Cummins Engineering Corporation

135 West Lake Shore Drive
Springfield, Illinois 62703
Phone: 217-726-8570

January 20, 2022

Mr. Jeff Blue
Champaign County Engineer
Champaign County Highway Department
1605 East Main Street
Urbana, IL. 61802

Subject: **Proposal for Survey Services**
Bridge Hydraulic Survey
Existing SN 010-0144
TR 250N over 2 Mile Slough, Pesotum Township

Dear Jeff:

Please consider this our proposal to perform a bridge hydraulic survey at the subject site.

We propose to provide the surveying services in accordance with the attached prepared survey checklist and rate schedule. The upper limit cost to complete the above stated work is **$7000.00** to be billed at our standard hourly rates.

All direct costs are included in the above stated price. Payments will be due no later than 30 days after the date shown on an invoice. Any work not listed will be completed upon authorization from your office and billed using our standard hourly rates.

If you find this proposal satisfactory, please sign this proposal and return a copy for our files.

Sincerely yours,
Cummins Engineering Corporation

Kimberly S. Cummins
CEO

ACCEPTED:

CUMMINS ENGINEERING CORPORATION
135 West Lake Shore Dr.
Springfield, Illinois 62703
(217) 726-8570

CEC Job No: _____
Route / Description: CR 250N
County: Champaign
Section: _____
SN: 010-0144 → 010-4593

SURVEY CHECKLIST

1. INITIAL PAGE

- ☐ JOB NO., LOCATION; NOTE JOB IN INDEX; KEEP DAILY LOG OF FIELD CREW, WEATHER, DATE (ENTER IN FIELD BOOK EACH DAY ON THE PAGE YOU START.)
- ☐ DESCRIBE EXISTING BRIDGE(S): LOAD RATING, BRIDGE TYPE, RAIL TYPE, DECK TYPE, SUBSTRUCTURE TYPE, MEASURE F.F. WIDTH, F.F. ABUT., F.F. RAIL, F.F. CURB; SURFACE & ROADWAY DIMENSIONS AND UTILITIES ON STRUCTURE.

2. SET VERTICAL CONTROL

GPS SUFFICIENT UNLESS OTHERWISE NOTED (USGS POINT, NGS BENCHMARK OR F.I.S. R.M.)

- ☐ RUN B.M. CIRCUIT, 3 B.M.'s (ONE NOT ON BRIDGE) DESCRIBE B.M.'s W/ STATION, OFFSET & ELEVATION. LOCATE WITH TOPO SHOT.

3. SET HORIZONTAL CONTROL

- ☐ SET TWO P.O.T.'s A MINIMUM OF ~~325~~ 325' FROM CL BRIDGE. SPLIT THE EXISTING PAVEMENT AND SET POINTS AT EACH END OF PROJECT AND A P.O.T. AT CENTERLINE OF BRIDGE (STA. 10+00 OR AS DIRECTED). IF THE BRIDGE IS NOT IN THE CENTER OF ROADWAY OR OTHER UNUSUAL ALIGNMENT FEATURES ARE PRESENT OTHER POINTS MAY NEED TO BE SET. CONTACT CEC ROADWAY ENGINEER FOR COORDINATION. LIST CONTROL POINTS AND ALIGNMENT POINTS WITH COORDINATES AND POINT NUMBER IN AN ALIGNMENT LAYOUT SKETCH. FOR HORIZONTAL CURVES PROVIDE COORDINATES FOR PC, PI AND PT. TIE ALL POINTS WITH THREE TIES EACH AS NEEDED. PROVIDE SKETCH OF ALIGNMENT AND CROSS TIES IN NOTES.
- ☐ OTHER _____

