

# Project Delivery Guide

## APPENDIX A: ODOT PROJECT TYPES

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Most projects can be separated into two types:

Preservation projects that protect the state's investment in the transportation infrastructure by systematically preserving all elements of the existing system

Modernization projects that primarily add new capacity to the system

These two broad types can be further split into project categories:

[Modernization](#)

[Preservation](#)

[Operations](#)

[Bridge](#)

[Safety](#)

[Special programs](#)

All the project categories complete the same project delivery stages (e.g. program development, project development, award construction contract and construction management), but not all projects include the same components and activities of project development.

NOTE: Please refer to the Resource Management System for detailed information on all the specific activities and schedule for each project type at:

[http://www.oregon.gov/ODOT/HWY/PDU/resources\\_management\\_system.shtml](http://www.oregon.gov/ODOT/HWY/PDU/resources_management_system.shtml)

Descriptions of each type of project and their associated programs are also available in the STIP Users' Guide at: <http://www.oregon.gov/ODOT/HWY/STIP/index.shtml>

## ***MODERNIZATION PROJECTS***

Modernization projects improve transportation safety and operations by adding capacity to the highway system to ease traffic congestion or to accommodate projected traffic growth.

Modernization projects are divided into three classes based on the level of environmental work needed.

Class 1: Requires preparation of an Environmental Impact Statement (EIS).

Class 2: Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals.

Class 3: Requires preparation of an Environmental Assessment (EA).

Modernization projects include:

New alignments, facilities, bypasses

New safety rest areas

Adding lanes, including:

Passing and climbing lanes

Turn lanes

Acceleration and deceleration lanes

High-occupancy vehicle lanes

Widening bridges to add lanes

Grade separations

Intersection improvements

Potential modernization projects are identified primarily through statewide, regional and local transportation system plans.

Metropolitan Regional Transportation Plans (RTPs) primarily develop potential projects in metropolitan areas.

City and County TSPs develop projects in urban and rural areas.

Statewide, corridor, refinement, and local Transportation System Plans are (the STIP lists already developed projects) primarily used to develop potential projects in rural areas.

Modernization projects are selected and added to the draft STIP based on input from:

[Area Commissions on Transportation](#)

County Commissions or Coordinating Committees

Elected officials

[Metropolitan Planning Organizations](#)

Other state agencies

The general public

Project selection is based on criteria set forth by the OTC, which may consider issues such as:

Congestion

Accessibility

Safety

Public Support

Land Use

Freight Mobility

Environmental issues

ODOT Region Managers select project for consideration by the OTC. The draft STIP is presented to the Oregon Transportation Commission (OTC) for consideration. The OTC approves the Final STIP projects.

Project Development for in-house projects begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Project Development for out-sourced modernization projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The project development and the construction are completed through Design-Build or Design-Bid-Build contracting.

NOTE: [Appendix B: Project Delivery Methods](#) has more information on Design-Build and Design-Bid-Build contracting

The duration of project development for a modernization project can vary. However, a time estimate can be derived from the Resource Management System templates:

Class 1 - 10.5 years

Class 2 - 4.7 years

Class 3 - 10.0 years

(Note: The Resource Management System templates reflect project schedules that include all possible work needed to complete a project. Typically, a project will not require all activities that are included in the template to complete a project. All possible activities are included so that:

1. No potentially vital but infrequently used tasks needed to complete a project are overlooked.
2. It is easier and less prone to error to delete tasks from a schedule than it is to add them.

Additionally, the activity durations in the templates are based upon the "worst-case" or "maximum" timeframes that are expected for each activity. Although many activities take substantially less time than indicated in the templates, that determination is best made once the project team has been assembled and expert judgment can be applied to the specific project. Further, the maxim that it is better to "under-promise and over-deliver" is implied and preferable to the alternative. As an example in the Class 2 Modernization template the default duration for the "RIGHT-OF-WAY MAP and DESCRIPTIONS" task is 80 days whereas the average duration for projects currently in the system is 45 days).

Construction begins after the construction contractor is chosen and ends with a completed modernization project. Construction adds another one to three years to the business process.



