



# **Preconstruction Project Development Process**

## **Showing Sub-Tasks & Responsible Party**

Note: The Program Manager (PM) is the project leader and will lead the Project Development Team (PDT) throughout this process in order to move the project to completion. The process below assumes the project has a defined purpose and need and is approved by the Commission and is included in the State Transportation Improvement Program (STIP). Candidate projects (or groups of projects) would normally be identified in accordance with Legislative Act 114 through coordination with the Planning Office and the Metropolitan Planning Organization (MPO) or Council of Government (COG). Local Public Agency (LPA) or County Transportation Committee (CTC) projects developed by the Department may follow an abridged process.

This information is not inclusive of all items that will be required but is general information for the user. The numbering convention used below should not be considered ordered steps but as a way to indicate milestones or other general tasks. Several items include alphanumeric codes in parenthesis that reference primavera tasks (i.e. PM010).

“Dates for Assembling Information on Construction Obligations” should be followed where applicable. (<http://iwww.dot.state.sc.us/PreConstruction/Support/letting/operationscenter.shtml>)

### **1. Advanced Project Planning Report (APPR) and Corridor Feasibility Studies (CFS)**

- The Office of Planning works with MPOs and COGs to identify eligible projects and facilitates their inclusion in their Transportation Improvement Programs (TIP) and the STIP. Whenever a major widening or new location project is selected from a long-range plan for inclusion in the STIP, the Planning Office develops an Advanced Project Planning Report (APPR) or Corridor Feasibility Study (CFS). An APPR and CFS is a document that identifies impacts to the surrounding environment and communities. The SCDOT Program Manager should have an approved (by MPO or Local Representative) APPR developed by Planning Office for the proposed project prior to scoping the project and requesting authorization of funding for design services from the Federal Highway Administration (FHWA).

### **2. Initial Project Development Team Meeting (Scoping Meeting)**

The purpose of this meeting is to explain the purpose and need of the project to the Project Development Team – Program Manager

- Coordinate establishment of the Project Development Team (PDT) – Program Manager [Regional Production Group (RPG) Design Staff, Preconstruction Support Design Staff, Surveys Office, Environmental Office, Utilities Office, Rights of Way (R/W) Office, Railroad Projects Office, Traffic Engineering, Program Controls Unit, District Engineering Offices, and FHWA]
- Determine if outside design resources will be necessary for the project – Program Manager, Design Manager, RPG Engineer
- Revise schedule based on time necessary to issue notice to proceed for outside design resources – Program Manager

Team Member	Items to Gather for Initial Project Meeting
Program Manager	Purpose and need of project. Scope of project (construction, reconstruction, Non-Freeway Resurfacing, Restoration and Rehabilitation (3R)). Logical termini for project, fiscal year obligation commitments
RPG Design Office (Including, when applicable, Road Design, Hydraulic Design, Bridge Design, Roadway Structure Design, and Geotechnical Design)	Gather available plans, and reports relevant to the project corridor. (Structure Inventory & Appraisal (SI&A) reports, soil information, aerial photos, and functional classifications)
Traffic Engineering	Gather available traffic and crash information currently on file. Determine “Significant” category and traffic control limitations
Environmental Office	Gather available environmental information
Planning Office	Gather available planning information and design year volumes
Utilities Office	Determine if corridor has major utility distribution/collector lines (Exact location not required at this time)
Program Controls	Collect project information to establish draft project schedule
District Office	Gather information to assist in preliminary design

[For all Federal Aid projects, the FHWA environmental and operations representative needs to be part of the review].

- Schedule and conduct office/field review, allowing a minimum of two weeks advance notice – Program Manager (PM020)
- Define Termini, Purpose of Project – Program Manager
- Identify public involvement requirements/methods. Complete public involvement form – Program Manager
- Prepare and distribute “minutes” from initial project meeting – Program Manager

Departments listed below should be contacted and possibly added as a member to the project development team as necessary

- The Bridge Construction Office should be used as a resource on bridge projects as necessary
- Traffic Control office may also need to be involved early in the design phase to address constructability/staging concerns
- Landscape Architect should be used as a resource if landscaping is likely to be an element of the project.
- Railroad Projects Office to provide information regarding requirements and future plans.
- Office of Materials and Research – See EDM 15 for pavement type selection process.

