EXHIBIT A-SCOPE OF WORK
TH 371 Reduced Conflict Intersection Corridor
S.P. 1810-99

PROJECT OVERVIEW:
The Contractor will provide detail design and right of way services for State Project (SP) 1810-99, a reduced conflict resurfacing project on TH 371 from south of Gull Lake Dam Road CR 125 to north of CR 126 in the Unorganized Territory in Crow Wing County. SP 1810-99 is scheduled for a letting date of January 28, 2022. This work requires the utility identification, right of way services, and development of plans and specifications of the project.

SP 1810-99
This project consists of reduced conflict intersection construction, new roadway construction, grading, curb and gutter, storm sewer, pond construction, bituminous milling, bituminous surfacing, culvert repairs, lighting, signing, Americans with Disabilities Act (ADA) improvements, business accesses, cost sharing splits with Crow Wing County, and other work as defined on the level 1 layout.

Final project plans and specifications will be prepared in accordance with the most current State Manuals, Standards and Work Types included in the project. The Contractor will perform all tasks necessary to prepare and receive State approval for final plans. The Contractor’s tasks will include, but are not limited to:

1. Project Management
2. Utility Identification
3. Construction Limits
4. Right of Way Services
5. Detail Roadway Design
6. Consultation During Construction

1. PROJECT MANAGEMENT

Project management will include work necessary for communication and completion of the project tasks on time and within budget. The Contractor’s Project Manager or their primary duties will not be reassigned without the written consent of the State’s Project Manager. The Contractor’s staff will have the training and expertise necessary for the work tasks to which they are assigned.

1.1 Project Management and Administration

1.1.1 Monthly Budget & Billing (Invoice and Status Report): Invoices will be accompanied by a cover letter explaining the general status of the project, including at a minimum the work completed to date, the anticipated remaining efforts and required schedule changes; progress report form; supporting data for direct expenses; and an updated project status report reflecting State Project and Primavera 6 (P6) activities identified by the State’s Project Manager.

1.1.2 Weekly Update to the State’s Project Manager: On a weekly basis defined by the State’s Project Manager, the Contractor’s Project Manager will update the State’s Project Manager with regards to the status of the project schedule, budget and general status/progress.

1.2 Work Plan and Schedule

1.2.1 Submit a refined work plan (scope of work, budget, and schedule) based on discussions with the State’s Project Manager.
1.2.2 Submit the work plan to the State’s Project Manager for review and approval.
1.2.3 Develop and maintain a project schedule.
1.3 **Kick-off Meeting**

1.3.1 Schedule and facilitate a kick-off meeting to establish communications protocol, discuss known issues and review the project schedule.

1.3.2 Schedule anticipated meetings: Up to 4 design team meetings are anticipated during detail design. These meetings will be scheduled at the Kick-off meeting. These meetings are likely to be scheduled after the state review of submittals and at a time appropriate for traffic staging meetings.

1.3.3 Coordinate receiving available existing information from the State including existing horizontal alignment, preliminary construction limits, level 1 layout, right of way mapping/data, survey information, culvert data, etc.

1.4 **Design Team Meetings**

1.4.1 Attend up to 4 design team meetings during detail design.

1.4.2 Prepare agenda and facilitate the Design Team meetings. Agenda items should include, but not be limited to, the following:
   - Review the project schedule and budget status.
   - Present and address any issues that may affect the schedule, budget, or work quality.

1.4.3 Prepare and distribute draft minutes within 2 business days after each meeting and final minutes within 3 business days after each meeting.

1.5 **Survey Coordination**

1.5.1 Make an analysis of existing survey data and information.

1.5.2 If the data are found to be incorrect or incomplete, bring this finding to the attention of the State’s Project Manager immediately with a survey request, such that district surveys can collect the additional field data needed for a quality design.

