

Chapter 28

Shop and Erection Drawings

The following are changes, additions or deletions to the January 2010, Topic #625-000-007, Plans Preparation Manual (PPM) - English, for use on Florida's Turnpike Enterprise projects only:

28.1 Introduction

Add the following sentence, paragraph 1, last sentence

Shop Drawings are required to be submitted electronically as outlined in the Special Provisions.

Add the following paragraph

Typically Florida's Turnpike Enterprise Shop Drawing Administration Office will provide the Contractor with the Shop Drawing Routing Chart (Exhibit 28.6-A) and General Submittal Requirements information package (Section 28.6.1), at the Preconstruction Meeting. This information addresses major requirements for the submission of Shop Drawings and an overview of the review and approval process. It may also include additional procedures to facilitate expeditious processing.

28.6 Transmittal of Submittals

Delete sentences 4 and 5 in paragraph 1, replace with the following

Exhibits 28-A through 28-C shall be supplemented with the following Exhibits. These Exhibits are shown at the end of this chapter.

Exhibit 28.6-A **Florida's Turnpike Enterprise Shop Drawing Routing Chart for "Electronic" Shop Drawing Review Process**

Exhibit 28.6-B **Florida's Turnpike Enterprise Shop Drawing Review Office; Department's Review Staff Distribution Chart**

Replace paragraph 2 with the following

The Special Provisions for the project may denote the procedure to be followed. Furthermore, the website URL the Contractor shall utilize to electronically submit shop drawings and the procedure to be followed may also be defined during the preconstruction conference for the project. In the absence of such instructions, Section 28.6.1 generally applies.

28.6.1 General Submittal Requirements *Replace this section with the following*

On projects where the Engineer of Record/Architect of Record is a consultant to the Department, and unless otherwise directed at the project's preconstruction conference, the contractor shall provide the following: prior to the submission of any shop drawings, Contractor shall submit a schedule of shop/erection drawings submittal list, that identifies the work for which the shop

drawings applies. For each planned submittal, define the following; description of item, location, specification section number and/or roadway division, if applicable. The schedule of shop/erection drawings shall be submitted in electronic format (excel spreadsheet), which the CEI will provide to the Contractor. Contractor shall submit the schedule to the CEI for verification. Once verified by CEI, they will forward to Florida's Turnpike Enterprise Shop Drawing Administration Office and copy the "*ProjectSolve*" Administrator. The schedule will be imported into "*ProjectSolve*", to assist Contractor with the submission of shop drawings.

Submit Shop Drawings electronically by utilizing Florida's Turnpike Enterprise Construction Management's internet website, "*ProjectSolve*", <https://ww2.projectsolve2.com>. Assign a unique submittal number to Shop Drawing.

Shop drawings shall be in Portable Data Format (pdf), scanned using 300 dpi resolution and in 8-bit up to 24-bit color. Once the Contractor has uploaded the shop drawing to "*ProjectSolve*", the Engineer of Record (EOR)/Architect of Record (AOR) and the CEI will receive a notification via email.

Prior to submission of the shop drawing electronically, Contractor shall clearly label and number each sheet in the submittal to indicate the total number of sheets in the series (i.e., 1 of 12, 2 of 12.....12 of 12). Stamp (in red) and initial each drawing, page, cut sheet, etc. of the submittal, indicating they have reviewed for compliance with the plans and specifications. In the case there is no place for the stamp on the front, please stamp the back side of each sheet, indicating the page number (i.e., back of page 1 of 6). Insure that this page is also scanned in Portable Data Format (.pdf).

For Contractor-Originated Design or for items which require design and drawing preparation of components, systems or installation methods and equipment for specific temporary portions of the project work or for special items of the permanent work not fully detailed in the plans and required to be furnished by the Contractor. A Specialty Engineer must sign and seal each drawing affected as well as the cover sheet of any design calculations required in accordance with the Florida Board of Professional Engineers regulations as outlined at the following link: <http://fbpe.org/>.

