# Basis of Estimates

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## Appendices (available online)

- Appendix 1: Past Updates/ Cover Letters
- Appendix 2: History- Obsolete Structures
- Appendix 3: Forms & Documentation
  Additional Online Information & Reports
Chapter 1
Updates and Registration

1.1 Registration

All users of the Basis of Estimates (BOE) are encouraged to register with the Contact Database at [http://www.dot.state.fl.us/projectmanagementoffice/contactdatabase.htm](http://www.dot.state.fl.us/projectmanagementoffice/contactdatabase.htm). Registration is free. Additional information about the contact database is available at the web page.

1.2 Update notices

An e-mail message is sent to all registered users when major updates occur, normally twice a year. The e-mail message will remind users to go to the Estimates Office web pages for the BOE, as well as to read the Summary of Major Changes, also known as the “Cover Letter”.

Special Update notices, Estimates Bulletin announcements, or other e-mail messages may be sent to registered users. These e-mail messages will only be sent when it is determined that an issue has a “significant impact” on a large number of users, with approval of the State Estimates Engineer.

Minor changes will be posted online, as needed. Note the revision date for the applicable file or chapter. A summary of minor changes will be posted online, with the major updates.

1.3 Proposed Changes

Users are encouraged to submit comments and suggestions for changes to the BOE. All items will be reviewed by the BOE Coordinator, and processed as follows:

a) Pay item Issues: Refer to Chapter 6 for additional information.

b) Formatting Issues: Evaluated by the BOE Coordinator.

c) Other Content Issues: Evaluated by the BOE Coordinator and/or the responsible office.

Issues forwarded to the C-Team are processed as detailed in Chapter 6. Other issues requiring review will be discussed with the State Estimates Engineer, and processed as recommended.

1.4 Submitting Proposed Updates

To submit a comment or suggestion, send the appropriate information to the BOE Coordinator or State Estimates Engineer. Contact Information is listed in Chapter 5, and on the State Estimates Office’s web pages.

Please include the complete pay item number (if applicable), a detailed explanation of the proposal, and contact information (if you would like a response).
1.5 Critical Dates for 2007-2008

In order to process changes in a timely manner, please submit proposed changes as early as possible. What may appear as a minor change for one office may result in major changes for another office. With assistance from the Coordination team, all issues will be resolved prior to announcement in the Summary of Major Changes.

The following dates are normal processing deadlines. Issues impacting a significant number of projects and/or dollar value may require longer or shorter processing times, as recommended by FDOT managers.

<table>
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<th>Deadline</th>
<th>2007 Mid-Year</th>
<th>2008 Edition</th>
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<td>October 1, 2007</td>
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<td>Manager’s sign-off*</td>
<td>March 2007</td>
<td>September 2007</td>
<td>March 2008</td>
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<td>Manager’s Issues Meeting*</td>
<td>March 2007</td>
<td>September 2007</td>
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<td>March 2007</td>
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<td>Plans Preparation Manual**</td>
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<td>Design Standards**</td>
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<tr>
<td>Other affected manuals and/or handbooks**</td>
<td>varies</td>
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*Exact dates to be determined.  
**Contact the responsible office for critical dates and update procedures. Specifications, manuals, and handbooks may take 6-18 months from start to implementation.
Chapter 2
Units of Measure

2.1 Abbreviations
Listed below are selected abbreviations used in the Basis of Estimates. For a more complete list of abbreviations, refer to Design Standards, Index No. 001.

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<td>CY</td>
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<td>PW</td>
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<td>SF</td>
<td>Square Foot</td>
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2.2 CONVERSION FACTORS

**Linear Measure**
- 25.4 mm/in
- 0.03937 in/mm
- 0.3048 m/ft
- 3.2808 ft/m
- 0.9144 m/yd
- 1.0936 yd/m
- 1.609 km/mi
- 0.621 mi/km

**Area Measure**
- 9 ft²/yd²
- 0.836 m²/yd²
- 1.2 yd²/m²
- 0.40 ha/acre
- 4047 m²/acre
- 2.477 ac/ha
- 43,560 ft²/acre
- 4840 yd²/acre
- 640 ac/mi²
- 0.386 mi²/km²
- 2.590 km²/mi²

**Volume, Liquid Measure**
- 1728 in³/ft³
- 0.028 m³/ft³
- 0.765 m³/yd³
- 27 ft³/yd³
- 0.2642 gal/l
- 3.785 l/gal

**Force, Weight Measure**
- 2.205 lb/kg
- 1.10 TN/MT
- 0.907 MT/TN (short ton)
- 2000 lb/ton (short ton)
- 1000 kg/MT

Additional items to be added upon request.
Chapter 3

Alphabetical Index

This list is currently under review and will return upon completion.

The listing on the following pages is provided to assist the user with locating item numbers. **Inclusion of items on this list does not guarantee that the item is currently valid.** Refer to Chapters 11 through 20 and/or a Master Pay Item List for availability of specific pay item numbers.
Chapter 4

Blank- for future enhancement
Chapter 5
Contact Lists

The Basis of Estimates, including the details and structure, is the result of coordination between District Estimates Offices and Central Office Design, Construction, and Maintenance. Issues are identified in the districts, options are proposed through the Responsible Offices, and finally, recommendations are presented for management approval and statewide implementation.

In general, Designers should coordinate with the Project Manager. Pay item issues should be forwarded through the District Estimates and Specifications Coordinator(s) to the Central Office BOE Coordinator. Issues that require major changes (plans, standards, specifications, pay items, or other manuals) will be coordinated between the Responsible Offices, and any recommendations will be forwarded from the Coordination Team. Refer to the tables below for District and Responsible Office contacts.

CENTRAL OFFICE COORDINATORS

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<thead>
<tr>
<th>CENTRAL OFFICE</th>
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<tr>
<td>Roadway Design</td>
<td>Cheryl Adams</td>
<td>(850) 414-4327</td>
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<tr>
<td>Estimates, Engineering Support Services</td>
<td>Melissa Hollis</td>
<td>(850) 414-4182</td>
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<tr>
<td>Basis of Estimates</td>
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<tr>
<td>Long Range Estimates</td>
<td>Dale Stanley</td>
<td>(850) 414-4197</td>
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<tr>
<td>TRNS*PORT PES/CES</td>
<td>Paul Herring</td>
<td>(850) 414-4179</td>
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<td>Final Estimates</td>
<td>David Chason</td>
<td>(850) 414-4171</td>
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<td></td>
<td>Sherry Valdez</td>
<td>(850) 414-4249</td>
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<tr>
<td>Specifications</td>
<td>Clinton Shaw</td>
<td>(850) 414-4612</td>
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<td></td>
<td>Frances Thomas</td>
<td>(850) 414-4101</td>
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<tr>
<td>Construction</td>
<td>Stefanie Maxwell</td>
<td>(850) 414-4314</td>
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<tr>
<td>Maintenance</td>
<td>Deanna Carroll</td>
<td>(850) 410-5757</td>
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<tr>
<td>CADD</td>
<td>Bill Gerry</td>
<td>(850) 245-1600</td>
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## DISTRICT COORDINATORS

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<td>First</td>
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<tr>
<td></td>
<td>John Previte</td>
<td>(863) 519-2679</td>
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<td></td>
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<td></td>
<td>Teresa Thrasher</td>
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<td>W.C. Cobb</td>
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<td>Shane Adams</td>
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<td>Ben Burton</td>
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<td>Sixth</td>
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<td>Hong Benitez</td>
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<td>Rubin Rivero</td>
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<td>Jason Spilak</td>
<td>(813) 975-6799</td>
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<td>Beth Carlson</td>
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<td>Turnpike</td>
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<td>Don Brackins</td>
<td>(407) 532-3999 x3437</td>
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<td>Cheri Sylvester</td>
<td>(407) 264-3087</td>
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Additional names may be added upon request of District Office.
### CONTACT PERSONS - BY PAY ITEM NUMBER RANGE

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<th>CENTRAL OFFICE COORDINATOR</th>
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<td>100-102</td>
<td>MOT</td>
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<td>850-414-4267</td>
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<td>Drainage</td>
<td>Joshua Boan</td>
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<td>850-414-5267</td>
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<td>Joshua Boan</td>
<td>850-414-5266</td>
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<td>Air Quality</td>
<td>Jeff Caster</td>
<td>850-414-5267</td>
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<td>Decontamination/Hazardous Materials</td>
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<td>300-399, except 346-347</td>
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<td>Vegetation/Irrigation</td>
<td>Jeff Caster</td>
<td>850-414-5267</td>
</tr>
<tr>
<td></td>
<td>Wetland Monitoring</td>
<td>Jeff Caster</td>
<td>850-414-5267</td>
</tr>
<tr>
<td>600-699</td>
<td>Traffic Control Devices (Signals)</td>
<td>Chester Henson</td>
<td>850-414-4117</td>
</tr>
<tr>
<td>700-714</td>
<td>Traffic Control</td>
<td>Chester Henson</td>
<td>850-414-4117</td>
</tr>
<tr>
<td>715</td>
<td>Traffic Control- Lighting</td>
<td>Chester Henson</td>
<td>850-414-4117</td>
</tr>
<tr>
<td>720-740</td>
<td>Incidental Construction- Other</td>
<td>Andy Keel</td>
<td>850-414-4323</td>
</tr>
<tr>
<td>741-749</td>
<td>Incidental Construction- Traffic Monitoring (TMS)</td>
<td>Kip Jones</td>
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<td>750-770</td>
<td>Incidental Construction- Other</td>
<td>Andy Keel</td>
<td>850-414-4323</td>
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<tr>
<td>780-789</td>
<td>Intelligent Transportation Systems (ITS)</td>
<td>Gene Glotzbach</td>
<td>850-410-5616</td>
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<tr>
<td>800-899</td>
<td>Mass Transit (Railroad)</td>
<td>Ken Weldon</td>
<td>850-414-4364</td>
</tr>
<tr>
<td>1000-1999</td>
<td>Utilities</td>
<td>Ken Weldon</td>
<td>850-414-4364</td>
</tr>
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</table>
Chapter 6
Pay Items

6.1 General

Occasionally a project requires the use of a pay item that is not currently active in the Master Pay Item Listing, or not defined in the Pay Item Structure. When this occurs, a request must be submitted. All pay item requests must go through the District Estimates Engineer. See the instructions below for Opening Pay Items (Items which are listed on the pay item structure) or Requesting New Items (Items which require a new/expanded structure).

Note: According to the Plans Preparation Manual, Volume II, Chapter 2, items should be loaded for a project at Phase II. Quantities should be completed in Phase III. Due to processing times noted below, items should be requested as soon as a need is identified. DO NOT WAIT until Phase III or IV submittals are due.

Note: The Specifications Office requires that Technical Special Provisions (TSPs) be submitted along with new pay item requests. To avoid production delays, TSPs should be submitted for District Review as soon as a need is identified. Refer to the Specifications Office’s web page at www.dot.state.fl.us/specificationsoffice for additional instructions.

6.2 Opening Pay Items

For items included in the Pay Item Structure, but not currently open on the Master Pay Item list, submit the following information via e-mail to the District Estimates Engineer:
- Financial Project ID,
- Letting date,
- FDOT project manager’s name,
- Pay item number and description,
- Cost data: Supplier (name, address, phone number) and unit price. (For commonly used items, a related pay item number is acceptable),
- Contact name and phone number.

For Tech Spec items, coordinate with the District Specifications Office prior to submitting pay item request.
TO: District Estimates Engineer
Copy: Project Manager
From: Designer
Subject: Pay Item Request, Project 123456-1-52-01

Please open the following Pay Item(s) for Project 123456-1-52-01, scheduled for 01/01
letting:

0123-456 Item Description (size)(shape defined in structure), EA
   The Tech Spec for this item has been approved the District Specifications Office, as
   included/attached below.

0123-457 Item Description (size in structure), LS
   Covered by specification Section 123.

Requested By: Joe Designer, ABC Company, phone 850-555-1212.

The District Estimates Engineer will review the request, verify specification status as
needed, and forward the information to the TRNS*PORT Coordinator in the State Estimates
Office.

While most requests are completed within 2 hours, please allow up to 2 working days
for items to be opened. Upon completion of the request, a “reply to all” e-mail will be sent
so that the item(s) may be loaded on the identified project(s).

6.3 Requesting New Items
To expand or request a new pay item structure, form 600-000-02 must be completed and
submitted to the BOE Coordinator, either by the District Estimates Office or the responsible
office, as listed in Chapter 5. Detailed Instructions for completing the form are listed below.
Information for the form includes:
   Item Description and suggested unit of measure,
   Proposed pay item structure (if applicable for items with multiple sizes, functions,
   etc.)
   Specifications (attach proposed modification, Developmental Specification, and/or
   Technical Special Provision)
   Supporting information (drawings, Manufacturer’s literature, etc.), if available
   Cost data: Supplier (name, address, phone number) and unit price. (For commonly
   used items, a related pay item number is acceptable),
   Contact name, e-mail address, and phone number (Designer and/or Project
   Manager)
Financial Project ID & Letting Date

The District Estimates Engineer forwards the request to the BOE Coordinator. It is reviewed by the responsible office(s), Specifications Office, and then returns to the Estimates Office. Each office has the opportunity to indicate if the proposed change affects current documents (specifications, standards, and/or other manuals).

Requests for items with no known impact on specifications, standards, or other manuals (normally expanded sizes, shapes, etc.) will be completed within 2 working days*. Upon completion of the request, the originator will be contacted, so that the item may be loaded on the identified project.

*NOTE: While minor changes to the pay item structure can be completed within 2 hours, other changes may require additional time. When a pay item request MAY involve a new/changed specification, existing pay item, standard, and/or manual, the request will be forwarded to the responsible office and/or C-Team for evaluation. Updates to these items may involve extended industry review period(s) and coordination for implementation. Requests for new items should be submitted as early as possible in the design phase. Refer to the C-Team information below for process details.

6.4 Completing the Pay Item Request Form

The Pay item request form 600-000-02 is available at http://www2.dot.state.fl.us/proceduraldocuments/forms/forms.asp

To complete the form, the Originator completes the fields marked with an asterisks (*). The Originator may be a Consultant Designer (for project specific needs), an FDOT Designer (for new products, processes, etc.) or any FDOT Employee (for implementing policy or procedures).

Item Structure (Pay item number):

This number will be assigned by the Basis of Estimates Coordinator in the Central Office. Specification Section numbers will be selected with recommendations from the State Specifications Office. Refer also to Developmental Pay Items below.

Guidelines for new pay item structures 0123-456-789:
First three digits (123) match the Specification Section. See also Developmental Pay Items for special cases.

Digits 456-789 are right justified within the group.
Variables ABC-DEF may be used to define operation, size, shape, color, type, etc. when needed to separate items with significantly different cost. Variables that can be defined in the plans or specifications DO NOT need separate pay items, if the cost is similar. Contact the Basis of Estimates Coordinator for assistance.

When Install, Relocate, or other non-furnish operations are defined, the remaining variables may be blank or zero. These should be clearly indicated with the structure.

*Description:
Describe the new pay item so that this "name" best relates to future users what this item is used for. The same name will be used for English & Metric lists; therefore, dimensions or unit specific names should be used at the structure level.

*Unit of measure:
A maximum of two spaces used to abbreviate the method of measure for this item. (Refer to Section 3 of the Basis of Estimates for acceptable units.) Include both English and Metric units.

*Requested Action:
Check the type of action requested: New Item or Permanent Block. When this item is to be processed with other items, note the related item(s), i.e. Item No. ###-abc-def, or "MOT items for updated standards"

*Structure:
The pay item structure ###-abc-def, should be used to define parameters which affect the price (i.e. size, shape, material), where variables “a” through “f” are detailed as needed. Additional parameters which do not affect the price may be detailed in the plans; DO NOT create additional pay item structures for these parameters. Limited structures can be used to encourage price competition between products that perform similar functions and/or provide similar end results.
Use additional sheet(s) if necessary.

*Detail Information:
Describe the item, application, recommended use, materials, etc. This information will be used to help identify the appropriate pay item, and cost estimate distribution. This information is used in the Basis of Estimates detail to assist designers in the selection and quantity calculations of an item.

Text should include "Use When…", "Do not use when…", "Estimate xx items per…", and/or "Item(s)… are recommended/required when this item is used."

*Method of Measure, Accuracy:
Unit of Measure & Accuracy used for payment. Consider payment accuracy of similar items, as shown in the Basis of Estimates. Note: Calculation/Documentation may require higher level of accuracy in the plans and/or computation book.

*Plan Quantity:
Yes, if payment of item to be based on Plan Quantity, subject to specifications. No, if payment to be based on Field Measurement.

Ensure that this selection matches compensation information in the applicable specifications.

Documentation-
*Specification- Section, Article; Tech Specs?:
For items with existing or related specifications (requests for items with new size, shape, or function), refer to the applicable Section number.

For project specific items without existing specifications (requests for items with limited use or project specific conditions), contact the District Specifications Office; a copy of the Technical Special Provision will be required with the pay item request form.

For new, general use items without existing specifications (requests for items based on changes to standards, specifications, and or policy), contact the State Specifications Office. The implementation of these items will be coordinated with all affected offices.

Specifications Submitted, Date:
List the name of the person originating the specification, and the date it was sent to the Specifications Office.

*Plans Prep Manual:
Refer to Volume and Chapter for applicable information. If a revision is necessary, contact the State Roadway Design Office to propose revision(s).

*Standards Index No(s):
Applicable Roadway and Traffic Design Standards, or Structures Design Standards, with index number(s). If a revision is necessary, contact the applicable office.

*CADD/COMP Form Number(s):
Applicable form(s) for documentation of quantities. Refer to Section 1 of the Basis of Estimates for current forms.

*Plan Notes:
If plan notes will be required, provide sample text of note. (Plan notes should not replace or duplicate specification text.) All plan notes should be coordinated with the PPM text.

Other:
If use of this item is included in other documentation (Drainage, Pavement Design, Traffic Signals, or other Manual/Handbook), note applicable volume, chapter, or edition. If revisions are necessary, coordinate changes with applicable office.

Responsible Office Approval, Date:
This is the Office and Contact Person listed in Chapter 5, generally within the Office of Design in Tallahassee.

Cost Data-
Related Pay Item(s), Unit Price, Additional Cost, Availability:
For items similar in cost, provide related item numbers. (This information is used to assist in Preliminary Cost Estimates.) If no similar item exist, provide price and availability information. Unit price includes cost of material; additional cost to include installation, delivery, incidental materials, etc. Availability to include suppliers or manufacturers.
Estimator’s Approval, Date:
State Estimates Office, Preliminary Estimates Section will review of the proposed price and/or related items.

Originator-
Name, Date, Office, Phone, District:
The originator may be a Consultant or FDOT employee, currently working on the project for which the item is requested. This person should be able to answer any additional questions regarding the use/application of this item. Complete information as requested.

District Estimates Office Approval:
For Items originating in the districts, the District Estimates Engineer should sign, indicating that the form contents have been completed and reviewed.

Central Office Approvals-
Design Coordinator, Specifications Coordinator, BOE Coordinator, TRNS*PORT Coordinator:
Each person responsible for approval should verify that requested action is necessary, meets existing/proposed standards, guidelines, handbooks, etc, and not in conflict with existing item(s).

Implementation-
Effective Letting Date, C-Team Issue #, Summary Details:
The implementation information will be completed in the Central Office, following all approvals. Actions which require coordination between offices will be addressed by the Coordination Team, with approved implementation plans detailed in the Basis of Estimates Summary of Changes. Minor actions, not requiring an implementation plan, will be implemented immediately.

Master File- Item Number, Financial Project Number, and Project Letting Date:
If a project number is known, the item(s) will be opened upon approval and implementation. If the project number is unknown, the structure will be established, but the item will not be opened until requested.

6.5 Inactive Items
In an effort to remove unused pay items, those items not used within a 2 year period will be labeled as “inactive” and considered for temporary and/or permanent blocking.

Opening inactive items will require that the Designer follow the instructions for opening an item (i.e. submit an e-mail with the requested information, as described above. A copy of the Tech Spec may be required). The Central Office Estimates staff will request approval from the responsible office, prior to opening. Designers should allow up to an additional 2 working days for this approval.
If an inactive item remains unused for 3 years, the Estimates Office will recommend to the responsible office that the pay item structure be blocked. Once blocked, a pay item request form must be completed in accordance with Requesting new items, as described above.

6.6 Pay Item Reviews

When a major specification or standards change is made, the responsible office is requested to review the pay item structure to ensure that the affected items meet the needs of Design, Construction, Maintenance, and other industries. Historical use and item averages are available, but should not be the only consideration.

As recommended with new items, the pay item structure ###-abc-def, should be used to define parameters as needed. Some factors to consider when reviewing the pay item item structure:

a. What factors are most important to the Designer, Estimator, Supplier, Manufacturer, and/or Contractor? Can they be detailed in the plans? Are they included in the specification? Does it affect the price?

   Note: Not all factors should be weighted equally. Sometimes the installation (labor) is more significant than the materials.

b. Are there standards/specifications for the item?

   There may be 2 standard products and 8 “special” items. If the 2 standard items account for a significant percentage of applications, could the “special” items be combined under one “special” item?

Additional parameters which do not affect the price may be detailed in the plans; DO NOT create additional pay item structures for these parameters. Limited structures can be used to encourage price competition between products that perform similar functions and/or provide similar end results.

6.7 Coordination Team

A team representing Design, Construction, and Maintenance Offices has been established to coordinate the review and implementation of various issues. By working together, the team is able to ensure that pay items, specifications, and standards, as well as supporting handbooks and manuals, are available in a timely manner- with a coordinated implementation plan. Design Representatives include the persons from Roadway, Structures, Specifications, Standards, and Estimates. Construction and Maintenance are also represented. When necessary, representatives from other affected offices are requested to attend.

Issues may be submitted by any office or representative, but are normally the result of changes to pay items, specifications, and/or standards. Each office’s representative is encouraged to keep the team informed of issues that may impact others. Representatives’ names and contact information are listed in Chapter 5. When proposing major changes to the pay item structure, specifications or standards, please coordinate with the contact person(s) listed for the affected items.
Issues brought to the attention of the C-Team will be evaluated and processed on a “case-by-case” basis. Issues with minimal impact on others are noted, with little or no further C-Team activity. Issues with extensive impact may be assigned to a committee for further investigation. The result of C-Team activity should be a recommended implementation plan, complete with a brief history and resulting changes. Implementation will be scheduled to coincide with Specification, BOE, Standard, and Manual updates, when possible.

The State Estimates Office compiles information resulting from C-Team recommendations for the Summary of Major Changes included with each edition/update to the Basis of Estimates. Managers of the affected offices approve issues included in the summary. Overall approvals, from the Directors of the Office of Design and Highway Operations, are also included.

### 6.8 Developmental Pay Items (Trial Pay Item)

When an item is recommended for implementation while details are under review (specifications, standards, policy, etc.) a developmental pay item may be assigned. Developmental items are created for limited use, for a limited period of time, while the item is under review. A monitor will be assigned for each Developmental Item.

Developmental pay item numbers will be assigned as follows: (year)-(section)-(sequential use). The monitor’s name will be included with the structure. Any problems or concerns with these items, from either Design or Construction, should be directed to the monitor, in writing.

Contact the monitor prior to using a Developmental Pay Item. If the monitor approves the item for use, the monitor will e-mail the central offices of Design, Specifications and Estimates approving the use of that trial pay item number with specifications dated mm/dd/yy for a specific project.

Upon completion of the specification, standard, and/or policy change(s), the monitor will recommend that the item be opened for statewide implementation, the Coordination Team will recommend an implementation date, and a new pay item number will be assigned.

### 6.9 Related Documents
COMPUTATION BOOKS
The Computation Book(s) are to be prepared in accordance with the Department’s directive/procedure No. 700-050-001, Computation Methods for Design, Construction, and Final Estimates, and accompanying handbook. Included in the procedure are instructions for documentation of Lump Sum items, Plan Quantity items, as well as final measure items. This information is available online at www.dot.state.fl.us/construction.

ALTERNATIVE CONTRACTING USER’S GUIDE
It is the intention of the Department to use various techniques on a wide range of project types in order to determine which techniques work best with each project type. The goal of this program is to reduce the cost and time overruns, and thereby reducing the impact of construction on motorists, businesses and homeowners within the transportation corridor.

Most of the alternative contracting practices involve financial incentives to expedite work. Methods include A+B Bidding, Lane Rental, Design-Build, Bonus, Liquidated Savings, and Lump Sum Projects. *Note: For more detailed instructions, refer to the Department’s Alternative Contracting User’s Guide on the Construction Office’s web page at www.dot.state.fl.us/construction

PLANS PREPARATION MANUAL
The Roadway Design office maintains the Plans Preparation Manual (PPM). The manual sets forth geometric and other design criteria, as well as procedure for FDOT projects. This document is now available online at www.dot.state.fl.us/rrdesign
## 50- A- DESIGN / BUILD

<table>
<thead>
<tr>
<th>Notes</th>
<th>Details</th>
<th>Related Items</th>
<th>Forms</th>
<th>Documentation</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This item to be used for Districts letting Design-Build projects. This item to be used only when identified by the District as a &quot;Design-Build&quot; project. Include Initial Contingency Amount under 999-25 (2999-25) item.</td>
<td>Required 999-25 (2999-25) Recommended</td>
<td>Design SHTabQuantLS COMP 700-050-05</td>
<td>Design Contractor is responsible for design. The computation book, if required, will show lump sum tasks (lump sum constructed project pay items), as listed in the proposal.</td>
<td>PPM Chapter Other Standards Specifications</td>
</tr>
<tr>
<td></td>
<td>Required 999-25 (2999-25) Recommended</td>
<td>Forms Design SHTabQuantLS COMP 700-050-05</td>
<td>Documentation Design Contractor is responsible for design. The computation book, if required, will show lump sum tasks (lump sum constructed project pay items), as listed in the proposal.</td>
<td>References PPM Chapter Other Standards Specifications</td>
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<td>Forms</td>
<td>Documentation</td>
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<td>Forms</td>
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**Notes**

**Status**

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<tbody>
<tr>
<td>A= Operation</td>
</tr>
<tr>
<td>1 (Resurfacing)</td>
</tr>
<tr>
<td>2 (Roadway Construction)</td>
</tr>
<tr>
<td>3 (Roadway Reconstruction)</td>
</tr>
<tr>
<td>4 (Bridge Construction)</td>
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<tr>
<td>5 (Buildings)</td>
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<td>6 (Traffic Operations)</td>
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**Notes**

## 101- 1- MOBILIZATION

<table>
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<tr>
<th>Notes</th>
<th>Details</th>
<th>Related Items</th>
<th>Forms</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Consists of work and operations necessary to begin work on a project. Includes moving in equipment and personnel, establishing temporary offices, safety equipment and sanitary facilities. May include surveying, bond and insurance expenses. In some cases, may consist of security services and/or expenses associated with night work. For contracts with more than one project, the pay item for Mobilization will be shown on each project's Summary of Pay Items. An exception to this is when the contract contains a Joint Project Agreement (JPA); the Mobilization will not be shown on the Summary of Pay Items for the JPA; the cost of Mobilization will be included in the prime project.</td>
<td></td>
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<tr>
<td></td>
<td>Related Items Required</td>
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<tr>
<td></td>
<td>Forms Design SHTabQuantLS COMP 700-050-05</td>
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## 102- 1- MAINTENANCE OF TRAFFIC

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<th>Unit</th>
<th>LS/DA</th>
<th>Accuracy</th>
<th>Lump Sum (Day)</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

### Notes

Includes all items required to safely maintain traffic throughout a transportation work zone with minimal inconvenience to the public and fit into one of the following categories: 1) cannot reasonably be quantified; 2) cannot be addressed under current pay items; 3) are incidental to the operations necessary to safely maintain traffic throughout a work zone. Code the second unit of measure (number of days) from the construction day estimate. For contracts with more than one project, the pay item for Maintenance of Traffic will be shown on each project's Summary of Pay Items. An exception to this is when the contract contains a Joint Project Agreement (JPA): the Maintenance of Traffic will not be shown on the Summary of Pay Items for the JPA; the cost of Maintenance of Traffic will be included in the prime project.

### Related Items

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<th>Recommendation</th>
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<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
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</tbody>
</table>

| Design   | Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

### References

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

### Status

**Struct. 102- 1-** MOBILIZATION LS/LS
### Notes

#### 102- 2- AA  SPECIAL DETOUR

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<tr>
<th>Unit</th>
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<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
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</tr>
</thead>
</table>

**Notes**

**Details**

Consists of work and materials necessary to construct a diversion (Temp Roadway). The quantities for major items necessary for the Special Detour shall be shown in the plans but paid for under Special Detour. Items that will be used in the Special Detour that will remain as part of the final product will be paid for under the appropriate pay item (i.e., earthwork). Show the limits of each Special Detour in the plans. Traffic control devices, warning devices, barriers, signing and pavement markings will be paid for separately.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
<td>COMP 700-050-05</td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

Struct.  102- 2- AA  SPECIAL DETOUR  LS/LS

AA = Detour Number
1 (First Detour Of Several)
2 (Second Detour Of Several)
3 (Third Detour Of Several)
4 (Fourth Detour Of Several)
N (Nth Detour Of Several)
N = 1 Thru 56

**Notes**

#### 102- 3-  COMMERCIAL MATERIAL FOR DRIVEWAY MAINTENANCE

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
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</tr>
</thead>
</table>

**Notes**

**Details**

Consists of furnishing and placing suitable material which may be necessary for providing safe access to businesses and residences affected by the construction. If authorized, portions of this material may be salvaged and reused at other driveways along the length of the project. Use 250 cubic yards per mile (200 cubic meters per kilometer) on rural projects and 500 cubic yards per mile (400 cubic meters per kilometer) on urban projects. Use 250 cubic yards (200 cubic meters) as a minimum. The final quantity shall be determined by truck measurement, loose volume. For final quantity, measure the width, height, and length inside the truck bed; calculate the...
volume by multiplying those three dimensions. Subtract 2% of the result to account for the hoist box and bed fillets.

### Related Items

**Forms**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tr>
<td>Construction</td>
<td>700-050-54</td>
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**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

### References

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

### Status

**Struct.** 102-3- COMMERCIAL MATERIAL FOR DRIVEWAY MAINTENANCE CY

### Notes

**102-11- SERVICE PATROL**

**Unit** MH **Accuracy** Hour **PlanQuantity?** no

**Details**

Used when it is determined during design that an active service patrol will be needed to keep traffic flowing. The Traffic Control Plan (TCP) or Technical Special Provisions should explain when and where the service patrol will be needed, as well as what type of services will be provided, and what type of service vehicle will be needed. Time shall be based on an 8 hour day.

### Related Items

**Forms**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
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<td>SHTabQuant</td>
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<tr>
<td>Construction</td>
<td>700-050-51</td>
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</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | All field records are required for this item. Final payment is based on field book/records. |

### References

- PPM Chapter
- Other
- Standards Index No. 600
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

### Status

**Struct.** 102-11- SERVICE PATROL MH

---

Details and Structure: Complete
## Notes

### 102-14-
**TRAFFIC CONTROL OFFICER**

<table>
<thead>
<tr>
<th>Unit</th>
<th>MH</th>
<th>Accuracy</th>
<th>Hour</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>Refer to 999-102 for Speed/Law Enforcement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Details| Provide uniformed traffic control officers, including marked law enforcement vehicles, to assist in controlling and directing traffic in the work zone ONLY when the following types of work is necessary on projects:  
* traffic control in a signalized intersection when signals are not in use,  
* when standard index no. 619 (moving operations) are used on Interstate at nighttime and required by the plans,  
* when pacing/rolling blockade specification is used (Tech Spec Recommended).  
The Department will include pay item 102-14 for officers directing traffic as defined above.  
For Speed and Law Enforcement officers, see pay item 999-102 |

### Related Items
- **Required**: 999-102-xxa
- **Recommended**: 999-102-xxa

### Forms
- **Design**: SHTabQuant  
  COMP 700-050-03
- **Construction**: 700-050-50

### Documentation
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction**: All field records are required for this item. Final payment is based on field book/records.

### References
- **PPM Chapter**:  
- **Other**:  
- **Standards**: Index No. 619  
- **Specifications**:  
  Plan Detail and/or Tech Spec Required

### Status

### Structures
<table>
<thead>
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<th>TRAFFIC CONTROL OFFICER</th>
<th>MH</th>
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<tbody>
<tr>
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<td>Refer to 999-102 for Speed/Law Enforcement</td>
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</table>

## Notes

### 102-60-
**WORK ZONE SIGN**

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<th>ED</th>
<th>Accuracy</th>
<th>Each Day</th>
<th>PlanQuantity?</th>
<th>no</th>
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<tbody>
<tr>
<td>Notes</td>
<td>Refer to 999-102 for Speed/Law Enforcement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Details</td>
<td>Used for the purpose of informing motorists of the work zone and work zone related (i.e. temporary regulatory or temporary route) conditions that will be encountered. Tabulate the number of individual sign panels (20 square feet or less)/(1.9 square meters or less) as recorded per day for each phase of the project. When multiple signs are located together on a single or multiple posts, each sign panel will be paid for individually. Non-standard sign panels (greater than 20 square feet)/(greater than 1.9 square meters) will be detailed in the plans and paid for under Maintenance of Traffic, Lump sum.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Related Items
- **Required**:  
- **Recommended**:  

### Forms
- **Design**: SHTabQuant  
  COMP 700-050-03
- **Construction**: 700-050-51

### Documentation
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  

### Details and Structure: Complete
### Structural 102-60- WORK ZONE SIGN

**Notes**

- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Details**

- Used for the purpose of assisting the motorists find the appropriate business driveway entrance while the roadway is under construction. The quantity is based on one business sign for each business whose driveway entrance could be affected. When several businesses share a common driveway, one sign per common driveway should be estimated.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<tr>
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</tr>
<tr>
<td>Construction</td>
<td>700-050-51</td>
</tr>
</tbody>
</table>

**References**

- **PPM Chapter**
- **Other**
- **Standards** Index No. 600
- **Specifications**

### Structural 102-61- BUSINESS SIGN

**Notes**

- Used for the purpose of assisting the motorists find the appropriate business driveway entrance while the roadway is under construction. The quantity is based on one business sign for each business whose driveway entrance could be affected. When several businesses share a common driveway, one sign per common driveway should be estimated.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<tr>
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<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
<td>700-050-51</td>
</tr>
</tbody>
</table>

**References**

- **PPM Chapter**
- **Other**
- **Standards** Index No. 600
- **Specifications**

### Structural 102-71- AB TEMPORARY BARRIER WALL

**Notes**

- Included for the protection of the traveling public and workers. May be moved from one location to another on the project. Estimate length of wall needed for each phase, and

**Related Items**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
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<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

**References**

- **PPM Chapter**
- **Other**
- **Standards** Index No. 600
- **Specifications**

---

**Details and Structure:** Complete
then choose the maximum length anticipated for any one phase to be paid for as Temporary Barrier. Phasing in plans must indicate adequate quantity of barrier prior to calling for relocating of barrier. Add the estimated lengths for the remaining phases together and pay for under Barrier Wall (Temporary) Relocate. When this item is used, include lights or glare screen.

QPL- Temporary barrier wall shall conform to the requirements of the pre-approved alternatives listed on the Department's Qualified Products List (QPL), unless otherwise called for in the plans.

NOTE: For bridge applications, ONLY Type K permitted.

### Related Items

<table>
<thead>
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<th>Recommended</th>
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<tbody>
<tr>
<td>102- 79 or 102- 94-xab</td>
<td>102- 81- 1, and/or 102- 89-xxa</td>
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### Forms

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<td>SHTabQuant</td>
<td>Refer to Comp Book</td>
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### Documentation

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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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### References

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### Standards

- see detail

### Specifications

<table>
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<tr>
<td>6, 7, 13</td>
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### Status

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<tbody>
<tr>
<td>102- 71- AB TEMPORARY BARRIER WALL LF</td>
</tr>
</tbody>
</table>

A = Operation
1 (Furnish & Install)
2 (Relocate)
B = Material
1 (Concrete)
2 (Waterfilled)
3 (Low Profile Concrete)
4 (Type K) bridge applications

### Notes

Effective 1/04 letting: B= 3, 4

### 102- 73-

<table>
<thead>
<tr>
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<th>Accuracy</th>
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<td>Linear Foot; 10th of a Meter</td>
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### Details

<table>
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<tbody>
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<td>Design</td>
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<tr>
<td>SHTabQuant</td>
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<table>
<thead>
<tr>
<th>Documentation</th>
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<td>Design</td>
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<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
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</table>
### TEMPORARY GUARDRAIL LF

**Unit**: ED  
**Accuracy**: Each Day  
**PlanQuantity?**: no  

**Details**: Included for the protection of workers and the public from hazards within the traffic control zone. The designer is not to add plan notes specifying one type of barricade (Type I, II, DI, VP, or Drum). Note: DI = Direction Indicator Barricade, which is shown on Index 600. Estimate for each Traffic Control Plan phase based on the type of operation and duration anticipated as follows: Quantity= (Length of Setup / Barricade Spacing) X Phase Duration.

**Related Items**

- **Required**: SHTabQuant  
- **Recommended**: COMP 700-050-03  
- **Design**:  
- **Construction**: 700-050-51  

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 400  
- **Specifications**

**Prep & Doc Manual Chapter(s)**: 7, 13

---

### TEMPORARY BARRICADE

**Unit**: ED  
**Accuracy**: Each Day  
**PlanQuantity?**: no  

**Details**: Included for the protection of the public from hazards within the traffic control zone. The designer is not to add plan notes specifying one type of barricade (Type I, II, DI, VP, or Drum). Note: DI = Direction Indicator Barricade, which is shown on Index 600. Estimate for each Traffic Control Plan phase based on the type of operation and duration anticipated as follows: Quantity= (Length of Setup / Barricade Spacing) X Phase Duration.

**Related Items**

- **Required**: SHTabQuant  
- **Recommended**: COMP 700-050-03  
- **Design**:  
- **Construction**: 700-050-51  

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 600  
- **Specifications**

**Prep & Doc Manual Chapter(s)**: 7, 13

---

### ADVANCE WARNING ARROW PANEL

**Unit**: ED  
**Accuracy**: Each Day  
**PlanQuantity?**: no  

**Details**: Included for the purpose of providing advanced warning of a lane closure. (Not intended for lane shifts.) Estimate the number needed for each Traffic Control Plan phase times the phase duration. Note: per specifications, there is a 5 day minimum per each.

**Related Items**

- **Required**: SHTabQuant  
- **Recommended**: COMP 700-050-03  
- **Design**:  
- **Construction**: 700-050-51  

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 600  
- **Specifications**

**Prep & Doc Manual Chapter(s)**: 7, 13

---

Details and Structure: Complete
Related Items | Required | Recommended
--- | --- | ---
Forms | Design | SHTabQuant | COMP 700-050-03
 | Construction | 700-050-51 | 
Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. | 
 | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). | 
References | PPM Chapter | 
 | Other | 
 | Standards | Index No. 600 | 
 | Specifications | 
 | Prep & Doc Manual Chapter(s) | 7, 13 | 

Status

Struct. 102-76- ADVANCE WARNING ARROW PANEL ED

Notes

102-77- HIGH INTENSITY FLASHING LIGHT, TEMPORARY, TYPE B

Unit ED | Accuracy Each Day | PlanQuantity? no

Details Included as a safety device, to draw attention to the warning sign. The lights shall be mounted on the first advanced warning sign where only one sign is used, and on the first and second advanced warning signs where two or more signs are used. This applies to all approaches to any work zone. When this item is used, item 102-60 (2102-60) must be used.

Related Items | Required | Recommended
--- | --- | ---
Forms | Design | SHTabQuant | COMP 700-050-03
 | Construction | 700-050-51 | 
Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. | 
 | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). | 
References | PPM Chapter | 
 | Other | 
 | Standards | Index No. 600 | 
 | Specifications | 
 | Prep & Doc Manual Chapter(s) | 7, 13 | 

Status

Struct. 102-77- HIGH INTENSITY FLASHING LIGHT, TEMPORARY, TYPE B ED

Notes

102-78- TEMPORARY REFLECTIVE PAVEMENT MARKER

Details and Structure: Complete
### 102- 78-  
**TEMPORARY REFLECTIVE PAVEMENT MARKER**  

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Class A, B, D, or E RPMs used to supplement pavement markings, as shown in Index 600.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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**Documentation**

| Design | Location in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter  
Other  
Specifications  
Index No. 600, 17352  
Prep & Doc Manual Chapter(s) 7, 13

**Status**

102- 78-  
**TEMPORARY REFLECTIVE PAVEMENT MARKER**  

---

### 102- 79-  
**LIGHT- BARRIER WALL MOUNT, TEMPORARY,TYPE C STEADY BURN**

<table>
<thead>
<tr>
<th>Unit</th>
<th>ED</th>
<th>Accuracy</th>
<th>Each Day</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

These lights are placed on Barrier Wall (Temp), excluding low profile. The standard spacing will be:  
50’ on centers for transitions, 100’ on centers for curves, 200’ on centers tangents  
(15 meters on centers for transitions, 30 meters on centers for curves, 60 meters on centers for tangent);  
Curves that are flat enough to maintain a normal 2% cross slope shall have spacing equal to that of a tangent.  
QPL- Temporary barrier wall mount lights shall conform to the requirements of the pre-approved alternatives for temporary concrete or water filled barrier wall listed on the Department’s Qualified Products List (QPL).

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter  
Other  
Specifications  
Prep & Doc Manual Chapter(s) 700-050-51  
Prep & Doc Manual Chapter(s) 7, 13

---

Details and Structure: Complete
Struct. 102- 79- LIGHT- BARRIER WALL MOUNT, TEMPORARY, TYPE C STEADY BURN

Notes

102- 81- 2 CRASH CUSHION - GATING, TEMPORARY

<table>
<thead>
<tr>
<th>Unit</th>
<th>LO</th>
<th>Accuracy</th>
<th>Location</th>
<th>Plan Quantity?</th>
</tr>
</thead>
</table>

Notes
Details
Formerly known as "Impact Attenuator Modules"
Roadway Design permission needed before "sand barrels" may be used; requires special design
QPL- Temporary Gating Crash Cushions shall conform to the requirements of the pre-approved alternatives listed on the Department's Qualified Products List (QPL), unless otherwise called for in the plans.

Related Items Required Recommended
Forms Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other Standards Index 417, see detail
Specifications

Prep & Doc Manual Chapter(s)

-------------------

Status Inactive Structure

Struct. 102- 81- 2 CRASH CUSHION - GATING, TEMPORARY LO

Notes Contact Cheryl Adams prior to use. Replaces 102- 81-1, modules- EA

102- 89- A CRASH CUSHION, TEMPORARY

<table>
<thead>
<tr>
<th>Unit</th>
<th>LO</th>
<th>Accuracy</th>
<th>Location</th>
<th>Plan Quantity?</th>
</tr>
</thead>
</table>

Notes
Details
Formerly known as "Impact Attenuators"
Payment will be made based on each location of the crash cushion/attenuator.
Redirective cushions selected by contractor, subject to Design Standards. Restricted options to be detailed in plans and documented in project file.
QPL- Temporary Redirective Crash Cushions shall conform to the requirements of the pre-approved alternatives listed on the Department's Qualified Products List (QPL), unless otherwise called for in the plans.

Related Items Required Recommended
Forms Design SHTabQuant COMP 700-050-03
### Topic No. 600-000-002

**Basis of Estimates**

**2007 Edition**  
April 16, 2007

---

**Construction**  
Refer to Comp Book

**Design**  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**References**

<table>
<thead>
<tr>
<th>Standards</th>
<th>PPM Chapter</th>
<th>Other</th>
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<tbody>
<tr>
<td>See detail; Index No. 413, 415, 434, 432, 433, 435, 438, 439, 440, 441, 481, 493, 495, 497, 498</td>
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**Specifications**

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

**Struct.** 102- 89- A  
CRASH CUSHION, TEMPORARY  
LO

A = Type  
7 (Redirective Option)

---

#### 102- 90- BRIDGE OPERATOR

<table>
<thead>
<tr>
<th>Unit</th>
<th>DA</th>
<th>Accuracy</th>
<th>Day</th>
<th>Plan</th>
<th>Quantity?</th>
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<td></td>
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<td></td>
<td></td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

Future use will require Specification Development

This item covers the cost of furnishing a bridge tender during construction.

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
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<tr>
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<td>Construction</td>
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</table>

**Forms**

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

**Struct.** 102- 90-  
BRIDGE OPERATOR  
DA

---

#### 102- 94- AB GLARE SCREEN

<table>
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<th>Accuracy</th>
<th>Plan</th>
<th>Quantity?</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

---

Details and Structure: Complete
See barrier wall detail for measurement. To be used with Temporary Barrier Wall (Concrete).

### Related Items

#### Required
- **Design**: SHTabQuant
- **Construction**: 700-050-51

#### Recommended
- **Design**: COMP 700-050-03

### Forms

**Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Other**

### Standards

- **Specifications**

### Prep & Doc Manual Chapter(s)

#### SHTabQuant COMP 700-050-03

---

**Notes**

### Status

**Struct.**: 102-94-AB

**GLARE SCREEN**

<table>
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</tr>
</thead>
</table>

A = Operation
Blank (Furnish and Install)
1 (Relocate)

B = Wall Material
1 (Concrete)

---

**Notes**

### 102-98-A

**BARRICADE TYPE III (TO REMAIN)**

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

### Related Items

**Required**

**Design**: SHTabQuant

**Construction**: Refer to Comp Book

### Forms

**Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Other**

### Standards

- **Specifications**

### Prep & Doc Manual Chapter(s)

7, 13

---

**Notes**

### Status

**Struct.**: 102-98-A

**BARRICADE TYPE III (TO REMAIN)**

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

---

**Details and Structure**: Complete
A = Size
2 (6 Feet)

Notes

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<th>CHANGEABLE VARIABLE MESSAGE SIGN- TEMPORARY</th>
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<tbody>
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<td>Accuracy</td>
<td>Each Day</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
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Notes

Details

Should be considered for use in complex, high-density work zones. Messages must be simple, with a minimum number of words and lines, and should require no more than two displays of no more than two lines each. The Traffic Control Plan (TCP) shall include the location and messages to be displayed. Estimate the number needed for each traffic control plan phase, times the phase duration. Note: Per the specifications, signs will have a 5 day minimum, per each. Not to be used when standard signs are available. Refer to the Plans Preparation Manual for proper usage.

Related Items

<table>
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<td>Forms</td>
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<tr>
<td>Design</td>
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</tr>
<tr>
<td>Construction</td>
<td>700-050-03</td>
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</table>

Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|        |                                                           |
|        | Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

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Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 102-99- CHANGEABLE VARIABLE MESSAGE SIGN- TEMPORARY ED

Notes

<table>
<thead>
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<th>TEMPORARY TRAFFIC CONTROL SIGNAL</th>
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</tr>
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<tr>
<td>PlanQuantity?</td>
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Notes

Details

Estimate based on the number of completed installations (each signalized location) in operation on the project.

Related Items

<table>
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Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|        |                                                           |
|        | Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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<td>7, 13</td>
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**Status**

**Struct.** 102-104- A  
**TEMPORARY TRAFFIC CONTROL SIGNAL**  
**ED**

A = Type
1 (Portable)
2 (Fixed)

**Notes**

### 102-106- A  
**BARRIER WALL CONCRETE (QUICK CHANGE MOVABLE)**

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<tr>
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**Notes**

**Details**

**Related Items**

**Required**

**Recommended**

**Design**

SHTabQuant

COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter Other

**Standards Specifications**

Index No. 600

**Prep & Doc Manual Chapter(s)**

6, 7, 13

**Status**

Inactive Structure

**Struct.** 102-106- A  
**BARRIER WALL CONCRETE (QUICK CHANGE MOVABLE)**

A = Operation
1 (Furnish & Install) LF
2 (Lateral Relocation) EA
3 (Phase Relocation) LF

**Notes**

### 102-107-  
**TEMPORARY TRAFFIC DETECTION, INTERSECTION**

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<tr>
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<td>Day</td>
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**Notes**

Details and Structure: Complete
Identify intersections where required. Estimate number of intersections times number of contract days. Do not include "new" intersections. Payment will be for number of days Temp Traffic Detection Technology is used and authorized by Engineer.

**Details**

**Related Items**

**Forms**

<table>
<thead>
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**References**

PPM Chapter

Other Standards Specifications

**Prep & Doc Manual Chapter(s)**

**Status**

Structure: 102-107- TEMPORARY TRAFFIC DETECTION, INTERSECTION DA

**Notes**

**102-150- 1 PORTABLE REGULATORY SIGN**

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</tr>
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<td>PlanQuantity?</td>
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</table>

**Notes**

This device is part of the Motorist Awareness System (MAS). Design should work with Construction to determine the estimated days for each component of the motorist awareness system to be included in the contract. Consideration should be given that it may not be cost effective to use the MAS system on projects where it would be used for 20 days or less.

Portable Regulatory Sign (PRS): The purpose of this device is to highlight the regulatory speed for the work zone. A PRS is a trailer that has the regulatory sign mounted with flashing lights on each side of the sign. The lights are used to draw the driver's attention to the regulatory speed.

**Related Items**

**Forms**

<table>
<thead>
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<th>Required</th>
<th>Recommended</th>
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**References**

PPM Chapter

Other Standards Specifications

**Prep & Doc Manual Chapter(s)**

**Status**

Prep & Doc Manual Chapter(s): 6, 7, 13

Details and Structure: Complete
### Struct. 102-150-1 PORTABLE REGULATORY SIGN

#### Notes

**102-150-2 RADAR SPEED DISPLAY UNIT**

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#### Notes

**Details**

This device is part of the Motorist Awareness System. Refer to item 102-150-1 for additional detail information.

Radar Speed Display Unit (RSDU): The purpose of this device is to display the motorist's work zone speed. A radar speed display unit is a portable trailer that displays the speed of approaching motorists on a LED display panel. The radar mounted on the unit detects the speed. A regulatory sign with the posted speed is mounted above the LED display panel. The unit is fitted with a device which counts the number of vehicles passing the Radar Speed Display Unit. The counter device is capable of: digital readout of the total number of vehicles passing the radar speed display unit, and digital readout of the number of vehicles exceeding the speed limit shown on the radar speed display unit. The device can be set that only speeds greater than the work zone speed are displayed.

#### Related Items

<table>
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#### References

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<td>Specifications</td>
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#### Status

**Struct. 102-150-2 RADAR SPEED DISPLAY UNIT**

#### Notes

**102-150-3 SAFETY WARNING TRANSMITTER**

<table>
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<th>Accuracy</th>
<th>Each Day</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

**Details**

Valid through 12-31-2006.

This device is part of the Motorist Awareness System. Refer to item 102-150-1 for additional detail information.

Safety Warning Transmitter (SWT): The purpose of the SWT is to transmit a message to drivers with radar detectors that have the capability of receiving messages from a transmitter. The SWT can transmit to a radar detector an audible alert such as a "beep", a LED text message, or a synthesized voice message, depending on the type of radar detector a motorist has. This device is a small unit, which can be attached to any other traffic control device within the work zone. The effectiveness of this device is limited to motorists with radar detectors, so it is not considered an integral part of a motorist.
Highway Advisory Radio (HAR): This is a radio transmitter mounted on a portable trailer, which can be set-up in the work zone to advise motorists through their car radio of work zone information. Notice of lane closures, reasons for delays, advance warning of work zones, etc. Let motorists know what to expect while driving through the work zone. A Variable Message Sign (VMS) is used in conjunction with the HAR to inform the motorist of the AM frequency to tune to in their car radio. The HAR can generally transmit messages in a 2.5 mile radius. It is very important that the messages broadcast be up to date and reflects actual work zone conditions.

The HAR should be considered as a supplement to the MAS, not an integral device. Use of a HAR should be in accordance with the Department's Highway Advisory Radio System User Manual. This manual is available from Maps and Publication. HAR use is restricted to daytime hours, and to the immediate vicinity of areas identified in the HAR manual. The district Public Information Officer should be consulted prior to use of this device.

## 102-150-4 HIGHWAY ADVISORY RADIO

<table>
<thead>
<tr>
<th>Unit</th>
<th>ED</th>
<th>Accuracy</th>
<th>Each Day</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

### Notes
Valid through 12-31-2006.

### Details
This device is part of the Motorist Awareness System. Refer to item 102-150-1 for additional detail information.

**Highway Advisory Radio (HAR):** This is a radio transmitter mounted on a portable trailer, which can be set-up in the work zone to advise motorists through their car radio of work zone information. Notice of lane closures, reasons for delays, advance warning of work zones, etc. let motorists know what to expect while driving through the work zone. A Variable Message Sign (VMS) is used in conjunction with the HAR to inform the motorist of the AM frequency to tune to in their car radio. The HAR can generally transmit messages in a 2.5 mile radius. It is very important that the messages broadcast be up to date and reflects actual work zone conditions.

The HAR should be considered as a supplement to the MAS, not an integral device. Use of a HAR should be in accordance with the Department's Highway Advisory Radio System User Manual. This manual is available from Maps and Publication. HAR use is restricted to daytime hours, and to the immediate vicinity of areas identified in the HAR manual. The district Public Information Officer should be consulted prior to use of this device.
### Specifications

#### Prep & Doc Manual Chapter(s)

6, 7, 13

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#### Status

<table>
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<th>102-150-4</th>
<th>HIGHWAY ADVISORY RADIO</th>
<th>ED</th>
</tr>
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</table>

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#### Notes

**102-911- A**

**PAVEMENT MARKING REMOVABLE- WHITE/BLACK**

- **Unit**: LF; M1; SF; M2
- **Accuracy**: Linear Foot; 10th of a Meter; Square Foot; Square Meter
- **PlanQuantity?**: no

**Details**

Use of removable work zone pavement markings shall be as defined by 102-10 of the specifications.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 600
- **Specifications**

**Prep & Doc Manual Chapter(s)**

7, 13

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#### Status

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<th>PAVEMENT MARKING REMOVABLE- WHITE/BLACK</th>
<th>LF; SF</th>
</tr>
</thead>
</table>

- **A = Type**
  1 (Skip) LF
  2 (Solid) LF
  3 (Other) SF

**Notes**

**102-912- A**

**PAVEMENT MARKING REMOVABLE- YELLOW**

- **Unit**: LF; M1; SF; M2
- **Accuracy**: Linear Foot; 10th of a Meter; Square Foot; Square Meter
- **PlanQuantity?**: no

**Details**

Use of removable work zone pavement markings shall be as defined by 102-10 of the specifications.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Recommended**: COMP 700-050-03

---

Details and Structure: Complete
Standards  Index No. 600
Specifications

Notes

Status
Struct.  102-912- A  PAVEMENT MARKING REMOVABLE- YELLOW  LF; SF

A = Type
1 (Skip) LF
2 (Solid) LF
3 (Other) SF

Related Items
Forms  Required  Recommended
Design  SHTabQuantLS  COMP 700-050-05

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of
quantities sheet in the plans, or detail calculations in the computation book.

Construction  Final pay quantity will be PLAN QUANTITY with proper consideration for
Specification tolerances.

References  PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)  6, 7, 13

Details and Structure: Complete
**104- 1- ARTIFICIAL COVERINGS FOR EROSION CONTROL**

**Unit**  SY; M2  **Accuracy** Square Yard; Square Meter  **PlanQuantity?** no

**Notes**

This item may be used for two purposes. Estimate and/or calculate according to the following information. The total quantity is the sum used for the two purposes below. The quantity and purpose of each should be noted in a pay item footnote.

**FOR PAUSES IN CONSTRUCTION:** Used for pauses in construction due to inclement weather or other circumstances. For this purpose, artificial coverings may be composed of natural or synthetic fiber mats, plastic sheeting or netting. Estimate 1% of the total permanent grassing area, where the total grassing area is defined as the sum of the seeding + seeding and mulching + sodding areas. Coverings used for this purpose are typically removed when construction resumes.

**FOR EROSION CONTROL:** Used for erosion control that facilitates plant growth, while permanent grass is established. Biodegradable erosion control blankets are installed over a seeded area and may be used on fill slopes and in ditches, and left in place to biodegrade. Show in plans (plan view or tabulation of quantities) the locations where erosion control blankets are to be used. Calculate the quantity in square yards (square meters).

**Required**  
**Recommended**

**Forms**  
**Design**  SHTabQuant  **Construction**  Refer to Comp Book

**Documentation**  
**Design**  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Prep & Doc Manual Chapter(s)**  6, 7, 13

**Status**  
**Struct.**  104- 1-  **Temporary Work Structure**  **SY**

**Notes**

**104- 4- MOWING**

**Unit**  AC; HA  **Accuracy** 10th of an Acre; 10th of a Hectare  **PlanQuantity?** no

**Details**

This item is included for routine maintenance of existing, permanent, and temporary grassing until the project is completed. Coordinate the use of this item with Sections 570 and 580. DO NOT use this item when
payment for mowing is to be made under Section 570.  
Estimated Design Quantity: Use total grassed area, plus any other undisturbed areas within the project limits that need to be mowed during the life of the contract. Obtain the mowing cycle from the local Maintenance Office; multiply the area by the number of mowing cycles to be performed during the life of the contract. Convert units to acres (hectares), as necessary. Detail calculations in the comp book.

<table>
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| Documentation | Required | Recommended | 570-1-A, 580-1-A |
|---------------|----------|-------------|
| Design        | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction  | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

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Unit CY; M3  
Accuracy Cubic Yard; Cubic Meter  
PlanQuantity? no

Details  
Included for the purpose of controlling erosion and siltation. Use 12"x24"x6" bags (0.3 x 0.6 x 0.15 meter bags). Refer to index for applications and estimated quantity.

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| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

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| 104- 4-  
MOWING     | AC | |

104- 5-  
SANDBAGGING

Unit CY; M3  
Accuracy Cubic Yard; Cubic Meter  
PlanQuantity? no

Details  
Included for the purpose of controlling erosion and siltation. Use 12"x24"x6" bags (0.3 x 0.6 x 0.15 meter bags). Refer to index for applications and estimated quantity.

<table>
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<td>Construction</td>
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</tr>
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<td>Standards</td>
<td>Index No. 100, 102, 201</td>
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| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

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<th>Struct.</th>
<th>Notes</th>
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</table>
| 104- 5-  
SANDBAGGING     | CY | |
### 104- 6- TEMPORARY SLOPE DRAIN

<table>
<thead>
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<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
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**Notes**

**Details**

Base estimate as described by Roadway Standard Index No. 100, locations and lengths are required.

**Related Items**

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**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Design, Other
- **Standards**: Index No. 100
- **Specifications**: COMP 700-050-03

**Status**

<table>
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<th>Prep &amp; Doc Manual Chapter(s)</th>
<th>7, 13</th>
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### 104- 7- SEDIMENT BASIN

<table>
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<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Use when separate items for temporary erosion control features are included in the contract. Includes cost for riprap, fencing, baffles, piping, and earthwork, as indicated on Index. Refer to index for estimated quantity.

**Related Items**

<table>
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**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Design, Other
- **Standards**: Index No. 101, 241

**Status**

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<thead>
<tr>
<th>Prep &amp; Doc Manual Chapter(s)</th>
<th>7, 13</th>
</tr>
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</table>

**Details and Structure**: Complete
### Struct. 104-7- SEDIMENT BASIN

**Notes**

#### 104-9- SEDIMENT BASIN CLEANOUT

<table>
<thead>
<tr>
<th>Unit</th>
<th>CO; EA</th>
<th>Accuracy</th>
<th>Per Clean Out; Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**
Estimate one cleanout per sediment basin, Item 104-7 (2104-7), on project.

**Related Items**
- **Required**
- **Recommended**

**Forms**
- **Design**
  - SHTabQuant
  - COMP 700-050-04
- **Construction**
  - Refer to Comp Book

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- **Standards**
  - Index No. 101
- **Specifications**
- **Prep & Doc Manual Chapter(s)**
  - 6, 7, 13

**Status**

#### Struct. 104-9- SEDIMENT BASIN CLEANOUT

**Notes**

### 104-10-1 BALED HAY OR STRAW

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Valid through December 2006 letting; replaced by 104-10-2 Synthetic Bales

**Details**
Consists of construction of baled hay or straw (natural or synthetic bales) dams to protect against downstream accumulations of silt. The baled hay or straw dams shall be constructed in accordance with the details shown in the plans or Design Standards. Estimate time (in months) bales are to be in place at each location, and divide by 3 (rounding up to nearest whole) to determine the total number of replacements.

**Related Items**
- **Required**
- **Recommended**

**Forms**
- **Design**
  - SHTabQuant
  - COMP 700-050-03
- **Construction**
  - Refer to Comp Book

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - All field records are required for this item. Final payment is based on field book/records.

**References**
- PPM Chapter
- Other
- **Standards**
  - Index No. 102, 106
- **Specifications**

Details and Structure: Complete
### 104-10-1 BALED HAY OR STRAW

**Unit:** LF; M1  
**Accuracy:** Linear Foot; 10th of a Meter  
**PlanQuantity:** no

**Notes:**  
Effective January 2007; replaces 104-10-1 Baled Hay or Straw.  
**NOTE:** UNIT OF MEASURE CHANGED TO LINEAR FOOT

**Details:**  
Consists of synthetic bales to protect against downstream accumulations of silt. Dams shall be constructed in accordance with the details shown in the plans or Design Standards. Standard lengths for common inlets will be shown on the Design Standards. Note that synthetic bales may be cleaned or replaced as necessary. Do not estimate for replacement cycles; payment includes maintenance of the erosion control device (cleaning and/or replacement), until permanent erosion control measures are in place. All bales must be listed on the QPL, according to specification.

**Related Items**  
**Required:**  
- Design: SHTabQuant  
- Construction: Refer to Comp Book  
**Recommended:**  
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
- PPM Chapter
- Other
- Standards
- Specifications

---

### 104-10-2 SYNTHETIC BALE

**Unit:** LF; M1  
**Accuracy:** Linear Foot; 10th of a Meter  
**PlanQuantity:** no

**Notes:**  
Effective January 2007; replaces 104-10-1 Baled Hay or Straw.  
**NOTE:** UNIT OF MEASURE CHANGED TO LINEAR FOOT

**Details:**  
Consists of synthetic bales to protect against downstream accumulations of silt. Dams shall be constructed in accordance with the details shown in the plans or Design Standards. Standard lengths for common inlets will be shown on the Design Standards. Note that synthetic bales may be cleaned or replaced as necessary. Do not estimate for replacement cycles; payment includes maintenance of the erosion control device (cleaning and/or replacement), until permanent erosion control measures are in place. All bales must be listed on the QPL, according to specification.

**Related Items**  
**Required:**  
- Design: SHTabQuant  
- Construction: Refer to Comp Book  
**Recommended:**  
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
- PPM Chapter
- Other
- Standards
- Specifications

---

### 104-11-A FLOATING TURBIDITY BARRIER

**Unit:** LF; M1  
**Accuracy:** Linear Foot; 10th of a Meter  
**PlanQuantity:** no

**Notes:**  
To be included in areas where dredging, filling or other construction activities may cause turbidity in water. Refer to Design Standard Index 103. Used when turbidity standards may be exceeded, as shown in the plans and permit.

**Related Items**  
**Required:**  
- Design: SHTabQuant  
**Recommended:**  
- Design: COMP 700-050-03

---

Details and Structure: Complete
Standards

Specifications

Struct.  104- 11-  A FLOATING TURBIDITY BARRIER LF

A = Blank (Standard)
1 (Special) Plan Detail and/or Tech Spec Required

Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

PPM Chapter

Other

Index No. 103

Prep & Doc Manual Chapter(s)  6, 7, 13

------------------------

Struct.  104- 12-  A STAKED TURBIDITY BARRIER LF

A = Blank (Standard)
1 (Special) Plan Detail and/or Tech Spec Required

Notes

To be included in areas where continuous construction activities change the natural contour and drainage runoff. Should be installed across ditch lines and other temporary locations where construction may interfere with natural runoff. Refer to Design Standard Index 106.

Related Items

Forms

Design SHTabQuant

Construction COMP 700-050-03

Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Index No. 103

Prep & Doc Manual Chapter(s)  6, 7, 13

------------------------

Struct.  104- 12-  A STAKED TURBIDITY BARRIER LF

A = Blank (Standard)
1 (Special) Plan Detail and/or Tech Spec Required

Notes
### 104-13- A STAKED SILT FENCE

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter  
**PlanQuantity?**: no

#### Notes

Used for erosion control in areas where construction activities may cause silt runoff. Type III Silt Fence, as detailed in Index No. 102, should be used in most locations. Type IV fence has greater strength and height and should be used where a large sediment load is anticipated (steep fill slopes, long fill slopes, or a combination of both likely to produce a large sediment load). Each type of silt fence will have an estimated service life of 12 months. The quantity will be developed by estimating the time (in months) the fence will be in place at each location and dividing by 12 (rounding up to the nearest whole) to determine the number of replacements. The total length of fence at each location is determined by multiplying the length of fence at each location by the number of replacements.

#### Related Items

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<tr>
<td>Construction</td>
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</table>

#### References

PPM Chapter  
Other  
Standards  
Index No. 102, 106  
Specifications

#### Prep & Doc Manual Chapter(s)

7, 13

#### Status

Struct.  
104-13- A STAKED SILT FENCE LF

A = Type  
1 (Type III)  
2 (Type IV)

#### Notes

- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### 104-15- SOIL TRACKING PREVENTION DEVICE

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

#### Notes

Should be constructed at points of egress from unstabilized areas of the project to minimize offsite tracking of sediment. To minimize tracking from the roadway portion of the project, use one device per mile (one device per 2 kilometers) with a minimum of two per project. Include an additional device for each stormwater pond or mitigation site that is not adjacent to the roadway right-of-way. RRR projects should be handled on a case-by-case basis.

#### Related Items

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<tr>
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#### Notes

- Should be constructed at points of egress from unstabilized areas of the project to minimize offsite tracking of sediment. To minimize tracking from the roadway portion of the project, use one device per mile (one device per 2 kilometers) with a minimum of two per project. Include an additional device for each stormwater pond or mitigation site that is not adjacent to the roadway right-of-way. RRR projects should be handled on a case-by-case basis.
- Payment includes excavation, grading, pipe, filter fabric, aggregate, etc., as indicated in Design Standard 106. Separate payment is made for hay bales and silt fence.

Details and Structure: Complete
**104-15-**

**SOIL TRACKING PREVENTION DEVICE**

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity**: no

**Notes**
Include for the purpose of controlling siltation at curb and gutter inlets as shown in the Design Standards. Bags are to be 12"x12"x4" (0.3 m x 0.3 m x 0.1 m). Estimate 20 bags for each curb inlet.

**Related Items**

- **Required**: SHTabQuant  
- **Recommended**: COMP 700-050-03

**Forms**

- **Design**: Refer to Comp Book  
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other Standards**: Index No. 106  
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

---

**104-16-**

**ROCK BAG**

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity**: no

**Notes**
Include for the purpose of controlling siltation at curb and gutter inlets as shown in the Design Standards. Bags are to be 12"x12"x4" (0.3 m x 0.3 m x 0.1 m). Estimate 20 bags for each curb inlet.

**Related Items**

- **Required**: SHTabQuant  
- **Recommended**: COMP 700-050-03

**Forms**

- **Design**: Refer to Comp Book  
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other Standards**: Index No. 102  
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

---

**104-75-**

**RELOCATE FLOATING TURBIDITY BARRIER**

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter  
**PlanQuantity**: no

**Notes**
Valid through 12-31-06. Refer to Specifications and 104-11 item for payment.

---

Details and Structure: Complete
### Related Items

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### References

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<th>Index No. 103</th>
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<td>Specifications</td>
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</table>

| Prep & Doc Manual Chapter(s) | 7, 13 |

### Status

**Block Pending**

### Structure

| 104-75- | RELOCATE FLOATING TURBIDITY BARRIER LF |

### Notes

**109-71-A** FIELD OFFICE

| Unit | DA | Accuracy | Day | PlanQuantity? | no |

**Notes**

The designer should contact the District Construction Office to determine if this item should be used on a project. Consists of providing, furnishing and maintaining an Engineer's field office for exclusive use by the Department. Type B Fencing shall be used as detailed on Roadway and Traffic Design Standards, Index No. 452 for enclosing the field office. Payment for the fence shall be included in the bid price of the field office. The field office shall be a building or mobile trailer erected at locations selected by the engineer. The field office shall be paid for at the contract unit price per day. per the specifications, "Provide a Field Office for Department use beginning 10 working days before contract time begins, and remain for 30 days after final acceptance, unless the Department request removal earlier. Payment will be made for each day the field office is available for use by Department personnel."

**Details**

- The designer should contact the District Construction Office to determine if this item should be used on a project.
- Consists of providing, furnishing and maintaining an Engineer's field office for exclusive use by the Department.
- Type B Fencing shall be used as detailed on Roadway and Traffic Design Standards, Index No. 452 for enclosing the field office. Payment for the fence shall be included in the bid price of the field office.
- The field office shall be a building or mobile trailer erected at locations selected by the engineer. The field office shall be paid for at the contract unit price per day. per the specifications, "Provide a Field Office for Department use beginning 10 working days before contract time begins, and remain for 30 days after final acceptance, unless the Department request removal earlier. Payment will be made for each day the field office is available for use by Department personnel."

**Related Items**

<table>
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| Specifications |                  |

| Prep & Doc Manual Chapter(s) | 7, 13 |

### Status

**Block Pending**

### Details and Structure: Complete
### Struct. 109- 71- A  FIELD OFFICE  DA

<table>
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<tr>
<td>1 (300 Sq ft)</td>
</tr>
<tr>
<td>2 (600 Sq ft)</td>
</tr>
<tr>
<td>3 (900 Sq ft)</td>
</tr>
<tr>
<td>4 (1200 Sq ft)</td>
</tr>
<tr>
<td>5 (1500 Sq ft)</td>
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#### Notes

**110- 1- 1 CLEARING AND GRUBBING**

| Unit  | LS/AC; LS/HA | Accuracy | Lump Sum (1/100th of an Acre); Lump Sum (1/100th of a Hectare) | PlanQuantity? | yes |

**Notes**

Consists of complete removal and disposal of all vegetation, debris, drainage structures, flexible pavement, buildings or any other obstructions in all areas where excavation is to be done, or where embankments or structures will be constructed. This includes roadway area, ditch area, borrow and material pits, and areas where culverts or pipe lines will be constructed. Code the number of acres (hectares). Locate or define the scope of work involved on the contract plans. (Removal of concrete pavement, non-asphalt, to be paid under 110-4- (2110-4-))

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tr>
<td>Design</td>
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<td>COMP 700-050-05</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Documentation**

| Design | Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

Struct. 110-1-1 CLEARING AND GRUBBING LS/AC

---

**110-2-1 CLEARING AND GRUBBING (FOR PUSH BUTTON CONTRACTS)**

| Unit  | AC; HA | Accuracy | 10th of an Acre; 10th of a Hectare | PlanQuantity? | no |

**Notes**

FOR PUSH BUTTON CONTRACTS ONLY

Consists of complete removal and disposal of all vegetation, debris, drainage structures, flexible pavement, buildings or any other obstructions identified in the plans or
specifications. Locate or define the scope of work involved. (Removal of concrete pavement, non-asphalt, to be paid under 110- 4- (2110-4-))

<table>
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<tr>
<th>Related Items</th>
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<tr>
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<tr>
<td>Construction</td>
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**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)  7, 13

**Status**

**Struct.**  110- 2- 1  CLEARING AND GRUBBING (FOR PUSH BUTTON AC CONTRACTS)

**Notes**

**110- 3-**  REMOVAL OF EXISTING STRUCTURES

| Unit       | LS/SF; LS/M2 | Accuracy | Lump Sum (Square Foot); Lump Sum (Square Meter) | PlanQuantity? | yes |

**Notes**

To be used for the removal of existing bridge structures and box culverts. Includes all work of removal (complete and/or partial), and disposal of the designated structures. Code the number of square feet (square meters), out-to-out of coping from begin bridge to end bridge.

Add pay item note in plans that address bridges to be completely removed and bridges to be partially removed. Tabulate bridges by bridge number and deck area to be removed. Quantities to be based on out-to-out of coping from begin bridge to end bridge or from coping line to saw cut line from begin bridge to end bridge as applicable. Do not include rip-rap, fill slope area in removal quantity. Cover items to be removed in pay item note. Insert existing bridge plans into plan set. Show existing piling on Foundation Layout Sheet that requires complete removal (conflict with proposed foundations, or conflicts with future channel dredging per permit requirements, etc.).

**Related Items**

| Forms Design  | SHTabQuantLS | COMP 700-050-05 |
| Construction  | Refer to Comp Book | |
| Documentation Design | Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans. | |
| Construction  | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. | |
| References PPM Chapter | |
| Other | |
### Standards
Specifications

#### Prep & Doc Manual Chapter(s)
6, 13

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#### Status

<table>
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<th>LS/SF</th>
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#### Notes

**110- 3-**

**110- 4-**

**110- 5-**

---

#### 110- 4-

**REMOVAL OF EXISTING CONCRETE PAVEMENT**

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<tr>
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<tbody>
<tr>
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<td>PlanQuantity?</td>
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</table>

**Details**

Consists of removing and disposing of existing concrete pavement, concrete sidewalks, slope pavement, ditch pavement and curb and gutter, where required because of construction operations. Specifically excludes retaining walls and drainage structures. NOTE: Do not include flexible pavement removal under this item.

