




## LOWER PLATTE SOUTH natural resources district

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### Memorandum

**Date:** April 15, 2022  
**To:** Urban Subcommittee  
**From:** Jared Nelson, District Engineer   
**Subject:** Urban Subcommittee Meeting Minutes – April 2022

The Urban Subcommittee met at 5:30pm, on Thursday, April 14, 2022. Subcommittee members participating included Tom Green, Gary Aldridge, David Landis, Lisa Lewis, Ron Nolte, and John Yoakum. Others participating included Board Chair Deb Eagan; NRD staff Paul Zillig, Al Langdale, Tracy Zayac, Jared Nelson, and Mike Murren; and Ross Lawrence with JEO Consulting Group. Director Green called the meeting to order at 5:31pm. There were five items the Subcommittee took action on, as described below.

**(a.) Consideration of the Annual Work Plan for the Stormwater Interlocal Agreement with the City of Lincoln. [ACTION]** – First, Nelson described how the City of Lincoln and NRD have put into place an Interlocal Agreement on Stormwater Management to list activities the entities cooperate on. He explained how as part of the Interlocal Agreement, the City and NRD annually take up a Work Plan (attached) which describes specific activities for the upcoming year. He described that the activities this year are very similar to the past. Then Nelson and staff provided a summary of the Work Plan items, and explained in more detail the following items which are different this year:

The activities this year are very similar to the past. Three paragraphs (#7 and #8 and #13) include the following construction projects which are different:

- *South Salt Creek Stream Stability Project SSC #6 in Wilderness Park (NRD lead) [#7]*
- *Salt Creek Drainage Structure at N. 70th Steet / Lincoln Water System Emergency 16" Water Main Repair (City lead) [#8]*
- *Watershed Best Management Practice Rehabilitation projects, as identified before or during this interlocal agreement, with cost shares and the lead agency decided on a case-by-case basis. [#13]*

A new paragraph [#10] was added this year, for “**Salt Creek Floodplain Resiliency**”, to consolidate and clarify planning activities where the City and the NRD “*will continue to coordinate and consider opportunities to make the City more resilient to the risks of flooding along Salt Creek*”.

This paragraph [#10] includes the following four planning activities which are different:

- *Conduct a cost/benefit analysis of implementing structural measures to address updated precipitation data (NOAA Atlas 14) and related updated flooding frequencies. Building Resilient Infrastructure and Communities (BRIC) grant application submitted to FEMA (City lead).*
- *Consider additional federal assistance via USDA/NRCS Watersheds and Flood Prevention Operations (WFPO) program, or USACE General Infrastructure (GI) program, with lead agency decided on case-by-case basis.*
- *Review and potentially update how updated precipitation data (NOAA Atlas 14) is used and applied to floodplain modeling in the Lincoln region with meteorologists' assistance (City lead).*
- *Review updated modeling of stormwater runoff based on updated precipitation data (NOAA Atlas 14), as recommended in the City's Climate Action Plan, and update Lincoln floodplain maps based on federal standards. Year one of updating floodplain maps as a part of FEMA's Coordinating Technical Partnership (CTP) program (City lead).*

Questions and comments were shared by the Subcommittee members with staff responding. The Subcommittee reviewed and discussed the Work Plan.

**It was moved by Landis, seconded by Yokum, and unanimously approved by the Subcommittee to recommend that the Board of Directors approve the Fiscal Year 2022 - 2023 Work Plan for the Interlocal Agreement on Stormwater Management, with the City of Lincoln.**

**(b.) Consideration of a Professional Services Agreement with JEO to prepare the 2022 Salt Creek Levee SWIF Annual Progress Report [ACTION]** – Next, Nelson described how the NRD is the local sponsor of the Salt Creek Levee system in Lincoln, originally constructed by the U.S. Army Corps of Engineers (USACE). The USACE performs annual inspections and identifies deficiencies which determine the levees sponsor's continued eligibility in the Public Law (P.L.) 84-99 Rehabilitation Program. The rectification of multiple deficiencies while maintaining eligibility in the Program have been coordinated with USACE through a System–Wide Improvement Framework (SWIF) Plan, accepted by the USACE on May 31, 2016.

Nelson described that every year the NRD is required to report progress to the Omaha District Commander that demonstrates system-wide improvement accomplishments, and report any changes to levee condition, progress, schedule, funding, and permitting process, as well as any changes to critical USACE inspection items.

He said that he completed past SWIF annual progress reports for the NRD, and JEO Consulting has assisted the District in past biennial SWIF updates and efforts. He explained that due to his absence, he will not be able to complete the progress report this year, so he worked to negotiate a contract (attached) with JEO to prepare this year's annual report. The Subcommittee reviewed and discussed the proposal, with Nelson answering questions. Also, Lawrence assured the subcommittee JEO would be able to complete the report by May 31<sup>st</sup>, 2022.

**It was moved by Yoakum, seconded by Landis, and unanimously approved by the Subcommittee to recommend that the Board of Directors approve the Professional Services Agreement with JEO Consulting Group for the 2022 Salt Creek Levee SWIF Annual Progress Report, in an amount not to exceed \$7,020, pending legal counsel review.**

**(c.) Consideration to establish the Oak Creek Streambank Mitigation site [ACTION]** – Next, Zillig referred to his attached Memorandum, dated April 11, 2022 regarding this item. He discussed how the District needs to establish the Oak Creek Streambank Mitigation Site to mitigate environmental impacts, and obtain a Section 404 permit, for the District’s Antelope Creek 40<sup>th</sup> to Scott Avenue Restoration Project. The subcommittee reviewed and discussed the proposal and timeline of the project.

**It was moved by Landis, seconded by Lewis, and unanimously approved by the Subcommittee to recommend that the Board of Directors direct the General Manager to submit a Financial Assurances Letter for the Oak Creek Stream Mitigation site and agree to continue developing mitigation plans and preparation of the required deed restriction “easement”.**

**(d.) Consideration to authorize a modification of the joint City of Lincoln/NRD Antelope Valley Project easement northeast of the Antelope Creek “N” Street bridge. [ACTION]** – Zillig referred to his attached Memorandum dated April 12, 2022 regarding this item. He described how St. Joseph Institute/Catholic Social Services (CSS) would like to grow south of their existing building where an existing City/NRD easement exists for Antelope Valley (east of Antelope Valley; north of N Street). Initially CSS was requesting to have a portion of this easement simply released. However, he explained, CSS has more recently discussed with staff and has offered to also provide an additional new easement. Zillig said the new easement would be more beneficial for the District and the Antelope Valley project. He said that staff finds the new easement location to be better and would provide the City/NRD with better access to the east side of the channel in this vicinity. The subcommittee discussed and carefully considered the proposal.

**It was moved by Landis, seconded by Yoakum, and approved by the Subcommittee (with Green, Landis, Lewis, Nolte, and Yoakum voting yes, and Aldridge voting no) to recommend that the Board of Directors agree to approve the proposed changes to the existing Antelope Valley access easement area for the Saint Joseph Institute property at 22nd & N, and authorize the General Manager to work with the City of Lincoln and NRD Legal Counsel to complete the steps necessary to complete this action.**

**(e.) Consideration of a Professional Services Agreement with Intuition & Logic to design, permit, and bid the South Salt Creek Basin Master Plan Project #6 [ACTION]** – Murren referred to the attached summary information on the South Salt Creek Basin Master Plan #6 (SSC#6), which is a planned stream stability Capital Improvement Project identified in the South Salt Creek Watershed Master Plan. He explained how the City of Lincoln Parks and Recreation Department has recently submitted for a Recreational Trails Program (RTP) grant to have the trail and bridge improved at this location, where the old Rock Island Railroad bridge crosses Salt Creek and its line continued east.

Murren described how City and NRD staff had recent discussion on the benefits of coordinating and completing the stream stability project before, or in conjunction with the City trail project. Murren said it will be best to construct this project in the fall, and it would also need a Section 404 permit, and so he contacted Intuition & Logic to begin design, permitting, and bidding services on SSC#6.

This project is a stream stability project is at two locations: the old Rock Island Trail Railroad bridge over Salt Creek; and the Jamaica North Trail bridge located south of the GPTN Connector Trail bridge, in Wilderness Park.

The Subcommittee reviewed and discussed the proposal with staff answering questions.

**It was moved by Yoakum, seconded by Lewis, and unanimously approved by the Subcommittee to recommend that the Board of Directors authorize the General Manager to approve an engineering services agreement with Intuition and Logic of St. Louis, MO for the design, permitting and bidding of the South Salt Creek Master Plan Project #6 at a cost not to exceed \$122,650, pending legal counsel review.**

There being no further business but cookies the meeting adjourned at approximately 6:35 pm.

JN/jn

A.

**FISCAL YEAR 2022-2023 Work Plan  
For the Interlocal Agreement on Stormwater Management  
April 2022**

**1) NPDES Administration:** The City of Lincoln (City) and the Lower Platte South Natural Resources District (NRD) will continue to explore enhancements to provide comprehensive, effective and consistent review, inspection, implementation and enforcement of National Pollutant Discharge Elimination System (NPDES) items, especially related to erosion and sediment control and Post Construction standards (i.e. water quality Best Management Practices). City is the lead agency.

- Cost share from the NRD is \$30,000

- Cost share from the City for current Erosion and Sediment Control staff is \$150,000

**2) Regional Storage Facilities:** The City and NRD will explore alternatives to study significant flood reduction projects where feasible with the cooperation of landowners and developers and to cooperate where practical and feasible with other entities to design and construct storage facilities. Once a funding mechanism is developed and facilities are built the NRD may operate and maintain the facilities in cooperation with City.

**3) Ordinance and Standards Updating:** The City and the NRD will examine the need to update the floodplain and stormwater standards and propose revisions as necessary. Such items include stakeholder meetings for updating the Lincoln Municipal Code, Drainage Criteria Manual, Lincoln Standard Plans, Lincoln Design Standards and Post Construction Standards. This is to include reviewing and assessing minimum stream corridor requirements along creeks and drainageways, additional freeboard, and restricted development of critical infrastructures within floodplain areas.

- The cost share is \$5,000 each (City lead)

**4) Legislative Issues and Grant Writing:** The City and NRD will work with other agencies, communities, citizens and legislators to coordinate on state legislative and funding issues related to floodplain and stormwater.

**5) Floodplain and Stormwater Education:** The City and NRD will jointly work on public education and involvement programs to educate city staff, contractors, developers, engineers, and the public regarding floodplains, stormwater and the Salt Creek Levee system. The City will continue to provide floodplain information at public events, to potential home buyers and on City websites. Floodplain information will also be provided at public meetings or open houses for projects involving the floodplain for both the City and NRD. Both the City and NRD will continue to provide erosion and sediment control and Post Construction standards information to developers, builders, engineers and contractors during builder training and safety workshops. Training to city staff will continue to be provided during inspections and training workshops. Information regarding erosion and sediment control, general stormwater items, stormwater quality and Post Construction standards will continue to be available to the general public on our websites. The NRD will continue to provide information to the public regarding Salt Creek Levee risk and awareness.



- The cost share from the NRD is \$5,000
- The cost share from the City is \$15,000 (City lead)

**6) Water Quality Monitoring:** The City will continue water quality monitoring and other stormwater monitoring as required. It is planned for the City to do dry weather monitoring for 2022, and this is the fourth year of wet weather monitoring for the proposed 2019-23 NPDES cycle, where wet weather monitoring is being planned for years 2–5.

- The cost share is \$10,000 each (City lead)

**7) Master Plan Implementation:** The City and the NRD will contribute toward improvement projects for Master Planned basins. These improvement projects are anticipated to include such projects as stream bed and bank stability measures, stormwater storage facilities, wetlands, floodplain preservation, engineering, easements and land acquisition as generally identified in and consistent with the goals in basin plans (e.g. Watershed Master/Basin Plans/Conservation Plans) approved by the City and NRD. The City and NRD will continue to develop a plan and schedule for design, right-of-way and implementation of projects.

Master Plan Implementation projects are anticipated to include some or all the projects and project areas listed below and may include additional projects to be developed jointly by the City and NRD during the Work Plan period. City funds are from stormwater bond funds.

Note: The Deadmans Run Flood Reduction Project is a U.S. Army Corps of Engineers (COE) lead project with NRD as the principal partner and is a Master Plan project separately included in item 7.1.

- Beal Slough stream stability project 70<sup>th</sup> to Pine Lake at Gapp Park. Construction completion Spring 2022 (NRD lead), \$25,000 each
- South Salt Creek Stream Stability Project SSC #6 in Wilderness Park at old Rock Island Railroad bridge and at Jamaica North Trail bridge south of GPTN Connector bridge. Total cost estimated at \$983,000 (NRD lead)
- Other Master Plan projects as identified before or during this interlocal agreement, and informed with results from the Comprehensive Watershed Master Plan (see related item #9), with the lead agency decided on a case-by-case basis, \$50,000 each

#### **7.1) Deadmans Run:**

- Deadmans Run Flood Reduction Project is a COE lead with NRD as the principal partner. This project involves an approximate \$14.5M federal project with a 35% local match, and a local project for approximately \$10M. Projected expenditures for FY22-23 include the following with the City and NRD sharing equally:

- \$200,000 for the local cost share on the federal project (NRD lead)
- \$12,000 for hydrologic and hydraulic review and updates to Corps modeling for future floodplain re-mapping, (NRD lead)
- \$100,000 for railroad engineering review of proposed improvements (NRD coordinating with BNSF and RTSD)
- \$400,000 for engineering design on 48<sup>th</sup> Street bridge (City lead)
- \$400,000 for engineering design on 38<sup>th</sup> Street bridge (NRD coordinating with UNL)
- \$1.35M for ROW appraisals and acquisitions (shared City/NRD responsibility)
- \$2.2M for construction on 48<sup>th</sup> Street bridge (City lead)

- \$1.23M for construction on 38<sup>th</sup> Street bridge (NRD coordinating with UNL)
- Total for Deadmans Run Flood Reduction project for this fiscal year is \$2.946M each.

**8) Other Projects:** The City and the NRD will contribute toward improvement projects that are not included in an approved Stormwater Master Plan. These projects could include stream stability, water quality, water quantity and/or floodplain projects. City funds are from stormwater bond funds.

