# STATE OF ILLINOIS

LIVINGSTON COUNTY HIGHWAY DEPARTMENT Lasalle County Highway Department

# PLANS FOR PROPOSED LOCAL FUNDING PROJECT

T.R. 1E / 3300N ROAD OVER TRIBUTARY TO VERMILION CREEK SECTION 21-00230-00-BR / 22-00844-00-BR LIVINGSTON / Lasalle Counties **NEWTOWN / OTTER CREEK ROAD DISTRICTS** PROPOSED STRUCTURE NO. 053-5535

R. 4 E., 3RD P.M.

APPROXIMATE SCALE:

NET LENGTH OF SECTION = 200 FEET = 0.038 MILES

#### 5.-10. CULVERT PLANS STATION CROSS SECTIONS 11.-17.

PLAN AND PROFILE

SUMMARY OF QUANTITIES

TYPICAL CROSS SECTIONS

AND GENERAL NOTES

DESCRIPTION

COVER SHEET

**INDEX OF SHEETS** 

SHEET NO.

2.

3.

4.

SEE PROPOSAL BOOKLET FOR **HIGHWAY STANDARDS:** 

> STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS NAME PLATE FOR BRIDGES

515001-04 601001-05 PIPE UNDERDRAINS

601101-02 CONCRETE HEADWALL FOR PIPE UNDERDRAINS

701901-08 TRAFFIC CONTROL DEVICES 725001-01 OBJECT AND TERMINAL MARKERS

> TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

### **UTILITIES**

FUNCTIONAL CLASSIFICATION:

3R DESIGN GUIDELINES USED

DESIGN SPEED:

DESIGN TRAFFIC:

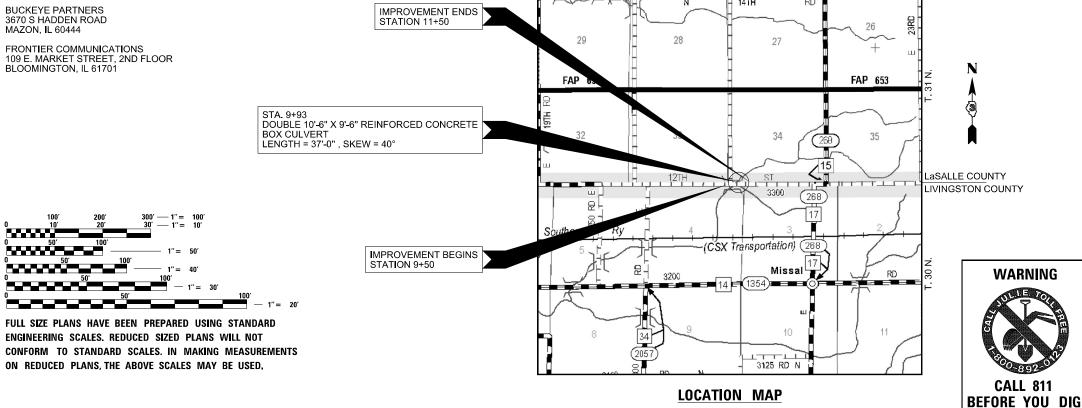
LOCAL ROAD

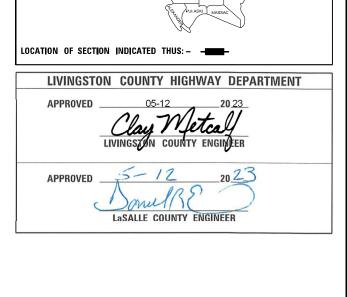
30 MPH

50 ADT

FRONTIER COMMUNICATIONS 109 E. MARKET STREET, 2ND FLOOR BLOOMINGTON, IL 61701

BLR 21-9

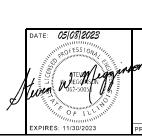




21-00230-00-BR LIVINGSTON 22-00844-00-BR / LaSALLE

ILLINOIS

FED. ROAD DIST. NO. 7



DIG NO: X221920503

HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201

SPRINGFIELD, ILLINOIS 62703 217.546.3400 www.hlrengineering.com 184.000959 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATIO

DATE: 05/08/2023 OJECT NUMBER: 22.0428.130

|   |          | SUMMARY OF QUANTITIES              |       |                           |
|---|----------|------------------------------------|-------|---------------------------|
|   | CODE NO. | ITEM                               | TYPE  | RUCTION<br>E CODE<br>1010 |
|   |          |                                    | UNIT  | TOTAL<br>QUANTITY         |
| ^ | 20200100 | EARTH EXCAVATION                   | CU YD | 170                       |
| ^ | 20700110 | POROUS GRANULAR EMBANKMENT         | TON   | 880                       |
|   | 20900110 | POROUS GRANULAR BACKFILL           | CU YD | 40                        |
| ^ | 28100707 | STONE DUMPED RIPRAP, CLASS A4      | SQ YD | 400                       |
|   | 40200800 | AGGREGATE SURFACE COURSE, TYPE B   | TON   | 226                       |
| ^ | 50100100 | REMOVAL OF EXISTING STRUCTURES     | EACH  | 1                         |
|   | 50800205 | REINFORCEMENT BARS, EPOXY COATED   | POUND | 26,550                    |
|   | 50900205 | STEEL RAILING, TYPE S1             | FOOT  | 58                        |
|   | 51500100 | NAME PLATES                        | EACH  | 1                         |
|   | 52200015 | PERMANENT SHEET PILING             | SQ FT | 2,118                     |
|   | 54003000 | CONCRETE BOX CULVERTS              | CU YD | 122.2                     |
|   | 60146304 | PIPE UNDERDRAINS FOR STRUCTURES 4" | FOOT  | 160                       |
|   | 72501000 | TERMINAL MARKER - DIRECT APPLIED   | EACH  | 4                         |
| ^ | X2010400 | STUMP REMOVAL ONLY                 | UNIT  | 136                       |
| ^ | X2501000 | SEEDING, CLASS 2 (SPECIAL)         | ACRE  | 0.25                      |
| ^ | XX009301 | FIELD TILE ADJUSTMENT              | FOOT  | 50                        |

<sup>^</sup> SEE SPECIAL PROVISIONS

| STUN    | 1P REM | IOVAL | ONLY  |
|---------|--------|-------|-------|
| STATION | OFFSET | SIDE  | UNITS |
| 9+92    | 28'    | LT    | 8     |
| 9+92    | 28'    | LT    | 8     |
| 9+92    | 28'    | LT    | 8     |
| 9+93    | 30'    | LT    | 12    |
| 9+93    | 30'    | LT    | 12    |
| 9+98    | 22'    | LT    | 10    |
| 9+98    | 22'    | LT    | 10    |
| 9+98    | 22'    | LT    | 10    |
| 9+98    | 22'    | LT    | 10    |
| 10 + 34 | 24'    | RT    | 12    |
| 10+34   | 24'    | RT    | 12    |
| 10+67   | 25'    | LT    | 24    |
| OTAL    |        |       | 136   |

