

|             |         |          |                    |           |
|-------------|---------|----------|--------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY   | TOTAL SHEETS       | SHEET NO. |
| 132         | 103BR-1 | POPE     | 38                 | 1         |
| D-99-019-10 |         | ILLINOIS | CONTRACT NO. 78164 |           |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**

**PROPOSED**  
**HIGHWAY PLANS**

**FAP ROUTE 132 (IL-145)**  
**SECTION 103BR-1**  
**PROJECT ACBRH-0132(132)**  
**POPE COUNTY**  
**C-99-019-10**  
**PPC DECK BEAM SUPERSTRUCTURE**  
**REPLACEMENT OVER BAY CREEK DITCH**

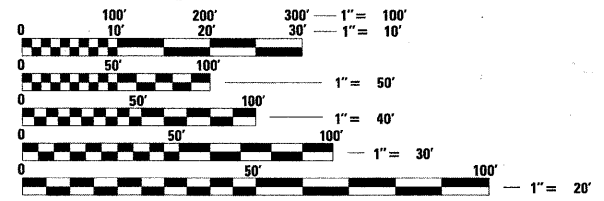
**INDEX OF SHEETS**

| SHEET NO. | DESCRIPTION                    |
|-----------|--------------------------------|
| 1         | COVER SHEET                    |
| 2         | GENERAL NOTES & STANDARDS      |
| 3 - 4     | SUMMARY OF QUANTITIES          |
| 5         | TYPICAL SECTIONS               |
| 6         | SCHEDULES OF QUANTITIES        |
| 7         | ALIGNMENT, TIES, & BENCHMARKS  |
| 8         | REMOVAL PLAN                   |
| 9         | PLAN AND PROFILE SHEET         |
| 10        | TRAFFIC CONTROL AND STAGING    |
| 11        | WIDE LOAD DETOUR SIGNING       |
| 12        | TEMPORARY EROSION CONTROL PLAN |
| 13        | DISTRICT 9 STANDARDS           |
| 14 - 16   | CROSS SECTIONS                 |
| 17 - 38   | BRIDGE PLANS                   |

**FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2**

**UTILITY NOTE**

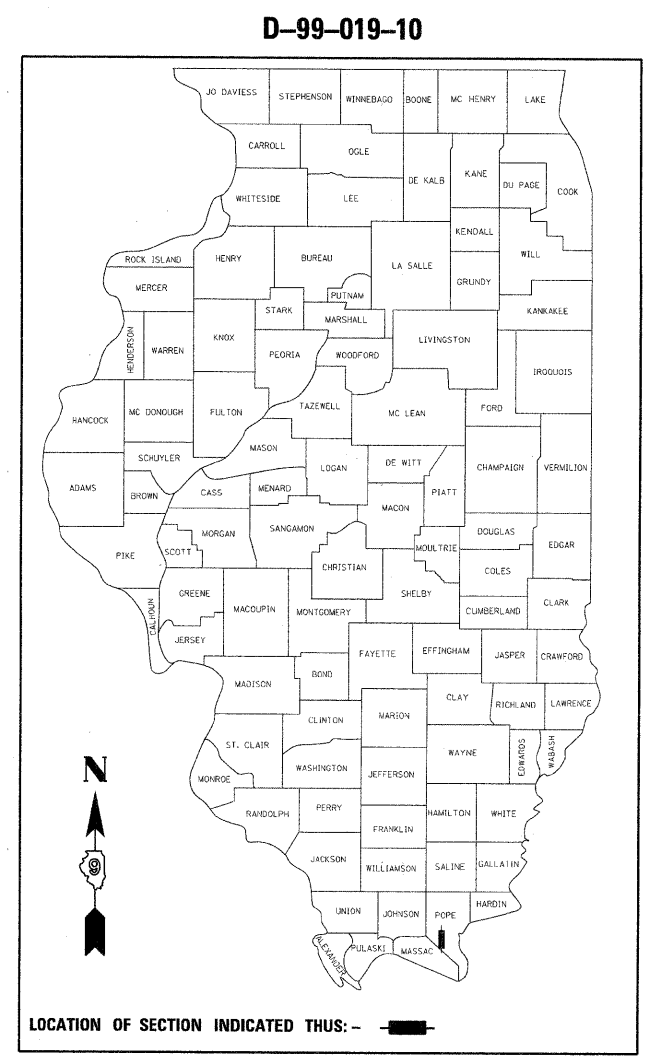
THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, REROUTING, DISCONNECTION, PROTECTION, ETC. OF AN UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR



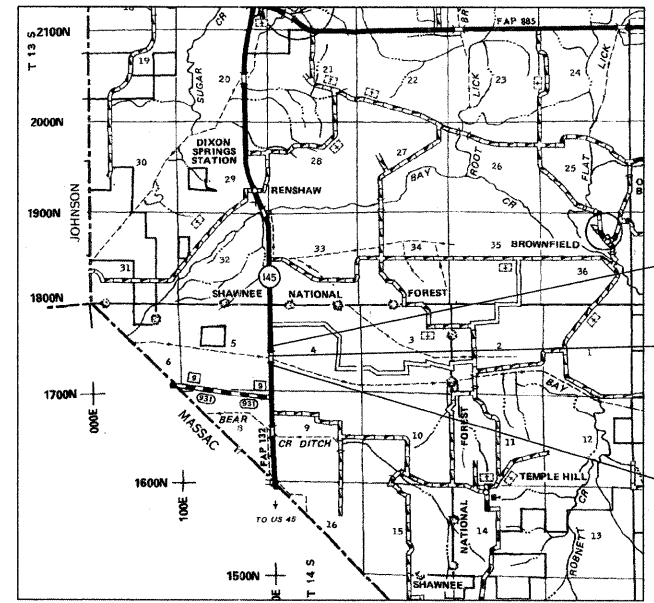
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

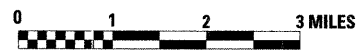
**PROJECT MANAGER - DAVID PICHE (618) 549-2171**  
**CONTRACT NO. 78164**



**FUNCTIONAL CLASSIFICATION**  
**MINOR ARTERIAL (NON-URBAN)**  
**2008 ADT = 2280**  
**P.V. = 90.6% S.U. = 4.0% M.U. = 5.4%**  
**ROAD DISTRICT #1**



**AREA LOCATION PLAN**



GROSS LENGTH = 795.0 FT. = 0.151 MILES  
 NET LENGTH = 795.0 FT. = 0.151 MILES



END IMPROVEMENTS IL-145  
 STA 816+25.00

STRUCTURE #076-0025  
 STA. 813+76.22  
 TO STA. 810+53.67

BEGIN IMPROVEMENTS IL-145  
 STA 808+30.00

SIGNATURE: *J. M. Heyen*  
 DATE SIGNED: 1/7/2011  
 LICENSE EXP.: 1/30/2011

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED August 3 20 11

*Reg Z Ombik*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 14 20 11  
*Scott E. Stitt P.E. Ia*  
 acting ENGINEER OF DESIGN AND ENVIRONMENT

