RESOLUTION APPROVING AND AUTHORIZING CHAIRMAN TO SIGN THE WORK ORDER 7 AGREEMENT WITH FELSBURG HOLT & ULLEVIG FOR CONSTRUCTION ENGINEERING SERVICES FOR 168TH STREET AND HIGHWAY 370

WHEREAS, pursuant to Neb. Rev. Stat. § 23-104, the County has the power to do all acts in relation to the concerns of the County necessary to the exercise of its corporate powers;

WHEREAS, pursuant to Neb. Rev. Stat. § 23-103, the powers of the County as a body are exercised by the County Board;

WHEREAS, general supervision and control of the public roads of each county is vested in the County Board by virtue of Neb. Rev. Stat. § 39-1402;

WHEREAS, the County and Felsburg Holt & Ullevig have previously executed an agreement for Professional Engineering Services via Resolution 2015-97, in order that Felsburg Holt & Ullevig may provide as needed professional engineering services for construction projects in Sarpy County; and,

WHEREAS, Sarpy County and Felsburg Holt & Ullevig wish to agree to Work Order 7 which outlines modifications and/or additional duties for the professional engineering services, specifically the design of short term and mid-term improvements to the intersection of 168th ST and Highway 370.

NOW, THEREFORE, BE IT RESOLVED BY THE SARPY COUNTY BOARD OF COMMISSIONERS THAT Pursuant to the statutory authority set forth above, the Work Order 7 with Felsburg Holt & Ullevig for the professional engineering services described with the Work Order 7, a copy of which is attached hereto, is hereby approved.

BE IT FURTHER RESOLVED that the Chairman of this Board, together with the County Clerk are hereby authorized to execute said Work Order on behalf of Sarpy County, Nebraska and any other related documents, the same being approved by the Board.

The above Resolution was approved by a vote of the Sarpy County Board of Commissioners at a public meeting duly held in accordance with applicable law on the 9th day of August, 2016.

Sarpy County Board Chairman

County Clerk

Attest
SEAL
August 5, 2016

RE: 168th Street & N-370 Design Proposal
On-Call Traffic Engineering Services – Work Order 07

Mr. Michael Kosa, PE
Sarpy County Public Works
15100 S 84th St
Papillion, NE 68046-4627

Dear Mr. Kosa:

Thank you for the opportunity to submit this proposal to develop design plans for the proposed improvements at the intersection of 168th Street with Nebraska Highway 370 (N-370) in Sarpy County. The County recently commissioned a traffic study for the intersection and surrounding area to evaluate 2016 existing and 2020 future build-out conditions. The study identified three sets of improvements, a Short, Mid, and Long-Term. Through discussions with NDOR, Sarpy County has decided to carry forth the design of both the Short-Term and Mid-Term improvements. Two plan sets will be developed, one for the Short-Term improvement, and a second for the Mid-Term improvements. This letter proposal summarizes our understanding of the services requested, project schedule, and estimated engineering fee.

Scope of Services

Task 1 – Address NDOR Comments on Traffic Study
   a. Address Comments - Felsburg Holt & Ullevig (FHU) will address comments on the traffic study provided via email by NDOR’s traffic staff on June 8, 2016. The traffic study will be updated to reflect the changes and a final report will be submitted to Sarpy County and NDOR.

Task 2 – Short-Term Improvement Design
FHU will develop preliminary and final plans for the Short-Term improvement (see attached Figure 3A). The southbound shared through/right-turn lane will be re-striped to allow for left-turn movements, creating a dual left-turn movement. The traffic signal will be reconfigured with a split phase. An overlap phase will be provided for the westbound right-turn with the southbound approach phase.
   a. Preliminary Plans- FHU shall prepare project base plans and plan sheets in accordance with the County’s standards. Plan sheets to be included in the submittal include the following:
      • Cover Sheet
      • General Note Sheets
      • Traffic Signal Modification Sheet
      • Signal Wiring Sheet
      • Pavement Marking & Signing Sheets
b. **Final Plans** - FHU shall prepare a final plan set in accordance with County standards. This includes, but is not limited to, the following sheets:
   - Cover Sheet
   - Summary of Quantities Sheet
   - General Notes Sheet
   - Detail Sheets (if necessary)
   - Traffic Signal Modification Sheet
   - Signal Wiring Sheet
   - Construction Phasing Sheets (if necessary)

c. **Cost Estimates** - FHU shall prepare and submit cost estimates twice during the Short-Term improvement design. Once during preliminary design and once with final design.

