



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

Memorandum

Date: January 10, 2024
To: Urban Subcommittee
From: Mark Lindemann, District Engineer
Subject: Urban Subcommittee Meeting Minutes – 2024

The Urban Subcommittee met on Wednesday, January 10th, at the NRD Office, at 5:30 pm. Subcommittee members participating included John Yoakum- committee chair, Gary Aldridge, Melissa Baker, Deborah Eagan, Larry Ruth, Stacie Sinclair, and Susan Seacrest. Others participating included NRD staff Mike Sousek, David Potter, Drew Ratkovec, Craig Matulka, and Mark Lindemann. Justin Eggleston with the Village of Ceresco, Colleen Ocken from JEO Consulting Group, Inc., and Connor Kelley with Houston Engineering were also in attendance. With everyone present, director Yoakum called the meeting to order at 5:28pm. There were three (3) items the Subcommittee took action on. A quorum was present for the meeting.

To start the meeting, Lindemann noted the email sent earlier in the morning regarding the addition of agenda (item C). As soon as they were made available to staff, background materials for item C were emailed to directors and staff in the afternoon, and copies were made available at the subcommittee meeting. Lindemann then announced Drew Ratkovec as the new Projects Coordinator for the District. Drew was previously the former Stormwater/ Watershed Specialist, and also a Maintenance Technician. Craig Matulka was also introduced as the newly promoted Stormwater/ Watershed Specialist, filling Ratkovec's former position. Matulka has been with the District for 19 years as an Operation and Maintenance Technician overseeing the inspection and maintenance of the District's watershed dam structures and other maintenance duties. Both were congratulated by those present.

A. Consideration of a Community Assistance program Application Request – Village of Ceresco Hobson Branch Stream Restoration Project – Construction Phase [ACTION] – Rakovec provided background on phase 3 (construction) of the Hobson Branch stream restoration project that runs through the Village of Ceresco. The previous Community Assistance Program (CAP) application was approved by the Board in May of 2023 to perform engineering and design to stabilize the channel below two bridges and along their park (phase 2). Ceresco has advertised and received bids for construction. A total of nine (9) bids were received, with a recommendation to the low bid of \$145,763.88, from Gana Trucking and Excavating, Inc. The bid package was separated into three Groups, with Groups A and B addressing channel work at the bridges, and Group C addressing channel work along the park. Ratkovec explained that Ceresco has submitted a CAP application request for cost-share for Group C work, which has been considered eligible. The application for cost share would be 50% of Group C for \$77,101.85, of which the NRD would reimburse \$38,550.92.

It was moved by Baker, seconded by Eagan and approved by the Subcommittee (6 voting Yes, Aldridge voting Present) to recommend that the Board of Directors approve the Community Assistance Program cost-share request, in an amount not to exceed \$38,550.92 for Village of Ceresco Hobson Branch Stream Restoration Construction Project, pending legal counsel review.

B. Consideration of a Professional Services Agreement with Houston Engineering for Engineering Services for the Deadmans Run Flood Reduction Project - CLOMR. [ACTION] – Lindemann updated the subcommittee on the progress of the Deadmans Run Flood Reduction Project (DMRFRP). 95% design deliverables (plans, cost estimate, schedule, engineering documentation) are expected to be received from the U.S. Army Corps of Engineers (USACE) by the end of February 2024. Lindemann explained that when final design is completed, a Conditional Letter of Map Revision will need to be submitted to the Federal Emergency Management Agency (FEMA) to show the proposed changes to the hydrologic and hydraulics resultant from the project as related to a flood event and the floodplain. Connor Kelley, from Houston Engineering, Inc., was present to answer specific questions related to the CLOMR requirements. Kelley explained that Houston will coordinate and collect all final design materials (plans, engineering documents, hydrology results) to develop a deliverable to FEMA to allow FEMA to understand the changes that will be made to the channel and floodplain as a result of the project. Houston will submit the CLOMR deliverable on behalf of the NRD and City. The total fee for Houston’s proposal is at a cost not to exceed \$38,213. Lindemann explained that Houston has previously assisted the NRD with modeling and engineering work for the Deadmans Run project, and feels it is important to get the team on board soon to get them up to speed and to stay informed of any changes in the design and assist project team members as needed. Questions on the CLOMR submittal process and specifics of what documentation is required, with Kelly providing responses. Houston’s proposal has been reviewed by legal counsel.

