



Maryland
Transportation
Authority

OFFICE OF ENGINEERING AND CONSTRUCTION
PROJECT DELIVERY GUIDELINE
DESIGN-BID-BUILD PROCUREMENTS

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Introduction

OEC developed this Project Delivery Guideline (PDG) document to provide Project Managers and team members with a consistent and consolidated guides and procedure on the process including initiation, design, advertisement, and construction support of projects administered by the MDTA.

The process and procedures detailed in the PDG cover the most typical types of projects, using the design-bid-build project delivery method. Brief descriptions of the various procurement methods have been included for reference. Some projects may require evaluation to determine the most appropriate project delivery method based on direction from the MDTA Project Manager.

The PDG is continuously updated to keep up with changes in processes affecting the planning, design, permitting, procurement, and construction of projects. Project Managers and Project Team members can access the latest version of this document.

Project Managers should ensure that all project files, including but not limited to, plans, specifications, estimates, permits, design calculations, CAD files and working files are stored in the respective project folders for each project prior to the completion of each project milestone.

MDTA provides trainings on its project delivery process during A/E contract kickoff meetings. Project Managers are encouraged to review this document prior to work on any project and contact the MDTA Project Manager if there are any concerns or items that require clarification. A list of revisions is provided to help the reader identify the changes made from previous versions.

The PDG includes sections covering roles and responsibilities of personnel involved in projects, MDTA staff and project delivery organizational charts, detailed activities in project delivery process from project initiation to design to advertisement to construction.

Roles and Responsibilities

The definitions below list out most of project stakeholders but this is not a comprehensive list. These definitions are accessible for review from links available when hovering over the shortened designations throughout the document.

- **Chief Engineer (CE):** Senior level oversight and direction of all facets of Planning, Engineering and Construction in OEC Planning Office (PB), Key Bridge Office (FSK) and White Marsh Office (WMO).
- **Director/Deputy Director of Construction (DC/DDC):** Oversight and direction of Construction
- **Director/Deputy Director of Engineering (DE/DDE):** Oversight and direction of OEC Engineering (FSK)
- **Director/Deputy Director of Project Development (DPD/DDPD):** Oversight and direction of OEC Engineering (WMO)
- **Director/Deputy Director of Planning and Program Development (DPPD/DDPPD):** Oversight and direction of OEC Planning (PB)
- **Operations (O):** Representative from Division of Operations, as assigned by Chief/Director of Operations
- **Police (P):** Representative from MDTA Police
- **OEC Discipline Managers (OECDM):** Provide independent oversight and technical expertise in discipline specialty and ensure compliance with MDTA directives and policies. Disciplines are as follows: Bridge and Tunnels, Environmental, Facilities, Highways, Traffic, Electrical and ITS. OECDM to provide detailed discipline reviews if DR's are not used.
- **Environmental Review and Permitting Lead (ERPL):** Performs environmental milestone/ discipline reviews, SW plan approvals and Natural Resources permitting oversight.
- **MDTA Project Manager (MPM):** MDTA staff or designee providing guidance and direction to Project Manager (PM), handles and coordinates internal processes, and acts the State's representative for the Project.
- **Special Program Manager (SPM):** MDTA staff or designee providing budgetary oversight, guidance, and assistance to the Directors, Deputy Directors, and Engineering Discipline Managers for the collection, maintenance, analysis, and distribution of all capital and operating projects information.
- **Project Manager (PM):** Overall project lead providing oversight and direction to Design Manager (DM), Design Reviewer (DR), Independent Reviewer (IR) and Quality Manager (QM)
- **Quality Manager (QM):** Ensures submittals are in compliance with consultant's quality management plan, tracks timeliness of delivery process, documents review comments and disposition, and maintains Project Quality Checklist. The PM may serve as the QM.
- **Design Manager (DM):** Typically the lead consultant for design services. DM assigns all needed work to primes and subs under his A/E contract. Also provides the Quality Management Plan (QMP) for each project. The PM may also serve as the DM.
- **Designer (D):** Typically work under same contract as DM (prime or sub)

- **Discipline Lead (DL):** Provides independent oversight and technical expertise in discipline specialty, ensures compliance with MDTA directives and policies, and signs the Pre-AD checklist when directed by the DE/DDE or DPD/DDPD for the pertinent projects from respective offices. Determines if project warrants use of Design Reviewers (DR) and provides direction and oversight of them if used. DL provides detailed discipline reviews, if DR's are not used. The number of needed DL's per project will vary depending on the scope and signatories required for the Pre-AD checklist. DL's should not be from the same firm as the DM.
- **Design Reviewer (DR):** Provides detailed discipline specialty reviews of all submittals. DR's may not be needed for basic or non-complex projects. DR's should not be from the same firm as the DM. **Procurement (DOP):** Lead office responsible for administrative functions related to contract advertisement and award
- **Procurement (DOP):** Lead office responsible for administrative functions related to contract advertisement and award
- **Civil Rights and Fair Practices (CRFP):** Lead office responsible for determination of contract minority, small business, and veterans' goals
- **Independent Reviewer (IR):** Reviews entire PSE package.
- **Area Engineer (AE):** Works underneath DC/DDC and provides oversight and direction for various construction projects

Responsibility Assignment Matrix

A responsibility matrix has been included in the PDG to help enhance clarity about the roles and responsibilities of various stakeholder for projects using a more concise tabular format.

¹A Responsibility Assignment Matrix (RAM) is a grid that shows the project resources assigned to each work package. It is used to illustrate the connections between work packages or activities and project team member. One example of a RAM is a RACI (Responsible, Accountable, Consulted, and Informed) chart. A RACI chart is a useful tool to use when the team consists of internal and external resources in order to ensure clear divisions of roles and expectations.

R = Responsible - the person who actually owns the project, task, or work.

A = Accountable - the person who will sign off on the work and judging its completion and how it meets quality standards.

C = Consulted - the person who has the ability or knowledge needed to complete the work.