4. FIELD SURVEY

- ☐ TOPO: TAKE ALL TOPO 300' (FT) EACH WAY FROM BRIDGE, EXTEND 60' (FT) RT & LT, NOTE ANY SWALES OR SPECIAL DRAINAGE. P. L. & OWNERS, ROW MARKERS, UTILITIES AND ADDRESSES. ER, FC, POLES, TREES, PIPES, ENTRANCE, ROADWAY SURFACE TYPE (MATERIAL). ENTRANCE CL STATION AND PERPENDICULAR CL STATION. TAKE 4 SHOTS AT PIPE CULV. FOR DTM: FL, GR @ RT & LT & TOP. NOTE SIZE, TYPE, CONDITION OF ALL PIPES IN TOPO NOTES.
- ☐ DTM SURVEY: ROAD CROSS SECTIONS AT 50' INTERVALS THROUGH PROJECT AREA EACH WAY FROM BRIDGE AND @ 25' INTERVALS FOR 100' EITHER SIDE OF BRIDGE NEAR THE BRIDGE. TAKE CROSS SECTION AT EACH BRIDGE ABUTMENT OR AT BOTH ENDS OF SKEWED CROSS RD. CULV. WITH A SKEWED SECTION ALONG THE CULV. CENTERLINE. TAKE AT ENTRANCES: ONE AT BOTH ENDS OF PIPE AND HALF SECTION. NOTE FLOWLINE (FL) OF DITCH; EXTEND 50' RT & LT.
- ☐ ROAD PROFILE: PROFILE MAINLINE AND SIDEROADS AT 50' INTERVALS 300 (FT) EACH WAY OUTSIDE LIMITS OF CROSS SECTIONS, EXTEND ABOVE HIGHWATER ELEVATION OR FLOODPLAIN (APPROX EL = _____)
- ☐ MEASURE ROADWAY SURFACE WIDTH & SHOULDER-SHOULDER WIDTH WITH TAPE
- ☐ OTHER SR NORTH 100'
  SR SOUTH 150'

5. HYDRAULIC SURVEY

- ☐ DESCRIBE EXISTING CULVERT(S): TYPE, SIZE, NUMBER BOXES, SHOOT FL & INVERT ON CONCRETE AT INLET AND OUTLET, MEASURE LENGTH, MEASURE F.F. WIDTH, SURFACE AND ROADWAY DIMENSIONS.
- ☐ STRUCTURE OPENINGS: PROFILE BOTH SIDES OF STRUCTURE OPENING(S): LOW STEEL OR LOW CONC, GROUND @ FC OF ABUTS AND PIERS, BERMS, SLOPEWALL, EW, & FL.

☐ NOTE ANY SCOUR AT STRUCTURE(S): IF SO, CAUSED BY:
DEBRIS? POOR STREAM ALIGNMENT? INADEQUATE OPENING?

_____

☐ INTERVIEW RESIDENTS (2 IF POSSIBLE): H.W. ELEVATION AND FREQUENCY, AND MAX. H.W.; NAME OF RESIDENT AND LENGTH OF RESIDENCY; TALK TO MORE THAN ONE PERSON IF POSSIBLE; HAS WATER GONE OVER THE ROAD? DOES STREAM RISE RAPIDLY? GET OUT OF BANKS? H.W. MARKS? TAKE SHOTS AT CORNERS AND FLOOR ELEVATIONS OF AFFECTED HOUSES IN FLOODPLAIN US OF STRUCTURE(S).

☐ **STREAM MEANDER**: LOCATE STREAM MEANDER 150' US & DS FROM STRUCTURE(S). LOCATE @ 25', 50' 100' & 150'. AND AT 200' IF STREAM IS WITHIN A BEND.

☐ **STREAM CROSS SECTIONS**: DESCRIBE CHANNEL SOIL AND FLOOD PLAIN COVER WHERE STREAM X-SECTIONS ARE TAKEN, I.E., HEAVY BRUSH ON BANKS, CLEAN SANDY BOTTOM, TALL GRASS ON BANKS, ETC.

☐ **STREAM PROFILE**: 500' ' US FROM THE STRUCTURE AND 500' ' DS FROM THE STRUCTURE. SHOTS AT 100' INTERVALS. INCLUDE A SHOT AT TOP OF WATER 500 ' US & DS FROM THE STRUCTURE.

