

**Field Performance of Impact Attenuators:
Design and Population of a Comprehensive Database**

Final Report

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Executive Summary

To supplement the information available from standard crash tests, primarily those specified in Report 350 of the National Cooperative Highway Research Program, a repository of in-service performance data on crash attenuators was created. (Although this research addresses only crash cushions, not including guardrail end treatments or other attenuators, the term attenuator is used in both of the major data sources used in this research, and therefore appears in this report instead of the term crash cushion.) In addition to the effect of vehicle type, impact velocity and angle, and other aspects of crash tests, in-service data also includes the effect of driver behavior, roadway conditions, and the maintenance history of the attenuator. The computerized information system was developed for an intranet platform with a HTML-based interface. A central Oracle database contains a variety of data describing site conditions, maintenance history, and accident characteristics. The database includes both permanent and construction zone attenuator systems in the state of Florida. The database schema was developed based on literature surveys, examination of existing data sources, and visits with key departments and districts within FDOT. It was further refined through an evaluation of both the quantitative and qualitative data provided on the Florida Traffic Crash Report (FTCR).

Numerous standard reports can be generated from the database, summarizing attenuator usage, inspection results, and accident outcomes under a variety of conditions. Data entry forms and a detailed database query program are also provided with the computerized information system. A variety of data entry protocols were investigated for both scenarios; the primary source of the accident data currently loaded in the database was the FTCR. The populated database can be used to

support both clinical and statistical analyses of attenuator performance, so as to better understand the behavior and applicability of various types of attenuator systems.

In addition, a multi-criteria decision support system (DSS) was developed. The DSS uses the historical data in the database to rank attenuators based on their past performance under specific site conditions. This application supports the design and selection of attenuators for new locations; it also can be used to analyze current placement recommendations for common scenarios. In addition to furthering the understanding of the performance and applicability of various types of crash attenuators, the research extends the concept of a decision hierarchy by 1) using deterministic and heuristic importance functions to vary the weights to reflect changes in site conditions, and 2) using a possibilistic matching algorithm to include historical data which partially matches the user-input site characteristics in the performance evaluations.

Finally, a study of impacts involving crash attenuators in the state of Florida was performed using data from the attenuator database. To populate the database, computerized and paper data from the FTCT were collected and linked with the FDOT attenuator inventory database to identify the type of attenuators involved in the impacts. Items not quantified in the reports, such as evidence of secondary collisions, final resting position of the vehicle, and point of impact on the attenuator, were extracted from the narrative and diagram portions of the report. The crash reports provided a good deal of information regarding the outcome of attenuator impacts; however, some information on the vehicle-attenuator interaction, such as the length of attenuator crushed, were difficult to obtain from this source. An important deficiency of the FTCT is that there is not a specific field to indicate whether a crash site is in a construction work zone.

Although a number of causative factors were noted in the crash reports, the most common was careless driving, which was cited in over 30 percent of the accidents. Alcohol and drug use was also suspected or confirmed in over 20 percent of the crashes. Excessive speed did not seem to be a significant cause of attenuator impacts, although outcomes following high-speed crashes were fairly negative. A speed exceeding either the stated limit and/or a safe speed was cited in five of the 91 crashes; these crashes resulted in 3 incapacitating injuries and no fatalities among both drivers and passengers. In over 90 percent of the impacts, vehicles hit the attenuator head-on or hit its front corners. Less than 6 percent of the vehicles hit the rear quadrants of the attenuator, impacts in which snagging and pocketing are a primary concern. In addition, in no accident did more than one vehicle impact the attenuator.

Combining all of these results, one can arrive at the following conclusions and recommendations.

1. Looking only at impacts documented by crash reports, one can conclude that attenuators are performing well in the state of Florida, preventing impacts with the shielded objects and stopping the vehicle in a controlled manner after most impacts. Rollover, secondary impacts, and occupant injury are relatively infrequent. It is expected that unreported accidents are, in general, less severe than those for which crash reports are completed. (See page 106-119 for details.)
2. The design of toll facilities, especially the use of so-called Gator attenuators (tapered end treatments of concrete barrier walls, also known as Gator-nose end treatments) should be studied in further detail. Based on a limited number of reports studied, the Gator-nose end

treatments appear to be involved in a high number of vehicle rollover accidents. In addition, while Hex Foam Sandwiches performed better on average than the Gator attenuators, they were also associated with a disproportionate rate of rollovers accidents when used at toll booths. Design practices that might contribute to overriding of the attenuator and subsequent vehicle rollover should be revisited. (See page 119 for details.)

3. Rebound does not seem to be a major problem with any attenuator system presently used in Florida. Only seven percent of the vehicles impacting attenuators rebounded behind the attenuator, although 50 percent of these vehicles were involved in a secondary impact with either another vehicle or an object on the roadside. Overall, however, only 14 percent of the secondary accidents occurred following rebound of the vehicle. (See page 109 for details.)
4. Hex Foam Sandwiches were effective in preventing impacts with the shielded object; however, impacting vehicles were often redirected at large angles, increasing the potential for secondary impacts. In fact, impacts with Hex Foam Sandwiches did result in the highest rate of secondary impacts, as well as occupant injuries. Hex Foam Sandwiches also appear to have a high rate of rollover accidents, especially at toll booth locations. Consideration should be given to phasing out Hex Foam Sandwiches and replacing them with systems that meet current NCHRP standards. (See pages 112 and 114 for details.)
5. Hi-Dro Sandwiches were effective overall, performing better than average in preventing impacts with the shielded object and bringing vehicles to a controlled stop without secondary impacts. Impacts with Hi-Dro Sandwiches did result in one of the highest rates of occupant

injuries. In addition, a much smaller than average percentage of Hi-Dro Sandwiches were in good condition upon inspection, indicating possible maintenance concerns. Consideration should be given to a more rapid phase out of Hi-Dro Sandwiches, replacing them with systems that meet current NCHRP standards. However, systems in use today appear to be reasonably effective. (See pages 101 and 117 for details.)

6. G-R-E-A-T systems were of average effectiveness. Occupants in vehicles impacting G-R-E-A-T's had the best outcomes of any attenuator system, measured by the lowest percentage of occupants with definite injuries. However accidents involving G-R-E-A-T's also resulted in a high percentage of secondary impacts, especially after gating. This is probably attributable to vehicles that had glancing blows with the attenuator without losing much speed. Accidents of note include one in which the vehicle impacted the rear right quadrant and snagged, and one in which the vehicle appeared to snag upon impacting the G-R-E-A-T from the rear. Although G-R-E-A-T's appear to be performing adequately, these phenomena should be investigated more thoroughly. (See pages 114 and 115 for details.)
7. Sand barrel arrays in permanent installations had excellent performance in all aspects being considered. They prevented impacts with the shielded object in all cases, and were very effective in bringing vehicles to a controlled stop and preventing secondary impacts. The rate and severity of occupant injury was also lower than average. Because they provide generally positive accident outcomes, and because sand barrel arrays are potentially a low cost alternative to compression cushions, increasing their use should be considered in permanent

installations with low impact rates and no need for redirection. (See pages 106-118 for details.)

8. Sand barrel arrays in construction zones showed several areas of concern. When used in construction zones, sand barrels exhibited a much higher than average rate of impacts with shielded objects, including 8 of 9 accidents where the vehicles hit the front of the attenuator and crushed all of the barrels. Although the rate of secondary impacts was low, the consequences of both types of impacts were severe, resulting in the only two attenuator-related fatalities. Large post-impact angles (after impacts with the shielded object) and rollover are also concerns. Insufficient capacity and a tendency toward overriding appeared to be causative factors in these accidents. One potential cause of these problems was an apparent lack of compliance with installation and maintenance standards by construction contractors during the time period in question. As part of this study, the researchers conducted numerous site visits to observe construction zone sand barrel arrays along Interstate-95 during July 1997, as described in Chapter 9. Condition assessments during these visits found that sand barrel arrays were often poorly aligned, in disrepair, filled with dirt or wet sand, and/or surrounded by debris, excess dirt and vegetation. Installation and maintenance practices for construction zone arrays should be reviewed and standards in these areas should be better enforced.

Another possible cause of poor construction zone sand barrel performance is the use of single-barrel arrays, which was common during the time period in question. This type of installation, in which all barrels are aligned in a single row, was used in front of temporary

concrete barriers because of small clearances to the travel lane. Federal Highway Administration guidelines currently do not recommend this practice, because single barrel arrays provide little mass to slow a vehicle in the event of an angled impact with the rear barrels, resulting in pocketing and a potential high-speed impact with the shielded object. The data from this study showed that vehicles impacted the hazard at the same rate, regardless of where they impacted the cushion; however, because 63 percent of the impacts with crash cushions were head-on collisions, 8 of the 11 vehicles that impacted the shielded object (73 percent) hit the front of the sand barrel array and crushed all of the barrels without coming to a stop. In light of these results, the use of single-barrel arrays should be reconsidered in the state of Florida.¹ (See pages 92-97, 107, 112, 114, and 117 for details.)

9. Efforts should be made to continue populating the database developed in this study. The additional data will allow more conclusive comparisons of the different attenuator systems. It will also enhance the usefulness and practicability of the Decision Support System in the selecting attenuators and analyzing their performance. The research team is continuing data collection to support certain areas of this research.²

¹ This research was completed and this conclusion reached in September 1999. Subsequently, revisions were made to the final report in August 2001, resulting in the current version of this document. During that time, the Roadway Design and Construction Offices placed an increased emphasis on proper placement and maintenance of sand barrel arrays, including compliance with standard drawings. Construction Memorandum No. 23-00 clarified these issues, and stated that any deviation from the standard plans, such as substituting a different type of attenuator, requires that a site-specific change be designed by the engineer of record. To improve the capacity of the arrays, and to better protect against pocketing, FDOT has developed a modified single-barrel array, which offsets the array slightly toward the traffic lane and offsets a single 2100 lb. (900 kg) barrel into a second row, centered between the last two barrels of the first row. This array is provided in Index 417 of the Roadway and Traffic Design Standards.

² Two years of additional data were added to the database in August 2000. While not addressed within the body of the report, these results are documented in a paper included as Appendix A.

Acknowledgments

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1. Introduction

Understanding the behavior and performance of roadside safety devices, such as guardrails, concrete barriers, end terminals, and crash attenuators, is of great importance to improving the safety of roadways and intersections. One third of all motorist injury costs result from car impacts with roadside objects, including traffic barriers [Appel94]. Crash attenuators are devices that prevent errant vehicles from impacting objects on the roadside by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from the hazard [AASHTO96]. (Although this research addresses only crash cushions, not including guardrail end treatments or other crash attenuators, the term attenuator is used in both of the major data sources used in this research, and therefore appears in this report instead of the term crash cushion.) Attenuators are often used as end treatments for rigid concrete barriers; they also are used to protect bridge piers, sign and luminaire supports, toll booths, and other roadside hazards. As such, they have saved numerous lives by reducing the severity of vehicle crashes. Ratulowski reported in a study of the Breakaway Cable Terminal (BCT) that five out of every six fatal guardrail accidents recorded involved the guardrail penetration into the vehicle's passenger compartment; the use of a crash attenuator as an end treatment reduces this danger significantly [Ratulowski80].

Before the acceptance of any roadside safety device, including crash attenuators, evaluation tests must be conducted to ensure that it meets minimum safety standards. The most recent specification in use in the United States is "Recommended Procedures for the Safety Performance Evaluation of Highway Features," Report 350 of the National Cooperative Highway Research Program [NCHRP93]. The program is administered by the Transportation Research Board (TRB) and sponsored by the member departments of the American Association of State Highway and

Transportation Officials (AASHTO), that is, the individual state departments of transportation, in cooperation with the Federal Highway Administration (FHWA).

NCHRP was created in 1962 as a means to conduct research in acute problem areas that affect highway planning, design, construction, operation, and maintenance nationwide. NCHRP crash test specifications are accepted by all state transportation departments; however, roadway projects completed prior to the acceptance of a new standard are generally brought up to code only when major renovation is required. Therefore, while NCHRP 350 is the current standard in the state of Florida, many attenuators in the state were installed prior to its adoption, and only meet the less stringent provisions of NCHRP 230 [NCHRP81] or an even older standard.

The crash tests required by NCHRP 350 and other standard specifications ensure that a roadside safety device will protect vehicle occupants under expected service conditions. In general, the tests are intended to replicate a maximum credible vehicle impact, and require the device to meet specific criteria regarding deceleration forces and change in vehicular velocity. However, these tests are based on idealized installations and carefully controlled impacts, which may be very different from service conditions. Test impacts are conducted under carefully controlled conditions that specify speeds and angles of impact, without driver interaction. Factors which affect the in-service performance of barriers and attenuators include, but are not limited to, the following:

- Vehicle impact conditions which may differ from the idealized test conditions. These include high speeds, wet roadways, larger vehicles, and unanticipated impact angles and positions.

- Driver action, including slamming on brakes and turning of the steering wheel in an attempt to avoid the attenuator.
- Variations in roadway and roadside surfaces, including potholes, curbs, drainage structures, changes in grade, embankment slopes, etc.
- Multiple car accidents, including hits after the attenuator was damaged in a previous accident.
- Improper installation, poor maintenance or lack of routine maintenance, and delays in repair after an impact or other damage.
- Deterioration due to age and exposure to weather, support settlement, vandalism and other causes.

To assess the field performance of crash attenuators correctly, it is necessary to understand the effect of driver action, road conditions, maintenance history, and other field characteristics on their behavior and operation. In addition, to select the most cost effective attenuator system for a given situation, designers need to know the relative in-service performance of the different systems under the environment in consideration. While the crash test standards provide a service rating for each attenuator system based on the maximum design speed at which it can be used, they provide no information that can be used in comparing the performance of two evenly-rated systems against one another. Finally, understanding the factors which contribute to accidents can guide engineers in deciding whether attenuator use is appropriate under certain conditions, or whether the roadway design, signs, and markings are sufficient for the site.

2. Research Objectives

The main objective of this research project was to collect and use data on the field performance of crash attenuators to evaluate the relative performance of different types of attenuator systems.

Intermediate tasks in the research project were identified as follows:

1. The first task in the research project was to investigate available data on the field performance of various attenuator systems. This task involved identifying potential data sources and assessing their quality, suitability, and feasibility for integration into the computerized information system. For the suitable data sources, we investigated protocols for accessing, extracting, quantifying, and using the data. Two primary categories of data are historical data, and real-time data, primarily accident data. For the historical data sources, including FDOT databases, paper copies of inspection and accident reports, we developed methods for extracting relevant data, including translating qualitative data to a more quantitative format that is more useable in a database. This task also required investigating practical and efficient methods of gathering critical information at the site of an impacted attenuator.
2. The second task in the research project was to develop a database to contain the data identified in the first task. The Oracle database management system (DBMS) was used as the platform for the database and computational system. This required us to first develop data models and prototype computer systems based on the feasible data sources identified previously. The focus in designing the database was providing the greatest number of parameters for immediate and later study, including maintenance and repair history, site description, and accident characteristics. A secondary focus was to provide a user-friendly interface to support data collection in the field for

uploading to a remote data server. Data entry, reports, and query applications were also developed.

3. The third task in the research project was to populate the database from the available data identified in the first task. In many cases, records had to be linked together by identifying common features (e.g. link an accident record to an attenuator inventory record using the FDOT roadway and node numbers). The data was then manipulated using protocols defined as part of the first task, and electronically recorded in a format that was easily recognized and utilized by the Oracle DBMS.
4. The fourth task in the research project was to develop a multi-criteria decision support system (DSS) to use the historical data in the database to rank the performance of attenuators based on a set of site characteristics. This required us to choose a decision methodology and to develop a decision model based on relevant criteria, objectives, and characteristics. Because the complexity of a DSS increases for each parameter included in the ranking process, a subset of the data items stored in the database was selected to drive the DSS. The decision model was implemented within the Oracle DBMS using the accompanying programming language and tools, and tested with sample data from the database.
5. The fifth and final task in the research project was to use the data in the database and associated analytical tools (summary reports, DSS, etc.) to evaluate attenuator performance. To complete this task, we analyze the data and looked for possible trends in the performance of the various

types of attenuators. Further, we attempted to draw conclusions on the applicability and effectiveness of various barrier designs under actual service conditions.

The field performance database allows engineers to extract summary information on the performance of different attenuators under a variety of crash conditions (impact angle, environmental conditions, etc.). The user can obtain information about various accident outcomes, including vehicle results (e.g. stopping mode and trajectory), attenuator performance and results (e.g. estimated repair cost, attenuator-vehicle interaction) and occupant results (e.g. injury severity). The database user can also search for past projects with similar site conditions (roadway grade, design speed, clear distances, etc.) to investigate what attenuator types have been used in the past and how they have performed. In addition, the decision support system provides a heuristic means of ranking attenuators based on their past performance under similar site conditions.

Ultimately, the database system will enable an improved understanding of the parameters affecting the performance of various attenuator systems under service conditions. FDOT engineers and administrators will then have a rational basis for making comparison between different types of attenuators, which will provide a knowledge base for safety system selection and reduce project costs. Further, by analyzing the behavior of large numbers of existing attenuators, they will be able to judge the validity of results from test sites and make recommendations regarding improved attenuator design, selection, placement and anchoring. Finally, by providing tools to computerize the data entry procedure, the software system has the ability to make the work of documenting accidents more efficient and accurate. This would be of benefit to police officers, insurance companies, and all those concerned with highway safety.

3. Background

This chapter presents background information on impact attenuators (also known as crash cushions, crash attenuators, or simply attenuators), including the basic principles on which their design is based and descriptions of the various systems approved for use in the state of Florida. Guidelines from the AASHTO Roadside Design Guide for their selection, placement, and maintenance are presented, as are relevant crash test specifications from the NCHRP 350 standard.

3.1 Attenuator Design Principles

This section summarizes the design principles, including conservation of momentum and kinetic energy which govern the behavior of most attenuator systems. Much of this material is summarized from the AASHTO Roadside Design Guide [AASHTO96]. A crash cushion, or impact attenuator, is a device that prevents an errant vehicle from impacting fixed object hazards by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from the hazard. Attenuators also prevent traffic from entering work zone areas and provide protection for workers in these work zone areas.

Attenuators are used throughout the state on many different types of roadways. Many different types and designs are used depending on the size or type of object that needs to be shielded. A separate class of attenuators are those used exclusively as end treatments for longitudinal barriers, such as guardrails and concrete barriers: these safety structures are not addressed in this research.

In general, two mechanical principles govern the behavior of the two primary types of attenuator: inertial attenuators and compression attenuators. The conservation of momentum principle, which

governs in inertial attenuators, states that the momentum of a vehicle is absorbed by successively larger masses; therefore, the velocity of the vehicle is successively reduced. The momentum is transferred to an expendable mass that is in the vehicle's traveled way. Each collision is assumed perfectly elastic; therefore, the impacted mass and the vehicle move at the same (reduced) speed following impact. After the velocity of the vehicle is reduced to below 15 km/hr, an additional mass is assumed to bring the vehicle to a full stop. Sand barrel arrays are the most common example of inertial cushions. The sand and barrel acts as the expendable mass, with lighter barrels to the front of the array and heavier barrels to the rear, so that the vehicle is gradually slowed to a stop. These types of attenuators do not need a rigid backup because the kinetic energy is not absorbed, but is transferred to the other masses. Most sand barrel arrays do not have redirection capabilities in case of a side hit.

Most crash cushions other than sand barrels are compression crash cushions. The kinetic energy principle, which governs for compression cushions, states that the cushion absorbs the energy in a moving vehicle, typically through the crushing of deformable parts or through hydraulic energy absorbers. In this type of attenuator, plastics, foam, metal or other types of deforming materials are used to absorb the kinetic energy of the moving vehicle. The kinetic energy of the vehicle approximately equals the work done by the cushion during the deformation phase, which in turn equals the stopping force times length of deformation. Some of the kinetic energy is also dissipated by the part of the car being crushed. This type of attenuator needs a rigid backup to resist the vehicle impact force.

Many compression cushions have stiff side fender panels or guide wires that redirect a vehicle away from the shielded object in the event of a side hit. Parts of the crash cushion may or may not be crushed by this action. Unless properly redirected, the vehicle may penetrate into the cushion and strike the shielded object at a high rate of speed, a phenomenon known as pocketing, or snag the attenuator, leading to high deceleration rates. However, a danger of redirection is that the vehicle may be subject to a secondary impact upon re-entering the travel lanes. If the material in the cushion is sufficiently elastic, the vehicle may bounce backwards away from the cushion, a motion known as rebound. In general, it is desirable that the vehicle stops within the boundaries of the cushion, without a large post-impact trajectory behind the attenuator, again because of the danger of secondary impact.

To lessen the effect of an angled impact on the nose of an attenuator, many are designed to break away, allowing the vehicle to pass through without excessive deceleration due to the impact. This property is known as gating. To prevent secondary collisions with other vehicles, construction equipment, pedestrians, or other highway structures, the highway designer must ensure that the clear zone behind the attenuator is of sufficient length and width.

3.2 Types of Attenuators used in Florida

This section enumerates and illustrates some of the more common attenuator systems used in Florida. It is not meant to be comprehensive, but does address the major types of attenuator in use. There are many different types of attenuators in use today. This section lists some of those and briefly describes those in use in Florida. Although the category of attenuators includes gravel beds, truck-mounted attenuators and vehicle arresting barriers, we are only concerned with compression cushions

and inertial barriers as defined previously. In the following list, attenuators that are used primarily as end treatments are separated out. This was done because in Florida, end treatments are not included in the attenuators inventory database. Therefore, they are excluded from the research described herein. For more details on these systems, refer to the AASHTO Roadside Design Guide and relevant specifications available from the manufacturers [AASHTO96].

Common attenuators used in the United States include:

- Sand barrel arrays
 - Fitch barrels
 - Energite barrels
 - Traffix barrels
- Compression cushions
 - G-R-E-A-T (Guardrail Energy Absorbing Terminal) and G-R-E-A-T_{cz}
 - Hi-Dro Sandwich
 - Hi-Dro Cell Cluster
 - Hex-Foam Sandwich
 - REACT-350 (Reusable Energy Absorbing Crash Terminal)
 - QuadGuard
 - Low Maintenance Attenuator (LMA)
 - Low Maintenance Cushion (LMC)
 - Connecticut Impact Attenuation System (CIAS)
 - Advanced Dynamic Impact Extension Module (ADIEM)
- End treatments

- Crash Attenuating Terminal (CAT)
- Sentre
- Trend
- Brakemaster
- Triton Barrier

The following are descriptions of the most common attenuators that are being used in Florida today.

3.2.1 Energite, Fitch, and Traffix Barrel Attenuator Systems

Energite Sand Barrels and Fitch Barrels are two types of sand filled containers used in Florida. The main difference is that the Energite Sand Barrels are of one piece construction and come in two different sizes, whereas the Fitch Barrel system consists of two components which are put together to form a barrel. Only one size barrel is available. Different sand weights are accommodated in both barrel systems by raising or lowering the internal platform. Typical sand barrel weights are shown in Table 3.1. In states where freezing occurs, rock salt is added to the sand to help prevent any freezing due to moisture in the sand. The Energite Sand Barrel is manufactured by Energy Absorption Systems and the Roadway Safety Service manufactures Fitch Sand Barrels.

Fitch Sand Barrels can be interchanged in an array with the Energite Sand Barrels. Both of these systems are very easy to install and remove and can be configured to meet a variety of needs. They are also very convenient to store since they can be stacked inside of one another. Figures 3.1 and 3.2 are pictures of both the Energite and Fitch Sand Barrels. The key benefit of either sand barrel system is their low installation and replacement cost. However, one major drawback is that they do not have redirective features and have to be set up in wide arrays to protect most hazards. As a result, they are

difficult to place where space is limited. Another drawback is that when impacted, debris may scatter causing clean up to be a problem.

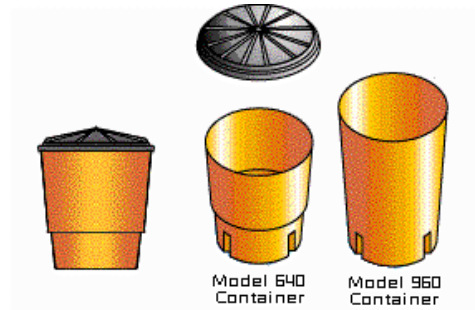


Figure 3.1: Energite Sand Barrel Attenuator

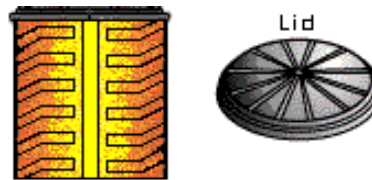


Figure 3.2: Fitch Sand Barrel Attenuator

3.2.2 G-R-E-A-T and G-R-E-A-T_{cz} Attenuator System

The GuardRail Energy Absorbing Terminal (G-R-E-A-T) system was designed specifically to protect the ends of median barriers and other narrow objects. Some of these objects include:

- Bridge piers, bents, and pylons
- Luminaire supports
- Butterfly signs
- Double faced guardrail ends
- Gore areas

Table 3.1: Nominal Sand Masses and Weights for Typical Sand Barrel Arrays

Mass (kg)	Weight (lbs)
90	200
180	400
320	700
640	1400
960	2100

The G-R-E-A-T attenuator is a compression cushion that absorbs and dissipates the kinetic energy of impacting vehicles. It absorbs the kinetic energy through dense foam cartridges with the trade name Hex-Foam. The Hex-Foam cartridges are held in place by steel frames, which retract backwards when it is hit end-on. Cables and leg pins restrain the unit when hit from the side. When a side impact occurs, the system will redirect the vehicle. The G-R-E-A-T attenuator has many different lengths ranging from one bay to twelve bays and three different widths. The widths are designed to match corresponding widths of narrow hazards; width selection is not governed by design speed. The longer systems absorb more energy and therefore, are suitable for roads with higher design speeds.

The G-R-E-A-T_{cz} is intended for temporary installation in construction work zones. It has an integral platform, backup structure, and anchor system; therefore, it does not require a separate backup structure. It can be moved fully assembled from one location to the next. It comes in two lengths

and two widths. It should be located on a smooth surface for anchoring with either bolts or pins. This system is also designed to redirect an impacting vehicle. Some benefits of these systems are the ease of repair, diversity of different configurations, and performance of the attenuator. The only drawback is the durability of the foam cartridges in certain weather conditions. In very hot climates, the cartridges may deteriorate. Energy Absorption Systems is the manufacturer of both of these systems. Figure 3.3 is a picture of the G-R-E-A-T System.

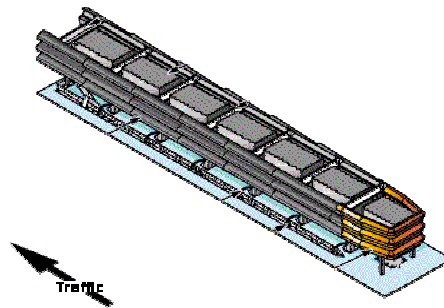


Figure 3.3: G-R-E-A-T Attenuator

3.2.3 Hi-Dro Sandwich Attenuator System

The Hi-Dro Sandwich System dissipates the kinetic energy of a crash by discharging water from plastic tubes and by the transfer of energy from the vehicle to the expelled water. The plastic tubes are arranged in bays separated by diaphragms. A rigid backup structure is required for this system. Vertically and laterally, it is supported by steel cables and it is free to collapse backward at impact. An advantage of this system is that there is very little debris after impact except for water. Another advantage is that the system is easy to repair if involved in an accident. Many times immediately after an accident the attenuator can be pulled back out into place. Then, the cells can be replaced or filled with water, if needed. A disadvantage is that the expelled water could cause skidding and

decrease traction. In addition, a major drawback is that water can evaporate during hot weather or leak out of small punctures in the tubes. This means that maintenance is high on this attenuator. To prevent freezing, the tubes are sometimes filled with a liquid calcium chloride solution.

This system is designed to redirect a vehicle if it is hit from the side. The redirection of a vehicle is caused through fender panels attached to the side of the barrier. As with most of the attenuators, Energy Absorption Systems is the manufacturer of this attenuator. Figure 3.4 is a picture of a Hi-Dro Sandwich attenuator.

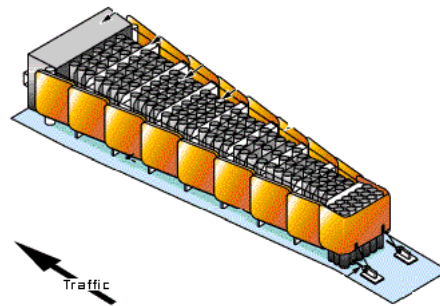


Figure 3.4: Hi-Dro Sandwich Attenuator

3.2.4 Hi-Dro Cell Cluster Attenuator System

The Hi-Dro Cell Cluster system uses the same tubes as the Hi-Dro Sandwich system. These tubes are filled with water and held together in a cluster by a flexible “safety belt.” Backup structures are required for this system. The system is used for areas where the speed limit is 70 km/hr (45 mph) or less. One advantage of this system is that it can be arranged in various patterns to fit the object being shielded. Another advantage is that the system can be used in very small places where many of the other attenuators will not fit. However, because there are no fender panels, an impact toward the rear of the system may allow the vehicle to hit the back up structure. Similar to the Hi-Dro Sandwich,

the Hi-Dro Cell Cluster attenuator has a high maintenance rate due to the water filled tubes. Some applications include shielding gore areas, bridge piers, or abutments, traffic control devices, and toll booths. The Hi-Dro Cell Cluster is manufactured by Energy Absorption Systems.

3.2.5 Hex-Foam Sandwich Attenuator System

The Hex-Foam Sandwich is used to protect wide hazards and is very effective at high accident frequency locations. This is because it is relatively inexpensive to repair, which is a major advantage. Another advantage is that it can be used for head on or side impacts. It dissipates the kinetic energy of an impacting vehicle primarily through the crushing of expandable cartridges containing Hex-Foam. When hit, the cartridges crush, the unit collapses from front to rear, and the front of the vehicle crushes as impact forces build up. This system uses telescoping panels for side impacts. During side impacts, the system redirects the vehicle safely. The system can easily be pulled out and reused. The only parts that need replacement in a normal impact are the foam cartridges. The system is available in three different widths and nine different lengths. It can accommodate speeds varied from 65-120 km/hr (40-70 mph). The Hex-Foam Sandwich is manufactured by Energy Absorption Systems. Figure 3.5 is a picture of the Hex-Foam Sandwich attenuation system.

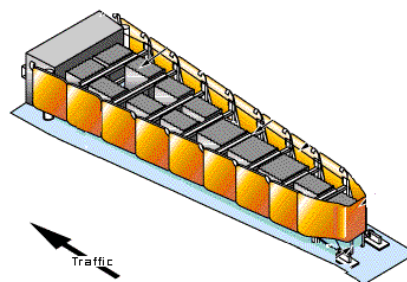


Figure 3.5: Hex-Foam Sandwich Attenuator

3.2.6 REACT-350 Attenuator System

The REACT-350 system consists of high density polyethylene cylinders along with a cable system that are designed to attenuate head on hits and redirect severe angle hits. As the name suggests, the REACT-350 meets the requirements of NCHRP 350, Test Levels 1 through 3. REACT stands for Reusable Energy Absorbing Crash Terminal, indicating that each attenuator maintains 90% of its initial deceleration capabilities after an impact, so it can be reused for many impacts. After a hit, the system is designed to be easily restored to its original length with only minor repair required. For severe hits, an over-stretching is sometimes required to obtain the original shape. However, some concerns have been raised over the possibility of excessive rebound of vehicles back into travel lanes. Three different models of the REACT-350 are available depending on the design speed of the road where it is to be placed. The systems are self-contained and can be used for both permanent and temporary applications. The low speed attenuator comes factory or fabricator assembled, meaning that the contractor has to spend time at the site only for installation, including constructing the foundation. Roadway Safety Service manufactures the REACT-350. Figure 3.6 is a picture of the REACT-350 attenuator system.

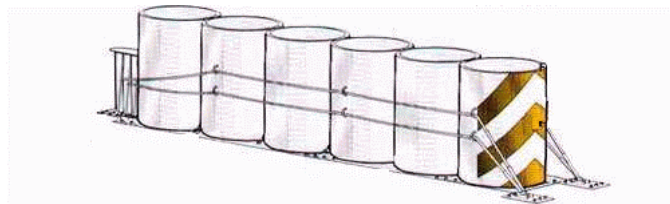


Figure 3.6: REACT-350 Attenuator

3.2.7 QuadGuard

The QuadGuard is a relatively new attenuator system that meets NCHRP 350, Test Levels 1, 2 and 3 as a redirective, non-gating attenuator. It is designed for narrow, medium and wide hazards ranging in width from 610 mm to 2.3 m (24" to 90"). The QuadGuard System consists of energy-absorbing cartridges surrounded by a framework of steel diaphragms and fender panels. The name of the QuadGuard results from the "four-beam" fender panels mounted on a monorail platform. Depending on the number of bays in the system, the QuadGuard accommodates roadway design speeds from 40 to 120 km/hr (25 to 75 mph). The QuadGuard family of attenuators also includes the QuadGuard LMC (Low Maintenance Cushion) System for hazards in high frequency impact areas. Figure 3.7 depicts the standard QuadGuard system.



Figure 3.7: QuadGuard Attenuator

3.2.8 Low Maintenance Attenuator (LMA)

The LMA system is designed to protect narrow hazards in locations where a high frequency of impacts occur. It is considered to be low maintenance because it has highly reusable parts. The system meets the requirements of NCHRP-230 but has not been tested or accepted as meeting the requirements of NCHRP-350. The system has twelve modular bays, which consist of triple

corrugated steel diaphragms, compressible cylinders, and three-beam fender panels. It also has a reusable nose section. The cylinders are made of an elastomeric material, which is a specially formulated rubber that absorbs the kinetic energy when hit head-on. Restraining chains and cables are used for longitudinal stiffness and side impacts. The system can easily be pulled back out to its original length and repaired by a two-person crew in about an hour. Unlike foam cushions, the elastomeric cylinders recover their original shape when expanded. The Low Maintenance Attenuator is manufactured by Energy Absorption Systems.

3.2.9 Low Maintenance Cushion (LMC)

The QuadGuard LMC meets NCHRP 350, Test Level 3 as a redirective, non-gating attenuator. It consists of reusable, self-restoring elastomeric (specially formulated rubber) cylinders surrounded by a framework of steel diaphragms and fender panels mounted on a monorail platform. The QuadGuard family of attenuators is manufactured by Energy Absorption Systems and is intended as a replacement product for the G-R-E-A-T system, which does not meet the provisions of NCHRP 350.

3.3 AASHTO Selection and Placement Guidelines

The American Association of State Highway and Transportation Officials (AASHTO) developed a guide for roadside design called the Roadside Design Guide (RDG) [AASHTO96]. The RDG was developed in metric units and presents a synthesis of current information and operating practices for roadside safety. The roadside can be defined as the area beyond the driving lanes and shoulder of the roadway. The main focus of the RDG is safety treatments including attenuators, that will minimize the likelihood of serious injuries if a driver runs off the road.

It is very important to note that the RDG is strictly a guide and not a code or standard for design. It should only be used as a resource that highway agencies could develop standards or policies. The RDG uses design speed as the basic speed parameter. However, some drivers may go much faster than the design speed. The highway engineer should therefore consider the speed at which encroachments are most likely to occur when selecting an appropriate design standard or feature.

The RDG provides a brief description of how attenuators work and summarizes the key features of many common attenuators. The RDG also discusses placement, use, and maintenance issues. The RDG recommends the following criteria for the selection of attenuators.

- Performance Capability
- Deflection
- Site conditions
- Compatibility
- Cost
- Maintenance (routine, collision, materials storage, simplicity)
- Aesthetics
- Field Experience

Placement recommendations are considered after it has been determined that an attenuator is needed. The required layout can be determined by four major factors: lateral offset from the edge of the traveled way, terrain effects, flare rate, and length of need. These factors are interrelated so that the highway engineer can make a determination for a final design.

3.3.1 Lateral Offset

The rule of thumb for the placement of an attenuator is that it should be placed the distance from the traveled way that will give motorists the best chance at regaining control without causing an impact, yet without violating the placement and orientation guidelines for the attenuator used. The shy line offset is the distance from the edge of the traveled way, beyond which a roadside object will not be seen as a hazard, which could result in the motorist reducing speed or changing the vehicles position on the roadway. Table 3.2 shows the design speed and related shy line offset.

Table 3.2: Suggested Shy Line Offset Values for Various Design Speeds (RDG Table 5.4)

Design Speed (km/hr)	Shy Line Offset (m)
130	3.7
120	3.2
110	2.8
100	2.4
90	2.2
80	2
70	1.7
60	1.4
50	1.1

3.3.2 Terrain Effects

The best results of an impact usually occur when all of the vehicles wheels are touching the ground and its suspension is not compressed or extended. The terrain conditions between the traveled way

and attenuator have a great effect on the performance of the attenuator. Two important features are curbs and slopes. If a vehicle comes across one of these features, it might override the attenuator or underride the attenuator if there is a downhill slope. A vehicle that underrides the attenuator risks the chance of snagging, resulting in higher decelerations.

3.3.3 Flare Rate

If an attenuator is not parallel to the edge of the traveled way, then it is considered flared. The reason to flare an attenuator or longitudinal barrier is to minimize the driver's reaction to an hazard near the road by gradually introducing a parallel installation. A disadvantage of flaring an attenuator is that the greater the flare rate, the higher the angle at which it can be hit. When the angle of impact is increased the severity of the accident increases. Table 3.3 shows flare rates for barrier design.

Table 3.3: Suggested Flare Rates for Attenuator Design (RDG Table 5.6)

Design Speed (km/hr)	Flare Rate— Inside Shy Line	Flare Rate—Beyond Shy Line	
		Min.	Max.
110	30:1	20:1	15:1
100	26:1	18:1	14:1
90	24:1	16:1	12:1
80	21:1	14:1	11:1
70	18:1	12:1	10:1
60	16:1	10:1	8:1
50	13:1	8:1	7:1

3.3.4 Length of Need

The variables governing length of need are runout length and lateral extent of the area of concern. Length of need is the length of the attenuator which is needed to prevent the vehicle from impacting the obstruction. If the vehicle hits the attenuator before the length of need, it is acceptable if the attenuator gates or breaks away. If the vehicles hits after the length of need begins, then the attenuator shouldn't break away because the vehicle won't have sufficient runout length to stop. Runout length is the distance a vehicle requires to come to a stop if it has left the roadway. Runout length is measured from the upstream extent of the obstruction along the road to the point where it is believed that the vehicle had left the road. Table 3.4 shows suggested runout lengths. Depending on the operating speed and tire friction, the exact distances will vary.

Table 3.4: Suggested Runout Lengths for Attenuator Design (RDG Table 5.7)

Design Speed (km/hr)	Traffic Volume (ADT)			
	Over 6000	2000-6000	800-2000	Under 800
	Runout Length (m)			
110	145	135	120	110
100	130	120	105	100
90	110	105	95	85
80	100	90	80	75
70	80	75	65	60
60	70	60	55	50
50	50	50	45	40

3.3.5 Attenuator Maintenance

Maintenance is broken up into three categories, which are routine maintenance, collision maintenance, and material and storage requirements. Routine maintenance may include filling tubes with water, replacing diaphragms, painting, tightening nuts and bolts, or just cleaning the surrounding area. Collision maintenance includes any type of repair or adjustment that the attenuator may need due to a vehicle impact. Material and storage requirements are very important when selecting an attenuator. It is preferable that the parts are readily available and easy to store. It is very important to consider the need for spare parts since storage requirements increase as the number of parts in the attenuator increases.

3.4 Relevant NCHRP-350 Crash Test Specifications

The National Cooperative Highway Research Program (NCHRP) produces crash test standards and protocols for various types of roadside safety structures. The most recent guide is Report 350 titled “Recommended Procedures for the Safety Performance Evaluation of Highway Features” [NCHRP93]. This report contains recommended procedures for safety performance evaluation of highway features, including crash cushions, longitudinal barriers, breakaway or yielding supports for signs and luminaries, breakaway utility poles, truck mounted attenuators, and work zone traffic control devices. The report gives standards and guidelines that each attenuator is required to pass in order to be used on our highways and freeways.

The first NCHRP specification for crash tests was the Highway Research Correlation Services Circular 482, written in 1962. It was a one-page document that specified vehicle masses, impact speeds, and impact angles for different crash tests. In 1973, a project headed by the NCHRP was begun to address questions that the Circular 482 did not cover. A new report by NCHRP was devised and written. This new report was published in 1974 as NCHRP Report 153 and was sixteen pages long. It was based on technical input from over seventy individuals and agencies. Later revisions included minor changes requiring modified treatment of particular problem areas and major changes that were required were testing with trucks and buses, reevaluating criteria for impact severity, and looking at special highway appurtenances such as construction barriers. These new changes were implemented and published in 1978 as the Transportation Research Circular 191.

The NCHRP then reviewed and revised the Circular 191 to include current technology. This report was published in 1980 as NCHRP Report 230. This was used for full scale crash testing for highway

appurtenances in the United States. In 1989, a research team began investigating new technology, new barriers that were being designed, and new criteria needed for crash testing. After years of research the team came up with a draft of the new report. This draft was sent to one hundred individuals for comments. The comments were reviewed and where necessary, changes were made. This new report was published as NCHRP Report 350.

NCHRP Report 350 is used to present guidelines for crash testing of permanent and temporary highway safety features and recommends evaluation criteria to get test results. These guidelines and evaluation criteria incorporate current technology and knowledge of professionals in the field of roadside safety design. The guidelines and criteria provide a platform on which researchers and agencies can compare impact performance of safety features, guidance for new safety features, and a way for agencies to formulate performance specifications for safety features.

NCHRP 350 highly recommends uniform testing of all roadside safety devices so highway engineers can have a good foundation to compare product performances. The NCHRP 350 helps in the selection of a safety feature by grouping safety devices into product types. These groups are based on crash performance characteristics. Also, there are many test levels that are based on the design speed of the product being tested.

As of May 1994, all newly designed attenuator products must meet the approval of the NCHRP 350 requirements. In addition, all existing attenuators and crash cushions were to be re-tested to make sure that they meet the NCHRP 350 requirements by August 1998. Only attenuators meeting the

NCHRP 350 requirements can be purchased using Federal funds, however, attenuators presently in use which do not meet the NCHRP 350 standards do not have to be replaced.

NCHRP 350 addresses three different vehicle types or weight classes in the test procedures. These test vehicles and their description is as follows:

- 700C and 820C vehicles (small compact cars)
- 2000P vehicle (high center of gravity pickup truck)
- 8000S, 36000V and 36000T vehicles (heavy trucks)

The 820C vehicle (1800 lbs.) is a good comparison for the passenger cars on the lower end of the spectrum in terms of mass. The vehicle that the NCHRP 350 recommends is the Ford Festiva. The 2000P (4409 lbs.) pickup truck represents utility vehicles and mini vans, which have a high center of gravity. NCHRP 350 recommends a $\frac{3}{4}$ ton pickup truck. The other three test vehicles (8000S, 36000V, and 36000T) are used for crash test evaluation of longitudinal barriers.

The NCHRP 350 evaluates the performance of highway safety devices based on three criteria. These criteria are structural adequacy, occupant risk, and vehicle trajectory. These three criteria are called Performance Evaluation Criteria.

Structural adequacy is a factor that assesses the safety device from a structural and mechanical aspect. If an impact occurs, the vehicle should not penetrate, underide, or override the attenuator. If there are support posts or transition areas, they should not cause snagging. Factors that should be

checked include the stiffness, deformation, yielding, fracture, and energy absorption or dissipation of the device.

Occupant risk is a criterion that evaluates the risk of the occupant injury during an impact with an attenuator. This is very hard to quantify because it involves very important, but varied factors of the occupant, such as, physiology, size, seating position, attitude, and restraint. There are several other occupant risk criteria which include:

- Debris does not penetrate occupant compartment.
- Debris does not block driver's vision or cause the driver to lose control of the vehicle.
- Debris should not present a hazard to other traffic, pedestrians, or workers that might be present in a work zone.
- Vehicle should remain upright during and after the impact.

Vehicle trajectory is the third criterion by which the post impact behavior of the test vehicle is evaluated, and is a measure of the risk of the test vehicle causing a subsequent multi-vehicle accident or impacting other objects on the roadside. Factors of vehicle trajectory are as follows:

- After an impact, the vehicle's trajectory does not interfere with adjacent traffic lanes.
- If pocketing or snagging occurs, it does not cause occupant velocities or ride-down accelerations in the longitudinal direction to exceed the specified limits.
- The exit angle is less than 60% of the impact angle.
- Vehicle trajectory behind the device is acceptable for gating and non-redirective devices.

4. Related Research

Because the field performance of roadside safety devices can vary drastically from their behavior during crash tests, it is important to collect and analyze in-service performance data. While a great deal of crash test data exists on crash attenuators and other roadside safety devices, information on their performance under field conditions is limited. A number of factors have influenced this, including the difficulty and cost of collecting data from accident sites in a timely manner. However, several studies have investigated the field performance and maintenance requirements of crash attenuators [Button77, Carlson77, Lohrey88, Lohrey94, Stanley89].

Most in-service performance studies have focused on a limited number of sites, tabulating installation and repair costs as well as injury rates. Data was collected from accident response teams, police reports, and/or maintenance department repair records. With the exception of a study in New York which included 393 accidents, most of these studies included very few impacts [Carlson77]. In most cases, this was due to an unexpected decrease in the number of accidents at sites previously identified as high-impact locations. Because of the limited number of sites and incidents being investigated in these studies, no attempts were made to computerize the resulting data records.

A notable effort to computerize field performance data on roadside safety structures is Malcolm Ray's ongoing study at the University of Iowa [Ray96]. In this NCHRP-funded study, the research team is developing a procedure for evaluating the performance of roadside safety structures in actual field conditions. In addition, the team is collecting information about impacts with metal-beam and cable guardrails and metal-beam guardrail terminals using a combination of police reports, maintenance reports, and on-site visits. Data is being collected for a one year period in three

different states. Data entry can be completed by project personnel via password-protected internet-based forms. A flat-file database has been created and is being regularly updated; some data and summary statistics are available on-line. However, the focus of the study is on guardrails rather than crash attenuators, and the data is only being used to support statistical analyses. No decision support system or design aid is planned.

Several decision support systems have been developed for application to transportation-related areas [Cunningham98, Davis95, Uzarski94, Gal-Tzur93]. Peled and others developed a GIS-based DSS for road safety evaluations [Peled91]. A DSS for selection of pavement design alternatives, based on a multi-attribute utility analysis was presented by Van Dam and Thurston [Van Dam94]. The DSS is intended to be used as a design aid. Davis and Campbell developed a DSS for the selection of pavement markings [Davis95]. The DSS described herein is based on a decision hierarchy similar to that used by Davis and Campbell; however, the methodology described in this report is more detailed in its synthesis of evaluation criteria into a defined goal. Further, based on a literature review, there is no existing DSS for selecting roadway crash attenuators or evaluating their field performance.

5. Computational System

Development and implementation of the computational system described in this report was conducted at the FAMU-FSU College of Engineering, and the initial population of the database was completed under the authors' direction. After the project was completed, the system was turned over to the Florida Department of Transportation (FDOT), who has assumed responsibility for system maintenance, and continued data entry as required to meet FDOT's needs.

5.1 System Overview

The overall architecture of the computational system is depicted in Figure 5.1. The central component of the software system is a relational database, implemented using the Oracle database management system. The database contains four basic categories of historical performance data on crash attenuators: catalog data, site and installation data, inspection and maintenance data, and accident and incident data. The data in each category is described in more detail later in the report. Data analysis is supplied to the user in the form of query reports describing the performance of different attenuators under a variety of site or crash conditions: summary reports detailing attenuator usage, inspection results, and accident outcomes can also be generated. The database also supplies data to an integrated decision support system program, which ranks attenuators based on their relative performance in three areas: safety, cost, and convenience. Administrative users can interact with the DBMS directly, while most tasks required by end users (roadway engineers, administrators, etc.) can be conducted through a user-friendly internet interface.

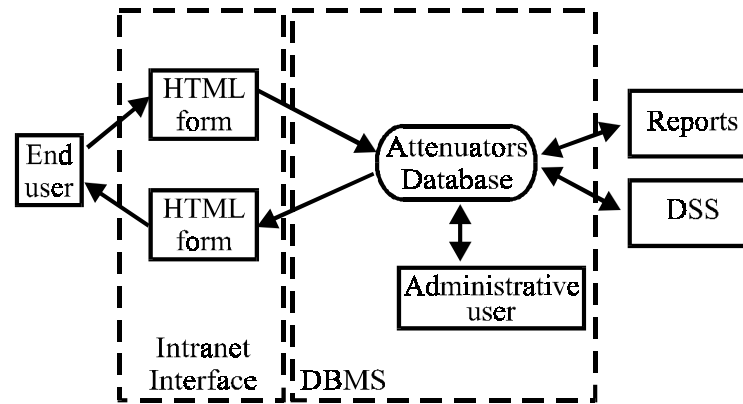


Figure 5.1: Overall Computational System

5.2 Hardware and Software Platform

The computer system was implemented on an intranet platform, which provides a familiar, user-friendly interface and accessibility from remote users running a number of hardware platforms. An intranet can be defined as the application of internet technology to an organization's internal information needs. The project server is a Pentium-based computer with Windows NT, a network card, and DBMS and web-browser software. With an intranet platform, users within the organization can quickly access the database and application programs via hard-wired computer terminals. Users outside the organization with sufficient security privileges can access the system through an internet gateway by way of the main organizational server. Depending on the needs of the end users, public information about the project, including member profiles, contact information, and progress statements could be provided by means of an internet home page. Links could also be provided to web pages maintained by attenuator manufacturers, state transportation departments, and other transportation safety organizations.

All application programs, including the decision support system, were developed using the Oracle PL/SQL language. User interface screens are created “on the fly” with calls to a set of stored procedures from within the PL/SQL code. These stored procedures, along with a procedural gateway provided by Oracle, provide a framework for producing dynamic HTML pages using the data in the underlying database. The gateway is implemented using CGI, enabling it to function with any web browser. To minimize typing by the end user, pull-down menus enable the user to select items from lists of attenuator types, site features, repair activities, etc. Another key benefit of the graphical interface is that incorrect and inconsistent data input is minimized.

Appendices B and C contain the database schema (database structure and data); appendices D through G contain the program code developed for the various components of the computerized information system. In addition, a copy of the software in an Oracle backup format is included with this report.

5.3 Relational Database Model

As stated previously the data model was implemented as a relational database on an Oracle platform. In a relational database, the data is stored in tables (relations), which consist of columns (fields) defining the data item and type to be stored. Each row (record) in a table adds another instance to the table. Uniqueness is ensured by a primary key, which is a set of one or more columns which must be defined uniquely within each row. Tables are related to one another using foreign keys, which are fields from one table placed in another table to create a relationship between the two tables. This is illustrated in Figure 5.2, where Accident ID is the primary key in the Accident table, and the foreign

key in the Vehicle table. Together, this uniquely identifies the accident in which each vehicle was involved.

To minimize the size of the database and to make searching easier, lookup tables were used wherever possible. Lookup tables consist of, at minimum, an identification code and a description or value of an associated parameter. When the identification code rather than the description is used as the foreign key in other tables, the possible values of that field are limited to the set of valid records. Table 5.1 illustrates the lookup table for lighting during an accident. Like many of the identification codes and values, these were adopted from the Florida Traffic Crash Report, the accident report used in the state of Florida.

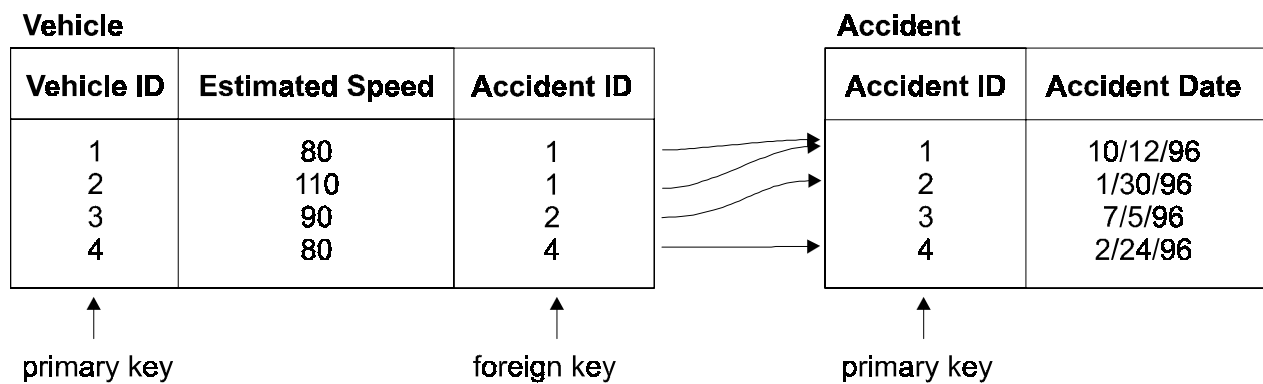


Figure 5.2: Two Database Tables (Relations), Showing Primary and Foreign Keys

The database schema (structure) was created as a series of ASCII text files in the Structured Query Language (SQL), a standard data definition and manipulation language recognized by most relational database management systems (DBMS's). Through a series of SQL statements, tables and columns were defined, primary and foreign keys were established, and an initial data set was inserted. The initial data set consists primarily of attenuator inventory data for the state of Florida, accident data for

the entire state from 1996 (attenuator impacts only), and inspection data from District 6 for the years 1996 and 1997. The SQL files are included as Appendices B (Schema) and C (Data) of this report; the database structure and data population are described in more detail in Chapters 6 and 7 of the report.

Table 5.1: Acceptable Values of Lighting During an Accident, and Associated Identification Codes

Lighting_ID	Lighting_Value
1	DAYLIGHT
2	DUSK
3	DAWN
4	DARK (STREET LIGHT)
5	DARK (NO STREET LIGHT)
88	UNKNOWN

5.4 Data Entry Application

To allow for simple entry of additional data to the database, a collection of data entry forms were provided. Each form is accessed using drop-down menus; as many data items as possible were implemented using drop-down menus or check boxes to minimize user typing. The use of lookup tables, as described in the previous section, greatly simplified this process. Data entry forms were provided for the following scenarios:

- New attenuator type
- New attenuator model

- New attenuator instance (in inventory)
- New roadway description
- New accident
- New inspection

Several of these options lead to multiple forms, allowing the user to enter data into multiple database tables as often required. In most cases, the identification codes which link together related tables are automatically generated within the program code, so that the user does not have to memorize or search for previously used codes. A partial data entry form for entering a new accident is shown in Figure 5.3. The menu for lighting during the accident is dropped down to show the valid options, which are analogous to those in Table 5.1. Once the user has completed the form and clicked "Continue" to add data into the subsequent form, this information is automatically entered into the Accident table of the database.

5.5 Reports Application

The View Data/Reports portion of the computational system provides two primary means of viewing the data in the database. All reports are viewable through internet-based forms, or can be printed using standard browser facilities. The first type of report is a summary report; summary reports are provided in three general areas: Inventory/Usage, Accidents, and Inspections. With respect to the attenuator inventory, reports can be generated which summarize attenuator usage by county, district, attenuator type, and work zone use. Summary reports of accident characteristics and results can be generated by attenuator location and type, accident cause, impact characteristic, attenuator performance and results, vehicle results, occupant results, and work zone usage. Inspection reports

can be generated showing condition after inspection based on attenuator type, location, and installation date. One of the accident reports summarized by attenuator location and type is included as Table 5.4; this report shows the number of accidents in each county and district.

The second type of report which can be printed are detail reports. As the name indicates, these reports can be used to query the database to provide more detail about the attenuator, accident, or inspection in question. The user can search for details by providing one or more criteria in a number of categories. If multiple criteria are entered, they are joined by an "AND" rather than an "OR," meaning that the record must meet all specified criteria to be returned by the search. The results are in much more detail than those provided in the summary reports. For instance, the summary report in Table 5.4 indicated that one accident occurred in District 1. To search for additional details on this accident, the menu option for "Detail Reports: Accidents by Attenuator Type and Location" could be selected. Then, from the form shown in Figure 5.4, the user checks the block prior to the "District" option, then selects District 1 on the drop down menu, to indicate that accidents in District 1 should be returned. Clicking on Submit returns details on the accident, a few components of which is illustrated in Tables 5.5 and 5.6.

DOT Interactive System - New Accident Page - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location: ty.eng.fsu.edu/owa_att/owa/attenuator_www.enter_data.actions What's Related

Instant Message WebMail Contact People Yellow Pages Download Channels

Enter Accident Data:

Report Number

Data Source FDOT AAR/CRASH DATABASE

Non Design Impact? N/A

Location on Road/Roadside ON ROAD

Site Location NOT AT INTERSECTION/RR XING/BRIDGE

Traffic Control NO CONTROL

Road Surface DRY

Weather During Accident CLEAR

Lighting During Accident DAYLIGHT

First Harmful Event DUSK PORT (REAR-END)

Second Harmful Event DAWN PORT (REAR-END)

Accident Mile Post DARK (STREET LIGHT)

UNKNOWN DARK (NO STREET LIGHT)

Document: Done

Figure 5.3: Partial Data Entry Screen for a New Accident

Table 5.4: Summary Report of Accidents by County and District

District	County ID	County Name	Number of Accidents
1	17	SARASOTA	1
Number of Accidents in District 1			1
2	71	CLAY	2
2	72	DUVAL	3
Number of Accidents in District 2			5
3	48	ESCAMBIA	1
Number of Accidents in District 3			1
4	86	BROWARD	25
4	93	PALM BEACH	7
4	94	ST. LUCIE	2
Number of Accidents in District 4			34
5	70	BREVARD	1
5	75	ORANGE	4
5	79	VOLUSIA	1
Number of Accidents in District 5			6
6	87	DADE	37
Number of Accidents in District 6			37
7	10	HILLSBOROUGH	3
7	15	PINELLAS	4
Number of Accidents in District 7			7
Total Number of Accidents			91

DOT Interactive System - Detail Report: Accidents by Attenuator Type and Location - Netsc...

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location: edu/owa_att/owa/attenuator_www.reports.accid_det_act What's Related

Instant Message WebMail Contact People Yellow Pages Download Channels

Enter Search Criteria:

Check?	Data Field	Constraint
☐	Attenuator ID Number	
☐	Year Installed (YYYY)	
☐	Maintenance Unit	
☒	District	1
☐	County	ALACHUA , 26
☐	Roadway ID (County,Section,Subsection)	
☐	State Road Number	NO REC
☐	In Work Zone?	YES
☐	Present Status	IN USE
☐	Location With Respect to Road	MEDIAN
☐	Model Number	00200400700140521
☐	Attenuator Type	DRAGNET

**If more than one box is checked, constraints are joined with "AND" rather than "OR".

**If no boxes are checked, results of all accidents are returned.

Submit Reset

Document: Done

Figure 5.4: Search Criteria menu for Detail Reports on Accidents by Attenuator Type and Location

Table 5.5: Example of General Accident Details

Acc ID	Report Number	Data Source	Non-Design Impact?	Date	Time	AM/PM?
554	50709601	DHSMV CRASH REPORT	NO	23-NOV-96	11:05	AM
First Harmful Event		Second Harmful Event		Number of Vehicles	Number of Atten Impacts	Road Surface
COLLISION WITH CRASH ATTENUATORS		MV HIT CONCRETE BARRIER WALL		1	1	DRY
Weather	Lighting	Mile Post	Nearest Node	Site Location		Traffic Control
CLEAR	DAYLIGHT		1533	EXIT RAMP		SPECIAL SPEED ZONE
Lane Number	Road Side	Description				
6	ON ROAD	V-1 southbound SR 93 in the right lane attempted to exit at SR 780 lost control and struck attenuator then struck the concrete barrier wall.				

To run the DSS, the user provides a set of attenuators (alternates) to be ranked and a description of the relevant site conditions. Because the relative importance of each criteria depends on the specific site characteristics, the DSS computes weights for each node in the tree using a combination of importance functions and consequences multipliers based on both heuristic and deterministic relationships. The DSS then searches the database for records matching the input data and extracts the associated performance data from the database. This information is input into the DSS where the effectiveness of each alternate is measured for each criteria. Finally, the nodal weights are combined with the criteria scores to compute an overall score for each alternate. These steps are described in more detail within Chapter 8.

Table 5.6: Example of Attenuator Details

Atten ID	Model Number	Attenuator Type	Owner	Date Installed	Maintenance Unit	District
1-50	UNKNOWN-- SAND BARREL	SAND BARREL-- UNKNOWN	Other		190	1
County ID	County	Section	Sub Section	State Road	US Road	Mile Post
17	SARASOTA	75	32	SR 93		5.418
Location wrt Road	Approaching Traffic		Work Zone?	Present Status	Remarks/Location	
RIGHT GORE	SOUTH BOUND		YES	NOT IN USE	CONSTRUCTION ZONE	

6. Development of Database Schema

This chapter of the report describes the development and refinement of the database schema, which started with the identification of four major categories or types of data in the database. It then describes the various sources of attenuator data and potential methods for collecting that data. One of the key methods pursued in this study was the collection of data from historical sources, including computerized databases and paper records. Therefore, the chapter continues by describing the quantification and evaluation of the data in those sources, which helped to refine and finalize the database schema. The procedure used to link the various data sets is also described. Finally, the resulting database model and schema are presented.

6.1 General Types of Data in Attenuators Database

The challenge in designing a database for any accident analysis system is that roadway geometries, environmental conditions, and accident characteristics are unique, with an infinite number of possible scenarios. An effective database design must be capable of describing the majority of these attributes without overburdening the system with unnecessary details. If the latter occurs, the system will be worthless, because data gatherers will tire of recording the excessive amount of data, leading to incomplete and inaccurate data, and engineers and researchers will be unable to draw conclusions or find trends in the data. Therefore, a key concern was identifying the most relevant parameters, and the most efficient ways of describing attenuators, their history, conditions during impacts, and their performance.

To fully address the needs of FDOT regarding attenuator installations, we considered data needs related to both construction zone attenuators and permanent roadside installations. With the

exception that attenuators in construction zones are subject to frequent relocation and reconfiguration, the data needs of the two types of systems are no different. A status field is used to indicate whether the installation was permanent or temporary; a second field tracks whether a record is archival or for an attenuator currently in use.

The data required to fully describe an attenuator and any activity which it might undergo during its life cycle can be separated into four categories. The data categories can be described as moving from the most general (data about an attenuator type) to the most specific (data about a specific accident involving an attenuator of a specific type). These categories of data are listed and briefly described below. In addition, a specific example of how that data might be used is also included.

- **Catalog Data:** This data is descriptive information about the types of attenuators which are available from various manufacturers and suppliers. This data, which can be drawn from manufacturer's literature and FDOT specifications, includes model numbers and specifications, as well as design criteria and key features of different attenuator types. A database user might utilize this data to review the characteristics of an attenuator to be installed for a specific project.
- **Site and Installation Data:** This data set contains installation and site information about a specific attenuator in the FDOT inventory. The data describes the roadway geometry and features, including clearances, design speeds, etc. Data in this category is collected from existing FDOT records, as well as from site investigations, and can be placed into the database as soon as a site is identified. This information is used in conjunction with data from the other categories to

evaluate the performance of various attenuators under a set of roadway and traffic conditions (e.g. high volume urban medians with clearance of less than 3 meters).

- **Accident and Incident Data:** This data set contains information about specific accidents and incidents involving an attenuator installation. The information includes driver and vehicle characteristics as well as the environment and traffic at the time of the accident. It also includes quantitative and qualitative data about the accident outcome, including damage to the vehicle and attenuator, injury to the vehicle occupants, and the overall performance of the attenuator. This information can be used to compare attenuator performance after undergoing impacts of various degrees of severity.
- **Repair and Maintenance Data:** This data describes the inspection, maintenance and impact repair history of a specific attenuator. The data includes the attenuator condition after various FDOT mandated inspections and any deficiencies noted or repairs required at that time. It also includes data collected from other FDOT maintenance and repair reports, including impact repair activities. This information can be used to compare repair rates and costs among various attenuator systems under common installation and usage criteria.

In most cases, data would also be entered in the order of the above categories. Catalog data about an attenuator model can be placed in the database before any systems are installed (or documented in the database); likewise, data describing an installation and its site conditions can be entered before any accident or repair data is available. However, the data would be incomplete and unclear if accident data were entered without a corresponding site description.

6.2 Data Sources and Data Collection

Collecting attenuator data, particularly impact data, is difficult because of the breadth and amount of information required, and because of physical and time constraints in collecting the data. A good deal of useful data often exists to support other safety and management interests of state highway departments, although it is sometimes incomplete or in different formats. Another approach is to assemble accident response teams to monitor attenuators, collect data at the scene of accidents, and follow the progress of repairs to the site. Obviously, this method is best suited for densely populated regions with high traffic volumes. A third approach relies on law enforcement and roadway maintenance personnel to record vehicle impact and attenuator repair data, respectively.

The primary approach to data collection used in this study was to rely on existing data sources where possible. Much of the required data had already been computerized and stored in mainframe databases. In the state of Florida, the Florida Traffic Crash Report (FTCR) is initially completed by a responding law enforcement officer and forwarded to the DHSMV, where portions of the data are computerized. Records of the crashes which occurred on state roads are forwarded to the Department of Transportation, along with photocopies of the original crash reports.

Computerized crash records were downloaded from the Accident Analysis Reporting (AAR) subsystem of the FDOT mainframe database in an ASCII text format. The downloaded files were limited to crashes involving traffic attenuators during 1996, the most recent year available at the time of the study. The computer records provide a good deal of information on the causes of the crash and the relevant environmental and roadway characteristics. However, there is limited information on the results of the crash, including only the number of injuries and deaths resulting from the crash.

The data sets did not include or describe several of the characteristics that were thought to be necessary to effectively evaluate the performance of a crash attenuator, such as the movement and final location of the vehicle. As a result, additional data was collected from the photocopies of the crash reports that would later supplement the data obtained from FDOT's database. The procedure by which this additional data, which is largely qualitative, was converted into a more quantitative format for easier computerization and comparison, is described in the subsequent section.

In addition to the data on the crashes involving attenuators, supplemental data was required to identify the type and condition of the attenuators involved in the crashes. This data was obtained from the FDOT Attenuators Inventory, part of the Roadway Characteristics Inventory (RCI) database. In addition to the type and model of all of the permanent attenuators in the state of Florida, the database also identifies the location (roadway section, subsection, and milepost) and position of the attenuator, and the date and condition during last inspection. Copies of the FTCT, as well as sample data from the AAR and RCI are included in Appendix H.

The inventory data is updated twice a year, upon each inspection, and old records are deleted, except in the rare case where new inspection information is missing. The data available for this study was the fall of 1998 inventory. While the inventory data is reasonably complete and accurate, model numbers are often not provided for the sand barrel arrays. When provided, the model numbers only indicate the number of each barrel size, not the exact location. In addition, construction zone attenuators are not included in the permanent inventory. Maintenance of Traffic (MOT) Accident Reports, required by FDOT for all accidents in construction zones, should provide information on

attenuators involved in work zone accidents. However, these reports proved difficult to obtain, so the only information on work zone attenuators was drawn from the accident report itself.

While a number of computer and paper records are available from FDOT Maintenance Offices and state contractors documenting the time and cost of various inspection, maintenance, and repair activities, it is difficult to obtain complete information in a consistent format across the state. For this reason, only limited repair and cost data has been entered into the database. However, a basic database structure has been provided for accommodating this data, if desired at a later date. In some cases, such as when evaluating installation time or attenuator portability, field performance data was either not available or not applicable. In these cases, catalog data was used instead.

To supplement existing databases and paper records, we investigated the effectiveness of providing supplemental accident reports to law enforcement personnel to be completed in the event of an attenuator impact. The forms requested additional information about the attenuator involved in the impact, including the nature and extent of the damage, the amount of debris scatter, and any irregularities in the path of the vehicle (e.g. curbs, drainage structures, etc.) This method of collecting data was only a limited success; the primary problems were that some forms were not returned, and others were incomplete or completed incorrectly.

6.3 Quantification and Evaluation of Crash Data

Because the crash report data, that downloaded from the FDOT AAR database and the additional data copied from the hard copies, is a key component of the attenuators database, it was considered important that it be closely aligned with the database schema in both structure and content. Many of

the data items on the crash reports were numeric or coded by FDOT and could be placed directly into a data field. Others had to be quantified after being extracted from either the narrative description or the diagram accompanying the report. This section describes the procedure involved in extracting and quantifying the crash data.

Every item in the FDOT AAR database was recorded in the database, although some, such as Traffic Control and Site Location, are less important to attenuator crashes than to some other types of crash. Because of the limited nature of the FDOT database, this data was supplemented with additional data items copied directly from the reports. (A more comprehensive crash database is presently being implemented by the FDOT, which will include more of the items from the FTCT.) The crash data was separated into categories which loosely correspond to the relational tables in the database. Some of the tables contain additional information obtained from other sources. The tables are linked together using unique identification codes. Most crashes involved one or two vehicles impacting a single attenuator; however, in a few cases, a single vehicle hit two attenuators in a single crash event.

The crash data was divided into six categories. Tables 6.1 through 6.6 list the data items in each category. The type and purpose of the data in each category is listed and described below.

- **Crash Data:** General information about the crash, used primarily to describe the conditions surrounding the crash, including possible contributing causes.
- **Attenuator and Site Data:** Information about the attenuator and its exact location, used primarily in conjunction with the FDOT inventory data to deduce which attenuator was involved

in the crash. A few data items describe the amount of damage to the attenuator and the amount of debris scattered during the crash.

- **Vehicle Data:** Information about the vehicle and its actions prior to the crash, as well as information about the amount of damage to the vehicle.
- **Vehicle-Attenuator Interaction Data:** Information about the collision, especially the type of impact and its effect on the vehicle's post-impact trajectory.
- **Driver and Passenger Data:** Information about the driver and passenger, including factors which might have contributed to the crash, and the effect of the crash on the vehicle occupants.
- **Roadway Characteristics Data:** Information about the roadway and roadside in the immediate vicinity of the crash, including information about possible contributing causes.

In addition to listing the data items in each category, Tables 6.1 through 6.6 describe the source of the data and its data type or format. A source of "FDOT Database" indicates that the data item could be downloaded directly from the AAR database. A source of "Hard Copy" means that it had to be copied from the hard copy, but that it was directly available on the data fields of the report. A source of "Narrative," "Diagram," "Data Fields," or some combination thereof means that the data item had to be extracted or inferred from the more qualitative parts of the crash report in a more subjective manner.

With respect to data type, a few fields have the types of Date, Text, and Numeric, which are both commonly used and self-explanatory. A Boolean data type indicates that the data item may only have the values "Yes," "No," or "Unknown." However, in an effort to improve searching and categorizing the data, more restrictive data types were used where possible. If a code was used by

either DHSMV or FDOT to indicate the value of a field, that same code was adopted in the Historical Performance database. These data items are identified by the data type “FDOT Code” or “DHSMV Code.” An example is the Driver’s Residence (see Table 6.5), which is coded as follows on the FTCT form:

- 1 = County of Crash
- 2 = Elsewhere in State
- 3 = Non-Resident of State
- 4 = Foreign
- 5 = Unknown

An Enumerated data type was used where there was a reasonably short list of possible data values, but no specific code was used for this data item by either FDOT or DHSMV. An example of this is the data item Stopping Mode (see Table 6.4), which describes the manner in which a vehicle came to a stop after impacting the attenuator. This field has the following legal values:

- 1 = Gating
- 2 = Controlled Stop
- 3 = Rebound
- 4 = Redirect
- 5 = Sliding/Skidding
- 6 = Unknown

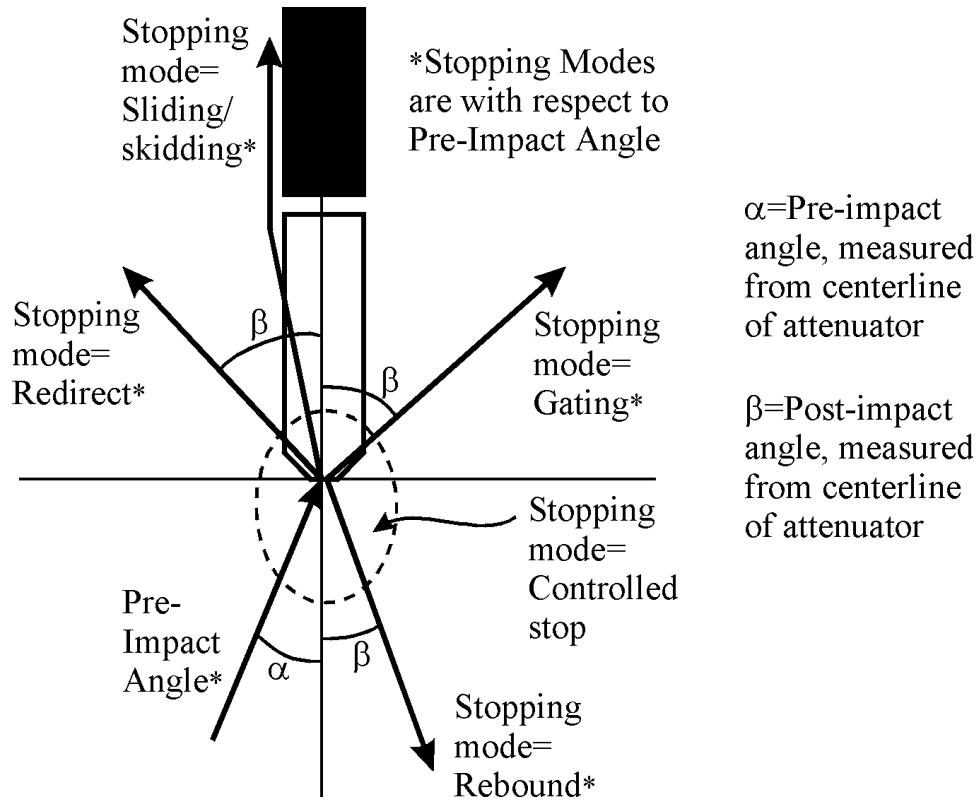


Figure 6.1: Definitions of Various Stopping Modes, With Respect to Pre-Impact Angle as Shown

Degree, Possibility, and Severity are three special enumerated types, used to provide “semi-quantitative” data where only qualitative, subjective data is available in the crash report. The possible values of these types are as follows:

- **Possibility:** Yes, No, Possible, Unknown
- **Degree:** Very Small, Small, Medium, Large, Very Large, Unknown
- **Severity:** None, Minor, Moderate, Severe, Unknown

A data type of “Possibility” is used to describe whether Overriding occurred, for instance, because no quantitative answer to this question is provided on the crash report. However, a value of “Possible” might be justified based on supportive information the Diagram and Narrative, coupled with an Area of Damage value indicating damage to the undercarriage of the vehicle. Likewise, a data type of “Degree” is used for Post Impact Distance, Lateral and Longitudinal (see Table 6.4) because the information in the narrative and diagram portions of the crash report are usually not detailed enough to support exact numbers. The information is, however, sufficient to make a judgment as to the approximate distance the vehicle traveled after impacting the attenuator.

Table 6.1: Names, Sources, and Types of Data Items About the Crash

Crash Data Items	Source	Data Type
Crash Report Number	FDOT Database	DHSMV Code
Year, Month, Day, Hour of Crash	FDOT Database	Date
First Harmful Event (25=Collision w/Crash Attenuator)	FDOT Database	DHSMV Code
Subsequent Harmful Event	FDOT Database	DHSMV Code
Road Side (e.g. On road, Shoulder, Median, etc.)	FDOT Database	FDOT Code
Accident Lane Number	FDOT Database	Numeric
Narrative Description	Hard Copy	Text
Lighting	FDOT Database	DHSMV Code
Weather	FDOT Database	DHSMV Code
Contributing Cause Environment	Hard Copy	DHSMV Code
Pedestrian Action	Hard Copy	DHSMV Code

Table 6.2: Names, Sources, and Types of Data Items About the Attenuator and Site

Attenuator/Site Data Items	Source	Data Type
County	FDOT Database	FDOT Code
State Road Number	FDOT Database	Text
Roadway Section Number	FDOT Database	FDOT Code
Roadway Subsection Number	FDOT Database	FDOT Code
Milepost (of Accident)	FDOT Database	Numeric
Nearest Node	FDOT Database	DHSMV Code
Location with respect to Roadway (e.g. Gore, Median)	Diagram	Enumerated
Approaching Traffic Direction	Diagram	Enumerated
Shielded Object	Diagram, Narrative	Enumerated
In Work Zone?	Diagram, Narrative, Data Fields	Boolean
Suspected Type of Attenuator	Diagram	Enumerated
Estimated Damage Cost	Hard Copy	Numeric
Extent of Damage	Narrative, Data Fields	Severity
Debris Scattered	Diagram, Narrative	Severity
Owner	Hard Copy	Enumerated

Table 6.3: Names, Sources, and Types of Data Items About the Vehicles

Vehicle Data Items	Source	Data Type
Driver Action (e.g. Phantom/Hit and Run Vehicle)	Hard Copy	DHSMV Code
Vehicle Make	Hard Copy	Enumerated
Vehicle Type	FDOT Database	DHSMV Code

Vehicle Defect	Hard Copy	DHSMV Code
Vehicle Special Function	Hard Copy	DHSMV Code
Estimated Speed	Hard Copy	Numeric
Vehicle Movement	FDOT Database	DHSMV Code
Vehicle Direction	FDOT Database	DHSMV Code
Estimated Damage Cost	Hard Copy	Numeric
Extent of Damage	Narrative, Data Fields	Severity
Damaged Areas	Hard Copy	DHSMV Code

Table 6.4: Names, Sources, and Types of Data Items About the Vehicle-Attenuator Interaction

Vehicle-Attenuator Interaction Data Items	Source	Data Type
Final Resting Place	Diagram, Narrative	Enumerated
Final Orientation	Diagram, Narrative	Enumerated
Post Impact Distance (Longitudinal)	Diagram, Narrative	Degree
Post Impact Distance (Lateral)	Diagram, Narrative	Degree
Number of Lanes Crossed	Diagram, Narrative	Numeric
Pre Impact Angle	Diagram	Degree
Post Impact Angle	Diagram	Degree
Impact Point on Attenuator	Diagram, Narrative	Enumerated
Impact Point on Vehicle	FDOT Database	DHSMV Code
Vehicle Approach from Rear of Attenuator?	Diagram	Boolean
Evidence of Pocketing	Diagram, Narrative	Possibility
Evidence of Snagging	Diagram, Narrative	Possibility
Evidence of Overriding	Diagram, Narrative	Possibility

Evidence of Underriding	Diagram, Narrative	Possibility
Stopping Mode	Diagram, Narrative	Enumerated
Spin Behavior	Diagram, Narrative	Enumerated
Impact with Shielded Object	Diagram, Narrative	Severity

Table 6.5: Names, Sources, and Types of Data Items About the Drivers and Passengers

Driver/Passenger Data Items	Source	Data Type
Residence (Driver Only)	Hard Copy	DHSMV Code
Age	FDOT Database	Numeric
Sex (Driver Only)	Hard Copy	DHSMV Code
Physical Defects (Driver Only)	Hard Copy	DHSMV Code
Alcohol/Drug Use Suspected (Driver Only)	Hard Copy	DHSMV Code
Blood Alcohol Results (Driver Only)	Hard Copy	Numeric
Contributing Cause-Driver (Driver Only)	FDOT Database	DHSMV Code
Citation Issued (Driver Only)	Hard Copy	Enumerated
Location in Car (Passenger Only)	Hard Copy	DHSMV Code
Safety Equipment Used	Hard Copy	DHSMV Code
Ejected?	Hard Copy	DHSMV Code
Severity of Injury	Hard Copy	DHSMV Code

Table 6.6: Names, Sources, and Types of Data Items About the Roadway

Roadway Data Items	Source	Data Type
Average Daily Traffic	FDOT Database	Numeric
Curvature of Main Movement	Diagram	Enumerated
Curvature of Secondary Movement	Diagram	Enumerated
Posted Speed	Hard Copy	Numeric
Location Type (e.g. Business, Residential, Open Country)	Hard Copy	DHSMV Code
Rural or Urban Location	FDOT Database	FDOT Code
Road Type (Divided, One-Way, Substandard, Etc.)	FDOT Database	FDOT Code
Road System Identifier	Hard Copy	DHSMV Code
Trafficway Character (Level/Grade, Curve/Straight)	FDOT Database	DHSMV Code
Traffic Control Devices	FDOT Database	DHSMV Code
Site Location (Intersection, Railroad Crossing, Bridge, Etc.)	FDOT Database	DHSMV Code
Type of Shoulder	Hard Copy	DHSMV Code
Number of Lanes-Main Movement	FDOT Database	Numeric
Number of Lanes-Secondary Movement	Diagram	Numeric
Road Surface	FDOT Database	DHSMV Code
Road Defect/Contributing Cause-Roadway	FDOT Database	DHSMV Code
Road Name and Intersection	Hard Copy	Text

6.4 Database Model

Once the available data sets were identified, evaluated, and, where necessary, quantified, a database model and schema could be developed. One way to graphically represent the data in the attenuators database and the relationships between various data items is with an Entity-Relationship (ER) model

or diagram. The ER diagram is a conceptual modeling methodology that is well recognized and often used in the computer science community. Conceptual modeling, as defined in [Loucopoulos92], is the activity of formally describing some aspects of the physical and social world around us for purposes of understanding and communication. Along with the graphical ER diagram, the ER method includes an algorithm that enables a relational database schema to be developed directly from the diagram in a systematic fashion. Using such an approach improves both the quality and timeliness of the database design procedure.

Figure 6.2 depicts the basic configuration of the database using an ER diagram. An ER diagram distills the information content of a domain area down to the concepts of 1) entities or objects, 2) relationships between those entities, and 3) attributes or properties of the entities and relationships. The entity name is at the top of each rectangle, and the attribute names follow the solid line. The term *PK* denotes an attribute which acts as a primary key for the entity. The term *FK* denotes an attribute which is a foreign key, indicating a relationship to another entity, which is connected by a dashed line to the entity possessing the foreign key.

The principal entity Attenuator is in the center of the figure. With respect to the data categories described in Section 6.1, catalog data is to the upper right, site and installation data is to the upper left, inspection and repair data is to the lower left, and accident data is to the right and lower right of the figure. A number of the attributes are actually implemented as foreign keys to lookup tables containing the allowable attribute values. These entities are not shown in Figure 6.2 because of space limitations.

As stated previously, a standard algorithm exists to create a relational database from an ER diagram. This procedure was used to create the database structure used in this project. In general, each entity in the diagram represents a table in the database, and each attribute in the diagram represents a column or field in the table. The primary and foreign keys create the links between the tables as described in Section 5.3 of the report. Because of its size, the complete schema of the database, represented as SQL commands for defining tables, columns, and keys, is included in Appendix B.

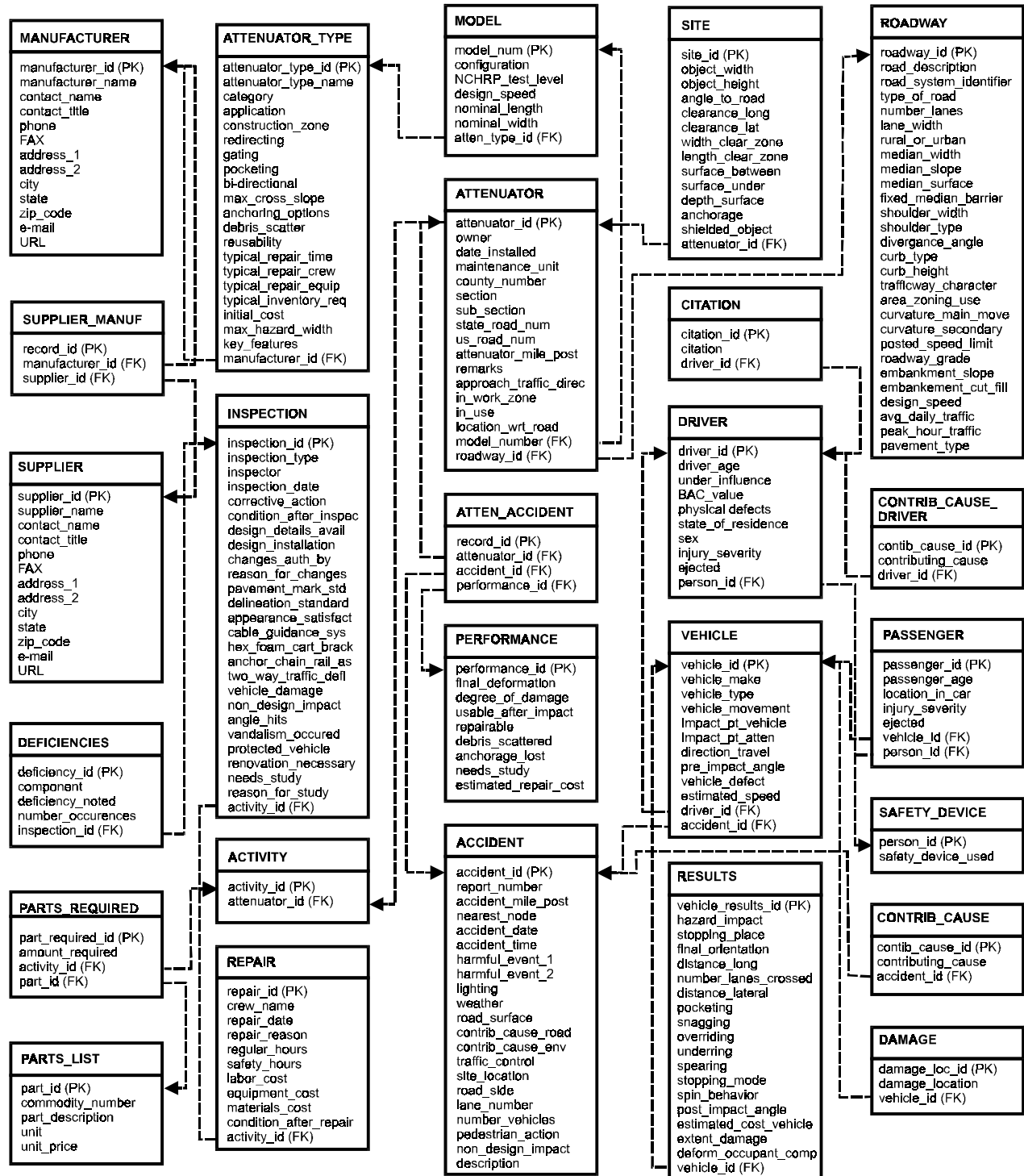


Figure 6.2: Entity-Relationship diagram of Attenuator Performance Database

7. Populating the Database

The primary data sources and methods of collecting data used in this project were described in Section 6.2. This chapter provides a brief example of extracting data from a crash report for use in the database, plus a description of the procedures used in linking the crash data to the attenuator inventory data. The full set data currently in the database is included in Appendix C.

7.1 Extracting and Quantifying Crash Data

As an example of how the crash data was quantified and coded, consider the crash report whose Diagram is as given in Figure 7.1. From the diagram, the pre- and post-impact angles were determined to be Small (0-15 degrees) and Large (30-90 degrees), respectively. The stopping mode of the vehicle was determined to be Rebound, with a 90 degree spin. Finally, the post-impact trajectory was evaluated as Small (4-8 m) longitudinally and Very Small (0-4 m) laterally. Note that the guardrail at the far side of the exit ramp prevented further rebound. As is common with crash reports, additional data regarding damage to the attenuator is not available from the diagram or the narrative of this crash.

7.2 Linking the Crash and Inventory Data Sets

As seen in Figure 7.1, the type of attenuator is difficult to infer from the Diagram included with the crash report. In addition, to properly judge the performance of various attenuator systems, the exact type and model of attenuator, as well as its age, condition, and maintenance history, the crash data must be linked to the FDOT inventory data. To link the data sets, the attenuator location, which is described by several columns the FDOT inventory database was matched with the crash location, items one through six of the attenuator site data in Table 6.2. Initially, a criteria was established that

the milepost number of the attenuator and the crash must match within one tenth of a mile to be considered an exact match. However, it was later seen that crash mileposts and attenuator mileposts could vary by several tenths a mile. This occurred because of distances between initial and secondary

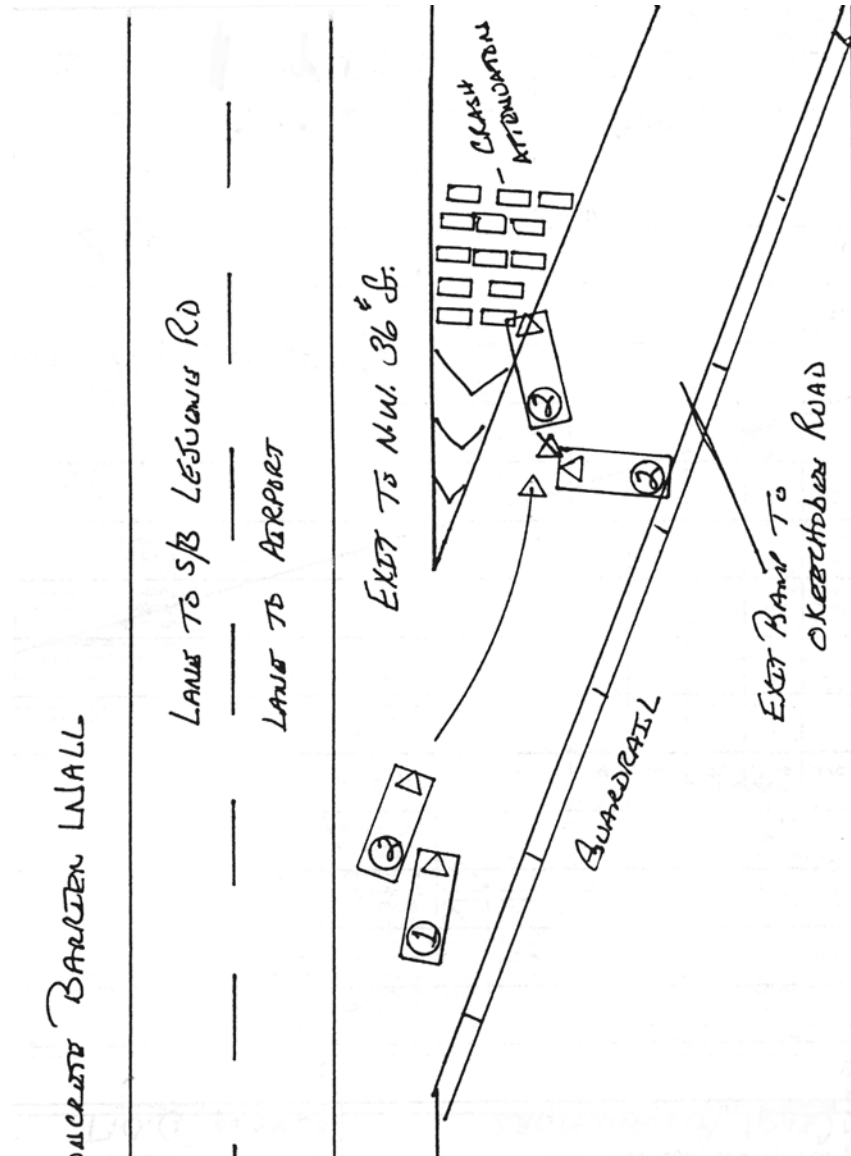


Figure 7.1: Portion of Diagram from Attenuator Crash Report

impacts, and distances between the beginning of exit ramps, where the node number is established, and the end of the exit ramp, where the attenuator is often located.

Because of the number of attenuators which did not match using this limit, a third data set was added. Printouts containing Roadway ID's (County, Section, and Subsection numbers), Node Numbers, Milepost numbers, and Node Junction Descriptions were obtained from the RCI database. First, the printouts were used to verify that the milepost and node number on the crash report were consistent with that shown on the printout. If the text description on the crash report did not correspond to that of the same node on the RCI printouts, a new milepost was selected that more closely match the text description of the crash.

If no data transcription errors were found, additional information from the crash report was used to match the records. As indicated in Table 6.2, the crash report diagram and other data could be used to deduce the attenuation's location with respect to the roadway, the direction of approaching traffic, and suspected type of attenuator. If these items matched the inventory data, and the mileposts were within two tenths of a mile, a match was made. The additional attenuator placement information was particularly useful when several attenuators were located very closely together. Samples of all relevant data reports are included in Appendix H.

One group of attenuators which deserves extra attention are those used in construction zones. Such attenuators are put in place temporarily and relocated frequently, and thus do not appear in the FDOT Inventory Database. The FTCT does not have a separate data item for work zone crashes; however, it does provide a field for Contributing Cause, Roadway which has a code for Road Under

Repair/Construction. This value is only intended for use when the road construction contributes to the crash; therefore, many crashes in construction zones do not have this code.

As a result, several additional techniques were used to identify construction zone attenuators. An attenuator owner other than FDOT was presumed to indicate the presence of a private contractor, thus a construction site. In addition, the narrative and diagram portions of the crash report often referred to a construction zone in the vicinity of the crash. Because of the prevalence of sand barrel arrays in Florida highway work zones, any construction zone attenuator depicted on the crash report diagram as a series of barrels was assumed to be a sand barrel array.

8. Decision Support System

To supplement the reports which can be generated to analyze the historical performance data in the attenuators database, a prototype multi-criteria decision support system (DSS) was developed. The DSS uses a decision hierarchy to rank various attenuator configurations based on their performance under a set of roadway and site characteristics. The tree structure, which is based on criteria established after careful review of relevant literature, including the AASHTO Roadside Design Guide [AASHTO96] and the NCHRP crash test specifications in Report 350 [NCHRP93], is shown in Figure 8.1. Referring to the background material in Chapter 3, several direct relationships between the DSS criteria and the NCHRP test standards are evident.

Briefly, the top node on the tree is the overall objective function which is used to evaluate an attenuator. The nodes on the second level are the three goals on which the decision is based: Safety, Cost, and Convenience. The third level of nodes are the criteria which are used to measure the degree to which each attenuator achieves the respective goal. Those criteria may or may not be broken into successive levels of sub-criteria, which enable a more precise measurement and differentiation between different alternates. Some criteria are listed more than once because they affect the performance of the attenuator in more than one way. Weights are placed on each node in the tree to reflect the significance of that criteria or goal in ranking an attenuator's performance. The most critical function the attenuator performs is preventing an impact between the vehicle and the shielded object. However, the manner in which the attenuator carries out that function, can have an important effect on rating the overall performance of the system. The twenty nine criteria are described in more detail below.

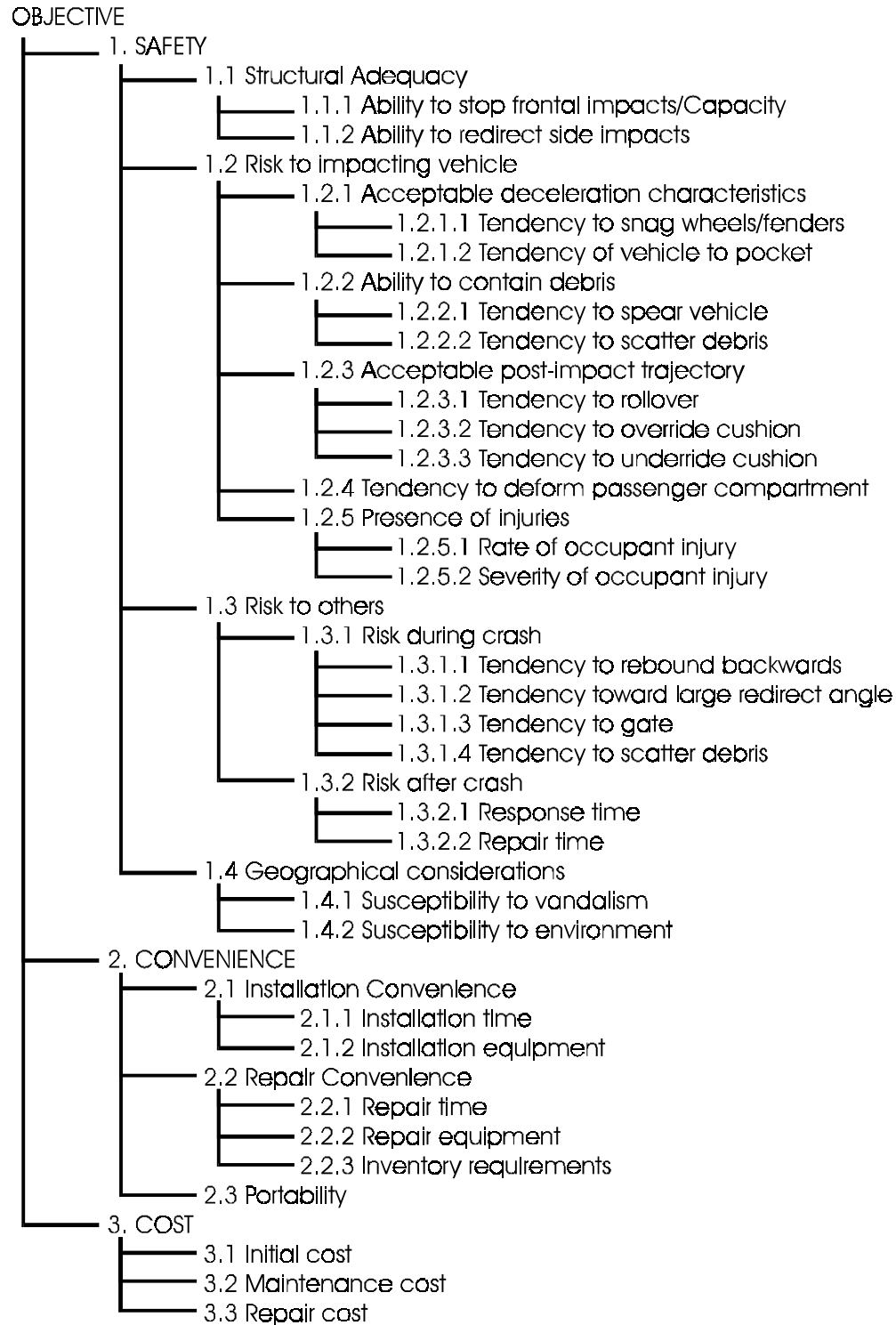


Figure 8.1: Decision hierarchy, showing Goals, Criteria, and Sub-criteria

1. **Safety:** The first goal of the decision support system is to improve the safety of the attenuator site by providing adequate structural performance, and reducing the impact both to the impacting vehicle and to the object impacted.

1.1 Structural Adequacy: An attenuator with adequate structural performance will better protect the vehicle, its occupants, and the shielded object by preventing a direct impact.

1.1.1 Ability to Stop Frontal Impacting Vehicles: Because an impact with the shielded object will most likely result in the most negative possible outcomes, an attenuator that can stop an impacting vehicle before it hits the obstacle is desirable.

1.1.2 Ability to Redirect Side Impacting Vehicles: An attenuator which can redirect side impacting vehicles is preferable to one which allows gating, pocketing, snagging, and/or other undesirable behaviors, because the impact is less likely to result in high deceleration rates and occupant injury.

1.2 Risk to Impacting Vehicle: In the event of an impact, an attenuator that produces the best outcome for the impacting vehicle is desirable.

1.2.1 Acceptable Deceleration Characteristics: High vehicular deceleration rates are correlated to high rates of occupant injury and unpredictable trajectories; therefore an attenuator that produces safe deceleration rates is desirable.

1.2.1.1 Tendency to Snag: When the vehicle snags on an attenuator, high decelerations will occur, causing a higher likelihood of severe injuries as well as unpredictable vehicle trajectories.

1.2.1.2 Tendency to Pocket: The tendency of an attenuator to pocket under vehicle impact can lead to high vehicle deceleration rates, which in turn leads to highly likelihood of severe injuries as well as unpredictable vehicle trajectories.

1.2.2 Ability to Contain Debris: Pieces of debris that fly or protrude from the attenuator after an accident may result in potential injuries to the vehicle's occupants.

1.2.2.1 Tendency to Spear/Penetrates Occupant Compartment: When the impact leads to the creation of sharp edges and pointed debris on the attenuator, the passenger compartment may rupture, thus causing injuries to the occupants.

1.2.2.2 Tendency to Scatter Debris: Excessive scatter of debris may lead to loss of vehicular control by the driver, projected object hazards, and/or reduced traction on the roadway. This increases the chances that the vehicle will be in a secondary accident.

1.2.3 Acceptable Post-Impact Trajectory: The post-impact trajectory of the impacting vehicle is very important in determining the ultimate safety of the vehicle's occupants, as well as occupants in other surrounding vehicles and pedestrians.

1.2.3.1 Tendency to Rollover: A rollover of the impacting vehicle will increase the chances of causing injuries to the occupants of the impacting vehicle.

1.2.3.2 Tendency to Override Cushion: An override of the cushion can lead to the vehicle hitting the hazardous objects or encroaching on travel lanes in the opposite direction.

1.2.3.3 Tendency to Under-Ride Cushion: An under-ride of the cushion will lead to high deceleration, which in turn will likely lead to severe injuries.

1.2.4 Tendency to Deform Passenger Compartment: Heavy vehicle damage and deformation, particularly to the passenger compartment, correlate to a higher incidence of occupant injuries.

1.2.5 Injuries: A system which results in less frequent and less severe injuries is obviously more desirable to the driving public.

1.2.5.1 Rate of Occupant Injury: An attenuator system which results in less frequent injuries is obviously more desirable to the driving public.

1.2.5.2 Severity of Occupant Injury: An attenuator system which results in less severe injuries is obviously more desirable to the driving public.

1.3 Risk to Others: In the event of an attenuator impact, there is risk to other vehicles prior to clean-up and repairs, and to other vehicles and to repair crews during the clean-up and repair operations.

1.3.1 Risk During Crash: Drivers in adjacent lanes at the time of the crash can suffer severe risks, particularly in the event that the impacting vehicle has a poor post-impact trajectory.

1.3.1.1 Tendency to Rebound Backwards: A rebound backwards from the cushion increases the chances of the vehicle will land in a travel lane and be hit by other vehicles that were following behind the original.

1.3.1.2 Tendency Toward Large Redirect Angle: Small redirect angles will reduce the possibility that the impacting vehicle will interfere with other travel lanes, while large redirect angles increase the chance of serious encroachment in adjacent travel lanes.

1.3.1.3 Tendency to Gate: Where attenuators are used in systems dividing two-way traffic or shielding construction work, gating increases the possibility that the impacting vehicle will progress into a hazardous area, thus posing an increased risk to other vehicles and workers.

1.3.1.4 Tendency to Scatter Debris: Flying debris will increase the chance of objects piercing other vehicles, blinding other drivers, and/or make other drivers swerve in an attempt to avoid the debris. This may cause an additional risk to other road users.

1.3.2 Risk After Crash: After a vehicle impact, risks to the safety of others on the road include risks to the repair crew and risks to other drivers due to the unshielded hazards.

1.3.2.1 Response Time: Response time is the time it takes for a crew to respond to an attenuator impact. The longer it takes for a crew to respond to the repair, the higher the likelihood that another vehicle may hit the unprotected hazard, adding a risk to other road users.

1.3.2.2 Repair Time: Repair time is the actual time it takes to restore the cushion to normal working order, once the repair has begun. During a repair, workers are exposed to a higher risk of being hit by an errant vehicle, thus the less time it takes to perform the actual repair the better.

1.4 Geographical Considerations: A cushion's susceptibility to vandalism or environmental deterioration can affect its safe performance. Both of these measures are highly correlated to geographical location.

1.4.1 Susceptibility to Vandalism: In the eventuality of vandalism, the hazardous object may become unshielded or improperly shielded, thus posing a safety concern.

1.4.2 Susceptibility to Environment: A susceptibility to environmental degradation can increase the need for and cost of maintaining an attenuator. In addition, the

deterioration can severely decrease the impact performance of a cushion, if undetected and unrepaired.

- 2. Convenience:** The second goal of the decision support system is to increase the convenience to construction workers and other roadway users when installing, repairing, and using crash attenuators.

2.1 Installation Convenience: A system which is more difficult to install can potentially result in inconveniences and travel delays to the driving public.

2.1.1 Installation Time: The longer the workers need to stay on the road installing the attenuator, the greater the need for more elaborate maintenance of traffic and the higher likelihood of inconvenience to the roadway users.

2.1.2 Installation Equipment: When heavy equipment is required to complete an installation, the operation of the highway may be obstructed, causing more inconvenience to other highway users.

2.2 Repair Convenience: A system which is more difficult to repair can potentially result in inconveniences and travel delays to the driving public, in addition to secondary effects on the safety and cost of the repair.

2.2.1 Repair Time: The longer the workers need to stay on the road conducting the repair, the greater the need for more elaborate maintenance of traffic and the higher likelihood of inconvenience to the roadway users.

2.2.2 Repair Equipment: When heavy equipment is required to complete a repair, the operation of the highway may be obstructed, causing more inconvenience to other highway users.

2.2.3 *Inventory Requirements*: Larger inventory required for installation and maintenance of a crash cushion result in larger storage requirements and make repairs more difficult and time-consuming.

2.3 Portability: At certain locations, such as in construction zones, portability may be a critical parameter. Some crash cushion systems are more portable than others.

3. Cost: The third goal of the decision support system is to reduce life-cycle costs when selecting attenuators. The rationale for this goal is self-explanatory.

3.1 Initial/Installation Cost: A system with a high initial or installation cost requires a large initial investment, which may reduce the funding available for other aspects of a roadway project, or result in the use of fewer attenuators.

3.2 Maintenance Cost: A system with high maintenance costs will require a high level of funding throughout its life-cycle.

3.3 Repair Cost: A system with high repair costs would be less desirable in a location with frequent impacts. This measure would be less important in a less impact-prone location.

A modular view of the data flow in the DSS algorithm is shown in Figure 8.2. Initially, the user provides a set of attenuators (alternates) to be ranked and a description of the relevant site conditions to the Input Module, where limited preprocessing occurs. Because the relative importance of each criteria depends on the specific site characteristics, the Weighting Module computes weights for each node in the tree using a combination of importance functions and consequences multipliers based on both heuristic and deterministic relationships. The Matching Module searches the database for records matching the input data and extracts the associated performance data from the database. This information is input into the Criteria Evaluation module where the effectiveness of each alternate is

measured at the criteria level. Finally, the nodal weights are combined with the criteria scores in the Ranking Module to compute an overall score for each alternate. These steps are described in more detail within the following subsections.

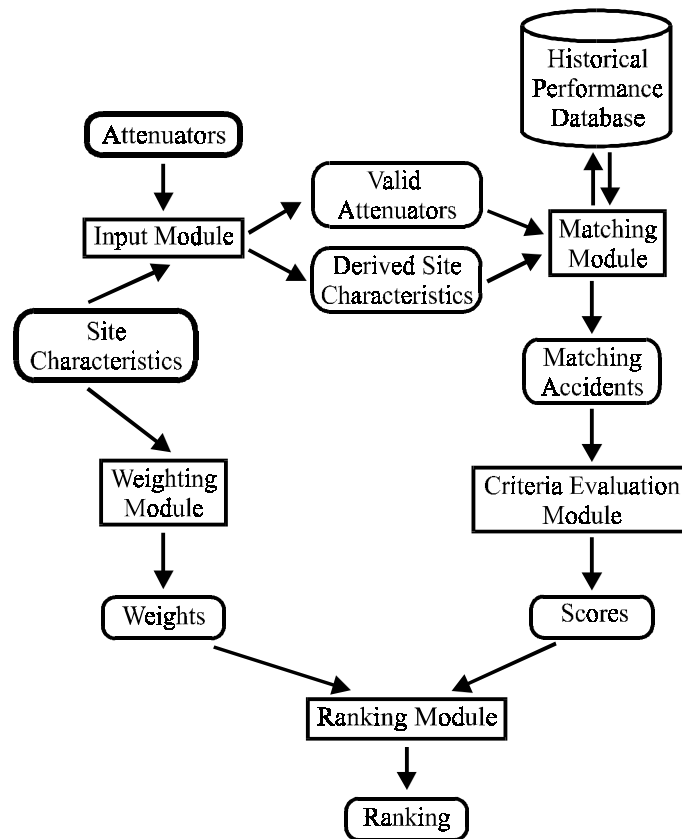


Figure 8.2: Schematic diagram of data flow between DSS modules

8.1 Input Module

As input to the DSS, the user provides the types of attenuators to be considered as alternates and a set of site characteristics that describes the site where the attenuator would be placed. The required site and roadway characteristics include the position of the attenuator with respect to the roadway (e.g. gore, shoulder, median), the roadway classification (e.g. interstate, U.S., state, county, or local road),

design speed, average daily traffic count (ADT), number of lanes, whether the site is in a work zone, and the prevailing climate. Required clearances include the lateral and longitudinal distances between the attenuator and the travel lanes, and the width and length of the clear zone behind the attenuator. (Longitudinal distance between the attenuator and travel lanes would primarily apply in gore areas.) Finally, the user must indicate whether the location is urban or rural; the four categories used in Florida are 1) outside city-outside urban, 2) inside city-outside urban, 3) outside city-inside urban, and 4) inside city-inside urban.

In addition, the user may also identify a standard (e.g. NCHRP 350) that the attenuator must meet. This information is used in the Input Module to exclude attenuators that do not meet the standard from further consideration. Although attenuator selection guidelines based on other criteria (e.g. hazard width, clearances, etc.) are available, no other constraints are used in the DSS to restrict an attenuator from further consideration. These constraints are intentionally limited for two reasons. First, many attenuators currently in use do not meet the newer standards, having been placed in service before the standard came into effect. One use of the DSS will be to evaluate the performance of those “grandfathered” attenuators against newer systems. Second, the intent of the DSS is to rank attenuators using the field performance data. If many alternates were excluded based on current design guidelines, the usefulness of the DSS would be severely limited.

8.2 Weighting Module

Using the site characteristics input by the user and derived within the Input Module, the weights of each end node in the decision hierarchy are computed within the Weighting Module. End nodes are those which do not branch any further; there are twenty-nine of them within the tree. Weights on

higher level nodes are set by an administrative user. Weights at any level can be modified from the computed or pre-set values to perform “what-if” type analyses.

The criteria weights for the end nodes are based on a combination of importance factors, computed from importance functions, and consequences multipliers. The importance functions were developed from a careful study of highway safety literature [AASHTO96, NCHRP93], and are based on deterministic or statistical data where available, and heuristic relationships where no exact data is available. Interviews with roadside safety experts at the Florida Department of Transportation were used to modify the initially proposed functions. Table 8.1 illustrates the relationships between DSS criteria and the site characteristics input by the user, and lists the consequences multipliers for each criteria. The use of the consequences multiplier is explained below.

Importance factors for the individual site characteristics are defined as I_{ij} , where i is the DSS criteria and j is the site characteristic in question. The intersecting blocks in Table 8.1 are marked with an x when an importance function exists between the site characteristic and decision criteria in question. For instance, criteria number 4 describes the tendency of a vehicle to cause an attenuator to pocket, or penetrate the attenuator, resulting in a sudden deceleration and possible impact with the hazard. This tendency becomes more important as the design speed of the roadway increases, as the rigidity of the hazard increases, and as the impact frequency of the site increases. If Attenuator A shows a much greater tendency to pocket than Attenuator B, the relative importance of that characteristic in ranking the performance of those attenuators depends largely on the design speed, rigidity of the hazard, and impact frequency of the site.

Figure 8.3 depicts the importance functions for these three relationships in graphical form. The importance functions act in an analogous manner to fuzzy set membership functions. In the first graph, for example, if the design speed on the roadway is less than 75 km/hr, the importance of not exhibiting pocketing (I_{41}) is set equal to 0.1. This is analogous to a membership of 0.1 in the set Important. If the design speed is above 100 km/hr, I_{41} equals 1.0, that is, very important. The importance of pocketing increases linearly for speeds in between 75 and 100 km/hr. This relationship was defined because low speed impacts do not pose the risk for excessive deceleration that high speed impacts do. Most importance functions have linear relationships to the associated site characteristic; however, some are exact, like hazard rigidity in Figure 8.3. The remainder of the importance functions is included in Appendix I.

After the importance factor is computed for a criteria, it is modified by a consequences multiplier, which reflects the consequences of a negative outcome. The consequences of a negative outcome can range from neutral (e.g. increased installation time) to very severe (e.g. secondary collision). The consequences multiplier is of the form 2^n , where n is an index to reflect the consequences of a negative outcome in the corresponding criteria. As the exponent increments by one, the consequences multiplier doubles; therefore, the weight of that criteria will double. Table 8.2 summarizes the possible n values and the severity of the associated consequences; n values for each criteria are listed in the last column of Table 8.1.

Once all criteria weights are available, they are normalized within each branch such that the total weight of all offspring descended from the same parent node equals one at the local level. To obtain the global weight, the local level weight must be multiplied by the global level weight of the parent.

Table 8.1: Importance Functions and Consequences Multipliers for DSS Criteria

		Importance Functions (IF _{ij})												
Criteria Number (End Nodes)	DSS Criteria	Design Speed	Traffic Count per Lane	Long. Clearance-Traffic	Lateral Clear.-Traffic	Width Clear Zone	Length Clear Zone	Work Zone Use	Rigid Hazard	Urban Loc.	Climate	Impact Frequency ³	Pedestrian Use ⁴	Consequences Exponent
	1 SAFETY													
	1.1 Structural Adequacy													
1	1.1.1 Ability to stop frontal impacting vehicles	X							X			X		3
2	1.1.2 Ability to redirect side impacting vehicles	X			X							X		3
	1.2 Risk to impacting vehicle													
	1.2.1 Acceptable deceleration characteristics													
3	1.2.1.1 Tendency to snag	X										X		2
4	1.2.1.2 Tendency to pocket	X							X			X		3
	1.2.2 Ability to contain debris													
5	1.2.2.1 Tendency to spear vehicle	X												2
6	1.2.2.2 Tendency to scatter debris	X										X		1
	1.2.3 Post-impact trajectory													
7	1.2.3.1 Tendency to rollover	X	X		X									2
8	1.2.3.2 Tendency to override cushion	X				X								1
9	1.2.3.3 Tendency to underride cushion	X			X									2
10	1.2.4 Tendency to deform passenger compartment	X												2
	1.2.5 Injuries													
11	1.2.5.1 Rate of occupant injury	X												2
12	1.2.5.2 Severity of occupant injury	X												3
	1.3 Risk to others													
	1.3.1 Risk during crash													
13	1.3.1.1 Tendency to rebound backwards	X	X	X									X	3
14	1.3.1.2 Tendency toward large redirect angle	X	X		X								X	2

³ Derived quantity based on Design speed, Traffic count, and Clear distance to traffic.⁴ Derived quantity based on Urban location and Road classification.

15	1.3.1.3 Tendency to gate	X	X			X	X						X	3
16	1.3.1.4 Tendency to scatter debris	X	X		X	X	X	X					X	1
	<i>1.3.2 Risk after crash</i>													
17	1.3.2.1 Response time							X	X				X	3
18	1.3.2.2 Repair time	X	X	X	X								X	2
	<u>1.4 Geographical considerations</u>													
19	1.4.1 Susceptibility to vandalism			X	X					X				1
20	1.4.2 Susceptibility to environment										X			0
	2 CONVENIENCE													
	<u>2.1 Installation Convenience</u>													
21	2.1.1 Installation time	X	X	X	X									0
22	2.1.2 Installation equipment			X	X	X	X							0
	<u>2.2 Repair Convenience</u>													
23	2.2.1 Repair time	X	X	X	X								X	0
24	2.2.2 Repair equipment			X	X	X	X						X	0
25	2.2.3 Inventory requirements												X	0
26	<u>2.3 Portability</u>							X					X	0
	3 COST													
27	3.1 Initial/Installation cost													1
28	3.2 Maintenance cost			X	X	X	X					X		1
29	3.3 Repair/replacement cost			X	X	X	X						X	1

For example, since the parent node Risk to others (1.3) has two offspring, Risk during a crash (1.3.1) and Risk after a crash (1.3.2), the criteria weights for those nodes must add to one after normalization. A criteria weight can be normalized by dividing it by the sum of the criteria weights for all offspring of its parent node. Normalization is performed so that all nodes operate in a unitless system, thus allowing comparison across the nodes.

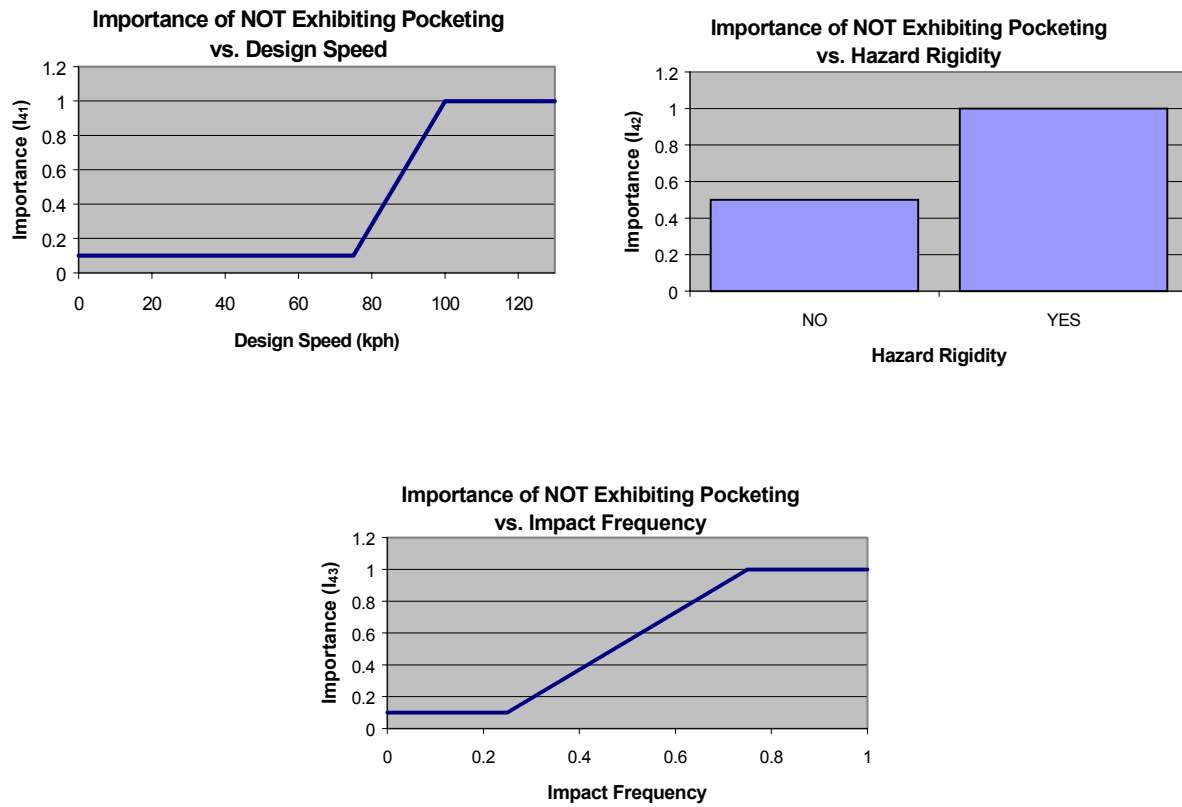


Figure 8.3: Importance Functions Describing the Importance of Not Pocketing

Table 8.2: Possible Consequences Multipliers and Associated Severity

Exponent (n)	Multiplier (2 ⁿ)	Consequences
0	1	Neutral
1	2	Somewhat severe
2	4	Severe
3	8	Very Severe

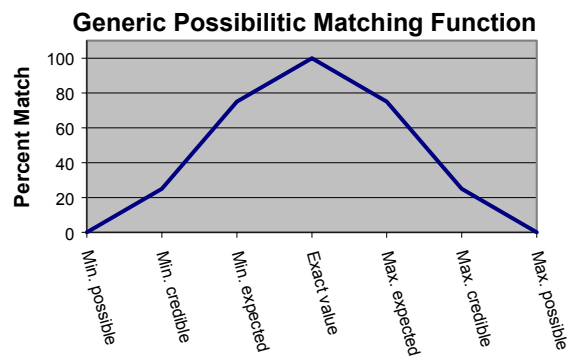
8.3 Matching Module

The Matching Module identifies attenuator records in the database which match the site characteristics input by the user. A matching routine which relied only on exact matches would unnecessarily restrict the data available to the DSS; however, there is not sufficient data to support a probabilistic algorithm. As an alternative, a possibilistic matching routine was developed. For each site characteristic, the value in the database record is compared to the value input by the user (or derived in the Input Module). An individual match score (M_i) is computed to indicate the percent match between the two values for this characteristic. After all n site characteristics are examined, an overall match score (M) for each record is computed as a weighted average as follows:

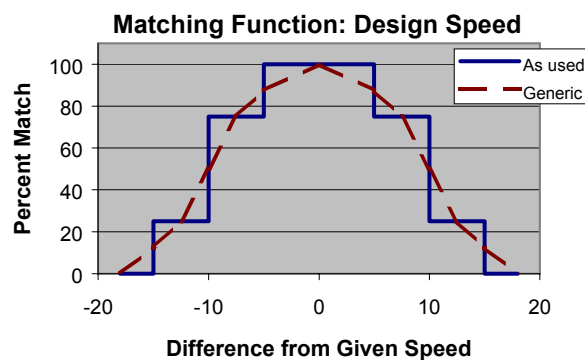
$$M = \frac{\sum_{i=1}^n M_i}{n}$$

Figure 8.4a depicts a generic form of the matching function; it is similar to a probabilistic bell curve, but the values at the ends of the range are heuristically derived from domain knowledge. To simplify processing, a step function is used within the DSS rather than the linear relationship of the generic function. Figure 8.4b contains the matching function used for design speed, with the generic function

overlaid on top. For this characteristic, speeds within five km/hr (positive or negative) of the value input by the user are deemed a 100% match, those within an additional five miles are deemed a 75% match, and those within an additional ten miles are deemed a 25% match. Speeds outside of this range are deemed not to match at all. This procedure is repeated for each site characteristic and an overall match score is computed for the record. Table 8.3 lists the values within each range for the remaining site characteristics, along with the match scores applied to the ranges.



a. Generic Form



b. Design Speed

Figure 8.4: Possibilistic Matching Functions

Table 8.3: Site Characteristic Data Ranges for Matching Attenuator Records

Site Characteristic	Percent Match			
	100%	75%	25%	0%
Design speed (kph)	± 5	± 10	± 15	$> \pm 15$
Traffic Count (ADT)/Lane	± 500	± 1000	± 2000	$> \pm 2000$
Long. Clearance-Traffic (m)	± 0.5	± 1	± 1.5	$> \pm 1.5$
Lateral Clear.-Traffic (m)	± 1	± 2	± 3	$> \pm 3$
Width Clear Zone (m)	± 0.5	± 1	± 1.5	$> \pm 1.5$
Length Clear Zone (m)	± 1	± 2	± 3	$> \pm 3$
Work Zone Use (yes/no)	match	n/a	n/a	no match
Rigid Hazard (yes/no)	match	n/a	n/a	no match
Urban Location (categories)	match	$\pm$ one category	$\pm$ two categories	$>$ two categories
Climate (extreme/not)	match	n/a	n/a	no match
Impact Frequency Factor	± 0.1	0.15	0.2	$> \pm 0.2$
Pedestrian Use Factor	± 0.1	0.15	0.2	$> \pm 0.2$

8.4 Criteria Evaluation Module

Once the matching database records have been identified, the performance of the attenuators under consideration must be evaluated for all twenty-nine criteria in the hierarchy. In general, criteria scores are computed from the database records by measuring the rate of negative accident outcomes, the frequency of repair and maintenance activities, and the time and cost required by those activities. PL/SQL statements are used to extract the required data from the database.

Criteria performance can be measured in one of four ways,. In each case, the criteria score increases as the attenuator performance in that area declines. First, an attribute may be numeric, as in the case of cost or temporal data. Second, a criteria may be Boolean, e.g. rollover, in that the outcome can only be positive (score of 0) or negative (score of 1). Third, an attribute value may fall within some qualitative range, indicating the quantity or amount of the attribute in question. In this case, lookup tables constrain these attributes to one of the following five values: Very Small (0), Small (0.25), Medium (0.5), Large (0.75), and Very Large (1).

Finally, if criteria performance falls within some severity range, e.g. severity of a frontal impact, the following definitions and outcome scores are used: None (0), Minor (0.33), Moderate (0.67), and Severe (1). The one exception is in measuring injury severity, where the format used by the state Department of Highway Safety and Motor Vehicles is adopted. In this system, an injury is identified as None (0), Possible (0.25), Non-Incompassitating (0.5), Incompassitating (0.75), or Fatal (1.0). The restriction of the data to enumerated types corresponding to these sets of values was described in Section 6.3.

Using the attribute values from the database, a raw criteria score is computed for each attenuator. The raw criteria score is a measure of the attenuator's effectiveness in that area, independent of the performance of other alternates. For each matching record, the corresponding attribute value is multiplied by the match score for the record. The resulting values are summed, then divided by the total weight of the matching records. The general formula for computing a raw criteria score (R_i) is as follows:

$$R_i = \frac{\sum_{j=1}^n (A_{ij} * M_j)}{\sum_{j=1}^n (1 * M_j)}$$

where A_{ij} = value of attribute i in record j

M_j = overall match score for record j

n = number of relevant, matching records

8.5 Ranking Module

The criteria weights, computed in the Weighting Module, and the criteria scores, computed in the Criteria Evaluation module, are used in the Ranking Module to compute an overall performance score for each alternate. Recall that criteria weights are computed for all nodes in the tree and are normalized within each branch. As such, a criteria weight only reflects the relative significance of that node with respect to other nodes sharing the same parent. By multiplying the criteria weight of an end node by the normalized weight of every ancestor node in the tree, the result is a measure of the overall significance of that node with respect to all other end nodes, regardless of parentage. If the symbol W_{ijkl} represents the criteria weight of an end node on the fourth level of the hierarchy, its final criteria weight (F_{ijkl}) is computed as follows:

$$F_{ijkl} = W_{ijkl} * W_{ijk} * W_{ij} * W_i$$

Raw criteria scores, on the other hand, are only computed for the end nodes in the tree. Most fall between zero and one because of restrictions on the attribute values, as described previously.

However, those criteria which are measured by summing the relevant attribute result in a numeric value which is representative of the original attribute, e.g. average repair time, or average installation cost. Raw criteria scores cannot be added directly, therefore, because they do not all share the same data range. Further, because every raw criteria score increases as the attenuator performance in that area declines, care must be taken to rank attenuators based on their tendency to *minimize* negative outcomes. These problems were addressed by normalizing the inverse of the raw criteria scores. The resulting quantity, known as the inverse normalized score (N_i), is computed for each attenuator based on the raw criteria score (R_i) as follows:

$$N_i = \frac{\frac{1}{R_i}}{\sum_{i=1}^n \left(\frac{1}{R_i} \right)}$$

As opposed to the raw criteria score, the inverse normalized score reflects the attenuator's comparative performance on a given criteria with respect to all other alternates. One mathematical deficiency in the method occurs when an attenuator has a raw criteria score of zero, indicating perfect performance in the area in question, because of the need to invert the score. In criteria with a maximum score of one, this shortcoming is addressed by replacing the zero score with a 0.05, which reflects 95 percent effectiveness instead. For numeric criteria, one percent of the average score for all alternates is used instead. This decision is justified in light of the relatively small data set available for any one criteria: a zero score typically occurs when very few relevant records are available.

To ease processing, both the final criteria weights and the inverse normalized scores for each attenuator are stored within one-dimensional arrays. The overall performance score for an attenuator (S_j) can then be computed by multiplying the i^{th} criteria weight by the i^{th} score for that attenuator, and summing the results for each criteria. Because the criteria scores are inverted during the normalization process, a higher attenuator score now reflects better overall performance. The equation is as follows:

$$S_j = \sum_{i=1}^n (F_i * N_i)$$

8.6 Example

To illustrate the features and action of the decision support system, an example is presented. Because the decision support system is a prototype, whose weights and importance functions have not been verified by external review, and because of the relatively small amount of data in the database, complete identifying information is not provided for the attenuator systems compared in this example. In particular, this decision was made because of the proprietary nature of the attenuator systems. This example is drawn from data records on 172 installations of six different types of attenuators. A total of 47 configurations or attenuator models were initially examined. Because of insufficient data for some of the configurations, nineteen were eliminated from consideration after individual criteria scores were computed.

Two sets of site characteristics were input to the decision support system. The first case represents a severe environment, with a high design speed and traffic count, and small clearances. The second

case represents a less extreme scenario. Both sets of input data are summarized in Table 8.4; the pedestrian usage and impact frequency factors, both derived quantities, are also included.

Table 8.4: Roadway and Site Characteristics for Two Example Cases

Site Characteristics:	Case 1	Case 2
Roadway classification	Interstate	State
Design speed (kph)	110	88
Average Daily Traffic (ADT)	95000	15000
Number of lanes	6	4
Lateral clearance to traffic (m)	3	6
Longitudinal clearance to traffic (m)	6	20
Width of clear zone (m)	4	6
Length of clear zone (m)	8	20
Work zone usage	yes	no
Urban or rural location	IC/IU	OC/OU
Climate	extreme	normal
Rigid hazard	yes	no
Pedestrian usage factor	0.6	0.35
Impact frequency factor	0.964	0.5285

The site characteristics are used in the Weighting Module to compute the weights for the end nodes in the decision hierarchy using the importance functions defined for each criteria. Table 8.5 shows the normalized criteria weights resulting from the two test cases. As intended, the site characteristics

have a significant effect on the criteria weights. For instance, the weight on the maintenance and repair costs decreases as the site conditions become less severe, while the weight on the installation cost increases. This reflects the fact that maintenance and repair are more important for the first site, which is more harsh in terms of environment and impacts, and less important in the second, less harsh site. The weights on the criteria dealing with accident performance also change as the site conditions vary. For instance, a tendency to rebound becomes more important as the longitudinal clearance decreases.

Table 8.5: Normalized Criteria Weights for Two Example Cases

Criteria	Normalized Weight		Difference
	Case 1	Case 2	
1.1.1 Frontal impact/capacity	0.522	0.456	-0.065
1.1.2 Redirect side impacts	0.478	0.544	0.065
1.2.1.1 Snagging	0.333	0.429	0.095
1.2.1.2 Pocketing	0.667	0.571	-0.095
1.2.2.1 Spearing	0.667	0.726	0.059
1.2.2.2 Scattering debris	0.333	0.274	-0.059
1.2.3.1 Rollover	0.369	0.488	0.119
1.2.3.2 Overriding	0.210	0.306	0.096
1.2.3.3 Underriding	0.421	0.206	-0.215
1.2.4 Deform pass. comp.	1.000	1.000	0.000
1.2.5.1 Rate of injury	0.083	0.083	0.000
1.2.5.2 Severity of injury	0.917	0.917	0.000

1.3.1.1 Rebound	0.314	0.176	-0.138
1.3.1.2 Large redirect angle	0.197	0.224	0.027
1.3.1.3 Gating	0.409	0.540	0.131
1.3.1.4 Scattering debris	0.080	0.060	-0.020
1.3.2.1 Response time	0.683	0.866	0.182
1.3.2.2 Repair time	0.317	0.134	-0.182
1.4.1 Vandalism	0.667	0.744	0.077
1.4.2 Environment	0.333	0.256	-0.077
2.1.1 Installation time	0.499	0.562	0.062
2.1.2 Installation equipment	0.501	0.438	-0.062
2.2.1 Repair time	0.331	0.452	0.121
2.2.2 Repair equipment	0.328	0.359	0.031
2.2.3 Inventory requirements	0.341	0.189	-0.152
2.3 Portability	1.000	0.000	-1.000
3.1 Initial/Installation cost	0.351	0.679	0.328
3.2 Maintenance cost	0.322	0.170	-0.152
3.3 Repair/replacement cost	0.327	0.151	-0.176

The effect of varying the site conditions is also reflected in the Matching Module. In the first test case, all 172 records match to some degree, with a minimum match score of 0.271 and a maximum of 0.708. Match scores are lower for the second test case: only 144 of the records match, with a maximum match score of 0.479. This is partially due to the limited number of data records in this example; however, it also reflects the fact attenuators are used more often in harsh site locations.

The final step of the DSS is computing the overall performance for each attenuator and ranking them accordingly. Table 8.6 summarizes the ranking of the twenty-eight configurations for the two sites. Because of the relatively large number of configurations being evaluated, no single model carries a large percent of the total weight. However, the highest ranked configuration received about four times the weight of the lowest ranked system for both sets of site conditions. The same general ranking trends are seen for both sites. Configuration B11 receives the highest ranking for both sites, and configuration D6 ranks very poorly in both cases. Some configurations, however, receive significantly different rankings for the two sites. Configuration B11, which received the second highest score for the less severe site, is only ranked number six for the harsh site. Configurations B5 and B25 drop by seven positions as the site conditions become more severe.

Table 8.6: Overall Scores and Rankings for 28 Attenuator Configurations

Config.	Case 1			Case 2			Position Change
	Total Score	Percent	Rank	Total Score	Percent	Rank	
B11	0.0718	7.5%	1	0.0652	6.9%	1	0
F9	0.0524	5.5%	2	0.0499	5.3%	4	-2
F7	0.0436	4.6%	3	0.0435	4.6%	5	-2
E6	0.0426	4.5%	4	0.0418	4.4%	6	-2
F5	0.0415	4.4%	5	0.0412	4.4%	7	-2
B24	0.0413	4.3%	6	0.0505	5.4%	2	4
B3	0.0408	4.3%	7	0.0500	5.3%	3	4
D1	0.0397	4.2%	8	0.0350	3.7%	11	-3
D3	0.0382	4.0%	9	0.0340	3.6%	13	-4

F4	0.0370	3.9%	10	0.0325	3.5%	14	-4
B2	0.0368	3.9%	11	0.0390	4.1%	8	3
F14	0.0361	3.8%	12	0.0345	3.7%	12	0
F12	0.0360	3.8%	13	0.0308	3.3%	16	-3
D8	0.0356	3.7%	14	0.0309	3.3%	15	-1
F8	0.0349	3.7%	15	0.0294	3.1%	18	-3
B25	0.0330	3.5%	16	0.0378	4.0%	9	7
B5	0.0320	3.4%	17	0.0367	3.9%	10	7
E9	0.0318	3.3%	18	0.0286	3.0%	19	-1
A1	0.0312	3.3%	19	0.0264	2.8%	22	-3
E15	0.0304	3.2%	20	0.0277	2.9%	20	0
D10	0.0243	2.6%	21	0.0232	2.5%	24	-3
B19	0.0240	2.5%	22	0.0306	3.2%	17	5
F11	0.0235	2.5%	23	0.0189	2.0%	25	-2
B21	0.0204	2.1%	24	0.0268	2.9%	21	3
E8	0.0198	2.1%	25	0.0187	2.0%	26	-1
F2	0.0189	2.0%	26	0.0163	1.7%	28	-2
B12	0.0178	1.9%	27	0.0248	2.6%	23	4
D6	0.0167	1.8%	28	0.0164	1.7%	27	1
Total	0.9522	100.0%	---	0.9411	100.0%	---	---

9. Condition Assessment of Construction-Zone Sand Barrel Arrays

In July 1997, a total of 19 attenuator systems in use in District 2 were inspected by project team members. The attenuators were located along a seven mile stretch of construction zone of I-95 south of Jacksonville. Inspections were conducted by team members during several consecutive ride-alongs with Florida Highway Patrol personnel. All investigated systems were single-barrel arrays consisting of six barrels in a single line.

The attenuator arrays were inspected using the criteria developed by the FDOT State Maintenance Office for the Type II inspection of sand barrel arrays. This inspection is a detailed review to ascertain that the attenuator is properly installed and in good functioning order, and to insure that all deficiencies are identified for immediate repair. Type II inspections are conducted annually on all permanent attenuator installations; a less-involved Type I inspection is also conducted six months after each Type II inspection. Copies of the forms used to conduct Type I and II inspections are included in Appendix H. To supplement the criteria provided in the inspection report, the following definitions were developed for the four condition ratings:

- **Good:** A unit that contains no deterioration, i.e., all components placed according to manufacturer's specification.
- **Fair:** A unit that contains deteriorated components, i.e., small cracks, loose lids.
- **Poor:** A unit with the following characteristics; cracks greater than five inches, two or less uncovered modules, and low sand levels or filled with dirt.
- **Critical:** A unit with more than two uncovered modules, high moisture content, and shows evidence of Caking

Using these definitions, it was concluded that 36 percent of the observed systems were in good condition, 32 percent were in fair condition, 21 percent were in poor condition, and 11 percent were in critical condition.

Poor installation and maintenance procedures were evident in many of the arrays. During the inspections, it was noted that 57 percent of the systems had at least one barrel that was severely cracked; these cracks usually were around the base of the barrels. Twenty-one percent of the arrays were misaligned; 15 percent of the barrels were leaning to one side. Four of the nineteen systems studied (21%) had misplaced lids. A similar percentage had loose lids. No splits or cracks were noticed in any of the lids; however, depressed lids were fairly common.

Almost all the barrels in each of the systems investigated were filled to their proper level, but there were two modules in particular that were almost empty. However, 26% of the observed modules were filled with dirt instead of sand. Approximately 16% of the arrays studied showed evidence of caking. In these systems, the most common deficiencies were poor placement of lids and systems filled with dirt instead of sand. Twenty-six percent of the observed systems had damp or water-logged sand instead of dry sand as required by specification. Debris and/or vegetation surrounded approximately 58% of the systems investigated.

Over the course of the summer, several images were taken of the various types of attenuators, showing their basic condition. Figure 9.1 depicts a typical six-unit array protecting the end of a temporary concrete barrier. This system was determined to be in fair condition, because the third barrel was cracked, the second had a depressed lid, and the last had a loose lid.



Figure 9.1: Sand Barrel Array in Fair Condition

Figures 9.2 and 9.3 show attenuators with debris and vegetation growing around and between the modules. The second system has cracked barrels and a missing lid, as well. These systems were first observed on 7/11/97, and were observed to be in the same condition as of 8/17/97.



Figure 9.2: Sand Barrel Array Surrounded by Vegetation



Figure 9.3: Sand Barrel Array Surrounded by Dirt, With Cracks and Missing Lids

Figures 9.4 and 9.5 show a misaligned system that might have resulted from an impact with a construction vehicle. As a result, the system was thrown out of alignment; two barrels were cracked, and one barrel was tipped. This system was filled with dirt and not sand. The condition of the system was first noted on 7/30/97, and was still in same condition as of 8/17/97.



Figure 9.4 Close-up of Misaligned Sand Barrel Array



Figure 9.5: Front View of Misaligned Sand Barrel Array

Figures 9.6 through 9.8 show a typical example of a system in critical condition. Four barrels were uncovered, and the other two had loose lids. The system was poorly aligned; several barrels were slumping, and two were tipped over. The uncovered barrels had wet dirt, and caking was evident in at least three barrels. All barrels were filled with dirt instead of sand. These observations were initially made on 7/11/97. On 7/30/97, the same system was in the condition shown in Figure 9.8. By 8/12/97, the entire system had been removed.



Figure 9.6: Barrel Filled with Dirt Rather Than Sand



Figure 9.7: Sand Barrel Array in Critical Condition



Figure 9.8: Same Array Over Two Weeks Later

10. Results

This chapter summarizes the accident causation and results data in the attenuators database. It is primarily drawn from the tables created by the computerized information system in the View Data/Reports module described in Section 5.5. Note that the totals in most tables below indicate the total number of accidents or vehicles for which that type of data was available. Since every data item is not available for each accident, this value may vary from table to table.

10.1 Available Data

In recent years, attenuator crashes have represented slightly less than one percent of all crashes in the state of Florida. In 1996, 134 crashes were identified from the FDOT AAR database (by First or Second Harmful Event equal to Collision with Crash Attenuator) as attenuator crashes. Paper copies of the crash reports were found for 113 of these crashes; 11 reports were eliminated from the study because they involved either collisions with other roadside features (such as barricades and curbs) or non-design vehicles (such as motorcycles or heavy trucks). Several accident reports were eliminated because they involved so-called Gator attenuators, which are the tapered end treatments used at the end of some concrete barrier walls and in front of certain toll booth fixtures. However, because of possible rollover problems with this type of end treatment, their performance is briefly discussed in Section 10.7.7.

Of the 102 design impacts for which paper copies were available, 20 crashes were identified as occurring in construction zones using the techniques described in Section 7.1. These crashes could not be linked with the inventory data; however, from the diagrams, narratives, and other information

in the reports, all were judged to be sand barrel arrays. Of the 82 remaining crash reports, 71 could be linked with the attenuators inventory.

10.2 Attenuator Usage

There are 1,635 attenuators in the permanent inventory at FDOT. Table 10.1 details how they are distributed by attenuator type or model. The most commonly used attenuator in the state of Florida is the G-R-E-A-T, while the least commonly used is the Quad-Guard, a similar design which meets NCHRP 350 requirements. The G-R-E-A-T system presently accounts for 73 percent of the permanent attenuator inventory, while the Quad-Guard accounts for less than 2 percent. A single Dragnet attenuator, a drop-down arresting barrier intended to completely close a roadway, was neglected for this study. As a whole, sand barrel arrays account for around 8 percent of the permanent attenuators.

While exact numbers are not available on construction zone attenuators, sand barrel arrays are the most prevalent system in use in Florida highway work zones. The database includes 20 construction zone attenuators, all of which were identified as sand barrel arrays of unknown type. (Further, all of the attenuators in the database of type “Sand Barrel—Unknown” are construction zone attenuators; all of the attenuators of type “Sand Barrel—Energite” and “Sand Barrel—Fitch” are permanent installations. This information is useful in comparing the performance of sand barrel arrays in permanent and construction zone use.)

Table 10.1: Distribution of Permanent Attenuators in Florida by Attenuator Type

Type	Number	Percent
G-R-E-A-T	1192	73
Hex Foam Sandwich	200	12
Hi-Dro Cluster	36	2
Hi-Dro Sandwich	54	3
QuadGuard	26	2
Sand Barrels—Energite	90	6
Sand Barrels—Fitch	31	2
Unknown	4	0.2
Dragnet	1	0.06
Total	1635	100

Table 10.2 details the distribution by FDOT district. In the first set of columns, attenuators on the turnpike, which is treated as District 8 in most of the FDOT administration, are separated from the district in which they are physically located. (The turnpike, and therefore District 8, crosses Districts 4, 5, 6, and 7.) In the second set of columns, the turnpike attenuators are merged with the county and district in which they are physically located. It is evident that the turnpike accounts for almost half of the attenuators in the state. Merging the turnpike attenuators with the surrounding counties, the regions covered by Districts 4 and 5 account for over half of the attenuators. The smallest number of attenuators is in District 1, in southwest Florida.

Table 10.2: Distribution of Permanent Attenuators in Florida by District Number

District	District 8 Separated		District 8 Merged	
	Number	Percent	Number	Percent
1	49	3	49	3
2	109	7	109	7
3	73	4	73	4
4	110	7	468	28
5	304	18	477	29
6	193	12	290	18
7	129	8	188	11
8	688	42	N/A	N/A
Total	1654	100	1654	100

10.3 Inspection Results

Most of the inspection data in the database was taken from the Fall 1998 inventory, the only one available at the time of the study. Table 10.3 details the condition of the attenuators according to attenuator type, and Table 10.4 details the attenuator conditions by district. Because the inspection data is not for the same time period as the accident data described below (taken from 1996 crash reports), no attempt was made to correlate the attenuator condition to the accident outcomes. As more data is added to the database, this relationship can be explored in more detail.

Table 10.3: Condition After Inspection, by Attenuator Type

Attenuator Type	Good	Fair	Poor	Critical	Total
G-R-E-A-T	1150	25	4	0	1179
Hex Foam Sandwich	204	2	1	0	207
Hi-Dro Cluster	31	4	0	0	35
Hi-Dro Sandwich	33	22	0	0	55
QuadGuard	29	1	0	0	30
Sand Barrels—Energite	84	6	0	0	90
Sand Barrels—Fitch	31	1	0	0	32
Unknown/Other	4	0	0	0	4
Total	1566	61	5	0	1632

Table 10.4: Condition After Inspection, by District

District	Good	Fair	Poor	Critical	Total
1	40	8	0	0	48
2	107	0	0	0	107
3	72	0	0	0	72
4	100	6	1	0	107
5	301	4	0	0	305
6	170	9	3	0	182
7	95	26	1	0	122
8	677	7	0	0	684
Total	1562	60	5	0	1627

The vast majority, 96 percent, of the attenuators in the state are in Good condition. Only five, less than one percent, were in Poor condition upon inspection, and none were in Critical condition. In general, the inspection process makes maintenance engineers aware of severe deficiencies, and they are often rectified during the inspection itself. Only sixty percent of the Hi-Dro Sandwich systems were in Good condition at the time of the inspection: This was the smallest percentage of all of the attenuator types. The next closest was the Hi-Dro Cluster, of which almost 89 percent were in Good condition at the time of the inspection. Examined by district, Districts 1 and 7 had a higher than average rate of deficiencies (attenuators not in Good condition). Districts 4 through 6 had relatively few deficient attenuators. Finally, Districts 2 through 3 had no deficient attenuators at the time of the inspection.

10.4 Accident Rates

A total of 91 accidents are documented in the attenuators database. Table 10.5 details how they are distributed among the various attenuator types. Whereas 73 percent of the attenuators were G-R-E-A-T's, less than 28 percent of the accidents involved G-R-E-A-T's. (This number would be 35 percent if only accidents in permanent attenuators were considered.) Hex-Foam Sandwiches and Hi-Dro Sandwiches were involved in disproportionately high percentages of accidents. This is probably due to the locations in which those attenuators are placed. About 35 percent of the accidents involved sand barrel arrays. There were no accidents involving either Hi-Dro Clusters or QuadGuard attenuators, so no details are available on the performance of these systems.

Table 10.5: Distribution of Accidents by Attenuator Type

Type	Number	Percent
G-R-E-A-T	25	27
Hex Foam Sandwich	26	29
Hi-Dro Cluster	0	0
Hi-Dro Sandwich	8	9
QuadGuard	0	0
Sand Barrels—Permanent	12	13
Sand Barrels—Construction Zone	20	22
Unknown	0	0
Total	91	100

Table 10.6 details the distribution by FDOT district. Because the Florida Traffic Crash Reports categorizes accidents by county, accidents on the turnpike (District 8) are merged with the district that includes the county in which the accident occurred. Of the districts with most of the attenuators, District 4 has an accident rate moderately higher than the percent of attenuators in that district (37 percent of the accidents compared to 28 percent of the attenuators), whereas District 5 has almost 30 percent of the attenuators and only seven percent of the accidents. On the other hand, District 6 has over 40 percent of the accidents, but only about 18 percent of the attenuators in the state.

10.5 Possible Causes of Attenuator Impacts

Approximately 70 percent of the 101 drivers involved in attenuator crashes were male. Sixty-five percent of the drivers were residents of the county in which the crash occurred, and 31 percent were

from elsewhere in the state of Florida. The average driver's age was 35; the youngest driver was 16, and the oldest was 84. About three percent of the drivers were 60 and older. Alcohol or drugs were involved or suspected in 22 percent of the crashes. While almost 90 percent of the drivers had no known physical defects, the most common defect, "Fatigue/asleep" was attributed to 6 percent of the drivers. The most common causative factors attributed to the drivers were careless driving, cited in 34 percent of the accidents, and improper lane change, cited in about 10 percent. Excessive speed did not seem to be a significant cause of attenuator impacts: a speed exceeding either the stated limit and/or a safe speed was cited in only five of the 91 crashes.

Table 10.6: Distribution of Accidents in Florida by District

District	Number	Percent
1	1	1
2	5	5
3	1	1
4	34	37
5	6	7
6	37	41
7	7	8
Total	91	100

Weather was cited as a contributing cause in less than three percent of the accidents, although the road surface was wet in about 12 percent of the accidents. The only contributing cause, roadway, that was cited was road construction, which was indicated in less than 9 percent of the accidents. One additional accident had an "Other" contributing cause roadway marked, but no additional

explanation was offered—this accident occurred in a work zone, but the driver suffered a seizure prior to impacting the attenuator. Eight percent of the accidents occurred in rainy or foggy weather and 12 percent on wet roads. Fifty-eight percent occurred at night (85 percent of those with street lights) and less than four percent at dawn or dusk.

10.6 Impact Characteristics

The impact point on the vehicle was the front end in about 52 percent of the accidents, and the right or left front corner in 38 percent. Sixty-four percent of the vehicles hit the attenuator head-on. An additional 27 percent of the impacts were side impacts on the front quadrants. Less than 6 percent of the impacts hit the rear quadrants of the attenuator. Less than 8 percent of the impacts were from vehicles approaching from the rear. Of the design impacts, slightly over 15 percent involved passenger vans and light trucks. Two accidents involved medium trucks with 4 rear tires.

Many of the crash reports document multiple vehicles involved in the event; however, in many cases the second vehicle is a phantom or hit-and-run vehicle. (A phantom vehicle is one identified by a driver or witness as contributing to the accident, but who is not involved in any impact.) Of the 28 accidents indicated as multi-car accidents on the crash reports studied, 13 involved phantom vehicles and 3 involved hit and run vehicles. In no case did more than one vehicle impact the attenuator. Twenty-percent of the crashes involved an initial impact between two vehicles, followed by an impact with the attenuator.

10.7 Impact Results and Outcomes

This section summarizes results and outcomes of attenuator impacts in various categories, including vehicle results and outcomes, occupant results, and attenuator performance. Aggregated performance data is compared for various types of attenuator systems; HSMV Crash Report Numbers are provided for accidents with notable results. The focus of this section is the vehicles' post-impact trajectory; impacts with the hazard, other objects on the roadway, and other vehicles; and the occupants' rate and severity of injury. The FDOT attenuators inventory of permanent attenuators differentiates between Energite and Fitch sand barrel arrays. Because of the similarities in these systems, and because of the small numbers of either in use, they are combined in the following tables. However, because installation, maintenance, and usage practices are vastly different between sand barrel arrays in permanent and construction zone usage, these are considered separately in this section.

10.7.1 Impacts with Shielded Object

Since the primary function of an attenuator is to protect or shield an object from vehicle impacts, the first item to be considered is the number of vehicle impacts with the shielded object. Table 10.7 details the percent of accidents in which a vehicle impacted the hazard, and details the number and severity of those impacts. Note that this table doesn't include vehicles that, through redirection, rebound, or gating, impacted other objects on the roadside. Those are detailed in Section 10.7.5, Secondary Impacts, along with impacts with other vehicles in the roadway.

The attenuators prevented vehicular collisions with the shielded objects in the vast majority (89 percent) of all accidents. However, a major exception occurred in impacts with sand barrel arrays in

Table 10.7: Impacts with Shielded Object, by Severity

Attenuator Type	Total Number of Accidents	Number of Impacts by Severity				Percent of Accidents w/ Hazard Impact
		None	Minor	Moderate	Severe	
G-R-E-A-T	24	23	0	1	0	4
Hex Foam Sandwich	26	26	0	0	0	0
Hi-Dro Sandwich	8	8	0	0	0	0
Sand Barrels—Permanent	12	12	0	0	0	0
Sand Barrels—Construction Zone	20	12	3	5	1 ⁵	45
Total	90	81	3	6	1	11

construction zones, where 45 percent of the accidents resulted in impacts with the hazard. Because the design of sand barrel arrays is based on the conservation of momentum, a low speed (less than 10 mph (16 kph)) impact with the shielded object is a permissible part of the design. However, these impacts are of more concern because of additional negative consequences, described in subsequent sections. One of these nine impacts with the hazard resulted in fatal injury to a vehicle occupant. This accident is described in more detail in Section 10.7.6, Injury Rate and Severity, below. Eight of the nine vehicles impacting construction-zone temporary barrier walls hit the sand barrel attenuators head-on and crushed all of the barrels; the ninth vehicle (HSMV 51270498) hit the rear left quadrant of the attenuator, resulting in a moderately severe impact with a temporary concrete barrier.

⁵ Resulted in one traffic fatality.

As opposed to the construction zone sand barrel arrays, none of the impacts with permanent sand barrel arrays resulted in impacts with the hazard. In fact, the only other accident that resulted in an impact with the hazard occurred with a G-R-E-A-T system. In this impact (HSMV 50188736), the vehicle hit the rear right quadrant of the attenuator, causing it to lose anchorage and pocket, resulting in a moderately severe impact with a permanent concrete barrier.

10.7.2 Vehicle Stopping Mode

An important criteria in examining attenuator crashes is the stopping mode of the vehicle. Along with post-impact distance and post-impact angle, stopping mode defines the post-impact trajectory of the vehicle. Stopping mode describes the manner in which a vehicle came to a stop after impacting the attenuator, and has the following legal values:

- Gating
- Controlled Stop
- Rebound
- Redirect
- Sliding/Skidding
- Unknown

Figure 6.1 graphically depicts the stopping mode definitions. Stopping mode for the attenuator impacts is summarized in Tables 10.8 and 10.9. The data includes only vehicles that actually hit the attenuator, not phantom vehicles, or vehicles involved only in vehicle-vehicle impacts. The negative effect of collisions involving gating and redirection depends largely on the clearances between the

attenuator and the traveled way. Where gating is allowed, proper design practices provide sufficient clearances to prevent impacts with hazardous objects; however, controlled stops are most desirable because they decrease the possibility of secondary impacts, including vehicle-vehicle impacts (see Section 10.7.5). Sliding or skidding along the attenuator is also a generally positive outcome, because it typically keeps the vehicle out of travel lanes and away from objects on the roadside. Note that, despite the fact the sand barrel arrays are not designed to redirect errant vehicles, a stopping mode of redirect can sometimes be inferred from the data on the crash report, probably due to either evasive action taken by the driver, or a spinning post-impact trajectory following impact with the shielded object.

Table 10.8: Stopping Mode In Attenuator Crashes (Number of Impacts)

Attenuator Type	Controlled Stop	Gating	Rebound	Redirect	Sliding/Skidding Along Barrier to Stop
G-R-E-A-T	10	7	1	2	4
Hex Foam Sandwich	12	2	2	10	0
Hi-Dro Sandwich	5	1	1	1	0
Sand Barrels—Permanent	9	2	0	1	0
Sand Barrels—Construction Zone	6	3	2	5	4
Total	42	15	6	19	8

On the whole, 47 percent of the vehicles impacting attenuators stopped in a controlled manner, that is, without an excessive post-impact trajectory away from the attenuator. The next most common stopping mode, overall, is redirection, which occurred in 21 percent of the impacts. This number increases to 30 percent if vehicles that slid or skidded to a stop along the attenuator and concrete

barrier wall behind it. Rebound was the least frequent stopping mode, overall, occurring in only 7 percent of the impacts.

Table 10.9: Stopping Mode In Attenuator Crashes, by Percent

Attenuator Type	Controlled Stop	Gating	Rebound	Redirect	Sliding/Skidding Along Barrier to Stop
G-R-E-A-T	42	29	4	8	17
Hex Foam Sandwich	46	8	8	38	0
Hi-Dro Sandwich	63	13	13	13	0
Sand Barrels—Permanent	75	17	0	8	0
Sand Barrels—Construction Zone	30	15	10	25	20
Total	47	17	7	21	9

Considering each attenuator type individually, sand barrel arrays stopped vehicles in a controlled manner most frequently, resulting in controlled stops in 75 percent of the impacts. All other vehicles either gated through the array or rebounded behind it. Sand barrel arrays in construction zones, however, performed worst in producing controlled stops, stopping vehicles in a controlled manner in only 30 percent of the impacts. Another 25 percent of the impacting vehicles were redirected, and an additional 20 percent skidded along the attenuator and the barrier wall behind it. Hi-Dro Sandwiches produced controlled stops in 63 percent of the impacts, while Hex Foam Sandwiches and G-R-E-A-T's produced controlled stops in less than 50 percent of the impacts. The remaining impacts with Hi-Dro Sandwiches were evenly distributed between stopping modes of gating, rebound, and redirection.

Hex Foam Sandwiches had a high rate of redirecting vehicles (38 percent), with few gating, rebound, and skidding stops. G-R-E-A-T's had a relatively high rate of gating (29 percent), a higher than average rate of skidding along the attenuator (17 percent), and small rates of rebound and redirect.

10.7.3 Pre- and Post-Impact Angle for Redirected Impacts

Tables 10.10 and 10.11 provide more detail on the ability of the attenuators to redirect side impacts. The larger the post-impact angle, the more likely the vehicle is to redirect into a traffic lane and cause a secondary collision. These tables plot the post-impact angle as a function of the pre-impact angle. Although more detailed categories were used in the attenuators database, in these tables the angles are divided into two categories, small (less than 15 degrees) and large (greater than 15 degrees). Both frontal and side impacts are included, but the only stopping modes that are considered are redirection and sliding or skidding along the attenuator, which is interpreted as redirecting at a very small angle.

Overall, a total of 44 percent of the redirected vehicles exited the attenuators at a small angle. Seven percent of those that exited at a large angle had impacted the attenuator with a large angle; therefore, a large exit angle was not unexpected. Of concern are those vehicles that hit the attenuator head-on or at a small angle and were redirected at a large angle: 48 percent of the vehicles fell into this category. Attenuators with high rates of this type of outcome included Hex Foam Sandwiches (6 of 8 impacts), Hi-Dro Sandwiches (1 of 1 impacts) and sand barrels in construction zones (5 of 8 impacts). (Because of the small numbers of impacts involved, these are presented in terms of raw numbers, rather than percentages.) The redirective impacts attributed to sand barrel arrays are

probably due to a combination of driver action, including turning the wheel in an effort to avoid the attenuator, and

Table 10.10: Post-Impact Angle as a Function of Pre-Impact Angle, for Vehicles which were Redirected

Attenuator Type	Small Pre-Impact Angle		Large Pre-Impact Angle	
	Small Post-Impact Angle	Large Post-Impact Angle	Small Post-Impact Angle	Large Post-Impact Angle
G-R-E-A-T	3	1	2	0
Hex Foam Sandwich	2	6	1	1
Hi-Dro Sandwich	0	1	0	0
Sand Barrels—Permanent	1	0	0	0
Sand Barrels—Construction Zone	3	5	0	1
Total	9	13	3	2

Table 10.11: Post-Impact Angle as a Function of Pre-Impact Angle, for Vehicles which were Redirected, by Percent

	Small Pre-Impact Angle		Large Pre-Impact Angle	
	Small Post-Impact Angle	Large Post-Impact Angle	Small Post-Impact Angle	Large Post-Impact Angle
G-R-E-A-T	50	17	33	0
Hex Foam Sandwich	20	60	10	10
Hi-Dro Sandwich	0	100	0	0
Sand Barrels—Permanent	100	0	0	0
Sand Barrels—Construction Zone	33	56	0	11
Total	33	48	11	7

snagging upon impact with the shielded object. Note from Section 10.7.1 above that construction zone sand barrel arrays showed a high rate of impacts with the shielded object, especially when compared to those in permanent installations.

10.7.4 Vehicle Rollover

The attenuators database documents vehicle rollover as part of the post-impact spin behavior data. Because of the increased possibility of negative outcomes with vehicle rollover, the prevalence of this spin mode is described in further detail in this section and in Table 10.12.

Table 10.12: Number and Percent of Rollovers

Attenuator Type	Total Number of Impacts	Total with Rollover	Percent with Rollover
G-R-E-A-T	24	0	0
Hex Foam Sandwich	26	3	12
Hi-Dro Sandwich	8	0	0
Sand Barrels—Permanent	12	0	0
Sand Barrels—Construction Zone	20	3 ⁶	15
Total	90	6	7

A total of 6 accidents resulted in vehicle rollovers. Rollover accidents occurred only with sand barrel arrays in construction zones, where 3 of 20 impacts or 12 percent resulted in vehicle rollover, and with Hex Foam Sandwiches, where 3 of 26 impacts or 15 percent, resulted in vehicle rollover. Two of the three Hex Foam Sandwich impacts were at toll booth locations, one where redirection caused the vehicle to impact a raised concrete island and subsequently roll over. In two of the three rollover accidents involving construction zone sand barrel arrays, the vehicle did not impact the hazard prior to rollover. The third accident resulted in the death of the vehicle's driver, after the vehicle crushed all of the barrels, impacted the concrete barrier wall, and turned onto its right side. Details of this accident are provided in Section 10.7.6 below.

⁶ Resulted in one traffic fatality.

10.7.5 Secondary Impacts with Vehicles and Other Objects

Tables 10.13 and 10.14 examine the number of attenuator impacts resulting in secondary impacts with either vehicles or other objects, primarily concrete barrier walls or toll booth fixtures. Impacts with concrete barrier walls are only included if the vehicle was redirected or rebounded away from the attenuator and subsequently impacted a wall; vehicles which slid along the attenuator and the barrier wall behind it in one continuous motion are not included. The impacts are categorized by stopping mode. Overall, 23 percent of all attenuator impacts resulted in secondary impacts. Fifty-seven percent of the secondary impacts occurred when a vehicle was redirected, and 29 percent of the secondary impacts involved gating. As expected, no secondary impacts occurred during controlled stops, and only 14 percent of the rebound-type stops resulted in secondary impacts.

Thirty-one percent of the impacts with Hex Foam attenuators resulted in a secondary impact. Fifty percent of these impacts involved a redirected vehicle, 25 percent involved rebound, and 25 percent involved gating. A similar rate of secondary impacts, 29 percent, occurred in accidents involving G-R-E-A-T systems. Fifty-seven percent of these occurred when the vehicle was redirected, and 43 percent after gating. Of note is an accident involving a G-R-E-A-T (HSMV 50114173) in which the vehicle approached from the rear and appeared to snag on the G-R-E-A-T, spinning away from the attenuator and impacting a second attenuator aligned behind it.

Table 10.13: Total Number of Secondary Impacts, by Attenuator Type and Stopping Mode

Attenuator Type	Total Number of Accidents	Stopping Mode				Percent w/ Secondary Impacts
		Controlled Stop	Gating	Rebound	Redirect (including Sliding)	
		Number of Accidents w/Secondary Impacts				
G-R-E-A-T	24	0	3	0	4	29
Hex Foam Sandwich	26	0	2	2	4	31
Hi-Dro Sandwich	8	0	0	1	0	13
Sand Barrels—Permanent	12	0	0	0	1	8
Sand Barrels—Construction Zone	20	0	1	0	3 ⁷	20
Total	90	0	6	3	12	23

Secondary impacts occurred only 13 percent of the time in impacts with Hi-Dro Sandwich attenuators, a single accident in a vehicle which rebounded. Accidents involving sand barrel arrays in permanent installations resulted in only one secondary impact in which the vehicle gated through the attenuator (8 percent of the accidents), and those in construction zones resulted in secondary impacts 20 percent of the time. Seventy-five percent of these impacts involved a redirect-type stopping mode.

⁷ Resulted in one traffic fatality.

Table 10.14: Percent of Secondary Impacts, by Stopping Mode

Attenuator Type	Controlled Stop	Gating	Rebound	Redirect (inc. Sliding)
G-R-E-A-T	0	43	0	57
Hex Foam Sandwich	0	25	25	50
Hi-Dro Sandwich	0	0	100	0
Sand Barrels—Permanent	0	0	0	100
Sand Barrels—Construction Zone	0	25	0	75
Total	0	29	14	57

Secondary impacts occurred only 13 percent of the time in impacts with Hi-Dro Sandwich attenuators, a single accident in a vehicle which rebounded. Accidents involving sand barrel arrays in permanent installations resulted in only one secondary impact in which the vehicle gated through the attenuator (8 percent of the accidents), and those in construction zones resulted in secondary impacts 20 percent of the time. Seventy-five percent of these impacts involved a redirect-type stopping mode.

10.7.6 Injury Rate and Severity

Details of the occupant injuries, according to the DHSMV codes for severity, are provided in Tables 10.15 and 10.16. Data was available for 143 persons (drivers and passengers) involved in crashes with attenuators. Of those, 60 percent had either possible injuries or no evident injuries, and 14 percent had either severe or fatal injuries. Excessive speed did not seem to be a significant cause of attenuator impacts, although outcomes following high-speed crashes were fairly negative. A speed

exceeding either the stated limit and/or a safe speed was cited in five of the 91 crashes; these crashes resulted in 3 incapacitating injuries and no fatalities among both drivers and passengers. Impacts with the Hex Foam Sandwich resulted in the highest percent of incapacitating injuries, at 23 percent, but no fatalities. Similarly, 22 percent of the occupants in vehicles impacting the Hi-Dro Sandwich had incapacitating injuries, but no fatalities were recorded. Impacts with the other systems resulted in severe occupant injuries in only 10 or 11 percent of the time, about half the rate of the Hex Foam and Hi-Dro Sandwiches. Further, 2 fatalities, the only fatalities resulting from any attenuator impacts, occurred in impacts with sand barrels, both in construction zones.

Table 10.15: Total Number of Injury Severities, by Attenuator Type

Attenuator Type	None	Possible	Non-Incapacitating	Incapacitating	Fatal	Total
G-R-E-A-T	17	15	9	5	0	46
Hex Foam Sandwich	12	8	11	9	0	40
Hi-Dro Sandwich	3	2	2	2	0	9
Sand Barrels—Permanent	9	3	5	2	0	19
Sand Barrels—Construction Zone	12	5	9	1	2	29
Total	53	33	36	19	2	143

One of the fatal accidents (HSMV 52158135) was a one-vehicle accident, in which the driver, a 27 year old male was killed. The driver had no physical defects, was not drinking or using drugs, and was wearing a seat belt. The estimated speed was 55 mph (88 kph), the same as the posted speed. The accident occurred on a partly cloudy, dry, day. The vehicle, a pickup truck, hit the front of the

attenuator with its left front corner, crushing all of the barrels before impacting a concrete barrier at or near its end. Upon impact with the barrier, the vehicle began to spin, rotating counter-clockwise and lifting off its left wheels, landing on its right side. Although road construction was indicated as a contributing cause on the crash report initially, a later review did not support this conclusion.

Table 10.16: Percent of Injury Severities, by Attenuator Type

Attenuator Type	None	Possible	Non-Incapacitating	Incapacitating	Fatal
G-R-E-A-T	37	33	20	11	0
Hex Foam Sandwich	30	20	28	23	0
Hi-Dro Sandwich	33	22	22	22	0
Sand Barrels—Permanent	47	16	26	11	0
Sand Barrels—Construction Zone	41	17	31	3	7
Total	37	23	25	13	1

The second accident (HSMV 52126379), which involved two vehicles, occurred on a dry, cloudy, night. The driver of the first vehicle, a passenger van, was a 76 year old male, for whom alcohol use was suspected, pending results of a BAC test. The vehicle was traveling between 55 mph (88 kph) and 65 mph (104 kph) in a 55 mph (88 kph) zone. This vehicle hit the end of the attenuator head-on, crushing all of the barrels before impacting the end of the concrete barrier being shielded. The vehicle spun counterclockwise back onto the roadway at a large angle, crossing the inner lane and stopping in the outer lane facing the oncoming traffic. At this point, a second vehicle, traveling at 55 mph, impacted the first vehicle, causing it to spin counter-clockwise again and ejecting the right front

passenger onto the roadway. The passenger, a 45 year old male who was not wearing a seatbelt, died from his injuries. The impact and post-impact trajectory were similar to the accident described previously. Again, the vehicle crushed all of the barrels before impacting the concrete wall.

At the other end of the spectrum, 50 percent of the occupants in vehicles impacting the Hex Foam Sandwich, and 55 percent of the occupants in vehicles impacting the Hi-Dro Sandwich, either had no injuries or only possible injuries. Impacts with the G-R-E-A-T system resulted in possible injuries at most in 70 percent of the vehicle occupants, a significant improvement. Sand barrel arrays fell in between, with 63 percent and 58 percent of the occupants having at most possible injuries in impacts with sand barrel arrays in permanent and construction zones installations, respectively.

10.7.7 Note on Gator End Treatments

Seven accident reports involving so-called Gator attenuators, which are also known as Gator-nose end treatments, were found in the set of attenuator accidents obtained from FDOT. Gator-nose end treatments are the tapered end treatments used at the end of some concrete barrier walls and in front of certain toll booth fixtures. Although they were not included in the attenuators database, because they are not included in the FDOT attenuators inventory, researchers made note of potential rollover problems with this type of end treatment. Two of the seven impacts with Gator-nose end treatments resulted in vehicle rollover, a rate of 29 percent, almost twice the rate of the next closest attenuator type, sand barrel arrays in construction zones.

In addition, a third impact with a Gator-nose end treatment (HSMV 50314473) resulted in a fatality, after the vehicle was redirected at a high angle into a coin box and a traffic gate. The fatality

occurred in a one-vehicle accident, on a clear, dry, night. The fatality was the driver, who was a 37 year old male wearing a seatbelt. Alcohol use was suspected, pending a blood alcohol test. The driver did not slow when approaching a toll booth, impacting the left front of the end treatment with the right front corner of the vehicle. Upon impact, the vehicle, an automobile, was redirected at a moderate angle, impacting a coin box about 15 m past the nose of the end treatment. The vehicle snagged on the coin box, rotating 180 degrees counter-clockwise before impacting a traffic gate and stopping. The relatively large redirection angle appeared to contribute to the impact with the coin box and, ultimately, the fatality.

It is likely that other Gator accidents were recorded as collisions with concrete barrier wall rather than as collisions with crash attenuators, and, therefore, not included in this set of accident reports. However, while these outcomes may be anomalies not reflected in other accidents for which reports were not available, they certainly merit further study.

11. Conclusions

Conclusions are provided in three areas. First, the ease of collecting and utilizing the attenuators data, including difficulties encountered while accessing and linking the data, and limitations of the data, are presented. Second, conclusions regarding the applicability and usefulness of the prototype decision support system are discussed. Finally, the relative performance of the various attenuator systems is discussed.

11.1 Practicality and Limitations of Analyzing Attenuators Data

The method used to collect and match the various data sets was effective and relatively straightforward. One problem in using the FDOT permanent attenuator inventory for identifying the attenuator type is that construction zone attenuators are not included. In addition, despite the fact the a MOT report is supposed to be completed for every construction zone accident, it was difficult to obtain these reports to collect data on impacts involving construction zone attenuators.

The crash reports provided a good deal of information regarding the outcome of attenuator impacts, including vehicle stopping mode and position, pre- and post-impact angle, and injury rate and severity. Items not explicitly quantified in the report, such as evidence of secondary collisions, final resting position of vehicle, and point of impact on attenuator, can easily be extracted from the narrative and diagram portions of the report. However, it is difficult to get certain information on the vehicle-attenuator interaction, for instance, the length of attenuator crushed, amount of debris scattered, and evidence of spearing, under riding, etc. This is understandable given the focus and limitations of the crash report. It is possible to get some of this additional data from repair records; however, repair records are often difficult to link to crash records. In analyzing a set of crash reports,

the quality of the findings depends on the quality of the diagrams, in particular. Although most diagrams are not drawn to scale, sufficient detail is provided to judge distances and angles in a semi-quantitative method, as described in this paper.

Several specific deficiencies of the Florida Traffic Crash Report can be noted. First, the report differentiates between several vehicle types, including automobiles, passenger vans, and pickup trucks; however, it does not differentiate between small and large vehicles. Second and more importantly, there is not a specific field to indicate whether a crash site is in a work zone. Of the 17 crashes identified as being in a work zone by either the narrative, diagram, or other data, only 9 had the box for “Contributing Cause—Roadway=Road Under Construction/Repair” checked. This field is intended to imply that the construction work contributed to the crash, in the opinion of the law enforcement officer. Providing a separate field to indicate the presence of a work zone would assist in identifying and linking crash and inventory data.

Finally, an issue that must be considered when analyzing crash reports, particularly of attenuator impacts, is the high incidence of non-reported crashes. A comparison of accident and repair records indicates that crash reports are filed in at most one in ten events. Hit-and-run crashes with attenuators, where no crash report is filed, indicate a positive outcome, with no severe injury or vehicle damage. However, repair costs for all crashes should be figured into an ideal ranking and evaluation mechanism.

11.2 Applicability and Usefulness of DSS

One way in which the crash data was utilized was as input to a prototype decision support system (DSS). The DSS described in Chapter 8 uses a decision hierarchy to rank attenuators based on their rank attenuators based on their tendency to minimize negative outcomes in three areas: safety, cost, and convenience. Alternates are evaluated under a set of user-specified roadway and site characteristics using historical performance data extracted from the central database. Depending on the criteria, a combination of Boolean, scaled, and numeric data types are used to measure performance. Weights are placed on each node in the tree to reflect the significance of that criteria or goal in ranking the attenuators' performance.

Although the concept of a decision hierarchy is not new, the research described herein extends the concept in three major ways. First, all performance evaluations are based upon historical data, generally using a ratio of incidents with negative outcomes to the total number of relevant incidents. Second, a possibilistic matching algorithm is used to identify records in the database which match the roadway and site characteristics input by the user. The contribution of each record to an attenuator score is therefore modified by a match score that reflects the overall fit of that record to the user-specified characteristics. Finally, rather than relying on static criteria weights, a collection of deterministic and heuristic importance functions and consequences multipliers are used to vary nodal weights to reflect changes in the significance of each criteria as the site and roadway characteristics change. These features combine to make the DSS highly adaptive to changing site characteristics.

One limitation of the computational system is inherent with data-driven systems such as the one described herein. The decision support system needs a tremendous amount of historical performance

data in order to draw reasonable conclusions. Further, the data should be diverse, ideally containing accident records, repair records, and maintenance histories on the same attenuator installations. Because criteria scores are based on actual costs and accident outcomes, the scores are more valid when based on a greater number of records, and when there are relatively equal numbers of records for the attenuators being compared. This problem could be dealt with by displaying the number of applicable records and allowing the user to replace the criteria score with a pre-set default if necessary. For these reasons, and because of the preliminary nature of the weights and importance functions within the DSS, the example used to illustrate its features does not identify the attenuator systems or models being ranked.

11.3 Performance of Attenuator Systems

In evaluating these conclusions, one should be aware of the limitations of the procedures and data discussed in Section 10.1. In particular, this data only reflects accidents for which reports were filed, not hit-and-run accidents where the attenuator successfully shielded the vehicle and its occupants.

In examining the attenuator usage, condition, and accident rates, it is evident that G-R-E-A-T systems are the most commonly used attenuator in the state, with almost three-quarters of the attenuators being G-R-E-A-T's. Although attenuators are in every district, over forty percent are in District 8, the turnpike. District 5 has the next highest concentration, at 18 percent. The inspection results show that the vast majority of the attenuators in the state are in good or fair condition at any point in time. A significant portion of the Hi-Dro Sandwiches was in fair condition during the latest inspection, about 40 percent, compared to approximately 10 percent for the other types. Despite the fact the G-R-E-A-T systems make up approximately 73 percent of the attenuators in the state, only about 27

percent of the accidents in the database involved G-R-E-A-T's. Almost 30 percent of the accidents involved Hex Foam Sandwiches, which only make up 12 percent of the inventory. This probably reflects differences in placement for the two types of attenuators, i.e. that Hex Foams are in more crash-prone locations, but it might also indicate that Hex Foams are less visible to drivers.

Only about 9 percent of the accidents involved Hi-Dro Sandwiches, and only 13 percent involved sand barrels in permanent installations. While there is some disparity among these percentages (over three times as many accidents with Hex Foam Sandwiches as with Hi-Dro Sandwiches), the accidents are sufficiently spread out among the attenuator types to allow reasonable comparisons to be made. However, the relatively small number of accidents with permanent sand barrel arrays and Hi-Dro Sandwiches may skew the conclusions somewhat.

Although a number of causative factors were noted in the crash reports, the most common was careless driving, which was cited in over 30 percent of the accidents. Alcohol and drug use was also suspected or confirmed in over 20 percent of the crashes. In over 90 percent of the impacts, vehicles hit the front half of the attenuator. Less than 6 percent of the impacts hit the rear quadrants of the attenuator, impacts in which snagging and pocketing are a primary concern. In addition, in no accident did more than one vehicle impact the attenuator.

11.3.1 Overall Attenuator Performance

In examining the results of the attenuator impact study, it is evident that all types of attenuators are performing well in the state of Florida. Taken as a group, attenuators prevented vehicular collisions with the shielded objects in almost 90 percent of the accidents studied. In 42 percent of the impacts,

the vehicle was brought to a controlled stop in the vicinity of the attenuator, without excessive rebound, gating, or redirection. In impacts where redirection was the stopping mode, 44 percent of the vehicles had a small redirection angle. Both controlled stops and redirection with a small angle are desirable stopping modes because the vehicle is less likely to return to the travel lanes and/or be involved in a secondary impact.

Again, looking at the group of attenuators as a whole, secondary impacts, with either vehicles in the roadway or objects other than the shielded object, occurred in about 23 percent of the accidents. Over half of the secondary impacts occurred in redirected vehicles; vehicles that gated were also involved in about 30 percent of the secondary impacts. The remainder of the secondary impacts (14 percent) occurred in vehicles that rebounded. The impacting vehicle rolled over in 7 percent of the impacts. Finally, severe or fatal injuries occurred in only 14 percent of the vehicle occupants, and 60 percent of the occupants had at most possible injuries. One can conclude that the majority of attenuator impacts result in favorable outcomes for the vehicle and its occupants.

11.3.2 Comparison of Attenuator Systems

To compare the different attenuator systems, the best and worst performers in the each area are pointed out. All compression cushions performed adequately as far as preventing impact with the shielded object; the only impact with the hazard involved a G-R-E-A-T, where the vehicle hit the rear quadrant and the attenuator pocketed. Notably, sand barrels in permanent installations also performed very well, preventing all impacts, but those in construction zones performed very poorly, allowing impacts with the shielded object in almost half of the accidents. One potential cause of these problems was an apparent lack of compliance with installation and maintenance standards by

construction contractors during the time period in question. Another possible cause of poor construction zone sand barrel performance is the use of single-barrel arrays, which was common during the time period in question.

When stopping mode is considered, sand barrel arrays in both permanent installations were the best performers, resulting in the most controlled stops, followed by Hi-Dro Sandwiches. Again, sand barrel arrays in construction zones performed significantly worse than those in permanent installations. When used in construction zones, sand barrels exhibited a much higher than average rate of impacts with shielded objects, including impacts with a velocity exceeding permissible exit velocity levels. Despite the fact that sand barrel arrays are not designed to redirect errant vehicles, this research indicated that a redirective-type stopping mode occurred with one of every four construction zone arrays. Two causes which were identified were: 1) glancing blows to the sand barrels, coupled with evasive actions taken by the driver and 2) off-center impacts with the temporary concrete barrier being shielded, resulting in snagging and spinning of the vehicle away from the attenuator in a redirective manner.

Rebound was not common with any of the attenuators, occurring most often with Hi-Dro Sandwiches (in 13 percent of the accidents), and least often (zero accidents) with permanent sand barrel arrays. Impacts where the vehicle rebounds behind the attenuator are not considered negatively in NCHRP Report 350; however, engineers and administrators at the FDOT are concerned about the risk of secondary impacts from excessive rebound. All of the vehicles that rebounded after impacting Hex Foam and Hi-Dro Sandwiches were involved in secondary collisions, whereas none of the vehicles that rebounded after impacting G-R-E-A-T's and construction zone sand barrel arrays were involved

in secondary collisions. However, the number of relevant impacts is probably not large enough to draw conclusions about the performance of the different attenuator types.

A higher than average percent of the vehicles impacting Hex Foam Sandwiches, almost 40 percent, were redirected, which is a concern because 70 percent were redirected at a large angle, despite small pre-impact angles in most cases, and 40 percent were in secondary accidents. No vehicles skidded along Hex Foam attenuators to a stop, probably because of its wedge-like shape. Combining the stopping modes of redirection and skidding along the attenuator, 45 percent of the vehicles impacting sand barrel arrays in construction zones had these stopping modes. As with Hex Foam Sandwiches, a high rate of these vehicles, 67 percent, were also redirected at large angles, and 33 percent were involved in secondary impacts. On the other hand, a much smaller percentage of vehicles impacting G-R-E-A-T's, only 25 percent, either were redirected or skid along the attenuator, and less than 20 percent were redirected at a high angle. However, 67 percent of these vehicles were involved in a secondary accident.

Overall, secondary impacts were most frequent with G-R-E-A-T systems and Hex Foam Sandwiches, occurring in about 30 percent of these impacts. Sand barrel arrays in permanent installations performed best in terms of preventing secondary impacts, followed by Hi-Dro Sandwiches. While sand barrel arrays in construction zones had an average rate of secondary accidents, occurring in 20 percent of the impacts, one of the four secondary impacts involving a construction zone sand barrel array secondary impact resulted in a fatality. In this accident, the vehicle exited the attenuator at a sharp angle and impacted a second vehicle in the roadway. Since sand barrel arrays are not designed

to redirect vehicles, and since the vehicle did not impact the hazard, resulting in snagging and a spinning trajectory, it is likely that the driver jerked the wheel following the initial attenuator impact.

Vehicle rollover was most common in impacts with Hex Foam Sandwiches and sand barrel arrays in construction zone installations, and non-existent among G-R-E-A-T's, Hi-Dro Sandwiches and sand barrel arrays in permanent installations. Two of the three rollover impacts involving Hex Foam Sandwiches occurred at toll booths, including one where redirection caused the vehicle to impact a raised concrete island and subsequently roll over. In another accident involving a Hex Foam Sandwich at a toll booth, a vehicle went airborne upon impacting the attenuator, but landed on its wheels. Potential rollover problems were also evident with Gator end treatments: an examination of seven records involving Gator-nose attenuators at toll booths indicated a rollover rate twice that of the worst proprietary attenuator.

With respect to occupant injuries, the Hex Foam Sandwich and Hi-Dro Sandwich systems had the highest rate of injuries, and the largest percent of severe injuries. Sand barrel arrays in both permanent and construction zone installations had the lowest rate of injuries and the lowest rate of severe injuries. However, two accidents involving sand barrel arrays in construction zones resulted in fatal injuries. In both accidents, the vehicles hit the front of the array, crushing all of the barrels before impacting the concrete barrier being shielded. In the first accident, the vehicle, a pickup truck, lifted off its left wheels and rotated counterclockwise, landing on its right side. The driver, who was wearing a seat belt, was killed. No alcohol or drug use was suspected; careless driving was the only contributing cause indicated in the final report. In the second accident, the vehicle, a passenger van, spun counterclockwise before stopping in a traffic lane, where it was impacted by a second vehicle.

After the second impact, a passenger in the first vehicle, who was not wearing a seatbelt, was ejected and fatally injured. Alcohol use was suspected in the crash; careless driving was also identified as a contributing cause.

The impact and post-impact trajectories were similar in both accidents involving construction zone sand barrel arrays. The arrays might have been underdesigned, as both vehicles impacted the first barrel and crashed through all of the barrels before impacting the concrete wall. Because of the placement of the attenuators in front of temporary concrete barrier walls and near the travel lanes, they probably were single-barrel arrays. In addition, in the first accident, where the pickup truck rolled onto its side, overriding of the sand barrels and barrier wall might have been a factor.

11.3.3 Summary of Conclusions and Recommendations

Combining all of these results, one can arrive at the following conclusions and recommendations.

1. Looking only at impacts documented by crash reports, one can conclude that attenuators are performing well in the state of Florida, preventing impacts with the shielded objects and stopping the vehicle in a controlled manner after most impacts. Rollover, secondary impacts, and occupant injury are relatively infrequent. It is expected that unreported accidents are, in general, less severe than those for which crash reports are completed.
2. The design of toll facilities, especially the use of so-called Gator attenuators (tapered end treatments of concrete barrier walls, also known as Gator-nose end treatments) should be studied in further detail. Based on a limited number of reports studied, the Gator-nose end treatments appear to be involved in a high number of vehicle rollover accidents. In addition,

while Hex Foam Sandwiches performed better on average than the Gator attenuators, they were also associated with a disproportionate rate of rollovers accidents when used at toll booths. Design practices that might contribute to overriding of the attenuator and subsequent vehicle rollover should be revisited.

3. Rebound does not seem to be a major problem with any attenuator system presently used in Florida. Only seven percent of the vehicles impacting attenuators rebounded behind the attenuator, although 50 percent of these vehicles were involved in a secondary impact with either another vehicle or an object on the roadside. Overall, however, only 14 percent of the secondary accidents occurred following rebound of the vehicle.
4. Hex Foam Sandwiches were effective in preventing impacts with the shielded object; however, impacting vehicles were often redirected at large angles, increasing the potential for secondary impacts. In fact, impacts with Hex Foam Sandwiches did result in the highest rate of secondary impacts, as well as occupant injuries. Hex Foam Sandwiches also appear to have a high rate of rollover accidents, especially at toll booth locations. Consideration should be given to phasing out Hex Foam Sandwiches and replacing them with systems that meet current NCHRP standards.
5. Hi-Dro Sandwiches were effective overall, performing better than average in preventing impacts with the shielded object and bringing vehicles to a controlled stop without secondary impacts. Impacts with Hi-Dro Sandwiches did result in one of the highest rates of occupant injuries. In addition, a much smaller than average percentage of Hi-Dro Sandwiches were in

good condition upon inspection, indicating possible maintenance concerns. Consideration should be given to a more rapid phase out of Hi-Dro Sandwiches, replacing them with systems that meet current NCHRP standards. However, systems in use today appear to be reasonably effective.

6. G-R-E-A-T systems were of average effectiveness. Occupants in vehicles impacting G-R-E-A-T's had the best outcomes of any attenuator system, measured by the lowest percentage of occupants with definite injuries. However accidents involving G-R-E-A-T's also resulted in a high percentage of secondary impacts, especially after gating. This is probably attributable to vehicles that had glancing blows with the attenuator without losing much speed. Accidents of note include one in which the vehicle impacted the rear right quadrant and snagged, and one in which the vehicle appeared to snag upon impacting the G-R-E-A-T from the rear. Although G-R-E-A-T's appear to be performing adequately, these phenomena should be investigated more thoroughly.
7. Sand barrel arrays in permanent installations had excellent performance in all aspects being considered. They prevented impacts with the shielded object in all cases, and were very effective in bringing vehicles to a controlled stop and preventing secondary impacts. The rate and severity of occupant injury was also lower than average. All of the permanent sand barrel arrays in the state of Florida are customized designs, specially suited to their locations. In locations with a low impact frequency where a redirective capability is not required, sand barrel arrays are potentially a low cost alternative to compression cushions.

8. Sand barrel arrays in construction zones showed several areas of concern. When used in construction zones, sand barrels exhibited a much higher than average rate of impacts with shielded objects, including impacts with a velocity exceeding permissible exit velocity levels. Although the rate of secondary impacts was low, the consequences of both types of impacts were severe, resulting in the only two attenuator-related fatalities. Large post-impact angles (after impacts with the shielded object) and rollover are also concerns. Insufficient capacity and a tendency toward overriding appeared to be causative factors in these accidents. One potential cause of these problems was an apparent lack of compliance with installation and maintenance standards by construction contractors during the time period in question. As part of this study, the researchers conducted numerous site visits to observe construction zone sand barrel arrays along Interstate-95 during July 1997, as described in Chapter 9. Condition assessments during these visits found that sand barrel arrays were often poorly aligned, in disrepair, filled with dirt or wet sand, and/or surrounded by debris, excess dirt and vegetation. Although designed with sufficient capacity, sand barrel arrays were often not installed according to standards, with the proper skew toward the roadway. Installation and maintenance practices for construction zone arrays should be reviewed and standards in these areas should be better enforced.

