EXHIBIT "A"

Scope of Services

Project Name: York Project Access

Project No. DPS-93(15)

CN: 43010

Engineering Design Services

Text shown below that has been struck through (~~example~~) is not a part of this scope and has been left in this document simply as a place holder.

Upon receipt of notice to proceed from State and/or LPA, Consultant agrees to complete all the following services as part of developing construction plans that are ready for State's use in a bid-letting for this project.

PROJECT DESCRIPTION

~~<general scope of project and description of work>~~The scope of services for this project involves project management, survey, right-of-way (ROW) design, trail design, bridge design, environmental coordination, and geologic services required to produce final construction plans and special provisions for the following:

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The York Project Access is located within the City of York located in York County Nebraska and involves constructing pedestrian safety infrastructure that includes a pedestrian overpass over US-81, approximately 9.7 miles of pedestrian trails, and signalized cross walks. A more detailed project description will be developed as part of the scope of services.

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TASKS AND TASK ASSIGNMENTS

~~Projects located in the jurisdictional area of a Metropolitan Planning Organization (MPO) and has a Responsible Charge (RC) who is an employee of the respective Local Public Agency will manage the project.~~ Nebraska Department of Transportation (NDOT) will manage the project and will act as the RC since this project is ~~when~~ located outside of the Metropolitan Planning Organization (MPO).

It is anticipated the project will require the following major tasks:

a. Environmental Documents and coordination (Design Consultant/NEPA Consultant)
b. Project Management and Quality Control
c. Preliminary Field Survey
d. Right of Way Survey
e. ~~Roadway~~ Trail Design (including Right-of-Way Design)
f. ~~Hydrology and Hydraulic Design~~ Formatted: Strikethrough
g. Bridge Design ~~and Concrete Box Culvert Design.~~
h. ~~When~~ NDOT is the Responsible Charge (RC) the National Pollutant Discharge Elimination System/ and the Storm water Pollution Prevention Plan/SWPPP will be prepared by the NDOT's Roadside Stabilization Unit. The erosion control plans will be designed by the Design Consultant. NDOT's Roadside Stabilization Unit will submit the Notice of Intent, NPDES permit and the SWPPP.

i. PS&E Submittals

j. ~~Project~~ Meetings (Kick off meeting, Progress, Plan in Hand (PIH) meeting, Utility meeting, and Project Coordination meetings)

~~k. Public Involvement~~

l. Geological Studies and geotechnical recommendations

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APPLICABLE PUBLICATIONS

Overview: Work shall be done in accordance with the most current version of the following materials. The most current versions of the NDOT materials can be obtained from the NDOT Website.

1) LPA Guidelines Manual for Federal-Aid Projects. NDOT April 2009
2) A Policy on Geometric Design of Highways and Streets 2018 (AASHTO)
3) Federal Emergency Management Agency (F.E.M.A.) National Flood Insurance, Flood Boundary and Floodway Map, and Flood Insurance Study (FIS)
4) Manual on Uniform Traffic Control Devices (FHWA), 2009 Edition
5) MUTCD - Nebraska 2011 Supplement to the MUTCD
6) Nebraska Minimum Design Standards – Counties, Municipalities, State - 2016 (or most current) (Nebraska Administrative Code Title 428; Rules and Regulations of the Board of Public Roads Classifications and Standards
7) Nebraska State Plane Coordinate System Datum Adjustment Computations Lambert Conformal System Manual
8) Roadside Design Guide, 2011 (AASHTO)
9) Standard Specifications for Highway Construction 2017 (or latest edition) (NDOT)
10) NDOT Hydraulic Analysis Guidelines for Consultant
11) NDOT Roadway Design Manual & Drainage Design and Erosion Control Manual
12) Bridge Office Policies and Procedures Manual
13) NDOT Geotechnical Policies and Procedures Manual
14) Uniform Relocation Assistance and Real Property Acquisition Act (the Uniform Act)
15) The NDOT Right-of-Way Manual.
16) Evidencing Nebraska Land Titles (Nebraska Land Title Association)
17) So you Want Access to the Highway (March 2008)
18) Access Control Policy to the State Highway System, 2006 or latest (NDOT)
19) Union Pacific and BNSF Railway Guidelines for Railroad Grade Separation Projects
20) Guide for the Development of Bicycle Facilities 2012 (AASHTO)
~~19)~~21) LRFD Guide Specification for the Design of Pedestrian Bridges 2009 (AASHTO)

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SOFTWARE AND EQUIPMENT REQUIREMENTS

1. The Consultant's design and drafting software and design files must be compatible with NDOT's design and drafting software. Information on NDOT's design protocol can be found on NDOT's website on the Roadway Design page; https://dot.nebraska.gov/business-center/design-consultant/.
2. The Consultant's design must be accomplished using the design software ~~OPENROADS~~ Microstation Connect Edition (OpenRoads Design, ORD) but no version later than that in use by NDOT. The consultant's design must follow NDOT's drafting procedures, guidelines, and file naming convention using the appropriate version of OpenRoads Designer. Format CAD software. Consultant's use of an earlier version of Bentley OpenRoads Designer may be approved for specific activities with written permission of NDOT and at NDOT's sole discretion.
3. In many cases, projects will require that a 3D model be generated using Bentley OpenRoads Designer technology.
4. Reports and documents must be submitted in a form compatible with Microsoft Office products unless otherwise directed.
5. The Consultant will provide all software and computer equipment required to complete the work including any analysis software required to perform the bridge design work.
6. The Consultant is required to complete work (CAD/OpenRoads Designer files) within the ProjectWise environment if NDOT acting as RC on project. All project document submittals (non CAD/OpenRoads Designer) are to be uploaded into the State's FTP site. Modeling files to be located within ProjectWise

EXPECTATIONS FOR THE DELIVERABLES

1. The consultant shall provide to NDOT acceptable final plans, special provisions~~ifications~~, and estimates (PS&E) for use in a bid letting and construction of the project. The Consultant shall seal and sign the final plans and applicable deliverables in accordance with the Nebraska Engineers and Architects Regulation Act. Consultant shall also provide to NDOT all applicable supporting documentation and reports as described in the Task Order.
2. Plans and special provisions shall be developed in compliance with the manuals, guidelines and specifications as listed in the Qualifications, Knowledge and Experience.
3. Consultant shall submit to the NDOT ~~roadway~~ trail design plans at the following stages, when applicable: before the plan-in-hand field inspection, before public meetings, at draft PS&E completion stage, and final PS&E package. Deliverables must be completed and submitted in accordance with the schedule set out in the Task Order.
4. Deliverables must be submitted in electronic form as outlined in the Task Order.
5. Submittals will be reviewed and approved by NDOT. Consultant shall address all issues raised by NDOT's review and make all necessary changes to the work.

DESIGN PLAN PREPARATION AND ASSEMBLY

Overview. These tasks are to develop design plans and assembly of design plans of items not shown in the ~~Roadway~~ Trail Design section. Items to be included, but not

limited to, can be found in the NDOT Roadway Design Manual under Highway Plans Assembly. These are the plans which will be let to contract; therefore, plans should be thoroughly checked for completeness, accuracy, and formatting by the design technician, the trail~~roadway~~ designer, and other contributing parties.

Drafting Procedures. Consultants using MicroStation will follow the State's CADD drafting procedures and guidelines in preparing plans. File names must follow the State's CADD naming convention. Line weights, line styles, test size and leveling must follow the State's guidelines.

NDOT's CADD drafting standards do not apply for projects developed in AutoCAD, however, the Consultant shall make an effort to follow the State's CADD drafting procedures and guidelines in preparing plans.

Format of Project Plans

1. The Consultant shall prepare plan and profile plan sheets on a scale of 1" = 20' and "J" (enlarged detail) sheets on a scale of 1" = 50' (rural) or 1" = 20' (urban).
2. All full-sized plan sheets must be approximately 24" x 36". The border sheet information is on NDOT's website. All half-size plan sheets must be 11" x 17".
3. All plans are to be submitted in electronic pdf format unless otherwise specified.
~~3. Any materials submitted to the State by the Consultant must be on equivalent to white bond.~~
4. Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.
5. The Consultants shall follow the State's CADD Drafting procedures and guidelines in preparing the project plans.
    a. Sheets must be set up according to the State's procedures.
    b. File names must follow the State's CADD naming convention.
    c. Line weights, line styles, text size and leveling must follow the State's guidelines.
6. The CADD files must also conform to the following standards and conventions:
    (a) Working units must be:
        1. Master Units = Survey Feet (sf)
        2. Sub Units = inches (in)
        3. Resolution = 1000 per survey foot
        4. Accuracy = 0.1234
        5. Working Area = 813.442402 miles
    (b) The Consultant shall tie the project into the State Plane Coordinate System using NAD 1983 for horizontal control. Consultant shall coordinate with the Geodetic Survey office for the Project Datum Adjustment Factor (DAF). Prepare all topography information in a MicroStation. Line weights, line styles, text sizes and leveling will follow NDOT's guidelines

Format of cross-sections

1. Plot all cross-sections. This includes labeling stations on the right side of the sheet, labeling existing and design centerline elevations at centerline and labeling offset distances every 5 or 10 feet at the bottom of each sheet.
2. Plot cross-sections on standard size sheets (same size as project plan sheets) according to the State's standards.
3. Stamp or plot in the upper right corner of each sheet the control number, horizontal and vertical scale. Plot the roadway cross-sections at the scale of 1" = 10' H & V, or 1" = 20'H & V.
4. Plot cross-sections with stations progressing upward from the bottom to the top of the sheet.
5. Plot the cross-sections so that there is room for the improvement cross-section. Do not overlap cross-sections.
6. Cut cross-sections at 100-foot intervals (maximum) and at other locations as needed.
7. Plot a cross-section at each location when there may be a drainage structure needed and at driveways, intersections, or other unusual features.
8. Plot drainage structure cross-sections and keep them separate from roadway cross-sections.
9. Plot drainage structure cross-sections at the following scales:
    a. Storm Sewer 1" = 10' H & V.
    b. Roadway Culverts 1" = 10' H & V.
10. Plot computer roadway cross-sections in the following manner:
    a. Plot original ground with a dashed line.
    b. Plot design template with a solid line.
11. Plan Sheets. The consultant will refer to NDOT Roadway Design Manual for a complete list of plans sheets to be included in the plan set. The Consultant will develop special plans. Standard plans are not included with the plan set, but a current up to date list of Standard Plans used for the project will be included to be placed on the Title Sheet.

The State or LPA Shall Provide:

PRELIMINARY ITEMS

1. As-built or design plans of the existing and adjacent roadways (if available).
2. Existing work already completed including traffic study, geotechnical report, and survey.
3. Any drainage studies completed in the area (if available).
4. Names of known utilities, addresses and permits listing use and occupancy permit data along the project.
5. Electronic files of current aerial photographs (if available).
6. Existing cadastral maps, plat maps, etc. electronic right-of-way files of the project area (if available).
7. Traffic count information. (NDOT)
8. Crash history for study corridor. (NDOT)
9. Detour route.
10. Section Corner Ties to corner monuments.
11. Existing benchmark information.
12. ROW negotiations and acquisitions.
13. Permit to occupy ROW (NDOT Form 19)
14. Local Public Agency (LPA) Project Programming Request (NDOT Form 530)
15. Probable Class of NEPA Action (NDOT 53) Form.

Consultant Shall Provide:

PROJECT MANAGEMENT AND QUALITY CONTROL

Coordination of Design Professional and Scheduling. The Consultant Project Manager will serve as point of contact, maintain project schedule and coordinate work of sub-Consultants

THE CONSULTANT SHALL NOTIFY THE LPA AND NDOT OF ANY CHANGES MADE TO THE DESIGN OR PLANS AFTER THEY HAVE BEEN SUBMITTED TO AND/OR REVIEWED BY THE BOTH THE LPA AND STATE. SUCH CHANGES ARE DISCOURAGED, UNLESS THEY ARE IMPERATIVE OR AT THE REQUEST OF THE LPA AND/OR STATE.

1. **Project Management.** This task includes activities to initiate and monitor project schedules, workload assignments and internal cost controls throughout the project. Also included are efforts to prepare and process invoices, prepare monthly progress reports and prepare project correspondence with the Responsible Charge (RC) and to NDOT and maintain project records.

2. **Project Description/ Purpose and Need/ Project Details:** The Consultant shall work with the NDOT and the NEPA Consultant to develop the Project Description (NDOT 182), Project Details (NDOT 173), Purpose and Need Statement (NDOT 213), and update the NDOT Form 530. This task also includes time to update each of these documents as necessary at each milestone submittal based on updates to the project.~~when updates or corrections are needed to the existing approved corresponding documents.~~

3. **Quality Assurance/Quality Control.** The Consultant will perform QA/QC checks before each milestone submittal ~~at various stages~~ of the project ~~including prior to any official submittal~~which include but are not limited to:.

   a. Plan in Hand Submittal
   b. Post Plan in Hand Submittal
   c. Draft PS&E Submittal
   d. Final PS&E Submittal

~~3.~~

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MEETINGS

1. **Project Kickoff Meeting** the Consultant will schedule and attend a project kickoff meeting with the LPA and NDOT soon after the NTP is issued. The purpose of the kickoff meeting will be to identify key personal from NDOT and the LPA involved in the project, schedule the PCM 0 meeting, schedule the design charrette meeting (included within the NEPA scope of services for public involvement) and identify key community stakeholders who should be included for the design charrette meeting.

~~1.~~2. **Plan-In-Hand Meeting** the Consultant will schedule and attend a plan-in-hand meeting to review the thirty (30) percent the preliminary ~~roadway~~ trail design plans. (On-site meeting)

3. **Project Coordination Meetings** the Consultant will meet with the LPA and NDOT to discuss the status of plan development and coordinate design activities at different stages throughout the project. The consultant should anticipate ~~six~~ 7 meetings (PCMs 0, 20, 30, 35, 50, 70, and 90). The Consultant will be responsible for preparing meeting minutes from the discussion on this project and shall prepare required materials prior to the meeting as listed on the agenda for PCM meeting.

~~2.~~

4. **Meetings with Utilities.** 1 Utility review meetings will be scheduled. Effort is also included for coordination via the phone and up to 4 total one-on-one meetings with affected utilities.

   a. ~~In addition, t~~The Consultant will coordinate and schedule a Utilities meeting to identify and work through potential conflicts identified in the preliminary Plan-In-Hand plans and prepare NDOT Standard Utility contracts and pole tab sheets. (LPA is responsible to coordinate utility agreement negotiations with utilities) as well as prepare call reports of all correspondence with contacted utilities. NDOT to provide Consultant standard templates for utility contracts.