It was moved by Seacrest, seconded by Sinclair, and approved by the Subcommittee (6 voting Yes, Aldridge voting Present) to recommend that the Board of Directors approve the Professional Services Agreement with Houston Engineering, Inc., in an amount not to exceed \$38,213 for Engineering Services for the Deadmans Run Flood Reduction Project.

C. Consideration of a Professional Services Agreement with Houston Engineering for Engineering Services for the Deadmans Run Flood Reduction Project- Value Engineering. [ACTION] – Lindemann then recalled the update report provided to Directors at the December 13, 2023, Urban meeting regarding the increased costs for the Deadmans Run Flood Reduction Project (DMRFRP). On December 12th, 2023, the City and NRD held a “Mini Value Engineering” session at the NRD to discuss ways to reduce project costs and improve the schedule. On Tuesday, January 9th, 2024, the City and NRD met with Houston Engineering Inc., to determine the feasibility of options discussed at the December 12th session. Houston was directed to provide a proposal to investigate in more detail the modeling and analysis previously performed by Houston and look at multiple components of the project that could be modified, changed, or eliminated. The goal of the work to be performed by Houston would be to develop a report that provides preliminary costs and alternatives for a project that is best suited to the local sponsors (NRD and City), that when constructed, will still provide the same or improved flood reduction benefits to the public, and meet the FEMA standards with significant cost savings to the local sponsors. Results from Houston’s report will assist the City and NRD in determining the direction it will take for the Deadmans Run project. The total fee for Houston’s proposal is at a cost not to exceed \$163,243. Costs associated with the DMRFRP, including Houston’s proposal, are split 50/50% between the NRD and City per an interlocal agreement. Lindemann noted that this action item for Board consideration was added as a result of the January 9th meeting with the City, Houston, and NRD. The City and NRD believe it is important for Houston to begin work

immediately (upon Board approval) to allow Houston sufficient time to have results at the same time it is expected that the 95% plans and cost estimate are received from the U.S. Army Corps of Engineers (the end of February). Much discussion occurred from directors, staff, and Houston. Multiple questions were asked, including causes of cost increases and examples of options being considered to reduce costs, as well as any negative impacts that should be considered.

It was moved by Eagan, seconded by Seacrest, and approved by the Subcommittee (6 voting Yes, Aldridge voting Present) to recommend that the Board of Directors approve the Professional Services Agreement with Houston Engineering, Inc., in an amount not to exceed \$163,243 for Engineering Services for the Deadmans Run Flood Reduction Project.

With no other discussion, meeting adjourned at 6:22 pm.

cc: Dave Landis
Steve Seglin
Corey Wasserburger



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Memorandum

Date: January 10, 2024
To: Urban Subcommittee
From: Mark Lindemann, District Engineer
Subject: **Revised** Urban Subcommittee Background Information –January 2024

The Urban Subcommittee will be meeting on Wednesday, January 10, 2023, at the NRD Office, at 5:30 pm to review, discuss and take action on several items. The following summarizes the items to take action on at the meeting. Please find the attached background information on these items; the red letters shown on the upper right of the attachments help denote which item below they relate to.

A. Consideration of a Community Assistance program Application Request – Village of Ceresco Hobson Branch Stream Restoration Project – Construction Phase [ACTION] – In May of 2023, the Board approved a Community Assistance Program (CAP) application request from the Village of Ceresco to cost-share for stream restoration design on Hobson Branch, south of Elm Street. Please refer to Drew Ratkovec’s memo dated January 4, 2024, for additional information. With the design complete, Ceresco has advertised for construction bids. Nine (9) contractors submitted bids for the project, with Ceresco selecting the low bid of \$145,763.88, from Gana Trucking and Excavating. Gana’s bid for the CAP eligible work (item Group C in Bid Tab) is \$77,101.85. The design engineer, JEO Consulting Group, Inc., has provided a recommendation for Gana. Ceresco has submitted an application to cost-share 50% of eligible construction costs, which totals \$77,101.85. The NRD share of funding would be \$38,550.92, or 50% of eligible costs. The Village of Ceresco application request letter and bid tabulations are attached.

The Subcommittee will consider a motion to recommend that the Board of Directors approve the Community Assistance Program cost-share request, in an amount not to exceed \$38,550.92 for Village of Ceresco Hobson Branch Stream Restoration Construction Project, pending legal counsel review.

