N E W S

L E T T E R

DISTRICT THREE DESIGN

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

INSIDE

DISTRICT THREE DESIGN
Florida Department of Transportation
If you are interested in receiving a copy of this free quarterly Newsletter, contact Brian Blanchard, District Design Engineer.
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Interim Roadway and Traffic Design Standards

Bill L. Hattaway
State Design Engineer

The requirement to include all interim standards in design plans, as explained in a memo which was sent out by my office dated July 18, 1995, is rescinded. From this date on, include in the plans only interim standards that apply to the project. If a plans set is in production and includes all interim standards, these sheets can remain as part of the set. This instruction will be included in upcoming revisions to the Plans Preparation Manual.

On interim standard 0400 in English units, the box for the sheet number at the lower right corner should read 1 of 1. If a plans set is in production and includes this sheet and it reads Sheet No. 1 of 2, change it to read correctly or get a new copy from the server. ❐

1996 Metric Standard Indexes

Brian Blanchard
District Design Engineer

The 1996 Metric Standard Indexes are basically complete and plates are being made. They should go to print in August. The TENTATIVE dates for distribution to the districts are in December, with the effective date July 1997 letting. THESE DATES ARE TENTATIVE! The 1994 Indexes were the last English unit indexes published. These are not being updated. There are details needed for plans that are not in the 1994 Indexes which must be included in the plans as special details. Pleas do not just refer to the 1994 Indexes for English projects and assume your project is covered. ❐

Initial Superpave Implementation Guidelines

Bruce Dietrich,
State Pavement Design Engineer

The Department's Pavement Policy Committee has approved the implementation of Superpave asphalt structural mixes on all Limited Access facilities beginning with the January, 1997 letting. This bulletin gives initial design implementation guidance. As experience is gained through initial projects, further guidance will be incorporated into future revisions to the Flexible Pavement Manual.

Superpave is a new structural asphalt mix design system that was developed through the national Strategic Highway Research Program (SHRP). It uses the Superpave Gyratory Compactor to better simulate actual pavement loadings and thus provides for better rut resistant mix designs. The mixes are designed for seven different levels of traffic loadings (Design ESALs).

The Superpave structural mixes will have the same design layer coefficient and layer thickness limits as the current Type S mixes. A new specification section 334 is being finalized and will specify the Superpave mix designations that will correspond to the current Type S mixes for Standard Index 513 layer thickness limitations.

(Continued on Page 2)

"If we put our efforts into doing a good job for the public, even in the little things, it soon becomes a habit to do a good job."
Secretary Ben Watts

(Continued...)

Therefore, the primary change for Pavement design will be the change in structural mix nomenclature from Type S to Superpave and the addition of traffic levels to the structural asphalt pay items.

The following are the Design Traffic ESAL levels for Superpave:

Design ESAL Range	Traffic Level
less than 300 000	*1*
300 000 to 1 000 000	*2*
1 000 000 to 3 000 000	*3*
3 000 000 to 10 000 000	*4*
10 000 000 to 30 000 000	*5*
30 000 000 to 100 000 000	*6*
greater than 100 000 000	*7*

The following Superpave pay item numbering scheme has been set up:
2334- 1- a SUPERPAVE ASPHALTIC CONC (TRAFFIC a) for metric ton units of measure and
2334- 2a-bbb SUPERPAVE ASPHALTIC CONC (TRAFFIC a) (bbb MM THICK) for square meter units of measure.

The 'a' corresponds to the traffic level and 'bbb' corresponds to the thickness in millimeters for square meter pay items. Either Type S mix or lower traffic level Superpave mixes can be used for non-mainline pavements on limited access projects, such as wide shoulders, ramps and cross roads. Shoulder traffic levels can be based on three percent of the roadway design ESALs or a higher value if maintenance of traffic is anticipated on the shoulder. The same Superpave traffic level as the roadway should be used for shoulders 1.5 meters or less, where the final layer is paved in one pass with the roadway.

