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Exhibit A—Scope of Work and Deliverables

General Statement of Scope of Work

The State of Minnesota is proceeding with development of the Osceola Bridge and approach roadway improvement project through the preliminary design phase. The project includes Osceola Bridge number 6347 over the St. Croix River and Highway (Hwy) 243 approach roadways including bicycle and pedestrian considerations in Minnesota (MN) and Wisconsin (WI).

This scope of work includes the following components:

1. All tasks to lead project management and public involvement coordination among responsible government agencies, stakeholders and the public. Coordination will be required with Minnesota and Wisconsin Department of Transportation (DOT’s), district offices, State Bridge Office, Federal, State, local government agencies, stakeholders and the public.

2. All tasks necessary to complete scoping, approved geometric layout and environmental documentation with a preferred alternative following the National Environmental Policy Act (NEPA) guidelines. An Environmental Assessment (EA) document will be assumed as the base environmental document for deliverables and beginning preliminary design. Outcomes of the alternatives analysis could result in a lesser document reducing the scope of work to be verified as a concurrence point deliverable.

3. All tasks necessary to support the National Park Services (NPS) Section 7A determination in conjunction with the Environmental Document development and approval and coordination with NPS boat landing project.

4. All preliminary bridge study and engineering required to complete bridge type selection and preliminary plans for rehabilitation or replacement of Bridge No. 6347. All preliminary bridge engineering required to complete the location and profile establishment for the design of the approach roadways including bicycle and pedestrian considerations.

Background

This Project is located on MN and WI Hwy 243 over the St. Croix River. Project study limits will be from MN Trunk Highway (TH) 95 in Franconia Township to WI Hwy 35 intersection in Osceola, WI excluding the MN Hwy 95/243 and Wisconsin 35/243 intersections. The purpose of this contract is to conduct the necessary scoping and project development to facilitate preliminary design in 24 months and a State Fiscal Year (SFY) 2025 or prior start of construction.

State has identified the need for replacement of Bridge No. 6347 on Hwy 243 over the St. Croix River which is designated a Wild and Scenic River. Replacement evaluation will include the reuse of existing bridge piers and replacing just the super structure or the entire bridge. The Contractor’s team will scope and define options, costs and impacts of the project to replace the bridge and any related approach modifications in MN and WI.

Project Goals are to address and evaluate:

1. Comprehensive agency, stakeholder and public engagement
2. Structural deficiencies of the bridge
3. Functional deficiencies of the bridge
4. Existing approach alignments
5. Bicycle, pedestrian and American with Disabilities Act (ADA) needs
6. Area drainage, bridge and water resources needs
7. Constructability, River Access, Staging and Maintenance of Traffic (MOT)
8. Considerations including MnDOT and WisDOT standards
9. Considerations including NPS
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9.1. Section 7a Wild and Scenic Rivers Act
9.2. Section 4f – Riverway
9.3. Boat launch in MN
10. Considerations including Cascade Falls and Bluff Park in Osceola, WI
11. Westbound left turn lane evaluation in to the NPS boat launch on the MN approach
12. Accommodating/Perpetuating the MN wayside
13. Others as identified by project team.

Contract Completion Timeline
State expects the deliverables in this scope of work to be completed within 24 months of Notice to Proceed (NTP). State will provide a draft P6 schedule that has not been baselined with general activity placeholders only for this work. The Contractor will work with the State in scheduling and baselining the activities in this scope of work with the goal of project construction in SFY 2025 or prior. Once the schedule is agreed upon by Contractor and State, the Late Finish dates for the activities in that schedule will serve as the guide for the due dates for the tasks in this scope of work.

Additionally, Contractor will need to evaluate the entire schedule for accuracy and feasibility for project delivery and provide corrections where needed in order to baseline the schedule by State and its functional groups. If the schedule requires a change during project development and if the change has a delivery impact, Contractor will work with the State to re-baseline the schedule for approval by the State.

Activities in P6 will be marked as “by State” but do not preclude work by the Contractor to complete the activity, and activities marked as “by Contractor” do not preclude work by the State to complete the activity.

Source Type Codes and P6 Activity Codes
Every deliverable will list a Source Type Code. The Source Type Code will be used in the Contractor’s contract budget and invoice to subtotal the deliverables together under one number for billing and budgeting purposes.

P6 Activity codes can be assigned to deliverables. The Contractor can use this code to understand the due dates for that deliverable in the schedule, and how the activity relates to other activities in the schedule. The overall goal is to get the Contractor deliverables and cost estimate for the contract proposal to match the format and organization of the P6 schedule.

The Contractor is expected to understand Critical Path Method (CPM) scheduling, be able to understand hard copy reports printed by the P6 schedule, regularly update the hardcopy reports at minimum using a pencil, and recommend changes to the schedule to reflect changes in the scope or flow of work.

Standards
Comply with all State (MN and WI), Federal standards, laws and regulations related to the scope of work and project area. Work must comply with the latest edition or revision of that standard in effect on the Proposal Due Date, including any amendments in effect on that date, unless otherwise specified in the contract or otherwise directed by State.

Plain Language
Provide all documents or exhibits specifically designed to be used by the public in “Plain Language”. Technical documents, presentations, spreadsheets, and drawings used by technical staff do not need to be in plain language. Executive Order 14-07 requires the Office of the Governor and all Executive Branch agencies to communicate with Minnesotans using Plain Language. As defined in Executive Order 14-07, Plain Language is a communication which an audience can understand the first time they read or hear it. Additional information provided at this website: [http://ihub.dot.State.mn.us/plainlanguage/index.html](http://ihub.dot.State.mn.us/plainlanguage/index.html). To achieve that, the successful responder will take the following steps in the deliverables:
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1. Use language commonly understood by the public;
2. Write in short and complete sentences;
3. Present information in a format that is easy-to-find and easy-to-understand; and
4. Clearly State directions and deadlines to the audience.

Accessibility Standards
Comply with the State of Minnesota’s Accessibility Standard (http://mn.gov/oet/images/Stnd_State_Accessibility.pdf) for all documents or exhibits specifically designed to be used by the public. Technical documents, presentations, spreadsheets, and drawings used by technical staff do not need to be in plain language. The State of Minnesota’s Accessibility Standards entail, in part, the Web Content Accessibility Guidelines (WCAG) 2.0 (Level AA) and Section 508 of the Rehabilitation Act, as amended. Additional requirements can be found at this website: http://www.dot.State.mn.us/ada/accommodation.html and include:

1. Providing interpreters, translators or other special accommodations,
2. Providing documents in an alternative format,
3. Following the Portable Document Format (PDF) accessibility guidance.

Compliance with the State of Minnesota’s Accessibility Standard includes, but is not limited to, the specific requirements as follows:

1. All documents, presentations, spreadsheets, drawings, and other material must be provided in an accessible format. In addition, provide native files in an editable format. Acceptable formats include InDesign, Word and Excel; and
2. All materials intended for downloading and printing such as promotional brochures, must be labeled as such and the content must additionally be provided in an accessible format.
3. All videos must include closed captions, audio descriptions and a link to a complete transcript;

1 Project Management, Coordination, and Meetings (Source Code Type 1010)
This task focuses on effective communication and coordination of the contract work to expedite the decision-making process and maintain the scheduled completion dates. The Contractor’s Project Manager (PM) team will also be responsible for transferring/saving electronic files/deliverables to the State’s ProjectWise system prior to requesting State’s review of said task/deliverable. State PM will request and provide access.

1.1 Project Instructions, Work Plan and Work Plan Schedule, Quality Assurance Management Plan
Contractor will develop tools (Project Instructions, Work Plan, Work Plan Schedule and a Quality Assurance Plan) to establish budgets, roles, and responsibilities for the project team members throughout the project. Provide project leadership and oversight, leadership to the project team, and facilitate and document team meetings. Develop resource utilization tool to indicate "burn rate" to aid in budget management.

Contractor will perform Quality Assurance/Quality Control (QA/QC) functions throughout the project duration to confirm delivery of a quality product. Contractor will detail specific QC activities and processes that will be utilized throughout the duration of the project. This includes specific processes for specific work groups. Perform independent review of the Quality Management Plan (QMP) deliverables, administer the QMP, verify the document QC reviews of all deliverables and coordinate with State on audit of the QC process.

Contractor’s developed Work Plan Schedule will include major project deliverables and milestones, project coordination, meetings and public involvement activities. Work plan schedule will be reviewed and updated monthly.

Deliverable 1.1:
1. Electronic copies of project instructions, work plan, work plan schedule and QA/QC Plan for the Work Order Contract
2. Within 30 business days from notice to proceed
3. Work plan schedule updates monthly

1.2 Schedule (Source Code Type 1003)
Contractor will modify the draft P6 schedule supplied by State by analyzing the work required to complete this project, evaluating each activity’s duration and networking to create a schedule that will accomplish preliminary design in 24 month and construction in SFY 2025 or prior.

Updates to the schedule will be entered into the State’s P6 system by State utilizing the information provided by Contractor. Contractor will create an activity for each task in this scope (one activity can also represent multiple tasks if agreed to by Contractor and State), and link activities to reflect the planned progression of the work. Schedule a review meeting to evaluate the schedule and revise as needed. The schedule will need State approval and go through the baseline process. Once agreed upon, the schedule will set the expected progression and due dates of the tasks.

Contractor will create and actively maintain a detailed schedule using Primavera P6 or other commercially available scheduling software. Update the schedule monthly in time for the monthly invoicing and progress meetings and at other times deemed necessary to allow the use of the schedule as an effective management tool. Provide the State with a marked up P6 report at each update for the State PM to enter updates. At a minimum the schedule will include durations and due dates for all deliverables listed in this scope of work.

**Deliverable 1.2:**
1. At least two scheduling meetings with State PM, State Scheduler and other team members and or functional groups as needed to revise and baseline the Project Schedule.
2. One electronic schedule and subsequent monthly updates.
3. All files submitted electronically. Monthly reports must be in Adobe Acrobat (pdf extension).

1.3 Project Management Risk Analysis and Tracking
Develop a project risk register to track large cost and schedule risks in the project. State has a sample risk register as an example.

**Deliverable 1.3:**
1. Electronic copy of risk register
2. Maintained throughout the project
3. Format: Microsoft (MS) Excel 2013 spreadsheet, State Risk Register Template

1.4 Initial Project Coordination Meeting
Contractor will facilitate and attend a project kickoff meeting with State’s PM and other State representatives to understand their scope, schedule, identify roles of key personnel and establish communication procedures.

Contractor will review and concur responsibilities of Contractor and State. Establishment of submittal requirements, review dates and overall project schedule. Establishment of the frequency of ongoing project team meetings and reviews. Contractor will coordinate with State’s PM to establish personnel required to attend.

Contractor will review proposed work plan and work plan schedule, identify and present key tasks to initiate project development.

**Deliverable 1.4:**
Exhibit A— Scope of Work and Deliverables

1. Initial Project Coordination Meeting

1.5 Monthly Progress Meetings
Contractor’s PM will coordinate and meet with State’s PM once per month to review the monthly progress and invoices. Contractor’s PM will solicit feedback from State’s PM to assess whether all services meet or exceed the requirements of the project. If needed, Contractor will direct changes to personnel and/or procedures to correct identified deficiencies and implement opportunities for improvements.

Contractor will prepare monthly progress reports. Work will include:

Prepare a work summary for reporting periods including work completed to be resolved, items pending that require action by State, present stage of project (% complete), and next major deliverables to be submitted.

Prepare deliverables status report that provides the following information:
1) Ahead of schedule, under budget;
2) Ahead of schedule, over budget;
3) Behind schedule, over budget;
4) Behind schedule, under budget;
5) On schedule on budget;
6) If behind schedule, provide explanation for how to get back on schedule, as well as impact to other deliverables.

Prepare Log of external meetings with Local, State and Federal Agencies. Financial billings and budget status that meet State requirements. Filing and record keeping, project logs and correspondence.

Deliverable 1.5:
1. Setup and coordinate monthly meeting and provide action item list.
2. All files submitted electronically. Meeting occur in person, teleconference, or web conference as agreed to by the Contractor and the State’s PM. Send E-mail to State’s PM at completion of meeting documenting that meeting occurred per work order requirements.
3. Due monthly at the same time as invoices, update action item list.
4. Update invoice within five days of meeting.

1.6 Subcontractor Management and Oversight
Contractor will manage, coordinate, direct, and monitor subcontractor services. This includes review of progress reports, deliverables, schedule and invoices. Each subcontractor will be responsible for their own internal management and QC.

Deliverable 1.6:
1. Manage, coordinate, direct, and monitor subcontractor services.

1.7 Project Coordination and Meetings
Contractor will manage day-to-day project coordination activities to complete each individual work package and coordinate with State’s PM, functional groups and stakeholders. This includes phone calls, e-mails, meetings and other correspondence.

Contractor will conduct and facilitate all meetings required to complete each work package with State’s PM, functional groups and stakeholders including those listed 2.1.2.

Contractor’s tasks will include proposed meeting dates, inviting required attendees, agenda preparation, required technical and visual documents, work plan schedule, meeting facilitation, meeting minutes within five days of
Exhibit A— Scope of Work and Deliverables

Each meeting, action items and follow up, summary of activities and outcomes of each meeting are due within five days of the meeting.

The Contractor will create and maintain a living action item/issue list, noting date added to the list, responsible party, status, date completed, and any other information to track outstanding project action items and issues.

Contractor will keep track of comments and provide a comment response letter and/or comment response matrix as appropriate.

Contractor will arrange for and pay for adequate facilities and refreshments such as water, coffee, fruit or cookies for meeting that are considered public in coordination with approval from the State’s PM.

**Deliverable 1.7:**
1. Manage day-to-day stakeholder, internal and external team coordination
2. Facilitate, conduct and document meetings to complete each work package with State’s PM, functional groups and stakeholders including those listed in 2.1.2
3. Living action item list and comment response letter/matrix
4. Pay for adequate facilities and refreshments for meetings that are considered public with approval from State PM

2 Public and Agency Involvement (Source Code Type 0054)

The State expects this project to require a significant amount of public, government and agency stakeholder involvement throughout the duration of the preliminary design phase. The State will provide oversight by the State’s PM and/or Public Affairs Coordinator for the Contractor’s Public Involvement Relations effort however, the Contractor will be responsible for the majority of the Stakeholder and public involvement/public relations efforts as described in this scope of work.

Contractor’s public information goals will be consistent with the current State Communications plan. These include meeting customer expectations with information that is reliable and encourages open communication with and among all audiences.

Contractor will provide a facilitator to assess and guide public involvement for the project.

2.1 Public Involvement Plan (PIP)

Contractor will develop and implement the PIP to include both public and agency stakeholders. PIP consists of nine steps:

1. Project Analysis
2. Stakeholder Identification
3. Conflict Identification
4. Mapping
5. Assessment
6. Strategy
7. Implementation and Management
8. Resolution, Review, and Regeneration
9. Post-Project Analysis

Contractor will prepare a PIP that supports the State in developing and maintaining a consistent level of public, government and agency stakeholder communication with the goal of establishing trust, public awareness and understanding of the Project. The Contractor will develop a PIP that will identify public, government and
Exhibit A— Scope of Work and Deliverables

agency stakeholder concerns and then provide the appropriate public involvement strategies and tactics for those stakeholders.

The Contractor will develop a schedule for public involvement activities, and what information is needed prior to those activities. The public involvement schedule will align activities with major milestones and decisions as determined in the overall project schedule.

The Contractor will develop a PIP that identifies when public involvement activities will be held, what the purpose of the activity is, who the intended audience is, what the intended format will be, and what information will be needed prior to the activity. The plan will identify contacts with primary stakeholder groups and identify which groups should attend specific project activities.

The Contractor will support the State by being proactive in providing information and responding to the public and by helping to facilitate the resolution of public involvement issues.

Activities described in the Contractor’s PIP will be implemented and managed by the Contractor. State will provide oversight and direction as deemed appropriate by the State. The Contractor will work with the State and respond to address public involvement issues. The phone numbers and e-mail of the Contractor’s Public Involvement staff will be provided to State.