**Related Items**

<table>
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<td>Forms</td>
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<td>Design</td>
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<td>Refer to Comp Book</td>
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**Documentation**

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**References**

PPM Chapter

**Related Items**

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**Notes**

**110- 5-**

**PLUGGING WATER WELL- ARTESIAN**

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**Details**

Artesian is defined in specifications as "an artificial hole in the ground from which water supplies may be obtained and which penetrates any water bearing rock, the water in which is raised to the surface by natural flow…"

**Related Items**

<table>
<thead>
<tr>
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**Notes**

Details and Structure: Complete
Stand. 110-5- PLUGGING WATER WELL- ARTESIAN PW

**Notes**

**Details**

Locate in plans. Summarize quantities by location on tabulation sheet (plans) or computation form (comp book).

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**References**

PPM Chapter, Other, Standards, Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Non-Artesian** is defined in the specifications as "a well in which the source of water is an unconfined aquifer. The water... does not rise above the source bed."

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**References**

PPM Chapter, Other, Standards, Specifications

Prep & Doc Manual Chapter(s) 7, 13

**MAILBOX - FURNISH AND INSTALL**

**Notes**

**Details**

Used for replacement of residential or business mailboxes that must be removed during construction operations. Refer to Index 532 for details.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
The specification must describe the item in detail, including its acceptance criteria, method of measurement, and for lump sum items, any secondary units of measure. This item should only be used when the designer is reasonably sure of the number of days which will be required for the task. The daily unit cost for the cranes and barges typically used in this item is relatively high and can quickly lead to large overrun costs if the number of days cannot be accurately estimated. Item 110-3 (2110-3) is a more appropriate item to use when an accurate estimate of days required cannot be made.

The specification must describe the item in detail, including its acceptance criteria, method of measurement, and for lump sum items, any secondary units of measure. This item should only be used when the designer is reasonably sure of the number of days which will be required for the task. The daily unit cost for the cranes and barges typically used in this item is relatively high and can quickly lead to large overrun costs if the number of days cannot be accurately estimated. Item 110-3 (2110-3) is a more appropriate item to use when an accurate estimate of days required cannot be made.

The specification must describe the item in detail, including its acceptance criteria, method of measurement, and for lump sum items, any secondary units of measure. This item should only be used when the designer is reasonably sure of the number of days which will be required for the task. The daily unit cost for the cranes and barges typically used in this item is relatively high and can quickly lead to large overrun costs if the number of days cannot be accurately estimated. Item 110-3 (2110-3) is a more appropriate item to use when an accurate estimate of days required cannot be made.
### 110-12- A  HYDRODEMOLITION

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2; SF</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter; Square Foot</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struct.</td>
</tr>
</tbody>
</table>

A = Description/Unit of Measure

1 (Removal Of Deck Surface) SY

2 (Removal Of Concrete Curb) SF

---

### 110-71- 1  BRIDGE FENDER SYSTEM, REMOVAL & DISPOSAL- REHAB PROJECTS ONLY

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

For use on Fender System Rehab projects only.

For projects with bridge and fender system replacement, payment for removal and disposal of existing fender system is included under Removal Of Existing Structures, item 110-3.

Plan Details and/or Tech Spec must address proper disposal of timber, as well as measurement and payment of rehab work. Refer to Section 110 of Specifications.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
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<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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Details and Structure: Complete
<table>
<thead>
<tr>
<th>References</th>
<th>PPM Chapter Other Standards Specifications</th>
</tr>
</thead>
</table>

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 110-71-1 BRIDGE FENDER SYSTEM, REMOVAL & DISPOSAL - REHAB PROJECTS ONLY

Notes

<table>
<thead>
<tr>
<th>110-73- REMOVE EXISTING BULKHEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no</td>
</tr>
</tbody>
</table>

Details

Related Items

Forms
Design Required SHTabQuant Recommended COMP 700-050-03
Construction Required Refer to Comp Book

Documentation
Design Required Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Required Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter Other Standards Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 110-73- REMOVE EXISTING BULKHEAD LF

Notes

<table>
<thead>
<tr>
<th>110-82- STRUCTURAL TIMBER- REMOVAL &amp; DISPOSAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit MB; M3 Accuracy 10th of a Thou Board Measure; 10th of a Cubic Meter PlanQuantity? no</td>
</tr>
</tbody>
</table>

Details

one board foot = one foot square by one inch thick; convert to thousand board foot for pay item.

Related Items
Required Recommended

Details and Structure: Complete
### Forms
- **Design**: SHTabQuant
- **Construction**: 700-050-56

### Documentation
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References
- **PPM Chapter**: Design 7/13
- **Other**:  
- **Standards**:  
- **Specifications**:  

#### Plan Detail and/or Tech Spec Required
- **Prep & Doc Manual Chapter(s)**: 7, 13

### Status
- **Struct.**: MB

### Notes

#### 110-84- TRANSPORT EXISTING MATERIAL FOR REEF ESTABLISHMENT

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

#### Details

#### Related Items
- **Forms**: Required SHTabQuantLS, Recommended COMP 700-050-05
- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References
- **PPM Chapter**: Design 7/13
- **Other**:  
- **Standards**:  
- **Specifications**:  

#### Plan Detail and/or Tech Spec Required
- **Prep & Doc Manual Chapter(s)**: 7, 13

### Status
- **Struct.**: MB

### Notes

#### 110-86- DELIVERY OF SALVAGEABLE MATERIAL TO FDOT

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

Details and Structure: Complete
Notes
Designer must coordinate with Maintenance office prior to using this item. Plan note as to
delivery location of salvageable material must be included.

Related Items
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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<tr>
<td>Documentation</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
</tr>
</tbody>
</table>

References
| PPM Chapter |
| Other |
| Standards |
| Specifications |

Prep & Doc Manual Chapter(s) 7, 13

Status
Struct. 110- 86-
DELIVERY OF SALVAGEABLE MATERIAL TO FDOT LS/LS

Notes

| 120- 1- |
| REGULAR EXCAVATION |
| Unit CY; M3 |
| Accuracy Cubic Yard; Cubic Meter |
| PlanQuantity? yes |

Details
Refer to Plans Preparation Manual, Volume 1, Chapter 3 for guidance on Earthwork Items.
This item should be used on projects with cross sections to pay for the quantity of excavation on the project.

Related Items
| Required | Recommended 120- 6 (2120- 6) |
| Forms    |             |
| Design   | SBEHWK; SBEarthwork COMP 700-050-04 |
| Construction | Refer to Comp Book |
| Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
|           | Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

References
| PPM Chapter |
| Other |
| Standards | Index No. 285, 500, 505 |
| Specifications |

Prep & Doc Manual Chapter(s) 6, 13

Status
Struct. 120- 1-
REGULAR EXCAVATION CY

Notes

Details and Structure: Complete
### 120- 2- A  BORROW EXCAVATION

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Refer to Plans Preparation Manual, Volume 1, Chapter 3 for guidance on Earthwork Items.

**Details**
TRUCK MEASURE: This item should only be used on projects with limited or no cross sections. The method to determine the quantity of borrow excavation is as follows: \( \text{Fill} + (\text{Fill} \times \text{Fill Adjustment}) \times \text{Truck Adjustment} = \text{Borrow Excavation (Truck Measure)} \). For final quantity, measure the width, height, and length inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% of the result to account for the hoist box and bed fillets.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<tr>
<td>Construction</td>
<td>700-050-54</td>
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**Documentation**

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</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Chapter 3</th>
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<tbody>
<tr>
<td>Other</td>
<td>Index No. 500, 505</td>
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**Specifications**

| Prep & Doc Manual Chapter(s) | 6, 8, 13 |

**Status**

<table>
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<tr>
<th>Struct.</th>
<th>120- 2- A  BORROW EXCAVATION CY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = Measure Type 2 (Truck Measure)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

---

### 120- 3-  LATERAL DITCH EXCAVATION

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**
Consists of excavation on portions of lateral ditches beyond the limits of the roadway ROW. Includes inlet and outlet ditches, ditches parallel to the roadway, and may include channel excavation if Item 120-5 (2120-5) is not used.

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>PLAN QUANTITY will be basis of payment to the Contractor. Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

---

Details and Structure: Complete
Standards Index No. 281, 500
Specifications
Prep & Doc Manual Chapter(s) 9, 13

Status
Struct.  120- 3- LATERAL DITCH EXCAVATION CY

Notes

120- 4- SUBSOIL EXCAVATION

Unit CY; M3
Accuracy Cubic Yard; Cubic Meter
Plan Quantity? no

Notes
Details Refer to Plans Preparation Manual, Volume 1, Chapter 3 for guidance on Earthwork Items. Consists of excavation and disposal of muck, clay, rock or other material that is unsuitable in its original position, and that is excavated below the finished grade line template. Also includes all suitable material necessary to be removed in order to excavate the unsuitable material. The areas used to calculate subsoil excavation must also be used in calculating the fill areas, if material is to be replaced.

Related Items
Required
Recommended 120- 2- 2 or 120- 6 (2120-2- 2 or 2120- 6)

Forms
Design SHTabQuant
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards Index No. 500, 505
Specifications
Prep & Doc Manual Chapter(s) 9, 13

Status
Struct.  120- 4- SUBSOIL EXCAVATION CY

Notes

120- 5- CHANNEL EXCAVATION

Unit CY; M3
Accuracy Cubic Yard; Cubic Meter
Plan Quantity? no

Notes
Details Consists of excavation and disposal of all material from the limits of the channel, within the lines and grades indicated in the plans and permit.

Related Items
Required
Recommended

Forms
Design SHTabQuant

Details and Structure: Complete
### 120-5- CHANNEL EXCAVATION CY

**Construction Standards**
Refer to Comp Book

**Design Specifications**
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Documentation**
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**References**
PPM Chapter
Other

**Standards**

**Specifications**

Prep & Doc Manual Chapter(s) 9, 13

**Status**

**Struct.** 120-5- CHANNEL EXCAVATION CY

---

### 120-6- EMBANKMENT

**Notes**

**Details**
Refer to Plans Preparation Manual, Volume 1, Chapter 3 for guidance on Earthwork Items. This item should be used on projects with cross sections to pay for the quantity of embankment on the project.

**Related Items**
Required

**Forms**

**Documentation**

**Design**
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
PPM Chapter
Other

**Standards**
Index No. 500, 505

**Specifications**

Prep & Doc Manual Chapter(s) 9, 13

**Status**

**Struct.** 120-6- EMBANKMENT CY

---

### 120-71- REGULAR EXCAVATION (3R PROJECTS ONLY)

**Notes**

**Details**
Refer to Plans Preparation Manual, Volume 1, Chapter 3 for guidance on Earthwork Items.
To be used only on resurfacing or minor widening and resurfacing projects which conform to the guidelines in the Plans Preparation Manual. The designer will calculate quantities based on information obtained from the field and the proposed typical section. The designer will continue to show the Summary of Earthwork in the plans. The summary should show all quantities and adjustments.

Effective 7/2000 letting: This item should be used on projects with limited or no cross sections, to pay for the quantity of excavation on the project. Item 120-2-2 (2120-2-2) should be considered.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>Standards</th>
</tr>
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<tbody>
<tr>
<td>Specifications</td>
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<tr>
<td>Prep &amp; Doc Manual Chapter(s)</td>
</tr>
</tbody>
</table>

**Status**

| Struct. | 120-71- | REGULAR EXCAVATION (3R PROJECTS ONLY) | LS/LS |

**Notes**

**120-72-**

**GRAVEL FILL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Cubic Yard; Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Calculations will be made by the average end area method for all material placed within the limits and according to the detail shown in the plans.

Plan details and/or Tech Spec required for material requirements; compensation specification available.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-54</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity to computation book.</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specifications</td>
</tr>
<tr>
<td>Prep &amp; Doc Manual Chapter(s)</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Specifications

Plan Details and/or Tech Spec required.

Prep & Doc Manual Chapter(s)  6, 7, 13

| Status | Struct. 120-72- | GRAVEL FILL | CY |

Notes

<table>
<thead>
<tr>
<th>120-73-</th>
<th>LIGHTWEIGHT AGGREGATE FILL</th>
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<tbody>
<tr>
<td>Unit</td>
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</tr>
<tr>
<td>Accuracy</td>
<td>10th of a Cubic Yard;</td>
</tr>
<tr>
<td></td>
<td>10th of a Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details
Calculations will be made by the average end area method for all material placed within the limits and according to the detail shown in the plans.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

| Design        | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction  | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  9, 13

| Status | Struct. 120-73- | LIGHTWEIGHT AGGREGATE FILL | CY |

Notes

<table>
<thead>
<tr>
<th>120-74-</th>
<th>SURCHARGE EMBANKMENT</th>
</tr>
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<tbody>
<tr>
<td>Unit</td>
<td>CY; M3</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Cubic Yard; Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details
The work of constructing surcharge fills, as shown in the plans and any extensions thereof, directed by the engineer, shall be included in the price and payment for surcharge embankment. The quantity shall be measured as provided in 120-12.2, with the exception that the original ground line used in computations shall be the finished grading template for the permanent construction. The measurement shall include only surcharge material actually placed above the original ground line (as defined above) and within the lines and grades for surcharge construction, as indicated in the plans or directed by the engineer. No allowance will be made for subsidence of material below the original ground line, as defined above. The price and payment for surcharge embankment shall be full compensation for all work required to construct and remove surcharge fills, including...
furnishing from areas provided by the contractor and borrow excavation required. Surcharge embankment requires a Technical Specification.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-04</td>
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<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

| Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|               | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

| References | PPM Chapter |  |
|           | Other |  |
|           | Standards |  |
|           | Specifications |  |

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>120- 74-</th>
<th>SURCHARGE EMBANKMENT</th>
<th>CY</th>
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</thead>
</table>

Notes

121- 70-

| Flowable Fill |
| Unit | CY; M3 | Accuracy | Cubic Yard; Cubic Meter | PlanQuantity? | no |

Notes

Details

Applications for flowable fill include: beddings, encasements, closure for tanks, pipes, and general backfill for trenches.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-04</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
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</table>

| Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|               | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

| References | PPM Chapter |  |
|           | Other |  |
|           | Standards |  |
|           | Specifications |  |

Prep & Doc Manual Chapter(s) 7, 13

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>121- 70-</th>
<th>FLOWABLE FILL</th>
<th>CY</th>
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Notes

125- 1-

<table>
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<tr>
<th>Excavation for Structures</th>
</tr>
</thead>
</table>
### Topic No. 600-000-002
#### Basis of Estimates

**2007 Edition**

**April 16, 2007**

**Unit** CY; M3  
**Accuracy** Cubic Yard; Cubic Meter  
**Plan Quantity?** no

**Notes**

**Details**
Includes excavation for bridge foundations, box culverts, pipe culverts, retaining walls, headwalls for pipe culverts and drains, manholes, and similar structures. Direct Payment: refer to Method of Measurement in specifications. No Direct Payment: work is included in the price for concrete or other related items.

**Related Items**

**Required**
- Design: SHTabQuant
- Construction: Refer to Comp Book

**Recommended**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Design**

**Construction**

**PPM Chapter**

**Other**

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

**Struct.** 125-1-  
**EXCAVATION FOR STRUCTURES**  
**CY**

---

### Topic No. 600-000-002
#### Basis of Estimates

**2007 Edition**

**April 16, 2007**

**Unit** CY; M3  
**Accuracy** Cubic Yard; Cubic Meter  
**Plan Quantity?** no

**Notes**

**Details**
No payment for this material will be made when available from excavation of pipe culvert or from other material from grading operations at a location not sufficiently remote to require loading on trucks.

**Related Items**

**Required**
- Design: SHTabQuant
- Construction: 700-050-04

**Recommended**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity to computation book.

**PPM Chapter**

**Other**

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

---

**Details and Structure:** Complete
141- 70-  SETTLEMENT PLATE ASSEMBLY

| Unit       | AS; EA | Accuracy | Assembly; Each | PlanQuantity? |  no |

Details

- Used with surcharge embankment item

Related Items

- Required
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

- Recommended
  - Design: SHTabQuant
  - Construction: COMP 700-050-03

Documentation

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

- PPM Chapter
- Other
  - Index No. 540
  - Specifications
  - Plan Detail and/or Tech Spec Required
  - Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 141- 70-  SETTLEMENT PLATE ASSEMBLY  AS; EA

Notes

142- 70-  SAND FILL

| Unit       | CY; M3 | Accuracy | Cubic Yard; Cubic Meter | PlanQuantity? |  no |

Details

Related Items

- Required
  - Design: SHTabQuant
  - Construction: COMP 700-050-04

- Recommended
  - Design: SHTabQuant
  - Construction: COMP 700-050-54

Documentation

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- Construction: Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity to computation book.

References

- PPM Chapter
- Other
  - Standards
  - Specifications

Details and Structure: Complete
Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status Inactive Structure

Struct. 142-70- SAND FILL CY

Notes Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

144-1- A DIGITAL INCLINOMETER CASING

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? no

Futue use will require Specification Development

Details

Related Items
Forms
Design SHTabQuant
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 144-1- A DIGITAL INCLINOMETER CASING LF

A = Description
1 (Vertical)
2 (Horizontal)

Notes Futue use will require Specification Development

144-71- PORE-PRESSURE TRANSDUCER (PIEZOMETER)

Unit EA
Accuracy Each
PlanQuantity? no

Futue use will require Specification Development

Details

Related Items
Forms
Design SHTabQuant
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Details and Structure: Complete
## References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

### Basis of Estimates

**2007 Edition**

**April 16, 2007**

### Standards

**Specifications**

**Struct. 144-71-** PORE-PRESSURE TRANSDUCER (PIEZOMETER) EA

### Notes

Future use will require Specification Development

### Status

**Struct. 144-71-**

### Related Items

- **Unit**: LF; M1
- **Accuracy**: Linear Foot; 10th of a Meter
- **Plan Quantity?**: no

### Details

**Related Items**

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Design**: Refer to Comp Book

**Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### Notes

Future use will require Specification Development

### Status

**Struct. 144-72-** TUBING FOR PIEZOMETER

### Related Items

- **Unit**: LF; M1
- **Accuracy**: Each
- **Plan Quantity?**: no

### Details

**Related Items**

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Design**: Refer to Comp Book

**Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

### Notes

Future use will require Specification Development

### Status

**Struct. 144-73-** DIGITAL INCLINOMETER

### Related Items

- **Unit**: EA
- **Accuracy**: Each
- **Plan Quantity?**: no

### Details

**Related Items**

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Design**: Refer to Comp Book

**Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

**Details and Structure**: Complete
### Digital Inclinometer

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Notes**

Future use will require specification development.

---

### Pore-Pressure Transducer - Control/Readout Unit

**Notes**

Future use will require specification development.

---

### Geosynthetic Reinforced Soil Slopes

**Details**

Refer to Plans Prep Manual, Volume 1, Chapter 31, to establish design guidelines, parameters, and limitations for these systems. Payment will be based on Plan Quantity, regardless of the length or number of layers of geosynthetic, including any reinforcement required below ground line. Does not include the cost of backfill material or placement of...
Plan measurement will be based on the projected height of the slope face, from top of slope to the ground line at the toe of slope. Refer to the specifications.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td><strong>Forms</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td></td>
</tr>
<tr>
<td>PPM Chapter</td>
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<td>Other</td>
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<td>Standards</td>
<td>Index No. 501</td>
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<td>Specifications</td>
<td></td>
</tr>
<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td>6, 7, 13</td>
</tr>
</tbody>
</table>

### Notes

Refer to Plans Prep Manual, Volume 1, Chapter 31, to establish design guidelines, parameters, and limitations for these systems. Payment will be based on Plan Quantity, regardless of the length or number of layers of geosynthetic, including any reinforcement required below ground line. Does not include the cost of backfill material or placement of backfill.

Plan measurement will be based on the area of embankment to be reinforced. Refer to specifications.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
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<tr>
<td><strong>Documentation</strong></td>
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<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
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<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
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<td><strong>References</strong></td>
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<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td>6, 7, 13</td>
</tr>
</tbody>
</table>
Chapter 145-2

**GEOSYNTHETIC REINFORCED FOUNDATIONS OVER SOFT SOILS**

**Notes**

**145-71- A REINFORCEMENT GRID**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Future use will require Specification Development

**Details**

Geosynthetic Reinforced Roadway Base for Construction Expedient

**Related Items**

**Forms**

- Design: SHTabQuant
- Construction: COMP 700-050-01

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards: Index No. 501
- Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

6, 7, 13

**Status**

**Struct. 145-71- A REINFORCEMENT GRID SY**

A = Description

1 (Biaxial, Type)

2 (Biaxial, Type 2)

3 (Biaxial, Type 3)

**Notes**

Future use will require Specification Development

Chapter 160-3

**COMMERCIAL STABILIZING MATERIAL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Contact the District Soils Engineer for basis of estimate on each project. Show basis.

**Related Items**

**Forms**

- Design: SHTabQuant
- Construction: COMP 700-050-04
- Construction: COMP 700-050-54

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity.
### 160-3 Commercial Stabilizing Material

- **Unit**: CY
- **Accuracy**: SY; M2
- **Plan Quantity?**: yes

Consists of stabilizing designated portions of the roadbed to provide a firm and unyielding subgrade. Stabilizing material can be obtained from existing base material, or from commercial and local materials.

**Related Items**
- **Design**: SHTabQuant
- **Construction**: Ref to Comp Book

**References**
- **PPM Chapter**: 6, 7, 13

---

### 160-4 Stabilization, Type "B"

- **Unit**: SY; M2
- **Accuracy**: Square Yard; Square Meter
- **Plan Quantity?**: yes

Consists of stabilizing designated portions of the roadbed to provide a firm and unyielding subgrade. Stabilizing material can be obtained from existing base material, or from commercial and local materials.

**Related Items**
- **Design**: SHTabQuant
- **Construction**: COMP 700-050-01

**References**
- **PPM Chapter**: 6, 7, 13

---

### 160-6 Stabilized Subbase

- **Unit**: SY; M2
- **Accuracy**: Square Yard; Square Meter
- **Plan Quantity?**: no

**Related Items**
- **Design**: SHTabQuant
- **Construction**: COMP 700-050-01

---
Standards
Specifications

Struct. 160-6- STABILIZED SUBBASE SY

Notes

162-1-AB PREPARED SOIL LAYER

Unit SY; M2 Accuracy Square Yard; Square Meter PlanQuantity? no

Notes

Details Not to be used for Section 580: Landscape Operations. Refer to 580 specifications.

To be used for areas to be seeded, seeded and mulched, or planted. (Included for sodded areas when called for in the plans.) Refer to 162 specifications.

Related Items

Required Recommended
Forms Design SHTabQuant COMP 700-050-01
Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter Other Standards Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 162-1-AB PREPARED SOIL LAYER SY

A= Material
1 (Finish Soil Layer)
2 (Organic Soil Layer) Note: by Permit only
3 (Blanket Soil Layer) Note: By Permit Only

B= Depth
1 (6") Standard
2 (12")

Details and Structure: Complete
3 (Special Depth) A=2 or 3 only

### Notes

#### 173-71-
**DRILLING HOLES FOR PRESSURE GROUTING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
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<tr>
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<td>COMP 700-050-03</td>
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<td>Construction</td>
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<td>References</td>
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<td>Standards</td>
<td>Specifications</td>
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<td><strong>Plan Detail and/or Tech Spec Required</strong></td>
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<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td>6, 7, 13</td>
<td></td>
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</tbody>
</table>

#### Status

**Struct. 173-71-**

**DRILLING HOLES FOR PRESSURE GROUTING**

**EA**

### Notes

#### 173-74-
**CEMENT- PRESSURE GROUTING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M³</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
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<tr>
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<td>Valid through 12-31-2006; replaced by 173-77-A</td>
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<td><strong>Details</strong></td>
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<tr>
<td>Forms</td>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-04</td>
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<tr>
<td></td>
<td>Construction</td>
<td>700-050-54</td>
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<td>Design</td>
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<td>PPM Chapter</td>
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<td>Specifications</td>
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<td><strong>Plan Detail and/or Tech Spec Required</strong></td>
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<td>6, 7, 13</td>
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</tbody>
</table>

#### Status

**Struct.**

**173-74-**

**CEMENT- PRESSURE GROUTING**

**EA**

Details and Structure: Complete
### 173-76- GROUT PIPE INSTALLATION

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
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<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

**Struct.** 173-76-  
**GROUT PIPE INSTALLATION**  
**LF**

**Notes**

Contact the State Structures Design Office prior to using this item. This item to be used for subsurface applications only. May be used for sinkhole repair. Tech Specs should indicate that this item includes all work and materials for grout injection; drilling holes and grout pipe may be paid separately under related 173 items. Clearly define material properties in specifications. For concrete structures, refer to Structures items 400 to 460.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

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<tr>
<th>Design</th>
<th>Construction</th>
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<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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</table>
### 173-77- A

**PRESSURE GROUTING- SUBSURFACE**

<table>
<thead>
<tr>
<th>Unit</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Square Yard; Square Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

- PPM Chapter
- Other
- Standards
- Specifications

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struct.</td>
</tr>
</tbody>
</table>

**A= Grout Material**

1. (Sand-Cement)
2. (Sand Cement with Calcium Chloride) $\text{CaCl}_2$
3. (Cement Slurry)

**Related Items**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Square Yard; Square Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**

| 6, 13 |

---

### 175-1-

**RESEAT CONCRETE PAVEMENT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Square Yard; Square Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

- Design
- Construction

**Details**

- Required
- Recommended

**Related Items**

- Forms
- Documentation

**References**

- PPM Chapter
- Other
- Standards
- Specifications

<table>
<thead>
<tr>
<th>Prep &amp; Doc Manual Chapter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6, 13</td>
</tr>
</tbody>
</table>

**Status**

| Struct. | 175-1- |

**Notes**

- Design
- Construction

**Related Items**

- Forms
- Documentation

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**

| 6, 13 |

---

### 180-70-

**STABILIZED SUBBASE**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Square Yard; Square Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

- Refer to specification(s).

---

**Details and Structure:** Complete
### Forms
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

### Documentation
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

### Status
- **Struct.**: 180-70-

### Notes

#### 180-72-
**STABILIZED SUBBASE, 6"**
- **Unit**: SY; M2
- **Accuracy**: Square Yard; Square Meter
- **Plan Quantity?**: yes

### Details and Structure: Complete
### Meter

#### Related Items
- **Forms**
  - **Design**: Required
  - **Recommended**: SHTabQuant
- **Construction**: Required
  - **Recommended**: COMP 700-050-01

#### Forms
- **Construction**: Refer to Comp Book

#### Documentation
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

#### Status
- **Inactive Structure**

#### Struct.
- **210-1- AA**
  - **REWORKING LIMEROCK BASE**
  - **SY**
  - **AA = Thickness**
    1 (6"
    2 (8" D-CSE)
    3 (10" D-CSE)
    4 (Var. Thickness)
    5 (5"
    6 (12" D-CSE)
    7 (9" D-CSE)
    8 (4"
    9 (3"
    11 (14" T-CSE)
    12 (16" T-CSE)
    13 (11" D-CSE)
    14 (Var. Thickness 4 1/2 Avg.)
    15 (Var. Thickness 12 1/2 Avg.)
    16 (7"
    17 (13" D-CSE)
    18 (14" D-CSE)
    19 (Var. Thickness 7 1/2 Avg.)
    20 (Var. Thickness 9 Avg.)
    21 (4 1/2"
    22 (9 1/2"

#### Notes
- **210-2-**
  - **LIMEROCK, NEW MATERIAL**
  - **Unit**: CY; M3
  - **Accuracy**: Cubic Yard; Cubic Meter
  - **PlanQuantity**: no

#### Related Items
- **Required**
- **Recommended**

---

**Details and Structure: Complete**
Standards
Specifications

Struct.  210-  2-  LIMEROCK, NEW MATERIAL  CY

Notes

---

220-  1- AA  SHAPE & COMPACT BASE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

Notes

Details

Related Items

Forms

Design  SHTabQuant  COMP 700-050-04

Construction  700-050-54

Documentation

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity to computation book.

References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status  Inactive Structure

Struct.  220-  1- AA  SHAPE & COMPACT BASE  SY

Notes  Code Same As  220- 70-AAA

---

220- 70- AA  SHAPE & COMPACT EXISTING BASE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Refer to specifications for correct usage; consider optional base pay item when possible. Verify with construction prior to use of this item.

<table>
<thead>
<tr>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struct.</td>
<td>SHAPE &amp; COMPACT EXISTING BASE SY</td>
</tr>
<tr>
<td></td>
<td>AA = Thickness</td>
</tr>
<tr>
<td></td>
<td>6&quot;</td>
</tr>
<tr>
<td></td>
<td>8&quot; D-CSE</td>
</tr>
<tr>
<td></td>
<td>10&quot; D-CSE</td>
</tr>
<tr>
<td></td>
<td>12&quot; D-CSE</td>
</tr>
<tr>
<td></td>
<td>9&quot; D-CSE</td>
</tr>
<tr>
<td></td>
<td>4&quot;</td>
</tr>
<tr>
<td></td>
<td>3&quot;</td>
</tr>
<tr>
<td></td>
<td>14&quot; T-CSE</td>
</tr>
<tr>
<td></td>
<td>16&quot; T-CSE</td>
</tr>
<tr>
<td></td>
<td>11&quot; D-CSE</td>
</tr>
<tr>
<td></td>
<td>(Var. Thickness 4 1/2&quot; Avg.)</td>
</tr>
<tr>
<td></td>
<td>(Var. Thickness 12 1/2&quot; Avg.)</td>
</tr>
<tr>
<td></td>
<td>(7&quot;)</td>
</tr>
<tr>
<td></td>
<td>(13&quot; D-CSE)</td>
</tr>
<tr>
<td></td>
<td>(14&quot; D-CSE)</td>
</tr>
<tr>
<td></td>
<td>(Var. Thickness 7 1/2&quot; Avg.)</td>
</tr>
<tr>
<td></td>
<td>(Var. Thickness 9&quot; Avg.)</td>
</tr>
<tr>
<td></td>
<td>4 1/2&quot;</td>
</tr>
</tbody>
</table>
|           | 9 1/2"

D-CSE = Double Course
T-CSE = Triple Course

---

### Related Items

**Forms**
- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-01

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### Notes

D-CSE = Double Course
T-CSE = Triple Course

---

### 230- 2- LIMEROCK MATERIAL

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Cubic Yard; Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

Refer to specifications for correct usage; consider optional base pay item when possible.

---

Details and Structure: Complete

Page 60 of 468
### 285-7AA- OPTIONAL BASE

| Unit   | SY; M2 | Accuracy         | Square Yard; Square Meter | PlanQuantity? | yes |

**Notes**

Consists of base construction of one of the optional materials shown in the plan typical sections. The plans will include typical sections specifying only the base group on new construction and complete reconstruction projects, permitting the maximum number of general use options that the contractor can utilize. Note that there are still limitations given in the notes. Also, the designer can still specify base materials, if this is appropriate for the project. The Optional Base item is also used when specifying only one option, such as ABC III. The quantity must include a 4” (0.1 m) overhang, as shown on the typical section for rural projects.

NOTE: The cost of prime or tack coats used between layers of the base are included in the cost of the Optional Base.
### Status

**Struct.** 285-7AA-  
**OPTIONAL BASE** SY

AA = Is 01 Thru 15 which indicates Base Group, as shown on Index 514

**Notes**

#### 286-1- TURNOUT CONSTRUCTION

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

Consists of constructing new turnouts or extending existing turnouts on resurfacing and widening/resurfacing projects. Consists of excavation and construction of base course, and specifically excludes placing of AC surface course.

**Related Items**

**Forms**

- **Required**: SBTURN; SBTurnouts
- **Recommended**: COMP 700-050-01

**Documentation**

- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**References**

- **PPM Chapter**
- **Other Standards**: Index No. 516
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 9, 13

---

**Status**

**Struct.** 286-1-  
**TURNOUT CONSTRUCTION** SY

**Notes**

#### 286-2- TURNOUT CONSTRUCTION- ASPHALT

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN; MT</td>
<td>10th of a Ton; 10th of a Metric Ton</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

Consists of constructing new turnouts or extending existing turnouts on resurfacing and widening/resurfacing projects. Consists of excavation and construction of asphalt base course, and specifically excludes placing of AC surface course.

**Related Items**

**Forms**

- **Required**: SBTURN; SBTurnouts
- **Recommended**: COMP 700-050-06

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**Details and Structure:** Complete
### 287-1- ASPHALT TREATED PERMEABLE BASE

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

#### Details
- **Related Items**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - Construction: COMP 700-050-04
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### Status
- **Inactive Structure**

#### Notes
- **PPM Chapter**
  - Design: 6, 9, 13
- **Construction**
  - Design: 6, 9, 13
  - Construction: 6, 9, 13

---

### 288-001- CEMENT TREATED PERMEABLE BASE

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
<th>Accuracy</th>
<th>Cubic Yard; Cubic Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

#### Details
- **Related Items**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - Construction: COMP 700-050-04
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.
Specifications tolerances.

**References**
- **PPM Chapter**
- **Other**
- **Standards** Index No. 287
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 13

**Status** Inactive Structure

**Struct.** 288-001- CEMENT TREATED PERMEABLE BASE CY

**Notes**

**327- 70- AA MILLING EXISTING ASPHALT PAVEMENT**

**Unit** SY; M2  
**Accuracy** Square Yard; Square Meter  
**PlanQuantity?** yes

**Notes**

**Details**
Consists of removing existing AC pavement to improve the rideability of the finished pavement, to lower the finished grade adjacent to existing curb prior to resurfacing, or to completely remove existing pavement. Includes transporting the milled material to the asphalt plant site, and stockpiling the material. Also includes removal of existing Reflective Pavement Markers. Show basis of calculation, include exceptions.

**Related Items**
- **Required**
- **Recommended** 300- 1- 1 (2300- 1- 1)

**Forms**
- **Design** SHTabQuant  
- **Construction** Refer to Comp Book

**Documentation**
- **Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction** Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

**Struct.** 327- 70- AA MILLING EXISTING ASPHALT PAVEMENT SY

AA =
- 1 (1" Avg. Depth)
- 2 (3 1/2" Avg. Depth)
- 3 (4 1/2" Avg. Depth)
- 4 (3" Avg. Depth)
- 5 (2" Avg. Depth)
- 6 (1 1/2" Avg. Depth)
- 7 (4" Avg. Depth)
- 8 (2 1/2" Avg. Depth)
- 9 (5 1/4 Avg. Depth)
334- 1- AA SUPERPAVE ASPHALTIC CONCRETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>TN; MT</th>
<th>Accuracy</th>
<th>10th of a Ton; 10th of a Metric Ton</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Consists of using SUPERPAVE asphalt mixture design and analysis test equipment and procedures, Gyratory Compactor to better simulate actual pavement loadings (five different traffic levels available) to provide for a better rut-resistant mix design. Use 110 lb per square yard per 1 inch (24 kg/m² per 10 mm) lift. Note: Other rates and PG 76-22 Binder may be used only when recommended by District Materials Engineer.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-06</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-56</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design          | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction    | Approved automated asphalt plant tickets shall be used and submitted as Department records; in case of a malfunction of the automated system, the data shall be hand written on blank plant tickets. Transfer quantity to computation book. |

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)** 13

**Status**

<table>
<thead>
<tr>
<th>Struct.</th>
<th>334- 1- AA</th>
<th>SUPERPAVE ASPHALTIC CONCRETE</th>
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</thead>
<tbody>
<tr>
<td>AA = Traffic</td>
<td></td>
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</tr>
<tr>
<td>11 (A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 (B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 (C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 (D)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
15 (E)
21 (Traffic A, PG 76-22)
22 (Traffic B, PG 76-22)
23 (Traffic C, PG 76-22)
24 (Traffic D, PG 76-22)
25 (Traffic E, PG 76-22)

Notes

### 337- 7- AA ASPHALTIC CONCRETE FRICTION COURSE

<table>
<thead>
<tr>
<th>Unit</th>
<th>TN; MT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>10th of a Ton; 10th of a Metric Ton</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Changes effective July 2007: block/open items based on January 2007 cover letter. Note: No changes made to FC-5 items.

**Details**

The maximum spread rate used for estimating quantities are as follows:

- a=5~ FC-5(Rubber): 80 lb/yd² (44 kg/m²); recommended thickness 3/4 in (20mm)
- a=7~ FC-9.5 (Rubber): 110 lb/yd² (72 kg/m²); recommended thickness 1 in (30mm)
- a=6~ FC-12.5 (Rubber): 165 lb/yd² (96 kg/m²); recommended thickness 1 1/2 in (40mm)
- a=21~ FC-9.5 (PG 76-22): 110 lb/yd² (72 kg/m²); recommended thickness 1 in (30mm)
- a=20~ FC-12.5 (PG 76-22): 165 lb/yd² (96 kg/m²); recommended thickness 1 1/2 in (40mm)
- a=22~ FC-5 (PG 76-22): 80 lb/yd² (44 kg/m²); recommended thickness 3/4 in (20mm)

The actual spread rate will be based on the contractor's mix design per specifications. Designers must specify on the Typical Section, the traffic Level for structural Friction Courses FC-9.5 and FC-12.5. Refer to Pavement Design Manual for additional information.

**Related Items**

- **Required**
  - Design: SHTabQuant
  - Construction: 700-050-56
- **Recommended**
  - Design: COMP 700-050-06
  - Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Approved automated asphalt plant tickets shall be used and submitted as Department records; in case of a malfunction of the automated system, the data shall be hand written on blank plant tickets. Transfer quantity to computation book.

**References**

- PPM Chapter
  - Other
  - Standards
  - Specifications
  - Prep & Doc Manual Chapter(s) 11, 13

**Status**

- **Struct.**
  - 337- 7- AA ASPHALTIC CONCRETE FRICTION COURSE TN

  AA = Type
  5 (FC-5, Rubber)
  22 (FC-5, PG 76-22)
  30 (Traffic B, FC-9.5, Rubber)
  31 (Traffic B, FC-12.5, Rubber)

Details and Structure: Complete
32 (Traffic C, FC-9.5, Rubber)
33 (Traffic C, FC-12.5, Rubber)
35 (Traffic D, FC-12.5, Rubber)
40 (Traffic B, FC-9.5, PG 76-22)
41 (Traffic B, FC-12.5, PG 76-22)
42 (Traffic C, FC-9.5, PG 76-22)
43 (Traffic C, FC-12.5, PG 76-22)
45 (Traffic D, FC-12.5, PG 76-22)

Notes
Valid through 6-30-2007:
AA= Type
6 (FC-12.5, Rubber)
7 (FC-9.5, Rubber)
20 (FC-12.5, PG 76 22)
21 (FC-9.5, PG 76-22)

339- 1-
MISCELLANEOUS ASPHALT PAVEMENT

Unit TN; MT
Accuracy 10th of a Ton; 10th of a Metric Ton
PlanQuantity? no

Details
Consists of construction of asphalt pavement in areas which will not be subjected to vehicular traffic, such as pavement under guardrail, bicycle paths, median pavement, sidewalks, etc. The pay quantity will be based on the average spread rate or dimensions for the project, limited to a maximum of 105% of the plan quantity. For calculation, use a weight of 100 lb/sy-in (22kg/m2 per 10mm) thickness.

Related Items
Required

design
SHTabQuant

Recommended

construction
COMP 700-050-06

Reference
PPM Chapter
Design
Other
Specifications

Prep & Doc Manual Chapter(s)
Contact Final Estimates

Status
Struct.
339- 1-
MISCELLANEOUS ASPHALT PAVEMENT

Notes

340-
OPEN GRADED CRACK RELIEF LAYER

Unit TN; MT
Accuracy 10th of a Ton; 10th of a Metric Ton
PlanQuantity? no
Notes
HOLD for Future Development; refer to 906-340- item for use with developmental specification

Details
Contact the State Materials Office for assistance with this office.

Related Items
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

Forms
<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHTabQuant</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation
<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
</tr>
</tbody>
</table>

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status
Future Effective Date

Struct.
340- OPEN GRADED CRACK RELIEF LAYER TN

Notes

341- 70- ASPHALT RUBBER MEMBRANE INTERLAYER

Unit SY; M2
Accuracy Square Yard; Square Meter
PlanQuantity? no

Notes
Consists of a separate application of asphalt rubber binder covered with a single application of aggregate. Jobs let through 6/04: When this item is used, item 2300- 1- 19 must be used.
Jobs let 7/04 and later: Payment for bituminous material (rubber binder) is incidental to this item.

Related Items
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

Forms
<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHTabQuant</td>
<td>COMP 700-050-01</td>
</tr>
<tr>
<td>Refer to Comp Book</td>
<td></td>
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Documentation
<table>
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<tr>
<th>Design</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td></td>
</tr>
<tr>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
</tr>
</tbody>
</table>

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct.
341- 70- ASPHALT RUBBER MEMBRANE INTERLAYER SY

Notes
Details and Structure: Complete
350-1 AA  CEMENT CONCRETE PAVEMENT PLAIN

| Unit     | SY; M2 | Accuracy | Square Yard; Square Meter | PlanQuantity? | yes |

**Notes**

**Details**
Consists of placement of plain Portland Cement Concrete pavement and also of construction of pavement joints.
For colored concrete, see 523 items.

**Related Items**

<table>
<thead>
<tr>
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<tr>
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**Documentation**

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<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

PPM Chapter

Other

Standards

Index No. 305, 560

Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

**Struct.** 350-1 AA  CEMENT CONCRETE PAVEMENT PLAIN SY

AA =
1 (6")
2 (7")
3 (8")
4 (9")
5 (10")
6 (3")
7 (2")
8 (7 1/2")
9 (Var. 7 1/2" Avg.)
10 (12")
11 (13")
12 (11")
13 (11 1/2")
14 (14")
15 (13 1/2")
16 (10 1/2")
17 (8 1/2")
18 (15")
19 (12 1/2")
20 (Var. 9 1/2" Avg.)
21 (Var. 11" Avg.)
22 (Var. 11 1/2" Avg.)
23 (14 1/2")
24 (var 10 1/2" ave)

**Notes**

Details and Structure: Complete
### 350-2-AA  CEMENT CONCRETE PAVEMENT, REINFORCED

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<td>Square Yard; Square Meter</td>
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**Notes**

**Details**

Consists of placement of reinforced Portland Cement Concrete pavement and also of construction of pavement joints. For colored concrete, see 523 items.

**Related Items**

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<td>COMP 700-050-01</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Documentation**

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**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

<table>
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<th>PPM Chapter</th>
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<tr>
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<td>Index No. 305, 560</td>
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**Specifications**

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<tbody>
<tr>
<td>6, 7, 13</td>
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**Status**

**Struct.** 350-2-AA  CEMENT CONCRETE PAVEMENT, REINFORCED  SY

AA =
1 (6")
2 (7")
3 (8")
4 (9")
5 (10")
6 (3")
7 (2")
9 (Var. 7 1/2" Avg.)
10 (12")
11 (13")
12 (11")

**Notes**

### 350-72-  CLEANING & RESEALING JOINTS IN CONCRETE PAVEMENT

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
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**Notes**

**Details**

Longitudinal and transverse joints must be summarized. This item to be used on existing concrete pavement only. DO NOT Use on bridge structures; refer to item 400-12.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Forms</td>
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</tr>
<tr>
<td></td>
<td>COMP 700-050-03</td>
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**Details and Structure:** Complete
### 350-72-
CLEANING & RESEALING JOINTS IN CONCRETE PAVEMENT

**Unit**: LF; M1
**Accuracy**: Linear Foot; 10th of a Meter

**Notes**
Longitudinal and transverse joints must be summarized. This item to be used on existing concrete pavement only.
DO NOT Use on bridge structures; refer to Section 400 items.

**Related Items**

**Required**

- **Forms**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Recommended**

- **Forms**
  - Design: COMP 700-050-03

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other

**Standards**: Index No. 305

**Specifications**

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

---

### 350-78-
CLEANING AND SEALING RANDOM CRACKS IN CONCRETE PAVEMENT

**Unit**: LF
**PlanQuantity?**: no

**Notes**
Longitudinal and transverse joints must be summarized. This item to be used on existing concrete pavement only.

**Related Items**

**Required**

- **Forms**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Recommended**

- **Forms**
  - Design: COMP 700-050-03

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other

**Standards**: Index No. 305

**Specifications**

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

---

### 352-70-
GRINDING CONCRETE PAVEMENT

**Unit**: SY; M2
**Accuracy**: Square Yard; Square Meter
**PlanQuantity?**: no

**Notes**

- **Forms**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other

**Standards**: Index No. 305

**Specifications**

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

---

Details and Structure: Complete
**Related Items**

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**References**

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<tr>
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</table>

---

**Notes**

**Details**

- This item to be used on existing concrete pavement only. Grinding of new concrete pavement included in the bid price for Cement Concrete Pavement. DO NOT Use on bridge structures; refer to Section 400 items.

**Related Items**

<table>
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<tr>
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**Notes**

**Details**

- For use on Concrete Pavement only.

**Related Items**

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<tbody>
<tr>
<td>Notes</td>
<td>CONCRETE PAVEMENT SLAB REPLACEMENT CY</td>
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</tbody>
</table>

---

Details and Structure: Complete
### Bridge Approach Expansion Joint

#### Unit
LF; M1

#### Accuracy
Linear Foot; 10th of a Meter

#### Plan Quantity
Yes

**Details**: Consists of the construction of special expansion joints for concrete pavement near the bridge approach slabs. These joints contain a section of reinforced concrete subslab supporting the concrete pavement, and a portion of the pavement over the subslab interrupted by a galvanized sheet metal strip.

#### Related Items

<table>
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**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### Status

| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

#### Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### Class I Concrete

#### Unit
CY; M3

#### Accuracy
10th of a Cubic Yard; 10th of a Cubic Meter

#### Plan Quantity
Yes/No

**Details**: No separate payment made for deck scuppers, poured expansion joints, deck control joints, preformed anchor bolt holes, plain neoprene bearing pads. These items are included in the cost of the concrete.

Include quantity block in plans by component (except for misc. concrete). Mass concrete should be broken out in the quantity block separately. See SDG’s 3.9. When component is phased, break down quantity by phase.

Concrete quantity is PLAN QUANTITY (except for misc. concrete). See Section 400-22.2.2 of the Specifications.

Estimate 5 CY (5 M3) minimum for misc. concrete.

Class III: When it is not practical to dewater land pier footings, show seal concrete in the plans. For water piers, both waterline and mudline footings require seal concrete to be shown in the plans. See SDG’s 3.7.

Superstructure Light-Weight Concrete requires plan notes and/or a TSP for unit weight, aggregate requirements, etc.

Low Shrink Deck Concrete requires a TSP.

Counterweight Concrete may require plan notes and/or a TSP for unit weight, aggregate requirements, etc.

Concrete for bascule bridge pier should be paid for under Substructure or Mass-
Substructure pay items. See SDG’s 3.9.
Clearly delineate limits of microsilica concrete in the plans. Clearly delineate limits of calcium nitrite in the plans. CIP concrete requiring calcium nitrite should be paid for using the normal concrete pay item. See SDG’s 1.4.2.

ORIGINAL MEASUREMENT:
ALL, Except MISC: Detailed calculations are required in the computation book, calculate carefully to reflect actual scope of work. PLAN QUANTITY will be basis of payment to the Contractor.
MISC: Detailed calculations are required in computation book.

FINAL:
ALL, Except MISC: No calculations required unless item is to be adjusted. Final pay quantity will be PLAN QUANTITY with proper considerations for Specification tolerances.
MISC: Final measurements should be recorded in field book showing detailed calculations. (Refer to subarticle 400-20.2.2 in the specifications.) Transfer final quantity to proper form in computation book.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
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<tbody>
<tr>
<td>Forms</td>
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**References**

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<td>Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.</td>
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**Standards**

| APPROACH SLABS: Index No. 20900, 20910 |
| CIP Retaining Wall: Index 5100 |
| CULVERTS: Index No. 290 |
| ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295 |
| MISC: Index No. 270, 280, 286, 287, 520 |
| RET WALLS: Index Nos. 5000 series |

**Specifications**

346, 400

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

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<td>2 (Endwalls)</td>
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<td>4 (Superstructure)</td>
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<td>5 (Substructure)</td>
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<td>6 (Counterweight)</td>
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<td>8 (Bulkhead)</td>
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<td>10 (Approach Slabs) Class II Only</td>
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<td>11 (Retaining Walls)</td>
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<td>12 (Trench Slabs)</td>
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<td>15 (Miscellaneous)</td>
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<td>20 (Seal)</td>
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Details and Structure: Complete
### Notes

**400- 2-AAA  CLASS II CONCRETE**

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<th>PlanQuantity?</th>
<th>yes/no</th>
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**Notes**

**Details**

Refer to Class I Concrete 400- 1-AAA for details

**Related Items**

**Required** 415- 1- A  **Recommended**

**Forms**

**Design** SHTabQuant  **Construction** Refer to Comp Book

**Documentation**

**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other** Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.

**Standards**

APPROACH SLABS: Index No. 900
CULVERTS: Index No. 290
ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295
MISC: Index No. 270, 280, 286, 287, 520
RET WALLS: Index Nos. 5000 series

**Specifications** 346, 400

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.** 400- 2-AAA  **CLASS II CONCRETE**  CY

AAA =
1 (Culverts)
2 (Endwalls)
4 (Superstructure)
5 (Substructure)
6 (Counterweight)
8 (Bulkhead)
10 (Approach Slabs) Class II Only
11 (Retaining Walls)
12 (Trench Slabs)
15 (Miscellaneous)
20 (Seal)

---

Details and Structure: Complete
22 (Superstructure Closure Joint)
25 (Mass- Substructure)
39 (Precast Segmental Superstructure) CLASS IV/V ONLY
40 (Precast Segmental Substructure) CLASS IV/V ONLY
104 (Superstructure Light-Weight)
105 (Superstructure Special)
106 (Microsilica Substructure) CLASS V ONLY
107 (Microsilica Substructure-Mass) CLASS V ONLY
239 (Low Shrink Deck) Material Only, CLASS IV ONLY

Notes

<table>
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<td><strong>PlanQuantity?</strong></td>
<td>yes/no</td>
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Notes

Details

Refer to Class I Concrete 400- 1-AAA for details

Related Items

Required 415-1- A
Recommended

Forms

Design SHTabQuant
Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.

Standards

APPROACH SLABS: Index No. 900
CULVERTS: Index No. 290
ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295
MISC: Index No. 270, 280, 286, 287, 520
RET WALLS: Index Nos. 5000 series

Specifications 346, 400

Prep & Doc Manual Chapter(s)

Status

Struct. 400- 3-AAA CLASS III CONCRETE CY

AAA =
1 (Culverts)
2 (Endwalls)
4 (Superstructure)
5 (Substructure)
6 (Counterweight)
8 (Bulkhead)
10 (Approach Slabs) Class II Only
11 (Retaining Walls)
12 (Trench Slabs)
15 (Miscellaneous)
20 (Seal)
22 (Superstructure Closure Joint)
25 (Mass- Substructure)
39 (Precast Segmental Superstructure) CLASS IV/V ONLY
40 (Precast Segmental Substructure) CLASS IV/V ONLY
104 (Superstructure Light-Weight)
105 (Superstructure Special)
106 (Microsilica Substructure) CLASS V ONLY
107 (Microsilica Substructure-Mass) CLASS V ONLY
239 (Low Shrink Deck) Material Only, CLASS IV ONLY

### Notes

#### 400- 4-AAA CLASS IV CONCRETE

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**Notes**

Refer to Class I Concrete 400- 1-AAA for details

**Related Items**

- **Required**: 415- 1- A
- **Recommended**: COMP 700-050-04/07

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.

**Standards**

- APPROACH SLABS: Index No. 900
- CULVERTS: Index No. 290
- ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295
- MISC: Index No. 270, 280, 286, 287, 520
- RET WALLS: Index Nos. 5000 series

**Specifications**: 346, 400

**Prep & Doc Manual Chapter(s)**

- Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.
- APPROACH SLABS: Index No. 900
- CULVERTS: Index No. 290
- ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295
- MISC: Index No. 270, 280, 286, 287, 520
- RET WALLS: Index Nos. 5000 series

**Specifications**: 346, 400

**Prep & Doc Manual Chapter(s)**

- Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.
- APPROACH SLABS: Index No. 900
- CULVERTS: Index No. 290
- ENDWALLS: Index No. 245, 250, 251, 252, 253, 255, 261, 264, 266, 282, 295
- MISC: Index No. 270, 280, 286, 287, 520
- RET WALLS: Index Nos. 5000 series

### Status

**Struct. 400- 4-AAA CLASS IV CONCRETE CY**

**AAA =**

- 1 (Culverts)
- 2 (Endwalls)
- 4 (Superstructure)
- 5 (Substructure)
- 6 (Counterweight)
- 8 (Bulkhead)
- 10 (Approach Slabs) Class II Only
- 11 (Retaining Walls)
- 12 (Trench Slabs)
- 15 (Miscellaneous)
- 20 (Seal)
22 (Superstructure Closure Joint)
25 (Mass- Substructure)
39 (Precast Segmental Superstructure) CLASS IV/V ONLY
40 (Precast Segmental Substructure) CLASS IV/V ONLY
104 (Superstructure Light-Weight)
105 (Superstructure Special)
106 (Microsilica Substructure) CLASS V ONLY
107 (Microsilica Substructure-Mass) CLASS V ONLY
239 (Low Shrink Deck) Material Only, CLASS IV ONLY

Notes

400-6- PRECAST ANCHOR BEAMS

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes
Details
Intended for Precast Tie Back anchors for use in anchored wall systems. Include in anchored wall quantity block in plans

Related Items
Required
Design: SHTabQuant
Construction: Refer to Comp Book

Recommended
Design: COMP 700-050-03
Construction: Refer to Comp Book

Forms
Design: Refer to Comp Book
Construction: Refer to Comp Book

Documentation
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 400-6- PRECAST ANCHOR BEAMS EA

Notes

400-7- BRIDGE DECK GROOVING- DECK THICKNESS LESS THAN 8.5"

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

Notes
Details
Item intended for cases where deck profilograph and planing is not required by specification. When rigid approach slab is utilized, include approach slab area only. Quantity based on area bound by bridge gutter lines, begin/end of bridge or begin/end approach slab (if not covered by asphalt wearing surface).

Related Items
Required
Design: SHTabQuant
Construction: Refer to Comp Book

Recommended
Design: COMP 700-050-01
Construction: Refer to Comp Book

Forms
Design: Refer to Comp Book
Construction: Refer to Comp Book

Documentation
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Details and Structure: Complete
PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

**PPM Chapter**

SDG's 4.2

**Other**

SDG's 4.2

**Standards**

**Specifications**

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct. 400- 7-** BRIDGE DECK GROOVING- DECK THICKNESS LESS THAN 8.5"

**Notes**

400- 8-AAA CLASS V CONCRETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>CY; M3</td>
<td>10th of a Cubic Yard; 10th of a Cubic Meter</td>
<td>yes/no</td>
</tr>
</tbody>
</table>

**Related Items**

Required 415- 1- A

Recommended SHTabQuant

**Forms**

Design SHTabQuant

Construction Refer to Comp Book

**Documentation**

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.

**Other**

Mass Concrete SDG’s 3.9, Class and Admixtures SDG’s 1.4.2, Cofferdams and Seals SDG’s 3.7.

**Overview**

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

**Status**

**Struct. 400- 8-AAA** CLASS V CONCRETE CY

AAA =

1 (Culverts)
2 (Endwalls)
4 (Superstructure)
5 (Substructure)
6 (Counterweight)
8 (Bulkhead)
10 (Approach Slabs) Class II Only
11 (Retaining Walls)
12 (Trench Slabs)

Details and Structure: Complete
15 (Miscellaneous)
20 (Seal)
22 (Superstructure Closure Joint)
25 (Mass- Substructure)
39 (Precast Segmental Superstructure) CLASS IV/V ONLY
40 (Precast Segmental Substructure) CLASS IV/V ONLY
104 (Superstructure Light-Weight)
105 (Superstructure Special)
106 (Microsilica Substructure) CLASS V ONLY
107 (Microsilica Substructure-Mass) CLASS V ONLY
239 (Low Shrink Deck) Material Only, CLASS IV ONLY

Notes

400- 9- BRIDGE DECK GROOVING AND PLANING- DECK THICKNESS 8.5” or GREATER

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

Notes

Details

Item intended for cases where deck profilograph, and planing is required by specification. When rigid approach slab is utilized, include approach slab area. Quantity based on area bound by bridge gutter lines, begin/end of bridge or begin/end approach slab (if not covered by asphalt wearing surface).

Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-01</td>
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</table>

References

PPM Chapter
Other
SDG’s 4.2
Specifications

Status

400- 9- BRIDGE DECK GROOVING AND PLANING- DECK THICKNESS 8.5” or GREATER

Notes

400- 12- CLEANING AND SEALING JOINTS (STRUCTURES REHABILITATION AND WIDENING)

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes

Valid through December 2006; replaced by 458-1-ab items

Details

For use on Structures Rehabilitation and/or Widening projects (existing deck areas); item includes backer rod, sealant, and incidental materials as detailed on plans.

NOTE: Joint materials for new bridge deck are incidental to the cost of bridge deck.

Details and Structure: Complete
For Concrete Pavement (Roadway), use Section 350 or 352 pay items.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
<tr>
<td>References</td>
<td>PPM Chapter</td>
<td></td>
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<tr>
<td>Standards</td>
<td>Specifications</td>
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</table>

Notes

**400- 12- CLEANING AND SEALING JOINTS (STRUCTURES REHABILITATION AND WIDENING)**

<table>
<thead>
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<td>PlanQuantity?</td>
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<td>Notes</td>
<td>Details</td>
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For use on bridge rehabilitation projects only.

<table>
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<th>Recommended</th>
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<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<td>Standards</td>
<td>Specifications</td>
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**400- 20- GRINDING BRIDGE DECK- REHABILITATION ONLY**

<table>
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<th>Unit</th>
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<tbody>
<tr>
<td>Notes</td>
<td>Details</td>
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</table>

For use on bridge rehabilitation projects only.

<table>
<thead>
<tr>
<th>Related Items</th>
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<td>Specifications</td>
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</table>

**400- 32- CONCRETE FOR JOINT REPAIR**

Details and Structure: Complete
### Topic No. 600-000-002

#### Basis of Estimates

**Unit** CY; M3  
**Accuracy** 10th of a Cubic Yard; 10th of a Cubic Meter  
**Plan Quantity?** yes

#### Notes

**Details**

Intended for rehabilitation or widening projects to repair or replace concrete deck at expansion joints. Include in Quantity Block in Plans.

**Related Items**

**Required**  
**Recommended**

**Forms**

**Design** SHTabQuant  
**Construction** Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

**PPM Chapter**

**Other** SDG’s 6.4

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 6, 7, 13

#### Status

**Struct.** 400-32-  
**Notes**

**Concrete for Joint Repair**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
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<th>Plan Quantity?</th>
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#### 400-60- A

**Cathodic Protection- Electrical Work**

**Notes**

This item is under development by the State Materials Lab. Contact the Materials Lab prior to using this item.

**Details**

NOTE: 3 pay items- power, conduit, and equipment, as described below, are needed for a complete electrical system. Use with either 400-142, 455-81, or 457-71.

AC or DC POWER SOURCE ASSEMBLY: Includes all work and materials for providing power to the Cathodic Protection System. For AC assemblies, this includes all costs associated with connection between system and external power source. For DC assemblies, includes solar panels, batteries, incidentals, and wiring necessary to provide power.

CONDUIT: Includes all conduit from power source assembly to end location(s), junction boxes, wiring, and all incidentals. Measure as the length of conduit from the power system, along the bridge, and down each pier to be protected.

EQUIPMENT & INSTRUMENTATION: Lump sum item to include all remaining items necessary for a complete system. Detail major equipment, by location, in the plans or Tech Specs.

**Related Items**

**Required**

400-142, 455-81, or 457-71.

**Recommended**

**Forms**

**Design** SHTabQuantLS  
**Construction** Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

**Details and Structure:** Complete  
**Page 82 of 468**
quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Other

**Standards**
Specifications

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct. 400-60- A CATHODIC PROTECTION- ELECTRICAL WORK LS/LS**

A= Components (Select only 1 power source assembly; use with BOTH A=3 and 4)
1 (AC Power Source Assembly) LS
2 (DC Power Source Asswmbly) LS
3 (Conduit, Wiring, and Accessories) LS/LF
4 (Equipment & Instrumentation) LS

**Notes**

Plan Detail and/or Tech Spec Required

---

**400-72- PRECAST BULKHEAD PANELS**

**Unit** SF; M2

**Accuracy** Square Foot; 10th of a Square Meter

**Plan Quantity?** yes

**Notes**

Intended for precast panels used as part of a soldier pile wall system.
Pay Item note recommended; coordinate with specifications. Add pay item note similar to concrete sheet piles (Spec. 455-9.4 and 455-12.7) to include cost of trenching, preformed holes in cost of precast panels. Include in Soldier Wall Quantity Block in Plans.
May require specification modifications as follows: 455-5.15.2 and 455-5.15.3 Placement Tolerances (+/-1") and Batter Tolerances (1/8 in/ft)

**Related Items**

<table>
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<tr>
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<th>Recommended</th>
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<tbody>
<tr>
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<td>COMP 700-050-01</td>
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<td>Refer to Comp Book</td>
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**Documentation**

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<table>
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<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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**References**

PPM Chapter
Other
SDG’s 3.12.9 and Figure 3-13.

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct. 400-72- PRECAST BULKHEAD PANELS SF**

---

Details and Structure: Complete
Notes

400- 91- DEWATERING FOR SPREAD FOOTINGS

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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</tr>
</thead>
</table>

Notes

Details

Required on all spread footing projects where dewatering is anticipated due to high water table. Include in Footing Quantity Block in Plans. Usually used with Pay Items 400-4-25, 400-2-25, 415-1-4. Include Pay Item 125-1 only when additional excavation is required below bottom of footing elevation.

Required Recommended

Standards

Specifications

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 400- 91- DEWATERING FOR SPREAD FOOTINGS EA

Notes

400- 95- A COFFERDAM

<table>
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<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

Notes

Details

Intended to construct/dewater cofferdams. Cofferdams may be required to construct or demolish mudline footings located in the waterway. This pay item is not to be utilized when full containment structures are required due to special environmental turbidity requirements, or when a pier footing is located at the shoreline making dewatering difficult. Do not use for waterline or slightly submerged footings.

Required Recommended

Forms

Design SHTabQuant COMP 700-050-03

Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

Related Items

Forms

Design SBDRST COMP 700-050-03

Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

Details and Structure: Complete
### 400-97- COATING CONCRETE SURFACES

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/SF; LS/M2</th>
<th>Accuracy</th>
<th>Lump Sum (Square Foot); Lump Sum (Square Meter)</th>
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</thead>
<tbody>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Details

Intended on rehabilitation projects to apply coating systems onto existing concrete surfaces such as epoxy or bituminous protection coatings. Cost usually covers the labor. Material costs covered under separate pay item. Show location. Pay item note recommended. Do not use with Item 400-143.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

#### Documentation

- **Design**
  - Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.
- **Construction**
  - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 13

#### Notes

Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### 400-113- PRECAST BENT CAPS (END)

Details and Structure: Complete
### 400-000-002 Topic

#### Basis of Estimates

**2007 Edition**
**April 16, 2007**

<table>
<thead>
<tr>
<th><strong>Unit</strong></th>
<th><strong>Accuracy</strong></th>
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</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

#### Notes

**Details**
Intended for prefabricated end bent caps (furnish and install). Include in End Bent Quantity Block in Plans. Address cost of connection to piles and flowable fill (or similar) required to fill under finished cap. Tech Spec or Plan note may be necessary to address connection to piles.

**Related Items**

<table>
<thead>
<tr>
<th><strong>Forms</strong></th>
<th><strong>Design</strong></th>
<th>SHTabQuant</th>
<th>COMP 700-050-03</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
<td></td>
<td></td>
</tr>
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</table>

| **Documentation** | **Design** | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| **Construction** | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**References**

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

**PPM Chapter**

**Design**

**Construction**

**Other**

**Specifications**

**Notes**

**400-114-**

PRECAST BENT CAPS (INT)

<table>
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<th><strong>Unit</strong></th>
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</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

Intended for prefabricated bent caps (furnish and install). Include in Bent Cap Quantity Block in Plans. TSP or plan notes may be necessary to address connection to piles.

**Related Items**

<table>
<thead>
<tr>
<th><strong>Forms</strong></th>
<th><strong>Design</strong></th>
<th>SHTabQuant</th>
<th>COMP 700-050-03</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
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</tbody>
</table>

| **Documentation** | **Design** | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| **Construction** | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**PPM Chapter**

**Design**

**Construction**

**Other**

**Specifications**

Plan Detail and/or Tech Spec Required

**Notes**

**PPM Chapter**

**Design**

**Construction**

**Other**

**Specifications**

Plan Detail and/or Tech Spec Required
400-114- PRECAST BENT CAPS (INT)  LF

400-128- GROUTING PRECAST DECK PANELS (NON-SHRINK GROUT)

Notes
Details
Intended for grouting the keyways of precast deck panels for both new and rehabilitation projects. On rehabilitation projects, include pay item notes to address payment of the various work items involved. TSP may be required on rehabilitation projects to address removal of existing asphalt overlay, removal and preparation of existing keyways, grouting of keyways, post-tensioning and new overlay requirements.

Required
400-97, 400-135
Recommended
Details
Related Items
Forms
Construction
Refer to Comp Book

Documentation
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)  6, 13

400-134- EPOXY MATERIAL- STRUCTURES REHAB

Notes
Details
Intended on rehabilitation projects for epoxy material to coat existing concrete surfaces. Cost of labor usually paid for under 400-97 or 400-135. Show location in plans. Pay item note recommended.

Required
400-97, 400-135
Recommended
Forms
Design
SHTabQuant

Details and Structure: Complete
### Notes

**Details**

Intended for Rehabilitation Projects to Epoxy Inject and Seal Cracks in Existing Concrete Components. Item intended to Cover Labor. Item 400-134 Intended to cover material. Show locations w/ quantity block in plans.

**Related Items**

- **Required** 400-134
- **Recommended**

**Forms**

- **Design** SHTabQuant
- **Construction** Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status

**Struct.** 400-135- CRACKS, INJECT AND SEAL LF

**Notes**

**Details and Structure:** Complete
Details

Used for rehabilitation of existing bridges. Item includes all costs for shotblasting deck, cleaning deck surface, testing cohesion, furnishing & installing epoxy overlay wearing surface. Contact State Structures Office for assistance.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

Status

Struct.  400-136-  EPOXY CONCRETE OVERLAY  SY

Notes

400-140- A  NEOPRENE PAD REPLACEMENT

Unit  EA  Accuracy  Each  PlanQuantity?  no

Notes

Details

Intended for rehabilitation and widening projects to replace existing damaged pads. Show locations w/ quantity block in plans. Include pay item note to include cost of neoprene pads, jacking bridge, disposal of old pads, and all other labor and materials required to replace existing bearing incidental to cost of this item. For Composite pads, refer to pay item 400-417.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other  SDG’s 6.5

Standards  Index No. 20500, 20501

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  6, 7, 13

Status

Prep & Doc Manual Chapter(s)  6, 7, 13

Details and Structure: Complete
Struct. 400-140- A NEOPRENE PAD REPLACEMENT EA

A =
1 (Bent / Pier)
2 (Abutment)
3 (Box Pier)
4 (Trestle Pier)
5 (V - Pier)

Notes

400-142- A CATHODIC PROTECTION SYSTEM

Unit SF; M² Accuracy Square Foot; 10th of a Square Meter PlanQuantity? no

Notes
Details This item is under development by the Materials Lab. Contact State Materials Office, Corrosion Lab for assistance in use of this item. Intended for rehabilitation projects when cathodic for structural components is utilized. Show locations in plans w/ quantity block. Use Item 400-60 for Electrical Work associated with this item. See 455-81 (pile) or 457-71 (pile jacket) for related items.

Related Items Required 400-60- A Recommended
Forms Design SHTabQuant COMP 700-050-01
Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 400-142- A CATHODIC PROTECTION SYSTEM SF

A =
1 (Raychem) valid through 6/30/06
2 (Eltech) valid through 6/30/06
3 (Zinc Aluminum Spray)
4 (Zinc Aluminum Sheets)
6 (Titanium Sheets) valid through 6/30/06
7 (Titanium Mesh) effective 7/1/06
8 (Titanium Bars) effective 7/1/06
9 (Other) effective 7/1/06

Notes

400-143- CLEANING AND COATING CONCRETE SURFACES, CLASS 5

Details and Structure: Complete
This item is used on bridge widening jobs for applying a class 5 finish coating to existing concrete surfaces or where existing bridges/walls within the limits of a project require a class 5 finish coating. Show locations in plans w/ quantity block.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-01</td>
</tr>
</tbody>
</table>

### Documentation

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

**PPM Chapter**

**Design**

**Construction**

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

### Notes

Details

Intended for cleaning existing class 5 finish coating of existing bridge. Show locations in plans w/ quantity block. Include pay item note in plans.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
</tr>
</tbody>
</table>

**Documentation**

**Design**

Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

**PPM Chapter**

**Other**

**Standards**

**Specifications**
### Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct. 400-145- A</th>
<th>CLEANING CONCRETE SURFACE LS/SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>A = location Blank (Above Water) 1 (Underwater)</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>400-147-</th>
<th>COMPOSITE NEOPRENE PADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>CF; M3</td>
</tr>
<tr>
<td>Accuracy</td>
<td>10th of a Cubic Foot; 100th of a Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Intended for composite (steel reinforced) neoprene bearing pads for bridges. Include cost of plain neoprene bearing pads in cost of concrete superstructure component. Add pay item note for this case. Show locations in plans w/ quantity block. For replacement of neoprene pads, refer to pay item 400-140.

**Related Items**

**Required**

- Design SHTabQuant
- Construction 700-050-56

**Recommended**

- Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter SDG’s 6.5
- Other Standards Specifications Index No. 20500, 20501

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct. 400-147- COMPOSITE NEOPRENE PADS CF</th>
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<tbody>
<tr>
<td>Notes</td>
<td></td>
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<table>
<thead>
<tr>
<th>400-153-</th>
<th>NON SHRINK GROUT- MISCELLANEOUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>CF; M3</td>
</tr>
<tr>
<td>Accuracy</td>
<td>10th of a Cubic Foot; 100th of a Cubic Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

For rehabilitation/widening projects only. Use 10.0 CF (0.03 M3) as a minimum quantity. Show locations in plans w/ quantity block. Include pay item note in plans.

**Related Items**

**Required**

- Design SHTabQuant

**Recommended**

- Design COMP 700-050-04

---

Details and Structure: Complete
401-70- A RESTORE SPALLED AREAS

**Unit**  CF; M3  
**Accuracy**  10th of a Cubic Foot; 100th of a Cubic Meter  
**PlanQuantity?**  no

**Notes**

Used on rehabilitation projects to cover costs of patching existing concrete spalls. Show locations in plans w/ quantity block. Include pay item note in plans. Cost includes cost of preparation, labor and material of concrete patch. Use 10.0 CF (1.00 M3) as a minimum quantity.

**Related Items**

**Required**  
Design  SHTabQuant  
Construction  Refer to Comp Book

**Recommended**  
Design  COMP 700-050-04

**Forms**

**Documentation**

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter  
Other  
Standards  
Specifications

**Status**

Struct.  401-70- A  
RESTORE SPALLED AREAS  
CF

A = 
1 (Epoxy) 
2 (Latex Modified Mortar - Styrene-Butadiene) 
3 (Latex Modified Mortar - Acrylic) 
4 (Portland Cement Grout)

Details and Structure: Complete
5 (Contractors Option)
6 (Thermosetting Polymer Concrete)
Blank (Gunter)

Notes

**405- 70- A**

**LATEX MODIFIED PORTLAND CEMENT CONCRETE**

**Unit** CF; M3  
**Accuracy** 10th of a Cubic Foot; 100th of a Cubic Meter  
**Plan Quantity?** no

**Notes**

**Details**

Intended for thin deck overlays. Show locations in plans with quantity block. Include pay item note in plans. Cost includes cost of preparation, labor and material of latex modified concrete overlay. Use 10.0 CF (1.00 M3) as a minimum quantity.

**Related Items**

**Forms**

**Required**
- Design
- Construction

**Recommended**
- SHTabQuant
- COMP 700-050-04
- Refer to Comp Book

**Documentation**

**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 6, 7, 13

**Status**

**Struct.** 405- 70- A

A =
1 (Type I Cement)
2 (Type III Cement)

Notes

**407- 1- AB**

**PRECAST THREE SIDED CULVERT**

**Unit** LF; M1  
**Accuracy** Linear Foot; 10th of a Meter  
**Plan Quantity?** yes

**Notes**

**Details**

Per specifications, 3 sided box culverts are not an equivalent substitution for Precase Concrete Box Culverts. Refer to PPM for selection and design criteria.

**Related Items**

**Forms**

**Required**
- Design
- Construction

**Recommended**
- SBDRST
- COMP 700-050-03
- Refer to Comp Book

**Documentation**

**Design**

**Construction** Record final quantity on the tabulation sheet (plans) or computation form
AA = Span in Feet
B = Height in Feet
(If 10' or Greater in Height, Code as 0)
410- 70-AAB  PRECAST CONCRETE BOX CULVERT

Unit  LF; M1  Accuracy  Linear Foot; 10th of a Meter  PlanQuantity?  no

Notes  Valid through June 2007; use concrete & steel items.

Details  Intended for 4-sided precast box culverts. Show schematically in the plans. Pay for headwall concrete wing walls under separate pay items. When a CIP 4-sided box culvert, Standard Index 290 is called for in the plans, Item 410- 70-AAB should not be used. Show locations in plans w/ quantity block. Include pay item note in clarify payment of culvert, head wall and wing walls.