Superpave mixes can be used on non-limited access projects as well, but coordination with the district materials offices should be made to ensure testing requirements can be met. A target date for implementation of Superpave mixes on all projects will be established later. There was several presentations on Superpave at the State Design Conference in August to provide additional information. ❐

Submittals - Supporting Documents - Prompt Reviews

Jerry Potter,
State Structures Design Engineer

One of the objectives of our office is to provide useful and beneficial input into your production program for Category 2 structures. In order to accomplish this objective all submittals have to contain the bridge plans/reports and all supporting documents such as roadway plans and foundation reports. Regrettably many submittals are being submitted in an incomplete manner. Bridge review is an integrated and comprehensive process which cannot be conducted in isolation.

This article is to remind everyone of the essential elements of a proper submittal. A complete description of this requirement is found in the "Structures Design Guidelines" Section 3.3 and Figure 3.1. Attached is a summary of the requirements. Making sure that submittals contain all the required supporting documents will speed the review process. Incomplete submittals will result in rejection of the submittal and possible delay of the project. We solicit your cooperation so that reviews will be beneficial and completed in a timely manner. The review time in our office is thirty days beginning with the receipt of all required documents.

BDR/30% PLANS SUBMITTAL

1. Approved Typical Section
2. Approved 30% Roadway Plans
3. Approved MOT Requirements
4. Approved Phase I Bridge Hydraulics Report (if required)
5. Approved Phase I Bridge Foundation Report
6. Approved Bridge Corrosion Environmental Report
7. Other items as per Structures Design Guidelines Chapter 3, Section 3.

90% PLANS SUBMITTAL

1. Approved 90%Roadway Plans
2. Approved MOT Plans
3. Approved 90% Wall Plans
4. Approved Phase 2 Bridge Hydraulics Report (if required)
5. Approved Phase 2 Bridge Foundation Report
6. Approved 90% Utility Accommodation Plans
7. Approved 90% Lighting Plans
8. Other items as needed ❐

District III Utility Liaison Committee Meeting

Brian Blanchard,
District Design Engineer

On March 29, 1996, Edward Prescott, Phillip Gainer and myself met with the Utility Liaison Committee to discuss utility related problems that have occurred during the planning or construction of our projects.

The meeting was beneficial and indicated the need to improve our communication and coordination between the utility companies and FDOT. The majority of their concerns involved design changes between Phase II and IV plans. This is a concern for all parties. However, we will never totally eliminate plan change requests that come from the permitting agencies, FHWA, city traffic engineers, counties requesting changes by utilities. Many changes are initiated by those outside FDOT. Other changes are initiated by FDOT policy. We can assist the utility companies by having the consultants include in their cover letter those changes that have occurred from one phase to the next (changes that affect utilities specifically on plan/profile sheets and drainage structure sheets).

They have concerns about existing utilities not being shown on the Phase I plans. The design consultant's surveyor needs to give the utility companies a one week notice when spotting utilities. I am asking the consultants to state in their Phase I transmittal cover letter if the utility company representative failed to show up. The consultants need to contact the Area Utility Manager when they are having problems. I instructed the utility companies to let the AUM or myself know if existing (Phase I plans) or relocated (Phase III plans) utilities were not detailed in the design plans. The consultants need to contact the AUM for correct name, address and phone number, to verify their information.

Another issue is insufficient plans at Phase II to adequately relocate their utilities. The Plans Preparation Manual is specific about what items are required in the plans. At Phase II, Preliminary Traffic Control Plans, signalization plans, drainage structures and lighting plans should all be included. This information is vital if we expect the Construction Department to set the contract time at Phase III (with utility relocation schedules in -hand).

Below are other issues discussed:

FDOT wanting schedules before design is complete: Reply: FDOT must have relocation schedules at 90%. This is the only way we can have completed utility adjustment sheets, relocation schedules and contract time by Phase IV (100% plans). If changes affecting utilities occur, then time for relocation schedule adjustments must be provided to the utility companies.

Plan Changes: Reply: Place yourself in the position of a utility company representative. We can not eliminate plans revisions. We can improve our coordination with utility companies concerning these changes. Consultants should state in their cover letter what major changes have occurred (especially from Phase III through Phase IV submittals).