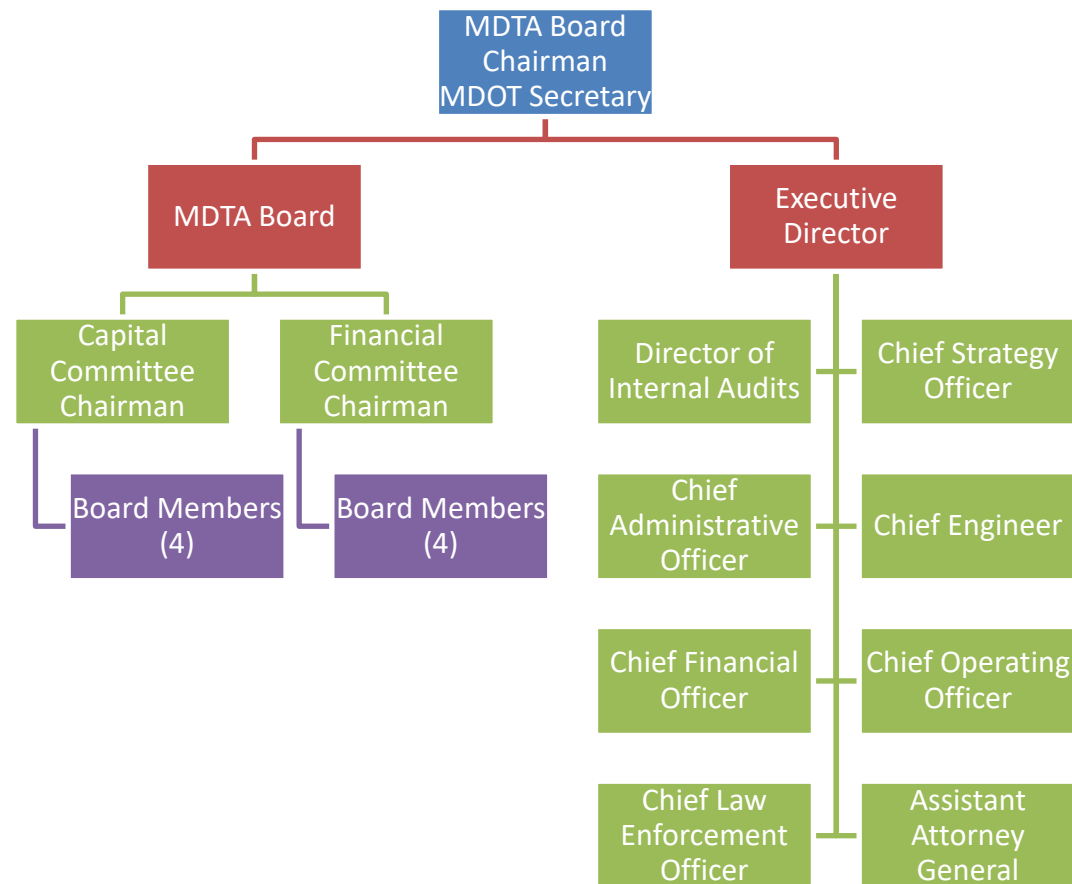
I = Informed - people who must be kept informed of the work, but not necessarily consulted.

The RACI charts added for some milestones include a list of roles Responsible or Accountable for a specific task and those who need to be Consulted or Informed. While efforts have been made to ensure completeness of the Responsible and Accountable roles, the PDG leaves more discretion to the judgment of the Project Manager and Project Team to determine the roles to be Consulted or Informed, depending on the nature, size and complexity of the Project.

¹ PMBOK® Guide (PMI)