### 3. Initial Cost Estimates and Schedule

- Request cost estimate from Value Engineering – Program Manager (Due to time necessary to complete cost estimates previous estimates provided to MPO/COG may be necessary for initial programming).
- Coordinate the gathering of cost estimates from all affected sections, such as RPG, Right of Way, Utilities, Railroad Projects Office, Traffic Engineer, etc.–Value Engineer
- Compile and distribute cost estimate to Program Manager for review & comments – Value Engineer
- Distribute cost estimate to the appropriate funding authority – Program Manager
- With Program Manager, coordinate with MPO/COG, etc., and modify project costs and termini in STIP as appropriate – Planning Office

#### **4. Program Action Request (PAR) Submitted**

- Estimate funding for Consultant and in-house services as needed – Program Manager
- Include Railroad preliminary engineering cost in PE budget as needed – Program Manager
- Prepare and submit PAR, with proposed schedule [including establishing bridge PCNs, as appropriate] - Program Manager (PM010)

#### **5. Project Authorization Received – Preliminary Engineering Funding Approved**

- Immediately notify Program Manager once charge code is established – Preconstruction Resource Management (PCM005, PCM010)
- Notify PDT of project information (File Number, PCN, and Charge Code) – Program Manager

#### **6. Surveys and Initial Studies**

- Submit application, fees, and insurance requirements to railroad for approval 60 days prior to conducting surveys or geotechnical borings on railroad right of way – Railroad Projects Office
- Identify areas that may need geotechnical data to facilitate design – RPG Geotechnical Design
- Consider identifying wetland boundaries for survey crew to locate when surveying – Environmental Office (ENV030), Program Manager, Design Manager
- Prepare project-specific portion of eminent domain ad and submit along with PCN & charge code to Environmental Office – Program Manager
- Submit first bridge letter for bridge replacement projects (see EDM 36) – Program Manager
- Submit eminent domain advertisement to appropriate media outlets for advertisement – Environmental Office (ENV010)
- Gather crash diagram and safety rank information from Traffic Engineering – Design Manager
- Prepare the survey and Subsurface Utility Engineering (SUE) request, allowing a brief review period by the PDT then submit the survey and SUE request to the Surveys Office - RPG Roadway Design (RDPD010, SURV010)
- Select and contract with Consultant (SUE, Mapping, etc.), when requested by Project Development Team and provide SUE data to RPG Roadway Design – Surveys Office

[Note: If follow-up survey requests become necessary, for instance, to extend a side road or ditch survey, the request will be prepared and submitted by RPG Roadway Design]

- Once survey data check is complete, submit survey information to RPG Roadway Design and notify the Program Manager (via E-mail) – Surveys Office (SURV020, SURV030, SURV040, SURV130, SURV140, SURV150)
- Submit Initial Studies Request (ISR) to Environmental Office – Surveys Office (PM050)
- Prepare and submit requests for traffic data and analysis to the Director of Traffic Engineering, including pavement loading – RPG Roadway Design
- Prepare and submit requests for pavement design to Pavement Design Engineer – RPG Roadway Design (RDRW042, RDRW043)
- Surveys received by RPG Roadway Design