#### **GENERAL NOTES**

- 1) ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2022", (HERE IN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- 2) ALL CLEARING, GRUBBING, FENCE REMOVAL, PAVEMENT REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. ALL AGGREGATE AND BITUMINOUS PAVEMENT SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. REMOVAL AND DISPOSAL OF PAVEMENT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 3) ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARD OF THE DEPARTMENT.
- 4) THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, TELEPHONE LINES, ELECTRIC LINES, WATER SERVICE LINES, GAS MAINS, AND OTHER UTILITY FACILITIES AS SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- 5) THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES AGGREGATE SURFACE COURSE 2.05 TON/CU YD

POROUS GRANULAR EMBANKMENT 2.0 TON/CU YD

- 6) THE FINAL SURFACE OF ALL EMBANKMENT AREAS SHALL BE SEEDED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE TOPSOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING TOP SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- 7) THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.

SEEDING, CLASS 2 (SPECIAL) = 0.25 ACRES

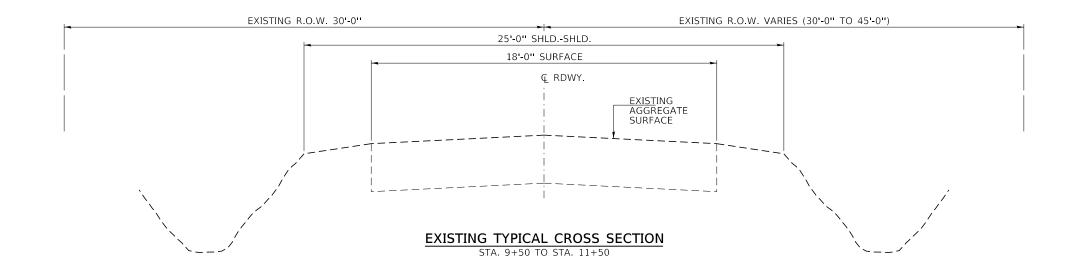
8) ALL WASTE MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

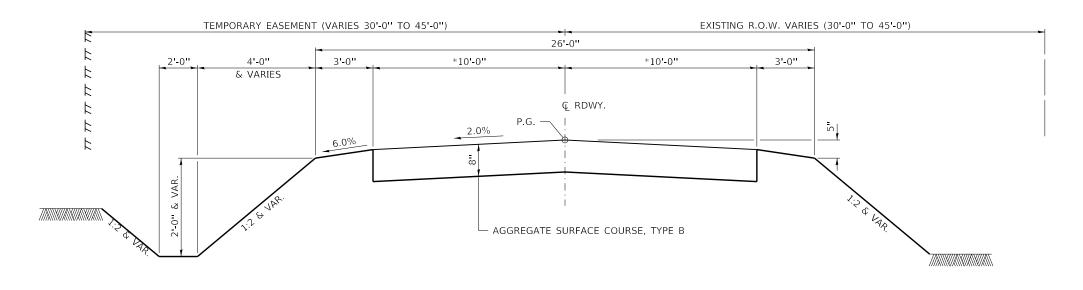
|                                    | EARTHWORK SCHEDULE |           |         |              |            |           |  |  |  |  |  |  |  |
|------------------------------------|--------------------|-----------|---------|--------------|------------|-----------|--|--|--|--|--|--|--|
|                                    | EARTH              | SHRINKAGE | PERCENT | EXCAVATION   | EMBANKMENT | EARTHWORK |  |  |  |  |  |  |  |
|                                    | EXCAVATION         | FACTOR    | USED    | ADJUSTED FOR | REQUIRED   | BALANCE   |  |  |  |  |  |  |  |
| LOCATION                           |                    |           |         | SHRINKAGE    |            |           |  |  |  |  |  |  |  |
|                                    | CU.YD.             |           |         | CU.YD.       | CU.YD.     | CU.YD.    |  |  |  |  |  |  |  |
| TR 1E                              |                    |           |         |              |            |           |  |  |  |  |  |  |  |
| STA. 9+50.00 TO STA. 9+77.66       | 24                 | 25.00%    | 100%    | 18           | 0          | 18        |  |  |  |  |  |  |  |
| SEE SPECIAL PROVISIONS FOR STRUCTU | RE EXCAVATION      | N         |         |              |            |           |  |  |  |  |  |  |  |
| STA. 10+08.34 TO 11+50.00          | 146                | 25.00%    | 100%    | 110          | 77         | 33        |  |  |  |  |  |  |  |
| TOTAL                              | 170                |           |         | 128          | 77         | 51        |  |  |  |  |  |  |  |
| USE                                | 170                |           |         |              |            | 50        |  |  |  |  |  |  |  |

WASTE EXCAVATION 50 CU YDS

| AGGREGATE SURFACE COURSE, TYPE B |                  |           |             |        |     |  |  |  |  |  |
|----------------------------------|------------------|-----------|-------------|--------|-----|--|--|--|--|--|
| STATION T                        | O STATION        | THICKNESS | WIDTH       | LENGTH | TON |  |  |  |  |  |
| 9+50.00                          | 9+77.66          | 8"        | 18.77' AVG. | 27.66' | 27  |  |  |  |  |  |
| 9+77.66                          | 9+77.66 10+08.34 |           | 25.33'      | 30.68' | 59  |  |  |  |  |  |
| 10+08.34                         | 11+00.00         | 8"        | 20.00'      | 91.66' | 93  |  |  |  |  |  |
| 11+00.00                         | 11+50.00         | 8"        | 18.23' AVG. | 50.00' | 47  |  |  |  |  |  |
| TOTAL                            |                  |           | •           | •      | 226 |  |  |  |  |  |

| FILE NAME = 220428-sht-summary.dgn |  | 28-shl-summary.dgn USER.NAME = gmetcalf DESIGNED - S.W.M. REVISED - |                   |           |                                      |             |                         | T.R.         | SECTION       | COUNTY                 | TOTAL SHEET NO.               |              |               |
|------------------------------------|--|---|-------------------|-----------|--------------------------------------|-------------|-------------------------|--------------|---------------|------------------------|-------------------------------|--------------|---------------|
|                                    | HAMPTON, LENZINI AND RENWICK, INC.                                 |   | DRAWN - R.D.H.    | REVISED - | STATE OF ILLINOIS                    | SUI         | MMARY OF QUANTITIES A   | ND GENERAL I | NOTES         | 1E :                   | 21-00230-00-BR/22-00844-00-BR | LIVINGSTON / | 17 2          |
|                                    | 3085 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62703     | PLOT SCALE = \$SCALE\$  | CHECKED - S.T.M.  | REVISED - | LIVINGSTON COUNTY HIGHWAY DEPARTMENT | ·           |                         |              | NEWTO         | OWN / OTTER CREEK R.D. | Laoalle                       |              |               |
|                                    | ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 | PLOT DATE = 5/15/2023   | DATE - 05/15/2023 | REVISED - |                                      | SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 9+50    | TO STA. 11+50 |                        | ILLINOIS                      |              | $\overline{}$ |