☐ **TYPICAL FLOODPLAIN STREAM CROSS SECTIONS**: @ _____(FT) US AND DS OF EACH STRUCTURE; IF OVERLAPS TAKE MOST CONSTRICTIVE X-SECTION BETWEEN THE TWO.

As shown on Quad.

_____

☐ MULTIPLE STRUCTURES: (_____ FLOODPLAIN CROSS SECTIONS EACH: SEE MAP)

☐ SINGLE STRUCTURE: (_____ FLOODPLAIN XSEC TOTAL: SEE MAP)

☐ OTHER Model Channel (TB-TB) From opening To ± 50' U/S & D/S of structure

6. LAND SURVEYING

☐ COURTHOUSE RESEARCH. CHECK FOR LOCAL RECORDED MONUMENTS, SECTION CORNERS OR QUARTER CORNERS., IDENTIFY LANDOWNERS AND COPY DEED AND PLATS AVAILABLE.

☐ LOCATE NEAREST IDENTIFIED SECTION CORNERS WITHIN TOPO SURVEY OR TURN ANGLE/ DISTANCE FROM KNOWN CONTROL POINTS. LOG TIES IN NOTES.

☐ LOCATE ANY PROPERTY LINES / PINS AVAILABLE. IF NO DEFINITE MARKERS, ASK LOCAL RESIDENT FOR GENERAL INFO: CROPLINES, FP, STREAM, ETC.

☐ OTHER _____

_____

7. MISCELLANEOUS

☐ TAKE PICTURES, MAKE A PHOTO LOG, DOWNLOAD PICTURES TO THE NETWORK.

☐ AT THE COMPLETION OF EACH SURVEY, DOWNLOAD SURVEY, PRINT RAW DATA, AND REDUCED ASCII FILE. RETURN COMPLETED FIELD BOOK, SURVEY REQUEST FORM AND SIGNED SURVEY CHECKLIST.

☐ LOCATE BORING LAYOUTS.

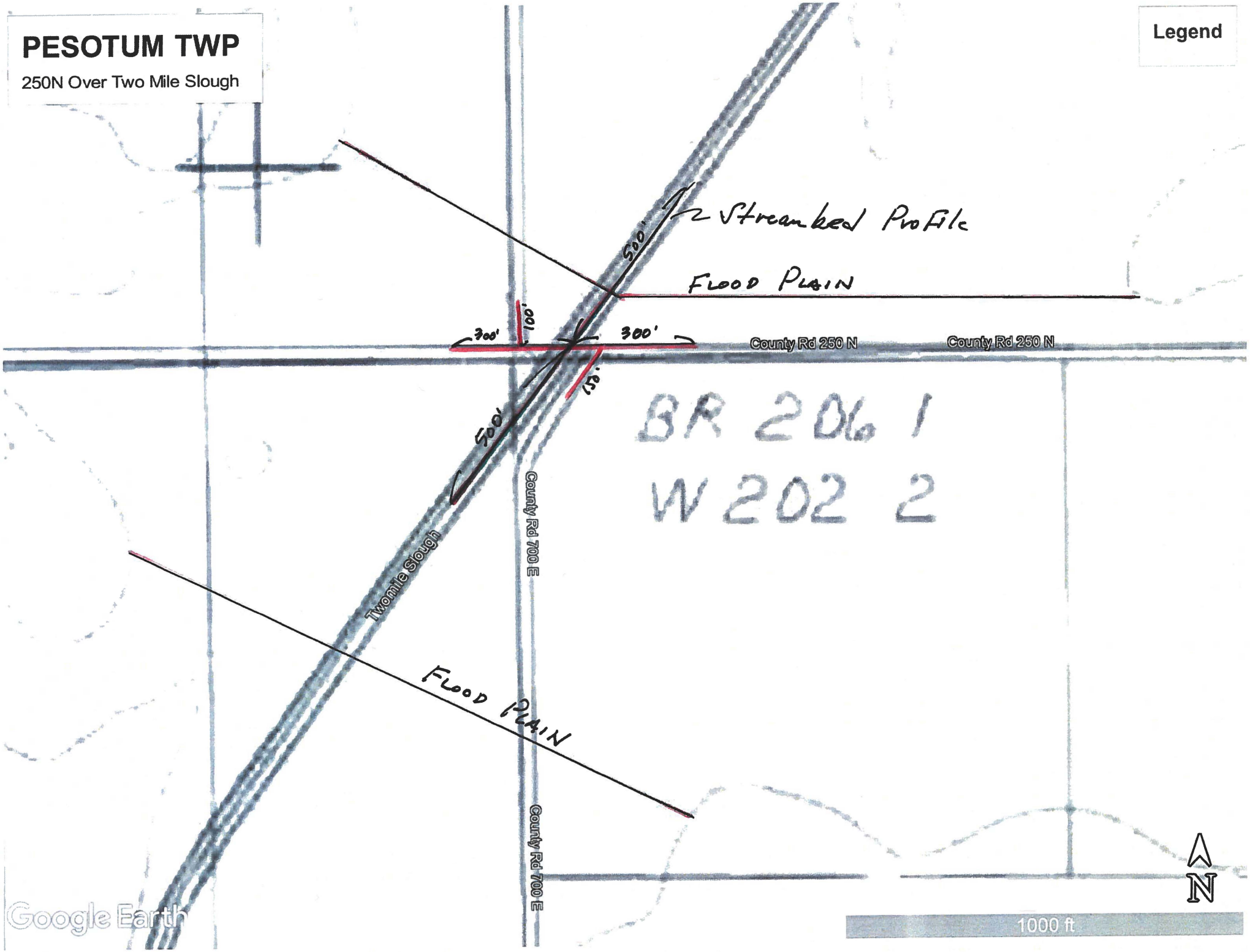
☐ ATTACHED TOPO MAPS, HIGH WATER INFORMATION, ETC.

