| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR & 16-00079-00-BR | SCHUYLER | 52 | 1 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | CONTRACT NO. 93699 | | |

03-09-2018 LETTING ITEM 099

INDEX OF SHEETS

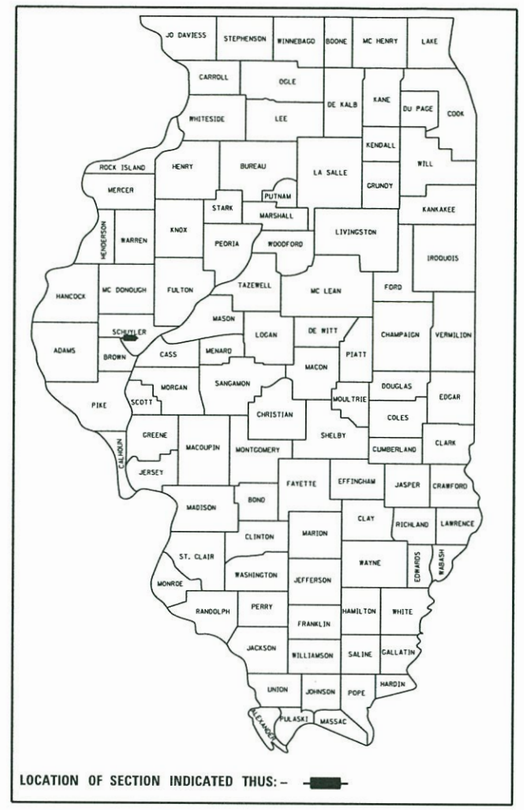


REQUIRED HIGHWAY STANDARDS

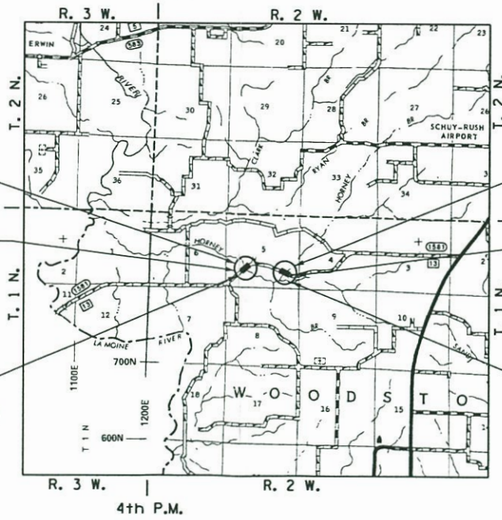
000001-06
280001-07
515001-03
601101-02
630001-12
630301-08
631032-09
701901-07
725001-01
BLR 21-9
BLR 26-3

# STATE OF ILLINOIS
# DEPARTMENT OF TRANSPORTATION
# PLANS FOR PROPOSED
# SURFACE TRANSPORTATION PROGRAM-BRIDGE
## SCHUYLER COUNTY
## SECTION 16-00078-00-BR & 16-00079-00-BR
## F.A.S. 1581 (CH 13) OVER HORNEY BRANCH
## PROJECT NO. CUQI(262)
## JOB NUMBER C-96-010-18

SCALES
- PLAN, PROFILE HORIZ. — 50′ 0 50′
- PROFILE VERT. — 5′ 0 5′
- CROSS SECTIONS HORIZ., CROSS SECTIONS VERT. — 5′ 0 5′




LOCATION OF SECTION INDICATED THUS:- ■




SECTION 16-00078-00-BR
BEGINS STA. 18+00.00
ENDS STA. 22+00.00

SECTION 16-00079-00-BR
BEGINS STA. 37+50.00
ENDS STA. 43+00.00

PROPOSED STRUCTURE SN 085-3057
STATION 20+00.00
THREE SPAN STEEL W-BEAM WITH A REINFORCED CONCRETE DECK SUPERSTRUCTURE ON CONCRETE ENCASED PILE BENT PIERS AND CONCRETE INTEGRAL ABUTMENTS, 110′-0″ BK TO BK, AND 28′-0″ O TO O DECK, NO SKEW.

EXISTING STRUCTURE SN 085-3132
THREE SPAN STEEL BEAM SUPERSTRUCTURE WITH A REINFORCED CONCRETE DECK ON PRECAST CONCRETE PILE BENT ABUTMENTS AND PILE BENT PIERS WITH REINFORCED CONCRETE CAPS, 99′-1″ BK. TO BK., 26′-0″ O. TO O., NO SKEW (TO BE REMOVED)

PROPOSED STRUCTURE SN 085-3058
STATION 40+00.00
SINGLE SPAN STEEL PLATE GIRDER WITH A REINFORCED CONCRETE DECK SUPERSTRUCTURE ON CONCRETE INTEGRAL ABUTMENTS, 96′-0″ BK TO BK, AND 28′-0″ O TO O DECK, NO SKEW.

EXISTING STRUCTURE SN 085-3133
THREE SPAN STEEL BEAM SUPERSTRUCTURE WITH A REINFORCED CONCRETE DECK ON PRECAST CONCRETE PILE BENT ABUTMENTS AND PILE BENT PIERS WITH REINFORCED CONCRETE CAPS, 84′-0″ BK. TO BK., 26′-0″ O. TO O., NO SKEW (TO BE REMOVED)

LOCATION MAP
1 MI 0 1 MI
APPROXIMATE SCALE

NET LENGTH OF PROJECT = 950.00 FEET = 0.18 MILES

DESIGN CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
DESIGN ADT = 200 (18)
DESIGN SPEED = 30 MPH

UTILITY COMPANIES

FRONTIER COMMUNICATIONS
JACKSONVILLE, ILLINOIS

ADAMS ELECTRIC COOPERATIVE
CAMP POINT, ILLINOIS

HICKORY KERTON WATER CO-OP
RUSHVILLE, ILLINOIS

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

**CONTRACT NO. 93699**

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES

2017 JOB#4079-1/4079-2

CHRIS E. HUTCHISON — REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS — 12118417

12/18/17
SIGNATURE

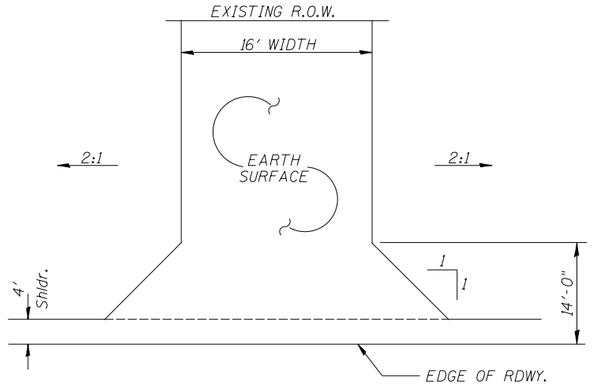
ENGINEER'S SEAL

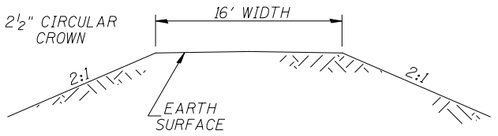
APPROVED David L Schneider 2017
12/18/17
SCHUYLER COUNTY ENGINEER

PASSED 12-21 2017
Chad L Ebell
DISTRICT SIX ENGINEER OF
LOCAL ROADS & STREETS

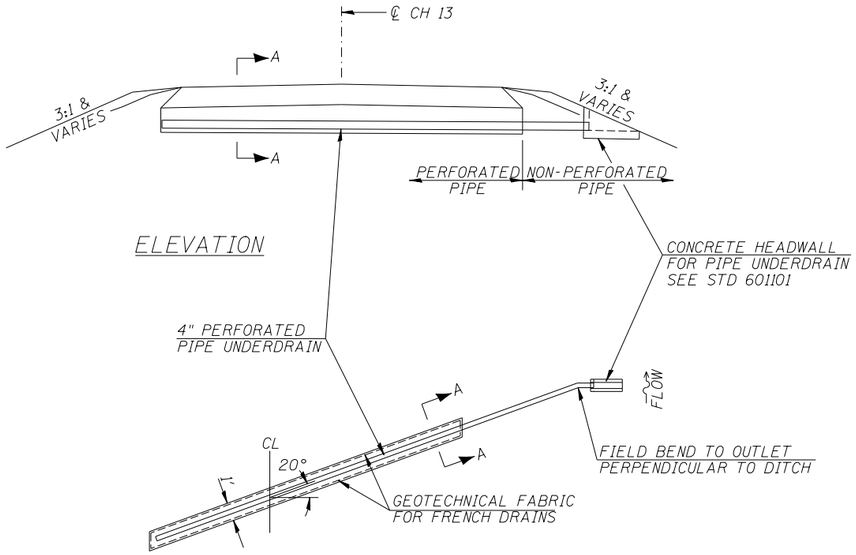
PASSED 12-21 2017
Jeffrey M Smith
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

4079-1/4079-2E001



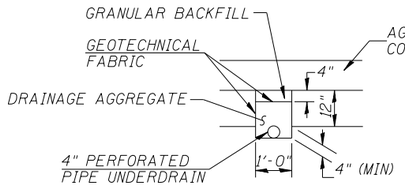




FIELD ENTRANCE
STA 18+20 LT

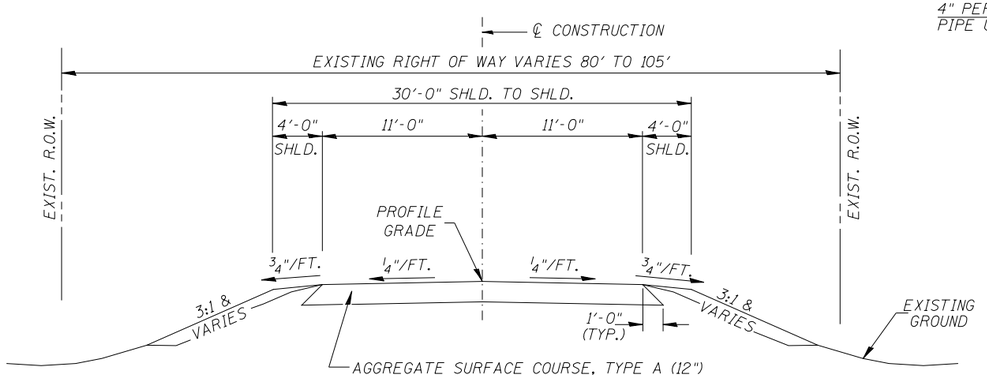



ELEVATION

PLAN




SECTION A-A




CONSTRUCT GUARDRAIL SHOULDER WIDENING IN ACCORDANCE WITH STD 630301

PROPOSED TYPICAL SECTION

STA. 18+00.00 TO STA. 19+45.00
STA. 20+55.00 TO STA. 22+00.00
STA. 37+50.00 TO STA. 39+52.00
STA. 40+48.00 TO STA. 43+00.00

EXCEPT TRANSITIONS

BRIDGE OMISSION
STA. 19+45.00 TO STA. 20+55.00
STA. 39+52.00 TO STA. 40+48.00

## GENERAL NOTES

PLAN QUANTITIES FOR TREE REMOVAL HAVE BEEN BASED ON ALL TREES WITHIN THE EXISTING RIGHT OF WAY. THIS QUANTITY MAY BE REVISED DURING CONSTRUCTION, AT THE DIRECTION OF THE ENGINEER, BY DELETING FROM THE TREE REMOVAL QUANTITIES, SUCH TREES THAT DO NOT INTERFERE WITH THE PROPOSED CONSTRUCTION.

THE REMOVAL OF EXISTING OIL & CHIP SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE NEW BRIDGE SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

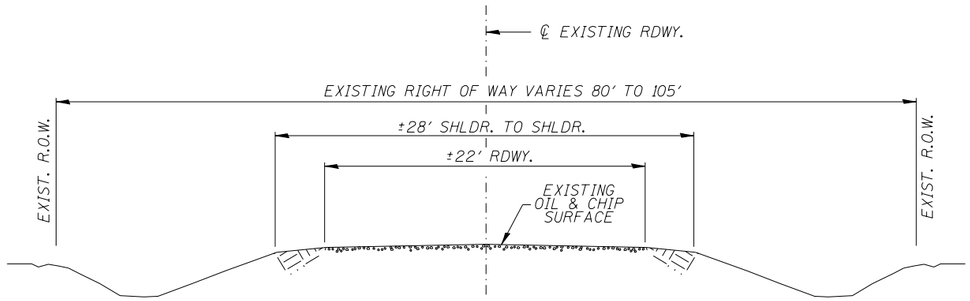
ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

ALL ELEVATIONS SHOWN REFER TO AN U.S.G.S. MEAN SEA LEVEL DATUM.




EXISTING TYPICAL SECTION

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1t00DET.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - | SCHUYLER COUNTY COUNTY HIGHWAY 13 OVER HORNEY BRANCH | GENERAL NOTES, TYPICAL SECTIONS, DETAILS | F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | | DRAWN - | REVISED - | | | 1581 | 16-00078-00-BR & 16-00079-00-BR | SCHUYLER | 52 | 2 |
| | PLOT SCALE = 2.0000 ' / in. | CHECKED - | REVISED - | | | | | CONTRACT NO. 93699 | | |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - | | SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. 18+00.00 TO STA. 43+00.00 | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

## SUMMARY OF QUANTITIES

| | CODE NO. | ITEM | UNIT | SN 085-3057 IMPROVEMENTS | SN 085-3058 IMPROVEMENTS | TOTAL QUANTITIES |
|---|---|---|---|---|---|---|
| ① | 20100110 | TREE REMOVAL (6 TO 15 UNITS DIAMETER) | UNIT | — | 89 | 89 |
| ① | 20100210 | TREE REMOVAL (OVER 15 UNITS DIAMETER) | UNIT | 70 | 118 | 188 |
| | 20200100 | EARTH EXCAVATION | CU YD | 306 | 289 | 595 |
| | 20300100 | CHANNEL EXCAVATION | CU YD | 25 | 40 | 65 |
| | 20400800 | FURNISHED EXCAVATION | CU YD | 433 | 77 | 510 |
| | 28000400 | PERIMETER EROSION BARRIER | FOOT | 700 | 965 | 1,665 |
| | 28100207 | STONE RIPRAP, CLASS A4 | TON | 40 | 115 | 155 |
| | 28200200 | FILTER FABRIC | SQ YD | 60 | 165 | 225 |
| | 40200100 | AGGREGATE SURFACE COURSE, TYPE A | TON | 466 | 730 | 1,196 |
| ① | 50100300 | REMOVAL OF EXISTING STRUCTURES NO. 1 | EACH | 1 | — | 1 |
| ① | 50100400 | REMOVAL OF EXISTING STRUCTURES NO. 2 | EACH | — | 1 | 1 |
| | 50200100 | STRUCTURE EXCAVATION | CU YD | 195 | 205 | 400 |
| | 50200300 | COFFERDAM EXCAVATION | CU YD | 195 | — | 195 |
| | 50201101 | COFFERDAM (TYPE 1) (LOCATION 1) | EACH | 1 | — | 1 |
| | 50201102 | COFFERDAM (TYPE 1) (LOCATION 2) | EACH | 1 | — | 1 |
| | 50300225 | CONCRETE STRUCTURES | CU YD | 101.9 | 33.1 | 135.0 |
| ① | 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 101.9 | 100.4 | 202.3 |
| | 50300260 | BRIDGE DECK GROOVING | SQ YD | 318 | 277 | 595 |
| | 50300300 | PROTECTIVE COAT | SQ YD | 377 | 329 | 706 |
| | 50500105 | FURNISHING AND ERECTING STRUCTURAL STEEL | L SUM | 0.40 | 0.60 | 1 |
| | 50500505 | STUD SHEAR CONNECTORS | EACH | 2,865 | 940 | 3,805 |
| | 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 37,070 | 27,320 | 64,390 |
| △ | 50901050 | STEEL RAILING, TYPE SM | FOOT | 220 | — | 220 |
| | 51201600 | FURNISHING STEEL PILES HP12X53 | FOOT | 1,268 | 284 | 1,552 |
| | 51202305 | DRIVING PILES | FOOT | 1,268 | 284 | 1,552 |
| | 51203600 | TEST PILE STEEL HP12X53 | EACH | 4 | 2 | 6 |
| | 51500100 | NAME PLATES | EACH | 1 | 1 | 2 |
| | 52100520 | ANCHOR BOLTS, 1" | EACH | 40 | 20 | 60 |
| | 59100100 | GEOCOMPOSITE WALL DRAIN | SQ YD | 46 | 62 | 108 |
| △ | 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | FOOT | 62.5 | — | 62.5 |
| △ | 63100087 | TRAFFIC BARRIER TERMINAL, TYPE 6A | EACH | 4 | 2 | 6 |
| △ | 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 4 | 2 | 6 |
| | 67100100 | MOBILIZATION | L SUM | 0.5 | 0.5 | 1 |
| △ | 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 | 4 | 8 |
| ① | X0326911 | TRANSVERSE DRAINS COMPLETE | EACH | — | 1 | 1 |
| ① | X2501000 | SEEDING, CLASS 2 (SPECIAL) | ACRE | 0.4 | 0.8 | 1.2 |
| ① | X5860110 | GRANULAR BACKFILL FOR STRUCTURES | CU YD | 85 | 125 | 210 |
| ① | X7010216 | TRAFFIC CONTROL AND PROTECTION (SPECIAL) | L SUM | 0.5 | 0.5 | 1 |
| ① | Z0046304 | PIPE UNDERDRAINS FOR STRUCTURES 4" | FOOT | 106 | 112 | 218 |
| △ | XX006199 | STEEL BRIDGE RAIL, TYPE SM (SPECIAL) | FOOT | — | 192 | 192 |
| # | Z0076600 | TRAINEES | HOUR | | | 1,000 |
| # | Z0076604 | IDOT TRAINING PROGRAM GRADUATE ON-THE-JOB TRAINING | HOUR | | | 1,000 |

① SEE SPECIAL PROVISIONS

△ SPECIALTY ITEMS

# 0042

CONSTRUCTION CODE TYPE: 0010
BRIDGE CODE TYPE: X071

## EARTHWORK SUMMARY

| STATION TO STATION | EARTH EXCAVATION | CHANNEL EXCAVATION | STRUCTURE EXCAVATION | COFFERDAM EXCAVATION | FILL | WASTE (SHORTAGE) |
|---|---|---|---|---|---|---|
| | CU YD | CU YD | CU YD | CU YD | CU YD | CU YD |
| SN 085-3057 IMPROVEMENTS | | | | | | |
| RDWY 18+00.00 - 19+45.00 | 117 | | | | 402 | (315) |
| RDWY 20+55.00 - 22+00.00 | 189 | | | | 260 | (118) |
| CHANNEL | | 25 | | | | |
| STRUCTURE | | | 195 | | | |
| COFFERDAM | | | | 195 | | |
| SN 085-3058 IMPROVEMENTS | | | | | | |
| RDWY 37+50.00 - 39+52.00 | 216 | | | | 175 | (13) |
| RDWY 40+48.00 - 43+00.00 | 73 | | | | 118 | (64) |
| CHANNEL | | 40 | | | | |
| STRUCTURE | | | 205 | | | |
| TOTAL | 595 | 65 | 400 | 195 | 955 | (510) |
| USE | 595 | 65 | 400 | 195 | - | (510) |

(@ 25% SHRINKAGE)

## TREE REMOVAL

| STATION | OFFSET | SIDE | 6 TO 15 UNITS | OVER 15 UNITS |
|---|---|---|---|---|
| SN 085-3057 IMPROVEMENTS | | | | |
| 18+67 | 37' | LEFT | | 30 |
| 19+44 | 37' | LEFT | | 24 |
| 20+60 | 39' | LEFT | | 16 |
| SN 085-3058 IMPROVEMENTS | | | | |
| 40+73 | 40' | LEFT | | 32 |
| 40+75 | 40' | LEFT | | 28 |
| 41+06 | 56' | LEFT | 15 | |
| 41+25 | 39' | LEFT | 15 | 17 |
| 41+32 | 63' | LEFT | | 21 |
| 41+33 | 37' | LEFT | 14 | |
| 41+44 | 52' | LEFT | | 20 |
| 41+79 | 55' | LEFT | 15 | |
| 41+84 | 44' | LEFT | 12 | |
| 41+93 | 58' | LEFT | 8 | |
| 41+99 | 42' | LEFT | 10 | |
| | | TOTAL | 89 | 188 |

## PERIMETER EROSION BARRIER

| STATION TO STATION | SIDE | FOOT |
|---|---|---|
| SN 085-3057 IMPROVEMENTS | | |
| 18+00 - 19+45 | LEFT | 180 |
| 18+00 - 19+45 | RIGHT | 175 |
| 20+55 - 22+00 | LEFT | 175 |
| 20+55 - 22+00 | RIGHT | 170 |
| SN 085-3058 IMPROVEMENTS | | |
| 37+50 - 39+52 | LEFT | 225 |
| 37+50 - 39+52 | RIGHT | 225 |
| 40+48 - 43+00 | LEFT | 255 |
| 40+48 - 43+00 | RIGHT | 260 |
| | TOTAL | 1,665 |

## TRANSVERSE DRAINS COMPLETE

| STATION TO STATION | EACH |
|---|---|
| SN 085-3058 IMPROVEMENTS | |
| 40+61.90 - 40+75.00 | 1 |
| TOTAL | 1 |

## AGGREGATE SURFACE COURSE, TYPE A

| STATION TO STATION | THICKNESS | WIDTH | LENGTH | TON |
|---|---|---|---|---|
| SN 085-3057 IMPROVEMENTS | | | | |
| 18+00.00 - 18+50.00 | 1.00' | 22.80' AVG. | 50.00' | 80 |
| 18+50.00 - 19+45.00 | 1.00' | 23.00' | 95.00' | 153 |
| 20+55.00 - 21+50.00 | 1.00' | 23.00' | 95.00' | 153 |
| 21+50.00 - 22+00.00 | 1.00' | 22.95' AVG. | 50.00' | 80 |
| SN 085-3058 IMPROVEMENTS | | | | |
| 37+50.00 - 38+00.00 | 1.00' | 22.75' AVG. | 50.00' | 80 |
| 38+00.00 - 39+52.00 | 1.00' | 23.00' | 152.00' | 245 |
| 40+48.00 - 42+50.00 | 1.00' | 23.00' | 202.00' | 325 |
| 42+50.00 - 43+00.00 | 1.00' | 22.78' AVG. | 50.00' | 80 |
| | | | TOTAL | 1,196 |

## TRAFFIC BARRIER TERMINAL, TYPE 6A

| STATION TO STATION | SIDE | EACH |
|---|---|---|
| SN 085-3057 IMPROVEMENTS | | |
| 19+07.50 - 19+45.00 | LEFT | 1 |
| 19+07.50 - 19+45.00 | RIGHT | 1 |
| 20+55.00 - 20+92.50 | LEFT | 1 |
| 20+55.00 - 20+92.50 | RIGHT | 1 |
| SN 085-3058 IMPROVEMENTS | | |
| 39+14.50 - 39+52.00 | RIGHT | 1 |
| 40+48.00 - 40+85.50 | LEFT | 1 |
| | TOTAL | 6 |

## TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

| STATION TO STATION | SIDE | EACH |
|---|---|---|
| SN 085-3057 IMPROVEMENTS | | |
| 18+45.00 - 18+95.00 | LEFT | 1 |
| 18+57.50 - 19+07.50 | RIGHT | 1 |
| 21+17.50 - 21+67.50 | LEFT | 1 |
| 21+17.50 - 21+67.50 | RIGHT | 1 |
| SN 085-3058 IMPROVEMENTS | | |
| 38+64.50 - 39+14.50 | RIGHT | 1 |
| 40+85.50 - 41+35.50 | LEFT | 1 |
| | TOTAL | 6 |

## STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS

| STATION TO STATION | SIDE | FOOT |
|---|---|---|
| SN 085-3057 IMPROVEMENTS | | |
| 18+95.00 - 19+07.50 | LEFT | 12.5 |
| 20+92.50 - 21+17.50 | LEFT | 25.0 |
| 20+92.50 - 21+17.50 | RIGHT | 25.0 |
| | TOTAL | 62.5 |

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-Was\ | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | Bridge (Schuyler)\CADD\CADD Sheets\4079-1q3200.dgn | DRAWN - | REVISED - |
| | PLOT SCALE = 2.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**SUMMARY OF QUANTITIES, & SCHEDULES OF QUANTITIES**

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 18+00.00 | TO STA. 43+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR & 16-00079-00-BR | SCHUYLER | 52 | 3 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUD11262 | | |

R 2 W, 4th PM

SECTION 30 | SECTION 29 | SECTION 28 | SECTION 27 | SECTION 26

SECTION 31 | SECTION 32 | SECTION 33 | SECTION 34 | SECTION 35

T 1 N | T 2 N

T 1 N | T 2 N

SECTION 6 | SECTION 5 | SECTION 4 | SECTION 3 | SECTION 2

SECTION 7 | SECTION 8 | SECTION 9 | SECTION 10 | SECTION 11

SECTION 18 | SECTION 17 | SECTION 16 | SECTION 15

R 2 W, 4th PM

1 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3 — ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY

2 ROAD CLOSED 1/3 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3 — ROAD CLOSED 1/3 MILE AHEAD LOCAL TRAFFIC ONLY

3 ROAD CLOSED AHEAD — W20-3 — ROAD CLOSED AHEAD

4 ROAD CLOSED 500 FT — W20-3 — ROAD CLOSED 500 FT

5 TYPE III BARRICADES

SEE STANDARD BLR 21 AND SPECIAL PROVISIONS

1/3 MI 0 1/3 MI

GRAPHIC SCALE IN MILES

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1h00DSHT.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 2.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13**
**OVER HORNEY BRANCH**

**TRAFFIC CONTROL PLAN**

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 18+00.00 TO STA. 43+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR & 16-00079-00-BR | SCHUYLER | 52 | 4 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

T 1 N, R 2 W, 4th PM
SECTION 5

BRANCH

+00 +45 +55 +00

17 18 19 20 21 22

COUNTY HIGHWAY 13

23

+00 +45 +55 +00

HORNEY

PROPOSED STRUCTURE
S.N. 085-3057

LEGEND

PERIMETER EROSION BARRIER

PROPOSED RIPRAP PLACEMENT

EXISTING RIPRAP

T 1 N, R 2 W, 4th PM
SECTION 5

20' 0' 20'
GRAPHIC SCALE IN FEET

| | | | |
|---|---|---|---|
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| | | DRAWN - | REVISED - |
| | PLOT SCALE = 40.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

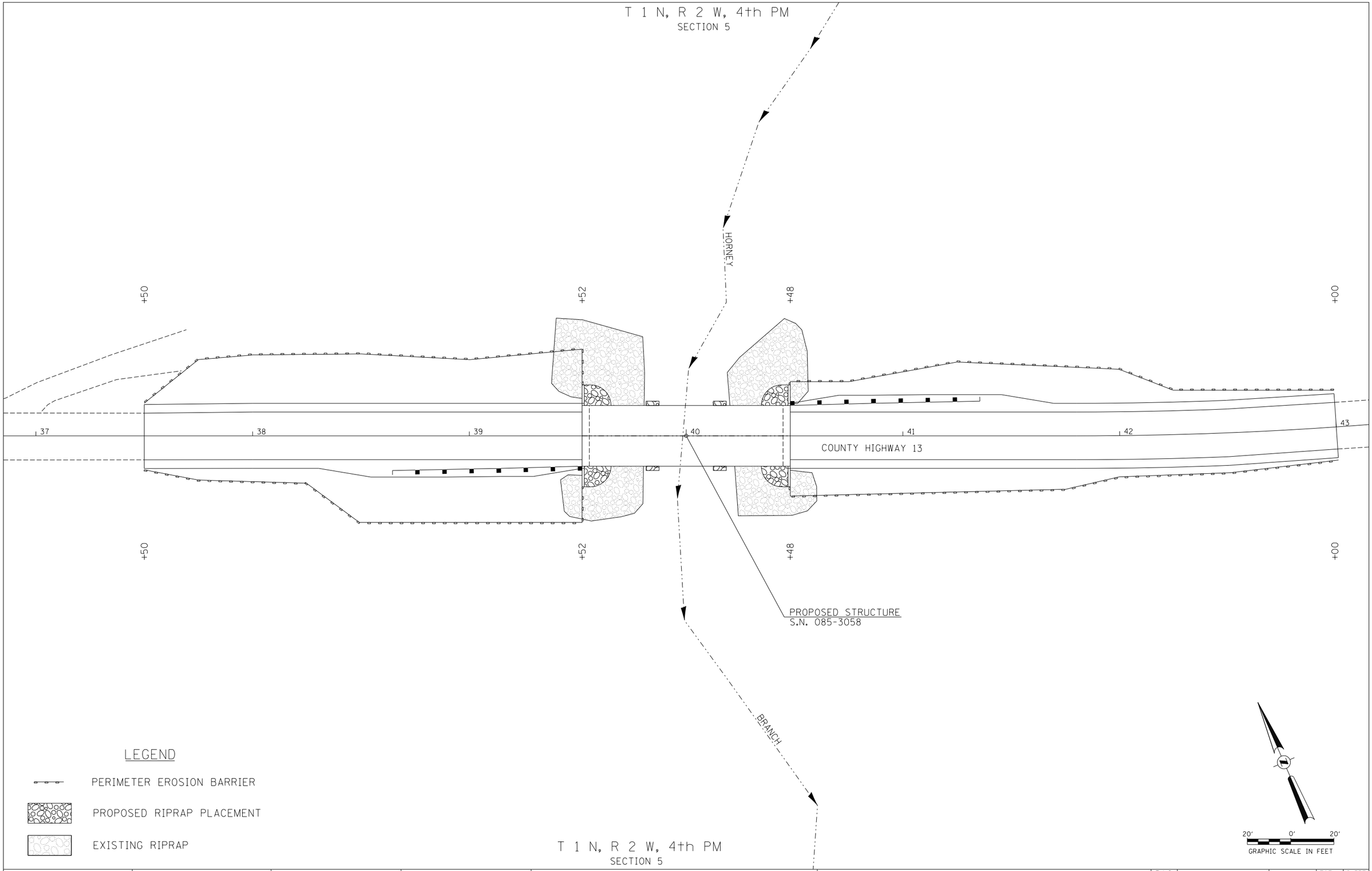
**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**EROSION CONTROL PLAN**

SCALE: 1"=20' | SHEET NO. 1 OF 1 SHEETS | STA. 18+00.00 | TO STA. 22+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 5 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