SUGGESTED CUT SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS

## PROPOSED TYPICAL CROSS SECTION

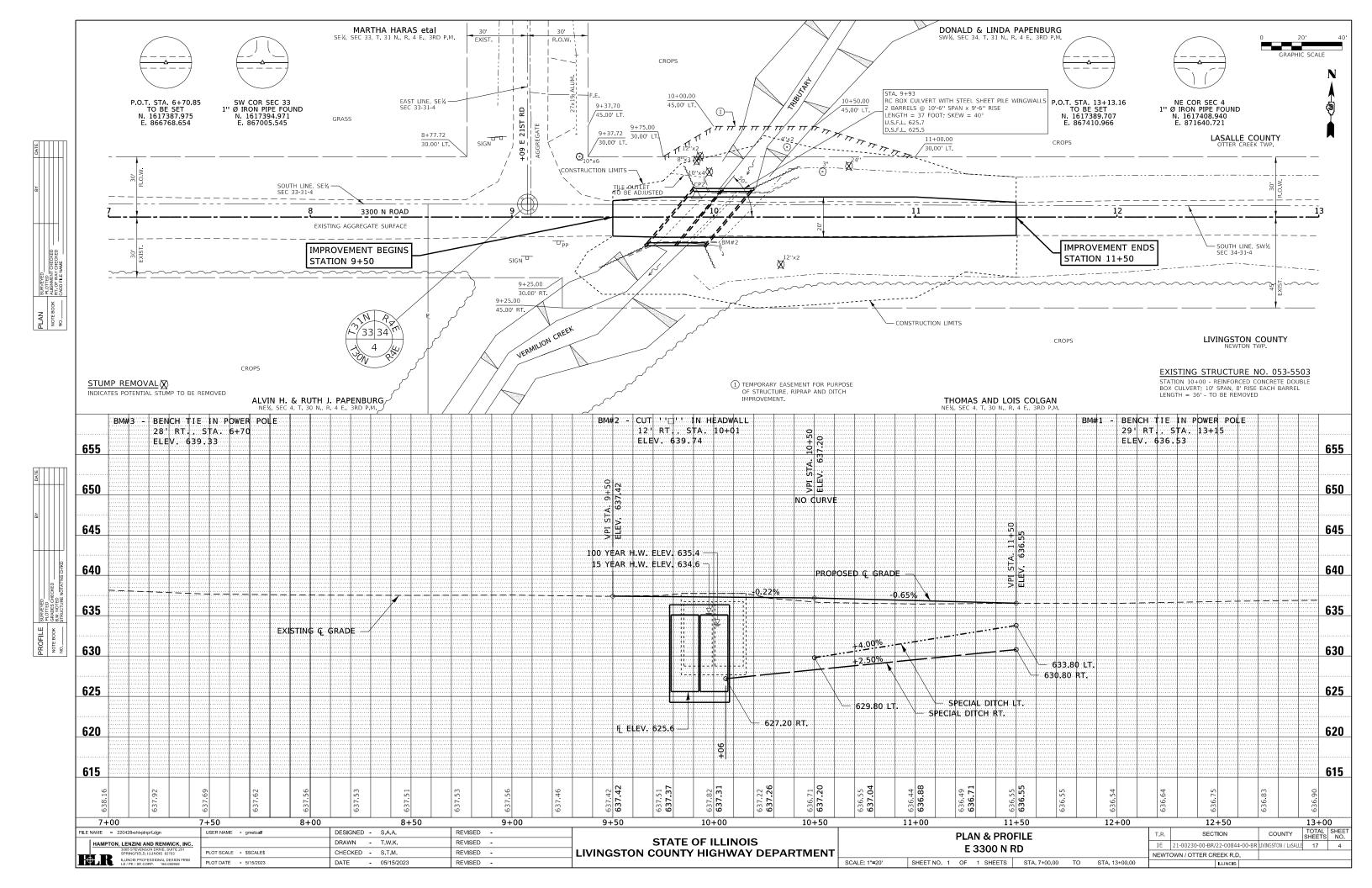
STA. 9+50 TO STA. 11+50

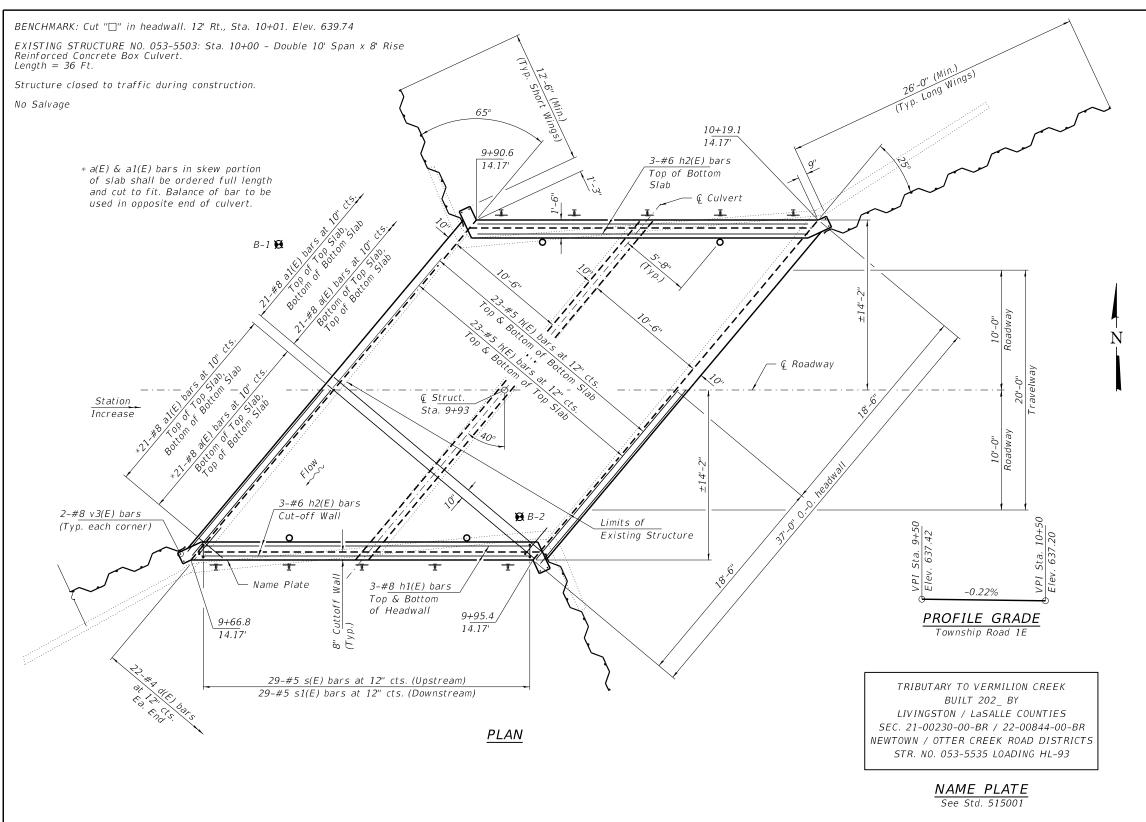
EXCEPT TRANSITIONS STA. 9+50 TO 9+85 AND STA. 11+00 TO STA. 11+50.

