

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
BRIDGE REPLACEMENT  
STP-OFF SYSTEM**

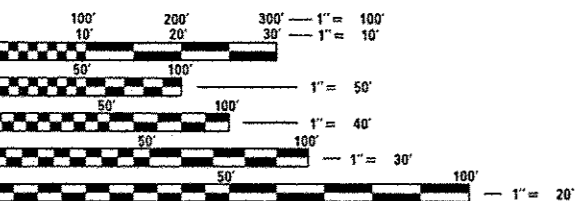
TR ROUTE 124 (N 1200 E ROAD)  
MONTICELLO TOWNSHIP  
SECTION 02-05108-00-BR  
PIATT COUNTY  
C-95-306-14

**INDEX OF SHEETS**

- 1 COVER SHEET
- 2 GENERAL NOTES AND SUMMARY OF QUANTITIES
- 3 TYPICAL SECTIONS
- 4 PLAN AND PROFILE
- 5 - 13 BRIDGE PLANS
- 14 - 23 CROSS SECTIONS

**STANDARDS (IN PROPOSAL)**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS & PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701901-03 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



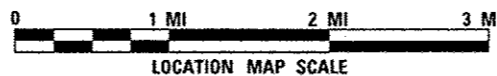
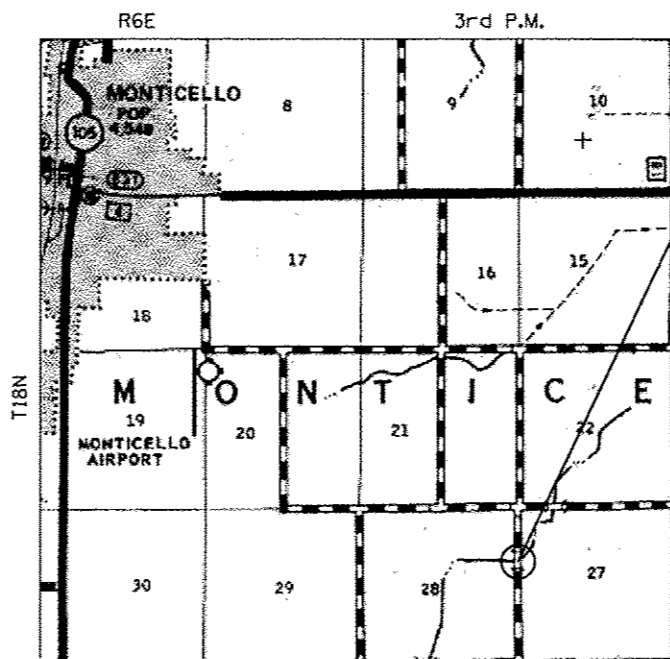
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT MANAGER: CORY W. CHAMBERLAIN, P.E., S.E.  
CONTRACT NO. 91507



*Cory W. Chamberlain*  
Expires: 11/30/2015

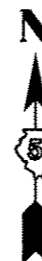


**LOCATION MAP**

TOTAL LENGTH = 250 FEET (0.047 MI)  
NET LENGTH = 250 FEET (0.047 MI)

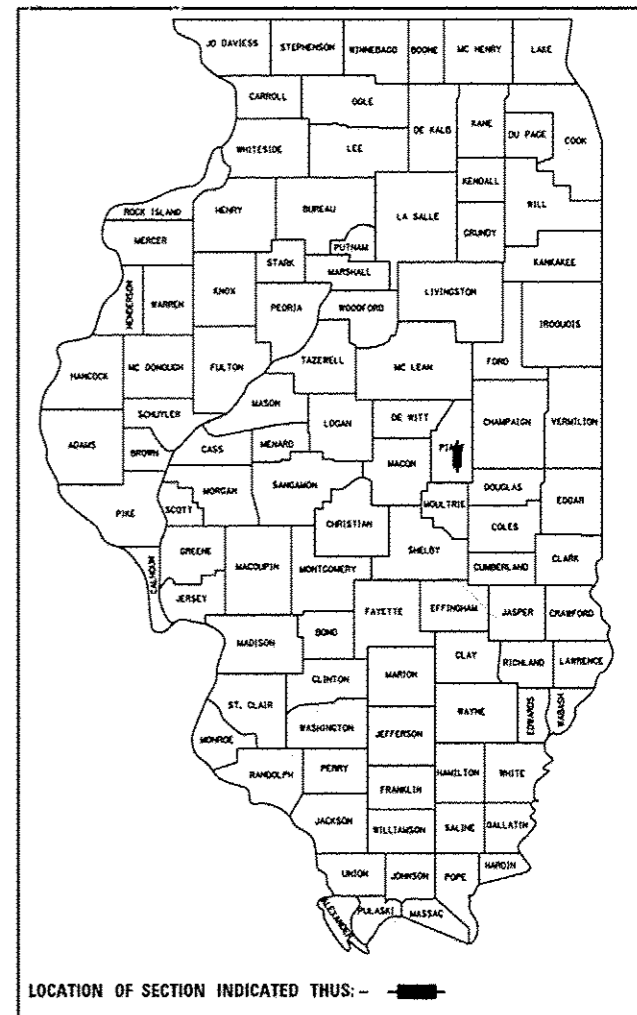
FUNCTIONAL CLASSIFICATION - LOCAL ROAD  
ADT < 50  
DESIGN SPEED = 30 MPH

PROPOSED SECTION 02-05108-00-BR BEGINS STA. 98+50.00 ENDS STA. 101+00.00 PROPOSED STRUCTURE NO. 074-3295



**UTILITY COMPANIES:**

NO KNOWN UTILITY



LOCATION OF SECTION INDICATED THUS: -

APPROVED MARCH 28 20 14  
COUNTY ENGINEER

APPROVED 04-03 20 14  
ROAD COMMISSIONER

PASSED 04/09 20 14  
ACTING DISTRICT FIVE ENGINEER OF LOCAL ROADS AND STREETS

Released For Bid Based on Limited Review 04/09 20 14  
ACTING DEPUTY DIRECTOR OF HIGHWAYS  
REGION THREE ENGINEER

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

THE WORK CONSISTS OF REMOVING THE EXISTING BRIDGE AND CONSTRUCTING A NEW STRUCTURE (S.N. 074-3295) AT STA. 99+96.00 WITH A SINGLE SPAN PRECAST PRESTRESSED REINFORCED DECK BEAM BRIDGE ON CONCRETE PILE BENT ABUTMENTS, 27'-0" CLEAR ROADWAY WIDTH AND 72'-7 1/8" BACK TO BACK OF ABUTMENTS, 45° SKEW, VARIABLE WIDTH TRANSITION APPROACHES AND OTHER COLLATERAL WORK.

**SUMMARY OF QUANTITIES**

| PAY ITEM #   | DESCRIPTION   | UNIT  | TOTAL |
|--------------|---|-------|-------|
| 20200100     | EARTH EXCAVATION                                    | CU YD | 184   |
| 20300100     | CHANNEL EXCAVATION                                  | CU YD | 200   |
| 28000305     | TEMPORARY DITCH CHECKS                              | FOOT  | 18    |
| 28000500     | INLET AND PIPE PROTECTION                           | EACH  | 2     |
| 28100107     | STONE RIPRAP, CLASS A4                              | SQ YD | 519   |
| 28200200     | FILTER FABRIC                                       | SQ YD | 519   |
| 35101400     | AGGREGATE BASE COURSE, TYPE B                       | TON   | 156   |
| 44000100     | PAVEMENT REMOVAL                                    | SQ YD | 319   |
| 50100100     | REMOVAL OF EXISTING STRUCTURES                      | EACH  | 1     |
| 50105220     | PIPE CULVERT REMOVAL                                | FOOT  | 120   |
| 50200100     | STRUCTURE EXCAVATION                                | CU YD | 176   |
| 50300225     | CONCRETE STRUCTURES                                 | CU YD | 40.0  |
| 50400505     | PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH) | SQ FT | 1,890 |
| 50800205     | REINFORCEMENT BARS, EPOXY COATED                    | POUND | 4,780 |
| Δ 50901050   | STEEL RAILING, TYPE SM                              | FOOT  | 144   |
| 51200957     | FURNISHING METAL SHELL PILES 12" X 0.250"           | FOOT  | 264   |
| 51202305     | DRIVING PILES                                       | FOOT  | 264   |
| 51203200     | TEST PILE METAL SHELLS                              | EACH  | 1     |
| 51500100     | NAME PLATES   | EACH  | 1     |
| 542D0217     | PIPE CULVERTS, CLASS D, TYPE 1 12"                  | FOOT  | 60    |
| 542D0223     | PIPE CULVERTS, CLASS D, TYPE 1 18"                  | FOOT  | 91    |
| 59300100     | CONTROLLED LOW-STRENGTH MATERIAL                    | CU YD | 64    |
| 67100100     | MOBILIZATION  | LSUM  | 1     |
| * 70101830   | TRAFFIC CONTROL AND PROTECTION, BLR 21              | LSUM  | 1     |
| Δ * 78201000 | TERMINAL MARKER - DIRECT APPLIED                    | EACH  | 4     |
| * X2501000   | SEEDING, CLASS 2 (SPECIAL)                          | ACRE  | 0.2   |

\*SPECIAL PROVISION

Δ SPECIALTY ITEMS

**GENERAL NOTES**

- WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.
- THE ENGINEER SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUBCONTRACTOR, SHALL HAVE NO SUPERVISION OF THE PERSONS DOING THE WORK, SHALL HAVE NO CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORT, FORMS OR OTHER WORK AIDS.
- ALL ELEVATIONS ARE BASED ON NAVD 88. THE PROPOSED GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND STATION CROSS SECTIONS ARE THE ELEVATIONS FOR THE FINISHED SURFACE AT THE LOCATIONS INDICATED.
- THE FOLLOWING RATES WERE USED IN CALCULATING QUANTITIES FOR THIS PROJECT:  
AGGREGATE BASE COURSE: 2.05 TONS/CU YD
- UTILITIES ARE SHOWN IN ACCORDANCE WITH BEST AVAILABLE INFORMATION AND THEIR TRUE LOCATION IS NOT GUARANTEED TO BE AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND CARRY ON HIS WORK OPERATIONS ACCORDINGLY.
- CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THIS WORK SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

**EARTHWORK SCHEDULE**

| LOCATION                        | EARTH EXCAVATION<br>(CU YD) | CHANNEL EXCAVATION<br>(CU YD) | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE<br>(CU YD) | EMBANKMENT<br>(CU YD) | EARTHWORK BALANCE WASTE(+) AND SHORTAGE (-)<br>(CU YD) |
|---------------------------------|-----------------------------|-------------------------------|--|-----------------------|--|
| STA. 98+50 TO STA. 99+59.70     | 99                          |                               | 74   | 36                    | 38   |
| STA. 99+59.70 TO STA. 100+32.30 |                             | 200                           | 150  |                       | 150  |
| STA. 100+32.30 TO STA. 101+00   | 85                          |                               | 64   | 0                     | 64   |
| <b>TOTAL</b>                    | <b>184</b>                  | <b>200</b>                    | <b>288</b>   | <b>36</b>             | <b>252</b>   |

SHRINKAGE FACTOR FOR EARTH EXCAVATION = 25%

design firm  
no. 184001036



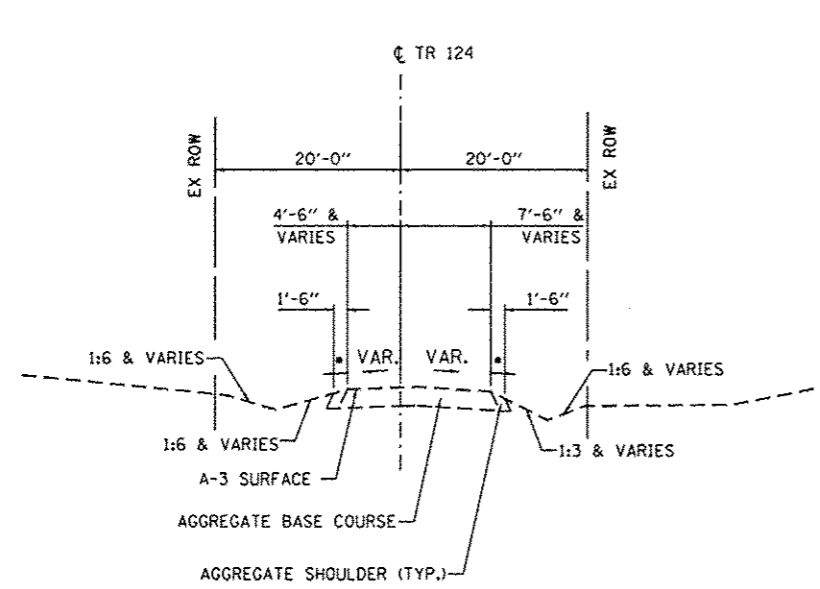
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|-------------------------------|------------|---------|
| USER NAME * OPERATOR*         | DESIGNED - | REVISED |
| FILE NAME * GEN_NOTES_SHT.dgn | CHECKED -  | REVISED |
| PLOT SCALE * 20,0000 ' / in.  | DRAWN -    | REVISED |
| PLOT DATE * 3/17/2014         | CHECKED -  | REVISED |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES AND SUMMARY OF QUANTITIES  
TR 124**

SCALE: 1" = 10' SHEET NO. 1 OF 1 SHEETS

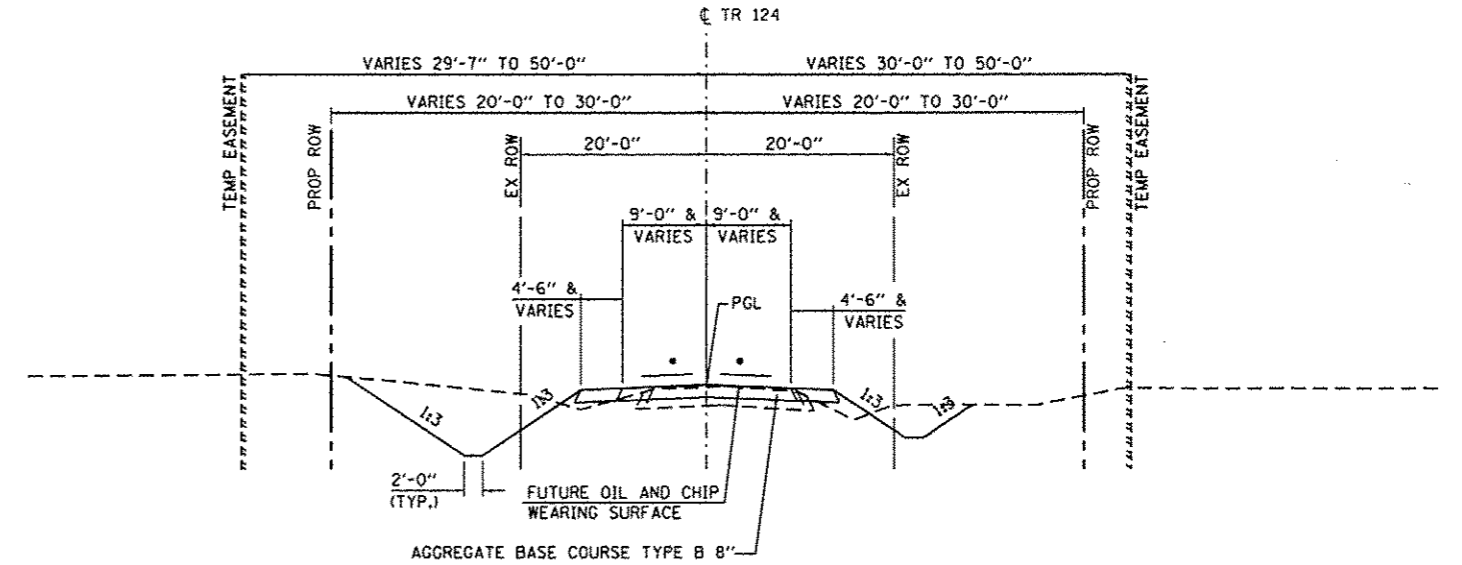
| TR RTE.                                      | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|--|----------------|--------|--------------|-----------|
| 124  | 02-05108-00-BR | PIATT  | 23           | 2         |
| ILLINOIS FED. AID PROJECT CONTRACT NO. 91507 |                |        |              |           |



• VARIES

**EXISTING TYPICAL SECTION**

STA. 98+50.00 TO STA. 99+96.00  
(LOOKING NORTH)

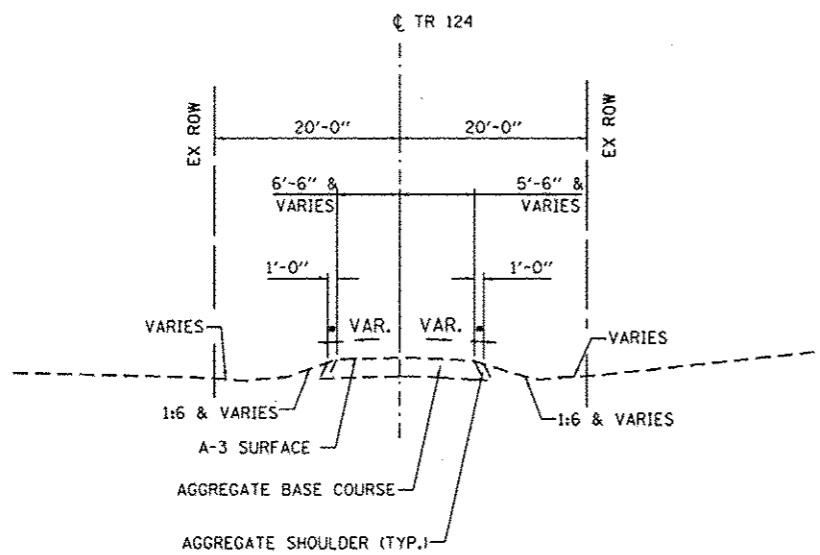


- 2% AND VARIES
- LEFT DITCH IMPROVEMENT BEGINS AT STA. 98+50

**PROPOSED TYPICAL SECTION**

STA. 98+80.00 TO STA. 99+59.70 ••  
(LOOKING NORTH)

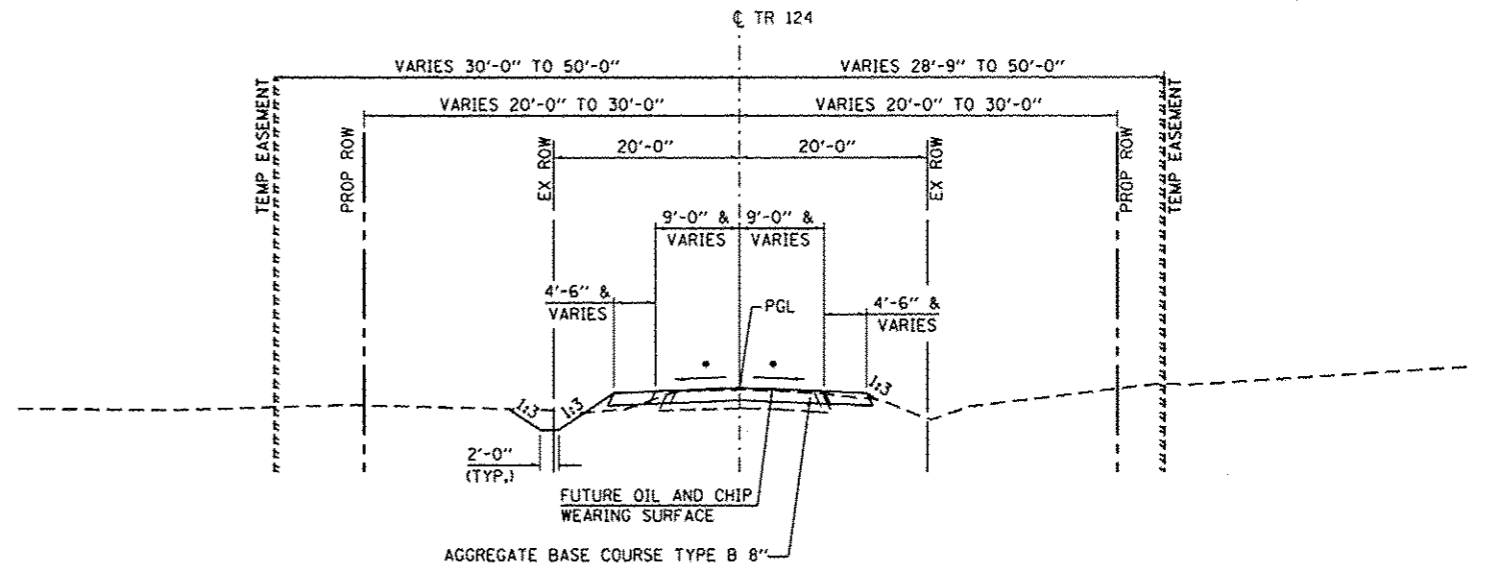
**BRIDGE OMISSION:**  
STA. 99+59.70 TO STA. 100+32.30