Prior to Contractor scanning and uploading shop drawing to *ProjectSolve*, ensure that the seal capable of leaving a permanent ink representation or other form of opaque and permanent impression is legible. Failure to do so will constitute the submission as incomplete and shop drawing will be routed back to Contractor, Not Reviewed, and resubmittal will be required. This replaces the requirement of having to send an original signed/sealed shop drawing to the Department.

As the Engineer of Record/Architect of Record, when reviewing signed and sealed calculations and shop drawing, it is acceptable to incorporate the code disposition stamp on the cover sheet of the calculations and each sheet of the shop drawings must be stamped.

Shop drawings shall be no larger than 11" x 17" (plotted in 11" x 17" format), in order to facilitate electronic filing. For plotting requirements, please refer to *FDOT CADD Production Criteria Handbook*, Chapter 3 and Chapter 6. Website is located at: <http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook>

If the shop drawings consist of samples, Contractor shall submit three (3) samples for proper processing, in addition to the number of samples needed by Contractor. Contractor is still required to initiate the shop drawing review process through “*ProjectSolve*”, by uploading their transmittal, indicating that they have forwarded the samples to EOR/AOR, via Overnight Courier Service.

To facilitate logging and distribution of shop drawings and to expedite reviews, it is recommended that Contractor comply with the following:

- Assign a unique number for each shop drawing entry.
- Verify that all applicable items are complied with prior to submission of shop drawing.
- Prior to submitting shop drawing through “*ProjectSolve*”, Contractor shall verify all sheets/pages are legible, page numbered correctly, and all sheets/pages are properly stamped, in red. Failure to do so will constitute the submission as incomplete and shop drawing will be routed back to Contractor, “Not Reviewed” and resubmittal will be required for a complete package for proper review.

Contractor shall not use shop drawings submittals for obtaining clarification regarding contract plans or specification requirements. Such clarifications shall be submitted as a Request For Information (RFI) electronically through “*ProjectSolve*”.

Contractor’s request for contract change in time, cost, design, material or product type, specification requirements and/or remedial design for correcting construction/fabrication deficiencies shall not be submitted as a shop drawing, but shall be submitted in proper format to the CEI for further handling and processing. In addition, indicate on the shop drawings all deviations from the contract drawings and itemize all deviations in a letter and/or a letter of transmittal.

28.6.3.1 Review by Engineer of Record Only

Replace paragraph with the following

On projects where the Engineer of Record is a Consultant to the Department and has been retained by the Department to review construction items without follow-up review by the Department, the Consultant will assume the responsibility of the owner’s agent. The reviewing consultant is encouraged to communicate with fabricators, contractors, specialty engineers and the Department’s Structures Office to clarify concerns before returning the submittal to the contractor. The reviewing consultant shall also contact the Department’s Structures Office if unsure of the Department’s position on certain issues during the review. Submittals should not be stamped “resubmit” if “approved as noted” will suffice. Submittals (unless otherwise noted below) shall have been transmitted by the Contractor directly to the Consultant. Upon receipt of the submittal, the Consultant shall perform the review, note any comments on the sheets, indicate disposition by stamping the sheets as described hereinafter and electronically submit shop drawings back to Contractor through “*ProjectSolve*”.

28.6.3.2 Review by Engineer of Record/Architect of Record and the Department

Add the following section

For EOR/AOR requirements for review and submission of shop drawings, please visit the following site:

http://design.floridasturnpike.com/prod_design/shopdrawings/Electronic%20EOR.pdf

Replace this section with the following

On projects where the Engineer of Record/Architect of Record is a Consultant to the Department and has been retained by the Department to review construction items and shop drawings, (unless otherwise noted below) shall have been submitted by the Contractor directly to the Consultant. Upon receipt of the shop drawing, the Consultant shall perform the review, note any comments directly on the sheets, indicate the disposition by stamping the sheets and, finally, submit to Florida's Turnpike Shop Drawing Administrative Office via "**ProjectSolve**", for review and distribution.

28.6.5 Requirements for Architectural or Building Structures

Replace this section with the following

Shop drawings/submittals related to architectural or building structures shall follow the standard Florida's Turnpike Enterprise Shop Drawing Process as required within this chapter.