The Contractor will submit and meet with State and other appropriate representatives as designated by State to review, assess input, evaluate effectiveness of communication efforts and/or modify the Contractor’s PIP.

The Contractor’s strategies and tactics in the PIP are intended to engage, inform, gather input, propose and establish ongoing project coordination activities and/or meetings with all stakeholders including State agencies, Federal agencies, local agencies, local businesses, local residents and others. The PIP will be continually updated.

The Contractor will provide one work session which will be held with State staff, State will provide comments and the Contractor will make changes. Contractor will add any needed updates to the PMT meeting agenda as needed.

Deliverable 2.1:

1. PIP will include sections as described below.
2. Contractor will provide the PIP in hard copy and electronic format.
3. At least one PIP work session.
4. PMT PIP updates.

2.1.1 Project Analysis
Contractor will conduct thorough project research that takes into account all key audiences impacted by the project work. The Project Goals Statement will be formalized.

Deliverable 2.1.1:

1. Project Analysis Report – Document and explain all the project goals from major to minor goals.

2.1.2 Stakeholder Identification, Contacts, Agencies, Permitting and Approval Agencies
Contractor will identify and create a living contact list document for internal and external stakeholders, including motorists/commuters, agencies, permitting agencies, elected officials and appointed officials, special interest and advocacy groups, businesses and adjacent property owners/tenants.
Exhibit A—Scope of Work and Deliverables

Contractor will conduct initial outreach and engagement process to better understand the project area and how the project affects the various stakeholders. Contractor will document and review stakeholder outreach participation and modify processes to meet stakeholder’s needs.

Agency and stakeholder coordination is anticipated to be an important and involved task. Contractor will be responsible for keeping the appropriate stakeholders informed, involved and gain required project consent and approval.

Below is draft stakeholder identification list of agencies as a starting point:

Contractor
   Contractor’s PM
   Contractor Team and Functional Group Contacts

State and Possible Participating Agencies
   State’s PM
   State Functional Groups Contacts
   MnDOT
   WisDOT
   MN Department of Natural Resources
   WI Department of Natural Resources
   MN and WI Tribal Governments
   Others

Federal and Possible Cooperating Agencies (*)
   Federal Highway Administration
   NPS
   Army Corps of Engineers
   US Coast Guard
   US Fish and Wildlife Service
   Others

(*) If required, State will send out the cooperating agency requests to the appropriate federal agencies.

Local and Possible Participating Agencies
   Watershed Districts/Water Management Organizations
   Chisago County
   Polk County
   Village of Osceola
   Town of Osceola
   Franconia Township
   Taylor Falls
   St. Croix Falls
   Dresser
   Village of Dresser
   Residents in project area
   Others

Businesses and other
   Chambers
   Canoe and recreational rental
Exhibit A—Scope of Work and Deliverables

Osceola Businesses
Osceola and St. Croix Valley Railway
L.O. Simenstad Municipal Airport
Emergency Services
Schools and School Transportation
Truck Interests
Private and Public Utilities
Separate Subsurface Utility Engineering (SUE) Contractor working for State
Environmental Documentation Development Agencies
Media outlets and contacts
Area Mailing Lists added as developed
Others

Contractor will update the stakeholder report to include new or additional information on stakeholders throughout project.

Deliverable 2.1.2:
1. Stakeholder Identification, Contact and Engagement List.
2. Living document list, updated monthly.
3. Contact list in MS Excel
5. Complete package in Adobe Acrobat PDF format.

2.1.3 Conflict Identification
Contractor will identify existing and potential issues related to the identified stakeholders.

Deliverable 2.1.3:
1. Document identifying all conflicts, update as necessary.

2.1.4 Conflict Mapping
Contractor will produce an influence/interest grid of stakeholders. Relationships between stakeholders will be mapped, including alliances, relationships with friction, broken relationships, relationships that don’t exist and relationships that need to exist. Power imbalances and triggering events, which will create issues will be indicated.

Deliverable 2.1.4:
1. Influence/interest grid document, update as determined by the project team.

2.1.5 Assessment
Contractor will review conflicts for likelihood of occurring, risk to the project for time, scope and budget, and risk to the State’s reputation.

Deliverable 2.1.5:
1. Assessment document that explains risk of each conflict.

2.1.6 Public Involvement and Agency Strategy Report
Contractor will provide a facilitator to assess and guide public involvement for the Project.

Contractor will propose and prepare a strategy report that supports developing and maintaining a consistent level of public and agency communication with the goal of establishing trust, public awareness and understanding of the Project.
Exhibit A—Scope of Work and Deliverables

Contractor will establish measurable communications and engagement goals for the project, with a focus on engagement to help define the project purpose and need.

Contractor will identify community partners who can play a role in reaching potentially effected stakeholder groups identified in the stakeholder analysis. Contractor will provide recommendations for engaging community resources in communicating the history and interests of people and places near the project.

Contractor will recommend a set of communication channels that the State’s project team should use, to effectively and economically reach segmented consumer and stakeholder groups with project updates, opportunities for input, and relevant project information.

Contractor will deliver an outreach and engagement strategy briefing, in addition to a report for the PMT.

Contractor will propose and create the membership to the Project Management Team (PMT), Technical Advisory Committee (TAC), and Stakeholder Local Advisory Committee (LAC), Internal and External Coordination Meetings, Public Information Meetings and the frequency of the meetings.

Contractor will continually monitor the stakeholders, planned outreach activities, and the effectiveness of the outreach activities and suggest changes to the strategy plan. Contractor will submit a monthly Outreach and Engagement report that identifies key audience attendees, activities and changes over the month, including:

1. Outreach and Engagement Activities.
2. Information on meeting time, place, and attendees.
3. Summary of the feedback received.
4. How the feedback will be incorporated into the project process.
5. Future outreach and engagement identified.
6. Changes to the Outreach and Engagement Strategy based on changes to the project, new information, outreach and engagement activities, or other.
7. Identify upcoming and future outreach and engagement activities.

Deliverable 2.1.6:
1. Outreach and Engagement Strategies Report
2. Monthly updates

2.1.7 Implementation and Management
Strategy transitions to the implementation stage, where the Contractor team in coordination with the State will take action toward resolutions, including communication with agencies, stakeholders and tracking progress.

Contractor will implement the outreach and engagement strategy developed as a part of 2.1.6. The actual outreach and engagement activities won’t be known until the strategy is proposed/developed by the Contractor, the base assumptions below can be used as a guide to develop the proposal.

2.1.7.1 PMT Meetings
Contractor will prepare for and conduct monthly PMT meetings during the project. The project PMT meetings will be attended by the State’s PM, State Functional Groups (as necessary), other as determined by the Contractor and State’s PM. This task includes agenda preparation, meeting facilitation, follow-up, and a summary of outcomes from each meeting and expectations noted in Project Management Meetings noted in 1.8.

Deliverable 2.1.7:
Exhibit A—Scope of Work and Deliverables

1. Prepare and facilitate up to 24 PMT meetings.

2.1.7.2 Technical Advisory Committee
Contractor will prepare for and facilitate TAC meetings during the project. The project TAC meetings will be attended by PMT staff, cooperating agencies, stakeholders and permitting agencies as determined by the Contractor and State’s PM. This task includes agenda preparation, meeting facilitation, follow-up, and a summary of outcomes from each meeting and other deliverables identified in Project Coordination Meetings section 1.7.

Deliverable 2.1.7.2:
1. Prepare and facilitate up to 10 TAC Meetings.

2.1.7.3 Local Advisory Committee
The Contractor will prepare for and facilitate LAC meetings, and distribute meeting notices and summaries. Additional LAC participants will be identified by the Contractor and the State. This task includes agenda preparation, meeting facilitation, follow-up, and a summary of outcomes from each meeting and deliverables identified in Project Coordination Meetings section 1.7.

Deliverable 2.1.7.3:
1. Prepare and facilitate up to 4 LAC meetings.

2.1.7.4 Public Meetings with Businesses, Special Interest Groups and Stakeholder groups
Contractor will prepare for and conduct local businesses, special interest group and other stakeholder groups and coordinate meetings to communicate project goals, objectives and requirements. This task includes preparation of necessary graphics and figures coordination, meeting facilitation, agenda preparation follow-up, and a summary of outcomes from each meeting and other deliverables as identified in Project Coordination Meetings section 1.7.

Deliverable 2.1.7.4:
1. Prepare for and facilitate up to 8 Businesses, special interest group meetings and other stakeholders meetings.

2.1.7.5 Public Information Meetings
The Contractor will organize and conduct Public Open House Information Meetings to gather input and inform the communities and stakeholders of the study progress. The number of open house meetings will be determined and updated in the strategy report.

Contractor duties will include meeting attendance, preparation of meeting materials including mailing list, open house notice, sign-in sheets, handouts and exhibits/displays boards. The Contractor will attend and present at the meeting, preparing open house summary, documenting materials presented, provide attendance and record public/agency comments. The Contractor will provide a hard copy and electronic copy of the report. The report will be submitted to the State’s PM within 5 business days of each meeting.

The number of notices to be determined by the Contractor with the development of the mailing list and updated in the public involvement strategy report.

As noted in 1.7, for any public meetings, the Contractor will arrange and pay for adequate facilities and refreshments and prepare exhibits and presentations as approved by the State’s PM.

Before each open house (one after each open house), the Contractor will lead an open house planning meeting with the State project team to review proposed agenda and presentation materials. This
Exhibit A— Scope of Work and Deliverables

preparation meeting can instead be presented at the PMT or the TAC pending level of concurrence required as determined by the project team.

The Contractor will also be required to hold an open house debriefing meeting (one after each open house) to review the comments made at these meetings and decide on the necessary course of action based on the feedback. Pending level of concurrence required as determined by the project team, this can be done at the PMT and/or TAC.

Deliverable 2.1.7.5:
1. Prepare and facilitate at least 2 open house meetings
2. Facilities and Refreshments as approved by the State’s PM
3. At least 2 pre-open house meetings
4. At least 2 post open house meeting conferences and reports

2.1.7.6 Project Web Documents and Electronic Communications
The Contractor will be required to follow the Contractor’s Style Guide which will be provided to the selected Contractor. The Contractor will not be responsible for hosting, or maintaining a project website, but will be responsible for providing documents and graphics that meet Accessibility and Plain Language Standards. The Contractor will provide the Metro Communication Public Affairs Coordinator with materials for possible posting to the State website.

The Contractor will provide updated information at significant steps in the process including public meetings, completion of technical reports and environmental documents, and selection of the Preferred Alternative.

Contractor will provide maps, graphics and text documents intended for printing as Adobe PDF files. Maps, whether intended for print or online viewing, will be provided as Adobe PDF files. Text for online viewing will be provided as MS Word documents.

Contractor will develop an ongoing list and schedule of project documents that need to be posted to the project website or distributed by other electronic means for the State’s use in keeping the general public informed.

Deliverable 2.1.7.6:
1. Contractor will be required to follow the website posting guidelines outlined in the 2020 Contractor’s Style Guide.

2.1.8 Resolution, Review and Regeneration
Contractor will track each identified conflict and action item until final resolution. Issues where potential conflict never materializes will be monitored until project completion by the Contractor. Conflicts will be reviewed; those that are resolved but could regenerate as other stakeholders and issues emerge then return to Conflict Identification.

Deliverable 2.1.8:
1. Document that tracks status of each conflict and action item until final resolution.

2.1.9 Post Project Analysis, Public and Agency Involvement Report
Just prior to final completion of the contract work the Contractor will prepare a summary report of the public and agency involvement for the project. The report will summarize findings, observations, what worked well, and where improvements could be made for future projects. Contractor will establish best practices and lessons learned to benefit PM’s in similar situations and improve PIP.
Deliverable 2.1.9:
1. Post project analysis, public and Agency Involvement Report.

2.2 Public Contact
Contractor will integrate with State to facilitate coordinated and consistent efforts when contacting and disseminating information to the public. All contacts will be tracked. The Contractor will track, at a minimum, the names, addresses, e-mail addresses, phone numbers, questions, comments, concerns, date of contact and the information or response provided, using an electronic database capable of producing reports. Updated reports detailing public contacts will be provided to State on at least a monthly basis during the PMT Meetings.

Deliverable 2.2:
1. Contractor will track all public contacts and disseminate information to the public.
2. Monthly report and update at the PMT

2.3 Supplying Information to Third Parties
Upon request, the Contractor will furnish Project information, including plan sheets, electronic data files (description of content), and design information to third parties within 10 business days. All information requests will be routed through, reviewed, and approved by the State’s PM.

Deliverable 2.3:
1. Contractor will supply third party information requests as approved by the State.

2.4 Media Relations Support, Press Releases, Public Inquiries, etc.
Media relations efforts that occur will be managed by State with support from the Contractor. State will be responsible for conveying messages to the media and addressing Project-specific progress questions such as milestones, etc. With the oversight of the State, the Contractor will be responsible for conveying project detail messages, such as specific design or process questions, etc. To develop an effective media relations effort, State and the Contractor must establish an effective partnership that shares information and coordinates key messages communicated to the public.

During the work, the Contractor will immediately notify State of any situations involving the media. All media requests will be tracked by the State.

As requested by the State, the Contractor will prepare and provide versions of press releases, responses to public inquiries, local bulletin board announcements, short newsletter articles for government stakeholders and letters to property owners or interested parties. Coordinate review, responses and incorporate comments with State’s Public Agency Communications PM.

Deliverable 2.4:
1. Contractor will provide media relations project information and support.

Contractor will assist the State with a facilitated public visual quality planning process, visual quality meetings, a public open house and the development of a Visual Quality Manual (VQM). The process articulates community values to ensure context sensitive visual quality and aesthetic design results while at the same time satisfying the transportation needs and preserving the area’s historic, natural and cultural resources.

3.1 Visual Quality Planning Process
Contractor will provide a Visual Quality Manager to lead the visual quality planning process. The Visual Quality Manager will be responsible for the coordination, planning and design of the projects aesthetic features while taking into consideration site constraints, maintenance and budget parameters. The intent of the planning process is to gather input from stakeholders to provide final guidance for overall project visual quality in the
**Exhibit A— Scope of Work and Deliverables**

form of a VQM. Public involvement will be achieved through the use of a Visual Quality Advisory Committee (VQAC) and a public open house. The visual quality planning process and stakeholder preferences will be tracked in a workbook that will be provided to all members of the VQAC and used as the foundation to create the VQM.

**Visual Quality Advisory Committee:**
Representatives from village, town, city, county, State, and federal agencies as well as the community at large may be invited to participate as members on a VQAC. The purpose of this group is to articulate project and community values to ensure the goals and objectives of this project are achieved. This committee may be an extension of the LAC. The VQAC will consist of no more than 15 members.

State will provide staff to participate with the VQAC and pertinent project correspondence and project data.

**Deliverable 3.1:**
Contractor will provide:
1. Visual Quality Manager that is an architectural engineer, architect, landscape architect, or transportation planner, with considerable training and experience in visual quality planning and design for large transportation projects.
2. List of all team members participating in the visual quality planning process including: title, contact information, and responsibilities.
3. Schedule of visual quality planning process, meetings, and final VQM delivery.
5. Each member of the VQAC is responsible for maintaining their own workbook after delivery.

**3.2 Visual Quality Meetings**
Contractor and State will cohost meetings with the VQAC. Exhibits, documents and graphics developed during the VQAC meetings will be the basis for exhibits used for public open houses and the VQM. The following are the type and number of anticipated meetings:

1. Pre-meeting conferences are required between the Contractor and State to prepare the agenda and agree on presentation materials such as exhibits and presentations to be displayed at each VQAC meeting.
2. 5 meetings with the VQAC are anticipated.
3. Post-meeting conferences will be needed between the Contractor and State to review the prior VQAC meeting to decide on any necessary courses of action.

Provide a meeting facility near the project site.

State will provide attendance by appropriate staff at all meetings.

