

**SCOTT COUNTY ENGINEER'S OFFICE**

950 E. Blackhawk Trail
Eldridge, Iowa 52748

(563) 326-8640

FAX – (563) 328-4173

E-MAIL - engineer@scottcountyiowa.com

WEB SITE - www.scottcountyiowa.com

JON R. BURGSTRUM, P.E.
County Engineer

ANGELA K. KERSTEN, P. E.
Assistant County Engineer

TARA YOUNGERS
Administrative Assistant

MEMO

TO: Mahesh Sharma
County Administrator

FROM: Jon Burgstrum, P.E.
County Engineer

SUBJ: Professional Structural Design Services

DATE: September 10, 2019

On May 2, 2019, IIW, P.C. was hired to perform professional structural design services for preliminary design of three bridge replacement projects that are in FY2020 of our construction program.

Project No. BRS-CHBP-C082(63)--GB-82 (33H Liberty) is an existing 24' X 28' Concrete Slab Bridge built in 1962 on Y30 (20th Avenue) over a Tributary to Mud Creek in Liberty Township.

Project No. BRS-CHBP-C082(62)--GB-82 (7F Princeton) is an existing 42'-6 X 28' Steel I-Beam Bridge built in 1967 on Z30 (240th Avenue) over Lost Creek in Princeton Township.

Project No. BRS-CHBP-C082(61)--GB-82 (6 Blue Grass) is an existing Twin 12' Span Concrete Slab Culvert on Concrete Sheet Piles built in 1957 on F58 (200th Street) over a Tributary to Mud Creek in Blue Grass Township.

IIW, P.C. has completed the preliminary design of the three replacement structures and has submitted an amendment to our contract for geotechnical investigation and final design. The contract estimate for those services is \$34,500. I recommend approving this contract amendment to allow IIW, P.C. to complete the final design of these projects. We have approximately \$109,000 remaining in our FY2020 budget for professional services. Included with this memo is IIW P.C.'s proposal and a project location map.

September 9, 2019

Angie Kersten, P.E.
Scott County Engineer's Office
950 Blackhawk Trail
Eldridge, IA 52748

**Re: Proposal for Professional Services
Final Design for Replacement of 3 Bridges
Y30 (20th Avenue) over Tributary to Mud Creek, Z30 (240th Avenue) over Lost Creek,
and F58 (200th Street) over Tributary to Mud Creek
IIW Project No. 19080**

Dear Angie:

IIW has prepared the following as the basis for Amendment No. 1 to the Professional Services Agreement dated April 23, 2019.

SCOPE OF SERVICES

Item A. *Preliminary Design and Topographic Survey* of the original Professional Services Agreement remains unchanged. The following additional services are added by this Amendment and will be provided by or under the direct personal supervision of a Professional Engineer licensed to practice in the State of Iowa. Less than an acre of land is disturbed at each site so a NPDES permit is not necessary. Work shall be contained within the existing right-of-way except at Z30 where the upstream land will extend onto land owned by the Iowa DNR. The County shall submit a sovereign lands permit to allow work outside the right-of-way at this location.

Selected structures as a result of preliminary design are:

1. Y30 (20th Avenue) over Tributary to Mud Creek, 70' three-span standard slab.
2. Z30 (240th Avenue) over Lost Creek, box culvert, 10x8 standard RCB with one custom headwall and one standard headwall.
3. F58 (200th Avenue) over Tributary to Mud Creek, twin 12x6 box culvert with a custom headwall on each end.

Services will be performed in conjunction with the County. The County will supply lead and asbestos testing information, perform any necessary utility coordination, submit permits as needed, and submit project development certificate to the Iowa DOT.

