



Florida Department of Transportation

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MIKE DEW
SECRETARY

ROADWAY DESIGN MEMORANDUM 18-02

DATE: **July 10, 2018**

TO: District Directors of Transportation Operations, District Directors of Transportation Development, District Design Engineers, District Construction Engineers, District Geotechnical Engineers, District Structures Design Engineers, District Maintenance Engineers, District Roadway Design Engineers, District Traffic Operations Engineers, District Program Management Engineers, District Consultant Project Management Engineers, District Materials Engineers, District Project Development Engineers

FROM: Michael Shepard, P.E., State Roadway Design Engineer

DocuSigned by:

Michael Shepard

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SUBJECT: **Project Documentation**

This Design Memorandum announces an upcoming change to the 2019 FDOT Design Manual (FDM) related to project documentation. A new section, **FDM 111.7**, provides required procedures for the organization and delivery of project documentation. See Attachment 'A' for the draft of **FDM 111.7 Project Documentation**.

The procedures outlined in **FDM 111.7** will provide consistency for the delivery and long-term retention of documents that were used to develop the contract plans.

The requirements contained in **FDM 111.7** will be implemented with the 2019 FDM; however, they may be implemented immediately at the discretion of the Districts.

There are no changes in negotiated staff hours for submitting project documentation in accordance with **FDM 111.7**; this remains 4-12 hours in the Standard Scope of Services. The description and hours for this task are currently provided in **Task 4.15 Design Report**: "...submit to the DEPARTMENT design notes, data, and calculations to document the design...." It is proposed to move the description and hours to **Task 3.4 Contract Maintenance and Project Documentation**: "Project documentation includes the compilation and delivery of final documents, reports and calculations...". See Attachment 'B' for proposed Standard Scope of Services revisions.

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Attachment 'A'

Draft

FDM 111.7 Project Documentation

111.7 Project Documentation

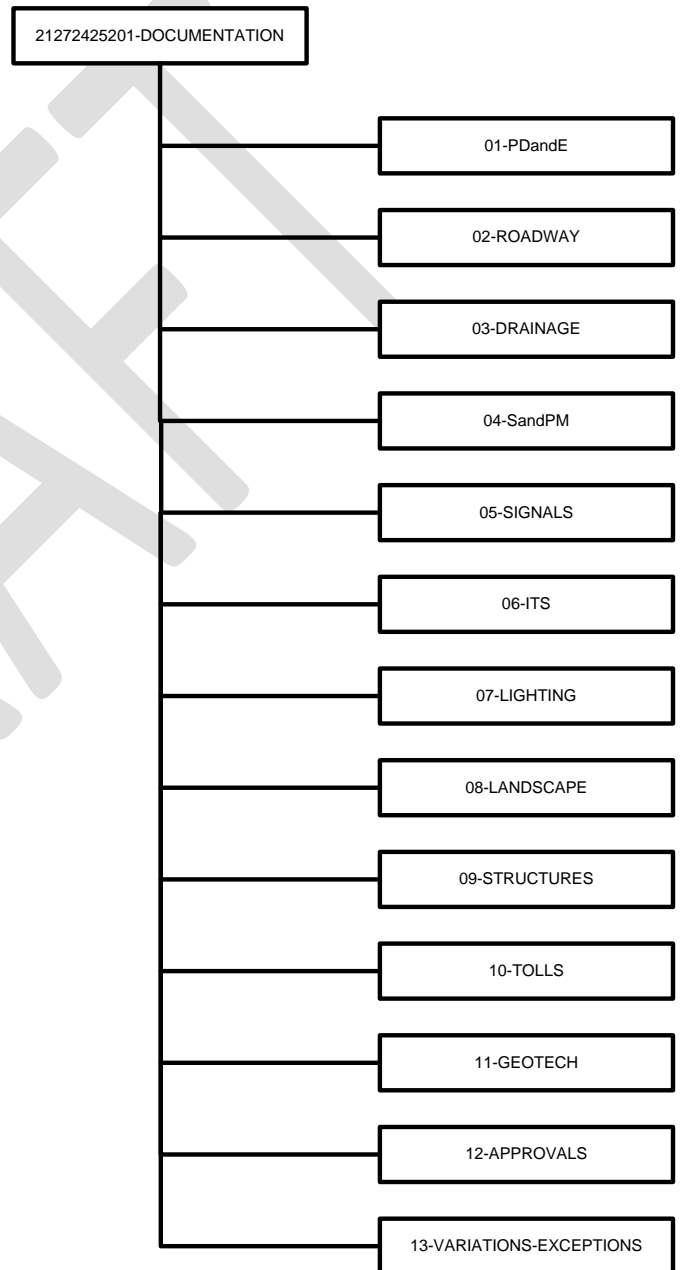
The submittal of design documentation is required for all projects. This section describes the required process for delivery of design documentation, and a list of documents that are to be provided.

