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Plan Related Actions

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1501 Introduction

There are several actions that are required to complete the processing of a highway construction plan. Section 1500 includes a discussion of these related actions.

1502 Documentation of Environmental Commitments

Environmental commitments are any agreed upon actions to mitigate (i.e., restore, enhance, avoid, minimize, and/or replace) impacts to the human environment. Environmental Commitments **are captured in the environmental document and** are the link between the Environmental (EE) phase of the project and the Final Engineering/Right-of-way (FE/RW) and Construction (CO) phases of the **Project Development Process (PDP)**.

To ensure environmental commitments are carried out appropriately, an Environmental Consultation Form (ECF) is to be completed, signed by the District Environmental Coordinator, and submitted with the Plan Package to ODOT's **Office of Contracts**. The District Environmental Coordinator will communicate all applicable environmental commitments to designers. Environmental commitments must be incorporated into a plan's design and/or plan notes so that they can be implemented during construction.

For more information, contact the **Office of Environmental Services** or see the **Office of Environmental Services' Environmental Commitments Guidance**.

1503 CADD File Requirements for Design and Construction

1503.1 CADD Software Requirements

All projects requiring submittal of CADD files shall be developed using Bentley or Autodesk products, in accordance with the [CADD Engineering Standards Manual, the Guidelines for Electronic Design Deliverables](#), and the project's scope of services. Although ODOT will accept CADD files developed using Autodesk software, no support, standards, documentation, or guidance of any kind with respect to design and delivery using Autodesk tools will be provided. For more information, see the ODOT CADD Engineering Standards Manual, Section 101.

1503.2 CADD File Requirements

Unlike electronic image files (i.e. PDF images) that are part of the contract documents, CADD files (i.e., basemap files) provided to contractors are for reference purposes only. In the event that there is a conflict between the CADD files and the bidding documents, the bidding documents shall take precedence.

CADD files, and a Project Index File, shall be provided in accordance with the requirements for Electronic Submittals described in the [ODOT Guidelines for Electronic Design Deliverables](#), located on the [Office of CADD and Mapping Services](#) website, and included in the [Final Plan Package submittal](#).

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1503.2.1 Typical Requirements for Projects Following Path 1 of the Project Development Process (PDP)

For projects scoped to Path 1 of the PDP, the following files are typically required for reference purposes only:

- Existing Plans (Roadway and Bridge)
- Designer Office Calculations (such as Pavement, Earthwork, and Structure Quantities)
- Final Geotechnical Report

Most Path 1 projects are simple transportation improvements generated by traditional maintenance and preventative maintenance. They may involve structure or roadway resurfacing and have no right-of-way or utility impacts. However, there are some projects which require more detail in their design than a “typical” Path 1 project but still meet the criteria of a Path 1 project. For these projects, electronic design files (i.e., .gpk, triangle model, ASCII text files, etc.), if generated, shall be submitted with the project’s Plan Package. For example, on projects requiring a Project Site Plan, electronic design files generated during the project’s design are required in the final plan submission. These files will be made available to contractors during ODOT’s construction contract bidding process.

Information to be made available to bidders should be determined, and documented, in the project’s Scope of Services document.

For more detailed information on electronic files required to be submitted with the Final Plan Submission, see the ODOT Guidelines for Electronic Design Deliverables.

1503.2.2 Typical Requirements for Projects Following Paths 2, 3, 4, and 5 of the Project Development Process (PDP)

The PDP provides Project Managers with the flexibility to tailor the requirements of a project to meet its individual needs. Therefore, the requirements for each project are based upon the path it is following. Electronic Files (i.e., CADD files, alignment files, basemap files, etc.) shall be in accordance with the requirements for electronic submittals described in the ODOT Guidelines for Electronic Design Deliverables. Contact the Office of CADD and Mapping Services, CADD Services section with questions.