1.6 **Quality Control Management**

1.6.1 Assign a key team member the title of quality control manager. Quality control manager will:
   - Review key submittals. Key submittals include draft plan set submittals.
   - Use the following basic format for quality certification: checking, back checking, and verifying format as according to State’s Design-Bid-Build Quality Management Process. Refer to [www.dot.state.mn.us/design/qmp/index.html](http://www.dot.state.mn.us/design/qmp/index.html) for further information.

1.6.2 Develop a TH 371 specific Quality Management Plan (QMP) detailing the quality process to be used.

1.6.3 Submit the TH 371 QMP to the State for review and approval.

1.7 **Deliverables**

**Contractor Deliverables:**
1. Schedule and attend meetings.
2. Hold weekly update meeting or conference call with State’s Project Manager and Design Manager.
3. Prepare meeting agendas, displays, and minutes.
4. Prepare and submit monthly progress and status reports.
5. Maintain project schedule.
6. Provide timely copies of critical correspondences and project issue data.
7. Submit refined Work Plan.
8. Submit electronic project files at the project completion.
9. TH 371 QMP.

**State Deliverables:**
1. Review and respond to submittals.
2. Coordinate internal reviews.
3. Provide copies of project correspondences and project information.
4. Attend meetings.
5. Approve deliverables.

2. UTILITY IDENTIFICATION [Source Type 1195]
For the purpose of this contract “utility facilities” means and includes all privately, publicly, or cooperatively owned communication lines and facilities; and any system, lines, or facilities for the distribution or transmission of electrical energy, gasoline, oil, gas, water, steam, or for the exclusive collection of sewage.

2.1 Utility Identification
Utility Coordination will include all tasks necessary to comply with the current State Utilities Manual and all applicable State Statutes. The utility coordination services set forth herein must be performed by individuals with sufficient skill and experience.

2.1.1 Complete Gopher State One Call (GSOC), design locate request, and coordinate with MnDOT Surveys for field locate utilities as necessary. Desirable one call out for MnDOT Surveys.

2.1.2 Prepare and provide to MnDOT utility information to send to utility owners for facilitating utility information and design meetings.

2.1.3 Identify possible construction impacts.

2.1.4 Identify any impacts to utilities that are located outside of MnDOT right of way and coordinate mitigation. Coordinate needed utilities to call out MnDOT Surveys to conduct survey with onsite utility representatives in these areas.

2.1.5 Attend at least one utility information meeting and one utility design meeting, if necessary. Prepare and distribute meeting minutes. Verify with all utility owners the location of their facilities are accurately depicted.

2.1.6 Incorporate this information into the Detail Design Plans, according to State’s design standards.

2.2 Deliverables
Contractor Deliverables:
1. Provide utility information and plan content per current State Utilities Manual.
2. Areas of need to locate by Gopher State One Call.
3. Prepare and provide to MnDOT utility information to send to utility owners for facilitating utility information and design meetings.
4. Identify construction impacts and complete utility tabulations in plans depicting impacts and actions required.
5. Attend and assist in coordinating at least one utility information meeting and one utility design meeting. Prepare and distribute meeting minutes.
6. Provide updates for completion of utility certification.

State Deliverables:
1. Provide x/y coordinates of utilities as identified in areas of need for Gopher State One Call.
2. Submit utility meeting letters and plan information to utility owners for facilitating utility information and design meetings.
3. Assist in identifying construction impacts and review utility tabulations to be included in plans depicting impacts and actions required.
4. Schedule and facilitate at least one utility information meeting and one utility design meeting.
5. Complete and submit utility verification letters & request for relocation plans.
6. Complete and submit utility certification.
3. **CONSTRUCTION LIMITS** [Source Type 1200]
Establish final cross-sections and grading limits to determine limits of construction. This product will be for right of way and wetland impact purposes for all disturbed area including working space, ponds, and staging. This will build off of the preliminary limits developed from the level 1 layout work. This activity will allow the contractor to evaluate options/design criteria to make improvements the final layout also.