5. **Progress Meetings** the Consultant will meet with the LPA and NDOT to provide progress updates monthly (as needed) during the duration of the design and NEPA coordination for the project. Assume up to 36 meetings.

Meeting Minutes for all meetings (unless otherwise specified) to be summarized emailed to the Client, NDOT and applicable stakeholders within (32) working days following the ~~of~~ meetings.

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SURVEY

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1. **Preliminary Field Survey.** The topographic survey will be completed by the design consultant for the project corridor in accordance with current NDOT survey specifications. The design consultant will perform the necessary topographical ground survey including the ~~existing~~ proposed centerline of the trail, intersecting streets, and drives, tying the location of land monuments to the existing centerline, cross-sections, and profiles. A topographical survey will be performed ~~using GPS and electronic "Total Station"~~LiDAR technology collected by high precision LiDAR sensors mounted on a UAV platform. The data collected will be produced in MicroStation *dgn. format. Copies of field book records and electronic records will be submitted to the RC at the completion of final design. Natural topographic features and man-made features, will be recorded by coordinates to the nearest one-tenth (0.1) of a foot. All such topographic features, which are pertinent to the design or are necessary to properly show the effect of the proposed work upon the adjoining property and/or improvements, will be recorded. The topographical survey will not include an exact and detailed tree count. The consultant will complete a site visit after LOC's are created noting the size, type and location of trees to be removed. Station and offset will be noted on the plans. Unless otherwise noted the limits of the survey are to be at least 100 feet on each side of the ~~existing~~ proposed centerline or to corners of structures on tracts and must include enough information to build the proposed typical cross-section and show the limits of construction. The survey limits will extend ~~5~~100 feet before the start of the project and 1~~5~~00 feet beyond the end of the project. The topographic survey will extend along intersecting streets a minimum distance of 1500 feet from ~~roadway~~ trail centerline.

2. **Digital Terrain Model.** A Digital Terrain Model will be provided for use in cross-section creation. Natural topographic features and man-made features above ground (including existing adjacent building limits) will be recorded. All above and below ground utilities will be located once Digger's Hotline marks them. Sanitary and storm sewer manholes will have rim and flow line elevations surveyed as necessary.

3. **Base Map Preparation.** Consultant will create the base maps using the topographic survey data.

4. **Horizontal and Vertical Control.** The design consultant will establish control points along the project corridor at regular intervals and provide control "reference" point ties to topographic features of permanent nature.

   a) Horizontal control points will be established and referenced to existing section corners. The control points will be permanent in nature and tied to Nebraska State Plane Coordinate system.

   b) Vertical control points will be established and referenced to USGS NAVD88 datum. There will be a minimum of three permanent benchmarks established with additional temporary benchmarks set along the project corridor at intervals not to exceed 500 feet.

5. **Section/Property Corners.** The consultant will locate necessary section corners, quarter section and property corners for use in drafting existing right-of-way and property lines. The Consultant will work with the County Surveyor on any corners not found to be set by the County Surveyor.

6. **Existing Utilities.** The consultant will call in a One-Call utility locate ticket. Utilities will be shown based on visible, above ground, evident in the field and utility locator's markings. The project liaison will assist in providing utility locations and contact information.

7. **Note Reduction/Preliminary Plotting.** This task will include the effort for gathering data to create the existing topography file to use for preliminary design. Placing station offsets for all topographic items.

8. **PIH Staking the Right of Way**. For the PIH field visit the Consultant will stake new and existing right of way, assume 120_____ tract (s):

9. **Appraisal and Negotiations Staking the Right of Way**. During the negotiations, the Consultant will stake new and existing right of way, assume 120_____ tract (s), staked twice. The consultant will also attend a site visit with the appraisal team to review project impacts and answer project questions for the appraisal process.

~~**10. Staking Right of Way for Condemnation Hearing.** (*Will be handled as a Supplement to this contract*) The Consultant will stake the new and existing right of way prior to the Condemnation Hearing so the Board of Appraiser's can view the proposed taking (to include temporary and permanent easements), assume _____ tract (s).~~

~~**11. Condemnation Plats.** (*Will be handled as a Supplement to this contract*) The Consultant will prepare condemnation plats. The plat is a unique plan sheet showing the condemned tract along with the metes and bounds reflected in the legal description. A reduced drawing of the section(s) and how the tract in question is situated in that section is also included as part of the plat. Emphasis should be made to keep the plat(s) to a manageable size yet easily readable. A CADD file of the condemnation plat and an electronic version of the legal descriptions will also be submitted, assume _____ tract (s).~~

~~**12. Condemnation Hearings.** (*Will be handled as a Supplement to this contract*) The Engineer is to attend the Condemnation Hearing to provide an expert opinion regarding the need for the taking, assume _____ tract (s).~~

ROW staking should be done to clearly and accurately represent information that is illustrated on the ROW plans. When a tract requires ROW staking the following items should be staked:

1. Existing ROW
2. Existing Control of Access.
3. Existing Control of Access Breaks.

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4. Existing Permanent Easements (except utility easements are generally not staked).
5. New ROW
6. New Permanent Easements
7. New Temporary Easements.
8. New Control of Access Breaks

For each line the ROW staking should at a minimum include the staking of points at the following:

1. The ends of each line.
2. Their intersection with a property line.
3. Their intersection with lot lines, section, quarter section line, etc.
4. Any deflection points within the line (turn points).
5. If a line involves a long straight run interim stakes along the line should be placed as needed to clearly denote the line in the field.
6. Any critical points along a line such as the portion coming close to a significant feature such as a structure, center-pivot, well, etc.
7. The stakes should be clearly visible in the field and denote the type of line(s) it is representing. Information to be included on the stakes include.
8. A color identification (surveyors' tape and/or paint) unique to the type of line. Generally, Orange for ROW and Yellow - Green for easements.
9. The line designation (ROW, PE, TE, CA, etc.)
10. The distance to Centerline.
11. The Station

See NDOT's Construction Manual for additional ROW staking information.

DRAFT

PRELIMINARY ~~ROADWAY TRAIL AND ROW~~ DESIGN

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Overview. The following task will be used to accomplish ~~Roadway~~Trail Design and in the development of design plans. This task includes ~~roadway~~ trail design services during the Plan-in-Hand phase.

The Design shall be in conformance to "~~Nebraska Minimum Design Standards" for New and Reconstructed Projects, 3R Standards (Resurfacing, Restoration and Rehabilitation)~~AASHTO Guide for Development of Bicycle Facilities, 2012" and the "NDOT, Standard Specifications for Highway Construction". Reference to local standard plans and specifications is not allowed, such plans and specifications must be included within the PS&E package as special plan sheets or special provisions.

The consultant is to make every effort to use NDOT standard items, standard plans, and products from the NDOT approved product list in the design of the project. Items unique to the project and not on the standard item list, will need a special provision stating the method of construction, the unit of measure, and method of payment. Specialty items not on the approved product list will require the consultant to provide a list of 2~~3~~ or more products/suppliers and an "or approved equal statement". Approval by NDOT is needed before the item may be incorporated into the project.

1. **Data Collection and Review.** For gathering, reviewing, and organizing data for the project such as review of ~~the~~ as-built plans, survey data, current ~~roadway~~ shoulder/sidewalk conditions, and other supportive documentation.

2. ~~Roadway~~ Trail **Horizontal Alignment.** This task includes the design and drafting of the horizontal alignments(s). Task includes creation of the Control Point/PI/Curve Data F sheet(s); the Consultant will create Horizontal Alignment and Orientation (F Sheets) on any design alignments.

3. ~~Roadway~~ Trail **Vertical Alignment.** This task includes the design and drafting of the vertical alignment(s) and/or adjustment of vertical alignment(s).

4. ~~Template Roadway~~ **Cross Sections.** Develop the design templates necessary to template and develop the cross sections, including design of special ditches.

5. **Limits of Construction.** This task includes efforts to create LOCs for the project. The Consultant will define and draft the limits of construction on the plan sheets. These limits are to be used to determine environmental impacts and right-of-way requirements.

6. **Earthwork.** Determine earthwork balance factor. Process the earthwork for each alignment, including any extra earthwork due to large driveways, guardrail, or any other cause for earthwork. Calculate earthwork quantities and produce earthwork summary and plan notes. Earthwork data sheets will be provided in subsequent submittals.

7. ~~Roadway~~ Trail **Geometric Design.** This task includes the geometric design of ~~all Roadway~~the trail alignment~~s, intersections,~~ and driveways, parking lot reconstruction, sidewalks, and pavement transitions, which includes setting up all the geometric sheets for the project and labeling.

8. ~~**Storm Sewer and Drainage:** This task includes hydrologic and hydraulic analysis for design of the new storm sewer system for the new and reconstruction portion of the project. This would include hydrologic review to determine drainage areas and discharges to the roadways for multiple storm events; development of a hydraulic model; identification of outlet storm sewers or drainage ways; and required improvements to outlet storm sewers or drainage ways necessary to drain the reconstructed highway. The storm sewer design will review the 10 year storm event to determine if a reasonable and practical storm sewer system can be provided to meet the current criteria. If it is determined that it is not practical to meet a 10 year storm event, a practical design approach will be used to determine a reasonable design that meets or exceeds the capacity required to convey a 2 year design storm. The design of the storm sewer will be developed in a manner to accommodate phased construction of the project that will maintain existing roadway drainage while providing outlets for the new storm sewer being constructed. This work also includes of drainage plans and storm sewer profiles. Storm sewer design will be based upon the new and reconstruction urban segment.~~

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9. ~~Roadway~~ Trail **and Driveway Culverts.** This task is for ~~roadway~~ trail and driveway culverts and includes the preparation of a drainage map outlining all drainage areas and completion of the following for each area. NDOT's Pipe Policy will be followed.
    a. Compute area size and Q.
    b. Determine allowable H.W.
    c. Size culvert and compute H.W.
    d. Using design cross sections, determine length of culvert.
    e. For each culvert, show the Station, D.A., Q., H.W., Size and Length.
    f. Determine location of new/existing culverts with special ditch locations
    g. Draft culvert build notes

10. **Construction and Removal.** Development of Construction and Removal notes detailing construction and removal items not specifically identified elsewhere in this scope. NDOT CAD standards and construction/removal notes/tabs are to be used. The construction/removal notes will be placed on the plan/profiles sheets for this project.

11. **Utility Coordination/Verification.** The Consultant will draft utilities on the plans that were not included in the preliminary plotting and for limited coordination with the utilities, to verify the location and type of utility. ~~In addition, the Consultant will coordinate and schedule a Utilities meeting to identify and work through potential conflicts identified in the preliminary Plan-In-Hand plans and prepare NDOT Standard Utility contracts and pole tab sheets. (LPA is responsible to coordinate utility agreement negotiations with utilities) as well as prepare call reports of all correspondence with contacted utilities.~~

12. **Construction Phasing/Detour Route/Temporary Roads.** The Consultant shall develop traffic phasing concepts to allow for reasonable access during construction for highway and local traffic that may include detours and staging of construction. The Consultant shall prepare a written description of the Construction Phasing, noting detour routes if applicable. This phasing plan shall be submitted at the time of the first submittal.

13. **Erosion Control.** This task includes effort required to design and draft both temporary and permanent erosion control measures for the project. The consultant will submit the erosion control plans to the LAD of NDOT for review and concurrence by NDOT Roadside Stabilization Unit.

14. **Quantities/Estimates.** Develop and tabulate all the preliminary quantities. Computation sheets will be submitted with all Quantities to the RC and/or the LAD of NDOT for all submittals, including Pre/Post Plan-in-Hand and Final Plans, using NDOT standard bid items, NDOT Project Information sheet (NDOT Form 342), and NDOT quantities forms (NDOT Form 343 and NDOT Form 355). In addition to these submittals, opinion of probable cost will be updated and submitted yearly (**January 31**) throughout the preliminary engineering and final design phases. Estimate of probable cost will be prepared by the Consultant using recent bid tabulations and other available information.

15. **Typical Sections.** This includes design and drafting the typical cross sections and other details as needed for the project.

16. **E Sheets**. This task includes developing the wetland aerial plan sheets ("E" Sheets) from the ortho. This task will include effort to illustrate and label wetlands, restricted areas, channels, alignments, impacted areas, reference files, and other wetland features. This task includes effort to illustrate sensitive areas including, but are not limited to, 4(f) properties, Section 106 sites, and T&E areas.

17. **Guardrail.** This task includes effort to analyze potential guardrail locations and design new guardrail at locations that do not meet current standards or are affected by other elements of the project. Guardrail will be designed to meet current NDOT standards unless justified by an accepted design as governed by the current Roadside Design Guide.

~~18.1. **Floodplain Permitting Identification.** This task includes the following: Determine if the project will have construction occurring in a floodplain, whether crossing or parallel. The Consultant determines if the project crosses or occurs within a mapped floodplain, or in the case of parallel floodplains determines and quantifies the highway embankment work that will encroach into the area mapped as a floodplain.~~

~~19.1. **Floodplain Permit** if a Floodplain Permit is required, the Design Consultant will prepare a Floodplain Certification Package. The package is to include a memo describing the project and it is impacts on the floodplain, a location map showing the boundary of the project, FIRMette maps with floodplains and structures identified and a~~

~~certification form signed, sealed and dated by a professional engineer certifying compliance with floodplain and floodway regulations. A FIRMette is a legal to scale copy of a portion of a Flood Insurance Rate Map (FIRM). FIRMette can per printed in either letter legal or leger size paper and found at the following website, http://msc.fema.gov. The LPA with assistance from the Consultant is to apply for the permit.~~

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~~20.~~18. **Plan-In-Hand Report.** The Consultant will prepare and submit a draft Plan-in-Hand report within two (2) weeks of the meeting summarizing the findings and decisions made regarding the project design. The draft PIH report will be submitted and routed for review and comments. The consultant will address the comments (within 2 weeks after receipt of the comments) and submit the final PIH report.

~~21.~~19. **Working Day Calculations.** Working Days for construction activities will be calculated at the Plan in Hand plan stage and incorporated into the draft PIH report and updated at the Draft Final PS&E plan stage.