Although not all-inclusive, following is a listing of files which, if available, shall be made available to bidders:

- Plan and Profile Sheets
- Cross Section Sheets and cells
- Intersection/Interchange Details
- Project Site Plan
- Reference basemap files

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- Excel files containing the project's General Summary (ODOT Guidelines for Electronic Design Deliverables)
- GEOPAK (.gpk) file
- Existing Ground Triangle Model (.tin file)
- ASCII text file(s) listing:
 - Chain data for existing and proposed horizontal alignments; including the centerline of construction, centerline of right-of-way, and ramp baselines
 - Vertical alignment data for existing and proposed profiles
 - Northing, easting, station, offset and elevation, for all monuments to be used during construction

The ODOT Guidelines for Electronic Design Deliverables, provides specific requirements for the content of the required ASCII reports and provides directions on how to create them using GEOPAK software.

- LandXML files for:
 - The existing ground triangle model (.tin file)
 - All existing and proposed horizontal alignments and vertical profiles

The ODOT Guidelines for Electronic Design Deliverables, provides direction on how to create these reports directly from GEOPAK software.

- Files for reference purposes only:
 - Existing Plans (Roadway and Bridge)
 - Designer Office Calculations (such as Pavement, Earthwork, and Structure Quantities)
 - Final Geotechnical Report(s)

Other files may be required at the District's discretion, but this should be documented in the project's scope.

- Proposed Digital Terrain Models (DTM):

All proposed surfaces, if created, shall be submitted in LandXML format. The native format used to generate the surfaces is also required. For projects using Bentley GEOPAK and which cannot create LandXML for proposed conditions, a ".GEN" file shall be submitted. This file shall be submitted with the project's Final Plan Package.

Chapter 4.3 of the ODOT Guidelines for Electronic Design Deliverables provides specific guidance on how to generate a .GEN file.

The District Planning and Engineering Administrator may elect to waive all, or a portion, of the CADD file requirements (except for the submittal of existing plans and designer office calculations) for projects that have less than 1.0 (one) acre of earth disturbed area. Waiver of these requirements shall be noted in the Scope of Services document.

Since each project is unique, Information to be made available to bidders should be determined, and documented, in the project's Scope of Services document.

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1503.3 Submission of Files to the District

CADD and electronic image files shall be supplied to ODOT via CD, DVD, or other media as approved by the District, pursuant to the project Scope of Services document.

For detailed information on the electronic files required to be submitted to ODOT, see the [ODOT Guidelines for Electronic Design Deliverables](#).

1503.4 Submission of Files to Central Office

The plan package for a project is to be submitted in accordance with the schedule prepared by Central Office and the Districts. The plan package must include documentation confirming that the project is eligible and ready to be advertised for bids.

Submission of the Final Plan Package is part of the **Final Engineering /Right-of-Way (FE/RW) Phase of ODOT's Project Development Process (PDP)**. Project Managers are required to create and submit the final plan package documentation in electronic format as a single PDF. To reduce the size of PDF files, vectorized elements are preferred to raster PDF, with the exception of the Title Sheet. The Title Sheet is the only document which can be a raster PDF. The District shall review the electronic documents for completeness to ensure that all required files are transmitted to Central Office.

A project's CADD files, if created, are required to be submitted with the Final Plan Package. ODOT provides CADD files to contractors for reference purposes only. For more details on the electronic files required to be submitted to ODOT, see the [ODOT Guidelines for Electronic Design Deliverables](#).

All ODOT-let projects shall be submitted to Project Coordination via the ODOT Plan Package Submittal internal SharePoint site located here:

<http://portal.dot.state.oh.us/Divisions/Planning/estimating/PlanSubmittal/default.aspx>

1504 Submission of Completed Plans to District

1504.1 General

When a design agency other than ODOT prepares the construction plans, the final plan shall be submitted to the District Office. The final plan submittal shall include information described in the sections which follow.