MDTA Governing Body

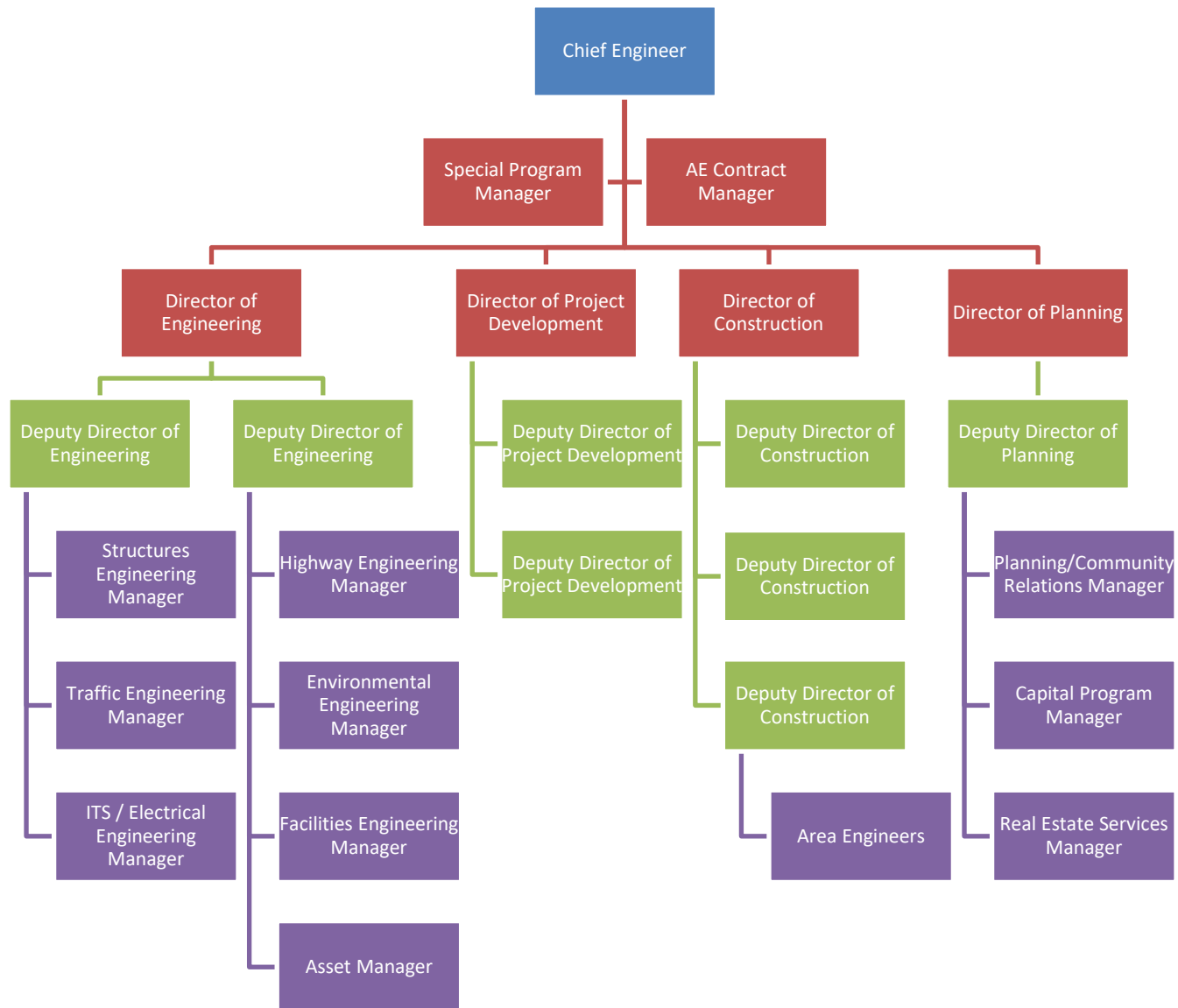
MDTA Board² and Executive Leadership³



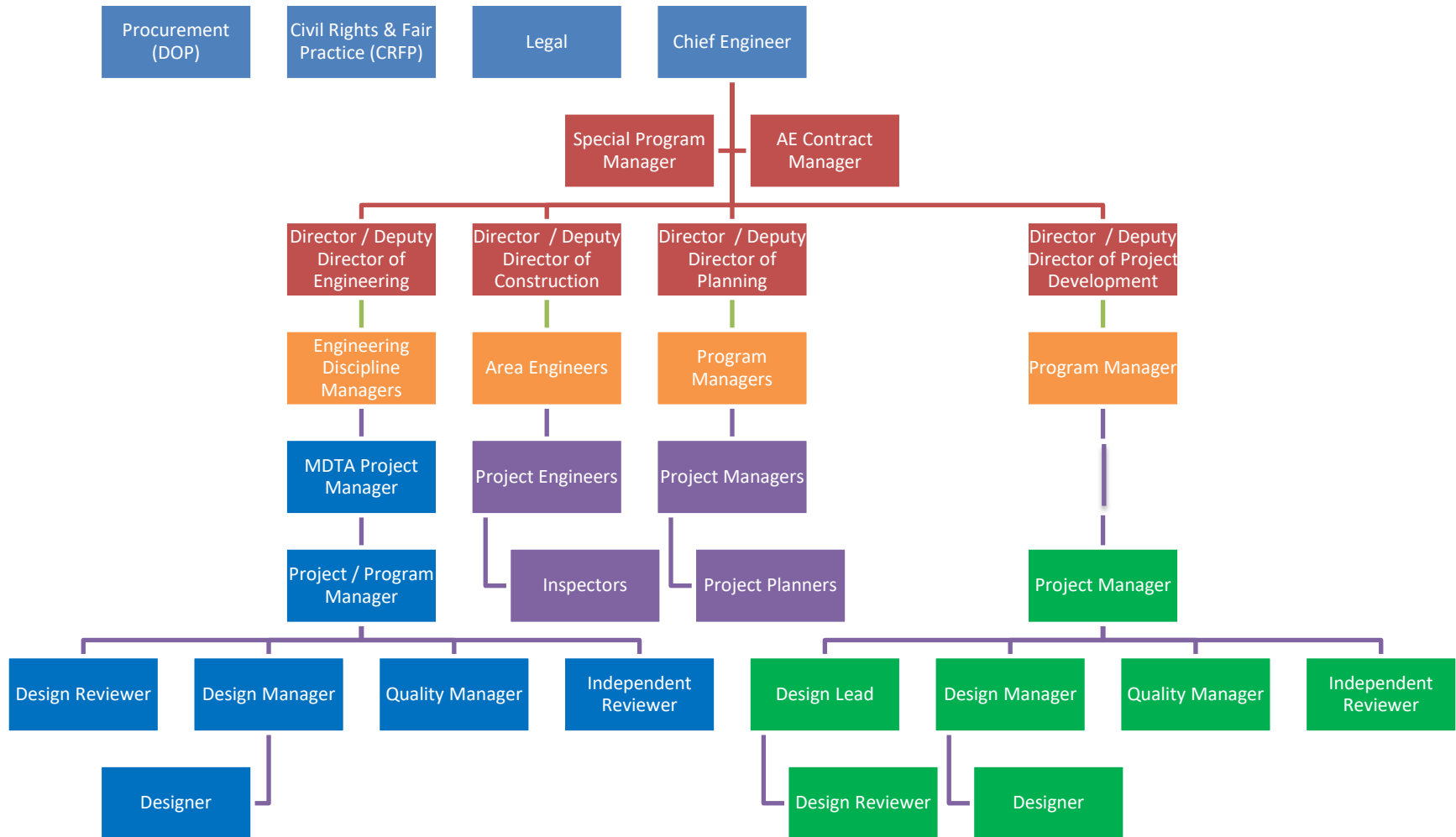
² https://mdta.maryland.gov/About/Governing_Body.html

³ https://mdta.maryland.gov/About/Organizational_Chart.html

MDTA OEC Staff Organization Chart



Project Delivery Organization Chart



Project Delivery Process

Study and Project Initiation

Some capital projects or operating projects will have a study and evaluation (Pre-TS&L) phase. Some of the initial tasks listed below phase in this phase may be completed under 30% phase depending on the nature of the project.

Project Initiation Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Initiate a study for project needs identified in the Long-Range Needs based on priority	MPM , PM	OECDM ' s	SPM	
2. Distribute report to relevant stakeholders to collect comments and finalize report.	PM			
3. Determine any Planning needs for the project	PM		DPPD	
4. Determine the need to perform Project Labor Agreement Analysis. This is needed if project cost exceeds \$20 Million	PM			
5. Determine if alternate project delivery evaluation should be considered for the project	MPM , PM			
6. Determine if MDOT Complete Streets Policy and MDTA's Implementation Plan applies to the project.	MPM , PM			
7. Verify that adequate funding is available for the project in the CTP and/or Operating Budget.	MPM , PM	Budget Managers	OECDM , DPD , DPPD	
8. Select PM , IR , DM , and DR or DL (as needed) ⁴	PM / OECDM / DPD / DDPD			
9. Task Proposals for PM , IR , DM , DR and/or DL (as needed)				
a. Request Task Proposals ⁵	PM / OECDM	DM		
b. Prepare independent manhour estimates for pending task proposals.	/ DPD / DDPD		OECDM	
c. Prepare and submit CMAPS Funding Request for PE design phase based on the pending task proposal cash flows and budget using the Project Delivery Schedule, the PE Project Estimate and Budget Process and the PE Cash Flow Tool				
d. Request invoice code and MTrack code for the project with the submitted CMAPS Funding Request.	PM	Finance		

⁴ Selection should be coordinated with MDTA's AE Contract Manager for fund availability, contract expiration, project familiarity, technical expertise.

⁵ Task proposal from DM must include submission of the consultant firm's Quality Management Plan (QMP), project schedule and budget, monthly cash flows, and e-mailed monthly progress reports (OEC WMO projects only).