Related Items  Required  Recommended  400-4-1, 400-2-1, 415-1-1

Forms  Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References  PPM Chapter
Other
Standards  Index No. 290
Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status  Block Pending
Struct.  410- 70-AAB  PRECAST CONCRETE BOX CULVERT  LF

AA = Span In Feet (Total Width Of Box When Multiple Barrels)
B = Height In Feet (If 10’ Or Greater In Height, Code As 0)

Notes

413-149-  PENETRANT SEALER

Unit  GA; LI  Accuracy  Gallon; Liter  PlanQuantity?  no

Notes  NO SEPARATE PAYMENT FOR NEW, PRECAST ITEMS.
Pay Item for Rehabilitation jobs only. Intended to cover material cost of penetrant sealer. Pay Item 413-154 to cover labor costs. Show locations in plans w/ quantity block.

Related Items  Required  413-154  Recommended

Forms  Design  SHTabQuant  COMP 700-050-06
Construction  700-050-56

Documentation  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References  PPM Chapter
Other
Standards

Details and Structure: Complete
### 413-149 - PENETRANT SEALER

**Unit:** GA; LI  
**Accuracy:** Gallon; Liter  
**PlanQuantity:**

**Notes:**
- Effective 1-1-06; replaces Section 400 items

**Details:**
For use on rehabilitation projects to seal existing deck cracks. Contact State Materials (Gainesville Corrosion) Lab for assistance with Specs. Intended to cover material cost of methacrylate monomer. Pay Item 413-154 to cover labor costs. Show locations in plans w/ quantity block.

**Related Items**
- **Required:** 413-149
- **Recommended:**

**Forms**
- **Design:** SHTabQuant  
- **Construction:** COMP 700-050-06

**Documentation**
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter  
- Other  
- Standards  
- Specifications

### 413-151 - METHACRYLATE MONOMER

**Unit:** GA; LI  
**Accuracy:** Gallon; Liter  
**PlanQuantity:**

**Notes:**
- Effective 1-1-06; replaces Section 400 items

**Details:**
For use on rehabilitation projects to seal existing deck cracks. Contact State Materials (Gainesville Corrosion) Lab for assistance with Specs. Intended to cover material cost of methacrylate monomer. Pay Item 413-154 to cover labor costs. Show locations in plans w/ quantity block.

**Related Items**
- **Required:** 413-154
- **Recommended:**

**Forms**
- **Design:** SHTabQuant  
- **Construction:** COMP 700-050-56

**Documentation**
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter  
- Other  
- Standards  
- Specifications

### 413-154 - CLEANING AND SEALING CONCRETE SURFACES - PENETRANT SEALER OR METHACRYLATES

**Unit:** SF; M2  
**Accuracy:** Square Foot; 10th of a Square Meter  
**PlanQuantity:**

**Notes:**
- REFER TO SECTION 400 for other coatings.

**Details:**
Intended to cover labor cost of penetrant sealer or Methacrylates. Pay Item 413-149 or 413-151 to cover material costs. Show locations in plans w/ quantity block.

**Related Items**
- **Required:** 413-149 or 413-151
- **Recommended:**

**Forms**
- **Design:** SHTabQuant  
- **Construction:** COMP 700-050-01

**Documentation**
- **Design:** Refer to Comp Book
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form

**Details and Structure:** Complete
### Structure: 413-154-

**CLEANING AND SEALING CONCRETE SURFACES - PENETRANT SEALER OR METHACRYLATES**

**Notes**

Show locations in plans w/ quantity block by component (when component is constructed in phases break down quantity by phase). Include complete bar lists in plans. Item No. 415-1-9 (2415-1-9) to be used with Item No. 400-2-10 (2400-2-10).

**Required**

1. ENDWALLS: 295
2. MISC: Index 280 for guard at pipe end

**Recommended**

**Unit**  | LB; KG  | **Accuracy**  | Pound; Kilogram  | **PlanQuantity?**  | yes
---|---|---|---|---

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**

**Status**

**Struct. 415-1- A**  
**REINFORCING STEEL**  
**LB**

A =  
1 (Roadway)  
3 (Retaining Wall)  
4 (Superstructure)  
5 (Substructure)  
6 (Miscellaneous)  
8 (Bulkhead)  
9 (Approach Slabs)

**Notes**

Details and Structure: Complete
### 415-2-A  REINFORCING STEEL- STAINLESS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB; KG</td>
<td>Pound; Kilogram</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes
Coordinate the use of Stainless Steel with the State Structures Office. Intended for stainless steel or stainless steel clad reinforcing. Show locations in plans w/ quantity block. Include bar lists.

#### Details

**Related Items**
- Required
  - Design: SHTabQuant
  - Construction: COMP 700-050-07

**Forms**
- Design: Refer to Comp Book
- Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other Standards
- Specifications

**Status**
- Prep & Doc Manual Chapter(s): 7, 13

---

### 425-1-AAB  INLETS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>Each</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes
"Partial" is used when an existing structure is to be modified.
"Modified" is used when the standard structure on new construction is modified. Modification of the Standard Index Drawing by adding weirs, notches, skimmers, and/or a change to dimensions and reinforcement, are to be detailed in the plans.
"Special" is not limited to any particular inlet type. If a designer has a need for something other than an inlet covered by the standard indexes, it is regarded as special (as in special design). Special Designs require signed and sealed drawings to be included in the plans.

**Related Items**
- Required
  - Design: SBDRST
  - Construction: COMP 700-050-03
Standards


Specifications

*Selected Items may require Tech Spec and/or Plan Detail

PPM Chapter

Other

Standards


References

PPM Chapter

Other

Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 425-1-AAB INLETS EA

AA =
20 (Curb Type 9)
21 (Curb Type 10)
31 (Curb Type P-1) B not 3, 4, 7, or 8
32 (Curb Type P-2) B not 3, 4, 7, or 8
33 (Curb Type P-3) B not 3, 4, 7, or 8
34 (Curb Type P-4) B not 3, 4, 7, or 8
35 (Curb Type P-5) B not 3, 4, 7, or 8
36 (Curb Type P-6) B not 3, 4, 7, or 8
41 (Curb Type J-1) B not 3, 4, 7, or 8
42 (Curb Type J-2) B not 3, 4, 7, or 8
43 (Curb Type J-3) B not 3, 4, 7, or 8
44 (Curb Type J-4) B not 3, 4, 7, or 8
45 (Curb Type J-5) B not 3, 4, 7, or 8
46 (Curb Type J-6) B not 3, 4, 7, or 8
47 (Curb Type 7)
48 (Curb Type 8)
50 (Dt Bot Type A)
51 (Dt Bot Type B)
52 (Dt Bot Type C)
53 (Dt Bot Type C Mod) B not 9
54 (Dt Bot Type D)
55 (Dt Bot Type E)
56 (Dt Bot Type F)
57 (Dt Bot Type G)
58 (Dt Bot Type H)
59 (Dt Bot Type I)
60 (Dt Bot Type J)
61 (Dt Bot Type K)
70 (Gutter Type S)
71 (Gutter Type V)
72 (Gutter Type S Mod) B not 9
80 (Med Barrier Type 1)
81 (Med Barrier Type 2)
82 (Med Barrier Spec Type 1)
83 (Med Barrier Spec Type 2)
84 (Med Barrier Type 3)
85 (Med Barrier Type 4)
86 (Med Barrier Type 5)
88 (Barrier Wall, Rigid, Curb & Gutter)
89 (Barrier Wall)
90 (Special) B not 7 or 8*
91 (Closed Flume) B= 0

**B =**

1 (< 10')
2 (> 10')
3 (J Bot, < 10') (Standard Index 201)
4 (J Bot, > 10') (Standard Index 201)
5 (Partial)
7 (J Bottom, < 10', Special)
8 (J Bottom, > 10', Special)
9 (Modify)
0 (N/A) only for A=91

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### Notes

<table>
<thead>
<tr>
<th>425- 2-AAB MANHOLES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
</tr>
</tbody>
</table>

**Notes**

The designer should consider calling for a ring and cover where routine cleanout and inspection is anticipated, such as a French Drain.

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Related Items**

**Required**

- Design: SBDRST
- Construction: Refer to Comp Book

**Recommended**

- Design: COMP 700-050-03
- Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
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<tbody>
<tr>
<td>Index No. 200, 201</td>
<td></td>
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</table>

**Other Standards**

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>4 (P-7)</td>
</tr>
<tr>
<td>6 (P-8)</td>
</tr>
<tr>
<td>7 (J-7)</td>
</tr>
<tr>
<td>9 (J-8)</td>
</tr>
<tr>
<td>10 (Special) Plan Detail and/or Tech Spec required</td>
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</table>

**Status**

<table>
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<th>Struct.</th>
<th>425- 2-AAB MANHOLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td></td>
</tr>
</tbody>
</table>

AA =

1 (< 10') Refer To Index 201
2 (> 10') " " "
3 (Partial)
425- 3-AAB  JUNCTION BOX (DRAINAGE)

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Related Items
Forms
- Required: Design
  - Recommendations:
    - SBDRST
    - COMP 700-050-03

Documentation
- Design: Refer to Comp Book
- Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

References
PPM Chapter
- Design
- Construction

Prep & Doc Manual Chapter(s)
- Design: 7, 13
- Construction: 7, 13

Notes

Related Items for 425- 4-

425- 4-  INLET- ADJUST

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Details
Consists of changing the vertical placement of an existing inlet so that it will conform to the finished grade as designated in the plans.

Related Items
Forms
- Required: Design
  - Recommendations:
    - SBDRST
    - COMP 700-050-03

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
### MANHOLES- ADJUST

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**

Consists of changing the vertical placement of an existing manhole so that it will conform to the finished grade as designated in the plans.

**Related Items**

- **Forms**
  - **Design**: SBDRST
  - **Construction**: Refer to Comp Book

- **Documentation**
  - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 200, 201
- **Specifications**: 7, 13
Standards
Specifications

Struct. 425-6- VALVE BOX- ADJUST EA

Notes

425-8- DRAINAGE STRUCTURES, MISCELLANEOUS- ADJUST

Unit EA Accuracy Each PlanQuantity? no

Details

Related Items Required Recommended
Forms Design SBDRST COMP 700-050-03
Design Refer to Comp Book
Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Refer to Comp Book

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 425-8- DRAINAGE STRUCTURES, MISCELLANEOUS- ADJUST EA

Notes

425-10- YARD DRAIN

Unit EA Accuracy Each PlanQuantity? no

Details

Related Items Required Recommended
Forms Design SBDRST COMP 700-050-03

For use outside of the R/W. Refer to Design Standard for details.

Prep & Doc Manual Chapter(s) 7, 13

Details and Structure: Complete
### 425-10-

**YARD DRAIN**

**Unit:** EA  
**Accuracy:** Each  
**PlanQuantity?:** no

**Related Items**

**Forms**  
- **Design:** Required  
- **Construction:** Refer to Comp Book

**Documentation**  
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards:** Index No. 282  
- **Specifications**
- **Prep & Doc Manual Chapter(s):** 7, 13

**Status**
- **Struct:** 425-10-  
**Notes**

---

### 425-11-

**DRAINAGE STRUCTURE- MODIFY EXISTING**

**Unit:** EA  
**Accuracy:** Each  
**PlanQuantity?:** no

**Related Items**

**Forms**  
- **Design:** Required  
- **Construction:** Refer to Comp Book

**Documentation**  
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s):** 7, 13

**Status**
- **Struct:** 425-11-  
**Notes**

---

### 425-71-

**INLETS RELOCATION**

**Unit:** EA  
**Accuracy:** Each  
**PlanQuantity?:** no

**Related Items**

**Forms**  
- **Design:** Required  
- **Construction:** Refer to Comp Book

**Documentation**

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s):** 7, 13

**Status**
- **Struct:** 425-71-  
**Notes**
425-71- INLETS RELOCATION

**Details for this pay item must be included in the plans or specifications.**

**Notes**

**Related Items**

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<tr>
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<th>Recommended</th>
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<tr>
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<td>COMP 700-050-03</td>
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**Construction**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Prep & Doc Manual Chapter(s) 7, 13

**Status**

Struct. 425-71- INLETS RELOCATION EA

A =
1 (<10')
2 (>10')

**Notes**

**425-74- A MANHOLES AND INLETS, CLEANING & SEALING**

**Unit** EA

**Accuracy** Each

**PlanQuantity?** no

**Notes**

Details for this pay item must be included in the plans or specifications.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td></td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Prep & Doc Manual Chapter(s) 7, 13

**Status**

Struct. 425-74- A MANHOLES AND INLETS, CLEANING & SEALING EA

A =
1 (<10')
2 (>10')

**Notes**

**425-78- INLET CAP, PRECAST**

**Unit** EA

**Accuracy** Each

**PlanQuantity?** no

Details and Structure: Complete
### Notes

#### Details

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Forms**

- Design: SBDRST  
- Construction: Refer to Comp Book

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 200, 201, 280
- **Specifications**
  - Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

7, 13

---

**Status**

**Struct.**

425-78-  
INLET CAP, PRECAST  
EA

---

### Notes

#### 425-82- GRATE, REPLACE

**Unit**

| EA |

**Accuracy**

Each

**Plan Quantity?**

no

**Notes**

Payment includes "...new grates, and removing and stockpiling existing grates", per specification.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Forms**

- Design: SBDRST  
- Construction: Refer to Comp Book

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

6, 7, 13

---

**Status**

**Struct.**

425-82-  
GRATE, REPLACE  
EA

---

### Notes

#### 430-94- AA DESILT PIPE

**Details and Structure:** Complete
Topic No. 600-000-002
Basis of Estimates

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? no

Notes Effective January 2007 letting; replaces 430-94A-BB

Details Includes furnishing equipment and labor necessary to desilt the pipe, and also includes disposing of all silt and debris removed during the desilting operation. Summarize on plans by pipe location, diameter (or equivalent round diameter), and length to be desilted.

Related Items
Forms
- Required: SBSPMS; SBSDMES
- Recommended: COMP 700-050-03

Documentation
- Required: Refer to Comp Book

References PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 6, 7, 13

Status Struct. 430-94- AA DESILT PIPE LF

430-150-ABB CAST IRON SOIL PIPE

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes Inactive Structure; verify applicable standard index

Details To be used in accordance with Index 282 for back of sidewalk drainage only.

Related Items
Forms
- Required: SBDRST
- Recommended: COMP 700-050-03

Documentation
- Required: Refer to Comp Book

References PPM Chapter
- Other
- Standards Index No. 282

Details and Structure: Complete
Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status  Inactive Structure

Struct.  430-150-ABB CAST IRON SOIL PIPE LF

A =
1 (Service) SV

BB = Standard Pipe Sizes
13 (4”)

Notes

430-17A-BCC PIPE CULVERT OPTIONAL MATERIAL

Unit  LF; M1  Accuracy  Linear Foot; 10th of a Meter  PlanQuantity?  yes

Notes  Effective January 2007, use size ranges (CC=01 to CC=05), Pipe diameters (CC=21 to CC=57) valid through 12-31-06.

Details  Show application, size, and material with class/gage/corrugation on the contract plans. Refer to Index 205 for valid sizes, class/gage/corrugation. For pipe other than round (elliptical concrete and metal pipe arch) show actual size, class/gage/corrugation shown on standard index 205. Use equivalent round pipe size for payment.

Related Items

Required  Recommended

Forms  Design  SBSPMS; SBSDMES  COMP 700-050-03

Construction  Refer to Comp Book

Documentation  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction  Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References  PPM Chapter

Other  Drainage Manual:
http://www.dot.state.fl.us/rrdesign/dr/Manuals%20and%20handbooks.htm

Standards  Index No. 205

Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status  Inactive Structure

Struct.  430-17A-BCC PIPE CULVERT OPTIONAL MATERIAL LF

A =
1 (Storm Sewer)
2 (Cross Drain)
3 (Gutter Drain)
4 (Side Drain)

B = Shape
1 (Round Shape)
2 (Other –Elip/Arch)

CC= Standard Pipe Sizes (effective 1/1/2007)
01 (up to 24")
02 (25 to 36")
03 (37 to 48")
04 (49 to 60")
05 (61" or greater)

cc = Standard Pipe Sizes (valid through 12-31-2006)
21 (12")
23 (15")
25 (18")
29 (24")
33 (30")
38 (36")
40 (42")
41 (48")
42 (54")
43 (60")
44 (66")
45 (72")
46 (78")
47 (84")
48 (90")
49 (96")
50 (102")
51 (108")
52 (120")
53 (132")
54 (144")
55 (156")
56 (168")

Notes

430-200-ABB  FLARED END SECTION

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details

Intended for use outside the clear zone on median drain and cross drain installations. Pipe sizes 12" and 15" (300 mm and 375 mm) are permitted within the clear zone. Specifically not intended for side drain installation.

Related Items

Forms

Required  Design  SBDRST
Recommended  Construction  COMP 700-050-03

Design  Refer to Comp Book

Documentation

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter  Index No. 270
Other
Standards  7, 13
Specifications

Prep & Doc Manual Chapter(s)  7, 13

Prep & Doc Manual Chapter(s)  7, 13

Details and Structure: Complete
### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>430-200-ABB</th>
<th>FLARED END SECTION</th>
<th>EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A =</td>
<td>Blank (Concrete)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB =</td>
<td>Standard Pipe Sizes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 (12&quot;)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>23 (15&quot;)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 (18&quot;)</td>
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<td>27 (21&quot;)</td>
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<td></td>
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<td>29 (24&quot;)</td>
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<td>31 (27&quot;)</td>
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<td>33 (30&quot;)</td>
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<td>34</td>
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<td>38 (36&quot;)</td>
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<td>40 (42&quot;)</td>
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<td>41 (48&quot;)</td>
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<td>42 (54&quot;)</td>
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<td>43 (60&quot;)</td>
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<tr>
<td>44 (66&quot;)</td>
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<td></td>
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<tr>
<td>45 (72&quot;)</td>
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</table>

### Notes

**430-6AB-CDD U-ENDWALL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no</td>
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</table>

**Notes**

Refer to Standard Index 260 or 261 for proper selection. To be used only in the clear zone for the drainage of medians and other areas having low design velocities. Precasting or cast-in-place will be permitted. Cost of this item shall include concrete, reinforcing steel, grate and all accessories. For items included on Index 250, payment will be made under concrete and steel items.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
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</table>

**Documentation**

<table>
<thead>
<tr>
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<th>Construction</th>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**References**

<table>
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<th>PPM Chapter</th>
<th>Other</th>
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<td>SBDRST COMP 700-050-03</td>
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<table>
<thead>
<tr>
<th>Standards</th>
<th>Specifications</th>
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<tbody>
<tr>
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| Prep & Doc Manual Chapter(s) | 7, 13 |

### Status

<table>
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<tbody>
<tr>
<td>A =</td>
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<td></td>
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<tr>
<td>0 (Std 260) when A =0, BC =21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Std 261)</td>
<td></td>
<td></td>
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</table>
B = Appurtenance
0 (none)
1 (baffles)
2 (grate)
3 (baffles and grate)
C = slope
0 (1:6)
1 (1:4)
2 (1:3)
3 (1:2)
dd = Standard Pipe Sizes
23 (15")
25 (18")
29 (24")
33 (30")

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>430-72A-BCC PIPE, SLOTTED OR PERFORATED CULVERT</td>
</tr>
<tr>
<td><strong>Unit</strong></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
</tr>
</tbody>
</table>

**Details**
To be used for French Drain applications only. Refer to Design Standards. Show size, class/gage and material on the contract plans. Payment is based on equivalent round pipe size.

**Related Items**

**Required**

**Forms**
Design SBSPMS; SBSDMES COMP 700-050-03
Construction Refer to Comp Book

**Documentation**
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
PPM Chapter SBSPMS; SBSDMES COMP 700-050-03
Other Refer to Comp Book
Standards Index No. 205, 285
Specifications

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**
Struct. 430-72A-BCC PIPE, SLOTTED OR PERFORATED CULVERT LF

**A** =
1 (Storm Sewer) French Drain ONLY
B = Material
4 (Optional)
CC = Standard Pipe Sizes
23 (15")
25 (18")
27 (21")

Details and Structure: Complete
29 (24")
31 (27")
33 (30")
34
38 (36")
40 (42")
41 (48")
42 (54")
43 (60")
44 (66")
45 (72")

Notes

430-82A- BB  CLEANING & SEALING EXISTING PIPE JOINT

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Each</td>
<td>yes</td>
</tr>
</tbody>
</table>

Notes

Details

For cleaning and sealing existing joints only. Coordinate use of this item w/ State Drainage Office.

Related Items

Forms

Required
Design
SBDRST

Recommended
Construction
Refer to Comp Book

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter
Design
Construction

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status  Inactive Structure

Struct.  430-82A- BB  CLEANING & SEALING EXISTING PIPE JOINT  EA

A =
1 (Storm Sewer)
2 (Cross Drain)

BB = Standard Pipe Sizes
23 (15")
25 (18")
27 (21")
29 (24")
31 (27")
33 (30")
34
38 (36")
40 (42")
41 (48")
### 430-830- PIPE FILLING AND PLUGGING

<table>
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<tr>
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<tbody>
<tr>
<td>CY; M3</td>
<td>Cubic Yard; Cubic Meter</td>
<td>no</td>
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</tbody>
</table>

**Notes**

To be used only for filling/plugging existing drainage culverts, where called for in the plans. Per the specifications, "The cost of filling and plugging pipe shown in the plans as existing, to be placed out of service"

NOTE: "The cost of plugging pipe, shown in the plans as proposed new pipe, will be included in the contract unit price for pipe culvert." (Do not use this pay item for new pipe.)

**Related Items**

<table>
<thead>
<tr>
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<th>Recommended</th>
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**Documentation**

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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**Status**

| Struct. | 430-830- PIPE FILLING AND PLUGGING | CY |

**Related Items**

<table>
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<tr>
<th>PPM Chapter</th>
<th>Other</th>
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<td>Index No. 280</td>
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**Prep & Doc Manual Chapter(s)**

6, 7, 13

---

### 430-860- A STORM SEWER TRENCH

<table>
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<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

Details and Structure: Complete
**Struct. 430-860- A STORM SEWER TRENCH LF**

A =
2 (2' Wide)
3 (3' Wide)
4 (4' Wide)
5 (5' Wide)
6 (6' Wide)

**Notes**

Effective January 2007, sizes AA = 1 to 5 effective. Sizes AA = 21 and greater valid through 12-31-06.
Refer to Drainage Manual for additional information.

**Related Items**

**Forms**

- **Design** Required: SBDRST
  - Recommended: COMP 700-050-03
- **Construction** Required: Refer to Comp Book

**Documentation**

- **Design** Required: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction** Required: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s): 7, 13

**Status**

**Struct. 430-880- AA FLAP GATES EA**

**Unit** EA  **Accuracy** Each  **PlanQuantity?** no

**Notes**

Effective January 2007, sizes AA = 1 to 5 effective. Sizes AA = 21 and greater valid through 12-31-06.

**Details**

Refer to Drainage Manual for additional information.

**Related Items**

**Forms**

- **Design** Required: SBDRST
  - Recommended: COMP 700-050-03
- **Construction** Required: Refer to Comp Book

**Documentation**

- **Design** Required: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction** Required: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards
- Specifications
  - Plan Detail and/or Tech Spec Required
- Prep & Doc Manual Chapter(s): 7, 13

**Status**

**Struct. 430-880- AA FLAP GATES EA**

**Details and Structure:** Complete
AA = Standard Pipe Sizes (effective 1/1/2007)
01 (0 to 24")
02 (25 to 36")
03 (37 to 48")
04 (49 to 60")
05 (61" or greater)

AA = Standard Pipe Sizes (valid through 12/2006)
21 (12")
23 (15")
25 (18")
27 (21")
31 (27")
33 (30")
34
38 (36")
40 (42")
41 (48")
42 (54")
43 (60")
44 (66")
45 (72")
46 (78")
47 (84")
48 (90")
49 (96")
50 (102")
51 (108")
52 (120")
53 (132")
54 (144")
55 (156")
56 (168")
57 (180")
90 (Special)

Notes

430-94A- BB PIPE, DESILTING

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
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<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
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</table>

Notes
Valid through December 2006 letting; replaced by 430-94-AA

Details
Includes furnishing equipment and labor necessary to desilt the particular pipe size, and also includes disposing of all silt and debris removed during the desilting operation. Calculate lengths for each different size of round pipe, or equivalent, on a project.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBSPMS; SBSDMES</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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<table>
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<tr>
<th>Documentation</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
</tr>
</tbody>
</table>
Standards
Specifications

Struct. 430-94A- BB PIPE, DESILTING LF

A = Application
1 (Storm Sewer)
2 (Cross Drain)
3 (Gutter Drain)
4 (Side Drain)
5 (Edgedrain) when A=5, BB=18

BB = Standard Pipe Sizes
18 (4") A=1 Thru 4, Is Not Valid
23 (15")
25 (18")
27 (21")
29 (24")
31 (27")
33 (30")
34
38 (36")
40 (42")
41 (48")
42 (54")
43 (60")
44 (66")
45 (72")
46 (78")
47 (84")
48 (90")
49 (96")
50 (102")
51 (108")
52 (120")
53 (132")
54 (144")
55 (156")
56 (168")
57 (180")

Notes

430-950- DESILTING CONCRETE BOX CULVERT

Unit CY; M3 Accuracy Cubic Yard; Cubic Meter PlanQuantity? no

Notes
Details Payment is for the VOLUME OF SILT removed, based on the length and width of the box culvert, and the average DEPTH OF SILT to be removed.

Related Items Required Recommended

Details and Structure: Complete
### 430-950- DESILTING CONCRETE BOX CULVERT

**Unit** LF; M1  
**Accuracy** Linear Foot; 10th of a Meter  
**Quantity** CY

**Notes**  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Related Items**  
**Forms** Design SBDRST  
Construction 700-050-54  
**Documentation** Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter  
Other  
Standards  
Specifications  
Prep & Doc Manual Chapter(s) 6, 7, 13

## 430-963- AA PVC PIPE FOR BACK OF SIDEWALK

**Unit** LF; M1  
**Accuracy** Linear Foot; 10th of a Meter  
**Quantity** LF

**Notes**  
Effective January 2007; replaces 430-96A-BCC  
For use according to Design Standard for back of sidewalk applications.  
For all other applications, including gutter drain, use Optional Pipe.

**Related Items**  
**Forms** Required Design SBDRST  
Recommended COMP 700-050-03  
**Construction** Refer to Comp Book

**Documentation** Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter  
Other  
Standards Index 282  
Specifications  
Prep & Doc Manual Chapter(s)

## 430-96A-BCC PIPE, POLYVINYL CHLORIDE- DRAINAGE

**A= Size**  
1 (4") Standard  
2 (Non-Standard)

**Notes**
### Notes
Valid Through December 2006; replaced by 430-963 item

### Details
Calculate lengths for each different size of pipe on a project.

### Related Items

#### Forms
- **Required**: Design
  - SBSPMS; SBSDMES
- **Recommended**: COMP 700-050-03

#### Documentation
- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References
- PPM Chapter
- Other
- Standards
- Specifications

- Plan Detail and/or Tech Spec Required

### Status
Block Pending

### Structural
- 430-96A-BCC
- PIPE, POLYVINYL CHLORIDE- DRAINAGE
  - LF

- A = Class
  - 1 (Schedule 40)
  - 2 (Schedule 80)
- B =
  - 1 (Encased)
  - 2 (Not Encased)
- CC =
  - 04 (1/2")
  - 05 (3/4")
  - 06 (1")
  - 07 (1 1/4")
  - 08 (1 1/2")
  - 09 (2")
  - 10 (2 1/2")
  - 11 (3")
  - 12 (3 1/2")
  - 13 (4")
  - 16 (6")
  - 18 (8")
  - 20 (10")
  - 21 (12")
  - 23 (15")
  - 25 (18")
  - 29 (24")

### Notes
Formerly titled "Polyvinyl Chloride Pipe Culvert"
### UNIT: LF; M1
### ACCURACY: Linear Foot; 10th of a Meter
### PLAN QUANTITY?: no

#### Related Items

**Required**
- **Forms**
  - **Design**: SBDRST
  - **Construction**: Refer to Comp Book

**Recommended**
- **Forms**
  - **Design**: COMP 700-050-03
  - **Construction**: Refer to Comp Book

#### Notes
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 7, 13

### Status
- **Inactive Structure**
- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**
- **PLAN QUANTITY will be basis of payment to the Contractor.**
- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

#### Related Items

**Required**
- **Forms**
  - **Design**: SBSPMS; SBSDMES
  - **Construction**: Refer to Comp Book

**Recommended**
- **Forms**
  - **Design**: COMP 700-050-03
  - **Construction**: Refer to Comp Book

#### Notes
- Includes all pipe, grates (when required), fasteners, reinforcement, connectors, anchors, concrete, sealants, jackets, coupling bands, and all work required to install the mitered end section. Show shape and size on the contract plans. Refer to Index 273 for valid sizes. Use equivalent round pipe size for payment.

#### References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 6, 13

### Status
- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**
- **PLAN QUANTITY will be basis of payment to the Contractor.**
- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

#### Design References
- **SBSPMS; SBSDMES**: COMP 700-050-03

#### Other References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 6, 13

### Status
- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**
- **PLAN QUANTITY will be basis of payment to the Contractor.**
- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

## 430-98A-BCC MITERED END SECTION

### UNIT: EA
### ACCURACY: Each
### PLAN QUANTITY?: yes

#### Related Items

**Required**
- **Forms**
  - **Design**: SBSPMS; SBSDMES
  - **Construction**: Refer to Comp Book

**Recommended**
- **Forms**
  - **Design**: COMP 700-050-03
  - **Construction**: Refer to Comp Book

#### Notes
- Includes all pipe, grates (when required), fasteners, reinforcement, connectors, anchors, concrete, sealants, jackets, coupling bands, and all work required to install the mitered end section. Show shape and size on the contract plans. Refer to Index 273 for valid sizes. Use equivalent round pipe size for payment.

#### References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 6, 13

### Status
- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**
- **PLAN QUANTITY will be basis of payment to the Contractor.**
- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

## 430-970- PROTECTIVE PIPE BEDDING

### UNIT: LF
### ACCURACY: Linear Foot; 10th of a Meter
### PLAN QUANTITY?: no

#### Notes
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 7, 13

### Status
- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**
- **PLAN QUANTITY will be basis of payment to the Contractor.**
- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

## 430-98A-BCC MITERED END SECTION

### UNIT: EA
### ACCURACY: Each
### PLAN QUANTITY?: yes

#### Notes
- Includes all pipe, grates (when required), fasteners, reinforcement, connectors, anchors, concrete, sealants, jackets, coupling bands, and all work required to install the mitered end section. Show shape and size on the contract plans. Refer to Index 273 for valid sizes. Use equivalent round pipe size for payment.

#### References
- **PPM Chapter**: Design, Construction
- **Other**: Standards, Specifications
- **Specifications**: Index No. 205, 272, 273
- **Prep & Doc Manual Chapter(s)**: 6, 13
A = Application
2 (Cross Drain)
4 (Side Drain)

B = Shape
1 (Optional Round)
6 (Optional Other – Elliptical/Arch)

CC = Standard Round or Equivalent Other Shape Pipe Sizes
Standard Pipe Sizes
21 (12")
23 (15")
25 (18")
27 (21")
29 (24")
31 (27")
33 (30")
34
38 (36")
40 (42")
41 (48")
42 (54")
43 (60")
44 (66")
45 (72")
46 (78")
47 (84")
48 (90")
49 (96")
50 (102")
51 (108")
52 (120")
53 (132")
54 (144")
55 (156")
56 (168")
57 (180")

Refer to Standard Index 205

Notes

<table>
<thead>
<tr>
<th>431-1- A</th>
<th>PIPE LINER, OPTIONAL MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>LF; M1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes
Effective January 2007 letting; replaces 431-1-ABB.

Details
Design with manufacturer’s lengths in mind for all practical applications. This item is used to rehabilitate an existing pipe by forming a lining on the host pipe’s interior, thereby allowing a debilitated pipe to regain strength and performance capabilities. Refer to specifications for current industry practices.

Related Items

Forms
Required
Design: SBDRST

Recommended
Construction: COMP 700-050-03

Documentation
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Details and Structure: Complete
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

---

**Status**

**Struct.** 431-1- A  PIPE LINER, OPTIONAL MATERIAL  LF

A = Size Range
1 (0"-24")
2 (25-36")
3 (37-48")
4 (49-60")
5 (61" and greater)

---

**Notes**

---

**432-3- A**  CHEMICAL GROUT REPAIR - PIPE, NON-TEST

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Related Items**

**Required**

**Design**

SHTabQuant

**Recommended**

COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.** 432-3- A  CHEMICAL GROUT REPAIR - PIPE, NON-TEST  EA

A =
1 (15")
2 (18")
3 (21")
4 (24")
5 (30")
6 (36")
7 (42")

---

Details and Structure: Complete
## CHEMICAL GROUT REPAIR - MANHOLE/INLET

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

### Notes

- Plan Detail and/or Tech Spec Required

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

### Documentation

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- PPM Chapter
- Other
- Standards
- Specifications

### Status

<table>
<thead>
<tr>
<th>Struct.</th>
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</thead>
<tbody>
<tr>
<td>433- 1- CHEMICAL GROUT REPAIR - MANHOLE/INLET EA</td>
</tr>
</tbody>
</table>

### Notes

Refer to Design Standards for valid gauges & sizes.

Design with manufacturer's lengths in mind for all practical applications.

**FINAL:**

- FOR STORM SEWER AND CROSS DRAIN: Final quantity must be recorded in space provided on summary sheet in the plans. All changes must be shown on final plan sheets. Final pay quantity will be PLAN QUANTITY with the proper consideration for specification tolerances.
- FOR SIDE DRAIN AND GUTTER DRAIN: Final quantity and additions must be recorded in space provided on summary of quantity sheet in the plans by station number.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

### Documentation

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
### Specifications

**Struct.** 435-1A-BCC  
**PIPE, STRUCTURAL PLATE STEEL CULVERT**  
**LF**

- **A** =  
  - 1 (Storm Sewer)  
  - 2 (Cross Drain)  
  - 4 (Side Drain)

- **B** = Gauge Or Thickness  
  - 2 (0.109 Thickness 12 Gauge)  
  - 3 (0.138 Thickness 10 Gauge)  
  - 4 (0.168 Thickness 8 Gauge)  
  - 5 (0.188 Thickness 7 Gauge)  
  - 6 (0.218 Thickness 5 Gauge)  
  - 7 (0.249 Thickness 3 Gauge)  
  - 8 (0.280 Thickness 1 Gauge)

- **CC** = Standard Pipe Sizes  
  - 43 (60")  
  - 44 (66")  
  - 45 (72")  
  - 46 (78")  
  - 47 (84")  
  - 48 (90")  
  - 49 (96")  
  - 50 (102")  
  - 51 (108")  
  - 52 (120")  
  - 53 (132")  
  - 54 (144")  
  - 55 (156")  
  - 56 (168")  
  - 57 (180")

### Notes

- **435-2A-BCC**  
  **PIPE STRUCTURAL PLATE STEEL ARCH CULVERT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes/no</td>
</tr>
</tbody>
</table>

### Details

Refer to Design Standards for valid gauges & sizes.  
Design with manufacturer’s lengths in mind for all practical applications.  

**FINAL:**  
FOR STORM SEWER AND CROSS DRAIN: Final quantity must be recorded in space provided on summary sheet in the plans. All changes must be shown on final plan sheets.  
Final pay quantity will be PLAN QUANTITY with the proper consideration for specification.
tolerances.  
FOR SIDE DRAIN AND GUTTER DRAIN: Final quantity and additions must be recorded in space provided on summary of quantity sheet in the plans by station number.

### Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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<table>
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<tr>
<th>Documentation</th>
<th>Design</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
</tr>
</tbody>
</table>

### References

- **Standards**: Index No. 205
- **Specifications**
  - **PPM Chapter**: Design, Construction
  - **Other**: PPMDoc Manual Chapter(s) 6, 7, 13

### Status

**Struct.** 435- 2A-BCC  
PIECE STRUCTURAL PLATE STEEL ARCH CULVERT  
LF

**A** =  
1 (Storm Sewer)  
2 (Cross Drain)  
4 (Side Drain)

**B** = Gauge Or Thickness  
2 (0.109 Thickness 12 Gauge)  
3 (0.138 Thickness 10 Gauge)  
4 (0.168 Thickness 8 Gauge)  
5 (0.188 Thickness 7 Gauge)  
6 (0.218 Thickness 5 Gauge)  
7 (0.249 Thickness 3 Gauge)  
8 (0.280 Thickness 1 Gauge)

**CC** = Standard Pipe Arch Sizes 18" Radius  
Pipe Arch - 6" X 2" (12 Gauge Thru 1 Gauge)  
36 (6'1" X 4'7")  
37 (6'4" X 4'9")  
38 (6'9" X 4'11")  
39 (7'0" X 5'1")  
40 (7'3" X 5'3")  
41 (7'8" X 5'5")  
42 (7'11" X 5'7")  
43 (8'2" X 5'9")  
44 (8'7" X 5'11")  
45 (8'10" X 6'1")  
46 (9'4" X 6'3")  
47 (9'6" X 6'5")  
48 (9'9" X 6'7")  
49 (10'3" X 6'9")  
50 (10'8" X 6'11")  
51 (10'11" X 7'1")  
52 (11'5" X 7'3")  
53 (11'7" X 7'5")  
54 (11'10" X 7'7")

---

**Details and Structure**: Complete  
Page 125 of 468
55 (12'4" X 7'9")
56 (12'6" X 7'11")
57 (12'8" X 8'1")
58 (12'10" X 8'4")
59 (13'5" X 8'5")
60 (13'1" X 8'7")
61 (14'1" X 8'9")
62 (14'3" X 8'11")
63 (14'10" X 9'1")

Pipe Arch - 6" X 2" (10 Gauge Thru 1 Gauge)
66 (15'4" X 9'3")
67 (15'6" X 9'5")
68 (15'8" X 9'7")
69 (15'10" X 9'10")
70 (16'5" X 9'11")
71 (16'7" X 10'1")

CC = Standard Pipe Arch Size 31" Radius
76 (13'3" X 9'4")
77 (13'6" X 9'6")
78 (14'0" X 9'8")
79 (14'2" X 9'10")
80 (14'8" X 10'0")
81 (14'11" X 10'2")
82 (15'4" X 10'4")
83 (15'7" X 10'6")
84 (15'10" X 10'8")
85 (16'3" X 10'10")
86 (16'6" X 11'6")
87 (17'0" X 11'2")
88 (17'2" X 11'4")
89 (17'5" X 11'6")
90 (17'11" X 11'8")
91 (18'1" X 11'10")
92 (18'7" X 12'0")
93 (18'9" X 12'2")
94 (19'3" X 12'4")
95 (19'6" X 12'6")
96 (19'8" X 12'8")
97 (19'11" X 12'10")
98 (20'5" X 13'0")
99 (20'7" X 13'2")

Notes

<table>
<thead>
<tr>
<th>435-3AB-CDD</th>
<th>STRUCTURAL PLATE CULVERT- ALUMINUM, ROUND SHAPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
<tr>
<td><strong>Details</strong></td>
<td>Refer to Design Standards for valid gauges &amp; sizes.</td>
</tr>
<tr>
<td><strong>Related Items</strong></td>
<td><strong>Required</strong></td>
</tr>
<tr>
<td><strong>Forms</strong></td>
<td>Design</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Standards Index No. 205
Specifications

Struct.  435-3AB-CDD STRUCTURAL PLATE CULVERT- ALUMINUM, ROUND LF SHAPE

A =
1 (Storm Sewer)
2 (Cross Drain)
4 (Side Drain)

B = Thickness
1 (0.100 Thickness)
2 (0.125 Thickness)
3 (0.150 Thickness)
4 (0.175 Thickness)
5 (0.200 Thickness)
6 (0.225 Thickness)

C = Rib Type And Spacing
0 (None)
1 (Type II, 9")
2 (Type II, 18")
3 (Type II, 27")
4 (Type II, 54")
5 (Type IV, 9")
6 (Type IV, 18")
7 (Type IV, 27")
8 (Type IV, 54")

DD = Standard Pipe Sizes
43 (60")
44 (66")
45 (72")
46 (78")
47 (84")
48 (90")
49 (96")
50 (102")
51 (108")
52 (114")
53 (120")
54 (126")
55 (132")
56 (138")
57 (144")
58 (150")
59 (156")
60 (162")
61 (168")
62 (174")
63 (180")
64 (186")
65 (192")
66 (198")
67 (204")
68 (210")
69 (216")
70 (222")
71 (228")
72 (234")

Notes

435-4AB-CDD  STRUCTURAL PLATE CULVERT - ALUMINUM PIPE ARCH

Unit LF; M1  Accuracy Linear Foot; 10th of a Meter  PlanQuantity? yes/no

Notes

Details

Refer to Design Standards for valid gauges & sizes.
Design with manufacturer's lengths in mind for all practical applications.

ORIGINAL:
FOR STORM SEWER AND CROSS DRAIN: Location and dimension must be summarized on summary sheet in the contract plans. PLAN QUANTITY will be basis of payment to the Contractor.
FOR SIDE DRAIN AND GUTTER DRAIN: Location and dimension must be summarized on the contract plans.

FINAL:
FOR STORM SEWER AND CROSS DRAIN: Final quantity must be recorded in space provided on summary sheet in the plans. All changes must be shown on final plan sheets. Final pay quantity will be PLAN QUANTITY with the proper consideration for specification tolerances.
FOR SIDE DRAIN AND GUTTER DRAIN: Final quantity and additions must be recorded in space provided on summary of quantity sheet in the plans by station number.

Related Items

Required    Recommended

Forms
Design  SBDRST  COMP 700-050-03
Construction  Refer to Comp Book

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other Standards  Index No. 205
Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status
Struct.  435-4AB-CDD  STRUCTURAL PLATE CULVERT - ALUMINUM PIPE  LF

Details and Structure: Complete
ARCH

A = 1 (Storm Sewer)
2 (Cross Drain)
4 (Side Drain)

B = Thickness
1 (0.100 Thickness)
2 (0.125 Thickness)
3 (0.150 Thickness)
4 (0.175 Thickness)
5 (0.200 Thickness)
6 (0.225 Thickness)

C = Rib Type And Spacing
0 (None)
1 (Type II, 9")
2 (Type II, 18")
3 (Type II, 27")
4 (Type II, 54")
5 (Type IV, 9")
6 (Type IV, 18")
7 (Type IV, 27")
8 (Type IV, 54")

DD = Standard Pipe Arch Sizes
10 (6' 7" X 5' 8")
11 (6'11" X 5' 9")
12 (7' 3" X 5'11")
13 (7' 9" X 6' 0")
14 (8' 1" X 6' 1")
15 (8' 5" X 6' 3")
16 (8'10" X 6' 4")
17 (9' 3" X 6' 5")
18 (9' 7" X 6' 6")
19 (9'11" X 6' 8")
20 (10' 3" X 6' 9")
21 (10' 9" X 6'10")
22 (11' 1" X 7' 0")
23 (11' 5" X 7' 1")
24 (11' 9" X 7' 2")
25 (12' 3" X 7' 3")
26 (12' 7" X 7' 5")
27 (12'11" X 7' 6")
28 (13' 1" X 8' 2")
29 (13' 1" X 8' 4")
30 (13'11" X 8' 5")
31 (14' 0" X 8' 7")
32 (13'11" X 9' 5")
33 (14' 3" X 9' 7")
34 (14' 8" X 9' 8")
35 (14'11" X 9'10")
36 (15' 4" X 10' 0")
37 (15' 7" X 10' 2")
38 (16' 1" X 10' 4")
39 (16' 4" X 10' 6")

Notes
435-5AB-CDD  STRUCTURAL PLATE CULVERT- ALUMINUM , ARCH SHAPE

| Unit  | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | yes/no |

Notes

Refer to Design Standards for valid gauges & sizes.
Design with manufacturer's lengths in mind for all practical applications.

FINAL:
FOR STORM SEWER AND CROSS DRAIN: Final quantity must be recorded in space provided on summary sheet in the plans. All changes must be shown on final plan sheets. Final pay quantity will be PLAN QUANTITY with the proper consideration for specification tolerances.
FOR SIDE DRAIN AND GUTTER DRAIN: Final quantity and additions must be recorded in space provided on summary of quantity sheet in the plans by station number.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

Documentation

| Design  | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction  | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>Index No. 205</td>
</tr>
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<td>Specifications</td>
<td></td>
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<td>Prep &amp; Doc Manual Chapter(s)</td>
<td>6, 7, 13</td>
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Status

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<th>435-5AB-CDD</th>
<th>STRUCTURAL PLATE CULVERT- ALUMINUM , ARCH SHAPE</th>
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</thead>
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<tr>
<td>A = 1</td>
<td>(Storm Sewer)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Cross Drain)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(Side Drain)</td>
<td></td>
</tr>
<tr>
<td>B = Thickness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(0.100 Thickness)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(0.125 Thickness)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>(0.150 Thickness)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(0.175 Thickness)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>(0.200 Thickness)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>(0.225 Thickness)</td>
<td></td>
</tr>
<tr>
<td>C = Rib Type And Spacing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>(None)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Type II, 9&quot;)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>(Type II, 18&quot;)</td>
<td></td>
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<tr>
<td>3</td>
<td>(Type II, 27&quot;)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>(Type II, 54&quot;)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>(Type IV, 9&quot;)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>(Type IV, 18&quot;)</td>
<td></td>
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<tr>
<td>7</td>
<td>(Type IV, 27&quot;)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>(Type IV, 54&quot;)</td>
<td></td>
</tr>
<tr>
<td>DD = Standard Pipe Arch Sizes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10 (5' 0" X 1' 9")
11 (5' 0" X 2' 3")
12 (5' 0" X 2' 7")
13 (6' 0" X 1'10")
14 (6' 0" X 2' 4")
15 (6' 0" X 2' 9")
16 (6' 0" X 3' 2")
17 (7' 0" X 2' 4")
18 (7' 0" X 2'10")
19 (7' 0" X 3' 3")
20 (7' 0" X 3' 8")
21 (8' 0" X 2'11")
22 (8' 0" X 3' 4")
23 (8' 0" X 4' 2")
24 (9' 0" X 2'11")
25 (9' 0" X 3'10")
26 (9' 0" X 4' 8")
27 (10' 0" X 3' 6")
28 (10' 0" X 4' 5")
29 (10' 0" X 5' 2")
30 (11' 0" X 3' 6")
31 (11' 0" X 4' 6")
32 (11' 0" X 5' 8")
33 (12' 0" X 4' 1")
34 (12' 0" X 5' 0")
35 (12' 0" X 6' 3")
36 (13' 0" X 4' 1")
37 (13' 0" X 5' 1")
38 (13' 0" X 5'11")
39 (13' 0" X 6' 9")
40 (14' 0" X 4' 8")
41 (14' 0" X 5' 7")
42 (14' 0" X 6' 5")
43 (14' 0" X 7' 3")
44 (15' 0" X 4' 8")
45 (15' 0" X 5' 8")
46 (15' 0" X 6' 7")
47 (15' 0" X 7' 5")
48 (15' 0" X 7' 9")
49 (16' 0" X 5' 3")
50 (16' 0" X 6' 2")
51 (16' 0" X 7' 1")
52 (16' 0" X 7'11")
53 (16' 0" X 8' 3")
54 (17' 0" X 5' 3")
55 (17' 0" X 6' 3")
56 (17' 0" X 7' 2")
57 (17' 0" X 8' 0")
58 (17' 0" X 8'10")
59 (18' 0" X 5' 9")
60 (18' 0" X 6' 9")
61 (18' 0" X 7' 8")
62 (18' 0" X 8'11")
63 (18' 0" X 8' 6")
64 (19' 0" X 6' 4")
65 (19' 0" X 7' 4")
66 (19' 0" X 8' 2")
67 (19' 0" X 9' 0")
68 (19' 0" X 9' 5")

Notes

435-6AB-CDD  STRUCTURAL PLATE CULVERT- ALUMINUM, UNDERPASS SHAPE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details
Refer to Design Standards for valid gauges & sizes.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards
Index No. 205
Specifications

Prep & Doc Manual Chapter(s)

Status
Inactive Structure

Struct.
435-6AB-CDD  STRUCTURAL PLATE CULVERT- ALUMINUM, UNDERPASS SHAPE

A = 1 (Storm Sewer)
2 (Cross Drain)
4 (Side Drain)

B = Thickness
1 (0.100 Thickness)
2 (0.125 Thickness)
3 (0.150 Thickness)
4 (0.175 Thickness)
5 (0.200 Thickness)
6 (0.225 Thickness)

C = Rib Type And Spacing
0 (None)
1 (Type II, 9")
2 (Type II, 18")
3 (Type II, 27")
4 (Type II, 54")
5 (Type IV, 9")
6 (Type IV, 18")
7 (Type IV, 27")
8 (Type IV, 54")

DD = Standard Pipe Arch Sizes
11 (6' 3" X 6' 1")
12 (6' 3" X 6' 5")

Details and Structure: Complete
### Notes

**436- 1- A TRENCH DRAIN**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Use in accordance with Index 206

**Details**

**Related Items**

**Forms**

**Design**

SHTabQuant

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

Index No. 206

**Specifications**

*Selected Items may require Tech Spec and/or Plan Detail

**Status**

**Struct.**

436- 1- A TRENCH DRAIN LF

A = size

1 (15" Diameter Standard)

2 (Special) *

**Notes**

* Special may require Tech Spec and/or Plan Detail

---

**440- 1- AA UNDERDRAIN**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Notes
Details Item based on the size of the smooth interior product. Price per length shall include cost of pipe, fittings, aggregate, sock, filter fabric, cleanouts, and concrete aprons.

Related Items
Forms

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SBUNDR; SBUnderdrain</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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Documentation

| Design        | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction  | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
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<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
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</tbody>
</table>

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 440-1-AA UNDERDRAIN LF

AA =
10 (Type I)
20 (Type II)
30 (Type III)
50 (Type V)
60 (Type Special)

Notes

440-70- UNDERDRAIN INSPECTION BOX

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Each</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
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Notes

Details

Related Items

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<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBUNDR; SBUnderdrain</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
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</table>

Documentation

| Design        | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction  | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
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<tbody>
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<tr>
<td>Other</td>
</tr>
<tr>
<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
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</table>

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 440-70- UNDERDRAIN INSPECTION BOX EA

Details and Structure: Complete
Notes

440- 73-  A UNDERDRAIN OUTLET PIPE

| Unit | LF; M1  | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

**Notes**

**Details**
Use in accordance with Standard Index. Price per length includes trench excavation, pipe, fittings, concrete aprons, hardware cloth for concrete aprons, stubbing into drainage structures, backfill in place, and removal of excess materials.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
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</tr>
<tr>
<td>Design</td>
<td>SBUNDR; SBUnderdrain</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

| Documentation |             |
| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**
PPM Chapter
Other
Standards | Index No. 286 |
Specifications

**Prep & Doc Manual Chapter(s)** | 7, 13 |

**Status**

<table>
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<tr>
<th>Struct.</th>
<th>440- 73-  A UNDERDRAIN OUTLET PIPE</th>
<th>LF</th>
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<tbody>
<tr>
<td>A = Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ( 4&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ( 6&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 ( 8&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (10&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 (12&quot;)</td>
<td>Note: 12&quot; is non-standard; will require plan details and/or Tech Spec</td>
<td></td>
</tr>
<tr>
<td>6 ( 5&quot;)</td>
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<td></td>
</tr>
</tbody>
</table>

**Notes**

**442- 70- VERTICAL DRAINAGE WICKS**

| Unit | LF; M1  | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

**Notes**

**Details**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

| Documentation |             |
| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

Details and Structure: Complete
### 442-70- VERTICAL DRAINAGE WICKS LF

**Notes**

This item includes furnishing and placing pipe, pipe plugs, pipe fittings, coarse aggregate and filter fabric, and also includes trenching, backfilling, sheeting and, when necessary, pavement restoration.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

### 443-70- AA FRENCH DRAIN

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter  
**PlanQuantity?**: no

**Notes**

This item includes furnishing and placing pipe, pipe plugs, pipe fittings, coarse aggregate and filter fabric, and also includes trenching, backfilling, sheeting and, when necessary, pavement restoration.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBDRST</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

### 443-71- A BALLAST ROCK

**Unit**: CY; M3  
**Accuracy**: Cubic Yard; Cubic Meter  
**PlanQuantity?**: no

**Notes**

AA = Size
3 (18")  
4 (24")  
5 (30")  
6 (36")  
7 (42")  
8 (48")  
9 (54")

**Status**

**Struct.**: 442-70- VERTICAL DRAINAGE WICKS LF

**Status**

**Struct.**: 443-70- AA FRENCH DRAIN LF

**Status**

**Struct.**: 443-71- A BALLAST ROCK LF
Do not use with 443-70 French Drain item; refer to Index 285 for details

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms Design</td>
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<td>COMP 700-050-04</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-54</td>
<td></td>
</tr>
</tbody>
</table>

| Documentation Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Documentation Construction | Measure inside the truck bed; calculate the volume by multiplying those three dimensions. Subtract 2% to account for the hoist box and bed fillets. Record all field records on site source record form and transfer final quantity to computation book. |

| References | PPM Chapter |
| Other |              |
| Standards | Index No. 285 |
| Specifications |             |
| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

| Status | Struct. 443-71- A BALLAST ROCK CY |
|  | A = 1 (French Drain Aggregate) |

| Notes |                               |

<table>
<thead>
<tr>
<th>Related Items</th>
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<th>Recommended</th>
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</thead>
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<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

| Documentation Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Documentation Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

| References | PPM Chapter |
| Other |              |
| Standards |              |
| Specifications |             |
| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

| Status | Struct. 444-70- AA WELL OPEN HOLE (DEEP) LF |
|  | AA = |

Details and Structure: Complete
### 444-71- AA WELL CASING (DEEP)

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

- **Design**
  - SHTabQuant
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

**Struct. 444-71- AA WELL CASING (DEEP)** LF

AA =

5 (12")
6 (14")
7 (16")
8 (18")
11 (24")
14 (30")
17 (36")

### 444-72- AA DEEP WELL CLEANING

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

- **Design**
  - SHTabQuant
- **Recommended**
  - COMP 700-050-03

**Prep & Doc Manual Chapter(s)** 6, 7, 13

Details and Structure: Complete
### 446- 1- A EDGEDRAIN DRAINCRETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Details
Price per length includes removal of existing shoulder pavement, trench excavation, disposal of excess materials, filter fabric, draincrete, edgedrain pipe and fittings. Refer to Design Standard for payment details, based on new/rehab construction.

#### Related Items
- **Required**
  - Design: SBEDDR; SBEdgedrains
  - Construction: Refer to Comp Book

- **Recommended**
  - Design: COMP 700-050-03

#### Forms
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status
- **Struct.** 446- 1- A EDGEDRAIN DRAINCRETE LF

---

### Standards
- Index No. 286, 287

### Specifications
- PPMD Chapter
- Other
- Design
- Construction

### References
- PPM Chapter
- Other
- Standards
- Specifications

---

### Notes
- **Inactive Structure**

---

**Details and Structure: Complete**
A = pipe size
1 (Standard)
9 (non-standard)*
standard per Index 287 is 4"

Notes
* non-standard may require Tech Spec and/or Plan Detail

<table>
<thead>
<tr>
<th>446-71- A</th>
<th>EDGEDRAIN OUTLET PIPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**
Includes removal of existing shoulder pavement, trench excavation, pipe and fitting, concrete apron, sod, stubbing into existing inlets and paved ditches, etc. Refer to Design Standard for details.

**Related Items**

<table>
<thead>
<tr>
<th><strong>Required</strong></th>
<th><strong>Recommended</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SBEDDR; SBEdgedrains</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
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</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th><strong>PPM Chapter</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>Index No. 287</td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
<tr>
<td>Prep &amp; Doc Manual Chapter(s)</td>
<td></td>
</tr>
</tbody>
</table>

**Status**

<table>
<thead>
<tr>
<th><strong>Struct.</strong></th>
<th><strong>446-71- A</strong></th>
<th>EDGEDRAIN OUTLET PIPE</th>
<th>LF</th>
</tr>
</thead>
</table>
| Notes       | **A**= pipe size
1 (4"
9 (non-standard)
standard per Index 287 is 4"

<table>
<thead>
<tr>
<th>448-73-</th>
<th>PUMPING STATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LS/LS</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Lump Sum</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

**Related Items**

<table>
<thead>
<tr>
<th><strong>Required</strong></th>
<th><strong>Recommended</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
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</tr>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Specification tolerances.

References
- PPM Chapter
- Other
- Standards
- Specifications

Plan Detail and/or Tech Spec Required
- Prep & Doc Manual Chapter(s): 6, 7, 13

Status
- Struct. 448-73- PUMPING STATION LS/LS

Notes

450-1-AAA PRESTRESSED BEAMS

| Unit     | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | yes |

Notes
- Intended for prestressed beams for bridge construction.
- Summarize quantities by location per span.
- AAA= 201, 202, 203 are typically used for bridge widening projects. These are non-standard and will require project specific design. Designers must work with the District and/or State Structures Office when using these items.
- AAA=278, 378 are typically used for post-tensioned beams. These are non-standard and will require project specific design. Designers must work with the District and/or State Structures Office when using these items.

Related Items
- Required
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- Recommended
  - Design: COMP 700-050-03
  - Construction: COMP 700-050-03

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
- PPM Chapter
- Other
- Standards: Index No. 20110 thru 20199, and 20310, 20320.
- Specifications

Status
- Struct. 450-1-AAA PRESTRESSED BEAMS LF

AAA =
1 (Type II)
2 (Type III)
3 (Type IV)
4 (Type V)
5 (Type VI)
### Notes

**450- 3- AB**  
**PRESTRESSED SLAB UNITS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Intended for non-post-tensioned prestressed bridge deck panels with concrete wearing surface.

**Related Items**

- **Forms**
  - Design: SHTabQuant  
  - Construction: Refer to Comp Book

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
  - SDG’s 4.4
- **Other**
  - SDG’s 4.4

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.**  
**450- 3- AB**  
**PRESTRESSED SLAB UNITS**  
**LF**

A = Width  
1 (48")  
2 (60")  
3 (96")  
4 (72")  
5 (36")  
6 (54")  
7 (57")  
8 (63")  
9 (72")  
10 (78")  

B = Thickness  
1 (12")
2 (16")
3 (10")
4 (18")
5 (15")

Notes

450- 4-AAA PRESTRESSED BEAM (FLORIDA U-BEAM)

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes

Details
Intended for prestressed Florida U-beams for bridge construction. Summarize quantities by location per span.

Related Items
Forms
Required
Design SHTabQuant
Construction Refer to Comp Book

Recommended
Design COMP 700-050-03
Construction

Documentation
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards Index No. 20210 thru 20299
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 450- 4-AAA PRESTRESSED BEAM (FLORIDA U-BEAM) LF

AAA =
1 (48")
2 (54")
3 (63")
4 (72")

Notes

450- 82- BEAM REPAIR

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes

Details
Intended for rehabilitation projects to strengthen or repair existing concrete beams. Show locations in plans. Include pay item note to clarify payment for various work items. See also item 450-83.

Related Items
Forms
Required
Design SHTabQuant

Recommended
COMP 700-050-03

Details and Structure: Complete
### Title

**Struct. 450-82-** BEAM REPAIR **LF**

**Notes**

#### 450-83- A BEAM REPAIR

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**

Show locations in plans. Include pay item note to clarify payment for various work items. See also item 450-82.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Refer to Comp Book</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
</tbody>
</table>

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### Status

**Struct.** 450-82- BEAM REPAIR

**Notes**

**450-88- AA PRESTRESSED SLAB UNITS TRANSVERSELY POST TENSIONED**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SF; M2</th>
<th>Accuracy</th>
<th>Square Foot; 10th of a</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details and Structure:** Complete
Square Meter

Notes

Details
Intended for post-tensioned prestressed bridge deck panels w/ concrete or asphalt wearing surface.

Related Items

Forms
- Required: SHTabQuant
- Recommended: COMP 700-050-01

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
- PPM Chapter
- Other: SDG’s 4.4

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s): 7, 13

Status

Struct.
450- 88- AA
PRESTRESSED SLAB UNITS TRANSVERSELY POST TENSIONED

AA =
- 12 (12")
- 14 (14")
- 15 (15")
- 16 (16")
- 18 (18")
- 19 (19")
- 20 (20")
- 21 (21")
- 24 (24")

Notes

451- 70- AA
PRESTRESSED SOIL ANCHOR

Unit
EA
Accuracy
Each
PlanQuantity?
no

Notes

Details
For permanent applications only. Do not pay for separately when prestressed soil anchors are part of a temporary steel sheet pile wall system. Intended for payment of prestressed soil anchor, proof and creep test. See specification 451-12. Show anchor spacing and force/anchor. Show locations in plans w/ quantity block.

Related Items

Forms
- Required: SHTabQuant
- Recommended: COMP 700-050-03

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form

Details and Structure: Complete

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(comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)  7, 13

Status
Struct.  451- 70- AA

Notes

**452- 70-** PRECAST SEGMENT PRODUCTION

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

Details
Intended to cover for segmental casting yard set-up costs. Required on all Precast Segmental Bridge Projects.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
<td>COMP 700-050-05</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)  6, 7, 13

Status
Struct.  452- 70- PRECAST SEGMENT PRODUCTION LS/LS

Notes

**455- 2- A** TREATED TIMBER PILING

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Details
Designer must verify material requirements with State Materials Lab prior to requesting item.
Intended for temporary detour bridge applications, or special use structures. Summarize quantities by location per bent. The quantity to be paid for shall be the length, in feet (meters), of piling actually remaining in the completed structure below the elevation of cut-off shown in the plans or designated by the Engineer.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

**Struct.** 455-2- A TREATED TIMBER PILING LF

A = Treatment
Blank (Single Treatment)
1 (Dual Treatment)

**Notes** Designer must verify material requirements with State Materials Lab prior to requesting item.

---

**455-14-AA CONCRETE SHEET PILING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes** Intended for concrete sheet pile walls. Show locations in plans. Include quantity block in plans.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Details and Structure:** Complete
Struct.  455- 14- AA  CONCRETE SHEET PILING  LF

A =
1 (7" X 30")
2 (8" X 30")
3 (10" X 30")
4 (12" X 30")
5 (Special)
6 (6" X 30")
7 (5" X 24")
8 (6" X 48")
9 (6" X 36")
10 (9" X 48")

Notes

455- 18-  PROTECTION OF EXISTING STRUCTURES

Unit  LS/LS  Accuracy  Lump Sum  PlanQuantity?  yes

Notes

Details
Intended for projects where impacts of construction vibration on adjacent existing structures is a concern. Survey existing older bridges and monitor vibration/settlement of existing structures located within a few hundred feet of the following construction operations: pile driving, drilled shaft excavations, blasting, vibro-compaction, steel sheet pile installations, well point dewatering systems, etc. Of special concern are old bridge structures on timber piles, existing retaining walls, existing building on shallow foundations, etc.

List in the plans adjacent to structures not covered under 455-1.1 that require surveying and vibration monitoring, or structures that require special attention during construction

Related Items

Required  Recommended
Forms
Design  SHTabQuantLS  COMP 700-050-05
Construction  Refer to Comp Book

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter
Other
Soils and Foundations Handbook 7.1.6, 9.2.4

Prep & Doc Manual Chapter(s)  7, 13

Status

Struct.  455- 18-

Notes

455- 34- AA  PRESTRESSED CONCRETE PILING

Details and Structure: Complete
### Topic No. 600-000-002

**Basis of Estimates**

#### 2007 Edition

**April 16, 2007**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

**Details**

Intended to cover cost and installation of the square prestressed concrete piling. Quantity computed as the total anticipated length of pile without allowances for cutoffs, splices or preforming. Related items 455-143 & 455-137, except for fender system piling, & piling for soldier pile walls.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td></td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

#### Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Detailed calculations are required in computation book to reflect actual scope of work.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Final tabulation of quantities must be recorded on proper form in computation book by location.</td>
</tr>
</tbody>
</table>

#### References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Design</th>
<th>Construction</th>
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<tbody>
<tr>
<td>Other</td>
<td>SDG's 3.5</td>
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#### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>455- 34- AA</th>
<th>PRESTRESSED CONCRETE PILING</th>
<th>LF</th>
</tr>
</thead>
</table>

A =

1 (12" Sq.)
2 (14" Sq.)
3 (18" Sq.)
4 (20" Sq.)
5 (24" Sq.)
6 (30" Sq.)
7 (36" Sq.)
8 (Special)

#### Notes

**Details**

Intended to cover cost and installation of the steel “H” or pipe piling. Quantity computed as the total anticipated length of pile without allowances for cutoffs, splices or preforming.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td></td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

#### Documentation

<table>
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<tr>
<th>Design</th>
<th>Locate in plans. Detailed calculations are required in computation book to reflect actual scope of work.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Final tabulation of quantities must be recorded on proper form in computation book by location.</td>
</tr>
</tbody>
</table>

---

**Details and Structure:** Complete

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Standards
Specifications
Struct. 455-35-AA PILING, STEEL LF

AA =
1 (Hp 8 X 36)
2 (Hp 10 X 36)
3 (Hp 10 X 42)
4 (Hp 12 X 53)
5 (Hp 14 X 73)
6 (Hp 14 X 89)
7 (Hp 14 X 102)
8 (Hp 14 X 117)
9 (Special)
20 (18” Dia Pipe)
21 (20” Dia. Pipe)
22 (24” Dia. Pipe)
23 (30” Dia. Pipe)

Notes

455-36-A CONCRETE CYLINDER PILES- FURNISHED & DRIVEN

| Unit   | LF; M1 | Accuracy       | Linear Foot; 10th of a Meter | PlanQuantity? | no |

Notes

Details
Intended to cover cost and installation of the concrete cylinder piling. Quantity computed as the total anticipated length of pile without allowances for cutoffs, splices or preforming.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

Documentation

| Design              | Locate in plans. Detailed calculations are required in computation book to reflect actual scope of work. |
| Construction        | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>SDG’s 3.5</th>
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<tbody>
<tr>
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<tr>
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<td>Index 20654, 20660.</td>
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<tr>
<td>Specifications</td>
<td>Plan Detail and/or Tech Spec Required</td>
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Status

Prep & Doc Manual Chapter(s) 7, 13

Details and Structure: Complete
Struct.  455-36- A  CONCRETE CYLINDER PILES- FURNISHED & DRIVEN  LF

A =
1 (54" Dia.)
2 (60" Dia.)

Notes

455-37- A  FIBERGLASS STRUCTURALLY REINFORCED COMPOSITE PILES

Unit  LF; M1  Accuracy  Linear Foot; 10th of a Meter  PlanQuantity?  yes

Notes  Effective January 2007. Formerly titled "Fender System, Plastic Composite Piles"
Details  To be used with Fender System, Section 471. Refer to Design Standards and Specifications for additional information.

Related Items
Forms  Required  Recommended
Design  SHTabQuant  COMP 700-050-08
Construction  Refer to Comp Book

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction  Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References  PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status
Struct.  455-37- A  FIBERGLASS STRUCTURALLY REINFORCED COMPOSITE PILES

A= Size
1 (13" Diameter) to be opened only with Structures Design Approval
2 (16" Diameter)

Notes

455-39- A  MINIPILE FOUNDATION SYSTEMS- FURNISH AND INSTALL

Unit  EA  Accuracy  Each  PlanQuantity?  no

Notes
Details  Intended for strengthening existing bridges or used on new structures that have restricted overhead room. Payment is per each; length is determined by the contractor's specialty engineer. Minimum tip elevation and minimum casing lengths shall be shown in the plans. Use requires State Structures Design Office approval.

Related Items
Forms  Required  Recommended
Design  SHTabQuant  COMP 700-050-03

Details and Structure: Complete
455- 39-  A MINIPILE FOUNDATION SYSTEMS- FURNISH AND INSTALL

A= Nominal Pile Diameter
blank (unspecified)
1 (10" Diameter)
2 (12" Diameter)
3 (14" Diameter)

Plan Detail and/or Tech Spec Required

455- 76- WRAP PILE CLUSTERS

Unit  EA  Accuracy  Each  PlanQuantity? no

Notes

Details
Repair/Rehab Projects only.
Intended on fender repair projects.
Show locations in plans w/ quantity block.

Related Items
Required  Recommended
Forms  Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  7, 13
455-81-ABB  CATHODIC PROTECTION

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

This item is under development by the State Materials Lab. Contact State Materials Office, Corrosion Lab for assistance in use of this item. Intended for Pile or Pier installation of Zinc or Titanium anode.
Show locations in plans with quantity block.
Electrical Work paid under item 400-60-A.
See items 400-142 (structure) and 457-71 (pile jacket) for related work.

Related Items

<table>
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Forms

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Construction

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Standards

PPM Chapter

Other

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status

455-81-ABB  CATHODIC PROTECTION  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)

BB =
01 (Pile, Zinc Anode Assembly)
02 (Pier, Zinc Anode Assembly)
04 (Pile, Titanium Anode Assembly)
05 (Pier, Titanium Anode Assembly)
06 (Other)

Notes

455-87- ANCHOR BAR, STEEL

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Intended for wall anchor tiebacks to connect wall to dead men, or anchor piles. Not for prestressed soil anchor applications.
Show locations in plans w/ quantity block. Design for sacrificial thickness and coat with coal tar epoxy, if required

Related Items

<table>
<thead>
<tr>
<th>Required</th>
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Forms

<table>
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</tr>
</thead>
<tbody>
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<td>COMP 700-050-03</td>
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</table>

Details and Structure: Complete
455- 88- AA DRILLED SHAFT

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Intended to pay for the cost of concrete and steel, temporary casing, all labor, materials, equipment and incidentals necessary to complete the drilled shaft. Length is measured from top-of-shaft elevation to the design tip elevation shown in the plans. Pay Item 455-122-XAA is required with this item. Pay Item 455-122 covers the cost of the shaft excavation. Clearly specify in plans CSL testing requirements as required. Cost of Shaft Inspection Device included in cost of drilled shaft, 455- 88-XAA. CSL tubes included under 455- 88-XAA. CSL testing paid for under Item 455-142.

Related Items

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<tr>
<td>455-122 (2455-122)</td>
<td>455-142 when CSL testing is required</td>
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Forms

<table>
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<td>Refer to Comp Book</td>
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Documentation

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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<th>Other</th>
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<tr>
<td>SDG’s 3.6</td>
<td></td>
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</tbody>
</table>

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 455- 87- ANCHOR BAR, STEEL EA

Notes

AA =
1 (24" Dia.)
2 (30" Dia.)
3 (36" Dia.)

Details and Structure: Complete
# 455-89-AA Drilled Shaft Tip Grouting

| Unit  | EA | Accuracy  | Each | PlanQuantity? | no |

**Notes**

**Details**

Intended for the post grouting of drilled shaft tips after installation. The item includes all materials, hardware, and labor to perform the work.

**Related Items**

- **Required**: 455-122 (2455-122), 455-88-AA (2455-88-AA)
- **Recommended**: 455-101-A Load Test-Osterberg

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: SDG's 3.6
- **Other**: SDG's 3.6

**Status**

**Struct.** 455-89-AA Drilled Shaft Tip Grouting EA

- AA = 1 (24” Dia.)
- 2 (30” Dia.)
- 3 (36” Dia.)
- 4 (42” Dia.)
- 5 (48” Dia.)
- 6 (60” Dia.)
- 7 (72” Dia.)
- 8 (54” Dia.)
- 9 (66” Dia.)
- 19 (90” Dia.)
- 20 (108” Dia.)

**Notes**

**455-101-A Load Test-Osterberg**

Details and Structure: Complete
### 455-101- XXA

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

**Details**

Intended to load test drilled shafts using Osterberg Cells. Show location and test load of o-cells test shafts. Show number and depth of o-cells for each test shaft.

**Related Items**

**Required**: 455-129-XXA  
**Recommended**: 455-131- and 455-132- required for test located on water.

**Forms**

- **Design**: SHTabQuant  
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Plan Detail and/or Tech Spec Required
- **Other**: Soils and Foundations Handbook 10.3.3

---

### 455-103- ABB

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

**Details**

Intended for Statnamic load testing of piles or drilled shafts. Show location and test load of test shafts or piles.

**Related Items**

**Required**: 455-129- A  
**Recommended**: 455-131- and 455-132- required for test located on water.

**Forms**

- **Design**: SHTabQuant  
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Plan Detail and/or Tech Spec Required
- **Other**: Soils and Foundations Handbook 10.3.1
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)  6, 7, 13

Status

Struct.  455-103-ABB LOAD TEST- STATNAMIC EA

A = Type
1 (Compression)
2 (Lateral)

BB = Test Capacity
01 ( 100 Tons)
02 ( 200 Tons)
03 ( 300 Tons)
04 ( 400 Tons)
05 ( 500 Tons)
06 ( 600 Tons)
07 ( 700 Tons)
08 ( 800 Tons)
09 ( 900 Tons)
10 (1000 Tons)
11 (1100 Tons)
12 (1200 Tons)
13 (1300 Tons)
14 (1400 Tons)
15 (1500 Tons)
16 (1600 Tons)
30 (3000 Tons)

Notes
Plan Detail and/or Tech Spec Required

Status
Prep & Doc Manual Chapter(s)  6, 7, 13

455-107- AA DRILLED SHAFT CASING

Unit       LF; M1  Accuracy  Linear Foot; 10th of a Meter  PlanQuantity?  no

Notes
Intended on drilled shaft projects when plans require permanent casing method be used. Permanent casing is typically not paid for separately for portions of shaft in waterway unless permanent casing method is required for shaft below the mud line. Show locations and depths in drilled shaft data table.