28.6.6 Requirements for Roadway Submittal Items

Replace 1st sentence with the following

Shop drawings/submittals related to Roadway plans such as lighting, attenuators, retained earth wall systems, etc. (except bridge items such as poles, bracket arms, etc.) shall be distributed in accordance to the Construction Project Administration Manual, Section 5.8.4.2 and/or the standard Florida's Turnpike Enterprise's shop drawing process as required within this chapter.

28.6.7 Requirements for Overhead Sign Structures and Nonstandard Miscellaneous Structures

Replace with the following

Shop Drawings/Submittals concerning overhead sign structures shall be submitted in accordance with Section 28.6.1 General Submittal Requirements and Structures Requirements above.

28.7 Disposition of Submittals

Replace the 4th paragraph with the following

When a shop drawing contains deviations from the contract plans and specifications, the consultant shall contact Florida's Turnpike Enterprise Project Manager, who will coordinate with the Construction Project Manager to determine as to whether or not a Supplemental Agreement or Value Engineering Change Proposal (VECP) is required. If either procedure is required to be initiated, the shop drawing shall not be reviewed until a decision is finalized.

Replace Paragraph 13 with the following

Exhibit 28.6-A depicts the shop drawing distributional flow of a shop drawing. When the Department concurs with the Consultant's review and disposition, the Department will stamp and distribute the shop drawing. Should the Department's review and/or disposition of the submittal differ from that of the Consultant, the final disposition will be resolved in accordance with Section 28.6.3.2, EOR/AOR requirements.

28.9 Distribution of Submittals

Replace Paragraph 1 and Table 28.3 with the following

Refer to Exhibit 28.6-A for routing of a Shop Drawing with the use of "ProjectSolve". Exhibit 28.6-B reflects the Department's Review Staff.

Replace Paragraph 2 with the following

When precast/prestressed concrete components are involved, the Department's District Prestress Engineer is furnished an electronic copy. When structural steel components are involved, the Department's Assigned Commercial Inspection Agency (ACIA) is furnished an electronic copy. When mechanical/electrical components of movable bridges are involved, the Mechanical/Electrical Section of the State Structures Design Office (SSDO) is furnished an electronic copy.

28.10 Review of Welding Procedures Specifications

Replace with the following

The review process for welding procedures specifications (WPS) will be per the Materials Manual, Chapter 11 Steel and Miscellaneous Metal Products, Section 11.2 Welding Procedures Specification Review and Approval Process.

<http://www.dot.state.fl.us/statematerialsoffice/administration/resources/library/publications/materialsmanual/index.shtm>

28.11 Submittal Activity Record (Logbook)

Replace 1st paragraph with the following

Florida's Turnpike Enterprise Shop Drawing Administration Office is the Final Review Office responsible for maintaining the Submittal Activity Record (Logbook,), through the Construction Management's website "**ProjectSolve**". A log is maintained for each project reviewed by the Florida's Turnpike Enterprise Shop Drawing Administration Office and is updated when any activity occurs with a shop drawing.

28.11.1 Shop Drawing Website

Add the following section

Shop Drawings can be tracked daily by utilizing "**ProjectSolve**" at <https://ww2.projectsolve2.com>

The purpose of "**ProjectSolve**" is to provide the Contractor, CEI, EOR/AOR, Project Managers, Construction Managers and Turnpike Management with up-to-date information/latest status of the Construction Project, whether it be related to shop drawings, RFIs, correspondence or MOT Lane Closure Notifications for every ongoing/active construction contract. It will serve as a tracking tool for project related documents and assist in expediting the construction process.

Visit the following website for Florida's Turnpike Enterprise general shop drawing requirements, guidelines and other helpful data.

http://design.floridasturnpike.com/prod_design/shopdrawings/shopdrawings.html

28.12 Archiving Record Shop Drawings *Replace this section with the following*

Florida's Turnpike Enterprise Shop Drawing Administration Office archives shop drawings through "**ProjectSolve**" and the EDMS System.