- Antelope Creek Pipe Rehabilitation Project (NRD lead): Construction substantially complete Spring 2022. Cost remaining for retainage: \$60,000. City will reimburse their share of construction cost, estimated at \$43,500.
- 56<sup>th</sup> and Morton (City lead): \$25,000 each to finalize the 56<sup>th</sup> and Morton Project
- Salt Creek Drainage Structure at N. 70<sup>th</sup> Steet / Lincoln Water System Emergency 16” Water Main Repair (City lead): NRD will reimburse their share of cost, \$100,000.
- Others as identified before or during this interlocal, with cost shares and lead agency decided on a case-by-case basis.

**9) Watershed Master Planning:** The City and the NRD have finalized work on the drainage Master Plan studies for all creeks draining through Lincoln.

- Comprehensive Watershed Master Plan (City lead), \$25,000 each
- Flood Mitigation Master Plan (City lead), \$20,000 each

**10) Salt Creek Floodplain Resiliency:** The City and the NRD will continue to coordinate and consider opportunities to make the City more resilient to the risks of flooding along Salt Creek. This includes both structural and nonstructural measures for flood control and preservation.

- Conduct a cost/benefit analysis of implementing structural measures to address updated precipitation data (NOAA Atlas 14) and related updated flooding frequencies. Building Resilient Infrastructure and Communities (BRIC) grant application submitted to FEMA with local cost share currently estimated at \$50,000 each (City lead)
- Consider additional federal assistance via USDA/NRCS Watersheds and Flood Prevention Operations (WFPO) program, or USACE General Infrastructure (GI) program, with lead agency decided on case-by-case basis, \$50,000 each
- Review and potentially update how updated precipitation data (NOAA Atlas 14) is used and applied to floodplain modeling in the Lincoln region with meteorologists’ assistance, \$50,000 each (City lead)
- Review updated modeling of stormwater runoff based on updated precipitation data (NOAA Atlas 14), as recommended in the City’s Climate Action Plan, and update Lincoln floodplain maps based on federal standards. Year one of updating floodplain maps as a part of FEMA’s Coordinating Technical Partnership (CTP) program (City lead): Cost is \$500,000, and is 100% FEMA funded.

**11) Floodplain/Floodprone Easements and Projects:** The City and the NRD will consider purchase of easements or fee title on floodplain/floodprone areas and other structural and nonstructural measures for flood control and preservation.

- Any projects to be identified before or during this interlocal, with cost shares and the lead agency decided on a case-by-case basis

**12) Flood Warning System:** The NRD will cooperate with Lincoln and Lancaster County to operate and enhance the Salt Creek Flood Warning System.

- The cost share from the NRD is \$35,000 (lead agency)
- The cost share from the City is \$25,000

**13) Watershed Best Management Practice Rehabilitation:** The City and the NRD will continue to coordinate and provide services to rehabilitate public Best Management Practices and selected completed Master Plan Projects. Best Management Practices and selected completed Master Plan Projects for rehabilitation will be mutually coordinated between the City and NRD.

- Beal Slough MP, Larson Park water quality wetland project rehabilitation (City lead), \$10,000 each
- Any projects to be identified before or during this interlocal, with cost shares and the lead agency decided on a case-by-case basis

**14) Stormwater BMP Demonstration Projects:** The City and the NRD will consider opportunities for demonstration projects of stormwater best management practices on a case-by-case basis with developers, non-profits, businesses or similar entities and Rainscaping with individual owners.

- Rainscaping Lincoln Sustainable Landscapes Cost Share Program, \$15,000 each (City lead)
- Any projects to be identified before or during this interlocal, with cost shares and the lead agency decided on a case-by-case basis

**15) Watershed Master Plan Project Inspection, Operation & Maintenance:** It is planned that the City and NRD will periodically inspect, operate, and maintain all completed Watershed Master Plan Projects, Best Management Practices and conservation easements. The City will provide funds to rehabilitate selected Best Management Practices and the NRD will provide funds and services to keep selected Best Management Practices maintained over the course of the fiscal year.

- Cost share is \$25,000 each

**16) City of Lincoln Wetland Bank Annual Maintenance by the NRD:** Maintenance activities will include mowing, noxious weed control, controlling woody vegetation, and maintaining stop logs for a fee of \$4,500 from the City.

**17) Little Salt Creek Watershed Plan:** The NRD is partnering with USDA/NRCS and will work jointly with the City to incorporate identified projects and components of the existing Little Salt Creek Master Plan and the Upper Little Salt Creek Saline Wetlands Plan and additional identified needs to create a Little Salt Creek Watershed Plan. This will allow for any of the projects in the plan to be eligible for federal USDA/NRCS Watershed & Flood Prevention Operations (WFPO) funding.

- Cost is \$300,000, and is 100% WFPO reimbursable (NRD lead)

**18) Cost Summary:** The total cost to the City and NRD according to this work plan in FY 2022-2023 is estimated to be \$8,863,000.

- The cost share from the NRD for 2022-23 is estimated to be \$4,819,000 and is subject to NRD Board approval of the proposed NRD FY 2022-23 Budget (NRD Fiscal year for FY2022-23)



starts July 1, 2022)

- The cost share from the City for 2022-23 is estimated to be \$4,044,000 and is subject to the City approval of the general budget for FY2022-23. The City fiscal year for FY2022-23 starts September 1, 2022

**19) Summary Report:** The City in September 2023 will prepare an annual report of activities and accomplishments to be reviewed by the NRD.

IN WITNESS WHEREOF, the District and the City have caused these presents to be executed by their duly authorized officials as of the date below indicated.

Executed by the City this \_\_\_\_\_ Day of \_\_\_\_\_ 2022  
CITY OF LINCOLN, NEBRASKA

\_\_\_\_\_  
City Clerk

\_\_\_\_\_  
Mayor

STATE OF NEBRASKA )

) ss.

COUNTY OF LANCASTER )

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 2022,  
by \_\_\_\_\_, Mayor of the **City of Lincoln, Nebraska**, a municipal corporation, on  
behalf of the municipal corporation.

(Seal)

\_\_\_\_\_  
Notary Public





**AGREEMENT  
BETWEEN OWNER AND ENGINEER  
FOR  
PROFESSIONAL SERVICES**

B.

THIS IS AN AGREEMENT effective as of April 7, 2022 ("Effective Date") between Lower Platte South Natural Resources District ("Owner") and JEO Consulting Group, Inc. ("Engineer").

Owner's project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

2022 Salt Creek Levee SWIF Annual Progress Report ("Project").

JEO Project Number: 220622.00

Owner and Engineer further agree as follows:

**ARTICLE 1 - SERVICES OF ENGINEER**

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**1.01 Scope**

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

**ARTICLE 2 - OWNER'S RESPONSIBILITIES**

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**2.01 Owner Responsibilities**

- A. Owner responsibilities are outlined in Section 3 of Exhibit B.

**ARTICLE 3 - COMPENSATION**

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**3.01 Compensation**

- A. Owner shall pay Engineer as set forth in Exhibit A and per the terms in Exhibit B.
- B. The hourly not-to-exceed fee for the Project is: \$7,020
- C. The Standard Hourly Rates Schedule shall be adjusted annually (as of approximately January 1st) to reflect equitable changes in the compensation payable to Engineer. The current hourly rate schedule can be provided upon request.

**ARTICLE 4 - EXHIBITS AND SPECIAL PROVISIONS**

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**4.01 Exhibits**

Exhibit A – Scope of Services  
Exhibit B – General Conditions

**4.02 Total Agreement**

- A. This Agreement (consisting of pages 1 to 2 inclusive, together with the Exhibits identified as included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Owner:

Lower Platte South NRD

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Address for giving notices:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Engineer:

JEO Consulting Group, Inc.

By: Ross Lawrence 

Title: Project Manager

Date Signed: 04-07-2022

Address for giving notices:

JEO Consulting Group, Inc.

1937 N Chestnut Street

Wahoo, NE 68066

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**Scope of Services**  
**2022 Salt Creek Levee SWIF Annual Progress Report**  
**JEO Project No. 220622.00**

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**Project Background:**

The Lower Platte South Natural Resources District (LPSNRD) is the local sponsor of the Salt Creek Flood Risk Reduction Project (FRRP) in Lincoln, NE, originally constructed by the U.S. Army Corps of Engineers (USACE). The USACE performs annual inspections and provides findings to the levee sponsor. It is the levee sponsor's responsibility to resolve any operation and maintenance deficiencies identified during the inspections. Critical deficiencies and their rectification are coordinated more closely with the USACE. Certain inspection items determine the levee sponsor's continued eligibility in the Public Law (P.L.) 84-99 Rehabilitation Program. These inspection items are identified in the "Interim Policy for Determining Eligibility Status of Flood Risk Management Projects for the Rehabilitation Program Pursuant to P.L. 84-99". Rectification of multiple deficiencies while maintaining conditional eligibility in the P.L. 84-99 Rehabilitation Program can be coordinated with the USACE through a System-Wide Improvement Framework (SWIF) Plan. The LPSNRD developed and submitted a SWIF Plan in December 2016, which was subsequently accepted by the USACE with an anniversary date of 31 May. The LPSNRD is actively executing the SWIF plan and rectifying deficiencies.

Implementation of the SWIF Plan includes requirements for annual progress coordination with the USACE Omaha District. The LPSNRD is required to submit annual progress reports to the Omaha District Commander that demonstrates system-wide improvement accomplishments. Every two years, the LPSNRD is required to submit a request for an additional two years of eligibility in the P.L. 84-99 Rehabilitation Program, in addition to the annual progress report.

The following summarizes the previous effort and submittals to the USACE.

- 31 May 2017 – SWIF Implementation
- May 2018 – Annual Progress Report
- May 2019 – SWIF Biennial Update (including progress report)
- May 2020 – Annual Progress Report
- May 2021 – SWIF Biennial Update (including progress report)

**The SWIF Annual Progress Report is due to the USACE (current effort) by 31 May 2022.** The current effort includes a summary of changed conditions, summary of progress, and changes to schedule for the current SWIF projects which have occurred in the past year.

**Scope of Work:**

The proposed scope of work is intended to satisfy the USACE requirement for annual progress updates, details of which are outlined below.

**1 – SWIF Team Meetings and Progress Report**

- Facilitate up to two (2) coordination meetings with the NRD staff to review project details and progress in the past year

Exhibit A

- Develop a brief summary/table of changes (page and paragraph), and explanation of changes, if necessary, for the NRD as well as USACE coordination.
- Develop a draft summary progress report in letter format for NRD review and input.
- Incorporate NRD comments and finalize summary progress report for submittal to the USACE.

**Meetings:**

- Up to two (2) LPSNRD coordination meetings

**Task Deliverables:**

- Meeting support material
- Draft progress report (letter)
- Final progress report (letter)

**Key Understandings/Assumptions:**

- Meetings will be attended by up to two JEO staff, including the Project Manager and lead Project Engineer. Coordination meetings will be hosted in Lincoln and/or virtually. The number of meetings has been estimated to achieve the overall project goal. If additional meetings are needed, a scope change will be coordinated with the Owner.
- This scope assumes the latest available USACE Continuing Eligibility Inspection (CEI) is from the 2020 inspection. If the 2021 CEI is available, or becomes available, and the Owner desires to incorporate into this progress report, a scope change will be coordinated with the Owner.

**Project Fee:**

JEO proposes to perform the described services at an hourly not-to-exceed fee as included in the following schedule:

1 – SWIF Team Meetings and Progress Report.....	\$7,020
<b><u>Project Total</u></b>	<b><u>\$7,020</u></b>

**Project Schedule:**

The proposed project is expected to take approximately 35 days. Final Progress Report must be submitted to USACE on or before May 31, 2022.

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

**1. SCOPE OF SERVICES:** JEO Consulting Group, Inc. (JEO) shall perform the services described in Exhibit A. JEO shall invoice the owner for these services at the fee stated in Exhibit A.

**2. ADDITIONAL SERVICES:** JEO can perform work beyond the scope of services, as additional services, for a negotiated fee or at fee schedule rates.

**3. OWNER RESPONSIBILITIES:** The owner shall provide all criteria and full information as to the owner's requirements for the project; designate and identify in writing a person to act with authority on the owner's behalf in respect to all aspects of the project; examine and respond promptly to JEO's submissions; and give prompt written notice to JEO whenever the owner observes or otherwise becomes aware of any defect in work.

Unless otherwise agreed, the owner shall furnish JEO with right-of-access to the site in order to conduct the scope of services. Unless otherwise agreed, the owner shall also secure all necessary permits, approvals, licenses, consents, and property descriptions necessary to the performance of the services hereunder. While JEO shall take reasonable precautions to minimize damage to the property, it is understood by the owner that in the normal course of work some damage may occur, the restoration of which is not a part of this agreement.

**4. TIMES FOR RENDERING SERVICES:** JEO's services and compensation under this agreement have been agreed to in anticipation of the orderly and continuous progress of the project through completion. Unless specific periods of time or specific dates for providing services are specified in the scope of services, JEO's obligation to render services hereunder shall be for a period which may reasonably be required for the completion of said services.

If specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided, and if such periods of time or date are changed through no fault of JEO, the rates and amounts of compensation provided for herein shall be subject to equitable adjustment. If the owner has requested changes in the scope, extent, or character of the project, the time of performance of JEO's services shall be adjusted equitably.

**5. INVOICES:** JEO shall submit invoices to the owner monthly for services provided to date and a final bill upon completion of services. Invoices are due and payable within 30 days of receipt. Invoices are considered past due after 30 days. Owner agrees to pay a finance charge on past due invoices at the rate of 1.0% per month, or the maximum rate of interest permitted by law.

If the owner fails to make any payment due to JEO for services and expenses within 30 days after receipt of JEO's statement, JEO may, after giving 7 days' written notice to the owner, suspend services to the owner under this agreement until JEO has been paid in full all amounts due for services, expenses, and charges.

**6. STANDARD OF CARE:** The standard of care for all services performed or furnished by JEO under the agreement shall be the care and skill ordinarily used by members of JEO's profession practicing under similar circumstances at the same time and in the

same locality. JEO makes no warranties, express or implied, under this agreement or otherwise, in connection with JEO's services.

