

HIGHWAY PROGRAM PROCESS FOR PROJECT DEVELOPMENT

INTRODUCTION

The Highway Program Process for Project Development identifies the steps necessary for a project to move from the planning level through construction complete. This chapter is a template for development of the project and is presented in a manner that follows the natural progression of activities through the project schedule. This template may evolve over time as the process changes or improves, and may be customized to fit unique project demands. Roles and responsibilities of Team Members, meeting types and intent, and process milestones and activities are identified herein.

GLOSSARY OF TERMS

Coachpoint Meeting – If at any point in the Process, the Project Team needs a decision beyond the scope of its authority, or requires a more detailed meeting to have in depth discussions on a specific project issue (scope, budget, schedule), any Team Member may request a Coachpoint Meeting. Program Managers and other experts from the appropriate functions and levels of authority will be invited to attend, and they will work with the Project Team to identify the appropriate course of action.

Project Team –The Team consists of individuals with varied functional backgrounds and typically include- Design, Construction Project Manager, Right of Way (ROW), Utilities, Geotechnical, Environmental (ENV), Maintenance and Operations (M&O) usually represented by the Region Engineer, Senior Designer, and Highway Program Management are represented and are led by a Project Manager. This Team is responsible for the delivery and construction of a project including schedule, budget and scope decisions. This Team may be supplemented by outside consultants for various functions when needs arise. The Project Team may also include the Federal Highway Administration (FHWA) on projects with Federal oversight.

Project Team Meeting – This meeting is project specific and involves appropriate Team and resource members. These meetings are typically used to update the Project Team Members or to work towards completion of a project milestone.

TEAM MEMBER EXPECTATIONS

Throughout the development of a project there are certain responsibilities that are incumbent on each member of the Project Team.

Project Manager

- Project Manager duties include but are not limited to the following:
 - Fostering communication with all Team Members
 - Scheduling appropriate Team Meetings
 - Overseeing the quality of plan development using appropriate reviews and checks.
 - Gather Team Member input to keep project schedule and budget up to date
 - Project submittals
 - Coordination of consultant designs
 - Public communication
- The Project Manager notifies Highway Program Management about any schedule and budget changes that affect the project, so that reporting systems can be updated.

See the [MaineDOT Standard Operating Procedure for Management of Project Funding](#) and the [MaineDOT Standard Operating Procedure for Project Schedules](#) for more information on these business practices.

Team Members

- Team Members will provide guidance to the Project Manager and the Project Team as to their progress and when they need assistance to continue with the project. This should be done well in advance of the point of need.
- As a member of a Project Team, Team Members are expected to attend all Coachpoint and Project Team Meetings under the following guidelines:
 - participate and communicate;
 - be a proactive problem-solver;
 - be prepared and be ready to make decisions;
 - think beyond their discipline;
 - trust, respect, and be accountable for Project Team performance.

See [Meeting Etiquette](#) for more information on meeting guidelines.

HIGHWAY PROGRAM PROCESS

A Project is identified and placed in the MaineDOT Work Plan and assigned to the Highway Program. In some cases, a Scoping Report is provided to the Highway Program by the Bureau of Planning prior to Project Kickoff. A meeting with the Bureau of Planning at this time is discretionary.

The Project Manager contacts the Program Development Manager in the Bureau of Planning and the Finance Manager in the Bureau of Finance and Administration to make sure the project is in

a STIP and to activate project funds. This is also an opportunity to confirm funding sources and whether Federal, State, or local funds are appropriated.

The following subsections will present each Milestone (bold) and Activities (italics) in the Highway Program Process with the responsible party listed in parenthesis.

Milestone: X01 Project Kickoff/Effort Begin (Project Manager)

Once funds have been allocated, the Project Manager enters an actual Project Kickoff date in the scheduling software. The project is assigned to the respective Project Team. The Project Manager reviews all information received from the Bureau of Planning, and may meet with the Bureau of Planning if more information is needed. This meeting can provide the Project Manager with additional information pertaining to the project scope, funding, commitments, or any other background information that may not be clear. The Project Manager notifies the Project Team that the project has been kicked off so that the Team can begin collecting preliminary data. The typical timeframe between Project Kickoff and Initial Team Meeting is 100 days.