Another possible cause of poor construction zone sand barrel performance is the use of single-barrel arrays, which was common during the time period in question. This type of installation, in which all barrels are aligned in a single row, was used in front of temporary concrete barriers because of small clearances to the travel lane. This type of array is not included in the Federal Highway Administration's current guidelines, because single barrel

arrays provide little mass to slow a vehicle in the event of an angled impact with the rear barrels, resulting in pocketing and a potential high-speed impact with the shielded object. The data from this study showed that vehicles impacted the hazard at the same rate, regardless of where they impacted the cushion; however, because 63 percent of the impacts with crash cushions were head-on collisions, most of the vehicles that impacted the shielded object hit the front of the sand barrel array and crushed all of the barrels without coming to a stop. In light of these results, the use of single-barrel arrays should be reconsidered in the state of Florida.

9. Efforts should be made to continue populating the database developed in this study. The database system will make it easier to collect and analyze large quantities of crash records, as well as to examine individual crashes and investigate various types of crash cushions in more detail. The additional data will allow more conclusive comparisons of the different attenuator systems. It will also enhance the usefulness and practicability of the Decision Support System in the selecting attenuators and analyzing their performance. The research team is continuing data collection to support certain areas of this research.

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APPENDICES

Appendix A: Impact Performance of Crash Cushions in the State of Florida

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Appendix A is included in both paper and PDF copies of this report. Appendices B through I are included only in the PDF version of this report. Please refer to the enclosed CD-ROM for this file. The free Adobe Acrobat Reader software is required to access the file.

Appendix A: Impact Performance of Crash Cushions in the State of Florida

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and John Grant, Jr.¹⁰

ABSTRACT

A study of impacts involving crash cushions in the state of Florida was performed. Computerized and paper records of the Florida Traffic Crash Report (FTCR) were collected for a three-year period. The data was linked with the FDOT attenuator inventory database to identify the type of crash cushion involved in the impacts. Items not quantified in the reports, such as evidence of secondary collisions, final resting position of the vehicle, and point of impact on the crash cushion, were extracted from the narrative and diagram portions of the report. Impact rates varied greatly for the different types of cushions; much of this was not explainable by the traffic volume and crash rate on the surrounding roadway. Although a number of causative factors were noted in the crash reports, the most common was careless driving, which was cited in over 40 percent of the crashes. Alcohol and drug use was also suspected or confirmed in about 16 percent of the crashes. Excessive speeds did not appear to be a significant causative factor. The results of the study showed that overall, crash cushions are performing well in the state of Florida. Proprietary compression cushions were of average effectiveness, although maintenance concerns were apparent with certain cushion types.

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Sand barrel arrays in permanent installations had excellent performance in all aspects being considered. In locations with a low impact frequency where a redirective capability is not required, sand barrel arrays are potentially a low cost alternative to compression cushions. However, sand barrel arrays in construction zones showed several areas of concern, including high rates of vehicle impacts with shielded objects, poor post impact trajectories, and severe occupant injuries. A new design, consisting of a modified single-barrel array, coupled with improved installation and maintenance practices and tighter control over attenuator substitutions, have been implemented to address these concerns.

KEYWORDS: crash cushions, impact attenuators, field performance, crash analysis, database systems

INTRODUCTION

Crash cushions shield objects on the roadside from errant vehicles by gradually decelerating the vehicle to a safe stop or by redirecting the vehicle away from the hazard (AASHTO 1996). The most recent specification governing roadside safety hardware, including crash cushions, is “Recommended Procedures for the Safety Performance Evaluation of Highway Features,” Report 350 of the National Cooperative Highway Research Program (NCHRP 1993). However, many crash cushions in the state of Florida were installed prior to its adoption, and only meet the less stringent provisions of NCHRP 230 or an even older standard (NCHRP 1981).

The crash tests required by NCHRP 350 and other specifications ensure that a roadside safety device will protect vehicle occupants under expected service conditions. In general, the tests replicate a

maximum credible vehicle impact, and require the device to meet specific criteria regarding deceleration forces and change in vehicular velocity. However, these tests are based on idealized installations and carefully controlled impacts, which may be very different from service conditions. Factors that affect the in-service performance of barriers and crash cushions include, but are not limited to, driver actions, variations in road surface and condition, variations in highway geometry, and deterioration of the cushion due to age and exposure to weather.

Because of the proliferations of proprietary crash cushion designs, and because of potential differences between crash test and service conditions, it was desired to study their field performance. The two primary methods for gathering field performance data are 1) analyzing existing data sources, including police crash reports, and 2) performing in-service performance evaluations, where engineers or other trained personnel respond to a crash site immediately after an impact. Obviously, the latter method will lead to improved data on the condition of the roadside safety structure after the impact; however, the drawbacks include the difficulty and expense in providing a quick and safe response to the crash, and the lack of trained personnel.

Several studies of crash cushion performance have been conducted using one or both of these methods (Button 1977, Carlson et al. 1977, Lohrey 1994, Lohrey 1998, Stanley and Strong 1989). Most of these studies have focused on a limited number of sites, tabulating installation and repair costs as well as injury rates. Data was collected from crash response teams, police reports, and/or maintenance department repair records. With the exception of a study in New York which included 393 crashes (Carlson 1977), most of these studies included very few impacts. In most cases, this was

due to an unexpected decrease in the number of crashes at sites previously identified as high-impact locations.

In a notable effort to collect field performance data on roadside safety structures, NCHRP funded a study to evaluate the performance of guardrails and end terminals in actual field conditions (Ray and Hopp 2000a, Ray and Hopp 2000b). The team collected information using a combination of police reports, maintenance reports, and on-site visits. Data was collected for a one year period in Iowa and North Carolina, with trained personnel evaluating site characteristics and collision damage as soon as practicable after an impact. Preliminary results showed that impacts with MELT and BCT guardrail end terminals resulted in severe or fatal injuries in approximately four percent of the 144 impacts (both reported and unreported), and no statistically significant differences between the two systems were observed.

METHODOLOGY

The main objective of the research was to collect, computerize, and analyze data on the field performance of crash cushions. In addition to supporting clinical and statistical analyses, the resulting database is at the core of a computerized decision support system that ranks cushions based on the conditions at a specific site (Spainhour et al. 1999). Three years of data have presently been collected, representing crashes from the years 1996 through 1998. The two data sets used in this analysis were obtained from the Florida Department of Transportation (FDOT). Although this research addresses only crash cushions (not including guardrail end treatments or other attenuators), the term attenuator is used in both of the data sources, and therefore appears in that context within this paper.

Much of the required data had already been computerized and stored in mainframe databases. Crash records where the First or Second Harmful Event field equaled “Collision with Crash Attenuator” were downloaded from the Accident Analysis Reporting (AAR) subsystem of the FDOT mainframe database for the years 1996-1998. Photocopies of the original crash reports (Florida Traffic Crash Report or FTCT) provided supplemental data. Much of the information on the FTCT is coded and could be categorized directly. Other data items had to be extracted or inferred from the more qualitative parts of the crash report, primarily the narrative and/or the diagram. An example is the data item Stopping Mode, which describes the manner in which a vehicle came to a stop after impacting the crash cushion. After examining the FTCT diagram, one of the following values was assigned to each vehicle that impacted the cushion, based on its post-impact trajectory:

1 = Gating

2 = Controlled Stop

3 = Rebound

4 = Redirect

5 = Sliding/Skidding

6 = Unknown

In general, the definitions for Stopping Mode are based on the quadrant in which the vehicle stopped; the five categories are depicted in Figure 1 for a vehicle that approached the crash cushion from the upstream direction and the left-hand side.

Because much of the information extracted from the narrative and diagram portions of the FTCT was subjective in nature, enumerated types were often used to categorize the data in a “semi-quantitative”

manner. For example, if the vehicle hit the object being shielded by the crash cushion, the severity of that impact was categorized as Minor, Moderate, or Severe, based on the information available in the crash report. Similarly, the pre- and post-impact angles of the vehicles were determined to be Small (0-15 degrees), Medium (15-30 degrees), or Large (30-90 degrees), and post-impact distances were evaluated using five categories ranging from Very Small (0-4 m) to Very Large (50+ m) both longitudinally and laterally.

Data on the types of cushions involved in the crashes was obtained from the 1998 FDOT Attenuators Inventory, part of the Roadway Characteristics Inventory (RCI) database. The inventory includes both proprietary compression cushions and inertial cushions, primarily sand barrel arrays, in permanent installations in the state. In addition to the type of crash cushion and descriptive characteristics such as length and width, the database also identifies its location and position with respect to the roadway, and its condition during the most recent inspection. While the inventory data is reasonably complete and accurate, full descriptions are often not provided for the sand barrel arrays.

To identify which cushion was involved in a specific crash, it was necessary to link the crash data with the inventory data. First, the location of the crash (road and milepost) was compared to the attenuator inventory to tentatively identify the cushion at the crash location. It was found that the milepost associated with the crash could often vary by several tenths of a mile from that on the attenuator inventory because of distances between initial and secondary impacts, difficulties correlating ramp crashes with mainline mileposts, and inaccuracies in the crash location measurements. The position of the crash cushion with respect to the roadway (e.g. gore, median,

etc.) and the direction of approaching traffic, both available on the FDOT inventory, were also compared with the diagram on the crash report. If these items matched, and the mileposts were within two tenths of a mile, the cushion under consideration was assumed to have been the one involved in the crash.

If the crash could not be linked with an attenuator in the permanent inventory, researchers attempted to determine whether the crash occurred in a construction zone. The FTCCR does not have a separate data item for work zone crashes; however, it does provide a field for Contributing Cause, Roadway, for which Road Under Repair/Construction is a possible value. This value is intended for use only when the road construction contributes to the crash; therefore, many crashes in construction zones do not have this code. As a result, several additional techniques were used to identify crash cushions in construction zones. First, the narrative and diagram portions of the crash report were examined for references to a construction zone. Second, an owner other than FDOT indicated the presence of a private contractor, thus a construction site.

Since inventory data is not available for construction zones, it was difficult to identify the specific type of compression cushion used in a construction zone. Because of this, the only construction zone cushions that were included in this study were those that could clearly be identified as sand barrel arrays. If the type of cushion could not be identified, either as a construction zone sand barrel array or through the permanent inventory, the crash report was discarded from the database and not included in the analysis.

DATA QUALITY AND LIMITATIONS

The method used to collect and match the various data sets was effective and relatively straightforward. Paper copies were located for approximately 90 percent of the crashes in the FDOT database. Nineteen percent of these reports were eliminated from the study because they were miscoded in some way (such as collisions with construction barricades, concrete barriers, or vehicle-vehicle collisions), although a few “miscoded” crashes were merely unrelated to this research (such as truck-mounted attenuators). The number of coding errors was relatively high, including all 11 crashes in one county, and one fatal crash, which involved a changeable message sign instead of an attenuator.

Another seven percent of the crashes involved non-design vehicles, designated as motorcycles and heavy trucks, which were excluded from this study. Finally, eight percent of the crashes could not be linked to the attenuator inventory, despite evidence that attenuators or crash cushions were involved. Two potential reasons were identified for this: 1) errors in the inventory records and/or in the crash location (including transcription errors in the FDOT database) that prevented linking of the data sets, and 2) no information on the crash report to verify the presence of a construction zone. In addition, it is likely that some crashes involving crash cushions were also miscoded as crashes with guardrails or concrete barrier walls, although the rating of this type of miscoding was not investigated.

The crash reports provided a substantial amount of information regarding the outcome of impacts with crash cushions, including vehicle stopping mode and position, pre- and post-impact angle, and injury rate and severity. Items not explicitly quantified in the report, such as secondary collisions, final resting position of vehicle, and point of impact on the cushion, were extracted from the narrative

and diagram portions of the report as described in the previous section. The quality of the findings depends on the quality of the diagrams, in particular: although most diagrams are not drawn to scale, sufficient detail is provided to judge distances and angles in a semi-quantitative method, as described in this paper.

Several specific deficiencies of the Florida Traffic Crash Report can be noted. First, the report provides the vehicle make (e.g. Ford, Chevy) and differentiates between several vehicle types, including automobiles, passenger vans, and pickup trucks; however, it does not provide vehicle model or differentiate between small and large automobiles. SUV's are typically categorized as automobiles, making it difficult if not impossible to analyze the effect of vehicle weight and bumper height, important factors in crash cushion impacts. Second, there is not a specific field to indicate whether a crash site is in a work zone. Of the 48 crashes identified as being in a work zone by either the narrative, diagram, or other data, only 38 percent had the box for "Contributing Cause—Roadway=Road Under Construction/Repair" checked. In addition, it is presumed that some of the crashes that were unable to be matched involved construction zone cushions that could not be verified. Providing a separate field to indicate the presence of a work zone would assist in categorizing crashes.

The threshold for reporting a crash involving a crash cushion is relatively low compared to other crash types. By Florida Statute, the Long Form of the Florida Traffic Crash Report must be completed by the responding officer for all crashes involving damage to government property, including crash cushions, regardless of injury severity (Florida 1999). (Other conditions necessitating completion of the Long Form include bodily injury or death of any person, leaving the

scene of the crash, driving under the influence, and hazardous material incidents. Generally, the threshold for completion of the Short Form report is damage to any vehicle or property in an apparent amount of at least \$500, although several other criteria apply as well.)

However, an issue that must be considered when analyzing crash reports, particularly of crash cushion impacts, is the high incidence of non-reported crashes. As part of this study, a comparison of crash and repair records was conducted in one Florida county to determine the frequency of crash reporting. The area of concern was primarily a large urban center. Results indicated that crash reports were filed in approximately 20 percent of the impacts with crash cushions. These hit-and-run crashes, where no crash report is filed, can be assumed to indicate a relatively positive outcome. This level of underreporting of minor crashes would be expected to be relatively consistent across the state, with two exceptions. First, minor crashes occurring at tollbooths appear to be reported more frequently because of the constant presence of the toll collector. Second, the rate of crash reporting would be expected to be higher than average in work zones, especially for minor crashes, because a law enforcement vehicle is present during active construction on state projects.

RESULTS

There are 1,630 crash cushions in the permanent inventory at FDOT. As of the fall of 1998, the vast majority of the crash cushions in the state (96 percent) were classified as being in good condition. Less than one percent was in poor condition upon inspection, and none were in critical condition. In general, the inspection process makes maintenance engineers aware of severe deficiencies, and they are often rectified during the inspection itself. However, only sixty percent of the Hi-Dro Sandwich systems were in good condition at the time of the inspection: This was the smallest percentage of all

of the attenuator types. The next closest was the Hi-Dro Cluster, of which almost 89 percent were in good condition at the time of the inspection.

Between 1996 and 1998, 358 crashes were identified from the FDOT AAR database (by First or Second Harmful Event equal to Collision with Crash Attenuator) as crashes involving crash cushions. These crashes represented approximately one out of every one thousand crashes in the state of Florida. Table 1 details the distribution of crash cushions by type, and the distribution of crashes by year and cushion type. Of the cushions involved in significant numbers of crashes, G-R-E-A-T's were involved in crashes at a disproportionally low rate when compared to other types of crash cushions. To investigate this phenomenon, both the average number of crashes within one mile of a crash cushion and the average daily traffic count at the cushion site were obtained; the results are summarized in Table 2.

When the average crash rate in the vicinity of the crash cushions is computed, it appears that Hi-Dro Sandwiches are in the most crash prone locations, and sand barrel arrays in construction zones are in the least crash prone locations. The remainder of the cushion types have approximately the same crash rates. Sand barrels in construction zones are on the lowest volume roadways, on average, while those in permanent installations are on the highest volume roadways, followed by Hi-Dro Sandwiches. Therefore, one might conclude that Hi-Dro Sandwiches have a high crash rate because they are on high volume roads with high crash rates in the vicinity of the cushion. However, Hex Foam Sandwiches are in locations with similar crash rates to G-R-E-A-T's, with only slightly higher traffic counts, yet the two cushion systems have very different crash rates.

While there is some disparity in the distribution of crashes among the cushion types (about three times as many crashes with G-R-E-A-T's as with Hi-Dro Sandwiches), they are sufficiently distributed to allow reasonable comparisons to be made. In the remainder of the paper, the discussion only pertains those crashes that were linked with a crash cushion, that is, those for which the crash cushion type was identified, a total of 214 crashes. Because there was only one crash involving a QuadGuard cushion, it was excluded from the study. As previously stated, in construction zones, only cushions that could clearly be identified as sand barrel arrays were included.

Contributing Causes

Almost 70 percent of the 101 drivers involved in crashes with crash cushions were male. Sixty-percent of the drivers were residents of the county in which the crash occurred, and 27 percent were from elsewhere in the state of Florida. The average driver's age was 37; the youngest driver was 16, and the oldest was 84. About seven percent of the drivers were 60 and older. Alcohol or drugs were involved or suspected in about 16 percent of the crashes. While almost 90 percent of the drivers had no known physical defects, the most common defect, "Fatigue/asleep" was attributed to five percent of the drivers. Ninety-two percent of the drivers wore seat belts; 20 percent also had an air bag. Only one driver did not use a seat belt in a vehicle equipped with an air bag.

The most common causative factors attributed to the drivers were careless driving, cited in 41 percent of the crashes, and improper lane change, cited in about 12 percent. Excessive speed did not seem to be a significant cause of impacts with crash cushions: a speed exceeding either the stated limit and/or a safe speed was cited as a contributing cause less than five percent of the crashes. Forty-eight percent of the crashes occurred at night (21 percent of those with no street lights in use) and about

three percent at dawn or dusk. About 10 percent of the crashes occurred in rainy or foggy weather. The only roadway contributing cause that was cited was road construction, which was indicated in about nine percent of the crashes.

Impact Characteristics

The impact point on the vehicle was the front end in about 50 percent of the crashes, and the right or left front corner in 38 percent. Sixty-three percent of the vehicles hit the upstream end of the cushion. An additional 23 percent of the impacts were side impacts on the front quadrants. Slightly over five percent of the impacts hit the rear quadrants of the cushion, impacts in which snagging and pocketing are a primary concern. Less than seven percent of the impacts were from vehicles approaching from the rear. Of the design impacts, slightly over 18 percent involved passenger vans and light trucks. Around four percent involved medium trucks with four rear tires.

Many of the crash reports document multiple vehicles involved in the event; however, in many cases the second vehicle is a phantom or hit-and-run vehicle. (A phantom vehicle is one identified by a driver or witness as contributing to the crash, but who is not involved in any impact.) Of the 59 crashes coded as multi-car crashes, 46 percent involved phantom vehicles and 8 percent involved hit and run vehicles. In no case did more than one vehicle impact the cushion. Fifteen percent of the crashes involved an initial impact with another vehicle or a fixed object, followed by the impact with the crash cushion.

Impact Results and Outcomes

The focus of this study was the vehicles' post-impact trajectory; impacts with the hazard, other fixed objects on the roadway, and other vehicles; and the occupants' rate and severity of injury.

Impacts with Shielded Object

Since the primary function of a crash cushion is to shield an object from vehicle impacts, the first item to be considered is the number of vehicle impacts with the shielded object. Table 3 details the percent of crashes in which a vehicle impacted the hazard, and details the number and severity of those impacts. Note that this table doesn't include vehicles that, through redirection, rebound, or gating, impacted other fixed objects on the roadside. Those are detailed in a subsequent section, along with impacts with other vehicles in the roadway. Figure 2 plots the percent of vehicles that impacted the shielded object, along with 90th percentile confidence intervals for each type of cushion. For example, there is a 90 percent confidence (i.e. 0.90 probability) that the true proportion of vehicle impacts with the shielded object is between 0.5 and 9 percent, when that object is shielded by a G-R-E-A-T. The confidence intervals in this and other graphs were generated using a binomial proportion analysis, but because of the relatively small data sets involved, the normal approximation to the binomial distribution was not assumed.

The crash cushions prevented vehicular collisions with the shielded objects in the vast majority of all crashes. However, a major exception occurred in impacts with sand barrel arrays in construction zones, where eleven crashes (28 percent) resulted in impacts with the shielded objects, temporary concrete barriers in all cases. In Figure 2, the lower bound of the 90 percent confidence interval for construction zone sand barrels exceeds the upper bounds of the confidence intervals for all permanent

crash cushions except for Hi-Dro Sandwiches; it far exceeds the upper bound when all of the crash cushions are aggregated. Based on this data, then, there is a 90 percent confidence that the remaining types of cushions outperformed the construction zone sand barrel arrays in preventing impacts with the shielded object.

Because the design of sand barrel arrays is based on the conservation of momentum, a low speed (less than 10 mph (16 kph)) impact with the shielded object is a permissible part of the design. However, these impacts are of more concern because of additional negative consequences, described in subsequent sections. Of the eleven crashes where construction zone sand barrel arrays did not prevent impact with the shielded object, two resulted in fatal injuries to vehicle occupants, following undesirable post-impact trajectories.

Eight of the eleven vehicles hit the sand barrel arrays head-on and crushed all of the barrels, two hit the front quadrant, and one hit the rear left quadrant, resulting in a moderately severe impact with the barrier. Of the hazard impacts involving other types of cushions, all vehicles impacted the rear quadrant with the exception of the impact involving the permanent sand barrel array, where the vehicle impacted the front quadrant.

Vehicle Stopping Mode

An important measure of crash cushion performance is the stopping mode of the vehicle. This information is summarized in Table 4 and in Figure 3. See Figure 1 for the definitions used. The data includes only vehicles that actually hit the cushion, not phantom vehicles, or vehicles involved only in vehicle-vehicle impacts. The negative effect of collisions involving gating and redirection

depends largely on the clearances between the crash cushion and the traveled way. Where gating is allowed, proper design practices provide sufficient clearances to prevent impacts with hazardous objects; however, controlled stops are most desirable because they decrease the possibility of secondary impacts, including vehicle-vehicle impacts. Sliding or skidding along the cushion is also generally a positive outcome, because it typically keeps the vehicle out of travel lanes and away from hazards. Note that, despite the fact the sand barrel arrays are not designed to redirect errant vehicles, a stopping mode of redirect can sometimes be inferred from the data on the crash report; in fact construction zone sand barrel arrays had the largest rate of redirected vehicles of all the crash cushion types. Two causes which were identified were: 1) glancing blows to the sand barrels, coupled with evasive actions taken by the driver and 2) off-center impacts with the temporary concrete barrier being shielded, resulting in snagging and spinning of the vehicle away from the cushion in a manner that appeared redirective.

Overall, half of the vehicles impacting crash cushions stopped in a controlled manner, that is, without an excessive post-impact trajectory away from the cushion. Rebound was the least frequent stopping mode overall, occurring in only 5 percent of the impacts. Considering each type of cushion individually, sand barrel arrays stopped vehicles in a controlled manner most frequently, resulting in controlled stops in 70 percent of the impacts. This equates to a 90 percent probability that between 53 and 83 percent of the impacts with permanent sand barrel arrays would result in controlled stops. Sand barrel arrays in construction zones, however, performed worst in producing controlled stops, stopping vehicles in a controlled manner in only 32 percent of the impacts, a 90th percentile range of 20 to 46 percent. Another 34 percent of the vehicles impacting construction zone sand barrel arrays had a redirective-type trajectory, and an additional 17 percent gated through the barrels. Hi-Dro

Sandwiches produced controlled stops in 60 percent (39-78 percent) of the impacts, which is higher than average. Hex Foam Sandwiches produced an average rate of controlled stops (52 percent) and a high rate of redirected vehicles (29 percent), with few gating, rebound, or skidding stops.

Pre- and Post-Impact Angle for Redirected Impacts

Table 5 and Figure 4 provide more detail on the ability of the crash cushions to redirect side impacts. Because of the relatively small number of impacts, Figure 4 shows the number of impacts rather than percentages. In the figure and table, post-impact angle is plotted as a function of pre-impact angle. The larger the post-impact angle, the more likely the vehicle is to redirect into a traffic lane and cause a secondary collision. Although more detailed categories were used in the database, in these tables the angles are divided into two categories, small (less than 15 degrees) and large (greater than 15 degrees). Both frontal and side impacts are included, but the only stopping modes that are considered are redirection and sliding or skidding along the cushion, which is interpreted as redirecting at a very small angle.

Looking at the data, one can see that the vast majority (74 percent) of redirected vehicles hit the crash cushion at a small angle. Fifty-nine percent of those vehicles exited the cushions at a small angle. Of the 47 percent that exited at a large angle, 56 percent had impacted the crash cushion with a large angle; therefore, a large exit angle was not unexpected. The concern is those vehicles that hit the crash cushion head-on or at a small angle and were redirected at a large angle: 31 percent of the vehicles fell into this category. The cushion with the highest rate of this outcome was sand barrels in construction zones, where 62 percent of the vehicles with a small pre-impact angle (8 vehicles) had a

large post-impact angle. G-R-E-A-T's performed best in this respect, with only 15 percent of the vehicles that impacted at a small angle (2 vehicles) being redirected at a large angle.

Vehicle Rollover

Vehicle rollover is documented in the crash cushions database as part of the post-impact spin behavior data. Because of the increased possibility of negative outcomes with vehicle rollover, the prevalence of this spin mode is described in further detail in this section. Table 6 provides data on vehicle rollovers, including the 90th percentile confidence intervals. A total of 10 crashes resulted in vehicle rollovers. Vehicle rollover was most common in impacts with Hex Foam Sandwiches and sand barrel arrays in construction zone installations, and least common among G-R-E-A-T's, Hi-Dro Sandwiches and sand barrel arrays in permanent installations. Overall, however, there is not much difference between the various types of cushions, especially when the 90th percentile confidence intervals are examined. However, sand barrel arrays in construction zones again had the highest rate and most severe consequences of vehicle rollovers. Notably, all rollover crashes involved impacts on the nose or front quadrant of the cushion, typically by the front corner of the vehicle.

Secondary Impacts with Vehicles and Other Fixed Objects

Table 7 and Figure 5 examine the number and percent of cushion impacts resulting in secondary impacts with either vehicles or other fixed objects, primarily concrete barrier walls or toll booth fixtures. Impacts with concrete barrier walls are only included if the vehicle was redirected or rebounded away from the cushion and subsequently impacted a wall; vehicles that slid along the crash cushion and the barrier wall behind it in one continuous motion are not included. The impacts are categorized by stopping mode. Overall, 23 percent of all impacts with crash cushions resulted in

secondary impacts. Forty-one percent of the secondary impacts occurred when a vehicle was redirected, and 39 percent of the secondary impacts involved gating. As might be expected, only 6 percent of the secondary impacts occurred during controlled stops. The percentage data provided for the individual crash cushion is the percent of crashes with a given stopping mode that resulted in a secondary impact; these numbers were computed using the total number of impacts with a given same stopping mode, a figure provided in Table 4. Because of the small numbers involved, it is difficult to compare the different crash cushions based on rate of secondary impacts: note that, in Figure 5, the 90th percentile confidence interval for all crash cushions falls in the middle of the 90th percentile confidence intervals for each individual cushion.

Injury Rate and Severity

Data on injury severity was available for 339 persons (drivers and passengers) involved in impacts with crash cushions. However, since the injury rates could be significantly affected by one or two collisions involving a vehicle with several injured occupants, the maximum injury severity was identified for each crash. Table 8 and Figure 6 summarize this data using the KABCO injury scale, which is analogous to the DHSMV scale of 5 (fatal) to 1 (no injury), respectively. In Figure 6, the injuries are further categorized as severe (fatal or incapacitating), minor (non-incapacitating or possible), or none (property damage only).

Overall, 39 percent of the crashes resulted in no injuries, 46 percent resulted in minor injuries, and 15 percent resulted in severe or fatal injuries. Injuries following high-speed crashes were common although not severe. Nine of 10 crashes where speed was cited as a factor resulted in injuries, although none were fatal and only one (involving a Hex Foam Sandwich) was incapacitating. G-R-

E-A-T cushions and sand barrel arrays in construction zones had the smallest percentage of property damage only crashes, with 34 and 33 percent of crashes resulting in no injuries, respectively. Sand barrel arrays in permanent installations, Hex Foam Sandwiches, and Hi-Dro Sandwiches had almost identical rates of property damage only crashes, at 43 percent. Nineteen percent of the crashes involving Hi-Dro Sandwiches resulted in severe or fatal injuries, the worst performance of all systems. Sand barrel arrays in permanent installations and G-R-E-A-T systems resulted in severe or fatal injuries in only 13 percent of crashes.

Fifteen percent of the crashes with construction zone sand barrel arrays resulted in severe injuries, an average rate; however, these impacts resulted in two fatalities, the only cushion-related fatalities observed in this study. The impact and post-impact trajectory were similar in both crashes. In both crashes, vehicles hit the presenting end of the crash cushion head-on, crushing all of the barrels before impacting the end of the concrete barrier being shielded. Again, a low speed (less than 10 mph (16 kph)) exiting velocity is a permissible part of the sand barrel design. However, the consequences of these impacts indicate that impact velocity with the concrete barrier exceeded permissible levels.

One of the fatal crashes was a one-vehicle crash, in which the driver was killed. The driver had no physical defects, was not drinking or using drugs, and was wearing a seat belt. The estimated speed was 55 mph (88 kph), the same as the posted speed. The vehicle, a pickup truck, hit the front of the crash cushion head-on with its left front corner. Upon impact with the barrier being shielded, the vehicle began to spin, rotating counter-clockwise and lifting off its left wheels, landing on its right

side. Although road construction was indicated as a contributing cause on the crash report initially, a later review did not support this conclusion.

The second fatal crash involved two vehicles. The driver of the first vehicle, a passenger van, was a 76 year old male, for whom alcohol use was suspected, pending results of a BAC test. The vehicle was traveling between 55 mph (88 kph) and 65 mph (104 kph) in a 55 mph (88 kph) zone. This vehicle hit the end of the crash cushion at a small angle. Upon impact with the concrete barrier being shielded, the vehicle spun counterclockwise back onto the roadway at a large angle, where a second vehicle traveling 55 mph (88 kph) impacted it, causing it to spin counter-clockwise again and ejecting the right front passenger onto the roadway. The passenger, who was not wearing a seatbelt, died from his injuries.

Note on Gator End Treatments

In the set of crashes coded as attenuator crashes by law enforcement personnel, sixteen of the reports involved Gator-nose end treatments (identified in the crash reports as Gator attenuators), which are the tapered end treatments used at the end of some concrete barrier walls and in front of certain toll booth fixtures. Although they were not included in this study, because they are not crash cushions, the authors made note of potential rollover problems with this type of end treatment. Five of the impacts, over 30 percent, resulted in vehicle rollover, and another two vehicles rode up onto the end treatment and stopped. In addition, two fatalities resulted from the sixteen Gator impacts, including one resulting from a rollover, and a second after a vehicle was redirected at a high angle into a coin box and a traffic gate. The second driver was not wearing a seatbelt; alcohol use was suspected in both cases pending blood alcohol tests. This fatality rate of 13 percent far exceeds the fatality rate of 5 percent observed with construction zone sand barrel arrays.

It is likely that other Gator crashes were coded as collisions with concrete barrier wall rather than as collisions with crash cushions, especially when the Gator end treatment was applied to a longitudinal barrier of greater length than those in front of toll booths. However, while these outcomes may be anomalies not reflected in other crashes for which reports were not available, they certainly merit further study.

CONCLUSIONS

Given the limitations of the data described previously, specifically the relatively small number of crashes that were examined, several conclusions can be drawn from this study. Looking only at impacts documented by crash reports, one can conclude that crash cushions are performing fairly well in the state of Florida, preventing impacts with the shielded objects in over 90 percent of the impacts, and stopping the vehicle in a controlled manner in the vicinity of the cushion in half of the impacts. Rollover, secondary impacts, and severe occupant injury are relatively infrequent. Rebound does not seem to be a major problem with any crash cushion presently used in Florida. However, in impacts where redirection was the stopping mode, over forty percent of the vehicles with a small pre-impact angle had a large post-impact angle.

Although a number of causative factors were noted in the crash reports, the most common was careless driving, which was cited in over 40 percent of the crashes. Alcohol and drug use was also suspected or confirmed in about 16 percent of the crashes. Excessive speeds did not appear to be a significant causative factor. Impact rates varied greatly for the different types of cushions; much of this was not explainable by the traffic volume and crash rate on the surrounding roadway.

In comparing the various crash cushions, most compression cushions were of average effectiveness. G-R-E-A-T's had a low rate of controlled stops and a high rate of secondary impacts. However, they performed well in redirecting vehicles at small angles. Hex Foam Sandwiches performed had high rollover rates and redirected many vehicles at large angles, even when impacted at small angles. Hi-Dro Sandwiches had a high rate of controlled stops and a low rate of secondary impacts; however, they also resulted in a high rate of severe occupant injuries. In addition, only 60 percent of the Hi-Dro Sandwich systems were in good condition during the Fall 1998 inspection, indicating possible maintenance concerns with this type of system.

Sand barrel arrays in permanent installations had excellent performance in all aspects being considered. They were the most effective cushions in bringing vehicles to a controlled stop and preventing secondary impacts. The rate and severity of occupant injury were also lower than average. All of the permanent sand barrel arrays in the state of Florida are customized designs, specially suited to their locations. In locations with a low impact frequency where a redirective capability is not required, sand barrel arrays are potentially a low cost alternative to compression cushions.

On the other hand, sand barrel arrays in construction zones showed several areas of concern. When used in construction zones, sand barrels exhibited a much higher than average rate of impacts with shielded objects, including impacts with a velocity exceeding permissible exit velocity levels. Although the rate of secondary impacts was about average, the consequences of both types of impacts were severe, resulting in the only two fatalities involving crash cushions. Large post-impact angles

(after impacts with small pre-impact angles) and rollover are also concerns. In examining the crash reports, insufficient capacity and a tendency toward overriding appeared to be causative factors in these crashes.

One potential cause of these problems was an apparent lack of compliance with installation and maintenance standards by construction contractors during the time period in question. As part of this study, the researchers conducted numerous site visits to observe construction zone sand barrel arrays along Interstate-95 during July 1997. Condition assessments during these visits found that sand barrel arrays were often poorly aligned, in disrepair, filled with dirt or wet sand, and/or surrounded by debris, excess dirt and vegetation. Although designed with sufficient capacity, sand barrel arrays were often not installed according to standards, with the proper skew toward the roadway. In response to these concerns, the FDOT has developed an increased emphasis on proper placement and maintenance of sand barrel arrays, including compliance with standard drawings. Any deviation from the standard plans, such as substituting a different type of attenuator, requires that a site-specific change be designed by the engineer of record (Hattaway and Xanders 2000).

Another possible cause of poor construction zone sand barrel performance is the use of single-barrel arrays, which was common in the state of Florida during the time period in question. This type of installation, in which all barrels are aligned in a single row, was used in front of temporary concrete barriers because of small clearances to the travel lane. This type of array is not included in the Federal Highway Administration's current guidelines, because single barrel arrays provide little mass to slow a vehicle in the event of an angled impact with the rear barrels, resulting in pocketing and a potential high-speed impact with the shielded object. The data from this study showed that vehicles

impacted the hazard at the same rate, regardless of where they impacted the cushion; however, because 63 percent of the impacts with crash cushions were head-on collisions, 8 of the 11 vehicles that impacted the shielded object (73 percent) hit the front of the sand barrel array and crushed all of the barrels without coming to a stop. Nonetheless, to better protect against pocketing, FDOT has developed a modified single-barrel array, approved by the FHWA, which offsets the array slightly toward the traffic lane and offsets a single 2100 lb. (900 kg) barrel into a second row, centered between the last two barrels of the first row.

A future study will be undertaken to assess whether the new design, coupled with improved installation and maintenance practices and tighter control over attenuator substitutions, has a positive impact on the performance of construction zone sand barrel arrays. The database system developed as part of this research will make it easier to collect and analyze large quantities of crash records, as well as to examine individual crashes and investigate various types of crash cushions in more detail.

ACKNOWLEDGEMENTS

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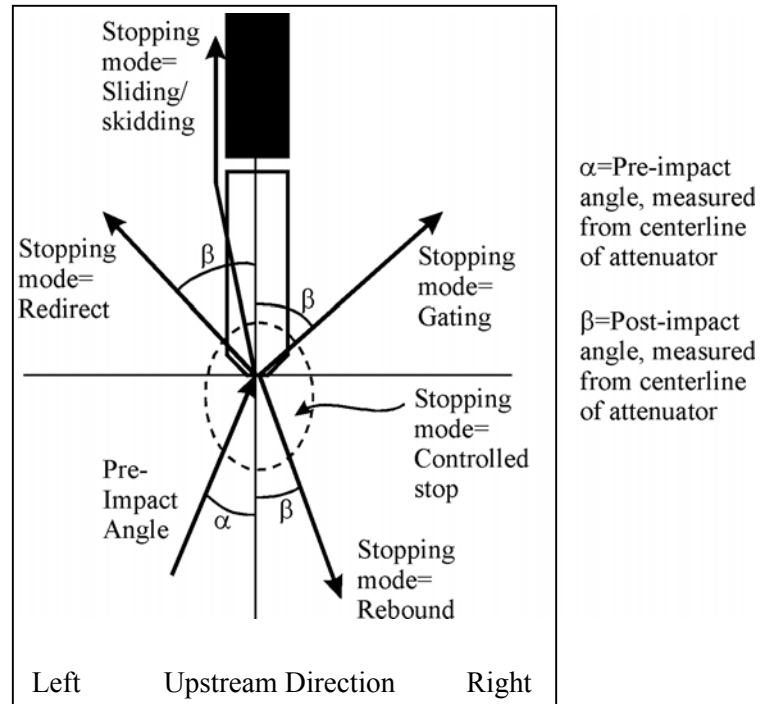


Figure 1: Stopping Mode Definitions

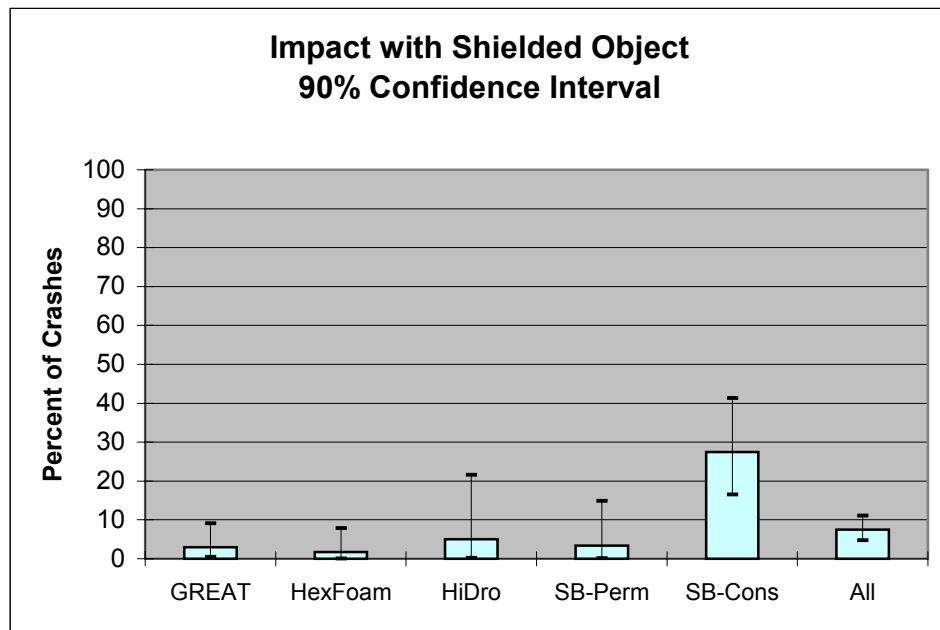


Figure 2: Impacts with Shielded Object Subsequent to Crash Cushion Impact

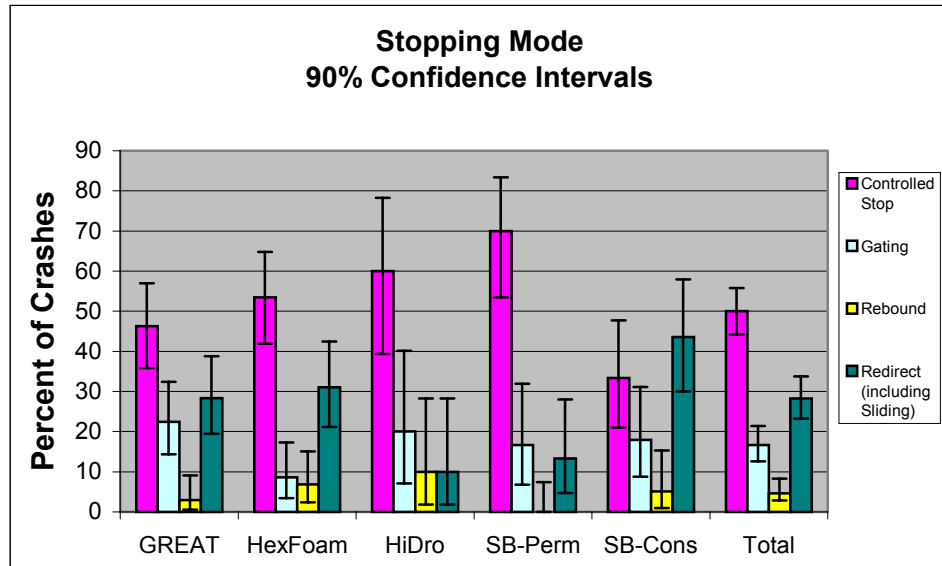


Figure 3: Stopping Mode Subsequent to Impact with Crash Cushion

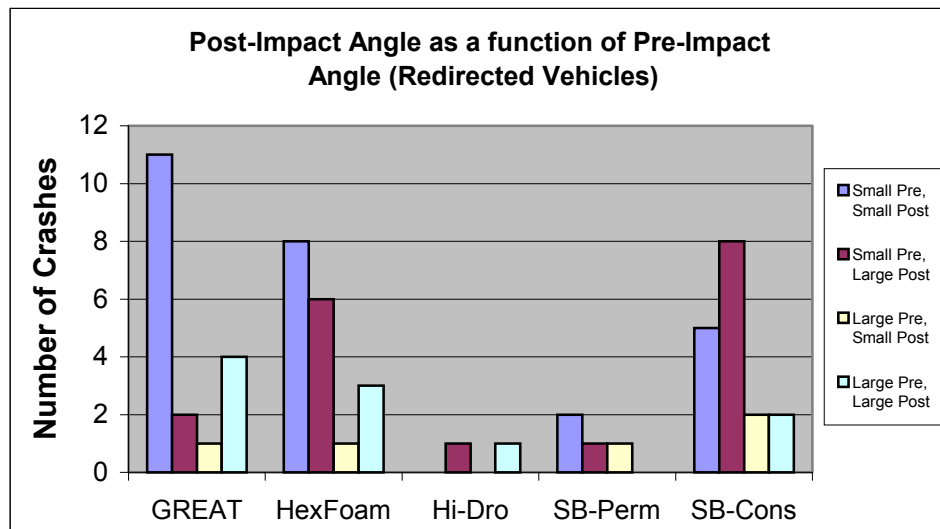


Figure 4: Post-Impact Angle as a Function of Pre-Impact Angle for Redirected Vehicles

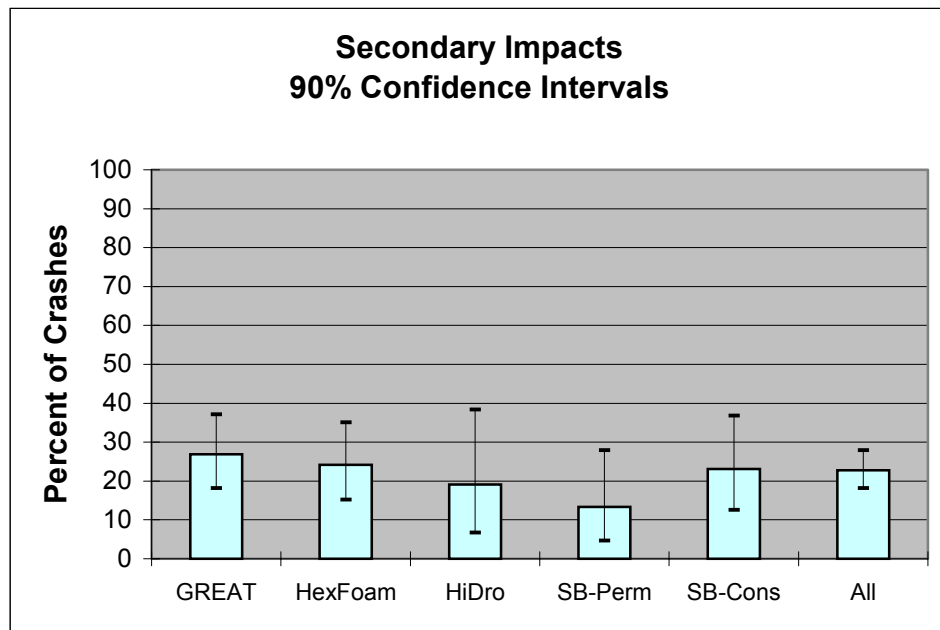


Figure 5: Secondary Impacts Subsequent to Impact with Crash Cushion

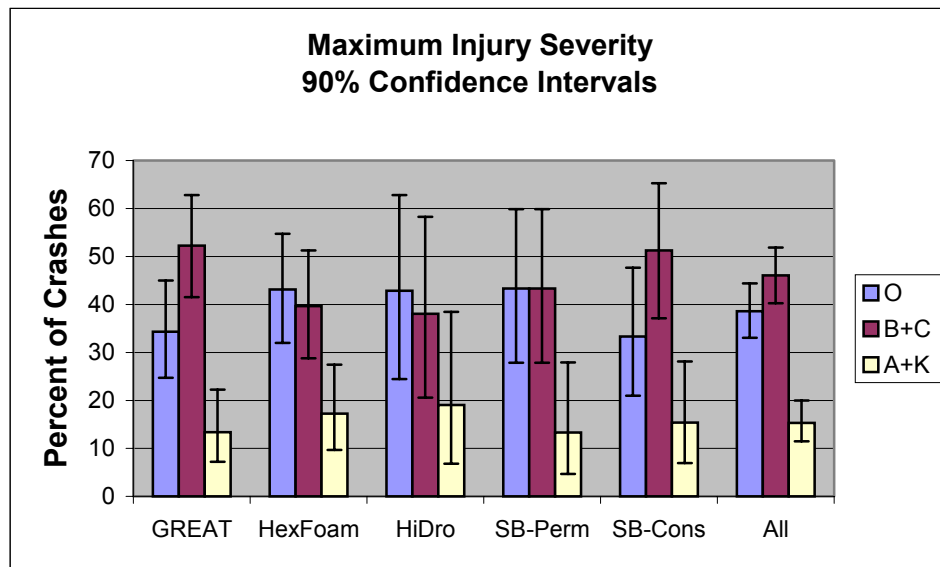


Figure 6: Maximum Injury Severity Following Impact with Crash Cushion

TABLE 1 Distribution of Crash Cushions and Crashes involving Cushions in the State of Florida

Type	Crash Cushion Usage		Crash Distribution					Crashes per 1000 Cushions
			1996	1997	1998	Total		
	No.	%	No.	No.	No.	No.	%	
Records in AAR database	1630	100	133	121	104	358	n/a	n/a
Paper copies found	n/a	n/a	106	121	94	321	89.7 ^a	n/a
Miscoded	n/a	n/a	8	34	18	60	18.7 ^b	n/a
Non design impacts	n/a	n/a	3	15	4	22	6.9 ^b	n/a
Non matching records	n/a	n/a	3	9	13	25	7.8 ^b	n/a
G-R-E-A-T	1192	73	25	21	21	67	30.8 ^c	56
Hex Foam Sandwich	200	12	26	19	13	58	27.1 ^c	290
Hi-Dro Cluster	36	2	0	0	0	0	0 ^c	0
Hi-Dro Sandwich	54	3	8	6	7	21	9.8 ^c	389
QuadGuard	26	2	0	1	0	1	0.5 ^c	38
Sand Barrels—Permanent	121	8	12	12	6	30	13.6 ^c	248
Sand Barrels—Construction Zone	n/a	n/a	20	9	10	40	18.2 ^c	n/a
Other Crash Cushions—Construction Zone	n/a	n/a	0	3	6	9	4.2 ^c	n/a
Dragnet	1	0.06	0	0	0	0	0 ^c	0
All Linked Crashes	n/a	n/a	91	68	57	215	100	132

^aPercent of all crash records.^bPercent of paper copies.^cPercent of linked crashes (those w/type of crash cushion identified).

TABLE 2 Crash Rate and Traffic Count in Proximity to Crash Cushion Locations

Crash Cushion	Average Crash Rate^a (crashes/year)	Average Traffic Count (vehicles/day)
G-R-E-A-T	47.0	70,766
Hex Foam Sandwich	46.2	75,463
Hi-Dro Sandwich	60.4	84,686
Sand Barrels—Permanent	50.4	91,422
Sand Barrels—Construction Zone	27.8	66,464
Average	45.7	77,760

^aAll vehicle crashes within one mile of a crash cushion.

TABLE 3 Impacts with Shielded Object, by Type of Crash Cushion and Impact Severity

Crash Cushion	Total Number of Impacts	Impacts By Impact Severity (#)				Percent of Crashes w/ Hazard Impact
		None	Minor	Moderate	Severe	
G-R-E-A-T	67	65	0	2	0	3
Hex Foam Sandwich	58	57	1	0	0	2
Hi-Dro Sandwich	20	19	1	0	0	5
Sand Barrels—Permanent	30	29	1	0	0	3
Sand Barrels—Construction Zone	39	28	4	6	1 ^a	28
Total	214	198	7	8	1	7

^aResulted in one traffic fatality.

TABLE 4 Stopping Mode, By Type of Crash Cushion

Crash Cushion	Controlled Stop ^a		Gating		Rebound		Redirect		Sliding/Skidding Along Barrier to Stop	
	No.	%	No.	%	No.	%	No.	%	No.	%
G-R-E-A-T	31	46	15	22	2	3	11	16	8	12
Hex Foam Sandwich	31	53	5	9	4	7	17	29	1	2
Hi-Dro Sandwich	12	60	4	20	2	10	2	10	0	0
Sand Barrels—Permanent	21	70	5	17	0	0	4	13	0	0
Sand Barrels—Construction Zone	13	33	7	18	2	5	13	33	4	10
Total	108	50	36	17	10	5	47	22	13	6

^aSee Figure 1 for stopping mode definitions.

TABLE 5 Post-Impact Angle as a Function of Pre-Impact Angle, for Vehicles which were Redirected

Crash Cushion	Small Pre-Impact Angle ^a				Large Pre-Impact Angle ^b			
	Small Post-Impact Angle ^a		Large Post-Impact Angle ^b		Small Post-Impact Angle ^a		Large Post-Impact Angle ^b	
	No.	% ^c	No.	% ^c	No.	% ^d	No.	% ^d
G-R-E-A-T	11	85	2	15	1	20	4	80
Hex Foam Sandwich	8	57	6	43	1	25	3	75
Hi-Dro Sandwich	0	0	1	100	0	0	1	100
Sand Barrels—Permanent	2	67	1	33	1	100	0	0
Sand Barrels—Construction Zone	5	38	8	61	2	50	2	50
Total	26	59	18	41	5	33	10	67

^aDefined as an angle of less than 15°, as inferred from the crash report diagram.

^bDefined as an angle of greater than 15°, as inferred from the crash report diagram.

^cPercent of impacts with small pre-impact angle.

^dPercent of impacts with large pre-impact angle.

TABLE 6 Rollovers, by Type of Crash Cushion

Crash Cushion	Total Number of Impacts	Total with Rollover	Percent with Rollover	90 th Percentile Confidence Intervals	
				Minimum	Maximum
G-R-E-A-T	67	3	4	1.2	11.2
Hex Foam Sandwich	58	4	7	2.4	15.1
Hi-Dro Sandwich	21	1	5	0.2	20.7
Sand Barrels—Permanent	30	1	3	0.2	14.9
Sand Barrels—Construction Zone	39	4 ^a	10	3.6	22.0
Total	188	10	5	3.6	9.4

^aResulted in one traffic fatality.

TABLE 7 Secondary Impacts, by Type of Crash Cushion and Stopping Mode

Crash Cushion	Percent of Crashes w/ Secondary Impacts	Secondary Impacts, According to Stopping Mode							
		Controlled Stop		Gating		Rebound		Redirect (including sliding)	
		No.	% ^a	No.	% ^a	No.	% ^a	No.	% ^a
G-R-E-A-T	27	3	10	7	5	0	0	8	42
Hex Foam Sandwich	24	1	3	3	60	2	50	8	47
Hi-Dro Sandwich	19	1	8	0	0	2	100	1	50
Sand Barrels—Permanent	13	1	5	1	20	0	0	2	50
Sand Barrels—Construction Zone	23	0	0	3	43	0	0	6 ^b	35
Total	23	6	6	14	39	4	36	25	41

^aPercent of crashes with this stopping mode that resulted in a secondary impact (see Table 3).

^bResulted in one traffic fatality.

TABLE 8 Maximum Injury Severity, by Type of Crash Cushion

Crash Cushion	None (O)		Possible (C)		Non- Incapacitating (B)		Incapacitating (A)		Fatal (K)	
	No.	%	No.	%	No.	%	No.	%	No.	%
G-R-E-A-T	23	34	16	24	19	33	9	13	0	0
Hex Foam Sandwich	25	43	7	12	16	28	10	17	0	0
Hi-Dro Sandwich	9	43	5	24	3	14	4	19	0	0
Sand Barrels—Permanent	13	43	3	10	10	33	4	13	0	0
Sand Barrels—Construction Zone	13	33	8	21	12	31	4	10	2	5
Total	83	39	39	18	60	28	31	14	2	1

Appendix B: Database Schema (Table, Column, and Key Definitions)

Appendix B-1: CREATE_USER_TABLES.SQL

```

CREATE TABLE ACCIDENT(
    ACCIDENT_ID          NUMBER(10, 0)      NOT NULL,
    REPORT_NUMBER        CHAR(10)           NOT NULL,
    DATA_SOURCE_ID      NUMBER(2,0),
    NON_DES_IMPACT       CHAR(3),
    ROAD_SIDE_ID         NUMBER(2,0),
    SITE_LOCATION_ID     NUMBER(2,0),
    TRAFFIC_CONTROL_ID   NUMBER(2,0),
    ROAD_SURFACE_ID      NUMBER(2,0),
    WEATHER_ID           NUMBER(2,0),
    LIGHTING_ID          NUMBER(2,0),
    HARMFUL_EVENT_1      NUMBER(2,0),
    HARMFUL_EVENT_2      NUMBER(2,0),
    ACCIDENT_MILE_POST   NUMBER(8,3),
    NEAREST_NODE         NUMBER(5, 0),
    DATE_ACCIDENT        DATE,
    TIME_ACCIDENT        CHAR(5),
    AM_PM               CHAR(3),
    LANE_NUMBER          NUMBER(3, 0),
    NUMBER_VEHICLES      NUMBER(3, 0),
    NUMBER_ATTEN_IMPACTS NUMBER(2,0),
    DESCRIPTION          VARCHAR2(1000)
)
;

CREATE TABLE ACTIVITY(
    ACTIVITY_ID          NUMBER(4,0)      NOT NULL,
    ATTENUATOR_ID        CHAR(5)         NOT NULL
)
;

CREATE TABLE ANCHORING_OPTIONS_ATTENUATOR(
    ANCHORING_OPTIONS_ID NUMBER(4,0)      NOT NULL,
    ATTENUATOR_TYPE_ID   NUMBER(4,0)      NOT NULL
)
;

CREATE TABLE APPLICATIONS(
    APPLICATIONS_ID      NUMBER(4, 0)      NOT NULL,
    ATTENUATOR_TYPE_ID   NUMBER(4, 0)      NOT NULL
)
;

CREATE TABLE ATTEN_ACCIDENT(
    ATTEN_ACCIDENT_ID    NUMBER(4,0)      NOT NULL,
    ATTEN_PERFORMANCE_ID NUMBER(4,0)      NOT NULL,
    ACCIDENT_ID          NUMBER(4,0)      NOT NULL,
    ATTENUATOR_ID        CHAR(5)         NOT NULL
)
;

CREATE TABLE ATTEN_PERFORMANCE(
    ATTEN_PERFORMANCE_ID NUMBER(4,0)      NOT NULL,
    NEED_STUDY           CHAR(3),
    ANCHOR_LOST          CHAR(3),

```

```

DEBRIS_SCATTER_ID          NUMBER(2, 0),
REPAIRABLE                  CHAR(3),
USABLE_AFTER                CHAR(3),
ATTEN_DAMAGE_ID            NUMBER(3, 0)      NOT NULL,
FINAL_DEFORMATION           NUMBER(5,2),
ESTIMATED_REPAIR_COST      NUMBER(6, 0)
)
;

CREATE TABLE ATTEN_REPAIR(
  ATTEN_REPAIR_ID           NUMBER(4,0)      NOT NULL,
  ACTIVITY_ID               NUMBER(4,0)      NOT NULL,
  CREW_NAME                 CHAR(10),
  REPAIR_DATE               DATE,
  REPAIR_REASON_ID          NUMBER(3,0),
  ACCIDENT_ID               NUMBER(10,0),
  REGULAR_HOURS              NUMBER(5,1),
  SAFETY_HOURS               NUMBER(5,1),
  CONDITION_AFTER_REPAIR_ID NUMBER(3,0),
  LABOR_COST                NUMBER(7,2),
  EQUIP_COST                NUMBER(7,2),
  MATLS_COST                NUMBER(7,2)
)
;

CREATE TABLE ATTENUATOR_SITE(
  ATTENUATOR_SITE_ID        NUMBER(4,0)      NOT NULL,
  ATTENUATOR_ID              CHAR(5)         NOT NULL,
  OBJECT_WIDTH               NUMBER(3,1),
  OBJECT_HEIGHT              NUMBER(3,1),
  ANGLE_TO_ROAD              NUMBER(3, 0),
  CLEARANCE_LATERAL          NUMBER(4, 0),
  CLEARANCE_LONG              NUMBER(4, 0),
  WIDTH_CLEAR_ZONE           NUMBER(4, 0),
  LENGTH_CLEAR_ZONE          NUMBER(4, 0),
  SURFACE_UNDER_ATTEN_ID     NUMBER(3, 0),
  DEPTH_SURF                 NUMBER(4, 0),
  SURFACE_BT_ATTEN_ROAD_ID   NUMBER(3, 0),
  SHIELD_OBJECT_ID           NUMBER(4, 0),
  ANCHORING_OPTIONS_ID       NUMBER(4, 0)
)
;

CREATE TABLE ATTENUATOR_TYPE(
  ATTENUATOR_TYPE_ID         NUMBER(4,0)      NOT NULL,
  ATTENUATOR_TYPE_NAME       CHAR(20),
  MANUFACTURER_ID            NUMBER(2,0)      NOT NULL,
  CATEGORY_ID                NUMBER(2,0),
  MAX_CROSS_SLOPE             NUMBER(3, 0),
  PERCENT_REUSABLE            NUMBER(3, 0),
  KEY_FEATURES                CHAR(255),
  TYP_REPAIR_TIME_ID          NUMBER(2,0),
  TYP_REPAIR_EQUIP_ID         NUMBER(2,0),
  TYP_REPAIR_CREW_ID          NUMBER(2, 0),
  INITIAL_COST_ID             NUMBER(2, 0),
  TYP_INSTALL_TIME_ID         NUMBER(2,0),
  TYP_INSTALL_EQUIP_ID        NUMBER(2,0),
  DEBRIS_SCATTER_ID           NUMBER(2,0),
  BIDIRECTIONAL_CAP           CHAR(3),
  REDIRECT_TEND               CHAR(3),
  INVENTORY_ID                NUMBER(2, 0),

```

```

GATING_TEND                CHAR(3),
POCKETING_TEND             CHAR(3),
SUITABLE_CONSTRUCTION      CHAR(3)
)
;

CREATE TABLE ATTENUATOR (
  ATTENUATOR_ID            CHAR(5)      NOT NULL,
  OWNER_ID                 NUMBER(3,0),
  DATE_INSTALLED           NUMBER(4,0),
  MAINT_UNIT               NUMBER(3,0),
  COUNTY_ID               NUMBER(3,0),
  SECTION                 NUMBER(3,0),
  SUB_SECTION             NUMBER(3,0),
  STATE_ROAD_NUMBER        CHAR(10),
  US_ROAD_NUMBER           CHAR(10),
  ATTEN_MILE_POST          NUMBER(8,3),
  REMARKS                  CHAR(255),
  APPROACH_TRAFFIC_ID      NUMBER(2,0),
  IN_WORK_ZONE             CHAR(3),
  STATUS_ID               NUMBER(2,0),
  LOCATION_WRT_ROAD_ID     NUMBER(3,0),
  MODEL_NUMBER             CHAR(25)     NOT NULL,
  ROADWAY_ID              NUMBER(9,0)   NOT NULL,
  NOTES                    CHAR(100)
)
;

CREATE TABLE CITATION (
  CITATION_ID             NUMBER(4,0)   NOT NULL,
  CITATION_NAME_ID        NUMBER(4,0)   NOT NULL,
  DRIVER_ID              NUMBER(4,0)   NOT NULL
)
;

CREATE TABLE CONTRIB_CAUSE_DRIVER_CITED (
  CONTRIB_CAUSE_DRIVER_CITED_ID NUMBER(4,0) NOT NULL,
  DRIVER_ID              NUMBER(4,0) NOT NULL,
  CONTRIB_CAUSE_DRIVER_ID NUMBER(2,0) NOT NULL
)
;

CREATE TABLE CONTRIB_CAUSE_ENV_CITED (
  CONTRIB_CAUSE_ENV_CITED_ID NUMBER(4,0) NOT NULL,
  ACCIDENT_NUMBER_ID        NUMBER(4,0) NOT NULL,
  CONTRIB_CAUSE_ENV_ID      NUMBER(2,0) NOT NULL
)
;

CREATE TABLE CONTRIB_CAUSE_ROAD_CITED (
  CONTRIB_CAUSE_ROAD_CITED_ID NUMBER(4,0) NOT NULL,
  ACCIDENT_NUMBER_ID        NUMBER(4,0) NOT NULL,
  CONTRIB_CAUSE_ROAD_ID     NUMBER(2,0) NOT NULL
)
;

CREATE TABLE DEFICIENCIES (
  DEFICIENCY_ID           NUMBER(4,0) NOT NULL,
  INSPECTION_ID           NUMBER(4,0) NOT NULL,
  COMPONENT_ID            NUMBER(3,0),
  DEFICIENCY_NOTED_ID     NUMBER(3,0),

```

```

NUMBER_OCCURANCES      NUMBER(2,0)
)
;

CREATE TABLE DRIVER(
  DRIVER_ID              NUMBER(4,0)      NOT NULL,
  SEX_ID                 NUMBER(1,0),
  RESIDENCE_ID           NUMBER(2,0),
  AGE                    NUMBER(4,1),
  EJECTED_ID             NUMBER(2,0),
  INJURY_SEVERITY_ID     NUMBER(2,0),
  PHYSICAL_DEFECTS_ID    NUMBER(2,0),
  BAC_VALUE              NUMBER(5,4),
  UNDER_INFLUENCE_ID    NUMBER(2,0),
  PERSON_ID              NUMBER(4,0)
)
;

CREATE TABLE INSPECTION(
  INSPECTION_ID          NUMBER(4,0)      NOT NULL,
  DATA_SOURCE_ID        NUMBER(2,0),
  ACTIVITY_ID            NUMBER(4,0)      NOT NULL,
  INSPECTION_TYPE_ID     NUMBER(2,0),
  INSPECTION_CONDITION_ID NUMBER(2,0),
  INSPECTOR              CHAR(20),
  INSPECTION_DATE        DATE,
  CORRECTIVE_ACTION      CHAR(100),
  DESIGN_INSTALLATION    CHAR(3),
  DESIGN_DETAILS_AVAILABLE CHAR(3),
  CHANGES_AUTHORIZED_BY CHAR(20),
  REASON_FOR_CHANGES    CHAR(100),
  PAVEMENT_MARKINGS_STD  CHAR(3),
  DELINEATION_STD        CHAR(3),
  APPEARANCE_SATISFACTORY CHAR(3),
  CABLE_GUIDANCE_SYSTEM  CHAR(3),
  HEX_FOAM_CARTRIDGE_BRACKET CHAR(3),
  ANCHOR_CHAIN_RAIL      CHAR(3),
  TWO_WAY_TRAFFIC_DEFLECTOR CHAR(3),
  EVIDENCE_VEHICLE_DAMAGE CHAR(3),
  EVIDENCE_NON_DESIGN_IMPACT CHAR(3),
  EVIDENCE_ANGLE_HITS     CHAR(3),
  EVIDENCE_VANDALISM      CHAR(3),
  PROTECTED_VEHICLE      CHAR(3),
  RENOVATION_NECESSARY    CHAR(3),
  NEEDS_STUDY            CHAR(3),
  REASON_FOR_STUDY       CHAR(100)
)
;

CREATE TABLE MANUFACTURER(
  MANUFACTURER_ID        NUMBER(2,0)      NOT NULL,
  MANUFACTURER_NAME      CHAR(30)         NOT NULL,
  CONTACT_NAME           CHAR(30),
  CONTACT_TITLE          CHAR(30),
  PHONE_NUMBER           CHAR(15),
  FAX_NUMBER             CHAR(15),
  ADDRESS_1              CHAR(50),
  ADDRESS_2              CHAR(50),
  CITY                   CHAR(20),
  STATE_ID               NUMBER(2,0),
  ZIP_CODE               CHAR(10),

```



```

E_MAIL                CHAR(40),
URL_ADDRESS           CHAR(50)
)
;

CREATE TABLE MODEL(
    MODEL_NUMBER        CHAR(25)          NOT NULL,
    CONFIG_NUMBER       CHAR(5)           NOT NULL,
    DESIGN_SPEED        NUMBER(4,1),
    NOMINAL_LENGTH      NUMBER(4,1),
    NOMINAL_WIDTH       NUMBER(4,1),
    NCHRP_STANDARD_ID   NUMBER(2, 0),
    ATTENUATOR_TYPE_ID  NUMBER(4, 0)      NOT NULL
)
;

CREATE TABLE PARTS_LIST(
    PART_ID             NUMBER(4,0)        NOT NULL,
    MANUFACTURER_PART_NUMBER CHAR(20),
    COMMODITY_NUMBER     NUMBER(10),
    PART_DESCRIPTION     CHAR(40),
    UNIT_PRICE          NUMBER(8, 2),
    UNIT                CHAR(8)
)
;

CREATE TABLE PARTS_REQUIRED(
    PARTS_REQUIRED_ID   NUMBER(4,0)        NOT NULL,
    PART_ID             NUMBER(4,0)        NOT NULL,
    AMOUNT_REQUIRED     NUMBER(4,1),
    ACTIVITY_ID         NUMBER(4,0)        NOT NULL
)
;

CREATE TABLE PASSENGER(
    PASSENGER_ID        NUMBER(4,0)        NOT NULL,
    AGE                 NUMBER(4,1),
    EJECTED_ID          NUMBER(2,0),
    INJURY_SEVERITY_ID  NUMBER(2,0),
    LOCATION_IN_CAR_ID  NUMBER(2,0),
    VEHICLE_ID          NUMBER(4,0)        NOT NULL,
    PERSON_ID           NUMBER(4,0)
)
;

CREATE TABLE PEDESTRIAN_ACTION_CITED(
    PEDESTRIAN_ACTION_CITED_ID NUMBER(4,0)        NOT NULL,
    ACCIDENT_NUMBER_ID        NUMBER(4,0)        NOT NULL,
    PEDESTRIAN_NUMBER         NUMBER(2,0)        NOT NULL,
    PEDESTRIAN_ACTION_ID      NUMBER(2,0)        NOT NULL
)
;

CREATE TABLE SAFETY_DEVICE_USED(
    PERSON_ID             NUMBER(4,0)        NOT NULL,
    SAFETY_DEVICE_ID      NUMBER(2,0)        NOT NULL
)
;

CREATE TABLE ROADWAY_DESCRIPTION(
    ROADWAY_ID            NUMBER(9,0)        NOT NULL,

```

```

ROAD_DESCRIPTION                CHAR(50),
ROAD_SYSTEM_IDENTIFIER_ID       NUMBER(2,0),
ROAD_TYPE_ID                    NUMBER(2,0),
MEDIAN_SURFACE_ID               NUMBER(2,0),
FIXED_MEDIAN_BARRIER           CHAR(3),
MEDIAN_WIDTH                    NUMBER(3,1),
MEDIAN_SLOPE                    CHAR(4),
SHOULDER_TYPE_ID                NUMBER(2,0),
SHOULDER_WIDTH                  NUMBER(3,1),
DIVERGANCE_ANGLE                NUMBER(3,1),
CURB_TYPE_ID                    NUMBER(2,0),
CURB_HEIGHT                     NUMBER(3,2),
ROADWAY_GRADE                   NUMBER(3,1),
EMBANKMENT_SLOPE                CHAR(4),
EMBANKMENT_CUT_FILL_ID          NUMBER(2,0),
DESIGN_SPEED                     NUMBER(4,1),
POSTED_SPEED_LIMIT              NUMBER(3,0),
CURVE_MAIN_MOVE_ID              NUMBER(2,0),
CURVE_SECOND_MOVE_ID            NUMBER(2,0),
TRAFFICWAY_CHARACTER_ID         NUMBER(2,0),
AREA_ZONING_USE_ID              NUMBER(2,0),
AVG_DAILY_TRAFFIC               NUMBER(7,0),
PEAK_HOUR_TRAFFIC               NUMBER(7,0),
RURAL_URBAN_ID                  NUMBER(2,0),
LANE_WIDTH                      NUMBER(3,1),
NUMBER_LANES                     NUMBER(2,0),
PAVEMENT_TYPE_ID                NUMBER(2,0)
)
;

CREATE TABLE SUPPLIER(
    SUPPLIER_ID                NUMBER(2,0)    NOT NULL,
    SUPPLIER_NAME                CHAR(30)      NOT NULL,
    CONTACT_NAME                 CHAR(30),
    CONTACT_TITLE                CHAR(30),
    PHONE_NUMBER                 CHAR(15),
    FAX_NUMBER                   CHAR(15),
    ADDRESS_1                    CHAR(50),
    ADDRESS_2                    CHAR(50),
    CITY                         CHAR(20),
    STATE_ID                     NUMBER(2,0),
    ZIP_CODE                     CHAR(10),
    E_MAIL                       CHAR(40),
    URL_ADDRESS                   CHAR(50)
)
;

CREATE TABLE SUPPLIER_MANUF(
    SUPPLIER_MANUF_ID            NUMBER(2,0)    NOT NULL,
    SUPPLIER_ID                  NUMBER(2,0)    NOT NULL,
    MANUFACTURER_ID              NUMBER(2,0)    NOT NULL
)
;

CREATE TABLE VEHICLE(
    VEHICLE_ID                   NUMBER(4,0)    NOT NULL,
    DRIVER_ACTION_ID              NUMBER(2,0),
    VEHICLE_MAKE_ID               NUMBER(2,0),
    VEHICLE_TYPE_ID               NUMBER(2,0),
    VEHICLE_USE_ID                NUMBER(2,0),
    VEHICLE_SPECIAL_FUNCTION_ID    NUMBER(2,0),

```

```

    VEHICLE_DEFECT_ID          NUMBER(2,0),
    TRAILER_ID                 NUMBER(2,0),
    DIRECTION_ID               NUMBER(2,0),
    VEHICLE_MOVEMENT_ID        NUMBER(2,0),
    ESTIMATED_SPEED             NUMBER(3,0),
    PRE_IMPACT_ANGLE_ID         NUMBER(2,0),
    REAR_IMPACT                 CHAR(3),
    IMPACT_POINT_ATTEN_ID        NUMBER(2,0),
    IMPACT_POINT_VEHICLE_ID      NUMBER(2,0),
    DRIVER_ID                   NUMBER(4,0),
    ACCIDENT_ID                 NUMBER(4,0)      NOT NULL
/**IMPACT_POINT_VEHICLE IS A POINTER TO POINT_VEHICLE*/
)
;

CREATE TABLE VEHICLE_DAMAGE_RECEIVED(
    DAMAGE_RECEIVED_ID          NUMBER(4,0)      NOT NULL,
    POINT_VEHICLE_ID             NUMBER(2,0)      NOT NULL,
    VEHICLE_ID                   NUMBER(4,0)      NOT NULL
)
;

CREATE TABLE VEHICLE_RESULTS(
    VEHICLE_RESULTS_ID          NUMBER(4,0)      NOT NULL,
    VEHICLE_ID                   NUMBER(4,0)      NOT NULL,
    HAZARD_IMPACT_ID             NUMBER(2,0),
    FINAL_ORIENTATION_ID         NUMBER(2,0),
    STOPPING_PLACE_ID            NUMBER(2,0),
    STOPPING_MODE_ID             NUMBER(2,0),
    SPIN_BEHAVIOR_ID             NUMBER(2,0),
    SNAGGING_ID                  NUMBER(2,0),
    POCKETING_ID                 NUMBER(2,0),
    SPEARING_ID                  NUMBER(2,0),
    OVERRIDE_ID                  NUMBER(2,0),
    UNDERRIDE_ID                 NUMBER(2,0),
    DEFORMATION_ID               NUMBER(2,0),
    NUMBER_LANES_CROSSED         NUMBER(2,0),
    POST_IMPACT_ANGLE_ID         NUMBER(2,0),
    ESTIMATED_COST_VEHICLE       NUMBER(6,0),
    DISTANCE_LONG_ID             NUMBER(4,2),
    DISTANCE_LAT_ID              NUMBER(4,2),
    SECONDARY_ACC                 CHAR(3)
)
;

```

Appendix B-2: CREATE_LOOKUP_TABLES.SQL

```

CREATE TABLE ANCHORING_OPTIONS(
    ANCHORING_OPTIONS_ID        NUMBER(2,0)      NOT NULL,
    ANCHORING_OPTIONS_VALUE     CHAR(40)         NOT NULL
)
;

CREATE TABLE APPLICATIONS_AVAILABLE(
    APPLICATIONS_AVAILABLE_ID   NUMBER(2, 0)     NOT NULL,
    APPLICATIONS_AVAILABLE     CHAR(25)         NOT NULL
)
;

```

```

CREATE TABLE AREA_ZONING_USE (
    AREA_ZONING_USE_ID      NUMBER(2, 0)      NOT NULL,
    AREA_ZONING_USE_VALUE   CHAR(22)          NOT NULL
)
;

CREATE TABLE CATEGORY (
    CATEGORY_ID             NUMBER(2,0)        NOT NULL,
    CATEGORY_TYPE           CHAR(15)           NOT NULL
)
;

CREATE TABLE COMPONENT (
    COMPONENT_ID            NUMBER(3,0)        NOT NULL,
    COMPONENT_NAME          CHAR(40)           NOT NULL
)
;

CREATE TABLE CONDITION_AFTER_INSPECTION (
    INSPECTION_CONDITION_ID NUMBER(2,0)        NOT NULL,
    INSPECTION_CONDITION_VALUE CHAR(20)        NOT NULL
)
;

CREATE TABLE CONDITION_AFTER_REPAIR (
    REPAIR_CONDITION_ID     NUMBER(2,0)        NOT NULL,
    REPAIR_CONDITION_VALUE  CHAR(20)           NOT NULL
)
;

CREATE TABLE CONTRIBUTING_CAUSE_DRIVER (
    CONTRIB_CAUSE_DRIVER_ID NUMBER(2,0)        NOT NULL,
    CONTRIB_CAUSE_DRIVER_VALUE CHAR(40)        NOT NULL
)
;

CREATE TABLE CONTRIBUTING_CAUSE_ENV (
    CONTRIB_CAUSE_ENV_ID    NUMBER(2,0)        NOT NULL,
    CONTRIB_CAUSE_ENV_VALUE CHAR(40)           NOT NULL
)
;

CREATE TABLE CONTRIBUTING_CAUSE_ROAD (
    CONTRIB_CAUSE_ROAD_ID   NUMBER(2,0)        NOT NULL,
    CONTRIB_CAUSE_ROAD_VALUE CHAR(40)          NOT NULL
)
;

CREATE TABLE COUNTY (
    COUNTY_ID              NUMBER(3, 0)        NOT NULL,
    ENVIRONMENT_ID         NUMBER(2, 0)        NOT NULL,
    COUNTY                 CHAR(30)            NOT NULL,
    DISTRICT               NUMBER(3, 0)        NOT NULL
)
;

CREATE TABLE CURB_TYPE (
    CURB_TYPE_ID           NUMBER(2, 0)        NOT NULL,
    CURB_TYPE_VALUE        CHAR(13)            NOT NULL
)
;

```

```

CREATE TABLE CURVATURE_MAIN_MOVE (
    CURVE_MAIN_MOVE_ID      NUMBER(2,0)      NOT NULL,
    CURVE_MAIN_MOVE_VALUE   CHAR(30)         NOT NULL
)
;

CREATE TABLE CURVATURE_SECOND_MOVE (
    CURVE_SECOND_MOVE_ID    NUMBER(2,0)      NOT NULL,
    CURVE_SECOND_MOVE_VALUE CHAR(30)         NOT NULL
)
;

CREATE TABLE DAMAGE_TO_ATTEN (
    ATTEN_DAMAGE_ID         NUMBER(2,0)      NOT NULL,
    ATTEN_DAMAGE_DESCRIP    CHAR(10)         NOT NULL,
    ATTEN_DAMAGE_VALUE      NUMBER(3,2)      NOT NULL
)
;

CREATE TABLE DAMAGE_TO_VEHICLE (
    VEHICLE_DAMAGE_ID       NUMBER(2,0)      NOT NULL,
    VEHICLE_DAMAGE_DESCRIP   CHAR(10)         NOT NULL,
    VEHICLE_DAMAGE_VALUE     NUMBER(3,2)      NOT NULL
)
;

CREATE TABLE DATA_SOURCE (
    DATA_SOURCE_ID         NUMBER(2,0)      NOT NULL,
    DATA_SOURCE            CHAR(35)         NOT NULL
)
;

CREATE TABLE DEBRIS_SCATTERED (
    DEBRIS_SCATTER_ID       NUMBER(2,0)      NOT NULL,
    DEBRIS_DESCRIP          CHAR(10)         NOT NULL,
    DEBRIS_VALUE            NUMBER(3,2)      NOT NULL
)
;

CREATE TABLE DEFICIENCY_NOTED (
    DEFICIENCY_ID           NUMBER(3,0)      NOT NULL,
    DEFICIENCY_NAME         CHAR(30)         NOT NULL
)
;

CREATE TABLE DEFORM_PASS_COMPART (
    DEFORMATION_ID          NUMBER(2, 0)     NOT NULL,
    DEFORMATION_DESCRIP     CHAR(10)         NOT NULL,
    DEFORMATION_VALUE       NUMBER(4, 2)     NOT NULL
)
;

CREATE TABLE DIRECTION (
    DIRECTION_ID            NUMBER(2,0)      NOT NULL,
    DIRECTION_VALUE         CHAR(12)         NOT NULL
)
;

```

```

CREATE TABLE DISTANCE_LATERAL (
    DISTANCE_LAT_ID          NUMBER(2,0)          NOT NULL,
    DISTANCE_LAT_DESCRIP     CHAR(20)             NOT NULL,
    DISTANCE_LAT_VALUE       NUMBER(4,2)          NOT NULL
)
;

CREATE TABLE DISTANCE_LONG (
    DISTANCE_LONG_ID        NUMBER(2,0)          NOT NULL,
    DISTANCE_LONG_DESCRIP   CHAR(20)             NOT NULL,
    DISTANCE_LONG_VALUE     NUMBER(4,2)          NOT NULL
)
;

CREATE TABLE DRIVER_ACTION (
    DRIVER_ACTION_ID        NUMBER(2,0)          NOT NULL,
    DRIVER_ACTION_VALUE     CHAR(25)             NOT NULL
)
;

CREATE TABLE EJECTED (
    EJECTED_ID              NUMBER(2, 0)          NOT NULL,
    EJECTED_VALUE           CHAR(10)             NOT NULL
)
;

CREATE TABLE EMBANKMENT_CUT_FILL (
    EMBANKMENT_CUT_FILL_ID  NUMBER(2, 0)          NOT NULL,
    EMBANKMENT_VALUE        CHAR(10)             NOT NULL
)
;

CREATE TABLE ENVIRONMENT_CONDITIONS (
    ENVIRONMENT_ID          NUMBER(2, 0)          NOT NULL,
    ENVIRONMENT_DESCRIP     CHAR(30)             NOT NULL,
    ENVIRONMENT_VALUE       NUMBER(4,2)          NOT NULL
)
;

CREATE TABLE FINAL_ORIENTATION (
    FINAL_ORIENTATION_ID    NUMBER(2,0)          NOT NULL,
    FINAL_ORIENTATION_VALUE CHAR(40)             NOT NULL
)
;

CREATE TABLE HARMFUL_EVENT (
    HARMFUL_EVENT_ID        NUMBER(2,0)          NOT NULL,
    HARMFUL_EVENT           CHAR(45)             NOT NULL
)
;

CREATE TABLE HAZARD_IMPACT (
    HAZARD_IMPACT_ID        NUMBER(2,0)          NOT NULL,
    HAZARD_IMPACT_DESCRIP   CHAR(10)             NOT NULL,
    HAZARD_IMPACT_VALUE     NUMBER(4,2)          NOT NULL
)
;

CREATE TABLE IMPACT_POINT_ATTEN (

```

```

        IMPACT_POINT_ATTEN_ID      NUMBER(2,0)      NOT NULL,
        IMPACT_POINT_ATTEN        CHAR(15)          NOT NULL
    )
;

CREATE TABLE INITIAL_COST (
    INITIAL_COST_ID                NUMBER(2,0)      NOT NULL,
    INITIAL_COST_DESCRIP           CHAR(12)          NOT NULL,
    INITIAL_COST_VALUE             NUMBER(4,2)       NOT NULL
)
;

CREATE TABLE INJURY_SEVERITY (
    INJURY_SEVERITY_ID            NUMBER(3, 0)      NOT NULL,
    INJURY_SEVERITY_DESCRIP       CHAR(30)          NOT NULL,
    INJURY_SEVERITY_VALUE         NUMBER(4,2)       NOT NULL
)
;

CREATE TABLE INSPECTION_TYPE (
    INSPECTION_TYPE_ID            NUMBER(2,0)        NOT NULL,
    INSPECTION_TYPE_VALUE         CHAR(2)            NOT NULL
)
;

CREATE TABLE INVENTORY_REQUIRED (
    INVENTORY_ID                  NUMBER(2, 0)       NOT NULL,
    TYP_INVENTORY_REQ             CHAR(30)           NOT NULL,
    INVENTORY_REQ_VALUE           NUMBER(4,2)        NOT NULL
)
;

CREATE TABLE LIGHTING (
    LIGHTING_ID                   NUMBER(2,0)        NOT NULL,
    LIGHTING_VALUE                CHAR(22)           NOT NULL
)
;

CREATE TABLE LOCATION_IN_CAR (
    LOCATION_IN_CAR_ID            NUMBER(2,0)        NOT NULL,
    LOCATION_IN_CAR_VALUE         CHAR(16)           NOT NULL
)
;

CREATE TABLE LOCATION_WRT_ROAD (
    LOCATION_WRT_ROAD_ID          NUMBER(3, 0)       NOT NULL,
    LOCATION_CODE                 CHAR(2)            NOT NULL,
    LOCATION_WRT_ROAD             CHAR(30)           NOT NULL
)
;

CREATE TABLE MEDIAN_SURFACE (
    MEDIAN_SURFACE_ID             NUMBER(2, 0)       NOT NULL,
    MEDIAN_SURFACE                CHAR(10)           NOT NULL
)
;

CREATE TABLE NCHRP_TEST_LEVELS (
    NCHRP_STANDARD_ID             NUMBER(2, 0)       NOT NULL,
    STANDARD_TEST_LEVEL           CHAR(15)           NOT NULL
)
;

```

```

;

CREATE TABLE OVERRIDE (
    OVERRIDE_ID          NUMBER(2, 0)      NOT NULL,
    OVERRIDE_DESCRIP     CHAR(10)          NOT NULL,
    OVERRIDE_VALUE       NUMBER(4, 2)      NOT NULL
)
;

CREATE TABLE OWNER (
    OWNER_ID             NUMBER(2, 0)      NOT NULL,
    OWNER_NAME           CHAR(15)          NOT NULL
)
;

CREATE TABLE PAVEMENT_TYPE (
    PAVEMENT_TYPE_ID     NUMBER(2, 0)      NOT NULL,
    PAVEMENT_TYPE        CHAR(20)          NOT NULL
)
;

CREATE TABLE PEDESTRIAN_ACTION (
    PEDESTRIAN_ACTION_ID NUMBER(2, 0)      NOT NULL,
    PEDESTRIAN_ACTION     CHAR(40)          NOT NULL
)
;

CREATE TABLE PHYSICAL_DEFECTS (
    PHYSICAL_DEFECTS_ID  NUMBER(2, 0)      NOT NULL,
    PHYSICAL_DEFECTS_VALUE CHAR(28)          NOT NULL
)
;

CREATE TABLE POCKETING (
    POCKETING_ID         NUMBER(2, 0)      NOT NULL,
    POCKETING_DESCRIP    CHAR(10)          NOT NULL,
    POCKETING_VALUE      NUMBER(4, 2)      NOT NULL
)
;

CREATE TABLE POINT_VEHICLE (
    POINT_VEHICLE_ID     NUMBER(2, 0)      NOT NULL,
    POINT_VEHICLE_VALUE  CHAR(25)          NOT NULL
)
;

CREATE TABLE IMPACT_ANGLE (
    IMPACT_ANGLE_ID      NUMBER(2, 0)      NOT NULL,
    IMPACT_ANGLE_DESCRIP CHAR(20)          NOT NULL,
    IMPACT_ANGLE_VALUE    NUMBER(4, 2)      NOT NULL
)
;

CREATE TABLE REASON_FOR_REPAIR (
    REPAIR_REASON_ID     NUMBER(2, 0)      NOT NULL,
    REPAIR_REASON_VALUE  CHAR(20)          NOT NULL
)
;

CREATE TABLE RESIDENCE (
    RESIDENCE_ID         NUMBER(2, 0)      NOT NULL,

```



```

        RESIDENCE_VALUE          CHAR(22)          NOT NULL
    )
;

CREATE TABLE ROAD_SIDE (
    ROAD_SIDE_ID                NUMBER(2,0)        NOT NULL,
    ROAD_SIDE_VALUE              CHAR(22)           NOT NULL
)
;

CREATE TABLE ROAD_SURFACE (
    ROAD_SURFACE_ID              NUMBER(2,0)        NOT NULL,
    ROAD_SURFACE_VALUE           CHAR(20)           NOT NULL
)
;

CREATE TABLE ROAD_SYSTEM_IDENTIFIER (
    ROAD_SYSTEM_IDENTIFIER_ID    NUMBER(2,0)        NOT NULL,
    ROAD_SYSTEM_IDENTIFIER       CHAR(15)          NOT NULL,
    ROAD_SYSTEM_IDENTIFIER_VALUE NUMBER(4,2)
)
;

CREATE TABLE ROAD_TYPE (
    ROAD_TYPE_ID                 NUMBER(2,0)        NOT NULL,
    ROAD_TYPE_VALUE              CHAR(30)           NOT NULL
)
;

CREATE TABLE RURAL_URBAN (
    RURAL_URBAN_ID               NUMBER(2, 0)       NOT NULL,
    RURAL_OR_URBAN_CODE          CHAR(5)           NOT NULL,
    RURAL_OR_URBAN_DESCRIP      CHAR(30)           NOT NULL,
    RURAL_OR_URBAN_VALUE         NUMBER(4, 2)       NOT NULL
)
;

CREATE TABLE SAFETY_DEVICE (
    SAFETY_DEVICE_ID             NUMBER(2,0)        NOT NULL,
    SAFETY_DEVICE_VALUE          CHAR(30)           NOT NULL
)
;

CREATE TABLE SEX (
    SEX_ID                       NUMBER(1,0)        NOT NULL,
    SEX_VALUE                    CHAR(7)            NOT NULL
)
;

CREATE TABLE SHIELDED_OBJECT (
    SHIELD_OBJECT_ID             NUMBER(4, 0)       NOT NULL,
    OBJECT                       CHAR(30)           NOT NULL,
    RIGIDITY_VALUE               NUMBER(2, 0)       NOT NULL
)
;

CREATE TABLE SHOULDER_TYPE (
    SHOULDER_TYPE_ID             NUMBER(4, 0)       NOT NULL,
    SHOULDER_TYPE_VALUE          CHAR(10)           NOT NULL
)
;

```

```

CREATE TABLE SITE_LOCATION(
    SITE_LOCATION_ID      NUMBER(2,0)      NOT NULL,
    SITE_LOCATION_VALUE    CHAR(40)        NOT NULL
)
;

CREATE TABLE SNAGGING(
    SNAGGING_ID           NUMBER(2, 0)      NOT NULL,
    SNAGGING_DESCRIP      CHAR(10)          NOT NULL,
    SNAGGING_VALUE        NUMBER(4, 2)      NOT NULL
)
;

CREATE TABLE SPEARING(
    SPEARING_ID           NUMBER(2, 0)      NOT NULL,
    SPEARING_DESCRIP      CHAR(10)          NOT NULL,
    SPEARING_VALUE        NUMBER(4, 2)      NOT NULL
)
;

CREATE TABLE SPIN_BEHAVIOR(
    SPIN_BEHAVIOR_ID      NUMBER(2,0)      NOT NULL,
    SPIN_BEHAVIOR_VALUE    CHAR(15)        NOT NULL
)
;

CREATE TABLE STATE(
    STATE_ID              NUMBER(2,0)      NOT NULL,
    STATE_NAME            CHAR(13)         NOT NULL
)
;

CREATE TABLE STATUS(
    STATUS_ID             NUMBER(2, 0)      NOT NULL,
    PRESENT_STATUS        CHAR(10)         NOT NULL
)
;

CREATE TABLE STOPPING_MODE(
    STOPPING_MODE_ID      NUMBER(2,0)      NOT NULL,
    STOPPING_MODE_VALUE    CHAR(20)        NOT NULL
)
;

CREATE TABLE STOPPING_PLACE(
    STOPPING_PLACE_ID     NUMBER(2,0)      NOT NULL,
    STOPPING_PLACE_VALUE   CHAR(60)        NOT NULL
)
;

CREATE TABLE SURFACE_BT_ATTEN_AND_ROAD(
    SURFACE_BT_ATTEN_ROAD_ID  NUMBER(2, 0)      NOT NULL,
    SURFACE_BT_ATTEN_ROAD    CHAR(10)        NOT NULL
)
;

CREATE TABLE SURFACE_UNDER_ATTEN(
    SURFACE_UNDER_ATTEN_ID    NUMBER(2, 0)      NOT NULL,
    SURFACE_UNDER_ATTEN      CHAR(20)        NOT NULL
)

```

```

;

CREATE TABLE TRAFFICWAY_CHAR(
    TRAFFICWAY_CHAR_ID      NUMBER(2, 0)      NOT NULL,
    TRAFFICWAY_CHAR_VALUE   CHAR(26)          NOT NULL
)
;

CREATE TABLE TRAFFIC_CONTROL(
    TRAFFIC_CONTROL_ID      NUMBER(2,0)        NOT NULL,
    TRAFFIC_CONTROL_VALUE   CHAR(22)           NOT NULL
)
;

CREATE TABLE TRAILER(
    TRAILER_ID              NUMBER(2, 0)        NOT NULL,
    TRAILER_VALUE           CHAR(22)            NOT NULL
)
;

CREATE TABLE TYP_DEBRIS_SCATTER(
    DEBRIS_SCATTER_ID       NUMBER(2,0)        NOT NULL,
    DEBRIS_SCATTER_DESCRIP  CHAR(10)           NOT NULL,
    DEBRIS_SCATTER_VALUE    NUMBER(4,2)        NOT NULL
)
;

CREATE TABLE TYP_INSTALL_EQUIP(
    INSTALL_EQUIP_ID        NUMBER(2,0)        NOT NULL,
    INSTALL_EQUIP_DESCRIP   CHAR(10)           NOT NULL,
    INSTALL_EQUIP_VALUE     NUMBER(4,2)        NOT NULL
)
;

CREATE TABLE TYP_INSTALL_TIME(
    INSTALL_TIME_ID         NUMBER(2,0)        NOT NULL,
    INSTALL_TIME_DESCRIP    CHAR(10)           NOT NULL,
    INSTALL_TIME_VALUE      NUMBER(4,2)
)
;

CREATE TABLE TYP_REPAIR_CREW(
    REPAIR_CREW_ID          NUMBER(2,0)        NOT NULL,
    REPAIR_CREW_DESCRIP     CHAR(10)           NOT NULL,
    REPAIR_CREW_VALUE       NUMBER(4,2)        NOT NULL
)
;

CREATE TABLE TYP_REPAIR_EQUIP(
    REPAIR_EQUIP_ID         NUMBER(2,0)        NOT NULL,
    REPAIR_EQUIP_DESCRIP    CHAR(10)           NOT NULL,
    REPAIR_EQUIP_VALUE      NUMBER(4,2)        NOT NULL
)
;

CREATE TABLE TYP_REPAIR_TIME(
    REPAIR_TIME_ID          NUMBER(2,0)        NOT NULL,
    REPAIR_TIME_DESCRIP     CHAR(10)           NOT NULL,
    REPAIR_TIME_VALUE       NUMBER(4,2)
)
;

```

```

CREATE TABLE UNDERRIDE (
    UNDERRIDE_ID          NUMBER(2,0)      NOT NULL,
    UNDERRIDE_DESCRIP     CHAR(20)         NOT NULL,
    UNDERRIDE_VALUE       NUMBER(4,2)      NOT NULL
)
;

CREATE TABLE UNDER_INFLUENCE (
    UNDER_INFLUENCE_ID   NUMBER(2,0)      NOT NULL,
    UNDER_INFLUENCE_VALUE CHAR(35)        NOT NULL
)
;

CREATE TABLE VEHICLE_DEFECT (
    VEHICLE_DEFECT_ID     NUMBER(2,0)      NOT NULL,
    VEHICLE_DEFECT_VALUE  CHAR(25)         NOT NULL
)
;

CREATE TABLE VEHICLE_MAKE (
    VEHICLE_MAKE_ID       NUMBER(2,0)      NOT NULL,
    VEHICLE_MAKE_VALUE    CHAR(15)         NOT NULL
)
;

CREATE TABLE VEHICLE_MOVEMENT (
    VEHICLE_MOVEMENT_ID   NUMBER(2,0)      NOT NULL,
    VEHICLE_MOVEMENT_VALUE CHAR(30)        NOT NULL
)
;

CREATE TABLE VEHICLE_SPECIAL_FUNCTION (
    VEHICLE_SPECIAL_FUNCTION_ID NUMBER(2,0) NOT NULL,
    SPECIAL_FUNCTION_VALUE     CHAR(30)    NOT NULL
)
;

CREATE TABLE VEHICLE_TYPE (
    VEHICLE_TYPE_ID       NUMBER(2,0)      NOT NULL,
    VEHICLE_TYPE_VALUE    CHAR(35)         NOT NULL
)
;

CREATE TABLE VEHICLE_USE (
    VEHICLE_USE_ID        NUMBER(2,0)      NOT NULL,
    VEHICLE_USE_VALUE     CHAR(22)         NOT NULL
)
;

CREATE TABLE WEATHER (
    WEATHER_ID           NUMBER(2,0)      NOT NULL,
    WEATHER_VALUE        CHAR(10)         NOT NULL
)
;

CREATE TABLE TERRAIN (
    TERRAIN_ID           NUMBER(2,0)      NOT NULL,
    TERRAIN_VALUE        CHAR(15)         NOT NULL
)
;

```

```

CREATE TABLE CITATION_NAME (
    CITATION_NAME_ID NUMBER (3,0) NOT NULL,
    CITATION_NAME_DESCRIPTION CHAR(60) NOT NULL
)
;

```

Appendix B-3: CONSTRAINTS_USER_TABLES.SQL

```

ALTER TABLE ACCIDENT ADD
    CONSTRAINT PKA PRIMARY KEY (ACCIDENT_ID);

ALTER TABLE ACTIVITY ADD
    CONSTRAINT PKACT PRIMARY KEY (ACTIVITY_ID);

ALTER TABLE ANCHORING_OPTIONS_ATTENUATOR ADD
    CONSTRAINT PKANCHORING_OPTIONS_ATTENUATOR PRIMARY KEY
(ANCHORING_OPTIONS_ID,ATTENUATOR_TYPE_ID);

ALTER TABLE APPLICATIONS ADD
    CONSTRAINT PKAPPLICATIONS PRIMARY KEY (APPLICATIONS_ID,ATTENUATOR_TYPE_ID);

ALTER TABLE ATTEN_ACCIDENT ADD
    CONSTRAINT PK84 PRIMARY KEY (ATTEN_ACCIDENT_ID);

ALTER TABLE ATTEN_PERFORMANCE ADD
    CONSTRAINT PKATTEN_DAMAGE PRIMARY KEY (ATTEN_PERFORMANCE_ID);

ALTER TABLE ATTEN_REPAIR ADD
    CONSTRAINT PK116 PRIMARY KEY (ATTEN_REPAIR_ID);

ALTER TABLE ATTENUATOR_SITE ADD
    CONSTRAINT PKATTENUATOR_SITE PRIMARY KEY (ATTENUATOR_SITE_ID);

ALTER TABLE ATTENUATOR_TYPE ADD
    CONSTRAINT PKGENERAL_ATTEN_CATALOG PRIMARY KEY (ATTENUATOR_TYPE_ID);

ALTER TABLE ATTENUATOR ADD
    CONSTRAINT PKATTEN PRIMARY KEY (ATTENUATOR_ID);

ALTER TABLE CITATION ADD
    CONSTRAINT PK102 PRIMARY KEY (CITATION_ID);

ALTER TABLE CONTRIB_CAUSE_DRIVER_CITED ADD
    CONSTRAINT PK106 PRIMARY KEY (CONTRIB_CAUSE_DRIVER_CITED_ID);

ALTER TABLE CONTRIB_CAUSE_ENV_CITED ADD
    CONSTRAINT PK108 PRIMARY KEY (CONTRIB_CAUSE_ENV_CITED_ID);

ALTER TABLE CONTRIB_CAUSE_ROAD_CITED ADD
    CONSTRAINT PKCCR PRIMARY KEY (CONTRIB_CAUSE_ROAD_CITED_ID);

ALTER TABLE DEFICIENCIES ADD
    CONSTRAINT PK122 PRIMARY KEY (DEFICIENCY_ID);

ALTER TABLE DRIVER ADD
    CONSTRAINT PKENTITY66 PRIMARY KEY (DRIVER_ID);

ALTER TABLE INSPECTION ADD

```

```

        CONSTRAINT PK118 PRIMARY KEY (INSPECTION_ID);

ALTER TABLE MANUFACTURER ADD
    CONSTRAINT PK119 PRIMARY KEY (MANUFACTURER_ID);

ALTER TABLE MODEL ADD
    CONSTRAINT PKATTENUATOR_NUMBER PRIMARY KEY (MODEL_NUMBER);

ALTER TABLE PARTS_LIST ADD
    CONSTRAINT PK124 PRIMARY KEY (PART_ID);

ALTER TABLE PARTS_REQUIRED ADD
    CONSTRAINT PK123 PRIMARY KEY (PARTS_REQUIRED_ID);

ALTER TABLE PASSENGER ADD
    CONSTRAINT PK99 PRIMARY KEY (PASSENGER_ID);

ALTER TABLE PEDESTRIAN_ACTION_CITED ADD
    CONSTRAINT PKPEDACT PRIMARY KEY (PEDESTRIAN_ACTION_CITED_ID);

ALTER TABLE SAFETY_DEVICE_USED ADD
    CONSTRAINT PKPERSON PRIMARY KEY (PERSON_ID, SAFETY_DEVICE_ID);

ALTER TABLE ROADWAY_DESCRIPTION ADD
    CONSTRAINT PKROADWAY_DESCRIPTION PRIMARY KEY (ROADWAY_ID);

ALTER TABLE SUPPLIER ADD
    CONSTRAINT PK121 PRIMARY KEY (SUPPLIER_ID);

ALTER TABLE SUPPLIER_MANUF ADD
    CONSTRAINT PK120 PRIMARY KEY (SUPPLIER_MANUF_ID);

ALTER TABLE VEHICLE ADD
    CONSTRAINT PK85 PRIMARY KEY (VEHICLE_ID);

ALTER TABLE VEHICLE_DAMAGE_RECEIVED ADD
    CONSTRAINT PK104 PRIMARY KEY (DAMAGE_RECEIVED_ID);

ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT PKVEHICLE_RESULTS PRIMARY KEY (VEHICLE_RESULTS_ID);

ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_datsourc2 FOREIGN KEY (data_source_id)
        REFERENCES data_source(data_source_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_roadside FOREIGN KEY (road_side_id)
        REFERENCES road_side(road_side_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_sitloc FOREIGN KEY (site_location_id)
        REFERENCES site_location(site_location_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_trafcont FOREIGN KEY (traffic_control_id)
        REFERENCES traffic_control(traffic_control_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_roadsurf FOREIGN KEY (road_surface_id)
        REFERENCES road_surface(road_surface_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_weather FOREIGN KEY (weather_id)
        REFERENCES weather(weather_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_lighting FOREIGN KEY (lighting_id)

```

```

REFERENCES lighting(lightning_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_harmev1 FOREIGN KEY (harmful_event_1)
        REFERENCES harmful_event(harmful_event_id);
ALTER TABLE ACCIDENT ADD
    CONSTRAINT fk_harmev2 FOREIGN KEY (harmful_event_2)
        REFERENCES harmful_event(harmful_event_id);

ALTER TABLE ACTIVITY ADD
    CONSTRAINT fk_atten3 FOREIGN KEY (attenuator_id)
        REFERENCES attenuator(attenuator_id);

ALTER TABLE ANCHORING_OPTIONS_ATTENUATOR ADD
    CONSTRAINT fk_anch FOREIGN KEY (anchoring_options_id)
        REFERENCES anchoring_options(anchoring_options_id);
ALTER TABLE ANCHORING_OPTIONS_ATTENUATOR ADD
    CONSTRAINT fk_attype3 FOREIGN KEY (attenuator_type_id)
        REFERENCES attenuator_type(attenuator_type_id);

ALTER TABLE APPLICATIONS ADD
    CONSTRAINT fk_applic FOREIGN KEY (applications_id)
        REFERENCES applications_available(applications_available_id);
ALTER TABLE APPLICATIONS ADD
    CONSTRAINT fk_attype2 FOREIGN KEY (attenuator_type_id)
        REFERENCES attenuator_type(attenuator_type_id);

ALTER TABLE ATTEN_ACCIDENT ADD
    CONSTRAINT fk_attperf FOREIGN KEY (atten_performance_id)
        REFERENCES atten_performance(atten_performance_id);
ALTER TABLE ATTEN_ACCIDENT ADD
    CONSTRAINT fk_acc5 FOREIGN KEY (accident_id)
        REFERENCES accident(accident_id);
ALTER TABLE ATTEN_ACCIDENT ADD
    CONSTRAINT fk_atten2 FOREIGN KEY (attenuator_id)
        REFERENCES attenuator(attenuator_id);

ALTER TABLE ATTEN_PERFORMANCE ADD
    CONSTRAINT fk_deb FOREIGN KEY (debris_scatter_id)
        REFERENCES debris_scattered(debris_scatter_id);
ALTER TABLE ATTEN_PERFORMANCE ADD
    CONSTRAINT fk_acc FOREIGN KEY (atten_damage_id)
        REFERENCES damage_to_atten(atten_damage_id);

ALTER TABLE ATTEN_REPAIR ADD
    CONSTRAINT fk_activ3 FOREIGN KEY (activity_id)
        REFERENCES activity(activity_id);
ALTER TABLE ATTEN_REPAIR ADD
    CONSTRAINT fk_reasrep FOREIGN KEY (repair_reason_id)
        REFERENCES reason_for_repair(repair_reason_id);
ALTER TABLE ATTEN_REPAIR ADD
    CONSTRAINT fk_acc4 FOREIGN KEY (accident_id)
        REFERENCES accident(accident_id);
ALTER TABLE ATTEN_REPAIR ADD
    CONSTRAINT fk_car FOREIGN KEY (condition_after_repair_id)
        REFERENCES condition_after_repair(repair_condition_id);

ALTER TABLE ATTENUATOR_SITE ADD
    CONSTRAINT fk_atten4 FOREIGN KEY (attenuator_id)
        REFERENCES attenuator(attenuator_id);
ALTER TABLE ATTENUATOR_SITE ADD
    CONSTRAINT fk_sua FOREIGN KEY (surface_under_atten_id)

```

```

REFERENCES surface_under_atten(surface_under_atten_id);
ALTER TABLE ATTENUATOR_SITE ADD
  CONSTRAINT fk_sbar FOREIGN KEY (surface_bt_atten_road_id)
    REFERENCES surface_bt_atten_and_road(surface_bt_atten_road_id);
ALTER TABLE ATTENUATOR_SITE ADD
  CONSTRAINT fk_shieldobj FOREIGN KEY (shield_object_id)
    REFERENCES shielded_object(shield_object_id);
ALTER TABLE ATTENUATOR_SITE ADD
  CONSTRAINT fk_anchopt FOREIGN KEY (anchoring_options_id)
    REFERENCES anchoring_options(anchoring_options_id);

ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_manuf2 FOREIGN KEY (manufacturer_id)
    REFERENCES manufacturer(manufacturer_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_cat FOREIGN KEY (category_id)
    REFERENCES category(category_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_trt FOREIGN KEY (typ_repair_time_id)
    REFERENCES typ_repair_time(repair_time_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_tre FOREIGN KEY (typ_repair_equip_id)
    REFERENCES typ_repair_equip(repair_equip_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_trc FOREIGN KEY (typ_repair_crew_id)
    REFERENCES typ_repair_crew(repair_crew_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_initcost FOREIGN KEY (initial_cost_id)
    REFERENCES initial_cost(initial_cost_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_tit FOREIGN KEY (typ_install_time_id)
    REFERENCES typ_install_time(install_time_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_tie FOREIGN KEY (typ_install_equip_id)
    REFERENCES typ_install_equip(install_equip_id);
ALTER TABLE ATTENUATOR_TYPE ADD
  CONSTRAINT fk_tds FOREIGN KEY (debris_scatter_id)
    REFERENCES typ_debris_scatter(debris_scatter_id);

ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_owner FOREIGN KEY (owner_id)
    REFERENCES owner(owner_id);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_county FOREIGN KEY (county_id)
    REFERENCES county(county_id);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_apptraf FOREIGN KEY (approach_traffic_id)
    REFERENCES direction(direction_id);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_stat FOREIGN KEY (status_id)
    REFERENCES status(status_id);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_locroad FOREIGN KEY (location_wrt_road_id)
    REFERENCES location_wrt_road(location_wrt_road_id);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_mod FOREIGN KEY (model_number)
    REFERENCES model(model_number);
ALTER TABLE ATTENUATOR ADD
  CONSTRAINT fk_road FOREIGN KEY (roadway_id)
    REFERENCES roadway_description(roadway_id);

```



```

ALTER TABLE CONTRIB_CAUSE_DRIVER_CITED ADD
    CONSTRAINT fk_driv2 FOREIGN KEY (driver_id)
        REFERENCES driver(driver_id);
ALTER TABLE CONTRIB_CAUSE_DRIVER_CITED ADD
    CONSTRAINT fk_ccd FOREIGN KEY (contrib_cause_driver_id)
        REFERENCES contributing_cause_driver(contrib_cause_driver_id);

ALTER TABLE CONTRIB_CAUSE_ENV_CITED ADD
    CONSTRAINT fk_accid3 FOREIGN KEY (accident_number_id)
        REFERENCES accident(accident_id);
ALTER TABLE CONTRIB_CAUSE_ENV_CITED ADD    CONSTRAINT fk_cce FOREIGN KEY
(contrib_cause_env_id)
    REFERENCES contributing_cause_env(contrib_cause_env_id);

ALTER TABLE CONTRIB_CAUSE_ROAD_CITED ADD
    CONSTRAINT fk_accid2 FOREIGN KEY (accident_number_id)
        REFERENCES accident(accident_id);
ALTER TABLE CONTRIB_CAUSE_ROAD_CITED ADD
    CONSTRAINT fk_ccr FOREIGN KEY (contrib_cause_road_id)
        REFERENCES contributing_cause_road(contrib_cause_road_id);

ALTER TABLE DEFICIENCIES ADD
    CONSTRAINT fk_insp FOREIGN KEY (inspection_id)
        REFERENCES inspection(inspection_id);
ALTER TABLE DEFICIENCIES ADD
    CONSTRAINT fk_comp FOREIGN KEY (component_id)
        REFERENCES component(component_id);
ALTER TABLE DEFICIENCIES ADD
    CONSTRAINT fk_defnot FOREIGN KEY (deficiency_noted_id)
        REFERENCES deficiency_noted(deficiency_id);

ALTER TABLE DRIVER ADD
    CONSTRAINT fk_sex FOREIGN KEY (sex_id)
        REFERENCES sex(sex_id);
ALTER TABLE DRIVER ADD
    CONSTRAINT fk_res FOREIGN KEY (residence_id)
        REFERENCES residence(residence_id);
ALTER TABLE DRIVER ADD
    CONSTRAINT dage_OK CHECK (age >= 0);
ALTER TABLE DRIVER ADD
    CONSTRAINT fk_eject2 FOREIGN KEY (ejected_id)
        REFERENCES ejected(ejected_id);
ALTER TABLE DRIVER ADD
    CONSTRAINT fk_injsev2 FOREIGN KEY (injury_severity_id)
        REFERENCES injury_severity(injury_severity_id);
ALTER TABLE DRIVER ADD
    CONSTRAINT fk_physdef FOREIGN KEY (physical_defects_id)
        REFERENCES physical_defects(physical_defects_id);

ALTER TABLE DRIVER ADD
    CONSTRAINT fk_undinf FOREIGN KEY (under_influence_id)
        REFERENCES under_influence(under_influence_id);

ALTER TABLE INSPECTION ADD
    CONSTRAINT fk_datsour FOREIGN KEY (data_source_id)
        REFERENCES data_source(data_source_id);
ALTER TABLE INSPECTION ADD
    CONSTRAINT fk_activ2 FOREIGN KEY (activity_id)
        REFERENCES activity(activity_id);
ALTER TABLE INSPECTION ADD
    CONSTRAINT fk_insptyp FOREIGN KEY (inspection_type_id)

```

```

REFERENCES inspection_type(inspection_type_id);
ALTER TABLE INSPECTION ADD
  CONSTRAINT fk_inspcond FOREIGN KEY (inspection_condition_id)
    REFERENCES condition_after_inspection(inspection_condition_id);

ALTER TABLE MANUFACTURER ADD
  CONSTRAINT fk_state FOREIGN KEY (state_id)
    REFERENCES state(state_id);

ALTER TABLE MODEL ADD
  CONSTRAINT fk_nchrp FOREIGN KEY (nchrp_standard_id)
    REFERENCES nchrp_test_levels(nchrp_standard_id);
ALTER TABLE MODEL ADD
  CONSTRAINT fk_attype FOREIGN KEY (attenuator_type_id)
    REFERENCES attenuator_type(attenuator_type_id);

ALTER TABLE PARTS_REQUIRED ADD
  CONSTRAINT fk_part FOREIGN KEY (part_id)
    REFERENCES parts_list(part_id);
ALTER TABLE PARTS_REQUIRED ADD
  CONSTRAINT fk_activ FOREIGN KEY (activity_id)
    REFERENCES activity(activity_id);

ALTER TABLE PASSENGER ADD
  CONSTRAINT fk_eject FOREIGN KEY (ejected_id)
    REFERENCES ejected(ejected_id);
ALTER TABLE PASSENGER ADD
  CONSTRAINT fk_injsev FOREIGN KEY (injury_severity_id)
    REFERENCES injury_severity(injury_severity_id);
ALTER TABLE PASSENGER ADD
  CONSTRAINT fk_loccar FOREIGN KEY (location_in_car_id)
    REFERENCES location_in_car(location_in_car_id);
ALTER TABLE PASSENGER ADD
  CONSTRAINT fk_vehno FOREIGN KEY (vehicle_id)
    REFERENCES vehicle(vehicle_id);

ALTER TABLE PEDESTRIAN_ACTION_CITED ADD
  CONSTRAINT fk_accid5 FOREIGN KEY (accident_number_id)
    REFERENCES accident(accident_id);
ALTER TABLE PEDESTRIAN_ACTION_CITED ADD
  CONSTRAINT fk_pact FOREIGN KEY (pedestrian_action_id)
    REFERENCES pedestrian_action(pedestrian_action_id);

ALTER TABLE SAFETY_DEVICE_USED ADD
  CONSTRAINT fk_safdev FOREIGN KEY (safety_device_id)
    REFERENCES safety_device(safety_device_id);

ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_rsi FOREIGN KEY (road_system_identifier_id)
    REFERENCES road_system_identifier(road_system_identifier_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_rdtp FOREIGN KEY (road_type_id)
    REFERENCES road_type(road_type_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_medsurf FOREIGN KEY (median_surface_id)
    REFERENCES median_surface(median_surface_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_shtp FOREIGN KEY (shoulder_type_id)
    REFERENCES shoulder_type(shoulder_type_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_cbtp FOREIGN KEY (curb_type_id)

```

```

REFERENCES curb_type(curb_type_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_embank FOREIGN KEY (embankment_cut_fill_id)
    REFERENCES embankment_cut_fill(embankment_cut_fill_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_cmm FOREIGN KEY (curve_main_move_id)
    REFERENCES curvature_main_move(curve_main_move_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_csm FOREIGN KEY (curve_second_move_id)
    REFERENCES curvature_second_move(curve_second_move_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_traf FOREIGN KEY (trafficway_character_id)
    REFERENCES trafficway_char(trafficway_char_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_azc FOREIGN KEY (area_zoning_use_id)
    REFERENCES area_zoning_use(area_zoning_use_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_rururb FOREIGN KEY (rural_urban_id)
    REFERENCES rural_urban(rural_urban_id);
ALTER TABLE ROADWAY_DESCRIPTION ADD
  CONSTRAINT fk_pave FOREIGN KEY (pavement_type_id)
    REFERENCES pavement_type(pavement_type_id);

ALTER TABLE SUPPLIER ADD
  CONSTRAINT fk_state2 FOREIGN KEY (state_id)
    REFERENCES state(state_id);

ALTER TABLE SUPPLIER_MANUF ADD
  CONSTRAINT fk_sup FOREIGN KEY (supplier_id)
    REFERENCES supplier(supplier_id);
ALTER TABLE SUPPLIER_MANUF ADD
  CONSTRAINT fk_manuf FOREIGN KEY (manufacturer_id)
    REFERENCES manufacturer(manufacturer_id);

ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_drivact FOREIGN KEY (driver_action_id)
    REFERENCES driver_action(driver_action_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehmak FOREIGN KEY (vehicle_make_id)
    REFERENCES vehicle_make(vehicle_make_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehtyp FOREIGN KEY (vehicle_type_id)
    REFERENCES vehicle_type(vehicle_type_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehuse FOREIGN KEY (vehicle_use_id)
    REFERENCES vehicle_use(vehicle_use_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehspecfct FOREIGN KEY (vehicle_special_function_id)
    REFERENCES vehicle_special_function(vehicle_special_function_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehdef FOREIGN KEY (vehicle_defect_id)
    REFERENCES vehicle_defect(vehicle_defect_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_trail FOREIGN KEY (trailer_id)
    REFERENCES trailer(trailer_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_dir FOREIGN KEY (direction_id)
    REFERENCES direction(direction_id);
ALTER TABLE VEHICLE ADD
  CONSTRAINT fk_vehmove FOREIGN KEY (vehicle_movement_id)
    REFERENCES vehicle_movement(vehicle_movement_id);

```

```

ALTER TABLE VEHICLE ADD
    CONSTRAINT fk_preia FOREIGN KEY (pre_impact_angle_id)
        REFERENCES impact_angle(impact_angle_id);
ALTER TABLE VEHICLE ADD
    CONSTRAINT fk_ipa FOREIGN KEY (impact_point_atten_id)
        REFERENCES impact_point_atten(impact_point_atten_id);
ALTER TABLE VEHICLE ADD
    CONSTRAINT fk_ipv FOREIGN KEY (impact_point_vehicle_id)
        REFERENCES point_vehicle(point_vehicle_id);
ALTER TABLE VEHICLE ADD
    CONSTRAINT fk_driver FOREIGN KEY (driver_id)
        REFERENCES driver(driver_id);
ALTER TABLE VEHICLE ADD
    CONSTRAINT fk_accid FOREIGN KEY (accident_id)
        REFERENCES accident(accident_id);

ALTER TABLE VEHICLE_DAMAGE_RECEIVED ADD
    CONSTRAINT fk_dampoint FOREIGN KEY (point_vehicle_id)
        REFERENCES point_vehicle(point_vehicle_id);
ALTER TABLE VEHICLE_DAMAGE_RECEIVED ADD
    CONSTRAINT fk_vch2 FOREIGN KEY (vehicle_id)
        REFERENCES vehicle(vehicle_id);

ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_vehr FOREIGN KEY (vehicle_id)
        REFERENCES vehicle(vehicle_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_hazimp FOREIGN KEY (hazard_impact_id)
        REFERENCES hazard_impact(hazard_impact_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_orient FOREIGN KEY (final_orientation_id)
        REFERENCES final_orientation(final_orientation_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_stopplace FOREIGN KEY (stopping_place_id)
        REFERENCES stopping_place(stopping_place_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_stop FOREIGN KEY (stopping_mode_id)
        REFERENCES stopping_mode(stopping_mode_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_spin FOREIGN KEY (spin_behavior_id)
        REFERENCES spin_behavior(spin_behavior_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_snag FOREIGN KEY (snagging_id)
        REFERENCES snagging(snagging_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_pock FOREIGN KEY (pocketing_id)
        REFERENCES pocketing(pocketing_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_spear FOREIGN KEY (spearing_id)
        REFERENCES spearing(spearing_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_over FOREIGN KEY (override_id)
        REFERENCES override(override_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_und FOREIGN KEY (underride_id)
        REFERENCES underride(underride_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_def FOREIGN KEY (deformation_id)
        REFERENCES deform_pass_compart(deformation_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_postia FOREIGN KEY (post_impact_angle_id)

```

```

REFERENCES impact_angle(impact_angle_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_dislong FOREIGN KEY (distance_long_id)
        REFERENCES distance_long(distance_long_id);
ALTER TABLE VEHICLE_RESULTS ADD
    CONSTRAINT fk_dislat FOREIGN KEY (distance_lat_id)
        REFERENCES distance_lateral(distance_lat_id);

```

Appendix B-4: CONSTRAINTS_LOOKUP_TABLES.SQL

```

ALTER TABLE ANCHORING_OPTIONS ADD
    CONSTRAINT PKANCHORING_OPTIONS_ID PRIMARY KEY (ANCHORING_OPTIONS_ID);

ALTER TABLE APPLICATIONS_AVAILABLE ADD
    CONSTRAINT PKAPPLICATIONS_AVAILABLE_ID PRIMARY KEY
    (APPLICATIONS_AVAILABLE_ID);

ALTER TABLE AREA_ZONING_USE ADD
    CONSTRAINT PKAZU PRIMARY KEY (AREA_ZONING_USE_ID);

ALTER TABLE CATEGORY ADD
    CONSTRAINT PKCAT PRIMARY KEY (CATEGORY_ID);

ALTER TABLE COMPONENT ADD
    CONSTRAINT PKCOMP PRIMARY KEY (COMPONENT_ID);

ALTER TABLE CONDITION_AFTER_INSPECTION ADD
    CONSTRAINT PK125 PRIMARY KEY (INSPECTION_CONDITION_ID);

ALTER TABLE CONDITION_AFTER_REPAIR ADD
    CONSTRAINT PKCAREP PRIMARY KEY (REPAIR_CONDITION_ID);

ALTER TABLE CONTRIBUTING_CAUSE_DRIVER ADD
    CONSTRAINT PK105 PRIMARY KEY (CONTRIB_CAUSE_DRIVER_ID);

ALTER TABLE CONTRIBUTING_CAUSE_ENV ADD
    CONSTRAINT PK107 PRIMARY KEY (CONTRIB_CAUSE_ENV_ID);

ALTER TABLE CONTRIBUTING_CAUSE_ROAD ADD
    CONSTRAINT PKCONT PRIMARY KEY (CONTRIB_CAUSE_ROAD_ID);

ALTER TABLE CURB_TYPE ADD
    CONSTRAINT PKENTITY18 PRIMARY KEY (CURB_TYPE_ID);

ALTER TABLE CURVATURE_MAIN_MOVE ADD
    CONSTRAINT PKCMM PRIMARY KEY (CURVE_MAIN_MOVE_ID);

ALTER TABLE CURVATURE_SECOND_MOVE ADD
    CONSTRAINT PKCSM PRIMARY KEY (CURVE_SECOND_MOVE_ID);

ALTER TABLE DAMAGE_TO_ATTEN ADD
    CONSTRAINT PKENTITY60 PRIMARY KEY (ATTEN_DAMAGE_ID);

ALTER TABLE DAMAGE_TO_VEHICLE ADD
    CONSTRAINT PKDTV PRIMARY KEY (VEHICLE_DAMAGE_ID);

ALTER TABLE DATA_SOURCE ADD
    CONSTRAINT PKDSI PRIMARY KEY (DATA_SOURCE_ID);

```

```

ALTER TABLE DEBRIS_SCATTERED ADD
    CONSTRAINT PKENTITY62 PRIMARY KEY (DEBRIS_SCATTER_ID);

ALTER TABLE DEFICIENCY_NOTED ADD
    CONSTRAINT PKDEF_NOT PRIMARY KEY (DEFICIENCY_ID);

ALTER TABLE DEFORM_PASS_COMPART ADD
    CONSTRAINT PKENTITY49 PRIMARY KEY (DEFORMATION_ID);

ALTER TABLE DIRECTION ADD
    CONSTRAINT PK88 PRIMARY KEY (DIRECTION_ID);

ALTER TABLE DISTANCE_LATERAL ADD
    CONSTRAINT DISLAT PRIMARY KEY (DISTANCE_LAT_ID);

ALTER TABLE DISTANCE_LONG ADD
    CONSTRAINT DISLONG PRIMARY KEY (DISTANCE_LONG_ID);

ALTER TABLE DRIVER_ACTION ADD
    CONSTRAINT DRIVACT PRIMARY KEY (DRIVER_ACTION_ID);

ALTER TABLE EJECTED ADD
    CONSTRAINT PKEJ PRIMARY KEY (EJECTED_ID);

ALTER TABLE EMBANKMENT_CUT_FILL ADD
    CONSTRAINT PKENTITY23 PRIMARY KEY (EMBANKMENT_CUT_FILL_ID);

ALTER TABLE ENVIRONMENT_CONDITIONS ADD
    CONSTRAINT PKENTITY71 PRIMARY KEY (ENVIRONMENT_ID);

ALTER TABLE COUNTY ADD
    CONSTRAINT fk_env FOREIGN KEY (environment_id)
    REFERENCES environment_conditions(environment_id);
ALTER TABLE COUNTY ADD
    CONSTRAINT PKCOUNTY PRIMARY KEY (COUNTY_ID);

ALTER TABLE FINAL_ORIENTATION ADD
    CONSTRAINT PK112 PRIMARY KEY (FINAL_ORIENTATION_ID);

ALTER TABLE HARMFUL_EVENT ADD
    CONSTRAINT PK74 PRIMARY KEY (HARMFUL_EVENT_ID);

ALTER TABLE HAZARD_IMPACT ADD
    CONSTRAINT PK110 PRIMARY KEY (HAZARD_IMPACT_ID);

ALTER TABLE IMPACT_POINT_ATTEN ADD
    CONSTRAINT PKENTITY55 PRIMARY KEY (IMPACT_POINT_ATTEN_ID);

ALTER TABLE INITIAL_COST ADD
    CONSTRAINT PKIC PRIMARY KEY (INITIAL_COST_ID);

ALTER TABLE INJURY_SEVERITY ADD
    CONSTRAINT PKENTITY69 PRIMARY KEY (INJURY_SEVERITY_ID);

ALTER TABLE INSPECTION_TYPE ADD
    CONSTRAINT PK126 PRIMARY KEY (INSPECTION_TYPE_ID);

ALTER TABLE INVENTORY_REQUIRED ADD
    CONSTRAINT PKENTITY72 PRIMARY KEY (INVENTORY_ID);

ALTER TABLE LIGHTING ADD

```

```

CONSTRAINT PK76 PRIMARY KEY (LIGHTING_ID);

ALTER TABLE LOCATION_IN_CAR ADD
  CONSTRAINT PK100 PRIMARY KEY (LOCATION_IN_CAR_ID);

ALTER TABLE LOCATION_WRT_ROAD ADD
  CONSTRAINT PKLWR PRIMARY KEY (LOCATION_WRT_ROAD_ID);

ALTER TABLE MEDIAN_SURFACE ADD
  CONSTRAINT PKENTITY17 PRIMARY KEY (MEDIAN_SURFACE_ID);

ALTER TABLE NCHRP_TEST_LEVELS ADD
  CONSTRAINT PKENTITY38 PRIMARY KEY (NCHRP_STANDARD_ID);

ALTER TABLE OVERRIDE ADD
  CONSTRAINT PKENTITY48 PRIMARY KEY (OVERRIDE_ID);

ALTER TABLE OWNER ADD
  CONSTRAINT PKOWNER PRIMARY KEY (OWNER_ID);

ALTER TABLE PAVEMENT_TYPE ADD
  CONSTRAINT PKENTITY24 PRIMARY KEY (PAVEMENT_TYPE_ID);

ALTER TABLE PEDESTRIAN_ACTION ADD
  CONSTRAINT PKPED PRIMARY KEY (PEDESTRIAN_ACTION_ID);

ALTER TABLE PHYSICAL_DEFECTS ADD
  CONSTRAINT PK93 PRIMARY KEY (PHYSICAL_DEFECTS_ID);

ALTER TABLE POCKETING ADD
  CONSTRAINT PKENTITY80 PRIMARY KEY (POCKETING_ID);

ALTER TABLE POINT_VEHICLE ADD
  CONSTRAINT PK87 PRIMARY KEY (POINT_VEHICLE_ID);

ALTER TABLE IMPACT_ANGLE ADD
  CONSTRAINT PKENTITY44 PRIMARY KEY (IMPACT_ANGLE_ID);

ALTER TABLE REASON_FOR_REPAIR ADD
  CONSTRAINT PKRFR PRIMARY KEY (REPAIR_REASON_ID);

ALTER TABLE RESIDENCE ADD
  CONSTRAINT PKRES PRIMARY KEY (RESIDENCE_ID);

ALTER TABLE ROAD_SIDE ADD
  CONSTRAINT PK82 PRIMARY KEY (ROAD_SIDE_ID);

ALTER TABLE ROAD_SURFACE ADD
  CONSTRAINT PK78 PRIMARY KEY (ROAD_SURFACE_ID);

ALTER TABLE ROAD_SYSTEM_IDENTIFIER ADD
  CONSTRAINT PKRSI PRIMARY KEY (ROAD_SYSTEM_IDENTIFIER_ID);

ALTER TABLE ROAD_TYPE ADD
  CONSTRAINT PKRT PRIMARY KEY (ROAD_TYPE_ID);

ALTER TABLE RURAL_URBAN ADD
  CONSTRAINT PK68 PRIMARY KEY (RURAL_URBAN_ID);

ALTER TABLE SAFETY_DEVICE ADD

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```

        CONSTRAINT PK97 PRIMARY KEY (SAFETY_DEVICE_ID);

ALTER TABLE SEX ADD
    CONSTRAINT PK95 PRIMARY KEY (SEX_ID);

ALTER TABLE SHIELDED_OBJECT ADD
    CONSTRAINT PKSHEILDED_OBJECT PRIMARY KEY (SHIELD_OBJECT_ID);

ALTER TABLE SHOULDER_TYPE ADD
    CONSTRAINT PKSHOUL_TYPE PRIMARY KEY (SHOULDER_TYPE_ID);

ALTER TABLE SITE_LOCATION ADD
    CONSTRAINT PK81 PRIMARY KEY (SITE_LOCATION_ID);

ALTER TABLE SNAGGING ADD
    CONSTRAINT PKENTITY43 PRIMARY KEY (SNAGGING_ID);

ALTER TABLE SPEARING ADD
    CONSTRAINT PKSPEARING PRIMARY KEY (SPEARING_ID);

ALTER TABLE SPIN_BEHAVIOR ADD
    CONSTRAINT PK114 PRIMARY KEY (SPIN_BEHAVIOR_ID);

ALTER TABLE STATE ADD
    CONSTRAINT PK94 PRIMARY KEY (STATE_ID);

ALTER TABLE STATUS ADD
    CONSTRAINT PKSTATUS PRIMARY KEY (STATUS_ID);

ALTER TABLE STOPPING_MODE ADD
    CONSTRAINT PK113 PRIMARY KEY (STOPPING_MODE_ID);

ALTER TABLE STOPPING_PLACE ADD
    CONSTRAINT PK111 PRIMARY KEY (STOPPING_PLACE_ID);

ALTER TABLE SURFACE_BT_ATTEN_AND_ROAD ADD
    CONSTRAINT PKSURFACE PRIMARY KEY (SURFACE_BT_ATTEN_ROAD_ID);

ALTER TABLE SURFACE_UNDER_ATTEN ADD
    CONSTRAINT PKENTITY13 PRIMARY KEY (SURFACE_UNDER_ATTEN_ID);

ALTER TABLE TRAFFICWAY_CHAR ADD
    CONSTRAINT PKTC PRIMARY KEY (TRAFFICWAY_CHAR_ID);

ALTER TABLE TRAFFIC_CONTROL ADD
    CONSTRAINT PK80 PRIMARY KEY (TRAFFIC_CONTROL_ID);

ALTER TABLE TRAILER ADD
    CONSTRAINT PKTRAILER PRIMARY KEY (TRAILER_ID);

ALTER TABLE TYP_DEBRIS_SCATTER ADD
    CONSTRAINT PK73 PRIMARY KEY (DEBRIS_SCATTER_ID);

ALTER TABLE TYP_INSTALL_EQUIP ADD
    CONSTRAINT PKTIE PRIMARY KEY (INSTALL_EQUIP_ID);

ALTER TABLE TYP_INSTALL_TIME ADD
    CONSTRAINT PKTIT PRIMARY KEY (INSTALL_TIME_ID);

ALTER TABLE TYP_REPAIR_CREW ADD
    CONSTRAINT PKTRC PRIMARY KEY (REPAIR_CREW_ID);

```



```

ALTER TABLE TYP_REPAIR_EQUIP ADD
    CONSTRAINT PKTRE PRIMARY KEY (REPAIR_EQUIP_ID);

ALTER TABLE TYP_REPAIR_TIME ADD
    CONSTRAINT PKTRT PRIMARY KEY (REPAIR_TIME_ID);

ALTER TABLE UNDERRIDE ADD
    CONSTRAINT PKENTITY45 PRIMARY KEY (UNDERRIDE_ID);

ALTER TABLE UNDER_INFLUENCE ADD
    CONSTRAINT PK91 PRIMARY KEY (UNDER_INFLUENCE_ID);

ALTER TABLE VEHICLE_DEFECT ADD
    CONSTRAINT PK89 PRIMARY KEY (VEHICLE_DEFECT_ID);

ALTER TABLE VEHICLE_MAKE ADD
    CONSTRAINT PK86 PRIMARY KEY (VEHICLE_MAKE_ID);

ALTER TABLE VEHICLE_MOVEMENT ADD
    CONSTRAINT PKVM PRIMARY KEY (VEHICLE_MOVEMENT_ID);

ALTER TABLE VEHICLE_SPECIAL_FUNCTION ADD
    CONSTRAINT PK90 PRIMARY KEY (VEHICLE_SPECIAL_FUNCTION_ID);

ALTER TABLE VEHICLE_TYPE ADD
    CONSTRAINT PKVEHTYP PRIMARY KEY (VEHICLE_TYPE_ID);

ALTER TABLE VEHICLE_USE ADD
    CONSTRAINT PKVEHUSE PRIMARY KEY (VEHICLE_USE_ID);

ALTER TABLE WEATHER ADD
    CONSTRAINT PK77 PRIMARY KEY (WEATHER_ID);

```

Appendix B-5: DSS_TABLES_SCHEMA.SQL

```

create table CRITERIA_WEIGHTS
(CRITERIA          number(2,0),
 CRIT_WEIGHT       number(5,3));

create table MATCHING_SCORES
(ATTENUATOR_ID     char(5),
 MATCH_SCORE       number(5,3));

create table SCORES
(CONFIG_NUMBER      char(5),
 SCORE_1           number(8,4),
 SCORE_2           number(8,4),
 SCORE_3           number(8,4),
 SCORE_4           number(8,4),
 SCORE_5           number(8,4),
 SCORE_6           number(8,4),
 SCORE_7           number(8,4),
 SCORE_8           number(8,4),
 SCORE_9           number(8,4),
 SCORE_10          number(8,4),
 SCORE_11          number(8,4),
 SCORE_12          number(8,4),

```

```

SCORE_13      number(8,4),
SCORE_14      number(8,4),
SCORE_15      number(8,4),
SCORE_16      number(8,4),
SCORE_17      number(8,4),
SCORE_18      number(8,4),
SCORE_19      number(8,4),
SCORE_20      number(8,4),
SCORE_21      number(8,4),
SCORE_22      number(8,4),
SCORE_23      number(8,4),
SCORE_24      number(8,4),
SCORE_25      number(8,4),
SCORE_26      number(8,4),
SCORE_27      number(8,4),
SCORE_28      number(8,4),
SCORE_29      number(8,4)
);

create table NEGATIVE_OUTCOMES
(CONFIG_NUMBER      char(5),
NO_1               number(11,4),
REL_1              number(11,4),
NO_2               number(11,4),
REL_2              number(11,4),
NO_3               number(11,4),
REL_3              number(11,4),
NO_4               number(11,4),
REL_4              number(11,4),
NO_5               number(11,4),
REL_5              number(11,4),
NO_6               number(11,4),
REL_6              number(11,4),
NO_7               number(11,4),
REL_7              number(11,4),
NO_8               number(11,4),
REL_8              number(11,4),
NO_9               number(11,4),
REL_9              number(11,4),
NO_10              number(11,4),
REL_10             number(11,4),
NO_11              number(11,4),
REL_11             number(11,4),
NO_12              number(11,4),
REL_12             number(11,4),
NO_13              number(11,4),
REL_13             number(11,4),
NO_14              number(11,4),
REL_14             number(11,4),
NO_15              number(11,4),
REL_15             number(11,4),
NO_16              number(11,4),
REL_16             number(11,4),
NO_17              number(11,4),
REL_17             number(11,4),
NO_18              number(11,4),
REL_18             number(11,4),
NO_19              number(11,4),
REL_19             number(11,4),
NO_20              number(11,4),

```

```

REL_20          number(11,4),
NO_21           number(11,4),
REL_21          number(11,4),
NO_22           number(11,4),
REL_22          number(11,4),
NO_23           number(11,4),
REL_23          number(11,4),
NO_24           number(11,4),
REL_24          number(11,4),
NO_25           number(11,4),
REL_25          number(11,4),
NO_26           number(11,4),
REL_26          number(11,4),
NO_27           number(11,4),
REL_27          number(11,4),
NO_28           number(11,4),
REL_28          number(11,4),
NO_29           number(11,4),
REL_29          number(11,4)
);

```

```

create table OBJECTIVE_WEIGHTS
(OBJ_WT_1          number(6,4),
 OBJ_WT_2          number(6,4),
 OBJ_WT_3          number(6,4),
 OBJ_WT_11         number(6,4),
 OBJ_WT_12         number(6,4),
 OBJ_WT_13         number(6,4),
 OBJ_WT_14         number(6,4),
 OBJ_WT_121        number(6,4),
 OBJ_WT_122        number(6,4),
 OBJ_WT_123        number(6,4),
 OBJ_WT_124        number(6,4),
 OBJ_WT_125        number(6,4),
 OBJ_WT_131        number(6,4),
 OBJ_WT_132        number(6,4),
 OBJ_WT_21         number(6,4),
 OBJ_WT_22         number(6,4),
 OBJ_WT_23         number(6,4)
);

```

```

create table DSS_RESULTS
(CONFIG_NUMBER     char(5),
 FINAL_SCORE       number(8,4),
 PERCENT_SCORE     number(5,1),
 RANK              number(3,0));

```

Appendix C: Database Schema (Lookup Tables and Sample Data)

Appendix C-1: LOOKUP_TABLES_DATA.SQL

```

/*
INSERT INTO LOOKUP TABLE ANCHORING_OPTIONS (ATTENUATOR TYPE&SITE)
*/

INSERT INTO ANCHORING_OPTIONS VALUES (1, 'CONCRETE PAD');
INSERT INTO ANCHORING_OPTIONS VALUES (2, 'ASPHALT PAD');
INSERT INTO ANCHORING_OPTIONS VALUES (3, 'DRIVEABLE PILE ANCHOR');
INSERT INTO ANCHORING_OPTIONS VALUES (4, 'CONCRETE FOOTING');
INSERT INTO ANCHORING_OPTIONS VALUES (5, 'NONE');
INSERT INTO ANCHORING_OPTIONS VALUES (6, 'UNKNOWN');
/*
INSERT INTO LOOKUP TABLE APPLICATIONS_AVAILABLE (ATTENUATOR TYPE)
*/

INSERT INTO APPLICATIONS_AVAILABLE VALUES (1, 'NARROW HAZARDS');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (2, 'WIDE HAZARDS');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (3, 'LOW IMPACT FREQUENCY');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (4, 'HIGH IMPACT FREQUENCY');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (5, 'LOW SPEED IMPACTS');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (6, 'HIGH SPEED IMPACTS');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (7, 'CONSTRUCTION ZONE');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (8, 'END TREATMENT');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (9, 'TRANSITION SECTION');
INSERT INTO APPLICATIONS_AVAILABLE VALUES (10, 'MOVEABLE BARRIER');

/*
INSERT INTO LOOKUP TABLE CATEGORY (ATTENUATOR TYPE)
*/

INSERT INTO CATEGORY VALUES (1, 'COMPRESSION');
INSERT INTO CATEGORY VALUES (2, 'SAND BARREL');

/*
INSERT INTO LOOKUP TABLE COMPONENT (INSPECTION)
*/

INSERT INTO COMPONENT VALUES (1, 'anchor bolts');
INSERT INTO COMPONENT VALUES (2, 'anchor connections');
INSERT INTO COMPONENT VALUES (3, 'anchorage assembly');
INSERT INTO COMPONENT VALUES (4, 'anti-debris skirts');
INSERT INTO COMPONENT VALUES (5, 'backup assembly');
INSERT INTO COMPONENT VALUES (6, 'backup system');
INSERT INTO COMPONENT VALUES (7, 'bolt assembly');
INSERT INTO COMPONENT VALUES (8, 'cable connections');
INSERT INTO COMPONENT VALUES (9, 'cartridges');
INSERT INTO COMPONENT VALUES (10, 'cell cartridge hardware');
INSERT INTO COMPONENT VALUES (11, 'cell cartridges');
INSERT INTO COMPONENT VALUES (12, 'chain rail');
INSERT INTO COMPONENT VALUES (13, 'concrete backup');
INSERT INTO COMPONENT VALUES (14, 'concrete pad');
INSERT INTO COMPONENT VALUES (15, 'diaphragm');
INSERT INTO COMPONENT VALUES (16, 'diaphragm hardware');
INSERT INTO COMPONENT VALUES (17, 'edge protection kit-diaphragms');
INSERT INTO COMPONENT VALUES (18, 'edge protection kit-interior panels');
INSERT INTO COMPONENT VALUES (19, 'entire unit');

```

```

INSERT INTO COMPONENT VALUES (20, 'expansion rail');
INSERT INTO COMPONENT VALUES (21, 'fender panel');
INSERT INTO COMPONENT VALUES (22, 'fender panel hardware');
INSERT INTO COMPONENT VALUES (23, 'guidance cable');
INSERT INTO COMPONENT VALUES (24, 'interior panel hardware');
INSERT INTO COMPONENT VALUES (25, 'interior panels');
INSERT INTO COMPONENT VALUES (26, 'lids');
INSERT INTO COMPONENT VALUES (27, 'modules');
INSERT INTO COMPONENT VALUES (28, 'mushroom bolt assembly');
INSERT INTO COMPONENT VALUES (29, 'nose cover');
INSERT INTO COMPONENT VALUES (30, 'other');
INSERT INTO COMPONENT VALUES (31, 'pad grade');
INSERT INTO COMPONENT VALUES (32, 'pullout cables');
INSERT INTO COMPONENT VALUES (33, 'restraining cables');
INSERT INTO COMPONENT VALUES (34, 'restraining chains');
INSERT INTO COMPONENT VALUES (35, 'restraining connections');
INSERT INTO COMPONENT VALUES (36, 'safety flex belt');
INSERT INTO COMPONENT VALUES (37, 'sand');
INSERT INTO COMPONENT VALUES (38, 'secondary cables');
INSERT INTO COMPONENT VALUES (39, 'slide strap');
INSERT INTO COMPONENT VALUES (40, 'support connections');
INSERT INTO COMPONENT VALUES (41, 'support legs');
INSERT INTO COMPONENT VALUES (42, 'tube caps');
INSERT INTO COMPONENT VALUES (43, 'turnbuckles');
INSERT INTO COMPONENT VALUES (44, 'vinyl tubes');

/*
INSERT INTO LOOKUP TABLE CONDITION_AFTER_INSPECTION (INSPECTION)
*/

INSERT INTO CONDITION_AFTER_INSPECTION VALUES (1, 'GOOD');
INSERT INTO CONDITION_AFTER_INSPECTION VALUES (2, 'FAIR');
INSERT INTO CONDITION_AFTER_INSPECTION VALUES (3, 'POOR');
INSERT INTO CONDITION_AFTER_INSPECTION VALUES (4, 'CRITICAL');

/*
INSERT INTO LOOKUP TABLE CONDITION_AFTER_REPAIR (REPAIR)
*/

INSERT INTO CONDITION_AFTER_REPAIR VALUES (1, 'GOOD');
INSERT INTO CONDITION_AFTER_REPAIR VALUES (2, 'FAIR');
INSERT INTO CONDITION_AFTER_REPAIR VALUES (3, 'POOR');
INSERT INTO CONDITION_AFTER_REPAIR VALUES (4, 'CRITICAL');

/*
INSERT INTO LOOKUP TABLE ENVIRONMENT_CONDITIONS (COUNTY)
*/

INSERT INTO ENVIRONMENT_CONDITIONS VALUES (1, 'NORMAL', 0.0);
INSERT INTO ENVIRONMENT_CONDITIONS VALUES (2, 'EXTREME', 1.0);

/*
INSERT INTO LOOKUP TABLE COUNTY (ATTENUATOR)
*/

/*
DISTRICT 1
*/

insert into county values (1, 1, 'CHARLOTTE', 1);
insert into county values (3, 1, 'COLLIER', 1);

```

```

insert into county values (4, 1, 'DESOTO', 1);
insert into county values (5, 1, 'GLADES', 1);
insert into county values (6, 1, 'HARDEE', 1);
insert into county values (7, 1, 'HENDRY', 1);
insert into county values (9, 1, 'HIGHLANDS', 1);
insert into county values (12, 1, 'LEE', 1);
insert into county values (13, 1, 'MANATEE', 1);
insert into county values (91, 1, 'OKEECHOBEE', 1);
insert into county values (16, 1, 'POLK', 1);
insert into county values (17, 1, 'SARATOTA', 1);

```

```

/*
DISTRICT 2
*/

```

```

insert into county values (26, 1, 'ALACHUA', 2);
insert into county values (27, 1, 'BAKER', 2);
insert into county values (28, 1, 'BRADFORD', 2);
insert into county values (71, 1, 'CLAY', 2);
insert into county values (29, 1, 'COLUMBIA', 2);
insert into county values (30, 1, 'DIXIE', 2);
insert into county values (72, 1, 'DUVAL', 2);
insert into county values (31, 1, 'GILCHRIST', 2);
insert into county values (32, 1, 'HAMILTON', 2);
insert into county values (33, 1, 'LAFAYETTE', 2);
insert into county values (34, 1, 'LEVY', 2);
insert into county values (35, 1, 'MADISON', 2);
insert into county values (74, 1, 'NASSAU', 2);
insert into county values (76, 1, 'PUTNAM', 2);
insert into county values (78, 1, 'ST. JOHNS', 2);
insert into county values (37, 1, 'SUWANNEE', 2);
insert into county values (38, 1, 'TAYLOR', 2);
insert into county values (39, 1, 'UNION', 2);

```

```

/*
DISTRICT 3
*/

```

```

insert into county values (46, 2, 'BAY', 3);
insert into county values (47, 2, 'CALHOUN', 3);
insert into county values (48, 2, 'ESCAMBIA', 3);
insert into county values (49, 2, 'FRANKLIN', 3);
insert into county values (50, 2, 'GADSDEN', 3);
insert into county values (51, 2, 'GULF', 3);
insert into county values (52, 2, 'HOLMES', 3);
insert into county values (53, 2, 'JACKSON', 3);
insert into county values (54, 2, 'JEFFERSON', 3);
insert into county values (55, 2, 'LEON', 3);
insert into county values (56, 2, 'LIBERTY', 3);
insert into county values (57, 2, 'OKALOOSA', 3);
insert into county values (58, 2, 'SANTA ROSA', 3);
insert into county values (59, 2, 'WAKULLA', 3);
insert into county values (60, 2, 'WALTON', 3);
insert into county values (61, 2, 'WASHINGTON', 3);

```

```

/*
DISTRICT 4
*/

```

```

insert into county values (86, 1, 'BROWARD', 4);
insert into county values (88, 1, 'INDIAN RIVER', 4);

```

```

insert into county values (89, 1, 'MARTIN', 4);
insert into county values (93, 1, 'PALM BEACH', 4);
insert into county values (94, 1, 'ST. LUCIE', 4);

/*
DISTRICT 5
*/

insert into county values (70, 1, 'BREVARD', 5);
insert into county values (73, 1, 'FLAGLER', 5);
insert into county values (11, 1, 'LAKE', 5);
insert into county values (36, 1, 'MARION', 5);
insert into county values (75, 1, 'ORANGE', 5);
insert into county values (92, 1, 'OSCEOLA', 5);
insert into county values (77, 1, 'SEMINOLE', 5);
insert into county values (18, 1, 'SUMTER', 5);
insert into county values (79, 1, 'VOLUSIA', 5);

/*
DISTRICT 6
*/

insert into county values (87, 2, 'DADE', 6);
insert into county values (90, 2, 'MONROE', 6);

/*
DISTRICT 7
*/

insert into county values (2, 1, 'CITRUS', 7);
insert into county values (8, 1, 'HERNANDO', 7);
insert into county values (10, 1, 'HILLSBOROUGH', 7);
insert into county values (14, 1, 'PASCO', 7);
insert into county values (15, 1, 'PINELLAS', 7);

/*
DISTRICT TURNPIKE
*/

INSERT INTO COUNTY VALUES (0, 1, 'TURNPIKE', 8);

/*
INSERT INTO LOOKUP TABLE CURB_TYPE (ROADWAY)
*/

INSERT INTO CURB_TYPE VALUES (1, 'VERTICAL');
INSERT INTO CURB_TYPE VALUES (2, 'SLOPED');
INSERT INTO CURB_TYPE VALUES (3, 'UNKNOWN TYPE');
INSERT INTO CURB_TYPE VALUES (4, 'NONE');

/*
INSERT INTO LOOKUP TABLE CURVATURE_MAIN_MOVE (ROADWAY)
*/

INSERT INTO CURVATURE_MAIN_MOVE VALUES (1, 'SHARP LEFT');
INSERT INTO CURVATURE_MAIN_MOVE VALUES (2, 'SHARP RIGHT');
INSERT INTO CURVATURE_MAIN_MOVE VALUES (3, 'GENTLE LEFT');
INSERT INTO CURVATURE_MAIN_MOVE VALUES (4, 'GENTLE RIGHT');
INSERT INTO CURVATURE_MAIN_MOVE VALUES (5, 'NOT GIVEN');

/*

```

```

INSERT INTO LOOKUP TABLE CURVATURE_SECOND_MOVE (ROADWAY)
*/

INSERT INTO CURVATURE_SECOND_MOVE VALUES (1, 'SHARP LEFT');
INSERT INTO CURVATURE_SECOND_MOVE VALUES (2, 'SHARP RIGHT');
INSERT INTO CURVATURE_SECOND_MOVE VALUES (3, 'GENTLE LEFT');
INSERT INTO CURVATURE_SECOND_MOVE VALUES (4, 'GENTLE RIGHT');
INSERT INTO CURVATURE_SECOND_MOVE VALUES (5, 'NOT APPLICABLE');
INSERT INTO CURVATURE_SECOND_MOVE VALUES (6, 'NOT GIVEN');

/*
INSERT INTO LOOKUP TABLE DAMAGE_TO_ATTEN (ATTENUATOR PERFORMANCE)
*/

INSERT INTO DAMAGE_TO_ATTEN VALUES (1, 'NONE', 0.0);
INSERT INTO DAMAGE_TO_ATTEN VALUES (2, 'MINOR', 0.33);
INSERT INTO DAMAGE_TO_ATTEN VALUES (3, 'MODERATE', 0.67);
INSERT INTO DAMAGE_TO_ATTEN VALUES (4, 'SEVERE', 1.0);
INSERT INTO DAMAGE_TO_ATTEN VALUES (5, 'UNKNOWN', 1.0);

/*
INSERT INTO LOOKUP TABLE DAMAGE_TO_VEHICLE (VEHICLE RESULTS)
*/

INSERT INTO DAMAGE_TO_VEHICLE VALUES (1, 'NONE', 0.0);
INSERT INTO DAMAGE_TO_VEHICLE VALUES (2, 'MINOR', 0.33);
INSERT INTO DAMAGE_TO_VEHICLE VALUES (3, 'MODERATE', 0.67);
INSERT INTO DAMAGE_TO_VEHICLE VALUES (4, 'SEVERE', 1.0);
INSERT INTO DAMAGE_TO_VEHICLE VALUES (5, 'UNKNOWN', 1.0);

/*
INSERT INTO LOOKUP TABLE DATA_SOURCE (ACCIDENT & INSPECTION)
*/

INSERT INTO DATA_SOURCE VALUES (1, 'FDOT AAR/CRASH DATABASE');
INSERT INTO DATA_SOURCE VALUES (2, 'DHSMV CRASH REPORT');
INSERT INTO DATA_SOURCE VALUES (3, 'FDOT RCI/ATTEN INVENTORY DATABASE');
INSERT INTO DATA_SOURCE VALUES (4, 'FDOT INSPECTION REPORT');
INSERT INTO DATA_SOURCE VALUES (5, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE DEBRIS_SCATTERED (ATTENUATOR PERFORMANCE)
*/

INSERT INTO DEBRIS_SCATTERED VALUES (1, 'NONE', 0.0);
INSERT INTO DEBRIS_SCATTERED VALUES (2, 'MINOR', 0.33);
INSERT INTO DEBRIS_SCATTERED VALUES (3, 'MODERATE', 0.67);
INSERT INTO DEBRIS_SCATTERED VALUES (4, 'SEVERE', 1.0);
INSERT INTO DEBRIS_SCATTERED VALUES (5, 'UNKNOWN', 1.0);

/*
INSERT INTO LOOKUP TABLE DEFICIENCY_NOTED (INSPECTION)
*/

INSERT INTO DEFICIENCY_NOTED VALUES (1, 'breaks');
INSERT INTO DEFICIENCY_NOTED VALUES (2, 'caked');
INSERT INTO DEFICIENCY_NOTED VALUES (3, 'corroded');
INSERT INTO DEFICIENCY_NOTED VALUES (4, 'cracked');
INSERT INTO DEFICIENCY_NOTED VALUES (5, 'cut');
INSERT INTO DEFICIENCY_NOTED VALUES (6, 'debris/sand/vegetation');
INSERT INTO DEFICIENCY_NOTED VALUES (7, 'deformed');

```



```

INSERT INTO DEFICIENCY_NOTED VALUES (8, 'depressed');
INSERT INTO DEFICIENCY_NOTED VALUES (9, 'deteriorated');
INSERT INTO DEFICIENCY_NOTED VALUES (10, 'discolored');
INSERT INTO DEFICIENCY_NOTED VALUES (11, 'displaced parts');
INSERT INTO DEFICIENCY_NOTED VALUES (12, 'displaced sand');
INSERT INTO DEFICIENCY_NOTED VALUES (13, 'excessive grade');
INSERT INTO DEFICIENCY_NOTED VALUES (14, 'excessive moisture');
INSERT INTO DEFICIENCY_NOTED VALUES (15, 'frayed');
INSERT INTO DEFICIENCY_NOTED VALUES (16, 'hit damage');
INSERT INTO DEFICIENCY_NOTED VALUES (17, 'improper adjustment');
INSERT INTO DEFICIENCY_NOTED VALUES (18, 'improper position');
INSERT INTO DEFICIENCY_NOTED VALUES (19, 'improper sand level');
INSERT INTO DEFICIENCY_NOTED VALUES (20, 'improper tension');
INSERT INTO DEFICIENCY_NOTED VALUES (21, 'improper water level');
INSERT INTO DEFICIENCY_NOTED VALUES (22, 'leaks');
INSERT INTO DEFICIENCY_NOTED VALUES (23, 'loose');
INSERT INTO DEFICIENCY_NOTED VALUES (24, 'misaligned');
INSERT INTO DEFICIENCY_NOTED VALUES (25, 'misplaced');
INSERT INTO DEFICIENCY_NOTED VALUES (26, 'missing');
INSERT INTO DEFICIENCY_NOTED VALUES (27, 'missized');
INSERT INTO DEFICIENCY_NOTED VALUES (28, 'moist');
INSERT INTO DEFICIENCY_NOTED VALUES (29, 'no antifreeze');
INSERT INTO DEFICIENCY_NOTED VALUES (30, 'not attached');
INSERT INTO DEFICIENCY_NOTED VALUES (31, 'other');
INSERT INTO DEFICIENCY_NOTED VALUES (32, 'poor fit');
INSERT INTO DEFICIENCY_NOTED VALUES (33, 'rotting');
INSERT INTO DEFICIENCY_NOTED VALUES (34, 'separation(s)');
INSERT INTO DEFICIENCY_NOTED VALUES (35, 'shear pin placement');
INSERT INTO DEFICIENCY_NOTED VALUES (36, 'slumping');
INSERT INTO DEFICIENCY_NOTED VALUES (37, 'spalling');
INSERT INTO DEFICIENCY_NOTED VALUES (38, 'splits');
INSERT INTO DEFICIENCY_NOTED VALUES (39, 'unable to open');
INSERT INTO DEFICIENCY_NOTED VALUES (40, 'unstable/movement');
INSERT INTO DEFICIENCY_NOTED VALUES (41, 'vandalism');
INSERT INTO DEFICIENCY_NOTED VALUES (42, 'weathered');
INSERT INTO DEFICIENCY_NOTED VALUES (43, 'wire clip positioning');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE DEFORM_PASS_COMP (VEHICLE RESULTS)
```

```
*/
```

```

INSERT INTO DEFORM_PASS_COMPART VALUES (1, 'NONE', 0.0);
INSERT INTO DEFORM_PASS_COMPART VALUES (2, 'MINOR', 0.33);
INSERT INTO DEFORM_PASS_COMPART VALUES (3, 'MODERATE', 0.67);
INSERT INTO DEFORM_PASS_COMPART VALUES (4, 'SEVERE', 1.0);
INSERT INTO DEFORM_PASS_COMPART VALUES (5, 'UNKNOWN', 1.0);

```

```
/*
```

```
INSERT INTO LOOKUP TABLE DIRECTION (ATTENUATOR&VEHICLE)
```

```
*/
```

```

insert into direction values (1, 'NORTH BOUND');
insert into direction values (2, 'EAST BOUND');
insert into direction values (3, 'SOUTH BOUND');
insert into direction values (4, 'WEST BOUND');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE DISTANCE_LATERAL (VEHICLE RESULTS)
```

```
*/
```

```
INSERT INTO DISTANCE_LATERAL VALUES (1, 'VERY SMALL (0-4 M)', 0.0);
```

```

INSERT INTO DISTANCE_LATERAL VALUES (2, 'SMALL (4-8 M)', 0.25);
INSERT INTO DISTANCE_LATERAL VALUES (3, 'MEDIUM (8-20 M)', 0.5);
INSERT INTO DISTANCE_LATERAL VALUES (4, 'LARGE (20-50 M)', 0.75);
INSERT INTO DISTANCE_LATERAL VALUES (5, 'VERY LARGE (50+ M)', 1.0);

/*
INSERT INTO LOOKUP TABLE DISTANCE_LONG (VEHICLE RESULTS)
*/

INSERT INTO DISTANCE_LONG VALUES (1, 'VERY SMALL (0-4 M)', 0.0);
INSERT INTO DISTANCE_LONG VALUES (2, 'SMALL (4-8 M)', 0.25);
INSERT INTO DISTANCE_LONG VALUES (3, 'MEDIUM (8-20 M)', 0.5);
INSERT INTO DISTANCE_LONG VALUES (4, 'LARGE (20-50 M)', 0.75);
INSERT INTO DISTANCE_LONG VALUES (5, 'VERY LARGE (50+ M)', 1.0);

/*
INSERT INTO LOOKUP TABLE EMBANKMENT_CUT_FILL (ROADWAY)
*/

INSERT INTO EMBANKMENT_CUT_FILL VALUES (1, 'CUT');
INSERT INTO EMBANKMENT_CUT_FILL VALUES (2, 'FILL');
INSERT INTO EMBANKMENT_CUT_FILL VALUES (3, 'UNKNOWN');
INSERT INTO EMBANKMENT_CUT_FILL VALUES (4, 'N/A');

/*
INSERT INTO LOOKUP TABLE FINAL_ORIENTATION (VEHICLE RESULTS)
*/

INSERT INTO FINAL_ORIENTATION VALUES (1, 'SIDEWAYS');
INSERT INTO FINAL_ORIENTATION VALUES (2, 'IN DIRECTION OF TRAFFIC FLOW');
INSERT INTO FINAL_ORIENTATION VALUES (3, 'FACING ONCOMING TRAFFIC');
INSERT INTO FINAL_ORIENTATION VALUES (4, 'NOT UPRIGHT');
INSERT INTO FINAL_ORIENTATION VALUES (5, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE HAZARD_IMPACT (VEHICLE RESULTS)
*/

INSERT INTO HAZARD_IMPACT VALUES (1, 'NONE', 0.0);
INSERT INTO HAZARD_IMPACT VALUES (2, 'MINOR', 0.33);
INSERT INTO HAZARD_IMPACT VALUES (3, 'MODERATE', 0.67);
INSERT INTO HAZARD_IMPACT VALUES (4, 'SEVERE', 1.0);
INSERT INTO HAZARD_IMPACT VALUES (5, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP TABLE IMPACT_ANGLE (VEHICLE & VEHICLE RESULTS)
*/

INSERT INTO IMPACT_ANGLE VALUES (1, 'HEAD-ON (0 DEG)', 0.0);
INSERT INTO IMPACT_ANGLE VALUES (2, 'SMALL (0-15 DEG)', 0.33);
INSERT INTO IMPACT_ANGLE VALUES (3, 'MEDIUM (15-30 DEG)', 0.67);
INSERT INTO IMPACT_ANGLE VALUES (4, 'LARGE (30-90 DEG)', 1.0);
INSERT INTO IMPACT_ANGLE VALUES (5, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP TABLE IMPACT_POINT_ATTEN (VEHICLE)
*/

INSERT INTO IMPACT_POINT_ATTEN VALUES (1, 'HEAD ON');
INSERT INTO IMPACT_POINT_ATTEN VALUES (2, 'FRONT LEFT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (3, 'FRONT RIGHT');

```

```

INSERT INTO IMPACT_POINT_ATTEN VALUES (4, 'REAR LEFT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (5, 'REAR RIGHT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (6, 'LEFT SIDE');
INSERT INTO IMPACT_POINT_ATTEN VALUES (7, 'RIGHT SIDE');
INSERT INTO IMPACT_POINT_ATTEN VALUES (8, 'NO IMPACT');

/*Old values:
INSERT INTO IMPACT_POINT_ATTEN VALUES (1, 'FRONT RIGHT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (2, 'REAR RIGHT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (3, 'FRONT LEFT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (4, 'REAR LEFT');
INSERT INTO IMPACT_POINT_ATTEN VALUES (5, 'HEAD ON');
*/

/*
INSERT INTO LOOKUP_TABLE_INITIAL_COST (ATTENUATOR TYPE)
*/

INSERT INTO INITIAL_COST VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO INITIAL_COST VALUES (2, 'SMALL', 0.25);
INSERT INTO INITIAL_COST VALUES (3, 'MEDIUM', 0.5);
INSERT INTO INITIAL_COST VALUES (4, 'LARGE', 0.75);
INSERT INTO INITIAL_COST VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP_TABLE_INJURY_SEVERITY (PERSON)
*/

INSERT INTO INJURY_SEVERITY VALUES (1, 'NONE', 0.0);
INSERT INTO INJURY_SEVERITY VALUES (2, 'POSSIBLE', 0.25);
INSERT INTO INJURY_SEVERITY VALUES (3, 'NON-INCOMPASITATING', 0.5);
INSERT INTO INJURY_SEVERITY VALUES (4, 'INCOMPASITATING', 0.75);
INSERT INTO INJURY_SEVERITY VALUES (5, 'FATAL (WITHIN 90 DAYS)', 1.0);
INSERT INTO INJURY_SEVERITY VALUES (6, 'NON-TRAFFIC FATALITY', 0.5);
INSERT INTO INJURY_SEVERITY VALUES (7, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP_TABLE_INSPECTION_TYPE (INSPECTION)
*/

INSERT INTO INSPECTION_TYPE VALUES (1, 'I');
INSERT INTO INSPECTION_TYPE VALUES (2, 'II');

/*
INSERT INTO LOOKUP_TABLE_INVENTORY_REQUIRED (ATTENUATOR TYPE)
*/

INSERT INTO INVENTORY_REQUIRED VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO INVENTORY_REQUIRED VALUES (2, 'SMALL', 0.25);
INSERT INTO INVENTORY_REQUIRED VALUES (3, 'MEDIUM', 0.5);
INSERT INTO INVENTORY_REQUIRED VALUES (4, 'LARGE', 0.75);
INSERT INTO INVENTORY_REQUIRED VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP_TABLE_LOCATION_WRT_ROAD (ATTENUATOR)
*/

insert into location_wrt_road values (1, 'MD', 'MEDIAN');
insert into location_wrt_road values (2, 'RS', 'RIGHT SHOULDER');
insert into location_wrt_road values (3, 'LS', 'LEFT SHOULDER');
insert into location_wrt_road values (4, 'GR', 'RIGHT GORE');

```

```

insert into location_wrt_road values (5, 'GL', 'LEFT GORE');
insert into location_wrt_road values (6, 'NA', 'TOLL BOOTH');
insert into location_wrt_road values (7, 'NA', 'OTHER');

/*
INSERT INTO LOOKUP TABLE MEDIAN_SURFACE (ROADWAY)
*/

INSERT INTO MEDIAN_SURFACE VALUES (1, 'CONCRETE');
INSERT INTO MEDIAN_SURFACE VALUES (2, 'GRAVEL');
INSERT INTO MEDIAN_SURFACE VALUES (3, 'GRASS');
INSERT INTO MEDIAN_SURFACE VALUES (4, 'SOIL');
INSERT INTO MEDIAN_SURFACE VALUES (5, 'ASPHALT');
INSERT INTO MEDIAN_SURFACE VALUES (6, 'OTHER');

/*
INSERT INTO LOOKUP TABLE NCHRP_TEST_LEVELS (ATTENUATOR MODEL)
*/

INSERT INTO NCHRP_TEST_LEVELS VALUES (1, 'NONE');
INSERT INTO NCHRP_TEST_LEVELS VALUES (2, 'NCHRP 230');
INSERT INTO NCHRP_TEST_LEVELS VALUES (3, 'NCHRP 350 TL1');
INSERT INTO NCHRP_TEST_LEVELS VALUES (4, 'NCHRP 350 TL2');
INSERT INTO NCHRP_TEST_LEVELS VALUES (5, 'NCHRP 350 TL3');

/*
INSERT INTO LOOKUP TABLE OVERRIDE (VEHICLE RESULTS)
*/

INSERT INTO OVERRIDE VALUES (1, 'YES', 1.0);
INSERT INTO OVERRIDE VALUES (2, 'NO', 0.0);
INSERT INTO OVERRIDE VALUES (3, 'POSSIBLE', 0.5);
INSERT INTO OVERRIDE VALUES (4, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP TABLE OWNER (ATTENUATOR)
*/

insert into OWNER values (1, 'FDOT');
insert into OWNER values (2, 'OTHER');
insert into OWNER values (3, 'NOT GIVEN');

/*
INSERT INTO LOOKUP TABLE PAVEMENT_TYPE (ROADWAY)
*/

INSERT INTO PAVEMENT_TYPE VALUES (1, 'SLAG/GRAVEL/STONE');
INSERT INTO PAVEMENT_TYPE VALUES (2, 'BLACKTOP/ASPHALT');
INSERT INTO PAVEMENT_TYPE VALUES (3, 'BRICK/BLOCK');
INSERT INTO PAVEMENT_TYPE VALUES (4, 'CONCRETE');
INSERT INTO PAVEMENT_TYPE VALUES (5, 'DIRT');
INSERT INTO PAVEMENT_TYPE VALUES (77, 'ALL OTHER');

/*
INSERT INTO LOOKUP TABLE POCKETING (VEHICLE RESULTS)
*/

INSERT INTO POCKETING VALUES (1, 'YES', 1.0);
INSERT INTO POCKETING VALUES (2, 'NO', 0.0);
INSERT INTO POCKETING VALUES (3, 'POSSIBLE', 0.5);
INSERT INTO POCKETING VALUES (4, 'UNKNOWN', 0.0);

```

```
/*
INSERT INTO LOOKUP TABLE POINT_VEHICLE (VEHICLE & VEHICLE DAMAGE)
*/
```

```
INSERT INTO POINT_VEHICLE VALUES (1, 'FRONT END');
INSERT INTO POINT_VEHICLE VALUES (2, 'RIGHT FRONT CORNER');
INSERT INTO POINT_VEHICLE VALUES (3, 'RIGHT FRONT QUARTER PANEL');
INSERT INTO POINT_VEHICLE VALUES (4, 'RIGHT FRONT DOOR');
INSERT INTO POINT_VEHICLE VALUES (5, 'RIGHT REAR DOOR');
INSERT INTO POINT_VEHICLE VALUES (6, 'RIGHT REAR QUARTER PANEL');
INSERT INTO POINT_VEHICLE VALUES (7, 'RIGHT REAR CORNER');
INSERT INTO POINT_VEHICLE VALUES (8, 'REAR END');
INSERT INTO POINT_VEHICLE VALUES (9, 'LEFT REAR CORNER');
INSERT INTO POINT_VEHICLE VALUES (10, 'LEFT REAR QUARTER PANEL');
INSERT INTO POINT_VEHICLE VALUES (11, 'LEFT REAR DOOR');
INSERT INTO POINT_VEHICLE VALUES (12, 'LEFT FRONT DOOR');
INSERT INTO POINT_VEHICLE VALUES (13, 'LEFT FRONT QUARTER PANEL');
INSERT INTO POINT_VEHICLE VALUES (14, 'LEFT FRONT CORNER');
INSERT INTO POINT_VEHICLE VALUES (15, 'HOOD');
INSERT INTO POINT_VEHICLE VALUES (16, 'ROOF');
INSERT INTO POINT_VEHICLE VALUES (17, 'TRUNK');
INSERT INTO POINT_VEHICLE VALUES (18, 'UNDERCARRIAGE');
INSERT INTO POINT_VEHICLE VALUES (19, 'OVERTURN');
INSERT INTO POINT_VEHICLE VALUES (20, 'WINDSHIELD');
INSERT INTO POINT_VEHICLE VALUES (21, 'FIRE');
INSERT INTO POINT_VEHICLE VALUES (22, 'NOT CODED');
INSERT INTO POINT_VEHICLE VALUES (88, 'UNKNOWN');
```

```
/*
INSERT INTO LOOKUP TABLE REASON_FOR_REPAIR (REPAIR)
*/
```

```
INSERT INTO REASON_FOR_REPAIR VALUES (1, 'VEHICLE IMPACT');
INSERT INTO REASON_FOR_REPAIR VALUES (2, 'VANDALISM');
INSERT INTO REASON_FOR_REPAIR VALUES (3, 'DETERIORATION');
INSERT INTO REASON_FOR_REPAIR VALUES (4, 'REGULAR MAINTENANCE');
```

```
/*
INSERT INTO LOOKUP TABLE RURAL_URBAN (ROADWAY)
*/
```

```
INSERT INTO RURAL_URBAN VALUES (1, 'OC/OU', 'OUTSIDE CITY, OUTSIDE URBAN', 0.1);
INSERT INTO RURAL_URBAN VALUES (2, 'IC/OU', 'INSIDE CITY, OUTSIDE URBAN', 0.4);
INSERT INTO RURAL_URBAN VALUES (3, 'OC/IU', 'OUTSIDE CITY, INSIDE URBAN', 0.7);
INSERT INTO RURAL_URBAN VALUES (4, 'IC/IU', 'INSIDE CITY, INSIDE URBAN', 1.0);
```

```
/*
INSERT INTO LOOKUP TABLE SAFETY_DEVICE (PERSON)
*/
```

```
DELETE SAFETY_DEVICE;
INSERT INTO SAFETY_DEVICE VALUES (1, 'NOT IN USE');
INSERT INTO SAFETY_DEVICE VALUES (2, 'SEAT BELT/SHOULDER HARNESS');
INSERT INTO SAFETY_DEVICE VALUES (3, 'CHILD RESTRAINT');
INSERT INTO SAFETY_DEVICE VALUES (4, 'AIR BAG');
INSERT INTO SAFETY_DEVICE VALUES (5, 'SAFETY HELMET');
INSERT INTO SAFETY_DEVICE VALUES (6, 'EYE PROTECTION');
INSERT INTO SAFETY_DEVICE VALUES (77, 'UNKNOWN');
```

```
/*
INSERT INTO LOOKUP TABLE SEX (PERSON)
```

```

*/

INSERT INTO SEX VALUES (1, 'MALE');
INSERT INTO SEX VALUES (2, 'FEMALE');
INSERT INTO SEX VALUES (3, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE SHIELDED_OBJECT (SITE)
*/

INSERT INTO SHIELDED_OBJECT VALUES (1, 'CONCRETE BARRIER', 1);
INSERT INTO SHIELDED_OBJECT VALUES (3, 'TOLL BOOTH', 0);
INSERT INTO SHIELDED_OBJECT VALUES (4, 'FENCE', 0);
INSERT INTO SHIELDED_OBJECT VALUES (5, 'GUARD RAIL', 0);
INSERT INTO SHIELDED_OBJECT VALUES (6, 'BRIDGE PIER', 1);
INSERT INTO SHIELDED_OBJECT VALUES (7, 'UTILITY POLE', 0);
INSERT INTO SHIELDED_OBJECT VALUES (8, 'SIGN POLE', 0);
INSERT INTO SHIELDED_OBJECT VALUES (9, 'WORK ZONE', 0);
INSERT INTO SHIELDED_OBJECT VALUES (10, 'OTHER', 0);
INSERT INTO SHIELDED_OBJECT VALUES (2, 'UNKNOWN', 0);

/*
INSERT INTO LOOKUP TABLE SHOULDER_TYPE (SITE)
*/

insert into SHOULDER_TYPE values (1, 'PAVED');
insert into SHOULDER_TYPE values (2, 'UNPAVED');
insert into SHOULDER_TYPE values (3, 'CURBS');
insert into SHOULDER_TYPE values (4, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE SNAGGING (VEHICLE RESULTS)
*/

INSERT INTO SNAGGING VALUES (1, 'YES', 1.0);
INSERT INTO SNAGGING VALUES (2, 'NO', 0.0);
INSERT INTO SNAGGING VALUES (3, 'POSSIBLE', 0.5);
INSERT INTO SNAGGING VALUES (4, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP TABLE SPEARING (VEHICLE RESULTS)
*/

INSERT INTO SPEARING VALUES (1, 'YES', 1.0);
INSERT INTO SPEARING VALUES (2, 'NO', 0.0);
INSERT INTO SPEARING VALUES (3, 'POSSIBLE', 0.5);
INSERT INTO SPEARING VALUES (4, 'UNKNOWN', 0.0);

/*
INSERT INTO LOOKUP TABLE SPIN_BEHAVIOR (VEHICLE RESULTS)
*/

INSERT INTO SPIN_BEHAVIOR VALUES (1, '180 DEGREES');
INSERT INTO SPIN_BEHAVIOR VALUES (2, '360 DEGREES');
INSERT INTO SPIN_BEHAVIOR VALUES (3, 'MULTIPLE SPINS');
INSERT INTO SPIN_BEHAVIOR VALUES (4, 'ROLLOVER');
INSERT INTO SPIN_BEHAVIOR VALUES (5, 'NO SPIN');
INSERT INTO SPIN_BEHAVIOR VALUES (6, '90 DEGREES');

/*
INSERT INTO LOOKUP TABLE STATE (DRIVER)

```

*/

```

INSERT INTO STATE VALUES (1, 'AL');
INSERT INTO STATE VALUES (2, 'AK');
INSERT INTO STATE VALUES (3, 'AZ');
INSERT INTO STATE VALUES (4, 'AR');
INSERT INTO STATE VALUES (5, 'CA');
INSERT INTO STATE VALUES (6, 'CO');
INSERT INTO STATE VALUES (7, 'CT');
INSERT INTO STATE VALUES (8, 'DE');
INSERT INTO STATE VALUES (9, 'DC');
INSERT INTO STATE VALUES (10, 'FL');
INSERT INTO STATE VALUES (11, 'GA');
INSERT INTO STATE VALUES (12, 'HI');
INSERT INTO STATE VALUES (13, 'ID');
INSERT INTO STATE VALUES (14, 'IL');
INSERT INTO STATE VALUES (15, 'IN');
INSERT INTO STATE VALUES (16, 'IA');
INSERT INTO STATE VALUES (17, 'KS');
INSERT INTO STATE VALUES (18, 'KY');
INSERT INTO STATE VALUES (19, 'LA');
INSERT INTO STATE VALUES (20, 'ME');
INSERT INTO STATE VALUES (21, 'MD');
INSERT INTO STATE VALUES (22, 'MA');
INSERT INTO STATE VALUES (23, 'MI');
INSERT INTO STATE VALUES (24, 'MN');
INSERT INTO STATE VALUES (25, 'MS');
INSERT INTO STATE VALUES (26, 'MO');
INSERT INTO STATE VALUES (27, 'MT');
INSERT INTO STATE VALUES (28, 'NE');
INSERT INTO STATE VALUES (29, 'NV');
INSERT INTO STATE VALUES (30, 'NH');
INSERT INTO STATE VALUES (31, 'NJ');
INSERT INTO STATE VALUES (32, 'NM');
INSERT INTO STATE VALUES (33, 'NY');
INSERT INTO STATE VALUES (34, 'NC');
INSERT INTO STATE VALUES (35, 'ND');
INSERT INTO STATE VALUES (36, 'OH');
INSERT INTO STATE VALUES (37, 'OK');
INSERT INTO STATE VALUES (38, 'OR');
INSERT INTO STATE VALUES (39, 'PA');
INSERT INTO STATE VALUES (40, 'RI');
INSERT INTO STATE VALUES (41, 'SC');
INSERT INTO STATE VALUES (42, 'SD');
INSERT INTO STATE VALUES (43, 'TN');
INSERT INTO STATE VALUES (44, 'TX');
INSERT INTO STATE VALUES (45, 'UT');
INSERT INTO STATE VALUES (46, 'VT');
INSERT INTO STATE VALUES (47, 'VA');
INSERT INTO STATE VALUES (48, 'WA');
INSERT INTO STATE VALUES (49, 'WV');
INSERT INTO STATE VALUES (50, 'WI');
INSERT INTO STATE VALUES (51, 'WY');
INSERT INTO STATE VALUES (52, 'INTERNATIONAL');
INSERT INTO STATE VALUES (53, 'UNKNOWN');

```

/*

```

INSERT INTO LOOKUP TABLE STATUS (ATTENUATOR)

```

*/

```

insert into status values (1, 'IN USE');

```

```

insert into status values (2, 'NOT IN USE');

/*
INSERT INTO LOOKUP TABLE STOPPING_MODE (VEHICLE RESULTS)
*/

INSERT INTO STOPPING_MODE VALUES (1, 'GATING');
INSERT INTO STOPPING_MODE VALUES (2, 'CONTROLLED STOP');
INSERT INTO STOPPING_MODE VALUES (3, 'REBOUND');
INSERT INTO STOPPING_MODE VALUES (4, 'REDIRECT');
INSERT INTO STOPPING_MODE VALUES (5, 'SLIDING/SKIDDING');
INSERT INTO STOPPING_MODE VALUES (6, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE STOPPING_PLACE (VEHICLE RESULTS)
*/

INSERT INTO STOPPING_PLACE VALUES (1, 'In front of attenuator, out of path of
traffic');
INSERT INTO STOPPING_PLACE VALUES (2, 'In front of attenuator, partially in
traffic');
INSERT INTO STOPPING_PLACE VALUES (3, 'In lanes in initial direction of traffic
flow');
INSERT INTO STOPPING_PLACE VALUES (4, 'In opposing lanes');
INSERT INTO STOPPING_PLACE VALUES (5, 'Out of traffic across roadway in median or
shoulder');
INSERT INTO STOPPING_PLACE VALUES (6, 'Along side attenuator');
INSERT INTO STOPPING_PLACE VALUES (7, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE SURFACE_BT_ATTEN_AND_ROAD (SITE)
*/

insert into surface_bt_atten_and_road values (1, 'ASPHALT');
insert into surface_bt_atten_and_road values (2, 'CONCRETE');
insert into surface_bt_atten_and_road values (3, 'GRASS');
insert into surface_bt_atten_and_road values (4, 'GRAVEL');
insert into surface_bt_atten_and_road values (5, 'SOIL');
insert into surface_bt_atten_and_road values (6, 'OTHER');
insert into surface_bt_atten_and_road values (7, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE SURFACE_UNDER_ATTEN (SITE)
*/

insert into surface_under_atten values (1, 'ASPHALT PAD');
insert into surface_under_atten values (2, 'CONCRETE FOOTING');
insert into surface_under_atten values (3, 'CONCRETE PAD');
insert into surface_under_atten values (4, 'PALLET');
insert into surface_under_atten values (5, 'OTHER');
insert into surface_under_atten values (6, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE TERRAIN (ROADWAY)
*/

INSERT INTO TERRAIN VALUES (1, 'UPHILL');
INSERT INTO TERRAIN VALUES (2, 'DOWNHILL');
INSERT INTO TERRAIN VALUES (3, 'FLAT');
INSERT INTO TERRAIN VALUES (4, 'NOT GIVEN');

```



```

/*
INSERT INTO LOOKUP TABLE TYP_DEBRIS_SCATTER (ATTENUATOR TYPE)
*/

INSERT INTO TYP_DEBRIS_SCATTER VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_DEBRIS_SCATTER VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_DEBRIS_SCATTER VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_DEBRIS_SCATTER VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_DEBRIS_SCATTER VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP TABLE TYP_INSTALL_EQUIP (ATTENUATOR TYPE)
*/

INSERT INTO TYP_INSTALL_EQUIP VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_INSTALL_EQUIP VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_INSTALL_EQUIP VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_INSTALL_EQUIP VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_INSTALL_EQUIP VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP TABLE TYP_INSTALL_TIME (ATTENUATOR TYPE)
*/

INSERT INTO TYP_INSTALL_TIME VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_INSTALL_TIME VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_INSTALL_TIME VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_INSTALL_TIME VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_INSTALL_TIME VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP TABLE TYP_REPAIR_CREW (ATTENUATOR TYPE)
*/

INSERT INTO TYP_REPAIR_CREW VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_REPAIR_CREW VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_REPAIR_CREW VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_REPAIR_CREW VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_REPAIR_CREW VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP TABLE TYP_REPAIR_EQUIP (ATTENUATOR TYPE)
*/

INSERT INTO TYP_REPAIR_EQUIP VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_REPAIR_EQUIP VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_REPAIR_EQUIP VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_REPAIR_EQUIP VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_REPAIR_EQUIP VALUES (5, 'VERY LARGE', 1.00);

/*
INSERT INTO LOOKUP TABLE TYP_REPAIR_TIME (ATTENUATOR TYPE)
*/

INSERT INTO TYP_REPAIR_TIME VALUES (1, 'VERY SMALL', 0.0);
INSERT INTO TYP_REPAIR_TIME VALUES (2, 'SMALL', 0.25);
INSERT INTO TYP_REPAIR_TIME VALUES (3, 'MEDIUM', 0.5);
INSERT INTO TYP_REPAIR_TIME VALUES (4, 'LARGE', 0.75);
INSERT INTO TYP_REPAIR_TIME VALUES (5, 'VERY LARGE', 1.00);

/*

```

```
INSERT INTO LOOKUP TABLE UNDERRIDE (VEHICLE RESULTS)
*/
```

```
INSERT INTO UNDERRIDE VALUES (1, 'YES', 1.0);
INSERT INTO UNDERRIDE VALUES (2, 'NO', 0.0);
INSERT INTO UNDERRIDE VALUES (3, 'POSSIBLE', 0.5);
INSERT INTO UNDERRIDE VALUES (4, 'UNKNOWN', 0.0);
```

```
/*
INSERT INTO LOOKUP TABLE VEHICLE_MAKE (VEHICLE)
*/
```

```
INSERT INTO VEHICLE_MAKE VALUES (1, 'HONDA');
INSERT INTO VEHICLE_MAKE VALUES (2, 'DODGE');
INSERT INTO VEHICLE_MAKE VALUES (3, 'FORD');
INSERT INTO VEHICLE_MAKE VALUES (4, 'CHEVY');
INSERT INTO VEHICLE_MAKE VALUES (5, 'TOYOTA');
INSERT INTO VEHICLE_MAKE VALUES (6, 'OLDSMOBILE');
INSERT INTO VEHICLE_MAKE VALUES (7, 'CADILLAC');
INSERT INTO VEHICLE_MAKE VALUES (8, 'MERCEDES');
INSERT INTO VEHICLE_MAKE VALUES (9, 'NISSAN');
INSERT INTO VEHICLE_MAKE VALUES (10, 'LINCOLN');
INSERT INTO VEHICLE_MAKE VALUES (11, 'ACURA');
INSERT INTO VEHICLE_MAKE VALUES (12, 'PONTIAC');
INSERT INTO VEHICLE_MAKE VALUES (13, 'CHRYSLER');
INSERT INTO VEHICLE_MAKE VALUES (14, 'GMC');
INSERT INTO VEHICLE_MAKE VALUES (15, 'MAZDA');
INSERT INTO VEHICLE_MAKE VALUES (16, 'JEEP CHEROKEE');
INSERT INTO VEHICLE_MAKE VALUES (17, 'MITSUBISHI');
INSERT INTO VEHICLE_MAKE VALUES (18, 'VOLVO');
INSERT INTO VEHICLE_MAKE VALUES (19, 'SATURN');
INSERT INTO VEHICLE_MAKE VALUES (20, 'DIFFERENT');
```

```
/*
INSERT INTO LOOKUP TABLE CITATION_NAME
*/
```

```
INSERT INTO CITATION_NAME VALUES (1, 'Improper Lane Change');
INSERT INTO CITATION_NAME VALUES (2, 'DUI');
INSERT INTO CITATION_NAME VALUES (3, 'No proof of Drivers Licence');
INSERT INTO CITATION_NAME VALUES (4, 'Failure to use due care');
INSERT INTO CITATION_NAME VALUES (5, 'Pending BAC results');
INSERT INTO CITATION_NAME VALUES (6, 'Improper U-turn');
INSERT INTO CITATION_NAME VALUES (7, 'Open Container');
INSERT INTO CITATION_NAME VALUES (8, 'Failure to stay in lane');
INSERT INTO CITATION_NAME VALUES (9, 'Special Hazard');
INSERT INTO CITATION_NAME VALUES (10, 'Careless Driving');
INSERT INTO CITATION_NAME VALUES (11, 'Disregarding Traffic Control Device');
INSERT INTO CITATION_NAME VALUES (12, 'Suspended Drivers Licence');
INSERT INTO CITATION_NAME VALUES (13, 'No Proof of Insurance');
INSERT INTO CITATION_NAME VALUES (14, 'Expired Tag');
INSERT INTO CITATION_NAME VALUES (15, 'Failure to change address on Drivers Licence');
INSERT INTO CITATION_NAME VALUES (16, 'Seat belt violation');
INSERT INTO CITATION_NAME VALUES (17, 'Obstruction of Traffic');
INSERT INTO CITATION_NAME VALUES (18, 'Failure to Yield');
```

Appendix C-2: CRASH_REPORT_CODES_DATA.SQL

```

/*
INSERT INTO LOOKUP TABLE AREA_ZONING_USE
*/

INSERT INTO AREA_ZONING_USE VALUES (1, 'PRIMARYLY BUSINESS');
INSERT INTO AREA_ZONING_USE VALUES (2, 'PRIMARYLY RESIDENTIAL');
INSERT INTO AREA_ZONING_USE VALUES (3, 'OPEN COUNTRY');

/*
INSERT INTO LOOKUP TABLE CONTRIB_CAUSE_DRIVER
*/

INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (1, 'NO IMPROPER DRIVING/ACTION');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (2, 'CARELESS DRIVING');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (3, 'FAILED TO YIELD RIGHT-OF-WAY');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (4, 'IMPROPER BACKING');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (5, 'IMPROPER LANE CHANGE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (6, 'IMPROPER TURN');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (7, 'ALCOHOL-UNDER INFLUENCE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (8, 'DRUGS-UNDER INFLUENCE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (9, 'ALCOHOL AND DRUGS-UNDER
INFLUENCE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (10, 'FOLLOWED TOO CLOSELY');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (11, 'DISREGARDED TRAFFIC SIGNAL');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (12, 'EXCEEDED SAFE SPEED LIMIT');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (13, 'DISREGARDED STOP SIGN');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (14, 'FAILED TO MAINTAIN
EQUIP./VEHICLE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (15, 'IMPROPER PASSING');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (16, 'DROVE LEFT OF CENTER');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (17, 'EXCEEDED STATED SPEED LIMIT');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (18, 'OBSTRUCTING TRAFFIC');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (19, 'IMPROPER LOAD');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (20, 'DISREGARDED OTHER TRAFFIC
CONTROL');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (21, 'DRIVING WRONG SIDE/WAY');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (22, 'FLEETING POLICE');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (23, 'VEHICLE MODIFIED');
INSERT INTO CONTRIBUTING_CAUSE_DRIVER VALUES (77, 'ALL OTHER (EXPLAIN)');

/*
INSERT INTO LOOKUP TABLE CONTRIB_CAUSE_ENV
*/

INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (1, 'VISION NOT OBSCURED');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (2, 'INCLEMENT WEATHER');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (3, 'PARKED/STOPPED VEHICLE');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (4, 'TREES/CROPS/BUSHES');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (5, 'LOAD ON VEHICLE');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (6, 'BUILDING/FIXED OBJECT');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (7, 'SIGNS/BILLBOARDS');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (8, 'FOG');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (9, 'SMOKE');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (10, 'GLARE');
INSERT INTO CONTRIBUTING_CAUSE_ENV VALUES (77, 'ALL OTHER (EXPLAIN)');

/*
INSERT INTO LOOKUP TABLE CONTRIB_CAUSE_ROAD

```

THIS IS SAME AS 'ROAD DEFECTS' IN DOT DATABASE.