## **7. Preliminary Design**

- Coordinate with Environmental Management Office (EMO) to present at Agency Coordination Effort (ACE) meeting.
- Plot existing topography and determine plan sheet layout – RPG Roadway Design (RDPD030).
- Develop Design Criteria Report for Program Manager approval noting any design exceptions to SCDOT and/or AASHTO design standards – RPG Roadway Design, RPG Structure Design, RPG Hydraulic Design
- Prepare horizontal design (noting in design notebook and copying PM any changes made to minimize impacts to natural resources) – RPG Roadway Design and RPG Structure Design (RDPD030)
- Request Bridge Hydrology Design – RPG Roadway Design (RDRW020, HY010)
- Request Landscape Architect’s input on landscape design – Program Manager
- For projects requiring alternative geometric designs, Value Engineer to prepare comparative cost estimates – Program Manager
- Provide bridge hydrology & hydraulic information for RPG Roadway and RPG Structure Design – RPG Hydrology Design (HY020, RDRW041)
- Prepare vertical design and bridge layout design – RPG Roadway and RPG Structure Design
- Place preliminary design onto existing topography and develop preliminary plans –RPG Roadway Design (RDPD050)
- If necessary, distribute the design to all members of the Project Development Team to review – Program Manager
- If necessary, distribute to Preconstruction Support (thru Program Manager) for QA review of design criteria, geometric design, pedestrian and bicycle accommodations, landscaping – RPG Roadway Design and/or RPG Structure Design
- Perform “Line and Grade” Design Field Review (see IB 2006-7), noting any potential design exceptions – RPG Roadway Design (RDRW060)
- Perform intersection analysis on major intersections on request of Program Manager – Traffic Engineering
- Develop Transportation Management Plan checklist (TMP) for Program Manager to complete and forward to Traffic Engineering – RPG Roadway Design (RDRW0401, RDRW0601)

- Distribute plans and cross sections to RPG Hydraulic Design to initiate drainage design- RPG Roadway Design (RDRW065, HY090)
- Verify receiving streams for project then check if listed on SCDHEC's most current 303(d) list and table for total maximum daily loads (TMDL) – RPG Hydraulic Design (HY001)
- Complete NEPA Bridge Scope and Risk Assessment Form – Environmental Office
- If necessary, coordinate and hold Public Information Meeting (PIM) – Program Manager
- Prepare Public Information Meeting Displays – RPG Roadway Design
- Initiate and coordinate value engineering study as necessary – Program Manager (PM040)

## **7.1 Design Review Meeting Conducted, Preliminary Design Finalized**

- Analyze written comments received from preliminary design review process/PIM and determine feasibility of incorporating into design; notify team members of results – Program Manager with RPG Roadway Design and/or RPG Bridge and Roadway Structure Design
- Schedule/conduct office and, if necessary, field review with the Project Development Team to review comments and team members sign-off on revision/addition to preliminary design then resolve all design issues before finalizing the preliminary design – RPG Roadway Design and/or RPG Bridge Structure Design (RDRW060)

[Note: Provide one week minimum advance notice]

- Determine whether to require Fee Simple right of way or Slope Permission to cover construction slopes beyond new right of way – Program Manager
- Evaluate alternatives to retaining walls, e.g. purchasing additional right of way, changing alignment, etc., to determine most appropriate design – Design Manager
- Identify proposed structures that may require geotechnical investigation and submit to RPG Geotechnical Design to determine areas requiring geotechnical investigations – RPG Bridge Structure Design and RPG Roadway Structure Design
- Establish retaining wall and culvert structure alignment and stationing, provide to RPG Roadway Design Group a sketch showing additional right of way needed due to structure footprint or construction requirements – RPG Roadway Structure Design
- For roadway projects complete Geotechnical Checklist to determine if a geotechnical investigation should be performed – RPG Roadway Design
- Establish proposed boring locations & request Rights of Way Office to obtain drilling access permission - RPG Geotechnical Design
- Coordinate with Environmental Office to determine if site is historically significant or if there is soil, surface water, or subsurface water contamination – RPG Geotechnical Design
- Add proposed boring locations as determined by RPG Geotechnical Design to plans – RPG Roadway Design
- Request preliminary soil borings from Office of Materials and Research in areas needing geotechnical study– RPG Geotechnical Design
- Finalize Design Criteria Report for Program Manager approval noting any design exceptions to SCDOT and/or AASHTO design standards – RPG Roadway Design, RPG Structure Design, RPG Hydraulic Design
- RPG Roadway Structure Design Office to create list of facing options for visible structures to be presented at the Public Hearing – Program Manager
- Update cost estimates, if necessary, based on revised geometric design and structural requirements–Value Engineer