## ***PRESERVATION PROJECTS***

Preservation projects protect the state's investment in the highway system. By maintaining elements of the existing system, preservation work extends the service life of existing pavements beyond what can be done through routine maintenance. Preservation funding may not be used to increase capacity.

Preservation projects include:

- Pavement overlays (including minor safety and bridge improvements)
- Interstate Maintenance Program (pavement preservation projects on the interstate system)
- Reconstruction to re-establish an existing roadway
- Resurfacing projects

Preservation projects are identified by a statewide committee using the Pavement Management System, with input from regions

Criteria used to choose preservation projects include:

- Pavement condition
- Maintenance costs
- Traffic volumes
- Highway classification
- Efficiency opportunities
- Emergency response

The Draft STIP is refined during the public review period. The OTC approves the Final STIP projects.

Project Development for in-house preservation projects begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Project Development for out-sourced preservation projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The project development and construction are completed through Design-Build or Design-Bid-Build contracting.

NOTE: See [Appendix B: Project Delivery Methods](#) for more information on Design-Build and Design-Bid-Build contracting.

Note that the pavement design for ALL preservation projects is managed through the Construction Section, Pavement Service Unit, regardless of the delivery method for the rest of the project.

See [PD-13](#) - Resourcing Pavement Designs for Preservation Projects

The duration of project development for a preservation project can vary. However, a time estimate can be derived from the Resource Management System templates:

- Class 2 Preservation - 3.5 years

- Class 2 Overlay - 2 years

- Class 2 Overlay (pavement only) - 1.7 years

Construction begins after the construction contractor is chosen and ends with a completed preservation project. Construction adds another one to three years to the business process.



## ***BRIDGE PROJECTS***

Bridge projects improve the safety and condition of the state's bridges, overpasses, tunnels and culverts (over 6 feet in length) beyond the scope of routine maintenance. These projects vary from complete replacements to rehabilitation or repair.

Bridge projects are divided into three classes based on required environmental work.

Class 1 - Requires preparation of an Environmental Impact Statement (EIS)

Class 2 - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals

Class 3 - Requires preparation of an Environmental Assessment (EA)

Bridge projects include:

Bridge replacement

Overpass screening

Bridge rail end treatments

Seismic retrofitting

Painting

Sound walls and earth retaining walls

Improved railings

Sign, signal and illumination supports

Bridge projects are identified by using the Bridge Management System and other technical databases to identify bridges that meet 12 separate deficiency parameters. The Bridge Engineering Section and the regions cooperatively agree on priorities based on bridge deficiencies and the need to maintain effective corridors for movement of vehicles and freight. The Bridge Engineering Section and region recommend which bridges should be repaired or replaced based on priorities and estimated costs.

Using a cost-to-recover method, the bridges are ranked in a single statewide list from most to least urgent to repair or replace. These are compared against projects scheduled in the current STIP, to identify projects that should be added to, deleted from or continued in the STIP. The Bridge Engineering Section makes a formal recommendation to the region manager and then to the OTC for approval.

In order to address entire routes that need several bridges repaired, ODOT switched to a corridor-based approach for the OTIA III bridge projects. Under this approach, OTIA III bridges are repaired in groups to ensure a comprehensive solution for the entire highway system and to maintain effective corridors for vehicle and freight movement.

Project development for in-house bridge projects begins with the assignment of a project in the STIP to a Project Leader and ends when the preservation project is let for bid and a contractor is selected.

Project development for outsourced bridge projects begins when a project in the STIP is assigned to the Advanced Contracting Unit. The bridge project development and the bridge construction are completed through Design-Build and Design-Bid-Build contracting.

NOTE: See [Appendix B: Project Delivery Methods](#) for additional information on Design-Build and Design-Bid-Build contracting.

Project development for OTIA III bridge projects begins when a project in the STIP is assigned to the OTIA III Bridge Delivery Unit. BDU uses a private sector program-management company to perform the contract administration and management. The bridge project development and the bridge construction are completed through Design-Build, Design-Bid-Build and CMGC contracting.

NOTE: See [Appendix B: Project Delivery Methods](#) for additional information on Design-Build, Design-Bid-Build and CMGC contracting.