• VARIES

**EXISTING TYPICAL SECTION**

STA. 99+96.00 TO STA. 101+00.00  
(LOOKING NORTH)



• 2% AND VARIES

**PROPOSED TYPICAL SECTION**

STA. 100+32.30 TO STA. 101+00.00  
(LOOKING NORTH)

Design firm  
no. 184001036

**whks**

engineers + planners + land surveyors

|                             |            |         |
|-----------------------------|------------|---------|
| USER NAME • OPERATOR#       | DESIGNED - | REVISED |
| FILE NAME • TYPICAL_SHT.dgn | CHECKED -  | REVISED |
| PLOT SCALE • 20.0000' / in. | DRAWN -    | REVISED |
| PLOT DATE • 3/17/2014       | CHECKED -  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

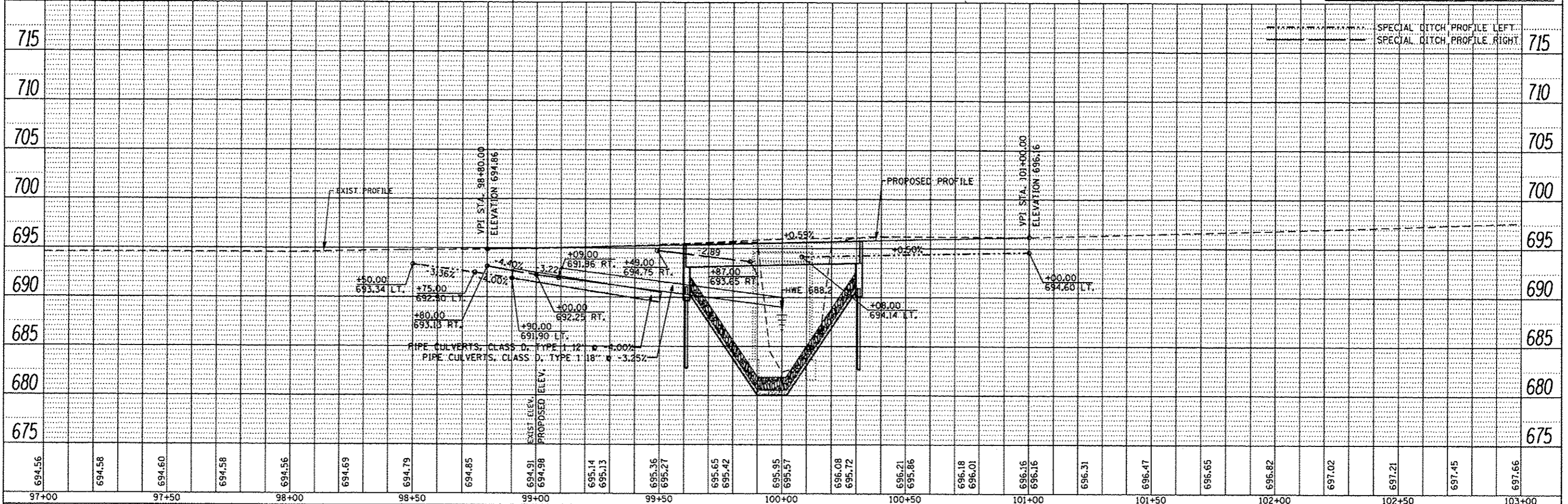
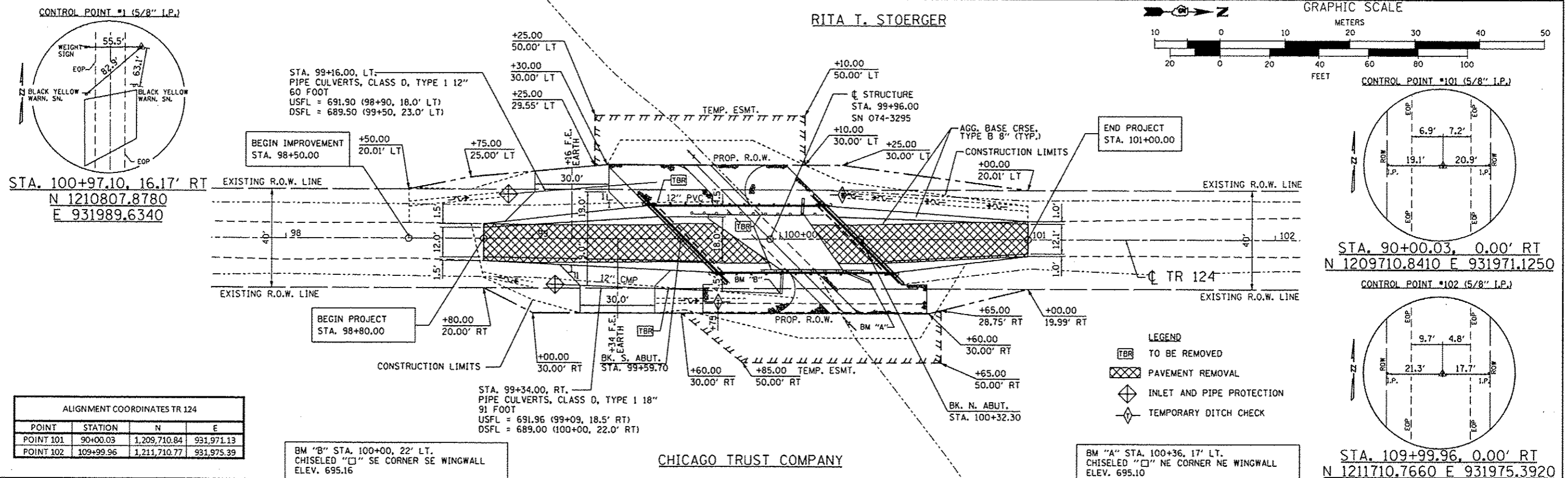
TYPICAL SECTIONS  
TR 124

SCALE: 1"=10' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|                           |                           |                 |                       |                   |
|---------------------------|---------------------------|-----------------|-----------------------|-------------------|
| TR<br>RTE<br>124          | SECTION<br>02-05108-00-BR | COUNTY<br>PIATT | TOTAL<br>SHEETS<br>23 | SHEET<br>NO.<br>3 |
| CONTRACT NO. 91507        |                           |                 |                       |                   |
| ILLINOIS FED. AID PROJECT |                           |                 |                       |                   |

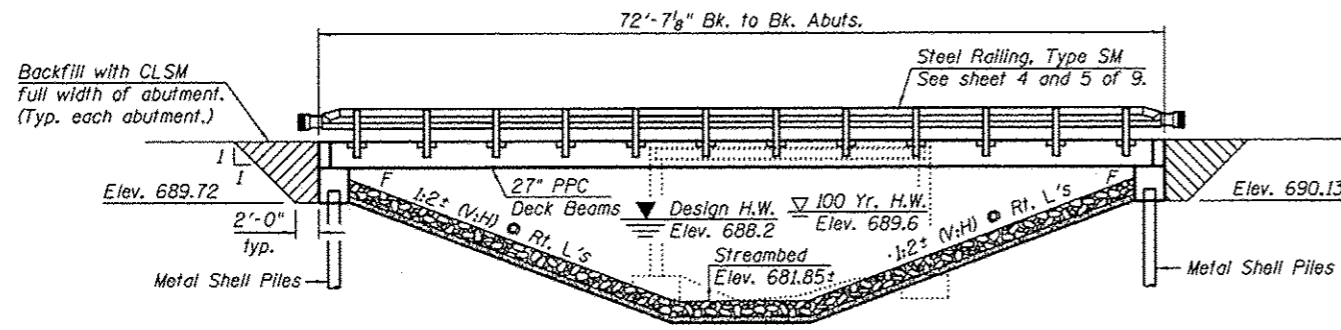
|           |      |
|-----------|------|
| PLAN      | DATE |
| APPROVED  |      |
| REVISIONS |      |
| NO. DATE  |      |
| BY        |      |
| DATE      |      |
| BY        |      |
| DATE      |      |
| BY        |      |
| DATE      |      |

|           |      |
|-----------|------|
| PROFILE   | DATE |
| APPROVED  |      |
| REVISIONS |      |
| NO. DATE  |      |
| BY        |      |
| DATE      |      |
| BY        |      |
| DATE      |      |
| BY        |      |
| DATE      |      |

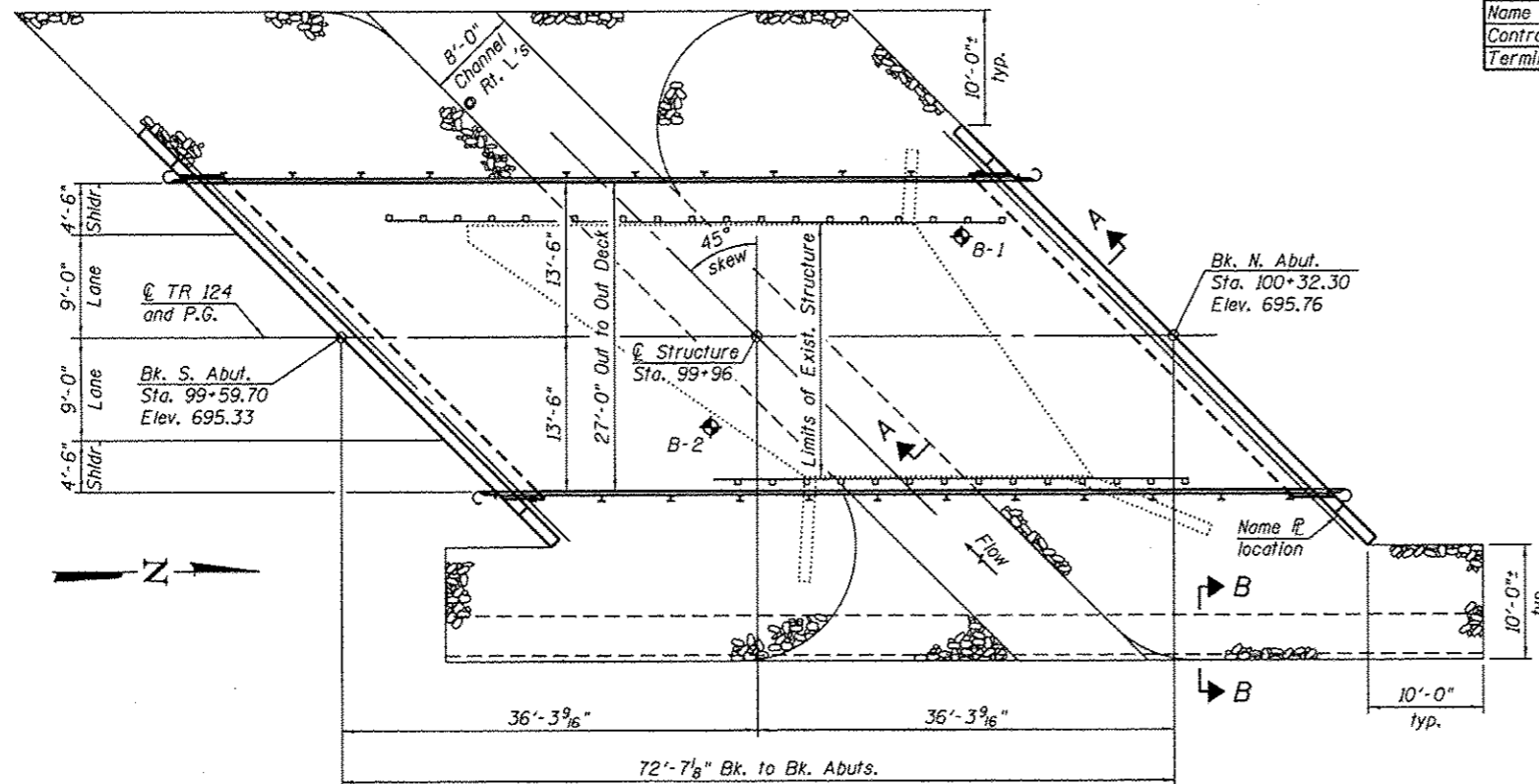


Bench Mark: Chiseled "□" on N.E. corner of N.E. wingwall. Elev. 695.10  
 Existing Structure: S.N. 074-3085 is a single-span steel stringer bridge with concrete deck supported on closed reinforced concrete abutments. The bridge is 24'-0"± back-to-back of abutments and the out-to-out bridge width is 22'-0". Structure is to be removed and replaced. Road is to be closed during construction.

No Salvage



ELEVATION



PLAN

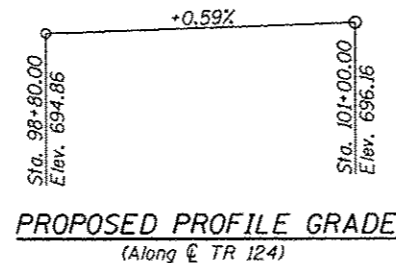
DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | S. Abut. | N. Abut. |
|------------------------------|----------|----------|
|                              | 689.72   | 690.13   |

WATERWAY INFORMATION

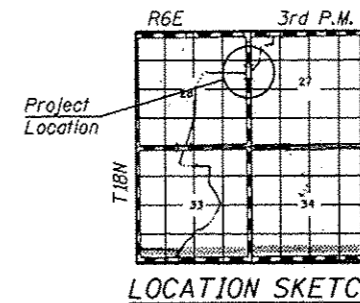
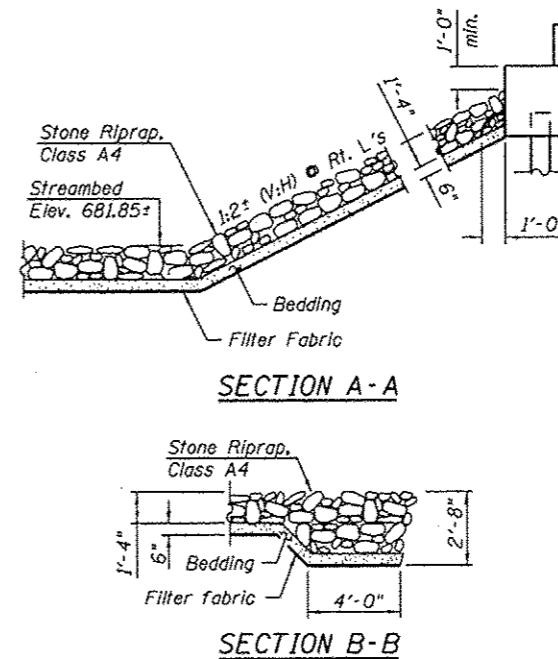
|            |           | Opening Sq. Ft. |        | Head - Ft. |               | Headwater El. |        |       |       |
|------------|-----------|-----------------|--------|------------|---------------|---------------|--------|-------|-------|
| Flood      | Freq. Yr. | Q C.F.S.        | Exist. | Prop.      | H.W.E. Exist. | Prop.         | Exist. | Prop. |       |
| Design     | 15        | 270             | 74     | 122        | 688.2         | 0.1           | 0.0    | 688.3 | 688.2 |
| Base       | 100       | 432             | 98     | 167        | 689.6         | 0.2           | 0.0    | 689.8 | 689.6 |
| Max. Calc. | 500       | 572             | 113    | 201        | 690.5         | 0.3           | 0.0    | 690.8 | 690.5 |

Exist. Low Grade Elev. = 694.56 @ Sta. 97+00  
 Drainage Area = 2.20 sq. mi. Prop. Low Grade Elev. = 694.56 @ Sta. 97+00



LAKE FORK DRAINAGE BUILT 20 BY PIATT COUNTY SECTION 02-05108-00-BR STATION 99+96 STR. NO. 074-3295 LOADING HL93

NAME PLATE See Std. 515001



GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer. The existing structural steel coating may contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Reinforcement bars designated (E) shall be epoxy coated.