**Deliverable 3.2:** Contractor will:
1. Prepare meeting agenda for each meeting
2. Prepare graphics as required for each meeting, including but not limited to, sketches, 2D & 3D drawings, renderings, and photo simulations
3. Prepare and distribute necessary handouts, documents, and exhibits for workbooks
4. Assist State staff with presentations and discussions at all VQAC meetings
5. Record and distribute minutes of each meeting
6. Maintain a decision list which will be reviewed and expanded after each meeting, included with the minutes after each meeting

**3.3 Visual Quality Public Open House**
Exhibit A—Scope of Work and Deliverables

Contractor will be responsible for scheduling, preparing exhibits, and conducting a minimum of one public open house, in coordination with the State, to assess public feedback and acceptance of the visual quality planning process and concepts developed under the guidance of the VQAC. The audience must fully understand the project decisions made to date and clearly understand the scope of the visual quality planning process and outcomes. A post open house conference will be needed between the Contractor and State to review the feedback received and decide on any necessary courses of action. The VQAC public Open house should be referenced in the outreach and engagement strategy report and is considered in addition to the two project public information meetings listed in 2.1.7.5

Provide a meeting facility near the project site.

State will provide attendance by appropriate staff at all meetings.

Deliverable 3.3: Contractor will:
1. Provide attendance by Visual Quality Manager and appropriate staff
2. Prepare and distribute necessary handouts, documents, and and/or surveys
3. Prepare exhibits, including but not limited to, sketches, 2D & 3D drawings, renderings, and photo simulations
4. Assist State staff with any presentations and discussions
5. Record and distribute minutes of feedback received

3.4 Visual Quality Manual

Contractor will develop a VQM that documents the visual quality planning process and provides sufficient detail to fully communicate intent for the final design and construction of the project. The VQM should be highly graphical in nature. Exhaustive language to support graphics is not desired or encouraged. The VQM must, at a minimum, include the following:

1. Documentation of the completed visual quality planning process and VQAC’s input
2. Detail drawings of all bridge and structural elements, including but not limited to, railings, barriers, piers, overlooks, abutments, retaining walls, noise barriers and slope protection
3. Signing
4. Lighting
5. Textures
6. Storm Water Treatment Ponds/Basins
7. Colors
8. Preliminary landscape layout
9. Aesthetic cost analysis
10. Five photo simulations will prepared to adequately show the completed project. See Section 3.5

All graphic illustrations developed by the Contractor must show proportional relationships, approximate color representation and appropriate textures. All detailed drawings (plans, sections, and elevations) must be drawn to scale and adequately dimensioned with preliminary structural information.

Deliverable 3.4: Contractor will:
1. Prepare and distribute a draft VQM including all text and graphics in an electronic format
2. Prepare and distribute bound hard copies of the final VQM in an 8 ½” x 11” format after incorporating all revisions
3. Provide digital files for all work included in the final VQM and the final draft must be provided to the State

3.5 Graphic Support Visualizations
Exhibit A—Scope of Work and Deliverables

Contractor will produce project development graphic support visualizations (photo renderings, drawings, computer-generated images, etc.) to portray the bridge(s), roadways, trails, stormwater treatment ponds/basins, landscape amenities, project environment, and all other related elements to assist in project communication with stakeholder and public participation.

Contractor will provide requested/required graphic support to the NPS in their Section 7a evaluation process and as it related to the Outstanding Remarkable Values (ORV’s).

Contractor will include 5 photos required for the Visual Quality Manual noted in 3.4

Contractor’s visualizations will be of appropriate size and quality for display at public information meetings and will be made available electronically to the State for possible website display. These visualizations will include plan views, elevation views, isometric views, perspective views, and details of overall portions of the project and/or individual elements.

The Contractor will provide all drawings and 3-D images in a format compatible with programs currently utilized by the MnDOT Visualization Unit.

Deliverable 3.5
1. Produce up to 10 Graphic Support Visualizations

4 State Scoping Report (Source Code 1003)

Contractor will assist the State PM in preparing and delivering a preliminary and final scoping report for this project. The primary purpose is to document the detailed scope and costs that have been approved for this project. This task will require coordinating with the Contractor and State functional groups to identify needs. The State’s PM will add the needs and complete the funding in MSD.

Initial State Scoping Report

Contractor and the State’s PM will begin the process to complete the Metro District Scoping Report for the project. Contractor will coordinate with the Contractor’s and State’s functional areas and to request scoping input. Contractor will provide a response to all scoping worksheets questions. The response will either document the need, state that the question has been evaluated and there are no needs associated with project, or state that there is a need that requires further investigation.

Contractor will assist State’s PM in submitting initial scoping report and supporting information corresponding to Request for Proposals (RFP) deliverables. Supporting information to the scoping report will include: (Layouts, Risk Register, Traffic Management Plan (TMP) worksheets, staging considerations, Length, Width, and Depth (LWD) Estimates, Investment Category Guidance, and Complete Streets Worksheet).

Contractor will incorporate State’s initial scoping report into the alternatives evaluation documentation, including but not limited to, updating the scope, layout, cost estimates, and EA.

Updates and Final State Scoping Report

The final State scoping report based on the preferred alternative will be updated throughout the project between the completion of the initial State scoping report and the completion of this contract. The intent is that the Contractor’s deliverables and State scoping report coincide with each other throughout the process.

Deliverable 4:
Contractor will:
1. Respond to all scoping worksheets identifying needs and further investigation.
Exhibit A—Scope of Work and Deliverables

3. Integrate approved scope into contract deliverables and supply supporting document information.
4. To be completed in conjunction with the Alternatives Evaluation deliverable, State’s scoping presentation turn in deadlines and annual updates.

5. **Environmental Documentation (Source Code 1071)**

An EA document will be assumed as the base environmental document for the RFP deliverables and beginning preliminary design. Outcomes of the alternatives analysis could result in a lesser document reducing the scope of work to be verified as a concurrence point deliverable.

Contractor will prepare a Federal EA/MN EAW, and Findings of Fact and Conclusions (FOFC) which is the assumed environmental document with this RFP that meets the project letting schedule. The deliverable for this item includes:

Contractor will use the latest version of the EAW located on the Environmental Quality Board’s (EQB) website at: [http://www.eqb.State.mn.us/EnvRevGuidanceDocuments.htm](http://www.eqb.State.mn.us/EnvRevGuidanceDocuments.htm)

Additional EA Federal issues not covered by the EAW must be addressed in the document by the Contractor. The Federal Highway Administration’s (FHWA) guidebook or Highway Project Development Process (HPDP) must be used as guidance to verify that the NEPA laws have been fulfilled in the EA/EAW. Refer to the following websites: [http://environment.fhwa.dot.gov/guidebook/index.asp](http://environment.fhwa.dot.gov/guidebook/index.asp) [http://www.dot.State.mn.us/planning/hpdp/](http://www.dot.State.mn.us/planning/hpdp/)

Contractor will address and answer the EAW questions 1-20, additional EA federal issues, and State policy items with supporting data to sufficiently determine whether the project will cause an environmental effect. A sample will be available upon request from the State Project Documentation group as an example of expected product. Additional Federal issues/State policy items that must be included, but not be limited to, include the following:

A. Purpose and Need
B. Evaluation Criteria
C. Alternatives Analysis/Logical Termini
D. Cost Benefit Analysis: This requirement is State policy.
E. Impacts not covered in EAW, or a different federal standard:
   1. Floodplain Assessment
   2. Section 4(f) Recreation Areas and Wildlife Refuge
   3. Section 7 US Fish and Wild Life Service
   4. Section 7a NPS
   5. Section 106 Historic Archeological
   6. Section 6(f) Land and Water Conservation Fund (LAWCON) funded properties
   7. Traffic
   8. Noise
   9. Air
   10. Environmental Justice
   11. Bicycle and Pedestrian Issues
   12. Social Impacts
   13. Economic Impacts
   14. Relocation Impacts
F. Public and Agency Involvement

Deliverable 5:

1. EA EAW, and FOFC. See task below for specific deliverables.
Exhibit A—Scope of Work and Deliverables

2. Applicable to all deliverables under the environmental document section:
   a. Standard: Applicable requirements listed on the State’s HPDP website: http://www.dot.state.mn.us/planning/hpdp/scoping.html. Must use the July 2013 version of the EAW located on the EQB’s website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The FHWA’s guidebook or State’s HPDP must be used as guidance to verify that the NEPA laws have been fulfilled in the EA/EAW. Refer to the following websites: http://environment.fhwa.dot.gov/guidebook/index.asp, and http://www.dot.state.mn.us/planning/hpdp/scoping.html, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, Federal Highway Administration Technical Advisory 6640.8A.

3. Key tasks that are required as part of the EA, EAW, and FOFC are described below. All subtasks must be represented in the separate detailed cost breakdown.

5.1 Environmental Agency Kick-Off and Progress Meeting
Contractor will prepare and facilitate an Environmental Agencies Kick-off Workshop that will include Federal, State and local entities. The workshop will focus on environmental document type, process concurrence points, project purpose and need, alternative evaluation criteria, preliminary alternatives, environmental and engineering issues relevant to the study area.

Contractor will also prepare for and facilitate an Environmental Agency Progress Review Meeting upon direction from the State’s PM and State Environmental Document PM. The meeting will focus on alternatives decision-making and refinement, including potential mitigation measures, relevant to ongoing development of environmental documentation.

Deliverable 5.1:
   1. One environmental agency kick-off and up to 2 progress review meetings.

5.2 Environmental Document Process Concurrence Points
Contractor will prepare an Environmental Review Process Outline and coordinate the review to obtain conditional concurrence points from FHWA (Joe Campbell anticipated FHWA Area Engineer), DOT’s and cooperating agencies (if applicable) in order to complete the environmental document.

Contractor will draft and review the outline with the State’s Office of Environmental Stewardship (OES) PM, edits based on comments and process as it progresses and include environmental meeting dates to obtain concurrence points. Below is a list as a starting point for consideration:

1. Identify and size draft primary and secondary needs (problems)
2. Identify and size draft purpose addressing the needs
3. Developing draft alternative evaluation criteria and matrix
4. Developing draft logical termini
5. Concurrence point with State OES and FHWA on (1-4)
6. Identify Stakeholders
7. Finalize Draft Purpose and Need, evaluation criteria based on stakeholder comments
8. Summarize needs, purpose, alternative evaluation criteria and alternatives of NEPA
9. Environmental Document Type confirmation
10. Early Notification Memo
11. Develop alternatives that meet the Purpose and Need and review of Social and Environmental Issues
Exhibit A— Scope of Work and Deliverables

a. Evaluate alternatives based on performance criteria
b. Evaluate alternatives based on natural and cultural impacts
c. Present results to stakeholders and receive comments

12. Concurrence Point with FHWA and stakeholders on preferred alternative
   a. Review potential social and economic issues

13. Correct NEPA level documentation

14. Draft environmental document

15. Present results to stakeholders and receive comments

16. Concurrence Point by State OES and FHWA

17. Project in STIP

18. Final Environmental Document review and approval process.

The work required to complete concurrence points will be billed and shown under the appropriate Environmental Document and Public Involvement deliverable activities.

Deliverable 5.2:


5.3 Early Notification Memo (ENM) and Update

State will distribute early notification based on general project scope and termini prior to contract execution. Contractor will meet with State’s project documentation group to review and incorporate ENM responses as appropriate in to the environmental document, create checklist of follow up actions and act on them as necessary. Follow ENM applicable requirements listed on the State’s HPDP website.

When there is adequate information for the purpose and need, preferred alternative and logical project termini, Contractor will work with the State and provide all necessary information to issue an ENM update, review and incorporate ENM responses in to the Environmental Document Process, create checklist of follow up action items, and follow up as necessary.

Deliverable 5.3:

1. Review and incorporate ENM responses, create follow actions, follow up as necessary.
2. Provide all necessary information to issue an ENM update, review and incorporate responses in to the Environmental Document Process, create action items, follow up as necessary.

5.4 Purpose and Need Statement

The purpose and need Statement is a critical part of the EA. Many of the tasks listed in this scope will be used to inform and develop the purpose and need Statement.

Contractor will prepare the draft project Purpose and Need section and will be reviewed by the FHWA and State as part of the EA/EAW schedule. The outcome of this review will set the scope of work required to complete the Final Purpose and Need Statement. The completion of this task and the meeting between FHWA and State must occur early in the project to determine how much work will be needed to complete both the alternatives analysis and the final purpose and need Statement.

Contractor will prepare the Final Purpose and Need Statement at the conclusion of the Logical Termini and Alternatives Evaluation processes. The results of that process and the preferred alternative selected from it will be used to write a more precise and detailed final purpose and need statement.

The Project Need Statement prepared by the Contractor will identify transportation problems along the project corridor. The Project Purpose and Need Statement will summarize the project objectives and goals for
addressing some or all of the project needs. The identified needs will be a concurrence point with FHWA (Joe Campbell anticipated FHWA Area Engineer).

Contractor will facilitate and document State and FHWA review and concurrence of Preliminary and Final Purpose and Need. The outcome of the preliminary purpose and need review meeting will determine the amount of work needed to complete the Final Purpose and Need Statement.

Contractor will incorporate the following items into the Purpose and Need as necessary, along with additional items, if any, identified by the Contractor, State, and/or FHWA during the early phases of the project:

A. Analysis defining logical termini
B. Identify the structural and functional defines of the bridge
C. Traffic operations outlining current traffic problems
D. Identify existing roadway approach needs
E. Pedestrian, bicycle connectivity and surrounding land uses
F. Safety Analysis/Crash Analysis
G. Describe current geometric deficiencies
H. Drainage and water resources needs
I. Detour and Traffic Impacts
J. Constructability
K. Pavement
L. Coordination with other projects
M. Other

Deliverable 5.4:
1. One electronic Draft and Final Purpose and Need Statement.
2. Facilitate State and FHWA review and concurrence of Preliminary Purpose and Need.
3. Preliminary draft purpose and need document will be reviewed electronically.
4. Final electronic report on the purpose and need will be provided documenting concurrence point.

5.5 Alternatives Evaluation
Contractor will facilitate all required discussions and workshops to select a preferred alternative for Bridge No. 6347 rehabilitation or replacement and associated roadway approaches which will include the additional left turn lane at NPS boat ramp entrance, and addition of Bike and Pedestrian facilities.

5.5.1 Evaluation Criteria
Contractor will develop draft alternative evaluation criteria matrix for screening of the alternatives.

Deliverable 5.5.1:

5.5.2 Alternatives Screening
Contractor will develop a list of alternatives to be screened. The list includes, but not be limited to the following alternatives:

1. No build
2. Reuse existing bridge substructure, replace superstructure
3. Replace bridge on current alignment
4. Replace bridge on new alignment north of existing bridge
5. Replace bridge on new alignment south of existing bridge

The development of alternatives will also consider other elements, including:
Contractor will develop a process to evaluate the reuse of existing substructure alternative. This process will determine and document if this is a feasible alternative or should be eliminated from further consideration.

Contractor will develop a screening process to evaluate the remaining build alternatives. The screening process should evaluate alternatives based on approved evaluation criteria metrics.

Contractor will screen the alternatives based on the screening process developed and prepare a report describing the alternatives considered, the process developed to evaluate them, the results of the evaluation, and the alternatives recommended to continue to be evaluated.

Deliverable 5.5.3:
2. Facilitate State and FHWA review and concurrence of Project Alternatives Report.
Exhibit A— Scope of Work and Deliverables

5.5.4 Logical Termini Analysis and Memo
Contractor will create a logical termini write-up detailing the reasons for the end points of the project. The logical termini and the purpose and need statement influence each other, because the logical termini analysis can influence the outcome of the purpose and need just as the purpose and need can influence the outcome of the logical termini.

Logical Termini discussion will satisfy the three general principals at 23 CFR 771.111(f).

Contractor will facilitate State and FHWA review and concurrence of the logical termini selected for the project as a concurrence point.