B. Geotechnical Investigation (Modified item)

For the Y30 (20th Ave) bridge replacement, solicit geotechnical consultants for geotechnical investigation on behalf of the County. Arrange for proposal from subconsultant to be sent to County directly in order to allow County to pay costs of geotechnical investigation directly. Coordinate with geotechnical consultant for scheduling of borings including providing a soil boring exhibit. Geotechnical consultant will provide results of geotechnical investigation to IIW. The Z30 (240th Avenue), the F58 (200th Avenue) structure replacements do not need geotechnical investigation.

ARCHITECTURE
CIVIL ENGINEERING
CONSTRUCTION SERVICES
ENVIRONMENTAL ENGINEERING
LAND SURVEYING
MUNICIPAL ENGINEERING
STRUCTURAL ENGINEERING
TRANSPORTATION ENGINEERING

Dennis F. Waugh, PE/SE* **
Charles A. Cate, PE **
Gary D. Sejkora, PE **
Michael A. Jansen, PE/SE
Timothy J. Tranel, PE*
Julie P. Neebel, PE
James P. Kaune, PE
Thomas J. Oster, PLS **
Wray A. Childers, PLS **
Geoffrey T. Blandin, PE
Mark C. Jobgen, PE **
Lauren N. Ray, PE/SE
Cody T. Austin, PE*
Marc D. Ruden, PE
Mark R. Fassbinder, AIA*
Michael A. Ruden, NCARB/AIA*
Eric J. Helminiak, PE/SE*
Jeffrey J. Brandt, PLS
Craig L. Geiser, PLS
David A. Leapaldt, AIA, CID*
Nathan W. Miller, PE
Damian D. Baumhover, NCARB/AIA
Nicholas A. Schneider, PE
Christian J. Hendrie, AIA
Eldon M. Schneider, PE
Whitney A. Lougheed, AIA*
Patrick R. Ready, PE
Nicholas M. Rettenberger, AIA
Christopher A. Becklin, PE
Courtney E. Wand, PE
Jonathan H. Lutz, PE
John M. Tranmer, PLS
Andrew C. Busch, NCARB/AIA
Bryson E. Winsky, PE
Jeri M. Vondera, PE
Noah J. Hofrichter, PE
Andrew J. Goedken, PE
Emily M. Crowe, PE

* LEED AP

** Retired

C. Final Design (Scope added)

1. Collect additional topographic data as necessary for the F58 (200th Avenue) upstream culvert end to allow grading revised channel and removal and replacement of revetment extents.
2. Select bid items and Standard Road Plans, Standard Bridge or Culvert Plans for the proposed structure and roadway related construction.
3. For the Y30 (20th Avenue) structure, design bridge foundations using information from geotechnical investigation provided by County. The piling design will utilize the Iowa DOT ENR method. SPS sheet will consist of a scan of the boring logs provided by the geotechnical investigation. Create a deck grades sheet (V.2).
4. For the Z30 (240th Avenue) structure, perform structural design and detailing for a headwall parallel to the roadway. Detailed as V sheets.
5. For the F58 (200th Avenue) structure, perform structural design and detailing for a headwall parallel to the roadway and for a headwall parallel to the box culvert (adapt headwall for a single box to fit the twin box geometry). Detailed as V sheets.
6. Prepare traffic control for F58 (200th Avenue) to allow 70th Street to remain open to traffic during construction. Detailed as a J sheet.
7. Prepare pavement marking details for F58 (200th Avenue) detailed as an N sheet.
8. Calculate quantities and write reference notes. Complete tabulations for most bid items, as required by IDOT.
9. Create Bid Item Access file.
10. Finalize design, prepare and submit check plans and checklists for proposed structure replacements for three separate plan sets, as required by Iowa DOT Local Systems reviewer and checklists. Projects with federal funding require structural calculation packets submitted with check plans for structural elements which do not utilize existing bridge and culvert standards. Submit structural calculations for the three customized culvert headwalls. Sheets submitted to County and Iowa DOT as check plans include:
 - a. Title sheet (A sheet)
 - b. Typical Section and Details (B Sheet)
 - c. Quantities and Reference Notes and tabulations (C Sheet)
 - d. General Notes (C Sheet)
 - e. Plan and profile sheets (D Sheets)
 - f. Temporary traffic control for F58 (J Sheet)
 - g. Intersection Layout sheet for F 58 (L Sheet)
 - h. Pavement Marking for F 58 (N Sheet)
 - i. Soil boring information for Y 30 (SPS Sheets)
 - j. Situation Plan (V Sheet)
 - k. Deck elevation grid and table or special structural details, as described above (V Sheets)
 - l. Cross Sections for Z30 and Y30 (W Sheets)
11. Incorporate County and IDOT check plan comments.
12. Submit final plans and engineer's estimate of probable construction cost to County and IDOT for each bridge.