D26 Preliminary Data Gathering – (Designer & Project Manager)

- Any existing plans from the MEPlans are acquired (Designer).
- Project Manager collects information from the Team on anticipated funding needs that should be represented in the project budget.
- An initial field inspection and/or Coachpoint meeting may also take place at this time in order to define the scope.
- Maintenance representatives from the Region Office (usually the Region Traffic Engineer and the Region Engineer) are contacted for their initial comments and concerns.
- On projects with federal oversight, FHWA personnel must be contacted for their comments or concerns.
- Many of these initial contacts may be addressed through an initial field inspection.

E41 Environmental Baseline (Environmental Team Leader)

The Wetland Delineation, Surface Water Evaluation, Hazardous Waste Assessment, Endangered Species Screening, evaluation of culvert sizes for streams based on resources, Historic and 4(f) resources are identified, and Initial Fisheries comments are requested.

R35 Existing ROW Ownership (Region Professional Land Surveyor (PLS) & ROW Mapper)

Valuation and Zoning data are compiled through MaineDOT, Municipalities, and various resources. The survey team compiles tax maps and assessments, Property Owner mailing list and other Right of Way information.

G25 Preliminary Subsurface Exploration (Geotechnical Team Member)

The Geotechnical Team Member makes an initial site visit, develops 100-series boring program and prepares a boring request. Preliminary borings are completed and soil samples may be sent to the laboratory for testing.

R36 Plot Existing ROW and Property Lines (PLS)

Using data from R35(existing right of way ownership) the ROW Mapper will add the Preliminary ROW and Property ownership information to the survey data.

S45 Preliminary Survey (Region PLS)

The scope of the project is verified by the Survey Section. The GPS control is set, existing ROW and Survey plans gathered, and ground and/or LIDAR survey efforts begin. PLS coordinates with the Utility coordinator and Utility companies to mark their underground facilities.

R38 Preliminary Utility Coordination (Utility Coordinator)

The first letters (Letter 1's) are sent to affected Utilities and Railroads. A field inspection to look at existing utilities is conducted. Comments received from the Utility companies are reviewed and it is determined if more survey is required for utility concerns. The utility coordinator will meet with utilities to discuss project scope, ROW status, clearing, potential relocations, and any new utility facilities planned for construction. Accommodations will then be communicated to the ROW mapper. These activities may occur after Project Kickoff.

Milestone: X04 Existing Conditions Plan (PLS)

Complete baseline conditions are delivered to the Team and typically include ROW boundaries, property boundaries, topography of project area, as well as available environmental information such as wetlands, historic properties, flood zones, and significant wildlife habitat.

Milestone: X07 Initial Team Meeting (Project Manager)

This milestone is accomplished with a meeting with all Project Team Members, and should occur for all projects. The meeting should be arranged to allow all Project Team Members to be present. At this meeting, all information gathered by the Project Team is shared and discussed to help identify project constraints. The project schedule is reviewed along with the setting of the milestone dates and the project budget.

D25 Preliminary Drainage Design (Project Manager-Designer-ENV)

Hydrology/Hydraulics are requested from ENV if needed. Rough flows are calculated and initial pipe sizes and locations are determined. The Designer and ENV often take a field trip to see how the existing drainage functions. Preliminary recommendations are given to the Team.

E40.1 Draft Endangered Species Act (ESA) and Biological Assessment (BA) (ENV Biologist)

Endangered Species Act draft biological assessment is being prepared between Initial Team Meeting and draft PDR milestones.