\*AGGREGATE SURFACE COURSE, TYPE B SHALL BE WIDENED AT THE PROPOSED STRUCTURE FROM HEADWALL TO HEADWALL.

SUGGESTED FILL SECTION CONSTRUCT AS SHOWN IN STATION CROSS SECTIONS

FILE NAME = 220428-sht-typsections.dgn USER NAME = gmetcalf DESIGNED - S.W.M. REVISED -COUNTY SECTION STATE OF ILLINOIS HAMPTON, LENZINI AND RENWICK, INC.
3095 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703 DRAWN - R.D.H. TYPICAL CROSS SECTIONS REVISED -1E 21-00230-00-BR/22-00844-00-BR CHECKED - S.T.M. REVISED -LIVINGSTON COUNTY HIGHWAY DEPARTMENT NEWTOWN / OTTER CREEK R.D. SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 9+50 TO STA. 11+50 PLOT DATE = 5/15/2023 DATE - 05/15/2023 REVISED -





# DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition with all interims.

## LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

## DESIGN STRESSES

 $fy = 60,000 \text{ psi} \\ f'c = 3,500 \text{ psi}$ 

# WATERWAY INFORMATION

| Existing Low Grade Elev. 636.4 at Sta. 11+00 Drainage Area = 2.4 Sq. Mi. Proposed Low Grade Elev. 636.6 at Sta. 11+50 |            |            |              |         |            |            |           |            |          |  |  |
|---|------------|------------|--------------|---------|------------|------------|-----------|------------|----------|--|--|
| Flood   | Freq.      |            | Opening      | Sq. Ft. | Nat.       | Head       | - Ft.     | Headwa     | ater El. |  |  |
| FIOOU   | Yr.        | C.F.S.     | Exist.       | Prop.   | H.W.E.     | Exist.     | Prop.     | Exist.     | Prop.    |  |  |
| Ten-Year  | 10         | 900        | 108          | 179     | 634.2      | 1.2        | 0.1       | 635.4      | 634.3    |  |  |
| Design  | 15         | 1050       | 116          | 187     | 634.6      | 1.5        | 0.2       | 636.1      | 634.8    |  |  |
| Base  | 100        | 1790       | 132          | 200     | 635.4      | 2.0        | 1.4       | 637.4      | 636.8    |  |  |
| Max. Calc.  | 500        | 2490       | 136          | 200     | 635.6      | 1.9        | 1.5       | 637.5      | 637.1    |  |  |
| 10 Year Velocity th.  | rough Exi: | sting Brid | ge = 8.5  fp | s 10 \  | 'ear Veloc | ity throug | h Propose | d Bridge = | 5.1 fps  |  |  |

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the

current "AASHTO LRFD Specifications."

Lun W. Megginson 05/08/2023

ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2024

## GENERAL NOTES

For backfilling and embankment see Standard Specifications. Precast culvert option will not be allowed.

All construction joints shall be bonded.

Layout of the stone riprap/slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall be responsible to dewater the excavation as needed for proposed construction.

All excavation required for removal of the existing structure or construction of the culvert as shown in these plans and in accordance with the Standard Specifications shall be included in the cost of Concrete Box Culverts.

Areas of excavation required for construction of the new culvert shall be backfilled with Porous Granular Embankment up to the top of slab elevation. See Special Provisions for more detailed information.

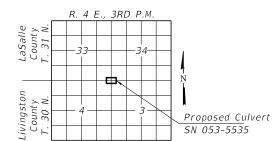
Reinforcement bars designated (E) shall be expoxy coated.

## INDEX OF STRUCTURE SHEETS

1-3. Culvert Details

4. Steel Railing, Type S-1

5-6. Borings



# LOCATION SKETCH

#### BILL OF MATERIAL

| BAR               | NO.        | SIZE    | LENGTH  | SHAPE  |
|-------------------|------------|---------|---------|--------|
| a(E)              | 84         | #8      | 25'-0'' |        |
| a1(E)             | 84         | #8      | 23'-2"  |        |
|                   |            |         |         |        |
| d(E)              | 44         | #4      | 4'-5"   |        |
|                   |            |         |         |        |
| h(E)              | 152        | #5      | 36'-8'' |        |
| h1(E)             | 12         | #8      | 29'-0'' |        |
| h2(E)             | 12         | #6      | 29'-0'' |        |
|                   |            |         |         |        |
| s(E)              | 29         | #5      | 6'-9''  | U      |
| s1(E)             | 29         | #5      | 6'-11'' | ß      |
|                   |            |         |         |        |
| v(E)              | 296        | #6      | 9'-11"  |        |
| v 1(E)            | 296        | #6      | 5'-8''  |        |
| v2(E)             | 74         | #5      | 9'-2"   |        |
| v3(E)             | 8          | #8      | 14'-2"  |        |
|                   |            |         |         |        |
| Porous Granular   |            | nt      | Ton     | 880    |
| Porous Granular   |            |         | Cu. Yd. | 40     |
| Stone Dumped Ri   |            |         | Sq. Yd. | 400    |
| Removal of Exist  | ing Struct | ures    | Each    | 1      |
| Reinf. Bars, Epo. |            |         | Pound   | 26,550 |
| Steel Railing, Ty | pe S-1     |         | Foot    | 58     |
| Name Plates       |            |         | Each    | 1      |
| Permanent Sheet   |            |         | Sq. Ft. | 2,118  |
| Concrete Box Cu.  |            |         | Cu. Yd. | 122.2  |
| Pipe Underdrains  |            |         | Foot    | 160    |
| Terminal Marker:  | s – Direct | Applied | Each    | 4      |