3.1 **Cross Sections and Earthwork**
Develop cross sections and earthwork sufficient for the preparation of a Section 404 wetland permit and right of way impacts.

3.2 **Plan / Layout**
Complete plan view of construction limits and wetland impacts sufficient for preparation of a Section 404 wetland permit and right of way impacts.

3.3 **Deliverables**
**Contractor Deliverables:**
1. Construction Limits.
2. Determination of wetland and right of way impacts.

**State Deliverables:**
1. Review construction limits and submit comments.
2. Wetland Delineations.

4. **Right of Way Services** [Source Type 1235, 1242, 1220, 1240]
The Contractor will use prequalified consultants from the State’s Prequalification Program list in the work types of 8.1 (field titles), 8.3 (direct purchase), 8.22 (relocation), and 8.52 (appraisals). This work will be coordinated with the District 3 right of way project manager.

4.1 **Right of Way Appraisals (source type 1235)**
4.1.1 Furnish one written original, with one copy and one electronic copy in PDF format, for approximately 44 uncomplicated commercial appraisals and 2 complex appraisals, prepared in accordance with the State’s Office of Land Management (OLM) Right of Way, Manual, Section 200, and all applicable state and federal laws, rules, regulations and codes. The Contractor must also comply with the “Uniform Standards of Professional Appraisal Practice” published by the Appraisal Foundation, 1029 Vermont Avenue Northwest, Suite 900, Washington, DC 20005-3517.

4.1.2 Upon completion of the draft appraisal a copy of the draft will be delivered to the Appraisal Supervisor in St Paul for review to determine if the appraisal can be certified. The appraisal needs to be certified for payment to the Contractor.

4.1.3 Deliverables are the work products created or supplied by the Contractor pursuant to the terms of this Contract. The summary of the deliverables for this Contract are as follows: One original, one copy and one PDF uncomplicated commercial appraisal in electronic format for each parcel. The Contractor will provide the landowners of the above-mentioned parcels with one copy of the corresponding appraisal.

4.2 **Right of Way Relocation Services (source type 1242)**
4.2.1 Provide relocation assistance, to persons displaced by right of way acquisitions, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as well as Minnesota Statutes Chapter 117. It is anticipated a business might be required to move due to this project. It is anticipated that a billboard might need to move as a part of this project.

4.2.2 Coordinate relocation assistance through the State’s Right of Way Project Manager.
4.2.3 Maintain a relocation file on each relocate.
4.2.4 Meet with displaced persons to:
Exhibit A
Scope of Work

Explain the relocation process and benefits. Identify the needs and eligibility of individuals, families, businesses, farms, or non-profit organizations for reimbursement payments including moving costs, replacement housing costs, appraisal fees and re-establishment expenses. Questions of eligibility, or whether specific items are reimbursable, will be directed to the State’s Project Manager.

4.2.5 Determine the preferences of the displacees with regards to their actual moving and re-establishment options.

4.2.6 Provide assistance, to displacees, in:
- Securing and verifying moving estimates from professional movers and or assistance with time and material logs
- Review their efforts to locate suitable replacement property,
- Review their efforts to re-establish businesses operations, farms or non-profit organizations,
- Assist the relocatee in preparation of claims for entitled reimbursement. Identifying other federal and state programs offering assistance to displaced property owners,
- Ensure that the relocatee receives the maximum benefits that they have been determined to be eligible for.

4.2.7 Prepare and submit claims for displaced property owners so they receive the relocation benefits that they are eligible for. The claim forms will be accompanied by appropriate documentation for the expenses being claimed. Submit completed claim packages to the State’s Project Manager, for review and district approval. The State provides final review of the claim before the displaced owner is compensated.

4.2.8 Claims will be entered by the Contractor into REALMS software

4.2.9 Represent the State in a professional and accommodating manner in working with property owners and others involved in relocation assistance.