Create a project documentation folder structure as shown in **Figure 111.7.1**. Title the primary folder with the FPID number followed by “-DOCUMENTATION.” Second level folders must be named as shown in the figure. Include the second level folder even when empty. Do not create third level folders.

Place only final documents in this folder structure; do not submit working files or draft documents. Standard file format is PDF; however, an Excel spread sheet may be placed in the folder structure if protected to prohibit changes.

When the folder structure is fully populated, zip the folder and submit to the Department Project Manager (PM). Deliver the zipped folder with the second PS&E submittal (see **FDM 301.2.5**). The PM will place the zipped folder in the Final Plans Processing Module of ProjectSuite.

Figure 111.7.1 Folder Structure



111.7.1 File Naming Convention

Although the filename is limited to 240 characters, the number of characters used should not exceed 48. Filename is not to contain spaces or special characters (!@#\$\$%^&*+).

Filenames are not case sensitive; however, the use of uppercase letters to begin each word in the filename is encouraged.

The filename should be easily searchable within the folder

111.7.2 Documents

Include the following list of documents only when the Scope of Services indicates that the document must be produced. Other final documents, reports, or calculations not listed in this chapter may be included if they support the development of the contract plans.

Recommended filename for the submitted document is provided in square brackets; e.g., [TypicalSectionPackage]. Additional document description may be provided using a hyphen before the identifying information; for example:

- MiscStructureDesignCalcs-TempRetWall2
- LoadRatingReport-Bridge1
- DesignVariation-Sidewalk
- GeotechReport-MSERetWall
- GeotechReport-PondSoilSurvey

111.7.2.1 PD&E

Place the following documents in the folder "01-PDandE":

- (1) Noise Study Report Addendum [NoiseStudyReportAddendum]
- (2) Contamination Screening Evaluation Report [ContaminationScreeningReport]
- (3) Contamination Level II Report [ContaminationLevel2Report]

Place the following additional documents in the in the 01-PDandE folder, for projects with concurrent or overlapping PD&E and Design Phases:

- (4) Project Commitments [ProjectCommitments]
- (5) Existing Conditions Report [ExistingConditionsReport]
- (6) Project Traffic Analysis Report [TrafficAnalysisReport]
- (7) Project Traffic Forecasting Memorandum [TrafficForecastingMemo]
- (8) Alternatives Analysis Report [AlternativesAnalysisReport]
- (9) Preliminary Engineering Report [PreliminaryEngineeringReport]
- (10) Noise Study Report [NoiseStudyReport]
- (11) Interchange Justification Report or System Interchange Justification Report [InterchangeJustificationReport] or [SystemInterchangeJustificationReport]
- (12) Interchange Modification Report or System Interchange Modification Report [InterchangeModReport] or [SystemInterchangeModReport]
- (13) Interchange Operational Analysis Report or System Interchange Operational Analysis Report [InterchangeOperationalAnlyReport] or [SystemInterchangeOperationalAnlyReport]
- (14) Comments and Coordination Report [CommentsCoordinationReport]
- (15) Public Involvement Plan [PublicInvolvementPlan]
- (16) Value Engineering Report [ValueEngineering]
- (17) ICE Report [ICEReport]
- (18) Public Meeting / Hearing Summary [PublicMeetingSummary]

111.7.2.2 Roadway

Place the following documents in the folder "02-ROADWAY":