Maintenance of Traffic Phasing issues: Reply: We must minimize the construction impact on the public. We are requiring the contractor to only work with each phase, i.e., Capital Circle leg II. The biggest complaint from the public is to see no active work on a project. In the future, the utility companies must complete their relocation within phases unless directed otherwise.

Clearing and Grubbing Contracts: Reply: This will simplify and reduce utility problems during roadway construction. This has already occurred in District Three and will continue. Surveying the Right of Way lines and center lines will also be helpful to the utility companies. Problems such as who maintains the erosion control between contractors have to be considered.

No existing or proposed utilities are considered in the roadway/drainage design: Reply: We consider drainage/roadway re-designs when utilities are impacted. This office considers design variances and exceptions (deviations from state and AASHTO design criteria) on a daily basis.

Survey control point not shown on plans/include utility surveys on resurfacing projects: Reply: The designer will pick up manholes, valves, etc, in their survey. This will eliminate related claims. All resurfacing projects now have limited design survey requirements.

Due to compressed scheduling, utility information put on 30% plans is not reflected in 60 % plan, 60% information not on 90% plans, etc.: Reply: This occurs in some cases because utility owners are late with their response. In each case, the AUM, District Utility Engineer or Design Engineer should be notified.

FDOT work schedule moving to 16 hour days, 6 days a week: Reply: That is a fact on urban projects. Expect to see peak hour restrictions and night work requirement as well.

I realize there is a real problem with multi-lane construction. I am requiring all area utility managers attend the preliminary scope meetings and make sure the scope requires that 80% plans be furnished to the appropriate area utility manager.

The consultant will have to furnish 80% plans to the utility section so that area utility managers will have relocation schedules by 90%. If we get the consultant to do this, it should allow utility companies relocation schedules in by 90%. I will also be asking consultants to include manhours for design partnering meetings at 90%. These meetings will include the utility companies. If you see something that will work better to help achieve this goal, then please let me know and we will see if we can get it implemented. ❐

Procedure for Retrieving Crash Data

Jason Peters,
District Project
Management Engineer

A number of consulting firms have been contacting the District Safety Office to receive Accident (Crash) Data for roadway design projects. Although safety personnel have been assisting in this matter, this information is readily available on the mainframe. If a consultant has need for Crash Data, then he/she is probably working on an active job and has a valid password. The following procedure should be used to retrieve Crash Data:

Step 1: From the SUPERSESSION Main Menu, select TSO; <ENTER>

Step 2: <ENTER>

Step 3. Select Option 5- ENG, USE ENGINEERING PROGRAMS AND SERVICES;<ENTER>

Step 4. Select Option H- SAFETY;<ENTER>

Step 5. From the Safety Options Menu, Select Option 3- SAFETY MENU SYSTEM;<ENTER>

Step 6. From the Safety Office Options Menu, Select Option 1- CRASH DATA MENU, or Option 4- RCI NODES MENU;<ENTER>

Step 7. From the Crash Data Primary Options Menu, Select Option 1- DETAIL or Option 3- SUMMARY, (Normally, Option 3 is sufficient);<ENTER>

Step 8. Enter the time frame in question (Years). *(Crash Data is now available from '91-'95).*

Step 9. Enter the District Number, County Number, Section Number, Sub-Section Number (which can be obtained from a Node Number Listing or Straight Line Diagrams), and the Beginning and Ending Milepoint. If the section is 1/10 mi or less, a Spot Rate Code = t must be input.

Step 10. The screen will be blank. Enter additional request (same as step 9) or, <ENTER>

Step 11. Follow directions on the screen. To proceed type "No"; <ENTER>

Step 12. Printer options. To receive the information in the district , type a "3" in the blank. To receive the output at a different printer, type "0". If a "0" is entered, the printer name will also be needed.

Step 13. The default criteria designates the information to be proceeded and printed at night. Therefore you must <TAB> to the Day or Night Run. If you wish the information to be printed during the day, type "D" for day. Otherwise, the output will be printed at night.