The duration of project development for a bridge project can vary. However, a time estimate of the duration can be derived from the Resource Management System templates.

- Class 1 - 10 years
- Class 2 - 4 years
- Class 3 - 9.5 years

Construction begins after the construction contractor is chosen and ends with a completed bridge project. Construction adds another one to three years to the business process.



## *OPERATIONS PROJECTS*

Operations projects increase the efficiency of the highway system, leading to safer traffic operations and greater system reliability. There are currently four sub-programs under Operations:

- Signs, signals, and illumination (interconnected traffic signals, new traffic signals)
- Intelligent Transportation Systems (ramp meters, incident management, emergency response, variable message signs and traffic management operations centers)
- Transportation demand management (RideShare, van pool, park-n-ride programs)
- Slides and rockfalls (repairs)

Operations projects also observe the environmental work classifications. The duration of project development for an operations project can vary; a time estimate can be derived from the Resource Management System templates.

- Class 2 - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals - 3.8 years
- Class 3 - Requires preparation of an Environmental Assessment (EA) - (Currently, there is no template for Class 3 Operations Projects)

Operations projects are identified and chosen by the regions based on system conditions. For Intelligent Transportation System projects, the regions coordinate project selection with the Traffic Engineering and Operations Section. Recommended projects are approved by the State Traffic Engineer or Region Managers based on delegated authority, and then by the OTC.

Operations project development begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

Construction begins after the construction contractor is chosen and ends with a completed operations project. Construction adds another one to three years to the business process.



## *SAFETY PROJECTS*

Most of projects in the STIP yield a safety benefit, but there are some projects that fit into a separate safety category. There are four safety programs in this STIP category:

- Highway Safety Program
- Rail Crossing Improvement Program
- Safe Routes to School
- High Risk Rural Roads

These programs are designed to improve hazardous highway locations and corridors. They aim to reduce the number of fatal and serious injury crashes.

Safety projects are divided into two classes based on needed environmental work.

- Class 2 - Categorically excluded from preparation of an EIS or EA, but still requires environmental analysis and approvals.
- Class 3 - Requires preparation of an Environmental Assessment (EA).

Safety projects may include:

- Access management
- Roadway illumination, striping and signing
- Channeling traffic at intersections
- Roundabouts or traffic signals
- Continuous shoulder rumble strips
- Railroad crossing improvements

Each safety program has a unique process for including projects in the STIP. Highway Safety Program projects are chosen based on a benefit-cost ranking using the following criteria:

- Crash data
- Roadway files and traffic volumes
- Safety Priority Index System sites
- Safety Investment Program segments
- Rail Crossing Safety Improvement Program - the Rail Division works from a prioritized list to program STIP projects

Projects are recommended to region managers and the Rail Division manager and then move to the OTC for approval.

Safety Project Development begins with the assignment of a project in the STIP to a Project Leader and ends when the project is let for bid and a construction contractor is chosen.

The duration of project development for a safety project can vary. However, a time estimate of the duration can be derived from the Resource Management System templates:

Class 2 - 3.8 years

Class 3 - (Currently there is no template for Class 3 Safety Projects)

Safety Project Construction begins after the construction contractor is chosen and ends with a completed safety project. Construction adds another one to three years to the business process.



## ***SPECIAL PROGRAMS***

There are some programs included in the STIP that meet special needs or mandates. These special programs have funding that is more restrictive and specific, as directed by state or federal law. Projects funded by these programs may need as much as three years to develop and prepare for construction.

The **Bicycle and Pedestrian Program** provides state funds to cities and counties for walkways and bikeways on local streets and state highways. The Bicycle and Pedestrian staff in the Roadway Engineering Unit manages this program.

The **Congestion Mitigation and Air Quality Program** provides federal transportation funds for air quality improvement projects. The Geo-Environmental Section leads this program.

The **Culvert Replacement and Fish Recovery Program** provides ODOT's required assistance, through the repair and replacement of culverts, to the Oregon Plan for Salmon and Watersheds. The Oregon Plan is the state's action plan to improve water quality, restore fish runs and protect fish habitat. The Oregon Plan is coordinated by the Oregon Watershed Enhancement Board. The Geo-Environmental Section leads ODOT's contributions to this program. Other participants include Roadway Engineering and Bridge Engineering.