- Coordinate review of cost estimate and resolve the differences, if necessary – Program Manager
- Review and revise the project schedule as necessary – Program Manager and Program Controls Unit
- Incorporate changes requested by Railroad after Program Manager’s approval and resubmit revised design to Railroad company – RPG Roadway Design and Railroad Projects Office
- Complete and distribute copies of the final preliminary design to all members of the Project Development Team excluding Program Controls – RPG Roadway Design
- Initiate design exception process identified by road, bridge, and hydraulic design – Design Manager
- Provide preliminary structure plan and profile and structure loading to RPG Geotechnical Design – RPG Bridge Structure Design or RPG Roadway Structure Design
- Provide preliminary geotechnical report including structure recommendations to RPG Structure Design – RPG Geotechnical Design
- Provide preliminary geotechnical report including relevant hydraulic parameters to RPG Hydraulic Design – RPG Geotechnical Design

## **7.2 Preliminary Right of Way Plans Completed**

- Prepare preliminary right of way plans, cross sections, etc., necessary for a field review coordinated with Project Development Team and schedule a Right of Way Plans Field Review (See IB 2006-6) – RPG Roadway Design Office (RDRW085, RDRW95)

[Note: Program Manager will send plans to MPO and COG team members]

- Provide conceptual signing and traffic signal/ITS information as related to right of way acquisition, as necessary – Traffic Engineering
- Send typical section sheets to Pavement Design Engineer to verify pavement design – RPG Roadway Design
- Contact Utilities Office to review preliminary right of way plans to ensure all needed information is included on plans – RPG Roadway Design
- Develop Preliminary Bridge Plans- RPG Structure Design (BR1020, BR2020, BR3020, BRRR1050)
- Request subsurface investigations based on preliminary bridge plans – RPG Geotechnical Design (GT010)
- Coordinate with the Construction Office and establish the Constructability Review Team and date of their review – Program Manager (Reference: SCDOT Construction Manual – Section 101.3.1 (Constructability Review))

## **7.3 Preliminary Right of Way Design Field Review (see IB 2006-6)**

- Coordinate and conduct a Right of Way Plans Field Review of the preliminary right of way plans by the Project Development Team. This review will determine the impact the roadway drainage has on right of way and construction. Include the District Utility Coordinator – RPG Roadway Design (RDRW095)
- Revise plans in accordance with comments from the Field Review – RPG Roadway Design

- Provide road plans, including plan and profile, cross-sections, pavement designs, and typical sections to Work Zone Traffic Control Coordinator in Traffic Engineering to begin preparation of work zone traffic control staging plans – RPG Roadway Design
- Provide revised plans including cross sections to RPG Geotechnical Design RPG Roadway Design
- Provide proposed structure design criteria to RPG Geotechnical Design – RPG Bridge Structure Design or RPG Roadway Structure Design
- Request final subsurface investigations for proposed structures – RPG Geotechnical Design (GT040)
- Notify Signing & Marking Plans Preparation Engineer in Traffic Engineering upon completion of plan and profile sheets to permit scheduling of signing and pavement marking plans preparation – RPG Roadway Design
- Notify Signal Systems Engineer of new signals (identified by District Traffic Engineer or Traffic Engineering Studies) and/or signal replacements – Program Manager
- Traffic Engineering to submit completed IMR or IJR to Program Manager – Traffic Engineering
- Submit Final Interchange Modification/Justification Report to FHWA – Program Manager

## **8. Utility and Railroad Preliminary Coordination**

- For Railroad involvement, RPG Roadway Design to contact the Railroad Projects Office to review the project and determine what needs to be provided in Preliminary Design Plans submittal to the Railroad Company – RPG Roadway Design
- Conduct Utilities Coordination Meeting, when applicable – Utilities Office and Program Manager
- Determine if environmental permits should include impacts for relocating utilities – Program Manager, Utilities Office and Environmental Office