COMPENSATION

IIW proposes to complete the Scope of Services as follows:

Section B, Geotechnical Investigation, a lump sum fee to IIW of \$900.00 (Nine Hundred Dollars and Zero Cents). *Does not include geotechnical consultant costs.

Section C, Final Design, Items 1- 12, a lump sum fee of \$34,500.00 (Thirty Four Thousand Five Hundred Dollars and Zero Cents)

DELIVERABLES

1. Check and Final Plans, including structural calculation packets.

GENERAL TERMS AND CONDITIONS

The General Terms and Conditions of the original Professional Services Agreement dated April 23, 2019 shall be applicable to this Amendment. If the services and fees defined in this Amendment are acceptable, please return one signed copy to our office. The second copy is for your records. If you have any questions, or require further assistance, please feel free to contact me at j.neebel@iiwengr.com or our office at 563-556-2464. Thank you for choosing IIW, P.C. as the provider of professional services for your project.

Sincerely,
IIW, P.C.



Julie Neebel
Project Manager



Patrick R. Ready, P.E.
Vice President, Director of Engineering Operations

I hereby accept this Contract Amendment 1 Proposal and authorize this work.

FOR: Scott County Engineer's Office

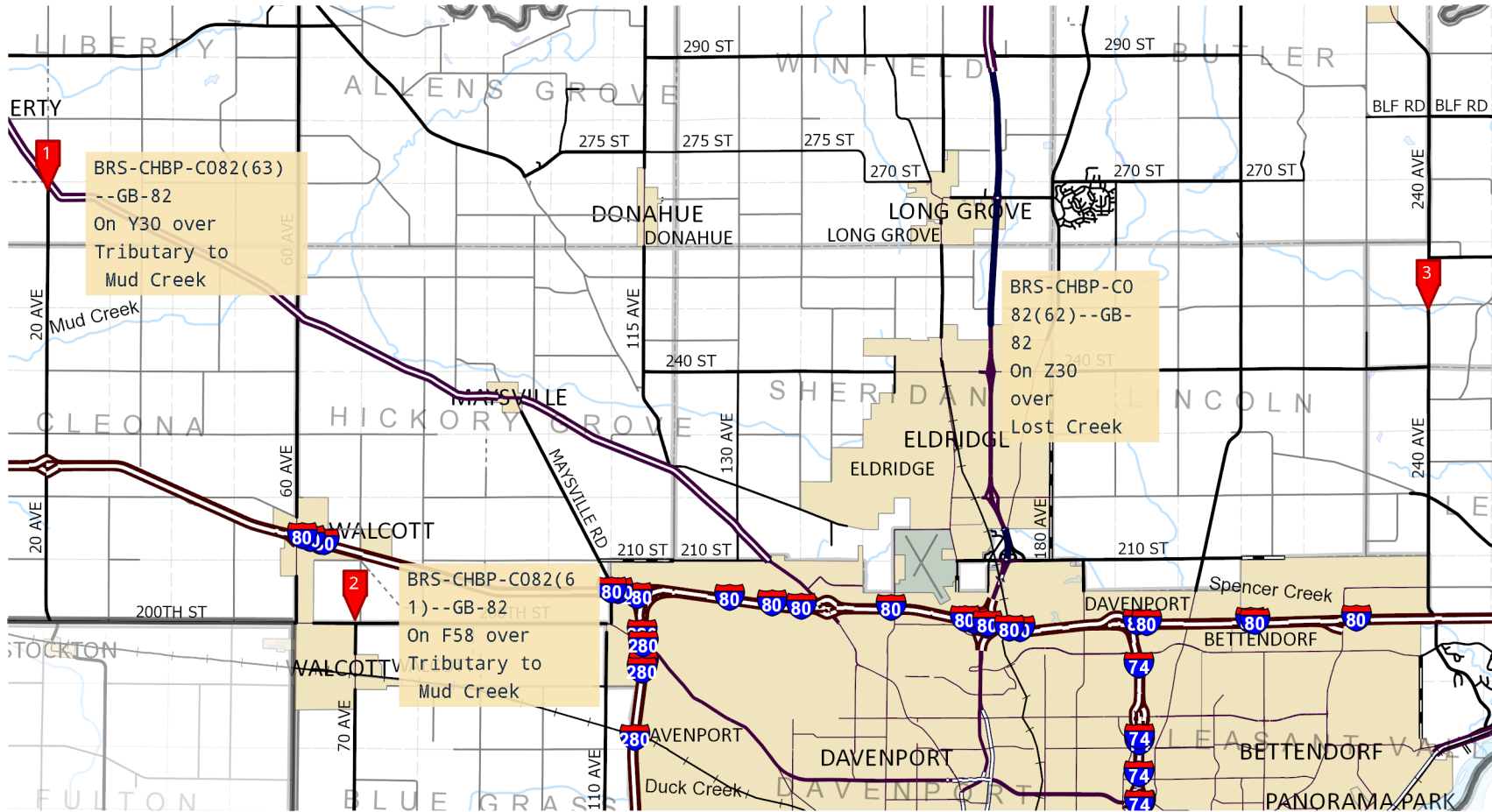
Authorized Signature

Date

Bridge Final Design Project Location Map