Related Items
Required  455-122- AA, 455-88- AA  Recommended

Forms
Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter  SDG’s 3.6
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Details and Structure: Complete
Status

Struct.  455-107- AA  DRILLED SHAFT CASING  LF

AA =
1 (24" Dia.)
2 (30" Dia.)
3 (36" Dia.)
4 (42" Dia.)
5 (48" Dia.)
6 (60" Dia.)
7 (72" Dia.)
8 (54" Dia.)
9 (66" Dia.)
18 (84" Dia.)
19 (90" Dia.)
20 (108" Dia.)
21 (96" Dia)

Notes

455-111-  CORE/PILOT HOLE- DRILLED SHAFT EXCAVATION

Unit  LF; M1  Accuracy  Linear Foot; 10th of a Meter

Notes

Details

Intended for payment of pilot holes or cores for drilled shaft projects to determine the quality of the material below the tip.
Pilot holes are taken at shaft locations prior to shaft excavation.
Cores are taken below the tip of an excavated shaft.
Pilot holes or cores when deemed necessary, are typically taken 3 to 5 shaft diameters below the shaft’s planned tip elevation. Use 3 shaft diameters unless otherwise noted in the plans.
Show location in the plans. Clarify whether pilot holes or cores are to be taken. Base quantity on the anticipated pilot hole and/or core length needed. Include pay item note.

Establish quantities as follows:  Cores: measured from the bottom of shaft elevation to the bottom of the core (3 to 5 shaft diameters below tip); Pilot holes: measured from the ground elevation to the bottom elevation of the pilot hole (3 to 5 shaft diameters below tip).

Related Items

Required  455- 88- AA, 455-122- AA  Recommended

Forms  Design  SHTabQuant  COMP 700-050-03

Documentation  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References  PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status

Details and Structure: Complete
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<table>
<thead>
<tr>
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<tr>
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<tr>
<td>Accuracy</td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
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**Notes**

**Details**

Intended for payment of auger cast piles to support miscellaneous structures. Do not use with Pay Item 534-72-1AA. Cost of sound barrier foundations included in the cost of sound barrier wall. Not for use to support bridge structures.

**Related Items**

**Forms**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Design</td>
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</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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<table>
<thead>
<tr>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
</tr>
<tr>
<td>Construction</td>
</tr>
</tbody>
</table>

**References**

PPM Chapter

Other

Soils and Foundations Manual 8.2.4, SDG’s 3.1

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

<table>
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<th>455-112- A</th>
<th>PILE- AUGER GROUTED LF</th>
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</thead>
<tbody>
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<td></td>
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</tr>
<tr>
<td>1 (16&quot; Diameter)</td>
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<td></td>
</tr>
<tr>
<td>2 (14&quot; Diameter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (24&quot; Diameter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (30&quot; Diameter)</td>
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**Notes**

**Details**

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</tr>
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<td>PlanQuantity?</td>
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**Related Items**

**Forms**

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<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
</tr>
</tbody>
</table>

**Prep & Doc Manual Chapter(s)** 7, 13
### Standards

#### Specifications

**Struct. 455-119-ABB LOAD TEST- STATIC EA**

**A = Type Load**
- 1 (Compression)
- 2 (Tension)
- 3 (Lateral)

**BB = Amount Of Load**
- 01 (0 - 50 Tons)
- 02 (51 - 100 Tons)
- 03 (101 - 600 Tons)
- 04 (601 - 1200 Tons)
- 05 (1201-1800 Tons)

### Notes

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Soils and Foundations Handbook 10.3.1

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct. 455-119-ABB LOAD TEST- STATIC EA**

**A = Type Load**
- 1 (Compression)
- 2 (Tension)
- 3 (Lateral)

**BB = Amount Of Load**
- 01 (0 - 50 Tons)
- 02 (51 - 100 Tons)
- 03 (101 - 600 Tons)
- 04 (601 - 1200 Tons)
- 05 (1201-1800 Tons)

### Notes

**455-120- A PILE POINT PROTECTION**

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Intended for steel “H” or pipe piling and steel sheet piling projects when borings show soils that may be difficult to penetrate. Show locations in plans w/ quantity block.

**Related Items**

**Required** 455- 35, 455-133

**Recommended**

**Forms**

**Design** SHTabQuant

**Construction** COMP 700-050-03

Refer to Comp Book

**Documentation**

**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Soils and Foundations Handbook 10.3.1

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct. 455-120- A PILE POINT PROTECTION EA**

**A =**
- 1 (HP 14" X 89)
- 2 (20" Sq.)
- 3 (24" Sq.)
### 455-122- AA  UNCLASSIFIED SHAFT EXCAVATION

<table>
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<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Intended for the excavation of the drilled shafts. Pay Item 455-88-XAA is required with this item. Quantity is the depth of excavated hole from ground elevation to tip of shaft.

**Related Items**

- **Required**: 455-88- AA
- **Recommended**: 455-88- AA

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: SDG’s 3.6

**Prep & Doc Manual Chapter(s)**

6, 7, 13

**Status**

**Struct.**

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<th>UNCLASSIFIED SHAFT EXCAVATION</th>
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</table>

AA =
1 (24” Diameter.)
2 (30” Diameter.)
3 (36” Diameter.)
4 (42” Diameter.)
5 (48” Diameter.)
6 (60” Diameter.)
7 (72” Diameter.)
8 (54” Diameter.)
9 (66” Diameter.)
19 (90” Diameter.)
20 (108” Diameter.)
21 (96” Diameter.)

**Notes**

**Related Items**

- **Required**: 455-101, 455-103, or 455-119
- **Recommended**: 455-101, 455-103, or 455-119

Intended for use with all static, statnamic and Osterberg Cell load tests.

---

**Details**

Intended for use with all static, statnamic and Osterberg Cell load tests.
**Struct. 455-129- A**

**INSTRUMENTATION AND DATA COLLECTION**

- **A =**
  - 1 (Pile Foundation)
  - 2 (Drilled Shaft Foundation)

**Notes**

- **Forms**
  - **Design**
    - SHTabQuantLS
  - **Construction**
    - Refer to Comp Book

- **Documentation**
  - **Design**
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
  - **Construction**
    - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

- **References**
  - **PPM Chapter**
  - **Other**
    - Soils and Foundations Handbook 10.3

**Status**

- **Struct.** 455-129- A

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Struct. 455-131-**

**PLATFORM, WORKING SERVICE**

- **Unit** EA
- **Accuracy** Each
- **PlanQuantity?** no

**Notes**

- **Details**
  - Intended for access platform at pile/shaft test site. Use with all static, statnamic and Osterberg Cell load test projects when tests are located in waterway or on land tests where access is difficult.

**Related Items**

- **Required** 455-101, 455-103, or 455-119
- **Recommended**

**Forms**

- **Design**
  - SHTabQuant
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

- **Struct.** 455-131-

**PLATFORM, WORKING SERVICE**

- **Unit** EA

---
### 455-132- PLATFORM, REMOTE OBSERVATION

<table>
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<th>Notes</th>
<th>Details</th>
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<tbody>
<tr>
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<tr>
<td><strong>Accuracy</strong></td>
<td>Each</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
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</table>

**Details**

Intended for survey platform at test pile/shaft. Use with all static, statnamic and Osterberg Cell load test projects when tests are located in waterway or on land tests where access is difficult.

**Related Items**

- **Required**: 455-101, 455-103, or 455-119
- **Recommended**

**Forms**

- **Design**: SHTabQuant
- **Construction**: COMP 700-050-03

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

- **Plan Detail and/or Tech Spec Required**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

**Status**

Inactive Structure

**Struct.**

455-132- PLATFORM, REMOTE OBSERVATION EA

### 455-133- SHEET PILING, STEEL

<table>
<thead>
<tr>
<th>Notes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>SF; M2</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Square Foot; 10th of a Square Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
</tr>
</tbody>
</table>

**Details**

PERMANENT: Complete designs and details must be provided in the plans including the Steel sheeting section, begin and end stations, top and bottom pile elevations.

TEMPORARY: This item should be utilized for temporary sheet pile installations that are installed at “critical locations.” Critical walls” are walls necessary to maintain the safety of the traveling public or structural integrity of nearby structures, roadways and utilities during construction.

For temporary critical walls requiring soil anchors, dead men etc., provide full details in plans (design of wale, soil anchor spacing and load, dead men anchor, number of proof test and creep test required, etc.).

Complete design and details must be provided in the plans including the section modulus, begin and end stations, top and bottom pile elevations.

See 455-12.6.2 for MEASUREMENT: The area to be paid for will be measured from top of pile elevation to bottom of pile elevation and longitudinally from beginning to end of wall, as shown in the plans.

PAYMENT: PLAN QUANTITY will be the basis of payment to the contractor. No separate
payment will be made for the cost of the anchor system for anchored

Related Items

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>COMP 700-050-01</td>
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<tr>
<td>Documentation</td>
<td>Design</td>
<td>Refer to Comp Book</td>
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<td></td>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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References

<table>
<thead>
<tr>
<th>References</th>
<th>PPM Chapter</th>
<th>Other</th>
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<tbody>
<tr>
<td>Standards</td>
<td>SDG’s 3.5</td>
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<tr>
<td>Specifications</td>
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</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s) 6, 7, 13

Notes

**Struct.** 455-133- A SHEET PILING, STEEL SF

A =
2 (Temporary- Critical)
3 (Furnish & Install Permanent)

**Status**

**Structure** 455-137- LOAD TEST- DYNAMIC

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

Notes

Details

Intended on driven piling projects for PDA testing. Quantity given should be equal to the number of test piles called out on the Foundations Layout Sheet.

Related Items

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
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<tr>
<td></td>
<td>Construction</td>
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<tr>
<td>Documentation</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
</tr>
<tr>
<td>References</td>
<td>PPM Chapter</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Standards</td>
<td>Soil and Foundation Handbook 10.1, 10.2</td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s) 6, 7, 13

Notes

Details and Structure: Complete
### CROSSHOLE SONIC LOGGING

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Intended for integrity testing of drilled shafts. Typically CSL tubes are required to be placed in all drilled shafts but only a portion of shafts will be actually CSL tested. Determine number of shafts to be CSL tested.

**Related Items**
- **Required**: 455-88, 455-122-XAA
- **Recommended**: 

**Forms**
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**: Soils and Foundation Handbook 10.4.2, 10.4.3

**Prep & Doc Manual Chapter(s)**
6, 7, 13

**Status**

**Struct.** 455-142- CROSSHOLE SONIC LOGGING EA

### TEST PILES- PRESTRESSED CONCRETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Intended to cover cost and installation of the prestressed concrete test piling. PDA paid for separately under item 455-137.

**Details**
- **Design**: Design quantity is computed as the total anticipated length of test pile without allowances for cutoffs, splices or preforming. Show locations on Foundation Layout Sheet. Give test pile lengths in Pile Installation Table.
- **Construction**: Construction/Final quantity for Test Piles is based on Specification. For Example: (Sum of test pile lengths) + [(0.3) x Sum of required preformed pile hole depths for test piles]
  Do not add allowances for splices.

Include quantity for preformed holes only if preforming is known to be required and shown in the plans. Do not use as contingency.

**Related Items**
- **Required**: 455-137, 455-34
- **Recommended**: 

**Forms**
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Notes**

*Special may require Tech Spec and/or Plan Detail

<table>
<thead>
<tr>
<th>Struct.</th>
<th>455-143- AA</th>
<th>TEST PILES- PRESTRESSED CONCRETE</th>
<th>LF</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (12&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (14&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (18&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (20&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 (24&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 (30&quot; Sq.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 (36&quot; Dia)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 (Special)*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Notes | * Special may require Tech Spec and/or Plan Detail |

**455-144- AA | TEST PILES- STEEL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
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</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

**Details**

Intended to cover cost and installation of the prestressed concrete test piling. PDA paid for separately under item 455-137. Design quantity computed as the total anticipated length of test pile without allowances for cutoffs, splices or preforming. Show locations on Foundation Layout Sheet. Give test pile lengths in Pile Installation Table.

Construction/Final quantity for Test Piles is computed as follows:

(Sum of test pile lengths) + [(0.3) x Sum of required preformed pile hole depths for test piles]

Do not add allowances for splices.

Include quantity for preformed holes only if preforming is known to be required and shown in the plans. Do not use as contingency.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td>455-137, 455-34</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Forms**

<table>
<thead>
<tr>
<th>Design Forms</th>
<th>SHTabQuant</th>
</tr>
</thead>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design Documentation</th>
<th>Refer to Comp Book</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Construction Documentation</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>
Standards Specifications

Struct. 455-144- AA TEST PILES- STEEL

AA =
1 (Hp 8 X 36)
2 (Hp 10 X 36)
3 (Hp 10 X 42)
4 (Hp 12 X 53)
5 (Hp 14 X 73)
6 (Hp 14 X 89)
7 (Hp 14 X 102)
8 (Hp 14 X 117)
9 (Special)*
20 (18" Dia Pipe)
21 (20" Dia Pipe)
22 (24" Dia Pipe)
23 (30" Dia Pipe)

Notes
* Special may require Tech Spec and/or Plan Detail

455-145- A TEST PILE- CONCRETE CYLINDER PILES

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no

Notes
Details
Intended to cover cost and installation of the prestressed concrete test piling. PDA paid for separately under item 455-137.
Design quantity computed as the total anticipated length of test pile without allowances for cutoffs, splices or preforming. Show locations on Foundation Layout Sheet. Give test pile lengths in Pile Installation Table.

Construction/Final quantity for Test Piles is computed as follows:
(Sum of test pile lengths) + [(0.3) x Sum of required preformed pile hole depths for test piles]
Do not add allowances for splices.

Include quantity for preformed holes only if preforming is known to be required and shown in the plans. Do not use as contingency.

Related Items
Forms Required 455-137, 455-34 Recommended
Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).
References

PPM Chapter
Other
Soils and Foundation Handbook 10.1, 10.2
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 455-145- A TEST PILE- CONCRETE CYLINDER PILES LF

A =
1 (54" Dia.)
2 (60" Dia.)

Notes

455-146- EMBEDDED DATA COLLECTOR

Unit EA Accuracy Each PlanQuantity? no

Notes Effective January 2007. Implemented by mandatory specification change and Structures Temporary Design Bulletin

Details To be used with all prestressed concrete test piles. Estimate a quantity of 1 per test pile. Each collector system will include gauges at the top and tip, as well as antenna and incidental equipment for installation in each pile, as shown in the standard.

Related Items

Required Recommended
Forms Design COMP 700-050-03
Documentation Construction Refer to Comp Book

References

PPM Chapter
Other
Standards Interim 20602
Specifications
Prep & Doc Manual Chapter(s)

Status

Struct. 455-146- EMBEDDED DATA COLLECTOR EA

Notes

457- 70-ABB INTEGRAL PILE JACKET

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no

Notes

Details Intended for rehabilitation projects to repair concrete pile corrosion damage. Contact State Materials Office, Corrosion Lab for assistance in use of this item. Show locations in plans w/ quantity block.

Related Items Required Recommended
Standards Specifications

Struct. 457- 70-ABB INTEGRAL PILE JACKET LF

A =
1 (Epoxy Grout Filler)
2 (Portland Cement Grout Filler)
3 (Class III Concrete Seal Filler)
4 (Others)

BB =
01 (12”)
02 (14”)
03 (15”)
04 (16”)
05 (18”)
06 (20”)
07 (21”)
08 (22”)
09 (24”)
10 (27”)
11 (30”)

Notes

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)  6, 7, 13

Status

Struct. 457- 70-ABB INTEGRAL PILE JACKET LF

Notes

457- 71- AB CATHODIC PROTECTION- PILE JACKET

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no

Notes

Details

Related Items

Required 400- 60- Recommended

Forms Design SHTabQuant COMP 700-050-03

Documentation Design Refer to Comp Book

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

This item is under development by the State Materials Lab. Contact the State Materials Office, Corrosion Lab for assistance in use of this item.

Intended for rehabilitation projects to repair piles with corrosion damage using cathodic protection. Show locations in plans w/ quantity block.

Electrical Work paid under item 400-60-A.

See items 400-142 (structure) and 455-81 (pier or pile) for related work.

Details and Structure: Complete
quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

---

**Struct.**  457-71-AB  CATHODIC PROTECTION-PILE JACKET  LF

A =
1 (Galvanic Cathodic Protection Non-Structural)
2 (Galvanic Cathodic Protection Structural)
3 (Impressed Current Cathodic Protection Non-Structural)
4 (Impressed Current Cathodic Protection Structural)
5 (Other)

B = Pile Size
1 (up to 16")
2 (16.1 to 30")
3 (30.1 and larger)

---

**458-1-AB**  BRIDGE DECK EXPANSION JOINT

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

**Notes**
Effective January 2007. Replaces several joint seal items

**Details**
Refer to Design Standards and Specifications for selection and use of these joints.
Note: Tech Specs are required for selected items, as shown in the pay item structure.
For Bridge Approach Expansion Joints, refer to 370 items.
For Concrete Joint repairs in Structures, refer to 400 items.

**Related Items**

**Forms**
Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

**Documentation**
Design  Record final quantity on the tabulation sheet (plans) or computation form (comp book).
Construction  Refer to Comp Book

**References**
PPM Chapter
Other
Standards  Index No. 21110, 21100
Specifications

**Prep & Doc Manual Chapter(s)**

---

**Struct.**  458-1-AB  BRIDGE DECK EXPANSION JOINT  LF

---

Details and Structure: Complete
A= Operation
1 (New Construction- F&I)
2 (Rehabilitation- Clean, Seal, Replace)
B= Type
1 (Poured Joint with Backer Rod)
2 (Strip Seal)
3 (Modular) Note: Tech Spec Required
4 (Finger Joint) Note: Tech Spec Required
5 (Compression Elastomeric) Note: For Rehab only
6 (Other)

Notes

459- 71- PILES, POLYETHYLENE SHEETING

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details

Intended on piling or drilled shaft projects to wrap portion of end bent pile or shaft within the fill height to reduce down-drag. Add note on Foundation Layout Sheet. Pay quantity is the pile area wrapped.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<td>Construction</td>
<td>Refer to Comp Book</td>
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Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
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<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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References

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<tr>
<th>PPM Chapter</th>
<th>Other</th>
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<tbody>
<tr>
<td>Soils and Foundations Handbook 8.3.3</td>
<td></td>
</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 459- 71- PILES, POLYETHYLENE SHEETING SY

Notes

460- 1- AA STRUCTURAL STEEL- REHAB

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB; KG</td>
<td>Pound; Kilogram</td>
<td>yes</td>
</tr>
</tbody>
</table>

Notes

Details

Do not use for new steel structures. This item will be used on all rehabilitation work only. Show steel quantities in quantity blocks on plans. Pay for painting of structural steel separately. Conduct lead based paint survey. Add general note to alert Contractor of existing lead based paint.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s) 560- 1

Details and Structure: Complete


**Structure**

**460- 1- AA**

**Structural Steel - Rehab**

AA =
1 (Carbon)
2 (Low Alloy)
3 (Shoe Assemblies)
4 (Expansion Assemblies)
5 (Bascule Leaves)
6 (Bascule Piers)
7 (Approach Spans)
11 (Screws, Bolts And Washer Assemblies)
12 (Flanking Spans)
13 (Bolts, Nuts, Washers And Plates)
15 (Miscellaneous)
16 (Movable Span)
18 (Carbon, Truss)
19 (Low Alloy, Truss)
20 (Weathering)

**Notes**

Intended for new construction of steel structures and bridge widenings. When painting is specified, cost of painting is incidental to this item. WEATHERING item used when uncoated weathering steel is specified. CARBON item used for Grades 36 and higher including weathering steel when painted. LOW ALLOY item used for Grade 50 steel. BASCULE LEAVES item used for all grades of steel in bascule leaf except steel used for decking, and steel counterweight blocks. When flanking span remains within the limits of bascule pier, pay under BASCULE PIERS. If not, include under CARBON or LOW ALLOY. Cost of F-shaped or vertical shape steel traffic railing barrier located on bascule leaf included in steel quantity under BASCULE PIERS. Leaf Centering Device Assembly included in steel quantity under BASCULE LEAVES. BASCULE PIERS item used for all grades of steel in bascule pier except for steel for decking. Cost of F-shaped or vertical shape steel traffic railing barrier located within limits of bascule pier included in steel quantity under BASCULE PIERS. Calculate weight of steel for estimating purposes only. Due not tabulate steel quantities in...

**460- 2- AA**

**Structural Steel - New/Widening**

**Unit** LS/LB; LS/KG  **Accuracy** Pound; Kilogram  **Plan Quantity?** yes

**Notes**

Intended for new construction of steel structures and bridge widenings. When painting is specified, cost of painting is incidental to this item. WEATHERING item used when uncoated weathering steel is specified. CARBON item used for Grades 36 and higher including weathering steel when painted. LOW ALLOY item used for Grade 50 steel. BASCULE LEAVES item used for all grades of steel in bascule leaf except steel used for decking, and steel counterweight blocks. When flanking span remains within the limits of bascule pier, pay under BASCULE PIERS. If not, include under CARBON or LOW ALLOY. Cost of F-shaped or vertical shape steel traffic railing barrier located on bascule leaf included in steel quantity under BASCULE PIERS. Leaf Centering Device Assembly included in steel quantity under BASCULE LEAVES. BASCULE PIERS item used for all grades of steel in bascule pier except for steel for decking. Cost of F-shaped or vertical shape steel traffic railing barrier located within limits of bascule pier included in steel quantity under BASCULE PIERS. Calculate weight of steel for estimating purposes only. Due not tabulate steel quantities in...
the plans. On steel box girder projects add note to include cost of all access hatches, and screen doors in cost on structural steel.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
</tr>
<tr>
<td>Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.</td>
<td>Construction</td>
</tr>
<tr>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
<td></td>
</tr>
</tbody>
</table>

### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 7, 13

### Status

**Struct. 460- 2- AA**

**STRUCTURAL STEEL- NEW/WIDENING**

**LS/LB**

**AA =**

1 (Carbon)

2 (Low Alloy)

3 (Shoe Assemblies)

5 (Bascule Leaves)

6 (Bascule Piers)

15 (Miscellaneous)

18 (Carbon, Truss)

19 (Low Alloy, Truss)

20 (Weathering)

### Notes

**460- 6-**

**LADDERS & PLATFORMS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LB; KG</th>
<th>Accuracy</th>
<th>Pound; Kilogram</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>yes</td>
</tr>
</tbody>
</table>

### Notes

**Details**

Intended for both steel and aluminum ladders and platforms when necessary for personnel/maintenance access. Clearly define location w/ quantity block in plans.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
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<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
</tr>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
<td>Construction</td>
</tr>
<tr>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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</table>

### References

- **PPM Chapter**
- **Other**
- **Standards**
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 460-6  LADDERS & PLATFORMS

Notes

460-7-AA EXPANSION JOINT SEAL

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes

Valid through December 2006 lettings; to be replaced by 458-1-ab.

Details

Intended for bridge expansion joints. Clearly define location w/ quantity block in plans. Refer to standard(s) for details.

Related Items

Required SHTabQuant | Recommended COMP 700-050-03

Documents

Design Refer to Comp Book

Details

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter SDG’s 6.4

Other Standards Index 21100

Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status Block Pending

Struct. 460-7-AA EXPANSION JOINT SEAL

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes

AA =
1 (Steel Reinforced Elastomeric)
3 (Aluminum Reinforced Elastomeric)
4 (Strip Elastomeric)
5 (Modular)
9 (Poured w/ Backer Rod)

460-8-ABB ELASTIC PREFORMED JOINT SEAL (STRUCTURES)

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes

Valid through December 2006 lettings; to be replaced by 458-1-ab.

Details

Intended for bridge expansion joints. Clearly define location w/ quantity block in plans.

Related Items

Required SHTabQuant | Recommended COMP 700-050-03

Details and Structure: Complete
**460- 8-ABB**  
ELASTIC PREFORMED JOINT SEAL (STRUCTURES)  
LF

**Standards**  
Struct. 460- 8-ABB ELASTIC PREFORMED JOINT SEAL (STRUCTURES) LF

**A =**  
0 (No Nosing)  
1 (Polymeric Nosing)

**BB =**  
01 (3/4")  
02 (1")  
03 (1 1/2")  
04 (2")  
05 (2 1/2")  
06 (3")  
07 (4")

**Notes**

Experimental Item. Requires State Structures Design Office Approval / FHWA

Must be coordinated with State Structures Design Office.

Consists of Furnishing and Installing Sandwich Plate System, including wearing surface, bridge deck, and supporting stringer.

**Related Items**

**Forms**

Required  
Design  
SHTabQuant

Recommended  
Construction  
COMP 700-050-01

**Documentation**

Design  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

PPM Chapter  
Design

Other  
SDG's 6.4

Standards

Specifications

Plan Detail and/or Tech Spec Required
### Prep & Doc Manual Chapter(s)

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>460-13- A</th>
<th>STRUCTURAL STEEL REHAB- SANDWICH PLATE SYSTEM</th>
</tr>
</thead>
</table>

\[ A = \]
1 (Deck and Stringer)
2 (Deck)

### Notes

**FINGER JOINT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

Valid through December 2006 letting; to be replaced by 458-1-ab.

**Details**

Intended for bridge expansion joints. Clearly define location w/ quantity block in plans.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Forms**

- **Design**
  - SHTabQuant
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**
  - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
- **Other**
  - SDG's 6.4

**Prep & Doc Manual Chapter(s)**

6, 7, 13

### Status

Block Pending

### Notes

**FINGER JOINT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

Consists of furnishing and installing bullet railing on top of traffic railing barriers and parapets to protect pedestrians or bicycles. Note details on structures Indexes 800, 810, and 820.

For other aluminum railings, refer to Structures Index Series 800 and pay items 515-1-xxa and 515-2-xxa.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Forms**

- **Design**
  - 521-6- A when Index 800 Ped Bicycle railing is used
Standards
Index No. 820-822
Specifications
Struct.  460- 70-  A ALUMINUM BULLET RAILINGS LF
A =
1 (Single Rail)
2 (Double Rail)
3 (Triple Rail)

Notes

Forms
Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards Index No. 820-822
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 460- 70- A ALUMINUM BULLET RAILINGS LF

460- 71- A METAL TRAFFIC RAILING

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes

Details
Consists of furnishing and installing metal traffic barriers, for new construction or Barrier Retrofit. Show location in plans and include in quantity block.

Related Items
Required
Forms Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other SDG’s 6.7
Standards Index 470 through 476
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 460- 71- A METAL TRAFFIC RAILING LF
A =
1 (Thrie Beam Retrofit)
2 (Steel Post And Rail)*
3 (Steel Post and Rail-Retaining Wall System Maintenance)

Notes
*Non-standard; custom design may be required.

### 460-81- A RIVET / HIGH STRENGTH BOLT REPLACEMENT

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
For Rehabilitation projects only.

**Related Items**
- **Required**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other

**Standards**
- Specifications

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**

---

### 460-92- A MODULAR EXPANSION ASSEMBLY

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
Valid through December 2006 letting; to be replaced by 458-1-ab.

**Details**
Intended for modular expansion joints. Show location in plans w/ quantity block.

**Related Items**
- **Required**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other

---

Details and Structure: Complete
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status Block Pending

Struct. 460-92- A MODULAR EXPANSION ASSEMBLY LF

A =
1 (14.8" Movement)
2 (17.3" Movement)
3 (21.9" Movement)
4 (24.0" Movement)
5 (24.4" Movement)
6 (7.8" Movement)
7 (9.0" Movement)
8 (12.0" Movement)

Notes

460-95- STRUCTURAL STEEL REPAIR

<table>
<thead>
<tr>
<th>Unit</th>
<th>LB; KG</th>
<th>Accuracy</th>
<th>Pound; Kilogram</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

Notes

Details Intended on rehabilitation projects for in-place heat straightening. Quantity based on weight of steel components to be repaired. Show locations in the plans w/ pay item note to address all work items required.

Related Items Required 460-1-XAA Recommended

Forms Design SHTabQuant COMP 700-050-06
Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status Struct. 460-95- STRUCTURAL STEEL REPAIR LB

Notes

460-98- A PIPE HANGER

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

Notes

Details To be used ONLY for non-drainage system applications such as structure utility attachments. When deck inserts are required for utility attachments by others, do not
include this item. Deck inserts are included in the cost of the superstructure concrete.
Show location spacing w/ quantity block in plans.
Note: Pipe hangers for bridge drainage system paid for under 506-2.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

### Forms

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

### Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

### Prep & Doc Manual Chapter(s)

7, 13

---

### 460-98-A PIPE HANGER EA

**A =**

1 (Carbon)
2 (Stainless)

### Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

### 460-112- ANCHOR BOLT REPLACEMENT

**Unit**: EA
**Accuracy**: Each
**PlanQuantity?**: no

**Notes**
For rehabilitation jobs only. Show location with quantity block in plans.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
</table>

### Forms

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

### Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

### Prep & Doc Manual Chapter(s)

7, 13

---

### Status

- **Struct.**: 460-112-

### Notes
### 461-113- AB MULTI ROTATIONAL BEARING ASSEMBLY

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intended furnish and installing pot, disc or cylindrical bearing assemblies. Include location w/ quantity block in plans.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Items</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>Documentation</td>
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<table>
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<tr>
<td>PPM Chapter</td>
</tr>
<tr>
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</tr>
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<td>SHTabQuant COMP 700-050-03</td>
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<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struct.</td>
</tr>
</tbody>
</table>

#### Notes

A = Operation
1 (Furnish & Install)

B =
1 (1 - 250 Kips)
2 (251 - 500 Kips)
3 (501 - 750 Kips)
4 (751 - 1000 Kips)
5 (1001 - 1250 Kips)
6 (1251 - 1500 Kips)
7 (1501 - 1750 Kips)
8 (1751 - 2000 Kips)
9 (> = 2001 Kips)

---

### 461-114- AB MULTI ROTATIONAL BEARING ASSEMBLY- EXPANSION

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
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<td>Intended furnish and installing pot, disc or cylindrical bearing assemblies. Include location w/ quantity block in plans.</td>
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<table>
<thead>
<tr>
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</thead>
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<tr>
<td>Forms</td>
</tr>
<tr>
<td>Documentation</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

---

Details and Structure: Complete
**Specifications**

**Struct.** 461-114- AB

**MULTI ROTATIONAL BEARING ASSEMBLY-EXPANSION**

A = Operation
1 (Furnish & Install)

B =
1 (1 - 250 Kips)
2 (251 - 500 Kips)
3 (501 - 750 Kips)
4 (751 - 1000 Kips)
5 (1001 - 1250 Kips)
6 (1251 - 1500 Kips)
7 (1501 - 1750 Kips)
8 (1751 - 2000 Kips)
9 (> = 2001 Kips)

**Notes**

**462- 2- AA**

**POST TENSIONING TENDONS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LB; KG</th>
<th>Accuracy</th>
<th>Pound; Kilogram</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Details**

**Related Items**

**Required**

**Recommended**

**Forms**

**Design**

SHTabQuant

COMP 700-050-06

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.** 462- 2- AA

**POST TENSIONING TENDONS**

AA =
11 (Superstructure Strand)
12 (Superstructure Bar)

**Details and Structure:** Complete
ADDITIONAL POST-TENSIONING IN SEGMENTAL BOX SPAN

Unit: EA  Accuracy: Each  PlanQuantity?: no

Details:
Intended for rehabilitation projects intended to strengthen span with the installation of additional post-tensioning. Show location in plans. Include a schedule of post tensioning tendons w/ quantity block in plans. Include a pay item notes as necessary to cover the work activity.

Related Items:
Required: SHTabQuant  Recommended: COMP 700-050-03

Documentation:
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References:
PPM Chapter: SDG’s 4.5
Other: Index 21801 thru 21803

Status: Inactive Structure

ADDITIONAL POST-TENSIONING IN SEGMENTAL BOX SPAN

NOT FOR USE ON NEW CONSTRUCTION. Details to be included in Tech Specs.
Tendon Inspection: Do not include repairs under this item, except for repair of inspection holes.
Anchorage Inspection: Do not include void repairs or pour backs under this item.
Tendon Repair Set-up: To be used every time a void is detected and is to cover the cost of installing injection and outlet points, preparing to fill void, and sealing of these areas after completion. Shop drawings may be required.
Replace Anchorage Protect Sys: Includes replacement of the tendon anchorage protect system
Repair External Ducts: Not for use to repair areas damaged while repairing voids.
Tendon Replace: Remove & replace complete tendons, including anchorage components, placement & stressing new tendon, grouting, inspection, and protection system.
Grout Tendon Voids: Includes installation & material, detailed in Tech Spec
Install Grout Ports: includes drilling and installing grout ports suitable for connection to...
grouting equipment.

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**References**

<table>
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<tr>
<th>PPM Chapter</th>
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<tbody>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>Standards</strong></td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
</tr>
</tbody>
</table>

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Struct. 462- 20- A**

**POST TENSIONING REPAIR**

EA; LF; CF

**A=**
1 (Tendon Inspection) LF
2 (Anchorage Inspection) EA
3 (Tendon Repair Set-up) EA
4 (Replace Anchorage Protection System) EA
5 (Repair External Tendon Ducts) LF
6 (Replace Tendon) LF
7 (Vacuum Grout Tendon Voids) CF
8 (Pressure Grout Tendon Voids) CF
9 (Install Grout Ports) EA

**Notes**

| Unit | LS/LS | Accuracy | Lump Sum | PlanQuantity? | yes |
|------|-------|----------|-----------|---------------|

**465- 1- MOVABLE BRIDGE- MECHANICAL EQUIPMENT**

**Details**

For new bridge construction only. Intended for furnishing and installing complete mechanical system for bascule bridge. Includes all mechanical equipment and appurtenances (speed reducer and gear train, trunnion assemblies, span locks, couplings, live load shoes, flat & curved tracks, plain journal bearings, spherical bearings, supports and brackets, hydraulic systems, and all other equipment/service) required for a complete mechanical system on new bascule bridges. Clearly define scope of work in plans and specifications. Contact State Structures Design for boiler plate Specification 465 to be modified as required for project specifics.

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
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<tr>
<td><strong>Documentation</strong></td>
<td><strong>Design</strong></td>
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</table>

**Notes**

**Details and Structure: Complete**
### References

<table>
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<tr>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDG's Chapter 8</td>
<td></td>
</tr>
</tbody>
</table>

### Status

| Struct. | 465- 1- | MOVABLE BRIDGE- MECHANICAL EQUIPMENT | LS/LS |

### Notes

**465- 2-ABB’ MOBILE BRIDGE MACHINERY AND CASTINGS- REHAB**

| Unit | LS/LS; EA; AS | Accuracy | Lump Sum; Each; Assembly | PlanQuantity? | yes |

**Notes**

Intended for rehabilitation projects for bascule bridge machinery and castings. For new structures, the complete machinery system is included under 465-1, LS. Contact C.O. Structures Design for boiler plate 465 Specification to be modified as required for project specifics.

**Related Items**

<table>
<thead>
<tr>
<th><strong>Required</strong></th>
<th><strong>Recommended</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
</tbody>
</table>

**Documentation**

| Design | LUMP SUM ITEMS: Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans. EACH ITEMS: Location must be summarized on the plans. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
</tr>
</thead>
</table>

**Prep & Doc Manual Chapter(s)**

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
</table>

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Recondition)
5 (Adjust /Modify)
6 (Remove & Dispose) Note: Contractor takes ownership

Details and Structure: Complete

Page 185 of 468
7 (Remove & Stockpile/Salvage) Note: DOT/maintaining agency retains ownership
8 (Field Machining)

BB= Equipment
BB =
01 (Speed Reducer And Gear Train) LS/LS
04 (Trunion Assembly) EA
05 (Span Locks) AS
07 (Couplings) EA
08 (Live Load Shoes) LS/LS
10 (Flat Rack, Curved Rack, Flat Track) EA
11 (Hopkins Frame) EA
21 (Plain Journal Bearing) EA
22 (Spherical Bearing) EA
52 (Hydraulic Cylinder) EA
53 (Hydraulic Motor) EA
54 (Hydraulic Power Pack) EA
55 (Temporary Hydraulic System) EA

Notes

465-3-AB MOBILE BRIDGE COUNTERWEIGHT

Unit EA; TN; MT Accuracy Each; Ton; Metric Ton Plan Quantity? no

Details
Applies for either rehabilitation or new bridge projects. Intended for work items related to
displacement bridge counterweights (balance calculations, balance blocks, steel ballast,
transition slabs, sump pumps, bumper blocks). Steel ballast intended for bulk steel
counterweight (transition slabs, steel plates). Show location & quantity block in plans.
When using "Adjust" item, Tech Spec must clearly define method of measurement:
adjustment of each bridge, leaf, or after specific operations.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
</tr>
</tbody>
</table>

References
PPM Chapter
Other SDG’s Chapter 8

Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

Status
Struct. 465-3-AB MOBILE BRIDGE COUNTERWEIGHT EA; TN

A= Operation
1 (Furnish & Install)
5 (Adjust) EA; for A=5, B=0
9 (Clean) Valid for B=6 only

Details and Structure: Complete
### MOVABLE BRIDGE SPAN JACKING

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

#### Details
Intended for rehabilitation projects to jack bascule span off trunnion supports. Used in conjunction with trunion reconditioning or bearing replacement. Tech Spec should include jacking procedure, and require that procedures and calculations be completed by a Florida Licensed Engineer.

#### Related Items
- **Required:** SHTabQuantLS
- **Recommended:** COMP 700-050-05

#### Forms
- **Design:** Refer to Comp Book
- **Construction:**
  - **Design:** Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.
  - **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
  - Plan Detail and/or Tech Spec Required

#### Prep & Doc Manual Chapter(s)

### MOVABLE BRIDGE FUNCTIONAL CHECKOUT

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

#### Details
Phase A to be used to test first-two leafs of a four leaf bascule, Phase B to be used for the Second-two leafs, and Phase C to be used for the complete bridge. Sometimes Phase C and Phase B are combined for simplicity. This item is required on all new bascule bridges and on all bascule bridge rehabilitation projects where the leaf operation, weight is being affected.

Where phasing is not required, only a single checkout (Phase C) is required.

Contact State Structures Design for boiler plate 465 Specification to be modified as required for project specifics.
### Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
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<tr>
<td>Forms</td>
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<td>PPM Chapter</td>
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<tr>
<td>Other</td>
<td>SDG’s 8.7.19</td>
</tr>
<tr>
<td>Standards</td>
<td>Specifications</td>
</tr>
</tbody>
</table>

**Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status

**Struct.** 465- 71-  A  MOVABLE BRIDGE FUNCTIONAL CHECKOUT  LS/LS

A = See detail for Phasing
1 (Phase A) for 1st 2 leaves
2 (Phase B) for 2nd leaves
3 (Phase C) for Complete

### Notes

**470- 1-** TREATED TIMBER, STRUCTURAL

<table>
<thead>
<tr>
<th>Unit</th>
<th>MB; M3</th>
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<tbody>
<tr>
<td>Accuracy</td>
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</tr>
<tr>
<td>PlanQuantity?</td>
<td>yes</td>
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</table>

**Notes**

Intended for the cost of treated structural timber. The quantity of timber to be based on the final width and thickness shown in the plans. When applicable, indicate in the plans the nominal size (2x6) and dressed dimension. Quantity is to be based on the dressed volume. For rough cut or “full sawn” sizes, the nominal size is the finished size and the basis of the quantity. Timber piles paid for under 455- 2-XXA.

The board-foot measure is the unit of volume for measuring lumber. One board-foot measure is a 12-inch long 1-inch-by-12-inch volume. MB is per thousand board-foot measure.

Example calculation:
800' - 12X6 Rough Sawn = 800x12x6/12,000= 4.8 MB
800' - 12X6 Dressed Lumber (Dressed 11 ½ " X 5 ½") = 800X11.5X5.5/12,000= 4.2 MB

**Related Items**

<table>
<thead>
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<th>Recommended</th>
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<tbody>
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<td>Construction</td>
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</table>
### 470-1- TREATED TIMBER, STRUCTURAL MB

**Notes**

Intended for the cost of treated structural timber. The quantity of timber to be based on the final width and thickness shown in the plans. When applicable, indicate in the plans the nominal size (2x6) and dressed dimension. Quantity is to be based on the dressed volume. For rough cut or “full sawn” sizes, the nominal size is the finished size and the basis of the quantity. Timber piles paid for under 455-2-XXA.

The board-foot measure is the unit of volume for measuring lumber. One board-foot measure is a 12-inch long 1-inch-by-12-inch volume. MB is per thousand board-foot measure.

**Example calculation:**

- **800' - 12X6 Rough Sawn** = \(800\times12\times6/12,000= 4.8 \text{ MB}\)
- **800' - 12X6 Dressed Lumber** (Dressed 11 ½ '' X 5 ½ '') = \(800\times11.5\times5.5/12,000= 4.2 \text{ MB}\)

### 470-2- TIMBER, STRUCTURAL- UNTREATED MB

**Notes**

Intended for the cost of untreated structural timber. The quantity of timber to be based on the final width and thickness shown in the plans. When applicable, indicate in the plans the nominal size (2x6) and dressed dimension. Quantity is to be based on the dressed volume. For rough cut or “full sawn” sizes, the nominal size is the finished size and the basis of the quantity. Timber piles paid for under 455-2-XXA.

The board-foot measure is the unit of volume for measuring lumber. One board-foot measure is a 12-inch long 1-inch-by-12-inch volume. MB is per thousand board-foot measure.

**Example calculation:**

- **800' - 12X6 Rough Sawn** = \(800\times12\times6/12,000= 4.8 \text{ MB}\)
- **800' - 12X6 Dressed Lumber** (Dressed 11 ½ '' X 5 ½ '') = \(800\times11.5\times5.5/12,000= 4.2 \text{ MB}\)

### References

**PPM Chapter**

Structures Detailing Manual Chapter 12.

**Other**

Structures Detailing Manual Chapter 12.

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

**470-3- A MARINE LUMBER, PLASTIC**
Notes
Valid through December 2006; replaced by Section 471 items

Details
Intended for the cost of plastic marine lumber. The quantity of plastic lumber to be based on the final width and thickness shown in the plans. The board-foot measure is the unit of volume for measuring lumber. One board-foot measure is a 12-inch long 1-inch-by-12-inch volume. MB is per thousand board-foot measure.

Example calculation:
800' - 12X6 = 800x12x6/12,000 = 4.8 MB

Related Items

Forms

Design
SHTabQuant

Construction
Refer to Comp Book

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter

Other
Structures Detailing Manual Chapter 12.

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)
6, 7, 13

Status
Block Pending

Struct.
470- 3- A

MARINE LUMBER, PLASTIC

MB

A= Reinforcement
1 (Reinforced)
2 (non-reinforced)

Notes

471- 1- A
FENDER SYSTEM, PLASTIC MARINE LUMBER

Unit
MB; M3

Accuracy
10th of a Thou Board Measure; 10th of a Cubic Meter

PlanQuantity?

Notes
Effective January 2007 letting.

Details
To be used for wales and dimensional lumber for fender systems. Plastic piling to be paid separately under Section 455 items.

one board foot= one foot square by one inch thick; convert to thousand board foot for pay item.

Refer to Design Standards and Specifications for additional information.

Related Items

Forms

Required
455- 37- a

Recommended
555- 050- 04

Documentation

Design
SHTabQuant

Construction
Refer to Comp Book

Locate in plans. Summarize quantities by location on tabulation of
Standards Index No. 21900 thru 21930
Specifications

Notes

Status
Struct. 471- 1- A FENDER SYSTEM, PLASTIC MARINE LUMBER MB
A= Reinforcement
1 (Reinforced)
2 (non-reinforced)

Notes

504- 1- AA STEEL ROADWAY FLOOR
Unit SF; M2 Accuracy Square Foot; 10th of a Square Meter PlanQuantity? yes

Details
Intended for steel grating for sidewalks and bridge decks usually on bascule leaves. Show location w/ quantity block in plans. Make deductions in quantities for openings or joints. When concrete filled decks are called for in the plans, no separate payment is made for fill concrete. See Section 504 for Specifications.

Required Recommended
Forms Design SHTabQuant COMP 700-050-01
Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 504- 1- AA STEEL ROADWAY FLOOR SF
A =
1 (5" Open)
2 (3" Armored)
3 (4 1/2" Open)
4 (5 1/2" Open)
5 (5 1/2" Armored)
### 504- 2- SIDEWALK FLOOR, STEEL - REHAB

<table>
<thead>
<tr>
<th>Unit</th>
<th>SF; M²</th>
<th>Accuracy</th>
<th>Square Foot; 10th of a Square Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Intended for rehabilitation projects when steel sidewalks gratings is required without roadway grating. On new bascule bridge projects, include both sidewalk and roadway grating quantity under 504-1. Show location w/ quantity block in plans. Make deductions in quantities for openings or joints. When concrete filled decks are called for in the plans, include cost of the concrete fill under this pay item (add pay item note).

**Related Items**

**Forms**

Design: SHTabQuant
Construction: Refer to Comp Book

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

**Status**

Inactive Structure

**Struct.** 504- 2- SIDEWALK FLOOR, STEEL - REHAB SF

---

### 505- 1- AB FIRE SUPPRESSION SYSTEM

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<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Coordinate the use of this item with the State Structures Design Office Tech Spec should indicate that this is a complete system, including all lines, fittings, incendentals, and testing.

**Related Items**

**Forms**

Design: SHTabQuant
Construction: Refer to Comp Book

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

---

**Status**

**Struct.** 505-1-AB  
**FIRE SUPPRESSION SYSTEM**  
**LF**

A = location  
1 (Bridge)

B = System Type  
1 (Dry Line System)

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**Notes**

---

**506-2-**  
**BRIDGE DRAIN PIPE**

<table>
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<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
<td>Intended for payment for drainage pipes located on bridge structure to convey water from deck inlets to ends of bridge or down to ground at pier locations. Include piping that is cast into concrete components in the quantity. Bridge drains paid separately under 506-3. Show location w/ quantity block in plans.</td>
</tr>
</tbody>
</table>

**Related Items**

**Required** 506-3-  
**Recommended**

**Forms**

Design  
SHTabQuant  
COMP 700-050-03  
Refer to Comp Book

**Documentation**

Design  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction  
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

**Struct.** 506-2-  
**BRIDGE DRAIN PIPE**  
**LF**

---

**Notes**

---

**506-3-**  
**BRIDGE DRAINS**
### Topic No. 600-000-002

#### Basis of Estimates

**2007 Edition**  
**April 16, 2007**

<table>
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<td>EA</td>
<td>Each</td>
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</table>

**Notes**

**Details**

Intended for payment for deck inlets located on bridge structure. Bridge piping paid under 506-2. Deck scuppers holes cast into bridge deck should not be paid for under this item unless they consist of a casting. Pay for deck scupper holes under superstructure concrete (add pay item note). Show location w/ quantity block in plans.

**Related Items**

**Required**  
**Recommended**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Design</th>
<th>SHTabQuant</th>
<th>COMP 700-050-03</th>
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<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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**References**

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<th>PPM Chapter</th>
<th>7, 13</th>
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<td>Standards</td>
<td></td>
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<tr>
<td>Specifications</td>
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</table>

**Status**

**Struct.**  
**506- 3-**  
**BRIDGE DRAINS**  
**EA**

---

### 507- 70-  
**ALUMINUM SIDEWALK FLOOR**

<table>
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<tbody>
<tr>
<td>SF; M2</td>
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**Notes**

**Details**

Intended for aluminum sidewalks usually on bascule leaves. Show location w/ quantities block in plans.

**Related Items**

**Required**  
**Recommended**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Design</th>
<th>SHTabQuant</th>
<th>COMP 700-050-01</th>
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<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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**References**

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</tr>
<tr>
<td>Specifications</td>
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**Prep & Doc Manual Chapter(s)**  
7, 13

---

**Details and Structure: Complete**
### Status

| Struct. | 507-70- | ALUMINUM SIDEWALK FLOOR | SF |

### Notes

**508-1- A MOBILE BRIDGE ELECTRICAL EQUIPMENT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

For movable bridges only. Clearly define scope of work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

**Details**

NEW- Furnish & Install: Includes complete, new, electrical system for bascule bridge. Includes all electrical equipment and appurtenances (emergency generator, submarine cable, motors, control console, brakes, programmable controller, motor control center, drive system, CCTV system, navigation lights, gates, signals, and all other equipment/service) required for a complete installation on bascule bridges.

EXISTING- Adjust/Modify/Rehab: Includes all electrical system equipment, components, and/or work not paid for separately under other items. May include furnishing/wiring/installation of new or rehab electrical components.

REMOVAL: Clearly identify which items are to be stockpiled or disposed. For stockpiled items, include a location for delivery (define limits of contractor's work) and a contact name.

**Related Items**

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<tr>
<th>Forms</th>
<th>Required</th>
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<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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**References**

PPM Chapter
Other Standards Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

| Struct. | 508-1-A | MOBILE BRIDGE ELECTRICAL EQUIPMENT | LS/LS |

A= Operation
1 (New- Furnish & Install)
4 (Relocate)
5 (Existing- Adjust/Modify/Rehab)
6 (Remove & Dispose) Note: Contractor takes ownership
7 (Remove & Stockpile/Salvage) Note: DOT/maintaining agency retains ownership

**Details and Structure:** Complete
### MOBILE BRIDGE GATE

<table>
<thead>
<tr>
<th>Unit</th>
<th>AS</th>
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<th>Assembly</th>
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</table>

**Details**

For use on movable bridges only. This item may be used with 508-1 for rehab bridge projects. (DO NOT use on New Bridge Construction.) Clearly define scope of work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

FURNISH & INSTALL: Furnish & Install new gates on an existing bascule bridge.

ADJUST/MODIFY/REHAB: Includes all work and materials necessary for rehab of existing gates. Include pay item 508-1 for other electrical system work.

**Required**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Design</th>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**References**

- PPM Chapter
- Other
- Standards
- Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

---------------------------------------------

**Status**

**508-2- A MOBILE BRIDGE GATE AS**

A= Operation
1 (Furnish & Install)
4 (Relocate)
5 (Adjust/Modify/Rehab)
6 (Remove & Dispose) Note: Contractor takes ownership
7 (Remove & Stockpile/Salvage) Note: DOT/maintaining agency retains ownership

**Notes**

For use on movable bridges only. This item may be used with 508-1 for rehab bridge projects. (DO NOT use on New Bridge Construction.) Clearly define scope of work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

FURNISH & INSTALL: Furnish & Install new signals on an existing bascule bridge.
ADJUST/MODIFY/REHAB: Includes all work and materials necessary for rehab of existing signals. Include pay item 508-1 for other electrical system work.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
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<tr>
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<tr>
<td>Specifications</td>
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</table>

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

**Struct.** 508- 3- A MOVABLE BRIDGE SIGNAL AS

A= Operation
1 (Furnish & Install)
4 (Relocate)
5 (Adjust/Modify/Rehab) Note: Contractor takes ownership
6 (Remove & Dispose) Note: DOT/maintaining agency retains ownership
7 (Remove & Stockpile/Salvage) Note: DOT/maintaining agency retains ownership

**Notes**

**Related Items**

<table>
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<td>Construction</td>
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</tbody>
</table>

**References**

PPM Chapter
Other
Standards
Specifications

**Details**

MOVABLE BRIDGE EMERGENCY GENERATOR

Unit AS Accuracy Assembly PlanQuantity? yes

Includes standby generator system (generator, transfer switch, control panel, etc.) for bascule bridge rehabilitation projects only.
For new structures, emergency generator is included under 508- 1-. Clearly define work in plans and specifications.
Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

**Notes**

**Related Items**

<table>
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<td>Construction</td>
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</table>

**References**

PPM Chapter
Other
Standards
Specifications
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)  6, 7, 13

Struct.  508- 72-  A  MOVABLE BRIDGE EMERGENCY GENERATOR  AS

A =  1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)

Notes

508- 73-  A  SUBMARINE CABLE ASSEMBLY

Unit  LS/LF; LS/M1  Accuracy  Lump Sum (Linear Foot);  PlanQuantity?  yes  Lump Sum (Meter)

Notes

Details
Intended for sub-aqueous cable. For bascule bridge rehabilitation projects only or fixed new bridge projects.
For new bascule bridge projects, submarine cable is included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

Related Items
Required  Recommended
Forms
Design  SHTabQuantLS  COMP 700-050-05
Construction  Refer to Comp Book

Documentation
Design  Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.
Construction  Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)  7, 13

Struct.  508- 73-  A  SUBMARINE CABLE ASSEMBLY  LS/LF

A =
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)

Notes

508- 76-  A  MOVABLE BRIDGE REHAB- SPAN MOTORS AND CONTROLLERS

Unit  LS/LS  Accuracy  Lump Sum  PlanQuantity?  yes

Details and Structure: Complete
Notes
Details
Includes span drive motors and speed controllers for bascule bridge rehabilitation only. For new structures, span motors are included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

Related Items
Forms
Required: Design
Recommended: SHTabQuantLS

Construction
Refer to Comp Book

Documentation
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
SDG’s Chapter 8

Standards
Specifications
Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status
Struct. 508-76- A MOVABLE BRIDGE REHAB- SPAN MOTORS AND CONTROLLERS

A =
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Recondition)

Notes

508-77- A MOVABLE BRIDGE REHAB- PROGRAMMABLE LOGIC CONTROLLER

Unit EA Accuracy Each PlanQuantity? no

Details
Includes programmable logic controllers (controllers, I/O racks, power supplies, programming) for bascule bridge rehabilitation only. For new structures, logic controllers are included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

Related Items
Forms
Required: Design
Recommended: SHTabQuant

Construction
Refer to Comp Book

Documentation
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### MOVABLE BRIDGE REHAB - PROGRAMMABLE LOGIC CONTROLLER

| Unit   | LS/LS | Accuracy | Lump Sum | PlanQuantity? | yes |

A = 1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Programming)

### MOVABLE BRIDGE REHAB - LIMIT SWITCHES AND TRANSDUCERS

| Unit   | LS/LS | Accuracy | Lump Sum | PlanQuantity? | yes |

Includes limit switches and transducers for bascule bridge rehabilitation only. For new structures, limit switches and transducers are included under 508- 1-. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

**Related Items**

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
<td>SHTabQuantLS COMP 700-050-05</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

| PPM Chapter | SDG’s Chapter 8 |
| Other       | SDG’s Chapter 8 |

**Status**

<table>
<thead>
<tr>
<th>Struct.</th>
<th>508- 77- A</th>
<th>MOVABLE BRIDGE REHAB - PROGRAMMABLE LOGIC CONTROLLER</th>
</tr>
</thead>
</table>

A =
1 (Furnish & Install)
2 (Furnish)
3 (Install)
MOVABLE BRIDGE REHAB- CONTROL CONSOLE

Unit: EA  Accuracy: Each  PlanQuantity?: no

Notes
Includes control console and associated equipment (switches, indicating lights, relays, etc.) for bascule bridge rehabilitation only. For new structures, control console is included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
</tbody>
</table>

Documentation

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
SDG’s Chapter 8

Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 508-79- A  MOVABLE BRIDGE REHAB- CONTROL CONSOLE  EA

A =
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)

Notes

MOVABLE BRIDGE REHAB- BRAKE SYSTEM

Unit: EA  Accuracy: Each  PlanQuantity?: no

Notes
Includes brake systems (brake shoes, brake drums, brake operators) for bascule bridge rehabilitation only. For new structures, brake system is included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
### MOVABLE BRIDGE REHAB- BRAKE SYSTEM

**Unit**: EA  
**Accuracy**: Each  
**Plan Quantity**: no

**Notes**

Includes motor control center and starters for bascule bridge rehabilitation only. For new structures, control panel or motor controller is included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

### MOVABLE BRIDGE REHAB- CONTROL PANEL / MOTOR CONTROLLER

**Unit**: EA  
**Accuracy**: Each  
**Plan Quantity**: no

**Notes**

Includes motor control center and starters for bascule bridge rehabilitation only. For new structures, control panel or motor controller is included under 508-1-. Clearly define work in plans and specifications. Contact State Structures Design for boiler plate specification to be modified as required for project specifics.
MOTOR CONTROLLER

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Recondition)
5 (Replace)

Notes

### 508- 83-ABB MOVABLE BRIDGE REHAB- INTEGRATED DRIVE SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>AS</th>
<th>Accuracy</th>
<th>Assembly</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AS</td>
<td></td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Includes drive systems (motor(s), variable speed drive, shop testing) for bascule bridge rehabilitation only. For new structures, integrated drive system is included under 508- 1-.

Contact State Structures Design for boiler plate specification to be modified as required for project specifics.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>SDG's Chapter 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.** 508- 83-ABB MOVABLE BRIDGE REHAB- INTEGRATED DRIVE SYSTEM AS

A = Operation
1 (Furnish & Install)
2 (Replace)
3 (Recondition)
4 (Repair)

BB = Drive Type
01 ( 25 kW Or Less)
02 ( 26 - 40 kW)
03 ( 41 - 60 kW)
04 ( 61 - 80 kW)
05 ( 81 - 115 kW)
06 (116 - 155 kW)
07 (156 - 190 kW)
08 (191 Or Larger)

Details and Structure: Complete
**510- 1- A  NAVIGATION LIGHTS- FIXED BRIDGE**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS; EA</th>
<th>Accuracy</th>
<th>Lump Sum; Each</th>
<th>PlanQuantity?</th>
<th>yes/no</th>
</tr>
</thead>
</table>

**Details**

Includes work related to the navigation lights and accessories for fixed bridges, including the fender and channel lights. For bascule bridges, navigation lights included under 508-1.

**Final:**

LUMP SUM: No calculations required unless item is to be adjusted. All calculations and documentation of adjustments, in accordance with the Specifications, are required.

EACH: Final quantity must be recorded in space provided on summary sheet in the plans. All changes must be shown on final plan sheets.

**Required**

**Recommended**

**Forms**

- **Design**
  - SHTabQuantLS
  - COMP 700-050-05
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - LUMP SUM ITEMS: Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans.
  - EACH ITEMS: Location must be summarized on the plans.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
  - Index 21220

**Prep & Doc Manual Chapter(s)**

7, 13

**Status**

**510- 1- A  NAVIGATION LIGHTS- FIXED BRIDGE  LS/LS; EA**

A =
Blank (Navigation Lights) LS/LS
3 (Piers) EA

**512- 1- A  MOVABLE BRIDGE- CONTROL HOUSE**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Details**

Intended for the complete cost of control house for bascule bridges. Include cost of foundation under separate pay items (piling, shaft, etc.) Contact State Structures Design for boiler plate specification to be modified as required for project specifics. Clearly show limits in plans for payment purposes. Include complete bar lists for control house in the plans, Including cost of reinforcing steel for walls and floors.

**Required**

**Recommended**

**Forms**

- **Design**
  - SHTabQuantLS
  - COMP 700-050-05
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
### MOVABLE BRIDGE- CONTROL HOUSE

**A =**
- 1 (Renovation)
- Blank (New)

**Unit:** EA

**Accuracy:** Each

**PlanQuantity? no**

**Details:**
- **Related Items**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - Design: COMP 700-050-03
- **Forms**
  - **Design:** Refer to Comp Book
- **Construction**
  - **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Status**
- **Struct.** 512- 1- A

**Prep & Doc Manual Chapter(s) 7, 13**

---

### MOVABLE BRIDGE PLUMBING SYSTEM

**Unit:** EA

**Accuracy:** Each

**PlanQuantity? no**

**Details:**
- **Related Items**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - Design: COMP 700-050-03
- **Forms**
  - **Design:** Refer to Comp Book
- **Construction**
  - **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Status**
- **Struct.** 512- 71- A

**Prep & Doc Manual Chapter(s) 6, 7, 13**

---

### FILTER FABRIC, PLASTIC

**Unit:** SY; M2

**Accuracy:** Square Yard; Square Meter

**PlanQuantity? no**

**Details:**
- **Related Items**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - Design: COMP 700-050-03
- **Forms**
  - **Design:** Refer to Comp Book
- **Construction**
  - **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Status**
- **Struct.** 512- 71- A

**Prep & Doc Manual Chapter(s) 6, 7, 13**

---

**Notes:** Complete
### Details
Roadway Design and Structures Design should coordinate when this item is used. Intended for Subsurface Drainage or Stabilization applications, as detailed in Section 514 of Specifications.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
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<td>Design</td>
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</tr>
<tr>
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<td>Refer to Comp Book</td>
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</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

### References

- PPM Chapter
- Other
- Standards: Index No. 199
- Specifications
- Prep & Doc Manual Chapter(s): 6, 7, 13

### Status

**Struct.** 514-71- A

FILTER FABRIC, PLASTIC SY

A =
1 (Subsurface)
2 (Stabilization)

### Notes

Tech Spec/Details to consider include: materials, construction requirements, method of measurement and basis of payment.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-01</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

### References

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s): 6, 7, 13

### Status

**Struct.** 514-72-

LINER IMPERMEABLE PVC SY
515- 1- A PIPE HANDRAIL- GUIDERAIL

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? yes

Notes
Details
To be used as detailed on Design Standards Index 870. Two pipe handrail is generally used in locations where drop-off is between 10" and 30". Additional applications may include "steering" pedestrians next to a sidewalk or out of a parking lot (with or without drop-off). For use next to drop-off greater than 30", refer to Structures Index 800 series and pay items 460-70 or 515-2. Not valid for use on bridge.

Related Items
Required Recommended
Forms Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards Index No. 870
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 515- 1- A PIPE HANDRAIL- GUIDERAIL LF

A =
1 (Steel)
2 (Aluminum)
5 (PVC)

Notes

515- 2-ABB PEDESTRIAN/BICYCLE RAILING

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? yes

Notes
Details
To be used for pedestrian railing next to drop-offs greater than 30". Use in accordance with Structures Index 850 and 860; English standards may be used on metric projects. These specific rails replace the current two rail system, and are intended to be used when there is a drop-off next to a pedestrian or bicycle facility which must be protected. These rails are not intended for use on top of traffic barriers or where vehicle containment is required. For drop-off locations less than 30", consider item 515- 1. For other railings, refer to Structures Index series 800 and pay item 460- 70-xxa.
**Related Items**

**Forms**

- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

- **Construction**
  - Required: Refer to Comp Book

**Documentation**

- **Design**
  - Required: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**
  - Required: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
  - Vol 1, Section 8.8

- **Standards**
  - Index No. 850 or 860

- **Specifications**
  - *Selected Items may require Tech Spec and/or Plan Detail*

- **Prep & Doc Manual Chapter(s)**

**Struct.**

- **515- 2-ABB PEDESTRIAN/BICYCLE RAILING LF**

  - **A** = Required Material Types
  - 1 (Non Specified)
  - 2 (Steel Only)
  - 3 (Aluminum Only)
  - 4 (Special)*

  - **BB** = Rail Type
  - 01 (42" Picket Railing)
  - 02 (54" Picket Railing)
  - 03 (Special)*

**Notes**

- *"Special" will require plan details and/or Tech Spec*

**Related Items**

**Forms**

- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

- **Construction**
  - Required: Refer to Comp Book

**Documentation**

- **Design**
  - Required: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**
  - Required: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
  - Vol 1, Section 8.8

- **Other**

- **Standards**

- **Specifications**

**Notes**

- *"Special" will require plan details and/or Tech Spec*

**Related Items**

**Forms**

- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

- **Construction**
  - Required: Refer to Comp Book

**Documentation**

- **Design**
  - Required: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**
  - Required: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**

- **Other**

- **Standards**

**Details**

- Tech Spec should indicate that this is a plan quantity item. Details to consider include: materials, methods and/or construction requirements.

- Intended for posts placed at the ends of pedestrian or special-use facilities. Space as necessary to restrict certain vehicles, while allowing others.

**Notes**

- **519- 78- BOLLARDS**

  - **Unit**
  - **EA**

  - **Accuracy**
  - **Each**

  - **PlanQuantity?**
  - **yes**

- **Notes**

- **Details**

- **Related Items**

- **Forms**

- **Construction**

- **Documentation**

- **References**

- **Standards**

Details and Structure: Complete
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 519-78- BOLLARDS EA

Notes

520-1-AA CONCRETE CURB AND GUTTER

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes

Details Includes construction of concrete curb and/or curb and gutter, and all forming, contraction joint forming, expansion joint construction, steel reinforcement, finishing and backfilling and compaction. Deduct inlet top lengths as shown in the standards from the length of curb and gutter. Length to be measure along the face of the curb. Cost of asphalt curb pad, and additional curb thickness required, to be included in the cost of curb and gutter.

Related Items

Forms

Required SHTabQuant
Recommended COMP 700-050-02 (with deductions) or 700-050-03 (no deductions)

Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter

Other

Standards Index No. 300
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 520-1-AA CONCRETE CURB AND GUTTER LF

AA =
7 (Type E)
8 (Special) - For Any Odd Type*
10 (Type F)

Notes **"Special" will require plan details and/or Tech Spec

520-2-AA CONCRETE CURB

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter
PlanQuantity? yes

Notes

Details and Structure: Complete
Per specification, asphalt curb pad will be included in unit price, when detailed in the plans.

**Basis of Estimates**

**2007 Edition**

**April 16, 2007**

- **Per specification, asphalt curb pad will be included in unit price, when detailed in the plans.**

**Required**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Design</th>
<th>SHTabQuant</th>
</tr>
</thead>
</table>

**Recommended**

- **Design**
  - COMP 700-050-02 (with deductions) or 700-050-03 (no deductions)

**Documentation**

- **Design**
  - Refer to Comp Book

- **Construction**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**
  - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
- **Other**
- **Index No. 300**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

- **6, 7, 13**

**Status**

- **Struct. 520-2 AA CONCRETE CURB LF**

**Notes**

- **"Special" will require plan details and/or Tech Spec**

**520-3- VALLEY GUTTER, CONCRETE**

- **Unit**
  - LF; M1
- **Accuracy**
  - Linear Foot; 10th of a Meter
- **PlanQuantity?**
  - yes

**Details**

- **Required**
  - SHTabQuant

**Recommended**

- **COMP 700-050-02 (with deductions) or 700-050-03 (no deductions)**

**Documentation**

- **Design**
  - Refer to Comp Book

- **Construction**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**
  - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
- **Other**
- **Index No. 300**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

- **6, 7, 13**

---

**Details and Structure:** Complete
### Topic No. 600-000-002
#### Basis of Estimates

**2007 Edition**

*April 16, 2007*

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**Status**

**Struct.**

| 520-3- | VALLEY GUTTER, CONCRETE | LF |

**Notes**

---

**520-4-**

**CONCRETE GUTTER, SPECIAL**

| Unit | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | yes |

**Notes**

**Details**

Calculate carefully to reflect actual scope of work.

**Related Items**

**Required**

| Design | SHTabQuant |

**Recommended**

| Design | COMP 700-050-02 (with deductions) or 700-050-03 (no deductions) |

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

**PPM Chapter**

**Other**

Index No. 300

**Specifications**

**Prep & Doc Manual Chapter(s)**

6, 7, 13

---

**Status**

**Struct.**

| 520-4- | CONCRETE GUTTER, SPECIAL | LF |

**Notes**

---

**520-5- AB**

**CONCRETE TRAFFIC SEPARATOR**

| Unit | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | yes |

**Notes**

**Details**

Includes construction of traffic separator in 4, 6, and 8.5' (1.2, 1.8, and 2.6 meter) widths. Includes all forming, contraction joint forming, expansion joint construction, steel reinforcement, finishing and backfilling and compaction. Include the length of the nose when calculating the linear feet (meters). Refer to Plans Preparation Manual for proper use.

For separator of variable width, consider item 520-70, paid per area.

**Related Items**

**Required**

| Design | SHTabQuant |

**Recommended**

| Design | 520-70 (2520-70) |

| Design | COMP 700-050-02 (with deductions) or 700-050-03 (no deductions) |

---

Details and Structure: Complete
**Standards**

Index No. 300, 302, 212, 213

**Specifications**

Struct. 520-6- AB CONCRETE TRAFFIC SEPARATOR LF

<p>| | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>(Type I)</td>
<td>2</td>
<td>(Type II)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>(Type IV)</td>
<td>5</td>
<td>(Type V)</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>(4' Wide)</td>
<td>2</td>
<td>(6' Wide)</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>(8.5' Wide)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

NOTE: A=1 Thru 6 Valid For Widths Of 4', 6' And 8.5' Only; B = 1, 2 Or 6 Only. Selected items blocked 6/30/2001

---

**520-6-** SHOULDER GUTTER, CONCRETE

<table>
<thead>
<tr>
<th></th>
<th>LF; M1</th>
<th>Linear Foot; 10th of a Meter</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

Deduct inlet top lengths as shown in the standards from the length of curb and gutter. For Type S, length to be measured along the face of the curb.

**Related Items**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Required</td>
<td>Recommended</td>
</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-02 (with deductions) or 700-050-03 (no deductions)</td>
</tr>
</tbody>
</table>

**References**

PPM Chapter
Other
Standards Index No. 220, 284, 300
Specifications

---

**Status**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**Documentation**

Design Refer to Comp Book

Location in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**Design**

Refer to Comp Book

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

**Details and Structure:** Complete
**520-6-**  
**SHOULDER GUTTER, CONCRETE**  
**LF**

**Notes**

**520-70-**  
**CONCRETE TRAFFIC SEPARATOR, SPECIAL- VARIABLE WIDTH**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

Includes construction of traffic separator in variable width, as indicated in the plans. Refer to Plans Preparation Manual for proper use. Consider item 520-5 for constant width separator, paid per length.

**Related Items**

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-01

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 302
- **Specifications**

**521-1-A**  
**MEDIAN CONCRETE BARRIER WALL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

To be used when calling for concrete barrier wall that is to be located in a median (double face or full wall barrier); see 521-72- (2521-72- ) for shoulder wall. Consists of construction of plain or reinforced barrier wall. The contractor may request approval for precast construction in lieu of cast-in-place.

**Related Items**

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
PLAN QUANTITY will be basis of payment to the Contractor.

**Construction** Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References
- **PPM Chapter**
- **Other**
- **Standards** Index No. 217, 410, 413, 415
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status
- **Struct.** 521- 1- A

#### MEDIAN CONCRETE BARRIER WALL
- **Unit** LF
- **Accuracy** Linear Foot; 10th of a Meter
- **Plan Quantity?** yes

#### A =
- Blank (Cast In Place)
- 1 (Precast)
- 2 (Trapezoidal)

### Notes
- Items to be used in accordance with Standard Indexes. If any modification is made to a standard barrier, the “Special” pay item should be used. Details for any non-standard barrier must be submitted to the Structures Design Office for approval, due to crash testing requirements.
- Include barriers located on approach slabs in this item.
- Standard Indexes:
  - Index 420 - 32” F-Shape
  - Index 425: 42” F-Shape
  - Index 421: 32” Median, Double Face
  - Index 423: 32” Vertical Face
  - Index 422: 42” Vertical Face
  - Index 424: Corral With Curb
  - Index 424: Corral W/O Curb
  - Index 480 thru Index 483: Retrofit-Vertical Face
  - Index 5210: F–Shaped with Sound Barrier Wall, 8’Ht.

### Related Items
- **Forms**
  - **Required**
    - Design: SHTabQuant
  - **Recommended**
    - COMP 700-050-03
- **Construction**
  - **Design** Refer to Comp Book
  - **Notes**
  - **Documentation**
    - **Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
  - **Construction** Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.
- **References**
  - **PPM Chapter**
  - **Other** SDG 6.7
  - **Standards** See detail for index numbers 420, 421, 422, 423, 424, 425, 480, 481, 482, 483, 5210
## Specifications

**Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status

**Struct.** 521- 5- A  
**CONCRETE TRAFFIC RAILING- BRIDGE**  
**LF**

AA =
1 (32” F-Shape)  
2 (42” F-Shape)  
3 (32” F-Shape Median, Double Face)  
4 (32” Vertical Face)  
5 (42” Vertical Face)  
6 (Corral With Curb)  
7 (Corral W/O Curb)  
8 (Retrofit-Vertical Face)  
9 (Special)*  
20 (F–Shaped with Sound Barrier Wall 8’Ht.)

### Notes

*See details above for use of "Special" item

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
<tr>
<td>Documentation Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
<td></td>
</tr>
</tbody>
</table>

### Details

Intended for pedestrian/ bicycle railings located on bridge or on retailing walls. Includes cost of concrete portion of the parapet (including cost of sidewalk as applicable). Railing mounted on the top of parapet are to be paid for separately. Show location w/ quantity block on bridge superstructure sheets and wall sheets as required.

When Index 800, Pedestrian Bicycle Railing is utilized, Pay Item 460-70-3 also Required

### Status

**Struct.** 521- 6- A  
**CONCRETE PARAPET**  
**LF**

AA =
1 (Pedestrian/Bicycle)  
2 (Special)*

### Notes

*See details above for use of "Special" item

---

**Details and Structure: Complete**
3 (Retaining Wall System Mounted w/ Sidewalk)
4 (Retaining Wall System Mounted w/ sidewalk and 8’ Sound Wall)

**Notes**  "Special" will require plan details and/or Tech Spec

<table>
<thead>
<tr>
<th>521- 7- AA</th>
<th>CONCRETE TRAFFIC RAILING BARRIER- RETAINING WALL SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**
Intended for 8’ retaining wall mounted sound barrier with junction slab. Show location with quantity block on wall sheets.

**Related Items**

**Forms**
- **Required**: Design
- **Recommended**: SHTabQuant, COMP 700-050-03

**Construction**
Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- **PPM Chapter**
- **Other**
- **Standards**: Index 415
- **Specifications**

**Prep & Doc Manual Chapter(s)**

**Status**

**Struct.** 521- 7- AA  CONCRETE TRAFFIC RAILING BARRIER- RETAINING WALL SYSTEM

A =
1 (F Shape with Sound Barrier Wall 8’ Ht.)

**Notes**

---

<table>
<thead>
<tr>
<th>521- 8- AA</th>
<th>CONCRETE TRAFFIC RAILING BARRIER- RETAINING WALL SYSTEM, MOUNTED WITH SLEEPER SLAB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

**Details**
Item to be used in accordance with Standard Indexes. Show location with quantity block in wall plans. Sometimes used with item 521- 5- A for traffic railing systems that extend onto bridge.