Project Initiation Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
e. Review Task Proposals and negotiate (if necessary).	<u>PM/</u> <u>OECDM</u> <u>/ DDPD</u>	<u>DM</u>		
f. Prepare the NTP packages ⁶ , initial the NTP Letter and submit for approval.		<u>DPD/ DE</u> <u>/DDE</u>		
g. Issue NTP letter.	<u>PM</u>	<u>PM, IR,</u> <u>DM, DR</u> or <u>DL</u>		
10. Use Project Delivery Schedule Tool ⁷ to submit and save a copy of schedule in Project Folder.	<u>PM</u>	<u>PM</u>		
11. Submit draft MDTA OEC Climate Resiliency Review checklist	<u>DM</u>	<u>PM</u>		
12. Distribute Project Charter	<u>PM</u>	Distr. List ⁸	<u>OECDM</u> , <u>DE/DDE</u> , <u>DPD</u>	

TSL (30%) Submission

TSL (30%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Update Project Quality Checklist.	<u>QM/ PM</u>			
2. Incorporate the following guidelines and resources into the development of the contract documents.	<u>DM</u>	<u>PM</u>		
a. Geotechnical Information Guideline b. Maintenance of Traffic Pay Item Guideline c. MDTA Structures Design Directives (SDD) d. System Preservation Project (SPP) Manual e. MDTA OEC Climate Resiliency Review for Projects f. United States Fish and Wildlife Service's (USFWS) Information for Planning and Construction (IPaC) tool to determine impacts (and their severity) to plant and animal species				

⁶ Each NTP Package shall include the following:

- NTP Transmittal Memo checklist
- NTP letter
- Manhour estimate
- Email from Finance confirming fund and invoice code
- Consultant task proposal

⁷ The NEW Project Delivery Schedule Tool contains the most comprehensive list of tasks for each phase of a project. There are two versions: Simple Project and Complex Project Schedule, which includes MDE permitting activities such as concept design approvals. Use the most applicable version for the specific project.

⁸ See distribution list in Project Charter

TSL (30%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
3. Ensure that the most current AASHTO design and guide specifications are incorporated into the Preliminary/TSL (30%) submittal. Specifications include, but are not limited to:	<u>DM/ PM</u>			
a. A Policy on Geometric Design of Highways and Streets (The Green Book)	<u>DM</u>	<u>QM</u>		
b. AASHTO LRFD Bridge Design Specifications				
c. Manual on Uniform Traffic Control Devices				
d. Roadside Design Guide				
4. Submit Preliminary/TS&L (30%) package, including:	<u>DM/ PM</u>	<u>QM</u>		
a. TS&L (30%) Submittal Checklist				
b. Practical Design Review Summary ⁹				
c. 30% design plan and specs, that include (but not limited to):	<u>DM/ PM</u>	<u>QM</u>		
- Plans, utilizing most current plan sheet templates				
- Conceptual details				
- Any reports				
- Table of Contents for specifications				
d. Preliminary CO Estimate	<u>DM/ PM</u>			
e. Submit Project Charter ¹⁰	<u>PM, DM</u>			
f. MDTA OEC Climate Resiliency Review ¹¹ for Projects checklist and forms	<u>PM, DM</u>			
g. Permits and Approvals Status Checklist ¹² , in accordance with:	<u>QM/ PM</u>			
- Environmental Permitting Quick Reference Guide				
- WMO Environmental Resources and Permitting Guidelines				
h. Proof of compliance with the consultant firm's Quality Management Plan (QPM)	<u>QM/ PM</u>			
5. Review submittal to ensure that:	<u>QM</u>	<u>PM</u>		
- All appropriate documents are included				
- Submittal is consistent with approved consultant QMP, including submission of QA/QC checklists, forms, etc.				
6. Distribute 30% package, including:	<u>QM</u>	<u>DC/DDC, OECDM's</u>		
• Milestone Review Distribution Cover letter				
• The entire 30% submittal package				

⁹ Not required for on-call contracts. For certain projects, the Practical Design Review Summary may be submitted at Pre-TSL (10%).

¹⁰ Use the electronic signature form

- Required for all projects except on-call contracts
- For certain projects, the Project Charter may be submitted at Pre-TSL (10%)

¹¹ Required for all projects except on-call contracts

For certain projects, the Climate Resiliency checklist and forms may be submitted at Pre-TSL (10%)

¹² Submit two weeks in advance of TSL submission to OEC Environmental Discipline in order get a head start on the permitting process.

TSL (30%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
• Design Review Comment Form ¹⁰		, ERPL , O , P ¹³		
7. Send out 30% comment due date calendar invite.	QM/ PM	See Item 6		
8. Send out 30% review meeting calendar invite immediately after the 30% distribution package.	QM/ PM	See Item 6		
9. 30% Comment Review and Response				
a. Receive review comments from stakeholders and consolidate on single Design Review Comment Form. ¹⁴	QM/ PM			
b. Send review comments to DM.	QM/ PM	DM		
c. Provide preliminary response to review comments.	DM	QM		
d. Distribute preliminary response to all stakeholders prior to review meeting.	QM/ PM	DM		
10. Hold Preliminary/TSL (30%) Review Meeting	PM			
Discuss/decide on - Project Charter - Practical Design Alternatives and selected scope - MDTA OEC Climate Resiliency Review checklist and forms - Potential impacts to plant and animal species identified by the USFWS's Planning and Construction (IPaC) tool and resultant impacts to PE and CO delivery schedules - Permits and Approvals Status Checklist - Review comments - Other issues	PM , DM	See Item 8		
11. Distribute/email Project Charter to signatories and cc's on distribution list	QM/ PM	DC/DDC , OECDM 's , ERPL , O , P		
12. Submit finalized MDTA OEC Climate Resiliency Review checklist	DM	PM		
13. Forward MDTA OEC Climate Resiliency Review checklist for concurrence. ¹⁵	PM	OECDM 's		
14. Prepare minutes ¹⁶ from review meeting.	DM	QM or PM		

¹³ Distribute 30% package to the DL, DR, all OECDM's, the ERPL, Operations (O), Police, and all other stakeholders for review.

¹⁴ All unresolved comments (coded WC or DE) from previous reviews to be included. For projects that include any potential impacts to MDTA facilities (buildings), QM must ensure that a response is received from Alan Benn and/or Bob Farlow.

¹⁵ Discipline Managers should provide concurrence or feedback within 2 weeks of receiving checklist and forms.