Step 14. A message should come on the screen, "Job submitted" along with three asterisks; <ENTER>

Step 15. Press the F-3 Key to end and follow the directions to exit the program

Once this has been input, the data can be printed or viewed on the screen. Should you have any questions, contact the District Safety Office. ❐

Errors and Omissions

Mac Watters
District Utilities Engineer

The following is an update of the most prominent supplement agreements , work orders and change orders generated because of errors and / or omissions by designers. All project managers and designers must make a concerted effort to avoided these types of mistakes in the future. Consultants can call Mac Watters or Mary Powell for details of each project.

The following is for fiscal year 1995 to 1996:

1) Necessary pay items not included (code 101) was the cause of 10.34% of all supplemental agreements for this fiscal year. Total cost not anticipated by the Department was $382,801.14. The following list of projects were determined to have been effected by this type of error or omission:

WPI	SPN	S.A. DATE
3115996	55005-3504	04/26/96
3110314	46090-3520	01/29/95
3110314	46090-3520	03/13/96
3110307	46080-3512	09/27/95
3110305	46020-3559	09/13/95
3110307	46080-3512	09/27/95
3110305	46020-3559	08/30/95
3142988	50001-3443	03/28/96
3115682	55050-3515	02/19/96

3116858	56040-3517	04/02/96
3127284	57000-3609	03/28/96
3144927	54001-3430	01/08/96
3142570	48260-3463	12/08/95
3127286	57000-3611	01/24/96
3142570	48260-3463	08/14/95
3119918	99903-3562	02/20/96
3142556	48270-3432	02/21/96
3144779	53002-3434	12/15/95
3114674	53130-3508	02/12/96
3127300	57000-3614	05/06/96
3115867	55003-3518	02/05/96
3115682	55050-3515	02/19/96
3115998	55060-3550	04/15/96
3110314	46090-3520	04/23/96
3110314	46090-3520	02/02/96
3110316	46030-3513	12/08/95
3115867	55003-3518	03/25/96
3115682	55050-3515	06/24/96

2) Plans do not adequately describe the scope of work (code 108) was the cause of 9.83% of all supplemental agreements for this fiscal year. Total cost not anticipated By the Department was $363,741.16 The following list of projects were determined to have been effected by this type or error or omission:

WPI	SPN	S.A. DATE
3142552	48260-3450	04/12/96
3119108	60020-3515	12/21/95
3113164	50030-3538	01/08/96
3118671	59030-3508	05/15/96
3146867	57002-3419	03/12/96
3115250	54020-3511	01/09/96
3111931	48030-3513	02/10/96
3111931	48030-3513	08/21/95
3142552	48260-3450	06/07/96

3) Computation Errors (code 126) was the cause of 2.09% of all supplemental agreements for this fiscal year. Total cost not anticipated by the Department was $77,253.36. The following list of projects were determined to have been effected by this type of error or omission:

WPI	SPN	S.A. DATE
3110317	46060-351	05/17/95
3118660	59020-3504	11/13/95
3111931	48030-3513	05/30/96
3115250	54020-3511	01/09/96
3111931	48030-3513	03/08/96

During fiscal year 1995-1996 the Bidability Team was formed. One of the responsibilities of this team is to evaluate all supplemental agreements. Their evaluation is to reveal whether or not procedure 375-020-010-b (Identifying and Assigning Responsibility for Errors and/or Omissions by Design Consultants) is to be implemented. Also, they are to determine: coding, fault, and cause of the supplemental and estimate the associated "premium cost."

For the fiscal year 1995-96 procedure 375-020-010-b was implemented 5 times. This does not mean that the designers were at fault only 5 times. Not all the supplementals fell into the appropriate time frame to be considered for recovery of cost.

Also, if no premium cost could be determined then Procedure 375-020-010-b is not applicable . If construction personnel did not give the designer the appropriate opportunity to mitigate damages, then Procedure 375-020-010-b could not be invoked. Therefore, all designers are cautioned not to take the above listed errors and/or omissions lightly in immediate and future designs.

Of the five cases, where Procedure 375-020-010-b was implemented, all cost recovery proceedings were stopped after the appropriate project manager submitted their reports. These reports show either:

1) the error and/or omission was unavoidable
2) the designer was not at fault or
3) the cost of the recovery was higher than the associated premium cost.