T 1 N, R 2 W, 4th PM
SECTION 5




LEGEND

PERIMETER EROSION BARRIER

PROPOSED RIPRAP PLACEMENT

EXISTING RIPRAP

T 1 N, R 2 W, 4th PM
SECTION 5

20' 0' 20'
GRAPHIC SCALE IN FEET

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2s00DRAWN | USER NAME = SMierzwa | DESIGNED - | REVISED - |
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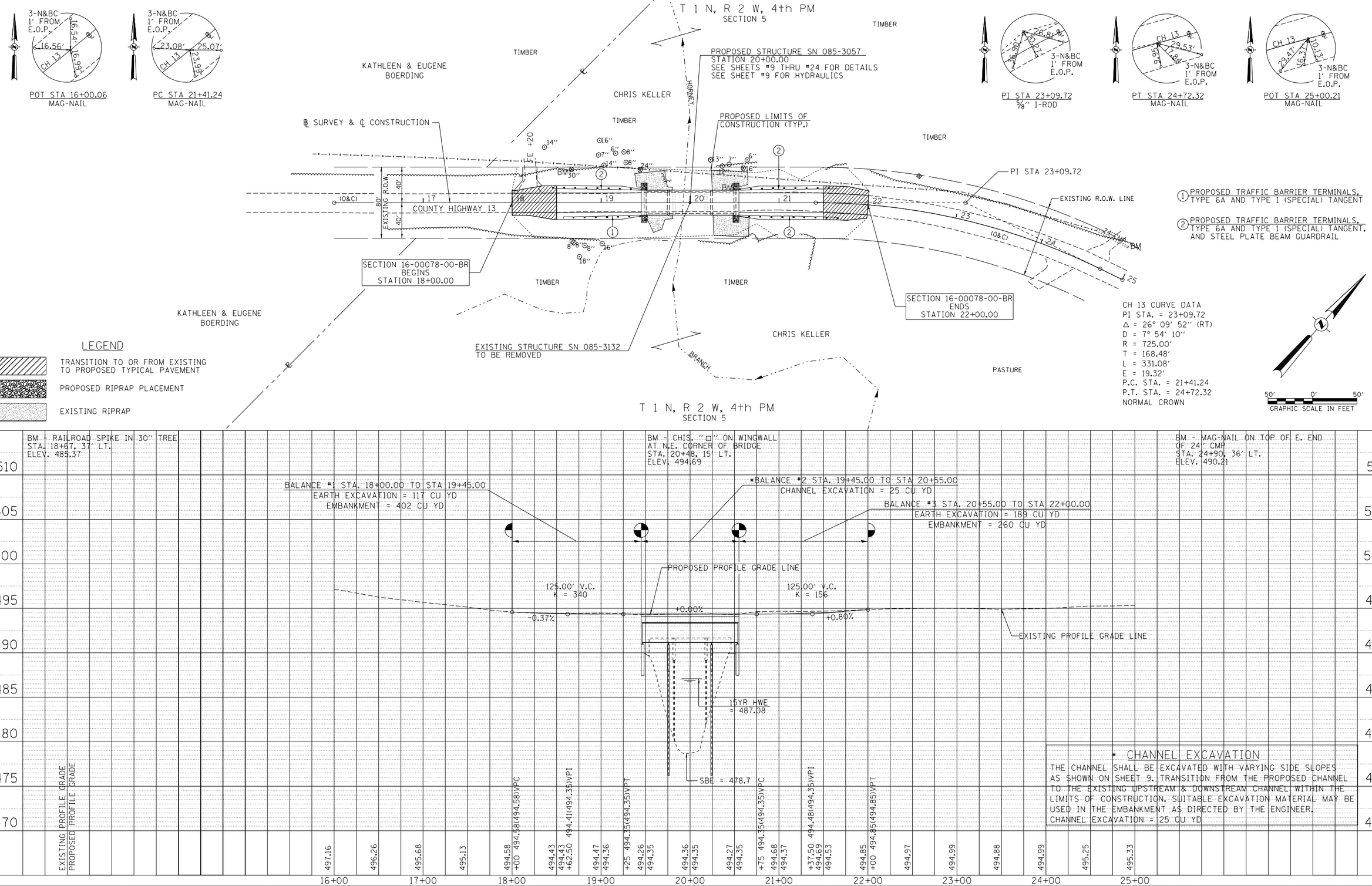
| | PLOT SCALE = 40.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**EROSION CONTROL PLAN**

SCALE: 1"=20' | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 | TO STA. 43+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 6 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

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| Default | | DRAWN - | REVISED - |
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| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

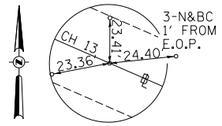
**PLAN AND PROFILE**

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 18+00.00 TO STA. 22+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 7 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

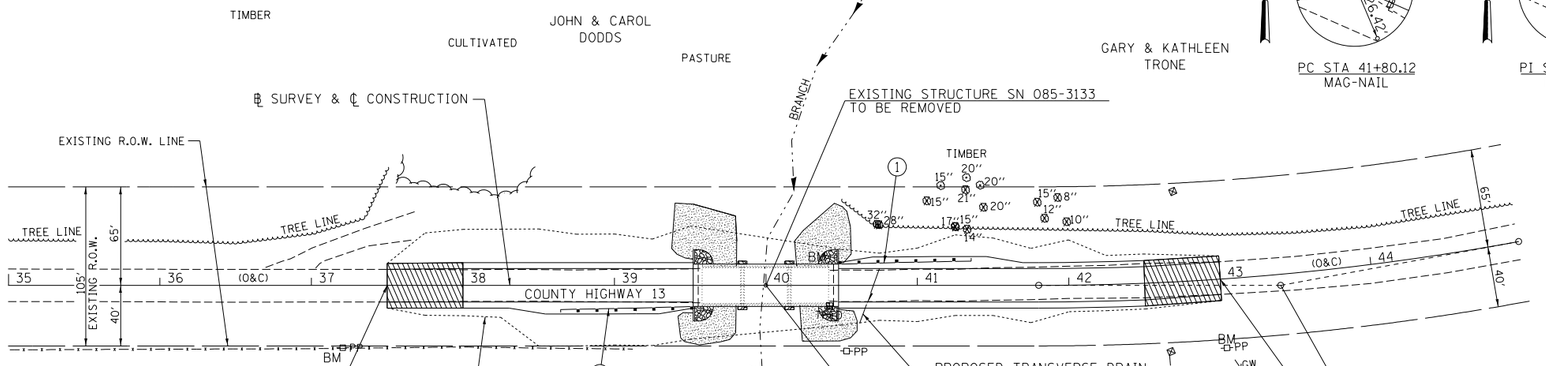
PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

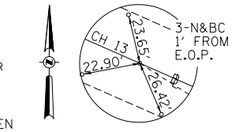
PROFILE: SURVEYED, PLOTTED, PROFILE CHECKED, B.M. NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO., BY, DATE



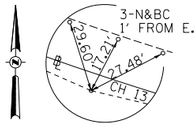

POT STA 34+99.73
MAG-NAIL

T 1 N, R 2 W, 4th PM
SECTION 5

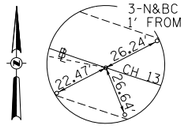



PC STA 41+80.12
MAG-NAIL

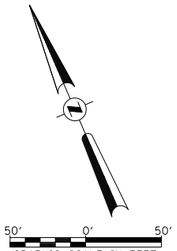



PI STA 43+39.85
MAG-NAIL




PT STA 44+98.69
MAG-NAIL

CH 13 CURVE DATA
PI STA. = 43+39.85
Δ = 10° 25' 48" (LT)
D = 3° 16' 27"
R = 1,750.00'
T = 159.73'
L = 318.57'
E = 7.27'
P.C. STA. = 41+80.12
P.T. STA. = 44+98.69
NORMAL CROWN




## LEGEND

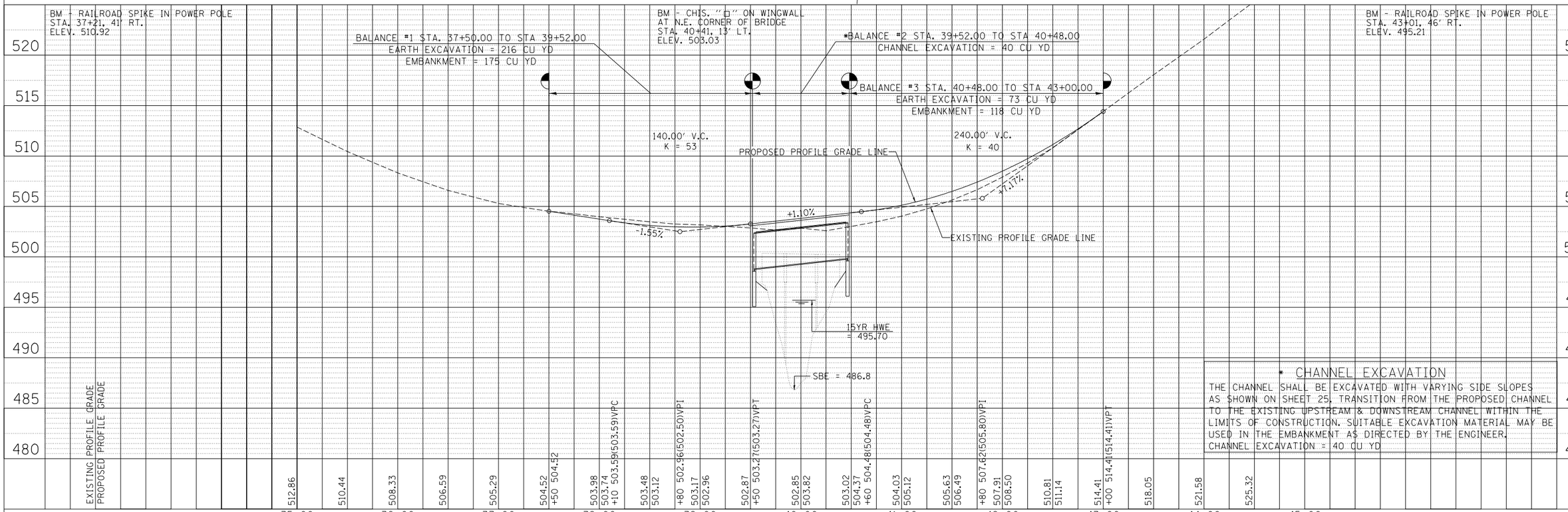
- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- EXISTING RIPRAP

① PROPOSED TRAFFIC BARRIER TERMINALS, TYPE 6A AND TYPE 1 (SPECIAL) TANGENT

T 1 N, R 2 W, 4th PM
SECTION 5

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
PROFILE CHECKED
BM. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE




* CHANNEL EXCAVATION

THE CHANNEL SHALL BE EXCAVATED WITH VARYING SIDE SLOPES AS SHOWN ON SHEET 25. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 40 CU YD

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Default | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | Bridge (Schuyler\CADD\CADD Sheets\4079-2p001.dgn | DRAWN - | REVISED - |
| | PLOT SCALE = 100.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**PLAN AND PROFILE**

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 37+50.00 TO STA. 43+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 8 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

B.M.: RR Spike in 22" Tree
Sta. 18+67, 37' Lt.
Elev. 485.37

Mag-nail on Top of E. End of 24" CMP
Sta. 24+90, 36' Lt.
Elev. 490.21

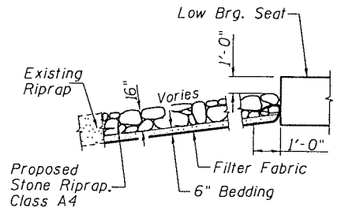
Existing Structure:

Three span steel beam superstructure with a reinforced concrete deck supported on precast concrete pile bent abutments and pile bent piers with reinforced concrete cops. The structure is ±99'-1" back to bock of abutments, 26'-0" out to out deck, and is not skewed. The structure wos built in 1956.
Str. No. 085-3132.

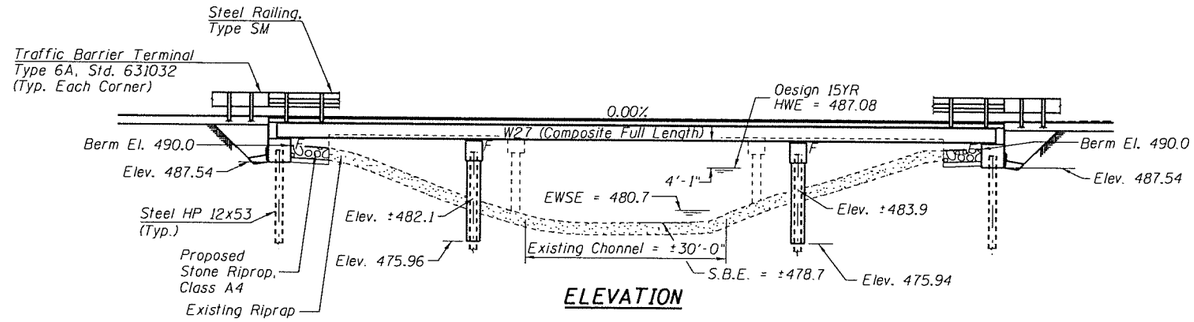
Salvage: Existing Riprap

Road to be closed to troffic during construction.

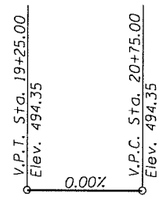
Note:
See Sheet 2 of 16 for Totol Bill of Materials and Index of Sheets.



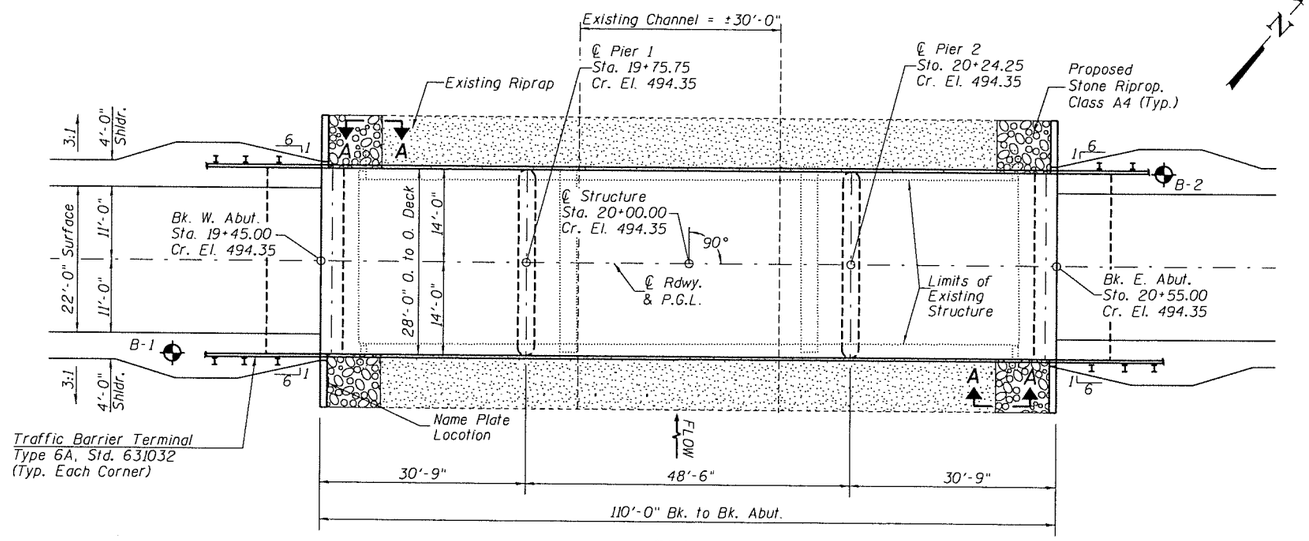

SECTION A-A




ELEVATION




PROFILE GRADE
F.A.S. 1581 (CH 13)




PLAN

## DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevations (ft.) | | | | | Item 113 |
|---|---|---|---|---|---|
| | W. Abut. | Pier 1 | Pier 2 | E. Abut. | |
| 0.100 | 487.5 | 470.7 | 472.5 | 487.5 | 5 |
| 0.200 | 487.5 | 469.5 | 471.3 | 487.5 | |
| Design | 487.5 | 470.7 | 472.5 | 487.5 | |
| Check | 487.5 | 469.5 | 471.3 | 487.5 | |

## WATERWAY INFORMATION

Drainage Area = 11.02 Sq. Mi. Low Grade Elev. = 494.35 @ Sta. 20+00.00

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. Exist. | Opening Sq. Ft. Prop. | Hot. H.W.E. | Head - Ft. Exist. | Head - Ft. Prop. | Headwater El. Exist. | Headwater El. Prop. |
|---|---|---|---|---|---|---|---|---|---|
| Design | 15 | 2,436 | 378 | 378 | 487.08 | 0.69 | 0.67 | 487.77 | 487.75 |
| Base | 100 | 3,890 | 449 | 447 | 488.06 | 1.48 | 1.47 | 489.54 | 489.53 |

Construction of this project complies with IDNR.
Office of Water Resources Statewide Permit No. 2

| | |
|---|---|
| DESIGNED | C.T.M. |
| CHECKED | B.A.N. |
| DRAWN | C.T.M. |
| CHECKED | B.A.N. |

## DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

## DESIGN STRESSES

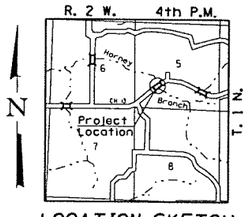
f'c = 3,500 psi (Substructure)
f'c = 5,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

## LOADING HL-93

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

## SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. ($S_{D1}$) = 0.125g
Design Spectral Acceleration at 0.2 sec. ($S_{DS}$) = 0.200g
Soil Site Class = D




LOCATION SKETCH


Lic. Exp. 11/30/2018

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequote for the design looding shown on the plans. The design is an economical one far the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specificotions.
This design complies with all requirements of the current AASHTO Guide Specifications far Seismic Design of highway bridges.

Gregory T. Maas 12/15/17

Illinois Structurol No. 7999
Expires 11/30/2018

# GENERAL PLAN & ELEVATION
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00
# STRUCTURE NO. 085-3057

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD-PEORIA-QUAD CITIES

2017 JOB#4079-1

SHEET NO. 1
16 SHEETS

| F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 9 |
| | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUO1(262) | | |

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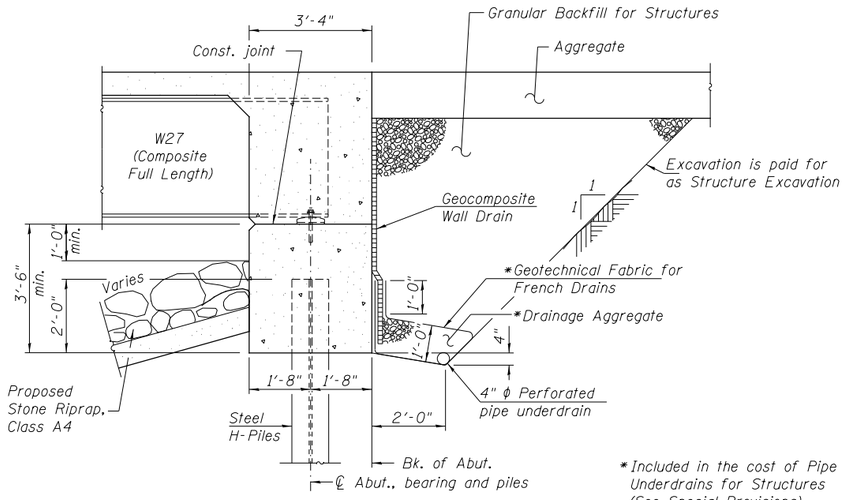



*Included in the cost of Pipe Underdrains for Structures (See Special Provisions)

## SECTION THRU INTEGRAL ABUTMENTS

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

## GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 type 3 in unpainted areas. Bolts $\frac{7}{8}$" ϕ, holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 53,800 lb (AASHTO M270 Gr. 50W)

All structural steel shall be AASHTO M270 Gr. 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

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

Protective Coat shall be applied to the top and sides of the bridge deck.

Bridge Deck Grooving is figured 1'-0" from the face of the rail.

For Soil Boring Logs, See Special Provisions.

## INDEX OF SHEETS



HORNEY BRANCH
BUILT 201_ BY
SCHUYLER COUNTY
SEC. 16-00078-00-BR
C.H. 13 STATION 20+00.00
F.A. PROJ. NO. CUQI(262)
STR. NO. 085-3057 LOADING HL-93

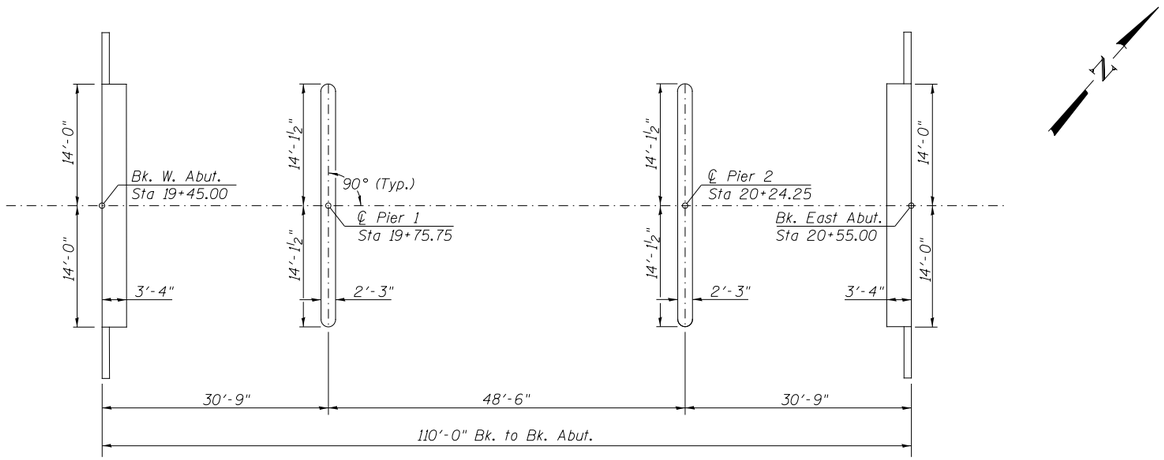
## NAME PLATE

Locate Name Plate on S.W. Wingwall of Bridge (See Std. 515001)

## TOTAL BILL OF MATERIAL

| | ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---|---|---|---|---|
| | Channel Excavation | CU YD | —— | 25 | 25 |
| | Stone Riprap, Class A4 | TON | —— | 40 | 40 |
| | Filter Fabric | SQ YD | —— | 60 | 60 |
| (1) | Granular Backfill for Structures | CU YD | —— | 85 | 85 |
| (1) | Removal of Existing Structures No. 1 | EACH | —— | —— | 1 |
| | Cofferdam Excavation | CU YD | —— | 195 | 195 |
| | Structure Excavation | CU YD | —— | 195 | 195 |
| | Concrete Structures | CU YD | —— | 101.9 | 101.9 |
| (1) | Concrete Superstructure | CU YD | 101.9 | —— | 101.9 |
| | Bridge Deck Grooving | SQ YD | 318 | —— | 318 |
| | Protective Coat | SQ YD | 377 | —— | 377 |
| | Furnishing and Erecting Structural Steel | L SUM | 0.40 | —— | 0.40 |
| | Reinforcement Bars, Epoxy Coated | POUND | 25,940 | 11,130 | 37,070 |
| | Stud Shear Connectors | EACH | 2,865 | —— | 2,865 |
| | Anchor Bolts, 1" | EACH | —— | 40 | 40 |
| | Furnishing Steel Piles HP12x53 | FOOT | —— | 1,268 | 1,268 |
| | Test Pile Steel HP12x53 | EACH | —— | 4 | 4 |
| | Driving Piles | FOOT | —— | 1,268 | 1,268 |
| | Name Plates | EACH | —— | 1 | 1 |
| | Steel Railing, Type SM | FOOT | 220 | —— | 220 |
| | Geocomposite Wall Drain | SQ YD | —— | 46 | 46 |
| (1) | Pipe Underdrains For Structures 4" | FOOT | —— | 106 | 106 |
| | Cofferdam (Type 1) (Location-1) | EACH | —— | 1 | 1 |
| | Cofferdam (Type 1) (Location-2) | EACH | —— | 1 | 1 |

(1) See Special Provisions




## FOOTING LAYOUT

## GENERAL NOTES, DETAILS, BILL OF MATERIAL & FOOTING LAYOUT F.A.S. 1581 (C.H. 13) OVER HORNEY BRANCH SECTION 16-00078-00-BR SCHUYLER COUNTY STATION 20+00.00

| SHEET NO. 2 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 10 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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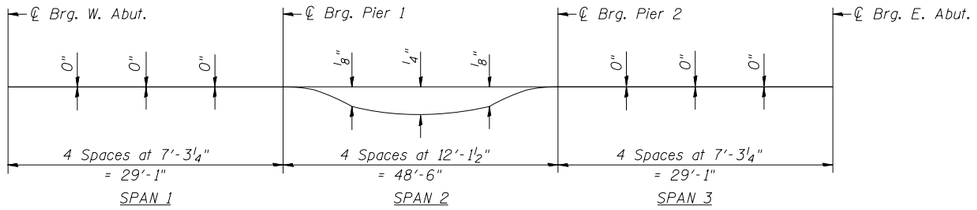
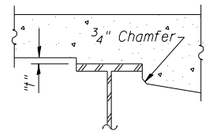


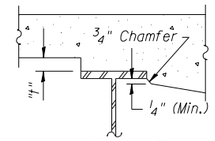

## DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in the tables on Sheet 4 of 16.



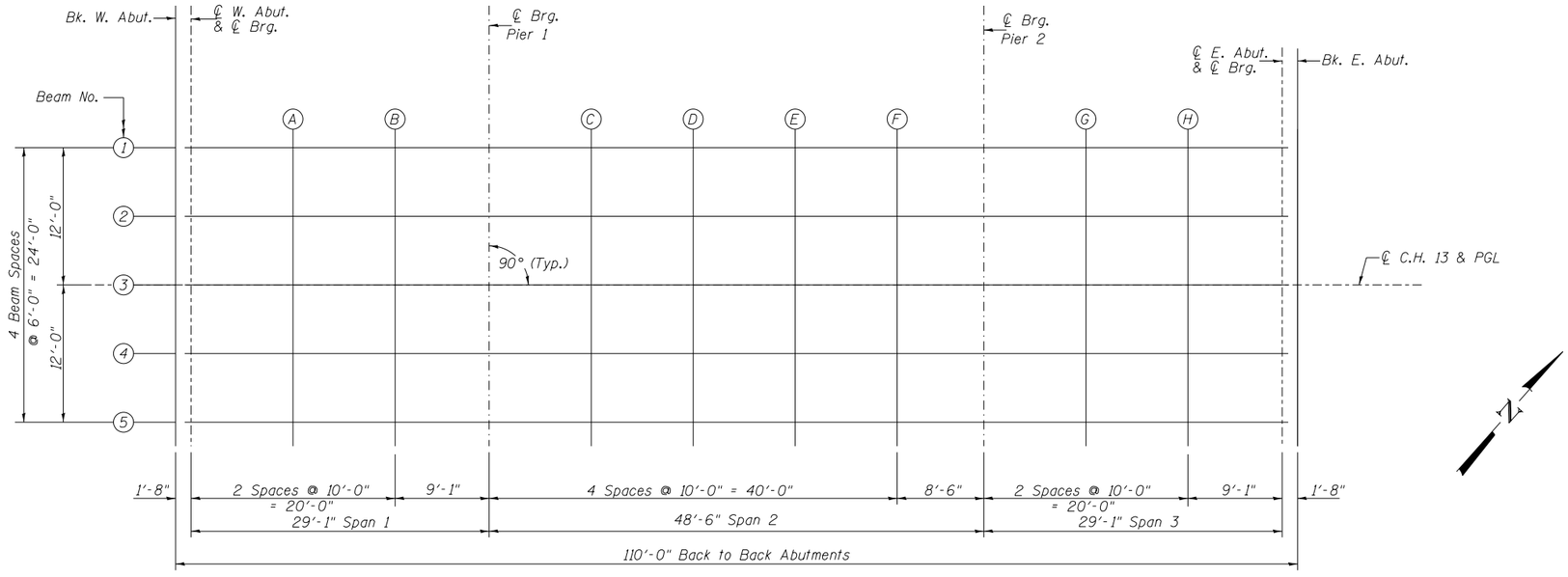

At Minimum Fillet




At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in the tables on Sheet 4 of 16, minus slab thickness, equals the fillet height "t" above top flange of beams.

## FILLET HEIGHTS




## PLAN

## TOP OF DECK ELEVATIONS
## F.A.S. 1581 (C.H. 13)
## OVER HORNEY BRANCH
## SECTION 16-00078-00-BR
## SCHUYLER COUNTY
## STATION 20+00.00

| SHEET NO. 3 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 11 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

4079-1b003.dgn

## BEAM #1

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted for Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 19+45.00 | -12.00 | 494.16 | 494.16 |
| CL Brg W. Abut. | 19+46.67 | -12.00 | 494.16 | 494.16 |
| A | 19+56.67 | -12.00 | 494.16 | 494.16 |
| B | 19+66.67 | -12.00 | 494.16 | 494.16 |
| CL Brg Pier 1 | 19+75.75 | -12.00 | 494.16 | 494.16 |
| C | 19+85.75 | -12.00 | 494.16 | 494.17 |
| D | 19+95.75 | -12.00 | 494.16 | 494.18 |
| E | 20+05.75 | -12.00 | 494.16 | 494.18 |
| F | 20+15.75 | -12.00 | 494.16 | 494.17 |
| CL Brg Pier 2 | 20+24.25 | -12.00 | 494.16 | 494.16 |
| G | 20+34.25 | -12.00 | 494.16 | 494.16 |
| H | 20+44.25 | -12.00 | 494.16 | 494.16 |
| CL Brg E. Abut. | 20+53.33 | -12.00 | 494.16 | 494.16 |
| Bk E. Abutment | 20+55.00 | -12.00 | 494.16 | 494.16 |

## BEAM #2

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted for Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 19+45.00 | -6.00 | 494.26 | 494.26 |
| CL Brg W. Abut. | 19+46.67 | -6.00 | 494.26 | 494.26 |
| A | 19+56.67 | -6.00 | 494.26 | 494.26 |
| B | 19+66.67 | -6.00 | 494.26 | 494.26 |
| CL Brg Pier 1 | 19+75.75 | -6.00 | 494.26 | 494.26 |
| C | 19+85.75 | -6.00 | 494.26 | 494.27 |
| D | 19+95.75 | -6.00 | 494.26 | 494.28 |
| E | 20+05.75 | -6.00 | 494.26 | 494.28 |
| F | 20+15.75 | -6.00 | 494.26 | 494.27 |
| CL Brg Pier 2 | 20+24.25 | -6.00 | 494.26 | 494.26 |
| G | 20+34.25 | -6.00 | 494.26 | 494.26 |
| H | 20+44.25 | -6.00 | 494.26 | 494.26 |
| CL Brg E. Abut. | 20+53.33 | -6.00 | 494.26 | 494.26 |
| Bk E. Abutment | 20+55.00 | -6.00 | 494.26 | 494.26 |

## BEAM #3 & PROFILE GRADE

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted for Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 19+45.00 | 0.00 | 494.35 | 494.35 |
| CL Brg W. Abut. | 19+46.67 | 0.00 | 494.35 | 434.35 |
| A | 19+56.67 | 0.00 | 494.35 | 494.35 |
| B | 19+66.67 | 0.00 | 494.35 | 494.35 |
| CL Brg Pier 1 | 19+75.75 | 0.00 | 494.35 | 494.35 |
| C | 19+85.75 | 0.00 | 494.35 | 494.37 |
| D | 19+95.75 | 0.00 | 494.35 | 494.37 |
| E | 20+05.75 | 0.00 | 494.35 | 494.37 |
| F | 20+15.75 | 0.00 | 494.35 | 494.36 |
| CL Brg Pier 2 | 20+24.25 | 0.00 | 494.35 | 494.35 |
| G | 20+34.25 | 0.00 | 494.35 | 494.35 |
| H | 20+44.25 | 0.00 | 494.35 | 494.35 |
| CL Brg E. Abut. | 20+53.33 | 0.00 | 494.35 | 494.35 |
| Bk E. Abutment | 20+55.00 | 0.00 | 494.35 | 494.35 |

## BEAM #4

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted for Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 19+45.00 | 6.00 | 494.26 | 494.26 |
| CL Brg W. Abut. | 19+46.67 | 6.00 | 494.26 | 494.26 |
| A | 19+56.67 | 6.00 | 494.26 | 494.26 |
| B | 19+66.67 | 6.00 | 494.26 | 494.26 |
| CL Brg Pier 1 | 19+75.75 | 6.00 | 494.26 | 494.26 |
| C | 19+85.75 | 6.00 | 494.26 | 494.27 |
| D | 19+95.75 | 6.00 | 494.26 | 494.28 |
| E | 20+05.75 | 6.00 | 494.26 | 494.28 |
| F | 20+15.75 | 6.00 | 494.26 | 494.27 |
| CL Brg Pier 2 | 20+24.25 | 6.00 | 494.26 | 494.26 |
| G | 20+34.25 | 6.00 | 494.26 | 494.26 |
| H | 20+44.25 | 6.00 | 494.26 | 494.26 |
| CL Brg E. Abut. | 20+53.33 | 6.00 | 494.26 | 494.26 |
| Bk E. Abutment | 20+55.00 | 6.00 | 494.26 | 494.26 |