20. ~~**Pavement Determination.** The Consultant shall provide complete documentation of the structural pavement design analysis used for the project. The pavement analysis must be a nationally recognized method, such as AASHTO, AIM, PCA, etc. The Pavement Determination Data Sheet (supplied by NDOT) shall be completed by the Consultant and included as part of the documentation.~~

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21. **Pedestrian Crossing Signal (RRFB) Design:** This task includes effort to design and produce plans for a Rectangular Rapid Flashing Beacons (RRFBs) located on the project.

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22. **Miscellaneous:** This task includes completion of any necessary forms or items included within the deliverables section such as:

a. Checklist of NDOT Activities / Sources of Impacts
b. Erosion Control - Plan-in-Hand - Checklist, Exhibit G of the DPO
c. Forms – updated, if applicable
d. Project KMZ

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23. **Trail Design Data:** Assemble corridor file(s) to develop preliminary corridor model, setting and updating parametric constraints and point controls, and overall file management and development.

Factors Affecting Trail Design Data Effort	**Occurrences and Complexities**
Project Length:	9.7 miles
Divided versus undivided (or 2 lane vs 4-lane)	Undivided 10' wide trail
Multiple alignments (side roads)	Single alignment for trail with special ditches
Curb & flume (new, repair, or replacement)	N/A

Drives and intersections (typically not modeled on 3R jobs unless new or modifying)	Detailed design for driveways along the project.
Mailbox turnouts	NA
Grading for guardrail	Design for guardrail grading at abutment locations for pedestrian bridge
Culvert work (new, extensions, replacement)	New driveway culverts and roadway/trail culvert extensions
Grading or flattening foreslopes/backslopes	Full grading to meet new and reconstruction standards for a trail
Special ditches	Special ditches required along the project on both sides of the trail potentially
Right turn lanes (new or modifying)	N/A
Varying pavement strategies within the project	N/A
Construction phasing including temporary surfacing/grading, shoo-fly, crossovers, slip ramps	N/A
Other complex designs (roundabouts, rest areas, interchanges, etc.)	N/A

24. **Plan in Hand Plan Submittal:** This task includes effort to compile and print the plan set to PDF format. The following plans with the limits of construction are to be submitted to the LAD PC at the completion of the preliminary design phase. Below is the order the plans are to be arranged in the plan set.

- Title Sheet
- Typical Cross-Sections
- Environmental or Aerial Sheets (including Wetlands)
- Horizontal Alignment and Control Points
- General Information Sheets
- Geometrics
- Erosion & Sediment Control (w/ Wetland Areas)
- Plan and Profile Sheets (includes Construction & Removal notes)
- Pedestrian Crossing Signal (RRFB) Plans
- Drainage Structure Cross-Section Sheets
- Bridge Plans
- Right-of-Way Ownership Plans
- Trail Cross-Sections

~~22.~~

DELIVERABLES FOR THE PRELIMINARY DESIGN PHASE

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~~(a) Meeting Minutes for all meetings to be summarized emailed to the Client, NDOT and applicable stakeholders within (2) days of meetings.~~

~~(b)~~(a) Hydraulic Report and Data Sheet

~~(c)~~(b) Deliverables for the Plan-in-Hand Phase include:

i) Preliminary Waterway Permit Data Sheet, NDOT Form 290 (preliminary)
ii) Erosion Control Plan-in-Hand Checklist, Exhibit G of the NDOT Roadway Design Process Outline (DPO), if applicable
iii) FAA Form 7460-1 when applicable
iv) Plan-in-Hand Plans
v) Project Information Sheet, NDOT Form 342
vi) Project Quantity Sheet, NDOT Form 343E
vii) Draft Plan-in-Hand Report (pdf format)
viii) Plan-in-Hand plans with comments consolidated on one set (two weeks after visit)

~~(d)~~(c) Final Plan-in-Hand Report (pdf format) (two weeks after receival of comments)

~~(e)~~(d) Plans/display showing project in relation to mapped floodplains/floodways, if applicable

~~(f)~~(e) Opinion of Probable Construction Cost

(f) Construction and working day estimates

~~Working Day Calculations~~

~~(g)~~(i)

~~(h)~~(g) Updated project description, project details, and purpose and need as necessary

~~(i)~~(h) ~~Pavement Determination~~

~~(j)(a) Working Day Calculations~~

~~(k)~~(i) Cost Estimates

~~(l)~~(j) Updated KMZ file ~~at each plan submittal~~

(k) Utility Call Reports or equivalent documentation

~~(m)~~(l) "Checklist of NDOT Activities/Sources of Impacts" (if update)

~~Refer to last page of this Scope of Services for detailed list of required plan sheets at each phase of project.~~

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POST PLAN IN HAND PLANS

1. **Post Plan in Hand plans** incorporate review comments needing revisions identified during the plan in hand and serves as a mid-point check of the design.

2. **Horizontal & Vertical Alignments:** This task includes effort to finalize the horizontal and vertical alignment. This also includes effort to update the "F Sheets" as well as the plan/profile sheets to incorporate changes to the alignment and profile including any additions or updates to special ditch profiles.

3. **Typical Sections** this task includes effort to create additional typical sections based upon the development of the final design and to update the current typicals as necessary.

4. **Earthwork:** this task includes effort required to calculate earthwork quantities and produce earthwork computation sheets for the mainline trail alignments as well as the surfaced driveways. A total of four (12) "Q Sheets" are estimated for the earthwork plan sheets.

5. **General Information:** this includes updating or adding other project details to be included on the General Information Sheets ("G Sheets"). A total of eight (8) "G Sheets" are estimated based on the current design details.

6. **Trail and Driveway Culverts.** This task includes effort required to revise and update the trail and driveway culverts for the project for the final design of the project.

7. **Limits of Construction:** This task includes effort required to revise and update the limits of construction as the final design is developed to incorporate revisions to the alignment, profile, special ditches, driveways, and other items that will affect the grading and limits of construction.

8. **Erosion Control.** This task includes effort required to revise and update the permanent erosion control measures as the final design is developed to incorporate revisions to the alignment, profile, special ditches, driveways, and other items that will affect the grading and limits of construction.

9. **Sidewalks and ADA:** This task includes effort to finalize the design details for sidewalks and ADA curb ramps. The project is estimated to have 8 ramps.

10. **Cross Sections & Modeling:** This task includes effort required to revise and update the cross sections and model as the final design is developed to incorporate revisions to the alignment, profile, special ditches, driveways and other items that will affect the grading and limits of construction.

11. **Floodplain Permitting Identification.** This task includes the following: Determine if the project will have construction occurring in a floodplain, whether crossing or parallel. The Consultant determines if the project crosses or occurs within a mapped

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floodplain, or in the case of parallel floodplains determines and quantifies the highway embankment work that will encroach into the area mapped as a floodplain.

12. **Floodplain Permit** if a Floodplain Permit is required, the Design Consultant will prepare a Floodplain Certification Package. The package is to include a floodplain memo describing the project and it~~'~~s impacts on the floodplain, a location map showing the boundary of the project, FIRMette maps with floodplains and structures identified and a certification form signed, sealed and dated by a professional engineer certifying compliance with floodplain and floodway regulations. A FIRMette is a legal to scale copy of a portion of a Flood Insurance Rate Map (FIRM). FIRMettes can ~~per~~be printed in either letter legal or leger size paper and found at the following website. http://msc.fema.gov. The LPA with assistance from the Consultant is to apply for the permit.

13. **Miscellaneous:** This task includes completion or updating necessary forms or items included within the deliverables section such as:

a. Checklist of NDOT Activities / Sources of Impacts
b. Forms – updated, if applicable
c. Project KMZ

14. **Quantities & Estimates:** this task includes effort to compute quantities using NDOT standard bid items.

~~1.~~

15. **Post Plan in Hand Plan Submittal**. This task includes effort to compile and print the plan set to PDF format. ~~t~~The following plans with the limits of construction are to be submitted to the LAD PC at the completion of the functional design. Below is the order the plans are to be arranged in the plan set.

~~2.~~

- Title Sheet
- Typical Cross-Sections
- Environmental or Aerial Sheets (including Wetlands)
- Horizontal Alignment and Control Points
- General Information Sheets
- Geometrics and Grades
- Erosion & Sediment Control (w/ Wetland Areas)
- Plan and Profile Sheets (includes Construction & Removal notes)
- Pedestrian Crossing Signal (RRFB) Plans
- Earthwork Data Sheets
- Drainage Structure Cross-Section Sheets
- Bridge Plans
- Right-of-Way Appraisal Plans
- Trail Cross-Sections

DELIVERABLES FOR POST PIH DESIGN PHASE:

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a. "Checklist of NDOT Activities/Sources of Impacts" (confirm/update)
b. Custom Special Plan Request Sheet, NDOT Form 66
c. Design Details Plans (one half-size .pdf set each of plans and cross sections)
d. Floodplain certification and documentation (hydraulic analysis as required, etc.)
e. Floodplain certification memo and associated FIRMette Floodplain maps for entire length of project
f. .KMZ file (based on Design Detail Plans) with memo stating changes from functional design LOC .KMZ
g. Project Information Sheet, NDOT Form 342 – Status 45
h. Project Quantity Sheet, NDOT Form 343
i. Updated KMZ for Access Control (if needed)
j. Prior to Project Coordination Meeting 35 (PCM 35):
    1) Final limits of construction (.KMZ)
    2) Project Description, Purpose & Need, and Project Details (confirm/update)
    3) T&E (confirm/update)
    4) Waterway Permit Data Sheet, NDOT Form 290 (final)

DRAFT PS&E SUBMITTAL PLAN REVIEW

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NOTE: upon receipt of the Draft PS&E Plans on projects NDOT has assumed the duties of the Responsible Charge (typically projects located outside of MAPA and LCLC) the NDOT's Right of Way Division will prepare the ROW Cost Estimate.

1. **Incorporate review comments** the Consultant will address and incorporate review comments from the Post Plan in Hand Plan review. This task also includes revisions per ROW process, utility coordination, and environmental process (not to include errors and omissions).

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2. **Utility Rehabilitation Plans (K Sheets):** the Consultant will prepare K Sheets for inclusion in the Draft PS&E plan set that show existing utilities, proposed utility relocations, and buried utilities to be abandoned in place.

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3. **Working Day Calculations:** Working Days for construction activities will be updated at the Draft Final PS&E plan stage

4. **Quantities/Estimates:** This task includes effort to update quantities (based on revisions from this phase) using NDOT standard bid items. This includes preparation of horseblankets for drainage items.

5. **Miscellaneous:** This task includes completion of any necessary forms as required in the deliverables section such as:

    a. NDOT Form 64E

b. NDOT Form 415
c. NDOT Form 280
d. Special Plans List
e. Special Provisions (draft)
f. Standard Plan List

~~1.~~6. ___

7. ___**Draft PS&E Submittal**: This task includes effort to compile and print the plan set to PDF format. ~~T~~The Consultant shall submit a draft PS&E package, to the Project Liaison and LAD PC for final review. The package will include the plan set and total project quantities. Below is the order the plans are to be arranged in the plan set.

Title Sheet
Typical Cross-Sections
Environmental or Aerial Sheets (including Wetlands)
Horizontal Alignment and Control Points
General Information Sheets
Geometrics and Grades
Erosion & Sediment Control (w/ Wetland Areas)
Utility Rehabilitation Plans
Plan and Profile Sheets (includes Construction & Removal notes)
Pavement Marking & Signing Plans
Pedestrian Crossing Signal (RRFB) Plans
Earthwork Data Sheets
Drainage Structure Cross-Section Sheets
Bridge Plans
Special Plans from Bridge
Special Plans from Roadway
Right-of-Way Negotiation Plans
~~2.~~ Trail Cross-Sections

The only revisions to the Draft PS&E plans would be modifications resulting from right of way negotiations, design modifications due to unknown utility conflicts, review comments from NDOT or the LPA, or revisions requested by an affected railroad.

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DELIVERABLES FOR DRAFT PS&E SUBMITTAL:

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a. Grading Item Summary, NDOT Form 64E
b. Table of Drainage Summary Items, "Horse blankets"
c. Length Sheet, NDOT Form 415
d. OnBase (NDOT RD PS&E Plans)
e. One full-sized .pdf set each of "Pre PS&E Plans" and "Pre PS&E Cross Sections"
f. PS&E Required Sheet (Word format), NDOT Form 280
g. Special Plans list (from NDOT's "Standard/Special Plans" book)
h. Special Provisions (draft)
i. Standard Plan list (from NDOT's "Standard/Special Plans" book)
j. Summary of Quantities, NDOT Form 355

FINAL PS&E SUBMITTAL/BLUE LINE CORRECTIONS

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1. **Final PS&E Submittal.** Upon incorporating review comments into the plan set and special provisions, the Consultant shall prepare and submit all drawings, special provisions, and an estimate of quantities to the LAD Project Coordinator for the final PS&E review. The completed PS&E plans to be submitted by the Consultant shall include the following:

   i. Electronic Plan Data for the Contractor: 3D grading surface
   ~~ii. Slope staking information at locations where grading is to be completed to flatten slopes, construct guardrail and mailbox turnouts, and construct new erosion control curb and flumes. The Consultant shall provide the State with samples of these items for approval of the formats and information. Final construction information to be submitted as directed by the NDOT Project Coordinator.~~
   ~~iii. Subgrade and finish grade information for new construction (previously blue tops and paving grades).~~

2. **Address comments or questions** during PS&E Review this includes the effort of addressing any questions or comments that arise during the PS&E review. And making corrections per PS&E Comments (not to include errors or omissions), this includes corrections based on PS&E comments that make the plans biddable (bluelines).

3. **Electronic CADD files** after PS&E corrections, the Consultant shall upload all electronic CADD files to the State's FTP Site (ProjectWise). The following should also be included:

a. Documentation File (metadata about the files provided, descriptions, etc.)
b. CADD Files (*.DGN format)
1) Alignment File(s), GPK file

2) Roadway Design Feature File(s)
3) ROW Feature File, if applicable
4) Wetlands Feature File
5) Topography Cross Sections (when available)
6) 3D Design Break-line file

c. Alignment Data
1) LandXML Format

d. Machine Control Surface Model files (LandXML format)
1) Existing Ground
2) Proposed Finished Grade
3) Proposed Grading Surface

~~e. Super-elevation Transition Diagrams~~
~~1) Super Diagram or Word Document~~

4. **Printing** this includes effort to print and resubmit any sheets that change based on PS&E comments (not to include errors or omissions).