*/

```
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (1, 'NO DEFECTS');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (2, 'OBSTRUCTION WITH/WITHOUT
WARNING');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (3, 'ROAD UNDER REPAIR/CONSTRUCTION');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (4, 'LOOSE SURFACE MATERIALS');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (5, 'SHOULDERS- SOFT/LOW/HIGH');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (6, 'HOLES/RUTS/UNSAFE PAVED EDGE');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (7, 'STANDING WATER');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (8, 'WORN/POLISHED ROAD SURFACE');
INSERT INTO CONTRIBUTING_CAUSE_ROAD VALUES (77, 'ALL OTHER (EXPLAIN)');
```

/*

INSERT INTO LOOKUP TABLE DRIVER ACTION

*/

```
INSERT INTO DRIVER_ACTION VALUES (1, 'PHANTOM');
INSERT INTO DRIVER_ACTION VALUES (2, 'HIT AND RUN');
INSERT INTO DRIVER_ACTION VALUES (3, 'N/A (DRIVER KNOWN)');
```

/*

INSERT INTO LOOKUP TABLE EJECTED

*/

```
INSERT INTO EJECTED VALUES (1, 'NO');
INSERT INTO EJECTED VALUES (2, 'YES');
INSERT INTO EJECTED VALUES (3, 'PARTIAL');
```

/*

INSERT INTO LOOKUP TABLE HARMFUL_EVENT

*/

```
INSERT INTO HARMFUL_EVENT VALUES (1, 'COLLISION WITH MV IN TRANSPORT (REAR-
END)');
INSERT INTO HARMFUL_EVENT VALUES (2, 'COLLISION WITH MV IN TRANSPORT (HEAD-ON)');
INSERT INTO HARMFUL_EVENT VALUES (3, 'COLLISION WITH MV IN TRANSPORT (ANGLE)');
INSERT INTO HARMFUL_EVENT VALUES (4, 'COLLISION WITH MV IN TRANSPORT (LEFT
TURN)');
INSERT INTO HARMFUL_EVENT VALUES (5, 'COLLISION WITH MV IN TRANSPORT (RIGHT
TURN)');
INSERT INTO HARMFUL_EVENT VALUES (6, 'COLLISION WITH MV IN TRANSPORT
(SIDESWIPE)');
INSERT INTO HARMFUL_EVENT VALUES (7, 'COLLISION WITH MV IN TRANSPORT (BACKED
INTO)');
INSERT INTO HARMFUL_EVENT VALUES (8, 'COLLISION WITH PARKED CAR');
INSERT INTO HARMFUL_EVENT VALUES (9, 'COLLISION WITH MV ON OTHER ROADWAY');
INSERT INTO HARMFUL_EVENT VALUES (10, 'COLLISION WITH PEDESTRIAN');
INSERT INTO HARMFUL_EVENT VALUES (11, 'COLLISION WITH BICYCLE');
INSERT INTO HARMFUL_EVENT VALUES (12, 'COLLISION WITH BICYCLE (BIKE LANE)');
INSERT INTO HARMFUL_EVENT VALUES (13, 'COLLISION WITH MOPED');
INSERT INTO HARMFUL_EVENT VALUES (14, 'COLLISION WITH TRAIN');
INSERT INTO HARMFUL_EVENT VALUES (15, 'COLLISION WITH ANIMAL');
INSERT INTO HARMFUL_EVENT VALUES (16, 'MV HIT SIGN/SIGN POST');
INSERT INTO HARMFUL_EVENT VALUES (17, 'MV HIT UTILITY POLE/LIGHT POLE');
INSERT INTO HARMFUL_EVENT VALUES (18, 'MV HIT GUARDRAIL');
INSERT INTO HARMFUL_EVENT VALUES (19, 'MV HIT FENCE');
INSERT INTO HARMFUL_EVENT VALUES (20, 'MV HIT CONCRETE BARRIER WALL');
INSERT INTO HARMFUL_EVENT VALUES (21, 'MV HIT BRIDGE/PIER/ABUTMENT/RAIL');
INSERT INTO HARMFUL_EVENT VALUES (22, 'MV HIT TREE/SHRUBBERY');
```

```

INSERT INTO HARMFUL_EVENT VALUES (23, 'COLLISION WITH CONSTRUCTION
BARRICADE/SIGN');
INSERT INTO HARMFUL_EVENT VALUES (24, 'COLLISION WITH TRAFFIC GATE');
INSERT INTO HARMFUL_EVENT VALUES (25, 'COLLISION WITH CRASH ATTENUATORS');
INSERT INTO HARMFUL_EVENT VALUES (26, 'COLLISION WITH FIXED OBJECT ABOVE ROAD');
INSERT INTO HARMFUL_EVENT VALUES (27, 'MV HIT OTHER FIXED OBJECT');
INSERT INTO HARMFUL_EVENT VALUES (28, 'COLLISION WITH MOVEABLE OBJECT ON ROAD');
INSERT INTO HARMFUL_EVENT VALUES (29, 'MV RAN INTO DITCH/CULVERT');
INSERT INTO HARMFUL_EVENT VALUES (30, 'RAN OFF ROAD INTO WATER');
INSERT INTO HARMFUL_EVENT VALUES (31, 'OVERTURNED');
INSERT INTO HARMFUL_EVENT VALUES (32, 'OCCUPANT FELL FROM VEHICLE');
INSERT INTO HARMFUL_EVENT VALUES (33, 'TRACTOR/TRAILER JACKKNIFED');
INSERT INTO HARMFUL_EVENT VALUES (34, 'FIRE');
INSERT INTO HARMFUL_EVENT VALUES (35, 'EXPLOSION');
INSERT INTO HARMFUL_EVENT VALUES (77, 'ALL OTHER (EXPLAIN)');
INSERT INTO HARMFUL_EVENT VALUES (88, 'UNKNOWN');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE LIGHTING
```

```
*/
```

```

INSERT INTO LIGHTING VALUES (1, 'DAYLIGHT');
INSERT INTO LIGHTING VALUES (2, 'DUSK');
INSERT INTO LIGHTING VALUES (3, 'DAWN');
INSERT INTO LIGHTING VALUES (4, 'DARK (STREET LIGHT)');
INSERT INTO LIGHTING VALUES (5, 'DARK (NO STREET LIGHT)');
INSERT INTO LIGHTING VALUES (88, 'UNKNOWN');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE LOCATION_IN_CAR
```

```
*/
```

```

INSERT INTO LOCATION_IN_CAR VALUES (1, 'FRONT LEFT');
INSERT INTO LOCATION_IN_CAR VALUES (2, 'FRONT CENTER');
INSERT INTO LOCATION_IN_CAR VALUES (3, 'FRONT RIGHT');
INSERT INTO LOCATION_IN_CAR VALUES (4, 'REAR LEFT');
INSERT INTO LOCATION_IN_CAR VALUES (5, 'REAR CENTER');
INSERT INTO LOCATION_IN_CAR VALUES (6, 'REAR RIGHT');
INSERT INTO LOCATION_IN_CAR VALUES (7, 'IN BODY OF TRUCK');
INSERT INTO LOCATION_IN_CAR VALUES (8, 'BUS PASSENGER');
INSERT INTO LOCATION_IN_CAR VALUES (9, 'OTHER');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE PEDESTRIAN_ACTION
```

```
*/
```

```

INSERT INTO PEDESTRIAN_ACTION VALUES (0, 'NOT APPLICABLE');
INSERT INTO PEDESTRIAN_ACTION VALUES (1, 'CROSSING NOT AT AN INTERSECTION');
INSERT INTO PEDESTRIAN_ACTION VALUES (2, 'CROSSING AT MID-BLOCK CROSSWALK');
INSERT INTO PEDESTRIAN_ACTION VALUES (3, 'CROSSING AT INTERSECTION');
INSERT INTO PEDESTRIAN_ACTION VALUES (4, 'WALKING ALONG ROAD WITH TRAFFIC');
INSERT INTO PEDESTRIAN_ACTION VALUES (5, 'WALKING ALONG ROAD AGAINST TRAFFIC');
INSERT INTO PEDESTRIAN_ACTION VALUES (6, 'WORKING ON VEHICLE IN ROAD');
INSERT INTO PEDESTRIAN_ACTION VALUES (7, 'OTHER WORKING IN ROAD');
INSERT INTO PEDESTRIAN_ACTION VALUES (8, 'STANDING/PLAYING IN ROAD');
INSERT INTO PEDESTRIAN_ACTION VALUES (9, 'STANDING IN PEDESTRIAN ISLAND');
INSERT INTO PEDESTRIAN_ACTION VALUES (77, 'ALL OTHER');
INSERT INTO PEDESTRIAN_ACTION VALUES (88, 'UNKNOWN');

```

```
/*
```

```
INSERT INTO LOOKUP TABLE PHYSICAL_DEFECTS
```

*/

```
INSERT INTO PHYSICAL_DEFECTS VALUES (1, 'NO DEFECTS KNOWN');
INSERT INTO PHYSICAL_DEFECTS VALUES (2, 'EYESIGHT DEFECT');
INSERT INTO PHYSICAL_DEFECTS VALUES (3, 'FATIGUE/ASLEEP');
INSERT INTO PHYSICAL_DEFECTS VALUES (4, 'HEARING DEFECT');
INSERT INTO PHYSICAL_DEFECTS VALUES (5, 'ILLNESS');
INSERT INTO PHYSICAL_DEFECTS VALUES (6, 'SEIZURE, EPILEPSY, BLACKOUT');
INSERT INTO PHYSICAL_DEFECTS VALUES (7, 'OTHER PHYSICAL DEFECT');
```

/*

```
INSERT INTO LOOKUP TABLE RESIDENCE
```

*/

```
INSERT INTO RESIDENCE VALUES (1, 'COUNTY OF CRASH');
INSERT INTO RESIDENCE VALUES (2, 'ELSEWHERE IN STATE');
INSERT INTO RESIDENCE VALUES (3, 'NON-RESIDENT OF STATE');
INSERT INTO RESIDENCE VALUES (4, 'FOREIGN');
INSERT INTO RESIDENCE VALUES (5, 'UNKNOWN');
```

/*

```
INSERT INTO LOOKUP TABLE ROAD_SIDE
```

*/

```
INSERT INTO ROAD_SIDE VALUES (1, 'ON ROAD');
INSERT INTO ROAD_SIDE VALUES (2, 'NOT ON ROAD');
INSERT INTO ROAD_SIDE VALUES (3, 'SHOULDER');
INSERT INTO ROAD_SIDE VALUES (4, 'MEDIAN');
INSERT INTO ROAD_SIDE VALUES (5, 'TURN LANE/SAFETY_ZONE');
```

/*

```
INSERT INTO LOOKUP TABLE ROAD_SURFACE
```

*/

```
INSERT INTO ROAD_SURFACE VALUES (1, 'DRY');
INSERT INTO ROAD_SURFACE VALUES (2, 'WET');
INSERT INTO ROAD_SURFACE VALUES (3, 'SLIPPERY');
INSERT INTO ROAD_SURFACE VALUES (4, 'ICY');
INSERT INTO ROAD_SURFACE VALUES (77, 'ALL OTHER (EXPLAIN)');
```

/*

```
INSERT INTO LOOKUP TABLE ROAD_SYSTEM_IDENTIFIER
```

```
THIS IS SAME AS ROAD CLASSIFIER.
```

*/

```
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (1, 'INTERSTATE', 1);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (2, 'U.S.', 0.8);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (3, 'STATE', 0.6);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (4, 'COUNTY', 0.4);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (5, 'LOCAL', 0.2);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (6, 'TURNPIKE/TOLL', 1);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (7, 'FOREST ROAD', 0);
INSERT INTO ROAD_SYSTEM_IDENTIFIER VALUES (77, 'ALL OTHER', 0.4);
```

/*

```
INSERT INTO LOOKUP TABLE ROAD_TYPE
```

*/

```
INSERT INTO ROAD_TYPE VALUES (0, 'NOT DIVIDED');
INSERT INTO ROAD_TYPE VALUES (1, 'NOT DIVIDED, SUBSTANDARD');
INSERT INTO ROAD_TYPE VALUES (2, 'DIVIDED');
```

```

INSERT INTO ROAD_TYPE VALUES (3, 'DIVIDED, SUBSTANDARD');
INSERT INTO ROAD_TYPE VALUES (4, 'ONE WAY');
INSERT INTO ROAD_TYPE VALUES (5, 'RAMPS');
INSERT INTO ROAD_TYPE VALUES (6, 'NOT DIVIDED, LEFT TURN');
INSERT INTO ROAD_TYPE VALUES (8, 'DIVIDED, LEFT TURN');
INSERT INTO ROAD_TYPE VALUES (9, 'NOT OPEN TO TRAFFIC');

/*
INSERT INTO LOOKUP TABLE SITE_LOCATION
*/

INSERT INTO SITE_LOCATION VALUES (1, 'NOT AT INTERSECTION/RR XING/BRIDGE');
INSERT INTO SITE_LOCATION VALUES (2, 'AT INTERSECTION');
INSERT INTO SITE_LOCATION VALUES (3, 'INFLUENCED BY INTERSECTION');
INSERT INTO SITE_LOCATION VALUES (4, 'DRIVEWAY ACCESS');
INSERT INTO SITE_LOCATION VALUES (5, 'RAILROAD CROSSING');
INSERT INTO SITE_LOCATION VALUES (6, 'BRIDGE');
INSERT INTO SITE_LOCATION VALUES (7, 'ENTRANCE RAMP');
INSERT INTO SITE_LOCATION VALUES (8, 'EXIT RAMP');
INSERT INTO SITE_LOCATION VALUES (9, 'PARKING LOT - PUBLIC');
INSERT INTO SITE_LOCATION VALUES (10, 'PARKING LOT - PRIVATE');
INSERT INTO SITE_LOCATION VALUES (11, 'PRIVATE PROPERTY');
INSERT INTO SITE_LOCATION VALUES (77, 'ALL OTHER (EXPLAIN)');

/*
INSERT INTO LOOKUP TABLE TRAFFIC_CONTROL
*/

INSERT INTO TRAFFIC_CONTROL VALUES (1, 'NO CONTROL');
INSERT INTO TRAFFIC_CONTROL VALUES (2, 'SCHOOL ZONE');
INSERT INTO TRAFFIC_CONTROL VALUES (3, 'TRAFFIC SIGNAL');
INSERT INTO TRAFFIC_CONTROL VALUES (4, 'STOP SIGN');
INSERT INTO TRAFFIC_CONTROL VALUES (5, 'YIELD SIGN');
INSERT INTO TRAFFIC_CONTROL VALUES (6, 'FLASHING LIGHT');
INSERT INTO TRAFFIC_CONTROL VALUES (7, 'RAILROAD SIGNAL');
INSERT INTO TRAFFIC_CONTROL VALUES (8, 'OFFICER/GUARD/FLAGMAN');
INSERT INTO TRAFFIC_CONTROL VALUES (9, 'POSTED NO U-TURN');
INSERT INTO TRAFFIC_CONTROL VALUES (10, 'SPECIAL SPEED ZONE');
INSERT INTO TRAFFIC_CONTROL VALUES (11, 'NO PASSING ZONE');
INSERT INTO TRAFFIC_CONTROL VALUES (77, 'ALL OTHER (EXPLAIN)');
INSERT INTO TRAFFIC_CONTROL VALUES (88, 'UNKNOWN');

/*
INSERT INTO LOOKUP TABLE TRAFFICWAY_CHAR
*/

INSERT INTO TRAFFICWAY_CHAR VALUES (1, 'STRAIGHT-LEVEL');
INSERT INTO TRAFFICWAY_CHAR VALUES (2, 'STRAIGHT-UPGRADE/DOWNGRADE');
INSERT INTO TRAFFICWAY_CHAR VALUES (3, 'CURVE-LEVEL');
INSERT INTO TRAFFICWAY_CHAR VALUES (4, 'CURVE-UPGRADE/DOWNGRADE');

/*
INSERT INTO LOOKUP TABLE TRAILER
*/

INSERT INTO TRAILER VALUES (1, 'SINGLE SEM. TRAILER');
INSERT INTO TRAILER VALUES (2, 'TANDEM SEMI TRAILER(S)');
INSERT INTO TRAILER VALUES (3, 'TANK TRAILER');
INSERT INTO TRAILER VALUES (4, 'SADDLE MOUNT/FLATBED');
INSERT INTO TRAILER VALUES (5, 'BOAT TRAILER');
INSERT INTO TRAILER VALUES (6, 'UTILITY TRAILER');

```

```

INSERT INTO TRAILER VALUES (7, 'HOUSE TRAILER');
INSERT INTO TRAILER VALUES (8, 'POLE TRAILER');
INSERT INTO TRAILER VALUES (9, 'TOWED VEHICLE');
INSERT INTO TRAILER VALUES (77, 'OTHER');
INSERT INTO TRAILER VALUES (88, 'NO TRAILER');
/*
INSERT INTO LOOKUP_TABLE_UNDER_INFLUENCE
*/

INSERT INTO UNDER_INFLUENCE VALUES (1, 'NOT DRINKING OR USING DRUGS');
INSERT INTO UNDER_INFLUENCE VALUES (2, 'ALCOHOL - UNDER INFLUENCE');
INSERT INTO UNDER_INFLUENCE VALUES (3, 'DRUGS - UNDER INFLUENCE');
INSERT INTO UNDER_INFLUENCE VALUES (4, 'ALCOHOL AND DRUGS - UNDER INFLUENCE');
INSERT INTO UNDER_INFLUENCE VALUES (5, 'HAD BEEN DRINKING');
INSERT INTO UNDER_INFLUENCE VALUES (6, 'PENDING BAC TEST RESULT');

/*
INSERT INTO LOOKUP_TABLE_VEHICLE_DEFECT
*/

INSERT INTO VEHICLE_DEFECT VALUES (1, 'NO DEFECTS');
INSERT INTO VEHICLE_DEFECT VALUES (2, 'DEF. BRAKES');
INSERT INTO VEHICLE_DEFECT VALUES (3, 'WORN/SMOOTH TIRES');
INSERT INTO VEHICLE_DEFECT VALUES (4, 'DEFECTIVE/IMPROPER LIGHTS');
INSERT INTO VEHICLE_DEFECT VALUES (5, 'PUNCTURE/BLOWOUT');
INSERT INTO VEHICLE_DEFECT VALUES (6, 'STEERING MECH. ');
INSERT INTO VEHICLE_DEFECT VALUES (7, 'WINDSHIELD WIPERS');
INSERT INTO VEHICLE_DEFECT VALUES (8, 'EQUIPMENT/VEHCILE DEFECT');
INSERT INTO VEHICLE_DEFECT VALUES (9, 'ALL OTHER');

/*
INSERT INTO LOOKUP_TABLE_VEHICLE_MOVEMENT
*/

INSERT INTO VEHICLE_MOVEMENT VALUES (1, 'STRAIGHT AHEAD');
INSERT INTO VEHICLE_MOVEMENT VALUES (2, 'SLOWING/STOPPED/STALLLED');
INSERT INTO VEHICLE_MOVEMENT VALUES (3, 'MAKING LEFT TURN');
INSERT INTO VEHICLE_MOVEMENT VALUES (4, 'BACKING');
INSERT INTO VEHICLE_MOVEMENT VALUES (5, 'MAKING RIGHT TURN');
INSERT INTO VEHICLE_MOVEMENT VALUES (6, 'CHANGING LANES');
INSERT INTO VEHICLE_MOVEMENT VALUES (7, 'ENTERING/LEAVING PARKING SPACE');
INSERT INTO VEHICLE_MOVEMENT VALUES (8, 'PROPERLY PARKED');
INSERT INTO VEHICLE_MOVEMENT VALUES (9, 'IMPROPERLY PARKED');
INSERT INTO VEHICLE_MOVEMENT VALUES (10, 'MAKING U-TURN');
INSERT INTO VEHICLE_MOVEMENT VALUES (11, 'PASSING');
INSERT INTO VEHICLE_MOVEMENT VALUES (12, 'DRIVERLESS OR RUNAWAY VEH. ');
INSERT INTO VEHICLE_MOVEMENT VALUES (77, 'ALL OTHER');

/*
INSERT INTO LOOKUP_TABLE_VEHICLE_SPECIAL_FUNCTION
*/

INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (1, 'NONE');
INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (2, 'FARM');
INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (3, 'POLICE PURSUIT');
INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (4, 'RECREATIONAL');
INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (5, 'EMERGENCY OPERATION');
INSERT INTO VEHICLE_SPECIAL_FUNCTION VALUES (6, 'CONSTRUCTION/ MAINTENANCE');

/*
INSERT INTO LOOKUP_TABLE_VEHICLE_TYPE

```



```
*/
```

```
INSERT INTO VEHICLE_TYPE VALUES (1, 'AUTOMOBILE');
INSERT INTO VEHICLE_TYPE VALUES (2, 'PASSENGER VAN');
INSERT INTO VEHICLE_TYPE VALUES (3, 'PICKUP, LIGHT TRUCK (2 REAR TIRES)');
INSERT INTO VEHICLE_TYPE VALUES (4, 'MEDIUM TRUCK (4 REAR TIRES)');
INSERT INTO VEHICLE_TYPE VALUES (5, 'HEAVY TRUCK (2 OR MORE REAR AXLES)');
INSERT INTO VEHICLE_TYPE VALUES (6, 'TRUCK TRACTOR (CAB)');
INSERT INTO VEHICLE_TYPE VALUES (7, 'MOTOR HOME (RV)');
INSERT INTO VEHICLE_TYPE VALUES (8, 'BUS');
INSERT INTO VEHICLE_TYPE VALUES (9, 'BICYCLE');
INSERT INTO VEHICLE_TYPE VALUES (10, 'MOTORCYCLE');
INSERT INTO VEHICLE_TYPE VALUES (11, 'MOPED');
INSERT INTO VEHICLE_TYPE VALUES (12, 'ALL TERRAIN VEHICLE');
INSERT INTO VEHICLE_TYPE VALUES (13, 'TRAIN');
INSERT INTO VEHICLE_TYPE VALUES (77, 'OTHER');
```

```
/*
```

```
INSERT INTO LOOKUP TABLE VEHICLE_USE
```

```
*/
```

```
INSERT INTO VEHICLE_USE VALUES (1, 'PRIVATE TRANSPORTATION');
INSERT INTO VEHICLE_USE VALUES (2, 'COMMERCIAL PASSENGERS');
INSERT INTO VEHICLE_USE VALUES (3, 'COMMERCIAL CARGO');
INSERT INTO VEHICLE_USE VALUES (4, 'PUBLIC TRANSPORTATION');
INSERT INTO VEHICLE_USE VALUES (5, 'PUBLIC SCHOOL BUS');
INSERT INTO VEHICLE_USE VALUES (6, 'PRIVATE SCHOOL BUS');
INSERT INTO VEHICLE_USE VALUES (7, 'AMBULANCE');
INSERT INTO VEHICLE_USE VALUES (8, 'LAW ENFORCEMENT');
INSERT INTO VEHICLE_USE VALUES (9, 'FIRE/RESCUE');
INSERT INTO VEHICLE_USE VALUES (10, 'MILITARY');
INSERT INTO VEHICLE_USE VALUES (11, 'OTHER GOVERNMENT');
INSERT INTO VEHICLE_USE VALUES (77, 'OTHER');
```

```
/*
```

```
INSERT INTO LOOKUP TABLE WEATHER
```

```
*/
```

```
INSERT INTO WEATHER VALUES (1, 'CLEAR');
INSERT INTO WEATHER VALUES (2, 'CLOUDY');
INSERT INTO WEATHER VALUES (3, 'RAIN');
INSERT INTO WEATHER VALUES (4, 'FOG');
INSERT INTO WEATHER VALUES (77, 'ALL OTHER');
```

Appendix C-3: ATTENUATOR_TYPE_AND_MODEL_DATA.SQL

```
insert into supplier values (1, 'Gulf Industries', 'Richard Rowe', '', '(318)256-6313', '(318)256-3324', 'PO Box 10', 'Hwy 171 S.', 'Fisher', 19, '71426', '', '');
```

```
insert into supplier values (2, 'Highway Safety Systems', 'Jeffrey Ross', 'President', '(407)323-3349', '(407)323-4649', 'PO Box 4303', '', 'Enterprise', 10, '32725', '', '');
```

```
insert into manufacturer values (1, 'Energy Absorption Systems', 'Richard E. Morgan', 'Regional Manager', '(312)467-6750', '(770)992-2853', 'One East Wacker Drive', '', 'Chicago', 14, '60601', '', 'http://www.energyabsorption.com');
insert into manufacturer values (2, 'Roadway Safety Service', 'Rigg Warton', 'National Sales Manager', '(516)588-6200', '(516)588-6394', '1050 N. Rand Rd.',
```

```

'', 'Wauconda', 14, '11779', 'info@roadwaysafetyservice.com',
'http://roadwaysafetyservice.com');
insert into manufacturer values (3, 'UNKNOWN', '', '', '', '', '', '', '',
'', '', '');

insert into supplier_manuf values (1, 1, 1);
insert into supplier_manuf values (2, 2, 1);
insert into supplier_manuf values (3, 2, 2);

INSERT INTO ATTENUATOR_TYPE VALUES (1, 'G-R-E-A-T', 1, 1, 8, 80, '', 2, 3, 4, 3,
2,3,3, 'no', 'yes', 2, 'no', 'no', 'no');
insert into attenuator_type values (2, 'HEX FOAM SANDWICH', 1, 1, 5, 90, '', 2,
3, 4, 4, 2, 3, 3, 'no', 'yes', 2, 'no', 'no', 'yes');
insert into attenuator_type values (3, 'G-R-E-A-T cz', 1, 1, 8, 80, '', 3, 3, 4,
3, 2, 3, 3, 'yes', 'yes', 2, 'no', 'no', 'no');
insert into attenuator_type values (4, 'HI-DRO Cluster', 1, 1, 5, 98, '', 3, 4,
4, 4, 1, 4, 4, 'yes', 'no', 4, 'no', 'yes', 'no');
insert into attenuator_type values (5, 'HI-DRO SANDWICH', 1, 1, 5, 98, '', 4, 4,
4, 4, 1, 4, 4, 'yes', 'yes', 5, 'no', 'no', 'no');
insert into attenuator_type values (6, 'LMA', 1, 1, 8, 100, '', 3, 3, 3, 4, 1, 2,
3, 'yes', 'yes', 3, 'no', 'no', 'no');
insert into attenuator_type values (7, 'NEAT', 1, 1, 8, 30, '', 1, 2, 4, 2, 2, 1,
2, 'yes', 'no', 1, 'yes', 'no', 'yes');
insert into attenuator_type values (8, 'QUADGUARD', 1, 1, 8, 80, '', 3, 3, 3, 3,
2,4, 3, 'yes', 'yes', 4, 'no', 'no', 'no');
insert into attenuator_type values (9, 'QUADGUARD LMC', 1, 1, 8, 100, '', 3, 3,
3, 4, 1,4, 3, 'yes', 'yes', 4, 'no', 'no', 'no');
insert into attenuator_type values (10, 'QUADGUARD CZ', 1, 1, 8, 80, '', 5, 3, 3,
4, 2, 4, 3, 'yes', 'yes', 4, 'no', 'no', 'yes');
insert into attenuator_type values (11, 'REACT-350', 2, 1, '', 100, '', 3, 3, 2,
3, 1,4, 3, 'yes', 'yes', 1, 'no', 'no', 'yes');
insert into attenuator_type values (12, 'UNKNOWN', 3, '', '', '', '', '', '', '',
'', '', '', '', '', '', '', '', '', '');
insert into attenuator_type values (13, 'SAND BARREL-ENERGITE', 1, 2, 5, 0, '',
5, 4, 4, 1, 5,3, 3, 'yes', 'no', 2, 'yes', 'yes', 'yes');
insert into attenuator_type values (14, 'SAND BARREL-FITCH', 2, 2, 5, 0, '', 5,
4, 4, 1, 5,3, 3, 'yes', 'no', 2, 'yes', 'yes', 'yes');
insert into attenuator_type values (15, 'DRAGNET', 2, '', '', '', '', '', '', '',
'', '', '', '', '', '', '', '', '', '');
insert into attenuator_type values (16, 'SAND BARREL-UNKNOWN', 3, 2, 5, 0, '', 5,
4, 4, 1, 5, 3, 3, 'yes', 'no', 2, 'yes', 'yes', 'yes');

INSERT INTO MODEL VALUES ('200200NFA', 'GA', '', 2.667, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200S2', 'G2', 56, 2.667, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF2', 'G2', 56, 2.667, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200FS3', 'G3', 72, 3.581, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF3', 'G3', 72, 4.496, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200NF3', 'G3', 72, 4.496, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200DF3', 'G3', 72, 4.496, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF3T', 'G3', 72, 4.496, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200F4', 'G4', 80, 5.41, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200NF4', 'G4', 80, 5.41, 0.6096, 2, 1);

```

```

INSERT INTO MODEL VALUES ('200200SF4', 'G4', 80, 5.41, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SF4T', 'G4', 80, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200S5', 'G5', 88, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF5', 'G5', 88, 6.325, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SF5T', 'G5', 88, 5.41, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200NF5', 'G5', 88, 6.325, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200S6', 'G6', 97, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF6', 'G6', 97, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF6T', 'G6', 97, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF7', 'G7', 97, 6.325, 0.6096, 2,
1);
INSERT INTO MODEL VALUES ('200200SF8', 'G8', 105, 8.153, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SE8T', 'G8', 105, 8.153, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SF9', 'G9', 113, 9.068, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SF10', 'G10', 113, 9.982, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('200200SF12', 'G12', 120, 9.982, 0.6096, 2, 1);
INSERT INTO MODEL VALUES ('206206NF3', 'G3', 72, 4.496, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206NF4', 'G4', 80, 4.496, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206NF6C', 'G6', 97, 6.325, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206SF3', 'G3', 72, 3.581, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206SF4', 'G4', 80, 4.496, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206S5', 'G5', 88, 5.41, 0.762, 2, 1);
INSERT INTO MODEL VALUES ('206206SF5', 'G5', 88, 5.41, 0.762, 2, 1);
INSERT INTO MODEL VALUES ('206206SF6', 'G6', 97, 6.325, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206SF7', 'G7', 97, 7.239, 0.762, 2,
1);
INSERT INTO MODEL VALUES ('206206SF8', 'G8', 105, 8.153, 0.762, 2, 1);
INSERT INTO MODEL VALUES ('206206SF9', 'G9', 113, 9.068, 0.762, 2, 1);
INSERT INTO MODEL VALUES ('206206SF12', 'G12', 120, 9.068, 0.762, 2, 1);
INSERT INTO MODEL VALUES ('207207NF7G', 'G7', 97, 7.239, 0.79248, 2, 1);
INSERT INTO MODEL VALUES ('209508H8S', 'G8', 105, 8.153, 0.8382, 2, 1);
INSERT INTO MODEL VALUES ('300300SF3', 'G3', 72, 3.581, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF-3', 'G3', 72, 3.581, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF3T', 'G3', 72, 3.581, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF4', 'G4', 80, 4.496, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF4G', 'G4', 80, 4.496, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF5', 'G5', 88, 5.41, 0.9144, 2, 1);
INSERT INTO MODEL VALUES ('300300SF5T', 'G5', 88, 5.41, 0.9144, 2, 1);
INSERT INTO MODEL VALUES ('300300SF6', 'G6', 97, 6.325, 0.9144, 2,
1);
INSERT INTO MODEL VALUES ('300300SF8', 'G8', 105, 8.153, 0.9144, 2, 1);
INSERT INTO MODEL VALUES ('300300SF9', 'G9', 113, 9.068, 0.9144, 2, 1);
INSERT INTO MODEL VALUES ('304304NF7G', 'G7', 97, 7.239, 1.014984, 2,
1);

```

```

INSERT INTO MODEL VALUES ('308308SF6', 'G6', 97, 6.325, 1.1176, 2,
1);
INSERT INTO MODEL VALUES ('5943260-0000', 'G*', '', '', '', 2, 1);
INSERT INTO MODEL VALUES ('111307H4S', 'HF4', 72, 3.9, 1.0922, 2, 2);
INSERT INTO MODEL VALUES ('111307H5S', 'HF5', 72, 3.9, 1.0922, 2, 2);
INSERT INTO MODEL VALUES ('111307H6S', 'HF6', 72, 4.6, 1.0922, 2, 2);
INSERT INTO MODEL VALUES ('111307HS6', 'HF6', 72, 4.6, 1.0922, 2, 2);
INSERT INTO MODEL VALUES ('111307R6S', 'HF6', 72, 4.6, 1.0922, 2, 2);
INSERT INTO MODEL VALUES ('G111311H4S', 'HF4', 64, 3.19, 1.1938, 2, 2);
INSERT INTO MODEL VALUES ('111311H4S', 'HF4', 64, 3.19, 1.1938, 2, 2);
INSERT INTO MODEL VALUES ('111311H5S', 'HF5', 72, 3.9, 1.1938, 2, 2);
INSERT INTO MODEL VALUES ('111311H85', 'HF8', 89, 5.9, 1.1938, 2, 2);
INSERT INTO MODEL VALUES ('111311H8S', 'HF8', 89, 5.9, 1.1938, 2, 2);
INSERT INTO MODEL VALUES ('111400H12S', 'HF12', 113, 8.67, 1.2192, 2, 2);
INSERT INTO MODEL VALUES ('2041000H12N', 'HF12', 113, 8.67, 0.3048, 2, 2);
INSERT INTO MODEL VALUES ('204507H10S', 'HF10', 105, 7.3, 1.7018, 2, 2);
INSERT INTO MODEL VALUES ('G204507S10S', 'HF10', 105, 7.3, 1.7018, 2, 2);
INSERT INTO MODEL VALUES ('204508H12S', 'HF12', 113, 8.67, 1.7272, 2, 2);
INSERT INTO MODEL VALUES ('204608F12N', 'HF12', 113, 8.67, 2.032, 2,
2);
INSERT INTO MODEL VALUES ('204700H15NB', 'HF15', '', '', 2.1336, 2, 2);
INSERT INTO MODEL VALUES ('204711H10S', 'HF10', 105, 7.3, 2.413, 2, 2);
INSERT INTO MODEL VALUES ('204711H11S', 'HF11', 105, 8, 2.413, 2, 2);
INSERT INTO MODEL VALUES ('207711H10S', 'HF10', 105, 7.3, 2.413, 2, 2);
INSERT INTO MODEL VALUES ('2091009H7N', 'HF7', 81, 5.2, 3.2766, 2,
2);
INSERT INTO MODEL VALUES ('2091300H8S', 'HF8', 89, 5.9, 3.9624, 2,
2);
INSERT INTO MODEL VALUES ('209508H6S', 'HF6', 72, 4.6, 1.7272, 2,
2);
INSERT INTO MODEL VALUES ('209509H5S', 'HF5', 72, 3.9, 1.7526, 2,
2);
INSERT INTO MODEL VALUES ('209509H7S', 'HF7', 81, 5.2, 1.7526, 2,
2);
INSERT INTO MODEL VALUES ('209509H9S', 'HF9', 97, 6.6, 1.7526, 2,
2);
INSERT INTO MODEL VALUES ('209711H5S', 'HF5', 72, 3.9, 2.413, 2,
2);
INSERT INTO MODEL VALUES ('G209711H6N', 'HF6', 72, 4.6, 2.413, 2,
2);
INSERT INTO MODEL VALUES ('209711H6S', 'HF6', 72, 4.6, 2.413, 2,
2);
INSERT INTO MODEL VALUES ('209711H6SB', 'HF6', 72, 4.6, 2.413, 2, 2);
INSERT INTO MODEL VALUES ('209711H7S', 'HF7', 81, 5.2, 2.413, 2,
2);
INSERT INTO MODEL VALUES ('209711H9S', 'HF9', 97, 6.6, 2.413, 2,
2);
INSERT INTO MODEL VALUES ('209800H7S', 'HF7', 81, 5.2, 2.4384, 2,
2);
INSERT INTO MODEL VALUES ('209900H9N', 'HF9', 97, 6.6, 2.7432, 2,
2);
INSERT INTO MODEL VALUES ('330600H9S', 'HF9', 97, 6.6, 1.8288, 2,
2);
INSERT INTO MODEL VALUES ('360360SF4', 'HF4', 64, 3.19, 2.4384, 2,
2);
INSERT INTO MODEL VALUES ('M111308H7S', 'HF7', 81, 5.2, 1.1176, 2,
2);
INSERT INTO MODEL VALUES ('111308H7SB', 'HF7', 81, 5.2, 1.1176, 2,
2);
INSERT INTO MODEL VALUES ('G111307N6D', 'HS6', 72, 4.9, 1.0922, 1,
5);

```

```

INSERT INTO MODEL VALUES ('G111307N6S', 'HS6', 72, 4.9, 1.0922, 1,
5);
INSERT INTO MODEL VALUES ('G111307S6', 'HS6', 72, 4.9, 1.0922, 1,
5);
INSERT INTO MODEL VALUES ('G111309N9S', 'HS9', 97, 6.7, 1.143, 1,
5);
INSERT INTO MODEL VALUES ('G111311N8S', 'HS8', 89, 6.1, 1.1938, 1,
5);
INSERT INTO MODEL VALUES ('G111311S4N', 'HS4', 64, 3.66, 1.1938, 1,
5);
INSERT INTO MODEL VALUES ('G111400N7S', 'HS7', 81, 5.5, 1.2192, 1,
5);
INSERT INTO MODEL VALUES ('G111400N9S', 'HS9', 97, 6.7, 1.2192, 1,
5);
INSERT INTO MODEL VALUES ('G111400N15S', 'HS15', '', '', 1.2192, 1, 5);
INSERT INTO MODEL VALUES ('G200400S8S', 'HS8', 89, 6.1, 1.2192, 1,
5);
INSERT INTO MODEL VALUES ('G204510N10S', 'HS10', 105, 7.3, 1.778, 1, 5);
INSERT INTO MODEL VALUES ('204610N10S-G', 'HS10', 105, 7.3, 2.0828, 1, 5);
INSERT INTO MODEL VALUES ('G204711S10S', 'HS10', 105, 7.3, 2.413, 1, 5);
INSERT INTO MODEL VALUES ('G2091108N6S', 'HS6', 72, 4.9, 3.556, 1, 5);
INSERT INTO MODEL VALUES ('G209508N8S', 'HS8', 89, 6.1, 1.7272, 1,
5);
INSERT INTO MODEL VALUES ('G209508S8S', 'HS8', 89, 6.7, 1.7272, 1,
5);
INSERT INTO MODEL VALUES ('G209509N4S', 'HS4', 64, 3.66, 1.7526, 1,
5);
INSERT INTO MODEL VALUES ('G209509N5S', 'HS5', 72, 4.3, 1.7526, 1,
5);
INSERT INTO MODEL VALUES ('209509S5S', 'HS5', 72, 4.3, 1.7526, 1,
5);
INSERT INTO MODEL VALUES ('G209800S8S', 'HS8', 89, 6.1, 2.4384, 1, 5);
INSERT INTO MODEL VALUES ('G2091000N5S', 'HS5', 72, 4.3, 3.048, 1, 5);
INSERT INTO MODEL VALUES ('G2091100N8S', 'HS8', 89, 6.1, 3.3528, 1, 5);
INSERT INTO MODEL VALUES ('G2091206N8S', 'HS8', 89, 6.1, 3.81, 1, 5);
INSERT INTO MODEL VALUES ('2091007N6S', 'HS6', 72, 4.9, 3.2256984, 1, 5);
INSERT INTO MODEL VALUES ('2091009N7S', 'HS7', 81, 5.5, 3.2766, 1, 5);
INSERT INTO MODEL VALUES ('209508S6S', 'HS6', 72, 4.9, 1.7272, 1, 5);
INSERT INTO MODEL VALUES ('209509S4S', 'HS4', 64, 3.66, 1.7526, 1,
5);
INSERT INTO MODEL VALUES ('209509N4S', 'HS4', 64, 3.66, 1.7526, 1,
5);
INSERT INTO MODEL VALUES ('209711S6S', 'HS6', 72, 4.9, 2.413, 1,
5);
INSERT INTO MODEL VALUES ('209811S6S', 'HS6', 72, 4.9, 2.7178, 1,
5);
INSERT INTO MODEL VALUES ('G210800N7S', 'HS7', 81, 5.5, 2.4384, 1,
5);
INSERT INTO MODEL VALUES ('300410W', 'HC1', '', 0.9144,
1.4730984, 1, 4);
INSERT INTO MODEL VALUES ('300600W', 'HC1', '', 0.9144, 1.8288,
1, 4);
INSERT INTO MODEL VALUES ('310610W', 'HC2', '', 1.1682984,
2.0826984, 1, 4);
INSERT INTO MODEL VALUES ('400500W', 'HC3', '', 1.2192, 1.524,
1, 4);
INSERT INTO MODEL VALUES ('400506W', 'HC3', '', 1.2192, 1.6764,
1, 4);
INSERT INTO MODEL VALUES ('400600W', 'HC3', '', 1.2192, 1.8288,
1, 4);

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INSERT INTO MODEL VALUES ('406400W', 'HC4', '', 1.3716, 1.2192,
1, 4);
INSERT INTO MODEL VALUES ('406500W-2', 'HC4', '', 1.3716, 1.524,
1, 4);
INSERT INTO MODEL VALUES ('500500W', 'HC5', '', 1.524, 1.524,
1, 4);
INSERT INTO MODEL VALUES ('800500W', 'HC6', '', 2.4384, 1.524,
1, 4);
INSERT INTO MODEL VALUES ('W40-58-62 (340)', 'HC7', 32, 0.61, '', 1,
4);
INSERT INTO MODEL VALUES ('W40-59-11 (130)', 'HC8', 32, 0.61, '', 1,
4);
INSERT INTO MODEL VALUES ('W40-59-12 (118)', 'HC8', 32, 0.61, '', 1,
4);
INSERT INTO MODEL VALUES ('W40 59 27', 'HC9', 32, 0.61, '', 1, 4);
INSERT INTO MODEL VALUES ('40-58-29 (71)', 'HC9', 32, 0.61, '', 1, 4);
INSERT INTO MODEL VALUES ('27-31-051', 'HC*', '', '', '', 1, 4);
INSERT INTO MODEL VALUES ('UNKNOWN--HI-DRO CLUS', 'HC*', '', '', '',
1, 4);
INSERT INTO MODEL VALUES ('QS2403Y', 'QG3', '', '', 4, 8);
INSERT INTO MODEL VALUES ('QS2406G', 'QG6', '', '', 5, 8);
INSERT INTO MODEL VALUES ('QS2406Y', 'QG6', '', '', 5, 8);
INSERT INTO MODEL VALUES ('QS2409G', 'QG9', '', '', 5, 8);
INSERT INTO MODEL VALUES ('H27667-9', 'UK', '', '', 1, 12);
INSERT INTO MODEL VALUES ('DRAGNET', 'D*', '', '', 4, 15);
INSERT INTO MODEL VALUES ('MOD-5', 'E*', '', '', 4, 13);
INSERT INTO MODEL VALUES ('UNKNOWN--ENERGITE', 'F*', '', '', 4,
13);
INSERT INTO MODEL VALUES ('UNKNOWN--FITCH', 'F*', '', '', 4,
14);
INSERT INTO MODEL VALUES ('UNKNOWN--SAND BARREL', 'S*', '', '', 4,
16);
INSERT INTO MODEL VALUES ('00200400700140521', 'E40', 40, '', 2, 13);
INSERT INTO MODEL VALUES ('00200401704140221', 'E60', 60, '', 3, 13);
INSERT INTO MODEL VALUES ('00200403703140021E', 'E40', 40, '', 2, 13);
INSERT INTO MODEL VALUES ('00200403704140221', 'E60', 60, '', 3, 13);
INSERT INTO MODEL VALUES ('00201402703140021E', 'E35', 35, '', 2, 13);
INSERT INTO MODEL VALUES ('00201403704140021', 'E60', 60, '', 3, 13);
INSERT INTO MODEL VALUES ('00201405702140021', 'E45', 45, '', 2, 13);
INSERT INTO MODEL VALUES ('00201405702140221', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00201405706140021', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00202401704140221', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00202403704140021E', 'E65', 65, '', 3, 13);
INSERT INTO MODEL VALUES ('00203404704140021', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00203405703140321', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00205406706140021E', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('00205406708140021E', 'E75', 75, '', 4, 13);
INSERT INTO MODEL VALUES ('01201401703140421', 'E80', 80, '', 4, 13);
INSERT INTO MODEL VALUES ('01201405706140021', 'E80', 80, '', 4, 13);
INSERT INTO MODEL VALUES ('01203405703140321', 'E80', 80, '', 4, 13);
INSERT INTO MODEL VALUES ('02201405702140221', 'E60', 60, '', 3, 13);
INSERT INTO MODEL VALUES ('02203404702140221', 'E60', 60, '', 3, 13);
INSERT INTO MODEL VALUES ('03202402711140521E', 'E95', 95, '', 4, 13);
INSERT INTO MODEL VALUES ('04200840015700721E', 'E90', 90, '', 4, 13);
INSERT INTO MODEL VALUES ('04202402700140621E', 'E90', 90, '', 4, 13);
INSERT INTO MODEL VALUES ('04202402702140621E', 'E90', 90, '', 4, 13);
INSERT INTO MODEL VALUES ('04202402708140021E', 'E90', 90, '', 4, 13);
INSERT INTO MODEL VALUES ('18212412700142421E', 'E50', 50, '', 3, 13);
INSERT INTO MODEL VALUES ('00200400701140021', 'F20', 20, '', 2, 14);
INSERT INTO MODEL VALUES ('00200402702140221F', 'F55', 55, '', 3, 14);
INSERT INTO MODEL VALUES ('00200402708140421F', 'F60', 60, '', 3, 14);

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INSERT INTO MODEL VALUES ('00201402702140021F', 'F30', 30, '', '', 2, 14);
INSERT INTO MODEL VALUES ('00201403702140221F', 'F65', 65, '', '', 3, 14);
INSERT INTO MODEL VALUES ('00201405704140021F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00202402710140421F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00202408706140421F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00202410704140421F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00203403703140321F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00204403704140521F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00204403713140821F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00204404718140721F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00205403709140421F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00205405707140421F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00205406706140021F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00205406708140021F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00208410705140521F', 'F75', 75, '', '', 4, 14);
INSERT INTO MODEL VALUES ('00209404722140921F', 'F85', 85, '', '', 4, 14);
INSERT INTO MODEL VALUES ('01201401701140221F', 'F40', 40, '', '', 2, 14);
INSERT INTO MODEL VALUES ('02201403708140021F', 'F90', 90, '', '', 4, 14);
INSERT INTO MODEL VALUES ('02202407706140321F', 'F85', 85, '', '', 4, 14);
INSERT INTO MODEL VALUES ('04202402700140621F', 'F90', 90, '', '', 4, 14);
INSERT INTO MODEL VALUES ('04202402702140621F', 'F90', 90, '', '', 4, 14);
INSERT INTO MODEL VALUES ('05204406702140021F', 'F60', 60, '', '', 3, 14);
INSERT INTO MODEL VALUES ('06202408703140321F', 'F90', 90, '', '', 4, 14);
INSERT INTO MODEL VALUES ('UNKNOWN', 'UK', '', '', '', 1, 12);

```

```

insert into anchoring_options_attenuator values (1, 1);
insert into anchoring_options_attenuator values (1, 2);
insert into anchoring_options_attenuator values (2, 2);
insert into anchoring_options_attenuator values (4, 2);
insert into anchoring_options_attenuator values (1, 3);
insert into anchoring_options_attenuator values (2, 3);
insert into anchoring_options_attenuator values (3, 3);
insert into anchoring_options_attenuator values (1, 4);
insert into anchoring_options_attenuator values (1, 5);
insert into anchoring_options_attenuator values (1, 6);
insert into anchoring_options_attenuator values (1, 7);
insert into anchoring_options_attenuator values (1, 8);
insert into anchoring_options_attenuator values (1, 9);
insert into anchoring_options_attenuator values (1, 10);
insert into anchoring_options_attenuator values (2, 10);
insert into anchoring_options_attenuator values (3, 10);
insert into anchoring_options_attenuator values (1, 11);
insert into anchoring_options_attenuator values (2, 11);

```

```

insert into applications values (1, 1);
insert into applications values (2, 2);
insert into applications values (1, 3);
insert into applications values (7, 3);
insert into applications values (5, 4);
insert into applications values (1, 4);
insert into applications values (2, 5);
insert into applications values (6, 5);
insert into applications values (1, 6);
insert into applications values (6, 6);
insert into applications values (7, 7);
insert into applications values (1, 8);
insert into applications values (2, 8);
insert into applications values (1, 9);
insert into applications values (6, 9);
insert into applications values (1, 10);
insert into applications values (7, 10);

```

```
insert into applications values (1, 11);
insert into applications values (6, 11);
```

Appendix C-4: ROADWAY_DATA.SQL

```
INSERT INTO ROADWAY_DESCRIPTION VALUES (10190000, 'SR
93', 1, 2, '', 'YES', 1, 10, 3, '', '', '', '', '', '', 55, '', '', '', '', '', '', 4, 12, 8, 2);
INSERT INTO ROADWAY_DESCRIPTION VALUES (87001000, 'SR
618', 3, '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '', '',
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (75008000, 'SR 400
', 1, 2, '', '', '', '', 1, '', '', '', '', '', '', 94.11764706, 80, 1, 5, 1, 1, 154843, '', 4, '', 7,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (70100000, 'SR 520
', 3, 2, '', '', '', '', 2, '', '', '', '', '', '', 94.11764706, 80, 1, 6, 1, 1, 21500, '', 3, '', 4,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (72020000, 'SR 9 (I 95)
', 1, 2, '', '', '', '', 3, '', '', '', '', '', '', 94.11764706, 80, 1, 1, 2, 3, 108000, '', 4, '', 5,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (75002000, 'SR
408', 3, 2, '', '', '', '', 1, '', '', '', '', '', '', 94.11764706, 80, 1, 6, 1, 3, 47500, '', 4, '', 6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (75280000, 'I-
4', 1, 2, '', '', '', '', 3, '', '', '', '', '', '', 94.11764706, 80, 1, 5, 1, 1, 141500, '', 4, '', 7,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (86070000, 'SR 9
', 1, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 4, 1, 1, 203500, '', 4, '', 10,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (86095000, 'SR 862 (I-595)
', 1, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 5, 1, 3, 102500, '', 4, '', 6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (86470000, 'SR 91
', 6, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 1, 1, 2, 49190, '', 3, '', 6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (86471000, 'SR
821', 6, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 6, 1, 2, 55000, '', 3, '',
6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (86472000, 'SR
829', 1, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 5, 1, 1, 29000, '', 4, '', 6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (87003000, 'SR
112', 3, 2, '', '', '', '', 2, '', '', '', '', '', '', 103.5294118, 88, 1, 5, 2, 3, 84000, '', 4, '',
6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (87060000, 'SR
A1A', 3, 2, '', '', '', '', 3, '', '', '', '', '', '', 75.29411765, 64, 1, 1, 2, 3, 62000, '', 4, '',
6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (87200000, 'SR
836', 3, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 5, 2, 3, 120000, '', 3,
',
6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (87270000, 'SR 9A(I-
95)', 1, 2, '', '', '', '', 1, '', '', '', '', '', '', 103.5294118, 88, 1, 4, 1, 1, 106500, '', 4,
',
6,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (87300000, 'SR
93', 1, 2, '', '', '', '', 2, '', '', '', '', '', '', 103.5294118, 88, 1, 6, 1, 3, 99000, '', 3, '', 4,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (88010000, 'US
1', 2, 2, '', '', '', '', 1, '', '', '', '', '', '', 84.70588235, 72, 1, 5, 2, 1, 54500, '', 4, '', 4,
');
INSERT INTO ROADWAY_DESCRIPTION VALUES (89470000, 'SR
821', 6, 2, '', '', '', '', 1, '', '', '', '', '', '', 122.3529412, 104, 1, 5, 1, 3, 35000, '', 3,
',
4,
');
```



```

INSERT INTO ROADWAY_DESCRIPTION VALUES(93470000,'SR
91',6,2,'','','','2','','','','','122.3529412,104,1,6,1,3,23475','','3','
4,');
INSERT INTO ROADWAY_DESCRIPTION VALUES(01075000,'SR
93',3,'','','','','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(03175000,'SR
93',3,'','','','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(08150000,'SR
93A',3,'','','','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(09010000,'SR
25',3,'','','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10002000,'SR
618',3,'','','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10010000,'SR
45',3,'','','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10040000,'SR
93A',3,'','','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10060000,'SR
93A',3,'','','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10075000,'SR
93A',3,'','','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10080000,'SR
674',3,'','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10110000,'SR
600',3,'','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10120000,'SR
600',3,'','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10130000,'SR
60',3,'','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10140000,'SR
60',3,'','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10160000,'SR
93',3,'','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10270002,'SR
582',3,'','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10270000,'SR
93',3,'','','','','','','','','','','','','','','','','')
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(10290000,'SR
574',3,'','','','','','','','','','','','','','','','','')
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10320000,'SR
93',3,'','','','','','','','','','','','','','','','','')
;

```

[illegible]


```

INSERT INTO ROADWAY_DESCRIPTION VALUES (48260000,'SR
8',3,'','','','','','','','','','','','','','','','','');
INSERT INTO ROADWAY_DESCRIPTION VALUES (48270000,'SR
8A',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (50050000,'SR
12',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (52030000,'SR
79',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (52040000,'SR
81',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (53002000,'SR
8',3,'','','','','','','','','','','','','','','','','');
INSERT INTO ROADWAY_DESCRIPTION VALUES (53040000,'SR
71',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (53130000,'SR
69',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (54001000,'SR
8',3,'','','','','','','','','','','','','','','','','');
INSERT INTO ROADWAY_DESCRIPTION VALUES (54020000,'SR
20',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (54030000,'SR
57',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (54060000,'SR
59',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (55002000,'SR
263',3,'','','','','','','','','','','','','','','','','');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES (55060000,'SR
10',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (55080000,'SR
20',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (57002000,'SR
8',3,'','','','','','','','','','','','','','','','','');
INSERT INTO ROADWAY_DESCRIPTION VALUES (57030000,'SR
30',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (57040000,'SR
20',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (57050000,'SR
85',3,'','','','','','','','','','','','','','','','','');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES (57110000,'SR
189',3,'','','','','','','','','','','','','','','','','');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES (57518000,'SR
293',3,'','','','','','','','','','','','','','','','','');
);

```



```
INSERT INTO ROADWAY_DESCRIPTION VALUES(79110000,'SR
400','3','','','','','T','','','','','VALUES('79110000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(79150000,'SR
40','3','','','','','T','','','','','VALUES('79150000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86006000,'SR
842','3','','','','','T','','','','','VALUES('86006000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86010000,'SR
5','3','','','','','T','','','','','VALUES('86010000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86040000,'SR
820','3','','','','','T','','','','','VALUES('86040000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86080000,'SR
84','3','','','','','T','','','','','VALUES('86080000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86170000,'SR
811','3','','','','','T','','','','','VALUES('86170000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86470138,'SR
91','6','','','','','T','','','','','VALUES('86470138','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86471072,'SR
821','6','','','','','T','','','','','VALUES('86471072','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86471127,'SR
821','6','','','','','T','','','','','VALUES('86471127','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86471128,'SR
821','6','','','','','T','','','','','VALUES('86471128','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86472007,'NO
REC','','','','','T','','','','','VALUES('86472007','NO
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(86472008,'NO
REC','','','','','T','','','','','VALUES('86472008','NO
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87004000,'SR
112','3','','','','','T','','','','','VALUES('87004000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87005000,'SR
874','3','','','','','T','','','','','VALUES('87005000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87006000,'SR
970','3','','','','','T','','','','','VALUES('87006000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87017000,'SR
913','3','','','','','T','','','','','VALUES('87017000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87019000,'SR
817','3','','','','','T','','','','','VALUES('87019000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87021000,'SR
878','3','','','','','T','','','','','VALUES('87021000','SR
');
INSERT INTO ROADWAY_DESCRIPTION VALUES(87030000,'SR
5','3','','','','','T','','','','','VALUES('87030000','SR
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(87044000,'SR
976','3','','','','','T','','','','','VALUES('87044000','SR
);
```



```
INSERT INTO ROADWAY_DESCRIPTION VALUES(92470010,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO ROADWAY_DESCRIPTION VALUES(92470020,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO ROADWAY_DESCRIPTION VALUES(92471000,'SR
91',6,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
;
INSERT INTO ROADWAY_DESCRIPTION VALUES(92471014,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92471015,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92471027,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92472028,'SR
417',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92472005,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92472006,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92472009,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(92472010,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93001000,'SR
786',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93016000,'SR
882',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93060000,'SR
A1A',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93190000,'SR
706',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93220000,'SR
9',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93470091,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(10470008,'SR
589',3,' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93470092,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
);
INSERT INTO ROADWAY_DESCRIPTION VALUES(93470103,'NO
REC',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ')
```

[illegible]


```

INSERT INTO ATTENUATOR VALUES('1-6',1,'',190,16,60,0,'SR 35','US
98',6.9,'',3,'NO',1,1,'200200SF5',16060000,'');
INSERT INTO ATTENUATOR VALUES('1-7',1,'',190,16,110,0,'SR 35','USB
98',4.297,'',4,'NO',1,2,'206206SF4',16110000,'');
INSERT INTO ATTENUATOR VALUES('1-8',1,'',190,16,110,0,'SR 35','USB
98',11.585,'',2,'NO',1,2,'206206SF4',16110000,'');
INSERT INTO ATTENUATOR VALUES('1-9',1,'',190,16,110,0,'SR 35','USB
98',11.785,'',4,'NO',1,2,'206206SF4',16110000,'');
INSERT INTO ATTENUATOR VALUES('1-10',1,'',190,16,130,0,'SR 60','NO
REC',11.4,'',2,'NO',1,1,'200200SF9',16130000,'');
INSERT INTO ATTENUATOR VALUES('1-11',1,'',190,16,130,0,'SR 60','NO
REC',11.458,'',4,'NO',1,1,'200200SF9',16130000,'');
INSERT INTO ATTENUATOR VALUES('1-12',1,'',190,16,210,0,'SR 35','USB
98',3.111,'',1,'NO',1,1,'206206SF3',16210000,'');
INSERT INTO ATTENUATOR VALUES('1-13',1,'',190,16,210,0,'SR 35','USB
98',3.111,'',1,'NO',1,2,'200200SF3',16210000,'');
INSERT INTO ATTENUATOR VALUES('1-14',1,'',190,16,210,0,'SR 35','USB
98',3.117,'',3,'NO',1,1,'200200SF3',16210000,'');
INSERT INTO ATTENUATOR VALUES('1-15',1,'',190,16,210,0,'SR 35','USB
98',3.117,'',3,'NO',1,2,'200200SF3',16210000,'');
INSERT INTO ATTENUATOR VALUES('1-16',1,'',191,9,10,0,'SR 25','US
27',17.543,'',1,'NO',1,1,'200200SF8',9010000,'');
INSERT INTO ATTENUATOR VALUES('1-17',1,'',191,9,10,0,'SR 25','US
27',17.839,'',1,'NO',1,1,'200200SF8',9010000,'');
INSERT INTO ATTENUATOR VALUES('1-18',1,'',192,1,75,0,'SR 93','I
75',17.8,'',2,'NO',1,1,'200200SF5',1075000,'');
INSERT INTO ATTENUATOR VALUES('1-19',1,'',192,1,75,0,'SR 93','I
75',17.9,'',4,'NO',1,1,'200200SF5',1075000,'');
INSERT INTO ATTENUATOR VALUES('1-20',1,'',192,1,75,0,'SR 93','I
75',21.1,'',2,'NO',1,1,'200200SF5',1075000,'');
INSERT INTO ATTENUATOR VALUES('1-21',1,'',192,1,75,0,'SR 93','I
75',21.2,'',4,'NO',1,1,'200200SF5',1075000,'');
INSERT INTO ATTENUATOR VALUES('1-22',1,'',192,12,1,0,'SR 739','USB
41',1.017,'',1,'NO',1,1,'200200SF4',12001000,'');
INSERT INTO ATTENUATOR VALUES('1-23',1,'',192,12,5,0,'SR 884','NO
REC',2.193,'',4,'NO',1,2,'206206SF4',12005000,'');
INSERT INTO ATTENUATOR VALUES('1-24',1,'',192,12,10,0,'SR 45','US
41',23.375,'',1,'NO',1,4,'209508H6S',12010000,'');
INSERT INTO ATTENUATOR VALUES('1-25',1,'',192,12,10,0,'SR 45','US
41',23.673,'',3,'NO',1,4,'00201405706140021',12010000,'Model number was
00201405706140021');
INSERT INTO ATTENUATOR VALUES('1-26',1,'',192,12,10,0,'SR 45','US
41',23.674,'',1,'NO',1,1,'200200SF4',12010000,'');
INSERT INTO ATTENUATOR VALUES('1-27',1,'',192,12,10,0,'SR 45','US
41',24.614,'',3,'NO',1,1,'206206SF4',12010000,'');
INSERT INTO ATTENUATOR VALUES('1-28',1,'',194,13,30,0,'SR 45','USB
41',5.188,'',1,'NO',1,1,'200200SF5',13030000,'');
INSERT INTO ATTENUATOR VALUES('1-29',1,'',194,13,30,0,'SR 45','USB
41',5.238,'',3,'NO',1,1,'200200SF5',13030000,'');
INSERT INTO ATTENUATOR VALUES('1-30',1,'',194,13,75,0,'SR 93','I
75',0,'',2,'NO',1,1,'206206SF4',13075000,'');
INSERT INTO ATTENUATOR VALUES('1-31',1,'',194,13,75,0,'SR 93','I
75',0,'',4,'NO',1,1,'206206SF4',13075000,'');
INSERT INTO ATTENUATOR VALUES('1-32',1,'',194,13,75,0,'SR 93','I
75',16.203,'',2,'NO',1,1,'200200SF4',13075000,'');
INSERT INTO ATTENUATOR VALUES('1-33',1,'',194,13,75,0,'SR 93','I
75',16.203,'',4,'NO',1,1,'200200SF4',13075000,'');
INSERT INTO ATTENUATOR VALUES('1-34',1,'',194,13,130,0,'SR 45','US
41',9.535,'',1,'NO',1,1,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-35',1,'',194,13,130,0,'SR 45','US
41',9.768,'',1,'NO',1,2,'200200SF9',13130000,'');

```

```

INSERT INTO ATTENUATOR VALUES('1-36',1,'',194,13,130,0,'SR 45','US
41',9.769,'',1,'NO',1,2,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-37',1,'',194,13,130,0,'SR 45','US
41',9.77,'',1,'NO',1,2,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-38',1,'',194,13,130,0,'SR 45','US
41',9.771,'',1,'NO',1,2,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-39',1,'',194,13,130,0,'SR 45','US
41',9.772,'',1,'NO',1,2,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-40',1,'',194,13,130,0,'SR 45','US
41',9.773,'',1,'NO',1,2,'200200SF9',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-41',1,'',194,13,130,0,'SR 45','US
41',11.785,'',1,'NO',1,1,'200200SF6',13130000,'');
INSERT INTO ATTENUATOR VALUES('1-42',1,'',194,17,20,0,'SR 45','USB
41',8.329,'',3,'NO',1,1,'200200SF4',17020000,'');
INSERT INTO ATTENUATOR VALUES('1-43',1,'',194,17,40,0,'SR 780','NO
REC',0.395,'',2,'NO',1,1,'00201405702140221',17040000,'Model number was
00201405702140221');
INSERT INTO ATTENUATOR VALUES('1-44',1,'',194,17,40,0,'SR 780','NO
REC',0.396,'',4,'NO',1,1,'00201405702140221',17040000,'Model number was
00201405702140221');
INSERT INTO ATTENUATOR VALUES('1-45',1,'',194,17,40,0,'SR 780','NO
REC',5.257,'',2,'NO',1,1,'200200SF3',17040000,'');
INSERT INTO ATTENUATOR VALUES('1-46',1,'',194,17,40,0,'SR 780','NO
REC',5.277,'',4,'NO',1,1,'200200SF3',17040000,'');
INSERT INTO ATTENUATOR VALUES('1-47',1,'',197,3,175,0,'SR 93','I
75',50.334,'',1,'NO',1,1,'300300SF4',3175000,'');
INSERT INTO ATTENUATOR VALUES('1-48',1,'',197,3,175,0,'SR 93','I
75',50.358,'',3,'NO',1,1,'300300SF4',3175000,'');
INSERT INTO ATTENUATOR VALUES('2-1',1,'',291,26,20,0,'SR 25','US
441',16.804,'',1,'NO',1,1,'200200SF5T',26020000,'');
INSERT INTO ATTENUATOR VALUES('2-2',1,'',291,26,20,0,'SR 25','US
441',16.881,'',3,'NO',1,1,'200200SF5T',26020000,'');
INSERT INTO ATTENUATOR VALUES('2-3',1,'',291,26,20,0,'SR 25','US
441',16.881,'',3,'NO',1,1,'200200SF5T',26020000,'');
INSERT INTO ATTENUATOR VALUES('2-4',1,'',291,26,60,0,'SR 200','US
301',0.001,'',1,'NO',1,1,'200200SE8T',26060000,'');
INSERT INTO ATTENUATOR VALUES('2-5',1,'',291,26,60,0,'SR 200','US
301',0.051,'',3,'NO',1,1,'200200SE8T',26060000,'');
INSERT INTO ATTENUATOR VALUES('2-6',1,'',291,26,60,0,'SR 200','US
301',29.44,'',1,'NO',1,1,'200200SE8T',26060000,'');
INSERT INTO ATTENUATOR VALUES('2-7',1,'',291,26,70,0,'SR 20','NO
REC',14.57,'',2,'NO',1,1,'200200SF3T',26070000,'');
INSERT INTO ATTENUATOR VALUES('2-8',1,'',291,28,10,0,'SR 200','US
301',0.05,'',3,'NO',1,1,'200200SE8T',28010000,'');
INSERT INTO ATTENUATOR VALUES('2-9',1,'',291,28,10,0,'SR 200','US
301',5.25,'',1,'NO',1,1,'200200SE8T',28010000,'');
INSERT INTO ATTENUATOR VALUES('2-10',1,'',291,28,10,0,'SR 200','US
301',5.34,'',3,'NO',1,1,'200200SE8T',28010000,'');
INSERT INTO ATTENUATOR VALUES('2-11',1,'',291,28,10,0,'SR 200','US
301',17.86,'',1,'NO',1,1,'200200SE8T',28010000,'');
INSERT INTO ATTENUATOR VALUES('2-12',1,'',291,28,10,0,'SR 200','US
301',17.97,'',3,'NO',1,1,'200200SE8T',28010000,'');
INSERT INTO ATTENUATOR VALUES('2-13',1,'',292,29,10,0,'SR 10','US
90',6.647,'',2,'NO',1,1,'200200FS3',29010000,'');
INSERT INTO ATTENUATOR VALUES('2-14',1,'',292,29,10,0,'SR 10','US
90',6.77,'',4,'NO',1,1,'200200FS3',29010000,'');
INSERT INTO ATTENUATOR VALUES('2-17',1,'',292,37,10,0,'SR 10','US
90',5.415,'',2,'NO',1,1,'H27667-9',37010000,'NOT sure what type this is.');
```

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INSERT INTO ATTENUATOR VALUES('2-18',1,'',292,37,10,0,'SR 10','US
90',6.3,'',4,'NO',1,1,'H27667-9',37010000,'NOT sure what type this is.');
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INSERT INTO ATTENUATOR VALUES('2-19',1,'',294,72,1,0,'SR 9A','I
295',24.715,'',4,'NO',1,1,'300300SF4',72001000,'');
INSERT INTO ATTENUATOR VALUES('2-20',1,'',294,72,1,0,'SR 9A','I
295',24.715,'',2,'NO',1,1,'300300SF4',72001000,'');
INSERT INTO ATTENUATOR VALUES('2-21',1,'',294,72,2,0,'SR 9A','NO
REC',9.366,'',1,'NO',1,1,'200200SF9',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-22',1,'',294,72,2,0,'SR 9A','NO
REC',11.399,'',3,'NO',1,1,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-23',1,'',294,72,2,0,'SR 9A','NO
REC',11.4,'',3,'NO',1,4,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-24',1,'',294,72,2,0,'SR 9A','NO
REC',11.4,'',1,'NO',1,4,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-25',1,'',294,72,2,0,'SR 9A','NO
REC',11.401,'',3,'NO',1,1,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-26',1,'',294,72,2,0,'SR 9A','NO
REC',11.401,'',1,'NO',1,1,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-27',1,'',294,72,2,0,'SR 9A','NO
REC',11.41,'',1,'NO',1,1,'300300SF6',72002000,'');
INSERT INTO ATTENUATOR VALUES('2-28',1,'',294,72,4,0,'SR A1A','NO
REC',0.005,'',1,'NO',1,1,'200200SF3',72004000,'');
INSERT INTO ATTENUATOR VALUES('2-29',1,'',294,72,4,0,'SR A1A','NO
REC',0.2,'',3,'NO',1,1,'200200SF3',72004000,'');
INSERT INTO ATTENUATOR VALUES('2-30',1,'',294,72,4,0,'SR A1A','NO
REC',0.2,'',1,'NO',1,1,'200200SF3',72004000,'');
INSERT INTO ATTENUATOR VALUES('2-31',1,'',294,72,20,0,'SR 5','I
95',0.265,'',1,'NO',1,4,'111311H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-32',1,'',294,72,20,0,'SR 5','I
95',0.27,'',3,'NO',1,4,'111311H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-33',1,'',294,72,20,0,'SR 5','I
95',0.4,'',3,'NO',1,4,'111307H5S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-34',1,'',294,72,20,0,'SR 5','I
95',0.425,'',3,'NO',1,4,'111307H5S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-35',1,'',294,72,20,0,'SR 5','I
95',0.48,'',3,'NO',1,1,'111307H5S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-36',1,'',294,72,20,0,'SR 5','I
95',0.78,'',1,'NO',1,4,'111307H5S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-37',1,'',294,72,20,0,'SR 5','I
95',2.52,'',3,'NO',1,3,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-38',1,'',294,72,20,0,'SR 5','I
95',2.52,'',1,'NO',1,2,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-39',1,'',294,72,20,0,'SR 5','I
95',3.15,'',1,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-40',1,'',294,72,20,0,'SR 5','I
95',3.2,'',3,'NO',1,2,'300300SF5',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-41',1,'',294,72,20,0,'SR 5','I
95',3.21,'',1,'NO',1,1,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-42',1,'',294,72,20,0,'SR 5','I
95',3.39,'',1,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-43',1,'',294,72,20,0,'SR 5','I
95',3.527,'',1,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-44',1,'',294,72,20,0,'SR 5','I
95',3.578,'',1,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-45',1,'',294,72,20,0,'SR 5','I
95',3.647,'',3,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-46',1,'',294,72,20,0,'SR 5','I
95',3.783,'',1,'NO',1,4,'209508H8S',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-47',1,'',294,72,20,0,'SR 5','I
95',4.617,'',4,'NO',1,1,'200200SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-48',1,'',294,72,20,0,'SR 5','I
95',4.617,'',2,'NO',1,1,'200200SF4',72020000,'');

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INSERT INTO ATTENUATOR VALUES('2-49',1,'',294,72,20,0,'SR 5','I
95',5.83,'',4,'NO',1,1,'200200SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-50',1,'',294,72,20,0,'SR 5','I
95',5.83,'',2,'NO',1,1,'200200SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-51',1,'',294,72,20,0,'SR 5','I
95',7.129,'',4,'NO',1,1,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-52',1,'',294,72,20,0,'SR 5','I
95',7.129,'',2,'NO',1,1,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-53',1,'',294,72,20,0,'SR 5','I
95',7.787,'',4,'NO',1,1,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-54',1,'',294,72,20,0,'SR 5','I
95',7.787,'',2,'NO',1,1,'206206SF4',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-55',1,'',294,72,20,0,'SR 5','I
95',8.8,'',3,'NO',1,1,'200200SF5',72020000,'');
INSERT INTO ATTENUATOR VALUES('2-56',1,'',294,72,30,0,'SR 15','US
17',8.698,'',1,'NO',1,4,'200200SF5',72030000,'');
INSERT INTO ATTENUATOR VALUES('2-57',1,'',294,72,31,0,'SR 113','NO
REC',0.8,'',3,'NO',1,1,'200200SF5',72031000,'');
INSERT INTO ATTENUATOR VALUES('2-58',1,'',294,72,31,0,'SR 113','NO
REC',0.8,'',1,'NO',1,1,'200200SF5',72031000,'');
INSERT INTO ATTENUATOR VALUES('2-59',1,'',294,72,31,0,'SR 113','NO
REC',1.42,'',3,'NO',1,1,'200200SF4',72031000,'');
INSERT INTO ATTENUATOR VALUES('2-60',1,'',294,72,31,0,'SR 113','NO
REC',1.42,'',1,'NO',1,1,'200200SF4',72031000,'');
INSERT INTO ATTENUATOR VALUES('2-61',1,'',294,72,40,0,'SR 115','NO
REC',14.7,'',2,'NO',1,1,'00201402703140021E',72040000,'Model number was
0020140270314E');
INSERT INTO ATTENUATOR VALUES('2-62',1,'',294,72,40,0,'SR 115','NO
REC',14.705,'',2,'NO',1,1,'00200403703140021E',72040000,'Model number was
0020040370314E');
INSERT INTO ATTENUATOR VALUES('2-63',1,'',294,72,40,0,'SR 115','NO
REC',15.362,'',2,'NO',1,4,'360360SF4',72040000,'');
INSERT INTO ATTENUATOR VALUES('2-64',1,'',294,72,50,0,'SR 5','US
17',7.602,'',1,'NO',1,1,'111307H5S',72050000,'');
INSERT INTO ATTENUATOR VALUES('2-65',1,'',294,72,50,0,'SR 5','US
17',7.645,'',1,'NO',1,4,'209711H5S',72050000,'');
INSERT INTO ATTENUATOR VALUES('2-66',1,'',294,72,50,0,'SR 5','US
17',7.771,'',3,'NO',1,1,'111307H5S',72050000,'');
INSERT INTO ATTENUATOR VALUES('2-67',1,'',294,72,70,0,'SR 5','US
1',7.3,'',3,'NO',1,1,'00202403704140021E',72070000,'Model number was
0020240370414E');
INSERT INTO ATTENUATOR VALUES('2-68',1,'',294,72,70,0,'SR 5','US
1',7.3,'',1,'NO',1,1,'00202403704140021E',72070000,'Model number was
0020240370414E');
INSERT INTO ATTENUATOR VALUES('2-69',1,'',294,72,70,0,'SR 5','US
1',18.33,'',1,'NO',1,5,'209711H6S',72070000,'');
INSERT INTO ATTENUATOR VALUES('2-70',1,'',294,72,70,0,'SR 5','US
1',18.997,'',1,'NO',1,1,'209711H7S',72070000,'');
INSERT INTO ATTENUATOR VALUES('2-71',1,'',294,72,70,0,'SR 5','US
1',19.075,'',1,'NO',1,5,'18212412700142421E',72070000,'Model number was
1821241270142421E');
INSERT INTO ATTENUATOR VALUES('2-72',1,'',294,72,70,0,'SR 5','US
1',19.076,'',1,'NO',1,5,'03202402711140521E',72070000,'Model number was
03202402711140521E');
INSERT INTO ATTENUATOR VALUES('2-73',1,'',294,72,80,0,'SR 15','US
1',15.101,'',1,'NO',1,1,'200200SF5',72080000,'');
INSERT INTO ATTENUATOR VALUES('2-74',1,'',294,72,90,0,'SR 15','USA
1',2.9,'',1,'NO',1,1,'00202403704140021E',72090000,'Model number was
0240370414E');

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INSERT INTO ATTENUATOR VALUES('2-75',1,'',294,72,90,0,'SR 15','USA
1',2.91,'',2,'NO',1,1,'00202403704140021E',72090000,'Model number was
0240370414E');
INSERT INTO ATTENUATOR VALUES('2-76',1,'',294,72,90,0,'SR 15','USA
1',2.95,'',1,'NO',1,1,'00202403704140021E',72090000,'Model number was
0240370414E');
INSERT INTO ATTENUATOR VALUES('2-77',1,'',294,72,90,0,'SR 15','USA
1',2.955,'',4,'NO',1,1,'00202403704140021E',72090000,'Model number was
0020240370414E');
INSERT INTO ATTENUATOR VALUES('2-78',1,'',294,72,90,0,'SR 15','USA
1',6.468,'',1,'NO',1,4,'209508H6S',72090000,'');
INSERT INTO ATTENUATOR VALUES('2-79',1,'',294,72,100,0,'SR A1A','US
90',0.4,'',1,'NO',1,4,'111311H5S',72100000,'');
INSERT INTO ATTENUATOR VALUES('2-80',1,'',294,72,100,0,'SR A1A','US
90',0.974,'',1,'NO',1,5,'200200SF4',72100000,'');
INSERT INTO ATTENUATOR VALUES('2-81',1,'',294,72,100,0,'SR A1A','US
90',1.932,'',4,'NO',1,1,'111307R6S',72100000,'');
INSERT INTO ATTENUATOR VALUES('2-82',1,'',294,72,100,0,'SR A1A','US
90',1.962,'',2,'NO',1,1,'111307R6S',72100000,'');
INSERT INTO ATTENUATOR VALUES('2-83',1,'',294,72,160,0,'SR 13','NO
REC',14.2,'',3,'NO',1,4,'111307H5S',72160000,'');
INSERT INTO ATTENUATOR VALUES('2-84',1,'',294,72,160,0,'SR 13','NO
REC',14.24,'',1,'NO',1,4,'111307H5S',72160000,'');
INSERT INTO ATTENUATOR VALUES('2-85',1,'',294,72,160,0,'SR 13','NO
REC',14.27,'',1,'NO',1,4,'111307H5S',72160000,'');
INSERT INTO ATTENUATOR VALUES('2-86',1,'',294,72,160,0,'SR 13','NO
REC',14.278,'',1,'NO',1,1,'111307H5S',72160000,'');
INSERT INTO ATTENUATOR VALUES('2-87',1,'',294,72,190,0,'SR 212','US
90',3.66,'',4,'NO',1,4,'00202403704140021E',72190000,'Model number was
0240370414E');
INSERT INTO ATTENUATOR VALUES('2-88',1,'',294,72,270,0,'SR 8','I
10',21.021,'',3,'NO',1,1,'200200SF4',72270000,'');
INSERT INTO ATTENUATOR VALUES('2-89',1,'',294,72,270,0,'SR 8','I
10',21.021,'',1,'NO',1,1,'406500W-2',72270000,'');
INSERT INTO ATTENUATOR VALUES('2-90',1,'',294,72,280,0,'SR 9','I
95',10.194,'',3,'NO',1,1,'200200SF5',72280000,'');
INSERT INTO ATTENUATOR VALUES('2-91',1,'',294,72,280,0,'SR 9','I
95',11.635,'',4,'NO',1,1,'111307H6S',72280000,'');
INSERT INTO ATTENUATOR VALUES('2-92',1,'',294,72,280,0,'SR 9','I
95',11.635,'',2,'NO',1,1,'111307H6S',72280000,'');
INSERT INTO ATTENUATOR VALUES('2-93',1,'',294,72,292,0,'SR 202','NO
REC',0.71,'',2,'NO',1,4,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-94',1,'',294,72,292,0,'SR 202','NO
REC',0.72,'',2,'NO',1,4,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-95',1,'',294,72,292,0,'SR 202','NO
REC',0.73,'',4,'NO',1,4,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-96',1,'',294,72,292,0,'SR 202','NO
REC',0.74,'',4,'NO',1,4,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-97',1,'',294,72,292,0,'SR 202','NO
REC',5.22,'',3,'NO',1,1,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-98',1,'',294,72,292,0,'SR 202','NO
REC',5.22,'',1,'NO',1,1,'200200SF6',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-99',1,'',294,72,292,0,'SR 202','NO
REC',6.17,'',2,'NO',1,1,'200200SF8',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-100',1,'',294,72,292,0,'SR 202','NO
REC',6.2,'',4,'NO',1,1,'200200SF8',72292000,'');
INSERT INTO ATTENUATOR VALUES('2-101',1,'',294,74,30,0,'SR 15','US
1',0.001,'',3,'NO',1,1,'200200SF5',74030000,'');
INSERT INTO ATTENUATOR VALUES('2-102',1,'',294,74,30,0,'SR 15','US
1',19.56,'',1,'NO',1,5,'200200SF5',74030000,'');

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INSERT INTO ATTENUATOR VALUES('2-103',1,'',294,74,30,0,'SR 15','US
1',20,'',3,'NO',1,5,'200200SF5',74030000,'');
INSERT INTO ATTENUATOR VALUES('2-15',1,'',296,30,10,0,'SR 55','US
19',26.654,'',3,'NO',1,1,'5943260-0000',30010000,'Model number does NOT make
sense.');
```

```

INSERT INTO ATTENUATOR VALUES('2-16',1,'',296,30,10,0,'SR 55','US
19',26.736,'',1,'NO',1,1,'5943260-0000',30010000,'Model number does NOT make
sense.');
```

```

INSERT INTO ATTENUATOR VALUES('2-104',1,'',297,76,10,0,'SR 15','US
17',23.913,'',3,'NO',1,3,'27-31-051',76010000,'Model changed from Energite to Hi-
Dro Cluster.');
```

```

INSERT INTO ATTENUATOR VALUES('2-105',1,'',297,76,10,0,'SR 15','US
17',27.91,'',1,'NO',1,1,'200200SF3',76010000,'Model number varied from FDOT
inventory.');
```

```

INSERT INTO ATTENUATOR VALUES('2-106',1,'',297,78,10,0,'SR 5','US
1',11.89,'',1,'NO',1,1,'200200SF4',78010000,'Model number varied from FDOT
inventory.');
```

```

INSERT INTO ATTENUATOR VALUES('2-107',1,'',297,78,70,0,'SR 13','NO
REC',17.294,'',3,'NO',1,1,'200200DF3',78070000,'Model number varied from FDOT
inventory.');
```

```

INSERT INTO ATTENUATOR VALUES('3-1',1,'',390,57,2,0,'SR 8','I
10',0.141,'',1,'NO',1,1,'200200SF3',57002000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-2',1,'',390,57,2,0,'SR 8','I
10',0.186,'',3,'NO',1,1,'200200SF3',57002000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-3',1,'',390,57,30,0,'SR 30','US
98',16.624,'',2,'NO',1,1,'200200SF6',57030000,'');
```

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INSERT INTO ATTENUATOR VALUES('3-4',1,'',390,57,40,0,'SR 20','NO
REC',1.798,'',3,'NO',1,1,'200200SF4',57040000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-5',1,'',390,57,40,0,'SR 20','NO
REC',1.998,'',1,'NO',1,1,'200200SF4',57040000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-6',1,'',390,57,40,0,'SR 20','NO
REC',3.421,'',1,'NO',1,1,'200200SF4',57040000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-7',1,'',390,57,40,0,'SR 20','NO
REC',3.696,'',3,'NO',1,1,'200200SF4',57040000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-8',1,'',390,57,40,0,'SR 397','NO
REC',0.985,'',3,'NO',1,3,'200200SF4',57040000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-9',1,'',390,57,50,0,'SR 85','NO
REC',13.686,'',3,'NO',1,1,'200200SF6',57050000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-10',1,'',390,57,50,0,'SR 85','NO
REC',15.55,'',1,'NO',1,1,'200200SF3',57050000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-11',1,'',390,57,50,0,'SR 85','NO
REC',15.69,'',3,'NO',1,1,'200200SF3',57050000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-12',1,'',390,57,110,0,'SR 189','NO
REC',3.083,'',1,'NO',1,1,'200200SF4',57110000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-13',1,'',390,57,110,0,'SR 189','NO
REC',3.111,'',3,'NO',1,1,'200200SF4',57110000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-14',1,'',390,57,518,0,'SR 293','NO
REC',4.73,'',1,'NO',1,5,'200200SF3',57518000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-15',1,'',390,57,518,0,'SR 293','NO
REC',4.73,'',1,'NO',1,4,'200200SF3',57518000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-16',1,'',390,57,518,0,'SR 293','NO
REC',4.75,'',3,'NO',1,5,'200200SF3',57518000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-17',1,'',390,57,518,0,'SR 293','NO
REC',4.75,'',3,'NO',1,4,'200200SF3',57518000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-18',1,'',390,60,50,0,'SR 83','US
331',13.9,'',1,'NO',1,1,'200200SF3',60050000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-19',1,'',390,60,50,0,'SR 83','US
331',14.1,'',3,'NO',1,1,'200200SF3',60050000,'');
```

```

INSERT INTO ATTENUATOR VALUES('3-20',1,'',390,60,90,0,'SR 285','NO
REC',6.36,'',1,'NO',1,1,'200200SF3',60090000,'');
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INSERT INTO ATTENUATOR VALUES('3-21',1,'',390,60,90,0,'SR 285','NO
REC',6.53,'',3,'NO',1,1,'200200SF3',60090000,'');
INSERT INTO ATTENUATOR VALUES('3-22',1,'',391,46,10,0,'SR 30','US
98',0.845,'',4,'NO',1,1,'200200SF9',46010000,'');
INSERT INTO ATTENUATOR VALUES('3-23',1,'',391,46,10,0,'SR 30','US
98',16.013,'',2,'NO',1,1,'206206SF3',46010000,'');
INSERT INTO ATTENUATOR VALUES('3-24',1,'',391,46,10,0,'SR 30','US
98',16.025,'',4,'NO',1,1,'206206SF3',46010000,'');
INSERT INTO ATTENUATOR VALUES('3-25',1,'',391,46,10,0,'SR 30','US
98',16.361,'',2,'NO',1,1,'200200SF5',46010000,'');
INSERT INTO ATTENUATOR VALUES('3-26',1,'',392,50,50,0,'SR 12','NO
REC',8.902,'',2,'NO',1,1,'200200SF3',50050000,'');
INSERT INTO ATTENUATOR VALUES('3-27',1,'',392,50,50,0,'SR 12','NO
REC',8.943,'',4,'NO',1,1,'200200SF3',50050000,'');
INSERT INTO ATTENUATOR VALUES('3-28',1,'',392,54,1,0,'SR 8','I
10',17.05,'',3,'NO',1,1,'200200SF3',54001000,'');
INSERT INTO ATTENUATOR VALUES('3-29',1,'',392,54,1,0,'SR 8','I
10',17.053,'',1,'NO',1,1,'200200SF3',54001000,'');
INSERT INTO ATTENUATOR VALUES('3-30',1,'',392,54,20,0,'SR 20','US
19',0.65,'',3,'NO',1,1,'206206SF6',54020000,'');
INSERT INTO ATTENUATOR VALUES('3-31',1,'',392,54,20,0,'SR 20','US
19',0.8,'',3,'NO',1,1,'206206SF6',54020000,'');
INSERT INTO ATTENUATOR VALUES('3-32',1,'',392,54,30,0,'SR 57','US
19',4.74,'',1,'NO',1,1,'200200SF5',54030000,'');
INSERT INTO ATTENUATOR VALUES('3-33',1,'',392,54,30,0,'SR 57','US
19',4.765,'',3,'NO',1,1,'200200SF5',54030000,'');
INSERT INTO ATTENUATOR VALUES('3-34',1,'',392,54,60,0,'SR 59','NO
REC',9.65,'',1,'NO',1,1,'200200SF3',54060000,'');
INSERT INTO ATTENUATOR VALUES('3-35',1,'',392,54,60,0,'SR 59','NO
REC',9.675,'',3,'NO',1,1,'200200SF3',54060000,'');
INSERT INTO ATTENUATOR VALUES('3-36',1,'',392,55,2,0,'SR 263','US
319',11.35,'',1,'NO',1,1,'200200SF3',55002000,'');
INSERT INTO ATTENUATOR VALUES('3-37',1,'',392,55,2,0,'SR 263','US
319',11.361,'',3,'NO',1,1,'200200SF3',55002000,'');
INSERT INTO ATTENUATOR VALUES('3-38',1,'',392,55,20,0,'SR 10','US
90',7.869,'',2,'NO',1,1,'200200SF5T',55020000,'');
INSERT INTO ATTENUATOR VALUES('3-39',1,'',392,55,20,0,'SR 10','US
90',7.941,'',4,'NO',1,1,'200200SF5T',55020000,'');
INSERT INTO ATTENUATOR VALUES('3-40',1,'',392,55,60,0,'SR 10','US
90',4.465,'',2,'NO',1,1,'209711H5S',55060000,'');
INSERT INTO ATTENUATOR VALUES('3-41',1,'',392,55,60,0,'SR 10','US
90',4.495,'',4,'NO',1,1,'209711H5S',55060000,'');
INSERT INTO ATTENUATOR VALUES('3-42',1,'',392,55,80,0,'SR 20','US
27',10.916,'',3,'NO',1,1,'206206NF6C',55080000,'');
INSERT INTO ATTENUATOR VALUES('3-43',1,'',392,55,80,0,'SR 20','US
27',11.053,'',1,'NO',1,1,'206206NF6C',55080000,'');
INSERT INTO ATTENUATOR VALUES('3-44',1,'',393,52,30,0,'SR 79','NO
REC',1.206,'',1,'NO',1,1,'206206SF3',52030000,'');
INSERT INTO ATTENUATOR VALUES('3-45',1,'',393,52,30,0,'SR 79','NO
REC',1.287,'',3,'NO',1,1,'206206SF3',52030000,'');
INSERT INTO ATTENUATOR VALUES('3-46',1,'',393,52,40,0,'SR 81','NO
REC',0.702,'',1,'NO',1,1,'206206SF3',52040000,'');
INSERT INTO ATTENUATOR VALUES('3-47',1,'',393,52,40,0,'SR 81','NO
REC',0.766,'',3,'NO',1,1,'206206SF3',52040000,'');
INSERT INTO ATTENUATOR VALUES('3-48',1,'',393,53,2,0,'SR 8','I
10',3.15,'',2,'NO',1,4,'2041000H12N',53002000,'');
INSERT INTO ATTENUATOR VALUES('3-49',1,'',393,53,40,0,'SR 71','NO
REC',8.243,'',1,'NO',1,1,'206206SF3',53040000,'');
INSERT INTO ATTENUATOR VALUES('3-50',1,'',393,53,40,0,'SR 71','NO
REC',8.267,'',3,'NO',1,1,'206206SF3',53040000,'');

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INSERT INTO ATTENUATOR VALUES('3-51',1,'',393,53,130,0,'SR 69','NO
REC',3.716,'',1,'NO',1,1,'206206SF3',53130000,'');
INSERT INTO ATTENUATOR VALUES('3-52',1,'',393,53,130,0,'SR 69','NO
REC',3.782,'',3,'NO',1,1,'206206SF3',53130000,'');
INSERT INTO ATTENUATOR VALUES('3-53',1,'',393,61,1,0,'NO REC','NO
REC',0.243,'',1,'NO',1,1,'206206SF3',61001000,'');
INSERT INTO ATTENUATOR VALUES('3-54',1,'',393,61,1,0,'NO REC','NO
REC',0.286,'',3,'NO',1,1,'206206SF3',61001000,'');
INSERT INTO ATTENUATOR VALUES('3-55',1,'',393,61,80,0,'SR 77','NO
REC',23.772,'',1,'NO',1,1,'206206SF4',61080000,'');
INSERT INTO ATTENUATOR VALUES('3-56',1,'',393,61,80,0,'SR 77','NO
REC',23.827,'',3,'NO',1,1,'206206SF4',61080000,'');
INSERT INTO ATTENUATOR VALUES('3-57',1,'',394,58,5,0,'SR 281','NO
REC',0.125,'',1,'NO',1,1,'200200SF3',58005000,'');
INSERT INTO ATTENUATOR VALUES('3-58',1,'',394,58,5,0,'SR 281','NO
REC',0.166,'',3,'NO',1,1,'200200SF3',58005000,'');
INSERT INTO ATTENUATOR VALUES('3-59',1,'',395,48,10,0,'SR 10','US
90',6.991,'',2,'NO',1,1,'200200SF7',48010000,'');
INSERT INTO ATTENUATOR VALUES('3-60',1,'',395,48,10,0,'SR 10','US
90',7.072,'',4,'NO',1,1,'200200SF7',48010000,'');
INSERT INTO ATTENUATOR VALUES('3-61',1,'',395,48,60,0,'SR 95','US
29',13.331,'',1,'NO',1,1,'200200SF10',48060000,'');
INSERT INTO ATTENUATOR VALUES('3-62',1,'',395,48,60,0,'SR 95','US
29',13.442,'',3,'NO',1,1,'200200SF10',48060000,'');
INSERT INTO ATTENUATOR VALUES('3-63',1,'',395,48,80,0,'SR 30','USB
98',1.421,'',2,'NO',1,1,'200200SF5',48080000,'');
INSERT INTO ATTENUATOR VALUES('3-64',1,'',395,48,190,0,'SR 297','NO
REC',3.378,'',1,'NO',1,1,'200200SF3',48190000,'');
INSERT INTO ATTENUATOR VALUES('3-65',1,'',395,48,190,0,'SR 297','NO
REC',3.438,'',3,'NO',1,1,'200200SF3',48190000,'');
INSERT INTO ATTENUATOR VALUES('3-66',1,'',395,48,260,0,'SR 8','I
10',7.175,'',2,'NO',1,4,'300300SF9',48260000,'');
INSERT INTO ATTENUATOR VALUES('3-67',1,'',395,48,260,0,'SR 8','I
10',10.086,'',2,'NO',1,4,'300300SF9',48260000,'');
INSERT INTO ATTENUATOR VALUES('3-68',1,'',395,48,260,0,'SR 8','I
10',10.151,'',4,'NO',1,4,'300300SF9',48260000,'');
INSERT INTO ATTENUATOR VALUES('3-69',1,'',395,48,260,0,'SR 8','I
10',10.276,'',2,'NO',1,4,'300300SF9',48260000,'');
INSERT INTO ATTENUATOR VALUES('3-70',1,'',395,48,270,0,'SR 8A','I
110',0.071,'',1,'NO',1,4,'G209711H6N',48270000,'');
INSERT INTO ATTENUATOR VALUES('3-71',1,'',395,48,270,0,'SR 8A','I
110',0.87,'',3,'NO',1,4,'204608F12N',48270000,'');
INSERT INTO ATTENUATOR VALUES('3-72',1,'',395,48,270,0,'SR 8A','I
110',0.96,'',3,'NO',1,4,'204608F12N',48270000,'');
INSERT INTO ATTENUATOR VALUES('4-1',1,'',490,88,3,0,'SR 656','NO
REC',0.715,'',2,'NO',1,1,'200200SF5',88003000,'');
INSERT INTO ATTENUATOR VALUES('4-2',1,'',490,88,3,0,'SR 656','NO
REC',1.6,'',4,'NO',1,1,'200200SF5',88003000,'');
INSERT INTO ATTENUATOR VALUES('4-3',1,'',490,88,10,0,'SR 5','US
1',0.012,'',1,'NO',1,1,'01201401703140421',88010000,'Model number was
1201401703140420');
INSERT INTO ATTENUATOR VALUES('4-4',1,'',490,88,10,0,'SR 5','US
1',0.189,'',3,'NO',1,1,'01201401703140421',88010000,'Model number was
1201401703140420 ');
INSERT INTO ATTENUATOR VALUES('4-5',1,'',490,88,10,0,'SR 5','US
1',3.53,'',3,'NO',1,1,'00202401704140221',88010000,'Model number was
202401704140221 ');
INSERT INTO ATTENUATOR VALUES('4-6',1,'',490,88,10,0,'SR 5','US
1',10.158,'',1,'NO',1,1,'01201405706140021',88010000,'Model number was
1201405706140020 ');

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INSERT INTO ATTENUATOR VALUES('4-7',1,'',490,88,10,0,'SR 5','US
1',10.181,'',3,'NO',1,1,'01201405706140021',88010000,'Model number was
1201405706140020 ');
INSERT INTO ATTENUATOR VALUES('4-8',1,'',490,89,90,0,'SR 714','NO
REC',14.136,'',2,'NO',1,1,'200200SF4',89090000,'Spaces removed from model
number.');
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INSERT INTO ATTENUATOR VALUES('4-9',1,'',490,94,1,0,'SR 9','I
95',4.298,'',2,'NO',1,1,'00200403704140221',94001000,'Model number was
200403704140221 ');
INSERT INTO ATTENUATOR VALUES('4-10',1,'',490,94,1,0,'SR 9','I
95',4.299,'',4,'NO',1,1,'00200403704140221',94001000,'Model number was
200403704140221 ');
INSERT INTO ATTENUATOR VALUES('4-11',1,'',490,94,1,0,'SR 9','I
95',12.143,'',2,'NO',1,1,'00200403704140221',94001000,'Model number was
200403704140221 ');
INSERT INTO ATTENUATOR VALUES('4-12',1,'',490,94,1,0,'SR 9','I
95',12.144,'',4,'NO',1,1,'00200403704140221',94001000,'Model number was
200403704140221 ');
INSERT INTO ATTENUATOR VALUES('4-13',1,'',490,94,100,0,'SR 707','NO
REC',0.228,'',1,'NO',1,4,'00200401704140221',94100000,'Model number was
200401704140221 ');
INSERT INTO ATTENUATOR VALUES('4-14',1,'',491,86,6,0,'SR 842','NO
REC',2.22,'',2,'NO',1,1,'200200SF6',86006000,'');
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INSERT INTO ATTENUATOR VALUES('4-15',1,'',491,86,6,0,'SR 842','NO
REC',2.221,'',4,'NO',1,1,'200200SF6',86006000,'');
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INSERT INTO ATTENUATOR VALUES('4-16',1,'',491,86,10,0,'SR 5','US
1',9.78,'',1,'NO',1,4,'209711H5S',86010000,'');
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INSERT INTO ATTENUATOR VALUES('4-17',1,'',491,86,10,0,'SR 5','US
1',10.13,'',3,'NO',1,4,'200200SF4',86010000,'');
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INSERT INTO ATTENUATOR VALUES('4-18',1,'',491,86,10,0,'SR 5','US
1',10.29,'',1,'NO',1,1,'200200SF4',86010000,'');
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INSERT INTO ATTENUATOR VALUES('4-19',1,'',491,86,10,0,'SR 5','US
1',10.3,'',3,'NO',1,1,'00200400701140021',86010000,'Model number was
200400701140021 ');
INSERT INTO ATTENUATOR VALUES('4-20',1,'',491,86,40,0,'SR 820','NO
REC',13.657,'',2,'NO',1,1,'400600W',86040000,'');
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INSERT INTO ATTENUATOR VALUES('4-21',1,'',491,86,40,0,'SR 820','NO
REC',13.74,'',4,'NO',1,1,'400600W',86040000,'Spaces removed from model number.');
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INSERT INTO ATTENUATOR VALUES('4-22',1,'',491,86,40,0,'SR 820','NO
REC',19.883,'',2,'NO',1,4,'G2091108N6S',86040000,'');
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INSERT INTO ATTENUATOR VALUES('4-23',1,'',491,86,40,0,'SR 820','NO
REC',19.884,'',2,'NO',1,1,'300300SF4',86040000,'');
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INSERT INTO ATTENUATOR VALUES('4-24',1,'',491,86,70,0,'SR 9','I
95',0.58,'',1,'NO',1,4,'200200SF6',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-25',1,'',491,86,70,0,'SR 9','I
95',0.77,'',4,'NO',1,1,'G111311S4N',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-26',1,'',491,86,70,0,'SR 9','I
95',0.775,'',2,'NO',1,1,'G111311S4N',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-27',1,'',491,86,70,0,'SR 9','I
95',0.98,'',3,'NO',1,4,'200200SF6',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-28',1,'',491,86,70,0,'SR 9','I
95',1.35,'',1,'NO',1,4,'200200SF6',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-29',1,'',491,86,70,0,'SR 9','I
95',1.52,'',4,'NO',1,1,'G111311H4S',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-30',1,'',491,86,70,0,'SR 9','I
95',1.525,'',2,'NO',1,1,'G111311H4S',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-31',1,'',491,86,70,0,'SR 9','I
95',1.74,'',3,'NO',1,4,'200200SF6',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-32',1,'',491,86,70,0,'SR 9','I
95',2.32,'',1,'NO',1,4,'200200SF6',86070000,'');
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INSERT INTO ATTENUATOR VALUES('4-33',1,'',491,86,70,0,'SR 9','I
95',2.545,'',4,'NO',1,1,'300300SF-3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-34',1,'',491,86,70,0,'SR 9','I
95',2.55,'',2,'NO',1,1,'300300SF-3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-35',1,'',491,86,70,0,'SR 9','I
95',2.79,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-36',1,'',491,86,70,0,'SR 9','I
95',4.12,'',2,'NO',1,1,'206206SF3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-37',1,'',491,86,70,0,'SR 9','I
95',4.125,'',4,'NO',1,1,'206206SF3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-38',1,'',491,86,70,0,'SR 9','I
95',4.34,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-39',1,'',491,86,70,0,'SR 9','I
95',4.95,'',1,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-40',1,'',491,86,70,0,'SR 9','I
95',5.39,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-41',1,'',491,86,70,0,'SR 9','I
95',6.156,'',2,'NO',1,1,'209509H5S',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-42',1,'',491,86,70,0,'SR 9','I
95',6.175,'',4,'NO',1,1,'209509H5S',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-43',1,'',491,86,70,0,'SR 9','I
95',6.745,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-44',1,'',491,86,70,0,'SR 9','I
95',8.25,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-45',1,'',491,86,70,0,'SR 9','I
95',8.26,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-46',1,'',491,86,70,0,'SR 9','I
95',8.9,'',1,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-47',1,'',491,86,70,0,'SR 9','I
95',9.15,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-48',1,'',491,86,70,0,'SR 9','I
95',9.224,'',4,'NO',1,4,'200200SF3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-49',1,'',491,86,70,0,'SR 9','I
95',9.225,'',4,'NO',1,4,'200200SF3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-50',1,'',491,86,70,0,'SR 9','I
95',9.35,'',1,'NO',1,4,'200200SF9',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-51',1,'',491,86,70,0,'SR 9','I
95',9.43,'',3,'NO',1,4,'200200SF6',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-52',1,'',491,86,70,0,'SR 9','I
95',9.59,'',1,'NO',1,5,'200200SF9',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-53',1,'',491,86,70,0,'SR 9','I
95',10.645,'',3,'NO',1,4,'200200SF9',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-54',1,'',491,86,70,0,'SR 9','I
95',10.7,'',3,'NO',1,5,'200200SF9',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-55',1,'',491,86,70,0,'SR 9','I
95',13.439,'',2,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-56',1,'',491,86,70,0,'SR 9','I
95',13.442,'',4,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-57',1,'',491,86,70,0,'SR 9','I
95',14.219,'',1,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-58',1,'',491,86,70,0,'SR 91','I
95',14.34,'',3,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-59',1,'',491,86,70,0,'SR 9','I
95',15.08,'',2,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-60',1,'',491,86,70,0,'SR 9','I
95',15.084,'',4,'NO',1,1,'206206SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-61',1,'',491,86,70,0,'SR 9','I
95',16.285,'',1,'NO',1,4,'00200400700140521',86070000,'Model number was
200400700140521 ');
INSERT INTO ATTENUATOR VALUES('4-62',1,'',491,86,70,0,'SR 9','I
95',16.29,'',2,'NO',1,1,'200200SF3',86070000,'');

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INSERT INTO ATTENUATOR VALUES('4-63',1,'',491,86,70,0,'SR 9','I
95',16.295,'',4,'NO',1,1,'200200SF3',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-64',1,'',491,86,70,0,'SR 9','I
95',18.37,'',1,'NO',1,1,'200200SF4',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-65',1,'',491,86,70,0,'SR 9','I
95',18.375,'',4,'NO',1,1,'200200SF4',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-66',1,'',491,86,70,0,'SR 9','I
95',20.42,'',2,'NO',1,1,'200200SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-67',1,'',491,86,70,0,'SR 9','I
95',20.425,'',4,'NO',1,1,'200200SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-68',1,'',491,86,70,0,'SR9','I
95',21.575,'',2,'NO',1,1,'200200SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-69',1,'',491,86,70,0,'SR9','I
95',21.579,'',4,'NO',1,1,'200200SF5',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-70',1,'',491,86,70,0,'SR9','I
95',24.619,'',2,'NO',1,1,'200200SF4',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-71',1,'',491,86,70,0,'SR9','I
95',24.621,'',4,'NO',1,1,'200200SF4',86070000,'');
INSERT INTO ATTENUATOR VALUES('4-72',1,'',491,86,75,0,'SR 93','I
75',12,'',3,'NO',1,4,'G204711S10S',86075000,'');
INSERT INTO ATTENUATOR VALUES('4-73',1,'',491,86,80,0,'SR 84','NO
REC',16.81,'',4,'NO',1,1,'200200SF5',86080000,'');
INSERT INTO ATTENUATOR VALUES('4-74',1,'',491,86,80,0,'SR 84','NO
REC',17.74,'',4,'NO',1,4,'200200SF6',86080000,'');
INSERT INTO ATTENUATOR VALUES('4-75',1,'',491,86,95,0,'SR 862','I
595',2.525,'',4,'NO',1,4,'111400H12S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-76',1,'',491,86,95,0,'SR 862','I
595',2.7,'',2,'NO',1,4,'111400H12S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-77',1,'',491,86,95,0,'SR 862','I
595',3.5,'',4,'NO',1,4,'111400H12S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-78',1,'',491,86,95,0,'SR 862','I
595',3.725,'',2,'NO',1,4,'111400H12S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-79',1,'',491,86,95,0,'SR 862','I
595',4.625,'',4,'NO',1,4,'111400H12S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-80',1,'',491,86,95,0,'SR 862','I
595',9.82,'',2,'NO',1,4,'209800H7S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-81',1,'',491,86,95,0,'SR 862','I
595',10.211,'',2,'NO',1,4,'204711H10S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-82',1,'',491,86,95,0,'SR 862','I
595',10.225,'',2,'NO',1,4,'204711H10S',86095000,'');
INSERT INTO ATTENUATOR VALUES('4-83',1,'',491,86,170,0,'SR 811','NO
REC',10.03,'',2,'NO',1,1,'200200SF3',86170000,'');
INSERT INTO ATTENUATOR VALUES('4-84',1,'',491,86,170,0,'SR 811','NO
REC',10.04,'',4,'NO',1,1,'200200SF3',86170000,'');
INSERT INTO ATTENUATOR VALUES('4-85',1,'',496,93,1,0,'SR 786','NO
REC',6.03,'',2,'NO',1,1,'300600W',93001000,'');
INSERT INTO ATTENUATOR VALUES('4-86',1,'',496,93,16,0,'SR 882','NO
REC',8.284,'',4,'NO',1,2,'200200SF4',93016000,'');
INSERT INTO ATTENUATOR VALUES('4-87',1,'',496,93,16,0,'SR 882','NO
REC',8.327,'',2,'NO',1,2,'200200SF4',93016000,'');
INSERT INTO ATTENUATOR VALUES('4-88',1,'',496,93,60,0,'SR A1A','NO
REC',28.732,'',1,'NO',1,4,'00203404704140021',93060000,'Model number was
203404704140021 ');
INSERT INTO ATTENUATOR VALUES('4-89',1,'',496,93,190,0,'SR 706','NO
REC',13.959,'',2,'NO',1,4,'209509S5S',93190000,'');
INSERT INTO ATTENUATOR VALUES('4-90',1,'',496,93,220,0,'SR
9','I95',1.525,'',4,'NO',1,1,'200200SF5',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-91',1,'',496,93,220,0,'SR
9','I95',5.287,'',2,'NO',1,1,'200200SF6',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-92',1,'',496,93,220,0,'SR
9','I95',5.288,'',4,'NO',1,1,'200200SF6',93220000,'');

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INSERT INTO ATTENUATOR VALUES('4-93',1,'',496,93,220,0,'SR
9','I95',7.261,'',2,'NO',1,4,'W40 59 27',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-94',1,'',496,93,220,0,'SR
9','I95',7.361,'',3,'NO',1,4,'200200SF6',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-95',1,'',496,93,220,0,'SR
9','I95',16.108,'',1,'NO',1,2,'200200SF9',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-96',1,'',496,93,220,0,'SR
9','I95',16.158,'',1,'NO',1,4,'200200SF9',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-97',1,'',496,93,220,0,'SR
9','I95',16.417,'',3,'NO',1,4,'200200SF9',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-98',1,'',496,93,220,0,'SR
9','I95',16.467,'',3,'NO',1,2,'200200SF9',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-99',1,'',496,93,220,0,'SR
9','I95',20.526,'',3,'NO',1,4,'204700H15NB',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-100',1,'',496,93,220,0,'SR
9','I95',28.484,'',2,'NO',1,1,'200200SF4',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-101',1,'',496,93,220,0,'SR
9','I95',28.484,'',4,'NO',1,1,'200200F4',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-102',1,'',496,93,220,0,'SR
9','I95',31.247,'',4,'NO',1,1,'200200SF2',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-103',1,'',496,93,220,0,'SR
9','I95',31.247,'',2,'NO',1,1,'200200S2',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-104',1,'',496,93,220,0,'SR
9','I95',33.001,'',4,'NO',1,1,'308308SF6',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-105',1,'',496,93,220,0,'SR
9','I95',33.001,'',2,'NO',1,1,'308308SF6',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-106',1,'',496,93,220,0,'SR
9','I95',34.787,'',4,'NO',1,1,'200200SF4',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-107',1,'',496,93,220,0,'SR
9','I95',34.787,'',2,'NO',1,1,'200200SF4',93220000,'');
INSERT INTO ATTENUATOR VALUES('4-108',1,'',94,10,0,'SR
5','',20.823,'CONSTRUCTION ZONE',3,'YES',2,1,'UNKNOWN--SAND BARREL',94010000,'');
INSERT INTO ATTENUATOR VALUES('5-1',1,'',590,70,4,0,'SR 404','NO
REC',0.802,'',2,'NO',1,1,'200200SF4',70004000,'');
INSERT INTO ATTENUATOR VALUES('5-2',1,'',590,70,4,0,'SR 404','NO
REC',1.883,'',4,'NO',1,1,'200200SF4',70004000,'');
INSERT INTO ATTENUATOR VALUES('5-3',1,'',590,70,4,0,'SR 404','NO
REC',2.045,'',2,'NO',1,1,'200200SF5',70004000,'');
INSERT INTO ATTENUATOR VALUES('5-4',1,'',590,70,4,0,'SR 404','NO
REC',2.17,'',4,'NO',1,1,'200200SF5',70004000,'');
INSERT INTO ATTENUATOR VALUES('5-5',1,'',590,70,4,0,'SR 404','NO
REC',2.302,'',2,'NO',1,1,'200200SF5',70004000,'');
INSERT INTO ATTENUATOR VALUES('5-6',1,'',590,70,7,0,'SR 528','NO
REC',5.516,'',2,'NO',1,1,'200200SF9',70007000,'');
INSERT INTO ATTENUATOR VALUES('5-7',1,'',590,70,7,0,'SR 528','NO
REC',5.645,'',4,'NO',1,1,'200200SF9',70007000,'');
INSERT INTO ATTENUATOR VALUES('5-8',1,'',590,70,7,0,'SR 528','NO
REC',5.885,'',2,'NO',1,1,'200200SF9',70007000,'');
INSERT INTO ATTENUATOR VALUES('5-9',1,'',590,70,7,0,'SR 528','NO
REC',6.033,'',4,'NO',1,1,'200200SF9',70007000,'');
INSERT INTO ATTENUATOR VALUES('5-10',1,'',590,70,10,0,'SR 5','US
1',8.561,'',1,'NO',1,1,'200200SF6',70010000,'');
INSERT INTO ATTENUATOR VALUES('5-11',1,'',590,70,10,0,'SR 5','US
1',8.652,'',3,'NO',1,1,'200200SF6',70010000,'');
INSERT INTO ATTENUATOR VALUES('5-12',1,'',590,70,20,0,'SR 5','US
1',9.645,'',1,'NO',1,1,'02203404702140221',70020000,'');
INSERT INTO ATTENUATOR VALUES('5-13',1,'',590,70,20,0,'SR 5','US
1',9.688,'',3,'NO',1,1,'02203404702140221',70020000,'');
INSERT INTO ATTENUATOR VALUES('5-14',1,'',590,70,20,0,'SR 5','US
1',24.365,'',1,'NO',1,1,'200200SF6',70020000,'');

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INSERT INTO ATTENUATOR VALUES('5-15',1,'',590,70,20,0,'SR 5','US
1',24.406,'',3,'NO',1,1,'200200SF6',70020000,'');
INSERT INTO ATTENUATOR VALUES('5-16',1,'',590,70,20,0,'SR 5','US
1',27.295,'',1,'NO',1,1,'200200SF5',70020000,'');
INSERT INTO ATTENUATOR VALUES('5-17',1,'',590,70,20,0,'SR 5','US
1',27.312,'',3,'NO',1,1,'200200SF5',70020000,'');
INSERT INTO ATTENUATOR VALUES('5-18',1,'',590,70,60,0,'SR A1A','NO
REC',28.8,'',1,'NO',1,3,'200200SF4',70060000,'');
INSERT INTO ATTENUATOR VALUES('5-19',1,'',590,70,100,0,'SR 520','NO
REC',4.872,'',2,'NO',1,1,'200200SF4',70100000,'');
INSERT INTO ATTENUATOR VALUES('5-20',1,'',590,70,100,0,'SR 520','NO
REC',4.892,'',4,'NO',1,1,'200200SF4',70100000,'');
INSERT INTO ATTENUATOR VALUES('5-21',1,'',590,70,100,0,'SR 520','NO
REC',10.144,'',4,'NO',1,1,'200200SF4',70100000,'');
INSERT INTO ATTENUATOR VALUES('5-22',1,'',590,70,100,0,'SR 520','NO
REC',13.715,'',2,'NO',1,1,'200200SF6',70100000,'');
INSERT INTO ATTENUATOR VALUES('5-23',1,'',590,70,100,0,'SR 520','NO
REC',14.106,'',4,'NO',1,1,'200200SF6',70100000,'');
INSERT INTO ATTENUATOR VALUES('5-24',1,'',590,70,110,0,'SR 50','NO
REC',5.116,'',2,'NO',1,1,'300300SF3',70110000,'');
INSERT INTO ATTENUATOR VALUES('5-25',1,'',590,70,110,0,'SR 50','NO
REC',5.15,'',4,'NO',1,1,'300300SF3',70110000,'');
INSERT INTO ATTENUATOR VALUES('5-26',1,'',590,70,225,0,'SR 9','I
95',3.633,'',1,'NO',1,4,'200200SF9',70225000,'');
INSERT INTO ATTENUATOR VALUES('5-27',1,'',590,70,225,0,'SR 9','I
95',3.932,'',1,'NO',1,1,'200200SF9',70225000,'');
INSERT INTO ATTENUATOR VALUES('5-28',1,'',590,70,225,0,'SR 9','I
95',3.934,'',3,'NO',1,1,'200200SF9',70225000,'');
INSERT INTO ATTENUATOR VALUES('5-29',1,'',590,70,225,0,'SR 9','I
95',4.333,'',3,'NO',1,5,'200200SF9',70225000,'');
INSERT INTO ATTENUATOR VALUES('5-30',1,'',590,75,5,0,'SR 528','NO
REC',0.088,'',4,'NO',1,1,'206206SF8',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-31',1,'',590,75,5,0,'SR 528','NO
REC',1.235,'',2,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-32',1,'',590,75,5,0,'SR 528','NO
REC',1.411,'',4,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-33',1,'',590,75,5,0,'SR 528','NO
REC',1.703,'',2,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-34',1,'',590,75,5,0,'SR 528','NO
REC',1.852,'',4,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-35',1,'',590,75,5,0,'SR 528','NO
REC',2.716,'',2,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-36',1,'',590,75,5,0,'SR 528','NO
REC',2.834,'',4,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-37',1,'',590,75,5,0,'SR 528','NO
REC',4.6,'',2,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-38',1,'',590,75,5,0,'SR 528','NO
REC',4.735,'',4,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-39',1,'',590,75,5,0,'SR 528','NO
REC',4.919,'',2,'NO',1,1,'200200SF9',75005000,'');
INSERT INTO ATTENUATOR VALUES('5-40',1,'',590,92,30,0,'SR 500','US
192',5.407,'',4,'NO',1,1,'200200SF8',92030000,'');
INSERT INTO ATTENUATOR VALUES('5-41',1,'',591,79,10,0,'SR 5','US
1',22.45,'',1,'NO',1,1,'200200SF6',79010000,'');
INSERT INTO ATTENUATOR VALUES('5-42',1,'',591,79,10,0,'SR 5','US
1',23.65,'',3,'NO',1,1,'200200SF6',79010000,'');
INSERT INTO ATTENUATOR VALUES('5-43',1,'',591,79,10,0,'SR 5','US
1',24.65,'',1,'NO',1,1,'200200SF6',79010000,'');
INSERT INTO ATTENUATOR VALUES('5-44',1,'',591,79,10,0,'SR 5','US
1',24.73,'',3,'NO',1,1,'200200SF6',79010000,'');

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INSERT INTO ATTENUATOR VALUES('5-45',1,'',591,79,30,0,'SR 5','US
1',11.08,'',1,'NO',1,1,'02201405702140221',79030000,'');
INSERT INTO ATTENUATOR VALUES('5-46',1,'',591,79,30,0,'SR 5','US
1',11.12,'',3,'NO',1,1,'00201405702140221',79030000,'');
INSERT INTO ATTENUATOR VALUES('5-47',1,'',591,79,100,0,'SR 40','NO
REC',0,'',4,'NO',1,1,'DRAGNET',79100000,'');
INSERT INTO ATTENUATOR VALUES('5-48',1,'',591,79,100,0,'SR 40','NO
REC',25.831,'',2,'NO',1,1,'200200SF4',79100000,'');
INSERT INTO ATTENUATOR VALUES('5-49',1,'',591,79,100,0,'SR 40','NO
REC',25.995,'',4,'NO',1,1,'200200SF4',79100000,'');
INSERT INTO ATTENUATOR VALUES('5-50',1,'',591,79,110,0,'SR 400','I
4',0.052,'',4,'NO',1,1,'200200SF6',79110000,'');
INSERT INTO ATTENUATOR VALUES('5-51',1,'',591,79,110,0,'SR 400','I
4',3.501,'',2,'NO',1,1,'200200SF4',79110000,'');
INSERT INTO ATTENUATOR VALUES('5-52',1,'',591,79,110,0,'SR 400','I
4',3.502,'',4,'NO',1,1,'200200SF4',79110000,'');
INSERT INTO ATTENUATOR VALUES('5-53',1,'',591,79,110,0,'SR 400','I
4',3.503,'',4,'NO',1,3,'200200SF4',79110000,'');
INSERT INTO ATTENUATOR VALUES('5-54',1,'',591,79,150,0,'SR 40','NO
REC',0.49,'',2,'NO',1,1,'200200SF4',79150000,'');
INSERT INTO ATTENUATOR VALUES('5-55',1,'',591,79,150,0,'SR 40','NO
REC',0.9,'',4,'NO',1,1,'200200SF3',79150000,'');
INSERT INTO ATTENUATOR VALUES('5-56',1,'',592,11,10,0,'SR 19','US
441',14.35,'',3,'NO',1,1,'111311H4S',11010000,'');
INSERT INTO ATTENUATOR VALUES('5-57',1,'',592,11,10,0,'SR 19','US
441',14.351,'',1,'NO',1,1,'111311H4S',11010000,'');
INSERT INTO ATTENUATOR VALUES('5-58',1,'',592,11,10,0,'SR 19','US
441',16.131,'',3,'NO',1,1,'04202402708140021E',11010000,'Model number was
0040020020008E');
INSERT INTO ATTENUATOR VALUES('5-59',1,'',592,11,10,0,'SR 19','US
441',16.143,'',1,'NO',1,1,'04202402708140021E',11010000,'Model number was
0040020020008E');
INSERT INTO ATTENUATOR VALUES('5-60',1,'',592,11,10,0,'SR 19','US
441',17.49,'',3,'NO',1,1,'00203405703140321',11010000,'');
INSERT INTO ATTENUATOR VALUES('5-61',1,'',592,11,70,0,'SR 50','NO
REC',13.536,'',2,'NO',1,1,'200200SF4',11070000,'');
INSERT INTO ATTENUATOR VALUES('5-62',1,'',592,11,70,0,'SR 50','NO
REC',13.567,'',4,'NO',1,1,'200200SF4',11070000,'');
INSERT INTO ATTENUATOR VALUES('5-63',1,'',592,11,200,0,'SR 25','US
27',27.3,'',1,'NO',1,1,'200200SF8',11200000,'');
INSERT INTO ATTENUATOR VALUES('5-64',1,'',592,11,200,0,'SR 25','US
27',27.4,'',3,'NO',1,1,'200200SF8',11200000,'');
INSERT INTO ATTENUATOR VALUES('5-65',1,'',592,18,10,0,'SR 35','US
301',21.634,'',1,'NO',1,1,'200200SF5',18010000,'');
INSERT INTO ATTENUATOR VALUES('5-66',1,'',592,18,10,0,'SR 35','US
301',21.666,'',3,'NO',1,1,'200200SF5',18010000,'');
INSERT INTO ATTENUATOR VALUES('5-67',1,'',592,18,70,0,'SR 44','NO
REC',8.35,'',2,'NO',1,1,'200200SF4',18070000,'');
INSERT INTO ATTENUATOR VALUES('5-68',1,'',592,18,70,0,'SR 44','NO
REC',8.4,'',4,'NO',1,1,'200200SF4',18070000,'');
INSERT INTO ATTENUATOR VALUES('5-69',1,'',593,75,3,0,'SR 436','NO
REC',0,'',1,'NO',1,1,'200200SF4',75003000,'');
INSERT INTO ATTENUATOR VALUES('5-70',1,'',593,75,3,0,'SR 436','NO
REC',6.01,'',1,'NO',1,1,'200200SF4',75003000,'');
INSERT INTO ATTENUATOR VALUES('5-71',1,'',593,75,3,0,'SR 436','NO
REC',6.011,'',3,'NO',1,1,'200200SF4',75003000,'');
INSERT INTO ATTENUATOR VALUES('5-72',1,'',593,75,8,160,'SR 408','NO
REC',2,'',2,'NO',1,2,'300300SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-73',1,'',593,75,8,160,'SR 408','NO
REC',2.539,'',2,'NO',1,1,'200200SF7',75008160,'');

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INSERT INTO ATTENUATOR VALUES('5-74',1,'',593,75,8,160,'SR 408','NO
REC',2.54,'',2,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-75',1,'',593,75,8,160,'SR 408','NO
REC',2.541,'',2,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-76',1,'',593,75,8,160,'SR 408','NO
REC',2.542,'',2,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-77',1,'',593,75,8,160,'SR 408','NO
REC',2.543,'',2,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-78',1,'',593,75,8,160,'SR 408','NO
REC',2.544,'',2,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-79',1,'',593,75,8,160,'SR 408','NO
REC',2.546,'',4,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-80',1,'',593,75,8,160,'SR 408','NO
REC',2.547,'',4,'NO',1,1,'200200SF7',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-81',1,'',593,75,8,160,'SR 408','NO
REC',2.548,'',4,'NO',1,1,'200200SF8',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-82',1,'',593,75,8,160,'SR 408','NO
REC',2.549,'',4,'NO',1,1,'200200SF8',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-83',1,'',593,75,8,160,'SR 408','NO
REC',2.55,'',4,'NO',1,1,'200200SF8',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-84',1,'',593,75,8,160,'SR 408','NO
REC',2.551,'',4,'NO',1,1,'200200SF8',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-85',1,'',593,75,8,160,'SR 408','NO
REC',3.077,'',4,'NO',1,2,'01203405703140321',75008160,'');
INSERT INTO ATTENUATOR VALUES('5-86',1,'',593,75,11,0,'SR 414','NO
REC',0.284,'',4,'NO',1,1,'00205406706140021E',75011000,'');
INSERT INTO ATTENUATOR VALUES('5-87',1,'',593,75,11,0,'SR 414','NO
REC',0.286,'','',1,'NO',1,1,'200200SF3',75011000,'');
INSERT INTO ATTENUATOR VALUES('5-88',1,'',593,75,30,0,'SR 526','US
17',8.551,'',1,'NO',1,1,'G111307N6D',75030000,'');
INSERT INTO ATTENUATOR VALUES('5-89',1,'',593,75,30,0,'SR 526','US
17',8.705,'',3,'NO',1,1,'G111307N6D',75030000,'');
INSERT INTO ATTENUATOR VALUES('5-90',1,'',593,75,30,0,'SR 526','US
17',8.722,'',3,'NO',1,2,'00201403704140021',75030000,'');
INSERT INTO ATTENUATOR VALUES('5-91',1,'',593,75,190,0,'SR 423','NO
REC',8.567,'',1,'NO',1,2,'200200SF4',75190000,'');
INSERT INTO ATTENUATOR VALUES('5-92',1,'',593,75,190,0,'SR 423','NO
REC',8.569,'',1,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75190000,'');
INSERT INTO ATTENUATOR VALUES('5-93',1,'',593,75,190,0,'SR 423','NO
REC',8.588,'',3,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75190000,'');
INSERT INTO ATTENUATOR VALUES('5-94',1,'',593,75,190,0,'SR 423','NO
REC',8.589,'',3,'NO',1,3,'200200SF4',75190000,'');
INSERT INTO ATTENUATOR VALUES('5-95',1,'',593,75,280,0,'SR 400','I
4',13.689,'',1,'NO',1,2,'200200SF3',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-96',1,'',593,75,280,0,'SR 400','I
4',13.69,'',3,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-97',1,'',593,75,280,0,'SR 400','I
4',13.691,'',1,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-98',1,'',593,75,280,0,'SR 400','I
4',13.692,'',3,'NO',1,2,'200200SF3',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-99',1,'',593,75,280,0,'SR 400','I
4',15,'',1,'NO',1,1,'200200SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-100',1,'',593,75,280,0,'SR 400','I
4',15.001,'',3,'NO',1,1,'200200SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-101',1,'',593,75,280,0,'SR 400','I
4',15.53,'',2,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-102',1,'',593,75,280,0,'SR 400','I
4',15.54,'',4,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-103',1,'',593,75,280,0,'SR 400','I
4',17.078,'',2,'NO',1,4,'00205406708140021E',75280000,'');

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INSERT INTO ATTENUATOR VALUES('5-104',1,'',593,75,280,0,'SR 400','I
4',17.178,'',2,'NO',1,5,'00203403703140321',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-105',1,'',593,75,280,0,'SR 400','I
4',17.5,'',4,'NO',1,4,'00205406708140021E',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-106',1,'',593,75,280,0,'SR 400','I
4',17.703,'',2,'NO',1,4,'00205406708140021E',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-107',1,'',593,75,280,0,'SR 400','I
4',18,'',2,'NO',1,4,'00205406708140021E',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-108',1,'',593,75,280,0,'SR 400','I
4',18.53,'',4,'NO',1,4,'00202408706140421',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-109',1,'',593,75,280,0,'SR 400','I
4',19.81,'',2,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-110',1,'',593,75,280,0,'SR 400','I
4',19.82,'',4,'NO',1,2,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-111',1,'',593,75,280,0,'SR 400','I
4',20.407,'',2,'NO',1,2,'206206SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-112',1,'',593,75,280,0,'SR 400','I
4',20.416,'',4,'NO',1,2,'206206SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-113',1,'',593,75,280,0,'SR 400','I
4',21.3,'',2,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-114',1,'',593,75,280,0,'SR 400','I
4',21.301,'',2,'NO',1,2,'206206SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-115',1,'',593,75,280,0,'SR 400','I
4',21.302,'',4,'NO',1,2,'206206SF4',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-116',1,'',593,75,280,0,'SR 400','I
4',21.303,'',4,'NO',1,1,'UNKNOWN--HI-DRO CLUS',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-117',1,'',593,75,280,0,'SR 400','I
4',24.075,'',4,'NO',1,1,'200200SF8',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-118',1,'',593,75,280,0,'SR 400','I
4',24.216,'',4,'NO',1,3,'200200SF8',75280000,'');
INSERT INTO ATTENUATOR VALUES('5-119',1,'',593,77,120,0,'SR 434','NO
REC',5.14,'',2,'NO',1,1,'400500W',77120000,'');
INSERT INTO ATTENUATOR VALUES('5-120',1,'',593,77,120,0,'SR 434','NO
REC',5.162,'',4,'NO',1,1,'400500W',77120000,'');
INSERT INTO ATTENUATOR VALUES('5-121',1,'',593,77,160,0,'SR 400','I
4',13.575,'',2,'NO',1,1,'200200SF6',77160000,'');
INSERT INTO ATTENUATOR VALUES('5-122',1,'',594,75,2,0,'SR 482','NO
REC',1.2,'',4,'NO',1,1,'2091009H7N',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-123',1,'',594,75,2,0,'SR 482','NO
REC',9.555,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-124',1,'',594,75,2,0,'SR 482','NO
REC',9.556,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-125',1,'',594,75,2,0,'SR 482','NO
REC',9.557,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-126',1,'',594,75,2,0,'SR 482','NO
REC',9.558,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-127',1,'',594,75,2,0,'SR 482','NO
REC',9.559,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-128',1,'',594,75,2,0,'SR 482','NO
REC',9.56,'',2,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-129',1,'',594,75,2,0,'SR 482','NO
REC',9.561,'',4,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-130',1,'',594,75,2,0,'SR 528','NO
REC',9.562,'',4,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-131',1,'',594,75,2,0,'SR 482','NO
REC',9.563,'',4,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-132',1,'',594,75,2,0,'SR 482','NO
REC',9.564,'',4,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-133',1,'',594,75,2,0,'SR 482','NO
REC',9.565,'',4,'NO',1,1,'200200SF6',75002000,'');

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INSERT INTO ATTENUATOR VALUES('5-134',1,'',594,75,2,0,'SR 482','NO
REC',9.566,'',4,'NO',1,1,'200200SF6',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-135',1,'',594,75,2,0,'SR 482','NO
REC',12.235,'',4,'NO',1,5,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-136',1,'',594,75,2,0,'SR 482','NO
REC',12.935,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-137',1,'',594,75,2,0,'SR 482','NO
REC',13,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-138',1,'',594,75,2,0,'SR 482','NO
REC',14.45,'',2,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-139',1,'',594,75,2,0,'SR 482','NO
REC',14.451,'',2,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-140',1,'',594,75,2,0,'SR 482','NO
REC',14.452,'',2,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-141',1,'',594,75,2,0,'SR 482','NO
REC',14.453,'',2,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-142',1,'',594,75,2,0,'SR 482','NO
REC',14.454,'',2,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-143',1,'',594,75,2,0,'SR 482','NO
REC',14.455,'',4,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-144',1,'',594,75,2,0,'SR 482','NO
REC',14.456,'',4,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-145',1,'',594,75,2,0,'SR 482','NO
REC',14.457,'',4,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-146',1,'',594,75,2,0,'SR 482','NO
REC',14.458,'',4,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-147',1,'',594,75,2,0,'SR 482','NO
REC',14.459,'',4,'NO',1,1,'200200SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-148',1,'',594,75,2,0,'SR 528','NO
REC',16.775,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-149',1,'',594,75,2,0,'SR 482','NO
REC',16.78,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-150',1,'',594,75,2,0,'SR 482','NO
REC',19.245,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-151',1,'',594,75,2,0,'SR 482','NO
REC',19.59,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-152',1,'',594,75,2,0,'SR 482','NO
REC',20.52,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-153',1,'',594,75,2,0,'SR 482','NO
REC',20.525,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-154',1,'',594,75,2,0,'SR 482','NO
REC',22.52,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-155',1,'',594,75,2,0,'SR 482','NO
REC',22.532,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-156',1,'',594,75,2,0,'SR 482','NO
REC',23.292,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-157',1,'',594,75,2,0,'SR 482','NO
REC',23.297,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-158',1,'',594,75,2,0,'SR 482','NO
REC',27.438,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-159',1,'',594,75,2,0,'SR 482','NO
REC',27.453,'',4,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-160',1,'',594,75,2,0,'SR 482','NO
REC',30.194,'',2,'NO',1,1,'206206SF8',75002000,'');
INSERT INTO ATTENUATOR VALUES('5-161',1,'',594,75,8,0,'SR 408','NO
REC',3.175,'',2,'NO',1,1,'200200SF3',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-162',1,'',594,75,8,0,'SR 408','NO
REC',3.177,'',2,'NO',1,1,'200200SF3',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-163',1,'',594,75,8,0,'SR 408','NO
REC',3.2,'',1,'NO',1,1,'111311H4S',75008000,'');

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INSERT INTO ATTENUATOR VALUES('5-164',1,'',594,75,8,0,'SR 408','NO
REC',3.201,'',3,'NO',1,1,'111311H4S',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-165',1,'',594,75,8,0,'SR 408','NO
REC',3.6,'',4,'NO',1,1,'200200SF5',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-166',1,'',594,75,8,0,'SR 408','NO
REC',3.61,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-167',1,'',594,75,8,0,'SR 408','NO
REC',3.611,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-168',1,'',594,75,8,0,'SR 408','NO
REC',3.612,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-169',1,'',594,75,8,0,'SR 408','NO
REC',3.613,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-170',1,'',594,75,8,0,'SR 408','NO
REC',3.614,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-171',1,'',594,75,8,0,'SR 408','NO
REC',3.615,'',4,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-172',1,'',594,75,8,0,'SR 408','NO
REC',3.616,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-173',1,'',594,75,8,0,'SR 408','NO
REC',3.617,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-174',1,'',594,75,8,0,'SR 408','NO
REC',3.618,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-175',1,'',594,75,8,0,'SR 408','NO
REC',3.619,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-176',1,'',594,75,8,0,'SR 408','NO
REC',3.62,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-177',1,'',594,75,8,0,'SR 408','NO
REC',3.621,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-178',1,'',594,75,8,0,'SR 408','NO
REC',3.622,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-179',1,'',594,75,8,0,'SR 408','NO
REC',3.7,'',4,'NO',1,1,'200200SF5',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-180',1,'',594,75,8,0,'SR 408','NO
REC',3.75,'',2,'NO',1,1,'200200SF5',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-181',1,'',594,75,8,0,'SR 408','NO
REC',4.299,'',2,'NO',1,2,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-182',1,'',594,75,8,0,'SR 408','NO
REC',4.3,'',4,'NO',1,5,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-183',1,'',594,75,8,0,'SR 408','NO
REC',5.23,'',4,'NO',1,5,'01203405703140321',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-184',1,'',594,75,8,0,'SR 408','NO
REC',5.23,'','','NO',1,'','UNKNOWN',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-185',1,'',594,75,8,0,'SR 408','NO
REC',5.619,'',2,'NO',1,4,'00209404722140921',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-186',1,'',594,75,8,0,'SR 408','NO
REC',7.14,'',4,'NO',1,3,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-187',1,'',594,75,8,0,'SR 408','NO
REC',7.171,'',4,'NO',1,2,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-188',1,'',594,75,8,0,'SR 408','NO
REC',7.764,'',2,'NO',1,2,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-189',1,'',594,75,8,0,'SR 408','NO
REC',7.765,'',4,'NO',1,3,'200200SF4',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-190',1,'',594,75,8,0,'SR 408','NO
REC',8.424,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-191',1,'',594,75,8,0,'SR 408','NO
REC',8.45,'',2,'NO',1,1,'206206SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-192',1,'',594,75,8,0,'SR 408','NO
REC',8.75,'',2,'NO',1,1,'200200SF6',75008000,'');
INSERT INTO ATTENUATOR VALUES('5-193',1,'',594,75,8,0,'SR 408','NO
REC',8.751,'',2,'NO',1,1,'200200SF6',75008000,'');

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[illegible]

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INSERT INTO ATTENUATOR VALUES('5-224',1,'',594,75,8,170,'SR 408','NO
REC',4.2,'',4,'NO',1,3,'200200SF4',75008170,'');
INSERT INTO ATTENUATOR VALUES('5-225',1,'',594,75,8,170,'SR 408','NO
REC',4.3,'',2,'NO',1,2,'200200SF4',75008170,'');
INSERT INTO ATTENUATOR VALUES('5-226',1,'',594,75,10,0,'SR 500','US
17',5.677,'',3,'NO',1,3,'200200SF4',75010000,'');
INSERT INTO ATTENUATOR VALUES('5-227',1,'',594,75,35,1,'SR 535','NO
REC',2.1,'',1,'NO',1,1,'200200SF4',75035000,'');
INSERT INTO ATTENUATOR VALUES('5-228',1,'',594,75,35,1,'SR 535','NO
REC',2.12,'',3,'NO',1,1,'200200SF4',75035000,'');
INSERT INTO ATTENUATOR VALUES('5-229',1,'',594,75,50,0,'SR 50','NO
REC',1.204,'',4,'NO',1,1,'200200SF6',75050000,'');
INSERT INTO ATTENUATOR VALUES('5-230',1,'',594,75,50,0,'SR 50','NO
REC',1.205,'',2,'NO',1,1,'200200SF6',75050000,'');
INSERT INTO ATTENUATOR VALUES('5-231',1,'',594,75,190,1,'SR 423','NO
REC',39.286,'',1,'NO',1,1,'111311H4S',75190001,'');
INSERT INTO ATTENUATOR VALUES('5-232',1,'',594,75,190,1,'SR 423','NO
REC',39.289,'',3,'NO',1,1,'111311H4S',75190001,'');
INSERT INTO ATTENUATOR VALUES('5-233',1,'',594,75,200,0,'SR 551','NO
REC',4.52,'',1,'NO',1,1,'200200SF5',75200000,'');
INSERT INTO ATTENUATOR VALUES('5-234',1,'',594,75,200,0,'SR 551','NO
REC',4.54,'',3,'NO',1,1,'200200SF5',75200000,'');
INSERT INTO ATTENUATOR VALUES('5-235',1,'',594,75,270,0,'SR 435','NO
REC',6.8,'',1,'NO',1,1,'300300SF3',75270000,'');
INSERT INTO ATTENUATOR VALUES('5-236',1,'',594,75,270,0,'SR 435','NO
REC',6.9,'',3,'NO',1,1,'300300SF3',75270000,'');
INSERT INTO ATTENUATOR VALUES('5-237',1,'',594,75,300,0,'SR 417','NO
REC',0.5,'',3,'NO',1,1,'200200SF4',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-238',1,'',594,75,300,0,'SR 417','NO
REC',2.629,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-239',1,'',594,75,300,0,'SR 417','NO
REC',2.63,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-240',1,'',594,75,300,0,'SR 417','NO
REC',2.631,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-241',1,'',594,75,300,0,'SR 417','NO
REC',2.632,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-242',1,'',594,75,300,0,'SR 417','NO
REC',2.633,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-243',1,'',594,75,300,0,'SR 417','NO
REC',2.634,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-244',1,'',594,75,300,0,'SR 417','NO
REC',2.635,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-245',1,'',594,75,300,0,'SR 417','NO
REC',2.636,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-246',1,'',594,75,300,0,'SR 417','NO
REC',2.637,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-247',1,'',594,75,300,0,'SR 417','NO
REC',2.638,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-248',1,'',594,75,300,0,'SR 417','NO
REC',8.6,'',1,'NO',1,1,'200200SF4',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-249',1,'',594,75,300,0,'SR 417','NO
REC',8.8,'',3,'NO',1,1,'200200SF4',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-250',1,'',594,75,300,0,'SR 417','NO
REC',10.101,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-251',1,'',594,75,300,0,'SR 417','NO
REC',10.102,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-252',1,'',594,75,300,0,'SR 417','NO
REC',10.103,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-253',1,'',594,75,300,0,'SR 417','NO
REC',10.104,'',1,'NO',1,1,'200200SF8',75300000,'');

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INSERT INTO ATTENUATOR VALUES('5-254',1,'',594,75,300,0,'SR 417','NO
REC',10.105,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-255',1,'',594,75,300,0,'SR 417','NO
REC',10.106,'',1,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-256',1,'',594,75,300,0,'SR 417','NO
REC',10.201,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-257',1,'',594,75,300,0,'SR 417','NO
REC',10.202,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-258',1,'',594,75,300,0,'SR 417','NO
REC',10.203,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-259',1,'',594,75,300,0,'SR 417','NO
REC',10.204,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-260',1,'',594,75,300,0,'SR 417','NO
REC',10.205,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-261',1,'',594,75,300,0,'SR 417','NO
REC',10.206,'',3,'NO',1,1,'200200SF8',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-262',1,'',594,75,300,0,'SR 417','NO
REC',10.8,'',1,'NO',1,2,'00205406706140021E',75300000,'');
INSERT INTO ATTENUATOR VALUES('5-263',1,'',594,75,301,0,'SR 417','NO
REC',1.115,'',1,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-264',1,'',594,75,301,0,'SR 417','NO
REC',1.116,'',1,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-265',1,'',594,75,301,0,'SR 417','NO
REC',1.117,'',1,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-266',1,'',594,75,301,0,'SR 417','NO
REC',1.118,'',1,'NO',1,1,'UNKNOWN',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-267',1,'',594,75,301,0,'SR 417','NO
REC',1.118,'',3,'NO',1,5,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-268',1,'',594,75,301,0,'SR 417','NO
REC',1.119,'',3,'NO',1,5,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-269',1,'',594,75,301,0,'SR 417','NO
REC',1.12,'',3,'NO',1,5,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-270',1,'',594,75,301,0,'SR 417','NO
REC',3.6,'',3,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-271',1,'',594,75,301,0,'SR 417','NO
REC',3.605,'',3,'NO',1,5,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-272',1,'',594,75,301,0,'SR 417','NO
REC',3.7,'',1,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-273',1,'',594,75,301,0,'SR 417','NO
REC',4.89,'',3,'NO',1,5,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-274',1,'',594,75,301,0,'SR 417','NO
REC',4.9,'',1,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-275',1,'',594,75,301,0,'SR 417','NO
REC',5.094,'',3,'NO',1,4,'204711H11S',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-276',1,'',594,75,301,0,'SR 417','NO
REC',6.92,'',1,'NO',1,5,'200200SF9',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-277',1,'',594,75,301,0,'SR 417','NO
REC',7.2,'',1,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-278',1,'',594,75,301,0,'SR 417','NO
REC',7.21,'',3,'NO',1,5,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-279',1,'',594,75,301,0,'SR 417','NO
REC',9.207,'',1,'NO',1,4,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-280',1,'',594,75,301,0,'SR 417','NO
REC',9.208,'',1,'NO',1,4,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-281',1,'',594,75,301,0,'SR 417','NO
REC',9.209,'',1,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-282',1,'',594,75,301,0,'SR 417','NO
REC',9.21,'',1,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-283',1,'',594,75,301,0,'SR 417','NO
REC',9.211,'',3,'NO',1,1,'200200SF8',75301000,'');

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INSERT INTO ATTENUATOR VALUES('5-284',1,'',594,75,301,0,'SR 417','NO
REC',9.212,'',3,'NO',1,5,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-285',1,'',594,75,301,0,'SR 417','NO
REC',9.213,'',3,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-286',1,'',594,75,301,0,'SR 417','NO
REC',9.214,'',3,'NO',1,1,'200200SF8',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-287',1,'',594,75,301,0,'SR 417','NO
REC',11,'',3,'NO',1,1,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-288',1,'',594,75,301,0,'SR 417','NO
REC',11.05,'',1,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-289',1,'',594,75,301,0,'SR 417','NO
REC',15.5,'',1,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-290',1,'',594,75,301,0,'SR 417','NO
REC',15.6,'',3,'NO',1,2,'200200SF4',75301000,'');
INSERT INTO ATTENUATOR VALUES('5-291',1,'',594,92,40,0,'SR 535','NO
REC',0.702,'',1,'NO',1,1,'200200SF4',92040000,'');
INSERT INTO ATTENUATOR VALUES('5-292',1,'',594,92,40,0,'SR 535','NO
REC',0.706,'',3,'NO',1,1,'200200SF4',92040000,'');
INSERT INTO ATTENUATOR VALUES('5-293',1,'',594,92,90,0,'SR 530','US
192',6.842,'',4,'NO',1,1,'200200SF6',92090000,'');
INSERT INTO ATTENUATOR VALUES('5-294',1,'',594,92,130,0,'SR 400','I
4',0.017,'',2,'NO',1,1,'206206SF3',92130000,'');
INSERT INTO ATTENUATOR VALUES('5-295',1,'',594,92,130,0,'SR 400','I
4',0.039,'',4,'NO',1,1,'206206SF3',92130000,'');
INSERT INTO ATTENUATOR VALUES('5-296',1,'',595,36,30,0,'SR 25','US
301',0.648,'',1,'NO',1,1,'200200SF5',36030000,'');
INSERT INTO ATTENUATOR VALUES('5-297',1,'',595,36,30,0,'SR 25','US
301',0.824,'',3,'NO',1,1,'200200SF5',36030000,'');
INSERT INTO ATTENUATOR VALUES('5-298',1,'',595,36,30,0,'SR 25','US
301',1.288,'',1,'NO',1,1,'200200SF5',36030000,'');
INSERT INTO ATTENUATOR VALUES('5-299',1,'',595,36,30,0,'SR 25','US
301',1.561,'',3,'NO',1,1,'200200SF5',36030000,'');
INSERT INTO ATTENUATOR VALUES('5-300',1,'',595,36,70,0,'SR 500','US
27',17.927,'',4,'NO',1,1,'111311H85',36070000,'');
INSERT INTO ATTENUATOR VALUES('5-301',1,'',595,36,70,0,'SR 500','US
27',17.999,'',2,'NO',1,1,'111311H85',36070000,'');
INSERT INTO ATTENUATOR VALUES('5-302',1,'',595,36,100,0,'SR 200','NO
REC',14.859,'',4,'NO',1,1,'111311H85',36100000,'');
INSERT INTO ATTENUATOR VALUES('5-303',1,'',595,36,100,0,'SR 200','NO
REC',14.9,'',2,'NO',1,1,'111311H85',36100000,'');
INSERT INTO ATTENUATOR VALUES('6-1',1,'1991',690,87,1,0,'SR 94','NO
REC',5.553,'ramp to sr821 s/b - n/b G111',2,'NO',1,4,'200200SF3T',87001000,'');
INSERT INTO ATTENUATOR VALUES('6-2',1,'1991',690,87,1,0,'SR 94','NO
REC',10.601,'94 @ sr5 H1',2,'NO',1,1,'G209509N5S',87001000,'');
INSERT INTO ATTENUATOR VALUES('6-3',1,'1991',690,87,1,0,'SR 94','NO
REC',10.641,'94 @ sr5 H2',4,'NO',1,4,'G209509N5S',87001000,'');
INSERT INTO ATTENUATOR VALUES('6-4',1,'1991',690,87,3,0,'SR 112','NO
REC',0.047,'e/b 21st st ramp to sr112 and N113 sr953
H31',1,'NO',1,4,'209509S4S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-5',1,'1991',690,87,3,0,'SR 112','NO
REC',0.494,'between e/b - w/b lanes to sr112
H32',3,'NO',1,1,'209509N4S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-6',1,'1991',690,87,3,0,'SR 112','NO
REC',0.513,'between e/b - w/b lanes to sr112
H33',1,'NO',1,1,'209509N4S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-7',1,'1991',690,87,3,0,'SR 112','NO
REC',0.947,'112 w/b off ramp to s/b 953
H30',4,'NO',1,4,'2091009N7S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-8',1,'1991',690,87,3,0,'SR 112','NO
REC',1.191,'112 w/b to 36th st H3',4,'NO',1,4,'G209508S8S',87003000,'');

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INSERT INTO ATTENUATOR VALUES('6-9',1,'1991',690,87,3,0,'SR 112','NO
REC',1.28,'exit ramp to sr25 n/b HD13',4,'NO',1,4,'209900H9N',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-10',1,'1991',690,87,3,0,'SR 112','NO
REC',3.063,'airport way ramp to 22nd ave
H4',4,'NO',1,4,'G209800S8S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-11',1,'1991',690,87,3,0,'SR 112','NO
REC',3.332,'just west of 22nd ave exit ramp F2
(temp)',4,'NO',1,2,'01201401701140221F',87003000,'Model number was
01201401701140221F');
INSERT INTO ATTENUATOR VALUES('6-12',1,'1991',690,87,3,0,'SR 112','NO
REC',3.68,'112 e/b @ toll plaza
F3',2,'NO',1,2,'00200402702140221F',87003000,'Model number was 00200402702140221F
');
INSERT INTO ATTENUATOR VALUES('6-13',1,'1991',690,87,3,0,'SR 112','NO
REC',3.751,'112 w/b to 17th ave H26',4,'NO',1,4,'2091007N6S',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-14',1,'1991',690,87,3,0,'SR 112','NO
REC',3.892,'e/b exit to 12th ave G3',2,'NO',1,4,'200200SF7',87003000,'');
INSERT INTO ATTENUATOR VALUES('6-15',1,'1991',690,87,4,0,'SR 112','NO
REC',0.023,'exclusive lane to 12th ave ramp
G71',4,'NO',1,4,'200200SF8',87004000,'');
INSERT INTO ATTENUATOR VALUES('6-16',1,'1991',690,87,4,0,'SR 112','NO
REC',0.026,'exclusive ramp to I-95 n/b
G72',2,'NO',1,5,'200200SF8',87004000,'');
INSERT INTO ATTENUATOR VALUES('6-17',1,'1991',690,87,4,0,'SR 112','NO
REC',0.47,'112 e/b to I-95 n-s/b F5',2,'NO',1,4,'06202408703140321F
',87004000,'Model number was 06202408703140321F ');
INSERT INTO ATTENUATOR VALUES('6-18',1,'1991',690,87,4,0,'SR 112','NO
REC',0.741,'112 w/b to I-95 n and s/b
F4',4,'NO',1,4,'04202402702140621E',87004000,'Model number was 04202402702140621E
');
INSERT INTO ATTENUATOR VALUES('6-19',1,'1991',690,87,4,0,'SR 112','NO
REC',0.85,'I95 w/b to I-95 s and n/b
F6',4,'NO',1,4,'00202402710140421F',87004000,'Model number was 00202402710140421F
');
INSERT INTO ATTENUATOR VALUES('6-20',1,'1995',690,87,4,0,'SR 112','NO
REC',1.61,'112 e/b exit to biscayne
F7',2,'NO',1,4,'00204403704140521F',87004000,'Model number was 00204403704140521F
');
INSERT INTO ATTENUATOR VALUES('6-21',1,'1995',690,87,5,0,'SR 874','NO
REC',1.165,'874 toll plaza F8',1,'NO',1,2,'00201402702140021F',87005000,'Model
number was 00201402702140021F ');
INSERT INTO ATTENUATOR VALUES('6-22',1,'1995',690,87,5,0,'SR 874','NO
REC',4.021,'874 w/b to sr94
F31',4,'NO',1,4,'02201403708140021F',87005000,'Model number was
02201403708140021F ');
INSERT INTO ATTENUATOR VALUES('6-23',1,'1994',690,87,6,0,'SR 970','NO
REC',0.15,'se 2nd ave to I-95 s/b H5',4,'NO',1,4,'G209508S8S',87006000,'');
INSERT INTO ATTENUATOR VALUES('6-24',1,'1994',690,87,6,0,'SR 970','NO
REC',0.39,'I-95 s/b to biscayne @ miami ave
H24',2,'NO',1,5,'G209508S8S',87006000,'');
INSERT INTO ATTENUATOR VALUES('6-25',1,'',690,87,6,0,'SR 970','NO REC',0.43,'I-
95 n/b to se 1st st at 2nd ave H7',2,'NO',1,4,'G209508S8S',87006000,'');
INSERT INTO ATTENUATOR VALUES('6-26',1,'1994',690,87,17,0,'SR 913','NO
REC',0.225,'rockenbaker flyover to I-95 and sr5
G95',4,'NO',1,5,'300300SF4G',87017000,'Spaces removed from model number. ');
INSERT INTO ATTENUATOR VALUES('6-27',1,'1994',690,87,21,0,'SR 878','NO
REC',2.693,'878 @ sr5 G9',4,'NO',1,2,'200200SF4',87021000,'');
INSERT INTO ATTENUATOR VALUES('6-28',1,'1994',690,87,21,0,'SR 878','NO
REC',2.704,'878 w/b @ sr5 G8',4,'NO',1,2,'200200SF4',87021000,'');
INSERT INTO ATTENUATOR VALUES('6-29',1,'1995',690,87,21,0,'SR 878','NO
REC',2.723,'878 e/b @ sr5 G7',2,'NO',1,3,'200200SF4',87021000,'');

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INSERT INTO ATTENUATOR VALUES('6-30',1,'1995',690,87,21,0,'SR 878','NO
REC',2.724,'878 e/b @ sr5 G6',2,'NO',1,2,'200200SF4',87021000,'');
INSERT INTO ATTENUATOR VALUES('6-188',1,'',690,87,26,0,'SR
860','',6.569,'CONSTRUCTION ZONE',4,'YES',2,1,'UNKNOWN--SAND
BARREL',87026000,'');
INSERT INTO ATTENUATOR VALUES('6-189',1,'',690,87,260,0,'SR
826','',0.861,'CONSTRUCTION ZONE',3,'YES',2,4,'UNKNOWN--SAND
BARREL',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-190',1,'','',87,260,0,'SR
826','',14.095,'CONSTRUCTION ZONE',1,'YES',2,5,'UNKNOWN--SAND
BARREL',87260000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('6-191',1,'','',87,75,0,'SR
93','',0.423,'CONSTRUCTION ZONE',3,'YES',2,1,'UNKNOWN--SAND
BARREL',87075000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('6-192',1,'','',87,260,0,'SR
826','',0.5,'CONSTRUCTION ZONE',3,'YES',2,1,'UNKNOWN--SAND
BARREL',87260000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('6-193',1,'',690,87,200,0,'SR 836','NO
REC',11.7,'836 e/b to I-95 n/b',2,'NO',2,5,'UNKNOWN--FITCH',87200000,'Has all
properties of 6-68, but accident report (#483) says sand barrels.');
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INSERT INTO ATTENUATOR VALUES('6-31',1,'1995',690,87,30,0,'SR 5','NO
REC',2.129,'sr5 n/b @ 62nd ave
F10',3,'NO',1,4,'00200402708140421F',87030000,'Model number was
00200402708140421F');

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INSERT INTO ATTENUATOR VALUES('6-32',1,'1995',690,87,30,0,'SR 5','NO
REC',5.05,'ponce @ oak C1',3,'NO',1,1,'300410W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-33',1,'1993',690,87,30,0,'SR 5','NO
REC',7.252,'sw 22nd ave @ sr5 G10',3,'NO',1,4,'206206SF3',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-34',1,'1994',690,87,30,0,'SR 5','NO
REC',10.453,'brickell bridge c14',1,'NO',1,2,'W40-58-62 (340)',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-35',1,'1991',690,87,30,0,'SR 5','NO
REC',10.459,'brickell bridge G112',3,'NO',1,1,'300300SF3',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-36',1,'1991',690,87,30,0,'SR 5','NO
REC',10.852,'between 25th and 1st st C2',1,'NO',1,5,'400506W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-37',1,'1991',690,87,30,0,'SR 5','NO
REC',11.888,'FEC N of ne 6th st C6',1,'NO',1,1,'406400W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-38',1,'1991',690,87,30,0,'SR 5','NO
REC',11.89,'FEC N of ne 6th st C7',3,'NO',1,1,'406400W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-39',1,'1991',690,87,30,0,'SR 5','NO
REC',11.895,'FEC N of ne 6th st C8',1,'NO',1,1,'406400W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-40',1,'1977',690,87,30,0,'SR 5','NO
REC',11.897,'FEC N of ne 6th st C9',3,'NO',1,1,'406400W',87030000,'');
INSERT INTO ATTENUATOR VALUES('6-41',1,'1972',690,87,44,0,'SR 976','NO
REC',8.403,'bird rd @ sr5 G11',4,'NO',1,1,'200200NF3',87044000,'');
INSERT INTO ATTENUATOR VALUES('6-42',1,'1972',690,87,44,0,'SR 976','NO
REC',8.436,'bird rd @ sr5 G12',2,'NO',1,1,'200200NF3',87044000,'');
INSERT INTO ATTENUATOR VALUES('6-43',1,'1972',690,87,55,0,'SR 986','NO
REC',6.754,'sunset dr @ sw 59th pl G13',2,'NO',1,1,'200200NF3',87055000,'');
INSERT INTO ATTENUATOR VALUES('6-44',1,'1972',690,87,55,0,'SR 986','NO
REC',6.778,'sunset dr @ sr5 C3',4,'NO',1,1,'800500W',87055000,'');
INSERT INTO ATTENUATOR VALUES('6-45',1,'1994',690,87,60,0,'SR A1A','NO
REC',0.173,'','',3,'NO',1,1,'QS2406G',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-46',1,'1972',690,87,60,0,'SR A1A','NO
REC',2.458,'','',2,'NO',1,1,'QS2406G',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-47',1,'1981',690,87,60,0,'SR A1A','NO
REC',2.602,'','',4,'NO',1,1,'QS2406G',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-48',1,'1994',690,87,60,0,'SR A1A','NO
REC',2.619,'','',2,'NO',1,1,'QS2406G',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-49',1,'1993',690,87,60,0,'SR A1A','NO
REC',3.333,'alton rd flyover H9',2,'NO',1,4,'G200400S8S',87060000,'');
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INSERT INTO ATTENUATOR VALUES('6-50',1,'1993',690,87,60,0,'SR A1A','NO
REC',14.508,'163rd st flyover G66',1,'NO',1,5,'200200SF4',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-51',1,'1988',690,87,60,0,'SR A1A','NO
REC',14.514,'flyover to 163rd st G64',1,'NO',1,4,'200200SF4',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-52',1,'1988',690,87,61,0,'SR 886','NO
REC',0.063,'west side of bridge @ FEC C10 e/b',2,'NO',1,2,'40-58-29
(71)',87061000,'');
INSERT INTO ATTENUATOR VALUES('6-53',1,'1990',690,87,61,0,'SR 886','NO
REC',0.067,'west side of bridge @ FEC w/b C11',4,'NO',1,2,'40-58-29
(71)',87061000,'');
INSERT INTO ATTENUATOR VALUES('6-54',1,'1990',690,87,85,0,'SR 933','NO
REC',2.528,'12th ave @ 14th st H11',1,'NO',1,1,'G209509N4S',87085000,'');
INSERT INTO ATTENUATOR VALUES('6-55',1,'1995',690,87,120,0,'SR 90','NO
REC',9.95,'ramp to s/b sr826 G19',4,'NO',1,4,'206206SF3',87120000,'');
INSERT INTO ATTENUATOR VALUES('6-56',1,'1996',690,87,120,0,'SR 90','NO
REC',10.07,'ramp to n/b sr826 G20',2,'NO',1,2,'206206SF3',87120000,'');
INSERT INTO ATTENUATOR VALUES('6-57',1,'1978',690,87,200,0,'SR 836','NO
REC',4.15,'836 e/b to 826 n/b H12',2,'NO',1,4,'G204507S10S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-58',1,'',690,87,200,0,'SR 836','NO
REC',4.25,'w/b 836 to 826 s/b H13',4,'NO',1,5,'G204507S10S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-59',1,'1978',690,87,200,0,'SR 836','NO
REC',7.439,'',2,'NO',1,4,'05204406702140021F',87200000,'Model number was
05204406702140021F ');
INSERT INTO ATTENUATOR VALUES('6-60',1,'1978',690,87,200,0,'SR 836','NO
REC',7.64,'836 e/b exit to 42nd ave n/b
G21',2,'NO',1,5,'200200SF6',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-61',1,'1978',690,87,200,0,'SR 836','NO
REC',7.84,'836 w/b exxit to 42nd ave s/b
G22',4,'NO',1,5,'200200SF6',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-62',1,'1978',690,87,200,0,'SR 836','NO
REC',9.24,'836 e/b exit to 27th ave
F14',2,'NO',1,4,'00204403713140821F',87200000,'Model number was
00204403713140821F ');
INSERT INTO ATTENUATOR VALUES('6-63',1,'1978',690,87,200,0,'SR 836','NO
REC',9.467,'836 w/b ramp to sr9 s/b new',4,'NO',1,4,'209800H7S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-64',1,'1978',690,87,200,0,'SR 836','NO
REC',10.4,'836 e/b to 17th ave n/b
F15',2,'NO',1,4,'00205403709140421F',87200000,'Model number was
00205403709140421F ');
INSERT INTO ATTENUATOR VALUES('6-65',1,'1978',690,87,200,0,'SR 836','NO
REC',11.04,'836 w/b to 12th ave H34',4,'NO',1,4,'209509H7S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-66',1,'',690,87,200,0,'SR 836','NO
REC',11.211,'836 w/b @ 14th st G65',4,'NO',1,4,'200200SF8',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-67',1,'1978',690,87,200,0,'SR 836','NO
REC',11.53,'836 e/b to I-95 s/b H14',2,'NO',1,4,'G209508S8S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-68',1,'1978',690,87,200,0,'SR 836','NO
REC',11.6,'836 e/b to I-95 n/b F0',2,'NO',1,5,'204508H12S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-69',1,'1978',690,87,200,0,'SR 836','NO
REC',11.72,'836 w/b to I-95 s/b H17',4,'NO',1,5,'G209508S8S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-70',1,'',690,87,200,0,'SR 836','NO
REC',11.87,'836 w/b to I-95 n/b H18',4,'NO',1,4,'G209508S8S',87200000,'');
INSERT INTO ATTENUATOR VALUES('6-71',1,'1986',690,87,200,0,'SR 836','NO
REC',12.358,'e/b 395 @ 2nd ave
F16',2,'NO',1,5,'00208410705140521F',87200000,'Model number was
00208410705140521F ');
INSERT INTO ATTENUATOR VALUES('6-72',1,'1972',690,87,200,0,'SR 836','NO
REC',12.414,'395 e/b to 2nd ave
F17',2,'NO',1,4,'00202410704140421F',87200000,'Model number was
00202410704140421F ');
INSERT INTO ATTENUATOR VALUES('6-73',1,'',690,87,240,0,'SR 9','NO
REC',0.01,'sr5 n/b @ sr9 C5',1,'NO',1,1,'500500W',87240000,'');

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INSERT INTO ATTENUATOR VALUES('6-74',1,'1972',690,87,240,0,'SR      9','NO
REC',0.029,'sw 27th @ sr5      G24',3,'NO',1,1,'206206NF3',87240000,'');
INSERT INTO ATTENUATOR VALUES('6-75',1,'1972',690,87,240,0,'SR      9','NO
REC',3.563,'south side miami river 27th ave
HD100',1,'NO',1,1,'209711H6SB',87240000,'');
INSERT INTO ATTENUATOR VALUES('6-76',1,'1972',690,87,240,0,'SR      9','NO
REC',3.657,'North side miami river 27th ave bridge
HD99',3,'NO',1,1,'209711H6SB',87240000,'');
INSERT INTO ATTENUATOR VALUES('6-77',1,'1972',690,87,260,0,'SR  826','NO
REC',0.812,'',3,'NO',1,4,'300300SF3',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-78',1,'1977',690,87,260,0,'SR  826','NO
REC',0.878,'',4,'NO',1,1,'200200SF3T',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-79',1,'1985',690,87,260,0,'SR  826','NO
REC',0.975,'',3,'NO',1,4,'200200SF3',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-80',1,'1984',690,87,260,0,'SR  826','NO
REC',1.168,'',3,'NO',1,4,'200200SF6T',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-81',1,'1986',690,87,260,0,'SR  826','NO
REC',1.984,'',3,'NO',1,4,'200200SF6T',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-82',1,'1986',690,87,260,0,'SR  826','NO
REC',5.12,'e/b coral way under 826
F18',2,'NO',1,1,'00201405704140021F',87260000,'Model number was
00201405704140021F ');
INSERT INTO ATTENUATOR VALUES('6-83',1,'1994',690,87,260,0,'SR  826','NO
REC',6.152,'n/b 826 to sr90  F19',1,'NO',1,4,'04202402700140621F',87260000,'Model
number was 04202402700140621F ');
INSERT INTO ATTENUATOR VALUES('6-84',1,'1994',690,87,260,0,'SR  826','NO
REC',7.407,'826 to 836 e-w/b
F20',3,'NO',1,4,'04202402700140621F',87260000,'Attenuator type was Energite;
model number was 04202402700140621F ');
INSERT INTO ATTENUATOR VALUES('6-85',1,'1977',690,87,260,0,'SR  826','NO
REC',7.61,'sr826 s/b to sr836 e-w/b
H19',3,'NO',1,4,'G204507S10S',87260000,'Model number changed from GREAT to Hex
Foam Sandwich');
INSERT INTO ATTENUATOR VALUES('6-86',1,'1986',690,87,260,0,'SR  826','NO
REC',8.222,'nw 25th st off ramp  G96',1,'NO',1,4,'206206SF7',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-87',1,'',690,87,260,0,'SR  826','NO
REC',8.386,'on nw 25th st  C16',4,'NO',1,1,'310610W',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-88',1,'1997',690,87,260,0,'SR  826','NO
REC',8.387,'on nw 25th st  C15',2,'NO',1,1,'310610W',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-89',1,'1993',690,87,260,0,'SR  826','NO
REC',11.43,'826 s/b to 74th st
F21',3,'NO',1,4,'04202402700140621F',87260000,'Attenuator type was Energite;
model number was 0420240270621F ');
INSERT INTO ATTENUATOR VALUES('6-90',1,'1995',690,87,260,0,'SR  826','NO
REC',14.541,'sr826 s/b @ exit ramp to 122 st nw
G110',3,'NO',1,4,'200200SF6',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-91',1,'1995',690,87,260,0,'SR  826','NO
REC',15.406,'826 s/b to ww138th st  HD8',3,'NO',1,4,'209509H9S',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-92',1,'1986',690,87,260,0,'SR  826','NO
REC',15.668,'',1,'NO',1,4,'200200SF6',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-93',1,'1997',690,87,260,0,'SR  826','NO
REC',16.443,'826 s/b to ww154th st  HD35',3,'NO',1,4,'209711H9S',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-94',1,'1991',690,87,260,0,'SR  826','NO
REC',18.11,'67th ave under 826  G25',3,'NO',1,1,'206206NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-95',1,'1991',690,87,260,0,'SR  826','NO
REC',18.12,'w/b 67th ave under 826  G26',1,'NO',1,1,'206206NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-96',1,'1987',690,87,260,0,'SR  826','NO
REC',19.11,'s/b 57th ave under 826  G27',3,'NO',1,1,'206206NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-97',1,'1987',690,87,260,0,'SR  826','NO
REC',19.12,'57th ave n/b under 826  G28',1,'NO',1,1,'206206NF4',87260000,'');

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INSERT INTO ATTENUATOR VALUES('6-98',1,'1984',690,87,260,0,'SR 826','NO
REC',20.151,'s/b 47th ave under 826 G29',3,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-99',1,'1984',690,87,260,0,'SR 826','NO
REC',20.152,'n/b 47th ave under sr826 G30',1,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-100',1,'1977',690,87,260,0,'SR 826','NO
REC',20.65,'s/b 42nd ave under 826 G31',3,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-101',1,'1977',690,87,260,0,'SR 826','NO
REC',20.651,'n/b 42nd ave under 826 G32',1,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-102',1,'1997',690,87,260,0,'SR 826','NO
REC',21.15,'s/b 37th ave under 826 G33',3,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-103',1,'',690,87,260,0,'SR 826','NO
REC',21.151,'n/b 37th ave under 826 G34',1,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-104',1,'',690,87,260,0,'SR 826','NO
REC',21.646,'s/b 32nd ave under 826 G36',3,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-105',1,'1990',690,87,260,0,'SR 826','NO
REC',21.647,'n/b 32nd ave under 826 G37',1,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-106',1,'1977',690,87,260,0,'SR 826','NO
REC',22.648,'s/b 22nd ave under 826 G38',3,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-107',1,'1977',690,87,260,0,'SR 826','NO
REC',22.649,'n/b 22nd ave under 826 G39',1,'NO',1,1,'200200NF4',87260000,'');
INSERT INTO ATTENUATOR VALUES('6-108',1,'1990',690,87,270,0,'SR 9A','NO
REC',2.03,'n/b I-95 to biscayne H20',1,'NO',1,4,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-109',1,'1990',690,87,270,0,'SR 9','NO
REC',2.11,'3rd CT entrance to I-95 s/b and sw 7th st
H6',3,'NO',1,4,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-110',1,'1978',690,87,270,0,'SR 9','NO
REC',2.13,'on ramp miami ave to I-95 n and K651s/b
F24',4,'NO',1,5,'00205405707140421F',87270000,'Model number was
00205405707140421F ');
INSERT INTO ATTENUATOR VALUES('6-111',1,'1978',690,87,270,0,'SR 9','NO
REC',2.18,'I-95 n/b to 2nd st H21',1,'NO',1,4,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-112',1,'1981',690,87,270,0,'SR 9','NO
REC',2.19,'I-95 s/b to biscayne H22',3,'NO',1,5,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-113',1,'1981',690,87,270,0,'SR 9','NO
REC',2.26,'I-95 s/b to 7th st H23',3,'NO',1,4,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-114',1,'1972',690,87,270,0,'SR 9','NO
REC',2.69,'I-95 n/b to 395 e/b H25',1,'NO',1,4,'G209508S8S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-115',1,'1997',690,87,270,0,'SR 9','NO
REC',2.96,'e/b 836 ramp to I-95 s/b G103',3,'NO',1,4,'200200SF8',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-116',1,'1972',690,87,270,0,'SR 9','NO
REC',3.16,'I-95 n/b to 836 w/b
F25',1,'NO',1,5,'00204404718140721F',87270000,'Model number was
00204404718140721F ');
INSERT INTO ATTENUATOR VALUES('6-117',1,'1993',690,87,270,0,'SR 9','NO
REC',3.33,'I-95 s/b exit tp 395 e/b
F26',3,'NO',1,5,'02202407706140321F',87270000,'Model number was
02202407706140321F ');
INSERT INTO ATTENUATOR VALUES('6-118',1,'1993',690,87,270,0,'SR 9','NO
REC',3.53,'I-95 s/b exit to 836
F27',3,'NO',1,4,'04200840015700721E',87270000,'Model number was
420084001570072100E ');
INSERT INTO ATTENUATOR VALUES('6-119',1,'1989',690,87,270,0,'SR 9','NO
REC',3.56,'I-95 n/b @ I-75 HD12',1,'NO',1,4,'209509H7S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-120',1,'1984',690,87,270,0,'SR 9','NO
REC',4.607,'I-95 n/b to 112 G68',1,'NO',1,4,'200200SF6',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-121',1,'1984',690,87,270,0,'SR 9','NO
REC',4.68,'I-95 w/b to 112',1,'NO',1,4,'04202402702140621F',87270000,'Model
number was 04202402702140621F ');
INSERT INTO ATTENUATOR VALUES('6-122',1,'1995',690,87,270,0,'SR 9','NO
REC',5.07,'I-95 s/b to 112 w/b

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F22',3,'NO',1,4,'04202402702140621F',87270000,'Model number was
04202402702140621F ');
INSERT INTO ATTENUATOR VALUES('6-123',1,'1995',690,87,270,0,'SR 9','NO
REC',5.214,'I-95 s/b to I-95 e/b H29',3,'NO',1,4,'209811S6S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-124',1,'1987',690,87,270,0,'SR 9','NO
REC',5.505,'exclusive fly over to 112 w/b
G70',3,'NO',1,5,'200200SF8',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-125',1,'1988',690,87,270,0,'SR 9','NO
REC',6.409,'I-95 s/b to ww625 HD9',3,'NO',1,4,'111400H12S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-126',1,'1988',690,87,270,0,'SR 9','NO
REC',6.632,'on ramp from 69th st to I-95 n/b
HD10',1,'NO',1,4,'111400H12S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-127',1,'1988',690,87,270,0,'SR 9','NO
REC',7.537,'I-95 s/b to 81st st HD11',3,'NO',1,4,'111400H12S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-128',1,'1988',690,87,270,0,'SR 9','NO
REC',10.695,'I-95 n/b to 135th st G98',1,'NO',1,4,'200200SF9',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-129',1,'1984',690,87,270,0,'SR 9','NO
REC',11.036,'I-95 s/b to opalocka blvd
G101',3,'NO',1,4,'200200SF9',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-130',1,'1984',690,87,270,0,'SR 9','NO
REC',11.041,'I-95 n/b @ opalocka blvd on ramp
G102',1,'NO',1,4,'200200SF5',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-131',1,'1984',690,87,270,0,'SR 9','NO
REC',11.696,'I-95 n/b to 151st G97',1,'NO',1,4,'200200SF9',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-132',1,'1984',690,87,270,0,'SR 9','NO
REC',11.827,'151st e/b under I-95 G13',2,'NO',1,1,'W40-59-11
(130)',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-133',1,'1982',690,87,270,0,'SR 9','NO
REC',11.828,'151st w/b under I-95 C12',4,'NO',1,1,'W40-59-12
(118)',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-134',1,'1992',690,87,270,0,'SR 9','NO
REC',12.223,'w/b HOV and w/b turnpike G109',1,'NO',1,5,'200200SF9',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-135',1,'1990',690,87,270,0,'SR 9','NO
REC',12.321,'w/b park and ride and HOV
HD36',1,'NO',1,5,'111400H12S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-136',1,'1990',690,87,270,0,'SR 9','NO
REC',12.813,'441 s/b and e/b 826 G106',3,'NO',1,4,'206206SF3',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-137',1,'1972',690,87,270,0,'SR 9','NO
REC',13.222,'441 and trunpike G107',3,'NO',1,5,'200200SF3',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-138',1,'1976',690,87,270,0,'SR 9','NO
REC',13.336,'turnpike and 826 w/b HD 7',3,'NO',1,4,'111400H12S',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-139',1,'',690,87,270,0,'SR 9','NO
REC',13.777,'s/b to HOV G105',3,'NO',1,5,'200200SF9',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-187',1,'',690,87,270,0,'SR9A','NO
REC',4.53,'CONSTRUCTION ZONE',1,'YES',2,'','UNKNOWN--SAND BARREL',87270000,'');
INSERT INTO ATTENUATOR VALUES('6-140',1,'1989',690,87,281,0,'SR 953','NO
REC',5.525,'n/b 953 to e/b 112
F29',1,'NO',1,4,'04202402700140621E',87281000,'Model number was 0420240270621E
');
INSERT INTO ATTENUATOR VALUES('6-141',1,'1972',691,87,19,0,'SR 817','NO
REC',1.708,'sr817 under sr826 G4',1,'NO',1,1,'200200NF4',87019000,'');
INSERT INTO ATTENUATOR VALUES('6-142',1,'1972',691,87,19,0,'SR 817','NO
REC',1.725,'s/b 817 under sr826 G5',3,'NO',1,1,'200200NF4',87019000,'');
INSERT INTO ATTENUATOR VALUES('6-143',1,'1972',691,87,60,0,'SR A1A','NO
REC',0.217,'under alton rd flyover G67',3,'NO',1,1,'206206SF3',87060000,'');
INSERT INTO ATTENUATOR VALUES('6-144',1,'1991',691,87,75,0,'SR 93','NO
REC',0.001,'826 n/b to I-75 n/b G15',1,'NO',1,5,'200200SF4',87075000,'');
INSERT INTO ATTENUATOR VALUES('6-145',1,'1976',691,87,75,0,'SR 93','NO
REC',0.002,'nw 154th st and n/b 826 G16',1,'NO',1,5,'200200SF4',87075000,'');

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INSERT INTO ATTENUATOR VALUES('6-146',1,'1976',691,87,80,900,'SR 934','NO
REC',33.112,'east 2nd st w/b below metro rail
HD10',4,'NO',1,1,'G209509N4S',87080900,'');
INSERT INTO ATTENUATOR VALUES('6-147',1,'1984',691,87,90,0,'SR 25','NO
REC',10.23,'s/b okeechobee rd under 826
F11',3,'NO',1,1,'00201403702140221F',87090000,'Model number was
00201403702140221F ');
INSERT INTO ATTENUATOR VALUES('6-148',1,'1984',691,87,90,0,'SR 25','NO
REC',10.27,'n/b okeechobee rd at 826
F13',1,'NO',1,2,'00201403702140221F',87090000,'Model number was
00201403702140221F ');
INSERT INTO ATTENUATOR VALUES('6-149',1,'1984',691,87,90,0,'SR 25','NO
REC',10.271,'w/b okeechobee rd under 826
F12',1,'NO',1,1,'00201403702140221F',87090000,'Model number was
00201403702140221F ');
INSERT INTO ATTENUATOR VALUES('6-150',1,'1984',691,87,90,0,'SR 25','NO
REC',11.775,'s/b okeechobee rd NOth of w 19th st
G18',3,'NO',1,1,'200200NF4',87090000,'');
INSERT INTO ATTENUATOR VALUES('6-151',1,'1984',691,87,90,0,'SR 25','NO
REC',11.807,'okeechobee rd n/b NOth of w 19th st
G17',1,'NO',1,1,'200200NF4',87090000,'');
INSERT INTO ATTENUATOR VALUES('6-152',1,'1996',691,87,90,0,'SR 25','NO
REC',12.381,'west 14th st G69',3,'NO',1,2,'200200SF3',87090000,'');
INSERT INTO ATTENUATOR VALUES('6-153',1,'',691,87,170,0,'SR 826','NO
REC',5.474,'east side of intercoastal H28',4,'NO',1,4,'209711S6S',87170000,'');
INSERT INTO ATTENUATOR VALUES('6-154',1,'',691,87,170,0,'SR 826','NO
REC',5.475,'east side of intercoastal H27',4,'NO',1,5,'209508S6S',87170000,'');
INSERT INTO ATTENUATOR VALUES('6-155',1,'1991',691,87,210,0,'SR 856','NO
REC',0.25,'west country club dr under the william lehman bridge sr 856 n/b
G112',3,'NO',1,1,'200200NF3',87210000,'');
INSERT INTO ATTENUATOR VALUES('6-156',1,'1991',691,87,210,0,'SR 856','NO
REC',0.251,'west country club dr under the william lehman bridge sr 856 s/b
G24',1,'NO',1,1,'200200NF3',87210000,'');
INSERT INTO ATTENUATOR VALUES('6-157',1,'1991',691,87,300,0,'SR 924','NO
REC',3.386,'w/b west of toll G73',4,'NO',1,1,'200200SF8',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-158',1,'1991',691,87,300,0,'SR 924','NO
REC',3.561,'e/b toll plaza G74',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-159',1,'1972',691,87,300,0,'SR 924','NO
REC',3.562,'e/b toll plaza G75',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-160',1,'1995',691,87,300,0,'SR 924','NO
REC',3.563,'e/b toll plaza G76',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-161',1,'1984',691,87,300,0,'SR 924','NO
REC',3.564,'e/b toll plaza G77',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-162',1,'1989',691,87,300,0,'SR 924','NO
REC',3.565,'toll plaza e/b G78',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-163',1,'1978',691,87,300,0,'SR 924','NO
REC',3.566,'toll plaza e/b G79',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-164',1,'1988',691,87,300,0,'SR 924','NO
REC',3.567,'toll plaza e/b G80',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-165',1,'1988',691,87,300,0,'SR 924','NO
REC',3.568,'toll plaza e/b G81',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-166',1,'1990',691,87,300,0,'SR 924','NO
REC',3.569,'toll plaza e/b G82',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-167',1,'1990',691,87,300,0,'SR 924','NO
REC',3.57,'toll plaza e/b G83',2,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-168',1,'1979',691,87,300,0,'SR 924','NO
REC',3.571,'toll plaza w/b G84',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-169',1,'1988',691,87,300,0,'SR 924','NO
REC',3.572,'toll plaza w/b G85',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-170',1,'',691,87,300,0,'SR 924','NO
REC',3.573,'toll plaza w/b G86',4,'NO',1,4,'300300SF4',87300000,'');

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INSERT INTO ATTENUATOR VALUES('6-171',1,'',691,87,300,0,'SR 924','NO
REC',3.574,'toll plaza w/b G87',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-172',1,'',691,87,300,0,'SR 924','NO
REC',3.575,'toll plaza w/b G88',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-173',1,'',691,87,300,0,'SR 924','NO
REC',3.576,'toll plaza w/b G89',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-174',1,'',691,87,300,0,'SR 924','NO
REC',3.577,'toll plaza w/b G90',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-175',1,'',691,87,300,0,'SR 924','NO
REC',3.578,'toll plaza w/b G91',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-176',1,'',691,87,300,0,'SR 924','NO
REC',3.579,'toll plaza w/b G92',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-177',1,'',691,87,300,0,'SR 924','NO
REC',3.58,'toll plaza w/b G93',4,'NO',1,4,'300300SF4',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-178',1,'',691,87,300,0,'SR 924','NO
REC',3.746,'east of toll plaza G94 median',2,'NO',1,1,'200200SF8',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-179',1,'',691,87,300,0,'SR 924','NO
REC',4.21,'ramp to lesevne HD 5',2,'NO',1,4,'207711H10S',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-180',1,'',691,87,300,0,'SR 924','NO
REC',4.359,'w/b ramp to lesevne HD 6',4,'NO',1,4,'204507H10S',87300000,'');
INSERT INTO ATTENUATOR VALUES('6-183',1,'1979',692,90,20,0,'SR 5','US
1',3.686,'',3,'NO',1,4,'200200SF5',90020000,'');
INSERT INTO ATTENUATOR VALUES('6-184',1,'1979',692,90,60,0,'SR 5','US
1',33.82,'',3,'NO',1,2,'01201401701140221F',90060000,'Model number was
01201401701140221F ');
INSERT INTO ATTENUATOR VALUES('6-186',1,'1996',692,87,1,0,'SR 618','NO
REC',10.11,'',2,'NO',1,2,'200200NFA',87001000,'Error in model number. ');
INSERT INTO ATTENUATOR VALUES('6-185',1,'1982',692,87,1,0,'SR 618','NO
REC',10.23,'',4,'NO',1,1,'200200NF4',87001000,'');
INSERT INTO ATTENUATOR VALUES('6-181',1,'',692,87,1,0,'SR 618','NO
REC',5.553,'',2,'NO',1,4,'200200SF3T',87001000,'');
INSERT INTO ATTENUATOR VALUES('6-182',1,'',692,87,60,0,'SR 618','NO
REC',3.34,'',2,'NO',1,1,'200200NF5',87060000,'');
INSERT INTO ATTENUATOR VALUES('7-1',1,'',796,10,2,0,'SR 618','NO
REC',1.43,'',3,'NO',1,4,'G111309N9S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-2',1,'',796,10,2,0,'SR 618','NO
REC',2.055,'',3,'NO',1,4,'G210800N7S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-3',1,'',796,10,2,0,'SR 618','NO
REC',5.185,'',2,'NO',1,4,'G111311N8S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-4',1,'',796,10,2,0,'SR 618','NO
REC',5.513,'',4,'NO',1,4,'G209508N8S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-5',1,'',796,10,2,0,'SR 618','NO
REC',5.827,'',4,'NO',1,4,'G209508N8S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-6',1,'',796,10,2,0,'SR 618','NO
REC',7.133,'',4,'NO',1,4,'G2091100N8S',10002000,'');
INSERT INTO ATTENUATOR VALUES('7-7',1,'',796,10,10,0,'SR 43','US
301',21.143,'',1,'NO',1,1,'200200SF4',10010000,'');
INSERT INTO ATTENUATOR VALUES('7-8',1,'',796,10,10,0,'SR 43','US
301',21.174,'',3,'NO',1,1,'200200SF4',10010000,'');
INSERT INTO ATTENUATOR VALUES('7-9',1,'',796,10,40,0,'SR 45','US
41',10.086,'',1,'NO',1,1,'300300SF4',10040000,'');
INSERT INTO ATTENUATOR VALUES('7-10',1,'',796,10,40,0,'SR 45','US
41',10.107,'',3,'NO',1,1,'300300SF4',10040000,'');
INSERT INTO ATTENUATOR VALUES('7-11',1,'',796,10,60,0,'SR 45','US
41',18.715,'',1,'NO',1,1,'200200SF6',10060000,'');
INSERT INTO ATTENUATOR VALUES('7-12',1,'',796,10,60,0,'SR 45','US
41',19.117,'',3,'NO',1,1,'200200SF6',10060000,'');
INSERT INTO ATTENUATOR VALUES('7-13',1,'',796,10,75,0,'SR 93A','I
75',12.309,'',2,'NO',1,1,'00201405702140021',10075000,'Model number was
20140570214 ');

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INSERT INTO ATTENUATOR VALUES('7-14',1,'',796,10,75,0,'SR 93A','I
75',12.31,'',4,'NO',1,1,'00201405702140021',10075000,'Model number was
20140570214 ');
INSERT INTO ATTENUATOR VALUES('7-15',1,'',796,10,75,0,'SR 93A','I
75',12.311,'',2,'NO',1,1,'00201405702140021',10075000,'Model number was
20140570214 ');
INSERT INTO ATTENUATOR VALUES('7-16',1,'',796,10,75,0,'SR 93A','I
75',12.312,'',4,'NO',1,1,'00201405702140021',10075000,'Model number was
20140570214 ');
INSERT INTO ATTENUATOR VALUES('7-17',1,'',796,10,75,0,'SR 93A','I
75',20.082,'',1,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-18',1,'',796,10,75,0,'SR 93A','I
75',20.083,'',3,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-19',1,'',796,10,75,0,'SR 93A','I
75',22.89,'',4,'NO',1,1,'200200SF4',10075000,'');
INSERT INTO ATTENUATOR VALUES('7-20',1,'',796,10,75,0,'SR 93A','I
75',22.9,'',2,'NO',1,1,'200200SF4',10075000,'');
INSERT INTO ATTENUATOR VALUES('7-21',1,'',796,10,75,0,'SR 93A','I
75',26.683,'',1,'NO',1,4,'200200SF6',10075000,'');
INSERT INTO ATTENUATOR VALUES('7-22',1,'',796,10,75,0,'SR 93A','I
75',31.1,'',4,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-23',1,'',796,10,75,0,'SR 93A','I
75',31.11,'',2,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-24',1,'',796,10,75,0,'SR 93A','I
75',31.29,'',3,'NO',1,4,'200200SF4',10075000,'');
INSERT INTO ATTENUATOR VALUES('7-25',1,'',796,10,75,0,'SR 93A','I
75',31.47,'',3,'NO',1,4,'200200SF6',10075000,'');
INSERT INTO ATTENUATOR VALUES('7-26',1,'',796,10,75,0,'SR 93A','I
75',32.23,'',2,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-27',1,'',796,10,75,0,'SR 93A','I
75',32.24,'',4,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-28',1,'',796,10,75,0,'SR 93A','I
75',32.25,'',2,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-29',1,'',796,10,75,0,'SR 93A','I
75',32.251,'',4,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-30',1,'',796,10,75,0,'SR 93A','I
75',36.18,'',1,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-31',1,'',796,10,75,0,'SR 93A','I
75',36.19,'',3,'NO',1,1,'UNKNOWN--ENERGITE',10075000,'Model was previously SAND
CUSHION. ');
INSERT INTO ATTENUATOR VALUES('7-32',1,'',796,10,80,0,'SR 45','USB
41',3.926,'',2,'NO',1,1,'200200SF4',10080000,'');
INSERT INTO ATTENUATOR VALUES('7-33',1,'',796,10,80,0,'SR 45','USB
41',4.072,'',4,'NO',1,1,'200200SF4',10080000,'');
INSERT INTO ATTENUATOR VALUES('7-34',1,'',796,10,110,0,'SR 60','NO
REC',19.885,'',2,'NO',1,5,'200200SF6',10110000,'');
INSERT INTO ATTENUATOR VALUES('7-35',1,'',796,10,110,0,'SR 60','NO
REC',19.95,'',4,'NO',1,5,'200200SF6',10110000,'');
INSERT INTO ATTENUATOR VALUES('7-36',1,'',796,10,120,0,'SR 674','NO
REC',0.504,'',2,'NO',1,1,'200200SF4T',10120000,'');
INSERT INTO ATTENUATOR VALUES('7-37',1,'',796,10,120,0,'SR 674','NO
REC',0.518,'',4,'NO',1,1,'200200SF4T',10120000,'');

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INSERT INTO ATTENUATOR VALUES('7-38',1,'',796,10,130,0,'SR 600','NO
REC',9.208,'',1,'NO',1,1,'200200SF4',10130000,'');
INSERT INTO ATTENUATOR VALUES('7-39',1,'',796,10,130,0,'SR 600','US
92',9.21,'',1,'NO',1,2,'200200SF4',10130000,'');
INSERT INTO ATTENUATOR VALUES('7-40',1,'',796,10,130,0,'SR 600','US
92',9.236,'',3,'NO',1,2,'200200SF4',10130000,'');
INSERT INTO ATTENUATOR VALUES('7-41',1,'',796,10,130,0,'SR 600','US
92',9.238,'',3,'NO',1,1,'200200SF4',10130000,'');
INSERT INTO ATTENUATOR VALUES('7-42',1,'',796,10,140,0,'SR 60','NO
REC',0.288,'',4,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-43',1,'',796,10,140,0,'SR 60','NO
REC',0.438,'',2,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-44',1,'',796,10,140,0,'SR 60','NO
REC',2.287,'',4,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-45',1,'',796,10,140,0,'SR 60','NO
REC',2.424,'',2,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-46',1,'',796,10,140,0,'SR 60','NO
REC',3.497,'',4,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-47',1,'',796,10,140,0,'SR 60','NO
REC',3.624,'',2,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-48',1,'',796,10,140,0,'SR 60','NO
REC',4.301,'',4,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-49',1,'',796,10,140,0,'SR 60','NO
REC',5.225,'',2,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-50',1,'',796,10,140,0,'SR 60','NO
REC',5.745,'',4,'NO',1,1,'200200SF6',10140000,'');
INSERT INTO ATTENUATOR VALUES('7-51',1,'',796,10,160,0,'SR 580','NO
REC',2.779,'',1,'NO',1,1,'200200SF4',10160000,'');
INSERT INTO ATTENUATOR VALUES('7-52',1,'',796,10,160,0,'SR 580','NO
REC',2.828,'',3,'NO',1,1,'200200SF4',10160000,'');
INSERT INTO ATTENUATOR VALUES('7-53',1,'',796,10,190,0,'SR 93','I
4',0.223,'',4,'NO',1,2,'200200SF9',10190000,'Spaces removed from model number. ');
INSERT INTO ATTENUATOR VALUES('7-54',1,'',796,10,190,0,'SR 93','I
4',1.746,'',2,'NO',1,4,'G111400N15S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-55',1,'',796,10,190,0,'SR 93','I
4',3.239,'',1,'NO',1,1,'G111307S6',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-56',1,'',796,10,190,0,'SR 93','I
4',3.24,'',3,'NO',1,1,'G111307S6',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-57',1,'',796,10,190,0,'SR 93','I
4',3.478,'',4,'NO',1,1,'G111307N6S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-58',1,'',796,10,190,0,'SR 93','I
4',3.479,'',2,'NO',1,1,'G111307N6S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-59',1,'',796,10,190,0,'SR 93','I
4',4.105,'',3,'NO',1,2,'200200SF4',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-60',1,'',796,10,190,0,'SR 93','I
4',4.115,'',1,'NO',1,2,'200200SF4',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-61',1,'',796,10,190,0,'SR 93','I
4',6.388,'',2,'NO',1,4,'204610N10S-G',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-62',1,'',796,10,190,0,'SR 93','I
4',6.405,'',2,'NO',1,4,'G2091000N5S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-63',1,'',796,10,190,0,'SR 93','I
4',6.532,'',4,'NO',1,4,'G2091206N8S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-64',1,'',796,10,190,0,'SR 93','I
4',7.155,'',4,'NO',1,4,'G111400N9S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-65',1,'',796,10,190,0,'SR 93','I
4',7.58,'',4,'NO',1,4,'2091300H8S',10190000,'The word HEX-FOAM removed from model
number. ');
INSERT INTO ATTENUATOR VALUES('7-66',1,'',796,10,190,0,'SR 93','I
4',8.25,'',2,'NO',1,4,'330600H9S',10190000,'The word HEX-FOAM removed from model
number. ');

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INSERT INTO ATTENUATOR VALUES('7-67',1,'',796,10,190,0,'SR 93','I
4',13.65,'',2,'NO',1,4,'G111311N8S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-68',1,'',796,10,190,0,'SR 93','I
4',14.15,'',4,'NO',1,4,'G111311N8S',10190000,'');
INSERT INTO ATTENUATOR VALUES('7-69',1,'',796,10,270,0,'SR 60','NO
REC',1.147,'',1,'NO',1,5,'G209508N8S',10270000,'');
INSERT INTO ATTENUATOR VALUES('7-70',1,'',796,10,270,2,'SR 60','NO
REC',0.229,'',2,'NO',1,2,'200200SF4',10270002,'');
INSERT INTO ATTENUATOR VALUES('7-71',1,'',796,10,270,2,'SR 60','NO
REC',0.334,'',2,'NO',1,1,'200200SF4',10270002,'');
INSERT INTO ATTENUATOR VALUES('7-72',1,'',796,10,270,2,'SR 60','NO
REC',0.346,'',2,'NO',1,2,'200200SF4',10270002,'');
INSERT INTO ATTENUATOR VALUES('7-73',1,'',796,10,270,2,'SR 60','NO
REC',0.351,'',4,'NO',1,2,'200200SF4',10270002,'');
INSERT INTO ATTENUATOR VALUES('7-74',1,'',796,10,270,2,'SR 60','NO
REC',0.367,'',4,'NO',1,1,'200200SF4',10270002,'');
INSERT INTO ATTENUATOR VALUES('7-75',1,'',796,10,290,0,'SR 582','NO
REC',0.683,'',2,'NO',1,1,'300300SF3T',10290000,'');
INSERT INTO ATTENUATOR VALUES('7-76',1,'',796,10,290,0,'SR 582','NO
REC',0.693,'',4,'NO',1,1,'300300SF3T',10290000,'');
INSERT INTO ATTENUATOR VALUES('7-77',1,'',796,10,320,0,'SR 93','I
275',0.475,'',3,'NO',1,4,'G204510N10S',10320000,'');
INSERT INTO ATTENUATOR VALUES('7-78',1,'',796,10,340,0,'SR 574','NO
REC',7.39,'',4,'NO',1,1,'MOD-5',10340000,'Insufficient model number.');
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INSERT INTO ATTENUATOR VALUES('7-79',1,'',796,10,340,0,'SR 574','NO
REC',7.42,'',2,'NO',1,1,'MOD-5',10340000,'Insufficient model number.');
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INSERT INTO ATTENUATOR VALUES('7-80',1,'',798,8,150,0,'SR 93','I
75',7.052,'',2,'NO',1,1,'200200SF5',8150000,'');
INSERT INTO ATTENUATOR VALUES('7-81',1,'',798,8,150,0,'SR 93','I
75',7.052,'',4,'NO',1,1,'200200SF5',8150000,'');
INSERT INTO ATTENUATOR VALUES('7-82',1,'',798,14,140,0,'SR 93A','I
75',5.113,'',2,'NO',1,1,'111308H7SB',14140000,'');
INSERT INTO ATTENUATOR VALUES('7-83',1,'',798,14,140,0,'SR 93A','I
75',5.123,'',4,'NO',1,1,'300300SF5',14140000,'');
INSERT INTO ATTENUATOR VALUES('7-84',1,'',798,14,140,0,'SR 93A','I
75',5.125,'',2,'NO',1,1,'300300SF5',14140000,'');
INSERT INTO ATTENUATOR VALUES('7-85',1,'',798,14,140,0,'SR 93A','I
75',5.135,'',4,'NO',1,1,'111308H7SB',14140000,'');
INSERT INTO ATTENUATOR VALUES('7-86',1,'',799,15,3,0,'SR 594','I
175',0.316,'',1,'NO',1,5,'M111308H7S',15003000,'');
INSERT INTO ATTENUATOR VALUES('7-87',1,'',799,15,30,0,'SR 686','NO
REC',5.429,'',2,'NO',1,1,'200200SF4',15030000,'');
INSERT INTO ATTENUATOR VALUES('7-88',1,'',799,15,30,0,'SR 686','NO
REC',6.079,'',4,'NO',1,1,'200200SF4',15030000,'');
INSERT INTO ATTENUATOR VALUES('7-89',1,'',799,15,40,0,'SR 60','NO
REC',6.383,'',2,'NO',1,1,'200200S6',15040000,'');
INSERT INTO ATTENUATOR VALUES('7-90',1,'',799,15,40,0,'SR 60','NO
REC',8.064,'',4,'NO',1,1,'200200S6',15040000,'');
INSERT INTO ATTENUATOR VALUES('7-91',1,'',799,15,40,0,'SR 60','NO
REC',8.212,'',2,'NO',1,1,'200200S6',15040000,'');
INSERT INTO ATTENUATOR VALUES('7-92',1,'',799,15,100,0,'SR 686','NO
REC',9.292,'',1,'NO',1,1,'206206SF4',15100000,'');
INSERT INTO ATTENUATOR VALUES('7-93',1,'',799,15,100,0,'SR 666','NO
REC',9.35,'',3,'NO',1,1,'200200SF4',15100000,'');
INSERT INTO ATTENUATOR VALUES('7-94',1,'',799,15,120,0,'SR 688','NO
REC',11.46,'',2,'NO',1,1,'304304NF7G',15120000,'');
INSERT INTO ATTENUATOR VALUES('7-95',1,'',799,15,120,0,'SR 688','NO
REC',11.475,'',4,'NO',1,1,'207207NF7G',15120000,'');
INSERT INTO ATTENUATOR VALUES('7-96',1,'',799,15,150,0,'SR 55','US
19',6.96,'',1,'NO',1,1,'200200SF3',15150000,'');
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INSERT INTO ATTENUATOR VALUES('7-97',1,'',799,15,150,0,'SR 55','US
19',7.285,'',3,'NO',1,1,'200200SF3',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-98',1,'',799,15,150,0,'SR 55','US
19',12.676,'',1,'NO',1,1,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-99',1,'',799,15,150,0,'SR 55','US
19',12.773,'',1,'NO',1,4,'200200SF5',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-100',1,'',799,15,150,0,'SR 55','US
19',13.266,'',3,'NO',1,5,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-101',1,'',799,15,150,0,'SR 55','US
19',13.865,'',3,'NO',1,5,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-102',1,'',799,15,150,0,'SR 55','US
19',14.172,'',3,'NO',1,4,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-103',1,'',799,15,150,0,'SR 55','US
19',17.882,'',1,'NO',1,1,'300300SF5T',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-104',1,'',799,15,150,0,'SR 55','US
19',17.883,'',3,'NO',1,1,'300300SF5T',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-105',1,'',799,15,150,0,'SR 55','US
19',17.997,'',1,'NO',1,4,'300300SF5T',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-106',1,'',799,15,150,0,'SR 55','US
19',18.003,'',1,'NO',1,1,'200200SF5T',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-107',1,'',799,15,150,0,'SR 55','US
19',18.455,'',3,'NO',1,5,'300300SF5T',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-108',1,'',799,15,150,0,'SR 55','US
19',18.705,'',3,'NO',1,1,'206206S5',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-109',1,'',799,15,150,0,'SR 55','US
19',21.76,'',1,'NO',1,1,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-110',1,'',799,15,150,0,'SR 55','US
19',21.93,'',1,'NO',1,4,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-111',1,'',799,15,150,0,'SR 55','US
19',22.259,'',1,'NO',1,4,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-112',1,'',799,15,150,0,'SR 55','US
19',22.645,'',3,'NO',1,4,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-113',1,'',799,15,150,0,'SR 55','US
19',22.961,'',3,'NO',1,1,'200200SF6',15150000,'');
INSERT INTO ATTENUATOR VALUES('7-114',1,'',799,15,170,0,'SR 93','I
275',4.426,'',3,'NO',1,1,'200200SF6',15170000,'');
INSERT INTO ATTENUATOR VALUES('7-115',1,'',799,15,170,0,'SR 93','I
275',8.42,'',1,'NO',1,1,'206206SF5',15170000,'');
INSERT INTO ATTENUATOR VALUES('7-116',1,'',799,15,190,0,'SR 93','I
275',2.555,'',2,'NO',1,1,'200200SF3',15190000,'');
INSERT INTO ATTENUATOR VALUES('7-117',1,'',799,15,190,0,'SR 93','I
275',2.555,'',4,'NO',1,1,'200200SF3',15190000,'');
INSERT INTO ATTENUATOR VALUES('7-118',1,'',799,15,190,0,'SR 93','I
275',14.519,'',3,'NO',1,5,'G111400N7S',15190000,'');
INSERT INTO ATTENUATOR VALUES('7-119',1,'',799,15,190,0,'SR 93','I
275',5.049,'',1,'NO',1,4,'M111308H7S',15190000,'');
INSERT INTO ATTENUATOR VALUES('7-120',1,'',799,15,190,900,'SR 93','I
275',0.1,'',1,'NO',1,1,'UNKNOWN--ENERGITE',15190900,'Model was previously SAND
CUSHION.');
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INSERT INTO ATTENUATOR VALUES('7-121',1,'',799,15,190,900,'SR 93','I
275',0.637,'',3,'NO',1,4,'200200S5',15190900,'');
INSERT INTO ATTENUATOR VALUES('7-122',1,'',799,15,190,900,'SR 93','I
275',0.966,'',1,'NO',1,5,'200200S5',15190900,'');
INSERT INTO ATTENUATOR VALUES('7-123',1,'',799,15,190,0,'SR 93','I
275',14.037,'CONSTRUCTION ZONE',3,'YES',1,2,'UNKNOWN--SAND BARREL',15190000,'');
INSERT INTO ATTENUATOR VALUES('8-1',1,'',853,10,470,0,'SR 200','NO
REC',1.975,'',1,'NO',1,4,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-2',1,'',853,10,470,0,'SR 200','NO
REC',2.389,'',1,'NO',1,4,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-3',1,'',853,10,470,0,'SR 200','NO
REC',2.685,'',3,'NO',1,2,'200200SF6',10470000,'');
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[illegible]

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INSERT INTO ATTENUATOR VALUES('8-34',1,'',853,10,470,0,'SR 589','NO
REC',9.141,'',1,'NO',1,4,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-35',1,'',853,10,470,0,'SR 589','NO
REC',9.426,'',3,'NO',1,4,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-36',1,'',853,10,470,0,'SR 589','NO
REC',10.245,'',3,'NO',1,4,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-37',1,'',853,10,470,0,'SR 589','NO
REC',11.098,'',1,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-38',1,'',853,10,470,0,'SR 589','NO
REC',11.099,'',1,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-39',1,'',853,10,470,0,'SR 589','NO
REC',11.1,'',1,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-40',1,'',853,10,470,0,'SR 589','NO
REC',11.101,'',1,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-41',1,'',853,10,470,0,'SR 589','NO
REC',11.104,'',3,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-42',1,'',853,10,470,0,'SR 589','NO
REC',11.105,'',3,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-43',1,'',853,10,470,0,'SR 589','NO
REC',11.106,'',3,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-44',1,'',853,10,470,0,'SR 589','NO
REC',11.107,'',3,'NO',1,1,'200200SF6',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-45',1,'',853,10,470,0,'SR 589','NO
REC',12,'',4,'NO',1,1,'300300SF4',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-46',1,'',853,10,470,0,'SR 589','NO
REC',12,'',2,'NO',1,1,'300300SF4',10470000,'');
INSERT INTO ATTENUATOR VALUES('8-47',1,'',853,10,470,8,'SR 589','NO
REC',0.179,'',1,'NO',1,1,'209509H7S',10470008,'');
INSERT INTO ATTENUATOR VALUES('8-48',1,'',853,10,470,9,'SR 589','NO
REC',0.005,'',3,'NO',1,1,'200200SF6',10470009,'');
INSERT INTO ATTENUATOR VALUES('8-49',1,'',853,10,470,9,'SR 589','NO
REC',0.049,'',3,'NO',1,1,'209509H7S',10470009,'');
INSERT INTO ATTENUATOR VALUES('8-50',1,'',853,10,470,12,'SR 589','NO
REC',0.125,'',3,'NO',1,1,'209509H7S',10470012,'');
INSERT INTO ATTENUATOR VALUES('8-51',1,'',853,10,470,12,'SR 589','NO
REC',0.126,'',3,'NO',1,1,'209509H7S',10470012,'');
INSERT INTO ATTENUATOR VALUES('8-52',1,'',853,10,470,13,'SR 589','NO
REC',0.138,'',1,'NO',1,1,'209509H7S',10470013,'');
INSERT INTO ATTENUATOR VALUES('8-53',1,'',853,10,470,13,'SR 589','NO
REC',0.139,'',1,'NO',1,1,'209509H7S',10470013,'');
INSERT INTO ATTENUATOR VALUES('8-54',1,'',853,10,470,16,'SR 589','NO
REC',0.002,'',1,'NO',1,4,'300300SF6',10470016,'');
INSERT INTO ATTENUATOR VALUES('8-55',1,'',853,10,470,16,'SR 589','NO
REC',0.057,'',1,'NO',1,1,'200200SF6',10470016,'');
INSERT INTO ATTENUATOR VALUES('8-56',1,'',853,10,470,16,'SR 589','NO
REC',0.35,'',3,'NO',1,1,'200200SF6',10470016,'');
INSERT INTO ATTENUATOR VALUES('8-57',1,'',853,10,470,19,'SR 589','NO
REC',0.108,'',1,'NO',1,1,'209509H7S',10470019,'');
INSERT INTO ATTENUATOR VALUES('8-58',1,'',853,10,470,20,'SR 589','NO
REC',0.065,'',1,'NO',1,1,'209509H7S',10470020,'');
INSERT INTO ATTENUATOR VALUES('8-59',1,'',853,10,470,23,'SR 589','NO
REC',0.091,'',3,'NO',1,1,'209509H7S',10470023,'');
INSERT INTO ATTENUATOR VALUES('8-60',1,'',853,10,470,24,'SR 589','NO
REC',0.107,'',1,'NO',1,1,'209509H7S',10470024,'');
INSERT INTO ATTENUATOR VALUES('8-61',1,'',853,11,470,0,'SR 589','NO
REC',14.3,'',1,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-62',1,'',853,11,470,0,'SR 589','NO
REC',14.301,'',1,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-63',1,'',853,11,470,0,'SR 589','NO
REC',14.302,'',1,'NO',1,1,'200200SF8',11470000,'');

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INSERT INTO ATTENUATOR VALUES('8-64',1,'',853,11,470,0,'SR 589','NO
REC',14.303,'',1,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-65',1,'',853,11,470,0,'SR 91','NO
REC',14.304,'',1,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-66',1,'',853,11,470,0,'SR 91','NO
REC',14.305,'',1,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-67',1,'',853,11,470,0,'SR 91','NO
REC',14.312,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-68',1,'',853,11,470,0,'SR 91','NO
REC',14.313,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-69',1,'',853,11,470,0,'SR 91','NO
REC',14.314,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-70',1,'',853,11,470,0,'SR 91','NO
REC',14.315,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-71',1,'',853,11,470,0,'SR 91','NO
REC',14.316,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-72',1,'',853,11,470,0,'SR 91','NO
REC',14.317,'',3,'NO',1,1,'200200SF8',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-73',1,'',853,11,470,0,'SR 91','NO
REC',14.8,'',3,'NO',1,1,'200200SF4',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-74',1,'',853,11,470,0,'SR 91','NO
REC',14.8,'',1,'NO',1,1,'200200SF4',11470000,'');
INSERT INTO ATTENUATOR VALUES('8-75',1,'',853,11,470,24,'NO REC','NO
REC',0.3,'',2,'NO',1,1,'200200SF4',11470024,'');
INSERT INTO ATTENUATOR VALUES('8-76',1,'',853,11,470,24,'NO REC','NO
REC',0.301,'',2,'NO',1,1,'200200SF4',11470024,'');
INSERT INTO ATTENUATOR VALUES('8-77',1,'',853,11,470,24,'NO REC','NO
REC',0.302,'',2,'NO',1,1,'200200SF4',11470024,'');
INSERT INTO ATTENUATOR VALUES('8-78',1,'',853,11,470,27,'NO REC','NO
REC',0.639,'',4,'NO',1,1,'200200SF4',11470027,'');
INSERT INTO ATTENUATOR VALUES('8-79',1,'',853,11,470,27,'NO REC','NO
REC',0.64,'',4,'NO',1,1,'200200SF4',11470027,'');
INSERT INTO ATTENUATOR VALUES('8-80',1,'',853,11,470,27,'NO REC','NO
REC',0.641,'',4,'NO',1,1,'200200SF4',11470027,'');
INSERT INTO ATTENUATOR VALUES('8-81',1,'',853,11,470,40,'NO REC','NO
REC',0.245,'',3,'NO',1,1,'200200SF4',11470040,'');
INSERT INTO ATTENUATOR VALUES('8-82',1,'',853,11,470,41,'NO REC','NO
REC',0.175,'',1,'NO',1,1,'200200SF4',11470041,'');
INSERT INTO ATTENUATOR VALUES('8-83',1,'',853,18,470,0,'SR 91','NO
REC',7.242,'',3,'NO',1,1,'200200SF5',18470000,'');
INSERT INTO ATTENUATOR VALUES('8-84',1,'',853,18,470,0,'SR 91','NO
REC',7.242,'',1,'NO',1,1,'200200SF5',18470000,'');
INSERT INTO ATTENUATOR VALUES('8-85',1,'',853,18,470,0,'SR 91','NO
REC',7.531,'',3,'NO',1,4,'111307H6S',18470000,'');
INSERT INTO ATTENUATOR VALUES('8-86',1,'',853,75,470,0,'SR 91','NO
REC',1.416,'',3,'NO',1,1,'200200SF9',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-87',1,'',853,75,470,0,'SR 91','NO
REC',1.476,'',1,'NO',1,1,'200200SF9',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-88',1,'',853,75,470,0,'SR 91','NO
REC',8.228,'',3,'NO',1,1,'200200SF10',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-89',1,'',853,75,470,0,'SR 91','NO
REC',8.288,'',1,'NO',1,1,'200200SF10',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-90',1,'',853,75,470,0,'SR 91','NO
REC',11.71,'',3,'NO',1,1,'200200SF10',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-91',1,'',853,75,470,0,'SR 91','NO
REC',11.77,'',1,'NO',1,1,'200200SF10',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-92',1,'',853,75,470,0,'SR 91','NO
REC',13.13,'',1,'NO',1,1,'200200SF8',75470000,'');
INSERT INTO ATTENUATOR VALUES('8-93',1,'',853,75,470,0,'SR 91','NO
REC',13.19,'',3,'NO',1,1,'200200SF8',75470000,'');

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INSERT INTO ATTENUATOR VALUES ('8-94',1,'',853,75,470,0,'SR 91','NO
REC',22.54,'',4,'NO',1,1,'200200SF6',75470000,'');
INSERT INTO ATTENUATOR VALUES ('8-95',1,'',853,75,470,0,'SR 91','NO
REC',22.54,'',2,'NO',1,1,'200200SF6',75470000,'');
INSERT INTO ATTENUATOR VALUES ('8-96',1,'',853,75,470,111,'NO REC','NO
REC',0.127,'',3,'NO',1,1,'200200SF4',75470111,'');
INSERT INTO ATTENUATOR VALUES ('8-97',1,'',853,75,470,111,'NO REC','NO
REC',0.128,'',3,'NO',1,1,'200200SF4',75470111,'');
INSERT INTO ATTENUATOR VALUES ('8-98',1,'',853,75,470,112,'NO REC','NO
REC',0.235,'',1,'NO',1,1,'200200SF4',75470112,'');
INSERT INTO ATTENUATOR VALUES ('8-100',1,'',853,75,470,143,'NO REC','NO
REC',0.195,'',3,'NO',1,1,'200200SF4',75470143,'');
INSERT INTO ATTENUATOR VALUES ('8-101',1,'',853,75,470,145,'NO REC','NO
REC',0.524,'',1,'NO',1,1,'200200SF4',75470145,'');
INSERT INTO ATTENUATOR VALUES ('8-102',1,'',853,75,470,145,'NO REC','NO
REC',0.525,'',2,'NO',1,1,'200200SF4',75470145,'');
INSERT INTO ATTENUATOR VALUES ('8-106',1,'',853,75,471,0,'SR 528','NO
REC',3.083,'',2,'NO',1,1,'200200SF9',75471000,'');
INSERT INTO ATTENUATOR VALUES ('8-107',1,'',853,75,471,0,'SR 528','NO
REC',3.1,'',3,'NO',1,1,'200200SF5',75471000,'');
INSERT INTO ATTENUATOR VALUES ('8-108',1,'',853,75,471,0,'SR 528','NO
REC',3.1,'',1,'NO',1,1,'200200SF5',75471000,'');
INSERT INTO ATTENUATOR VALUES ('8-109',1,'',853,75,471,0,'SR 528','NO
REC',3.125,'',2,'NO',1,4,'UNKNOWN--ENERGITE',75471000,'Model was previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-128',1,'',853,75,471,0,'SR 528','NO
REC',3.144,'',2,'NO',1,4,'UNKNOWN--ENERGITE',75471000,'Model was previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-129',1,'',853,75,471,0,'SR 528','NO
REC',3.145,'',2,'NO',1,4,'UNKNOWN--ENERGITE',75471000,'Model was previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-130',1,'',853,75,471,0,'SR 528','NO
REC',3.146,'',2,'NO',1,4,'UNKNOWN--ENERGITE',75471000,'Model was previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-131',1,'',853,75,471,0,'SR 528','NO
REC',3.147,'',2,'NO',1,4,'UNKNOWN--ENERGITE',75471000,'Model was previously 0.');
```