d. **Special Provisions** - FHU will submit Special Provisions (if necessary) with the plan submittal.

e. **QA/QC** - FHU will conduct internal quality reviews of the design and plan sets prior to each submittal.

f. **Final Plan Submittal** - Upon incorporating review comments into the plan set and special provisions, FHU shall prepare and submit all drawings, special provisions, and an updated total project cost estimate, to the County’s Project Manager for the final review. Upon County acceptance of the final plans, FHU shall prepare and submit the bid package to the County’s Project Manager. The bid package includes sealed drawings, sealed special provisions, an engineer’s estimate, and the County’s standard front end agreement.

**Assumptions:**
- Sarpy County will provide survey data in point format, including point number, northing, easting, elevation and description. Survey will include adjacent section corners, existing property lines, existing utilities, and general topographic features. FHU will process the survey.
- Durable pavement markings will be included in the proposed improvements per NDOR guidance.
- Any re-timing of the signal will be completed by NDOR personnel.
- NDOR will provide as-built plans for the intersection of N-370 and 168th Street and any recent improvements to N-370 in the project area.
- All plans and specification for the short-term improvement will be prepared in accordance to NDOR standard plans/specification.
- FHU will provide electronic versions of all project files, including CAD files in AutoCAD format.

**Task 3 - Mid-Term Improvement Design**
FHU will develop preliminary and final plans for the Mid-Term improvement (see attached Figure 3B). This improvement includes a new lane added on the east side of 168th Street from N-370 through the intersection with Oakmont Drive. Northbound traffic would use the new lane, and the southbound approach will be reconfigured to provide a shared through/right-turn lane and southbound dual left-turn lanes. Signal phasing will be modified to allow for northbound left turns to run concurrently with the southbound left turns. The south leg will be restriped to provide a left-turn lane and a shared through/right lane.
a. Preliminary Plans- FHU shall prepare project base plans and plan sheets in accordance with the County's standards. Plan sheets to be included in the submittal include the following:
   - Cover Sheet
   - Typical Sections Sheet
   - General Note Sheets
   - Horizontal/Vertical Control Sheets
   - Geometric, Joints, and Grade Sheets
   - Roadway Construction and Removal Sheets
   - Right-of-Way Plan Sheets (if necessary)
   - Cross Sections
   - Pavement Marking & Signing Sheets
   - Traffic Signal Modification Sheet
   - Signal Wiring Sheet

b. Final Plans - FHU shall prepare a final plan set in accordance with County standards. This includes, but is not limited to, the following sheets:
   - Cover Sheet
   - Summary of Quantities Sheet
   - General Notes Sheet
   - Detail Sheets
   - Typical Sections Sheet
   - Horizontal/Vertical Control Sheets
   - Geometric, Joints, and Grade Sheets
   - Roadway Construction and Removal Sheets
   - Erosion/Sediment Control Plan Sheets
   - Right-of-Way Plan Sheets (if necessary)
   - Cross Sections
   - Pavement Marking & Signing Sheets
   - Traffic Signal Modification Sheet
   - Signal Wiring Sheet
   - Construction Phasing Sheets (if necessary)

c. Cost Estimates- FHU shall prepare and submit cost estimates twice during the Mid-Term improvement design. Once during preliminary design and once with final design.

d. Special Provisions- FHU will submit Special Provisions (if necessary) with the plan submittal.

e. QA/QC- FHU will conduct internal quality reviews of the design and plan sets prior to each submittal.

f. Final Plan Submittal- Upon incorporating review comments into the plan set and special provisions, FHU shall prepare and submit all drawings, special provisions, and an updated total project cost estimate, to the County’s Project Manager for the final review. Upon County acceptance of the final plans, FHU shall prepare and submit the bid package to the County’s Project Manager. The bid package includes sealed drawings, sealed special provisions, an engineer’s estimate, and the County’s standard front end agreement.
g. **ROW Design** - Legal descriptions and tract maps will be prepared for ROW acquisition for up to two (2) properties.