Although this may suggest that the designer is doing a good job; it does not mean he/she is. It merely demonstrates that at this time the designers are very fortunate.

Moving on the present fiscal year, the following is a list of the most common errors and/or omissions for fiscal year

(Continued...)

1996 to present:

1) Computation Error (code 126) is the cause of 61.55% of all supplemental agreements to date. Total cost not anticipated by the Department is $2,217,013.99. The following list of projects have been determined to be effected by this type of error and/or omission:

WPI	SPN	S.A. DATE
3142988	50001-3443	08/08/96
3113121	50080-3511	07/19/96

2) Inaccurate location, size, identification, conflict resolution and etc. of an existing or proposed utility (code 106) is the cause of 12.2% of all supplemental agreements to date. Total cost not anticipated by the department is $439,903.36. The following list of projects have been determined to be effected by this type of error and/or omission:

WPI	SPN	S.A. DATE
3111956	48012-3514	07/22/96
3125236	54050-3603	08/26/96

3) Drainage modifications required due to structure omissions, problems with pond designs, offsite flow not handled, incorrect elevations of structures, improper hydraulic design, etc.(code 115) is the cause of 8.77% of all supplemental agreements to date. Total cost not anticipated by the Department is $316,000.00. The following list of projects have been determined to be effected by this type of error and/or omission:

WPI	SPN	S.A. DATE
3115256	54010-3513	08/03/96
3119108	60020-3515	08/13/96

So far this fiscal year (96/97) Procedure 375-020-010-b has been implemented two (2) times. Both of these cases are presently under review. Premium cost in these two (2) cases has been estimated at approximately 1.5 million dollars. Hopefully by the next newsletter we will be able to report the final results of these two (2) cases.

In conclusion I can not stress enough the importance of competent and prudent design. ❑

Bridge Numbering System

Brian Blanchard
District Design Engineer

The bridge numbering system is by authority of Rule 14-49 F.A.C. Florida numbers bridges, not bridge sites. Therefore, when a bridge is replaced, a new number is used for the replacement at the same site. In general, bridges that are widened will retain their existing numbers.

The coordinator of the bridge numbering system is Max Laney in the Structures and Facilities Office (Maintenance). His SunCom number is 676-1652, and FAX number is 904-638-6369. Contact him for any questions.

The Department's Structures Detailing Manuel (625-020-200) Section 2.2 requires that "the bridge number shall be prominently shown in the title block of all drawings." ❑

Request for User ID Numbers

Jason Peters
District Project Management Engineer

Recently, some consultants have ben denied access to the data center facilities even though they have a potential valid User ID Number. A consultant may have authorization to use the data center facilities, however, at some time period during the process, the consultant's User ID Number is revoked. Therefore, efforts were put forth and the cause of the problem was determined to be incorrect project numbers used on Form 325-060-41 dated 3/93. This form is from the Information System Office called "AUTHORIZATION TO USED DOT DATA CENTER FACILITIES FOR CONSULTANTS." Also, consultants have failed to state the type work to be performed.

Since the contracts, plans production, budgeting, and construction of roadway projects are part of a complex system, the use of several different numbering systems for projects are required (Example: 46060-1550, 46060-2550, 46060-3550, etc.). When requesting User ID Numbers or assistance with User ID and passwords, the consultant should not always use the construction project number stated on the plans. User ID Numbers and password should be requested using the project numbers stated in the contract for the authorized activities to be performed. Time extensions or assistance cannot be performed for unauthorized project numbers. Usually, there is a time delay and sometimes necessary authorization forms are required before the problem can be resolved.

In order to prevent this problem from occurring, all project numbers in the contract are required on Form 325-060-41. When assistance with User ID or passwords are needed, the consultant needs to reference the project numbers on the contract. The consultant also needs to include the type work to be performed in the REMARKS: section of the form. The type

(Continued...)

work stated should be Design, R/W, CEI, etc. (or whatever purpose the User ID Number is needed). ❑

Traffic Signals - M.O.T. Plans

Hollis Savell
Traffic Q.A. Engineer

Renewed emphasis has moved to the forefront for traffic signal Designers in the area of maintenance of traffic (M.O.T.) during construction. The real "Attention Getter" was a recent claim filed by a contractor in the amount of $120,000.00 for temporary traffic signals. As always, hind site/history is 20/20!