Milestone: X02 Pavement Coachpoint Meeting (Project Manager)

The Pavement Coachpoint meeting is held prior to the design of the preliminary alignment. All reconstruction and rehabilitation pavement designs are reviewed and discussed by Highway Program Management and the Pavement Design & Quality section. Constructability, material

availability, impacts, traffic/truck volumes, cost, and risks to the Department are all discussed resulting in a final pavement design decision that will be used on the project. The pavement section of the Preliminary Design Report (PDR) form containing both the final pavement design information and Coachpoint summary is provided to the Team by the Pavement Design & Quality section following the Coachpoint meeting. A draft Special Provision 403 can be requested by the Team following this meeting.

G45 Geotechnical Preliminary Design/Report (Geotechnical Team Member)

The boring logs are reviewed and preliminary recommendations are developed. These recommendations are then shared with the Project Manager and Team.

D20 Preliminary Alignment Design (Designer)

Based on the input from the Team, the designer develops the draft horizontal and vertical alignment (HVAC). The HVAC is shared with the Project Team for comments. This distribution initiates the HVAC review process by a Senior Designer. All Team Members are expected to review and comment. By providing the alignment proposal at this stage, Team Members will have an advanced opportunity to review the proposal and consider any potential impacts from their perspective. Adjustments are made as warranted.

A Team Meeting should be conducted as a follow-up to the distribution process.

Milestone: X09 Preliminary Public Meeting (Project Manager)

The Project Manager schedules a preliminary public meeting in cooperation with the local municipality, retains the services of a court reporter, and notifies the Designer to produce a Public Meeting Plan. At this meeting, the Project Manager shares known information and gathers new information from the Public. The Project Manager acts as the moderator and other Team Members may attend as needed. In some cases, this meeting may determine that a later Formal Public Meeting will not be necessary. After the meeting, the Project Manager communicates to the Team a summary of the input received and distributes the transcript. The Project Manager and Team Members should review the transcript and follow-up with the public and municipality if necessary. The Project Manager and Team can utilize all the information to develop the project.

Milestone: X11 Horizontal/Vertical Alignment Complete (HVAC) (Project Manager)

At this Milestone it is expected that the Team has addressed all comments and concerns with regards to alignment. The alignment will remain unchanged through the remainder of the project development process. Any change to the alignment beyond this step would bring the project back to this point.

The Team will select the recommended alternative and the Preliminary Plan will be developed.

TA1 Draft Traffic Analysis Management and Evaluation (TAME) (Project Manager)

All projects that may impact traffic must go through TAMEing and receive a signed TAME certificate from Traffic Engineering. Project Managers should consult with Region Traffic

Engineers for guidance on proposed traffic control measures and submit a TAME request form to Traffic Engineering's Work Zone Safety Engineer for review. Traffic Engineering will determine potential restrictions for the Project Manager to develop the proper 105/107 Special Provisions.

Depending upon the extent of potential traffic impacts, some projects may require that the proposed traffic control method be reviewed by the TAMEing Committee.

See the [Guidelines For TAMEing Process](#) for a copy of the TAME request form or for additional information on the TAME process, requirements, and TAME Committee review.

R37 Preliminary ROW Mapping (ROW Mapper)

Data from the Preliminary Plan and Utility Coordinator are compiled to develop the proposed ROW for PDR development.

E43 Environmental PDR Preparation (Environmental Team Leader)

This activity includes the evaluation of the following as they relate to the project: Section 106, Section 4(f), Endangered Species, Essential Fish Habitat, Fish Passage, Instream work window, Hazardous Waste, Dredge, Stormwater and MS4, Department of Environmental Protection (DEP)/Land Use Planning Commission (LUPC), Army Corps of Engineers (ACOE), and Mitigation.

R77 Relocation Planning (Project Manager and Appraiser III)

Preliminary Design and Proposed ROW cost data are compiled. If it is determined that there will be relocations due to the Project, a Preliminary Relocation Report and cost estimate are compiled. ENV is informed and the Property Owners are initially contacted.

D35 Preliminary Plan Development (Designer)

The Designer develops the extent of impacts for the approved alignment based on public input and Team comments. These are defined as impacts that do not take into account constrictions due to ROW, Environment and other areas. The intent is to develop a baseline for use in defining minimization.