h. **NDOR Permit** - FHU will prepare and submit DR Form 22, Application to Construct Access. FHU will submit during preliminary design to ensure the permit is granted prior to the project letting.

i. **Drainage Investigation & Report** – FHU will investigate existing hydrology and drainage impacts associated with the proposed widening for an additional lane on the east side of 168th Street. If investigation reveals no existing drainage problems with roadway culverts, hydrologic and hydraulic analysis will be minimal. If investigation reveals existing drainage problems with the roadway culvert system, FHU will determine peak flow rates to the roadway culverts and evaluate options for increasing culvert sizes. A draft drainage report will be prepared summarizing the results of the investigation and the proposed design. The draft report will be submitted to Sarpy County for review.

j. **Erosion/Sediment Control Plans** – In conjunction with the design plans for the mid-term improvement, FHU will prepare an erosion control and/or final stabilization plan. The plan will include seeding and blankets, inlet protection, silt fence, and any other construction stormwater BMP required for the project. A SWPPP is not required as part of this project however, the County has indicated they would like to have an Erosion/Sediment Control Plan for this project.

**Assumptions:**

- Sarpy County will provide survey data; see requirements above under short term improvements. FHU will process the survey.
- Durable pavement markings will be included in the proposed improvements per NDOR guidance.
- Any re-timing of the signal will be completed by NDOR personnel.
- Sarpy County will handle any ROW negotiations that are required for the project.
- All plans and specification for the mid-term improvement will be prepared in accordance to NDOR standard plans/specification.
- FHU will provide electronic versions of all project files, including CAD files in AutoCAD format.
- It is assumed that the design of the Mid-Term Improvement will not exceed one (1) acre in footprint. As such, no SWPPP, Permix web site setup, or NOI is included as part of this proposal.
- Runoff from the new impervious surfacing will flow into a grassed swale along the east side of 168th Street. Although it is anticipated that this project will result in greater than 5,000 square feet of new pavement, it is assumed that design of Post Construction Stormwater Treatment facilities will not be required as part of this proposal.

**Task 4 – Utility Coordination**

a. **Utility Location/Verification** - FHU will review the utility locations shown on the plans, and verify these locations during field inspections. Plans will be printed and distributed to the utility companies for verification of ownership, type, size, location, and cased or uncased. FHU will request that the utility companies return marked up plans with utility verification.

b. **Utility Conflict Meetings/Coordination** - Identification and verification by the utility companies of major utility conflicts such as fiber optic lines, gas pipelines, crude oil pipelines, high-pressure waterlines, transmission lines, etc., will be accomplished early
in the design process. FHU does not anticipate any significant conflicts, however, if a conflict is identified, FHU and the County's Project Manager will discuss the conflicts and attempt to avoid them. If avoidance is not possible, FHU will then request the utility company to verify the conflict and provide a preliminary plan to relocate the utility in conflict.

FHU shall include time for coordination via phone calls, emails and one-on-one meetings with affected utilities, depending on the complexity of the potential conflict.

**Task 5 – Project Management and Meetings**

a. *Project Management* – The FHU Project Manager will serve as point of contact, maintain project schedule and budget, be responsible for coordinating work, and provide regular progress reports with invoices. Kyle Anderson, PE, PTOE will serve as the Principal in Charge and Adam Denney, PE will serve as the Project Manager for this project.

b. *Kick-off Meeting* – Once notice to proceed has been received, FHU will schedule and attend at kick-off meeting with Sarpy County and/or NDOR. The County shall provide a list of attendees for the kick-off meeting.

c. *Progress Meetings* – FHU will attend two progress/review meetings with County staff. An additional, separate progress/review meeting with NDOR is planned as part of this task. This meeting shall occur by phone. If requested by the County, FHU can attend additional meetings to report on project progress and answer questions at our standard hourly rates.

*Assumptions:*
- No Public Information Meetings are planned as part of this scope. If a public meeting is requested by the County, FHU will provide a fee estimate to prepare displays and handouts for the public meeting, and attend the public meeting.