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INSERT INTO ATTENUATOR VALUES('8-132',1,'',853,75,471,0,'SR 528','NO
REC',3.15,'',4,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-133',1,'',853,75,471,0,'SR 528','NO
REC',4.258,'',2,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-134',1,'',853,75,471,0,'SR 528','NO
REC',4.326,'',4,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-135',1,'',853,75,471,0,'SR 528','NO
REC',4.503,'',2,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-136',1,'',853,75,471,0,'SR 528','NO
REC',4.596,'',4,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-137',1,'',853,75,471,0,'SR 528','NO
REC',4.935,'',2,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-138',1,'',853,75,471,0,'SR 528','NO
REC',4.99,'',4,'NO',1,1,'200200SF9',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-139',1,'',853,75,471,0,'SR 528','NO
REC',6.221,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-140',1,'',853,75,471,0,'SR 528','NO
REC',6.222,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-141',1,'',853,75,471,0,'SR 528','NO
REC',6.223,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-142',1,'',853,75,471,0,'SR 528','NO
REC',6.224,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-143',1,'',853,75,471,0,'SR 528','NO
REC',6.225,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-144',1,'',853,75,471,0,'SR 528','NO
REC',6.226,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-145',1,'',853,75,471,0,'SR 528','NO
REC',6.227,'',2,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-146',1,'',853,75,471,0,'SR 528','NO
REC',6.234,'',4,'NO',1,1,'200200SF8',75471000,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-147',1,'',853,75,471,0,'SR 528','NO
REC',6.235,'',4,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-148',1,'',853,75,471,0,'SR 528','NO
REC',6.236,'',4,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-149',1,'',853,75,471,0,'SR 528','NO
REC',6.237,'',4,'NO',1,1,'200200SF8',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-150',1,'',853,75,471,0,'SR 528','NO
REC',6.238,'',4,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-151',1,'',853,75,471,0,'SR 528','NO
REC',6.239,'',4,'NO',1,1,'200200SF8',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-152',1,'',853,75,471,0,'SR 528','NO
REC',6.24,'',4,'NO',1,1,'200200SF8',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-153',1,'',853,75,471,0,'SR 528','NO
REC',7.018,'',2,'NO',1,1,'200200SF9',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-154',1,'',853,75,471,0,'SR 528','NO
REC',7.18,'',3,'NO',1,1,'200200SF4',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-155',1,'',853,75,471,0,'SR 528','NO
REC',7.181,'',1,'NO',1,1,'300600W',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-156',1,'',853,75,471,0,'SR 528','NO
REC',8,'',1,'NO',1,1,'200200SF4',75471000,'');
```

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INSERT INTO ATTENUATOR VALUES('8-157',1,'',853,75,471,0,'SR 528','NO
REC',8.001,'',3,'NO',1,1,'200200SF4',75471000,'');
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INSERT INTO ATTENUATOR VALUES('8-158',1,'',853,77,470,0,'SR 417','NO
REC',3.95,'',4,'NO',1,1,'200200SF7',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-159',1,'',853,77,470,0,'SR 417','NO
REC',3.95,'',2,'NO',1,1,'200200SF7',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-160',1,'',853,77,470,0,'SR 417','NO
REC',9.982,'',1,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-161',1,'',853,77,470,0,'SR 417','NO
REC',9.983,'',1,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-162',1,'',853,77,470,0,'SR 417','NO
REC',9.984,'',1,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-163',1,'',853,77,470,0,'SR 417','NO
REC',9.985,'',1,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-164',1,'',853,77,470,0,'SR 417','NO
REC',9.986,'',1,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-165',1,'',853,77,470,0,'SR 417','NO
REC',9.994,'',3,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-166',1,'',853,77,470,0,'SR 417','NO
REC',9.995,'',3,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-167',1,'',853,77,470,0,'SR 417','NO
REC',9.996,'',3,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-168',1,'',853,77,470,0,'SR 417','NO
REC',9.997,'',3,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-169',1,'',853,77,470,0,'SR 417','NO
REC',9.998,'',3,'NO',1,1,'200200SF8',77470000,'');
INSERT INTO ATTENUATOR VALUES('8-170',1,'',853,77,470,1,'NO REC','NO
REC',0.176,'',1,'NO',1,1,'200200SF4',77470001,'');
INSERT INTO ATTENUATOR VALUES('8-171',1,'',853,77,470,2,'NO REC','NO
REC',0.087,'',3,'NO',1,1,'200200SF4',77470002,'');
INSERT INTO ATTENUATOR VALUES('8-172',1,'',853,77,470,5,'NO REC','NO
REC',0.24,'',1,'NO',1,1,'200200SF4',77470005,'');
INSERT INTO ATTENUATOR VALUES('8-173',1,'',853,77,470,6,'NO REC','NO
REC',0.108,'',1,'NO',1,1,'200200SF4',77470006,'');
INSERT INTO ATTENUATOR VALUES('8-174',1,'',853,77,470,7,'NO REC','NO
REC',0.115,'',3,'NO',1,1,'200200SF4',77470007,'');
INSERT INTO ATTENUATOR VALUES('8-175',1,'',853,77,470,10,'NO REC','NO
REC',0.159,'',3,'NO',1,1,'200200SF4',77470010,'');
INSERT INTO ATTENUATOR VALUES('8-176',1,'',853,77,470,11,'NO REC','NO
REC',0.147,'',1,'NO',1,1,'200200SF4',77470011,'');
INSERT INTO ATTENUATOR VALUES('8-177',1,'',853,86,470,0,'SR 91','NO
REC',0.35,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-178',1,'',853,86,470,0,'SR 91','NO
REC',0.351,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-179',1,'',853,86,470,0,'SR 91','NO
REC',0.92,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-180',1,'',853,86,470,0,'SR 91','NO
REC',0.921,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-181',1,'',853,86,470,0,'SR 91','NO
REC',1.9,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-182',1,'',853,86,470,0,'SR 91','NO
REC',1.901,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-183',1,'',853,86,470,0,'SR 91','NO
REC',2.92,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-184',1,'',853,86,470,0,'SR 91','NO
REC',2.921,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-185',1,'',853,86,470,0,'SR 91','NO
REC',4.82,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-186',1,'',853,86,470,0,'SR 91','NO
REC',4.821,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-187',1,'',853,86,470,0,'SR 91','NO
REC',5.8,'',3,'NO',1,1,'200200SF5',86470000,'');

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INSERT INTO ATTENUATOR VALUES('8-188',1,'',853,86,470,0,'SR 91','NO
REC',5.801,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-189',1,'',853,86,470,0,'SR 91','NO
REC',6.76,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-190',1,'',853,86,470,0,'SR 91','NO
REC',6.761,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-191',1,'',853,86,470,0,'SR 91','NO
REC',7.71,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-192',1,'',853,86,470,0,'SR 91','NO
REC',7.711,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-193',1,'',853,86,470,0,'SR 91','NO
REC',7.842,'',1,'NO',1,4,'206206SF12',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-194',1,'',853,86,470,0,'SR 91','NO
REC',8.48,'',3,'NO',1,1,'200200SF12',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-195',1,'',853,86,470,0,'SR 91','NO
REC',8.481,'',1,'NO',1,1,'200200SF12',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-196',1,'',853,86,470,0,'SR 91','NO
REC',9.71,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-197',1,'',853,86,470,0,'SR 91','NO
REC',9.711,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-198',1,'',853,86,470,0,'SR 91','NO
REC',10.78,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-199',1,'',853,86,470,0,'SR 91','NO
REC',10.781,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-200',1,'',853,86,470,0,'SR 91','NO
REC',11.78,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-201',1,'',853,86,470,0,'SR 91','NO
REC',11.781,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-202',1,'',853,86,470,0,'SR 91','NO
REC',12.49,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-203',1,'',853,86,470,0,'SR 91','NO
REC',12.491,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-204',1,'',853,86,470,0,'SR 91','NO
REC',14.61,'',3,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-205',1,'',853,86,470,0,'SR 91','NO
REC',14.611,'',1,'NO',1,1,'200200SF5',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-206',1,'',853,86,470,0,'SR 91','NO
REC',16.895,'',3,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-207',1,'',853,86,470,0,'SR 91','NO
REC',16.995,'',1,'NO',1,2,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-208',1,'',853,86,470,0,'SR 91','NO
REC',17.023,'',1,'NO',1,2,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-209',1,'',853,86,470,0,'SR 91','NO
REC',17.035,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-210',1,'',853,86,470,0,'SR 91','NO
REC',17.036,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-211',1,'',853,86,470,0,'SR 91','NO
REC',17.037,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-212',1,'',853,86,470,0,'SR 91','NO
REC',17.038,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-213',1,'',853,86,470,0,'SR 91','NO
REC',17.039,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-214',1,'',853,86,470,0,'SR 91','NO
REC',17.04,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-215',1,'',853,86,470,0,'SR 91','NO
REC',17.041,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-216',1,'',853,86,470,0,'SR 91','NO
REC',17.042,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-217',1,'',853,86,470,0,'SR 91','NO
REC',17.043,'',1,'NO',1,1,'111307H6S',86470000,'');

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INSERT INTO ATTENUATOR VALUES('8-218',1,'',853,86,470,0,'SR 91','NO
REC',17.044,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-219',1,'',853,86,470,0,'SR 91','NO
REC',17.045,'',1,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-220',1,'',853,86,470,0,'SR 91','NO
REC',17.052,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-221',1,'',853,86,470,0,'SR 91','NO
REC',17.053,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-222',1,'',853,86,470,0,'SR 91','NO
REC',17.054,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-223',1,'',853,86,470,0,'SR 91','NO
REC',17.055,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-224',1,'',853,86,470,0,'SR 91','NO
REC',17.056,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-225',1,'',853,86,470,0,'SR 91','NO
REC',17.057,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-226',1,'',853,86,470,0,'SR 91','NO
REC',17.058,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-227',1,'',853,86,470,0,'SR 91','NO
REC',17.059,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-228',1,'',853,86,470,0,'SR 91','NO
REC',17.06,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-229',1,'',853,86,470,0,'SR 91','NO
REC',17.061,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-230',1,'',853,86,470,0,'SR 91','NO
REC',17.062,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-231',1,'',853,86,470,0,'SR 91','NO
REC',17.063,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-232',1,'',853,86,470,0,'SR 91','NO
REC',17.064,'',3,'NO',1,1,'111307H6S',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-233',1,'',853,86,470,0,'SR 91','NO
REC',17.206,'',1,'NO',1,1,'200200SF6',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-234',1,'',853,86,470,0,'SR 91','NO
REC',19.55,'',3,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-235',1,'',853,86,470,0,'SR 91','NO
REC',19.551,'',1,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-236',1,'',853,86,470,0,'SR 91','NO
REC',20.832,'',3,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-237',1,'',853,86,470,0,'SR 91','NO
REC',20.833,'',1,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-238',1,'',853,86,470,0,'SR 91','NO
REC',22.525,'',3,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-239',1,'',853,86,470,0,'SR 91','NO
REC',22.526,'',1,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-240',1,'',853,86,470,0,'SR 91','NO
REC',23.398,'',3,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-241',1,'',853,86,470,0,'SR 91','NO
REC',23.399,'',1,'NO',1,1,'206206SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-242',1,'',853,86,470,0,'SR 91','NO
REC',25.338,'',3,'NO',1,1,'200200SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-243',1,'',853,86,470,0,'SR 91','NO
REC',25.339,'',1,'NO',1,1,'200200SF9',86470000,'');
INSERT INTO ATTENUATOR VALUES('8-244',1,'',853,86,470,138,'SR 91','NO
REC',0.15,'',3,'NO',1,1,'206206SF4',86470138,'Model number changed from 206205SF4
to 206206SF4.');
```

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INSERT INTO ATTENUATOR VALUES('8-245',1,'',853,86,470,138,'SR 91','NO
REC',0.151,'',3,'NO',1,1,'206206SF4',86470138,'Model number changed from
206205SF4 to 206206SF4.');
```

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INSERT INTO ATTENUATOR VALUES('8-246',1,'',853,86,471,0,'SR 821','NO
REC',6.71,'',1,'NO',1,1,'111307H6S',86471000,'');
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INSERT INTO ATTENUATOR VALUES('8-247',1,'',853,86,471,0,'SR 821','NO
REC',6.711,'',1,'NO',1,1,'111307HS6',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-248',1,'',853,86,471,0,'SR 821','NO
REC',6.712,'',1,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-249',1,'',853,86,471,0,'SR 821','NO
REC',6.713,'',1,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-250',1,'',853,86,471,0,'SR 821','NO
REC',6.728,'',3,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-251',1,'',853,86,471,0,'SR 821','NO
REC',6.729,'',3,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-252',1,'',853,86,471,0,'SR 821','NO
REC',6.73,'',3,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-253',1,'',853,86,471,0,'SR 821','NO
REC',6.731,'',3,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-254',1,'',853,86,471,0,'SR 821','NO
REC',6.735,'',3,'NO',1,1,'111307H6S',86471000,'');
INSERT INTO ATTENUATOR VALUES('8-255',1,'',853,86,471,0,'SR 821','NO
REC',6.987,'',1,'NO',1,1,'UNKNOWN--ENERGITE',86471000,'Model number was
previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-256',1,'',853,86,471,0,'SR 821','NO
REC',6.988,'',1,'NO',1,1,'UNKNOWN--ENERGITE',86471000,'Model number was
previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-257',1,'',853,86,471,0,'SR 821','NO
REC',6.989,'',1,'NO',1,1,'UNKNOWN--ENERGITE',86471000,'Model number was
previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-258',1,'',853,86,471,0,'SR 821','NO
REC',6.99,'',1,'NO',1,1,'UNKNOWN--ENERGITE',86471000,'Model number was previously
0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-259',1,'',853,86,471,0,'SR 821','NO
REC',6.991,'',1,'NO',1,1,'UNKNOWN--ENERGITE',86471000,'Model number was
previously 0.');
```

```

INSERT INTO ATTENUATOR VALUES('8-260',1,'',853,86,471,72,'SR 821','NO
REC',0.261,'',1,'NO',1,1,'111307H6S',86471072,'');
INSERT INTO ATTENUATOR VALUES('8-261',1,'',853,86,471,72,'SR 821','NO
REC',0.262,'',1,'NO',1,1,'111307H6S',86471072,'');
INSERT INTO ATTENUATOR VALUES('8-262',1,'',853,86,471,72,'SR 821','NO
REC',0.263,'',1,'NO',1,1,'111307H6S',86471072,'');
INSERT INTO ATTENUATOR VALUES('8-263',1,'',853,86,471,127,'SR 821','NO
REC',0.162,'',1,'NO',1,1,'300300SF4',86471127,'');
INSERT INTO ATTENUATOR VALUES('8-264',1,'',853,86,471,127,'SR 821','NO
REC',0.163,'',1,'NO',1,1,'300300SF4',86471127,'');
INSERT INTO ATTENUATOR VALUES('8-265',1,'',853,86,471,128,'SR 821','NO
REC',0.169,'',3,'NO',1,1,'200200SF4',86471128,'');
INSERT INTO ATTENUATOR VALUES('8-266',1,'',853,86,471,128,'SR 821','NO
REC',0.17,'',3,'NO',1,1,'200200SF4',86471128,'');
INSERT INTO ATTENUATOR VALUES('8-267',1,'',853,86,471,128,'SR 821','NO
REC',0.171,'',3,'NO',1,1,'200200SF4',86471128,'');
INSERT INTO ATTENUATOR VALUES('8-268',1,'',853,86,472,0,'SR 869','NO
REC',2.06,'',1,'NO',1,1,'111307H5S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-269',1,'',853,86,472,0,'SR 869','NO
REC',2.061,'',1,'NO',1,1,'111307H5S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-270',1,'',853,86,472,0,'SR 869','NO
REC',2.062,'',1,'NO',1,1,'111307H5S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-271',1,'',853,86,472,0,'SR 869','NO
REC',2.063,'',1,'NO',1,1,'111307H6S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-272',1,'',853,86,472,0,'SR 869','NO
REC',2.064,'',1,'NO',1,1,'111307H6S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-273',1,'',853,86,472,0,'SR 869','NO
REC',2.065,'',1,'NO',1,1,'111307H6S',86472000,'');
INSERT INTO ATTENUATOR VALUES('8-274',1,'',853,86,472,0,'SR 869','NO
REC',2.066,'',1,'NO',1,1,'111307H6S',86472000,'');
```

[illegible]

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INSERT INTO ATTENUATOR VALUES('8-305',1,'',853,86,472,7,'NO REC','NO
REC',0.133,'',1,'NO',1,3,'QS2403Y',86472007,'');
INSERT INTO ATTENUATOR VALUES('8-306',1,'',853,86,472,7,'NO REC','NO
REC',0.142,'',1,'NO',1,1,'QS2403Y',86472007,'');
INSERT INTO ATTENUATOR VALUES('8-307',1,'',853,86,472,7,'NO REC','NO
REC',0.143,'',1,'NO',1,1,'QS2403Y',86472007,'');
INSERT INTO ATTENUATOR VALUES('8-308',1,'',853,86,472,8,'NO REC','NO
REC',0.187,'',3,'NO',1,3,'QS2403Y',86472008,'');
INSERT INTO ATTENUATOR VALUES('8-309',1,'',853,86,472,8,'NO REC','NO
REC',0.195,'',3,'NO',1,1,'QS2403Y',86472008,'');
INSERT INTO ATTENUATOR VALUES('8-310',1,'',853,86,472,8,'NO REC','NO
REC',0.196,'',3,'NO',1,1,'QS2403Y',86472008,'');
INSERT INTO ATTENUATOR VALUES('8-311',1,'',853,87,470,0,'SR 91','NO
REC',0.323,'',3,'NO',1,4,'QS2406G',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-312',1,'',853,87,470,0,'SR 91','NO
REC',0.413,'',3,'NO',1,4,'QS2406G',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-313',1,'',853,87,470,0,'SR 91','NO
REC',0.418,'',1,'NO',1,4,'QS2406G',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-314',1,'',853,87,470,0,'SR 91','NO
REC',0.452,'',1,'NO',1,4,'QS2406G',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-315',1,'',853,87,470,0,'SR 91','NO
REC',0.58,'',1,'NO',1,1,'200200SF6',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-316',1,'',853,87,470,0,'SR 91','NO
REC',0.581,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-317',1,'',853,87,470,0,'SR 91','NO
REC',0.582,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-318',1,'',853,87,470,0,'SR 91','NO
REC',0.583,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-319',1,'',853,87,470,0,'SR 91','NO
REC',0.584,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-320',1,'',853,87,470,0,'SR 91','NO
REC',0.585,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-321',1,'',853,87,470,0,'SR 91','NO
REC',0.586,'',1,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-322',1,'',853,87,470,0,'SR 91','NO
REC',0.593,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-323',1,'',853,87,470,0,'SR 91','NO
REC',0.594,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-324',1,'',853,87,470,0,'SR 91','NO
REC',0.595,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-325',1,'',853,87,470,0,'SR 91','NO
REC',0.596,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-326',1,'',853,87,470,0,'SR 91','NO
REC',0.597,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-327',1,'',853,87,470,0,'SR 91','NO
REC',0.598,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-328',1,'',853,87,470,0,'SR 91','NO
REC',0.599,'',3,'NO',1,1,'111307H6S',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-329',1,'',853,87,470,0,'SR 91','NO
REC',1.942,'',1,'NO',1,4,'200200SF10',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-330',1,'',853,87,470,0,'SR 91','NO
REC',2.503,'',3,'NO',1,4,'200200SF10',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-331',1,'',853,87,470,0,'SR 91','NO
REC',3.03,'',1,'NO',1,4,'200200SF7',87470000,'');
INSERT INTO ATTENUATOR VALUES('8-332',1,'',853,87,471,0,'SR 821','NO
REC',10.416,'',1,'NO',1,1,'200200SF9',87471000,'');
INSERT INTO ATTENUATOR VALUES('8-333',1,'',853,87,471,0,'SR 821','NO
REC',10.417,'',1,'NO',1,1,'200200SF9',87471000,'');
INSERT INTO ATTENUATOR VALUES('8-334',1,'',853,87,471,0,'SR 821','NO
REC',10.418,'',1,'NO',1,1,'200200SF9',87471000,'');

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[illegible]

[illegible]

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INSERT INTO ATTENUATOR VALUES('8-395',1,'',853,87,471,502,'SR 821','NO
REC',0.2,'',1,'NO',1,1,'300300SF4',87471502,'');
INSERT INTO ATTENUATOR VALUES('8-396',1,'',853,87,471,510,'SR 821','NO
REC',0.186,'',3,'NO',1,1,'200200SF4',87471510,'');
INSERT INTO ATTENUATOR VALUES('8-397',1,'',853,87,471,510,'SR 821','NO
REC',0.187,'',3,'NO',1,1,'200200SF4',87471510,'');
INSERT INTO ATTENUATOR VALUES('8-398',1,'',853,87,471,510,'SR 821','NO
REC',0.188,'',3,'NO',1,1,'200200SF4',87471510,'');
INSERT INTO ATTENUATOR VALUES('8-399',1,'',853,87,471,511,'SR 821','NO
REC',0.13,'',1,'NO',1,1,'200200SF4',87471511,'');
INSERT INTO ATTENUATOR VALUES('8-400',1,'',853,87,471,511,'SR 821','NO
REC',0.131,'',1,'NO',1,1,'200200SF4',87471511,'');
INSERT INTO ATTENUATOR VALUES('8-401',1,'',853,87,471,511,'SR 821','NO
REC',0.132,'',1,'NO',1,1,'200200SF4',87471511,'');
INSERT INTO ATTENUATOR VALUES('8-402',1,'',853,87,471,530,'SR 821','NO
REC',0.295,'',1,'NO',1,1,'209508H8S',87471530,'');
INSERT INTO ATTENUATOR VALUES('8-403',1,'',853,87,471,530,'SR 821','NO
REC',0.296,'',1,'NO',1,1,'209508H8S',87471530,'');
INSERT INTO ATTENUATOR VALUES('8-404',1,'',853,87,471,530,'SR 821','NO
REC',0.297,'',1,'NO',1,1,'111307H6S',87471530,'');
INSERT INTO ATTENUATOR VALUES('8-405',1,'',853,87,471,533,'SR 821','NO
REC',0.62,'',3,'NO',1,1,'209508H8S',87471533,'');
INSERT INTO ATTENUATOR VALUES('8-406',1,'',853,87,471,533,'SR 821','NO
REC',0.621,'',3,'NO',1,1,'209508H8S',87471533,'');
INSERT INTO ATTENUATOR VALUES('8-407',1,'',853,87,471,533,'SR 821','NO
REC',0.622,'',3,'NO',1,1,'209508H8S',87471533,'');
INSERT INTO ATTENUATOR VALUES('8-408',1,'',853,88,470,0,'SR 91','NO
REC',2.3,'',1,'NO',1,1,'QS2409G',88470000,'');
INSERT INTO ATTENUATOR VALUES('8-409',1,'',853,88,470,0,'SR 91','NO
REC',2.336,'',3,'NO',1,1,'QS2409G',88470000,'');
INSERT INTO ATTENUATOR VALUES('8-410',1,'',853,88,470,0,'SR 91','NO
REC',4.984,'',1,'NO',1,1,'QS2409G',88470000,'');
INSERT INTO ATTENUATOR VALUES('8-411',1,'',853,88,470,0,'SR 91','NO
REC',4.992,'',3,'NO',1,1,'QS2409G',88470000,'');
INSERT INTO ATTENUATOR VALUES('8-412',1,'',853,89,470,0,'SR 91','NO
REC',0.327,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-413',1,'',853,89,470,0,'SR 91','NO
REC',0.328,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-414',1,'',853,89,470,0,'SR 91','NO
REC',1.303,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-415',1,'',853,89,470,0,'SR 91','NO
REC',1.304,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-416',1,'',853,89,470,0,'SR 91','NO
REC',2.251,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-417',1,'',853,89,470,0,'SR 91','NO
REC',2.252,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-418',1,'',853,89,470,0,'SR 91','NO
REC',3.232,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-419',1,'',853,89,470,0,'SR 91','NO
REC',3.233,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-420',1,'',853,89,470,0,'SR 91','NO
REC',4.205,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-421',1,'',853,89,470,0,'SR 91','NO
REC',4.206,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-422',1,'',853,89,470,0,'SR 91','NO
REC',5.192,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-423',1,'',853,89,470,0,'SR 91','NO
REC',5.193,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-424',1,'',853,89,470,0,'SR 91','NO
REC',6.109,'',3,'NO',1,1,'200200SF9',89470000,'');

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INSERT INTO ATTENUATOR VALUES('8-425',1,'',853,89,470,0,'SR 91','NO
REC',6.11,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-426',1,'',853,89,470,0,'SR 91','NO
REC',7.691,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-427',1,'',853,89,470,0,'SR 91','NO
REC',7.692,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-428',1,'',853,89,470,0,'SR 91','NO
REC',8.808,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-429',1,'',853,89,470,0,'SR 91','NO
REC',8.809,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-430',1,'',853,89,470,0,'SR 91','NO
REC',9.638,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-431',1,'',853,89,470,0,'SR 91','NO
REC',9.639,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-432',1,'',853,89,470,0,'SR 91','NO
REC',10.766,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-433',1,'',853,89,470,0,'SR 91','NO
REC',10.767,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-434',1,'',853,89,470,0,'SR 91','NO
REC',11.972,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-435',1,'',853,89,470,0,'SR 91','NO
REC',11.973,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-436',1,'',853,89,470,0,'SR 91','NO
REC',13.602,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-437',1,'',853,89,470,0,'SR 91','NO
REC',13.603,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-438',1,'',853,89,470,0,'SR 91','NO
REC',14.678,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-439',1,'',853,89,470,0,'SR 91','NO
REC',14.679,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-440',1,'',853,89,470,0,'SR 91','NO
REC',15.658,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-441',1,'',853,89,470,0,'SR 91','NO
REC',15.659,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-442',1,'',853,89,470,0,'SR 91','NO
REC',16.481,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-443',1,'',853,89,470,0,'SR 91','NO
REC',16.482,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-444',1,'',853,89,470,0,'SR 91','NO
REC',18.481,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-445',1,'',853,89,470,0,'SR 91','NO
REC',18.482,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-446',1,'',853,89,470,0,'SR 91','NO
REC',19.581,'',3,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-447',1,'',853,89,470,0,'SR 91','NO
REC',19.582,'',1,'NO',1,1,'200200SF9',89470000,'');
INSERT INTO ATTENUATOR VALUES('8-448',1,'',853,89,470,4,'NO REC','NO
REC',0.485,'',1,'NO',1,1,'200200SF4',89470004,'');
INSERT INTO ATTENUATOR VALUES('8-449',1,'',853,89,470,4,'NO REC','NO
REC',0.486,'',1,'NO',1,1,'200200SF4',89470004,'');
INSERT INTO ATTENUATOR VALUES('8-450',1,'',853,89,470,4,'NO REC','NO
REC',0.487,'',1,'NO',1,1,'200200SF4',89470004,'');
INSERT INTO ATTENUATOR VALUES('8-451',1,'',853,89,470,4,'NO REC','NO
REC',0.488,'',1,'NO',1,1,'200200SF4',89470004,'');
INSERT INTO ATTENUATOR VALUES('8-452',1,'',853,89,470,5,'NO REC','NO
REC',0.104,'',3,'NO',1,1,'200200SF4',89470005,'');
INSERT INTO ATTENUATOR VALUES('8-453',1,'',853,89,470,5,'NO REC','NO
REC',0.105,'',3,'NO',1,1,'200200SF4',89470005,'');
INSERT INTO ATTENUATOR VALUES('8-454',1,'',853,92,470,0,'SR 91','NO
REC',8.414,'',1,'NO',1,1,'QS2409G',92470000,'');

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INSERT INTO ATTENUATOR VALUES('8-455',1,'',853,92,470,0,'SR 91','NO
REC',8.437,'',3,'NO',1,1,'QS2409G',92470000,'');
INSERT INTO ATTENUATOR VALUES('8-456',1,'',853,92,470,0,'SR 91','NO
REC',15.825,'',1,'NO',1,1,'QS2409G',92470000,'');
INSERT INTO ATTENUATOR VALUES('8-457',1,'',853,92,470,0,'SR 91','NO
REC',15.842,'',3,'NO',1,1,'QS2409G',92470000,'');
INSERT INTO ATTENUATOR VALUES('8-458',1,'',853,92,470,10,'NO REC','NO
REC',0.537,'',3,'NO',1,1,'200200SF4',92470010,'');
INSERT INTO ATTENUATOR VALUES('8-459',1,'',853,92,470,10,'NO REC','NO
REC',0.538,'',3,'NO',1,1,'200200SF4',92470010,'');
INSERT INTO ATTENUATOR VALUES('8-460',1,'',853,92,470,20,'NO REC','NO
REC',0.115,'',1,'NO',1,1,'200200SF4',92470020,'');
INSERT INTO ATTENUATOR VALUES('8-461',1,'',853,92,470,20,'NO REC','NO
REC',0.116,'',1,'NO',1,1,'200200SF4',92470020,'');
INSERT INTO ATTENUATOR VALUES('8-462',1,'',853,92,471,0,'SR 91','NO
REC',28.3,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-463',1,'',853,92,471,0,'SR 91','NO
REC',28.301,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-464',1,'',853,92,471,0,'SR 91','NO
REC',28.302,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-465',1,'',853,92,471,0,'SR 91','NO
REC',28.303,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-466',1,'',853,92,471,0,'SR 91','NO
REC',28.304,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-467',1,'',853,92,471,0,'SR 91','NO
REC',28.305,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-468',1,'',853,92,471,0,'SR 91','NO
REC',28.306,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-469',1,'',853,92,471,0,'SR 91','NO
REC',28.307,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-470',1,'',853,92,471,0,'SR 91','NO
REC',28.308,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-471',1,'',853,92,471,0,'SR 91','NO
REC',28.309,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-472',1,'',853,92,471,0,'SR 91','NO
REC',28.31,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-473',1,'',853,92,471,0,'SR 91','NO
REC',28.311,'',1,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-474',1,'',853,92,471,0,'SR 91','NO
REC',28.312,'',3,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-475',1,'',853,92,471,0,'SR 91','NO
REC',28.313,'',3,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-476',1,'',853,92,471,0,'SR 91','NO
REC',28.314,'',3,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-477',1,'',853,92,471,0,'SR 91','NO
REC',28.315,'',3,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-478',1,'',853,92,471,0,'SR 91','NO
REC',28.316,'',3,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-479',1,'',853,92,471,0,'SR 91','NO
REC',28.328,'',3,'NO',1,2,'200200SF9',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-480',1,'',853,92,471,0,'SR 91','NO
REC',28.63,'',1,'NO',1,1,'200200SF9',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-481',1,'',853,92,471,0,'SR 91','NO
REC',28.645,'',3,'NO',1,1,'200200SF9',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-482',1,'',853,92,471,0,'SR 91','NO
REC',34.1,'',4,'NO',1,1,'200200SF8',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-483',1,'',853,92,471,0,'SR 91','NO
REC',40.196,'',1,'NO',1,1,'200200SF9',92471000,'');
INSERT INTO ATTENUATOR VALUES('8-484',1,'',853,92,471,0,'SR 91','NO
REC',40.304,'',3,'NO',1,1,'200200SF9',92471000,'');

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INSERT INTO ATTENUATOR VALUES('8-485',1,'',853,92,471,14,'NO REC','NO
REC',0.079,'',2,'NO',1,1,'200200SF4',92471014,'');
INSERT INTO ATTENUATOR VALUES('8-486',1,'',853,92,471,14,'NO REC','NO
REC',0.213,'',2,'NO',1,1,'200200SF4',92471014,'');
INSERT INTO ATTENUATOR VALUES('8-487',1,'',853,92,471,14,'NO REC','NO
REC',0.214,'',2,'NO',1,1,'200200SF4',92471014,'');
INSERT INTO ATTENUATOR VALUES('8-488',1,'',853,92,471,14,'NO REC','NO
REC',0.215,'',2,'NO',1,1,'200200SF4',92471014,'');
INSERT INTO ATTENUATOR VALUES('8-489',1,'',853,92,471,15,'NO REC','NO
REC',0.276,'',4,'NO',1,1,'200200SF4',92471015,'');
INSERT INTO ATTENUATOR VALUES('8-490',1,'',853,92,471,15,'NO REC','NO
REC',0.277,'',4,'NO',1,1,'200200SF4',92471015,'');
INSERT INTO ATTENUATOR VALUES('8-491',1,'',853,92,471,15,'NO REC','NO
REC',0.278,'',4,'NO',1,1,'200200SF4',92471015,'');
INSERT INTO ATTENUATOR VALUES('8-492',1,'',853,92,471,27,'NO REC','NO
REC',0.098,'',1,'NO',1,1,'300300SF4',92471027,'');
INSERT INTO ATTENUATOR VALUES('8-493',1,'',853,92,471,27,'NO REC','NO
REC',0.099,'',1,'NO',1,1,'300300SF4',92471027,'');
INSERT INTO ATTENUATOR VALUES('8-494',1,'',853,92,471,28,'NO REC','NO
REC',0.155,'',3,'NO',1,1,'300300SF4',92471028,'');
INSERT INTO ATTENUATOR VALUES('8-495',1,'',853,92,471,28,'NO REC','NO
REC',0.156,'',3,'NO',1,1,'300300SF4',92471028,'');
INSERT INTO ATTENUATOR VALUES('8-496',1,'',853,92,472,0,'SR 417','NO
REC',0.006,'',3,'NO',1,1,'200200SF9',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-497',1,'',853,92,472,0,'SR 417','NO
REC',0.28,'',1,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-498',1,'',853,92,472,0,'SR 417','NO
REC',0.281,'',1,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-499',1,'',853,92,472,0,'SR 417','NO
REC',0.282,'',1,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-500',1,'',853,92,472,0,'SR 417','NO
REC',0.283,'',1,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-501',1,'',853,92,472,0,'SR 417','NO
REC',0.284,'',1,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-502',1,'',853,92,472,0,'SR 417','NO
REC',0.285,'',3,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-503',1,'',853,92,472,0,'SR 417','NO
REC',0.3,'',3,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-504',1,'',853,92,472,0,'SR 417','NO
REC',0.301,'',3,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-505',1,'',853,92,472,0,'SR 417','NO
REC',0.302,'',3,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-506',1,'',853,92,472,0,'SR 417','NO
REC',0.312,'',3,'NO',1,1,'200200SF8',92472000,'');
INSERT INTO ATTENUATOR VALUES('8-507',1,'',853,92,472,5,'NO REC','NO
REC',0.164,'',3,'NO',1,1,'200200SF4',92472005,'');
INSERT INTO ATTENUATOR VALUES('8-508',1,'',853,92,472,6,'NO REC','NO
REC',0.196,'',1,'NO',1,1,'200200SF4',92472006,'');
INSERT INTO ATTENUATOR VALUES('8-509',1,'',853,92,472,9,'NO REC','NO
REC',0.2,'',3,'NO',1,1,'200200SF4',92472009,'');
INSERT INTO ATTENUATOR VALUES('8-510',1,'',853,92,472,10,'NO REC','NO
REC',0.5,'',1,'NO',1,1,'200200SF4',92472010,'');
INSERT INTO ATTENUATOR VALUES('8-511',1,'',853,93,470,0,'SR 91','NO
REC',0.817,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-512',1,'',853,93,470,0,'SR 91','NO
REC',0.818,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-513',1,'',853,93,470,0,'SR 91','NO
REC',1.592,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-514',1,'',853,93,470,0,'SR 91','NO
REC',1.593,'',1,'NO',1,1,'200200SF9',93470000,'');

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INSERT INTO ATTENUATOR VALUES('8-515',1,'',853,93,470,0,'SR 91','NO
REC',2.202,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-516',1,'',853,93,470,0,'SR 91','NO
REC',2.203,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-517',1,'',853,93,470,0,'SR 91','NO
REC',4.185,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-518',1,'',853,93,470,0,'SR 91','NO
REC',4.186,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-519',1,'',853,93,470,0,'SR 91','NO
REC',6.129,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-520',1,'',853,93,470,0,'SR 91','NO
REC',6.13,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-521',1,'',853,93,470,0,'SR 91','NO
REC',7.202,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-522',1,'',853,93,470,0,'SR 91','NO
REC',7.203,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-523',1,'',853,93,470,0,'SR 91','NO
REC',8,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-524',1,'',853,93,470,0,'SR 91','NO
REC',8.001,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-525',1,'',853,93,470,0,'SR 91','NO
REC',9.4,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-526',1,'',853,93,470,0,'SR 91','NO
REC',9.401,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-527',1,'',853,93,470,0,'SR 91','NO
REC',9.87,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-528',1,'',853,93,470,0,'SR 91','NO
REC',9.871,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-529',1,'',853,93,470,0,'SR 91','NO
REC',11.639,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-530',1,'',853,93,470,0,'SR 91','NO
REC',11.64,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-531',1,'',853,93,470,0,'SR 91','NO
REC',12.636,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-532',1,'',853,93,470,0,'SR 91','NO
REC',12.637,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-533',1,'',853,93,470,0,'SR 91','NO
REC',12.894,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-534',1,'',853,93,470,0,'SR 91','NO
REC',12.895,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-535',1,'',853,93,470,0,'SR 91','NO
REC',13.518,'',1,'NO',1,4,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-536',1,'',853,93,470,0,'SR 91','NO
REC',14.018,'',3,'NO',1,4,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-537',1,'',853,93,470,0,'SR 91','NO
REC',15.461,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-538',1,'',853,93,470,0,'SR 91','NO
REC',15.462,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-539',1,'',853,93,470,0,'SR 91','NO
REC',15.929,'',3,'NO',1,1,'200200SF6',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-540',1,'',853,93,470,0,'SR 91','NO
REC',16.06,'',1,'NO',1,1,'111307H6S',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-541',1,'',853,93,470,0,'SR 91','NO
REC',16.061,'',1,'NO',1,1,'111307H6S',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-542',1,'',853,93,470,0,'SR 91','NO
REC',16.062,'',1,'NO',1,1,'111307H6S',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-543',1,'',853,93,470,0,'SR 91','NO
REC',16.063,'',1,'NO',1,1,'111307H6S',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-544',1,'',853,93,470,0,'SR 91','NO
REC',16.064,'',1,'NO',1,1,'111307H6S',93470000,'');

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[illegible]

[illegible]

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INSERT INTO ATTENUATOR VALUES('8-605',1,'',853,93,470,0,'SR 91','NO
REC',40.214,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-606',1,'',853,93,470,0,'SR 91','NO
REC',40.215,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-607',1,'',853,93,470,0,'SR 91','NO
REC',41.111,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-608',1,'',853,93,470,0,'SR 91','NO
REC',41.112,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-609',1,'',853,93,470,0,'SR 91','NO
REC',42.002,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-610',1,'',853,93,470,0,'SR 91','NO
REC',42.003,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-611',1,'',853,93,470,0,'SR 91','NO
REC',42.84,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-612',1,'',853,93,470,0,'SR 91','NO
REC',42.841,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-613',1,'',853,93,470,0,'SR 91','NO
REC',43.821,'',3,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-614',1,'',853,93,470,0,'SR 91','NO
REC',43.822,'',1,'NO',1,1,'200200SF9',93470000,'');
INSERT INTO ATTENUATOR VALUES('8-615',1,'',853,93,470,91,'NO REC','NO
REC',0.63,'',3,'NO',1,1,'QS2406Y',93470091,'');
INSERT INTO ATTENUATOR VALUES('8-616',1,'',853,93,470,91,'NO REC','NO
REC',0.71,'',3,'NO',1,1,'UNKNOWN--HI-DRO CLUS',93470091,'Model number was
previously 0.');
```

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INSERT INTO ATTENUATOR VALUES('8-617',1,'',853,93,470,92,'NO REC','NO
REC',0.05,'',1,'NO',1,1,'UNKNOWN--HI-DRO CLUS',93470092,'Model number was
previously 0.');
```

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INSERT INTO ATTENUATOR VALUES('8-618',1,'',853,93,470,92,'NO REC','NO
REC',0.184,'',1,'NO',1,1,'QS2406Y',93470092,'');
```

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INSERT INTO ATTENUATOR VALUES('8-619',1,'',853,93,470,103,'NO REC','NO
REC',0.121,'',1,'NO',1,1,'200200SF4',93470103,'');
```

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INSERT INTO ATTENUATOR VALUES('8-620',1,'',853,93,470,103,'NO REC','NO
REC',0.122,'',1,'NO',1,1,'200200SF4',93470103,'');
```

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INSERT INTO ATTENUATOR VALUES('8-621',1,'',853,93,470,103,'NO REC','NO
REC',0.123,'',1,'NO',1,1,'200200SF4',93470103,'');
```

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INSERT INTO ATTENUATOR VALUES('8-622',1,'',853,93,470,104,'NO REC','NO
REC',0.527,'',3,'NO',1,1,'200200SF4',93470104,'');
```

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INSERT INTO ATTENUATOR VALUES('8-623',1,'',853,93,470,104,'NO REC','NO
REC',0.528,'',3,'NO',1,1,'200200SF4',93470104,'');
```

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INSERT INTO ATTENUATOR VALUES('8-624',1,'',853,93,470,104,'NO REC','NO
REC',0.529,'',3,'NO',1,1,'200200SF4',93470104,'');
```

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INSERT INTO ATTENUATOR VALUES('8-625',1,'',853,93,470,104,'NO REC','NO
REC',0.53,'',3,'NO',1,1,'200200SF4',93470104,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-626',1,'',853,93,470,104,'NO REC','NO
REC',0.531,'',3,'NO',1,1,'200200SF4',93470104,'');
```

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INSERT INTO ATTENUATOR VALUES('8-627',1,'',853,93,470,112,'NO REC','NO
REC',0.095,'',1,'NO',1,1,'200200SF4',93470112,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-628',1,'',853,93,470,112,'NO REC','NO
REC',0.096,'',1,'NO',1,1,'200200SF4',93470112,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-629',1,'',853,93,470,112,'NO REC','NO
REC',0.097,'',1,'NO',1,1,'200200SF4',93470112,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-630',1,'',853,93,470,113,'NO REC','NO
REC',0.491,'',3,'NO',1,1,'200200SF4',93470113,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-631',1,'',853,93,470,113,'NO REC','NO
REC',0.492,'',3,'NO',1,1,'200200SF4',93470113,'');
```

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INSERT INTO ATTENUATOR VALUES('8-632',1,'',853,93,470,113,'NO REC','NO
REC',0.493,'',3,'NO',1,1,'200200SF4',93470113,'');
```

```

INSERT INTO ATTENUATOR VALUES('8-633',1,'',853,93,470,113,'NO REC','NO
REC',0.494,'',3,'NO',1,1,'200200SF4',93470113,'');
```

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INSERT INTO ATTENUATOR VALUES('8-634',1,'',853,93,470,117,'NO REC','NO
REC',0.611,'',3,'NO',1,1,'200200SF4',93470117,'');
INSERT INTO ATTENUATOR VALUES('8-635',1,'',853,93,470,117,'NO REC','NO
REC',0.612,'',3,'NO',1,1,'200200SF4',93470117,'');
INSERT INTO ATTENUATOR VALUES('8-636',1,'',853,93,470,117,'NO REC','NO
REC',0.613,'',3,'NO',1,1,'200200SF4',93470117,'');
INSERT INTO ATTENUATOR VALUES('8-637',1,'',853,93,470,118,'NO REC','NO
REC',0.11,'',1,'NO',1,1,'200200SF4',93470118,'');
INSERT INTO ATTENUATOR VALUES('8-638',1,'',853,93,470,118,'NO REC','NO
REC',0.111,'',1,'NO',1,1,'200200SF4',93470118,'');
INSERT INTO ATTENUATOR VALUES('8-639',1,'',853,93,470,121,'NO REC','NO
REC',0.564,'',3,'NO',1,1,'200200SF4',93470121,'');
INSERT INTO ATTENUATOR VALUES('8-640',1,'',853,93,470,121,'NO REC','NO
REC',0.565,'',3,'NO',1,1,'200200SF4',93470121,'');
INSERT INTO ATTENUATOR VALUES('8-641',1,'',853,93,470,121,'NO REC','NO
REC',0.566,'',3,'NO',1,1,'200200SF4',93470121,'');
INSERT INTO ATTENUATOR VALUES('8-642',1,'',853,93,470,121,'NO REC','NO
REC',0.567,'',3,'NO',1,1,'200200SF4',93470121,'');
INSERT INTO ATTENUATOR VALUES('8-643',1,'',853,93,470,122,'NO REC','NO
REC',0.039,'',1,'NO',1,1,'200200SF4',93470122,'');
INSERT INTO ATTENUATOR VALUES('8-644',1,'',853,93,470,122,'NO REC','NO
REC',0.04,'',1,'NO',1,1,'200200SF4',93470122,'');
INSERT INTO ATTENUATOR VALUES('8-645',1,'',853,93,470,122,'NO REC','NO
REC',0.041,'',1,'NO',1,1,'200200SF4',93470122,'');
INSERT INTO ATTENUATOR VALUES('8-646',1,'',853,93,470,139,'NO REC','NO
REC',0.167,'',1,'NO',1,1,'200200SF2',93470139,'');
INSERT INTO ATTENUATOR VALUES('8-647',1,'',853,93,470,139,'NO REC','NO
REC',0.168,'',1,'NO',1,1,'200200SF2',93470139,'');
INSERT INTO ATTENUATOR VALUES('8-648',1,'',853,93,470,140,'NO REC','NO
REC',0.306,'',3,'NO',1,4,'111307H4S',93470140,'');
INSERT INTO ATTENUATOR VALUES('8-649',1,'',853,93,470,143,'NO REC','NO
REC',0.116,'',1,'NO',1,1,'200200SF2',93470143,'');
INSERT INTO ATTENUATOR VALUES('8-650',1,'',853,93,470,143,'NO REC','NO
REC',0.117,'',1,'NO',1,1,'200200SF2',93470143,'');
INSERT INTO ATTENUATOR VALUES('8-651',1,'',853,94,470,0,'SR 91','NO
REC',0.406,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-652',1,'',853,94,470,0,'SR 91','NO
REC',0.407,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-653',1,'',853,94,470,0,'SR 91','NO
REC',1.649,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-654',1,'',853,94,470,0,'SR 91','NO
REC',1.65,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-655',1,'',853,94,470,0,'SR 91','NO
REC',2.351,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-656',1,'',853,94,470,0,'SR 91','NO
REC',2.352,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-657',1,'',853,94,470,0,'SR 91','NO
REC',3.359,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-658',1,'',853,94,470,0,'SR 91','NO
REC',3.36,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-659',1,'',853,94,470,0,'SR 91','NO
REC',4.359,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-660',1,'',853,94,470,0,'SR 91','NO
REC',4.36,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-661',1,'',853,94,470,0,'SR 91','NO
REC',6.327,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-662',1,'',853,94,470,0,'SR 91','NO
REC',6.328,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-663',1,'',853,94,470,0,'SR 91','NO
REC',8.277,'',3,'NO',1,1,'200200SF9',94470000,'');

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INSERT INTO ATTENUATOR VALUES('8-664',1,'',853,94,470,0,'SR 91','NO
REC',8.278,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-665',1,'',853,94,470,0,'SR 91','NO
REC',9.263,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-666',1,'',853,94,470,0,'SR 91','NO
REC',9.264,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-667',1,'',853,94,470,0,'SR 91','NO
REC',10.25,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-668',1,'',853,94,470,0,'SR 91','NO
REC',10.251,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-669',1,'',853,94,470,0,'SR 91','NO
REC',11.224,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-670',1,'',853,94,470,0,'SR 91','NO
REC',11.225,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-671',1,'',853,94,470,0,'SR 91','NO
REC',12.201,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-672',1,'',853,94,470,0,'SR 91','NO
REC',12.202,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-673',1,'',853,94,470,0,'SR 91','NO
REC',14.253,'',3,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-674',1,'',853,94,470,0,'SR 91','NO
REC',14.254,'',1,'NO',1,1,'200200SF9',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-675',1,'',853,94,470,0,'SR 91','NO
REC',32.02,'',1,'NO',1,1,'QS2409G',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-676',1,'',853,94,470,0,'SR 91','NO
REC',32.032,'',3,'NO',1,1,'QS2409G',94470000,'');
INSERT INTO ATTENUATOR VALUES('8-677',1,'',853,94,470,9,'SR 91','NO
REC',0.52,'',3,'NO',1,1,'200200SF4',94470009,'');
INSERT INTO ATTENUATOR VALUES('8-678',1,'',853,94,470,9,'SR 91','NO
REC',0.521,'',3,'NO',1,1,'200200SF4',94470009,'');
INSERT INTO ATTENUATOR VALUES('8-679',1,'',853,94,470,9,'SR 91','NO
REC',0.522,'',3,'NO',1,1,'200200SF4',94470009,'');
INSERT INTO ATTENUATOR VALUES('8-680',1,'',853,94,470,10,'SR 91','NO
REC',0.136,'',1,'NO',1,1,'200200SF4',94470010,'');
INSERT INTO ATTENUATOR VALUES('8-681',1,'',853,94,470,10,'SR 91','NO
REC',0.137,'',1,'NO',1,1,'200200SF4',94470010,'');
INSERT INTO ATTENUATOR VALUES('8-682',1,'',853,94,470,15,'NO REC','NO
REC',0.124,'',3,'NO',1,1,'200200SF4',94470015,'');
INSERT INTO ATTENUATOR VALUES('8-683',1,'',853,94,470,15,'NO REC','NO
REC',0.125,'',3,'NO',1,1,'200200SF4',94470015,'');
INSERT INTO ATTENUATOR VALUES('8-684',1,'',853,94,470,15,'NO REC','NO
REC',0.126,'',3,'NO',1,1,'200200SF4',94470015,'');
INSERT INTO ATTENUATOR VALUES('8-685',1,'',853,94,470,16,'NO REC','NO
REC',0.534,'',1,'NO',1,1,'200200SF4',94470016,'');
INSERT INTO ATTENUATOR VALUES('8-686',1,'',853,94,470,16,'NO REC','NO
REC',0.535,'',1,'NO',1,1,'200200SF4',94470016,'');
INSERT INTO ATTENUATOR VALUES('8-687',1,'',853,94,470,16,'NO REC','NO
REC',0.536,'',1,'NO',1,1,'200200SF4',94470016,'');
INSERT INTO ATTENUATOR VALUES('8-688',1,'',853,94,470,16,'NO REC','NO
REC',0.537,'',1,'NO',1,1,'200200SF4',94470016,'');
INSERT INTO ATTENUATOR VALUES('7-124',1,'',10,190,0,'SR 45','US
41',4.945,'CONSTRUCTION ZONE',2,'YES',2,1,'UNKNOWN--SAND
BARREL',10190000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('7-125',1,'',10,190,0,'SR
93',6.136,'CONSTRUCTION ZONE',4,'YES',2,2,'UNKNOWN--SAND
BARREL',10190000,'TEMPORARY CONSTRUCTION BARRIER');
--INSERT INTO ATTENUATOR VALUES('7-126',1,'',10,190,0,'SR
400',17.419,'CONSTRUCTION ZONE',2,'YES',2,1,'UNKNOWN--SAND
BARREL',10190000,'TEMPORARY CONSTRUCTION BARRIER');

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INSERT INTO ATTENUATOR VALUES('7-129',2,'',' ',15,80,0,'SR
584',' ',1.964,'CONSTRUCTION ZONE',1,'YES',2,2,'UNKNOWN--SAND
BARREL',15080000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('7-127',1,'',' ',15,140,0,'SR
699',' ',6.752,'CONSTRUCTION ZONE',3,'YES',2,1,'UNKNOWN--SAND
BARREL',15140000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('7-128',1,'',' ',15,190,0,'SR
93',' ',13.935,'CONSTRUCTION ZONE',2,'YES',2,1,'UNKNOWN--SAND
BARREL',15190000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('1-50',2,'',' ',17,75,32,'SR 93',' ',0,'CONSTRUCTION
ZONE',3,'YES',2,4,'UNKNOWN--SAND BARREL',17075032,'TEMPORARY CONSTRUCTION
BARRIER');
INSERT INTO ATTENUATOR VALUES('3-
73',2,'',' ',48,260,0,'SR8',' ',12.911,'CONSTRUCTION ZONE',2,'YES',2,2,'UNKNOWN--
SAND BARREL',48260000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('2-109',1,'',' ',71,20,0,'SR 15','US
17',8.561,'CONSTRUCTION ZONE',1,'YES',2,1,'UNKNOWN--SAND
BARREL',71020000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('2-108',2,'',' ',71,20,0,'SR 15','US
17',0.019,'CONSTRUCTION ZONE',3,'YES',2,1,'UNKNOWN--SAND
BARREL',71020000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('8-99',1,'',' ',75,470,140,'NO REC','NO
REC',0.152,' ',1,'NO',1,1,'200200SF4',75470140,' ');
INSERT INTO ATTENUATOR VALUES('8-103',1,'',' ',75,470,147,'NO REC','NO
REC',0.001,' ',4,'NO',1,1,'200200SF4',75470147,' ');
INSERT INTO ATTENUATOR VALUES('8-104',1,'',' ',75,470,147,'NO REC','NO
REC',0.002,' ',4,'NO',1,1,'200200SF4',75470147,' ');
INSERT INTO ATTENUATOR VALUES('8-105',1,'',' ',75,470,147,'NO REC','NO
REC',0.003,' ',4,'NO',1,1,'200200SF4',75470147,' ');
INSERT INTO ATTENUATOR VALUES('5-304',2,'',' ',79,2,0,'SR
9',' ',28.167,'CONSTRUCTION ZONE',3,'YES',2,2,'UNKNOWN--SAND
BARREL',79002000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('4-109',1,'',' ',86,18,0,'SR
824',' ',4.405,'CONSTRUCTION ZONE',2,'YES',2,1,'UNKNOWN--SAND
BARREL',86018000,'TEMPORARY CONSTRUCTION BARRIER');
INSERT INTO ATTENUATOR VALUES('4-110',1,'',' ',94,120,0,'SR
716',' ',4.945,'CONSTRUCTION ZONE',2,'YES',2,1,'UNKNOWN--SAND
BARREL',94120000,'TEMPORARY CONSTRUCTION BARRIER');

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Appendix C-6: ATTENUATOR_SITE_DATA.SQL

```

INSERT INTO ATTENUATOR_SITE VALUES(55,'1-
50',' ',' ',0.914,1.8285,0.914,1.8285,1,' ',1,9,5);
INSERT INTO ATTENUATOR_SITE VALUES(59,'2-
108',' ',' ',1.8285,3.657,1.8285,3.657,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(60,'2-
109',' ',' ',1.8285,3.657,1.8285,3.657,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(1,'2-
36',' ',' ',0.75,12.5,0.375,1.25,' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(2,'2-
69',' ',' ',0.75,20,0.75,1.875,' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(3,'2-
70',' ',' ',0.375,1.25,0.375,1.25,' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(61,'3-
73',' ',' ',1.8285,3.657,1.8285,3.657,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(58,'4-
108',' ',' ',0.914,4,0.914,1.8285,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(77,'4-109',' ',' ',0.914,4,3,6,' ',' ',1,5);

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INSERT INTO ATTENUATOR_SITE VALUES (78,'4-
110','','',' ',0.914,1.8285,0.914,1.8285','','',' ',1,5);
INSERT INTO ATTENUATOR_SITE VALUES (4,'4-
16','','',' ',0.375,1.25,0.375,1.25','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (5,'4-52','','',' ',3,25,1.5,7.5','','',' ',2,'');
INSERT INTO ATTENUATOR_SITE VALUES (6,'4-
54','','',' ',3,12,0.375,0.625','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (79,'4-77','','',' ',2,6,1,3','','',' ',2,'');
INSERT INTO ATTENUATOR_SITE VALUES (9,'4-
78','','',' ',2.4375,15,2.25,4.375','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (7,'4-
80','','',' ',3,12,2.25,7.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (8,'4-
81','','',' ',2.25,17.5,1.875,7.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (14,'5-
104','','',' ',3,8.75,1.5,2.5','','',' ',1,'');
--INSERT INTO ATTENUATOR_SITE VALUES (10,'5-
107','','',' ',0.375,1.25,0.375,1.25','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (11,'5-
108','','',' ',1.5,10,0.75,2.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (80,'5-130','','',' ',1,6,0.75,3','','',' ',1,'');
--INSERT INTO ATTENUATOR_SITE VALUES (12,'5-
143','','',' ',0.75,7.5,0.75,5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (13,'5-
20','','',' ',0.375,8,1,1.25','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (56,'5-
304','','',' ',0.914,1.8285,0.914,1.8285,1','',' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES (16,'6-
110','','',' ',0.375,2.5,0.75,2.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (15,'6-
112','','',' ',1.5,4.5,1.5,2.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (17,'6-
117','','',' ',0.9375,5.3125,0.5625,1.875','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (18,'6-
118','','',' ',0.375,3.75,0.75,1.875','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (19,'6-
123','','',' ',0.15,6,1.125,1.875','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (74,'6-13',' ',1,13,2,2','','',' ',2,'');
INSERT INTO ATTENUATOR_SITE VALUES (20,'6-
138','','',' ',1.125,10,1.3125,4.6875','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (21,'6-
139','','',' ',1.425,19.75,1.05,3.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (23,'6-
158','','',' ',0.75,5,0.75,7.5','','',' ',6,'');
INSERT INTO ATTENUATOR_SITE VALUES (22,'6-
169','','',' ',0.75,7.5,0.75,5','','',' ',3,'');
INSERT INTO ATTENUATOR_SITE VALUES (28,'6-
189','','',' ',0.375,2.5,0.375,0.625','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (70,'6-
190','','',' ',0.914,1.8285,1.8285,3.657,1','',' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES (67,'6-191','','',' ',0.914,2,2,3,1','',' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES (69,'6-192','','',' ',1,4,1,1.8285,1','',' ',3,1,5);
INSERT INTO ATTENUATOR_SITE VALUES (87,'6-193','','',' ',1.5,15,1.5,2,1','',' ',3,1,5);
INSERT INTO ATTENUATOR_SITE VALUES (24,'6-
49','','',' ',0.5625,18.5,0.5625,0.9375','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (25,'6-
57','','',' ',4.5,7.5,0.75,2.5','','',' ',1,'');
INSERT INTO ATTENUATOR_SITE VALUES (73,'6-
6','','',' ',0.5625,3,0.75,0.75','','',' ',2,'');
INSERT INTO ATTENUATOR_SITE VALUES (81,'6-
64','','',' ',0.75,4,0.75,2','','',' ',2,'');

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INSERT INTO ATTENUATOR_SITE VALUES(26,'6-
67',' ',' ',' ',1.5,17.5,1.5,5,' ',' ',' ',1,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(27,'6-
68',' ',' ',' ',3,25,0.75,2.5,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(29,'6-
85',' ',' ',' ',1.875,11.25,2,6.041666667,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(30,'6-
89',' ',' ',' ',1.5,18,1.5,2.5,' ',' ',' ',2,' ');
INSERT INTO ATTENUATOR_SITE VALUES(31,'6-
9',' ',' ',' ',1.5,5,0.75,1.25,' ',' ',' ',1,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(32,'6-
90',' ',' ',' ',0.375,1.25,0.75,1.875,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(62,'7-123',' ',' ',' ',1,4,1,2,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(63,'7-124',' ',' ',' ',0.914,4,2,3,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(64,'7-125',' ',' ',' ',1,2,1,2,1,' ',1,1,5);
--INSERT INTO ATTENUATOR_SITE VALUES(65,'7-
126',' ',' ',' ',4.572,0.914,4.572,0.6096,1,' ',3,5,5);
INSERT INTO ATTENUATOR_SITE VALUES(54,'7-127',' ',' ',' ',1,2,1,3,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(68,'7-128',' ',' ',' ',1,3,1,3,1,' ',3,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(53,'7-129',' ',' ',' ',1,2,1,1,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(71,'7-
5',' ',' ',' ',1.8285,3.657,1.8285,3.657,1,' ',1,1,5);
INSERT INTO ATTENUATOR_SITE VALUES(33,'8-
183',' ',' ',' ',3,7.5,3,7.5,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(82,'8-
184',' ',' ',' ',3,7.5,3,7.5,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(34,'8-
201',' ',' ',' ',2,3.5,2,3.5,' ',' ',' ',1,' ');
INSERT INTO ATTENUATOR_SITE VALUES(57,'8-206',' ',' ',' ',3,40,2,4,1,' ',1,9,5);
--INSERT INTO ATTENUATOR_SITE VALUES(72,'8-
209',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(36,'8-
210',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(35,'8-
212',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(39,'8-
213',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(76,'8-
214',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(84,'8-
217',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(83,'8-
220',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(37,'8-
223',' ',' ',' ',0.5625,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(40,'8-
232',' ',' ',' ',0.75,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(41,'8-
248',' ',' ',' ',0.75,11,0.75,3.75,' ',' ',' ',3,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(42,'8-
249',' ',' ',' ',0.75,11,0.75,3.75,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(43,'8-
304',' ',' ',' ',2.25,8.75,1.5,2.5,' ',' ',' ',5,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(44,'8-
352',' ',' ',' ',0.375,7.5,0.75,2.5,' ',' ',' ',3,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(45,'8-
353',' ',' ',' ',0.75,3.5,0.75,5,' ',' ',' ',3,' ');
INSERT INTO ATTENUATOR_SITE VALUES(46,'8-
359',' ',' ',' ',1.125,7.5,1.125,5,' ',' ',' ',3,' ');
--INSERT INTO ATTENUATOR_SITE VALUES(47,'8-
441',' ',' ',' ',0.375,5,0.75,5,' ',' ',' ',3,' ');

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INSERT INTO ATTENUATOR_SITE VALUES (48,'8-528','','','3,12,3,3','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (85,'8-
533','','','3,7.5,3,7.5','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (86,'8-
534','','','3,7.5,3,7.5','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (49,'8-
535','','','2.25,7.75,3.75,8.125','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (50,'8-562','','','3,4,3,3.75','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (51,'8-
570','','','3,12,4,3.75','','','1,');
INSERT INTO ATTENUATOR_SITE VALUES (52,'8-589','','','3,3,3,2','','','1,');

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Appendix C-7: ATTEN_ACCIDENT_DATA.SQL

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INSERT INTO ATTEN_ACCIDENT VALUES (554,554,554,'1-50');
INSERT INTO ATTEN_ACCIDENT VALUES (560,560,560,'2-108');
INSERT INTO ATTEN_ACCIDENT VALUES (547,547,547,'2-109');
INSERT INTO ATTEN_ACCIDENT VALUES (437,437,437,'2-36');
INSERT INTO ATTEN_ACCIDENT VALUES (439,439,439,'2-69');
INSERT INTO ATTEN_ACCIDENT VALUES (440,440,440,'2-70');
INSERT INTO ATTEN_ACCIDENT VALUES (551,551,551,'3-73');
INSERT INTO ATTEN_ACCIDENT VALUES (541,541,541,'4-108');
INSERT INTO ATTEN_ACCIDENT VALUES (561,561,561,'4-109');
INSERT INTO ATTEN_ACCIDENT VALUES (556,556,556,'4-110');
INSERT INTO ATTEN_ACCIDENT VALUES (471,471,471,'4-16');
INSERT INTO ATTEN_ACCIDENT VALUES (460,460,460,'4-52');
INSERT INTO ATTEN_ACCIDENT VALUES (461,461,461,'4-54');
INSERT INTO ATTEN_ACCIDENT VALUES (467,467,467,'4-77');
INSERT INTO ATTEN_ACCIDENT VALUES (468,468,468,'4-78');
INSERT INTO ATTEN_ACCIDENT VALUES (470,470,470,'4-80');
INSERT INTO ATTEN_ACCIDENT VALUES (472,472,472,'4-81');
INSERT INTO ATTEN_ACCIDENT VALUES (443,443,443,'5-104');
INSERT INTO ATTEN_ACCIDENT VALUES (441,441,441,'5-108');
INSERT INTO ATTEN_ACCIDENT VALUES (442,442,442,'5-108');
INSERT INTO ATTEN_ACCIDENT VALUES (446,446,446,'5-130');
INSERT INTO ATTEN_ACCIDENT VALUES (433,433,433,'5-20');
INSERT INTO ATTEN_ACCIDENT VALUES (546,546,546,'5-304');
INSERT INTO ATTEN_ACCIDENT VALUES (505,505,505,'6-110');
INSERT INTO ATTEN_ACCIDENT VALUES (506,506,506,'6-110');
INSERT INTO ATTEN_ACCIDENT VALUES (487,487,487,'6-112');
INSERT INTO ATTEN_ACCIDENT VALUES (503,503,503,'6-117');
INSERT INTO ATTEN_ACCIDENT VALUES (504,504,504,'6-117');
INSERT INTO ATTEN_ACCIDENT VALUES (488,488,488,'6-118');
INSERT INTO ATTEN_ACCIDENT VALUES (502,502,502,'6-118');
INSERT INTO ATTEN_ACCIDENT VALUES (500,500,500,'6-123');
INSERT INTO ATTEN_ACCIDENT VALUES (485,485,485,'6-13');
INSERT INTO ATTEN_ACCIDENT VALUES (524,524,524,'6-138');
INSERT INTO ATTEN_ACCIDENT VALUES (525,525,525,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (526,526,526,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (527,527,527,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (528,528,528,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (529,529,529,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (530,530,530,'6-139');
INSERT INTO ATTEN_ACCIDENT VALUES (522,522,522,'6-158');
INSERT INTO ATTEN_ACCIDENT VALUES (523,523,523,'6-169');
INSERT INTO ATTEN_ACCIDENT VALUES (489,489,489,'6-189');
INSERT INTO ATTEN_ACCIDENT VALUES (548,548,548,'6-190');
INSERT INTO ATTEN_ACCIDENT VALUES (557,557,557,'6-190');
INSERT INTO ATTEN_ACCIDENT VALUES (549,549,549,'6-191');

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INSERT INTO ATTEN_ACCIDENT VALUES (552,552,552,'6-192');
INSERT INTO ATTEN_ACCIDENT VALUES (562,562,562,'6-192');
INSERT INTO ATTEN_ACCIDENT VALUES (483,483,483,'6-193');
INSERT INTO ATTEN_ACCIDENT VALUES (520,520,520,'6-49');
INSERT INTO ATTEN_ACCIDENT VALUES (521,521,521,'6-49');
INSERT INTO ATTEN_ACCIDENT VALUES (480,480,480,'6-57');
INSERT INTO ATTEN_ACCIDENT VALUES (499,499,499,'6-6');
INSERT INTO ATTEN_ACCIDENT VALUES (481,481,481,'6-64');
INSERT INTO ATTEN_ACCIDENT VALUES (516,516,516,'6-67');
INSERT INTO ATTEN_ACCIDENT VALUES (495,495,495,'6-85');
INSERT INTO ATTEN_ACCIDENT VALUES (496,496,496,'6-85');
INSERT INTO ATTEN_ACCIDENT VALUES (497,497,497,'6-85');
INSERT INTO ATTEN_ACCIDENT VALUES (512,512,512,'6-89');
INSERT INTO ATTEN_ACCIDENT VALUES (484,484,484,'6-9');
--INSERT INTO ATTEN_ACCIDENT VALUES (492,492,492,'6-90');
INSERT INTO ATTEN_ACCIDENT VALUES (423,423,423,'7-123');
INSERT INTO ATTEN_ACCIDENT VALUES (558,558,558,'7-124');
INSERT INTO ATTEN_ACCIDENT VALUES (544,544,544,'7-125');
--INSERT INTO ATTEN_ACCIDENT VALUES (545,545,545,'7-126');
INSERT INTO ATTEN_ACCIDENT VALUES (555,555,555,'7-127');
INSERT INTO ATTEN_ACCIDENT VALUES (553,553,553,'7-128');
INSERT INTO ATTEN_ACCIDENT VALUES (550,550,550,'7-129');
INSERT INTO ATTEN_ACCIDENT VALUES (559,559,559,'7-5');
INSERT INTO ATTEN_ACCIDENT VALUES (466,466,466,'8-183');
INSERT INTO ATTEN_ACCIDENT VALUES (566,566,566,'8-184');
INSERT INTO ATTEN_ACCIDENT VALUES (473,473,473,'8-201');
INSERT INTO ATTEN_ACCIDENT VALUES (474,474,474,'8-206');
INSERT INTO ATTEN_ACCIDENT VALUES (478,478,478,'8-210');
INSERT INTO ATTEN_ACCIDENT VALUES (457,457,457,'8-212');
INSERT INTO ATTEN_ACCIDENT VALUES (459,459,459,'8-212');
INSERT INTO ATTEN_ACCIDENT VALUES (458,458,458,'8-213');
INSERT INTO ATTEN_ACCIDENT VALUES (477,477,477,'8-213');
INSERT INTO ATTEN_ACCIDENT VALUES (565,565,565,'8-214');
INSERT INTO ATTEN_ACCIDENT VALUES (476,476,476,'8-217');
INSERT INTO ATTEN_ACCIDENT VALUES (479,479,479,'8-220');
INSERT INTO ATTEN_ACCIDENT VALUES (456,456,456,'8-223');
INSERT INTO ATTEN_ACCIDENT VALUES (475,475,475,'8-232');
INSERT INTO ATTEN_ACCIDENT VALUES (463,463,463,'8-248');
INSERT INTO ATTEN_ACCIDENT VALUES (464,464,464,'8-248');
INSERT INTO ATTEN_ACCIDENT VALUES (469,469,469,'8-304');
INSERT INTO ATTEN_ACCIDENT VALUES (515,515,515,'8-359');
INSERT INTO ATTEN_ACCIDENT VALUES (535,535,535,'8-528');
INSERT INTO ATTEN_ACCIDENT VALUES (567,567,567,'8-533');
INSERT INTO ATTEN_ACCIDENT VALUES (536,536,536,'8-534');
INSERT INTO ATTEN_ACCIDENT VALUES (540,540,540,'8-535');
INSERT INTO ATTEN_ACCIDENT VALUES (537,537,537,'8-562');
INSERT INTO ATTEN_ACCIDENT VALUES (538,538,538,'8-570');
INSERT INTO ATTEN_ACCIDENT VALUES (539,539,539,'8-589');

```

Appendix C-8: ATTEN_PERFORMANCE_DATA.SQL

```

insert into atten_performance values (423,'yes','no',2,'no','no',4,2,500);
insert into atten_performance values (433,'no','no',2,'yes','yes',2,2,1000);
insert into atten_performance values (437,'yes','no','','',' ',4,3,4000);
insert into atten_performance values (439,'no','no','','',' ',2,2,'');
insert into atten_performance values (440,'no','no','','',' ',2,2,'');
insert into atten_performance values (441,'no','','3','',' ',2,2,2000);
insert into atten_performance values (442,'no','no',4,'no','no',4,4,2000);
insert into atten_performance values (443,'no','yes',3','',' ',3,3,500);

```

```

insert into atten_performance values (446,'NO','NO','','','5','','');
insert into atten_performance values (456,'NO','NO',2,'NO','YES',3,3,5000);
insert into atten_performance values (457,'no','no',2,'yes','yes',3,3,1000);
insert into atten_performance values (458,'no','no',2,'','','',3,3,2500);
insert into atten_performance values (459,'no','no','','','','',3,1,5000);
insert into atten_performance values (460,'yes','no','','','yes','yes',4,3,3000);
insert into atten_performance values (461,'no','no',2,'yes','yes',2,2,800);
insert into atten_performance values (463,'no','no',3,'yes','yes',3,3,7000);
insert into atten_performance values (464,'no','no',2,'yes','yes',3,2,1000);
insert into atten_performance values (466,'no','no',2,'yes','yes',2,2,500);
insert into atten_performance values (467,'no','no',2,'yes','yes',1,1,'');
insert into atten_performance values (468,'no','yes',2,'yes','no',3,2,1000);
insert into atten_performance values (469,'no','no',2,'','','',3,3,500);
insert into atten_performance values (470,'no','no',2,'yes','yes',2,2,600);
insert into atten_performance values (471,'no','no','','','','',2,2,'');
insert into atten_performance values (472,'yes','no','','','yes','yes',3,3,2000);
insert into atten_performance values (473,'no','no','','','','',3,3,2000);
insert into atten_performance values (474,'no','no',1,'yes','yes',2,2,1000);
insert into atten_performance values (475,'no','no',3,'yes','','',3,3,3000);
insert into atten_performance values (476,'no','yes',4,'no','no',4,4,15000);
insert into atten_performance values (477,'no','no','','','','',3,2,1000);
insert into atten_performance values (478,'no','no','','','yes','yes',2,2,500);
insert into atten_performance values (479,'no','no','','','','',3,3,5000);
insert into atten_performance values (480,'no','no',2,'yes','yes',3,2,500);
insert into atten_performance values (481,'no','no',2,'','','',2,2,'');
insert into atten_performance values (483,'yes','no',3,'no','no',4,3,6400);
insert into atten_performance values (484,'yes','','','','','yes','','',4,'',2000);
insert into atten_performance values (485,'no','no',2,'yes','yes',3,2,1000);
insert into atten_performance values (487,'no',2,'yes','yes',2,2,'');
insert into atten_performance values (488,'no','no','','','','',5,'',300);
insert into atten_performance values (489,'yes','yes',3,'no','no',4,4,5000);
insert into atten_performance values (492,'yes','yes','','','','',3,'',2000);
insert into atten_performance values (495,'no','yes',3,'no','no',4,3,5000);
insert into atten_performance values (496,'no','no',3,'','','',3,2,1500);
insert into atten_performance values (497,'yes','yes',3,'no','no',4,4,2000);
insert into atten_performance values (499,'no','no','','','yes','yes',5,'',1500);
insert into atten_performance values (500,'no','no',2,'yes','yes',2,2,'');
insert into atten_performance values (502,'yes','','','','','','',3,'',);
insert into atten_performance values (503,'no','yes','','','yes','no',3,'',500);
insert into atten_performance values (504,'yes','yes',3,'no','no',4,4,1700);
insert into atten_performance values (505,'no','no',1,'yes','yes',2,2,0);
insert into atten_performance values (506,'no','no',2,'yes','yes',5,'',);

```

```

insert into atten_performance values (512,'no','no',3,'no','no',3,2,1000);
insert into atten_performance values (515,'no','no','','','yes','','',3,3,5000);
insert into atten_performance values (516,'no','no',3,'yes','yes',3,3,8000);
insert into atten_performance values (520,'no','no',2,'yes','yes',2,2,1000);
insert into atten_performance values (521,'no','no','','','','',2,2,'');
insert into atten_performance values (522,'no','no','','','yes','','',3,3,5000);
insert into atten_performance values (523,'no','no','','','yes','','',3,3,1000);
insert into atten_performance values (524,'yes','','','','no','no',3,'',1000);
insert into atten_performance values (525,'yes','yes',4,'no','no',4,4,20000);
insert into atten_performance values (526,'no','no',1,'yes','yes',2,2,0);
insert into atten_performance values (527,'no','no','','','yes','yes',2,2,0);
insert into atten_performance values (528,'yes','no',2,'yes','yes',2,'',0);
insert into atten_performance values (529,'no','no',1,'yes','yes',2,2,0);
insert into atten_performance values (530,'no','no',1,'yes','yes',2,2,0);

```

```

insert into atten_performance values (535,'no','no',2,'yes','yes',2,2,500);
insert into atten_performance values (536,'no','no',2,'yes','',3,3,2000);
insert into atten_performance values (537,'no','yes',2,'yes','no',2,2,100);
insert into atten_performance values (538,'no','yes',2,'no','no',4,4,3000);
insert into atten_performance values (539,'no','no',1,'yes','yes',1,1,'');
insert into atten_performance values (540,'no','no',3,'yes','yes',3,2,1000);
insert into atten_performance values (541,'no','no','',',',',',5,'','');
insert into atten_performance values (544,'NO','NO',2,'NO','NO',3,3,200);
--insert into atten_performance values (545,'NO','NO',2,'YES','YES',2,2,100);
insert into atten_performance values (546,'NO','NO',3,'NO','NO',3,3,4000);
insert into atten_performance values (547,'NO','NO',3,'NO','NO',3,3,500);
insert into atten_performance values (548,'NO','NO',3,'NO','NO',3,3,2000);
insert into atten_performance values (549,'NO','NO',3,'NO','NO',3,3,2000);
insert into atten_performance values (550,'NO','NO',2,'NO','NO',2,2,100);
insert into atten_performance values (551,'NO','NO',2,'NO','YES',2,2,200);
insert into atten_performance values (552,'NO','NO',3,'NO','NO',3,3,1500);
insert into atten_performance values (553,'NO','NO',2,'NO','NO',3,3,9000);
insert into atten_performance values (554,'NO','NO',2,'NO','NO',3,3,500);
insert into atten_performance values (555,'NO','NO',3,'NO','NO',3,3,5000);
insert into atten_performance values (556,'NO','NO',4,'NO','NO',4,4,1000);
insert into atten_performance values (557,'NO','NO',2,'NO','NO',3,3,2000);
insert into atten_performance values (558,'NO','NO',2,'NO','NO',3,3,500);
insert into atten_performance values (559,'NO','NO',2,'YES','YES',2,2,1000);
insert into atten_performance values (560,'NO','NO',3,'NO','NO',3,3,1800);
insert into atten_performance values (561,'NO','NO',3,'NO','NO',3,3,1500);
insert into atten_performance values (562,'NO','NO',1,'YES','YES',5,'',2000);
insert into atten_performance values (565,'NO','NO',1,'YES','YES',2,'','');
insert into atten_performance values (566,'NO','NO',1,'YES','YES',2,'','');
insert into atten_performance values (567,'NO','NO',1,'YES','YES',2,'','');

```

Appendix C-9: ACCIDENT_DATA.SQL

```

INSERT INTO ACCIDENT VALUES(28,9353002,'','',5,1,2,2,3,1,25,88,10.703,7981,'27-
nov-92','',',2,1','',');
INSERT INTO ACCIDENT VALUES(112,13860006,'','',5,1,1,3,4,1,31,25,2.58,2981,'13-
feb-92','',',5,1','',');
INSERT INTO ACCIDENT VALUES(95,13916415,'','',5,4,2,2,2,4,1,25,10.461,663,'18-
feb-92','',',4,2','',');
INSERT INTO ACCIDENT VALUES(71,14175460,'','',4,6,2,1,1,5,25,20,22.168,327,'26-
may-92','',',2,1','',');
INSERT INTO ACCIDENT VALUES(72,14175467,'','',4,6,2,1,2,5,25,21,22.168,327,'09-
jun-92','',',2,1','',');
INSERT INTO ACCIDENT VALUES(70,14175481,'','',4,6,2,2,3,1,25,21,0.326,273,'12-
jul-92','',',2,1','',');
INSERT INTO ACCIDENT VALUES(73,14177205,'','',4,1,1,1,1,5,25,88,12.672,1147,'22-
nov-92','',',2,1','',');
INSERT INTO ACCIDENT VALUES(238,14232415,'','',1,6,1,2,3,4,25,88,3.179,1864,'25-
mar-92','',',6,1','',');
INSERT INTO ACCIDENT VALUES(324,14234634,'','',5,1,1,2,3,1,25,88,2.396,5081,'06-
mar-97','',',6,1','',');
INSERT INTO ACCIDENT VALUES(29,14727801,'','',1,1,1,1,1,1,25,88,13.215,299,'14-
dec-92','',',4,1','',');
INSERT INTO ACCIDENT VALUES(94,14895586,'','',1,1,1,2,3,5,8,25,11.062,6076,'03-
jun-92','',',4,2','',');
INSERT INTO ACCIDENT VALUES(85,14896689,'','',1,1,2,1,1,1,25,88,10.531,1914,'17-
mar-92','',',4,1','',');
INSERT INTO ACCIDENT VALUES(296,14964556,'','',5,1,2,1,2,2,77,25,10.423,2341,'28-
aug-92','',',4,1','',');

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INSERT INTO ACCIDENT VALUES(98,14966173,'',' ',1,1,2,1,1,1,25,88,14.012,1028,'01-
feb-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(97,14966191,'',' ',5,3,3,2,3,4,25,88,12.62,997,'13-
may-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(335,14972132,'',' ',5,8,2,1,1,4,25,18,3.12,5805,'15-
feb-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(200,14989866,'',' ',1,8,2,1,1,4,25,88,9.173,334,'16-
jan-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(139,14998411,'',' ',4,1,2,2,3,5,25,88,33.059,956,'02-
jan-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(131,14999256,'',' ',1,2,4,1,2,1,3,25,22.323,444,'15-
dec-92',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(45,15021725,'',' ',1,1,1,1,1,1,6,25,0.17,562,'28-nov-
92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(297,15030144,'',' ',1,1,4,1,1,2,25,88,10.423,2341,'11-
jan-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(258,15033447,'',' ',1,1,2,1,1,4,25,20,2.176,2246,'22-
aug-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(272,15033728,'',' ',5,1,1,1,2,1,25,88,13.69,2288,'09-
jan-92',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(61,15048126,'',' ',1,1,2,1,1,5,20,25,11.072,635,'13-
dec-92',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES(298,15093327,'',' ',5,1,2,1,1,1,25,88,10.423,2341,'28-
apr-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(39,15140096,'',' ',4,1,2,1,2,4,25,88,9.045,2628,'22-
oct-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(214,15317735,'',' ',1,1,2,1,2,1,25,88,2.891,425,'28-
jun-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(320,15318609,'',' ',5,1,1,1,1,4,25,88,14.152,3146,'24-
may-92',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(283,15319320,'',' ',5,8,1,1,2,4,25,20,5.346,2308,'14-
apr-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(116,15347449,'',' ',5,1,2,1,2,1,1,25,0.847,98,'07-aug-
92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(261,15370449,'',' ',1,1,1,2,3,1,25,88,9.036,2263,'22-
may-92',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES(3,15375805,'',' ',1,1,2,1,1,1,25,6,6.445,641,'03-nov-
92',' ',' ',7,2,' ',' ');
INSERT INTO ACCIDENT VALUES(22,15376405,'',' ',1,1,2,1,1,1,31,25,10.473,2892,'12-
may-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(19,15379840,'',' ',5,8,2,1,1,2,25,88,0,2689,'27-dec-
92',' ',' ',1,1,' ',' ');
INSERT INTO ACCIDENT VALUES(299,15380827,'',' ',1,1,2,1,1,1,25,31,10.423,2341,'02-
sep-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(300,15381544,'',' ',1,1,4,1,1,1,25,88,10.423,2341,'30-
jul-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(330,15381739,'',' ',1,1,6,1,1,1,25,88,32,5194,'13-aug-
92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(195,15383322,'',' ',5,1,2,1,2,1,25,88,17.81,7017,'13-
aug-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT
VALUES(146,15383344,'',' ',5,8,77,1,1,1,25,88,16.114,1700,'25-nov-
92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(301,15384795,'',' ',1,1,77,1,2,1,25,31,10.423,2341,'04-sep-
92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(302,15384920,'',' ',1,1,2,1,1,1,77,25,10.423,2341,'03-
sep-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(303,15385000,'',' ',5,1,1,1,1,1,25,88,10.423,2341,'02-
sep-92',' ',' ',4,1,' ',' ');

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INSERT INTO ACCIDENT VALUES(397,15386510,'',' ',4,1,2,2,3,4,23,25,27.62,2886,'28-
jun-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(380,15386558,'',' ',4,1,2,1,1,1,25,88,30.594,1453,'22-
sep-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(408,15386559,'',' ',4,1,1,2,3,1,23,25,39.719,6039,'28-
sep-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(379,15386752,'',' ',5,1,2,1,1,5,6,25,26.92,1448,'17-
dec-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(407,15386818,'',' ',1,1,2,1,2,1,1,25,18.652,6018,'02-
nov-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(366,15387411,'',' ',4,6,1,2,3,1,25,88,17.798,513,'27-
jun-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(385,15389701,'',' ',5,1,2,2,2,1,2,25,14.219,1503,'10-
nov-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(15,15393472,'',' ',5,1,2,1,1,4,25,31,14.191,2642,'07-
jul-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(4,15411429,'',' ',1,8,2,1,1,4,25,88,6.445,641,'02-may-
92',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT VALUES(52,15436777,'',' ',1,1,2,1,1,5,25,20,15.345,748,'02-
may-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(161,15565186,'',' ',5,8,2,2,2,1,25,88,15.646,2146,'17-
jul-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(182,15566391,'',' ',5,1,2,1,2,4,25,88,23.525,4533,'26-
jan-92',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(145,15567284,'',' ',1,1,6,1,1,4,25,88,16.22,1680,'18-
mar-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(25,15609173,'',' ',4,1,2,1,1,4,25,88,9.219,3511,'13-
aug-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(224,15891042,'',' ',5,7,2,1,1,1,25,88,13.667,1559,'08-
oct-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(199,15932800,'',' ',1,8,2,1,1,5,25,88,4.287,315,'27-
sep-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(368,15992045,'',' ',1,1,2,2,2,1,77,25,7.054,565,'24-
nov-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(82,16062911,'',' ',5,1,1,1,1,1,25,88,25.9,1446,'04-
sep-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(89,16062945,'',' ',5,4,1,1,1,5,25,88,5.021,2511,'25-
oct-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(79,16062972,'',' ',1,1,2,1,1,1,25,88,0.83,450,'19-nov-
92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(92,16063719,'',' ',1,8,2,1,1,1,4,25,5.079,6004,'21-
mar-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(126,16090489,'',' ',5,2,2,2,3,5,25,10,3.86,6748,'23-
nov-92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(120,16095403,'',' ',5,1,2,1,1,1,25,3,17.414,437,'13-
sep-92',' ',' ',7,2,' ',' ');
INSERT INTO ACCIDENT VALUES(153,16111856,'',' ',5,1,2,2,2,1,25,88,10.644,1886,'10-
sep-92',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(273,16172505,'',' ',5,8,2,1,1,4,25,88,13.69,2288,'19-
sep-92',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(228,16174260,'',' ',4,1,2,1,1,4,25,88,0.098,1849,'13-
dec-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(6,16186130,'',' ',1,1,2,1,1,1,25,20,0.746,878,'29-may-
92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(68,16293563,'',' ',4,1,2,1,2,1,6,25,9.45,1027,'25-sep-
92',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(170,16310807,'',' ',5,7,1,1,2,1,25,88,6.155,3399,'19-
nov-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(154,16345921,'',' ',5,1,2,1,1,5,25,20,10.644,1886,'06-
dec-92',' ',' ',8,1,' ',' ');

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INSERT INTO ACCIDENT VALUES(390,16365721,'',' ',5,1,1,1,1,1,25,88,16.817,2197,'31-
jan-92',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(387,16368927,'',' ',4,1,1,1,1,1,25,20,9.519,1506,'26-
dec-92',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(37,16464364,'',' ',1,1,2,1,2,1,25,88,21.85,2563,'07-
nov-92',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(38,16466019,'',' ',1,2,3,2,2,1,3,25,22.184,2564,'16-
oct-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(125,30001969,'',' ',5,2,2,1,2,4,25,88,0.993,6717,'21-
mar-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(400,30019229,'',' ',4,1,9,3,3,2,20,25,41.959,2901,'29-
jun-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(399,30024110,'',' ',4,1,2,2,3,3,25,88,41.12,2899,'01-
feb-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(386,30024262,'',' ',5,1,2,1,1,5,25,88,9.419,1506,'05-
jan-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(378,30024351,'',' ',1,6,2,1,2,5,23,25,13.369,1433,'13-
feb-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(384,30024383,'',' ',4,1,2,2,3,5,20,25,14.119,1503,'27-
mar-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(404,30024597,'',' ',4,1,1,2,3,1,20,25,1.384,6001,'05-
jun-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(395,30024600,'',' ',1,1,77,1,2,1,25,88,16.15,2874,'02-
aug-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(66,30025098,'',' ',5,2,3,1,1,4,25,88,6.655,204,'23-
jan-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(396,30040139,'',' ',5,1,2,2,3,1,25,88,24.62,2883,'02-
oct-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(410,30042700,'',' ',4,1,1,2,3,1,20,25,8.767,9008,'12-
feb-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(369,30043148,'',' ',4,1,1,2,3,1,25,18,18.554,583,'23-
jun-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(367,30043518,'',' ',5,1,1,1,1,5,3,25,1.062,554,'13-
jan-95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(365,30044170,'',' ',4,1,2,1,1,5,25,88,7.029,502,'20-
jan-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(62,30050190,'',' ',1,8,1,1,1,5,25,88,3.073,923,'08-
mar-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(372,30055176,'',' ',5,2,2,1,1,4,25,31,25.359,761,'16-
jul-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(69,30055840,'',' ',1,1,2,1,1,4,6,25,1.735,102,'03-jan-
93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(129,30057574,'',' ',5,2,2,1,1,1,25,1,4.729,13,'17-jan-
95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(127,30057575,'',' ',1,2,3,1,2,1,1,25,4.566,11,'23-jan-
95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(59,30061728,'',' ',5,6,2,1,2,5,25,21,25.815,691,'12-
apr-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(349,30062168,'',' ',1,8,77,1,2,1,25,88,12.242,7519,'19-may-
95',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(132,30101551,'',' ',5,4,2,1,2,1,4,25,20.575,878,'15-
feb-93',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(375,30110054,'',' ',3,2,3,1,2,4,25,88,1.178,478,'22-
jan-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(91,30117729,'',' ',1,8,1,1,1,1,4,25,5.116,2716,'09-
jun-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(174,30123289,'',' ',4,1,1,2,3,1,25,88,24.11,3559,'14-
aug-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(148,30125451,'',' ',4,1,1,1,1,4,25,88,10.335,1884,'02-
jul-93',' ',' ',8,1,' ',' ');

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INSERT INTO ACCIDENT VALUES(142,30126518,'',' ',1,8,1,1,1,5,25,88,9.022,1497,'04-
apr-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(149,30126699,'',' ',5,8,1,1,1,1,25,18,10.644,1886,'21-
jun-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(147,30126866,'',' ',1,1,1,1,1,4,3,25,1.677,1722,'12-
jun-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(156,30127924,'',' ',1,8,2,1,1,4,25,31,9.971,1928,'03-
dec-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(382,30194449,'',' ',4,1,1,2,2,5,25,20,39.277,1475,'08-
apr-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(402,30194478,'',' ',1,1,4,1,2,4,25,88,16.18,3782,'16-
jan-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(86,30201778,'',' ',5,1,1,1,1,1,25,18,3.391,1923,'06-
apr-94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(76,30202442,'',' ',1,1,1,1,1,1,25,88,30.229,139,'04-
mar-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(150,30203072,'',' ',5,8,1,2,3,4,25,88,10.644,1886,'28-
aug-93',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(159,30206595,'',' ',4,6,2,1,1,1,25,88,10.764,1932,'05-
jul-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(172,30207765,'',' ',1,7,2,2,2,4,25,20,18.016,3537,'28-
dec-93',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT VALUES(173,30207863,'',' ',1,7,1,2,2,1,25,88,18.016,3537,'09-
aug-93',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT VALUES(151,30207905,'',' ',5,8,1,1,2,1,25,88,10.644,1886,'17-
dec-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(152,30208830,'',' ',5,8,2,1,1,1,25,18,10.644,1886,'17-
dec-93',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(388,30209882,'',' ',5,7,6,1,1,4,25,88,7.943,2135,'01-
apr-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(144,30214190,'',' ',4,1,2,1,1,4,25,16,9.118,1503,'02-
apr-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(167,30215041,'',' ',5,8,77,2,1,4,25,88,7.265,2491,'06-
jan-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(143,30215392,'',' ',1,8,2,2,3,4,25,18,9.022,1497,'05-
feb-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(389,30215537,'',' ',1,8,1,1,1,1,25,23,8.044,2150,'20-
jun-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(166,30216220,'',' ',5,1,2,1,1,4,25,88,15.102,2428,'14-
jan-93',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(171,30217847,'',' ',1,1,1,2,2,1,25,34,17.667,3535,'01-
jan-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(196,30230188,'',' ',4,1,1,2,3,1,25,88,19.61,7019,'04-
feb-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(406,30230520,'',' ',4,1,2,1,1,5,25,88,13.719,6013,'17-
sep-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(155,30232779,'',' ',5,1,2,1,1,1,25,23,9.184,1927,'17-
apr-93',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(184,30232950,'',' ',1,1,2,1,1,1,25,88,17.167,7017,'02-
jan-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(181,30234919,'',' ',5,8,2,1,1,4,25,88,8.909,4528,'19-
mar-95',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES(54,30246140,'',' ',4,6,2,1,2,1,25,21,14.859,1237,'14-
nov-93',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES(305,30270020,'',' ',5,1,4,1,1,1,25,34,24.233,2378,'11-
apr-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(294,30270161,'',' ',1,1,77,1,1,1,25,88,10.423,2341,'14-jan-
93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(326,30270196,'',' ',4,1,2,1,2,1,23,25,19,5180,'20-may-
93',' ',' ',4,1,' ',' ');

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INSERT INTO ACCIDENT VALUES (306,30270370,'',' ',5,1,1,1,1,4,25,88,24.233,2378,'22-
jun-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (307,30270536,'',' ',5,1,2,1,1,4,25,88,24.233,2378,'22-
aug-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (310,30270541,'',' ',5,8,2,1,1,4,25,88,25.543,2432,'18-
sep-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (327,30273646,'',' ',4,1,2,2,2,1,25,31,21.1,5182,'05-
jan-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (295,30273679,'',' ',5,1,1,2,3,1,25,88,10.423,2341,'05-
jan-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (35,30294508,'',' ',5,8,1,1,1,1,25,20,4.623,2372,'04-
feb-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (99,30300841,'',' ',4,1,1,2,3,5,25,20,16.418,30,'07-
oct-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (107,30302045,'',' ',5,2,1,1,1,2,25,20,3.57,1632,'31-
mar-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (332,30310894,'',' ',4,2,3,1,1,1,25,88,2.504,5261,'09-
apr-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (342,30321015,'',' ',1,2,3,1,1,1,3,25,38.55,6372,'13-
mar-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (223,30332813,'',' ',5,1,77,1,1,2,1,25,2.322,620,'15-
jan-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (289,30332952,'',' ',4,1,77,1,1,1,25,88,3.321,2311,'11-
feb-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (270,30333697,'',' ',5,1,2,1,2,4,25,88,13.69,2288,'01-
feb-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (284,30333705,'',' ',5,8,2,1,2,4,6,25,0,2308,'17-may-
94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES (212,30333972,'',' ',5,1,2,1,2,5,25,88,0.346,412,'14-
apr-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (235,30338549,'',' ',4,8,1,2,3,1,25,88,3.15,1864,'13-
sep-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (179,30342125,'',' ',1,8,1,1,1,4,25,88,20.628,3790,'04-
mar-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (209,30352090,'',' ',5,1,1,1,2,3,25,88,9.693,379,'04-
jan-95',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (230,30352095,'',' ',1,8,1,1,1,1,25,88,12.083,1851,'11-
apr-95',' ',' ',1,' ',' ');
INSERT INTO ACCIDENT VALUES (42,30360528,'',' ',4,1,1,1,1,1,25,88,8.702,461,'23-
apr-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (239,30366546,'',' ',1,1,2,2,2,4,25,88,3.187,1865,'04-
mar-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (277,30382230,'',' ',5,1,1,1,1,1,25,20,7.699,2302,'06-
jun-93',' ',' ',1,' ',' ');
INSERT INTO ACCIDENT VALUES (314,30382251,'',' ',1,1,1,1,1,4,25,88,11.903,2843,'30-
jan-94',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (256,30382320,'',' ',5,1,1,1,2,4,25,88,1.711,2245,'26-
feb-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (259,30382937,'',' ',1,1,77,1,1,4,25,88,3.079,2249,'12-
jun-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (285,30383215,'',' ',5,8,1,2,2,4,25,88,0,2308,'27-jan-
94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES (336,30384039,'',' ',1,8,2,1,1,4,25,88,4.025,6228,'10-
dec-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (207,30384045,'',' ',5,8,2,1,1,4,25,88,11.175,370,'09-
oct-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (231,30384646,'',' ',1,2,2,1,1,3,25,88,1.134,1857,'04-
nov-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (215,30396896,'',' ',5,8,2,1,1,1,25,88,2.35,436,'24-
oct-93',' ',' ',6,1,' ',' ');

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INSERT INTO ACCIDENT VALUES (325,30398384,'',' ',1,8,2,1,1,5,25,18,6.06,5087,'05-
dec-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (213,30398685,'',' ',5,8,1,1,2,4,25,88,0.346,412,'29-
aug-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (344,30398696,'',' ',1,8,1,1,2,4,25,20,5.941,7188,'18-
oct-93',' ',' ',1,' ',' ');
INSERT INTO ACCIDENT VALUES (208,30398711,'',' ',5,8,2,1,2,4,25,20,11.175,370,'20-
nov-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (278,30399225,'',' ',5,8,1,1,1,1,6,25,7.699,2302,'18-
apr-93',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (24,30400268,'',' ',4,1,1,2,3,1,25,20,0.681,3212,'21-
aug-93',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT VALUES (20,30425960,'',' ',5,1,6,1,1,4,25,88,6.353,2703,'21-
jan-93',' ',' ',7,2,' ',' ');
INSERT INTO ACCIDENT VALUES (340,30435077,'',' ',5,1,1,1,2,1,6,25,7.969,6245,'24-
aug-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (203,30435252,'',' ',5,8,1,1,2,1,25,88,0,366,'20-jan-
94',' ',' ',1,2,' ',' ');
INSERT INTO ACCIDENT VALUES (287,30435535,'',' ',5,8,2,1,1,1,25,18,0,2308,'05-aug-
93',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES (242,30435953,'',' ',1,1,1,1,2,1,25,88,14.095,2085,'01-
aug-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (265,30436134,'',' ',1,8,2,1,1,4,25,31,16.363,2280,'10-
feb-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (266,30436991,'',' ',5,8,8,1,1,4,25,88,16.843,2282,'03-
mar-95',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (217,30439167,'',' ',4,1,2,2,3,4,25,88,0.04,449,'05-
feb-93',' ',' ',3,1,' ',' ');
INSERT INTO ACCIDENT VALUES (210,30439293,'',' ',1,8,1,1,1,1,25,88,0.158,411,'04-
may-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (222,30439489,'',' ',5,8,2,1,1,4,25,88,0,490,'06-feb-
94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES (216,30439496,'',' ',5,8,2,1,2,4,25,18,0.59,444,'08-
apr-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (267,30439507,'',' ',5,8,3,1,2,4,6,25,17.006,2282,'10-
jul-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (268,30439574,'',' ',1,2,2,1,1,4,25,88,13.69,2288,'15-
jan-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (33,30445725,'',' ',5,2,3,1,1,1,3,25,22.551,47,'03-dec-
93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (2,30465364,'',' ',1,1,2,1,1,5,26,25,1.172,569,'15-apr-
93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (17,30466272,'',' ',5,8,2,2,3,4,25,88,0,2667,'06-oct-
93',' ',' ',1,1,' ',' ');
INSERT INTO ACCIDENT VALUES (5,30467581,'',' ',1,8,2,1,1,1,25,88,0,641,'06-dec-
93',' ',' ',1,1,' ',' ');
INSERT INTO ACCIDENT VALUES (183,30478366,'',' ',1,1,1,2,3,4,1,25,10.648,7010,'16-
oct-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (374,30479257,'',' ',1,4,2,1,1,4,4,25,0.791,237,'15-
may-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (328,30481190,'',' ',5,1,1,1,1,1,6,25,31.534,5194,'06-
apr-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (75,30519547,'',' ',4,1,2,1,1,5,25,88,5.789,91,'21-feb-
94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (341,30544047,'',' ',1,2,3,1,1,4,6,25,2.19,6269,'24-
jul-94',' ',' ',3,2,' ',' ');
INSERT INTO ACCIDENT VALUES (403,30557499,'',' ',5,8,3,1,1,4,25,88,6.825,3783,'03-
sep-94',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (93,30561896,'',' ',1,8,2,1,1,1,25,88,12.895,6064,'04-
aug-93',' ',' ',4,2,' ',' ');

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INSERT INTO ACCIDENT VALUES(169,30584790,'',' ',1,6,1,2,3,4,25,88,19.893,2848,'14-
jan-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(78,30596105,'',' ',5,1,2,1,1,3,25,88,29.796,339,'24-
nov-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(90,30597375,'',' ',4,1,2,2,3,1,25,88,13.513,2515,'20-
feb-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(80,30599594,'',' ',5,2,3,1,1,1,25,88,3.523,494,'24-
feb-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(135,30659796,'',' ',1,1,1,1,1,5,1,25,11.663,38,'08-
dec-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(30,30670170,'',' ',1,6,2,1,1,1,25,88,0.17,100,'01-mar-
93',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES(31,30673181,'',' ',1,8,2,1,1,4,25,88,23.376,1847,'05-
apr-93',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES(44,30712479,'',' ',1,6,2,1,1,1,25,88,5.294,595,'06-
sep-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(64,30778518,'',' ',5,8,2,1,2,1,25,88,3.466,978,'10-
oct-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(114,30797450,'',' ',5,1,1,2,3,5,25,88,0.3,4259,'13-
jan-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(47,30814853,'',' ',4,1,2,1,1,5,25,88,13.764,22,'15-
dec-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(205,30819081,'',' ',5,8,2,1,1,4,25,88,0,367,'27-dec-
94',' ',' ',1,2,' ',' ');
INSERT INTO ACCIDENT VALUES(358,30819102,'',' ',5,8,2,1,1,1,25,88,13.612,7551,'14-
feb-95',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(102,30826858,'',' ',1,1,1,1,1,1,25,88,19.617,419,'23-
apr-95',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(111,30827690,'',' ',1,1,1,1,1,4,25,88,16.163,2964,'13-
nov-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(113,30829155,'',' ',5,1,2,1,1,4,25,20,0.933,4038,'29-
sep-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(329,30855907,'',' ',1,2,4,1,1,1,25,88,31.534,5194,'08-
oct-94',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(165,30855937,'',' ',1,1,1,1,1,1,25,6,6.736,2405,'29-
nov-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(331,30855956,'',' ',1,1,1,1,2,5,25,31,33.1,5195,'20-
nov-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(185,30856570,'',' ',1,1,2,1,1,1,25,88,17.167,7017,'08-
feb-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(409,30857494,'',' ',4,1,1,1,1,1,25,3,0.157,9006,'28-
apr-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(186,30857680,'',' ',1,1,6,2,3,4,25,20,17.167,7017,'29-
apr-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(187,30857994,'',' ',1,1,6,1,1,1,25,88,17.167,7017,'03-
jan-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(177,30858151,'',' ',1,1,1,1,1,4,25,25,1.943,3727,'26-
jul-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(178,30858174,'',' ',1,1,77,1,2,1,25,1,2.312,3728,'04-
oct-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(226,30858290,'',' ',1,1,6,1,2,4,25,88,0.573,1829,'29-
mar-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(193,30858331,'',' ',1,1,1,1,1,4,25,88,17.114,7017,'10-
nov-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(308,30859027,'',' ',1,1,1,1,1,4,25,88,29.013,2388,'10-
jun-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(309,30859255,'',' ',5,8,2,1,1,3,25,88,27.009,2427,'03-
jun-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT
VALUES(304,30859361,'',' ',1,2,77,2,2,1,25,88,24.233,2378,'02-aug-
94',' ',' ',6,2,' ',' ');

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INSERT INTO ACCIDENT VALUES (293,30859623,'',' ',1,1,4,1,2,4,25,24,10.4,2341,'28-mar-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (36,30865786,'',' ',4,8,1,1,1,1,25,88,4.623,2372,'11-jul-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (34,30867838,'',' ',4,8,2,1,1,1,25,88,4.623,2372,'30-jun-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (51,30887278,'',' ',1,1,2,1,1,2,25,31,13.28,305,'25-jun-95',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES (157,30918037,'',' ',1,7,2,1,1,1,25,31,10.468,1930,'07-dec-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (158,30918040,'',' ',1,7,2,1,1,1,25,31,10.468,1930,'08-dec-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (401,30920510,'',' ',5,1,2,1,1,4,25,88,16.855,3769,'31-dec-93',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (391,30921603,'',' ',5,8,2,2,3,4,25,88,0,2209,'16-oct-93',' ',' ',1,1,' ',' ');
INSERT INTO ACCIDENT VALUES (393,30924540,'',' ',5,1,1,1,1,1,25,88,8.266,2421,'09-jun-95',' ',' ',5,1,' ',' ');
INSERT INTO ACCIDENT VALUES (50,30931635,'',' ',4,1,2,1,1,1,25,88,17.957,1794,'10-jul-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (96,30978504,'',' ',5,2,3,1,1,1,25,13.153,667,'26-jul-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (57,31032041,'',' ',5,8,1,1,1,1,25,88,0.2,2748,'29-nov-93',' ',' ',3,1,' ',' ');
INSERT INTO ACCIDENT VALUES (18,31107708,'',' ',5,1,1,1,1,1,6,25,7.418,2669,'22-may-95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (21,31108048,'',' ',1,1,77,1,1,4,25,88,26.258,2756,'29-jun-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (12,31108706,'',' ',1,1,2,1,1,88,25,1,23.745,2628,'06-jun-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (162,31135699,'',' ',1,6,1,3,4,4,25,88,19.803,2386,'27-mar-93',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES (63,31148134,'',' ',1,1,2,1,1,1,25,10,32.673,951,'25-mar-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (117,31172896,'',' ',5,7,2,1,1,4,3,25,0.127,430,'14-aug-93',' ',' ',1,2,' ',' ');
INSERT INTO ACCIDENT VALUES (405,31230021,'',' ',1,1,1,2,3,1,25,88,2.32,6002,'18-apr-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (317,31232999,'',' ',1,8,2,1,2,1,25,88,12.948,2853,'24-may-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (281,31234752,'',' ',5,8,1,1,1,1,25,20,6.769,2304,'13-may-94',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (202,31234927,'',' ',1,8,1,1,2,1,25,88,12.5,354,'15-oct-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (370,31239804,'',' ',4,1,1,2,3,1,25,18,18.554,584,'19-aug-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (271,31315201,'',' ',5,2,1,1,1,4,25,88,13.69,2288,'18-jul-93',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (279,31317698,'',' ',5,8,2,1,1,1,6,25,7.699,2302,'09-dec-93',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (240,31319202,'',' ',1,8,1,1,1,4,25,20,14.095,2085,'11-mar-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (260,31320015,'',' ',4,1,2,1,2,4,20,25,7.15,2258,'03-feb-95',' ',' ',1,' ',' ');
INSERT INTO ACCIDENT VALUES (219,31324106,'',' ',1,8,1,1,1,4,25,88,0,449,'22-oct-93',' ',' ',3,1,' ',' ');
INSERT INTO ACCIDENT VALUES (312,31324736,'',' ',5,1,1,1,1,4,18,25,16.435,2730,'25-apr-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (264,31330088,'',' ',5,1,1,1,2,4,25,3,12.401,2272,'16-oct-94',' ',' ',8,2,' ',' ');

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INSERT INTO ACCIDENT VALUES (241,31331295,'',' ',1,8,1,1,1,4,25,20,14.095,2085,'09-
feb-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES (313,31333330,'',' ',5,1,1,1,1,1,6,25,5.165,2824,'29-
jun-93',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (350,31333490,'',' ',1,8,1,1,1,1,25,88,12.242,7519,'06-
feb-95',' ',' ',8,1,' ',' ');
INSERT INTO ACCIDENT VALUES (194,31333800,'',' ',1,1,2,1,2,1,25,88,17.114,7017,'16-
dec-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (334,31334363,'',' ',5,1,2,1,1,1,25,88,3.12,5805,'08-
may-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (274,31334371,'',' ',1,1,2,1,2,1,25,31,7.699,2302,'22-
jun-94',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (236,31436373,'',' ',1,8,1,2,3,4,25,88,3.15,1864,'01-
oct-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (280,31440229,'',' ',5,8,2,1,1,1,25,88,7.699,2302,'27-
aug-93',' ',' ',1,' ',' ');
INSERT INTO ACCIDENT VALUES (316,31441398,'',' ',4,1,1,1,1,5,25,20,16.819,2850,'10-
jul-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (269,31442142,'',' ',5,2,2,2,2,1,25,88,13.69,2288,'10-
oct-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (262,31442157,'',' ',4,1,1,1,1,1,25,3,9.545,2264,'26-
apr-95',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (321,31454987,'',' ',1,4,1,1,1,1,25,2.584,4224,'25-
aug-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (160,31499814,'',' ',4,2,3,1,1,4,25,88,6.523,1941,'21-
oct-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (88,31586267,'',' ',1,1,1,1,1,1,25,88,4.784,2178,'12-
may-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (11,31653819,'',' ',4,2,3,1,1,5,25,88,0.836,1664,'24-
aug-93',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT VALUES (134,31681017,'',' ',5,1,2,1,1,5,25,3,12.163,37,'03-
dec-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (10,31711435,'',' ',4,2,2,1,1,5,25,18,0.836,1664,'08-
feb-94',' ',' ',7,2,' ',' ');
INSERT INTO ACCIDENT VALUES (26,31712720,'',' ',4,8,1,2,3,4,25,88,0.3858,'30-jun-
94',' ',' ',1,2,' ',' ');
INSERT INTO ACCIDENT VALUES (56,31783946,'',' ',5,1,1,1,1,1,25,18,0.46,2498,'05-
jun-93',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES (130,31826661,'',' ',1,2,2,1,1,1,4,25,4.816,14,'12-may-
95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES (141,31877235,'',' ',4,2,1,1,1,4,25,88,15.789,1017,'24-
feb-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (252,31910901,'',' ',5,7,2,1,1,1,25,88,16.107,2145,'05-
oct-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (343,31913552,'',' ',1,1,2,1,1,1,25,88,14.895,6947,'29-
dec-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (275,31914517,'',' ',5,8,1,1,1,1,25,20,7.699,2302,'10-
may-94',' ',' ',2,' ',' ');
INSERT INTO ACCIDENT VALUES (290,31914568,'',' ',5,8,1,1,1,1,25,88,0.2311,'04-may-
94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES (247,31914829,'',' ',5,1,2,1,1,1,18,25,16.662,2093,'14-
jun-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (351,31921285,'',' ',1,1,2,1,1,4,25,3,12.346,7520,'04-
feb-95',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (333,31933084,'',' ',1,2,3,1,1,88,25,88,3.009,5716,'01-
jun-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES (100,31952538,'',' ',5,8,2,1,1,4,25,18,16.732,72,'06-
may-94',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES (106,31952853,'',' ',5,8,2,1,1,4,25,88,0.404,1376,'14-
nov-93',' ',' ',4,1,' ',' ');

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INSERT INTO ACCIDENT VALUES(339,31965766,'',' ',5,1,1,1,1,4,25,18,7.969,6245,'06-
may-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(168,32051285,'',' ',5,1,1,1,1,1,25,22,22.082,2750,'27-
jun-95',' ',' ',8,2,' ',' ');
INSERT INTO ACCIDENT VALUES(175,32054332,'',' ',5,1,77,1,1,1,1,25,2.529,3704,'16-
apr-95',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(27,32063758,'',' ',1,1,1,1,1,5,25,22,31.974,4279,'14-
jun-95',' ',' ',5,2,' ',' ');
INSERT INTO ACCIDENT VALUES(248,32110411,'',' ',1,1,2,2,3,1,25,88,16.912,2143,'22-
jun-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(337,32114611,'',' ',1,8,1,1,1,4,25,88,11.689,6239,'15-
mar-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(180,32134101,'',' ',4,1,1,3,3,1,25,88,4.066,4125,'16-
jun-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(1,32189610,'',' ',1,2,3,1,1,1,25,88,14.165,243,'28-
jun-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(249,32201911,'',' ',5,1,1,2,3,4,25,88,16.335,2144,'04-
jun-95',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(137,32221238,'',' ',5,6,2,1,1,1,3,25,0.97,208,'08-sep-
94',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(138,32222013,'',' ',5,2,1,1,1,4,25,88,17.296,306,'26-
mar-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(128,32224902,'',' ',1,2,3,1,1,1,25,8,4.566,11,'30-jan-
95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(110,32235646,'',' ',5,6,1,1,1,4,25,25,0.712,2484,'24-
sep-94',' ',' ',9,2,' ',' ');
INSERT INTO ACCIDENT VALUES(288,32257704,'',' ',5,1,1,1,1,4,25,88,3.321,2311,'24-
jan-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(257,32258937,'',' ',1,8,2,1,1,1,25,77,1.958,2246,'02-
apr-95',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(204,32259043,'',' ',5,8,2,1,1,1,25,88,0,366,'30-apr-
94',' ',' ',1,2,' ',' ');
INSERT INTO ACCIDENT VALUES(197,32259263,'',' ',5,2,2,1,2,4,1,25,0.84,312,'12-feb-
94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(338,32260797,'',' ',1,1,1,1,1,1,3,25,11.637,6239,'10-
oct-93',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(81,32292079,'',' ',5,2,1,1,1,5,25,88,30.672,706,'21-
aug-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(118,32395346,'',' ',4,8,1,1,1,4,25,88,17.414,437,'20-
apr-95',' ',' ',7,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(123,32439704,'',' ',1,8,2,77,77,1,25,88,10.056,2663,'24-jun-
95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(121,32464622,'',' ',1,1,2,2,3,5,3,25,5.73,1765,'17-
mar-95',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(124,32467106,'',' ',1,1,6,2,3,1,25,88,9.562,5613,'04-
sep-94',' ',' ',6,2,' ',' ');
INSERT INTO ACCIDENT VALUES(77,32502729,'',' ',5,1,2,1,2,5,20,25,29.772,339,'18-
may-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(101,32768148,'',' ',4,1,1,2,3,1,25,3,16.04,92,'03-may-
94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(104,32792268,'',' ',5,8,1,1,1,1,29,25,0.459,759,'13-
aug-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(140,32822101,'',' ',1,1,2,1,1,1,25,88,31.895,1088,'11-
apr-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(133,32830819,'',' ',1,1,2,1,1,1,25,88,12.249,22,'03-
aug-94',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(67,40184203,'',' ',5,1,1,1,1,5,25,77,13.968,556,'22-
jun-95',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(119,40227241,'',' ',5,1,1,1,1,4,25,88,17.414,437,'08-
may-95',' ',' ',7,2,' ',' ');

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INSERT INTO ACCIDENT VALUES (359,40272113,'',' ',4,1,2,1,1,5,20,25,13.612,7551,'23-mar-95',' ',' ','8,1',' ');
INSERT INTO ACCIDENT VALUES (361,40272116,'',' ',4,1,2,1,1,5,25,3,13.612,7551,'23-mar-95',' ',' ','8,2',' ');
INSERT INTO ACCIDENT VALUES (7,40446106,'',' ',4,7,1,2,3,4,25,88,0.911,1244,'30-jan-95',' ',' ','6,1',' ');
INSERT INTO ACCIDENT VALUES (8,40446108,'',' ',4,7,1,2,3,4,25,88,0.911,1244,'28-jan-95',' ',' ','6,1',' ');
INSERT INTO ACCIDENT VALUES (16,40447501,'',' ',5,8,1,2,3,4,25,88,0,2667,'15-jan-95',' ',' ','1,1',' ');
INSERT INTO ACCIDENT VALUES (229,40750295,'',' ',1,2,2,1,1,4,25,88,12.455,1850,'20-may-95',' ',' ','8,1',' ');
INSERT INTO ACCIDENT VALUES (245,40750372,'',' ',1,1,1,1,1,1,25,1,16.127,2090,'08-jan-95',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (318,40752605,'',' ',4,1,2,2,3,1,20,25,12.641,2855,'10-aug-94',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (286,40752614,'',' ',5,8,1,2,3,1,25,88,0,2308,'21-dec-94',' ',' ','2,2',' ');
INSERT INTO ACCIDENT VALUES (255,40754177,'',' ',5,8,1,1,1,1,1,25,7.643,2164,'22-oct-94',' ',' ','8,2',' ');
INSERT INTO ACCIDENT VALUES (315,40754304,'',' ',4,6,1,1,1,4,25,20,16.8,2850,'12-nov-94',' ',' ','8,2',' ');
INSERT INTO ACCIDENT VALUES (250,40830501,'',' ',1,1,2,1,1,1,25,88,16.278,2144,'15-jun-94',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (354,40830575,'',' ',1,8,2,1,2,1,1,25,12.176,7549,'19-apr-95',' ',' ','8,2',' ');
INSERT INTO ACCIDENT VALUES (220,40832569,'',' ',1,8,1,1,1,4,25,88,0.114,450,'03-mar-95',' ',' ','3,1',' ');
INSERT INTO ACCIDENT VALUES (282,40833162,'',' ',4,1,2,1,1,1,23,25,6.108,2306,'23-nov-94',' ',' ','2',' ');
INSERT INTO ACCIDENT VALUES (355,40835717,'',' ',1,8,2,1,1,1,25,88,12.176,7549,'23-mar-95',' ',' ','8,2',' ');
INSERT INTO ACCIDENT VALUES (246,40837381,'',' ',1,8,2,1,1,4,25,20,16.127,2090,'13-jun-95',' ',' ','6,1',' ');
INSERT INTO ACCIDENT VALUES (263,40839611,'',' ',1,8,1,1,1,1,25,88,11.666,2269,'17-nov-94',' ',' ','2',' ');
INSERT INTO ACCIDENT VALUES (364,40912737,'',' ',5,3,3,1,1,4,25,8,14.661,8005,'20-nov-94',' ',' ','4,2',' ');
INSERT INTO ACCIDENT VALUES (276,40935005,'',' ',5,8,2,1,1,1,25,88,7.699,2302,'27-dec-94',' ',' ','2',' ');
INSERT INTO ACCIDENT VALUES (311,40935041,'',' ',4,1,2,1,1,4,25,88,0.19,2511,'06-mar-95',' ',' ','4,2',' ');
INSERT INTO ACCIDENT VALUES (322,40937031,'',' ',5,1,1,1,1,1,25,88,0.493,47198,'22-apr-95',' ',' ','4,2',' ');
INSERT INTO ACCIDENT VALUES (360,40938952,'',' ',5,8,1,1,1,1,25,88,13.612,7551,'10-apr-95',' ',' ','8,1',' ');
INSERT INTO ACCIDENT VALUES (348,40938966,'',' ',5,1,1,2,3,1,25,88,5.782,7515,'27-apr-95',' ',' ','1',' ');
INSERT INTO ACCIDENT VALUES (40,40963400,'',' ',5,2,77,1,1,4,25,77,2.214,1030,'07-mar-95',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (206,50008506,'',' ',5,1,1,1,1,1,6,25,11.267,370,'24-jul-95',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (221,50008537,'',' ',1,7,1,1,2,1,25,88,0.855,456,'09-sep-95',' ',' ','6,1',' ');
INSERT INTO ACCIDENT VALUES (345,50030378,'',' ',5,1,2,1,1,1,25,25,3.518,7489,'04-dec-95',' ',' ','6,1',' ');
INSERT INTO ACCIDENT VALUES (251,50031428,'',' ',5,7,2,1,1,1,1,25,16.107,2145,'06-dec-95',' ',' ','6,2',' ');
INSERT INTO ACCIDENT VALUES (487,50031704,2,'NO',5,8,1,1,1,1,25,21,2.32,620,'25-mar-96','430','PM',6,1,1,'V-1 was south bound on SR 9A in lane #3 (Lane closest to attenuator) approaching downtown Exit Ramp. V-1 took evasive action to the

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left in an attempt to make exit but instead lost control and struck crash attenuators with its front. After striking attenuators, V-1 spun to its left and struck bridge abutment with its left rear side. V-1 came to final rest in area of collision facing south west in lane 1 (farthest from attenuator on exit ramp)');
 INSERT INTO ACCIDENT VALUES (356,50034257,'',' ',1,8,1,1,1,1,25,88,12.176,7549,'12-sep-95',' ',8,2,'',' ');
 INSERT INTO ACCIDENT VALUES (495,50034731,2,'NO',5,1,1,1,1,1,25,31,7.643,2164,'06-apr-96','610','PM',8,1,1,'V-1 was travelling South bound, in the outside lane. The driver of V-1 was cut of by V-2 during a lane change. Driver of V-1 took evasive action and crash into an attenuator and also overturned on the exit ramp ');
 INSERT INTO ACCIDENT VALUES (227,50037514,'',' ',1,1,2,3,2,4,25,88,0.573,1829,'04-aug-95',' ',6,1,'',' ');
 INSERT INTO ACCIDENT VALUES (486,50037542,'',' ',5,8,1,1,1,1,25,88,3.334,436,'05-jan-96',' ',6,1,'',' ');
 INSERT INTO ACCIDENT VALUES (211,50060121,'',' ',5,1,1,1,2,1,3,25,0.964,412,'28-aug-95',' ',4,2,'',' ');
 INSERT INTO ACCIDENT VALUES (362,50060915,'',' ',5,8,1,1,1,4,25,3,13.612,7551,'16-aug-95',' ',8,2,'',' ');
 INSERT INTO ACCIDENT VALUES (218,50061001,'',' ',1,8,1,1,2,4,25,20,0,449,'07-jul-95',' ',3,1,'',' ');
 INSERT INTO ACCIDENT VALUES (352,50061644,'',' ',5,1,1,1,1,4,25,3,13.252,7523,'28-sep-95',' ',8,2,'',' ');
 INSERT INTO ACCIDENT VALUES (225,50062198,'',' ',5,8,1,1,1,1,25,88,11.321,1741,'17-nov-95',' ',2,2,'',' ');
 INSERT INTO ACCIDENT VALUES (363,50062233,'',' ',5,8,8,2,3,4,25,88,13.612,7551,'04-aug-95',' ',8,1,'',' ');
 INSERT INTO ACCIDENT VALUES (481,50063485,2,'NO',1,8,1,1,1,4,25,88,10.371,342,'14-jul-96','850','PM',6,1,1,'V-1 was travelling eastbound on SR 836, on the right lane, V-2 was traveling eastbound SR 836 on the exit lane to NW 17 Ave. The Driver of V-2 made an improper lane change from the exit lane to the right lane, to continue eastbound. The driver of V-1 steered sharply to the right to avoid collision with V-2. V-1 then collided with the crash attenuators with V-1 front rightside. ');
 INSERT INTO ACCIDENT VALUES (74,50081368,'',' ',4,6,1,1,2,5,25,20,0.379,316,'30-oct-95',' ',4,1,'',' ');
 INSERT INTO ACCIDENT VALUES (60,50084443,'',' ',4,1,2,1,1,1,25,21,17.386,608,'26-oct-95',' ',2,1,'',' ');
 INSERT INTO ACCIDENT
 VALUES (474,50110053,2,'NO',4,1,1,1,2,1,20,25,16.887,7017,'01-mar-96','1211','PM',7,2,1,'V-2 was stopped in an intervening space/ median, just south of the Cypress Creek toll, waiting to make U-turn. V-1 was northbound on SR 91 approaching the toll. The driver of V-1 stated she had a black out, and doesn't remember what happened. After D-1 lost control of her vehicle, when she suffered the black out, V-1 collided with the concrete Barrier wall. The vehicle continued out of control and collided with a crash attenuator. The impact from the second collision buckled to the left front wheel and undercarriage. The vehicle went into an uncontrolled skid for approximately 132 ft before colliding with the left front of V-2');
 INSERT INTO ACCIDENT VALUES (291,50110890,'',' ',1,1,4,1,1,1,25,88,10.423,2341,'02-jul-95',' ',4,1,'',' ');
 INSERT INTO ACCIDENT
 VALUES (475,50111097,2,'NO',5,1,4,1,1,1,25,88,17.288,7018,'24-mar-96','245','AM',6,1,1,'V-1 was travelling south bound on SR 91 (Florida Turnpike) approaching the cypress Creek toll plaza. V-1 then struck the crash attenuator with its left front. The driver of V-1 paid the automatic toll and then fled the scene');
 INSERT INTO ACCIDENT VALUES (188,50111365,'',' ',1,1,77,2,3,1,6,25,17.167,7017,'15-oct-95',' ',6,2,'',' ');

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INSERT INTO ACCIDENT VALUES(189,50111389,'',' ',1,1,4,1,2,1,25,88,17.167,7017,'29-
sep-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(190,50111427,'',' ',1,1,6,1,1,4,25,88,17.167,7017,'15-
dec-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(476,50112327,2,'YES',1,1,6,1,1,1,25,88,17.288,7018,'24-apr-
96','949','AM',6,1,1,' ');
INSERT INTO ACCIDENT VALUES(319,50112709,'',' ',4,1,2,2,3,4,25,17,0.139,2899,'26-
jul-95',' ',' ',3,1,' ',' ');
INSERT INTO ACCIDENT VALUES(176,50113474,'',' ',1,1,1,1,1,1,1,25,2.048,3727,'18-
sep-95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(191,50114045,'',' ',5,1,6,2,3,1,25,88,17.167,7017,'08-
sep-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(466,50114173,2,'NO',4,1,1,1,2,4,20,25,3.02,3668,'20-
apr-96','1105','PM',6,1,1,'V-1 was south bound on SR 91. V-1 driver apparently
fell asleep at the wheel. V-1 struck the concrete barrier wall with V-1 front
left. V-1 continued to travel south bound along the wall and struck the crash
attenuator with V-1 left side. V-1 then spun counterclockwise 180 degrees and
struck the crash attenuator with V-1 right front and rear. D-1 was ejected from
V-1. SEE ACCIDENT #566 DESCRIBING IMPACT WITH SECOND ATTENUATOR. ');
INSERT INTO ACCIDENT VALUES(566,50114173,2,'NO',4,1,1,1,2,4,20,25,3.02,3668,'20-
apr-96','1105','PM',6,1,1,'V-1 was south bound on SR 91. V-1 driver apparently
fell asleep at the wheel. V-1 struck the concrete barrier wall with V-1 front
left. V-1 continued to travel south bound along the wall and struck the crash
attenuator with V-1 left side. V-1 then spun counterclockwise 180 degrees and
struck the crash attenuator with V-1 right front and rear. D-1 was ejected from
V-1. SEE ACCIDENT #466 DESCRIBING IMPACT WITH FIRST ATTENUATOR. ');
INSERT INTO ACCIDENT VALUES(192,50114336,'',' ',1,1,1,1,2,1,25,88,17.167,7017,'21-
sep-95',' ',' ',6,1,' ','V-1 section1 was northbound on SR 91 approaching the
Cypress Creek Toll Plaza. For unknown reason, V-1 lost control and the front of
V-1 collided with a crash attenuator. V-1 fled the scene by continuing north
bound on SR 91. The witness advised that V-1 was blue in color and possibly a
Chrysler bearing a Florida tag of PCC 958. That tag is registered to a Ford,
White in color. ');
INSERT INTO ACCIDENT
VALUES(477,50114363,2,'NO',1,1,77,2,3,4,25,88,17.288,7018,'31-mar-
96','633','PM',6,1,1,' ');
INSERT INTO ACCIDENT VALUES(463,50114923,2,'NO',1,1,3,1,1,1,25,25,6.736,2405,'07-
jun-96','1252','PM',4,1,1,'V-1 was travelling Northbound on SR 821 outside lane
V-1 was attempting to enter the exact change lane at a high rate of speed. V-1
front collided with crash attenuator causing V-1 to spin counter clockwise. V-1
traveled up and over a concrete barrier of the next lane. V-1 came to rest
facing southbound against a concrete barrier ');
INSERT INTO ACCIDENT VALUES(562,50117250,2,'NO',1,1,1,1,1,4,25,88,' ',' ','03-apr-
97','400','PM',14,1,1,' ');
INSERT INTO ACCIDENT
VALUES(456,50117474,2,'YES',1,1,6,1,2,4,25,31,16.297,1681,'22-sep-
96','910','PM',6,1,1,'V-1 was travelling south bound in the left lane on SR 91.
Driver #1 drive across center dividing area and traveled south into the north
bound lanes. As V-1 crossed over from the south bound to the northbound lanes it
struck several traffic cones . The front of V-1 struck a crash attenuator which
was in front of on of the dividing barriers separating the individual toll lanes
at cypress Toll plaza. After V-1 struck the attenuator it overturned onto its
left side. ');
INSERT INTO ACCIDENT VALUES(464,50118249,2,'NO',5,1,1,1,2,4,25,88,6.735,2407,'18-
aug-96','1130','PM',4,1,1,'V-1 was west bound on State Road 821 attempting enter
the toll plaza. Witness stated that it seemed that the driver of V-1 was looking
for change, when he hit the attenuator of lane 7 with its front. ');
INSERT INTO ACCIDENT VALUES(292,50119335,'',' ',5,1,4,1,2,1,25,25,10.423,2341,'19-
sep-95',' ',' ',4,1,' ',' ');

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INSERT INTO ACCIDENT VALUES(13,50155565,'',' ',5,1,1,1,1,4,25,18,14.23,2642,'22-
nov-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(545,50156614,2,'NO',5,1,1,2,2,5,25,88,17.419,2638,'01-JAN-
96','330','AM',4,1,1,'V-1 was travelling east bound on SR 400 (I-4) However the
driver failed to drive the vehicle within his lane. Striking 3 large barrels.
The driver then turned the vehicle around and drove 100 yards in the center grass
median ( west bound in the east bound traffic side)');
INSERT INTO ACCIDENT VALUES(41,50160011,'',' ',4,1,2,2,3,5,23,25,6.9,528,'06-oct-
95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(418,50164435,'',' ',1,1,3,1,1,1,25,30,2.969,1822,'18-
jan-96',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(58,50177669,'',' ',5,1,88,1,1,1,25,88,33.003,656,'13-
jul-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT
VALUES(457,50185281,2,'NO',1,1,1,1,1,4,25,88,16.297,1681,'09-feb-
96','1205','AM',6,1,1,'V-1 was travelling North on SR 91 ( Turnpike) at Cypress
Toll Plaza. The driver of V-1 stated he fell asleep and lost control of Vehicle
. The left front of V-1 struck crash attenuator divider at toll plaza, coming to
final rest. ');
INSERT INTO ACCIDENT
VALUES(478,50185283,2,'NO',5,1,6,1,2,4,25,27,17.288,7018,'19-jan-
96','820','PM',6,1,1,'V-1 was southbound on state Road 91 approaching the Cypress
Creek toll facility at a high rate of speed. Driver one, upon approaching the
toll plaza, turned the wheel of V-1 sharply to the right causing V-1 to slide
partially in a clockwise direction. V-1 then struck the impact absorption
barrier in lane six with its left front causing it to become airborne. V-1 then
slammed into the concrete barrier in lane seven with its right front. Vehicle
one came to final rest facing southbound in lane seven. Vehicle one left tire
left 113 of yaw marks on the pavement before impact. Vehicle one right tires
left 74 ft of yaw marks on the pavement also prior to impact. 77=Site
Location=Toll Gate/ toll Plaza. ');
INSERT INTO ACCIDENT VALUES(381,50185484,'',' ',4,1,1,1,1,1,25,88,39.064,1475,'02-
dec-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(543,50185625,'',' ',4,1,1,1,1,4,25,88,14.158,9014,'28-
apr-96',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(377,50187225,'',' ',4,1,1,2,3,1,25,88,5.205,1424,'09-
aug-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(536,50187474,2,'NO',4,1,1,1,1,5,6,25,12.97,2872,'10-
feb-96','610','AM',4,2,1,'V-1 was travelling on SR 91 when it began to experience
mechanical problems. According to Ped-1 and Ped-2, Ped-1 attempted to coast
into the U-turn but failed. V-1 came to a stop in the inside lane, with both
driver (P-1) and his passenger (P-2) exiting. Veh-2 was also travelling north on
SR 91(turnpike), inside lane when it suddenly came up on the disabled vehicle,
and immediately took evasive action by braking and steering to the left.
Subsequently the right front of V-2 collided into the left rear of V-1. At the
same time the left front of V-2 side swiped the crash attenuator, where it came
to final rest. SEE ACCIDENT #536 DESCRIBING IMPACT WITH FIRST ATTENUATOR. ');
INSERT INTO ACCIDENT VALUES(567,50187474,2,'NO',4,1,1,1,1,5,6,25,12.97,2872,'10-
feb-96','610','AM',4,2,1,'V-1 was travelling on SR 91 when it began to experience
mechanical problems. According to Ped-1 and Ped-2, Ped-1 attempted to coast
into the U-turn but failed. V-1 came to a stop in the inside lane, with both
driver (P-1) and his passenger (P-2) exiting. Veh-2 was also travelling north on
SR 91(turnpike), inside lane when it suddenly came up on the disabled vehicle,
and immediately took evasive action by braking and steering to the left.
Subsequently the right front of V-2 collided into the left rear of V-1. At the
same time the left front of V-2 side swiped the crash attenuator, where it came
to final rest. SEE ACCIDENT #536 DESCRIBING IMPACT WITH FIRST ATTENUATOR. ');
INSERT INTO ACCIDENT VALUES(394,50187792,'',' ',1,1,2,2,2,4,25,1,14.79,2874,'04-
oct-95',' ',' ',4,2,' ',' ');

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INSERT INTO ACCIDENT
VALUES(538,50188512,2,'NO',4,1,9,1,1,1,25,88,22.987,2882,'10-dec-
96','450','PM',4,1,1,'');
INSERT INTO ACCIDENT
VALUES(537,50188736,2,'NO',4,1,1,2,3,1,25,20,16.438,2876,'06-oct-
96','601','PM',4,1,1,'V-1 was traveling north on SR 91 in the right lane.
According to witnesses statement, V-1 had been weaving through traffic while
travelling North. V-1 driver loss control of V-1, and crossed into he left lane
and struck the attenuator. The impact to the attenuator caused it to separate
from its base and move westward. V-1 continued to move forward after the impact,
and struck the end of the concrete barrier with its front. V-1 after impact slid
across North bound SR 91 onto the shoulder where V-1 came to rest facing
northwest. V-1 traveled approximately 349 ft from impact point to final rest.');
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INSERT INTO ACCIDENT VALUES(398,50189007,'',' ',4,1,1,2,3,2,25,88,27.684,2887,'27-aug-95',' ',4,1,'','');

INSERT INTO ACCIDENT VALUES(383,50189092,'',' ',5,8,2,1,1,4,25,88,36.352,1477,'11-dec-95',' ',4,1,'','');

INSERT INTO ACCIDENT VALUES(535,50189641,2,'NO',1,1,9,2,3,1,3,25,9.832,2869,'24-may-96','404','PM',4,2,1,'V-2 of lane 1(inner most lane) was north bound on SR 91 in the inside lane behind V-1. V-1 of lane2 was also north bound on SR 91. V-1 driver having missed her exit attempted a U-turn in heavy holiday traffic, through a prohibited area. V-1 cut off V-2 and the right rear of V-1 struck the left front of V-2. V-1 continued to rotate counterclockwise less than one half revolution, and the right rear struck and damaged the attenuator');

INSERT INTO ACCIDENT VALUES(539,50189710,2,'NO',4,1,1,1,1,1,25,88,32.48,2892,'21-jul-96','350','PM',4,1,1,'V-2 was southbound SR-91 (turnpike) mile post 105.7, Lane B, when a white vehicle(V-1) changed from lane A to Lane B cutting V-2 off. V-2 went onto emergency stop lane for a distance of 124 ft, to a depth of 8 feet. At 109 ft operator related he jerked V-2 back onto the road crossing lane b and Lane a, onto median where he struck the attenuator at 268 ft coming back into lane A at 304 ft, crossing lane A+B emergency stop lane, off onto west grass shoulder at 365 ft, to a depth of 22 ft at 411 ft, back onto emergency stop lane at 495ft coming to rest at 550 ft(front of vehicle) V-1 departed the area. Witness following V-2 when it was at 181 ft didn't see the white vehicle that V-2 was originally in lane A they were in lane B. Scuff marks attenuator marks on left side of V-2 paint transfer V-2 to attenuator, tire tracks on grass west shoulder. V-2 cut off V-1. V-2 then collided with attenuator, and was redirected across 2 lanes into grass median.');

INSERT INTO ACCIDENT

VALUES(540,50189808,2,'NO',1,8,2,1,2,5,25,18,13.484,3923,'28-jul-96','1101','PM',4,1,1,'V-1 of section one was north bound on SR 91, attempting to exit at Boynton Beach. For unknown reason V-1 failed to maintain control going into the curve. The left front of V-1 struck the attenuator. V-1 then rotated almost 90 degrees counter clockwise, travelling 26 additional ft before final rest. The rear of V-1 lightly touched the guard rail. The front portion of the attenuator (6-8 ft) will require repair.');

INSERT INTO ACCIDENT VALUES(53,50212326,'',' ',1,8,2,1,1,5,25,88,10.38,667,'27-sep-95',' ',4,2,'','');

INSERT INTO ACCIDENT VALUES(65,50233951,'',' ',5,6,77,1,1,1,25,28,17.096,372,'10-nov-95',' ',4,2,'','');

INSERT INTO ACCIDENT VALUES(201,50245804,'',' ',1,8,2,1,1,1,25,88,12,354,'14-jul-95',' ',4,2,'','');

INSERT INTO ACCIDENT VALUES(253,50246190,'',' ',5,8,2,1,1,1,25,20,14.71,2148,'29-jul-95',' ',6,1,'','');

INSERT INTO ACCIDENT

VALUES(512,50246766,2,'NO',5,1,1,2,3,1,25,88,11.447,2692,'14-jul-96','1010','AM',8,1,1,'V-1 was travelling south Bound on SR 826 in the second lane from the outside. V-2 was travelling southbound on SR 826 in the outside lane. V-1 changed lane improperly and entered the path of V-2 swerved to the right in order to avoid the collision, lost control and struck the crash

attenuator with front. V-1 left the scene of the crash. V-2 was removed from the road way prior to officer's arrival');
INSERT INTO ACCIDENT VALUES(244,50247197,'','','',1,7,2,1,1,4,25,88,15.828,2089,'12-jul-95','','',6,1,'','');
INSERT INTO ACCIDENT VALUES(254,50247217,'','','',5,7,2,1,1,4,25,20,14.116,2149,'20-aug-95','','',6,1,'','');
INSERT INTO ACCIDENT VALUES(500,50247653,2,'NO',5,8,1,1,1,4,25,88,0,2308,'23-nov-96','850','PM',2,1,1,'V-2 was south on State Road 9A in lane D(lane closest to attenuator) to go to east on I-195. V-1 was south on SR 9A in lane F(3 lanes away from attenuator) to go west on SR112 V-1 driver changed lanes, crossing the path of V-2. V-2 veered left to avoid contact with V-1 but struck the crash attenuator then spun-out of control counter clockwise to a final rest facing east in the south bound lane of SR 9A. V-1 continued south on SR 9A ');
INSERT INTO ACCIDENT VALUES(346,50247909,'','','',1,1,4,2,3,1,25,88,3.518,7489,'26-jul-95','','',6,1,'','');
INSERT INTO ACCIDENT VALUES(357,50248517,'','','',1,8,1,1,2,4,25,88,12.176,7549,'24-aug-95','','',8,1,'','');
INSERT INTO ACCIDENT VALUES(519,50256061,'','','',4,6,1,1,2,4,25,3,3.072,7343,'30-jun-96','','',6,2,'','');
INSERT INTO ACCIDENT VALUES(373,50280701,'','','',5,1,2,1,1,5,25,88,9.473,214,'05-aug-95','','',2,1,'','');
INSERT INTO ACCIDENT VALUES(243,50303308,'','','',1,8,1,2,2,1,25,20,15.391,2088,'25-jul-95','','',6,1,'','');
INSERT INTO ACCIDENT VALUES(520,50309481,2,'NO',4,6,1,2,3,3,25,88,3.072,7343,'13-jun-96','635','AM',6,1,1,'');
INSERT INTO ACCIDENT VALUES(411,50314473,2,'NO',5,1,6,1,1,4,25,27,4.515,1519,'04-feb-96','220','AM',4,1,1,'V-1 was westbound on SR 618. V-1 for unknown reason failed to stop for Crosstown west Toll Plaza. V-1 veered out of the approach lane and struck the eastmost point of the west bound crash attenuator. V-1 glanced off the attenuator in the southwest direction and struck a toll plaza coin box with left front. V-1 spun counterclockwise and struck a traffic gate. V-1 came to final rest on top of the traffic gate. V-1 driver was dead at the scene and still in the vehicle upon this officers arrival. Site location #77 Toll Plaza');
INSERT INTO ACCIDENT VALUES(423,50318993,2,'NO',5,1,1,1,1,5,25,20,14.037,584,'09-feb-96','304','AM',4,1,1,'V-1 was southwest bound on SR-93(I-275) in the right lane. V-1 drifted to the right and struck sand Barrels on the northside of the roadway. V-1 veered left and struck the concrete barrier wall located on the southside of the southbound lanes. V-1 was off of the roadway upon officer's arrival.');

INSERT INTO ACCIDENT VALUES(518,50335784,'','','',1,1,1,1,1,5,25,18,5.492,7211,'14-apr-96','','',4,1,'','V-1 was travelling on SR 15, traveling in inside lane. V-1 drifted to the left and struck several crash attenuators. Then the left front of the V-1 struck the concrete barrier wall. After striking the concrete wall V-1 partially overturned on its right side in the northbound lane');
INSERT INTO ACCIDENT VALUES(450,50354239,'','','',1,2,3,1,1,1,1,25,4.978,16,'23-mar-96','','',4,2,'','');
INSERT INTO ACCIDENT VALUES(447,50354241,'','','',1,2,3,1,1,1,4,25,4.216,8,'05-apr-96','','',4,2,'','');
INSERT INTO ACCIDENT VALUES(449,50354242,'','','',1,2,3,1,1,1,4,25,4.366,9,'05-may-96','','',4,2,'','');
INSERT INTO ACCIDENT VALUES(448,50354245,'','','',1,2,3,1,1,1,4,25,4.216,8,'05-apr-96','','',4,2,'','');
INSERT INTO ACCIDENT VALUES(43,50403898,'','','',1,1,1,1,1,5,25,88,10.268,93,'14-nov-95','','',2,2,'','');
INSERT INTO ACCIDENT VALUES(14,50453733,'','','',5,8,1,2,3,4,25,31,14.23,2642,'11-sep-95','','',4,1,'','');
INSERT INTO ACCIDENT VALUES(547,50464587,2,'NO',4,1,10,1,1,5,25,31,0.152,273,'21-MAR-96','820','PM',4,1,1,'');
INSERT INTO ACCIDENT VALUES(48,50465938,'','','',5,1,1,1,1,1,25,88,21.086,91,'23-aug-95','','',4,1,'','');

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INSERT INTO ACCIDENT VALUES(49,50466093,'',' ',4,1,2,1,1,1,25,88,13.745,105,'09-
nov-95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(46,50469502,'',' ',4,1,88,1,1,1,25,3,13.063,21,'07-
jul-95',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(470,50498765,2,'NO',1,8,1,1,1,4,25,20,9.796,3801,'10-
feb-96','409','AM',7,1,1,'V-1 was travelling EB on SR 862''s exit ramp to NB SR
9 in the inside lane. In an attempt to travel EB on SR 862 V-1''s driver sharply
turned the steering wheel to the left. Consequently V-1 veered from the inside
lane in a northerly direction into the gore area, where the left front end
collided with the crash attenuator located in the gore area. Upon impacting, V-1
ricocheted off the attenuator and started east bound movement across the inside
lane. V-1 then started counterclockwise movement across both the outside lane
and the south shoulder, where the rear bumper collided with (brushed with the
concrete barrier wall. It then ricocheted off the wall and started once again
east bound movement up the ramp where it came to final rest approximately 162 ft
from the original point of impact in the outside lane of the north bound exit
ramp to SR 9 and was facing in an easterly direction');
INSERT INTO ACCIDENT VALUES(461,50498782,2,'NO',5,8,1,1,1,4,25,88,10.76,1932,'17-
sep-96','1145','PM',' ',1,1,'V-1 was travelling SB on SR 9 in the lane. For
reason unknown, V-1 veered from #1 lane in a easterly direction, across the east
shoulder where the front end collided with a crash attenuator located in the gore
area. Upon impact, V-1 started counterclockwise movement and came to final rest
on the SB exit ramp to the park and ride lot located on Broward Blvd.
Contributing causes-Driver/ped. 77=V-1 failure to stay with in single lane. ');
INSERT INTO ACCIDENT VALUES(422,50512057,'',' ',5,3,3,1,1,1,25,88,4.022,467,'05-
dec-96',' ',' ',4,2,' ','Operator of V-1 stated that he was southbound on Gulf Blvd
(SR-699) intending to turn south onto w. Gulf Blvd. Operator stated that he was
adjusting his radio as he approached the intersection to turn right. Operator
stated he was travelling to fast and when he attempted to turn, he lost control
of his vehicle. V-1 swerved into the Northbound Lane of W. Gulf Blvd, then
veered to the right across southbound lane and striking a cluster group of
plastic traffic attenuators. V-1 continued through the attenuators, almost
striking road side sign in front of Beach Nut Bar-96WW.Gulf Blvd. V-1 left scene
travelling south across the unpaved section of W. Gulf Blvd that was at the time
under construction. Operator of V-1 was interviewed 12/6/96 at his residence,
and stated that he was afraid to stop because of the damage he did. ');
INSERT INTO ACCIDENT VALUES(555,50512057,2,'NO',1,3,3,1,1,1,25,88,6.752,223,'05-
DEC-96','220','PM',2,1,1,'Operator of V-1 stated that he was southbound on Gulf
Blvd (SR-699) intending to turn south onto w. Gulf Blvd. Operator stated that he
was adjusting his radio as he approached the intersection to turn right.
Operator stated he was travelling to fast and when he attempted to turn, he lost
control of his vehicle. V-1 swerved into the Northbound Lane of W. Gulf Blvd,
then veered to the right across southbound lane and striking a cluster group of
plastic traffic attenuators. V-1 continued through the attenuators, almost
striking road side sign in front of Beach Nut Bar-96WW.Gulf Blvd. V-1 left scene
travelling south across the unpaved section of W. Gulf Blvd that was at the time
under construction. Operator of V-1 was interviewed 12/6/96 at his residence,
and stated that he was afraid to stop because of the damage he did. ');
INSERT INTO ACCIDENT VALUES(23,50516971,'',' ',4,6,1,1,1,4,25,88,4.021,3171,'02-
dec-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(544,50518509,2,'NO',3,1,1,1,1,4,25,88,6.136,2702,'09-
FEB-96','1130','PM',8,1,1,'V-1 was south bound at approximately 55 mph, and
veered to the right for an unknown reason. V-1 then struck an attenuator and
came to final rest about 60 ft away from attenuator, in the inner most lane next
to attenuator');
INSERT INTO ACCIDENT VALUES(9,50518626,'',' ',4,1,1,2,3,5,25,88,9.26,1609,'19-oct-
95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(371,50577105,'',' ',4,6,2,1,1,5,25,18,19.963,601,'27-
oct-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(83,50600563,'',' ',5,8,3,2,2,5,4,25,4.92,1510,'13-oct-
95',' ',' ',4,2,' ',' ');

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INSERT INTO ACCIDENT VALUES(122,50617842,'',' ',1,8,1,1,1,4,25,20,5.629,2110,'06-
aug-95',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(421,50655911,'',' ',1,1,1,1,1,5,1,25,7.482,650,'20-
feb-96',' ',' ',2,2,' ',' ');
INSERT INTO ACCIDENT VALUES(429,50707034,'',' ',4,1,1,1,1,1,25,28,34.46,1497,'02-
aug-96',' ',' ',6,1,' ',' ');
INSERT INTO ACCIDENT VALUES(431,50709597,'',' ',5,8,2,1,1,1,25,88,0,1533,'12-dec-
96',' ',' ',1,1,' ',' ');
INSERT INTO ACCIDENT VALUES(554,50709601,2,'NO',1,8,10,1,1,1,25,20,0,1533,'23-
NOV-96','1105','AM',6,1,1,'V-1 southbound SR 93 in the right lane attempted to
exit at SR 780, lost control and struck attenuator, then struck the concrete
barrier wall. ');
INSERT INTO ACCIDENT VALUES(419,50722698,'',' ',1,2,4,1,2,88,25,22,5.467,58,'28-
jan-96',' ',' ',2,1,' ',' ');
INSERT INTO ACCIDENT VALUES(32,50740320,'',' ',4,6,1,2,1,4,25,88,24.061,1848,'20-
oct-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(420,50786155,'',' ',4,3,3,2,2,4,26,25,14.56,1242,'07-
apr-96',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(445,50901197,2,'NO',1,1,1,2,2,1,25,1,16.368,2984,'22-
may-96','1200','PM',4,2,1,'V-2 was slowing to stop at the toll both east bound on
SR. 528 in the outside lane. V-1 was travelling east bound on SR 528 approaching
the toll booth 1.5 miles east of SR.417. V-1 left front struck the attenuator at
the outside lane toll booth, continued along the attenuator ad struck the
concrete barrier wall. V-1 then spun out counterclockwise striking the left rear
of V-2 with right front fender of V-1. V-1 continued to spin counterclockwise
and came to final rest facing west bound in the east bound toll lane. V-2 came
to final rest facing east bound on the outer edge of the toll lane approximately
15 ft from point of initial impact. ');
INSERT INTO ACCIDENT VALUES(136,50933097,'',' ',1,8,6,2,2,1,18,25,5.763,1331,'28-
sep-95',' ',' ',4,1,' ',' ');
INSERT INTO ACCIDENT VALUES(488,51043076,2,'NO',5,2,3,1,1,4,3,25,6.569,828,'01-
nov-96','1247','AM',4,2,1,'While in the line of duty driver of V-1 deputy Hunger
was attempting to clear SR 915 Westbound on SR 860. D-1 was using full emergency
equipment(red, blue, and white lights) as he tried to clear the intersection,
V-1 had cleared the northbound lanes when it struck V-2. V-2 driver was
travelling southbound on NE 6 Ave(SR 915), #77 V-1 an emergency vehicle
attempting to cross a red light. After impact V-1 struck crash attenuator ');
INSERT INTO ACCIDENT VALUES(560,51050374,2,'NO',1,1,1,1,1,4,25,31,0.019,275,'10-
NOV-96','147','AM',4,1,1,'V-1 travelling Southbound on Highway 17 in the front
3100 block. Witness advised that V-1 was travelling in the outside travel lane
and suddenly veered into the inside lane. Striking the six yellow barricade
barriers in front of a concrete barricade at the entrance to the construction
area. V-1 then jerked hard to the right and flipped onto the passenger side of
the vehicle. No injuries V-1 driver denied driving the vehicle, but his
passenger advised that he was driving, as did the witness who observed the crash
and rendered aid to remove the occupant. Driver of V-1 was arrested for DUI
after refusing field sobriety exercise. An insufficient breath sample on the
intoxilizer 5000 showed .172 and .206');
INSERT INTO ACCIDENT VALUES(428,51068093,'',' ',1,5,7,1,1,1,1,25,4.296,3024,'15-
jan-96',' ',' ',4,2,' ',' ');
INSERT INTO ACCIDENT VALUES(522,51081369,2,'NO',1,1,1,1,1,1,25,88,3.518,7489,'10-
feb-96','1050','AM',6,1,1,'V-1 was travelling on SR-924 approaching the toll
plaza. For unknown reason, V-1 crashed into an attenuator while entering the
toll plaza. The vehicle was at final rest in one of the toll lanes. ');
INSERT INTO ACCIDENT VALUES(506,51083373,2,'NO',5,1,1,1,1,1,25,88,0.736,2319,'04-
feb-96','518',' ',8,2,1,'V-1 and V-2 were traveling southbound on SR 9A, V-1 in
lane # 3 and V-2 in Lane # 2 (NB Lane #1 lane closest attenuator increasing going
out)V-1 changed lanes into the lane occupied by V-2. V-2 driver took evasive
action not to strike V-1 and lost control of V-2, sending it uncontrollably into
the crash attenuator. V-2 final resting place was in lane # 2 of South Bound
lanes of SR 9A. V-1 fled southbound on SR 9A. ');

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INSERT INTO ACCIDENT VALUES(446,51125837,2,'NO',5,1,2,1,1,4,25,88,9.562,5613,'03-sep-96','450','AM',6,1,1,'V-1 was travelling westbound in the left lane on the BEE- LINE expressway (SR 528). The Front of the V-1 struck a crash attenuator between lanes 9 and 10 of the toll plaza. The driver of V-1 stated she feel asleep while driving. The driver of the V-1 was found at fault for the crash and cited for careless driving.');

INSERT INTO ACCIDENT VALUES(84,51149832,'','','5,2,1,1,1,5,25,31,12.603,1562,'14-oct-95','','',4,1,'','','');

INSERT INTO ACCIDENT VALUES(433,51149993,2,'NO',4,1,2,1,1,1,25,18,4.966,2510,'16-dec-96','525','PM',4,1,1,'V-1 was travelling west on SR 520 for no apparent reason, V-1 drifted left striking the crash Attenuator east of the over pass supports. V-1 continued west in the east bound lanes, striking a guard rail. No surface marks prior to collision. Driver #1 stated he did not know what happened. Passenger stated he was not paying attention ');

INSERT INTO ACCIDENT VALUES(442,51157333,2,'NO',5,7,1,1,1,4,25,88,18.246,431,'05-jan-96','334','AM',7,1,1,'V-1 was travelling westbound on interstate-4. The driver of V-1 stated that he was unsure which lane he was travelling in because he had fallen asleep. The front of V-1 impacted with 6-10 crash barrels (unavailable to determine how many barrels were destroyed) located at the I-4 West bound exit ramp to Colonial Drive, causing damage to V-1 and the barrels. The driver of V-1 was not insured. The driver of V-1 was cited for careless driving. DOT was notified of the destroyed crash barrels');

INSERT INTO ACCIDENT VALUES(451,51168072,'','','5,8,2,1,1,5,25,31,29.043,74,'19-dec-96','','',4,1,'','','');

INSERT INTO ACCIDENT VALUES(453,51169909,'','','5,1,2,1,2,5,25,20,27.891,80,'01-oct-96','','',4,1,'','','');

INSERT INTO ACCIDENT VALUES(473,51220098,2,'NO',5,1,1,1,1,1,3,25,11.781,7012,'08-sep-96','517','PM',6,2,1,'V-1 and V-2 were travelling southbound on SR 91, V-2 was in the center lane and V-1 was in the southbound entry lane from SR 838 Driver #2 and the witness stated that V-1 traveled to the east across the outside lane and into the center lane directly into he path of V#2. As V-1 was making this maneuver it was facing east. The right front of V-2 struck the left rear of V-1. After the first impact, V-2 traveled across the left lane and the left breakdown lane. The left side of V-2 struck the crash attenuator on the north side of the U-turn slot. V-1 spun around in a counter clockwise direction coming to rest in the center lane facing north.');

INSERT INTO ACCIDENT VALUES(564,51222275,2,'YES',1,1,1,2,4,1,25,33,288,960,'06-dec-96','745','AM',4,2,2,'Driver of S#1 was coming put of a fog bank travelling south bound on SR 91 (turnpike). Driver of S#1 did not did not see the toll plaza in the fog until about 300 ft from the plaza. Driver tried to take evasive action, steering hard left to avoid a collision but S#1 jackknifed. s#1 rotated to the left and slid into the crash barriers blocking three south bound lanes of the plaza. S#1 came to a final rest on the cement lane barriers. Section #2 Vehicle was stopped in the center south bound lane of the plaza to pay toll. The rear trailer of S#2 was struck from behind by the rear trailer of S#1 as it rolled over the crash barrier, pushing S#2 forward approximately 40 ft in the lane.');

INSERT INTO ACCIDENT VALUES(459,51222855,2,'NO',1,1,6,1,2,4,25,27,16.35,1681,'30-may-96','240','AM',6,1,1,'V-1 was travelling north on state road 91 toward Cypress Creek toll plaza. Driver one stated that he fell asleep and did not realize he was approaching the toll facility. V-1 slammed into the crash attenuator south of the toll booth with its left front. V-1 then turned to the right where in it struck a concrete barrier and small concrete wall with its right front. V-1 then began turning on its side, and slid in a northerly direction along the raised concrete island. V-1 subsequently overturned. V-1 came to a final rest on its roof in a northwesterly direction in the toll lane.');

INSERT INTO ACCIDENT VALUES(465,51224005,'','','5,1,77,1,1,1,25,88,6.735,2407,'27-mar-96','','',4,1,'','','');

INSERT INTO ACCIDENT VALUES(507,51224158,2,'NO',1,8,1,1,1,1,23,25,4.96,2330,'10-apr-96','154','PM',4,1,1,'V-1 was north bound on SR 821. Witness stated that V-1

was weaving from lane to lane, at times almost travelling off the road. Witness followed V-1 from the 0 mile post to the 5 milepost. At the 5 milepost, exit to SW 288 Street, V-1 right front collided with the five barrels that were being used to close the exit ramp that was under construction. V-1 traveled north on the unopened exit ramp V-1 right front collided with the crash attenuator and then the concrete barrier wall at the toll Plaza. After my arrival, upon inquiry driver 1 stated that he was a diabetic, and could not remember when he last took his insulin.');

INSERT INTO ACCIDENT VALUES(563,51224161,2,'NO',1,1,1,1,1,4,77,1,24,2378,'06-apr-96','246','AM',12,2,1,'Vehicles were south bound on SR 821. V-1 was approaching Lane # 11. V-2 was stopped in lane # 11 paying toll. D-1 had fallen asleep as he was travelling south. D-1 awoke realized he was approaching the toll and attempted to stop leaving 120 ft of skid marks before he collided with the concrete crash attenuator. V-1 right front wheel collided with the base of crash attenuator. because of this, V-1 veered to the left. V-1 rode up on to the concrete base of the toll both. V-1 left front collided with the toll booth. V-1 right collided with V-2 left rear. Vehicles came to final rest. V-2 had been moved forward.');

INSERT INTO ACCIDENT

VALUES(508,51224162,2,'NO',5,1,4,1,1,4,25,31,24.233,2378,'06-apr-96','345','AM',6,2,1,'V-1 and V-2 were south bound on SR 821. V-1 was approaching the Tamiami toll plaza in lane # 12, paying the toll. Lane # 11 was closed due to a previous collision. The red lights was on my patrol vehicle with some of the emergency lights activated (blue deck lights directional yellow lights on the light bar) and cones in front of the lane were all used to close the lane. V-1 did not slow nor attempt to slow as it neared the toll. approximately 20 ft from entering the plaza, D-1 realized that lane #11 was closed and veered to the right. V-1 front collided with the base of the concrete crash attenuator between lanes #11 and #12. V-1 rode upon the crash attenuator becoming airborne. As V-1 continued to move forward it was rotating in a clockwise direction and overturning. V-1 top rear collided with V-2 right rear. V-1 came to final rest upside down, facing North, partially in the toll lane, partially on the grass shoulder. V-2 came to final rest at the point of collision.');

INSERT INTO ACCIDENT

VALUES(479,51224706,2,'NO',5,1,77,1,1,4,25,34,17.288,7018,'01-aug-96','425','AM',6,1,1,'V-1 section 1, was southbound on SR 91 approaching the Cypress Toll Plaza. The driver of V-1 fell asleep and the front of V-1 collided with a crash attenuator');

INSERT INTO ACCIDENT

VALUES(458,51224756,2,'NO',1,1,6,2,2,4,25,25,16.297,1681,'24-aug-96','1238','AM',6,1,1,'V-1 was travelling North bound on SR 91 (Turnpike) approaching Lane #6 of the Cypress Toll Plaza. V-1 front struck lane #6 right side attenuator. V-1 then rotated clockwise and struck the left side attenuator with V-1's left rear quarter panel. V-1 came to final rest facing East across lane # 6 of SR 91 (turnpike). SEE ACCIDENT #565 DESCRIBING IMPACT WITH SECOND ATTENUATOR.');

INSERT INTO ACCIDENT

VALUES(565,51224756,2,'NO',1,1,6,2,2,4,25,25,16.297,1681,'24-aug-96','1238','AM',6,1,1,'V-1 was travelling North bound on SR 91 (Turnpike) approaching Lane #6 of the Cypress Toll Plaza. V-1 front struck lane #6 right side attenuator. V-1 then rotated clockwise and struck the left side attenuator with V-1's left rear quarter panel. V-1 came to final rest facing East across lane # 6 of SR 91 (turnpike). SEE ACCIDENT #458 DESCRIBING IMPACT WITH FIRST ATTENUATOR.');

INSERT INTO ACCIDENT

VALUES(509,51224814,2,'NO',5,1,77,1,1,1,25,88,24.233,2378,'29-oct-96','1245','PM',6,1,1,'V-1 driver was southbound on SR 821 approaching toll plaza. V-1 driver stated she attempted to change lanes and struck the attenuator. V-1 then rolled over and came to final rest up-side down in the toll

lane. V-1 driver refused treatment from Metro Dade fire Rescue. Excalibur towed the vehicle to a Saturn dealership');
 INSERT INTO ACCIDENT VALUES(392,51235792,'','','',1,1,1,1,2,1,19,25,16.201,2241,'27-dec-95','','',6,1,'','','');
 INSERT INTO ACCIDENT VALUES(561,51248050,2,'NO',1,2,3,1,1,1,25,20,4.405,2102,'22-FEB-96','1107','','',4,1,1,'V-1 Travelling East Bound on Pembroke Rd when driver suffered a black out. Upon reaching South Park Road Vehicle #1 went off the left side of the roadway and struck attenuator (sand Barrels) After initial impact, the vehicle continued East bound along the concrete barrier and came to rest. V-1 sustained heavy front end and left front damage.');

INSERT INTO ACCIDENT VALUES(511,51255619,'','','',1,2,1,1,1,5,25,88,4.132,2556,'10-apr-96','','',4,2,'','','');
 INSERT INTO ACCIDENT VALUES(558,51270498,2,'NO',1,1,8,1,1,1,25,20,0.041,2380,'13-DEC-96','140','PM',4,1,1,'V-1 was traveling south on SR 45 (US 41). Within the right southbound lane. At approximately 55 mph. There was a freight trailer traveling south on SR 45 within the left southbound lane approximately 128ft south of Saeford Park Drive, there are two signs, indicating curve to the left. Approximately 194-215 ft south of Saeford Drive, there were five crash attenuators along the West Road Edge. At the south end of the attenuator, a concrete barrier wall began. For unknown reason V-1 drove into the crash attenuator with its front right. V-1 then struck the concrete barrier then it rotated clockwise approximately 70 degrees.');

INSERT INTO ACCIDENT VALUES(55,51325288,'','','',1,1,5,1,1,1,25,88,10.404,2083,'02-dec-95','','',4,2,'','','');
 INSERT INTO ACCIDENT VALUES(559,51333666,2,'NO',5,8,3,1,1,1,25,88,5.961,2849,'10-NOV-96','312','PM',4,1,1,'V-1 travelling westbound on the Leroy Selmon Express way in the right lane, approached exit#8, Realized he had to get off, proceeded to exit, failed to keep control of the vehicle struck the crash attenuators and Came to rest.');

INSERT INTO ACCIDENT
 VALUES(551,51362421,2,'NO',2,1,10,1,2,5,23,25,0.095,2084,'17-nov-96','255','AM',4,1,1,'V-1 was travelling Eastbound on Sr-8 in the outside lane . The driver of V-1 failed to keep V-1 on the roadway. V-1 traveled onto the south grass shoulder and struck two construction barricades. V-1 continued eastbound an the shoulder and then struck a crash attenuator with its front right. After striking the crash attenuator, V-1 skidded back into the Eastbound lanes of SR-8 and came to a final rest facing Eastbound');

INSERT INTO ACCIDENT VALUES(376,51369719,'','','',4,1,1,2,3,1,25,88,34.806,1210,'17-sep-95','','',6,1,'','','');
 INSERT INTO ACCIDENT VALUES(468,51381291,2,'NO',1,1,1,1,1,2,3,25,3.908,3713,'22-jul-96','705','PM',6,2,1,'V-1 was travelling minor traffic altercation with witness #2 near Nob Hill Rd EB. V-1 approached Witness #2 from behind at a high rate of speed and at the last second swerved across her. Driver of V-1 lost control of her vehicle V-1 rotated and skipped across SR 862 towards the exit ramp to pine Island. V-1's front collided with the Left rear of V-2 in lane 3. V-1 then continued to skid in a SE direction and the Left side of V-1 then slammed into a crash attenuator at the entrance to the exit ramp before coming to a final rest facing SE on the Ramp against the guard rail. V-2 was located on the shoulder of SR 862. Independent witness stated that V-1 was operating in a very reckless manner prior to crash.');

INSERT INTO ACCIDENT VALUES(471,51388416,2,'NO',1,1,1,1,2,4,25,88,9.819,3914,'19-mar-96','430','PM',4,1,1,'V-1 section 1 was traveling northbound in the right hand curve lane (lane closest to attenuator). Investigations revealed that driver of V-1 lost control of vehicle and hit crash attenuator on the right hand side of the entrance to the New River Tunnel');

INSERT INTO ACCIDENT VALUES(496,51490243,2,'NO',5,1,1,1,2,4,25,88,7.643,2164,'06-apr-96','1149','PM',8,1,1,'V-1 was south bound on SR 826 in the outside lane. V-1 lost control of vehicle and drove down the apex separating the South bound lanes of SR 826 and the exit lanes to SR 836. V-1 struck and broke several traffic attenuators. V-1 then swung rearend first in a counterclockwise

direction and came to final rest in the west and east bound exit lanes to SR 836 facing East bound.');

INSERT INTO ACCIDENT VALUES(498,51492701,2,'NO',5,8,1,2,3,4,25,88,0.565,2194,'16-jan-96','1050','PM',2,1,1,'V-1 was travelling on SR 826 entrance ramp from South Bound SR 9A. D-1 lost control of vehicle. V-1 ran off the roadway, and struck crash attenuators with its front');

INSERT INTO ACCIDENT VALUES(549,51492723,2,'NO',5,7,10,1,1,4,25,20,0.423,6754,'05-APR-96','935','PM',1,1,1,'V-1 travelling South on the Exit Ramp from SR 93 to south bound SR 826. D-1 stated that he was preoccupied with his pizza causing him to take his eyes off the roadway for a brief moment. The right front of V-1 crashed into four crash attenuators prior to crashing into concrete barrier wall with right front of V-1');

INSERT INTO ACCIDENT VALUES(198,51493236,'','','',1,8,1,2,3,1,25,88,4.23,315,'24-aug-95','','',6,1,'','','');

INSERT INTO ACCIDENT VALUES(515,51493516,2,'NO',1,1,1,2,3,4,25,88,31.429,5193,'03-jan-96','1205','AM',4,1,1,'V-1 was northbound on SR 821 approaching the Okeechobee Road Toll Plaza. V-1 driver attempted to change lanes. V-1 began to slide on the wet surface. V-1 front bumper struck the crash attenuator. V-1 was moved prior to arrival');

INSERT INTO ACCIDENT VALUES(455,51534684,'','','',4,3,4,1,1,1,25,88,11.769,127,'14-jan-96','','',6,2,'','','');

INSERT INTO ACCIDENT VALUES(440,51594580,2,'NO',4,6,2,1,1,88,25,88,18.962,6306,'27-nov-96','1150','AM',2,1,'','V-1 was north bound on the Main Street Bridge, V-1 veered out of the lane of traffic and struck the crash attenuator. ');

INSERT INTO ACCIDENT VALUES(553,52126379,2,'NO',3,1,1,1,2,4,25,2,0.3,2009,'02-JAN-96','6:35','AM',5,2,1,'V-1 was travelling southbound on SR-93 in the inside lane. V-2 was travelling southbound on SR-93 in the outside lane(2 lane road). Driver of V-1 for unknown reason drifted to the left out of the inside lane colliding with the crash attenuators with V-1 front. V-1 then spun in a counter clockwise motion back into the south bound lanes of traveling coming to final rest facing north bound obstructing the outside lane. V-1 was then struck head on by V-2 causing V-1 to spin in a counter clockwise motion ejecting its right front passenger onto the roadway and against the outside concrete barrier wall. V-1 then came to final rest in the inside lane facing south. V-2 continued travelling in South bound direction coming to final rest in the inside lane south of V-1.');

INSERT INTO ACCIDENT VALUES(426,52129830,2,'YES',5,1,1,1,1,2,25,31,14.35,588,'08-jun-96','758','PM',8,1,1,'');

INSERT INTO ACCIDENT VALUES(233,52142646,'','','',1,1,1,1,1,4,25,88,3.173,1864,'20-nov-95','','',6,1,'','','');

INSERT INTO ACCIDENT VALUES(501,52155316,'','','',5,8,1,2,3,4,25,31,0,2308,'11-mar-96','','',2,1,'','','');

INSERT INTO ACCIDENT VALUES(523,52157189,2,'NO',5,1,2,1,1,4,25,88,3.518,7489,'25-feb-96','1030','PM',6,2,1,'V-1 was traveling westbound on SR-924 approaching Toll Plaza in lane #2. V-2 was travelling westbound on SR-924 approaching toll plaza in Lane #1 and cross into the path of V-2. V-2 swerved left to avoid the collision, losing control of vehicle and struck the crash attenuator in the lane 32. V-2 came to final rest upon impact. V-1 fled the scene west on SR-924');

INSERT INTO ACCIDENT VALUES(494,52157775,'','','',5,1,1,1,1,1,25,14.112,2149,'27-jun-96','','',6,2,'','','');

INSERT INTO ACCIDENT VALUES(552,52158135,2,'NO',5,1,1,1,1,1,25,20,0.5,2714,'15-AUG-96','750','AM',6,1,1,'V-1 was travelling southbound on SR 826. V-1 for unknown reason lost control and struck several crash attenuators with the left front. These crash attenuators were positioned in front of a temporary concrete wall. After V-1 struck the attenuators, V-1 rotated counter clockwise and began to overturn. V-1 came to rest on its right side (FATALITY)');

INSERT INTO ACCIDENT VALUES(347,52158925,'','','',5,1,77,1,1,1,25,18,3.518,7489,'14-dec-95','','',6,2,'','','');

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INSERT INTO ACCIDENT
VALUES(516,52221329,2,'NO',1,8,1,1,1,5,25,88,11.689,6239,'08-dec-
96','325','AM',4,1,1,'V-1 and V-2 were both travelling southbound on the exit
ramp to SR 9A from SR 836. V-1 made an improper lane change from the right lane
into the left lane, causing V-2 to take evasive action. V-2 failed to avoid
collision, colliding with the crash attenuator, with its front. V-1 continued
southbound on SR 9A leaving the scene of this crash. No information was obtained
on V-1 therefore this investigation is complete.');
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INSERT INTO ACCIDENT VALUES(513,52222029,'','','5,1,1,1,1,4,25,88,13.151,2849,'27-
oct-96','','',6,1,'','');
INSERT INTO ACCIDENT VALUES(525,52222175,2,'NO',5,8,1,1,1,4,1,25,13.612,7551,'02-
dec-96','1210','AM',8,2,1,'V-1 driver states that he was travelling southbound on
SR9 in the inside lane. V-1 driver further states that as he approached the
flyover ramp, V-2 was stopped in the roadway for unknown reasons. V-1 failed to
avoid collision, colliding into the rear of V-2, with if front, V-2 subsequently
collided with the crash attenuator with its front, V-2 driver states that he was
travelling south bound on SR9 in the inside lane at normal speed(45-50 mph), when
the collision occurred. Due to conflicting statements, no charge was made in
this crash investigation');
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INSERT INTO ACCIDENT VALUES(483,52222181,2,'NO',1,8,1,1,1,4,25,88,11.77,368,'02-
dec-96','145','AM',4,1,1,'V-1 driver states that he was travelling on SR 836 in
the inside lane. V-1 driver further states that he fell asleep before colliding
with the sand crash attenuators with its front. V-1 was found as shown (in front
of attenuator out of path of traffic flow)');
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INSERT INTO ACCIDENT VALUES(234,52241126,'','','1,1,1,1,1,2,25,3,3.174,1864,'10-
nov-95','','',6,2,'','');
INSERT INTO ACCIDENT VALUES(499,52249457,2,'NO',1,8,2,1,1,1,25,88,4.53,2253,'07-
apr-96','1200','PM',3,1,1,'V-1 was travelling North on SR 9A on exit Ramp at apex
to continue Eastbound or Westbound on SR 112. V-1 collided with crash
attenuators( sand Barrels). Witness stated that V-1 struck attenuators for no
apparent reason. She seemed as though she was undecided which way she wanted to
go.');
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INSERT INTO ACCIDENT VALUES(437,52273815,2,'NO',1,1,2,1,1,1,25,88,1.136,2367,'08-
may-96','1200','PM',5,1,1,'V-1 was travelling North bound on SR 9 middle inside
lane. V-1 attempted to change lane or course, failing to use due care. V-1
struck crash attenuator with front of V-1 then spun counterclockwise coming to
final rest at this time.');
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INSERT INTO ACCIDENT
VALUES(439,52273823,2,'NO',4,1,2,1,1,1,25,88,18.176,4186,'30-jun-
96','445','PM',6,1,1,'V-1 was travelling northbound on SR 9. V-2 was travelling
north bound on SR 9 middle lane. V-1 unknown abruptly came into the pathway of
V-2. V-2 veered left spun counterclockwise then struck crash attenuators with
right front of V-2 . V-2came to final rest approximately 15 ft North of
collision V-1 and its driver unknown left the scene north bound on SR 9. ');
INSERT INTO ACCIDENT VALUES(438,52350709,'','','4,1,2,1,1,5,1,25,13.49,3296,'22-
nov-96','','',4,2,'','');
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INSERT INTO ACCIDENT
VALUES(425,52375485,2,'YES',1,2,1,1,1,4,77,25,6.079,1737,'10-dec-
96','218','AM',4,1,1,'');
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INSERT INTO ACCIDENT VALUES(556,52448544,2,'NO',1,6,10,1,1,4,25,88,4.945,770,'01-
JAN-96','347','AM',2,1,1,'Driver of V-1 was travelling eastbound over the Florida
Turnpike Bridge on Port St. Lucie Boulevard. Driver#1 did not adjust his driving
pattern when the roadway curved to the left. Instead, driver#1 drive straight
ahead into the attenuator, This caused all sand barrels to smash apart and the
sand contents to spill out. Driver #1 then continued down the bridge and drive
to the swale area located at Bayshore Blvd. and Port St. Lucie Boulevard where he
pulled off the roadway onto the grass and left the vehicle. Driver #1 was picked
up after leaving the scene in another car. This vehicle was owned by his
roommate. Driver #1 was arrested and taken to the port St. Lucie Police Station
for processing. Driver #1 had admitted to the fact that he was drinking
alcoholic beverages prior to the crash, and he was driving. He was given a
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Breathalyzer Test. The results of this test was .018% B.A.C. and .075% B.A.C.
');

INSERT INTO ACCIDENT VALUES (87,52573254,'',' ',4,6,1,1,1,5,25,21,9.688,1982,'02-dec-95',' ',4,2,' ',' ');

INSERT INTO ACCIDENT VALUES (521,52622852,2,'NO',1,8,1,1,1,3,25,88,3.072,7343,'09-aug-96','704','AM',6,1,1,'V-1 was east bound to Action Road "Flyover" when driver fell asleep. Car struck crash barrier. Facial injuries from air bag.');

INSERT INTO ACCIDENT VALUES (541,52724633,2,'YES',4,1,2,1,1,5,25,18,21.073,85,'28-sep-96','100','AM',4,1,1,'V-1 was traveling southbound on SR 5. V-1 drove across SR-5 and struck safety barrels which were in the center of SR-5. V-1 came to final rest against a guardrail on the east shoulder of SR-5');

INSERT INTO ACCIDENT VALUES (416,52864060,'',' ',4,2,2,1,1,4,25,88,10.471,3639,'05-sep-96',' ',4,1,' ',' ');

INSERT INTO ACCIDENT

VALUES (469,52875612,2,'NO',1,77,1,1,1,88,25,88,20.531,3790,'13-dec-96','615','AM',6,1,1,'V-1 was travelling eastbound on SR 864 in the outside lane. V-1 driver stated his dog jumped into his lap causing him to lose control. V-1 veered from the outside lane across both the shoulder and the gore area. Where the front end of V-1 collided with several crash attenuators located on the South shoulder. Upon impacting, V-1 went in a counter clockwise movement. V-1 came to final rest against the crash attenuator and facing in a northeasterly direction');

INSERT INTO ACCIDENT VALUES (467,52878928,2,'NO',1,1,1,1,1,1,25,3,3.458,3710,'14-dec-96','448','PM',6,3,1,' ');

INSERT INTO ACCIDENT VALUES (460,52879818,2,'NO',1,8,2,1,1,4,25,88,9.971,1928,'30-nov-96','1249','AM',7,1,1,'V-1 was travelling North in lane #7, approaching exit ramp state road 892. Driver claimed that he was using his Cell phone, and was arguing with the person on the other end. During this time, the vehicle drifted off of the roadway onto the shoulder and collided with an attenuator with the front of the vehicle. Vehicle was stopped in front of attenuator out of path of traffic.');

INSERT INTO ACCIDENT

VALUES (472,53042958,2,'NO',1,8,77,1,1,1,3,25,10.212,4077,'22-mar-96','410','PM',6,1,1,'V-1 was east bound on SR 862 in the outside lane approaching the exit ramp to southbound SR9. V-2 was eastbound on SR 862 in the right center lane approaching the exit ramp to southbound SR 9. V-1 without warning changed lanes to the left. V-2 driver locked his brakes to avoid collision. V-1 right side was struck by V-2 left front. V-1 after the collision continued east on SR862. V-2 continued skidding in a east direction into the apex safety zone. V-2 front collided with a crash attenuator. V-2 came to final rest in a east direction up against the crash attenuator.');

INSERT INTO ACCIDENT VALUES (454,53060407,'',' ',1,4,1,1,1,4,3,25,7.451,123,'09-jul-96',' ',8,2,' ',' ');

INSERT INTO ACCIDENT VALUES (502,53135551,2,'NO',5,1,1,2,3,4,25,88,3.513,2310,'30-sep-96','1100','PM',6,1,1,'V-1 was travelling south bound on SR 9A in the second from the outside lane. V-1 lost directional control and struck the crash attenuator at the apex between SR 9A south and SR 836 (West) exit ramp. V-1 struck attenuators with its front end and came to final rest at point of impact.');

INSERT INTO ACCIDENT VALUES (497,53137429,2,'NO',5,8,1,1,1,4,25,20,7.643,2164,'02-sep-96','540','AM',8,1,1,'V-1 was southbound on SR 826 in an unknown lane. For unknown reason V-1 struck the crash attenuators in the apex of SR 826/SR 836. V-1 then continued onto the exit ramp and struck the concrete wall. V-1 came to rest facing west in the outside lane obstructing traffic.');

INSERT INTO ACCIDENT VALUES (485,53137438,2,'NO',5,8,1,1,1,4,25,88,3.592,425,'13-nov-96',' ',8,1,1,'V-1 travelling West bound on SR 112. For unknown reason, V-1 swerved right and struck a crash attenuator head-on. V-1 spun Clockwise and came to rest in the outside lane ');

INSERT INTO ACCIDENT VALUES (480,53138631,2,'NO',1,8,1,2,2,4,25,88,4.23,315,'21-dec-96','330','AM',6,1,1,'V-1 was travelling eastbound on SR 836 on the exit ramp to northbound SR 826. V-2 was east bound on SR 836 in the outside lane. V-1

driver claims that V-2 cut into her path of travel causing her to sharply apply brakes and lose control. V-1 rotated clockwise and entered the apex. V-1 front then struck the crash attenuator and rotated clockwise to final rest. No description on V-2 (phantom Vehicle)');
INSERT INTO ACCIDENT VALUES(490,53138896,'','','',4,1,2,1,1,1,25,20,1.759,2051,'16-jun-96','','',4,2,'','');
INSERT INTO ACCIDENT
VALUES(548,53146079,2,'NO',5,8,1,1,1,4,25,88,14.095,2085,'02-SEP-96','600','AM',6,1,1,'V-1 was northbound on SR 826 in Lane#1(lane closest to attenuator). Driver fell asleep and drifted to the right. V-1 then struck 3 crash attenuators in the apex from NB SR 826 to NW SR 826.');

INSERT INTO ACCIDENT VALUES(504,53147638,2,'NO',5,8,1,1,1,4,25,88,0,2311,'07-jul-96','344','N/A',2,1,1,'V-1 was southbound on SR 9A. D-1 fell asleep causing V-1 to travel into the entrance ramp to SR 836 eastbound and collided with the sand barrels around the guardrail area with the front of V-1');

INSERT INTO ACCIDENT VALUES(482,53148087,'','','',1,1,1,1,1,1,25,88,12.01,354,'29-aug-96','','',4,2,'','');
INSERT INTO ACCIDENT VALUES(353,53148506,'','','',5,1,1,1,1,4,25,88,13.252,7523,'19-dec-95','','',8,1,'','');
INSERT INTO ACCIDENT
VALUES(526,53148896,2,'NO',5,8,1,1,1,1,25,20,13.612,7551,'01-jul-96','340','PM',8,1,1,'V-2 was travelling southbound on SR 9-A in the second lane from the inside wall. V-1, who according to driver-2 had been following and passing her and trying to gain her attention, proceeded to change from the third lane from the inside wall on to the inside lane (H.O.V Lane), across the front of V-2. this action caused V-2 to loose control and collide with crash attenuators. V-2 then collided with concrete Barrier wall. V-1 cut off V-2 causing V-2 to loose control and collide with crash attenuator. After first impact with attenuator, V-2 was redirected across 1 lane, where it collided with concrete wall barrier.');

INSERT INTO ACCIDENT VALUES(443,53190106,2,'NO',5,1,1,1,1,4,25,88,17.177,440,'22-mar-96','455','AM',7,1,1,'V-1 was travelling in the inside west bound lane on SR 400 W V-1 was');

INSERT INTO ACCIDENT VALUES(444,53456502,2,'NO',5,1,1,2,3,1,25,88,8.758,1560,'10-sep-96','449','PM',6,1,1,'V-2 was travelling westbound on SR 408 (east-west Expressway) approaching the east toll plaza. Driver #2 stated approximately 50 ft east of the toll plaza V-1 (non-contact phantom) entered his path. As Driver #2 tried to break to avoid the vehicle, his vehicle began to hydroplane out of control. V-1 continued westbound. V-1 was described as a white vehicle with an unknown tag. The front right of V-2 struck the south east portion of the attenuator that was located in the lane 2. Driver #2 was found at fault and cited for special Hazard(failure to use due care) ');

INSERT INTO ACCIDENT VALUES(441,53459849,2,'NO',5,7,1,1,1,4,25,88,0.097,430,'14-dec-96','1039','PM',1,1,1,'V-1 was travelling west bound at the exit 41 ramp at interstate 4, V-1 hit head on, witness claimed V-1 was travelling at 60 mph, and did not attempt to brake before hitting the attenuator');

INSERT INTO ACCIDENT VALUES(489,53505075,2,'NO',5,8,2,1,1,1,6,25,0.858,2049,'14-dec-96','849','AM',4,2,1,'V-1 was southbound on SR 826 in the inside lane(left) lane of travel. V-2 was southbound on SR 836 in the outside (right0 lane of travel. As V-2 approached the SR 826 southbound exit ramp to SR 94 eastbound, V-1 overtook V-2 and began to change lanes and sideswipe V-2. V-1 struck V-2 right side to left side respectively. V-1 continued onto exit ramp and fled the scene without stopping. After first collision, V-2 continued to travel southbound and struck the sand filled crash attenuators which were in the apex area at the beginning of exit ramp. With no further information available regarding V-1 (hit and run) This investigation is now closed.');

INSERT INTO ACCIDENT VALUES(484,53505510,2,'NO',5,8,2,1,2,1,25,88,1.283,414,'21-aug-96','1145','AM',6,1,1,'V-1 and V-2 were traveling west on SR 112 at exit to Okeechobee road. Driver of V-2 stated that a vehicle cut him off and caused him to spin out of control and strike crash attenuator. Driver of V-2 was unable to give any information regarding V-1 driver.');