JEO shall be responsible for the technical accuracy of its services and documents resulting therefrom, and the owner shall not be responsible for discovering deficiencies therein. JEO shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in owner furnished information.

**7. REUSE OF DOCUMENTS:** Reuse of any materials (including in part plans, specifications, drawings, reports, designs, computations, computer programs, data, estimates, surveys, other work items, etc.) by the owner on a future extension of this project, or any other project without JEO's written authorization shall be at the owner's risk and the owner agrees to indemnify and hold harmless JEO from all claims, damages, and expenses including attorney's fees arising out of such unauthorized use.

**8. ELECTRONIC FILES:** Copies of Documents that may be relied upon by the owner are limited to the printed copies (also known as hard copies) that are signed or sealed by JEO. Files in electronic media format of text, data, graphics, or of other types that are furnished by JEO to the owner are only for convenience of the owner. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk.

a. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it shall perform acceptance tests or procedures within 30 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 30 day acceptance period shall be corrected by the party delivering the electronic files. JEO shall not be responsible to maintain documents stored in electronic media format after acceptance by the owner.

b. When transferring documents in electronic media format, JEO makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by JEO at the beginning of the project.

c. The owner may make and retain copies of documents for information and reference in connection with use on the project by the owner.

d. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

e. Any verification or adaptation of the documents by JEO for extensions of the project or for any other project shall entitle JEO to further compensation at rates to be agreed upon by the owner and JEO.

**9. SUBCONSULTANTS:** JEO may employ consultants as JEO deems necessary to assist in the performance of the services. JEO shall not be required to employ any consultant unacceptable to JEO.

**10. INDEMNIFICATION:** To the fullest extent permitted by law, JEO and the owner shall indemnify and hold each other harmless and their respective officers, directors, partners, employees, and consultants from and against any and all claims, losses, damages, and expenses (including but not limited to all fees and charges of

## JEO CONSULTING GROUP INC ■ JEO ARCHITECTURE INC

engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) to the extent such claims, losses, damages, or expenses are caused by the indemnifying parties' negligent acts, errors, or omissions. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of JEO and the owner, they shall be borne by each party in proportion to its negligence.

**11. INSURANCE:** JEO shall procure and maintain insurance coverage for Project No. 201376.00 as described in the 'CERTIFICATE OF LIABILITY INSURANCE for JEO Consulting Group, Inc. as INSURED, INSPRO Insurance as PRODUCER, and Lower Platte South Natural Resources District as CERTIFICATE HOLDER (the "Certificate"). The Certificate is attached hereto and incorporated herein by this reference.

**12. TERMINATION:** This agreement may be terminated by either party upon 7 days prior written notice. In the event of termination, JEO shall be compensated by owner for all services performed up to and including the termination date. The effective date of termination may be set up to thirty (30) days later than otherwise provided to allow JEO to demobilize personnel and equipment from the site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble project materials in orderly files.

**13. GOVERNING LAW:** This agreement is to be governed by the law of the state in which the project is located.

**14. SUCCESSORS, ASSIGNS, AND BENEFICIARIES:** The owner and JEO each is hereby bound and the partners, successors, executors, administrators and legal representatives of the owner and JEO are hereby bound to the other party to this agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, with respect to all covenants, agreements and obligations of this agreement.

a. Neither the owner nor JEO may assign, sublet, or transfer any rights under or interest (including, but without limitation, monies that are due or may become due) in this agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or

discharge the assignor from any duty or responsibility under this agreement.

b. Unless expressly provided otherwise in this agreement: Nothing in this agreement shall be construed to create, impose, or give rise to any duty owed by the owner or JEO to any contractor, contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

c. All duties and responsibilities undertaken pursuant to this agreement shall be for the sole and exclusive benefit of the owner and JEO and not for the benefit of any other party.

**15. PRECEDENCE:** These standards, terms, and conditions shall take precedence over any inconsistent or contradictory language contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding JEO's services.

**16. SEVERABILITY:** Any provision or part of the agreement held to be void or unenforceable shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the owner and JEO, who agree that the agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

**17. NON-DISCRIMINATION CLAUSE:** Pursuant to Neb. Rev. Stat. § 73-102, the parties declare, promise, and warrant that they have and will continue to comply fully with Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.A § 1985, et seq.) and the Nebraska Fair Employment Practice Act, Neb. Rev. Stat. § 48-1101, et seq., in that there shall be no discrimination against any employee who is employed in the performance of this agreement, or against any applicant for such employment, because of age, color, national origin, race, religion, creed, disability or sex.

**18. E-VERIFY:** JEO shall register with and use the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the state where the work shall be performed. Engineer shall require the same of each consultant.



## LOWER PLATTE SOUTH natural resources district

3125 Portia Street | P.O. Box 83581 • Lincoln, Nebraska 68501-3581  
P: 402.476.2729 • F: 402.476.6454 | www.lpsnrd.org

C.

### Memorandum

**Date:** April 11, 2022  
**To:** Urban Subcommittee  
**From:** Paul Zillig  
**Subject:** Antelope Creek 40th – Scott Avenue Restoration Project

The flood of 2015 resulted in damage to a wide range of LPSNRD infrastructure. Included in the list of damaged infrastructure were the streambanks of Antelope Creek in Lincoln from 40th Street west two blocks to Scott Avenue. The NRD applied for and was eventually approved for over \$1M of cost-share assistance by FEMA to repair the project, the NRD hired Olsson to assist with this project and has been working since that time to receive FEMA approval of the proposed design and now we are working on obtaining the Section 404 Permit for the impacts to the streambanks.

The permitting process has determined that 700 feet of streambank will be environmentally damaged due to the repair project and will need to be mitigated. Mitigating the streambank on site is not feasible so an off-site location needs to be selected. The requirements for the off-site location is that the NRD must “control/own” the site and it must be degraded to the point that a mitigation project will improve the streambank. The NRD has limited sites that the NRD owns and would qualify, selecting a site separate from the Salt Creek Levee System was a priority. The NRD owns a parcel just downstream of I-80 and across Oak Creek from Capitol Beach. This parcel was accepted as part of the Interstate Land development. The 1.6 acre mitigation site is also shown on the attached “12-Point Compensatory Mitigation Plan and Stream Enhancement”.

The US Army Corps of Engineers will require the NRD to improve the site in accordance with the mitigation plan, submit a Financial Assurances Letter (see attached draft letter), and upon completion of the work, grant the US Army Corps of Engineers a deed restriction (easement) limiting future uses not compatible with the requirements for a streambank mitigation site. The cost to establish the mitigation site is not available, but it appears to be the least expensive option and we have reviewed similar deed restrictions for similar sites in the PMR NRD and their deed restriction conditions are compatible with our typical streambank maintenance efforts. This is the best mitigation option for the District.

Staff recommends the Urban Subcommittee recommend the Board of Directors direct the General Manager to submit a Financial Assurances Letter for the Oak Creek Stream Mitigation site and agree to continue developing mitigation plans and preparation of the required deed restriction “easement”.

PDZ/pz



March 17, 2022

Mr. Keith Simmons  
U.S. Army Corps of Engineers  
Omaha District – Nebraska Regulatory Office  
8901 S. 154<sup>th</sup> Street, Suite #1  
Omaha, NE 68138-3621

RE: Financial Assurances Letter  
Oak Creek Stream Mitigation/Wetland Mitigation  
NWO-2019-00125-WEH

Attention Mr. Simmons:

The Lower Platte South Natural Resources District (LPS NRD) intends to construct the Oak Creek Stream Mitigation/Wetland Mitigation Area, located at latitude 40.830519 degrees and longitude - 96.738243 degrees, east of Interstate-80 and north of Capital Beach in Sections 15 and 16, Township 10 North, Range 6 East, in Lancaster County, Nebraska. LPS NRD would be responsible for all costs associated with the site construction, maintenance, protection, monitoring, corrective actions, and long-term management. LPS NRD has an average annual budget of \$X and an average annual maintenance budget of \$X. Any maintenance, protection, monitoring, corrective actions, and long-term management would come out of the maintenance budget or the overall district budget if work rises to the level of a programmed project. LPS NRD is a government agency with the ability to levy taxes and has adequate funding to facilitate all noted costs.

---

Paul Zillig  
General Manager  
Lower Plate South NRD  
3125 Portia Street  
Lincoln, NE 68521

# **12-Point Compensatory Mitigation Plan and Stream Enhancement**

## **Oak Creek Lincoln, Lancaster County, Nebraska**

**Prepared For:  
Lower Platte South Natural Resources District**

**Prepared By:  
Olsson, Inc.**

**USACE ID – 2019-00125-WEH  
Olsson Project No. 015-1619**

**March 2022**

### Table of Contents

1	OBJECTIVES .....	2
	1.1 Wetland Mitigation .....	2
2	Site Selection .....	3
3	Site Protection Instruments.....	3
4	Baseline Information.....	4
	4.1 Vegetation .....	4
	4.2 Soils.....	4
	4.3 Hydrology .....	5
5	Determination of Credits .....	5
6	Mitigation Work Plan.....	5
	6.1 Wetland Mitigation .....	5
	6.2 Upland Buffer.....	6
7	Maintenance Plan.....	7
8	Performance Standards.....	7
	8.1 PEMA Wetlands.....	9
9	Monitoring Requirements.....	10
10	Long-term Maintenance Plan.....	11
11	Adaptive Management Plan.....	11
12	Financial Assurances .....	12
	SOURCES CITED .....	13

#### Appendices

Appendix A – NeSCAP Stream Assessment

Appendix B - Figures

Appendix C – Final Plans

Appendix D – Financial Assurances Letter

## 1 OBJECTIVES

This 12 Component Plan for Compensatory Mitigation (Plan) has been prepared for submission to the Omaha District, U.S. Army Corps of Engineers (USACE), for approval under Section 404 of the Clean Water Act (CWA) to discharge fill material into "Waters of the United States" (WOTUS) during construction of Antelope Creek Bank Stabilization Project (NWO-2019-00125-WEH) by Lower Platte South Natural Resources District (LPS NRD). The purpose of the project is the emergency repair of Antelope Creek between Scott Avenue pedestrian bridge and South 40th Street due to extreme flooding caused by a 500-year flood event in May 2015. Urban development contributed storm water run-off in the lower reaches of the Antelope Creek basin, which caused the channel to flood in many areas of Lincoln. The flooding caused aggregate wash-outs and embankment failures on a 770 linear foot segment of the existing channel. With the continuing expansion of urban development and impermeable surfaces in the area, the increase of storm water run-off to the channel will likely contribute to more damage.

Channel and bank erosion, such as head cutting, are jeopardizing the existing infrastructure upstream from this portion of Antelope Creek. Bulging in the gabion baskets near the toe of the slope has also occurred as part of the recent slope failures. Stabilization of the channel banks is required to repair the slope and prevent future failures.

The proposed project would include total repair of both banks of Antelope Creek between South 40th Street and the Scott Avenue pedestrian bridge. To stabilize the banks at the toe of the slope and improve flood control, the proposed project would regrade the banks, add retaining walls, and install a concrete cellular mattress along the bed of the channel.

The project includes a 12 Component Plan for Compensatory Mitigation for an off-site location, Oak Creek. Maps of the relocated mitigation site are shown in Appendix B, Figures 1 and 2.

As detailed in *Pre-Construction Notification for project Antelope Creek Bank Stabilization* (USACE Number: NWO-2019-00125-WEH), the project would result in permanent and unavoidable impacts to aquatic resources, including WOTUS. This Plan is intended to outline our strategy to effectively mitigate for impacts resulting from construction of the proposed project, in compliance with *Compensatory Mitigation for Losses of Aquatic Resources* (33 CFR 332).

Mitigation will be guided by the following objectives:

- No net loss of wetlands and waters;
- No net loss of ecological function, achieving functional lift where practicable;
- Take an ecosystem approach;
- Promote biodiversity by creating habitat for native terrestrial and aquatic species;
- Reduce habitat fragmentation;
- Improve water quality.

### 1.1 Wetland Mitigation

Approximately 0.02 acre of Palustrine Emergent Temporarily Flooded (PEMA) wetland and 750 linear feet of perennial stream, Antelope Creek, will be permanently impacted by fill as a result of the project construction activities.

Olsson, Inc. (Olsson), on behalf of LPS NRD, proposes permittee responsible compensatory mitigation to be completed through off-site stream restoration by bank vegetation enhancement located along Oak Creek in Lincoln, Nebraska. Mitigation will be achieved through the establishment of an approximately 700 linear feet by 100 feet wide bank vegetation enhancement. Dominant species along the Oak Creek bank currently include *Phragmites australis*, *Typha angustifolia*, and *Bromus inermis*. This compensatory mitigation strategy will result in no net loss of wetlands or other WOTUS. The NeSCAP Stream Assessment for both Antelope Creek and Oak Creek are included in Attachment A.

## **2 SITE SELECTION**

The project site, Antelope Creek, is located at latitude 40.790159 degrees and longitude -96.664587 degrees, west of South 40<sup>th</sup> Street and east of Scott Avenue in Section 31, Township 10 North, Range 7 East, in Lancaster County, Nebraska (Appendix B Figure 3). The mitigation site (Site), Oak Creek, is located at latitude 40.830519 degrees and longitude -96.738243 degrees, east of Interstate-80 and north of Capital Beach in Sections 15 and 16, Township 10 North, Range 6 East, in Lancaster County, Nebraska (Appendix B, Figure 2). All compensatory mitigation will occur off-site along Oak Creek. The site will likely develop as an herbaceous dominated wetland.