#### 

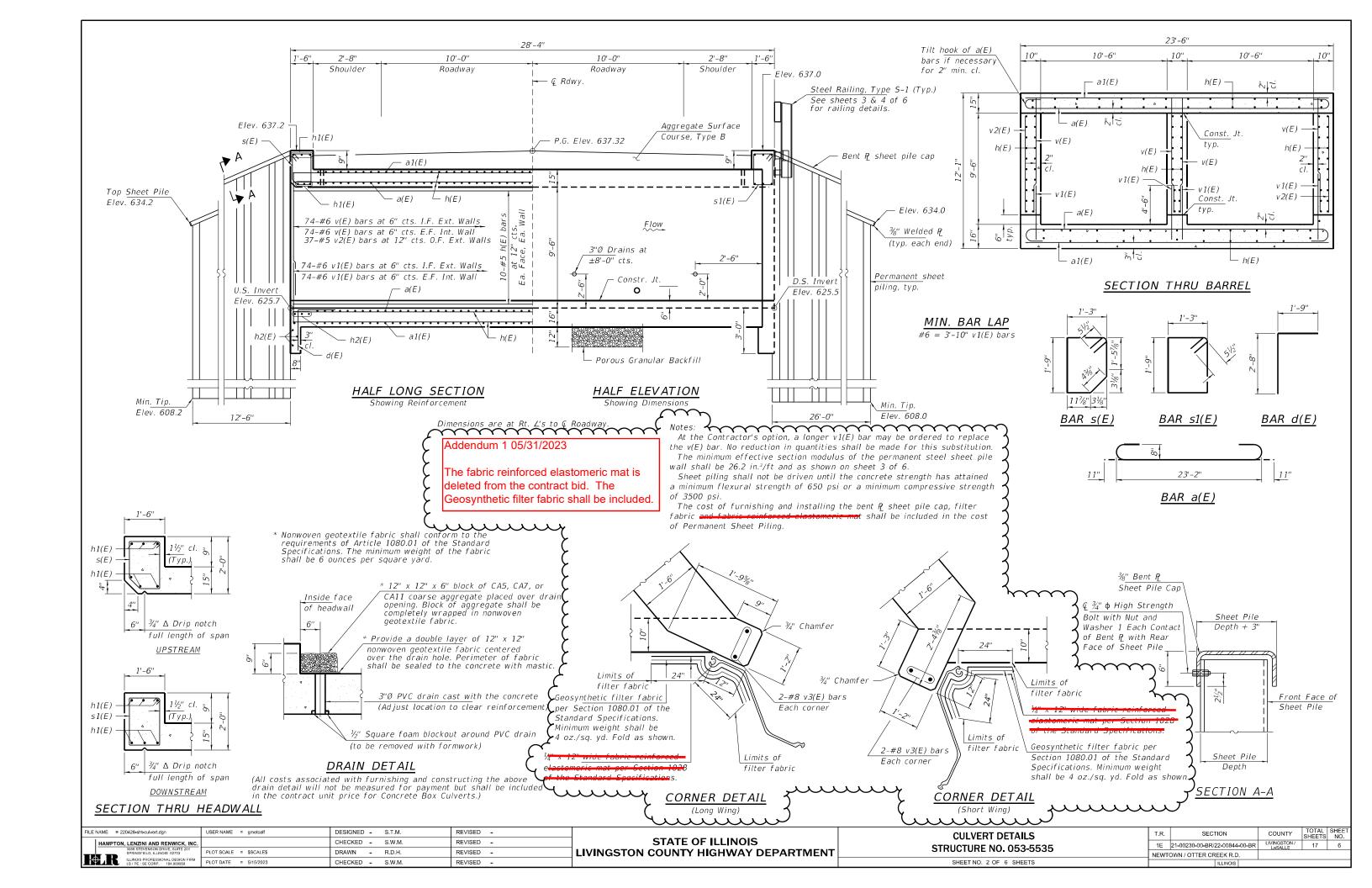
CULVERT DETAILS
STRUCTURE NO. 053-5535
SHEET NO. 1 OF 6 SHEETS

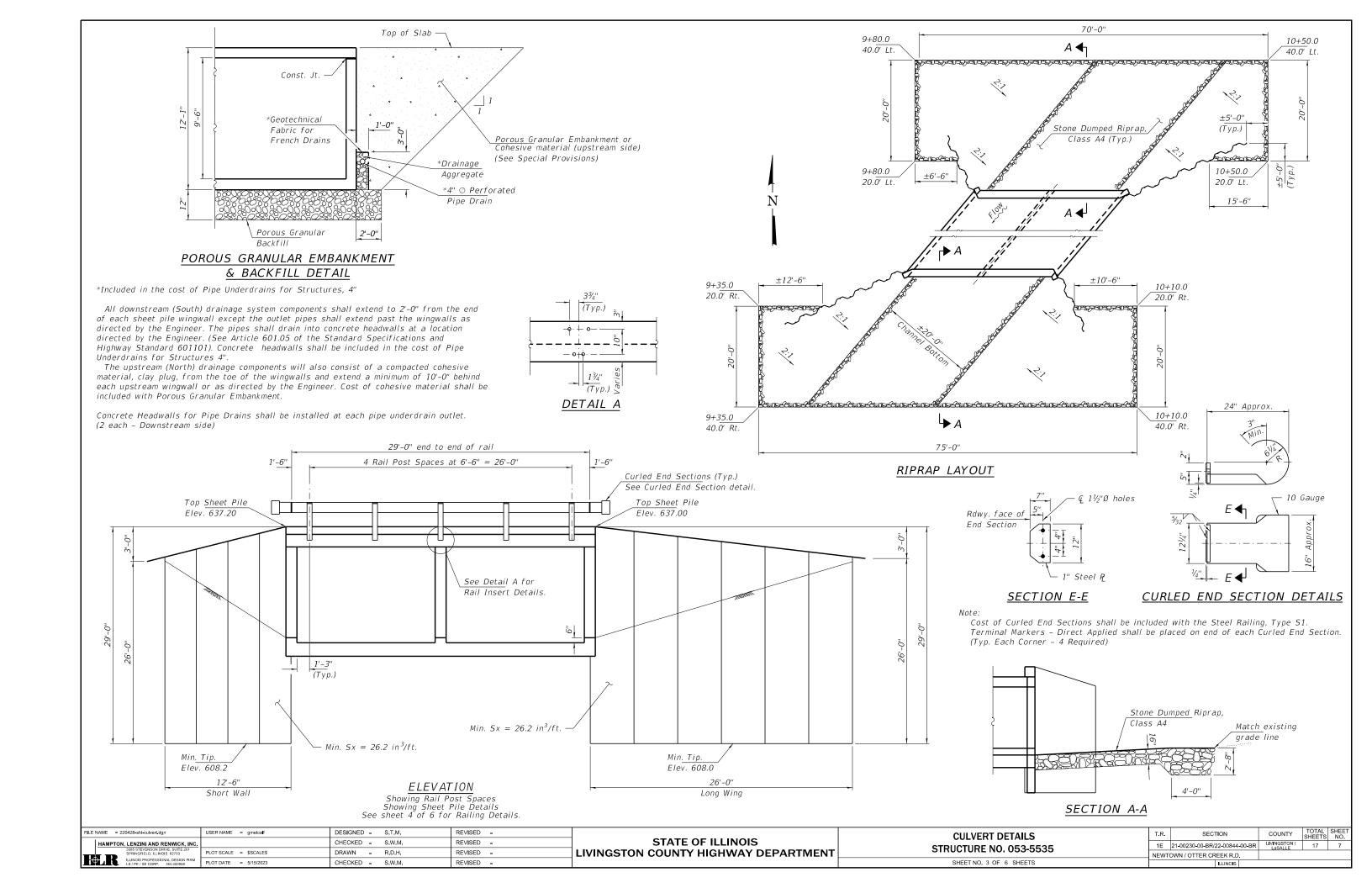
 T.R.
 SECTION
 COUNTY
 TOTAL SHEETS ND.