```

INSERT INTO ACCIDENT
VALUES(527,53509545,2,'NO',5,8,1,1,2,4,25,88,13.612,7551,'15-nov-
96','745','PM',8,1,1,'V-1 was travelling south bound SR 9A in the Flyover lane,
the driver of V-1 traveled. From the flyover lane through the safety Zone,
hitting a couple of safety poles, to lane 1. V-1 then lost control, traveled in
a counter-clockwise motion and collided with the crash attenuators, with V-1
right side.');
```

```

INSERT INTO ACCIDENT VALUES(528,53555596,2,'NO',5,8,1,1,2,4,25,3,13.612,7551,'17-
nov-96','725','PM',8,2,1,'V-1 and V-2 were south bound on SR 9A entering HOV
flyover ramp, V-2 travelling behind V-1. V-1 attempted to cross over safety apex
then veered back to left causing V-1 to rotate counterclockwise and slide
sideways. V-1 struck crash attenuators with its right rear and careened off and
into path of V-2. V-2 struck left side of V-1 with its front. Both vehicles
came to rest in HOV lane, V-1 facing east and V-2 facing south');
```

```

INSERT INTO ACCIDENT VALUES(503,53905289,2,'NO',5,1,1,1,2,1,1,25,3.321,2311,'10-
aug-96','645','PM',6,2,1,'V-1 and V-2 were travelling southbound on SR9A. V-1
while attempting to change lanes cut in front of V-2 . Causing v-2 to collide
with V-1 rear. After impact V-1 was Forced into the crash Attenuator');
```

```

INSERT INTO ACCIDENT
VALUES(557,53905458,2,'NO',5,8,1,'',' ',1,25,20,14.095,2085,'08-DEC-
96','800','AM',6,1,1,'V-1 was travelling Northbound on SR 826. The driver of V-1
failed to use due care and lost control of his vehicle. V-1 hit with its front
end 4 crash attenuators located at the exit ramp to NW 122 St. After first
collision V-1 had a secondary collision with a barrier wall. ( the front end of
V-1 struck the concrete barrier wall)');
```

```

INSERT INTO ACCIDENT
VALUES(524,53938516,2,'NO',5,1,1,2,2,4,25,88,13.252,7523,'30-apr-
96','830','PM',8,1,1,'V-1 was travelling southbound on SR 9A Ramp. The driver of
V-1 failed to maintain control of his vehicle and crashed into the attenuators.
Upon arrival V-1 was facing in a westerly direction under the crash
attenuators.');
```

```

INSERT INTO ACCIDENT VALUES(414,53999126,'',' ',5,1,1,1,1,4,25,88,6.542,2705,'07-
sep-96',' ',' ',6,2,' ',' ');
```

```

INSERT INTO ACCIDENT VALUES(550,54065364,2,'NO',1,2,4,1,1,4,3,25,1.964,2625,'17-
NOV-96','605','PM',3,2,1,'V-1 was north Bound on Exter St. and then attempted to
cross Tampa Road to Go West Bound on Tampa Road. V-1 failed to observe V-2
traveling West Bound and pulled into V-2 path. V-1 was struck in the passenger
side door, quarter panel and front fender. V-2 driver lost control of his
Vehicle and drove into yellow crash attenuators and then hit a concrete barrier.
Involved parties refused rescue at the scene. V-1 was removed by the driver. V-
2 was disabled and had to be towed. A driver exchange was completed and released
at the scene. V-1 driver was cited for failure to yield entering an
intersection.');
```

```

INSERT INTO ACCIDENT
VALUES(529,54440514,2,'NO',5,8,1,1,1,4,25,88,13.612,7551,'02-dec-
96','710','PM',8,1,1,'The Driver of V-1 stated he became confused with the
flyover ramp fearing he was going the wrong way. At that time he veered to the
right in order to change lanes whereby loosing control of V-1 colliding with the
crash attenuator on southbound SR-9A');
```

```

INSERT INTO ACCIDENT VALUES(510,54440681,'',' ',5,1,4,2,3,1,25,88,24.233,2378,'01-
oct-96',' ',' ',6,1,' ',' ');
```

```

INSERT INTO ACCIDENT
VALUES(530,54443508,2,'NO',4,1,1,1,1,1,25,88,13.612,7551,'21-dec-
96','310','PM',8,2,1,'V-1 and V-2 were traveling south on SR 9A. V-1 attempted
to change lanes and entered the lanes occupied by V-2. V-2 had to take evasive
action to avoid a collision with V-1. V-2 left side struck the crash attenuator.
V-1 immediately left the scene travelling south on state road 9A');
```

```

INSERT INTO ACCIDENT VALUES(505,54444005,2,'NO',5,8,1,1,1,1,25,88,2.273,2314,'25-
oct-96','110','PM',6,2,1,'V-1 was travelling southbound on SR 9A. V-2 was
travelling South Bound on SR 9A. V-1 made a lane change onto V-2 path. V-2
aggressively braked and swerved left to avoid striking V-1. V-2 slid into the
```



```

crash attenuator and barrier, striking them with the front of V-2. V-2 came to
final rest approximately 27ft south east of impact site. V-1 fled scene');
INSERT INTO ACCIDENT VALUES(546,54831444,2,'NO',5,3,1,1,1,4,25,20,28.167,78,'20-
SEP-96','930','PM',4,1,1,'V-1 was southbound on SR 9, when the Vehicle went out
of control while changing lanes. V-1 front crashed head on into attenuators and
a concrete barrier wall, while the vehicle was attempting to change lanes.');
```

```

INSERT INTO ACCIDENT
VALUES(163,112346846,'',' ',4,6,2,1,1,4,25,21,19.894,2387,'08-jan-
92','',' ',2,1,'',' ');
INSERT INTO ACCIDENT VALUES(237,112897418,'',' ',1,8,2,1,1,1,6,25,3.15,1864,'23-
oct-92','',' ',6,2,'',' ');
INSERT INTO ACCIDENT
VALUES(164,112969795,'',' ',1,6,1,2,3,1,25,88,19.894,2387,'29-jun-
92','',' ',2,1,'',' ');
INSERT INTO ACCIDENT VALUES(103,129611521,'',' ',5,2,3,1,1,4,25,88,7.43,742,'16-
dec-92','',' ',4,1,'',' ');
INSERT INTO ACCIDENT VALUES(109,129849683,'',' ',5,1,2,1,1,2,25,88,0.259,2425,'17-
dec-92','',' ',4,1,'',' ');
INSERT INTO ACCIDENT VALUES(108,129952172,'',' ',4,1,2,1,1,4,25,88,3.623,1632,'31-
may-92','',' ',8,1,'',' ');
INSERT INTO ACCIDENT
VALUES(105,129953956,'',' ',4,1,2,2,3,1,25,88,19.057,1365,'24-feb-
92','',' ',2,1,'',' ');
INSERT INTO ACCIDENT VALUES(115,130361975,'',' ',5,1,2,1,1,4,2,25,5.594,4763,'03-
jul-92','',' ',4,2,'',' ');
INSERT INTO ACCIDENT VALUES(323,133607374,'',' ',5,1,2,1,1,4,25,88,1.648,5080,'30-
mar-92','',' ',6,1,'',' ');
INSERT INTO ACCIDENT VALUES(232,133634121,'',' ',4,6,2,1,1,4,25,88,3.138,1863,'15-
feb-92','',' ',6,1,'',' ');
```

Appendix C-10: DRIVER_DATA.SQL

```

insert into driver values(1,1,4,26,1,3,1,0.247,1,49);
insert into driver values(2,1,1,19,1,2,1,' ',1,24);
insert into driver values(4,1,1,25,1,1,1,' ',1,5);
insert into driver values(6,2,1,34,1,2,6,' ',1,155);
insert into driver values(7,1,1,41,1,1,1,' ',1,156);
insert into driver values(9,1,' ',' ',1,' ',' ',5,' ',82);
insert into driver values(10,' ',' ',' ',1,1,' ',' ',83);
insert into driver values(11,2,1,36,1,3,' ',6,1,' ');
insert into driver values(12,2,2,27,1,1,1,' ',1,9);
insert into driver values(13,1,2,45,1,2,1,' ',5,42);
insert into driver values(16,1,2,35,1,4,1,' ',6,174);
insert into driver values(20,1,1,37,1,3,1,' ',1,65);
insert into driver values(21,2,2,25,1,2,1,' ',1,7);
insert into driver values(22,1,2,41,1,2,1,' ',1,8);
insert into driver values(24,1,2,34,1,1,1,' ',1,10);
insert into driver values(25,1,1,37,1,1,1,' ',5,13);
insert into driver values(27,2,1,19,1,1,1,' ',1,3);
insert into driver values(29,2,1,47,1,4,1,' ',1,68);
insert into driver values(34,2,2,36,1,1,1,' ',5,12);
insert into driver values(35,' ',' ',' ',' ',' ',' ',' ',' ');

insert into driver values(40,1,1,29,1,4,1,' ',1,153);
insert into driver values(41,2,1,18,1,2,1,' ',1,154);
insert into driver values(44,1,1,37,1,1,1,' ',1,150);
insert into driver values(46,2,2,27,1,3,1,' ',1,149);
insert into driver values(47,1,1,32,1,4,1,' ',1,175);
```

```

insert into driver values(48,1,1,38,1,1,1,'',1,15);
insert into driver values(49,2,1,77,1,2,1,'',1,176);
insert into driver values(50,1,2,50,1,1,1,'',1,177);
insert into driver values(54,1,1,30,1,3,3,'',5,64);

```

```

insert into driver values(60,1,1,27,1,4,3,'',1,62);
insert into driver values(61,1,1,40,1,3,7,0,3,178);

```

```

insert into driver values(66,'','','','','','','','');
insert into driver values(67,2,1,17,1,3,1,'',1,20);
insert into driver values(68,2,2,47,1,1,1,'',1,19);
insert into driver values(69,1,1,37,1,1,1,'',1,14);
insert into driver values(70,2,1,39,1,4,1,'',2,61);
insert into driver values(71,1,1,30,1,3,1,'',1,148);
insert into driver values(72,1,2,52,1,1,1,'',1,159);
insert into driver values(73,1,2,43,1,1,1,'',1,18);
insert into driver values(74,2,1,29,1,4,1,'',1,60);
insert into driver values(75,1,1,41,2,3,1,'',1,157);
insert into driver values(76,1,1,32,1,3,1,'',2,158);
insert into driver values(79,1,2,35,1,1,1,'',1,160);
insert into driver values(80,'','','','','','','','');
insert into driver values(82,1,1,38,1,1,1,'',1,16);
insert into driver values(83,1,1,42,1,2,1,'',1,40);
insert into driver values(84,1,3,50,1,2,1,'',1,41);
insert into driver values(85,1,1,26,1,3,1,'',1,48);
insert into driver values(86,2,1,46,1,1,1,0.142,2,147);
insert into driver values(87,2,1,29,1,2,1,'',1,31);
insert into driver values(89,2,1,30,1,2,2,'',1,58);
insert into driver values(91,2,1,20,1,2,3,'',1,57);
insert into driver values(92,1,1,'',1,1,1,'',1,146);
insert into driver values(93,1,1,40,1,2,1,'',2,38);
insert into driver values(94,1,1,25,1,3,1,'',1,47);
insert into driver values(96,1,1,34,1,2,1,'',1,33);
insert into driver values(97,2,1,39,1,2,1,'',1,37);
insert into driver values(98,1,2,30,1,4,1,'',6,56);
insert into driver values(99,2,1,30,1,4,1,'',6,145);
insert into driver values(100,2,2,18,1,1,1,'',1,1);
insert into driver values(103,1,1,48,1,3,1,0.146,2,67);
insert into driver values(105,2,2,36,1,3,1,'',1,54);
insert into driver values(106,1,1,23,1,3,1,'',5,46);

```

```

insert into driver values(109,1,1,44,3,4,1,'',1,179);
insert into driver values(110,'','','',1,'','','','');
insert into driver values(111,1,2,34,1,2,1,'',1,35);
insert into driver values(113,1,2,22,1,3,1,'',1,44);
insert into driver values(114,1,1,26,1,2,1,'',1,26);
insert into driver values(115,1,2,25,1,3,1,'',1,30);
insert into driver values(116,2,2,27,1,2,1,'',1,29);
insert into driver values(117,1,3,63,1,1,1,'',1,22);
insert into driver values(118,1,1,37,1,3,1,'',1,23);
insert into driver values(120,1,1,40,1,3,1,'',1,66);
insert into driver values(121,1,1,24,1,3,1,'',5,164);
insert into driver values(122,1,1,23,2,4,1,'',5,165);
insert into driver values(123,1,2,52,1,2,1,'',1,43);
insert into driver values(125,2,1,27,1,2,1,'',1,27);
insert into driver values(126,'','','',1,'','','','');
insert into driver values(127,1,1,31,1,3,1,'',1,52);

```

```

insert into driver values(129,2,1,20,2,4,1,'',1,84);
insert into driver values(130,1,2,34,1,2,1,'',1,180);
insert into driver values(131,1,2,26,1,3,3,'',1,81);
insert into driver values(132,1,1,29,1,3,3,'',1,74);
insert into driver values(133,1,2,24,1,1,1,'',1,75);
insert into driver values(134,'','','',1,1,'','','',73);
insert into driver values(135,1,1,32,1,2,1,'',1,80);
insert into driver values(136,2,1,20,1,4,1,'',1,79);
insert into driver values(137,1,2,84,1,4,1,'',1,76);
insert into driver values(139,1,1,25,1,4,1,'',1,78);
insert into driver values(140,2,1,40,1,3,1,'',6,70);
insert into driver values(141,1,2,47,1,1,1,'',1,71);
insert into driver values(142,1,1,26,1,4,1,'',1,72);
INSERT INTO DRIVER VALUES(143,1,2,37,1,1,1,'',6,118);
INSERT INTO DRIVER VALUES(144,1,2,21,1,1,2,0.162,1,119);
INSERT INTO DRIVER VALUES(145,1,2,82,1,1,1,'',1,120);
INSERT INTO DRIVER VALUES(146,1,1,27,1,2,1,'',1,121);
INSERT INTO DRIVER VALUES(147,1,1,25,1,4,1,'',1,122);
INSERT INTO DRIVER VALUES(148,1,2,38,1,1,1,'',1,123);
INSERT INTO DRIVER VALUES(149,1,1,42,1,1,1,'',1,124);
INSERT INTO DRIVER VALUES(150,1,1,16,1,1,1,'',1,125);
INSERT INTO DRIVER VALUES(151,1,2,48,1,3,1,'',6,126);
INSERT INTO DRIVER VALUES(152,1,1,27,1,5,1,'',1,127);
INSERT INTO DRIVER VALUES(153,1,1,76,1,3,1,'',6,128);
INSERT INTO DRIVER VALUES(154,1,2,29,1,2,1,'',1,129);
INSERT INTO DRIVER VALUES(155,2,2,55,1,2,1,'',1,130);
INSERT INTO DRIVER VALUES(156,1,1,33,1,1,1,'',1,131);
INSERT INTO DRIVER VALUES(157,1,1,27,1,1,1,0.081,2,132);
INSERT INTO DRIVER VALUES(158,1,1,34,1,2,1,'',1,133);
INSERT INTO DRIVER VALUES(159,1,2,27,1,3,1,'',1,134);
INSERT INTO DRIVER VALUES(160,1,1,26,1,1,1,'',1,135);
INSERT INTO DRIVER VALUES(161,1,3,22,1,1,1,'',2,136);
INSERT INTO DRIVER VALUES(162,2,1,47,1,3,6,'',1,137);
INSERT INTO DRIVER VALUES(3,'','','','','','','','','',181);
INSERT INTO DRIVER VALUES(5,'','','','','','','','','',182);
INSERT INTO DRIVER VALUES(23,'','','','','','','','','',183);
INSERT INTO DRIVER VALUES(26,'','','','','','','','','',184);
INSERT INTO DRIVER VALUES(28,'','','','','','','','','',185);
INSERT INTO DRIVER VALUES(81,'','','','','','','','','',186);
INSERT INTO DRIVER VALUES(88,'','','','','','','','','',187);
INSERT INTO DRIVER VALUES(95,'','','','','','','','','',188);
INSERT INTO DRIVER VALUES(101,'','','','','','','','','',189);
INSERT INTO DRIVER VALUES(104,'','','','','','','','','',190);
INSERT INTO DRIVER VALUES(124,'','','','','','','','','',191);
INSERT INTO DRIVER VALUES(138,'','','','','','','','','',192);
INSERT INTO DRIVER VALUES(112,'','','','','','','','','',193);
INSERT INTO DRIVER VALUES(163,'','','','','','','','','',194);
insert into driver values(164,1,1,40,1,3,7,0,3,195);
insert into driver values(165,2,1,20,2,4,1,'',1,196);
insert into driver values(166,1,1,29,1,3,3,'',1,197);
insert into driver values(167,1,2,24,1,1,1,'',1,198);

```

Appendix C-11: VEHICLE_DATA.SQL

```

INSERT INTO VEHICLE VALUES(1,3,3,1,1,1,1,88,3,6,88,1,'NO',1,1,1,487,'NO');
INSERT INTO VEHICLE VALUES(2,3,9,1,1,1,1,88,3,1,88,2,'NO',1,14,2,495,'NO');
INSERT INTO VEHICLE VALUES(4,3,5,1,1,1,1,88,2,6,88,2,'NO',1,1,4,481,'NO');
INSERT INTO VEHICLE VALUES(6,3,2,1,1,1,1,88,1,1,96,1,'NO',5,14,6,474,'YES');

```

```

INSERT INTO VEHICLE VALUES (7,3,4,1,8,1,1,88,3,2,0,5,'NO',8,14,7,474,'NO');
INSERT INTO VEHICLE VALUES (9,2,3,1,1,1,1,88,3,6,72,1,'NO',3,14,9,475,'NO');
INSERT INTO VEHICLE VALUES (10,2,'',77,'','','',88,1,6,72,2,'NO',1,1,10,477,'NO');
INSERT INTO VEHICLE VALUES (11,3,19,1,1,1,1,88,1,6,88,2,'NO',1,1,11,463,'NO');
INSERT INTO VEHICLE VALUES (12,3,16,77,'',1,1,88,3,6,80,1,'NO',1,1,12,456,'NO');
INSERT INTO VEHICLE VALUES (13,3,2,2,1,1,1,88,4,1,48,2,'NO',1,1,13,464,'NO');
INSERT INTO VEHICLE VALUES (16,3,10,1,1,1,1,88,3,3,118.4,4,'NO',2,2,16,478,'NO');
INSERT INTO VEHICLE VALUES (20,3,4,1,1,1,1,88,1,6,120,4,'NO',5,14,20,537,'NO');
INSERT INTO VEHICLE VALUES (21,3,3,1,1,1,1,88,1,10,88,4,'NO',1,7,21,535,'YES');
INSERT INTO VEHICLE VALUES (22,3,2,1,1,1,1,88,1,1,88,5,'NO',8,14,22,535,'NO');
INSERT INTO VEHICLE VALUES (24,3,4,1,1,1,1,88,3,1,112,4,'NO',7,14,24,539,'NO');
INSERT INTO VEHICLE VALUES (25,3,2,1,1,1,1,88,1,1,56,2,'NO',3,14,25,540,'NO');
INSERT INTO VEHICLE VALUES (27,3,3,1,1,1,1,88,3,1,80,2,'NO',1,1,27,512,'NO');
INSERT INTO VEHICLE VALUES (29,3,5,1,1,1,1,88,3,1,88,2,'YES',1,2,29,500,'YES');
INSERT INTO VEHICLE VALUES (34,3,13,1,1,1,1,88,3,1,104,4,'NO',1,2,34,461,'NO');
INSERT INTO VEHICLE VALUES (35,'',3,1,'',1,1,88,'',5,48,4,'NO','',2,35,422,'');

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INSERT INTO VEHICLE VALUES (40,3,4,1,8,5,1,88,4,1,27.2,4,'NO',1,14,40,488,'YES');
INSERT INTO VEHICLE VALUES (41,3,12,1,1,1,1,88,3,1,32,2,'NO',8,2,41,488,'NO');
INSERT INTO VEHICLE VALUES (44,3,5,1,1,1,1,88,3,6,88,2,'NO',1,3,44,506,'NO');
INSERT INTO VEHICLE VALUES (46,3,5,1,1,1,1,88,3,1,88,1,'NO',1,1,46,446,'NO');
INSERT INTO VEHICLE VALUES (47,3,4,3,1,1,1,88,4,1,72,2,'NO',1,1,47,433,'NO');
INSERT INTO VEHICLE VALUES (48,3,3,2,1,1,1,88,4,1,88,1,'NO',4,14,48,442,'NO');
INSERT INTO VEHICLE VALUES (49,3,4,1,1,1,1,88,3,6,56,5,'NO',8,10,49,473,'NO');
INSERT INTO VEHICLE VALUES (50,3,12,1,'',1,1,88,'',1,96,3,'YES',6,3,50,473,'YES');
INSERT INTO VEHICLE VALUES (54,3,9,1,1,1,1,88,1,1,112,1,'NO',2,14,54,459,'NO');

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INSERT INTO VEHICLE VALUES (60,3,3,3,1,1,1,88,3,1,88,1,'NO',1,1,60,479,'NO');
INSERT INTO VEHICLE VALUES (61,3,5,1,1,1,1,88,1,1,88,2,'NO',1,1,61,458,'YES');

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--INSERT INTO VEHICLE VALUES (66,'',17,1,'',1,1,88,'',1,72,3,'',5,1,66,432,'');
INSERT INTO VEHICLE VALUES (67,3,2,1,1,1,1,88,4,6,112,3,'NO',1,1,67,468,'YES');
INSERT INTO VEHICLE VALUES (68,3,2,1,1,1,1,88,4,1,88,5,'NO',8,11,68,468,'NO');
INSERT INTO VEHICLE VALUES (69,3,11,1,1,1,1,88,1,1,56,1,'NO',2,2,69,471,'NO');
INSERT INTO VEHICLE VALUES (70,3,8,1,1,1,1,88,1,6,88,2,'NO',1,1,70,496,'NO');
INSERT INTO VEHICLE VALUES (71,3,6,1,1,1,1,88,3,1,'',1,'NO',3,1,71,498,'NO');

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INSERT INTO VEHICLE VALUES (73,3,9,1,1,1,1,88,1,1,56,2,'NO',1,1,73,515,'NO');
INSERT INTO VEHICLE VALUES (74,3,7,1,1,1,1,88,1,1,56,3,'NO',3,1,74,440,'NO');
INSERT INTO VEHICLE VALUES (76,3,3,3,1,1,1,88,1,1,112,2,'NO',1,2,76,562,'NO');

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INSERT INTO VEHICLE VALUES (82,3,5,1,1,1,1,88,3,1,88,2,'NO',1,1,82,516,'NO');
INSERT INTO VEHICLE VALUES (83,3,4,4,1,1,1,88,3,1,88,5,'NO',8,1,83,525,'NO');
INSERT INTO VEHICLE VALUES (84,3,10,1,1,1,1,88,3,1,72,2,'NO',1,1,84,525,'YES');
INSERT INTO VEHICLE VALUES (85,3,5,1,1,1,1,88,4,1,88,2,'NO',1,1,85,483,'NO');
INSERT INTO VEHICLE VALUES (86,3,1,1,1,1,1,88,1,1,88,5,'NO',1,1,86,499,'NO');
INSERT INTO VEHICLE VALUES (87,3,9,1,1,1,1,88,1,6,96,3,'NO',1,1,87,437,'NO');
INSERT INTO VEHICLE VALUES (89,3,1,1,1,1,1,88,1,1,80,3,'NO',2,2,89,439,'NO');
INSERT INTO VEHICLE VALUES (91,3,17,1,1,1,1,88,4,1,56,2,'NO',1,1,91,521,'NO');
INSERT INTO VEHICLE VALUES (92,3,3,4,1,1,1,88,2,1,88,4,'YES',2,2,92,541,'NO');
INSERT INTO VEHICLE VALUES (93,3,3,1,1,1,1,88,4,1,64,3,'NO',1,1,93,469,'NO');
INSERT INTO VEHICLE VALUES (94,3,14,3,1,1,1,88,1,1,'',1,'NO',1,1,94,460,'NO');
INSERT INTO VEHICLE VALUES (96,3,1,1,1,1,1,88,1,1,104,1,'NO',1,1,96,472,'YES');
INSERT INTO VEHICLE VALUES (97,3,9,1,1,1,1,88,3,1,88,2,'NO',1,1,97,502,'NO');
INSERT INTO VEHICLE VALUES (98,3,5,1,1,1,1,88,3,1,'',2,'NO',2,'',98,497,'NO');
INSERT INTO VEHICLE VALUES (99,3,1,1,1,1,1,88,4,1,'',1,'NO',1,1,99,485,'NO');

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INSERT INTO VEHICLE VALUES (100,3,9,1,1,1,1,88,4,1,64,1,'NO',3,1,100,480,'NO');
INSERT INTO VEHICLE VALUES (103,3,6,1,1,1,1,88,3,1,80,2,'NO',1,1,103,504,'NO');
INSERT INTO VEHICLE VALUES (105,3,4,1,1,1,1,88,3,1,88,3,'NO',1,2,105,526,'NO');
INSERT INTO VEHICLE VALUES (106,3,1,1,1,1,1,88,4,6,96,1,'NO',1,1,106,443,'NO');

INSERT INTO VEHICLE VALUES (109,3,3,1,1,1,1,'',88,4,1,96,1,'NO',1,1,109,441,'NO');
INSERT INTO VEHICLE VALUES (110,2,'',1,1,1,'',88,3,6,96,5,'NO',8,4,110,489,'NO');
INSERT INTO VEHICLE VALUES (111,3,17,1,1,1,1,88,3,1,56,2,'NO',3,2,111,489,'YES');
INSERT INTO VEHICLE VALUES (113,3,13,1,1,1,1,88,4,1,88,2,'NO',3,14,113,484,'NO');
INSERT INTO VEHICLE VALUES (114,3,4,1,1,1,1,88,3,6,88,3,'NO',1,4,114,527,'NO');
INSERT INTO VEHICLE VALUES (115,3,1,1,1,1,1,88,3,1,88,1,'NO',1,11,115,528,'NO');
INSERT INTO VEHICLE VALUES (116,3,4,1,1,1,1,88,3,1,88,5,'NO',8,1,116,528,'NO');
INSERT INTO VEHICLE VALUES (117,3,'',1,1,1,1,88,3,3,40,2,'YES',3,1,117,503,'YES');
INSERT INTO VEHICLE VALUES (118,3,8,1,1,1,1,88,3,3,88,5,'NO',8,1,118,503,'NO');
INSERT INTO VEHICLE VALUES (120,3,9,1,1,1,1,88,4,2,48,2,'NO',1,1,120,524,'NO');
INSERT INTO VEHICLE VALUES (121,3,4,1,1,1,1,88,3,1,88,2,'NO',1,2,121,423,'NO');
INSERT INTO VEHICLE VALUES (123,'',15,1,1,1,1,88,3,6,88,2,'NO',2,1,123,529,'NO');
INSERT INTO VEHICLE
VALUES (124,1,'',77,1,1,1,88,3,6,104,5,'NO',8,'',124,530,'NO');
INSERT INTO VEHICLE VALUES (125,3,4,1,1,1,1,88,3,1,88,2,'NO',3,12,125,530,'NO');
INSERT INTO VEHICLE VALUES (126,2,'',3,1,1,1,88,3,6,88,5,'NO',8,'',126,505,'NO');
INSERT INTO VEHICLE VALUES (127,3,'',77,1,6,1,88,2,1,88,3,'NO',1,2,127,505,'NO');

INSERT INTO VEHICLE VALUES (129,3,3,1,1,1,1,88,3,1,64,3,'NO',3,4,129,466,'YES');
INSERT INTO VEHICLE VALUES (130,3,'',5,1,6,2,88,1,1,72,1,'NO',1,1,130,476,'NO');
INSERT INTO VEHICLE VALUES (131,3,9,1,1,1,1,88,1,1,72,1,'NO',1,1,131,457,'NO');
INSERT INTO VEHICLE VALUES (132,3,4,3,1,1,1,88,1,1,1.6,5,'NO',8,9,132,536,'NO');
INSERT INTO VEHICLE VALUES (133,3,9,1,1,1,1,88,1,1,104,1,'NO',1,1,133,536,'YES');
INSERT INTO VEHICLE VALUES (134,2,'',1,1,1,1,88,3,1,16,4,'NO',2,3,134,538,'YES');
INSERT INTO VEHICLE VALUES (135,3,15,1,1,1,1,88,2,1,48,2,'NO',1,1,135,520,'NO');
INSERT INTO VEHICLE VALUES (136,3,15,1,1,1,1,88,2,1,104,2,'NO',3,14,136,470,'NO');
INSERT INTO VEHICLE VALUES (137,3,4,1,1,1,1,88,2,1,'',2,'NO',2,2,137,522,'NO');
INSERT INTO VEHICLE VALUES (138,1,'',1,1,1,1,88,4,1,'',5,'NO',8,'',138,523,'NO');
INSERT INTO VEHICLE VALUES (139,3,4,1,1,1,1,88,4,6,80,3,'NO',1,1,139,523,'NO');
INSERT INTO VEHICLE VALUES (140,3,7,1,1,1,1,88,4,6,'',2,'NO',3,2,140,467,'NO');
INSERT INTO VEHICLE VALUES (141,3,16,1,1,1,1,88,2,1,88,5,'NO',8,2,141,467,'NO');
INSERT INTO VEHICLE VALUES (142,3,9,1,1,1,1,88,2,1,88,5,'NO',8,1,142,467,'NO');
INSERT INTO VEHICLE VALUES (143,3,14,1,1,1,1,88,4,1,88,2,'NO',2,1,143,544,'NO');
--INSERT INTO VEHICLE VALUES (144,3,2,1,1,1,1,88,2,1,80,2,'NO',1,1,144,545,'NO');
INSERT INTO VEHICLE VALUES (145,3,3,3,1,1,1,88,3,6,88,1,'NO',1,1,145,546,'NO');
INSERT INTO VEHICLE VALUES (146,3,9,3,1,1,1,88,1,1,88,1,'NO',3,14,146,547,'NO');
INSERT INTO VEHICLE VALUES (147,3,7,1,1,1,1,88,1,6,88,1,'NO',1,1,147,548,'NO');
INSERT INTO VEHICLE VALUES (148,3,3,1,1,1,1,88,3,1,56,2,'NO',1,2,148,549,'NO');
INSERT INTO VEHICLE VALUES (149,3,2,2,1,1,1,88,1,3,56,2,'NO',8,4,149,550,'NO');
INSERT INTO VEHICLE VALUES (150,3,6,1,1,1,1,88,1,1,64,2,'NO',1,2,150,550,'YES');
INSERT INTO VEHICLE VALUES (151,3,17,1,1,1,1,88,2,1,72,1,'NO',2,1,151,551,'YES');
INSERT INTO VEHICLE VALUES (152,3,3,3,1,1,1,88,3,1,88,1,'NO',1,2,152,552,'NO');
INSERT INTO VEHICLE VALUES (153,3,2,2,1,1,1,88,3,1,80,2,'NO',1,1,153,553,'NO');
INSERT INTO VEHICLE VALUES (154,3,3,2,1,1,1,88,3,1,88,1,'NO',8,1,154,553,'NO');
INSERT INTO VEHICLE VALUES (155,3,3,1,1,1,1,88,3,6,88,2,'NO',1,2,155,554,'NO');
INSERT INTO VEHICLE VALUES (156,2,3,1,1,1,1,88,3,6,48,4,'YES',7,2,156,555,'NO');
INSERT INTO VEHICLE VALUES (157,3,5,1,1,1,1,88,2,1,56,2,'NO',1,2,157,556,'NO');
INSERT INTO VEHICLE VALUES (158,3,19,1,1,1,1,88,1,6,'',1,'NO',1,1,158,557,'NO');
INSERT INTO VEHICLE VALUES (159,3,3,1,1,1,1,88,3,1,88,3,'NO',4,1,159,558,'NO');
INSERT INTO VEHICLE VALUES (160,3,1,1,1,1,1,88,2,4,88,1,'NO',1,1,160,559,'NO');
INSERT INTO VEHICLE VALUES (161,3,9,3,1,1,1,88,3,6,'',3,'NO',3,14,161,560,'NO');
INSERT INTO VEHICLE VALUES (162,3,12,1,1,1,1,88,4,1,48,1,'NO',1,1,162,561,'NO');
INSERT INTO VEHICLE VALUES (3,1,'','','',' ',88,3,6,'',5,'NO',8,88,3,495,'NO');
INSERT INTO VEHICLE VALUES (5,1,'','','',' ',88,2,6,96,5,'NO',8,88,5,481,'NO');
INSERT INTO VEHICLE
VALUES (23,1,'','','',' ',88,3,6,112,5,'NO',8,88,23,539,'NO');

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INSERT INTO VEHICLE
VALUES (26,1,'','','',' ',88,3,6,' ',5,'NO',8,88,26,512,'NO');
INSERT INTO VEHICLE
VALUES (28,1,'','','',' ',88,3,6,96,5,'NO',8,88,28,500,'NO');
INSERT INTO VEHICLE
VALUES (81,1,'','','',' ',88,3,6,88,5,'NO',8,88,81,516,'NO');
INSERT INTO VEHICLE
VALUES (88,1,'','','',' ',88,' ',' ',5,'NO',8,88,88,439,'NO');
INSERT INTO VEHICLE
VALUES (95,2,'','','',' ',88,' ',6,' ',5,'NO',8,88,95,472,'NO');
INSERT INTO VEHICLE
VALUES (101,1,'','','',' ',88,2,6,' ',5,'NO',8,88,101,480,'NO');
INSERT INTO VEHICLE
VALUES (104,1,'','','',' ',88,3,6,88,5,'NO',8,88,104,526,'NO');

INSERT INTO VEHICLE
VALUES (112,1,'','','',' ',88,' ',77,' ',5,'NO',8,88,112,484,'NO');
INSERT INTO VEHICLE
VALUES (163,1,'','','',' ',88,3,6,88,5,'NO',8,88,163,506,'NO');
INSERT INTO VEHICLE VALUES (164,3,5,1,1,1,1,88,1,1,88,4,'NO',1,10,164,565,'YES');
INSERT INTO VEHICLE VALUES (165,3,3,1,1,1,1,88,3,1,64,1,'YES',4,14,165,566,'NO');
INSERT INTO VEHICLE VALUES (166,3,4,3,1,1,1,88,1,1,1.6,5,'NO',8,9,166,567,'NO');
INSERT INTO VEHICLE
VALUES (167,3,9,1,1,1,1,88,1,1,104,2,'YES',2,14,167,567,'YES');

```

Appendix C-12: VEHICLE_DAMAGE_RECEIVED.SQL

```

INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (1,2,1);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (2,14,1);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (3,15,1);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (4,9,1);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (5,10,1);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (6,3,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (7,2,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (8,1,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (9,15,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (10,14,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (11,13,100);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (12,2,103);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (13,14,103);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (14,15,103);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (15,20,103);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (16,1,103);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (17,1,106);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (18,2,106);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (19,15,106);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (20,14,106);
--INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (21,2,108);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (22,1,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (23,15,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (24,2,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (25,3,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (26,14,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (27,13,109);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (28,1,11);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (29,2,11);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (30,3,11);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (31,13,11);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (32,14,11);

```

[illegible]

INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(94,1,123);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(95,2,123);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(96,3,123);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(97,14,123);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(98,15,123);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(99,12,125);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(100,2,127);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(101,2,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(102,3,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(103,4,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(104,5,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(105,6,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(106,7,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(107,14,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(108,12,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(109,13,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(110,11,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(111,19,129);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(112,1,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(113,2,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(114,3,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(115,13,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(116,14,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(117,15,13);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(118,1,130);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(119,2,130);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(120,14,130);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(121,12,131);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(122,13,131);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(123,14,131);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(124,9,132);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(125,2,133);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(126,3,133);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(127,1,133);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(128,15,133);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(129,13,133);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(130,1,135);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(131,2,135);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(132,14,135);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(133,18,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(134,20,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(135,14,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(136,13,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(137,12,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(138,9,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(139,8,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(140,7,136);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(141,20,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(142,1,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(143,2,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(144,3,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(145,15,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(146,10,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(147,9,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(148,8,137);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(149,14,139);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(150,1,139);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(151,2,139);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(152,4,139);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(153,5,139);
INSERT	INTO	VEHICLE_DAMAGE_RECEIVED	VALUES(154,6,139);


```

INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (155,2,140);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (156,2,141);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (157,11,142);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (158,1,143);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (159,2,143);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (160,3,143);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (161,4,143);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (162,15,143);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (163,18,143);
--INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (164,1,144);
--INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (165,2,144);
--INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (166,15,144);
--INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (167,4,144);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (168,1,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (169,2,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (170,3,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (171,4,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (172,13,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (173,15,145);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (174,14,146);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (175,19,146);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (176,1,147);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (177,2,147);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (178,14,147);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (179,1,148);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (180,2,148);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (181,14,148);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (182,15,148);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (183,13,149);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (184,12,149);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (185,11,149);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (186,1,150);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (187,2,150);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (188,3,150);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (189,14,150);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (190,15,151);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (191,1,151);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (192,2,151);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (193,3,151);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (194,1,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (195,15,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (196,14,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (197,13,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (198,12,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (199,11,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (200,10,152);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (201,1,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (202,2,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (203,3,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (204,14,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (205,15,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (206,13,153);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (207,1,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (208,2,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (209,3,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (210,15,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (211,14,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (212,13,154);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (213,2,155);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (214,3,155);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (215,4,155);

```

[illegible]

[illegible]

[illegible]

[illegible]

```

INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (460,4,92);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (461,13,92);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (462,14,92);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (463,15,92);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (464,1,93);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (465,2,93);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (466,14,93);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (467,15,93);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (468,1,94);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (469,6,95);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (470,1,96);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (471,14,96);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (472,1,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (473,2,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (474,3,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (475,15,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (476,14,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (477,13,97);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (478,1,98);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (479,2,98);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (480,14,98);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (481,15,98);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (482,1,99);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (483,13,99);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (484,14,99);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (485,15,99);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (486,1,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (487,2,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (488,3,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (489,5,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (490,10,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (491,14,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (492,20,164);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (493,2,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (494,3,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (495,4,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (496,5,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (497,6,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (498,7,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (499,8,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (500,11,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (501,12,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (502,13,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (503,14,165);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (504,9,166);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (505,1,167);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (506,2,167);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (507,3,167);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (508,13,167);
INSERT INTO VEHICLE_DAMAGE_RECEIVED VALUES (509,15,167);

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Appendix C-13: VEHICLE_RESULTS_DATA.SQL

```

INSERT INTO VEHICLE_RESULTS VALUES (1,1,1,1,5,3,5,2,2,2,2,2,1,2,3,5000,4,3,'YES');
INSERT INTO VEHICLE_RESULTS VALUES (2,2,1,4,3,4,4,2,2,2,1,2,4,1,3,10000,2,2,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (4,4,1,2,1,2,5,2,2,2,2,2,1,0,1,9000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (9,9,1,2,5,4,5,2,2,2,2,2,1,0,2,0,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (10,10,1,2,1,2,5,2,2,2,2,2,1,0,1,'',1,1,'NO');

```

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INSERT INTO VEHICLE_RESULTS
VALUES (11,11,1,1,2,4,6,3,2,2,1,2,1,2,4,8000,2,3,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (12,12,1,4,6,2,4,2,2,3,1,2,1,0,1,12000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (13,13,1,2,1,2,5,2,2,2,2,1,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (16,16,1,2,3,4,5,2,2,3,1,2,2,1,3,4000,1,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (20,20,3,1,5,4,6,3,1,2,2,2,3,3,2,24100,5,4,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (21,21,1,2,4,1,5,2,2,2,2,2,1,2,3,2500,4,4,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (22,22,1,2,3,2,5,2,2,2,2,4,1,0,5,3500,1,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (24,24,1,2,5,2,6,2,2,2,2,2,1,2,4,5000,5,5,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (25,25,1,1,3,4,6,3,2,2,2,2,1,1,4,4000,2,4,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (27,27,1,5,5,2,5,2,2,2,2,2,1,0,1,1800,2,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (29,29,1,1,3,1,6,2,2,2,2,2,1,1,2,4000,3,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (34,34,1,3,2,3,1,3,2,2,2,2,3,1,4,3000,2,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (47,47,1,3,4,1,5,2,2,2,2,2,1,2,3,5000,3,3,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (48,48,1,2,2,2,5,2,2,2,2,2,1,0,1,15000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (49,49,1,3,4,2,5,2,2,2,2,2,1,1,1,800,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (50,50,1,2,1,2,5,2,2,2,2,2,3,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (54,54,1,4,3,4,4,2,2,3,2,2,4,0,4,15000,3,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (60,60,1,2,1,2,5,2,2,3,2,2,1,0,1,7000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (61,61,1,1,6,3,6,3,2,3,2,2,1,1,4,6000,1,1,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (67,67,1,1,3,2,6,2,2,3,2,2,3,1,4,7000,1,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (68,68,1,2,3,2,5,2,2,2,2,2,1,1,1,1500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (69,69,1,1,3,4,6,2,2,2,2,2,1,2,4,10000,1,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (70,70,1,1,3,4,6,2,2,2,2,2,3,2,4,5000,2,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (73,73,1,2,1,2,5,2,2,2,2,2,1,0,1,1500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (74,74,1,2,2,2,5,2,2,2,2,2,1,0,1,2500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (82,82,1,2,1,2,5,2,2,2,2,2,1,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (83,83,1,2,5,2,5,2,2,2,2,2,4,2,1,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (84,84,1,2,1,2,5,2,2,2,2,2,1,0,1,6000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (85,85,1,2,1,2,5,2,2,2,2,2,1,0,1,3500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (87,87,1,2,1,2,5,2,2,2,2,2,1,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (89,89,1,3,3,4,1,3,2,2,2,2,1,0,2,3000,2,1,'NO');

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INSERT INTO VEHICLE_RESULTS
VALUES (91,91,1,2,1,2,5,2,2,2,2,2,1,0,1,3500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (93,93,1,2,1,2,5,2,2,2,2,2,1,0,1,2500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (94,94,1,2,1,2,5,2,2,2,2,2,1,0,1,9900,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (95,95,1,5,7,6,5,2,2,2,2,2,1,3,5,0,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (96,96,1,2,1,2,5,2,2,2,2,2,1,0,1,1000,1,4,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (97,97,1,2,2,2,5,2,2,2,2,2,1,0,1,3000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (98,98,1,2,3,1,5,2,2,2,2,2,1,2,4,1000,3,3,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (100,100,1,3,5,4,1,3,2,2,2,2,1,0,2,4000,2,1,'NO');
--INSERT INTO VEHICLE_RESULTS
VALUES (102,102,1,2,1,1,2,2,2,2,2,2,1,0,1,6000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (103,103,1,2,3,1,5,2,2,2,2,2,1,0,3,2000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (105,105,1,1,3,1,5,3,2,2,2,2,1,1,2,5500,3,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (106,106,1,2,1,2,5,2,2,2,2,2,1,0,1,1500,1,1,'NO');

INSERT INTO VEHICLE_RESULTS
VALUES (109,109,1,2,1,2,5,2,2,2,2,2,1,0,1,31000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (110,110,1,2,1,6,1,1,1,1,4,2,1,3,1,1,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (111,111,1,2,2,2,5,2,2,2,2,2,1,1,1,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (113,113,1,1,1,3,6,2,2,2,2,2,1,0,4,2500,1,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (114,114,1,1,1,2,5,2,2,2,2,2,2,0,1,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (115,115,1,2,3,1,6,2,2,2,2,2,3,1,2,6000,2,1,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (116,116,1,2,3,6,5,1,1,1,2,4,1,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (117,117,1,2,1,2,5,2,2,2,2,2,1,0,1,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (118,118,1,2,5,2,2,2,2,2,2,2,4,2,0,1,5000,2,1,'NO');
--INSERT INTO VEHICLE_RESULTS
VALUES (119,119,1,2,3,4,5,2,2,2,2,2,1,1,2,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (120,120,1,2,1,2,5,2,2,2,2,3,1,0,1,2000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (121,121,1,3,3,4,5,2,2,2,2,2,1,2,3,500,3,3,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (123,123,1,2,2,2,5,2,2,2,2,2,1,0,1,4900,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (125,125,1,3,6,1,5,2,2,2,2,2,1,0,2,500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (126,126,1,5,7,6,5,3,3,2,2,2,1,1,2,0,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (127,127,1,2,3,1,5,2,2,2,2,2,1,0,3,6000,1,2,'NO');

INSERT INTO VEHICLE_RESULTS
VALUES (129,129,1,2,3,5,5,2,2,2,2,2,2,0,1,3000,2,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (130,130,1,2,1,2,5,1,1,1,1,1,2,0,1,5000,1,1,'NO');

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INSERT INTO VEHICLE_RESULTS
VALUES (131,131,1,2,2,2,5,2,3,3,2,3,2,0,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (132,132,1,2,2,2,5,2,2,2,2,2,1,0,1,25,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (133,133,1,2,2,2,5,2,2,2,2,2,1,0,1,3000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (134,134,1,2,5,1,5,1,2,2,2,2,1,3,4,0,5,5,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (135,135,1,2,5,2,5,2,2,2,2,2,1,0,2,1500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (136,136,1,2,3,4,6,2,2,2,2,3,1,2,4,8000,4,4,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (137,137,1,2,3,1,5,2,2,2,2,2,1,1,4,4500,1,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (139,139,1,2,3,2,5,2,2,2,2,2,2,1,1,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (140,140,1,1,4,1,6,2,2,2,2,2,5,1,3,4000,4,4,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (141,141,1,2,5,2,5,2,2,2,2,2,2,1,5,3000,2,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (142,142,1,3,4,2,2,2,2,2,2,2,2,1,5,2000,3,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (143,143,1,2,5,5,5,2,2,2,2,2,2,2,1,4000,4,1,'NO');
--INSERT INTO VEHICLE_RESULTS
VALUES (144,144,1,2,2,2,5,2,2,2,2,2,2,1,1,1,5000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (145,145,3,2,5,2,5,2,1,2,2,2,3,1,1,4000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (146,146,3,4,5,2,4,2,1,2,1,2,2,1,1,3500,4,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (147,147,1,2,5,2,5,2,2,2,2,2,3,1,1,6000,2,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (148,148,3,1,3,4,5,2,3,2,2,2,2,1,1,4,1500,3,4,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (149,149,1,5,5,2,5,2,2,2,2,2,2,3,1,3000,3,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (150,150,3,1,6,3,6,2,3,2,2,2,2,1,1,4,5000,2,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (151,151,1,2,3,1,6,3,2,2,2,2,2,1,2,3500,3,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (152,152,4,4,5,5,4,2,1,2,1,2,4,1,1,2000,4,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (153,153,1,2,5,4,3,2,1,2,1,2,3,1,4,3800,3,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (154,154,1,5,2,2,5,2,2,2,2,2,3,1,2,3800,3,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (155,155,2,3,3,4,1,2,2,2,2,2,2,3,3000,4,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (156,156,1,2,5,1,5,2,2,2,2,2,2,1,0,4,2000,4,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (157,157,1,2,3,2,5,2,2,2,2,2,2,1,1,1,1000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (158,158,2,2,3,4,5,1,2,2,2,2,2,1,0,3,5000,4,2,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (159,159,3,1,6,2,5,1,1,2,2,3,2,0,3,1500,2,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (160,160,1,1,1,2,5,2,2,2,2,2,2,1,0,1,5000,2,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (161,161,1,4,6,5,4,2,2,2,1,2,3,2,4,7000,4,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (162,162,2,2,5,5,5,2,2,2,2,2,2,0,1,3500,1,4,'NO');

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INSERT INTO VEHICLE_RESULTS VALUES (6,6,1,2,5,5,5,2,2,2,2,2,1,0,1,1000,4,1,'YES');
INSERT INTO VEHICLE_RESULTS VALUES (40,40,1,2,5,2,5,2,2,2,2,2,1,0,1,300,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (44,44,1,3,6,4,6,2,2,2,2,2,1,0,2,'',2,1,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (46,46,1,2,1,2,5,2,2,2,2,2,1,0,1,8000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (76,76,1,1,2,3,6,2,2,2,2,2,1,1,4,2000,2,2,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (86,86,1,2,1,2,5,2,2,2,2,2,1,0,1,1500,1,1,'NO');
INSERT INTO VEHICLE_RESULTS VALUES (92,92,1,3,4,1,5,2,2,2,2,2,1,2,4,'',3,3,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (99,99,1,1,3,4,6,3,2,2,2,2,1,2,4,1000,2,3,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (164,164,1,1,6,2,5,2,2,2,2,2,1,0,1,6000,1,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (165,165,1,2,3,5,1,3,3,2,2,2,2,0,1,3000,3,1,'YES');
INSERT INTO VEHICLE_RESULTS
VALUES (166,166,1,2,2,6,5,2,2,2,2,2,1,0,1,25,3,1,'NO');
INSERT INTO VEHICLE_RESULTS
VALUES (167,167,1,2,2,5,5,2,1,2,2,1,2,0,1,3000,3,1,'YES');

```

Appendix C-14: PASSENGER_DATA.SQL

```

insert into passenger values (1,8,1,2,4,68,85);
insert into passenger values (2,14,1,2,6,68,86);
insert into passenger values (3,16,1,1,4,118,88);
insert into passenger values (4,20,1,1,3,73,105);
insert into passenger values (5,28,1,1,3,24,106);
insert into passenger values (6,'',1,1,5,24,107);
insert into passenger values (7,0.5,1,1,3,21,108);
insert into passenger values (8,18,1,1,3,100,109);
insert into passenger values (9,18,1,1,6,100,110);
insert into passenger values (10,31,1,1,3,120,96);
insert into passenger values (11,34,1,1,6,118,89);
insert into passenger values (12,46,1,3,3,1,111);
INSERT INTO PASSENGER VALUES (14,13,1,1,3,68,87);
INSERT INTO PASSENGER VALUES (15,36,1,1,3,118,90);
INSERT INTO PASSENGER VALUES (16,57,1,1,3,117,91);
INSERT INTO PASSENGER VALUES (17,60,1,2,3,114,92);
INSERT INTO PASSENGER VALUES (18,26,1,4,3,16,93);
INSERT INTO PASSENGER VALUES (19,44,1,1,3,47,94);
INSERT INTO PASSENGER VALUES (20,60,1,2,3,49,95);
INSERT INTO PASSENGER VALUES (21,27,1,1,6,120,97);
INSERT INTO PASSENGER VALUES (22,42,1,1,4,120,98);
INSERT INTO PASSENGER VALUES (23,23,1,3,3,94,99);
INSERT INTO PASSENGER VALUES (24,44,1,3,3,20,100);
INSERT INTO PASSENGER VALUES (25,41,1,2,3,84,101);
INSERT INTO PASSENGER VALUES (26,36,1,2,3,97,102);
INSERT INTO PASSENGER VALUES (27,24,1,1,3,115,103);
INSERT INTO PASSENGER VALUES (28,29,1,2,3,116,104);
INSERT INTO PASSENGER VALUES (30,4,1,4,3,74,114);
INSERT INTO PASSENGER VALUES (31,6,1,3,3,140,115);
INSERT INTO PASSENGER VALUES (32,39,1,3,3,141,116);
INSERT INTO PASSENGER VALUES (33,23,1,1,3,133,117);
INSERT INTO PASSENGER VALUES (34,77,1,1,3,145,138);
INSERT INTO PASSENGER VALUES (35,45,2,5,3,153,139);
INSERT INTO PASSENGER VALUES (36,28,1,3,3,159,140);
INSERT INTO PASSENGER VALUES (37,28,1,1,3,161,141);
INSERT INTO PASSENGER VALUES (38,1,1,1,3,159,142);

```

```

INSERT INTO PASSENGER VALUES (39,22,1,3,6,159,143);
INSERT INTO PASSENGER VALUES (40,19,1,3,4,159,144);
INSERT INTO PASSENGER VALUES (47,22,1,2,3,71,172);
INSERT INTO PASSENGER VALUES (48,23,1,1,6,71,173);
INSERT INTO PASSENGER VALUES (49,23,1,1,3,167,199);

```

Appendix C-15: SAFETY_DEVICE_USED_DATA.SQL

```

INSERT INTO SAFETY_DEVICE_USED VALUES (1,2);,
INSERT INTO SAFETY_DEVICE_USED VALUES (3,2);,
INSERT INTO SAFETY_DEVICE_USED VALUES (5,2);,
INSERT INTO SAFETY_DEVICE_USED VALUES (7,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (7,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (8,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (8,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (9,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (9,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (10,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (10,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (12,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (12,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (13,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (14,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (14,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (15,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (15,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (16,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (18,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (18,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (19,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (20,77);
INSERT INTO SAFETY_DEVICE_USED VALUES (21,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (22,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (23,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (24,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (24,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (26,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (27,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (27,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (29,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (30,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (31,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (32,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (32,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (33,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (35,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (36,77);
INSERT INTO SAFETY_DEVICE_USED VALUES (37,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (38,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (39,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (39,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (40,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (41,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (42,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (43,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (44,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (46,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (47,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (47,4);

```

[illegible]

[illegible]

```

INSERT INTO SAFETY_DEVICE_USED VALUES (164,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (165,5);
INSERT INTO SAFETY_DEVICE_USED VALUES (165,6);
INSERT INTO SAFETY_DEVICE_USED VALUES (166,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (167,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (168,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (169,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (170,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (171,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (172,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (173,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (174,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (175,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (176,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (177,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (178,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (178,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (179,1);
INSERT INTO SAFETY_DEVICE_USED VALUES (195,4);
INSERT INTO SAFETY_DEVICE_USED VALUES (196,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (198,2);
INSERT INTO SAFETY_DEVICE_USED VALUES (199,2);

```

Appendix C-16: CITATION_DATA.SQL

```

INSERT INTO CITATION VALUES (1,1,1);
INSERT INTO CITATION VALUES (2,2,1);
INSERT INTO CITATION VALUES (3,3,1);
INSERT INTO CITATION VALUES (4,4,11);
INSERT INTO CITATION VALUES (5,10,12);
INSERT INTO CITATION VALUES (6,5,16);
INSERT INTO CITATION VALUES (7,10,20);
INSERT INTO CITATION VALUES (8,6,21);
INSERT INTO CITATION VALUES (9,10,25);
INSERT INTO CITATION VALUES (10,7,25);
INSERT INTO CITATION VALUES (11,8,34);
INSERT INTO CITATION VALUES (12,10,48);
INSERT INTO CITATION VALUES (13,1,49);
INSERT INTO CITATION VALUES (14,10,54);
INSERT INTO CITATION VALUES (15,5,58);
INSERT INTO CITATION VALUES (16,2,61);
INSERT INTO CITATION VALUES (17,9,61);
INSERT INTO CITATION VALUES (18,10,62);
INSERT INTO CITATION VALUES (19,10,67);
INSERT INTO CITATION VALUES (20,4,69);
INSERT INTO CITATION VALUES (21,10,70);
INSERT INTO CITATION VALUES (22,2,70);
INSERT INTO CITATION VALUES (23,11,70);
INSERT INTO CITATION VALUES (24,12,74);
INSERT INTO CITATION VALUES (25,13,83);
INSERT INTO CITATION VALUES (26,14,83);
INSERT INTO CITATION VALUES (27,10,85);
INSERT INTO CITATION VALUES (28,10,91);
INSERT INTO CITATION VALUES (29,2,93);
INSERT INTO CITATION VALUES (30,8,93);
INSERT INTO CITATION VALUES (31,15,93);
INSERT INTO CITATION VALUES (32,10,94);
INSERT INTO CITATION VALUES (33,10,97);
INSERT INTO CITATION VALUES (34,5,98);

```

```

INSERT INTO CITATION VALUES (35,10,103);
INSERT INTO CITATION VALUES (36,2,103);
INSERT INTO CITATION VALUES (37,16,103);
INSERT INTO CITATION VALUES (38,10,106);
INSERT INTO CITATION VALUES (39,16,106);
INSERT INTO CITATION VALUES (40,9,108);
INSERT INTO CITATION VALUES (41,10,109);
INSERT INTO CITATION VALUES (42,10,113);
INSERT INTO CITATION VALUES (43,10,115);
INSERT INTO CITATION VALUES (44,3,115);
INSERT INTO CITATION VALUES (45,1,117);
INSERT INTO CITATION VALUES (46,10,119);
INSERT INTO CITATION VALUES (47,10,129);
INSERT INTO CITATION VALUES (48,10,131);
INSERT INTO CITATION VALUES (49,17,132);
INSERT INTO CITATION VALUES (50,3,139);
INSERT INTO CITATION VALUES (51,16,139);
INSERT INTO CITATION VALUES (52,5,140);
INSERT INTO CITATION VALUES (53,2,143);
INSERT INTO CITATION VALUES (54,2,144);
INSERT INTO CITATION VALUES (55,12,144);
INSERT INTO CITATION VALUES (56,10,146);
INSERT INTO CITATION VALUES (57,12,147);
INSERT INTO CITATION VALUES (58,10,147);
INSERT INTO CITATION VALUES (59,13,147);
INSERT INTO CITATION VALUES (60,18,149);
INSERT INTO CITATION VALUES (61,5,151);
INSERT INTO CITATION VALUES (62,5,153);
INSERT INTO CITATION VALUES (63,10,157);
INSERT INTO CITATION VALUES (64,10,158);
INSERT INTO CITATION VALUES (65,10,159);
INSERT INTO CITATION VALUES (66,3,159);
INSERT INTO CITATION VALUES (67,10,160);
INSERT INTO CITATION VALUES (68,10,161);
INSERT INTO CITATION VALUES (69,2,161);
INSERT INTO CITATION VALUES (70,12,162);
INSERT INTO CITATION VALUES (71,4,162);
INSERT INTO CITATION VALUES (72,2,164);
INSERT INTO CITATION VALUES (73,9,164);
INSERT INTO CITATION VALUES (74,10,165);

```

Appendix C-17: CONTRIB_CAUSE_DRIVER_CITED_DATA.SQL

```

INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (1,1,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (2,1,7);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (3,2,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (4,3,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (5,4,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (6,5,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (7,10,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (8,11,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (9,12,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (10,12,16);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (11,12,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (12,13,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (13,16,9);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (14,16,17);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (15,20,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (16,20,17);

```

```

INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (17,21,6);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (18,22,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (19,21,20);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (20,23,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (21,24,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (22,25,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (23,26,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (24,27,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (25,28,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (26,29,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (27,34,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (28,47,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (29,48,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (30,49,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (31,50,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (32,54,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (33,54,17);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (38,60,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (39,61,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (40,61,8);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (42,67,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (43,68,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (44,69,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (45,70,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (46,70,7);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (47,70,20);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (48,73,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (49,81,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (50,82,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (51,83,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (52,84,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (53,85,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (54,87,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (55,89,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (56,91,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (57,91,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (58,93,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (59,94,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (60,94,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (61,95,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (62,96,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (63,97,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (64,98,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (65,100,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (66,101,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (67,103,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (68,104,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (69,105,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (70,106,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (73,109,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (74,110,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (75,110,12);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (76,110,17);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (77,111,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (78,112,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (79,113,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (80,114,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (81,115,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (82,116,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (83,117,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES (84,118,1);

```



```
--INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(85,119,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(86,120,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(87,123,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(88,124,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(89,125,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(90,126,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(91,127,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(92,129,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(93,130,14);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(94,131,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(95,132,18);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(96,133,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(97,134,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(98,135,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(99,136,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(100,136,12);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(101,137,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(102,138,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(103,139,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(104,140,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(105,141,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(106,142,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(107,143,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(108,143,8);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(109,144,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(110,144,7);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(111,145,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(112,146,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(113,147,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(114,148,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(115,149,3);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(116,150,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(117,151,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(118,152,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(119,153,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(120,154,1);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(121,155,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(122,156,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(123,156,6);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(124,157,14);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(125,157,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(126,158,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(127,159,20);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(128,160,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(129,161,5);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(130,161,7);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(131,162,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(132,164,77);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(133,164,8);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(134,165,2);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(135,166,18);
INSERT INTO CONTRIB_CAUSE_DRIVER_CITED VALUES(136,167,1);
```

Appendix C-18: CONTRIB_CAUSE_ENV_CITED_DATA.SQL

```
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES(1,487,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES(2,495,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES(3,481,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES(4,475,1);
```

```

INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (5,477,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (6,463,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (7,456,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (8,464,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (9,478,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (10,537,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (11,535,2);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (12,539,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (13,540,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (14,512,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (15,500,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (16,461,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (17,433,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (18,442,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (19,473,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (20,459,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (21,507,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (22,508,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (23,479,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (24,458,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (25,509,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (26,468,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (27,471,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (28,496,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (29,515,2);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (30,440,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (31,516,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (32,525,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (33,483,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (34,437,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (35,439,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (36,521,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (37,469,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (38,460,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (39,472,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (40,502,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (41,497,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (42,480,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (43,504,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (44,526,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (45,443,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (46,444,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (47,441,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (48,489,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (49,484,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (50,527,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (51,528,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (52,503,1);
--INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (53,492,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (54,524,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (55,529,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (56,530,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (57,505,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (58,466,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (59,476,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (60,457,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (61,536,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (62,538,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (63,520,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (64,470,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (65,522,1);

```

```

INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (66,523,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (67,467,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (68,544,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (69,545,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (70,546,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (71,547,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (72,548,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (73,549,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (74,550,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (75,551,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (76,552,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (77,553,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (78,554,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (79,555,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (80,556,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (81,557,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (82,558,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (83,559,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (84,560,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (85,561,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (86,565,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (87,566,1);
INSERT INTO CONTRIB_CAUSE_ENV_CITED VALUES (88,567,1);

```

Appendix C-19: CONTRIB_CAUSE_ROAD_CITED_DATA.SQL

```

INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (1,487,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (2,495,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (3,481,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (4,475,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (5,477,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (6,463,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (7,456,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (8,464,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (9,478,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (10,537,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (11,535,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (12,539,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (13,540,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (14,512,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (15,500,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (16,461,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (17,433,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (18,442,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (19,473,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (20,459,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (21,507,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (22,508,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (23,479,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (24,458,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (25,509,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (26,468,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (27,471,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (28,496,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (29,515,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (30,440,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (31,516,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (32,525,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (33,483,1);

```

```

INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (34,437,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (35,439,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (36,521,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (37,469,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (38,460,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (39,472,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (40,502,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (41,497,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (42,480,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (43,504,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (44,526,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (45,443,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (46,444,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (47,441,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (48,489,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (49,484,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (50,527,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (51,528,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (52,503,1);
--INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (53,492,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (54,524,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (55,529,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (56,530,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (57,505,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (58,466,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (59,476,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (60,457,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (61,536,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (62,538,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (63,520,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (64,470,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (65,522,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (66,523,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (67,467,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (68,544,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (69,545,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (70,546,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (71,547,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (72,548,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (73,549,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (74,550,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (75,151,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (76,552,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (77,553,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (78,554,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (79,555,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (80,556,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (81,557,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (82,558,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (83,559,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (84,560,3);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (85,561,77);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (86,565,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (87,566,1);
INSERT INTO CONTRIB_CAUSE_ROAD_CITED VALUES (88,567,1);

```

Appendix C-20: ACTIVITY_DATA.SQL

```

INSERT INTO ACTIVITY VALUES (1,'1-1');

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```
INSERT INTO ACTIVITY VALUES (2, '1-2');
INSERT INTO ACTIVITY VALUES (3, '1-3');
INSERT INTO ACTIVITY VALUES (4, '1-4');
INSERT INTO ACTIVITY VALUES (5, '1-5');
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INSERT INTO ACTIVITY VALUES (7, '1-7');
INSERT INTO ACTIVITY VALUES (8, '1-8');
INSERT INTO ACTIVITY VALUES (9, '1-9');
INSERT INTO ACTIVITY VALUES (10, '1-10');
INSERT INTO ACTIVITY VALUES (11, '1-11');
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INSERT INTO ACTIVITY VALUES (14, '1-14');
INSERT INTO ACTIVITY VALUES (15, '1-15');
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INSERT INTO ACTIVITY VALUES (17, '1-17');
INSERT INTO ACTIVITY VALUES (18, '1-18');
INSERT INTO ACTIVITY VALUES (19, '1-19');
INSERT INTO ACTIVITY VALUES (20, '1-20');
INSERT INTO ACTIVITY VALUES (21, '1-21');
INSERT INTO ACTIVITY VALUES (22, '1-22');
INSERT INTO ACTIVITY VALUES (23, '1-23');
INSERT INTO ACTIVITY VALUES (24, '1-24');
INSERT INTO ACTIVITY VALUES (25, '1-25');
INSERT INTO ACTIVITY VALUES (26, '1-26');
INSERT INTO ACTIVITY VALUES (27, '1-27');
INSERT INTO ACTIVITY VALUES (28, '1-28');
INSERT INTO ACTIVITY VALUES (29, '1-29');
INSERT INTO ACTIVITY VALUES (30, '1-30');
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INSERT INTO ACTIVITY VALUES (50, '2-2');
INSERT INTO ACTIVITY VALUES (51, '2-3');
INSERT INTO ACTIVITY VALUES (52, '2-4');
INSERT INTO ACTIVITY VALUES (53, '2-5');
INSERT INTO ACTIVITY VALUES (54, '2-6');
INSERT INTO ACTIVITY VALUES (55, '2-7');
INSERT INTO ACTIVITY VALUES (56, '2-8');
INSERT INTO ACTIVITY VALUES (57, '2-9');
INSERT INTO ACTIVITY VALUES (58, '2-10');
INSERT INTO ACTIVITY VALUES (59, '2-11');
INSERT INTO ACTIVITY VALUES (60, '2-12');
INSERT INTO ACTIVITY VALUES (61, '2-13');
INSERT INTO ACTIVITY VALUES (62, '2-14');
```

```
INSERT INTO ACTIVITY VALUES (63,'2-17');
INSERT INTO ACTIVITY VALUES (64,'2-18');
INSERT INTO ACTIVITY VALUES (65,'2-19');
INSERT INTO ACTIVITY VALUES (66,'2-20');
INSERT INTO ACTIVITY VALUES (67,'2-21');
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INSERT INTO ACTIVITY VALUES (82,'2-36');
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INSERT INTO ACTIVITY VALUES (88,'2-42');
INSERT INTO ACTIVITY VALUES (89,'2-43');
INSERT INTO ACTIVITY VALUES (90,'2-44');
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INSERT INTO ACTIVITY VALUES (92,'2-46');
INSERT INTO ACTIVITY VALUES (93,'2-47');
INSERT INTO ACTIVITY VALUES (94,'2-48');
INSERT INTO ACTIVITY VALUES (95,'2-49');
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INSERT INTO ACTIVITY VALUES (116,'2-70');
INSERT INTO ACTIVITY VALUES (117,'2-71');
INSERT INTO ACTIVITY VALUES (118,'2-72');
INSERT INTO ACTIVITY VALUES (119,'2-73');
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INSERT INTO ACTIVITY VALUES (121,'2-75');
INSERT INTO ACTIVITY VALUES (122,'2-76');
INSERT INTO ACTIVITY VALUES (123,'2-77');
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INSERT INTO ACTIVITY VALUES (124,'2-78');
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INSERT INTO ACTIVITY VALUES (126,'2-80');
INSERT INTO ACTIVITY VALUES (127,'2-81');
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INSERT INTO ACTIVITY VALUES (132,'2-86');
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INSERT INTO ACTIVITY VALUES (134,'2-88');
INSERT INTO ACTIVITY VALUES (135,'2-89');
INSERT INTO ACTIVITY VALUES (136,'2-90');
INSERT INTO ACTIVITY VALUES (137,'2-91');
INSERT INTO ACTIVITY VALUES (138,'2-92');
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INSERT INTO ACTIVITY VALUES (140,'2-94');
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INSERT INTO ACTIVITY VALUES (142,'2-96');
INSERT INTO ACTIVITY VALUES (143,'2-97');
INSERT INTO ACTIVITY VALUES (144,'2-98');
INSERT INTO ACTIVITY VALUES (145,'2-99');
INSERT INTO ACTIVITY VALUES (146,'2-100');
INSERT INTO ACTIVITY VALUES (147,'2-101');
INSERT INTO ACTIVITY VALUES (148,'2-102');
INSERT INTO ACTIVITY VALUES (149,'2-103');
INSERT INTO ACTIVITY VALUES (150,'2-15');
INSERT INTO ACTIVITY VALUES (151,'2-16');
INSERT INTO ACTIVITY VALUES (152,'2-104');
INSERT INTO ACTIVITY VALUES (153,'2-105');
INSERT INTO ACTIVITY VALUES (154,'2-106');
INSERT INTO ACTIVITY VALUES (155,'2-107');
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INSERT INTO ACTIVITY VALUES (158,'3-3');
INSERT INTO ACTIVITY VALUES (159,'3-4');
INSERT INTO ACTIVITY VALUES (160,'3-5');
INSERT INTO ACTIVITY VALUES (161,'3-6');
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INSERT INTO ACTIVITY VALUES (173,'3-18');
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INSERT INTO ACTIVITY VALUES (175,'3-20');
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INSERT INTO ACTIVITY VALUES (178,'3-23');
INSERT INTO ACTIVITY VALUES (179,'3-24');
INSERT INTO ACTIVITY VALUES (180,'3-25');
INSERT INTO ACTIVITY VALUES (181,'3-26');
INSERT INTO ACTIVITY VALUES (182,'3-27');
INSERT INTO ACTIVITY VALUES (183,'3-28');
INSERT INTO ACTIVITY VALUES (184,'3-29');
```

```
INSERT INTO ACTIVITY VALUES(185,'3-30');
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INSERT INTO ACTIVITY VALUES(190,'3-35');
INSERT INTO ACTIVITY VALUES(191,'3-36');
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INSERT INTO ACTIVITY VALUES(243,'4-16');
INSERT INTO ACTIVITY VALUES(244,'4-17');
INSERT INTO ACTIVITY VALUES(245,'4-18');
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INSERT INTO ACTIVITY VALUES (246, '4-19');
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INSERT INTO ACTIVITY VALUES (248, '4-21');
INSERT INTO ACTIVITY VALUES (249, '4-22');
INSERT INTO ACTIVITY VALUES (250, '4-23');
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INSERT INTO ACTIVITY VALUES (281, '4-54');
INSERT INTO ACTIVITY VALUES (282, '4-55');
INSERT INTO ACTIVITY VALUES (283, '4-56');
INSERT INTO ACTIVITY VALUES (284, '4-57');
INSERT INTO ACTIVITY VALUES (285, '4-58');
INSERT INTO ACTIVITY VALUES (286, '4-59');
INSERT INTO ACTIVITY VALUES (287, '4-60');
INSERT INTO ACTIVITY VALUES (288, '4-61');
INSERT INTO ACTIVITY VALUES (289, '4-62');
INSERT INTO ACTIVITY VALUES (290, '4-63');
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INSERT INTO ACTIVITY VALUES (302, '4-75');
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INSERT INTO ACTIVITY VALUES (304, '4-77');
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INSERT INTO ACTIVITY VALUES (306, '4-79');
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INSERT INTO ACTIVITY VALUES (307, '4-80');
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INSERT INTO ACTIVITY VALUES (343, '5-9');
INSERT INTO ACTIVITY VALUES (344, '5-10');
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INSERT INTO ACTIVITY VALUES (1466, '8-531');
INSERT INTO ACTIVITY VALUES (1467, '8-532');
INSERT INTO ACTIVITY VALUES (1468, '8-533');
INSERT INTO ACTIVITY VALUES (1469, '8-534');
INSERT INTO ACTIVITY VALUES (1470, '8-535');
INSERT INTO ACTIVITY VALUES (1471, '8-536');
INSERT INTO ACTIVITY VALUES (1472, '8-537');
INSERT INTO ACTIVITY VALUES (1473, '8-538');
INSERT INTO ACTIVITY VALUES (1474, '8-539');
INSERT INTO ACTIVITY VALUES (1475, '8-540');
INSERT INTO ACTIVITY VALUES (1476, '8-541');
INSERT INTO ACTIVITY VALUES (1477, '8-542');
INSERT INTO ACTIVITY VALUES (1478, '8-543');
INSERT INTO ACTIVITY VALUES (1479, '8-544');
INSERT INTO ACTIVITY VALUES (1480, '8-545');
INSERT INTO ACTIVITY VALUES (1481, '8-546');
INSERT INTO ACTIVITY VALUES (1482, '8-547');
INSERT INTO ACTIVITY VALUES (1483, '8-548');
INSERT INTO ACTIVITY VALUES (1484, '8-549');
INSERT INTO ACTIVITY VALUES (1485, '8-550');
INSERT INTO ACTIVITY VALUES (1486, '8-551');
INSERT INTO ACTIVITY VALUES (1487, '8-552');
INSERT INTO ACTIVITY VALUES (1488, '8-553');
INSERT INTO ACTIVITY VALUES (1489, '8-554');
INSERT INTO ACTIVITY VALUES (1490, '8-555');
INSERT INTO ACTIVITY VALUES (1491, '8-556');
INSERT INTO ACTIVITY VALUES (1492, '8-557');
INSERT INTO ACTIVITY VALUES (1493, '8-558');
INSERT INTO ACTIVITY VALUES (1494, '8-559');
INSERT INTO ACTIVITY VALUES (1495, '8-560');
INSERT INTO ACTIVITY VALUES (1496, '8-561');
INSERT INTO ACTIVITY VALUES (1497, '8-562');
INSERT INTO ACTIVITY VALUES (1498, '8-563');
INSERT INTO ACTIVITY VALUES (1499, '8-564');
INSERT INTO ACTIVITY VALUES (1500, '8-565');
INSERT INTO ACTIVITY VALUES (1501, '8-566');
INSERT INTO ACTIVITY VALUES (1502, '8-567');
INSERT INTO ACTIVITY VALUES (1503, '8-568');
INSERT INTO ACTIVITY VALUES (1504, '8-569');
INSERT INTO ACTIVITY VALUES (1505, '8-570');
INSERT INTO ACTIVITY VALUES (1506, '8-571');
INSERT INTO ACTIVITY VALUES (1507, '8-572');
INSERT INTO ACTIVITY VALUES (1508, '8-573');
INSERT INTO ACTIVITY VALUES (1509, '8-574');
INSERT INTO ACTIVITY VALUES (1510, '8-575');
INSERT INTO ACTIVITY VALUES (1511, '8-576');
INSERT INTO ACTIVITY VALUES (1512, '8-577');
INSERT INTO ACTIVITY VALUES (1513, '8-578');
INSERT INTO ACTIVITY VALUES (1514, '8-579');
INSERT INTO ACTIVITY VALUES (1515, '8-580');
INSERT INTO ACTIVITY VALUES (1516, '8-581');
INSERT INTO ACTIVITY VALUES (1517, '8-582');
INSERT INTO ACTIVITY VALUES (1518, '8-583');
INSERT INTO ACTIVITY VALUES (1519, '8-584');
INSERT INTO ACTIVITY VALUES (1520, '8-585');
INSERT INTO ACTIVITY VALUES (1521, '8-586');
INSERT INTO ACTIVITY VALUES (1522, '8-587');
INSERT INTO ACTIVITY VALUES (1523, '8-588');
INSERT INTO ACTIVITY VALUES (1524, '8-589');
INSERT INTO ACTIVITY VALUES (1525, '8-590');
INSERT INTO ACTIVITY VALUES (1526, '8-591');
```

```
INSERT INTO ACTIVITY VALUES (1527, '8-592');
INSERT INTO ACTIVITY VALUES (1528, '8-593');
INSERT INTO ACTIVITY VALUES (1529, '8-594');
INSERT INTO ACTIVITY VALUES (1530, '8-595');
INSERT INTO ACTIVITY VALUES (1531, '8-596');
INSERT INTO ACTIVITY VALUES (1532, '8-597');
INSERT INTO ACTIVITY VALUES (1533, '8-598');
INSERT INTO ACTIVITY VALUES (1534, '8-599');
INSERT INTO ACTIVITY VALUES (1535, '8-600');
INSERT INTO ACTIVITY VALUES (1536, '8-601');
INSERT INTO ACTIVITY VALUES (1537, '8-602');
INSERT INTO ACTIVITY VALUES (1538, '8-603');
INSERT INTO ACTIVITY VALUES (1539, '8-604');
INSERT INTO ACTIVITY VALUES (1540, '8-605');
INSERT INTO ACTIVITY VALUES (1541, '8-606');
INSERT INTO ACTIVITY VALUES (1542, '8-607');
INSERT INTO ACTIVITY VALUES (1543, '8-608');
INSERT INTO ACTIVITY VALUES (1544, '8-609');
INSERT INTO ACTIVITY VALUES (1545, '8-610');
INSERT INTO ACTIVITY VALUES (1546, '8-611');
INSERT INTO ACTIVITY VALUES (1547, '8-612');
INSERT INTO ACTIVITY VALUES (1548, '8-613');
INSERT INTO ACTIVITY VALUES (1549, '8-614');
INSERT INTO ACTIVITY VALUES (1550, '8-615');
INSERT INTO ACTIVITY VALUES (1551, '8-616');
INSERT INTO ACTIVITY VALUES (1552, '8-617');
INSERT INTO ACTIVITY VALUES (1553, '8-618');
INSERT INTO ACTIVITY VALUES (1554, '8-619');
INSERT INTO ACTIVITY VALUES (1555, '8-620');
INSERT INTO ACTIVITY VALUES (1556, '8-621');
INSERT INTO ACTIVITY VALUES (1557, '8-622');
INSERT INTO ACTIVITY VALUES (1558, '8-623');
INSERT INTO ACTIVITY VALUES (1559, '8-624');
INSERT INTO ACTIVITY VALUES (1560, '8-625');
INSERT INTO ACTIVITY VALUES (1561, '8-626');
INSERT INTO ACTIVITY VALUES (1562, '8-627');
INSERT INTO ACTIVITY VALUES (1563, '8-628');
INSERT INTO ACTIVITY VALUES (1564, '8-629');
INSERT INTO ACTIVITY VALUES (1565, '8-630');
INSERT INTO ACTIVITY VALUES (1566, '8-631');
INSERT INTO ACTIVITY VALUES (1567, '8-632');
INSERT INTO ACTIVITY VALUES (1568, '8-633');
INSERT INTO ACTIVITY VALUES (1569, '8-634');
INSERT INTO ACTIVITY VALUES (1570, '8-635');
INSERT INTO ACTIVITY VALUES (1571, '8-636');
INSERT INTO ACTIVITY VALUES (1572, '8-637');
INSERT INTO ACTIVITY VALUES (1573, '8-638');
INSERT INTO ACTIVITY VALUES (1574, '8-639');
INSERT INTO ACTIVITY VALUES (1575, '8-640');
INSERT INTO ACTIVITY VALUES (1576, '8-641');
INSERT INTO ACTIVITY VALUES (1577, '8-642');
INSERT INTO ACTIVITY VALUES (1578, '8-643');
INSERT INTO ACTIVITY VALUES (1579, '8-644');
INSERT INTO ACTIVITY VALUES (1580, '8-645');
INSERT INTO ACTIVITY VALUES (1581, '8-646');
INSERT INTO ACTIVITY VALUES (1582, '8-647');
INSERT INTO ACTIVITY VALUES (1583, '8-648');
INSERT INTO ACTIVITY VALUES (1584, '8-649');
INSERT INTO ACTIVITY VALUES (1585, '8-650');
INSERT INTO ACTIVITY VALUES (1586, '8-651');
INSERT INTO ACTIVITY VALUES (1587, '8-652');
```

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INSERT INTO ACTIVITY VALUES(1588,'8-653');
INSERT INTO ACTIVITY VALUES(1589,'8-654');
INSERT INTO ACTIVITY VALUES(1590,'8-655');
INSERT INTO ACTIVITY VALUES(1591,'8-656');
INSERT INTO ACTIVITY VALUES(1592,'8-657');
INSERT INTO ACTIVITY VALUES(1593,'8-658');
INSERT INTO ACTIVITY VALUES(1594,'8-659');
INSERT INTO ACTIVITY VALUES(1595,'8-660');
INSERT INTO ACTIVITY VALUES(1596,'8-661');
INSERT INTO ACTIVITY VALUES(1597,'8-662');
INSERT INTO ACTIVITY VALUES(1598,'8-663');
INSERT INTO ACTIVITY VALUES(1599,'8-664');
INSERT INTO ACTIVITY VALUES(1600,'8-665');
INSERT INTO ACTIVITY VALUES(1601,'8-666');
INSERT INTO ACTIVITY VALUES(1602,'8-667');
INSERT INTO ACTIVITY VALUES(1603,'8-668');
INSERT INTO ACTIVITY VALUES(1604,'8-669');
INSERT INTO ACTIVITY VALUES(1605,'8-670');
INSERT INTO ACTIVITY VALUES(1606,'8-671');
INSERT INTO ACTIVITY VALUES(1607,'8-672');
INSERT INTO ACTIVITY VALUES(1608,'8-673');
INSERT INTO ACTIVITY VALUES(1609,'8-674');
INSERT INTO ACTIVITY VALUES(1610,'8-675');
INSERT INTO ACTIVITY VALUES(1611,'8-676');
INSERT INTO ACTIVITY VALUES(1612,'8-677');
INSERT INTO ACTIVITY VALUES(1613,'8-678');
INSERT INTO ACTIVITY VALUES(1614,'8-679');
INSERT INTO ACTIVITY VALUES(1615,'8-680');
INSERT INTO ACTIVITY VALUES(1616,'8-681');
INSERT INTO ACTIVITY VALUES(1617,'8-682');
INSERT INTO ACTIVITY VALUES(1618,'8-683');
INSERT INTO ACTIVITY VALUES(1619,'8-684');
INSERT INTO ACTIVITY VALUES(1620,'8-685');
INSERT INTO ACTIVITY VALUES(1621,'8-686');
INSERT INTO ACTIVITY VALUES(1622,'8-687');
INSERT INTO ACTIVITY VALUES(1623,'8-688');
INSERT INTO ACTIVITY VALUES(1624,'8-99');
INSERT INTO ACTIVITY VALUES(1625,'8-103');
INSERT INTO ACTIVITY VALUES(1626,'8-104');
INSERT INTO ACTIVITY VALUES(1627,'8-105');

```

Appendix C-21: INSPECTION_DATA.SQL

```

INSERT INTO INSPECTION VALUES(1,3,1,1,1,'','02-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(2,3,2,1,1,'','02-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(3,3,3,1,1,'','13-oct-
97','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(4,3,4,1,1,'','06-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(5,3,5,1,1,'','06-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(6,3,6,1,1,'','01-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(7,3,7,1,1,'','01-apr-
98','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(8,3,8,1,2,'','01-apr-
98','','','','','','','','','','','','','');

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INSERT INTO INSPECTION VALUES (9,3,9,1,2,'','01-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (10,3,10,1,1,'','01-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (11,3,11,1,1,'','01-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (12,3,12,1,1,'','31-mar-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (13,3,13,1,1,'','31-mar-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (14,3,14,1,1,'','31-mar-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (15,3,15,1,1,'','31-mar-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (16,3,16,2,1,'','29-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (17,3,17,1,1,'','03-oct-
97',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (18,3,18,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (19,3,19,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (20,3,20,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (21,3,21,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (22,3,22,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (23,3,23,1,2,'','22-oct-
97',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (24,3,24,2,2,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (25,3,25,1,1,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (26,3,26,1,2,'','22-oct-
97',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (27,3,27,1,2,'','28-apr-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (28,3,28,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (29,3,29,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (30,3,30,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (31,3,31,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (32,3,32,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (33,3,33,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (34,3,34,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (35,3,35,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (36,3,36,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (37,3,37,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');
INSERT INTO INSPECTION VALUES (38,3,38,1,1,'','04-may-
98',' ',' ',' ',' ',' ',' ',' ',' ',' ');

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INSERT INTO INSPECTION VALUES (39,3,39,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (40,3,40,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (41,3,41,1,2,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (42,3,42,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (43,3,43,1,2,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (44,3,44,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (45,3,45,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (46,3,46,1,1,'','04-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (47,3,47,1,1,'','15-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (48,3,48,1,1,'','15-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (49,3,49,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION
VALUES (50,3,50,2,1,'','','','','','','','','','','','','','','',
'');
INSERT INTO INSPECTION VALUES (51,3,51,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (52,3,52,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (53,3,53,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (54,3,54,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (55,3,55,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (56,3,56,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (57,3,57,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (58,3,58,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (59,3,59,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (60,3,60,1,1,'','29-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (61,3,61,1,1,'','06-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (62,3,62,1,1,'','06-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (63,3,63,1,1,'','13-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (64,3,64,1,1,'','13-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (65,3,65,1,1,'','06-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (66,3,66,1,1,'','06-may-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (67,3,67,1,1,'','15-apr-
98','','','','','','','','');
INSERT INTO INSPECTION VALUES (68,3,68,1,1,'','15-apr-
98','','','','','','','','');

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```

INSERT INTO INSPECTION VALUES (69,3,69,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (70,3,70,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (71,3,71,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (72,3,72,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (73,3,73,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (74,3,74,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (75,3,75,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (76,3,76,1,1,'',20-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (77,3,77,1,1,'',20-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (78,3,78,1,1,'',20-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (79,3,79,1,1,'',15-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (80,3,80,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (81,3,81,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (82,3,82,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (83,3,83,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (84,3,84,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (85,3,85,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (86,3,86,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (87,3,87,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (88,3,88,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (89,3,89,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (90,3,90,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (91,3,91,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (92,3,92,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (93,3,93,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (94,3,94,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (95,3,95,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (96,3,96,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (97,3,97,1,1,'',14-apr-
98','','','','');
INSERT INTO INSPECTION VALUES (98,3,98,1,1,'',14-apr-
98','','','','');

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```
INSERT INTO INSPECTION VALUES(99,3,99,1,1,'','14-apr-88','','');
INSERT INTO INSPECTION VALUES(100,3,100,1,1,'','14-apr-88','','');
INSERT INTO INSPECTION VALUES(101,3,101,1,1,'','14-apr-88','','');
INSERT INTO INSPECTION VALUES(102,3,102,1,1,'','14-apr-88','','');
INSERT INTO INSPECTION VALUES(103,3,103,1,1,'','14-apr-88','','');
INSERT INTO INSPECTION VALUES(104,3,104,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(105,3,105,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(106,3,106,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(107,3,107,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(108,3,108,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(109,3,109,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(110,3,110,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(111,3,111,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(112,3,112,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(113,3,113,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(114,3,114,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(115,3,115,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(116,3,116,1,1,'','15-apr-88','','');
INSERT INTO INSPECTION VALUES(117,3,117,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(118,3,118,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(119,3,119,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(120,3,120,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(121,3,121,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(122,3,122,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(123,3,123,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(124,3,124,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(125,3,125,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(126,3,126,1,1,'','16-apr-88','','');
INSERT INTO INSPECTION VALUES(127,3,127,1,1,'','20-apr-88','','');
INSERT INTO INSPECTION VALUES(128,3,128,1,1,'','20-apr-88','','')
```

```
INSERT INTO INSPECTION VALUES(129,3,129,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(130,3,130,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(131,3,131,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(132,3,132,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(133,3,133,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(134,3,134,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(135,3,135,1,1,'','15-apr-98','','');
INSERT INTO INSPECTION VALUES(136,3,136,1,1,'','14-apr-98','','');
INSERT INTO INSPECTION VALUES(137,3,137,1,1,'','14-apr-98','','');
INSERT INTO INSPECTION VALUES(138,3,138,1,1,'','16-apr-98','','');
INSERT INTO INSPECTION VALUES(139,3,139,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(140,3,140,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(141,3,141,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(142,3,142,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(143,3,143,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(144,3,144,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(145,3,145,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(146,3,146,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(147,3,147,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(148,3,148,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(149,3,149,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(150,3,150,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(151,3,151,1,1,'','20-apr-98','','');
INSERT INTO INSPECTION VALUES(152,3,152,1,1,'','28-apr-98','','');
INSERT INTO INSPECTION VALUES(153,3,153,1,1,'','28-apr-98','','');
INSERT INTO INSPECTION VALUES(154,3,154,1,1,'','28-apr-98','','');
INSERT INTO INSPECTION VALUES(155,3,155,1,1,'','28-apr-98','','');
INSERT INTO INSPECTION VALUES(156,3,156,2,1,'','28-oct-97','','');
INSERT INTO INSPECTION VALUES(157,3,157,2,1,'','28-oct-97','','');
INSERT INTO INSPECTION VALUES(158,3,158,2,1,'','28-oct-97','','');
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INSERT INTO INSPECTION VALUES(159,3,159,2,1,'','07-oct-97','','');
INSERT INTO INSPECTION VALUES(160,3,160,2,1,'','07-oct-97','','');
INSERT INTO INSPECTION VALUES(161,3,161,2,1,'','07-oct-97','','');
INSERT INTO INSPECTION VALUES(162,3,162,2,1,'','07-oct-97','','');
INSERT INTO INSPECTION VALUES(163,3,163,2,1,'','07-oct-97','','');
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INSERT INTO INSPECTION VALUES(165,3,165,2,1,'','28-oct-97','','');
INSERT INTO INSPECTION VALUES(166,3,166,2,1,'','28-oct-97','','');
INSERT INTO INSPECTION VALUES(167,3,167,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(168,3,168,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(169,3,169,2,1,'','22-oct-97','','');
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INSERT INTO INSPECTION VALUES(171,3,171,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(172,3,172,2,1,'','22-oct-97','','');
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INSERT INTO INSPECTION VALUES(174,3,174,2,1,'','06-oct-97','','');
INSERT INTO INSPECTION VALUES(175,3,175,2,1,'','06-oct-97','','');
INSERT INTO INSPECTION VALUES(176,3,176,2,1,'','06-oct-97','','');
INSERT INTO INSPECTION VALUES(177,3,177,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(178,3,178,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(179,3,179,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(180,3,180,2,1,'','22-oct-97','','');
INSERT INTO INSPECTION VALUES(181,3,181,1,1,'','30-apr-98','','');
INSERT INTO INSPECTION VALUES(182,3,182,1,1,'','30-apr-98','','');
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INSERT INTO INSPECTION VALUES(184,3,184,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(185,3,185,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(186,3,186,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(187,3,187,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(188,3,188,1,1,'','21-apr-98','','');
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INSERT INTO INSPECTION VALUES(191,3,191,1,1,'','21-apr-98','','');
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INSERT INTO INSPECTION VALUES(193,3,193,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(194,3,194,1,1,'','21-apr-98','','');
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INSERT INTO INSPECTION VALUES(198,3,198,1,1,'','21-apr-98','','');
INSERT INTO INSPECTION VALUES(199,3,199,1,1,'','18-may-98','','');
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INSERT INTO INSPECTION VALUES(202,3,202,1,1,'','18-may-98','','');
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INSERT INTO INSPECTION VALUES(204,3,204,1,1,'','18-may-98','','');
INSERT INTO INSPECTION VALUES(205,3,205,1,1,'','21-may-98','','');
INSERT INTO INSPECTION VALUES(206,3,206,1,1,'','18-may-98','','');
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INSERT INTO INSPECTION VALUES(209,3,209,1,1,'','18-may-98','','');
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INSERT INTO INSPECTION VALUES(211,3,211,1,1,'','18-may-98','','');
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INSERT INTO INSPECTION VALUES(213,3,213,2,1,'','15-oct-97','','');
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INSERT INTO INSPECTION VALUES (248,3,248,1,1,'','22-apr-98','','');
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98','','','');
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98','','','');
INSERT INTO INSPECTION VALUES (313,3,313,1,1,'','24-apr-
98','','','');
INSERT INTO INSPECTION VALUES (314,3,314,1,1,'','24-apr-
98','','','');
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INSERT INTO INSPECTION VALUES (318,3,318,1,1,'','24-apr-
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INSERT INTO INSPECTION VALUES (335,3,335,1,1,'','22-apr-
98','','','');
INSERT INTO INSPECTION VALUES (336,3,336,1,1,'','22-apr-
98','','','');
INSERT INTO INSPECTION VALUES (337,3,337,1,1,'','22-apr-
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INSERT INTO INSPECTION VALUES (338,3,338,1,1,'','22-apr-
98','','','');

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INSERT INTO INSPECTION VALUES (341,3,341,1,1,'','05-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (342,3,342,1,1,'','22-may-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (343,3,343,1,1,'','22-may-
98','','','','','','','','','','');
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98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (345,3,345,1,1,'','03-mar-
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INSERT INTO INSPECTION VALUES (346,3,346,1,1,'','03-mar-
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INSERT INTO INSPECTION VALUES (347,3,347,1,1,'','03-mar-
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INSERT INTO INSPECTION VALUES (349,3,349,1,1,'','02-mar-
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INSERT INTO INSPECTION VALUES (350,3,350,1,1,'','02-mar-
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INSERT INTO INSPECTION VALUES (351,3,351,1,1,'','02-mar-
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INSERT INTO INSPECTION VALUES (352,3,352,1,1,'','05-mar-
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INSERT INTO INSPECTION VALUES (353,3,353,1,1,'','05-mar-
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INSERT INTO INSPECTION VALUES (354,3,354,1,1,'','04-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (355,3,355,1,1,'','02-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (356,3,356,1,1,'','02-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (357,3,357,1,1,'','05-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (358,3,358,1,1,'','02-mar-
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INSERT INTO INSPECTION VALUES (359,3,359,1,1,'','02-mar-
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INSERT INTO INSPECTION VALUES (360,3,360,1,1,'','04-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (361,3,361,1,1,'','04-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (362,3,362,1,1,'','04-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (363,3,363,1,1,'','04-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (364,3,364,1,1,'','05-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (365,3,365,1,1,'','26-feb-
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INSERT INTO INSPECTION VALUES (366,3,366,1,1,'','05-mar-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (367,3,367,1,1,'','26-feb-
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INSERT INTO INSPECTION VALUES (368,3,368,1,1,'','26-feb-
98','','','','','','','','','','');

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INSERT INTO INSPECTION VALUES (370,3,370,1,1,'','25-feb-98','','');
INSERT INTO INSPECTION VALUES (371,3,371,1,1,'','25-feb-98','','');
INSERT INTO INSPECTION VALUES (372,3,372,1,1,'','05-mar-98','','');
INSERT INTO INSPECTION VALUES (373,3,373,1,1,'','25-feb-98','','');
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INSERT INTO INSPECTION VALUES (392,3,392,1,1,'','18-mar-98','','');
INSERT INTO INSPECTION VALUES (393,3,393,1,1,'','18-mar-98','','');
INSERT INTO INSPECTION VALUES (394,3,394,1,1,'','18-mar-98','','');
INSERT INTO INSPECTION VALUES (395,3,395,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES (396,3,396,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES (397,3,397,1,1,'','19-mar-98','','');
INSERT INTO INSPECTION VALUES (398,3,398,1,1,'','19-mar-98','','');
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INSERT INTO INSPECTION VALUES (399,3,399,1,1,'','18-mar-
98','','','');
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INSERT INTO INSPECTION VALUES (404,3,404,1,1,'','24-mar-
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INSERT INTO INSPECTION VALUES (405,3,405,1,1,'','24-mar-
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INSERT INTO INSPECTION VALUES (420,3,420,1,2,'','19-mar-
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INSERT INTO INSPECTION VALUES (421,3,421,1,1,'','19-mar-
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INSERT INTO INSPECTION VALUES (422,3,422,1,1,'','19-mar-
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INSERT INTO INSPECTION VALUES (423,3,423,1,1,'','19-mar-
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INSERT INTO INSPECTION VALUES (424,3,424,1,1,'','19-mar-
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INSERT INTO INSPECTION VALUES (425,3,425,1,1,'','27-apr-
98','','','');
INSERT INTO INSPECTION VALUES (426,3,426,1,2,'','27-apr-
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INSERT INTO INSPECTION VALUES (427,3,427,1,2,'','27-apr-
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98','','','');

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98','','','');
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98','','','');
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98','','','');
INSERT INTO INSPECTION VALUES (480,3,480,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (481,3,481,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (482,3,482,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (483,3,483,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (484,3,484,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (485,3,485,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (486,3,486,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (487,3,487,1,1,'','23-mar-
98','','','');
INSERT INTO INSPECTION VALUES (488,3,488,1,1,'','23-mar-
98','','','');

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INSERT INTO INSPECTION VALUES (519,3,519,1,1,'','27-mar-98',' ',' ',' ');
INSERT INTO INSPECTION VALUES (520,3,520,1,1,'','24-mar-98',' ',' ',' ');
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INSERT INTO INSPECTION VALUES (522,3,522,1,1,'','24-mar-98',' ',' ',' ');
INSERT INTO INSPECTION VALUES (523,3,523,1,1,'','24-mar-98',' ',' ',' ');
INSERT INTO INSPECTION VALUES (524,3,524,1,1,'','24-mar-98',' ',' ',' ');
INSERT INTO INSPECTION VALUES (525,3,525,1,1,'','24-mar-98',' ',' ',' ');
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INSERT INTO INSPECTION VALUES (527,3,527,1,1,'','25-mar-98',' ',' ',' ');
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INSERT INTO INSPECTION VALUES (529,3,529,1,1,'','25-mar-98',' ',' ',' ');
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INSERT INTO INSPECTION VALUES (539,3,539,1,1,'','25-mar-98',' ',' ',' ');
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INSERT INTO INSPECTION VALUES (547,3,547,1,1,'','25-mar-98',' ',' ',' ');
INSERT INTO INSPECTION VALUES (548,3,548,1,1,'','25-mar-98',' ',' ',' ');

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INSERT INTO INSPECTION VALUES(551,3,551,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(552,3,552,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(553,3,553,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(554,3,554,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(555,3,555,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(556,3,556,1,1,'','25-mar-98','','');
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INSERT INTO INSPECTION VALUES(560,3,560,1,1,'','25-mar-98','','');
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INSERT INTO INSPECTION VALUES(562,3,562,1,1,'','29-apr-98','','');
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INSERT INTO INSPECTION VALUES(565,3,565,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(566,3,566,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(567,3,567,1,1,'','17-apr-98','','');
INSERT INTO INSPECTION VALUES(568,3,568,1,1,'','17-apr-98','','');
INSERT INTO INSPECTION VALUES(569,3,569,1,1,'','25-mar-98','','');
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INSERT INTO INSPECTION VALUES(571,3,571,1,1,'','23-mar-98','','');
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INSERT INTO INSPECTION VALUES(573,3,573,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(574,3,574,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(575,3,575,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(576,3,576,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(577,3,577,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(578,3,578,1,1,'','23-mar-98','','');
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INSERT INTO INSPECTION VALUES(611,3,611,1,1,'','23-mar-98','','');
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INSERT INTO INSPECTION VALUES(621,3,621,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(622,3,622,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(623,3,623,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(624,3,624,1,1,'','23-mar-98','','');
INSERT INTO INSPECTION VALUES(625,3,625,1,1,'','29-apr-98','','');
INSERT INTO INSPECTION VALUES(626,3,626,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(627,3,627,1,1,'','25-mar-98','','');
INSERT INTO INSPECTION VALUES(628,3,628,1,1,'','29-apr-98','','');
INSERT INTO INSPECTION VALUES(629,3,629,1,1,'','29-apr-98','','');
INSERT INTO INSPECTION VALUES(630,3,630,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES(631,3,631,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES(632,3,632,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES(633,3,633,1,1,'','17-mar-98','','');
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INSERT INTO INSPECTION VALUES(636,3,636,1,1,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES(637,3,637,1,2,'','17-mar-98','','');
INSERT INTO INSPECTION VALUES(638,3,638,1,1,'','02-apr-98','','');
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INSERT INTO INSPECTION VALUES(640,3,640,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(641,3,641,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(642,3,642,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(643,3,643,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(644,3,644,1,3,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(645,3,645,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(646,3,646,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(647,3,647,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(648,3,648,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(649,3,649,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(650,3,650,1,1,'02-apr-98',' ',' ');
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INSERT INTO INSPECTION VALUES(653,3,653,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(654,3,654,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(655,3,655,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(656,3,656,1,1,'02-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(657,3,657,1,1,'06-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(658,3,658,1,1,'06-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(659,3,659,1,2,'06-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(660,3,660,1,2,'23-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(661,3,661,1,1,'06-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(662,3,662,1,1,'23-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(663,3,663,1,1,'23-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(664,3,664,1,1,'01-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(665,3,665,1,1,'01-apr-98',' ',' ');
INSERT INTO INSPECTION VALUES(666,3,666,1,1,'23-apr-98',' ',' ');
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INSERT INTO INSPECTION VALUES(668,3,668,1,1,'07-may-98',' ',' ');
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98','','','','','','','','','','');
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98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (671,3,671,1,1,'','23-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (672,3,672,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (673,3,673,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (674,3,674,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (675,3,675,1,1,'','02-apr-
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INSERT INTO INSPECTION VALUES (676,3,676,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (677,3,677,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (678,3,678,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (679,3,679,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (680,3,680,2,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (681,3,681,2,1,'','03-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (682,3,682,2,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (683,3,683,2,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (684,3,684,1,2,'','06-apr-
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INSERT INTO INSPECTION VALUES (685,3,685,1,1,'','06-apr-
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INSERT INTO INSPECTION VALUES (686,3,686,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (687,3,687,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (688,3,688,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (689,3,689,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (690,3,690,1,1,'','03-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (691,3,691,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (692,3,692,1,1,'','10-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (693,3,693,1,1,'','10-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (694,3,694,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (695,3,695,1,3,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (696,3,696,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (697,3,697,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (698,3,698,1,1,'','17-apr-
98','','','','','','','','','','');

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INSERT INTO INSPECTION VALUES (699,3,699,1,1,'','17-apr-
98','','','','','','','','','','');
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98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (701,3,701,1,1,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (702,3,702,1,2,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (703,3,703,1,1,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (704,3,704,1,1,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (705,3,705,1,2,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (706,3,706,1,1,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (707,3,707,1,1,'','17-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (708,3,708,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (709,3,709,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (710,3,710,1,1,'','06-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (711,3,711,1,1,'','23-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (712,3,712,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (713,3,713,1,1,'','23-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (714,3,714,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (715,3,715,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (716,3,716,1,1,'','01-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (717,3,717,1,1,'','07-may-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (718,3,718,1,1,'','08-may-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (719,3,719,1,1,'','14-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (720,3,720,1,1,'','14-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (721,3,721,1,1,'','14-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (722,3,722,1,2,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (723,3,723,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (724,3,724,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (725,3,725,1,1,'','23-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (726,3,726,1,1,'','24-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (727,3,727,1,1,'','24-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (728,3,728,1,1,'','24-apr-
98','','','','','','','','','','');

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INSERT INTO INSPECTION VALUES (729,3,729,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (730,3,730,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (731,3,731,1,1,'','19-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (732,3,732,1,1,'','01-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (733,3,733,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (734,3,734,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (735,3,735,1,1,'','07-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (736,3,736,1,1,'','23-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (737,3,737,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (738,3,738,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (739,3,739,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (740,3,740,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (741,3,741,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (742,3,742,1,1,'','13-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (743,3,743,1,2,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (744,3,744,1,1,'','16-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (745,3,745,1,1,'','03-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (746,3,746,1,1,'','03-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (747,3,747,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (748,3,748,1,1,'','02-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (749,3,749,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (750,3,750,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (751,3,751,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (752,3,752,1,1,'','07-may-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (753,3,753,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (754,3,754,1,2,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (755,3,755,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (756,3,756,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (757,3,757,1,1,'','22-apr-
98','','','','','','','','','','');
INSERT INTO INSPECTION VALUES (758,3,758,1,1,'','14-apr-
98','','','','','','','','','','');

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INSERT INTO INSPECTION VALUES (759,3,759,1,1,'','03-apr-
98','','','');
INSERT INTO INSPECTION VALUES (760,3,760,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (761,3,761,1,1,'','01-apr-
98','','','');
INSERT INTO INSPECTION VALUES (762,3,762,1,1,'','01-apr-
98','','','');
INSERT INTO INSPECTION VALUES (763,3,763,1,1,'','01-apr-
98','','','');
INSERT INTO INSPECTION VALUES (764,3,764,1,1,'','01-apr-
98','','','');
INSERT INTO INSPECTION VALUES (765,3,765,1,1,'','01-apr-
98','','','');
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98','','','');
INSERT INTO INSPECTION VALUES (767,3,767,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (768,3,768,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (769,3,769,1,1,'','22-apr-
98','','','');
INSERT INTO INSPECTION VALUES (770,3,770,1,1,'','22-apr-
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INSERT INTO INSPECTION VALUES (771,3,771,1,3,'','01-apr-
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98','','','');
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98','','','');
INSERT INTO INSPECTION VALUES (775,3,775,1,1,'','22-apr-
98','','','');
INSERT INTO INSPECTION VALUES (776,3,776,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (777,3,777,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (778,3,778,1,1,'','01-apr-
98','','','');
INSERT INTO INSPECTION VALUES (779,3,779,1,1,'','03-apr-
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INSERT INTO INSPECTION VALUES (782,3,782,1,1,'','01-apr-
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INSERT INTO INSPECTION VALUES (783,3,783,1,1,'','01-apr-
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INSERT INTO INSPECTION VALUES (784,3,784,1,1,'','14-apr-
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INSERT INTO INSPECTION VALUES (785,3,785,1,1,'','14-apr-
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INSERT INTO INSPECTION VALUES (786,3,786,1,1,'','14-apr-
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INSERT INTO INSPECTION VALUES (787,3,787,1,1,'','14-apr-
98','','','');
INSERT INTO INSPECTION VALUES (788,3,788,1,1,'','14-apr-
98','','','');

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INSERT INTO INSPECTION VALUES(791,3,791,1,1,'','22-apr-
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INSERT INTO INSPECTION VALUES(792,3,792,1,1,'','07-apr-
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INSERT INTO INSPECTION VALUES(793,3,793,1,1,'','07-apr-
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INSERT INTO INSPECTION VALUES(794,3,794,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES(795,3,795,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES(797,3,797,1,1,'','13-apr-
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INSERT INTO INSPECTION VALUES(798,3,798,1,1,'','07-apr-
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INSERT INTO INSPECTION VALUES(799,3,799,1,1,'','13-apr-
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INSERT INTO INSPECTION VALUES(802,3,802,1,1,'','13-apr-
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INSERT INTO INSPECTION VALUES(804,3,804,1,1,'','13-apr-
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INSERT INTO INSPECTION VALUES(805,3,805,1,1,'','13-apr-
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VALUES(815,3,815,1,1,'','','','','','','','','','','','','',
'','','');
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[illegible]

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INSERT INTO INSPECTION VALUES(869,3,869,1,1,'','23-apr-98','','');
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INSERT INTO INSPECTION VALUES(903,3,903,1,1,'','29-apr-98','','');
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INSERT INTO INSPECTION VALUES (1226,3,964,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1227,3,965,1,1,'', '30-apr-99', '', '', '');
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INSERT INTO INSPECTION VALUES (1233,3,971,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1234,3,972,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1235,3,973,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1236,3,974,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1237,3,975,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1238,3,976,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1239,3,977,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1240,3,978,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1241,3,979,1,1,'', '30-apr-99', '', '', '');
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INSERT INTO INSPECTION VALUES (1243,3,981,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1244,3,982,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1245,3,983,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1246,3,984,1,1,'', '30-apr-99', '', '', '');
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INSERT INTO INSPECTION VALUES (1248,3,986,1,1,'', '30-apr-99', '', '', '');
INSERT INTO INSPECTION VALUES (1249,3,987,1,1,'', '30-apr-99', '', '', '');
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INSERT INTO INSPECTION VALUES (1294,3,1032,1,1,'','15-apr-
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INSERT INTO INSPECTION VALUES (1295,3,1033,1,1,'','15-apr-
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INSERT INTO INSPECTION VALUES (1300,3,1038,1,1,'','20-apr-
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INSERT INTO INSPECTION VALUES (1303,3,1041,1,1,'','20-apr-
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INSERT INTO INSPECTION VALUES (1305,3,1043,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1307,3,1045,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1308,3,1046,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1313,3,1051,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1314,3,1052,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1315,3,1053,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1316,3,1054,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1317,3,1055,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1319,3,1057,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1320,3,1058,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1321,3,1059,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1322,3,1060,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1323,3,1061,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1324,3,1062,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1325,3,1063,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1326,3,1064,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1327,3,1065,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1328,3,1066,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1329,3,1067,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1330,3,1068,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1333,3,1071,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1334,3,1072,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1335,3,1073,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1336,3,1074,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1337,3,1075,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1338,3,1076,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1339,3,1077,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1340,3,1078,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1341,3,1079,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1342,3,1080,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1343,3,1081,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1344,3,1082,1,1,'','21-apr-
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INSERT INTO INSPECTION VALUES (1345,3,1083,1,1,'','21-apr-
99','','','');

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INSERT INTO INSPECTION VALUES (1376,3,1114,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1377,3,1115,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1378,3,1116,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1379,3,1117,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1380,3,1118,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1381,3,1119,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1382,3,1120,2,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1383,3,1121,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1384,3,1122,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1385,3,1123,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1386,3,1124,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1387,3,1125,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1389,3,1127,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1390,3,1128,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1391,3,1129,1,1,'','26-apr-
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INSERT INTO INSPECTION VALUES (1393,3,1131,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1395,3,1133,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1397,3,1135,1,2,'','27-apr-
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INSERT INTO INSPECTION VALUES (1398,3,1136,1,2,'','30-apr-
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99','','','');
INSERT INTO INSPECTION VALUES (1400,3,1138,1,1,'','30-apr-
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INSERT INTO INSPECTION VALUES (1401,3,1139,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1402,3,1140,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1403,3,1141,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1404,3,1142,1,1,'','27-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1405,3,1143,1,1,'','30-apr-
99','','','');

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INSERT INTO INSPECTION VALUES (1406,3,1144,1,1,'27-apr-99',,,);
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INSERT INTO INSPECTION VALUES (1435,3,1173,1,1,'27-apr-99',,,);

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INSERT INTO INSPECTION VALUES (1436,3,1174,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1437,3,1175,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES (1438,3,1176,1,1,'','27-apr-
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INSERT INTO INSPECTION VALUES(1524,3,1262,1,1,'','30-apr-99','','');
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INSERT INTO INSPECTION VALUES(1026,3,1450,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1027,3,1451,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1028,3,1452,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1029,3,1453,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1030,3,1454,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1031,3,1455,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1032,3,1456,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1033,3,1457,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1034,3,1458,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1035,3,1459,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1036,3,1460,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1037,3,1461,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1038,3,1462,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1039,3,1463,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1040,3,1464,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1041,3,1465,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1042,3,1466,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1043,3,1467,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1044,3,1468,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1045,3,1469,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1046,3,1470,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1047,3,1471,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1048,3,1472,1,1,'','14-apr-99','','');,
INSERT INTO INSPECTION VALUES(1049,3,1473,1,1,'','14-apr-99','','');
```



```
INSERT INTO INSPECTION VALUES(1050,3,1474,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1051,3,1475,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1052,3,1476,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1053,3,1477,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1054,3,1478,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1055,3,1479,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1056,3,1480,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1057,3,1481,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1058,3,1482,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1059,3,1483,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1060,3,1484,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1061,3,1485,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1062,3,1486,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1063,3,1487,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1064,3,1488,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1065,3,1489,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1066,3,1490,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1067,3,1491,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1068,3,1492,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1069,3,1493,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1070,3,1494,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1071,3,1495,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1072,3,1496,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1073,3,1497,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1074,3,1498,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1075,3,1499,2,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1076,3,1500,2,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1077,3,1501,2,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1078,3,1502,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1079,3,1503,1,1,'','14-apr-99','','');
```

```

INSERT INTO INSPECTION VALUES (1080,3,1504,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1081,3,1505,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1082,3,1506,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1083,3,1507,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1084,3,1508,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1085,3,1509,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1086,3,1510,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1087,3,1511,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1088,3,1512,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1089,3,1513,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1090,3,1514,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1091,3,1515,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1092,3,1516,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1093,3,1517,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1094,3,1518,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1095,3,1519,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1096,3,1520,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1097,3,1521,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1098,3,1522,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1099,3,1523,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1100,3,1524,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1101,3,1525,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1102,3,1526,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1103,3,1527,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1104,3,1528,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1105,3,1529,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1106,3,1530,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1107,3,1531,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1108,3,1532,1,1,'','14-apr-
99','','','');
INSERT INTO INSPECTION VALUES (1109,3,1533,1,1,'','14-apr-
99','','','');

```

```
INSERT INTO INSPECTION VALUES(1110,3,1534,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1111,3,1535,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1112,3,1536,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1113,3,1537,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1114,3,1538,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1115,3,1539,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1116,3,1540,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1117,3,1541,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1118,3,1542,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1119,3,1543,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1120,3,1544,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1121,3,1545,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1122,3,1546,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1123,3,1547,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1124,3,1548,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1125,3,1549,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1126,3,1550,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1127,3,1551,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1128,3,1552,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1129,3,1553,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1130,3,1554,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1131,3,1555,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1132,3,1556,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1133,3,1557,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1134,3,1558,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1135,3,1559,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1136,3,1560,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1137,3,1561,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1138,3,1562,1,1,'','14-apr-99','','');,,
INSERT INTO INSPECTION VALUES(1139,3,1563,1,1,'','14-apr-99','','');
```

```
INSERT INTO INSPECTION VALUES(1140,3,1564,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1141,3,1565,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1142,3,1566,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1143,3,1567,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1144,3,1568,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1145,3,1569,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1146,3,1570,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1147,3,1571,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1148,3,1572,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1149,3,1573,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1150,3,1574,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1151,3,1575,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1152,3,1576,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1153,3,1577,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1154,3,1578,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1155,3,1579,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1156,3,1580,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1157,3,1581,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1158,3,1582,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1159,3,1583,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1160,3,1584,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1161,3,1585,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1162,3,1586,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1163,3,1587,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1164,3,1588,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1165,3,1589,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1166,3,1590,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1167,3,1591,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1168,3,1592,1,1,'','14-apr-99','','');
INSERT INTO INSPECTION VALUES(1169,3,1593,1,1,'','14-apr-99','','');
```



```
INSERT INTO INSPECTION VALUES(1200,3,1624,1,1,'','14-apr-
99','','','','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(1201,3,1625,1,1,'','14-apr-
99','','','','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(1202,3,1626,1,1,'','14-apr-
99','','','','','','','','','','','','','','','','');
INSERT INTO INSPECTION VALUES(1203,3,1627,1,1,'','14-apr-
99','','','','','','','','','','','','','','','','');
```

Appendix D: Application Programs--Main Menus

Appendix D-1: ATTENUATOR_WWW.MAIN

```

PACKAGE BODY                                MAIN
IS
/*****
 * Purpose: This Package creates the main page, password page and other
 *pages.
 *
 * Author:   Michael Howell
 * Date:     09-01-99
 * -----
 *
 *****/

/*****
 * Purpose: This procedure displays the main splash page for our
 * dot welcome page.
 * Author:   Michael Howell
 * Date:     09-01-99
 * MODIFICATION HISTORY
 * Person      Date      Comments
 * -----
 *
 *****/

PROCEDURE get_password
IS

BEGIN

html_functions.html_header('Attenuator Database Main Page');
htp.p('<h1>Enter Password:</h1>');
htp.tableOpen;
    htp.formOpen('/owa_att/owa/attenuator_apps.attenuators.check_pass');
    htp.p('<tr><td>Password</td><td>'||htf.formPassword('pass_in',
10,10)||'</td></tr>');

    htp.p('<tr><td colspan="2">'||htf.formSubmit('','Enter')||'</td></tr>');
    htp.formClose;
    htp.tableClose;
html_functions.html_footer;

END get_password;

PROCEDURE main_window
IS

type varray_char12 is table of char(24) index by binary_integer;
actions varray_char12;

BEGIN

actions(1) := 'Enter data';
actions(2) := 'View data/Reports';
actions(3) := 'Run DSS';
actions(4) := 'Change objective weights';
actions(5) := 'Exit';

```

```

html_functions.html_header('Attenuator Database Main Page');
http.p('<h1>Specify An Action:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.attenuators.actions');

    http.p('<tr><td>Action</td><td>');
    http.formSelectOpen('action_in');
    for r in 1..5 loop
        http.formSelectOption(actions(r),'', 'value="'||r||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    http.formClose;
    http.tableClose;
html_functions.html_footer;
END main_window;

PROCEDURE dss_input
IS
cursor get_shielded_object is select * from attenuator_apps.shielded_object where
0=0;
cursor get_urban is select * from attenuator_apps.rural_urban where 0=0;
cursor get_climate is select * from attenuator_apps.environment_conditions where
0=0;
cursor get_road_class is select * from attenuator_apps.road_system_identifier
where 0=0;
cursor get_std is select * from attenuator_apps.nchrp_test_levels where 0=0;

type varray_char3 is table of char(3) index by binary_integer;
type varray_char60 is table of char(60) index by binary_integer;
type varray_num is table of number(3,2) index by binary_integer;
boolean_descrip varray_char3;
boolean_value varray_num;
acc_descrip varray_char60;
acc_value varray_num;
    speed_in number;
    length_in number;
    count_in number;
    width_in number;
    long_in number;
    lateral_in number;
    rigid_in number;
    urban_in number;
    climate_in number;
    work_in number;
    road_class_in number;
    lanes_in number;
    accident_in number;
    v_standard number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';
boolean_value(1) := 1;
boolean_value(2) := 0;
acc_descrip(1) := 'Accident Data Only, No Inspection or Repair Data (FASTEST)';

```



```

acc_descrip(2) := 'All Data for Attenuators Involved in Accidents (RECOMMENDED)';
acc_descrip(3) := 'All Available Data on All Attenuators in Database (SLOWEST)';
acc_value(1) := 1;
acc_value(2) := 2;
acc_value(3) := 3;

html_functions.html_header('DSS Input Page');
http.p('<h1>Enter Site Characteristics and Search Parameters:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.dss.dss_run');

    http.p('<tr><td>Design Speed</td><td>' || http.formText('speed_in', 5,5) || '
km/h</td></tr>');
    http.p('<tr><td>Average Daily Traffic
Count</td><td>' || http.formText('count_in', 7, 10) || '</td></tr>');
    http.p('<tr><td>Total Number of Lanes</td><td>' || http.formText('lanes_in', 3,
3) || '</td></tr>');
    http.p('<tr><td>Work Zone Use</td><td>');
    http.formSelectOpen('work_in');
    for r in 1..2 loop

http.formSelectOption(boolean_descrip(r), '', 'value="" || boolean_value(r) || ""');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Shielded Object</td><td>');
    http.formSelectOpen('rigid_in');
    for r in get_shielded_object loop
        http.formSelectOption(r.object, '', 'value="" || r.rigidity_value || ""');
    end loop;
    http.formSelectClose;

    http.p('</td></tr>');
    http.p('<tr><td>Site Location</td><td>');
    http.formSelectOpen('urban_in');
    for r in get_urban loop

        http.formSelectOption(r.rural_or_urban_descrip, '', 'value="" || r.rural_or_urban_value || ""');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.p('<tr><td>Climate</td><td>');
    http.formSelectOpen('climate_in');
    for r in get_climate loop

        http.formSelectOption(r.environment_descrip, '', 'value="" || r.environment_value || ""');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.p('<tr><td>Road Classification</td><td>');
    http.formSelectOpen('road_class_in');
    for r in get_road_class loop

        http.formSelectOption(r.road_system_identifier, '', 'value="" || r.road_system_identifier_value || ""');
    end loop;
    http.formSelectClose;
/*

```



```

        http.p('<tr><td colspan="2">' || http.formSubmit('','Enter') || '</td></tr>');
        http.formClose;
        http.tableClose;
html_functions.html_footer;

END get_weight_password;

PROCEDURE obj_weight_input
IS

cursor get_objective_weights is select * from attenuator_apps.objective_weights
where 0=0;

dss_1    number;
dss_2    number;
dss_3    number;
dss_11   number;
dss_12   number;
dss_13   number;
dss_14   number;
dss_121  number;
dss_122  number;
dss_123  number;
dss_124  number;
dss_125  number;
dss_131  number;
dss_132  number;
dss_21   number;
dss_22   number;
dss_23   number;
obj_wt_1  number(5,3);
obj_wt_2  number(5,3);
obj_wt_3  number(5,3);
obj_wt_11 number(5,3);
obj_wt_12 number(5,3);
obj_wt_13 number(5,3);
obj_wt_14 number(5,3);
obj_wt_121 number(5,3);
obj_wt_122 number(5,3);
obj_wt_123 number(5,3);
obj_wt_124 number(5,3);
obj_wt_125 number(5,3);
obj_wt_131 number(5,3);
obj_wt_132 number(5,3);
obj_wt_21 number(5,3);
obj_wt_22 number(5,3);
obj_wt_23 number(5,3);

BEGIN

for i in get_objective_weights loop
    obj_wt_1 := i.obj_wt_1;
    obj_wt_2 := i.obj_wt_2;
    obj_wt_3 := i.obj_wt_3;
    obj_wt_11:= i.obj_wt_11;
    obj_wt_12 := i.obj_wt_12;
    obj_wt_13 := i.obj_wt_13;
    obj_wt_14 := i.obj_wt_14;
    obj_wt_121 := i.obj_wt_121;
    obj_wt_122 := i.obj_wt_122;
    obj_wt_123 := i.obj_wt_123;

```

```

obj_wt_124 := i.obj_wt_124;
obj_wt_125 := i.obj_wt_125;
obj_wt_131 := i.obj_wt_131;
obj_wt_132 := i.obj_wt_132;
obj_wt_21 := i.obj_wt_21;
obj_wt_22 := i.obj_wt_22;
obj_wt_23 := i.obj_wt_23;
end loop;

html_functions.html_header('Objective Weights Input Page');
http.p('<h1>Enter Objective Weights:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.obj_weights.obj_weights');

    http.p('<tr><td>Current values are in parentheses. To retain current
values, leave cell blank. </td></tr>');
    http.p('<tr><td>Values within each group of objectives will be re-
normalized.</td></tr>');
    http.p('<tr><td></td></tr>');
    http.p('<tr><td>Evaluate the relative importance of the
following:</td></tr>');
    http.p('<tr><td>1. Safety</td><td> ('||obj_wt_1||')
</td><td>'||htf.formText('dss_1', 4,4)||'</td></tr>');
    http.p('<tr><td>2. Convenience</td><td> ('||obj_wt_2||')
</td><td>'||htf.formText('dss_2', 4,4)||'</td></tr>');
    http.p('<tr><td>3. Cost</td><td> ('||obj_wt_3||')
</td><td>'||htf.formText('dss_3', 4,4)||'</td></tr>');
    http.p('<tr><td></td></tr>');
    http.p('<tr><td>With respect to Safety, evaluate the relative importance of
the following:</td></tr>');
    http.p('<tr><td>1.1 Structural adequacy of the attenuator</td><td>
('||obj_wt_11||') </td><td>'||htf.formText('dss_11',4,4)||'</td></tr>');
    http.p('<tr><td>1.2 Risk to the impacting vehicle</td><td> ('||obj_wt_12||')
</td><td>'||htf.formText('dss_12',4,4)||'</td></tr>');
    http.p('<tr><td>1.3 Risk to others</td><td> ('||obj_wt_13||')
</td><td>'||htf.formText('dss_13',4,4)||'</td></tr>');
    http.p('<tr><td>1.4 Geographical considerations</td><td> ('||obj_wt_14||')
</td><td>'||htf.formText('dss_14',4,4)||'</td></tr>');
    http.p('<tr><td></td></tr>');
    http.p('<tr><td>With respect to Risk to the Impacting Vehicle, evaluate the
relative importance of the following:</td></tr>');
    http.p('<tr><td>1.2.1 Acceptable deceleration characteristics</td><td>
('||obj_wt_121||') </td><td>'||htf.formText('dss_121',4,4)||'</td></tr>');
    http.p('<tr><td>1.2.2 Ability to contain debris</td><td> ('||obj_wt_122||')
</td><td>'||htf.formText('dss_122',4,4)||'</td></tr>');
    http.p('<tr><td>1.2.3 Acceptable post-impact trajectory</td><td>
('||obj_wt_123||') </td><td>'||htf.formText('dss_123',4,4)||'</td></tr>');
    http.p('<tr><td>1.2.4 Tendency to deforming passenger compartment</td><td>
('||obj_wt_124||') </td><td>'||htf.formText('dss_124',4,4)||'</td></tr>');
    http.p('<tr><td>1.2.5 Tendency to cause injuries</td><td> ('||obj_wt_125||')
</td><td>'||htf.formText('dss_125',4,4)||'</td></tr>');
    http.p('<tr><td></td></tr>');
    http.p('<tr><td>With respect to Risk to Others, evaluate the relative
importance of the following:</td></tr>');
    http.p('<tr><td>1.3.1 Risk during crash</td><td> ('||obj_wt_131||')
</td><td>'||htf.formText('dss_131',4,4)||'</td></tr>');
    http.p('<tr><td>1.3.2 Risk after crash</td><td> ('||obj_wt_132||')
</td><td>'||htf.formText('dss_132',4,4)||'</td></tr>');
    http.p('<tr><td></td></tr>');
    http.p('<tr><td>With respect to Convenience, evaluate the relative
importance of the following:</td></tr>');

```

```

        http.p('<tr><td>2.1 Installation Convenience</td><td> ('||obj_wt_21||')
</td><td>'||htf.formText('dss_21',4,4)||'</td></tr>');
        http.p('<tr><td>2.2 Repair Convenience</td><td> ('||obj_wt_22||')
</td><td>'||htf.formText('dss_22',4,4)||'</td></tr>');
        http.p('<tr><td>2.3 Portability</td><td> ('||obj_wt_23||')
</td><td>'||htf.formText('dss_23',4,4)||'</td></tr>');
        http.p('<tr><td colspan="2">'||htf.formSubmit('','Enter')||'</td></tr>');
        http.formClose;
        http.tableClose;

html_functions.html_footer;
END obj_weight_input;

PROCEDURE end_session
IS

type varray_char12 is table of char(12) index by binary_integer;
actions varray_char12;

BEGIN

actions(1) := 'Enter data';
actions(2) := 'View data';
actions(3) := 'Run DSS';
actions(4) := 'Exit';

html_functions.html_header('End Session Page');
http.p('<h1>Session Complete</h1>');
html_functions.html_footer;
END end_session;

PROCEDURE results_window
(speed_in in number,
length_in in number,
count_lane_in in number,
width_in in number,
long_in in number,
lateral_in in number,
rigid_in in number,
urban_in in number,
climate_in in number,
work_in in number,
road_class_in in number
)

IS

cursor get_dss_results is select * from attenuator_apps.dss_results where 0=0
order by rank;
cursor get_atten_model is select * from attenuator_apps.model where 0=0;
cursor get_atten_type is select * from attenuator_apps.attenuator_type where 0=0;
v_config_last      char(5);
v_config           char(5);

BEGIN
        html_functions.html_header('DSS Search Results');
        http.p('<br>');
        http.p('<h1>DSS Results:</h1>');
        http.tableOpen;

        http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=10 WIDTH=600>');

```

```

        http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Configuration</td><td><font size=5>Sample Model</td><td><font size=5>
Percent Score</td><td><font size=5>Raw Score</td></tr>');
        v_config_last := 'first';
        for r in get_dss_results loop
            v_config := r.config_number;
            for s in get_atten_model loop
                if (v_config = s.config_number) then
                    if (v_config_last <> v_config) then
                        for t in get_atten_type loop
                            if (t.attenuator_type_id = s.attenuator_type_id) then

                                http.p('<tr><td>'||t.attenuator_type_name||'</td><td>'||r.config_number||'</
td><td>'||s.model_number||'</td><td>'||r.percent_score||'</td><td>'||r.final_scor
e||'</td></tr>');

                                    end if;
                                end loop;
                            end if;
                            v_config_last := s.config_number;
                        end if;
                    end loop;
                end loop;
            http.tableClose;
            http.p('<br>');
            delete from attenuator_apps.dss_results;
            html_functions.html_footer;

END results_window;
-- Enter further code below as specified in the Package spec.
END;
```

Appendix D-2: ATTENUATOR_APPS.ATTENUATORS

```

Package Body                                ATTENUATORS
IS
--
-- Purpose: Procedures accompanying main windows, including password checking.
--
-- -----

PROCEDURE check_pass
    (pass_in IN char)

IS

BEGIN

    if (pass_in = 'password') then
        attenuator_www.main.main_window;
    else
        attenuator_www.main.get_password;
    end if;

END;

PROCEDURE actions
    ( action_in IN number)

IS
```

```

BEGIN

/* Start appropriate code based on user-specified action:
   1= Enter data
   2= View data
   3= Run DSS
   4= Change objective weights
   5= End session */

   if (action_in = 1) then
       attenuator_www.enter_data.main;
   elsif (action_in = 2) then
       attenuator_www.reports.main;
   elsif (action_in = 3) then
       attenuator_www.main.dss_input;
   elsif (action_in = 4) then
       attenuator_www.main.get_weight_password;
   elsif (action_in = 5) then
       attenuator_www.main.end_session;
   else
       attenuator_www.main.main_window;
   end if;

END;

PROCEDURE check_wt_pass
  (pass_in IN char)

IS

BEGIN

   if (pass_in = 'password') then
       attenuator_www.main.obj_weight_input;
   else
       attenuator_www.main.main_window;
   end if;

END;

END;

```

Appendix D-3: ATTENUATOR_WWW.HTML_FUNCTIONS

```

Package Body                                HTML_FUNCTIONS
IS

/*****
* Purpose: This Package contains common HTML functions.
* such as header information, etc.
*
* Author:  Michael Howell
* Date:    09-01-99
* MODIFICATION HISTORY
* Person    Date    Comments
* -----
*
*****/

```

```

/*****
* Purpose: This procedure displays the header that goes on all
* the HTML pages.
* Author: Michael Howell
* Date: 09-01-99
* MODIFICATION HISTORY
* Person Date Comments
* -----
*
*****/

```

```
procedure html_header(title_in in varchar2) is
```

```
begin
```

```

    http.htmlOpen;
    http.headOpen;
    http.title('DOT Interactive System - '||title_in);
    http.headClose;
    http.bodyOpen('','bgcolor="#FFFFFF" text="#000000"');
    http.p('<center></center><br>');

```

```
end;
```

```

/*****
* Purpose: This procedure displays the footer that goes on all
* the HTML pages.
* Author: Michael Howell
* Date: 09-01-99
* MODIFICATION HISTORY
* Person Date Comments
* -----
*
*****/

```

```
procedure html_footer is
```

```
begin
```

```

    http.hr;
    http.p('<font size=2>Please <a
href="mailto:'||www_settings.email_address||'">e-mail</a>');
    http.p(' any suggestions or comments to: <a
href="mailto:'||www_settings.email_address||'">'||owner||'</a>.</font><br>');
    http.p('<font size=1>&copy; Department of Civil Engineering, 1998</font>');
    http.bodyClose;
    http.htmlClose;

```

```
end;
```

```
END;
```


Appendix E: Application Programs--Data Entry

Appendix E-1: ATTENUATOR_WWW.ENTER_DATA

```

Package Body                                ENTER_DATA
IS

PROCEDURE main
IS
type varray_char40 is table of char(40) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'New attenuator type';
actions(2) := 'New attenuator model';
actions(3) := 'New attenuator instance (in inventory)';
actions(4) := 'New roadway description';
actions(5) := 'New accident';
actions(6) := 'New inspection';
actions(7) := 'Return to main menu';

html_functions.html_header('Attenuator Data Entry Page');
http.p('<h1>Choose a Form:</h1>');

http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_www.enter_data.actions');

    http.p('<tr><td>Form</td><td>');
    http.formSelectOpen('action_in');
    for r in 1..7 loop
        http.formSelectOption(actions(r),'', 'value="'||r||"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    http.formClose;
    http.tableClose;

html_functions.html_footer;
END main;

PROCEDURE actions
(action_in IN number)
IS

road_in number;

BEGIN

    if (action_in = 1) then
        attenuator_www.enter_data.new_type;
    elsif (action_in = 2) then
        attenuator_www.enter_data.new_model;
    elsif (action_in = 3) then

```

```

        attenuator_www.enter_data.new_atten;
    elsif (action_in = 4) then
        attenuator_www.enter_data.new_road;
    elsif (action_in = 5) then
        attenuator_www.enter_data.new_accid;
    elsif (action_in = 6) then
        attenuator_www.enter_data.new_inspec;
    elsif (action_in = 7) then
        attenuator_www.main.main_window;
    else
        attenuator_www.main.main_window;
    end if;

END;

```

```

PROCEDURE new_type
IS
cursor get_manuf is select * from attenuator_apps.manufacturer where 0=0;
cursor get_category is select * from attenuator_apps.category where 0=0;
cursor get_install_time is select * from attenuator_apps.typ_install_time where
0=0;
cursor get_install_equip is select * from attenuator_apps.typ_install_equip where
0=0;
cursor get_repair_time is select * from attenuator_apps.typ_repair_time where
0=0;
cursor get_repair_equip is select * from attenuator_apps.typ_repair_equip where
0=0;
cursor get_repair_crew is select * from attenuator_apps.typ_repair_crew where
0=0;
cursor get_initial_cost is select * from attenuator_apps.initial_cost where 0=0;
cursor get_debris_scatter is select * from attenuator_apps.typ_debris_scatter
where 0=0;
cursor get_inventory is select * from attenuator_apps.inventory_required where
0=0;
cursor get_applic is select * from attenuator_apps.applications_available where
0=0;
cursor get_anchor is select * from attenuator_apps.anchoring_options where 0=0;

type varray_char3 is table of char(3) index by binary_integer;
type varray_num is table of number(2) index by binary_integer;

boolean_descrip varray_char3;
applics varray_num;
i number;

BEGIN

boolean_descrip(1) := 'N/A';
boolean_descrip(2) := 'NO';
boolean_descrip(3) := 'YES';

html_functions.html_header('New Attenuator Type Page');
http.p('<h1>Enter Type Data:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_type');

        http.p('<tr><td><B><I>Type (Model)
Name</I></B></td><td>' || http.formText('model_name',20, 20) || '</td></tr>');

```

```

http.p('<tr><td>Manufacturer</td><td>');
http.formSelectOpen('manufacturer_id');
for r in get_manuf loop

http.formSelectOption(r.manufacturer_name, '', 'value="" || r.manufacturer_id || '
');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Category</td><td>');
http.formSelectOpen('category_id');
for r in get_category loop

http.formSelectOption(r.category_type, '', 'value="" || r.category_id || ""');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Maximum Cross Slope</td><td>' || htf.formText('cross_slope',
5,5) || ' percent</td></tr>');
http.p('<tr><td>Percent Reusable</td><td>' || htf.formText('reuse', 5,5) || '
percent</td></tr>');
http.p('<tr><td>Key Features</td><td>' || htf.formTextarea('features',
2,50) || ' </td></tr>');

http.p('<tr><td>Approximate Initial Cost</td><td>');
http.formSelectOpen('initial_cost');
for r in get_initial_cost loop

http.formSelectOption(r.initial_cost_descrip, '', 'value="" || r.initial_cost_id
|| ""');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Installation Time</td><td>');
http.formSelectOpen('install_time');
for r in get_install_time loop

http.formSelectOption(r.install_time_descrip, '', 'value="" || r.install_time_id
|| ""');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Installation Equipment</td><td>');
http.formSelectOpen('install_equip');
for r in get_install_equip loop

http.formSelectOption(r.install_equip_descrip, '', 'value="" || r.install_equip_
id || ""');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Repair Time</td><td>');
http.formSelectOpen('repair_time');
for r in get_repair_time loop

```

```

http.formSelectOption(r.repair_time_descrip, '', 'value="" || r.repair_time_id ||
'');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Repair Equipment</td><td>');
http.formSelectOpen('repair_equip');
for r in get_repair_equip loop

http.formSelectOption(r.repair_equip_descrip, '', 'value="" || r.repair_equip_id
|| '');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Repair Crew</td><td>');
http.formSelectOpen('repair_crew');
for r in get_repair_crew loop

http.formSelectOption(r.repair_crew_descrip, '', 'value="" || r.repair_crew_id ||
'');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Debris Scatter</td><td>');
http.formSelectOpen('debris_scatter');
for r in get_debris_scatter loop

http.formSelectOption(r.debris_scatter_descrip, '', 'value="" || r.debris_scatte
r_id || '');
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Typical Inventory Requirements</td><td>');
http.formSelectOpen('inv_req');
for r in get_inventory loop

http.formSelectOption(r.typ_inventory_req, '', 'value="" || r.inventory_id || '');
;
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Tendency to Redirect</td><td>');
http.formSelectOpen('redirect');
for r in 1..3 loop
http.formSelectOption(boolean_descrip(r));
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Bidirectional Capacity</td><td>');
http.formSelectOpen('bidir');
for r in 1..3 loop
http.formSelectOption(boolean_descrip(r));
end loop;
http.formSelectClose;

```

```

    http.p('</td></tr>');

    http.p('<tr><td>Tendency to Gate</td><td>');
    http.formSelectOpen('gating');
    for r in 1..3 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Tendency to Pocket</td><td>');
    http.formSelectOpen('pocket');
    for r in 1..3 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Suitable for Construction</td><td>');
    http.formSelectOpen('suit_const');
    for r in 1..3 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.tablerowopen;
    http.tabledata('Potential Applications');
    i := 1;
    for r in get_applic loop
        if (i > 1) then
            http.tabledata(' ');
        end if;
        http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="applic'||i||'"
VALUE="'||r.applications_available_id||'" >'||r.applications_available);
        http.tablerowclose;
        http.formhidden('applic'||i||'', 'x');
        i := i + 1;
    end loop;

    http.tablerowopen;
    http.tabledata('Anchoring Options');
    i := 1;
    for r in get_anchor loop
        if (i > 1) then
            http.tabledata(' ');
        end if;
        http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="anchor'||i||'"
VALUE="'||r.anchoring_options_id||'" >'||r.anchoring_options_value);
        http.tablerowclose;
        http.formhidden('anchor'||i||'', 'x');
        i := i + 1;
    end loop;

    http.p('<tr><td>**Items in <B>Bold</B> are required. Items in
<I>Italics</I> must be unique. </td></tr>');
    http.p('<tr><td>**If request fails, check data types and try again.
</td></tr>');

```



```

http.p('<h1>Enter Attenuator Data:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_atten');

    http.p('<tr><td><B><I>Attenuator ID Number (see
below)</I></B></td><td>'||htf.formText('atten_id',20, 20)||'</td></tr>');

    http.p('<tr><td>Owner</td><td>');
    http.formSelectOpen('owner_id');
    for r in get_owner loop
        http.formSelectOption(r.owner_name,'','value="'||r.owner_id||"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Year Installed (YYYY)
</td><td>'||htf.formText('inst_date',10, 10)||' </td></tr>');
    http.p('<tr><td>Maintenance Unit</td><td>'||htf.formText('maint_unit',5,
5)||' </td></tr>');

    http.p('<tr><td>County Name, County Number, and District</td><td>');
    http.formSelectOpen('county_id');
    for r in get_county loop
        http.formSelectOption(r.county||' #'||r.county_id||', D-
'||r.district,'','value="'||r.county_id||"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td><B>Roadway Section</B></td><td>'||htf.formText('section',
5,5)||' </td></tr>');
    http.p('<tr><td><B>Roadway Subsection</B></td><td>'||htf.formText('subsec',
5,5, '0')||' </td></tr>');
    http.p('<tr><td>State Road Number</td><td>'||htf.formText('sr_num',
10,10)||' </td></tr>');
    http.p('<tr><td>US Road Number</td><td>'||htf.formText('us_num', 10,10)||'
</td></tr>');
    http.p('<tr><td>Milepost Number</td><td>'||htf.formText('atten_mp', 8,8)||'
</td></tr>');
    http.p('<tr><td>Remarks/Location</td><td>'||htf.formTextarea('remarks',
2,50)||' </td></tr>');

    http.p('<tr><td>Approaching Traffic Direction</td><td>');
    http.formSelectOpen('traffic');
    for r in get_traf_dir loop

        http.formSelectOption(r.direction_value,'','value="'||r.direction_id||"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>In Work Zone?</td><td>');
    http.formSelectOpen('work_zone');
    for r in 2..3 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Present Status</td><td>');
    http.formSelectOpen('status');

```


[illegible]

```

http.tabledata(2);
i := 1;
for r in get_atten2 loop
    http.tabledata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(2);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabledata(3);
i := 1;
for r in get_atten3 loop
    http.tabledata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(3);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabledata(4);
i := 1;
for r in get_atten4 loop
    http.tabledata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(4);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabledata(5);
i := 1;
for r in get_atten5 loop
    http.tabledata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(5);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabledata(6);

```

```

i := 1;
for r in get_atten6 loop
    http.tabldata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabldata(6);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabldata(7);
i := 1;
for r in get_atten7 loop
    http.tabldata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabldata(7);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;

http.tablerowopen;
http.tabldata(8);
i := 1;
for r in get_atten8 loop
    http.tabldata(htf.formSelectOption(r.attenuator_id));
    if (i >= 15) then
        http.tablerowclose;
        http.tablerowopen;
        http.tabldata(8);
        i := 0;
    end if;
    i := i + 1;
end loop;
http.tablerowclose;
http.tableclose;

html_functions.html_footer;
END new_atten;

PROCEDURE new_site
    (atten_id IN char,
     roadway_id IN number)

IS
cursor get_surface_under is select * from attenuator_apps.surface_under_atten
where 0=0;
cursor get_surface_between is select * from
attenuator_apps.surface_bt_atten_and_road where 0=0;
cursor get_object is select * from attenuator_apps.shielded_object where 0=0;
cursor get_anchoring is select * from attenuator_apps.anchoring_options where
0=0;

```

BEGIN

```

html_functions.html_header('New Attenuator Site Page');
http.p('<h1>Enter Site Data:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_site');

    http.p('<tr><td><B><I>Attenuator ID
Number</I></B></td><td>'||htf.formText('atten_id2',6, 6, atten_id)||'
</td></tr>');
    http.p('<tr><td><B><I>Roadway ID
Number</I></B></td><td>'||htf.formText('roadway_id2',10, 10, roadway_id)||'
</td></tr>');
    http.p('<tr><td>Object Width</td><td>'||htf.formText('width',5, 5)||'
m</td></tr>');
    http.p('<tr><td>Object Height</td><td>'||htf.formText('height',5, 5)||'
m</td></tr>');
    http.p('<tr><td>Angle to Road</td><td>'||htf.formText('angle',5, 5)||'
degrees</td></tr>');
    http.p('<tr><td>Lateral Clearance to
Attenuator</td><td>'||htf.formText('clear_lat',5, 5)||' m</td></tr>');
    http.p('<tr><td>Longitudinal Clearance to
Attenuator</td><td>'||htf.formText('clear_long',5, 5)||' m</td></tr>');
    http.p('<tr><td>Width of Clear Zone</td><td>'||htf.formText('cz_width',5,
5)||' m</td></tr>');
    http.p('<tr><td>Length of Clear Zone</td><td>'||htf.formText('cz_length',5,
5)||' m</td></tr>');

    http.p('<tr><td>Surface Under Attenuator</td><td>');
    http.formSelectOpen('surf_und');
    for r in get_surface_under loop

        http.formSelectOption(r.surface_under_atten,'','value="'||r.surface_under_at
ten_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Depth of Surface</td><td>'||htf.formText('depth',5, 5)||'
m</td></tr>');

    http.p('<tr><td>Surface Between Attenuator and Road</td><td>');
    http.formSelectOpen('surf_bt');
    for r in get_surface_between loop

        http.formSelectOption(r.surface_bt_atten_road,'','value="'||r.surface_bt_att
en_road_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Shielded Object</td><td>');
    http.formSelectOpen('object');
    for r in get_object loop
        http.formSelectOption(r.object,'','value="'||r.shield_object_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Anchorage Used</td><td>');
    http.formSelectOpen('anchor');

```



```

        http.formSelectOption(r.county||'|' #'||r.county_id||'|', D-
'||r.district','','value="'||r.county_id||'");
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td><B>Roadway Section</B></td><td>'||htf.formText('section',
5,5)||' </td></tr>');
        http.p('<tr><td><B>Roadway Subsection</B></td><td>'||htf.formText('subsec',
5,5, '0')||' </td></tr>');
        http.p('<tr><td>Road Description</td><td>'||htf.formText('road_desc',50,
50)||' </td></tr>');

        http.p('<tr><td>Road System Identifier</td><td>');
        http.formSelectOpen('rsi');
        for r in get_rsi loop

            http.formSelectOption(r.road_system_identifier,'','value="'||r.road_system_i
dentifier_id||'");
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');

            http.p('<tr><td>Road Type</td><td>');
            http.formSelectOpen('road_type');
            for r in get_road_type loop

                http.formSelectOption(r.road_type_value,'','value="'||r.road_type_id||'");
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');

                http.p('<tr><td>Median Surface</td><td>');
                http.formSelectOpen('med_surf');
                for r in get_median_surface loop

                    http.formSelectOption(r.median_surface,'','value="'||r.median_surface_id||'
');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');

                    http.p('<tr><td>Fixed Median Barrier</td><td>');
                    http.formSelectOpen('med_bar');
                    for r in 1..3 loop
                        http.formSelectOption(boolean_descrip(r));
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');

                    http.p('<tr><td>Median Width</td><td>'||htf.formText('med_width',5, 5)||'
m</td></tr>');
                    http.p('<tr><td>Median Slope</td><td>'||htf.formText('med_slope',5, 5)||'
</td></tr>');

                    http.p('<tr><td>Shoulder Type</td><td>');
                    http.formSelectOpen('should_type');
                    for r in get_shoulder loop

                        http.formSelectOption(r.shoulder_type_value,'','value="'||r.shoulder_type_id
||'");

```

```

end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Shoulder Width</td><td>'||htf.formText('should_width',5,
5)||' m</td></tr>');
http.p('<tr><td>Divergance Angle</td><td>'||htf.formText('div_angle',5,
5)||' </td></tr>');

http.p('<tr><td>Curb Type</td><td>');
http.formSelectOpen('curb_type');
for r in get_curb loop

http.formSelectOption(r.curb_type_value,'','value="'||r.curb_type_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Curb Height</td><td>'||htf.formText('curb_ht',5, 5)||'
m</td></tr>');
http.p('<tr><td>Roadway Grade</td><td>'||htf.formText('grade',5, 5)||'
</td></tr>');
http.p('<tr><td>Embankment Slope</td><td>'||htf.formText('emb_slope',5,
5)||' </td></tr>');

http.p('<tr><td>Embankement Cut or Fill</td><td>');
http.formSelectOpen('cut_fill');
for r in get_embank loop

http.formSelectOption(r.embankment_value,'','value="'||r.embankment_cut_fill
_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Design Speed</td><td>'||htf.formText('des_speed',5, 5)||'<b>
km/hr</b></td></tr>');
http.p('<tr><td>Posted Speed Limit</td><td>'||htf.formText('post_speed',5,
5)||'<b> km/hr</b></td></tr>');

http.p('<tr><td>Curvature of Main Movement</td><td>');
http.formSelectOpen('curve_main');
for r in get_curve_main loop

http.formSelectOption(r.curve_main_move_value,'','value="'||r.curve_main_mov
e_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Curvature of Secondary Movement</td><td>');
http.formSelectOpen('curve_second');
for r in get_curve_second loop

http.formSelectOption(r.curve_second_move_value,'','value="'||r.curve_second
_move_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Trafficway Character</td><td>');

```



```

html_functions.html_footer;
END new_road;

PROCEDURE new_inspec
IS
cursor get_atten is select * from attenuator_apps.attenuator where 0=0;
cursor get_source is select * from attenuator_apps.data_source where 0=0;
cursor get_type is select * from attenuator_apps.inspection_type where 0=0;
cursor get_condition is select * from attenuator_apps.condition_after_inspection
where 0=0;

type varray_char3 is table of char(3) index by binary_integer;

boolean_descrip varray_char3;

BEGIN

boolean_descrip(1) := 'N/A';
boolean_descrip(2) := 'NO';
boolean_descrip(3) := 'YES';

html_functions.html_header('New Inspection Page');
http.p('<h1>Enter Inspection Data:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_inspec');

    http.p('<tr><td>Attenuator Identification Number (and Location if Available)
</td><td>');
    http.formSelectOpen('atten_id');
    for r in get_atten loop
        http.formSelectOption(r.attenuator_id||',
'||r.remarks,',','value="'||r.attenuator_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Data Source</td><td>');
    http.formSelectOpen('source');
    for r in get_source loop
        if (r.data_source = 'FDOT INSPECTION REPORT') or (r.data_source = 'FDOT
RCI/ATTEN INVENTORY DATABASE')
            or (r.data_source = 'UNKNOWN') then

            http.formSelectOption(r.data_source,',','value="'||r.data_source_id||'"');
            end if;
        end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Inspection Type</td><td>');
    http.formSelectOpen('inspec_type');
    for r in get_type loop

        http.formSelectOption(r.inspection_type_value,',','value="'||r.inspection_typ
e_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Condition After Inspection</td><td>');
    http.formSelectOpen('inspec_cond');

```

```

    for r in get_condition loop

        http.formSelectOption(r.inspection_condition_value, '', 'value="" || r.inspectio
n_condition_id || ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Inspector</td><td>' || http.formText('inspector', 20,20) || '
</td></tr>');
        http.p('<tr><td>Inspection Date</td><td>' || http.formText('inspec_date',
11,11) || ' (dd-mon-yyyy)</td></tr>');
        http.p('<tr><td>Corrective Actions
Taken</td><td>' || http.formTextarea('corr_act', 2,50) || ' </td></tr>');

        http.p('<tr><td>Design Installation?</td><td>');
        http.formSelectOpen('des_install');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Design Details Available?</td><td>');
        http.formSelectOpen('des_details');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Changes Authorized By</td><td>' || http.formText('changes',
20,20) || ' </td></tr>');
        http.p('<tr><td>Reason for Changes</td><td>' || http.formTextarea('reasons',
2,50) || ' </td></tr>');

        http.p('<tr><td>Pavement Markings Standard?</td><td>');
        http.formSelectOpen('std_marks');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Delineation Standard?</td><td>');
        http.formSelectOpen('std_delin');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Appearance Satisfactory?</td><td>');
        http.formSelectOpen('appear');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Cable Guidance System Installed?</td><td>');

```

```

http.formSelectOpen('cable_sys');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Hex-Foam Cartridge Brackets Installed?</td><td>');
http.formSelectOpen('hf_bracket');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Anchor Chain Rail Installed?</td><td>');
http.formSelectOpen('chain_rail');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Two-Way Traffic Deflector Installed?</td><td>');
http.formSelectOpen('deflector');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Evidence of Vehicle Damage?</td><td>');
http.formSelectOpen('veh_dam');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Evidence of Non-Design Impact?</td><td>');
http.formSelectOpen('nd_impact');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Evidence of Angle Hits?</td><td>');
http.formSelectOpen('angle_hits');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Evidence of Vandalism?</td><td>');
http.formSelectOpen('vandalism');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;

```

[illegible]

```
html_functions.html_header('Inspection Deficiencies Page');
http.p('<h1>Enter Deficiencies Data:</h1>');
http.tableOpen();
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_defic');

    http.p('<tr><td><b><i>Inspection ID  
Number</i></b></td><td>'||htf.formText('inspec_id2',6, 6, inspec_id)||'  
</td></tr>');

    http.tablerowopen;
    http.tabledata('<b>No Deficiency Data</b>');
    http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="no_def" VALUE="true" CHECKED>');
    http.tablerowclose;
    http.formhidden('no_def', 'false');


    http.p('<tr><td>If there are deficiency(s), continue with remaining questions...</td><td>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</td></tr>');

    http.p('<tr><td>Component</td><td>');
    http.formSelectOpen('comp');
    for r in get_component loop

        http.formSelectOption(r.component_name,'','value="'||r.component_id||'"');
        end loop;
    http.formSelectClose;
    http.p('</td></tr>');


    http.p('<tr><td>Deficiency Noted</td><td>');
    http.formSelectOpen('defic');
    for r in get_defic_noted loop

        http.formSelectOption(r.deficiency_name,'','value="'||r.deficiency_id||'"');
        end loop;
    http.formSelectClose;
    http.p('</td></tr>');


    http.p('<tr><td>Number of Occurances</td><td>'||htf.formText('num_occur',5,  
5)||' </td></tr>');
    http.formhidden ('num_occur',1);


    http.p('<tr><td>Is this the last deficiency to be entered?</td><td>');
    http.formSelectOpen('last');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');


    http.p('<tr><td>**Items in <b>Bold</b> are required. Items in  
<i>Italics</i> must be unique. </td></tr>');
    http.p('<tr><td>**If request fails, check data types and try again.  
</td></tr>');


    http.p('<tr><td>'||htf.formSubmit('', 'Submit') || '&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&~  
|htf.formReset||'</td></tr>');


    http.formClose;
    http.tableClose;
```

```

html_functions.html_footer;
END new_defic;

PROCEDURE subs_defic
    (inspec_id IN number)

IS
cursor get_component is select * from attenuator_apps.component where 0=0 order
by component_id;
cursor get_defic_noted is select * from attenuator_apps.deficiency_noted where
0=0 order by deficiency_id;

type varray_char3 is table of char(3) index by binary_integer;

boolean_descrip varray_char3;

BEGIN

boolean_descrip(1) := 'NO';
boolean_descrip(2) := 'YES';

html_functions.html_header('Inspection Deficiencies Page');
http.p('<h1>Enter Deficiencies Data:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_defic');

    http.p('<tr><td><B><I>Inspection ID
Number</I></B></td><td>'||htf.formText('inspec_id2',6, 6, inspec_id)||'
</td></tr>');

    http.formhidden('no_def', 'false');

    http.p('<tr><td>Component</td><td>');
    http.formSelectOpen('comp');
    for r in get_component loop

        http.formSelectOption(r.component_name, '', 'value="'||r.component_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Deficiency Noted</td><td>');
    http.formSelectOpen('defic');
    for r in get_defic_noted loop

        http.formSelectOption(r.deficiency_name, '', 'value="'||r.deficiency_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Number of Occurances</td><td>'||htf.formText('num_occur',5,
5)||' </td></tr>');
    http.formhidden ('num_occur',1);

    http.p('<tr><td>Is this the last deficiency to be entered?</td><td>');
    http.formSelectOpen('last');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

```

[illegible]

```

        or (r.data_source = 'UNKNOWN') then

        http.formSelectOption(r.data_source, '', 'value=""||r.data_source_id||"");
        end if;
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Non Design Impact?</td><td>');
    http.formSelectOpen('non_des');
    for r in 1..3 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Location on Road/Roadside</td><td>');
    http.formSelectOpen('road_side');
    for r in get_road_side loop

        http.formSelectOption(r.road_side_value, '', 'value=""||r.road_side_id||"");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Site Location</td><td>');
    http.formSelectOpen('site_loc');
    for r in get_site_loc loop

        http.formSelectOption(r.site_location_value, '', 'value=""||r.site_location_id
||"");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Traffic Control</td><td>');
    http.formSelectOpen('traf_cont');
    for r in get_traf_cont loop

        http.formSelectOption(r.traffic_control_value, '', 'value=""||r.traffic_contro
l_id||"");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Road Surface</td><td>');
    http.formSelectOpen('road_surf');
    for r in get_road_surf loop

        http.formSelectOption(r.road_surface_value, '', 'value=""||r.road_surface_id||
"");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Weather During Accident</td><td>');
    http.formSelectOpen('weather');
    for r in get_weather loop

        http.formSelectOption(r.weather_value, '', 'value=""||r.weather_id||"");
    end loop;

```



```

        http.formSelectClose;
        http.p('</td></tr>');

http.p('<tr><td>Lighting During Accident</td><td>');
http.formSelectOpen('lighting');
    for r in get_lighting loop

        http.formSelectOption(r.lighting_value, '', 'value="' || r.lighting_id || '"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

http.p('<tr><td>First Harmful Event</td><td>');
http.formSelectOpen('hel');
    for r in get_harm_event loop

        http.formSelectOption(r.harmful_event, '', 'value="' || r.harmful_event_id || '"')
;
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

http.p('<tr><td>Second Harmful Event</td><td>');
http.formSelectOpen('he2');
    for r in get_harm_event loop

        http.formSelectOption(r.harmful_event, '', 'value="' || r.harmful_event_id || '"')
;
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Accident Mile Post</td><td>' || htf.formText('milepost',
10,10) || '</td></tr>');
    http.p('<tr><td>Nearest Node</td><td>' || htf.formText('node', 5,5) || '
</td></tr>');
    http.p('<tr><td>Accident Date (dd-mon-yyyy)
</td><td>' || htf.formText('date_acc', 11,11) || '</td></tr>');
    http.p('<tr><td>Accident Time</td><td>' || htf.formText('time_acc', 5,5) || '
</td></tr>');

    http.p('<tr><td>AM or PM?</td><td>');
    http.formSelectOpen('am_pm');
    for r in 1..3 loop
        http.formSelectOption(am_pm(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Lane Number</td><td>' || htf.formText('lane_num', 4,4) || '
</td></tr>');
    http.p('<tr><td>Number of Vehicles</td><td>' || htf.formText('num_veh',
4,4) || '</td></tr>');
    http.p('<tr><td>Number of Attenuator
Impacts</td><td>' || htf.formText('num_imp', 4,4) || '</td></tr>');
    http.p('<tr><td>Description</td><td>' || htf.formTextarea('descrip', 4,75) || '
</td></tr>');

    http.tablerowopen;
    http.tabledata('Contributing Cause(s), Environment');
    i := 1;

```

```

for r in get_ccenv loop
  if (i = 1) then
    http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="ccenv'||i||'"
VALUE="'||r.contrib_cause_env_id||'" CHECKED>'||r.contrib_cause_env_value);
    http.tablerowclose;
    http.formhidden('ccenv1', 'x');
  else
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="ccenv'||i||'"
VALUE="'||r.contrib_cause_env_id||'" ">'||r.contrib_cause_env_value);
    http.tablerowclose;
    http.formhidden('ccenv'||i||'', 'x');
  end if;
  i := i + 1;
end loop;

http.tablerowopen;
http.tabledata('Contributing Cause(s), Roadway');
i := 1;
for r in get_ccroad loop
  if (i = 1) then
    http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="ccroad'||i||'"
VALUE="'||r.contrib_cause_road_id||'" CHECKED>'||r.contrib_cause_road_value);
    http.tablerowclose;
    http.formhidden('ccroad1', 'x');
  else
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="ccroad'||i||'"
VALUE="'||r.contrib_cause_road_id||'" ">'||r.contrib_cause_road_value);
    http.tablerowclose;
    http.formhidden('ccroad'||i||'', 'x');
  end if;
  i := i + 1;
end loop;

http.p('<tr><td>Action of Pedestrian #1</td><td>');
http.formSelectOpen('ped1');
for r in get_ped_act loop

  http.formSelectOption(r.pedestrian_action, '', 'value="'||r.pedestrian_action_
id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Action of Pedestrian #2</td><td>');
http.formSelectOpen('ped2');
for r in get_ped_act loop

  http.formSelectOption(r.pedestrian_action, '', 'value="'||r.pedestrian_action_
id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Action of Pedestrian #3</td><td>');
http.formSelectOpen('ped3');
for r in get_ped_act loop

```



```

http.formSelectOpen('need_study');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Lost Anchorage</td><td>');
http.formSelectOpen('anchor_lost');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Amount of Debris Scatter</td><td>');
http.formSelectOpen('debris');
  for r in get_debris loop

    http.formSelectOption(r.debris_descrip, '', 'value="' || r.debris_scatter_id || "'");
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Usable After Accident</td><td>');
http.formSelectOpen('usable');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Repairable After Accident</td><td>');
http.formSelectOpen('repair');
  for r in 1..3 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Damage to Attenuator</td><td>');
http.formSelectOpen('dam_att');
  for r in get_a_damage loop

    http.formSelectOption(r.atten_damage_descrip, '', 'value="' || r.atten_damage_id || "'");
  end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Total Deformation</td><td>' || htf.formText('deform', 4,4) || 'm</td></tr>');
http.p('<tr><td>Estimated Repair Cost</td><td>' || htf.formText('rep_cost', 8,8) || '</td></tr>');

http.p('<tr><td>**Items in <B>Bold</B> are required. Items in <I>Italics</I> must be unique. </td></tr>');
http.p('<tr><td>**If request fails, check data types and try again. </td></tr>');

```

[illegible]

```

    http.p('</td></tr>');

    http.p('<tr><td>If Driver Action is NOT Phantom or Hit and Run, continue
with remaining questions...</td><td>&nbsp;&nbsp;&nbsp;</td></tr>');
    http.p('<tr><td>Age</td><td>'||htf.formText('age',3, 3)||' </td></tr>');

    http.p('<tr><td>Sex</td><td>');
    http.formSelectOpen('sex');
    for r in get_sex loop
        http.formSelectOption(r.sex_value,'','value="'||r.sex_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Residence</td><td>');
    http.formSelectOpen('residence');
    for r in get_residence loop

    http.formSelectOption(r.residence_value,'','value="'||r.residence_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Physical Defects</td><td>');
    http.formSelectOpen('defect');
    for r in get_phys_def loop

    http.formSelectOption(r.physical_defects_value,'','value="'||r.physical_defe
cts_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Under Influence?</td><td>');
    http.formSelectOpen('und_inf');
    for r in get_und_inf loop

    http.formSelectOption(r.under_influence_value,'','value="'||r.under_influenc
e_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>BAC Value, if applicable</td><td>'||htf.formText('bac',5,
5)||' </td></tr>');

    http.p('<tr><td>Ejected?</td><td>');
    http.formSelectOpen('ejected');
    for r in get_ejected loop

    http.formSelectOption(r.ejected_value,'','value="'||r.ejected_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Injury Severity</td><td>');
    http.formSelectOpen('inj_sev');
    for r in get_inj_sev loop

    http.formSelectOption(r.injury_severity_descrip,'','value="'||r.injury_sever
ity_id||'");