## **3 SITE PROTECTION INSTRUMENTS**

LPS NRD is committed to protecting the mitigation Site and assuring that it provides its intended wetland functions in perpetuity. To assure the Site functions as required, LPS NRD will place a Covenant of Dedication to protect the functions of the mitigation wetland and upland buffer. After completion of the mitigation Site, LPS NRD will provide the USACE a legal description of the land to be preserved, as determined by a registered land surveyor and a draft Covenant of Dedication (Appendix C). A certified copy of the real estate instruments and records with the County Registrar of Deeds will be submitted to the USACE within 60 days following completion of the mitigation Site. It is anticipated that the following land use restrictions for the Site would be included:

1. There shall be no construction or placement of structures or mobile homes, fences, signs, billboards, or other advertising material, or other structures whether temporary or permanent, on the land;
2. There shall be no filling, draining, excavating, dredging, mining, drilling, or removal of topsoil, loam, peat, sand, gravel, rock, minerals, or other materials;
3. There shall be no construction of roads or paths for vehicular or pedestrian travel or any change in the topography of the land;
4. There shall be no removal or destruction planted vegetation, spraying with insecticides, grazing of animals, farming, tilling of soil, or other agricultural activity. However, maintenance activities would be conducted pending approval from the USACE;
5. There shall be no operation of all-terrain vehicles or any other type of motorized vehicle on the land without approval from USACE;
6. The real estate instrument shall be reviewed by USACE prior to signature to assure compliance with permit conditions;



7. The real estate instrument is made in perpetuity;

8. Signs shall be placed around the sites to inform the public of these restrictions.

#### **4 BASELINE INFORMATION**

The mitigation Site is located at 40.830519 degrees and longitude -96.738243 degrees, along the north bank of Oak Creek in Sections 15 and 16, Township 10 North, Range 6 East, in Lancaster County, Nebraska (Appendix B, Figures 1 and 2).

A description of baseline conditions can be found in the Wetland Delineation Report previously submitted in support of the *Pre-Construction Notification for Antelope Creek Bank Stabilization project, Lancaster County, Nebraska (USACE Number: NWO-2019-00125-WEH)*. Olsson biologists visited the Site on September 22, 2021, to complete a field investigation and wetland delineation. The wetland delineation identified three PEMA / C wetlands totaling 3.25 acres.

The mitigation Site is located within the Environmental Protection Agency (EPA) Level III Ecoregion: 47-Western Corn Belt Plains and Level IV Ecoregion: 47i- Loess and Glacial Drifts Hills. The Level IV characteristics are described by EPA follows: "Low, rolling loess-covered hills with areas of exposed glacial till are characteristic of the Loess and Glacial Drift Hills. Loess deposits are generally thinner than those in 47h, and historically there was less oak-hickory forest and more extensive tallgrass prairie than found in 47h. The flatter loess hills have a silty, clay loam soil that supports cropland, while rangeland is somewhat more extensive on the deep clay loams formed in glacial till soils" (Chapman et al., 2001).

##### **4.1 Vegetation**

Dominant vegetation identified during the wetland delineation included: honey locust (*Gleditsia triacanthos*), reed canarygrass (*Phalaris arundinacea*), common reed (*Phragmites australis*), smooth brome (*Bromus inermis*), and horseweed (*Erigeron canadensis*).

The likely historic ecological system located at the Site is classified as Eastern Upland Oak Bluff Forest (Rolfsmeier and Steinauer, 2010). This ecosystem is described as being dominated by oaks and hickories in a moderate to dense canopy on upper slopes and basswoods on the lower slopes with ironwoods being the dominate in the subcanopy. "The herbaceous understory is often fairly species rich, with numerous shade-tolerant sedges and grasses, ephemeral spring herbs, ferns, mosses, and fungi, including many that reach the western edge of their geographic range" (Rolfsmeier and Steinauer, 2010).

##### **4.2 Soils**

The *Custom Soil Resource Report for Sarpy County, Nebraska* (USDA, 2017) and online Web Soils Survey, based on the Natural Resource Conservation Service (NRCS) state hydric soils list, shows that the Site for wetland mitigation contains six of the following Soil Survey Geographic database map units.

- 7050: Kennebec silt loam, occasionally flooded – hydric rating of five
- 7099: Zook silty clay loam, occasionally flooded – hydric rating of 100
- 7231: Judson silt loam, two to six percent slopes – hydric rating of one

- 7867: Nodaway silt loam, channeled, frequently flooded – hydric rating of five
- 9709: Urban land-Kennebec complex, zero to two percent slopes – non-hydric
- 9999: Water – non-hydric

#### 4.3 Hydrology

The mitigation Site is located within the Little Salt Creek watershed (HUC 8 – 10200203). Hydrology for the Site will be provided by surface run-off from adjacent uplands and enhanced through excavation and grading which will allow run-off and overland flow from these areas to supply sufficient hydrology. The minimum standard will be saturation within 12 inches of the surface for at least two weeks of the growing season.

### 5 DETERMINATION OF CREDITS

The proposed mitigation Site is designed to enhance an approximate 700 linear feet by 100-foot wide stream bank on the north side of Oak Creek. The stream enhancement is being proposed to satisfy mitigation credits determined by the NeSCAP Stream Assessment due to impacts from the Antelope Creek Bank Stabilization project. The NeSCAP Stream Assessment is included in Appendix A.

### 6 MITIGATION WORK PLAN

Mitigation Site construction would focus on creating wetland and aquatic habitats typical of the region by restoring hydrology and establishing native vegetation communities. Naturally occurring wetlands currently exist in areas along the north bank. In addition to the creation of additional wetlands, the main focus is to eliminate, control, and maintain the presence of common reed. Proposed mitigation locations for wetlands are shown in Appendix B.

#### 6.1 Wetland Mitigation

Construction for the mitigation Site will begin concurrently with Antelope Creek Bank Stabilization project construction. The mitigation Site was previously sprayed (Fall 2021) for the existing *Phragmites australis* that was identified at the Site during the wetland delineation completed in September 2021.

Following Site preparation, a seed mixture of native grasses and forbs, such as Stock Seed Farms (Murdock, Nebraska) Water's Edge Mixture, will be planted within the wetland mitigation area to facilitate the development of an herbaceous understory. Water's Edge is a combination of native grasses and forbs designed to hold soil in wetland areas with fluctuating water levels. The mix consists of 28 facultative wetland and obligate hydrophytic species that provide soil stabilization and habitat not only in the water, but also on the banks. The wetland areas would be planted in a mix of the following species or comparable species, in a mix similar to Stock Seed Farms Water's Edge Mixture, depending on availability:

- Blue flag iris (*Iris versicolor*)
- Bluejoint reedgrass (*Calamagrostis canadensis*)
- Blue vervain (*Verbena hastata*)

- Bristley sedge (*Carex comosa*)
- Canada anemone (*Anemone canadensis*)
- Cardinal flower (*Lobelia cardinalis*)
- Common arrowhead (*Sagittaria latifolia*)
- Dark green bulrush (*Scirpus atrovirens*)
- Fox sedge (*Carex vulpinoidea*)
- Frank's sedge (*Carex frankii*)
- Giant bur reed (*Sparganium eurycarpum*)
- Great blue lobelia (*Lobelia siphilitica*)
- Hardstem bulrush (*Schoenoplectus acutus*)
- Hop sedge (*Carex lupulina*)
- Joe pye weed (*Eutrochium purpureum*)
- Monkey flower (*Mimulus ringens*)
- New England aster (*Symphotrichum novae-angliae*)
- Prairie cordgrass (*Spartina pectinata*)
- Rice cut grass (*Leersia oryzoides*)
- Riverbank wildrye (*Elymus lanceolatus ssp. riparius*)
- Softstem bulrush (*Schoenoplectus tabernaemontani*)
- Soft rush (*Juncus effusus*)
- Swamp milkweed (*Asclepias incarnata*)
- Sweet flag (*Acorus americanus*)
- Tussock sedge (*Carex stricta*)
- Virginia wildrye (*Elymus virginicus*)
- Water pliantain (*Alisma subcordatum*)
- Woolgrass (*Scirpus cyperinus*)

Plants in this mix also function as filtration for run-off flowing into the body of water while providing food and cover for wildlife and waterfowl. Plan details are included in Appendix D.

## 6.2 Upland Buffer

The wetland mitigation areas will be protected by a 50-foot buffer consisting of native vegetation, on slopes with a gradient of less than 4:1. The buffer along the wetland areas are identified as a floodway berm. The buffer area would be planted in a mix of the following species or comparable species, in a mix similar to Stock Seed Farms Prairie 7, depending on availability:

- Virginia wildrye (*Elymus virginicus*);
- Big bluestem (*Andropogon gerardii*);
- Indian grass (*Sorghastrum nutans*);
- Switchgrass (*Panicum virgatum*);
- Western wheatgrass (*Pascopyrum smithii*);
- Sideoats grama (*Bouteloua curtipendula*);
- Prairie cordgrass (*Spartina pectinata*);
- Joe Pye weed (*Eutrochium purpureum*);
- Eastern gamagrass (*Tripsacum dactyloides*).

## 7 MAINTENANCE PLAN

The Site will be designed to be self-sustaining and will require minimal maintenance, once established. LPS NRD would assume responsibility for necessary corrective actions, in the instance that the Site fails to meet the success criteria during the monitoring period. Due to Site containing *Phragmites australis*, LPS NRD would assume responsibility eliminating the species., The area was sprayed with a single treatment of Polaris herbicide in the Fall of 2021 which is effective for two to three years. Prior to seeding for the mitigation Site, a qualified biologist or LPS NRD staff will identify and spray areas that were missed during the Fall 2021 application. To control the spread of *Phragmites australis*, qualified LPS NRD staff will use Rodeo Herbicide to spot spray any *Phragmites australis* that is present. All other maintenance activities will be pre-approved by USACE before being initiated.

## 8 PERFORMANCE STANDARDS

Wetlands counted towards mitigation must meet performance standards and be monitored based on parameters defined in the 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region (Version 2.0, [March 2010]).

In order to achieve the required diversity and sustainability, annual thresholds of wetland development have been established. The 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region will be used to gauge whether the sites are meeting the following performance measures. Absolute ground cover (measured by estimated aerial cover) and species abundance (measured by number of species present) will be identified for the proposed sites prior to construction to serve as a baseline for future monitoring and will be compared to subsequent growing seasons.

Many factors influence development of the mitigation site's diversity, plant cover, and hydrology from year to year. Therefore, failure to observe hydrology indicators or failure to reach the diversity and percent coverage targets enumerated below may or may not indicate that corrective measures are warranted. The USACE will make such determinations after reviewing monitoring reports and climatic conditions.

Performance measures for the restoration, establishment and enhancement PEMAC wetland mitigation areas are as follows:

- Year 1 – The percent concurrence of dominant plants observed of commonly abundant or diagnostic species associated with the Freshwater Seep and Eastern Sedge Wet Meadow communities is greater than five percent. Annual and perennial grasses and forbs recruited from the soil, the native wetland seed mixture, and propagules received from adjoining wetlands will begin to become established. Weedy annual species may be present and abundant. Absolute ground cover is at least 25 percent. At least one primary hydrology indicator from the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region is present. The source(s) of hydrology are appropriate for the targeted Nebraska Wetland Subclass (Riverine Floodplain and Slope). The duration of saturation and/or presence of surface water is appropriate for the

targeted Cowardin Classification regime modifier (semi-permanently flooded or temporarily/seasonally flooded).

- Year 2 – The percent concurrence of dominant plants observed of commonly abundant or diagnostic species associated with the Freshwater Seep and Eastern Sedge Wet Meadow communities is greater than 15 percent. Invasive species (i.e. noxious weeds, *Phragmites spp.*, *Phalaris spp.*, *Lythrum salicaria*, *Juniperus virginiana*, etc.) are neither dominant nor trending toward dominance. Weedy annuals may still be present or even dominant but should be less than Year 1. Absolute ground cover is at least 50 percent. At least one primary hydrology indicator from the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region is present. The source(s) of hydrology are appropriate for the targeted Nebraska wetland subclass (Riverine Floodplain and Slope). The duration of saturation and/or presence of surface water is appropriate for the targeted Cowardin Classification regime modifier (semi-permanently flooded or temporarily/seasonally flooded).
- Year 3 – The percent concurrence of dominant plants observed of commonly abundant or diagnostic species associated with the Freshwater Seep and Eastern Sedge Wet Meadow communities is greater than 25 percent. The plant distribution shall meet the dominance test standards in the 1987 Corps of Engineers Wetlands Delineation Manual and the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region. Additionally, there are at least three native hydrophytes among the list of dominants. Invasive species (i.e. noxious weeds, *Phragmites spp.*, *Phalaris spp.*, *Lythrum salicaria*, *Juniperus virginiana*, etc.) are neither dominant nor trending toward dominance. Weedy annuals may still be present but should be less than the previous year. Absolute ground cover is at least 75 percent. At least one primary hydrology indicator from the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region is present. The source(s) of hydrology are appropriate for the targeted Nebraska wetland subclass (Riverine Floodplain and Slope). The duration of saturation and/or presence of surface water is appropriate for the targeted Cowardin Classification regime modifier (semi-permanently flooded or temporarily/seasonally flooded).
- Year 4 – The percent concurrence of dominant plants observed of commonly abundant or diagnostic species associated with the Freshwater Seep and Eastern Sedge Wet Meadow communities is greater than 50 percent. The Year 3 thresholds continue to be met or exceeded. There are now three or more native hydrophytes among the list of dominants. Invasive species (i.e. noxious weeds, *Phragmites spp.*, *Phalaris spp.*, *Lythrum salicaria*, *Juniperus virginiana*, etc.) are neither dominant nor trending toward dominance. Weedy annuals may still be present but should be less than the previous year. Absolute ground cover is at least 75 percent. At least one primary hydrology indicator from the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region is present. The source(s) of hydrology are appropriate for the targeted Nebraska wetland subclass (Riverine Floodplain and Slope). The duration of saturation and/or presence of surface water is appropriate for the targeted Cowardin Classification regime modifier (semi-permanently flooded or temporarily/seasonally flooded).

- Year 5 – The percent concurrence of dominant plants observed of commonly abundant or diagnostic species is associated with the Freshwater Seep and Eastern Sedge Wet Meadow communities greater than 75 percent. The Year 4 thresholds have been maintained or surpassed and the Site is successfully trending as a stable and self-sustaining Site. Invasive species and weedy annuals are less than 10 percent and are not dominant. Noxious weeds and undesirable species are eliminated. Absolute ground cover is at least 75 percent or greater. At least one primary hydrology indicator from the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Great Plains Region is present. The source(s) of hydrology are appropriate for the targeted Nebraska wetland subclass (Riverine Floodplain and Slope). The duration of saturation and/or presence of surface water is appropriate for the targeted Cowardin Classification regime modifier (semi-permanently flooded or temporarily/seasonally flooded).