**Task 6 – Process Survey**

a. *Process Survey* – FHU will process the survey provided by Sarpy County. This will require drafting the line work to interpret and connect the points provided by Sarpy County.

**Task 7 – Construction Questions and Shop Drawing Review**

a. *Shop Drawing Review* – FHU will review and approve shop drawings as needed.

b. *Construction Questions & Site Visits* – FHU will be available to answer questions the contractor may have during construction. This may occur by phone or in person. This may include up to two (2) site visits to provide onsite answers to questions and monitor project activities. The visits will be combined when possible for efficiency.

**Schedule and Fee Estimate**

The revised final study with comments addressed and the Short-Term design will be completed within 30 days of receipt of the notice to proceed and receipt of the survey. Upon receipt of review comments from Sarpy County and NDOR, FHU will finalize the Short-Term design within two weeks. The Mid-Term design will be completed within 90 days of receipt of the notice to proceed and receipt of the survey. Upon receipt of review comments from Sarpy County, FHU will submit Mid-Term final plans within 30 days. We propose to conduct these services on a “time and materials” basis. Under such an agreement, we are compensated on an hourly basis for all labor and other direct costs, such as
printing, are reimbursed at a rate of 1.1 times actual cost. The following are our standard hourly billing rates for the personnel expected to be involved in this project:

<table>
<thead>
<tr>
<th>Personnel</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Engineer V</td>
<td>$190.00/Hour</td>
</tr>
<tr>
<td>Engineer IV</td>
<td>$150.00/Hour</td>
</tr>
<tr>
<td>Engineer III</td>
<td>$135.00/Hour</td>
</tr>
<tr>
<td>Engineer II</td>
<td>$115.00/Hour</td>
</tr>
<tr>
<td>Sr. Designer</td>
<td>$100.00/Hour</td>
</tr>
<tr>
<td>Intern</td>
<td>$50.00/Hour</td>
</tr>
<tr>
<td>Administration</td>
<td>$80.00/Hour</td>
</tr>
</tbody>
</table>

At these standard hourly rates, we have estimated that the analyses could be completed for a maximum budget of **$42,800**. This amount would be established as a "not to exceed" limit beyond which no charges could be made without your prior approval. A more detailed breakdown of the estimated cost by task is provided below:

<table>
<thead>
<tr>
<th>TASKS</th>
<th>COSTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1 – Address NDOR Comments on Traffic Study</td>
<td>$2,040</td>
</tr>
<tr>
<td>Task 2 – Short-Term Improvement Design</td>
<td>$4,970</td>
</tr>
<tr>
<td>Task 3 – Mid-Term Improvement Design</td>
<td>$24,730</td>
</tr>
<tr>
<td>Task 4 – Utility Coordination</td>
<td>$1,470</td>
</tr>
<tr>
<td>Task 5 – Project Management and Meetings</td>
<td>$3,580</td>
</tr>
<tr>
<td>Task 6 – Process Survey</td>
<td>$2,080</td>
</tr>
<tr>
<td>Task 7 – Construction Questions and Shop Drawing Review</td>
<td>$3,100</td>
</tr>
<tr>
<td><strong>Total Labor</strong></td>
<td><strong>$41,970</strong></td>
</tr>
<tr>
<td><strong>Direct Expenses (Counts, Mileage and Printing)</strong></td>
<td><strong>$830</strong></td>
</tr>
<tr>
<td><strong>TOTAL LABOR AND DIRECT EXPENSES</strong></td>
<td><strong>$42,800</strong></td>
</tr>
</tbody>
</table>

If the conditions of this proposal are acceptable to you, please print out this letter, sign below and send it back for our files. In an effort to expedite the study, please call or send an e-mail with the signed proposal back as your acceptance. If you have any questions about this proposal, please call Adam Denney at 402.445.4405.

Sincerely,

FELSBURG HOLT & ULLEVIG

Kyle A. Anderson, PE, PTOE
Principal

Adam Denney, PE
Project Manager

Accepted By

Chairman

Title

Date 8-9-16

APPROVED AS TO FORM

Sarpy County Attorney