```

[illegible]

```

PROCEDURE new_vehicle
(last IN char,
driver_id IN number,
driv_action IN number,
accid_id IN number)

IS

cursor get_v_make is select * from attenuator_apps.vehicle_make where 0=0;
cursor get_v_type is select * from attenuator_apps.vehicle_type where 0=0;
cursor get_v_use is select * from attenuator_apps.vehicle_use where 0=0;
cursor get_v_funcnt is select * from attenuator_apps.vehicle_special_function
where 0=0;
cursor get_v_defect is select * from attenuator_apps.vehicle_defect where 0=0;
cursor get_trailer is select * from attenuator_apps.trailer where 0=0;
cursor get_direct is select * from attenuator_apps.direction where 0=0;
cursor get_v_move is select * from attenuator_apps.vehicle_movement where 0=0;
cursor get_imp_ang is select * from attenuator_apps.impact_angle where 0=0;
cursor get_imp_pt_atten is select * from attenuator_apps.impact_point_atten where
0=0;
cursor get_imp_pt_veh is select * from attenuator_apps.point_vehicle where 0=0;
cursor get_haz_imp is select * from attenuator_apps.hazard_impact where 0=0;
cursor get_orient is select * from attenuator_apps.final_orientation where 0=0;
cursor get_stop_place is select * from attenuator_apps.stopping_place where 0=0;
cursor get_stop_mode is select * from attenuator_apps.stopping_mode where 0=0;
cursor get_spin_beh is select * from attenuator_apps.spin_behavior where 0=0
order by spin_behavior_value;
cursor get_snag is select * from attenuator_apps.snagging where 0=0;
cursor get_pocket is select * from attenuator_apps.pocketing where 0=0;
cursor get_spear is select * from attenuator_apps.spearing where 0=0;
cursor get_over is select * from attenuator_apps.override where 0=0;
cursor get_under is select * from attenuator_apps.underide where 0=0;
cursor get_deform is select * from attenuator_apps.deform_pass_compart where 0=0;
cursor get_dist_long is select * from attenuator_apps.distance_long where 0=0;
cursor get_dist_lat is select * from attenuator_apps.distance_lateral where 0=0;
cursor get_veh_damage is select * from attenuator_apps.point_vehicle where 0=0
order by point_vehicle_id;

type varray_char3 is table of char(3) index by binary_integer;

boolean_descrip varray_char3;
i number;

BEGIN

boolean_descrip(1) := 'NO';
boolean_descrip(2) := 'YES';
boolean_descrip(3) := 'N/A';

html_functions.html_header('Vehicle Results Page');
htp.p('<h1>Enter Vehicle and Vehicle Results Data:</h1>');
htp.tableOpen;
htp.formOpen('/owa_att/owa/attenuator_apps.data_entry.input_veh_perf');

        htp.p('<tr><td><B><I>Accident ID
Number</I></B></td><td>'||htf.formText('accid_id2',6, 6, accid_id)||'
</td></tr>');
        htp.p('<tr><td><B><I>Driver ID
Number</I></B></td><td>'||htf.formText('driver_id2',6, 6, driver_id)||'
</td></tr>');

```



```

http.formhidden('driv_action', driv_action);

    http.p('<tr><td>Vehicle Make</td><td>');
    http.formSelectOpen('make');
    for r in get_v_make loop

        http.formSelectOption(r.vehicle_make_value, '', 'value=""||r.vehicle_make_id||
    '');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Vehicle Type</td><td>');
    http.formSelectOpen('type');
    for r in get_v_type loop

        http.formSelectOption(r.vehicle_type_value, '', 'value=""||r.vehicle_type_id||
    '');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Vehicle Use</td><td>');
    http.formSelectOpen('use');
    for r in get_v_use loop

        http.formSelectOption(r.vehicle_use_value, '', 'value=""||r.vehicle_use_id||'
    ');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Vehicle Special Function</td><td>');
    http.formSelectOpen('sp_funcnt');
    for r in get_v_funcnt loop

        http.formSelectOption(r.special_function_value, '', 'value=""||r.vehicle_speci
al_function_id||'');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Vehicle Defect</td><td>');
    http.formSelectOpen('defect');
    for r in get_v_defect loop

        http.formSelectOption(r.vehicle_defect_value, '', 'value=""||r.vehicle_defect_
id||'');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td>Trailer Type</td><td>');
    http.formSelectOpen('trailer');
    for r in get_trailer loop

        http.formSelectOption(r.trailer_value, '', 'value=""||r.trailer_id||'');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

```

```

http.p('<tr><td>Vehicle Direction</td><td>');
http.formSelectOpen('direc');
for r in get_direc loop

http.formSelectOption(r.direction_value,'','value="'||r.direction_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Vehicle Movement</td><td>');
http.formSelectOpen('veh_move');
for r in get_v_move loop

http.formSelectOption(r.vehicle_movement_value,'','value="'||r.vehicle_movem
ent_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Estimated Speed</td><td>'||htf.formText('est_speed',5,
5)||'<b> km/hr</b></td></tr>');

http.p('<tr><td>Impact Point on Attenuator</td><td>');
http.formSelectOpen('imp_pt_atten');
for r in get_imp_pt_atten loop

http.formSelectOption(r.impact_point_atten,'','value="'||r.impact_point_atte
n_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Impact Point on Vehicle</td><td>');
http.formSelectOpen('imp_pt_veh');
for r in get_imp_pt_veh loop

http.formSelectOption(r.point_vehicle_value,'','value="'||r.point_vehicle_id
||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Impact From Rear/Opposing Direction?</td><td>');
http.formSelectOpen('rear');
for r in 1..3 loop
http.formSelectOption(boolean_descrip(r));
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Pre Impact Angle</td><td>');
http.formSelectOpen('pre_im_ang');
for r in get_imp_ang loop

http.formSelectOption(r.impact_angle_descrip,'','value="'||r.impact_angle_id
||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Post Impact Angle</td><td>');

```

```

    http.formSelectOpen('post_imp_ang');
    for r in get_imp_ang loop

        http.formSelectOption(r.impact_angle_descrip, '', 'value="" || r.impact_angle_id
|| ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Was there a Prior Impact?</td><td>');
    http.formSelectOpen('prev_imp');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Was there a Secondary Impact?</td><td>');
    http.formSelectOpen('sec_imp');
        for r in 1..3 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Severity of Hazard Impact</td><td>');
    http.formSelectOpen('haz_imp');
    for r in get_haz_imp loop

        http.formSelectOption(r.hazard_impact_descrip, '', 'value="" || r.hazard_impact_
id || ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Final Orientation of Vehicle</td><td>');
    http.formSelectOpen('orient');
    for r in get_orient loop

        http.formSelectOption(r.final_orientation_value, '', 'value="" || r.final_orient
ation_id || ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Stopping Place</td><td>');
    http.formSelectOpen('stop_place');
    for r in get_stop_place loop

        http.formSelectOption(r.stopping_place_value, '', 'value="" || r.stopping_place_
id || ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

    http.p('<tr><td>Stopping Mode</td><td>');
    http.formSelectOpen('stop_mode');
    for r in get_stop_mode loop

        http.formSelectOption(r.stopping_mode_value, '', 'value="" || r.stopping_mode_id
|| ""');

```

```

        end loop;
        http.formSelectClose;
        http.p('</td></tr>');

        http.p('<tr><td>Spin Behavior</td><td>');
        http.formSelectOpen('spin_behavior');
        for r in get_spin_beh loop

            http.formSelectOption(r.spin_behavior_value, '', 'value="' || r.spin_behavior_id
|| '"');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');

            http.p('<tr><td>Longitudinal Distance Travelled, Post Impact</td><td>');
            http.formSelectOpen('dist_long');
            for r in get_dist_long loop

                http.formSelectOption(r.distance_long_descrip, '', 'value="' || r.distance_long_
id || '"');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');

                http.p('<tr><td>Lateral Distance Travelled, Post Impact</td><td>');
                http.formSelectOpen('dist_lat');
                for r in get_dist_lat loop

                    http.formSelectOption(r.distance_lat_descrip, '', 'value="' || r.distance_lat_id
|| '"');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');

                    http.p('<tr><td>Number of Lanes Crossed</td><td>' || http.formText('num_lanes',
3,3) || '</td></tr>');

                    http.p('<tr><td>Was there any Snagging</td><td>');
                    http.formSelectOpen('snagging');
                    for r in get_snag loop

                        http.formSelectOption(r.snagging_descrip, '', 'value="' || r.snagging_id || '"');
                        end loop;
                        http.formSelectClose;
                        http.p('</td></tr>');

                        http.p('<tr><td>Was there any Pocketing</td><td>');
                        http.formSelectOpen('pocketing');
                        for r in get_pocket loop

                            http.formSelectOption(r.pocketing_descrip, '', 'value="' || r.pocketing_id || '"');
                            ;
                            end loop;
                            http.formSelectClose;
                            http.p('</td></tr>');

                            http.p('<tr><td>Was there any Spearing</td><td>');
                            http.formSelectOpen('spearing');
                            for r in get_spear loop

                                http.formSelectOption(r.spearing_descrip, '', 'value="' || r.spearing_id || '"');

```

```

end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Was there any Overriding</td><td>');
http.formSelectOpen('overriding');
for r in get_over loop

http.formSelectOption(r.override_descrip, '', 'value="'||r.override_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Was there any Underriding</td><td>');
http.formSelectOpen('underriding');
for r in get_under loop

http.formSelectOption(r.underride_descrip, '', 'value="'||r.underride_id||'");
;
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Severity of Deformation of Occupant Compartment</td><td>');
http.formSelectOpen('deform');
for r in get_deform loop

http.formSelectOption(r.deformation_descrip, '', 'value="'||r.deformation_id||
'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Estimated Repair
Cost</td><td>'||http.formText('rep_cost_veh', 8,8)||' </td></tr>');

http.tablerowopen;
http.tabledata('Areas of Vehicle Damage (refer to figure below)');
i := 1;
for r in get_veh_damage loop
    if (i = 1) then
        http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="dam'||i||'"
VALUE="'||r.point_vehicle_id||'" CHECKED>'||r.point_vehicle_id||',
'||r.point_vehicle_value);
        http.tablerowclose;
        http.formhidden('dam1', 'x');
    else
        http.tablerowopen;
        http.tabledata(' ');
        http.tabledata( '<INPUT TYPE="CHECKBOX" NAME="dam'||i||'"
VALUE="'||r.point_vehicle_id||'" ">'||r.point_vehicle_id||',
'||r.point_vehicle_value);
        http.tablerowclose;
        http.formhidden('dam'||i||', 'x');
    end if;
    i := i + 1;
end loop;

http.formhidden('last', last);

```



```

http.p('<tr><td>Age</td><td>'||htf.formText('age',3, 3)||' </td></tr>');

http.p('<tr><td>Location in Car</td><td>');
http.formSelectOpen('loc_car');
for r in get_loc_car loop

    http.formSelectOption(r.location_in_car_value,'','value="'||r.location_in_ca
r_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Ejected?</td><td>');
http.formSelectOpen('ejected');
for r in get_ejected loop

    http.formSelectOption(r.ejected_value,'','value="'||r.ejected_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>Injury Severity</td><td>');
http.formSelectOpen('inj_sev');
for r in get_inj_sev loop

    http.formSelectOption(r.injury_severity_descrip,'','value="'||r.injury_sever
ity_id||'");
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.tablerowopen;
http.tabledata('Safety Equipment Used');
i := 1;
for r in get_safety loop
    if (i = 1) then
        http.tabledata(' <INPUT TYPE="CHECKBOX" NAME="safe'||i||' "
VALUE="'||r.safety_device_id||' " CHECKED>'||r.safety_device_value);
        http.tablerowclose;
        http.formhidden('safel', 'x');
    else
        http.tablerowopen;
        http.tabledata(' ');
        http.tabledata(' <INPUT TYPE="CHECKBOX" NAME="safe'||i||' "
VALUE="'||r.safety_device_id||' ">'||r.safety_device_value);
        http.tablerowclose;
        http.formhidden('safe'||i||', 'x');
    end if;
    i := i + 1;
end loop;

http.p('<tr><td><b>Is this the last passenger to be entered?</b></td><td>');
http.formSelectOpen('last_pass');
for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
end loop;
http.formSelectClose;
http.p('</td></tr>');

http.p('<tr><td>**Items in <B>Bold</B> are required. Items in
<I>Italics</I> must be unique. </td></tr>');

```


[illegible]

```

/*
PROCEDURE exists_error
    (item_number IN char)
IS
BEGIN

    html_functions.html_header('Error Page');

    http.p('</br>');
    http.p('Record '||item_number||' already exists in the database.</br>');
    http.p('Enter another record.</br>');
    http.p('</br>');
    --new_type;

    /*http.tableOpen;
    http.formOpen('/owa_att/owa/attenuator_www.enter_data.new_model');

        http.p('<tr><td>Record '||item_number||' already exists in the
database.</td></tr>');
        http.p('<tr><td>Enter another record.</td></tr>');
        http.p('<tr><td colspan="2">'||htf.formSubmit('','OK')||'</td></tr>');
        http.formClose;
        http.tableClose;

    http_functions.html_footer;
    END exists_error;

*/

    -- Enter further code below as specified in the Package spec.
END;
```

Appendix E-2: ATTENUATOR_APPS.DATA_ENTRY

```

Package Body                                DATA_ENTRY
IS
--
-- To modify this template, edit file PKGBODY.TXT in TEMPLATE
-- directory of SQL Navigator
--
-- Purpose: Briefly explain the functionality of the package body
--
-- MODIFICATION HISTORY
-- Person      Date      Comments
-- -----
-- Enter procedure, function bodies as shown below

PROCEDURE input_type
    (model_name IN char,
    manufacturer_id IN number,
    category_id IN number,
    cross_slope IN number,
    reuse IN number,
    features IN char,
    initial_cost IN number,
    install_time IN number,
    install_equip IN number,
    repair_time IN number,
```

```

repair_equip IN number,
repair_crew IN number,
debris_scatter IN number,
inv_req IN number,
redirect IN char,
bidir IN char,
gating IN char,
pocket IN char,
suit_const IN char,
applic1 IN char,
applic2 IN char,
applic3 IN char,
applic4 IN char,
applic5 IN char,
applic6 IN char,
applic7 IN char,
applic8 IN char,
applic9 IN char,
applic10 IN char,
anchor1 IN char,
anchor2 IN char,
anchor3 IN char,
anchor4 IN char,
anchor5 IN char,
anchor6 IN char
)

IS

cursor get_types is select * from attenuator_type where 0=0 order by
attenuator_type_id;
type_id number;

BEGIN

type_id := 0;
for i in get_types loop
    type_id := i.attenuator_type_id;
end loop;
type_id := type_id + 1;

attenuator_www.http.p('<br>');
attenuator_www.http.p('New rows written to database. <br>');

INSERT INTO attenuator_type
(attenuator_type_id, attenuator_type_name, manufacturer_id, category_id,
max_cross_slope, percent_reusable, key_features, typ_repair_time_id,
typ_repair_equip_id, typ_repair_crew_id, initial_cost_id,
debris_scatter_id,
bidirectional_cap, redirect_tend, inventory_id, gating_tend,
pocketing_tend,
suitable_construction, typ_install_time_id, typ_install_equip_id)
VALUES
(type_id, model_name, manufacturer_id, category_id, cross_slope, reuse,
features,
repair_time, repair_equip, repair_crew, initial_cost, debris_scatter,
bidir,
redirect, inv_req, gating, pocket, suit_const, install_time,
install_equip);

if (applic1 <> 'x') then

```

```

        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic1, type_id);
    end if;
    if (applic2 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic2, type_id);
    end if;
    if (applic3 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic3, type_id);
    end if;
    if (applic4 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic4, type_id);
    end if;
    if (applic5 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic5, type_id);
    end if;
    if (applic6 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic6, type_id);
    end if;
    if (applic7 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic7, type_id);
    end if;
    if (applic8 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic8, type_id);
    end if;
    if (applic9 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic9, type_id);
    end if;
    if (applic10 <> 'x') then
        INSERT INTO applications
            (applications_id, attenuator_type_id) VALUES (applic10, type_id);
    end if;

    if (anchor1 <> 'x') then
        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor1, type_id);
    end if;
    if (anchor2 <> 'x') then
        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor2, type_id);
    end if;
    if (anchor3 <> 'x') then
        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor3, type_id);
    end if;
    if (anchor4 <> 'x') then
        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor4, type_id);
    end if;
    if (anchor5 <> 'x') then
        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor5, type_id);
    end if;
    if (anchor6 <> 'x') then

```

```

        INSERT INTO anchoring_options_attenuator
            (anchoring_options_id, attenuator_type_id) VALUES (anchor6, type_id);
    end if;

attenuator_www.enter_data.main;

END input_type;

PROCEDURE input_model
    (model_num IN char,
     config_num IN char,
     design_speed IN number,
     nom_length IN number,
     nom_width IN number,
     test_level_id IN number,
     atten_type_id IN number)

IS

    cursor get_model is select * from model where 0=0;
    found    number;

BEGIN

--Check to see whether this model number has been entered into the database.

    attenuator_www.http.p('<br>');
    attenuator_www.http.p('New row written to database.  <br>');

    INSERT INTO model
        (model_number, config_number, design_speed, nominal_length,
         nominal_width, nchrp_standard_id, attenuator_type_id)
        VALUES
            (model_num, config_num, design_speed, nom_length, nom_width,
test_level_id,
            atten_type_id);

attenuator_www.enter_data.main;

END input_model;

PROCEDURE input_atten
    (atten_id IN char,
     owner_id IN number,
     inst_date IN number,
     maint_unit IN number,
     county_id IN number,
     section IN number,
     subsec IN number,
     sr_num IN char,
     us_num IN char,
     atten_mp IN number,
     remarks IN char,
     traffic IN number,
     work_zone IN char,
     status IN number,
     loc_road IN number,
     model_num IN char,
     notes IN char)

IS

```

```

        cursor get_atten_id is select * from attenuator where 0=0;
        cursor get_road_id is select * from roadway_description where 0=0 order by
roadway_id;
        roadway_id  number;
        district    number;
        found       number;

BEGIN

    if (subsec = 0) or (subsec = '') then
        roadway_id := county_id*1000 + section;
    else
        roadway_id := county_id*1000000 + section*1000 + subsec;
    end if;

    found := 0;
    for r in get_road_id loop
        if (roadway_id = r.roadway_id) then
            found := 1;
        end if;
    end loop;
    if (found = 0) then
        attenuator_www.http.p('<br>');
        attenuator_www.http.p('Roadway ID doesn't exist.  Enter Roadway Data
first. <br>');
        attenuator_www.enter_data.main;
    else

        attenuator_www.http.p('<br>');
        attenuator_www.http.p('New row written to database.  Continue with Site
data.<br>');

        INSERT INTO attenuator
            (attenuator_id, owner_id, date_installed, maint_unit, county_id,
section, sub_section,
            state_road_number, us_road_number, atten_mile_post, remarks,
approach_traffic_id,
            in_work_zone, status_id, location_wrt_road_id, model_number,
roadway_id, notes)
VALUES
            (atten_id, owner_id, inst_date, maint_unit, county_id, section,
subsec, sr_num,
            us_num, atten_mp, remarks, traffic, work_zone, status, loc_road,
model_num,
            roadway_id, notes);

        attenuator_www.enter_data.new_site (atten_id, roadway_id);

    end if;

END input_atten;

PROCEDURE input_site
(atten_id2 IN char,
 roadway_id2 IN number,
 width IN number,
 height IN number,
 angle IN number,
 clear_lat IN number,
 clear_long IN number,

```

```

    cz_width IN number,
    cz_length IN number,
    surf_und IN number,
    depth IN number,
    surf_bt IN number,
    object IN number,
    anchor IN number)

IS

    cursor get_site_id is select * from attenuator_site where 0=0 order by
attenuator_site_id;
    site_id number;
    found number;

BEGIN

    site_id := 0;
    for i in get_site_id loop
        site_id := i.attenuator_site_id;
    end loop;
    site_id := site_id + 1;

    attenuator_www.http.p('<br>');
    attenuator_www.http.p('New row written to database. <br>');

    INSERT INTO attenuator_site
        (attenuator_site_id, attenuator_id, object_width, object_height,
angle_to_road,
        clearance_lateral, clearance_long, width_clear_zone, length_clear_zone,
surface_under_atten_id, depth_surf, surface_bt_atten_road_id,
shield_object_id,
        anchoring_options_id)
    VALUES
        (site_id, atten_id2, width, height, angle, clear_lat, clear_long,
cz_width, cz_length,
        surf_und, depth, surf_bt, object, anchor);

    attenuator_www.enter_data.main;

END input_site;

PROCEDURE input_road
(county_id IN number,
section IN number,
subsec IN number,
road_desc IN char,
rsi IN number,
road_type IN number,
med_surf IN number,
med_bar IN char,
med_width IN number,
med_slope IN number,
should_type IN number,
should_width IN number,
div_angle IN number,
curb_type IN number,
curb_ht IN number,
grade IN number,
emb_slope IN number,
cut_fill IN number,

```

```

des_speed IN number,
post_speed IN number,
curve_main IN number,
curve_second IN number,
traffic_char IN number,
zoning IN number,
adt IN number,
pht IN number,
rur_urb IN number,
lane_width IN number,
num_lanes IN number,
pave_type IN number)

IS

roadway_id number;

BEGIN

if (subsec = 0) or (subsec = '') then
    roadway_id := county_id*1000 + section;
else
    roadway_id := county_id*1000000 + section*1000 + subsec;
end if;

attenuator_www.http.p('<br>');
attenuator_www.http.p('New row written to database. <br>');

INSERT INTO roadway_description
    (roadway_id, road_description, road_system_identifier_id, road_type_id,
    median_surface_id, fixed_median_barrier, median_width, median_slope,
    shoulder_type_id, shoulder_width, divergance_angle, curb_type_id,
    curb_height, roadway_grade, embankment_slope, embankment_cut_fill_id,
    design_speed, posted_speed_limit, curve_main_move_id,
curve_second_move_id,
    trafficway_character_id, area_zoning_use_id, avg_daily_traffic,
    peak_hour_traffic, rural_urban_id, lane_width, number_lanes,
    pavement_type_id)
VALUES
    (roadway_id, road_desc, rsi, road_type, med_surf, med_bar, med_width,
    med_slope, should_type, should_width, div_angle, curb_type, curb_ht,
    grade, emb_slope, cut_fill, des_speed, post_speed, curve_main,
    curve_second, traffic_char, zoning, adt, pht, rur_urb, lane_width,
    num_lanes, pave_type);

attenuator_www.enter_data.main;

END input_road;

PROCEDURE input_inspec
    (atten_id IN char,
    source IN number,
    inspec_type IN number,
    inspec_cond IN number,
    inspector IN char,
    inspec_date IN date,
    corr_act IN char,
    des_install IN char,
    des_details IN char,

```



```

changes IN char,
reasons IN char,
std_marks IN char,
std_delin IN char,
appear IN char,
cable_sys IN char,
hf_bracket IN char,
chain_rail IN char,
deflector IN char,
veh_dam IN char,
nd_impact IN char,
angle_hits IN char,
vandalism IN char,
veh_prot IN char,
ren_nec IN char,
needs_study IN char,
reason_study IN char)

IS

cursor get_inspec is select * from inspection where 0=0 order by
inspection_id;
cursor get_activity is select * from activity where 0=0 order by activity_id;
inspec_id number;
activity_id number;

BEGIN

inspec_id := 0;
for i in get_inspec loop
    inspec_id := i.inspection_id;
end loop;
inspec_id := inspec_id + 1;

activity_id := 0;
for i in get_activity loop
    activity_id := i.activity_id;
end loop;
activity_id := activity_id + 1;

attenuator_www.http.p('<br>');
attenuator_www.http.p('New row written to database. Continue with
Deficiencies data.<br>');

INSERT INTO activity
(activity_id, attenuator_id)
VALUES
(activity_id, atten_id);

INSERT INTO inspection
(inspection_id, data_source_id, activity_id, inspection_type_id,
inspection_condition_id,
inspector, inspection_date, corrective_action, design_installation,
design_details_available,
changes_authorized_by, reason_for_changes, pavement_markings_std,
delineation_std,
appearance_satisfactory, cable_guidance_system,
hex_foam_cartridge_bracket,
anchor_chain_rail, two_way_traffic_deflector, evidence_vehicle_damage,
evidence_non_design_impact, evidence_angle_hits, evidence_vandalism,
protected_vehicle,

```

```

        renovation_necessary, needs_study, reason_for_study)
VALUES
    (inspec_id, source, activity_id, inspec_type, inspec_cond, inspector,
inspec_date,
    corr_act, des_install, des_details, changes, reasons, std_marks,
std_delin, appear,
    cable_sys, hf_bracket, chain_rail, deflector, veh_dam, nd_impact,
angle_hits,
    vandalism, veh_prot, ren_nec, needs_study, reason_study);

attenuator_www.enter_data.new_defic (inspec_id);

END input_inspec;

PROCEDURE input_defic
    (inspec_id2 IN number,
    no_def IN char,
    comp IN number,
    defic IN number,
    num_occur IN number,
    last IN char)

IS

    cursor get_defic is select * from deficiencies where 0=0 order by
deficiency_id;
    defic_id number;

BEGIN

    attenuator_www.htp.p('<br>');
    if (no_def = 'true') then
        attenuator_www.htp.p('No rows written to database. <br>');
        attenuator_www.enter_data.main;
    else
        defic_id := 0;
        for i in get_defic loop
            defic_id := i.deficiency_id;
        end loop;
        defic_id := defic_id + 1;
        if (num_occur is not null) then
            INSERT INTO deficiencies
                (deficiency_id, inspection_id, component_id, deficiency_noted_id,
                number_occurrences)
            VALUES (defic_id, inspec_id2, comp, defic, num_occur);
        else
            INSERT INTO deficiencies
                (deficiency_id, inspection_id, component_id, deficiency_noted_id,
                number_occurrences)
            VALUES (defic_id, inspec_id2, comp, defic, 1);
        end if;
        if (last <> 'YES') then
            attenuator_www.htp.p('New row written to database. Continue with
additional Deficiencies data.<br>');
            attenuator_www.enter_data.subs_defic (inspec_id2);
        else
            attenuator_www.htp.p('New row written to database. <br>');
            attenuator_www.enter_data.main;
        end if;
    end if;
end if;

```

```
END input_defic;
```

```
PROCEDURE input_accid
(report IN char,
data_source IN number,
non_des IN char,
road_side IN number,
site_loc IN number,
traf_cont IN number,
road_surf IN number,
weather IN number,
lighting IN number,
hel IN number,
he2 IN number,
milepost IN number,
node IN number,
date_acc IN date,
time_acc IN char,
am_pm IN char,
lane_num IN number,
num_veh IN number,
num_imp IN number,
descrip IN char,
ccenv1 IN varchar2,
ccenv2 IN varchar2,
ccenv3 IN varchar2,
ccenv4 IN varchar2,
ccenv5 IN varchar2,
ccenv6 IN varchar2,
ccenv7 IN varchar2,
ccenv8 IN varchar2,
ccenv9 IN varchar2,
ccenv10 IN varchar2,
ccenv11 IN varchar2,
ccroad1 IN varchar2,
ccroad2 IN varchar2,
ccroad3 IN varchar2,
ccroad4 IN varchar2,
ccroad5 IN varchar2,
ccroad6 IN varchar2,
ccroad7 IN varchar2,
ccroad8 IN varchar2,
ccroad9 IN varchar2,
ped1 IN number,
ped2 IN number,
ped3 IN number
)
```

```
IS
```

```
cursor get_accid is select * from accident where 0=0 order by accident_id;
cursor get_ccenv is select * from contrib_cause_env_cited where 0=0 order by
contrib_cause_env_cited_id;
cursor get_ccroad is select * from contrib_cause_road_cited where 0=0 order
by contrib_cause_road_cited_id;
cursor get_ped_act is select * from pedestrian_action where 0=0 order by
pedestrian_action_id;
cursor get_ped_act_cite is select * from pedestrian_action_cited where 0=0
order by pedestrian_action_cited_id;
accid_id number;
```

```

ccenv_id number;
ccroad_id number;
ped_id number;
found number;

BEGIN

accid_id := 0;
for i in get_accid loop
    accid_id := i.accident_id;
end loop;
accid_id := accid_id + 1;

attenuator_www.http.p('<br>');
attenuator_www.http.p('New rows written to database. Continue with Attenuator
Performance data.<br>');

INSERT INTO accident
    (accident_id, report_number, data_source_id, non_des_impact,
road_side_id,
    site_location_id, traffic_control_id, road_surface_id, weather_id,
lighting_id,
    harmful_event_1, harmful_event_2, accident_mile_post, nearest_node,
    date_accident, time_accident, am_pm, lane_number, number_vehicles,
number_atten_impacts,
    description)
    VALUES (accid_id, report, data_source, non_des, road_side, site_loc,
    traf_cont, road_surf, weather, lighting, he1, he2, milepost, node,
    date_acc, time_acc, am_pm, lane_num, num_veh, num_imp, descrip);

ccenv_id := 0;
for i in get_ccenv loop
    ccenv_id := i.contrib_cause_env_cited_id;
end loop;
ccenv_id := ccenv_id + 1;

if (ccenv1 <> 'x') then
    INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv1);
    ccenv_id := ccenv_id + 1;
end if;
if (ccenv2 <> 'x') then
    INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv2);
    ccenv_id := ccenv_id + 1;
end if;
if (ccenv3 <> 'x') then
    INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv3);
    ccenv_id := ccenv_id + 1;
end if;
if (ccenv4 <> 'x') then
    INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv4);
    ccenv_id := ccenv_id + 1;
end if;
if (ccenv5 <> 'x') then

```

```

        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv5);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv6 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv6);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv7 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv7);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv8 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv8);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv9 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv9);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv10 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv10);
        ccenv_id := ccenv_id + 1;
    end if;
    if (ccenv11 <> 'x') then
        INSERT INTO contrib_cause_env_cited (contrib_cause_env_cited_id,
accident_number_id,
        contrib_cause_env_id) VALUES (ccenv_id, accid_id, ccenv11);
        ccenv_id := ccenv_id + 1;
    end if;

    ccroad_id := 0;
    for i in get_ccroad loop
        ccroad_id := i.contrib_cause_road_cited_id;
    end loop;
    ccroad_id := ccroad_id + 1;

    if (ccroad1 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad1);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad2 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad2);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad3 <> 'x') then

```

```

        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad3);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad4 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad4);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad5 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad5);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad6 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad6);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad7 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad7);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad8 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad8);
        ccroad_id := ccroad_id + 1;
    end if;
    if (ccroad9 <> 'x') then
        INSERT INTO contrib_cause_road_cited (contrib_cause_road_cited_id,
accident_number_id,
        contrib_cause_road_id) VALUES (ccroad_id, accid_id, ccroad9);
        ccroad_id := ccroad_id + 1;
    end if;

    ped_id := 0;
    for i in get_ped_act_cite loop
        ped_id := i.pedestrian_action_cited_id;
    end loop;
    ped_id := ped_id + 1;

    found := 0;
    for i in get_ped_act loop
        if (i.pedestrian_action_id = ped1) then
            if (i.pedestrian_action = 'NOT APPLICABLE') then
                found := 1;
                exit;
            end if;
        end if;
    end loop;
    if (found <> 1) then
        INSERT INTO pedestrian_action_cited (pedestrian_action_cited_id,
accident_number_id,

```

```

        pedestrian_number, pedestrian_action_id) VALUES (ped_id, accid_id, 1,
ped1);
        ped_id := ped_id + 1;
    end if;

    found := 0;
    for i in get_ped_act loop
        if (i.pedestrian_action_id = ped2) then
            if (i.pedestrian_action = 'NOT APPLICABLE') then
                found := 1;
                exit;
            end if;
        end if;
    end loop;
    if (found <> 1) then
        INSERT INTO pedestrian_action_cited (pedestrian_action_cited_id,
accident_number_id,
        pedestrian_number, pedestrian_action_id) VALUES (ped_id, accid_id, 3,
ped3);
        ped_id := ped_id + 1;
    end if;

    found := 0;
    for i in get_ped_act loop
        if (i.pedestrian_action_id = ped3) then
            if (i.pedestrian_action = 'NOT APPLICABLE') then
                found := 1;
                exit;
            end if;
        end if;
    end loop;
    if (found <> 1) then
        INSERT INTO pedestrian_action_cited (pedestrian_action_cited_id,
accident_number_id,
        pedestrian_action_id, pedestrian_number) VALUES (ped_id, accid_id,
ped3, 3);
        ped_id := ped_id + 1;
    end if;

    attenuator_www.enter_data.new_atten_perf (accid_id);

END input_accid;

```

```

PROCEDURE input_atten_perf
(accid_id2 IN number,
atten_id IN char,
need_study IN char,
anchor_lost IN char,
debris IN number,
usable IN char,
repair IN char,
dam_att IN number,
deform IN number,
rep_cost IN number)

```

IS

```

    cursor get_atten_perf is select * from atten_performance where 0=0 order by
    atten_performance_id;

```

```

        cursor get_atten_acc is select * from atten_accident where 0=0 order by
        atten_accident_id;
        atten_perf number;
        atten_acc number;

        BEGIN

        atten_perf := 0;
        for i in get_atten_perf loop
            atten_perf := i.atten_performance_id;
        end loop;
        atten_perf := atten_perf + 1;

        atten_acc := 0;
        for i in get_atten_acc loop
            atten_acc := i.atten_accident_id;
        end loop;
        atten_acc := atten_acc + 1;

        attenuator_www.http.p('<br>');
        attenuator_www.http.p('New rows written to database. Continue with Driver and
        Vehicle data.<br>');

        INSERT INTO atten_performance
        (atten_performance_id, need_study, anchor_lost, debris_scatter_id,
        repairable,
        usable_after, atten_damage_id, final_deformation, estimated_repair_cost)
        VALUES (atten_perf, need_study, anchor_lost, debris, repair, usable,
        dam_att,
        deform, rep_cost);
        INSERT INTO atten_accident
        (atten_accident_id, atten_performance_id, accident_id, attenuator_id)
        VALUES (atten_acc, atten_perf, accid_id2, atten_id);

        attenuator_www.enter_data.new_driver (accid_id2);

    END input_atten_perf;

    PROCEDURE input_driver
    (accid_id2 IN number,
    last IN char,
    driv_action IN number,
    age IN number,
    sex IN number,
    residence IN number,
    defect IN number,
    und_inf IN number,
    bac IN number,
    ejected IN number,
    inj_sev IN number,
    safe1 IN char,
    safe2 IN char,
    safe3 IN char,
    safe4 IN char,
    safe5 IN char,
    safe6 IN char,
    safe7 IN char,
    ccd1 IN char,
    ccd2 IN char,
    ccd3 IN char,

```



```

ccd4 IN char,
ccd5 IN char,
ccd6 IN char,
ccd7 IN char,
ccd8 IN char,
ccd9 IN char,
ccd10 IN char,
ccd11 IN char,
ccd12 IN char,
ccd13 IN char,
ccd14 IN char,
ccd15 IN char,
ccd16 IN char,
ccd17 IN char,
ccd18 IN char,
ccd19 IN char,
ccd20 IN char,
ccd21 IN char,
ccd22 IN char,
ccd23 IN char,
ccd24 IN char,
cit1 IN char,
cit2 IN char,
cit3 IN char,
cit4 IN char,
cit5 IN char,
cit6 IN char,
cit7 IN char,
cit8 IN char,
cit9 IN char,
cit10 IN char,
cit11 IN char,
cit12 IN char,
cit13 IN char,
cit14 IN char,
cit15 IN char,
cit16 IN char,
cit17 IN char,
cit18 IN char
)

IS

cursor get_driver is select * from driver where 0=0 order by driver_id;
cursor get_person is select * from safety_device_used where 0=0 order by
person_id;
cursor get_driv_action is select * from driver_action where 0=0;
cursor get_ccd is select * from contrib_cause_driver_cited where 0=0 order by
contrib_cause_driver_cited_id;
cursor get_cit is select * from citation where 0=0 order by citation_id;
driver_id number;
pers_id number;
ccd_id number;
cit_id number;

BEGIN

pers_id := 0;
for i in get_person loop
    pers_id := i.person_id;
end loop;

```

```

pers_id := pers_id + 1;

if (safel <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safel);
end if;
if (safe2 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe2);
end if;
if (safe3 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe3);
end if;
if (safe4 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe4);
end if;
if (safe5 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe5);
end if;
if (safe6 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe6);
end if;
if (safe7 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
        VALUES (pers_id, safe7);
end if;

driver_id := 0;
for i in get_driver loop
    driver_id := i.driver_id;
end loop;
driver_id := driver_id + 1;

INSERT INTO driver
--      (column names)
VALUES (driver_id, sex, residence, age, ejected, inj_sev, defect, bac,
und_inf, pers_id);

ccd_id := 0;
for i in get_ccd loop
    ccd_id := i.contrib_cause_driver_cited_id;
end loop;
ccd_id := ccd_id + 1;
if (ccd1 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd1);
    ccd_id := ccd_id + 1;
end if;
if (ccd2 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd2);
    ccd_id := ccd_id + 1;
end if;
if (ccd3 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,

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```

        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd3);
        ccd_id := ccd_id + 1;
end if;
if (ccd4 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd4);
        ccd_id := ccd_id + 1;
end if;
if (ccd5 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd5);
        ccd_id := ccd_id + 1;
end if;
if (ccd6 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd6);
        ccd_id := ccd_id + 1;
end if;
if (ccd7 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd7);
        ccd_id := ccd_id + 1;
end if;
if (ccd8 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd8);
        ccd_id := ccd_id + 1;
end if;
if (ccd9 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd9);
        ccd_id := ccd_id + 1;
end if;
if (ccd10 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd10);
        ccd_id := ccd_id + 1;
end if;
if (ccd11 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd11);
        ccd_id := ccd_id + 1;
end if;
if (ccd12 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd12);
        ccd_id := ccd_id + 1;
end if;
if (ccd13 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)

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```

VALUES (ccd_id, driver_id, ccd13);
ccd_id := ccd_id + 1;
end if;
if (ccd14 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd14);
ccd_id := ccd_id + 1;
end if;
if (ccd15 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd15);
ccd_id := ccd_id + 1;
end if;
if (ccd16 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd16);
ccd_id := ccd_id + 1;
end if;
if (ccd17 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd17);
ccd_id := ccd_id + 1;
end if;
if (ccd18 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd18);
ccd_id := ccd_id + 1;
end if;
if (ccd19 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd19);
ccd_id := ccd_id + 1;
end if;
if (ccd20 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd20);
ccd_id := ccd_id + 1;
end if;
if (ccd21 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd21);
ccd_id := ccd_id + 1;
end if;
if (ccd22 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd22);
ccd_id := ccd_id + 1;
end if;
if (ccd23 <> 'x') then
INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
driver_id, contrib_cause_driver_id)
VALUES (ccd_id, driver_id, ccd23);

```

```

        ccd_id := ccd_id + 1;
end if;
if (ccd24 <> 'x') then
    INSERT INTO contrib_cause_driver_cited (contrib_cause_driver_cited_id,
        driver_id, contrib_cause_driver_id)
        VALUES (ccd_id, driver_id, ccd24);
    ccd_id := ccd_id + 1;
end if;

cit_id := 0;
for i in get_cit loop
    cit_id := i.citation_id;
end loop;
cit_id := cit_id + 1;
if (cit1 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit1);
    cit_id := cit_id + 1;
end if;
if (cit2 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit2);
    cit_id := cit_id + 1;
end if;
if (cit3 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit3);
    cit_id := cit_id + 1;
end if;
if (cit4 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit4);
    cit_id := cit_id + 1;
end if;
if (cit5 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit5);
    cit_id := cit_id + 1;
end if;
if (cit6 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit6);
    cit_id := cit_id + 1;
end if;
if (cit7 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit7);
    cit_id := cit_id + 1;
end if;
if (cit8 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit8);
    cit_id := cit_id + 1;
end if;
if (cit9 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)
        VALUES (cit_id, driver_id, cit9);
    cit_id := cit_id + 1;
end if;
if (cit10 <> 'x') then
    INSERT INTO citation (citation_id, driver_id, citation_name_id)

```

```

        VALUES (cit_id, driver_id, cit10);
        cit_id := cit_id + 1;
    end if;
    if (cit11 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit11);
        cit_id := cit_id + 1;
    end if;
    if (cit12 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit12);
        cit_id := cit_id + 1;
    end if;
    if (cit13 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit13);
        cit_id := cit_id + 1;
    end if;
    if (cit14 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit14);
        cit_id := cit_id + 1;
    end if;
    if (cit15 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit15);
        cit_id := cit_id + 1;
    end if;
    if (cit16 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit16);
        cit_id := cit_id + 1;
    end if;
    if (cit17 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit17);
        cit_id := cit_id + 1;
    end if;
    if (cit18 <> 'x') then
        INSERT INTO citation (citation_id, driver_id, citation_name_id)
            VALUES (cit_id, driver_id, cit18);
        cit_id := cit_id + 1;
    end if;

    for i in get_driv_action loop
        if (i.driver_action_id = driv_action) then
            if (i.driver_action_value <> 'PHANTOM') and (i.driver_action_value <>
'HIT AND RUN') then
                attenuator_www.http.p('<br>');
                attenuator_www.http.p('New rows written to database. Continue
with Vehicle data.<br>');
            else
                attenuator_www.http.p('<br>');
                attenuator_www.http.p('New rows written to database. Phantom or
Hit and run Vehicle---enter any available vehicle <br>');
                attenuator_www.http.p('data---Vehicle Results data will not be
entered into the database for a Phantom vehicle.<br>');
            end if;
        end if;
    end loop;

```

```
attenuator_www.enter_data.new_vehicle (last, driver_id, driv_action,
accid_id2);
```

```
END input_driver;
```

```
PROCEDURE input_veh_perf
(accid_id2 IN number,
driver_id2 IN number,
driv_action IN number,
make IN number,
type IN number,
use IN number,
sp_funct IN number,
defect IN number,
trailer IN number,
direc IN number,
veh_move IN number,
est_speed IN number,
imp_pt_atten IN number,
imp_pt_veh IN number,
rear IN char,
pre_im_ang IN number,
post_im_ang IN number,
prev_imp IN char,
sec_imp IN char,
haz_imp IN number,
orient IN number,
stop_place IN number,
stop_mode IN number,
spin_behavior IN number,
dist_long IN number,
dist_lat IN number,
num_lanes IN number,
snagging IN number,
pocketing IN number,
spearing IN number,
overriding IN number,
underriding IN number,
deform IN number,
rep_cost_veh IN number,
dam1 IN char,
dam2 IN char,
dam3 IN char,
dam4 IN char,
dam5 IN char,
dam6 IN char,
dam7 IN char,
dam8 IN char,
dam9 IN char,
dam10 IN char,
dam11 IN char,
dam12 IN char,
dam13 IN char,
dam14 IN char,
dam15 IN char,
dam16 IN char,
dam17 IN char,
dam18 IN char,
dam19 IN char,
dam20 IN char,
```

```

dam21 IN char,
dam22 IN char,
dam23 IN char,
last IN char)

IS

cursor get_veh is select * from vehicle where 0=0 order by vehicle_id;
cursor get_veh_res is select * from vehicle_results where 0=0 order by
vehicle_results_id;
cursor get_driv_action is select * from driver_action where 0=0;
cursor get_dam_rec is select * from vehicle_damage_received where 0=0 order
by damage_received_id;
dam_id number;
veh_id number;
veh_res_id number;

BEGIN

veh_id := 0;
for i in get_veh loop
    veh_id := i.vehicle_id;
end loop;
veh_id := veh_id + 1;

veh_res_id := 0;
for i in get_veh_res loop
    veh_res_id := i.vehicle_results_id;
end loop;
veh_res_id := veh_res_id + 1;

dam_id := 0;
for i in get_dam_rec loop
    dam_id := i.damage_received_id;
end loop;
dam_id := dam_id + 1;

INSERT INTO vehicle
(VEHICLE_ID, DRIVER_ACTION_ID, VEHICLE_MAKE_ID, VEHICLE_TYPE_ID,
VEHICLE_USE_ID,
VEHICLE_SPECIAL_FUNCTION_ID, VEHICLE_DEFECT_ID, TRAILER_ID, DIRECTION_ID,
VEHICLE_MOVEMENT_ID, ESTIMATED_SPEED, PRE_IMPACT_ANGLE_ID, REAR_IMPACT,
IMPACT_POINT_ATTEN_ID, IMPACT_POINT_VEHICLE_ID, DRIVER_ID, ACCIDENT_ID,
PRIOR_IMPACT)
VALUES (veh_id, driv_action, make, type, use, sp_funct, defect, trailer,
direc,
veh_move, est_speed, pre_im_ang, rear, imp_pt_atten, imp_pt_veh,
driver_id2, accid_id2,
prev_imp);

for i in get_driv_action loop
    if (i.driver_action_id = driv_action) then
        if (i.driver_action_value = 'PHANTOM') then
            if (last = 'NO') then
                attenuator_www.http.p('<br>');
                attenuator_www.http.p('New rows written to database. Continue
with next vehicle. <br>');
                attenuator_www.enter_data.new_driver (accid_id2);
            else
                attenuator_www.http.p('<br>');
                attenuator_www.http.p('New rows written to database. <br>');
            end if;
        end if;
    end if;
end loop;

```



```

attenuator_www.enter_data.main;
end if;
else
  if (dam1 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam1, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam2 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam2, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam3 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam3, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam4 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam4, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam5 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam5, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam6 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam6, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam7 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam7, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam8 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam8, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam9 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam9, veh_id);
    dam_id := dam_id + 1;
  end if;
  if (dam10 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
      vehicle_id) VALUES (dam_id, dam10, veh_id);

```

```

dam_id := dam_id + 1;
end if;
if (dam11 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam11, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam12 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam12, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam13 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam13, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam14 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam14, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam15 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam15, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam16 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam16, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam17 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam17, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam18 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam18, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam19 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam19, veh_id);
    dam_id := dam_id + 1;
end if;
if (dam20 <> 'x') then
    INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
        vehicle_id) VALUES (dam_id, dam20, veh_id);
    dam_id := dam_id + 1;

```

```

        end if;
        if (dam21 <> 'x') then
            INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
                vehicle_id) VALUES (dam_id, dam21, veh_id);
            dam_id := dam_id + 1;
        end if;
        if (dam22 <> 'x') then
            INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
                vehicle_id) VALUES (dam_id, dam22, veh_id);
            dam_id := dam_id + 1;
        end if;
        if (dam23 <> 'x') then
            INSERT INTO vehicle_damage_received (damage_received_id,
point_vehicle_id,
                vehicle_id) VALUES (dam_id, dam23, veh_id);
            dam_id := dam_id + 1;
        end if;

        INSERT INTO vehicle_results
--      (column names)
        VALUES (veh_res_id, veh_id, haz_imp, orient, stop_place,
stop_mode, spin_behavior,
        snagging, pocketing, spearing, overriding, underriding,
deform, num_lanes,
        post_im_ang, rep_cost_veh, dist_long, dist_lat, sec_imp);

        if (i.driver_action_value = 'HIT AND RUN') then
            attenuator_www.http.p('<br>');
            attenuator_www.http.p('New rows written to database. Continue
with next vehicle. <br>');
            attenuator_www.enter_data.new_driver (accid_id2);
        else
            attenuator_www.http.p('<br>');
            attenuator_www.http.p('New rows written to database. Continue
with Passenger data.<br>');
            attenuator_www.enter_data.new_passenger (accid_id2, veh_id,
last);
        end if;
    end if;
end if;
end loop;

END input_veh_perf;

PROCEDURE input_passenger
(accid_id2 IN number,
veh_id2 IN number,
last IN char,
no_pass IN char,
age IN number,
loc_car IN number,
ejected IN number,
inj_sev IN number,
safel IN char,
safe2 IN char,
safe3 IN char,
safe4 IN char,
safe5 IN char,
safe6 IN char,

```

```

safe7 IN char,
last_pass IN char
)

IS

cursor get_pass is select * from passenger where 0=0 order by passenger_id;
cursor get_person is select * from safety_device_used where 0=0 order by
person_id;
pass_id number;
pers_id number;

BEGIN

if (no_pass = 'true') then
  if (last = 'NO') then
    attenuator_www.http.p('<br>');
    attenuator_www.http.p('No passenger data written to database.
Continue with next vehicle. <br>');
    attenuator_www.enter_data.new_driver (accid_id2);
  else
    attenuator_www.http.p('<br>');
    attenuator_www.http.p('No passenger data written to database. <br>');
    attenuator_www.enter_data.main;
  end if;
else
  pers_id := 0;
  for i in get_person loop
    pers_id := i.person_id;
  end loop;
  pers_id := pers_id + 1;

  if (safe1 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe1);
  end if;
  if (safe2 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe2);
  end if;
  if (safe3 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe3);
  end if;
  if (safe4 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe4);
  end if;
  if (safe5 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe5);
  end if;
  if (safe6 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe6);
  end if;
  if (safe7 <> 'x') then
    INSERT INTO safety_device_used (person_id, safety_device_id)
      VALUES (pers_id, safe7);
  end if;
end if;

```

```

pass_id := 0;
for i in get_pass loop
    pass_id := i.passenger_id;
end loop;
pass_id := pass_id + 1;

INSERT INTO passenger
--      (column names)
VALUES (pass_id, age, ejected, inj_sev, loc_car, veh_id2, pers_id);
if (last_pass = 'NO') then
    attenuator_www.http.p('<br>');
    attenuator_www.http.p('New rows written to database. Continue with
next passenger. <br>');
    attenuator_www.enter_data.subs_passenger (accid_id2, veh_id2, last);
else
    if (last = 'NO') then
        attenuator_www.http.p('<br>');
        attenuator_www.http.p('New rows written to database. Continue
with next vehicle. <br>');
        attenuator_www.enter_data.new_driver (accid_id2);
    else
        attenuator_www.http.p('<br>');
        attenuator_www.http.p('New rows written to database. <br>');
        attenuator_www.enter_data.main;
    end if;
end if;
end if;

END input_passenger;

END;
```

Appendix F: Application Programs—Reports

Appendix F-1: ATTENUATOR_WWW.REPORTS

```

Package Body                                REPORTS
IS

PROCEDURE main
IS
type varray_char40 is table of char(40) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'Attenuator inventory data';
actions(2) := 'Accident data: Summary reports';
actions(3) := 'Accident data: Detail reports';
actions(4) := 'Inspection data';
actions(5) := 'Return to main menu';

html_functions.html_header('Data Reports Page');
htp.p('<h1>Choose a Report Category:</h1>');

htp.tableOpen;
htp.formOpen('/owa_att/owa/attenuator_www.reports.actions');

    htp.p('<tr><td>Category</td><td>');
    htp.formSelectOpen('action_in');
    for r in 1..5 loop
        htp.formSelectOption(actions(r),',','value="'||r||'"');
    end loop;
    htp.formSelectClose;
    htp.p('</td></tr>');

    htp.p('<tr><td colspan="2">'||htf.formSubmit(',','Enter')||'</td></tr>');
    htp.formClose;
    htp.tableClose;

html_functions.html_footer;
END main;

PROCEDURE actions
(action_in IN number)
IS

BEGIN

    if (action_in = 1) then
        attenuator_www.reports.atten_rpt;
    elsif (action_in = 2) then
        attenuator_www.reports.accid_sum_rpt;
    elsif (action_in = 3) then
        attenuator_www.reports.accid_det_rpt;
    elsif (action_in = 4) then
        attenuator_www.reports.insp_rpt;
    elsif (action_in = 5) then
        attenuator_www.main.main_window;
    else
        attenuator_www.main.main_window;

```

```

        end if;

    END actions;

PROCEDURE atten_rpt
IS
type varray_char40 is table of char(50) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'Summary Report: Attenuators by District';
actions(2) := 'Summary Report: Attenuators by County';
actions(3) := 'Summary Report: Attenuators by Type';
actions(4) := 'Summary Report: Attenuators by Type and District';
actions(5) := 'Summary Report: Attenuators by Work Zone Use';
actions(6) := 'Detail Report: Attenuators by District';
actions(7) := 'Detail Report: Search by Various Characteristics';
actions(8) := 'Return to reports menu';

html_functions.html_header('Attenuator Reports Page');
htp.p('<h1>Choose a Category:</h1>');

htp.tableOpen;
htp.formOpen('/owa_att/owa/attenuator_www.reports.atten_act');

    htp.p('<tr><td>Category</td><td>');
    htp.formSelectOpen('action_in');
        for r in 1..8 loop
            htp.formSelectOption(actions(r), '|', 'value="||r||"');
        end loop;
    htp.formSelectClose;
    htp.p('</td></tr>');

    htp.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    htp.formClose;
    htp.tableClose;

html_functions.html_footer;
END atten_rpt;

PROCEDURE atten_act
(action_in IN number)
IS

BEGIN

    if (action_in = 1) then
        attenuator_www.reports.s_att_dis;
    elsif (action_in = 2) then
        attenuator_www.reports.s_att_count;
    elsif (action_in = 3) then
        attenuator_www.reports.s_att_type;
    elsif (action_in = 4) then
        attenuator_www.reports.s_att_typ_dis;
    elsif (action_in = 5) then
        attenuator_www.reports.s_att_wz;
    elsif (action_in = 6) then
        attenuator_www.reports.d_att_dis;
    elsif (action_in = 7) then
        attenuator_www.reports.d_att_char;

```

```

        elsif (action_in = 8) then
            attenuator_www.reports.main;
        else
            attenuator_www.reports.main;
        end if;

    END atten_act;

PROCEDURE insp_rpt
IS
type varray_char40 is table of char(65) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'Summary Report: Condition after Inspection';
actions(2) := 'Detail Report: Inspections by Attenuator Type and Location';
actions(3) := 'Detail Report: Inspections by Inspection Characteristic';
actions(4) := 'Return to reports menu';

html_functions.html_header('Attenuator Reports Page');
htp.p('<h1>Choose a Category:</h1>');

htp.tableOpen;
htp.formOpen('/owa_att/owa/attenuator_www.reports.insp_act');

    htp.p('<tr><td>Category</td><td>');
    htp.formSelectOpen('action_in');
        for r in 1..4 loop
            htp.formSelectOption(actions(r), '|', 'value="||r||"');
        end loop;
    htp.formSelectClose;
    htp.p('</td></tr>');

    htp.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    htp.formClose;
    htp.tableClose;

html_functions.html_footer;
END insp_rpt;

PROCEDURE insp_act
(action_in IN number)
IS

BEGIN

    if (action_in = 1) then
        attenuator_www.insp_report.s_insp;
    elsif (action_in = 2) then
        attenuator_www.insp_report.d_insp_atten;
    elsif (action_in = 3) then
        attenuator_www.insp_report.d_insp;
    else
        attenuator_www.reports.main;
    end if;

END insp_act;

PROCEDURE accid_sum_rpt
IS

```



```

type varray_char40 is table of char(55) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'Summary Reports: Accidents by Location and Atten. Type';
actions(2) := 'Summary Reports: Accidents by Cause';
actions(3) := 'Summary Reports: Accidents by Impact Characteristic';
actions(4) := 'Summary Reports: Accidents by Attenuator Result';
actions(5) := 'Summary Reports: Accidents by Vehicle Result';
actions(6) := 'Summary Reports: Accidents by Occupant Result';
actions(7) := 'Summary Reports: Work Zone Accidents by Outcome';
actions(8) := 'Return to reports menu';

html_functions.html_header('Accident Summary Reports Page');
http.p('<h1>Choose a Category:</h1>');

http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_www.reports.accid_sum_act');

    http.p('<tr><td>Category</td><td>');
    http.formSelectOpen('action_in');
    for r in 1..8 loop
        http.formSelectOption(actions(r),'', 'value="'||r||"'');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    http.formClose;
    http.tableClose;

html_functions.html_footer;
END accid_sum_rpt;

PROCEDURE accid_sum_act
(action_in IN number)
IS

BEGIN

    if (action_in = 1) then
        attenuator_www.acc_reports.s_acc_dis;
    elsif (action_in = 2) then
        attenuator_www.acc_reports.s_acc_cause;
    elsif (action_in = 3) then
        attenuator_www.acc_reports.s_acc_imp;
    elsif (action_in = 4) then
        attenuator_www.acc_reports.s_att_res;
    elsif (action_in = 5) then
        attenuator_www.acc_reports.s_veh_res;
    elsif (action_in = 6) then
        attenuator_www.acc_reports_2.s_occ_res;
    elsif (action_in = 7) then
        attenuator_www.acc_reports_2.s_wz_res;
    elsif (action_in = 8) then
        attenuator_www.reports.main;
    else
        attenuator_www.reports.main;
    end if;

```

```

    END accid_sum_act;

PROCEDURE accid_det_rpt
IS
type varray_char40 is table of char(60) index by binary_integer;
actions varray_char40;

BEGIN

actions(1) := 'Detail Report:  Accidents by Accident Characteristic';
actions(2) := 'Detail Report:  Accidents by Attenuator Type and Location';
actions(3) := 'Detail Report:  Accidents by Impact Characteristic';
actions(4) := 'Detail Report:  Accidents by Attenuator Result';
actions(5) := 'Detail Report:  Accidents by Vehicle Result';
actions(6) := 'Detail Report:  Accidents by Occupant Result';
actions(7) := 'Detail Report:  Accidents by Contributing Cause, Driver';
actions(8) := 'Return to reports menu';

html_functions.html_header('Accident Detail Reports Page');
http.p('<h1>Choose a Category:</h1>');

http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_www.reports.accid_det_act');

    http.p('<tr><td>Category</td><td>');
    http.formSelectOpen('action_in');
    for r in 1..8 loop
        http.formSelectOption(actions(r), '|', 'value="||r||"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');

    http.p('<tr><td colspan="2">||htf.formSubmit('','Enter')||</td></tr>');
    http.formClose;
    http.tableClose;

html_functions.html_footer;
END accid_det_rpt;

PROCEDURE accid_det_act
(action_in IN number)
IS

BEGIN

    if (action_in = 1) then
        attenuator_www.reports.d_acc;
    elsif (action_in = 2) then
        attenuator_www.reports.d_acc_loc;
    elsif (action_in = 3) then
        attenuator_www.reports.d_acc_imp;
    elsif (action_in = 4) then
        attenuator_www.reports.d_att_res;
    elsif (action_in = 5) then
        attenuator_www.reports.d_veh_res;
    elsif (action_in = 6) then
        attenuator_www.reports.d_occ_res;
    elsif (action_in = 7) then
        attenuator_www.reports.d_cont_cause;
    elsif (action_in = 8) then
        attenuator_www.reports.main;
    end if;

```

```

        else
            attenuator_www.reports.main;
        end if;

    END accid_det_act;

--
*****
**
--Attenuator Reports
--
*****
**

PROCEDURE s_att_dis
IS
cursor get_results is select county.district, attenuator.county_id,
county.county,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_name,
model.model_number,
attenuator.remarks
from attenuator_apps.attenuator, attenuator_apps.county, attenuator_apps.model,
attenuator_apps.attenuator_type
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by county.district, county.county_id, attenuator.section;

type varray_num is table of number(4,0) index by binary_integer;
dis_count   varray_num;
i           number;
total       number;

BEGIN

for i in 1..8 loop
    dis_count(i) := 0;
end loop;
total := 0;
for r in get_results loop
    if (r.district = 1) then
        dis_count(1) := dis_count(1) + 1;
        total := total + 1;
    end if;
    if (r.district = 2) then
        dis_count(2) := dis_count(2) + 1;
        total := total + 1;
    end if;
    if (r.district = 3) then
        dis_count(3) := dis_count(3) + 1;
        total := total + 1;
    end if;
    if (r.district = 4) then
        dis_count(4) := dis_count(4) + 1;
        total := total + 1;
    end if;
    if (r.district = 5) then
        dis_count(5) := dis_count(5) + 1;
        total := total + 1;
    end if;
end if;

```

```

    if (r.district = 6) then
        dis_count(6) := dis_count(6) + 1;
        total := total + 1;
    end if;
    if (r.district = 7) then
        dis_count(7) := dis_count(7) + 1;
        total := total + 1;
    end if;
    if (r.district = 8) then
        dis_count(8) := dis_count(8) + 1;
        total := total + 1;
    end if;
end loop;

    html_functions.html_header('Summary Report: Attenuators by District');
    http.p('<br>');
    http.p('<h1>Summary Report: Attenuators by District</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=300>');
    http.p('<tr><td><font size=5>District</td><td><font size=5>Number of  
Attenuators</td></tr>');

    for i in 1..7 loop
        http.tablerowopen;
        http.tabledata(i);
        http.tabledata(dis_count(i));
        http.tablerowclose;
    end loop;
    http.tablerowopen;
    http.tabledata('<b>Total</b>');
    http.tabledata('<b>'||total||'</b>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    http.p('**Attenuators on Turnpike (District 8) are counted with the  
surrounding county and district.<br>');
    http.p('<br>');
    html_functions.html_footer;

END s_att_dis;

PROCEDURE s_att_count
IS
cursor get_results is select county.district, attenuator.county_id,
county.county,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_name,
model.model_number,
attenuator.remarks
from attenuator_apps.attenuator, attenuator_apps.county, attenuator_apps.model,
attenuator_apps.attenuator_type
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by county.district, county.county_id, attenuator.section;
cursor get_county is select * from attenuator_apps.county order by county_id;

type varray_num is table of number(4,0) index by binary_integer;
atten_ct      varray_num;
i              number;

```

```

county_id    number;
total        number;

BEGIN

for i in 0..95 loop
    atten_ct(i) := 0;
end loop;
total := 0;
for r in get_results loop
    county_id := r.county_id;
    atten_ct(county_id) := atten_ct(county_id) + 1;
    total := total + 1;
end loop;

    html_functions.html_header('Summary Report: Attenuators by County');
    http.p('<br>');
    http.p('<h1>Summary Report: Attenuators by County</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=400>');
    http.p('<tr><td><font size=5>County ID</td><td><font size=5>County
Name</td><td><font size=5>Number of Attenuators</td></tr>');

    for r in get_county loop
        if (r.county <> 'TURNPIKE') then
            http.tablerowopen;
            http.tabledata(r.county_id);
            i := r.county_id;
            http.tabledata(r.county);
            http.tabledata(atten_ct(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    html_functions.html_footer;

END s_att_count;

PROCEDURE s_att_type
IS
cursor get_results is select county.district, attenuator.county_id,
county.county,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_id,
attenuator_type.attenuator_type_name
from attenuator_apps.attenuator, attenuator_apps.county, attenuator_apps.model,
attenuator_apps.attenuator_type
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by county.district, county.county_id, attenuator.section;
cursor get_type is select * from attenuator_apps.attenuator_type order by
attenuator_type_name;

type varray_num is table of number(4,0) index by binary_integer;

```

```

    atten_ct      varray_num;
    i              number;
    type_id        number;
    total          number;

BEGIN

for r in get_type loop
    i := r.attenuator_type_id;
    atten_ct(i) := 0;
end loop;
total := 0;
for r in get_results loop
    type_id := r.attenuator_type_id;
    atten_ct(type_id) := atten_ct(type_id) + 1;
    total := total + 1;
end loop;

    html_functions.html_header('Summary Report: Attenuators by Type');
    http.p('<br>');
    http.p('<h1>Summary Report: Attenuators by Type</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Type</td><td><font size=5>Number of  
Attenuators</td></tr>');

    for r in get_type loop
        http.tablerowopen;
        i := r.attenuator_type_id;
        http.tabledata(r.attenuator_type_name);
        http.tabledata(atten_ct(i));
        http.tablerowclose;
    end loop;
    http.tabledata('<b>Total</b>');
    http.tabledata('<b>'||total||'</b>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    html_functions.html_footer;

END s_att_type;

PROCEDURE s_att_typ_dis
IS
cursor get_results is select county.district, attenuator.county_id,
county.county,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_name,
attenuator_type.attenuator_type_id
from attenuator_apps.attenuator, attenuator_apps.county, attenuator_apps.model,
attenuator_apps.attenuator_type
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by county.district, county.county_id, attenuator.section;
cursor get_type is select * from attenuator_apps.attenuator_type order by
attenuator_type_name;

type varray_num is table of number(4,0) index by binary_integer;
atten_ct1      varray_num;

```

```

    atten_ct2      varray_num;
    atten_ct3      varray_num;
    atten_ct4      varray_num;
    atten_ct5      varray_num;
    atten_ct6      varray_num;
    atten_ct7      varray_num;
    atten_ct8      varray_num;
    dis_count      varray_num;
    i              number;
    type_id        number;
    total          number;

BEGIN

for i in 1..8 loop
    dis_count(i) := 0;
end loop;
total := 0;
for r in get_results loop
    if (r.district = 1) then
        dis_count(1) := dis_count(1) + 1;
        total := total + 1;
    end if;
    if (r.district = 2) then
        dis_count(2) := dis_count(2) + 1;
        total := total + 1;
    end if;
    if (r.district = 3) then
        dis_count(3) := dis_count(3) + 1;
        total := total + 1;
    end if;
    if (r.district = 4) then
        dis_count(4) := dis_count(4) + 1;
        total := total + 1;
    end if;
    if (r.district = 5) then
        dis_count(5) := dis_count(5) + 1;
        total := total + 1;
    end if;
    if (r.district = 6) then
        dis_count(6) := dis_count(6) + 1;
        total := total + 1;
    end if;
    if (r.district = 7) then
        dis_count(7) := dis_count(7) + 1;
        total := total + 1;
    end if;
    if (r.district = 8) then
        dis_count(8) := dis_count(8) + 1;
        total := total + 1;
    end if;
end loop;

for r in get_type loop
    i := r.attenuator_type_id;
    atten_ct1(i) := 0;
    atten_ct2(i) := 0;
    atten_ct3(i) := 0;
    atten_ct4(i) := 0;
    atten_ct5(i) := 0;
    atten_ct6(i) := 0;

```

```

        atten_ct7(i) := 0;
        atten_ct8(i) := 0;
end loop;
total := 0;
for r in get_results loop
    type_id := r.attenuator_type_id;
    if (r.district = 1) then
        atten_ct1(type_id) := atten_ct1(type_id) + 1;
        total := total + 1;
    elsif (r.district = 2) then
        atten_ct2(type_id) := atten_ct2(type_id) + 1;
        total := total + 1;
    elsif (r.district = 3) then
        atten_ct3(type_id) := atten_ct3(type_id) + 1;
        total := total + 1;
    elsif (r.district = 4) then
        atten_ct4(type_id) := atten_ct4(type_id) + 1;
        total := total + 1;
    elsif (r.district = 5) then
        atten_ct5(type_id) := atten_ct5(type_id) + 1;
        total := total + 1;
    elsif (r.district = 6) then
        atten_ct6(type_id) := atten_ct6(type_id) + 1;
        total := total + 1;
    elsif (r.district = 7) then
        atten_ct7(type_id) := atten_ct7(type_id) + 1;
        total := total + 1;
    elsif (r.district = 8) then
        atten_ct8(type_id) := atten_ct8(type_id) + 1;
        total := total + 1;
    end if;
end loop;

    html_functions.html_header('Summary Report: Attenuators by Type and
District');
    http.p('<br>');
    http.p('<h1>Summary Report: Attenuators by Type and District</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>District</td><td><font
size=5>Type</td><td><font size=5>Number of Attenuators</td></tr>');

--District = 1
    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct1(i) <> 0) then
            http.tablerowopen;
            http.tabledata('1');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct1(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 1
</b></td><td><b>'||dis_count(1)||'</b></td></tr>');
    http.tablerowclose;

    for r in get_type loop
        i := r.attenuator_type_id;

```



```

        if (atten_ct2(i) <> 0) then
            http.tablerowopen;
            http.tabledata('2');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct2(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 2
</b></td><td><b>' || dis_count(2) || '</b></td></tr>');
    http.tablerowclose;

    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct3(i) <> 0) then
            http.tablerowopen;
            http.tabledata('3');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct3(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 3
</b></td><td><b>' || dis_count(3) || '</b></td></tr>');
    http.tablerowclose;

    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct4(i) <> 0) then
            http.tablerowopen;
            http.tabledata('4');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct4(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 4
</b></td><td><b>' || dis_count(4) || '</b></td></tr>');
    http.tablerowclose;

    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct5(i) <> 0) then
            http.tablerowopen;
            http.tabledata('5');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct5(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 5
</b></td><td><b>' || dis_count(5) || '</b></td></tr>');
    http.tablerowclose;

    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct6(i) <> 0) then

```

```

        http.tablerowopen;
        http.tabledata('6');
        http.tabledata(r.attenuator_type_name);
        http.tabledata(atten_ct6(i));
        http.tablerowclose;
    end if;
end loop;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Number of Attenuators in District 6
</b></td><td><b>' || dis_count(6) || '</b></td></tr>');
http.tablerowclose;

for r in get_type loop
    i := r.attenuator_type_id;
    if (atten_ct7(i) <> 0) then
        http.tablerowopen;
        http.tabledata('7');
        http.tabledata(r.attenuator_type_name);
        http.tabledata(atten_ct7(i));
        http.tablerowclose;
    end if;
end loop;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Number of Attenuators in District 7
</b></td><td><b>' || dis_count(7) || '</b></td></tr>');
http.tablerowclose;

/*    for r in get_type loop
        i := r.attenuator_type_id;
        if (atten_ct8(i) <> 0) then
            http.tablerowopen;
            http.tabledata('8');
            http.tabledata(r.attenuator_type_name);
            http.tabledata(atten_ct8(i));
            http.tablerowclose;
        end if;
    end loop;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Number of Attenuators in District 8
</b></td><td><b>' || dis_count(8) || '</b></td></tr>');
    http.tablerowclose;
*/

    http.tablerowopen;
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    html_functions.html_footer;

END s_att_typ_dis;

PROCEDURE s_att_wz
IS
cursor get_results is select attenuator.in_work_zone, attenuator.county_id,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_id,
attenuator_type.attenuator_type_name
from attenuator_apps.attenuator, attenuator_apps.model,

```

```

attenuator_apps.attenuator_type
where attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by attenuator.in_work_zone, attenuator_type.attenuator_type_name;
cursor get_type is select * from attenuator_apps.attenuator_type order by
attenuator_type_name;

```

```

cursor get_results_2 is select county.county, attenuator.in_work_zone,
attenuator.county_id, attenuator.section, attenuator.sub_section,
attenuator.state_road_number,
attenuator.attenuator_id, attenuator_type.attenuator_type_id,
attenuator_type.attenuator_type_name
from attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.county
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by attenuator.in_work_zone, attenuator.county_id;

```

```

type varray_num is table of number(4,0) index by binary_integer;
acc_ct          varray_num;
i               number(1,0);
total           number;
total_res       number;
total_type      number;
last_id         number;
last_val        char(60);
last_name       char(20);
last_co         char(30);

```

```

BEGIN

```

```

    http_functions.html_header('Summary Report: Attenuators by Work Zone Use');
    http.p('<br>');
    http.p('<h1>Summary Report: Attenuators by Work Zone Use and Type</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>In
Work Zone?</td><td><font size=5>Number of Attenuators</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_results loop
        if (i = 1) then
            last_val := r.in_work_zone;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.in_work_zone) or (last_name <> r.attenuator_type_name)
then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_val <> r.in_work_zone) then
                http.tablerowopen;
                if (last_val = 'YES') or (last_val = 'yes') then

```

```

        http.p('<tr><td colspan="2"><b>Total Number of Attenuators In
Work Zones</b></td><td><b>'||total_type||'</b></td></tr>');
    else
        http.p('<tr><td colspan="2"><b>Total Number of Attenuators Not
In Work Zones</b></td><td><b>'||total_type||'</b></td></tr>');
        end if;
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.in_work_zone;
last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
if (last_val = 'YES') or (last_val = 'yes') then
    http.p('<tr><td colspan="2"><b>Total Number of Attenuators In Work
Zones</b></td><td><b>'||total_type||'</b></td></tr>');
else
    http.p('<tr><td colspan="2"><b>Total Number of Attenuators Not In Work
Zones</b></td><td><b>'||total_type||'</b></td></tr>');
end if;
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Attenuators by Work Zone Use and County</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>County ID</td><td><font size=5>County
Name</td><td><font size=5>In Work Zone?</td><td><font size=5>Number of
Attenuators</td></tr>');
total_type := 0;
i := 1;
for r in get_results_2 loop
    if (i = 1) then
        last_val := r.in_work_zone;
        last_name := r.county_id;
        last_co := r.county;
        i := 2;
    end if;
    if (last_val <> r.in_work_zone) or (last_name <> r.county_id) then
        http.tablerowopen;

```

```

        http.tabledata(last_name);
        http.tabledata(last_co);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_val <> r.in_work_zone) then
            http.tablerowopen;
            if (last_val = 'YES') or (last_val = 'yes') then
                http.p('<tr><td colspan="3"><b>Total Number of Attenuators In
Work Zones</b></td><td><b>'||total_type||'</b></td></tr>');
            else
                http.p('<tr><td colspan="3"><b>Total Number of Attenuators Not
In Work Zones</b></td><td><b>'||total_type||'</b></td></tr>');
            end if;
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_val := r.in_work_zone;
    last_name := r.county_id;
    last_co := r.county;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_co);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
if (last_val = 'YES') or (last_val = 'yes') then
    http.p('<tr><td colspan="3"><b>Total Number of Attenuators In Work
Zones</b></td><td><b>'||total_type||'</b></td></tr>');
else
    http.p('<tr><td colspan="3"><b>Total Number of Attenuators Not In Work
Zones</b></td><td><b>'||total_type||'</b></td></tr>');
end if;
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Reflects only records in the database, that is, only Work Zone
attenuators which were involved in accidents.<br>');
html_functions.html_footer;

END s_att_wz;

PROCEDURE d_att_dis
IS
cursor get_results is select county.district, attenuator.county_id,
county.county,
attenuator.section, attenuator.sub_section, attenuator.state_road_number,

```

```

attenuator.attenuator_id, attenuator_type.attenuator_type_name,
model.model_number,
attenuator.remarks
from attenuator_apps.attenuator, attenuator_apps.county, attenuator_apps.model,
attenuator_apps.attenuator_type
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
order by county.district, county.county_id, attenuator.section;
total number;
dis_last number;
district number;

BEGIN
    html_functions.html_header('Detail Report: Attenuators by District');
    total := 0;
    http.p('<br>');
    http.p('<h1>Detail Report: Attenuators by District</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Dis.</td><td><font size=5>County
ID</td><td><font size=5>County</td><td><font size=5>Section</td><td><font
size=5>Sub sec.</td><td><font size=5>State Road</td><td><font size=5>Atten
ID</td>');
    http.p('<td><font size=5>Atten Type</td><td><font size=5>Model</td><td><font
size=5>Location</td></tr>');
    dis_last := 0;
    for r in get_results loop
        district := r.district;
        if (dis_last <> district) then
            http.tablerowopen;
            http.p('<tr><td colspan="9"><b>District ||district||
</b></td></tr>');
            http.tablerowclose;
            dis_last := district;
        end if;
        http.tablerowopen;
        http.tabledata(r.district);
        http.tabledata(r.county_id);
        http.tabledata(r.county);
        http.tabledata(r.section);
        http.tabledata(r.sub_section);
        http.tabledata(r.state_road_number);
        http.tabledata(r.attenuator_id);
        http.tabledata(r.attenuator_type_name);
        http.tabledata(r.model_number);
        http.tabledata(r.remarks);
        http.tablerowclose;
        total := total + 1;
    end loop;
    http.tableClose;
    http.p('<br>');
    html_functions.html_footer;

END d_att_dis;

PROCEDURE d_att_char
IS
cursor get_owner is select * from attenuator_apps.owner where 0=0;

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cursor get_county is select * from attenuator_apps.county where 0=0 order by
county;
cursor get_traf_dir is select * from attenuator_apps.direction where 0=0;
cursor get_status is select * from attenuator_apps.status where 0=0;
cursor get_loc_wrt_road is select * from attenuator_apps.location_wrt_road where
0=0;
cursor get_model_num is select distinct * from attenuator_apps.model where 0=0
order by model_number;
cursor get_sr_num is select distinct state_road_number from
attenuator_apps.attenuator order by state_road_number;
cursor get_atten_type is select * from attenuator_apps.attenuator_type order by
attenuator_type name;
type varray_char3 is table of char(3) index by binary_integer;
type varray_num is table of number(2,0) index by binary_integer;
boolean_descrip varray_char3;
large_atten varray_num;
atten_id      number;
i              number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Attenuator Type and
Location');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.atten_char');

    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1" >');
    http.tabledata('Attenuator ID Number');
        http.tabledata(htf.formText('atten_id', 10,10) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check1', 'no');

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2" >');
    http.tabledata('Year Installed (YYYY)');
        http.tabledata(htf.formText('inst_date', 5,5) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check2', 'no');

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
    http.tabledata('Maintenance Unit');
        http.tabledata(htf.formText('maint_unit', 5,5) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check3', 'no');

    http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
    http.p('<td>District</td><td>');
    http.formSelectOpen('district');

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        for r in 1..7 loop
            http.formSelectOption(r);
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check4', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
        http.p('<td>County</td><td>');
        http.formSelectOpen('county');
        for r in get_county loop
            http.formSelectOption(r.county||',
'||r.county_id,',',value="'||r.county_id||'");
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check5', 'no');

        http.tablerowopen;
        http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6" >');
        http.tabledata('Roadway ID (County,Section,Subsection)');
        http.tabledata(htf.formText('road_id', 10,10)||' </td></tr>');
        http.tablerowclose;
        http.formhidden('check6', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
></td>');
        http.p('<td>State Road Number</td><td>');
        http.formSelectOpen('sr_num');
        for r in get_sr_num loop
            http.formSelectOption(r.state_road_number);
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check7', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
></td>');
        http.p('<td>In Work Zone?</td><td>');
        http.formSelectOpen('work_zone');
        for r in 1..2 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check8', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9"
></td>');
        http.p('<td>Present Status</td><td>');
        http.formSelectOpen('status');
        for r in get_status loop

            http.formSelectOption(r.present_status,',',value="'||r.status_id||'");
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check9', 'no');

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```

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check10"
></td>');
        http.p('<td>Location With Respect to Road</td><td>');
        http.formSelectOpen('loc_road');
        for r in get_loc_wrt_road loop

            http.formSelectOption(r.location_wrt_road, '', 'value="" || r.location_wrt_road_
id || ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check10', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check11"
></td>');
        http.p('<td>Model Number</td><td>');
        http.formSelectOpen('model_num');
        for r in get_model_num loop
            http.formSelectOption(r.model_number);
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check11', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check12"
></td>');
        http.p('<td>Attenuator Type</td><td>');
        http.formSelectOpen('atten_type');
        for r in get_atten_type loop

            http.formSelectOption(r.attenuator_type_name, '', 'value="" || r.attenuator_type
_id || ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check12', 'no');

        http.tablerowopen;
        http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
        http.p('<tr><td colspan="3">**If no boxes are checked, data on all attenuators
is returned. This is NOT recommended, because of the number of
records.</td></tr>');
        http.tablerowclose;

        http.p('<tr><td>' || http.formSubmit('', 'Submit') || '</td><td>' || http.formReset ||
'</td></tr>');

        http.formClose;
        http.tableClose;

html_functions.html_footer;
END d_att_char;

PROCEDURE atten_head_print
(num_rec IN number)

```

```

IS
BEGIN
    html_functions.html_header('Detail Report: Attenuators by Search
Characteristics');
    http.p('<br>');
    http.p('<br>');
    http.p('<font size = 5><b>Total Number of Matching Records:
'||num_rec||'</b><br>');
    http.p('<h1>Detail Report: Attenuators Meeting Search Criteria</h1>');
END atten_head_print;

PROCEDURE atten_print
(atten_id IN char,
 road_id IN OUT number)
IS
found    number;
cursor get_atten is select * from attenuator_apps.attenuator where attenuator_id
= atten_id order by attenuator_id;
cursor get_model is select * from attenuator_apps.model where 0=0 order by
model_number;
cursor get_type is select * from attenuator_apps.attenuator_type where 0=0 order
by attenuator_type_id;
cursor get_owner is select * from attenuator_apps.owner where 0=0;
cursor get_county is select * from attenuator_apps.county where 0=0 order by
county;
cursor get_traf_dir is select * from attenuator_apps.direction where 0=0;
cursor get_status is select * from attenuator_apps.status where 0=0;
cursor get_loc_wrt_road is select * from attenuator_apps.location_wrt_road where
0=0;
BEGIN
    http.tableOpen;
    http.p('<br>');
    http.p('<br>');
    http.p('<hr>');
    http.p('<font size=5><b>Results for Attenuator Identification Number
'||atten_id||'</b><br>');
    http.p('<hr>');
    http.p('<hr>');
    http.p('<font size=5>Attenuator Details:<br>');
    http.p('<TABLE BORDER CELLPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Atten ID</td><td><font size=5>Model
Number</td><td><font size=5>Attenuator Type</td>');
    http.p('<td><font size=5>Owner</td><td><font size=5>Date
Installed</td><td><font size=5>Maintenance Unit</td><td><font
size=5>District</td>');

    for r in get_atten loop
        if (r.attenuator_id = atten_id) then
            http.tablerowopen;
            http.tabledata(atten_id);
            http.tabledata(r.model_number);
            found := 0;
            for q in get_model loop
                if (q.model_number = r.model_number) then
                    for p in get_type loop
                        if (p.attenuator_type_id = q.attenuator_type_id) then
                            http.tabledata(p.attenuator_type_name);
                            found := 1;
                            exit;
                        end if;
                    end loop;
                end loop;
            end loop;
        end if;
    end loop;

```

```

        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_owner loop
        if (r.owner_id = q.owner_id) then
            http.tabledata(q.owner_name);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tabledata(r.date_installed);
    http.tabledata(r.maint_unit);
    for q in get_county loop
        if (r.county_id = q.county_id) then
            http.tabledata(q.district);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tablerowclose;
    http.tablerowopen;
    http.p('<td><font size=5>County ID</td><td><font
size=5>County</td><td><font size=5>Section</td><td><font size=5>Sub
Section</td>');
    http.p('<td><font size=5>State Road</td><td><font size=5>US
Road</td><td><font size=5>Mile Post</td>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(r.county_id);
    for q in get_county loop
        if (r.county_id = q.county_id) then
            http.tabledata(q.county);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tabledata(r.section);
    http.tabledata(r.sub_section);
    http.tabledata(r.state_road_number);
    http.tabledata(r.us_road_number);
    http.tabledata(r.atten_mile_post);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<td><font size=5>Location wrt Road</td><td><font
size=5>Approaching Traffic</td><td><font size=5>Work Zone?</td>');

```

```

        http.p('<td><font size=5>Present Status</td><td colspan="4"><font
size=5>Remarks/Location</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_loc_wrt_road loop
            if (r.location_wrt_road_id = q.location_wrt_road_id) then
                http.tabledata(q.location_wrt_road);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        for q in get_traf_dir loop
            if (r.approach_traffic_id = q.direction_id) then
                http.tabledata(q.direction_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.in_work_zone);
        for q in get_status loop
            if (r.status_id = q.status_id) then
                http.tabledata(q.present_status);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.p('<td colspan="4">'||r.remarks||'</td>');
        road_id := r.roadway_id;
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END atten_print;

--
*****
**
--Inspection Detail Reports
--
*****
**

PROCEDURE inspec_head_print
    (num_rec IN number)
IS
BEGIN
    html_functions.html_header('Detail Report: Inspections by Search
Characteristics');

```

```

        http.p('<br>');
        http.p('<br>');
        http.p('<font size = 5><b>Total Number of Matching Records:
'|num_rec||'</b><br>');
        http.p('<h1>Detail Report: Inspections Meeting Search Criteria</h1>');
END inspec_head_print;

--
*****
**
--Accident Detail Reports
--
*****
**

PROCEDURE d_acc
IS
--cursor get_source is select * from attenuator_apps.data_source where 0=0;
--cursor get_road_side is select * from attenuator_apps.road_side where 0=0;
--cursor get_site_loc is select * from attenuator_apps.site_location where 0=0;
--cursor get_traf_cont is select * from attenuator_apps.traffic_control where
0=0;
cursor get_road_surf is select * from attenuator_apps.road_surface where 0=0;
cursor get_weather is select * from attenuator_apps.weather where 0=0;
cursor get_lighting is select * from attenuator_apps.lighting where 0=0;
cursor get_harm_event is select * from attenuator_apps.harmful_event where 0=0;
cursor get_ccenv is select * from attenuator_apps.contributing_cause_env where
0=0 order by contrib_cause_env_id;
cursor get_ccroad is select * from attenuator_apps.contributing_cause_road where
0=0 order by contrib_cause_road_id;
--cursor get_ped_act is select * from attenuator_apps.pedestrian_action where
0=0;
type varray_char3 is table of char(3) index by binary_integer;
i number;

BEGIN

html_functions.html_header('Detail Report: Accidents by Accident
Characteristic');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.accid_det');

        http.tablerowopen;
        http.tabledata('<b>Check?</b>');
        http.tabledata('<b>Data Field</b>');
        http.tabledata('<b>Constraint</b>');
        http.tablerowclose;

        http.tablerowopen;
        http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1" >');
        http.tabledata('Report Number');
        http.tabledata(htf.formText('report', 10,10) || ' </td></tr>');
        http.tablerowclose;
        http.formhidden('check1', 'no');

        http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
        http.p('<td>Road Surface</td><td>');
        http.formSelectOpen('road_surf');

```

```

        for r in get_road_surf loop

            http.formSelectOption(r.road_surface_value, '', 'value=""||r.road_surface_id||'');
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check2', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3"
></td>');
        http.p('<td>Weather During Accident</td><td>');
        http.formSelectOpen('weather');
        for r in get_weather loop

            http.formSelectOption(r.weather_value, '', 'value=""||r.weather_id||'');
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check3', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
        http.p('<td>Lighting During Accident</td><td>');
        http.formSelectOpen('lighting');
        for r in get_lighting loop

            http.formSelectOption(r.lighting_value, '', 'value=""||r.lighting_id||'');
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check4', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
        http.p('<td>First Harmful Event</td><td>');
        http.formSelectOpen('he1');
        for r in get_harm_event loop

            http.formSelectOption(r.harmful_event, '', 'value=""||r.harmful_event_id||'');
        ;
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check5', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6"
></td>');
        http.p('<td>Second Harmful Event</td><td>');
        http.formSelectOpen('he2');
        for r in get_harm_event loop

            http.formSelectOption(r.harmful_event, '', 'value=""||r.harmful_event_id||'');
        ;
        end loop;
        http.formSelectClose;
        http.tablerowclose;
        http.formhidden('check6', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
></td>');

```

```

http.p('<td>Contributing Cause, Environment</td><td>');
http.formSelectOpen('ccenv');
  for r in get_ccenv loop

    http.formSelectOption(r.contrib_cause_env_value,'','value="'||r.contrib_caus
e_env_id||'");
  end loop;
  http.formSelectClose;
  http.tablerowclose;
  http.formhidden('check7', 'no');

  http.tabldata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
></td>');
  http.p('<td>Contributing Cause, Roadway</td><td>');
  http.formSelectOpen('ccroad');
  for r in get_ccroad loop

    http.formSelectOption(r.contrib_cause_road_value,'','value="'||r.contrib_cau
se_road_id||'");
  end loop;
  http.formSelectClose;
  http.tablerowclose;
  http.formhidden('check8', 'no');

  http.tablerowopen;
  http.tabldata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9" >');
  http.tabldata('Number of Attenuator Impacts');
  http.tabldata(htf.formText('num_imp', 4,4)||' </td></tr>');
  http.tablerowclose;
  http.formhidden('check9', 'no');

  http.tablerowopen;
  http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
  http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
  http.tablerowclose;

  http.p('<tr><td>'||htf.formSubmit('','Submit')||'</td><td>'||htf.formReset||
'</td></tr>');

  http.formClose;
  http.tableClose;

html_functions.html_footer;
END d_acc;

PROCEDURE d_acc_loc
IS
cursor get_owner is select * from attenuator_apps.owner where 0=0;
cursor get_county is select * from attenuator_apps.county where 0=0 order by
county;
cursor get_traf_dir is select * from attenuator_apps.direction where 0=0;
cursor get_status is select * from attenuator_apps.status where 0=0;
cursor get_loc_wrt_road is select * from attenuator_apps.location_wrt_road where
0=0;
cursor get_model_num is select distinct * from attenuator_apps.model where 0=0
order by model_number;
cursor get_sr_num is select distinct state_road_number from
attenuator_apps.attenuator order by state_road_number;

```

```

cursor get_atten_type is select * from attenuator_apps.attenuator_type order by
attenuator_type_name;
type varray_char3 is table of char(3) index by binary_integer;
type varray_num is table of number(2,0) index by binary_integer;
boolean_descrip varray_char3;
large_atten varray_num;
atten_id      number;
i              number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Attenuator Type and
Location');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.accid_atype');

    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1" >');
    http.tabledata('Attenuator ID Number');
        http.tabledata(htf.formText('atten_id', 10,10) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check1', 'no');

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2" >');
    http.tabledata('Year Installed (YYYY)');
        http.tabledata(htf.formText('inst_date', 5,5) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check2', 'no');

    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
    http.tabledata('Maintenance Unit');
        http.tabledata(htf.formText('maint_unit', 5,5) || ' </td></tr>');
    http.tablerowclose;
    http.formhidden('check3', 'no');

    http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
    http.p('<td>District</td><td>');
    http.formSelectOpen('district');
        for r in 1..7 loop
            http.formSelectOption(r);
        end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check4', 'no');

    http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
    http.p('<td>County</td><td>');

```



```

    http.formSelectOpen('county');
    for r in get_county loop
        http.formSelectOption(r.county||',
'||r.county_id,',', 'value="'||r.county_id||'"');
    end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check5', 'no');

    http.tablerowopen;
    http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6" >');
    http.tabledata('Roadway ID (County,Section,Subsection)');
    http.tabledata(htf.formText('road_id', 10,10)||' </td></tr>');
    http.tablerowclose;
    http.formhidden('check6', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
></td>');
    http.p('<td>State Road Number</td><td>');
    http.formSelectOpen('sr_num');
    for r in get_sr_num loop
        http.formSelectOption(r.state_road_number);
    end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check7', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
></td>');
    http.p('<td>In Work Zone?</td><td>');
    http.formSelectOpen('work_zone');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.tablerowclose;
    http.formhidden('check8', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9"
></td>');
    http.p('<td>Present Status</td><td>');
    http.formSelectOpen('status');
    for r in get_status loop

        http.formSelectOption(r.present_status,',', 'value="'||r.status_id||'"');
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.tablerowclose;
    http.formhidden('check9', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check10"
></td>');
    http.p('<td>Location With Respect to Road</td><td>');
    http.formSelectOpen('loc_road');
    for r in get_loc_wrt_road loop

        http.formSelectOption(r.location_wrt_road,',', 'value="'||r.location_wrt_road_
id||'"');
    end loop;

```

```

        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check10', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check11"
></td>');
        http.p('<td>Model Number</td><td>');
        http.formSelectOpen('model_num');
        for r in get_model_num loop
            http.formSelectOption(r.model_number);
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check11', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check12"
></td>');
        http.p('<td>Attenuator Type</td><td>');
        http.formSelectOpen('atten_type');
        for r in get_atten_type loop

            http.formSelectOption(r.attenuator_type_name, '', 'value=""||r.attenuator_type
_id||'');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check12', 'no');

        http.tablerowopen;
        http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
        http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
        http.tablerowclose;

        http.p('<tr><td>'||htf.formSubmit('', 'Submit')||'</td><td>'||htf.formReset||
'</td></tr>');

        http.formClose;
        http.tableClose;

html_functions.html_footer;
END d_acc_loc;

PROCEDURE d_acc_imp
IS
cursor get_driv_action is select * from attenuator_apps.driver_action where 0=0;
cursor get_imp_ang is select * from attenuator_apps.impact_angle where 0=0;
cursor get_imp_pt_atten is select * from attenuator_apps.impact_point_atten where
0=0;
cursor get_imp_pt_veh is select * from attenuator_apps.point_vehicle where 0=0;
type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;
atten_id      number;
i              number;

BEGIN

```

```

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Attenuator Type and
Location');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.accid_imp');

    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1"
></td>');
        http.p('<td>Driver Action</td><td>');
        http.formSelectOpen('driv_act');
        for r in get_driv_action loop

            http.formSelectOption(r.driver_action_value, '', 'value="" || r.driver_action_id
|| ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check1', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
            http.p('<td>Impact Point, Vehicle</td><td>');
            http.formSelectOpen('imp_pt_veh');
            for r in get_imp_pt_veh loop

                http.formSelectOption(r.point_vehicle_value, '', 'value="" || r.point_vehicle_id
|| ""');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');
                http.tablerowclose;
                http.formhidden('check2', 'no');

            http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3"
></td>');
                http.p('<td>Impact Point, Attenuator</td><td>');
                http.formSelectOpen('imp_pt_atten');
                for r in get_imp_pt_atten loop

                    http.formSelectOption(r.impact_point_atten, '', 'value="" || r.impact_point_atte
n_id || ""');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');
                    http.tablerowclose;
                    http.formhidden('check3', 'no');

                http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
                    http.p('<td>Prior Impact(s)</td><td>');

```

```

http.formSelectOpen('prev_imp');
  for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check4', 'no');

  http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
  http.p('<td>Pre Impact Angle</td><td>');
  http.formSelectOpen('pre_imp_angle');
  for r in get_imp_ang loop

    http.formSelectOption(r.impact_angle_descrip, '', 'value="" || r.impact_angle_id
|| ""');
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check5', 'no');

  http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6"
></td>');
  http.p('<td>Rear Impact</td><td>');
  http.formSelectOpen('rear_imp');
  for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check6', 'no');

  http.tablerowopen;
  http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
  http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
  http.tablerowclose;

  http.p('<tr><td>' || http.formSubmit('', 'Submit') || '</td><td>' || http.formReset ||
'</td></tr>');

  http.formClose;
  http.tableClose;

html_functions.html_footer;
END d_acc_imp;

PROCEDURE d_att_res
IS
cursor get_debris is select * from attenuator_apps.debris_scattered where 0=0;
cursor get_a_damage is select * from attenuator_apps.damage_to_atten where 0=0;
cursor get_snag is select * from attenuator_apps.snagging where 0=0;
cursor get_pocket is select * from attenuator_apps.pocketing where 0=0;
cursor get_spear is select * from attenuator_apps.spearing where 0=0;
cursor get_over is select * from attenuator_apps.override where 0=0;
cursor get_under is select * from attenuator_apps.underride where 0=0;

```

```

type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;
atten_id      number;
i              number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Attenuator Results');
htp.p('<h1>Enter Search Criteria:</h1>');
htp.tableOpen;
htp.formOpen('/owa_att/owa/attenuator_apps.data_reports.atten_res');

    htp.tablerowopen;
    htp.tabledata('<b>Check?</b>');
    htp.tabledata('<b>Data Field</b>');
    htp.tabledata('<b>Constraint</b>');
    htp.tablerowclose;

    htp.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1"
></td>');
        htp.p('<td>Damage to Attenuator</td><td>');
        htp.formSelectOpen('att_dam');
        for r in get_a_damage loop

            htp.formSelectOption(r.atten_damage_descrip, '', 'value="" || r.atten_damage_id
|| ""');
            end loop;
        htp.formSelectClose;
        htp.p('</td></tr>');
    htp.tablerowclose;
    htp.formhidden('check1', 'no');

    htp.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
        htp.p('<td>Amount of Debris Scattered</td><td>');
        htp.formSelectOpen('debris_scat');
        for r in get_debris loop

            htp.formSelectOption(r.debris_descrip, '', 'value="" || r.debris_scatter_id || ""
');
            end loop;
        htp.formSelectClose;
        htp.p('</td></tr>');
    htp.tablerowclose;
    htp.formhidden('check2', 'no');

    htp.tablerowopen;
    htp.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
    htp.tabledata('Estimated Repair Cost');
        htp.tabledata('Greater than or equal to ' || htf.formText('low_cost',
6,6) || '</td></tr>');
    htp.tablerowclose;
    htp.formhidden('check3', 'no');

    htp.tablerowopen;
    htp.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4" >');
    htp.tabledata('Estimated Repair Cost');

```

```

        http.tabledata('Less than or equal to '||htf.formText('high_cost',
6,6)||'</td></tr>');
        http.tablerowclose;
        http.formhidden('check4', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4a"
></td>');
        http.p('<td>Anchorage Lost?</td><td>');
        http.formSelectOpen('anchor');
        for r in 1..2 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check4a', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
        http.p('<td>Snagging</td><td>');
        http.formSelectOpen('snag');
        for r in get_snag loop

            http.formSelectOption(r.snagging_descrip, '', 'value="'||r.snagging_id||'");
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check5', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6"
></td>');
        http.p('<td>Pocketing</td><td>');
        http.formSelectOpen('pocket');
        for r in get_pocket loop

            http.formSelectOption(r.pocketing_descrip, '', 'value="'||r.pocketing_id||'");
;
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check6', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
></td>');
        http.p('<td>Spearing</td><td>');
        http.formSelectOpen('spear');
        for r in get_spear loop

            http.formSelectOption(r.spearing_descrip, '', 'value="'||r.spearing_id||'");
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check7', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
></td>');
        http.p('<td>Underriding</td><td>');
        http.formSelectOpen('under');

```

```

        for r in get_under loop

            http.formSelectOption(r.underride_descrip, '', 'value=""||r.underride_id||"')
;
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check8', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9"
></td>');
        http.p('<td>Overriding</td><td>');
        http.formSelectOpen('over');
        for r in get_over loop

            http.formSelectOption(r.override_descrip, '', 'value=""||r.override_id||"');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check9', 'no');

            http.tablerowopen;
            http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
            http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
            http.tablerowclose;

            http.p('<tr><td>'||htf.formSubmit('', 'Submit')||'</td><td>'||htf.formReset||
'</td></tr>');

            http.formClose;
            http.tableClose;

html_functions.html_footer;
END d_att_res;

PROCEDURE d_veh_res
IS
cursor get_imp_ang is select * from attenuator_apps.impact_angle where 0=0;
cursor get_haz_imp is select * from attenuator_apps.hazard_impact where 0=0;
cursor get_orient is select * from attenuator_apps.final_orientation where 0=0;
cursor get_stop_place is select * from attenuator_apps.stopping_place where 0=0;
cursor get_stop_mode is select * from attenuator_apps.stopping_mode where 0=0;
cursor get_spin_beh is select * from attenuator_apps.spin_behavior where 0=0
order by spin_behavior_value;
cursor get_deform is select * from attenuator_apps.deform_pass_compart where 0=0;
cursor get_dist_long is select * from attenuator_apps.distance_long where 0=0;
cursor get_dist_lat is select * from attenuator_apps.distance_lateral where 0=0;
type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;
atten_id      number;
i              number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

```

```

html_functions.html_header('Detail Report: Accidents by Vehicle Results');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.vehicle_res');

    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1"
></td>');
        http.p('<td>Severity of Hazard Impact</td><td>');
        http.formSelectOpen('haz_imp');
        for r in get_haz_imp loop

            http.formSelectOption(r.hazard_impact_descrip, '', 'value="" || r.hazard_impact_
id || ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check1', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
            http.p('<td>Secondary Accidents</td><td>');
            http.formSelectOpen('sec_acc');
            for r in 1..2 loop
                http.formSelectOption(boolean_descrip(r));
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check2', 'no');

        http.tablerowopen;
        http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
        http.tabledata('Estimated Repair Cost');
        http.tabledata('Greater than or equal to ' || http.formText('low_cost',
6,6) || '</td></tr>');
        http.tablerowclose;
        http.formhidden('check3', 'no');

        http.tablerowopen;
        http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4" >');
        http.tabledata('Estimated Repair Cost');
        http.tabledata('Less than or equal to ' || http.formText('high_cost',
6,6) || '</td></tr>');
        http.tablerowclose;
        http.formhidden('check4', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
            http.p('<td>Deformation of Occupant Compartment</td><td>');
            http.formSelectOpen('deform');
            for r in get_deform loop

```



```

        http.formSelectOption(r.deformation_descrip, '', 'value="" || r.deformation_id ||
        ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check5', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6"
></td>');
        http.p('<td>Stopping Mode</td><td>');
        http.formSelectOpen('stop_mode');
        for r in get_stop_mode loop

            http.formSelectOption(r.stopping_mode_value, '', 'value="" || r.stopping_mode_id
            || ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check6', 'no');

            http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
            ></td>');
            http.p('<td>Spin Behavior</td><td>');
            http.formSelectOpen('spin_beh');
            for r in get_spin_beh loop

                http.formSelectOption(r.spin_behavior_value, '', 'value="" || r.spin_behavior_id
                || ""');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');
                http.tablerowclose;
                http.formhidden('check7', 'no');

                http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
                ></td>');
                http.p('<td>Post Impact Angle</td><td>');
                http.formSelectOpen('post_imp_ang');
                for r in get_imp_ang loop

                    http.formSelectOption(r.impact_angle_descrip, '', 'value="" || r.impact_angle_id
                    || ""');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');
                    http.tablerowclose;
                    http.formhidden('check8', 'no');

                    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9"
                    ></td>');
                    http.p('<td>Post Impact Distance, Lateral</td><td>');
                    http.formSelectOpen('dist_lat');
                    for r in get_dist_lat loop

                        http.formSelectOption(r.distance_lat_descrip, '', 'value="" || r.distance_lat_id
                        || ""');
                        end loop;
                        http.formSelectClose;

```

```

        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check9', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check10"
></td>');
        http.p('<td>Post Impact Distance, Longitudinal</td><td>');
        http.formSelectOpen('dist_long');
        for r in get_dist_long loop

            http.formSelectOption(r.distance_long_descrip, '', 'value="" || r.distance_long_
id || ""');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check10', 'no');

            http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check11"
></td>');
            http.p('<td>Stopping Place</td><td>');
            http.formSelectOpen('stop_place');
            for r in get_stop_place loop

                http.formSelectOption(r.stopping_place_value, '', 'value="" || r.stopping_place_
id || ""');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');
                http.tablerowclose;
                http.formhidden('check11', 'no');

                http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check12"
></td>');
                http.p('<td>Final Orientation</td><td>');
                http.formSelectOpen('final_orient');
                for r in get_orient loop

                    http.formSelectOption(r.final_orientation_value, '', 'value="" || r.final_orient
ation_id || ""');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');
                    http.tablerowclose;
                    http.formhidden('check12', 'no');

                    http.tablerowopen;
                    http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
                    http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
                    http.tablerowclose;

                    http.p('<tr><td>' || htf.formSubmit('', 'Submit') || '</td><td>' || htf.formReset ||
'</td></tr>');

                    http.formClose;
                    http.tableClose;

html_functions.html_footer;

```

```

END d_veh_res;

PROCEDURE d_occ_res
IS
cursor get_ejected is select * from attenuator_apps.ejected where 0=0;
cursor get_inj_sev is select * from attenuator_apps.injury_severity where 0=0;
cursor get_safety is select * from attenuator_apps.safety_device where 0=0;
type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;
atten_id      number;
i              number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Occupant Results');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.occup_res');

    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1"
></td>');
        http.p('<td>Ejected?</td><td>');
        http.formSelectOpen('eject');
        for r in get_ejected loop

            http.formSelectOption(r.ejected_value, '', 'value="'||r.ejected_id||"'");
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check1', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
        http.p('<td>Injury Severity</td><td>');
        http.formSelectOpen('inj_sev');
        for r in get_inj_sev loop

            http.formSelectOption(r.injury_severity_descrip, '', 'value="'||r.injury_sever
ity_id||"'");
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check2', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3"
></td>');
        http.p('<td>Safety Devices Used</td><td>');
        http.formSelectOpen('safety');
        for r in get_safety loop

```

```

        http.formSelectOption(r.safety_device_value, '', 'value="" || r.safety_device_id
|| ""');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check3', 'no');

        http.tablerowopen;
        http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
        http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
        http.tablerowclose;

        http.p('<tr><td>' || http.formSubmit('', 'Submit') || '</td><td>' || http.formReset ||
'</td></tr>');

        http.formClose;
        http.tableClose;

html_functions.html_footer;
END d_occ_res;

PROCEDURE d_cont_cause
IS
cursor get_phys_def is select * from attenuator_apps.physical_defects where 0=0;
cursor get_und_inf is select * from attenuator_apps.under_influence where 0=0;
cursor get_sex is select * from attenuator_apps.sex where 0=0;
cursor get_residence is select * from attenuator_apps.residence where 0=0;
cursor get_ccdriver is select * from attenuator_apps.contributing_cause_driver
where 0=0;
cursor get_citations is select * from attenuator_apps.citation_name where 0=0;
type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;
atten_id      number;
i             number;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Accidents by Contributing Cause,
Driver');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.accid_cause');

        http.tablerowopen;
        http.tabledata('<b>Check?</b>');
        http.tabledata('<b>Data Field</b>');
        http.tabledata('<b>Constraint</b>');
        http.tablerowclose;

        http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1"
></td>');
        http.p('<td>Physical Defects</td><td>');
        http.formSelectOpen('phys_def');

```

```

        for r in get_phys_def loop

            http.formSelectOption(r.physical_defects_value, '', 'value=""||r.physical_defe
cts_id||"');
            end loop;
            http.formSelectClose;
            http.p('</td></tr>');
            http.tablerowclose;
            http.formhidden('check1', 'no');

            http.tabldata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2"
></td>');
            http.p('<td>Drug and Alcohol Use</td><td>');
            http.formSelectOpen('und_inf');
            for r in get_und_inf loop

                http.formSelectOption(r.under_influence_value, '', 'value=""||r.under_influenc
e_id||"');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');
                http.tablerowclose;
                http.formhidden('check2', 'no');

                http.tabldata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3"
></td>');
                http.p('<td>Sex</td><td>');
                http.formSelectOpen('sex');
                for r in get_sex loop
                    http.formSelectOption(r.sex_value, '', 'value=""||r.sex_id||"');
                end loop;
                http.formSelectClose;
                http.p('</td></tr>');
                http.tablerowclose;
                http.formhidden('check3', 'no');

                http.tabldata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
                http.p('<td>Residence</td><td>');
                http.formSelectOpen('residence');
                for r in get_residence loop

                    http.formSelectOption(r.residence_value, '', 'value=""||r.residence_id||"');
                    end loop;
                    http.formSelectClose;
                    http.p('</td></tr>');
                    http.tablerowclose;
                    http.formhidden('check4', 'no');

                    http.tabldata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
                    http.p('<td>Contributing Cause, Driver</td><td>');
                    http.formSelectOpen('ccdriver');
                    for r in get_ccdriver loop

                        http.formSelectOption(r.contrib_cause_driver_value, '', 'value=""||r.contrib_c
ause_driver_id||"');
                        end loop;
                        http.formSelectClose;
                        http.p('</td></tr>');
                        http.tablerowclose;

```

```

http.formhidden('check5', 'no');

http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6"
></td>');
http.p('<td>Citations Given to Driver</td><td>');
http.formSelectOpen('citations');
for r in get_citations loop

http.formSelectOption(r.citation_name_description, '', 'value="" || r.citation_n
ame_id || ""');
end loop;
http.formSelectClose;
http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check6', 'no');

http.tablerowopen;
http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
http.p('<tr><td colspan="3">**If no boxes are checked, results of all
accidents are returned.</td></tr>');
http.tablerowclose;

http.p('<tr><td>' || htf.formSubmit('', 'Submit') || '</td><td>' || htf.formReset ||
'</td></tr>');

http.formClose;
http.tableClose;

html_functions.html_footer;
END d_cont_cause;

PROCEDURE accid_head_print
(num_rec IN number)
IS
BEGIN
html_functions.html_header('Detail Report: Accidents by Search
Characteristics');
http.p('<br>');
http.p('<br>');
http.p('<font size = 5><b>Total Number of Matching Accidents:
' || num_rec || '</b><br>');
http.p('<h1>Detail Report: Accidents Meeting Search Criteria</h1>');
END accid_head_print;

PROCEDURE accid_det_print
(acc_id IN number)
IS
found number;
cursor get_accid is select * from attenuator_apps.accident where accident_id =
acc_id order by accident_id;
cursor get_source is select * from attenuator_apps.data_source where 0=0;
cursor get_road_side is select * from attenuator_apps.road_side where 0=0;
cursor get_site_loc is select * from attenuator_apps.site_location where 0=0;
cursor get_traf_cont is select * from attenuator_apps.traffic_control where 0=0;
cursor get_road_surf is select * from attenuator_apps.road_surface where 0=0;
cursor get_weather is select * from attenuator_apps.weather where 0=0;
cursor get_lighting is select * from attenuator_apps.lighting where 0=0;
cursor get_harm_event is select * from attenuator_apps.harmful_event where 0=0;

```

```

cursor get_ccenv is select * from attenuator_apps.contributing_cause_env where
0=0 order by contrib_cause_env_id;
cursor get_ccroad is select * from attenuator_apps.contributing_cause_road where
0=0 order by contrib_cause_road_id;
cursor get_ped_act is select * from attenuator_apps.pedestrian_action where 0=0;
BEGIN

```

```

    http.tableOpen;
    http.p('<br>');
    http.p('<br>');
    http.p('<font size=5><b>Results for Accident Identification Number
'||acc_id||'</b><br>');
    http.p('<hr>');
    http.p('<hr>');
    http.p('<br>');
    http.p('<font size=5>Accident Data:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Acc ID</td><td><font size=5>Report
Number</td><td><font size=5>Data Source</td>');
    http.p('<td><font size=5>Non-Design Impact?</td>');
    http.p('<td><font size=5>Date</td><td><font size=5>Time</td><td><font
size=5>AM/PM?</td>');

    for r in get_accid loop
        if (r.accident_id = acc_id) then
            http.tablerowopen;
            http.tabledata(acc_id);
            http.tabledata(r.report_number);
            found := 0;
            for q in get_source loop
                if (r.data_source_id = q.data_source_id) then
                    http.tabledata(q.data_source);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tabledata(r.non_des_impact);
            http.tabledata(r.date_accident);
            http.tabledata(r.time_accident);
            http.tabledata(r.am_pm);
            http.tablerowclose;
            http.tablerowopen;
            http.p('<td><font size=5>First Harmful Event</td><td><font
size=5>Second Harmful Event</td>');
            http.p('<td><font size=5>Number of Vehicles</td><td><font
size=5>Number of Atten Impacts</td>');
            http.p('<td><font size=5>Road Surface</td>');
            http.p('<td><font size=5>Weather</td><td><font size=5>Lighting</td>');
            http.tablerowclose;
            http.tablerowopen;
            for q in get_harm_event loop
                if (r.harmful_event_1 = q.harmful_event_id) then
                    http.tabledata(q.harmful_event);
                    found := 1;
                    exit;
                end if;
            end loop;
        end loop;
    end loop;

```

```

if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_harm_event loop
    if (r.harmful_event_2 = q.harmful_event_id) then
        http.tabledata(q.harmful_event);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tabledata(r.number_vehicles);
http.tabledata(r.number_atten_impacts);
for q in get_road_surf loop
    if (r.road_surface_id = q.road_surface_id) then
        http.tabledata(q.road_surface_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_weather loop
    if (r.weather_id = q.weather_id) then
        http.tabledata(q.weather_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_lighting loop
    if (r.lighting_id = q.lighting_id) then
        http.tabledata(q.lighting_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tablerowclose;
http.tablerowopen;
http.p('<td><font size=5>Mile Post</td><td><font size=5>Nearest
Node</td><td><font size=5>Site Location</td>');
http.p('<td><font size=5>Traffic Control</td><td><font size=5>Lane
Number</td><td><font size=5>Road Side</td>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(r.accident_mile_post);
http.tabledata(r.nearest_node);
for q in get_site_loc loop

```



```

        if (r.site_location_id = q.site_location_id) then
            http.tabledata(q.site_location_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_traf_cont loop
        if (r.traffic_control_id = q.traffic_control_id) then
            http.tabledata(q.traffic_control_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tabledata(r.lane_number);
    for q in get_road_side loop
        if (r.road_side_id = q.road_side_id) then
            http.tabledata(q.road_side_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tablerowclose;
    http.tablerowopen;
    http.p('<td colspan="7"><font size=5>Description</td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="7">||r.description||</td></tr>');
    http.tablerowclose;
end if;
end loop;
http.tableClose;
http.p('<br>');
END accid_det_print;

PROCEDURE atten_det_print
    (atten_id IN char,
     road_id IN OUT number)
IS
    found    number;
    cursor get_atten is select * from attenuator_apps.attenuator where attenuator_id
= atten_id order by attenuator_id;
    cursor get_model is select * from attenuator_apps.model where 0=0 order by
model_number;
    cursor get_type is select * from attenuator_apps.attenuator_type where 0=0 order
by attenuator_type_id;
    cursor get_owner is select * from attenuator_apps.owner where 0=0;
    cursor get_county is select * from attenuator_apps.county where 0=0 order by
county;
    cursor get_traf_dir is select * from attenuator_apps.direction where 0=0;

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cursor get_status is select * from attenuator_apps.status where 0=0;
cursor get_loc_wrt_road is select * from attenuator_apps.location_wrt_road where
0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Attenuator Involved in the Accident:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Atten ID</td><td><font size=5>Model
Number</td><td><font size=5>Attenuator Type</td>');
    http.p('<td><font size=5>Owner</td><td><font size=5>Date
Installed</td><td><font size=5>Maintenance Unit</td><td><font
size=5>District</td>');

    for r in get_atten loop
        if (r.attenuator_id = atten_id) then
            http.tablerowopen;
            http.tabledata(atten_id);
            http.tabledata(r.model_number);
            found := 0;
            for q in get_model loop
                if (q.model_number = r.model_number) then
                    for p in get_type loop
                        if (p.attenuator_type_id = q.attenuator_type_id) then
                            http.tabledata(p.attenuator_type_name);
                            found := 1;
                            exit;
                        end if;
                    end loop;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_owner loop
                if (r.owner_id = q.owner_id) then
                    http.tabledata(q.owner_name);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tabledata(r.date_installed);
            http.tabledata(r.maint_unit);
            for q in get_county loop
                if (r.county_id = q.county_id) then
                    http.tabledata(q.district);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tablerowclose;
            http.tablerowopen;

```

```

        http.p('<td><font size=5>County ID</td><td><font
size=5>County</td><td><font size=5>Section</td><td><font size=5>Sub
Section</td>');
        http.p('<td><font size=5>State Road</td><td><font size=5>US
Road</td><td><font size=5>Mile Post</td>');
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(r.county_id);
        for q in get_county loop
            if (r.county_id = q.county_id) then
                http.tabledata(q.county);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.section);
        http.tabledata(r.sub_section);
        http.tabledata(r.state_road_number);
        http.tabledata(r.us_road_number);
        http.tabledata(r.atten_mile_post);
        http.tablerowclose;
        http.tablerowopen;
        http.p('<td><font size=5>Location wrt Road</td><td><font
size=5>Approaching Traffic</td><td><font size=5>Work Zone?</td>');
        http.p('<td><font size=5>Present Status</td><td colspan="4"><font
size=5>Remarks/Location</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_loc_wrt_road loop
            if (r.location_wrt_road_id = q.location_wrt_road_id) then
                http.tabledata(q.location_wrt_road);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        for q in get_traf_dir loop
            if (r.approach_traffic_id = q.direction_id) then
                http.tabledata(q.direction_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.in_work_zone);
        for q in get_status loop
            if (r.status_id = q.status_id) then
                http.tabledata(q.present_status);
                found := 1;
                exit;
            end if;
        end loop;
    end loop;
end if;

```

```

        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.p('<td colspan="4">' || r.remarks || '</td>');
        road_id := r.roadway_id;
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END atten_det_print;

PROCEDURE site_det_print
(atten_id IN char)
IS
found    number;
cursor get_site is select * from attenuator_apps.attenuator_site where
attenuator_id = atten_id order by attenuator_site_id;
cursor get_surface_under is select * from attenuator_apps.surface_under_atten
where 0=0;
cursor get_surface_between is select * from
attenuator_apps.surface_bt_atten_and_road where 0=0;
cursor get_object is select * from attenuator_apps.shielded_object where 0=0;
cursor get_anchoring is select * from attenuator_apps.anchoring_options where
0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Attenuator Site Description:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Atten ID</td><td><font size=5>Shielded
Object</td><td><font size=5>Object Width (m)</td>');
    http.p('<td><font size=5>Object Height (m)</td><td><font size=5>Lateral
Clearance (m)</td>');
    http.p('<td><font size=5>Longitudinal Clearance (m)</td><td><font size=5>Clear
Zone Width (m)</td><td><font size=5>Clear Zone Length (m)</td>');

    for r in get_site loop
        if (r.attenuator_id = atten_id) then
            http.tablerowopen;
            http.tabledata(atten_id);
            found := 0;
            for q in get_object loop
                if (r.shield_object_id = q.shield_object_id) then
                    http.tabledata(q.object);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tabledata(r.object_width);
            http.tabledata(r.object_height);
            http.tabledata(r.clearance_lateral);
            http.tabledata(r.clearance_long);
            http.tabledata(r.width_clear_zone);
            http.tabledata(r.length_clear_zone);
            http.tablerowclose;
        end if;
    end loop;
end site_det_print;

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        http.tablerowopen;
        http.p('<td><font size=5>Surface Between Atten and Road</td><td><font
size=5>Surface Under Atten</td><td><font size=5>Surface Depth (m)</td>');
        http.p('<td><font size=5>Atten Angle to Road (deg)</td><td><font
size=5>Anchorage</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_surface_between loop
            if (r.surface_bt_atten_road_id = q.surface_bt_atten_road_id) then
                http.tabledata(q.surface_bt_atten_road);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        for q in get_surface_under loop
            if (r.surface_under_atten_id = q.surface_under_atten_id) then
                http.tabledata(q.surface_under_atten);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.depth_surf);
        http.tabledata(r.angle_to_road);
        for q in get_anchoring loop
            if (r.anchoring_options_id = q.anchoring_options_id) then
                http.tabledata(q.anchoring_options_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END site_det_print;

PROCEDURE road_det_print
    (road_id IN number)
IS
    found    number;
    cursor get_road is select * from attenuator_apps.roadway_description where
roadway_id = road_id order by roadway_id;
    cursor get_rsi is select * from attenuator_apps.road_system_identifier where 0=0;
    cursor get_road_type is select * from attenuator_apps.road_type where 0=0;
    cursor get_median_surface is select * from attenuator_apps.median_surface where
0=0;
    cursor get_shoulders is select * from attenuator_apps.shoulder_type where 0=0;
    cursor get_curb is select * from attenuator_apps.curb_type where 0=0;

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cursor get_embank is select * from attenuator_apps.embankment_cut_fill where 0=0;
cursor get_curve_main is select * from attenuator_apps.curvature_main_move where
0=0;
cursor get_curve_second is select * from attenuator_apps.curvature_second_move
where 0=0;
cursor get_traffic_char is select * from attenuator_apps.trafficway_char where
0=0;
cursor get_zoning is select * from attenuator_apps.area_zoning_use where 0=0;
cursor get_rur_urb is select * from attenuator_apps.rural_urban where 0=0;
cursor get_pave is select * from attenuator_apps.pavement_type where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Roadway Description:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Roadway ID</td><td><font
size=5>Description</td><td><font size=5>Road System Identifier</td><td><font
size=5>Road Type</td>');
    http.p('<td><font size=5>Avg Daily Traffic</td><td><font size=5>Peak Hourly
Traffic</td><td><font size=5>Rural or Urban</td>');

    for r in get_road loop
        if (r.roadway_id = road_id) then
            http.tablerowopen;
            http.tabledata(road_id);
            http.tabledata(r.road_description);
            found := 0;
            for q in get_rsi loop
                if (r.road_system_identifier_id = q.road_system_identifier_id)
then
                    http.tabledata(q.road_system_identifier);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_road_type loop
                if (r.road_type_id = q.road_type_id) then
                    http.tabledata(q.road_type_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tabledata(r.avg_daily_traffic);
            http.tabledata(r.peak_hour_traffic);
            for q in get_rur_urb loop
                if (r.rural_urban_id = q.rural_urban_id) then
                    http.tabledata(q.rural_or_urban_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;

```

```

        found := 0;
        http.tablerowclose;
        http.tablerowopen;
        http.p('<td><font size=5>Number of Lanes</td><td><font size=5>Lane
Width (m)</td><td><font size=5>Area Zoning Use</td><td><font size=5>Trafficway
Character</td>');
        http.p('<td><font size=5>Design Speed (kph)</td><td><font
size=5>Posted Speed Limit (kph)</td><td><font size=5>Pavement Type</td>');
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(r.number_lanes);
        http.tabledata(r.lane_width);
        for q in get_zoning_loop
            if (r.area_zoning_use_id = q.area_zoning_use_id) then
                http.tabledata(q.area_zoning_use_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        for q in get_traffic_char_loop
            if (r.trafficway_character_id = q.trafficway_char_id) then
                http.tabledata(q.trafficway_char_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.design_speed);
        http.tabledata(r.posted_speed_limit);
        for q in get_pave_loop
            if (r.pavement_type_id = q.pavement_type_id) then
                http.tabledata(q.pavement_type);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tablerowclose;
        http.tablerowopen;
        http.p('<td><font size=5>Main Movement Curvature</td>');
        http.p('<td><font size=5>Secondary Movement Curvature</td><td><font
size=5>Divergence Angle (deg)</td>');
        http.p('<td><font size=5>Shoulder Type</td><td><font size=5>Shoulder
Width (m)</td>');
        http.p('<td><font size=5>Curb Type</td><td><font size=5>Curb Height
(m)</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_curve_main_loop
            if (r.curve_main_move_id = q.curve_main_move_id) then
                http.tabledata(q.curve_main_move_value);

```

```

        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_curve_second loop
    if (r.curve_second_move_id = q.curve_second_move_id) then
        http.tabledata(q.curve_second_move_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tabledata(r.divergance_angle);
for q in get_shoulder loop
    if (r.shoulder_type_id = q.shoulder_type_id) then
        http.tabledata(q.shoulder_type_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tabledata(r.shoulder_width);
for q in get_curb loop
    if (r.curb_type_id = q.curb_type_id) then
        http.tabledata(q.curb_type_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tabledata(r.curb_height);
http.tablerowclose;
http.tablerowopen;
http.p('<td><font size=5>Median Surface</td><td><font size=5>Fixed
Median Barrier?</td><td><font size=5>Median Width (m)</td>');
http.p('<td><font size=5>Median Slope</td><td><font size=5>Roadway
Grade</td>');
http.p('<td><font size=5>Embankment Slope</td><td><font size=5>Cut or
Fill</td>');
http.tablerowclose;
http.tablerowopen;
for q in get_median_surface loop
    if (r.median_surface_id = q.median_surface_id) then
        http.tabledata(q.median_surface);
        found := 1;
        exit;
    end if;
end loop;

```



```

        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.fixed_median_barrier);
        http.tabledata(r.median_width);
        http.tabledata(r.median_slope);
        http.tabledata(r.roadway_grade);
        http.tabledata(r.embankment_slope);
        for q in get_embank loop
            if (r.embankment_cut_fill_id = q.embankment_cut_fill_id) then
                http.tabledata(q.embankment_value);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END road_det_print;

PROCEDURE aperf_det_print
(aperf_id IN number,
 atten_id IN char)
IS
found    number;
cursor get_perf is select * from attenuator_apps.atten_performance where
    atten_performance_id = aperf_id order by atten_performance_id;
cursor get_debris is select * from attenuator_apps.debris_scattered where 0=0;
cursor get_a_damage is select * from attenuator_apps.damage_to_atten where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Attenuator Performance Data:<br>');
    http.p('<TABLE BORDER CELLSPECING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Atten ID</td><td><font size=5>Anchorage
Lost?</td>');
    http.p('<td><font size=5>Debris Scattered</td><td><font size=5>Final
Deformation (m)</td><td><font size=5>Usable After</td><td><font
size=5>Repairable</td>');

    for r in get_perf loop
        if (r.atten_performance_id = aperf_id) then
            http.tablerowopen;
            http.tabledata(atten_id);
            http.tabledata(r.anchor_lost);
            found := 0;
            for q in get_debris loop
                if (r.debris_scatter_id = q.debris_scatter_id) then
                    http.tabledata(q.debris_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
        end if;
    end loop;
end aperf_det_print;

```

```

        end if;
        found := 0;
        http.tabledata(r.final_deformation);
        http.tabledata(r.usable_after);
        http.tabledata(r.repairable);
        http.tablerowclose;
        http.tablerowopen;
        http.p('<td><font size=5>Attenuator Damage</td><td><font
size=5>Estimated Repair Cost ($)</td><td><font size=5>Needs Study</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_a_damage loop
            if (r.atten_damage_id = q.atten_damage_id) then
                http.tabledata(q.atten_damage_descrip);
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.estimated_repair_cost);
        http.tabledata(r.need_study);
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END aperf_det_print;

PROCEDURE ccenv_det_print
(acc_id IN number)
IS
found    number;
cursor get_ccenv is select * from attenuator_apps.contrib_cause_env_cited where
accident_number_id = acc_id order by contrib_cause_env_id;
cursor get_cc is select * from attenuator_apps.contributing_cause_env where 0=0
order by contrib_cause_env_id;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Contributing Cause(s), Environment: <br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Acc ID</td><td><font size=5>CCE
ID</td><td><font size=5>Contributing Cause Environment</td>');

    for r in get_ccenv loop
        if (r.accident_number_id = acc_id) then
            http.tablerowopen;
            http.tabledata(acc_id);
            http.tabledata(r.contrib_cause_env_id);
            for q in get_cc loop
                if (q.contrib_cause_env_id = r.contrib_cause_env_id) then
                    http.tabledata(q.contrib_cause_env_value);
                    exit;
                end if;
            end loop;
            http.tablerowclose;
        end if;
    end loop;
    http.tableClose;

```

```

        http.p('<br>');
END ccenv_det_print;

PROCEDURE ccroad_det_print
    (acc_id IN number)
IS
    found    number;
    cursor get_ccroad is select * from attenuator_apps.contrib_cause_road_cited where
    accident_number_id = acc_id order by contrib_cause_road_id;
    cursor get_cc is select * from attenuator_apps.contributing_cause_road where 0=0
    order by contrib_cause_road_id;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Contributing Cause(s), Roadway:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Acc ID</td><td><font size=5>CCR
    ID</td><td><font size=5>Contributing Cause Road</td>');

    for r in get_ccroad loop
        if (r.accident_number_id = acc_id) then
            http.tablerowopen;
            http.tabledata(acc_id);
            http.tabledata(r.contrib_cause_road_id);
            for q in get_cc loop
                if (q.contrib_cause_road_id = r.contrib_cause_road_id) then
                    http.tabledata(q.contrib_cause_road_value);
                    exit;
                end if;
            end loop;
            http.tablerowclose;
        end if;
    end loop;
    http.tableClose;
    http.p('<br>');
END ccroad_det_print;

PROCEDURE veh_det_print
    (acc_id IN number,
    veh_id IN number)
IS
    found    number;
    cursor get_veh is select * from attenuator_apps.vehicle where vehicle_id = veh_id
    and accident_id = acc_id order by vehicle_id;
    cursor get_driv_action is select * from attenuator_apps.driver_action where 0=0;
    cursor get_v_make is select * from attenuator_apps.vehicle_make where 0=0;
    cursor get_v_type is select * from attenuator_apps.vehicle_type where 0=0;
    cursor get_v_use is select * from attenuator_apps.vehicle_use where 0=0;
    cursor get_v_funct is select * from attenuator_apps.vehicle_special_function
    where 0=0;
    cursor get_v_defect is select * from attenuator_apps.vehicle_defect where 0=0;
    cursor get_trailer is select * from attenuator_apps.trailer where 0=0;
    cursor get_direc is select * from attenuator_apps.direction where 0=0;
    cursor get_v_move is select * from attenuator_apps.vehicle_movement where 0=0;
    cursor get_imp_ang is select * from attenuator_apps.impact_angle where 0=0;
    cursor get_imp_pt_atten is select * from attenuator_apps.impact_point_atten where
    0=0;
    cursor get_imp_pt_veh is select * from attenuator_apps.point_vehicle where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Vehicle Data:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');

```

```

    http.p('<tr><td><font size=5>Acc ID</td><td><font size=5>Vehicle
ID</td><td><font size=5>Driver Action</td><td><font size=5>Make</td>');
    http.p('<td><font size=5>Type</td><td><font size=5>Use</td><td><font
size=5>Special Function</td><td><font size=5>Defect</td>');

    for r in get_veh loop
        if (r.accident_id = acc_id) and (r.vehicle_id = veh_id) then
            http.tablerowopen;
            http.tabledata(acc_id);
            http.tabledata(r.vehicle_id);
            found := 0;
            for q in get_driv_action loop
                if (q.driver_action_id = r.driver_action_id) then
                    http.tabledata(q.driver_action_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_v_make loop
                if (q.vehicle_make_id = r.vehicle_make_id) then
                    http.tabledata(q.vehicle_make_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_v_type loop
                if (q.vehicle_type_id = r.vehicle_type_id) then
                    http.tabledata(q.vehicle_type_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_v_use loop
                if (q.vehicle_use_id = r.vehicle_use_id) then
                    http.tabledata(q.vehicle_use_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_v_func loop
                if (q.vehicle_special_function_id =
r.vehicle_special_function_id) then
                    http.tabledata(q.special_function_value);
                    found := 1;
                    exit;

```

```

        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_v_defect loop
        if (q.vehicle_defect_id = r.vehicle_defect_id) then
            http.tabledata(q.vehicle_defect_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tablerowclose;
    http.tablerowopen;
    http.p('<td><font size=5>Trailer</td><td><font
size=5>Direction</td><td><font size=5>Movement</td><td><font size=5>Estimated
Speed (kph)</td>');
    http.p('<td><font size=5>Impact Point Attenuator</td><td><font
size=5>Impact Point Vehicle</td>');
    http.p('<td><font size=5>Pre Impact Angle</td><td><font size=5>Rear
Impact?</td>');
    http.tablerowclose;
    http.tablerowopen;
    for q in get_trailer loop
        if (q.trailer_id = r.trailer_id) then
            http.tabledata(q.trailer_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_direc loop
        if (q.direction_id = r.direction_id) then
            http.tabledata(q.direction_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_v_move loop
        if (q.vehicle_movement_id = r.vehicle_movement_id) then
            http.tabledata(q.vehicle_movement_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;

```

```

http.tabledata(r.estimated_speed);
for q in get_imp_pt_atten loop
    if (q.impact_point_atten_id = r.impact_point_atten_id) then
        http.tabledata(q.impact_point_atten);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_imp_pt_veh loop
    if (q.point_vehicle_id = r.impact_point_vehicle_id) then
        http.tabledata(q.point_vehicle_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_imp_ang loop
    if (q.impact_angle_id = r.pre_impact_angle_id) then
        http.tabledata(q.impact_angle_descrip);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tabledata(r.rear_impact);
http.tablerowclose;
end if;
end loop;
http.tableClose;
http.p('<br>');
END veh_det_print;

PROCEDURE vres_det_print
    (veh_id IN number)
IS
    found    number;
    cursor get_vres is select * from attenuator_apps.vehicle_results where vehicle_id
= veh_id order by vehicle_id;
    cursor get_haz_imp is select * from attenuator_apps.hazard_impact where 0=0;
    cursor get_orient is select * from attenuator_apps.final_orientation where 0=0;
    cursor get_stop_place is select * from attenuator_apps.stopping_place where 0=0;
    cursor get_stop_mode is select * from attenuator_apps.stopping_mode where 0=0;
    cursor get_spin_beh is select * from attenuator_apps.spin_behavior where 0=0
order by spin_behavior_value;
    cursor get_snag is select * from attenuator_apps.snagging where 0=0;
    cursor get_pocket is select * from attenuator_apps.pocketing where 0=0;
    cursor get_spear is select * from attenuator_apps.spearing where 0=0;
    cursor get_over is select * from attenuator_apps.override where 0=0;
    cursor get_under is select * from attenuator_apps.underride where 0=0;
    cursor get_deform is select * from attenuator_apps.deform_pass_compart where 0=0;
    cursor get_dist_long is select * from attenuator_apps.distance_long where 0=0;

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cursor get_dist_lat is select * from attenuator_apps.distance_lateral where 0=0;
cursor get_veh_damage is select * from attenuator_apps.point_vehicle where 0=0
order by point_vehicle_id;
cursor get_imp_ang is select * from attenuator_apps.impact_angle where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Vehicle Results Data:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Vehicle ID</td><td><font size=5>Hazard
Impact</td><td><font size=5>Overriding</td>');
    http.p('<td><font size=5>Underriding</td><td><font
size=5>Spearing</td><td><font size=5>Snagging</td><td><font
size=5>Pocketing</td>');

    for r in get_vres loop
        if (r.vehicle_id = veh_id) then
            http.tablerowopen;
            http.tabledata(veh_id);
            found := 0;
            for q in get_haz_imp loop
                if (q.hazard_impact_id = r.hazard_impact_id) then
                    http.tabledata(q.hazard_impact_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_over loop
                if (q.override_id = r.override_id) then
                    http.tabledata(q.override_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_under loop
                if (q.underride_id = r.underride_id) then
                    http.tabledata(q.underride_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_spear loop
                if (q.spearing_id = r.spearing_id) then
                    http.tabledata(q.spearing_descrip);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
        end if;
    end loop;
end;

```

```

end if;
found := 0;
for q in get_snag loop
    if (q.snagging_id = r.snagging_id) then
        http.tabledata(q.snagging_descrip);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_pocket loop
    if (q.pocketing_id = r.pocketing_id) then
        http.tabledata(q.pocketing_descrip);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.tablerowclose;
http.tablerowopen;
http.p('<td><font size=5>Occupant Compartment
Deformation</td><td><font size=5>Stopping Mode</td>');
http.p('<td><font size=5>Post Impact Angle</td><td><font size=5>Spin
Behavior</td>');
http.p('<td><font size=5>Stopping Place</td><td><font size=5>Final
Orientation</td><td><font size=5>Number Lanes Crossed</td>');
http.tablerowclose;
http.tablerowopen;
for q in get_deform loop
    if (q.deformation_id = r.deformation_id) then
        http.tabledata(q.deformation_descrip);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_stop_mode loop
    if (q.stopping_mode_id = r.stopping_mode_id) then
        http.tabledata(q.stopping_mode_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
for q in get_imp_ang loop
    if (q.impact_angle_id = r.post_impact_angle_id) then
        http.tabledata(q.impact_angle_descrip);
        found := 1;
        exit;
    end if;
end loop;

```



```

        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_spin_beh loop
        if (q.spin_behavior_id = r.spin_behavior_id) then
            http.tabledata(q.spin_behavior_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_stop_place loop
        if (q.stopping_place_id = r.stopping_place_id) then
            http.tabledata(q.stopping_place_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_orient loop
        if (q.final_orientation_id = r.final_orientation_id) then
            http.tabledata(q.final_orientation_value);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    http.tabledata(r.number_lanes_crossed);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<td><font size=5>Distance Lateral</td><td><font
size=5>Distance Longitudinal</td><td><font size=5>Secondary Impact(s)?</td>');
    http.p('<td><font size=5>Estimated Repair Cost ($)</td>');
    http.tablerowclose;
    http.tablerowopen;
    for q in get_dist_lat loop
        if (q.distance_lat_id = r.distance_lat_id) then
            http.tabledata(q.distance_lat_descrip);
            found := 1;
            exit;
        end if;
    end loop;
    if (found = 0) then
        http.tabledata(' ');
    end if;
    found := 0;
    for q in get_dist_long loop
        if (q.distance_long_id = r.distance_long_id) then
            http.tabledata(q.distance_long_descrip);

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                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tabledata(r.secondary_acc);
        http.tabledata(r.estimated_cost_vehicle);
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END vres_det_print;

PROCEDURE vdam_det_print
    (veh_id IN number)
IS
    found    number;
    cursor get_vdam is select * from attenuator_apps.vehicle_damage_received where
        vehicle_id = veh_id order by point_vehicle_id;
    cursor get_dam_point is select * from attenuator_apps.point_vehicle where 0=0
        order by point_vehicle_id;
    BEGIN
        http.tableOpen;
        http.p('<font size=5>Areas of Vehicle Damage:<br>');
        http.p('<TABLE BORDER CELLPACING=6 CELLPADDING=5 WIDTH=600>');
        http.p('<tr><td><font size=5>Vehicle ID</td><td><font size=5>Damage Area
ID</td><td><font size=5>Area of Damage</td>');

        for r in get_vdam loop
            if (r.vehicle_id = veh_id) then
                http.tablerowopen;
                http.tabledata(veh_id);
                http.tabledata(r.point_vehicle_id);
                for q in get_dam_point loop
                    if (q.point_vehicle_id = r.point_vehicle_id) then
                        http.tabledata(q.point_vehicle_value);
                    end if;
                end loop;
                http.tablerowclose;
            end if;
        end loop;
        http.tableClose;
        http.p('<br>');
    END vdam_det_print;

PROCEDURE driver_det_print
    (veh_id IN number,
    driv_id IN number,
    pers_id IN OUT number)
IS
    found    number;
    cursor get_driver is select * from attenuator_apps.driver where driver_id =
        driv_id order by driver_id;
    cursor get_sex is select * from attenuator_apps.sex where 0=0;
    cursor get_residence is select * from attenuator_apps.residence where 0=0;
    cursor get_ejected is select * from attenuator_apps.ejected where 0=0;
    cursor get_inj_sev is select * from attenuator_apps.injury_severity where 0=0;

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cursor get_phys_def is select * from attenuator_apps.physical_defects where 0=0;
cursor get_und_inf is select * from attenuator_apps.under_influence where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Driver Data:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Vehicle ID</td><td><font size=5>Driver
ID</td><td><font size=5>Sex</td>');
    http.p('<td><font size=5>Residence</td><td><font size=5>Age</td><td><font
size=5>Physical Defects</td>');
    http.p('<td><font size=5>Under Inflence?</td><td><font size=5>BAC Value
(%)</td>');

    for r in get_driver loop
        if (r.driver_id = driv_id) then
            pers_id := r.person_id;
            http.tablerowopen;
            http.tabledata(veh_id);
            http.tabledata(r.driver_id);
            found := 0;
            for q in get_sex loop
                if (q.sex_id = r.sex_id) then
                    http.tabledata(q.sex_value);
                    found := 1;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_residence loop
                if (q.residence_id = r.residence_id) then
                    http.tabledata(q.residence_value);
                    found := 1;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            http.tabledata(r.age);
            for q in get_phys_def loop
                if (q.physical_defects_id = r.physical_defects_id) then
                    http.tabledata(q.physical_defects_value);
                    found := 1;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;
            for q in get_und_inf loop
                if (q.under_influence_id = r.under_influence_id) then
                    http.tabledata(q.under_influence_value);
                    found := 1;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            found := 0;

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```

        http.tabledata(r.bac_value);
        http.tablerowclose;
        http.tablerowopen;
        http.p('<td><font size=5>Ejected</td><td><font size=5>Injury
Severity</td>');
        http.tablerowclose;
        http.tablerowopen;
        for q in get_ejected loop
            if (q.ejected_id = r.ejected_id) then
                http.tabledata(q.ejected_value);
                found := 1;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        for q in get_inj_sev loop
            if (q.injury_severity_id = r.injury_severity_id) then
                http.tabledata(q.injury_severity_descrip);
                found := 1;
            end if;
        end loop;
        if (found = 0) then
            http.tabledata(' ');
        end if;
        found := 0;
        http.tablerowclose;
    end if;
end loop;
    http.tableClose;
    http.p('<br>');
END driver_det_print;

PROCEDURE safety equip_print
    (veh_id IN number,
    driv_pass_id IN number,
    pers_id IN number,
    d_or_p IN OUT char)
IS
    found    number;
    cursor get_safe_equip is select * from attenuator_apps.safety_device_used where
0=0 order by safety_device_id;
    cursor get_device is select * from attenuator_apps.safety_device where 0=0 order
by safety_device_id;
    cursor get_pass_id is select * from attenuator_apps.passenger where vehicle_id =
veh_id order by passenger_id;
BEGIN
    http.tableOpen;
    if (d_or_p = 'd') then
        http.p('<font size=5>Safety Equipment Used by the Driver:<br>');
        http.p('<TABLE BORDER CELLSPPACING=6 CELLPADDING=5 WIDTH=600>');
        http.p('<tr><td><font size=5>Driver ID</td><td><font size=5>Device
ID</td><td><font size=5>Safety Device Used</td>');
        for q in get_safe_equip loop
            if (q.person_id = pers_id) then
                http.tablerowopen;
                http.tabledata(driv_pass_id);
                http.tabledata(q.safety_device_id);
                for p in get_device loop
                    if (p.safety_device_id = q.safety_device_id) then

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        http.tabledata(p.safety_device_value);
    end if;
end loop;
http.tablerowclose;
end if;
end loop;
elsif (d_or_p = 'p') then
    http.p('<font size=5>Safety Equipment Used by the Passengers:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Pass ID</td><td><font size=5>Device
ID</td><td><font size=5>Safety Device Used</td>');
    for r in get_pass_id loop
        if (r.vehicle_id = veh_id) then
            for q in get_safe_equip loop
                if (q.person_id = r.person_id) then
                    http.tablerowopen;
                    http.tabledata(r.passenger_id);
                    http.tabledata(q.safety_device_id);
                    for p in get_device loop
                        if (p.safety_device_id = q.safety_device_id) then
                            http.tabledata(p.safety_device_value);
                        end if;
                    end loop;
                    http.tablerowclose;
                end if;
            end loop;
        end if;
    end loop;
end if;
end loop;
http.tableClose;
if (d_or_p = 'p') then
    http.p('<br>');
    http.p('<hr>');
else
    http.p('<br>');
end if;
END safety_equip_print;

PROCEDURE citations_print
(driv_id IN number)
IS
found    number;
cursor get_citation is select * from attenuator_apps.citation where driver_id =
driv_id order by citation_name_id;
cursor get_cit_name is select * from attenuator_apps.citation_name where 0=0
order by citation_name_id;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Citations Issued to the Driver:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Driver ID</td><td><font size=5>Citation
Name</td>');

    for r in get_citation loop
        if (r.driver_id = driv_id) then
            http.tablerowopen;
            http.tabledata(r.driver_id);
            for p in get_cit_name loop
                if (p.citation_name_id = r.citation_name_id) then
                    http.tabledata(p.citation_name_description);
                end if;
            end loop;
        end if;
    end loop;
end if;
end loop;
http.tablerowclose;
end if;
end loop;
http.tableClose;
if (d_or_p = 'p') then
    http.p('<br>');
    http.p('<hr>');
else
    http.p('<br>');
end if;
END citations_print;

```

```

        end if;
    end loop;
    http.tablerowclose;
end if;
end loop;
    http.tableClose;
    http.p('<br>');
END citations_print;

PROCEDURE ccdriv_det_print
    (driv_id IN number)
IS
    found    number;
    cursor get_ccdriv is select * from attenuator_apps.contrib_cause_driver_cited
    where driver_id = driv_id order by contrib_cause_driver_id;
    cursor get_cc is select * from attenuator_apps.contributing_cause_driver where
    0=0 order by contrib_cause_driver_id;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Contributing Cause(s) Driver:<br>');
    http.p('<TABLE BORDER CELLSPPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Acc ID</td><td><font size=5>CCD
    ID</td><td><font size=5>Contributing Cause Driver</td>');

    for r in get_ccdriv loop
        if (r.driver_id = driv_id) then
            http.tablerowopen;
            http.tabledata(driv_id);
            http.tabledata(r.contrib_cause_driver_id);
            for q in get_cc loop
                if (q.contrib_cause_driver_id = r.contrib_cause_driver_id) then
                    http.tabledata(q.contrib_cause_driver_value);
                    exit;
                end if;
            end loop;
            http.tablerowclose;
        end if;
    end loop;
    http.tableClose;
    http.p('<br>');
END ccdriv_det_print;

PROCEDURE pass_det_print
    (veh_id IN number,
    pass_id IN OUT number,
    pers_id IN OUT number)
IS
    found    number;
    cursor get_pass is select * from attenuator_apps.passenger where 0=0 order by
    passenger_id;
    cursor get_loc_car is select * from attenuator_apps.location_in_car where 0=0;
    cursor get_ejected is select * from attenuator_apps.ejected where 0=0;
    cursor get_inj_sev is select * from attenuator_apps.injury_severity where 0=0;
BEGIN
    http.tableOpen;
    http.p('<font size=5>Passenger Data:<br>');
    http.p('<TABLE BORDER CELLSPPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Vehicle ID</td><td><font size=5>Passenger
    ID</td><td><font size=5>Age</td>');
    http.p('<td><font size=5>Location in Car</td><td><font
    size=5>Ejected</td><td><font size=5>Injury Severity</td>');

```

```

for r in get_pass loop
  if (r.vehicle_id = veh_id) then
    pers_id := r.person_id;
    pass_id := r.passenger_id;
    http.tablerowopen;
    http.tabledata(veh_id);
    http.tabledata(r.passenger_id);
    http.tabledata(r.age);
    found := 0;
    for q in get_loc_car loop
      if (q.location_in_car_id = r.location_in_car_id) then
        http.tabledata(q.location_in_car_value);
        found := 1;
      end if;
    end loop;
    if (found = 0) then
      http.tabledata(' ');
    end if;
    found := 0;
    for q in get_ejected loop
      if (q.ejected_id = r.ejected_id) then
        http.tabledata(q.ejected_value);
        found := 1;
      end if;
    end loop;
    if (found = 0) then
      http.tabledata(' ');
    end if;
    found := 0;
    for q in get_inj_sev loop
      if (q.injury_severity_id = r.injury_severity_id) then
        http.tabledata(q.injury_severity_descrip);
        found := 1;
      end if;
    end loop;
    if (found = 0) then
      http.tabledata(' ');
    end if;
    found := 0;
    http.tablerowclose;
  end if;
end loop;
http.tableClose;
http.p('<br>');
END pass_det_print;

PROCEDURE accid_foot_print
IS
BEGIN
  http.p('<br>');
  http.p('<br>');
  html_functions.html_footer;
END accid_foot_print;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix F-2: ATTENUATOR_WWW.ACC_REPORTS

```

Package Body                                ACC_REPORTS
IS

--
*****
**
--Accident Reports
--
*****
**

PROCEDURE s_acc_dis
IS
cursor get_results is select accident.accident_id, attenuator.attenuator_id,
county.county, county.county_id, county.district,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category, attenuator_apps.county
where attenuator.county_id = county.county_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
accident.accident_id, attenuator_type.attenuator_type_name;

cursor get_type is select accident.accident_id, attenuator.attenuator_id,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name;

cursor get_wz is select accident.accident_id, attenuator.attenuator_id,
attenuator.in_work_zone,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator.in_work_zone;

cursor get_county is select * from attenuator_apps.county order by district;

```



```

type varray_num is table of number(4,0) index by binary_integer;
type varray_char is table of char(30) index by binary_integer;
acc_ct          varray_num;
i               number;
m               number;
total_type      number;
dis_count       varray_num;
dis_last        number;
county_id       number;
last_atten      char(30);
attens          varray_char;
grand_total     number;
total_att       varray_num;

BEGIN

grand_total := 0;
for i in 0..95 loop
    acc_ct(i) := 0;
end loop;
for i in 1..8 loop
    dis_count(i) := 0;
end loop;
for r in get_results loop
    county_id := r.county_id;
    acc_ct(county_id) := acc_ct(county_id) + 1;
    if (r.district = 1) then
        dis_count(1) := dis_count(1) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 2) then
        dis_count(2) := dis_count(2) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 3) then
        dis_count(3) := dis_count(3) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 4) then
        dis_count(4) := dis_count(4) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 5) then
        dis_count(5) := dis_count(5) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 6) then
        dis_count(6) := dis_count(6) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 7) then
        dis_count(7) := dis_count(7) + 1;
        grand_total := grand_total + 1;
    end if;
    if (r.district = 8) then
        dis_count(8) := dis_count(8) + 1;
        grand_total := grand_total + 1;
    end if;
end loop;

```

```

    html_functions.html_header('Summary Report: Accidents by County and
District');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by County and District</h1>');
    http.tableOpen;

    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=400>');
    http.p('<tr><td><font size=5>District</td><td><font size=5>County
ID</td><td><font size=5>County Name</td><td><font size=5>Number of
Accidents</td></tr>');

    dis_last := 1;
    for r in get_county loop
        if (dis_last <> r.district) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Number of Accidents in District
'||dis_last||</b></td><td><b>'||dis_count(dis_last)||</b></td></tr>');
            http.tablerowclose;
        end if;
        i := r.county_id;
        if (acc_ct(i) <> 0) then
            http.tablerowopen;
            http.tabledata(r.district);
            http.tabledata(r.county_id);
            i := r.county_id;
            http.tabledata(r.county);
            http.tabledata(acc_ct(i));
            http.tablerowclose;
        end if;
        dis_last := r.district;
    end loop;
/*    http.tablerowopen;
    http.p('<tr><td colspan="3"><b>Number of Accidents in District
'||dis_last||</b></td><td><b>'||dis_count(dis_last)||</b></td></tr>');
    http.tablerowclose;
*/
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="3"><b>Total Number of Accidents
</b></td><td><b>'||grand_total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Attenuator Type</h1>');
    http.tableOpen;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=400>');
    http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Number of
Accidents</td></tr>');

    total_type := 0;
    grand_total := 0;
    i := 1;
    m := 1;
    for r in get_type loop
        if (i = 1) then
            last_atten := r.attenuator_type_name;
            i := i + 1;

```

```

end if;
if (last_atten <> r.attenuator_type_name) then
    attens(m) := last_atten;
    total_att(m) := total_type;
    m := m + 1;
    total_type := 0;
end if;
total_type := total_type + 1;
grand_total := grand_total + 1;
last_atten := r.attenuator_type_name;
end loop;
attens(m) := last_atten;
total_att(m) := total_type;

for i in 1..m loop
    http.tablerowopen;
    http.tabledata(attens(i));
    http.tabledata(total_att(i));
    http.tablerowclose;
end loop;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td><b>Total </b></td><td><b>'||grand_total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Accidents by Work Zone Use</h1>');
http.tableOpen;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=400>');
http.p('<tr><td><font size=5>In Work Zone</td><td><font size=5>Number of
Accidents</td></tr>');
total_type := 0;
grand_total := 0;
i := 1;
m := 1;
for r in get_wz loop
    if (i = 1) then
        last_atten := r.in_work_zone;
        i := i + 1;
    end if;
    if (last_atten <> r.in_work_zone) then
        attens(m) := last_atten;
        total_att(m) := total_type;
        m := m + 1;
        total_type := 0;
    end if;
    total_type := total_type + 1;
    grand_total := grand_total + 1;
    last_atten := r.in_work_zone;
end loop;
attens(m) := last_atten;
total_att(m) := total_type;
for i in 1..m loop
    http.tablerowopen;
    http.tabledata(attens(i));
    http.tabledata(total_att(i));

```

```

        http.tablerowclose;
    end loop;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td><b>Total </b></td><td><b>'||grand_total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('**Totals might be slightly different for individual accident
characteristics, based on the amount of data available to describe the
accident.<br>');
    http.p('<br>');
    html_functions.html_footer;

END s_acc_dis;

PROCEDURE s_acc_cause
IS
--Accident causation stats.
cursor get_cause_weather is select weather.weather_id, weather.weather_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.weather, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where weather.weather_id = accident.weather_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
weather.weather_id, attenuator_type.attenuator_type_name;

cursor get_cause_lighting is select lighting.lighting_id,
lighting.lighting_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.lighting, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where lighting.lighting_id = accident.lighting_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
lighting.lighting_id, attenuator_type.attenuator_type_name;

cursor get_cause_surface is select road_surface.road_surface_id,
road_surface.road_surface_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.road_surface, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where road_surface.road_surface_id = accident.road_surface_id
and atten_accident.accident_id = accident.accident_id

```

```

and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
road_surface.road_surface_id, attenuator_type.attenuator_type_name;

```

```

cursor get_cause_inf is select under_influence.under_influence_id,
under_influence.under_influence_value, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.under_influence, attenuator_apps.driver_action,
attenuator_apps.driver, attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where under_influence.under_influence_id = driver.under_influence_id
and driver.driver_id = vehicle.driver_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
under_influence.under_influence_id, attenuator_type.attenuator_type_name;

```

```

cursor get_cause_defects is select physical_defects.physical_defects_id,
physical_defects.physical_defects_value, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.physical_defects, attenuator_apps.driver_action,
attenuator_apps.driver, attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where physical_defects.physical_defects_id = driver.physical_defects_id
and driver.driver_id = vehicle.driver_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
physical_defects.physical_defects_id, attenuator_type.attenuator_type_name;

```

```

cursor get_cause_age is select driver.age, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.driver_action,
attenuator_apps.driver, attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where driver.driver_id = vehicle.driver_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id

```

```

and attenuator_type.category_id = category.category_id
order by
driver.age, attenuator_type.attenuator_type_name;

```

```

cursor get_cause_sex is select sex.sex_id, sex.sex_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,
driver_action.driver_action_value
from attenuator_apps.sex, attenuator_apps.driver_action,
attenuator_apps.driver, attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where sex.sex_id = driver.sex_id
and driver.driver_id = vehicle.driver_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
sex.sex_id, attenuator_type.attenuator_type_name;

```

```

cursor get_cause_residence is select residence.residence_id,
residence.residence_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,
driver_action.driver_action_value
from attenuator_apps.residence,
attenuator_apps.driver, attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.driver_action,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where residence.residence_id = driver.residence_id
and driver.driver_id = vehicle.driver_id
and vehicle.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
residence.residence_id, attenuator_type.attenuator_type_name;

```

--Accident causation stats--contributing cause driver.

```

cursor get_cause_driver is select
contributing_cause_driver.contrib_cause_driver_id,
contributing_cause_driver.contrib_cause_driver_value,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.contributing_cause_driver,
attenuator_apps.contrib_cause_driver_cited,
attenuator_apps.driver_action, attenuator_apps.driver, attenuator_apps.vehicle,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where contributing_cause_driver.contrib_cause_driver_id =
contrib_cause_driver_cited.contrib_cause_driver_id
and contrib_cause_driver_cited.driver_id = driver.driver_id

```

```

and driver.driver_id = vehicle.driver_id
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
contributing_cause_driver.contrib_cause_driver_id,
attenuator_type.attenuator_type_name;

```

```

--Accident causation stats--contributing cause environment.
cursor get_cause_env is select contributing_cause_env.contrib_cause_env_id,
contributing_cause_env.contrib_cause_env_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.contributing_cause_env,
attenuator_apps.contrib_cause_env_cited,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where contributing_cause_env.contrib_cause_env_id =
contrib_cause_env_cited.contrib_cause_env_id
and contrib_cause_env_cited.accident_number_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
contributing_cause_env.contrib_cause_env_id,
attenuator_type.attenuator_type_name;

```

```

--Accident causation stats--contributing cause road.
cursor get_cause_road is select contributing_cause_road.contrib_cause_road_id,
contributing_cause_road.contrib_cause_road_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.contributing_cause_road,
attenuator_apps.contrib_cause_road_cited,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where contributing_cause_road.contrib_cause_road_id =
contrib_cause_road_cited.contrib_cause_road_id
and contrib_cause_road_cited.accident_number_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
contributing_cause_road.contrib_cause_road_id,
attenuator_type.attenuator_type_name;

```

```

type varray_num is table of number(4,0) index by binary_integer;
acc_ct      varray_num;
i           number;
total       number;
total_cause number;
weather_last number;
weather_val  char(15);

```

```

light_last      number;
light_val       char(22);
surface_last    number;
surface_val     char(22);
defects_last    number;
defects_val     char(30);
ave_age        number(4,1);
young_age       number;
old_age         number;
sum_age         number;
m              number;
n              number;
sex_last        number;
sex_val         char(7);
residence_last  number;
residence_val   char(25);
driver_last     number;
driver_val      char(40);
env_last        number;
env_val         char(40);
road_last       number;
road_val        char(40);
inf_last        number;
inf_val         char(35);

```

```
BEGIN
```

```

    html_functions.html_header('Summary Report: Accidents by Cause');
    http.p('<br>');
    http.p('<h1>Summary Reports: Accidents by Cause</h1>');
    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Weather</h1>');
    http.tableOpen;
    total := 0;
    total_cause := 0;
    http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=500>');
    http.p('<tr><td><font size=5>Weather ID</td><td><font
size=5>Weather</td><td><font size=5>Number of Accidents</td></tr>');
    i := 1;
    for r in get_cause_weather loop
        if (i = 1) then
            weather_last := r.weather_id;
            weather_val := r.weather_value;
            i := 2;
        end if;
        if (weather_last <> r.weather_id) then
            http.tablerowopen;
            http.tabledata(weather_last);
            http.tabledata(weather_val);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
        total_cause := total_cause + 1;
        total := total + 1;
        weather_last := r.weather_id;
        weather_val := r.weather_value;
    end loop;
    http.tablerowopen;

```



```

    http.tabledata(weather_last);
    http.tabledata(weather_val);
    http.tabledata(total_cause);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Lighting</h1>');
    http.tableOpen;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
    http.p('<tr><td><font size=5>Lighting ID</td><td><font
size=5>Lighting</td><td><font size=5>Number of Accidents</td></tr>');
    total := 0;
    total_cause := 0;
    i := 1;
    for r in get_cause_lighting loop
        if (i = 1) then
            light_last := r.lighting_id;
            light_val := r.lighting_value;
            i := 2;
        end if;
        if (light_last <> r.lighting_id) then
            http.tablerowopen;
            http.tabledata(light_last);
            http.tabledata(light_val);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
        total_cause := total_cause + 1;
        total := total + 1;
        light_last := r.lighting_id;
        light_val := r.lighting_value;
    end loop;
    http.tablerowopen;
    http.tabledata(light_last);
    http.tabledata(light_val);
    http.tabledata(total_cause);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Road Surface</h1>');

```

```

http.tableOpen;
http.p('<TABLE BORDER CELLSAPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Road Surface ID</td><td><font size=5>Road
Surface</td><td><font size=5>Number of Accidents</td></tr>');
total := 0;
total_cause := 0;
i := 1;
for r in get_cause_surface loop
    if (i = 1) then
        surface_last := r.road_surface_id;
        surface_val := r.road_surface_value;
        i := 2;
    end if;
    if (surface_last <> r.road_surface_id) then
        http.tablerowopen;
        http.tabledata(surface_last);
        http.tabledata(surface_val);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    surface_last := r.road_surface_id;
    surface_val := r.road_surface_value;
end loop;
http.tablerowopen;
http.tabledata(surface_last);
http.tabledata(surface_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>||total||</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Accidents by Drivers' Alcohol or Drug Use</h1>');
http.tableOpen;
http.p('<TABLE BORDER CELLSAPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Alcohol-Drug ID</td><td><font size=5>Alcohol or
Drug Use</td><td><font size=5>Number of Drivers</td></tr>');
total := 0;
total_cause := 0;
i := 1;
for r in get_cause_inf loop
    if (r.driver_action_value <> 'PHANTOM') then
        if (i = 1) then
            inf_last := r.under_influence_id;
            inf_val := r.under_influence_value;
            i := 2;
        end if;
        if (inf_last <> r.under_influence_id) then
            http.tablerowopen;
            http.tabledata(inf_last);

```

```

        http.tabledata(inf_val);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    inf_last := r.under_influence_id;
    inf_val := r.under_influence_value;
end if;
end loop;
http.tablerowopen;
http.tabledata(inf_last);
http.tabledata(inf_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Accidents by Drivers'' Physical Defects</h1>');
http.tableOpen;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Physical Defects ID</td><td><font
size=5>Physical Defects</td><td><font size=5>Number of Drivers</td></tr>');
total := 0;
total_cause := 0;
i := 1;
for r in get_cause_defects loop
    if (r.driver_action_value <> 'PHANTOM') then
        if (i = 1) then
            defects_last := r.physical_defects_id;
            defects_val := r.physical_defects_value;
            i := 2;
        end if;
        if (defects_last <> r.physical_defects_id) then
            http.tablerowopen;
            http.tabledata(defects_last);
            http.tabledata(defects_val);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
        total_cause := total_cause + 1;
        total := total + 1;
        defects_last := r.physical_defects_id;
        defects_val := r.physical_defects_value;
    end if;
end loop;
http.tablerowopen;
http.tabledata(defects_last);
http.tabledata(defects_val);
http.tabledata(total_cause);

```

```

http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Accidents by Drivers' Age</h1>');
http.tableOpen;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Age Range</td><td><font size=5>Number of
Drivers</td></tr>');
total := 0;
sum_age := 0;
young_age := 100;
old_age := 0;
for i in 1..8 loop
    acc_ct(i) := 0;
end loop;
for r in get_cause_age loop
    if (r.driver_action_value <> 'PHANTOM') then
        if (r.age is not null) then
            total := total + 1;
            sum_age := sum_age + r.age;
            if (r.age > old_age) then
                old_age := r.age;
            end if;
            if (r.age < young_age) then
                young_age := r.age;
            end if;
            if (r.age < 20) then
                acc_ct(1) := acc_ct(1) + 1;
            elsif (r.age < 30) then
                acc_ct(2) := acc_ct(2) + 1;
            elsif (r.age < 40) then
                acc_ct(3) := acc_ct(3) + 1;
            elsif (r.age < 50) then
                acc_ct(4) := acc_ct(4) + 1;
            elsif (r.age < 60) then
                acc_ct(5) := acc_ct(5) + 1;
            elsif (r.age < 70) then
                acc_ct(6) := acc_ct(6) + 1;
            elsif (r.age < 80) then
                acc_ct(7) := acc_ct(7) + 1;
            else
                acc_ct(8) := acc_ct(8) + 1;
            end if;
        end if;
    end if;
end loop;
ave_age := sum_age/total;

if (acc_ct(1) <> 0) then
    http.tablerowopen;
    http.tabledata('Less than 20');

```

```

        http.tabledata(acc_ct(1));
        http.tablerowclose;
    end if;
    for i in 2..7 loop
        if (acc_ct(i) <> 0) then
            http.tablerowopen;
            m := i*10;
            n := m + 9;
            http.tabledata('Between '||m||' and '||n);
            http.tabledata(acc_ct(i));
            http.tablerowclose;
        end if;
    end loop;
    if (acc_ct(8) <> 0) then
        http.tablerowopen;
        http.tabledata('80 and above');
        http.tabledata(acc_ct(8));
        http.tablerowclose;
    end if;
    http.tablerowopen;
    http.tabledata('<b>Average</b>');
    http.tabledata(ave_age);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata('<b>Minimum</b>');
    http.tabledata(young_age);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata('<b>Maximum</b>');
    http.tabledata(old_age);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.p('<tr><td><b>Total Num. of
Drivers</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Drivers' Sex</h1>');
    http.tableOpen;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
    http.p('<tr><td><font size=5>Sex ID</td><td><font size=5>Sex</td><td><font
size=5>Number of Drivers</td></tr>');
    total := 0;
    total_cause := 0;
    i := 1;
    for r in get_cause_sex loop
        if (r.driver_action_value <> 'PHANTOM') then
            if (i = 1) then
                sex_last := r.sex_id;
                sex_val := r.sex_value;
                i := 2;
            end if;
            if (sex_last <> r.sex_id) then
                http.tablerowopen;
                http.tabledata(sex_last);
                http.tabledata(sex_val);

```

```

        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    sex_last := r.sex_id;
    sex_val := r.sex_value;
end if;
end loop;
http.tablerowopen;
http.tabledata(sex_last);
http.tabledata(sex_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Drivers' Residence</h1>');
    http.tableOpen;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
    http.p('<tr><td><font size=5>Residence ID</td><td><font
size=5>Residence</td><td><font size=5>Number of Drivers</td></tr>');
    total := 0;
    total_cause := 0;
    i := 1;
    for r in get_cause_residence loop
        if (r.driver_action_value <> 'PHANTOM') then
            if (i = 1) then
                residence_last := r.residence_id;
                residence_val := r.residence_value;
                i := 2;
            end if;
            if (residence_last <> r.residence_id) then
                http.tablerowopen;
                http.tabledata(residence_last);
                http.tabledata(residence_val);
                http.tabledata(total_cause);
                http.tablerowclose;
                total_cause := 0;
            end if;
            total_cause := total_cause + 1;
            total := total + 1;
            residence_last := r.residence_id;
            residence_val := r.residence_value;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(residence_last);
    http.tabledata(residence_val);
    http.tabledata(total_cause);
    http.tablerowclose;

```

```

    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Contributing Cause, Driver</h1>');
    http.tableOpen;
    http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=500>');
    http.p('<tr><td><font size=5>Cause ID</td><td><font size=5>Contributing
Cause</td><td><font size=5>Number of Drivers</td></tr>');
    total := 0;
    total_cause := 0;
    i := 1;
    for r in get_cause_driver loop
        if (r.driver_action_value <> 'PHANTOM') then
            if (i = 1) then
                driver_last := r.contrib_cause_driver_id;
                driver_val := r.contrib_cause_driver_value;
                i := 2;
            end if;
            if (driver_last <> r.contrib_cause_driver_id) then
                http.tablerowopen;
                http.tabledata(driver_last);
                http.tabledata(driver_val);
                http.tabledata(total_cause);
                http.tablerowclose;
                total_cause := 0;
            end if;
            total_cause := total_cause + 1;
            total := total + 1;
            driver_last := r.contrib_cause_driver_id;
            driver_val := r.contrib_cause_driver_value;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(driver_last);
    http.tabledata(driver_val);
    http.tabledata(total_cause);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Accidents by Contributing Cause,
Environment</h1>');
    http.tableOpen;

```

```

http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Cause ID</td><td><font size=5>Contributing
Cause</td><td><font size=5>Number of Accidents</td></tr>');
total := 0;
total_cause := 0;
i := 1;
for r in get_cause_env loop
    if (i = 1) then
        env_last := r.contrib_cause_env_id;
        env_val := r.contrib_cause_env_value;
        i := 2;
    end if;
    if (env_last <> r.contrib_cause_env_id) then
        http.tablerowopen;
        http.tabledata(env_last);
        http.tabledata(env_val);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    env_last := r.contrib_cause_env_id;
    env_val := r.contrib_cause_env_value;
end loop;
http.tablerowopen;
http.tabledata(env_last);
http.tabledata(env_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Accidents by Contributing Cause, Roadway</h1>');
http.tableOpen;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Cause ID</td><td><font size=5>Contributing
Cause</td><td><font size=5>Number of Accidents</td></tr>');
total := 0;
total_cause := 0;
i := 1;
for r in get_cause_road loop
    if (i = 1) then
        road_last := r.contrib_cause_road_id;
        road_val := r.contrib_cause_road_value;
        i := 2;
    end if;
    if (road_last <> r.contrib_cause_road_id) then
        http.tablerowopen;
        http.tabledata(road_last);
        http.tabledata(road_val);
        http.tabledata(total_cause);

```



```

        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    road_last := r.contrib_cause_road_id;
    road_val := r.contrib_cause_road_value;
end loop;
http.tablerowopen;
http.tabledata(road_last);
http.tabledata(road_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('**ID Codes are from DHSMV Florida Traffic Crash Report.<br>');
http.p('**Driver data does not include "Phantom" vehicles.<br>');

html_functions.html_footer;

END s_acc_cause;

PROCEDURE s_acc_imp
IS

cursor get_num_imp is select accident.number_atten_impacts,
model.model_number, attenuator_type.attenuator_type_name, category.category_type

from attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
accident.number_atten_impacts, attenuator_type.attenuator_type_name;

cursor get_imp_pt_veh is select point_vehicle.point_vehicle_id,
point_vehicle.point_vehicle_value,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,

impact_point_atten.impact_point_atten
from attenuator_apps.impact_point_atten, attenuator_apps.accident,
attenuator_apps.point_vehicle, attenuator_apps.driver_action,
attenuator_apps.vehicle, attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and impact_point_atten.impact_point_atten <> 'NO IMPACT'

```

```

and point_vehicle.point_vehicle_id = vehicle.impact_point_vehicle_id
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
point_vehicle.point_vehicle_id, attenuator_type.attenuator_type_name;

```

```

cursor get_imp_pt_atten is select impact_point_atten.impact_point_atten_id,
impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.driver_action,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
vehicle.impact_point_atten_id, attenuator_type.attenuator_type_name;

```

```

cursor get_pre_imp_ang is select impact_angle.impact_angle_id,
impact_angle.impact_angle_descrip,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,
impact_point_atten.impact_point_atten
from attenuator_apps.impact_point_atten, attenuator_apps.impact_angle,
attenuator_apps.driver_action,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and impact_point_atten.impact_point_atten <> 'NO IMPACT'
and impact_angle.impact_angle_id = vehicle.pre_impact_angle_id
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
impact_angle.impact_angle_id, attenuator_type.attenuator_type_name;

```

```

cursor get_rear_imp is select vehicle.rear_impact,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,
impact_point_atten.impact_point_atten

```

```

from attenuator_apps.impact_point_atten, attenuator_apps.driver_action,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and impact_point_atten.impact_point_atten <> 'NO IMPACT'
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
vehicle.rear_impact, attenuator_type.attenuator_type_name;

cursor get_prior_imp is select vehicle.prior_impact,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type,
impact_point_atten.impact_point_atten
from attenuator_apps.impact_point_atten, attenuator_apps.driver_action,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident,
attenuator_apps.attenuator, attenuator_apps.model,
attenuator_apps.attenuator_type,
attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and impact_point_atten.impact_point_atten <> 'NO IMPACT'
and driver_action.driver_action_id = vehicle.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
vehicle.prior_impact, attenuator_type.attenuator_type_name;

type varray_num is table of number(4,0) index by binary_integer;
acc_ct   varray_num;
i         number;
total    number;
total_cause number;
ipv_last number;
ipv_val  char(25);
ipa_last number;
ipa_val  char(15);
pia_last number;
pia_val  char(20);
rear_last char(3);
prior_last char(3);
num_imp_last number;

BEGIN

    html_functions.html_header('Summary Report: Accidents by Impact
Characteristics');
    http.p('<br>');
    http.p('<h1>Summary Reports: Accidents by Impact Characteristics</h1>');

```

```

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Number of Attenuator Impacts</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
  http.p('<tr><td><font size=5>Number of Vehicles Impacting
Attenuator</td><td><font size=5>Number of Accidents</td></tr>');
  i := 1;
  for r in get_num_imp loop
    if (i = 1) then
      num_imp_last := r.number_atten_impacts;
      i := 2;
    end if;
    if (num_imp_last <> r.number_atten_impacts) OR (r.number_atten_impacts is
null) then
      if (num_imp_last is not null) then
        http.tablerowopen;
        http.tabledata(num_imp_last);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
      end if;
    end if;
    if (r.number_atten_impacts is not null) then
      total_cause := total_cause + 1;
      total := total + 1;
    end if;
    num_imp_last := r.number_atten_impacts;
  end loop;
  if (num_imp_last is not null) then
    http.tablerowopen;
    http.tabledata(num_imp_last);
    http.tabledata(total_cause);
    http.tablerowclose;
  end if;
  http.tablerowopen;
  http.tabledata(' ');
  http.tabledata(' ');
  http.p('<tr><td><b>Total </b></td><td><b>||total||</b></td></tr>');
  http.tablerowclose;
  http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Prior Impacts</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
  http.p('<tr><td><font size=5>Prior Impact?</td><td><font size=5>Number of
Accidents</td></tr>');
  i := 1;
  for r in get_prior_imp loop
    if (r.driver_action_value <> 'PHANTOM') then
      if (i = 1) then
        prior_last := r.prior_impact;

```

```

        i := 2;
    end if;
    if (prior_last <> r.prior_impact) OR (r.prior_impact is null) then
        if (prior_last is not null) then
            http.tablerowopen;
            http.tabledata(prior_last);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
    end if;
    if (r.prior_impact is not null) then
        total_cause := total_cause + 1;
        total := total + 1;
    end if;
    prior_last := r.prior_impact;
end if;
end loop;
if (prior_last is not null) then
    http.tablerowopen;
    http.tabledata(prior_last);
    http.tabledata(total_cause);
    http.tablerowclose;
end if;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td><b>Total </b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Impact Point on Vehicle</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Impact Point ID</td><td><font size=5>Impact
Point</td><td><font size=5>Number of Accidents</td></tr>');
i := 1;
for r in get_imp_pt_veh loop
    if (r.driver_action_value <> 'PHANTOM') then
        if (i = 1) then
            ipv_last := r.point_vehicle_id;
            ipv_val := r.point_vehicle_value;
            i := 2;
        end if;
        if (ipv_last <> r.point_vehicle_id) then
            http.tablerowopen;
            http.tabledata(ipv_last);
            http.tabledata(ipv_val);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
        total_cause := total_cause + 1;
        total := total + 1;
        ipv_last := r.point_vehicle_id;
    end if;
end loop;

```

```

        ipv_val := r.point_vehicle_value;
    end if;
end loop;
http.tablerowopen;
http.tabledata(ipv_last);
http.tabledata(ipv_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Impact Point on Attenuator</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=500>');
http.p('<tr><td><font size=5>Impact Point</td><td><font size=5>Number of
Accidents</td></tr>');
i := 1;
for r in get_imp_pt_atten loop
    if (r.driver_action_value <> 'PHANTOM') then
        if (i = 1) then
            ipa_last := r.impact_point_atten_id;
            ipa_val := r.impact_point_atten;
            i := 2;
        end if;
        if (ipa_last <> r.impact_point_atten_id) then
            http.tablerowopen;
            http.tabledata(ipa_val);
            http.tabledata(total_cause);
            http.tablerowclose;
            total_cause := 0;
        end if;
        total_cause := total_cause + 1;
        total := total + 1;
        ipa_last := r.impact_point_atten_id;
        ipa_val := r.impact_point_atten;
    end if;
end loop;
http.tablerowopen;
http.tabledata(ipa_val);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td><b>Total </b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');

```

```

http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pre Impact Angle</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=500>');
  http.p('<tr><td><font size=5>Pre Impact Angle</td><td><font size=5>Number of
Accidents</td></tr>');
  i := 1;
  for r in get_pre_imp_ang loop
    if (r.driver_action_value <> 'PHANTOM') then
      if (i = 1) then
        pia_last := r.impact_angle_id;
        pia_val := r.impact_angle_descrip;
        i := 2;
      end if;
      if (pia_last <> r.impact_angle_id) then
        http.tablerowopen;
        http.tabledata(pia_val);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
      end if;
      total_cause := total_cause + 1;
      total := total + 1;
      pia_last := r.impact_angle_id;
      pia_val := r.impact_angle_descrip;
    end if;
  end loop;
  http.tablerowopen;
  http.tabledata(pia_val);
  http.tabledata(total_cause);
  http.tablerowclose;
  http.tablerowopen;
  http.tabledata(' ');
  http.tabledata(' ');
  http.p('<tr><td><b>Total </b></td><td><b>||total||</b></td></tr>');
  http.tablerowclose;
  http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Rear Impacts</h1>');
http.tableOpen;
total := 0;
total_cause := 0;
http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=500>');
  http.p('<tr><td><font size=5>Rear Impact?</td><td><font size=5>Number of
Accidents</td></tr>');
  i := 1;
  for r in get_rear_imp loop
    if (r.driver_action_value <> 'PHANTOM') then
      if (i = 1) then
        rear_last := r.rear_impact;
        i := 2;
      end if;
      if (rear_last <> r.rear_impact) then
        http.tablerowopen;

```

```

        http.tabledata(rear_last);
        http.tabledata(total_cause);
        http.tablerowclose;
        total_cause := 0;
    end if;
    total_cause := total_cause + 1;
    total := total + 1;
    rear_last := r.rear_impact;
end if;
end loop;
http.tablerowopen;
http.tabledata(rear_last);
http.tabledata(total_cause);
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td><b>Total </b></td><td><b>||total||</b></td></tr>');
http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('**ID Codes, where given, are from DHSMV Florida Traffic Crash
Report.<br>');
    http.p('**Impact data does not include "Phantom" vehicles, and with the
exception of "Impact Point, Attenuator" table, includes only vehicles which
physically impacted attenuator.<br>');
    html_functions.html_footer;

END s_acc_imp;

PROCEDURE s_att_res
IS

cursor get_att_dam is select damage_to_atten.atten_damage_id,
damage_to_atten.atten_damage_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.damage_to_atten, attenuator_apps.atten_performance,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where damage_to_atten.atten_damage_id = atten_performance.atten_damage_id
and atten_performance.atten_performance_id = atten_accident.atten_performance_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, damage_to_atten.atten_damage_id;

cursor get_deb_scatt is select atten_performance.atten_performance_id,
debris_scattered.debris_scatter_id,
debris_scattered.debris_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.debris_scattered, attenuator_apps.atten_performance,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where debris_scattered.debris_scatter_id = atten_performance.debris_scatter_id
and atten_performance.atten_performance_id = atten_accident.atten_performance_id
and atten_accident.attenuator_id = attenuator.attenuator_id

```



```

and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, debris_scattered.debris_scatter_id;

```

```

cursor get_cost_att is select atten_performance.estimated_repair_cost,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.atten_performance, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where atten_accident.atten_performance_id =
atten_performance.atten_performance_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, atten_performance.estimated_repair_cost;

```

```

cursor get_snag is select accident.accident_id, vehicle.vehicle_id,
snagging.snagging_id,
snagging.snagging_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.snagging, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.snagging_id = snagging.snagging_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, snagging.snagging_id;

```

```

cursor get_pocket is select accident.accident_id, vehicle.vehicle_id,
pocketing.pocketing_id,
pocketing.pocketing_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.pocketing, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.pocketing_id = pocketing.pocketing_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id

```

```

and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, pocketing.pocketing_id;

```

```

cursor get_spear is select accident.accident_id, vehicle.vehicle_id,
spearing.spearing_id,
spearing.spearing_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.spearing, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.spearing_id = spearing.spearing_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, spearing.spearing_id;

```

```

cursor get_over is select accident.accident_id, vehicle.vehicle_id,
override.override_id,
override.override_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.override, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.override_id = override.override_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, override.override_id;

```

```

cursor get_under is select accident.accident_id, vehicle.vehicle_id,
underride.underride_id,
underride.underride_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.underride, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,

```

```

attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.underride_id = underride.underride_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, underride.underride_id;

```

```

type varray_num is table of number(5,0) index by binary_integer;

```

```

acc_ct      varray_num;
cost_inc    varray_num;
i           number;
total       number;
total_res   number;
last_id     number;
last_val    char(30);
last_name   char(20);
ave_cost    number(8,1);
low_cost    number;
high_cost   number;
sum_cost    number;
m           number;
total_type  number;

```

```

BEGIN

```

```

        html_functions.html_header('Summary Report: Accidents by Attenuator
Results');
        http.p('<br>');
        http.p('<h1>Summary Reports: Accidents by Attenuator Results</h1>');
        http.p('<br>');
        http.p('<br>');
        http.p('<br>');
        http.p('<h1>Summary Report: Damage to Attenuator</h1>');
        http.tableOpen;
        total := 0;
        total_res := 0;
        http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
        http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Damage to
Attenuator</td><td><font size=5>Number of Accidents</td></tr>');
        i := 1;
        total_type := 0;
        for r in get_att_dam loop
            if (i = 1) then
                last_name := r.attenuator_type_name;
                last_id := r.atten_damage_id;
                last_val := r.atten_damage_descrip;
                i := 2;
            end if;
            if (last_id <> r.atten_damage_id) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);

```

```

        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.atten_damage_id;
    last_val := r.atten_damage_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Estimated Attenuator Repair Cost</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Estimated
Repair Cost</td><td><font size=5>Number of Accidents</td></tr>');

cost_inc(0) := 0;
cost_inc(1) := 500;
cost_inc(2) := 1000;
cost_inc(3) := 2500;
cost_inc(4) := 5000;
cost_inc(5) := 7500;
cost_inc(6) := 10000;
cost_inc(7) := 12500;
cost_inc(8) := 15000;
cost_inc(9) := 17500;
cost_inc(10) := 20000;
cost_inc(11) := 22500;
for i in 1..12 loop
    acc_ct(i) := 0;

```

```

end loop;
total := 0;
total_res := 0;
sum_cost := 0;
low_cost := 100000;
high_cost := 0;

i := 1;
for r in get_cost_att loop
    if (i = 1) then
        last_name := r.attenuator_type_name;
        i := 2;
    end if;
    if (last_name <> r.attenuator_type_name) then
        for i in 1..11 loop
            if (acc_ct(i) <> 0) then
                http.tablerowopen;
                http.tabledata(last_name);
                m := cost_inc(i) - 1;
                http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
                http.tabledata(acc_ct(i));
                http.tablerowclose;
            end if;
        end loop;
        if (acc_ct(12) <> 0) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('Greater than ' || cost_inc(11));
            http.tabledata(acc_ct(12));
            http.tablerowclose;
        end if;
        if (total_res <> 0) then
            ave_cost := sum_cost/total_res;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Average</b>');
            http.tabledata(ave_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Minimum</b>');
            http.tabledata(low_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Maximum</b>');
            http.tabledata(high_cost);
            http.tablerowclose;
        end if;
        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_res||'</b></td></tr>');
        http.tablerowclose;
        for i in 1..12 loop
            acc_ct(i) := 0;
        end loop;
        total_res := 0;
        sum_cost := 0;
        low_cost := 100000;
        high_cost := 0;
    end if;

```

```

if (r.estimated_repair_cost is not null) then
    total := total + 1;
    total_res := total_res + 1;
    sum_cost := sum_cost + r.estimated_repair_cost;
    if (r.estimated_repair_cost > high_cost) then
        high_cost := r.estimated_repair_cost;
    end if;
    if (r.estimated_repair_cost < low_cost) then
        low_cost := r.estimated_repair_cost;
    end if;
    if (r.estimated_repair_cost < cost_inc(1)) then
        acc_ct(1) := acc_ct(1) + 1;
    elsif (r.estimated_repair_cost < cost_inc(2)) then
        acc_ct(2) := acc_ct(2) + 1;
    elsif (r.estimated_repair_cost < cost_inc(3)) then
        acc_ct(3) := acc_ct(3) + 1;
    elsif (r.estimated_repair_cost < cost_inc(4)) then
        acc_ct(4) := acc_ct(4) + 1;
    elsif (r.estimated_repair_cost < cost_inc(5)) then
        acc_ct(5) := acc_ct(5) + 1;
    elsif (r.estimated_repair_cost < cost_inc(6)) then
        acc_ct(6) := acc_ct(6) + 1;
    elsif (r.estimated_repair_cost < cost_inc(7)) then
        acc_ct(7) := acc_ct(7) + 1;
    elsif (r.estimated_repair_cost < cost_inc(8)) then
        acc_ct(8) := acc_ct(8) + 1;
    elsif (r.estimated_repair_cost < cost_inc(9)) then
        acc_ct(9) := acc_ct(9) + 1;
    elsif (r.estimated_repair_cost < cost_inc(10)) then
        acc_ct(10) := acc_ct(10) + 1;
    elsif (r.estimated_repair_cost < cost_inc(11)) then
        acc_ct(11) := acc_ct(11) + 1;
    else
        acc_ct(12) := acc_ct(12) + 1;
    end if;
end if;
last_name := r.attenuator_type_name;
end loop;

for i in 1..11 loop
    if (acc_ct(i) <> 0) then
        http.tablerowopen;
        http.tabledata(last_name);
        m := cost_inc(i) - 1;
        http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
        http.tabledata(acc_ct(i));
        http.tablerowclose;
    end if;
end loop;
if (acc_ct(12) <> 0) then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('Greater than ' || cost_inc(11));
    http.tabledata(acc_ct(12));
    http.tablerowclose;
end if;
if (total_res <> 0) then
    ave_cost := sum_cost/total_res;
    http.tablerowopen;
    http.tabledata(last_name);

```

```

    http.tabledata('<b>Average</b>');
    http.tabledata(ave_cost);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('<b>Minimum</b>');
    http.tabledata(low_cost);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('<b>Maximum</b>');
    http.tabledata(high_cost);
    http.tablerowclose;
end if;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_res||'</b></td></tr>');
http.tablerowclose;

http.tablerowopen;
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total Number of
Records</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Debris Scattered</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Debris
Scattered</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_deb_scat loop
    if (i = 1) then
        last_name := r.attenuator_type_name;
        last_id := r.debris_scatter_id;
        last_val := r.debris_descrip;
        i := 2;
    end if;
    if (last_id <> r.debris_scatter_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
end if;

```

```

        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
        last_name := r.attenuator_type_name;
        last_id := r.debris_scatter_id;
        last_val := r.debris_descrip;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
|||last_name|||</b></td><td><b>'||total_type|||</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total|||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Snagging</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Snagging</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_snag loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_name := r.attenuator_type_name;
                last_val := r.snagging_descrip;
                i := 2;
            end if;
            if (last_val <> r.snagging_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
|||last_name|||</b></td><td><b>'||total_type|||</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
        end if;
    end if;

```



```

        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
        last_name := r.attenuator_type_name;
        last_val := r.snagging_descrip;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Pocketing</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Pocketing</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_pocket loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_name := r.attenuator_type_name;
                last_val := r.pocketing_descrip;
                i := 2;
            end if;
            if (last_val <> r.pocketing_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;

```

```

        total_res := total_res + 1;
        total := total + 1;
        last_name := r.attenuator_type_name;
        last_val := r.pocketing_descrip;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Spearing</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Spearing</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_spear loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_val := r.spearing_descrip;
            i := 2;
        end if;
        if (last_val <> r.spearing_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;
            end if;
        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
    end if;
end loop;

```

```

        total := total + 1;
        last_name := r.attenuator_type_name;
        last_val := r.spearing_descrip;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Underriding</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Underriding</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_under loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.underride_descrip;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.underride_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;
            end if;
        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
    end if;
end if;

```

```

        last_name := r.attenuator_type_name;
        last_val := r.override_descrip;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Overriding</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Overriding</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_over loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.override_descrip;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.override_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;
            end if;
        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
        last_val := r.override_descrip;

```

```

        last_name := r.attenuator_type_name;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
html_functions.html_footer;

END s_att_res;

PROCEDURE s_veh_res
IS

cursor get_haz_imp is
select accident.accident_id, vehicle.vehicle_id,
impact_point_atten.impact_point_atten,
hazard_impact.hazard_impact_id, hazard_impact.hazard_impact_descrip,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.hazard_impact, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.hazard_impact_id = hazard_impact.hazard_impact_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, hazard_impact.hazard_impact_id;

cursor get_cost_veh is select accident.accident_id, vehicle.vehicle_id,
vehicle_results.estimated_cost_vehicle, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,

```

```

attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.vehicle_id = vehicle.vehicle_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, vehicle_results.estimated_cost_vehicle;

```

```

cursor get_deform is select accident.accident_id, vehicle.vehicle_id,
deform_pass_compart.deformation_descrip,
deform_pass_compart.deformation_id, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.deform_pass_compart, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.deformation_id = deform_pass_compart.deformation_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, deform_pass_compart.deformation_id;

```

```

cursor get_dis_long is select accident.accident_id, vehicle.vehicle_id,
distance_long.distance_long_id,
distance_long.distance_long_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value, stopping_mode.stopping_mode_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.distance_long, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.distance_long_id = distance_long.distance_long_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id

```

```

and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, distance_long.distance_long_id;

cursor get_dis_lat is select accident.accident_id, vehicle.vehicle_id,
distance_lateral.distance_lat_id,
distance_lateral.distance_lat_descrip, stopping_mode.stopping_mode_value,
impact_point_atten.impact_point_atten, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.stopping_mode,
attenuator_apps.distance_lateral, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.distance_lat_id = distance_lateral.distance_lat_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, distance_lateral.distance_lat_id;

cursor get_stop_mode is select accident.accident_id, vehicle.vehicle_id,
stopping_mode.stopping_mode_id,
stopping_mode.stopping_mode_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.stopping_mode, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.stopping_mode_id = stopping_mode.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, stopping_mode.stopping_mode_id;

cursor get_stop_place is select accident.accident_id, vehicle.vehicle_id,
stopping_mode.stopping_mode_value, stopping_place.stopping_place_id,
stopping_place.stopping_place_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type

```