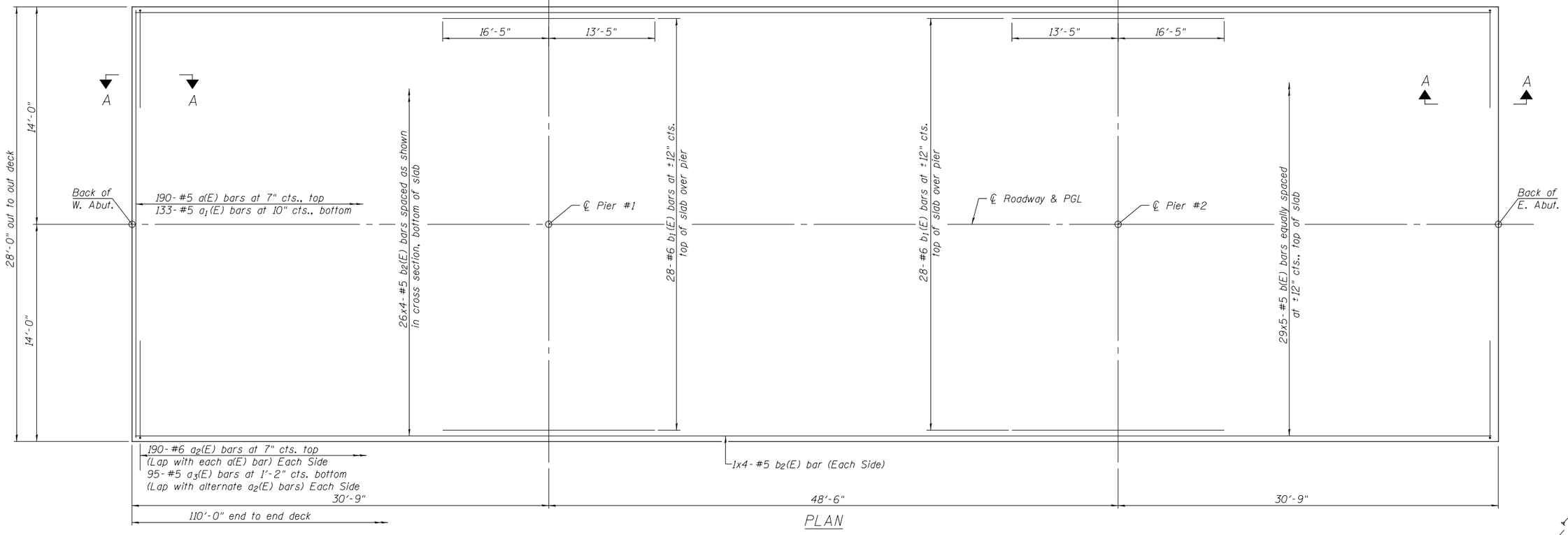
## BEAM #5

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted for Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 19+45.00 | 12.00 | 494.16 | 494.16 |
| CL Brg W. Abut. | 19+46.67 | 12.00 | 494.16 | 494.16 |
| A | 19+56.67 | 12.00 | 494.16 | 494.16 |
| B | 19+66.67 | 12.00 | 494.16 | 494.16 |
| CL Brg Pier 1 | 19+75.75 | 12.00 | 494.16 | 494.16 |
| C | 19+85.75 | 12.00 | 494.16 | 494.17 |
| D | 19+95.75 | 12.00 | 494.16 | 494.18 |
| E | 20+05.75 | 12.00 | 494.16 | 494.18 |
| F | 20+15.75 | 12.00 | 494.16 | 494.17 |
| CL Brg Pier 2 | 20+24.25 | 12.00 | 494.16 | 494.16 |
| G | 20+34.25 | 12.00 | 494.16 | 494.16 |
| H | 20+44.25 | 12.00 | 494.16 | 494.16 |
| CL Brg E. Abut. | 20+53.33 | 12.00 | 494.16 | 494.16 |
| Bk E. Abutment | 20+55.00 | 12.00 | 494.16 | 494.16 |

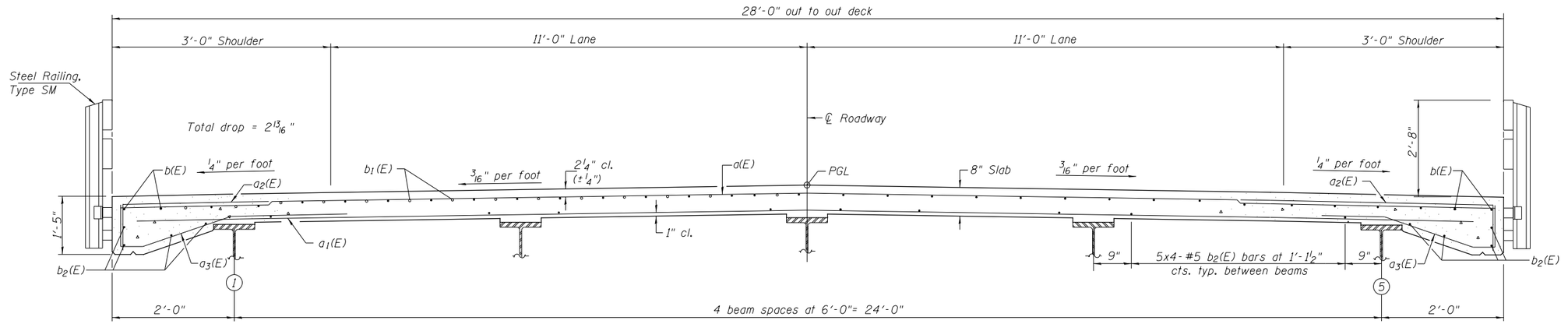
TOP OF DECK ELEVATIONS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

| SHEET NO. 4 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 12 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-1b004.dgn



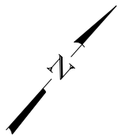

PLAN




NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN



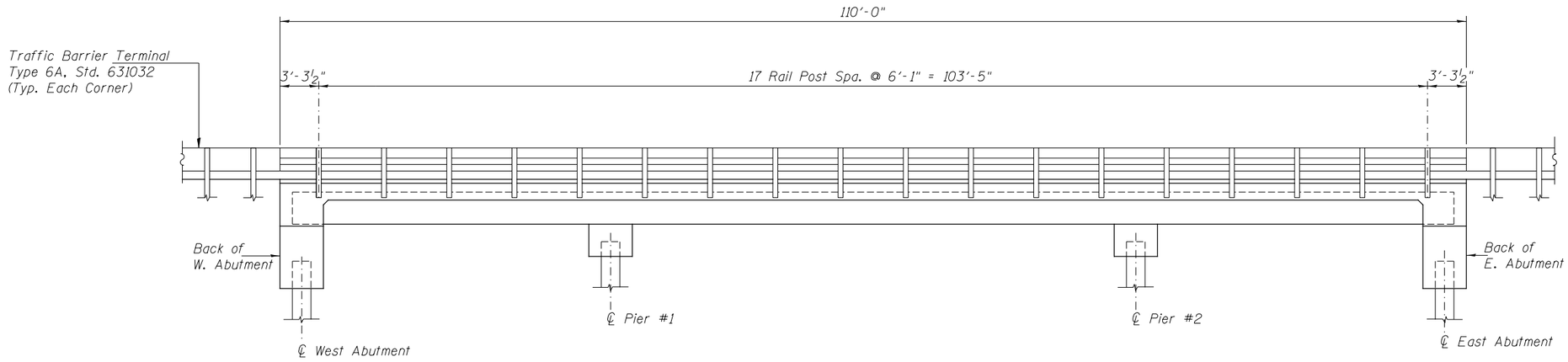

MINIMUM BAR LAP
(Deck)
#5 bar = 3'-6"

Notes:
Bars indicated thus 29x4-#5 etc. indicates 29 lines of bars with 4 lengths per line.
See Sheet 6 of 16 for superstructure details and Bill of Material.
See Sheet 7 of 16 for Section A-A and diaphragm details.
See Sheet 8 of 16 for rail details.

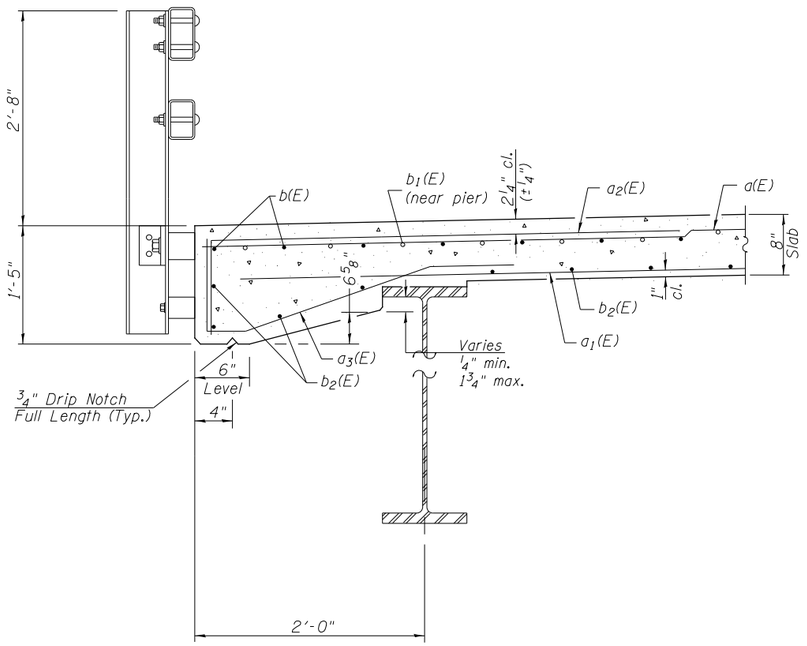
SUPERSTRUCTURE
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

| SHEET NO. 5 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 13 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-1b005.dgn

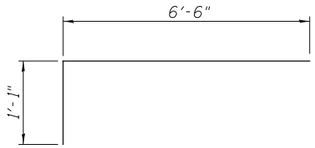



RAIL POST SPACING

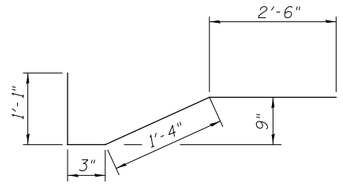



SECTION THRU DECK OVERHANG

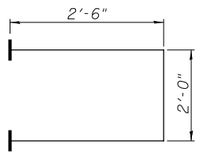
See Sheet 8 of 16 for Rail Post Anchor Details.



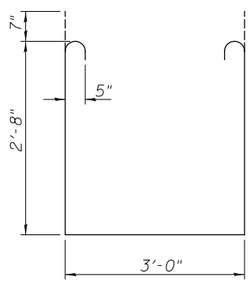

BAR a2(E)




BAR a3(E)




BAR s(E)
(Headed)




BAR s1(E)

SUPERSTRUCTURE
BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|---|---|---|---|---|
| a(E) | 190 | #5 | 27'-9" | |
| a1(E) | 133 | #5 | 26'-9" | |
| a2(E) | 380 | #6 | 7'-7" | |
| a3(E) | 190 | #5 | 5'-2" | |
| | | | | |
| b(E) | 145 | #5 | 24'-9" | |
| b1(E) | 56 | #6 | 29'-10" | |
| b2(E) | 112 | #5 | 30'-1" | |
| | | | | |
| m(E) | 6 | #6 | 27'-9" | |
| m1(E) | 24 | #6 | 5'-9" | |
| m2(E) | 12 | #6 | 1'-9" | |
| m3(E) | 30 | #5 | 4'-0" | |
| | | | | |
| s(E) | 56 | #5 | 7'-0" | |
| s1(E) | 56 | #5 | 9'-6" | |
| | | | | |
| v(E) | 20 | #4 | 2'-2" | |
| Reinforcement Bars, Epoxy Coated | | | POUND | 25,940 |
| ① Concrete Superstructure | | | CU YD | 101.9 |

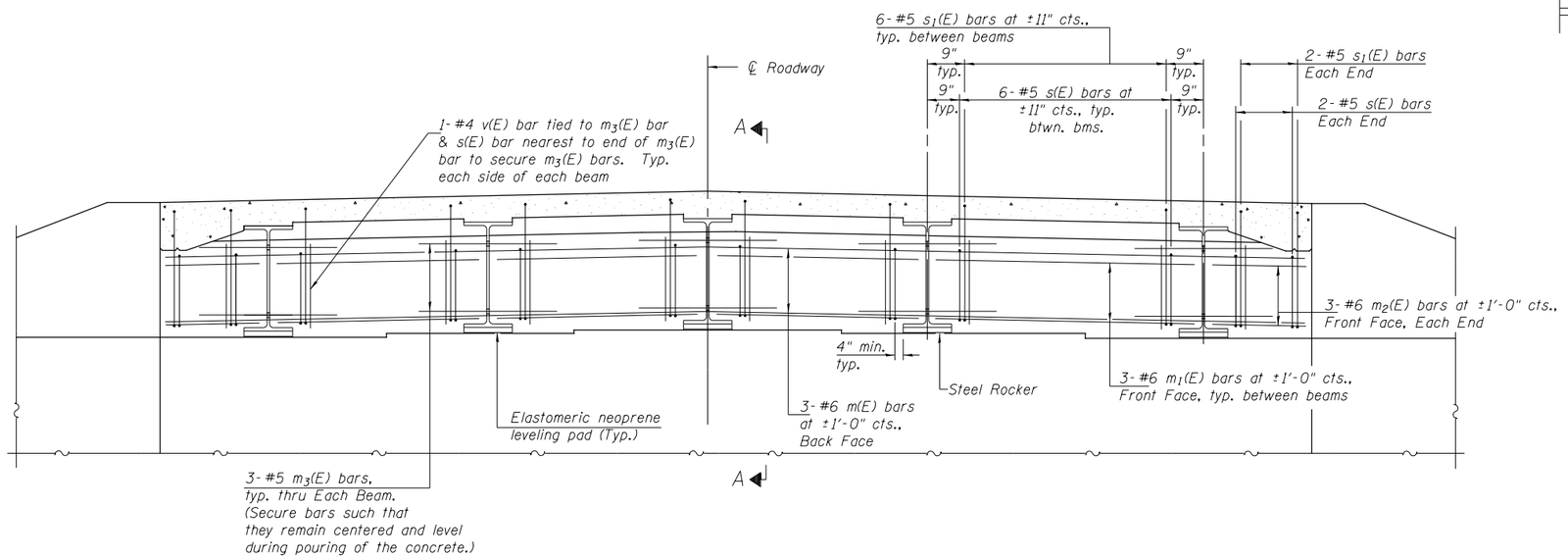
① See Special Provisions

Notes:
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

SUPERSTRUCTURE DETAILS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

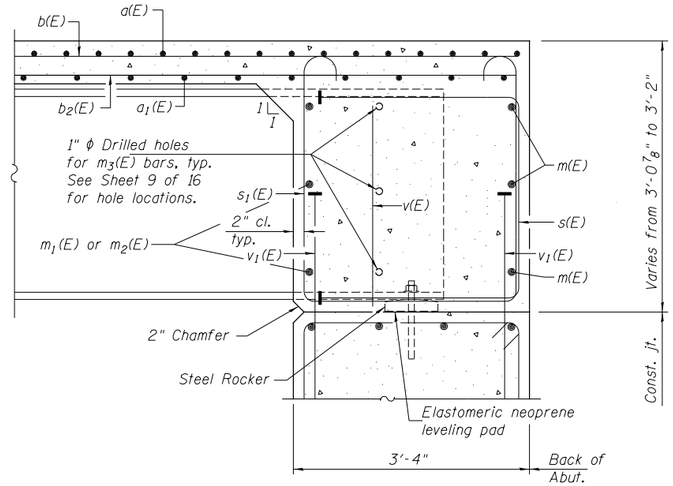
| SHEET NO. 6 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 14 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

4079-1b006.dgn

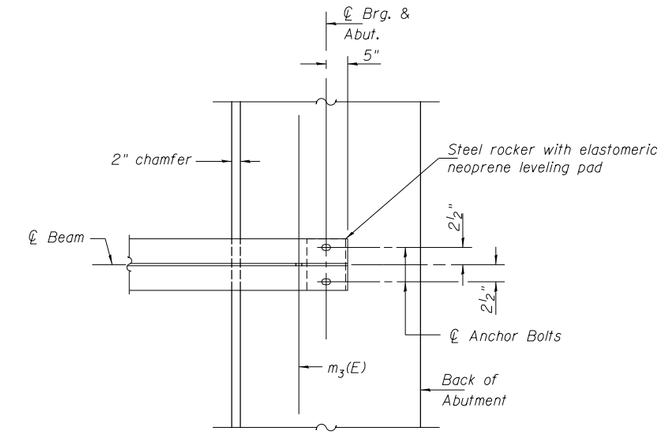



## DIAPHRAGM ELEVATION AT ABUTMENT

West Abut. Looking West. East Abut. Looking East




## SECTION A-A




## PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on Sheet 6 of 16.

Concrete in diaphragm is included with Concrete Superstructure on Sheet 6 of 16.

See Sheet 6 of 16 for details of bars s(E) and $s_1$(E).

See Sheet 12 of 16 for bearing details.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

# DIAPHRAGM DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00

| SHEET NO. 7 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 15 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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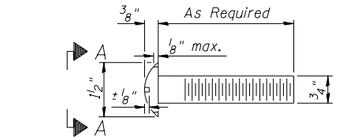
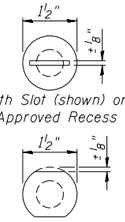
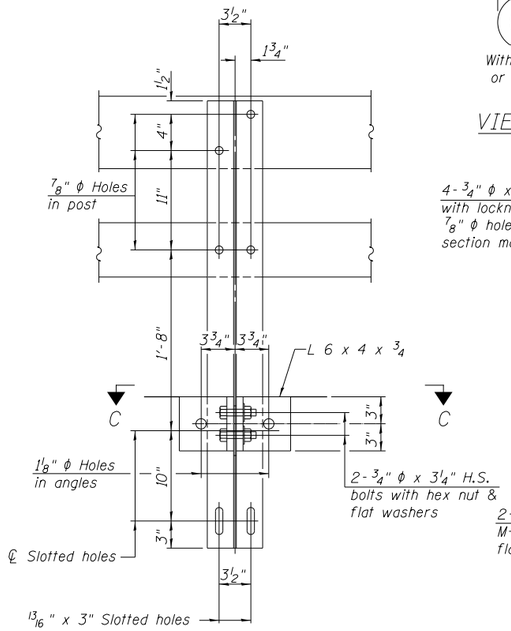
FOR RAIL POST SPACING SEE SH.#6 OF 16



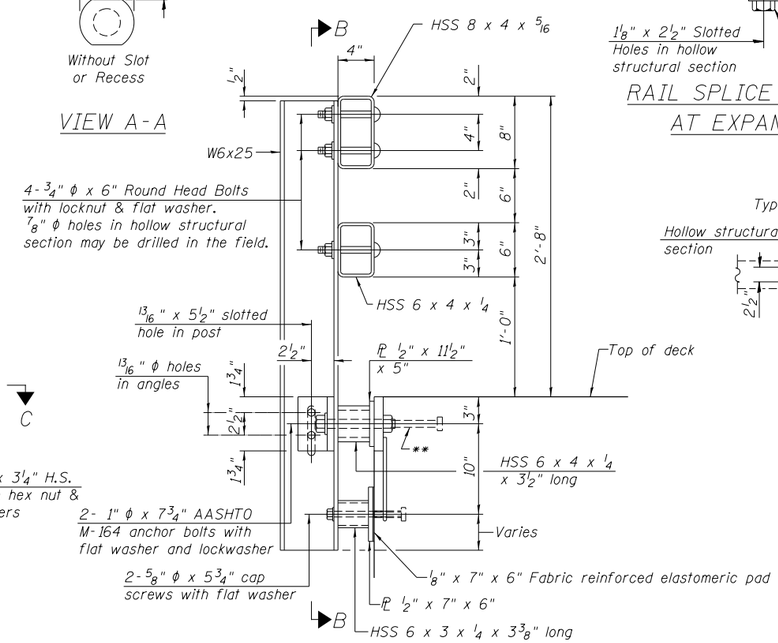

DETAIL OF 3/4" ϕ ROUND HEAD BOLT



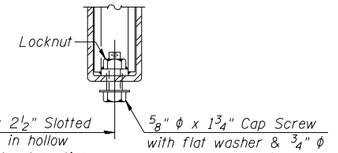

VIEW A-A



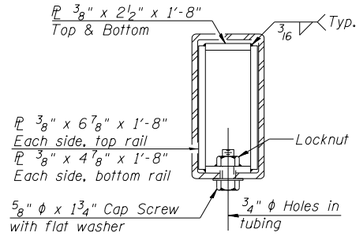

SECTION B-B



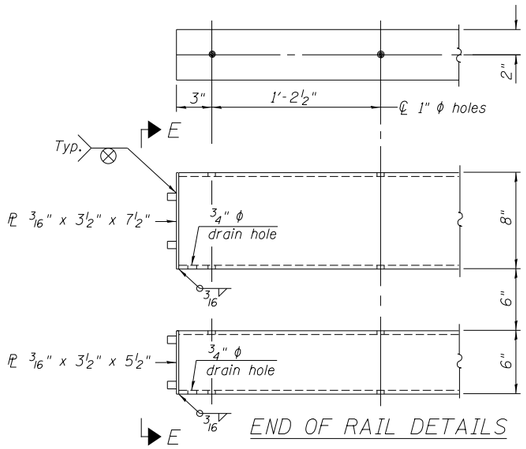

SECTION AT RAIL POST



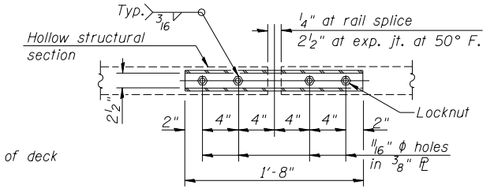

RAIL SPLICE CONNECTION AT EXPANSION JT.




SECTION AT RAIL SPLICE

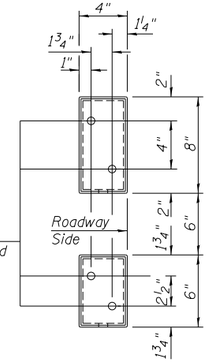



END OF RAIL DETAILS

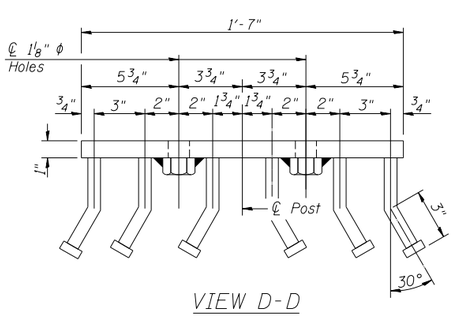



PLAN-BOTT. SPLICE PL TYPICAL

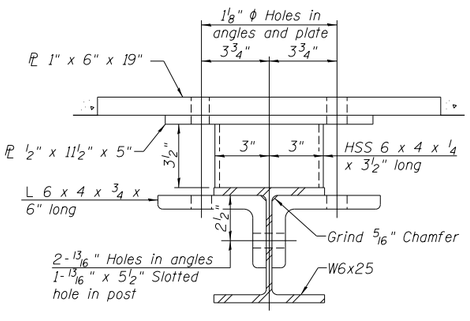
℄ - 5/8" reduced base welded studs. Provide 4-5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



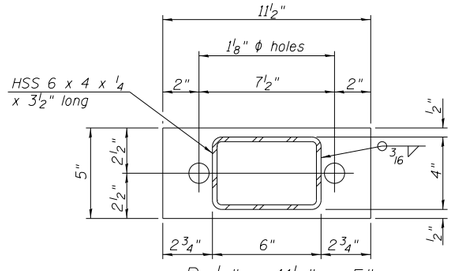

VIEW E-E



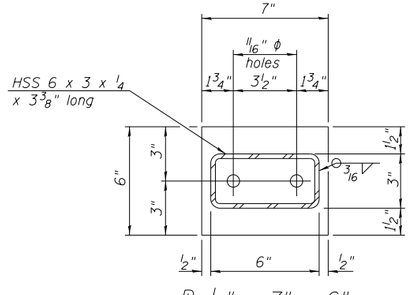

VIEW D-D



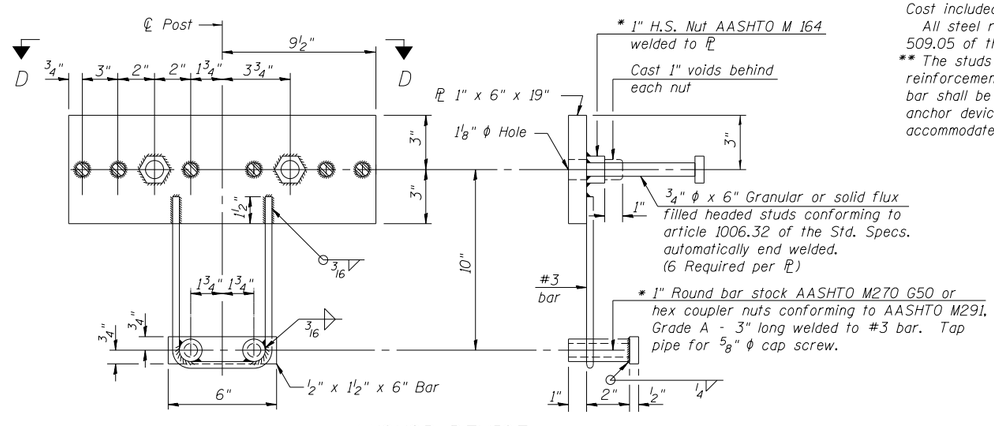

SECTION C-C




PL 1/2" x 11 1/2" x 5"




PL 1/2" x 7" x 6"




ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during pouring of deck. Galvanized after fabrication.

Notes:

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

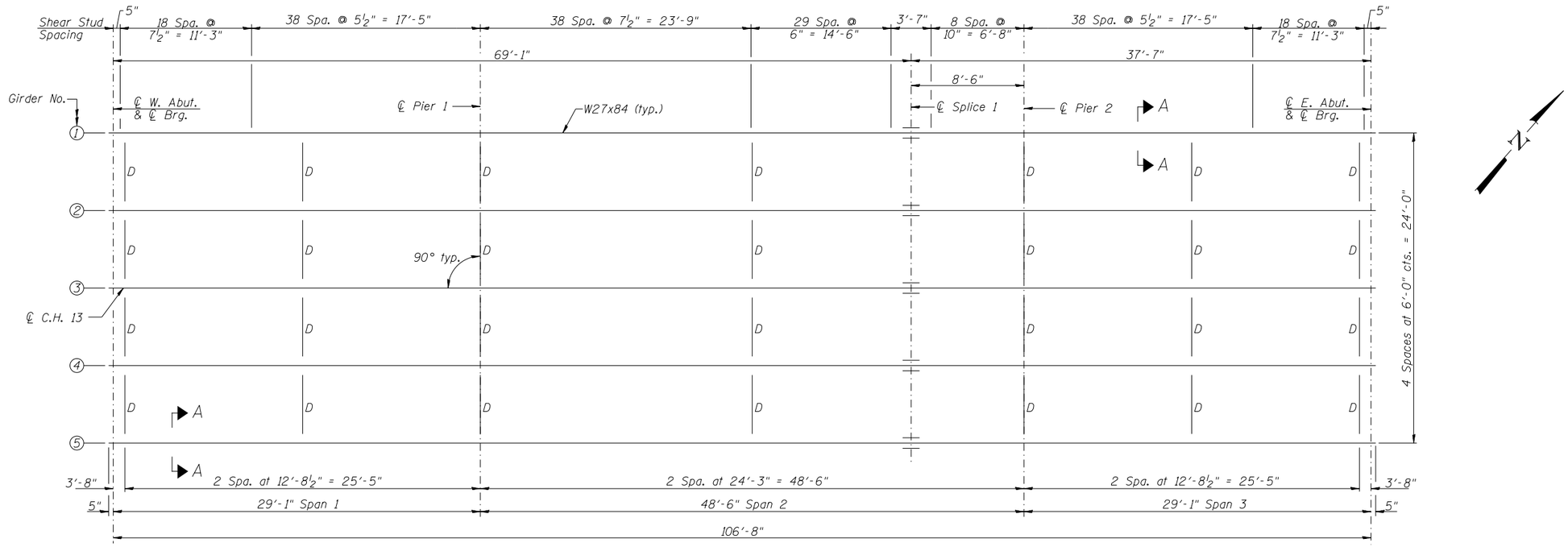
BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|---|---|---|
| Steel Railing, Type SM | FOOT | 220 |

STEEL RAILING, TYPE SM
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

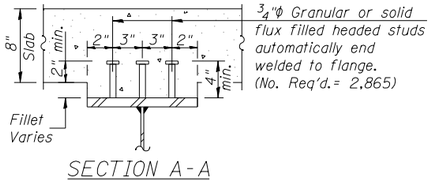
| SHEET NO. 8 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 16 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-1b008.dgn

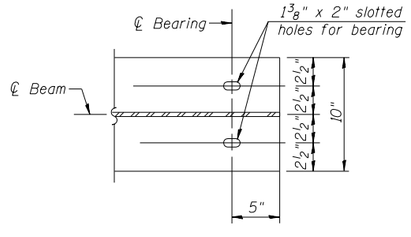



FRAMING PLAN

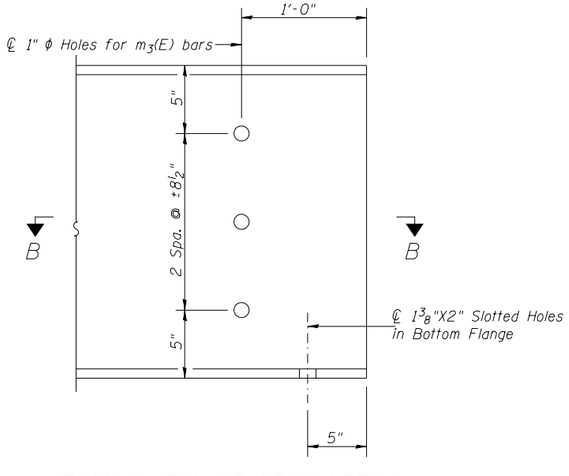
All beams shall be AASHTO M270, Gr. 50W (CVN).




SECTION A-A




SECTION B-B




TYPICAL END OF BEAM DETAIL

Notes:
"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
See Sheets 10 & 11 of 16 for Structural Steel Details.