¹⁶ Minutes shall include:

- A listing of who provided written comments, who attended the Review Meeting, and specific items that were discussed, and the schedule to address pertinent action items.
- Updated consolidated Design Review Comment Form with dispositions for each comment (including all comments from the 60% Review, and any unresolved comments, WC or DE, from 30% Review).

TSL (30%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
15. Forward minutes to all stakeholders and impacted members of the Project Charter signatory and distribution list	<u>QM/ PM</u>	<u>DC/DDC</u> , <u>OECDM</u> 's , <u>ERPL</u> , <u>O, P</u>		
16. Coordinate with Utility Coordinator, Railroad Coordinator, and/or Real Estate manager and submit 30% plans in accordance with the Permits and Approvals Status Checklist.	<u>PM</u>			
17. Coordinate with OEC Environmental Section and submit 30% plans to MDE and other relevant environmental agencies.	<u>PM</u>			
18. Update Schedule and Cashflow				
a. Update project schedule and budget status on the Project Summary Sheet (OEC FSK projects only)	<u>PM</u>			
b. Submits CMAPS Change Request if necessary.				

Semi-Final (60%) Submission

Semi-Final (60%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Submit Final (60%) package, including:	<u>DM</u>	<u>QM</u>		
a. Semi-Final (60%) Submittal Checklist				
b. 60% Design (structural design only)				
c. 60% Plans				
d. Draft Invitation for Bids – Part B				
e. Detailed Estimate including Category Code numbers				
f. ITS-Electrical Specification Checklist ¹⁷				
g. Contract Summary Form ¹⁸ , including:				
i. Project Scope of Work and Qualifications/Experience Requirements				
ii. All other information known at the time of submittal				
h. Recommended Contract Term				
i. Updated consolidated Design Review Comment Form ¹⁹ from TS&L (30%)				
j. Updated Permits and Approvals Status Checklist, in accordance with guidelines				
k. Proof of compliance with the consultant firm's Quality Management Plan (QPM)				
2. Review submittal to ensure that:	<u>QM</u>			

¹⁷ Only required for projects with ITS and/or electrical components

¹⁸ Use version matching the issuance year of the SHA Spec Book being used.

¹⁹ Reviewers shall use Design Review Comment Form to provide comments and confirm that disposition (WC – will comply, NCN – No Change Needed, DE – designer to evaluate, HC – have complied) of previous comments (30%) is correct.

Semi-Final (60%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
<ul style="list-style-type: none"> All appropriate documents are included Submittal is consistent with approved consultant QMP²⁰ 				
3. Distribute Final (60%) package, including: <ul style="list-style-type: none"> Milestone Review Distribution Cover letter The entire 60% submittal package Design Review Comment Form⁵ 	<u>QM</u>	<u>DC/DDC</u>, <u>OECDM's</u>, <u>ERPL</u>, <u>O</u>, <u>P</u>²¹		
4. Send out 60% comment due date calendar invite	<u>QM/ PM</u>	See Item 3		
5. Send out 60% review meeting calendar invite immediately after the 90% distribution package.	<u>QM/ PM</u>	See Item 3		
6. 60% Comment Review and Response				
a. Receive review comments from stakeholders and consolidate on single Design Review Comment Form. ²²	<u>QM/ PM</u>			
b. Send review comments to DM.	<u>QM/ PM</u>	<u>DM</u>		
c. Provide preliminary response to review comments.	<u>DM</u>	<u>QM</u>		
d. Distribute preliminary response to all stakeholders prior to review meeting.	<u>QM/ PM</u>	<u>DM</u>		
7. Hold Semi-Final (60%) Review Meeting	<u>PM</u>			
a. Discuss/decide on review comments, Permits and Approvals Status Checklist, and other issues.	<u>PM</u> , <u>DM</u>	See Item 3		
b. Prepare minutes ²³ from review meeting.	<u>DM</u>	<u>QM</u> or <u>PM</u>		
c. Forward to all stakeholders and impacted members of the Project Charter signatory and distribution list	<u>QM/ PM</u>	<u>DC/DDC</u>, <u>OECDM's</u>, <u>ERPL</u>, <u>O</u>, <u>P</u>		
8. Update Estimate				
a. Update and perform comprehensive review of the final estimate utilizing the Final Estimate Checklist ²⁴ .	<u>DM</u>	<u>PM</u>		

²⁰ Include submission of QA/QC checklists, forms, etc.

²¹ Distribute 90% package to the DL, DR, all OECDM's, the ERPL, Operations (O), Police, and all other stakeholders for review.

²² All unresolved comments (coded WC or DE) from previous reviews to be included. For projects that include any potential impacts to MDTA facilities (buildings), QM must ensure that a response is received from Alan Benn and/or Bob Farlow.

²³ Minutes shall include:

- A listing of who provided written comments, who attended the Review Meeting, and specific items that were discussed, and the schedule to address pertinent action items.
- Updated consolidated Design Review Comment Form with dispositions for each comment (including all comments from the 60% Review, and any unresolved comments, WC or DE, from 30% Review).
- Any significant changes impacting details presented in the approved Project Charter related to the scope, delivery/procurement method, or life cycle impacts.

²⁴ This is required for all projects.

Semi-Final (60%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
b. Obtain an independent 3rd party (Contractor/ Construction expert, etc.) review ²⁵ of the final estimate.				
9. Update Schedule and Cashflow				
a. Prepare and submit an updated schedule and the CMAPS Change Request for PE and CO funding and dates for Advertisement/Construction NTP ²⁶ based on updated estimate utilizing the Project Budgeting Process.	<u>PM</u>			
b. Save approved CMAPS Change Request from Published Reports to the project folder.				
c. Update project schedule and budget status on the Project Summary Sheet (OEC FSK projects only)				
d. Update ASIR using Contract Management.				

Final (90%) Submission

Final (90%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Submit Final (90%) package, including:	<u>DM</u>	<u>QM</u>		
a. Final (90%) Submittal Checklist				
b. Complete Plans				
c. Complete Invitation for Bids – Part B:		<u>DE/DDE,</u> <u>DPD</u>		
i. Utilize the most current version of MDTA's IFB Template (posted to ProjectWise)				
ii. Submit any deviation from this requirement and obtain approval.				
d. Updated ITS-Electrical Specification Checklist ²⁷				
e. Contract Summary Form, including:				
iii. Project Scope of Work and Qualifications/Experience Requirements				
iv. All other information known at the time of submittal				
f. Final Estimate & Checklist, including:				
i. Lump Sum Breakdowns				
ii. Column showing relevant specification for each bid item				
g. Updated consolidated Design Review Comment Form ²⁸ from Semi-Final (60%).				