```

from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.stopping_place, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.stopping_place_id = stopping_place.stopping_place_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, stopping_place.stopping_place_id;

```

```

cursor get_spin is select accident.accident_id, vehicle.vehicle_id,
spin_behavior.spin_behavior_id,
spin_behavior.spin_behavior_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.spin_behavior, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.spin_behavior_id = spin_behavior.spin_behavior_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, spin_behavior.spin_behavior_id;

```

```

cursor get_imp_angles is select vehicle.pre_impact_angle_id, --
impact_angle.impact_angle_descrip,
vehicle_results.post_impact_angle_id, --impact_angle.impact_angle_descrip,
impact_point_atten.impact_point_atten, stopping_mode.stopping_mode_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category--, impact_angle
where --vehicle.pre_impact_angle_id = impact_angle.impact_angle_id
--and vehicle_results.post_impact_angle_id = impact_angle.impact_angle_id
--and
vehicle_results.vehicle_id = vehicle.vehicle_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle.accident_id = accident.accident_id

```



```

and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, vehicle.pre_impact_angle_id,
vehicle_results.post_impact_angle_id;

cursor get_sec_acc_1 is
select accident.accident_id, vehicle.vehicle_id,
impact_point_atten.impact_point_atten,
vehicle_results.secondary_acc, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle_results.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, vehicle_results.secondary_acc;

cursor get_sec_acc is
select vehicle_results.stopping_mode_id, stopping_mode.stopping_mode_value,
accident.accident_id, vehicle.vehicle_id, impact_point_atten.impact_point_atten,
vehicle_results.secondary_acc, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle_results.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, vehicle_results.secondary_acc;

cursor get_angle_values is select * from attenuator_apps.impact_angle where 0=0
order by impact_angle_id;

type varray_num is table of number(6,0) index by binary_integer;

```

```

acc_ct      varray_num;
i           number(1,0);
total       number;
total_res   number;
total_type  number;
last_id     number;
last_val    char(60);
last_name   char(20);
cost_inc    varray_num;
sum_cost    number;
low_cost    number;
high_cost   number;
m           number;
ave_cost    number(8,1);
last_pre    char(20);
last_post   char(20);
pre         char(20);
post        char(20);

```

```

BEGIN

```

```

    html_functions.html_header('Summary Report: Accidents by Vehicle Results');
    http.p('<br>');
    http.p('<h1>Summary Reports: Accidents by Vehicle Results</h1>');
    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Severity of Hazard Impact</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Severity of Hazard Impact</td><td><font size=5>Number of
Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_haz_imp loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.hazard_impact_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.hazard_impact_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;

```

```

        total_res := total_res + 1;
        total := total + 1;
        last_val := r.hazard_impact_descrip;
        last_name := r.attenuator_type_name;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Estimated Vehicle Repair Cost</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Estimated
VehicleRepair Cost</td><td><font size=5>Number of Accidents</td></tr>');

cost_inc(0) := 0;
cost_inc(1) := 500;
cost_inc(2) := 1000;
cost_inc(3) := 2500;
cost_inc(4) := 5000;
cost_inc(5) := 7500;
cost_inc(6) := 10000;
cost_inc(7) := 12500;
cost_inc(8) := 15000;
cost_inc(9) := 17500;
cost_inc(10) := 20000;
cost_inc(11) := 22500;
for i in 1..12 loop
    acc_ct(i) := 0;
end loop;
total := 0;
total_res := 0;
sum_cost := 0;
low_cost := 100000;
high_cost := 0;

i := 1;
for r in get_cost_veh loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_name := r.attenuator_type_name;

```

```

        i := 2;
    end if;
    if (last_name <> r.attenuator_type_name) then
        for i in 1..11 loop
            if (acc_ct(i) <> 0) then
                http.tablerowopen;
                http.tabledata(last_name);
                m := cost_inc(i) - 1;
                http.tabledata('Between '||cost_inc(i-1)||' and '||m);
                http.tabledata(acc_ct(i));
                http.tablerowclose;
            end if;
        end loop;
        if (acc_ct(12) <> 0) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('Greater than '||cost_inc(11));
            http.tabledata(acc_ct(12));
            http.tablerowclose;
        end if;
        if (total_res <> 0) then
            ave_cost := sum_cost/total_res;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Average</b>');
            http.tabledata(ave_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Minimum</b>');
            http.tabledata(low_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Maximum</b>');
            http.tabledata(high_cost);
            http.tablerowclose;
        end if;
        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||</b></td><td><b>'||total_res||</b></td></tr>');
        http.tablerowclose;
        for i in 1..12 loop
            acc_ct(i) := 0;
        end loop;
        total_res := 0;
        sum_cost := 0;
        low_cost := 100000;
        high_cost := 0;
    end if;

    if (r.estimated_cost_vehicle is not null) then
        total := total + 1;
        total_res := total_res + 1;
        sum_cost := sum_cost + r.estimated_cost_vehicle;
        if (r.estimated_cost_vehicle > high_cost) then
            high_cost := r.estimated_cost_vehicle;
        end if;
        if (r.estimated_cost_vehicle < low_cost) then
            low_cost := r.estimated_cost_vehicle;
        end if;
    end if;

```

```

    if (r.estimated_cost_vehicle < cost_inc(1)) then
        acc_ct(1) := acc_ct(1) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(2)) then
        acc_ct(2) := acc_ct(2) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(3)) then
        acc_ct(3) := acc_ct(3) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(4)) then
        acc_ct(4) := acc_ct(4) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(5)) then
        acc_ct(5) := acc_ct(5) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(6)) then
        acc_ct(6) := acc_ct(6) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(7)) then
        acc_ct(7) := acc_ct(7) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(8)) then
        acc_ct(8) := acc_ct(8) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(9)) then
        acc_ct(9) := acc_ct(9) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(10)) then
        acc_ct(10) := acc_ct(10) + 1;
    elsif (r.estimated_cost_vehicle < cost_inc(11)) then
        acc_ct(11) := acc_ct(11) + 1;
    else
        acc_ct(12) := acc_ct(12) + 1;
    end if;
end if;
last_name := r.attenuator_type_name;
end if;
end loop;

for i in 1..11 loop
    if (acc_ct(i) <> 0) then
        http.tablerowopen;
        http.tabledata(last_name);
        m := cost_inc(i) - 1;
        http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
        http.tabledata(acc_ct(i));
        http.tablerowclose;
    end if;
end loop;
if (acc_ct(12) <> 0) then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('Greater than ' || cost_inc(11));
    http.tabledata(acc_ct(12));
    http.tablerowclose;
end if;
if (total_res <> 0) then
    ave_cost := sum_cost/total_res;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('<b>Average</b>');
    http.tabledata(ave_cost);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('<b>Minimum</b>');
    http.tabledata(low_cost);
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(last_name);

```

```

        http.tabledata('<b>Maximum</b>');
        http.tabledata(high_cost);
        http.tablerowclose;
    end if;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_res||</b></td></tr>');
    http.tablerowclose;

    http.tablerowopen;
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total Number of
Records</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Deformation of Vehicle Occupant
Compartment</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Vehicle Deformation</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_deform loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.deformation_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.deformation_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;
            total_res := total_res + 1;
            total := total + 1;
            last_val := r.deformation_descrip;
            last_name := r.attenuator_type_name;
        end if;
    end loop;
    http.tablerowopen;

```

```

    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Vehicle Stopping Mode (See Figure Below)</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Mode</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_stop_mode loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.stopping_mode_value;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.stopping_mode_value) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;
            total_res := total_res + 1;
            total := total + 1;
            last_val := r.stopping_mode_value;
            last_name := r.attenuator_type_name;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);

```

```

    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    http.p('<center></center><br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Vehicle Spin Behavior</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Spin
Behavior</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_spin loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.spin_behavior_value;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.spin_behavior_value) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;
            total_res := total_res + 1;
            total := total + 1;
            last_val := r.spin_behavior_value;
            last_name := r.attenuator_type_name;
        end if;
    end loop;
    http.tablerowopen;

```



```

    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Gated</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_imp_angles loop
        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_pre := 'UNKNOWN';
                    last_post := 'UNKNOWN';
                    for q in get_angle_values loop
                        if (r.pre_impact_angle_id = q.impact_angle_id) then
                            last_pre := q.impact_angle_descrip;
                        end if;
                        if (r.post_impact_angle_id = q.impact_angle_id) then
                            last_post := q.impact_angle_descrip;
                        end if;
                    end loop;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                pre := 'UNKNOWN';
                post := 'UNKNOWN';
                for q in get_angle_values loop
                    if (r.pre_impact_angle_id = q.impact_angle_id) then
                        pre := q.impact_angle_descrip;
                    end if;
                    if (r.post_impact_angle_id = q.impact_angle_id) then
                        post := q.impact_angle_descrip;
                    end if;
                end loop;
                if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;

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```

        http.tabledata(last_name);
        http.tabledata(last_pre);
        http.tabledata(last_post);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_pre := 'UNKNOWN';
    last_post := 'UNKNOWN';
    for q in get_angle_values loop
        if (r.pre_impact_angle_id = q.impact_angle_id) then
            last_pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
            last_post := q.impact_angle_descrip;
        end if;
    end loop;
    last_name := r.attenuator_type_name;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);
http.tabledata(last_post);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Were Redirected </h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');

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http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_imp_angles loop
  if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
    if (r.impact_point_atten <> 'NO IMPACT') then
      if (i = 1) then
        last_pre := 'UNKNOWN';
        last_post := 'UNKNOWN';
        for q in get_angle_values loop
          if (r.pre_impact_angle_id = q.impact_angle_id) then
            last_pre := q.impact_angle_descrip;
          end if;
          if (r.post_impact_angle_id = q.impact_angle_id) then
            last_post := q.impact_angle_descrip;
          end if;
        end loop;
        last_name := r.attenuator_type_name;
        i := 2;
      end if;
      pre := 'UNKNOWN';
      post := 'UNKNOWN';
      for q in get_angle_values loop
        if (r.pre_impact_angle_id = q.impact_angle_id) then
          pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
          post := q.impact_angle_descrip;
        end if;
      end loop;
      if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_pre);
        http.tabledata(last_post);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
          http.tablerowopen;
          http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end if;
      total_type := total_type + 1;
      total_res := total_res + 1;
      total := total + 1;
      last_pre := 'UNKNOWN';
      last_post := 'UNKNOWN';
      for q in get_angle_values loop
        if (r.pre_impact_angle_id = q.impact_angle_id) then
          last_pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
          last_post := q.impact_angle_descrip;
        end if;
      end loop;
    end if;
  end if;
end loop;

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        end if;
    end loop;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);
http.tabledata(last_post);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_imp_angles loop
    if (r.stopping_mode_value = 'REBOUND') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_pre := 'UNKNOWN';
                last_post := 'UNKNOWN';
                for q in get_angle_values loop
                    if (r.pre_impact_angle_id = q.impact_angle_id) then
                        last_pre := q.impact_angle_descrip;
                    end if;
                    if (r.post_impact_angle_id = q.impact_angle_id) then
                        last_post := q.impact_angle_descrip;
                    end if;
                end loop;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            pre := 'UNKNOWN';
            post := 'UNKNOWN';
            for q in get_angle_values loop

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        if (r.pre_impact_angle_id = q.impact_angle_id) then
            pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
            post := q.impact_angle_descrip;
        end if;
    end loop;
    if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_pre);
        http.tabledata(last_post);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_pre := 'UNKNOWN';
    last_post := 'UNKNOWN';
    for q in get_angle_values loop
        if (r.pre_impact_angle_id = q.impact_angle_id) then
            last_pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
            last_post := q.impact_angle_descrip;
        end if;
    end loop;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);
http.tabledata(last_post);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');

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    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Gated</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_dis_lat loop

        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_lat_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.distance_lat_descrip;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;

```

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http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Were Redirected</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_dis_lat loop
  if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
    if (r.impact_point_atten <> 'NO IMPACT') then
      if (i = 1) then
        last_val := r.distance_lat_descrip;
        last_name := r.attenuator_type_name;
        i := 2;
      end if;
      if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
          http.tablerowopen;
          http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end if;
      total_type := total_type + 1;
      total_res := total_res + 1;
      total := total + 1;
      last_val := r.distance_lat_descrip;
      last_name := r.attenuator_type_name;
    end if;
  end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');

```

```

    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableclose;
    http.p('<br>');
    http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Rebounded</h1>');
    http.tableopen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_dis_lat loop
        if (r.stopping_mode_value = 'REBOUND') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_lat_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.distance_lat_descrip;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');

```



```

    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Longitudinal Distance, Post Impact, For Vehicles
which Gated</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Longitudinal Distance</td><td><font size=5>Number of
Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_dis_long loop
        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_long_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.distance_long_descrip;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);

```

```

    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Longitudinal Distance, Post Impact, For Vehicles
which were Redirected</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Longitudinal Distance</td><td><font size=5>Number of
Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_dis_long loop
        if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_long_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.distance_long_descrip;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;

```

```

    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Longitudinal Distance, Post Impact, For Vehicles
which Rebounded</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Longitudinal Distance</td><td><font size=5>Number of
Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_dis_long loop
        if (r.stopping_mode_value = 'REBOUND') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_long_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
            end if;
        end if;
    end loop;

```

```

        last_val := r.distance_long_descrip;
        last_name := r.attenuator_type_name;
    end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which
Gated</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_stop_place loop
    if (r.stopping_mode_value = 'GATING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.stopping_place_value;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
        end if;
    end if;
end if;

```

```

        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
        last_val := r.stopping_place_value;
        last_name := r.attenuator_type_name;
    end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which were
Redirected</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_stop_place loop
    if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.stopping_place_value;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;

```

```

        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.stopping_place_value;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_stop_place loop
    if (r.stopping_mode_value = 'REBOUND') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.stopping_place_value;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then

```

```

        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.stopping_place_value;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts with Other Vehicles</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_sec_acc_1 loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.secondary_acc;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then

```

```

        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.secondary_acc;
last_name := r.attenuator_type_name;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which
Gated</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_sec_acc loop
    if (r.stopping_mode_value = 'GATING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;

```



```

        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_val := r.secondary_acc;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which Were
Redirected </h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_sec_acc loop
    if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);

```

```

        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_val := r.secondary_acc;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_sec_acc loop
    if (r.stopping_mode_value = 'REBOUND') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;

```

```

        if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    total_res := 0;
    if (last_name <> r.attenuator_type_name) then
        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.secondary_acc;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which Came to
Controlled Stop</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_sec_acc loop
    if (r.stopping_mode_value = 'CONTROLLED STOP') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;

```

```

        i := 2;
    end if;
    if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    total_res := 0;
    if (last_name <> r.attenuator_type_name) then
        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.secondary_acc;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

    http.p('**Impact data includes only vehicles which impacted the
attenuator.<br>');
    http.p('<br>');
    html_functions.html_footer;

END s_veh_res;

PROCEDURE d_acc_dis
IS

type varray_num is table of number(4,0) index by binary_integer;
acc_ct    varray_num;
i          number;
total     number;

BEGIN

```

```

total := 0;
END d_acc_dis;
    -- Enter further code below as specified in the Package spec.
END;
```

Appendix F-3: ATTENUATOR_WWW.ACC_REPORTS_2

```

Package Body                ACC_REPORTS_2
IS
```

```

PROCEDURE s_occ_res
IS
```

```

cursor get_driv_inj is select injury_severity.injury_severity_id,
injury_severity.injury_severity_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.injury_severity, attenuator_apps.driver,
attenuator_apps.vehicle,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where injury_severity.injury_severity_id = driver.injury_severity_id
and driver.driver_id = vehicle.driver_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, injury_severity.injury_severity_id;
```

```

cursor get_pass_inj is select injury_severity.injury_severity_id,
injury_severity.injury_severity_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.injury_severity, attenuator_apps.passenger,
attenuator_apps.vehicle,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where injury_severity.injury_severity_id = passenger.injury_severity_id
and passenger.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
order by
attenuator_type.attenuator_type_name, injury_severity.injury_severity_id;
```

```

cursor get_atten is select attenuator_type_id, attenuator_type_name from
attenuator_apps.attenuator_type where 0=0 order by attenuator_type_name;
```

```

type varray_num is table of number(6,0) index by binary_integer;
type varray_char is table of char(30) index by binary_integer;
names          varray_char;
codes          varray_num;
vals           varray_char;
```

```

totals      varray_num;
i           number(1,0);
total       number;
total_res   number;
total_type  number;
last_id     number;
last_val    char(30);
last_name   char(30);
m           number;
n           number;
found       number;
atten_name  char(30);
code        number;

BEGIN

    html_functions.html_header('Summary Report: Accidents by Occupant
Results');
    http.p('<br>');
    http.p('<h1>Summary Reports: Accidents by Occupant Results</h1>');
    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Severity of Driver Injury</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Driver Injury</td><td><font
size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    m := 1;
    for r in get_driv_inj loop
        if (i = 1) then
            last_id := r.injury_severity_id;
            last_val := r.injury_severity_descrip;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_id <> r.injury_severity_id) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_id);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            names(m) := last_name;
            codes(m) := last_id;
            vals(m) := last_val;
            totals(m) := total_res;
            m := m + 1;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;

```

```

        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.injury_severity_id;
    last_val := r.injury_severity_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_id);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
names(m) := last_name;
codes(m) := last_id;
vals(m) := last_val;
totals(m) := total_res;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Severity of Passenger Injury</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Passenger
Injury</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_pass_inj loop
    if (i = 1) then
        last_id := r.injury_severity_id;
        last_val := r.injury_severity_descrip;
        last_name := r.attenuator_type_name;
        i := 2;
    end if;
    if (last_id <> r.injury_severity_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_id);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        found := 0;

```

```

    for j in 1..m loop
        if (names(j) = last_name) and (codes(j) = last_id) then
            totals(j) := totals(j) + total_res;
            found := 1;
        end if;
    end loop;
    if (found = 0) then
        m := m + 1;
        names(m) := last_name;
        codes(m) := last_id;
        vals(m) := last_val;
        totals(m) := total_res;
    end if;
    total_res := 0;
    if (last_name <> r.attenuator_type_name) then
        http.tablerowopen;
        http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.injury_severity_id;
    last_val := r.injury_severity_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_id);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
found := 0;
for j in 1..m loop
    if (names(j) = last_name) and (codes(j) = last_id) then
        totals(j) := totals(j) + total_res;
        found := 1;
    end if;
end loop;
if (found = 0) then
    m := m + 1;
    names(m) := last_name;
    codes(m) := last_id;
    vals(m) := last_val;
    totals(m) := total_res;
end if;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

```



```

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Severity of Occupant Injury (Drivers and
Passengers)</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSAPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Occupant Injury</td><td><font
size=5>Number of Accidents</td></tr>');
    total_type := 0;
    total := 0;

    for r in get_atten loop
        atten_name := r.attenuator_type_name;
        for code in 1..5 loop
            for i in 1..m loop
                if (names(i) = atten_name) and (codes(i) = code) then
                    http.tablerowopen;
                    http.tabledata(names(i));
                    http.tabledata(codes(i));
                    http.tabledata(vals(i));
                    http.tabledata(totals(i));
                    http.tablerowclose;
                    total_type := total_type + totals(i);
                    total := total + totals(i);
                end if;
            end loop;
        end loop;
        if (total_type <> 0) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Total Records Involving
'||atten_name||</b></td><td><b>'||total_type||</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    html_functions.html_footer;

END s_occ_res;

PROCEDURE s_wz_res
IS

cursor get_driv_inj is select injury_severity.injury_severity_id,
injury_severity.injury_severity_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.injury_severity, attenuator_apps.driver,
attenuator_apps.vehicle,

```

```

attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where injury_severity.injury_severity_id = driver.injury_severity_id
and driver.driver_id = vehicle.driver_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, injury_severity.injury_severity_id;

```

```

cursor get_pass_inj is select injury_severity.injury_severity_id,
injury_severity.injury_severity_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.injury_severity, attenuator_apps.passenger,
attenuator_apps.vehicle,
attenuator_apps.accident, attenuator_apps.atten_accident,
attenuator_apps.attenuator,
attenuator_apps.model, attenuator_apps.attenuator_type, attenuator_apps.category
where injury_severity.injury_severity_id = passenger.injury_severity_id
and passenger.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, injury_severity.injury_severity_id;

```

```

cursor get_atten is select attenuator_type_id, attenuator_type_name from
attenuator_apps.attenuator_type where 0=0 order by attenuator_type_name;

```

```

cursor get_att_dam is select damage_to_atten.atten_damage_id,
damage_to_atten.atten_damage_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.damage_to_atten, attenuator_apps.atten_performance,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where damage_to_atten.atten_damage_id = atten_performance.atten_damage_id
and atten_performance.atten_performance_id = atten_accident.atten_performance_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, damage_to_atten.atten_damage_id;

```

```

cursor get_deb_scat is select atten_performance.atten_performance_id,
debris_scattered.debris_scatter_id,
debris_scattered.debris_descrip,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.debris_scattered, attenuator_apps.atten_performance,

```

```

attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where debris_scattered.debris_scatter_id = atten_performance.debris_scatter_id
and atten_performance.atten_performance_id = atten_accident.atten_performance_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, debris_scattered.debris_scatter_id;

```

```

cursor get_cost_att is select atten_performance.estimated_repair_cost,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.atten_performance, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where atten_accident.atten_performance_id =
atten_performance.atten_performance_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, atten_performance.estimated_repair_cost;

```

```

cursor get_snag is select accident.accident_id, vehicle.vehicle_id,
snagging.snagging_id,
snagging.snagging_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.snagging, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.snagging_id = snagging.snagging_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, snagging.snagging_id;

```

```

cursor get_pocket is select accident.accident_id, vehicle.vehicle_id,
pocketing.pocketing_id,
pocketing.pocketing_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,

```

```

attenuator_apps.pocketing, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.pocketing_id = pocketing.pocketing_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, pocketing.pocketing_id;

```

```

cursor get_spear is select accident.accident_id, vehicle.vehicle_id,
spearing.spearing_id,
spearing.spearing_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.spearing, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.spearing_id = spearing.spearing_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, spearing.spearing_id;

```

```

cursor get_over is select accident.accident_id, vehicle.vehicle_id,
override.override_id,
override.override_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.override, attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.override_id = override.override_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number

```

```

and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, override.override_id;

```

```

cursor get_under is select accident.accident_id, vehicle.vehicle_id,
underride.underride_id,
underride.underride_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.underride, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.underride_id = underride.underride_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, underride.underride_id;

```

```

cursor get_haz_imp is
select accident.accident_id, vehicle.vehicle_id,
impact_point_atten.impact_point_atten,
hazard_impact.hazard_impact_id, hazard_impact.hazard_impact_descrip,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.hazard_impact, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.hazard_impact_id = hazard_impact.hazard_impact_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, hazard_impact.hazard_impact_id;

```

```

cursor get_cost_veh is select accident.accident_id, vehicle.vehicle_id,
vehicle_results.estimated_cost_vehicle, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,

```

```

attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.vehicle_id = vehicle.vehicle_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, vehicle_results.estimated_cost_vehicle;

```

```

cursor get_deform is select accident.accident_id, vehicle.vehicle_id,
deform_pass_compart.deformation_descrip,
deform_pass_compart.deformation_id, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.deform_pass_compart, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.deformation_id = deform_pass_compart.deformation_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, deform_pass_compart.deformation_id;

```

```

cursor get_dis_long is select accident.accident_id, vehicle.vehicle_id,
distance_long.distance_long_id,
distance_long.distance_long_descrip, impact_point_atten.impact_point_atten,
driver_action.driver_action_value, stopping_mode.stopping_mode_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.distance_long, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.distance_long_id = distance_long.distance_long_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id

```

```

and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, distance_long.distance_long_id;

cursor get_dis_lat is select accident.accident_id, vehicle.vehicle_id,
distance_lateral.distance_lat_id,
distance_lateral.distance_lat_descrip, stopping_mode.stopping_mode_value,
impact_point_atten.impact_point_atten, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.stopping_mode,
attenuator_apps.distance_lateral, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.distance_lat_id = distance_lateral.distance_lat_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, distance_lateral.distance_lat_id;

cursor get_stop_mode is select accident.accident_id, vehicle.vehicle_id,
stopping_mode.stopping_mode_id,
stopping_mode.stopping_mode_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.stopping_mode, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.stopping_mode_id = stopping_mode.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, stopping_mode.stopping_mode_id;

```

```

cursor get_stop_place is select accident.accident_id, vehicle.vehicle_id,
stopping_mode.stopping_mode_value, stopping_place.stopping_place_id,
stopping_place.stopping_place_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.stopping_place, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.stopping_place_id = stopping_place.stopping_place_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator.in_work_zone = 'YES'
and attenuator_type.category_id = category.category_id
order by attenuator_type.attenuator_type_name, stopping_place.stopping_place_id;

```

```

cursor get_spin is select accident.accident_id, vehicle.vehicle_id,
spin_behavior.spin_behavior_id,
spin_behavior.spin_behavior_value, impact_point_atten.impact_point_atten,
driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.spin_behavior, attenuator_apps.vehicle,
attenuator_apps.driver_action, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where vehicle_results.spin_behavior_id = spin_behavior.spin_behavior_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.driver_action_id = driver_action.driver_action_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by attenuator_type.attenuator_type_name, spin_behavior.spin_behavior_id;

```

```

cursor get_imp_angles is select vehicle.pre_impact_angle_id, --
impact_angle.impact_angle_descrip,
vehicle_results.post_impact_angle_id, --impact_angle.impact_angle_descrip,
impact_point_atten.impact_point_atten, stopping_mode.stopping_mode_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results,
attenuator_apps.vehicle, attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,

```



```

attenuator_apps.attenuator_type, attenuator_apps.category--, impact_angle
where --vehicle.pre_impact_angle_id = impact_angle.impact_angle_id
--and vehicle_results.post_impact_angle_id = impact_angle.impact_angle_id
--and
vehicle_results.vehicle_id = vehicle.vehicle_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle.accident_id = accident.accident_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, vehicle.pre_impact_angle_id,
vehicle_results.post_impact_angle_id;

```

```

cursor get_sec_acc_1 is
select accident.accident_id, vehicle.vehicle_id,
impact_point_atten.impact_point_atten,
vehicle_results.secondary_acc, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.impact_point_atten, attenuator_apps.vehicle_results,
attenuator_apps.vehicle, attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id
and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, vehicle_results.secondary_acc;

```

```

cursor get_sec_acc is
select vehicle_results.stopping_mode_id, stopping_mode.stopping_mode_value,
accident.accident_id, vehicle.vehicle_id, impact_point_atten.impact_point_atten,
vehicle_results.secondary_acc, driver_action.driver_action_value,
model.model_number, attenuator_type.attenuator_type_name, category.category_type
from attenuator_apps.stopping_mode, attenuator_apps.impact_point_atten,
attenuator_apps.vehicle_results, attenuator_apps.vehicle,
attenuator_apps.driver_action,
attenuator_apps.accident,
attenuator_apps.atten_accident, attenuator_apps.attenuator,
attenuator_apps.model,
attenuator_apps.attenuator_type, attenuator_apps.category
where impact_point_atten.impact_point_atten_id = vehicle.impact_point_atten_id
and stopping_mode.stopping_mode_id = vehicle_results.stopping_mode_id
and vehicle_results.vehicle_id = vehicle.vehicle_id
and vehicle.accident_id = accident.accident_id
and vehicle.driver_action_id = driver_action.driver_action_id
and atten_accident.accident_id = accident.accident_id
and atten_accident.attenuator_id = attenuator.attenuator_id

```

```

and attenuator.model_number = model.model_number
and attenuator_type.attenuator_type_id = model.attenuator_type_id
and attenuator_type.category_id = category.category_id
and attenuator.in_work_zone = 'YES'
order by
attenuator_type.attenuator_type_name, vehicle_results.secondary_acc;

cursor get_angle_values is select * from attenuator_apps.impact_angle where 0=0
order by impact_angle_id;

type varray_num is table of number(6,0) index by binary_integer;
type varray_char is table of char(30) index by binary_integer;
acc_ct          varray_num;
i               number(1,0);
total           number;
total_res       number;
total_type      number;
last_id         number;
last_val        char(60);
last_name       char(30);
cost_inc        varray_num;
sum_cost        number;
low_cost        number;
high_cost       number;
m               number;
ave_cost        number(8,1);
last_pre        char(20);
last_post       char(20);
pre             char(20);
post           char(20);
names           varray_char;
codes           varray_num;
vals            varray_char;
totals          varray_num;
n               number;
found           number;
atten_name      char(30);
code            number;

BEGIN

    html_functions.html_header('Summary Report: Work Zone Accidents by
Outcome');
    http.p('<br>');
    http.p('<h1>Summary Reports: Work Zone Accidents by Outcome</h1>');
    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Damage to Attenuator</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Damage to
Attenuator</td><td><font size=5>Number of Accidents</td></tr>');
    i := 1;
    total_type := 0;
    for r in get_att_dam loop
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_id := r.atten_damage_id;

```

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        last_val := r.atten_damage_descrip;
        i := 2;
    end if;
    if (last_id <> r.atten_damage_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.atten_damage_id;
    last_val := r.atten_damage_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Estimated Attenuator Repair Cost</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Estimated
Repair Cost</td><td><font size=5>Number of Accidents</td></tr>');

cost_inc(0) := 0;
cost_inc(1) := 500;
cost_inc(2) := 1000;
cost_inc(3) := 2500;
cost_inc(4) := 5000;
cost_inc(5) := 7500;

```

```

cost_inc(6) := 10000;
cost_inc(7) := 12500;
cost_inc(8) := 15000;
cost_inc(9) := 17500;
cost_inc(10) := 20000;
cost_inc(11) := 22500;
for i in 1..12 loop
    acc_ct(i) := 0;
end loop;
total := 0;
total_res := 0;
sum_cost := 0;
low_cost := 100000;
high_cost := 0;

i := 1;
for r in get_cost_att loop
    if (i = 1) then
        last_name := r.attenuator_type_name;
        i := 2;
    end if;
    if (last_name <> r.attenuator_type_name) then
        for i in 1..11 loop
            if (acc_ct(i) <> 0) then
                http.tablerowopen;
                http.tabledata(last_name);
                m := cost_inc(i) - 1;
                http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
                http.tabledata(acc_ct(i));
                http.tablerowclose;
            end if;
        end loop;
        if (acc_ct(12) <> 0) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('Greater than ' || cost_inc(11));
            http.tabledata(acc_ct(12));
            http.tablerowclose;
        end if;
        if (total_res <> 0) then
            ave_cost := sum_cost/total_res;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Average</b>');
            http.tabledata(ave_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Minimum</b>');
            http.tabledata(low_cost);
            http.tablerowclose;
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata('<b>Maximum</b>');
            http.tabledata(high_cost);
            http.tablerowclose;
        end if;
        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>' || total_res || '</b></td></tr>');
        http.tablerowclose;

```

```

        for i in 1..12 loop
            acc_ct(i) := 0;
        end loop;
        total_res := 0;
        sum_cost := 0;
        low_cost := 100000;
        high_cost := 0;
    end if;

    if (r.estimated_repair_cost is not null) then
        total := total + 1;
        total_res := total_res + 1;
        sum_cost := sum_cost + r.estimated_repair_cost;
        if (r.estimated_repair_cost > high_cost) then
            high_cost := r.estimated_repair_cost;
        end if;
        if (r.estimated_repair_cost < low_cost) then
            low_cost := r.estimated_repair_cost;
        end if;
        if (r.estimated_repair_cost < cost_inc(1)) then
            acc_ct(1) := acc_ct(1) + 1;
        elsif (r.estimated_repair_cost < cost_inc(2)) then
            acc_ct(2) := acc_ct(2) + 1;
        elsif (r.estimated_repair_cost < cost_inc(3)) then
            acc_ct(3) := acc_ct(3) + 1;
        elsif (r.estimated_repair_cost < cost_inc(4)) then
            acc_ct(4) := acc_ct(4) + 1;
        elsif (r.estimated_repair_cost < cost_inc(5)) then
            acc_ct(5) := acc_ct(5) + 1;
        elsif (r.estimated_repair_cost < cost_inc(6)) then
            acc_ct(6) := acc_ct(6) + 1;
        elsif (r.estimated_repair_cost < cost_inc(7)) then
            acc_ct(7) := acc_ct(7) + 1;
        elsif (r.estimated_repair_cost < cost_inc(8)) then
            acc_ct(8) := acc_ct(8) + 1;
        elsif (r.estimated_repair_cost < cost_inc(9)) then
            acc_ct(9) := acc_ct(9) + 1;
        elsif (r.estimated_repair_cost < cost_inc(10)) then
            acc_ct(10) := acc_ct(10) + 1;
        elsif (r.estimated_repair_cost < cost_inc(11)) then
            acc_ct(11) := acc_ct(11) + 1;
        else
            acc_ct(12) := acc_ct(12) + 1;
        end if;
    end if;
    last_name := r.attenuator_type_name;
end loop;

for i in 1..11 loop
    if (acc_ct(i) <> 0) then
        http.tablerowopen;
        http.tabledata(last_name);
        m := cost_inc(i) - 1;
        http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
        http.tabledata(acc_ct(i));
        http.tablerowclose;
    end if;
end loop;
if (acc_ct(12) <> 0) then
    http.tablerowopen;
    http.tabledata(last_name);

```

```

        http.tabledata('Greater than '||cost_inc(11));
        http.tabledata(acc_ct(12));
        http.tablerowclose;
    end if;
    if (total_res <> 0) then
        ave_cost := sum_cost/total_res;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Average</b>');
        http.tabledata(ave_cost);
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Minimum</b>');
        http.tabledata(low_cost);
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Maximum</b>');
        http.tabledata(high_cost);
        http.tablerowclose;
    end if;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||</b></td><td><b>'||total_res||</b></td></tr>');
    http.tablerowclose;

    http.tablerowopen;
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total Number of
Records</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Debris Scattered</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Debris
Scattered</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_deb_scatt loop
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_id := r.debris_scatter_id;
            last_val := r.debris_descrip;
            i := 2;
        end if;
        if (last_id <> r.debris_scatter_id) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;

```

```

        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_name := r.attenuator_type_name;
    last_id := r.debris_scatter_id;
    last_val := r.debris_descrip;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Snagging</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Snagging</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_snag loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_val := r.snagging_descrip;
            i := 2;
        end if;
        if (last_val <> r.snagging_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;

```

```

        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_name := r.attenuator_type_name;
    last_val := r.snagging_descrip;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pocketing</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Pocketing</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_pocket loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_val := r.pocketing_descrip;
            i := 2;
        end if;
        if (last_val <> r.pocketing_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then

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        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_name := r.attenuator_type_name;
last_val := r.pocketing_descrip;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
' || last_name || '</b></td><td><b>' || total_type || '</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>' || total || '</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Spearing</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Spearing</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_spear loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_name := r.attenuator_type_name;
            last_val := r.spearing_descrip;
            i := 2;
        end if;
        if (last_val <> r.spearing_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;

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```

        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_name := r.attenuator_type_name;
last_val := r.spearing_descrip;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Underriding</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Underriding</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_under loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.underride_descrip;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.underride_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;

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```

        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_name := r.attenuator_type_name;
last_val := r.override_descrip;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Overriding</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font
size=5>Overriding</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_over loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.override_descrip;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.override_descrip) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;

```

```

        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.override_descrip;
last_name := r.attenuator_type_name;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Severity of Hazard Impact</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Severity of Hazard Impact</td><td><font size=5>Number of
Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_haz_imp loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.hazard_impact_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.hazard_impact_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;

```

```

        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.hazard_impact_descrip;
last_name := r.attenuator_type_name;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Estimated Vehicle Repair Cost</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Estimated
VehicleRepair Cost</td><td><font size=5>Number of Accidents</td></tr>');

cost_inc(0) := 0;
cost_inc(1) := 500;
cost_inc(2) := 1000;
cost_inc(3) := 2500;
cost_inc(4) := 5000;
cost_inc(5) := 7500;
cost_inc(6) := 10000;
cost_inc(7) := 12500;
cost_inc(8) := 15000;
cost_inc(9) := 17500;
cost_inc(10) := 20000;
cost_inc(11) := 22500;
for i in 1..12 loop
    acc_ct(i) := 0;
end loop;
total := 0;
total_res := 0;
sum_cost := 0;
low_cost := 100000;

```

```

high_cost := 0;

i := 1;
for r in get_cost_veh loop
  if (r.impact_point_atten <> 'NO IMPACT') then
    if (i = 1) then
      last_name := r.attenuator_type_name;
      i := 2;
    end if;
    if (last_name <> r.attenuator_type_name) then
      for i in 1..11 loop
        if (acc_ct(i) <> 0) then
          http.tablerowopen;
          http.tabledata(last_name);
          m := cost_inc(i) - 1;
          http.tabledata('Between '||cost_inc(i-1)||' and '||m);
          http.tabledata(acc_ct(i));
          http.tablerowclose;
        end if;
      end loop;
      if (acc_ct(12) <> 0) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('Greater than '||cost_inc(11));
        http.tabledata(acc_ct(12));
        http.tablerowclose;
      end if;
      if (total_res <> 0) then
        ave_cost := sum_cost/total_res;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Average</b>');
        http.tabledata(ave_cost);
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Minimum</b>');
        http.tabledata(low_cost);
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Maximum</b>');
        http.tabledata(high_cost);
        http.tablerowclose;
      end if;
      http.tablerowopen;
      http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_res||'</b></td></tr>');
      http.tablerowclose;
      for i in 1..12 loop
        acc_ct(i) := 0;
      end loop;
      total_res := 0;
      sum_cost := 0;
      low_cost := 100000;
      high_cost := 0;
    end if;

    if (r.estimated_cost_vehicle is not null) then
      total := total + 1;
      total_res := total_res + 1;
    end if;
  end if;
end loop;

```

```

sum_cost := sum_cost + r.estimated_cost_vehicle;
if (r.estimated_cost_vehicle > high_cost) then
    high_cost := r.estimated_cost_vehicle;
end if;
if (r.estimated_cost_vehicle < low_cost) then
    low_cost := r.estimated_cost_vehicle;
end if;
if (r.estimated_cost_vehicle < cost_inc(1)) then
    acc_ct(1) := acc_ct(1) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(2)) then
    acc_ct(2) := acc_ct(2) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(3)) then
    acc_ct(3) := acc_ct(3) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(4)) then
    acc_ct(4) := acc_ct(4) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(5)) then
    acc_ct(5) := acc_ct(5) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(6)) then
    acc_ct(6) := acc_ct(6) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(7)) then
    acc_ct(7) := acc_ct(7) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(8)) then
    acc_ct(8) := acc_ct(8) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(9)) then
    acc_ct(9) := acc_ct(9) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(10)) then
    acc_ct(10) := acc_ct(10) + 1;
elsif (r.estimated_cost_vehicle < cost_inc(11)) then
    acc_ct(11) := acc_ct(11) + 1;
else
    acc_ct(12) := acc_ct(12) + 1;
end if;
end if;
last_name := r.attenuator_type_name;
end if;
end loop;

for i in 1..11 loop
    if (acc_ct(i) <> 0) then
        http.tablerowopen;
        http.tabledata(last_name);
        m := cost_inc(i) - 1;
        http.tabledata('Between ' || cost_inc(i-1) || ' and ' || m);
        http.tabledata(acc_ct(i));
        http.tablerowclose;
    end if;
end loop;
if (acc_ct(12) <> 0) then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('Greater than ' || cost_inc(11));
    http.tabledata(acc_ct(12));
    http.tablerowclose;
end if;
if (total_res <> 0) then
    ave_cost := sum_cost/total_res;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata('<b>Average</b>');
    http.tabledata(ave_cost);
    http.tablerowclose;
end if;

```

```

        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Minimum</b>');
        http.tabledata(low_cost);
        http.tablerowclose;
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata('<b>Maximum</b>');
        http.tabledata(high_cost);
        http.tablerowclose;
    end if;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_res||</b></td></tr>');
    http.tablerowclose;

    http.tablerowopen;
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total Number of
Records</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Deformation of Vehicle Occupant
Compartment</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Vehicle Deformation</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    for r in get_deform loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.deformation_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.deformation_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;

```



```

        total_res := total_res + 1;
        total := total + 1;
        last_val := r.deformation_descrip;
        last_name := r.attenuator_type_name;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Mode (See Figure Below)</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Mode</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_stop_mode loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.stopping_mode_value;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.stopping_mode_value) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;
            end if;
        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
    end if;
end if;

```

```

        total := total + 1;
        last_val := r.stopping_mode_value;
        last_name := r.attenuator_type_name;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('<center></center><br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Spin Behavior</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Spin
Behavior</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_spin loop
    if (r.impact_point_atten <> 'NO IMPACT') then
        if (i = 1) then
            last_val := r.spin_behavior_value;
            last_name := r.attenuator_type_name;
            i := 2;
        end if;
        if (last_val <> r.spin_behavior_value) or (last_name <>
r.attenuator_type_name) then
            http.tablerowopen;
            http.tabledata(last_name);
            http.tabledata(last_val);
            http.tabledata(total_res);
            http.tablerowclose;
            total_res := 0;
            if (last_name <> r.attenuator_type_name) then
                http.tablerowopen;
                http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                http.tablerowclose;
                total_type := 0;
            end if;
        end if;
        total_type := total_type + 1;
    end if;
end loop;

```

```

        total_res := total_res + 1;
        total := total + 1;
        last_val := r.spin_behavior_value;
        last_name := r.attenuator_type_name;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Gated</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
last_pre := 'N/A';
last_post := 'N/A';
for r in get_imp_angles loop
    if (r.stopping_mode_value = 'GATING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_pre := 'UNKNOWN';
                last_post := 'UNKNOWN';
                for q in get_angle_values loop
                    if (r.pre_impact_angle_id = q.impact_angle_id) then
                        last_pre := q.impact_angle_descrip;
                    end if;
                    if (r.post_impact_angle_id = q.impact_angle_id) then
                        last_post := q.impact_angle_descrip;
                    end if;
                end loop;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            pre := 'UNKNOWN';
            post := 'UNKNOWN';

```

```

for q in get_angle_values loop
    if (r.pre_impact_angle_id = q.impact_angle_id) then
        pre := q.impact_angle_descrip;
    end if;
    if (r.post_impact_angle_id = q.impact_angle_id) then
        post := q.impact_angle_descrip;
    end if;
end loop;
if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_pre);
    http.tabledata(last_post);
    http.tabledata(total_res);
    http.tablerowclose;
    total_res := 0;
    if (last_name <> r.attenuator_type_name) then
        http.tablerowopen;
        http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_pre := 'UNKNOWN';
last_post := 'UNKNOWN';
for q in get_angle_values loop
    if (r.pre_impact_angle_id = q.impact_angle_id) then
        last_pre := q.impact_angle_descrip;
    end if;
    if (r.post_impact_angle_id = q.impact_angle_id) then
        last_post := q.impact_angle_descrip;
    end if;
end loop;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);
http.tabledata(last_post);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

```

```

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Were Redirected </h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    last_pre := 'N/A';
    last_post := 'N/A';
    for r in get_imp_angles loop
        if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_pre := 'UNKNOWN';
                    last_post := 'UNKNOWN';
                    for q in get_angle_values loop
                        if (r.pre_impact_angle_id = q.impact_angle_id) then
                            last_pre := q.impact_angle_descrip;
                        end if;
                        if (r.post_impact_angle_id = q.impact_angle_id) then
                            last_post := q.impact_angle_descrip;
                        end if;
                    end loop;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                pre := 'UNKNOWN';
                post := 'UNKNOWN';
                for q in get_angle_values loop
                    if (r.pre_impact_angle_id = q.impact_angle_id) then
                        pre := q.impact_angle_descrip;
                    end if;
                    if (r.post_impact_angle_id = q.impact_angle_id) then
                        post := q.impact_angle_descrip;
                    end if;
                end loop;
                if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_pre);
                    http.tabledata(last_post);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;

```

```

        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_pre := 'UNKNOWN';
    last_post := 'UNKNOWN';
    for q in get_angle_values loop
        if (r.pre_impact_angle_id = q.impact_angle_id) then
            last_pre := q.impact_angle_descrip;
        end if;
        if (r.post_impact_angle_id = q.impact_angle_id) then
            last_post := q.impact_angle_descrip;
        end if;
    end loop;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);
http.tabledata(last_post);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Pre and Post Impact Angles, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font size=5>Pre
Impact Angle</td><td><font size=5>Post Impact Angle</td><td><font size=5>Number
of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
last_pre := 'N/A';
last_post := 'N/A';
for r in get_imp_angles loop
    if (r.stopping_mode_value = 'REBOUND') then
        if (r.impact_point_atten <> 'NO IMPACT') then

```

```

if (i = 1) then
  last_pre := 'UNKNOWN';
  last_post := 'UNKNOWN';
  for q in get_angle_values loop
    if (r.pre_impact_angle_id = q.impact_angle_id) then
      last_pre := q.impact_angle_descrip;
    end if;
    if (r.post_impact_angle_id = q.impact_angle_id) then
      last_post := q.impact_angle_descrip;
    end if;
  end loop;
  last_name := r.attenuator_type_name;
  i := 2;
end if;
pre := 'UNKNOWN';
post := 'UNKNOWN';
for q in get_angle_values loop
  if (r.pre_impact_angle_id = q.impact_angle_id) then
    pre := q.impact_angle_descrip;
  end if;
  if (r.post_impact_angle_id = q.impact_angle_id) then
    post := q.impact_angle_descrip;
  end if;
end loop;
if (last_pre <> pre) or (last_post <> post) or (last_name <>
r.attenuator_type_name) then
  http.tablerowopen;
  http.tabledata(last_name);
  http.tabledata(last_pre);
  http.tabledata(last_post);
  http.tabledata(total_res);
  http.tablerowclose;
  total_res := 0;
  if (last_name <> r.attenuator_type_name) then
    http.tablerowopen;
    http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    total_type := 0;
  end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_pre := 'UNKNOWN';
last_post := 'UNKNOWN';
for q in get_angle_values loop
  if (r.pre_impact_angle_id = q.impact_angle_id) then
    last_pre := q.impact_angle_descrip;
  end if;
  if (r.post_impact_angle_id = q.impact_angle_id) then
    last_post := q.impact_angle_descrip;
  end if;
end loop;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_pre);

```

```

    http.tabledata(last_post);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="3"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Gated</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_dis_lat loop
        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_lat_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.distance_lat_descrip;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end if;

```



```

        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Were Redirected</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_dis_lat loop
        if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.distance_lat_descrip;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
            end if;
        end if;
    end loop;

```

```

        total_res := total_res + 1;
        total := total + 1;
        last_val := r.distance_lat_descrip;
        last_name := r.attenuator_type_name;
    end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Lateral Distance, Post Impact, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Lateral Distance</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
for r in get_dis_lat loop
    if (r.stopping_mode_value = 'REBOUND') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.distance_lat_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.distance_lat_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;

```

```

        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_val := r.distance_lat_descrip;
last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Longitudinal Distance, Post Impact, For Vehicles
which Gated</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Longitudinal Distance</td><td><font size=5>Number of
Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
for r in get_dis_long loop
    if (r.stopping_mode_value = 'GATING') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.distance_long_descrip;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
                http.tablerowopen;
                http.tabledata(last_name);

```



```

        i := 2;
    end if;
    if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_val := r.distance_long_descrip;
    last_name := r.attenuator_type_name;
end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Longitudinal Distance, Post Impact, For Vehicles
which Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Longitudinal Distance</td><td><font size=5>Number of
Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';

```

```

last_val := 'N/A';
for r in get_dis_long loop
  if (r.stopping_mode_value = 'REBOUND') then
    if (r.impact_point_atten <> 'NO IMPACT') then
      if (i = 1) then
        last_val := r.distance_long_descrip;
        last_name := r.attenuator_type_name;
        i := 2;
      end if;
      if (last_val <> r.distance_long_descrip) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
          http.tablerowopen;
          http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end if;
      total_type := total_type + 1;
      total_res := total_res + 1;
      total := total + 1;
      last_val := r.distance_long_descrip;
      last_name := r.attenuator_type_name;
    end if;
  end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which
Gated</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');

```

```

    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_stop_place loop
        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.stopping_place_value;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.stopping_place_value;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which were
Redirected</h1>');

```

```

http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
for r in get_stop_place loop
  if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
    if (r.impact_point_atten <> 'NO IMPACT') then
      if (i = 1) then
        last_val := r.stopping_place_value;
        last_name := r.attenuator_type_name;
        i := 2;
      end if;
      if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
          http.tablerowopen;
          http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end if;
      total_type := total_type + 1;
      total_res := total_res + 1;
      total := total + 1;
      last_val := r.stopping_place_value;
      last_name := r.attenuator_type_name;
    end if;
  end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');

```



```

http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Vehicle Stopping Place, for Vehicles which
Rebounded</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Stopping Place</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
for r in get_stop_place loop
  if (r.stopping_mode_value = 'REBOUND') then
    if (r.impact_point_atten <> 'NO IMPACT') then
      if (i = 1) then
        last_val := r.stopping_place_value;
        last_name := r.attenuator_type_name;
        i := 2;
      end if;
      if (last_val <> r.stopping_place_value) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
          http.tablerowopen;
          http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end if;
      total_type := total_type + 1;
      total_res := total_res + 1;
      total := total + 1;
      last_val := r.stopping_place_value;
      last_name := r.attenuator_type_name;
    end if;
  end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');

```

```

    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Secondary Impacts with Other Vehicles</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_sec_acc_1 loop
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;
            end if;
            total_type := total_type + 1;
            total_res := total_res + 1;
            total := total + 1;
            last_val := r.secondary_acc;
            last_name := r.attenuator_type_name;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');

```

```

    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which
Gated</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_sec_acc loop
        if (r.stopping_mode_value = 'GATING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.secondary_acc;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;
    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;

```

```

    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which Were
Redirected </h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_sec_acc loop
        if (r.stopping_mode_value = 'REDIRECT') or (r.stopping_mode_value =
'SLIDING/SKIDDING') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.secondary_acc;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
            end if;
        end if;
    end loop;
    http.tablerowopen;

```

```

    http.tabledata(last_name);
    http.tabledata(last_val);
    http.tabledata(total_res);
    http.tablerowclose;
    http.tablerowopen;
    http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
    http.tablerowclose;
    http.tablerowopen;
    http.tabledata(' ');
    http.tabledata(' ');
    http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
    http.tablerowclose;
    http.tableClose;
    http.p('<br>');
    http.p('**Includes Vehicles with Stopping Mode of Sliding/Skidding <br>');
    http.p('<br>');

    http.p('<br>');
    http.p('<br>');
    http.p('<br>');
    http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which
Rebounded</h1>');
    http.tableOpen;
    total := 0;
    total_res := 0;
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
    http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
    total_type := 0;
    i := 1;
    last_name := 'N/A';
    last_val := 'N/A';
    for r in get_sec_acc loop
        if (r.stopping_mode_value = 'REBOUND') then
            if (r.impact_point_atten <> 'NO IMPACT') then
                if (i = 1) then
                    last_val := r.secondary_acc;
                    last_name := r.attenuator_type_name;
                    i := 2;
                end if;
                if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                    http.tablerowopen;
                    http.tabledata(last_name);
                    http.tabledata(last_val);
                    http.tabledata(total_res);
                    http.tablerowclose;
                    total_res := 0;
                    if (last_name <> r.attenuator_type_name) then
                        http.tablerowopen;
                        http.p('<tr><td colspan="2"><b>Total Records Involving
||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                        http.tablerowclose;
                        total_type := 0;
                    end if;
                end if;
                total_type := total_type + 1;
                total_res := total_res + 1;
                total := total + 1;
            end if;
        end if;
    end loop;

```

```

        last_val := r.secondary_acc;
        last_name := r.attenuator_type_name;
    end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Secondary Impacts, for Vehicles which Came to
Controlled Stop</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Secondary Impacts</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
last_name := 'N/A';
last_val := 'N/A';
for r in get_sec_acc loop
    if (r.stopping_mode_value = 'CONTROLLED STOP') then
        if (r.impact_point_atten <> 'NO IMPACT') then
            if (i = 1) then
                last_val := r.secondary_acc;
                last_name := r.attenuator_type_name;
                i := 2;
            end if;
            if (last_val <> r.secondary_acc) or (last_name <> r.attenuator_type_name)
then
                http.tablerowopen;
                http.tabledata(last_name);
                http.tabledata(last_val);
                http.tabledata(total_res);
                http.tablerowclose;
                total_res := 0;
                if (last_name <> r.attenuator_type_name) then
                    http.tablerowopen;
                    http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
                    http.tablerowclose;
                    total_type := 0;
                end if;

```

```

        end if;
        total_type := total_type + 1;
        total_res := total_res + 1;
        total := total + 1;
        last_val := r.secondary_acc;
        last_name := r.attenuator_type_name;
    end if;
end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||</b></td><td><b>'||total_type||</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Severity of Driver Injury</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Driver Injury</td><td><font
size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
m := 1;
for r in get_driv_inj loop
    if (i = 1) then
        last_id := r.injury_severity_id;
        last_val := r.injury_severity_descrip;
        last_name := r.attenuator_type_name;
        i := 2;
    end if;
    if (last_id <> r.injury_severity_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_id);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
--         names(m) := last_name;
--         codes(m) := last_id;
--         vals(m) := last_val;
--         totals(m) := total_res;
        m := m + 1;

```

```

        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.injury_severity_id;
    last_val := r.injury_severity_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_id);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
-- http.p('M: '||m||'<br>');
-- for i in 1..m loop
--     http.p('Names: '||names(i)||'Codes: '||codes(i)||'Vals:
'||vals(i)||'Totals: '||totals(i)||'<br>');
-- end loop;
-- names(m) := last_name;
-- codes(m) := last_id;
-- vals(m) := last_val;
-- totals(m) := total_res;
http.tablerowopen;
http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Severity of Passenger Injury</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Passenger
Injury</td><td><font size=5>Number of Accidents</td></tr>');
total_type := 0;
i := 1;
for r in get_pass_inj loop
    if (i = 1) then
        last_id := r.injury_severity_id;
        last_val := r.injury_severity_descrip;

```



```

        last_name := r.attenuator_type_name;
        i := 2;
    end if;
    if (last_id <> r.injury_severity_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_id);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
/*
        found := 0;
        for j in 1..m loop
            if (names(j) = last_name) and (codes(j) = last_id) then
                totals(j) := totals(j) + total_res;
                found := 1;
            end if;
        end loop;
        if (found = 0) then
            m := m + 1;
            names(m) := last_name;
            codes(m) := last_id;
            vals(m) := last_val;
            totals(m) := total_res;
        end if;
*/
        total_res := 0;
        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="3"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.injury_severity_id;
    last_val := r.injury_severity_descrip;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_id);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
/*
    found := 0;
    for j in 1..m loop
        if (names(j) = last_name) and (codes(j) = last_id) then
            totals(j) := totals(j) + total_res;
            found := 1;
        end if;
    end loop;
    if (found = 0) then
        m := m + 1;
        names(m) := last_name;
        codes(m) := last_id;
        vals(m) := last_val;
        totals(m) := total_res;
    end if;

```

```

*/      http.tablerowopen;
      http.p('<tr><td colspan="3"><b>Total Records Involving
'|last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
      http.tablerowclose;
      http.tablerowopen;
      http.tabledata(' ');
      http.tabledata(' ');
      http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
      http.tablerowclose;
      http.tableClose;
      http.p('<br>');

/*      http.p('<br>');
      http.p('<br>');
      http.p('<br>');
      http.p('<h1>Summary Report: Severity of Occupant Injury (Drivers and
Passengers)</h1>');
      http.tableOpen;
      total := 0;
      total_res := 0;
      http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
      http.p('<tr><td><font size=5>Attenuator Type Name</td><td><font
size=5>Injury Code</td><td><font size=5>Severity of Occupant Injury</td><td><font
size=5>Number of Accidents</td></tr>');
      total_type := 0;
      total := 0;

      for r in get_atten loop
        atten_name := r.attenuator_type_name;
        for code in 1..5 loop
          for i in 1..m loop
            if (names(i) = atten_name) and (codes(i) = code) then
              http.tablerowopen;
              http.tabledata(names(i));
              http.tabledata(codes(i));
              http.tabledata(vals(i));
              http.tabledata(totals(i));
              http.tablerowclose;
              total_type := total_type + totals(i);
              total := total + totals(i);
            end if;
          end loop;
        end loop;
        if (total_type <> 0) then
          http.tablerowopen;
          http.p('<tr><td colspan="3"><b>Total Records Involving
'|atten_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
          http.tablerowclose;
          total_type := 0;
        end if;
      end loop;
      http.tablerowopen;
      http.tabledata(' ');
      http.tabledata(' ');
      http.p('<tr><td colspan="3"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
      http.tablerowclose;
      http.tableClose;
*/      http.p('<br>');

```

```

        http.p('**Impact data includes only vehicles which impacted the
attenuator.<br>');
        http.p('<br>');
        html_functions.html_footer;

END s_wz_res;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix F-4: ATTENUATOR_WWW.INSP_REPORTS

```

Package Body                                INSP_REPORT
IS

--
*****
**
--Inspection Reports
--
*****
**

PROCEDURE s_insp
IS
cursor get_cond_type is select inspection.inspection_id,
inspection.inspection_condition_id,
condition_after_inspection.inspection_condition_value,
attenuator_type.attenuator_type_name
from attenuator_apps.attenuator_type, attenuator_apps.model,
attenuator_apps.condition_after_inspection, attenuator_apps.inspection,
attenuator_apps.activity, attenuator_apps.attenuator
where attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
and inspection.inspection_condition_id =
condition_after_inspection.inspection_condition_id
and inspection.activity_id = activity.activity_id
and activity.attenuator_id = attenuator.attenuator_id
order by attenuator_type.attenuator_type_name,
condition_after_inspection.inspection_condition_id;

cursor get_cond_dis is select inspection.inspection_id,
inspection.inspection_condition_id,
condition_after_inspection.inspection_condition_value,
attenuator_type.attenuator_type_name,
county.district, county.county, attenuator.county_id
from attenuator_apps.county, attenuator_apps.attenuator_type,
attenuator_apps.model,
attenuator_apps.condition_after_inspection, attenuator_apps.inspection,
attenuator_apps.activity, attenuator_apps.attenuator
where attenuator.county_id = county.county_id
and attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
and inspection.inspection_condition_id =
condition_after_inspection.inspection_condition_id
and inspection.activity_id = activity.activity_id
and activity.attenuator_id = attenuator.attenuator_id
order by county.district, condition_after_inspection.inspection_condition_id;
```

```

cursor get_cond_age is select attenuator.date_installed,
inspection.inspection_id, inspection.inspection_condition_id,
condition_after_inspection.inspection_condition_value,
attenuator_type.attenuator_type_name
from attenuator_apps.attenuator_type, attenuator_apps.model,
attenuator_apps.condition_after_inspection, attenuator_apps.inspection,
attenuator_apps.activity, attenuator_apps.attenuator
where attenuator.model_number = model.model_number
and model.attenuator_type_id = attenuator_type.attenuator_type_id
and inspection.inspection_condition_id =
condition_after_inspection.inspection_condition_id
and inspection.activity_id = activity.activity_id
and activity.attenuator_id = attenuator.attenuator_id
order by attenuator.date_installed,
condition_after_inspection.inspection_condition_id;

type varray_num is table of number(5,0) index by binary_integer;
insp_ct      varray_num;
i            number;
total       number;
total_res   number;
last_id     number;
last_val    char(30);
last_name   char(20);
m           number;
total_type  number;

BEGIN

html_functions.html_header('Summary Report: Condition After Inspection');
http.p('<br>');
http.p('<h1>Summary Reports: Inspection Condition by Attenuator Type and
Location</h1>');
http.p('<br>');
http.p('<br>');

http.p('<br>');
http.p('<h1>Summary Report: Inspection Condition by Attenuator Type</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Attenuator Type</td><td><font size=5>Condition
After Inspection</td><td><font size=5>Number of Attenuators</td></tr>');
i := 1;
total_type := 0;
for r in get_cond_type loop
    if (i = 1) then
        last_name := r.attenuator_type_name;
        last_id := r.inspection_condition_id;
        last_val := r.inspection_condition_value;
        i := 2;
    end if;
    if (last_id <> r.inspection_condition_id) or (last_name <>
r.attenuator_type_name) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;

```

```

        if (last_name <> r.attenuator_type_name) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.inspection_condition_id;
    last_val := r.inspection_condition_value;
    last_name := r.attenuator_type_name;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records Involving
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Inspection Condition by District</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>District</td><td><font size=5>Condition After
Inspection</td><td><font size=5>Number of Attenuators</td></tr>');
i := 1;
total_type := 0;
for r in get_cond_dis loop
    if (i = 1) then
        last_name := r.district;
        last_id := r.inspection_condition_id;
        last_val := r.inspection_condition_value;
        i := 2;
    end if;
    if (last_id <> r.inspection_condition_id) or (last_name <> r.district)
then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);
        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.district) then

```

```

        http.tablerowopen;
        http.p('<tr><td colspan="2"><b>Total Records In District
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
        http.tablerowclose;
        total_type := 0;
    end if;
end if;
total_type := total_type + 1;
total_res := total_res + 1;
total := total + 1;
last_id := r.inspection_condition_id;
last_val := r.inspection_condition_value;
last_name := r.district;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Records In District
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');

http.p('<br>');
http.p('<br>');
http.p('<br>');
http.p('<h1>Summary Report: Inspection Condition by Installation Date</h1>');
http.tableOpen;
total := 0;
total_res := 0;
http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=600>');
http.p('<tr><td><font size=5>Installation Date</td><td><font
size=5>Condition After Inspection</td><td><font size=5>Number of
Attenuators</td></tr>');
i := 1;
total_type := 0;
for r in get_cond_age loop
    if (i = 1) then
        if (r.date_installed is null) then
            last_name := '0000';
        else
            last_name := r.date_installed;
        end if;
        last_id := r.inspection_condition_id;
        last_val := r.inspection_condition_value;
        i := 2;
    end if;
    if (last_id <> r.inspection_condition_id) or (last_name <>
r.date_installed) then
        http.tablerowopen;
        http.tabledata(last_name);
        http.tabledata(last_val);

```

```

        http.tabledata(total_res);
        http.tablerowclose;
        total_res := 0;
        if (last_name <> r.date_installed) then
            http.tablerowopen;
            http.p('<tr><td colspan="2"><b>Total Attenuators Installed in
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
            http.tablerowclose;
            total_type := 0;
        end if;
    end if;
    total_type := total_type + 1;
    total_res := total_res + 1;
    total := total + 1;
    last_id := r.inspection_condition_id;
    last_val := r.inspection_condition_value;
    if (r.date_installed is null) then
        last_name := '0000';
    else
        last_name := r.date_installed;
    end if;
end loop;
http.tablerowopen;
http.tabledata(last_name);
http.tabledata(last_val);
http.tabledata(total_res);
http.tablerowclose;
http.tablerowopen;
http.p('<tr><td colspan="2"><b>Total Attenuators Installed in
'||last_name||'</b></td><td><b>'||total_type||'</b></td></tr>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(' ');
http.tabledata(' ');
http.p('<tr><td colspan="2"><b>Total
</b></td><td><b>'||total||'</b></td></tr>');
http.tablerowclose;
http.tableClose;
http.p('<br>');
http.p('**A data of "0000" implies that the Installation Date is not known.');
```

```
END s_insp;
```

```
PROCEDURE d_insp_atten
```

```
IS
```

```
cursor get_owner is select * from attenuator_apps.owner where 0=0;
```

```
cursor get_county is select * from attenuator_apps.county where 0=0 order by
county;
```

```
cursor get_traf_dir is select * from attenuator_apps.direction where 0=0;
```

```
cursor get_status is select * from attenuator_apps.status where 0=0;
```

```
cursor get_loc_wrt_road is select * from attenuator_apps.location_wrt_road where
0=0;
```

```
cursor get_model_num is select distinct * from attenuator_apps.model where 0=0
order by model_number;
```

```
cursor get_sr_num is select distinct state_road_number from
```

```
attenuator_apps.attenuator order by state_road_number;
```

```
cursor get_atten_type is select * from attenuator_apps.attenuator_type order by
attenuator_type_name;
```

```
type varray_char3 is table of char(3) index by binary_integer;
```

```
boolean_descrip varray_char3;
```

```
BEGIN
```

```
boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';
```

```
html_functions.html_header('Detail Report: Inspections by Attenuator Type and
Location');
```

```
http.p('<h1>Enter Search Criteria:</h1>');
```

```
http.tableOpen;
```

```
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.atten_insp');
```

```
    http.tablerowopen;
    http.tabledata('<b>Check?</b>');
    http.tabledata('<b>Data Field</b>');
    http.tabledata('<b>Constraint</b>');
    http.tablerowclose;
```

```
    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1" >');
    http.tabledata('Attenuator ID Number');
        http.tabledata(htf.formText('atten_id', 10,10)||' </td></tr>');
    http.tablerowclose;
    http.formhidden('check1', 'no');
```

```
    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2" >');
    http.tabledata('Year Installed (YYYY)');
        http.tabledata(htf.formText('inst_date', 5,5)||' </td></tr>');
    http.tablerowclose;
    http.formhidden('check2', 'no');
```

```
    http.tablerowopen;
    http.tabledata(' <INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
    http.tabledata('Maintenance Unit');
        http.tabledata(htf.formText('maint_unit', 5,5)||' </td></tr>');
    http.tablerowclose;
    http.formhidden('check3', 'no');
```

```
    http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4"
></td>');
```

```
    http.p('<td>District</td><td>');
    http.formSelectOpen('district');
        for r in 1..7 loop
            http.formSelectOption(r);
        end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check4', 'no');
```

```
    http.tabledata(' <tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5"
></td>');
```

```
    http.p('<td>County</td><td>');
    http.formSelectOpen('county');
        for r in get_county loop
            http.formSelectOption(r.county||',
'||r.county_id,'','value="'||r.county_id||'"');
        end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check5', 'no');
```



```

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6" >');
http.tabledata('Roadway ID (County,Section,Subsection)');
    http.tabledata(htf.formText('road_id', 10,10)||' </td></tr>');
http.tablerowclose;
http.formhidden('check6', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7"
></td>');
    http.p('<td>State Road Number</td><td>');
    http.formSelectOpen('sr_num');
        for r in get_sr_num loop
            http.formSelectOption(r.state_road_number);
        end loop;
    http.formSelectClose;
    http.tablerowclose;
    http.formhidden('check7', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8"
></td>');
    http.p('<td>In Work Zone?</td><td>');
    http.formSelectOpen('work_zone');
        for r in 1..2 loop
            http.formSelectOption(boolean_descrip(r));
        end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.tablerowclose;
    http.formhidden('check8', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9"
></td>');
    http.p('<td>Present Status</td><td>');
    http.formSelectOpen('status');
    for r in get_status loop

        http.formSelectOption(r.present_status,'','value="'||r.status_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.tablerowclose;
    http.formhidden('check9', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check10"
></td>');
    http.p('<td>Location With Respect to Road</td><td>');
    http.formSelectOpen('loc_road');
    for r in get_loc_wrt_road loop

        http.formSelectOption(r.location_wrt_road,'','value="'||r.location_wrt_road_
id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
    http.tablerowclose;
    http.formhidden('check10', 'no');

    http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check11"
></td>');
    http.p('<td>Model Number</td><td>');

```

```

        http.formSelectOpen('model_num');
        for r in get_model_num loop
            http.formSelectOption(r.model_number);
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check11', 'no');

        http.tabledata( '<tr><td><INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check12"
></td>');
        http.p('<td>Attenuator Type</td><td>');
        http.formSelectOpen('atten_type');
        for r in get_atten_type loop

            http.formSelectOption(r.attenuator_type_name, '', 'value=""||r.attenuator_type
_id||'');
        end loop;
        http.formSelectClose;
        http.p('</td></tr>');
        http.tablerowclose;
        http.formhidden('check12', 'no');

        http.tablerowopen;
        http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
        http.p('<tr><td colspan="3">**If no boxes are checked, data on all attenuators
is returned. This is NOT recommended, because of the number of
records.</td></tr>');
        http.tablerowclose;

        http.p('<tr><td>'||htf.formSubmit('','Submit')||'</td><td>'||htf.formReset||
'</td></tr>');

        http.formClose;
        http.tableClose;

html_functions.html_footer;
END d_insp_atten;

PROCEDURE d_insp
IS
cursor get_source is select * from attenuator_apps.data_source where 0=0;
cursor get_type is select * from attenuator_apps.inspection_type where 0=0;
cursor get_condition is select * from attenuator_apps.condition_after_inspection
where 0=0;

type varray_char3 is table of char(3) index by binary_integer;
boolean_descrip varray_char3;

BEGIN

boolean_descrip(1) := 'YES';
boolean_descrip(2) := 'NO';

html_functions.html_header('Detail Report: Inspections by Inspection
Characteristic');
http.p('<h1>Enter Search Criteria:</h1>');
http.tableOpen;
http.formOpen('/owa_att/owa/attenuator_apps.data_reports.insp_char');

```

```

http.tablerowopen;
http.tabledata('<b>Check?</b>');
http.tabledata('<b>Data Field</b>');
http.tabledata('<b>Constraint</b>');
http.tablerowclose;

http.tablerowopen;
http.tabledata('<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check1" >');
http.p('<td>Data Source</td><td>');
    http.formSelectOpen('source');
    for r in get_source loop
        if (r.data_source = 'FDOT INSPECTION REPORT') or (r.data_source = 'FDOT
RCI/ATTEN INVENTORY DATABASE')
            or (r.data_source = 'UNKNOWN') then

            http.formSelectOption(r.data_source, '', 'value="'||r.data_source_id||'");
            end if;
        end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check1', 'no');

http.tablerowopen;
http.tabledata('<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check2" >');
http.p('<td>Condition After Inspection</td><td>');
    http.formSelectOpen('condition');
    for r in get_condition loop

        http.formSelectOption(r.inspection_condition_value, '', 'value="'||r.inspectio
n_condition_id||'");
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check2', 'no');

http.tablerowopen;
http.tabledata('<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check3" >');
http.p('<td>Design Installation</td><td>');
http.formSelectOpen('des_install');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check3', 'no');

http.tablerowopen;
http.tabledata('<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check4" >');
http.p('<td>Design Details Available</td><td>');
http.formSelectOpen('des_details');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check4', 'no');

```

```

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check5" >');
http.p('<td>Pavement Markings Standard</td><td>');
http.formSelectOpen('std_marks');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check5', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check6" >');
http.p('<td>Delineation Standard</td><td>');
http.formSelectOpen('std_del');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check6', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check7" >');
http.p('<td>Evidence of Vehicle Damage</td><td>');
http.formSelectOpen('veh_dam');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check7', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check8" >');
http.p('<td>Evidence of Non Design Impacts</td><td>');
http.formSelectOpen('non_des_imp');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check8', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check9" >');
http.p('<td>Evidence of Angle Hits</td><td>');
http.formSelectOpen('angle_hits');
    for r in 1..2 loop
        http.formSelectOption(boolean_descrip(r));
    end loop;
    http.formSelectClose;
    http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check9', 'no');

```

```

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check10" >');
http.p('<td>Evidence of Vandalism</td><td>');
http.formSelectOpen('vandal');
  for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check10', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check11" >');
http.p('<td>Protected Vehicle (if there is Evidence of Vehicle
Impact)</td><td>');
http.formSelectOpen('prot_veh');
  for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check11', 'no');

http.tablerowopen;
http.tabledata( '<INPUT TYPE="CHECKBOX" VALUE="yes" NAME="check12" >');
http.p('<td>Needs Additional Study</td><td>');
http.formSelectOpen('needs_study');
  for r in 1..2 loop
    http.formSelectOption(boolean_descrip(r));
  end loop;
  http.formSelectClose;
  http.p('</td></tr>');
http.tablerowclose;
http.formhidden('check12', 'no');

http.tablerowopen;
http.p('<tr><td colspan="3">**If more than one box is checked, constraints are
joined with "AND" rather than "OR".</td></tr>');
http.p('<tr><td colspan="3">**If no boxes are checked, data on all inspections
are returned. This is NOT recommended, because of the number of
records.</td></tr>');
http.tablerowclose;

http.p('<tr><td>' || htf.formSubmit('','Submit') || '</td><td>' || htf.formReset ||
'</td></tr>');

http.formClose;
http.tableClose;

html_functions.html_footer;
END d_insp;

PROCEDURE inspec_head_print
(num_rec IN number)
IS
BEGIN
  html_functions.html_header('Detail Report: Inspections by Search
Characteristics');

```

```

        http.p('<br>');
        http.p('<br>');
        http.p('<font size = 5><b>Total Number of Matching Records:
'||num_rec||'</b><br>');
        http.p('<h1>Detail Report: Inspections Meeting Search Criteria</h1>');
END inspec_head_print;

PROCEDURE inspec_det_print
    (atten_id IN char,
     inspec_id IN number)
IS
    found    number;
    cursor get_inspec is select * from attenuator_apps.inspection where inspection_id
    = inspec_id;
    cursor get_source is select * from attenuator_apps.data_source where 0=0;
    cursor get_type is select * from attenuator_apps.inspection_type where 0=0;
    cursor get_condition is select * from attenuator_apps.condition_after_inspection
    where 0=0;
BEGIN
    http.tableOpen;
    http.p('<br>');
    http.p('<br>');
    http.p('<font size=5>Inspection Details:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Atten ID</td><td><font size=5>Inspection
ID</td><td colspan="2"><font size=5>Data Source</td>');
    http.p('<td><font size=5>Type</td><td><font size=5>Date</td><td><font
size=5>Inspector</td>');

    for r in get_inspec loop
        if (r.inspection_id = inspec_id) then
            http.tablerowopen;
            http.tabledata(atten_id);
            http.tabledata(r.inspection_id);
            found := 0;
            for q in get_source loop
                if (q.data_source_id = r.data_source_id) then
                    http.p('<td colspan="2">'||q.data_source_id||'</td>');
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.p('<td colspan="2"> </td>');
            end if;
            for q in get_type loop
                if (q.inspection_type_id = r.inspection_type_id) then
                    http.tabledata(q.inspection_type_value);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            http.tabledata(r.inspection_date);
            http.tabledata(r.inspector);
            http.tablerowclose;
            http.tablerowopen;

```

```

http.p('<td><font size=5>Condition</td><td colspan="4"><font
size=5>Corrective Action</td><td><font size=5>Design Installation?</td><td><font
size=5>Design Details Available?</td>');
http.tablerowclose;
http.tablerowopen;
for q in get_condition loop
    if (q.inspection_condition_id = r.inspection_condition_id) then
        http.tabledata(q.inspection_condition_value);
        found := 1;
        exit;
    end if;
end loop;
if (found = 0) then
    http.tabledata(' ');
end if;
found := 0;
http.p('<td colspan="4">'||r.corrective_action||'</td>');
http.tabledata(r.design_installation);
http.tabledata(r.design_details_available);
http.tablerowclose;
http.tablerowopen;
http.p('<td><font size=5>Appearance Satisfactory?</td><td><font
size=5>Changes Authorized By</td><td colspan="3"><font size=5>Reason for
Changes</td><td><font size=5>Pavement Markings Standard?</td>');
http.p('<td><font size=5>Delineation Standard</td>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(r.appearance_satisfactory);
http.tabledata(r.changes_authorized_by);
http.p('<td colspan="3">'||r.reason_for_changes||'</td>');
http.tabledata(r.pavement_markings_std);
http.tabledata(r.delineation_std);
http.tablerowclose;
http.tablerowopen;
http.p('<td><font size=5>Cable Guidance System Installed</td><td><font
size=5>Hex Foam Cart. Bracket Installed</td><td><font size=5>Anchor Chain Rail
Installed</td>');
http.p('<td><font size=5>Two-Way Traffic Defl. Installed</td><td><font
size=5>Evidence of Vehicle Damage</td><td><font size=5>Evidence of Non-Design
Impacts</td>');
http.p('<td><font size=5>Evidence of Angle Hits</td>');
http.tablerowclose;
http.tablerowopen;
http.tabledata(r.cable_guidance_system);
http.tabledata(r.hex_foam_cartridge_bracket);
http.tabledata(r.anchor_chain_rail);
http.tabledata(r.two_way_traffic_deflector);
http.tabledata(r.evidence_vehicle_damage);
http.tabledata(r.evidence_non_design_impact);
http.tabledata(r.evidence_angle_hits);
http.tablerowclose;
http.tablerowopen;
http.p('<td colspan="2"><font size=5>Protected Vehicle (if Impact
Damage)</td><td><font size=5>Renovation Necessary?</td><td><font size=5>Needs
Study</td>');
http.p('<td colspan="3"><font size=5>Reason for Study</td>');
http.tablerowclose;
http.tablerowopen;
http.p('<td colspan="2">'||r.protected_vehicle||'</td>');
http.tabledata(r.renovation_necessary);
http.tabledata(r.needs_study);

```

```

        http.p('<td colspan="4">'||r.reason_for_study||'</td>');
        http.tablerowclose;
    end if;
end loop;
http.tableClose;
http.p('<br>');
END inspec_det_print;

PROCEDURE defic_det_print
    (inspec_id IN number)
IS
    found    number;
    cursor get_defic is select deficiencies.inspection_id,
    deficiencies.deficiency_id,
        deficiencies.number_occurrences, deficiencies.component_id,
    deficiencies.deficiency_noted_id
        from attenuator_apps.deficiencies, attenuator_apps.inspection
        where deficiencies.inspection_id = inspection.inspection_id
        order by deficiencies.inspection_id;
    cursor get_component is select * from attenuator_apps.component where 0=0 order
    by component_id;
    cursor get_defic_noted is select * from attenuator_apps.deficiency_noted where
    0=0 order by deficiency_id;
BEGIN
    http.tableOpen;
    http.p('<br>');
    http.p('<br>');
    http.p('<font size=5>Deficiency Details:<br>');
    http.p('<TABLE BORDER CELLSPACING=6 CELLPADDING=5 WIDTH=800>');
    http.p('<tr><td><font size=5>Inspection ID</td><td><font
size=5>Component</td>');
    http.p('<td><font size=5>Deficiency Noted</td><td><font size=5>Number of
Occurrences</td>');

    for r in get_defic loop
        if (r.inspection_id = inspec_id) then
            http.tablerowopen;
            http.tabledata(inspec_id);
            found := 0;
            for q in get_component loop
                if (q.component_id = r.component_id) then
                    http.tabledata(q.component_name);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            for q in get_defic_noted loop
                if (q.deficiency_id = r.deficiency_noted_id) then
                    http.tabledata(q.deficiency_name);
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                http.tabledata(' ');
            end if;
            http.tabledata(r.number_occurrences);
            http.tablerowclose;
        end if;
    end loop;
end defic_det_print;

```



```

        end if;
    end loop;
    http.tableClose;
    http.p('<br>');
END defic_det_print;

END;
```

Appendix F-5: ATTENUATOR_APPS.DATA_REPORTS

```

Package Body                                DATA_REPORTS
IS

    PROCEDURE atten_insp
    (atten_id IN char,
    check1 IN char,
    inst_date IN number,
    check2 IN char,
    maint_unit IN number,
    check3 IN char,
    district IN number,
    check4 IN char,
    county IN number,
    check5 IN char,
    road_id IN number,
    check6 IN char,
    sr_num IN char,
    check7 IN char,
    work_zone IN char,
    check8 IN char,
    status IN number,
    check9 IN char,
    loc_road IN number,
    check10 IN char,
    model_num IN char,
    check11 IN char,
    atten_type IN number,
    check12 IN char)
    IS
    type varray_num is table of number(4,0) index by binary_integer;
    type varray_char5 is table of char(5) index by binary_integer;
    cursor get_atten is select county.district, attenuator.county_id,
county.county, attenuator.maint_unit,
    attenuator.section, attenuator.sub_section, attenuator.date_installed,
    attenuator.state_road_number, attenuator.in_work_zone, attenuator.status_id,
    attenuator.location_wrt_road_id, attenuator.roadway_id,
    attenuator.attenuator_id, model.attenuator_type_id, model.model_number
    from attenuator_apps.attenuator, attenuator_apps.county,
attenuator_apps.model
    where county.county_id = attenuator.county_id
    and attenuator.model_number = model.model_number
    order by attenuator.attenuator_id, county.district, county.county_id;
    i            number;
    r            number;
    if1          char(30);
    equals1      char(30);
    if2          char(30);
    equals2      char(30);
    if3          char(30);
```

```

equals3      char(30);
if4          char(30);
equals4      char(30);
if5          char(30);
equals5      char(30);
if6          char(30);
equals6      char(30);
if7          char(30);
equals7      char(30);
if8          char(30);
equals8      char(30);
if9          char(30);
equals9      char(30);
if10         char(30);
equals10     char(30);
if11         char(30);
equals11     char(30);
if12         char(30);
equals12     char(30);
acc_ids      varray_num;
atten_ids    varray_char5;
inspec_ids   varray_num;
BEGIN

--Find the set of accidents which meet the search criteria.
  i := 1;
  if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
    or (check6 = 'yes') or (check7 = 'yes') or (check8 = 'yes') or (check9 =
'yes')
    or (check10 = 'yes') or (check11 = 'yes') or (check12 = 'yes') then
    for r in get_atten loop
      if (check1 = 'yes') then
        if1 := r.attenuator_id;
        equals1 := atten_id;
      else
        if1 := '0';
        equals1 := '0';
      end if;

      if (check2 = 'yes') then
        if2 := r.date_installed;
        equals2 := inst_date;
      else
        if2 := '0';
        equals2 := '0';
      end if;

      if (check3 = 'yes') then
        if3 := r.maint_unit;
        equals3 := maint_unit;
      else
        if3 := '0';
        equals3 := '0';
      end if;

      if (check4 = 'yes') then
        if4 := r.district;
        equals4 := district;
      else
        if4 := '0';

```

```

        equals4 := '0';
    end if;

    if (check5 = 'yes') then
        if5 := r.county_id;
        equals5 := county;
    else
        if5 := '0';
        equals5 := '0';
    end if;

    if (check6 = 'yes') then
        if6 := r.roadway_id;
        equals6 := road_id;
    else
        if6 := '0';
        equals6 := '0';
    end if;

    if (check7 = 'yes') then
        if7 := r.state_road_number;
        equals7 := sr_num;
    else
        if7 := '0';
        equals7 := '0';
    end if;

    if (check8 = 'yes') then
        if8 := r.in_work_zone;
        equals8 := work_zone;
    else
        if8 := '0';
        equals8 := '0';
    end if;

    if (check9 = 'yes') then
        if9 := r.status_id;
        equals9 := status;
    else
        if9 := '0';
        equals9 := '0';
    end if;

    if (check10 = 'yes') then
        if10 := r.location_wrt_road_id;
        equals10 := loc_road;
    else
        if10 := '0';
        equals10 := '0';
    end if;

    if (check11 = 'yes') then
        if11 := r.model_number;
        equals11 := model_num;
    else
        if11 := '0';
        equals11 := '0';
    end if;

    if (check12 = 'yes') then
        if12 := r.attenuator_type_id;

```

```

        equals12 := atten_type;
    else
        if12 := '0';
        equals12 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4)
        and (if5 = equals5) and (if6 = equals6) and (if7 = equals7) and
(if8 = equals8)
        and (if9 = equals9) and (if10 = equals10) and (if11 = equals11)
        and (if12 = equals12) then
            atten_ids(i) := r.attenuator_id;
            i := i + 1;
        end if;
    end loop;
else
    for r in get_atten loop
        atten_ids(i) := r.attenuator_id;
        i := i + 1;
    end loop;
end if;

--Print details on each matching record.
r := i - 1;
attenuator_www.insp_report.inspec_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_inspec_details(atten_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END atten_insp;

PROCEDURE insp_char
(source IN number,
check1 IN char,
condition IN number,
check2 IN char,
des_install IN char,
check3 IN char,
des_details IN char,
check4 IN char,
std_marks IN char,
check5 IN char,
std_del IN char,
check6 IN char,
veh_dam IN char,
check7 IN char,
non_des_imp IN char,
check8 IN char,
angle_hits IN char,
check9 IN char,
vandal IN char,
check10 IN char,
prot_veh IN char,
check11 IN char,
needs_study IN char,
check12 IN char)
IS
type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;

```

```

        cursor get_atten is select attenuator.attenuator_id,
inspection.inspection_id,
        inspection.data_source_id, inspection.inspection_condition_id,
inspection.design_installation,
        inspection.design_details_available, inspection.pavement_markings_std,
inspection.delineation_std,
        inspection.evidence_vehicle_damage, inspection.evidence_non_design_impact,
        inspection.evidence_angle_hits, inspection.evidence_vandalism,
inspection.protected_vehicle,
        inspection.needs_study
        from attenuator_apps.inspection, attenuator_apps.activity,
attenuator_apps.attenuator
        where attenuator.attenuator_id = activity.attenuator_id
        and inspection.activity_id = activity.activity_id
        order by attenuator.attenuator_id;
i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
if7        char(30);
equals7    char(30);
if8        char(30);
equals8    char(30);
if9        char(30);
equals9    char(30);
if10       char(30);
equals10   char(30);
if11       char(30);
equals11   char(30);
if12       char(30);
equals12   char(30);
atten_ids  varray_char5;
inspec_ids varray_num;
BEGIN

```

```

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
    or (check6 = 'yes') or (check7 = 'yes') or (check8 = 'yes') or (check9 =
'yes')
    or (check10 = 'yes') or (check11 = 'yes') or (check12 = 'yes') then
for r in get_atten loop
    if (check1 = 'yes') then
        if1 := r.data_source_id;
        equals1 := source;
    else
        if1 := '0';
        equals1 := '0';
    end if;

```

```

if (check2 = 'yes') then
    if2 := r.inspection_condition_id;
    equals2 := condition;
else
    if2 := '0';
    equals2 := '0';
end if;

if (check3 = 'yes') then
    if3 := r.design_installation;
    equals3 := des_install;
else
    if3 := '0';
    equals3 := '0';
end if;

if (check4 = 'yes') then
    if4 := r.design_details_available;
    equals4 := des_details;
else
    if4 := '0';
    equals4 := '0';
end if;

if (check5 = 'yes') then
    if5 := r.pavement_markings_std;
    equals5 := std_marks;
else
    if5 := '0';
    equals5 := '0';
end if;

if (check6 = 'yes') then
    if6 := r.delineation_std;
    equals6 := std_del;
else
    if6 := '0';
    equals6 := '0';
end if;

if (check7 = 'yes') then
    if7 := r.evidence_vehicle_damage;
    equals7 := veh_dam;
else
    if7 := '0';
    equals7 := '0';
end if;

if (check8 = 'yes') then
    if8 := r.evidence_non_design_impact;
    equals8 := non_des_imp;
else
    if8 := '0';
    equals8 := '0';
end if;

if (check9 = 'yes') then
    if9 := r.evidence_angle_hits;
    equals9 := angle_hits;
else
    if9 := '0';

```

```

        equals9 := '0';
    end if;

    if (check10 = 'yes') then
        if10 := r.evidence_vandalism;
        equals10 := vandal;
    else
        if10 := '0';
        equals10 := '0';
    end if;

    if (check11 = 'yes') then
        if11 := r.protected_vehicle;
        equals11 := prot_veh;
    else
        if11 := '0';
        equals11 := '0';
    end if;

    if (check12 = 'yes') then
        if12 := r.needs_study;
        equals12 := needs_study;
    else
        if12 := '0';
        equals12 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4)
        and (if5 = equals5) and (if6 = equals6) and (if7 = equals7) and
(if8 = equals8)
        and (if9 = equals9) and (if10 = equals10) and (if11 = equals11)
        and (if12 = equals12) then
            atten_ids(i) := r.attenuator_id;
            i := i + 1;
        end if;
    end loop;
else
    for r in get_atten loop
        atten_ids(i) := r.attenuator_id;
        i := i + 1;
    end loop;
end if;

--Print details on each matching record.
r := i - 1;
attenuator_www.insp_report.inspec_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_inspec_details(atten_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END insp_char;

PROCEDURE print_inspec_details
(atten_id IN char)
IS
    cursor get_inspec is select attenuator.attenuator_id, activity.activity_id,
inspection.inspection_id
    from attenuator_apps.activity, attenuator_apps.inspection,
attenuator_apps.attenuator
    where inspection.activity_id = activity.activity_id

```

```

        and activity.attenuator_id = attenuator.attenuator_id
        order by attenuator.attenuator_id, inspection.inspection_id;
        cursor get_defic is select deficiencies.inspection_id,
deficiencies.deficiency_id,
        component.component_name, deficiency_noted.deficiency_name,
deficiencies.number_occurrences
        from attenuator_apps.deficiencies, attenuator_apps.component,
attenuator_apps.deficiency_noted
        where deficiencies.deficiency_noted_id = deficiency_noted.deficiency_id
        and deficiencies.component_id = component.component_id
        order by deficiencies.inspection_id;
        road_id number;
        found number;

```

```

BEGIN
--Print details on each matching accident.
road_id := 0;
attenuator_www.reports.atten_print(atten_id, road_id);
for r in get_inspec loop
    if (r.attenuator_id = atten_id) then
        attenuator_www.insp_report.inspec_det_print(atten_id,
r.inspection_id);
        for q in get_defic loop
            found := 0;
            if (q.inspection_id = r.inspection_id) then
                if (q.deficiency_id is not null) then
                    found := 1;
                    exit;
                end if;
            end if;
        end loop;
        if (found = 1) then
            attenuator_www.insp_report.defic_det_print(r.inspection_id);
            exit;
        end if;
    end if;
end loop;
END print_inspec_details;

```

```

--
*****
**
--Attenuator Reports
--
*****
**

```

```

        PROCEDURE atten_char
        (atten_id IN char,
        check1 IN char,
        inst_date IN number,
        check2 IN char,
        maint_unit IN number,
        check3 IN char,
        district IN number,
        check4 IN char,
        county IN number,
        check5 IN char,
        road_id IN number,
        check6 IN char,
        sr_num IN char,

```



```

check7 IN char,
work_zone IN char,
check8 IN char,
status IN number,
check9 IN char,
loc_road IN number,
check10 IN char,
model_num IN char,
check11 IN char,
atten_type IN number,
check12 IN char)
IS
type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;
cursor get_atten is select county.district, attenuator.county_id,
county.county, attenuator.maint_unit,
attenuator.section, attenuator.sub_section, attenuator.date_installed,
attenuator.state_road_number, attenuator.in_work_zone, attenuator.status_id,
attenuator.location_wrt_road_id, attenuator.roadway_id,
attenuator.attenuator_id, model.attenuator_type_id, model.model_number
from attenuator_apps.attenuator, attenuator_apps.county,
attenuator_apps.model
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
order by attenuator.attenuator_id, county.district, county.county_id;
i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
if7        char(30);
equals7    char(30);
if8        char(30);
equals8    char(30);
if9        char(30);
equals9    char(30);
if10       char(30);
equals10   char(30);
if11       char(30);
equals11   char(30);
if12       char(30);
equals12   char(30);
acc_ids    varray_num;
atten_ids  varray_char5;
aperf_ids  varray_num;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')

```

```

or (check6 = 'yes') or (check7 = 'yes') or (check8 = 'yes') or (check9 =
'yes')
or (check10 = 'yes') or (check11 = 'yes') or (check12 = 'yes') then
for r in get_attn loop
  if (check1 = 'yes') then
    if1 := r.attenuator_id;
    equals1 := atten_id;
  else
    if1 := '0';
    equals1 := '0';
  end if;

  if (check2 = 'yes') then
    if2 := r.date_installed;
    equals2 := inst_date;
  else
    if2 := '0';
    equals2 := '0';
  end if;

  if (check3 = 'yes') then
    if3 := r.maint_unit;
    equals3 := maint_unit;
  else
    if3 := '0';
    equals3 := '0';
  end if;

  if (check4 = 'yes') then
    if4 := r.district;
    equals4 := district;
  else
    if4 := '0';
    equals4 := '0';
  end if;

  if (check5 = 'yes') then
    if5 := r.county_id;
    equals5 := county;
  else
    if5 := '0';
    equals5 := '0';
  end if;

  if (check6 = 'yes') then
    if6 := r.roadway_id;
    equals6 := road_id;
  else
    if6 := '0';
    equals6 := '0';
  end if;

  if (check7 = 'yes') then
    if7 := r.state_road_number;
    equals7 := sr_num;
  else
    if7 := '0';
    equals7 := '0';
  end if;

  if (check8 = 'yes') then

```

```

        if8 := r.in_work_zone;
        equals8 := work_zone;
    else
        if8 := '0';
        equals8 := '0';
    end if;

    if (check9 = 'yes') then
        if9 := r.status_id;
        equals9 := status;
    else
        if9 := '0';
        equals9 := '0';
    end if;

    if (check10 = 'yes') then
        if10 := r.location_wrt_road_id;
        equals10 := loc_road;
    else
        if10 := '0';
        equals10 := '0';
    end if;

    if (check11 = 'yes') then
        if11 := r.model_number;
        equals11 := model_num;
    else
        if11 := '0';
        equals11 := '0';
    end if;

    if (check12 = 'yes') then
        if12 := r.attenuator_type_id;
        equals12 := atten_type;
    else
        if12 := '0';
        equals12 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4)
        and (if5 = equals5) and (if6 = equals6) and (if7 = equals7) and
(if8 = equals8)
        and (if9 = equals9) and (if10 = equals10) and (if11 = equals11)
        and (if12 = equals12) then
            atten_ids(i) := r.attenuator_id;
            i := i + 1;
        end if;
    end loop;
else
    for r in get_atten loop
        atten_ids(i) := r.attenuator_id;
        i := i + 1;
    end loop;
end if;

--Print details on each matching record.
r := i - 1;
attenuator_www.reports.atten_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_atten_details(atten_ids(i));

```

```

        end loop;
        attenuator_www.htp.p('**Roadway and site data are generally only available
for attenuators which have been in an accident.<br>');
        attenuator_www.reports.accid_foot_print;
        END atten_char;

        PROCEDURE print_atten_details
        (atten_id IN char)
        IS
        road_id      number;
        BEGIN
--Print details on each matching accident.
        road_id := 0;
        attenuator_www.reports.atten_print(atten_id, road_id);
        attenuator_www.reports.site_det_print(atten_id);
        attenuator_www.reports.road_det_print(road_id);
        END print_atten_details;

--
*****
**
--Accident Reports
--
*****
**

        PROCEDURE accid_det
        (report IN char,
        check1 IN char,
        road_surf IN number,
        check2 IN char,
        weather IN number,
        check3 IN char,
        lighting IN number,
        check4 IN char,
        he1 IN number,
        check5 IN char,
        he2 IN number,
        check6 IN char,
        ccenv IN number,
        check7 IN char,
        ccroad IN number,
        check8 IN char,
        num_imp IN number,
        check9 IN char)
        IS
        type varray_num is table of number(4,0) index by binary_integer;
        type varray_char5 is table of char(5) index by binary_integer;
        cursor get_accid is select accident.accident_id, accident.report_number,
        accident.road_surface_id, accident.weather_id, accident.lighting_id,
accident.number_atten_impacts,
        accident.harmful_event_1, accident.harmful_event_2,
        atten_accident.atten_performance_id,
        atten_accident.attenuator_id from attenuator_apps.accident,
        attenuator_apps.atten_accident
        where accident.accident_id = atten_accident.accident_id order by
        accident.accident_id;
        cursor get_ccenv is select * from attenuator_apps.contrib_cause_env_cited
        where 0=0 order by contrib_cause_env_cited_id;
        cursor get_ccroad is select * from attenuator_apps.contrib_cause_road_cited
        where 0=0 order by contrib_cause_road_cited_id;

```

```

        cursor get_veh is select * from attenuator_apps.vehicle where 0=0 order by
accident_id;
        cursor get_veh_dam is select * from attenuator_apps.vehicle_damage_received
where 0=0 order by vehicle_id;
        i                number;
        r                number;
        if1              char(30);
        equals1          char(30);
        if2              char(30);
        equals2          char(30);
        if3              char(30);
        equals3          char(30);
        if4              char(30);
        equals4          char(30);
        if5              char(30);
        equals5          char(30);
        if6              char(30);
        equals6          char(30);
        if7              char(30);
        equals7          char(30);
        if8              char(30);
        equals8          char(30);
        if9              char(30);
        equals9          char(30);
        acc_ids          varray_num;
        atten_ids        varray_char5;
        aperf_ids        varray_num;
        person_id        number;
        pass_id          number;
        d_or_p           char(1);
        road_id          number;
BEGIN

--Find the set of accidents which meet the search criteria.
        i := 1;
        if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
            or (check6 = 'yes') or (check7 = 'yes') or (check8 = 'yes') or (check9 =
'yes') then
            for r in get_accid loop
                if (check1 = 'yes') then
                    if1 := r.report_number;
                    equals1 := report;
                else
                    if1 := '0';
                    equals1 := '0';
                end if;

                if (check2 = 'yes') then
                    if2 := r.road_surface_id;
                    equals2 := road_surf;
                else
                    if2 := '0';
                    equals2 := '0';
                end if;

                if (check3 = 'yes') then
                    if3 := r.weather_id;
                    equals3 := weather;
                else
                    if3 := '0';

```

```

        equals3 := '0';
    end if;

    if (check4 = 'yes') then
        if4 := r.lighting_id;
        equals4 := lighting;
    else
        if4 := '0';
        equals4 := '0';
    end if;

    if (check5 = 'yes') then
        if5 := r.harmful_event_1;
        equals5 := he1;
    else
        if5 := '0';
        equals5 := '0';
    end if;

    if (check6 = 'yes') then
        if6 := r.harmful_event_2;
        equals6 := he2;
    else
        if6 := '0';
        equals6 := '0';
    end if;

    if (check9 = 'yes') then
        if9 := r.number_atten_impacts;
        equals9 := num_imp;
    else
        if9 := '0';
        equals9 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4)
        and (if5 = equals5) and (if6 = equals6) and (if9 = equals9) then
        if (check7 = 'yes') and (check8 <> 'yes') then
            for q in get_ccenv loop
                if (q.contrib_cause_env_id = ccenv) and (r.accident_id =
q.accident_number_id) then
                    acc_ids(i) := r.accident_id;
                    atten_ids(i) := r.attenuator_id;
                    aperf_ids(i) := r.atten_performance_id;
                    i := i + 1;
                end if;
            end loop;
        elsif (check8 = 'yes') and (check7 <> 'yes') then
            for q in get_ccroad loop
                if (q.contrib_cause_road_id = ccroad) and (r.accident_id =
q.accident_number_id) then
                    acc_ids(i) := r.accident_id;
                    atten_ids(i) := r.attenuator_id;
                    aperf_ids(i) := r.atten_performance_id;
                    i := i + 1;
                end if;
            end loop;
        elsif (check7 = 'yes') and (check8 = 'yes') then
            for q in get_ccenv loop

```

```

        if (q.contrib_cause_env_id = ccenv) and (r.accident_id =
q.accident_number_id) then
            for p in get_ccroad loop
                if (p.contrib_cause_road_id = ccroad) and
(r.accident_id = q.accident_number_id) then
                    acc_ids(i) := r.accident_id;
                    atten_ids(i) := r.attenuator_id;
                    aperf_ids(i) := r.atten_performance_id;
                    i := i + 1;
                end if;
            end loop;
        end if;
    end loop;
else
    acc_ids(i) := r.accident_id;
    atten_ids(i) := r.attenuator_id;
    aperf_ids(i) := r.atten_performance_id;
    i := i + 1;
end if;
end if;
end loop;
else
    for r in get_accid loop
        acc_ids(i) := r.accident_id;
        atten_ids(i) := r.attenuator_id;
        aperf_ids(i) := r.atten_performance_id;
        i := i + 1;
    end loop;
end if;
--Print details on each matching accident.
r := i - 1;
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END accid_det;

```

```

PROCEDURE accid_atype
(atten_id IN char,
check1 IN char,
inst_date IN number,
check2 IN char,
maint_unit IN number,
check3 IN char,
district IN number,
check4 IN char,
county IN number,
check5 IN char,
road_id IN number,
check6 IN char,
sr_num IN char,
check7 IN char,
work_zone IN char,
check8 IN char,
status IN number,
check9 IN char,
loc_road IN number,

```

```

check10 IN char,
model_num IN char,
check11 IN char,
atten_type IN number,
check12 IN char)
IS
type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;
cursor get_atten is select county.district, attenuator.county_id,
county.county, attenuator.maint_unit,
attenuator.section, attenuator.sub_section, attenuator.date_installed,
attenuator.state_road_number, attenuator.in_work_zone, attenuator.status_id,
attenuator.location_wrt_road_id, attenuator.roadway_id,
attenuator.attenuator_id, model.attenuator_type_id, model.model_number,
atten_accident.atten_performance_id, atten_accident.accident_id
from attenuator_apps.attenuator, attenuator_apps.county,
attenuator_apps.model,
attenuator_apps.atten_accident
where county.county_id = attenuator.county_id
and attenuator.model_number = model.model_number
and attenuator.attenuator_id = atten_accident.attenuator_id
order by attenuator.attenuator_id, county.district, county.county_id;
i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
if7        char(30);
equals7    char(30);
if8        char(30);
equals8    char(30);
if9        char(30);
equals9    char(30);
if10       char(30);
equals10   char(30);
if11       char(30);
equals11   char(30);
if12       char(30);
equals12   char(30);
acc_ids    varray_num;
atten_ids  varray_char5;
aperf_ids  varray_num;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
    or (check6 = 'yes') or (check7 = 'yes') or (check8 = 'yes') or (check9 =
'yes')
    or (check10 = 'yes') or (check11 = 'yes') or (check12 = 'yes') then
    for r in get_atten loop

```



```

if (check1 = 'yes') then
    if1 := r.attenuator_id;
    equals1 := atten_id;
else
    if1 := '0';
    equals1 := '0';
end if;

if (check2 = 'yes') then
    if2 := r.date_installed;
    equals2 := inst_date;
else
    if2 := '0';
    equals2 := '0';
end if;

if (check3 = 'yes') then
    if3 := r.maint_unit;
    equals3 := maint_unit;
else
    if3 := '0';
    equals3 := '0';
end if;

if (check4 = 'yes') then
    if4 := r.district;
    equals4 := district;
else
    if4 := '0';
    equals4 := '0';
end if;

if (check5 = 'yes') then
    if5 := r.county_id;
    equals5 := county;
else
    if5 := '0';
    equals5 := '0';
end if;

if (check6 = 'yes') then
    if6 := r.roadway_id;
    equals6 := road_id;
else
    if6 := '0';
    equals6 := '0';
end if;

if (check7 = 'yes') then
    if7 := r.state_road_number;
    equals7 := sr_num;
else
    if7 := '0';
    equals7 := '0';
end if;

if (check8 = 'yes') then
    if8 := r.in_work_zone;
    equals8 := work_zone;
else
    if8 := '0';

```

```

        equals8 := '0';
    end if;

    if (check9 = 'yes') then
        if9 := r.status_id;
        equals9 := status;
    else
        if9 := '0';
        equals9 := '0';
    end if;

    if (check10 = 'yes') then
        if10 := r.location_wrt_road_id;
        equals10 := loc_road;
    else
        if10 := '0';
        equals10 := '0';
    end if;

    if (check11 = 'yes') then
        if11 := r.model_number;
        equals11 := model_num;
    else
        if11 := '0';
        equals11 := '0';
    end if;

    if (check12 = 'yes') then
        if12 := r.attenuator_type_id;
        equals12 := atten_type;
    else
        if12 := '0';
        equals12 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4)
        and (if5 = equals5) and (if6 = equals6) and (if7 = equals7) and
(if8 = equals8)
        and (if9 = equals9) and (if10 = equals10) and (if11 = equals11)
        and (if12 = equals12) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end loop;
else
    for r in get_atten loop
        acc_ids(i) := r.accident_id;
        atten_ids(i) := r.attenuator_id;
        aperf_ids(i) := r.atten_performance_id;
        i := i + 1;
    end loop;
end if;

r := i-1;
--Print details on each matching accident.
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop

```

```

        attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
    end loop;
    attenuator_www.reports.accid_foot_print;
END accid_atype;

```

```

PROCEDURE accid_imp
(driv_act IN number,
check1 IN char,
imp_pt_veh IN number,
check2 IN char,
imp_pt_atten IN number,
check3 IN char,
prev_imp IN char,
check4 IN char,
pre_imp_angle IN number,
check5 IN char,
rear_imp IN char,
check6 IN char)
IS
    type varray_num is table of number(4,0) index by binary_integer;
    type varray_char5 is table of char(5) index by binary_integer;
    cursor get_veh is select vehicle.driver_action_id,
vehicle.impact_point_vehicle_id, vehicle.impact_point_atten_id,
    vehicle.prior_impact, vehicle.pre_impact_angle_id, vehicle.rear_impact,
    atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
    from attenuator_apps.vehicle, attenuator_apps.atten_accident
    where atten_accident.accident_id = vehicle.accident_id
    order by atten_accident.accident_id;

```

```

i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
acc_ids    varray_num;
atten_ids  varray_char5;
aperf_ids  varray_num;
found      number;
m          number;
n          number;
acc_id     number(4,0);
acc_test   number(4,0);
BEGIN

```

--Find the set of accidents which meet the search criteria.

```

    i := 1;
    if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
        or (check6 = 'yes') then
        for r in get_veh loop

```

```

if (check1 = 'yes') then
    if1 := r.driver_action_id;
    equals1 := driv_act;
else
    if1 := '0';
    equals1 := '0';
end if;

if (check2 = 'yes') then
    if2 := r.impact_point_vehicle_id;
    equals2 := imp_pt_veh;
else
    if2 := '0';
    equals2 := '0';
end if;

if (check3 = 'yes') then
    if3 := r.impact_point_atten_id;
    equals3 := imp_pt_atten;
else
    if3 := '0';
    equals3 := '0';
end if;

if (check4 = 'yes') then
    if4 := r.prior_impact;
    equals4 := prev_imp;
else
    if4 := '0';
    equals4 := '0';
end if;

if (check5 = 'yes') then
    if5 := r.pre_impact_angle_id;
    equals5 := pre_imp_angle;
else
    if5 := '0';
    equals5 := '0';
end if;

if (check6 = 'yes') then
    if6 := r.rear_impact;
    equals6 := rear_imp;
else
    if6 := '0';
    equals6 := '0';
end if;

if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4) and (if5 = equals5)
    and (if6 = equals6) then
        found := 0;
        n := i - 1;
        if (i > 1) then
            for m in 1..n loop
                if (acc_ids(m) = r.accident_id) then
                    found := 1;
                    exit;
                end if;
            end loop;
        end if;
    end if;

```

```

        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end if;
end loop;
else
    for r in get_veh loop
        found := 0;
        if (i > 1) then
            n := i - 1;
            for m in 1..n loop
                if (acc_ids(m) = r.accident_id) then
                    found := 1;
                end if;
            end loop;
        end if;
        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end loop;
end if;

r := i-1;
--Print details on each matching accident.
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END accid_imp;

```

```

PROCEDURE atten_res
(att_dam IN number,
check1 IN char,
debris_scat IN number,
check2 IN char,
low_cost IN number,
check3 IN char,
high_cost IN number,
check4 IN char,
anchor IN char,
check4a IN char,
snag IN number,
check5 IN char,
pocket IN number,
check6 IN char,
spear IN number,
check7 IN char,
under IN number,
check8 IN char,
over IN number,
check9 IN char)
IS

```

```

type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;
cursor get_atten is select vehicle_results.snagging_id,
vehicle_results.pocketing_id,
vehicle_results.spearling_id, vehicle_results.underride_id,
vehicle_results.override_id,
atten_performance.atten_damage_id, atten_performance.debris_scatter_id,
atten_performance.estimated_repair_cost, atten_performance.anchor_lost,
atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
from attenuator_apps.vehicle, attenuator_apps.vehicle_results,
attenuator_apps.atten_accident, attenuator_apps.atten_performance
where atten_accident.accident_id = vehicle_results.vehicle_id
and atten_accident.atten_performance_id =
atten_performance.atten_performance_id
and vehicle_results.vehicle_id = vehicle_results.vehicle_id
order by atten_accident.accident_id;

```

```

i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if4a       char(30);
equals4a   char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
if7        char(30);
equals7    char(30);
if8        char(30);
equals8    char(30);
if9        char(30);
equals9    char(30);
acc_ids    varray_num;
atten_ids  varray_char5;
aperf_ids  varray_num;
found      number;
m          number;
n          number;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes')
or (check4a = 'yes') or (check5 = 'yes') or (check6 = 'yes') or (check7 =
'yes')
or (check8 = 'yes') or (check9 = 'yes') then
for r in get_atten loop
if (check1 = 'yes') then
if1 := r.atten_damage_id;
equals1 := att_dam;
else
if1 := '0';

```

```

        equals1 := '0';
    end if;

    if (check2 = 'yes') then
        if2 := r.debris_scatter_id;
        equals2 := debris_scatter_id;
    else
        if2 := '0';
        equals2 := '0';
    end if;

    if (check3 = 'yes') then
        if3 := r.estimated_repair_cost;
        equals3 := low_cost;
    else
        if3 := '0';
        equals3 := '0';
    end if;

    if (check4 = 'yes') then
        if4 := r.estimated_repair_cost;
        equals4 := high_cost;
    else
        if4 := '0';
        equals4 := '0';
    end if;

    if (check4a = 'yes') then
        if4a := r.anchor_lost;
        equals4a := anchor_lost;
    else
        if4a := '0';
        equals4a := '0';
    end if;

    if (check5 = 'yes') then
        if5 := r.snagging_id;
        equals5 := snagging_id;
    else
        if5 := '0';
        equals5 := '0';
    end if;

    if (check6 = 'yes') then
        if6 := r.pocketing_id;
        equals6 := pocketing_id;
    else
        if6 := '0';
        equals6 := '0';
    end if;

    if (check7 = 'yes') then
        if7 := r.spear_id;
        equals7 := spear;
    else
        if7 := '0';
        equals7 := '0';
    end if;

    if (check8 = 'yes') then
        if8 := r.override_id;

```

```

        equals8 := under;
    else
        if8 := '0';
        equals8 := '0';
    end if;

    if (check9 = 'yes') then
        if9 := r.override_id;
        equals9 := over;
    else
        if9 := '0';
        equals9 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 >= equals3) and (if4
<= equals4)
        and (if4a = equals4a) and (if5 = equals5) and (if6 = equals6) and
(if7 = equals7)
        and (if8 = equals8) and (if9 = equals9) then
            found := 0;
            n := i - 1;
            if (i > 1) then
                for m in 1..n loop
                    if (acc_ids(m) = r.accident_id) then
                        found := 1;
                        exit;
                    end if;
                end loop;
            end if;
            if (found = 0) then
                atten_ids(i) := r.attenuator_id;
                acc_ids(i) := r.accident_id;
                aperf_ids(i) := r.atten_performance_id;
                i := i + 1;
            end if;
        end if;
    end loop;
else
    for r in get_atten loop
        found := 0;
        if (i > 1) then
            n := i - 1;
            for m in 1..n loop
                if (acc_ids(m) = r.accident_id) then
                    found := 1;
                end if;
            end loop;
        end if;
        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end loop;
end if;

r := i-1;
--Print details on each matching accident.
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop

```



```

        attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
    end loop;
    attenuator_www.reports.accid_foot_print;
END atten_res;

```

```

PROCEDURE vehicle_res
(haz_imp IN number,
check1 IN char,
sec_acc IN char,
check2 IN char,
low_cost IN number,
check3 IN char,
high_cost IN number,
check4 IN char,
deform IN number,
check5 IN char,
stop_mode IN number,
check6 IN char,
spin_beh IN number,
check7 IN char,
post_imp_ang IN number,
check8 IN char,
dist_lat IN number,
check9 IN char,
dist_long IN number,
check10 IN char,
stop_place IN number,
check11 IN char,
final_orient IN number,
check12 IN char)
IS
    type varray_num is table of number(4,0) index by binary_integer;
    type varray_char5 is table of char(5) index by binary_integer;
    cursor get_veh is select vehicle_results.hazard_impact_id,
vehicle_results.secondary_acc,
vehicle_results.estimated_cost_vehicle, vehicle_results.deformation_id,
vehicle_results.stopping_mode_id, vehicle_results.spin_behavior_id,
vehicle_results.post_impact_angle_id, vehicle_results.distance_lat_id,
vehicle_results.distance_long_id, vehicle_results.stopping_place_id,
vehicle_results.final_orientation_id, atten_accident.attenuator_id,
atten_accident.accident_id, atten_accident.atten_performance_id
from attenuator_apps.vehicle, attenuator_apps.vehicle_results,
attenuator_apps.atten_accident, attenuator_apps.atten_performance
where atten_accident.accident_id = vehicle.accident_id
and atten_accident.atten_performance_id =
atten_performance.atten_performance_id
and vehicle.vehicle_id = vehicle_results.vehicle_id
order by atten_accident.accident_id;

i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if4a       char(30);

```

```

equals4a    char(30);
if5         char(30);
equals5     char(30);
if6         char(30);
equals6     char(30);
if7         char(30);
equals7     char(30);
if8         char(30);
equals8     char(30);
if9         char(30);
equals9     char(30);
if10        char(30);
equals10    char(30);
if11        char(30);
equals11    char(30);
if12        char(30);
equals12    char(30);
acc_ids     varray_num;
atten_ids   varray_char5;
aperf_ids   varray_num;
found       number;
m           number;
n           number;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes')
    or (check5 = 'yes') or (check6 = 'yes') or (check7 = 'yes')
    or (check8 = 'yes') or (check9 = 'yes') or (check10 = 'yes') or (check12
= 'yes')
    or (check12 = 'yes') then
    for r in get_veh loop
        if (check1 = 'yes') then
            if1 := r.hazard_impact_id;
            equals1 := haz_imp;
        else
            if1 := '0';
            equals1 := '0';
        end if;

        if (check2 = 'yes') then
            if2 := r.secondary_acc;
            equals2 := sec_acc;
        else
            if2 := '0';
            equals2 := '0';
        end if;

        if (check3 = 'yes') then
            if3 := r.estimated_cost_vehicle;
            equals3 := low_cost;
        else
            if3 := '0';
            equals3 := '0';
        end if;

        if (check4 = 'yes') then
            if4 := r.estimated_cost_vehicle;
            equals4 := high_cost;

```

```

else
    if4 := '0';
    equals4 := '0';
end if;

if (check5 = 'yes') then
    if5 := r.deformation_id;
    equals5 := deform;
else
    if5 := '0';
    equals5 := '0';
end if;

if (check6 = 'yes') then
    if6 := r.stopping_mode_id;
    equals6 := stop_mode;
else
    if6 := '0';
    equals6 := '0';
end if;

if (check7 = 'yes') then
    if7 := r.spin_behavior_id;
    equals7 := spin_beh;
else
    if7 := '0';
    equals7 := '0';
end if;

if (check8 = 'yes') then
    if8 := r.post_impact_angle_id;
    equals8 := post_imp_ang;
else
    if8 := '0';
    equals8 := '0';
end if;

if (check9 = 'yes') then
    if9 := r.distance_lat_id;
    equals9 := dist_lat;
else
    if9 := '0';
    equals9 := '0';
end if;

if (check10 = 'yes') then
    if10 := r.distance_long_id;
    equals10 := dist_long;
else
    if10 := '0';
    equals10 := '0';
end if;

if (check11 = 'yes') then
    if11 := r.stopping_place_id;
    equals11 := stop_place;
else
    if11 := '0';
    equals11 := '0';
end if;

```

```

    if (check12 = 'yes') then
        if12 := r.final_orientation_id;
        equals12 := final_orient;
    else
        if12 := '0';
        equals12 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) and (if3 >= equals3) and (if4
<= equals4)
        and (if5 = equals5) and (if6 = equals6) and (if7 = equals7)
        and (if8 = equals8) and (if9 = equals9) and (if10 = equals10)
        and (if11 = equals11) and (if12 = equals12) then
            found := 0;
            n := i - 1;
            if (i > 1) then
                for m in 1..n loop
                    if (acc_ids(m) = r.accident_id) then
                        found := 1;
                        exit;
                    end if;
                end loop;
            end if;
            if (found = 0) then
                atten_ids(i) := r.attenuator_id;
                acc_ids(i) := r.accident_id;
                aperf_ids(i) := r.atten_performance_id;
                i := i + 1;
            end if;
        end if;
    end loop;
else
    for r in get_veh loop
        found := 0;
        if (i > 1) then
            n := i - 1;
            for m in 1..n loop
                if (acc_ids(m) = r.accident_id) then
                    found := 1;
                end if;
            end loop;
        end if;
        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end loop;
end if;

r := i-1;
--Print details on each matching accident.
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END vehicle_res;

```

```

PROCEDURE occup_res
(eject IN number,
check1 IN char,
inj_sev IN number,
check2 IN char,
safety IN number,
check3 IN char)
IS
type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;
cursor get_driver is select driver.person_id, driver.ejected_id,
driver.injury_severity_id,
vehicle.vehicle_id, atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
from attenuator_apps.driver, attenuator_apps.vehicle,
attenuator_apps.atten_accident
where atten_accident.accident_id = vehicle.accident_id
and vehicle.driver_id = driver.driver_id
order by atten_accident.accident_id;
cursor get_pass is select passenger.person_id, passenger.ejected_id,
passenger.injury_severity_id,
vehicle.vehicle_id, atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
from attenuator_apps.passenger, attenuator_apps.vehicle,
attenuator_apps.atten_accident
where atten_accident.accident_id = vehicle.accident_id
and vehicle.vehicle_id = passenger.vehicle_id
order by atten_accident.accident_id;
cursor get_safety_driver is select safety_device_used.safety_device_id,
driver.person_id,
vehicle.vehicle_id, atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
from attenuator_apps.safety_device_used, attenuator_apps.driver,
attenuator_apps.vehicle, attenuator_apps.atten_accident
where safety_device_used.person_id = driver.person_id
and vehicle.driver_id = driver.driver_id
and atten_accident.accident_id = vehicle.accident_id
order by atten_accident.accident_id;
cursor get_safety_pass is select safety_device_used.safety_device_id,
passenger.person_id,
vehicle.vehicle_id, atten_accident.attenuator_id, atten_accident.accident_id,
atten_accident.atten_performance_id
from attenuator_apps.safety_device_used, attenuator_apps.passenger,
attenuator_apps.vehicle, attenuator_apps.atten_accident
where safety_device_used.person_id = passenger.person_id
and passenger.vehicle_id = vehicle.vehicle_id
and atten_accident.accident_id = vehicle.accident_id
order by atten_accident.accident_id;
cursor get_accid is select atten_accident.accident_id,
atten_accident.atten_performance_id,
atten_accident.attenuator_id from attenuator_apps.atten_accident
order by atten_accident.accident_id;

i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);

```

```

acc_ids      varray_num;
atten_ids    varray_char5;
aperf_ids    varray_num;
found        number;
m            number;
n            number;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') then
  for r in get_driver loop
    if (check1 = 'yes') then
      if1 := r.ejected_id;
      equals1 := eject;
    else
      if1 := '0';
      equals1 := '0';
    end if;

    if (check2 = 'yes') then
      if2 := r.injury_severity_id;
      equals2 := inj_sev;
    else
      if2 := '0';
      equals2 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) then
      if (check3 = 'yes') then
        for q in get_safety_driver loop
          if (q.safety_device_id = safety) and (q.person_id =
r.person_id) then
            found := 0;
            n := i - 1;
            if (i > 1) then
              for m in 1..n loop
                if (acc_ids(m) = r.accident_id) then
                  found := 1;
                  exit;
                end if;
              end loop;
            end if;
            if (found = 0) then
              atten_ids(i) := r.attenuator_id;
              acc_ids(i) := r.accident_id;
              aperf_ids(i) := r.atten_performance_id;
              i := i + 1;
            end if;
          end if;
        end loop;
      else
        found := 0;
        n := i - 1;
        if (i > 1) then
          for m in 1..n loop
            if (acc_ids(m) = r.accident_id) then
              found := 1;
              exit;
            end if;
          end loop;
        end loop;
      end if;
    end if;
  end loop;
end if;

```

```

        end if;
        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end if;
end if;
end loop;
for r in get_pass loop
    if (check1 = 'yes') then
        if1 := r.ejected_id;
        equals1 := eject;
    else
        if1 := '0';
        equals1 := '0';
    end if;

    if (check2 = 'yes') then
        if2 := r.injury_severity_id;
        equals2 := inj_sev;
    else
        if2 := '0';
        equals2 := '0';
    end if;

    if (if1 = equals1) and (if2 = equals2) then
        if (check3 = 'yes') then
            for q in get_safety_pass loop
                if (q.safety_device_id = safety) and (q.person_id =
r.person_id) then
                    found := 0;
                    n := i - 1;
                    if (i > 1) then
                        for m in 1..n loop
                            if (acc_ids(m) = r.accident_id) then
                                found := 1;
                                exit;
                            end if;
                        end loop;
                    end if;
                    if (found = 0) then
                        atten_ids(i) := r.attenuator_id;
                        acc_ids(i) := r.accident_id;
                        aperf_ids(i) := r.atten_performance_id;
                        i := i + 1;
                    end if;
                end if;
            end loop;
        else
            found := 0;
            n := i - 1;
            if (i > 1) then
                for m in 1..n loop
                    if (acc_ids(m) = r.accident_id) then
                        found := 1;
                        exit;
                    end if;
                end loop;
            end if;
        end if;
    end if;
end if;

```

```

        if (found = 0) then
            atten_ids(i) := r.attenuator_id;
            acc_ids(i) := r.accident_id;
            aperf_ids(i) := r.atten_performance_id;
            i := i + 1;
        end if;
    end if;
end if;
end loop;
else
    for r in get_accid loop
        atten_ids(i) := r.attenuator_id;
        acc_ids(i) := r.accident_id;
        aperf_ids(i) := r.atten_performance_id;
        i := i + 1;
    end loop;
end if;

r := i-1;
--Print details on each matching accident.
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
/*      attenuator_www.http.p('Accident: '||acc_ids(i)||'<br>');
      attenuator_www.http.p('Atten: '||atten_ids(i)||'<br>');
      attenuator_www.http.p('Atten Perf: '||aperf_ids(i)||'<br>');
*/
end loop;
attenuator_www.reports.accid_foot_print;
END occup_res;

PROCEDURE accid_cause
(phys_def IN number,
check1 IN char,
und_inf IN number,
check2 IN char,
sex IN number,
check3 IN char,
residence IN number,
check4 IN char,
ccdriver IN number,
check5 IN char,
citations IN number,
check6 IN char)
IS
type varray_num is table of number(4,0) index by binary_integer;
type varray_char5 is table of char(5) index by binary_integer;
cursor get_cause is select driver.driver_id, driver.physical_defects_id,
driver.under_influence_id,
driver.sex_id, driver.residence_id, atten_accident.accident_id,
atten_accident.atten_performance_id, atten_accident.attenuator_id
from attenuator_apps.atten_accident, attenuator_apps.vehicle,
attenuator_apps.driver
where vehicle.accident_id = atten_accident.accident_id
and vehicle.driver_id = driver.driver_id
order by atten_accident.accident_id;
cursor get_ccdriver is select * from
attenuator_apps.contrib_cause_driver_cited;
cursor get_citations is select * from attenuator_apps.citation;
cursor get_accid is select atten_accident.accident_id,
atten_accident.atten_performance_id,

```



```

    atten_accident.attenuator_id from attenuator_apps.atten_accident
order by atten_accident.accident_id;
i          number;
r          number;
if1        char(30);
equals1    char(30);
if2        char(30);
equals2    char(30);
if3        char(30);
equals3    char(30);
if4        char(30);
equals4    char(30);
if5        char(30);
equals5    char(30);
if6        char(30);
equals6    char(30);
acc_ids    varray_num;
atten_ids  varray_char5;
aperf_ids  varray_num;
found      number;
m          number;
n          number;
BEGIN

--Find the set of accidents which meet the search criteria.
i := 1;
if (check1 = 'yes') or (check2 = 'yes') or (check3 = 'yes') or (check4 =
'yes') or (check5 = 'yes')
    or (check6 = 'yes') then
for r in get_cause loop
    if (check1 = 'yes') then
        if1 := r.physical_defects_id;
        equals1 := phys_def;
    else
        if1 := '0';
        equals1 := '0';
    end if;

    if (check2 = 'yes') then
        if2 := r.under_influence_id;
        equals2 := und_inf;
    else
        if2 := '0';
        equals2 := '0';
    end if;

    if (check3 = 'yes') then
        if3 := r.sex_id;
        equals3 := sex;
    else
        if3 := '0';
        equals3 := '0';
    end if;

    if (check4 = 'yes') then
        if4 := r.residence_id;
        equals4 := residence;
    else
        if4 := '0';
        equals4 := '0';
    end if;

```

```

        if (if1 = equals1) and (if2 = equals2) and (if3 = equals3) and (if4 =
equals4) then
            if (check5 = 'yes') and (check6 <> 'yes') then
                for q in get_ccdriver loop
                    if (q.contrib_cause_driver_id = ccdriver) and (r.driver_id =
q.driver_id) then
                        found := 0;
                        n := i - 1;
                        if (i > 1) then
                            for m in 1..n loop
                                if (acc_ids(m) = r.accident_id) then
                                    found := 1;
                                    exit;
                                end if;
                            end loop;
                        end if;
                        if (found = 0) then
                            atten_ids(i) := r.attenuator_id;
                            acc_ids(i) := r.accident_id;
                            aperf_ids(i) := r.atten_performance_id;
                            i := i + 1;
                        end if;
                    end if;
                end loop;
            elsif (check6 = 'yes') and (check5 <> 'yes') then
                for q in get_citations loop
                    if (q.citation_name_id = citations) and (r.driver_id =
q.driver_id) then
                        found := 0;
                        n := i - 1;
                        if (i > 1) then
                            for m in 1..n loop
                                if (acc_ids(m) = r.accident_id) then
                                    found := 1;
                                    exit;
                                end if;
                            end loop;
                        end if;
                        if (found = 0) then
                            atten_ids(i) := r.attenuator_id;
                            acc_ids(i) := r.accident_id;
                            aperf_ids(i) := r.atten_performance_id;
                            i := i + 1;
                        end if;
                    end if;
                end loop;
            elsif (check5 = 'yes') and (check6 = 'yes') then
                for q in get_ccdriver loop
                    if (q.contrib_cause_driver_id = ccdriver) and (r.driver_id =
q.driver_id) then
                        for p in get_citations loop
                            if (p.citation_id = citations) and (r.driver_id =
q.driver_id) then
                                found := 0;
                                n := i - 1;
                                if (i > 1) then
                                    for m in 1..n loop
                                        if (acc_ids(m) = r.accident_id) then
                                            found := 1;
                                            exit;

```

```

        end if;
    end loop;
end if;
if (found = 0) then
    atten_ids(i) := r.attenuator_id;
    acc_ids(i) := r.accident_id;
    aperf_ids(i) := r.atten_performance_id;
    i := i + 1;
end if;
end if;
end loop;
end if;
end loop;
else
    found := 0;
    n := i - 1;
    if (i > 1) then
        for m in 1..n loop
            if (acc_ids(m) = r.accident_id) then
                found := 1;
                exit;
            end if;
        end loop;
    end if;
    if (found = 0) then
        atten_ids(i) := r.attenuator_id;
        acc_ids(i) := r.accident_id;
        aperf_ids(i) := r.atten_performance_id;
        i := i + 1;
    end if;
end if;
end loop;
else
    for r in get_accid loop
        acc_ids(i) := r.accident_id;
        atten_ids(i) := r.attenuator_id;
        aperf_ids(i) := r.atten_performance_id;
        i := i + 1;
    end loop;
end if;
--Print details on each matching accident.
r := i - 1;
attenuator_www.reports.accid_head_print(r);
for i in 1..r loop
    attenuator_apps.data_reports.print_details(acc_ids(i), atten_ids(i),
aperf_ids(i));
end loop;
attenuator_www.reports.accid_foot_print;
END accid_cause;

PROCEDURE print_details
(acc_id IN number,
atten_id IN char,
aperf_id IN number)
IS
cursor get_accid is select accident.accident_id, accident.report_number,
accident.road_surface_id, accident.weather_id, accident.lighting_id,
accident.harmful_event_1, accident.harmful_event_2,
atten_accident.atten_performance_id,

```

```

    atten_accident.attenuator_id from attenuator_apps.accident,
attenuator_apps.atten_accident
    where accident.accident_id = atten_accident.accident_id order by
accident.accident_id;
    cursor get_ccenv is select * from attenuator_apps.contrib_cause_env_cited
where 0=0 order by contrib_cause_env_cited_id;
    cursor get_ccroad is select * from attenuator_apps.contrib_cause_road_cited
where 0=0 order by contrib_cause_road_cited_id;
    cursor get_veh is select * from attenuator_apps.vehicle where 0=0 order by
accident_id;
    cursor get_veh_dam is select * from attenuator_apps.vehicle_damage_received
where 0=0 order by vehicle_id;
    i          number;
    r          number;
    person_id  number;
    pass_id    number;
    d_or_p     char(1);
    road_id    number;
BEGIN
--Print details on each matching accident.
    attenuator_www.reports.accid_det_print(acc_id);
    road_id := 0;
    attenuator_www.reports.atten_det_print(atten_id, road_id);
    attenuator_www.reports.site_det_print(atten_id);
    attenuator_www.reports.road_det_print(road_id);
    attenuator_www.reports.aperf_det_print(aperf_id, atten_id);
    attenuator_www.reports.ccenv_det_print(acc_id);
    attenuator_www.reports.ccroad_det_print(acc_id);
    for p in get_veh loop
        if (p.accident_id = acc_id) then
            attenuator_www.reports.veh_det_print(p.accident_id, p.vehicle_id);
            attenuator_www.reports.vres_det_print(p.vehicle_id);
            for q in get_veh_dam loop
                if (p.vehicle_id = q.vehicle_id) then
                    attenuator_www.reports.vdam_det_print(p.vehicle_id);
                    exit;
                end if;
            end loop;
            person_id := 0;
            d_or_p := 'd';
            attenuator_www.reports.driver_det_print(p.vehicle_id, p.driver_id,
person_id);
            attenuator_www.reports.safety equip_print(p.vehicle_id, p.driver_id,
person_id, d_or_p);
            attenuator_www.reports.citations_print(p.driver_id);
            attenuator_www.reports.ccdriv_det_print(p.driver_id);
            person_id := 0;
            pass_id := 0;
            d_or_p := 'p';
            attenuator_www.reports.pass_det_print(p.vehicle_id, pass_id,
person_id);
            attenuator_www.reports.safety equip_print(p.vehicle_id, pass_id,
person_id, d_or_p);
        end if;
    end loop;
END print_details;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix G: Application Programs—Decision Support System

Appendix G-1: ATTENUATOR_APPS.DSS

```

Package Body                                DSS
IS

PROCEDURE dss_run
    (speed_in in number,
     length_in in number,
     count_in in number,
     width_in in number,
     long_in in number,
     lateral_in in number,
     rigid_in in number,
     urban_in in number,
     climate_in in number,
     work_in in number,
     road_class_in in number,
     lanes_in in number,
     accident_in in number,
     v_standard in number)

is

count_lane_in number(9,2);

BEGIN

/*Given site characteristics as input, compute rank for each type
of attenuator in the database.*/

/*Compute traffic count per lane for site input by user.*/
count_lane_in := count_in / lanes_in;

/*Call weights procedure to compute criteria weights. */
weights.weights
    (speed_in in number,
     length_in in number,
     count_lane_in in number,
     width_in in number,
     long_in in number,
     lateral_in in number,
     rigid_in in number,
     urban_in in number,
     climate_in in number,
     work_in in number,
     road_class_in in number
     );

/*Call matching procedure to compute match score for each attenuator
in database. Input is site characteristics, output is ? */
matching.matching
    (speed_in in number,
     length_in in number,
     count_lane_in in number,
     width_in in number,
     long_in in number,
     lateral_in in number,

```

```

        rigid_in in number,
        urban_in in number,
        climate_in in number,
        work_in in number,
        road_class_in in number
    );

/*Call criteria evaluation procedure to compute... */
outcomes.outcomes
    (accident_in in number);

/*Call ranking module to compute... */
ranking.ranking
    (v_standard in number);

/*Print results*/
attenuator_www.main.results_window
    (speed_in in number,
     length_in in number,
     count_lane_in in number,
     width_in in number,
     long_in in number,
     lateral_in in number,
     rigid_in in number,
     urban_in in number,
     climate_in in number,
     work_in in number,
     road_class_in in number
    );

END dss_run;

END;
```

Appendix G-2: ATTENUATOR_APPS.DSS_FNS

```

Package Body          DSS_FNS
IS

/*
THIS FUNCTION CALCULATES THE IMPACT FREQUENCY FACTOR
*/
function Funct_impact_in
    (count_in in number,
     speed_in in number,
     lateral_in in number,
     long_in in number)
    return number as

return_lambda         number;

val1                  number;
val2                  number;
val3                  number;
val4                  number;

begin
```

```

    if count_in <= 5000 then
        val1 := 0.1;
    elsif ((count_in > 5000) and (count_in <= 20000)) then
        val1 := (((0.00006)*count_in)-(0.2));
    else
        val1 := 1;
    end if;

    if speed_in <= 60 then
        val2 := 0.1;
    elsif ((speed_in > 60) and (speed_in <= 110)) then
        val2 := (((0.018)*speed_in)-(0.98));
    else
        val2 := 1;
    end if;

    if lateral_in <= 2 then
        val3 := 1;
    elsif (lateral_in > 2 and lateral_in <= 8) then
        val3 := (((-0.15)*lateral_in) + 1.3);
    else
        val3 := 0.1;
    end if;

    if long_in <= 6 then
        val4 := 1;
    elsif (long_in > 6 and long_in <= 20) then
        val4 := (((-0.064)*long_in) + 1.39);
    else
        val4 := .1;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4)/4);
    return return_lambda;
end;

/*
THIS FUNCTION CALCULATES THE PEDESTRIAN USE FACTOR
*/

function Funct_pedestrian_in(road_class_in in number, urban_in in number) return
number as

return_lambda          number;
val1                   number;
val2                   number;

begin

    val1 :=road_class_in;
    val2 := urban_in;

    return_lambda := ((val1 + val2)/2);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR FRONTAL IMPACT,
CRITERIA DSS 1.1.1.

```

```

*/
function Funct_111(F_impact_val in number, speed_in in number, rigid_in in number)
return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 60 and speed_in < 110) then
        val1 := (((.0156)*speed_in)-.716);
    else
        val1 := 0.22;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN A RIGID HAZARD
*/
    if rigid_in = 0 then
        val2 := 0.5;
    else
        val2 := 1;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/
    if F_impact_val >= 0 and F_impact_val < 0.5 then
        val3 := (F_impact_val * 2);
    else
        val3 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3)/3);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE LAMBDA VALUES FOR SIDE IMPACT,
CRITERIA DSS 1.1.2.
*/

function Funct_112(F_impact_val in number, speed_in in number, lateral_in in
number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;

begin

/*

```


THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
 */

```

    if speed_in >= 100 then
        val1 := 1;
    elsif (speed_in >= 75 and speed_in < 100) then
        val1 := (((.036)*speed_in)-2.6);
    else
        val1 := 0.1;
    end if;

```

/*
 THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
 CLEARANCE TO TRAFFIC
 */

```

    if lateral_in >= 4 then
        val2 := 1;
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val2 := ((.25)*lateral_in);
    end if;

```

/*
 THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY

```

  */
    if F_impact_val >= 0 and F_impact_val < 0.5 then
        val3 := (F_impact_val * 2);
    else
        val3 := 1;
    end if;

```

```

    return_lambda := ((val1 + val2 + val3)/3);
    return return_lambda;

```

end;

/*
 THIS FUNCTION CALCULATES THE WEIGHT FOR SNAGGING WHEELS/FENDERS,
 CRITERIA DSS 1.2.1.1

*/
 function Funct_1211(F_impact_val in number, speed_in in number) return number as

```

    return_lambda          number;
    val1                   number;
    val2                   number;

```

begin

/*
 THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
 */

```

    if speed_in >= 100 then
        val1 := 1;
    elsif (speed_in >= 75 and speed_in < 100) then
        val1 := (((.036)*speed_in)-2.6);
    else
        val1 := 0.1;
    end if;

```

/*
 THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY

```

  */
    if F_impact_val <= 0.25 then

```

```

        val2 := 0.1;
    elsif F_impact_val > 0.25 and F_impact_val <= 0.75 then
        val2 := ((1.8*F_impact_val)- 0.35);
    else
        val2 := 1;
    end if;

    return_lambda := ((val1 + val2)/2);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR POCKETING,
CRITERIA DSS 1.2.1.2
*/
function Funct_1212(F_impact_val in number, speed_in in number, rigid_in in
number) return number as

    return_lambda          number;
    val1                   number;
    val2                   number;
    val3                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 100 then
        val1 := 1;
    elsif (speed_in >= 75 and speed_in < 100) then
        val1 := (((.036)*speed_in)-2.6);
    else
        val1 := 0.1;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE RIGID HAZARD
*/
    if rigid_in = 0 then
        val2 := 0.5;
    elsif rigid_in = 1 then
        val2 := 1;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/
    if F_impact_val <= 0.25 then
        val3 := 0.1;
    elsif F_impact_val > 0.25 and F_impact_val <= 0.75 then
        val3 := ((F_impact_val*1.8)-0.35);
    else
        val3 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3)/3);
    return return_lambda;

```

```

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SPEAR/PENETRATE OCCUPANT COMPARTMENT,
CRITERIA DSS 1.2.2.1
*/
function Funct_1221(speed_in in number) return number as

return_lambda          number;
val1                    number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/

    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 60 and speed_in < 110) then
        val1 := (((.018)*speed_in)- .98);
    else
        val1 := 0.1;
    end if;

    return_lambda := (val1);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SCATTERING DEBRIS,
CRITERIA DSS 1.2.2.2
*/
function Funct_1222(F_impact_val in number, speed_in in number) return number as

return_lambda          number;
val1                    number;
val2                    number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/

    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 110) then
        val1 := ((.0091)*speed_in);
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.5 then
        val2 := 0;
    elsif F_impact_val > 0.5 and F_impact_val <= 0.75 then
        val2 := ((F_impact_val*4)-2);
    else
        val2 := 1;
    end if;

```

```

        end if;

        return_lambda := ((val1 + val2)/2);
        return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR ROLLOVER,
CRITERIA DSS 1.2.3.1.
*/
function Funct_1231(speed_in in number, count_in in number, lateral_in in number)
return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 50 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 50) then
        val1 := ((.02)*speed_in);
    else
        val1 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE TO TRAFFIC
*/
    if (lateral_in >= 8 and lateral_in < 20) then
        val3 := (((-.083)*lateral_in)+1.667);
    elsif (lateral_in >= 0 and lateral_in < 8) then
        val3 := 1;
    else
        val3 := 0;
    end if;

    return_lambda := ((val1 + val2 +val3)/3);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR OVERRIDE,
CRITERIA DSS 1.2.3.2
*/

```

```

function Funct_1232(speed_in in number,width_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 100 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 100) then
        val1 := ((.0090909)*speed_in);
    else
        val1 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 6 and width_in < 12) then
        val2 := (((-.167)*width_in) + 2);
    elsif (width_in >= 0 and width_in < 6) then
        val2 := 1;
    else
        val2 := 0;
    end if;

    return_lambda := ((val1 + val2)/2);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR UNDERRIDE,
CRITERIA DSS 1.2.3.3.
*/
function Funct_1233(speed_in in number,lateral_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 60 and speed_in < 110) then
        val1 := (((.018)*speed_in)-.98);
    else
        val1 := .1;
    end if;

/*

```

THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL CLEARANCE TO TRAFFIC

```
*/
    if lateral_in >= 4 then
        val2 := 0;
    else
        val2 := 1;
    end if;

    return_lambda := ((val1 + val2)/2);
    return return_lambda;
```

end;

/*

THIS FUNCTION CALCULATES THE WEIGHT FOR DEFORMING PASSENGER COMPARTMENT, CRITERIA DSS 1.2.4.

*/

function Funct_124(speed_in in number) return number as

```
return_lambda      number;
val1                number;
```

begin

/*

THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED

*/

```
    if speed_in >= 50 then
        val1 := 1;
    elsif (speed_in >= 30 and speed_in < 50) then
        val1 := .67;
    else
        val1 := 0.33;
    end if;
```

```
    return_lambda := ((val1)/1);
    return return_lambda;
```

end;

/*

THIS FUNCTION CALCULATES THE WEIGHT FOR RATE OF OCCUPANT INJURY, CRITERIA DSS 1.2.5.1.

*/

function Funct_1251(speed_in in number) return number as

```
return_lambda      number;
val1                number;
```

begin

/*

THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED

*/

```
    if speed_in >= 50 then
        val1 := .18;
    elsif (speed_in >= 30 and speed_in < 50) then
        val1 := .24;
    else
        val1 := 1;
    end if;
```

```

        return_lambda := ((val1)/1);
        return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SEVERITY OF OCCUPANT INJURY,
CRITERIA DSS 1.2.5.2
*/
function Funct_1252(speed_in in number) return number as

return_lambda          number;
val1                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 50 then
        val1 := 1;
    elsif (speed_in >= 30 and speed_in < 50) then
        val1 := .67;
    else
        val1 := 0.33;
    end if;

    return_lambda := ((val1)/1);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR REBOUND BACKWARDS,
CRITERIA DSS 1.3.1.1.
*/
function Funct_1311(F_pedest_val in number, speed_in in number, count_in in
number, long_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 110) then
        val1 := ((.0090909)*speed_in);
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then

```

```

        val2 := ((.00004)*count_in);

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 3 and long_in < 18) then
        val3 := ((-.067)*long_in) + 1.2);
    elsif (long_in >= 0 and long_in < 3) then
        val3 := 1;
    else
        val3 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE PEDESTRIAN USE
*/

    if F_pedest_val <= 0.5 then
        val4 := 0.1;
    elsif F_pedest_val > 0.5 then
        val4 := ((1.8*F_pedest_val) - 0.8);
    end if;

    return_lambda := ((val1 + val2 + val3 + val4)/4);
    return return_lambda;
end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR LARGE REDIRECT ANGLE,
CRITERIA DSS 1.3.1.2.
*/
function Funct_1312(F_pedest_val in number, speed_in in number, count_in in
number, lateral_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;
--F_pedest_val         number;

begin

--F_pedest_val := dss_fns.Funct_pedestrian_in(road_class_in in number, urban_in
in number);

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 60 and speed_in < 110) then
        val1 := (((.018)*speed_in)-.98);
    else
        val1 := 0.1;
    end if;

/*

```


THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/

```

    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);
    else
        val2 := 0;
    end if;

```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE TO TRAFFIC
*/

```

    if (lateral_in >= 4 and lateral_in < 20) then
        val3 := ((-.0625)*lateral_in) + 1.25;
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val3 := 1;
    else
        val3 := 0;
    end if;

```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE PEDESTRIAN USE
*/

```

    if F_pedest_val <= 0 then
        val4 := 0;
    elsif F_pedest_val > 0 and F_pedest_val <= 1 then
        val4 := F_pedest_val;
    else
        val4 := 1;
    end if;

```

```

    return_lambda := ((val1 + val2 + val3 + val4)/4);
    return return_lambda;

```

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR TENDENCY TO GATE,
CRITERIA DSS 1.3.1.3.
*/

function Funct_1313(F_pedest_val in number, speed_in in number, count_in in
number, width_in in number, length_in in number) return number as

```

    return_lambda          number;
    val1                   number;
    val2                   number;
    val3                   number;
    val4                   number;
    val5                   number;

```

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/

```

    if speed_in >= 110 then
        val1 := 1;
    end if;

```

```

elseif (speed_in >= 50 and speed_in < 110) then
    val1 := (((.011)*speed_in)-.21);
else
    val1 := 0.1;
end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
    if count_in >= 25000 then
        val2 := 1;
    elseif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 6 and width_in < 12) then
        val3 := (((-.167)*width_in) + 2);
    elseif (width_in >= 0 and width_in < 6) then
        val3 := 1;
    else
        val3 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LENGTH OF CLEAR
ZONE
*/
    if (length_in >= 40 and length_in < 145) then
        val4 := (((-.0095)*length_in) + 1.38);
    elseif (length_in >= 0 and length_in < 40) then
        val4 := 1;
    else
        val4 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE PEDESTRIAN USE
*/
    if F_pedest_val <= 0.3 then
        val5 := 0.1;
    elseif F_pedest_val > 0.3 and F_pedest_val <=1 then
        val5 := ((1.29*F_pedest_val) - 0.29);
    else
        val5 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4 + val5)/5);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SCATTERING DEBRIS,
CRITERIA DSS 1.3.1.4.
*/

```

```

function Funct_1314(F_pedest_val in number, speed_in in number, count_in in
number, lateral_in in number, width_in in number, length_in in number, work_in in
number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;
val5                   number;
val6                   number;
val7                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 110) then
        val1 := ((.0090909)*speed_in);
    else
        val1 := 0;

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);
    else
        val2 := 0;

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE TO TRAFFIC
*/
    if (lateral_in >= 1 and lateral_in < 8) then
        val3 := (((-.143)*lateral_in) + 1.143);
    elsif (lateral_in >= 0 and lateral_in < 1) then
        val3 := 1;
    else
        val3 := 0;

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 1 and width_in < 8) then
        val4 := (((-.143)*width_in) + 1.143);
    elsif (width_in >= 0 and width_in < 1) then
        val4 := 1;
    else

```

```

        val4 := 0;

    end if;

/*
THIS IS AN EQUATION FOR LENGTH OF CLEAR ZONE
*/

    if (length_in >= 1 and length_in < 8) then
        val5 := ((-0.143)*length_in) + 1.143;
    elsif (length_in >= 0 and length_in < 1) then
        val5 := 1;
    else
        val5 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WORK ZONE USE
*/

    if work_in = 0 then
        val6 := 0.5;
    elsif (work_in = 1) then
        val6 := 1;
    else
        val6 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE PEDESTRIAN USE
*/

    if F_pedest_val <= 0 then
        val7 := 0;
    elsif F_pedest_val > 0 and F_pedest_val <= 1 then
        val7 := F_pedest_val;
    else
        val7 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + VAL4 + VAL5 + VAL6 + VAL7)/7);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR RESPONSE TIME,
CRITERIA DSS 1.3.2.1.
*/
function Funct_1321(F_impact_val in number, speed_in in number, rigid_in in
number) return number as

    return_lambda          number;
    val1                   number;
    val2                   number;
    val3                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED

```

```

*/

    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 60 and speed_in < 110) then
        val1 := ((.0156)*speed_in)-.716;
    else
        val1 := 0.22;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE RIGID HAZARD
*/
    if rigid_in = 0 then
        val2 := 0.5;
    elsif (rigid_in = 1) then
        val2 := 1;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.25 then
        val3 := 0;
    elsif F_impact_val >0.25 and F_impact_val <= 0.5 then
        val3 := ((4*F_impact_val)-1);
    else
        val3 := 1;
    end if;

    return_lambda := ((val1 + val2 +val3)/3);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR REPAIR TIME,
CRITERIA DSS 1.3.2.2.
*/
function Funct_1322(F_impact_val in number, speed_in in number, count_in in
number, long_in in number, lateral_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;
val5                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 110) then
        val1 := ((.0090909)*speed_in);

    end if;

```

```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val3 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val3 := 1;
    else
        val3 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE TO TRAFFIC
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val4 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val4 := 1;
    else
        val4 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.25 then
        val5 := 0;
    elsif F_impact_val > 0.25 and F_impact_val <= 0.5 then
        val5 := ((4*F_impact_val)-1);
    else
        val5 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + VAL4 + VAL5)/5);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SUSCEPTIBILITY TO VANDALISM,
CRITERIA DSS 1.4.1
*/
function Funct_141(F_pedest_val in number, long_in in number, lateral_in in
number, urban_in in number) return number as

return_lambda          number;

```

```

val1          number;
val2          number;
val3          number;
val4          number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if long_in >= 2 then
        val1 := 1;
    elsif (long_in >= 1 and lateral_in < 2) then
        val1 := ((long_in) - 1);
    elsif (long_in >= 0 or long_in < 1) then
        val1 := 0;
    else
        val1 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE TO TRAFFIC
*/
    if lateral_in >= 2 then
        val2 := 1;
    elsif (lateral_in >= 1 and lateral_in < 2) then
        val2 := ((lateral_in) - 1);
    elsif (lateral_in >= 0 and lateral_in < 1) then
        val2 := 0;
    else
        val2 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE URBAN LOCATION
*/
    val3 := urban_in;

/*
THIS IS THE EQUATION FOR PEDESTRIAN USE FROM THE FUNCT_PEDESTRIAN_IN FUNCTION
*/
    if F_pedest_val <= 0.5 then
        val4 := (2*F_pedest_val);
    else
        val4 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4)/4);
    return_return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR SUSCEPTIBILITY TO ENVIRONMENT,
CRITERIA DSS 1.4.2.
*/
function Funct_142(climate_in in number) return number as

return_lambda          number;
val1                   number;

```

```

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE CLIMATE
*/
    val1 := climate_in;

    return_lambda := val1;
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR INSTALLATION TIME,
CRITERIA DSS 2.1.1.
*/
function Funct_211(speed_in in number, count_in in number, long_in in
number, lateral_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
    if speed_in >= 110 then
        val1 := 1;
    elsif (speed_in >= 0 and speed_in < 110) then
        val1 := ((.0090909)*speed_in);

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/

    if count_in >= 25000 then
        val2 := 1;
    elsif (count_in >= 0 and count_in < 25000) then
        val2 := ((.00004)*count_in);

    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val3 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val3 := 1;
    else
        val3 := 0;
    end if;

```



```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val4 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val4 := 1;
    else
        val4 := 0;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4)/4);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR INSTALLATION EQUIPMENT,
CRITERIA DSS 2.1.2.
*/
function Funct_212(long_in in number,lateral_in in number,width_in in
number,length_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val1 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val1 := 1;
    else
        val1 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val2 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val2 := 1;
    else
        val2 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 4 and width_in < 8) then
        val3 := (((-.25)*width_in) + 2);

```

```

        elsif (width_in >= 0 and width_in < 4) then
            val3 := 1;
        else
            val3 := 0;
        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LENGTH OF CLEAR
ZONE
*/
        if (length_in >= 6 and length_in < 12) then
            val4 := (((-.167)*length_in) + 2);
        elsif (length_in >= 0 and length_in < 6) then
            val4 := 1;
        else
            val4 := 0;
        end if;

        return_lambda := ((val1 + val2 + val3 + val4)/4);
        return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR REPAIR TIME,
CRITERIA DSS 2.2.1.
*/
function Funct_221(F_impact_val in number, speed_in in number, count_in in
number, long_in in number, lateral_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;
val5                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE DESIGN SPEED
*/
        if speed_in >= 110 then
            val1 := 1;
        elsif (speed_in >= 0 and speed_in < 110) then
            val1 := ((.0090909)*speed_in);

        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE TRAFFIC COUNT
*/
        if count_in >= 25000 then
            val2 := 1;
        elsif (count_in >= 0 and count_in < 25000) then
            val2 := ((.00004)*count_in);

        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE

```

```

*/
    if (long_in >= 6 and long_in < 12) then
        val3 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val3 := 1;
    else
        val3 := 0;
    end if;
/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val4 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val4 := 1;
    else
        val4 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/
    if F_impact_val <= 0.5 then
        val5 := 0.1;
    elsif F_impact_val >= 0.5 and F_impact_val < 1 then
        val5 := ((1.8*F_impact_val)-0.8);
    else
        val5 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4 + val5)/5);
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR REPAIR EQUIPMENT,
CRITERIA DSS 2.2.2.
*/
function Funct_222(F_impact_val in number, speed_in in number, long_in in
number,lateral_in in number,width_in in number,length_in in number) return number
as

return_lambda          number;
val1                    number;
val2                    number;
val3                    number;
val4                    number;
val5                    number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val1 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val1 := 1;

```

```

        else
            val1 := 0;
        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
        if (lateral_in >= 4 and lateral_in < 8) then
            val2 := (((-.25)*lateral_in) + 2);
        elsif (lateral_in >= 0 and lateral_in < 4) then
            val2 := 1;
        else
            val2 := 0;
        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
        if (width_in >= 4 and width_in < 8) then
            val3 := (((-.25)*width_in) + 2);
        elsif (width_in >= 0 and width_in < 4) then
            val3 := 1;
        else
            val3 := 0;
        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LENGTH OF CLEAR
ZONE
*/
        if (length_in >= 6 and length_in < 12) then
            val4 := (((-.167)*length_in) + 2);
        elsif (length_in >= 0 and length_in < 6) then
            val4 := 1;
        else
            val4 := 0;
        end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/
        if F_impact_val <= 0.5 then
            val5 := 0.1;
        elsif F_impact_val > 0.5 and F_impact_val <= 1 then
            val5 := ((1.8*F_impact_val)-0.8);
        else
            val5 := 1;
        end if;

        return_lambda := ((val1 + val2 + val3 + val4 + val5)/5);
        return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR INVENTORY REQUIREMENTS,
CRITERIA DSS 2.2.3.

```

```

*/
function Funct_223(F_impact_val in number) return number as

return_lambda          number;
val1                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.5 then
        val1 := 0.1;
    elsif F_impact_val > 0.5 and F_impact_val <= 1 then
        val1 := ((1.8*F_impact_val)-0.8);
    else
        val1 := 1;
    end if;

    return_lambda := val1;
    return return_lambda;

end;
/*
THIS FUNCTION CALCULATES THE WEIGHT FOR PORTABILITY,
CRITERIA DSS 2.3.
*/
function Funct_23(F_impact_val in number, work_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WORK ZONE USE
*/

    if work_in = 0 then
        val1 := 0;
    elsif (work_in = 1) then
        val1 := 1;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.5 then
        val2 := 0.1;
    elsif F_impact_val > 0.5 and F_impact_val <= 1 then
        val2 := ((1.8*F_impact_val)-0.8);
    else
        val2 := 1;
    end if;

    return_lambda := ((val1 + val2)/2);
    return return_lambda;

```

```

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR INITIAL COST,
CRITERIA DSS 3.1.
*/
function Funct_31(long_in in number) return number as

return_lambda          number;
val1                   number;

begin

    val1 := 1.0;

    return_lambda := val1;
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR MAINTENANCE COST,
CRITERIA DSS 3.2.
*/
function Funct_32(long_in in number,lateral_in in number,width_in in
number,length_in in number,climate_in in number) return number as

return_lambda          number;
val1                   number;
val2                   number;
val3                   number;
val4                   number;
val5                   number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val1 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val1 := 1;
    else
        val1 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val2 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val2 := 1;
    else
        val2 := 0;
    end if;

```

```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 4 and width_in < 8) then
        val3 := (((-.25)*width_in) + 2);
    elsif (width_in >= 0 and width_in < 4) then
        val3 := 1;
    else
        val3 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LENGTH OF CLEAR
ZONE
*/
    if (length_in >= 6 and length_in < 12) then
        val4 := (((-.167)*length_in) + 2);
    elsif (length_in >= 0 and length_in < 6) then
        val4 := 1;
    else
        val4 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE CLIMATE
*/
    val5 := climate_in;

    return_lambda := ((val1 + val2 + val3 + val4 + val5)/5);
    return return_lambda;

end;

/*
THIS FUNCTION CALCULATES THE WEIGHT FOR REPAIR/REPLACEMENT COST,
CRITERIA DSS 3.3.
*/
function Funct_33(F_impact_val in number, long_in in number, lateral_in in
number,width_in in number,length_in in number) return number as

return_lambda          number;
val1                    number;
val2                    number;
val3                    number;
val4                    number;
val5                    number;

begin

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LONGITUDINAL
CLEARANCE
*/
    if (long_in >= 6 and long_in < 12) then
        val1 := (((-.167)*long_in) + 2);
    elsif (long_in >= 0 and long_in < 6) then
        val1 := 1;
    else
        val1 := 0;
    end if;

```

```

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LATERAL
CLEARANCE
*/
    if (lateral_in >= 4 and lateral_in < 8) then
        val2 := (((-.25)*lateral_in) + 2);
    elsif (lateral_in >= 0 and lateral_in < 4) then
        val2 := 1;
    else
        val2 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE WIDTH OF CLEAR
ZONE
*/
    if (width_in >= 4 and width_in < 8) then
        val3 := (((-.25)*width_in) + 2);
    elsif (width_in >= 0 and width_in < 4) then
        val3 := 1;
    else
        val3 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE LENGTH OF CLEAR
ZONE
*/
    if (length_in >= 6 and length_in < 12) then
        val4 := (((-.167)*length_in) + 2);
    elsif (length_in >= 0 and length_in < 6) then
        val4 := 1;
    else
        val4 := 0;
    end if;

/*
THIS IS AN EQUATION FOR THE IMPORTANCE OF THE CRITERIA GIVEN THE IMPACT FREQUENCY
*/

    if F_impact_val <= 0.5 then
        val5 := 0;
    elsif F_impact_val >0.5 and F_impact_val <= 0.75 then
        val5 := ((4*F_impact_val)-2);
    else
        val5 := 1;
    end if;

    return_lambda := ((val1 + val2 + val3 + val4 + val5)/5);
    return return_lambda;

end;

-- Enter further code below as specified in the Package spec.
END;

```


Appendix G-3: ATTENUATOR_APPS.MATCHING

```

Package Body                                MATCHING
IS
--
-- To modify this template, edit file PKGBODY.TXT in TEMPLATE
-- directory of SQL Navigator
--
-- Purpose: Briefly explain the functionality of the package body
--
-- MODIFICATION HISTORY
-- Person      Date      Comments
-- -----
--

PROCEDURE matching
(speed_in in number,
 length_in in number,
 count_lane_in in number,
 width_in in number,
 long_in in number,
 lateral_in in number,
 rigid_in in number,
 urban_in in number,
 climate_in in number,
 work_in in number,
 road_class_in in number)

IS

TYPE varray_num is table of number(5,3) index by binary_integer;
speed_match      number;
count_match      number;
lateral_match     number;
long_match       number;
width_match      number;
length_match     number;
ped_use_match    number;
impact_freq_match number;
urban_match      number;
zone_match       number;
climate_match    number;
rigidity_match   number;
match_score      varray_num;
v_atten          char(5);
v_config         char(5);
v_design_speed   NUMBER;
v_adt            NUMBER;
v_adt_lane       number(9,2);
v_num_lanes      NUMBER;
v_lat_clear      number;
v_long_clear     number;
v_width_cz       number;
v_length_cz      number;
v_urban_id       number;
v_urban          number;
v_workzone_desc  char(3);
v_climate        number;
v_rigidity       number;
v_road_class     number;
v_ped_use        number(5,3);

```

```

v_impact_freq    number(5,3);
ped_use_in       number(5,3);
impact_freq_in   number(5,3);
r                number;

cursor get_site is select * from site_view where 0=0;
cursor get_class is select * from road_system_identifier where 0=0;
cursor get_urban is select * from rural_urban where 0=0;
cursor get_county is select * from county where 0=0;
cursor get_climate is select * from environment_conditions where 0=0;
cursor get_rigidity is select * from shielded_object where 0=0;

BEGIN

r := 0;
/* Compute derived factors for input data. */
ped_use_in := dss_fns.Funct_pedestrian_in(road_class_in in number, urban_in in
number);
impact_freq_in := dss_fns.Funct_impact_in(count_lane_in in number, speed_in in
number,
    lateral_in in number, long_in in number);

/* For each attenuator, get site characteristics. Some characteristics come
directly from
the site_view view, others by lookups to other tables. Derived factors computed
for each row
also. */
for i in get_site loop

    r := r + 1;
    v_atten := i.attenuator_id;
    v_config := i.config_number;
    v_design_speed := i.design_speed;
    v_adt := i.avg_daily_traffic;
    v_num_lanes := i.number_lanes;
    v_lat_clear := i.clearance_lateral;
    v_long_clear := i.clearance_long;
    v_width_cz := i.width_clear_zone;
    v_length_cz := i.length_clear_zone;
    v_urban_id := i.rural_urban_id;
    v_workzone_desc := i.in_work_zone;
    v_adt_lane := v_adt / v_num_lanes;

    v_road_class := 0.2;
    for j in get_class loop
        if j.road_system_identifier_id = i.road_system_identifier_id then
            v_road_class := j.road_system_identifier_value;
            exit;
        end if;
    end loop;
    v_urban := 1.0;
    for j in get_urban loop
        if j.rural_urban_id = i.rural_urban_id then
            v_urban := j.rural_or_urban_value;
            exit;
        end if;
    end loop;
    v_ped_use := dss_fns.Funct_pedestrian_in(v_road_class in number, v_urban in
number);
    v_impact_freq := dss_fns.Funct_impact_in(v_adt_lane in number, v_design_speed
in number,

```

```

        v_lat_clear in number, v_long_clear in number);
v_climate := 0;
for j in get_county loop
    if j.county_id = i.county_id then
        for k in get_climate loop
            if k.environment_id = j.environment_id then
                v_climate := k.environment_value;
                exit;
            end if;
        end loop;
    end if;
end loop;
v_rigidity := 0;
for j in get_rigidity loop
    if j.shield_object_id = i.shield_object_id then
        v_rigidity := j.rigidity_value;
        exit;
    end if;
end loop;

/* Call functions to compute match scores for each site characteristic. */
speed_match := match_speed(v_design_speed in number, speed_in in number);
count_match := match_count(v_adt_lane in number, count_lane_in in number);
lateral_match := match_lateral(v_lat_clear in number, lateral_in in number);
long_match := match_long(v_long_clear in number, long_in in number);
width_match := match_width(v_width_cz in number, width_in in number);
length_match := match_length(v_length_cz in number, length_in in number);
ped_use_match := match_ped_use(v_ped_use in number, ped_use_in in number);
impact_freq_match := match_impact_freq(v_impact_freq in number,
impact_freq_in in number);
urban_match := match_urban(v_urban_id in number, v_urban in number, urban_in
in number);
zone_match := match_zone(v_workzone_desc in char, work_in in number);
climate_match := match_climate(v_climate in number, climate_in in number);
rigidity_match := match_rigidity(v_rigidity in number, rigid_in in number);

/* Compute overall match score by averaging twelve individual match scores. */
match_score(r) := (speed_match + count_match + lateral_match + long_match +
width_match +
length_match + ped_use_match + impact_freq_match + urban_match + zone_match +
climate_match
+ rigidity_match) / 12;

INSERT INTO MATCHING_SCORES (attenuator_id, match_score) VALUES (v_atten,
match_score(r));
end loop;

END matching;

FUNCTION match_speed
(v_design_speed in number,
speed_in in number)
RETURN number as

match_score            number;
input_value            number;
row_value              number;
exact_match_score      number;
credible_match_score   number;
possible_match_score   number;

```

```

        no_match_score          number;
        exact_match_range       number;
        credible_match_range    number;
        possible_match_range    number;

BEGIN

input_value := speed_in;
row_value   := v_design_speed;
exact_match_score := 1;
credible_match_score := 0.75;
possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 5;
credible_match_range := 10;
possible_match_range := 15;

if abs(input_value - row_value) > possible_match_range then
    match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
    match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
    match_score := credible_match_score;
else
    match_score := exact_match_score;
end if;

return match_score;

END match_speed;

FUNCTION match_count
    (v_adt_lane in number,
    count_lane_in in number)
    RETURN number as

    match_score          number;
    input_value          number;
    row_value            number;
    exact_match_score     number;
    credible_match_score  number;
    possible_match_score  number;
    no_match_score        number;
    exact_match_range     number;
    credible_match_range  number;
    possible_match_range  number;

BEGIN

input_value := count_lane_in;
row_value   := v_adt_lane;
exact_match_score := 1;
credible_match_score := 0.75;
possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 1000;
credible_match_range := 2000;
possible_match_range := 3000;

```

```

if abs(input_value - row_value) > possible_match_range then
    match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
    match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
    match_score := credible_match_score;
else
    match_score := exact_match_score;
end if;

return match_score;

```

```

END match_count;

```

```

FUNCTION match_lateral
    (v_lat_clear in number,
    lateral_in in number)
    RETURN number as

```

```

    match_score          number;
    input_value          number;
    row_value            number;
    exact_match_score    number;
    credible_match_score number;
    possible_match_score number;
    no_match_score       number;
    exact_match_range     number;
    credible_match_range number;
    possible_match_range number;

```

```

BEGIN

```

```

    input_value := lateral_in;
    row_value   := v_lat_clear;
    exact_match_score := 1;
    credible_match_score := 0.75;
    possible_match_score := 0.25;
    no_match_score := 0;

```

```

    exact_match_range := 0.5;
    credible_match_range := 1.0;
    possible_match_range := 1.5;

```

```

    if abs(input_value - row_value) > possible_match_range then
        match_score := no_match_score;
    elsif abs(input_value - row_value) > credible_match_range then
        match_score := possible_match_score;
    elsif abs(input_value - row_value) > exact_match_range then
        match_score := credible_match_score;
    else
        match_score := exact_match_score;
    end if;

```

```

    return match_score;

```

```

END match_lateral;

```

```

FUNCTION match_long
    (v_long_clear in number,
    long_in in number)
    RETURN number as

```

```

        match_score          number;
        input_value          number;
        row_value            number;
        exact_match_score    number;
        credible_match_score number;
        possible_match_score number;
        no_match_score       number;
        exact_match_range    number;
        credible_match_range number;
        possible_match_range number;

BEGIN

input_value := long_in;
row_value   := v_long_clear;
exact_match_score := 1;
credible_match_score := 0.75;
possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 1.0;
credible_match_range := 2.0;
possible_match_range := 3.0;

if abs(input_value - row_value) > possible_match_range then
    match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
    match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
    match_score := credible_match_score;
else
    match_score := exact_match_score;
end if;

return match_score;

END match_long;

FUNCTION match_width
    (v_width_cz in number,
    width_in in number)
    RETURN number as

        match_score          number;
        input_value          number;
        row_value            number;
        exact_match_score    number;
        credible_match_score number;
        possible_match_score number;
        no_match_score       number;
        exact_match_range    number;
        credible_match_range number;
        possible_match_range number;

BEGIN

input_value := width_in;
row_value   := v_width_cz;
exact_match_score := 1;
credible_match_score := 0.75;

```

```

possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 0.5;
credible_match_range := 1.0;
possible_match_range := 1.5;

if abs(input_value - row_value) > possible_match_range then
    match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
    match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
    match_score := credible_match_score;
else
    match_score := exact_match_score;
end if;

return match_score;

END match_width;

FUNCTION match_length
    (v_length_cz in number,
    length_in in number)
    RETURN number as

    match_score          number;
    input_value          number;
    row_value            number;
    exact_match_score    number;
    credible_match_score number;
    possible_match_score number;
    no_match_score       number;
    exact_match_range    number;
    credible_match_range number;
    possible_match_range number;

BEGIN

    input_value := length_in;
    row_value   := v_length_cz;
    exact_match_score := 1;
    credible_match_score := 0.75;
    possible_match_score := 0.25;
    no_match_score := 0;

    exact_match_range := 1.0;
    credible_match_range := 2.0;
    possible_match_range := 3.0;

    if abs(input_value - row_value) > possible_match_range then
        match_score := no_match_score;
    elsif abs(input_value - row_value) > credible_match_range then
        match_score := possible_match_score;
    elsif abs(input_value - row_value) > exact_match_range then
        match_score := credible_match_score;
    else
        match_score := exact_match_score;
    end if;

    return match_score;

```

```

END match_length;

FUNCTION match_ped_use
  (v_ped_use in number,
   ped_use_in in number)
  RETURN number as

  match_score          number;
  input_value          number;
  row_value            number;
  exact_match_score    number;
  credible_match_score number;
  possible_match_score number;
  no_match_score       number;
  exact_match_range    number;
  credible_match_range number;
  possible_match_range number;

BEGIN

input_value := ped_use_in;
row_value   := v_ped_use;
exact_match_score := 1;
credible_match_score := 0.75;
possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 0.1;
credible_match_range := 0.15;
possible_match_range := 0.2;

if abs(input_value - row_value) > possible_match_range then
  match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
  match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
  match_score := credible_match_score;
else
  match_score := exact_match_score;
end if;

return match_score;

END match_ped_use;

FUNCTION match_impact_freq
  (v_impact_freq in number,
   impact_freq_in in number)
  RETURN number as

  match_score          number;
  input_value          number;
  row_value            number;
  exact_match_score    number;
  credible_match_score number;
  possible_match_score number;
  no_match_score       number;
  exact_match_range    number;
  credible_match_range number;
  possible_match_range number;

```



```

BEGIN

input_value := impact_freq_in;
row_value   := v_impact_freq;
exact_match_score := 1;
credible_match_score := 0.75;
possible_match_score := 0.25;
no_match_score := 0;

exact_match_range := 0.1;
credible_match_range := 0.15;
possible_match_range := 0.2;

if abs(input_value - row_value) > possible_match_range then
    match_score := no_match_score;
elsif abs(input_value - row_value) > credible_match_range then
    match_score := possible_match_score;
elsif abs(input_value - row_value) > exact_match_range then
    match_score := credible_match_score;
else
    match_score := exact_match_score;
end if;

return match_score;

END match_impact_freq;

FUNCTION match_urban
(v_urban_id in number,
v_urban in number,
urban_in in number)
RETURN number as

match_score          number;

input_value          number;
row_value            number;
exact_match_score    number;
credible_match_score number;
possible_match_score number;
no_match_score       number;
exact_match_range    number;
credible_match_range number;
possible_match_range number;
row_position         number;
input_position       number;

cursor get_urban_id is select * from rural_urban where 0=0;

BEGIN

input_value := urban_in;
row_value := v_urban;
row_position := v_urban_id;

input_position := 1.0;
for i in get_urban_id loop
    if urban_in = i.rural_or_urban_value then
        input_position := i.rural_urban_id;
        exit;
    end if;
end loop;

```

```

        end if;
    end loop;

    if (row_position = input_position) then
        match_score := 1.0;
    elsif abs(row_position - input_position) = 1 then
        match_score := 0.75;
    elsif abs(row_position - input_position) = 2 then
        match_score := 0.25;
    else
        match_score := 0.0;
    end if;

return match_score;

END match_urban;

FUNCTION match_zone
    (v_workzone_desc in char,
    work_in in number)
    RETURN number as

    match_score          number;

    type varray_char3 is table of char(3) index by binary_integer;
    type varray_num is table of number(3,2) index by binary_integer;
    boolean_descrip varray_char3;
    boolean_value varray_num;
    input_value          number;
    row_value             number;
    exact_match_score     number;
    credible_match_score  number;
    possible_match_score  number;
    no_match_score        number;
    exact_match_range     number;
    credible_match_range  number;
    possible_match_range  number;

BEGIN

    boolean_descrip(1) := 'YES';
    boolean_descrip(2) := 'NO';
    boolean_descrip(3) := 'N/A';
    boolean_value(1) := 1;
    boolean_value(2) := 0;
    boolean_value(3) := 0.5;
    input_value := work_in;
    row_value := 0.0;
    for r in 1..3 loop
        if (v_workzone_desc = boolean_descrip(r)) then
            row_value := boolean_value(r);
            exit;
        end if;
    end loop;

    if (row_value = input_value) then
        match_score := 1.0;
    else
        match_score := 0.0;
    end if;

```

```

return match_score;

END match_zone;

FUNCTION match_climate
  (v_climate in number,
   climate_in in number)
  RETURN number as

  match_score          number;
  input_value          number;
  row_value            number;
  exact_match_score    number;
  credible_match_score number;
  possible_match_score number;
  no_match_score       number;
  exact_match_range    number;
  credible_match_range number;
  possible_match_range number;

BEGIN

  input_value := climate_in;
  row_value := v_climate;

  if (row_value = input_value) then
    match_score := 1.0;
  else
    match_score := 0.0;
  end if;

return match_score;

END match_climate;

FUNCTION match_rigidity
  (v_rigidity in number,
   rigid_in in number)
  RETURN number as

  match_score          number;
  input_value          number;
  row_value            number;
  exact_match_score    number;
  credible_match_score number;
  possible_match_score number;
  no_match_score       number;
  exact_match_range    number;
  credible_match_range number;
  possible_match_range number;

BEGIN

  input_value := rigid_in;
  row_value := v_rigidity;

  if (row_value = input_value) then
    match_score := 1.0;
  else
    match_score := 0.0;
  end if;

```

```

return match_score;

END match_rigidity;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix G-4: ATTENUATOR_APPS.OBJ_WEIGHTS

Package Body
IS

OBJ_WEIGHTS

```

PROCEDURE obj_weights
(dss_1    in number,
 dss_2    in number,
 dss_3    in number,
 dss_11   in number,
 dss_12   in number,
 dss_13   in number,
 dss_14   in number,
 dss_121  in number,
 dss_122  in number,
 dss_123  in number,
 dss_124  in number,
 dss_125  in number,
 dss_131  in number,
 dss_132  in number,
 dss_21   in number,
 dss_22   in number,
 dss_23   in number)
```

IS

```

cursor get_objective_weights is select * from objective_weights where 0=0;
```

```

obj_wt_1  number;
obj_wt_2  number;
obj_wt_3  number;
obj_wt_11 number;
obj_wt_12 number;
obj_wt_13 number;
obj_wt_14 number;
obj_wt_121 number;
obj_wt_122 number;
obj_wt_123 number;
obj_wt_124 number;
obj_wt_125 number;
obj_wt_131 number;
obj_wt_132 number;
obj_wt_21 number;
obj_wt_22 number;
obj_wt_23 number;
norm_wt_1 number;
norm_wt_2 number;
norm_wt_3 number;
norm_wt_11 number;
norm_wt_12 number;
norm_wt_13 number;
```

```

norm_wt_14  number;
norm_wt_121 number;
norm_wt_122 number;
norm_wt_123 number;
norm_wt_124 number;
norm_wt_125 number;
norm_wt_131 number;
norm_wt_132 number;
norm_wt_21  number;
norm_wt_22  number;
norm_wt_23  number;
BEGIN

for i in get_objective_weights loop
  if (dss_1 is null) then
    obj_wt_1 := i.obj_wt_1;
  else
    obj_wt_1 := dss_1;
  end if;
  if (dss_2 is null) then
    obj_wt_2 := i.obj_wt_2;
  else
    obj_wt_2 := dss_2;
  end if;
  if (dss_3 is null) then
    obj_wt_3 := i.obj_wt_3;
  else
    obj_wt_3 := dss_3;
  end if;
  if (dss_11 is null) then
    obj_wt_11 := i.obj_wt_11;
  else
    obj_wt_11 := dss_11;
  end if;
  if (dss_12 is null) then
    obj_wt_12 := i.obj_wt_12;
  else
    obj_wt_12 := dss_12;
  end if;
  if (dss_13 is null) then
    obj_wt_13 := i.obj_wt_13;
  else
    obj_wt_13 := dss_13;
  end if;
  if (dss_14 is null) then
    obj_wt_14 := i.obj_wt_14;
  else
    obj_wt_14 := dss_14;
  end if;
  if (dss_121 is null) then
    obj_wt_121 := i.obj_wt_121;
  else
    obj_wt_121 := dss_121;
  end if;
  if (dss_122 is null) then
    obj_wt_122 := i.obj_wt_122;
  else
    obj_wt_122 := dss_122;
  end if;
  if (dss_123 is null) then
    obj_wt_123 := i.obj_wt_123;

```

```

else
    obj_wt_123 := dss_123;
end if;
if (dss_124 is null) then
    obj_wt_124 := i.obj_wt_124;
else
    obj_wt_124 := dss_124;
end if;
if (dss_125 is null) then
    obj_wt_125 := i.obj_wt_125;
else
    obj_wt_125 := dss_125;
end if;
if (dss_131 is null) then
    obj_wt_131 := i.obj_wt_131;
else
    obj_wt_131 := dss_131;
end if;
if (dss_132 is null) then
    obj_wt_132 := i.obj_wt_132;
else
    obj_wt_132 := dss_132;
end if;
if (dss_21 is null) then
    obj_wt_21 := i.obj_wt_21;
else
    obj_wt_21 := dss_21;
end if;
if (dss_22 is null) then
    obj_wt_22 := i.obj_wt_22;
else
    obj_wt_22 := dss_22;
end if;
if (dss_23 is null) then
    obj_wt_23 := i.obj_wt_23;
else
    obj_wt_23 := dss_23;
end if;
end loop;

--Normalize weights within each branch so that they add to one.
norm_wt_1 := obj_wt_1/(obj_wt_1 + obj_wt_2 + obj_wt_3);
norm_wt_2 := obj_wt_2/(obj_wt_1 + obj_wt_2 + obj_wt_3);
norm_wt_3 := obj_wt_3/(obj_wt_1 + obj_wt_2 + obj_wt_3);

norm_wt_11 := obj_wt_11/(obj_wt_11 + obj_wt_12 + obj_wt_13 + obj_wt_14);
norm_wt_12 := obj_wt_12/(obj_wt_11 + obj_wt_12 + obj_wt_13 + obj_wt_14);
norm_wt_13 := obj_wt_13/(obj_wt_11 + obj_wt_12 + obj_wt_13 + obj_wt_14);
norm_wt_14 := obj_wt_14/(obj_wt_11 + obj_wt_12 + obj_wt_13 + obj_wt_14);

norm_wt_121 := obj_wt_121/(obj_wt_121 + obj_wt_122 + obj_wt_123 + obj_wt_124
+ obj_wt_125);
norm_wt_122 := obj_wt_122/(obj_wt_121 + obj_wt_122 + obj_wt_123 + obj_wt_124
+ obj_wt_125);
norm_wt_123 := obj_wt_123/(obj_wt_121 + obj_wt_122 + obj_wt_123 + obj_wt_124
+ obj_wt_125);
norm_wt_124 := obj_wt_124/(obj_wt_121 + obj_wt_122 + obj_wt_123 + obj_wt_124
+ obj_wt_125);
norm_wt_125 := obj_wt_125/(obj_wt_121 + obj_wt_122 + obj_wt_123 + obj_wt_124
+ obj_wt_125);

```

```

norm_wt_131 := obj_wt_131/(obj_wt_131 + obj_wt_132);
norm_wt_132 := obj_wt_132/(obj_wt_131 + obj_wt_132);

norm_wt_21 := obj_wt_21/(obj_wt_21 + obj_wt_22 + obj_wt_23);
norm_wt_22 := obj_wt_22/(obj_wt_21 + obj_wt_22 + obj_wt_23);
norm_wt_23 := obj_wt_23/(obj_wt_21 + obj_wt_22 + obj_wt_23);

DELETE FROM OBJECTIVE_WEIGHTS;
INSERT INTO OBJECTIVE_WEIGHTS (obj_wt_1, obj_wt_2, obj_wt_3, obj_wt_11,
    obj_wt_12, obj_wt_13, obj_wt_14, obj_wt_121, obj_wt_122, obj_wt_123,
    obj_wt_124, obj_wt_125, obj_wt_131, obj_wt_132, obj_wt_21, obj_wt_22,
    obj_wt_23) VALUES (norm_wt_1, norm_wt_2, norm_wt_3, norm_wt_11,
    norm_wt_12, norm_wt_13, norm_wt_14, norm_wt_121, norm_wt_122, norm_wt_123,
    norm_wt_124, norm_wt_125, norm_wt_131, norm_wt_132, norm_wt_21, norm_wt_22,
    norm_wt_23);

attenuator_www.http.p('<br>');
attenuator_www.http.p('New objective weights written to database. <br>');
attenuator_www.main.main_window;

    END obj_weights;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix G-5: ATTENUATOR_APPS.OUTCOMES

```

Package Body                                OUTCOMES
IS
--
-- To modify this template, edit file PKGBODY.TXT in TEMPLATE
-- directory of SQL Navigator
--
-- Purpose: Briefly explain the functionality of the package body
--
-- MODIFICATION HISTORY
-- Person      Date      Comments
-- -----
-- Enter procedure, function bodies as shown below

PROCEDURE outcomes
    (accident_in in number)

IS

type varray_num is table of number (6,4) index by binary_integer;
neg_outcome varray_num;
rel_record  varray_num;
no          varray_num;
rel         varray_num;
v_config_last char(5);
v_config      char(5);
v_atten      char(5);
v_atten_type  number;
v_vehicle_id  number;
v_accident_id number;
v_last_accident number;
v_accident_date date;
v_atten_perf_id number;
```

```

v_impact_point_atten_id number;
v_repair_reason_id      number;
v_matchscore            number;
v_driver_id             number;
found                   number;
v_reg_hrs               number;
v_safe_hrs              number;
v_activity              number;
no_111                  number;
rel_111                 number;
no_112                  number;
rel_112                 number;
no_1211                 number;
rel_1211                number;
no_1212                 number;
rel_1212                number;
no_1221                 number;
rel_1221                number;
no_1222                 number;
rel_1222                number;
no_1231                 number;
rel_1231                number;
no_1232                 number;
rel_1232                number;
no_1233                 number;
rel_1233                number;
no_124                  number;
rel_124                 number;
no_1251                 number;
rel_1251                number;
no_1252                 number;
rel_1252                number;
no_1311                 number;
rel_1311                number;
no_1312                 number;
rel_1312                number;
no_1313                 number;
rel_1313                number;
no_1314                 number;
rel_1314                number;
no_1321                 number;
rel_1321                number;
no_1322                 number;
rel_1322                number;
no_141                  number;
rel_141                 number;
no_142                  number;
rel_142                 number;
no_211                  number;
rel_211                 number;
no_212                  number;
rel_212                 number;
no_221                  number;
rel_221                 number;
no_222                  number;
rel_222                 number;
no_223                  number;
rel_223                 number;
no_23                   number;
rel_23                  number;
no_31                   number;

```



```

rel_31      number;
no_32       number;
rel_32      number;
no_33       number;
rel_33      number;

v_no_1      number;
v_rel_1     number;
v_no_2      number;
v_rel_2     number;
v_no_3      number;
v_rel_3     number;
v_no_4      number;
v_rel_4     number;
v_no_5      number;
v_rel_5     number;
v_no_6      number;
v_rel_6     number;
v_no_7      number;
v_rel_7     number;
v_no_8      number;
v_rel_8     number;
v_no_9      number;
v_rel_9     number;
v_no_10     number;
v_rel_10    number;
v_no_11     number;
v_rel_11    number;
v_no_12     number;
v_rel_12    number;
v_no_13     number;
v_rel_13    number;
v_no_14     number;
v_rel_14    number;
v_no_15     number;
v_rel_15    number;
v_no_16     number;
v_rel_16    number;
v_no_17     number;
v_rel_17    number;
v_no_18     number;
v_rel_18    number;
v_no_19     number;
v_rel_19    number;
v_no_20     number;
v_rel_20    number;
v_no_21     number;
v_rel_21    number;
v_no_22     number;
v_rel_22    number;
v_no_23a    number;
v_rel_23a   number;
v_no_24     number;
v_rel_24    number;
v_no_25     number;
v_rel_25    number;
v_no_26     number;
v_rel_26    number;
v_no_27     number;
v_rel_27    number;
v_no_28     number;

```

```

v_rel_28          number;
v_no_29           number;
v_rel_29          number;
v_both           number;
v_skip           number;
v_skip_last      number;

cursor get_accident is select * from accident_view where 0=0 order by
config_number;
cursor get_matchscore is select * from matching_scores where 0=0 order by
attenuator_id;
cursor get_outcome is select * from negative_outcomes where 0=0 order by
config_number;
cursor get_atten_type is select * from model where 0=0 order by
config_number;
cursor get_repair is select * from repair_view where 0=0 order by
config_number;
cursor get_inspection is select * from inspection_view where 0=0 order by
config_number;
cursor get_activity is select * from activity_view where 0=0 order by
config_number, activity_id;

BEGIN

--#####
--Criteria 1 through 17 are based on the attenuators' performance during
accidents.  If "accident_in" = 1
--(Accident Data Only, No Inspection or Repair Data), then only run this loop.
--#####

v_no_1 := 0.0;
v_rel_1 := 0.0;
v_no_2 := 0.0;
v_rel_2 := 0.0;
v_no_3 := 0.0;
v_rel_3 := 0.0;
v_no_4 := 0.0;
v_rel_4 := 0.0;
v_no_5 := 0.0;
v_rel_5 := 0.0;
v_no_6 := 0.0;
v_rel_6 := 0.0;
v_no_7 := 0.0;
v_rel_7 := 0.0;
v_no_8 := 0.0;
v_rel_8 := 0.0;
v_no_9 := 0.0;
v_rel_9 := 0.0;
v_no_10 := 0.0;
v_rel_10 := 0.0;
v_no_11 := 0.0;
v_rel_11 := 0.0;
v_no_12 := 0.0;
v_rel_12 := 0.0;
v_no_13 := 0.0;
v_rel_13 := 0.0;
v_no_14 := 0.0;
v_rel_14 := 0.0;
v_no_15 := 0.0;
v_rel_15 := 0.0;
v_no_16 := 0.0;

```

```

v_rel_16 := 0.0;
v_no_17 := 0.0;
v_rel_17 := 0.0;
v_config_last := 'first';
v_last_accident := 0;

for i in get_accident loop
    v_config := i.config_number;
    v_atten := i.attenuator_id;

    if (v_config <> v_config_last) then
        if (v_config_last <> 'first') then
            insert into negative_outcomes (config_number, no_1, rel_1, no_2,
rel_2,
                                no_3, rel_3, no_4, rel_4, no_5, rel_5, no_6, rel_6, no_7,
rel_7,
                                no_8, rel_8, no_9, rel_9, no_10, rel_10, no_11, rel_11,
no_12, rel_12,
                                no_13, rel_13, no_14, rel_14, no_15, rel_15, no_16, rel_16,
no_17,
                                rel_17)
values (v_config_last, v_no_1, v_rel_1, v_no_2, v_rel_2,
v_no_3, v_rel_3,
v_no_4, v_rel_4, v_no_5, v_rel_5, v_no_6, v_rel_6, v_no_7,
v_rel_7, v_no_8,
v_rel_8, v_no_9, v_rel_9, v_no_10, v_rel_10, v_no_11,
v_rel_11, v_no_12, v_rel_12,
v_no_13, v_rel_13, v_no_14, v_rel_14, v_no_15, v_rel_15,
v_no_16, v_rel_16, v_no_17,
v_rel_17);
v_no_1 := 0.0;
v_rel_1 := 0.0;
v_no_2 := 0.0;
v_rel_2 := 0.0;
v_no_3 := 0.0;
v_rel_3 := 0.0;
v_no_4 := 0.0;
v_rel_4 := 0.0;
v_no_5 := 0.0;
v_rel_5 := 0.0;
v_no_6 := 0.0;
v_rel_6 := 0.0;
v_no_7 := 0.0;
v_rel_7 := 0.0;
v_no_8 := 0.0;
v_rel_8 := 0.0;
v_no_9 := 0.0;
v_rel_9 := 0.0;
v_no_10 := 0.0;
v_rel_10 := 0.0;
v_no_11 := 0.0;
v_rel_11 := 0.0;
v_no_12 := 0.0;
v_rel_12 := 0.0;
v_no_13 := 0.0;
v_rel_13 := 0.0;
v_no_14 := 0.0;
v_rel_14 := 0.0;
v_no_15 := 0.0;
v_rel_15 := 0.0;
v_no_16 := 0.0;

```