☐ OTHER NOTES _____

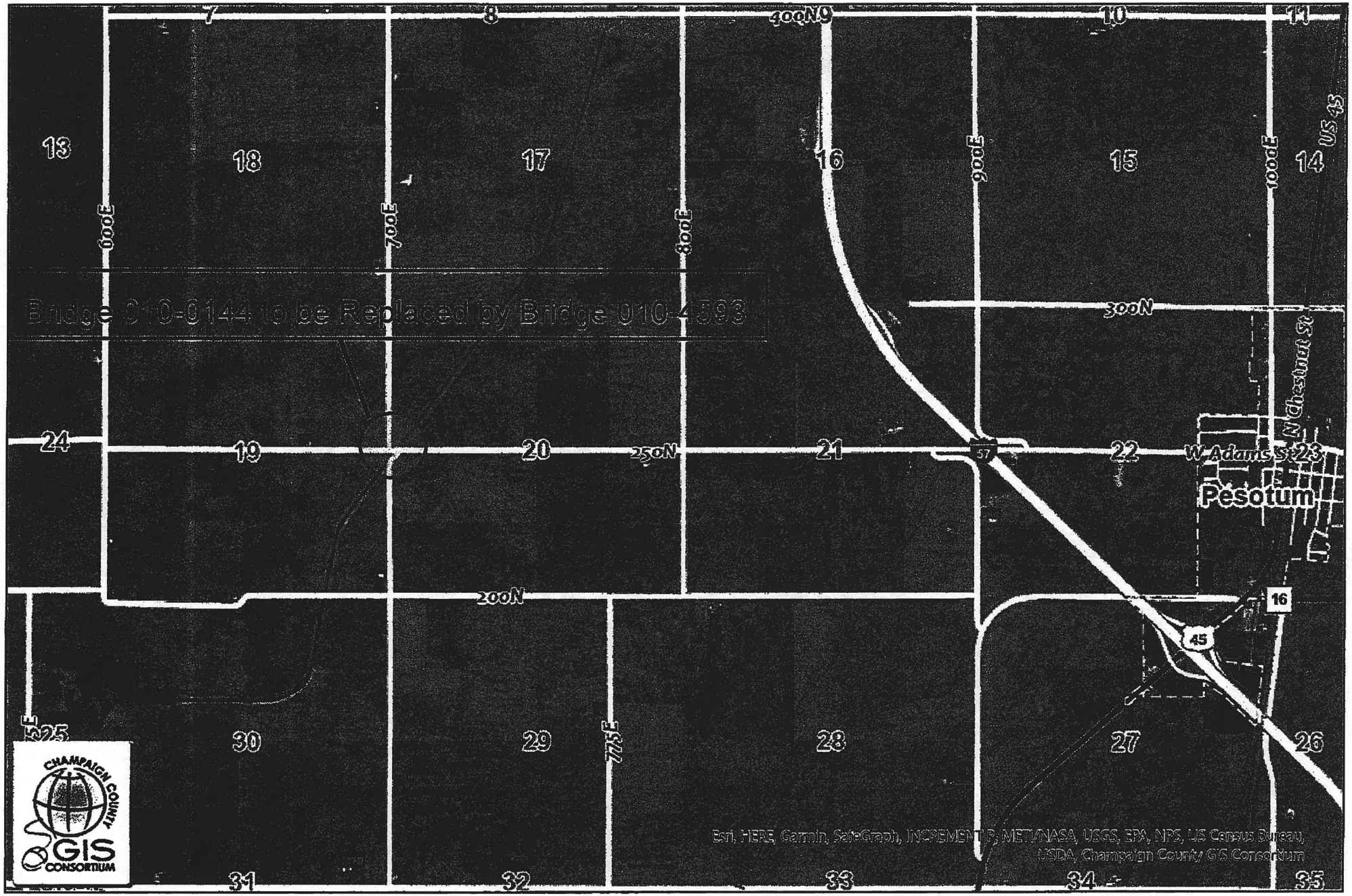
_____

_____

BY _____ DATE _____


PESOTUM TWP
250N Over Two Mile Slough
Legend
Streambed Profile
500'
FLOOD PLAIN
100'
300'
300'
County Rd 250 N
County Rd 250 N
150'
500'
BR 206 1
W 202 2
County Rd 700 E
Twomile Slough
FLOOD PLAIN
County Rd 700 E
N
1000 ft
Google Earth

Pesotum Bridge Replacement



0.45 mi

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NORTH

County Rd 700 E
Twomile Slough
County Rd 700 E
16
County Rd 250 N
County Rd 250 N
Twomile Slough
County Rd 700 E
County Rd 700 E

National Flood Hazard Layer FIRMette

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 1/20/2022 at 1:39 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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HOURLY BILLING RATES- COUNTY RATES

(Including Overhead and Profit as of November 1, 2021)

CLASSIFICATION	HOURLY RATE
PRINCIPAL	$ 182.00
LICENSED STRUCTURAL ENGINEER	$ 169.00