FRAMING PLAN
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

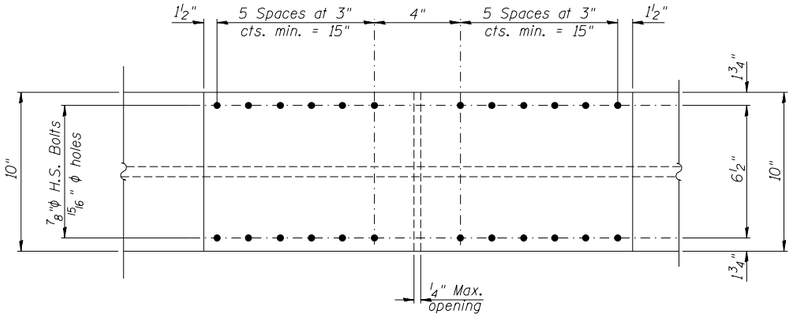
| SHEET NO. 9 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 17 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-1b009.dgn

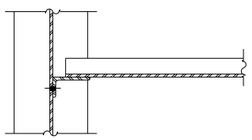
## *TOP OF BEAM ELEVATIONS

| Location | Beam 1 | Beam 2 | Beam 3 | Beam 4 | Beam 5 |
|---|---|---|---|---|---|
| ℄ Brg. at W. Abut. | 493.44 | 493.54 | 493.63 | 493.54 | 493.44 |
| ℄ Brg. at Pier 1 | 493.42 | 493.52 | 493.61 | 493.52 | 493.42 |
| ℄ Splice 1 | 493.40 | 493.50 | 493.59 | 493.50 | 493.40 |
| ℄ Brg. at Pier 2 | 493.40 | 493.50 | 493.59 | 493.50 | 493.40 |
| ℄ Brg. at E. Abut. | 493.44 | 493.54 | 493.63 | 493.54 | 493.44 |

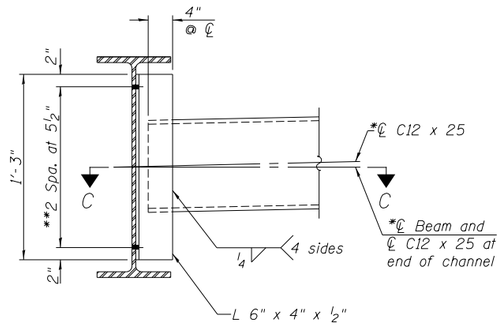
*For fabrication only




FLANGE SPLICE PLATE
(Top and Bottom Flange)

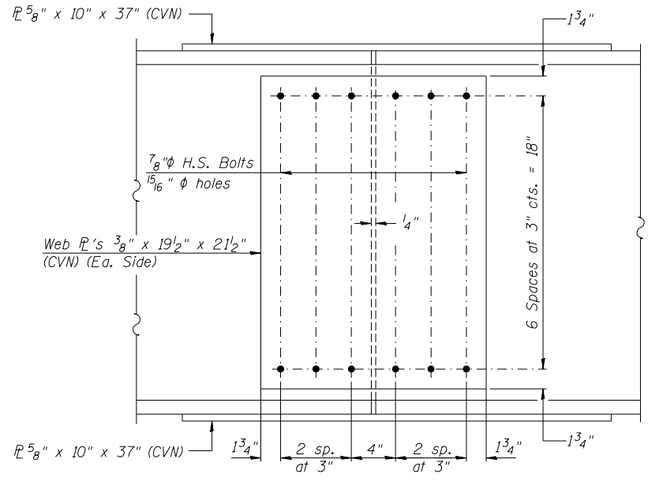


SECTION C-C




INTERIOR DIAPHRAGM
(28 Required)

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels, C12 x 30, are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the County.
**¾" ϕ HS bolts, 15/16" ϕ holes




ELEVATION

FIELD SPLICE DETAILS
(5 req'd)
All plates shall be AASHTO M270, Grade 50W (CVN)

Notes:
"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

# STRUCTURAL STEEL DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00

(Sheet 1 of 2)

| SHEET NO. 10 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 18 |
| 16 SHEETS | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-1b010.dgn

| INTERIOR GIRDER MOMENT TABLE | | | | |
|---|---|---|---|---|
| | | 0.4 Sp. 1 & 0.6 Sp. 3 | Pier 1 & Pier 2 | 0.5 Sp. 2 |
| $I_s$ | ($in^4$) | 2,850 | 2,850 | 2,850 |
| $I_c(n)$ | ($in^4$) | 9,026 | 9,026 | 9,026 |
| $I_c(3n)$ | ($in^4$) | 6,918 | 6,918 | 6,918 |
| $I_c(cr)$ | ($in^4$) | - | 4,328 | - |
| $S_s$ | ($in^3$) | 213 | 213 | 213 |
| $S_c(n)$ | ($in^3$) | 338 | 338 | 338 |
| $S_c(3n)$ | ($in^3$) | 308 | 308 | 308 |
| $S_c(cr)$ | ($in^3$) | - | 258 | - |
| DC1 | (k/') | 0.709 | 0.709 | 0.709 |
| $M_{DC1}$ | ('k) | 27 | 120 | 89 |
| DC2 | (k/') | 0.030 | 0.030 | 0.030 |
| $M_{DC2}$ | ('k) | 1 | 4 | 3 |
| DW | (k/') | 0.300 | 0.300 | 0.300 |
| $M_{DW}$ | ('k) | 11 | 51 | 38 |
| $M_{L+IM}$ | ('k) | 263 | 291 | 325 |
| $M_u$ (Strength I) | ('k) | 512 | 740 | 741 |
| $\phi_f M_n$ | ('k) | 1,804 | 939 | 1,740 |
| $f_s$ DC1 | (ksi) | 1.52 | 6.76 | 5.01 |
| $f_s$ DC2 | (ksi) | 0.04 | 0.14 | 0.11 |
| $f_s$ DW | (ksi) | 0.43 | 1.99 | 1.48 |
| $f_s$ (L+IM) | (ksi) | 9.34 | 10.33 | 11.54 |
| $f_s$ (Service II) | (ksi) | 14.13 | 22.32 | 21.60 |
| $0.95R_hF_{yf}$ | (ksi) | 47.50 | 47.50 | 47.50 |
| $f_s$ (Total)(Strength I) | (ksi) | - | - | - |
| $\phi_f F_n$ | (ksi) | - | - | - |
| $V_f$ | (k) | 16.4 | 19.4 | 15.0 |

| INTERIOR GIRDER REACTION TABLE | | | |
|---|---|---|---|
| | | W. Abut. & E. Abut. | Pier 1 & Pier 2 |
| $R_{DC1}$ | (k) | 6.2 | 31.6 |
| $R_{DC2}$ | (k) | 0.2 | 1.1 |
| $R_{DW}$ | (k) | 2.6 | 13.4 |
| $R_{L+IM}$ | (k) | 46.8 | 78.9 |
| $R_{Total}$ | (k) | 55.8 | 125.0 |

$I_s$, $S_s$: Non-composite moment of inertia and section modulus of the steel section used for computing $f_s$ (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing $f_s$ (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing $f_s$ (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing $f_s$ (Total -Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$ ).

DC1: Un-factored non-composite dead load (kips/ft.).

$M_{DC1}$: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

$M_{DC2}$: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

$M_{DW}$: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_{L+IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

$M_u$ (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

$f_s$ DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
$M_{DC1} / S_{nc}$

$f_s$ DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

$f_s$ DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

$f_s$ (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

$f_s$ (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s\ (L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

$f_s$ (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s\ (L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

$V_f$: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

STRUCTURAL STEEL DETAILS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

(Sheet 2 of 2)

| SHEET NO. 11 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 19 |
| 16 SHEETS | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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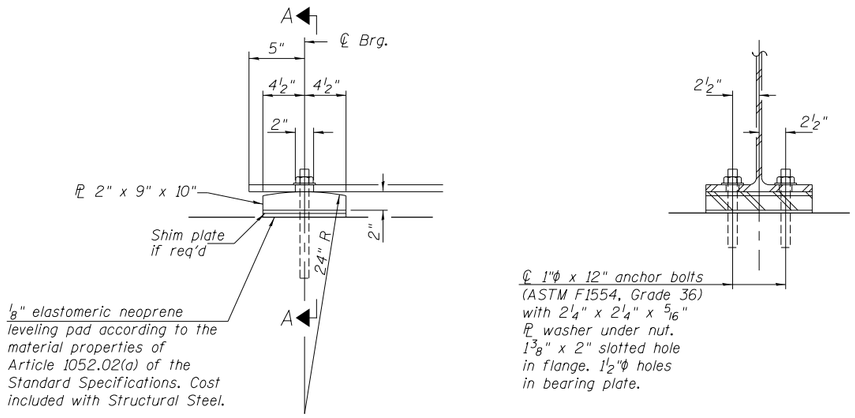


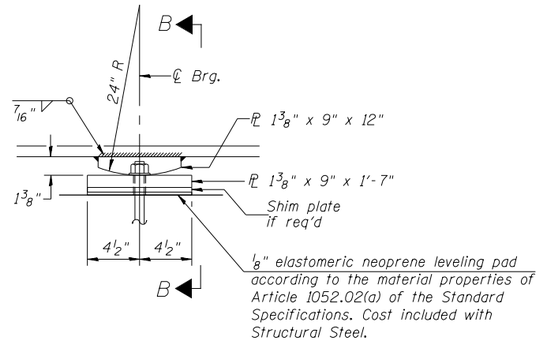

ELEVATION AT ABUTMENT



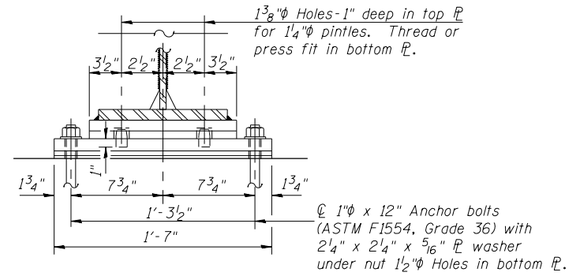

SECTION A-A

FIXED BEARING AT ABUTMENTS

(10 Required)



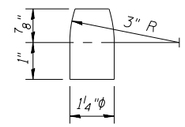

ELEVATION AT PIER




SECTION B-B

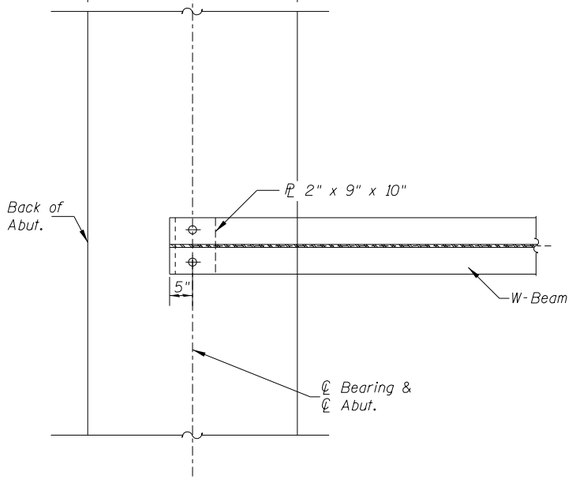
FIXED BEARING AT PIERS

(10 Required)

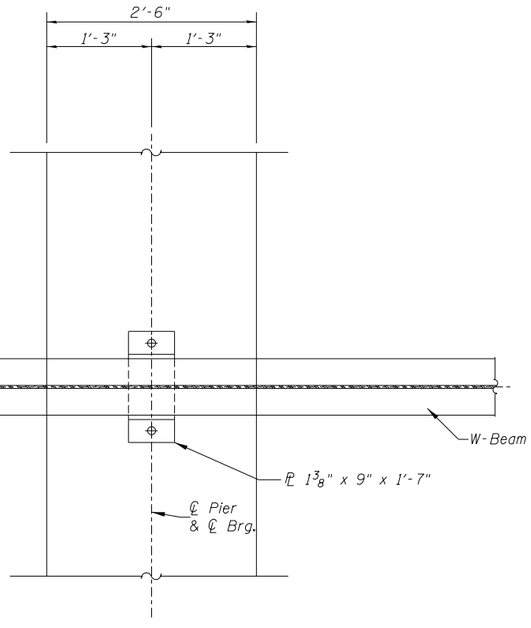



PINTLE

(M270 Grade 50W)




PARTIAL PLAN AT ABUTMENTS




PARTIAL PLAN AT PIERS

*Notes:*

*Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.*

*The structural steel bearing plates shall conform to the requirements of AASHTO M270 Grade 50W.*

*Two ⅛" in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.*

*Beams shall be braced for stability during erection and remain braced until deck is poured and cured.*

*Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.*

*Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.*

*Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after members are in place.*

BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|---|---|---|
| Anchor Bolts, 1" | EACH | 40 |

# BEARING DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00

| SHEET NO. 12 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 20 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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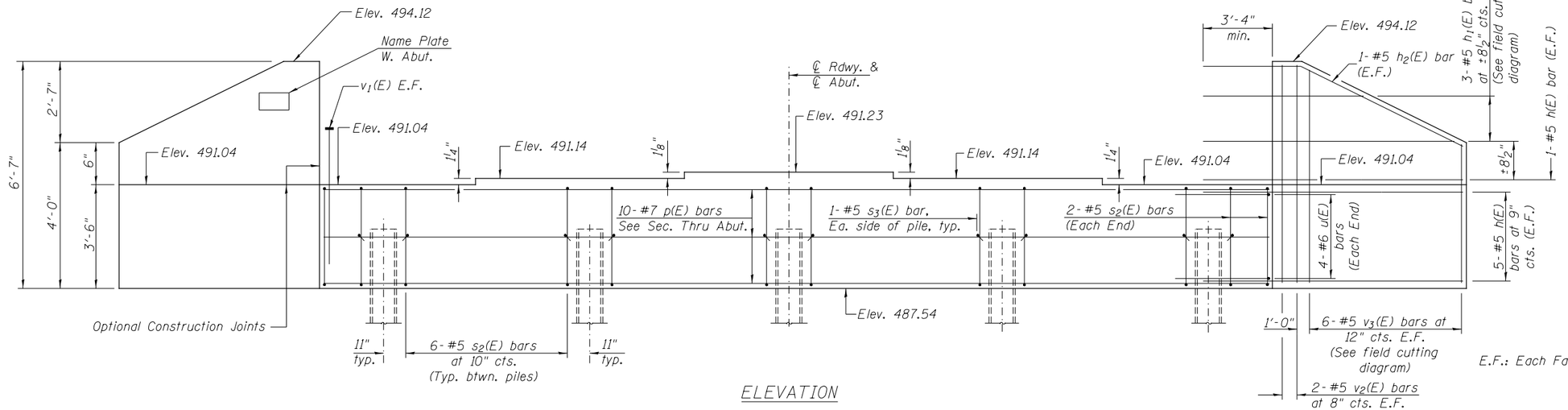
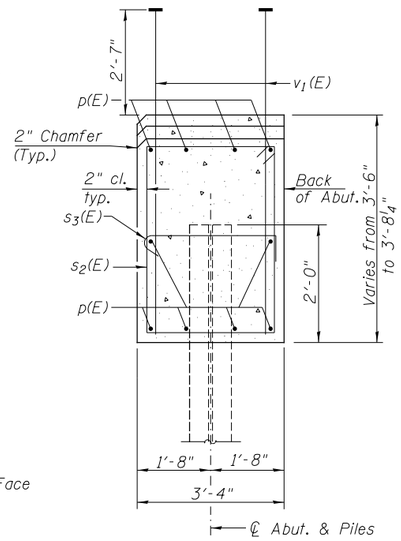
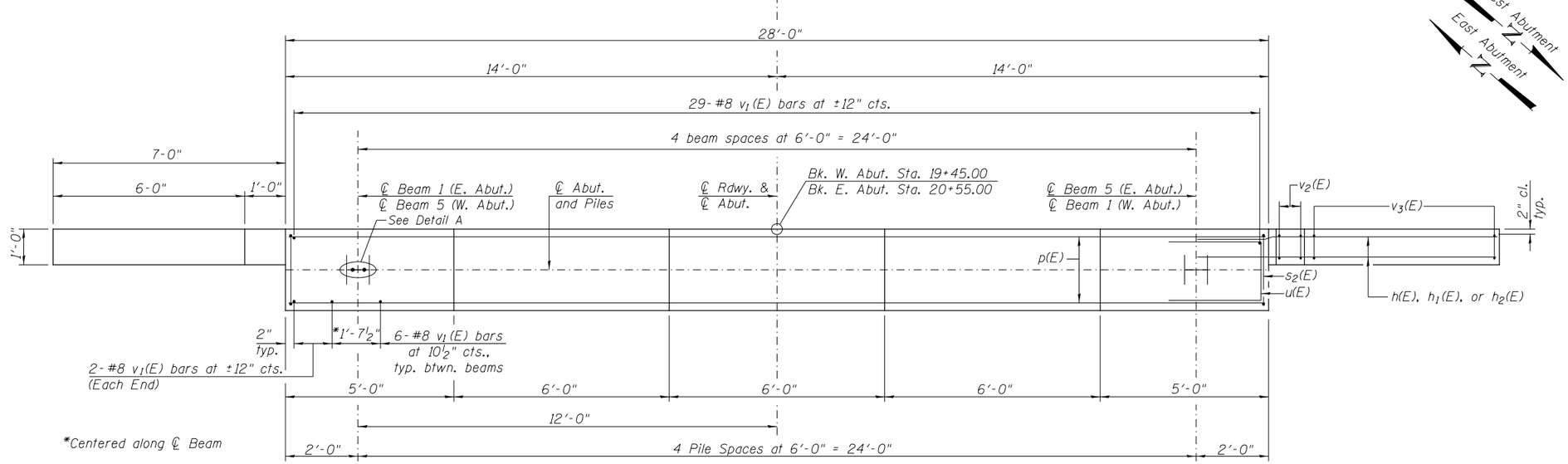



ELEVATION

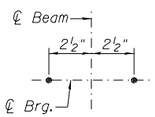



SEC. THRU ABUT.




*Centered along ℄ Beam

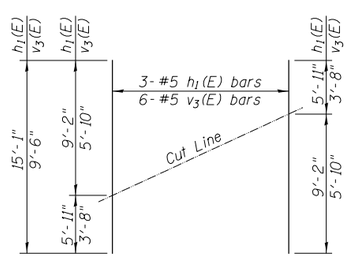
PLAN




DETAIL A

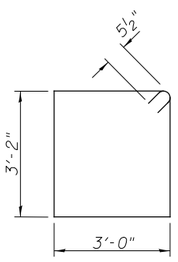
## PILE DATA

Type: Steel HP 12x53
Nominal Required Bearing: 160 kips
Factored Resistance Available: 88 kips
Est. Length: 46' W. Abutment
45' E. Abutment
No. Required: 10 (Includes 1 Test Pile at Each Abut.)

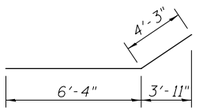



FIELD CUTTING DIAGRAM

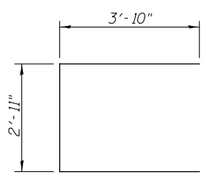
Order $h_1$(E) and $v_3$(E) full length. Cut as shown and use remainder of bars in opposite face.



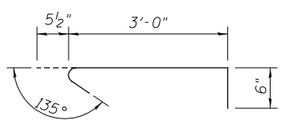

BAR $s_2$(E)




BAR $h_2$(E)




BAR u(E)




BAR $s_3$(E)

Notes:
Pour steps monolithically with cap.
All edges shall have standard ¾" chamfer.
For details of H-Piles, see Sheet 16 of 16.
Space reinforcement to miss anchor bolts.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.




## TWO ABUTMENTS BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|---|---|---|---|---|
| h(E) | 48 | #5 | 10'-2" | |
| $h_1$(E) | 12 | #5 | 15'-1" | |
| $h_2$(E) | 8 | #5 | 10'-7" | |
| | | | | |
| p(E) | 20 | #7 | 27'-9" | |
| | | | | |
| $s_2$(E) | 56 | #5 | 13'-3" | |
| $s_3$(E) | 20 | #5 | 4'-0" | |
| | | | | |
| u(E) | 16 | #6 | 10'-7" | |
| | | | | |
| $v_1$(E) | 114 | #8 | 5'-11" | |
| $v_2$(E) | 16 | #5 | 6'-3" | |
| $v_3$(E) | 24 | #5 | 9'-6" | |
| | | | | |
| Structure Excavation | | | CU YD | 195 |
| Concrete Structures | | | CU YD | 30.4 |
| Reinforcement Bars, Epoxy Coated | | | POUND | 5,180 |
| Name Plates | | | EACH | 1 |
| Furnishing Steel Piles HP 12x53 | | | FOOT | 364 |
| Driving Piles | | | FOOT | 364 |
| Test Pile Steel HP 12x53 | | | EACH | 2 |

# ABUTMENTS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00

| SHEET NO. 13 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 21 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

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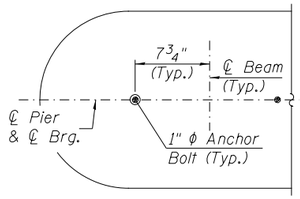
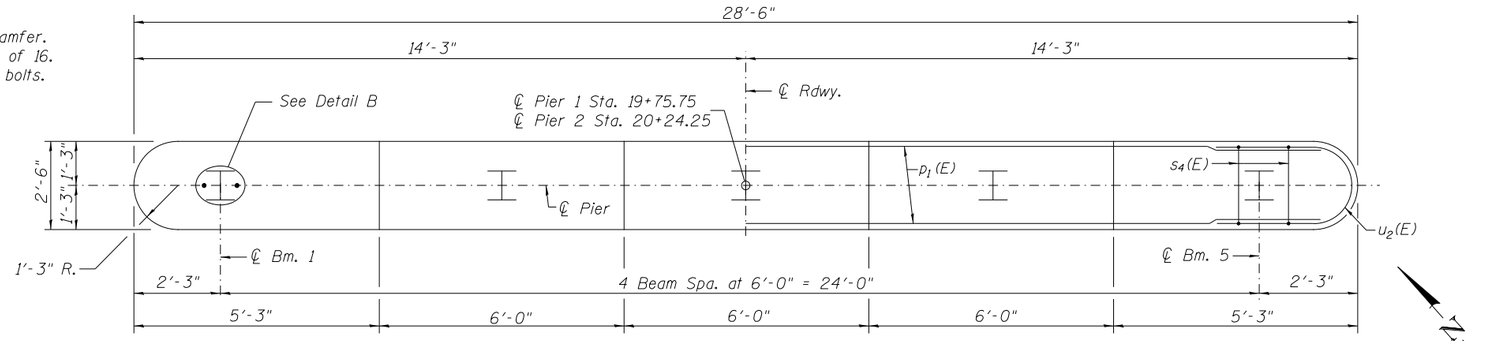
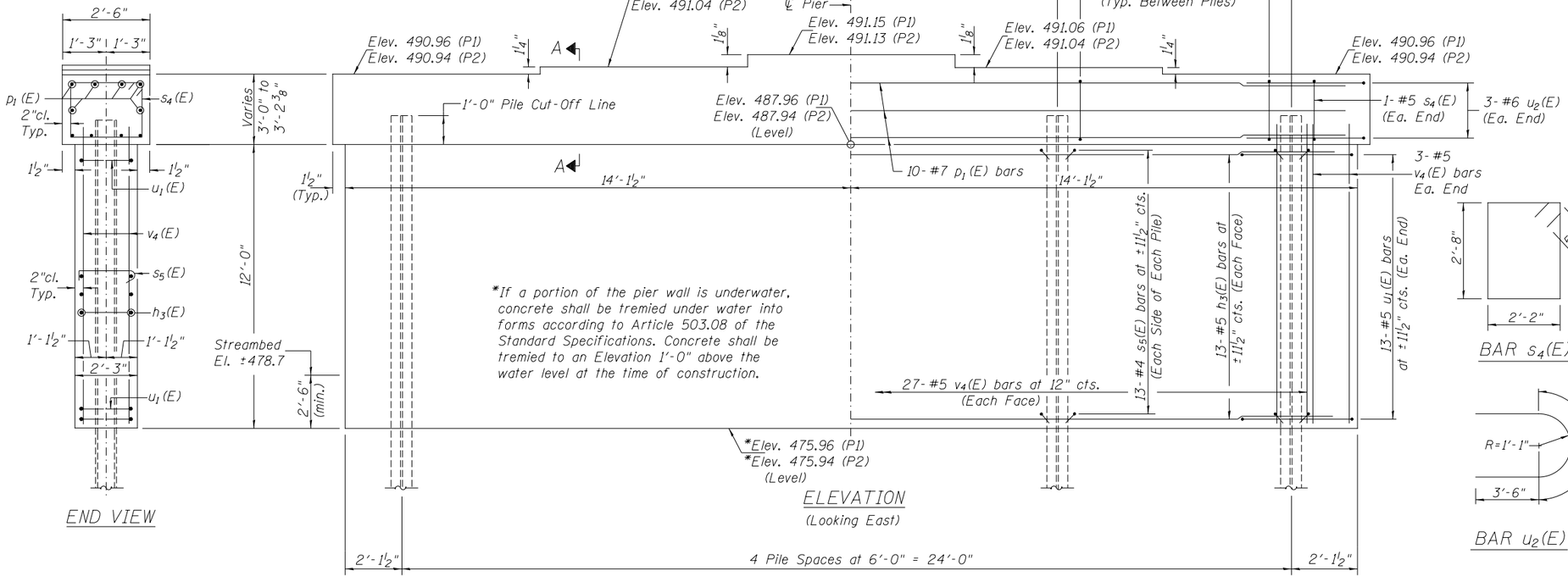
Notes:
Pour steps monolithically with cap.
All edges shall have standard $\frac{3}{4}$" chamfer.
For details of H-Piles, see Sheet 16 of 16.
Space reinforcement to miss anchor bolts.




DETAIL B
ANCHOR BOLT LOCATION



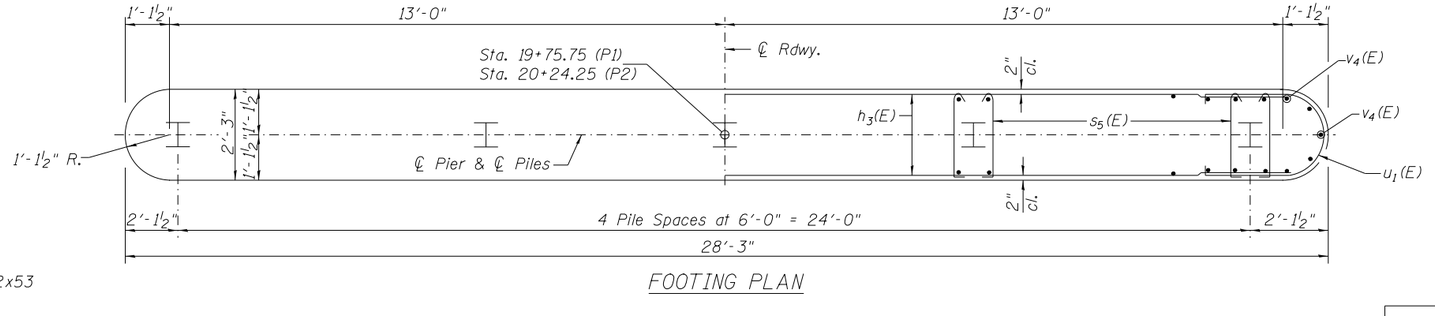

TOP PLAN



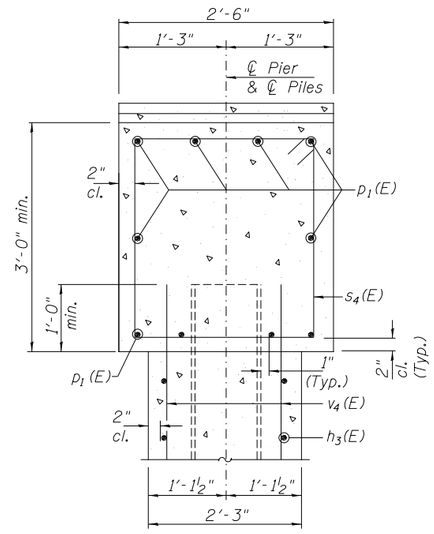

*If a portion of the pier wall is underwater, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be tremied to an Elevation 1'-0" above the water level at the time of construction.

END VIEW

ELEVATION
(Looking East)




FOOTING PLAN




SECTION A-A

TWO PIERS
BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|---|---|---|---|---|
| $h_3$(E) | 52 | #5 | 26'-0" | |
| | | | | |
| $p_1$(E) | 20 | #7 | 26'-0" | |
| | | | | |
| $s_4$(E) | 52 | #5 | 10'-7" | |
| $s_5$(E) | 260 | #4 | 2'-9" | |
| | | | | |
| $u_1$(E) | 52 | #5 | 11'-8" | |
| $u_2$(E) | 12 | #6 | 10'-5" | |
| | | | | |
| $v_4$(E) | 120 | #5 | 12'-10" | |
| | | | | |
| Concrete Structures | | | CU YD | 71.5 |
| Cofferdam Excavation | | | CU YD | 195 |
| Reinforcement Bars, Epoxy Coated | | | POUND | 5,950 |
| Furnishing Steel Piles HP 12x53 | | | FOOT | 904 |
| Driving Piles | | | FOOT | 904 |
| Test Pile Steel HP 12x53 | | | EACH | 2 |
| Cofferdam (Type 1) (Location-1) | | | EACH | 1 |
| Cofferdam (Type 1) (Location-2) | | | EACH | 1 |




BAR $s_4$(E)




BAR $u_2$(E)




BAR $s_5$(E)




BAR $u_1$(E)

PILE DATA
Type & Size: Steel HP 12x53
Nominal Required Bearing: 327 kips
Factored Resistance Available: 180 kips
Est. Length: 114' Pier 1
112' Pier 2
No. Required: 10 (Includes 1 Test Pile at Each Pier)

PIERS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

| SHEET NO. 14 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 22 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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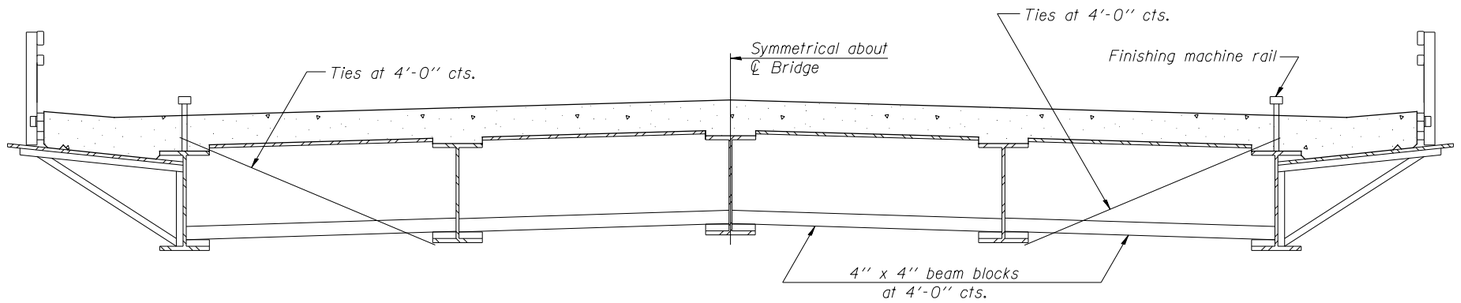
When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below, in the details shown on this sheet, and in the Special Provision "Bridge Deck Construction".

The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck pour. Beam Blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.

The top flange of exterior beams or girders supporting the cantilever forming brackets shall be tied to the bottom flange of the next interior beam.




FORM BRACES FOR
STANDARD CONSTRUCTION

CANTILEVER FORMING BRACKETS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00078-00-BR
SCHUYLER COUNTY
STATION 20+00.00

| SHEET NO. 15 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 23 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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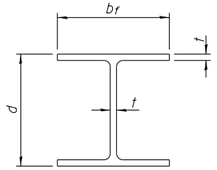
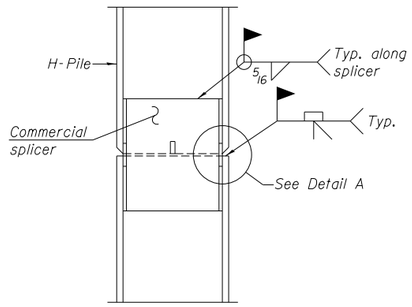


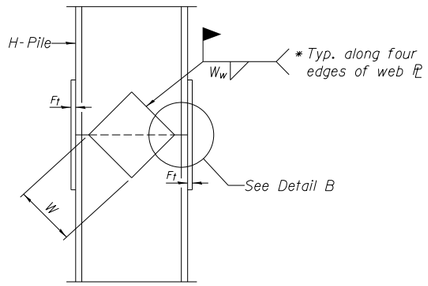

## STEEL PILE TABLE

| Designation | Depth d | Flange width $b_f$ | Web and Flange thickness t |
|---|---|---|---|
| HP 14x117 | 14 1/4" | 14 7/8" | 13/16" |
| x102 | 14" | 14 3/4" | 11/16" |
| x89 | 13 7/8" | 14 3/4" | 5/8" |
| x73 | 13 5/8" | 14 5/8" | 1/2" |
| HP 12x84 | 12 1/4" | 12 1/4" | 11/16" |
| x74 | 12 1/8" | 12 1/4" | 5/8" |
| x63 | 12" | 12 1/8" | 1/2" |
| x53 | 11 3/4" | 12" | 7/16" |
| HP 10x57 | 10" | 10 1/4" | 9/16" |
| x42 | 9 3/4" | 10 1/8" | 7/16" |
| HP 8x36 | 8" | 8 1/8" | 7/16" |

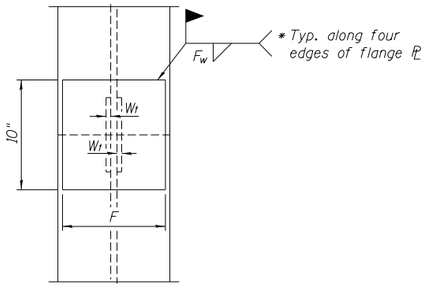
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



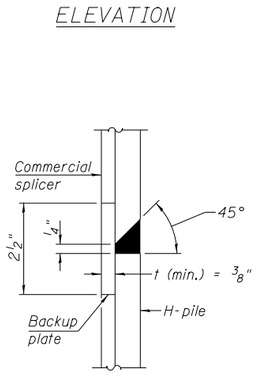

ELEVATION



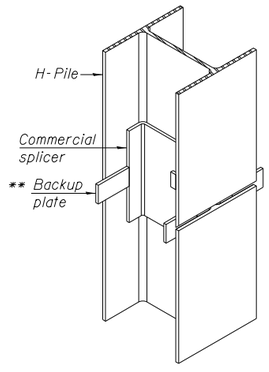

ELEVATION




END VIEW

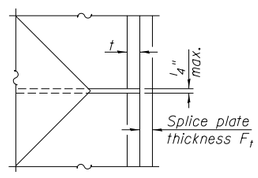



DETAIL A




ISOMETRIC VIEW

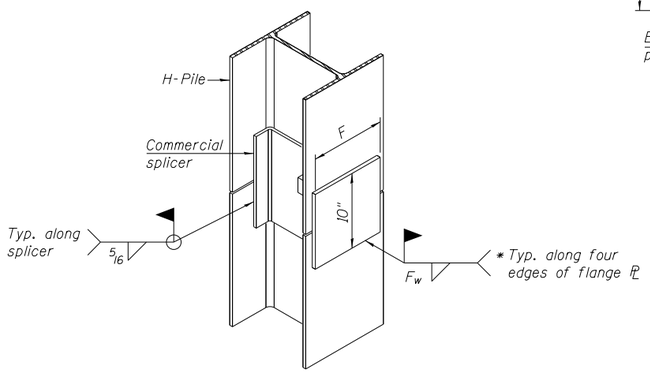
WELDED COMMERCIAL SPLICE




DETAIL B

| Designation | F | $F_f$ | $F_w$ | W | $W_f$ | $W_w$ |
|---|---|---|---|---|---|---|
| HP 14x117 | 12 1/2" | 1" | 7/8" | 7 3/4" | 5/8" | 1/2" |
| x102 | 12 1/2" | 7/8" | 3/4" | 7 3/4" | 5/8" | 1/2" |
| x89 | 12 1/2" | 3/4" | 11/16" | 7 3/4" | 5/8" | 1/2" |
| x73 | 12 1/2" | 5/8" | 9/16" | 7 3/4" | 5/8" | 1/2" |
| HP 12x84 | 10" | 7/8" | 11/16" | 6 1/2" | 5/8" | 1/2" |
| x74 | 10" | 7/8" | 11/16" | 6 1/2" | 5/8" | 1/2" |
| x63 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| x53 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| HP 10x57 | 8" | 3/4" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| x42 | 8" | 5/8" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| HP 8x36 | 7" | 5/8" | 7/16" | 4 1/4" | 1/2" | 3/8" |

WELDED PLATE FIELD SPLICE




ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.