Title Sheet
Typical Cross-Sections
Summary of Soil and Materials Survey Information
Environmental or Aerial Sheets (including Wetlands)
Horizontal Alignment and Control Points
General Information Sheets
Geometrics and Grades
Erosion & Sediment Control (w/ Wetland Areas)
Utility Rehabilitation Plans
Plan and Profile Sheets (includes Construction & Removal notes)
Pavement Marking & Signing Plans
Pedestrian Crossing Signal (RRFB) Plans
Earthwork Data Sheets
Drainage Structure Cross-Section Sheets
Bridge Plans
Special Plans from Bridge
Special Plans from Roadway
Right-of-Way PS&E Plans
Trail Cross-Sections
Standard Plans

5. **SWPPP Coordination:** This task includes effort to provide information to NDOT for NDOT to prepare ~~When required by~~ the NPDES Construction Stormwater Permit, the ~~Consultant shall provide a~~ Stormwater Pollution Prevention Plan (SWPPP) for the project.

6. **Temporary Erosion Control Sheets** (if a SWPPP is required)

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After PS&E corrections are complete, the Consultant shall produce temporary erosion control sheets for the Stormwater Pollution Prevention Plan. These are to be submitted in electronic form (.pdf) as half-sized plan sheets. These sheets do not need to be stamped plans. The temporary erosion control sheets must include the following items:

a. Topography
b. New design (do not include erosion control design)
c. New drainage
d. Wetlands and Legend
e. Ditches with slopes and arrows
f. Limits of Construction lines
g. Restricted areas
h. Contours (Attach the contour file with a "c1" logical name) (Only show contours if there are reconstruction design contours.)
4.i. R.O.W. (If possible) (legend cell: tempeclegend – change the legend to match the ROW lines used on your project) ~~The SWPPP must be developed using NDOT's SWPPP template that will be provided by the Roadside Stabilization Unit. The Roadside Stabilization Unit will complete a redline review of the SWPPP and Erosion Control Plans. The Consultant shall incorporate comments received from the Roadside Stabilization Unit prior to delivery of the final documents.~~

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~~5.~~7. **Letting Task**

a. Answering questions received from Contractors during Letting Phase
b. Supplying Information to NDOT for preparing addendums *(will be supplemented with future contract if needed)*
c. Shop drawing review/approvals *(will be supplemented with future contract if needed)*

DELIVERABLES FOR FINAL PLANS (PS&E) PHASE INCLUDE

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a. Revised Waterway Permit Data Sheet, NDOT Form 290
b. Floodplain Certification Package
~~,~~Floodplain Certification and Permit (If applicable)
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c. Concrete Box Culvert Request Sheet, NDOT Form 67
d. Opinion of Probable Construction Cost
e. Two full-size sets of Final Plan electronic files (one stamped/signed and one unstamped/unsigned both with preliminary stamp *removed*).
f. Project Information Sheet, NDOT Form 342
g. Project Quantity Sheet, NDOT Form 343E
h. Summary of Quantity Sheets, NDOT Form 355
i. Guardrail Summary, NDOT Form 195
j. Summary of Quantities and Locations of Surfaced Driveways/Intersections
k. Table of Drainage Summary Items, "Horse blankets"
l. Length Sheet, NDOT Form 415

m. PS&E Required Sheet, NDOT Form 280
n. Grading Item Summary, NDOT Form 64E
o. Special Provisions
p. Standard Plan listing
q. Special Plan listing
r. Certification of Compliance, NDOT Form 366
~~s.~~ ~~Floodplain Certification and Permit (If applicable)~~
~~t.~~ s. Construction and working day estimates

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RIGHT-OF-WAY DESIGN SERVICES

Overview: The following tasks will be completed to establish the existing Right-of-Way and to design the proposed Right-of-Way. The consultant will complete and submit title research, legal description, and ROW plans.

Qualifications, Knowledge and Experience. The Services must be completed by, or under the direct supervision of a registered abstractor who is qualified and in good standing to complete the Services in Nebraska. Consultant must be knowledgeable and have substantial experience completing Services of this type.

Software, Equipment, and Submission Requirements. Title researcher will be responsible for providing all necessary equipment, supplies, materials, and software to complete the Services. The Certificate of Title reports shall be signed, converted to pdf format and submitted in readable electronic form. Supporting documents shall be submitted in pdf, jpeg or tiff format. All deliverables shall be submitted using the specified file naming convention.

Format of Right-of-Way plans The Consultant shall submit all Right of Way plans as half size plans plotted at the appropriate scale. They must measure the standard 11"x17" paper that is used in any normal Xerox machine. The margins must measure as follows: left margin must be approx. 1 inch, right margin must be approx. 5/16 inch, and the top and bottom margins must be approx. 3/8 inch. The border used must be the one supplied with the ROW cell file. It measures approximately 15 5/8 inches x 10 3/8 inches when plotted at 1" = 200' scale. The scale of the ROW plan sheets will match the scale of the roadway plan sheets. Any materials submitted to the State by the Consultant must be on or equivalent to white bond. Any material, which does not produce an acceptable reproduction, will be returned to the Consultant for rectification. The Consultant shall follow the State's "CADD Drafting procedures and guidelines" in preparing the project plans. Sheets must be set up according to the State's procedures. File names must follow the State's CADD naming convention. Line weights, line styles, text size and leveling must follow the State's guidelines. The CADD files must conform to the following standards and conventions:

Graphic elements must be placed in accordance with the State MicroStation Right-of-Way element attributes standards. Working units must be:

1. Master Units = Ft
2. Sub Units = 1000 TH
3. Position Units = 1

File names must use State CADD naming convention.

Data Transfer It shall be the Consultant's responsibility to obtain the necessary software to translate to and from the specified format for all electronic files supplied by the State and for all electronic files prepared by the Consultant and supplied to the LPA/State. The State and the Consultant shall transfer all Graphic files in a MicroStation dgn. Format. A data sheet must accompany all electronic file submittals listing the file names and detailing the method of placement so the State will know how to restore the data in our system. All computer files shall be provided on either compact disk (CD) or loaded to State's FTP site unless otherwise specified. The State will provide instructions and password for FTP site with final contract documents.

1) **Existing Right-of-Way Base.** This task involves certified title research including collecting the Plat drawings, reviewing property titles, reviewing survey data, and other necessary information to establish the existing Right-of-Way, including easements, for the properties abutting the project. Title Searches to

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~~be completed by a certified abstractor. Ownership plans will be developed from this information and the consultant will have this task completed prior to the plan in hand meeting.~~

~~2) **Proposed Right of Way.** The Consultant will determine the easements (temporary and permanent) and right of way required to construct the project. It is estimated that there will be up to _____ tracts associated with this project.~~

~~3) **Right of Way Plan Sheets.** The Consultant will prepare right of way plan sheets to include in the plan set. The sheets will include existing property lines and all proposed right of way ownerships, easements and takings will be tabulated and shown on the sheets. Tract Maps with all legal description will be provided by the Consultant.~~

~~4) **Title Research.** All title research services will be completed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Act (the Uniform Act) and with the NDOT Right of Way Manual. The Services must be completed by, or under the direct supervision of a registered abstractor who is qualified and in good standing to complete the Services in Nebraska. Consultant must be knowledgeable and have substantial experience completing Services of this type. The State will provide instructions and password for FTP site with final contract documents. Consultant will be responsible for providing all necessary equipment, supplies, materials, and software to complete the Services. The Certificate of Title reports shall be signed, converted to pdf format, and submitted to State in readable electronic form. Supporting documents shall be submitted in pdf, jpeg, or tiff format. All deliverables shall be uploaded to an ftp site specified by State using State's file naming convention.~~

~~5)~~ **Permit to occupy right of way** Projects encroaching on NDOT right of way (utilities, drainage structures, grading, etc.) need to be permitted by the NDOT District Construction office. At the Plan in Hand Plan design stage, NDOT will assist the LPA/LPA's with contacting the District Engineer or Permits Officer to determine if a permit or permits are needed.

All requests for permitted access shall first be submitted to the District Engineer in whose District such access lies. Requests must be submitted on standard access permit application form available from the Department (NDOT Form 19). The consultant shall provide the following items to the RC for evaluation of encroachments or an access application or the construction of an access:

1. Highway and access plan and profile.
2. Complete drainage plan of the site showing impact to the highway right of way.
3. Map and letters detailing the utility locations before and after development in and along the highway.

~~4. Subdivision zoning and development plan. These should be coordinated with the local officials and their comments should be included with the application.~~

~~5. Property map indicating other accesses and abutting public roads and streets, including those on the opposite side of the highway.~~

~~6.~~4. Proposed access design details, such as, ADA requirements, or wetlands.

~~7. A Traffic Impact Study, if required.~~

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The District Engineer will make appropriate comments and forward the application together with the plans and other supporting data to the LADS PC/RC who will coordinate with the Right of Way Division for issuance of the permit.

~~**ROW Deliverables at the Post Plan in Hand Design Stage.**~~

~~a) The title researcher shall review the title research study area ("Study Area") and search the County real estate records to identify each separate parcel of land located within the Study Area. A separate parcel of land is all contiguous land owned by the same owner and held in the same title (e.g., sole owner, joint tenants, tenants in common, etc.).~~

~~b) The title researcher shall provide a copy of the title vesting document for the current owner of each parcel of land in the Study Area.~~

~~c) The title researcher shall list all owners of record of the parcel within the preceding 5-years and include a copy of each additional instrument conveying title to each owner identified.~~

~~d) Title researcher shall provide a Certificate of Title Report for each parcel within the study area. This Title Report shall be on the State's approved Certificate of Title Report form (or a preapproved form) to report such information. Each Title Report shall also include the following information:~~

~~i) The name of the current parcel owner(s) and how the title is held, exactly as shown on the title vesting document(s).~~

~~ii) The owner's mailing address as shown in the County Assessor or Treasurer's records.~~

~~iii) If the owner of record is known to be deceased, the Case Number of the Deceased's Probate along with the name(s) of court appointed Personal Representative(s) if available.~~

~~iv) Active Mortgages, Deeds of Trusts, and other financing documents, and any assignments of such documents.~~

~~v) Active liens, agreements, conditions, limitations, restrictions or covenants affecting title.~~

~~vi) Easements such as private water, sewer, ingress/egress (access), cell towers, flood, and irrigation or others that encumber or restrict the use of the land. Consultant should not provide easements for public utilities (water, sanitary sewer, power, gas, cable, telephone, and telegraph).~~

~~vii) All recorded leases except oil and gas leases.~~

~~viii) List the document recording information for each record listed in the title report to include the date of record and instrument number.~~

~~ix) The legal description for the subject parcel of land.~~

~~x) Comments the abstractor believes are necessary for a full understanding of the information reviewed for the parcel.~~

~~xi) Name, signature, and license number of abstractor and title effective date.~~

~~e) Provide copies of all supporting documentation (deeds, easements, etc.) that are listed in the title report in an electronic format type using the document naming convention as specified. Consultant should not provide copies of the active mortgages, deeds of trust or assignments that are listed on the Title Report.~~

f) If applicable, Consultant shall provide copies of subdivision plats and surveys of irregular tracts and tax lots with metes and bounds field notes.

g) Provide copies of deeds, easements, dedications, plats, etc., for any property acquired by or conveyed to governmental entities.

h) Provide copies of County Cadastral Maps in counties that do not have a GIS website.

Title Report and Supporting Document Naming Convention. For each parcel - two separate electronic files must be submitted as detailed below:

1. For each parcel - One electronic file containing the Title Report
2. For each parcel - One electronic file containing all supporting documents. This file should include all documents as specified under the above ROW Deliverables at the Post Plan in Hand Plan Stage.
3. For each electronic file - file names should be simple, easy, and logical. File names should include last name of private owner or first name of company.

Examples of File Names

Vesting Owner	**Title Report File Name**	**Documents File Name**
Joe Smith	Smith TR	Smith Documents
Lincoln Methodist Church	Methodist Church TR	Methodist Church Documents
MSD LLC	MSD TR	MSD Documents
Sam Jones and Doug Peters	Jones TR	Jones Documents
AJ Brown Auto Body	Brown TR	Brown Documents

The Consultant is to submit a geographically oriented base file in MicroStation *.dgn format showing the following information for the entire project. Files may be submitted in one file or in reference files, all necessary reference files need to be in the submittal.

- Surveyed Topography
- All construction items (feature file)
- Limits of construction.
- ROW Survey (section corners, lot corners, etc.)
- Ownership information (property lines, owner names, lot numbers, lot lines, tract numbers, etc.)
- ROW Design (new ROW, PE's and TE's)
- ROW patterning (if placed in the base file)
- Air photo if used

~~On Projects that NDOT is acquiring ROW, the consultant shall submit a kmz file.~~ **Project ROW Plans Format**

- The Consultant shall submit all Right of Way plans as half-size plans plotted at a scale that produces the least number of plan sheets, yet at a scale that the details are easy to see and features can be easily discernable. The plans sheet must measure the standard 11"x17" paper that is used in any standard copy machine. The margins must measure as follows: left margin must be approx. 1 inch, right margin must be approx. 5/16 inch, and the top and bottom margins must be approx. 3/8 inch. The Consultant must either use the ROW plan border sheet supplied by NDOT, or a pre-approved border sheet supplied by the Consultant. It is desirable for the scale and station range of the ROW plan sheets to match the scale and station range of the roadway construction plan sheets whenever possible.
- All ROW plans are to be submitted in electronic pdf format unless otherwise specified.
- Any hard copy materials submitted to the State by the Consultant must be on equivalent to white bond paper. Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.
- Any plan sheets submitted electronically to the State by the consultant must be able to be accessed, printed, printed to scale, and produce an acceptable document. Any files which cannot meet these requirements will be returned to the Consultant for rectification.
- Any text files submitted electronically must be able to be accessed and printed. Text must be able to be cut and pasted into the States ARMS system. Any files which cannot meet these requirements will be returned to the Consultant for rectification. Preferred format for text files is Microsoft Word. Files in pdf format are not acceptable when a text file is specified.
- The Consultant shall follow the State's CADD drafting procedures and guidelines in preparing the project plans.
    a. Sheets must be set up according to the State's procedures.
    b. File names must follow the State's CADD naming convention.
    c. Line weights, line styles, patternings, text size and leveling must follow the State's guidelines.
- The CADD files must conform to the following standards and conventions:
    a. Graphic elements must be placed in accordance with the State MicroStation Right of Way element attributes standards.
    b. Working units must be:
        i. Format = MU
        ii. Master Unit = US Survey Feet
        iii. Sub Unit = US Survey Inches
        iv. Accuracy = 0.1234
    c. File names must use State CADD naming convention.