Deliverable 5.5.4:
1. One electronic logical termini memo write-up.
2. Facilitate State and FHWA review and concurrence of Logical Termini Analysis and Memo.

5.5.5 Final Project Alternatives Evaluation Report
Contractor will complete the Final Project Alternatives Evaluation when the following tasks are completed and conclusions can be drawn from those tasks:

A. Alternative Evaluation Criteria Matrix
B. Logical Termini
C. Stakeholder Identification
D. Draft purpose and need Statement
E. Draft project alternatives report
F. Alternative layouts
G. Alternative cost estimates
H. Initial drainage overview map
I. Traffic modeling
J. Benefit-Cost Analysis

This evaluation will select and justify the preferred alternative. Contractor will facilitate State and FHWA review and concurrence of Project Alternatives Report. This report will be an appendix to the environmental document. All tasks that come after this task will have to do with developing the preferred alternative into a more detailed preliminary design.

Deliverable 5.5.5:
1. One electronic Final Project Alternatives Evaluation
2. Facilitate State and FHWA review and concurrence of Project Alternatives Report

5.6 Tasks for Federal EA/ Minnesota EAW

5.6.1 Contamination Investigation, and Hazardous Materials and Regulated Waste
A contamination investigation, hazardous materials and regulated waste analysis and Regulated Materials Bridge will be required for the project. The analysis will consist of a Regulated Waste, Phase I and possibly a Phase II Environmental Site Assessment, sampling, and testing. The State’s OES will hire a separate contractor to complete the Regulated Waste, Phase I and II Environmental Site Assessment, sampling, and testing.

Contractor will add information from State’s Regulated Waste, Phase I and II Environmental Site Assessments to the Environmental Documentation, as needed.

Deliverable 5.6.1:
Exhibit A—Scope of Work and Deliverables

1. One electronic Hazardous Material and Regulatory write up.

5.6.2 Wetland Delineation and Impacts Report
Contractor will perform the wetland delineation for the project to complete Level 1 and Level 2 delineation and final report as outlined in section 9. Contractor will use that information to determine the wetland impacts as related to the preferred alternatives analysis and write the physical impacts on water resources section of the environmental documents.

Deliverable 5.6.2:
1. One electronic Wetland Delineation and Impacts report write up.

5.6.3 Benefit-Cost Analysis
Contractor will prepare a benefit-cost analysis following the steps outlined on the Benefit-Cost Analysis for Transportation Projects website: [http://www.dot.State.mn.us/planning/program/benefitcost.html#section3](http://www.dot.State.mn.us/planning/program/benefitcost.html#section3). The analysis will compare the no-build to the identified alternatives. Please note, State is now requiring that the benefit-cost analysis be completed for more than just the preferred alternative. The analysis does not have to be done for every concept considered, but does need to be completed for those that are feasible and have been considered as part of the study. The Contractor will incorporate information from the benefit-cost analysis into the Alternatives Evaluation and the EA/EAW document.

Deliverable 5.6.3:
1. One electronic Benefit-Cost Analysis
2. Due: At completion of alternatives analysis process.
4. Facilitate State and FHWA review and concurrence

5.6.4 Flood Plain Assessment
Contractor will complete the Flood Plain Assessment provided at the following web page: [http://dotapp7.dot.State.mn.us/edms/download?docId=608948](http://dotapp7.dot.State.mn.us/edms/download?docId=608948)

In summary, each floodplain assessment will determine the physical nature of the encroachment, whether transverse or longitudinal. If the project results in a longitudinal encroachment additional information is required. This information must explain whether the longitudinal encroachment can or cannot be practicably avoided. After the physical nature of the encroachment is determined, the following four points will be addressed and adequately documented by the Contractor:

1) No significant potential for interruption of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route.
2) No significant impact on natural and beneficial floodplain values will result.
3) No significant increased risk of flooding will result.
4) Will project cause incompatible floodplain development?

State’s Bridge office will make available the Bridge Hydraulic analysis, data and letter.

Deliverable 5.6.4:
1. One electronic Flood Plain Assessment and write up.
5.6.5 Federal Wild and Scenic Rivers – St. Croix and Section 7(a) and NPS Coordination

The St. Croix River includes a mixture of Federal and State authorities. Contractor will coordinate and facilitate meetings with the appropriate agencies and discuss any possible adverse impacts to this designated Wild and Scenic River and any potential measures taken to minimize these impacts.

Projects involving Federal and State Wild and Scenic Rivers, Contractor will require coordination with MN Department of Natural Resources (DNR) and WI DNR.

Projects involving Federal Wild and Scenic Rivers, Contractor will coordinate with the NPS who has review authority on 404 permits, and any federal license, permit or federal assistance. The NPS has review authority for all projects on the upper portion and on all federally funded projects on the lower segment (letter from NPS to MnDOT dated June 11, 1991).

Contractor will review and be familiar with the NPS Management Plan and the Foundations Document St. Croix River National Scenic Riverway Minnesota Wisconsin. The document lists that Free-Flowing and Water Quality are over-arching characteristics of the Wild and Scenic Riverway, the document also defines the ORV’s for each segment of the St. Croix Rivers all of which will be considered during the NPS Section 7a evaluation process.

River Segment 9 St. Croix Falls to Osceola, River Segment 10 Osceola to Marine on St. Croix includes Over Arching Characteristic and ORV’s - Free Flowing, Water Quality, Aquatic, Cultural, Recreational, Riparian, Scenic- Aesthetic, and Geology.

Early meetings with the NPS have concluded that the Section 7a evaluation process will occur concurrent with the project Environmental Documentation Process. Contractor will consider how any alternatives impact the Free-Flowing, Water Quality and listed applicable ORV’s. Contractor will also be responsible to provide any project information requested by the NPS to assist and support in their evaluation determination process including graphic support as noted in 3.5.

NPS has a boat landing project in development for anticipated construction in 2021. Contractor will coordinate, facilitate and participate with NPS on the two projects.

Deliverable 5.6.5:
1. One electronic Section 7(a) write-up.
2. Coordinate and facilitate and participate in meetings with and support NPS section 7a review requests and NPS boat landing project as it relates to this project.

5.6.6 Section 4(f)

There are 4(f) resources adjacent to State right of way in the project area. Section 4(f) documentation write up will assume to follow the Individual Section 4f Evaluation process and will be completed concurrent with the NPS 7A determination process. Confirming the Individual Section 4(f) requirement will be a concurrence point.

Contractor will be responsible for working with FHWA to determine Section 4(f) impacts, a Section 4(f) documentation, complete Section 4f write up, coordinate 4(f) evaluation concurrently with NPS section 7a review. Provide any requested information to the NPS that fall under the applicable Outstanding Remarkable Value and characteristics.

Deliverable 5.6.6:
1. One electronic Section 4(f) write-up
2. Assume Individual 4(f) Evaluation concurrence point and process
3. Facilitate State and FHWA review and concurrence
4. Coordination with NPS section 7a Review
5.6.7 Visual Quality Impact Assessment
The Contractor will identify and list the impacts to the existing visual resources, the relationship of the impacts to potential viewers of and from the project, as well as, measures to avoid, minimize, or reduce the adverse impacts.

The Visual Impact Assessment, as part of the Bridge Alternative Evaluation Criteria, will help identify visual impacts. When there is potential for visual quality impacts, explain the consideration given to design quality, art and architecture in the project planning. Visual renderings will be used as necessary.

Identify/Document the affected Visual Resources, affected populations, define existing Visual Quality, identify impacts to visual quality, and summarize visual impacts by alternative and any mitigation of visual impacts.

Contractor will be responsible to complete the Visual Quality Impacts Assessment write up documentation.

Contractor will coordinate with NPS section 7a review and provide any requested information to the NPS that falls under the applicable Outstanding Remarkable Value and characteristics.

**Deliverable 5.6.7:**
1. One electronic Visual Quality Impacts Assessment write-up.
2. Coordination with NPS section 7a Review.

5.6.8 Traffic
Contractor will answer the questions outlined in the State EAW for traffic. In addition, this section will show how the preferred alternative addresses the purpose and need by using data from traffic modeling. This will include tables and illustrative exhibits.

**Deliverable 5.6.8:**
1. One electronic Traffic write-up

5.6.9 Air
Contractor will answer the questions outlined in the State EAW for Air following the Air Quality guidance and template text outlined in the HPDP. Contractor will consult with Metro District Air Quality as needed. Contractor will prepare write-up for this section of the draft and final EA/EAW based on information from the tasks above.

**Deliverable 5.6.9:**
1. One electronic Air Quality write-up

5.6.10 Greenhouse Gas/Minnesota Infrastructure Carbon Estimator (MICE) Analysis
The Contractor will provide greenhouse gas analysis services using the MICE tool. This analysis will be done according to guidance provided at the MnDOT HPDP. The MICE spreadsheet tool and User Guide is available at: [https://www.dot.state.mn.us/environment/airquality/index.html](https://www.dot.state.mn.us/environment/airquality/index.html). The Contractor will provide analysis of project greenhouse gas emission quantities using the MICE spreadsheet tool. The Contractor will prepare a Greenhouse Gas write-up for inclusion in the EA/EAW using the Prepared Statements provided in the HPDP.

**Deliverable 5.6.10**
Exhibit A— Scope of Work and Deliverables

5.6.11 Noise
Contractor will answer the questions outlined in the State EAW for Noise following the Noise guidance outlined in the HPDP. At this time, it is assumed that the work types included in the project will not trigger a Type I noise analysis. The Contractor will consult with Metro District Noise Coordinator as needed. Contractor will prepare write-up for this section of the draft and final EA/EAW based on information from the tasks above.

**Deliverable 5.6.11:**
1. One electronic Noise write-up

5.6.12 Social Impacts
Contractor will obtain demographic data for the project area and analyze the data to determine if the project will cause substantial adverse impacts to a community or neighborhood in the project area. Contractor will also need to note if any categories of people uniquely sensitive to transportation will be unduly impacted. State and its partners do not anticipate there being any communities uniquely sensitive to transportation that would be impacted by the proposed project.

In addition, Contractor will identify and document community facilities that will be impacted by the proposed project.

**Deliverable 5.6.12:**
1. One electronic Social Impacts write-up

5.6.13 Considerations Relating to Pedestrians and Bicyclists
Contractor will document how the project incorporates pedestrian and bicycle populations, as part of the preferred alternative.

**Deliverable 5.6.13:**
1. One electronic Considerations Relating to Pedestrian and Bicyclists write-up

5.6.14 Environmental Justice
Contractor will follow MnDOT HPDP Environmental Justice Section Guidance steps one through seven to review and document required write up for Environmental Justice section. [http://dotapp7.dot.State.mn.us/eDIGS_guest/DMResultSet/download?docId=614585](http://dotapp7.dot.State.mn.us/eDIGS_guest/DMResultSet/download?docId=614585)

As part of the text, the Contractor will provide background information on the Environmental Justice Executive Order; document project area demographics and how they compare to city/county demographics; and summarize adverse and beneficial impacts. The analysis and text will need to make a conclusion, if the preferred alternative will result in adverse impacts being disproportionately borne by low-income or minority populations.

**Deliverable 5.6.14:**
1. One electronic Environmental Justice write-up

5.6.15 Economics
Contractor will prepare text in the environmental document for anticipated losses to economic activity in the project area and identify any businesses that will be impacted by the project and identify possible mitigation strategies during construction.

**Deliverable 5.6.15:**
1. One electronic Economics write-up.
Exhibit A—Scope of Work and Deliverables

5.6.16 Right of Way (R/W) Impacts
Contractor will identify the amount of potential acres of additional R/W that is needed for the project and the number of parcels along the corridor that will be impacted by the need for additional right of way.

Contractor will also prepare the text for the environmental document. The text will need to include information identified above as well as the following: discussion of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and 49 Code of Federal Regulations (CFR) Part 24; discussion of relocation assistance; and discussion of replacement housing/business location availability.

Deliverable 5.6.16:
1. One electronic R/W Impacts write-up.

5.6.17 Public, Agency and Stakeholder Involvement
Contractor will prepare text for the environmental document that describes the public and agency involvement in the project. This section of the document will describe how agencies and the public were involved in the decision making process through public open house meetings, TAC meetings, agency coordination meetings, city council meetings, the project website, project mailings, newspaper articles, the public hearing, and other efforts to involve the public.

Contractor will prepare text documenting the official comment period and public hearing on the document.

Text for this section will note the environmental document distribution and the processes that will continue beyond the public hearing.

Deliverable 5.6.17:
1. One electronic Public and Agency Involvement write-up.

5.6.18 Section 106 Review (Cultural Resources)
State’s Cultural Resources Units (CRU) will perform all of the cultural resources reviews for the project, including archaeology or architectural history surveys that CRU determines necessary, for completion of the Section 106 process. Contractor will use that information to write the cultural resources section of the environmental documents. CRU and State’s Historical Preservation Office correspondence will be included as an appendix to the environmental document.

Deliverable 5.6.18:
1. One electronic cultural resources impacts write-up.

5.6.19 Section 6(f)
Contractor is to review if there are any areas within project limits where LAWCON funds used in the construction of a Park Land. Contractor will check with NPS if LAWCON funds were used on boat launch area, check with Osceola if LAWCON funds were used on any parks. Contractor will write up those findings in the environmental document.

Deliverable 5.6.19:
1. One electronic Section 6(f) impacts write-up.

5.6.20 Federal and State (MN & WI) - Threatened and Endangered Species
State will supply correspondence regarding State and federally-listed species or designated critical habitat within the project counties and, if necessary, commit to a more detailed analysis during the EA process. Due to the complexity of the action, the potential for impacts to federally-listed species/designated critical habitat, and any
required field evaluations, it may not be possible to make the determination of effect prior to the publication of the EA. In this case the EA should describe the coordination between agencies and steps being undertaken in order to come to a determination.

Contractor will be responsible for coordinating with environmental offices to complete the Federal and State threatened and endangered Species Sections.

Planned activities to make a Section 7 Endangered Species Determination include:

- Bat, bumble bee and mussel survey
- Biological Opinions for each species with an adverse impact
- Full consultation with U.S. Fish and Wildlife Service (USFWS)

State will complete the required threatened and endangered species surveys and or hiring their own Contractor.

Deliverable 5.6.20:
1. One electronic Federal and State (MN & WI) - Threatened and Endangered Species

5.7 EAW Questions 1-20
Contractor will answer all remaining EAW questions that were not identified above and address with sufficient supporting data to determine whether the project will cause a significant environmental effect. State’s Metro District Environmental Coordinator will provide a sample copy as a base model.

EAW Questions 1-20
1-6. Project Information
7. Cover Type
8. Permits and Approvals
9. Land Use
10. Geology, Soils and Topography/Land Forms
11. Water Resources
13. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (rare features).
14. Historic Properties
15. Visual
16. Air
17. Noise
18. Transportation
19. Cumulative Potential Effects
20. Other potential Environmental Effects.

Deliverable 5.7:
1. One electronic EAW Questions 1-20 write up.

5.8 Draft and Final EA/EAW Document
Contractor will provide a draft EA/EAW for the proposed project. The draft document will be prepared for initial review by State. Edits will be addressed and a revised document will be provided. Revised document will be sent to FHWA (Joe Campbell anticipated FHWA Area Engineer) and WisDOT. Comments and edits will be incorporated. A document for public distribution will be prepared at the completion of this task.