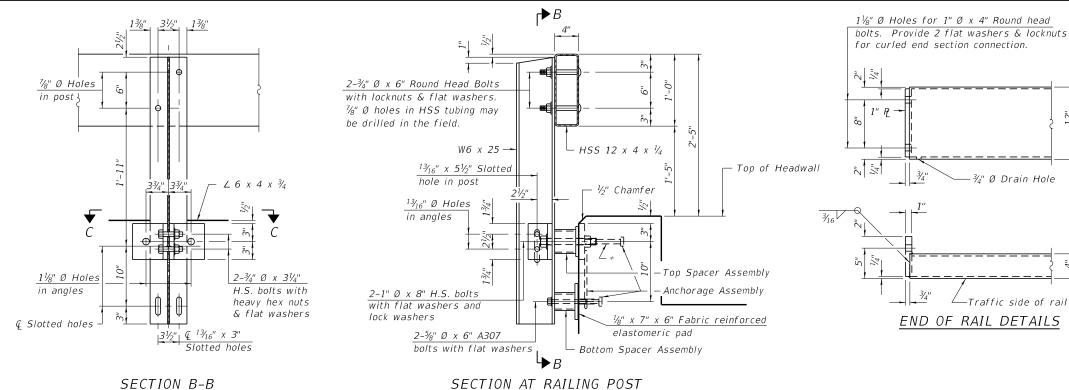
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 LunNGSTON / LaSALLE
 17
 5

 NEWTOWN / OTTER CREEK R.D.
 LunNGS
 17
 5

STATE OF ILLINOIS
LIVINGSTON COUNTY HIGHWAY DEPARTMENT
STRUCTURE NO. 05:

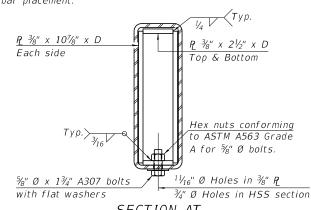




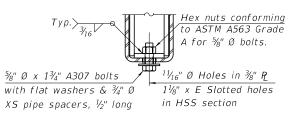


# SECTION AT RAILING POST

\* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down  $\frac{1}{2}$ " to accommodate the top reinforcement bar placement.



# SECTION AT RAIL SPLICE



# RAIL SPLICE CONNECTION AT EXPANSION JT.

# SPLICE DIMENSIONS

### RAILING CRITERIA

Anchorage

Assembly

L6 x 4 x 6" long

hole in post

 $2^{-13}/_{16}$ " Holes in angles

 $1 - \frac{13}{16}$ " x  $5\frac{1}{2}$ " Slotted

HSS section

Rail splice

insert

R-23A

**ERRERRER** 

| NCHRP 350 Test Level     | 2                             |
|--------------------------|-------------------------------|
| Railing Weight (plf)     | 50                            |
| Max Post Spacing         | 10'-9"                        |
| HMA thickness range (in) | $1\frac{1}{4} - 3\frac{1}{8}$ |

10-12-2021

Top Spacer

Grind ¾6" Chamfer

Q 1⅓" Ø Holes in

angles and plates

Assembly

W6x25

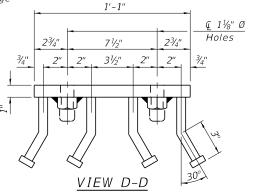
A at exp. jt. at 50° F.

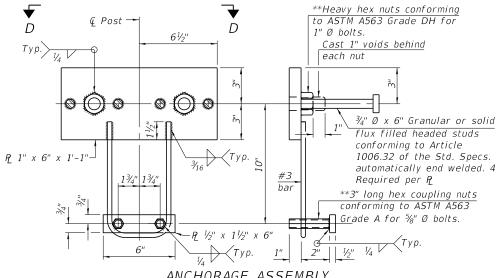
SECTION C-C

RAIL SPLICE ELEVATION

#### Location All locs. not over exp. jts. 4" 1'-8" Over Strip Seal Jt. 21/5" 45/8" 43/8" 1'-10" 31/16" **≤**4" 73/8" 71/4" 5<sup>13</sup>/16" Over Finger or Modular Jt. ≤9½" 51/2" 2'-91/4" Over Finger or Modular Jt. ≤15" 81/4" 101/2" 10" 3'-81/4"

T =; total movement along centerline of roadway at expansion joint





# ANCHORAGE ASSEMBLY

\*\* Threaded areas shall be plugged or blocked off during casting of concrete.

¾" Ø Drain Hole

-Traffic side of rail

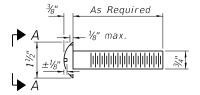
A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x  $11\frac{1}{2}$ ", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or  $\frac{1}{2}$ " (bottom), longer bolts are required. Cost included with Steel Railing, Type S-1.

All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.

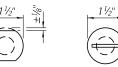
All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

Rail splice inserts may be built out of  $2 - \frac{3}{8}$ " bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.

All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.