October 14 20 11  
*Christina M. Reed Ia*  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY**  
**OF THE STATE OF ILLINOIS**

**GENERAL NOTES**

- 1 ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE SEEDED AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- 2 ACCESS TO ALL ENTRANCES SHALL BE MAINTAINED AT ALL TIMES.
- 3 IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16, THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT, AS DEFINED IN ARTICLE 101.17, REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 4 THESE PLANS HAVE BEEN PREPARED USING STANDARD SYMBOLS AS INDICATED IN THESE PLANS, AND THEY SHALL TAKE PRECEDENCE OVER THOSE SHOWN ON STANDARD 000001 IF THERE IS A CONFLICT.
- 5 ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- 6 FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF EIGHT SAND BAGS PER BARRICADE.
- 7 THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR BITUMINOUS SURFACE BEFORE TRAFFIC IS ALLOWED ON THE PAVEMENT.
- 8 ELEVATION DATA IS BASED ON NATIONAL GEODETIC VERTICAL DATUM 1988 (NGVD88).
- 9 GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POST, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 10 FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:  
 HOT-MIX ASPHALT - 112 LBS/SQ YD-IN (2.016 TON/CU YD)  
 ALL AGGREGATE - 2.05 TONS/CU YD  
 BITUMINOUS MATERIALS (PRIME COAT):  
 ON PAVEMENT - 0.09 GAL/ SQ YD  
 ON AGGREGATE SURFACE - 0.32 GAL/ SQ YD  
 RIPRAP - 1.5 TONS/CU YD  
 SEEDING FERTILIZER RATIO PERMANENT (NIT:PHOS:POT) - 90:90:90 LBS/AC  
 SEEDING FERTILIZER RATIO WITH CLASS 7 (NIT:PHOS:POT) - 40:0:0 LBS/AC  
 TEMPORARY EROSION CONTROL SEEDING - 100 LBS/AC  
 AGRICULTURAL GROUND LIMESTONE - 2.00 TONS/AC  
 MULCH - 2.00 TONS/AC  
 EARTHWORK SHRINKAGE = 25%  
 TEMPORARY DITCH CHECK LENGTH = 10 FT
- 11 THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.
- 12 AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
- 13 THE LIMITS OF ROCK AND EARTH SLOPES SHOWN IN THE CROSS SECTIONS ARE APPROXIMATE. THE ACTUAL SLOPE USED SHALL BE DETERMINED BY THE MATERIAL CLASSIFICATION AS DEFINED IN ARTICLE 202.04, AND AS DIRECTED BY THE ENGINEER.
- 14 PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

- 15 THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF TRAFFIC OPERATIONS 72 HOURS PRIOR TO THE SHUT-DOWN.
- 16 THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- 17 VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
- 18 THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- 19 ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
- 20 ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED ON IL-34 BETWEEN STATION 808+30 AND STATION 816+25. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR
- 21 COMMITMENTS:  
NONE AS OF AUGUST 26, 2011

**UTILITY NOTES**

- 1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

**UTILITY CONTACT INFORMATION**

|   |   |
|---|---|
| SHAWNEE COMMUNICATIONS-TELE<br>ATTN: JOHN BOURLAND<br>P.O. BOX 69<br>EQUALITY, IL 62934<br>(618) 276-4211 | SOUTHERN ILLINOIS POWER COOPERATIVE<br>ATTN: MATT CRAIN<br>11543 LAKE OF EGYPT ROAD<br>MARION, IL 62959<br>(618) 964-1448 |
|---|---|

SOUTHEASTERN ILLINOIS ELECTRIC COOPERATIVE  
ATTN: ERIC JUNG  
P.O. BOX 371  
ELDORADO, IL 62930  
(618) 273-3597

- 2 ANY DAMAGE TO THE UNDERGROUND FACILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE, INCLUDING TEMPORARY REPAIRS WHICH MAY BE REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS. UTILITY ADJUSTMENTS SHALL BE MADE BY THE UTILITY COMPANIES UNLESS NOTED OTHERWISE.
- 3 THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL OBTAIN EXACT UTILITY LOCATIONS FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION. THE FOLLOWING STANDARD UTILITY DEPTHS WERE USED IF INFORMATION WAS UNAVAILABLE:  
  
 TELEPHONE / FIBER OPTIC - 2 FEET  
 GAS - 2.5 FEET  
 CABLE TV - 1.5 FEET  
 ELECTRIC - 3 FEET  
 SANITARY SEWER - 2.5 FEET  
 WATER - 4 FEET
- 4 ALL ELECTRIC LINES WILL REMAIN ENERGIZED DURING CONSTRUCTION UNLESS OTHERWISE COORDINATED WITH THE UTILITY COMPANY.

**HIGHWAY STANDARDS**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 PAVEMENT JOINTS
- 420401-08 BRIDGE APPROACH PAVEMENT CONNECTOR
- 515001-03 NAME PLATE FOR BRIDGES
- 630001-09 STEEL PLATE BEAM GUARDRAIL
- 630201-06 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631032-06 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 701001-02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
- 701006-03 OFF-RD OPERATIONS, 2L, 2W, 15; TO 24" FROM PAVEMENT EDGE
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701321-11 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
- 701901-01 TRAFFIC CONTROL DEVICES
- 704001-06 TEMPORARY CONCRETE BARRIER
- 720006-02 SIGN PANEL ERECTION DETAILS
- 780001-02 TYPICAL PAVEMENT MARKINGS
- 781001-03 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

PREPARED BY: Joe Blumhagen DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: James Louis Emery DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Cami Nelson DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: Keith Wiley DISTRICT OPERATIONS ENGINEER

EXAMINED BY: K.P. [Signature] DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: Amesio [Signature] DISTRICT MATERIALS ENGINEER

APPROVED BY: Ryan Z. Smith DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

DATE: August 3 2011

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/17/11 |
| DRAWN    | BKC | 2/17/11 |
| REVIEWED | MH  | 2/28/11 |

|   |                            |                 |           |
|---|----------------------------|-----------------|-----------|
| FILE NAME =   | USER NAME = cox01293       | DESIGNED - BKC  | REVISED - |
| ca:\working\cox01293\dms24019\1D978164-sh-gennote.dgn |                            | DRAWN - BKC     | REVISED - |
| MODEL = GENERAL NOTES                                 | PLOT SCALE = 1:80000 / in. | CHECKED - MH    | REVISED - |
|   | PLOT DATE = 06/30/2011     | DATE - 04/29/11 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL-145 OVER BAY CREEK DITCH  
GENERAL NOTES & HIGHWAY STANDARDS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |         |        |                    |           |
|---|---------|--------|--------------------|-----------|
| F.A.P. RTE.                                   | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 132   | 103BR-1 | POPE   | 38                 | 2         |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |        | CONTRACT NO. 78164 |           |