TOTAL BILL OF MATERIAL

| ITEM  | UNIT    | SUPER | SUB   | TOTAL |
|---|---------|-------|-------|-------|
| Channel Excavation                                  | Cu. Yd. |       | 200   | 200   |
| Stone Riprap, Class A4                              | Sq. Yd. |       | 519   | 519   |
| Filter Fabric                                       | Sq. Yd. |       | 519   | 519   |
| Removal of Existing Structures                      | Each    |       | 1     | 1     |
| Structure Excavation                                | Cu. Yd. |       | 176   | 176   |
| Concrete Structures                                 | Cu. Yd. |       | 40.0  | 40.0  |
| Precast Prestressed Concrete Deck Beams (27" Depth) | Sq. Ft. | 1,890 |       | 1,890 |
| Reinforcement Bars, Epoxy Coated                    | Pound   |       | 4,780 | 4,780 |
| Steel Railing, Type SM                              | Foot    | 144   |       | 144   |
| Furnishing Metal Shell Piles 12" x 0.250"           | Foot    |       | 264   | 264   |
| Driving Piles                                       | Foot    |       | 264   | 264   |
| Test Pile Metal Shells                              | Each    |       | 1     | 1     |
| Name Plates   | Each    |       | 1     | 1     |
| Controlled Low-Strength Material                    | Cu. Yd. |       | 64    | 64    |
| Terminal Marker - Direct Applied                    | Each    | 4     |       | 4     |

INDEX OF SHEETS

1. General Plan and Elevation
- 2.-3. PPC Deck Beam Details
4. Steel Railing, Type SM
5. Curled End Section Details
6. South Abutment
7. North Abutment
8. Metal Shell Pile Details
9. Soil Boring Logs

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interim Revisions

LOADING HL 93

50 psf Future Wearing Surface

DESIGN STRESSES

FIELD UNITS

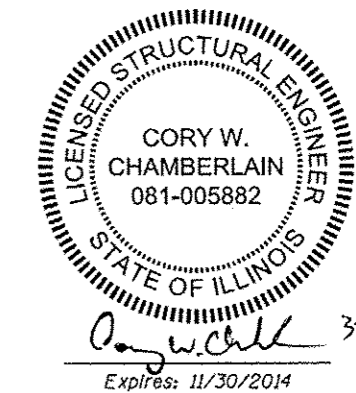
f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi  
 f'cl = 5,000 psi  
 f's = 270,000 psi (1/2" low lax strands)  
 f'sl = 202,000 psi (1/2" low lax strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. (S<sub>01</sub>) = 0.10g  
 Design Spectral Acceleration at 0.2 sec. (S<sub>05</sub>) = 0.19g  
 Soil Site Class = C



GENERAL PLAN AND ELEVATION  
 TR 124 OVER LAKE FORK DRAINAGE  
 SEC. 02-05108-00-BR  
 PIATT COUNTY  
 STATION 99+96  
 STRUCTURE NO. 074-3295



|                               |                |         |
|-------------------------------|----------------|---------|
| USER NAME = chamberlinc       | DESIGNED - TJZ | REVISED |
| FILE NAME = 0743085-91587.dgn | CHECKED - SBC  | REVISED |
| PLOT SCALE = 8/2 1/2" = 1"    | DRAWN - DLH    | REVISED |
| PLOT DATE = 3/17/2014         | CHECKED - TJZ  | REVISED |

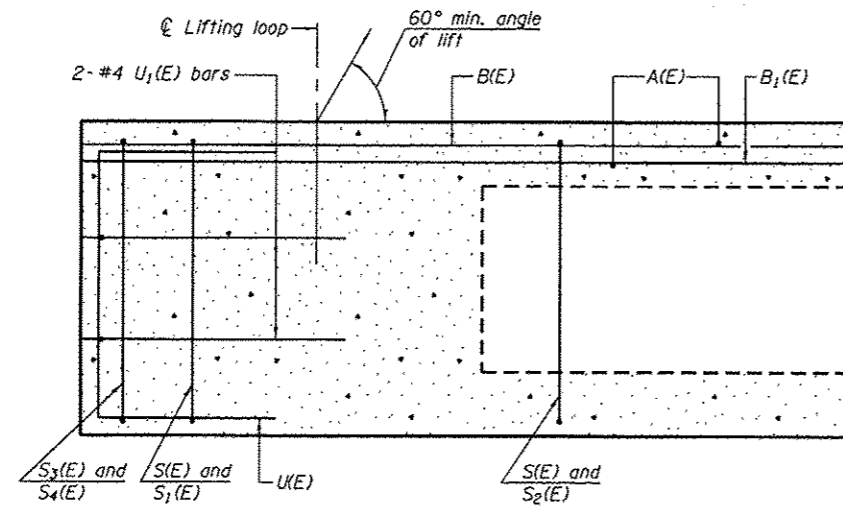
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 9 SHEETS

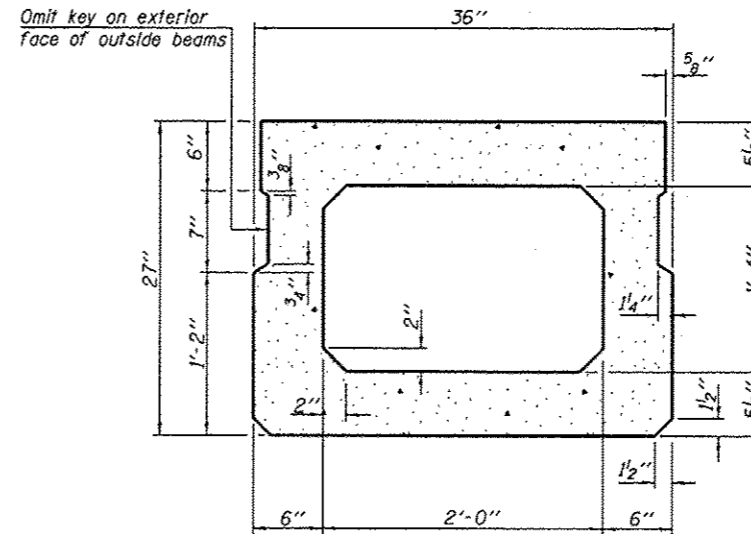
| T.R. RTE. | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------|----------------|--------|--------------|-----------|
| 124       | 02-05108-00-BR | PIATT  | 23           | 5         |

CONTRACT NO. 91507  
 ILLINOIS FED. AID PROJECT

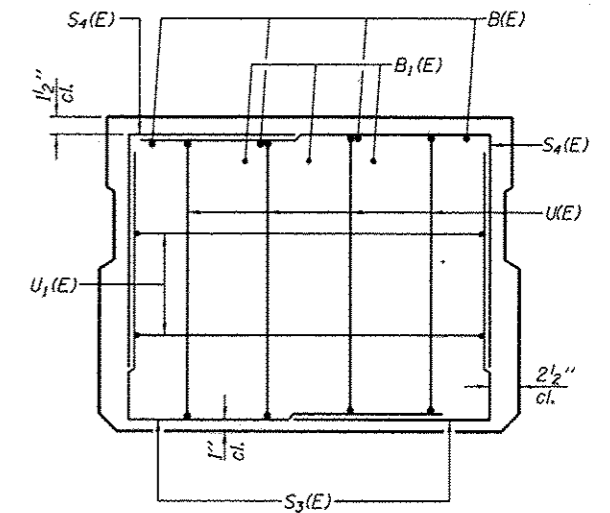




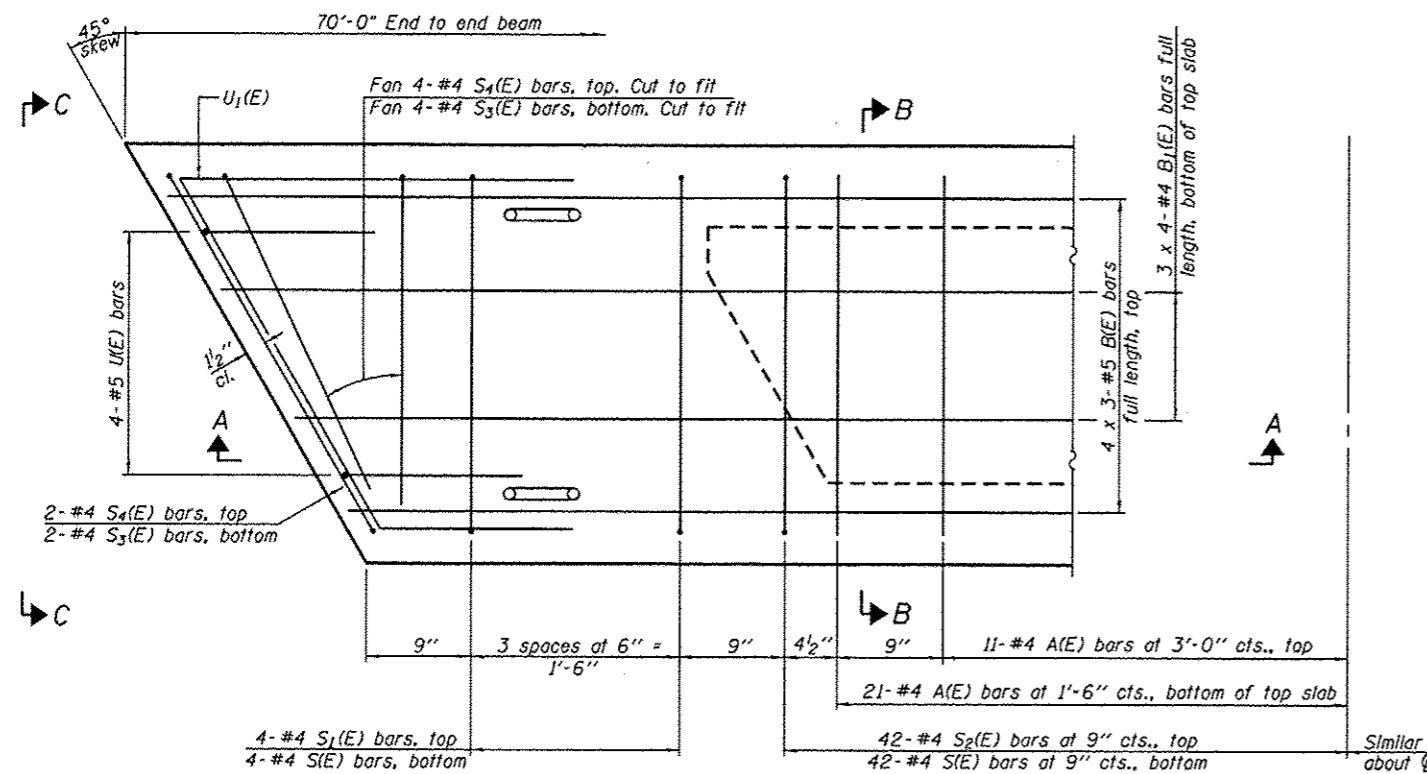
SECTION A-A



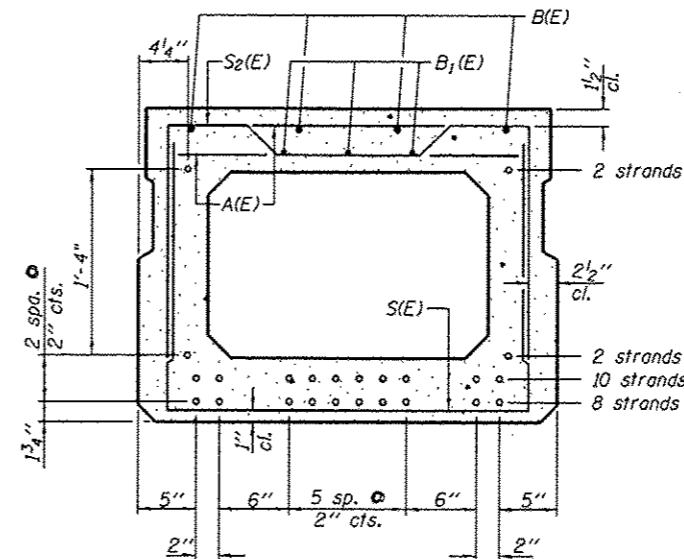
SECTION B-B  
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(Showing reinforcement and permissible strand locations)  
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST  
ONE BEAM ONLY  
(For information only)

| Bar   | No. | Size | Length  | Shape |
|-------|-----|------|---------|-------|
| A(E)  | 64  | #4   | 2'-7"   | —     |
| B(E)  | 12  | #5   | 24'-11" | —     |
| B1(E) | 12  | #4   | 18'-11" | —     |
| S(E)  | 92  | #4   | 6'-5"   | ┌     |
| S1(E) | 8   | #4   | 5'-11"  | ┌     |
| S2(E) | 84  | #4   | 6'-2"   | ┌     |
| S3(E) | 12  | #4   | 4'-9"   | ┌     |
| S4(E) | 12  | #4   | 4'-6"   | ┌     |
| U(E)  | 8   | #5   | 4'-6"   | ┌     |
| U1(E) | 4   | #4   | 8'-6"   | ┌     |

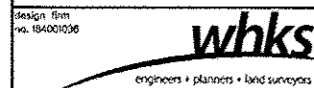
Note:  
See sheet 3 of 9 for additional details and Bill of Material.

MINIMUM BAR LAP

#4 bar = 2'-0"  
#5 bar = 2'-6"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

PD-2736-R 7-1-10



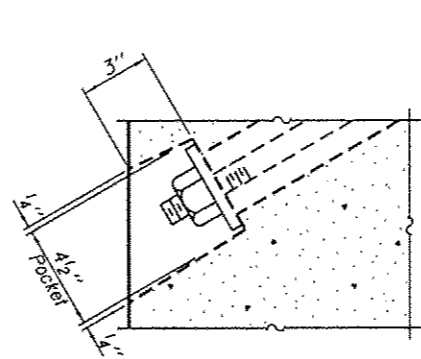
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| USER NAME = aheberling        | DESIGNED - TJZ | REVISED |
| FILE NAME = 0743085-91507.dgn | CHECKED - SBC  | REVISED |
| PLOT SCALE = 1/8" = 1'-0"     | DRAWN - DLH    | REVISED |
| PLOT DATE = 3/17/2014         | CHECKED - TJZ  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

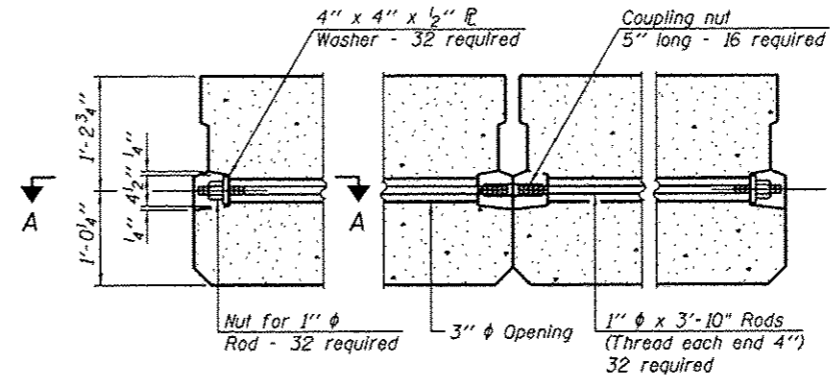
PPC DECK BEAM DETAILS  
STRUCTURE NO. 074-3295

SHEET NO. 2 OF 9 SHEETS

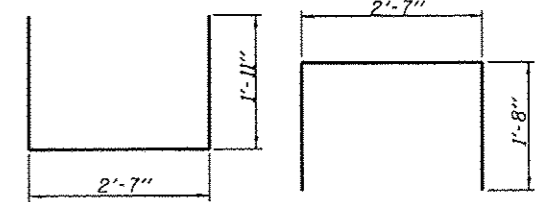
| T.R. RTE.                  | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|----------------------------|----------------|--------|--------------------|-----------|
| 124                        | 02-05108-00-BR | PIATT  | 23                 | 6         |
|                            |                |        | CONTRACT NO. 91507 |           |
| ILLINOISIFIED, AID PROJECT |                |        |                    |           |



SECTION A-A

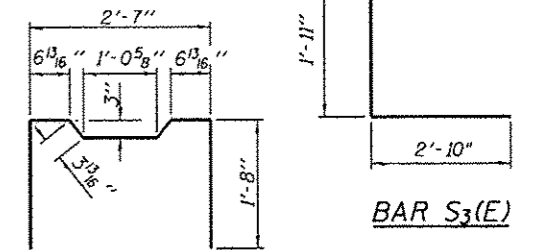


TYPICAL TRANSVERSE TIE ASSEMBLY



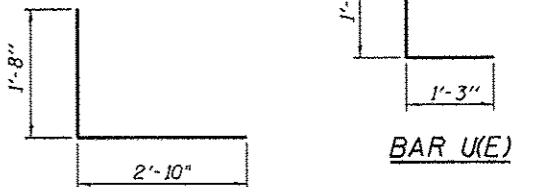
BAR S(E)

BAR S1(E)



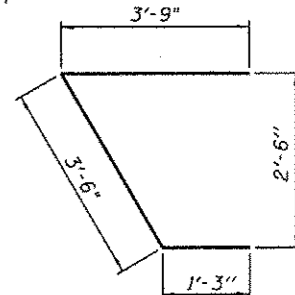
BAR S2(E)

BAR S3(E)

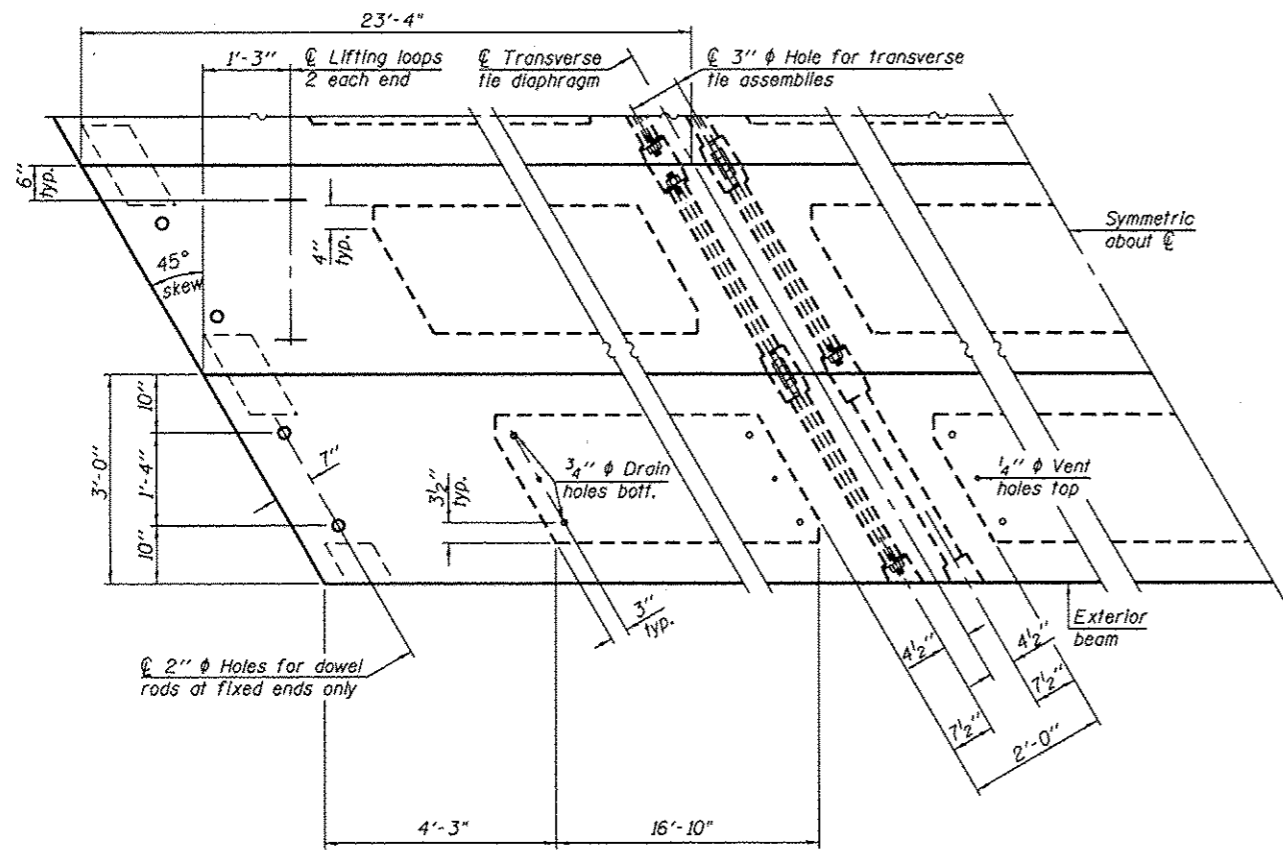


BAR S4(E)

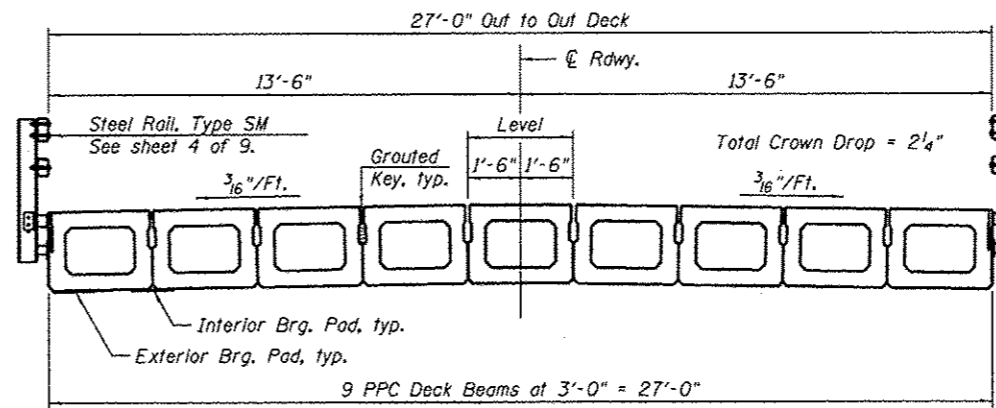
BAR U(E)