D36 Preliminary Construction Estimate (Project Manager)

The Project Manager, in conjunction with Construction Management, will review the project estimate. Areas of focus include major items, location of project, contractor availability, and other related factors. Additional project specific costs should also be included. These estimates are updated in ProjEx and any major cost variations to the current funding levels are reported to Highway Program Management and may become candidates for Work Plan Management.

G30 Final Subsurface Exploration (Geotechnical Team Member)

The Geotechnical Team Member will do follow up site visits if needed; Develop the 200-series/final boring program, if needed, and prepare a final boring request. Final borings are completed and soil samples may be submitted for laboratory testing.

Milestone: X12 Draft PDR Distribution (Project Manager)

The draft PDR and Preliminary Plans are distributed to the Project Team for review and comments. This distribution initiates the PDR review process by a Highway Senior Designer. Comments can be returned to the Project Manager or can be discussed at the PDR Milestone Meeting. Comments will be incorporated into the draft PDR and Preliminary Plans after they are discussed at the PDR Milestone Meeting or as determined by the Project Manager. Schedule and budget are also discussed at the PDR Milestone meeting. The draft PDR is distributed for one final review by the Chief Engineer, Chief Operating Officer, Director and Assistant Director of Project Development, the Property Office Director, and the Project Team.

Milestone: X13 PDR/Preliminary Plan Complete (Project Manager)

Once the draft PDR has completed its final review, the final PDR is signed by the Highway Program Manager, and the project is ready for Final Design.

D45 Final Highway Design (Designer)

The Designer completes the Highway design to a level that all project impacts are detailed in advance of the Plan Impacts Complete (PIC) Milestone. Final Highway Design includes any and all impacts that the design will have on the environment and property owners. This includes drainage outlets, cut/fill lines, utility coordination, clearing, and temporary traffic control measures necessary for construction.

Once PIC is declared, all Final Highway Design will be limited to details within the impacted areas.

E40.2 ESA BA Review (Environmental Biologist)

Internal and FHWA review of the biological assessment.

A09 Municipal Agreement (Project Manager)

The Municipal Agreement is written and includes the current project cost estimate and any commitments that have been agreed to. The completed agreement is distributed to the municipality for their approval. Municipal agreement templates can be accessed internally from the [Contract Procurement Office shared network drive](#).

E51 Environmental Coordination (Environmental Team Leader)

The Environmental Team Leader processes Section 106 effects, Section 4f documentation for approval, finalizing the stormwater design, finalizing fish passage design, obtaining hazardous waste permits and special provisions, and finalizing National Environment Policy Act (NEPA).

E40.3 ESA BA Agency Review (Environmental Team Leader)

Formal initiation with Federal Agencies for the Endangered Species Act.

TA2 Final TAME (Traffic Engineering)

A signed TAME Certificate is received from Traffic Engineering. The signed certificate may include additional traffic control restrictions. Any traffic control restrictions stated within the TAME certificate must match restrictions stated in Special Provision 105 Limitation of Operations, Special Provision 107 Time, and Special Provision 652 Maintenance of Traffic.

Milestone: X15 Formal Public Contact (Project Manager)

The project details are presented to the public by the Project Manager and other Team Members. This could be by a Public Meeting and/or a letter to the municipalities. If a public meeting is held, a court reporter is retained and meeting minutes will be distributed to the Team and the municipality. The Public's comments and concerns are received. Comments will be incorporated into the Plans as determined by the Project Manager.

Milestone: X21 Plan Impacts Complete (PIC) (Project Manager)

Upon completion of the impacts of the design, but prior to the completion of the plan details (detail sheets, final estimate, etc.), the Plans are distributed to the Project Team for review and comments. This distribution initiates the Plan Impacts Complete (PIC) review process by a Highway Senior Designer. At this point comments can be returned to the Project Manager or can be discussed at the PIC Milestone Meeting. Comments will be incorporated into the Plans after discussion at PIC Milestone Meeting or as determined by the Project Manager. Schedule and budget are also discussed at the PIC Milestone meeting.