B. Consideration of a Professional Services Agreement with Houston Engineering for Engineering Services for the Deadmans Run Flood Reduction Project. [ACTION] – The NRD is expecting the 95% design submittal for the Deadmans Flood Reduction Project (DMRFRP) from the U.S. Army Corps of Engineers (USACE) in February of 2024. Activities are taking place to prepare for final design and construction. One key task that is the responsibility of the local sponsor is to submit to the Federal Emergency Management Agency (FEMA) a Conditional Letter of Map Revision (CLOMR), prior to construction. The CLOMR provides FEMA with the proposed hydrologic and hydraulic (H&H) project changes related to a flood event and changes to the flood plain. A separate Letter of Map Revision (LOMR), based on actual construction, will be required post-construction. Houston Engineering, Inc., (formerly FYRA

Engineering) has previously been involved in the DMRFRP by providing H&H modeling for the USACE and the City and NRD (local sponsor). The local sponsor team has discussed the need to bring Houston on board to get their team up to speed in preparation for the CLOMR. Houston will perform the necessary modeling and prepare the CLOMR submittal to FEMA on behalf of the local sponsor and assist with notifying residents affected. A separate scope of services for the LOMR will be better determined at a later date, after construction as-built plans are reviewed. Houston's proposal is at a cost not to exceed \$38,213. The proposal is attached.

The Subcommittee will consider a motion to recommend that the Board of Directors approve the Professional Services Agreement with Houston Engineering, Inc., in an amount not to exceed \$38,213 for Engineering Services for the Deadmans Run Flood Reduction Project.

C. Consideration of a Professional Services Agreement with Houston Engineering for Engineering Services for the Deadmans Run Flood Reduction Project- Value Engineering. [ACTION] – As noted in the report from the December 2023 Urban meeting, the Deadmans Run Flood Reduction Project (DMRFRP) costs have increased substantially and the City and NRD held a Value Engineering session on December 12th, 2023, to discuss ways to reduce project costs and improve schedule. On Tuesday January 9th, 2024, the City and NRD met with Houston Engineering to discuss what additional information is necessary for the City and NRD to make informed decisions on the direction to take the project. Houston was asked to provide a proposal to determine the feasibility and preliminary costs of the options discussed at the previous Value Engineering session. Houston will investigate in more detail by looking at existing and proposed hydrology and hydraulics of the channel and perform preliminary engineering with proposed refinement options that will reduce costs but still provide flood protection benefits and meet the requirements of FEMA. Results from Houston's work will assist the City and NRD in determining the direction it will take for the Deadmans Run project. The total fee for Houston's proposal is at a cost not to exceed \$163,243. This action item was added at the last minute in order for Houston to begin to start work immediately, upon Board approval, giving Houston sufficient time to have results reported to the NRD and City at the same time it is expected that the 95% plans and cost estimate are received from the U.S. Army Corps of Engineers (USACE). Connor Kelley from Houston will be in attendance to answer questions regarding the analysis to be performed and types of information that will be provided to the NRD.

The Subcommittee will consider a motion to recommend that the Board of Directors approve the Professional Services Agreement with Houston Engineering, Inc., in an amount not to exceed \$163,243 for Engineering Services for the Deadmans Run Flood Reduction Project.

Enclosures;

cc: Dave Landis
Steve Seglin
Corey Wasserburger



Village of Ceresco Park Segment



5/1/2023, 2:11:19 PM



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Memorandum

Date: January 4, 2024
To: Urban Subcommittee
From: Drew Ratkovec, Projects Coordinator
Subject: Village of Ceresco CAP Application for Hobson Branch Stream Restoration Construction

The Hobson Branch flows north to south, west of Highway 77 through Ceresco. The reach south of Elm Street has experienced significant erosion and stability issues with the stream bank and bed. There is a concern for worsening erosion and damaging upstream bridges and infrastructure. In 2020, the Village hired JEO Consulting Group, Inc (JEO) to evaluate the stream to get an understanding of the causes and extent of the stream degradation so that an improvement can be developed, in which the NRD assisted on. The assessment was completed, recommendations were provided, and Ceresco continued to work with JEO to create a design for stream restoration.

In May 2023, the Board of Directors approved a Community Assistance Program (CAP) application for the design phase of the Hobson Branch. With the design being completed, JEO has provided final plans and advertised for construction bids. The bid tabulation is broken into three groups (A, B, C), with Group C pertaining to construction work eligible for consideration with the CAP program. Nine contractors submitted bids for the project, with Ceresco selecting the low bid of \$145,763.88, from Gana Trucking and Excavating. Gana's bid for the eligible Group C work is 77,101.85. JEO has provided a recommendation for Gana. Ceresco has submitted an application to cost-share 50% of eligible construction costs, which totals \$38,550.92. This has been budgeted for the fiscal year 2024.