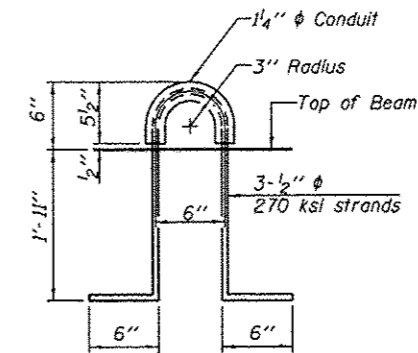
BAR U1(E)



PLAN VIEW



CROSS SECTION



LIFTING LOOP DETAIL

BILL OF MATERIAL

|   |         |       |
|---|---------|-------|
| Precast Prestressed Conc. Deck Bms. (27" depth) | Sq. Ft. | 1,890 |
|---|---------|-------|

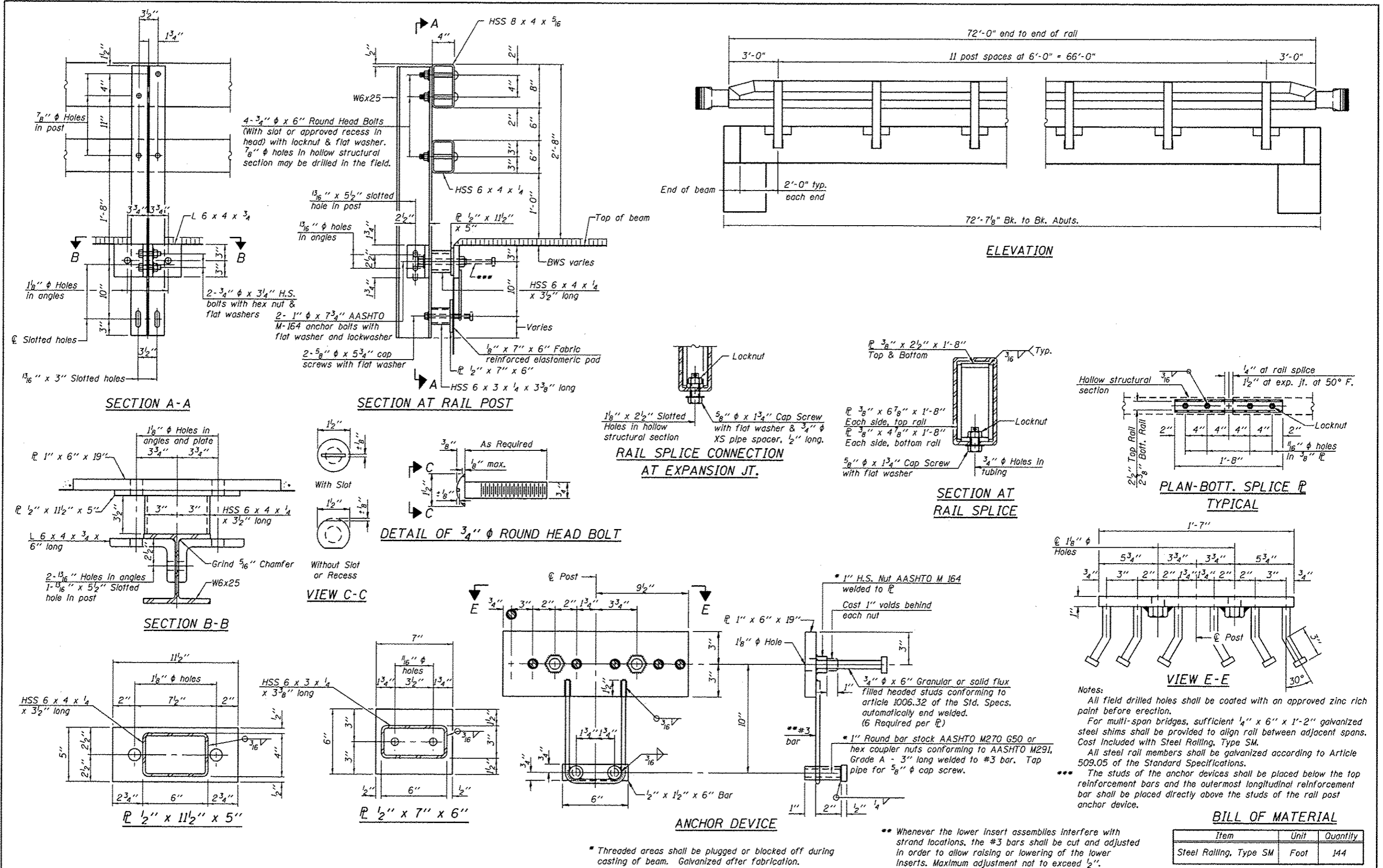
Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to ASTM A 706, Grade 60.
- See sheet 6 and 7 of 9 for bearing pad details.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f'cl, shall be 5000 psi.

PD-2736-RD 7-1-10

|  |  |   |  |   |  |                    |                        |              |                           |             |
|--|--|---|--|---|--|--------------------|------------------------|--------------|---------------------------|-------------|
|  | USER NAME = dhaberling<br>FILE NAME = 0743085-91587.dgn<br>PLOT SCALE = 0:2 1/4" = 1"<br>PLOT DATE = 3/17/2011 | DESIGNED - TJZ<br>CHECKED - SBC<br>DRAWN - DLH<br>CHECKED - TJZ | REVISED<br>REVISED<br>REVISED<br>REVISED | STATE OF ILLINOIS<br>DEPARTMENT OF TRANSPORTATION | PPC DECK BEAM DETAILS<br>STRUCTURE NO. 074-3295<br>SHEET NO. 3 OF 9 SHEETS | T.R. RTE. 124      | SECTION 02-05108-00-BR | COUNTY PIATT | TOTAL SHEETS 23           | SHEET NO. 7 |
|  |  |   |  |   |  | CONTRACT NO. 91507 |                        |              | ILLINOIS FED. AID PROJECT |             |



4-3/4" φ x 6" Round Head Bolts  
(With slot or approved recess in head) with locknut & flat washer.  
7/8" φ holes in hollow structural section may be drilled in the field.

2-3/4" φ x 3/4" H.S. bolts with hex nut & flat washers  
2-1" φ x 7 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher  
2-5/8" φ x 5 3/4" cap screws with flat washer

1/8" x 2 1/2" Slotted Holes in hollow structural section  
5/8" φ x 1 3/4" Cap Screw with flat washer & 3/4" φ XS pipe spacer, 1/2" long.

**DETAIL OF 3/4" φ ROUND HEAD BOLT**

1" x 6" x 19" Plate  
3/8" x 6 7/8" x 1'-8" Each side, top rail  
3/8" x 4 1/8" x 1'-8" Each side, bottom rail  
5/8" φ x 1 3/4" Cap Screw with flat washer

1/4" at rail splice  
1/2" at exp. jt. at 50° F.  
Hollow structural section  
2 1/2" Top Rail  
2 3/8" Bott. Rail  
1/8" φ Holes in 3/8" P

\* 1" H.S. Nut AASHTO M 164 welded to P  
Cast 1" voids behind each nut  
3/4" φ x 6" Granular or solid flux filled headed studs conforming to article 1006.32 of the Std. Specs. automatically end welded. (6 Required per P)  
\* 1" Round bar stock AASHTO M270 G50 or hex coupler nuts conforming to AASHTO M291, Grade A - 3" long welded to #3 bar. Top pipe for 5/8" φ cap screw.

**Notes:**  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
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.

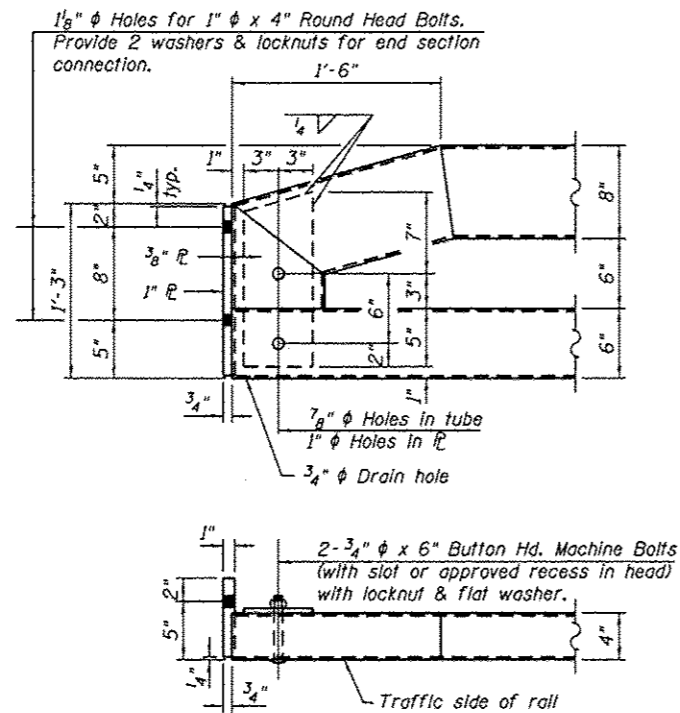
**BILL OF MATERIAL**

| Item                   | Unit | Quantity |
|------------------------|------|----------|
| Steel Railing, Type SM | Foot | 144      |

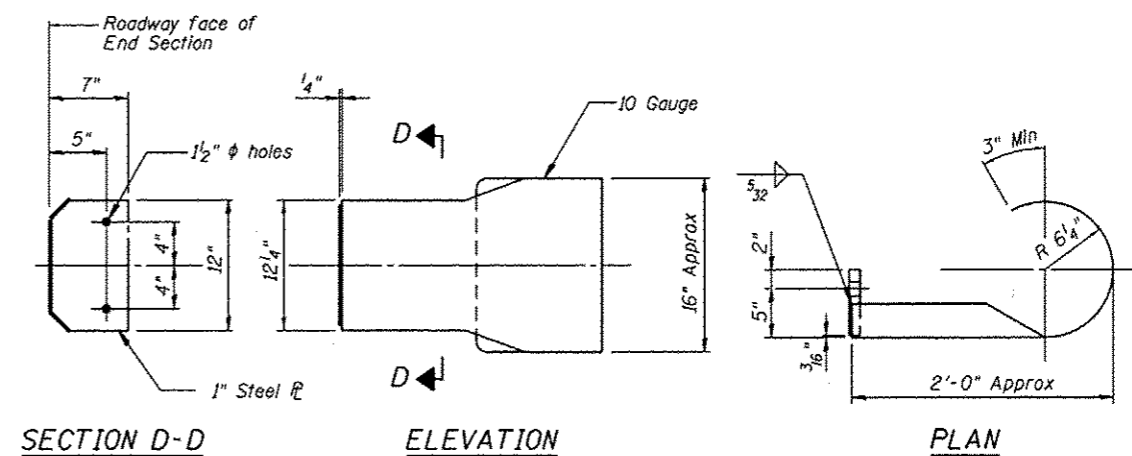
\* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".





END OF RAIL DETAILS



DETAILS OF CURLED END SECTION

(Cost included with Steel Railing, Type SM)

Design Item  
No. 184001030

**whks**  
engineers • planners • land surveyors

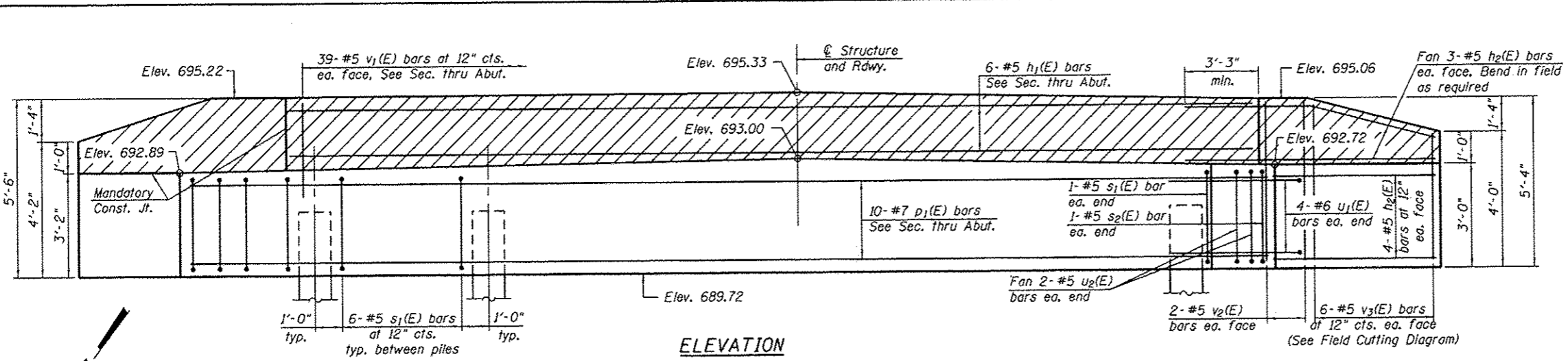
|                               |                 |         |
|-------------------------------|-----------------|---------|
| USER NAME = dcheber-ling      | DESIGNED - T.JZ | REVISED |
| FILE NAME = 0743285-91507.dgn | CHECKED - SBC   | REVISED |
| PLOT SCALE = 0.2" = 1'        | DRAWN - DLH     | REVISED |
| PLOT DATE = 3/17/2014         | CHECKED - T.JZ  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

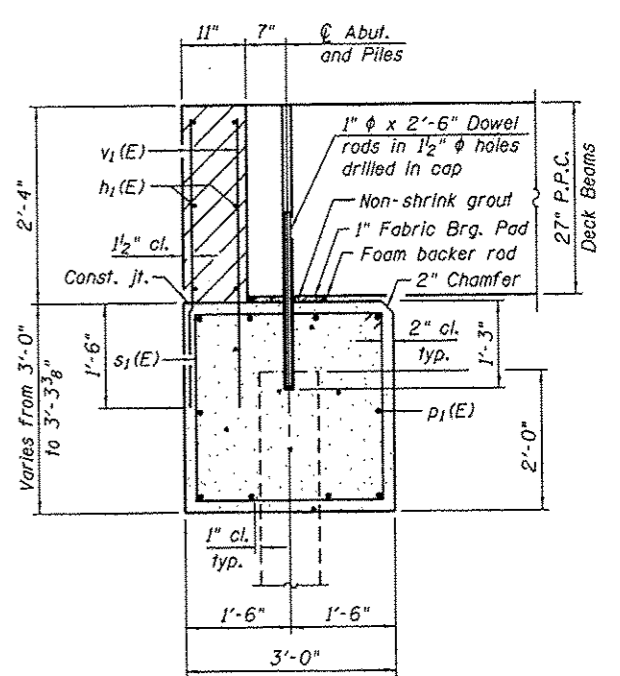
CURLED END SECTION DETAILS  
STRUCTURE NO. 074-3295

SHEET NO. 5 OF 9 SHEETS

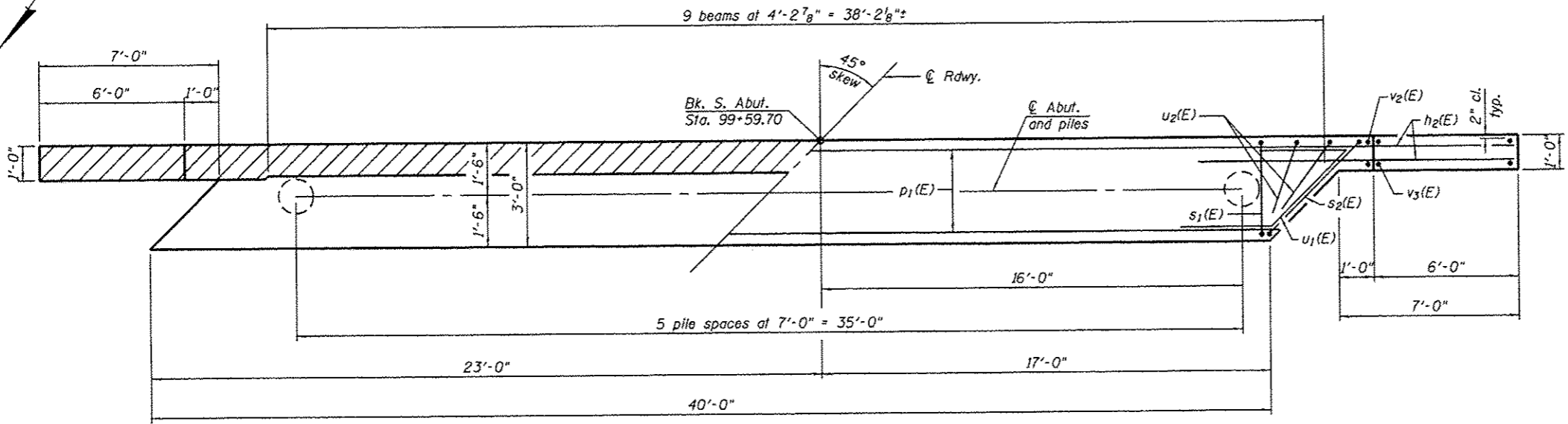
| T.R. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
| 124                       | 02-05108-00-BR | PIATT  | 23                 | 9         |
| ILLINOIS FED. AID PROJECT |                |        | CONTRACT NO. 91507 |           |



ELEVATION



SECTION THRU ABUTMENT  
(Dimensions are at Rt. L's)



PLAN

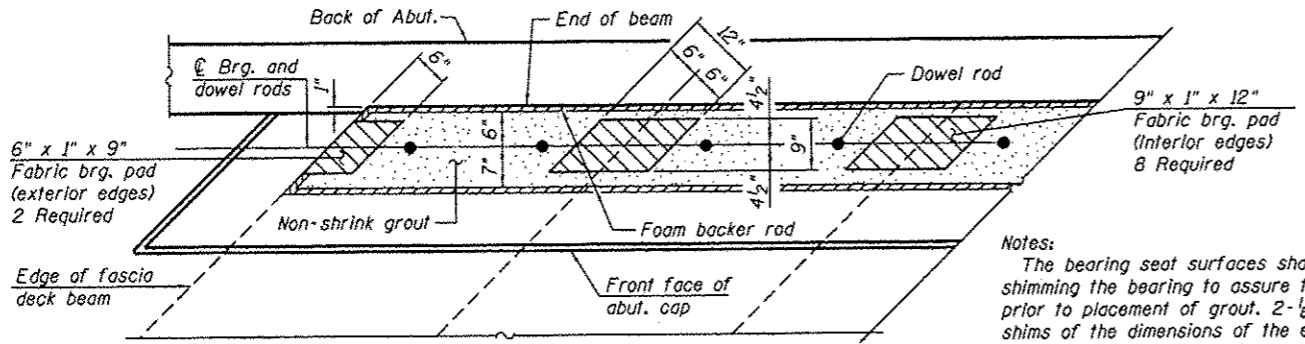
BILL OF MATERIAL

| Bar                                       | No. | Size | Length  | Shape |
|---|-----|------|---------|-------|
| $h_1(E)$                                  | 6   | #5   | 37'-11" | —     |
| $h_2(E)$                                  | 28  | #5   | 12'-0"  | —     |
| $p_1(E)$                                  | 10  | #7   | 39'-8"  | —     |
| $s_1(E)$                                  | 32  | #5   | 11'-3"  | □     |
| $s_2(E)$                                  | 2   | #5   | 13'-5"  | □     |
| $u_1(E)$                                  | 8   | #6   | 8'-8"   | ⌋     |
| $u_2(E)$                                  | 4   | #5   | 7'-6"   | ⌋     |
| $v_1(E)$                                  | 78  | #5   | 3'-7"   | —     |
| $v_2(E)$                                  | 8   | #5   | 5'-1"   | —     |
| $v_3(E)$                                  | 12  | #5   | 8'-10"  | —     |
| Structure Excavation                      |     |      | Cu. Yd. | 88    |
| Concrete Structures                       |     |      | Cu. Yd. | 20.0  |
| Reinforcement Bars, Epoxy Coated          |     |      | Pound   | 2,390 |
| Furnishing Metal Shell Piles 12" x 0.250" |     |      | Foot    | 144   |
| Driving Piles                             |     |      | Foot    | 144   |

PILE DATA

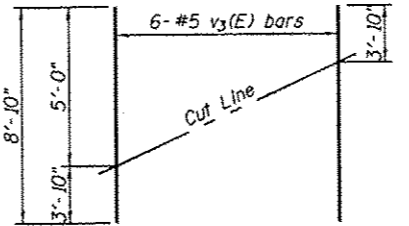
Type: Metal Shell 12"  $\phi$  x 0.250"  
 Nominal Required Bearing: 250 kips  
 Factored Resistance Available: 138 kips  
 Est. Length: 24 ft.  
 No. Production Piles: 6  
 No. Test Piles: 0

Notes:  
 The hatched area shall be poured after the beams are in place. The backwall shall be cast against the beams. Cast top of wingwall flush with exterior beam face after beams have been erected.  
 Dowel rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting the shear keys. Cost shall be included in the cost of Precast Prestressed Concrete Deck Beams (27" Depth).  
 For details of piles, see sheet 8 of 9.  
 If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").