## **9. Environmental / National Environmental Policy Act (NEPA)**

- Prepare and submit Project Planning Report (PPR) to the Environmental Office with a copy circulated through the appropriate offices – Program Manager (PM030)  
[Note: PPR's shall be shared with the RPG Bridge Structure Design Office for projects involving a bridge]
- Begin preparing environmental document – Environmental Office (ENV020, ENV030, ENV040, ENV050, ENV060, ENVCE010, ENVEA010, ENVEA0101)
- Submit a copy of the Project Planning Report to the State Energy Office and FHWA, as appropriate – Environmental Office
- On all Consultant projects involving adding capacity or new location construction where the Consultant is responsible for preparing the environmental document, complete the project planning report concerning transportation efficiency and forward it to the Environmental Office for transmittal to the State Energy Office – Program Manager
- Request permit determination from Environmental Office – Program Manager
- Identify Essential Fish Habitat (EFH) impacts for road and bridge projects in tidal areas – Environmental Office
- Provide conceptual landscaping information as related to right of way acquisition, as necessary – Landscape Architect

- Submit Municipal Agreement to appropriate municipality – Program Manager
- Review project schedule with Project Development Team and determine appropriate estimated completion date for approved environmental document and public hearing displays – Program Manager

### **9.1 Environmental Document Submitted for Approval**

- Distribute environmental document to the Program Manager and FHWA for review and comment – Environmental Office

[Note: Program Manager may request input from Project Development Team concerning the environmental document]

- Revise environmental document, as necessary, and submit document for FHWA's approval [Also, notify Program Manager via e-mail that document has been submitted] - Environmental Office (ENVEA0102)

### **9.2 Environmental Document Approval Received**

- Distribute copy of the approved environmental document to the Program Manager - Environmental Office
- Coordinate and prepare the public hearing handout if required – Environmental Office and Program Manager
- Determine if visualization techniques are needed. Coordinate with Rights of Way, Environmental, and RPG Roadway Design – Program Manager
- Review information to be placed on public hearing display with Environmental Office – Program Manager
- Complete the preparation of the public hearing displays – RPG Roadway Design
- Arrange appropriate location/date for public hearing – Program Manager

[Note: Program Manager to coordinate with Environmental Office and Communications & Creative Services to insure that all appropriate SCDOT, FHWA, MPO/COG, elected officials and other personnel are notified of the hearing]

- Request public hearing sign panels and coordinate the installation of the public hearing signs with District staff – Program Manager
- Prepare project-specific portion of public hearing advertisement and submit to Environmental Office – Program Manager (ENVEIS0401)
- Complete the preparation of the public hearing advertisement and submit appropriately – Environmental Office
- Review public hearing displays with appropriate staff and FHWA, a minimum of three weeks prior to the public hearing – Program Manager
- Review public hearing display with the City or Town Leaders, if located within the municipal limits – Program Manager
- Send copies of public hearing plans, environmental document, etc., at least two weeks (15 days) prior to the public hearing, to the District Office and to the local contact person as identified on the public hearing signs – Program Manager
- Send formal notice of the public meeting to all utility companies involved on the project at least two weeks prior to the meeting requesting their attendance – Program Manager

### **9.3 Design Public Hearing Completed**

- Coordinate/conduct public hearing – Program Manager (ENVEA0201, ENVEIS0402)  
[Note: Encourage MPO/COG staff to actively participate]
- Respond to public hearing comments and determine feasibility of revising plans to address public comments – Program Manager (ENVEA0202, ENVEIS0403)
- Revise preliminary design plans, as necessary – RPG Roadway Design
- Estimate the cost of utility relocation particularly those that have prior rights – Utilities Office
- Estimate cost of any wetland mitigation effort – Environmental Office
- Review and revise, as necessary, the project schedule – Program Manager and Program Controls Unit
- Request updated cost estimates from Value Engineer – Program Manager
- Distribute updated cost estimate to the Project Development Team including the FHWA - Program Manager
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- When retaining walls have been selected as the most appropriate alternative for the site, notify RPG Roadway Structure Design of required facing to be used (selected from the list of options created during preliminary design, Task 11) – Program Manager

#### **9.4 Finding Of No Significant Impact (FONSI) Submitted for Approval**

- Review with the Program Manager any project changes that may have occurred since document approval, prepare the Finding of No Significant Impact (FONSI) request, prepare public hearing certification package and allow Program Manager to review – Environmental Office
- Submit public hearing certification package to FHWA – Environmental Office (ENVEA0203, ENVEIS0204)

[Note: Program Manager may share the FONSI request with the Project Development Team for comments]