STRUCTURAL ENGINEER II	$ 118.30
STRUCTURAL ENGINEER I	$ -
PROFESSIONAL ENGINEER V	$ 169.00
PROFESSIONAL ENGINEER IV	$ 146.90
PROFESSIONAL ENGINEER III	$ 114.40
PROFESSIONAL ENGINEER II	$ 113.10
PROFESSIONAL ENGINEER I	$ -
PROFESSIONAL LAND SURVEYOR III	$ 146.90
SURVEY CREW CHIEF	$ 92.30
LAND SURVEYOR	$ 89.83
NEGOTIATOR	$ 107.90
CONSTRUCTION ENGINEER	$ 130.00
CONSTRUCTION OBSERVER	$ 120.90
ENGINEERING TECHNICIAN V	$ 125.24
ENGINEERING TECHNICIAN IV	$ 123.50
ENGINEERING TECHNICIAN III	$ 107.90
ENGINEERING TECHNICIAN II	$ 96.20
ENGINEERING TECHNICIAN I	$ 83.20
OFFICE MANAGER	$ 91.00
ADMINISTRATIVE ASSISTANT	$ 52.00

Hourly Billing Rates are adjusted to account for annual salary adjustments effective May 1 or November 1. This schedule is also updated periodically to reflect changes in personnel. The most current schedule is attached to hourly agreements but these rates are subject to change annually and as necessary to reflect changes in personnel.