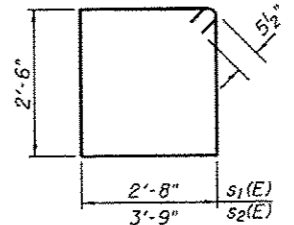
BEARING PAD DETAILS

Notes:  
 The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

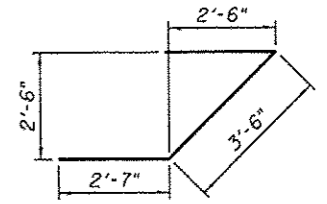


FIELD CUTTING DIAGRAM

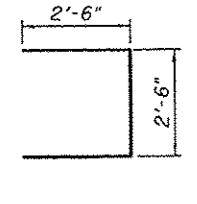
Order  $v_3(E)$  bars full length. Cut as shown and use remainder of bars in opposite face.



BARS  $s_1(E)$  &  $s_2(E)$



BAR  $u_1(E)$



BAR  $u_2(E)$

Design firm  
No. 15001038

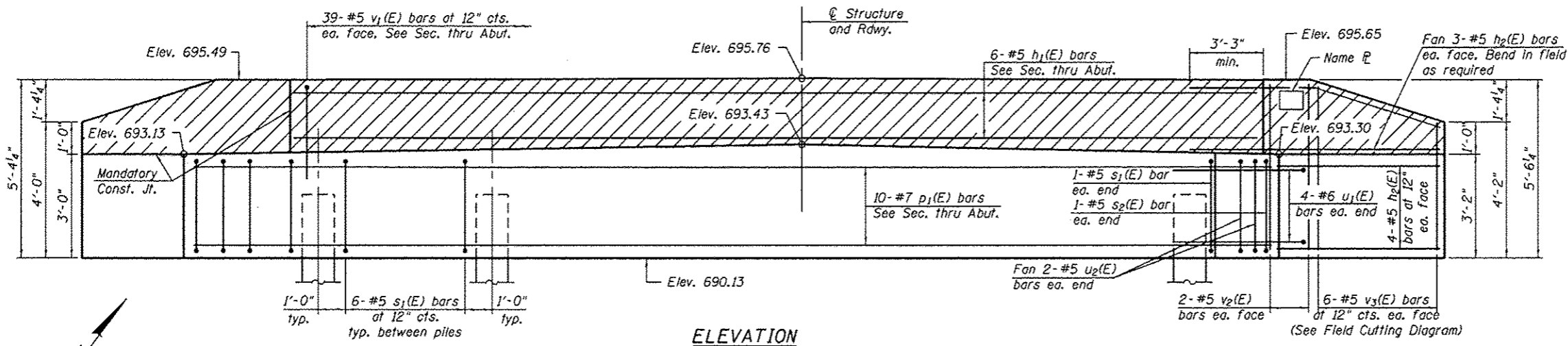


|                               |                |         |
|-------------------------------|----------------|---------|
| USER NAME = dhaberling        | DESIGNED - TJZ | REVISED |
| FILE NAME = 0743885-91507.dgn | CHECKED - SBC  | REVISED |
| PLOT SCALE = @ 2 1/2" = 1"    | DRAWN - DLH    | REVISED |
| PLOT DATE = 3/17/2014         | CHECKED - TJZ  | REVISED |

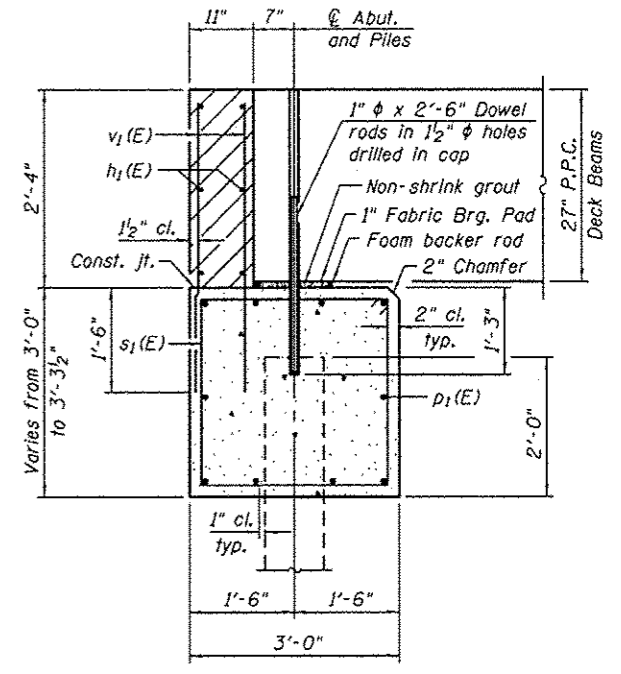
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT  
STRUCTURE NO. 074-3295  
SHEET NO. 6 OF 9 SHEETS

| T.R. RTE.                 | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO.          |
|---------------------------|----------------|--------|--------------|--------------------|
| 124                       | 02-05 08-00-BR | PIATT  | 23           | 10                 |
|                           |                |        |              | CONTRACT NO. 91507 |
| ILLINOIS FED. AID PROJECT |                |        |              |                    |



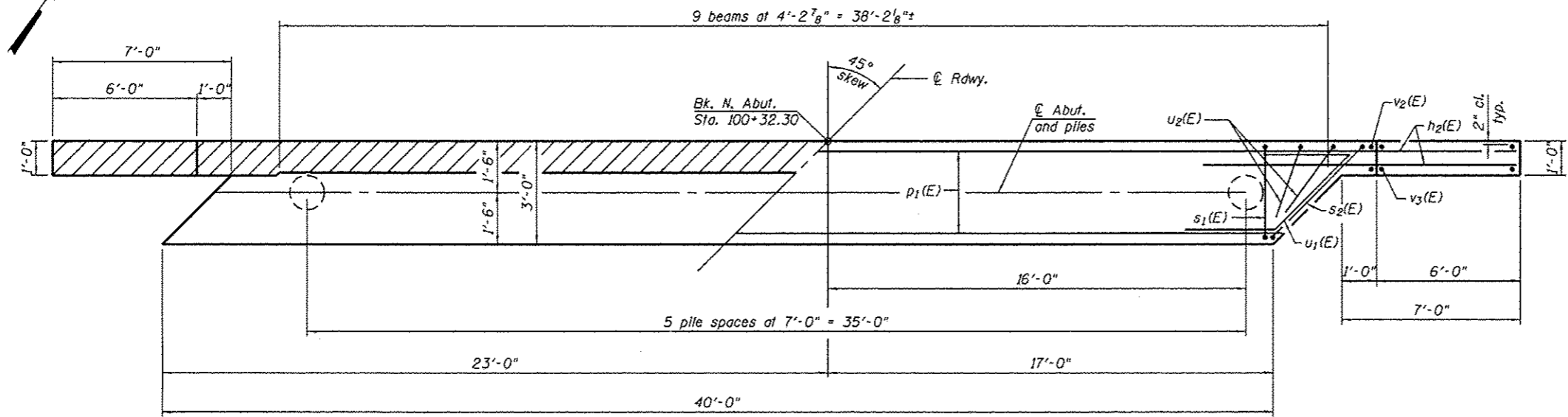
**ELEVATION**



**SECTION THRU ABUTMENT**  
(Dimensions are at Rt. L's)

**BILL OF MATERIAL**

| Bar                                       | No. | Size    | Length  | Shape |
|---|-----|---------|---------|-------|
| h <sub>1</sub> (E)                        | 6   | #5      | 37'-11" | —     |
| h <sub>2</sub> (E)                        | 28  | #5      | 12'-0"  | —     |
| p <sub>1</sub> (E)                        | 10  | #7      | 39'-8"  | —     |
| s <sub>1</sub> (E)                        | 32  | #5      | 11'-3"  | □     |
| s <sub>2</sub> (E)                        | 2   | #5      | 13'-5"  | □     |
| u <sub>1</sub> (E)                        | 8   | #6      | 8'-8"   | ∩     |
| u <sub>2</sub> (E)                        | 4   | #5      | 7'-6"   | ∩     |
| v <sub>1</sub> (E)                        | 78  | #5      | 3'-7"   | —     |
| v <sub>2</sub> (E)                        | 8   | #5      | 5'-1"   | —     |
| v <sub>3</sub> (E)                        | 12  | #5      | 8'-10"  | —     |
| Structure Excavation                      |     | Cu. Yd. |         | 88    |
| Concrete Structures                       |     | Cu. Yd. |         | 20.0  |
| Reinforcement Bars, Epoxy Coated          |     | Pound   |         | 2,390 |
| Furnishing Metal Shell Piles 12" x 0.250" |     | Foot    |         | 120   |
| Driving Piles                             |     | Foot    |         | 120   |
| Test Pile Metal Shells                    |     | Each    |         | 1     |

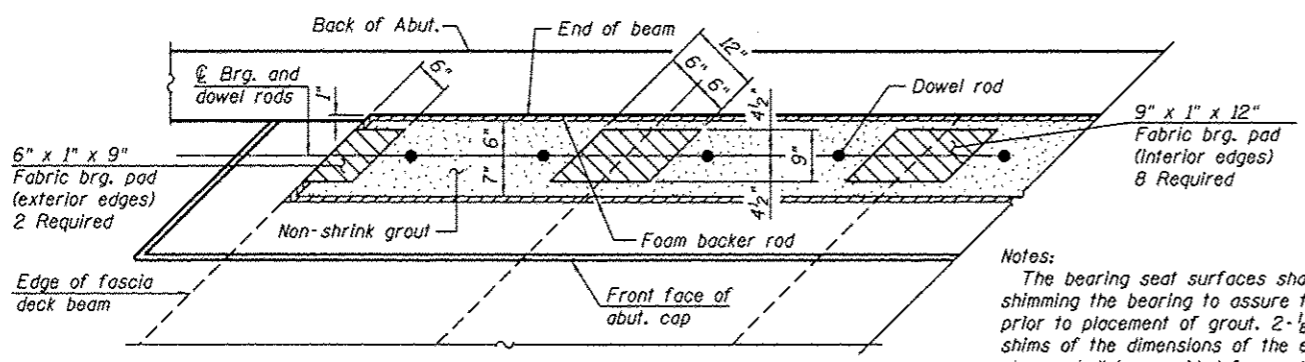


**PLAN**

**PILE DATA**

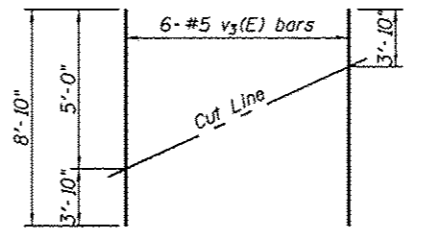
Type: Metal Shell 12"  $\phi$  x 0.250"  
 Nominal Required Bearing: 285 kips  
 Factored Resistance Available: 157 kips  
 Est. Length: 24 ft.  
 No. Production Piles: 5  
 No. Test Piles: 1

**Notes:**  
 The hatched area shall be poured after the beams are in place. The backwall shall be cast against the beams. Cast top of wingwall flush with exterior beam face after beams have been erected.  
 Dowel rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting the shear keys. Cost shall be included in the cost of Precast Prestressed Concrete Deck Beams (27" Depth).  
 For details of piles, see sheet 8 of 9.  
 If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").



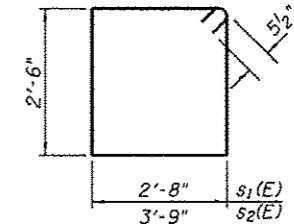
**BEARING PAD DETAILS**

**Notes:**  
 The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

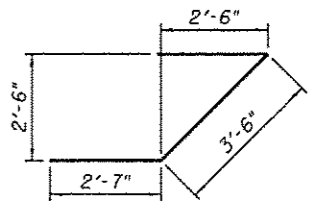


**FIELD CUTTING DIAGRAM**

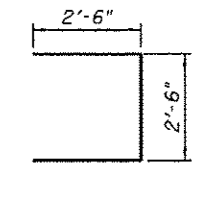
Order v<sub>3</sub>(E) bars full length. Cut as shown and use remainder of bars in opposite face.



**BARS s<sub>1</sub>(E) & s<sub>2</sub>(E)**



**BAR u<sub>1</sub>(E)**



**BAR u<sub>2</sub>(E)**

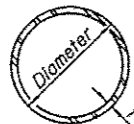


|            |                     |          |       |         |  |
|------------|---------------------|----------|-------|---------|--|
| USER NAME  | * dhaberling        | DESIGNED | - TJZ | REVISED |  |
| FILE NAME  | * 0743885-91507.dgn | CHECKED  | - SBC | REVISED |  |
| PLOT SCALE | * @2 1/4" = 1"      | DRAWN    | - DLH | REVISED |  |
| PLOT DATE  | * 3/17/2014         | CHECKED  | - TJZ | REVISED |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

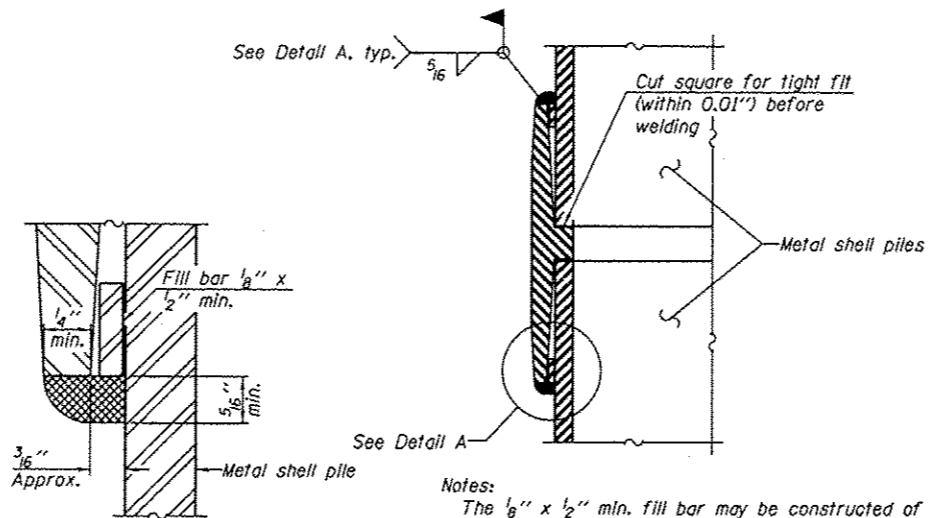
**NORTH ABUTMENT**  
**STRUCTURE NO. 074-3295**  
 SHEET NO. 7 OF 9 SHEETS

| T.R. RTE.          | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
| 124                | 02-05108-00-BR | PIATT  | 23                        | 11        |
| CONTRACT NO. 91507 |                |        | ILLINOIS FED. AID PROJECT |           |



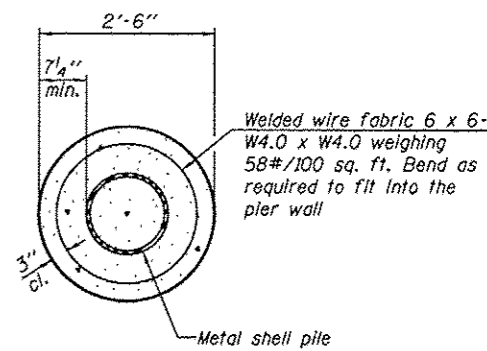
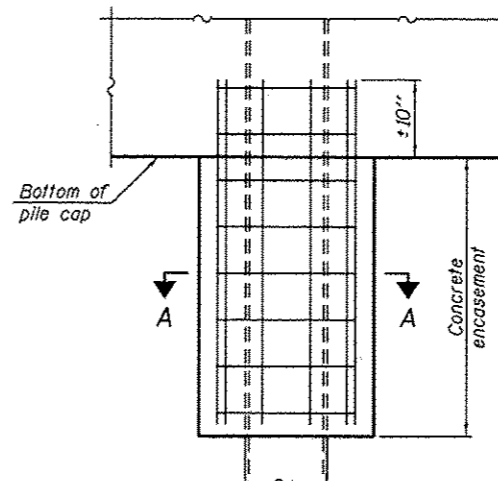
**METAL SHELL PILE TABLE**

| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. <sup>3</sup> /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12                             | 0.179"           | 22.60                      | 0.0274                                |
| PP12                             | 0.250"           | 31.37                      | 0.0267                                |
| PP14                             | 0.250"           | 36.71                      | 0.0368                                |
| PP14                             | 0.312"           | 45.61                      | 0.0361                                |



Notes:  
 The  $\frac{1}{8}$ " x  $\frac{1}{2}$ " min. fill bar may be constructed of 2 bars with a  $\frac{1}{8}$ " max. gap between them.  
 Pile segments shall be driven to solid contact with splicer before welding.

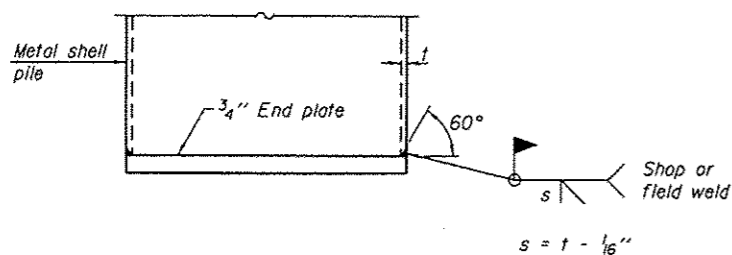
**WELDED COMMERCIAL SPLICE**



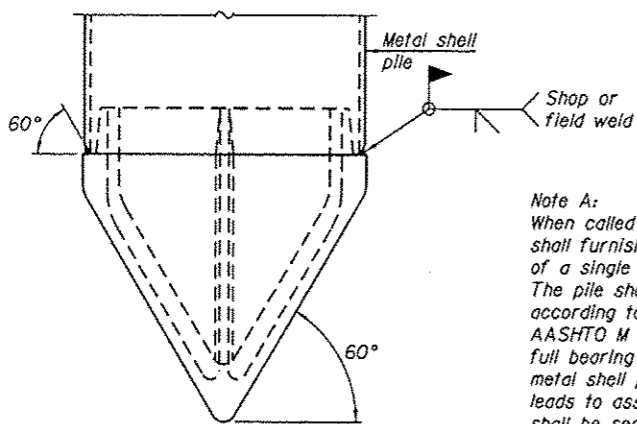
Note:  
 Forms for encasement may be omitted when soil conditions permit.