Data Transfer

1. The Consultant shall obtain the necessary software to translate to and from the specified format for all electronic files supplied by the State, and for all electronic files prepared by the Consultant and supplied to the State.
2. The State and the Consultant shall transfer all ROW Design CADD files in a 2D MICROSTATION V8i format.
3. All electronic files must be provided on compact disk (CD/DVD), e-mailed, or transferred through a file sharing site unless otherwise specified. Microstation CADD files should be transferred through NDOT's Bentley Projectwise program.

Qualifications

1. All ROW Design tasks must be performed by or under the direct supervision of a Professional Civil Engineer or Registered Land Surveyor registered in Nebraska.
2. All Title research services must be completed by, or under the direct supervision of a registered abstractor who is qualified and in good standing to complete the Services in Nebraska.
3. All ROW Survey must be performed by a Registered Land Surveyor registered in Nebraska.

TITLE RESEARCH

1. Overview
   The State is in the process of developing a project for the construction of a highway, road, street, or other State or Federal-aid transportation project ("Project"). New property rights (ROW) will need to be acquired to build the project. The State will use the services of Consultant to complete title research services ("Services") for this project.
2. Criteria
   All Services will be completed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Act (the Uniform Act), the NDOT Right-of-Way Manual, and the ROW Design Consultant Manual.
3. Qualifications, Knowledge and Experience
   The Services must be completed by, or under the direct supervision of a registered abstractor who is qualified and in good standing to complete the Services in Nebraska. Consultant must be knowledgeable and have substantial experience completing Services of this type.
4. Software, Equipment, and Submission Requirements
   Consultant will be responsible for providing all necessary equipment, supplies, materials and software to complete the Services. The Certificate of Title reports shall be signed. The Certificate of Title reports and their supporting documents shall be converted to an electronic file and submitted to State in readable electronic form. Acceptable electronic forms are either pdf, jpeg or tiff format. All deliverables shall either be e-mailed or uploaded to a file sharing service. The State can provide a file sharing link for the consultants use if requested. All documents shall be submitted using State's specified file naming convention.
5. Deliverables:
   a. The consultant shall prepare a title research study area ("Study Area") to identify all parcels that are either affected by the project, where it is

anticipated that property rights will need to be acquired from, or if the establishment of parcels are necessary to determine design aspects of the project. A separate parcel of land is all contiguous land owned by the same owner, and held in the same title (e.g. sole owner, joint tenants, tenants in common, etc.)

b. The registered abstracter shall search the County real estate records to identify the current owner(s) of each parcel of land identified in the study area and provide a copy of the title vesting document(s) for the current owner(s) of record for each parcel of land identified in the Study Area.

c. The registered abstracter will also identify and list all owners within the preceding five years of the title effective date, including the last owner of record preceding the 5-year period of the title effective date, if any, and provide copies of those vesting documents pertaining to the listed owners for each parcel of land identified in the Study Area.

d. The registered abstracter shall prepare a Certificate of Title Report for each separate parcel of land identified within the Study Area. The consultant shall use the State's Certificate of Title Report form, or a pre-approved Certificate of Title Report form supplied by the consultant, to report such information. Each Title Report shall include the following information:

   i. The legal description for the subject parcel of land.
      It is preferred to use the actual legal description of the parcel, however if the legal description is lengthy the registered abstracter can elect to summarize the description such that its location can be generally determined, and then list the filing information referenced to the document containing the actual legal description and refer the reader to it. (example: Part of the Southwest Quarter of SEC. 1-T6N-R3E XYZ County. See Book 30 Page 455 for actual legal description).
   ii. Parcel Number(s) of the subject parcel of land
   iii. The name of the current parcel owner(s) and how the title is held, exactly as shown on the title vesting document.
   iv. The owner's mailing address as shown in the County Assessor's or Treasurer's records.
   v. If the owner of record is known to be deceased, the Case Number of the Deceased's Probate along with the name(s) of court appointed Personal Representative(s) if available.
   vi. Active Mortgages, Deeds of Trusts, and other financing documents, and any assignments of such documents.
   vii. Active liens, agreements, conditions, limitations, restrictions, or covenants affecting title.
   viii. Easements such as private water, sewer, ingress/egress (access), cell towers, flood, and irrigation or others that encumber or restrict the use of the land.
   ix. All recorded leases except oil and gas leases.

x. Comments the registered abstractor believes are necessary for a full understanding of the information reviewed for the parcel.

xi. Name, signature, and license number of abstractor and title effective date.

e. The registered abstracter shall provide copies of supporting documentation (deeds, easements, etc.) in an electronic format type using the document naming convention as defined in Section G7. Consultant should not provide copies of the active mortgages, deeds of trust or assignments that are listed on the Title Report.

f. Registered abstracter shall provide copies of any subdivision plats and surveys of irregular tracts and tax lots with metes and bounds field notes that are referenced in any of the legal descriptions of any of the documents.

g. Registered abstracter shall provide copies of deeds, easements, dedications, ROW, plats, etc., for any property acquired by or conveyed to governmental entities except those acquired by the Nebraska Department of Roads or Nebraska Department of Transportation.

h. No separate Certificate of Title Report is required for owned by the Nebraska Department of Roads or Nebraska Department of Transportation, unless specifically requested.

6. Report and Document Submittal and Naming Convention:

a. A file with each individual Certificate of Title Report and its supporting documents will be submitted for each parcel. This file should include all documents as required under Section E. Deliverables.

b. Each file must be submitted in an electronic format (pdf, jpeg or tiff).

c. File names must be simple, easy, and logical. File names must include last name of private owner or first name of company.

Examples of File Naming Convention		
Vesting Owner	**Title Report File Name**	
Joe Smith	Smith TR	
Lincoln Methodist Church	Methodist Church TR	
MSD LLC	MSD TR	
Sam Jones and Doug Peters	Jones TR	
AJ Brown Auto Body	Brown TR	

OWNERSHIP PLANS

1. The Consultant shall place the ROW survey on the plans and label the various ROW survey elements. This includes, but is not limited to, section lines, 1/4 section lines, subdivisions, lot lines, lot and block identification, section-township-ranges, etc.
2. The Consultant shall reference the preliminary project alignment to the ROW ownership plans unless the proposed design alignment is available in which case it must be used instead.

3. The Consultant must not use any information contained on Tax Assessor or GIS sites to establish the ROW lines, existing easements, property lines, and property ownerships on the ROW plans. The ROW plan information must be established either by law, statute, or from the recorded instruments contained in the signed certificate of title reports and/or provided by the state.
4. The Consultant shall check all previous ROW plans against the existing ROW deeds and plats to verify the existence, boundaries, and type of all existing public ROW, permanent easements, and control of access. ALL EXISTING ROW, CONTROLLED ACCESS, PERMANENT EASEMENTS, AND PROPERTY LINES SHOWN ON THE PROJECT ROW PLANS MUST BE ESTABLISHED BY LAW, STATUTE, OR IN ACCORDANCE WITH THE RECORDED INSTRUMENTS AND SHALL BE REVIEWED AND APPROVED BY A REGISTERED LAND SURVEYOR REGISTERED IN THE STATE OF NEBRASKA. The existing ROW plans are not legal documents and therefore shall only be used as a general graphical indication of the existing ROW footprints. If no recorded instrument is provided by the State, the Consultant shall inform the ROW Design section of any missing documents and it is the State's responsibility to research and provide them to the Consultant. All existing public ROW, permanent easements, and control of access must be placed on the ROW plans and patterned accordingly.
5. Station and offsets referenced to the alignment used for the ownership plans must be placed on all existing Right of Way, permanent easements, and control of access lines at their break points, intersects with property lines, and intersects with section lines and 1/4 section lines. The ends of the control of access line on either side of a break within a control of access line do not need a station and offset unless one of the other requirements apply.
6. All existing Control of Access and access breaks with their classifications (i.e. Type 'A', Type 'B', Restricted, Unrestricted, etc.) as well as a drive built within the control of access but without a break (these should be labeled as an Illegal Access) must be shown and labeled on the plans.
7. All existing Permanent Easements with their usage descriptions and project number (if applicable) must also be shown on the plans. Document recording information can also be referenced to the existing easements if beneficial.
8. The Consultant shall provide a listing of all existing Access Control Breaks in electronic table format. The list should include the station where the break is located, which side of the centerline the break is located (lt./rt.), and the type of break that exists (i.e. Type 'A', Type 'B', Restricted, Unrestricted, etc.). The list shall reflect the access control breaks described in the deeds. Drives built within the control of access but without a break (these should be labeled as an Illegal Access) should also be identified in the listing. The break information shall be compared to what is shown on the existing ROW plans, and any discrepancies between the ROW plans and deeds shall be noted on the list. A KMZ file of the Ownership ROW base file should also be submitted with this listing. This list forms the basis for where control of access breaks are to be located as part of the project. The list and kmz file are to be provided no later than 3 weeks prior to the control of access meeting.

9. The Consultant shall place the property lines defining the boundaries of the individual parcels beyond the existing ROW to reflect the property ownerships described in the title research documents. All property ownerships must be established from the signed certificate of title reports and supported by a recorded instrument. If an instrument is missing the Consultant shall inform the ROW Design section and it is the State's responsibility to research and provide them to the Consultant. The name(s) of the current parcel owner(s), how the title is held, and the summary legal description (lot-block, Tax Lot, Quarter Section, etc.) of the subject parcel of land exactly as shown on the title vesting document shall be placed on the plans. All property lines must be labeled on the plans.
10. The Consultant shall label all streets and highways on the plans.
11. All text must be legible and not overlap other text, construction items, topography, or patterning.
12. The Consultant shall create a project title sheet that contains basic project information such as the project name, project number, project control number, beginning and ending reference posts, beginning and ending stations, north arrow, etc. Plan sheet should also show a map of the area encompassing the project with the boundaries of the project clearly identified on it. In order to orientate the user the map should be of sufficient size, scale, and coverage so that landmarks such as major streets, highways, towns, named waterways, section-township-ranges, and other such items can readily identified. A current air photo may also be incorporated if it will help orient and assist the user.
13. The Consultant shall create a situation sheet that identifies the location and footprint of the individual parcels within the project in a map format. Property lines for each parcel should be shown on the plan sheet(s) so that the extent of each tract, as well as their approximate location within the project, can be easily identified. To help orient the user basic location information such as section lines, section-township-range, lot-block-subdivision, major street names, north arrow, project alignment, etc. should be shown. Each parcel should be labeled with their corresponding owner name. Plan sheet(s) should be at a scale sufficient to minimize number of plan sheets yet still be able to see location, boundaries, and relative sizes of each tract. Plan sheet(s) do not need to be to scale.
14. The Consultant shall submit to the ROW Design Section no later than the scheduled date one set of Ownership Plans (as described in the Project ROW Plans Format) with each sheet dated in the lower right corner. Each sheet shall be labeled as "Ownership Plans" and that they are "Preliminary Plans – Not Final Subject to Change".
15. The Consultant shall submit all Ownership Plan sheets in pdf format along with the ROW Design CADD and GEOPAK ROW files to the State at the time of the Ownership Plans submittal.
16. The Consultant shall monitor all project scope and project design information throughout the development of the project. All ROW Design information and requirements shall be updated as necessary to reflect the latest project scope and project design.

17. Each time an Ownership Plan revision is done the date of the revision will be shown in the lower right corner of the revised sheet(s). When submitting revised Ownership Plans, the Consultant shall include an electronic transmittal sheet listing all revisions made to the plans.
18. Each time a revision to the Ownership Plans are made the Consultant shall submit updated versions of all affected CADD and GEOPAK ROW files to the State.

PRELIMINARY ROW PLANS

1. The consultant shall reference construction elements and roadway design information contained in the design files (alignment, feature, loc, etc.) to the ownership plans. The proposed design alignment shall be referenced to the ROW Appraisal plans instead of the preliminary project alignment. Construction elements to be referenced include items such as limits of construction (LOC's), pavement edges, sidewalks, sewers, drives, culverts, drainage structures, dikes, retaining walls, bridges, guardrail, wetland mitigation sites, construction staging areas, temporary roads, erosion control, traffic signals, street lights, etc.
2. The Consultant shall design the new ROW and easements necessary to construct, operate, and maintain the transportation facility and in accordance with NDOT's General ROW Design Guidelines. All new acquisitions shall be shown on the ROW plans and patterned accordingly.
3. Tract numbers are to be assigned to all parcels from which property rights will be acquired from.
4. Station and offsets shall be placed and referenced to the project design alignment for all new Right of Way, permanent easements, and control of access lines at their break points, intersects with property lines, and intersects with section lines and 1/4 section lines.
5. The State will determine the new access control and access control break locations/restrictions and provide them to the Consultant. The Consultant shall place the new access control and breaks on the Preliminary Appraisal plans.
6. For all new Control of Access lines station and offsets shall be placed at the ends of the control of access lines, breakpoints, intersects with property lines, and all intersects with section lines and 1/4 section lines. The ends of the control of access line on either side of a break within a control of access line do not need a station and offset unless one of the other requirements apply.
7. The consultant shall determine if any existing items within the temporary or permanent easements can be left in place and not disturbed during the construction of the project. If so a "Do Not Disturb" (DND) note shall be placed on the ROW and construction plans. The DND note shall identify the type of item (i.e. tree, fence, landscaping etc.) and its location either with a note leader or the Station and offset of the item.
8. All text must be legible and not overlapping other text, construction items, topography, or patterning.
9. The Consultant shall submit to the ROW Design Section no later than the scheduled date one set of Preliminary ROW Plans (as described in the Project ROW Plans Format, Section "D" of this Scope of Services) with each sheet dated

in the lower right corner. Each sheet shall be labeled as "Preliminary ROW Plans" and that they are "Preliminary Plans – Not Final Subject to Change".

10. The Consultant shall submit all Preliminary ROW plan sheets in pdf format along with the ROW Design CADD and GEOPAK ROW files to the State at the time of the Preliminary ROW plans submittal.
11. The Consultant shall monitor all project scope and project design information throughout the development of the project. All ROW Design information and requirements shall be updated as necessary to reflect the latest project scope and project design.
12. Each time a Preliminary ROW Plan revision is done the date of the revision will be shown in the lower right corner of the revised sheet(s). When submitting revised Preliminary ROW plans the Consultant shall include an electronic transmittal sheet listing all revisions made to the plans.
13. Each time a revision to the Preliminary ROW plans are made the Consultant shall submit updated versions of all affected CADD and GEOPAK ROW files to the State.
14. After the Preliminary ROW plans are submitted the Roadway Design Section and the ROW Design Section will arrange a Preliminary ROW Design review meeting. A representative of the Consultant shall attend this meeting. The consultant may also be requested to submit a kmz file with the Preliminary ROW plans for use at the Preliminary ROW Design review meeting.