²⁵ This is required for projects with a final estimate exceeding \$25M. The firm/individual performing this review shall not be from any of the firms that are providing the services of the DM, D, or DR and must be pre-approved by the PM.

²⁶ Advertisement/Construction NTP scheduling in the CMAPS Change Request should be revised, as needed, if Updated Permits and Approvals Status Checklist items are behind schedule.

²⁷ Only required for projects with ITS and/or electrical components

²⁸ Reviewers shall use Design Review Comment Form to provide comments and confirm that disposition (WC – will comply, NCN – No Change Needed, DE – designer to evaluate, HC – have complied) of previous comments (30% and 60) is correct.

Final (90%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
h. Updated Permits and Approvals Status Checklist, in accordance with guidelines.				
i. Proof of compliance with the consultant firm's Quality Management Plan (QPM)				
2. Review submittal to ensure that: <ul style="list-style-type: none"> • All appropriate documents are included • Submittal is consistent with approved consultant QMP 	<u>QM</u>			
3. Distribute Final (90%) package, including: <ul style="list-style-type: none"> • Milestone Review Distribution Cover letter • The entire 90% submittal package • Design Review Comment Form⁴ 	<u>QM</u>	<u>DC/DDC</u> , <u>OECDM</u> 's, <u>ERPL</u> , <u>O</u> , <u>P</u> ²⁹		
4. Send out 90% comment due date calendar invite	<u>QM/ PM</u>	See list above		
5. Send out 90% review meeting calendar invite immediately after the 90% distribution package.	<u>QM/ PM</u>	See list above		
6. 90% Comment Review and Response				
a. Receive review comments from stakeholders and consolidate on single Design Review Comment Form. ³⁰	<u>QM/ PM</u>			
b. Send review comments to DM.	<u>QM/ PM</u>	<u>DM</u>		
c. Provide preliminary response to review comments.	<u>DM</u>	<u>QM</u>		
d. Distribute preliminary response to all stakeholders prior to review meeting.	<u>QM/ PM</u>	<u>DM</u>		
7. Hold Final (90%) Review Meeting	<u>PM</u>			
a. Prepare minutes ³¹ from review meeting.	<u>DM</u>	<u>QM/ PM</u>		
b. Forward to all stakeholders and impacted members of the Project Charter signatory and distribution list.	<u>QM/ PM</u>	<u>DC/DDC</u> , <u>OECDM</u> 's, <u>ERPL</u> , <u>O</u> , <u>P</u>		
8. Send updated estimate in Excel for review.	<u>DM</u>	<u>PM</u>		
9. Request confirmation of Construction Recommendations (Liquidated Damages, Calendar Days, etc.) via e-mail, if major scope changes to the project since the 60% request.	<u>PM</u>	<u>DC/DDC</u>		
10. MBE goal through the PRG process: ³²				

²⁹ Distribute 90% package to the DL, DR, all OECDM's, the ERPL, Operations (O), Police, and all other stakeholders for review.

³⁰ All unresolved comments (coded WC or DE) from previous reviews to be included.

For projects that include any potential impacts to MDTA facilities (buildings), QM must ensure that a response is received from Alan Benn and/or Bob Farlow.

³¹ Minutes shall include:

- A listing of who provided written comments, who attended the Review Meeting, and specific items that were discussed, and the schedule to address pertinent action items.
- Updated consolidated Design Review Comment Form with dispositions for each comment (including all comments from the 90% Review, and any unresolved comments, WC or DE, from previous reviews).
- Any significant changes impacting details presented in the approved Project Charter related to the scope, delivery/procurement method, or life cycle impacts.

³² Notes:

Final (90%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
a. Prepare MBE Goal Request package, including: i. CRFP Cover Letter Memo ii. MBE Goal Request Project Scope iii. MBE Goal Request Worksheet	<u>PM</u>	<u>QM</u>		
b. Submit MBE goal worksheet for review.	<u>PM</u>	<u>OECDM</u>		
c. Submit MBE goal worksheet for approval. ³³	<u>OECDM</u>	<u>DE/DDE, DPD</u>		
d. Submit signed MBE Goal Request via mdtaprggoalrequest@mdta.state.md.us .	<u>PM</u>	<u>CRFP</u>		
e. Attend ³⁴ PRG meeting held on 2nd and 4th Thursday every month and coordinate on the MBE approval letter.	<u>PM</u>	<u>CRFP</u>		
11. ³⁵ Funds Availability Certification: a. Prepare Funds Availability Memorandum and submit for review & internal OEC approval. b. Submit Funds Availability Form to Finance for signature approval.	<u>PM</u>	<u>DE/DDE, DPD</u>		
12. Update Schedule and Cashflow				
e. Prepare and submit an updated schedule and the CMAPS Change Request for revised PE and CO funding and dates for ³⁶ Advertisement/Construction NTP based on updated estimate utilizing the Project Budgeting Process. f. Save approved CMAPS Change Request from Published Reports to the project folder. g. Updates project schedule and budget status on the Project Summary Sheet (OEC FSK projects only) h. Update ASIR using Contract Management.	<u>PM</u>			

- PM may receive formal PRG approval of the MBE Goal after submitting full advertisement package to DOP. However, it is a best practice to determine the goal prior to DOP submission, because Legal review will not start until the MBE goals are established.
- PM may submit MBE Goal package to CRFP for PRG following the 90% Review or at PS&E, depending on the reliability of the Engineers Estimate (EE). If changes in the cost of the EE are anticipated, the PRG submission should be deferred.

³³ All projects with a proposed goal of less than 20% shall be reviewed by the CE (Chief Engineer).

³⁴ The MBE Goal Request package must be submitted a minimum of 3 weeks before the PRG meeting in order to get onto the meeting agenda.

³⁵ If construction cost estimate is expected to change at PS&E (100%), Funds Availability Form may be submitted at PS&E.

³⁶ Advertisement/Construction NTP scheduling in the CMAPS Change Request should be revised, as needed, if Updated Permits and Approvals Status Checklist items are behind schedule.