**ELEVATION**

**CONCRETE ENCASMENT AT PIERS**

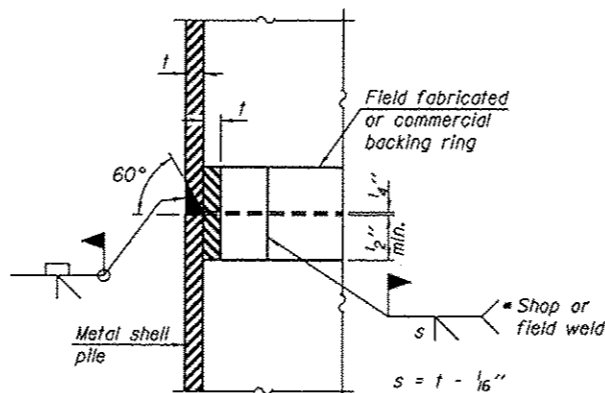


**END PLATE ATTACHMENT**



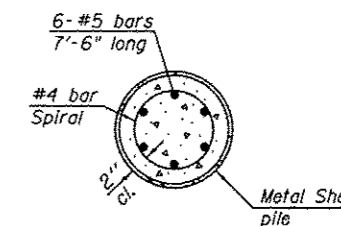
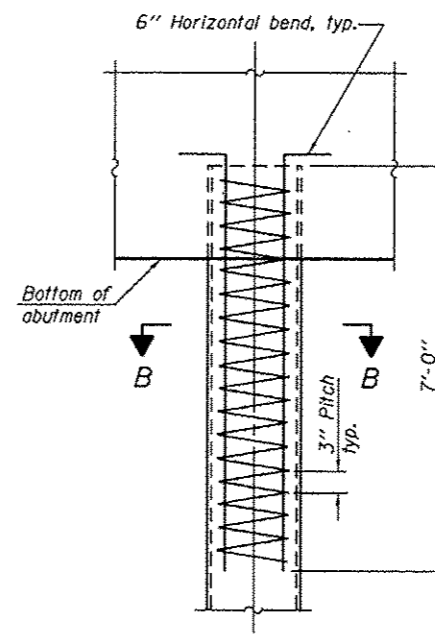
Note A:  
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

**METAL SHELL PILE SHOE ATTACHMENT**  
 (See Note A)



**COMPLETE PENETRATION WELD SPLICE**

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**

Note:  
 The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS

1-27-12



|                               |                |         |
|-------------------------------|----------------|---------|
| USER NAME * dhaberling        | DESIGNED - TJZ | REVISED |
| FILE NAME * 0743805-91507.dgn | CHECKED - SBC  | REVISED |
| PLOT SCALE * 8/2' = 1/4"      | DRAWN - DLH    | REVISED |
| PLOT DATE * 3/17/2014         | CHECKED - TJZ  | REVISED |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

METAL SHELL PILE DETAILS  
 STRUCTURE NO. 074-3295

SHEET NO. 8 OF 9 SHEETS

| T.R. RTEL | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|-----------|----------------|--------|--------------------|-----------|
| 124       | 02-05108-00-BR | PIATT  | 23                 | 12        |
|           |                |        | CONTRACT NO. 91507 |           |

ILLINOIS FED. AID PROJECT

**SOIL BORING LOG**

ROUTE \_\_\_\_\_ DESCRIPTION Piatt County Bridge Borings LOGGED BY CM, CH  
SECTION \_\_\_\_\_ LOCATION TR 124 (1200 E Rd) over Lake Fork District Drainage Ditch  
COUNTY Piatt STRUCTURE NO. \_\_\_\_\_ (Exist) \_\_\_\_\_ (Prop.)  
BORING NO. B-1 DRILLING METHOD Hollow Stem HAMMER TYPE 40# Safety Hammer

| Station   | Offset  | Ground Surface Elev. | SOIL DESCRIPTION  | (ft.) | (ft.) | /6" | (tsf) | (%)  | SOIL DESCRIPTION   | (ft.) | (ft.) | /6" | (tsf) | (%)  |
|-----------|---------|----------------------|---|-------|-------|-----|-------|------|--|-------|-------|-----|-------|------|
| 100+13.96 | 8.62 Lt | 695.7                | 1" OIL & CHIP   |       |       |     |       |      | Gray, very moist, hard, very dense                           |       |       |     |       |      |
|           |         |                      | CLAY LOAM- A-6  | 3     |       |     |       | 15.3 | CLAY- A-6  | 35    | 23    |     | 5.3   | 9.2  |
|           |         |                      | Brown, moist, firm-stiff, low plasticity, little sand, trace gravel | 5     |       |     |       |      | Gray, moist, hard, low plasticity, little sand, trace gravel | 40    | 20-3  |     |       |      |
|           |         |                      | -stiff  | 5     | 5     | 1.2 | 12.7  |      | SAND- A-3  | 33    |       |     |       |      |
|           |         |                      |   | 4     | 6     |     |       |      | Gray, very moist, very dense, fine-coarse, trace gravel      | 35    | 21-2  |     |       |      |
|           |         |                      |   | 4     | 6     |     |       |      | CLAY- A-6  | 40    | 32    |     | 9.4   | 10.0 |
|           |         |                      |   | 3     | 5     |     |       | 19.8 | Gray, moist, hard, low plasticity, little sand, trace gravel | 52    | 8-5   |     |       |      |
|           |         |                      | -very stiff   | 10    | 7     |     |       | 11.8 | END OF BORING @ 40.60 FT.                                    |       |       |     |       |      |
|           |         |                      |   | 8     | 9     |     |       | 3.2  |  | 45    |       |     |       |      |
|           |         |                      | CLAY LOAM- A-6  | 4     | 16    |     |       | 10.1 |  |       |       |     |       |      |
|           |         |                      | Gray, moist, hard, low plasticity, little sand, trace gravel        | 15    | 12    |     |       | 7.2  |  | 50    |       |     |       |      |
|           |         |                      |   | 19    | 24    |     |       | 10.2 |  |       |       |     |       |      |
|           |         |                      | 4" SAND SEAM  | 6     | 9     |     |       | 23.1 |  |       |       |     |       |      |
|           |         |                      | SILT- A-4   | 8     | 20    |     |       | 23.0 |  |       |       |     |       |      |
|           |         |                      | Gray, saturated, stiff, low plasticity (*free water @ 17.0')        | 12    | 13    |     |       |      |  | 55    |       |     |       |      |
|           |         |                      | SAND- A-3   | 8     | 11    |     |       | 9.5  |  |       |       |     |       |      |
|           |         |                      | Gray, saturated, medium dense, fine                                 | 11    | 13    |     |       |      |  |       |       |     |       |      |
|           |         |                      | 3" SANDY CLAY LOAM SEAM   | 25    | 12    |     |       | 11.1 |  | 60    |       |     |       |      |
|           |         |                      | CLAY- A-6   | 12    | 13    |     |       |      |  |       |       |     |       |      |
|           |         |                      | Gray, moist, very stiff, low plasticity, trace sand, trace gravel   | 11    | 20    |     |       | 9.4  |  |       |       |     |       |      |
|           |         |                      | SANDY CLAY LOAM- A-2-4  | 18    | 30    |     |       |      |  |       |       |     |       |      |
|           |         |                      | Gray, moist, hard, low plasticity                                   | 20    | 18    |     |       |      |  |       |       |     |       |      |
|           |         |                      | CLAY LOAM- A-6  | 35    | 21    |     |       | 9.5  |  |       |       |     |       |      |
|           |         |                      | Gray, moist, hard, low plasticity, trace gravel                     | 25-5  | 30    |     |       |      |  | 65    |       |     |       |      |
|           |         |                      | SANDY LOAM- A-2-4   | 27    | 60    |     |       | 10.7 |  |       |       |     |       |      |

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).  
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)

**SOIL BORING LOG**

ROUTE \_\_\_\_\_ DESCRIPTION Piatt County Bridge Borings LOGGED BY CM, CH  
SECTION \_\_\_\_\_ LOCATION TR 124 (1200 E Rd) over Lake Fork District Drainage Ditch  
COUNTY Piatt STRUCTURE NO. \_\_\_\_\_ (Exist) \_\_\_\_\_ (Prop.)  
BORING NO. B-2 DRILLING METHOD HOLLOW STEM HAMMER TYPE 40# SAFETY HAMMER

| Station  | Offset | Ground Surface Elev. | SOIL DESCRIPTION   | (ft.) | (ft.) | /6" | (tsf) | (%)  | SOIL DESCRIPTION   | (ft.) | (ft.) | /6" | (tsf) | (%)  |
|----------|--------|----------------------|--|-------|-------|-----|-------|------|--|-------|-------|-----|-------|------|
| 99+93.66 | 7.9 Rt | 695.7                | 1" OIL & CHIP  |       |       |     |       |      | Gray, moist, hard, low plasticity, trace gravel              |       |       |     |       |      |
|          |        |                      | SILTY CLAY LOAM- A-4   | 4     |       |     |       | 13.5 | SILTY CLAY- A-4  | 35    | 60    |     |       | 9.0  |
|          |        |                      | Brown, moist, firm-stiff, low plasticity, little sand        | 4     |       |     |       |      | Gray, moist, hard, low plasticity, little sand, trace gravel |       |       |     |       |      |
|          |        |                      | -stiff   | 5     | 4     |     |       | 19.2 |  |       |       |     |       |      |
|          |        |                      |  | 3     | 4     |     |       | 1.2  |  |       |       |     |       |      |
|          |        |                      |  | 4     | 4     |     |       |      | END OF BORING @ 40.5 FT.                                     |       |       |     |       |      |
|          |        |                      |  | 4     | 4     |     |       | 1.0  |  | 65.2  | 20    |     | 6.7   | 12.0 |
|          |        |                      |  | 4     | 6     |     |       |      |  |       | 45    |     |       |      |
|          |        |                      | SILTY CLAY- A-4  | 10    | 3     |     |       | 1.1  |  |       |       |     |       |      |
|          |        |                      | Gray, moist, stiff, low plasticity, trace sand, trace gravel | 4     | 7     |     |       |      |  |       |       |     |       |      |
|          |        |                      | -very stiff  | 5     | 11    |     |       | 6.7  |  |       |       |     |       |      |
|          |        |                      |  | 13    | 13    |     |       |      |  |       |       |     |       |      |
|          |        |                      | -stiff   | 15    | 3     |     |       | 2.9  |  |       |       |     |       |      |
|          |        |                      |  | 5     | 6     |     |       |      |  |       |       |     |       |      |
|          |        |                      | SAND- A-3  | 8     | 15    |     |       |      |  |       |       |     |       |      |
|          |        |                      | Gray, saturated, medium dense, fine-coarse, trace gravel     | 20    | 5     |     |       |      |  |       |       |     |       |      |
|          |        |                      | (*free water @ 18.5')  | 12    | 15    |     |       |      |  |       |       |     |       |      |
|          |        |                      | SAND- A-3  | 15    | 20    |     |       |      |  |       |       |     |       |      |
|          |        |                      | Gray, saturated, medium dense, fine                          | 18    | 16    |     |       |      |  |       |       |     |       |      |
|          |        |                      | SAND- A-3  | 16    | 25    |     |       |      |  |       |       |     |       |      |
|          |        |                      | Gray, wet, dense, fine-medium                                | 14    | 14    |     |       |      |  |       |       |     |       |      |
|          |        |                      | SAND- A-3  | 14    | 14    |     |       |      |  |       |       |     |       |      |
|          |        |                      | Gray, wet, medium dense-dense, fine-coarse, trace gravel     | 14    | 24    |     |       | 5.8  | 9.5  |       |       |     |       |      |
|          |        |                      | SILTY CLAY- A-4  | 36-5  | 30    |     |       |      |  |       |       |     |       |      |
|          |        |                      | Gray, moist, hard, low plasticity, little sand, trace gravel | 34    | 42    |     |       | 6.1  | 10.4   |       |       |     |       |      |
|          |        |                      |  | 19-3  | 60    |     |       |      |  |       |       |     |       |      |
|          |        |                      | SANDY LOAM- A-2-4  | 60    |       |     |       | 11.8 |  |       |       |     |       |      |

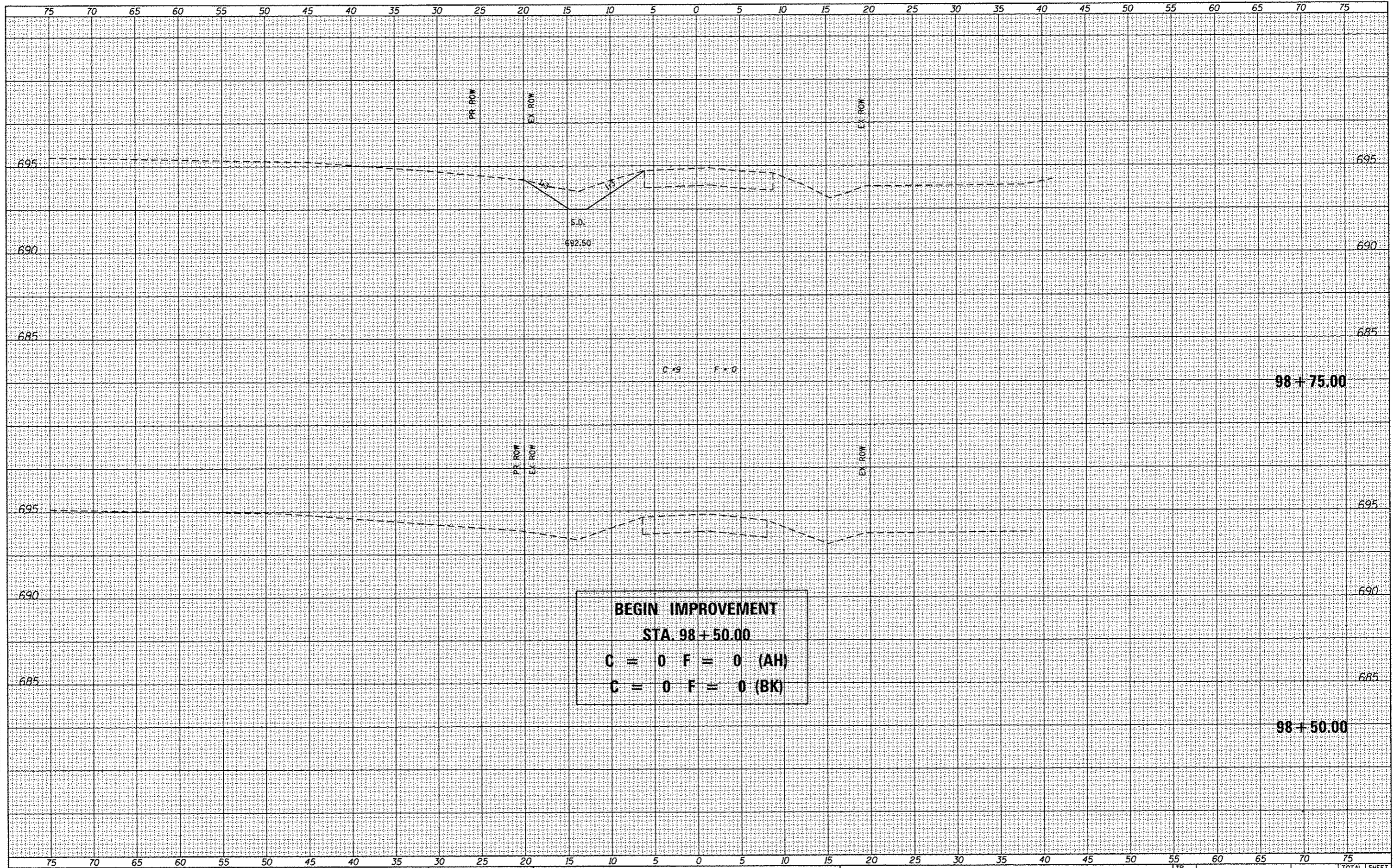
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer).  
The Standard Penetration Test (SPT) N Value is per (AASHTO T206)

BBS 137 (9/05)



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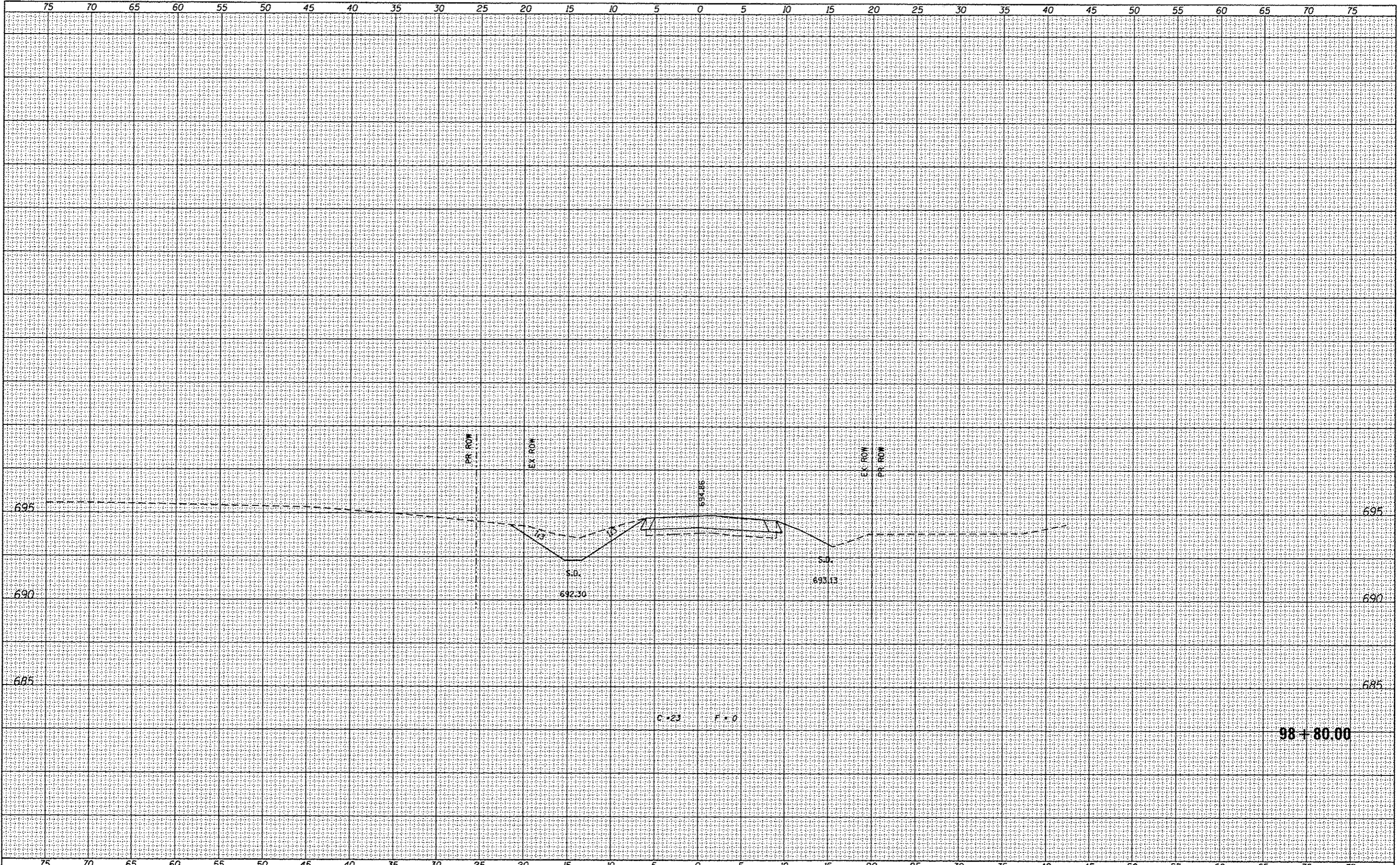