Contractor will prepare and distribute paper and electronic copies of the EA/EAW for public comment as required. Contractor will also prepare and submit official notices (e.g., EQB Monitor) of the document’s availability as outlined on State’s HPDP website.
Exhibit A— Scope of Work and Deliverables

Deliverable 5.8:
1. Electronic and up to 5 draft hardcopies EA/EAW Document for each review
2. Up to 15 hardcopies and 25 DVD/CD of Final EA/EAW Document
3. The initial draft document will be reviewed electronically.
4. State make take up to 30 days to review

5.9 EA/EAW Public Hearing
Contractor will conduct and attend one public hearing meeting to be held in conjunction with the EA/EAW public comment period. The public hearing will be held in an open house format. Contractor will provide a court reporter. Contractor will provide meeting materials (comment form, sign-in sheets, handout, and exhibits) to State’s PM for review prior to the EA/EAW public hearing. Contractor will prepare a draft legal notice and press release. Contractor will publish the legal notice in project area newspapers, and obtain an affidavit of publication from project area newspapers. State will distribute press release to local media outlets. State’s PM will be responsible for signing the public hearing certificate of compliance. Contractor will provide a public hearing summary packet, including comments received, sign-in sheets, and display materials to State’s PM at the conclusion of the comment period. The public hearing should be referenced in the outreach and engagement strategy report and is considered in addition to the two project public information meetings listed in 2.1.7.5

Deliverable 5.9:
1. Public Hearing and Court Reporter
2. EA/EAW public hearing summary packet, including copies of comments received, sign-in sheets, and display materials.
3. Public hearing summary packet to be provided to State for project files

5.10 Draft Findings of Fact and Conclusions (FOFC) Document
Contractor will prepare a draft FOFC document, which is prepared after the formal review of an EA/EAW. The draft document will be prepared for initial review by State. Edits will be addressed and a revised document will be provided. Revised document will be sent to FHWA and WisDOT. Comments and edits from FHWA and WisDOT will be incorporated. A final FOFC will be prepared.

The FOFC satisfies the State’s environmental review requirements, and is also used in the federal review process as supporting material to request the Finding of No Significant Impact (FONSI) from FHWA. The HPDP’s format and necessary information must be followed for this document.

Deliverable 5.10:
1. One electronic Draft FOFC Document
2. Facilitate State and FHWA review and concurrence.

5.11 Responses to Comments and Final FOFC
Contractor will prepare a written summary of comments and responses to those comments based on comments made at the public hearing. Contractor will review the comments and responses with the sponsoring agencies and other agencies, as appropriate. Comments and responses will be incorporated into the FOFC.

Deliverable 5.11:
1. One electronic Response to Comments Document and Final FOFC
2. Facilitate State and FHWA review and concurrence

5.12 FONSI and Greensheets
Contractor will prepare a draft request for FONSI confirmation for the agencies to review.
Exhibit A— Scope of Work and Deliverables

In addition, the Contractor will prepare Greensheets in Excel spreadsheet format. The Greensheet is a detailed list of every commitment in the EA document, State will supply a sample Greensheet Excel spreadsheet.

Contractor will revise the FONSI and Greensheets request based on official comments from the State and FHWA. Contact State Metro District Environmental Coordinator for sample FONSI.

**Deliverable 5.12:**
1. One electronic FONSI and one electronic Greensheet Document
2. Facilitate State and FHWA review and concurrence

**5.13 Final Declaration on the need for an EIS**
Contractor will submit the final need for an Environmental Impact Statement (EIS) (FOFC and FONSI) based on the outcome of the EA/EAW process to the EQB. The Contractor will draft the letter to the EQB distribution list and all parties that commented on the EA. The Contractor will address and send the letter to all necessary parties through the U.S. mail.

**Deliverable 5.13:**
1. Draft and send final letter to EQB distribution list and all parties that commented on the EA
2. Final electronic FONSI and FOFC submitted to EQB

**6 Project Agency Permits, Approvals and other required documentation (Source Code 1010)**
Contractor will identify agency permits, approvals required coordination and documentation for the project.

1. Federal Highway Administration
2. NPS
3. U.S. Army Corps of Engineers
4. U.S. Coast Guard
5. U.S. Fish and Wild Life Service
6. FAA
7. Minnesota Department of Transportation
8. Wisconsin Department of Transportation
9. Minnesota Department of Natural Resources
10. Wisconsin Department of Natural Resources
11. Minnesota Pollution Control Agency
12. Minnesota State Historic Preservation Office
13. Wisconsin State Historic Preservation Office
14. Wetland Conservation Act Approval
15. County
16. City
17. Stakeholder and Special Interest Groups
18. Other

Contractor will summarize and prepare matrix summarizing the agency, standard, permit, document or coordination requirement, schedule, notes and action items. Matrix will be a living document reviewed and updated monthly at the PMT. A sample can be requested from the State.

In the strategy implementation section, Contractor will propose and implement the best approach to facilitate meeting coordination with permitting and approval agencies.

**Deliverable 6:**
1. Project Agency Permits, Approvals and other required documents matrix.
Exhibit A—Scope of Work and Deliverables

2. Electronic format in MS Excel 2013.
3. Monthly Review and updates

7 Surveys
Contractor will coordinate all work with State survey staff and field crew. Acquire State available survey data, review needs and submit survey request to the State. Conduct supplemental surveys which are determined to be needed to complete the project. Contractor survey work should conform to MnDOT level 2 Computer-Aided Design (CADD) standards.

7.1 Survey Data and Survey Requests (Source Code 1010)
Contractor will request, acquire and review from State DOT’s all existing available survey file information. Upon examination of the State delivered survey data, determine additional survey needs and submit survey requests to the State to conduct the survey work.

Survey requests of reasonable scope will be completed by the State in 10 working days, weather permitting. Utility surveys will be completed within 20 working days which allows time for Gopher State One Call (GSOC) design locates, meets, marking of utilities and follow up.

Deliverable 7.1:
1. Request and review from State DOT’s available survey data.
2. Determined survey needs and submit survey request.

7.2 Supplemental Surveys (Source Code 1021)
Upon examination of State delivered survey data and State available resources, Contractor will plan for and conduct up to 120 hours of supplemental field survey work beyond that which is called out in specific work deliverables which are determined to be needed to complete the project and as approved by the State’s PM.

Deliverable 7.2:
1. Conduct supplemental survey.

8 Utilities Analysis (Source Code 1195)
The Contractor will conduct a utilities analysis on the Preferred Alternative alignment including the following:

Data Collection – the Contractor will initiate a Gopher State One Call (MN) and Diggers Hotline (WI) to request maps information from utilities in the project area (MN & WI).

Contractor will send easement letter to each utility company in the project area and include a map of the area with the letter directed to Utility Coordinator for Metro.

Review Inplace Utility Information – the Contractor will follow-up with direct contact to each utility owner to obtain and verify information and drawings provided by utility owners.

Create Utility Owner Database – the Contractor will create a utility owner database in MS Excel listing the names, addresses, email, phone numbers and contact person of each utility in the corridor.

Survey Significant Inplace Utilities – the Contractor will submit to the State survey requests to conduct surveys to locate major inplace utilities including power transmission lines, gas lines and fiber optic to include overhead and underground utilities. See Survey deliverable Section 7.

Identify Major Utility Impacts – the Contractor will prepare a memorandum to inform the State of any major utility impacts that affect right of way needs for the State or the utility company. The memorandum will provide
Exhibit A— Scope of Work and Deliverables

the location and detailed information regarding the potentially impacted utility, the utility owner, and a contact with the utility. This will be present to the project team in conflict analysis meeting and provide the deliverables.

Prepare Utility Exhibits – the Contractor will map surveyed and approximate (distinguishing between the two) utility locations in a Micro station file. Additional textual information identifying the size and material type, owner, and functional details of the utility will be included in the file using the State's Geopak survey data base or at a minimum, using the State's utility symbology as per the State's CADD Standards.

Deliverable 8:
1. Provide the Gopher State One call and Diggers Hotline for MN and WI
2. Utility easement letters to each company in project area (See appendix A) e-mailed to State utility engineer
3. Excel format listing of all utility companies in the project area and requested data
4. Micro station 3D CADD map of the project area to include the method of data collection. (Map, Field shot, Potholed).
5. Conflict analysis meeting to review the Utility Matrix completed as part of the (See appendix B)
6. PDF map of overall area for conflict analysis meeting and exhibits

9 Wetland Delineation (Source Code 1071)
General Statement of Scope of Work:
Contractor will complete the Level 1 and 2 wetland delineation for the project, including work necessary to obtain permitting agency approval for the Level 2 wetland delineation.

State will provide:
1. Property access and permissions for work outside of State R/W on an as-needed basis.
2. Existing Level 1 and Level 2 wetland delineations within the project area.
3. Review and approval of the Level 2 draft and final wetland delineation report prior to submittal to the Technical Evaluation Panel (TEP).
4. State will distribute the final Level 2 wetland delineation report to members of the TEP and Corps of Engineers (COE).

Assumptions:
1. Level 1 and 2 wetland delineations will be conducted in an area as identified by project team.
2. Level 1 wetland delineation will not include report, on-site sampling, or photographs. Digital boundaries file only.
3. TEP will consist of a representative from the Board of Soil and Water Resources (BWSR), Wetland Conservation Act (WCA), Local Government Unit (LGU), MnDNR, WisDNR and other agencies as appropriate. Additionally a representative from the COE will be invited to the TEP.
4. Level 1 (off-site) delineations and verification can be completed outside of the growing season.
5. Level 2 delineation and approvals will take place during the growing season.
6. Pin flags will be placed, and left in place for delineated boundaries on the roadway edges.
7. No wetland permitting in this task.

9.1 Perform Level 1 Field Prep (Wetlands)
Contractor will meet with State’s PM and wetland staff to discuss project approach, timelines, and scope for Level 1 and 2 wetland delineations. Contractor will identify the aquatic resources within and adjacent to the project limits, including lakes, streams, ponds, ditches and wetlands. Contractor will complete desktop mapping including a Level 1 wetland delineation. Desktop mapping is defined as mapping the wetlands by reviewing existing documentation only from your desk and not doing any field observations. Resources used to locate basins for Level 1 Delineations could include: National Wetlands Inventory (NWI) mapping, DNR Public Water
Exhibit A—Scope of Work and Deliverables

Inventory (PWI) mapping, MnDNR MN Land Cover Classification System (MLCCS) mapping, County Soil Survey mapping, Floodplain Mapping, United States Geological Survey (USGS) Topographic Mapping, Current Aerial Photos, Historic Aerial Photos, and other resources identified by Contractor during Level 1 Field Prep work.

Deliverable 9.1:
1. Assemble the documents containing existing information about wetlands and produce an electronic map showing location and preliminary boundary of wetlands.

9.2 Perform Level 1 Field Work (Wetlands)
Contractor will field review Level 1 aquatic resource mapping. Contractor will confirm desktop delineation mapping with a field walk to review up to 15 areas. The field review may occur outside of the growing season, but apparent vegetation and topography will be analyzed to determine if boundary lines were drawn in the correct location or make changes as needed.

Deliverable 9.2:
1. Perform the field walk.
2. Standard: Aerial photo mapping.

9.3 Perform Level 1 Post Field (Wetlands)
Contractor will update Level 1 mapping to reflect field review. Level 1 wetland delineations will be reviewed by State’s wetland staff before the permitting agency coordination meeting.

Deliverable 9.3:
1. Level 1 Wetland Delineation Mapping, including the source files with the MS Excel wetland impact table, minus impact data, from the COE/WCA Joint Application.
2. Mapping to be done using State’s Level 1 Basic CADD Data Delivery Specifications and ArcMap compatible shapefile of the aquatic resources.
4. State Review before permitting agency coordination meeting.

9.4 Review of Level 1 Delineation for Impacts (Wetlands)
Contractor will identify all aquatic resources impacts, both permanent and temporary. In table format, data for each wetland must include type (Circular 39 and Eggers and Reed Plant Communities), location, size and potential impact amount (permanent/temporary and cut/fill). Mapping should include impacts, differentiating between permanent and temporary and cut and fill and basin and ditches.

Deliverable 9.4:
1. Aquatic Resources Impact mapping and table listing impacts.
4. State Review before permitting agency coordination meeting.

9.5 Early Coordination Meeting with Regulators (Wetlands)
Contractor will arrange, coordinate, and facilitate an Early Coordination/TEP meeting. Contractor will invite the State’s PM, Contractor’s Wetland Delineator, State’s Wetland Coordinator, State’s WCA LGU representative, BWSR TEP representative, Soil and Water Conservation District (SWCD) TEP representative, WisDNR and MnDNR TEP representative, MnDOT / MnDNR liaison and COE liaison for State. The meeting...
Exhibit A—Scope of Work and Deliverables

will occur before the preferred alternative is selected, but after preliminary layouts and preliminary wetland impacts are complete.

Contractor will give a presentation to explain where the aquatic resources are located on the project, more detailed design description and how impacts were minimized. Contractor will use the US COE coordination meeting checklist to be provided by State. State will provide the meeting facilities. Contractor will facilitate discussion with regulators to determine if there are any initial concerns or information that can be shared considering the information collected to date by Contractor. Contractor will coordinate with regulators regarding future TEP meetings, if necessary.

Contractor will provide minutes of the meeting to State’s PM and State’s Wetland Coordinator.

Deliverable 9.5:
1. Prepare and facilitate meeting including expectations noted in Project Management Meetings Section 1.7. State will provide meeting facilities.

9.6 Perform Level 2 Field Work (Wetlands)
Contractor will complete Routine On-site Determination Method (RODM) for each wetland with the potential for permanent impacts. Each delineation will be surveyed with a Global Positioning System (GPS) to sub-meter accuracy during the growing season (generally May to October 15th).

Contractor will delineate wetlands using the determination methodology and procedures described in the U.S. COE Wetland Delineation Manual (Technical Report Y-87-1, 1987) and in accordance with the methods identified in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by both the MN Wetland Conservation Act and Section 404 of the Clean Water Act.

Deliverable 9.6:
1. Delineate the wetland boundary. Mark the boundary by installing pin flags in the field, survey the boundary by using GPS surveying.

9.7 Perform Level 2 Post Field (Wetlands)
Following the field delineation, wetland features in the project area will be classified using two different methods: (1) one of eight types of wetlands of the U. S., USFWS Circular 39 Document by Shaw and Fredine, 1956, (2) Eggers and Reed Wetland Plant Communities of Minnesota.

Deliverable 9.7:
1. To be included in 9.9 Wetland Delineation Report
2. Level 2 Wetland Delineation Mapping, including transect information
3. Wetland Determination Data Forms
4. Format: Mapping to be done using State’s Level 1 Basic CADD Data Delivery Specifications and ArcMap compatible shapefile of the aquatic resources.
6. State Review before permitting agency coordination meeting.

9.8 Final Coordination Meeting with Regulators (Wetlands)
The purpose of this task is to get final approval of final wetland delineations. Contractor will arrange, coordinate, and facilitate a Final Coordination/TEP meeting. Contractor will invite the State’s PM, Contractor’s Wetland Delineator, State’s Wetland Coordinator, State’s WCA LGU representative, BWSR TEP
representative, SWCD TEP representative, Mn and Wis DNR TEP representative, MnDOT / MnDNR liaison and COE liaison for State. State will provide a brief presentation describing the Project.

Contractor will give a presentation to explain where the aquatic resources are located on the project, more detailed design description and how impacts were minimized (use the COE coordination meeting checklist). This should be a field site visit during the growing season for TEP approval of the delineation boundaries. Contractor will facilitate discussion with regulators to determine if there are any concerns or information that can be shared, considering the information collected to date by Contractor. Contractor will provide meeting minutes to State.

Deliverable 9.8:
1. One meeting with minutes.
2. Prepare and facilitate meeting including expectations noted in Project Management Meetings Section 9.

9.9 Write report Documentation (Wetlands)
Contractor will prepare Wetland Delineation Report. The report will include identification of the aquatic resources and Level 2 wetland delineations.

Deliverable 9.9:
2. The complete report will be packaged using Electronic Adobe Acrobat document (pdf file extension). The source files for the PDF will be MS Word 2013 (docx file extension), and MS Excel 2010 (xlsx file extension). Five hardcopies.
4. State Review before permits are submitted.

10 Existing Traffic Conditions (Source Code 1016)
Contractor will review and develop a traffic summary that discusses existing traffic conditions, review of peak and seasonal spikes, any heavy and commercial vehicle use, any field observations, and explains any existing geometric and operational deficiencies. Summary will be used to start purpose and need considerations, alternative evaluation criteria considerations, Traffic Forecast and ESALS, TMP needs.