All wetlands within the mitigation Site which are counted towards compensation must meet performance standards and be monitored for parameters as defined in USACE (1987) and associated guidance. It is anticipated that soils may not develop sufficiently during the monitoring period to display hydric indicators, but hydrophytic vegetation and hydrology should be present. Wetland hydrology exists within the mitigation Site, but areas will also be established through excavation, which will facilitate run-off and overland flow from adjacent upland areas to the Site. The minimum hydrologic regime will be saturation within 12 inches of the surface for at least two weeks during the growing season. The quantifiable standard for vegetation will be the establishment of a percentage of cover of hydrophytic species.

To achieve diversity and sustainability, annual thresholds of wetland development will be established. Criteria established in USACE (2010, 1987) will be used to assess that the Site is meeting the following performance measures regarding:

- Absolute ground cover;
- Species richness (measured by number of species present);
- Species diversity (based on abundance and plant distribution).

## 8.1 PEMA Wetlands

Multiple factors influence development of the Site's diversity, plant cover, and hydrology from year to year. Therefore, failure to observe hydrologic indicators or failure to reach the diversity and coverage goals enumerated below may or may not indicate that corrective measures are warranted. USACE will make such determinations after reviewing monitoring reports and climatic conditions. Yearly performance measures<sup>1</sup> for PEMA wetland mitigation sites are as follows:

- Year 1 – Annual and perennial grasses and forbs recruited from the soil, the native wetland seed mixture, and propagules received from adjoining wetlands will begin to become established. Weedy annual species may be present and abundant. Absolute

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<sup>1</sup> PEMA wetland mitigation sites require a 5-year monitoring period. (Cowardin 1979)

ground cover is at least 25%. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.

- Year 2 – Absolute ground cover, species abundance, and species diversity are greater than Year 1. Undesirable species (i.e. noxious weeds, *Typha* spp., *Phragmites* spp., *Phalaris* spp., etc.) are neither dominant nor trending toward dominance. Weedy annuals may still be present or even dominant but should be less than Year 1. Absolute ground cover is at least 50%. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.
- Year 3 – The plant distribution shall meet the dominance test standards in USACE (2010, 1987). Additionally, there are at least three native hydrophytes among the list of dominants. Absolute ground cover, species abundance, and species diversity are greater than the previous year. Weedy annuals may still be present but should be less than the previous year. Absolute ground cover is at least 75%. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.
- Year 4 –Year 3 thresholds continue to be met or exceeded. There are now three or more native hydrophytes among the dominants. Absolute ground cover, species abundance, and species diversity are equal to or greater than the previous year. Weedy annuals may still be present but should be less than the previous year. Absolute ground cover is at least 75%. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.
- Year 5 – Year 4 thresholds have been maintained or surpassed and the Site shows all signs of sustainability. Invasive species and weedy annuals are less than 10% and are not dominant. Noxious weed species are eliminated. Absolute ground cover, species abundance, and species diversity are equal to or greater than the previous year. Absolute ground cover is at least 75% or greater. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.

## 9 MONITORING REQUIREMENTS

A monitoring plan will be established to assess the success of mitigation which would require annual site visits to evaluate wetland development (hydrology, hydrophytic vegetation, hydric soils) and stream function, and the establishment of desired vegetation in buffer areas. Annual Monitoring Reports summarizing conditions during each growing season would be completed for a minimum of five years beginning with the first full growing season after completion of the mitigation Site. Annual monitoring will consist of documenting plant community structure, hydrology, changes in wetland habitat, and mapping wetland boundaries along designated sampling transects. Transects will be utilized to comprehensively sample the entire Site and to document transitions between uplands and wetlands. Annual Reports would be submitted by December 1 after the end of each growing season and would include the following information, as appropriate:

- Activities conducted at the mitigation Site during the year including construction, seeding, planned weed control, etc.
- Miscellaneous observations including wildlife use;
- Identification of problems and proposed corrective actions;

- Color photographs of the project area;
- Figures showing sample point locations and wetland and buffer boundaries;
- Vegetation, soils, and hydrology data including USACE wetland determination forms.

## 10 LONG-TERM MAINTENANCE PLAN

Once established, the mitigation Site would be self-sustaining and would require a minimal amount of active management. There are no water diversion structures that would require long-term maintenance associated with the wetland development and vegetation enhancement along Oak Creek. Maintenance needs will be constantly reassessed based on monitoring events and periodic visits. After the five annual monitoring periods are complete, LPS NRD will maintain responsibility in perpetuity for all maintenance, protections, monitoring, and corrective actions.

The mitigation Site would be inspected regularly for the presence of noxious weeds which will be controlled with appropriate measures, contingent upon approval by the USACE. Methods to manage and control noxious species may include, but are not limited to: selective spraying, grazing, site flooding, and physical removal. Noxious species include but are not limited to:

- Common reed (*Phragmites australis*),
- Musk thistle (*Carduus nutans*),
- Leafy spurge (*Euphorbia esula*),
- Purple loosestrife (*Lythrum salicaria*),
- Canada thistle (*Carduus arvensis*),
- Plumeless thistle (*Carduus acanthoides*),
- Spotted knapweed (*Centaurea maculosa*),
- Saltcedar (*Tamarix ramosissima*),
- Chinese lespedeza (*Sericea lespedeza*)
- Japanese knotweed (*Fallopia japonica*)
- Bohemian knotweed (*Fallopia bohemica*)
- Giant knotweed (*Fallopia sachalinensis*)

A list of noxious weeds in Nebraska can be found at the following website:  
[https://nda.nebraska.gov/plant/noxious\\_weeds/index.html](https://nda.nebraska.gov/plant/noxious_weeds/index.html)

## 11 ADAPTIVE MANAGEMENT PLAN

LPS NRD would be responsible for Site management, which includes bi-annual monitoring, maintenance, and necessary tree removal. LPS NRD is responsible for monitoring and maintaining all channel structures. In addition, tree removal along channels will be necessary to prevent flow restriction during high water events and prevent erosion and bank failure to the banks. If monitoring activities identify potential problems, LPS NRD would be promptly notified and advised of potential remedial actions. In the event of unanticipated Site conditions or changes of conditions beyond the control of the LPS NRD, a contingency plan, developed in coordination with USACE, would be placed into effect.



## **12 FINANCIAL ASSURANCES**

LPS NRD would be responsible for all costs involved with construction, maintenance, protection, monitoring, corrective actions, and long-term management of the mitigation Site. LPS NRD has adequate funding to facilitate all noted costs to ensure the success of the mitigation Site. A Financial Assurances Letter signed by LPS NRD is provided in Appendix E.

## SOURCES CITED

- 33 Code of Federal Regulations (CFR) 332. Compensatory Mitigation For Losses of Aquatic Resources. 33 U.S.C. 1344 and 401. Public Law 108-136.
- Chapman, S. S., Omernik, J. M., Freeouf, J. A., Huggins, D. G., McCauley, J. R., Freeman, C. C., Steinauer, G., Angelo, R. T., and Schlepp, R. 2001. *Ecoregions of Nebraska and Kansas* (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,950,000).
- Cowardin, L. M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of wetlands and deepwater habitats of the United States*. U.S. Dept. of the Interior, Fish and Wildlife Service, Washington, D.C.
- Rolfsmeier, S.B. and G.A. Steinauer. 2010. *Terrestrial ecological systems and natural communities of Nebraska*. Nebraska Natural Heritage Program, Nebraska Game and Parks Commission. Lincoln, Nebraska
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- USACE. 1987. Corps of Engineers wetland delineation manual. U.S. Army Corps of Engineers, Wetlands Research Program. Washington, D. C.
- USDA. 2017. *Custom soil resource report for Lancaster County; Nebraska Soil Survey Geographic Database (SSURGO) Web Soils Survey*. U.S. Department of Agriculture. Natural Resources Conservation Service. Accessed January 7, 2022.

**Appendix A:**

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**NeSCAP Stream Assessment**

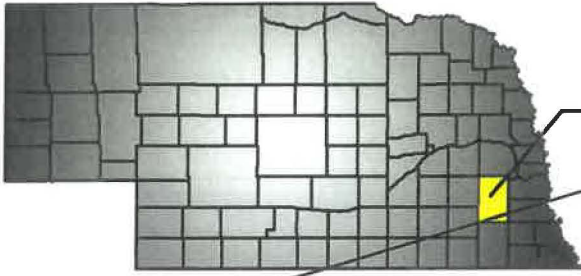
## **Appendix B:**

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### **Figures**

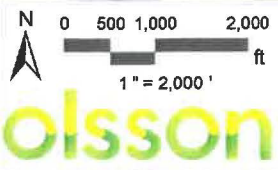
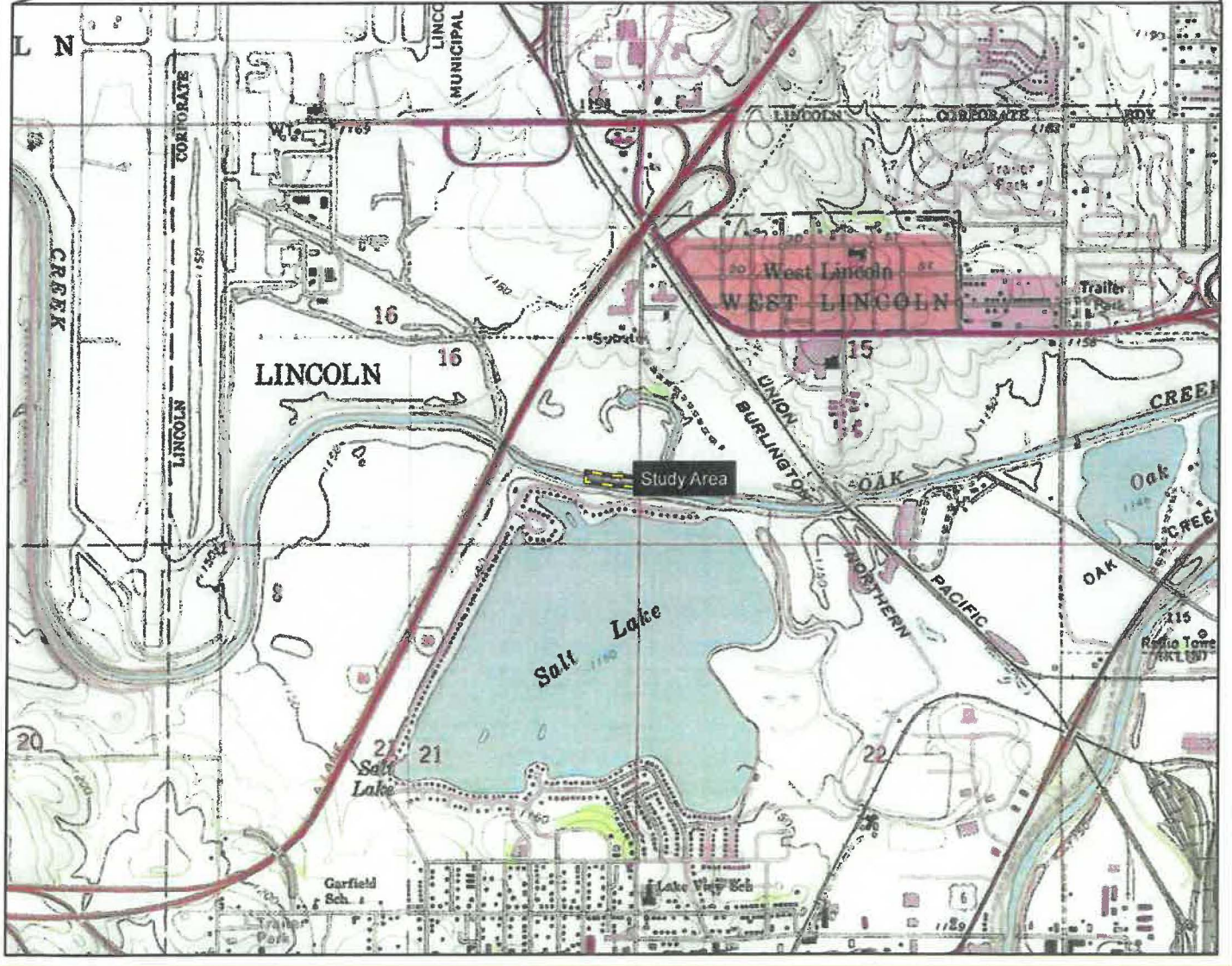
\\oa.ed.oaconsulting.com\frts-ns\1\projects\Projects\015-161940-Design\GIS\21-09-20\_NRPL\_Oak Creek Delineation.mxd PUBLISHED BY: mczewinski DATE: March 17, 2022