#### **9.5 FONSI Approval Received**

- Provide copy of approved FONSI to Program Manager – Environmental Office
- If necessary, coordinate with Environmental Office and prepare project-specific portion of advertisement that the FONSI is approved – Program Manager  
[Note: If the project involves a Categorical Exclusion and a public hearing is held, the Program Manager will coordinate with the Environmental Office and insure that the appropriate Study Report and advertisement is prepared and submitted]
- Complete the preparation of the advertisement and submit appropriately – Environmental Office
- Receive approved IMR or IJR from FHWA – Program Manager

#### **10. Right of Way Plans Completed and Signed**

- Complete the drainage design and review with the Project Development Team – RPG Hydraulic Design (HY100)
- Verify execution of Municipal State Highway Project Agreement, if required. If Agreement has not been executed, re-submit for execution by the City or Town - Program Manager
- Provide completed right of way plans to the Landscape Architect to receive recommended landscaping comments – RPG Roadway Design
- Submit design exception for review and approval by Design Manager, Program Manager, Preconstruction Support, RPG Engineer, Director of Preconstruction, and FHWA if necessary – RPG Roadway Design, RPG Hydraulic Design, RPG Structure Design
- Notify Value Engineer to initiate updated cost estimates (utilizing input from R/W, utilities, traffic engineering, environmental (wetland mitigation)) – Program Manager
- Review and revise the project schedule as necessary – Program Controls Unit
- Include right of way requirements for new or modified structures as provided by RPG Roadway Structure Design, Traffic Engineering (signals, signs, and ITS) - RPG Roadway Design
- Verify adequate right of way established for bridge construction access – RPG Roadway Design
- Coordinate the resolution of any substantial changes in estimated costs and share the information appropriately – Program Manager
- Complete Quality Control review of right of way plans. Obtain necessary initials and submit to Roadway Design Support for Quality Assurance review – RPG Roadway Design
- Complete Quality Assurance Review of right of way plans and return comments to RPG Engineer – Roadway Design Support
- Complete the right of way plans, including resolution of review comments and routing for final signatures – RPG Roadway Design
- Submit the signed right of way plans to the Operations Center within Preconstruction Support to forward to Rights of Way Office and FHWA, as needed; notifying the Program Manager – RPG Roadway Design (RDRW140)
- Provide completed right of way plans to the Utilities Office and District Office to initiate final utility coordination and final railroad coordination, as necessary – RPG Roadway Design (UT020, UTRR100)
- Provide signed right of way plans to Traffic Engineering to begin finalizing pavement marking, signing, signal, and traffic control plans – RPG Roadway Design
- Submit executed Municipal State Highway Project Agreement to the Rights of Way Office – Program Manager (PM055)
- Approved right of way plans signify the end of preliminary engineering per 23 CFR 636.103

## **11. Right of Way Acquisition Authorization Recieved**

- Submit R/W cost estimate via email to Program Manager for concurrence of amount prior to submitting to Preconstruction Resource Management – Rights of Way Office
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- Submit right of way cost estimate to Preconstruction Resource Management– Rights of Way Office

- Coordinate the obligation of right of way funds and notify the Program Manager and Director of R/W immediately upon approval of funds – Preconstruction Resource Management (PCM020, PCM030)
- Initiate R/W acquisition process – Rights of Way Office

## **12. Right of Way Acquisition**

- Right of way special provisions, as a result of negotiations, provided to RPG Design Manager to be reflected in the plans or contract special provisions – Rights of Way Office
- All relocations will be completed prior to award, or the appropriate special provisions are provided to RPG Road Design to be included in the contract special provisions as agreed upon by the FHWA – Rights of Way Office
- Right of Way acquisition process completed, with all tracts either acquired or condemned – Rights of Way Office  
[FHWA needs Right of Way certificate on all Interstate projects and projects greater than \$50 million on the National Highway System and other projects as requested by FHWA (See SCDOT/FHWA Stewardship and Oversight Plan)]
- Right of Way Certification provided to FHWA, Program Manager, Obligation Management and Director of Construction Office 2 months prior to letting – Rights of Way Office