4.3 Field Title Investigation (source type 1220)

4.3.1 Complete about 46 field title investigations, in accordance with State’s policies and procedures within its Right of Way manual

4.3.2 Send out to the landowner and retain in the State’s file an early notification letter, using State’s prepared parcel sketch

4.3.3 Conduct field title investigation to identify parties of interest regarding the affected right of way parcels and their contact information, discovered from public record sources and property owner interviews. Findings for the parties of interest will be entered into REALMS (Right of Way Electronic Acquisition and Land Management System – State’s right of way mainframe computer system) and a field title report will be created with REALMS.

4.3.4 Use field titles to collect new public land records, if any, to identify new parties of interest for each parcel, and identify any unrecorded cross easements

4.3.5 Gather market data information, defined within the Right of Way Manual, for use within the appraisal and direct purchase stages to help identify pertinent information of the affected parcel.

4.3.6 Conduct property owner interview and site inspection, to identify if there are affected improvements and/or concerns of the property owner caused by the anticipated project improvement. This information is entered into REALMS and a Landowner Concerns and Design Considerations report is created with REALMS.

4.3.7 Hold one on-site property owner meeting during the field title investigation process.

4.3.8 Complete each parcel’s hardcopy field title investigation packet with the above listed reports and new recorded public documents. These parcel information packets will be delivered to the State by mail in batches as requested by the State’s right of way project manager.
4.4 **Direct Purchase (source type 1240)**

4.4.1 Contact about 46 property owners to arrange an in person meeting to perform direct purchase negotiations. If a property owner resides out of state, other reasonable means of correspondence will be used to communicate with them following the delivery of the offer packet. (i.e. – telephone, mail, email, texting, etc.) Up to 6 contacts will be made to reach an agreement.

4.4.2 During the meeting with the property owner, provide the owner with a business card, explain the offer, the project and its impacts to their property. Property owner issues will be addressed along with questions or concerns the owner may have. Documents that require a signature will be presented to the owner within the offer packet. The agent will negotiate in good faith to acquire the needed rights of way.

4.4.3 If the property owner presents a counteroffer at an amount that exceeds the offer value approved by the State, Contractor will consult with the State on its acceptability. If the value increase is acceptable by State and the property owner, Contractor will prepare and submit an Administrative Settlement to the State for their approval. Upon reaching an agreement with the owner, a notarized easement agreement will be executed by the property owner. A signed easement will be left with the property owner and a signed and notarized easement will be kept within the direct purchase file for acceptance by the State. Negotiation contacts will be maintained for each parcel and entered into REALMS. The records will indicate the date and place of contact, identification of persons present, written offer made and counteroffer received (if applicable), and remarks.

4.4.4 Plan for 2 on-site property owner meetings during the negotiation process.

4.4.5 Mail the executed temporary easement agreements to the State for acceptance and the State will make direct payment to the property owner by mail.

4.4.6 Condemnation support is not included in this scope of work.

4.4.7 Work with property owners as needed to settle up to the hearing on petition.

4.5 **Deliverables**

Submit all deliverables specified in this Exhibit, in a timely manner, in accordance with the milestones listed below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Titles</td>
<td>October 1, 2020</td>
</tr>
<tr>
<td>Appraisals</td>
<td>February 1, 2021</td>
</tr>
<tr>
<td>Final date purchase offers can be submitted</td>
<td>June 1, 2021</td>
</tr>
<tr>
<td>Call back of files for Eminent Domain Process</td>
<td>July 1, 2021</td>
</tr>
</tbody>
</table>

**Contractor Deliverables:**

1. Field Title Report (1 hardcopy) for each parcel, delivered by mail, including:
   - About 46 Field Title Reports
   - Early Notification Memo
   - Market Data Report
   - Updated title information/New documents found at the recorder’s office
   - Landowner Concerns and Design Considerations Report