# HP PILE DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00078-00-BR
# SCHUYLER COUNTY
# STATION 20+00.00

| SHEET NO. 16 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 16 SHEETS | 1581 | 16-00078-00-BR | SCHUYLER | 52 | 24 |
| | | S.N. 085-3057 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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B.M.: RR Spike in Power Pole
Sta. 37+21, 41' Rt.
Elev. 510.92

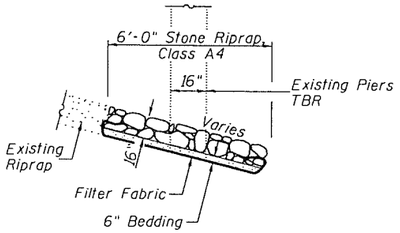
RR Spike in Power Pole
Sta. 43+01, 46' Rt.
Elev. 495.21

Existing Structure:

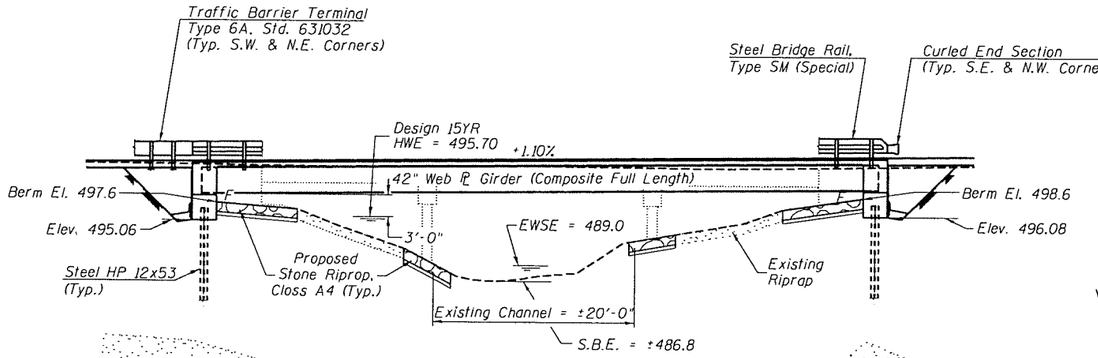
Three span steel beam superstructure with a reinforced concrete deck supported on precast concrete pile bent abutments and pile bent piers with reinforced concrete caps. The structure is 84'-0" back to back of abutments, 26'-0" out to out deck, and is not skewed. The structure wos built in 1956.
Str. No. 085-3133.

Salvage: Existing Riprap

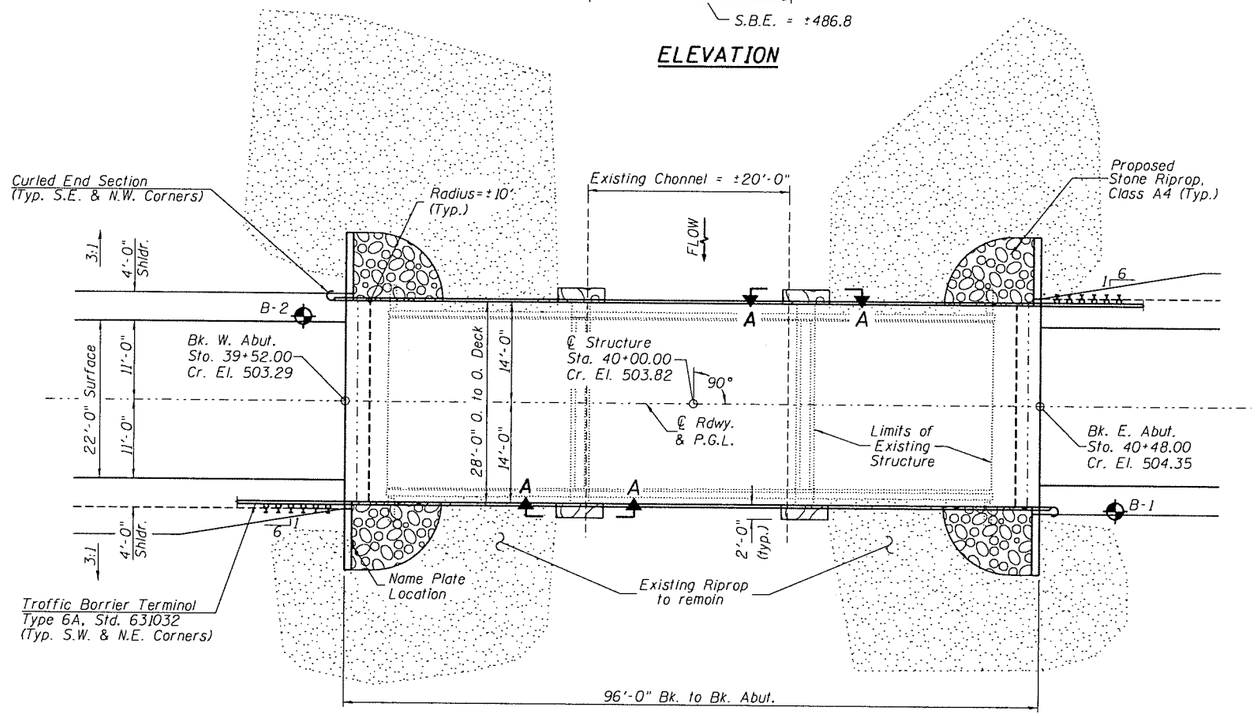
Road to be closed to traffic during construction.




## SECTION A-A

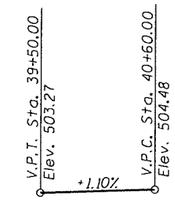



## ELEVATION




## PLAN

Note:
See Sheet 2 of 14 for Total Bill of Materials.




## PROFILE GRADE

F.A.S. 1581 (CH 13)

## INDEX OF SHEETS



## DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevations (ft.) | | | Item 113 |
|---|---|---|---|
| | W. Abut. | E. Abut. | |
| 0100 | 495.1 | 496.1 | 8 |
| 0200 | 495.1 | 496.1 | |
| Design | 495.1 | 496.1 | |
| Check | 495.1 | 496.1 | |

## WATERWAY INFORMATION

Drainage Area = 7.80 Sq. Mi. Low Grade Elev. = 502.95 @ Sta. 38+91.97

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. Exist. | Opening Sq. Ft. Prop. | Nat. H.W.E. | Head - Ft. Exist. | Head - Ft. Prop. | Headwater El. Exist. | Headwater El. Prop. |
|---|---|---|---|---|---|---|---|---|---|
| Design | 15 | 1,980 | 272 | 284 | 495.70 | 1.01 | 0.81 | 496.71 | 496.51 |
| Base | 100 | 3,170 | 314 | 328 | 496.40 | 2.45 | 2.09 | 498.85 | 498.49 |

## DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims

## DESIGN STRESSES

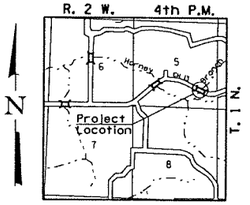
f'c = 3,500 psi (Substructure)
f'c = 5,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

## LOADING HL-93

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

## SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. ($S_{01}$) = 0.125g
Design Spectral Acceleration at 0.2 sec. ($S_{DS}$) = 0.200g
Soil Site Class = D




## LOCATION SKETCH

| | |
|---|---|
| DESIGNED | C.T.M. |
| CHECKED | B.A.N. |
| DRAWN | C.T.M. |
| CHECKED | B.A.N. |

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Lic. Exp 11/30/2018

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is on economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Grey T. Mann 12/15/17
Illinois Structural No. 7999
Expires 11/30/2018

# GENERAL PLAN & ELEVATION
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00079-00-BR
# SCHUYLER COUNTY
# STATION 40+00.00
# STRUCTURE NO. 085-3058

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD-PEORIA-QUAD CITIES

2017 JOB#4079-2

SHEET NO. 1
14 SHEETS

| F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 25 |
| | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

## GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 type 3 in unpainted areas. Bolts $\frac{3}{4}$" ϕ, holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 76,690 lb (AASHTO M270 Gr. 50W)

All structural steel shall be AASHTO M270 Gr. 50W.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

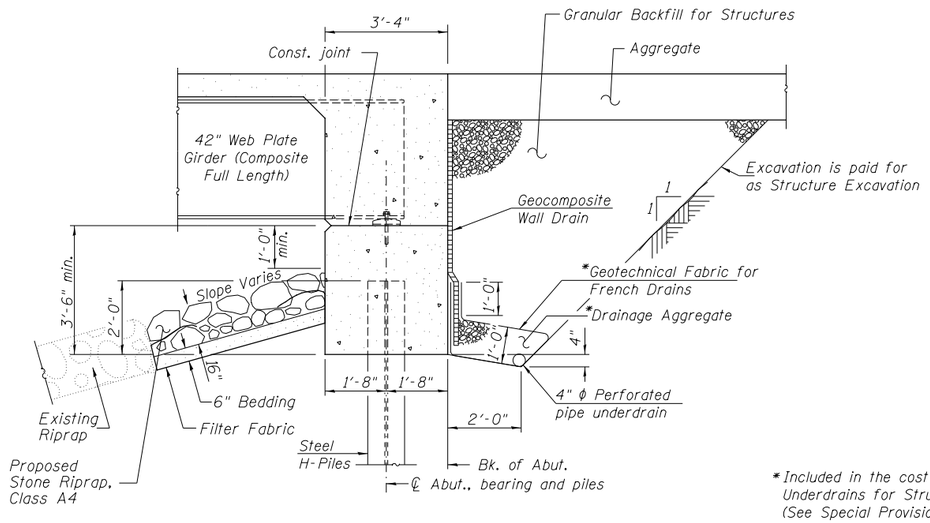
Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

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

Protective Coat shall be applied to the top and sides of the bridge deck.

Bridge Deck Grooving is figured 1'-0" from the face of the rail.

For Soil Boring Logs, See Special Provisions.




*Included in the cost of Pipe Underdrains for Structures (See Special Provisions)

## SECTION THRU INTEGRAL ABUTMENTS

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

HORNEY BRANCH
BUILT 201_ BY
SCHUYLER COUNTY
SEC. 16-00079-00-BR
C.H. 13 STATION 40+00.00
F.A. PROJ. NO. CUQI(262)
STR. NO. 085-3058 LOADING HL-93

## NAME PLATE

Locate Name Plate on S.W. Wingwall of Bridge (See Std. 515001)

## TOTAL BILL OF MATERIAL

| | ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---|---|---|---|---|
| | Channel Excavation | CU YD | —— | 40 | 40 |
| | Stone Riprap, Class A4 | TON | —— | 115 | 115 |
| | Filter Fabric | SQ YD | —— | 165 | 165 |
| ① | Granular Backfill for Structures | CU YD | —— | 125 | 125 |
| ① | Removal of Existing Structures No. 2 | EACH | —— | —— | 1 |
| | Structure Excavation | CU YD | —— | 205 | 205 |
| | Concrete Structures | CU YD | —— | 33.1 | 33.1 |
| ① | Concrete Superstructure | CU YD | 100.4 | —— | 100.4 |
| | Bridge Deck Grooving | SQ YD | 277 | —— | 277 |
| | Protective Coat | SQ YD | 329 | —— | 329 |
| | Furnishing and Erecting Structural Steel | L SUM | 0.60 | —— | 0.60 |
| | Reinforcement Bars, Epoxy Coated | POUND | 21,430 | 5,890 | 27,320 |
| | Stud Shear Connectors | EACH | 940 | —— | 940 |
| | Anchor Bolts, 1" | EACH | —— | 20 | 20 |
| | Furnishing Steel Piles HP12x53 | FOOT | —— | 284 | 284 |
| | Test Pile Steel HP12x53 | EACH | —— | 2 | 2 |
| | Driving Piles | FOOT | —— | 284 | 284 |
| | Name Plates | EACH | —— | 1 | 1 |
| | Steel Bridge Rail, Type SM (Special) | FOOT | 192 | —— | 192 |
| | Geocomposite Wall Drain | SQ YD | —— | 62 | 62 |
| ① | Pipe Underdrains For Structures 4" | FOOT | —— | 112 | 112 |

① See Special Provisions

GENERAL NOTES, DETAILS
AND BILL OF MATERIAL
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

| SHEET NO. 2 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 26 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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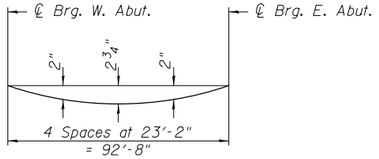
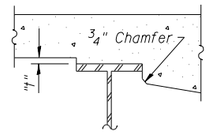


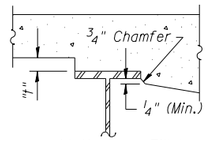

## DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 4 of 14.



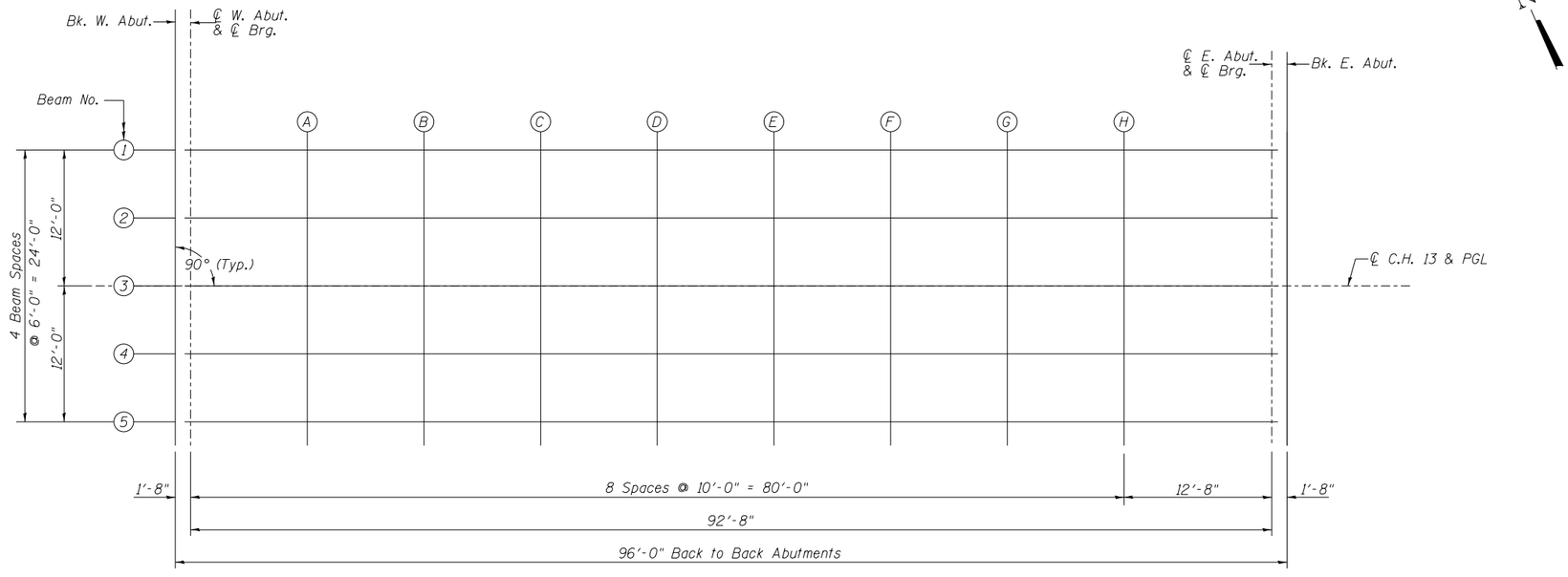

At Minimum Fillet




At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in the tables on Sheet 4 of 14, minus slab thickness, equals the fillet height "t" above top flange of beams.

## FILLET HEIGHTS




## PLAN

## TOP OF DECK ELEVATIONS
## F.A.S. 1581 (C.H. 13)
## OVER HORNEY BRANCH
## SECTION 16-00079-00-BR
## SCHUYLER COUNTY
## STATION 40+00.00

| SHEET NO. 3 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 27 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b003.dgn

## BEAM #1

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 39+52.00 | -12.00 | 503.10 | 503.10 |
| CL Brg W. Abut. | 39+53.67 | -12.00 | 503.12 | 503.12 |
| A | 39+63.67 | -12.00 | 503.23 | 503.31 |
| B | 39+73.67 | -12.00 | 503.34 | 503.49 |
| C | 39+83.67 | -12.00 | 503.45 | 503.65 |
| D | 39+93.67 | -12.00 | 503.56 | 503.79 |
| E | 40+03.67 | -12.00 | 503.67 | 503.90 |
| F | 40+13.67 | -12.00 | 503.78 | 503.99 |
| G | 40+23.67 | -12.00 | 503.89 | 504.05 |
| H | 40+33.67 | -12.00 | 504.00 | 504.10 |
| CL Brg E. Abut. | 40+46.33 | -12.00 | 504.14 | 504.14 |
| Bk E. Abutment | 40+48.00 | -12.00 | 504.16 | 504.16 |

## BEAM #2

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 39+52.00 | -6.00 | 503.20 | 503.20 |
| CL Brg W. Abut. | 39+53.67 | -6.00 | 503.22 | 503.22 |
| A | 39+63.67 | -6.00 | 503.33 | 503.41 |
| B | 39+73.67 | -6.00 | 503.44 | 503.59 |
| C | 39+83.67 | -6.00 | 503.55 | 603.75 |
| D | 39+93.67 | -6.00 | 503.66 | 503.89 |
| E | 40+03.67 | -6.00 | 503.77 | 504.00 |
| F | 40+13.67 | -6.00 | 503.88 | 504.09 |
| G | 40+23.67 | -6.00 | 503.99 | 504.15 |
| H | 40+33.67 | -6.00 | 504.10 | 504.20 |
| CL Brg E. Abut. | 40+46.33 | -6.00 | 504.24 | 504.24 |
| Bk E. Abutment | 40+48.00 | -6.00 | 504.25 | 504.25 |

## BEAM #3 & PROFILE GRADE

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 39+52.00 | 0.00 | 503.29 | 503.29 |
| CL Brg W. Abut. | 39+53.67 | 0.00 | 503.31 | 503.31 |
| A | 39+63.67 | 0.00 | 503.42 | 503.50 |
| B | 39+73.67 | 0.00 | 503.53 | 503.68 |
| C | 39+83.67 | 0.00 | 503.64 | 503.84 |
| D | 39+93.67 | 0.00 | 503.75 | 503.98 |
| E | 40+03.67 | 0.00 | 503.86 | 504.10 |
| F | 40+13.67 | 0.00 | 503.97 | 504.18 |
| G | 40+23.67 | 0.00 | 504.08 | 504.25 |
| H | 40+33.67 | 0.00 | 504.19 | 504.29 |
| CL Brg E. Abut. | 40+46.33 | 0.00 | 504.33 | 504.33 |
| Bk E. Abutment | 40+48.00 | 0.00 | 504.35 | 504.35 |

## BEAM #4

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 39+52.00 | 6.00 | 503.20 | 503.20 |
| CL Brg W. Abut. | 39+53.67 | 6.00 | 503.22 | 503.22 |
| A | 39+63.67 | 6.00 | 503.33 | 503.41 |
| B | 39+73.67 | 6.00 | 503.44 | 503.59 |
| C | 39+83.67 | 6.00 | 503.55 | 503.75 |
| D | 39+93.67 | 6.00 | 503.66 | 503.89 |
| E | 40+03.67 | 6.00 | 503.77 | 504.00 |
| F | 40+13.67 | 6.00 | 503.88 | 504.09 |
| G | 40+23.67 | 6.00 | 503.99 | 504.15 |
| H | 40+33.67 | 6.00 | 504.10 | 504.20 |
| CL Brg E. Abut. | 40+46.33 | 6.00 | 504.24 | 504.24 |
| Bk E. Abutment | 40+48.00 | 6.00 | 504.25 | 504.25 |

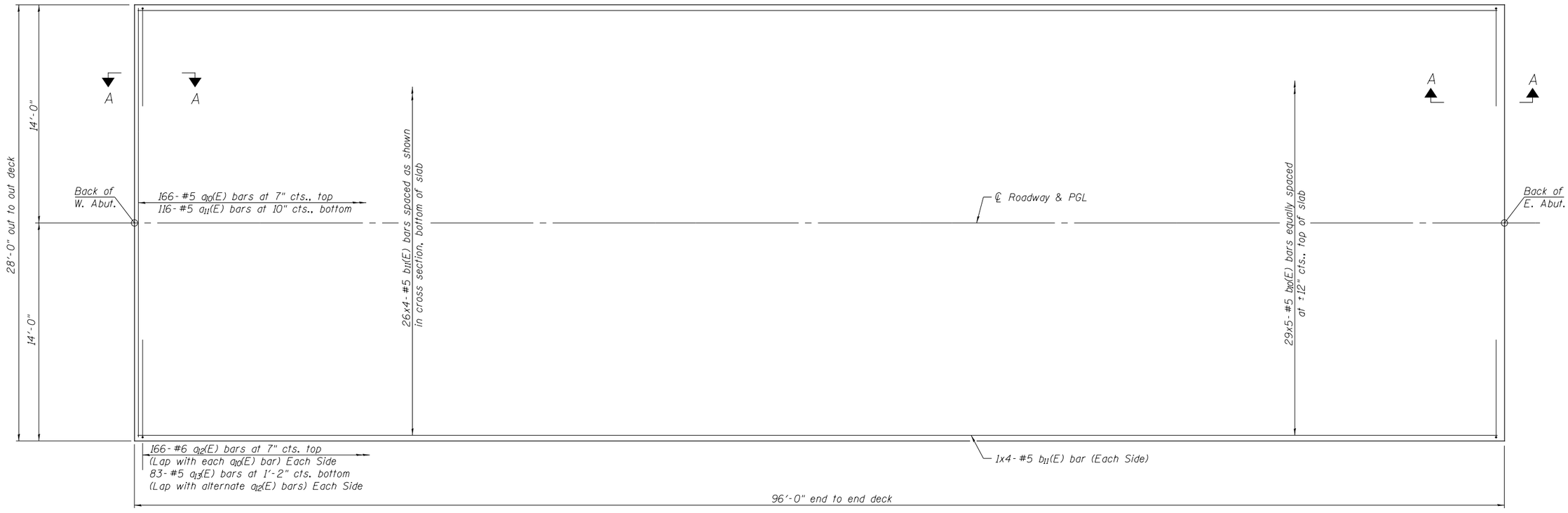
## BEAM #5

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|---|---|---|---|---|
| Bk W. Abutment | 39+52.00 | 12.00 | 503.10 | 503.10 |
| CL Brg W. Abut. | 39+53.67 | 12.00 | 503.12 | 503.12 |
| A | 39+63.67 | 12.00 | 503.23 | 503.31 |
| B | 39+73.67 | 12.00 | 503.34 | 503.49 |
| C | 39+83.67 | 12.00 | 503.45 | 503.65 |
| D | 39+93.67 | 12.00 | 503.56 | 503.79 |
| E | 40+03.67 | 12.00 | 503.67 | 503.90 |
| F | 40+13.67 | 12.00 | 503.78 | 503.99 |
| G | 40+23.67 | 12.00 | 503.89 | 504.05 |
| H | 40+33.67 | 12.00 | 504.00 | 504.10 |
| CL Brg E. Abut. | 40+46.33 | 12.00 | 504.14 | 504.14 |
| Bk E. Abutment | 40+48.00 | 12.00 | 504.16 | 504.16 |

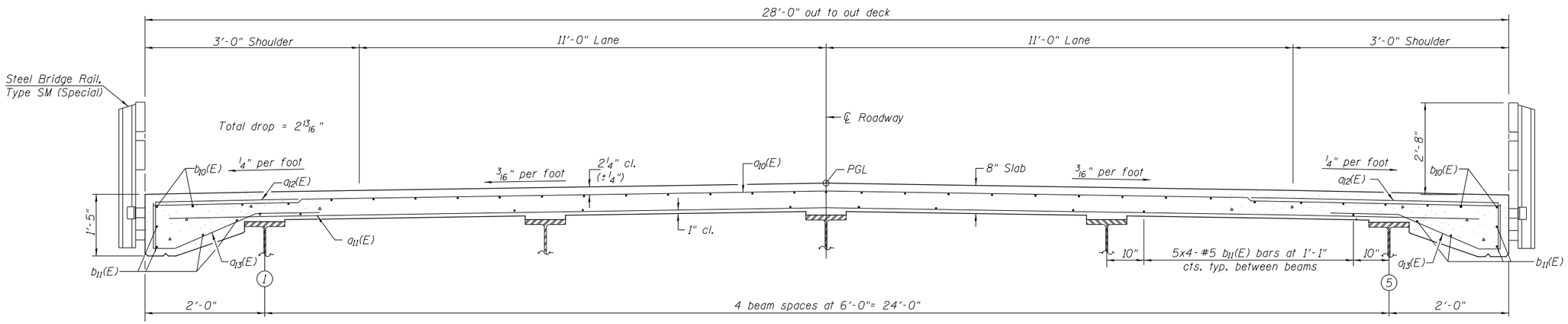
*TOP OF DECK ELEVATIONS*
*F.A.S. 1581 (C.H. 13)*
*OVER HORNEY BRANCH*
*SECTION 16-00079-00-BR*
*SCHUYLER COUNTY*
*STATION 40+00.00*

| SHEET NO. 4 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 28 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b004.dgn




PLAN




CROSS SECTION
(Looking East)

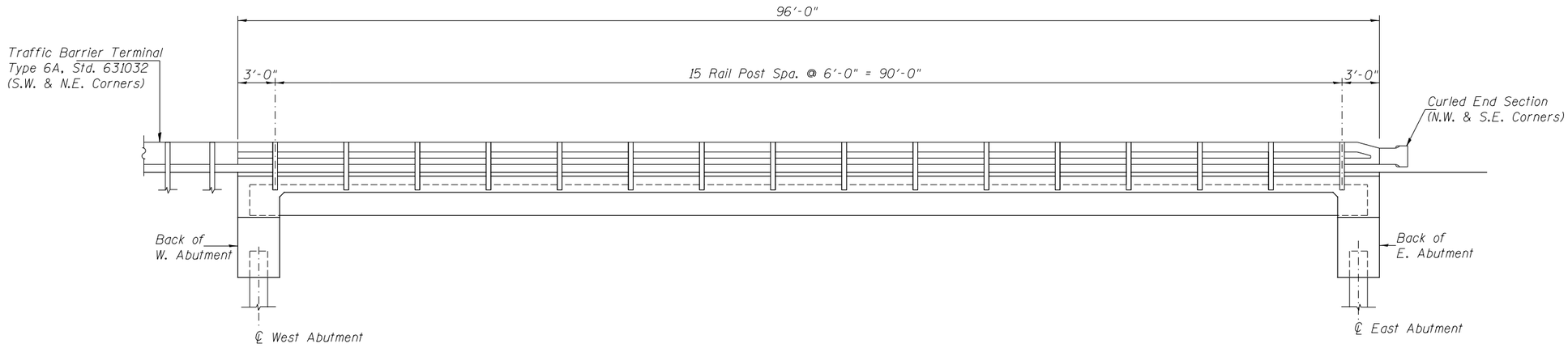
MINIMUM BAR LAP
(Deck)
#5 bar = 3'-6"

Notes:
Bars indicated thus 29x5-#5 etc. indicates 29 lines of bars with 5 lengths per line.
See Sheet 6 of 14 for superstructure details and Bill of Material.
See Sheet 7 of 14 for Section A-A and diaphragm details.
See Sheet 8 & 9 of 14 for rail details.

SUPERSTRUCTURE
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

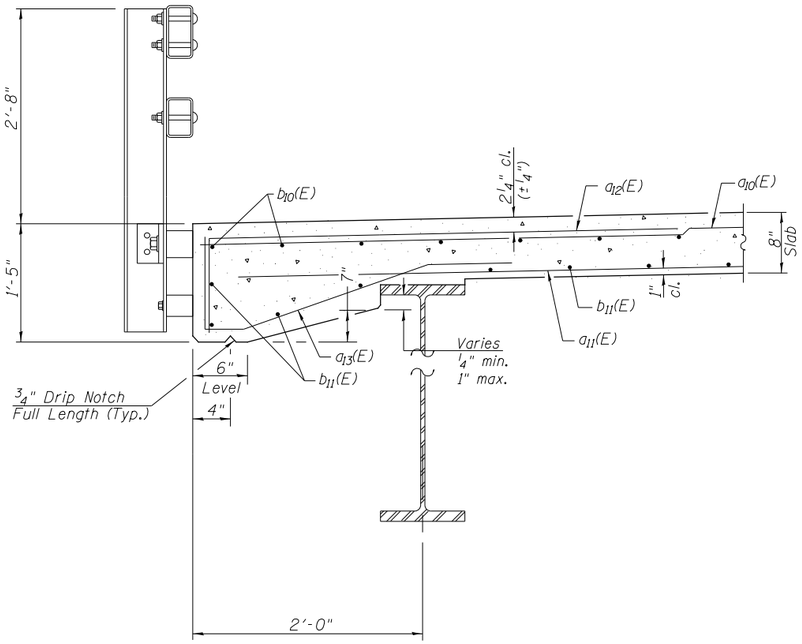
| SHEET NO. 5 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 29 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUOI(262) | | |

4079-2b005.dgn



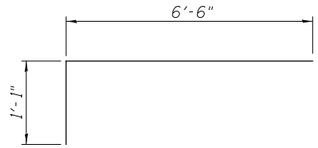

## RAIL POST SPACING

(South Rail Shown, North Rail Mirrored)

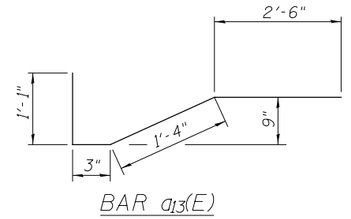



## SECTION THRU DECK OVERHANG

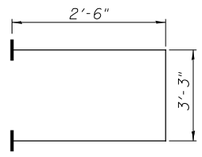
See Sheet 8 & 9 of 14 for Rail Post Anchor Details.