## **13. Environmental/ Water Quality Permit(s)**

- Prepare necessary water quality permit application(s) after considering the following design elements – Environmental Office (ENV030, ENV060)
  - Outfall and ditch requirements design by Hydrology
  - Traffic control requirements including temporary lanes for traffic shifts
  - Utility impacts (shall be reviewed on a case by case basis)
  - Bridge construction access requirements
- Submit water quality permits for approval
- Coordinate the resolution of any issues raised by permitting agencies – Environmental Office (ENVP010)

## **14. Utility and Railroad Final Coordination**

- Begin coordination necessary to secure Utility Agreements and No-cost relocation sketches – District Office (UT010, UT030-UT440)
- Send right of way plans to the railroad with a detailed letter explaining the project as it affects the Railroad to initiate their preliminary engineering review for approval– Railroad Projects Office (UTRR010, UTRR020, UTRR030, UTRR090, UTRR100, UTRR110)
- Utility relocations, special requirements, funding, and other items, as needed, are in place and included in the contract, as appropriate – Program Manager

### **14.1 Finalize Utility Coordination/Relocation**

- Verify PCN & charge code are established for utility relocations 3 months prior to letting – Program Manager

- All Utility Agreements and No-cost relocation sketches received from the District are reviewed, approved, and utilities are authorized to begin work 2 months prior to letting – Utilities Office (UT450)

## **15. Final Design**

- All project requirements as a result of field reviews, design exceptions, constructability reviews, and maintenance of traffic concerns are addressed – Program Manager
- Provide construction plans to the construction field office for review by the Resident Construction Engineer – RPG Roadway Design
- Provide bridge construction plans to the Bridge Construction Office for review – RPG Bridge Structure Design
- Local municipality needs are identified and included in the special provisions where appropriate. This could vary from lane closure restrictions for special events, to landscaping coordination, to coordination of preferred detour routing and signing – Program Manager
- Examine the construction plans for completeness with emphasis on the estimated quantities. District may add or revise quantities as deemed necessary to construct the project. Make changes to quantities on the summary of estimated quantities sheet sent by RPG Road and Bridge Design. A Construction Plans Review field review may be held but is not required (PS&E Review (see IB 2006-9))- District/Resident Engineer
- Coordinate the resolution of any substantial changes in the cost estimate and initiate any necessary STIP adjustment – Program Manager
- If a pavement design is older than 3 years determine need for a Pavement Design Review. Resubmit forms for traffic information and pavement design, as needed – RPG Roadway Design
- Environmental commitments and constraints are provided to Program Manager and Design Manager in order to be clearly indicated in the proposal and/or plans – Environmental Office
- Ensure environmental permit conditions match final plans – RPG Roadway Design
- Request right of way revisions to plans subject to approval by Program Manager – Rights of Way Office
- Finalize box culverts, retaining wall and shoring designs; provide details to RPG Roadway Design for plans – RPG Roadway Structure Design (RDCP040, RDCP050)
- Provide completed pavement marking, signing, traffic signal and ITS plans, special provisions and updated staging plans as necessary to Design Manager –Traffic Engineering
- Provide to RPG Design Manager any required landscape special provisions and estimates – Landscape Architect
- Conclude participation agreement with governmental entities concerning maintenance of landscaping – Program Manager
- Complete road construction plans including structure plan, profile, and cross section sheets as provided by RPG Roadway Structure Design – RPG Roadway Design (RDCP053)
- Obtain Pavement Design Engineer’s signature on typical section sheets – RPG Roadway Design
- Complete bridge construction plans, complete special provisions and estimates – RPG Bridge Structure Design
- Input quantities into PES – RPG Roadway Design and RPG Bridge Structure Design

- Complete Quality Control review of Construction Plans. Obtain necessary initials and submit to Roadway Design Support and/or Structural Design Support for Quality Assurance review – RPG Roadway Design and/or RPG Bridge Structure Design (RDCP060)
- Complete QA Review of Construction Plans and return comments to RPG Engineer – Roadway Design Support and/or Structural Design Support (RDCP065)
- Engineer of Record begins researching and writing special provisions and/or supplemental specifications as indicated by Design Group and Traffic Engineering – Design Manager
- Complete the Construction Plans, including resolution of review comments and routing for necessary signatures – RPG Roadway Design (RDCP085)