2. Deliver a Project and parcel relocation study (if needed)

3. Direct Purchase File (1 hardcopy) for each parcel, delivered by mail, including as applicable (when the direct purchase is complete):
   - About 46 Property owner contact records and agent certification of no conflict.
   - Owner signed offer letter
   - Executed acquisition deed or easement
   - W-9
   - Along with other items provided by the State within the Direct purchase file
State Deliverables:
1. Any data or material in its possession relating to the project that may be of use to the Contractor in performing the work.
2. Certificates of Title, Right of Way Maps, Right of Way Plats, Right of Way Surveys, Legal Descriptions and Parcel Sketches.
3. REALMS Access, electronic copies of all the necessary forms for field-title investigations, direct purchase and relocation claims.
4. Review and record documents at the courthouse prepared by the contract as it sees fit, and make payments for approved claims and purchases.

5 DETAIL ROADWAY DESIGN [Source Type 1250]

5.1 Detail Roadways Design
5.1.1 Prepare portions of the construction plans for the proposed roadway improvements that are consistent with horizontal and vertical alignments, typical sections, and construction limits identified in the approved Design Memorandum. The portions of the road plans prepared under this Contract will also be consistent with findings and recommendations identified in the Categorical Exclusion (CATEX), Level 1 Layout, Layout Preliminary Construction Limits, and Material Design Recommendation (MDR).
5.1.2 Perform work in accordance with the State’s Highway Project Development Process (HPDP), State Computer Aided Drafting and Design (CADD) standards, MnDOT Design Manuals, and Technical Memoranda. Work will be completed using English units.
5.1.3 Ensure that the format of the draft construction plans will comply with the State (District) provided sample plan and the State’s CADD Standards Manual.
5.1.4 Perform the following MicroStation plan sheets. Sheets will be combined with the prior consent of the State’s Project Manager:
1. Title Sheet
2. General Layout
3. Statement of Estimated Quantities (SEQ)
4. Soils & Construction Notes
5. Standard Plates
6. Alignment Tabulations
7. Typical Sections
8. Quantity Tabulations
9. Utility Conflict Plans
10. Removal Plans
11. Miscellaneous Details
12. Standard Plan Sheets
13. Construction Staging Plans & Details
14. Traffic Control, Accessible Pedestrian Route Plans & Tabulations
15. In-place Topography, Utility, and Right-of-Way
16. Construction Plan Sheets
17. Roadway Profile Sheets
18. ADA Intersection Detail Sheets (1:20 Scale)
19. ADA Driveway Elevation Table
20. Storm Water Pollution Prevention Plan (SWPPP)
21. Staking Tabulations and Plan Sheets with coordinate point locations and elevation at all critical points.
22. Drainage Plans, and Profiles
23. Earthwork Tabulations and Summary (Cross Section Generated)
24. Temporary Erosion/Sediment Control Plans
25. Turf Establishment and Permanent Erosion/Sediment Control Plans
26. Striping Plan
27. Signing Plan
28. Lighting Plan
29. Cross-Section Sheets

5.2 Urban Hydraulic Analysis and Design
The Contractor will perform the following tasks according to State’s District 3 Hydraulic Guidelines, the Drainage Manual, and other applicable resources with the approval of the district Hydraulics Engineer or their delegation.

5.2.1 This deliverable will include
a) Drainage plan view sheets showing location of drainage structures, pipes, outfalls, and ponds.
b) Drainage profile sheets showing the hydraulic grade line on proposed pipes and structures.
c) Hydraulic design information in a table showing the proposed drainage structures, drainage areas, runoff coefficients, time of concentration, intensity, drainage area discharge, allowed spread width, computed spread width, and bypass flow amounts.
d) Pond grading plans (if needed) and details. Contractor can eliminate pond design if there is another approved design to meet permitting requirements or has a final design not increasing the impervious area over an acre.
e) Infiltration/filtration basin and pond modeling computations. Contractor can eliminate basins if there is another approved design to meet permitting requirements or has a final design not increasing the impervious area over an acre.
f) Hydraulic design of ditches and/or flumes.
g) Incorporate necessary subsurface drainage into drainage plans, tabulations, and details as needed.
a. Include all tile crossings that will need to be replaced.
h) Evaluate storm sewer alternatives for addressing drainage deficiencies
a. Perform analysis of storm sewer outfall pipe sizing and alternatives for capacity improvements outside the state right-of-way and project area. Work includes feasibility-level analysis of options, preparation of cost estimates, and map of feasible outfall routes.