Milestone: X10 Section 7 Signoff (Environmental Biologist)

This will result in a letter of concurrence or a biological opinion.

Milestone: X16 National Environmental Policy Act (NEPA) Complete (Environmental Team Leader)

National Environmental Policy Act is required when there is a Federal nexus (funding/permitting). Under the NEPA umbrella compliance with approximately 40 federal laws is required. NEPA documentation consists of completion of either a Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement.

NEPA is not required when utilizing State funds only.

R32 Preparation of Titles (Title Office)

By formal request of the ROW mapper, titles are ordered and scheduled for title abstract research based upon the level of impacts to effected properties. Upon completion, titles are provided to the ROW mapper to be plotted on ROW maps.

R53 ROW Mapping (ROW Mapper)

This activity typically starts after PIC. Easements and Rights are added to the plan. Upon receipt of the deliverables under R32 Parcel set-ups and distances are added to the Plan to

provide more accurate depiction of property specifics. The Plan is peer reviewed and reviewed by Senior Property Officer for potential Appraisal and Negotiation implications.

R32.1 Verification of Titles (Title Office)

Plotting of Title information is reviewed by the Title Office for adjustments and suggested changes are reported back to ROW mapper.

R53.1 Final ROW Maps (ROW Mapper)

ROW Mapper takes verification memo from Title office and makes suggested changes to create Final ROW Plans.

G50 Final Geotechnical Design/Report (Geotechnical Engineer)

The Geotechnical Team Member provides boring location plans, Interpretive Subsurface Profile (ISP), Boring log sheets, assembles the Final Geotechnical Design Report, conducts geotechnical evaluations and analyses, and prepares geotechnical details and specifications for PS&E.

B4 Program Estimate Review (Project Manager & Construction Manager)

The Project Manager in conjunction with Construction Management should review the project estimate 6 months before the Plans, Specifications & Estimate (PS&E) milestone. Areas of focus include major items, location of project, contractor availability, and other related factors. Additional project specific costs should also be included. These estimates are updated in ProjEx and any major cost variations to the current funding level are reported to Program Management and may become candidates for Work Plan Management

R65 Valuation (Senior Property Officer)

Property impacts are assessed by appraisal staff to create determinations of just compensation. This process is complete upon appraisal review.

R50 Utilities Final Coordination (Utility Coordinator)

Utility conflicts are identified. A letter and project Plans are sent to the utilities with issues marked. The aerial utilities provide a pole list (if needed) and other final relocation information. Underground utilities provide facility relocation or new construction plans which are incorporated into the project Plans. A pre-coordination meeting may be held at this time. Special Provision Section 104 and utility certification are prepared.

R78 Relocation Implementation (Senior Property Officer)

Senior property officer works with the Relocation Manager in the Property Office to address necessary relocation of all displaced property inclusive of signs and personal property.

R68 Negotiation (Senior Property Officer)

Process of presenting offers of just compensation and ongoing negotiation with the affected property owners.

E52 Environmental PSE Preparation (Environmental Team Leader)

The final Permit Applications are submitted. Special Provisions are prepared.

R74 ROW Condemnation & Acquisition (Senior Property Officer)

The Titles are updated by the Title Office. Final Offer Letters and Condemnation Package sent out and record of condemnation is recorded at the Registry of Deeds.

Milestone: X24 Environmental Approvals Complete (Environmental Team Leader)

The Environmental package is provided to the Project Manager for the PS&E and Contract Package.

Milestone: X25 R/W Certified (Senior Property Officer)

A ROW Certificate is signed by the Chief Property Officer indicating the number of property owners, parcels, and items acquired through eminent domain and the date of legal possession.

Milestone: X23 Utilities Certified (Utility Coordinator)

The Utility Certificate is completed and provided to the Project Manager for the PS&E and Contract Package.

D65 Final Estimate Review (Project Manager)

The Final Construction Estimate is developed and reviewed by the Team. This is incorporated into the PS&E package.