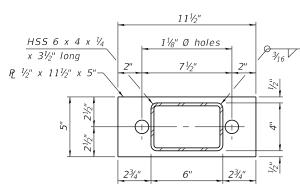
#### ROUND HEAD BOLT DETAIL



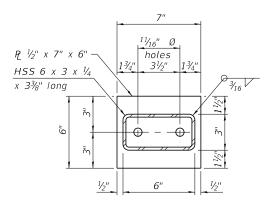
Without Slot or Recess

With Slot (shown) or Approved Recess

### VIEW A-A



# TOP SPACER ASSEMBLY



#### BOTTOM SPACER ASSEMBLY

## BILL OF MATERIAL

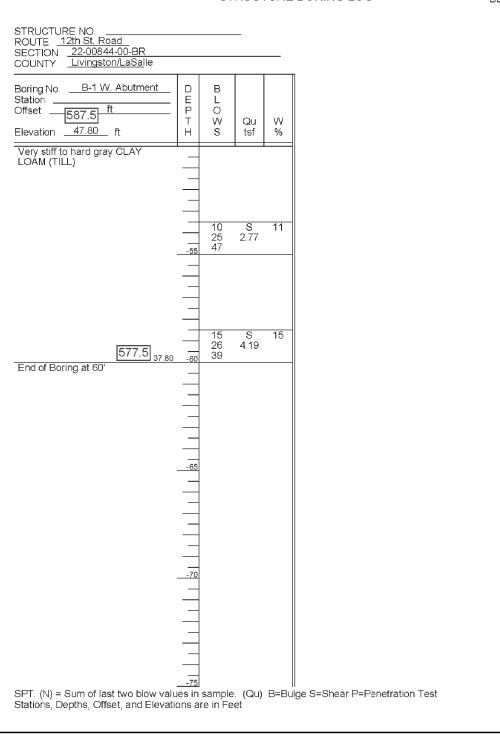
| Item                    | UTITE | Quantity |
|-------------------------|-------|----------|
| Steel Railing, Type S-1 | Foot  | 58       |

| FILE NAME = 220428-sht-culvert.dgn                              | USER NAME = gmetcalf   | DESIGNED - | S.T.M. | REVISED - |                                      | STEEL RAILING, TYPE S-1 | T.R. SECTION COUNTY TOTAL SHEETS NO.               |
|---|------------------------|------------|--------|-----------|--------------------------------------|-------------------------|--|
| HAMPTON, LENZINI AND RENWICK, INC.                              |                        | CHECKED -  | S.W.M. | REVISED - | STATE OF ILLINOIS                    | STRUCTURE NO. 052 5525  | 1E 21-00230-00-BR/22-00844-00-BR LIVINGSTON / 17 8 |
| SPRINGFIELD, ILLINOIS 62703                                     | PLOT SCALE = \$SCALE\$ | DRAWN -    | R.D.H. | REVISED - | LIVINGSTON COUNTY HIGHWAY DEPARTMENT | 31RUCTURE NO. 053-5555  | NEWTOWN / OTTER CREEK R.D.                         |
| ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184,000959 | PLOT DATE = 5/15/2023  | CHECKED -  | S.W.M. | REVISED - |                                      | SHEET NO. 4 OF 6 SHEETS | ILLINOIS   |

|   |           | ST          | RUCT      | ΓURE   | ering and Testing<br>BORING LOG  |            | Date           | Page<br>7/2 | 1 of<br>26/02 |
|---|-----------|-------------|-----------|--------|--|------------|----------------|-------------|---------------|
| ROUTE 12th St. Road DESCR   | PTIC      | ON L        | ivingsto  | n-LaS  | alle Bridge  |            |                |             |               |
| SECT. 22-00844-00-BR  | STR       | UCT. N      | 10        |        | DRILLED BY   | D. Cr      | ump            |             |               |
| COUNTY <u>Livingston/LaS</u> alle_OCA   | MOIT      |             |           |        |  | _31N       | _ , RNC        | ∋. <u> </u> | 4E            |
| Boring No. B-1 W. Abutment Station Offset 637.5 Surface Elev. 97.80 ft        | DEPTH     | B L O ≷ \$  | Qu<br>tsf | W<br>% | Surface Water Elev. Groundwater Elev.: 603.5 63.8 43.8 603.5 63.8 63.8 63.8 63.8 | D III P II | B∟O≷s          | Qu<br>tsf   | W<br>%        |
| Aggregate Shoulder 636.5 96.80  |           |             |           |        | Stiff to very stiff gray CLAY<br>LOAM (TILL)                                     |            |                |             |               |
| Hard brown-dark brown<br>SILTY CLAY LOAM, with<br>brick fragments 634.5 94.80 | $\exists$ | 5<br>6<br>6 | P<br>4.5+ | 15     | LOV (III (TILL)  |            | 2<br>3<br>4    | B<br>1.97   | 21            |
| Hard dark brown SILTY<br>CLAY LOAM  |           | 7<br>7<br>7 | P<br>4.5+ | 16     |  |            | 2<br>3<br>5    | P<br>3.0    | 20            |
| [631.5] <sub>91.80</sub><br>Hard brown-gray SILTY<br>CLAY LOAM                |           | 4<br>5<br>7 | P<br>4.5+ | 16     | 605.5 <sub>65.</sub>   | 30         |                |             |               |
|   | -10       | 3<br>4<br>5 | B<br>6.56 | 20     | SAND   | -35        | 3<br>11<br>5   |             |               |
| 626.5] 86.80  Hard brown-gray CLAY LOAM (TILL)  624.5] 84.80                  |           | 3<br>5<br>8 | B<br>4.22 | 21     | 600.5 60.  | 30         |                |             |               |
| Very stiff to stiff gray CLAY<br>LOAM (TILL)                                  |           | 3<br>4<br>6 | B<br>3.90 | 16     | (TILL)   |            | 10<br>14<br>20 | P<br>4.5+   | 12            |
|   |           | 3<br>3<br>6 | B<br>1.89 | 17     | 595.5 <sub>55.</sub> Stiff gray CLAY LOAM  | 30         |                |             |               |
|   | -20       | 2<br>3<br>4 | B<br>2.46 | 15     |  |            | 14<br>8<br>7   | B<br>1.44   | 14            |
|   |           | 2<br>3<br>3 | B<br>2.05 | 28     |  |            |                |             |               |
| 612.5 <sub>72.80</sub>  | -25       | 2<br>2<br>4 | B<br>1.85 | 27     | [587.5] <sub>47.</sub>   | 30 -50     | 12<br>22<br>48 | S<br>1.33   | 11            |