1504.1.1 Projects Administered by ODOT

Pursuant to the requirements of the project's Scope of Services document, below are items and information the final plan submission should contain:

- Completed Right-of-Way plans and final construction plans, including soil profile sheets in an electronic image file format (i.e., PDF images). Electronic image files shall be provided in accordance with the requirements of the ODOT [Guidelines for Electronic Design Deliverables](#), and the PDF Submission Procedure available on the **Office of Contracts** website.

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- Completed Standard Forms:
 - [Estimated Quantiles Form](#) - Formerly the LD-4 form, this electronic form is a summation of a project's specific quantities, and cost information, used in developing the official Engineer's Estimate. This form shall be submitted to ODOT Districts as part of the Plan Package Submittal process. See [Appendix D](#) of the [Location and Design Manual, Volume 3](#) for a PDF copy of this form.

ODOT Districts shall transfer estimated quantity information electronically via the [ODOT Plan Package Submittal SharePoint](#) website.
 - [LD-33 County Engineer Approval Form \(including signature\)](#) - This form is required per Ohio Revised Code 6131.631. See [Location and Design Manual, Volume Two](#) for a copy of this form.
- Marked review plans (if retained by the design agency) and the disposition of all review comments
- Excel file containing project's General Summary (CTY-PID-GENSUM.xlsm)
- Quantity calculations not typically included in the plans (i.e. structure calculations and pavement calculations)
- Cost estimates for items and/or services, or other special items furnished by the local government
- Documents/Records (i.e., photography, survey data, reports, studies, drawings, maps, computations, plans, specifications, estimates)
- Final Geotechnical Report(s)
- Electronic Files (i.e., CADD files, alignment files, basemap files, etc.) in accordance with the requirements for electronic submittals described in the [ODOT Guidelines for Electronic Design Deliverables](#). The electronic image file requirement applies to all ODOT-Let projects. However, Local-Let projects may elect to waive the electronic image file requirement with specific submittal guidance provided in the project Scope of Services document.

1504.1.2 Projects Administered through the Local Public Agency (LPA) Policy

ODOT may qualify a LPA to administer its own project, with the exception of those projects that are part of the National Highway System (NHS). ODOT shall retain all administration and management duties for the delivery of these projects. Any exception to this rule requires written approval from ODOT's Division of Planning, [Office of Local Programs](#).

The LPA Manager for the ODOT District office whose jurisdiction includes the LPA's project, shall be the Department's point of contact to the LPA. The LPA Manager will routinely provide guidance and coordination throughout the project's entire development process, including actively tracking and facilitating project progress to the extent practicable. Other District personnel, including but not limited to the District Real Estate Administrator (REA) and the District Environmental Coordinator (DEC) or their designees, will also provide guidance as necessary.

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Local-let LPA projects shall include the applicable information required by the Scope of Services document, and be in accordance with the [Locally Administered Transportation Projects Manual of Procedures](#). Project submittal checklists for Local-Let LPA projects are available on the [Office of Local Programs](#)' website.

1505 Review of Completed Plans

1505.1 Plan Checking

The District office shall determine the review process to be followed and shall assume responsibility for determining when a plan is complete and ready for sale. It is the Project Manager's responsibility to ensure that:

- plans are thoroughly checked,
- all of the proper reviews have been performed,
- all review comments have been resolved and documented,
- plans are in compliance with the Scope of Services document and the ODOT [Guidelines for Electronic Design Deliverables](#).

1505.1.1 Projects Administered by ODOT

Plans should be thoroughly checked by District and/or Central Office personnel to ensure the following:

- the proposed design is in compliance with the Scope of Services document, current specifications, design standards, policies, procedures, environmental commitments, and mitigation plans.
- accurate depiction of topographic and construction features
- plans contain all details, and quantities, required to bid and construct the proposed project
- existing topographic features are adequately and properly designated on the plans
- right-of-way certification is complete, including coordination of encroachment removals and utility relocations
- electronic files are included as per the [ODOT Guidelines for Electronic Design Deliverables](#)
- Geotechnical final plan review certification is complete.