**SUMMARY OF QUANTITIES**

| CODE NO.   | ITEM DESCRIPTION                             | UNIT   | HBP FUNDS               |
|------------|--|--------|-------------------------|
|            |  |        | 80% FED<br>20% STATE    |
|            |  |        | BRIDGE<br>0014<br>RURAL |
|            |  |        |                         |
| 20100500   | TREE REMOVAL, ACRES                          | ACRE   | 0.10                    |
| 20200100   | EARTH EXCAVATION                             | CU YD  | 40                      |
| 20400800   | FURNISHED EXCAVATION                         | CU YD  | 795                     |
| * 25000200 | SEEDING, CLASS 2                             | ACRE   | 0.50                    |
| * 25000350 | SEEDING, CLASS 7                             | ACRE   | 0.50                    |
| * 25000400 | NITROGEN FERTILIZER NUTRIENT                 | POUND  | 66                      |
| * 25000500 | PHOSPHORUS FERTILIZER NUTRIENT               | POUND  | 46                      |
| * 25000600 | POTASSIUM FERTILIZER NUTRIENT                | POUND  | 46                      |
| * 25000700 | AGRICULTURAL GROUND LIMESTONE                | TON    | 1.0                     |
| * 25100115 | MULCH, METHOD 2                              | ACRE   | 1.00                    |
| 25100630   | EROSION CONTROL BLANKET                      | SQ YD  | 2682                    |
| 28000250   | TEMPORARY EROSION CONTROL SEEDING            | POUND  | 50                      |
| 28000400   | PERIMETER EROSION BARRIER                    | FOOT   | 1612                    |
| 35600716   | HOT-MIX ASPHALT BASE COURSE WIDENING, 10"    | SQ YD  | 270                     |
| 40600100   | BITUMINOUS MATERIALS (PRIME COAT)            | GALLON | 342                     |
| 40600645   | LEVELING BINDER (MACHINE METHOD), N90        | TON    | 18                      |
| 40600982   | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | SQ YD  | 174                     |
| 40600990   | TEMPORARY RAMP                               | SQ YD  | 28                      |
| 40603090   | HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90  | TON    | 167                     |
| 40603320   | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90 | TON    | 126                     |
| 42001420   | BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)     | SQ YD  | 42                      |
| 44000100   | PAVEMENT REMOVAL                             | SQ YD  | 62                      |
| 44004250   | PAVED SHOULDER REMOVAL                       | SQ YD  | 270                     |
| 48100700   | AGGREGATE SHOULDERS, TYPE A 8"               | SQ YD  | 64                      |
| 48203029   | HOT-MIX ASPHALT SHOULDERS, 8"                | SQ YD  | 433                     |
| 48203037   | HOT-MIX ASPHALT SHOULDERS, 10"               | SQ YD  | 266                     |
| 50101500   | REMOVAL OF EXISTING SUPERSTRUCTURES          | EACH   | 1                       |
| 50102400   | CONCRETE REMOVAL                             | CU YD  | 5.3                     |
| 50300225   | CONCRETE STRUCTURES                          | CU YD  | 29.5                    |
| 50300255   | CONCRETE SUPERSTRUCTURE                      | CU YD  | 103.4                   |
| 50300260   | BRIDGE DECK GROOVING                         | SQ YD  | 1143                    |

| CODE NO.   | ITEM DESCRIPTION                                    | UNIT   | HBP FUNDS               |
|------------|---|--------|-------------------------|
|            |   |        | 80% FED<br>20% STATE    |
|            |   |        | BRIDGE<br>0014<br>RURAL |
|            |   |        |                         |
| 50300300   | PROTECTIVE COAT                                     | SQ YD  | 1221                    |
| 50400405   | PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH) | SQ FT  | 8836                    |
| 50800205   | REINFORCEMENT BARS, EPOXY COATED                    | POUND  | 39800                   |
| 50800515   | BAR SPLICERS  | EACH   | 494                     |
| * 50901050 | STEEL RAILING, TYPE SM                              | FOOT   | 585                     |
| 51500100   | NAME PLATES   | EACH   | 1                       |
| 52000110   | PREFORMED JOINT STRIP SEAL                          | FOOT   | 76                      |
| * 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS    | FOOT   | 450                     |
| * 63100087 | TRAFFIC BARRIER TERMINAL, TYPE 6A                   | EACH   | 4                       |
| * 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT  | EACH   | 4                       |
| 63200310   | GUARDRAIL REMOVAL                                   | FOOT   | 483                     |
| 67000400   | ENGINEER'S FIELD OFFICE, TYPE A                     | CAL MO | 6                       |
| 67100100   | MOBILIZATION  | L SUM  | 1                       |
| 70100405   | TRAFFIC CONTROL AND PROTECTION, STANDARD 701321     | EACH   | 1                       |
| 70100450   | TRAFFIC CONTROL AND PROTECTION, STANDARD 701201     | L SUM  | 1                       |
| 70100500   | TRAFFIC CONTROL AND PROTECTION, STANDARD 701326     | L SUM  | 1                       |
| 70103815   | TRAFFIC CONTROL SURVEILLANCE                        | CAL DA | 4                       |
| 70106500   | TEMPORARY BRIDGE TRAFFIC SIGNALS                    | EACH   | 1                       |
| 70106800   | CHANGEABLE MESSAGE SIGN                             | CAL MO | 12                      |
| 70300100   | SHORT-TERM PAVEMENT MARKING                         | FOOT   | 114                     |
| 70300220   | TEMPORARY PAVEMENT MARKING - LINE 4"                | FOOT   | 2524                    |
| 70301000   | WORK ZONE PAVEMENT MARKING REMOVAL                  | SQ FT  | 880                     |
| 70400100   | TEMPORARY CONCRETE BARRIER                          | FOOT   | 550                     |
| 70400200   | RELOCATE TEMPORARY CONCRETE BARRIER                 | FOOT   | 550                     |
| 72400500   | RELOCATE SIGN PANEL ASSEMBLY - TYPE A               | EACH   | 1                       |
| * 78001110 | PAINT PAVEMENT MARKING - LINE 4"                    | FOOT   | 2524                    |
| * 78100100 | RAISED REFLECTIVE PAVEMENT MARKER                   | EACH   | 7                       |
| * 78100105 | RAISED REFLECTIVE PAVEMENT MARKER(BRIDGE)           | EACH   | 4                       |
| * 78200410 | GUARDRAIL MARKERS, TYPE A                           | EACH   | 20                      |
| * 78201000 | TERMINAL MARKER - DIRECT APPLIED                    | EACH   | 4                       |
| 78300100   | PAVEMENT MARKING REMOVAL                            | SQ FT  | 841                     |

\*SPECIALTY ITEM



|          |          |         |  |
|----------|----------|---------|--|
| DESIGNED | BKC      | REVISED |  |
| DRAWN    | BKC      | REVISED |  |
| CHECKED  | MH       | REVISED |  |
| DATE     | 04/29/11 | REVISED |  |