5.2.2 Prepare hydraulic plans that incorporate approved drainage recommendations utilizing HydroCAD, HY8, CulvertMaster, and Power Geopak Drainage V8i
5.2.3 Incorporate Best Management Practices (BMPs) according to National Pollutant Discharge Elimination System (NPDES) permit for use during construction.
5.2.4 Prepare signing plans as necessary for storm water ponds and/or devices.
5.2.5 Video as-built storm sewer system as required by the Special Provisions.
5.2.6 Document the as-built (X, Y, and Z) of new drainage structures, and new pipe culverts in the file format per District 3 Hydraulic Engineer’s direction as required by the Special Provisions.
5.2.7 Size rip rap according to proposed pipe velocity (MnDOT Drainage Manual).
5.2.8 Update culvert guide post to MnDOT standards.

5.3 Rural Hydraulic Design
The Contractor will perform the following tasks according to State’s District 3 Hydraulic Guidelines, the Drainage Manual, and other applicable resources with the approval of the district Hydraulics Engineer or their delegation.

5.3.1 This deliverable will include:
a) Drainage plan view sheets showing location of drainage structures, pipes, outfalls, and ponds (if any).
b) Drainage profile sheets showing the hydraulic grade line on proposed pipes and structures.
c) Hydraulic design information in a table showing any proposed drainage structures, drainage areas, runoff coefficients, time of concentration, intensity, drainage area discharge, allowed spread width, computed spread width, and bypass flow amounts.
d) Pond grading plans (if needed) and details. Contractor can eliminate pond design if there is another approved design to meet permitting requirements or has a final design not increasing the impervious area over an acre.
e) Infiltration/filtration basin and pond modeling computations. Contractor can eliminate basins if there is another approved design to meet permitting requirements or has a final design not increasing the impervious area over an acre.
f) Hydraulic design of ditches and/or flumes.
5.3.2 Provide a risk assessment for all crossings 48” or larger.
5.3.3 Prepare hydraulic plans that incorporate approved drainage recommendations utilizing HydroCAD, HY8, CulvertMaster, and Power Geopak Drainage V8i
5.3.4 Incorporate Best Management Practices (BMPs) according to National Pollutant Discharge Elimination System (NPDES) permit for use during construction.
5.3.5 Review and provide updated exhibits to Section 404 permit application.
5.3.6 Prepare signing plans as necessary for storm water ponds or devices, where present.
5.3.7 Video of proposed pipe and pipe lining as required by the Special Provisions.
5.3.8 Document the as-built (X, Y, and Z) of new drainage structures, and new pipe culverts in the file format as per District 3 Hydraulic Engineer’s direction as required by the Special Provisions.
5.3.9 Size rip rap according to proposed pipe velocity (MNDOT Drainage Manual).
5.3.10 Update culvert guide post to MnDOT standards.

5.4 Traffic Control Design
Prepare traffic control for this project, consistent with the Minnesota Manual of Uniform Traffic Control Devices (MMUTCD), Manual for Temporary Traffic Control Zone Layouts, and State (District) practices, including the following details:
5.4.1 Confer with State regarding the staging and schedule.
5.4.2 Prepare Transportation Management Plan (TMP) in coordination with the State’s (District) Traffic Engineer as guiding document for design and resource for implementation during construction.
5.4.3 Prepare traffic control that will correspond with each construction stage. The plans will include notes, symbols and abbreviations, layout plans for each stage showing signs, pavement markings, channelizing devices, traffic barriers, delineators, temporary curbs, attenuators, and pavement marking removals as appropriate.
5.4.4 Prepare tabulations that will summarize the markings, signs, and other traffic control devices and their locations.
5.4.5 A minimum of one lane in each direction will be maintained at all times during construction.