The Subcommittee will consider a motion to recommend that the Board of Directors approve the Community Assistance Program cost-share request, in an amount not to exceed \$38,550.92 for the Village of Ceresco Hobson Branch Stream Restoration Construction Project, pending legal counsel review.

VILLAGE OF CERESCO

217 S 2ND STREET PO BOX 160 CERESCO, NE 68017

PHONE: 402-665-2391 FAX: 402-665-2393

December 29, 2023

Drew Ratkovec
Lower Platte South Natural Resources District
3125 Portia Street
Lincoln, NE 68521

Mr. Ratkovec

The Village of Ceresco is requesting the continued assistance through the Lower Platte South NRD's Community Assistance Program (CAP). The NRD previously committed to cost-share assistance on the Design Phase of the Hobson Branch Stream Rehabilitation project in May 2023. Design was finalized this fall and bids were received in December. The Village would now like to proceed into the Construction Phase.

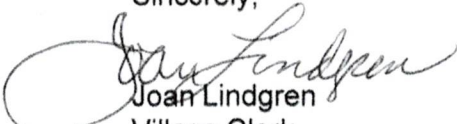
The Village hired JEO Consulting Group in 2020 to evaluate continued bed and bank erosion of the Hobson Branch, which generally flows north just west of Highway 77. The initial evaluation confirmed that active erosion was occurring and recommended improvements to the stream and to two bridges in the community. Continued erosion and degradation would threaten the park area, multiple utilities, and the two main bridges leading into town.

The final design of the stream improvements consists of reshaping the streambank to a stable slope, ranging from 3:1 to 4:1, along with installation of two cross vane grade control structures. The cross vanes will prevent the streambed from further downcutting while also focusing flow to the center of the channel. The streambanks will be reseeded with wetland and native mixes. The bridge improvements consist mainly of placing riprap along the banks from just upstream to just downstream of each the Elm and Main Street bridges.

The initial study estimated total construction to be \$163,170, with the stream improvements portion of the project being \$120,120. Nine qualifying bids were received, ranging from \$145,763.88 to \$290,230.00. The low bidder, Gana Trucking and Excavating, was \$145,763.88, with the stream improvements portion totaling \$77,101.85. The Village is requesting the NRD cost-share 50/50 on construction of the stream improvements portion, bringing the request from the NRD at \$38,550.92. The burden of cost for the bridge improvements is borne solely by the Village. The previous cost-share agreement for the Design Phase included JEO's bidding and construction phase efforts, so no additional request is made for consulting fees. The final design plans and bid tab have been provided to the NRD for review.

If the NRD agrees to cost share on the construction phase, we anticipate construction starting this winter and being complete by end of Spring. We appreciate the NRD's continued assistance on this project. If you have additional questions or need additional information, please do not hesitate to contact me at 402.665.2391, or by email at jlindgren@cerescove.com.

Sincerely,


Joan Lindgren
Village Clerk



Bid Tab

PROJECT | Hobson Branch Stream Restoration

JEO PROJECT NO. | 230744.00

LOCATION | Ceresco, Nebraska

LETTING | December 15, 2023 at 1:00 pm

OPINION OF PROBABLE COST | \$223,000

Bidder	Total Group A Highway 77 & Main Street	Total Group B Highway 77 & Elm Street	Total Group C Stream Improvements	TOTAL Groups A, B, & C
Gana Trucking and Excavating, Inc. Martell, NE	\$37,439.22	\$31,222.81	\$77,101.85	\$145,763.88
CDS Enterprise LLC Arlington, NE	\$41,400.00	\$30,750.00	\$75,674.00	\$147,824.00
Husker Engineering Burwell, NE	\$63,748.00	\$42,311.00	\$91,704.00	\$197,763.00
Yost Excavating INC Nebraska City, NE	\$64,387.00	\$40,645.00	\$95,290.00	\$200,322.00
Empire Construction and Trenching, Inc. Red Oak, IA	\$46,463.00	\$54,235.00	\$118,456.00	\$219,154.00
Nebraska Digging Services Alvo, NE	\$59,970.00	\$47,685.00	\$130,874.00	\$238,529.00
Lincoln-Midwest Infrastructure, Inc. Lincoln, NE	\$76,738.04	\$52,570.91	\$118,079.46	\$247,388.41
H.R. Bookstrom Construction, INC Lincoln, NE	\$93,080.00	\$57,930.00	\$137,685.00	\$288,695.00
Sawyer Construction Co. Fremont, NE	\$102,199.00	\$76,170.00	\$111,861.00	\$290,230.00

* Numbers in italics indicate an irregularity in the contractor's original bid form.