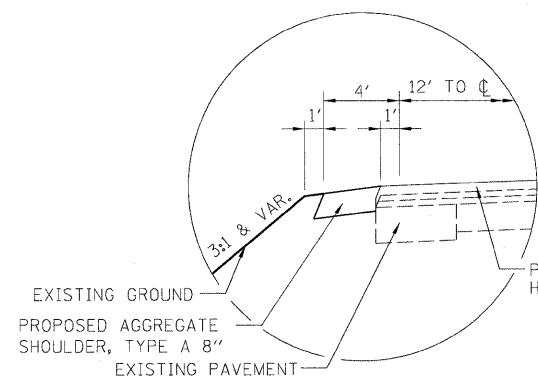
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL-145 (OVER BAY CREEK DITCH)  
SUMMARY OF QUANTITIES

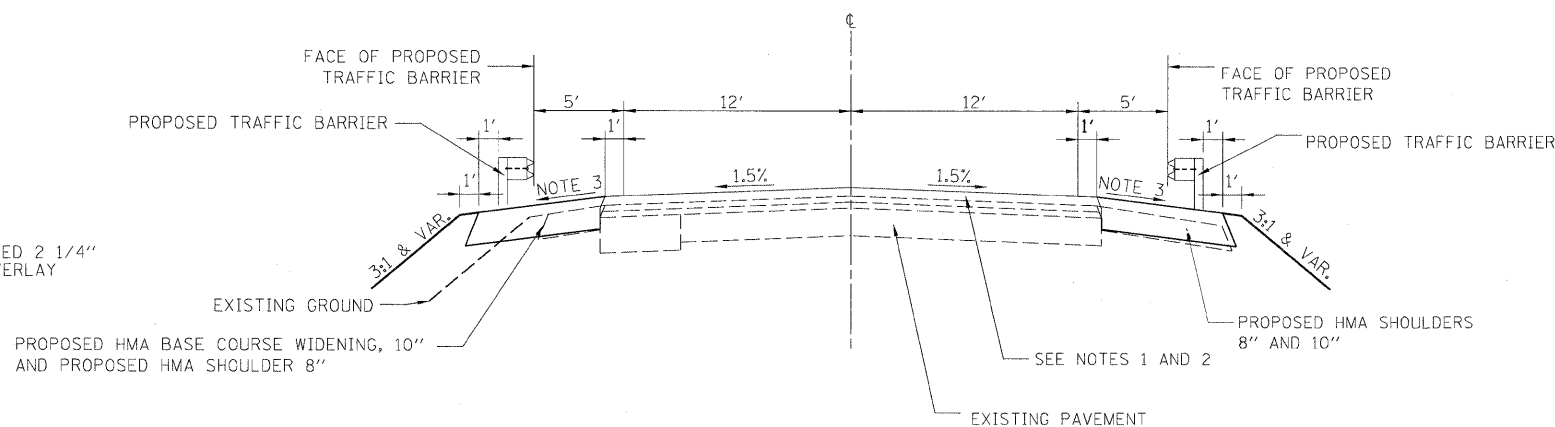
SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |         |        |                    |           |
|---|---------|--------|--------------------|-----------|
| F.A.P. RTE.                                   | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
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| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |        | CONTRACT NO. 78164 |           |



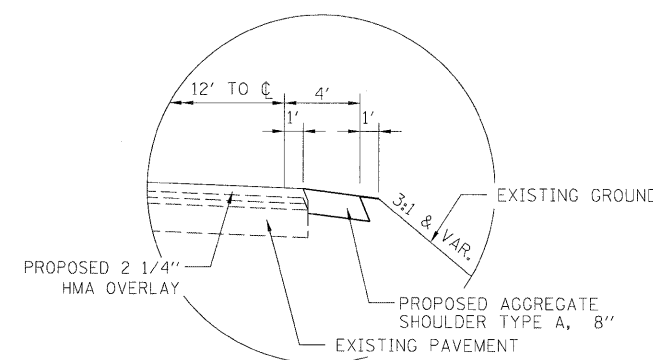


PROPOSED AGGREGATE SHOULDER DETAIL  
 LT STA. 808+00.00 TO LT STA. 808+77.82  
 LT STA. 816+43.30 TO LT STA. 816+55.00



**PROPOSED IL-145  
 TYPICAL SECTION**

STA. 808+30.00 TO STA. 810+47.67  
 STA. 810+47.67 TO STA. 810+53.67 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)  
 STA. 810+53.67 TO STA. 813+76.22 - BRIDGE OMISSION  
 STA. 813+76.22 TO STA. 813+82.22 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)  
 STA. 813+82.22 TO STA. 816+25.00



PROPOSED AGGREGATE SHOULDER DETAIL  
 RT STA. 815+52.09 TO RT STA. 816+55.00

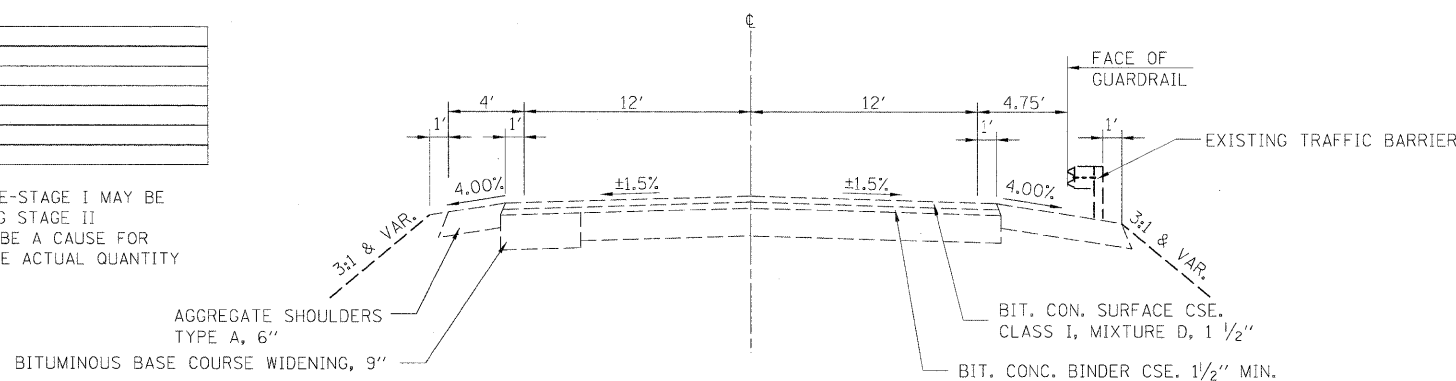
**MIXTURE TABLE**

|  |  |
|--|--|
| LOCATION(S):                             | HOT-MIX ASPHALT SURFACE COURSE AND LEVELING BINDER |
| MIXTURE USE(S):                          | HOT-MIX ASPHALT SURFACE COURSE, MX C, N90          |
| AC/PG:                                   | PG64-22  |
| RAP % (MAX.)                             | 10   |
| DESIGN AIR VOIDS:                        | 4.0%, 90 GYRATION DESIGN                           |
| MIXTURE COMPOSITION: (GRADATION MIXTURE) | IL-9.5 MM OR IL 12.5 MM                            |
| FRICTION AGGREGATE                       | C SURFACE  |