**Related Items**

**Forms**
- **Required**: Design
- **Recommended**: SHTabQuant, COMP 700-050-03

**Construction**
Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form

---

Details and Structure: Complete
### 521- 72- AA  
**SHOULDER CONCRETE BARRIER WALL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**
- Intended for rigid shoulder roadway barriers with 8'-14' shoulder mounted sound barrier walls and box culvert mounted barriers.
- Use 521- 1- (2521- 1-) for median wall.

**Related Items**
- **Required**
  - **Design**: SHTabQuant
  - **Construction**: Refer to Comp Book
- **Recommended**
  - **Design**: COMP 700-050-03

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 410, 5210, 5211, 5213, 5214, 5215
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

**Status**
- **Struct.** 521- 72- AA  
- **SHOULDER CONCRETE BARRIER WALL**  
- **LF**

**Notes**  
- "Special" will require plan details and/or Tech Spec
AA =
2 (Box Culvert)
3 (Rigid - Shoulder)
4 (Rigid - Retaining)
5 (Rigid - Curb & Gutter)
6 (Plain - Shoulder)
7 (Rigid - Shoulder, With 8’ Sound Wall)
20 (F-Shaped, With 8’ Sound Wall)
21 (F-Shaped, With 10’ Sound Wall)
22 (F-Shaped, With 12’ Sound Wall)
23 (F-Shaped, With 14’ Sound Wall)

### 521-73- CONCRETE BARRIER WALL - REMOVAL

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

This work normally paid for under Clearing and Grubbing or removal of existing structures. Read standards and specifications carefully before use. To be used for Roadway barrier only. For bridge barrier, refer to Structures Standards.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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**Documentation**

<table>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**References**

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<th>PPM Chapter</th>
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<th>Standards</th>
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<td>Prep &amp; Doc Manual Chapter(s) 6, 7, 13</td>
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</table>

**Status**

**Struct.** 521-73- CONCRETE BARRIER WALL - REMOVAL LF

**Notes**

**522-1- CONCRETE SIDEWALK, 4” THICK**

<table>
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<tr>
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<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>yes</td>
<td></td>
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</tbody>
</table>

**Notes**

Consists of construction of plain or reinforced sidewalk. Includes all materials, foundation preparation, joint forming (or sawing), placing, finishing and curing. Specifically excludes excavation. Sidewalk 6” (0.15 meter) is used in traffic-bearing situations, i.e., driveways. Detectable Warning for sidewalk ramps is incidental to the cost of new sidewalk; for retrofit of ramps, refer to Section 527 of the specifications.

Details and Structure: Complete
Additional details on Index 310. For designs near significant trees, consult with Environmental Management Office.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<tr>
<td>Construction</td>
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**Forms**

<table>
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<td>Refer to Comp Book</td>
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**Documentation**

<table>
<thead>
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<th>Construction</th>
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<tbody>
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<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

- PPM Chapter
- Other
- Standards Index No. 282, 304, 310, 515
- Specifications

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

| Struct. | 522- 1- | CONCRETE SIDEWALK, 4" THICK | SY |

**Notes**

Refer to 522-1 for details.

---

**522- 2-**

**CONCRETE SIDEWALK, 6" THICK**

| Unit | SY; M2 | Accuracy | Square Yard; Square Meter | PlanQuantity? | yes |

**Notes**

Refer to 522-1 for details.

---

**522- 73-**

**EXPOSED AGGREGATE TOPPING- SIDEWALK**

**Details and Structure:** Complete
### 522-73- EXPOSED AGGREGATE TOPPING - SIDEWALK

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
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</thead>
</table>

**Notes**

**Details**

**Related Items**

**Forms**
- Required: Design

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**
- Other

**Prep & Doc Manual Chapter(s)**
- 6, 7, 13

**Status**
- Inactive Structure

**Struct.**
- 522-73-

*NOTE: A = Underlying Pavement Material*

---

### 523-1- A PATTERNED / TEXTURED PAVEMENT

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Includes placement of a patterned (colored) and/or textured (imprinted, stamped) treatment. Work/materials (coloring, coating, etc.) for treatment included under this item. Underlying asphalt/concrete material paid for separately.

**Related Items**

**Forms**
- Required: Design

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**
- Other

**Prep & Doc Manual Chapter(s)**
- 6, 7, 13

**Status**
- Inactive Structure

**Struct.**
- 523-1-A PATTERNED / TEXTURED PAVEMENT SY

---

*NOTE: A = Underlying Pavement Material*
Notes

524- 1- A  CONCRETE DITCH PAVEMENT (NON-REINFORCED)

Unit  SY; M2  Accuracy  Square Yard; Square Meter  PlanQuantity?  yes

Details
Consists of construction of concrete pavement in the flow channel of drainage ditches. Includes excavation below the finished grade, refilling and tamping, and disposal of surplus material. Also includes all costs of providing joints and weep holes and of furnishing and placing the filter fabric. Refer to Index 281 for additional information.

Required  Recommended
Forms  Design  SBDTPS; SBDCmCmt  COMP 700-050-01
Construction  Refer to Comp Book

Documentation
Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
Construction  Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards  Index No. 281
Specifications

Prep & Doc Manual Chapter(s)  6, 7, 13

Status

Struct.  524- 1- A  CONCRETE DITCH PAVEMENT (NON-REINFORCED)  SY

A =
1 (3")
2 (4")
3 (5")
4 (6")

Notes

524- 1- AB  CONCRETE DITCH PAVEMENT (REINFORCED)

Unit  SY; M2  Accuracy  Square Yard; Square Meter  PlanQuantity?  no

Details
Consists of construction of concrete pavement in the flow channel of drainage ditches. Includes excavation below the finished grade, refilling and tamping, and disposal of surplus material. Also includes all costs of providing joints and weep holes and of furnishing and placing the filter fabric.

Related Items  Required  Recommended
Forms  Design  SBDTPS; SBDCmCmt  COMP 700-050-01
Standards

Specifications

Struct. 524- 1- AB CONCRETE DITCH PAVEMENT (REINFORCED) SY

A =
1 (3”)
2 (4”)
3 (5”)
4 (6”)
B =
9 (Reinforced)

Notes

524- 2- A CONCRETE SLOPE PAVEMENT (NON-REINFORCED) SY

Unit SY; M2
Accuracy Square Yard; Square Meter
PlanQuantity? yes

Details

Related Items

Forms

Documentation

References

Prep & Doc Manual Chapter(s) 6, 7, 13

Status

Struct. 524- 2- A CONCRETE SLOPE PAVEMENT (NON-REINFORCED) SY

A =
### 524- 2- AB  CONCRETE SLOPE PAVEMENT (REINFORCED)

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M²</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Intended for reinforced slope pavement to protect bridge fill slopes, to line flow channels, and drainage ditches. Refer to 524- 1-xxa for details.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

| Design   | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

<table>
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<th>PPM Chapter</th>
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</table>

| Other |
| Standards |
| Specifications |

**Prep & Doc Manual Chapter(s)**

**Status**

<table>
<thead>
<tr>
<th>Struct.</th>
<th>CONCRETE SLOPE PAVEMENT (REINFORCED)</th>
<th>SY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A =</td>
<td></td>
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</tr>
<tr>
<td>1 (3&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (4&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (5&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (6&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B =</td>
<td>9 (Reinforced)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

---

### 525- 1-  ASPHALTIC CONCRETE CURB

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M¹</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Not intended for temporary or MOT applications. Use in accordance with Index 300.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

| Design   | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |

---

Details and Structure: Complete
quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

PPM Chapter

Other

**Standards**

Index 300

**Specifications**

Prep & Doc Manual Chapter(s) 6, 7, 13

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>Notes</th>
<th>Details</th>
<th>Related Items</th>
<th>Forms</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>525-1-</td>
<td>ASPHALTIC CONCRETE CURB</td>
<td></td>
<td></td>
<td>Design</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LF</td>
<td></td>
<td></td>
<td>Construction</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

**526-1- A**

**PAVERS, ARCHITECTURAL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
</tr>
</thead>
</table>

**Accuracy**

Square Yard; Square Meter

**PlanQuantity?** no

**Notes**

Used for roadway and/or sidewalk applications. For Patterned/Textured pavement (asphalt or concrete), use 523 items.

**Related Items**

**Required**

**Recommended**

Design SHTabQuant COMP 700-050-01

**Forms**

**Construction**

Refer to Comp Book

**Documentation**

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

**Standards**

Specs

**Specifications**

Prep & Doc Manual Chapter(s) 6, 7, 13

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>Notes</th>
<th>Details</th>
<th>Related Items</th>
<th>Forms</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>526-1-</td>
<td>PAVERS, ARCHITECTURAL</td>
<td></td>
<td></td>
<td>Design</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>SY</td>
<td></td>
<td></td>
<td>Construction</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

**527-1-**

**DETECTABLE WARNING ON WALKING SURFACE- RETROFIT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
</tr>
</thead>
</table>

**Accuracy**

Each

**PlanQuantity?** no

**Notes**

Details and Structure: Complete
Details

This pay item is to be used for applied device on existing ramps only (RETROFIT for previous projects), used in coordination with Index 304. For new installations (ramps constructed under this project/proposal), use index 304; cost of detectable warning for new installations is included in the cost of the sidewalk. Refer to specifications for a complete description of product.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standards

Index 304

Specifications

Prep & Doc Manual Chapter(s)

Status

Struct. 527-1- DETECTABLE WARNING ON WALKING SURFACE- RETROFIT

Notes

530-1- RIPRAP- SAND - CEMENT

<table>
<thead>
<tr>
<th>Unit</th>
<th>CY; M3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>10th of a Cubic Yard; 10th of a Cubic Meter</td>
</tr>
</tbody>
</table>

Notes

This item entails the use of sand-cement bags to construct endwalls, provide fill slope protection, and/or provide ditch bottom and ditch slope protection.

FINAL:
Record and show how quantity was arrived at on tabulation form 700-050-56. If sand-cement is proportioned by volume, the sand shall be measured loose in an approved measure prior to mixing with cement. If proportioned by weight, approved scales shall be used for this purpose and the volume shall be calculated using a standard conversion factor for sand of 85 lb/ft³ (1360 kg/m³).

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-56</td>
</tr>
</tbody>
</table>

Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standards

Index 304

Specifications
Struct.  530-  1-  RIPRAP- SAND - CEMENT  CY

Notes

530-  3-  A RIPRAP- RUBBLE

Unit  TN; MT  Accuracy  10th of a Ton; 10th of a Metric Ton  PlanQuantity?  no

Details

To be used for bank and shore, bridge abutment, ditch, and outlet structure protection. Refer to Drainage Manual for design criteria. Gradation is given in the specifications. Design quantity is based on the following: 

\[
W = \text{Vol.s} \times \text{S.G.} \times \text{Ww} \times \text{Vf}
\]

- \( W \) = Weight of Stone
- \( \text{Vol.s} \) = Volume of Stone
- \( \text{S.G.} \) = Specific Gravity
  - =2.3 for Bank & Shore Protection
  - =1.9 for Ditch Lining
- \( \text{Ww} \) = 62.4 lb/ft³ (1 MT/M³) Weight of Water
- \( \text{Vf} \) = .90 (Void Factor)

NOTE: remember to convert weight (LB) to (TN) for unit of measure & payment. Final measure, per specifications, will be by railroad scales, truck scales, or barge displacement.

Related Items

Required  Recommended
Forms  Design  SHTabQuant  COMP 700-050-06
Construction  700-050-56

Documentation

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)  6, 13

Status

Struct.  530-  3-  A RIPRAP- RUBBLE  TN

A =
3 (Bank & Shore)
4 (Ditch Lining)

Notes

530-  74-  BEDDING STONE

Unit  TN; MT  Accuracy  10th of a Ton; 10th of a Metric Ton  PlanQuantity?  no
### Notes

**Details**

Quantities should be based on 115 lbs per cubic foot (1840 kg per cubic meter).

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>COMP 700-050-06</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-56</td>
</tr>
</tbody>
</table>

**Forms**

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

### Status

Struct. 530-74- BEDDING STONE TN

### Notes

**530-76- A GABION MAT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Standards under development; contact the State Drainage Office for assistance.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>COMP 700-050-01</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Forms**

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

### Status

Struct. 530-76- A GABION MAT SY

A = Thickness
1 (6" Thick)
2 (9" Thick)
3 (18")

Details and Structure: Complete
### 530-77- A  
**GABION BASKET**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M²</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Status**

**Struct.** 530-77- A  
**GABION BASKET**  
**SY**

\[ A = \]
1 (12” Thick)
2 (36” Thick)
3 (30” Thick)
4 (18” Thick)

---

### 530-78-  
**RIPRAP- ARTICULATING BLOCK**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M²</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### 534-72-1AA  
**SOUND BARRIERS- INCLUDING FOUNDATION**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF; M2</td>
<td>Square Foot; 10th of a Square Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

Refer to standards for details. Includes the cost of the foundation (auger cast piles or spread footings when called for in the plans), test wall, etc. Area bounded by top of panel, bottom of panel, without deductions for openings; refer to specs for additional information. When Special is used, details must be included in the plans.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-01</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 32</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Standards</th>
<th>Specifications</th>
</tr>
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<tbody>
<tr>
<td>Index No. 5200 to 5206</td>
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**Status**

<table>
<thead>
<tr>
<th>Struct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>534-72-1AA</td>
</tr>
</tbody>
</table>

**Notes**

A=

01 (Permanent)
02 (Temporary)
03 (Special Wall/Foundation)
### GUARDRAIL

<table>
<thead>
<tr>
<th>536- 1- AA</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan</th>
<th>Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUARDRAIL</td>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>

#### Notes

**Details**
Consists of the construction of metal guardrail on posts of timber or steel as specified. Panels are 12.5’ (3.810 meters) in length. The plan length of a run of guardrail should normally be determined as a multiple of the nominal panel lengths.

When attaching guardrail to a new or widened bridge railing, the guardrail (including transition and thrie beam panels) is paid for under item 536-1- (2536-1-). The cost of connecting the guardrail to the bridge railing is included in the cost of the guardrail.

When connecting guardrail to an existing bridge railing or to vertical face rail retrofits, the guardrail (including transition and thrie beam panels) is paid for under the item 536-1- (2536-1-) and item 536-8 is included for the cost of connecting the guardrail to the existing bridge railing.

Other situations should be noted in the plans.

Pipe rail/pedestrian safety treatment is to be included in the cost of the guardrail, as indicated on standards. Document locations on summary table. Refer to PPM Vol 2, Chapter 7 for details.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>339- 1</td>
<td>536-7 and 536-8 (2536-7, 2536-8)</td>
</tr>
</tbody>
</table>

#### Forms

- **Design**: SBGDRL; SBGuardrail
- **Construction**: COMP 700-050-03

#### Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

- **PPM Chapter**
- **Other**
- **Specifications**
  - Index No. 400, 402

#### Prep & Doc Manual Chapter(s)
6, 7, 13

---

### Structure

<table>
<thead>
<tr>
<th>536- 1- AA</th>
<th>GUARDRAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td></td>
</tr>
</tbody>
</table>

A =
1 (Roadway)
2 (Bridge)
3 (Roadway, Double Face)
4 (Bridge, Double Face)
5 (Roadway, Thrie Beam)
6 (Bridge, Thrie Beam)
8 (Roadway, With Rub Rail)
9 (Roadway, Thrie Beam, Double Face)
10 (Roadway, Weathering Steel)
11 (Roadway, Modified Thrie Beam)
12 (Roadway, Modified Thrie Beam, Double Face)

#### Notes

Details and Structure: Complete
## GUARDRAIL- SHOP BENT PANELS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Notes
- When this item is used, item 339-1 must be used.

### Related Items
- **Required**
  - Forms
    - Design: SBGDRL; SBGuardrail
  - Construction: Refer to Comp Book
- **Recommended**
  - Specifications
    - Index No. 400

### Status
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### Related Items
- **Required**
  - Forms
    - Design: SBGDRL; SBGuardrail
  - Construction: Refer to Comp Book
- **Recommended**
  - Specifications
    - Index No. 400

### Status
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### Notes
- Used when culvert, pier footing or other concrete structure precludes normal post installation and special fabrication is required. Specifically excludes posts for double-faced median guardrail. When this item is used, item 536-1-xxa (2536-1-xxa) must be used.

### Related Items
- **Required**
  - Forms
    - Design: SBGDRL; SBGuardrail
  - Construction: Refer to Comp Book
- **Recommended**
  - Specifications
    - Index No. 400

### Status
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).
GUARDRAIL BRIDGE ANCHORAGE ASSEMBLY

Unit: EA  Accuracy: Each  PlanQuantity?: no

Details:
Used when connecting guardrail to an existing bridge. Includes furnishing and installing special end shoes, wood blocks or concrete wedges, concrete posts and necessary hardware. When this item is used, item 536-1 (2536-1) must be used. Remove: Plans or specs to indicate disposal or salvage instruction.

Related Items:
Required: Design: SBGDR; SBGuardrail  Construction: COMP 700-050-03
Recommended: Design: Refer to Comp Book

Documentation:
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References:
PPM Chapter
Other: Index No. 402
Standards
Specifications

Prep & Doc Manual Chapter(s): 7, 13

GUARDRAIL REMOVAL

Unit: LF; M1  Accuracy: Linear Foot; 10th of a Meter  PlanQuantity?: no

Details:
For single run, double face guardrail: measurement and payment are based on the single run length. Refer to specification for details.

Related Items:
Required: Design: SBGDR; SBGuardrail  Construction: COMP 700-050-03
Recommended: Design: Refer to Comp Book

Documentation:
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### 536- 73-
**GUARDRAIL REMOVAL**
**LF**

#### Notes
- **Standards**
  - Index No. 400
- **Specifications**
  - Refer to Comp Book
- **Prep & Doc Manual Chapter(s)**
  - 7, 13

#### Status
- **Struct.** 536- 73-

#### Related Items
- **Forms**
  - **Required**
    - Design: SBGDRL; SBGuardrail
  - **Recommended**
    - Design: COMP 700-050-03
- **Documentation**
  - Design:
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction:
    - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 400
- **Specifications**
- **Prep & Doc Manual Chapter(s)**
  - 7, 13

---

### 536- 76-
**GUARDRAIL POSTS- SPECIAL LENGTH**
**EA**

#### Notes
- **Unit** 
  - **Accuracy**
  - **PlanQuantity?**
  - **no**

#### Details
- **Related Items**
  - **Required**
    - Design: SBGDRL; SBGuardrail
  - **Recommended**
    - Design: COMP 700-050-03
- **Documentation**
  - Design:
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction:
    - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 400
- **Specifications**
- **Prep & Doc Manual Chapter(s)**
  - 7, 13

#### Status
- **Struct.** 536- 76-

---

### 536- 82-
**GUARDRAIL ANCHORAGE- CONCRETE BARRIER WALL**
**EA**

#### Notes
- **Unit** 
  - **Accuracy**
  - **PlanQuantity?**
  - **no**

#### Details
- **Related Items**
  - **Required**
    - Design: SBGDRL; SBGuardrail
  - **Recommended**
    - Design: COMP 700-050-03
- **Documentation**
  - Design:
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction:
    - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

Details and Structure: Complete
### 536- 82-  
**GUARDRAIL ANCHORAGE- CONCRETE BARRIER WALL**

**Unit:** EA  
**Accuracy:** Each  
**PlanQuantity?** no

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SBGDRL; SBGuardrail COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

**Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

### 536- 83- A  
**GUARDRAIL POST REPLACEMENT**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**

- Includes furnishing and installing all necessary hardware, as shown in Standard Index 400.
Struct.  536-85- AA GUARDRAIL END ANCHORAGE ASSEMBLY EA

AA =
22 (Flared)
24 (Parallel)
25 (Type II)
26 (Type CRT)
27 (Double Face Terminal)

Related Items
Forms Required 536-1
Design SBGDRIL; SBGuardrail
Construction Refer to Comp Book

Documentation Required 536-1
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Notes

Related Items
Forms Required 536-1
Design SBGDRIL; SBGuardrail
Construction Refer to Comp Book

Documentation Required 536-1
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Design
Construction

Other Standards Index No. 400 Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Notes

Consists of the removal of existing guardrail and resetting of the salvaged guardrail along with necessary new materials. Locations of the existing and proposed guardrail must be shown in the plans. Coordinate the use of this item with District Maintenance Office. Refer to Section 3 of this Handbook for recommended pay item plan note. When this item is used, Item 339-1 (2339-1) must be used.
### 539-75-ABC GLARE SCREEN

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

**Related Items**

- **Required**
  - Design: SHTabQuant
  - Construction: COMP 700-050-03

- **Recommended**
  - Construction: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status

**Inactive Structure**

**Details**

- **A = Operation**
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
  - 4 (Remove)
  - 5 (Replace)
  - 6 (Relocate)

- **B = Material**
  - 1 (Modular)

- **C = Height**
  - 1 (18")
  - 2 (24")
  - 3 (30")

### 539-80-ABC OPAQUE VISUAL BARRIER

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

**Related Items**

- **Required**
  - Plan Detail and/or Tech Spec Required

- **Recommended**
  - Prep & Doc Manual Chapter(s)

**Status**

**Inactive Structure**

**Details**

**Note:**

Details and Structure: Complete
539- 80-ABC  OPAQUE VISUAL BARRIER  LF

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Replace)

B = Material
1 (Concrete)
2 (Fiberglass)
3 (Aluminum)

C = Height
1 (2’ 3” Height)

Notes

540-  HIGH TENSION CABLE BARRIER SYSTEM WITH ANCHORS

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>Plan Quantity?</th>
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<tbody>
<tr>
<td>Notes</td>
<td>Future item; refer to developmental item 904-540-xx1</td>
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<tr>
<td>Details</td>
<td></td>
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<tr>
<td>Related Items</td>
<td>Required</td>
<td>Recommended</td>
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<td></td>
</tr>
<tr>
<td>Forms</td>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
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<td>Documentation</td>
<td>Design</td>
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<td></td>
<td></td>
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<tr>
<td>References</td>
<td>PPM Chapter</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
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<tr>
<td>Standards</td>
<td>Index No. 461</td>
<td></td>
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<tr>
<td>Specifications</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
540- HIGH TENSION CABLE BARRIER SYSTEM WITH ANCHORS
pending

542- 70- BUMPER GUARDS, CONCRETE

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Details

Related Items

Forms

Design Required SHTabQuant Recommended COMP 700-050-03

Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Specifications

Index No. 300

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

544- 74- AA RELOCATE VEHICULAR IMPACT ATTENUATOR / CRASH CUSHION

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Details

Items to be installed in accordance with Standards and/or manufacturer's instructions.

Related Items

Forms

Design Required SHTabQuant Recommended COMP 700-050-03

Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Specifications

Index No. 432, 433, 434, 435, 436, 438
Specifications

**Prep & Doc Manual Chapter(s)**  7, 13

**Status**

**Struct.** 544-74- AA  
**RELOCATE VEHICULAR IMPACT ATTENUATOR / CRASH CUSHION**

AA =
8 (Cat)
9 (Brakemaster)
10 (Dragnet)
13 (React 350)
14 (Quadguard)
17-20 Hold
23 (SCI)
24 (Quest)

**Notes**

**544-75- AA  CRASH CUSHION- VEHICULAR IMPACT ATTENUATOR**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

Items to be installed in accordance with Standards and/or manufacturer's instructions. All items must be listed on QPL, per specifications.

**Related Items**

**Forms**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**  7, 13

**Status**

**Struct.** 544-75- AA  
**CRASH CUSHION- VEHICULAR IMPACT ATTENUATOR**

AA =
8 (Cat)
9 (Brakemaster)
10 (Dragnet)
13 (React 350)
14 (Quadguard)
16 (Tracc)
17 (QuadGuard Elite)
18 (QuadGuard LMC)
19 (QuadGuard LMA)
20 (QuadTrend)
21 (TAU-II)
22 (Widetracc)
23 (SCI)
24 (Quest)
30 (Special) Plan Details and/or Tech Spec required
40 (Optional)

**Notes**

<table>
<thead>
<tr>
<th>544- 76- ATTENUATOR MODULES- SAND FILLED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
</tr>
</tbody>
</table>

**Notes**

**Details**

**Related Items**

**Forms**
- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

**Construction**
- Refer to Comp Book

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status**

**Struct.** 544- 76- ATTENUATOR MODULES- SAND FILLED EA

**Notes**

<table>
<thead>
<tr>
<th>546- 71- RUMBLE STRIP SETS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
</tr>
</tbody>
</table>

**Notes**

**Details**

Raised rumble strip SETS shall be constructed at all structures with less than full width shoulders. They will also be constructed at intersection approaches only when specified in the plans. This item is to be used in accordance with Standard Index 518. Note that thermoplastic sets typically include 4 strips; Asphalt sets include 6 strips. Refer to Index for details.

For ground-in strips, refer to item 546-72-AB.

**Related Items**

**Forms**
- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03
- **Construction**
  - Refer to Comp Book

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Ground-in rumble strips (16" minimum width, 400 mm minimum width) shall be constructed on freeway and other limited access per Index No. 518. Other methods and types of applications shall not be used unless approved in writing by the State Roadway Design Engineer. Approval will be considered only with sufficient documented justification for variance from this standard.

For Raised Rumble Strips, refer to item 546-71-.

### Related Items

**Forms**
- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### Notes

- **Details**
- **Related Items**
- **References**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status

- **Struct.**: 546-71-
- **Notes**
- **PPM Chapter**
- **Other Standards**: Index No. 518
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13
### Topic No. 600-000-002

#### Basis of Estimates

**2007 Edition**

April 16, 2007

---

**Unit** SY; M2  
**Accuracy** Square Yard; Square Meter  
**PlanQuantity?** no

**Notes**

**Details**


**Related Items**

**Required**  
**Design** SHTabQuant  
**Construction** COMP 700-050-01

**Recommended**  
**Design** Refer to Comp Book

**Related Items**

**Forms**  
**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Documentation**  
**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

**547- 70- A**  
**RIPRAP, FABRIC-FORMED CONCRETE**  
**SY**

A =  
1 (8” Filter Points)  
2 (10” Filter Points)

**Notes**

---

**548- AA-**  
**RETAINING WALL SYSTEM**

**Notes**

**Details**

Approved walls are listed on the Qualified Products List (QPL).  
NOTE: Include item in TRNS*PORT Roadway Category.  
Pay area based on area bounded by coping line, top of leveling pad, begin and end of wall. Barriers and parapets paid for separately (Items 521-8 and 521-6.)

**Related Items**

**Required**  
**Design** SHTabQuant  
**Construction** COMP 700-050-01

**Recommended**  
**Design** Refer to Comp Book

**Related Items**

**Forms**  
**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.  
**Construction** Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**

**PPM Chapter**  
**Other**

**Standards** Index 5300, 5301

---

Details and Structure: Complete
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct.  548- AA- RETAINING WALL SYSTEM SF

AA = Type
12 (Permanent) excluding barrier
13 (Temporary) excluding barrier
14 (Permanent- Widening) attached to existing wall

Notes

550- 10-ABC FENCING

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no

Notes
Includes all fence, posts, and incidental materials. Gates to be paid under 550-60-ABC. Type 9 (Special) to be used for decorative fencing, other than A, B, or R. Tech Spec and/or plan details required to specify materials, installation, and payment.

Details
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Related Items
Required Recommended 550- 60-ABC

Forms
Design SBFN; SBFence; SBFNTA; COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s)

Status
Struct.  550- 10-ABC FENCING LF

A = Type
1 (Type A)
2 (Type B)
3 (Type R)
9 (Special) Not Type A, B, or R; C= 8 or 9

B = Nominal Fabric Height
1 (0.0- 5.0’ Height) Note: Type A Standard
2 (5.1- 6.0’ Height) Note: Type B Standard
3 (6.1- 7.0’ Height)
4 (7.1- 8.0’ Height)
5 (8.1-10.0’ Height)

C = Details/Features
0 (Standard)
### Topic No. 600-000-002

**Basis of Estimates**

2007 Edition  
April 16, 2007

#### Notes

- A = Special for non-standard types (wood fence?)
- B = Special for other than coatings or enclosure
- A or B = 9 may require Tech Spec and/or Plan Detail

### 550-60-ABC FENCE GATE

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>Plan Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

#### Details

Fence to be installed in accordance with standards.
Special: Tech Spec and/or plan details required to specify materials, installation, and payment. Do not use "special" item for type A, B, or R fencing.

#### Related Items

**Required** 550-10-ABC

**Recommended**

#### Forms

- **Design**
  - SBFN; SB Fence; SBFNTA; COMP 700-050-03
- **Construction**
  - Refer to Comp Book

#### Documentation

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status

**Struct.** 550-60-ABC FENCE GATE

| A = Type | 1 (Type A) | 2 (Type B) | 9 (Special) * |
| B = Type | 1 (Single) | 2 (Double) | 3 (Sliding / Cantilever) |
| C = Size of Opening | 1 (0-6.0’ Opening) | 2 (6.1-12.0’ Opening) | 3 (12.1-18.0’ Opening) | 4 (18.1-20.0’ Opening) | 5 (20.1-24.0’ Opening) | 6 (24.1-30.0’ Opening) | 7 (Greater than 30’ Opening) |

#### References

- PPM Chapter
- Other Standards
- Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s)

---

**Notes**

- A = Special for non-standard types (wood fence?)
- B = Special for other than coatings or enclosure
- A or B = 9 may require Tech Spec and/or Plan Detail

---

**Details and Structure:** Complete
**Notes**

* Special may require Tech Spec and/or Plan Detail

### 555-1- A  DIRECTIONAL BORE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes

Details

Payment will include work and materials, including casing, to be installed in accordance with specified method. Review alternate installation methods to determine best method for each location/crossing.

#### Related Items

**Required**

Design

SHTabQuant

**Recommended**

COMP 700-050-03

#### Forms

**Design**

Refer to Comp Book

**Construction**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Documentation**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

#### Status

**Struct.** 555-1- A  DIRECTIONAL BORE  LF

A = Diameter Of Pipe

1 (Less Than 6")

2 (6" To <12")

3 (12" To <18")

4 (18" To <24")

5 (24" To <36")

6 (36" To <48")

7 (48" To <60")

#### Notes

Additional Ranges At 12" Increments

### 556-1- A  JACK AND BORE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes

Details

Payment will include work and materials, including casing, to be installed in accordance with specified method. Review alternate installation methods to determine best method for each location/crossing.

#### Related Items

**Required**

Design

SHTabQuant

**Recommended**

COMP 700-050-03

#### Forms

**Design**

Refer to Comp Book

**Construction**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
### Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 7, 13

### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>556-1-A</th>
<th>JACK AND BORE</th>
<th>LF</th>
</tr>
</thead>
</table>

$AA = \text{Diameter Of Casing}$
1 ( 6" to < 12")
2 ( 12" to < 18")
3 ( 18" to < 24")
4 ( 24" to < 36")
5 ( 36" to < 48")
6 ( 48" to < 60")
7 ( 60" to < 72")
8 ( 72" to < 84")
9 ( 84" to < 96")
10 (96" to < 108")

### Notes

**557-1-A VIBRATORY PLOWING**

| Unit | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

**Notes**

**Details**
Effective January 03: Payment will include work and materials, including casing, to be installed in accordance with specified method. Review alternate installation methods to determine best method for each location/crossing.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Forms**

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to Comp Book</td>
<td></td>
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</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
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</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td></td>
</tr>
<tr>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
</tr>
</tbody>
</table>

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)** 7, 13

### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>557-1-A</th>
<th>VIBRATORY PLOWING</th>
<th>LF</th>
</tr>
</thead>
</table>
A = Diameter Of Casing
1 ( < 6")
2 ( 6" to < 12")
3 (12" to < 18")

### Notes

**560- 1-** PAINTING STRUCTURAL STEEL- REHAB

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/TN; LS/MT</th>
<th>Accuracy</th>
<th>Lump Sum (Ton); Lump Sum (Metric Ton)</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Intended for rehabilitation projects. For new bridges, the cost of painting is included in the cost of the structural steel. Do not include quantities in the plans. The weight of the steel to be painted is for estimating purposes only.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)  6, 7, 13

---

**Status**

Struct.  560- 1- PAINTING STRUCTURAL STEEL- REHAB LS/TN

---

### Notes

**561- 1-** PAINTING STRUCTURAL STEEL- REHAB, INORGANIC ZINC

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/TN; LS/MT</th>
<th>Accuracy</th>
<th>Lump Sum (Ton); Lump Sum (Metric Ton)</th>
<th>PlanQuantity?</th>
<th>yes</th>
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</thead>
</table>

**Notes**

**Details**

Intended for rehabilitation projects. For new bridges, the cost of painting is included in the cost of the structural steel. Do not include quantities in the plans. The weight of the steel to be painted is for estimating purposes only.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
### 561- 1- PAINTING STRUCTURAL STEEL- REHAB, INORGANIC LS/ZN

**Notes**

Coordinate the use of this item with District Maintenance Office. Consists of furnishing and applying anti-graffiti coating to the surfaces indicated in the plans. The work also includes surface preparations prior to application of the coating. All coatings are to be clear, unless otherwise specified in the plans, or approved by the Engineer. Pay Item specifies whether material is sacrificial or non-sacrificial.

Measurement is based on the projected area of the wall (height x length) or surface, with no additional allowance for surface texture.

#### 563- A ANTI-GRAFFITI COATING

<table>
<thead>
<tr>
<th>Unit</th>
<th>SF; M2</th>
<th>Accuracy</th>
<th>Square Foot; 10th of a Square Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**

Coordinate the use of this item with District Maintenance Office. Consists of furnishing and applying anti-graffiti coating to the surfaces indicated in the plans. The work also includes surface preparations prior to application of the coating. All coatings are to be clear, unless otherwise specified in the plans, or approved by the Engineer. Pay Item specifies whether material is sacrificial or non-sacrificial.

Measurement is based on the projected area of the wall (height x length) or surface, with no additional allowance for surface texture.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-01</td>
</tr>
</tbody>
</table>

#### Forms

- Refer to Comp Book

#### Documentation

- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

- PPM Chapter

Other

- Standards

 Specifications

- Prep & Doc Manual Chapter(s)  6, 7, 13

**Notes**

Coordinate the use of this item with District Maintenance Office. Consists of furnishing and applying anti-graffiti coating to the surfaces indicated in the plans. The work also includes surface preparations prior to application of the coating. All coatings are to be clear, unless otherwise specified in the plans, or approved by the Engineer. Pay Item specifies whether material is sacrificial or non-sacrificial.

Measurement is based on the projected area of the wall (height x length) or surface, with no additional allowance for surface texture.

#### 563- A ANTI-GRAFFITI COATING

<table>
<thead>
<tr>
<th>A =</th>
<th>3 (Sacrificial)</th>
</tr>
</thead>
</table>

#### 570- 1- SEEDING

**Details and Structure:** Complete
Unit: SY; M2  
Accuracy: Square Yard; Square Meter  
PlanQuantity?: no

Notes
- Effective January 2007 letting. Replaces several 570 items.
- Consists of establishing a stand of grass on slopes, shoulders, or other areas by seeding (includes seeding, seeding & mulching, hydroseeding, bonded fiber matrix, or any combination), or sodding, in accordance with Section 570. Coordinate the use of this item with Sections 104 and 580. This item includes the mowing of all areas, including undisturbed areas, within the project limits, as noted in the plans. DO NOT use item 104-4 when this item is used. Payment for all mowing is incidental to the turf payment.

Per Section 570 specification, the Statewide Disputes Review Board specifications must be included on projects with this item.

Related Items
- Required: SHTabQuant
- Recommended: COMP 700-050-01

Forms
- Design: Refer to Comp Book
- Construction: Refer to Comp Book

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### 570-1- A PERFORMANCE TURF SY

**A= Type**
1 leave blank- Contractor's Option
2 (Sod)

### Notes

**570-2- SEEDING & MULCHING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Valid through 12-31-2006; replaced by 570-1-A

**Details**

As above, with the addition of approximately 2" (50 mm), loose thickness, of mulch material applied uniformly over the seeded area. Does not include the furnishing of the mulch material.

**Related Items**

**Required**
570- 4, and 570- 3 and/or 570- 10 (2570- 4, 2570- 3 and/or 2570- 10)

**Recommended**
570- 9, 570- 10 and/or 570- 5, and 162- 3 (2570- 9, 2570- 10 and/or 2570- 5 and 2162- 3)

**Forms**

Design: SHTabQuant

Construction: Refer to Comp Book

**Documentation**

Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Index No. 104, 105

Prep & Doc Manual Chapter(s)

6, 7, 13

**Status**

Block Pending

### 570-3- A GRASS SEED (PERMANENT TYPE)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB; KG</td>
<td>Pound; Kilogram</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Valid through 12-31-2006; replaced by 570-1-A

**Details**

Includes furnishing of the grass seed at the job site. Calculate quantity of grass seed by
adding seeding area and seed and mulch area and converting to acres (hectares). Then use rate of spread as described by Index No. 104. For Reworking Shoulders, See Index No. 105 for rate of application.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>570- 1- , 570- 2- , 570- 4, 570- 5-, 570- 9 and 570-10 (2570- 1-, 2570- 2-, 2570- 4, 2570- 5-, 2570- 9 and 2570- 10).</td>
<td></td>
</tr>
</tbody>
</table>

### Forms

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHTabQuant</td>
<td>700-050-55</td>
</tr>
</tbody>
</table>

### Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

### References

| PPM Chapter |
| Other |
| Standards | Index No. 104, 105 |
| Specifications |
| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

### Status

Block Pending

### Struct.

| 570- 3- A | GRASS SEED (PERMANENT TYPE) |
| A = | LB |

\[
A = 1 \text{ (Argentina Bahia)} \\
\text{Blank (Contractor's Option)}
\]

### Notes

**570- 4- MULCH MATERIAL**

<table>
<thead>
<tr>
<th>Unit</th>
<th>TN; MT</th>
<th>Accuracy</th>
<th>10th of a Ton; 10th of a Metric Ton</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

### Notes

Valid through 12-31-2006; replaced by 570-1-A

### Details

Includes furnishing of the mulch material at the job site. Calculate quantity of mulch by converting area of seed and mulch to acres (hectares) and use rate of spread of 4 Tons/Acre (9000 kg/hectare).

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>570- 2-, 570- 3-, 570- 5-, 570- 9 and 570-10 (2570- 2-, 2570- 3-, 2570- 5-, 2570- 9 and 2570- 10).</td>
<td></td>
</tr>
</tbody>
</table>

### Forms

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHTabQuant</td>
<td>700-050-55</td>
</tr>
</tbody>
</table>

### Documentation

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

### References

| PPM Chapter |
| Other |

Details and Structure: Complete
### Standards

**Specifications**

Prep & Doc Manual Chapter(s)  6, 7, 13

---

**Status**  Block Pending

**Struct.**  570- 4-  MULCH MATERIAL  TN

---

**Notes**

#### 570- 5-

**FERTILIZER**

<table>
<thead>
<tr>
<th>Unit</th>
<th>TN; MT</th>
<th>Accuracy</th>
<th>10th of a Ton; 10th of a Metric Ton</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**  Valid through 12-31-2006; replaced by 570-1-A

**Details**  Includes furnishing and applying fertilizer. Calculate quantity of fertilizer using the areas of all grassing operations, including reworking shoulders. Convert to acres (hectares). Estimate 400 lb/acre (450 kg/hectare), which includes initial application and one subsequent application.

**Related Items**  Required  Recommended  570- 1- thru 570- 4-, 570- 9-, 570- 10-, 570- 5- and all plants, 580-327- 1 thru 585- 5- (2570- 1- thru 2570- 4-, 2570- 9-, 2570- 10-, 2570- 5- and all plants, 2580-327- 1 thru 2585- 5-)

**Forms**  Design  SHTabQuant  COMP 700-050-06

**Construction**  700-050-55

**Documentation**  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**References**  PPM Chapter

**Other**

**Standards Specifications**

Prep & Doc Manual Chapter(s)  6, 7, 13

---

**Status**  Block Pending

**Struct.**  570- 5-  FERTILIZER  TN

---

**Notes**

#### 570- 9-

**WATER FOR GRASSING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>MG; KL</th>
<th>Accuracy</th>
<th>1000 Gallons; Kiloliter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**  Valid through 12-31-2006; replaced by 570-1-A

**Details**  Includes furnishing and applying water to areas that have been seeded, seeded and mulched, sodded, or reworked. Calculate quantity based on 30,000 Gal/Acre (280 kl/hectare) for all counties and all grassing operations, including reworking shoulders.
570-10- SEED, GRASS (QUICK GROWING TYPE)

Unit: LB; KG  Accuracy: Pound; Kilogram  PlanQuantity?: no

Notes: Valid through 12-31-2006; replaced by 570-1-A

Details: Includes furnishing of the grass seed at the job site. Calculate quantity of grass seed by adding seeding area and seed & mulch area and converting to acres (hectares) then use a rate of application as described in Index No. 104 and/or 105.

Related Items

Forms
Design: SHTabQuant  Construction: COMP 700-050-06

Documentation
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Design
Other
Standards
Specifications
Prep & Doc Manual Chapter(s): 6, 7, 13

Status: Block Pending

Struct. 570-10- SEED, GRASS (QUICK GROWING TYPE) LB
## 570-12- SEED, WILDFLOWER

<table>
<thead>
<tr>
<th>Unit</th>
<th>LB; KG</th>
<th>Accuracy</th>
<th>Pound; Kilogram</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>Valid through 12-31-2006; replaced by 570-1-A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Details</td>
<td>Consists of establishing a stand of wildflowers within the grassing by seeding areas by seeding. Includes the furnishing of seed, labor and equipment for planting the seed (in the same operation as the permanent seeding operation or in a separate operation). Refer to Index 104 and/or 105 for application rates by location.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Related Items</td>
<td>Required 570-3 and/or 570-10- (2570-3 and/or 2570-10-)</td>
<td>Recommended 570-9- and 162-1- (2570-9- and 2162-1-)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forms</td>
<td>Design SHTabQuant</td>
<td>Construction COMP 700-050-06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td>Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
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</tr>
<tr>
<td>References</td>
<td>PPM Chapter Other Standards Index No. 104 Specifications</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Struct.</td>
<td>570-12- SEED, WILDFLOWER LB</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

## 571-1-AB PLASTIC EROSION MAT

<table>
<thead>
<tr>
<th>Unit</th>
<th>SY; M2</th>
<th>Accuracy</th>
<th>Square Yard; Square Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>Geosynthetic rolled erosion control product that retains soil, moisture, and seed; promotes vegetative growth while preventing erosion in ditches, channels, and spillways. To be used where conditions prevent vegetation that lasts past a single growing season.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Details</td>
<td>Related Items Required 570-1 and/or 570-10- (2570-3 and/or 2570-10-) Recommended 570-9- and 162-1- (2570-9- and 2162-1-)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Forms</td>
<td>Design SHTabQuant</td>
<td>Construction COMP 700-050-01</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td>Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
<td>Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>References</td>
<td>PPM Chapter Other Standards Index No. 199 Specifications</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Details and Structure: Complete
Struct.  571-  1- AB PLASTIC EROSION MAT SY

A =Application
1 (TRM) "Turf Reinforcement Mat"
B =Type
1 (Type 1)
2 (Type 2)
3 (Type 3)

Notes

573-  1- HYDROSEEDING

Unit SY; M2
Accuracy Square Yard; Square Meter
PlanQuantity? no

Notes Valid through 12-31-2006; replaced by 570-1-A
Details When this item is used, item 162- 3 (2162- 3) must be used.
Related Items Required Recommended
Forms Design SHTabQuant COMP 700-050-01
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 6, 7, 13

Status Block Pending
Struct.  573-  1- HYDROSEEDING SY

Notes

573-  2- GRASS SEED (FOR HYDRO-SEEDING)

Unit LB; KG
Accuracy Pound; Kilogram
PlanQuantity? no

Notes Valid through 12-31-2006; replaced by 570-1-A
Details Calculate quantity by adding seeding area and seed & mulch area and converting to acres (hectares), then use a rate of application as described in Index No. 104. Reworking Shoulders - See Index No. 105 for rate of application.
Related Items Required Recommended
Forms Design SHTabQuant COMP 700-050-06
Standards Index No. 104, 105
Specifications

Struct. 573-2- GRASS SEED (FOR HYDRO-SEEDING) LB

Notes
- Plan Detail and/or Tech Spec Required
- Status Block Pending
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter
Other
Standards Index No. 104, 105
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Struct. 573-3- FERTILIZER (FOR HYDRO-SEEDING) LB

Notes
- Plan Detail and/or Tech Spec Required
- Status Block Pending
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter
Other
Standards Index No. 104, 105
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Struct. 580-1-A LANDSCAPE COMPLETE

Notes
- Details and Structure: Complete
Details

This item is for the complete installation of plants, in accordance with Specification Section 580, including all incidental work. Mowing included as part of the landscape work will be identified in the contract documents. If mowing is required outside of the landscape areas, use pay item 104-4, unless 570-1-A is included.

Small plants are defined as:
- all ground covers, shrubs to less than 7 gallon, trees to less than 7 gallon, palms clustering type less than 6 foot overall height, cycads to less than 7 gallon

Large plants are defined as:
- shrubs 7 gallon or greater, trees 7 gallon or greater, all palms single trunk, palms clustering type 6 foot overall height and greater, cycads 7 gallon or greater, all sabal palms (aka sabal palmetto, cabbage palm, state tree)

Refer to the latest edition of the Florida Grades and Standards for Nursery Plants for classification. All plants must be detailed in the plans in accordance with Volume 2, Chapter 26 of the PPM.

The computation book will use form 70-050-05 Lump Sum Quantities. On the form, refer to the plans tabulation sheet for calculations; do not repeat tabulation sheet information on the form.

All 580 and 590 items must be loaded in TRNS*PORT Category 0600. If there are only a few items, they may be shown in roadway plans, but tabulated with "Summary of Landscape Pay Items" in Category 0600.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Design</td>
<td>SBTBLD</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td>Documentation</td>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
<tr>
<td>References</td>
<td>PPM Chapter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standards</td>
<td></td>
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<td></td>
<td>Specifications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prep &amp; Doc Manual Chapter(s)</td>
<td></td>
</tr>
</tbody>
</table>

Notes

All 580 and 590 items must be loaded in TRNS*PORT Category 0600. If there are only a few items, they may be shown in roadway plans, but tabulated with "Summary of Landscape Pay Items" in Category 0600.
Standards
Specifications

Struct. 590-70-
IRRIGATION SYSTEM
LS/LS

Notes

604-1-AB DATA COLLECTION

Unit LO; EA
Accuracy Per Location; Each
PlanQuantity no

Notes

Details

Related Items
Forms
Design SHTabQuant
Refer to Comp Book

Construction

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 604-1-AB DATA COLLECTION LO; EA

A = Type Of Location
1 (Intersection)
2 (Mid-Block)
B = Type Of Count
1 (Turning Movement)
2 (Approach)
### Notes

<table>
<thead>
<tr>
<th>604- 2-AAB</th>
<th>ANALYSIS &amp; DOCUMENTATION, INTERSECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>PA; EA</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Per Analysis; Each</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
</tbody>
</table>

#### Details

- **Related Items**: Required
  - **Forms**
    - **Design**: SHTabQuant
    - **Construction**: Refer to Comp Book
  - **Documentation**
    - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
    - **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

- **References**:
  - **PPM Chapter**
  - **Other**
  - **Standards**
  - **Specifications**

  - Plan Detail and/or Tech Spec Required

  - **Prep & Doc Manual Chapter(s)**: 7, 13

#### Status

- **Struct.** 604- 2-AAB ANALYSIS & DOCUMENTATION, INTERSECTION PA; EA

  - AA = (Number Of Intersections)
  - B = (Number Of Timing Patterns)

### Notes

<table>
<thead>
<tr>
<th>604- 3- A</th>
<th>TIMING IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>PI</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Per Intersection</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
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</table>

#### Details

- **Related Items**: Required
  - **Forms**
    - **Design**: SHTabQuant
    - **Construction**: Refer to Comp Book
  - **Documentation**
    - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
    - **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

- **References**:
  - **PPM Chapter**
  - **Other**
  - **Standards**
  - **Specifications**

  - **Prep & Doc Manual Chapter(s)**: 7, 13

---

**Details and Structure:** Complete
### Topic No. 600-000-002

#### Basis of Estimates

**2007 Edition**  
**April 16, 2007**

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**Struct.  604-  3-  A  
TIMING IMPLEMENTATION  
PI**

**A = Controller Type**
1 (Controller)  
2 (Controller And Coordination Unit)  
3 (Master Clock Unit)

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**Notes**

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#### 604-  4-  
INTERSECTION ANALYSIS & DOCUMENTATION

<table>
<thead>
<tr>
<th>Unit</th>
<th>PI</th>
<th>Accuracy</th>
<th>Per Intersection</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

**Details**

**Related Items**

**Required**

**Forms**

- **Design**
  - SHTabQuant  
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
  - Design  
  - Construction

**Other Standards**

- **Specifications**

**Prep & Doc Manual Chapter(s)**

- 7, 13

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**Status**

**Struct.  604-  4-  
INTERSECTION ANALYSIS & DOCUMENTATION**

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**Notes**

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#### 604-  5-  A  
ARTERIAL ANALYSIS & DOCUMENTATION

<table>
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<th>Accuracy</th>
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**Notes**

**Details**

**Related Items**

**Required**

**Forms**

- **Design**
  - SHTabQuant  
- **Construction**
  - Refer to Comp Book

**Documentation**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
  - Design  
  - Construction

**Other**

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**Details and Structure:** Complete
## Standards

### Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 6, 7, 13

### Status

**Struct.** 604-5- A

**ARTERIAL ANALYSIS & DOCUMENTATION** PA; EA

- **A = Number Of Timing Patterns Per Section**
  1. (1 Timing Pattern)
  2. (2 Timing Patterns)
  3. (3 Timing Patterns)
  4. (4 Timing Patterns)
  5. (5 Timing Patterns)
  6. (6 Timing Patterns)
  8. (8 Timing Patterns)

### Notes

In locations where the placement of the conduit will not necessitate saw-cutting of pavement, use 'Underground.' 'Underpavement' should be used when it is necessary to saw-cut and backfill the pavement in order to place the conduit.

### Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

### Documentation

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Prep & Doc Manual Chapter(s)** 6, 7, 13

### Standards Index No. 17721

### Specifications

**Struct.** 630-1-AB

**CONDUIT- SIGNALS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

### Notes

Refer to Comp Book

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Details**

- For traffic signals and traffic control devices only.
- Use 'Underground' in locations where the placement of the conduit will not necessitate saw-cutting of pavement. Most conduit placed on new construction projects will be placed underground prior to the placement of pavement, and should be paid for as 'Underground.' 'Underpavement' should be used when it is necessary to saw-cut and backfill the pavement in order to place the conduit.

### Status

**Struct.** 630-1-AB

**CONDUIT- SIGNALS**

- **A = Operation**
  1. (Furnish & Install)
  2. (Furnish)
  3. (Install)

- **B = Conduit Installation Type**
  1. (Aboveground)
  2. (Underground)
3 (Underpavement Sawcut) Note: Only when sawcutting is necessary
4 (Underground - Jacked)
5 (Bridge Mount)

Notes

<table>
<thead>
<tr>
<th>632- 6- A</th>
<th>CABLE- SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: LF; M1</td>
<td>Accuracy: Linear Foot; 10th of a Meter</td>
</tr>
</tbody>
</table>

Notes
Details
Use for runs to flashing beacon, signs, etc. beyond the normal limits of the intersection. Includes cable, support wire, cable ties, cable clamps, lashing wire, terminal connectors and cable grounding. Use item 632- 7- (2632- 7-) for cable within the intersection.

Related Items
Forms
- Design: SHTabQuant
- Construction: COMP 700-050-03
- Required: Refer to Comp Book
- Recommended: COMP 700-050-03

Documentation
Design
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
- PPM Chapter
- Other
- Standards: Index No. 17727
- Specifications
- Prep & Doc Manual Chapter(s): 7, 13

Status
Struct. 632- 6- A CABLE- SIGNAL LF
A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Adjust)

Notes

<table>
<thead>
<tr>
<th>632- 7- A</th>
<th>CABLE- SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit: PI</td>
<td>Accuracy: Per Intersection</td>
</tr>
</tbody>
</table>

Notes
Details
Includes cable, support wire, cable ties, cable clamps, lashing wire, terminal connectors and cable grounding, within the normal limits of the intersection. Consider 632- 6- (2632- 6-) for runs outside the limits of the intersection.

Related Items
Forms
- Design: SHTabQuant
- Construction: COMP 700-050-03
- Required: Refer to Comp Book
- Recommended: COMP 700-050-03

Documentation
Design
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Details and Structure: Complete
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

**Specifications**

Index No. 17727

**Prep & Doc Manual Chapter(s)** 6, 7, 13

---

**Status**

**Struct.** 632- 7- A

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<th>PI</th>
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<tbody>
<tr>
<td>Operation</td>
<td>1 (Furnish &amp; Install)</td>
<td>2 (Furnish)</td>
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**Notes**

- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

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**632- 8-ABC**

**CABLE- INTERCONNECT**

**Unit** LF; M1

**Accuracy** Linear Foot; 10th of a Meter

**PlanQuantity?** no

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**Notes**

**Details**

**Related Items**

**Forms** Required

**Design** SHTabQuant

**Construction** Refer to Comp Book

**Documentation**

**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

**Specifications**

Index No. 17733

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct.** 632- 8-ABC

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<tr>
<th>A</th>
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<td>Number Of Pairs</td>
<td>1 (To Be Determined By Contractor)</td>
<td>2 (1-25)</td>
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<td>1 (Furnish &amp; Install)</td>
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Details and Structure: Complete
### Notes

**633-ABC- D** **CABLE- FIBER OPTIC**

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**Notes**

**Details**

NOT TO BE USED FOR ITS Projects. Refer to 780 items.

**Related Items**

<table>
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</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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**Documentation**

| Design         | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction   | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

### Status

**Struct.** 633-ABC- D **CABLE- FIBER OPTIC** LF

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate)

B = Type Of Interconnect Cable Installation
1 (Aerial)
2 (Underground)
3 (Drop)

C = Type Of Fiber
1 (Single Mode)
2 (Multi Mode)
3 (Composite)

D = Number Of Fibers In Cable
1 (1 - 25)
2 (26 - 50)
3 (51 - 100)
4 (101 - 150)
5 (151 - 200)

**Notes**

Details and Structure: Complete
### 634- 4-ABC SPAN WIRE ASSEMBLY

<table>
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#### Details

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<td>Construction</td>
<td>Refer to Comp Book</td>
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#### Documentation

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#### Standards
- Index No. 17356, 17727

#### Specifications
- Structural 634- 4-ABC SPAN WIRE ASSEMBLY PI

#### Notes
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status
- Struct. 634- 4-ABC SPAN WIRE ASSEMBLY PI

- **A** = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
  - 4 (Adjust)
- **B** = Type Assembly
  - 1 (Two Wire)
  - 2 (Three Wire)
- **C** = Type Span
  - 1 (Perpendicular)
  - 2 (Diagonal)
  - 3 (Box)
  - 4 (Other - As Shown In Plans)

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### 634- 5- A FIBERGLASS INSULATOR

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<td>PlanQuantity?</td>
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#### Details

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#### Documentation

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<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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#### Notes
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### Structural 634-5-A

**FIBERGLASS INSULATOR**

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter

<table>
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<tr>
<th>A = Operation</th>
<th>1 (Furnish &amp; Install)</th>
<th>2 (Furnish)</th>
<th>3 (Install)</th>
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</table>

**Notes**

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### Structural 634-6-A

**MESSENGER WIRE**

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter

| **PlanQuantity?** | no |

**Related Items**

<table>
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<tr>
<th>Forms</th>
<th>Required</th>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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**Design Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s): 6, 7, 13

**Status**

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### Structural 634-6-A

**MESSENGER WIRE**

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter

<table>
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<th>2 (Furnish)</th>
<th>3 (Install)</th>
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**Notes**

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### Structural 634-7-A

**CABLE, ADJUST**

**Unit**: EA  
**Accuracy**: Each

| **PlanQuantity?** | no |

**Related Items**

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<th><strong>Form</strong></th>
<th><strong>Documentation</strong></th>
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<tr>
<td>SHTabQuant</td>
<td>Refer to Comp Book</td>
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**References**

- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s): 6, 7, 13

**Status**

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Details and Structure: Complete
### Related Items

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<tr>
<td><strong>Forms</strong></td>
<td><strong>Design</strong></td>
</tr>
<tr>
<td><strong>Construction</strong></td>
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| **Documentation** | **Design** | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| **Construction** | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

### References

- **PPM Chapter**
- **Design**
- **Construction**

**Prep & Doc Manual Chapter(s)** 7, 13

### Status

**Struct.** 634- 7- CABLE, ADJUST EA

### Notes

**635- 1- AB PULL & JUNCTION BOXES**

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

NOT TO BE USED FOR ITS Projects. Refer to 780 items. Use in accordance with Section 635 of the specifications. For Special sizes, detail in the plans or specifications.

**Details**

- **Related Items**
  | **Required** | **Recommended** |
  | **Forms** | **Design** | SHTabQuant | COMP 700-050-03 |
  | **Construction** | Refer to Comp Book |

- **Documentation**
  | **Design** | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
  | **Construction** | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

- **References**
  | **PPM Chapter** |
  | **Design** |
  | **Construction** |

**Prep & Doc Manual Chapter(s)** 7, 13

**Prep & Doc Manual Chapter(s)**

- A = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
- B = Type Of Box
  - 1 (Pull Box)

**Details and Structure**: Complete
2 (Aerial Junction Box)
3 (Mounted Junction Box)
4 (Telephone Termination Assembly)
5 (Fiber Optics)
6 (Special)*

Notes * Special may require Tech Spec and/or Plan Detail

### 639-1-AB ELECTRICAL POWER SERVICE (SIGNS)

<table>
<thead>
<tr>
<th>Unit</th>
<th>AS</th>
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</tbody>
</table>

**Related Items**

- **Forms**
  - Required: Design
  - Recommended: SHTabQuant
  - Construction: COMP 700-050-03
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- Standards: Index No. 17736
- Specifications: PPM Chapter

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

**Status**

**Struct. 639-1-AB ELECTRICAL POWER SERVICE (SIGNS) AS**

- **A** = Type Of Service
  - 1 (Overhead)
  - 2 (Underground)
- **B** = Meter Base
  - 1 (Furnished By Power Company)
  - 2 (Purchased By Contractor From Power Company)
  - 3 (Not Required)

### 639-2- A ELECTRICAL SERVICE WIRE

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

- Payment shall be based on the linear foot (meter) of a single conductor.

**Related Items**

- **Forms**
  - Required: Design
  - Recommended: SHTabQuant
  - Construction: COMP 700-050-03
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Prep & Doc Manual Chapter(s)**: 6, 7, 13

**Status**

**Struct. 639-2-A ELECTRICAL SERVICE WIRE AS**

**Notes**

- Payment shall be based on the linear foot (meter) of a single conductor.

**Related Items**

- **Forms**
  - Required: Design
  - Recommended: SHTabQuant
  - Construction: COMP 700-050-03
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 639- 2- A  
**Unit**  ELECTRICAL SERVICE WIRE  **Accuracy** Each; Assembly  **PlanQuantity?** no

**Notes**

**639- 3- AB ELECTRICAL SERVICE DISCONNECT**

**Unit** EA; AS  **Accuracy** Each; Assembly  **PlanQuantity?** no

**Related Items**

**Required**  SHTabQuant  
**Recommended**  COMP 700-050-03

**Forms**

**Design**  Refer to Comp Book

**Construction**

**Design**  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards  Index No. 17736

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 639- 3- AB  
**Unit**  ELECTRICAL SERVICE DISCONNECT  **Accuracy** EA; AS

**Notes**

**639- 4- A EMERGENCY GENERATOR (SIGNS)**

Details and Structure: Complete
### Basis of Estimates

**Unit** | **AS** | **Accuracy** | **Assembly** | **PlanQuantity?** | **no**
---|---|---|---|---|

**Notes**

**Details**

**Related Items**

**Forms**

**Design**

Required: SHTabQuant

Recommended: COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.**

639- 4- A

EMERGENCY GENERATOR (SIGNALS)

AS

A = Operation

1 (Furnish & Install)

2 (Modify)

**Notes**

**Details**

**Related Items**

**Forms**

**Design**

Required: SHTabQuant

Recommended: COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.**

641- 1-

STRAIN POLES, GUYING, CONCRETE

**Notes**

**Details**

**Related Items**

**Forms**

**Design**

Required: SHTabQuant

Recommended: COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.**

641- 1-

STRAIN POLES, GUYING, CONCRETE

**Notes**

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Details and Structure: Complete
### 641-2-AB

**PRESTRESSED CONCRETE POLES**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>Plan Quantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

- Effective January 2008; replaces 641-AB-CDD
- Pole description, including the type, height, and other details must be included in the signal plans.

**Details**

- Required
- Recommended

**Forms**

- Design
  - Construction: Refer to Comp Book

**Documentation**

- Design
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Related Items**

<table>
<thead>
<tr>
<th>Structure</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Status**

- **A**: Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
- **B**: Pole Type (defined in Design Standards)
  - 1 (Type P-II Pedestal)
  - 2 (Type P-II Service Pole)
  - 3 (Type P-III)
  - 4 (Type P-IV)
  - 5 (Type P-V)
  - 6 (Type P-VI)
  - 7 (Type P-VII)
  - 8 (Type P-VIII)
  - 9 (Custom Design)

**Notes**

- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

### 641-AB-CDD

**PRESTRESSED CONCRETE POLES**

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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>Plan Quantity?</th>
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**Notes**

- Valid through December 2007; replaced by 641-2-AB.
- To be used in accordance with Index.

**Details**

- Required
- Recommended

**Forms**

- Design
  - Construction: Refer to Comp Book

**Documentation**

- Design
  - Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

Details and Structure: Complete
Standards Index No. 17725
Specifications

Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 641- AB-CDD PRESTRESSED CONCRETE POLES EA

A =
1 (Furnish & Install - With foundation)
2 (Furnish)
3 (Install) When A=3, B=0 And CDD=blank.
4 (Furnish & Install - Direct Burial)
5 (Install - Direct Burial) When A=5, B=0 and CDD=blank.

B = Pole Type
1 (Type N-II Service Pole)
2 (Type N-III Service Pole)
3 (Type N-IV)
4 (Type N-V)
5 (Type N-VI)
6 (Type N-VII)
7 (Type N-VIII)
8 (Special Design)*

C = Pole Design Status
1 (1991 Design Change)

DD = Pole Length

Notes
* Special may require Tech Spec and/or Plan Detail

643- 1-

STRAIN POLES, GUYING, WOOD

Unit EA Accuracy Each PlanQuantity? no

Notes

Details

Related Items Required Recommended
Forms
Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards Index No. 17356, 17727
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status

Details and Structure: Complete
Struct.  643- 1- STRAIN POLES, GUYING, WOOD EA

Notes

643-ABB- STRAIN POLES, WOOD

Unit EA Accuracy Each PlanQuantity? no

Notes Details

Related Items Required Recommended 643- 1- (2643- 1)
Forms Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter Other
Standards Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct.  643-ABB- STRAIN POLES, WOOD EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
BB = Pole Length (Specified In 5' Increments Only)

Notes

649- 1- AB STEEL STRAIN POLES

Unit EA Accuracy Each PlanQuantity? no

Notes Effective January 2008; replaces 649- A-BCC
Details Pole description, including the type, height, and other details must be included in the signal plans.

Related Items Required Recommended
Forms Design COMP 700-050-03
Construction Refer to Comp Book

Documentation Design
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter Other
Standards

Details and Structure: Complete
Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s)

<table>
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<td>Struct. 649- A-BCC</td>
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<th>Specifications</th>
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<td>EA</td>
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</table>

<table>
<thead>
<tr>
<th>Details</th>
</tr>
</thead>
</table>
| A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) |
| B = Pole Type (defined in Design Standards)  
1 (Type PS-IV)  
2 (Type PS-V)  
3 (Type PS-VI)  
4 (Type PS-VII)  
5 (Type PS-VIII)  
6 (Type PS-IX)  
7 (Type PS-X)  
9 (Custom)* |

<table>
<thead>
<tr>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>* Custom may require Tech Spec and/or Plan Detail</td>
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<table>
<thead>
<tr>
<th>649- A-BCC STRAIN POLES, STEEL</th>
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<tr>
<td><strong>Unit</strong></td>
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<tr>
<td>Notes</td>
</tr>
<tr>
<td>Details</td>
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<tr>
<td>Related Items</td>
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<td>Forms</td>
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<tr>
<td>Construction</td>
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<td>Documentation</td>
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<tr>
<td>Construction</td>
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<td>References</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Specifications</td>
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</table>

*Selected Items may require Tech Spec and/or Plan Detail

| Prep & Doc Manual Chapter(s) | 7, 13 |

Details and Structure: Complete
### Topic No. 600-000-002  
#### Basis of Estimates

2007 Edition  
April 16, 2007

---

**B = Pole Type**  
1 (Type NS-IV)  
2 (Type NS - V)  
3 (Type NS-VI)  
4 (Type NS-VII)  
5 (Type NS - VIII)  
6 (Type NS-IX)  
7 (Type NS - X)  
0 (Special)*

**CC = Pole Height in even integers 20’ – 50’**  
20= 20’  
22= 22’

**Notes**  
*B=0 may require Tech Spec or Plan Detail*

---

<table>
<thead>
<tr>
<th>649- 1A-BBB</th>
<th>MONOTUBE ASSEMBLIES, STEEL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>EA</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**  
Valid through December 2007.

**Details**  
After December 2007: Design Standards are no longer available. Please contact the State Structures Office for assistance. Ensure that the maintaining agency and local authorities have agreed to the use of a monotube. Contact the Estimates Office to request replacement pay item(s).

NOT TO BE USED FOR ITS Projects. Refer to 780 items.  
Item used for monotube structures which carry signals. Refer to Plans Preparation Manual, Vol I Chapters 7 and 29, Vol II Chapter 24 for details.  
Use Monotube Tabulation Sheet (available from CADD barmenu). Structures Office will determine configuration required.  
Foundation included on standard; special foundation determined by structures engineer and included in plans.  
Standards available in English units only; English standards may be used on metric projects.  
Special: Tech Spec and/or plan detail required. Coordinate with District Specs Office

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

| Design | Location in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

PPM Chapter 7, 13

Other

Specifications

Index No. 17746

**Prep & Doc Manual Chapter(s)**  
7, 13

---

**Status**

Struct.  
**649- 1A-BBB**  
MONOTUBE ASSEMBLIES, STEEL  
EA

**A = Operation**  
1 (Furnish & Install)

---

Details and Structure: Complete

---

Page 275 of 468
2 (Furnish)
3 (Install)

BBB =
001 (Special) see detail
002 (Special 2) see detail
003 (Special 3) see detail
110 (Standard 110’ span)
135 (Standard 135’ span)
160 (Standard 160’ span)
185 (Standard 185’ span)

Notes

649-3A-BCC  MAST ARM ASSEMBLY

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
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</tbody>
</table>

Notes

Effective January 2008; replaces 649-ABC-DEE

Details

Pole description, including the type, height, and other details must be included in the signal plans.

Related Items

Required  Recommended

Forms

Design  SHMastArmTab1; SHMast  COMP 700-050-03

Construction  Refer to Comp Book

Documentation

Design  

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s)

Status

Struct.  649-3A-BCC  MAST ARM ASSEMBLY  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install) BCC=000

B= Wind Speed
1 (150)
2 (130)
3 (110)
9 (Custom) CC=99*

CC= Arm Length(s)
For Single Arm, w/o Luminaire
01 (36)
02 (46)
03 (60)
04 (70.5)
05 (78)
For Single Arm w/ Luminaire
06 (36)
07 (46)
08 (60)
09 (70.5)

For Double Arm w/o Luminaire
10 (36-36)
11 (36-46)
12 (36-60)
13 (36-70.5)
14 (46-46)
15 (46-60)
16 (46-70.5)
17 (60-60)
18 (60-70.5)
19 (70.5-70.5)

Custom/Non-Standard Combinations
99 = Custom*

Notes  *BC=99 (Custom) for non-standard designs. Verify with Roadway Design Office prior to opening.

<table>
<thead>
<tr>
<th>649-ABC-DEE</th>
<th>MAST ARM ASSEMBLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>EA</td>
</tr>
<tr>
<td>Notes</td>
<td>Valid through December 2007 letting; replaced by 649-3A-BCC.</td>
</tr>
<tr>
<td>Details</td>
<td>Refer to Plans Preparation Manual- Vol I Chapter 29, Vol II Chapter 24, and/or Standards for details. Mast Arm Tabulation Sheet required in plans, in addition to tabulation of quantities. If a Mast Arm assembly is required that differs from the standards, then a special design is performed and the details placed in the plans. Mast Arms &quot;A&quot; to be replaced by &quot;B&quot;. Mast Arms &quot;B&quot; for 110 MPH wind w/signal backplate. Mast Arms &quot;C&quot; for 90 MPH wind w/signal backplate, or 110 MPH wind, without backplate. Arm and pole types, as noted in standards and pay item structure. Foundation design is included on standard. Special Foundation designs to be determined by Structures Engineer and included with the plans, if needed.</td>
</tr>
</tbody>
</table>

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
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</tbody>
</table>

Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
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<tr>
<td>Standards</td>
<td>Index No. 17741, 17743, and 17745</td>
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<td>Specifications</td>
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</tbody>
</table>

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 649-ABC-DEE MAST ARM ASSEMBLY EA

Details and Structure: Complete
A = Operation
  4 (Furnish & Install / high loading)
  5 (Furnish / high loading)
  6 (Install / high loading)
  7 (Furnish & Install / reduced loading)
  8 (Furnish / reduced loading)
  9 (Install / reduced loading)

B = Structure Type
  1 (Single Arm Without Luminaire)
  2 (Double Arm Without Luminaire)
  3 (Single Arm With Luminaire)
  4 (Special Design)

C = First Arm Type (A=4-6)
  1 (B1)
  2 (B2)
  3 (B3)
  4 (B4)
  5 (B5)
  6 (B6)
  7 (B7)

C = First Arm Type (A=7-9)
  1 (C1)
  2 (C2)
  3 (C3)
  4 (C4)
  5 (C5)
  6 (C6)
  7 (C7)

D = Second Arm Type (A=4-6)
  0 (No Second Arm)
  1 (B1)
  2 (B2)
  3 (B3)
  4 (B4)
  5 (B5)
  6 (B6)

D = Second Arm Type (A=7-9)
  0 (No Second Arm)
  1 (C1)
  2 (C2)
  3 (C3)
  4 (C4)
  5 (C5)
  6 (C6)

EE = Upright Pole Type (A=4-6)
  01 (Q1)
  02 (Q2)
  03 (Q3)
  04 (Q4)
  05 (Q5)
  06 (Q6)
  07 (Q21 Lum)
  08 (Q22 Lum)
  09 (Q23 Lum)
  10 (Q24 Lum)
11 (Special Design)  
EE = Upright Pole Type (A=7-9)  
01 (R1)  
02 (R2)  
03 (R3)  
04 (R4)  
05 (R5)  
06 (R6)  
07 (R21 Lum)  
08 (R22 Lum)  
09 (R23 Lum)  
10 (R24Lum)  
11 (Special Design)  

Notes

<table>
<thead>
<tr>
<th>650-5A-BCD</th>
<th>TRAFFIC SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>AS</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Assembly</td>
</tr>
<tr>
<td>Plan</td>
<td>Quantity?</td>
</tr>
<tr>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**
Includes standard traffic signal, with LED indicators, and all other materials necessary for a complete and accepted installation.
Relocate item includes the removal of the signal head and installation at the location shown in the plans. This includes signal cable and all other materials necessary for a complete and accepted relocation.
Special: Tech Spec and/or plan detail required. Coordinate with District Specs Office

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

<table>
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<tr>
<th>PPM Chapter</th>
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<tr>
<td>Other</td>
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<td>Standards</td>
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**Prep & Doc Manual Chapter(s)**

7, 13

**Status**

<table>
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<tr>
<th>Struct.</th>
<th>650-5A-BCD</th>
<th>TRAFFIC SIGNAL</th>
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<tbody>
<tr>
<td>A = Operation</td>
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</tr>
<tr>
<td>1 (Furnish &amp; Install)</td>
<td></td>
<td></td>
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<tr>
<td>2 (Furnish)</td>
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<tr>
<td>3 (Install) BCD=blank</td>
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<tr>
<td>4 (Relocate) BCD=blank</td>
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</tr>
<tr>
<td>B = Number Of Sections On Each Face</td>
<td></td>
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</tr>
<tr>
<td>C = Number Of Directions</td>
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<tr>
<td>D = Type</td>
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<td>1 (Standard)</td>
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</table>

Details and Structure: Complete
### Notes

2 (Light Weight)
3 (Special) see detail

### 653-ABC-

#### SIGNAL, PEDESTRIAN

| Unit   | AS       | Accuracy | Assembly | PlanQuantity? | no |

**Details**

**Related Items**

**Required**

**Recommended**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**: Index No. 17764, 17784
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 7, 13

**Status**

**Struct.**

- **653-ABC-**
- **SIGNAL, PEDESTRIAN**
- **AS**

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) BC=00

B = Type Signal
1 (12” Incandescent)
2 (12” Fiber Optic)
3 (Optically Programmed)
4 (Neon)
5 (9” Incandescent)
6 (9” Fiber Optic)
7 (Neon International Symbol Low Wattage)
8 (LED)
9 (LED- Countdown)

C = Number Of Directions (Ways)

### Notes

**659-ABB-**

#### SIGNAL HEAD AUXILIARIES

| Unit   | EA       | Accuracy | Each | PlanQuantity? | no |

**Details**

**Related Items**

**Required**

**Recommended**

**References**

**Prep & Doc Manual Chapter(s)**: 7, 13

**Status**

**Struct.**

**659-ABB-**

**SIGNAL HEAD AUXILIARIES**

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) BC=00

B = Type Signal
1 (12” Incandescent)
2 (12” Fiber Optic)
3 (Optically Programmed)
4 (Neon)
5 (9” Incandescent)
6 (9” Fiber Optic)
7 (Neon International Symbol Low Wattage)
8 (LED)
9 (LED- Countdown)

C = Number Of Directions (Ways)
Standards Specifications
Struct. 659-ABB- SIGNAL HEAD AUXILIARIES EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
BB = 01 (Back Plates, 3 Section)
02 (Back Plates, 4 Section)
03 (Disconnect Hanger)
04 (Signal Lamps 140 Watt Max.)
05 (Signal Lamps 60 Watt Max.)
06 (Tunnel Visor)
07 (Aluminum Pedestal)
08 (Steel Pedestal)
09 (Concrete Pedestal, Type II)
10 (Louvers)
11 (Back Plates, 1-Section)
12 (Mounting Brackets, 2-Way)
13 (Mounting Brackets, 3-Way)
14 (Mounting Brackets, 4-Way)
15 (12” Lens)
16 (8” Lens)
17 (Signal Frame)
18 (Back Plates, 5-Section Cluster)
19 (Strobe Light For Red Indication)
20 (LED Module)

Notes

660- 1-ABB LOOP DETECTOR, INDUCTIVE

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Details and Structure: Complete
quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Other

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>660-1-ABB</th>
<th>LOOP DETECTOR, INDUCTIVE</th>
<th>EA</th>
</tr>
</thead>
</table>

A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  

BB = Type  
01 (Type 1, 1 Ch, R, S)  
02 (Type 2, 1 Ch, R, S, TD)  
03 (Type 3, 1 Ch, SS, S))  
04 (Type 4, 1 Ch, SS, S, TD)  
05 (Type 5, 2 Ch, SS, S)  
06 (Type 6, 2 Ch, SS, S, TD)  
07 (Type 7, 4 Ch, SS, S)  
08 (Type 8, 4 Ch, SS, S, TD)  
09 (Type 9, 2 Ch, SS, RM)  
10 (Type 10, 2 Ch, SS, RM, TD)  
11 (Type 11, 4 Ch, SS, RM)  
12 (Type 12, 4 Ch, SS, RM, TD)  

Legend  
Ch = Channel  
R = Relay Output  
S = Shelf Mounted  
TD = Time Delay  
RM = Rack Mounted  
SS = Solid State

---

### Notes

**660-2-ABB LOOP ASSEMBLY**

<table>
<thead>
<tr>
<th>Unit</th>
<th>AS</th>
<th>Accuracy</th>
<th>Assembly</th>
<th>PlanQuantity?</th>
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</table>

**Notes**
Includes cost of loop material, labor, etc. according to specifications.

**Related Items**

**Forms**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
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<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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**Documentation**

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<th>Design</th>
<th>Construction</th>
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<th>Specifications</th>
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<td>Index No. 17781</td>
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### Prep & Doc Manual Chapter(s)

6, 7, 13

---

### Status

**Struct.** 660-2-ABB

**LOOP ASSEMBLY**

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)

BB = Type
01 (Type A)
02 (Type B)
03 (Type C)
04 (Type D)
05 (Type E)
06 (Type F)
07 (Type G)
08 (Type H)

---

### Notes

**663-72- A VEHICLE DETECTOR SUPPORT APPURTENANCES**

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<th>Accuracy</th>
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**Notes**

**Details**

**Related Items**

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<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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</table>

**Forms**

Refer to Comp Book

**Documentation**

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

---

**Status**

**Struct.** 663-72- A

**VEHICLE DETECTOR SUPPORT APPURTENANCES**

EA

A =
1 (Readers)
2 (Memory Modules)
3 (Software)

---

Details and Structure: Complete
### 663-74-AB VEHICLE DETECTOR ASSEMBLIES

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**Notes**

Includes all work and materials necessary for a complete assembly, as detailed in the plans or specifications.