## **16. Construction Plans Completed & Signed**

- Engineer of Record signs and seals plans and special provisions – RPG Engineer (or designee) (RDCP085)
- Complete Notice of Intent (NOI)/Stormwater Pollution Prevention Plan (SWPPP) package and submit to Engineer of Record for signature – RPG Hydraulic Design (HY002, ENV060)
- Submit NOI package to Director of Construction Office – Design Manager

## **17. Plans, Specifications and Estimates (PS&E)**

### **17.1 Contract Proposal Preparation**

- Submit special provisions to Letting Preparation Engineer – Engineer of Record
- Complete engineer's estimate in PES for use by Program Manager, Contracts Administration and Preconstruction Resource Management – Letting Preparation
- Complete cost estimate updates including review of PE and R/W expenditures and remaining budgets – Program Manager
- Ensure adequate funds for construction, CEI, and contingencies are committed for CTC and Local Public Agency (LPA) projects – Program Manager
- Place final proposal in shared network directory for Program Manager and Design Manager to review – Letting Preparation
- Complete special provisions and prepare proposal for printing – Letting Preparation
- Coordinate the resolution of any substantial changes in the estimated costs and share the information appropriately – Program Manager
- On large projects, prepare a Critical Path Method (CPM) schedule to establish reasonable construction schedule - Construction Office
- Evaluate project for a minimum required contractor performance score - Director of Construction

### **17.2 PS&E Submittal**

- Upon receipt of approved water quality permits, notify Program Manager – Environmental Office
- Distribute copies of approved water quality permits as necessary – Environmental Office

- Notify FHWA and Program Manager of water quality permit approval dates or problems encountered – Environmental Office
- Submit PS&E package to FHWA, as appropriate – Letting Preparation Engineer

#### **18. Construction Authorization Received**

- Coordinate Obligation of funds. Receive and distribute FHWA Project Authorization Approval – Preconstruction Resource Management (PCM040, PCM050)
- Distribute Utility Agreements and/or relocation sketches – Utilities Office
- Inform Contract Administrator if any special submittals are required from the contractor upon submittal of bid (utility bid sheets, landscape/irrigation bid sheets) - Letting Preparation Engineer
- Prepare and publish ad for highway letting for project – Contracts Administration
- Conduct pre-bid conference on large and multi-phased projects, address utility conflict issues and if necessary prepare addenda to disseminate the minutes and questions and answers from the Pre-Bid meeting – Director of Construction Office
- Provide attendee list if there was a mandatory pre-bid conference to Contract Administrator – Program Manager

#### **19. Construction Bids Received**

- As soon as possible after bid opening, submit bid information to appropriate Program Manager – Contracts Administration
- Coordinate the resolution of any substantial differences between bid and STIP amounts – Program Manager
- Coordinate contract award with the FHWA on all oversight projects, provide necessary bid information – Contracts Administration
- As soon after bid opening as possible, load bid information into TrnsPort Program in order to analyze the bid and to expand the bid history – Contracts Administration
- Invite Program Manager to Bid Review Committee Meeting to review bids for award/reject recommendation – Director of Construction Office

#### **20. Award Project – Monitor Project Expenditures & Report Periodically to MPO, COG**

- Notify Program Manager via email upon approval of award – Contracts Administration
- Schedule/conduct preconstruction conference – Resident Construction Engineer
- Provide information periodically to Program Manager on status of construction and construction expenditures, when requested – Director of Construction Office
- Provide information periodically to Program Manager on status of condemnation cases, R/W hold offs, and remaining anticipated R/W expenditures, when requested – Rights of Way Office
- Distribute Railroad Agreements to the appropriate railroad company – Rights of Way Office (UTRR040, UTRR050, UTRR060, UTRR070, UTRR080, UTRR120, UTRR130, UTRR140, UTRR150)
- Verify invoices for utility relocations are paid. Notify Program Manager – Utilities Office (UT460)