5.5 Signing & Striping
5.5.1 Prepare signing and striping plans for this project, consistent with the State’s Signing and Striping Standards and District practices, including the following details:
• The salvaging and installing of existing signs, and/or replacement will need to be analyzed. Signing placement will be critical to sight obstructions at intersections.

5.6 Lighting
5.6.1 Prepare lighting plans for this project, consistent with the State’s Lighting Standards and District practices, including the following details:
• Cost sharing coordination with local agencies.

5.7 Special Provisions
5.7.1 Produce the project Special Provisions (Division ST and SL).
5.7.2 Develop construction contract time (timeline and bar chart) with input from the State.
5.7.3 Submit the Special Provisions (Division ST and SL) to State for review along with the 90%, and 100% Construction Plan submittals.
5.7.4 Submit electronic copies of the final Special Provisions (Division ST and SL) with signed cover sheet, in Microsoft Word format with the Final Construction Plans.
5.7.5 The State will prepare the Special Provisions (Division S) for reviews & final submittal.

5.8 Engineer’s Construction Cost Estimate
5.8.1 Submit the Engineer’s Construction Cost Estimate based on quantities and information at hand, starting with the Intermediate Design (60%), and all submittals thereafter.
5.8.2 Utilize the latest cost data available for the cost estimates.
5.8.3 Submit an electronic copy of the cost estimates in Excel.

5.9 Plan Format
5.9.1 Ensure that the format of the Construction Plans comply with the sample plan provided, and the State’s current design concepts and practices.
5.9.2 Submit all sheets contained in the Construction Plans and cross sections to the State in Power Geopak V8i formats.
5.9.3 Ensure that the plans and cross sections are in compliance with the State CADD Standards Manual.
5.9.4 Submit plans for reviews in PDF format created using Adobe Acrobat 8.0 or later.
5.9.5 Submit the final detail design plan on 11”x17” bond and only the title sheets will be on an 11”x17” sheet of vellum.

5.10 Plan Review and Approval
Submit Construction Plans and documents for review and approval at the following milestones:
5.10.1 Initial Design (30% Complete)
The Contractor will submit one PDF copy of the following elements of the Construction Plan:
- Title Sheet
- General Layout
- Inplace Utility Conflict Plans with initial conflicts determined
- Typical Sections
- Alignment Plan
- Alignment Tabulation
- Topography Plans
- Preliminary Construction Plans
- Preliminary Intersection Details
- Profiles
- Superelevation Plans
- Staging Concept
- Cross Sections with top surface

State’s staff will complete review and comment on this submittal within 10 working days of the submittal date. The Contractor will make all necessary revisions required by the State’s (District) staff.

5.10.2 Construction Staging Meeting
Coordinate with State on area needs and dates to deliver traffic efficiently through the area and to businesses. This will occur after the 30% plan.

5.10.3 Intermediate Design (60% Complete)
5.10.3.1 Submit one PDF copy of the proposed Construction Plan elements listed in Section 5.2 of this Scope of Work and Deliverables.
5.10.3.2 Submit one electronic Microsoft Excel copy of the Engineer’s Construction Cost Estimate for the State’s review and comment along with the Construction Plan. The State’s (District) staff will complete review and comment on this submittal within 10 working days of the submittal date.

5.10.3.3 Make all necessary revisions required by the State’s (District) staff.

5.10.3.4 Conduct a constructability review in cooperation with the State’s (District) staff to confirm the feasibility of staging and plan implementation.