|  |   |
|--|---|
| LOCATION(S):                             | HOT-MIX ASPHALT & BASE COURSE WIDENING - MAINLINE |
| MIXTURE USE(S):                          | HOT-MIX ASPHALT BINDER COURSE, N90, IL-19.0       |
| AC/PG:                                   | PG64-22   |
| RAP % (MAX.)                             | 10  |
| DESIGN AIR VOIDS:                        | 4.0%, 90 GYRATION DESIGN                          |
| MIXTURE COMPOSITION: (GRADATION MIXTURE) | IL-19.0 MM  |
| FRICTION AGGREGATE                       | NONE  |

|  |                           |
|--|---------------------------|
| LOCATION(S):                             | HOT-MIX ASPHALT SHOULDERS |
| MIXTURE USE(S):                          | HOT-MIX ASPHALT SHOULDERS |
| AC/PG:                                   | PG58-22                   |
| RAP % (MAX.)                             | 50                        |
| DESIGN AIR VOIDS:                        | 2.0%, 30 GYRATION DESIGN  |
| MIXTURE COMPOSITION: (GRADATION MIXTURE) | HMA SHOULDERS             |
| FRICTION AGGREGATE                       | NONE                      |

THE HOT MIX ASPHALT BASE COURSE WIDENING, 10" CONSTRUCTED IN PRE-STAGE I MAY BE INCORPORATED INTO THE FINAL HOT MIX ASPHALT SHOULDERS, 8" DURING STAGE II CONSTRUCTION IF APPROVED BY THE ENGINEER. SUCH CHANGE WILL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION, BUT THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.



**EXISTING TYPICAL SECTION**

**NOTE 1**

STA. 808+00.00 TO STA. 810+47.67  
 PROPOSED HMA SURFACE COURSE, MIX "C", N90 - 1 1/2"  
 STA. 808+30.00 TO STA. 809+00.00  
 PROPOSED LEVELING BINDER (MACHINE METHOD) N90 - 3/4"  
 STA. 809+00.00 TO STA. 810+47.67  
 PROPOSED HMA BINDER COURSE, IL-19.0, N90 - VARIABLE DEPTH

**NOTE 2**

STA. 813+82.22 TO STA. 816+55.00  
 PROPOSED HMA SURFACE COURSE, MIX "C", N90 - 1 1/2"  
 STA. 813+82.22 TO STA. 815+39.35  
 PROPOSED HMA BINDER COURSE, IL-19.0, N90 - VARIABLE DEPTH  
 STA. 815+39.35 TO STA. 816+25.00  
 PROPOSED LEVELING BINDER (MACHINE METHOD) N90 - 3/4"

**NOTE 3**

ROTATE SHOULDERS TO MATCH PCC CONNECTOR OVER 25.00'  
 STA. 810+22.67 TO STA. 810+47.67 - TRANSITION PAVED SHOULDER FROM 4.0% CROSS SLOPE TO 1.5% CROSS SLOPE  
 STA. 813+82.22 TO STA. 814+07.22 - TRANSITION PAVED SHOULDER FROM 1.5% CROSS SLOPE TO 4.0% CROSS SLOPE

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/23/11 |

|   |                            |                 |           |
|---|----------------------------|-----------------|-----------|
| FILE NAME =                               | USER NAME = eo01283        | DESIGNED - BKC  | REVISED - |
| ca:\working\cox\01283\dms24819\0978164-sh | typ.dgn                    | DRAWN - BKC     | REVISED - |
| MODEL = Typical Section                   | PLOT SCALE = 5,0000' / in. | CHECKED - MH    | REVISED - |
|   | PLOT DATE = 06\30\2011     | DATE - 04/29/11 | REVISED - |

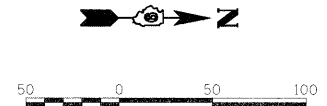
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS (IL - 145 OVER BAY CREEK DITCH)**

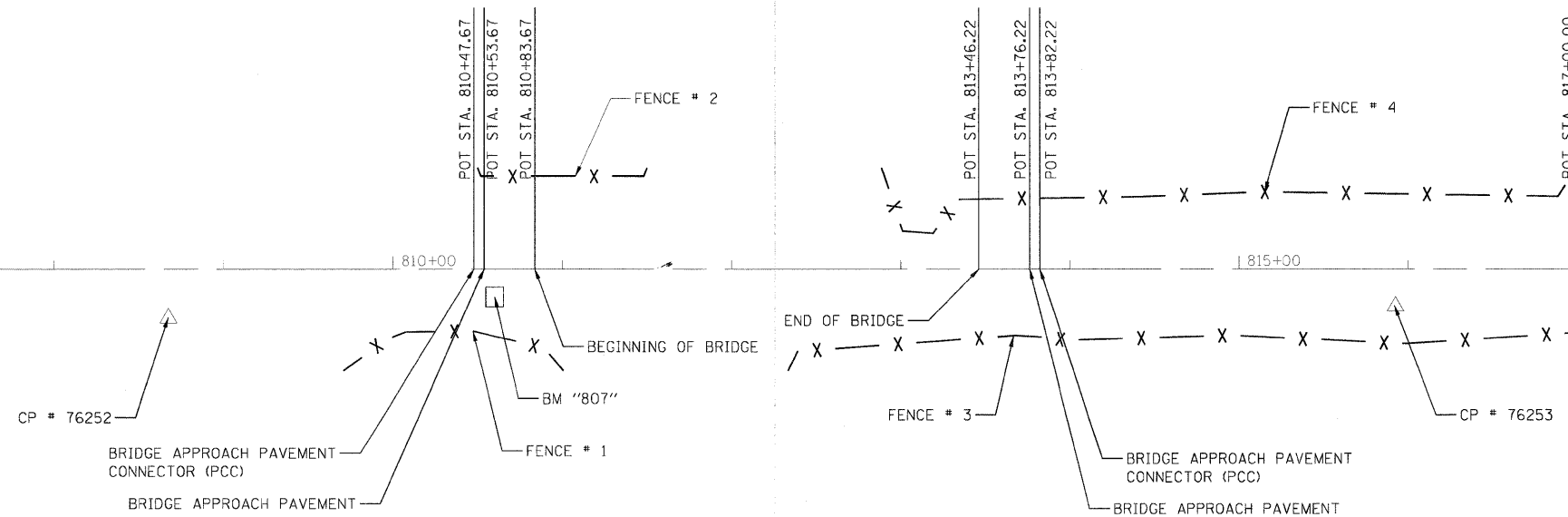
SCALE: SHEET NO. 1 OF 1 SHEETS STA. 808+00.00 TO STA. 816+55.00

|   |         |        |              |           |
|---|---------|--------|--------------|-----------|
| F.A.P. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 132   | 103BR-1 | POPE   | 38           | 5         |
| CONTRACT NO. 78164                              |         |        |              |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |         |        |              |           |