PS&E (100%) Submission

PS&E (100%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Submit PS&E (100%) package, including:	<u>DM</u>	<u>QM</u>		
a. PS&E (100%) Submittal Checklist				
b. Updated Plans (including signed & stamped title sheet), Invitation for Bids - Part B, and Estimate				
c. Contract Summary Form, Include: - Project Scope of Work & Qualifications/Experience Requirements - All other information known at the time of submittal				
d. Updated consolidated Design Review Comment form from Final (90%) Review showing current disposition/resolution/status of each comment.				
e. Updated Permits and Approvals Status Checklist, in accordance with guidelines, Ref. Docs. 214 & 215				
f. Proof of compliance with the consultant firm's Quality Management Plan (QPM)				
2. Review submittal to ensure that: - All appropriate documents are included - Submittal is consistent with approved consultant QMP	<u>QM</u>			
3. Submit labor categories and Wage Rate Request	<u>PM</u>	<u>QM</u>		
Submit via mdtadop@mdta.state.md.us	<u>QM</u>	<u>DOP</u>		
4. Confirm that all comments have been adequately addressed, including comments from the 30%, 60%, and 90% Reviews.	³⁷ <u>QM</u>		<u>DM</u>	
5. Distribute PS&E (100%) package, including: - Milestone Review Distribution Cover letter - The entire 100% submittal package	<u>QM</u>	³⁸ List ³⁹		
6. Submit Pre-Ad Checklist, including: - Updated consolidated Design Review Comment form from Final (90%) Review - 100% design plans, Invitation for Bids - Part B, and Final Estimate	<u>QM</u> or <u>PM</u>	<u>DC/DDC</u> , all <u>OECDM</u> 's, <u>ERPL</u> , O, P		
a. Send Pre-Ad Checklist to signatories for signature	<u>QM</u> or <u>PM</u>	List ⁴⁰		
b. Send Pre-Ad Checklist for concurrent review	<u>QM</u> or <u>PM</u>	<u>DE/DDE</u> , <u>DPD</u>		
7. Independent Review				
a. Send PS&E (100%) to IR for QA/QC review	<u>QM</u>	<u>IR</u>		

³⁷ All WC comments should be HC by PS&E³⁸ Reviewers shall confirm that disposition (WC – will comply, NCN – No Change Needed, DE – designer to evaluate, HC – have complied) of previous comments (30%, 60%, and 90%) is correct.³⁹ See distribution list in PS& Memo⁴⁰ See distribution list in Pre-Ad Checklist

PS&E (100%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
b. Comment, sign checklist and send.	<u>IR</u>	<u>QM</u>		
c. Addresses IR and DE/DDE or DPD comments and submit revised PS&E	<u>DM</u>	<u>QM</u>		
8. Update the Contract Summary Form and IFB with MBE Goals, Calendar Days, etc.	<u>PM</u>			
9. Circulate full-size final title sheet and applicable E&S sheets (already signed and stamped by designer/firm) for internal signatures.	<u>PM</u>	<u>DE/DDE, DPD</u>		
10. Establish the advertised estimate. ⁴¹	<u>PM</u>			
a. Provide the advertised estimate in the AASHTOware Estimator-compatible Microsoft Excel template.	<u>PM</u>	<u>QM</u>		
b. Review guidance for preparing AASHTOware estimate.	<u>PM</u>	<u>QM</u>		
c. Input/Import Estimate to Estimator and AASHTOware.	<u>QM</u>			<u>PM</u>
d. Ensure Estimate is accurately imported to create the schedule of prices.	<u>QM</u>		<u>PM, DM</u>	
11. Submit PS&E Package for review/approval. • Package shall include everything listed on the PS&E Package checklist.	<u>QM</u>	<u>DE/DDE, DPD</u>		
12. Submit final and signed PS&E Package via mdtadop@mdta.state.md.us , at least eight (8) weeks prior to the Advertisement date. - Package shall include everything listed on the PS&E Package Checklist, DOP Transmittal Memo. - Final, signed title sheet along with the full set of plans, shall be submitted no later than four (4) weeks prior to the Advertisement date.	<u>QM</u>	<u>DOP</u>		<u>PM, DM, DE/DD E, DPD, CE</u>
13. Perform review of IFB – Part B and send comments and revisions in Track Changes form.	<u>DOP, Legal</u>	<u>PM</u>		
14. Address each comment and make appropriate revisions to IFB – Part B in Track Changes form. ⁴²	<u>PM</u>	<u>DOP, QM</u>		
15. Coordinate on the dates of project procurement: - advertisement date - pre-bid/site visit date ⁴³ - questions due date - bid opening date	<u>DOP</u>	<u>PM</u>	<u>QM</u>	
16. Compile entire IFB including Parts A, B, and C. Input the dates into the IFB for advertisement	<u>DOP</u>	<u>PM</u>	<u>QM</u>	

⁴¹ All changes or additions after this point shall be clearly documented in the Engineer's Estimate by utilizing a different font color for each revision date. Only changed or added items shall be colored. A key shall be provided in the updated estimate indicating the revision date for each font color.

⁴² Each comment made by DOP/Legal must be individually responded to.

⁴³ PM determines site visit location (some projects may skip site visit), which is normally held immediately following the pre-bid meeting.

PS&E (100%) Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
17. Verify all comments and revisions are addressed and Track Changes are accepted by DOP. Obtain signatures. Advertise project.	<u>QM</u> , <u>PM</u> , <u>DOP</u>	<u>CE</u> , <u>DOP</u> , Principal Counsel, Executive Director		
18. Prepare and submit an updated schedule and CMAPS request for PE and CO funding, based on dates for Advertisement/Construction NTP, updated estimate utilizing the Project Budgeting Process. Save approved CMAPS to the project folder.	<u>PM</u>			
19. Update project schedule and budget status on the Project Summary Sheet ⁴⁴ .	<u>PM</u>			
20. Update ASIR if applicable utilizing Contract Management on ASIR.	<u>DM</u> , <u>D</u>	<u>PM</u>	<u>OEC</u> <u>DM</u>	

Phase IV (Post Advertisement to Pre-NTP)

Phase IV Post Advertisement Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Pre-bid meeting:	<u>DOP</u>			
a. Attend the pre-bid meeting and site visit to take notes and respond to questions ⁴⁵ from contractors.	<u>PM</u> , <u>DM</u>		<u>DOP</u>	
2. Addendum:				
a. Within 48 hours of pre-bid meeting, issue Addendum No. 1 for project, which includes pre-bid meeting minutes.	<u>DOP</u>			
b. Send any responses to questions and contract document revisions when they are ready to be issued.	<u>PM</u>		<u>DOP</u>	
c. Resubmit MBE Goal package if the revised Engineers Estimate (EE) varies more than 3% of the originally approved EE prior to advertisement. ⁴⁶	<u>PM</u>		<u>CRFP</u>	
d. Coordinate to develop contract document revisions and responses to all contractor questions submitted by Questions Due Date deadline. Include in the appropriate addendum.	<u>PM</u> , <u>DM</u>		<u>DDC</u> , <u>AE</u>	
e. Addendum documents include the following: - Transmittal memorandum from CE to DOP - Letter from DOP to Contractors	<u>PM</u> , <u>DM</u>		<u>QM</u>	

⁴⁴ OEC FSK projects only⁴⁵ NOTE: Technical Questions asked by contractors during the site visit must be submitted in writing to DOP or recorded in pre-bid meeting minutes. PM and DM should record and answer all questions (verbal or written) as soon as possible, in advance of the questions cutoff date to allow for follow up Contractor questions and to avoid bid date postponements.⁴⁶ Waiver may be applicable if concurrence from the Director of CRFP is received.