Deliverable 10:

11 Develop Travel Demand Forecasts (Source Code 1015)
Contractor will collaborate with State on travel forecast methodology and assumptions consistent with State guidelines and best practices. Contractor will utilize the Met Council’s Regional Activity-Based Travel Demand Forecasting model (ABM), which encompasses nineteen counties in and around the twin cities metropolitan area, including Chisago and Polk (WI) Counties. Contractor will submit travel demand forecasting models, methodologies, assumptions and results for State review and approval. Forecasts must be approved prior to using for any purpose including, but not limited to, capacity analysis, ESAL calculations, concept development and evaluation, public information, and project development.

Model Verification and Validation - Contractor will verify the 2015 and 2040 No Build network assumptions with State. State will provide the most current Base Year (2015) and 2040 networks for Contractor to model. Contractor will review the 2015 and 2040 networks for coding errors within the study area for accuracy and correct accordingly. Corrected networks will be re-run and validation rechecked. Contractor should anticipate running up to three model scenarios.
- 2015 Base year / Existing Conditions (model validation purposes)
Exhibit A—Scope of Work and Deliverables

- 2040 Forecast (Existing network plus programmed and planned improvements from fiscally constrained TPP)
- 2025/Opening Year Forecast (Existing network plus programmed and planned improvements completed as of 2025). If minimal network changes are anticipated for the study area, it may be acceptable to interpolate opening year forecasts from the base year and 2040 forecasts.

Socio-Economic Assumptions - Contractor will review 2040 Socio-economic data assumptions with State, County and local officials. Contractor will ensure the regional ABM is consistent with 2040 forecasted SE data control totals by municipality.

Technical Memo - Contractor will prepare a brief (less than 10 page) technical memorandum to summarize the travel demand forecast model methodology, preparation, assumptions, validation results, and model output results. The technical memorandum will include a section summarizing the 2040 Socio-economic data and network assumptions used in the travel demand model.

The document will adhere to guidelines and address the reasonableness checks as indicated in the May 10, 2006 MnDOT Memo "Revised Guidelines for Twin City Travel Demand Forecasts Prepared for the Metropolitan District". Traffic forecasts are not complete until the travel demand methodology, assumptions, and checks for reasonableness, described within the Traffic Forecasting Memo, are reviewed and approved by Metro District staff.

Deliverable 11:
1. Technical Memo detailing the travel demand modeling results
2. All altered modeling files required to replicate results
3. State will provide regional ABM files and Documentation

12 TMP (Source Code 1254)
Contractor will develop the TMP. Follow the State Metro TMP process described on this website: [http://www.dot.State.mn.us/metro/trafficeng/control_striping.html](http://www.dot.State.mn.us/metro/trafficeng/control_striping.html)

12.1 TMP Report
Contractor will review Project Timeline outlining TMP process and development in conjunction with overall project development schedule.

Contractor will review TMP Process and Components – Summary of State Metro Districts TMP process and what is included in a TMP.

Contractor will review TMP level guidelines, gain concurrence from both State DOT’s and FHWA (if required).

Contractor will review and complete the TMP Scoping Worksheet, TMP Worksheet, Work Zone Minimizations Strategies, Red Flag Checklist, and TMP Report using the TMP templates, all of which are found on the website.

Contractor will evaluate and document discussion on the layout alternatives and how traffic management and staging alternatives may or may not change between them. This information may be used in the preferred alternative selection and write up in the environmental document.

Contractor will create a DRAFT and Final TMP report for the for the preferred layout alternative. State DOT’s and FHWA (if required) will review and provide comment on the DRAFT report.

Deliverable 12.1:
12.2 Staging Alternatives Analysis and Traffic Impact Analysis Report

Contractor will prepare Staging Alternatives Analysis and Traffic Impact Analysis Report. The purpose of this report is to analyze the preferred staging alternative to assist stakeholders in making an informed decision on staging alternative selection that balances the road user costs of restrictions in traffic operations during construction with mitigation costs of alleviating those restrictions. The report will identify and analyze impacts from construction staging on the trunk highways and local roads systems, and provide appropriate mitigation recommendations.

The results from traffic modeling will be summarized by the Contractor using metrics that are understandable to the general public. These metrics will demonstrate the Road User Cost (RUC) of each of the staging alternatives. The main body of the report will include the performance metric for each alternative and the appendices will include a full set of the technical data.

Contractor will work with State’s PM and Construction Traffic Control Coordinator to identify staging option geometrics and traffic control, and Contractor will consider impacts from other DOT construction projects or local projects in considering staging alternatives.

Contractor will obtain, collect and summarize traffic volume data on selected trunk highway and local roadways in both MN and WI.

Contractor will perform a validation check on the accuracy of the existing conditions model (for example ABM or Dynamic Traffic Assignment Model, or equivalent model) to reflect existing observed conditions. Software packages such as such as Appropriate modeling software will need to be discussed and approved by both MnDOT and WISDOT.

Contractor will use calibrated and validated modeling to estimate traffic pattern changes, and report quantitative performance measures for each staging option, such as RUC and vehicle delay.

Contractor will develop proposed detour and calculate the approximate detoured traffic volume and length of the detour for State’s use for agreements with local agencies, and produce maps depicting the proposed detour, locations and magnitudes of traffic pattern shifts for the construction staging scenarios.

Contractor will prepare a technical memorandum documenting the methods, assumptions, data, and results of the construction staging traffic modeling. Contractor will provide a recommended staging option, trunk highway and local roadway impact and appropriate mitigation recommendations.

Deliverable 12.2:
1. One electronic DRAFT and Final report with TMP worksheets
2. MS Word 2013 document (docx extension). Complete package in Adobe Acrobat (pdf extension)
Exhibit A— Scope of Work and Deliverables

Contractor will develop river access alternatives including any impacts, mitigation and permitting requirements. Contractor will evaluate and develop for all alternatives considered preliminary staging approaches documenting impact considerations ranging from environmental, permitting, mitigation considerations, river access, constructability, time of construction, one construction season vs. two, traffic impacts, and schedule. Summary will be used in the alternative evaluation criteria considerations and environmental documentation.

Contractor will develop a recommended preliminary staging approach, layouts and summary report including mitigation considerations for the preferred alternative. Layouts will be an attachment in the report and used as presentation material. Report and layouts will be the baseline for final design.

Deliverable 13:
1. Preliminary alternatives staging evaluation summary
2. Preferred alternative recommended staging approach, layouts and summary report

14 Geometric Layouts (Source Code 1140)
Contractor will prepare concept roadway and bridge geometric layout, profile and cross sections for each alternative to be screened concurrent with alternative evaluation process. Once an alternative is selected, Contractor will develop and process Preliminary and Final Staff approved roadway and bridge Geometric Layout, profiles, cross sections and construction limits.

Contractor will facilitate and coordinate all required expertise and meetings including both MN and WI DOT’s standards and approval process.

Minimum Assumptions:
1. One submittal of each Concept Geometric Layout and profile will be provided. Comments received will be resolved and incorporated.
2. Two submittals of each Preliminary Geometric Layout and Profiles will be provided. Comments received from each of the submittals will be resolved and incorporated.
3. Two submittals of the Final Geometric Level 1 Staff Approved Layout, profiles cross sections and profiles will be provided that incorporates the comments received. Comments received will be resolved and incorporated.
4. State’s PM will provide a comprehensive comment list for each deliverable.
5. Contractor will coordinate all comment resolutions and provide a comprehensive comment response letter or matrix for each deliverable addressing its response to each comment.
6. Assumes at least 1 Layout Direction meeting with States and functional groups to review geometrics concept moving in to preferred alternative.
7. Assumes 3 meetings with LAC (one for Concept, one for Draft, and one for Final Staff approved layout), profiles, cross sections and construction limits.
9. State CADD Level II standards. Must use GEOPAK.
10. Electronic copies are to be delivered in 100 scale in both Adobe Acrobat (pdf extension) and MicroStation/GEOPAK formats.
11. Hardcopies to be delivered folded and in 100 scale in one continuous roll plot with layout and profiles on separate roll plots.
12. Contractor will create an electronic file project directory structure consistent with State naming and file structure for file submittal and storage.
13. Layout will include location and size of wet/dry ponds and infiltration basins to meet regulatory agency requirements and determine construction limits and right of way needs.
14. Contractor will provide the State with GEOPAK Drainage data files used in the hydraulic analysis/design, and analysis of the location and size of water quality and retention ponds.

14.1 Concept Geometric Layouts
Contractor will develop, prepare and process for review from the States and other stakeholders concept roadway and bridge geometric layouts for each alternatives to be screened that incorporate identified project needs, minimization and avoidance considerations, alternative evaluation and logical termini requirements (see Project Background and 12.5). The list includes, but not limited to the following alternatives to be screened:

- No build
- Reuse existing bridge substructure, replace superstructure
- Replace bridge on current alignment
- Replace bridge on new alignment north of existing bridge
- Replace bridge on new alignment south of existing bridge
- Consideration of an additional left turn lane at NPS Boat Entrance
- Addition of bike and pedestrian facilities
- Perpetuate existing wayside rest area

The Contractor will summarize the concept alternatives evaluated, submit for review by the States and other projects stakeholders, and summarize the rationale for selection of the preferred alternative. Concepts layouts will be an attachment to the summary report. States will review and provide comments.

Deliverable 14.1:
1. Electronic copy of each alternative to be screened with aerial photography. At least two hardcopies of each alternative with aerial photography.
2. To be completed in conjunction with the Alternatives Evaluation deliverable.
3. Agency review and incorporate comments, Comment Response letter or matrix
4. Concept alternative summary for the selection of the preferred alternative with layout attachment.

14.2 Preliminary Geometric Layout and Profiles
Upon approval of the preferred alternative, the Contractor will prepare and process for review from both States and other stakeholders a preliminary roadway and bridge geometric layout and profile and cross sections.

Contractor will make the necessary changes from the review comments received on the preliminary layout. Contractor will develop the layouts to the same level of detail as a Staff Approved Layout with profiles. Contractor will show coordinate-correct aerial photography on the layouts. Layout will incorporate location and size of wet/dry ponds and infiltration/filtration basins. Types of pond and basins will be indicated on the layout.

Deliverable 14.2:
1. Electronic copy of each alternative with aerial photography. One electronic copy of each alternative without the aerial photography and the file size minimized to allow for easy downloading from the internet. At least two hardcopies of each alternative with aerial photography.
2. To be completed in conjunction with the Alternatives Evaluation deliverable.
3. Agency review and incorporate comments, Comment Response Letter or Matrix

14.3 Final Geometric Level 1 Staff Approved Layout, Profiles and Construction Limits
The Contractor will develop and process for signatures a Final Geometric Level 1 layout, profiles, cross sections and identify construction limits for the preferred alternative for staff approval. Layout will incorporate hydraulic design analysis, location and size of water quality and retention ponds.

Deliverable 14.3:
Exhibit A—Scope of Work and Deliverables

1. Electronic copy and at least two Hard Copies of Staff Approved Layout with aerial photography.
2. To be completed in conjunction with the Alternatives Evaluation deliverable.
3. Agency review and incorporate comments, Comment Response Letter or Matrix Contractor Update

15 Design Memorandum (Source Code 1150)
Contractor will prepare and process for approval the design memorandum for the preferred alternative documenting the current and proposed design standards. Contractor will follow the requirements described on State’s Geometric Design & Layout Development website. Contractor will explain the design exceptions within the project limits including any existing design exceptions that will be left as-is.

Contractor will provide one draft submittal of the design memorandum based on the preferred alternative. Upon receipt of State comments, Contractor will provide one final submittal of the design memorandum.

Deliverable 15:
1. One electronic copy and one official hardcopy for signature.

16 3D Corridor Model, Cross Sections and Construction Limits (Source Code 1200)
Contractor will develop and complete 3D corridor model, cross sections and construction limits in conjunction with the Alternatives Evaluation deliverable and Layout Development.

16.1 3D Corridor Model, Cross Sections and Construction Limits of Alternatives
Contractor will prepare a 3D corridor model and cross sections for the preliminary geometric layout alternatives. The level of detail needed is just enough to describe and compute where retaining walls are required, and construction limits at any points where it is believed the work will require additional R/W, and enough detail to compute costs in the LWD cost estimates. Contractor does not need to run cross sections for the entire length of the project or compute earthwork quantities on this task. The retaining walls will be shown on the preliminary geometric layout alternatives. Contractor will create a MicroStation construction limit file that only shows construction limits that go beyond the State R/W. Contractor will show these construction limits on the preliminary geometric layout alternatives.

Deliverable 16.1:
1. Electronic file corridor model and copy of cross section set for each alternative with retaining walls and construction limits transferred onto the preliminary geometric layout alternatives.
2. Electronic copies are to be delivered in both Adobe Acrobat (pdf extension) and MicroStation/GEOPAK formats.

16.2 3D Corridor Model, Cross Sections and Construction Limits for Staff Approved Layout
Contractor will prepare a 3D corridor model and cut cross sections for the staff approved layout. In addition to the detail described in the cross sections for alternatives tasks, Contractor will provide enough detail to compute the quantities described in the 30% Quantities Based Cost Estimate task. Contractor will create cross sections for the entire project length and scope including earthwork for drainage facilities. Contractor will create a continuous construction limit line for the entire length and scope of the project and show on the Staff Approved Layout.

Deliverable 16.2:
1. Electronic file corridor 3D corridor model and copy of Cross sections with construction limits shown on the staff approved layout. One electronic copy with any retaining walls transferred onto the staff approved layout.
Exhibit A—Scope of Work and Deliverables

2. Electronic copies are to be delivered in both Adobe Acrobat (pdf extension) and MicroStation/GEOPAK formats.

17 Right of Way (Source Code 1003)
State is responsible for preparing the existing R/W map and CADD files. Contractor will create construction limits as discussed in this RFP and herein. Contractor will provide CADD files and cross section files, coordinate with State R/W Office in the evaluation of potential right of way needs for both concept alternatives and preferred alternative. Proposed construction limits should lead to discussion of potential acquisition size and type for concept and preferred alternative evaluation.

Deliverable 17:
1. R/W construction limits and right of way need considerations
2. CADD files and coordination with State right of way office.
3. To be completed in conjunction with Layout Development.

18 Water Resources (Source Code 1141)
Responsibilities for the Water Resources Work Package include performing preliminary hydraulics by the Contractor. Contractor will research and document the existing drainage to and from the project site, review and document the stormwater treatment requirements, determine the locations and type of stormwater treatment required for each of the alternatives and determine floodplain impacts and mitigation areas.

For the selected alternative, Contractor will prepare a drainage overview map based on the selected alternative, preliminary design treatment areas with proposed contours and indicating normal water level (NWL), High Water Level (HWL) and bottom elevation, determine R/W needed for treatment and culvert extensions/stormwater piping, determine if existing infrastructure needs to be increased in capacity, determine utility impacts and prepare a drainage report.

Contractor will divide the project between impervious surface addition/reconstruction in MN and impervious surface addition/reconstruction in WI. The appropriate regulations will be followed for each State and the treatment areas for each located within the respective State, i.e. MN new impervious/reconstructed impervious provided in MN and WI new impervious/reconstructed impervious provided in WI.

Since the Osceola Bridge over the St. Croix River is being replaced and the St. Croix River is a Wild and Scenic River and Lake St. Croix is an impaired water, Contractors will design all drainage to be routed off the bridge and collected and treated before discharge to the river.