The **Emergency Relief Program** provides federal emergency funding to state and local highway agencies for repairing unusually heavy damage to federal-aid highways by natural disasters or catastrophes. Regulatory and resource agencies lead this program with ODOT management.

The **Environmental Program** addresses specific environmental concerns, such as wetlands or species threatened by proposed transportation-related development. The Geo-Environmental Section manages this program.

The **Immediate Opportunity Fund Program** provides quick response to economic development opportunities, where an immediate commitment of funds is required to influence the location, relocation or retention of a major business in Oregon. The program also includes the option of building alternate mode projects that help reduce driving, and for new technologies that help improve commerce or safety. Financial Services manages this program with help from ODOT managers.

The **Intelligent Transportation System Program** is a collection of electronic real-time technologies used for:

- Incident management

- En-route driver information
- Traffic control
- Route guidance
- Automatic truck weigh station clearance
- Pre-trip travel information
- Public transportation management

The Intelligent Transportation System Unit leads this program

The **Maintenance Program** maintains the highway system in good operating condition through projects such as:

- Paving repairs
- Bridge deck repairs
- Drainage work
- Stream channel maintenance and improvements
- Minor bridge, overpass and culvert repairs
- Roadside maintenance
- Sign, signal and lane striping repairs
- Slide and flood damage repairs
- Snow and ice removal

ODOT Maintenance manages this program

The **National Scenic Byways Program** provides federal funds to preserve and enhance designated scenic transportation corridors as tourist attractions. The Scenic Byway staff manages this program.

The **Public Lands Highways Discretionary Program** provides federal funds for projects that improve access to and through federal lands. The Federal Highway Administration administers the program and takes project applications once a year through ODOT. Any public agency can apply. Projects are selected by an advisory committee representing ODOT and other agencies. ODOT and federal officials manage this program.

The **Rail and Highway Crossing Program** provides safety improvements at public railroad crossings. All crossing projects are based on diagnostic team reviews or by an application for an Order from the Rail Division. ODOT Rail Division manages this program with help from federal officials and the Project Administration Unit of Right of Way.

The **Special City Allotment Program** provides state funding for road improvements to cities with populations of 5,000 or less. ODOT managers and Financial Services lead this program. This program uses a special formula to provide extra state and federal funds to counties with the lowest funding per road mile. ODOT managers and Financial Services manage this program.

The **Transportation Enhancement Program** provides federal funds for projects that enhance federal transportation, cultural, aesthetic or environmental aspects of the surface transportation system such as:

- Pedestrian and Bicycle Facilities
- Historic preservation
- Preservation of abandoned railway corridors
- Mitigation of water pollution from:
  - Highway runoff
  - Landscaping
  - Other scenic beautification

The Transportation Enhancement Program staff in the Local Government Section manages this program.

The **Transportation Growth Management Program** provides grants to promote growth management objectives through:

- Comprehensive plan amendments
- New or amended local ordinances
- Implementation strategies for plans or ordinances
- Plans with detailed lists of projects

The grants are provided to cities, counties, councils of government, special districts, and metropolitan planning organizations. ODOT managers and Transportation Planning Section lead this program in partnership with the Department of Land Conservation and Development.

The Public Transit Division (PTD) assists communities with the development of alternative transportation methods, including rideshare programs, park and ride lots, telecommuting programs, and information and incentive programs to encourage the use of alternatives to driving alone. By reducing the number of vehicles on the road, PTD helps us manage traffic volumes.

There are seven cities/regions in Oregon with such programs known as Transportation Options, or "TO" (formerly known as Transportation Demand Management or TDM). ODOT provides funding to the agencies that conduct these programs, including transit agencies, city governments, councils of governments and private non-profit agencies.

The **Transportation Safety Grant Program** provides federal funds to support state and local safety projects that reduce transportation-related crashes, injuries and deaths. The Transportation Safety Division manages the program.



NOTE: Further descriptions of many of these programs is available in the STIP Users' Guide at:  
<http://www.oregon.gov/ODOT/HWY/STIP/index.shtml>