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: COMP 700-050-03

**Documentation**

- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Design
- **Construction**: Design

**Status**

- **Prep & Doc Manual Chapter(s)**: 7, 13

### 665-AB PEDESTRIAN DETECTOR

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**Notes**

For Relocate, ensure that plans/specs

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: COMP 700-050-03

**Documentation**

- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**: Design
- **Construction**: Design

---

**Details and Structure: Complete**
### Standards
Index No. 17784

### Specifications

#### PEDESTRIAN DETECTOR

**Struct.** 665- AB- 

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</tbody>
</table>

**A** = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) B=0

**B** = Assembly Type
1 (Pole Or Controller Cabinet Mounted Detector Station)
2 (Detector Station With Post)
3 (Detector With Sign Only)

---

### Notes

#### Status

- **665- AB-** PEDESTRIAN DETECTOR EA

- **Struct.** 668- AB-

**A** = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) B=0

**B** = Cabinet Size (Minimum)
1 (Type I 13” X 10” X 6”)
2 (Type II 27” X 15” X 12”)
3 (Type III 32” X 20” X 14”)
4 (Type IV 48” X 29” X 16”)
5 (Type V 54” X 38” X 24”)
6 (Type Vi 74” X 38” X 24”)

---

### Related Items

**Forms**

- **Design** Required: SHTabQuant
  Recommended: COMP 700-050-03

- **Construction** Refer to Comp Book

**Documentation**

- **Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

### Status

- **668- AB-** DETECTOR CABINET (SIGNALS) EA

**Struct.** 668- AB-

**A** = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) B=0

**B** = Cabinet Size (Minimum)
1 (Type I 13” X 10” X 6”)
2 (Type II 27” X 15” X 12”)
3 (Type III 32” X 20” X 14”)
4 (Type IV 48” X 29” X 16”)
5 (Type V 54” X 38” X 24”)
6 (Type Vi 74” X 38” X 24”)

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**Details and Structure:** Complete
## Notes

### 670- 4- A  FLASHING BEACON CONTROLLER ASSEMBLY

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### Documentation

| Design          | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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A =  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)

### Notes

## 670- 5-ABC  TRAFFIC CONTROLLER ASSEMBLY

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<td>Construction</td>
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### Documentation

| Design          | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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Notes: * Special may require Tech Spec and/or Plan Detail

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### Structural Details

- **670- 5-ABC**

#### Related Items

**Forms**
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status

- **Prep & Doc Manual Chapter(s)**: 7, 13

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**671- 2- AB**  
**TRAFFIC CONTROLLER**

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### Related Items

**Forms**
- **Design**: SHTabQuant
- **Construction**: COMP 700-050-03

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### Status

- **Prep & Doc Manual Chapter(s)**: 7, 13

---

Details and Structure: Complete
4 (2070)

Notes

678- 1-ABB CONTROLLER ACCESSORIES

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Required Recommended

Details

Related Items

Forms

Design  SHTabQuant  COMP 700-050-03

Construction  Refer to Comp Book

Documentation

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Specifications

Prep & Doc Manual Chapter(s)  7, 13

Status

Struct.  678- 1-ABB CONTROLLER ACCESSORIES  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)

BB = Type Of Controller Accessory
01 (Type 3 Conflict Monitor)
02 (Type 6 Conflict Monitor)
03 (Type 12 Conflict Monitor)
04 (Load Switch)
05 (Type 1 Flasher)
06 (Type 3 Flasher)
07 (Type 1 Time Switch)
08 (Type 2 Time Switch)
09 (Type 3 Time Switch)
10 (Type 4 Time Switch)
11 (Power Reduction Assembly)
12 (Master Clock Unit)

Notes

680-ABB- SYSTEM CONTROL EQUIPMENT

Unit  EA  Accuracy  Each  PlanQuantity?  no

Required Recommended

Details

Detailed plan notes or specifications to be provided by designer.

Related Items

Notes

Details and Structure: Complete
Standards 680-ABB- SYSTEM CONTROL EQUIPMENT EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

BB = Item As Described
01 (CPU)
02 (Card Reader)
03 (Keyboard Printer)
04 (Line Printer)
05 (Disc Memory System)
06 (Communications Interface)
07 (Display Map Interface)
08 (Mag Type System)
09 (Keyboard CRT)
10 (Control Console)
11 (Roadside Master)
12 (Card Punch)
13 (Central Microcomputer Assembly)
14 (Central Modem Card)
15 (Autodial/Answer Ext Comm Modem)
16 (Fiber Optic, FSK Modem)

Notes
Plan Detail and/or Tech Spec Required
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status

680-ABB- SYSTEM CONTROL EQUIPMENT EA

Notes

681-ABB- SYSTEM SOFTWARE

Unit LS/LS Accuracy Lump Sum PlanQuantity? no

Notes

Details

Related Items Required Recommended
Forms Design SHTabQuantLS COMP 700-050-05
Construction Refer to Comp Book

Documentation Design Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans.
### Structure 681-ABB-

**SYSTEM SOFTWARE**  
**LS/LS**

A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)

BB = Item As Described  
01 (CPU Software)  
02 (UTCS Fortran Routines)  
03 (UTCS Assembly Language Routines)  
04 (Data Base)  
05 (Control Patterns)  
06 (Data Base Generator)  
07 (Pattern Generator)  
08 (SCS Operating Software)  
09 (Motorist Aid Operating Software)  
10 (Weigh In Motion Operating Software)  
11 (Traffic Control System Software)

---

### Notes

- **Details:** This item requires technical information. Please coordinate notes and/or specifications with District Specifications Office.

### Related Items

#### Forms
- **Design:** SHTabQuant  
- **Construction:** Refer to Comp Book

#### Documentation
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  7, 13
Status

Struct.  682-ABB- SYSTEM DISPLAY

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

BB = Item As Described
01 (CRT Display)
02 (Panel Board Map)
03 (Projected Display)

Notes

683-ABB- SYSTEM COMMUNICATIONS

Unit  LS/LS  Accuracy  Lump Sum  PlanQuantity?  no

Notes
Details
Tabulation summary required on all projects.

Related Items

Forms
Design  SHTabQuantLS  COMP 700-050-05
Construction  Refer to Comp Book

Documentation
Design  Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct.  683-ABB- SYSTEM COMMUNICATIONS  LS/LS

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

BB = Item As Described
01 (FDM)
02 (TDM)
03 (TDM Hardware)
04 (TDM Radio)
05 (TDM Coaxial)
06 (Central Site Radio)
07 (System Communications Modems)
08 (Voice Equipment)

Details and Structure: Complete
### 684- AB- SYSTEM COMMUNICATIONS CARRIER

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**Notes**

**Details**

**Related Items**

**Required**
- Design
  - SHTabQuant
- Construction
  - Refer to Comp Book

**Recommended**
- Design
  - COMP 700-050-03
- Construction
  - Refer to Comp Book

**Details**

**Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).**

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**
- 7, 13

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### 685-ABB- SYSTEM AUXILIARIES

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**Notes**

**Details**

**NOT TO BE USED FOR ITS Projects. Refer to 780 items.**

**Related Items**

**Required**
- Design
  - SHTabQuant
- Construction
  - Refer to Comp Book

**Recommended**
- Design
  - COMP 700-050-03
- Construction
  - Refer to Comp Book

**Details**

**Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).**

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Details and Structure: Complete
### References

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#### Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**: 7, 13

### Status

**Struct.**: 685-ABB-  
**SYSTEM AUXILIARIES**: EA

- **A**: Operation
- **1**: (Furnish & Install)
- **2**: (Furnish)
- **3**: (Install)

- **BB**: Item As Described
- **01**: (RF Modulator)
- **02**: (Multi-Plex Field Transceiver, Wire)
- **03**: (Multi-Plex Field Transceiver, Radio)
- **04**: (Data Accumulator)
- **05**: (Master Clock Unit)
- **06**: (Uninterruptible Power Source)
- **07**: (Test Equipment)
- **08**: (Equipment Cabinet, Type A)
- **09**: (Equipment Cabinet, Type B)
- **10**: (Equipment Cabinet, Type C)
- **11**: (Equipment Cabinet, Type D)
- **12**: (Bridge Continuity Sensor)
- **13**: (Pier Vibration Detection System-Sensors)
- **14**: (Pier Vibration Detection System-Monitor/Controller)
- **15**: (Weather Instrumentation)
- **16**: (Remote Site-Radio)
- **17**: (Citizen Band-Radio)
- **18**: (Telemetry Transmitter)
- **19**: (Telemetry Receiver)
- **20**: (Telemetry Transceiver)
- **21**: (Pre-Timed Controller Adapter)
- **22**: (2-Phase Or Full Actuated Adapter)
- **23**: (3/Phase Thru 8-Phase Full Actuated Adapter)
- **24**: (Universal Adapter)
- **25**: (Standby System Relay)
- **26**: (Standby System Timer)
- **27**: (Telephone Connection Box)
- **28**: (Interface Panel)
- **29**: (Pneumatic Transport Tube Assembly)
- **30**: (Weigh In Motion Scale Assembly)
- **31**: (Static Scale Assembly)
- **32**: (Public Address System Assembly)
- **33**: (RF Demodulator)
- **34**: (Dimensional Measurement Assembly)
- **36**: (Low Band Vhf Radio)
- **37**: (Line Amplifier)
- **38**: (CCTV Camera Assembly)
- **39**: (Fiber Optic Video Amplifier, Transmitter & Receiver)
40 (Fiber Optic, Modulator/Demodulator)
41 (Fiber Optic, Multiplexer/Demultiplexer)
42 (Video Central Control Equipment)
43 (Video Monitors)
44 (Video System Support Equipment)
55 (PLP FSK Card)
56 (FSK Modem, Interface Panel Wall)
57 (FSK Modem, Multiplexer Interface Panel)
58 (FSK Modem, Interface Panel Rack)
60 (Microwave Radar Detection Unit Assembly)

Notes

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Notes

Details

Related Items

Required    Recommended
Design      SHTabQuant            COMP 700-050-03
Construction Refer to Comp Book

Documentation

Design      Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 686-ABB- CLOSED CIRCUIT TELEVISION EQUIPMENT EA
A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
BB = Item As Described
01 (Camera Assembly)
02 (Monitor)
03 (Recorder)
04 (Central Controls)
05 (Camera Support)
C 06 (Cable Plant)

Notes

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| PlanQuantity? | no |

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### Notes Details

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<td>Refer to Comp Book</td>
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<td>SIGNAL PEDESTRIAN ASSEMBLY, REMOVE EA</td>
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### Notes

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<tbody>
<tr>
<td>Accuracy</td>
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</table>

| PlanQuantity? | no |

---

Details and Structure: Complete
### 690-31- SIGNAL PEDESTAL- REMOVE EA

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

#### Notes
Separate items exist for "shallow" and "deep" pole removal.

Shallow: includes complete removal of the above ground portion of the pole, attachments, and removal of the pole foundation, including buried attachments to a depth of 4 feet (1.2 m) below existing grade, measured per each.

Deep: includes complete removal of the above ground portion of the pole and attachments, and the complete removal of the pole foundation, measured per foot (meter) from the existing grade to the deepest portion of the pole foundation actually removed. Estimate 20 ft (6 meters) per deep pole removal.

NOTE ALL: Plans should identify locations for pole removal, and type of pole to be removed at each location. Not to be used on poles for highway lighting, unless they are jointly used to support traffic signal mast arms or span wire assemblies.

#### Related Items

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</tr>
<tr>
<td><strong>Construction</strong></td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Forms**

Refer to Comp Book

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**PPM Chapter**

Design  
Construction

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13
Basis of Estimates

2007 Edition
April 16, 2007

Struct. 690-32- A POLE REMOVAL- SHALLOW EA

A =
1 (Direct Burial)
2 (Bolt on Attachment)

Notes

690-33- A POLE REMOVAL- DEEP

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity? no

Notes

Details

Separate items exist for "shallow" and "deep" pole removal. Shallow: includes complete removal of the above ground portion of the pole, attachments, and removal of the pole foundation, including buried attachments to a depth of 4 feet (1.2 m) below existing grade, measured per each. Deep: includes complete removal of the above ground portion of the pole and attachments, and the complete removal of the pole foundation, measured per foot (meter) from the existing grade to the deepest portion of the pole foundation actually removed. Estimate 20 ft (6 meters) per deep pole removal. NOTE ALL: Plans should identify locations for pole removal, and type of pole to be removed at each location. Not to be used on poles for highway lighting, unless they are jointly used to support traffic signal mast arms or span wire assemblies.

Related Items

Required Recommended
Forms Design SHTabQuant COMP 700-050-03
Construction

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)

Status

Struct. 690-33- A POLE REMOVAL- DEEP LF

A =
1 (Direct Burial)
2 (Bolt on Attachment)

Notes

690-50- A CONTROLLER ASSEMBLY- REMOVE

Unit EA Accuracy Each PlanQuantity? no

Details and Structure: Complete
**Details**

**Related Items**

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</table>

**References**

PPM Chapter Other Standards Specifications Prep & Doc Manual Chapter(s) 7, 13

**Status**

Struct. 690- 50- A CONTROLLER ASSEMBLY- REMOVE EA

A = 'Blank' = Complete Assembly
1 (Cabinet Assembly, Less Foundation)
2 (Controller Unit)

**Notes**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**Details**

**Related Items**

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**References**

PPM Chapter Other Standards Specifications Prep & Doc Manual Chapter(s) 7, 13

**Status**

Struct. 690- 60- DETECTOR VEHICLE ASSEMBLY, REMOVE EA

**Notes**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### DETECTOR PEDESTRIAN ASSEMBLY, REMOVE

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**Notes**

**Details**

**Related Items**

**Forms**
- **Design**: Required
  - SHTabQuant
- **Construction**: Recommended
  - COMP 700-050-03

**Documentation**
- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 690-70-

---

### SPAN WIRE ASSEMBLY REMOVE

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**Notes**

**Details**

**Related Items**

**Forms**
- **Design**: Required
  - SHTabQuant
- **Construction**: Recommended
  - COMP 700-050-03

**Documentation**
- **Design**: Refer to Comp Book
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 690-80-

---

Details and Structure: Complete
### 690-90- CONDUIT & CABLING, REMOVE

**Unit**: PI  
**Accuracy**: Per Intersection  
**Plan Quantity?**: no  

**Notes**

**Details**

**Related Items**

**Required**  
**Recommended**

**Forms**

**Design**: SHTabQuant  
**Construction**: Refer to Comp Book  

**Documentation**

**Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
**Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.**: 690-90- CONDUIT & CABLING, REMOVE  
**Notes**

---

### 690-91- SIGNAL INTERCONNECT CABLE, REMOVE

**Unit**: LF; M1  
**Accuracy**: Linear Foot; 10th of a Meter  
**Plan Quantity?**: no  

**Notes**

**Details**

**Related Items**

**Required**  
**Recommended**

**Forms**

**Design**: SHTabQuant  
**Construction**: Refer to Comp Book  

**Documentation**

**Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
**Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.**: 690-91- SIGNAL INTERCONNECT CABLE, REMOVE  
**Notes**

---

Details and Structure: Complete
### SIGNAL EQUIPMENT, MISCELLANEOUS REMOVE

| Unit | PI | Accuracy | Per Intersection | PlanQuantity? no |

| Notes |

**Details**

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| Documentation Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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<td>Specifications</td>
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**Status**

| Struct. | 690-100- | SIGNAL EQUIPMENT, MISCELLANEOUS REMOVE | PI |

**Notes**

---

### INTERNALLY ILLUMINATED SIGN

| Unit | EA | Accuracy | Each | PlanQuantity? no |

| Notes |

**Details**

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| Documentation Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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**Status**

| Struct. | 699- 1- AB | INTERNALLY ILLUMINATED SIGN | EA |

**Notes**

A=Operation
=blank (Furnish & Install)
=1 (Furnish)
=2 (Install)

---

Details and Structure: Complete
700- 20- AB  SINGLE POST SIGN

Unit  AS  Accuracy  Assembly  PlanQuantity?  no

Notes

$ =3 (Modify)
B = Sign type
1 (Street Name)

Details

Effective July 2007 letting; replaces 700-40-A.

Includes sign panel, post, any foundation or breakaway base as required by the Design Standards or plans. Per specifications, "for the purpose of payment, a sign assembly consists of all the signs mounted on a single structure (one, two, or three posts, or overhead structure)"

INSTALL: Install includes the installation of existing panel(s) on a new sign post.

NOTE: For signs greater than 20 SF, multi-post signs are recommended; if project conditions require a single post sign greater than 20sf, a custom (non-standard) sign may be used. Plan details will be needed. Refer to design standards for single/multi-post requirements.

Related Items

Required  Recommended
Forms  Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)  7, 13

Status

Struct. 700- 20- AB  SINGLE POST SIGN  AS

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) B=0
6 (Remove) B=0

B= Sign Panel Size, Square feet
1 (less than 12)
2 (12-20)
3 (20+ back-to back)
9 (Custom)*

Notes

NOTE: Standards limit single post sign area to 20 SF.

*B=9 (Custom) for non-standard designs. Plan details will be necessary. Verify with Roadway Design Office prior to opening/using on a project.
### 700-21-AB MULTI-POST SIGN

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**Notes**

Effective July 2007 letting; replaces 700-41-AA.

**Details**

Includes sign panel, post, any foundation or breakaway base as required by the Design Standards or plans. The number and size of post and the average post length must be shown in the plans. Per specifications, "for the purpose of payment, a sign assembly consists of all the signs mounted on a single structure (one, two, or three posts, or overhead structure)"

INSTALL: Install includes the installation of existing panel(s) on new sign posts.

**Related Items**

**Required**

- Forms
  - Design SHTabQuant
  - Construction Refer to Comp Book

**Recommended**

- Documentation
  - Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.** 700-21-AB MULTI-POST SIGN AS

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) B=0
6 (Remove) B=0

B = Sign Panel Size, square feet
1 (50 or less)
2 (51 to 100)
3 (101 to 150)
4 (151 to 200)
5 (201 to 250)
6 (251 to 300)
7 (over 300)
9 (Custom) non-standard sign

**Notes**

*B=9 (Custom) for non-standard designs. Verify with Roadway Design Office prior to opening.*

---

### 700-22-ABC OVERHEAD TRUSS SPAN SIGN

<table>
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<tr>
<th>Unit</th>
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<th>Assembly</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

Effective January 2008 letting; replaces selected 700-42 to 700-46 items

**Details**

Includes sign panels, overhead structure, foundations and other incidentals required for a complete assembly. Complete design and details of the structure and foundation must be
shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.
Custom (BC=99) to be used for non-standard designs.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
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<tbody>
<tr>
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<td>Construction</td>
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*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s) 7, 13

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<td>A= Operation</td>
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<tr>
<td>1 (Furnish &amp; Install)</td>
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<tr>
<td>2 (Furnish)</td>
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<tr>
<td>3 (Install) BC=00</td>
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<tr>
<td>4 (Relocate) BC=00</td>
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<td></td>
</tr>
<tr>
<td>6 (Remove) BC=00</td>
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<tr>
<td>B= Truss Span Length (feet)</td>
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<td>2 (51-100)</td>
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<td>3 (101-150)</td>
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<td>4 (151-200)</td>
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<td>5 (Greater than 200)</td>
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<tr>
<td>9 (Custom) C=9*</td>
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<tr>
<td>C= Sign Panel Size (square feet)</td>
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<tr>
<td>1 (300 or less)</td>
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<td>2 (301-500)</td>
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*BC=99 (Custom) for non-standard designs. Verify with Roadway Design Office prior to opening.

<table>
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<th>700-23-ABC</th>
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<td>Assembly</td>
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<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
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**Notes**
Effective January 2008 letting; replaces selected 700-42 to 700-46 items

**Details**
Includes sign panels, overhead structure, foundations and other incidentals required for a complete assembly. Complete design and details of the structure and foundation must be shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.
Custom (BC=99) to be used for non-standard designs.
**Related Items**

**Forms**  
Design: SHTabQuant  
Construction: Refer to Comp Book

**Documentation**  
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter

**Specifications**  

*Selected Items may require Tech Spec and/or Plan Detail*

**Prep & Doc Manual Chapter(s)**  
7, 13

---

**Struct.**  
700-23-ABC  
OVERHEAD TRUSS CANTILEVER SIGN  
AS

A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) BC=00  
4 (Relocate) BC=00  
6 (Remove) BC=00  

B= Truss Span Length (feet)  
1 (30 or less)  
2 (31-40)  
3 (41-50)  
4 (over 50)  
9 (Custom) C=9*

C= Sign Panel Size (square feet)  
1 (100 or less)  
2 (101-200)  
3 (201-300)  
4 (Greater than 300)  
9 (Custom) B=9*

---

**Notes**  
*BC=99 (Custom) for non-standard designs. Verify with Roadway Design Office prior to opening.*

---

**700-38-AAB**  
SIGN LIGHTED OVERHEAD TRUSS (MONOTUBE)

<table>
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<tr>
<td></td>
<td>AS</td>
<td></td>
<td></td>
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**Details**  
Includes sign panel, post, any foundation or breakaway base as required by the plans. Also includes sign luminaries, electrical enclosure and other incidentals required for a complete assembly. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item.

---

**Related Items**

**Forms**  
Design: SHTabQuant  
Construction: Refer to Comp Book

**Documentation**  
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

Details and Structure: Complete
Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status

Inactive Structure

Struct. 700-38-AAB SIGN LIGHTED OVERHEAD TRUSS (MONOTUBE) AS

AA = Length Of Sign Truss
01 (20 Or Less)
02 (21 - 40)
03 (41 - 60)
04 (61 - 80)
05 (81 - 100)
06 (101 - 120)
07 (121 - 140)
08 (141 - 160)
09 (161 - 180)
10 (181 - 200)
11 (201 - 220)

B = Square Footage Of Sign Panel
1 (100 Or Less)
2 (101 To 200)
3 (201 To 300)
4 (301 To 400)
5 (401 - 500)
6 (501 - 600)
7 (601 - 700)
8 (Over 700)

Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

700-39-AB SIGN LIGHTED OVERHEAD CANTILEVER- MONOTUBE

Unit AS Accuracy Assembly PlanQuantity? no

Notes

Inactive Structure

Details

Includes sign panel, post, any foundation or breakaway base as required by the plans. Also includes sign luminaries, electrical enclosure and other incidentals required for a complete assembly. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item.

Related Items

Forms

Design SHTabQuant COMP 700-050-03

Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Details and Structure: Complete

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**References**

<table>
<thead>
<tr>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
</table>

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status** Inactive Structure

**Struct.** 700-39-AB SIGN LIGHTED OVERHEAD CANTILEVER- MONOTUBE AS

A = Length Of Cantilever

<table>
<thead>
<tr>
<th>Length</th>
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<tbody>
<tr>
<td>1</td>
<td>(20 Or Less)</td>
</tr>
<tr>
<td>2</td>
<td>(21 - 30)</td>
</tr>
<tr>
<td>3</td>
<td>(31 - 40)</td>
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<tr>
<td>4</td>
<td>(41 - 50)</td>
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<td>(51 - 60)</td>
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<td>6</td>
<td>(61 - 70)</td>
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<tr>
<td>7</td>
<td>(71 - 80)</td>
</tr>
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<td>8</td>
<td>(81 - 90)</td>
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B = Square Footage Of Sign Panel

<table>
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<tbody>
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<tr>
<td>2</td>
<td>(51 To 100)</td>
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<td>3</td>
<td>(101 To 150)</td>
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<td>4</td>
<td>(151 To 200)</td>
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<td>5</td>
<td>(201 - 250)</td>
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<tr>
<td>6</td>
<td>(251 - 300)</td>
</tr>
<tr>
<td>7</td>
<td>(Over 300)</td>
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**Notes**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

---

**700-40- A SIGN, SINGLE POST**

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<th>Unit</th>
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<th>Accuracy</th>
<th>Assembly</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
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</table>

**Notes**

Valid through 6-30-07; replaced by 700-20

Includes sign panel, post, any foundation or breakaway base as required by the Design Standards or plans. Per specifications, "for the purpose of payment, a sign assembly consists of all the signs mounted on a single structure (one, two, or three posts, or overhead structure)"

**Related Items**

**Forms**

- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

<table>
<thead>
<tr>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
</table>

**Prep & Doc Manual Chapter(s)** 7, 13
Status

Struct.  700-40- A  SIGN, SINGLE POST  AS

A = Square Footage Of Sign Panel
1 (Less Than 12)
2 (12 - 25)
4 (Special)

Notes

700-41 AA  SIGN, MULTI-POST

Unit  AS  Accuracy  Assembly  PlanQuantity?  no

Notes  Valid through 6-30-07; replaced by 700-21 items

Details  Includes sign panel, post, any foundation or breakaway base as required by the Design Standards or plans. The number and size of post and the average post length must be shown in the plans. Per specifications, "for the purpose of payment, a sign assembly consists of all the signs mounted on a single structure (one, two, or three posts, or overhead structure)"

Related Items  Required  Recommended

Forms  Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation  Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References  PPM Chapter
Other  Standards  Index No. 11200
Specifications  Prep & Doc Manual Chapter(s)  7, 13

Status

Struct.  700-41- AA  SIGN, MULTI-POST  AS

AA = Square Footage Of Sign Panel
10 (50 Or Less)
11 (51 To 100)
12 (101 To 150)
13 (151 To 200)
14 (201 To 250)
15 (251 To 300)
16 (Greater Than 300)

Notes

700-42-AAB  OVERHEAD TRUSS SPAN SIGN

Unit  AS  Accuracy  Assembly  PlanQuantity?  no

Notes  Valid through December 2007; replaced by 700-22 and 700-23 items.

Details  Includes sign panels, overhead structure, foundations and other incidentals required for a
Complete assembly. Complete design and details of the structure and foundation must be shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
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<tr>
<td>Forms</td>
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<td>SHTabQuant</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
<td>Refer to Comp Book</td>
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<td>Design</td>
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</tr>
<tr>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<table>
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<tr>
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<th>PPM Chapter</th>
</tr>
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<td>Index No. 11200</td>
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| Prep & Doc Manual Chapter(s) | 7, 13 |

### Status

**Struct.** 700-42-AAB OVERHEAD TRUSS SPAN SIGN AS

**Notes**

**700-43-AB OVERHEAD TRUSS CANTILEVER SIGN**

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<th>Accuracy</th>
<th>Assembly</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Valid through December 2007; replaced by 700-22 and 700-23 items.

**Details**

Includes sign panels, overhead structure, foundations and other incidentals required for a complete assembly. Complete design and details of the structure and foundation must be shown in the plans.
shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
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<td>Construction</td>
<td>COMP 700-050-03</td>
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</table>

| Documentation | Design  | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|              | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

| References     | PPM Chapter | Index No. 11200 |
|                | Other       |                |

| Standards Specifications | Prep & Doc Manual Chapter(s) | 7, 13 |

### Status

#### Struct. 700-43-AB OVERHEAD TRUSS CANTILEVER SIGN AS

\[
A = \text{Length Of Cantilever} \\
1 \ (20 \text{ Or Less}) \\
2 \ (21 - 30) \\
3 \ (31 - 40) \\
4 \ (41 - 50) \\
5 \ (51 - 60) \\
6 \ (61 - 70) \\
7 \ (71 - 80) \\
8 \ (81 - 90) \\
B = \text{Square Footage Of Sign Panel} \\
1 \ (50 \text{ Or Less}) \\
2 \ (51 - 100) \\
3 \ (101 - 150) \\
4 \ (151 - 200) \\
5 \ (201 - 250) \\
6 \ (251 - 300) \\
7 \ (Over 300) \\
\]

### Notes

Valid through December 2007; replaced by 700-22 and 700-23 items.

Includes sign panels, overhead structure, foundations, sign luminaries, electrical enclosure and other incidentals required for a complete assembly. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item. Complete design and details of the structure and foundation must be shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.

<table>
<thead>
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<th>Related Items</th>
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</table>
Standards Index No. 11200, 17505
Specifications

Struct. 700-44-AAB LIGHTED OVERHEAD TRUSS SPAN SIGN AS

AA = Length Of Sign Truss
01 (20 Or Less)
02 (21 - 40)
03 (41 - 60)
04 (61 - 80)
05 (81 - 100)
06 (101 - 120)
07 (121 - 140)
08 (141 - 160)
09 (161 - 180)
10 (181 - 200)
11 (201 - 220)
12 (Over 220)

B = Square Footage Of Sign Panel
1 (100 Or Less)
2 (101 - 200)
3 (201 - 300)
4 (301 - 400)
5 (401 - 500)
6 (501 - 600)
7 (601 - 700)
8 (Over 700)

Notes

Valid through December 2007; replaced by 700-22 and 700-23 items.
Includes sign panels, overhead structure, foundations, sign luminaries, electrical enclosure and other incidentals required for a complete assembly. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item. Complete design and details of the structure and foundation must be shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.

Related Items

<table>
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<th>Required</th>
<th>Recommended</th>
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<td>Design</td>
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<tr>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
Standards Index No. 11200, 17505
Specifications

Notes

Selected Items blocked; B=1 & 2 valid through 6-30-07; B=3 & 4 valid through 12-31-07. Replaced by 700-20 to 700-23 items

Details
The REMOVE item includes the removal of the sign panels and the complete support assembly.
The RELOCATE item includes the reinstallation of the complete assembly at the location shown in the plans.
The INSTALL item includes the installation of the assembly, at the location shown in the plans. Includes the breakaway base and foundation, if required for installation of the new assembly. For a multi-post assembly, the number and size of the post and the average post length must be shown in the plans.

Prep & Doc Manual Chapter(s) 7, 13

Construction Refer to Comp Book
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

References
PPM Chapter
Other
Standards
Specifications

Status
Struct. 700-45-AB LIGHTED OVERHEAD TRUSS CANTILEVER SIGN AS

A = Length Of Cantilever
1 (20 Or Less)
2 (21 - 30)
3 (31 - 40)
4 (41 - 50)
5 (51 - 60)
6 (61 - 70)
7 (71 - 80)
8 (81 - 90)

B = Square Footage Of Sign Panel
1 (50 Or Less)
2 (51 - 100)
3 (101 - 150)
4 (151 - 200)
5 (201 - 250)
6 (251 - 300)
7 (Over 300)

Notes

700-46-AB EXISTING SIGN

Unit AS Accuracy Assembly PlanQuantity? no

Notes

Details

Related Items

Forms
Required Recommended
Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Details and Structure: Complete
Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

Notes

Status

Struct.  700-46-AB

EXISTING SIGN

AS

A = Operation
1 (Remove)
2 (Relocate)
3 (Install)

B = Sign Assembly Type
1 (Single Post) valid through 6/07
2 (Multi-Post) valid through 6/07
3 (Overhead Truss) valid through 12/07
4 (Overhead Cantilever) valid through 12/07
5 (Span Wire)
6 (Bridge Mounted)

Notes

700-47-A

INSTALL EXISTING SIGN ON BREAKAWAY SUPPORTS

Unit AS Accuracy Assembly PlanQuantity? no

Notes

Valid through 12-31-06; replaced by 700-46-AB through 6-30-07. See 700-20 or 700-21 for projects let after 7/07.

Details

Includes the breakaway base and foundation, if required for installation of the new assembly. For a multi-post assembly, the number and size of the post and the average post length must be shown in the plans.

Related Items

Required Recommended

Forms Design SHTabQuant COMP 700-050-03

Construction Refer to Comp Book

Documentation Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status Block Pending

Struct.  700-47- A

INSTALL EXISTING SIGN ON BREAKAWAY SUPPORTS AS

Details and Structure: Complete
A = Sign Assembly Type
1  (Single Post)
2  (Multi-Post)

### Notes

**700-48-AB SIGN PANEL**

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Details**

This item is for the sign panel only. For posts, structures, etc, refer to other Section 700 items.

The FURNISH AND INSTALL item includes the sign panel and materials required for installation. The INSTALL item includes the materials required for installation. The sign panel will be furnished. The OVERLAY item includes the sign panel and the materials required for installation. The RELOCATE item includes the removal of the sign panel and the reinstallion at the location noted in the plans. The REPLACE item includes the new sign panel, the removal of the existing panel and the installation of the new panel. The REMOVE item includes the removal of the existing sign panel.

**Related Items**

<table>
<thead>
<tr>
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<th>Recommended</th>
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<tr>
<td>Forms</td>
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<tr>
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<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
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</tr>
<tr>
<td>Documentation</td>
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<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
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<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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</tbody>
</table>

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct. 700-48-AB SIGN PANEL EA**

A = Operation
1 (Furnish & Install)
2 (Install)
3 (Overlay)
4 (Relocate)
5 (Replace)
6 (Remove) B=0
7 (Furnish Only)

B = Square Footage Of Sign Panel
2 (101 - 200)
3 (201 - 300)
4 (301 - 400)
5 (401 - 500)
6 (501 - 600)
7 (601 or greater)
8 (15 Or Less)
9 (16 - 100)
### 700-70- SIGN, LIGHTED OVERHEAD - BRIDGE MOUNTED

<table>
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<th>Unit</th>
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<th>Accuracy</th>
<th>Assembly</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

Includes sign panels, overhead structure, sign luminaries, electrical enclosure and other incidentals required for a complete assembly. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item. Complete design and details of the structure and connections to the bridge must be shown in the plans. Includes all components listed in the Standards and all external conduit and conductors for the service.

### Related Items

<table>
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<tr>
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<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**: 7, 13

### Status

**Struct.** 700-70- SIGN, LIGHTED OVERHEAD - BRIDGE MOUNTED AS

---

### 700-82- OVERHEAD SIGN - SPAN WIRE MOUNTED

<table>
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<th>Assembly</th>
<th>PlanQuantity?</th>
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</thead>
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**Notes**

This item includes sign panels, poles, span wire assembly and other incidentals required for a complete assembly. The type and length of the poles and the size of the span wires must be shown in the plans.

### Related Items

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**

---
700-83- OVERHEAD SIGN- BRIDGE MOUNTED

<table>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Assembly</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This item includes sign panels, overhead structure, and incidentals required for a complete assembly. Complete design and details of the structure and connections to the bridge must be shown in the plans.

Related Items

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

Prep & Doc Manual Chapter(s)

Refer to Comp Book

700-89- AA ELECTRIC POWERED SIGN

<table>
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<tbody>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: not to be used for ITS projects.
Refer to 699 items for Internally Illuminated signs.
Includes the complete sign assembly, support and any foundation required. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign structure, are not covered by this item. Includes all components listed in the Standards and all external conduit and conductors for the service.

Related Items

- **Required**: SHTabQuant
- **Recommended**: COMP 700-050-03

Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
### Topic No. 600-000-002

#### Basis of Estimates

**2007 Edition**

April 16, 2007

---

**Standards**

**Specifications**

**Struct. 700- 89- AA ELECTRIC POWERED SIGN EA**

AA =

2 (Blank-Out)

3 (Changeable Message - Fiber Optics)

4 (Changeable Message - Light Bulb Matrix)

5 (Changeable Message - Electromagnetic Disk Matrix)

6 (Changeable Message - Drum - Type)

7 (Changeable Message - Vane Matrix)

8 (Lane Control - Vane Matrix)

9 (Changeable Message - Flap Type)

10 (Changeable Message - Tricolor)

11 (Special)

---

### Status

**Struct. 700- 89- AA** ELECTRIC POWERED SIGN EA

---

**Notes**

Includes the complete sign, flashing beacon, flashing beacon controller, support and any foundation required. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign, are not covered by this item. Includes all components listed in the Standards and all external conduit and conductors for the service.

---

### Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<td>COMP 700-050-03</td>
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### References

**PPM Chapter**

**Other**

**Standards**

Index No. 17344, 17882, 17881

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

### Status

**Struct. 700- 90- AB** SIGN, FLASHING BEACON AS

---

**Notes**

Includes the complete sign, flashing beacon, flashing beacon controller, support and any foundation required. Conduit, conductors, pull boxes and service point equipment, if required to get power to the sign, are not covered by this item. Includes all components listed in the Standards and all external conduit and conductors for the service.

---

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
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<td>Refer to Comp Book</td>
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### Documentation

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**References**

**PPM Chapter**

**Other**

**Standards**

Index No. 17344, 17882, 17881

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct. 700- 90- AB** SIGN, FLASHING BEACON AS

---

Details and Structure: Complete
### 700-94- RADAR SPEED DISPLAY UNIT

<table>
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<tr>
<th>Unit</th>
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<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

- This item for permanent installations only; for temporary installations, refer to 102 items. Tech Spec should indicate that unit includes sign, radar unit, post, cabinet, power connection(s), and incidentals necessary for a complete unit.

**Related Items**

- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards
- Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

**Status**

- Struct. 700-94- RADAR SPEED DISPLAY UNIT

**Notes**

---

### 700-95- MOTORIST INFORMATION SIGN

<table>
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<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
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</thead>
</table>

**Notes**

- Inactive structure

**Details**

- Maintenance item (?) intended for blue information signs and/or logo program.

**Related Items**

- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form
701- 1- A RAISED RIB SHOULDER WARNING DEVICE

Unit NM; NK  Accuracy 1000th of a Net Mile; 1000th of a Net Kilometer  PlanQuantity? no

Notes
Details Not for centerline applications.

Related Items
Required SHTabQuant
Recommended COMP 700-050-03

Forms
Design Refer to Comp Book
Construction

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status
Struct. 701- 1- A RAISED RIB SHOULDER WARNING DEVICE NM

A =
1 (6”)
2 (8”)
3 (10”)
4 (12”)

Notes

702-?? WET WEATHER MARKINGS ?? INVERTED RIB PROFILE MARKINGS

Unit Mixed  Accuracy Refer to item structure and details  PlanQuantity?

Notes Future Effective Date: See 906-702 items.

Details

Related Items Required Recommended

Details and Structure: Complete
### Forms
- Design
- Construction

### Documentation
- Design
- Construction

### References
- PPM Chapter
- Other

### Standards
- Specifications

### Prep & Doc Manual Chapter(s)

### Status
- Struct. 704-1-AB

### Notes
- **704-1-AB CERAMIC PAVEMENT MARKERS**

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### Details

#### Related Items

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<th>SHTabQuant</th>
<th>COMP 700-050-03</th>
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<td></td>
<td>Construction</td>
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#### Documentation
- Design
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- PPM Chapter
- Other

**Standards Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

### Status
- Struct. 704-1-AB CERAMIC PAVEMENT MARKERS EA

- **A** = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
- **B** =
  - 1 (Class A)
  - 3 (Class C)

### Notes

---

**Details and Structure:** Complete
### 705- 1- Delineator, Single Unit

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**Notes**

**Details**

**Related Items**

**Required**
- Design: SHTabQuant
- Construction: Refer to Comp Book

**Recommended**
- Design: COMP 700-050-03
- Construction: Refer to Comp Book

**Specifications**
- Index No. 17345, 17346

**Documentation**

**Design**
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**
- Design: 7, 13

**Other**

**Standards**
- Index No. 17345, 17346

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**

**Struct.**
- 705- 1- Delineator, Single Unit

**Notes**

---

### 705- 2- Delineator, Double Unit

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<tbody>
<tr>
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<td>EA</td>
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**Notes**

**Details**

**Related Items**

**Required**
- Design: SHTabQuant
- Construction: Refer to Comp Book

**Recommended**
- Design: COMP 700-050-03
- Construction: Refer to Comp Book

**Specifications**
- Index No. 17345, 17346

**Documentation**

**Design**
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**
- Design: 7, 13

**Other**

**Standards**
- Index No. 17345, 17346

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**

**Struct.**
- 705- 2- Delineator, Double Unit

**Notes**

---

**Details and Structure: Complete**
### 705- 3-  Delineator, Triple Unit

**Unit**: EA  
**Accuracy**: Each  
**Plan Quantity?**: no

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<td><strong>Recommended</strong></td>
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<td><strong>Forms</strong></td>
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<tr>
<td>SHTabQuant</td>
</tr>
<tr>
<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
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<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
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#### Status

**Struct.**: 705- 3-  Delineator, Triple Unit  
**EA**

---

### 705- 10-  Object Marker

**Unit**: EA  
**Accuracy**: Each  
**Plan Quantity?**: no

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<td><strong>Recommended</strong></td>
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<td><strong>Forms</strong></td>
</tr>
<tr>
<td>Design</td>
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<tr>
<td>SHTabQuant</td>
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<tr>
<td>COMP 700-050-03</td>
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<tr>
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<td><strong>Documentation</strong></td>
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<tr>
<td>Construction</td>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<td>Other</td>
</tr>
<tr>
<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
</tr>
</tbody>
</table>

#### Status

**Struct.**: 705- 10-  Object Marker  
**EA**  

**A** = Installation Type  
1 (Post Mounted)  
2 (Object Mounted)

---

Details and Structure: Complete  
Page 322 of 468
B = Type
1 (Type 1)
2 (Type 2)
3 (Type 3)
4 (Type-End of Road)

Notes

### 705-71- DELINEATOR, TUBULAR FLEXIBLE

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
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<th>Each</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

**Details**

**Related Items**

**Forms**
- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 17345, 17346
- **Specifications**

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**

**Struct.** 705-71- DELINEATOR, TUBULAR FLEXIBLE EA

**Notes**

### 706-3- MARKER PAVEMENT RETRO-REFLECTIVE

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
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</thead>
</table>

**Notes**

**Details**

Refer to 710-90 for final surface payment.
Use Type B, unless otherwise shown in the plans. Use Pavement markers to supplement lane lines and gore markings.

**Related Items**

**Forms**
- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
  - Index No. 17345, 17352
### Specifications

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Notes**

**Status**

**Struct.** 706-3- **MARKER PAVEMENT RETRO-REFLECTIVE** **EA**

---

#### 709-1A-BCD TRAFFIC STRIPE- TWO REACTIVE COMPONENTS

<table>
<thead>
<tr>
<th><strong>Unit</strong></th>
<th>EA, LF, GM, NM; GK, NK</th>
<th><strong>Accuracy</strong></th>
<th><strong>Plan</strong></th>
<th><strong>Quantity?</strong></th>
</tr>
</thead>
</table>

**Notes**

Effective January 2007 letting. Replaces all other 709 items.

**Details**

Consists of paint used in areas representing final and work zone pavement markings. Refer to the Specification for the complete Method of Measurement. Broken (skip) stripes shall consist of a succession of solid stripes.

**LINEAR FOOT ITEMS:** The linear foot quantity shall be used to pay for all skip lines, except 3-9 or 10-30 skip traffic stripe sections, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and it shall NOT include the unpainted intervals.

**GROSS MILE ITEMS:** The gross mile quantity shall be used to pay for all 3-9 or 10-30 skip traffic stripes, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and shall include the unpainted intervals, subject to 9-1.3.

**Related Items**

**Required**

**Design** SHTabQuant

**Construction** 700-050-52

**Recommended**

**Design**

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.** 709-1A-BCD **TRAFFIC STRIPE- TWO REACTIVE COMPONENTS** EA, LF, GM, NM; GK, NK

A= Class
1 (Standard)
7 (Remove) SF Note: When A=7, BCD= Blank

B=Color
1 (White)
2 (Yellow)
3 (Black)

C= Type of Marking
1 (Solid) NM
2 (Solid) LF
3 (Skip) GM

---

**Details and Structure:** Complete
4 (Skip) LF
5 (Dotted/Guideline) LF

D = Width
1 (6")
2 (8")
3 (12")
4 (18")
5 (24")

Notes: C = 6 to 9 for messages, arrows, etc are not valid for 709. Consider using preformed Thermoplastic or other material.

<table>
<thead>
<tr>
<th>709-22-AAA</th>
<th>SOLID TRAFFIC STRIPE, TWO REACTIVE COMPONENTS (YELLOW)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Valid through 12-31-06; replaced by 709-1A-BCD</td>
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Details

**Related Items**
- **Forms**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s)

**Status**: Block Pending

**Struct.** 709-22-AAA SOLID TRAFFIC STRIPE, TWO REACTIVE COMPONENTS (YELLOW) LF

Notes: Code Same As 709-21-AAA

<table>
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<tr>
<th>709-31-AAA</th>
<th>TRAFFIC STRIPE SOLID, TWO COMPONENT- WHITE/BLACK, YELLOW</th>
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</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>NM; NK</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>1000th of a Net Mile; 1000th of a Net Kilometer</td>
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<tr>
<td><strong>PlanQuantity?</strong></td>
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<td><strong>Notes</strong></td>
<td>Valid through 12-31-06; replaced by 709-1A-BCD</td>
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Details

**Related Items**
- **Forms**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03
- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### Structural 709-31-AAA

<table>
<thead>
<tr>
<th>Standards</th>
<th>Index No. 17345, 17346</th>
</tr>
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#### Notes

AAA =

| 61 (6") |
| 81 (8") |

### Structural 709-41-1

#### Notes

Valid through 12-31-06; replaced by 709-1A-BCD

#### Details

Consists of Paint used in areas representing Work Zone and/or final pavement markings.

Broken (skip) stripes shall consist of a succession of solid stripes. The quantities to be paid for shall also include 2 lf/4 lf and 3 lf / 9 lf or 10 lf / 30 lf (1 m / 3 m or 3 m / 9 m) skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe and it shall include the unpainted intervals as determined by the plan dimensions or stations, subject to 9-1.3.

#### Related Items

<table>
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<td>Construction</td>
<td>700-050-52</td>
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#### References

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<th>PPM Chapter</th>
<th>Other</th>
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#### Status

Block Pending

#### Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### 709-4A- DIRECTIONAL ARROWS

<table>
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<th>Each</th>
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**Notes**
Valid through 12-31-06; replaced by 709-1A-BCD

**Details**
The following method of measurement shall be used:
Single arrows = 1 per each
Bi-directional arrows = 2 per each
Tri-directional arrows = 3 per each
Wrong Way Arrows = 1 per each

**Related Items**

<table>
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<tr>
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<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>700-050-52</td>
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**Documentation**

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**References**
PPM Chapter
Other
Standards  Index No. 17344, 17345, 17346
Specifications

**Status**  Block Pending

**Struct.**  709-4A-

**Notes**

A =
1 (Epoxies)
2 (Polyesters)
3 (Urethanes)

### 709-7A- PAVEMENT MARKINGS, (EPOXIES)/(URETHANES)- REMOVE EXISTING

<table>
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<tr>
<th>Unit</th>
<th>SF; M2</th>
<th>Accuracy</th>
<th>Square Foot; 10th of a Square Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
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**Notes**
Valid through 12-31-06; replaced by 709-1A-BCD

**Details**
Estimate quantity based on original project plans or later revisions. Note all exceptions.

**Related Items**

<table>
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<th>Recommended</th>
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<tbody>
<tr>
<td>Forms</td>
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<td>Design</td>
<td>SHTabQuant</td>
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**Documentation**

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**References**
PPM Chapter
Other

**Details and Structure:** Complete
**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**  Block Pending

**Struct.**  709- 7A-  

**PAVEMENT MARKINGS, (EPoxyes)/(URETHANES) - REMOVE EXISTING**

A =
1 (Epoxies)
2 (Polyesters)
3 (Urethanes)

---

### Notes

---

#### 710- 5- A  

**GUIDE LINES, PAINT- DOTTED**

**Unit**  LF; M1  
**Accuracy**  Linear Foot; 10th of a Meter  
**PlanQuantity?**  no

---

**Notes**  Valid through 12-31-06; replaced by 710-1A-BCD

**Details**  Consists of Paint used for Work Zone and/or final pavement markings.

**Related Items**

**Forms**
- **Design**  SHTabQuant  
- **Construction**  700-050-52

**Documentation**
- **Design**  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**  Other

**Standards**  Index No. 17346

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**  Block Pending

**Struct.**  710- 5- A  

**GUIDE LINES, PAINT- DOTTED**

A =
1 (White)
2 (Yellow)

---

#### 710- 6-  

**DIRECTIONAL ARROWS PAINTED**

**Unit**  EA  
**Accuracy**  Each  
**PlanQuantity?**  no

---

**Notes**  Valid through 12-31-06; replaced by 710-1A-BCD

**Details**  The following method of measurement shall be used:  
- Single arrows = 1 per each
- Bi-directional arrows = 2 per each
- Tri-directional arrows = 3 per each
- Wrong Way Arrows = 1 per each

**Related Items**

**Forms**
- **Design**  SHTabQuant  
- **Recommended**  COMP 700-050-03

---

Details and Structure: Complete
### 710-0-000-002

**Basis of Estimates**

**2007 Edition**
April 16, 2007

#### **Construction**

**Design**

700-050-02

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

**References**

**PPM Chapter**

**Other**

Index No. 17344, 17345, 17346

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

Block Pending

**Struct.**

710-6

**DIRECTIONAL ARROWS PAINTED**

**EA**

---

**Notes**

**710-7-**

**PAVEMENT MESSAGE PAINTED**

<table>
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<td><strong>Plan</strong></td>
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<td><strong>Notes</strong></td>
<td>Valid through 12-31-06; replaced by 710-1A-BCD</td>
</tr>
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<td><strong>Details</strong></td>
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<td><strong>Related Items</strong></td>
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<td><strong>Forms</strong></td>
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<td><strong>Documentation</strong></td>
<td><strong>Construction</strong></td>
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<tr>
<td><strong>Design</strong></td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td><strong>PPM Chapter</strong></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td>Index No. 17344, 17345, 17346</td>
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<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td>6, 7, 13</td>
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**Status**

Block Pending

**Struct.**

710-7

**PAVEMENT MESSAGE PAINTED**

**EA**

---

**Notes**

**710-11-**

**PAINT, REMOVE EXISTING MARKINGS**

<table>
<thead>
<tr>
<th>Unit</th>
<th>SF; M²</th>
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<tbody>
<tr>
<td><strong>Accuracy</strong></td>
<td>Square Foot; 10th of a Square Meter</td>
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<tr>
<td><strong>Plan</strong></td>
<td>Quantity? no</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td>Valid through 12-31-06; replaced by 710-1A-BCD</td>
</tr>
<tr>
<td><strong>Details</strong></td>
<td>Estimate quantity based on original project plans or later revisions. Note all exceptions.</td>
</tr>
<tr>
<td><strong>Related Items</strong></td>
<td>Required</td>
</tr>
<tr>
<td><strong>Forms</strong></td>
<td><strong>Design</strong></td>
</tr>
</tbody>
</table>

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Details and Structure: Complete
**710-1A-BCD  PAINTED PAVEMENT MARKINGS**

**Unit** Mixed  
**Accuracy** Refer to item structure and details  
**PlanQuantity?** no

**Notes** Effective January 2007 letting; replaces most other 710 items  
Consists of paint used in areas representing final and work zone pavement markings. Refer to the Specification for the complete Method of Measurement. Broken (skip) stripes shall consist of a succession of solid stripes.  
**LINEAR FOOT ITEMS:** The linear foot quantity shall be used to pay for all skip lines, except 3-9 or 10-30 skip traffic stripe sections, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and it shall NOT include the unpainted intervals.  
**GROSS MILE ITEMS:** The gross mile quantity shall be used to pay for all 3-9 or 10-30 skip traffic stripes, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and shall include the unpainted intervals, subject to 9-1.3.

**Required**  
**Design** SHTabQuant  
**Construction** 700-050-52

**Recommended**  
**Design** COMP 700-050-03  
**Construction**

**Related Items**  
**Forms**  
**Documentation**

**Status**

**Struct.** 710-1A-BCD  
**PAINTED PAVEMENT MARKINGS**  
**Mixed**

A= Class 1 (Standard)
7 (Remove) SF, BCD=blank
B= Color
1 (White)
2 (Yellow) C=1, 2, 3, 4, 5, 9
3 (Black)
4 (Blue)
C= Type of Marking
1 (Solid) NM
2 (Solid) LF
3 (Skip) GM, D= 1 or 2
4 (Skip) LF, D= 1 or 2
5 (Dotted/Guideline) LF, D=1
6 (Message) EA, D=0
7 (Arrows) EA, D=0
8 (Yield Message) EA, D=0
9 (Island Nose) SF, D=0
D= Width
1 (6")
2 (8")
3 (12")
4 (18")
5 (24")

Notes

<table>
<thead>
<tr>
<th>Unit</th>
<th>GM; GK</th>
<th>Accuracy</th>
<th>1000th of a Gross Mile; 1000th of a Gross Kilometer</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes

Valid through 12-31-06; replaced by 710-1A-BCD

Details

Consists of paint used in areas representing final and work zone pavement markings. Broken (skip) stripes shall consist of a succession of solid stripes. The quantities to be paid for shall also include 6 lf/10lf (1.8 m/3.0 m) skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe and it shall include the unpainted intervals as determined by plan dimensions or stations, subject to 9-1.3. If design quantity is less than 1 mile (1 KM) use linear foot (meter) item.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
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</tr>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td></td>
<td>700-050-52</td>
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<tr>
<td>Documentation</td>
<td></td>
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<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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References

PPM Chapter
Other Standards Index No. 17345, 17346
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13
### Status
Block Pending

### Struct.
710-21-

#### TRAFFIC STRIPE SKIP (WHITE/BLACK/BLUE)

**Notes**

#### 710-22-

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<th>GM; GK</th>
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</tr>
</tbody>
</table>

**Notes**
Valid through 12-31-06; replaced by 710-1A-BCD

**Details**

**Related Items**

**Forms**
- **Design**
  - SHTabQuant
- **Construction**
  - 700-050-52

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s)

### Status
Block Pending

### Struct.
710-22-

#### SKIP TRAFFIC STRIPE- YELLOW

**Notes**

#### 710-23-AAA

<table>
<thead>
<tr>
<th>Unit</th>
<th>NM; NK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>1000th of a Net Mile; 1000th of a Net Kilometer</td>
</tr>
</tbody>
</table>

**Notes**
Valid through 12-31-06; replaced by 710-1A-BCD

**Details**

**Related Items**

**Forms**
- **Design**
  - SHTabQuant
- **Construction**
  - 700-050-52

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other

---

*Details and Structure: Complete*
### Standards
Index No. 17345, 17346

### Specifications

### Prep & Doc Manual Chapter(s)
6, 7, 13

---

**Status**: Block Pending

**Struct.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
<th>Notes</th>
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<tbody>
<tr>
<td>710-23-AAA</td>
<td>TRAFFIC STRIPE SOLID- WHITE/BLACK/BLUE</td>
<td>NM</td>
<td></td>
<td>no</td>
<td>Valid through 12-31-06; replaced by 710-1A-BCD</td>
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</tbody>
</table>

**Notes**

*AAA = 61 (6") 81 (8")*

---

**Status**: Block Pending

**Struct.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>710-24-AAA</td>
<td>SOLID TRAFFIC STRIPE- YELLOW</td>
<td>NM; NK</td>
<td>1000th of a Net Mile; 1000th of a Net Kilometer</td>
<td>no</td>
<td>Valid through 12-31-06; replaced by 710-1A-BCD</td>
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</table>

**Notes**

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**Status**: Block Pending

**Struct.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>710-25-AAA</td>
<td>TRAFFIC STRIPE SOLID- WHITE/BLACK/BLUE</td>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
<td>Consists through 12-31-06; replaced by 710-1A-BCD</td>
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**Notes**

*Valid through 12-31-06; replaced by 710-1A-BCD*

---

**Related Items**

**Forms**

- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**PPM Chapter**

- Other
- Standards
- Specifications

---

Details and Structure: Complete
Standards Index No. 17345, 17346
Specifications

Struct.  710- 25-AAA TRAFFIC STRIPE SOLID- WHITE/BLACK/BLUE LF

Notes Code Same As 709- 21-AAA

710- 26-AAA SOLID TRAFFIC STRIPE- YELLOW

Unit LF; M1  Accuracy Linear Foot; 10th of a Meter  PlanQuantity? no

Notes Valid through 12-31-06; replaced by 710-1A-BCD

Details

Related Items
Forms Required Recommended
Design SHTabQuant  COMP 700-050-03
Construction 700-050-52

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 6, 7, 13

Status Block Pending
Struct. 710- 26-AAA SOLID TRAFFIC STRIPE- YELLOW LF

Notes Code Same As 709- 21-AAA

710- 27- TRAFFIC STRIPE SKIP- WHITE/BLACK/BLUE

Unit LF; M1  Accuracy Linear Foot; 10th of a Meter  PlanQuantity? no

Notes Valid through 12-31-06; replaced by 710-1A-BCD

Details Consists of Paint used for Work Zone and/or final pavement markings. Broken (skip)
stripes shall consist of a succession of solid white/solid black or solid blue/skip. The quantities to be paid for shall also include 6 lf/10 lf (1.8 m/3.0 m) skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe with proper deductions made for unpainted intervals as determined by the plan dimensions or stations, subject to 9-1.3. Unpainted intervals will not be included in pay quantity. Note all exceptions. If design quantity is greater than 1 mile (1 km), use the appropriate mile (kilometer) item(s).

### Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
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<tbody>
<tr>
<td><strong>Forms</strong></td>
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<tr>
<td>Design</td>
<td>SHTabQuant</td>
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<tr>
<td>Construction</td>
<td>700-050-03</td>
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<td><strong>Documentation</strong></td>
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<td>Design</td>
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<tr>
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<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td>6, 7, 13</td>
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</table>

### Status

Block Pending

### Struct.

710-27- TRAFFIC STRIPE SKIP- WHITE/BLACK/BLUE LF

### Notes

**710-28- SKIP TRAFFIC STRIPE (YELLOW)**

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<tr>
<th>Unit</th>
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<tbody>
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<td>Linear Foot; 10th of a Meter</td>
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<tr>
<td>PlanQuantity?</td>
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### Details

Valid through 12-31-06; replaced by 710-1A-BCD

### Related Items

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<td>Design</td>
<td>SHTabQuant</td>
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<td>Construction</td>
<td>700-050-03</td>
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<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
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</tr>
<tr>
<td><strong>References</strong></td>
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<td>Other</td>
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<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
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</table>

### Status

Block Pending

### Struct.

710-28- SKIP TRAFFIC STRIPE (YELLOW) LF
710-29- REFLECTIVE PAINT (ISLAND NOSE, WHITE)

| Unit   | SY; M2 | Accuracy | Square Yard; Square Meter | PlanQuantity? | no |

Notes: Valid through 12-31-06; replaced by 710-1A-BCD

Details: Consists of Paint used for Work Zone and/or final pavement markings.

Related Items:
- Required: SHTabQuant
- Recommended: COMP 700-050-01

Forms:
- Design: 700-050-52
- Construction: 700-050-52

Documentation:
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Status: Block Pending

Struct. 710-29- REFLECTIVE PAINT (ISLAND NOSE, WHITE) SY

Notes

710-30- REFLECTIVE PAINT (ISLAND NOSE) (YELLOW)

| Unit   | SY; M2 | Accuracy | Square Yard; Square Meter | PlanQuantity? | no |

Notes: Valid through 12-31-06; replaced by 710-1A-BCD

Details

Related Items:
- Required: SHTabQuant
- Recommended: COMP 700-050-01

Forms:
- Design: 700-050-52
- Construction: 700-050-52

Documentation:
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Status: Block Pending

Struct. 710-30- REFLECTIVE PAINT (ISLAND NOSE) (YELLOW) SY

Notes
### 710-79- TRAFFIC STRIPE ALTERNATING SKIP

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<tr>
<th>Unit</th>
<th>GM; GK</th>
<th>Accuracy</th>
<th>1000th of a Gross Mile; 1000th of a Gross Kilometer</th>
<th>PlanQuantity?</th>
<th>no</th>
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</table>

**Notes**
Verifiable through 12-31-06; replaced by 710-1A-BCD

**Details**
Consists of paint used for work zone and/or final pavement markings. Broken (skip) stripes shall consist of a succession of solid white/solid black/skip. Payment shall be based on the total color combination per gross mile (kilometer). The quantities to be paid for shall also include 6lf/10lf (1.8 m/3.0 m) skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe and it shall include the unpainted intervals as determined by the plan dimensions or stations, subject to 9-1.3. Station to station dimensions are required. If design quantity is less than one mile (1 kilometer) use linear foot (meter) item. Note all exceptions.

**Related Items**

<table>
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<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Construction</td>
<td>700-050-03</td>
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**Documentation**

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<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
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**Prep & Doc Manual Chapter(s)**

7, 13

**Status**
Block Pending

**Struct.** 710-79- TRAFFIC STRIPE ALTERNATING SKIP GM

---

### 710-90- PAINTED PAVEMENT MARKINGS- FINAL SURFACE

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
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</table>

**Notes**
Includes payment for final surface pavement markings (2 applications), including RPMs (1 application).
DOES NOT include pavement markings used for Maintenance of Traffic. Must continue to use other 710 items for MOT applications.
TRNS*PORT quantities: For Category 0200, MOT, continue to use 710 and 102-78 items. For Category 0300, include 710-90 pay item for final surface; do not include other 710 or 706-3 items.

**Related Items**

<table>
<thead>
<tr>
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<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
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<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
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**Details and Structure:** Complete
### Notes

Consists of paint used in areas representing final and work zone pavement markings. Refer to the Specification for the complete Method of Measurement. Broken (skip) stripes shall consist of a succession of solid stripes. LINEAR FOOT ITEMS: The linear foot quantity shall be used to pay for all skip lines, except 3-9 or 10-30 skip traffic stripe sections, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and it shall NOT include the unpainted intervals. GROSS MILE ITEMS: The gross mile quantity shall be used to pay for all 3-9 or 10-30 skip traffic stripes, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and shall include the unpainted intervals, subject to 9-1.3.

Consists of Thermoplastic used in area representing final and work zone pavement markings. "Remove" pay item for removal of existing Thermoplastic, in accordance with Section 711. Do not include quantities removed by milling. Color: Note restrictions on various colors. Type: Broken (skip) stripes shall consist of a succession of solid stripes. The quantities to be paid for shall also include 6 lf/10lf skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe and it shall include the unpainted intervals as determined by plan dimensions or stations, subject to 9-1.3.

For alternating skip, use with black paint. Payment made under black paint and thermoplastic white/yellow.

Arrows are measured as follows:
- Single arrows = 1 per each
- Bi-directional arrows = 2 per each
- Tri-directional arrows = 3 per each
- Wrong Way Arrows = 1 per each

### Related Items

**Required**

- **Details**
  - 710-90- PAINTED PAVEMENT MARKINGS- FINAL SURFACE LS/LS

**Recommended**

### Standards

**Specifications**

**Struct. 710-90-**

**PPM Chapter**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)**

---

**Documentation**

**Construction 700-050-52**

---

**Unit** Mixed

**Accuracy** Refer to item structure and details

**PlanQuantity?** no

---

**711-1A-BCD**

**THERMOPLASTIC**

---

**Notes**

**Details**

- Consists of paint used in areas representing final and work zone pavement markings. Refer to the Specification for the complete Method of Measurement.
- Broken (skip) stripes shall consist of a succession of solid stripes.
- LINEAR FOOT ITEMS: The linear foot quantity shall be used to pay for all skip lines, except 3-9 or 10-30 skip traffic stripe sections, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and it shall NOT include the unpainted intervals.
- GROSS MILE ITEMS: The gross mile quantity shall be used to pay for all 3-9 or 10-30 skip traffic stripes, as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe, and shall include the unpainted intervals, subject to 9-1.3.

************************** OLD Below

Consists of Thermoplastic used in area representing final and work zone pavement markings.

"Remove" pay item for removal of existing Thermoplastic, in accordance with Section 711. Do not include quantities removed by milling.

Color: Note restrictions on various colors.

Type: Broken (skip) stripes shall consist of a succession of solid stripes. The quantities to be paid for shall also include 6 lf/10lf skip traffic stripe sections as indicated in the plans. Measurement will be taken as the distance from the beginning of the first painted stripe to the end of the last painted stripe and it shall include the unpainted intervals as determined by plan dimensions or stations, subject to 9-1.3.

For alternating skip, use with black paint. Payment made under black paint and thermoplastic white/yellow.

Arrows are measured as follows:
- Single arrows = 1 per each
- Bi-directional arrows = 2 per each
- Tri-directional arrows = 3 per each
- Wrong Way Arrows = 1 per each
Standards
Specifications

Struct. 711-1A-BCD THERMOPLASTIC Mixed

A=Class
1 (Standard)
2 (Refurbishment)
3 (Hot Spray)
4 (Preformed)
7 (Remove) SF Note: When A=7, BCD=blank

B=Color
1 (White)
2 (Yellow)*
3 (Black) **
4 (Blue)***
*when B=2, C=1, 2, 3, 4 or 5
**B=3 not valid as of 12-15-05; use 710 items.
***when B=4, C=2, 6

C= Type of Marking
1 (Solid) NM
2 (Solid) LF
3 (Skip) GM*
4 (Skip) LF*
5 (Dotted/Guideline) LF**
6 (Message) EA ***
7 (Arrows) EA ***
8 (Yield Message) EA ***
*when C=3 or 4, D=1 or 2
**when C=5, D=1
***when C= 6, 7, or 8, D=0

D= Width
1 (6“)
2 (8“)
3 (12“)
4 (18“)
5 (24“)

Notes
Notes
Valid through 12-31-06; replaced by 508 items

Details
Includes all components listed in the Standards and all external conduit and conductors for the service.

Related Items
<table>
<thead>
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Documentation
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References
PPM Chapter

Other

Standards
Index No. 17890

Specifications
Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Notes
Valid through 12-31-06; replaced by 508 items

Details and Structure: Complete
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 712-71-AB MOVABLE BRIDGE GATE AS

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Refurnish)

B = Class Gate As Designated By Number Of Approach Lanes To Gate
1 (Class I One Lane)
2 (Class II Two Lane)
3 (Class III Three Lane)
4 (Pedestrian)

Notes

Valid through 12-31-06; replaced by 508 items

712-72-ABC MOVABLE BRIDGE GATE- SPECIAL

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Notes

Valid through 12-31-06; replaced by 508 items

Details

Related Items

Forms

Required Design SHTabQuant

Recommended Construction COMP 700-050-03

Construction 700-050-52

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)

Status

Struct. 712-72-ABC MOVABLE BRIDGE GATE- SPECIAL AS

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)

B = Installation Type
1 (Net Type)
2 (Cable Type)

C = Number Of Lanes
### Notes

**713-1AA-BCD PAVEMENT MARKING- PREFORMED TAPE**

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<tr>
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**Notes**

**Details**

To be considered for use on concrete surfaces.

**Related Items**

**Required**

- **Design**
  - SHTabQuant

**Recommended**

- **Construction**
  - SHTabQuant

**Forms**

- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Documentation**

- **Design**
- **Construction**

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.** 713-1AA-BCD PAVEMENT MARKING- PREFORMED TAPE Mixed

- **AA= Class**
  - 01 (Standard)
  - 02 (High Performance)
  - 03 (Temporary)
  - 07 (Removal) SF, BCD=blank

- **B= Color**
  - 1 (White)
  - 2 (Yellow)
  - 3 (Black)
  - 4 (Blue)
  - 5 (White w/Black Contrast)

- **C= Type of Marking**
  - 1 (Solid) NM
  - 2 (Solid) LF
  - 3 (Skip) GM
  - 4 (Skip) LF
  - 5 (Dotted / Guideline) LF
  - 6 (Messages) EA, D=0
  - 7 (Arrows) EA, D=0

- **D= Width**
  - 0 when C=6, 7
  - 1 (6")
  - 2 (8")

**Details and Structure** Complete
### 714- 1-ABC  MOTORIST AID CALL BOX

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#### Notes

**Details**
Estimate quantity on basis of 2 per mile (1 per 804 meters) in project length for rural areas.

**Related Items**

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Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

7, 13

---

### Status
Inactive Structure

### Struct.

| 714- 1-ABC  MOTORIST AID CALL BOX | AS |

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify Existing Roadside Terminal)
5 (Relocate Existing Roadside Terminal)
6 (Remove)
7 (Refurnish)

B = Installation Type
1 (Roadside Call Terminal)
2 (Call Box Assembly)
3 (Central Terminal)

C = Form
1 (Coded Message, Radio)
2 (Coded Message, Wire)
3 (Voice, Radio)
4 (Voice, Wire)

---

### Notes

#### 714- 2- A  MOTORIST AID CONSOLE

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<th>Each</th>
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Details and Structure: Complete
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**Notes**

**Details**

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<th>MOTORIST AID CONSOLE</th>
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<td>1 (Coded Message, Radio)</td>
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</tr>
<tr>
<td></td>
<td>2 (Coded Message, Wire)</td>
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<tr>
<td></td>
<td>3 (Voice, Radio)</td>
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### Notes Details

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**Notes**

**Details**

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<td>2 (Coded Message, Wire)</td>
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</tr>
<tr>
<td></td>
<td>3 (Voice, Radio)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 (Voice, Wire)</td>
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</tbody>
</table>
A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) Not Valid W/ B= 2, 3, & 4.