# NEBRASKA



Project Area

# LANCASTER COUNTY



 Study Area

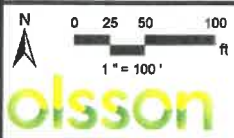
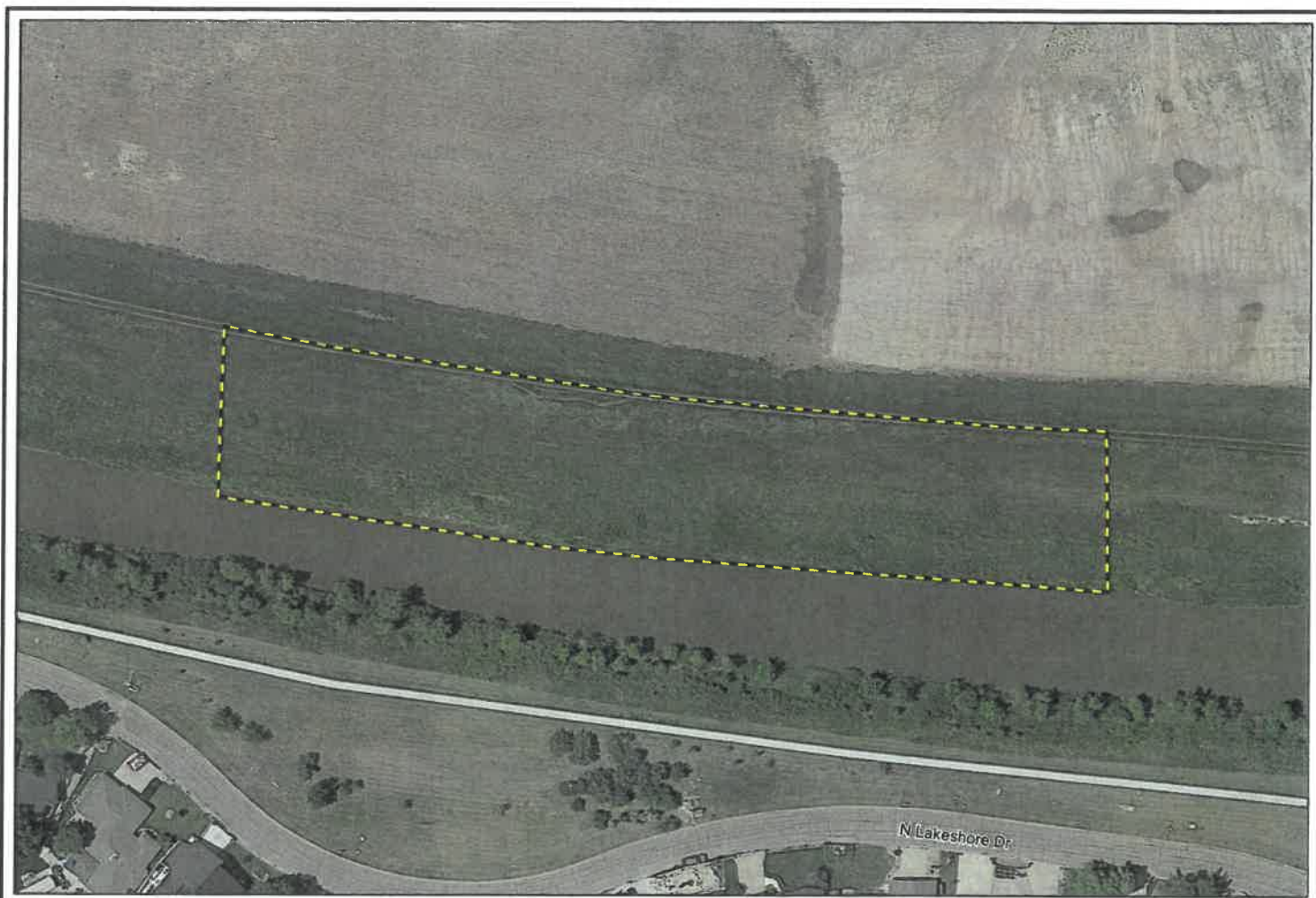
## Oak Creek Proposed Mitigation Site

Lincoln, Nebraska  
Olsson Project No: 015-1619

**Location Map**  
Figure 1



\\oa.adlocconsulting.com\frts-ns\Projects\Projects\015-161940-Design\GIS\21-09-20\_NRP\Oak Creek Delineation.mxd PUBLISHED BY: mcszwinshi DATE: March 17, 2022



 Study Area

**Oak Creek Proposed Mitigation Site**  
Lincoln, Nebraska  
Olsson Project No: 015-1619  
**Site Map**  
Figure 2

WGS 1984 ARC System Zone 11

Basemap: Google Maps Imagery

F:\Projects\015-16\PMO-Design\GIS\15-12-01\_LINA\_Delineation.mxd PUBLISHED BY: mczewinski DATE: July 19, 2021



0 25 50 100  
1" = 100'  
Original Published Resolution  
WGS 1984 ARC System Zone 11  
ESRI World Imagery

Antelope Creek Bank Repair 40th to Scott Ave  
Delineation Report  
Lancaster County, Nebraska  
Site Map

FIGURE

3

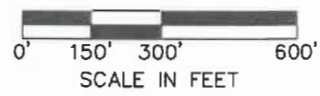
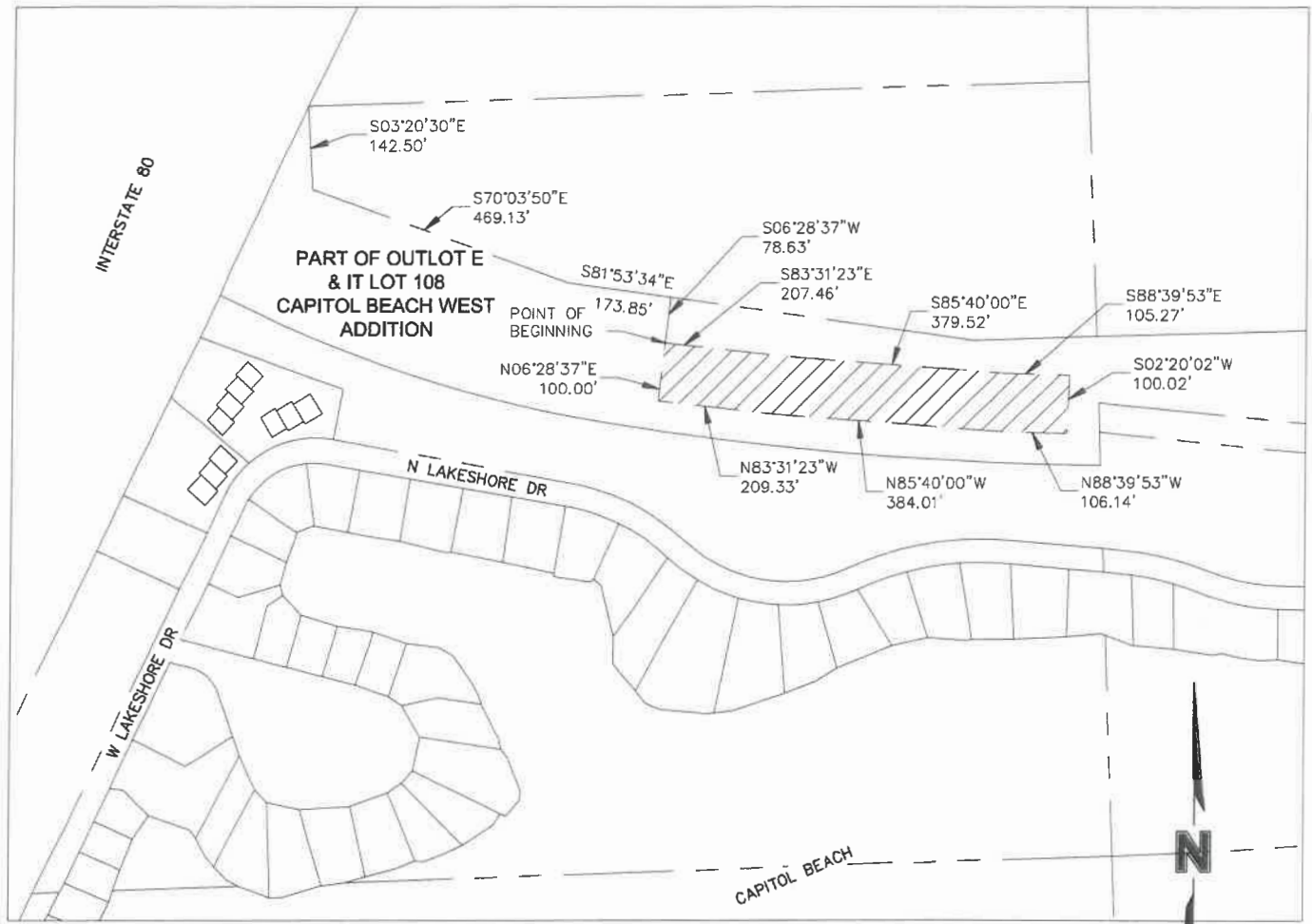


**Appendix C:**

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**Draft Deed Restriction**

DWG: F:\Projects\015-1619\40-Design\AutoCAD\Final Plans\Xref\W\_PBASE-OakCreekContours.dwg  
 DATE: Mar 21, 2022 5:52pm XREFS: W-PARCELS-NEStatePlane-151619  
 USER: jmcLaughlin



**VICINITY MAP  
R-6-E**



**LEGAL DESCRIPTION**

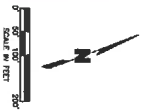
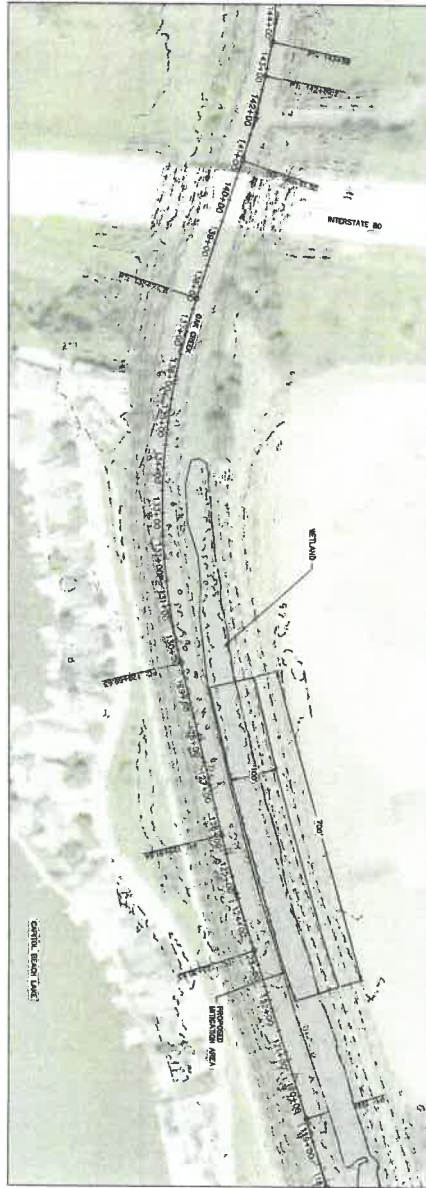
**COMMENCING** AT THE NORTHERN CORNER OF I.T. 108, SECTION 16, T10N, R6E; THENCE ALONG THE NORTHERN LINE OF SAID I.T. 108 ON AN ASSUMED BEARING OF S03°20'30"E, FOR A DISTANCE OF 142.50 FEET TO A POINT; THENCE S70°03'50"E, CONTINUING ALONG SAID NORTHERN LINE, FOR A DISTANCE OF 469.13 FEET TO A POINT; THENCE S81°53'34"E, CONTINUING ALONG SAID NORTHERN LINE, FOR A DISTANCE OF 173.85 TO A POINT; THENCE S06°28'37"W, FOR A DISTANCE OF 78.63 FEET TO THE **TRUE POINT OF BEGINNING**; THENCE S83°31'23"E, FOR A DISTANCE OF 207.46 FEET TO A POINT; THENCE S85°40'00"E, FOR A DISTANCE OF 379.52 FEET TO A POINT; THENCE S88°39'53"E, FOR A DISTANCE OF 105.27 FEET TO A POINT; THENCE S02°20'02"W, FOR A DISTANCE OF 100.02 FEET TO A POINT; THENCE N88°39'53"W, FOR A DISTANCE OF 106.14 FEET TO A POINT; THENCE N85°40'00"W, FOR A DISTANCE OF 384.01 FEET TO A POINT; THENCE N83°31'23"W, FOR A DISTANCE OF 209.33 FEET TO A POINT; THENCE N06°28'37"E, FOR A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING; SAID TRACT CONTAINS A CALCULATED AREA OF 2,191 SQUARE FEET OR 1.60 ACRES, MORE OR LESS.

PROJECT NO: 015-1619	PART OF OUTLOT E & IT LOT 108 STREAM BUFFER EASEMENT CAPITOL BEACH WEST ADDITION		601 P Street, Suite 200 P.O. Box 84608 Lincoln, NE 68508 TEL 402.474.6311	EXHIBIT
DRAWN BY: JLM			1	
DATE: 3.21.2022				

**Appendix D:**

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**Final Plans**



SHEET 1	PLAN VIEW WITH WETLAND	REV. NO.	DATE	REVISIONS/DESCRIPTION
	OAK CREEK MITIGATION			
	LINCOLN, NEBRASKA	2022		REVISIONS

PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

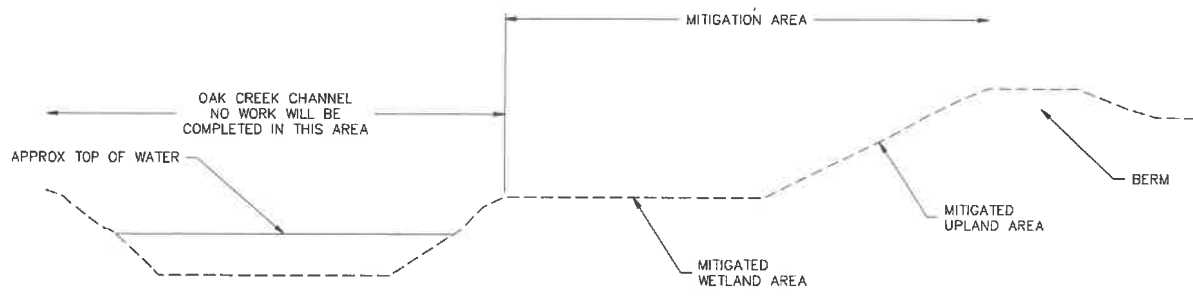
March 16, 2022

DATE PRINTED  
OLSSON

olsson

401 P Street, Suite 200  
P.O. Box 94808  
Lincoln, NE 68508  
TEL 402.474.8211 www.olsson.com

DWG: F:\Projects\015-1619\40-Design\AutoCAD\Final Plans\W\_PBASE-OakCreekContours.dwg USER: jmoloughlin  
DATE: Feb 16, 2022 12:06pm XREFS:



PROJECT NO:	015-1619
DRAWN BY:	JLM
DATE:	2.16.2022

OAK CREEK MITIGATION

**olsson**  
501 P Street, Suite 200  
P.O. Box 64604  
Lincoln, NE 68508  
TEL: 402.474.6311

EXHIBIT
1

**Appendix E:**

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**Financial Assurances Letter**



## LOWER PLATTE SOUTH natural resources district

3125 Portia Street | P.O. Box 83581 • Lincoln, Nebraska 68501-3581  
P: 402.476.2729 • F: 402.476.6454 | [www.lpsnrd.org](http://www.lpsnrd.org)



### Memorandum

**Date:** April 12, 2022  
**To:** Urban Subcommittee  
**From:** Paul Zillig  
**Subject:** Antelope Valley Access Easement Modification

The Antelope Valley Project has been completed for over ten years and the City of Lincoln and NRD holds access easements over a portion of a number of properties adjacent to the project right-of-way to aid with operation and maintenance of the project. One such property is located between “O” and “N” Streets on the east side of the conveyance channel and west of 23<sup>rd</sup> Street, the 8,700 square foot easement is on the south side of the property and grants the City/NRD access (see attached aerial photo and the easement).