Tab Sheet

PROJECT | Hobson Branch Stream Restoration
JEO PROJECT NO. | 230744.00
LOCATION | Ceresco, Nebraska

Table with 9 columns: CDS Enterprise, Empire Construction, Gana Trucking, Nebraska Digging, Husker Engineering, Midwest Infrastructure, H.R. Bookstrom, Sawyer Construction, Yost Excavating

GROUP A - Highway 77 & Main Street. Detailed table with 21 columns (Item, Description, Qty., Unit, Unit Price, Total) and 9 contractor columns.

GROUP B - Highway 77 & Elm Street. Detailed table with 21 columns (Item, Description, Qty., Unit, Unit Price, Total) and 9 contractor columns.

GROUP C - Stream Improvements. Detailed table with 21 columns (Item, Description, Qty., Unit, Unit Price, Total) and 9 contractor columns.

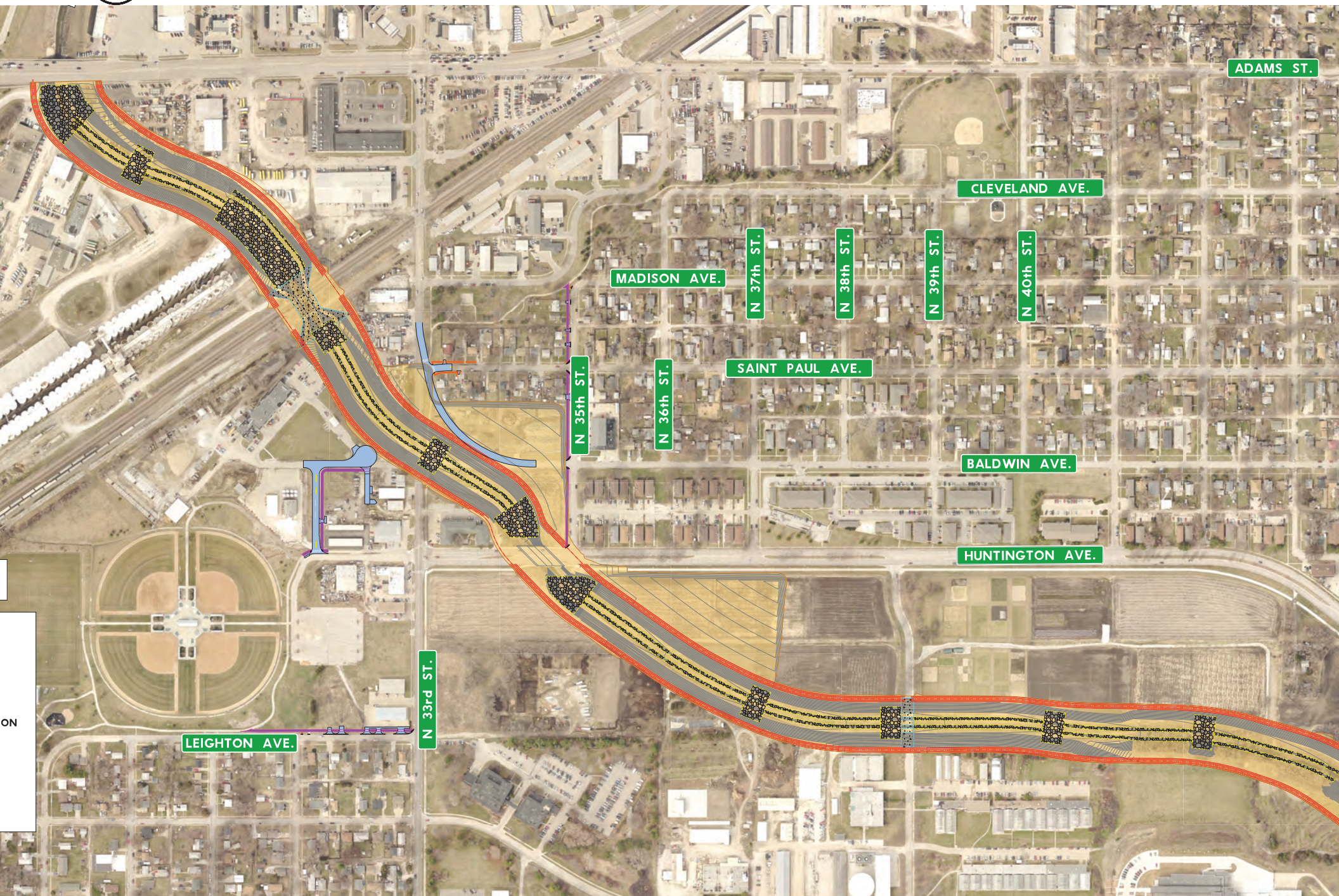
TOTAL GROUPS A, B, & C. Summary table with 9 contractor columns and total values.