Milestone: X35 PS&E Complete (Project Manager/Contracts & Specifications Engineer)

Plans are distributed to the Project Team for review and comments. This distribution initiates the PS&E review process by a Highway Senior Designer. At this point comments can be returned to the Project Manager or can be discussed at the PS&E Milestone Meeting. Comments will be incorporated into the Plans after discussed at PS&E Milestone Meeting or as determined by Project Manager. Schedule and budget are also discussed at the PS&E Milestone meeting.

A draft of the Contract Bid Book and Contract Plan Set are reviewed by Program Management and Construction Support.

The Contracts & Specifications Engineer declares a PS&E completion date to the Project Manager.

A13 PS&E Reviewed by Contracts (Contracts & Specifications Engineer)

The Project Manager assembles the Plans, Specifications and Estimates for the Project into one package and forwards it to the Contracts & Specifications Engineer for review. Final package includes Plans, Specifications, Certifications, Permits, and an Engineer's Estimate. This package will be reviewed to make sure all commitments are clearly understood, and responsibilities for meeting the commitments are assigned and communicated. Respective Team Members will be responsible for delivery of those products to the Project Manager. Once the PS&E package is

approved, it is passed to Finance and Administration office for Construction Authorization which is necessary for advertising Federal Projects.

Milestone: X39 Project Advertising (Contracts Office)

The project is advertised for the solicitation of bids.

B5 Design/Construction Hand-Off Meeting (Project Manager)

A meeting is set up between the in-house design team and the Construction Team (led by the Construction Resident) to discuss the project, project constraints, property impacts, and pertinent information that needs to be shared.

Milestone: X43 Contract Award

If the Contract Award Committee has concerns about the bid, it may meet with the Program Management/Project Manager to discuss the situation. The Award Recommendation Form is completed and the Municipality is notified.

C25 Pre-Construction Approvals (Resident)

The Contractor delivers the Soil Erosion Control Plan, Hazardous Waste Exposure Plan, Hazardous Spill Prevention Plan, schedule of work, subcontractor approvals, and Traffic Control Plan.

Milestone X40 Local Billing #1 (Project Manager)

The Project Manager drafts the invoice to the Municipality based on the Municipal State Agreement. The Project Manager works with the Procurement Manager from the Contract Procurement Office for processing.

C30 Construction Administration

MaineDOT oversight of project construction from Construction Begins to Construction Complete.

A15 Pre-Construction Meeting (Project Resident)

A Pre-Construction Meeting is held with the Construction Team and the Contractor to discuss Plans, Specifications and Procedures for the Project. Usually a meeting with the Utilities is held jointly with this meeting.

S55 Construction Survey (Project Resident)

The layout for construction control.

Milestone: X45 Construction Begin

Construction begin is considered to take place upon completion of the pre-construction meeting.

Milestone: X46 Local Billing #2 (Project Manager)

The Project Manager drafts the invoice to the Municipality based on the Municipal State Agreement. The Project Manager then sends the invoice to the Procurement Manager from the Contract Procurement Office for processing.

Milestone: X47 Final Team Meeting/Inspection (Project Resident)

When construction is substantially complete, the Construction Project Manager and the Construction Resident arrange for an on site Final Inspection Team Meeting to review the project. The purpose of this meeting is to provide another channel of direct feedback that will continue to improve our process. This Team meeting is recommended for most projects to discuss how the process worked during the development of the project. At the meeting, Team Members will discuss what went right, what went wrong, and how the project development process could be improved.

Milestone: X49 Construction/Effort Complete (Project Resident)

Construction is considered complete when the final walk through has been completed and the punch list items have been finished. Responsibility of the project limits is transferred back to the MaineDOT. Physical complete letter is sent to Contracts by the Resident. Once the letter has been sent, oversight of project has been transferred to the Contracts Section of Project Development.

Milestone: X50 Local Billing # 3 (Project Manager)

The Project Manager drafts the final invoice to the Municipality based on the Municipal State Agreement. The Project Manager then sends the final invoice to the Procurement Manager from the Contract Procurement Office for processing