The property is owned by St. Joseph Institute and they are requesting the City/NRD consider releasing a portion of the easement furthest away from the channel and in return grant us additional access rights (an easement) over some additional land that is adjacent to the channel and would provide improved access to the channel. The modified easement area is shown on the attached map and would be 8,900 square feet.

The proposed exchange of easement areas would allow St. Joseph Institute/Catholic Social Services to grow southeast of their existing building where the City/NRD easement would be released and would provide the City/NRD with better access to the east side of the channel with access from the driveway on “N” Street.

The proposed exchange would be beneficial to all parties involved. I would recommend the Urban Subcommittee recommend the NRD Board of Directors agree to approve the proposed changes to the existing Antelope Valley access easement area for the Saint Joseph Institute property at 22nd & N, and authorize the General Manager to work with the City of Lincoln and NRD Legal Counsel to complete the steps necessary to complete this action.

PDZ/pz

Enc. 3

pc: Steve Seglin & Corey Wasserburger



# Antelope Valley - Access Easement near N Street + S 23rd Street



-  Access Easement
-  Easements
-  Antelope Creek FPP (CORPS Project ROW Area)
-  Parcels

Map Updated: March 2022 - By: LPSNRD, sdr



\$12.00

FIHA  
TZ

Inst # 2008008706 Thu Feb 28 12:17:09 CST 2008  
Filing Fee: \$12.00  
Lancaster County, NE Assessor/Register of Deeds  
oppsc Office EASE  
Pages 2

EASEMENT

KNOW ALL MEN BY THESE PRESENTS:

That the **JOINT ANTELOPE VALLEY AUTHORITY**, a joint administrative entity created under the Interlocal Cooperation Act (Neb. Rev. Stat. §13-801 to 13-827), herein called "*Grantor*", whether one or more, record owner of the real property hereinafter described, for and in consideration of the sum of **ONE DOLLAR AND OTHER GOOD AND VALUABLE CONSIDERATION, (\$1.00 & OG&VC)**, duly paid, the receipt whereof is hereby acknowledged, and the further consideration of the performance of the covenants and agreements by Grantee as hereinafter set out and expressed, does hereby GRANT, REMISE and RELINQUISH unto the **CITY OF LINCOLN, NEBRASKA, a municipal corporation, and LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT, a political subdivision of the State of Nebraska**, its successors and assigns, herein called "*Grantee*", the RIGHT, PRIVILEGE and EASEMENT to construct, reconstruct, maintain, operate, and replace access, and appurtenances thereto belonging, over and through the following described real property, to-wit:

The south 50 feet of the east half of Lot 15, and the south 50.00 feet of Lots 16 through 18, Block 2, Field & Harrison's Addition, located in the Northeast Quarter of Section 25, Township 10 North, Range 6 East of the 6<sup>th</sup> P.M., Lancaster County, Nebraska, more particularly described as follows:

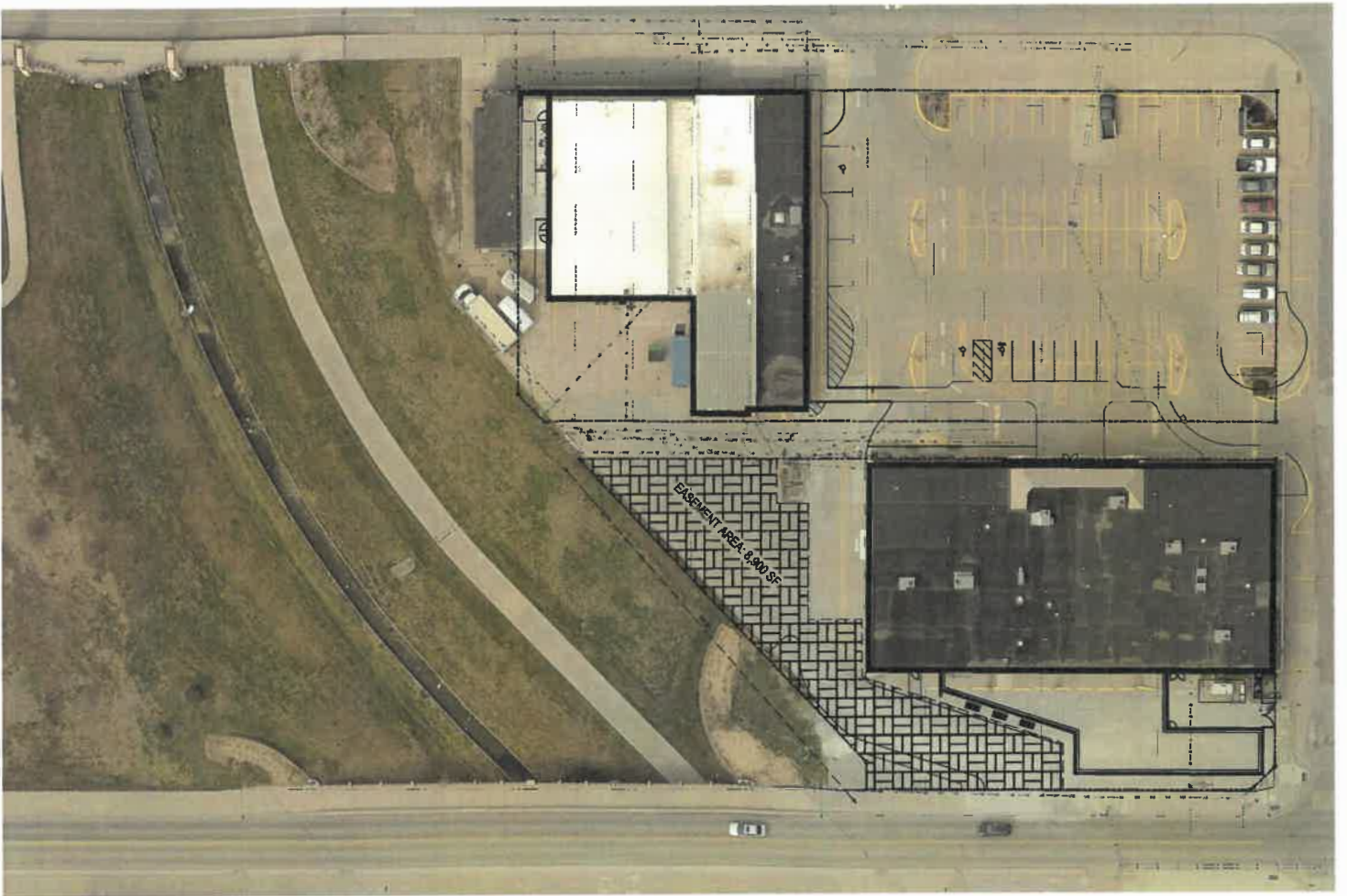
The south 50 feet of the east half of Lot 15, and the south 50.00 feet of Lots 16 through 18, Block 2, Field & Harrison's Addition, except for the following;

Beginning from the southeast corner of said Lot 18; thence on an assumed bearing of North 89° 43' 31" West, along the south line of said Lot 18, a distance of 10.12 feet to a point; thence North 45° 15' 54" East, a distance of 14.33 feet to a point on the east line of said Lot 18; thence South 00° 17' 55" West, along the east line of said Lot 18, a distance of 10.13 feet to the Point of Beginning, containing an area of 51 square feet (0.001 acres), more or less.

TO HAVE AND TO HOLD UNTO THE CITY OF LINCOLN, NEBRASKA, its successors and assigns, so long as such access shall be maintained, together with the right of ingress and egress to said property from the public streets, for the purpose of constructing, reconstructing, inspecting, repairing, maintaining, operating and replacing said access and appurtenances thereto, located thereon, in whole or in part, at the will of Grantee, it being the intention of the parties hereto that Grantor is hereby granting the uses herein specified without divesting Grantor of title and ownership of the rights to use and enjoy the above described property for any purpose except the construction thereon of permanent buildings, subject only to the right of Grantee to use the same for purposes herein expressed, and subject to any prior leases or easements of record heretofore granted to other parties.

CHG PUY







### 7.4.6 Project SSC-6: Grade Control Main Stem SCR030 at Old Railroad Bridge and Knickpoint on Tributary SC050R005 at Wilderness Park Tail Bridge

**Problem description:** There is an existing rock rubble knickzone on the main stem SCR030 at the old railroad bridge located approximately 2,500 feet south of W Denton Rd and 450 feet east of Highway 77. The rubble does not appear to provide reliable stability of the knickzone. Also, incision along tributary SC050R005 is undermining the trail bridge piers and exposing a fiber optic line in channel bed. The bridge is located west of the northwest corner of Lincoln Southwest High School, about 275 feet west of the railroad tracks. MCI plans to lower the exposed cable line and the MCI construction plans are available with the City Parks Department.



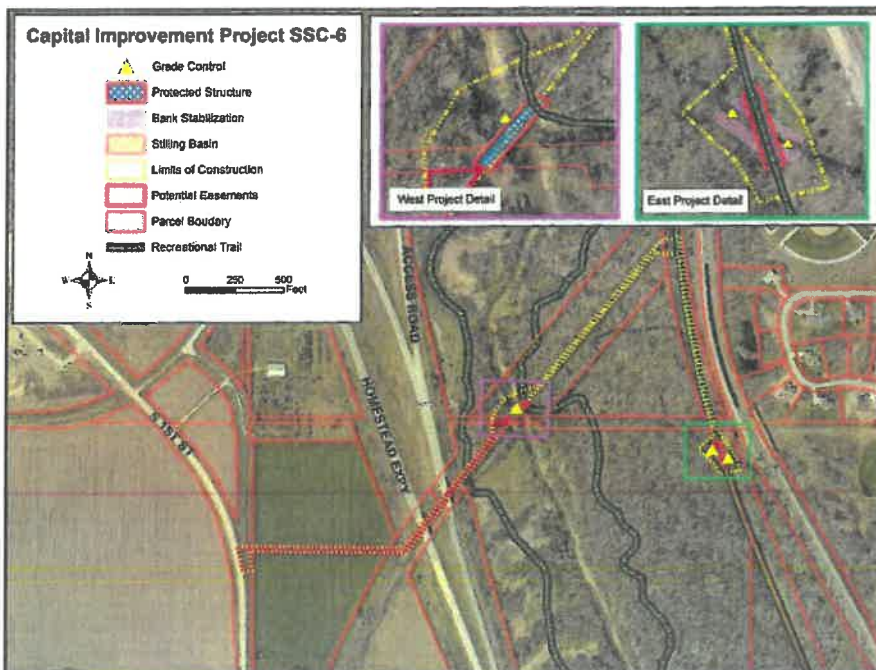
**Figure 7-16: Knickpoint Downstream of old Railroad Bridge Knickpoint**

**Recommendation:** Recommend constructing a grade control and associated bank stabilization on the main stem at the old railroad bridge to stop incision from propagating upstream. Also recommend grade controls and associated bank stabilization along approximately 150 feet of the tributary at the trail bridge to stop incision and protect the bridge. The tributary project reach should begin downstream of the bridge and extending to a point upstream of the bridge to the knickpoint in the channel bed where the exposed fiber optic line is/was located in the channel.



**Figure 7-17: Trail Bridge with exposed footings.**

**Impact to Special Areas and Water Quality:** The project is located within Salt Valley Corridor, Wilderness Park, and within a woodland. Consideration during design and construction should be provided to minimize disturbance and reduce impacts to the special areas and water quality to the greatest extent practical.



**Estimated Project Cost:**  
\$447,000

**Figure 7-18: Conceptual Layout of SSC-6.**

# Lower Platte South Natural Resources District

## South Salt Creek Project 6

### Scope of Service

The purpose of the following scope of services is to develop channel and bank stabilization design, plans, specification, costs and construction documents for the South Salt Creek Watershed Master Plan Project 6 (SSC 6).

#### 1.0 Surveying

Provide boundary and topographic surveying sufficient to produce final plans and easement documents.

##### 1.1 Boundary Data

Provide boundary data sufficient to produce easement documents based on NRD and County records for the parcels indicated by yellow stars in the boundary information exhibit. Locate enough property corners to closely approximate boundary lines on the survey. Include parcel information and meets and bounds data.



Boundary Information Exhibit

##### 1.2 Topographic Survey

Provide normal and customary topographic surveying of approximately 6 acres sufficient to produce 1' contours. Topographic surveying limits are indicated by solid red lines in the survey exhibit. The KMZ file for topographic surveying limits is available upon request.



Survey Exhibit

##### 1.3 Channel Profile Survey

Provide profile survey of approximately 2,000 feet of channel as indicated by the light blue lines in the survey limits exhibit. The KMZ file for surveying limits is available upon request.

##### 1.4 Horizontal and Vertical Control

Establish survey control using existing available reference control monuments and place site control points and benchmarks with reference ties for use during construction.