* Numbers in italics indicate an irregularity in the contractor's original bid form.



Deadmans Run Flood Reduction Project

B.



Tasks		Prj Mgr	Prj Engr	Prj Eng	Expenses	Total
		Sotak	Gregalunas	Kelley		
		\$285	\$259	\$208		
Proposed Conditions Hydraulic Model Updates Task Total		\$0	\$0	\$0	\$0	\$0
No.	CLOMR Submittal					
1.01	Hydrology Chapter Documentation ¹	1	2	12		
1.02	Hydraulics Chapter Documentation	1	2	8		
1.03	Develop Special Flood Hazard Mapping ²	1	2	32		
1.04	MT2 Form ³			20		
1.05	CLOMR Submittal Coordination	6	8	32	\$6,500	
1.06	Notice to Residents ⁴			4		
1.07	Public Meeting (1)	4	4	4	\$50	
CLOMR Submittal Task Total		\$3,705	\$4,662	\$23,296	\$6,550	\$38,213
Subtotal Hours		13	18	112		
Subtotal Costs		\$3,705	\$4,662	\$23,296	\$6,550	\$38,213

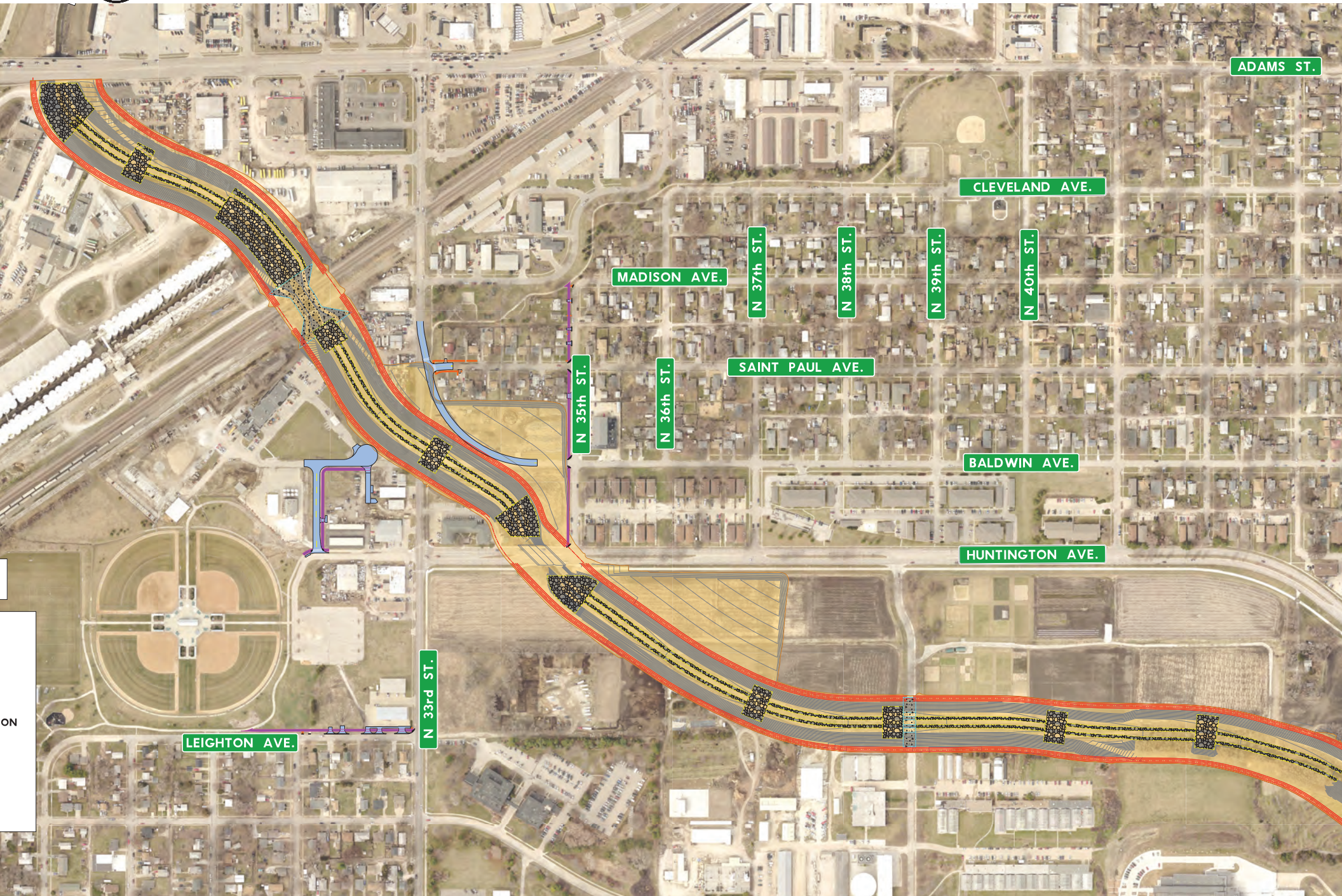
Assumptions

- ¹ Hydrology is not being revised from the "FEMA Hydrology" developed by FYRA
- ² Salt Creek flood storage areas and floodplain are not being revised with submittal
- ³ As-built/proposed information is provided, levee protected areas are not including in the submittal
- ⁴ LPSNRD sends out mailers



Deadmans Run Flood Reduction Project

C.



PROFESSIONAL SERVICES AGREEMENT

PROJECT: Local Deadman's Run Alternatives Development **HOUSTON ENG JOB #:** R000173-0010
CLIENT: Lower Platte South NRD
ADDRESS: 3125 Portia Street, Lincoln, NE 68521
CONTACT: Mark Lindemann, PE **TEL:** 402.476.2729 **Tax ID:** _____
CLIENT EMAIL: mlindemann@lpsnrd.org
CONSULTANT: Houston Engineering, Inc.
ADDRESS: 12702 Westport Parkway #300, Omaha, NE 68154
CONTACT: Mike Sotak, P.E., D.WRE **TEL:** 402.934.8328 **FAX:** _____