APPRAISAL PLANS

1. After the ROW review meeting, the Consultant shall make all the necessary revisions, corrections, etc. from the Preliminary ROW Review meeting.
2. Each separate area to be acquired within a tract that is described with its own legal description shall be assigned an acquisition type and a sequential number. A tract can have multiple acquisition areas, which when assembled, encompass all the property rights that are being acquired from that tract. Areas where absolute ownership is being acquired (ROW) shall be assigned a ROW1. Each Permanent and Temporary Easement area to be acquired are to be assigned a PE1 or TE1 respectively. If more than one acquisition area per tract occurs a consecutive number will be assigned to the subsequent area (i.e., ROW2, PE2, TE2 etc.) The ROW areas do not need to be labeled on the plans, but each new easement must be labeled with its acquisition type and number along with their respective purposes.
3. Acquisitions from railroad owned properties shall be patterned using the appropriate RR patterning. Also for areas being acquired from the railroad a note and leader to each area shall be added to the ROW plans indicating the tract number, the acquisition type and its sequential number (ROW1, PE1, TE1, etc.), the purpose of the acquisition (ROW, construction purposes, bridge, etc.), and the area of acquisition.
4. All text must be legible and not overlapping other text, topography, construction items, or patterning.
5. The Consultant shall prepare legal descriptions (distances and deflections, no bearings or azimuths) for all ROW, control of access, permanent easements, and

temporary easements. Legal descriptions must follow NDOT's standard legal description format and use NDOT's Standard Library statements. Degrees, Minutes, Seconds, Feet, etc. must be spelled out in text format in the legal descriptions. Symbols such as °, ', and " must not be used to denote units of measurement in the legal descriptions. Superscript text should also not be used in legal descriptions. Generally urban areas are to be calculated in square feet rounded up to the nearest whole square foot, and rural areas are to be in acres rounded up to two decimal places. During the appraisal process the consultant may be directed to use different units depending on the particular characteristics of the property. The legal descriptions shall be submitted in electronic text format (not pdf). Each legal description shall be identified by the project control number, its tract number, acquisition type, and its sequential number. Legal descriptions can be submitted in one text document, or each tract can have its own document. BEFORE SUBMITTAL TO NDOT ALL LEGAL DESCRIPTIONS SHALL BE REVIEWED AND APPROVED BY A REGISTERED LAND SURVEYOR REGISTERED IN THE STATE OF NEBRASKA.

6. The consultant shall update the situation sheet (sheet 1) as needed. The tract numbers assigned to each parcel shall be added to the corresponding parcel on the situation sheet.
7. The Consultant shall prepare a summary of areas sheet (#2 sheet). The #2 sheet must display all tract numbers, the owner(s) name, how the title is held, and the summary legal description (lot-block, Tax Lot, Quarter Section, etc.), the areas of all acquisitions, and the ROW sheet number(s) where the tract is located.
8. The Consultant shall submit to the ROW Design Section no later than the scheduled date one set of legal descriptions in the specified format, and one set of Appraisal Plans (as described in the Project ROW Plans Format) with each ROW plan sheet dated in the lower right corner. Each sheet shall be labeled as "Appraisal Plans" and that they are "Preliminary Plans – Not Final Subject to Change".
9. The Consultant shall submit all Appraisal plan sheets in pdf format along with the ROW Design CADD and GEOPAK ROW files to the State at the time of the Appraisal plans submittal.
10. The Consultant shall monitor all project scope and project design information throughout the development of the project. All ROW Design information and requirements shall be updated as necessary to reflect the latest project scope and project design.
11. The Consultant shall make ROW design alterations as required by the State during the Appraisal of the ROW. The revisions must be made within five (5) working days after the State requests the revision.
12. Each time an Appraisal Plan revision is done the date of the revision will be shown in the lower right corner of the revised ROW plan sheet(s).
13. Each time a revisions is made to a legal description the date of the revision shall be placed with the tract number, acquisition type, and its sequential number identifier.

14. Each time a revision to the legal descriptions or Appraisal Plans are made the Consultant shall submit updated versions of all affected electronic legal description text, CADD and GEOPAK ROW files to the State.
15. When submitting revised Appraisal plans or legal descriptions the Consultant shall include an electronic transmittal sheet listing all revisions made to the plans and/or legal descriptions in chronological order for the duration of the appraisal stage.
16. Upon request the Consultant shall submit a ROW staking listing for any tracts requested within three working days of the request. The listing must provide station offsets to the design centerline and coordinates for all ROW, PE, TE, and control of access lines at all break points, TS, SC, CS, ST, TC, CT, centerline deflections, and at every 100 feet or even stations like the cross sections. The staking report shall be provided in Excel and csv formats. Program and instructions for making the staking reports are found on the NDOT website.
17. A pre-appraisal and/or appraisal meeting may be held to inform the appraisers of the aspects and history of the project and to answer any questions they may have. A representative of the Consultant shall attend these meetings. The consultant may also be requested to submit a kmz file for use at these meetings.

NEGOTIATION PLANS

Negotiations to acquire the additional property rights needed for the project will occur after the appraisal process is complete.

1. The State shall request Negotiation plans when negotiation activities are ready to commence. The Consultant shall submit to the ROW Design Section within five working days of their request one set of Negotiation Plans (as described in the Project ROW Plans Format) with each sheet dated in the lower right corner. Each sheet shall be labeled as "Negotiation Plans" and that they are "Preliminary Plans – Not Final Subject to Change".
2. All text must be legible and not overlapping other text, topography, construction items, or patterning.
3. The Consultant shall submit all Negotiation plan sheets in pdf format along with the ROW Design CADD and GEOPAK ROW files to the State at the time of the Negotiation plans submittal.
4. The Consultant shall submit a ROW staking listing for all tracts with the Negotiations plans submittal. The listing must provide station offsets to the design centerline and coordinates for all ROW, PE, TE, and control of access lines at all break points, TS, SC, CS, ST, TC, CT, centerline deflections, and at every 100 feet or even stations like the cross sections. The staking report shall be provided in Excel and csv formats. Program and instructions for making the staking reports are found on the NDOT website.
5. The Consultant shall monitor all project scope and project design information throughout the development of the project. All ROW Design information and requirements shall be updated as necessary to reflect the latest project scope and project design.

6. The Consultant shall make ROW design alterations as required by the State during the acquisition phase of the ROW process. The revisions must be made within five working days after the State requests the revision.
7. Each time a Negotiation Plan revision is done the date of the revision will be shown in the lower right corner of the revised ROW plan sheet(s).
8. Each time a revision is made to a legal description the date of the revision shall be placed with the tract number, acquisition type, and its sequential number identifier.
9. Each time a revision to the legal descriptions, Negotiation Plans, or staking report is made the Consultant shall submit updated versions of all affected electronic legal description text, staking report files, CADD, and GEOPAK ROW files to the State.
10. When submitting revised Negotiation plans, legal descriptions, or staking reports, the Consultant shall include an electronic transmittal sheet listing all revisions made to the plans, legal descriptions, and/or staking reports in chronological order for the duration of the acquisition stage of the project.

PS&E ROW PLANS

1. The Consultant shall submit to the ROW Design Section within seven working days of their request 2 sets of PS&E ROW plans (as described in the Project ROW Plans Format) in PDF format as specified below:
    a. One PS&E ROW set with Preliminary stamp OFF/Seal OFF uploaded to the _EPlans folder on ProjectWise with the name of the PDF "13275 ROW Prelim Plans"
    b. One PS&E ROW set with Preliminary stamp OFF/Seal ON and electronically signed uploaded to the _EPlans folder on ProjectWise with the name of the PDF "13275 ROW Final Plans"

    The PS&E plan set shall consist of all Negotiation Plan sheets except the title sheet, situation sheet, and summary of areas sheet (2 sheet); and shall have the following changes made:
    c. The Negotiation Plan stamp will be removed along with any "revised" stamps.
    d. Any construction notes will be removed from the ROW plan sheets by shutting off the level(s) in which they are placed except for "Do Not Disturb" notes which are to remain on the PS&E ROW Plans.
2. The Consultant shall stamp, sign, and date PS&E ROW plans. The seal of the Consultant should be CADD generated that is then electronically signed and dated by the Professional Civil Engineer or Registered Land Surveyor registered in Nebraska.
3. The PS&E plans shall incorporate all negotiation plans revisions.
4. The Consultant shall submit all PS&E ROW Design CADD and GEOPAK ROW files to the state at the time of the PS&E submittal.
5. The Consultant shall make PS&E corrections as required by the state during the PS&E letting package preparation process. Any updated ROW Design CADD and GEOPAK ROW files shall also be submitted with the revised PS&E ROW

plans as necessary. The revisions must be made within five working days after the state requests the revision.

6. Formal PS&E Plan revisions may be required after the project letting. The consultant shall perform PS&E Plan revisions as needed. Each time a PS&E revision is made the Consultant shall submit updated versions of all affected electronic legal description text, staking report files, CADD, and GEOPAK ROW files to the State.

PRELIMINARY ROW AREA ESTIMATES

Preliminary ROW and easement area estimates may be needed for environmental and preliminary ROW cost estimating purposes.

1. The consultant shall estimate Preliminary ROW areas for their inclusion in the Plan-in-Hand report or upon request.
2. The consultant shall estimate the amount (area) of new ROW and easements that are anticipated to be needed for the project. These area estimates shall be based on the best information available at the time of the request.
3. The Consultant shall compute and record the area computations for:
    a. New ROW.
    b. New Temporary easements.
    c. New Permanent easements.
4. If requested the above areas may be further broke into general land usage or classification (dryland crop, irrigated crop, pasture, farmstead, residential, commercial, urban, rural, parkland, historical, etc.).
5. Consultant shall compute urban areas in square feet and rural areas in acres unless otherwise directed. During the preliminary ROW estimating process the consultant may be directed to use different units depending on the particular characteristics of the property.
6. Estimates shall also list any major privately owned improvements that will be removed or destroyed by the project (buildings, houses, grain bins, etc.)
7. The consultant shall submit the ROW area Estimates within 10 working days of their request or for their inclusion in the Plan-in-Hand report whichever is soonest.

PREPARE, RIGHT OF WAY COST ESTIMATE

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Overview Nebraska Department of Transportation (NDOT) will prepare the ROW Cost Estimate for the project since this project is located outside of a Metropolitan Planning Organization (MPO).~~NDOT will prepare the ROW Cost Estimate on projects located outside of the Metropolitan Planning Organizations (MPO) of Metropolitan Area Planning Agency, Omaha (MAPA) and of Lincoln City Lancaster County (LCLC). If project is within an MPO, ROW Cost Estimate will be completed by the LPA as detailed below.~~

~~If an LPA in MAPA or LCLC elect to outsource preparation of the ROW Cost Estimate, they may do so provided the ROW Cost Estimate is prepared by a real estate~~

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professional knowledgeable of land values in the area of the project and the ROW Cost Estimate is prepared using the following criteria.

ROW Cost Estimates should include an estimate of the current value of the takings, any damage costs, incidental costs (such as appraisal fees, negotiator fees, title fees, etc.), relocation expenses, possible condemnation costs, and demolition fees, (ROW Cost Estimate form PA-4).

The following items are required in the estimate:

1. *Land Value* - The land value for all fee takings and easements shall be calculated on a square foot cost basis in urban areas and by the acre in rural areas. Each tract shall be evaluated as to zoning and type of use, such as business, residential, and public use. Not all tracts will be valued at the same square foot price.
2. *Damage Costs* - Damage costs must be determined for each tract. These will include cost to cure items and damages to the remainder of the property.
3. *Relocation Costs* - Any residential properties or businesses that will be acquired, as part of the project needs to be included in the ROW Estimate. The estimated value of the home or business and the additional relocation costs (relocation payments to the owner, tenant, and Consultant fees) for each tract will be identified on the Estimate as Relocation Costs.
4. *Administrative Costs and Incidental Expenses* – These costs will include the fees for the Appraisal, Appraisal Review, and Consultant negotiation fees. An incidental cost should be included for each tract on the project if the LPA is hiring ROW Consultants.
5. *Demolition Contracts* – should also include any costs associated with hazardous materials removal.
6. *Advertising Sign Cost* if applicable
7. *Condemnation Costs/Administrative Settlements* - indicate the anticipated percent of parcels affected by either condemnation costs or administrative settlements.

The ROW Cost Estimate includes the cost to research and acquire the right of way for the project, including easements. It includes the right of way costs for storm water management, wetland mitigation, and other work outside of the roadway prism. Contractual obligations with property owners to relocate fencing, reconstruct gates, relocate sprinkler systems, etc. are a ROW cost and are not to be a construction item.

The cost to repair sprinkler systems on public right of way is ineligible for federal participation. However, Local Public Agency policies may provide local funding to repair underground sprinkler systems located in the public ROW and damaged by a public project.

The cost to repair sprinkler systems on public property is ineligible for federal participation. However, Local Public Agency policies may provide for local funding to repair underground sprinkler systems located in the public ROW and damaged by a

~~public project. The ROW Cost Estimate is to note if local funding is available and the estimated cost of repair of the system in the public right of way.~~

~~If the extent of the right-of-way acquisition is not known, then a contingency should be added based upon historical settlements and awards for condemnation cases, which must include costs for attorneys, engineering research, witness research, survey, and staff time. The right-of-way acquisition schedule needs to be considered. Right-of-way acquisition costs will increase quickly in rapidly developing areas Costs must include relocation assistance and benefits for displaced individuals, families, businesses, governments, and nonprofit organizations. Special acquisitions, such as those from government sites can be time consuming and costly. The LPA recognizes right-of-way estimates are dependent upon the accuracy and reliability of information concerning the locations of the right-of-way limits on a project. A small change in the locations of the right-of-way line, or a change in access control or drainage retentions placement, particularly in commercial areas, can affect the right-of-way cost estimate by millions of dollars because of required damage payments such as severance or business damages.~~

~~It is anticipated a ROW Cost Estimated is needed for _____ tracts.~~

~~**Deliverables**: ROW Cost Estimate form PA-4.~~

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Bridge Design Services

Description

This scope provides for engineering services to provide {ex. Bridge Design Data Sheets and TS & L's, and Final Bridge Design, Final Bridge Plans~~, Bridge Load Rating, and Construction Services~~ for a new pedestrian trail bridge over US-81 near the intersection of S 35th Street.~~_____ and _____~~.