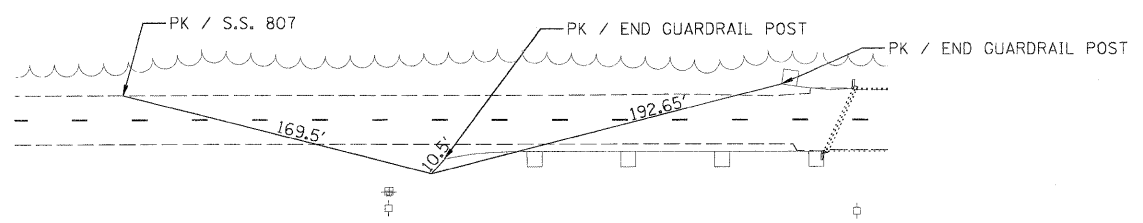
| ALIGNMENT COORDINATES - IL-145 |           |             |             |
|--------------------------------|-----------|-------------|-------------|
| IL-145                         | STATION   | NORTHING    | EASTING     |
| POT                            | 807+00.00 | 240539.7804 | 884989.8357 |
| POT                            | 810+48.62 | 240888.3976 | 884988.4342 |
| POT                            | 810+54.62 | 240894.3976 | 884988.4101 |
| POT                            | 810+84.62 | 240924.3973 | 884988.2895 |
| POT                            | 813+45.27 | 241185.0452 | 884987.2417 |
| POT                            | 813+75.27 | 241215.045  | 884987.1211 |
| POT                            | 813+81.27 | 241221.0449 | 884987.0969 |
| POT                            | 817+00.00 | 241539.7723 | 884985.8156 |



**BENCHMARK "807"**

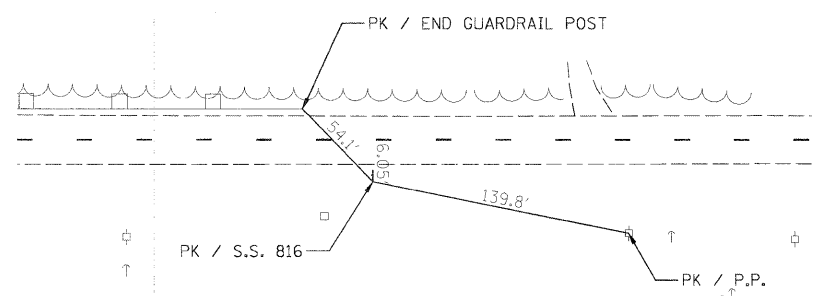
ELEV. 350.44  
 APPROX. 360' NORTH OF STATION STAMP 807+00.00  
 AND 17' EAST OF C OF ROUTE 145, A CUT "□" ON  
 SOUTHEAST WINGWALL OF STRUCTURE NO. 076-0025

| TEMPORARY FENCE COORDINATES - IL-145 |           |           |           |           |
|--------------------------------------|-----------|-----------|-----------|-----------|
| FENCE #                              | STATION   | OFFSET    | NORTHING  | EASTING   |
| 1                                    | 809+71.00 | 60.00' RT | 240811.02 | 885048.75 |
| 1                                    | 809+94.69 | 42.26' RT | 240834.64 | 885030.91 |
| 1                                    | 810+07.30 | 37.26' RT | 240847.22 | 885025.86 |
| 1                                    | 810+47.18 | 36.77' RT | 240887.11 | 885025.21 |
| 1                                    | 810+89.36 | 46.81' RT | 240929.33 | 885035.08 |
| 1                                    | 811+00.61 | 60.00' RT | 240940.62 | 885048.22 |
| 2                                    | 810+50.00 | 60.00' LT | 240889.54 | 884928.43 |
| 2                                    | 810+51.82 | 55.00' LT | 240891.38 | 885933.42 |
| 2                                    | 811+48.18 | 55.00' LT | 240987.74 | 884933.03 |
| 2                                    | 811+50.00 | 60.00' LT | 240989.54 | 884928.03 |
| 3                                    | 812+33.58 | 60.00' RT | 241073.60 | 885047.69 |
| 3                                    | 812+39.28 | 48.68' RT | 241079.25 | 885036.35 |
| 3                                    | 813+68.03 | 39.38' RT | 240207.97 | 885026.53 |
| 3                                    | 813+87.90 | 40.67' RT | 241227.84 | 885027.74 |
| 3                                    | 813+98.23 | 42.23' RT | 241238.18 | 885029.26 |
| 3                                    | 814+94.76 | 39.29' RT | 241334.69 | 885025.93 |
| 3                                    | 815+98.88 | 44.24' RT | 241438.83 | 885030.46 |
| 3                                    | 817+22.52 | 36.30' RT | 241562.44 | 885022.03 |
| 4                                    | 817+37.49 | 60.00' RT | 241577.50 | 885045.66 |
| 4                                    | 812+88.87 | 60.00' LT | 241128.40 | 884927.47 |
| 4                                    | 813+01.27 | 22.52' LT | 241140.96 | 884964.90 |
| 4                                    | 813+19.16 | 21.19' LT | 241158.85 | 884966.16 |
| 4                                    | 813+33.68 | 41.22' LT | 241173.29 | 884946.07 |
| 4                                    | 814+44.47 | 82.97' LT | 241284.07 | 884943.88 |
| 4                                    | 815+15.36 | 45.68' LT | 241354.95 | 884940.88 |
| 4                                    | 816+26.74 | 43.93' LT | 241466.34 | 884942.18 |
| 4                                    | 816+88.58 | 42.96' LT | 241528.18 | 884942.90 |
| 4                                    | 81700.13  | 60.00' LT | 241539.66 | 884925.82 |