PROJECT DESCRIPTION: Development of preliminary costs for potential Deadman's Run Flood Reduction Project alternatives that meet the goals of the local stakeholders and when finalized and constructed meet FEMA floodplain mapping standards for removal of properties from the Floodplain.

SCOPE OF SERVICES (By task assignment)
 SCHEDULE (See Attachment)

COMPENSATION:

The total compensation under this Agreement...

Task orders under this agreement can be authorized via email or written letter.

LUMP SUM. Compensation for these services shall be a Lump Sum of \$_____.

TIME AND MATERIALS. Compensation for these services will not exceed \$ 163,243 without written authorization and will be based on the following option (per the attached Budget or List of Hourly Rates), and Reimbursable Expenses based on actual costs incurred and approved by Houston Engineering and as authorized in writing by Client.

Consultant's Direct Job Wages times a factor of _____.
 Budget/List of Consultant's Hourly Rates.

COST PLUS FIXED FEE. Compensation for these services shall be Subconsultant Cost plus a fixed professional fee, including Reimbursable Expenses. The estimated compensation for services is \$ __ plus a fixed fee of \$ _____ for a total of \$ _____

COMPENSATION DETAIL (As per task assignment)

SCHEDULE OF PAYMENTS (See Following Pages)

SERVICES AUTHORIZED BY: **Execution of Agreement**
 or **Amendment(s) and/or NTP**

EXECUTION: Execution of this document by duly authorized representatives of Houston Engineering, Inc., and CLIENT, including Houston Engineering's Standard General Terms and Conditions (attached) and any other attachments, Additional Provisions as indicated, and addenda, represents the entire Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended or modified by written instrument, but such instrument is valid only upon signature by both parties.

CONSULTANT: Houston Engineering, Inc.