**BEGIN IMPROVEMENT**  
**STA. 98+50.00**  
**C = 0 F = 0 (AH)**  
**C = 0 F = 0 (BK)**



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| AREAS CHECKED   |  |



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|            |                |          |   |         |  |
|------------|----------------|----------|---|---------|--|
| USER NAME  | *OPERATOR*     | DESIGNED | - | REVISED |  |
| FILE NAME  | *XS_SHT.dgn    | CHECKED  | - | REVISED |  |
| PLOT SCALE | *10,0000' / 1" | DRAWN    | - | REVISED |  |
| PLOT DATE  | *3/17/2014     | CHECKED  | - | REVISED |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS - TR 124

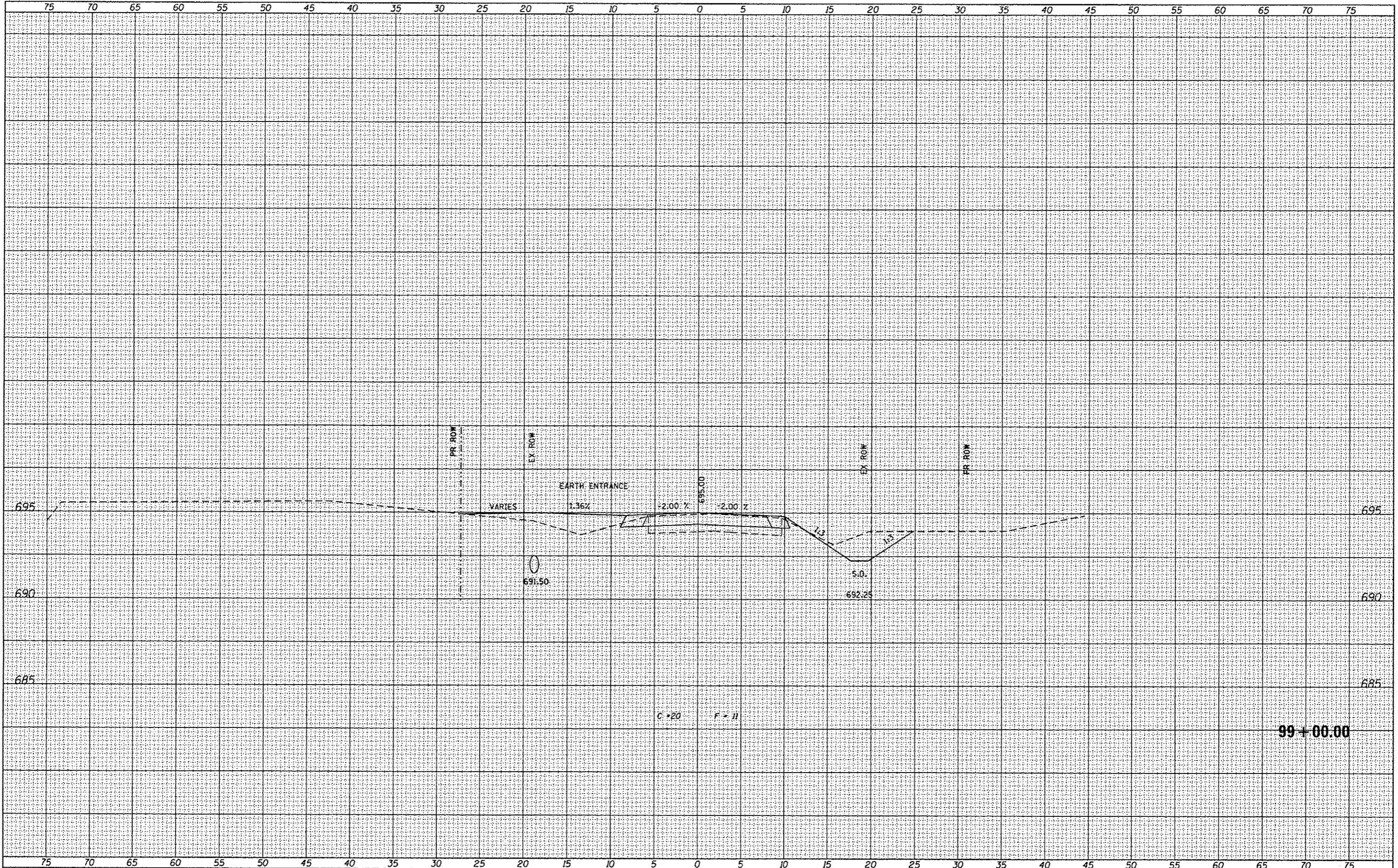
SCALE: 1" = 5' SHEET NO. 2 OF 10 SHEETS STA. 98+80.00 TO STA. 98+80.00

| TR RTE.                   | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
| 124                       | 02-05108-00-BR | PIATT  | 23                 | 15        |
|                           |                |        | CONTRACT NO. 91507 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



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| SURVEYED      |  |
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| NOTE BOOK     |  |
| AREAS CHECKED |  |



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|-----------------------------|------------|---------|
| USER NAME • #OPERATOR#      | DESIGNED - | REVISED |
| FILE NAME • XS_SHT.dgn      | CHECKED -  | REVISED |
| PLOT SCALE • 1/8,000 @ 1/4" | DRAWN -    | REVISED |
| PLOT DATE • 3/17/2014       | CHECKED -  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

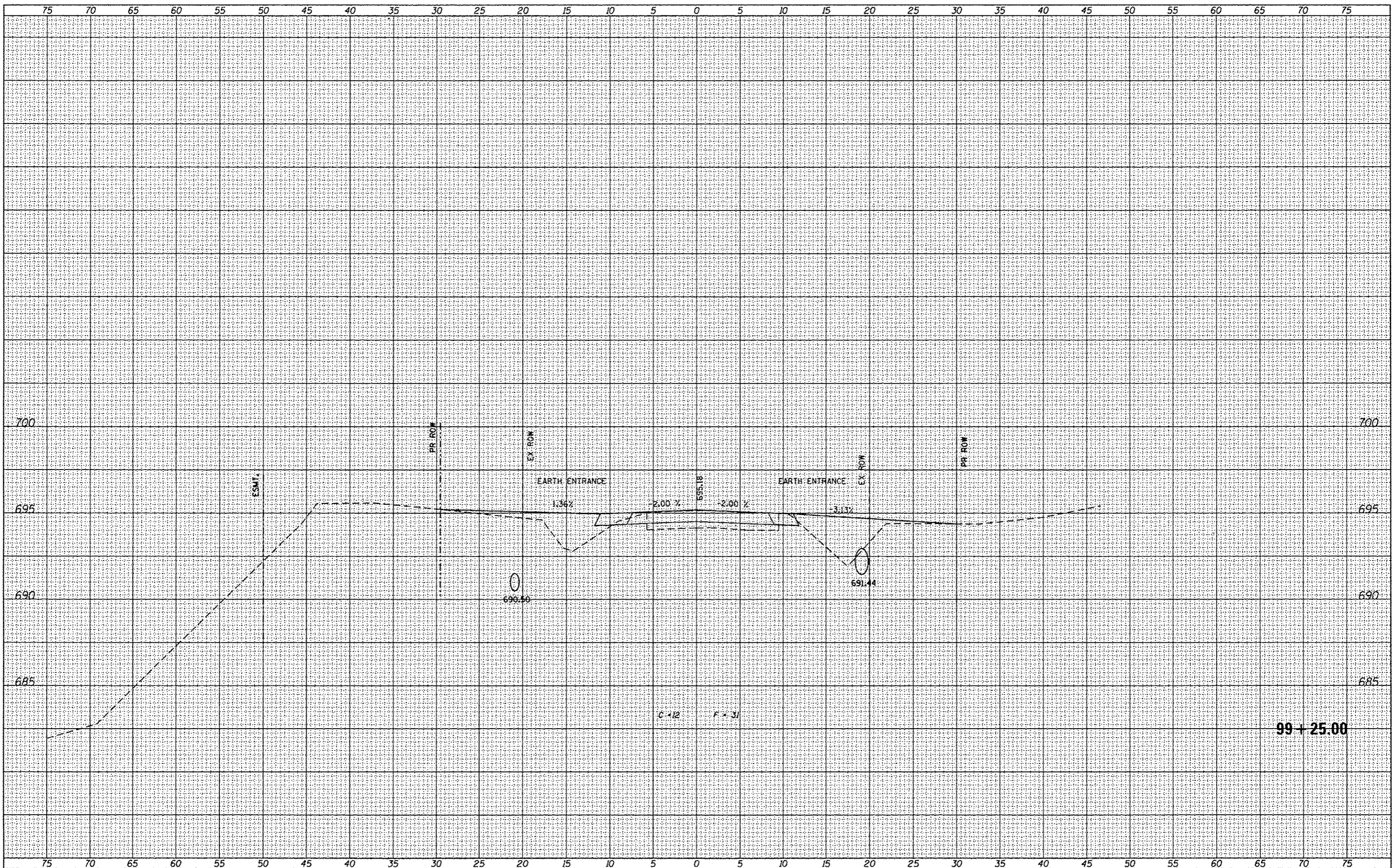
PROPOSED CROSS SECTIONS - TR 124  
SCALE: 1" = 5'  
SHEET NO. 3 OF 10 SHEETS STA. 99+00.00 TO STA. 99+00.00

| TR                        | SECTION        | COUNTY | TOTAL              | SHEET |
|---------------------------|----------------|--------|--------------------|-------|
| 124                       | 02-05108-00-BR | PIATT  | 25                 | 16    |
|                           |                |        | CONTRACT NO. 91507 |       |
| ILLINOIS FED. AID PROJECT |                |        |                    |       |



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| PLOTTED         |  |
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| AREAS CHECKED   |  |
| NO.             |  |



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|---------------------------|------------|---------|
| USER NAME = *OPERATOR*    | DESIGNED - | REVISED |
| FILE NAME = XS_SHT.dgn    | CHECKED -  | REVISED |
| PLOT SCALE = 10,0000 / 1" | DRAWN -    | REVISED |
| PLOT DATE = 3/17/2014     | CHECKED -  | REVISED |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PROPOSED CROSS SECTIONS - TR 124**

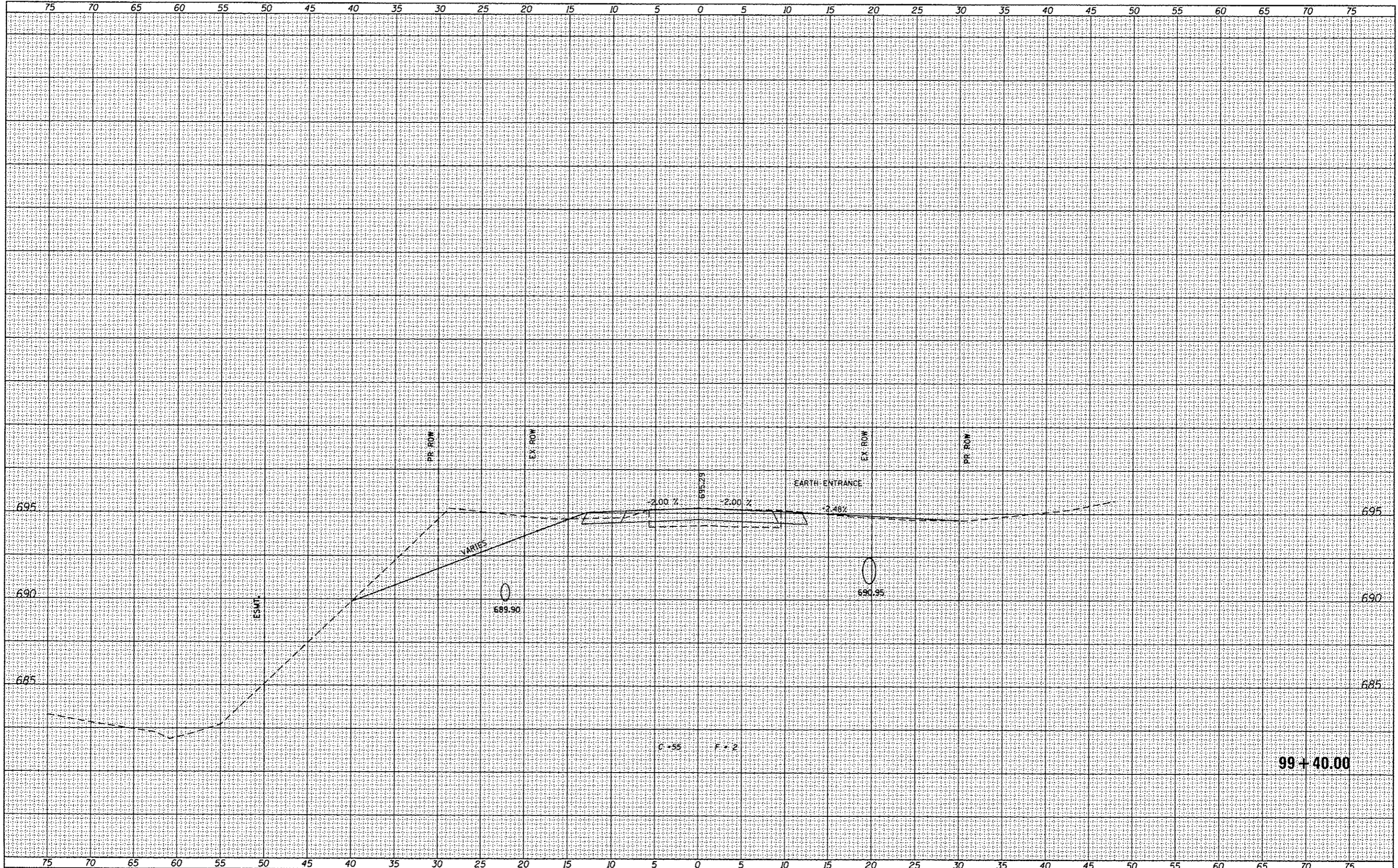
SCALE: 1" = 5'      SHEET NO. 4 OF 10 SHEETS      STA. 99+25.00 TO STA. 99+25.00

| TR RTE                    | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|----------------|--------|--------------|-----------|
| 124                       | 02-05108-00-BR | PIATT  | 23           | 17        |
| CONTRACT NO. 91507        |                |        |              |           |
| ILLINOIS FED. AID PROJECT |                |        |              |           |



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| USER NAME  | *OPERATOR     | DESIGNED | - | REVISED |  |
| FILE NAME  | *XS_SHT.dgn   | CHECKED  | - | REVISED |  |
| PLOT SCALE | *10.0000 / in | DRAWN    | - | REVISED |  |
| PLOT DATE  | *3/17/2014    | CHECKED  | - | REVISED |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

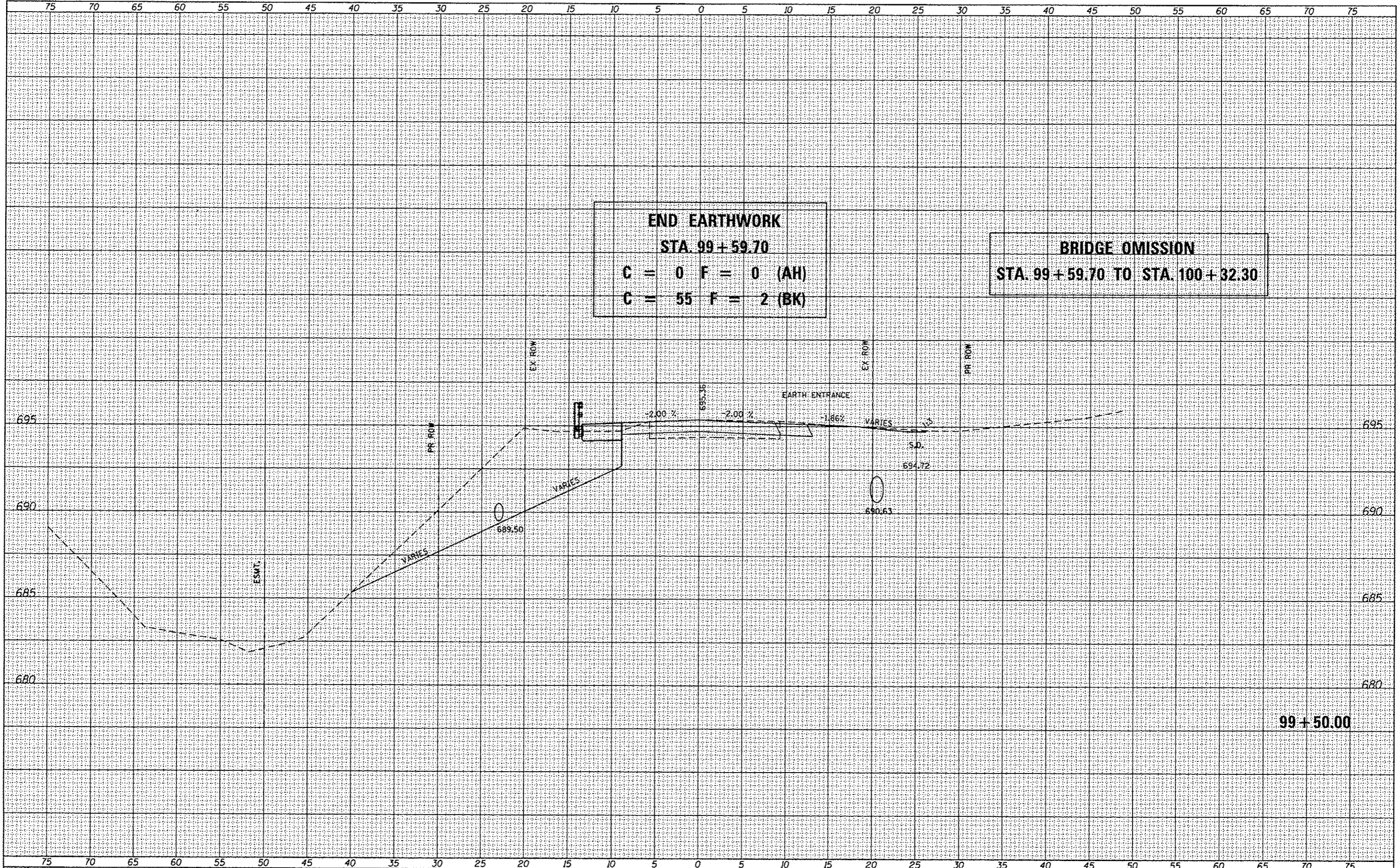
PROPOSED CROSS SECTIONS - TR 124  
SCALE: 1" = 5'  
SHEET NO. 5 OF 10 SHEETS | STA. 99+40.00 TO STA. 99+40.00

| TR                 | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
| 124                | 02-05108-00-BR | PIATT  | 23                        | 18        |
| CONTRACT NO. 91507 |                |        | ILLINOIS FED. AID PROJECT |           |



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| USER NAME  | *OPERATOR*      | DESIGNED | - | REVISED |  |
| FILE NAME  | *XS_SHT.dgn     | CHECKED  | - | REVISED |  |
| PLOT SCALE | *10.0000' / 1"* | DRAWN    | - | REVISED |  |
| PLOT DATE  | *3/17/2014      | CHECKED  | - | REVISED |  |