**FLORIDA'S TURNPIKE ENTERPRISE SHOP DRAWING ROUTING CHART FOR
"ELECTRONIC" SHOP DRAWING REVIEW PROCESS**

"Project Name Here"

FPID:

CONTRACT NO.:

COUNTY:

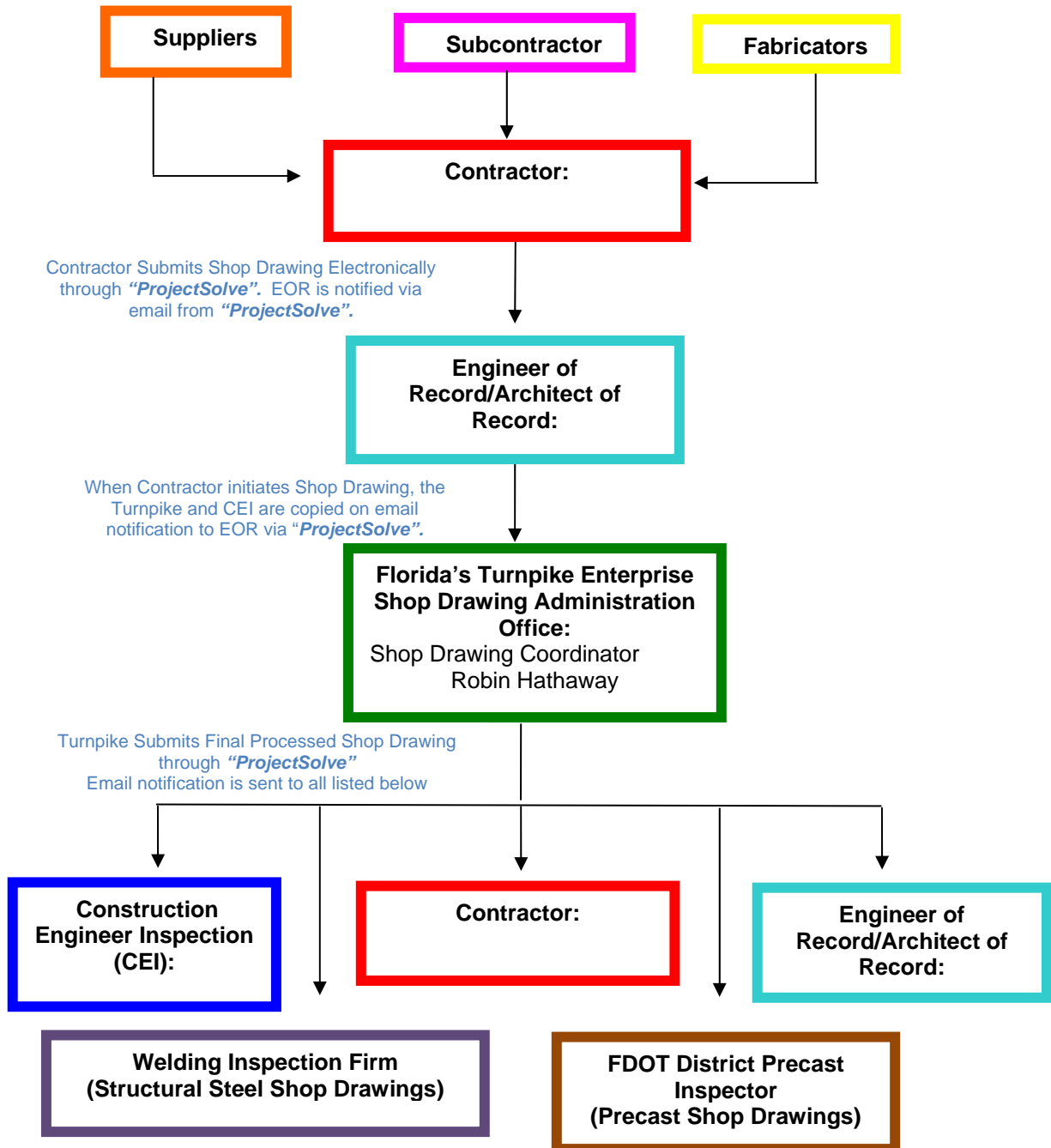


EXHIBIT 28.6-B
FLORIDA'S TURNPIKE ENTERPRISE SHOP DRAWING ADMINISTRATION OFFICE;
DEPARTMENT'S REVIEW STAFF DISTRIBUTION CHART