State to:

1. Provide as-built plans of ~~existing structure~~US-81.
2. ~~Provide subsurface investigation report and foundation recommendations (including boring logs, allowable soil pressure and bearing pile resistance for a selected pile type).~~
3. ~~Provide pile order lengths.~~
4. Provide the latest copy of Bridge Office Policies and Procedures Manual. (BOPP Manual) (Available on NDOT website)
5. Provide MicroStation *dgn. Format bridge design files, including base sheets, current design standards, libraries, etc. (Available on NDOT website)
6. Provide a sample set of typical bridge plans.
7. ~~Provide hydraulic data sheet.~~
8. ~~Provide latest bridge inspection reports.~~
9. ~~Provide Sufficiency Ratings and HS Ratings of existing bridges.~~
10. Provide available survey information.
11. ~~Provide preliminary roadway design plans.~~
12. Determine lighting locations on the bridge(s).
13. Provide traffic data for US-81.

Applicable Publications

The Consultant shall follow the criteria of the current applicable publications of the American Association of State Highway and Transportation Officials and design criteria furnished by the State. These publications and others which the Consultant shall use in this work are:

1. AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges (2009)
~~1.~~2. AASHTO LRFD Bridge Design Specifications (Ninth Edition)
~~2.~~3. Nebraska Minimum Design Standards, Board of Public Roads Classifications and Standards 2016 (or latest edition).
~~3.~~4. Nebraska Department of Transportation Standard Specifications for Highway Construction, 2017 (or latest edition)
~~4.~~5. Nebraska Department of Transportation Bridge Office Policies and Procedures Manual. (BOPP Manual)

Project Plans Formant, Convention and CADD

All full-sized plan sheets must be 24" x 36". The margin on the right will be ½", the margin on the top and bottom will be 1" and the margin on the left side (binding edge) will measure 2". The border will measure 22" x 33 1/2". Any materials submitted to the

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State by the Consultant must be on or equivalent to white bond. Any material which does not produce an acceptable reproduction will be returned to the Consultant for rectification.

The CADD files must also conform to the following standards conventions:

- Graphic elements must be placed according to NDOT-Bridge level conventions as described in the README DGN file.
- Working units must be:
- Master Units = Survey Feet, Label: '
- Sub Units = inches, Label: "
- Resolution = 1000 per distance survey foot
- File names must use NDOT-Bridge CADD naming convention as described in the Bridge Office Policies and Procedures Manual.

Data Transfer

The Consultant shall create ~~and transfer~~ all plan files to the State in MicroStation OpenBridgeModeler ~~*dgn. Format~~ within the State's Projectwise server. It is the Consultant's responsibility to obtain the MicroStation OpenBridge Modeler ~~*dgn. Format~~ software.

~~The MicroStation *dgn. Format software files shall be transferred to the State via NDOT's FTP site.~~

1. Bridge Design Data Sheets and Bridge Type, Size and Location Plans (TS&L) for Non-Hydraulic Structures

The Consultant shall prepare a Bridge Design Data Sheet and Type, Size, and Location plans (TS&L) for concrete and steel superstructure alternates (if applicable) for the structures listed below:

- Pedestrian Trail Bridge over US-81

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The Consultant shall prepare a general description/layout of the proposed bridges on each TS&L plan. This information shall include, but is not necessarily limited to the following:

1) ~~Sectional~~ General Elevation View of Bridge
   a. Span arrangement
   b. Locations of substructure elements
   c. Existing and/or design profiles of ground, roadways, railroads, etc. below and adjacent to the bridge.
   d. Low ~~girder~~ structure elevations
   e. Vertical clearances of bridge to roadway/railroads below
   f. Grade elevations of bridge and other critical elevations
   g. Top of pier footing elevations
2) General Plan View of Bridge
   a. Span arrangement
   b. Locations of existing roadway/railroads

d. Horizontal clearances to substructure elements

3) Typical Cross Section of Bridge Roadway/Superstructure

a. ~~Girder~~ Superstructure type designation

~~b. Girder spacing~~

~~c.~~b. Clear trail ~~roadway~~ width of bridge

~~d.~~c. Phasing (if any)

4) New Grade Profile Sketch

5) Structure Location Note

The title block along the right side of the sheet shall include the information specified in Section 2.1.3 of the Bridge Office Policies and Procedures Manual. The Bridge Design Data Sheet shall be done in accordance with the Bridge Office Policies and Procedures Manual. The Consultant retains electronic TS&L plot data for reproduction if necessary.

~~2. Bridge Design Data Sheets and Bridge Type, Size and Location Plans (TS&L) for Hydraulic Structures~~

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~~The Consultant shall prepare a Bridge Design Data Sheet and Type, Size, and Location plans (TS&L) for concrete and steel superstructure alternates (if applicable) for the structures listed below:~~

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~~_____~~

~~_____~~

~~The Consultant shall prepare a general description/layout of the proposed bridges on each TS&L plan. This information shall include, but is not necessarily limited to the following:~~

~~1) Sectional Elevation View of Bridge~~

~~a. Span arrangement~~

~~b. Locations of substructure elements~~

~~c. Existing and/or design profiles of ground, roadways, railroads, etc. below and adjacent to bridge (where applicable).~~

~~d. Low girder/slab elevations~~

~~e. Grade elevations of bridge and other critical elevations~~

~~f. Top of pier footing elevations~~

~~g. Bottom of sheet pile or abutment wall elevation~~

~~h. Bottom of pile bent encasement elevation~~

~~i. H.W. Elevation (Q100)~~

~~2) General Plan View of Bridge~~

~~a. Span arrangement~~

~~b. Locations of substructure elements~~

~~c. Location of existing bridge~~

~~3) Typical Cross Section of Bridge Roadway/Superstructure~~

~~a. Girder type designation~~

~~b. Girder spacing~~

~~c. Clear roadway width of bridge~~

~~d. Phasing (if any)~~

~~Show all hydraulic information as shown in the hydraulic data sheet. Also, show elevation and plan view of riprap layout, channel shaping and channel transition back to the natural channel, to scale. Show ordinary high water (OHW) elevation. Existing Profiles, New Grade Profile~~

~~Sketch, Structure Location Note The title block along the right side of the sheet shall include the information specified in Section 2.1.3 of the Bridge Office Policies and Procedures Manual. The Bridge Design Data Sheet shall be done in accordance with the Bridge Office Policies and Procedures Manual. The Consultant retains electronic TS&L plot data for reproduction if necessary.~~

~~3.~~2. Final Bridge Design

The Consultant shall prepare final bridge design plans for the structure(s) as described in this Scope of Services, and as detailed in the bridge design data sheets approved by the State. Because the bridges in this Scope of Services may be different types, some of the items in this section and the following section may not apply for each structure.

1) The Consultant shall compute quantities according to the standard bid items in the Standard Specifications.
2) The Consultant shall prepare a list of all current standard special provisions that pertain to this project. In addition, the Consultant shall prepare special provisions for any bid item not in accordance with the Standard Specifications.
3) If any proprietary items are specified in the final design plans, the Consultant shall list at least three manufacturers in the plans and special provisions, or a general specification eliminating any reference to proprietary names. In addition, the Consultant shall provide to the State any technical brochures pertaining to the proposed products.
4) *75% Bridge Plan Submittal.* The Consultant shall submit to the LAD PC PDF plans via the State's FTP site for the 75% review when the initial design and detailing is completed, but prior to the checking. To avoid delays in the design, during this period of preliminary review, the Consultant may proceed with the bridge design check.
5) *90% Bridge Plan Submittal.* The Consultant shall submit to the LAD PC PDF plans via the State's FTP site for the 90% review when the design and detail check is complete, and a draft copy of the special provisions.
6) *100% Final Bridge Plan Submittal.* The Consultant shall submit final drawings and final special provisions when all final corrections and quantity calculations are completed. The consultant shall submit one complete set of design calculations and one complete set of check calculations, including copies of any computer output used in the design and check calculations. Also, to be submitted, is one complete set of quantity calculations and one complete set of quantity check calculations (including copies of any applicable computer output). All design/check calculations and all quantity/check calculations, the Word files for the special provisions, and a PDF of the final bridge plans shall be submitted via LAD PC.
7) The Consultant shall do the design check calculations and check quantity calculations independent from the original design calculations and original quantity calculations. All check calculations are to be performed by a person of equal professional status as the one who performed the original calculations.
8) The Consultant shall show the names of the individuals preparing and checking the work, along with the date on each sheet of the original design, design check

calculations, and quantity calculations and check quantity calculations. The Consultant shall make sure that all calculations are properly indexed, arranged in a logical and orderly manner.

~~9) The Consultant shall provide shim data (deflections due to slab and curb/rail weight).~~

~~4.~~3. Final Bridge Plans

Requirements for bridge design plans:

1) The Consultant shall prepare final bridge design plans on sheets in accordance with the format described in this Scope of Services.
2) The Consultant shall provide a title block along the right side of each sheet that is in conformance with the "Bridge Office Policies and Procedures Manual".
3) The Consultant shall prepare a performance specification for the prefabricated pedestrian bridge structures (if applicable). The specification shall define, structure configuration, materials, and design criteria to be used by the bridge manufacturer designer.

~~3) The Consultant shall draft all structural details at a scale which will clearly show all details, notes, and lettering when the plans are reduced to half size.~~

4) The Consultant shall put the seal and signature of a registered professional engineer licensed to practice in the State of Nebraska on all sheets of the final design plans.

~~5.~~4. Load Rating Services

Load Rating Services shall include the following:

1. Provide bridge rating using BrR software. A Load Rating Summary Sheet (BR Form 465, current version; form available on NDOT website) and the load rating calculations shall be provided for the bridge.

2. The load rating shall include analysis for the Special Haul Vehicles SU4, SU5, SU6 and SU7 Trucks shown in the latest version of the Manual for Bridge Evaluation. NDOT Rating Trucks shall also be included in the load rating analysis.

The load rating shall be performed in accordance with NDOT's Bridge Inspection Program Manual. The consultant should utilize the Load Rating Report checklist in this manual when completing the load rating.

~~6.~~5. Girder Shim Calculations *(will be handled as a supplement to this contract)*

1) The Engineer shall provide to the Consultant the height of instrument elevation and the rod readings taken on top of the girders at the points designated by the Consultant.
2) The Consultant shall calculate the girder shims of each point and provide the results to the Engineer.
3) The Consultant shall recommend any needed adjustments to the grade, shear connector embedment, etc. to provide for proper girder shims.

NOTE: The State may make suggestions or comments and will attempt to return the plans within approximately two weeks after receiving the plans from the Consultant for the above bridge plan submittals.

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Environmental Services and Coordination

Environmental coordination requires the Design Consultant to work with the NEPA Consultant to ensure environmental commitments are met. The RC is responsible for coordinating these efforts.

1) **Review of NEPA documents and commitments.** The Design Consultant shall review the NEPA Documents for any commitments made that must be addressed during the design.

2) **NEPA exhibits.** The Design Consultant will provide the NDOT with exhibits as needed for the development of Public Involvement.

3) **Preliminary Waterway Permit Data Sheet.** The Design Consultant will complete form NDOT-290 for the project.

4) **Wetlands Impacts.** The Design Consultant will provide limits of construction to the Environmental Consultant for calculation of impacts to wetland areas delineated. This information shall be provided in the final plans on the E Sheet.

5) **Permits.** The Design Consultant shall prepare and submit on behalf of the LPA the following permits, certifications, and forms. The Consultant shall copy the RC (NDOT) on all applications submitted.
    a. Floodplain Permit (Design Consultant)
    b. Wetland Impact calculations form NDOT 290 Waterway Permit Data
    c. The need or potential need for a FAA Form 7460-1 should be noted in the plan-in-hand report and added as a special provision in the PS&E package by the design consultant.

PUBLIC INVOLVEMENT

Public involvement is included within the NEPA scope of services for this project.

~~The Consultant) shall serve as the agent for the Client, representing the Client in all matters related to public involvement services for this project, with the exception of *(list any tasks to be conducted by the Client or others):*~~

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~~1. Civil Rights Analysis~~
~~2. Preparation of a distribution list of stakeholders and contiguous property owners~~
~~3. Preparation and dissemination of a press release in regard to public involvement~~
~~4. Ordering and posting temporary public meeting highway signs (if needed)~~

~~It is anticipated that the project will require the following major tasks *(include the following, as appropriate):*~~

~~1. Public Information Meeting (PIM)~~

~~**APPLICABLE PUBLICATIONS:**~~

~~Work shall be done in accordance with the most current version of the following materials. The most current versions of the NDOT materials can be obtained from the NDOT website.~~

~~NDOT Public Involvement Procedure~~

~~http://dot.nebraska.gov/media/3964/ndor-public-involvement-procedure.pdf~~

~~**CLIENT SHALL PROVIDE:**~~

~~1. If applicable, cover any costs associated with securing or using meeting venue(s)~~
~~2. Distribution list of stakeholders and contiguous property owners~~
~~3. Press Release to be sent two weeks prior to public information meeting (optional)~~
~~4. Temporary signage to be installed 15 days prior to public information meeting (if needed)~~
~~5. Templates for standard reports, legal notices, handouts, comment response letters, etc., for materials being developed for Client~~

~~**CONSULTANT SHALL PROVIDE THE FOLLOWING SERVICES:**~~

~~Consultant will work with the Client to develop a Public Involvement Plan to address public notification, develop a database of project stakeholders and plan for the PIM, one-on-one meetings, or agency meetings that might be necessary. Consultant will assist the Client in conducting a Public Information Meeting (PIM) including setup, facilitation and teardown. Consultant will:~~

1. **Identify Venue** and arrange for booking. Provide a meeting venue floor plan including identification of ADA compliant access routes, location of display and presentation materials, and seating arrangement, if applicable;

2. **Prepare a Legal Notice** of meeting to include project location, purpose and need, planned construction, state if additional right of way or easements will be needed to construction the project, additional impacts and construction schedule

3. **Public Notice Publication**, verify local newspaper distribution schedule and critical dates and submittal information related to legal advertisements. **Client** will place advertising for the public notice in one local (Nebraska Press Association (NPA) certified paper at least 15 days prior to event with two affidavits of publication.