Phase IV Post Advertisement Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
<ul style="list-style-type: none"> - Responses to Contractor Questions⁴⁷ - Contract document revisions. - Addendum BidX File generated via AASHTOware⁴⁸ 				
3. Final Estimate and Bid Analysis Template: <ul style="list-style-type: none"> - Send final bid analysis template which includes the final estimate of project/contract, at least 24 hours prior to the bid opening. - Forwards template to DOP 	<u>DM</u> <u>QM</u>	<u>PM</u> <u>DOP</u>	<u>QM</u> 	
4. Bid Opening: <ul style="list-style-type: none"> - “Open” and evaluate electronically submitted bids. - Inputs individual bid item prices into bid analysis template. And sends results to PM. - Send Contractor Experience Questionnaire for review. - Develop contractor reference check form, if necessary, for file. 	<u>DOP</u> <u>DOP</u> <u>DOP</u> <u>PM</u>	 <u>PM</u>	 <u>PM</u>	
5. Bid Analysis: <ul style="list-style-type: none"> - Complete the bid analysis template and perform a bid evaluation. - Prepare a bid justification memo⁴⁹, if: <ul style="list-style-type: none"> ▪ bids are 10% over or 15% under the EE. ▪ only one bid was received⁵⁰. 	<u>PM</u>			
6. Phase V Engineering Support Task <ul style="list-style-type: none"> - Solicit and then process AE proposal⁵¹ from DM for Phase V (Construction Phase) services. 	<u>PM</u>			
7. Contract Approval				
<ul style="list-style-type: none"> - Revise CO budget and cash flows if needed in accordance with the Project Budgeting Process⁵² 	<u>PM</u>			
<ul style="list-style-type: none"> - Review and accept contract bid documents 	<u>DOP,</u> CRFP,		<u>PM</u>	

⁴⁷ Note: Revisions to contract documents are required, if question responses create variances between the contract documents and the responses (i.e. contract specifications and plans should always be updated to match changes made by question responses).

⁴⁸ All changes or additions to the estimate shall be clearly documented in the Engineer's Estimate by utilizing a different font color for each revision date. Only changed or added items shall be colored. A key shall be provided in the updated estimate indicating the revision date for each font color.

QM will utilize the differing font color(s) and color key to identify Addendum revisions to the Engineer's Estimate and update the AASHTOWare Estimate accordingly.

⁴⁹ If necessary, conduct meeting or phone call with bidders in the presence of DOP to gain information to be used in bid justification.

⁵⁰ Enhance to include a paragraph explaining advertisement outreach efforts and an explanation of why it is recommended to accept the single bid.

⁵¹ Make sure to use CO charge code for Phase V services as PE funds should be closed after Award. Construction is cc'd on approval letter.

⁵² This may be due a large variance in the low bid amount versus the EE, or due to expected delays in the Award due to bid protests, etc.

Phase IV Post Advertisement Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
- Determine when contract is ready to be presented to either the Capital Committee or the Finance Committee for preliminary approval ⁵³	and Legal			
- Submit the following for inclusion on the Capital/Finance Committee meeting agenda and mailout <ul style="list-style-type: none"> Capital/Finance Committee Project Summary sheet Bid Justification Memo, only when justification is needed Bid tabulations for all bids (provided by DOP) – only required when bid justification is needed 	PM			
- Present project to Capital/Finance Committee for approval <ul style="list-style-type: none"> Follow Capital/Finance Committee Contract Presentation Script example. <p>For virtual meetings via MS Teams, Authority Members will have their cameras on the entire time. Each presenter will need to turn on your camera when presenting only. No items are allowed to be shared on the screen including presentations. The Members will have their materials with them to review.</p>	PM PM			
- Full Authority Approval <ul style="list-style-type: none"> Prepare agenda materials and present the recommendation for contract approval at the Full Authority meeting 	DOP			
- Submit the Contract Award Letter to Executive Director for approval.	DOP			
8. Issue award for contract to Contractor.	DDC			
9. Schedule Preconstruction Meeting to include all stakeholders.	AE			
10. Issue contract Notice-To-Proceed following preconstruction meeting and approval of contractor schedule.	DDC			
11. Prepare and submit CMAPS Change Request for CO funding ⁵⁴ and schedule.	AE		PM	
12. Update ASIR if applicable utilizing Contract Management on ASIR	DM, D	PM	OECD M	
13. Create Monthly Repair Status Report for projects with ASIR repair items. Contractor then updates and submits this report on a monthly basis.	PM	AE		

⁵³ DOP may determine that certain contracts with yet to be resolved MBE plan or other issues may proceed to the Finance/Capital Committee for contingent approval. Operations and maintenance contracts are presented to and approved by the Finance Committee. All other projects are presented to and approved by the Capital Committee.

⁵⁴ AE liaises with PM when submitting CMAPS Change Request to include Phase V services as appropriate in budget.

Phase V (Construction Phase)

Phase V Construction Tasks	<u>R</u>	<u>A</u>	<u>C</u>	<u>I</u>
1. Coordinate responses to shop drawings, source of supply (SOS) submittals, and RFI's throughout construction.	<u>PM,</u> <u>DM</u>		<u>AE</u>	
2. Develop necessary documents for Red Line (RL) Revisions throughout term of contract. RL package includes: a. Concurrence Memo from PM to CE b. Letter from DDE to DC/DDC c. Internal EE of RL revisions d. External spreadsheet of revised items e. Revised contract documents (plans and/or specifications)	<u>PM,</u> <u>DM</u>		<u>AE</u>	
3. Attend construction progress meetings as necessary during construction.	<u>PM,</u> <u>DM</u>		<u>AE</u>	