```

        v_rel_16 := 0.0;
        v_no_17 := 0.0;
        v_rel_17 := 0.0;
    end if;
end if;

v_atten_perf_id := i.atten_performance_id;
v_accident_id := i.accident_number_id;
v_accident_date := i.accident_date;
v_vehicle_id := i.vehicle_id;
v_driver_id := i.driver_id;
v_impact_point_atten_id := i.impact_point_atten_id;
outcome_111
    (v_vehicle_id in number,
     v_impact_point_atten_id in number,
     no_111,
     rel_111);
outcome_112
    (v_vehicle_id in number,
     v_impact_point_atten_id in number,
     no_112,
     rel_112);
outcome_1211
    (v_vehicle_id in number,
     no_1211,
     rel_1211);
outcome_1212
    (v_vehicle_id in number,
     v_impact_point_atten_id in number,
     no_1212,
     rel_1212);
outcome_1221
    (v_vehicle_id in number,
     no_1221,
     rel_1221);
if (v_last_accident <> v_accident_id) then
    outcome_1222
        (v_atten_perf_id in number,
         no_1222,
         rel_1222);
end if;
outcome_1231
    (v_vehicle_id in number,
     no_1231,
     rel_1231);
outcome_1232
    (v_vehicle_id in number,
     no_1232,
     rel_1232);
outcome_1233
    (v_vehicle_id in number,
     no_1233,
     rel_1233);
outcome_124
    (v_vehicle_id in number,
     no_124,
     rel_124);
outcome_1251
    (v_vehicle_id in number,
     v_driver_id,
     no_1251,

```

```

        rel_1251);
outcome_1252
    (v_vehicle_id in number,
     v_driver_id,
     no_1252,
     rel_1252);
outcome_1311
    (v_vehicle_id in number,
     no_1311,
     rel_1311);
outcome_1312
    (v_vehicle_id in number,
     v_impact_point_attn_id,
     no_1312,
     rel_1312);
outcome_1313
    (v_vehicle_id in number,
     no_1313,
     rel_1313);
/* Criteria 1.3.1.4 has the same value as Criteria 1.2.2.2, since both are
asking whether debris was scattered. Copy results from that procedure into
these variables. */
    if (v_last_accident <> v_accident_id) then
        no_1314 := no_1222;
        rel_1314 := rel_1222;
/* Skipped because of lack of repair data.
*/
        outcome_1321
            (v_accident_id in number,
             v_accident_date,
             no_1321,
             rel_1321);
    end if;

v_matchscore := 0.0;
for j in get_matchscore loop
    if (v_attn = j.attenuator_id) then
        v_matchscore := j.match_score;
        exit;
    end if;
end loop;

v_no_1 := v_no_1 + v_matchscore * no_111;
v_rel_1 := v_rel_1 + v_matchscore * rel_111;
v_no_2 := v_no_2 + v_matchscore * no_112;
v_rel_2 := v_rel_2 + v_matchscore * rel_112;
v_no_3 := v_no_3 + v_matchscore * no_1211;
v_rel_3 := v_rel_3 + v_matchscore * rel_1211;
v_no_4 := v_no_4 + v_matchscore * no_1212;
v_rel_4 := v_rel_4 + v_matchscore * rel_1212;
v_no_5 := v_no_5 + v_matchscore * no_1221;
v_rel_5 := v_rel_5 + v_matchscore * rel_1221;
v_no_6 := v_no_6 + v_matchscore * no_1222;
v_rel_6 := v_rel_6 + v_matchscore * rel_1222;
v_no_7 := v_no_7 + v_matchscore * no_1231;
v_rel_7 := v_rel_7 + v_matchscore * rel_1231;
v_no_8 := v_no_8 + v_matchscore * no_1232;
v_rel_8 := v_rel_8 + v_matchscore * rel_1232;
v_no_9 := v_no_9 + v_matchscore * no_1233;
v_rel_9 := v_rel_9 + v_matchscore * rel_1233;
v_no_10 := v_no_10 + v_matchscore * no_124;
v_rel_10 := v_rel_10 + v_matchscore * rel_124;

```

```

v_no_11 := v_no_11 + v_matchscore * no_1251;
v_rel_11 := v_rel_11 + v_matchscore * rel_1251;
v_no_12 := v_no_12 + v_matchscore * no_1252;
v_rel_12 := v_rel_12 + v_matchscore * rel_1252;
v_no_13 := v_no_13 + v_matchscore * no_1311;
v_rel_13 := v_rel_13 + v_matchscore * rel_1311;
v_no_14 := v_no_14 + v_matchscore * no_1312;
v_rel_14 := v_rel_14 + v_matchscore * rel_1312;
v_no_15 := v_no_15 + v_matchscore * no_1313;
v_rel_15 := v_rel_15 + v_matchscore * rel_1313;
v_no_16 := v_no_16 + v_matchscore * no_1314;
v_rel_16 := v_rel_16 + v_matchscore * rel_1314;
v_no_17 := v_no_17 + v_matchscore * no_1321;
v_rel_17 := v_rel_17 + v_matchscore * rel_1321;
v_config_last := v_config;
v_last_accident := v_accident_id;

end loop;

-- Insert last row into negative_outcomes table.
insert into negative_outcomes (config_number, no_1, rel_1, no_2, rel_2,
no_3, rel_3, no_4, rel_4, no_5, rel_5, no_6, rel_6, no_7, rel_7,
no_8, rel_8, no_9, rel_9, no_10, rel_10, no_11, rel_11, no_12, rel_12,
no_13, rel_13, no_14, rel_14, no_15, rel_15, no_16, rel_16, no_17,
rel_17)
values (v_config_last, v_no_1, v_rel_1, v_no_2, v_rel_2, v_no_3, v_rel_3,
v_no_4, v_rel_4, v_no_5, v_rel_5, v_no_6, v_rel_6, v_no_7, v_rel_7,
v_no_8,
v_rel_8, v_no_9, v_rel_9, v_no_10, v_rel_10, v_no_11, v_rel_11, v_no_12,
v_rel_12,
v_no_13, v_rel_13, v_no_14, v_rel_14, v_no_15, v_rel_15, v_no_16,
v_rel_16, v_no_17,
v_rel_17);

--#####
--If "accident_in" = 1, skip to end of procedure. If "accident_in" = 2, then
process only attenuators
--involved in accidents (v_both = 0). If "accident_in" = 3, then process both
attenuators in
--accidents and attenuators not in accidents (v_both = 1).
--#####

if (accident_in = 2) then
v_both := 0;
elsif (accident_in = 3) then
v_both := 1;
end if;

if (accident_in <> 1) then

--#####
--Criteria 18 and 23 are based on the number of repairs, thus a new loop is
required.
--#####

v_no_18 := 0.0;
v_rel_18 := 0.0;
v_no_23a := 0.0;
v_rel_23a := 0.0;

v_config_last := 'first';

```

```

v_skip_last := 2;
v_skip := 0;

for i in get_repair loop
    v_config := i.config_number;
    v_atten := i.attenuator_id;

--If instructed to restrict data to those attenuators involved in accidents,
determine whether each configuration
--appears in the NEGATIVE_OUTCOMES table. If it does, then set "skip" parameter
to 0 (no). Otherwise "skip" = 1.
    if (v_both = 0) then
        v_skip := 1;
        for j in get_outcome loop
            if (j.config_number = v_config) then
                v_skip := 0;
                exit;
            end if;
        end loop;
    end if;

--If "skip" = 0 (do not skip this row) and it's not the first pass, then
add/update data for the previous configuration in the database.
    if (v_skip_last <> 1) then
        if (v_config <> v_config_last) then
            if (v_config_last <> 'first') then
                found := 0;
                for j in get_outcome loop
                    if (j.config_number = v_config_last) then
                        found := 1;
                        exit;
                    end if;
                end loop;
                if (found = 0) then
                    insert into negative_outcomes (config_number, no_18,
rel_18,
                                no_23, rel_23)
                                values (v_config_last, v_no_18, v_rel_18, v_no_23a,
v_rel_23a);
                else
                    update negative_outcomes set
                        no_18 = v_no_18,
                        rel_18 = v_rel_18,
                        no_23 = v_no_23a,
                        rel_23 = v_rel_23a
                        where config_number = v_config_last;
                end if;
                v_no_18 := 0.0;
                v_rel_18 := 0.0;
                v_no_23a := 0.0;
                v_rel_23a := 0.0;
            end if;
        end if;
    end if;

--If "skip" = 0 (do not skip this row), then evaluate outcomes data for this
configuration in the database.
    if (v_skip <> 1) then
        v_reg_hrs := i.regular_hours;
        v_safe_hrs := i.safety_hours;
        v_repair_reason_id := i.repair_reason;
        outcome_1322

```

```

        (v_config in char,
         v_reg_hrs,
         v_safe_hrs,
         v_repair_reason_id,
         no_1322,
         rel_1322);
outcome_221
    (v_config in char,
     v_reg_hrs,
     v_safe_hrs,
     no_221,
     rel_221);

v_matchscore := 0.0;
for j in get_matchscore loop
    if (v_atten = j.attenuator_id) then
        v_matchscore := j.match_score;
        exit;
    end if;
end loop;

v_no_18 := v_no_18 + v_matchscore * no_1322;
v_rel_18 := v_rel_18 + v_matchscore * rel_1322;
v_no_23a := v_no_23a + v_matchscore * no_221;
v_rel_23a := v_rel_23a + v_matchscore * rel_221;

v_config_last := v_config;
end if;
v_skip_last := v_skip;
end loop;

-- Insert last row into negative_outcomes table, if it's not still the "first"
configuration, and if "skip" does
--not equal one for this row (i.e. you are not instructed to skip this row).
found := 0;
if (v_skip_last <> 1) then
    if (v_config_last <> 'first') then
        for j in get_outcome loop
            if (j.config_number = v_config_last) then
                found := 1;
                exit;
            end if;
        end loop;
        if (found = 0) then
            insert into negative_outcomes (config_number, no_18, rel_18,
no_23, rel_23)
                values (v_config_last, v_no_18, v_rel_18, v_no_23a,
v_rel_23a);
        else
            update negative_outcomes set
                no_18 = v_no_18,
                rel_18 = v_rel_18,
                no_23 = v_no_23a,
                rel_23 = v_rel_23a
            where config_number = v_config_last;
        end if;
    end if;
end if;
v_no_18 := 0.0;
v_rel_18 := 0.0;
v_no_23a := 0.0;

```



```

v_rel_23a := 0.0;

--#####
--Criteria 19 and 20 are based on both the number of inspections and repairs,
thus a
--new loop is required.  Criteria 28 and 29 are based on the repair cost, but
costs due
--to inspections could be added later, so the code is included in this loop.
--#####

v_no_19 := 0.0;
v_rel_19 := 0.0;
v_no_20 := 0.0;
v_rel_20 := 0.0;
v_no_28 := 0.0;
v_rel_28 := 0.0;
v_no_29 := 0.0;
v_rel_29 := 0.0;

v_config_last := 'first';
v_skip_last := 2;
v_skip := 0;

for i in get_activity loop
    v_activity := i.activity_id;
    v_config := i.config_number;
    v_atten := i.attenuator_id;
--If instructed to restrict data to those attenuators involved in accidents,
determine whether each configuration
--appears in the NEGATIVE_OUTCOMES table.  If it does, then set "skip" parameter
to 0 (no).  Otherwise "skip" = 1.
    if (v_both = 0) then
        v_skip := 1;
        for j in get_outcome loop
            if (j.config_number = v_config) then
                v_skip := 0;
                exit;
            end if;
        end loop;
    end if;
--If "skip" = 0 (do not skip this row) and it's not the first pass, then
add/update data for the previous configuration in the database.
    if (v_skip_last <> 1) then
        if (v_config <> v_config_last) then
            if (v_config_last <> 'first') then
                found := 0;
                for j in get_outcome loop
                    if (j.config_number = v_config_last) then
                        found := 1;
                        exit;
                    end if;
                end loop;
                if (found = 0) then
                    insert into negative_outcomes (config_number, no_19,
rel_19,
                                no_20, rel_20, no_28, rel_28, no_29, rel_29)
                                values (v_config_last, v_no_19, v_rel_19, v_no_20,
v_rel_20, v_no_28,
                                v_rel_28, v_no_29, v_rel_29);
                else
                    update negative_outcomes set

```

```

        no_19 = v_no_19,
        rel_19 = v_rel_19,
        no_20 = v_no_20,
        rel_20 = v_rel_20,
        no_28 = v_no_28,
        rel_28 = v_rel_28,
        no_29 = v_no_29,
        rel_29 = v_rel_29
        where config_number = v_config_last;
    end if;
    v_no_19 := 0.0;
    v_rel_19 := 0.0;
    v_no_20 := 0.0;
    v_rel_20 := 0.0;
    v_no_28 := 0.0;
    v_rel_28 := 0.0;
    v_no_29 := 0.0;
    v_rel_29 := 0.0;
end if;
end if;
--If "skip" = 0 (do not skip this row), then evaluate outcomes data for this
configuration in the database.
if (v_skip <> 1) then
    outcome_141
        (v_config in char,
         v_activity in number,
         no_141,
         rel_141);
    outcome_142
        (v_config in char,
         v_activity in number,
         no_142,
         rel_142);
    outcome_32
        (v_config in char,
         v_activity in number,
         no_32,
         rel_32);
    outcome_33
        (v_config in char,
         v_activity in number,
         no_33,
         rel_33);

    v_matchscore := 0.0;
    for j in get_matchscore loop
        if (v_atten = j.attenuator_id) then
            v_matchscore := j.match_score;
            exit;
        end if;
    end loop;

    v_no_19 := v_no_19 + v_matchscore * no_141;
    v_rel_19 := v_rel_19 + v_matchscore * rel_141;
    v_no_20 := v_no_20 + v_matchscore * no_142;
    v_rel_20 := v_rel_20 + v_matchscore * rel_142;
    v_no_28 := v_no_28 + v_matchscore * no_32;
    v_rel_28 := v_rel_28 + v_matchscore * rel_32;
    v_no_29 := v_no_29 + v_matchscore * no_33;
    v_rel_29 := v_rel_29 + v_matchscore * rel_33;

```

```

        v_config_last := v_config;
    end if;
    v_skip_last := v_skip;
end loop;
-- Insert last row into negative_outcomes table, if it's not still the "first"
configuration, and if "skip" does
--not equal one for this row (i.e. you are not instructed to skip this row).
    found := 0;

    if (v_skip_last <> 1) then
        if (v_config_last <> 'first') then
            for j in get_outcome loop
                if (j.config_number = v_config_last) then
                    found := 1;
                    exit;
                end if;
            end loop;
            if (found = 0) then
                insert into negative_outcomes (config_number, no_19, rel_19,
                    no_20, rel_20, no_28, rel_28, no_29, rel_29)
                    values (v_config_last, v_no_19, v_rel_19, v_no_20, v_rel_20,
v_no_28,
                        v_rel_28, v_no_29, v_rel_29);
            else
                update negative_outcomes set
                    no_19 = v_no_19,
                    rel_19 = v_rel_19,
                    no_20 = v_no_20,
                    rel_20 = v_rel_20,
                    no_28 = v_no_28,
                    rel_28 = v_rel_28,
                    no_29 = v_no_29,
                    rel_29 = v_rel_29
                    where config_number = v_config_last;
            end if;
        end if;
    end if;
    v_no_19 := 0.0;
    v_rel_19 := 0.0;
    v_no_20 := 0.0;
    v_rel_20 := 0.0;
    v_no_28 := 0.0;
    v_rel_28 := 0.0;
    v_no_29 := 0.0;
    v_rel_29 := 0.0;

--#####
--Criteria 21, 22, 24, 25, 26, and 27 are based on catalog data, thus a new loop
is
--required.
--#####

    v_no_21 := 0.0;
    v_rel_21 := 0.0;
    v_no_22 := 0.0;
    v_rel_22 := 0.0;
    v_no_24 := 0.0;
    v_rel_24 := 0.0;
    v_no_25 := 0.0;
    v_rel_25 := 0.0;
    v_no_26 := 0.0;

```

```

v_rel_26 := 0.0;
v_no_27 := 0.0;
v_rel_27 := 0.0;

--Only get catalog data for those configurations for which other data (accident,
repair, and maintenance) exists.
for i in get_outcome loop
    v_config := i.config_number;
    for j in get_atten_type loop
        if (j.config_number = v_config) then
            v_atten_type := j.attenuator_type_id;
            exit;
        end if;
    end loop;

outcome_211
    (v_atten_type in number,
     no_211,
     rel_211);
outcome_212
    (v_atten_type in number,
     no_212,
     rel_212);
outcome_222
    (v_atten_type in number,
     no_222,
     rel_222);
outcome_223
    (v_atten_type in number,
     no_223,
     rel_223);
outcome_23
    (v_atten_type in number,
     no_23,
     rel_23);
outcome_31
    (v_atten_type in number,
     no_31,
     rel_31);

v_no_21 := no_211;
v_rel_21 := rel_211;
v_no_22 := no_212;
v_rel_22 := rel_212;
v_no_24 := no_222;
v_rel_24 := rel_222;
v_no_25 := no_223;
v_rel_25 := rel_223;
v_no_26 := no_23;
v_rel_26 := rel_23;
v_no_27 := no_31;
v_rel_27 := rel_31;

-- Insert into negative_outcomes table.
update negative_outcomes set
    no_21 = v_no_21,
    rel_21 = v_rel_21,
    no_22 = v_no_22,
    rel_22 = v_rel_22,
    no_24 = v_no_24,
    rel_24 = v_rel_24,

```

```

        no_25 = v_no_25,
        rel_25 = v_rel_25,
        no_26 = v_no_26,
        rel_26 = v_rel_26,
        no_27 = v_no_27,
        rel_27 = v_rel_27
        where config_number = v_config;

v_no_21 := 0.0;
v_rel_21 := 0.0;
v_no_22 := 0.0;
v_rel_22 := 0.0;
v_no_24 := 0.0;
v_rel_24 := 0.0;
v_no_25 := 0.0;
v_rel_25 := 0.0;
v_no_26 := 0.0;
v_rel_26 := 0.0;
v_no_27 := 0.0;
v_rel_27 := 0.0;
    end loop;
end if;

END outcomes;

--CRITERIA #1: frontal capacity
PROCEDURE outcome_111
(v_vehicle_id in number,
 v_impact_point_atten_id in number,
 no_111 in out number,
 rel_111 in out number)

IS

v_ip_atten      char(15);
v_haz_impact_id number;
v_haz_impact     number;

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_impact_point is select * from impact_point_atten where 0=0;
cursor get_haz_impact is select * from hazard_impact where 0=0;

BEGIN
/* Get data relevant to criteria 1.1.1.  That is, determine whether the
attenuator
had sufficient frontal capacity. */
--First, get the impact point.
    for j in get_impact_point loop
        if(j.impact_point_atten_id = v_impact_point_atten_id) then
            v_ip_atten := j.impact_point_atten;
            exit;
        end if;
    end loop;
--If the attenuator didn't get hit on the front, then the impact is not relevant.
    if (v_ip_atten <> 'HEAD ON') then
        rel_111 := 0.0;
--However, if it was a frontal impact, the impact might be relevant, and we need
to find out how severe it was.
    else
--The severity equals the hazard impact value.  Assume record is not relevant.

```

```

        rel_111 := 0.0;
        for j in get_veh_results loop
            if(v_vehicle_id = j.vehicle_id) then
                v_haz_impact_id := j.hazard_impact_id;
                exit;
            end if;
        end loop;
        for j in get_haz_impact loop
--If there is data on the hazard severity, the record is relevant, and the
severity
--equals the hazard impact value.
            if (v_haz_impact_id = j.hazard_impact_id) then
                v_haz_impact := j.hazard_impact_value;
                rel_111 := 1.0;
                exit;
            end if;
        end loop;
    end if;
--If the record is not relevant, set the negative outcome to 0 so as not to mess
up
--processing. Otherwise set the negative outcome to the hazard impact value.
    if (rel_111 = 0.0) then
        no_111 := 0.0;
    else
        no_111 := v_haz_impact;
    end if;
END outcome_111;

--CRITERIA #2: redirection
PROCEDURE outcome_112
(v_vehicle_id in number,
 v_impact_point_atten_id in number,
 no_112 in out number,
 rel_112 in out number)
IS

v_ip_atten      char(15);
v_haz_impact_id number;
v_haz_impact     number;
v_stop_mode_id  number;
v_stop_mode_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_impact_point is select * from impact_point_atten where 0=0;
cursor get_haz_impact is select * from hazard_impact where 0=0;
cursor get_stopping_mode is select * from stopping_mode where 0=0;

BEGIN
/* Get data relevant to criteria 1.1.2. That is, determine whether the
attenuator
redirected a side impact. */
--First, get the impact point.
    for j in get_impact_point loop
        if(j.impact_point_atten_id = v_impact_point_atten_id) then
            v_ip_atten := j.impact_point_atten;
            exit;
        end if;
    end loop;
--If the attenuator got hit on the front, then the impact is not relevant.
    if (v_ip_atten = 'HEAD ON') then

```

```

        no_112 := 0.0;
        rel_112 := 0.0;
--However, if it was a side impact, the impact might be relevant, and we need to
find out
--whether it was redirected.
    else
--Assume record is not relevant, and the negative outcome is zero.
        no_112 := 0.0;
        rel_112 := 0.0;
--Determine whether the car gated, rebounded, or was redirected.
        for j in get_veh_results loop
            if (v_vehicle_id = j.vehicle_id) then
                v_stop_mode_id := j.stopping_mode_id;
                v_haz_impact_id := j.hazard_impact_id;
                exit;
            end if;
        end loop;
        for j in get_stopping_mode loop
--If it gated or rebounded, then the outcome was negative.
            if (v_stop_mode_id = j.stopping_mode_id) then
                v_stop_mode_value := j.stopping_mode_value;
            end if;
            if (v_stop_mode_value = 'GATING') then
                no_112 := 1.0;
                rel_112 := 1.0;
            else
                if (v_stop_mode_value = 'REBOUND') then
                    no_112 := 1.0;
                    rel_112 := 1.0;
                else
--If the stopping mode is unknown then the accident is irrelevant.
                    if (v_stop_mode_value = 'UNKNOWN') then
                        no_112 := 0.0;
                        rel_112 := 0.0;
                    else
--Further, if it hit the hazard, then the severity equals the hazard impact
value.
                        for k in get_haz_impact loop
--If there is data on the hazard severity, the record is relevant, and the
severity
--equals the hazard impact value.
                            if (v_haz_impact_id = k.hazard_impact_id) then
                                if (k.hazard_impact_descrip = 'UNKNOWN') then
                                    no_112 := 0.0;
                                    rel_112 := 0.0;
                                else
                                    no_112 := k.hazard_impact_value;
                                    rel_112 := 1.0;
                                    exit;
                                end if;
                            end if;
                        end loop;
                    end if;
                end if;
            end if;
            if (v_stop_mode_id = j.stopping_mode_id) then
                exit;
            end if;
        end loop;
    end if;
end if;

```

```

END outcome_112;

--CRITERIA #3: snagging
PROCEDURE outcome_1211
(v_vehicle_id in number,
 no_1211 in out number,
 rel_1211 in out number)

IS

v_snagging_id number;
v_snagging_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_snagging_value is select * from snagging where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.1.1. That is, determine whether the
attenuator
snagged a vehicle wheel. */
--Assume record is not relevant, and the negative outcome is zero.
no_1211 := 0.0;
rel_1211 := 0.0;
--Determine whether the car wheels snagged.
for j in get_veh_results loop
    if(v_vehicle_id = j.vehicle_id) then
        v_snagging_id := j.snagging_id;
        for k in get_snagging_value loop
            if (v_snagging_id = k.snagging_id) then
                if (k.snagging_descrip <> 'UNKNOWN') then
                    no_1211 := k.snagging_value;
                    rel_1211 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1211;

--CRITERIA #4: pocketing
PROCEDURE outcome_1212
(v_vehicle_id in number,
 v_impact_point_atten_id in number,
 no_1212 in out number,
 rel_1212 in out number)

IS

v_ip_atten char(15);
v_pocketing_id number;
v_pocketing_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_impact_point is select * from impact_point_atten where 0=0;
cursor get_pocketing_value is select * from pocketing where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.1.2. That is, determine whether the
vehicle pocketed in the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_1212 := 0.0;

```



```

rel_1212 := 0.0;
--Determine whether the car hit the attenuator head on---if so, pocketing is not
--relevant.
for j in get_impact_point loop
    if(j.impact_point_atten_id = v_impact_point_atten_id) then
        v_ip_atten := j.impact_point_atten;
        exit;
    end if;
end loop;
--If the attenuator got hit on the front, then the impact is not relevant.
if (v_ip_atten <> 'HEAD ON') then
--Otherwise, determine whether the car pocketed.
    for j in get_veh_results loop
        if(v_vehicle_id = j.vehicle_id) then
            v_pocketing_id := j.pocketing_id;
            for k in get_pocketing_value loop
                if (v_pocketing_id = k.pocketing_id) then
                    if (k.pocketing_descrip <> 'UNKNOWN') then
                        no_1212 := k.pocketing_value;
                        rel_1212 := 1.0;
                    end if;
                end if;
            end loop;
        end if;
    end loop;
end if;
END outcome_1212;

--CRITERIA #5: spearing
PROCEDURE outcome_1221
(v_vehicle_id in number,
no_1221 in out number,
rel_1221 in out number)

IS

v_spearing_id number;
v_spearing_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_spearing_value is select * from spearing where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.2.1. That is, determine whether the
attenuator speared a vehicle. */
--Assume record is not relevant, and the negative outcome is zero.
no_1221 := 0.0;
rel_1221 := 0.0;
--Determine whether the car was speared.
for j in get_veh_results loop
    if(v_vehicle_id = j.vehicle_id) then
        v_spearing_id := j.spearing_id;
        for k in get_spearing_value loop
            if (v_spearing_id = k.spearing_id) then
                if (k.spearing_descrip <> 'UNKNOWN') then
                    no_1221 := k.spearing_value;
                    rel_1221 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;

```

```

        end if;
    end loop;
END outcome_1221;

--CRITERIA #6: scattering debris
PROCEDURE outcome_1222
(v_atten_perf_id in number,
 no_1222 in out number,
 rel_1222 in out number)

IS

v_debris_scatter_id number;
v_debris_value char(20);

cursor get_atten_results is select * from atten_performance where 0=0;
cursor get_scatter_value is select * from debris_scattered where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.2.2. That is, determine whether debris
scattered. */
--Assume record is not relevant, and the negative outcome is zero.
no_1222 := 0.0;
rel_1222 := 0.0;
--Determine whether debris scattered.
for j in get_atten_results loop
    if (v_atten_perf_id = j.atten_performance_id) then
        v_debris_scatter_id := j.debris_scatter_id;
        for k in get_scatter_value loop
            if (v_debris_scatter_id = k.debris_scatter_id) then
                if (k.debris_descrip <> 'UNKNOWN') then
                    no_1222 := k.debris_value;
                    rel_1222 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1222;

--CRITERIA #7: rollover
PROCEDURE outcome_1231
(v_vehicle_id in number,
 no_1231 in out number,
 rel_1231 in out number)

IS

v_spin_behavior_id number;
v_spin_behavior_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_spin_behavior_value is select * from spin_behavior where 0=0;

BEGIN

/* Get data relevant to criteria 1.2.3.1. That is, determine whether vehicle
rolled over.*/
--Assume record is not relevant, and the negative outcome is zero.
no_1231 := 0.0;
rel_1231 := 0.0;

```

```

--Determine whether vehicle rolled over.
for j in get_veh_results loop
    if (v_vehicle_id = j.vehicle_id) then
        v_spin_behavior_id := j.spin_behavior_id;
        for k in get_spin_behavior_value loop
            if (v_spin_behavior_id = k.spin_behavior_id) then
                v_spin_behavior_value := k.spin_behavior_value;
                if (v_spin_behavior_value = 'ROLLOVER') then
                    no_1231 := 1.0;
                end if;
                rel_1231 := 1.0;
            end if;
        end loop;
    end if;
end loop;

END outcome_1231;

--CRITERIA #8: overriding
PROCEDURE outcome_1232
(v_vehicle_id in number,
no_1232 in out number,
rel_1232 in out number)
IS

v_override_id number;
v_override_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_overriding_value is select * from override where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.3.2. That is, determine whether vehicle
overrode. */
--Assume record is not relevant, and the negative outcome is zero.
no_1232 := 0.0;
rel_1232 := 0.0;
--Determine whether vehicle overrode.
for j in get_veh_results loop
    if(v_vehicle_id = j.vehicle_id) then
        v_override_id := j.override_id;
        for k in get_overriding_value loop
            if (v_override_id = k.override_id) then
                if (k.override_descrip <> 'UNKNOWN') then
                    no_1232 := k.override_value;
                    rel_1232 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1232;

--CRITERIA #9: underriding
PROCEDURE outcome_1233
(v_vehicle_id in number,
no_1233 in out number,
rel_1233 in out number)
IS

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```

v_underride_id  number;
v_underride_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_underride_value is select * from underride where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.3.3. That is, determine whether vehicle
underrode. */
--Assume record is not relevant, and the negative outcome is zero.
no_1233 := 0.0;
rel_1233 := 0.0;
--Determine whether vehicle underrode.
for j in get_veh_results loop
    if(v_vehicle_id = j.vehicle_id) then
        v_underride_id := j.underride_id;
        for k in get_underride_value loop
            if (v_underride_id = k.underride_id) then
                if (k.underride_descrip <> 'UNKNOWN') then
                    no_1233 := k.underride_value;
                    rel_1233 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1233;

--CRITERIA #10: deformation of occupant compartment
PROCEDURE outcome_124
(v_vehicle_id in number,
no_124 in out number,
rel_124 in out number)

IS

v_deform_id  number;
v_deform_value char(20);

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_deform_value is select * from deform_pass_compart where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.4. That is, determine whether the occupant
compartment
deformed. */
--Assume record is not relevant, and the negative outcome is zero.
no_124 := 0.0;
rel_124 := 0.0;
--Determine whether occupant compartment deformed.
for j in get_veh_results loop
    if(v_vehicle_id = j.vehicle_id) then
        v_deform_id := j.deformation_id;
        for k in get_deform_value loop
            if (v_deform_id = k.deformation_id) then
                if (k.deformation_descrip <> 'UNKNOWN') then
                    no_124 := k.deformation_value;
                    rel_124 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;

```

```

        end loop;
    end if;
end loop;
END outcome_124;

--CRITERIA #11: frequency of injury
PROCEDURE outcome_1251
(v_vehicle_id in number,
 v_driver_id in number,
 no_1251 in out number,
 rel_1251 in out number)

IS

v_driver_injury_id  number;
v_pass_injury_id    number;

cursor get_driver_injury is select * from driver where 0=0;
cursor get_passenger_injury is select * from passenger where 0=0;
cursor get_injury_severity is select * from injury_severity where 0=0;

BEGIN

/* Get data relevant to criteria 1.2.5.1. That is, determine whether the
driver and/or the passengers were injured (existence of injury). */
--Assume record is not relevant, and the negative outcome is zero.
no_1251 := 0.0;
rel_1251 := 0.0;
--Determine whether the driver was injured.
for j in get_driver_injury loop
    if(v_driver_id = j.driver_id) then
        v_driver_injury_id := j.injury_severity_id;
        for k in get_injury_severity loop
            if (v_driver_injury_id = k.injury_severity_id) then
                if (k.injury_severity_descrip <> 'UNKNOWN') then
                    if (k.injury_severity_descrip <> 'NONE') then
                        no_1251 := 1.0;
                    end if;
                    rel_1251 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
--Determine whether the passengers were injured.
for j in get_passenger_injury loop
    if(v_vehicle_id = j.vehicle_id) then
        v_pass_injury_id := j.injury_severity_id;
        for k in get_injury_severity loop
            if (v_pass_injury_id = k.injury_severity_id) then
                if (k.injury_severity_descrip <> 'UNKNOWN') then
                    if (k.injury_severity_descrip <> 'NONE') then
                        no_1251 := no_1251 + 1.0;
                    end if;
                    rel_1251 := rel_1251 + 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1251;

```

```

--CRITERIA #12: severity of injury
PROCEDURE outcome_1252
(v_vehicle_id in number,
 v_driver_id in number,
 no_1252 in out number,
 rel_1252 in out number)

IS

v_driver_injury_id  number;
v_pass_injury_id    number;

cursor get_driver_injury is select * from driver where 0=0;
cursor get_passenger_injury is select * from passenger where 0=0;
cursor get_injury_severity is select * from injury_severity where 0=0;

BEGIN
/* Get data relevant to criteria 1.2.5.2. That is, determine the severity of
driver and/or passenger injuries (severity of injury). */
--Assume record is not relevant, and the negative outcome is zero.
no_1252 := 0.0;
rel_1252 := 0.0;
--Determine whether the driver was injured.
for j in get_driver_injury loop
    if(v_driver_id = j.driver_id) then
        v_driver_injury_id := j.injury_severity_id;
        for k in get_injury_severity loop
            if (v_driver_injury_id = k.injury_severity_id) then
                if (k.injury_severity_descrip <> 'UNKNOWN') then
                    no_1252 := k.injury_severity_value;
                    rel_1252 := 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
--Determine whether the passengers were injured.
for j in get_passenger_injury loop
    if(v_vehicle_id = j.vehicle_id) then
        v_pass_injury_id := j.injury_severity_id;
        for k in get_injury_severity loop
            if (v_pass_injury_id = k.injury_severity_id) then
                if (k.injury_severity_descrip <> 'UNKNOWN') then
                    no_1252 := no_1252 + k.injury_severity_value;
                    rel_1252 := rel_1252 + 1.0;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1252;

--CRITERIA #13: rebounding
PROCEDURE outcome_1311
(v_vehicle_id in number,
 no_1311 in out number,
 rel_1311 in out number)

IS

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```

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_distance_lat is select * from distance_lateral where 0=0;
cursor get_distance_long is select * from distance_long where 0=0;
cursor get_stopping_mode is select * from stopping_mode where 0=0;

BEGIN
/* Get data relevant to criteria 1.3.1.1. That is, determine whether the vehicle
rebounded backwards. */
--Assume record is not relevant, and the negative outcome is zero.
no_1311 := 0.0;
rel_1311 := 0.0;
--Determine whether vehicle rebounded.
for j in get_veh_results loop
    if (v_vehicle_id = j.vehicle_id) then
        for k in get_stopping_mode loop
            if (j.stopping_mode_id = k.stopping_mode_id) then
                if (k.stopping_mode_value = 'UNKNOWN') then
                    exit;
                elsif (k.stopping_mode_value <> 'REBOUND') then
                    rel_1311 := 1.0;
                    exit;
                else
                    for l in get_distance_lat loop
                        if (l.distance_lat_id = j.distance_lat_id) then
                            if (l.distance_lat_descrip <> 'UNKNOWN') then
                                no_1311 := l.distance_lat_value;
                                rel_1311 := 1.0;
                            end if;
                        end if;
                    end loop;
                    for l in get_distance_long loop
                        if (l.distance_long_id = j.distance_long_id) then
                            if (l.distance_long_descrip <> 'UNKNOWN') then
                                no_1311 := no_1311 + l.distance_long_value;
                                rel_1311 := rel_1311 + 1.0;
                            end if;
                        end if;
                    end loop;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1311;

--CRITERIA #14: redirect angle
PROCEDURE outcome_1312
(v_vehicle_id in number,
 v_impact_point_attn_id number,
 no_1312 in out number,
 rel_1312 in out number)

IS

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_impact_angle is select * from impact_angle where 0=0;
cursor get_stopping_mode is select * from stopping_mode where 0=0;
cursor get_impact_point is select * from impact_point_attn where 0=0;

BEGIN
/* Get data relevant to criteria 1.3.1.2. That is, determine whether the vehicle

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had a high redirect angle. */
--Assume record is not relevant, and the negative outcome is zero.
no_1312 := 0.0;
rel_1312 := 0.0;
--Determine whether vehicle had high redirect angle.
for j in get_veh_results loop
    if (v_vehicle_id = j.vehicle_id) then
        for k in get_stopping_mode loop
            if (j.stopping_mode_id = k.stopping_mode_id) then
                if (k.stopping_mode_value = 'UNKNOWN') then
                    exit;
                elsif (k.stopping_mode_value = 'SLIDING/SKIDDING') then
                    rel_1312 := 1.0;
                elsif (k.stopping_mode_value <> 'REDIRECT') then
                    exit;
                else
                    for l in get_impact_angle loop
                        if (l.impact_angle_id = j.post_impact_angle_id) then
                            if (l.impact_angle_descrip <> 'UNKNOWN') then
                                no_1312 := l.impact_angle_value;
                                rel_1312 := 1.0;
                            end if;
                        end if;
                    end loop;
                end if;
            end if;
        end loop;
    end if;
end loop;
END outcome_1312;

--CRITERIA #15: gating
PROCEDURE outcome_1313
(v_vehicle_id in number,
no_1313 in out number,
rel_1313 in out number)
IS

cursor get_veh_results is select * from vehicle_results where 0=0;
cursor get_distance_lat is select * from distance_lateral where 0=0;
cursor get_distance_long is select * from distance_long where 0=0;
cursor get_stopping_mode is select * from stopping_mode where 0=0;

BEGIN
/* Get data relevant to criteria 1.3.1.3. That is, determine whether the vehicle
gated. */
--Assume record is not relevant, and the negative outcome is zero.
no_1313 := 0.0;
rel_1313 := 0.0;
--Determine whether vehicle gated.
for j in get_veh_results loop
    if (v_vehicle_id = j.vehicle_id) then
        for k in get_stopping_mode loop
            if (j.stopping_mode_id = k.stopping_mode_id) then
                if (k.stopping_mode_value = 'UNKNOWN') then
                    exit;
                elsif (k.stopping_mode_value <> 'GATING') then
                    rel_1313 := 1.0;
                    exit;
                else

```



```

        for l in get_distance_lat loop
            if (l.distance_lat_descrip <> 'UNKNOWN') then
                no_1313 := l.distance_lat_value;
                rel_1313 := 1.0;
            end if;
        end loop;
        for l in get_distance_long loop
            if (l.distance_long_descrip <> 'UNKNOWN') then
                no_1313 := no_1313 + l.distance_long_value;
                rel_1313 := rel_1313 + 1.0;
            end if;
        end loop;
    end if;
end loop;
END outcome_1313;

--CRITERIA #16 = same as #6

--CRITERIA #17: response time
PROCEDURE outcome_1321
(v_accident_id in number,
 v_accident_date in date,
 no_1321 in out number,
 rel_1321 in out number)

IS

cursor get_repair is select * from atten_repair where accident_id is not null;

response_time    number;

BEGIN
/* Get data relevant to criteria 1.3.2.1.  That is, determine whether the
response
time was large.  */
--Assume record is not relevant, and the negative outcome is zero.
no_1321 := 0.0;
rel_1321 := 0.0;
--Determine response time (difference between accident date and repair date).
for j in get_repair loop
    if (v_accident_id = j.accident_id) then
        response_time := j.repair_date - v_accident_date;
        if (response_time < 0) then
            response_time := 1;
        end if;
        no_1321 := response_time;
        rel_1321 := 1.0;
    end if;
end loop;
END outcome_1321;

--CRITERIA #18: repair time
PROCEDURE outcome_1322
(v_config in char,
 v_reg_hrs in number,
 v_safe_hrs in number,
 v_repair_reason_id in number,
 no_1322 in out number,

```

```

    rel_1322 in out number)

IS

repair_reason    char(20);
repair_time      number;
cursor get_repair_reason is select * from reason_for_repair where 0=0 order by
repair_reason_id;

BEGIN
/* Get data relevant to criteria 1.3.2.2.  That is, determine whether the repair
time was large.  */
--Assume record is not relevant, and the negative outcome is zero.
no_1322 := 0.0;
rel_1322 := 0.0;
--Because we are looking at repair time due to impacts, determine the cause of
the repair.
for i in get_repair_reason loop
    if (i.repair_reason_id = v_repair_reason_id) then
        repair_reason := i.repair_reason_value;
        exit;
    end if;
end loop;
if (repair_reason = 'VEHICLE IMPACT') then
--Determine total repair time.
    repair_time := v_reg_hrs + v_safe_hrs;
    no_1322 := repair_time;
    rel_1322 := 1.0;
end if;

END outcome_1322;

--CRITERIA #19: suscetible to vandalism
PROCEDURE outcome_141
(v_config in char,
v_activity in number,
no_141 in out number,
rel_141 in out number)

IS

repair_reason_id number;
repair_reason    char(20);
found            number;
cursor get_repair_reason is select * from reason_for_repair where 0=0 order by
repair_reason_id;
cursor get_inspection is select * from inspection where 0=0 order by
inspection_id;
cursor get_repair is select * from atten_repair where 0=0 order by
atten_repair_id;

BEGIN

/* Get data relevant to criteria 1.4.1.  That is, determine whether the
attenuator
has undergone vandalism.  To do this, count fraction of inspections and repairs
due
to vandalism.  */
--Assume record is not relevant, and the negative outcome is zero.
no_141 := 0.0;
rel_141 := 0.0;

```

```

found := 0.0;
for i in get_inspection loop
    if (v_activity = i.activity_id) then
        found := 1.0;
        rel_141 := 1.0;
        if (i.evidence_vandalism = 'YES') or (i.evidence_vandalism = 'yes') then
            no_141 := 1.0;
        else
            no_141 := 0.0;
        end if;
        exit;
    end if;
end loop;
if (found <> 1.0) then
    for i in get_repair loop
        if (v_activity = i.activity_id) then
            repair_reason_id := i.repair_reason_id;
            for j in get_repair_reason loop
                if (j.repair_reason_id = repair_reason_id) then
                    repair_reason := j.repair_reason_value;
                end if;
            end loop;
            rel_141 := 1.0;
            if (repair_reason = 'VANDALISM') then
                no_141 := 1.0;
            else
                no_141 := 0.0;
            end if;
            exit;
        end if;
    end loop;
end if;

END outcome_141;

--CRITERIA #20: susceptible to environmental damage
PROCEDURE outcome_142
(v_config in char,
 v_activity in number,
 no_142 in out number,
 rel_142 in out number)

IS

repair_reason_id number;
repair_reason char(20);
deficiency_noted char(30);
found number;
cursor get_repair_reason is select * from reason_for_repair where 0=0 order by
repair_reason_id;
cursor get_repair is select * from atten_repair where 0=0 order by
atten_repair_id;
cursor get_inspection is select * from inspection where 0=0 order by
inspection_id;
cursor get_deficiency is select * from deficiencies where 0=0 order by
inspection_id;
--cursor get_cause_defic is select * from deficiency_noted where 0=0 order by
deficiency_id;

```

```

BEGIN
/* Get data relevant to criteria 1.4.2. That is, determine whether the
attenuator
has undergone environmental damage. To do this, count fraction of deficiencies
(noticed
during inspections) and repairs due to deterioration. */
--Assume record is not relevant, and the negative outcome is zero.
no_142 := 0.0;
rel_142 := 0.0;

found := 0.0;
for i in get_inspection loop
    if (v_activity = i.activity_id) then
        found := 1.0;
        for j in get_deficiency loop
            if (i.inspection_id = j.inspection_id) then
--
                for k in get_cause_defic loop
--
                    if (j.deficiency_noted_id = k.deficiency_id) then
--
                        deficiency_noted := k.deficiency_name;
                        rel_142 := rel_142 + 1.0;
                        if (j.deficiency_noted_id = 9) then
--FOR SOME REASON, THE DEFICIENCY_NOTED TABLE IS NOT ACCESSIBLE FROM WITHIN THIS
PROGRAM.
--DEFICIENCY_NOTED_ID = 9 IS EQUIVALENT TO DEFICIENCY NOTED = 'DETERIORATED'.
--
                            if (deficiency_noted = 'DETERIORATED') then
                                no_142 := no_142 + 1.0;
                            else
                                no_142 := no_142;
                            end if;
--
                        end if;
--
                    end loop;
--
                end if;
            end loop;
        end if;
    end loop;
if (found <> 1.0) then
    for i in get_repair loop
        if (v_activity = i.activity_id) then
            repair_reason_id := i.repair_reason_id;
            for j in get_repair_reason loop
                if (j.repair_reason_id = repair_reason_id) then
                    repair_reason := j.repair_reason_value;
                end if;
            end loop;
            rel_142 := 1.0;
            if (repair_reason = 'DETERIORATION') then
                no_142 := 1.0;
            else
                no_142 := 0.0;
            end if;
            exit;
        end if;
    end loop;
end if;

END outcome_142;

--CRITERIA #21: installation time
PROCEDURE outcome_211
(v_atten_type in number,
no_211 in out number,

```

```

    rel_211 in out number)

IS

cursor get_install_time_id is select * from attenuator_type where 0=0 order by
attenuator_type_id;
cursor get_install_time is select * from typ_install_time where 0=0 order by
install_time_id;
v_install_time_id    number;
v_install_time       number;

```

```

BEGIN
/* Get data relevant to criteria 2.1.1. That is, determine the installation
time of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_211 := 0.0;
rel_211 := 0.0;

```

```

for i in get_install_time_id loop
    if (v_atten_type = i.attenuator_type_id) then
        v_install_time_id := i.typ_install_time_id;
        for j in get_install_time loop
            if (v_install_time_id = j.install_time_id) then
                no_211 := j.install_time_value;
                rel_211 := 1.0;
                exit;
            end if;
        end loop;
    end if;
end loop;
end loop;

```

```

END outcome_211;

```

```

--CRITERIA #22: installation equipment requirements
PROCEDURE outcome_212
(v_atten_type in number,
no_212 in out number,
rel_212 in out number)

```

```

IS

```

```

cursor get_install_equip_id is select * from attenuator_type where 0=0 order by
attenuator_type_id;
cursor get_install_equip is select * from typ_install_equip where 0=0 order by
install_equip_id;
v_install_equip_id    number;
v_install_equip       number;

```

```

BEGIN
/* Get data relevant to criteria 2.1.2. That is, determine the installation
equipment requirements of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_212 := 0.0;
rel_212 := 0.0;

```

```

for i in get_install_equip_id loop
    if (v_atten_type = i.attenuator_type_id) then
        v_install_equip_id := i.typ_install_equip_id;
        for j in get_install_equip loop
            if (v_install_equip_id = j.install_equip_id) then
                no_212 := j.install_equip_value;
            end if;
        end loop;
    end if;
end loop;

```

```

                rel_212 := 1.0;
                exit;
            end if;
        end loop;
    end if;
end loop;

END outcome_212;

--CRITERIA #23: repair time
PROCEDURE outcome_221
(v_config in char,
 v_reg_hrs in number,
 v_safe_hrs in number,
 no_221 in out number,
 rel_221 in out number)

IS

repair_time    number;

BEGIN
/* Get data relevant to criteria 2.2.1.  That is, determine the repair
time of the attenuator. */
--When discussing the effect of repairs on convenience, we need to consider all
repairs,
--regardless of cause.
--Determine total repair time.
repair_time := v_reg_hrs + v_safe_hrs;
no_221 := repair_time;
rel_221 := 1.0;

END outcome_221;

--CRITERIA #24: repair equipment requirements
PROCEDURE outcome_222
(v_atten_type in number,
 no_222 in out number,
 rel_222 in out number)

IS

cursor get_repair equip_id is select * from attenuator_type where 0=0 order by
attenuator_type_id;
cursor get_repair equip is select * from typ_repair_equip where 0=0 order by
repair_equip_id;
v_repair_equip_id    number;
v_repair_equip       number;

BEGIN
/* Get data relevant to criteria 2.2.2.  That is, determine the repair
equipment requirements of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_222 := 0.0;
rel_222 := 0.0;
for i in get_repair equip_id loop
    if (v_atten_type = i.attenuator_type_id) then
        v_repair_equip_id := i.typ_repair_equip_id;
        for j in get_repair equip loop
            if (v_repair_equip_id = j.repair_equip_id) then
                no_222 := j.repair_equip_value;
            end if;
        end loop;
    end if;
end loop;

```

```

                rel_222 := 1.0;
                exit;
            end if;
        end loop;
    end if;
end loop;

END outcome_222;

--CRITERIA #25: inventory requirements
PROCEDURE outcome_223
(v_atten_type in number,
no_223 in out number,
rel_223 in out number)
IS

cursor get_inventory_id is select * from attenuator_type where 0=0 order by
attenuator_type_id;
cursor get_inventory is select * from inventory_required where 0=0 order by
inventory_id;
v_inventory_id    number;
v_inventory       number;

BEGIN
/* Get data relevant to criteria 2.2.3. That is, determine the inventory
requirements of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_223 := 0.0;
rel_223 := 0.0;
for i in get_inventory_id loop
    if (v_atten_type = i.attenuator_type_id) then
        v_inventory_id := i.inventory_id;
        for j in get_inventory loop
            if (v_inventory_id = j.inventory_id) then
                no_223 := j.inventory_req_value;
                rel_223 := 1.0;
                exit;
            end if;
        end loop;
    end if;
end loop;

END outcome_223;

--CRITERIA #26: portability
PROCEDURE outcome_23
(v_atten_type in number,
no_23 in out number,
rel_23 in out number)
IS

cursor get_portable is select * from attenuator_type where 0=0 order by
attenuator_type_id;
v_portable         char(3);

BEGIN
/* Get data relevant to criteria 2.3. That is, determine the portability
of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.

```

```

no_23 := 0.0;
rel_23 := 0.0;
for i in get_portable loop
    if (v_atten_type = i.attenuator_type_id) then
        v_portable := i.suitable_construction;
        if (v_portable = 'yes') or (v_portable = 'YES') then
            no_23 := 1.0;
            rel_23 := 1.0;
        elsif (v_portable = 'no') or (v_portable = 'NO') then
            no_23 := 0.0;
            rel_23 := 1.0;
        end if;
        exit;
    end if;
end loop;
END outcome_23;

--CRITERIA #27: installation cost
PROCEDURE outcome_31
(v_atten_type in number,
 no_31 in out number,
 rel_31 in out number)
IS

cursor get_initial_cost_id is select * from attenuator_type where 0=0 order by
attenuator_type_id;
cursor get_initial_cost is select * from initial_cost where 0=0 order by
initial_cost_id;
v_initial_cost_id    number;
v_initial_cost       number;

BEGIN
/* Get data relevant to criteria 3.1. That is, determine the initial/
installation cost of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_31 := 0.0;
rel_31 := 0.0;
for i in get_initial_cost_id loop
    if (v_atten_type = i.attenuator_type_id) then
        v_initial_cost_id := i.initial_cost_id;
        for j in get_initial_cost loop
            if (v_initial_cost_id = j.initial_cost_id) then
                no_31 := j.initial_cost_value;
                rel_31 := 1.0;
                exit;
            end if;
        end loop;
    end if;
end loop;

END outcome_31;

--CRITERIA #28: maintenance cost
PROCEDURE outcome_32
(v_config in char,
 v_activity in number,
 no_32 in out number,
 rel_32 in out number)
IS

```



```

repair_reason_id number;
repair_reason      char(20);
deficiency_noted   char(30);
v_amount           number;
v_part_id          number;
found              number;
v_price            number;
v_repair_cost      number;
cursor get_repair_reason is select * from reason_for_repair where 0=0 order by
repair_reason_id;
cursor get_repair is select * from atten_repair where 0=0 order by
atten_repair_id;
cursor get_parts_required is select * from parts_required where 0=0 order by
activity_id;
cursor get_part_cost is select * from parts_list where 0=0 order by part_id;
cursor get_inspection is select * from inspection where 0=0 order by
inspection_id;
cursor get_deficiency is select * from deficiencies where 0=0 order by
inspection_id;
--cursor get_cause_defic is select * from deficiency_noted where 0=0 order by
deficiency_id;

BEGIN
/* Get data relevant to criteria 3.2. That is, determine the
maintenance cost of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_32 := 0.0;
rel_32 := 0.0;

v_repair_cost := 0;
for i in get_repair loop
    if (v_activity = i.activity_id) then
        repair_reason_id := i.repair_reason_id;
        for j in get_repair_reason loop
            if (j.repair_reason_id = repair_reason_id) then
                repair_reason := j.repair_reason_value;
            end if;
        end loop;
        if (repair_reason = 'REGULAR MAINTENANCE') then
            for j in get_parts_required loop
                if (v_activity = j.activity_id) then
--Count as relevant record if a part was required due to regular maintenance.
                    rel_32 := 1.0;
                    v_amount := j.amount_required;
                    v_part_id := j.part_id;
                    for k in get_part_cost loop
                        if (v_part_id = k.part_id) then
                            v_price := k.unit_price;
                        end if;
                    end loop;
--For each required part, increment the total repair cost by the amount of the
new part.
                    v_repair_cost := v_repair_cost + v_amount * v_price;
                end if;
            end loop;
        end if;
    end if;
end loop;
no_32 := v_repair_cost;

```

```

END outcome_32;

--CRITERIA #29: repair/replacement time
PROCEDURE outcome_33
(v_config in char,
 v_activity in number,
 no_33 in out number,
 rel_33 in out number)

IS

repair_reason_id number;
repair_reason char(20);
deficiency_noted char(30);
v_amount number;
v_part_id number;
found number;
v_price number;
v_repair_cost number;
cursor get_repair_reason is select * from reason_for_repair where 0=0 order by
repair_reason_id;
cursor get_repair is select * from atten_repair where 0=0 order by
atten_repair_id;
cursor get_parts_required is select * from parts_required where 0=0 order by
activity_id;
cursor get_part_cost is select * from parts_list where 0=0 order by part_id;
cursor get_inspection is select * from inspection where 0=0 order by
inspection_id;
cursor get_deficiency is select * from deficiencies where 0=0 order by
inspection_id;
--cursor get_cause_defic is select * from deficiency_noted where 0=0 order by
deficiency_id;

BEGIN
/* Get data relevant to criteria 3.3. That is, determine the repair/replacement
cost of the attenuator. */
--Assume record is not relevant, and the negative outcome is zero.
no_33 := 0.0;
rel_33 := 0.0;

v_repair_cost := 0;
for i in get_repair loop
    if (v_activity = i.activity_id) then
        repair_reason_id := i.repair_reason_id;
        for j in get_repair_reason loop
            if (j.repair_reason_id = repair_reason_id) then
                repair_reason := j.repair_reason_value;
            end if;
        end loop;
        if (repair_reason <> 'REGULAR MAINTENANCE') then
            for j in get_parts_required loop
                if (v_activity = j.activity_id) then
--Count as relevant record if a part was required due to a reason other than
regular maintenance.
                    rel_33 := 1.0;
                    v_amount := j.amount_required;
                    v_part_id := j.part_id;
                    for k in get_part_cost loop
                        if (v_part_id = k.part_id) then
                            v_price := k.unit_price;
                        end if;

```

```

                end loop;
--For each required part, increment the total repair cost by the amount of the
new part.
                v_repair_cost := v_repair_cost + v_amount * v_price;
            end if;
        end loop;
    end if;
end if;
end loop;
no_33 := v_repair_cost;

END outcome_33;

END;
```

Appendix G-6: ATTENUATOR_APPS.RANKING

```

Package Body                                RANKING
IS
--
-- To modify this template, edit file PKGBODY.TXT in TEMPLATE
-- directory of SQL Navigator
--
-- Purpose: Briefly explain the functionality of the package body
--
-- MODIFICATION HISTORY
-- Person      Date      Comments
-- -----
-- Enter procedure, function bodies as shown below

PROCEDURE ranking
(v_standard in number)

IS
    -- Enter the procedure variables here. As shown below

    r    number;
    type varray_num is table of number(8,4) index by binary_integer;
    type varray_char is table of char(5) index by binary_integer;
    neg_outcome      varray_num;
    rel_record       varray_num;
    score            varray_num;
    norm_score       varray_num;
    atten_score      varray_num;
    percent_score    varray_num;
    weight           varray_num;
    total_score      number;
    v_config         char(5);
    v_config_temp    char(5);
    v_config_array   varray_char;
    larger_score     number;
    smaller_score    number;
    j               number;
    k               number;
    first           number;
    second          number;
    total_1         number;
    total_2         number;
    total_3         number;
```

```

total_4      number;
total_5      number;
total_6      number;
total_7      number;
total_8      number;
total_9      number;
total_10     number;
total_11     number;
total_12     number;
total_13     number;
total_14     number;
total_15     number;
total_16     number;
total_17     number;
total_18     number;
total_19     number;
total_20     number;
total_21     number;
total_22     number;
total_23     number;
total_24     number;
total_25     number;
total_26     number;
total_27     number;
total_28     number;
total_29     number;
norm_score_1 number;
norm_score_2 number;
norm_score_3 number;
norm_score_4 number;
norm_score_5 number;
norm_score_6 number;
norm_score_7 number;
norm_score_8 number;
norm_score_9 number;
norm_score_10 number;
norm_score_11 number;
norm_score_12 number;
norm_score_13 number;
norm_score_14 number;
norm_score_15 number;
norm_score_16 number;
norm_score_17 number;
norm_score_18 number;
norm_score_19 number;
norm_score_20 number;
norm_score_21 number;
norm_score_22 number;
norm_score_23 number;
norm_score_24 number;
norm_score_25 number;
norm_score_26 number;
norm_score_27 number;
norm_score_28 number;
norm_score_29 number;
v_config_std number;

```

```

cursor get_outcome is select * from negative_outcomes where 0=0 order by
config_number;
cursor get_scores is select * from scores where 0=0 order by config_number;

```

```

        cursor get_weights is select * from criteria_weights where 0=0 order by
criteria;
        cursor get_standard is select * from model where 0=0 order by config_number;

BEGIN

--Read in criteria weights.
    r := 1.0;
    for j in get_weights loop
        weight(r) := j.crit_weight;
        r := r + 1;
    end loop;

    for i in get_outcome loop
--Read in outcomes for each configuration.
        v_config := i.config_number;
        v_config_std := 1;
        for k in get_standard loop
            if (k.config_number = v_config) then
                v_config_std := k.nchrp_standard_id;
                exit;
            end if;
        end loop;

        if (v_config_std >= v_standard) then
            neg_outcome(1) := i.no_1;
            rel_record(1) := i.rel_1;
            neg_outcome(2) := i.no_2;
            rel_record(2) := i.rel_2;
            neg_outcome(3) := i.no_3;
            rel_record(3) := i.rel_3;
            neg_outcome(4) := i.no_4;
            rel_record(4) := i.rel_4;
            neg_outcome(5) := i.no_5;
            rel_record(5) := i.rel_5;
            neg_outcome(6) := i.no_6;
            rel_record(6) := i.rel_6;
            neg_outcome(7) := i.no_7;
            rel_record(7) := i.rel_7;
            neg_outcome(8) := i.no_8;
            rel_record(8) := i.rel_8;
            neg_outcome(9) := i.no_9;
            rel_record(9) := i.rel_9;
            neg_outcome(10) := i.no_10;
            rel_record(10) := i.rel_10;
            neg_outcome(11) := i.no_11;
            rel_record(11) := i.rel_11;
            neg_outcome(12) := i.no_12;
            rel_record(12) := i.rel_12;
            neg_outcome(13) := i.no_13;
            rel_record(13) := i.rel_13;
            neg_outcome(14) := i.no_14;
            rel_record(14) := i.rel_14;
            neg_outcome(15) := i.no_15;
            rel_record(15) := i.rel_15;
            neg_outcome(16) := i.no_16;
            rel_record(16) := i.rel_16;
            neg_outcome(17) := i.no_17;
            rel_record(17) := i.rel_17;
            neg_outcome(18) := i.no_18;
            rel_record(18) := i.rel_18;
        end if;
    end loop;
end loop;

```

```

neg_outcome(19) := i.no_19;
rel_record(19) := i.rel_19;
neg_outcome(20) := i.no_20;
rel_record(20) := i.rel_20;
neg_outcome(21) := i.no_21;
rel_record(21) := i.rel_21;
neg_outcome(22) := i.no_22;
rel_record(22) := i.rel_22;
neg_outcome(23) := i.no_23;
rel_record(23) := i.rel_23;
neg_outcome(24) := i.no_24;
rel_record(24) := i.rel_24;
neg_outcome(25) := i.no_25;
rel_record(25) := i.rel_25;
neg_outcome(26) := i.no_26;
rel_record(26) := i.rel_26;
neg_outcome(27) := i.no_27;
rel_record(27) := i.rel_27;
neg_outcome(28) := i.no_28;
rel_record(28) := i.rel_28;
neg_outcome(29) := i.no_29;
rel_record(29) := i.rel_29;
--Compute scores for each criteria (for the configuration under consideration).
  for j in 1..29 loop
--    for j in 1..27 loop
      if (rel_record(j) = 0.0) then
        score(j) := -999;
      else
        score(j) := neg_outcome(j)/rel_record(j);
      end if;
    end loop;
--Invert scores so that larger scores represent better performance.
  for j in 1..27 loop
--    for j in 1..25 loop
      if (score(j) = 0.0) then
        score(j) := 1/0.05;
      elsif (score(j) = -999) then
        score(j) := 0;
      else
        score(j) := 1/score(j);
      end if;
    end loop;

    attenuator_www.http.p('<br>');
  for j in 28..29 loop
--    for j in 26..27 loop
      if (score(j) = -999) then
        score(j) := 0;
      elsif (score(j) = 0.0) then
        score(j) := 1/0.5;
      else
        score(j) := 1/score(j);
      end if;
    end loop;
--Insert inverted scores into SCORES table according to configuration.
    attenuator_www.http.p('Score_1 for Config Number '||v_config||':
'||score(1)||'<br>');
    attenuator_www.http.p('Score_2 for Config Number '||v_config||':
'||score(2)||'<br>');
    attenuator_www.http.p('Score_3 for Config Number '||v_config||':
'||score(3)||'<br>');

```

```

        attenuator_www.http.p('Score_4 for Config Number '||v_config||':
'||score(4)||<br>');
        attenuator_www.http.p('Score_5 for Config Number '||v_config||':
'||score(5)||<br>');
        attenuator_www.http.p('Score_6 for Config Number '||v_config||':
'||score(6)||<br>');
        attenuator_www.http.p('Score_7 for Config Number '||v_config||':
'||score(7)||<br>');
        attenuator_www.http.p('Score_8 for Config Number '||v_config||':
'||score(8)||<br>');
        attenuator_www.http.p('Score_9 for Config Number '||v_config||':
'||score(9)||<br>');
        attenuator_www.http.p('Score_10 for Config Number '||v_config||':
'||score(10)||<br>');
        attenuator_www.http.p('Score_11 for Config Number '||v_config||':
'||score(11)||<br>');
        attenuator_www.http.p('Score_12 for Config Number '||v_config||':
'||score(12)||<br>');
        attenuator_www.http.p('Score_13 for Config Number '||v_config||':
'||score(13)||<br>');
        attenuator_www.http.p('Score_14 for Config Number '||v_config||':
'||score(14)||<br>');
        attenuator_www.http.p('Score_15 for Config Number '||v_config||':
'||score(15)||<br>');
        attenuator_www.http.p('Score_16 for Config Number '||v_config||':
'||score(16)||<br>');
        attenuator_www.http.p('Score_17 for Config Number '||v_config||':
'||score(17)||<br>');
        attenuator_www.http.p('Score_18 for Config Number '||v_config||':
'||score(18)||<br>');
        attenuator_www.http.p('Score_19 for Config Number '||v_config||':
'||score(19)||<br>');
        attenuator_www.http.p('Score_20 for Config Number '||v_config||':
'||score(20)||<br>');
        attenuator_www.http.p('Score_21 for Config Number '||v_config||':
'||score(21)||<br>');
        attenuator_www.http.p('Score_22 for Config Number '||v_config||':
'||score(22)||<br>');
        attenuator_www.http.p('Score_23 for Config Number '||v_config||':
'||score(23)||<br>');
        attenuator_www.http.p('Score_24 for Config Number '||v_config||':
'||score(24)||<br>');
        attenuator_www.http.p('Score_25 for Config Number '||v_config||':
'||score(25)||<br>');
        attenuator_www.http.p('Score_26 for Config Number '||v_config||':
'||score(26)||<br>');
        attenuator_www.http.p('Score_27 for Config Number '||v_config||':
'||score(27)||<br>');
        attenuator_www.http.p('Score_28 for Config Number '||v_config||':
'||score(28)||<br>');
        attenuator_www.http.p('Score_29 for Config Number '||v_config||':
'||score(29)||<br>');
        INSERT INTO SCORES (config_number, score_1, score_2, score_3, score_4,
        score_5, score_6, score_7, score_8, score_9, score_10, score_11,
        score_12, score_13, score_14, score_15, score_16, score_17, score_18,
        score_19, score_20, score_21, score_22, score_23, score_24, score_25,
        score_26, score_27, score_28, score_29)
        VALUES (v_config, score(1), score(2), score(3), score(4), score(5),
        score(6), score(7), score(8), score(9), score(10), score(11),
score(12),
        score(13), score(14), score(15), score(16), score(17), score(18),

```

```

        score(19), score(20), score(21), score(22), score(23), score(24),
        score(25), score(26), score(27), score(28), score(29));
    end if;
end loop;

total_1 := 0.0;
total_2 := 0.0;
total_3 := 0.0;
total_4 := 0.0;
total_5 := 0.0;
total_6 := 0.0;
total_7 := 0.0;
total_8 := 0.0;
total_9 := 0.0;
total_10 := 0.0;
total_11 := 0.0;
total_12 := 0.0;
total_13 := 0.0;
total_14 := 0.0;
total_15 := 0.0;
total_16 := 0.0;
total_17 := 0.0;
total_18 := 0.0;
total_19 := 0.0;
total_20 := 0.0;
total_21 := 0.0;
total_22 := 0.0;
total_23 := 0.0;
total_24 := 0.0;
total_25 := 0.0;
total_26 := 0.0;
total_27 := 0.0;
total_28 := 0.0;
total_29 := 0.0;
--For each criteria, get the total of all scores for all of the configurations.
for i in get_scores loop
    total_1 := total_1 + i.score_1;
    total_2 := total_2 + i.score_2;
    total_3 := total_3 + i.score_3;
    total_4 := total_4 + i.score_4;
    total_5 := total_5 + i.score_5;
    total_6 := total_6 + i.score_6;
    total_7 := total_7 + i.score_7;
    total_8 := total_8 + i.score_8;
    total_9 := total_9 + i.score_9;
    total_10 := total_10 + i.score_10;
    total_11 := total_11 + i.score_11;
    total_12 := total_12 + i.score_12;
    total_13 := total_13 + i.score_13;
    total_14 := total_14 + i.score_14;
    total_15 := total_15 + i.score_15;
    total_16 := total_16 + i.score_16;
    total_17 := total_17 + i.score_17;
    total_18 := total_18 + i.score_18;
    total_19 := total_19 + i.score_19;
    total_20 := total_20 + i.score_20;
    total_21 := total_21 + i.score_21;
    total_22 := total_22 + i.score_22;
    total_23 := total_23 + i.score_23;
    total_24 := total_24 + i.score_24;
    total_25 := total_25 + i.score_25;

```



```

        total_26 := total_26 + i.score_26;
        total_27 := total_27 + i.score_27;
        total_28 := total_28 + i.score_28;
        total_29 := total_29 + i.score_29;
    end loop;

--Normalize scores for each criteria by dividing by the total score.
    r := 1.0;
    for i in get_scores loop
        v_config := i.config_number;
        for j in 1..29 loop
--            for j in 1..27 loop
                norm_score(j) := 0.0;
            end loop;
            if (total_1 <> 0.0) then
                norm_score(1) := i.score_1/total_1;
            end if;
            if (total_2 <> 0.0) then
                norm_score(2) := i.score_2/total_2;
            end if;
            if (total_3 <> 0.0) then
                norm_score(3) := i.score_3/total_3;
            end if;
            if (total_4 <> 0.0) then
                norm_score(4) := i.score_4/total_4;
            end if;
            if (total_5 <> 0.0) then
                norm_score(5) := i.score_5/total_5;
            end if;
            if (total_6 <> 0.0) then
                norm_score(6) := i.score_6/total_6;
            end if;
            if (total_7 <> 0.0) then
                norm_score(7) := i.score_7/total_7;
            end if;
            if (total_8 <> 0.0) then
                norm_score(8) := i.score_8/total_8;
            end if;
            if (total_9 <> 0.0) then
                norm_score(9) := i.score_9/total_9;
            end if;
            if (total_10 <> 0.0) then
                norm_score(10) := i.score_10/total_10;
            end if;
            if (total_11 <> 0.0) then
                norm_score(11) := i.score_11/total_11;
            end if;
            if (total_12 <> 0.0) then
                norm_score(12) := i.score_12/total_12;
            end if;
            if (total_13 <> 0.0) then
                norm_score(13) := i.score_13/total_13;
            end if;
            if (total_14 <> 0.0) then
                norm_score(14) := i.score_14/total_14;
            end if;
            if (total_15 <> 0.0) then
                norm_score(15) := i.score_15/total_15;
            end if;
            if (total_16 <> 0.0) then
                norm_score(16) := i.score_16/total_16;

```

```

end if;
if (total_17 <> 0.0) then
    norm_score(17) := i.score_17/total_17;
end if;
if (total_18 <> 0.0) then
    norm_score(18) := i.score_18/total_18;
end if;
if (total_19 <> 0.0) then
    norm_score(19) := i.score_19/total_19;
end if;
if (total_20 <> 0.0) then
    norm_score(20) := i.score_20/total_20;
end if;
if (total_21 <> 0.0) then
    norm_score(21) := i.score_21/total_21;
end if;
if (total_22 <> 0.0) then
    norm_score(22) := i.score_22/total_22;
end if;
if (total_23 <> 0.0) then
    norm_score(23) := i.score_23/total_23;
end if;
if (total_24 <> 0.0) then
    norm_score(24) := i.score_24/total_24;
end if;
if (total_25 <> 0.0) then
    norm_score(25) := i.score_25/total_25;
end if;
if (total_26 <> 0.0) then
    norm_score(26) := i.score_26/total_26;
end if;
if (total_27 <> 0.0) then
    norm_score(27) := i.score_27/total_27;
end if;
if (total_28 <> 0.0) then
    norm_score(28) := i.score_28/total_28;
end if;
if (total_29 <> 0.0) then
    norm_score(29) := i.score_29/total_29;
end if;

--Compute overall score for each configuration by multiplying criteria scores by
normalized
--weights. Sum for all criteria.
    atten_score(r) := 0.0;
    for j in 1..29 loop
--        for j in 1..27 loop
            v_config_array(r) := v_config;
            atten_score(r) := atten_score(r) + weight(j)*norm_score(j);
        end loop;
        r := r + 1.0;

    end loop;

--Sort overall scores for each configuration from largest (best) to smallest
(worst).
    for i in 1..(r-2) loop
        for j in 1..(r-2) loop
            k := j + 1;
            if (atten_score(j) < atten_score(j+1)) then
                smaller_score := atten_score(j);

```

```

        atten_score(j) := atten_score(j+1);
        atten_score(j+1) := smaller_score;
        v_config_temp := v_config_array(j);
        v_config_array(j) := v_config_array(j+1);
        v_config_array(j+1) := v_config_temp;
    end if;
end loop;
end loop;

--Total scores for all configurations.
total_score := 0.0;
for i in 1..(r-1) loop
    total_score := total_score + atten_score(i);
end loop;

--Compute percent score for each configuration.
for i in 1..(r-1) loop
    percent_score(i) := atten_score(i)/total_score*100;
end loop;

--Insert data into DSS_RESULTS table.
for i in 1..(r-1) loop
    INSERT INTO DSS_RESULTS (config_number, final_score, percent_score, rank)
VALUES (v_config_array(i),
        atten_score(i), percent_score(i), i);
end loop;

delete from criteria_weights;
delete from matching_scores;
delete from negative_outcomes;
delete from scores;
commit;

END ranking;

-- Enter further code below as specified in the Package spec.
END;
```

Appendix G-7: ATTENUATOR_APPS.WEIGHTS

```
Package Body           WEIGHTS
IS
```

```

PROCEDURE weights
(speed_in in number,
length_in in number,
count_per_lane in number,
width_in in number,
long_in in number,
lateral_in in number,
rigid_in in number,
urban_in in number,
climate_in in number,
work_in in number,
road_class_in in number
)

```

```
IS
```

```

/* Declare variables and data types.*/

cursor get_objective_weights is select * from objective_weights where 0=0;

type varray_int is table of number (4,0) index by binary_integer;
type varray_num is table of number(5,3) index by binary_integer;
i number;
F_pedest_val number; --pedestrian use factor.
F_impact_val number; --impact frequency factor.
weight varray_num; --criteria weights based on site characteristics.
cons_mult varray_int; --consequences multipliers to reflect negative
consequences.
factored_weight varray_num; --criteria weights factored by consequences
multipliers.
norm_weight varray_num; --weights normalized within each branch.
sum_weights number; --total weight within each branch.
obj_wt_1 number;
obj_wt_2 number;
obj_wt_3 number;
obj_wt_11 number;
obj_wt_12 number;
obj_wt_13 number;
obj_wt_14 number;
obj_wt_121 number;
obj_wt_122 number;
obj_wt_123 number;
obj_wt_124 number;
obj_wt_125 number;
obj_wt_131 number;
obj_wt_132 number;
obj_wt_21 number;
obj_wt_22 number;
obj_wt_23 number;
mult_11x number;
mult_121x number;
mult_122x number;
mult_123x number;
mult_124x number;
mult_125x number;
mult_131x number;
mult_132x number;
mult_14x number;
mult_21x number;
mult_22x number;
mult_23x number;
mult_3x number;

BEGIN

/* Compute pedestrian use factor, impact frequency factor, and criteria
weights with function calls to appropriate functions.
*/
F_pedest_val := dss_fns.Funct_pedestrian_in(road_class_in in number,
urban_in in number);
F_impact_val := dss_fns.Funct_impact_in(count_per_lane in number, speed_in
in number, lateral_in in number, long_in in number);

weight(1) := dss_fns.Funct_111(F_impact_val in number, speed_in in
number, rigid_in in number);
weight(2) := dss_fns.Funct_112(F_impact_val in number, speed_in in
number, lateral_in in number);

```

```

    weight(3) := dss_fns.Funct_1211(F_impact_val in number, speed_in in
number);
    weight(4) := dss_fns.Funct_1212(F_impact_val in number, speed_in in
number,rigid_in in number);
    weight(5) := dss_fns.Funct_1221(speed_in in number);
    weight(6) := dss_fns.Funct_1222(F_impact_val in number, speed_in in
number);
    weight(7) := dss_fns.Funct_1231(speed_in in number,count_per_lane in
number,lateral_in in number);
    weight(8) := dss_fns.Funct_1232(speed_in,width_in);
    weight(9) := dss_fns.Funct_1233(speed_in,lateral_in);
    weight(10) := dss_fns.Funct_124(speed_in);
    weight(11) := dss_fns.Funct_1251(speed_in);
    weight(12) := dss_fns.Funct_1252(speed_in);
    weight(13) := dss_fns.Funct_1311(F_pedest_val in number, speed_in in
number,count_per_lane in number,long_in in number);
    weight(14) := dss_fns.Funct_1312(F_pedest_val in number, speed_in in
number,count_per_lane in number,lateral_in in number);
    weight(15) := dss_fns.Funct_1313(F_pedest_val in number, speed_in in
number,count_per_lane in number,width_in in number,length_in in number);
    weight(16) := dss_fns.Funct_1314(F_pedest_val in number, speed_in in
number,count_per_lane in number,lateral_in in number,width_in in number,length_in
in number,work_in in number);
    weight(17) := dss_fns.Funct_1321(F_impact_val in number, speed_in in
number,rigid_in in number);
    weight(18) := dss_fns.Funct_1322(F_impact_val in number, speed_in in
number,count_per_lane in number,long_in in number,lateral_in in number);
    weight(19) := dss_fns.Funct_141(F_pedest_val in number, long_in in
number,lateral_in in number, urban_in in number);
    weight(20) := dss_fns.Funct_142(climate_in);
    weight(21) :=
dss_fns.Funct_211(speed_in,count_per_lane,long_in,lateral_in);
    weight(22) := dss_fns.Funct_212(long_in,lateral_in,width_in,length_in);
    weight(23) := dss_fns.Funct_221(F_impact_val in number, speed_in in
number,count_per_lane in number,long_in in number,lateral_in in number);
    weight(24) := dss_fns.Funct_222(F_impact_val in number, speed_in in number,
long_in in number,lateral_in in number,width_in in number,length_in in number);
    weight(25) := dss_fns.Funct_223(F_impact_val in number);
    weight(26) := dss_fns.Funct_23(F_impact_val in number, work_in in number);
    weight(27) := dss_fns.Funct_31(long_in in number);
    weight(28) := dss_fns.Funct_32(long_in in number,lateral_in in
number,width_in in number,length_in in number,climate_in in number);
    weight(29) := dss_fns.Funct_33(F_impact_val in number, long_in in
number,lateral_in in number,width_in in number,length_in in number);

```

/*Input consequences multipliers for each criteria, then multiply
by corresponding weight. */

```

cons_mult(1) := 3;
cons_mult(2) := 3;

cons_mult(3) := 2;
cons_mult(4) := 3;

cons_mult(5) := 2;
cons_mult(6) := 1;

cons_mult(7) := 2;
cons_mult(8) := 1;
cons_mult(9) := 2;

```

```

cons_mult(10) := 2;

cons_mult(11) := 2;
cons_mult(12) := 3;

cons_mult(13) := 3;
cons_mult(14) := 2;
cons_mult(15) := 3;
cons_mult(16) := 1;

cons_mult(17) := 3;
cons_mult(18) := 2;

cons_mult(19) := 1;
cons_mult(20) := 0;

cons_mult(21) := 0;
cons_mult(22) := 0;

cons_mult(23) := 0;
cons_mult(24) := 0;
cons_mult(25) := 0;

cons_mult(26) := 0;

cons_mult(27) := 1;
cons_mult(28) := 1;
cons_mult(29) := 1;

/*Factor each weight by multiplying by consequences factor. */

for i in 1..29 loop
    factored_weight(i) := weight(i) * 2**(cons_mult(i));
end loop;

/*Normalize weights within each branch of decision tree.*/
sum_weights := 0;

for i in 1..2 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 1..2 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 3..4 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 3..4 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 5..6 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 5..6 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

```

```

sum_weights := 0;
for i in 7..9 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 7..9 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 10..10 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 10..10 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 11..12 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 11..12 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 13..16 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 13..16 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 17..18 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 17..18 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 19..20 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 19..20 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 21..22 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 21..22 loop
    norm_weight(i) := factored_weight(i) / sum_weights;
end loop;

sum_weights := 0;
for i in 23..25 loop
    sum_weights := sum_weights + factored_weight(i);
end loop;
for i in 23..25 loop

```

```

        norm_weight(i) := factored_weight(i) / sum_weights;
    end loop;

    sum_weights := 0;
    for i in 26..26 loop
        sum_weights := sum_weights + factored_weight(i);
    end loop;
    for i in 26..26 loop
        norm_weight(i) := factored_weight(i) / sum_weights;
    end loop;

    sum_weights := 0;
    for i in 27..29 loop
        sum_weights := sum_weights + factored_weight(i);
    end loop;
    for i in 27..29 loop
        norm_weight(i) := factored_weight(i) / sum_weights;
    end loop;

--Compute "cumulative" weights for final nodes.
    for i in get_objective_weights loop
        obj_wt_1 := i.obj_wt_1;
        obj_wt_2 := i.obj_wt_2;
        obj_wt_3 := i.obj_wt_3;
        obj_wt_11 := i.obj_wt_11;
        obj_wt_12 := i.obj_wt_12;
        obj_wt_13 := i.obj_wt_13;
        obj_wt_14 := i.obj_wt_14;
        obj_wt_121 := i.obj_wt_121;
        obj_wt_122 := i.obj_wt_122;
        obj_wt_123 := i.obj_wt_123;
        obj_wt_124 := i.obj_wt_124;
        obj_wt_125 := i.obj_wt_125;
        obj_wt_131 := i.obj_wt_131;
        obj_wt_132 := i.obj_wt_132;
        obj_wt_21 := i.obj_wt_21;
        obj_wt_22 := i.obj_wt_22;
        obj_wt_23 := i.obj_wt_23;
    end loop;

    mult_11x := obj_wt_1 * obj_wt_11;
    mult_121x := obj_wt_1 * obj_wt_12 * obj_wt_121;
    mult_122x := obj_wt_1 * obj_wt_12 * obj_wt_122;
    mult_123x := obj_wt_1 * obj_wt_12 * obj_wt_123;
    mult_124x := obj_wt_1 * obj_wt_12 * obj_wt_124;
    mult_125x := obj_wt_1 * obj_wt_12 * obj_wt_125;
    mult_131x := obj_wt_1 * obj_wt_13 * obj_wt_131;
    mult_132x := obj_wt_1 * obj_wt_13 * obj_wt_132;
    mult_14x := obj_wt_1 * obj_wt_14;
    mult_21x := obj_wt_2 * obj_wt_21;
    mult_22x := obj_wt_2 * obj_wt_22;
    mult_23x := obj_wt_2 * obj_wt_23;
    mult_3x := obj_wt_3;

    norm_weight(1) := norm_weight(1) * mult_11x;
    norm_weight(2) := norm_weight(2) * mult_11x;
    norm_weight(3) := norm_weight(3) * mult_121x;
    norm_weight(4) := norm_weight(4) * mult_121x;
    norm_weight(5) := norm_weight(5) * mult_122x;
    norm_weight(6) := norm_weight(6) * mult_122x;
    norm_weight(7) := norm_weight(7) * mult_123x;

```



```

norm_weight(8) := norm_weight(8) * mult_123x;
norm_weight(9) := norm_weight(9) * mult_123x;
norm_weight(10) := norm_weight(10) * mult_124x;
norm_weight(11) := norm_weight(11) * mult_125x;
norm_weight(12) := norm_weight(12) * mult_125x;
norm_weight(13) := norm_weight(13) * mult_131x;
norm_weight(14) := norm_weight(14) * mult_131x;
norm_weight(15) := norm_weight(15) * mult_131x;
norm_weight(16) := norm_weight(16) * mult_131x;
norm_weight(17) := norm_weight(17) * mult_132x;
norm_weight(18) := norm_weight(18) * mult_132x;
norm_weight(19) := norm_weight(19) * mult_14x;
norm_weight(20) := norm_weight(20) * mult_14x;
norm_weight(21) := norm_weight(21) * mult_21x;
norm_weight(22) := norm_weight(22) * mult_21x;
norm_weight(23) := norm_weight(23) * mult_22x;
norm_weight(24) := norm_weight(24) * mult_22x;
norm_weight(25) := norm_weight(25) * mult_22x;
norm_weight(26) := norm_weight(26) * mult_23x;
norm_weight(27) := norm_weight(27) * mult_3x;
norm_weight(28) := norm_weight(28) * mult_3x;
norm_weight(29) := norm_weight(29) * mult_3x;

attenuator_www.http.p('<br>');
for i in 1..29 loop
    attenuator_www.http.p('Criteria Number '||i||':
'||norm_weight(i)||'<br>');
    INSERT INTO CRITERIA_WEIGHTS (criteria, crit_weight)
        VALUES (i, norm_weight(i));
end loop;

/*    for i in 1..9 loop
        INSERT INTO CRITERIA_WEIGHTS (criteria, crit_weight)
            VALUES (i, norm_weight(i));
    end loop;
    for i in 11..25 loop
        INSERT INTO CRITERIA_WEIGHTS (criteria, crit_weight)
            VALUES (i-1, norm_weight(i));
    end loop;
    for i in 27..29 loop
        INSERT INTO CRITERIA_WEIGHTS (criteria, crit_weight)
            VALUES (i-2, norm_weight(i));
    end loop;
*/

END weights;

END;
```

Appendix H: Relevant Forms and Reports

Appendix H-1: Florida Traffic Crash Report

FLORIDA TRAFFIC CRASH REPORT														
MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES TRAFFIC CRASH RECORDS TALLAHASSEE, FLORIDA 32399-0500														
DO NOT WRITE IN THIS SPACE														
Time & Location	DATE OF CRASH		TIME OF CRASH		TIME OFFICER NOTIFIED		TIME OFFICER ARRIVED		INVEST. AGENCY REPORT NUMBER		HSMV CRASH REPORT NUMBER 32664820			
	COUNTY / CITY CODE		Feet or Miles		N S E W		CITY OR TOWN		(Check if in City or Town)		COUNTY			
	AT NODE NO. or		FEET / MILES		FROM NODE NO.		NEXT NODE NO.		NO. OF LANES		1 DIVIDED 2 UNDIVIDED		ON STREET, ROAD OR HIGHWAY	
Section 1	AT INTERSECTION OF		or		FEET / MILES		N S E W		OF INTERSECTION OF					
	DRIVER ACTION		YEAR		MAKE		TYPE		USE		VEH. LICENSE NUMBER		STATE	
	VEHICLE TRAVELING		ON		At		Est. MPH		Posted Speed		EST. VEHICLE DAMAGE		1 Disabling 2 Functional 3 No Damage	
Vehicle	TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE		VEHICLE IDENTIFICATION NUMBER		POLICY NUMBER		VEHICLE REMOVED BY		1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other		POINT OF IMPACT CIRCLE AREA OF DAMAGE	
	INSURANCE COMPANY (LIABILITY OR PIP)		OWNER'S FULL NAME (Check if Driver)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE					
	OWNER'S FULL NAME (Trailer or Towed Vehicle)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE							
Pedestrian	DRIVER (Exactly as on Driver License) / Pedestrian		CURRENT ADDRESS (Number and Street)		CITY & STATE / ZIP CODE		DATE OF BIRTH							
	DRIVER LICENSE NUMBER		STATE		DL TYPE		REG. END		BAC TEST		3 Urine 1 Blood 2 Breath 5 None		RESULTS	
	HAZARDOUS MATERIALS BEING TRANSPORTED		1 Yes 2 No		PLACARDED		1 Yes 2 No		RECOMMEND RE-EXAM		1 Yes 2 No		If YES, Explain in Narrative	
Section 2	PASSENGER'S NAME (Additional on Continuation Page)		CURRENT ADDRESS		CITY & STATE / ZIP		AGE		LOC.		INJ.		S. EQUIP. EJECT.	
	DRIVER ACTION		YEAR		MAKE		TYPE		USE		VEH. LICENSE NUMBER		STATE	
	VEHICLE TRAVELING		ON		At		Est. MPH		Posted Speed		EST. VEHICLE DAMAGE		1 Disabling 2 Functional 3 No Damage	
Vehicle	TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE		VEHICLE IDENTIFICATION NUMBER		POLICY NUMBER		VEHICLE REMOVED BY		1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other		POINT OF IMPACT CIRCLE AREA OF DAMAGE	
	INSURANCE COMPANY (LIABILITY OR PIP)		OWNER'S FULL NAME (Check if Driver)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE					
	OWNER'S FULL NAME (Trailer or Towed Vehicle)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE							
Pedestrian	DRIVER (Exactly as on Driver License) / Pedestrian		CURRENT ADDRESS (Number and Street)		CITY & STATE / ZIP CODE		DATE OF BIRTH							
	DRIVER LICENSE NUMBER		STATE		DL TYPE		REG. END		BAC TEST		3 Urine 1 Blood 2 Breath 5 None		RESULTS	
	HAZARDOUS MATERIALS BEING TRANSPORTED		1 Yes 2 No		PLACARDED		1 Yes 2 No		RECOMMEND RE-EXAM		1 Yes 2 No		If YES, Explain in Narrative	
Code Information	PASSENGER'S NAME (Additional on Continuation Page)		CURRENT ADDRESS		CITY & STATE / ZIP		AGE		LOC.		INJ.		S. EQUIP. EJECT.	
	VEHICLE TYPE		VEHICLE USE		TRAILER TYPE		RESIDENCE (Driver Only)		PHYSICAL DEFECTS		ALCOHOL / DRUG USE		LOCATION (in Vehicle)	
	VEHICLE TYPE		VEHICLE USE		TRAILER TYPE		RESIDENCE (Driver Only)		PHYSICAL DEFECTS		ALCOHOL / DRUG USE		LOCATION (in Vehicle)	

DRIVER ACTION 1 Phantom 2 Hit & Run 3 N/A		YEAR	MAKE	TYPE	USE	VEH LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER		POINT OF IMPACT CIRCLE AREA OF DAMAGE									
TRAILER OR TOWED VEHICLE INFORMATION												EST. TRAILER DAMAGE		1 Disabling 2 Functional 3 No Damage		EST. TRAILER DAMAGE \$		18 Undercarriage 19 Overturn 20 Windshield 21 Fire 22 Trailer	
VEHICLE TRAVELING		N	S	E	W	ON		Air	Est. MPH	Posted Speed	EST. VEHICLE DAMAGE \$		VEHICLE REMOVED BY:		1 Tow Rotation List 2 Tow Owner's Request		3 Driver 4 Other		
INSURANCE COMPANY (LIABILITY OR PIP)		POLICY NUMBER						CITY AND STATE						ZIP CODE					
OWNER'S FULL NAME (Check if Driver)		CURRENT ADDRESS (Number and Street)						CITY AND STATE						ZIP CODE					
OWNER'S FULL NAME (Trailer or Towed Vehicle)		CURRENT ADDRESS (Number and Street)						CITY AND STATE						ZIP CODE					
DRIVER (Exactly as on Driver License) / Pedestrian		CURRENT ADDRESS (Number and Street)						CITY AND STATE / ZIP CODE						DATE OF BIRTH					
DRIVER LICENSE NUMBER		STATE	C.L. TYPE	REG. END	BAC TEST 3 Urine 1 Blood 2 Breath 5 None	RESULTS	AL/DRUG	PHYS DEF	RES	RACE	SEX	INJ	S. EQUIP	EJECT.					
HAZARDOUS MATERIALS BEING TRANSPORTED		1 Yes	2 No	PLACARDED	1 Yes	2 No	RECOMMEND RE-EXAM	1 Yes	2 No	If YES, Explain in Narrative	DRIVER'S PHONE NO.								
PASSENGER'S NAME (Additional on Continuation Page)		CURRENT ADDRESS						CITY & STATE / ZIP						AGE	LOC.	INJ	S. EQUIP	EJECT.	
#	PROPERTY DAMAGED - OTHER THAN VEHICLES		EST. AMOUNT \$		OWNER'S NAME		ADDRESS		CITY		STATE		ZIP						
#	PROPERTY DAMAGED - OTHER THAN VEHICLES		EST. AMOUNT \$		OWNER'S NAME		ADDRESS		CITY		STATE		ZIP						
CONTRIBUTING CAUSES - DRIVER / PED		VEHICLE DEFECT		VEHICLE MOVEMENT		VEHICLE SPECIAL FUNCTIONS													
01 No Improper Driving / Action 02 Careless Driving 03 Failed to Yield Right-of-Way 04 Improper Backing 05 Improper Lane Change 06 Improper Turn 07 Alcohol/Under Influence 08 Drugs/Under Influence 09 Alcohol & Drugs/Under Influence 10 Followed Too Closely 11 Disregarded Traffic Signal 12 Exceeded Safe Speed Limit 13 Disregarded Stop Sign 14 Failed to Maintain Equip. / Vehicle 15 Improper Passing 16 Drove Left of Center 17 Exceeded Stated Speed Limit 18 Obstructing Traffic		01 No Defects 02 Def. Brakes 03 Worn / Smooth Tires 04 Defective / Improper Lights 05 Puncture / Blowout 06 Steering Mech. 07 Windshield Wipers 08 Equipment / Vehicle Defect 77 All Other (Explain in Narrative)		01 Straight Ahead 02 Slowing / Stopped / Stalled 03 Making Left Turn 04 Backing 05 Making Right Turn 06 Changing Lanes 07 Entering/Leaving Parking Space 08 Properly Parked 09 Improperly Parked 10 Making U-Turn		1 None 2 Farm 3 Police Pursuit 4 Recreational 5 Emergency Operation 6 Construction / Maintenance													
19 Improper Load 20 Disregarded Other Traffic Control 21 Driving Wrong Side / Way 22 Fleeting Police 23 Vehicle Modified 77 All Other (Explain)		LOCATION ON ROADWAY		PEDESTRIAN ACTION		LOCATION TYPE													
		1 On Road 2 Not On Road 3 Shoulder 4 Median 5 Turn Lane / Safety Zone		01 Crossing at Intersection 02 Crossing at Mid-block Crosswalk 03 Crossing at Intersection 04 Walking Along Road With Traffic 05 Walking Along Road Against Traffic 06 Working on Vehicle in Road		07 Other Working in Road 08 Standing/Playing in Road 09 Standing in Pedestrian Island 77 All Other (Explain) 88 Unknown													
FIRST / SUBSEQUENT HARMFUL EVENT		ROAD SYSTEM IDENTIFIER		LIGHTING CONDITION															
01 Collision With MV in Transport (Rear-end) 02 Collision With MV in Transport (Head-on) 03 Collision With MV in Transport (Angle) 04 Collision With MV in Transport (Left Turn) 05 Collision With MV in Transport (Right Turn) 06 Collision With MV in Transport (Sideswipe) 07 Collision With MV in Transport (Backed Into) 08 Collision With Parked Car 09 Collision With MV on Other Roadway 10 Collision With Pedestrian 11 Collision With Bicycle 12 Collision With Bicycle (Bike Lane) 13 Collision With Moped 14 Collision With Train 15 Collision With Animal 16 MV Hit Sign/Sign Post 17 MV Hit Utility Pole/Light Pole 18 MV Hit Guardrail 19 MV Hit Fence 20 MV Hit Concrete Barrier Wall 21 MV Hit Bridge/Pier/Culvert/Rail 22 MV Hit Tree/Shrubbery 23 Collision With Construction Barricade/Sign 24 Collision With Traffic Gate 25 Collision With Crash Attenuators 26 Collision With Fixed Object Above Road 27 MV Hit Other Fixed Object 28 Collision With Moveable Object On Road		29 MV Ran Into ditch/Culvert 30 Ran Off Road Into Water 31 Overturned 32 Occupant Fell From Vehicle 33 Tractor/Trailer Jackknifed 34 Fire 35 Explosion 77 All Other (Explain)		01 Interstate 02 U.S. 03 State 04 County 05 Local 06 Turnpike/Toll 07 Forest Road 77 All Other															
		ROAD SURFACE / CONDITION		WEATHER															
		01 Dry 02 Wet 03 Slippery 04 Icy 77 All Other (Explain)		01 Clear 02 Cloudy 03 Rain 04 Fog 77 All Other (Explain)															
		ROAD SURFACE TYPE		TRAFFICWAY CHARACTER															
		01 Slag / Gravel / Stone 02 Blacktop 03 Brick / Block 04 Concrete 05 Dirt 77 All Other (Explain)		1 Straight-Level 2 Straight-Upgrade / Downgrade 3 Curve-Level 4 Curve-Upgrade / Downgrade TYPE SHOULDER 1 Paved 2 Unpaved 3 Curbs															
CONTRIBUTING CAUSES - ROAD		CONTRIBUTING CAUSES - ENVIRONMENT		TRAFFIC CONTROL															
01 No Defects 02 Obstruction With / Without Warning 03 Road Under Repair / Construction 04 Loose Surface Materials 05 Shoulders - Soft / Low / High 06 Holes / Ruts / Unsafe Paved Edge 07 Standing Water 08 Worn / Polished Road Surface 77 All Other (Explain)		01 Vision Not Obscured 02 Inclement Weather 03 Parked / Stopped Vehicle 04 Trees / Crops / Bushes 05 Load on Vehicle 06 Building / Fixed Object 07 Signs / Billboards 08 Fog 09 Smoke 10 Glare 77 All Other (Explain)		01 No Control 02 Special Speed Zone 03 Traffic Signal 04 Stop Sign 05 Yield Sign 06 Flashing Light 07 Railroad Signal 08 Officer / Guard / Flagman 09 Posted No U-Turn 10 School Zone 77 All Other (Explain)															
				SITE LOCATION															
				01 Not At Intersection / RR X'ing / Bridge 02 At Intersection 03 Influenced By Intersection 04 Driveway Access 05 Railroad Crossing 06 Bridge 07 Entrance Ramp 08 Exit Ramp 09 Parking Lot - Public 10 Parking Lot - Private 11 Private Property 77 All Other (Explain)															
VIOLATOR		FL STATUTE NUMBER		NAME															
				CHARGE															
				CITATION #															

FLORIDA TRAFFIC CRASH REPORT

NARRATIVE / DIAGRAM

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS
TALLAHASSEE, FLORIDA 32399-0500

DO NOT WRITE IN THIS SPACE

[illegible]

DIAGRAM



INDICATE NORTH
WITH ARROW

Appendix H-2: Sample Data from Attenuators Inventory Report, Roadway Characteristics Inventory (RCI)

1**** GIS FP OFFLINE OUTPUT SF945HT1 **

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

(GISPGM88) 6/09/98

ATTENUATOR INVENTORY REPORT

PAGE 1

MAINT. UNIT	COSEC. SUBSEC.	S.R. NO.	U.S. NO.	M.P. STA.	VEH. DIR.	LOC.	TYPE	MODEL NO.	DATE INSPEC	TYPE INSPEC.	COND.
192	01075000	SR 93	I 75	17.800	EB	MD	G-R-E-A-T	200200SF5	042898	01	GOOD
192	01075000	SR 93	I 75	17.900	WB	MD	G-R-E-A-T	200200SF5	042898	01	GOOD
192	01075000	SR 93	I 75	21.100	EB	MD	G-R-E-A-T	200200SF5	042898	01	GOOD
192	01075000	SR 93	I 75	21.200	WB	MD	G-R-E-A-T	200200SF5	042898	01	GOOD
197	03175000	SR 93	I 75	50.334	NB	MD	G-R-E-A-T	300300SF4	041598	01	GOOD
197	03175000	SR 93	I 75	50.358	SB	MD	G-R-E-A-T	300300SF4	041598	01	GOOD
191	09010000	SR 25	US 27	17.543	NB	MD	G-R-E-A-T	200200SF8	042998	02	GOOD
191	09010000	SR 25	US 27	17.839	SB	MD	G-R-E-A-T	200200SF8	100397	01	GOOD
192	12001000	SR 739	USB 41	1.017	NB	MD	G-R-E-A-T	200200SF4	042898	01	GOOD
192	12005000	SR 884	NO REC	2.193	WB	RS	G-R-E-A-T	206206SF4	102297	01	FAIR
192	12010000	SR 45	US 41	23.375	NB	GR	HEX FOAM SANDWICH	209508H6S	042898	02	FAIR
192	12010000	SR 45	US 41	23.673	SB	GR	SAND (ENERGITE)	00201405706140021	042898	01	GOOD
192	12010000	SR 45	US 41	23.674	NB	MD	G-R-E-A-T	200200SF4	102297	01	FAIR
192	12010000	SR 45	US 41	24.614	SB	MD	G-R-E-A-T	206206SF4	042898	01	FAIR
194	13030000	SR 45	USB 41	5.188	NB	MD	G-R-E-A-T	200200SF5	050498	01	GOOD
194	13030000	SR 45	USB 41	5.238	SB	MD	G-R-E-A-T	200200SF5	050498	01	GOOD
194	13075000	SR 93	I 75	.000	EB	MD	G-R-E-A-T	206206SF4	050498	01	GOOD
194	13075000	SR 93	I 75	.000	WB	MD	G-R-E-A-T	206206SF4	050498	01	GOOD
194	13075000	SR 93	I 75	16.203	EB	MD	G-R-E-A-T	200200SF4	050498	01	GOOD
194	13075000	SR 93	I 75	16.203	WB	MD	G-R-E-A-T	200200SF4	050498	01	GOOD
194	13130000	SR 45	US 41	9.535	NB	MD	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.768	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.769	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.770	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.771	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.772	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	9.773	NB	RS	G-R-E-A-T	200200SF9	050498	01	GOOD
194	13130000	SR 45	US 41	11.785	NB	MD	G-R-E-A-T	200200SF6	050498	01	FAIR
190	16010000	SR 600	US 92	5.418	EB	MD	G-R-E-A-T	200200SF3	040298	01	GOOD
190	16010000	SR 600	US 92	5.444	WB	MD	G-R-E-A-T	200200SF3	040298	01	GOOD
190	16020000	SR 600	US 92	4.046	EB	RS	G-R-E-A-T	206206SF4	101397	01	GOOD
190	16030000	SR 35	US 17	2.704	NB	MD	G-R-E-A-T	200200SF8	040698	01	GOOD
190	16030000	SR 35	US 17	2.742	SB	MD	G-R-E-A-T	200200SF8	040698	01	GOOD
190	16060000	SR 35	US 98	6.900	SB	MD	G-R-E-A-T	200200SF5	040698	01	GOOD
190	16110000	SR 35	USB 98	4.297	WB	RS	G-R-E-A-T	206206SF4	040198	01	GOOD
190	16110000	SR 35	USB 98	11.585	EB	RS	G-R-E-A-T	206206SF4	040198	01	FAIR
190	16110000	SR 35	USB 98	11.785	WB	RS	G-R-E-A-T	206206SF4	040198	01	FAIR
190	16130000	SR 60	NO REC	11.400	EB	MD	G-R-E-A-T	200200SF9	040198	01	GOOD

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

(GISPGM88) 6/09/98

ATTENUATOR INVENTORY REPORT

PAGE 2

MAINT. UNIT	COSEC. SUBSEC.	S.R. NO.	U.S. NO.	M.P. STA.	VEH. DIR.	LOC.	TYPE	MODEL NO.	DATE INSPEC	TYPE INSPEC.	COND.
190	16130000	SR 60	NO REC	11.458	WB	MD	G-R-E-A-T	200200SF9	040198	01	GOOD
190	16210000	SR 35	USB 98	3.111	NB	MD	G-R-E-A-T	206206SF3	033198	01	GOOD
190	16210000	SR 35	USB 98	3.111	NB	RS	G-R-E-A-T	200200SF3	033198	01	GOOD
190	16210000	SR 35	USB 98	3.117	SB	MD	G-R-E-A-T	200200SF3	033198	01	GOOD
190	16210000	SR 35	USB 98	3.117	SB	RS	G-R-E-A-T	200200SF3	033198	01	GOOD
194	17020000	SR 45	USB 41	8.329	SB	MD	G-R-E-A-T	200200SF4	050498	01	GOOD
194	17040000	SR 780	NO REC	.395	EB	MD	SAND (ENERGITE)	002014057021400221	050498	01	FAIR
194	17040000	SR 780	NO REC	.396	WB	MD	SAND (ENERGITE)	002014057021400221	050498	01	GOOD
194	17040000	SR 780	NO REC	5.257	EB	MD	G-R-E-A-T	200200SF3	050498	01	GOOD
194	17040000	SR 780	NO REC	5.277	WB	MD	G-R-E-A-T	200200SF3	050498	01	GOOD

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END OF GIS SUBPROCEDURE 06

NO RECORDABLE EVENTS OCCURRED DURING THE EXECUTION OF THE SUBPROCEDURE

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Appendix H-3: Sample Data from Accident Analysis Reporting Subsystem (AAR)

1AAR0013	FLORIDA DEPARTMENT OF TRANSPORTATION										CRASH DETAIL FOR 1996										DATE 06/09/98		TIME 14:17		PAGE		1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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FATAL CRASH STATISTICS										INJURY CRASH STATS										PROPERTY DAMAGE										TOTALS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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FATAL CRASH STATISTICS										INJURY CRASH STATS										PROPERTY DAMAGE										TOTALS.									
*****										*****										*****										*****									
CRASHES			FATALITIES			INJURIES				CRASHES			INJURIES				CRASHES				CRASHES			FATALITIES			INJURIES				CRASHES			FATALITIES			INJURIES		
0						9				9			12				1				10						10												

FATAL CRASH STATISTICS			INJURY CRASH STATS		PROPERTY	TOTALS.		
*****			*****		DAMAGE	*****		
CRASHES	FATALITIES	INJURIES	CRASHES	INJURIES	CRASHES	CRASHES	FATALITIES	INJURIES
0			1	1		1		1

FATAL CRASH STATISTICS			INJURY CRASH STATS		PROPERTY	TOTALS.		
*****			*****		DAMAGE	*****		
CRASHES	FATALITIES	INJURIES	CRASHES	INJURIES	CRASHES	CRASHES	FATALITIES	INJURIES
0			6	11		6		11

Appendix H-4: Sample Data from Node List By Route Sequence, RCI

07/14/98 18.54.49

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATIONRCI0270
NODE LIST BY ROUTE SEQUENCE

COUNTY - HILLSBOROUGH

TYPE OF ROUTE - STATE ROAD SYSTEM

ROADWAY ID CO SEC SUB SEC	ROAD NUMBER	DIR	NODE	LCR	MI	POST	NODE DESCRIPTION	CITY NAME	S/S NT FT DES
10 070 000	SR 39	N	02954	C		.000	SR 39-REDMAN/SR 60-BRANDON/CR 573		M 12 11
10 070 000	SR 39	N	07972	C		.196	HOPWELL MANOR RD		M 10 11
10 070 000	SR 39	N	02149	C		.257	MCDONALD RD		M 10 11
10 070 000	SR 39	N	02150	C		.701	KARPEE RD		M 10 11
10 070 000	SR 39	N	02151	C		1.014	COLSON RD-HOLLOWAY RD		M 10 11
10 070 000	SR 39	N	02152	C		1.519	KILGORE RD		M 10 11
10 070 000	SR 39	N	02153	C		2.020	TRAPNELL RD		M 10 11
10 070 000	SR 39	N	02154	C		2.521	SPARKMAN RD		M 10 11
10 070 000	SR 39	N	02155	C		2.775	JOHNSON RD		M 10 11
10 070 000	SR 39	N	07973	C		2.988	RAYBURN RD		M 10 11
10 070 000	SR 39	N	02156	C		3.025	CHARLIE GRIFFIN RD		M 10 11
10 070 000	SR 39	N	07974	C		3.195	PLANT CITY CITY LIMITS	PLANT CITY	M 60 06
10 070 000	SR 39	N	03746	C		3.429	WALDEN WOODS VILLAGE ENT		M 09 11
10 070 000	SR 39	N	03287	C		3.539	WALDEN WOODS CENTER-ALEXANDER ST	PLANT CITY	M 10 11
10 070 000	SR 39	N	02157	C		3.830	STRAWBERRY PLAZA ENT-HAKI RD		M 10 11
10 070 000	SR 39	N	03288	C		3.891	HENRY RD		M 10 11
10 070 000	SR 39	N	00422	C		4.051	CR 39B-PARKS RD-WAL MART ENT		M 10 11
10 070 000	SR 39	N	02158	C		4.179	R LANGFORD DR E		M 10 11
10 070 000	SR 39	N	03289	C		4.202	L LANGFORD DR W		M 10 11
10 070 000	SR 39	N	02159	C		4.258	L MORRELL DR W		M 10 11
10 070 000	SR 39	N	02160	C		4.278	R MORRELL DR E		M 10 11
10 070 000	SR 39	N	03057	C		4.381	PROSSER DR W		M 10 11
10 070 000	SR 39	N	02161	C		4.399	ROSELAND AVE E		M 10 11
10 070 000	SR 39	N	02957	C		4.485	PLANT CITY PLAZA ENT		M 10 11
10 070 000	SR 39	N	02162	C		4.545	GRANT ST W		M 10 11
10 070 000	SR 39	N	02163	C		4.588	DREW ST E-DREW ST W		M 10 11
10 070 000	SR 39	N	02164	C		4.635	LEE ST E		M 10 11
10 070 000	SR 39	N	02165	C		4.682	STRICKLAND ST W		M 10 11
10 070 000	SR 39	N	02166	C		4.729	BATES ST W		M 10 11
10 070 000	SR 39	N	02167	C		4.747	R E MERRICK ST		M 10 11
10 070 000	SR 39	N	02168	C		4.756	L W MERRICK ST		M 10 11
10 070 000	SR 39	N	00214	C		4.808	ALSOBROOK ST E-ALSOBROOK ST W		M 10 11
10 070 000	SR 39	N	02169	C		4.836	CASTON ST		M 10 11
10 070 000	SR 39	N	02170	C		4.945	BALL ST W		M 10 11
10 070 000	SR 39	N	02171	C		5.068	ALABAMA ST E-ALABAMA ST W		M 10 11
10 070 000	SR 39	N	02172	C		5.100	OHIO ST		M 10 11
10 070 000	SR 39	N	02173	C		5.149	WARREN ST W		M 10 11
10 070 000	SR 39	N	02174	C		5.200	RENFROE ST W		M 10 11
10 070 000	SR 39	N	03290	C		5.243	RR #624414B		M 20 20
10 070 000	SR 39	N	02175	C		5.245	LAURA ST E		M 10 11
10 070 000	SR 39	N	02176	C		5.302	HAINES ST E-HAINES ST W		M 10 11
10 070 000	SR 39	N	02177	C		5.356	W J ARDEN-MAYS BLVD		M 10 11

07/14/98 18.54.49

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

COUNTY - HILLSBOROUGH

RC10270
NODE LIST BY ROUTE SEQUENCE

TYPE OF ROUTE - STATE ROAD SYSTEM

ROADWAY ID CO SEC SUB SEC	ROAD NUMBER	DIR	LCR	MI	POST	NODE DESCRIPTION	CITY NAME	S/S DES	NT FT
10 070 000	SR 39	N	C	5.365		RR #624319F	PLANT CITY	M	20 20
10 070 000	SR 39	N	C	5.385		DRANE ST E-DRANE ST W	PLANT CITY	M	10 11
10 070 000	SR 39	N	C	5.439		*SR 600-REYNOLDS/SR 39-COLLINS	PLANT CITY	M	11 11
10 070 000	SR 39	N	C	5.490		MAHONEY ST E-MAHONEY ST W	PLANT CITY	M	10 11
10 070 000	SR 39	N	C	5.535		*SR 600-BAKER/SR 39-COLLINS	PLANT CITY	M	13 11
10 200 000	SR 39	N	C	02134			PLANT CITY	M	12 11
10 200 000	SR 39	N	C	02200		*SR 600-REYNOLD/SR 39-WHEELER	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02133		MAHONEY ST	PLANT CITY	M	11 11
10 200 000	SR 39	N	C	02201		*SR 600-BAKER/SR 39-N WHEELER	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02202		MCLENDON ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02203		HERRING ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	04618		DAHON ST	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02204		ALLEY WAY	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02205		CALHOUN ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02206		DEVANE ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02207		L SAUNDERS ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02208		R SAUNDERS ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02209		TEVER ST-SIDE ROAD	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02210		CHERRY ST W	PLANT CITY	M	10 11
10 200 000	SR 39	N	C	02211		MORSE ST W	PLANT CITY	M	10 11
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10 200 000	SR 39	N	C	02218		L SB ENT FROM EB SR 400	PLANT CITY	M	30 03
10 200 000	SR 39	N	C	03543		R BR #192-SR 400-I 4 OVER	PLANT CITY	M	32 03
10 200 000	SR 39	N	C	02219		L BR #192-SR 400-I 4 OVER	PLANT CITY	M	30 03
10 200 000	SR 39	N	C	03544		R BR #191-SR 400-I 4 OVER	PLANT CITY	M	32 03
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Appendix H-5: Type II Inspection Report for Sand Barrel Arrays

APPENDIX VI
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
TYPE II ATTENUATOR INSPECTION REPORT
SAND BARREL
"ENERGITE" AND "FITCH"

FORM 850-055-07
MAINTENANCE - 05/94
Page 1 of 2

District _____ Maintenance _____

CO. SECT. NO.	SR NO.	US NO.	MP STA.	VEH. DIR.	LOC.	LOCATION REMARKS
ATTENUATOR TYPE		MODEL NO.		YR. INSTAL.		

A. GENERAL

YES NO

1. Is the current inventory data correct?
If not, note the corrected data in the above spaces in red. _____
2. Are the design details for this site available at the local or responsible maintenance unit? _____
3. Is the installation in accordance with the site design? _____

4. Are the approach pavement markings in accordance with the current standards? _____
5. Is the attenuator delineated in accordance with the current standards? _____
6. Is the general appearance of this unit satisfactory? _____

B. PERFORMANCE

1. Does the attenuator show evidence of:
 - a. vehicle impact or damage? _____
 - b. non-design impact(s)? _____
 - c. angle hit(s)? _____
 - d. vandalism _____
2. If the unit sustained a hit, did it adequately protect from the hazard? _____
3. Has this unit deteriorated or been impacted to the extent that a complete renovation is necessary? _____
4. Does this location need additional study as to site and design selection criteria?
If yes, explain. _____ _____

C. CONDITION

CHECK (✓)
IF NO DEFICIENCY

NOTE
DEFICIENCIES

1. Check Modules for:

a. Slumping	_____	
b. Cracking	_____	
c. Splitting	_____	
d. Discoloration	_____	
e. Displaced sand	_____	
f. Displaced parts	_____	
g. Stability or movement	_____	
h. Vandalism	_____	

C. <u>CONDITION (CONT'D)</u>	CHECK (✓) IF NO DEFICIENCY	NOTE DEFICIENCIES
2. Check Lids for:		
a. Placement	_____	_____
b. Looseness	_____	_____
c. Depression	_____	_____
d. Cracking	_____	_____
e. Splitting	_____	_____
f. Leaking	_____	_____
g. Discoloration	_____	_____
h. Vandalism	_____	_____
3. Check Sand for:		
a. Proper level	_____	_____
b. Caking	_____	_____
c. Moisture	_____	_____
4. Does the pad grade exceed 5% maximum?	_____	_____
5. Check the unit for proper alignment.	_____	_____
6. Check for debris or vegetation around, under or on the attenuator.	_____	_____

D. COMMENTS AND REQUIRED CORRECTIVE ACTION:

E. PARTS NECESSARY FOR CORRECTIVE ACTION:

F. INSPECTED CONDITION - Indicate by check (✓):

_____ GOOD _____ FAIR _____ POOR _____ CRITICAL

DATE _____ District Inspector _____ Signature _____

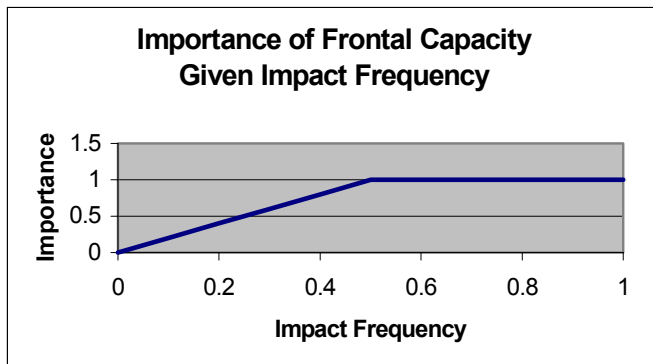
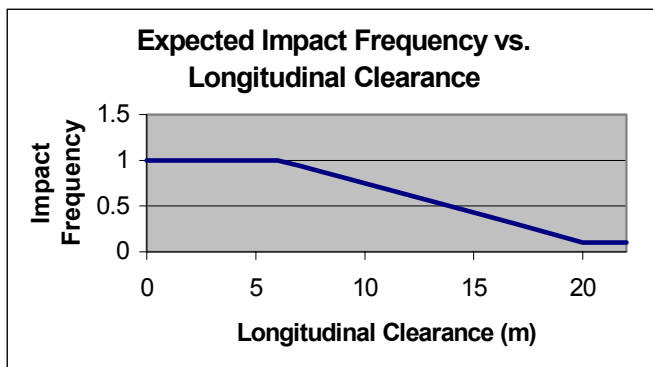
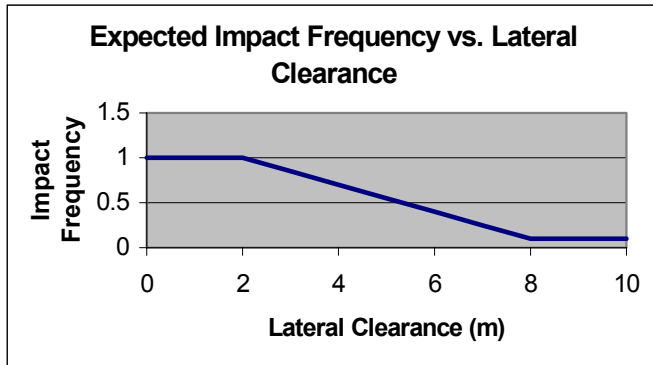
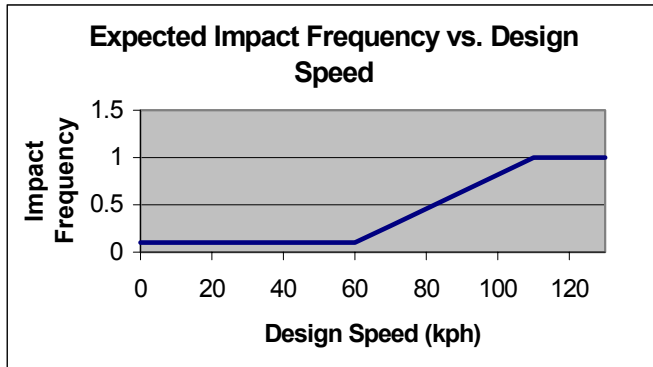
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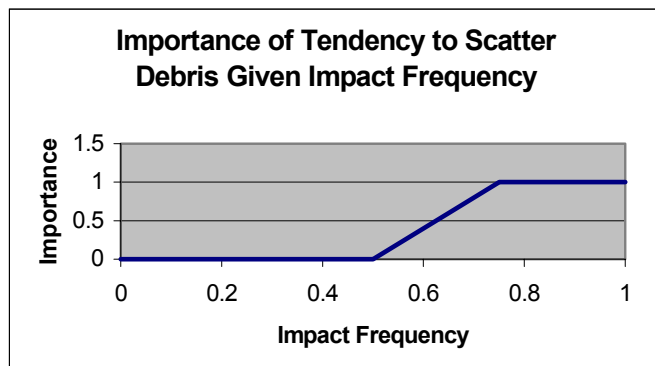
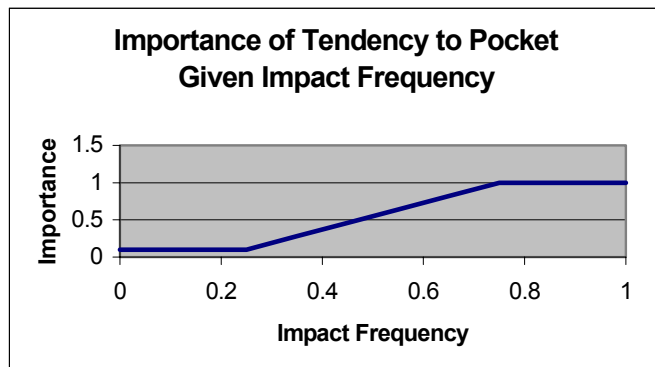
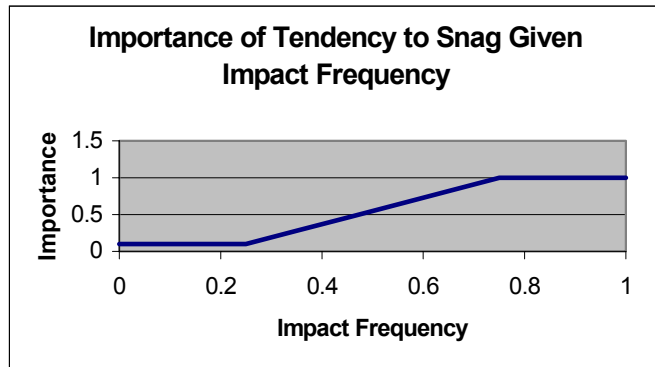
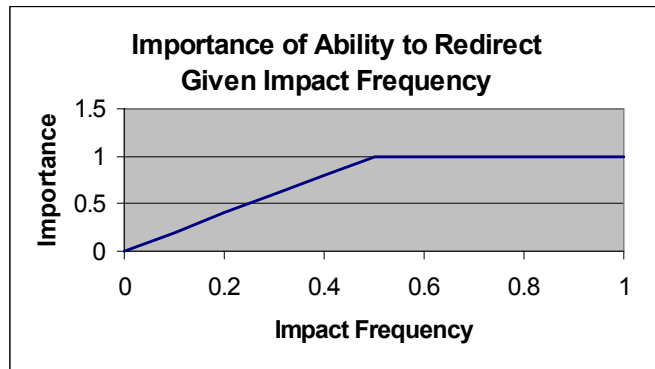
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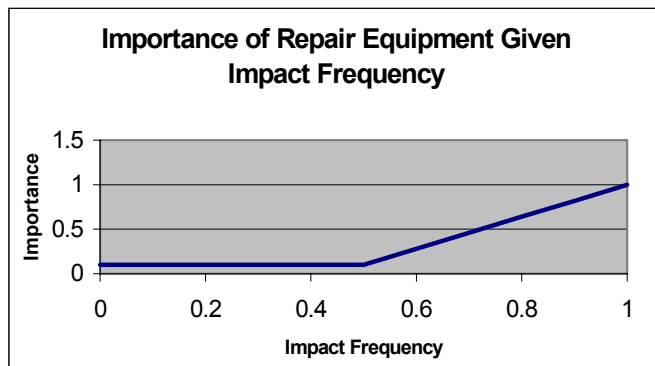
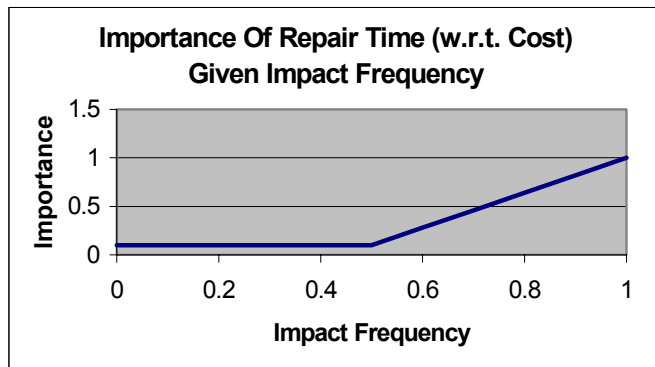
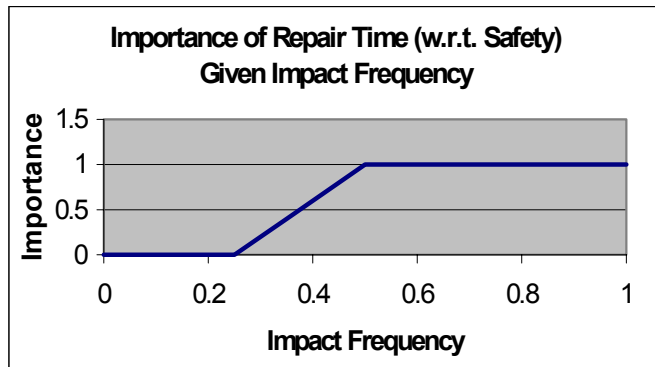
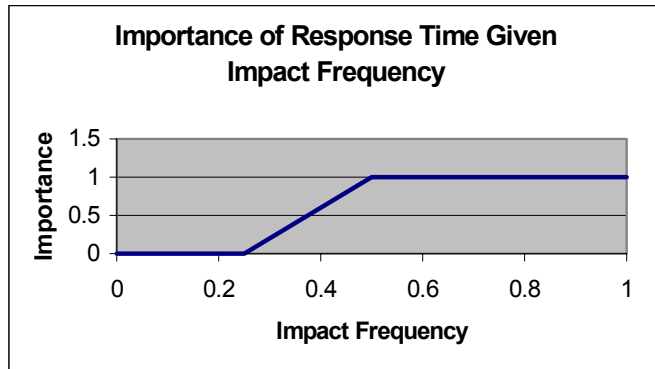
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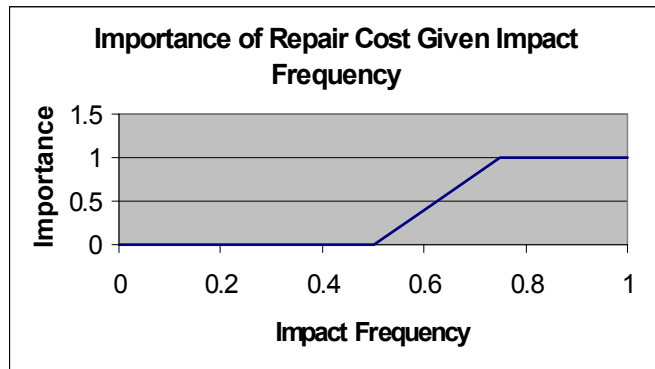
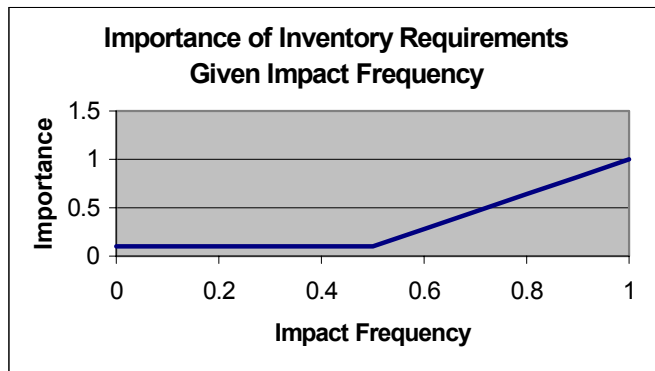
Appendix I: DSS Importance Function Graphs

Appendix I-1: Importance Functions and Governing Graphs for Impact Frequency

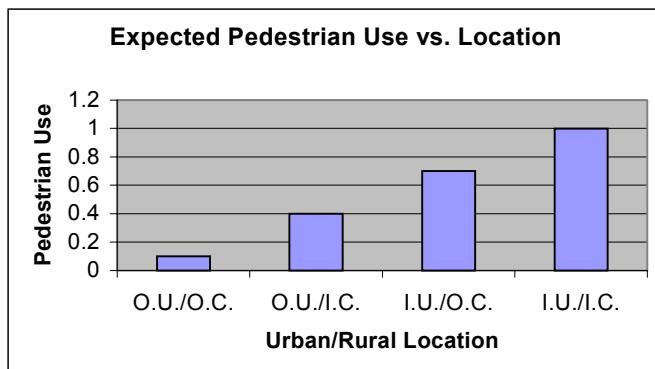
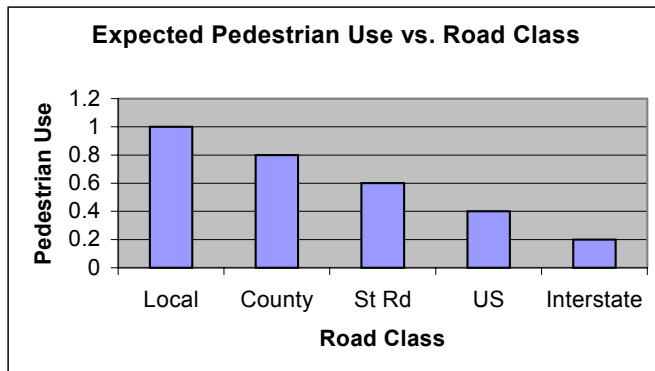


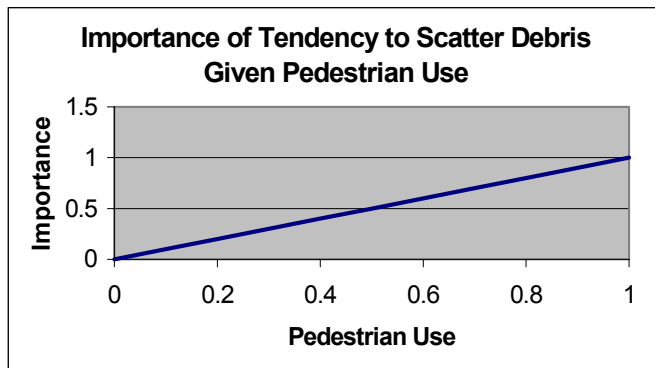
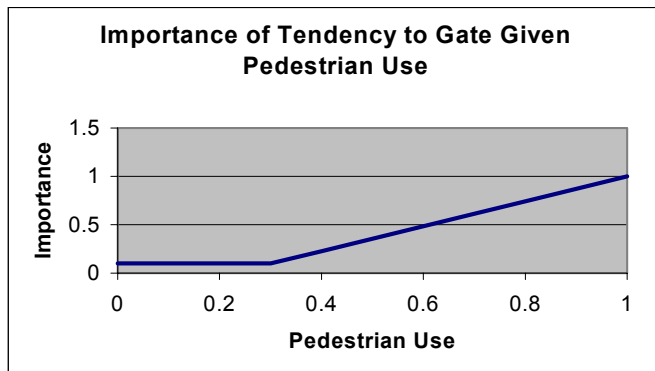
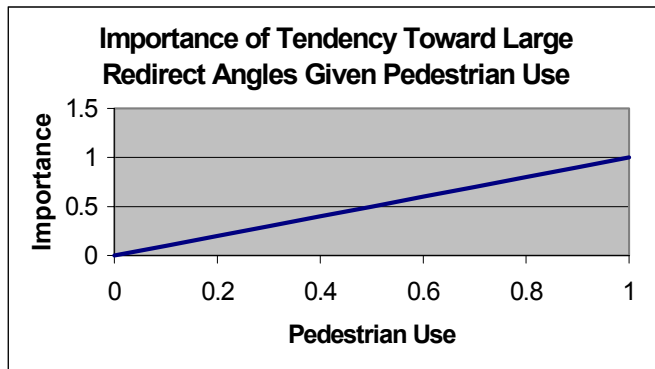
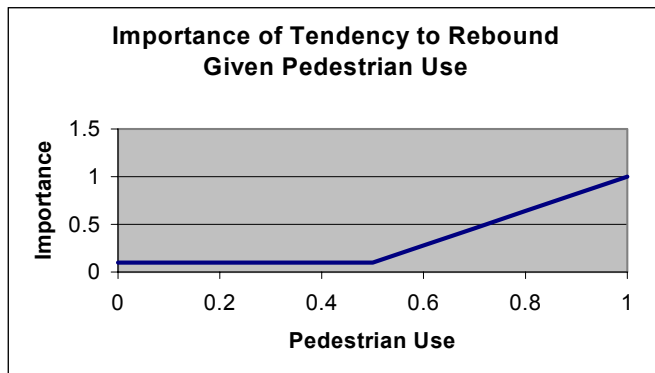


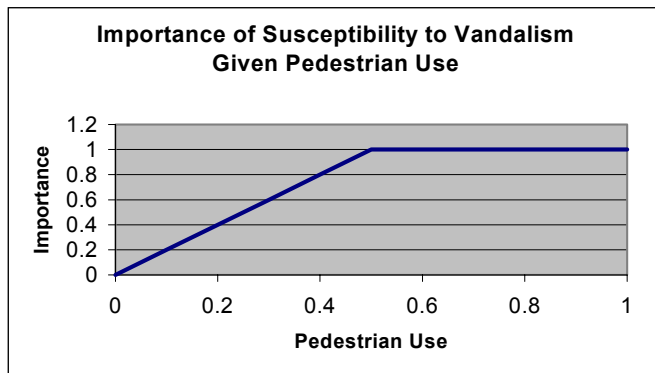




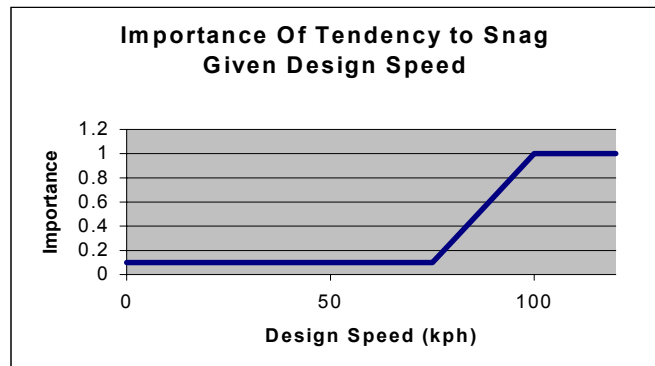
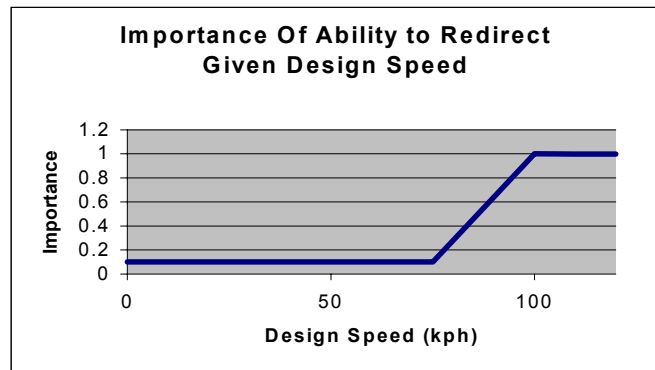
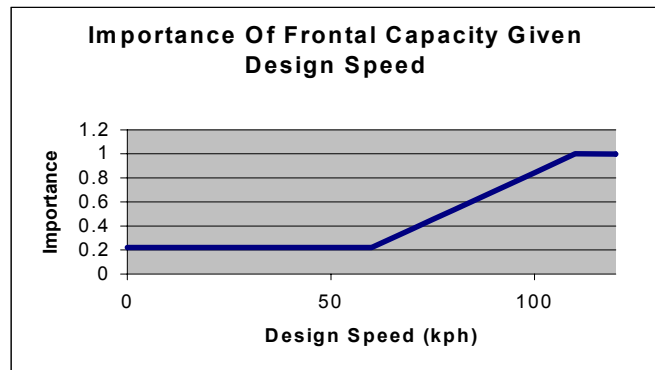
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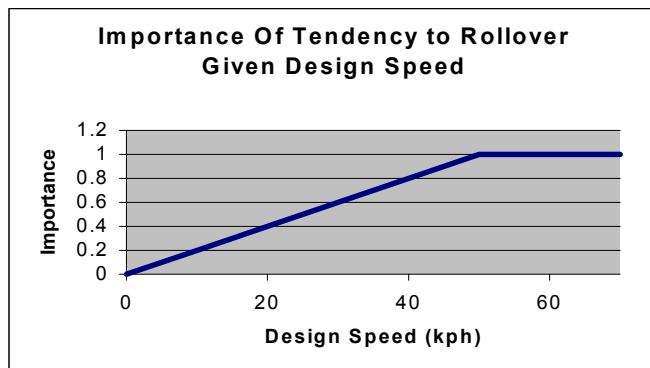
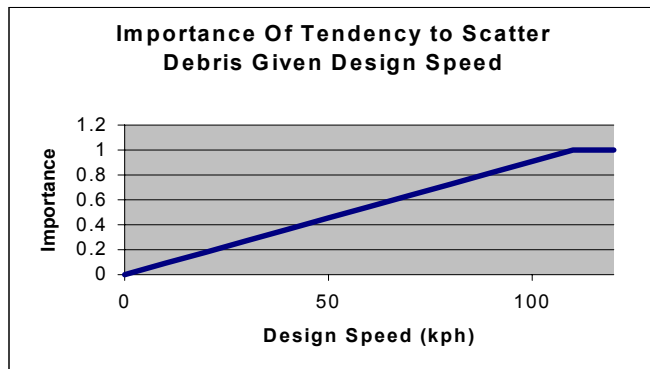
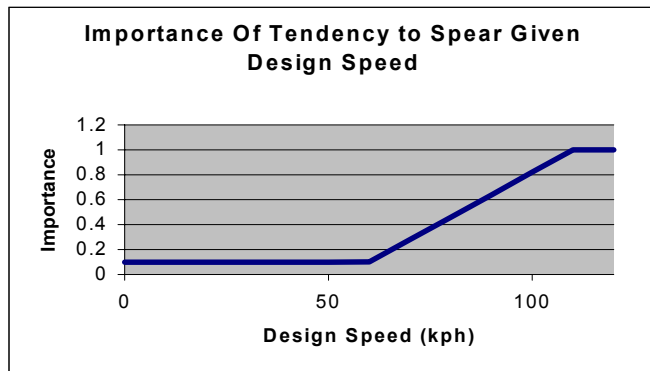
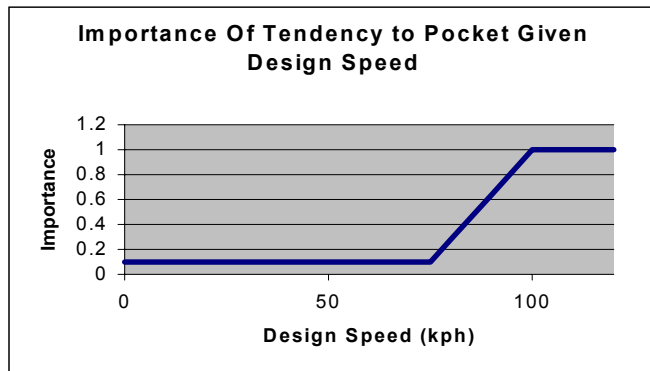


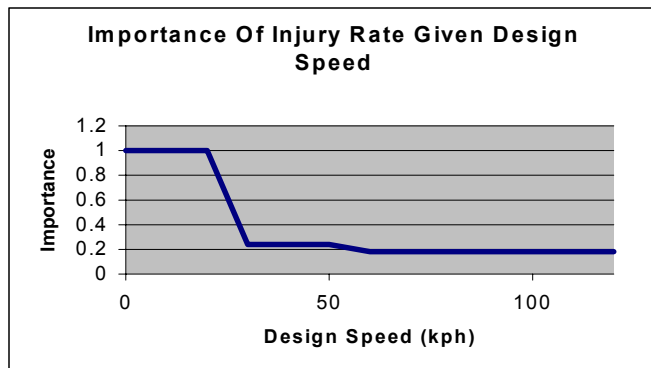
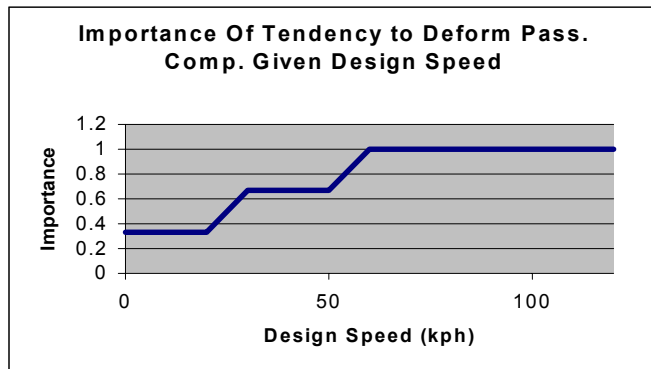
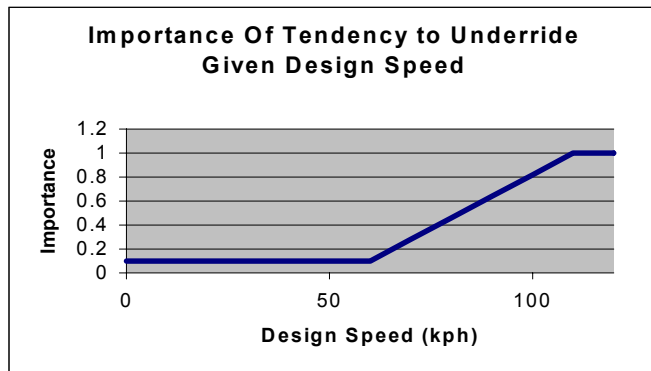
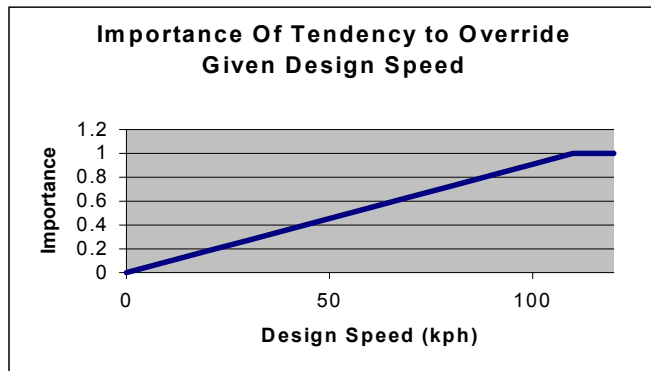


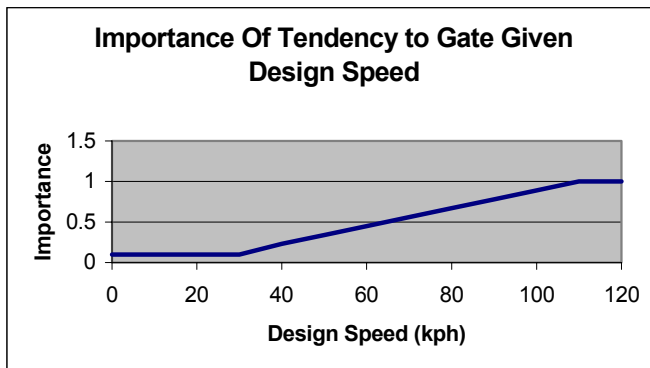
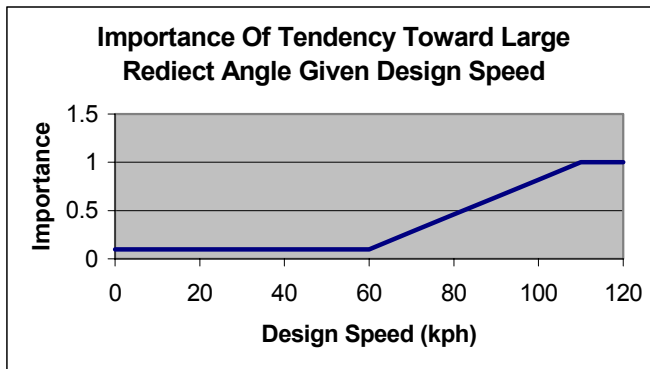
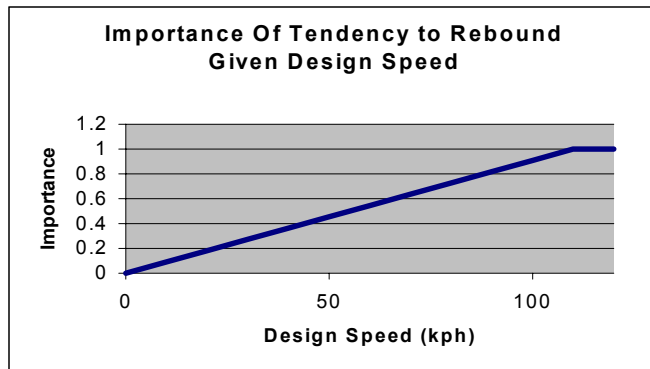
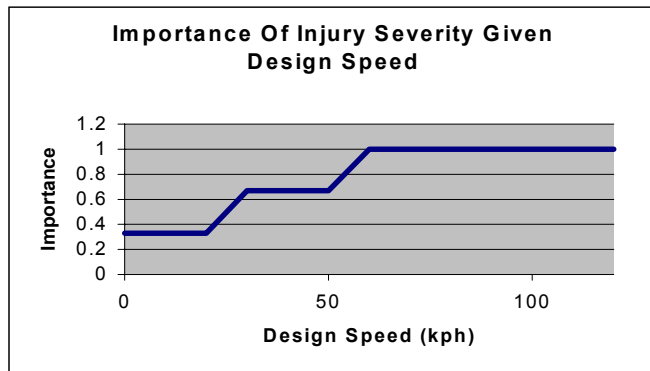


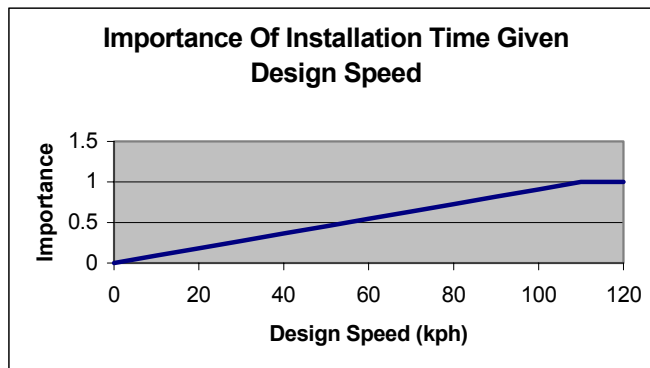
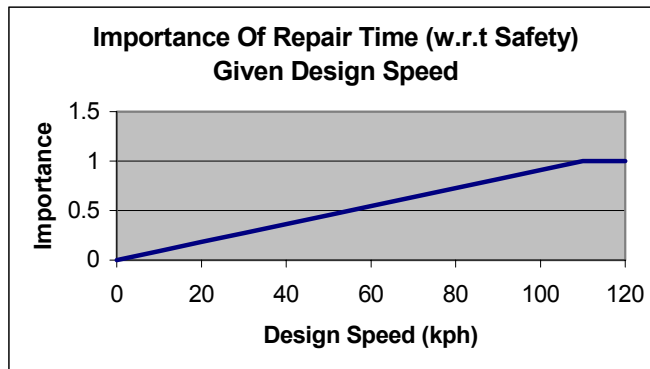
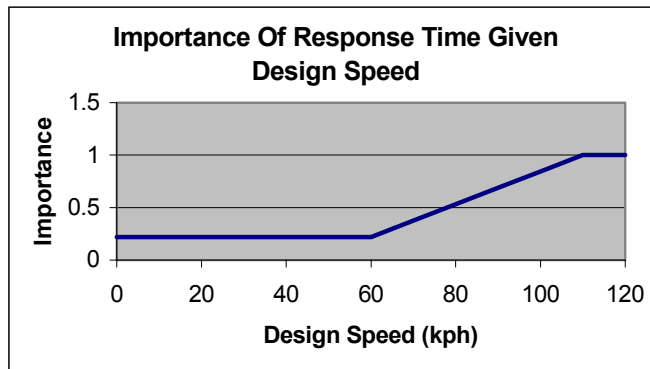
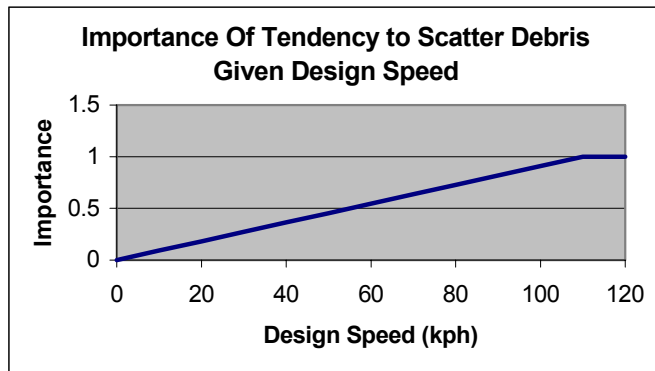
Appendix I-3: Importance Functions for Design Speed

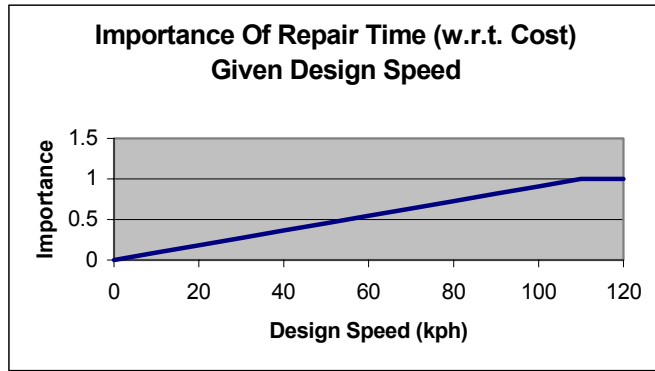




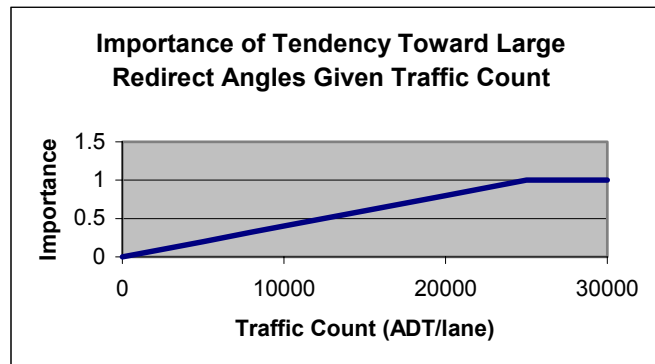
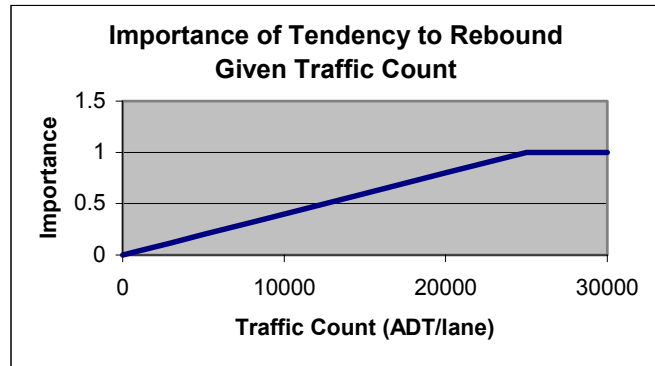
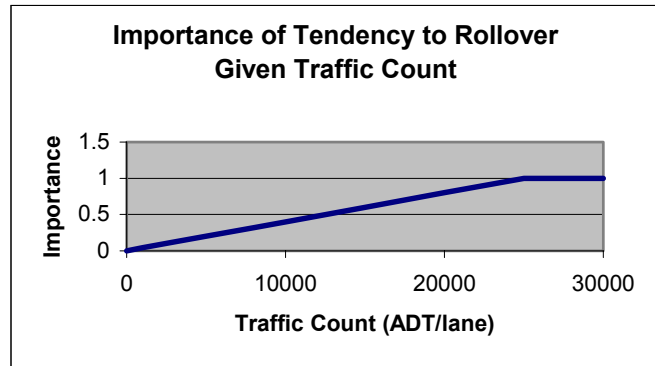


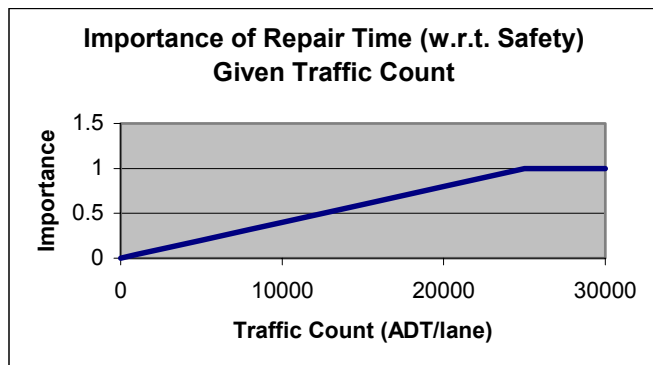
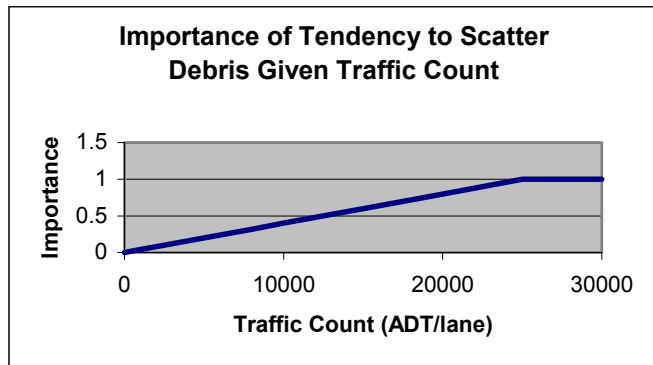
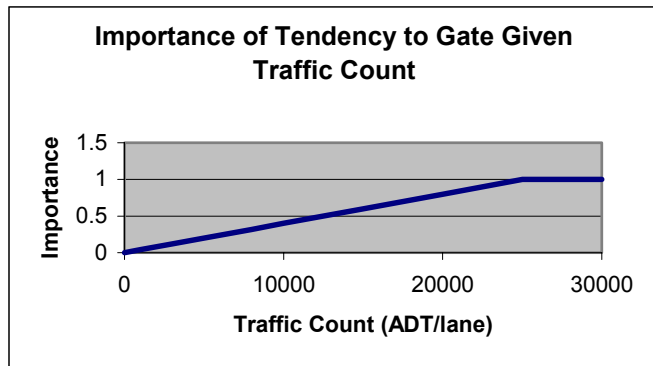


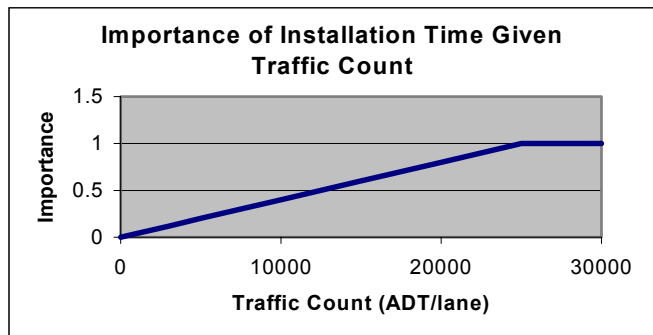
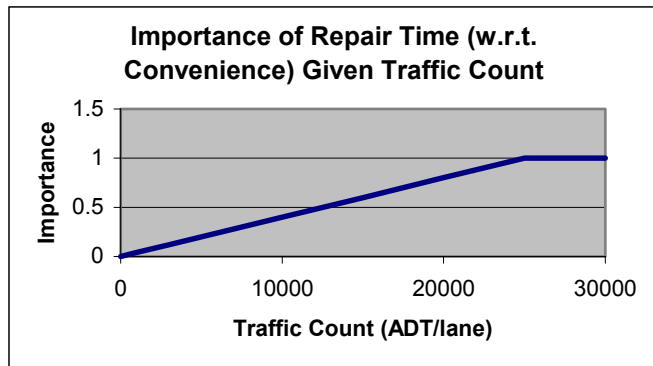




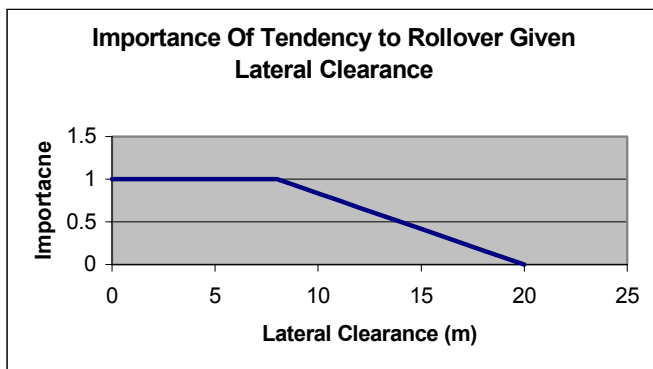
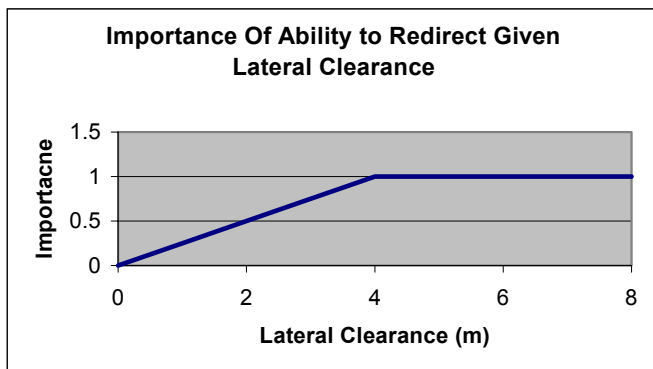
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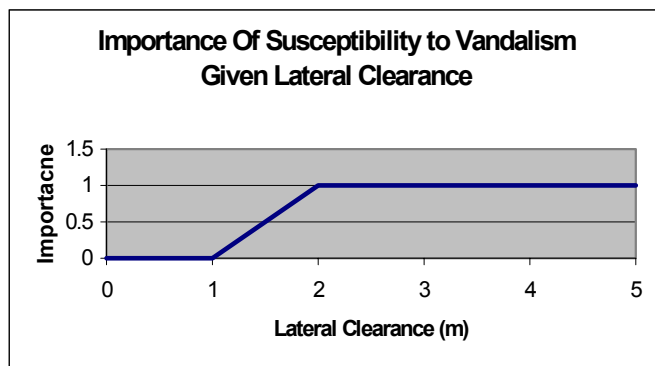
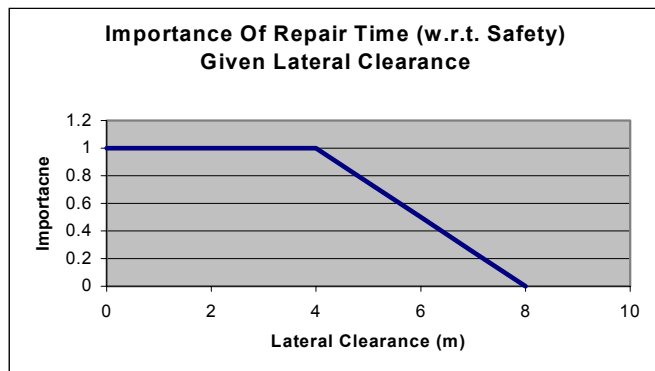
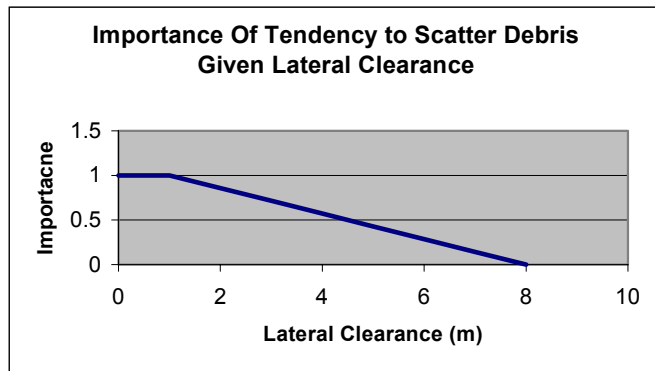
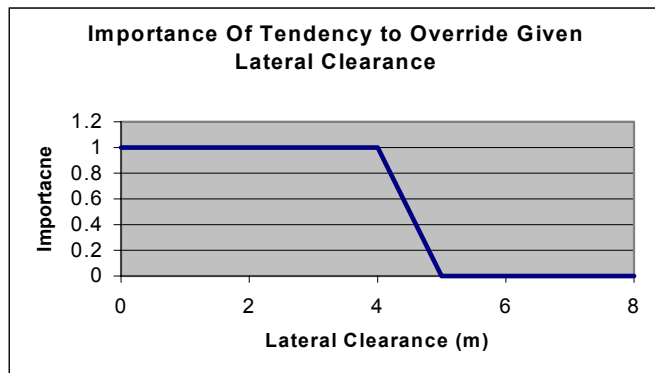


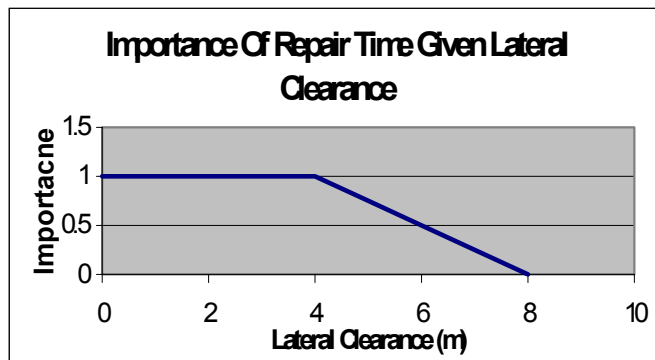
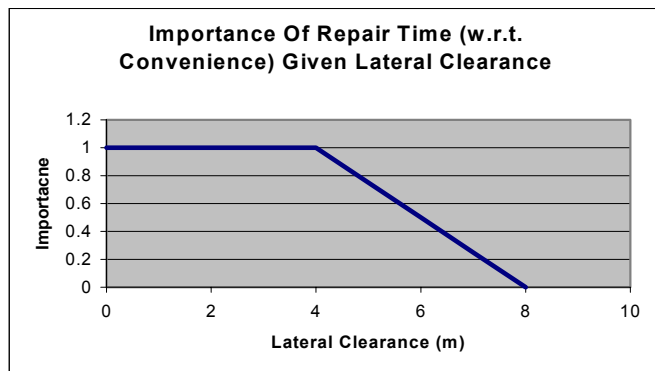
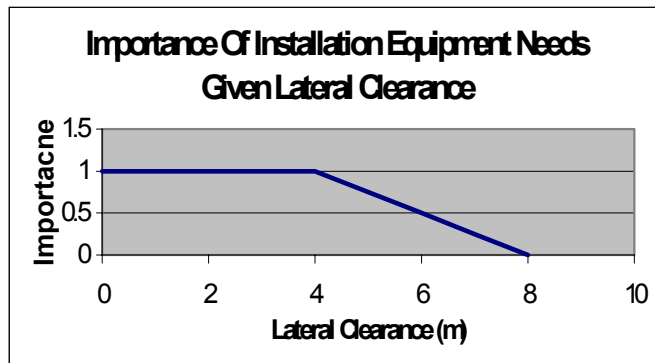
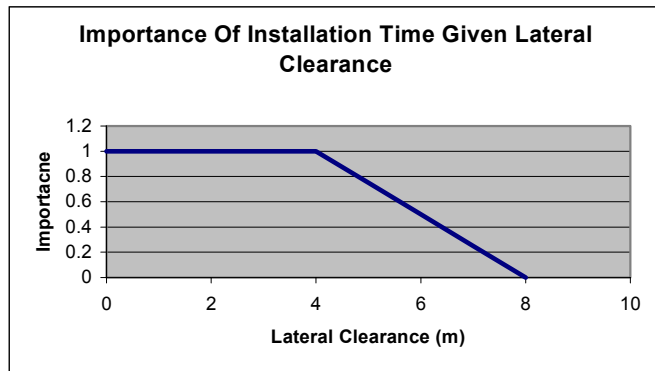


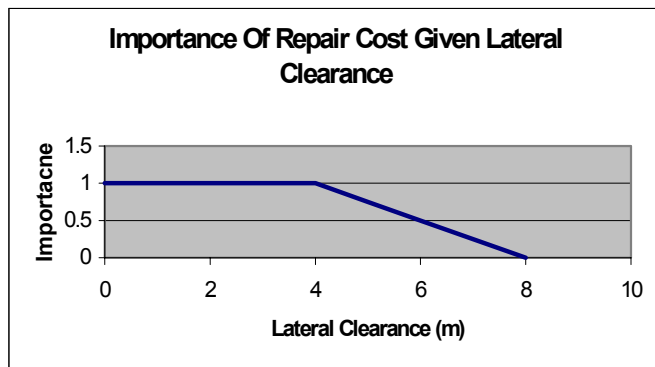
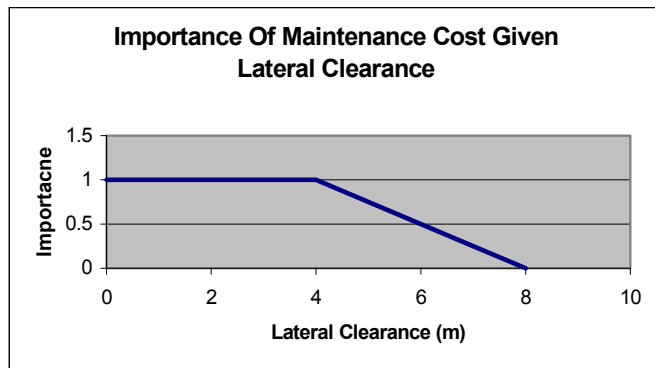


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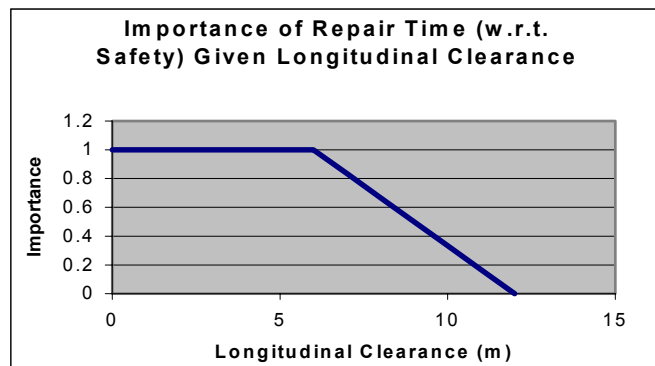
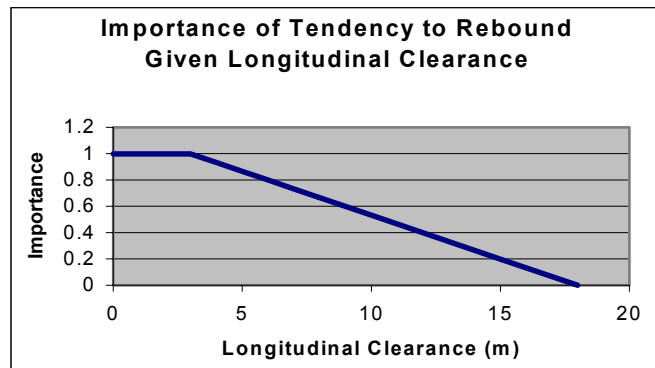


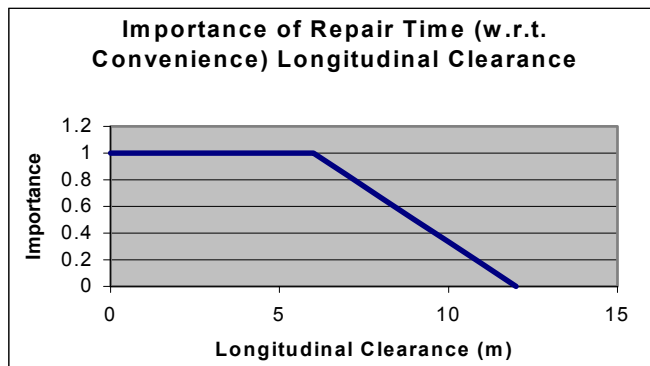
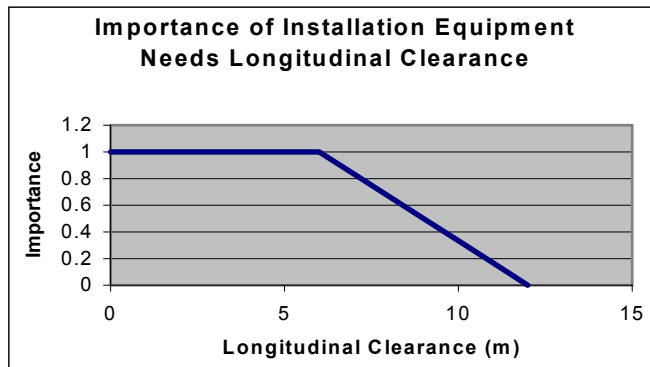
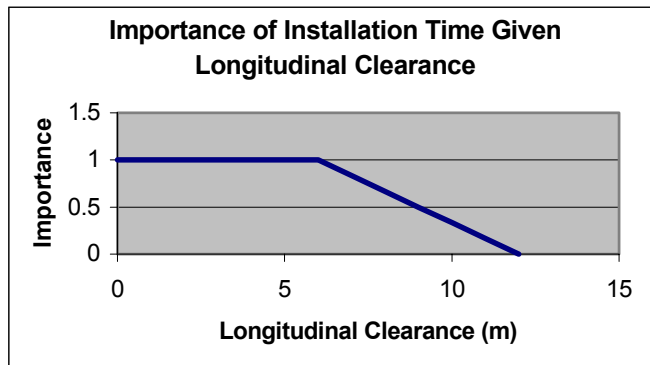
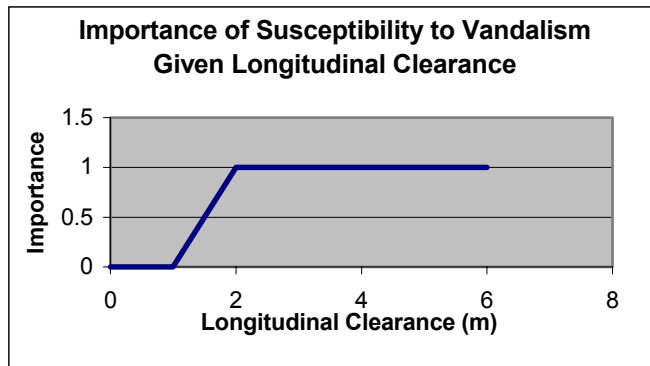


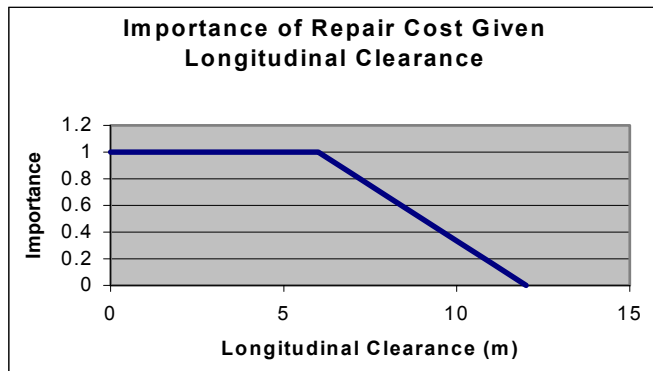
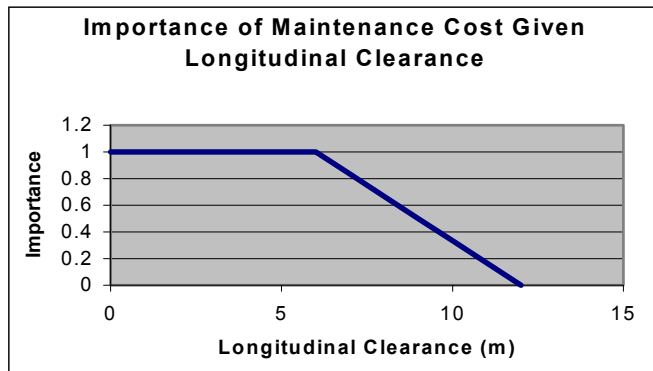




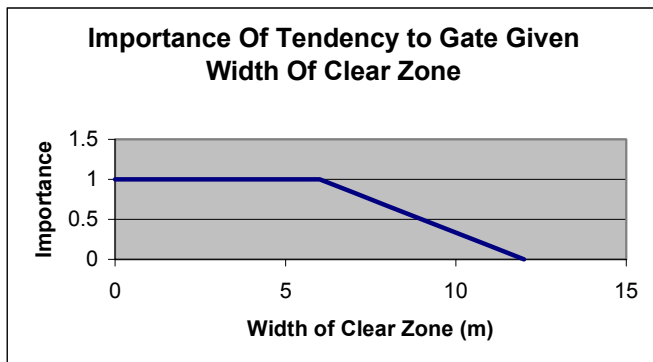
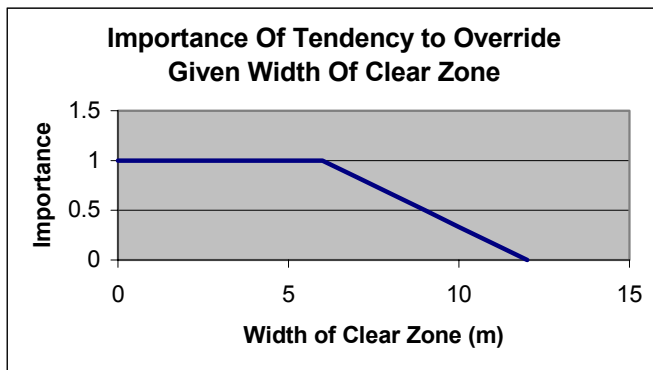
Appendix I-6: Importance Functions for Longitudinal Clearance

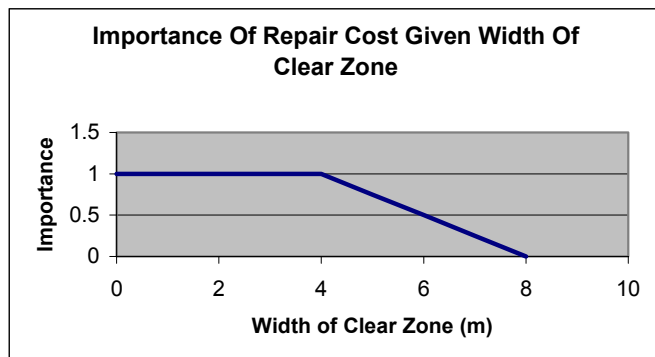
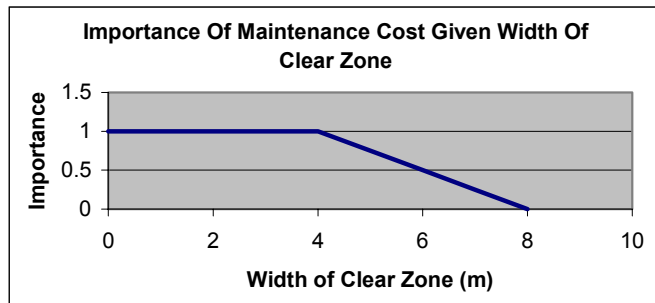
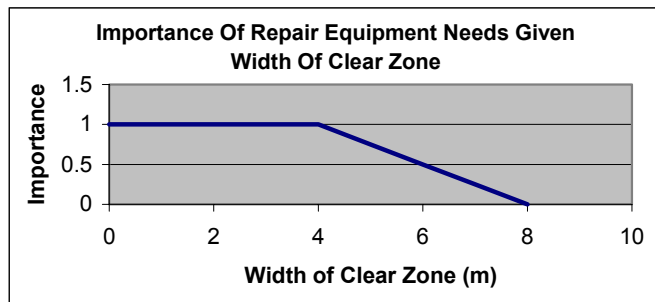
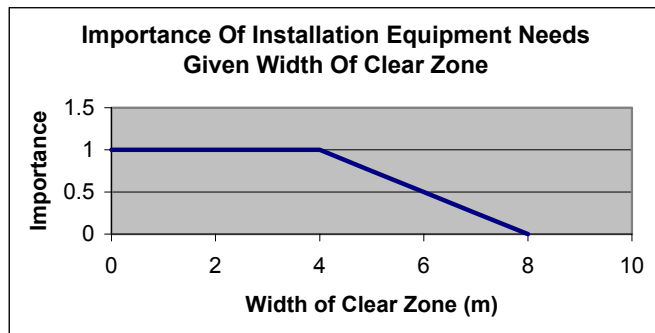
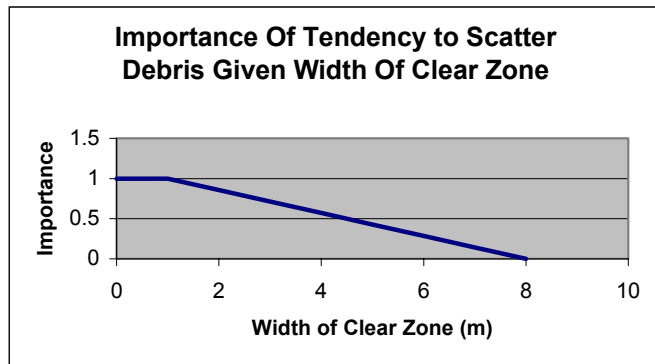




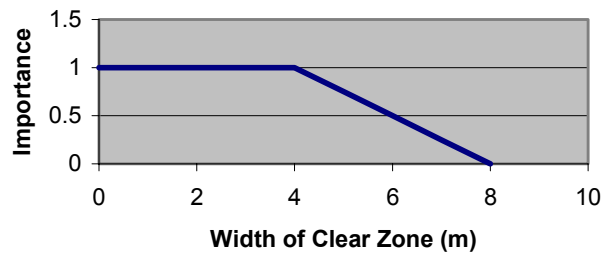


Appendix I-7: Importance Functions for Clear Zone Width

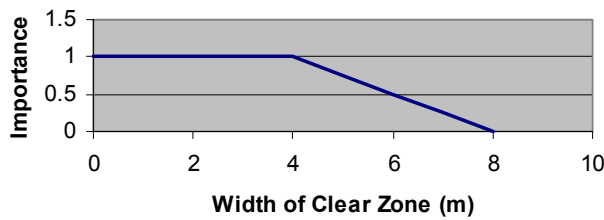




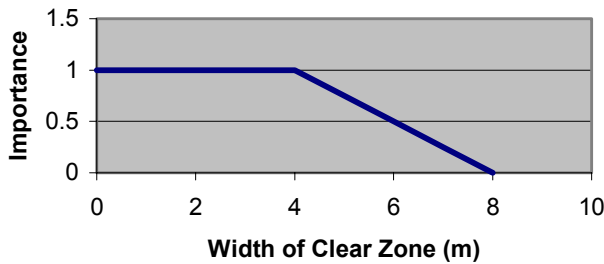
Importance Of Installation Equipment Needs Given Width Of Clear Zone



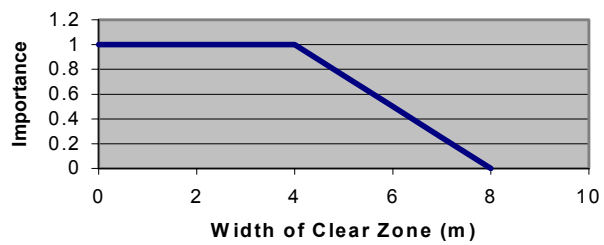
Importance Of Repair Equipment Needs Given Width Of Clear Zone



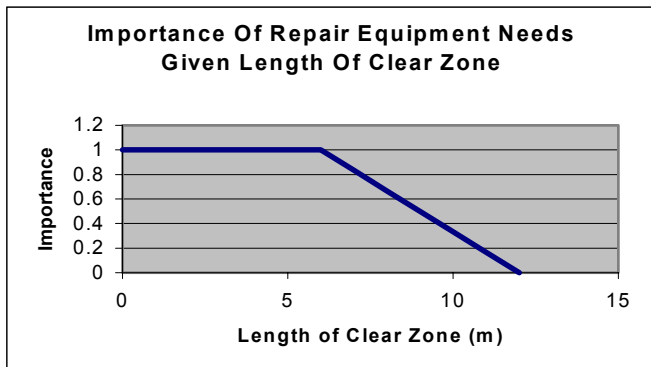
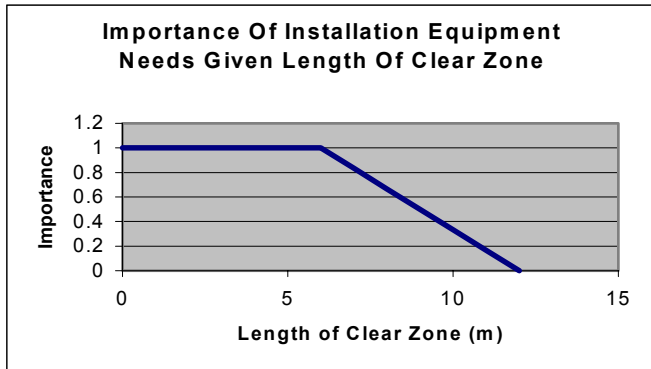
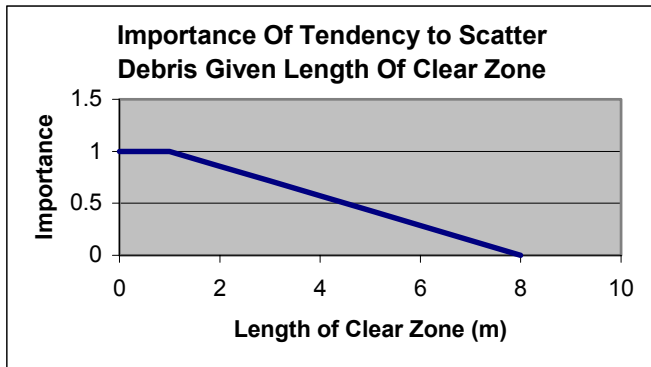
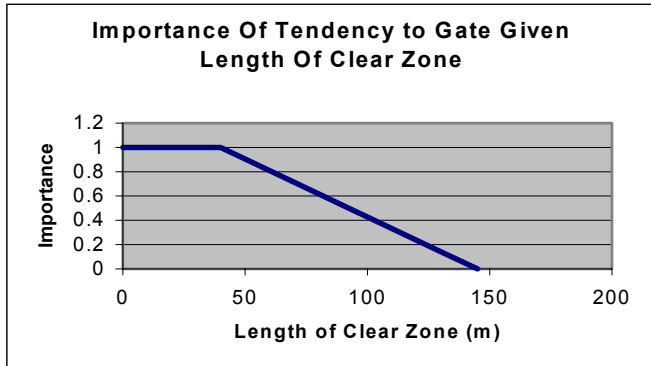
Importance Of Maintenance Cost Given Width Of Clear Zone

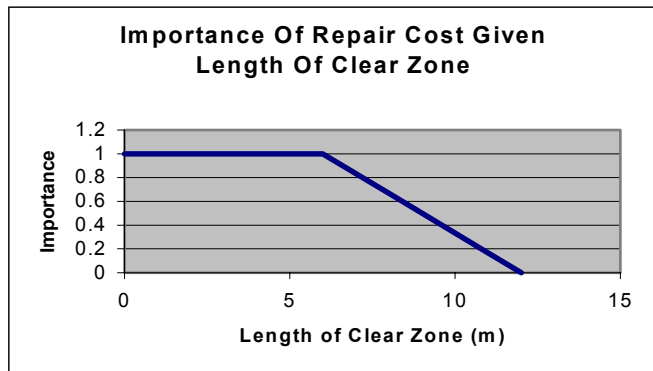
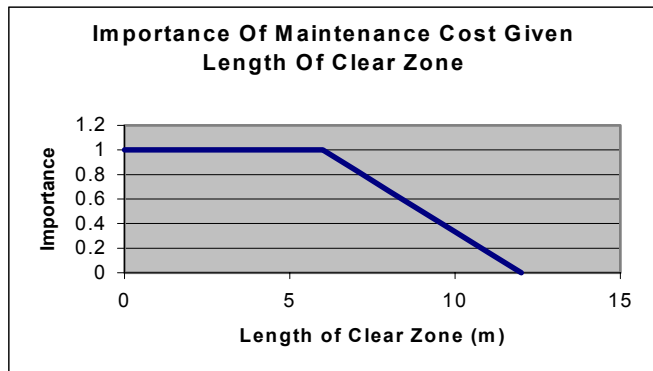


Importance Of Repair Cost Given Width Of Clear Zone

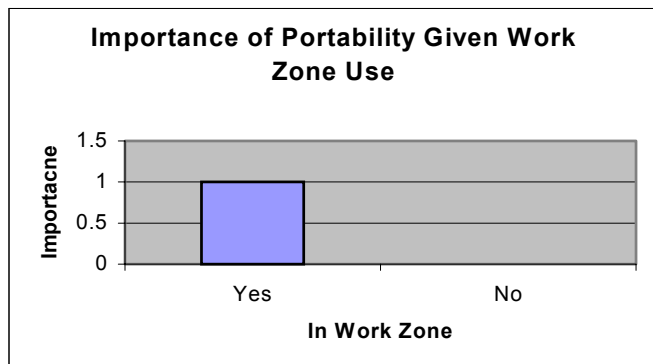
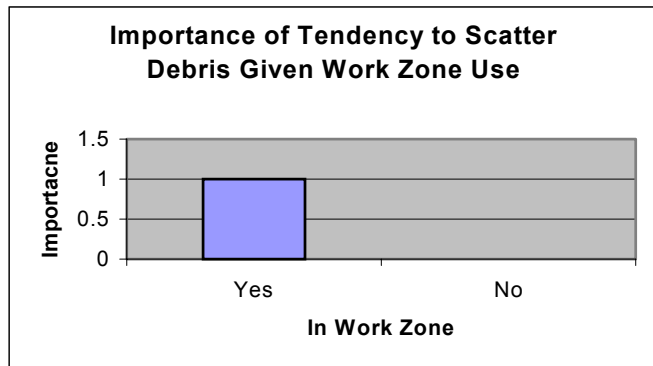


Appendix I-8: Importance Functions for Clear Zone Length

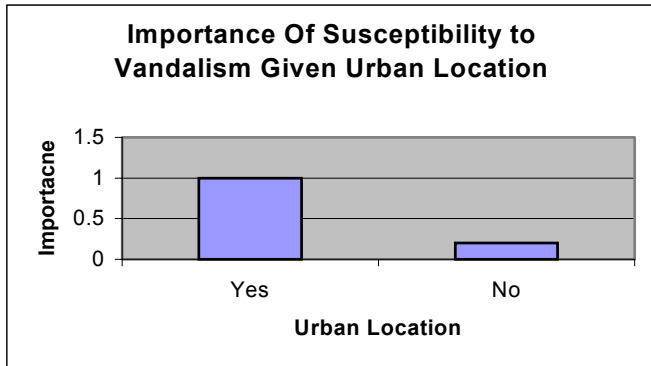




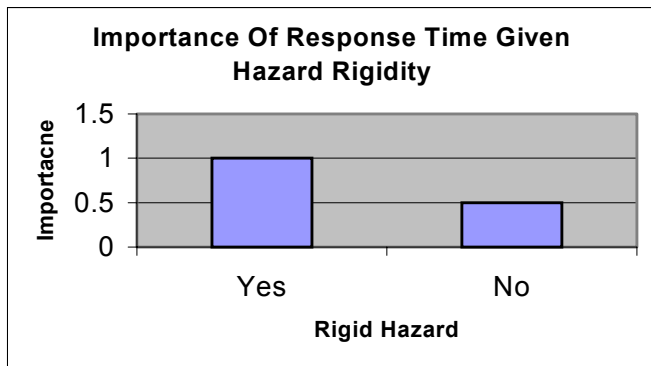
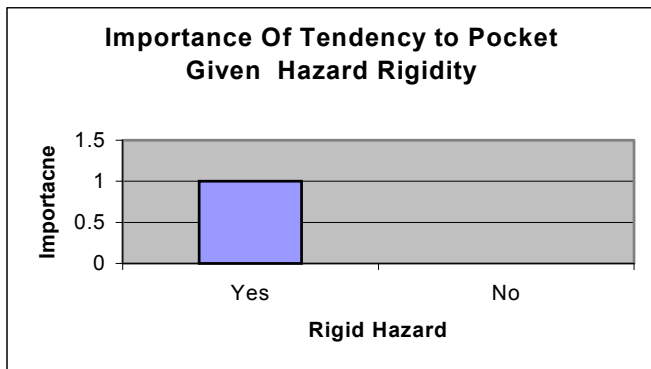
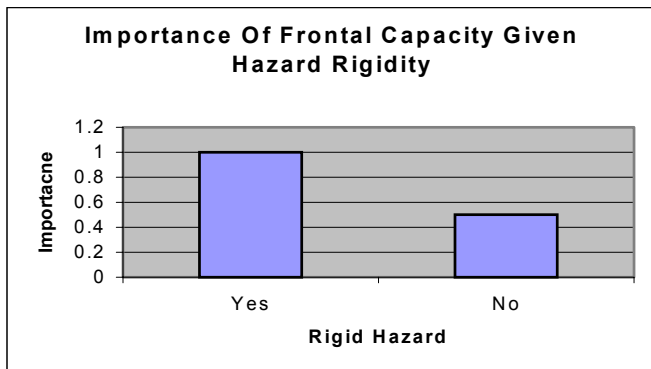
Appendix I-9: Importance Functions for Work Zone Use



Appendix I-10: Importance Functions for Urban Location



Appendix I-11: Importance Functions for Hazard Rigidity



Appendix I-12: Importance Functions for Climate