The District Office shall determine the review process to be followed and shall assume responsibility for determining when the plan is complete and ready for sale.

1505.1.2 Projects Administered through the Local Public Agency (LPA) Policy

ODOT may qualify a LPA to administer its own project, with the exception of those which are part of the National Highway System (NHS). ODOT shall retain all administration and management duties for the delivery of these projects. Any exception to this rule requires written approval from ODOT's

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The LPA Manager for the ODOT District office whose jurisdiction includes the LPA's project, shall be the Department's point of contact to provide guidance and coordination to the LPA throughout the project's entire development. Other District personnel including, but not limited to, the District Real Estate Administrator (REA) and the District Environmental Coordinator (DEC) or their designees will also provide guidance as necessary.

Local-let projects must be reviewed at least on a quarterly basis. At any time, the LPA Manager can request additional reviews or special meetings to ensure the project is consistent with the established schedule and environmental commitments are being addressed.

Plans shall be checked to ensure compliance with the project's Scope of Services document, and that they are in accordance with the [Locally Administered Transportation Projects Manual of Procedures](#) located on the [Office of Local Programs](#) website.

1505.2 Field Verification

District representatives should conduct a field verification to ensure that conditions have not materially changed before filing the plans with Central Office.

1506 Submission of Completed Plans to Central Office

1506.1 General

After the District Office completes its review of the construction plans, and any supplemental information, the project's **Plan Package** shall be prepared. Information regarding the **Plan Package**, its contents, and submission procedure, can be found in the [Electronic Plan Package Submittal Help Guide](#) document on the [ODOT Plan Package Submittal](#) SharePoint site. Contact the [Office of Estimating](#) with questions.

1506.1.1 Projects Administered by ODOT

Once plans are ready to be advertised for bid, the project must follow ODOT's electronic plan submittal process which requires all ODOT Districts to submit a plan package. The project's plan package, used by both the **Office of Estimating** and the **Office of Contracts**, contains all relevant files and documentation confirming that the project is eligible and ready to be advertised for bids. The plan package for a project is to be submitted in accordance with the schedule prepared by Central Office and Districts.

Submission of the **Final Plan Package** is part of the **Final Engineering /ROW (FE) Phase of ODOT's Project Development Process (PDP)**. Project Managers are required to create and submit the plan package documentation in electronic format as a single PDF. To efficiently use PDF plan sets in construction, all pages of the PDF, with the exception of the Title Sheet, shall be in vector format. PDF files shall not be rasterized. The District shall review the electronic documents for completeness to ensure that all required files are transmitted to Central Office.

A project's CADD files, if created, are required to be submitted with the Final Plan Package. ODOT provides CADD files to contractors for reference purposes only. For more information on the

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electronic files which are required to be submitted with the Final Plan Package, see the [ODOT Guidelines for Electronic Design Deliverables](#) located on the [CADD Services](#) website.

All ODOT-let projects shall be submitted to **Project Coordination** via the ODOT Plan Package Submittal Internal SharePoint site located here:

<http://portal.dot.state.oh.us/Divisions/Planning/estimating/PlanSubmittal/default.aspx>

1506.1.2 Projects Administered through the Local Public Agency Policy

ODOT may qualify a LPA to administer its own project, with the exception of those which are part of the National Highway System (NHS). ODOT shall retain all administration and management duties for the delivery of these projects. Any exception to this rule requires written approval from ODOT's Division of Planning, **Office of Local Programs**.

The [Locally Administered Transportation Projects Manual of Procedures](#) can be found on the [Office of Local Programs](#) website. It provides information on the requirements and procedures for projects administered through Local Public Agencies (LPA's).

1507 Record of Plans

After the project has been awarded, the District Office shall provide permanent storage in accordance with the Department's records retention policy and shall make arrangements to return completed plans for off-system projects to the originating agency.