STATE OF ILLINOIS  
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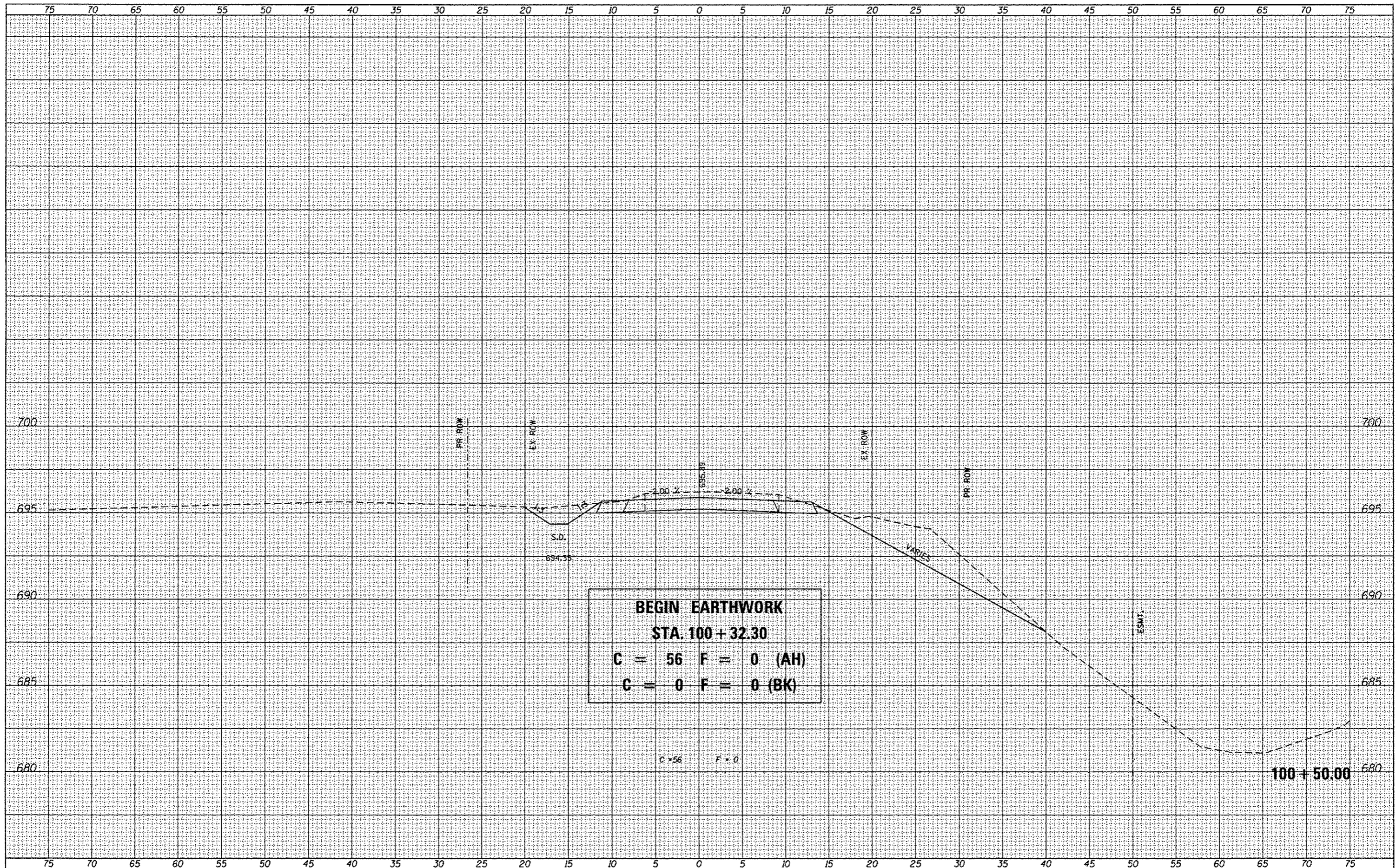
PROPOSED CROSS SECTIONS - TR 124  
SCALE: 1" = 5'  
SHEET NO. 6 OF 10 SHEETS | STA. 99+50.00 TO STA. 99+50.00

| TR RTE             | SECTION        | COUNTY | TOTAL SHEETS              | SHEET NO. |
|--------------------|----------------|--------|---------------------------|-----------|
| 124                | 02-05108-00-BR | PIATT  | 23                        | 19        |
| CONTRACT NO. 91507 |                |        | ILLINOIS FED. AID PROJECT |           |



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| USER NAME = #OPERATOR#     | DESIGNED - | REVISED |
| FILE NAME = XS_SHT.dgn     | CHECKED -  | REVISED |
| PLOT SCALE = 18.0000' / 1" | DRAWN -    | REVISED |
| PLOT DATE = 3/17/2014      | CHECKED -  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

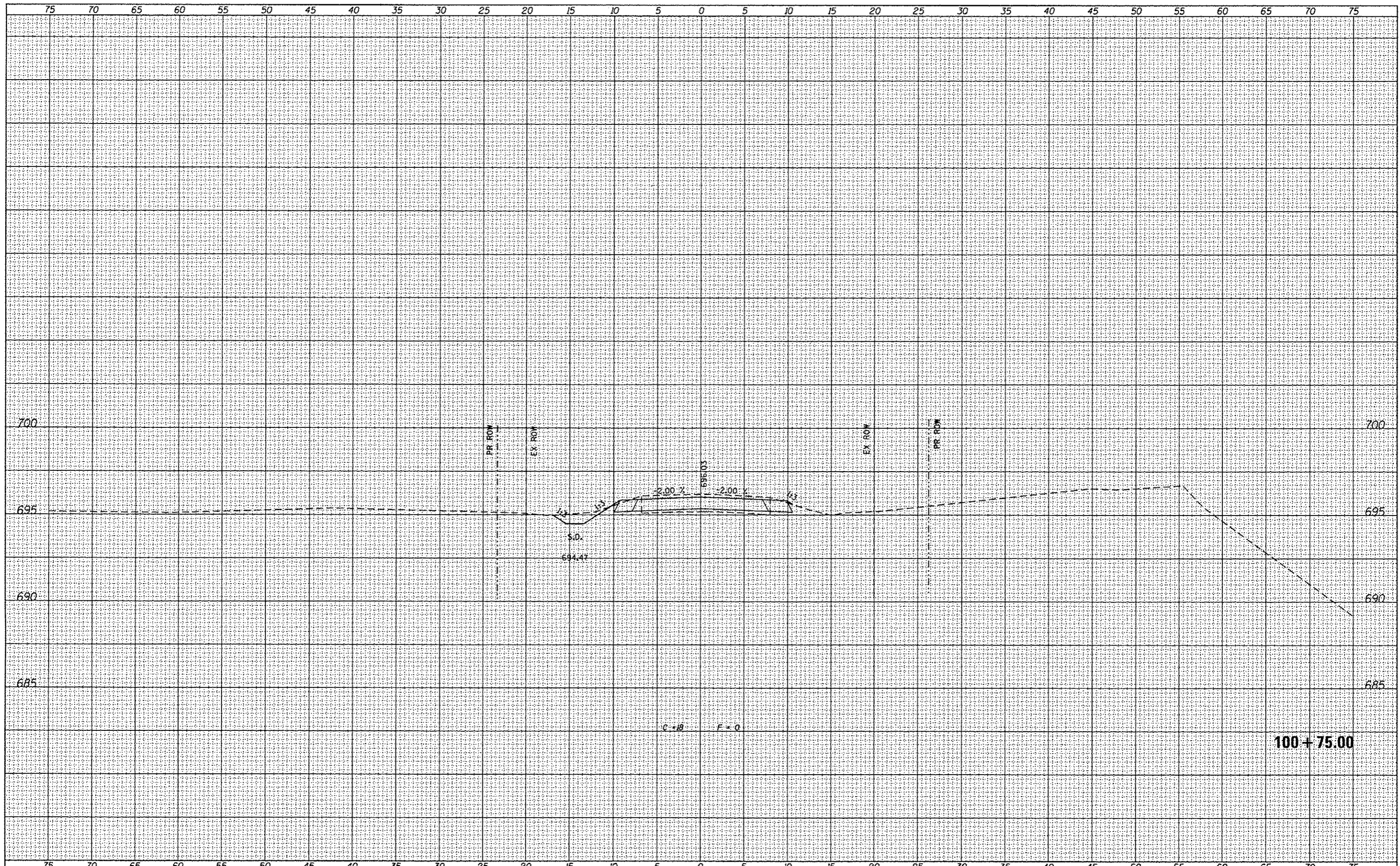
PROPOSED CROSS SECTIONS - TR 124  
SCALE: 1" = 5'  
SHEET NO. 7 OF 10 SHEETS STA. 100+50.00 TO STA. 100+50.00

|                           |                |        |                    |           |
|---------------------------|----------------|--------|--------------------|-----------|
| TR RTE                    | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 124                       | 02-05108-00-BR | PIATT  | 23                 | 20        |
|                           |                |        | CONTRACT NO. 91507 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



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| NOTE BOOK       | PLOTTED       |
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| USER NAME = #OPERATOR#     | DESIGNED - | REVISED |
| FILE NAME = XS_SHT.dgn     | CHECKED -  | REVISED |
| PLOT SCALE = 18.0000' / 1" | DRAWN -    | REVISED |
| PLOT DATE = 3/17/2014      | CHECKED -  | REVISED |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PROPOSED CROSS SECTIONS - TR 124

SCALE: 1" = 5'

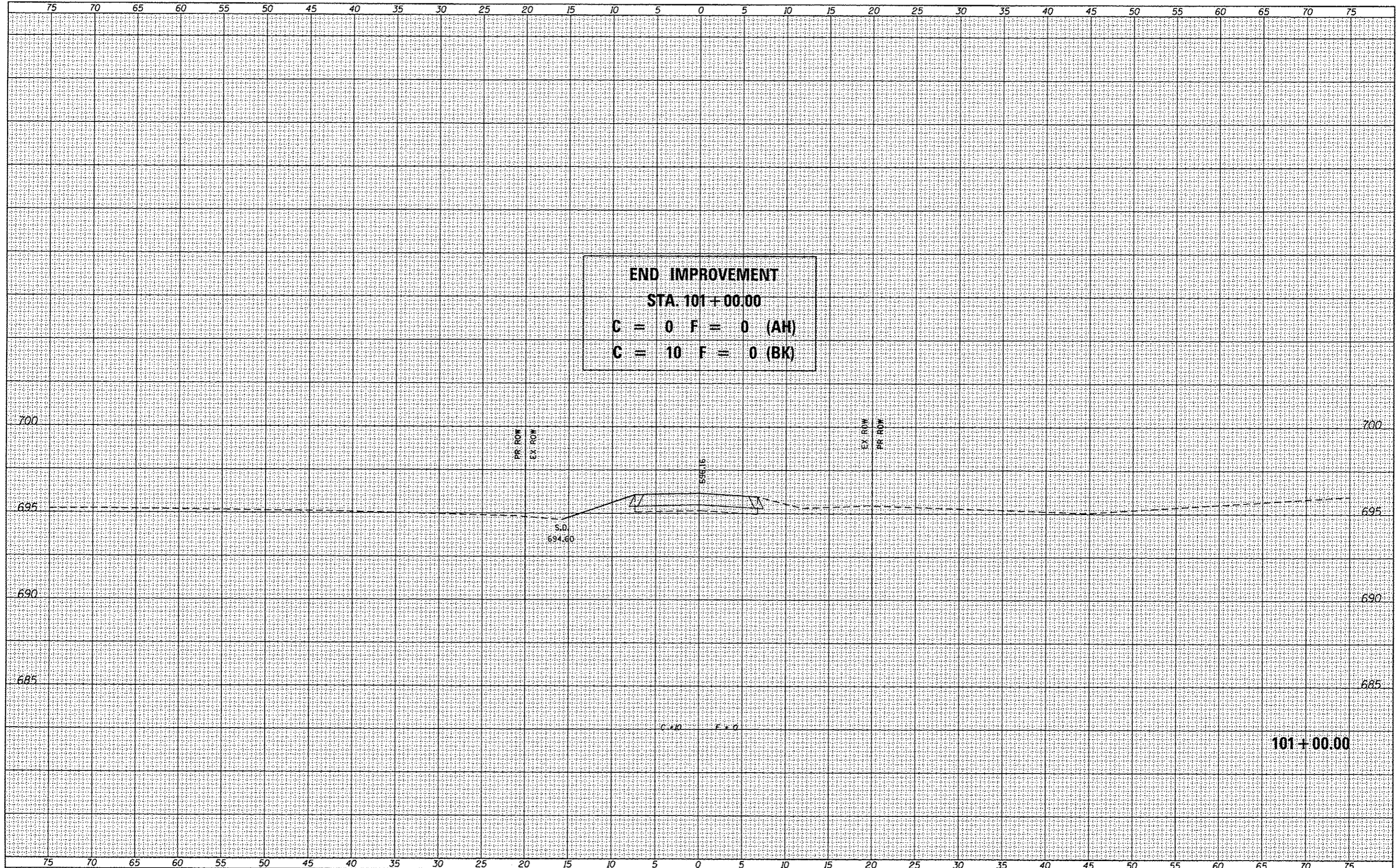
SHEET NO. 8 OF 10 SHEETS | STA. 100+75.00 TO STA. 100+75.00

| TR RTE                    | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
| 124                       | 02-05108-00-BR | PIATT  | 23                 | 21        |
|                           |                |        | CONTRACT NO. 91507 |           |
| ILLINOIS FED. AID PROJECT |                |        |                    |           |



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|-----------|---------------|------|
| FINAL     | SUBMITTED     | DATE |
| SHEET     | PLOTTED       |      |
| NOTE BOOK | TEMPLATE      |      |
| NO.       | AREAS CHECKED |      |

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| ORIGINAL  | SUBMITTED     | DATE |
| SHEET     | PLOTTED       |      |
| NOTE BOOK | TEMPLATE      |      |
| NO.       | AREAS CHECKED |      |



**END IMPROVEMENT**  
**STA. 101+00.00**  
**C = 0 F = 0 (AH)**  
**C = 10 F = 0 (BK)**

**101+00.00**

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| USER NAME = WOPERATOR     | DESIGNED - | REVISED |
| FILE NAME = XS_SHT.dgn    | CHECKED -  | REVISED |
| PLOT SCALE = 10.0000 / 1" | DRAWN -    | REVISED |
| PLOT DATE = 3/17/2014     | CHECKED -  | REVISED |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PROPOSED CROSS SECTIONS - TR 124**

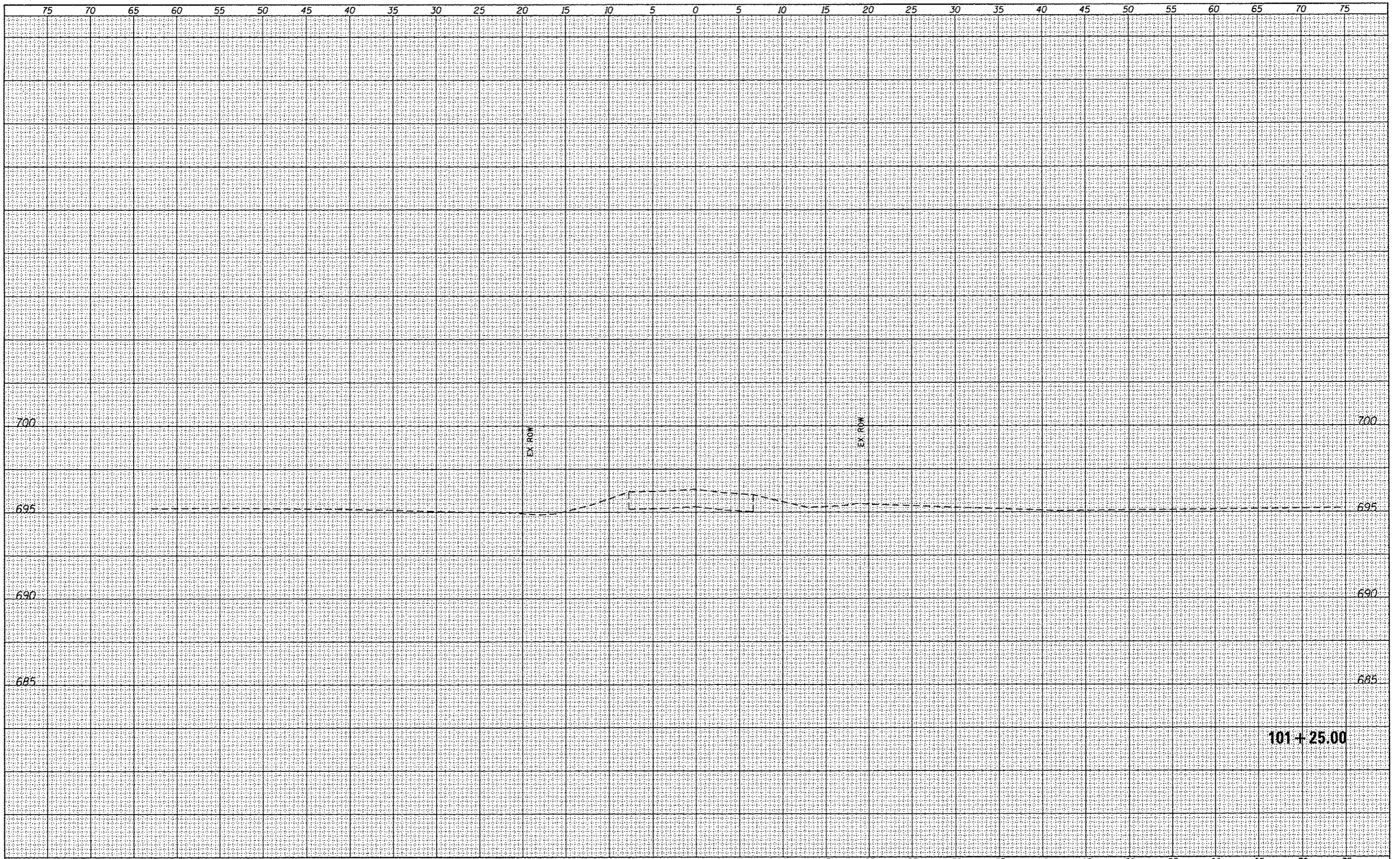
SCALE: 1" = 5'      SHEET NO. 9 OF 10 SHEETS      STA. 101+00.00 TO STA. 101+00.00

| TR. RTE.                  | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---------------------------|----------------|--------|--------------------|-----------|
| 124                       | 02-05108-00-BR | PIATT  | 23                 | 22        |
| ILLINOIS FED. AID PROJECT |                |        | CONTRACT NO. 91507 |           |



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



|                                  |   |   |  |   |   |                           |                                  |                           |                 |                    |                 |                           |
|----------------------------------|---|---|--|---|---|---------------------------|----------------------------------|---------------------------|-----------------|--------------------|-----------------|---------------------------|
| Design Firm<br>no. 184001036<br> | USER NAME * *OPERATOR*<br>FILE NAME * XS_SHT.dgn<br>PLOT SCALE * 10.0000 * / in.<br>PLOT DATE * 3/17/2014 | DESIGNED -<br>CHECKED -<br>DRAWN -<br>CHECKED - | REVISED<br>REVISED<br>REVISED<br>REVISED | <b>STATE OF ILLINOIS</b><br><b>DEPARTMENT OF TRANSPORTATION</b> | <b>PROPOSED CROSS SECTIONS - TR 124</b> |                           | TR<br>RTE<br>124                 | SECTION<br>02-05108-00-BR | COUNTY<br>PIATT | TOTAL SHEETS<br>23 | SHEET NO.<br>23 | ILLINOIS FED. AID PROJECT |
|                                  |   |   |  |   | SCALE: 1" = 5'                          | SHEET NO. 10 OF 10 SHEETS | STA. 101+25.00 TO STA. 101+25.00 | CONTRACT NO. 91507        |                 |                    |                 |                           |