**CONTROL POINT 76252**

IRON PIN WITH CAP  
 STA. 808+66.27 18.76' RT  
 N 240706.1273  
 E 885007.9269  
 ELEV. 351.00



**CONTROL POINT 76253**

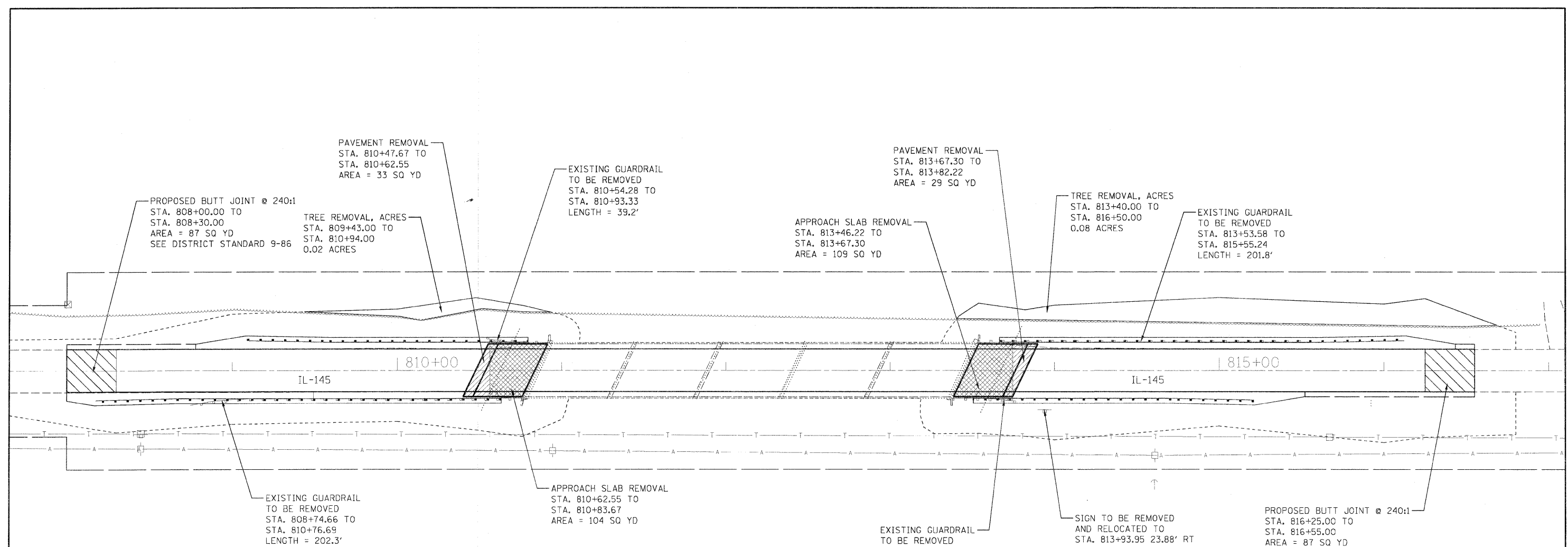
IRON PIN WITH CAP  
 STA. 815+92.16 17.36' RT  
 N 241432.0073  
 E 885003.6125  
 ELEV. 349.07

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|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/28/11 |

|  |                             |                 |           |   |  |                    |                     |                                  |   |             |  |  |
|--|-----------------------------|-----------------|-----------|---|--|--------------------|---------------------|----------------------------------|---|-------------|--|--|
| FILE NAME =                                      | USER NAME = cov01283        | DESIGNED - BKC  | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>IL-145 (OVER BAY CREEK DITCH)<br/>ALIGNMENT, TIES, &amp; BENCHMARKS</b> | F.A.P. RTE. 132    | SECTION 103BR-1     | COUNTY POPE                      | TOTAL SHEETS 38                               | SHEET NO. 7 |  |  |
| es:\working\cov01283\dms24019\0978164-sh-ATB.dgn | PLOT SCALE = 49.9999' / in. | DRAWN - BKC     | REVISED - |   |  | SCALE:             | SHEET NO. OF SHEETS | STA. 808+00.00 TO STA. 816+55.00 | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |             |  |  |
| MODEL = 100 scale                                | PLOT DATE = 07/22/2011      | CHECKED - MH    | REVISED - |   |  | CONTRACT NO. 78164 |                     |                                  |   |             |  |  |
|  |                             | DATE - 04/29/11 | REVISED - |   |  |                    |                     |                                  |   |             |  |  |

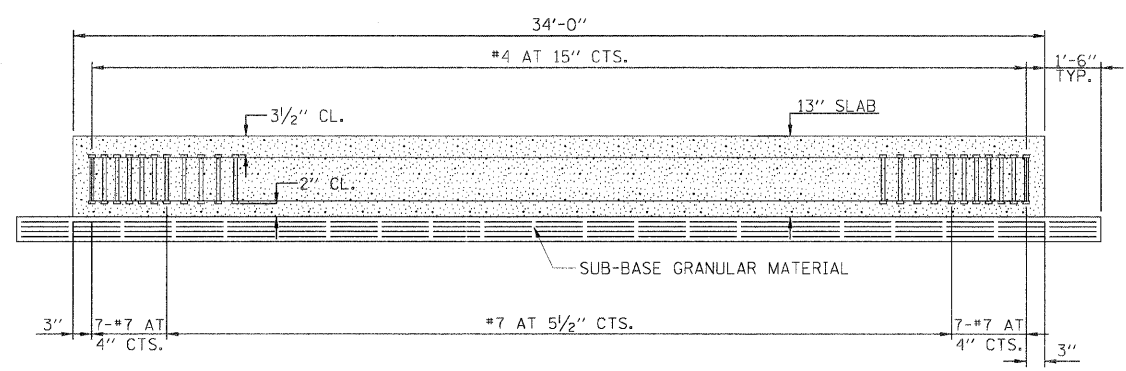
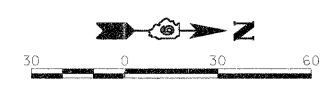


**LEGEND**

APPROACH SLAB REMOVAL

PAVEMENT REMOVAL

**REMOVAL PLAN**



**SECTIONAL VIEW OF EXISTING APPROACH SLAB**

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/28/11 |

|   |                             |                 |           |   |   |                    |           |        |              |                                  |                     |
|---|-----------------------------|-----------------|-----------|---|---|--------------------|-----------|--------|--------------|----------------------------------|---------------------|
| FILE NAME =                               | USER NAME = co-81283        | DESIGNED - BKC  | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>IL-145 (OVER BAY CREEK DITCH) REMOVAL PLAN</b> | F.A.P. RTE.        | SECTION   | COUNTY | TOTAL SHEETS | SHEET NO.                        |                     |
| ei:\working\co-81283\dms24019\d978164-sh- | r-em.dgn                    | DRAWN - BKC     | REVISED - |   |   | 132                | 103BR-1   | POPE   | 38           | 8                                |                     |
| MODEL = 30 scale                          | PLOT SCALE = 29.9999' / in. | CHECKED - MH    | REVISED - |   |   | CONTRACT NO. 78164 |           |        |              |                                  |                     |
|   | PLOT DATE = 07/22/2011      | DATE - 04/29/11 | REVISED - |   |   | SCALE:             | SHEET NO. | OF     | SHEETS       | STA. 808+00.00 TO STA. 816+55.00 | FED. ROAD DIST. NO. |