In the event of a conflict between the standards set forth relating to drainage, follow the order of precedence as set forth below:

A. MnDOT Special Provisions
B. MnDOT Technical Memoranda
C. MnDOT Standard Specifications for Construction
D. MnDOT Drainage Manual
E. MnDOT Road Design Manual
F. MnDOT Standard Plates Manual
G. MnDOT Load Factor and Resistance Design (LRFD) Bridge Design Manual
H. American Association of State Highway and Transportation officials (AASHTO)
I. LRFD Bridge Design Specifications
J. MnDOT Pavement Manual
K. MnDOT Geotechnical and Pavement Manual
L. MnDOT State Aid Manual

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M. MnDNR Best Practices for Meeting DNR General Public Waters Work Permit
N. MPCA Minnesota Stormwater Manual
O. FHWA Hydraulic Design Series No. 7, Hydraulic Design of Safe Bridges
Q. FHWA Hydraulic Design Series No. 3, Design Charts for Open Channel Flow
R. FHWA Hydraulic Engineering Circular Number 14 (HEC-14), Hydraulic Design of Energy Dissipaters for Culverts and Channels
S. FHWA Hydraulic Engineering Circular Number 15 (HEC-15), Design of Roadside Channels with Flexible Linings
T. FHWA Hydraulic Engineering Circular Number 17 (HEC-17), The Design of Encroachments on Flood Plains using Risk Analysis
U. FHWA Hydraulic Engineering Circular Number 18 (HEC-18), Evaluating Scour at Bridges
V. FHWA Hydraulic Engineering Circular Number 21 (HEC-21), Design of Bridge Deck Drainage Systems
W. FHWA Hydraulic Engineering Circular Number 22 (HEC-22), Urban Drainage Design Manual
X. FHWA Hydraulic Engineering Circular Number 23 (HEC-23), Bridge Scour and Stream Instability Countermeasures: Experience, Selection and Design Guidance, Volumes 1 and 2
Y. U.S. Geological Survey (USGS), Generalized Skew Coefficients for Flood-Frequency Analysis in Minnesota

18.1 Software Requirements

Choose drainage design software from the following table:

<table>
<thead>
<tr>
<th>Software</th>
<th>Possible Vendor</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOPAK Drainage</td>
<td>Bentley</td>
<td>• Rational method hydrology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Inlet design and spread analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Storm drain pipe design and hydraulic grade line analysis</td>
</tr>
<tr>
<td>Flowmaster</td>
<td>Bentley</td>
<td>• Inlet design and spread analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Channel/pipe critical and normal depth, capacity</td>
</tr>
<tr>
<td>HydroCAD</td>
<td>HydroCAD Software Solutions LLC</td>
<td>• Generate NRCS (SCS) hydrograph</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop stage-storage and stage-discharge for ponds</td>
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<tr>
<td></td>
<td></td>
<td>• Combine/route hydrographs through ponds and channels</td>
</tr>
<tr>
<td>XP-SWMM</td>
<td>XP-Software</td>
<td>• Generate NRCS (SCS) hydrograph or model historical storm</td>
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<tr>
<td></td>
<td></td>
<td>• Dynamic routing of hydrographs through ponds, pipes, and channels</td>
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<tr>
<td></td>
<td></td>
<td>with varying tailwater/flow conditions</td>
</tr>
<tr>
<td>CulvertMaster</td>
<td>Bentley</td>
<td>• Analyze headwater and hydraulics for single or multiple culverts</td>
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<td></td>
<td></td>
<td>and/or road overtopping</td>
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<tr>
<td></td>
<td></td>
<td>• Design pipe size based on maximum headwater</td>
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<tr>
<td>HY-8</td>
<td>FHWA</td>
<td>• Analyze headwater and hydraulics for single culvert, multiple barrels,</td>
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<td></td>
<td></td>
<td>broken back culverts and/or road overtopping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Design pipe size based on maximum headwater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Energy dissipater design</td>
</tr>
<tr>
<td>HEC-RAS</td>
<td>COE</td>
<td>• Water surface profiles for steady or unsteady flow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Analysis of bridges, bridge-culverts, and culverts</td>
</tr>
</tbody>
</table>
Exhibit A—Scope of Work and Deliverables

18.2 Water Resources and Environmental Agency Meeting Requirements
Contractor will coordinate a kick-off meeting with MN and WI State Water Resources Engineering staff.
Contractor will prepare for and facilitate an Environmental Agency Kick-off Workshop. The workshop will focus on project purpose and need, preliminary alternatives, agency regulations, and environmental and engineering issues relevant to the study area as part of the project.
Contractor will prepare for and facilitate an Environmental Agency Progress Review Meeting upon direction from the State’s PM. The meeting will focus on alternatives decision-making and refinement, including potential mitigation measures relevant to ongoing development of environmental documentation.
Contractor will prepare for and facilitate, as needed, up to two additional meetings with environmental agencies including but not limited to WI and MN DNR, US Fish and Wildlife Service, NPS, or other stakeholders, to address environmental issues. These could include, but are not limited to meetings with COE staff to discuss/get concurrence regarding purpose and need, alternatives, identification of the Preferred Alternative (Corps’ concurrence regarding Least Environmentally Damaging Practicable Alternative (LEDPA) and mitigation.
Schedule additional meetings, as needed, to coordinate closely with MN and WI State Water Resources Engineering staff.

18.3 Data Collection
Contractor will identify all water resources issues, utilizing available data, including water quality requirements as imposed by State, and federal government regulations; National Wetland Inventory (NWI) and other wetland/public waters inventories; and official documents concerning the project, such as the environmental studies.
Acquire information on municipal drainage systems draining to the project and watershed standards and rules.
Water resource issues include, but are not limited to, areas with historically inadequate drainage (flooding or citizen complaints), environmentally sensitive areas, localized flooding, and maintenance problems associated with drainage, erosion areas and areas known to contain contaminated soil or water. Identify watershed boundaries, MN and WI DNR public waters, county ditches, jurisdictional ditches, areas classified as wetlands, impaired waters (based on total maximum daily load (TMDL), special waters, contaminated soil areas, groundwater table elevations where treatment areas are proposed, floodplains, karst areas, Emergency Response Areas (ERA) and Drinking Water Supply Management Areas (DWSMA). This includes the degree of vulnerability of each DWSMA throughout the project area.
Contractor will acquire existing storm water drainage plans and survey data, including all data on culverts, ditches, and storm sewer systems within the project area. Determine existing drainage areas that contribute to the highway drainage system and the estimated runoff for design of the system. Determine existing and preliminary proposed impervious area, reconstructed impervious area and water quality treatment volumes.
Contractor will perform a field walk to review existing conditions and prepare survey request.
ESRI Geographic Information Systems (GIS) shapefiles of storm drainage features in the Minnesota project area that have been recorded in the Transportation Asset Management System (TAMs) HYDINFRA database will be provided by State. Existing plans and information on the existing drainage infrastructure in WI will be provided by WisDOT and the City of Osceola, WI.

18.4 Permit Requirements, Identification and Documentation
Contractor will identify which permits will be required by the project work including but not limited to: MN Pollution Control Agency (MPCA) permits, MN DNR permits, WI DNR permits, Army COE permits, Wetland...
Exhibit A—Scope of Work and Deliverables

Conservation Act approval. Summarize the design standards that will be used for the treatment features based on the permit requirements.

Contractor will prepare a matrix of the design standards and treatment to be provided including but not limited to: MPCA permit requirements and WI DNR requirements, showing the treatment site name, amount of treatment required and the treatment to be provided at each location.

18.5 Soil Borings and Piezometers
Contractor will obtain soil borings which will be needed where infiltration, filtration and wet ponds are proposed. Contractor will obtain soil borings where stormwater trunk line piping is proposed. Contractor will include Piezometers and groundwater elevation data from them which will be needed where infiltration areas are proposed. Contractor will provide two years of automated monitoring data. Refer to section 25 foundations investigations for soil borings deliverable.

18.6 Detailed Hydraulic Analysis
The Contractor will conduct a hydraulic study on the Preferred Alternative alignment using the software shown in section 18.1. This task will include, but not be limited to the following:

A. Determine drainage area boundaries.
B. Determine existing and future surface water runoff.
C. Locate water features and drainage infrastructure.
D. Determine preliminary sizes and locations of culverts, drop inlets, storm sewer, outfalls and other drainage structures. Study will include a table listing the location, size, type, slope, computed headwater, 2-year, 50-year, and 100-year discharges (existing and proposed) and preliminary invert elevations of each culvert and outfall.
E. Identify preliminary location and size of rate control and volume/water quality treatment basins that would be placed in advance of the receiving water bodies, including preliminary grading sufficient to establish construction limits and R/W needs.
F. Identify and determine limits of required R/W.

18.7 Drainage Overview Map
Contractor will submit a Project Drainage Overview Map to States for acceptance based on the preferred alternative. The Project Drainage Overview Map serves as the base plan for final drainage design. Show the existing and proposed drainage features including but not limited to: culverts, ditches, storm sewer, outfalls, drop inlets, catch basins and proposed wet ponds, dry ponds, infiltration basins and filtration basins. Include drainage areas, time of concentration and contributing flows of existing and proposed drainage infrastructure. Show floodplain, wetland, jurisdictional ditches and all Public Water areas. Show floodplain and wetland impacts from the project and proposed mitigation within the map extents. Show outstanding resource value waters, special waters, and impaired waters within one mile of the project that receive project runoff.

18.8 Drainage Feature Layouts
Contractor will show the proposed wet, dry, filtration and infiltration treatment features on the layout alternatives and preferred concept layouts.

18.9 Preliminary Drainage Design Report
Contractor will prepare a Preliminary Drainage Design Report signed by a MN and WI licensed Professional Engineer, which is a record set of all drainage computations, both hydrologic and hydraulic, and all supporting data. Submit a draft Preliminary Drainage Design Report for review by MN and WI DOT’s Water Resources Engineering staff. Submit a Final Drainage Design Report at the conclusion of the contract work. Include all electronic modeling files and the following within the Report:
Exhibit A— Scope of Work and Deliverables

A. Hydraulic notes, models, and tabulations
B. Summary of soil types within each proposed infiltration and filtration area
C. Depth to groundwater at each treatment facility location
D. Location map with limits of DWSMA’s and their vulnerability classifications and any ERA’s within the project limits
E. Summary of contaminated soil investigation check for proposed treatment areas
F. Summary of investigation into any karst areas within project limits
G. Locations where existing infrastructure will require increased capacity. Storm sewer and culvert preliminary locations and sizing.
H. Pond designs, filtration designs, infiltration designs – grading, NWL, HWL, bottom elevation and basis for design.
I. Floodplain impact and mitigation calculations and locations
J. Wetland impact and mitigation calculations and mitigation banks.
K. Complete set of calculations and detailed drainage area maps showing pre and post drainage conditions, including electronic files
L. Correspondence file
M. Memo documenting the watershed district rules, watershed management organization standards, MPCA National Pollution Discharge Elimination System (NPDES) permit requirements and WI DNR requirements that will be in effect at the time of the proposed construction and used as the basis of the project design.
N. Matrix of design standards using watershed district rules, MPCA permit requirements and WI DNR permit requirements, showing the treatment site name, amount of treatment required and the treatment to be provided.
O. Summary and MicroStation file showing limits of any R/W needed for proposed treatment sites, storm sewer piping or culvert extensions.
P. Excel spreadsheet of existing drainage infrastructure with repair, lining, replacement and erosion control recommendations.

18.10 Design Requirements
Contractor will use design requirements and design facilities compatible with existing drainage systems adjacent to the project and preserve existing drainage patterns wherever possible unless approved by the State’s Water Resources Engineer.

Stormwater Storage and Treatment Facilities:
A. Construct all stormwater storage facilities (wet ponds, infiltration basins, filtration basins and etc.) with a minimum of two feet of vertical freeboard above the HWL of a 100-year, 24-hour storm event to the berm crest (continuous flat surface).
B. Construct stormwater storage facilities with a minimum berm crest width of five feet.
C. Provide a wet pretreatment pond prior to all infiltration and filtration basin features, unless another method is approved by the State Water Resources Engineer.
D. Underground structural stormwater storage and/or infiltration facilities will not be utilized on this project.

Wet Stormwater Ponds and Filtration Basins
A. Line stormwater ponds and filtration basins if they are located within a very high or a high vulnerability area of a DWSMA, within an ERA or located within contaminated soils.
B. Provide a minimum of depth from the 1 NWL to the pond bottom of at least three feet and a maximum depth of 10 feet.
C. For areas not addressed in the Technical Memorandum for wet ponds, provide a 1:10 (V:H) bench extending from the NWL 10 feet horizontally into the ponds, 20 feet preferred, with other slopes no steeper than 1:3 (V: H), 1:4 slopes preferred.
Exhibit A— Scope of Work and Deliverables

D. Base filtration rates for the design of the filtration basin on the MPCA Stormwater Manual design infiltration rates. Base ponding depth within the filtration basin on the design infiltration rate and a 48-hour drawdown period.

Infiltration Basins
A. Infiltration basins cannot be located within a very high or a high vulnerability area of a DWSMA or within an ERA. If in other DWSMA vulnerability areas, written permission must be received from the corresponding City before locating there. Infiltration is also not permitted in areas with soil or groundwater contamination, karst, within three feet of groundwater table, in Hydrologic Soil Group D, where soil infiltration rates are more than 8.3 inches per hour without modification, within 200 feet of a private water supply well, within 100 feet from a septic system, or within 100 feet of buildings or building foundations.

B. Base infiltration rates for the design of the infiltration basins on measured infiltration rates along with the MPCA Stormwater Manual correction factor or use the MPCA Stormwater Manual design infiltration rates.

C. Provide an overflow to limit water depth in the infiltration basin such that the water elevation is above the surface for no more than 48 hours.

18.11 Hydrologic Methods
Contractor will design the drainage system so pre-Project conditions are not exceeded for flood damage potential. Use design frequencies, rainfall intensities, and design storm criteria specified in the MnDOT Drainage Manual and MnDOT Technical Memoranda that supersede the Drainage Manual.

Design stormwater storage and treatment facilities using the Atlas 14, 100-year, 24-hour rainfall event with an antecedent moisture condition of 2.

18.12 State will provide
1. TAMS HYDINFRA inventory table and map of existing Minnesota drainage systems with asset information including material type, dimensions, coordinates and condition ratings
2. Copy of plans for existing drainage systems in Minnesota and Wisconsin
3. Existing soil boring information
4. Any known existing drainage flooding and erosion issue areas

Deliverable 18:
1. Drainage Overview Map (two copies in MicroStation and PDF format)
2. Drainage Design Report including all models and model files (two hardcopies and two electronic copies). Supply the report as a bound document and include all stormwater models organized by design topic.
3. Utility conflict checks provided in electronic format using MS Word (.docx extension).
4. Show stormwater treatment features on all layouts
5. Additional soil boring logs and piezometer readings
6. WRE Scoping Worksheets and excel spreadsheet of existing drainage infrastructure with repair, lining, replacement and erosion control recommendations

19 Cost Estimates (Source Code 1003)
Contractor will deliver cost estimates for each concept, draft and preferred alternative. Bridge estimating and life cycle cost analysis is noted in the Bridge scope.

19.1 Cost Estimates for Concept Alternatives
Contractor will prepare cost estimates for each draft concept preliminary geometric layouts. Contractor will use State Metro’s LWD cost estimate template and methodology or as proposed by Contractor and approved by the State PM. Cost estimates for bridges will need to be reviewed with the bridge office. Document and justify estimating assumptions.
Exhibit A—Scope of Work and Deliverables

Deliverable 19.1:
1. One electronic copy of the LWD estimates for each alternative.
2. Electronic files in MS Excel 2010 (xlsx extension)
3. To be completed in conjunction with the Alternatives Evaluation deliverable.

19.2 Cost Estimates for Draft Alternatives
Contractor will prepare final preliminary cost estimate for each of the draft preliminary geometric layouts. Contractor will use State Metro’s LWD cost estimate template and methodology or as proposed by Contractor and approved by the State’s PM. Cost estimates for bridges will need to be reviewed with the bridge office. Document and justify estimating assumptions.

Deliverable: 19.2:
1. One electronic copy of the LWD estimates for each
2. Electronic files in MS Excel 2010 (xlsx extension)
3. To be completed in conjunction with the Alternatives Evaluation deliverable.
4. Contractor Update: See final preliminary geometric layouts task.