## BAR $a_{12}(E)$

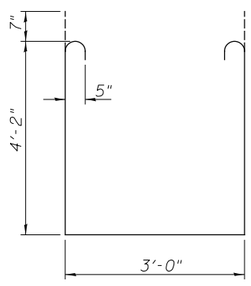



## BAR $a_{13}(E)$




## BAR $s_{10}(E)$

(Headed)




## BAR $s_{11}(E)$

## SUPERSTRUCTURE BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|---|---|---|---|---|
| $a_{10}(E)$ | 166 | #5 | 27'-9" | |
| $a_{11}(E)$ | 116 | #5 | 26'-9" | |
| $a_{12}(E)$ | 332 | #6 | 7'-7" | |
| $a_{13}(E)$ | 166 | #5 | 5'-2" | |
| | | | | |
| $b_{10}(E)$ | 145 | #5 | 22'-0" | |
| $b_{11}(E)$ | 112 | #5 | 26'-7" | |
| | | | | |
| $m_{10}(E)$ | 10 | #6 | 27'-9" | |
| $m_{11}(E)$ | 40 | #6 | 5'-9" | |
| $m_{12}(E)$ | 20 | #6 | 1'-9" | |
| $m_{13}(E)$ | 50 | #5 | 4'-0" | |
| | | | | |
| $s_{10}(E)$ | 56 | #5 | 8'-3" | |
| $s_{11}(E)$ | 56 | #5 | 12'-6" | |
| | | | | |
| $v_{10}(E)$ | 20 | #4 | 3'-5" | |
| Reinforcement Bars, Epoxy Coated | | | POUND | 21,430 |
| ① Concrete Superstructure | | | CU YD | 100.4 |

① See Special Provisions

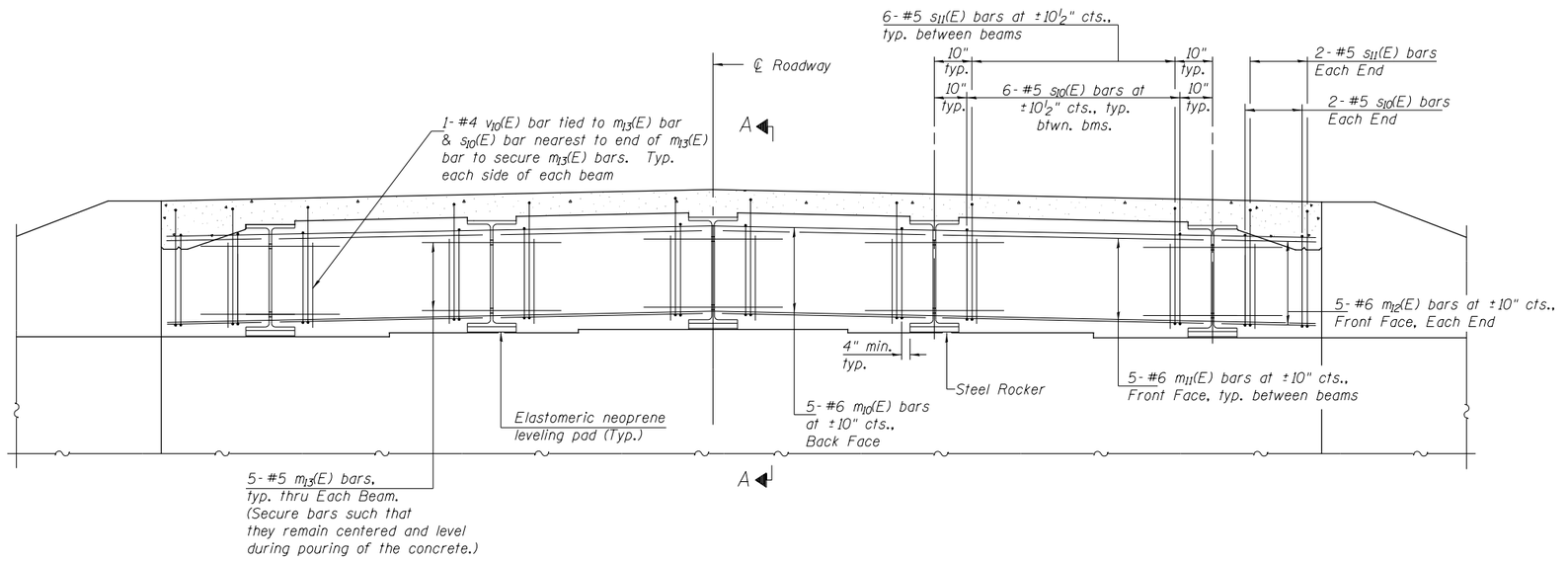
Notes:

Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

## SUPERSTRUCTURE DETAILS
## F.A.S. 1581 (C.H. 13)
## OVER HORNEY BRANCH
## SECTION 16-00079-00-BR
## SCHUYLER COUNTY
## STATION 40+00.00

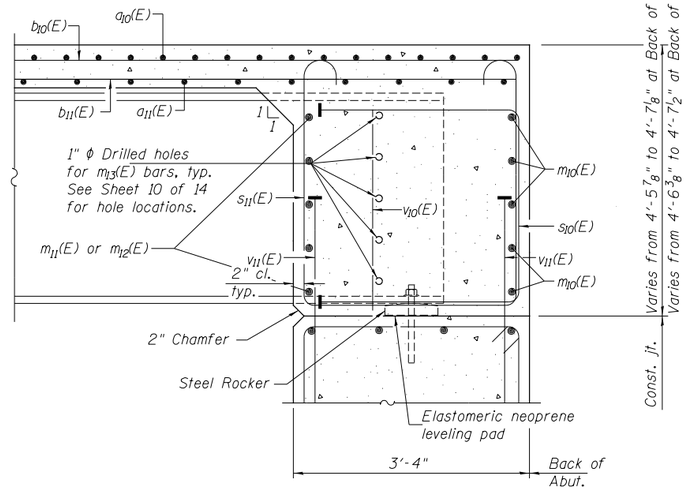
| SHEET NO. 6 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 30 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b006.dgn

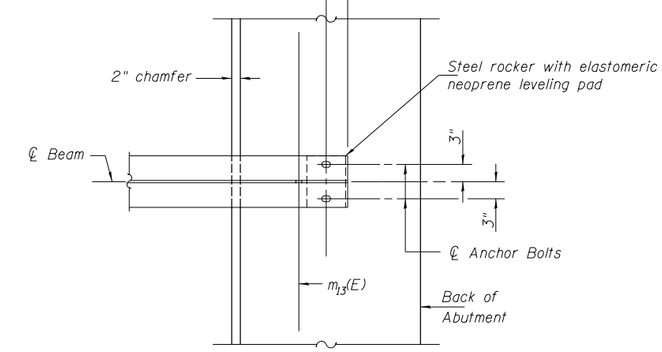



## DIAPHRAGM ELEVATION AT ABUTMENT

(West Abut. Looking West. East Abut. Looking East)




## SECTION A-A




## PARTIAL PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on Sheet 6 of 14.

Concrete in diaphragm is included with Concrete Superstructure on Sheet 6 of 14.

See Sheet 6 of 14 for details of bars $s_{10}(E)$ and $s_{11}(E)$.

See Sheet 12 of 14 for bearing details.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

# DIAPHRAGM DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00079-00-BR
# SCHUYLER COUNTY
# STATION 40+00.00

| SHEET NO. 7 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 31 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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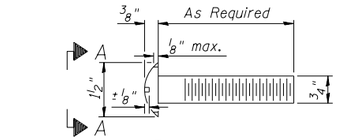
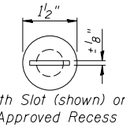
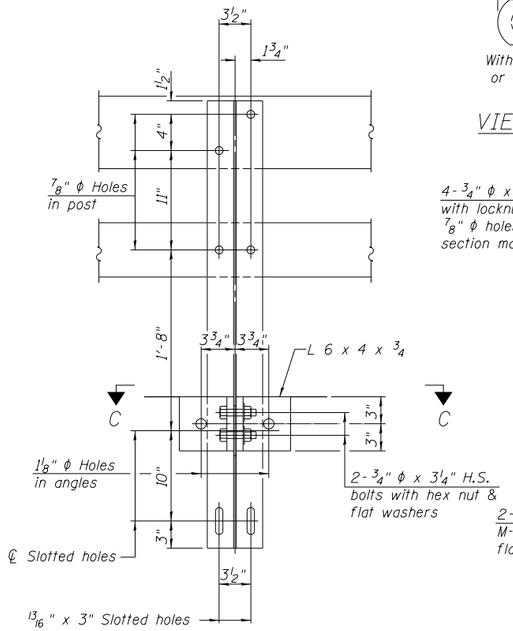
FOR RAIL POST SPACING SEE SH.#6 OF 14



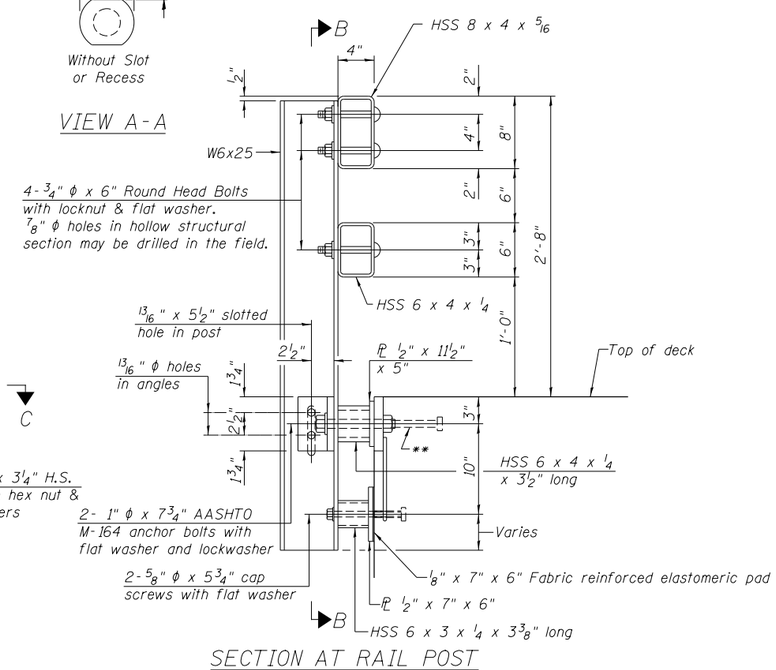

DETAIL OF 3/4" ϕ ROUND HEAD BOLT



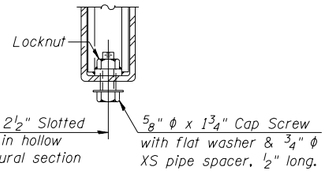

VIEW A-A



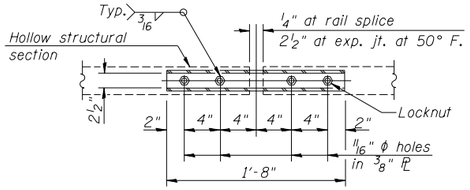

SECTION B-B



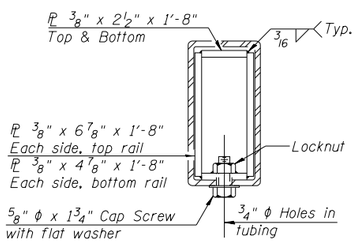

SECTION AT RAIL POST



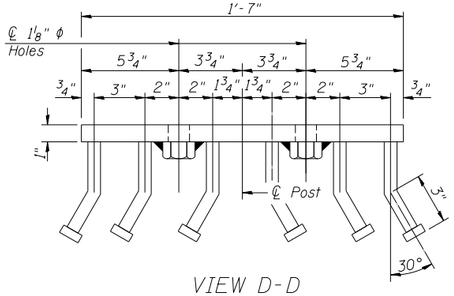

RAIL SPLICE CONNECTION
AT EXPANSION JT.



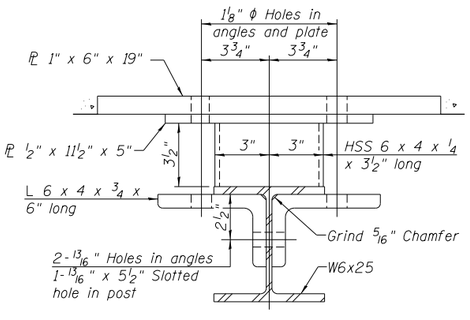

PLAN-BOTT. SPLICE PL
TYPICAL



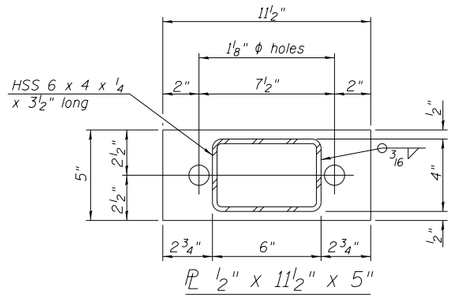

SECTION AT
RAIL SPLICE

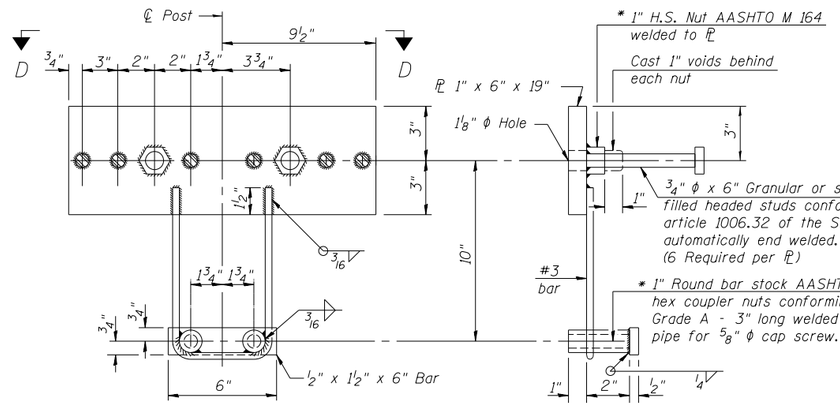



VIEW D-D




SECTION C-C




ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during pouring of deck. Galvanized after fabrication.

Notes:

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM (Special).

All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

BILL OF MATERIAL

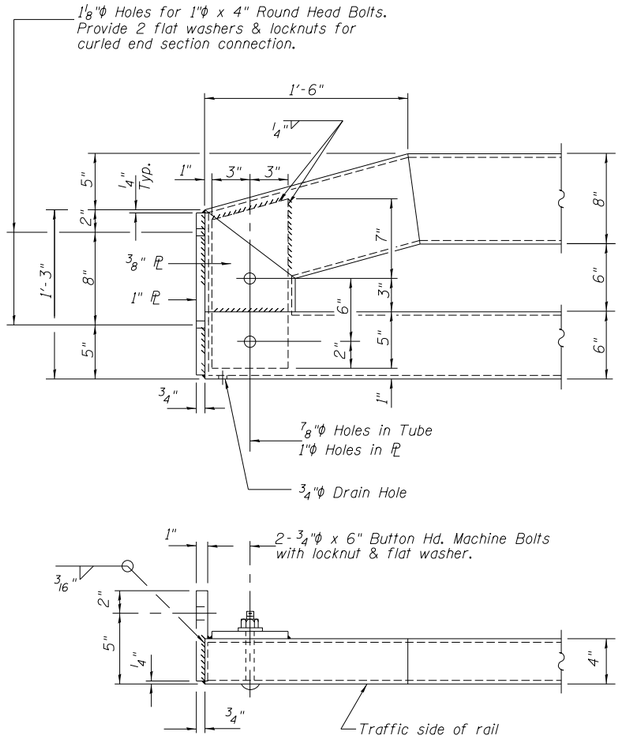
| ITEM | UNIT | QUANTITY |
|---|---|---|
| Steel Bridge Rail, Type SM (Special) | FOOT | 192 |

STEEL BRIDGE RAIL,
TYPE SM (SPECIAL)
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

(Sheet 1 of 2)

| SHEET NO. 8 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 32 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

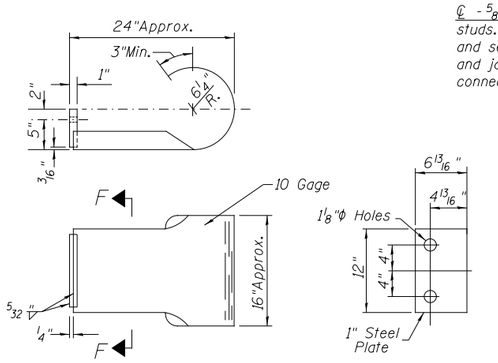
4079-2b008.dgn







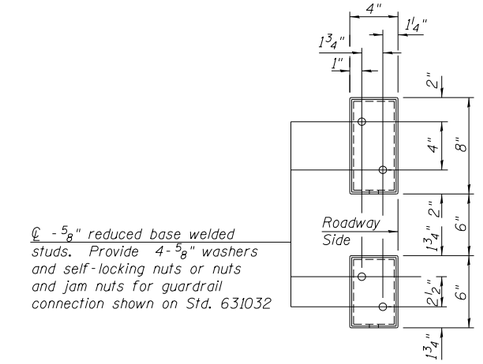
END OF RAIL DETAILS
N.W. & S.E. CORNERS




SECTION F-F

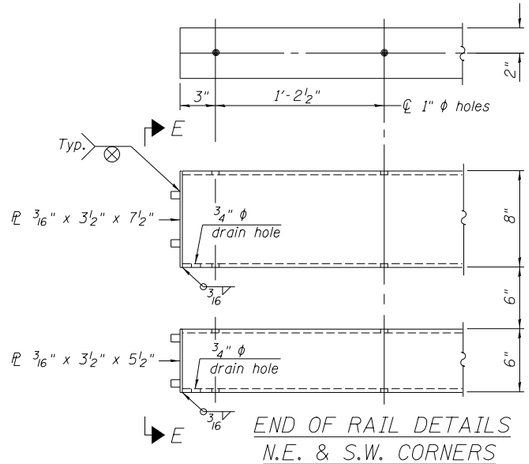
CURLED END SECTION

(2 Req'd) Cost Included with Steel Bridge Rail, Type SM (Special).
Terminal Markers - Direct Applied shall be placed on
end of each Curled End Section. (Typ. N.W. & S.E. Corners)




℄ - ⅝" reduced base welded
studs. Provide 4-⅝" washers
and self-locking nuts or nuts
and jam nuts for guardrail
connection shown on Std. 631032

VIEW E-E



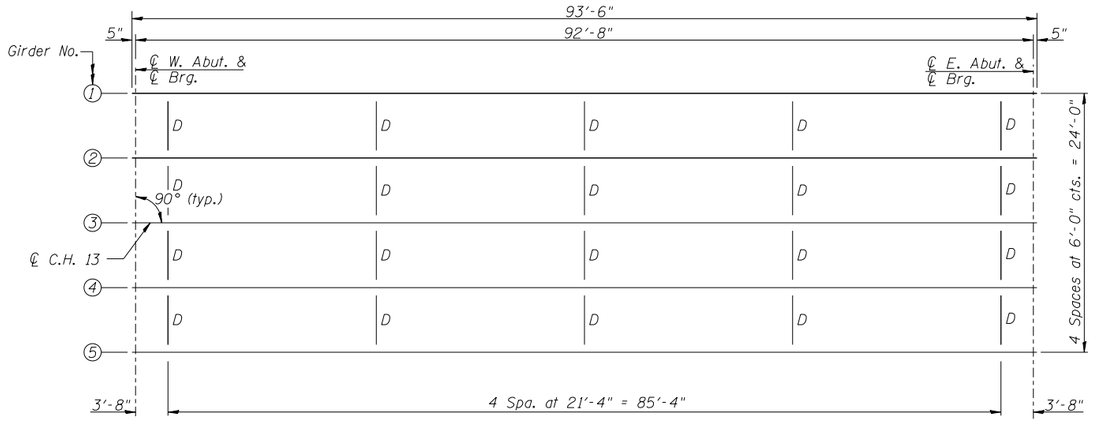

END OF RAIL DETAILS
N.E. & S.W. CORNERS

STEEL BRIDGE RAIL,
TYPE SM (SPECIAL)
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

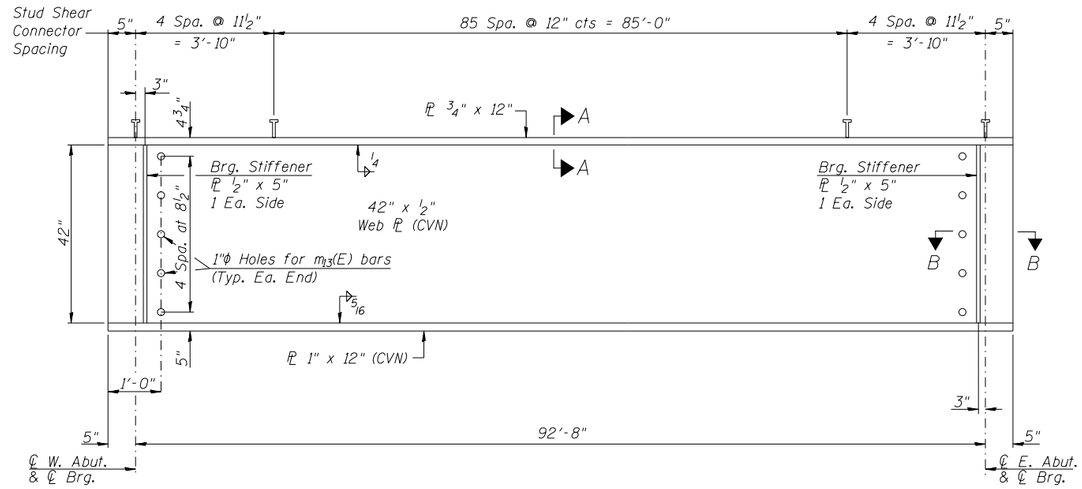
(Sheet 2 of 2)

| SHEET NO. 9 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 33 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b009.dgn

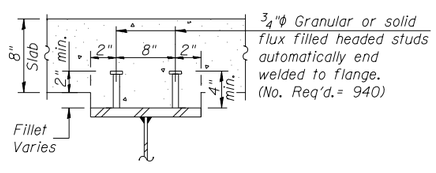



FRAMING PLAN



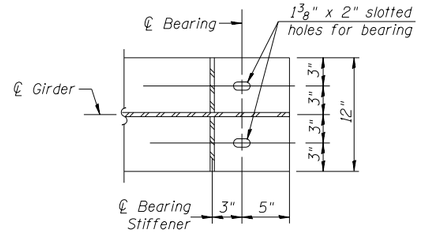

GIRDER ELEVATION

All plates and bearing stiffeners shall be AASHTO M270, Grade 50W (CVN).




SECTION A-A

Notes:
"CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
See Sheet 11 of 14 for Structural Steel Details.

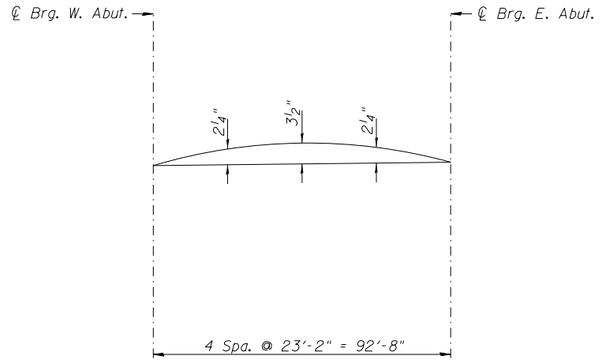



SECTION B-B

FRAMING PLAN
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

| | | | | | |
|---|---|---|---|---|---|
| SHEET NO. 10 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 34 |
| 14 SHEETS | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b010.dgn




CAMBER DIAGRAM

*TOP OF WEB ELEVATIONS

| LOCATION | GIRDER 1 | GIRDER 2 | GIRDER 3 | GIRDER 4 | GIRDER 5 |
|---|---|---|---|---|---|
| ℄ Brg. at W. Abut. | 502.32 | 502.42 | 502.51 | 502.42 | 502.32 |
| ℄ Brg. at E. Abut. | 503.34 | 503.44 | 503.53 | 503.44 | 503.34 |

*For fabrication only

| INTERIOR GIRDER MOMENT TABLE | | |
|---|---|---|
| | | 0.5 SP. I |
| $I_s$ | ($in^4$) | 12,647 |
| $I_c(n)$ | ($in^4$) | 33,830 |
| $I_c(3n)$ | ($in^4$) | 25,173 |
| $I_c(cr)$ | ($in^4$) | - |
| $S_s$ | ($in^3$) | 619 |
| $S_c(n)$ | ($in^3$) | 878 |
| $S_c(3n)$ | ($in^3$) | 806 |
| $S_c(cr)$ | ($in^3$) | - |
| DC1 | (k/') | 0.787 |
| $M_{DC1}$ | ('k) | 845 |
| DC2 | (k/') | 0.030 |
| $M_{DC2}$ | ('k) | 32 |
| DW | (k/') | 0.300 |
| $M_{DW}$ | ('k) | 322 |
| $M_{L+IM}$ | ('k) | 1,327 |
| $M_u$ (Strength I) | ('k) | 3,892 |
| $\phi_f M_n$ | ('k) | 4,845 |
| $f_s$ DC1 | (ksi) | 16.38 |
| $f_s$ DC2 | (ksi) | 0.48 |
| $f_s$ DW | (ksi) | 4.79 |
| $f_s$ (L+IM) | (ksi) | 18.14 |
| $f_s$ (Service II) | (ksi) | 45.10 |
| $0.95R_hF_{yf}$ | (ksi) | 47.50 |
| $f_s$ (Total)(Strength I) | (ksi) | - |
| $\phi_f F_n$ | (ksi) | - |
| $V_r$ | (k) | 24.9 |

$I_s$, $S_s$: Non-composite moment of inertia and section modulus of the steel section used for computing $f_s$ (Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing $f_s$ (Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing $f_s$ (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing $f_s$ (Total -Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$ ).

DC1: Un-factored non-composite dead load (kips/ft.).

$M_{DC1}$: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

$M_{DC2}$: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

$M_{DW}$: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_{L+IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

$M_u$ (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

$f_s$ DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
$M_{DC1} / S_{nc}$

$f_s$ DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

$f_s$ DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

$f_s$ (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

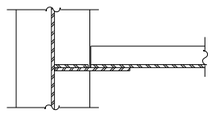
$f_s$ (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s\ (L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

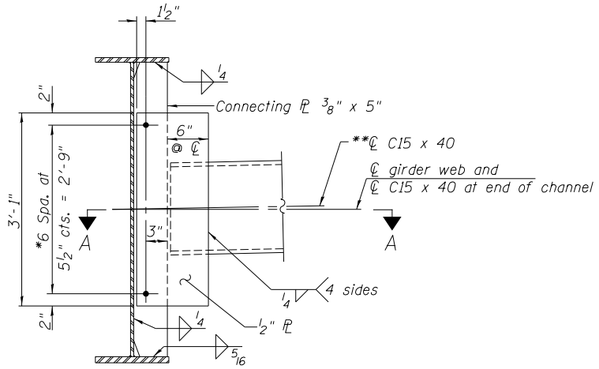
$f_s$ (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s\ (L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

$V_r$: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



SECTION A-A



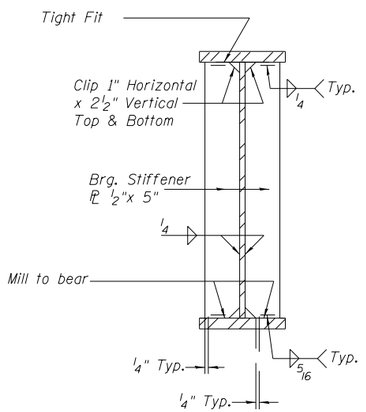

DIAPHRAGM D
(20 Required)

Note:
Two hardened washers required for each set of oversized holes.
*¾" ϕ HS bolts. 15/16" ϕ holes

**Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, C15x50, if utilized, shall be provided at no additional cost to the County.

All diaphragms between beams shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

| INTERIOR GIRDER REACTION TABLE | | |
|---|---|---|
| | | ABUTMENTS |
| $R_{DC1}$ | (k) | 36.5 |
| $R_{DC2}$ | (k) | 1.4 |
| $R_{DW}$ | (k) | 13.9 |
| $R_{L+IM}$ | (k) | 77.9 |
| $R_{Total}$ | (k) | 129.5 |

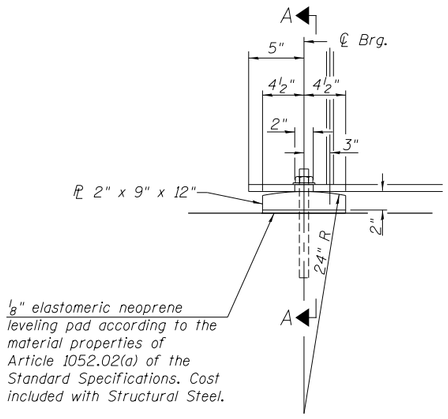



SECTION AT ABUTMENTS

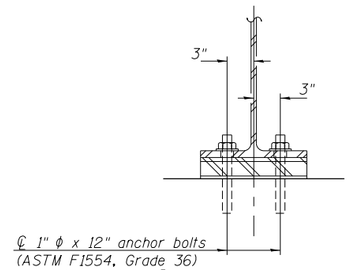
STRUCTURAL STEEL DETAILS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

| SHEET NO. 11 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 35 |
| 14 SHEETS | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b011.dgn



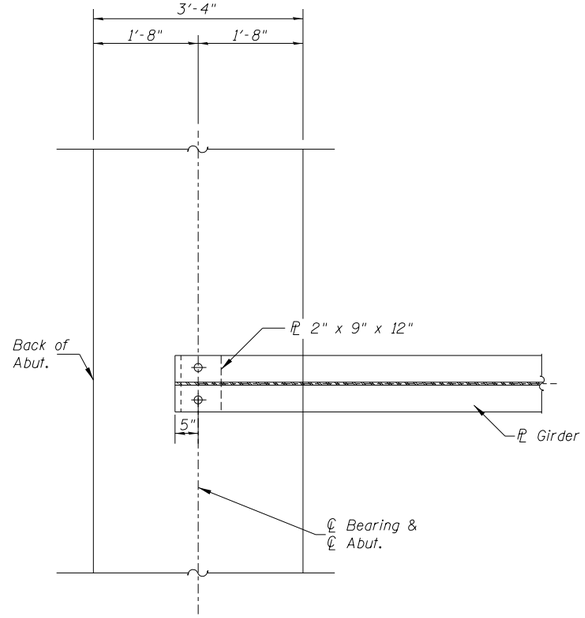

ELEVATION AT ABUTMENT




SECTION A-A

## FIXED BEARING AT ABUTMENTS

(10 Required)




PARTIAL PLAN AT ABUTMENTS

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

The structural steel bearing plates shall conform to the requirements of AASHTO M270 Grade 50W.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after members are in place.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.

## BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|---|---|---|
| Anchor Bolts, 1" | EACH | 20 |

# BEARING DETAILS
# F.A.S. 1581 (C.H. 13)
# OVER HORNEY BRANCH
# SECTION 16-00079-00-BR
# SCHUYLER COUNTY
# STATION 40+00.00

| SHEET NO. 12 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 36 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | | FED. ROAD DIST. NO. 7 ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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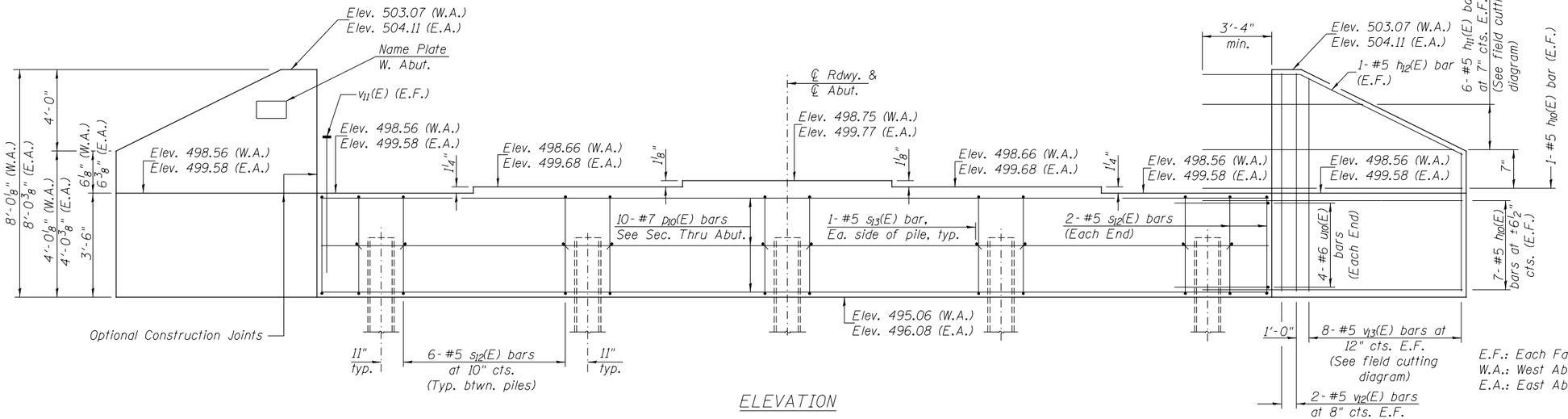
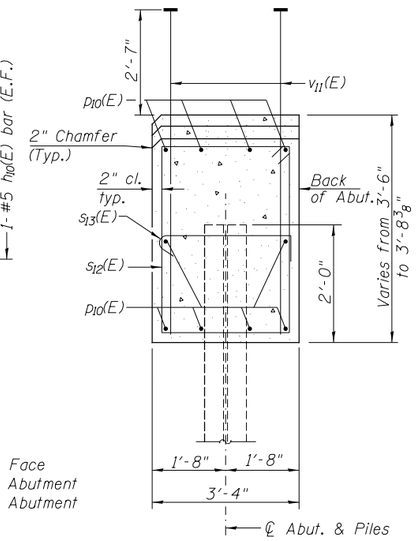
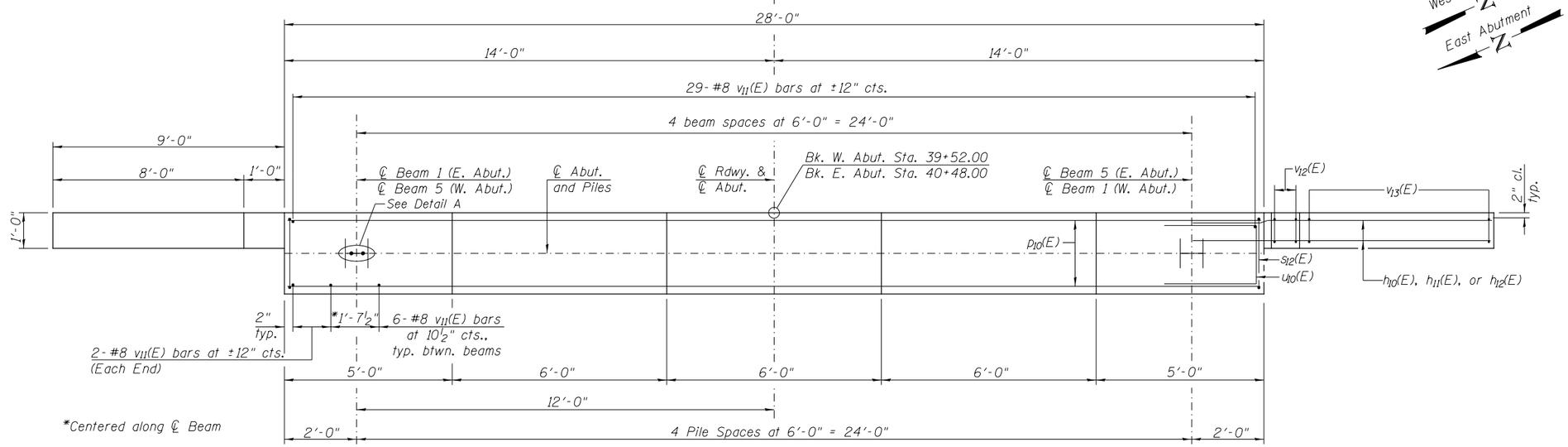



ELEVATION

E.F.: Each Face
W.A.: West Abutment
E.A.: East Abutment

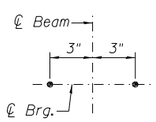



SEC. THRU ABUT.




*Centered along ℄ Beam

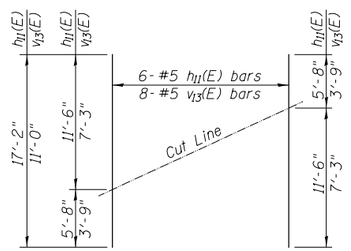
PLAN




DETAIL A

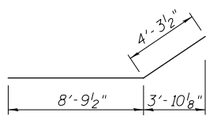
## PILE DATA

Type: Steel HP 12x53
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 35' W. Abutment
36' E. Abutment
No. Required: 10 (Includes 1 Test Pile at Each Abut.)

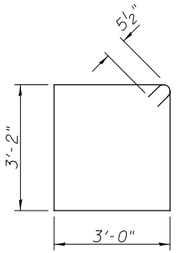



FIELD CUTTING DIAGRAM

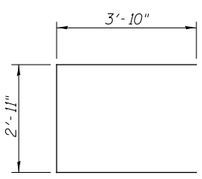
Order $h_{11}$(E) and $v_{13}$(E) full length. Cut as shown and use remainder of bars in opposite face.



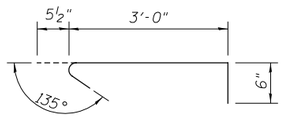

BAR $h_{12}$(E)




BAR $s_{12}$(E)




BAR $u_{10}$(E)




BAR $s_{13}$(E)

Notes:
Pour steps monolithically with cap.
All edges shall have standard ¾" chamfer.
For details of H-Piles, see sheet 14 of 14.
Space reinforcement to miss anchor bolts.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

## TWO ABUTMENTS
## BILL OF MATERIAL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|---|---|---|---|---|
| $h_{10}$(E) | 64 | #5 | 12'-2" | ——— |
| $h_{11}$(E) | 24 | #5 | 17'-2" | ——— |
| $h_{12}$(E) | 8 | #5 | 13'-1" | ——— |
| | | | | |
| $p_{10}$(E) | 20 | #7 | 27'-9" | ——— |
| | | | | |
| $s_{12}$(E) | 56 | #5 | 13'-3" | □ |
| $s_{13}$(E) | 20 | #5 | 4'-0" | ⊂ |
| | | | | |
| $u_{10}$(E) | 16 | #6 | 10'-7" | □ |
| | | | | |
| $v_{11}$(E) | 114 | #8 | 5'-11" | ——— |
| $v_{12}$(E) | 16 | #5 | 7'-8" | ——— |
| $v_{13}$(E) | 32 | #5 | 11'-0" | ——— |
| | | | | |
| Structure Excavation | | CU YD | 205 | |
| Concrete Structures | | CU YD | 33.1 | |
| Reinforcement Bars, Epoxy Coated | | POUND | 5,890 | |
| Name Plates | | EACH | 1 | |
| Furnishing Steel Piles HP 12x53 | | FOOT | 284 | |
| Driving Piles | | FOOT | 284 | |
| Test Pile Steel HP 12x53 | | EACH | 2 | |

## ABUTMENTS
## F.A.S. 1581 (C.H. 13)
## OVER HORNEY BRANCH
## SECTION 16-00079-00-BR
## SCHUYLER COUNTY
## STATION 40+00.00

| SHEET NO. 13 | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| 14 SHEETS | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 37 |
| | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

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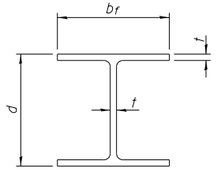
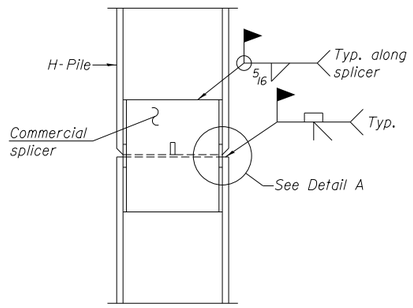


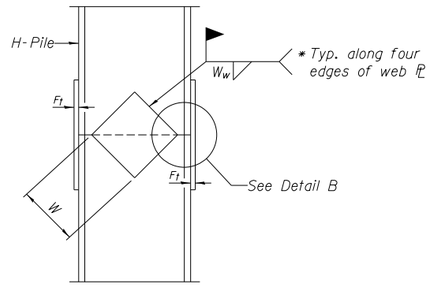

## STEEL PILE TABLE

| Designation | Depth d | Flange width $b_f$ | Web and Flange thickness t |
|---|---|---|---|
| HP 14x117 | 14 1/4" | 14 7/8" | 13/16" |
| x102 | 14" | 14 3/4" | 11/16" |
| x89 | 13 7/8" | 14 3/4" | 5/8" |
| x73 | 13 5/8" | 14 5/8" | 1/2" |
| HP 12x84 | 12 1/4" | 12 1/4" | 11/16" |
| x74 | 12 1/8" | 12 1/4" | 5/8" |
| x63 | 12" | 12 1/8" | 1/2" |
| x53 | 11 3/4" | 12" | 7/16" |
| HP 10x57 | 10" | 10 1/4" | 9/16" |
| x42 | 9 3/4" | 10 1/8" | 7/16" |
| HP 8x36 | 8" | 8 1/8" | 7/16" |

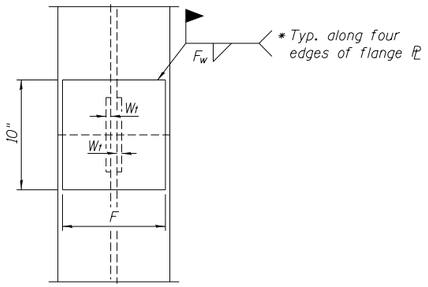
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



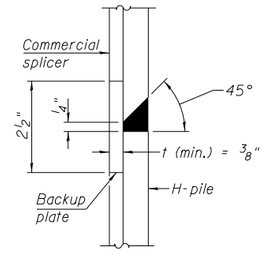

ELEVATION



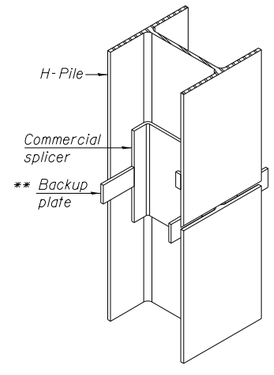

ELEVATION



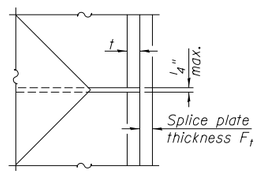

END VIEW




DETAIL A




ISOMETRIC VIEW

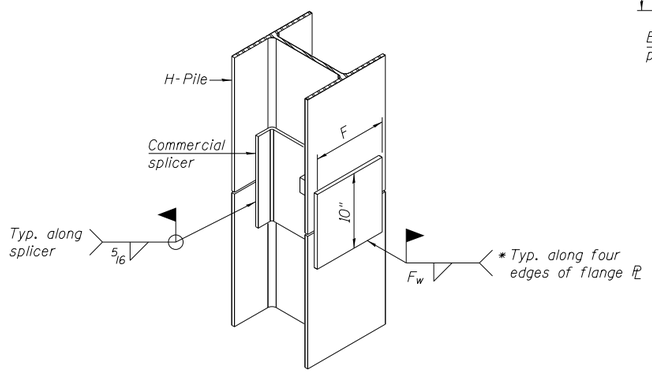



DETAIL B

| Designation | F | $F_t$ | $F_w$ | W | $W_t$ | $W_w$ |
|---|---|---|---|---|---|---|
| HP 14x117 | 12 1/2" | 1" | 7/8" | 7 3/4" | 5/8" | 1/2" |
| x102 | 12 1/2" | 7/8" | 3/4" | 7 3/4" | 5/8" | 1/2" |
| x89 | 12 1/2" | 3/4" | 11/16" | 7 3/4" | 5/8" | 1/2" |
| x73 | 12 1/2" | 5/8" | 9/16" | 7 3/4" | 5/8" | 1/2" |
| HP 12x84 | 10" | 7/8" | 11/16" | 6 1/2" | 5/8" | 1/2" |
| x74 | 10" | 7/8" | 11/16" | 6 1/2" | 5/8" | 1/2" |
| x63 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| x53 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| HP 10x57 | 8" | 3/4" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| x42 | 8" | 5/8" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| HP 8x36 | 7" | 5/8" | 7/16" | 4 1/4" | 1/2" | 3/8" |

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE




ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

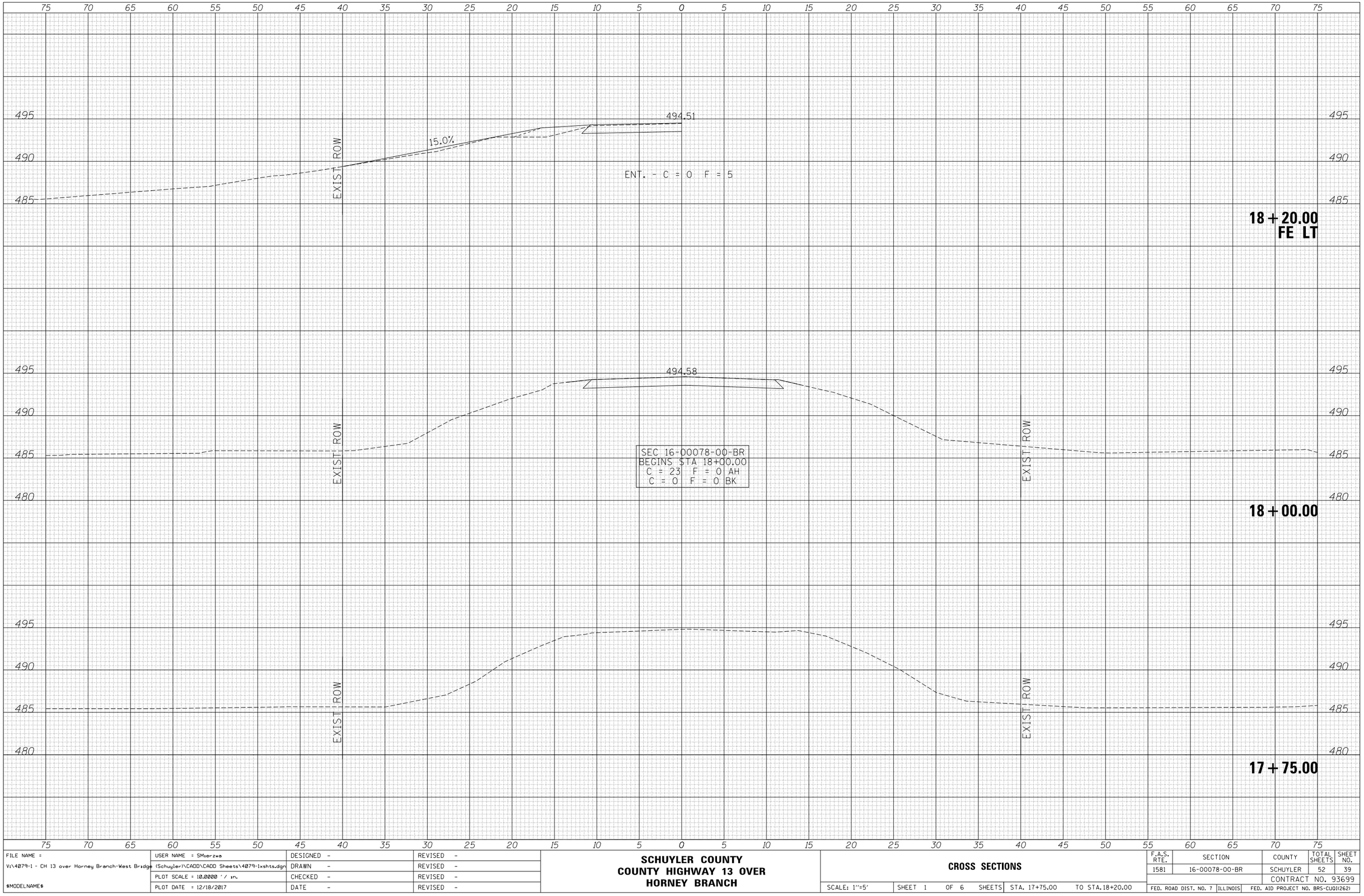
* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.

HP PILE DETAILS
F.A.S. 1581 (C.H. 13)
OVER HORNEY BRANCH
SECTION 16-00079-00-BR
SCHUYLER COUNTY
STATION 40+00.00

| | F.A.S. ROUTE | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|---|
| SHEET NO. 14 | 1581 | 16-00079-00-BR | SCHUYLER | 52 | 38 |
| 14 SHEETS | | S.N. 085-3058 | CONTRACT NO. 93699 | | |
| | FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. CUQI(262) | | |

4079-2b014.dgn

| FINAL SURVEY | NOTE BOOK | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED |
|---|---|---|---|---|---|---|
| NO. | | BY | | | | DATE |




| ORIGINAL SURVEY | NOTE BOOK | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED |
|---|---|---|---|---|---|---|
| NO. | | BY | | | | DATE |

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge $MODELNAME$ | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

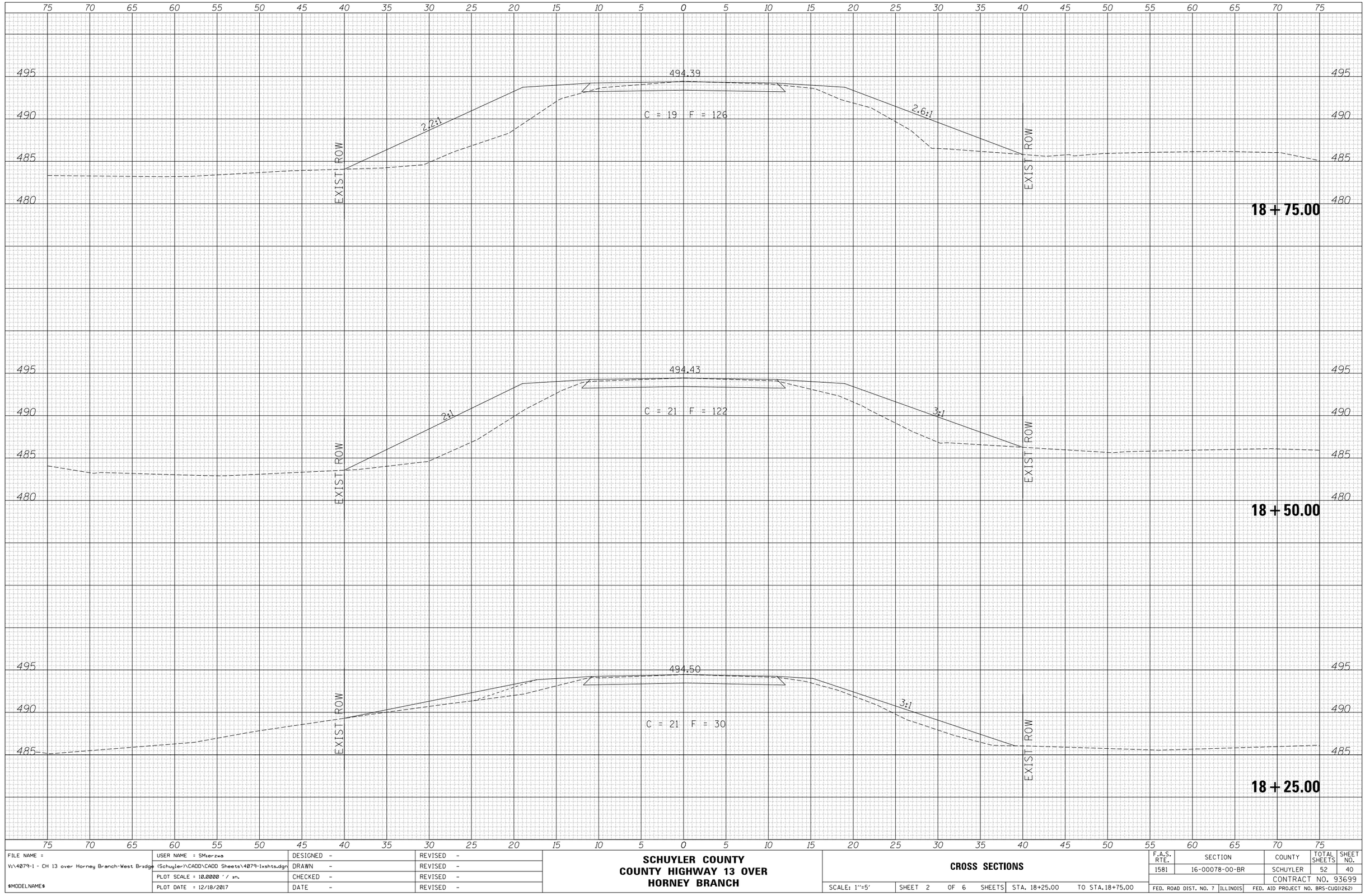
**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 1 OF 6 SHEETS | STA. 17+75.00 TO STA.18+20.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 39 |
| | | CONTRACT NO. 93699 | | |

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU01(262)




| FINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. | AREAS CHECKED | |

| ORIGINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. | AREAS CHECKED | |

| | | | |
|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

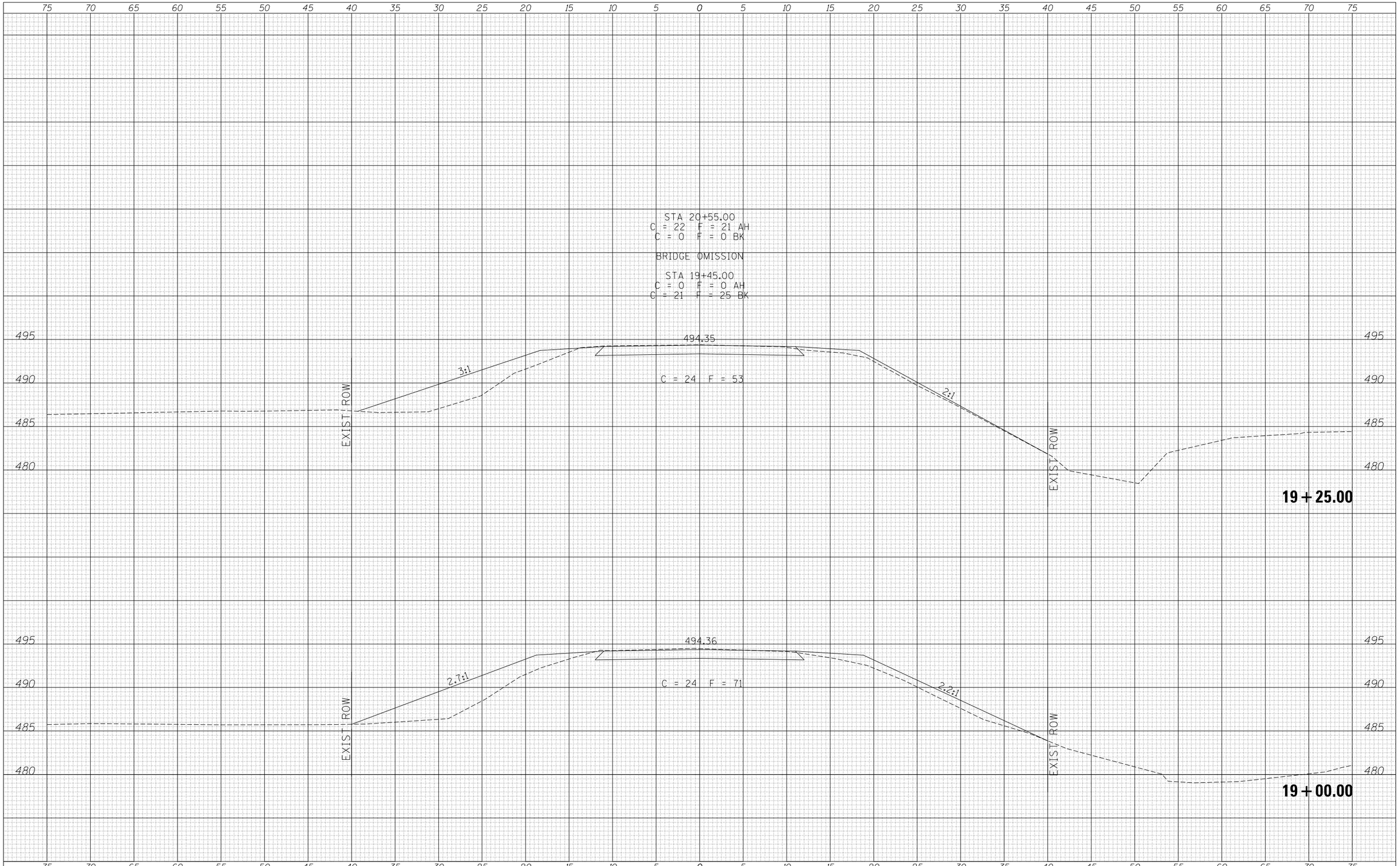
**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 2 OF 6 SHEETS | STA. 18+25.00 TO STA.18+75.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 40 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | DATE | |

| ORIGINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | DATE | |

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|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

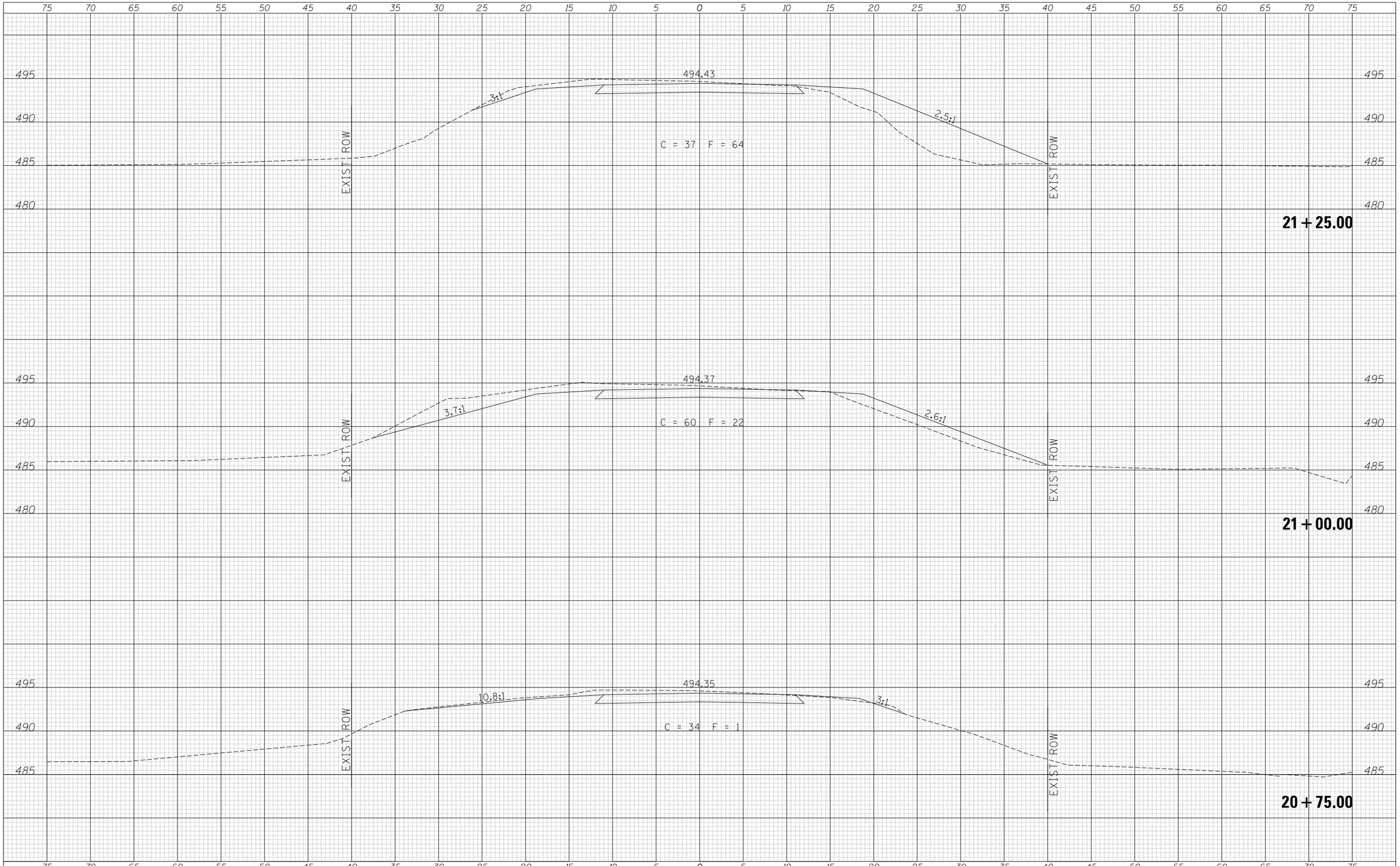
**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 3 OF 6 SHEETS | STA. 19+00.00 TO STA.19+25.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 41 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | DATE | |




| ORIGINAL SURVEY | NOTE BOOK | NO. |
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| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | DATE | |

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| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 4 OF 6 SHEETS | STA. 20+75.00 TO STA. 21+25.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 42 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

| BY | DATE |
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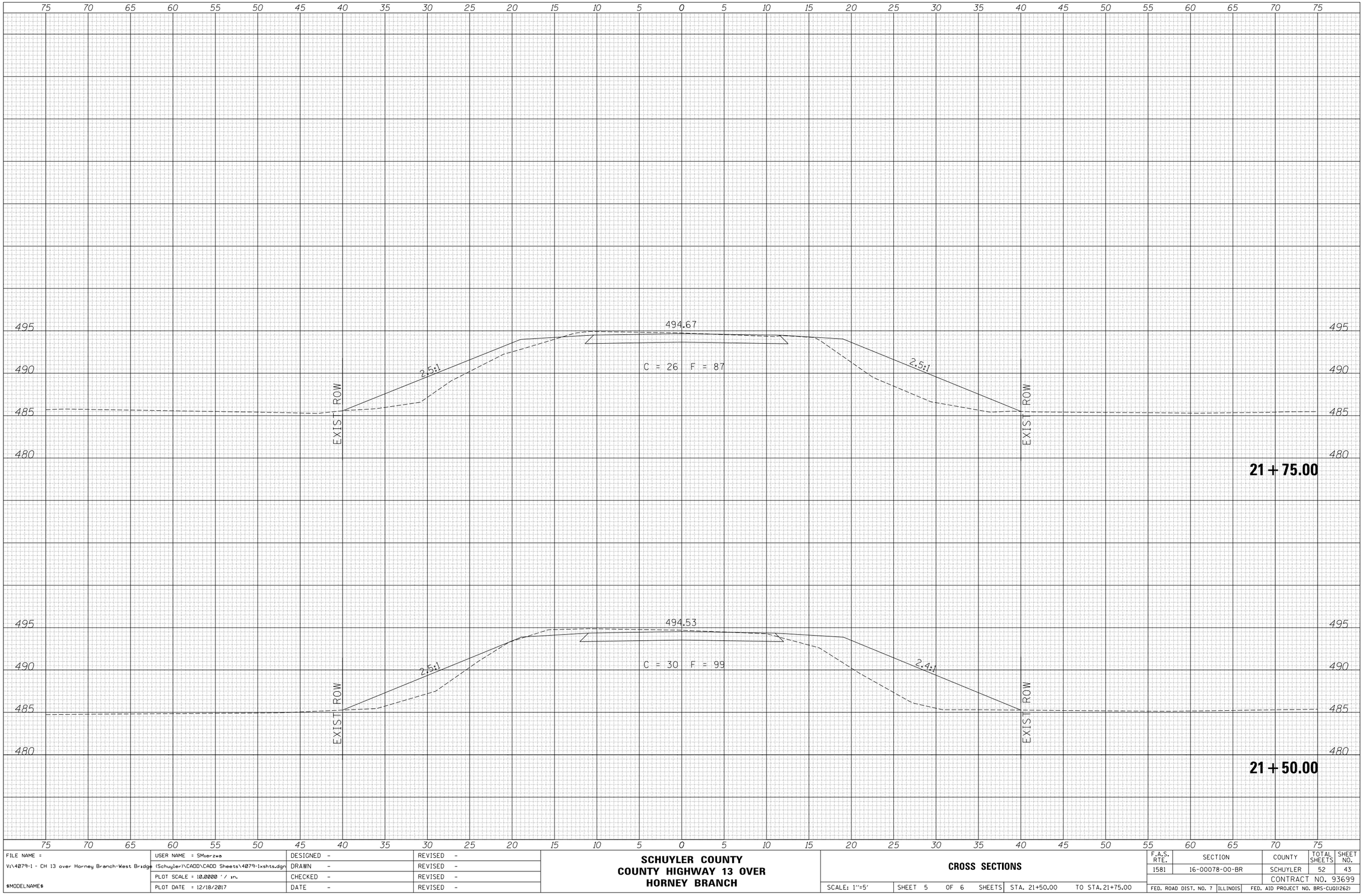


| ORIGINAL SURVEY | NOTE BOOK | NO. |
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| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

| BY | DATE |
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| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 5 OF 6 SHEETS | STA. 21+50.00 | TO STA. 21+75.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 43 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |

| FINAL SURVEY | |
|---|---|
| NOTE BOOK | |
| NO. | |

| | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

495
490
485

EXIST ROW

EXIST ROW

**22 + 25.00**

SEC 16-00078-00-BR
ENDS STA 22+00.00
C = 0 F = 0 AH
C = 23 F = 0 BK

494.85

495
490
485
480

EXIST ROW

EXIST ROW

**22 + 00.00**

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

| ORIGINAL SURVEY | |
|---|---|
| NOTE BOOK | |
| NO. | |

| | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

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|---|---|---|---|
| FILE NAME = V:\4079-1 - CH 13 over Horney Branch-West Bridge $MODELNAME$ | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | (Schuyler)\CADD\CADD Sheets\4079-1xshts.dgn | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 6 OF 6 SHEETS | STA. 22+00.00 | TO STA. 22+25.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00078-00-BR | SCHUYLER | 52 | 44 |
| | | CONTRACT NO. 93699 | | |