# ILLINOIS DEPARTMENT OF TRANSPORTATION Midwest Engineering and Testing STRUCTURE BORING LOG

Page 2 of 2 Date <u>7/26/02</u>



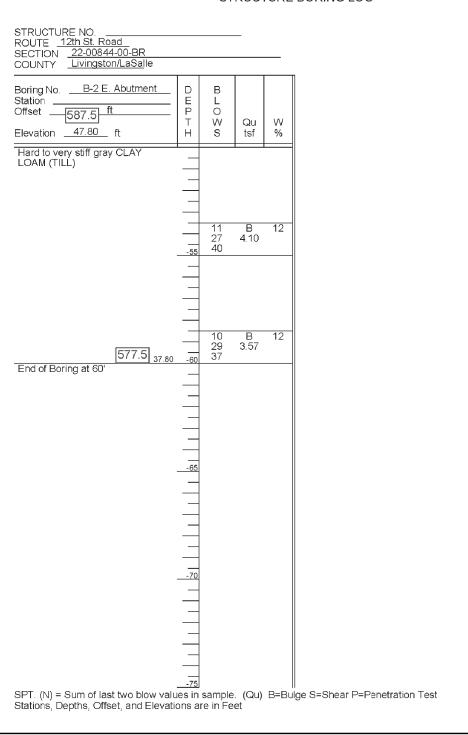
# **BORING-1**

| FILE NAME = 220428-sht-culvert.dgn |  | Secretary Secret |                  | REVISED - |                                      | BORINGS                 | T.R. SECTION                     | COUNTY TOTAL SHEET SHEETS NO. |
|------------------------------------|--|--|------------------|-----------|--------------------------------------|-------------------------|----------------------------------|-------------------------------|
|                                    | HAMPTON, LENZINI AND RENWICK, INC.                                 |  | CHECKED - S.W.M. | REVISED - | STATE OF ILLINOIS                    |                         | 1E 21-00230-00-BR/22-00844-00-BR | IVINGSTON / 17 9              |
| -                                  | 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703        | PLOT SCALE = \$SCALE\$   | DRAWN - R.D.H.   | REVISED - | LIVINGSTON COUNTY HIGHWAY DEPARTMENT | STRUCTURE NO. 053-5535  | NEWTOWN / OTTER CREEK R.D.       | LAGALLE                       |
|                                    | ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 | PLOT DATE = 5/15/2023  | CHECKED - S.W.M. | REVISED - |                                      | SHEET NO. 5 OF 6 SHEETS | ILLINOIS                         |                               |

|  |                    |           |        | ering and Testing<br>BORING LOG                            |          | Date           | Page<br>7/2 | 1 of<br><u>26/02</u> |
|--|--------------------|-----------|--------|--|----------|----------------|-------------|----------------------|
| ROUTE 12th St. Road DESCR  | IPTION             | Livingsto | n-LaS  | alle Bridge  |          |                |             |                      |
| SECT. <u>22-00844-00-BR</u>  | STRUCT             | . NO      |        | DRILLED BY   | D. Cru   | ımp            |             |                      |
| COUNTY <u>Livingston/LaS</u> alle_OCA  | TION _             |           |        | S.3 <u>3/34,</u> TWP.                                      | _31N     | _ , RN(        | G           | <u>4E</u>            |
| Boring No. <u>B-2 E. Abutment</u> Station Offset <u>637.5 ft</u> Surface Elev. <u>97.80</u> ft | D B L P O T W H S  | / Qu      | W<br>% | Surface Water Elev.  | DEPTH    | B∟0≷∅          | Qu<br>tsf   | W<br>%               |
| Aggregate Shoulder 636.5 96.80 Hard to very stiff dark brown                                   | 6                  |           | 18     | Stiff to very stiff gray CLAY<br>LOAM (TILL)               |          | 2              | Р           | 18                   |
| SILTY CLAY LOAM  | 6 4                |           |        |  |          | 2              | 1.0         |                      |
|  | -5 6               | 4.5+      | 16     |  | -30      | 2<br>2<br>3    | B<br>1.97   | 22                   |
| Very stiff to stiff brown-gray SILTY CLAY LOAM   | 3<br>6             | 3.0       | 22     | 605.5 65.8  Medium dense to dense gray fine to medium SAND | <u> </u> |                |             |                      |
|  | 1 B 4 3.36         | 3.36      | 23     |  | -35      | 5<br>10<br>10  |             | 24                   |
| [624.5] <sub>84.80</sub>   | 1<br>3             |           | 26     |  |          |                |             |                      |
| Very stiff to stiff gray CLAY<br>LOAM (TILL)   | 1<br>4<br>6        | 3.36      | 18     |  |          | 11<br>9<br>30  |             | 17                   |
|  |                    |           | 18     | [595.5] 55.8<br>Very stiff gray CLAY LOAM<br>(TILL)        | <u> </u> |                |             |                      |
|  | 1<br>3<br>20 4     | B<br>1.89 | 15     | (TEE)  | -45      | 6<br>8<br>11   | P<br>3.0    | 12                   |
|  | 1<br>3<br>3        | B<br>2.50 | 15     |  |          |                |             |                      |
| 612.5 <sub>72.80</sub>   | 1<br>1<br>3<br>254 | B<br>1.68 | 27     | [587.5] <sub>47.8</sub>                                    | 0 -50    | 12<br>26<br>32 | B<br>2.83   | 13                   |

# ILLINOIS DEPARTMENT OF TRANSPORTATION Midwest Engineering and Testing STRUCTURE BORING LOG

Page 2 of 2 Date <u>7/26/02</u>



# BORING-2

| FIL   | E NAME = 220428-sht-culvert.dgn    | USER NAME = gmetcalf   | DESIGNED - S.T.M. | REVISED - |                                      | BORINGS                 | T.R. SECTION                     | COUNTY TOTAL SHEET SHEETS NO. |  |
|-------|------------------------------------|------------------------|-------------------|-----------|--------------------------------------|-------------------------|----------------------------------|-------------------------------|--|
|       | HAMPTON, LENZINI AND RENWICK, INC. |                        | CHECKED - S.W.M.  | REVISED - | STATE OF ILLINOIS                    | CTDUCTUDE NO. 052 5525  | 1E 21-00230-00-BR/22-00844-00-BR | LIVINGSTON / 17 10            |  |
| -     | SPRINGFIELD, ILLINOIS 62703        | PLOT SCALE = \$SCALE\$ | DRAWN - R.D.H.    | REVISED - | LIVINGSTON COUNTY HIGHWAY DEPARTMENT | 31KUCTUKE NO. 033-3333  | NEWTOWN / OTTER CREEK R.D.       |                               |  |
| _ iΨ_ |                                    | PLOT DATE = 5/15/2023  | CHECKED - S.W.M.  | REVISED - |                                      | SHEET NO. 6 OF 6 SHEETS | ILLINOIS                         |                               |  |