B = Form  
1 (Antenna)  
2 (290' Guyed Tower)  
3 (190' Guyed Tower)  
4 (190' Self Support Tower)  
5 (Console)

### 714- 4-ABB  MOTORIST AID MICROWAVE COMPONENT

<table>
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<tr>
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<th>Accuracy</th>
<th>Each</th>
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**Notes**

**Details**

**Related Items**

- **Forms**
  - Design: SHTabQuant  
  - Construction: Refer to Comp Book

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

- Plan Detail and/or Tech Spec Required
- **Prep & Doc Manual Chapter(s)**: 7, 13

**Status**

- Inactive Structure

**Struct.**

- **714- 4-ABB**  MOTORIST AID MICROWAVE COMPONENT  
  
  A = Operation  
  1 (Furnish & Install)  
  2 (Furnish)  
  3 (Install)  
  4 (Relocate)  

  B =  
  01 (10,000 F9 Microwave 1.9 GHz)  
  02 (1,600 F9 Microwave 2.9 GHz)  
  03 (800 F9 Microwave 2.1 GHz)  
  04 (10,000 F9 Microwave 6.5 GHz)  
  05 (Master Alarm System)  
  06 (District Alarm System)  
  07 (Alarm Monitor)  
  08 (6' Grid Microwave Antenna)  
  09 (8' Grid Microwave Antenna)
10 (10’ Grid Microwave Antenna)
11 (10’ Solid Microwave Antenna)
12 (72 MHz Antenna)
13 (150-170 MHz Antenna)
14 (40-50 MHz Antenna)
15 (450-460 MHz Antenna)
16 (CB Antenna)
17 (1/2” Foam Connectors)
18 (7/8” Air Connectors)
19 (Dehydrator And Manifold)
20 (1 5/8” Air Connectors)
21 (72 MHz Base Station)
22 (Waveguide Connectors)
23 (DTMF Call Unit)
24 (DTMF Card / Phone)
25 (Power Divider Harness)
26 (Transmitter Combiner)
27 (Receiver Multicooupler)
28 (6 GHz Digital Radio)
29 (10 GHz Digital Radio)
30 (8’ Solid Microwave Antenna)
31 (6’ Solid Microwave Antenna)
32 (4’ Solid Microwave Antenna)
33 (72 MHz Antenna, High Gain)
34 (Phone Ringing Generator)
35 (10 GHz Waveguide Connector)
36 (Phone System)
37 (Channel Modem, Analog)
38 (Channel Modem, Digital)
39 (Pressurized Connector)

Notes

714-5-ABB MOTORIST AID MICROWAVE TOWER

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Notes

Related Items

- **Forms**
  - Required: Design
  - Recommended: SHTabQuant
  - Construction: Refer to Comp Book

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Plan Detail and/or Tech Spec Required**

Prep & Doc Manual Chapter(s): 6, 7, 13

Details and Structure: Complete
### Status
Inactive Structure

### Struct.
714- 7- A  
MOTORIST AID MICROWAVE TOWER  
EA

- **A** = Operation
- 1 (Furnish & Install)
- 2 (Transport)
- 3 (Disassemble)
- 4 (Modify)  
  **BB** = Tower Height
- 10 (51' - 75')
- 11 (76' - 100')
- 12 (101' - 125')
- 13 (126' - 150')
- 14 (151' - 175')
- 15 (176' - 200')
- 16 (201' - 225')
- 17 (226' - 250')
- 18 (251' - 275')
- 19 (276' - 300')
- 20 (301' - 325')
- 21 (326' - 350')
- 22 (351' - 375')
- 23 (376' - 400')
- 24 (401' - 425')
- 25 (426' - 450')

### Notes

#### 714- 7- A  
MOTORIST AID TRANSMISSION LINES

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### Forms

- **Related Items**
  - **Required**  
    - Design  
      - SHTabQuant
    - Construction  
      - Refer to Comp Book

- **Recommended**  
  - Design  
    - COMP 700-050-03
  - Construction

### Documentation

- **Design**  
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**  
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**  
  - Plan Detail and/or Tech Spec Required

### Prep & Doc Manual Chapter(s)
7, 13

### Status
Inactive Structure

### Struct.
714- 7- A  
MOTORIST AID TRANSMISSION LINES  
LF

---

Details and Structure: Complete
A =
1 (1/2” Foam Transmission Line)
2 (7/8” Air Transmission Line)
3 (1 5/8” Air Transmission Line)
4 (2.01” X 1.16” Elliptic Waveguide)
5 (7/8” Foam Transmission Line)
6 (1.32” X .80” 10 GHz Elliptical Waveguide)
7 (1 5/8” Foam Transmission Line)

**Notes**

### 714-8- A  
**MOTORIST AID MICROWAVE COMMUNICATION SHELTER**

<table>
<thead>
<tr>
<th>Unit</th>
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**Details**

**Related Items**
- Required
- Recommended

**Forms**
- Design: SHTabQuant
- Construction: Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other

### Standards

**Specifications**
- Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**
- Inactive Structure

**Struct.** 714-8- A  
**MOTORIST AID MICROWAVE COMMUNICATION SHELTER**

A = Area In Square Feet
1 ( <100 Sq. Ft. Shelter)
2 (100-125 Sq. Ft. Shelter)
3 (126-150 Sq. Ft. Shelter)
4 (151-175 Sq. Ft. Shelter)
5 (176-200 Sq. Ft. Shelter)
6 (201-250 Sq. Ft. Shelter)
7 (251-300 Sq. Ft. Shelter)
8 (301-400 Sq. Ft. Shelter)
9 ( >400 Sq. Ft. Shelter)

**Notes**

### 714-9- A  
**MOTORIST AID TECHNICAL SUPPORT**

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<th>Notes</th>
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<td>Each</td>
<td>no</td>
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</table>

**Details**

**Related Items**
- Required
- Recommended

**Forms**
- Design: SHTabQuant
- Construction: Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other

### Standards

**Specifications**
- Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**
- Inactive Structure

**Struct.** 714-9- A  
**MOTORIST AID TECHNICAL SUPPORT**

A = Area In Square Feet
1 ( <100 Sq. Ft. Shelter)
2 (100-125 Sq. Ft. Shelter)
3 (126-150 Sq. Ft. Shelter)
4 (151-175 Sq. Ft. Shelter)
5 (176-200 Sq. Ft. Shelter)
6 (201-250 Sq. Ft. Shelter)
7 (251-300 Sq. Ft. Shelter)
8 (301-400 Sq. Ft. Shelter)
9 ( >400 Sq. Ft. Shelter)
### Required Recommendations

**Forms**
- **Design:** SHTabQuant
- **Construction:** Refer to Comp Book

**Documentation**
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Notes**
- Plan Detail and/or Tech Spec Required

### Status
- **Inactive Structure**

### Struct.
- **714- 9- A**

**MOTORIST AID TECHNICAL SUPPORT EA**

A =
- 1 (Training Session Number 1)
- 2 (Training Session Number 2)
- 3 (Training Session Number 3)
- 4 (Testing Callboxes)
- 5 (Control Console)

---

### Related Items

**Forms**
- **Design:** SHTabQuant
- **Construction:** Refer to Comp Book

**Documentation**
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**
- 7, 13

---

**Status**
- **Inactive Structure**

### Struct.
- **714- 9- A**

**MOTORIST AID TECHNICAL SUPPORT EA**

**714- 73- RELAY STATION COMMUNICATION ASSEMBLY**

**Unit** AS  **Accuracy** Assembly  **PlanQuantity?** no

**Details**

**Notes**

---

**Related Items**

**Forms**
- **Design:** SHTabQuant
- **Construction:** Refer to Comp Book

**Documentation**
- **Design:** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction:** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

---

**Status**
- **Inactive Structure**

### Struct.
- **714- 73-**

**RELAY STATION COMMUNICATION ASSEMBLY**

---

**Details and Structure:** Complete
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<td>Assembly</td>
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**Notes**

**Details**

**Related Items**

**Forms**

**Required**

**Design**

SHTabQuant

**Recommended**

**Construction**

COMP 700-050-03

**Documentation**

**Design**

Refer to Comp Book

**Construction**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

**Notes**

**Status**

Inactive Structure

**Struct.**

714-74- CONTROL STATION COMMUNICATION ASSEMBLY AS

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**Notes**

**Details**

Refer to Section 3 for recommended pay item plan note.

**Related Items**

**Forms**

**Required**

**Design**

SHTabQuant

**Recommended**

**Construction**

COMP 700-050-03

**Documentation**

**Design**

Refer to Comp Book

**Construction**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

**Notes**

**Status**

Inactive Structure

**Struct.**

714-75-ABB MOTORIST AID MICROWAVE EA

A = 1 (Spares)

---

Details and Structure: Complete
2 (Test Equipment)
BB =
01 (Transmitter Baseband Combiner Card)
02 (Transmitter Baseband Amplifier Card)
03 (Transmitter Logic Card)
04 (Receiver Splitter Card)
05 (Receiver Baseband Amplifier Card)
06 (Receiver Logic Card)
07 (4w/4w Baseband Bridge)
08 (Alarm Card)
09 (Ringing Generator 5w)
10 (Hybrid Term Set)
11 (FXO Signaling Adaptor)
12 (FXS Signaling Adaptor)
13 (Bypass Card W/Attenuators)
14 (Line Pilot Sync Unit)
15 (Two-Step Group Translator)
16 (Dual Hybrid Card Kit)
17 (Equalizer / Timer For Battery Charger)
18 (RF Power Meter)
19 (RF Power Sensor)
20 (Tracking Generator)
21 (Selective Level Meter)
22 (Frequency Counter)
23 (RF Attenuator 20w, 30 Db)
24 (Variable Attenuator, 6-66 Db)
25 (Trans, Imparmrment Measurement Set -TIMS)
26 (Digital Multimeter)
27 (4w/4w DTMF Bridge)
28 (Test Fixtures)
29 (Transmitter Power Amplifier)
30 (Receiver Rf Amplifier)
31 (Transmitter Oscillator)
32 (Transmitter Modulator)
33 (Receiver Local Oscillator)
34 (Receiver If Amplifier)
35 (Remote Alarm Terminal)
36 (Selective Call Unit)
37 (Channel Modem)
38 (HF Combiner) S
39 (DTMF Orderwire Unit)
40 (72 MHz Base Transmitter Unit)
41 (72 MHz Base Receiver Unit)
42 (72 MHz Base Bridge)
43 (Phone Ringing Generator)
44 (Digital Channel/Codec)
45 (Spectrum Analyzer)
46 (Signal Generator)
47 (Bit Error Rate Test Set)

Notes

<table>
<thead>
<tr>
<th>715-1-AB</th>
<th>Lighting- Conductors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>LF; M1</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
</tr>
</tbody>
</table>

Details and Structure: Complete
### Notes

*Effective for projects let January 2007; replaces 715-1-ABC and 2715-11A-BCC.*

### Details

Includes conductors as per the plans and standard indexes. Design quantity shall be based on the length of single conductor in horizontal measurement.

#### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>SBTBLT</td>
</tr>
</tbody>
</table>

#### Forms

**Construction**

Refer to Comp Book

#### Documentation

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

PPM Chapter

Other

Standards

Index No. 17500, 17501, 17502

Specifications

*Selected Items may require Tech Spec and/or Plan Detail

Prep & Doc Manual Chapter(s) 6, 7, 13

---

### Status

#### Struct. 715-1-AB Lighting- Conduits LF

<table>
<thead>
<tr>
<th>A= Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Furnish &amp; Install)</td>
</tr>
<tr>
<td>2 (Furnish)</td>
</tr>
<tr>
<td>3 (Install)*</td>
</tr>
<tr>
<td>4 (Relocate)*</td>
</tr>
<tr>
<td>5 (Adjust /Modify)*</td>
</tr>
<tr>
<td>6 (Remove &amp; Dispose)* Note: Contractor takes ownership</td>
</tr>
<tr>
<td>7 (Remove &amp; Stockpile/Salvage)* Note: DOT/maintaining agency retains ownership</td>
</tr>
<tr>
<td>8 (Place out of Service)*</td>
</tr>
<tr>
<td>9 OPEN Note: May be defined in item structure as Special, Rehab, etc.</td>
</tr>
</tbody>
</table>

* When A=3-9, B=0

<table>
<thead>
<tr>
<th>B= Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (No. 10 or smaller)</td>
</tr>
<tr>
<td>2 (No 8 to No. 6)</td>
</tr>
<tr>
<td>3 (No. 4 to No. 2)</td>
</tr>
<tr>
<td>4 (No. 1 to No. 0)</td>
</tr>
<tr>
<td>5 (No. 1/0 to No. 3/0)</td>
</tr>
<tr>
<td>6 (No. 4/0 or larger)</td>
</tr>
<tr>
<td>9 (Special)</td>
</tr>
</tbody>
</table>

---

### Notes

#### 715-2-AB LIGHTING CONDUIT

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes

*Effective 1-1-2007; Replaces 715-2-ABC*

#### Details

For highway lighting applications only. Includes conduit, elbows, sweeps, connecting hardware, trenching and backfill as per the plans and standard indexes. Also includes the cost of restoring cut pavement, sidewalks, sod, etc. to its original condition. Use
'Underground' in locations where the placement of the conduit will not necessitate saw-cutting of pavement. Most conduit placed on new construction projects will be placed underground prior to the placement of pavement, and should be paid for as Underground. Underpavement should be used when it is necessary to saw-cut and backfill the pavement in order to place the conduit. Additional conduit placed for future use should be detailed in the plans; tabulate quantity as furnished & installed conduit.

When Furnish item is used, plans or specs should detail location (maintenance yard or other) for delivery of product.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SBTBLT</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
</tbody>
</table>

### References

<table>
<thead>
<tr>
<th>Standards</th>
<th>Index No. 17721</th>
</tr>
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<tbody>
<tr>
<td>Specifications</td>
<td></td>
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</tbody>
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### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>LIGHTING CONDUIT</th>
<th>LF</th>
</tr>
</thead>
<tbody>
<tr>
<td>A= Operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Furnish &amp; Install)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (Furnish) B=0 plan detail or specification required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (Install)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B = Location</td>
<td></td>
<td></td>
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<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (Underground)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (Underpavement Sawcut) Note: Only when sawcutting is necessary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (Surface Mount)</td>
<td></td>
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</tbody>
</table>

### Notes

See details above for furnish item

---

### 715- 4-ABC LIGHT POLE COMPLETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Effective January 2008; replaces 715-4A-BCC

**Details**

For standard light pole designs.

Use C=Custom only when the pole height is non-standard. Remaining design standards apply.

For Special Design (non-standard) light poles, refer to 715-5AB-CDD.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Forms</td>
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<tr>
<td>Design</td>
<td>SBTBLT</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
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</tbody>
</table>


**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Structures Manual, Vol 9

Specifications

Prep & Doc Manual Chapter(s)

**Status**

**Struct.** 715- 4-ABC  
LIGHT POLE COMPLETE  
EA

A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) BC=00  
4 (Relocate) BC=00  
6 (Remove) BC=00

B= Wind Speed (mph)  
1 (150)  
2 (130)  
3 (110)

C= Pole Height (feet)  
1 (40)  
2 (45)  
3 (50)  
9 (Custom height)

**Notes**

Includes the bracket arm, luminaire with lamp and all necessary mounting hardware as per the plans and indexes.

**Related Items**

**Forms**

Required  
Design  
SBTBLT

Recommended  
Construction  
COMP 700-050-03

**Documentation**

Design  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards  
Index No. 17500, 17501

Specifications

Prep & Doc Manual Chapter(s) 7, 13

---

Details and Structure: Complete
A = Operation
  1 (Furnish & Install)
  2 (Furnish)
  3 (Install)
  4 (Relocate)
  5 (Remove)

Code B = 0 If A = 3, 4, Or 5
B = Material Type
  1 (Aluminum)
  2 (Galvanized Steel)

**715- 7- AB LOAD CENTER**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
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**Related Items**

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<th>Required</th>
<th>Recommended</th>
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<td>SBTBLT</td>
<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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**Documentation**

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**References**

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<td>Construction</td>
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| Other |
| Index No. 17504 |
| Specifications |

| Prep & Doc Manual Chapter(s) | 7, 13 |

**Status**

**715- 7- AB LOAD CENTER**

<table>
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**715- 10- A LIGHT POLE FOUNDATION**

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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Includes the foundation and anchor bolts with lock nuts and washers as per the plans and
standard indexes. Includes all components listed in the Standards and all external conduit and conductors for the service.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td><strong>Forms</strong></td>
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<tr>
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<td>SBTBLT</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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### Standards

<table>
<thead>
<tr>
<th>Index No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17500, 17501, 17502, 17504</td>
</tr>
</tbody>
</table>

### Specifications

**Struct. 715-10- A LIGHT POLE FOUNDATION EA**

A = Operation
1 (Open)
2 (Furnish & Install)
3 (Repair)
4 (Straighten Existing Foundation)
5 (Remove)
6 (Relocate)
7 (Furnish)
8 (Install)

### Notes

- **Struct. 715-11-ABC LUMINAIRE**
  - **Unit**: EA
  - **Accuracy**: Each
  - **PlanQuantity?**: no

**Notes**

Includes the luminaire with lamp and necessary mounting hardware as per the plans and standard indexes.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>SBTBLT</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td></td>
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<tr>
<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
</tr>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
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### References

**PPM Chapter**

**Design**: 7, 13

**Construction**: Refer to Comp Book

---

**Details and Structure**: Complete
### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>715-11-ABC</th>
<th>LUMINAIRE</th>
<th>EA</th>
</tr>
</thead>
</table>

**A = Operation**  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Relocate)  
5 (Remove)  
6 (Repair & Reinstall)

**B = Classification**  
1 (Roadway)  
2 (Underdeck)  
3 (Sign)

**C = Type**  
1 (Cobra Head)  
2 (High Mast)  
3 (Pole Top)  
4 (Shoe Box)  
5 (Wall Mount)  
6 (Pendant Hung)  
7 (Sign Mount)  
8 (Flood)  
9 (Special)

### Notes

#### 715-14-AB  LIGHTING- PULL BOX

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Includes the pull box and cover as per plans and standard indexes.

**Related Items**

**Required**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Design</th>
<th>SBTBLT</th>
</tr>
</thead>
</table>

**Recommended**

<table>
<thead>
<tr>
<th>Construction</th>
<th>COMP 700-050-03</th>
</tr>
</thead>
</table>

**Details**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Record final quantity on the tabulation sheet (plans) or computation form (comp book).**

**References**

**PPM Chapter**

**Other**

**Standards**

Index No. 17500, 17503

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>715-14-AB</th>
<th>LIGHTING- PULL BOX</th>
<th>EA</th>
</tr>
</thead>
</table>

**A = Operation**  
1 (Furnish & Install)  
2 (Furnish)

Details and Structure: Complete
3 (Install)
4 (Relocate)
5 (Remove)
6 (Furnish & Install Cover Only)
7 (Repair)

B = Placement
1 (Roadside) - Moulded
2 (Sidewalk)
3 (Embedded) - Bridge
4 (Surface Mount)

Notes

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>715-19-A</td>
<td>LIGHTING- SURGE PROTECTOR</td>
<td>EA</td>
<td>Each</td>
<td>no</td>
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</tbody>
</table>

**Related Items**
- **Required**: SBTBLT
- **Recommended**: COMP 700-050-03

**Forms**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**: 7, 13

**Status**
- **Struct.**: 715-19-A
- **Notes**
  - A =
    - 1 (Pole Base)
    - 2 (Install Only)

**Details**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
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</thead>
<tbody>
<tr>
<td>715-19-ABC</td>
<td>HIGH MAST LIGHT POLE, COMPLETE</td>
<td>EA</td>
<td>Each</td>
<td>no</td>
</tr>
</tbody>
</table>

**Related Items**
- **Required**: SBTBLT
- **Recommended**: COMP 700-050-03

**Forms**
- **Design**
- **Construction**

**Documentation**
- **Design**: Refer to Comp Book
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Details and Structure**: Complete
Standards
Specifications
Struct. 715-19-ABC HIGH MAST LIGHT POLE, COMPLETE EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install) BC=00
6 (Remove) BC=00

B = Wind Speed (mph)
1 (150)
2 (130)
3 (110)

C = Pole Height (feet)
1 (80)
2 (100)
3 (120)
9 (Custom)

Notes
715-20- A LIGHTING- SCHEDULED CLEANING

Unit LU Accuracy Luminaire Plan Quantity? no

Details
Related Items
Forms Required Recommended
Design SBTBLT COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

Status
Struct. 715-20- A LIGHTING- SCHEDULED CLEANING LU

A =
1 (Pole Mounted <50’)

Details and Structure: Complete
Notes

715-21-1 LUMINAIRE STARTER BOARD

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

Notes

Details

Related Items

Forms
- Required: SBTBLT
- Recommended: COMP 700-050-03

Construction
- Refer to Comp Book

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s)

Status

Struct. 715-21-1 LUMINAIRE STARTER BOARD EA

Notes

715-26- A QUICK DISCONNECT PLUG

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

Notes

Details

Related Items

Forms
- Required: SBTBLT
- Recommended: COMP 700-050-03

Construction
- Refer to Comp Book

Documentation
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s) 7, 13

Status

Details and Structure: Complete
### Struct. 715-26- A  QUICK DISCONNECT PLUG  EA

A =
1 (Switch Boxing - For Sign Structure)
2 (Plug Pole Base - High Mast)

### Notes

**Related Items**
- **Forms**
  - **Required**
  - **Recommended**
  - **Design**
  - **SBTBLT**
  - **COMP 700-050-03**

- **Design**
  - **Refer to Comp Book**

- **Construction**
  - **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**

- **Construction**
  - **Record final quantity on the tabulation sheet (plans) or computation form (comp book).**

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

### Status

**Struct. 715-30- AA  GROUP RELAMPING (LIGHTING)  LU**

AA =
1 (Mercury Vapor)
2 (High Pressure Sodium)
3 (Metal Halide)
4 (Bridge Mounter HPS)
5 (High Mast/HPS)
6
7
8 (Low Pressure Sodium)
9 (Fluorescent)
10 (Incandescent)
11 (State Furnished Lamps)

### Notes

**Related Items**
- **Forms**
- **Required**
- **Recommended**
  - **Design**
  - **SBTBLT**
  - **COMP 700-050-03**

**Details and Structure: Complete**
Standards
Specifications
Struct. 715-31-AA LIGHTING - ROUTINE MAINTENANCE
AA =
1 (Shoulder, Single Arm)
2 (Shoulder, Double Arm)
3 (Median, Single Arm, Wall Mtd.)
4 (Median, Double Arm, Wall Mtd.)
5 (Bridge Mounted)
6 (Underdeck)
7 (Load Center)
8 (High Mast Pole)
9 (Overhead Sign Assembly)

Notes
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status
Struct. 715-31-AA LIGHTING - ROUTINE MAINTENANCE

Notes
This is a Maintenance item. Coordinate with District Maintenance Office.

Related Items
Required
Recommended
Forms
Design
SBTBLT
COMP 700-050-03
Design
Refer to Comp Book
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Design
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

Status
Struct. 715-34-A LIGHT POLE (FURNISH NEW POLE)

Notes
Details
This is a Maintenance item. Coordinate with District Maintenance Office.

Related Items
Required
Recommended
Forms
Design
SBTBLT
COMP 700-050-03
Design
Refer to Comp Book
Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Design
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

Details and Structure: Complete
1 (Furnish New Pole)
2 (Repair A Pole And Furnish For Reuse)

### Notes

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<tr>
<th>Unit</th>
<th>EA</th>
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### Related Items

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<tr>
<td>Construction</td>
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</table>

### Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

### References

- PPM Chapter
- Other

### Status

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<th>715- 35- A</th>
<th>MAST ARM</th>
<th>EA</th>
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A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Repair)

---

### Notes

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### Related Items

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<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</tbody>
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### Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

### References

- PPM Chapter
- Other

---

Details and Structure: Complete
### Standards
Index No. 17501

### Specifications

### Prep & Doc Manual Chapter(s) 7, 13

## Status

**Struct.** 715-36-AB **LIGHT POLE FRANGIBLE BASE** EA

A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Remove)  
5 (Leveling In-Place Pole)  

B = Type  
1 (Shoe Base)  
2 (Transformer Base)  
3 (Frangible Insert)  
4 (Door Assembly)

## Notes

**Notes**

### 715-37- A **PHOTO ELECTRIC CONTROL ASSEMBLY**

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

**Notes**

**Details**  
Includes the photo electric control, transformer, conduit and conductors as per the plans and standard indexes.

**Related Items**

**Required**  
SBTBLT

**Recommended**  
COMP 700-050-03

**Forms**

**Design**  
Refer to Comp Book

**Construction**

**Design**  
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

Index No. 17504

**Specifications**

**Prep & Doc Manual Chapter(s) 7, 13**

## Status

**Inactive Structure**

**Struct.** 715-37- A **PHOTO ELECTRIC CONTROL ASSEMBLY** EA

A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Remove)  
5 (Relocate)

**Notes**

Inactive
### 715-4A-BCC  ALUMINUM LIGHT POLE, COMPLETE

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Each</td>
<td>no</td>
<td>Valid through December 2007; replaced by 715-4-ABC.</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td>To be used in accordance with Index. Verify case number on standard. For special designs, refer to pay item 715-5AB-CDD.</td>
</tr>
<tr>
<td>Required</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended</td>
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**Forms**
- **Design**: SBTBLT
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Index**
- 17515

**Specifications**
- Index 71515

**Prep & Doc Manual Chapter(s)**
- 7, 13

### Status
- **Struct. 715-4A-BCC**
  - **Unit**: EA
  - **Accuracy**: Each
  - **PlanQuantity?**: no

**Notes**
- Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### 715-50- LIGHTING- INSIDE BOX GIRDER

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<tr>
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<td></td>
<td></td>
<td></td>
<td>Effective January 2007 letting. (Earlier implementation upon request)</td>
</tr>
<tr>
<td>Details</td>
<td></td>
<td></td>
<td></td>
<td>Intended for lighting system within box girder structures. Coordinate the use of this item with the Mechanical/Electrical Section of the State Structures Office. All work must be detailed in the plans/specifications, including a tabulation of materials.</td>
</tr>
<tr>
<td>Required</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Recommended</td>
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**Forms**
- **Design**: SHTabQuantLS
- **(No COMP Form; use tabulation sheet)**
715-11A-BCC CONDUCTOR- LIGHTING

Unit: LF; M1
Accuracy: Linear Foot; 10th of a Meter
PlanQuantity?: no

Notes: Valid for through 12-31-2006. replaced by 715-1-AB.

Details: For English Equivalent, see 715-1-abc
Payment shall be based on the length of a single conductor times the number of conductors.

Related Items:

Required: SBTBLT
Recommended: COMP 700-050-03

Forms: Design

Documentation: Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References:

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status: Block Pending
Struct. 715-11A-BCC CONDUCTOR- LIGHTING LF

Notes
bolts with lock nuts and washers, and base plate assembly.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
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<th>Recommended</th>
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<tr>
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<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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Documentation

| Design       | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

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<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
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</tbody>
</table>

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 715-19A-BBB HIGH MAST LIGHT POLE, COMPLETE EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4
5 (Remove)
6 (Rework)

BBB = Mounting Height (In Feet)

Notes

Includes the surge protector, fuse holders with fuses, waterproof connectors and waterproof wiring connection to the luminaire. Refer to Section 992 of the Specifications for details.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design</td>
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<tr>
<td>Construction</td>
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Documentation

| Design       | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

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<td>Specifications</td>
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Prep & Doc Manual Chapter(s) 7, 13

Notes

715-500- A LIGHT POLE CABLE DISTRIBUTION SYSTEM

<table>
<thead>
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<th>EA</th>
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<tbody>
<tr>
<td>Accuracy</td>
<td>Each</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

Details

Includes the surge protector, fuse holders with fuses, waterproof connectors and waterproof wiring connection to the luminaire. Refer to Section 992 of the Specifications for details.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tr>
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<tr>
<td>Construction</td>
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Documentation

| Design       | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References

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Prep & Doc Manual Chapter(s) 7, 13

Details and Structure: Complete
### Structure

<table>
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</tr>
<tr>
<td>1 = (Conventional)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 = (High Mast)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 = (Wall Mounted)</td>
<td></td>
<td></td>
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</tr>
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</table>

### Notes

**A = Type**
- 1 = (Conventional)
- 2 = (High Mast)
- 3 = (Wall Mounted)

**Notes**

**715-5AB-CDD**

<table>
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<th>Accuracy</th>
<th>Each</th>
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</tr>
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</table>

**Notes**

**Details**

- Used for Specially Designed Poles, including decorative or non-standard aluminum.
- Requires shop drawings.
- Includes the pole, bracket arm, luminaire with lamp, anchor bolts with lock nuts and washers, frangible base and foundation.

**Related Items**

<table>
<thead>
<tr>
<th>Related Items</th>
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<tbody>
<tr>
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**Documentation**

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**References**

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**Standards**

| Index No. 17500, 17501, 17503 |

**Specifications**

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**Prep & Doc Manual Chapter(s)**

- 7, 13

### Status

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<td>1 (Furnish &amp; Install)</td>
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<tr>
<td>2 (Furnish)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3 (Install)</td>
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<td></td>
<td></td>
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<tr>
<td>4 (Relocate) B-CDD = 0-000</td>
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<tr>
<td>5 (Remove) B-CDD = 0-000</td>
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<tr>
<td>6 (Repair &amp; Reinstall) B-CDD = 0-000</td>
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</tr>
<tr>
<td>7 (Furnish &amp; Install With Internal Vibration Damper)</td>
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</tr>
<tr>
<td>B = No. Arms &amp; Location</td>
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<tr>
<td>1 (Single Arm Shoulder Mount)</td>
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</tr>
<tr>
<td>2 (Double Arm Shoulder Mount)</td>
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<tr>
<td>3 (Single Arm Wall Mount)</td>
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</tr>
<tr>
<td>4 (Double Arm Wall Mount)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 (Single Arm Bridge Mount)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 (Pole Top Mount)</td>
<td></td>
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</tbody>
</table>

**Details and Structure:** Complete
7 (Double Arm Bridge Mount)
8 (Double Arm, Pole Top Mount)

C = Material Type
1 (Aluminum) non-standard designs
2 (Galvanized Steel)
3 (Concrete)
4 (Fiberglass)
5 (Wood)
6 (Cast Iron)

DD = Mounting Height (Open In Five Foot Increments)

### Notes

#### 721-70-AB PASSENGER SHELTER- ALUMINUM, PREFABRICATED

<table>
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<th>PlanQuantity?</th>
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<td>no</td>
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</table>

**Related Items**
- **Required**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**

**Struct.** 721-70-AB PASSENGER SHELTER- ALUMINUM, PREFABRICATED

A =
1 (Aluminum)
B =
1 (Pre-Fabricated)

**Notes**

#### 721-74- A TRASH RECEPTACLE

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**Related Items**
- **Required**
  - Design: SHTabQuant

**Forms**
- **Design**: COMP 700-050-03
### Structure 721-74- A TRASH RECEPTACLE

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<td></td>
<td></td>
<td>yes</td>
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</tbody>
</table>

**Notes**
- **Details**
- **Related Items**
  - Required
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- **Forms**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- **Documentation**
  - Design:
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
    - PLAN QUANTITY will be basis of payment to the Contractor.
  - Construction:
    - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Plan Detail and/or Tech Spec Required
- Prep & Doc Manual Chapter(s) 7, 13

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### Structure 721-75- A BENCHES

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**Notes**
- **Details**
- **Related Items**
  - Required
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- **Forms**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- **Documentation**
  - Design:
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
    - PLAN QUANTITY will be basis of payment to the Contractor.
  - Construction:
    - Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- PPM Chapter
- Other
- Standards
- Specifications
- Plan Detail and/or Tech Spec Required
- Prep & Doc Manual Chapter(s) 7, 13

---

**Details and Structure: Complete**
### BICYCLE PARKING RACK

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

#### Notes

#### Related Items

- **Forms**
  - Required: Design
  - Recommended: SHTabQuant
  - Construction: Refer to Comp Book

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

- **References**
  - PPM Chapter
  - Other
  - Standards
  - Specifications

- **Plan Detail and/or Tech Spec Required**
  - Prep & Doc Manual Chapter(s): 7, 13

#### Status

- **Struct.**: 721-77- BICYCLE PARKING RACK

#### Details

- **Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.**

- **PLAN QUANTITY will be basis of payment to the Contractor.**

- **Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.**

### PEDESTRIAN PLAZA

| Unit | LS/LS | Accuracy | Lump Sum | PlanQuantity? | yes |

#### Notes

- **May include pedestrian banners, drinking fountains, kiosk, and other items, as detailed in the plans. Tabulation summary required on all projects.**

#### Related Items

- **Forms**
  - Required: Design
  - Recommended: SHTabQuantLS
  - Construction: Refer to Comp Book

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

- **Plan Detail and/or Tech Spec Required**
  - Prep & Doc Manual Chapter(s): 7, 13

#### Status

- **Struct.**: 721-80- PEDESTRIAN PLAZA
### Notes

**730-76-ABB STEEL CASING, OPEN TRENCH**

| Unit  | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

**Notes**

**Details**

a=1, 4, 5 valid for open cut trench applications only. For Jack & Bore, Directional Bore, and/or vibratory plowing, refer to Items 555, 556, and/or 557.

**Related Items**

**Required**

SHTabQuant

**Recommended**

COMP 700-050-03

**Forms**

**Design**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

PPM Chapter

**Prep & Doc Manual Chapter(s)**

6, 7, 13

**Status**

**Struct.** 730-76-ABB STEEL CASING, OPEN TRENCH LF

A = Operation

1 (Furnish & Install)

4 (Remove)

5 (Install)

BB = Size

01 (2"

02 (3"

03 (4"

04 (6"

05 (8"

06 (10"

07 (12"

08 (14"

09 (16"

10 (18"

11 (20"

12 (22"

13 (24"

14 (26"

15 (28"

16 (30"

17 (32"

18 (34"

19 (36"

20 (38"

Details and Structure: Complete
21 (40")
22 (42")
23 (48")
24 (54")
25 (60")
26 (66")
27 (64")
28 (78")
29 (84")
30 (72")
31 (90")
32 (108")
33 ("")
34 ("")

**Notes**

<table>
<thead>
<tr>
<th>730-77- AA</th>
<th>CASING SPACERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td><strong>EA</strong></td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td><strong>Each</strong></td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td><strong>no</strong></td>
</tr>
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</table>

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| **Design** | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| **Construction** | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**PPM Chapter**

<table>
<thead>
<tr>
<th><strong>Design</strong></th>
<th>Construction</th>
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<tbody>
<tr>
<td>PPM Chapter</td>
<td>Prep &amp; Doc Manual Chapter(s) 6, 7, 13</td>
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</tbody>
</table>

**References**

**Struct.**

<table>
<thead>
<tr>
<th><strong>730-77- AA</strong></th>
<th><strong>CASING SPACERS</strong></th>
<th><strong>EA</strong></th>
</tr>
</thead>
</table>

AA = Carrier Size

01 (2")
02 (3")
03 (4")
04 (6")
05 (8")
06 (10")
07 (12")
08 (14")
09 (16")
10 (18")
11 (20")
12 (22")
13 (24")
<table>
<thead>
<tr>
<th>Unit</th>
<th>PW; EA; LF; M1</th>
<th>Accuracy</th>
<th>Per Well; Each; Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

Final Measure:
For Per Each/Well Items: Final tabulation of quantities must be recorded on proper form in computation book by location.
For Length Measurements: Record final measurements on proper form in computation book or field book. When measurements have been recorded in the field book, transfer final quantities to computation book.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
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</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prep &amp; Doc Manual Chapter(s)</td>
<td>7, 13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status**

**Struct.**

<table>
<thead>
<tr>
<th>730- 83- A WELL</th>
<th>PW; EA; LF;</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 4 (4&quot; Casing)</td>
<td>6 (6&quot; Casing)</td>
</tr>
</tbody>
</table>
### Notes

**730-84- A**  
**WELL (IN EXCESS OF 250 FEET DEPTH)**

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>Plan Quantity? no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</tbody>
</table>

**Documentation**

<table>
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<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
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<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

| PPM Chapter | |
|-------------| |
| Other       | |
| Standards   | |
| Specifications | |

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

**Status**

**Struct.**  
**730-84- A**  
**WELL (IN EXCESS OF 250 FEET DEPTH)**  
**LF**

A =  
4 (4" Casing)  
6 (6" Casing)

**Notes**

---

### 730-88-  
**PUMPING SYSTEM**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>Plan Quantity? no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
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</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

| PPM Chapter | |
|-------------| |
| Other       | |
| Standards   | |
| Specifications | |

---

Details and Structure: Complete
Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 6, 7, 13

---

**Status**

**Struct.** 730-88- PUMPING SYSTEM EA

---

**Notes**

---

**735-74- AA** TOLL PLAZA

| Unit    | LS/LS | Accuracy | Lump Sum | PlanQuantity? | yes |

---

**Notes**

**Details**

Tabulation summary required on all projects.

**Related Items**

**Required**

**Design**

SHTabQuantLS

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

---

---

**Related Items**

**Forms**

Design

SHTabQuantLS

**Construction**

COMP 700-050-05

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

---

**Status**

**Struct.** 735-74- AA TOLL PLAZA LS/LS

---

**Notes**

---

**735-79-** SEWAGE AND WATER MODIFICATIONS

| Unit    | LS/LS | Accuracy | Lump Sum | PlanQuantity? | no |

Details and Structure: Complete
**Notes**

**Details**

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>Design</strong></td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td></td>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td><strong>Design</strong></td>
<td>Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans.</td>
</tr>
<tr>
<td></td>
<td><strong>Construction</strong></td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
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</table>

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status** Inactive Structure

**Struct.** 735- 79- SEWAGE AND WATER MODIFICATIONS LS/LS

---

**Notes**

**Details**

<table>
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<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Forms</strong></td>
<td><strong>Design</strong></td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td></td>
<td><strong>Construction</strong></td>
<td>Refer to Comp Book</td>
</tr>
<tr>
<td><strong>Documentation</strong></td>
<td><strong>Design</strong></td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.</td>
</tr>
<tr>
<td></td>
<td><strong>Construction</strong></td>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)** 6, 7, 13

**Status** Inactive Structure

**Struct.** 735- 80- SERVICE PLAZA RENOVATION LS/LS

---

**Notes**
### 735-82- A TOLL PLAZA CANOPY

**Unit**: SF; M2  
**Accuracy**: Square Foot; 10th of a Square Meter  
**PlanQuantity?**: yes

#### Notes

#### Details

#### Related Items

**Forms**

- **Required**: Design  
- **Recommended**: SHTabQuant

**Construction**  
- **Required**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

- **Construction**: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

#### References

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**: 7, 13

---

**Status**: Inactive Structure

**Struct.**: 735-82- A TOLL PLAZA CANOPY SF

A =

1 (Concrete)
2 (Aluminum)
3 (Steel)

---

### 735-84- A TOLL PLAZA ISLAND

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

#### Notes

#### Details

#### Related Items

**Forms**

- **Required**: Design  
- **Recommended**: SHTabQuant

**Construction**  
- **Required**: Refer to Comp Book

**Documentation**

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Plan Detail and/or Tech Spec Required**

---

Details and Structure: Complete
<table>
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<tr>
<th>Status</th>
<th>Inactive Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Struct.</td>
<td>735-84- A TOLL PLAZA ISLAND EA</td>
</tr>
</tbody>
</table>

A =
1 (New)
2 (Modify)
3 (Remove)
4 (New With Stairwell)

**Notes**

<table>
<thead>
<tr>
<th>735-86- A DETECTORS VEHICLE- TREADLE FRAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

**Design**

SHTabQuant

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

<table>
<thead>
<tr>
<th>Struct.</th>
<th>735-86- A DETECTORS VEHICLE- TREADLE FRAME EA</th>
</tr>
</thead>
</table>

A =
1 (Existing Concrete Pavement)
2 (New Concrete Pavement)

**Notes**

<table>
<thead>
<tr>
<th>735-87- A UTILITY TUNNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

**Related Items**

**Forms**

**Design**

SHTabQuant

**Recommended**

COMP 700-050-03

Details and Structure: Complete
### Standards

**Struct. 735- 87- A UTILITY TUNNEL LF**

*Notes*

- Plan Detail and/or Tech Spec Required

**Status**

Inactive Structure

**Struct. 735- 87- A**

**Notes**

- Plan Detail and/or Tech Spec Required

**735- 88- TOLL PLAZA MODIFY EXISTING**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS/LS</td>
<td>Lump Sum</td>
<td>yes</td>
</tr>
</tbody>
</table>

**Notes**

- Tabulation summary required on all projects.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

- Use a quantity of 1. No form required. Locate or define the scope of work involved on the plans.

**References**

- Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

- 7, 13

**Status**

**Struct. 735- 88-**

**Notes**

**735- 89- AUTOMATIC WINDSHIELD WASHER**

Details and Structure: Complete
<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

### Notes

**Details**

**Related Items**

**Forms**

**Design**

Required

Recommended

**Construction**

Refer to Comp Book

### Documentation

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

**PPM Chapter**

**Other**

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct.** 735- 89- AUTOMATIC WINDSHIELD WASHER EA

---

### Utility Relocation- Water

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>yes</th>
</tr>
</thead>
</table>

### Notes

**Details**

**Related Items**

**Forms**

**Design**

Required

Recommended

**Construction**

Refer to Comp Book

### Documentation

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

**Construction**

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

**PPM Chapter**

**Other**

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct.** 736- 72- AA UTILITY RELOCATION- WATER LS/LS

**AA =**

11 (Permanent)

12 (Temporary)
### RAILROAD TRACK WORK

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>Plan Quantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
- Tabulation summary required on all projects.

**Related Items**
- **Required**
  - Design: SHTabQuantLS
  - Construction: Refer to Comp Book
- **Recommended**
  - Design: COMP 700-050-05
  - Construction: Refer to Comp Book

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Status**
- **Struct.** 736-73-1
- **RAILROAD TRACK WORK**
- **LS/LS**

---

### RAILROAD TURNOUT AND CROSSOVER

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>Plan Quantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Related Items**
- **Required**
  - Design: SHTabQuant
  - Construction: Refer to Comp Book
- **Recommended**
  - Design: COMP 700-050-03
  - Construction: Refer to Comp Book

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Status**

---

Details and Structure: Complete
### Struct.  736- 74-  A  RAILROAD TURNOUT AND CROSSOVER  EA

A =  
1 (No. 10)

#### Notes

### 736- 75-  RAILROAD CROSSING SIGNAL (CLASS II, TYPE 1)

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

#### Details

**Related Items**

**Forms**
- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

**PPM Chapter**
- Design
- Construction

**Prep & Doc Manual Chapter(s)**

**Other**

**Standards**

**Specifications**

- Plan Detail and/or Tech Spec Required
- Refer to Comp Book

### Status

#### Struct.  736- 75-  RAILROAD CROSSING SIGNAL (CLASS II, TYPE 1)  EA

#### Notes

### 737- 70-  A  UTILITY LOCATE

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes

#### Details

This item is intended to be used for verification of utility locations designated in the plans, when necessary to specifically identify a location. This item is not to be used for incidental work covered by 7-11 of the specifications.

**Related Items**

**Forms**
- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**
- Design
- Construction

**Prep & Doc Manual Chapter(s)**

**Other**

**Standards**

Details and Structure: Complete
### Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**  6, 7, 13

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
<th>737-70- A UTILITY LOCATE</th>
<th>EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A =</td>
<td>1 (Underground)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 (Under Pavement)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 (Electronic - Horizontal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 (Underwater)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**  6, 7, 13

#### 737-71- A ELECTRONIC UTILITY DESIGNATE

**Unit**  LF; M1  **Accuracy**  Linear Foot; 10th of a Meter  **PlanQuantity?**  no

**Notes**

This item is intended to be used for verification/designating/marking of utility locations designated in the plans. Marker requirements to be provided by designer for specifications. Pay item not intended for searching unknown conditions. This item is not to be used for incidental work covered by 7-11 of the specifications.

**Related Items**

**Forms**

- **Design**  SHTabQuant  **Recommended**  COMP 700-050-03
- **Construction**  Refer to Comp Book

**Documentation**

- **Design**  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Related Items

**PPM Chapter**

**Other**

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**  6, 7, 13

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<td>4 (Underwater)</td>
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### Notes

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**  6, 7, 13

#### 740-71-ABC WALL

Details and Structure: Complete
### Unit
LF; M1

### Accuracy
Linear Foot; 10th of a Meter

### PlanQuantity?
no

### Notes

#### Details

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</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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</table>

#### Documentation

- Design
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

- PPM Chapter
- Other
- Standards
- Specifications

#### Prep & Doc Manual Chapter(s)
7, 13

### Status

**Struct.**

<table>
<thead>
<tr>
<th>740- 71-ABC</th>
<th>WALL</th>
<th>LF</th>
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</thead>
</table>

- A = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
  - 4 (Removal)
  - 5 (Rehab) LS, BC=00
- B = Material
  - 1 (Drywall)
  - 2 (Panel Wall)
  - 3 (Block Wall)
  - 4 (Other)
- C = Height
  - 1 (8')
  - 2 (10')
  - 3 (12')
  - 4 (Other)

### Notes

Refer to Specifications for use and application.

#### Related Items

- Forms
- Documentation

#### Preparations and Documentation Manual Chapter(s)
7, 13

---

### 471- 70-ABC
TRAFFIC MONITORING SITE, VEHICLE SENSOR- CLASS II

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#### Notes

Refer to Specifications for use and application.

#### Related Items

- Forms
- Documentation

#### Preparations and Documentation Manual Chapter(s)
7, 13

---

Details and Structure: Complete
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 741-70-ABC

TRAFFIC MONITORING SITE, VEHICLE SENSOR-CLASS II

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

B = Vehicle Sensor Type
1 (Type I)
2 (Type II)

C = Sensor Length
1 (Half Lane Width)
2 (Full Lane Width)
3 (Non-Intrusive)

**Notes**

Refer to Specifications for use and application.

**Related Items**

**Forms**

Required
Design SHTabQuant
Construction Refer to Comp Book

Recommended
Design COMP 700-050-03

**Documentation**

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 742-70-AB

TRAFFIC MONITORING SITE, WEIGH-IN-MOTION ELECTRONICS ASSEMBLY

**Notes**

Refer to Specifications for use and application.

**Related Items**

**Forms**

Required
Design

Recommended
Design SHTabQuant

**Documentation**

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 742-70-AB

TRAFFIC MONITORING SITE, WEIGH-IN-MOTION ELECTRONICS ASSEMBLY

**Notes**

Refer to Specifications for use and application.

**Related Items**

**Forms**

Required
Design

Recommended
Design SHTabQuant

**Documentation**

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

**Status**

**Struct.** 742-70-AB

TRAFFIC MONITORING SITE, WEIGH-IN-MOTION ELECTRONICS ASSEMBLY

**Notes**

Refer to Specifications for use and application.

**Related Items**

**Forms**

Required
Design

Recommended
Design SHTabQuant

**Documentation**

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Details and Structure: Complete
A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)

B = Weight Sensor Type
1 (Bending Plate)
2 (Piezoelectric)
3 (Capacitance)
4 (Combined Types)
5 (Other)

Notes

743-70-AB TRAFFIC MONITORING SITE, VEHICLE SPEED/CLASSIFICATION UNIT

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Notes

Details
Refer to Specifications for use and application.

Related Items

Forms

Required
Design
SHTabQuant

Recommended
Construction
COMP 700-050-03

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other

Standards
Specifications

Prep & Doc Manual Chapter(s) 7, 13

Status

Struct. 743-70-AB TRAFFIC MONITORING SITE, VEHICLE SPEED/CLASSIFICATION UNIT AS

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

B = Assembly Component
1 (Electronics Unit With Equipment Cable)
2 (Electronics Unit Only)

Notes

744-70-AB TRAFFIC MONITORING SITE, SOLAR POWER UNIT

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Notes

Details and Structure: Complete
### Details
Refer to Specifications for use and application.

### Related Items

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### Forms

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### References

- PPM Chapter
- Other
- Standards
- Specifications

#### Prep & Doc Manual Chapter(s)
7, 13

---

### Status

#### Struct.
744-70-AB  TRAFFIC MONITORING SITE, SOLAR POWER UNIT AS

- A = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
- B = Mounting
  - 1 (New Pole)
  - 2 (Existing Pole)

---

### Notes

Refer to Specifications for use and application.

---

### Details

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### References

- PPM Chapter
- Other
- Standards
- Specifications

#### Prep & Doc Manual Chapter(s)
7, 13

---

### Status

#### Struct.
745-70-AB  TRAFFIC MONITORING SITE, INDUCTIVE LOOP ASSEMBLY

---

### Notes

Refer to Specifications for use and application.

---

### Details

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### References

- PPM Chapter
- Other
- Standards
- Specifications

#### Prep & Doc Manual Chapter(s)
7, 13

---

### Status

#### Struct.
745-70-AB  TRAFFIC MONITORING SITE, INDUCTIVE LOOP ASSEMBLY

---

### Notes

Refer to Specifications for use and application.
A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)

B = Number Of Loops Per Lane
1 (One)
2 (Two)

#### Notes

**746- 7A-BCD**  
TRAFFIC MONITORING SITE, CABINET

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**Notes**

Refer to Specifications for use and application.

**Related Items**

**Required**

**Recommended**

**Forms**

**Design**

SHTabQuant

COMP 700-050-03

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

**Status**

**Struct.** 746- 7A-BCD

TRAFFIC MONITORING SITE, CABINET EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)

B = Size
1 (Type III)
2 (Type IV)
3 (Type V)

C = Mounting
1 (Base)
2 (Pole)
3 (Pedestal)

D = Backplane
1 (One)
2 (Two)
3 (None)

**Notes**

Existing Specs apply for A=1-3; Plan Detail and/or Tech Spec Required for A=4

---

Details and Structure: Complete
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**Notes**
Refer to Specifications for use and application.

**Related Items**

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**Documentation**

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**References**

PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s) 7, 13

**Status**

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</table>

**Details**

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Modify)
B = Item
1 (Modem)

**Notes**

Effective January 2007; replaces several Architectural Items.

**Related Items**

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**Documentation**

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**Details and Structure:** Complete
Standards
Specifications

Struct. 750-1-AB ARCHITECTURAL, BUILDING LS/SF

A = Operation
1 (New)
5 (Rehab)
6 (Remove)

B = Facility
1 (Rest Area)
2 (Welcome Center)
3 (Weigh Station)
4 (Maintenance Facility Building)
5 (Office)
6 (Parking Garage)
7 (Storage/Mechanical)
8 (Uncovered Storage)
9 (Other building)*

*Contact Architectural Section for approval

Notes
Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

Status

Struct. 750-1-AB ARCHITECTURAL, BUILDING LS/SF

750-71- ARCHITECTURAL- ELECTRICAL WORK

Unit LS/LS Accuracy Lump Sum PlanQuantity? yes

Notes
Valid through December 2006; replaced by 750-1 and/or 751 items

Details
For use on Architectural projects only. For Movable bridges, refer to Tabulation summary required on all projects.

Related Items

Required Recommended
Forms
Design SHTabQuantLS COMP 700-050-05
Construction Refer to Comp Book

Documentation

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

Status Block Pending

Details and Structure: Complete
## 750- 71- ARCHITECTURAL- ELECTRICAL WORK LS/LS

### Notes

#### 750- 81- A ARCHITECTURAL- RADIO WEATHER SERVICE RECEIVER

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**Notes**
Valid through December 2006; replaced by 750-1 and/or 751 items

**Details**
For use on Architectural projects only.

**Related Items**

<table>
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<td>Design</td>
<td>COMP 700-050-03</td>
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</tbody>
</table>

**Design Forms**
Refer to Comp Book

**Construction Forms**
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction Documentation**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Standards
Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**
7, 13

**Status**
Block Pending

#### 751- 1- ARCHITECTURAL- BUILDING ASBESTOS ABATEMENT

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**Notes**
Valid through December 2006; replaced by 750-1 and/or 751 items

**Details**
For use on Architectural projects only.

**Related Items**

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<tr>
<td>Design</td>
<td>COMP 700-050-03</td>
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</table>

**Design Forms**
Refer to Comp Book

**Construction Forms**
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction Documentation**
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Standards

**Prep & Doc Manual Chapter(s)**

**Notes**

---

### Related Items

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<th>Documentation</th>
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<td>Other</td>
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</table>

**Details and Structure:** Complete

---

**Prep & Doc Manual Chapter(s):** 7, 13
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status  Block Pending

Struct.  751- 1-  ARCHITECTURAL- BUILDING ASBESTOS ABATEMENT  PB; EA

Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Specifications

Struct.  751- 2-  ARCHITECTURAL, ELECTRICAL/POWER

Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Specifications

Struct.  751- 3-  ARCHITECTURAL, TELEPHONE/COMMUNICATION

Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Shingles and Structure: Complete
### 751-4- ARCHITECTURAL, WATER/SEWER INTERIOR

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**Notes**
- Effective January 2007
- For use on Architectural projects only. Not to be used with 750-1 (New/Rehab building) item.
- Includes all work, hardware (sinks, toilets, water fountains), and materials for a complete water/sewer system for the interior of a building, as detailed in the plans and/or tech specs.

**Related Items**

<table>
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<th>Design</th>
<th>SHTabQuantLS</th>
<th>COMP 700-050-05</th>
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**References**
- PPM Chapter
- Other

**Standards Specifications**
- Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

---

### 751-5- ARCHITECTURAL, SANITARY SEWER/SEWAGE TREATMENT

**Details and Structure:** Complete

---

Page 394 of 468
### Topic No. 600-000-002

#### Basis of Estimates

**Unit**: LS/LS  
**Accuracy**: Lump Sum  
**PlanQuantity?**: no

**Notes**

*Effective January 2007*

**Details**

For use on Architectural projects only. May be used with 750-1 (New/Rehab building) item for major items of work. For minor water/sewer work associated with building, include with 750-1 item.

Includes all work, hardware (lift station, treatment plant, etc.) for a complete water/sewer system for the exterior of a building, as detailed in the plans and/or tech specs.

**Related Items**

**Required** | **Recommended**
---|---
**Forms**
Design | SHTabQuantLS  
Construction | COMP 700-050-05

**Documentation**

Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

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**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

---

**Struct. 751-5**

**ARCHITECTURAL, SANITARY SEWER/SEWAGE TREATMENT**

---

**Notes**

---

### Topic No. 600-000-002

#### Basis of Estimates

**Unit**: LS/LS  
**Accuracy**: Lump Sum  
**PlanQuantity?**: no

**Notes**

*Effective January 2007*

**Details**

For use on Architectural projects only. Not to be used with 750-1 (New/Rehab building) item.

Includes all work, hardware (AC, ventilation, and/or heating units), and materials for a complete HVAC system, as detailed in the plans and/or tech specs.

**Related Items**

**Required** | **Recommended**
---|---
**Forms**
Design | SHTabQuantLS  
Construction | COMP 700-050-05

**Documentation**

Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
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<tbody>
<tr>
<td>Other</td>
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</tbody>
</table>

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

---

**Struct. 751-6**

**ARCHITECTURAL, HVAC**

---

**Notes**

---

Details and Structure: Complete
### 751-10- ARCHITECTURAL, ASBESTOS ABATEMENT

<table>
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<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
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#### Notes
- Effective January 2007; contact Architectural Section before opening, due to possible CARS contract.
- Check for possible CARS contract prior to using this item.
- For use on Architectural projects only. Not to be used with 750-1 (New/Rehab building) item.
- Includes all work, hardware, and materials for Asbestos Abatement, as detailed in the plans and/or tech specs.

#### Related Items
- **Required**
  - Design: SHTabQuantLS
  - Construction: Refer to Comp Book

- **Recommended**
  - Design: COMP 700-050-05
  - Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- PPM Chapter
- Other
- Standards
- Specifications

- Plan Detail and/or Tech Spec Required

---

### 751-20- A ARCHITECTURAL, LIGHTNING PROTECTION SYSTEM

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</table>

#### Notes
- Effective January 2007
- For use on Architectural projects only. Not to be used with 750-1 (New/Rehab building) item.
- For movable bridge structures, refer to Section 508 items. For all other applications, lightning protection is incidental to the item being protected.
- Do not use for Signing, Lighting, ITS, or Signalization.
- Includes all work, hardware, and materials for a complete lightning protection system, as detailed in the plans and/or tech specs.
### Related Items

<table>
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#### Notes

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

---

### Status

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<tr>
<td>751- 20- A</td>
<td>ARCHITECTURAL, LIGHTNING PROTECTION SYSTEM LS/LS</td>
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</table>

A= Type of System  
1 (Point Discharge)  
2 (Static Charge Dissipation)  
3 (Surge Supression)

---

### Related Items

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#### Notes

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

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<td>ARCHITECTURAL, PICNIC PAVILION</td>
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Unit: EA  
Accuracy: Each  
Plan Quantity: no

---

### Details

**Effective January 2007**

For use on Architectural projects only.  
Size (small/large) and details as shown on Design Standards.  
Non-standard sizes must be approved by the Architectural Section, with a new pay item request.

---

### Related Items

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#### Notes

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

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<td>ARCHITECTURAL, PICNIC PAVILION</td>
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Unit: EA
### ARCHITECTURAL- LIFT STATION, SANITARY SEWER

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<th>Each</th>
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**Notes**
- Valid through December 2006; replaced by 750-1 and/or 751 items
- For use on Architectural projects only.
- For utility (JPA) projects, see utility item 1501-1.

**Related Items**
- **Forms**
  - Required: Design
  - Recommended: SHTabQuant, COMP 700-050-03
- **Construction**
  - Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.
- Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**References**
- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**
- Block Pending

### ARCHITECTURAL- WATER TREATMENT PLANT

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<th>Unit</th>
<th>PL; EA</th>
<th>Accuracy</th>
<th>Plant; Each</th>
<th>PlanQuantity?</th>
<th>no</th>
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**Notes**
- Valid through December 2006; replaced by 750-1 and/or 751 items
- For use on Architectural projects only.

**Related Items**
- **Forms**
  - Required: Design
  - Recommended: SHTabQuant, COMP 700-050-03
- **Construction**
  - Refer to Comp Book

**Documentation**
- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**
- 7, 13

**Status**
- Block Pending
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 7, 13

**Status**  Block Pending
**Struct.**  755- 72- A  ARCHITECTURAL- WATER TREATMENT PLANT  PL; EA

A =
1 (Aerator) LS/LS
2 (Renovation) PL
3 (Reseal) PL

**Notes**

---

### 764- 1- BOAT DOCK- FLOATING

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<th>Unit</th>
<th>SF; M²</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>no</th>
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**Notes**

**Details**

**Related Items**  Required  Recommended
Forms  Design  SHTabQuant  COMP 700-050-01
Construction  Refer to Comp Book

**Documentation**

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

---

**Status**  764- 1-
**Struct.**  BOAT DOCK- FLOATING

**Notes**

---

### 764- 2- BOAT DOCK- GANGWAY

<table>
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<tr>
<th>Unit</th>
<th>SF; M²</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

**Details**

**Related Items**  Required  Recommended
Forms  Design  SHTabQuant  COMP 700-050-01
Construction  Refer to Comp Book

**Documentation**

Design  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
**Construction**  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter  
Other  
Standards  
Specifications  

**Plan Detail and/or Tech Spec Required**  
Prep & Doc Manual Chapter(s)  7, 13

**Status**  
Struct.  764- 2-  
BOAT DOCK- GANGWAY  
SF

**Notes**

### 770-75- A  
PRE-PASS SENSOR

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
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**Notes**

Details  
For use at weigh/inspection stations only.

Related Items  
Required  
Recommended

Forms  
Design  
SHTabQuant  
COMP 700-050-03

Construction  
Refer to Comp Book

Documentation  
Design  
Construction  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter  
Other  
Standards  
Specifications  

**Plan Detail and/or Tech Spec Required**  
Prep & Doc Manual Chapter(s)

**Status**  
Struct.  770-75- A  
PRE-PASS SENSOR  
EA

A= Location  
1(Asphalt Embedded)

**Notes**

### 770-78-  
STATIC/WEIGH-IN-MOTION SCALE SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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</table>

**Notes**

Details  
The designer should details all requirements and components to be included in the system.

Related Items  
Required  
Recommended

Forms  
Design  
SHTabQuant  
COMP 700-050-03
Topic No. 600-000-002
Basis of Estimates

2007 Edition
April 16, 2007

Standards
Specifications

Struct.  770- 78- STATIC/WEIGH-IN-MOTION SCALE SYSTEM EA

Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  7, 13

Status Block Pending

Struct.  770- 78- STATIC/WEIGH-IN-MOTION SCALE SYSTEM EA

Notes

770- 79-
WEIGH STATION

Unit LS/LS Accuracy Lump Sum PlanQuantity? yes

Details

The designer should details all requirements and components to be included in the station.

Related Items

Required Recommended
Forms Design SHTabQuantLS COMP 700-050-05
Construction Refer to Comp Book

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor.

Construction Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)  7, 13

Status Block Pending

Struct.  770- 79- WEIGH STATION LS/LS

Notes

770- 81- ARCHITECTURAL- REROOFING BUILDING

Unit LS/LS Accuracy Lump Sum PlanQuantity? no

Notes

Valid through December 2006; replaced by 750-1 and/or 751 items

Details and Structure: Complete

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<table>
<thead>
<tr>
<th>Related Items</th>
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<tr>
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**Notes**

**770-82- ARCHITECTURAL- MAINTENANCE FACILITY BUILDING**

| Unit | LS/SF; LS/M2 | Accuracy | Lump Sum (Square Foot); Lump Sum (Square Meter) | PlanQuantity? | no |

**Notes**

Valid through December 2006; replaced by 750-1 and/or 751 items

<table>
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<td>Construction</td>
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<td>Documentation</td>
<td>Design</td>
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**Prep & Doc Manual Chapter(s)**

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**Architectural- Reroofing Building LS/LS**

| Notes | |

**Prep & Doc Manual Chapter(s)**

Details and Structure: Complete
### 770-85- ARCHITECTURAL- PARKING GARAGE

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**Notes**
Valid through December 2006; replaced by 750-1 and/or 751 items

**Details**

**Related Items**

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**Forms**

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**Documentation**

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<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
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**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Notes**

**Status**

Block Pending

**Struct.**

770-85- ARCHITECTURAL- PARKING GARAGE LS/LS

---

### 770-89- AB ARCHITECTURAL- ADDITIONAL UNCOVERED ADJACENT AREA

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<td>SF; M2</td>
<td>Square Foot; 10th of a Square Meter</td>
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**Notes**
Valid through December 2006; replaced by 750-1 and/or 751 items

**Details**

Item used for materials storage buildings, dumpster enclosures, mechanical equipment enclosures. Includes materials and/or parts detailed in the plans or specifications.

**Related Items**

<table>
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**Forms**

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**Documentation**

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**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Notes**

**Status**

Block Pending

**Prep & Doc Manual Chapter(s)**

7, 13

---

Details and Structure: Complete
Struct.  770- 89- AB  ARCHITECTURAL- ADDITIONAL UNCOVERED ADJACENT AREA  SF

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Removal)
5 (Other)
B = Area
1 (Planters)
2 (Loading Docks)
3 (Steps)
4 (Sidewalks)
5 (Other)

Notes

770- 93-ABC  ARCHITECTURAL- AIR CONDITIONING SYSTEM

<table>
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Details

Related Items

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<td>COMP 700-050-03</td>
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Documentation

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

References

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Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status  Block Pending

Struct.  770- 93-ABC  ARCHITECTURAL- AIR CONDITIONING SYSTEM  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Removal)
5 (Replace)
B = Type System
1 (Direct Expansion)
2 (Reciprocating Chilled Water)
3 (Absorption Chilled Water)
4 (Centrifugal Chilled Water)
5 (Heat Pump)
C = Tonage
When B = 1, B = 2, B = 5
1 (.5 - .9)
2 (1 - 1.9)
3 (2 - 2.9)
4 (3 - 4.9)
5 (5 - 7.4)
6 (7.5 - 14.9)
7 (15 - 29.9)
8 (30 - 60)
9 (> 60)
When B = 3, B = 4
1 (100 - 199)
2 (200 - 299)
3 (300 - 399)
4 (400 - 499)
5 (500 - 599)
6 (600 - 699)
7 (700-799)
8 (800-899)
9 (> 899)

Notes

770-94-ABC ARCHITECTURAL-HEATING SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each Plan Quantity?</th>
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<tr>
<td>Notes</td>
<td>Valid through December 2006; replaced by 750-1 and/or 751 items</td>
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<td>Details</td>
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<td>Related Items</td>
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<td>Recommended</td>
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<td>Forms</td>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
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<tr>
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<td>Design</td>
<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
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<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<td>Specifications</td>
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<td>Prep &amp; Doc Manual Chapter(s)</td>
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</table>

Status Block Pending

Struct. 770-94-ABC ARCHITECTURAL-HEATING SYSTEM EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Removal)
5 (Replace)
B = Type System
1 (Gas Fired Water)
2 (Oil Fired Water)
3 (All Electric)
4 (Solar)
C = Rating
1 (0.1 MBTU Or Less)
2 (0.2 MBtu)
3 (0.3 MBtu)
4 (0.4 MBtu)
5 (0.5 MBtu)
6 (0.6 MBtu)
7 (0.7 MBtu)
8 (0.8 MBtu)
9 (0.9 MBtu)
0 (1.0 Or Greater)

Notes

770-ABC-DEF ARCHITECTURAL- BUILDING

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA; LS/SF;</th>
<th>Accuracy</th>
<th>Each; Lump Sum (SF);</th>
<th>PlanQuantity?</th>
<th>yes/no Lump Sum (M2)</th>
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</thead>
</table>

Notes
Valid through December 2006; replaced by 750-1 and/or 751 items

Details
LUMP SUM ITEMS: Tabulation summary required on all projects.
ORIGINAL:
FOR ITEMS MEASURED LS/(M2): Use a quantity of 1, but calculations and
documentation must be to the second unit of measure. No form required. Define scope of
work on contract plans.
FOR ITEMS MEASURED PER EA: Locate in contract plans, summarize quantities by
location on the CADD summary of quantity sheet in the plans.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

Documentation

| Design      | LUMP SUM ITEMS: Use a quantity of 1. No form required. Locate or define
the scope of work involved on the plans.
| Construction| Location must be summarized on the plans. |
|            | Record final quantity on the tabulation sheet (plans) or computation form
(comp book). |

References

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
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<tbody>
<tr>
<td></td>
<td>Standards</td>
</tr>
<tr>
<td></td>
<td>Specifications</td>
</tr>
</tbody>
</table>

| Plan Detail and/or Tech Spec Required |
| Prep & Doc Manual Chapter(s) | 6, 7, 13 |

Status
Block Pending

Struct.
770-ABC-DEF ARCHITECTURAL- BUILDING EA; LS/SF
A = Operation
1 (New)
2 (Renovation - EA)
3 (Addition)
4 (blank-do not use)
5 (Architectural Work)
6 (Additional Work) Use DE = Table
7 (Removal)
8 (Ceiling)
0 (Other - EA)
B = Type Of Facility Building
1 (Office)
2 (Maintenance)
3 (Welcome Station)
4 (Rest Facility/Women/Men)
5 (Service Plaza)
6 (Weight Station)
7 (Fuel Station)
8 (Material Lab)
9 (Parking Garage)
0 (Other)
C = Outside Wall Structure
1 (Concrete Block)
2 (Wood Siding)
3 (Steel Siding)
4 (Concrete)
5 (Brick)
6 (Combination)
7 (Other)
8 (Tile)
D = No. Of Levels (Floors)
1 (Above Ground Single)
2 (Above Ground Two)
3 (Above Ground Three)
4 (Above Ground Four)
5 (Above Ground Five)
6 (Below Ground Single)
7 (Other)
Ef = Total Outside Wall Height
01 (8 Ft.)
02 (9 Ft.)
03 (10 Ft)
04 (12 Ft.)
05 (14 Ft.)
06 (18 Ft.)
07 (20 Ft.)
09 (Other)

Notes
(When "A" = 2 Then C = 0 And Def = Blank)
(When "A" = 6 Then C = 0 And F = 0)
(When "A" = 8 Then C = 0 And F = 0)
De = Additional Work
De = Additional Work
11 (Membrane PVC)
12 (Membrane EPDM)
13 (Membrane Hypalon CSPE)
14 (New Acoustic Ceiling Tile)
15 (Replace Acoustic Ceiling Tile)
### 775-70- SCALE PIT STRUCTURES

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
- **Related Items**
  - **Required**
    - **Design**
      - SHTabQuant
    - **Construction**
      - Refer to Comp Book
  - **Recommended**
    - **Design**
      - COMP 700-050-03
  - **Construction**
    - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
    - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Status**
- Inactive Structure

**Struct.** 775-70- SCALE PIT STRUCTURES

**Notes**
- **References**
  - PPM Chapter
  - Other
  - Standards
  - Specifications
  - Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

---

### 775-72- SCALE FOUNDATION

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<tr>
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<th>EA</th>
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**Notes**
- **Related Items**
  - **Required**
    - **Design**
      - SHTabQuant
    - **Construction**
      - Refer to Comp Book
  - **Recommended**
    - **Design**
      - COMP 700-050-03
    - **Construction**
      - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
      - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Status**
- Inactive Structure

**Struct.** 775-70- SCALE FOUNDATION

**Notes**
- **References**
  - PPM Chapter
  - Other
  - Standards
  - Specifications

---

**Details and Structure: Complete**
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)

Status: Inactive Structure

Struct.  775- 72-  SCALE FOUNDATION  EA

Notes

780-  1- AB  ITS ELECTRICAL POWER

Unit: Mixed  Accuracy: Refer to item structure and details  PlanQuantity?: no

Details

For use in providing electrical power service to ITS devices in the field. Installations of service assemblies can be either for overhead or underground service, in accordance with the details in the plans, or in Index 17736 of the Design Standards. A service assembly may include a weatherhead, conduit, service wire, a meter base, service disconnect, and a transient protection device.

Related Items

Forms
Required  Recommended
Design  SHTabQuant  COMP 700-050-03
Construction  Refer to Comp Book

Documentation
Design
Construction  Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter  Vol 1, Chapter 7
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status

Struct.  780-  1- AB  ITS ELECTRICAL POWER  Mixed

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate)
5 (Adjust & Modify)
6 (Remove and Dispose- Contractor takes ownership)

B= Type
1 (Service) AS
2 (Service Wire) LF
3 (Service Disconnect) EA

Notes

781-  2- AB  ITS HIGHWAY ADVISORY RADIO

Unit: EA  Accuracy: Each  PlanQuantity?: no

Details and Structure: Complete
Details

For installation along the roadway for the purpose of broadcasting traffic advisories to vehicle radios. The HAR installation consists of a radio antenna mounted on a pole, a control cabinet containing the transmitter, power supply, communication hardware, and conduit. The system includes a roadside HAR sign with flashing beacons to alert motorists that a message is being broadcast. Transmitter wattage, siting information, and installation details should be noted in the plans.

For temporary MAS systems during construction, refer to Maintenance Of Traffic, Section 102 items.

Related Items

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
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<tr>
<td>Construction</td>
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<table>
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<tr>
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</table>

References

PPM Chapter Vol 1, Chapter 7

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)

Status

Struct. 781- 2- AB ITS HIGHWAY ADVISORY RADIO EA

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate)
5 (Adjust /Modify)
B= Power Type
1 (Solar)
2 (AC)

Notes

781- 3-ABC ITS ROAD WEATHER INFORMATION SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

Notes Effective July 07 Letting.

Details

For installation at the roadside, on bridges or other new or existing structures to provide realtime weather data on temperature, humidity, precipitation, wind speed, and direction, and visibility. The RWIS is furnished with the weather instruments necessary to produce the readings desired and collects, stores, and processes the data for transmittal to the transportation management center (TMS). An RWIS with one central monitoring site can serve multiple field installations. The weather sensors are typically mounted on either a dedicated RWIS tower or existing structures.
### 781-3-ABC ITS ROAD WEATHER INFORMATION SYSTEM EA

**A= Operation**
1. Furnish & Install
2. Furnish
3. Install BC=00
4. Relocate BC=00
5. Adjust /Modify BC=00

**B= Equipment Type**
1. Field Hardware
2. Central Monitoring/Processing Equipment

**C= Sensor Mounting**
1. New Tower Included
2. Mounted to Existing Structure

#### Notes

For installation along interstate, expressway, or limited access corridors for communicating traffic advisories to motorists.

Structure Types: Mid-span- across one direction of travel, full span- across all lanes, or cantilever- at the roadside.

Sign Type: Front display surface, with either line matrix- pixels arranged in rows, or full matrix- pixels fully covering the surface.

Designer should note the size of sign, structure, and installation details in the plans.

NOTE:

Furnish & Install: includes the furnishing of both the truss and sign
Furnish: Furnish the sign only (Signs are available on State purchase contracts)
Install: Install sign on existing structure
Furnish & Install Truss, Install Sign: When sign is provided by FDOT (may have been purchased on state contract, or relocated from another location). Contractor must provide/construct truss, install sign.

#### Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
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<tbody>
<tr>
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**Details and Structure:** Complete
### Topic No. 600-000-002

**Basis of Estimates**

April 16, 2007

**Standards**

**Specifications**

**Vol 1, Chapter 7**

**Struct. 781-1A-BCD ITS DYNAMIC MESSAGE SIGN EA**

A= Operation
1 (Furnish & Install)
2 (Furnish) *
3 (Install) *Sign on existing truss
4 (Relocate) *Sign to another existing truss
5 (Adjust /Modify)
9 (Furnish & Install Truss; Install Sign)

B=Sign Type
1 (LED Line Matrix)
2 (LED Full Matrix)

C=Sign Support Structure
1 (Mid-span)
2 (Full Span)
3 (Cantilever) D=1, 2, or 3 only
4 (Sign Only) no structure; D=0

D= Horizontal Truss Length
0 (No Structure) when C=4
1 (0' to 40')
2 (41' to 60')
3 (61' to 80')
4 (81' to 100')
5 (101' to 120')
6 (121 to 140')
7 (141 to 161')
8 (161 to 180')
9 (greater than 180')

**Notes**  
See detail for Furnish/Install options

### 782-1 AB  ITS CCTV CAMERA

**Unit** EA  **Accuracy** Each  **PlanQuantity?** no

**Notes**

For installations along the roadway or intersections, to provide video of traffic movements. Includes mounting hardware, cabling, and power supply. Cameras can be dome style enclosures, or "barrel type" units with external positioners. Either unit can be pressurized to reduce the effects of moisture, dust, and other contaminants.