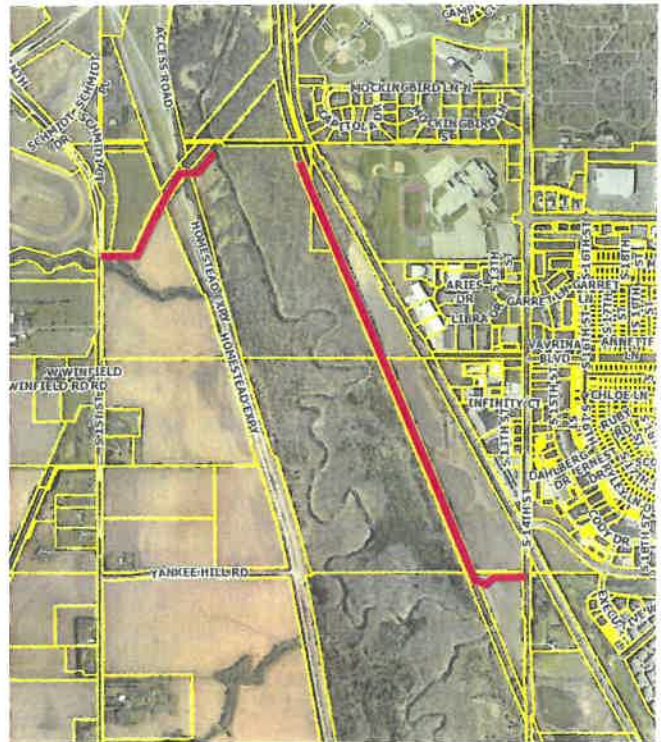
#### 2.0 Geotechnical Services

Geotechnical data is necessary for creek bank slope stability design and other situations where soil stability may affect design.



**2.1 Geotechnical Exploration**

The Geotechnical engineer will obtain soil samples in the field. The final number and location of geotechnical borings will be determined on site by the geotechnical engineer. Potential access for sampling equipment is illustrated in red in the Geotechnical Access Exhibit. Pedestrian traffic control signage and cones are planned for the Jamacian Trail. Access off 14<sup>th</sup>. Some chain-saw removal of overhanging limbs is expected for access off 1<sup>st</sup> Street. Care will be taken to minimize damage to property during the geotechnical exploration. Any damage will be restored to the pre-exploration condition by the geotechnical engineer. Boring holes will be backfilled with cutting, clay, plugs and/or other material as determined by the geotechnical engineer. Boring locations will be illustrated in the geotechnical report.



Potential Geotechnical Access Exhibit

**2.2 Laboratory Testing and Report**

The soil samples will be laboratory tested for the appropriate soil parameters to support the final design. Laboratory Tests results and implications will be summarized in the geotechnical report.

**2.3 Geotechnical Report**

The geotechnical engineer will evaluate the soils for retaining wall and foundation suitability, as appropriate for the design, and make design recommendations for proposed improvements as needed to support the final design. The results and geotechnical engineer’s recommendations will be summarized in the geotechnical report.

**3.0 60% Design, Plans and Cost Estimate**

**3.1 Hydraulic Analysis**

**3.1.1 HEC RAS Modeling**

I&L will develop a 2D HEC RAS model to illustrate design performance and support permits.

I&L will use the hydrologic and hydraulic data from the effective FEMA model as follows:

3.1.2 Effective Model – Obtain FEMA regulatory model

3.1.3 Duplicate Effective Model – Repeat FEMA results

3.1.4 Corrected Effective Model – Correct errors and bring model to current modeling standards

3.1.5 Existing Conditions Model – Add current topography and geometry.

3.1.6 Proposed Conditions Model – Model the effect of proposed designs on the regulatory floodway and floodplain.

**3.2 Preliminary Design**

I&L will locate and size channel stabilization in accordance with accepted design standards (City, NRD, County, State, Federal and others). Design may include:

3.2.1 Demolition and temporary relocation of facilities



- 3.2.2 Pipes, manholes, culverts as needed
- 3.2.3 Headwalls, structures, debris deflectors and weirs as needed
- 3.2.4 Channel protection, retaining walls, other
- 3.2.5 Bio- stabilization channel erosion protection as appropriate
- 3.2.6 Pavement, curb, guardrail, fencing as needed
- 3.2.7 Construction access and limits of disturbance
- 3.2.8 Utility relocations as needed
- 3.2.9 Preliminary Easement/ROW requirements as needed
- 3.2.10 Removal, replacement and/or relocation of amenities
- 3.2.11 Other design items as needed
- 3.3 Utility Coordination

I&L will submit preliminary plans to the utility companies for their review and identification of utility locations as appropriate. I&L will coordinate directly with each utility to either 1) utility verifies that there is no conflict or 2) develop a mutually agreed plan to address each utility conflicts identified. I&L will PDF all letters, maps, notes, and correspondence documenting the findings of “no conflict” or the agreed upon resolution.
- 3.4 60% Plans

Plans will be produced in AutoCAD Civil 3D to illustrate the design and develop quantities. The plans may include: Cover, Notes and Quantities, Overall Location Plan, Access and Easement Information, Plan, Profile, Sections, Elevations, Details, and Notes.
- 3.5 Quantities

Quantities will be developed in bid tab format based on the preliminary design.
- 3.6 Cost Opinion

Unit cost data will be estimated using bid tabs for similar project and local available bid tab databases appropriate for these projects.
- 3.7 Quality Control Check

The project Quality Control Manager (QCM), a senior design engineer, will review the design plans, calculations and cost opinion to check for practicality and that I&L’s design protocols were followed in developing and documenting the design.
- 3.8 60% Plan Submittal

I&L will submit plans and cost opinions to the NRD electronically in PDF format. The submittal will include electronic files (MS Word, MS Excel, AutoCAD, Esri) as requested by the NRD.
- 3.9 60% Plan Review Meeting
  - 3.9.1 Meeting

I&L will schedule and attend a meeting with the NRD to review the preliminary design, plans and cost opinion. I&L will prepare meeting summary notes in PDF format and submit them to the NRD via email for review and comment.
  - 3.9.2 Site Visit

As part of the meeting, I&L will walk the project site with NRD Staff and the 60% plans to observe field conditions and discuss the design challenges and opportunities. The site visit summary notes will be included in the meeting notes submittal.
- 3.10 Preliminary Plans, Cost Review and Approval

The NRD will review the preliminary plans submittal and provide comments and conditional approval. I&L will incorporate the review comments into the final design plan.
- 4.0 Easement Documents and Land Rights Exhibits
  - 4.1 Land Rights Exhibits

I&L will prepare Land Rights Exhibits as needed. The exhibits will illustrate the location of easements and construction disturbance limits on an aerial photo. The exhibits will include parcel information, the easement area quantity, and the construction disturbance areas quantity. Land Rights Exhibits will be prepared in PDF format and submitted to the NRD via email as needed to support the NRD's efforts.

4.2 Easement Documents

Easement Documents shall include a plat illustrating each easement and a script providing meets and bounds description of the easement in addition to the standard NRD language. I&L will submit Easement Documents to the NRD via email in PDF format for the NRD's use in acquiring easements. Easement documents will be formatted for printing on 8½"X11" media. I&L will also submit all final easement locations in GIS Shape File format acceptable to the NRD.

5.0 Permitting

I&L will prepare and submit the necessary required permits for review and approval:

5.1 US Army Corps of Engineer 404 Nationwide

5.1.1 Wetland Delineation

5.1.2 Nebraska Stream Condition Assessment Procedure (NeSCAP)

5.2 DNR 401

5.3 NDOR

5.4 Land Disturbance

5.5 Floodplain Development Permit

5.6 FEMA No-Rise Certification

6.0 Final Plans, Specifications, Cost Opinion and Construction Documents

6.1 Final Design Plans

Final plans will be produced in AutoCAD Civil 3D to illustrate the design and for use as a base for the final cost opinion. The Final plans may include the following sheets: Cover, Notes and Quantities, Overall Location Plan, Access and Easement Information, Benchmark and Reference Ties, Demolition and Utility Relocation, Plan Profile Sheets, Pipe Profiles as needed, Cross Sections Sheets, Retaining Wall Elevation, Details and Notes, Planting and Restoration Plan, Erosion and Sediment Control.

6.2 Specifications

6.2.1 Standard Specifications

The Project Standard Construction Specifications will be the NRD's approved specifications.

6.2.2 Special Provisions

Special provisions will be prepared for all items not specifically covered in the project standard specifications.

6.3 Construction Documents

I&L will prepare construction documents using the NRD standard format. Construction Documents may include: Project Description, Invitation to Bidders, Contract Agreement, Bid Tab, General Conditions, Standard Specifications, Special Provisions, Bond Forms (Bid, Payment, Performance), Project Construction Forms (Notice of Award, Notice to Proceed, Application for Payment, Change order, among others as appropriate)


6.4 Final Quantities

I&L will develop final quantities based on the final design. The final quantities will be in the final bid tab format using the bid tab item descriptions and units.

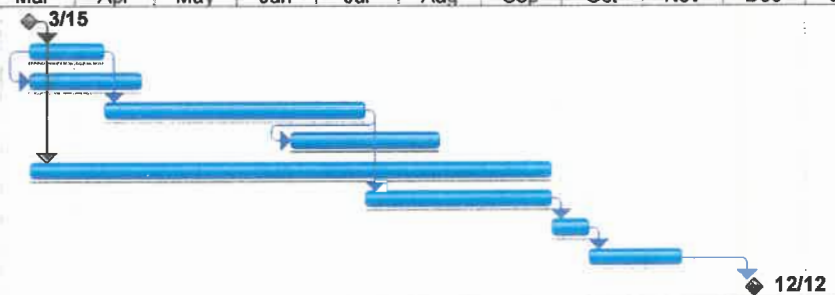
- 6.5 Final Cost Opinion  
I&L will prepare the final opinion of construction costs based on the bid tab final quantities and unit cost information appropriate for this region.
  - 6.6 Quality Control Check  
The project QCM will review the design plans, calculations and cost opinion to check for practicality and that I&L's design protocols were followed in developing and documenting the design.
  - 6.7 Final Plan, Specifications, Costs, and Construction Documents Submittal  
I&L will submit final plans, specifications, cost opinion, and construction documents to the NRD as electronically in PDF format.
  - 6.8 Final Plans, Specs and CDs Review Meeting  
I&L will coordinate and attend a virtual meeting with the NRD to review the final plans, specifications, construction documents, and cost opinion. I&L will prepare meeting summary notes in PDF format and submit them to the NRD via email for review and comment.
  - 6.9 Final Submittal Review and Approval  
The NRD will review the Final Plans Submittal documents and provide comments and conditional approval. I&L will incorporate the review comments into the approved documents.
- 7.0 Approved Documents  
Upon approval of the Final Submittal documents, I&L will prepare and submit the approved documents. The submittal will include:
- 7.1 Electronic Bid Documents Submittal – I&L will coordinate with and submit electronic copy of Plans, Specifications and Construction Documents in PDF format to the NRD designated electronic plan rooms for use in project bidding.
  - 7.2 Electronic Files – I&L will submit electronic copy of Plans, Specifications and Construction Documents to the NRD in PDF format. I&L will also submit all the approved documents in their original electronic format (MS Word, MS Excel, MS PowerPoint, AutoCAD, Microstation, HEC-RAS, others).
- 8.0 Bidding Services
- 8.1 Pre-Bid Meeting  
I&L will attend a pre-bid meeting to review the plans and answer questions.
  - 8.2 Requests for Information  
I&L will respond to written requests for information during the bidding process and make the resulting information available to the other potential bidders via email notifications.
  - 8.3 Addendum  
I&L will prepare contract addendum in a timely fashion during the bidding period and make the addendum available to the other potential bidders via email notification.
  - 8.4 Bid Tab Review and Recommendation  
I&L will review the responses and prepare a table in MS Excel summarizing the bid tabs from respondents. Review shall include checking references from respondents to verify each respondent possesses the required construction experience. I&L shall prepare a memorandum summarizing the review findings and recommending a respondent to the County. The memorandum will be in PDF format and will contain the bid tabs.

**Lower Platte South Natural Resources District - South Salt Creek Project 6 (SCC 6)**

**Fee Worksheet Summary**

									
Description	Principal	Project Manager	Engineer EI	CAD/ GIS/ Designer	Subtotal Hours	Subtotal Personnel Cost	Direct Expenses	Sub Consultant Expenses	Subtotal
Surveying	0	4	0	0	4	\$ 660.00	\$ -	\$ 28,200.00	\$ 28,860.00
Geotechnical	0	4	0	0	4	\$ 660.00	\$ -	\$ 19,981.00	\$ 20,641.00
60% Design, Plans, and Cost	2	60	97	58	217	\$ 26,625.00	\$ 2,438.00	\$ -	\$ 29,063.00
Easement Documents	0	8	14	0	22	\$ 2,790.00	\$ -	\$ 3,200.00	\$ 5,990.00
Permitting	0	25	52	0	77	\$ 9,585.00	\$ -	\$ 6,000.00	\$ 15,585.00
Final Plans, Specifications, Cost and CDs	3	20	62	44	129	\$ 15,105.00	\$ -	\$ -	\$ 15,105.00
Approved Documents	0	2	12	5	19	\$ 2,115.00	\$ -	\$ -	\$ 2,115.00
Bidding Services	0	17	10	2	29	\$ 4,065.00	\$ 1,226.00	\$ -	\$ 5,291.00
<b>Subtotal =</b>	<b>5</b>	<b>140</b>	<b>247</b>	<b>109</b>	<b>501</b>	<b>\$ 61,605.00</b>	<b>\$ 3,664.00</b>	<b>\$ 57,381.00</b>	<b>\$ 122,650.00</b>
	1.0%	27.9%	49.3%	21.8%		50.2%	3.0%	46.8%	

ID	Task Name	Duration	Start	Finish	22	Qtr 2, 2022			Qtr 3, 2022			Qtr 4, 2022			Qtr 1, 2
					Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Notice to Proceed	0 days	Tue 3/15/22	Tue 3/15/22			3/15								
2	Surveying	20 days	Tue 3/15/22	Mon 4/11/22											
3	Geotechnical	30 days	Tue 3/15/22	Mon 4/25/22											
4	60% Design, Plans, and Cost	70 days	Tue 4/12/22	Mon 7/18/22											
5	Land Rights & Easement Docs	40 days	Tue 6/21/22	Mon 8/15/22											
6	Permitting	140 days	Tue 3/15/22	Mon 9/26/22											
7	Final Plans, Specs, Cost and CDs	50 days	Tue 7/19/22	Mon 9/26/22											
8	Approved Documents	10 days	Tue 9/27/22	Mon 10/10/22											
9	Bidding Services	25 days	Tue 10/11/22	Mon 11/14/22											
10	Award	0 days	Mon 12/12/22	Mon 12/12/22											12/12



Project: SSC6 Schedule  
Date: Fri 3/4/22

Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	