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQ11(262)

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | DATE |

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

505
500
495
490

504.13

3:1

3:1

C = 25 F = 21

EXIST. ROW

EXIST. ROW

**37 + 75.00**

504.52

SEC 16-00079-00-BR
BEGINS STA 37+50.00
C = 23 F = 0 AH
C = 0 F = 0 BK

EXIST. ROW

EXIST. ROW

**37 + 50.00**

EXIST. ROW

EXIST. ROW

**37 + 00.00**

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

| ORIGINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | DATE |

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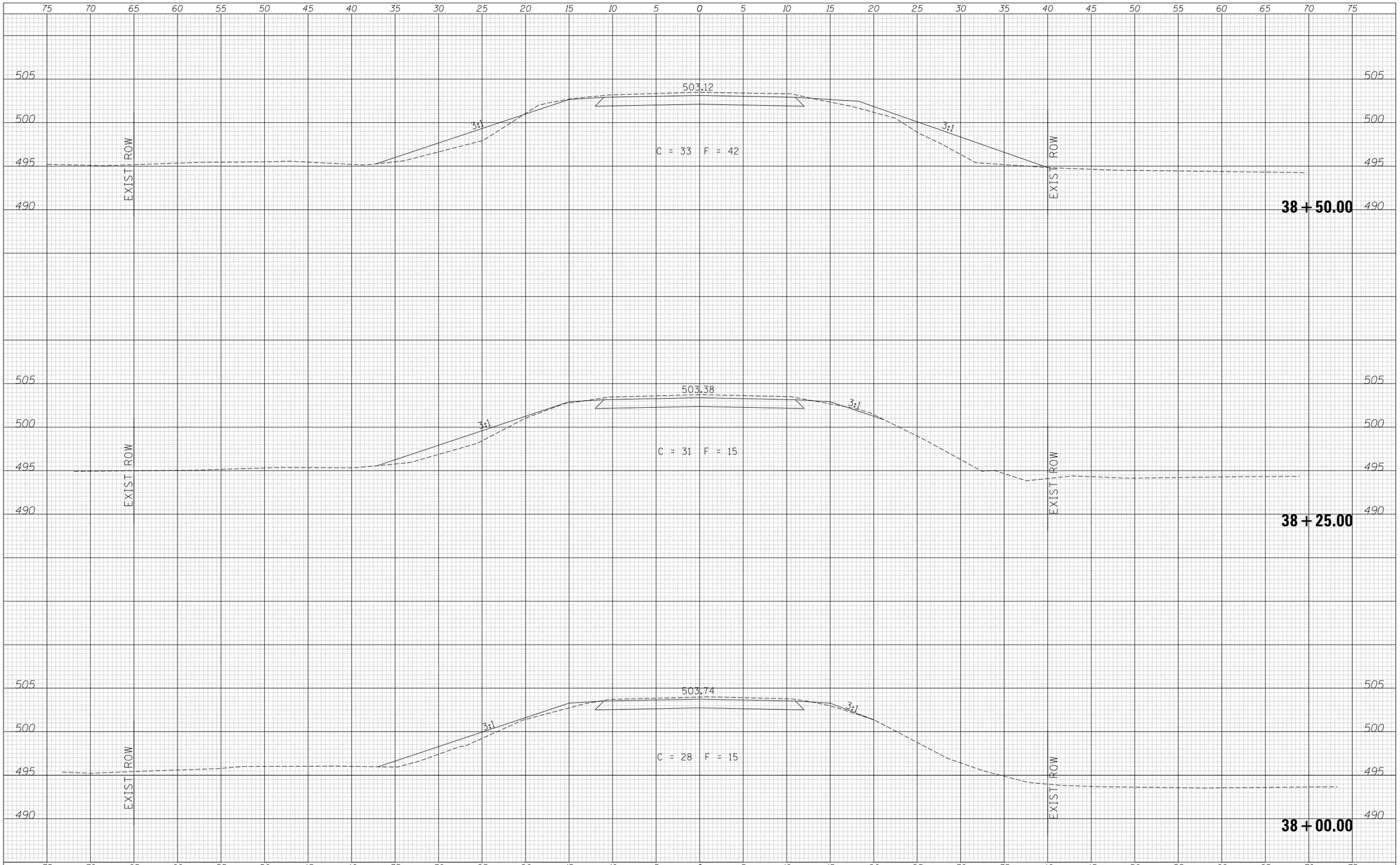
|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 1 OF 8 SHEETS | STA. 37+00.00 TO STA. 37+75.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 45 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |




| FINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. AREAS CHECKED | | |

| ORIGINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. AREAS CHECKED | | |

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|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

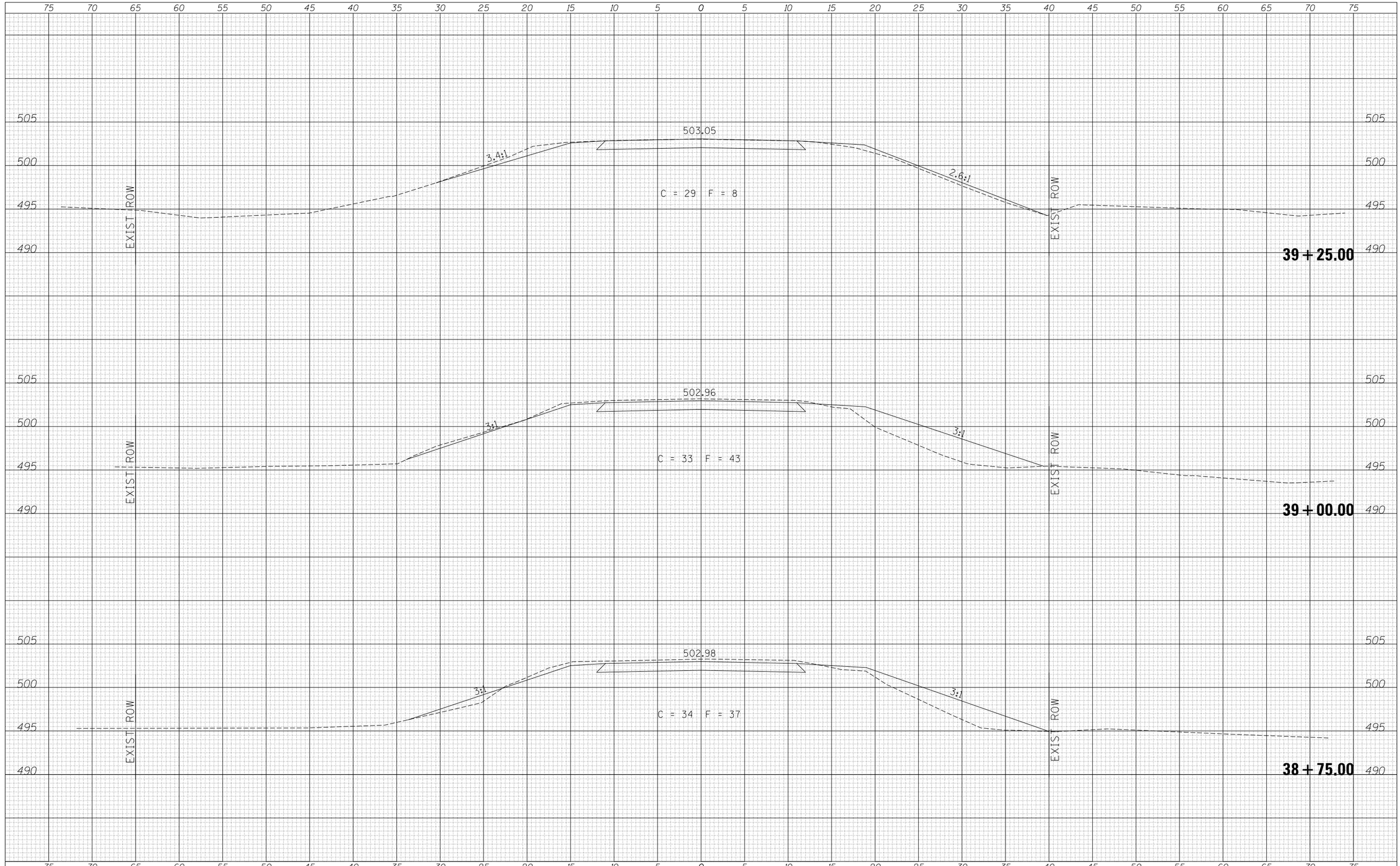
SCALE: 1"=5' | SHEET 2 OF 8 SHEETS | STA. 38+00.00 | TO STA. 38+50.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 46 |
| | | CONTRACT NO. 93699 | | |

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU0I(262)

| FINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. | AREAS CHECKED | |

| ORIGINAL SURVEY | BY | DATE |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| NOTE BOOK | | |
| AREAS | | |
| NO. | AREAS CHECKED | |

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| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 3 OF 8 SHEETS | STA. 38+75.00 TO STA. 39+25.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 47 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU01(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | BY | DATE |
| PLOTTED | | |
| TEMPLATE | | |
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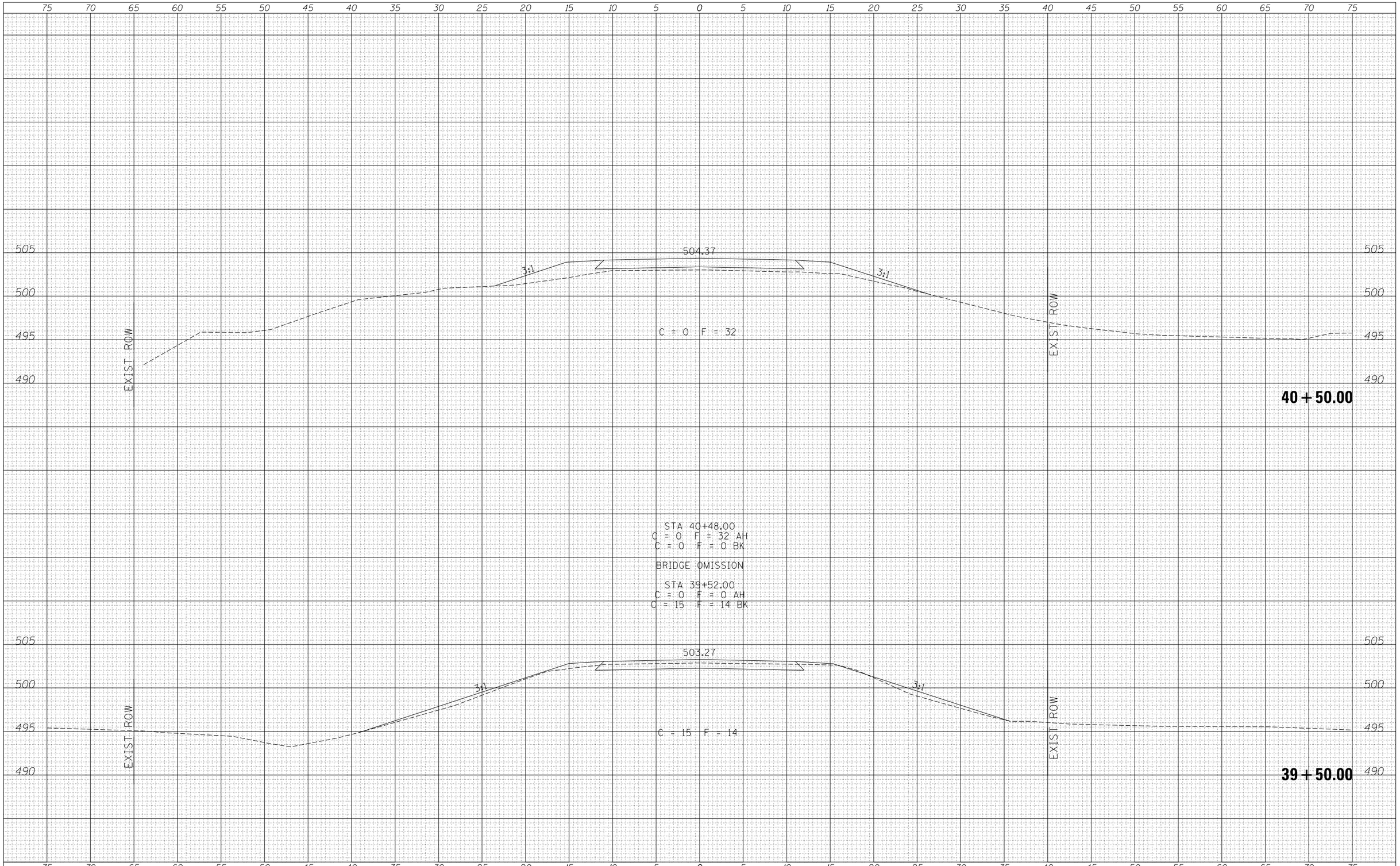


| ORIGINAL SURVEY | NOTE BOOK | NO. |
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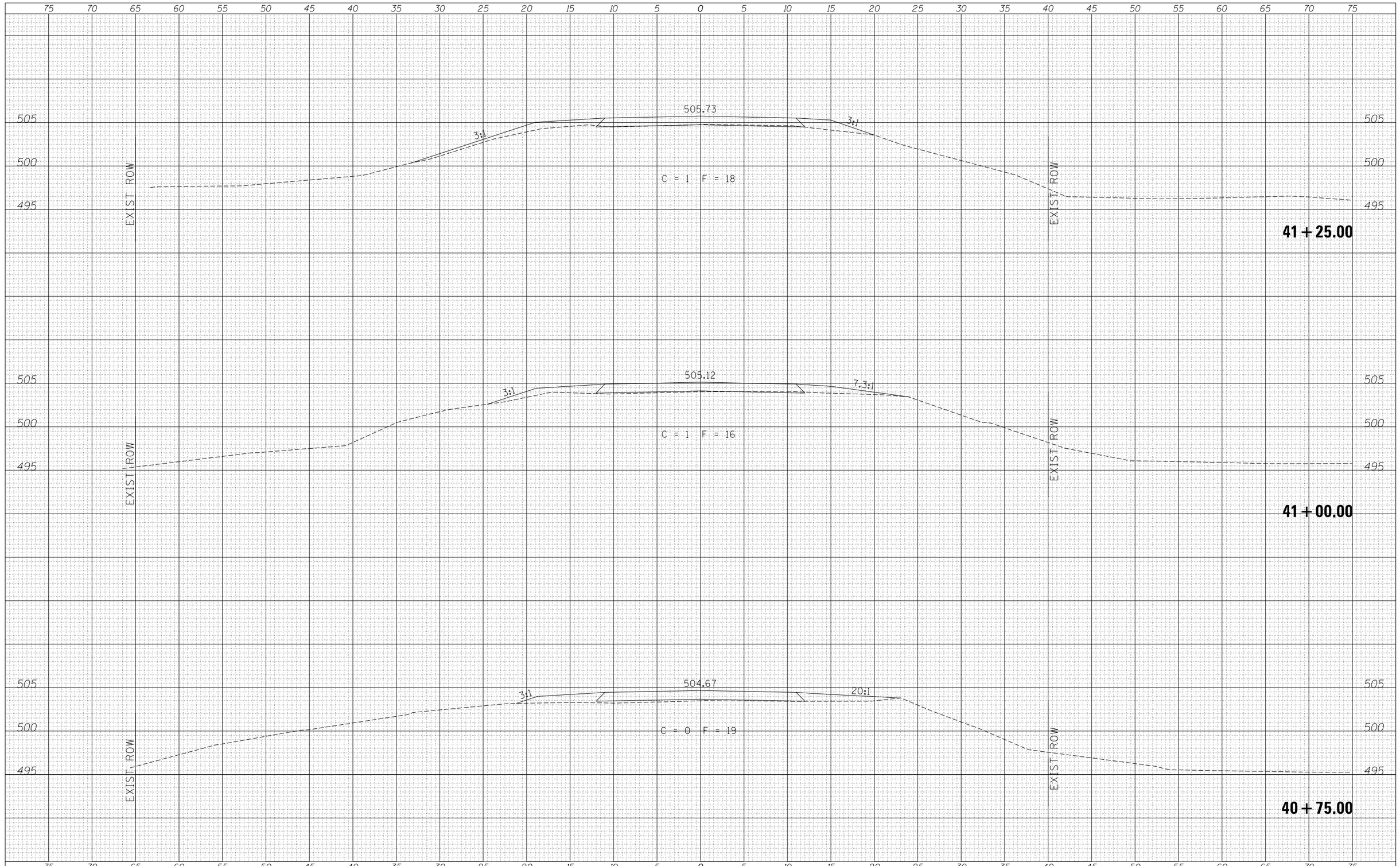
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 4 OF 8 SHEETS | STA. 39+50.00 TO STA. 40+50.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 48 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU01(262) | | |




| FINAL SURVEY | NOTE BOOK | NO. | BY | DATE |
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| ORIGINAL SURVEY | NOTE BOOK | NO. | BY | DATE |
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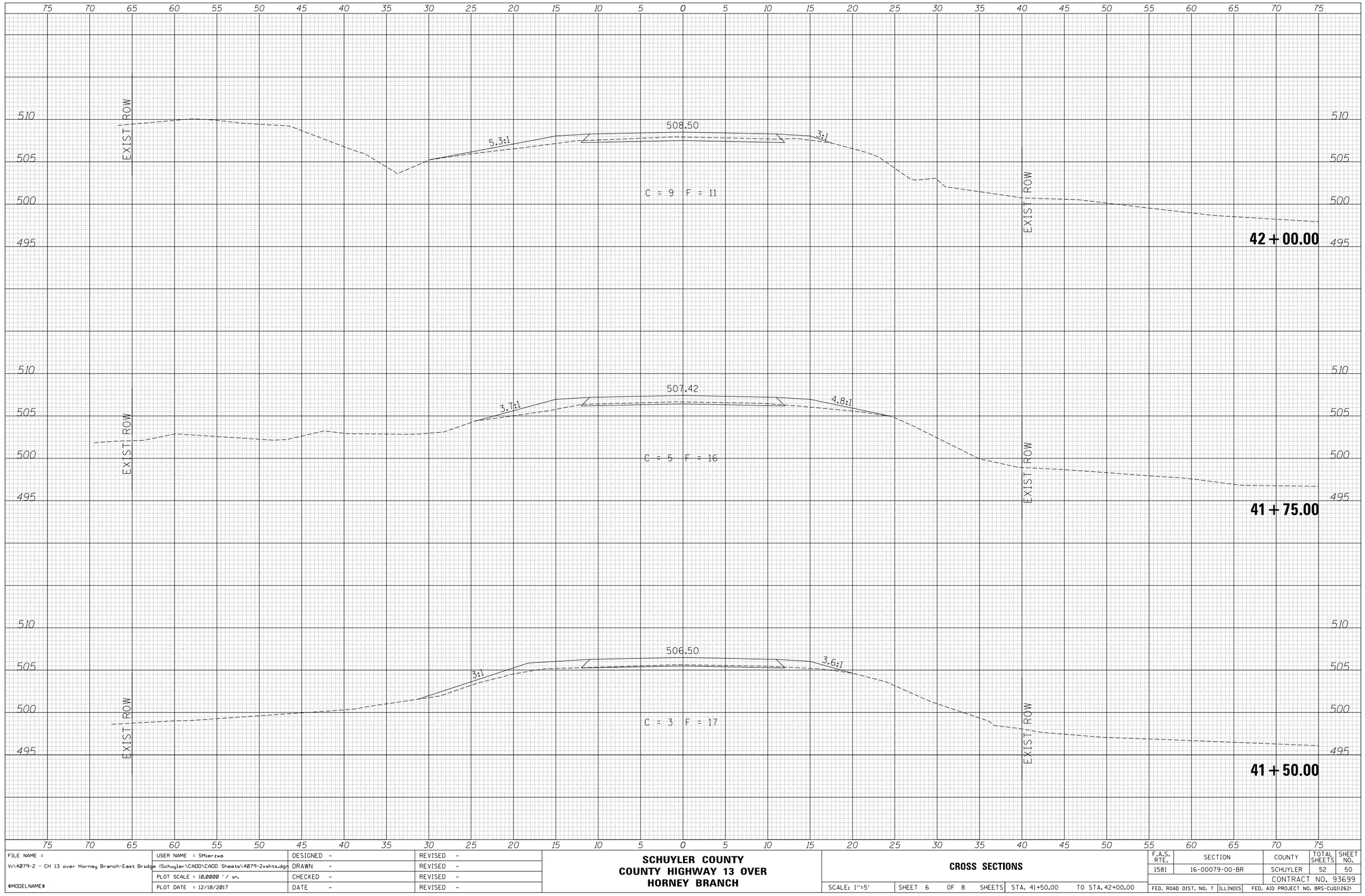
|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn $MODELNAME$ | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 5 OF 8 SHEETS | STA. 40+75.00 TO STA. 41+25.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 49 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQI(262) | | |




| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | | |
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| ORIGINAL SURVEY | NOTE BOOK | NO. |
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| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| $MODELNAME$ | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 6 OF 8 SHEETS | STA. 41+50.00 TO STA. 42+00.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 50 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU01(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

| BY | DATE |
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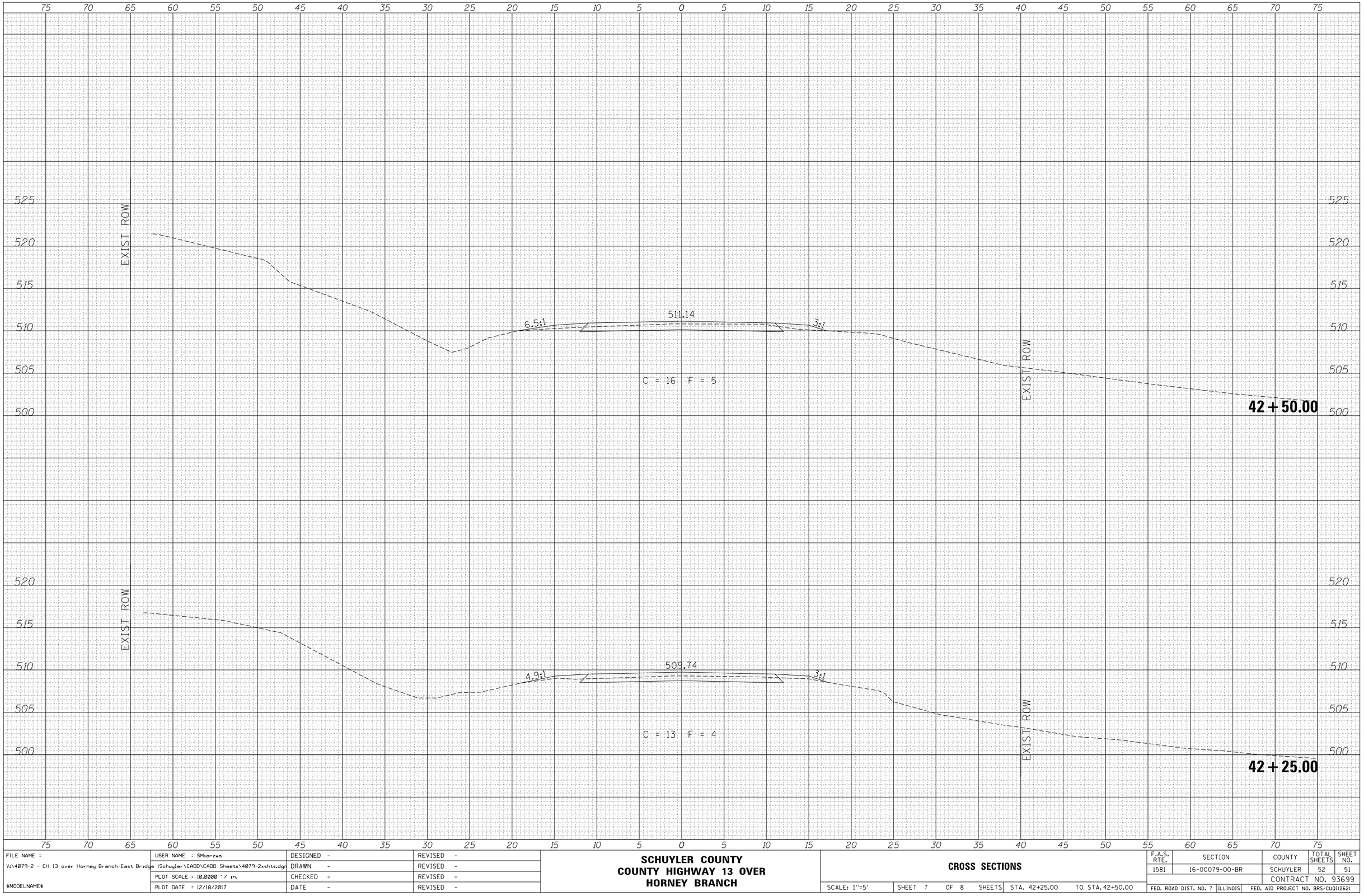


| ORIGINAL SURVEY | NOTE BOOK | NO. |
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| BY | DATE |
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| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 7 OF 8 SHEETS | STA. 42+25.00 TO STA. 42+50.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 51 |
| | | CONTRACT NO. 93699 | | |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CU01(262) | | |

| FINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

| BY | DATE |
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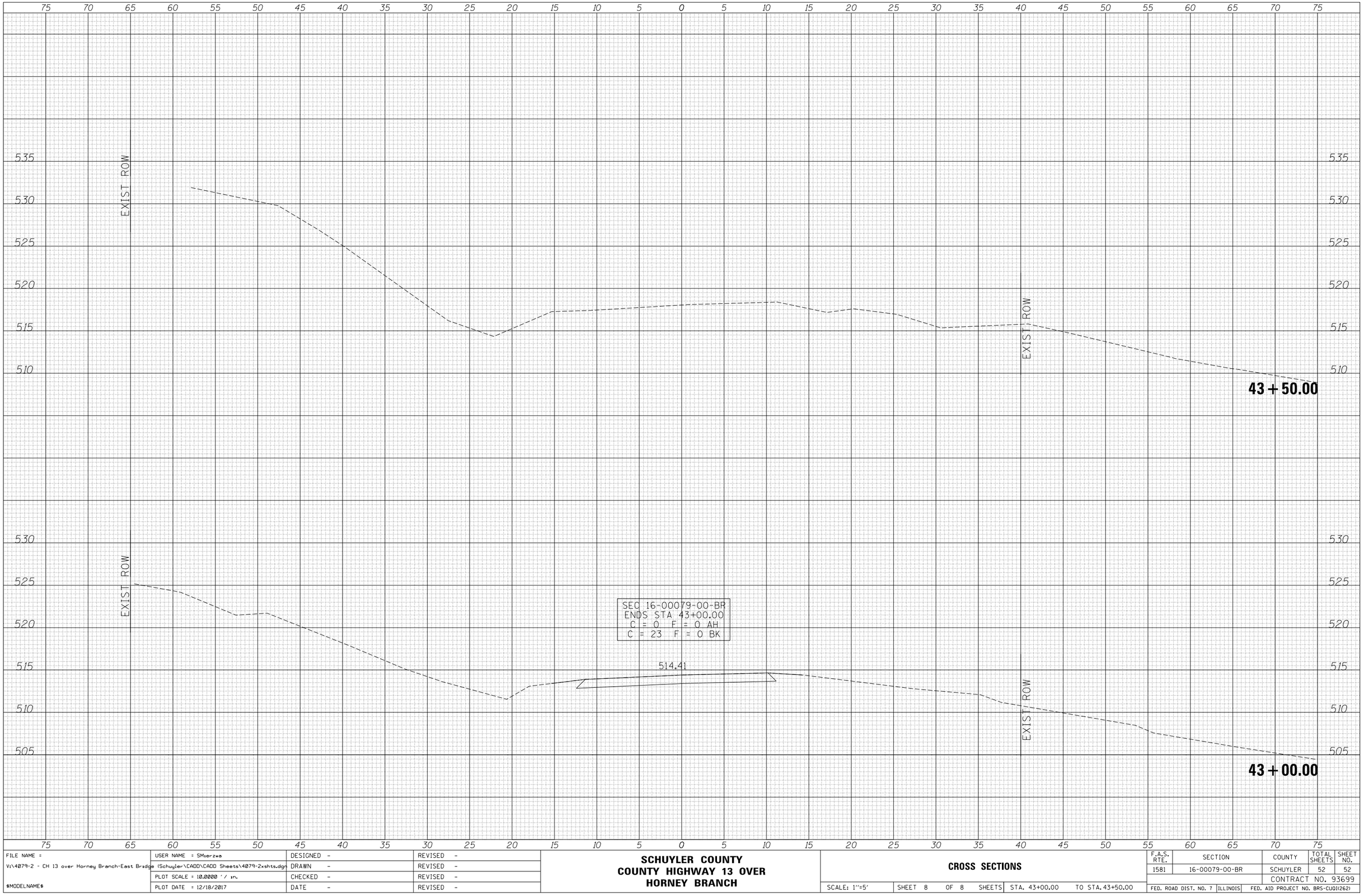


| ORIGINAL SURVEY | NOTE BOOK | NO. |
|---|---|---|
| SURVEYED | | |
| PLOTTED | | |
| TEMPLATE | | |
| AREAS | | |
| AREAS CHECKED | | |

| BY | DATE |
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|---|---|---|---|
| FILE NAME = V:\4079-2 - CH 13 over Horney Branch-East Bridge (Schuyler\CADD\CADD Sheets\4079-2xshts.dgn | USER NAME = SMierzwa | DESIGNED - | REVISED - |
| | | DRAWN - | REVISED - |
| $MODELNAME$ | PLOT SCALE = 10.0000 ' / in. | CHECKED - | REVISED - |
| | PLOT DATE = 12/18/2017 | DATE - | REVISED - |

**SCHUYLER COUNTY**
**COUNTY HIGHWAY 13 OVER**
**HORNEY BRANCH**

**CROSS SECTIONS**

SCALE: 1"=5' | SHEET 8 OF 8 SHEETS | STA. 43+00.00 | TO STA. 43+50.00

| F.A.S. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| 1581 | 16-00079-00-BR | SCHUYLER | 52 | 52 |
| | | CONTRACT NO. 93699 | | |

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT NO. BRS-CUQ11262)