We all realize that the older concept of "maintenance of traffic, a lump sum" covering all traffic issues is no longer valid especially on major urban projects where traffic signals are interconnected.

This particular project required the contractor to maintain current levels of operation and the integrity of the existing coordinated traffic signal system at all times. The plans had notes and details concerning temporary loops, signal head adjustments, portable signals and temporary signals. However, the contractor's complaint was that pay item numbers and quantities should have been included with more details (complete set of plans).

One of the main reasons for the use of temporary traffic signals is more emphasis toward Mast Arm Design Criteria. If strain poles are proposed, the new installation can be built early in the contract and used for M.O.T. purposes with only minor adjustments necessary. However, when Mast Arms are proposed, temporary signals may be necessary between the times the existing signal must be removed and the installation of the final Mast Arm Design.

In Summary, all traffic signal designers are encouraged to fully evaluate all plans requirements related to M.O.T. plans and to make every effort to prevent any claims by the contractors. ❑

Right of Way Agreements

Brian Blanchard
District Design Engineer

Agreements/Final judgements are not consistently being incorporated into the plans. If a consultant receives a copy of a final judgement from the project manager containing design on right-of-way changes, it is important that these changes get incorporated into the plans. This has been an oversight in the past causing driveways, etc. to be constructed, then removed and constructed again. ❑

Incorporation of Construction Plan Changes

Bob Deal
District General Counsel

In an effort to assure that all construction plan changes made during litigation are actually incorporated into the construction plans, several meetings have been held during the past few weeks to establish a process for communicating all changes to the proper parties. I have suggested to Brain Blanchard and Gene Martin that legal can do its part in resolving these problems by getting authorization for a change in writing from Brian and then attaching to the final judgement a cover sheet notifying Brian of the change.

The cover sheet will notify Brian that the change, which he will have previously approved, is actually incorporated into the final judgement. Also, it will give the designer an indication of what the change is and where it is mentioned in the documents.

Of course, the first contact with Brian will usually be to get a verbal authorization. The attorney should follow up with a letter to Brian which will be signed by Brian and returned to the attorney. This authorization letter should later be attached to the cover sheet. ❑

Standard Guidelines for Traffic Signal Design and Installation

Brian Blanchard
District Design Engineer

The Project Managers have noticed that phase review comments from the Traffic Operation Department include many generic notes. Design consultants should request a copy of District Three's Standard Guidelines for Traffic Signal Design and Installation. This manual covers signal design requirements, signal plan notes, a signalization check list, guidelines for placement of advance loops, etc.*

This will help reduce the number of comments, responses to those comments and the need for multiple reviews. ❑

(Section C of this manual states that signal quantities shown are approximate only. For example, this would apply to a Traffic Operations push-button project). Please include these general notes in all future submittals.

Computerized Backup Calculations

Kenny Sapp & Paula Roberts
Design and Project Analysts

Cost overruns, supplementals and omissions in roadway projects are a major concern of the Florida Department of Transportation. To avoid confusion for contractors during construction, calculations of quantities are extremely important. The F.D.O.T. Plans and Preparation Manual, Basis of Estimates Manual and C.A.A.D. Roadway Standards Manual explain procedures of the design process. The Basis of Estimates Handbook states: "DOT Design personnel and consultants shall assume responsibility for the accuracy of quantities and their computations. The Department has been experiencing many claims from contractors and/or additional costs resulting from inaccurate plan quantities."