19.3 30% Quantities Based Cost Estimate
Contractor will prepare one 30% quantities based cost estimate for the Staff Approved Layout using the State Design and Estimating Office Quantities estimating method which is to be reviewed with Metro Cost Estimating Unit.

This method requires Contractor to compute the quantities from the TRNS*PORT bid items that are normally used to create a final plan Statement of Estimated Quantities. Contractor will review with the State on the use of Average Bid Prices for Awarded Projects and document and justify estimating assumptions.

Example of items the Contractor will compute:
1. Earthwork quantities based on the cross section deliverable including common excavation, subgrade excavation, common embankment, granular borrow, topsoil borrow, and including excavation needed for storm water treatment and ponding
2. Aggregate base
3. Bituminous pavement items
4. Pavement item
5. Bridge/Structures
6. Quantities for bridges based on General, Plan, and Elevation (G, P, & E) bridge sheets and including anticipated foundation types and walls
7. Drainage items including various storm sewer sizes, storm sewer structures, and culverts
8. Trails
9. Mobilization
10. Removals
11. Other concrete items
12. Turf and erosion control, vegetation and landscaping
13. Miscellaneous signing, fencing, and appurtenances
14. Lighting
15. Signal systems
16. Pedestrian ramps
17. Traffic management systems
18. Maintenance of traffic
19. Mitigation
Exhibit A—Scope of Work and Deliverables

Contractor will identify assumptions and risk items at 30% quantities based cost level estimate. Contractor will work with the State to set up appropriate statement of estimated quantities groups based on approved layout and funding. Contractor will get input from applicable functional groups and revise estimate based on comments.

Deliverable 19.3:
1. One electronic copy of the 30% Quantities Based Cost Estimate
2. Electronic files in MS Excel 2010 (xlsx extension)
3. To be completed in conjunction with Staff Approved Layout
4. Standard, State Metro’s 30% quantities based cost estimate method guidelines

20 Pavement Recommendation (Source Code 1170)
State will perform pavement investigation, analysis, and recommendation for this project.

Contractor will review and determine a baseline of exiting pavement data for both MN and WI approaches and request any additional material investigation and recommendation needs to assist in completing scope deliverables.

Contractor will incorporate State’s analysis and pavement recommendations into Contractors deliverables including but not limited to draft and final: Alternatives Evaluation documentation, updating the scope, layout, cost estimates and environmental document. Contractor will also update the staff approved layout typical sections and color file indicating proposed construction.

Deliverable 20:
1. Evaluate existing data. Request additional materials investigation recommendation needs.
2. Integrate pavement recommendations into contract deliverables such as alternatives evaluation, cost estimates, layout, and draft EA.
3. Integrate final pavement recommendations into contract deliverables.
4. To be completed in conjunction with alternative evaluation and contract deliverables.

21 Value Engineering (Source Code 1068)
In conjunction with alternative evaluation, Contractor will review State and Federal standards and make a determination if a Value Engineering study is required or not required for this project [http://www.dot.state.mn.us/design/value-engineering/](http://www.dot.state.mn.us/design/value-engineering/)

Deliverable 21:
1. Document if this project does or does not require a Value Engineering Study.
2. To be complete with alternative analysis

22 Final Design Support (Source Code 1010)
Contractor will plan for up to 80 hours of final design support activities as the project transitions from Contractor preliminary design deliverables to project final design activities.

Deliverable 22:
1. Contractor Final Design Support Activities

23 Bridge Replacement Options Study (Source Code 1002)
Contractor will investigate opportunities to reuse existing substructures, which must include the following:

A. In-place piling
Exhibit A—Scope of Work and Deliverables

B. Scour
C. Loads
D. Concrete strength

State does not anticipate needing extensive materials testing or service life analysis. Contractor will conduct an investigation of replacing the existing structure with a new structure while maintaining traffic during construction. Three to five main span bridge type alternatives will be studied. Contractor must investigate the following constraints for each alternative:

A. Development of construction and lifecycle costs
B. Timeline for construction
C. Staging considerations (including maintenance of traffic and construction issues)
D. Constructability
E. Bicycle/pedestrian access
F. Visual quality
G. Environmental impacts
H. Maintenance and inspection
I. Geometrics
J. Vertical tie down points at each bridge end (to quantify approach roadway impacts)

A. Drainage (including deck drainage)
B. Security and vulnerability
C. Scour potential
D. Flood impacts on construction
E. Other flood risks
F. Applicability of Accelerated Bridge Construction (ABC) techniques
G. Other items mutually considered significant by State and Contractor

See alternatives screening section 5.5.2 for reference on alternative considerations.

Contractor will submit a preliminary structure type memo that identifies the superstructure types it plans to investigate and develop. The memo must also detail Contractor’s assumptions in selecting the superstructure types to carry forward through this analysis.

Contractor will develop cost estimates for each alternative by breaking down individual components, including quantities, unit costs, constructability costs, staging, maintenance costs, inspection costs, any site constraint costs, etc. Contractor must determine and document the validity of unit costs, quantities, analysis methods, and any assumptions made (i.e. construction schedule). All replacement bridge cost estimates must be in year-of-estimate dollars and must use a 100-year design life.

Contractor will present the alternatives and all considerations for each alternative in matrix form. A working copy of the alternatives matrix will be provided to State’s PM and the Bridge Office Preliminary Plans Unit on a monthly basis.

Contractor will lead or participate in up to 6 meetings with the Bridge Office during this phase of the project.

Deliverable 23:
1. Preliminary Structure Type memo
2. Bridge Type Alternative Matrix including cost estimates

24 Bridge Preliminary Design (Source Code 1250)
Exhibit A—Scope of Work and Deliverables

Upon determination of the selected alternative, Contractor will perform necessary engineering and design to determine the type, size, location, and geometrics for the new structure (or new superstructure, if existing substructures remain in place). Structure depth and profile grades will be iterated together to provide appropriate vertical clearance. Preliminary bridge design must be conducted with consideration of roadway geometrics, clear zone requirements, appropriate shoulder widths, appropriate trail width, required sight distance, required clearance from overhead utilities (if applicable), hydraulic requirements, staging needs, economics, and other project specific constraints.

Contractor will coordinate directly with the Preliminary Plans Unit of the State’s Bridge Office. The District PM must be copied or notified of all significant correspondence. State’s Preliminary Plans Unit staff will attend project meetings and respond to Contractor inquiries as needed.

24.1 Bridge Surveys
See surveys deliverable section 7

24.2 Foundations
Contractor will provide the Foundations investigation. See Section 25 for Foundations Investigation deliverable. State will provide the Foundation Analysis and Design Report (FADR).

24.3 Bridge Hydraulics
Bridge hydrology and hydraulics analysis will be completed by State.

24.4 Bridge Deck Drainage Evaluation
Contractor will evaluate bridge deck drainage requirements to determine the need for a bridge deck drainage system. Drainage design will be performed during the final design phase of the project, and is not included in this scope of services. The evaluation of bridge deck drainage needs is included in this contract to evaluate the proposed bridge deck profile, bridge deck cross-section, and bridge deck shoulder areas as a preferred means to convey runoff from the bridge deck. Runoff from the bridge will not be discharged directly from the bridge to the St. Croix River. Runoff will be taken to treatment areas on each end of the bridge. Preference is to design the bridge profile, cross-sections and shoulder areas to be self-draining to the bridge ends rather than suspending a stormwater collection and piping system on the bridge. See Water Resources section 25 for additional requirements.

24.5 Bridge Aesthetics
Contractor will prepare bridge aesthetics sheets collaboratively with State’s bridge architect and Visual Quality Planning Development Process deliverable outlined in Section 3.

24.6 Bridge Estimate
Contractor will produce estimated quantities to support its preliminary bridge design and State’s cost estimating activities for the bridge. Final quantities and pay items must be tabulated in spreadsheet format and submitted with the final preliminary bridge plans. Contractor will consult with the Bridge Office Estimating Unit for preliminary pay item tabulations and for list of required pay items to include for the bridge in advance of submitting final preliminary bridge plans. Submit electronic spreadsheets showing quantity tabulations and any backup materials for the bridge.

Deliverable 24.6:
1. Pay items list with 30% Preliminary Plan (no quantities, just the detailed list of anticipated pay items).
2. Final quantities and pay items must be submitted with the final preliminary bridge plan.

24.7 Quality Management Plan
Exhibit A— Scope of Work and Deliverables

Contractor will develop a project specific bridge QMP that specifies how Contractor will perform QA/QC activities throughout the duration of the project to ensure delivery of a quality product in a timely manner that conforms to established contract requirements. The QMP must be distributed to all project team members, including subcontractors. Components of the bridge QMP must include the following:

1. A List of Requirements
2. Checking Procedures
3. Quality Control Verification
4. Definitions

24.8 Design and Plan Sheet Check
Contractor is responsible for the completeness and accuracy of its work. Calculations and plan sheets must be independently checked and reconciled prior to submittal. Review comments from State on Contractor’s various plan review submittals does not relieve Contractor of liability for an inaccurate or incomplete bridge plan.

24.9 Verification of Computer Programs
All computer programs and/or spreadsheets utilized by Contractor must be verified by Contractor’s in-house QA Program.

24.10 Quality Assurance
Contractor’s QA Manager will review the entire plan design and production process to ensure the completeness and adequacy of their work and conformance with Contractor’s QA procedures.

24.11 Design Standards and Governance
Preliminary plans will be prepared in accordance with the following standards and governing documents:

1. MnDOT LRFD Bridge Design Manual
2. AASHTO LRFD Bridge Design Specifications
5. MnDOT Checking List for Preliminary Plans (current edition)
6. MnDOT Computer Assisted Design and Drafting (CADD) Standards
7. MnDOT Summary of Recommended Drafting Standards
8. MnDOT Staff Approved Layout
9. MnDOT Environmental Documents and Design Memorandums

All plan submittals must be on 11x17” paper, 20lb. white bond or approved equivalent. Plans sheets must be produced using MicroStation.

24.12 Preliminary Bridge Plan Submittals
At a minimum, Contractor will submit preliminary bridge plans at the following submittal stages:

1. 30% Preliminary Bridge Plan

30% Preliminary Bridge Plan which will include, at a minimum:
A. General Plan and Elevation Sheet(s)
   - General Plan and Elevation
   - Profile of Finished Bridge Deck
   - Design Data
   - Proposed Type of Structure Block
   - Projected Traffic Volumes
Exhibit A— Scope of Work and Deliverables

- Title Block
B. Proposed alignment, profile grades, structure type, and substructure locations;
C. Electronic MicroStation and Geopak files (coordinate correct) to support design.

Contractor will submit two hard copies of the 30% Preliminary Plan to State for review. State will return the 30% Preliminary Plan with red-lined comments within 20 working days.

2. Final Preliminary Plan

The final preliminary Bridge plan will show the general dimensions, elevations, sections, aesthetic features, survey information, foundation borings, and design data. The final preliminary plan must include the following:

A. General Plan And Elevation Sheet
   a. General Plan and Elevation
   b. Profile of Finished Bridge Deck
   c. Design Data
   d. Proposed Type of Structure Block
   e. Projected Traffic Volumes
   f. Title Block

B. Bridge Survey Sheet
   a. Contracted Profile
   b. Plat and Index Map
   c. Typical Roadway Sections
   d. Engineer’s Observations
   e. Hydraulic Recommendations
   f. Benchmark Data
   g. In-place (and proposed) Utility Locations

C. Foundation Sheet(s)
   a. Boring Plan
   b. Geotechnical Boring Logs
   c. Existing Footing Locations

D. Other Sheets and Details as Required
   a. Staging Details
   b. Staging Alignments
   c. Aesthetic Details
   d. Construction Plan
   e. Alignment Tabulations

E. Approximate quantities of the proposed structure for use in the preliminary cost estimate.

Contractor will submit electronic copies of the Final Preliminary Plan for State’s review, along with the finalized preliminary cost estimate. State will return the Final Preliminary Plan within 20 working days. Contractor will incorporate State’s comments/revisions and resubmit the Final Preliminary Plans to State.

Contractor will also submit all appropriate electronic files in support of preliminary design deliverables. This must include a Digital Terrain Model (TIN) file, MicroStation files containing planimetric mapping (APL,
Exhibit A—Scope of Work and Deliverables

PLN), MicroStation files showing the location of in-place utilities and other surveyed field input (FIP), and a Geopak (GPK) file containing chains, profiles, and shots of other surveyed features in the project area.

Deliverable 24.12:
1. Preliminary Cost Estimate
2. Review Copy of Preliminary Bridge Plan (electronic)
3. Working Copies of the electronic design files (Microstation, Geopak)
4. Preliminary Bridge Plan 30% and Final Preliminary Bridge Plan

25 Foundations Investigation (Source Code 1190)

General
The work for this contract deliverable involves subsurface investigation work to be performed for a State project involving the re-construction of Bridge No. 6347 on TH 243 over the St. Croix River. The work and services consists of taking foundation borings, obtaining undisturbed samples, performing field tests, performing laboratory tests and producing detailed boring logs.

Data Provide by State
The Contractor will work with the State to identify final boring locations. Layout plan will show existing topography, proposed alignments, proposed bridge substructures, and preliminary boring locations, current right-of-way lines and other pertinent information.

Tasks
In general, Contractors work and services to be provided by this contract will follow State’s Specifications for Subsurface Investigation and Geotechnical Analysis & Design Recommendations. This document, entitled “consultdrillreport.doc” is found for download from the following website: http://www.mrr.dot.State.mn.us/geotechnical/ foundations/tcontract.asp

More specifically, the required work will consist of the following tasks:

1. Performing a field review of the work area to determine drill rig accessibility.
2. Hiring a barge subcontractor to provide platform for river borings or providing a barge platform as part of contracting services
3. Locating proposed boring locations in field
4. Gaining access to non-State properties (if required)
5. Clearing utilities using the Gopher State One Call System
6. Performing foundation borings at proposed bridge substructure locations and as directed by the State’s PM
7. Providing daily progress updates as needed and weekly email updates
8. Producing field logs for each boring
9. Performing laboratory tests on selected soil samples as outlined in the above mentioned specifications
10. Producing final boring logs and electronic boring log file in gINT format

Please note that this scope of work does not include any foundation analysis or foundation recommendation work which will be performed by the State.

Project Details
The boring locations will be shown by the Contractor on the proposed boring plan. The plan will show a total of five foundation borings of which at least three are expected to be taken on a barge. Up to 12 additional borings will be assumed for the water resources pond, basin trunk line storm sewer and automated piezometers needs. The borings will be performed using either hollow stem auger or rotary mud drilling techniques.
Exhibit A—Scope of Work and Deliverables

Boring Depths
All foundation borings will be taken by the Contractor to bridge depth criteria (as outlined in State’s Specifications for Subsurface Investigation and Geotechnical Analysis & Design Recommendations) with the exception that the aggregate blow count will be 2,500 blows in lieu of the normally required 2,000 blows. Water Resources borings anticipated less than 25 feet.

Rock Core
Rock core will be delivered to the State’s Office of Materials in Maplewood by the Contractor within two days after coring operations are completed.

Deliverable 25:
1. Contractor’s deliverables will consist of the following items delivered on a weekly or final submittal basis as shown.

<table>
<thead>
<tr>
<th>Item</th>
<th>Submittal schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy of Field Logs (fax or pdf copy)</td>
<td>one week day after field work for boring is completed</td>
</tr>
<tr>
<td>Electronic files containing the gINT file (.prj files) for all borings</td>
<td>5 working days after field and lab work is completed</td>
</tr>
<tr>
<td>Weekly progress report (in the form of a phone call or one page email, updating drilling, lab testing, log writing, hammer testing, etc...)</td>
<td>Weekly</td>
</tr>
<tr>
<td>Final Submittal Package including a cover letter, MN Dept. of Health Borehole Sealing Records, Standard Penetration Test (SPT) hammer energy testing reports, final completed boring log (using gINT for Windows program) (unbound)</td>
<td>6 weeks after notice to proceed is granted</td>
</tr>
</tbody>
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