CLIENT: Lower Platte South NRD

BY: Michael K. Sotak, P.E., D.WRE

BY: Mike Sousek

SIGNATURE: 

SIGNATURE: _____

TITLE: Senior Consultant

TITLE: General Manager

DATE: 10 January 2024

DATE: _____

Local Deadman's Run Alternatives Development Project

Lower Platte South NRD
Lincoln, NE



Tasks		Sotak Project Mgr \$285	Kaufman Permitting \$238	Gregalunas H&H/Geotech \$259	Kelley H/H \$208	EI Design \$160	Accounting Stroh \$120	HEI Expenses	HEI TOTAL	Jordan WSP PM \$287	Lashbrook Engineer \$190	Gull Sr. Engineer \$223	Frischmann Sr. Engineer \$223	Morgan Engineer \$126	Lane Env Specialist \$225	Acctg Menchaca 115	WSP Expense	WSP TOTAL
Task 1	Project Management																	
1.1	Weekly Coordination Meetings (5)	20		5	10													
1.2	Schedule Development/Management	16	4															
1.3	Parallel Effort Coordination	4		4	4													
1.4	Economics Review	8		4	4													
1.5	Board/Committee Attendance/Updates (2)	16																
1.6	Monthly Invoicing/Updates (2)	2					2											
Task 2	Hydrology and Hydraulics Update																	
2.1	Hydrologic Update, Calibration/Validation			4	152													
2.2	Hydraulic Update, Calibration/Validation			2	40													
2.3	Additional Survey Collection																	
2.4	Alternatives Development Assessment/Costs	20	8	12	80	80			10									
2.5	Development of Technical Memorandum	20		8	40	32			8	8								
Task 3	Permitting																	
3.1	Review of USACE Permitting Considerations to Date		8			4												
3.2	Mitigation Strategies	2	8	4	4													
3.3	Identification of Required Fieldwork/Coordination		6			4												
Task 4	Project Impacts/Drainage Structures																	
4.1	Utility Relocation Costs								4	8								
4.2	Hydraulic Structure Sizing/Costs								12		32							
4.3	Land Rights								4	16								
	Subtotal Hours	108	34	43	334	120	2		38	32	32							
	Subtotal Costs	\$30,780	\$8,092	\$11,137	\$69,472	\$19,200	\$240	\$200	\$138,921	\$10,906	\$6,080	\$7,136	\$0	\$0	\$0	\$0	\$0	\$24,122
	Total Estimated Costs	\$163,243																

Task Assumptions

- 1.1 Consultant Team and NRD/City
- 1.2 Schedule to include outside funding milestones, final design, permitting, bidding/construction, land acquisition
- 1.3 Coordination with Salt Creek re-mapping, NDNR Floodmapping and other related work
- 1.4 Once costs are developed
- 2.1 Three forensic storm evaluations (2014,2015,2021), calibrate reach 2, update reach US of 48th Street.
- 2.2 Conversion of 1D/2D to 2D RAS. Calibrate model to observations for storm events.
- 2.3 Existing survey to be requested from USACE, City, NRD
- 2.4 Alternatives analysis includes optimization for: detention at three locations, channel design, and hydraulic structure design
- 2.5 Technical memorandum will be finalized in early March. Findings will be available by Mid February

WSP Notes

- 1.1 Amendment 1 under City and NRD review includes 18 months of PM.
- 1.2 WSP has a schedule developed. This could be refined.
- 1.3 No WSP effort
- 1.4 WSP would review estimates for construction previously completed for utilities, structures, and RR crossing
- 1.5 WSP to assist/attend one meeting
- 1.6 Amendment 1 under City and NRD review includes 18 months of PM.
- 2.1 No WSP effort
- 2.2 No WSP effort
- 2.3 No WSP effort
- 2.4 Review existing structures with new H&H results; prepare summary memo.
- 2.5 Assst with content
- 3.1 WSP could complete necessary environmental resource reviews, Channel Design input - 3D design with ORD or geopak not included this phase
- 3.2 No WSP effort
- 3.3 No WSP effort
- 4.1 WSP had completed prelim estimates. Amendment 1 included the design. Need to asses if 36" WM can remain in place.
- 4.2 Bridges: see other notes. Nearly all this is under contract currently. Will assess impacts and prepare memo content for task 2.8. WSP will look at 52nd Street and 56th Street after H&H is done and assess any structure changes that might affect the construction cost of the project.
- 4.3 WSP will check new channel limits with existing to determine changes on impacted parcels.