- (1) Typical Section Package [TypicalSectionPackage]
- (2) Pavement Design Report [PavementDesignReport]
- (3) AutoTurn Analysis [AutoTurnAnalysis]
- (4) Superelevation Analysis [SuperelevationAnalysis]
- (5) Cross Slope Evaluation [CrossSlopeEvaluation]
- (6) Barrier Length of Need Analysis [LengthofNeedAnalysis]

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- (7) Sight Distance Analysis [SightDistanceAnalysis]
- (8) Lane Closure Analysis [LaneClosureAnalysis]
- (9) Community Awareness Plan [CommunityAwarenessPlan]

111.7.2.3 Drainage / Permits

Place the following documents in the folder "03-DRAINAGE":

- (1) Bridge Hydraulics Report [BridgeHydraulicsReport]
- (2) Location Hydraulics Report [LocationHydraulicsReport]
- (3) Pond Siting Report [PondSitingReport]
- (4) Drainage Report (e.g., Storm Drain Tabulation Form, Spread Calculations) [DrainageReport]
- (5) Drainage Map, when not included in plans or drainage report [DrainageMap]
- (6) Base Clearance Water Evaluation Report [BaseClearanceWaterEvaluation]
- (7) Pipe Inspection Report [PipeInspectionReport]

111.7.2.4 Signing and Pavement Marking

Place the following documents in the folder "04-SandPM":

- (1) Multi-Post Sign Report (Miscellaneous Structural Calculations) [MultiPostSignReport]
- (2) Attachment to Barrier Calculations [AttachmentToBarrierCalcs]

111.7.2.5 Signalization

Place the following documents in the folder "05-SIGNALS":

- (1) Signal Warrant Report [SignalWarrantReport]
- (2) Signal Analysis (e.g., Turn Lane Length, Queuing, HCM) [SignalAnalysis]
- (3) Sub-Surface Utility Location Form (mast arm location) [SubSurfaceUtilityLocationForm]

111.7.2.6 Intelligent Transportation Systems (ITS)

Place the following documents in the folder “06-ITS”:

- (1) ITS Power Design Analysis Report [ITSPowerDesignAnalysis]
- (2) ITS Concept of Operations [ITSConceptOfOperations]

111.7.2.7 Lighting

Place the following documents in the folder “07-LIGHTING”:

- (1) Lighting Justification Report [LightingJustificationReport]
- (2) Lighting Design Analysis Report [LightingDesignAnalysis]
- (3) Voltage Drop Calculations [VoltageDropCalcs]
- (4) Intersection Lighting Retrofit Report [IntersectionLightingRetrofitRep]

111.7.2.8 Landscaping

Place the following documents in the folder “08-LANDSCAPE”:

- (1) Irrigation Feasibility Report [IrrigationFeasibilityReport]
- (2) Landscape Opportunity Plan [LandscapeOpportunityPlan]
- (3) Landscape Maintenance Plan [LandscapeMaintenancePlan]
- (4) Landscape Maintenance Cost Estimate [LandscapeMaintenanceCost]

111.7.2.9 Structures

Place the following documents in the folder “09-STRUCTURES”:

- (1) Bridge Development Report [BridgeDevelopmentReport]
- (2) Structural Design Calculations (Bridge) [StructuralDesignCalcs]
- (3) Misc. Structure Design Calculations (e.g., Temp Retaining Wall, Temporary Shoring, Sheet Pile Wall, Overhead Sign, Noise Wall, CCTV Poles, Mast Arms, Box Culverts, High Mast Lighting) [MiscStructureDesignCalcs]
- (4) Bridge Load Rating Report [BridgeLoadRatingReport]

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111.7.2.10 Toll and Express Lane Facilities

Place the following documents in the folder “10-TOLLS”:

- (1) Toll Siting Technical Memorandum [TollSitingTechMemo]
- (2) Tolls Design Analysis Report – Equipment Building – Mechanical [TollMechanicalDAR]
- (3) Tolls Design Analysis Report – Equipment Building – Structural [TollStructuralDAR]
- (4) Tolls Design Analysis Report – Gantry [TollGantryDesignAnalysisReport]
- (5) Tolls Power Design Analysis Report [TollPowerDesignAnalysisReport]
- (6) Tolls Concept of Operations [TollConceptOfOperations]
- (7) Express Lanes Diagrams and Concept Plans [ELDiagramsAndConceptPlans]
- (8) Express Lanes Separation Treatment Selection Memorandum [ELSeparationTreatmentSelectionMemo]
- (9) Express Lanes Systems Engineering Management Plan [ELSystemEngineeringManagementPlan]
- (10) Express Lanes Concept of Operations [ELConceptOfOperations]
- (11) Tolls Building Foundation Calculations [TollsBldgFdnCalcs]
- (12) Tolls Building Screen Wall Calculations [TollBldgScreenWallCalcs]

111.7.2.11 Geotechnical

Place the following documents in the folder “11-GEOTECH”:

- (1) Roadway Geotechnical Reports (e.g., Soil Survey, Pavement Cores) [RoadwayGeotechReport]
- (2) Sign Structures Geotechnical Report [SignStructuresGeotechReport]
- (3) Signals Geotechnical Report [SignalsGeotechReport]
- (4) ITS Geotechnical Report [ITSGeotechReport]
- (5) Lighting Geotechnical Report (High-mast) [LightingGeotechReport]
- (6) Structures Geotechnical Reports (e.g., Bridge, Noise Wall, MSE Retaining Wall, Pond Soil Survey) [StruturesGeotechReport]

111.7.2.12 Approvals

Place the following documents in the folder “12-APPROVALS”:

- (1) Lane Elimination Approval [LaneEliminationApproval]
- (2) Central Office Roundabout Design Approval Memorandum [RoundaboutDesignApprovalMemo]
- (3) Federal Aviation Administration (FAA) Approval Form [FederalAviationAdminApprovalForm]
- (4) Proprietary Product Approval Forms [ProprietaryProductApprovalForms]
- (5) Modified Special Provision (signed and sealed stand-alone document) [ModifiedSpecialProvision]
- (6) Intersection Number Request Form [IntersectionNumberRequestForm]
- (7) Contract Time Memo [ContractTimeMemo]
- (8) Permit Exemption Letter [PermitExemptionLetter]
- (9) Interchange Operational Analysis Report [InterchangeOperationalAnalRep]
- (10) Structure Number Request Form [StructureNumberRequestForm]

111.7.2.13 Design Variations and Design Exceptions

Place the following documents in the folder “13-VARIATIONS-EXCEPTIONS”:

- (1) Design Variation Package [DesignVariation]
- (2) Design Exception Package [DesignException]
- (3) Design Memorandum [DesignMemo]

Attachment 'B'

Draft

Standard Scope of Services Revisions

3.4 Contract Maintenance and ~~Project Documentation~~Electronic Document Management System (EDMS)

Contract maintenance includes project management effort for complete setup and maintenance of files, electronic folders and documents, developing technical monthly progress reports and schedule updates. Project documentation includes the compilation and delivery of final documents, reports or calculations that support the development of the contract plans; includes uploading files to Electronic Document Management System (EDMS) or Project Suite Enterprise Edition (PSEE).

3.4	Contract Maintenance and <u>EDMSProject Documentation</u>	LS	See Basis for Staff Hour Range	Includes project management efforts for complete setup and maintenance of files, electronic folders and documents, developing technical monthly progress reports, and <u>schedule updates, and compilation and submittal of project documentation.</u> (LS based on initial set-up estimated at 16 to 24 hours and 3 to 6 hours per month for update/maintenance <u>and 4 to 12 hours for project documentation</u>).
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3.4	Contract Maintenance and <u>EDMSProject Documentation</u>	LS	1	0	0	
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4.15 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope. Reports are to be delivered as a signed and sealed pdf file.

The CONSULTANT shall submit to the DEPARTMENT design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8½"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8½"x11" size. The data shall be in a hardback folder for submittal to the DEPARTMENT.

4.15	Design Report	LS	See Basis for Staff Hour Range	Includes all work necessary to describe project requirements and design criteria to be used for project. Includes <u>required design reports; e.g., Design, 3R, and/or Safety Report, ADA Assessment Report, etc.</u> (LS - based on 24-80 per report-). Use additional 4 to 16 hours for Highway Safety Manual analysis as needed.
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