Roadway projects are to be created in which the alignment contains beginning coordinates, point numbers, curves, and chains that include their own specific coordinates. From this **stored** geometry data, all existing and proposed information for plan sheets, cross sections, etc. can be drawn graphically. The area quantities can then be automatically calculated using the point numbers specific to any area. To verify quantities, especially irregular areas like turnouts, radius areas, irregular median and median "nose" areas, a hard copy printout of computerized backup calculations should be included in the computation book along with the graphics (sketch or drawing of area). The graphics or "picture" of an area displaying only coordinate data with an area amount but without the computations is not sufficient verification. MicroStation by Bentley Systems, INC., states in an F.D.O.T. CADD Courier dated May 1996: "Several bugs in MicroStation 5.X have come to our attention....we should not be using the measuring tools from MicroStation 5.X at all. **MicroStation 95** measuring tools have been verified to work properly." Any computer program able to store graphics as a shape with point numbers, coordinates, curve data, bearings, distances, and closures for area information should be used. If computer programs are not available, hand calculations are sufficient for areas if the mathematical "proof" accompanies the sketch, but calculating by hand can be more time consuming.

Several instances have resulted causing the Construction Department to request verification of quantities. Backup calculations are **required** in the computation book; A sketch showing only its total area without including the mathematical calculations is unacceptable. In other words, showing only the answer without the proof is not sufficient. With the production and letting dates being extremely significant, having computer printed backup computations will save valuable time and therefore is financially beneficial to all involved. Also, if quantity errors happen to occur during any of the production, design, estimate or on site construction phases, computerized files can be revised, edited and printed rapidly. Without sufficient information, delays occur in the letting process that can result in costly overruns and a negative reflection of the consulting firm involved.

The Department of Transportation is pleased to assist consulting firms in every way possible with projects to reduce quantity errors causing delayed schedules or costly overruns. Examples of computer graphic areas with their required computations are available upon request. ❑

Traffic Plans Preparation

Clyde Green
Asst. Traffic Plans
Coordinator

In a recent Process Performance Review (PPR) it was found that a signing supplemental had occurred as a result of incorrect column lengths and/or sizes.

The designer must gather all required field data to utilize in determination if longer or larger size supports are required, clear zone could require signs to be removed. Total Design is the responsibility of the Designer, **not the contractor.**

The Plans Preparation Manual (PPM), Chapter Seven (7), lists guidelines and manuals to be used in preparation of signing, markings, lighting, and signalization.

Signing

Any non-standard sign (not listed in the Standard Hwy. Signs Manual (FHWA) or the Roadway and Traffic Design Standards) must be detailed in the plans. Some exceptions to this would be street name signs with special logo, Recreational and Cultural Interest Area signs, and informational type signs. These would be relocated and the responsible agency would replace these signs as required. It would be proper to notify the particular agency of the proposed D.O.T. Roadway Project.

The Elder Road Users Program and the Americans With Disabilities Act (in Curb & Gutter Sections) must be considered in addition to the given manuals and/or Guidelines used for Sign Design.

Signs are to be located by station plus chart or detailed plans. Sign numbers found in the Roadway and Traffic Design Standards must be utilized (FTP) in place of the corresponding sign number found in the MUTCD.

Speed Zones

Speed reduction should follow increments of 10 m.p.h. If field survey reveals something different, then Traffic Operations should be contacted for concurrence in correcting sign placement. There have been locations in the field where increasing speed signs have been located in too close a proximity.

Pavement Markings

Two Lane Roadways - It is the Designers responsibility to prepare a "No Passing Zone Study." This shall be signed and sealed by a Florida Registered Professional Engineer, (to be included in documentation of various Phase reviews) and made a part of the official Project file.

(Continued...)

District Three recommends all curb and gutter sections (urban) be detailed (1:400).

In reference to quantities, if marking quantity results in less than one kilometer then the meters (ml) pay item would be utilized. This applies to solid and skip markings. All markings are to be located by station reference (begin and end) when plans are detailed.

Signalization

Power Service - Contact the Departments utility section for correct type of service (overhead/underground, meter, non-meter).

Electrical Service Wire - The correct procedure for calculating quantity is to multiply the number of conductors by the linear distance.

Mast Arms - When changing from an existing spar. to mast arms the Designer must include Signalization to cover each phase of Maintenance of Traffic. This may require temporary signals, wood poles, diagonal or box span. The Department recommends Aerial detectors in lieu of pavement loops. These may be pole or span wire mounted, depending upon given circumstances. ❑

DISTRICT THREE DESIGN NEWSLETTER

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