5.10.4 Detail Design (90% Complete)

5.10.4.1 Consider the 90% complete plans to be 100% complete.

5.10.4.2 Submit, one Power Geopak V8i copy and one PDF copy of the proposed Construction Plan, one electronic Microsoft Word copy of the Project Special Provisions, and one electronic Microsoft Excel copy of the Engineer’s Construction Cost Estimate for the State’s Review and Comment. The State’s (District) staff will complete review and comment on this submittal within 10 working days of the submittal date. Selected sheets will be sent to State’s Central Office for preparation of any necessary Agreements.

5.10.4.3 Make all necessary revisions required by the State’s (District) staff.

5.10.5 Construction Plan (100% Complete)

5.10.5.1 Upon making the revisions to the 90% Construction Plan submittal, the Contractor will submit 2 signed and certified set of bond prints with vellum title sheet, one MicroStation V8i copy and one PDF copy of the Construction Plan. Electronic signature is acceptable for signing the plans.

5.10.5.2 Submit 1 electronic Microsoft Word copy of the Project Special Provisions; and 1 electronic Microsoft Excel copy of the Engineer’s Construction Cost Estimate.

5.10.5.3 State will submit the original prints to State’s Central Office Pre-letting Section for review and approval. The State’s Central Office Pre-letting Section will make a final review and comment on the certified Construction Plan.

5.10.6 Construction Plan (Revisions for Bid Letting)

5.10.6.1 Make the revisions requested by State’s Central Office Pre-letting Section.

5.10.6.2 Submit new signed and certified sheets, as necessary.

5.10.6.3 Submit an electronic copy of the project’s Geopak design files and each sheet in Power Geopak V8i format and PDF format.

5.10.6.4 Submit 1 copy of the design computations and quantity calculations, and any associated electronic computation files.

5.11 Deliverables

Contractor’s Deliverables:

1. Submit all deliverables specified in this Exhibit, in a timely manner, in accordance with the milestones listed below.

   SP 1810-99 is projected for letting on January 28, 2022. The Contractor will submit all deliverables as required to meet the letting date. The State expects 100% completion of tasks and deliverables for a final Construction Plan turn in on August 31, 2021.

<table>
<thead>
<tr>
<th>Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Kick Off Meeting</td>
<td>May 1, 2020</td>
</tr>
<tr>
<td>Verify Construction Limits &amp; Wetland Impacts</td>
<td>July 1, 2020</td>
</tr>
<tr>
<td>30% submittal (Construction Plans)</td>
<td>December 31, 2020</td>
</tr>
<tr>
<td>60% submittals (Construction Plans, Engineer’s Cost)</td>
<td>February 28, 2021</td>
</tr>
<tr>
<td>90% submittals (Construction Plans)</td>
<td></td>
</tr>
</tbody>
</table>
Engineer’s Construction Cost Estimate, Special Provisions) May 31, 2021
- 100% submittals to State (Construction Plans, Vellum Title Sheet, Engineer’s Construction Cost Estimate, and Special Provisions) August 31, 2021

2. Provide the State electronic copy of all project files, including but not limited to, Power Geopak V8i design files, GPK file, input files, design computations and quantity calculations, engineer’s estimate, special provision, and hydraulic design and computation files.

State’s Deliverables:
1. Complete review and comments in a timely manner.
2. Survey data including: Mapping/Topographic, Tin, Alignment, and Existing and Proposed Right of Way (ROW).
3. CATEX and Design Memo
4. Delineated wetlands.
5. Record plans of roadways.
6. Culvert Hydraulic Recommendations including all culvert replacement, lining and repairs in rural and urban areas. Recommendations based on needs of inspection reports by State.

6 CONSULTATION DURING CONSTRUCTION [Source Type 1801]
The Contractor will be available to answer questions concerning design during the construction of the project at the request of the State.

Contractor’s Deliverables:
1. Attend preconstruction conference.
2. Answer design questions.