4. **Postal Outreach,** Prepare and distribute invitations to property owners directly adjacent to the project and other project stakeholders from a list provided by the Client, anticipate ___ invitations sent through the U.S. Postal Service.

5. **4f Informational Poster**, ___ posters showing publicly owned park and recreation areas that are open to the general public, publicly owned wildlife and waterfowl refuges, and public or privately owned historic sites. The term historic sites include prehistoric and historic districts, sites, buildings, structures or objects listed in, or eligible for, the National Register of Historic Places, if applicable;

6. **Prepare aerials** with proposed alternatives and potential impacts;

7. **Posters,** anticipate ___ other informational posters, note types of posters.

8. **Develop Advertising** for public meetings ___ radio adds, ___ website.

9. **Provided Translators** for public information meeting and for public meeting anticipate ___ documents (if needed).

10. **Prepare a Fact Sheet** suitable for a mailer or handout at the PIM; The Fact Sheet will be similar to the legal notice and include the project location, purpose and need, scope of work, traffic volumes, construction schedule, accommodations of traffic, ROW, potential impacts, additional costs, location map/detour map and appropriate logos (FHWA, NDOT, Client's logo, Preliminary Plan Stamp – NO consultant logos / branding);

11. **Prepare for and Attend the Public Meeting** meet approximately 15 minutes before the actual public meeting for the project team to review key facts/information and to go over any potential issues and to provide suggestions on how to approach questions and/or conflicts.

12. Prepare a matrix summarizing general comments and concerns from the public meeting and written comments. The client will identify those comments which warrant a response. The Consultant will prepare ___ draft responses and revise them as needed based on the Clients review comments. The approved responses will be mailed by U.S. Postal Service. The Consultant is to anticipate ___ responses.

13. Summary Memo, the Summary Memo is summary of what done to involve and inform the public of the proposed improvements and to solicit the public's comments and concerns.

14. Public Involvement Report, (which will include a summary of the outreach performed [tools used, information about the distribution list, legal notice publication dates, specified comment period date, etc.], a table of summarized comment/responses, and attachments that consist of what the public received in their project information packet, the comments received, and the final signed responses to the comments. The public involvement report/summary memo and attachments shall be attached to the CE. [Additional deliverables shall be inserted for various levels of public outreach.]

15. Public Information Packet. Consultant will assist the Client in the development of a Public Information Packet, as described by NDOT's PI Reports outline. Consultant will:

- Prepare Cover Letter
- Develop Comment Form
- Include the **Legal Notice**
- Include the **Fact Sheet** in the packet

16. Packet Distribution. Consultant will coordinate the mailing of the Public Information Packet, using a distribution list provided by the Client. The **Client** will coordinate hand-delivery of packets to the businesses and property owners adjacent to the project

17. MEETINGS

Meetings anticipate;

___ Kickoff meeting
___ Project status meeting(s)
___ Public meeting
___ Comment review meeting(s)
___ One on one meeting(s)
___ Agency meeting(s)

Other. (Additional project specific tasks may be added here).

~~**DIRECT COST ITEMS**~~

- ~~Venue;~~
- ~~Nametags, Sign In Sheets, comment forms.~~
- ~~Informational posters~~

~~**DELIVERABLES:**~~

1. ~~Project Schedule~~
2. ~~Monthly Invoices and Progress Reports~~
3. ~~Meeting Minutes~~
4. ~~Public Information Meeting Documents and Maps~~
5. ~~Public Involvement Summary Memo of entire public involvement process, public comments and responses to written comments~~
6. ~~Public Involvement Report~~
7. ~~Stakeholder letters addressing Comments~~

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WATERLINE/SANITARY SEWER RELOCATION/RECONSTRUCTION

Waterline/Sanitary Sewer Relocation/Reconstruction services are not included within this contract. If these services are needed for the project they will be included within a supplemental agreement.

~~The Consultant shall identify existing water mains or sanitary sewers that are in conflict with project improvements. Project improvements are to be designed around existing water mains and sanitary sewer lines; however, in some situations relocating the water main or sanitary line will produce an improved engineering design. Engineering judgment shall be used to determine when to relocate a public utility. This task involves minor reconstruction or relocation involving a public utility due to a roadway improvement and not a project initiated by the utility. Sometimes it is beneficial for municipalities (LPAs) to upgrade existing facilities concurrently with a transportation construction project. Federal aid Highway Transportation funds may not be used for betterments to water or wastewater systems. Only portions of the system directly impacted by improvements to the roadway may receive Federal aid Highway Transportation funds. The pay items for improvements to the water and wastewater systems will need to be separated out from the pay items for which Federal participation is allowed.~~

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~~1. **Wastewater Reconstruction Plan Sheets.** The design of the wastewater collection system shall comply with the requirements of the Federal and State Clean Water Acts. Design and construction of facilities for the City's the design of the system shall generally follow the Recommended Standards for Sewage Works, a Report of the Committee of the Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers (10 State Standards). Details of construction shall conform to the LPA's Standard Specifications for Municipal Construction and Standard Plans if applicable. All plans for construction of wastewater system improvements shall be reviewed and approved by the LPA's Public Works and Utilities Department and the State of Nebraska Department of Environmental Quality prior to construction.~~

- ~~Horizontal Alignment~~
- ~~Vertical Alignment~~
- ~~Detail Drawings~~
- ~~Utility Conflict Verification and Resolution~~

2. **Water Main Reconstruction** The design of water mains, water distribution systems, valves, backflow preventers, fire hydrants, etc. shall comply with the Federal and State Safe Drinking Water Acts. The design of the system shall generally follow the standards of the American Water Works Association (AWWA) and the Recommended Standards for Water Works, a Report of the Committee of the Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers (10-State Standards). The design and construction of the improvement shall comply with LPA's Standard Specifications for Construction and Standard Plans if applicable. Fire flow requirements shall generally follow those in the Fire Suppression Rating Schedule published by the Insurance Services Office. All plans for the construction of water system improvements shall be reviewed and approved by the LPA's Public Works and Utilities Department, the Local Fire Department and if applicable the State of Nebraska Department of Health and Human Services, prior to construction. The Nebraska Safe Drinking Water Act and regulations require plans and specifications for all major construction related to public water systems be prepared by a registered professional engineer and be approved by the Department of Health and Human Services before construction costs are committed by the system owner. The law defines major construction as structural changes that affect the source of supply, treatment processes, or transmission of water to service areas, but it does not include the extension of service mains within an established service area.

- Horizontal Alignment
- Vertical Alignment
- Detail Drawings
- Utility Conflict Verification and Resolution

Geotechnical

Geotechnical Investigations Consultant will provide geotechnical investigations of the subgrade at the two abutment locations of the pedestrian trail bridge structure ~~on areas to be surfaced; roadways, parking lots, trails with borings every 500 feet~~ unless otherwise directed by the engineer ~~and prepare the pavement determination~~.

1. Data Research

Based upon current site topography, the site grading is expected to be minor, with cuts and fills sloped at 3H:1V or flatter. ~~Borings will be taken, expect _____ soil test(s) with the project.~~ The fee associated with these borings assumes the project site is easily accessible for truck-mounted drilling equipment and rights of access can be obtained from adjacent owners. These test borings will be in accordance with schedules located in the most recent NDOT Geotechnical Policy and Procedures Manual. The field exploration program consists of the following:

Number of Borings	Boring Depth (feet)	Planned Location
2	50 to 60	Pedestrian Bridge Abutments

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2. Geotechnical Report

The Consultant shall prepare and submit a geotechnical report to the LAD PC for routing and for review.

i) The geotechnical engineering report shall include, as applicable, the following field and laboratory information:

(1) Discussion of geotechnical ~~analysis~~conditions

(2) Geotechnical recommendations including:

(a) Earthwork and subgrade preparation for trail pavements.

(b) Maximum allowable soil bearing pressures and estimates of maximum total and differential settlement for design of shallow bridge foundations. Shallow foundation recommendations will include minimum footing sizes and the required frost depth or other minimum bearing depth. Remedial measures, such as over-excavation, surcharge, or ground improvement, will also be addressed, if needed.

(c) Soil properties for helical pier intermediate foundation design, including unit weight, cohesion, and friction angle.

(d) Lift thickness, moisture control, and compaction criteria for backfill and structural fill. OSHA standards for soil excavation criteria will be included or referenced.

(e) Anticipated groundwater concerns, along with recommendations for addressing these concerns during construction, if required.

(f) Shrink/swell characteristics of the on-site soils and the potential for reuse of on-site soils as structural fill.

(g) Lateral earth pressure values for restrained and/or unrestrained foundation/retaining walls, including passive pressures and sliding friction values to resist sliding.

(h) Seismic soil site classification per ASCE 7 and IBC

~~(a)~~ Boring location map and ~~for use in designing retaining walls, bridges, and pavements for the project~~

(3) Boring Logs

~~(4) Density and moisture content of undisturbed samples~~

~~(5)~~(4) ~~Unconfined compressive test, triaxial test, direct shear test, and consolidation test reports~~Summary of laboratory testing of soil samples taken during drilling

~~(6)~~(5) Soil classification data

~~(7) Other information as requested by NDOT~~

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Coordination for Railroad

Scope will be provided when applicable to project.

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Schedule

Project Timeline. The Consultant shall prepare a schedule for project milestone dates and the schedule will be updated upon Notice to Proceed as well as quarterly or if dates change. The consultant will show old dates with the updated schedule dates. The document will include the project name, the project number, project control number consultant firm name, project manager and date.

Notice to Proceed for PE & NEPA =	01/09/23
Project Kickoff Meeting =	01/12/23
PCM 0 Meeting =	01/24/23
Design Charrette Meeting / Site Visit =	02/07/23 & 02/08/23
Survey Complete & Processed =	03/03/23
PCM 20 Meeting =	04/11/23
Roadway Design (30% Plans) Submittal =	05/29/23
PCM 30 Meeting =	06/13/23
Plan-in-Hand Visit =	06/22/23
Public Meeting #1 =	July 2023
Roadway Design (60% Plans) Submittal =	10/30/23
PCM 35 Meeting =	11/14/23
Submit Draft CE =	02/02/24
PCM 50 (If needed) =	September 2024
Anticipated Approved CE =	10/31/24
PCM 70 Meeting =	11/12/24
Stakeholder Meeting(s)	December 2024
Begin ROW Negotiations and Acquisitions =	12/02/24
Draft PS&E (90% Plans) Submittal =	03/28/25
PCM 80 (If needed) =	April 2026
Complete ROW Negotiations & Acquisitions =	05/29/26
PCM 90	06/18/26
PS&E Turn-In	06/29/26
Project Letting	September 2026
Obligation of Construction Dollars Deadline	09/30/26
Expenditure of Funds Deadline	09/30/31
~~Notice to Proceed for PE~~	
~~Submit Plan-in-Hand Plans with LOC's and existing ROW~~	
~~Start NEPA~~	
~~Start Right-of-Way Design~~	
~~Submit Post Plan in Hand Plans~~	
~~Prepare ROW Cost Estimate~~	
~~Complete NEPA~~	
~~Submit Draft PS&E plans~~	

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~~Complete ROW Negotiations and Acquisitions~~

~~PS&E Turn in~~

~~Let Project~~

Nebraska Department of Transportation - Local Assistance
Division Plans Assembly (Current as of July 2021)

Sheet Number & Order	Plan Sheet (As Required)	Created By	Sheet Description *See NDOT Roadway Design Manual	Sheets Required for Plan Sets				
					PIH	Functional	Prelim. PS&E	PS&E
A	Title Sheet	~~Consultant/PDU~~	See Section 4.A		X	X	X	X
B	Typical Cross-Sections	Consultant	See Section 4.B		X	X	X	X
C	Summary of Quantities	PDU	See Section 4.C					X
D_	Summary of Soil and Materials Survey Information	Consultant	See Section 4.D					X
E_	Environmental or Aerial Sheets including Wetlands (when applicable)	Consultant	See Section 4.E		X	X	X	X
F_	Horizontal Alignment and Control Points	Consultant	See Section 4.F		X	X	X	X
G	General Information Sheets	Consultant	See Section 4.G		X	X	X	X
H_	Phasing Plans	Consultant	See Section 4.H		X	X	X	X
J1 Thru J_	Large Scale Plans:	Consultant	See Section 4.I					
J_	Geometrics and Grades	Consultant	See Section 4.I		X	X	X	X
J_	Drainage	Consultant	See Section 4.I		X	X	X	X
J_	Construction & Removal (on separate sheets if necessary)	Consultant	See Section 4.I		X	X	X	X
J_	Erosion & Sediment Control w/ Wetland Areas	Consultant	See Section 4.I		X	X	X	X
K_	Utility Rehabilitation (project by project basis)	Consultant	See Section 4.J					
L_	Plan and Profile or Plan Over Plan Sheets	Consultant	See Section 4.K		X	X	X	X
M1	Traffic Control Plans	Consultant	See Section 4.L			X	X	X
M_	Temporary Pavement Marking Plan	Consultant	See Section 4.L				X	X
M	Signing Plans	Consultant	See Section 4.L				X	X
N_	Roadway Lighting Plans	Consultant	See Section 4.M		X	X	X	X
O_	Intelligent Transportation Project Plans	Consultant/	See Section 4.N and Chapter Fourteen: Traffic, Section 5					X
P_	Landscaping	Consultant	See Section 4.O				X	X
Q_	Earthwork Data Sheets	Consultant	See Section 4.P			X	X	X
R_	Drainage Structure Cross-Section Sheets	Consultant	See Section 4.Q		X	X	X	X
S_	Bridge Plans (Bridge, Approach Slab, Paving Section)	Consultant	See Section 4.R		X	X	X	X
T_	Special Plans from Bridge (CBC, etc.)	Consultant	See Section 2.C				X	X
U_	Special Plans from Roadway (Area Inlets, Guardrail etc.)	Consultant/ PDU	See Sections 2.B & 2.C				X	X
V	Other Plans as Needed		See Section 2.C					
W1 Thru W_	Right-of-Way Plans	Consultant	See Sect. 4.S and Chap. Fifteen: Right-of-Way					
	Ownership	Consultant	Chap. Fifteen, Sect. 2.B		X	X		
	Appraisal	Consultant	Chap. Fifteen, Sect. 2.D			X	X	
	PS&E Turn-in	Consultant	Chap. Fifteen, Sect. 2.F					X
X1 Thru X_	Roadway Cross-Sections	Consultant	See Section 4.P		X	X	X	X
Std. Plans	Standard Plans	Consultant PDU	See Section 2.A					X