**Related Items**  
**Required**  
**Recommended**
### Topic No. 600-000-002

#### Basis of Estimates

**2007 Edition**

**April 16, 2007**

---

**Forms**

**Design**

SHTabQuant

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Vol 1, Chapter 7

---

#### Structure

**782- 1- AB**

**ITS CCTV CAMERA**

<table>
<thead>
<tr>
<th>A= Operation</th>
<th>B= Type</th>
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<tbody>
<tr>
<td>1 (Furnish &amp; Install)</td>
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<td>2 (Furnish)</td>
<td>2 (External positioner, pressurized)</td>
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<tr>
<td>3 (Install)</td>
<td>3 (Dome enclosure, non-pressurized)</td>
</tr>
<tr>
<td>4 (Relocate)</td>
<td>4 (External positioner, non-pressurized)</td>
</tr>
<tr>
<td>5 (Adjust /Modify)</td>
<td></td>
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#### Notes

**782- 2-ABC**

**ITS VIDEO DISPLAY**

<table>
<thead>
<tr>
<th>Unit</th>
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<th>Accuracy</th>
<th>Each</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>EA</td>
<td>Each</td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

For use in the Transportation Management Center (TMC) to display video from the CCTV cameras in the field, and for displaying maps, graphics, traffic counts, and other visuals. Video Display cubes can be stacked to form a wall display. Other monitors are positioned in the room or on the operator's desktops for control purposes. The video controller receives the incoming video signals and arranges them on the various displays. Display types, room layout, and installation details must be noted in the plans.

**Related Items**

**Forms**

**Design**

SHTabQuant

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

---

**Prep & Doc Manual Chapter(s)**

**Details and Structure:** Complete

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## Specifications

### Prep & Doc Manual Chapter(s)

<table>
<thead>
<tr>
<th>Status</th>
<th>Struct.</th>
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<th>ITS VIDEO DISPLAY</th>
<th>EA</th>
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<tr>
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<td>1 (Furnish &amp; Install)</td>
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<td>4 (Relocate)</td>
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<tr>
<td>5 (Adjust /Modify)</td>
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<tr>
<td>B= Component</td>
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<tr>
<td>1 (Cube for video wall) C=2</td>
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<tr>
<td>2 (Workstation) C=1 or 3</td>
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<td>3 (Monitor)</td>
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<td>4 (Controller) C=0</td>
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<td>C= Technology</td>
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<td>3 (CRT- Cathode Ray Tube)</td>
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<td>4 (Special)</td>
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### Notes

**Details**

For use in highway rest areas for the display of traffic conditions and other information for the traveling public. The system is rack mounted and has the necessary processing power, memory, network connection, and video output capability to provide images for LCD displays in the lobby or concourse area of rest plazas.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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<tbody>
<tr>
<td>Design SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
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</tr>
<tr>
<td>Specifications</td>
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## Status

<table>
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<tr>
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<th>ITS REST AREA INFORMATION SYSTEMS</th>
<th>EA</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>1 (Furnish &amp; Install)</td>
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<td></td>
</tr>
<tr>
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</table>
### 783-1-ABC ITS FIBER OPTIC CABLE

<table>
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<tr>
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<th>LF; M1</th>
<th>Accuracy</th>
<th>Linear Foot; 10th of a Meter</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**

For use in fiber optic networks that support ITS devices and their connection to communication hubs, transportation management centers, and related facilities. Use "overhead" for installations involving bridges and other aboveground structures. Use "underground" for cable placed in buried conduit along the roadside.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**

- **PPM Chapter**: Vol 1, Chapter 7
- **Other Standards Specifications**
- **Prep & Doc Manual Chapter(s)**

**Status**

<table>
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<tbody>
<tr>
<td>783-1-ABC</td>
<td>ITS FIBER OPTIC CABLE</td>
</tr>
</tbody>
</table>

**Notes**

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate)
5 (Adjust /Modify)

B= Location
1 (Overhead)
2 (Underground)

C= Number of Fibers in Cable
1 (2 to 12)
2 (13 to 48)
3 (49 to 96)
4 (97 to 144)

### 783-2-AB ITS FIBER OPTIC CONNECTION

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

Details and Structure: Complete
Details
For use in fiber optic networks where segments of fiber optic cable must be spliced together, or when cables must be terminated at the end of a segment. Note that each connection involves the fusing of individual optical fibers in a cable. Payment “each” is for each FIBER to be connected.
Type of connection must be noted in the plans.

Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
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Documentation

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References

PPM Chapter
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Standards
Specifications
Prep & Doc Manual Chapter(s)

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<td>EA</td>
</tr>
<tr>
<td>B= Type 1 (Splice) 2 (Termination)</td>
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</table>

Notes

For use in fiber optic networks, where segments of cable must be spliced together. This item includes hardware and incidental materials for splices; payment for splicing individual fibers is made under 783-2.

Related Items

<table>
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PPM Chapter
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<td>5 (Adjust /Modify)</td>
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<td>3 (Preterminated Connector Assembly)</td>
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<td>4 (Buffer Tube Fan Out Kit)</td>
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<td>5 (Patch Panel, Preterminated)</td>
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<td>6 (Patch Panel, Field Terminated)</td>
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<td>4 (Relocate)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Details | For fiber optic cable and ITS devices only. |
|         | Underground: to be used when conduit is installed prior to placement of pavement, or where it does not interfere with existing pavement. |
|         | Underpavement Sawcut: to be used only when sawcutting is necessary. |

<table>
<thead>
<tr>
<th>Related Items</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
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<td>COMP 700-050-03</td>
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<tr>
<td>Construction</td>
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| Documentation | Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
|              | Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

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### 783-5- A  ITS PULL BOX FOR FIBER OPTIC

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<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes
- **Details**: For use in fiber optic networks as an access point for moving cable into position during installation.
- **Related Items**:
  - **Required**: SHTabQuant
  - **Recommended**: COMP 700-050-03

#### Forms
- **Design**: Refer to Comp Book
- **Construction**: Design
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status
- **Struct.** 783-5- A
- **ITS PULL BOX FOR FIBER OPTIC**
- **EA**
- A= Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
  - 4 (Relocate)
  - 5 (Adjust /Modify)

### 783-6- A  ITS SPLICE BOX FOR FIBER OPTIC

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

#### Notes
- **Details**: For use in fiber optic networks as a housing for the connection or termination of cable segments.
- **Related Items**:
  - **Required**: SHTabQuant
  - **Recommended**: COMP 700-050-03

#### Forms
- **Design**: Refer to Comp Book
- **Construction**: Design
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

**Details and Structure: Complete**
Construction

Reference:
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status

Struct. 783- 6- A ITS SPLICE BOX FOR FIBER OPTIC EA

Notes

Plan Detail and/or Tech Spec Required

Related Items
Forms
Design Required Recommended

SHTabQuant COMP 700-050-03

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Pulled and/or Junction Box

Reference:
PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)

Status

Struct. 783- 7- A ITS PULL AND JUNCTION BOX EA

Notes

Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### 783-8- A ITS MULTI-CONDUCTOR COMMUNICATION CABLE

| Unit       | LF; M1 | Accuracy     | Linear Foot; 10th of a Meter | PlanQuantity? | no |

**Notes**

For use on ITS projects. Tech Spec and/or plan detail needed to specify material requirements and/or number of conductors. Primarily for communications, may carry incidental low voltage device power.

**Details**

**Related Items**

**Forms**
- Design: SHTabQuant
- Construction: COMP 700-050-03

**Documentation**
- Design
- Construction

**References**
- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**

Plan Detail and/or Tech Spec Required

---

### 784-1- A ITS MANAGED FIELD ETHERNET SWITCH

| Unit       | EA | Accuracy   | Each | PlanQuantity? | no |

**Details**

For use in ITS communication networks to provide wire-speed fast Ethernet connections for ITS field devices. The Ethernet switch is hardened to withstand harsh environments and provides transmission rates of 100 megabits per second from the remote ITS device installation location to the ITS network trunk interconnection point.

**Related Items**

**Forms**
- Design: SHTabQuant
- Construction: COMP 700-050-03

**Documentation**
- Design
- Construction

**References**
- PPM Chapter
- Other
### Standards
### Specifications
### Prep & Doc Manual Chapter(s)

#### Status

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<td>5 (Adjust /Modify)</td>
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<tr>
<td>6 (Remove and Dispose) Contractor takes ownership</td>
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</table>

#### Notes

For use when an ITS field device must connect to an Ethernet network but the device is only equipped with serial communication ports (i.e. EIA-232, EIA-422, or EIA-485 connections). Field devices that may require use of device servers include highway advisory radio field assemblies, microwave vehicle detection system devices, magnetic traffic detection systems, road weather information system stations, and other low-speed data output devices.

#### Related Items

<table>
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<tr>
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#### Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**

#### Status

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#### Notes

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- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**

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#### Notes

For use when an ITS field device must connect to an Ethernet network but the device is only equipped with serial communication ports (i.e. EIA-232, EIA-422, or EIA-485 connections). Field devices that may require use of device servers include highway advisory radio field assemblies, microwave vehicle detection system devices, magnetic traffic detection systems, road weather information system stations, and other low-speed data output devices.
### 784- 3- AB  
**ITS DIGITAL VIDEO ENCODER WITH SOFTWARE DECODER**

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
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</thead>
</table>

**Notes**

For use when analog video and data signals obtained in the field must be converted to digital signals for transmission across IP networks. The encoder and decoder are independent, network-based devices that utilize MPEG-2 and other video compression algorithms for transmission of high-bandwidth signals. Encoders may be hardened devices and are installed in the field. Decoders are housed in transportation management centers and can be either a hardware device or a decoder software program running on a computer.  

**Related Items**

**Forms**
- **Design**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03
- **Construction**
  - Refer to Comp Book

**Documentation**
- **Design**
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**

**Status**

**Struct.** 784- 3- AB  
**ITS DIGITAL VIDEO ENCODER WITH SOFTWARE DECODER**  
EA

A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Relocate)  
5 (Adjust /Modify)  
6 (Remove and Dispose) Contractor takes ownership  
B= Component  
1 (Hardened Encoder)

**Notes**

DO NOT USE with Digital Video Encoder; see details with 784-3 item.  
This item to be used only when a hardware-based decoder, or additional copies of the software-based decoder are needed.  
Contact ITS Section prior to opening.

---

### 784- 4- AB  
**ITS DIGITAL VIDEO DECODER**

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<tr>
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**Notes**

**Details**

DO NOT USE with Digital Video Encoder; see details with 784-3 item.  
This item to be used only when a hardware-based decoder, or additional copies of the software-based decoder are needed.  
Contact ITS Section prior to opening.
### Struct. 784-4-AB

**ITS DIGITAL VIDEO DECODER**

*EA*

A = Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Relocate)  
5 (Adjust /Modify)  
6 (Remove and Dispose) Contractor takes ownership

B = Component*  
1 (Hardware-based decoder)  
2 (Software-based decoder)  

*See details and/or specifications

**Notes**  
Contact ITS Section prior to opening.

### Related Items

<table>
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<td>Construction</td>
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| Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.  
| Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

### Status

### 784-5-AB

**ITS MANAGER ETHERNET HUB SWITCH**

*EA*

**Unit**  
EA  
**Accuracy**  
Each  
**Plan Quantity?**  
no

**Notes**  
For use in ITS communication networks to provide centralized Ethernet connections for ITS field devices utilizing field or edge switches. The ethernet hub switch is hardened to withstand harsh environments and installation at remote locations. "Long haul" and "short haul" are common terms applied to telecommunication equipment in order to generally describe a devices ability to transmit information over various distances.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
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**Details**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

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<td>Refer to Comp Book</td>
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</tbody>
</table>

Details and Structure: Complete
ITS MANAGER ETHERNET HUB SWITCH

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate))
5 (Adjust /Modify)
6 (Remove and Dispose) Contractor takes ownership

B= Type
1 (Long Haul)
2 (Short Haul)

ITS WIRELESS COMMUNICATION DEVICE

Unit: EA
Accuracy: Each
PlanQuantity?: no

Notes
For use in transmitting and receiving data in ITS networks, especially between remotely located field devices and the mainline communications infrastructure tat serves them. Devices include radio transmitter-receivers and antennas, power-over-ethernet (PoE) injectors, serial cable, power supplies and mounting hardware. Access points and subscriber units are typically associated with ethernet systems.

Related Items
Required
Design
SHTabQuant

Recommended
Construction
COMP 700-050-03

Forms
Construction
Refer to Comp Book

Documentation
Design
Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

Status
A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate))
5 (Adjust /Modify)
6 (Remove and Dispose) Contractor takes ownership

B= Type
1 (Ethernet Access Point)
2 (Ethernet Subscriber Unit)
### ITS POLE

<table>
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<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

**Details**

Use a lowering device in field locations where a CCTV camera or other ITS device is mounted on a pole, but the height precludes easy access to the equipment for maintenance or repair. The lowering device is provided along with a steel or concrete pole.

Retrofit: to be used where a pole is already provided, to include furnishing & installation of lowering device.

**Related Items**

- **Forms**
  - **Design**: SHTabQuant
  - **Construction**: Refer to Comp Book

- **Documentation**
  - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
- **Prep & Doc Manual Chapter(s)**

**Status**

- **Struct.**: 785- 1- AB

  - **EA**
    - **A**: Operation
      1 (Furnish & Install)
      2 (Furnish)
      3 (Install)
      4 (Relocate)
      5 (Adjust /Modify)
      9 (Retrofit lowering device on existing pole) **B=0**
    - **B**: Type
      1 (Concrete Pole w/ lowering device)
      2 (Steel Pole w/ lowering device)
      3 (Concrete Pole w/o lowering device)
      4 (Steel Pole w/o lowering device)

**Notes**

Valid through June 2007; replaced by 785-2-ABC

For use on ITS project. Refer to Specification for cabinets covered by Section 785. (Items listed in other sections may have cabinets incidental to item being installed.) Detail in plans whether pole or base mount.

---

### ITS CABINET

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
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**Notes**

Valid through June 2007; replaced by 785-2-ABC

For use on ITS project. Refer to Specification for cabinets covered by Section 785. (Items listed in other sections may have cabinets incidental to item being installed.) Detail in plans whether pole or base mount.
### Related Items

<table>
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<tr>
<td>Other</td>
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<tr>
<td>Standards</td>
<td></td>
</tr>
<tr>
<td>Specifications</td>
<td></td>
</tr>
</tbody>
</table>

### Status

#### Struct.  785- 2- AB

**ITS CABINET**

- **A= Operation**
  1. (Furnish & Install)
  2. (Furnish)
  3. (Install) B=0
  4. (Relocate) B=0
  5. (Adjust /Modify) B=0
  6. (Remove and Dispose) Contractor takes ownership
- **B= Type**
  1. (Type 336)
  2. (Type 332)
  3. (Special)

### Notes

- Effective July 2007 letting; replaces 785-2-AB
- For use on ITS project. Refer to Specification for cabinets covered by Section 785.
- NOTE: Items listed in other sections may have cabinets incidental to item being installed.

### Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Construction</td>
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<td>Specifications</td>
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</table>

*Selected Items may require Tech Spec and/or Plan Detail

### Status

**Prep & Doc Manual Chapter(s)**

---

**Details and Structure:** Complete
Struct.  785- 2-ABC      ITS FIELD CABINET      EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install) B = 0
4 (Relocate) B = 0
5 (Adjust / Modify) B = 0
6 (Remove and Dispose) Contractor takes ownership

B = Type
1 (Type 336)
2 (Type 336 w/ sunshields)
3 (Type 336S)
4 (Type 336S w/ sunshields)
5 (Type 332)
6 (Type 332 w/ sunshields)
9 (Special)*

C = Mounting
1 (Pole Mount)
2 (Ground Mount)

Notes
* Special may require Tech Spec and/or Plan Detail

---

785-3-AB      ITS EQUIPMENT SHELTER

<table>
<thead>
<tr>
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<th>EA</th>
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<th>Plan Quantity?</th>
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<th>Details</th>
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<tr>
<td></td>
<td>EA</td>
<td>Each</td>
<td>no</td>
<td>Valid through June 2007; replaced by 785-3-ABC</td>
<td>For use on ITS Projects. Refer to Specification for cabinets/shelter covered by Section 785. (Items listed in other sections may have cabinets incidental to item being installed.) All shelter/building incidentals must be detailed in the plans or specifications, including electrical, mechanical, and/or HVAC.</td>
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<table>
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<th>Related Items</th>
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<td>Documentation</td>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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References
- PPM Chapter
- Other
- Standards
- Specifications
- Prep & Doc Manual Chapter(s)

Status
Struct.  785-3-AB      ITS EQUIPMENT SHELTER      EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install) B = 0
4 (Relocate) B = 0
5 (Adjust / Modify) B = 0

Details and Structure: Complete
6 (Remove and Dispose) Contractor takes ownership
B= Size
9 (Special)

### Notes

**785- 3-ABC**

<table>
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<th>no</th>
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**Notes**
Effective July 2007 letting; replaces 785-3-AB

**Details**
For use on ITS Projects. Refer to Specification for cabinets/shelter covered by Section 785. All shelter/building incidentals must be detailed in the plans or specifications, including electrical, mechanical, and/or HVAC.

DO NOT Use 750 Architectural Items with this item.

**Related Items**

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<td>Construction</td>
<td>COMP 700-050-03</td>
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</table>

Refer to Comp Book

**Documentation**

<table>
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<th>Construction</th>
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| Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

*Selected Items may require Tech Spec and/or Plan Detail

**Prep & Doc Manual Chapter(s)**

### Status

**Struct.**

785- 3-ABC

**ITS EQUIPMENT SHELTER**

<table>
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<th>EA</th>
</tr>
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</table>

A= Operation
1 (Furnish & Install)
2 (Furnish)*
3 (Install) BC=00*
4 (Relocate) BC=00*
5 (Adjust /Modify) BC=00
6 (Remove and Dispose) Contractor takes ownership

B= Size (from exterior dimensions)
1 (up to 120 ft2)
2 (121 to 170 ft2)
3 (171 to 250 ft2)
9 (Special)*

C= Interior Ceiling Height
1 (8 ft)
2 (9 ft)

**Notes**

*A=2, 3, 4 verify with ITS Office prior to opening
*B=9 may require Tech Spec or Plan Detail

---

**786- 1- AB**

**ITS VEHICLE DETECTION SYSTEM**

Details and Structure: Complete
**Topic No. 600-000-002**  
**Basis of Estimates**  
*2007 Edition*  
*April 16, 2007*

### Unit: EA  
**Accuracy:** Each  
**PlanQuantity?** no

**Notes**

**Details**

**Related Items**

**Forms**

**Design** Required  
**Recommended** SHTabQuant  
**Construction** Refer to Comp Book

**Documentation**

**Design**

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

**PPM Chapter**

**Other**

**Standards**

**Specifications**

*Selected Items may require Tech Spec and/or Plan Detail*

**Prep & Doc Manual Chapter(s)**

---

### Status

**Struct.** 786-1-AB  
**ITS VEHICLE DETECTION SYSTEM**  
**EA**

A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install)  
4 (Relocate)  
5 (Adjust/Modify)  
9 (Retrofit lowering device on existing pole) B=0

B= Detector Type  
1 (Microwave)  
2 (Video)  
3 (Magnetic)  
4 (Acoustic)  
9 (Special) * Note: Requires prior approval of the ITS Office

**Notes**

* Special may require Tech Spec and/or Plan Detail

---

**823-1A-BBB**  
**SUBBALLAST**

**Unit** SF; M2  
**Accuracy** Square Foot; 10th of a Square Meter  
**PlanQuantity?** no

**Notes**

**Details**

This item is to be used for railroad applications only.

**Related Items**

**Forms**

**Design** Required  
**Recommended** SHTabQuant  
**Construction** Refer to Comp Book

**Documentation**

**Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

Details and Structure: Complete
### 825-1AB-CDE TRACK, STANDARD

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<thead>
<tr>
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<th>Accuracy</th>
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<th>PlanQuantity?</th>
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#### Notes
- This item is to be used for railroad applications only.

#### Related Items
- **Forms**
  - **Design**: SHTabQuant  
  - **Construction**: Refer to Comp Book
- **Documentation**
  - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

### Status
- **Struct.** 825-1AB-CDE TRACK, STANDARD LF
- **A** = Operation
  - 1 (Furnish & Install)
  - 2 (Furnish)
  - 3 (Install)
  - 4 (Remove)
  - 5 (Modify)

**BBB** =
- 075 (3 in.)
- 100 (4 in.)
- 125 (5 in.)
- 150 (6 in.)

#### Notes
- NOTE: Open in one inch increments only (Mass Transit Item)
3 (Install)
4 (Remove)
5 (Modify)

B = Rail Size
1 (100 lb/yd)
2 (115 lb/yd)
3 (119 lb/yd)
4 (132 lb/yd)
5 (133 lb/yd)
6 (136 lb/yd)
7 (140 lb/yd)
8 (Special)

C = Joint Type
1 (Continuous Welded Rail, CWR)
2 (Jointed Rail, JR)

D = Tie Type
1 (Timber)
2 (Concrete)
3 (Steel)

E = Rail Head Hardening
0 (Standard Rail Head)
1 (Hardened Rail Head)

### Notes

**825-2AB-CCC TRACK UNDERCUTTING**

<table>
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<tr>
<th>Unit</th>
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<td>LF; M1</td>
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#### Details

**Related Items**

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<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-03</td>
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**Forms**

Refer to Comp Book

**Documentation**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

#### Prep & Doc Manual Chapter(s)

#### Status

**825-2AB-CCC TRACK UNDERCUTTING LF**

A = Joint Type
1 (Continuous Welded Rail, CWR)
2 (Jointed Rail, JR)

Details and Structure: Complete
B = Tie Type
1 (Timber)
2 (Concrete)
3 (Steel)

CCC = 075 (3 in.)
100 (4 in.)
125 (5 in.)
150 (6 in.)

Notes
NOTE: Open in one inch increments only. (Mass Transit Item)

<table>
<thead>
<tr>
<th>825-3AB-CCC</th>
<th>TRACK RAISING</th>
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<tr>
<td>Accuracy</td>
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<tr>
<td>PlanQuantity?</td>
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Notes
This item is to be used for railroad applications only

Related Items
- Required
- Design: SHTabQuant
- Construction: Refer to Comp Book

Forms
- Design
- Construction

Documentation
- Design
  - Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction
  - Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
- PPM Chapter
- Other
- Standards
- Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

Status
825-3AB-CCC TRACK RAISING

A = Joint Type
1 (Continuous Welded Rail, CWR)
2 (Jointed Rail, JR)

B = Tie Type
1 (Timber)
2 (Concrete)
3 (Steel)

CCC = 075 (3 in.)
100 (4 in.)
125 (5 in.)
150 (6 in.)

Notes
NOTE: Open in one inch increments only. (Mass Transit Item)

<table>
<thead>
<tr>
<th>825-4AB- C</th>
<th>LINE &amp; SURFACE</th>
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<tbody>
<tr>
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<tr>
<td>Accuracy</td>
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<td>PlanQuantity?</td>
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Details and Structure: Complete
### Meter

**Notes**

This item is to be used for railroad applications only.

**Related Items**

**Required**

- SHTabQuant

**Recommended**

- COMP 700-050-03

**Forms**

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- PPM Chapter
- Other
- Standards
- Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct.** 825-4AB- C  
**LINE & SURFACE**  
**LF**

---

**Notes**

825-5AB-CDE  
**TURNOUT**

<table>
<thead>
<tr>
<th>Unit</th>
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<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
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<td>no</td>
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</tbody>
</table>

**Notes**

This item is to be used for railroad applications only.

**Related Items**

**Required**

- SHTabQuant

**Recommended**

- COMP 700-050-03

**Forms**

**Construction**

Refer to Comp Book

**Documentation**

**Design**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

**Details and Structure:** Complete
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

**Struct.** 825-5AB-CDE  **TURNOUT**  **EA**

A = Operation

1 (Furnish & Install)

2 (Furnish)

3 (Install)

4 (Remove)

5 (Modify)

B = Rail Size

1 (100 lb/yd)

2 (115 lb/yd)

3 (119 lb/yd)

4 (132 lb/yd)

5 (133 lb/yd)

6 (136 lb/yd)

7 (140 lb/yd)

8 (Special)

C = 1 (Right Hand)

2 (Left Hand)

D = Turnout Size

1 (No. 08)

2 (No. 10)

3 (No. 12)

4 (No. 14)

5 (No. 15)

6 (No. 16)

7 (No. 18)

8 (No. 20)

E = Tie Type

1 (Timber)

2 (Concrete)

3 (Steel)

---

**Notes**

**825-6AB-CDE**  **CROSSOVER**

<table>
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<tr>
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<th>EA</th>
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**Notes**

Details  This item is to be used for railroad applications only.

Related Items

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<th>COMP 700-050-03</th>
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<tbody>
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Details and Structure: Complete
**Construction**

Refer to Comp Book

**Documentation**

- **Design**
  
  Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)** 7, 13

---

**Status**

**Struct.** 825-6AB-CDE  Crossover  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Modify)

B = Rail Size
1 (100 lb/yd)
2 (115 lb/yd)
3 (119 lb/yd)
4 (132 lb/yd)
5 (133 lb/yd)
6 (136 lb/yd)
7 (140 lb/yd)
8 (Special)

C = 1 (Right Hand)
2 (Left Hand)

D = Crossover Size
1 (No. 08)
2 (No. 10)
3 (No. 12)
4 (No. 14)
5 (No. 15)
6 (No. 16)
7 (No. 18)
8 (No. 20)

E = Tie Type
1 (Timber)
2 (Concrete)
3 (Steel)

---

**Notes**

**827- 1-ABC  DERAIL**

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<th>PlanQuantity?</th>
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**Notes**

Details and Structure: Complete
This item is to be used for railroad applications only.

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<th>Details</th>
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**References**

PPM Chapter

Other

Standards

Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

---

**Status**

**Struct.** 827- 1-ABC  DERAIL  EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Modify)

B = Rail Size
1 (100 lb/yd)
2 (115 lb/yd)
3 (119 lb/yd)
4 (132 lb/yd)
5 (133 lb/yd)
6 (136 lb/yd)
7 (140 lb/yd)
8 (Special)

C = Type of Derail
1 (Manual)
2 (Electric)

---

**Notes**

827- 2-ABC  BUMPING POST

| Unit     | EA  | Accuracy | Each | Plan Quantity? | no |

This item is to be used for railroad applications only.

**Related Items**

**Forms**

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<tbody>
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<td>Refer to Comp Book</td>
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**Documentation**

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<tr>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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</tr>
</tbody>
</table>
Standards
Specifications

Struct. 827-2-ABC BUMPING POST EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Modify)

B = Rail Size
1 (100 lb/yd)
2 (115 lb/yd)
3 (119 lb/yd)
4 (132 lb/yd)
5 (133 lb/yd)
6 (136 lb/yd)
7 (140 lb/yd)
8 (Special)

C = Type of Head
1 (Solid)
2 (Spring)
3 (Hydraulic)
4 (Buffer)

Notes

References PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s) 6, 7, 13

Status
Struct. 827-2-ABC BUMPING POST EA

Notes

References PPM Chapter
Other
Standards

Details

This item is to be used for railroad applications only.

Related Items

Forms Required Recommended
Design SHTabQuant COMP 700-050-03

Documentation

Design Locate in plans. Summarize quantities by location on tabulation of
tab quantities sheet in the plans, or detail calculations in the computation book.

Construction Record final quantity on the tabulation sheet (plans) or computation form
(comp book).

Unit LF; M1 Accuracy Linear Foot; 10th of a Meter

PlanQuantity? no

830-1AB-CDE GRADE CROSSING

Notes

Details

Related Items

Forms

Documentation

References

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

| Status |
|------------------|------------------|------------------|------------------|------------------|
| Struct. 830-1AB-CDE | GRADE CROSSING | LF |

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Remove)
5 (Modify)

B = Grade Crossing Type
1 (Concrete)
2 (Rubber)
3 (Timber)
4 (Asphalt)
5 (Timber and Asphalt)
6 (Stone)
7 (Special)
0 (Temporary)

C = Rail Size
1 (100 lb/yd)
2 (115 lb/yd)
3 (119 lb/yd)
4 (132 lb/yd)
5 (133 lb/yd)
6 (136 lb/yd)
7 (140 lb/yd)
8 (Special)

D = Joint Type
1 (Continuous Welded Rail, CWR)
2 (Jointed Rail, JR)

E = Tie Type
1 (Timber)
2 (Concrete)
3 (Steel)

Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

832-1AB-CDE WELDS, ELECTRIC FLASH-BUTT/ THERMITE

<table>
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Notes

This item is to be used for railroad applications only.

Related Items

Forms

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<tr>
<td>COMP 700-050-03</td>
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Construction

Refer to Comp Book

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Details and Structure: Complete
## 832-1- A

**WELDS, ELECTRIC FLASH-BUTT/ THERMITE**  
**EA**

A = Rail Size  
1 (100 lb/yd)  
2 (115 lb/yd)  
3 (119 lb/yd)  
4 (132 lb/yd)  
5 (133 lb/yd)  
6 (136 lb/yd)  
7 (140 lb/yd)  
8 (Special)

### Notes

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s) 7, 13

---

## 832-2- A

**THERMITE WELD**

**Unit**: EA  
**Accuracy**: Each  
**Plan Quantity?**: no

### Related Items

**Required**  
**Recommended**  

**Forms**  
**Design**: SHTabQuant  
**Construction**: Refer to Comp Book

**Documentation**  
**Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

PPM Chapter  
Other  
Standards  
Specifications

Plan Detail and/or Tech Spec Required

Prep & Doc Manual Chapter(s)

---

## Status

**Struct.**: 832-2- A  
**THERMITE WELD**  
**EA**

A = Rail Size  
1 (100 lb/yd)  
2 (115 lb/yd)  
3 (119 lb/yd)  
4 (132 lb/yd)  
5 (133 lb/yd)
### INSULATED JOINTS

<table>
<thead>
<tr>
<th>836-1AB-CDE</th>
<th>UNIT</th>
<th>EA</th>
<th>ACCURACY</th>
<th>EACH</th>
<th>PLAN</th>
<th>QUANTITY?</th>
<th>NO</th>
</tr>
</thead>
</table>

**Notes**

This item is to be used for railroad applications only.

#### Related Items

- **Forms**
  - **Required**: SHTabQuant
  - **Recommended**: COMP 700-050-03

- **Documentation**
  - Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References

- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

- **Plan Detail and/or Tech Spec Required**
- **Prep & Doc Manual Chapter(s)**: 6, 7, 13

#### Status

**Struct.** 836-1AB-CDE | **INSULATED JOINTS** | **EA**

- **A** = Operation
  1. (Furnish & Install)
  2. (Furnish)
  3. (Install)
  4. (Remove)
  5. (Modify)

- **B** = Insulated Joint Type
  1. (Factory Prefab Bonded Plug)
  2. (Field Bonded)
  3. (Field Installed)

- **C** = Rail Size
  1. (100 lb/yd)
  2. (115 lb/yd)
  3. (119 lb/yd)
  4. (132 lb/yd)
  5. (133 lb/yd)
  6. (136 lb/yd)
  7. (140 lb/yd)
  8. (Special)

- **D** = Joint Type
  1. (Continuous Welded Rail, CWR)
  2. (Jointed Rail, JR)

- **E** = Tie Type
1 (Timber)  
2 (Concrete)  
3 (Steel)

Notes

900-576- 1  GRASSING COMPLETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC; HA</td>
<td>10th of an Acre; 10th of a Hectare</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes  
This is a trial item; contact the Monitor prior to use. Monitor: Jeff Caster

Details  
Compare with 902-576 items.

Related Items  
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation  
| Design | Location in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References  
PPM Chapter
Other
Index No. 104, 105
Specifications

Prep & Doc Manual Chapter(s) 6, 7, 13

Status  
900-576- 1  GRASSING COMPLETE  AC

Notes

901-337- 8  BONDED ASPHALT CONCRETE FRICTION COURSE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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</thead>
<tbody>
<tr>
<td>TN; MT</td>
<td>10th of a Ton; 10th of a Metric Ton</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes  
Contact - Emmanuel Uwaibi for use

Details

Related Items  
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation  
| Design | Location in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

References  
PPM Chapter
Other
Specifications

Plan Detail and/or Tech Spec Required

Details and Structure: Complete
902-576-3 PERFORMANCE TURF

**Unit**: LS/AC; LS/HA  
**Accuracy**: Lump Sum (1/100th of an Acre); Lump Sum (1/100th of a Hectare)  
**PlanQuantity?**: yes

**Notes**: This is a trial item; contact the Monitor prior to use. Monitor: Jeff Caster, David Sadler

**Details**: Compare with 900-576 items. Pay Item associated with turf areas under the Performance Turf specification (end result specification).

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a quantity of 1, but calculations and documentation must be to the second unit of measure. Locate or define the scope of work involved on the plans.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.</td>
</tr>
</tbody>
</table>

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**

---

903-455-1 EMBEDDED DATA COLLECTOR

**Unit**: EA  
**Accuracy**: Each  
**PlanQuantity?**: no

**Notes**: This is a trial item; contact the Monitor prior to use. Monitor: Robert Robertson

**Details**: This item is used for the work associated with casting and installation of the data collector system in the piling. Coordinate use of this item with the State Construction Office and State Structures Design Office. Total assembly of embedded data collector system in each piling.

**Related Items**

<table>
<thead>
<tr>
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<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
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</table>

**Documentation**

<table>
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Details and Structure: Complete
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<th>Notes</th>
<th>Details</th>
<th>Related Items</th>
<th>Forms</th>
<th>Documentation</th>
<th>References</th>
<th>Prep &amp; Doc Manual Chapter(s)</th>
<th>Status</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>903-455-1</td>
<td>EMBEDDED DATA COLLECTOR</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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<td>Obsolete</td>
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<tr>
<td>903-460-1</td>
<td>TUNNEL CONSTRUCTION 12' DIAMETER (F&amp;I)</td>
<td>This is a trial item; contact the Monitor prior to use.</td>
<td>Required</td>
<td>SHTabQuant</td>
<td>Refer to Comp Book</td>
<td>PPM Chapter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intended for Lafayette St, Tallahassee, only. Valid for project 408049 only To be used in accordance with Tech Spec.</td>
<td>Recommended</td>
<td>COMP 700-050-03</td>
<td></td>
<td>Other</td>
<td></td>
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<td>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</td>
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<td>Standards</td>
<td></td>
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<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
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</tr>
<tr>
<td>904-439-1</td>
<td>SYNTHETIC SUBSURFACE DRAINAGE LAYER</td>
<td>Monitor: Larry Jones, State Structures Office</td>
<td>Required</td>
<td>SHTabQuant</td>
<td>COMP 700-050-01</td>
<td>PPM Chapter</td>
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<td>Recommended</td>
<td></td>
<td></td>
<td>Other</td>
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<td></td>
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<td>Specifications</td>
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<td></td>
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<td></td>
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</tr>
</tbody>
</table>
### 904-439- A SYNTHERIC SUBSURFACE DRAINAGE LAYER SY

A = sides covered by geotextile
1 (single sided)
2 (double sided)
Note: Standard is double sided

#### Status
- **Struct.** 904-439- A
- **Synthetic Subsurface Drainage Layer** SY

#### Notes
- A= sides covered by geotextile
- 1 (single sided)
- 2 (double sided)
- Note: Standard is double sided

### 904-540- A HIGH TENSION CABLE BARRIER SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>LF; M1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Linear Foot; 10th of a Meter</td>
</tr>
<tr>
<td>PlanQuantity?</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Notes
- This is a trial item; contact the Monitor prior to use

#### Details
- Monitor: Andy Keel
- through 12/05: A=1 complete system included anchors.
- Effective 1/2006: A=2 or 3 defines type of post system, to be used with A=4 end terminal.

#### Related Items
- **Forms**
  - Required: SHTabQuant
  - Recommended: COMP 700-050-03
- **Documentation**
  - Design: Refer to Comp Book
  - Construction: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### References
- PPM Chapter
- Other
- Standards
- Specifications

- Plan Detail and/or Tech Spec Required
- Prep & Doc Manual Chapter(s)

#### Status
- **Struct.** 904-540- A
- **High Tension Cable Barrier System** LF

A= Type
- 2 (Socketed Post System) LF
3 (Driven Post System) LF
4 (End Terminal) EA

### Notes

#### 904-711-ABC  THERMOPLASTIC, NO TRACK

| Unit | Mixed | Accuracy | Refer to item structure and details | PlanQuantity? | no |

**Notes**

Monitor: Chester Henson
Developmental Item- initial end date set at 6-30-2005. May only be changed with monitor's approval.

**Details**

Monitor: Chester Henson.
Contact the monitor prior to using this item.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>

**Forms**

<table>
<thead>
<tr>
<th>Design</th>
<th>SHTabQuant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

**Documentation**

<table>
<thead>
<tr>
<th>Design</th>
<th>Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Record final quantity on the tabulation sheet (plans) or computation form (comp book).</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th>PPM Chapter</th>
<th>Other</th>
</tr>
</thead>
</table>

**Standards**

**Specifications**

**Prep & Doc Manual Chapter(s)**

**Status**

**Struct.** 904-711-ABC  THERMOPLASTIC, NO TRACK  Mixed

A = color
1 (white)
2 (yellow)

B = type
1 (solid), per NM or NK Note: C =1 or 2
2 (skip), per GM or GK Note: C =1 or 2
3 (solid), per LF or M1
4 (skip), per LF or M1
5 (guidelines), per LF or M1
6 (messages), EA Note: C = 0

C = width
0 (blank- used for B =6)
1 (6")
2 (8")
3 (10")
4 (12")
5 (16")
6 (18")
7 (24")

**Notes**

Note: Mile (kilometer) units only valid with 6" or 8" stripes
905-707- 1 STRIPING & MARKING- ASPHALT RESISTANT

<table>
<thead>
<tr>
<th>Unit</th>
<th>LS/LS</th>
<th>Accuracy</th>
<th>Lump Sum</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
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</table>

Notes
This is a developmental Item; contact the monitor prior to use. Valid for projects let March 2005 through June 2006. Date may be extended only by Monitor.

Details
Monitor: Ananth Prasad

Related Items
Required Recommended

Forms
Design SHTabQuantLS COMP 700-050-05
Construction Refer to Comp Book

Documentation
Design Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References
PPM Chapter
Other
Specifications

Prep & Doc Manual Chapter(s)

Status

906-102- 1 AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

<table>
<thead>
<tr>
<th>Unit</th>
<th>ED</th>
<th>Accuracy</th>
<th>Each Day</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

Notes
This is a developmental item; designers must get approval from the monitor prior to use.

Details
Monitor: Cheryl Adams
Limited Use- When approved, Construction must document effectiveness for FHWA evaluation of this experimental item.
Coordinate all reports with the monitor.

Related Items
Required Recommended

Forms
Design SHTabQuant COMP 700-050-03
Construction Refer to Comp Book

Documentation
Design

References
PPM Chapter
Other
Specifications
Developmental Specification required.

Prep & Doc Manual Chapter(s)

Status

Details and Structure: Complete
### Structural 906-313- A

#### REINFORCED ASPHALT PAVEMENT OVERLAY

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY; M2</td>
<td>Square Yard; Square Meter</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

#### Details

This is a limited use item. Please contact the State Estimates Office prior to use. Must be coordinated with the Specifications and Structures Offices.

#### Related Items

- **Required**: Plan Detail and/or Tech Spec Required

#### Forms

- **Design**: Refer to Comp Book

#### Documentation

- **Design**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

#### Status

**Struct. 906-313- A**

REINFORCED ASPHALT PAVEMENT OVERLAY SY

A = Type of Mesh overlay

1 (Fiberglass Reinforced Mesh)
2 (Fiber Mesh Composite w/ Polyester Fabric)
3 (Steel Reinforced Mesh w/ mechanical fastening)

#### Notes

- **906-334- 1** FUEL RESISTANT SUPERPAVE ASPHALT CONCRETE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TN; MT</td>
<td>10th of a Ton; 10th of a Metric Ton</td>
<td>no</td>
<td></td>
</tr>
</tbody>
</table>

#### Details

This is a trial item; contact the Monitor prior to use

Monitor: Greg Sholar.

To be used only with approval of Asphalt Materials and/or Pavement Office. Intended for Agricultural Inspection and Weigh stations

#### Related Items

- **Required**: SHTabQuant

#### Forms

- **Design**: COMP 700-050-06

#### Documentation

- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
**References**  
PPM Chapter  
Other  
Standards  
Specifications

**Plan Detail and/or Tech Spec Required**  
Prep & Doc Manual Chapter(s)

**Status**  
**Struct.** 906-334- 1  
**FUEL RESISTANT SUPERPAVE ASPHALT CONCRETE**  
**TN**

**Notes**

<table>
<thead>
<tr>
<th><strong>906-340-1</strong></th>
<th>OPEN GRADED CRACK RELIEF LAYER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>TN; MT</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>10th of a Ton; 10th of a Metric Ton</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**  
HOLD for Future Development; refer to 906-340- item for use with developmental specification

**Details**  
Contact the State Materials Office for assistance with this office. Developmental Specification required.

**Related Items**  
**Required**  
**Recommended**

**Forms**  
**Design**  
SHTabQuant

**Construction**  
Refer to Comp Book

**Documentation**  
**Design**  
**Construction**  
Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**  
PPM Chapter  
Other  
Standards  
Specifications  
Prep & Doc Manual Chapter(s)

**Status**  
**Future Effective Date**

**Struct.** 906-340-1  
**OPEN GRADED CRACK RELIEF LAYER**  
**TN**

**Notes**

<table>
<thead>
<tr>
<th><strong>906-455- 1</strong></th>
<th>COMPOSITE SHEET PILING</th>
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</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>SF; M2</td>
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<tr>
<td><strong>Accuracy</strong></td>
<td>Square Foot; 10th of a Square Meter</td>
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<tr>
<td><strong>PlanQuantity?</strong></td>
<td>yes</td>
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**Notes**  
This is a trial item; contact the Monitor prior to use

**Details**  
Monitor: Larry Jones

Low height sheet pile for shoreline protection. Polyurethane resin/glass fiber matrix pultruded material. Experimental use only.

**Related Items**  
**Required**  
**Recommended**

**Forms**  
**Design**  
SHTabQuant

**COMP 700-050-01**

---

Details and Structure: Complete
## Topic No. 600-000-002

### Basis of Estimates

**2007 Edition**  
**April 16, 2007**

### Standards

**Specifications**

#### Struct.

906-455- 1  
**COMPOSITE SHEET PILING**  
SF

### Notes

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### References

<table>
<thead>
<tr>
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<tbody>
<tr>
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</tr>
<tr>
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<td><strong>Standards</strong></td>
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<td><strong>Specifications</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
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</tr>
</tbody>
</table>

### Status

**Struct.**  
906-455- 1  
**COMPOSITE SHEET PILING**  
SF

### Notes

This is a trial item; contact the Monitor prior to use

Monitor: Cheryl Adams

For use with flagging operations on a two-lane, two way roadway. Four Sets are to be used, in each direction of the roadway, in advance of the flagging station. Refer to the specification for details.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</thead>
</table>
| **Design** | **SHTabQuant**  
COMP 700-050-03 |
| **Construction** | **Refer to Comp Book** |

### Forms

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

<table>
<thead>
<tr>
<th>Design</th>
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<tbody>
<tr>
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<td><strong>Other</strong></td>
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<tr>
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<td></td>
</tr>
<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
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</tr>
</tbody>
</table>

### Status

**Struct.**  
906-456- 1  
**TEMPORARY RAISED RUMBLE STRIPS**  
PS

### Notes

This is a trial item; contact the Monitor prior to use

Monitor: Cheryl Adams

For use with flagging operations on a two-lane, two way roadway. Four Sets are to be used, in each direction of the roadway, in advance of the flagging station. Refer to the specification for details.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>
| **Design** | **SHTabquant**  
COMP 700-050-03 |
| **Construction** | **Refer to Comp Book** |

### Forms

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

<table>
<thead>
<tr>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPM Chapter</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Status

**Struct.**  
906-456- 1  
**TEMPORARY RAISED RUMBLE STRIPS**  
PS

### Notes

This is a trial item; contact the Monitor prior to use

Monitor: Cheryl Adams

For use with flagging operations on a two-lane, two way roadway. Four Sets are to be used, in each direction of the roadway, in advance of the flagging station. Refer to the specification for details.

### Related Items

<table>
<thead>
<tr>
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<th>Recommended</th>
</tr>
</thead>
</table>
| **Design** | **SHTabQuant**  
COMP 700-050-03 |
| **Construction** | **Refer to Comp Book** |

### Forms

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

<table>
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<th>Construction</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td><strong>Standards</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
<td></td>
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<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Status

**Struct.**  
906-456- 1  
**TEMPORARY RAISED RUMBLE STRIPS**  
PS

### Notes

This is a trial item; contact the Monitor prior to use

Monitor: Cheryl Adams

For use with flagging operations on a two-lane, two way roadway. Four Sets are to be used, in each direction of the roadway, in advance of the flagging station. Refer to the specification for details.

### Related Items

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
</table>
| **Design** | **SHTabQuant**  
COMP 700-050-03 |
| **Construction** | **Refer to Comp Book** |

### Forms

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

### References

<table>
<thead>
<tr>
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<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPM Chapter</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Prep &amp; Doc Manual Chapter(s)</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Status

**Struct.**  
906-456- 1  
**TEMPORARY RAISED RUMBLE STRIPS**  
PS

### Notes

This is a trial item; contact the Monitor prior to use

Monitor: Cheryl Adams

For use with flagging operations on a two-lane, two way roadway. Four Sets are to be used, in each direction of the roadway, in advance of the flagging station. Refer to the specification for details.
**Details**
Monitor: Karen Byram

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. PLAN QUANTITY will be basis of payment to the Contractor. |
| Construction | Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances. |

**References**
PPM Chapter
Other

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

| Struct. | 906-560-1 | PAINTING STRUCTURAL STEEL- CABLES | LF |

**Notes**

**906-609- AA TRAFFIC SIGNAL SYSTEM**

| Unit | PI | Accuracy | Per Intersection | Plan Quantity? | no |

**Notes**
This is a trial item; contact the Monitor prior to use

**Details**
Monitor: Chester Henson
This is a developmental item; contact the monitor prior to use.
Intended for the payment of traffic signal systems, per intersection. Refer to the specifications for detailed list of items included/excluded for payment under this item.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
<td></td>
</tr>
</tbody>
</table>

**Documentation**

| Design | Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book. |
| Construction | Record final quantity on the tabulation sheet (plans) or computation form (comp book). |

**References**
PPM Chapter
Other

**Standards**

**Specifications**

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

| Struct. | 906-609- AA | TRAFFIC SIGNAL SYSTEM | PI |

AA= Intersection Number
1 (Intersection 1)
2 (Intersection 2)
## as needed for additional intersections on a proposal

### Notes

#### 906-609-100  INTERCONNECT CABLE ASSEMBLY- TRAFFIC SIGNAL SYSTEM

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF; M1</td>
<td>Linear Foot; 10th of a Meter</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**
This is a trial item; contact the Monitor prior to use

**Details**
Monitor: Chester Henson
This is a developmental item; contact the monitor prior to use.
For use only with Traffic Signal System, per intersection. Includes cable, conduit, pull boxes, and other signals materials/items between intersections which are not included under per intersection item. Refer to the specifications for additional information.

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>906-609- AA</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Forms**
Design: SHTabQuant
Construction: Refer to Comp Book

**Documentation**
Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

**Status**

**Struct.** 906-609-100  INTERCONNECT CABLE ASSEMBLY- TRAFFIC SIGNAL SYSTEM

Notes

### Notes

#### 906-633- 1  FIBER OPTIC AERIAL SPLICE ENCLOSURE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EA</td>
<td>Each</td>
<td>no</td>
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</tbody>
</table>

**Notes**
New item for one-time use in district 5. Future use requires approval of Design and Specifications

**Details**

**Related Items**

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
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</table>

**Forms**
Design: Refer to Comp Book

**Documentation**
Design: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

Details and Structure: Complete
### 906-701- AA  AUDIBLE STRIPE

<table>
<thead>
<tr>
<th>Unit</th>
<th>Mixed</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
</tr>
</thead>
</table>

**Notes**

This is a Developmental item; contact the Monitor prior to use.

**Details**

Monitor: Chester Henson

This is a developmental item; contact the monitor prior to use.

**Required**

**Recommended**

**Forms**

**Design**

SBT BSP

**Construction**

Refer to Comp Book

**Documentation**

**Design**

**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

<table>
<thead>
<tr>
<th>References</th>
<th>PPM Chapter</th>
<th>Other</th>
<th>Standards</th>
<th>Specifications</th>
</tr>
</thead>
</table>

**Status**

**Struct.** 906-701- AA  AUDIBLE STRIPE  Mixed

Verify structure with Monitor prior to opening items

AA=

32 (Yellow, Skip, 6", GM)

35 (Yellow, Skip, 6", LF)

37

38

others, per specification.

**Notes**

### 906-702- AA  INVERTED PROFILE MARKINGS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Mixed</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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</thead>
</table>

**Notes**

Details
Contact Chester Henson for information.
Pay Item structure updated with 9-8-06 developmental specification

Related Items
<table>
<thead>
<tr>
<th>Required</th>
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<tbody>
<tr>
<td>Design</td>
<td>SBTBSP</td>
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<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
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</table>

Documentation
<table>
<thead>
<tr>
<th>Review</th>
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<tbody>
<tr>
<td>Design</td>
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<tr>
<td>Construction</td>
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References
<table>
<thead>
<tr>
<th>PPM Chapter</th>
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</thead>
<tbody>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s)

Status

Struct.
906-702- AA   INVERTED PROFILE MARKINGS   Mixed

Verify structure with Monitor prior to opening items
AA=
31 (White, Skip, 6", GM)
32 (Yellow, Skip, 6", GM)
33 (White, Skip, 6", LF)
34 (Yellow, Skip, 6", LF)
35 (White, Solid, 6", LF)
36 (Yellow, Solid, 6", LF)
37 (White, Solid, 6", NM)
38 (Yellow, Solid, 6", NM)

others, per specification.

Notes

999- 2-
LUMP SUM CONTRACT (ALTERNATIVE BIDDING)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>PlanQuantity?</th>
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</thead>
<tbody>
<tr>
<td>LS/LS</td>
<td>Lump Sum</td>
<td>no</td>
</tr>
</tbody>
</table>

Notes

Details
See latest guidelines for Innovative Bidding practices.

Related Items
<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuantLS</td>
</tr>
<tr>
<td>Construction</td>
<td>COMP 700-050-05</td>
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</table>

Documentation
<table>
<thead>
<tr>
<th>Review</th>
</tr>
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<tbody>
<tr>
<td>Design</td>
</tr>
<tr>
<td>Construction</td>
</tr>
<tr>
<td>Construction</td>
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</tbody>
</table>

References
<table>
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<th>PPM Chapter</th>
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<tbody>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Standards</td>
</tr>
<tr>
<td>Specifications</td>
</tr>
</tbody>
</table>

Prep & Doc Manual Chapter(s) 11, 13

Details and Structure: Complete
### LUMP SUM CONTRACT (ALTERNATIVE BIDDING) - LS/LS

**Notes**

<table>
<thead>
<tr>
<th>999- 5-</th>
<th>LANE RENTAL DAYS (TIME BID)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit</strong></td>
<td>DD</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Dollars per day</td>
</tr>
<tr>
<td><strong>PlanQuantity?</strong></td>
<td>no</td>
</tr>
</tbody>
</table>

**Details**

See latest guidelines for Innovative Bidding Practices.

**Required**

- **Design**: SHTabQuant
- **Construction**: 700-050-57

**Recommended**

- **Design**: COMP 700-050-03
- **Construction**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**Related Items**

- **Forms**
  - Design: SHTabQuantLS
  - Construction: Refer to Comp Book
- **Documentation**
  - Design: Computation book form or documentation from Construction required.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**Prep & Doc Manual Chapter(s)**: 11, 13

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Status**

| Struct. 999- 5- |

---

### PARTNERING (DO NOT BID)

**Notes**

The use of this pay item will be initiated by the District Construction Office. The purpose is to provide an amount of money to the contractor to pay for the cost of a partnering session(s). Designers will load the pay item and provide the cost to be overrun to the District Estimates Coordinator.

**NOTE**: Construction will advise the designer when to use this item. They will also provide the designer with the number of days and the cost per day.

**Related Items**

- **Forms**
  - Design: SHTabQuantLS
  - Construction: Refer to Comp Book
- **Documentation**
  - Design: Computation book form or documentation from Construction required.
  - Construction: Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

**Prep & Doc Manual Chapter(s)**

**References**

- PPM Chapter
- Other
- Standards

---

Details and Structure: Complete
### Dispute Review Board (DO NOT BID)

**Unit**: DA  
**Accuracy**: Day  
**PlanQuantity**: no

**Notes**: The use of this pay item will be initiated by the District Construction Office. The purpose is to require a Dispute Resolution Board to be established for the project and to provide the contractor a specific amount of money to pay for the services of each of the three Board members. Designers will load the pay item and the number of days (meetings).  
**NOTE**: Construction will advise the designer when to use this item. They will also provide the designer with the number of days (meetings), based on 1 meeting per month for the length of the contract. The cost has been hard coded at $3,300.00* as the unit price for this item. Only the Director of Construction can approve a change to this amount.  
*Verify current amount with specification.

**Related Items**

**Required**
- Design: SHTabQuant  
- Construction: Refer to Comp Book

**Recommended**
- Design: COMP 700-050-03  
- Construction: Computation book form or documentation from Construction required.

**References**

- PPM Chapter
- Other
- Standards
- Specifications

**Prep & Doc Manual Chapter(s)**: 11, 13

### Initial Contingency Amount (DO NOT BID)

**Unit**: $  
**Accuracy**: Dollars  
**PlanQuantity**: no

**Notes**: IMPORTANT: INITIAL CONTINGENCY TOTAL IS BASED ON PROPOSAL TOTAL, not individual project totals.

**Details**: Use when requested by Construction, in accordance with the CPAM. The item will be loaded as FA Participating and the cost will be input by the District Estimates Coordinator. Load item in Roadway Category.  
When a contract contains multiple projects, this item may be used on each project within the contract, if recommended by construction. Note that the totals listed in the CPAM are per PROPOSAL/CONTRACT, not per project.  
Department Policy (per F. Simmons, 10-1-02): Include Initial Contingency Amount on all
Design-Build Contracts.

### Related Items

**Forms**
- **Required**: Design
- **Recommended**: SHTabQuant

**Documentation**
- **Required**: Design
- **Recommended**: See Detail

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**: Contact Final Estimates

### Status

**Struct.** 999-25-

**INITIAL CONTINGENCY AMOUNT (DO NOT BID)** $ 

### Notes

**999-102- A** SPEED AND LAW ENFORCEMENT OFFICER (DO NOT BID)

| Unit | MH | Accuracy | Hour | PlanQuantity? | no |

**Notes**

Monitor: Cheryl Adams

**Details**

This item is used to provide uniformed traffic control officers, including marked law enforcement vehicles, to assist in controlling speed and enforcing traffic laws in the work zone. Officers should be actively involved in either directing traffic or reducing speeding and traffic violations present in our work zones.

**Related Items**

**Forms**
- **Required**: Design
- **Recommended**: SHTabQuant
- **Recommended**: COMP 700-050-03

**Documentation**
- **Required**: Design
- **Recommended**: Refer to Comp Book

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

**Prep & Doc Manual Chapter(s)**

### Status

**Struct.** 999-102- A

**SPEED AND LAW ENFORCEMENT OFFICER (DO NOT BID)**

A =
1 = Central Office Statewide Contract
2 = District Contract

**Prep & Doc Manual Chapter(s)**

Page 456 of 468
999-455- AB  PILING- PRESTRESSED

| Unit | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

Notes

Details

Related Items

Forms

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)

Status

Struct.  999-455- AB  PILING- PRESTRESSED  LF

A = 1 Piling (Prestressed Concrete)
2 Test Piling (Prestressed)

Notes

999-715- A  HURRICANE REPAIRS- LIGHTING

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

Notes

Valid for Hurricane Repairs only.

Details

This is a special items for repair/replacement due to hurricanes.

Related Items

Forms

<table>
<thead>
<tr>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
</tr>
<tr>
<td>Construction</td>
<td>Refer to Comp Book</td>
</tr>
</tbody>
</table>

Documentation

Design

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter

Other

Standards

Specifications

Prep & Doc Manual Chapter(s)

Plan Detail and/or Tech Spec Required

Details and Structure: Complete
Status
Struct. 999-715- A  HURRICANE REPAIRS- LIGHTING EA

A= Sequential Order of Items; may be expanded upon request.
1 (Ballast) EA
2 (Lamp, HPS) EA
3 (Lamp, Mercury Vapor) EA
4 (Lamp, Metal Halide) EA

Notes

9AA-BBB- CC  TRAIL PAY ITEMS (Monitor’s Name)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan</th>
<th>Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

Related Items
Required
Forms Design SHTabQuant
Construction Refer to Comp Book

Details
Required
Documentation Design See Detail
Construction see detail

References
PPM Chapter
Other
Standards
Specifications
Prep & Doc Manual Chapter(s)

1000- AA-  UTILITY WORK

<table>
<thead>
<tr>
<th>Unit</th>
<th>Accuracy</th>
<th>Plan</th>
<th>Quantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS/LS</td>
<td>Lump Sum</td>
<td></td>
<td>yes</td>
</tr>
</tbody>
</table>

Notes
HOLD pending approvals
Details
HOLD pending approval of the State Roadway Design Engineer. Specification and/or PPM guidance details to be determined.

Coordinate the use of this item with District Utilities Office. This item not to be used with detailed pay items for given utility. Payment covers all work and materials for specified utility.

Related Items
Required
Forms Design SHTabQuantLS
Recommended COMP 700-050-05

Notes
AA = Year of Development
BBB = Spec Book Section
CC = Sequence of New Item in Spec Book Section
01 = (First Trial Item for Year)
02 = (Second Trial Item for Year) Etc.
Standards

Specifications

Struct. 1000- AA- UTILITY WORK LS/LS

AA =
5 (Sewer)
6 (Water)
7 (Power)
8 (Communications)
9 (Fuel)

Notes

Plan Detail and/or Tech Spec Required

Status

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction
Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

References
PPM Chapter
Other
Standards
Specifications

Prep & Doc Manual Chapter(s)

Documentation

PPM Chapter
Design
Construction

Construction
Refer to Comp Book

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Final pay quantity will be PLAN QUANTITY with proper consideration for Specification tolerances.

Status

Struct. 1000- AA- UTILITY WORK LS/LS

AA =
5 (Sewer)
6 (Water)
7 (Power)
8 (Communications)
9 (Fuel)

Notes

1050- 1A-BCD UTILITY PIPE

Unit LF; M1
Accuracy Linear Foot; 10th of a Meter

PlanQuantity? no

Notes

Details

For new pipe, payment includes anchors & incidentals, as well as connections to existing systems; detail all work in the plans or specifications.

For pipe up to 7.9” diameter, payment includes all fittings.

Material requirements and pressure ratings must be included in the specifications.

Pressure values shown next to the application are for common operating pressures, and are not included in the pay item description. (Design and Material pressure ratings are considerably higher than normal operating pressure, to allow for factor of safety.) Select the application based on the type of utility work to be completed.

For Casings, payment includes vents/air release valves.

Note: Place out of service included under "remove"

Related Items

Required

Design SHTabQuant

Construction Refer to Comp Book

Recommended

Design COMP 700-050-03

Construction

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

References

PPM Chapter
Other
Standards

Prep & Doc Manual Chapter(s)

Documentation

PPM Chapter
Design
Construction

Construction
Refer to Comp Book

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

Construction

Record final quantity on the tabulation sheet (plans) or computation form (comp book).
### Specifications

*Selected Items may require Tech Spec and/or Plan Detail

#### Prep & Doc Manual Chapter(s)

---

#### Status

<table>
<thead>
<tr>
<th>Struct.</th>
<th>UTILITY PIPE</th>
<th>LF</th>
</tr>
</thead>
</table>
| A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) BC=00  
4 (Relocate) BC=00  
5 (Adjust /Modify) BC=00  
6 (Remove & Dispose) BC=00, Note: Contractor takes ownership  
7 (Remove & Stockpile/Salvage) BC=00, Note: DOT/maintaining agency retains ownership  
8 (Plug & Place out of Service) BC=00 Note: Utility Retains Ownership  
9 (Temporary Pipe) |
| B=Material  
1 (Concrete)  
2 (PVC)  
3 (PE)  
4 (DI/CI)  
5 (Steel)  
9 (Special)* |
| C= Application  
1 (Casing/Conduit)  
2 (Water/Sewer)  
3 (Gas)  
4 (Fuel Transmission) |
| D= Size or Equivalent Diameter  
1 (0 - 1.9")*  
2 (2.0 - 4.9")*  
3 (5.0 - 7.9")*  
4 (8.0 -19.9")  
5 (20.0 - 49.9")  
6 (50.0" or larger) |

*Sizes up to 7.9" includes the cost of all fittings

#### Notes

* Special may require Tech Spec and/or Plan Detail

---

### 1055-1A-BCD UTILITY FITTINGS

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Each</td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

For pipe up to 7.9" diameter, payment includes all fittings. Material requirements and pressure ratings to be included in the specifications.

**Related Items**

**Forms**

- Required: SHTabQuant
- Recommended: COMP 700-050-03

**Construction**

- Refer to Comp Book

**Documentation**

- Design: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

---

Details and Structure: Complete
### References
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**

*Selected Items may require Tech Spec and/or Plan Detail*

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.** 1055- 1A-BCD  
**UTILITY FITTINGS**  
**EA**

A= Operation  
1 (Furnish & Install)  
2 (Furnish)  
3 (Install) BCD=blank  
4 (Relocate) BCD=blank  
5 (Adjust /Modify) BCD=blank  
6 (Remove & Dispose) BCD=blank, Note: Contractor takes ownership  
7 (Remove & Stockpile/Salvage) BCD=blank, Note: DOT/maintaining agency retains ownership  
8  
9 OPEN Note: May be defined in item structure as Special, Rehab, etc.

B=Material  
1 (Concrete)  
2 (PVC)  
3 (PE)  
4 (Di/Cl)  
5 (Steel)  
9 (Special)*

C= Fitting Type  
1 (Elbow)  
2 (Tee)  
3 (Reducer)  
4 (Union)  
5 (Cap/Plug)  
6 (Y)  
7 (Cleanout)  
9 (Special)*

D= Size or Equivalent Diameter  
4 (8.0 -19.9")  
5 (20.0 - 49.9")  
6 (50.0" or larger)  
*Sizes up to 7.9" includes the cost of all fittings

**Notes**  
* Special may require Tech Spec and/or Plan Detail

---

**1060- 1A-BCD**  
**UTILITY STRUCTURE- BELOW GROUND**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**

**Details**  
DO NOT USE for Milling adjustments; see 425 items for adjusting manholes & utility valves  
For Utility Structures BELOW ground.

**Related Items**

**Required**   
**Recommended**

**Forms**

**Design**  
SHTabQuant  
COMP 700-050-03

**Details and Structure:** Complete
For Utility Structures ABOVE ground.
Calculate pad volume as the length x width x depth of concrete. Covers are for non-electrical applications, aesthetic or weather enclosures. Material requirements to be included in the specifications.

### Related Items

**Forms**
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
- **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

### Notes

* Special/"other*: may require Tech Spec and/or Plan Detail

---

**1060- 1A-BCD**

**UTILITY STRUCTURE- BELOW GROUND**

<table>
<thead>
<tr>
<th>A</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Furnish &amp; Install</td>
</tr>
<tr>
<td>2</td>
<td>Furnish</td>
</tr>
<tr>
<td>3</td>
<td>Install</td>
</tr>
<tr>
<td>4</td>
<td>Relocate</td>
</tr>
<tr>
<td>5</td>
<td>(Adjust /Modify) BCD= blank See detail information for milling adjustments</td>
</tr>
<tr>
<td>6</td>
<td>(Remove &amp; Dispose) Note: Contractor takes ownership</td>
</tr>
<tr>
<td>7</td>
<td>(Remove &amp; Stockpile/Salvage) Note: DOT/maintaining agency retains ownership</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>OPEN Note: May be defined in item structure as Special, Rehab, etc.</td>
</tr>
</tbody>
</table>

**B**

- Utility
  1. Electrical /Communications
  2. Water/Sewer
  3. Other*

**C**

- Volume
  1. (0-80 FT3)
  2. (>80 FT3)

**D**

- Depth
  1. (0-6')
  2. (6.1-12')
  3. (>12')

* *Special/"other*: may require Tech Spec and/or Plan Detail

---

**1060- 2A- BC**

**UTILITY STRUCTURE- ABOVE GROUND**

| Unit | EA | Accuracy | Each | PlanQuantity? | no |

**Notes**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Prep & Doc Manual Chapter(s)**

Refer to Comp Book

**PPM Chapter**

Design

**Construction**

Refer to Comp Book

**Other**

**Standards**

**Specifications**

Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

**Related Items**

**Forms**
- **Design**: SHTabQuant
- **Construction**: Refer to Comp Book

**Documentation**
- **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
quantities sheet in the plans, or detail calculations in the computation book.

**Construction**
- Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
- **Standards**
- **Specifications**
  
  *Selected Items may require Tech Spec and/or Plan Detail*

**Prep & Doc Manual Chapter(s)**

---

## Status

**Struct.** 1060- 2A- BC  
**UTILITY STRUCTURE- ABOVE GROUND**  
**EA**

| A= Operation | 1 (Furnish & Install) |
| 2 (Furnish) |
| 3 (Install) |
| 4 (Relocate) |
| 5 (Adjust /Modify) | BCD= blank |
| 6 (Remove & Dispose) | Note: Contractor takes ownership |
| 7 (Remove & Stockpile/Salvage) | Note: DOT/maintaining agency retains ownership |
| 8 |
| 9 OPEN | Note: May be defined in item structure as Special, Rehab, etc. |

| B=Pad Volume | 1 (0-1 YD3) |
| 2 (1.1-3 YD3) |
| 3 (>3 YD3) |

| C=Cover | 0 (without cover) |
| 1 (with cover) |

---

## Notes

**1080- 1A-BCC  UTILITY FIXTURES**

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
<th>no</th>
</tr>
</thead>
</table>

**Notes**
- Item to be used for any utility application.
- Additional fixtures to be added as needed. Submit Request through District Estimates Office.
- Tabulate all items in the plans.

**Related Items**
- **Required**
  - **Design** SHTabQuant
  - **Construction** Refer to Comp Book
- **Recommended**
  - **Design** COMP 700-050-03

**Forms**
- **Construction**
  - **Design** Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction** Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**
- **PPM Chapter**
- **Other**
**Standards**

**Specifications**

*Selected Items may require Tech Spec and/or Plan Detail

**Prep & Doc Manual Chapter(s)**

---

**Status**

**Struct.** 1080-1A-BCC UTILITY FIXTURES EA

A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Relocate) BCC= blank
5 (Adjust /Modify) BCC= blank
6 (Remove & Dispose) Note: Contractor takes ownership, BCC= blank
7 (Remove & Stockpile/Salvage) Note: DOT/maintaining agency retains ownership, BCC= blank
8
9 OPEN Note: May be defined in item structure as Special, Rehab, etc.

B= Size or Equivalent Diameter
1 (0 - 1.9")*
2 (2.0 - 4.9")*
3 (5.0 - 7.9")*
4 (8.0 -19.9")
5 (20.0 - 49.9")
6 (50.0" or larger)

CC= Fixture
1 (Valve/Meter Box)
2 (Backflow Assembly)
3 (Tapping Saddle/Sleeve)
4 (Valve Assembly)
5 (Blowoff Assembly)
6 (VAC/AIR Assembly)
7 (Line Stop Assembly)
8 (Mechanical Joint Separator)
9… submit request to expand structure

Note: CC list to be expanded as needed.

---

**Notes**

<table>
<thead>
<tr>
<th>1135- A</th>
<th>GUYS AND ANCHORS- ABOVE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>EA</td>
</tr>
</tbody>
</table>

**Notes**

**Details**

Item to be used for any utility application- NEW installations only.
Protection of existing structures during construction is incidental to the work being performed.
For ABOVE GROUND installations only.

**Related Items**

<table>
<thead>
<tr>
<th>Forms</th>
<th>Required</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>SHTabQuant</td>
<td>COMP 700-050-03</td>
</tr>
</tbody>
</table>

**Construction**

Refer to Comp Book

**Documentation**

Design
Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.

---

Details and Structure: Complete
**Construction**

Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

Inactive Structure

**Struct.** 1135- A

GUYS AND ANCHORS- ABOVE GROUND EA

A = Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)
4 (Salvage & Store/Reuse)
5 (Adjust & Modify Or Relocate)
9 (Remove)

**Notes**

**1501- 1-**

UTILITY LIFT STATION, SANITARY SEWER

<table>
<thead>
<tr>
<th>Unit</th>
<th>EA</th>
<th>Accuracy</th>
<th>Each</th>
<th>PlanQuantity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no</td>
</tr>
</tbody>
</table>

**Notes**

Details

Item to be used for Utility (JPA/UWHC) projects. Includes pump(s), power, internal piping, housing, and incidentals associated with the station.

**Related Items**

Required
Design: SHTabQuant
Construction: Refer to Comp Book

Recommended
Design: COMP 700-050-03
Construction: Record final quantity on the tabulation sheet (plans) or computation form (comp book).

**References**

PPM Chapter
Other
Standards
Specifications

Plan Detail and/or Tech Spec Required

**Prep & Doc Manual Chapter(s)**

**Status**

**Struct.** 1501- 1-

UTILITY LIFT STATION, SANITARY SEWER EA

**Notes**

**1644-ABC-DEE**

FIRE HYDRANT

Details and Structure: Complete
### Notes
- **Details**: Items to be used for Water Main & Service Applications.
- **Related Items**: Required
- **Forms**
  - **Design**: SHTabQuant
  - **Construction**: Refer to Comp Book
- **Documentation**
  - **Design**: Locate in plans. Summarize quantities by location on tabulation of quantities sheet in the plans, or detail calculations in the computation book.
  - **Construction**: Record final quantity on the tabulation sheet (plans) or computation form (comp book).
- **References**
  - **PPM Chapter**
  - **Other**
  - **Standards**
  - **Specifications**
  - Plan Detail and/or Tech Spec Required
  - Prep & Doc Manual Chapter(s) 7, 13

### Status
**Struct.** 1644-ABC-DEE **FIRE HYDRANT** EA

<table>
<thead>
<tr>
<th>A</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Furnish &amp; Install</td>
</tr>
<tr>
<td>2</td>
<td>Furnish</td>
</tr>
<tr>
<td>3</td>
<td>Install</td>
</tr>
<tr>
<td>4</td>
<td>Salvage &amp; Store</td>
</tr>
<tr>
<td>5</td>
<td>Salvage &amp; Reuse</td>
</tr>
<tr>
<td>6</td>
<td>Plug &amp; Placed Out Of Service</td>
</tr>
<tr>
<td>7</td>
<td>Adjust &amp; Modify</td>
</tr>
<tr>
<td>8</td>
<td>Relocate</td>
</tr>
<tr>
<td>9</td>
<td>Remove</td>
</tr>
</tbody>
</table>

(When A = 3,6,7,8,9 Then BC = 00,DEE = Blank)

<table>
<thead>
<tr>
<th>B</th>
<th>Type Of Hydrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Standard</td>
</tr>
<tr>
<td>2</td>
<td>Airport</td>
</tr>
<tr>
<td>3</td>
<td>Traffic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>Number Of Ways</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hose</td>
</tr>
<tr>
<td>2</td>
<td>Two Hose</td>
</tr>
<tr>
<td>3</td>
<td>Two Hose, One Pumper</td>
</tr>
<tr>
<td>4</td>
<td>2 Way, Flush Type, One Hose, One Pumper</td>
</tr>
<tr>
<td>5</td>
<td>4 Way, Three Hose, One Pumper</td>
</tr>
<tr>
<td>6</td>
<td>3 Way, Two Hose, One Pumper</td>
</tr>
</tbody>
</table>

| D | Open Leave Blank |

| EE | Size (Breakout On Table A) |

### Notes
- Note: Do Not Code Leading Zeros.

### 1820-1-AB **UTILITY CABLE, TELEPHONE/COMMUNICATIONS**

| Unit | LF; M1 | Accuracy | Linear Foot; 10th of a Meter | PlanQuantity? | no |

Details and Structure: Complete
Notes
Details
Related Items
Forms
Design
SHTabQuant
Construction
Refer to Comp Book
Documentation
Design
Construction
Record final quantity on the tabulation sheet (plans) or computation form (comp book).
References
PPM Chapter
Other
Standards
Specifications
Plan Detail and/or Tech Spec Required
Prep & Doc Manual Chapter(s)

Status
Struct. 1820- 1- AB UTILITY CABLE, TELEPHONE/COMMUNICATIONS LF
A= Operation
1 (Furnish & Install)
2 (Furnish)
3 (Install)*
4 (Relocate)*
5 (Adjust /Modify)*
6 (Remove & Dispose)* Note: Contractor takes ownership
7 (Remove & Stockpile/Salvage)* Note: DOT/maintaining agency retains ownership
8 (Place out of Service)*
9 OPEN Note: May be defined in item structure as Special, Rehab, etc.
* When A=3-9, B=0
B= # of pairs
1 (up to 10 pair)
2 (11-50 pair)
3 (50-100 pair)
4 (greater than 100 pair)

Notes

1820- 2- AB UTILITY FIBER OPTIC, TELEPHONE/COMMUNICATIONS
Unit LF; M1 Accuracy Linear Foot; 10th of a Meter PlanQuantity?
Notes
Details
Related Items
Forms
Design SHTabQuant Recommended
Construction Refer to Comp Book
Documentation
Design
Construction Record final quantity on the tabulation sheet (plans) or computation form (comp book).
<table>
<thead>
<tr>
<th>References</th>
<th>PPM Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Standards</td>
</tr>
<tr>
<td></td>
<td>Specifications</td>
</tr>
</tbody>
</table>

**Plan Detail and/or Tech Spec Required**

**Prep & Doc Manual Chapter(s)**

| Status | Struct. 1820-2-AB | UTILITY FIBER OPTIC, TELEPHONE/COMMUNICATIONS | LF |

**Notes**

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Details and Structure: Complete