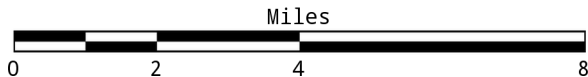
Scott - ICEASB Easy Map

11:31 AM, Tue, Sep 10, 2019



Feature Key

- | | | | | |
|-------------|------------|-----------|-----------------|----------------|
| Earth | Gravel | Seal Coat | County Pavement | State Pavement |
| Divided Hwy | Water | City | Township | Railroad |
| Bridge | County Hwy | State Hwy | US Hwy | |



THE COUNTY AUDITOR'S SIGNATURE CERTIFIES THAT
THIS RESOLUTION HAS BEEN FORMALLY APPROVED BY
THE BOARD OF SUPERVISORS ON _____
DATE

SCOTT COUNTY AUDITOR

R E S O L U T I O N

SCOTT COUNTY BOARD OF SUPERVISORS

September 19, 2019

APPROVAL OF CONTRACT FOR PROFESSIONAL STRUCTURAL DESIGN SERVICES
TO PERFORM GEOTECHNICAL INVESTIGATION AND FINAL DESIGN OF BRIDGE
REPLACEMENT PROJECTS BRS-CHBP-C082(61)--GB-82,
BRS-CHBP-C082(62)--GB-82 AND BRS-CHBP-C082(63)--GB-82

BE IT RESOLVED by the Scott County Board of Supervisors as
follows:

Section 1. That Scott County enters into a contract with
IIW, P.C. for professional structural design services
to perform geotechnical investigation and final design
of bridge replacement projects
BRS-CHBP-C082(61)--GB-82, BRS-CHBP-C082(62)--GB-82
and BRS-CHBP-C082(63)--GB-82

Section 2. That the County Engineer be authorized to sign
the contract document on behalf of the Board.

Section 3. That this resolution shall take effect
immediately.