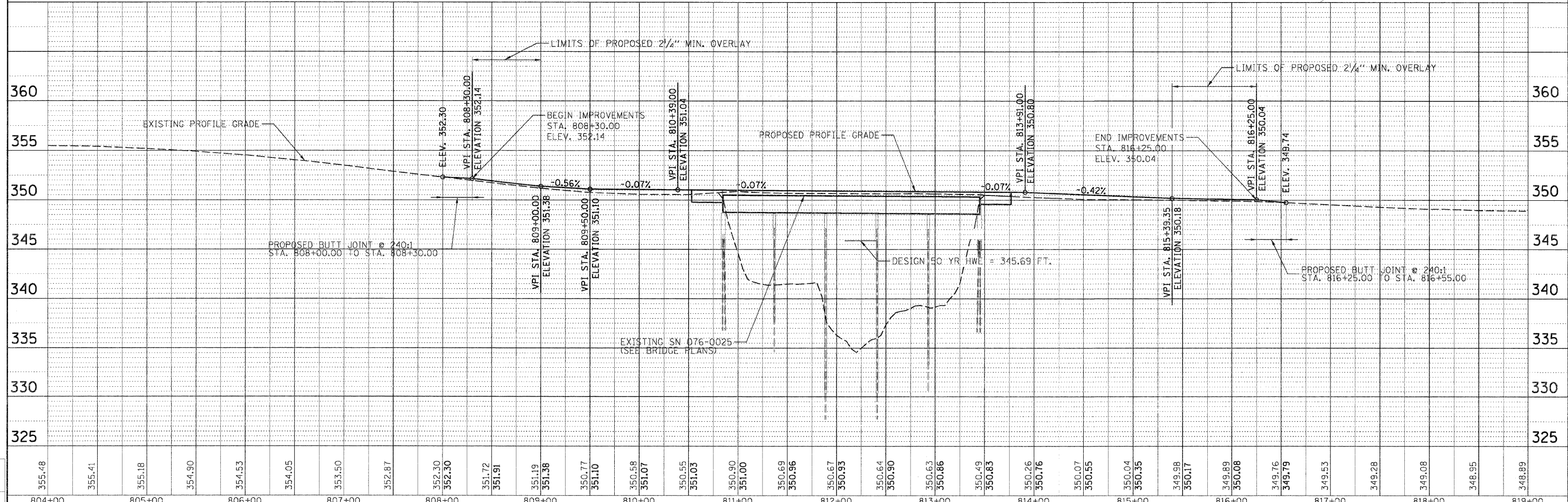
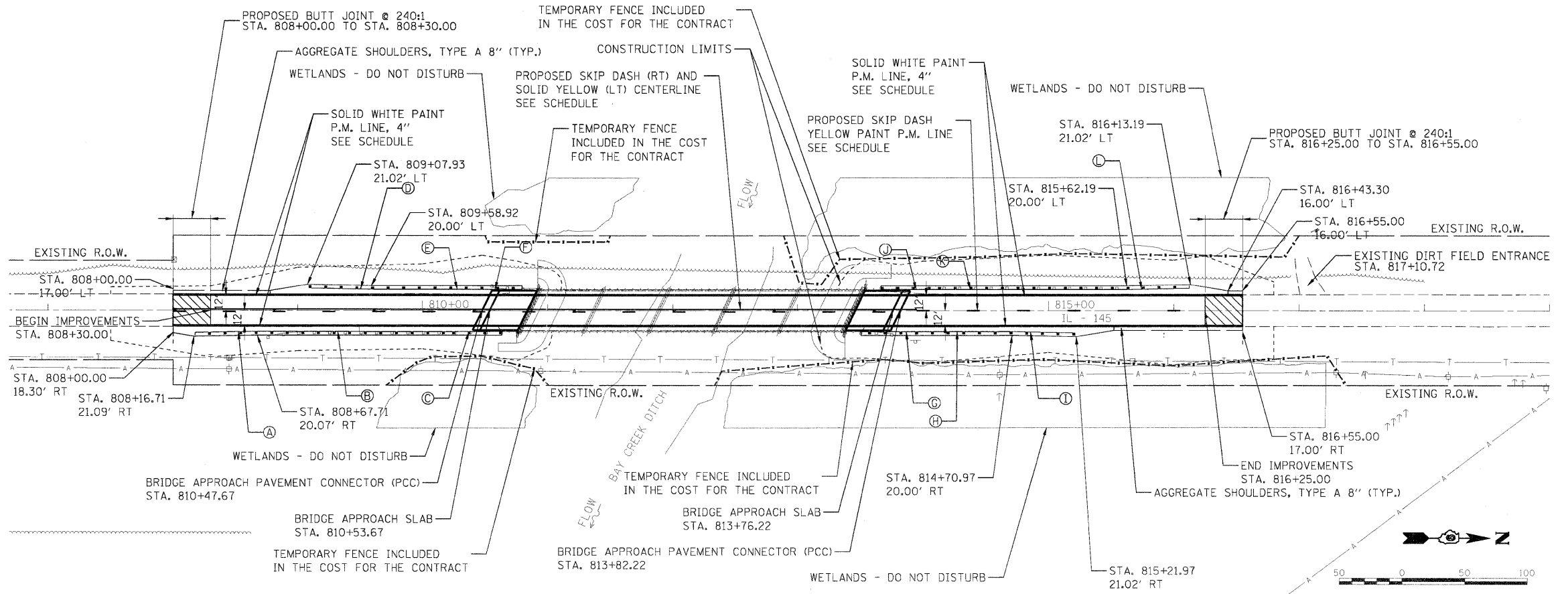


|          |  |
|----------|--|
| DATE     |  |
| BY       |  |
| PLAN     |  |
| NO.      |  |
| REVISION |  |
| DATE     |  |
| BY       |  |
| NO.      |  |
| REVISION |  |
| DATE     |  |
| BY       |  |
| NO.      |  |
| REVISION |  |



|          |  |
|----------|--|
| DATE     |  |
| BY       |  |
| PROFILE  |  |
| NO.      |  |
| REVISION |  |
| DATE     |  |
| BY       |  |
| NO.      |  |
| REVISION |  |

- Ⓐ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 808+17.65 TO STA. 808+67.65
- Ⓑ PROPOSED SPBG, LENGTH = 150.0' STA. 808+67.65 TO STA. 810+17.65
- Ⓒ PROPOSED T.B.T., TYPE 6A STA. 810+17.65 TO STA. 810+63.27
- Ⓓ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 809+08.87 TO STA. 809+58.86
- Ⓔ PROPOSED SPBG, LENGTH = 75.0' STA. 809+58.86 TO STA. 810+33.86
- Ⓕ PROPOSED T.B.T., TYPE 6A STA. 810+33.86 TO STA. 810+79.49
- Ⓖ PROPOSED T.B.T., TYPE 6A STA. 813+50.41 TO STA. 813+96.03
- Ⓗ PROPOSED SPBG, LENGTH = 75.0' STA. 813+96.03 TO STA. 814+71.03
- Ⓘ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 814+71.03 TO STA. 815+21.03
- Ⓝ PROPOSED T.B.T., TYPE 6A STA. 813+66.62 TO STA. 814+12.25
- Ⓚ PROPOSED SPBG, LENGTH = 150.0' STA. 814+12.25 TO STA. 815+62.25
- Ⓛ PROPOSED T.B.T., TYPE 1 (SPECIAL) TANGENT STA. 815+62.25 TO STA. 816+12.25



|        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 804+00 | 805+00 | 806+00 | 807+00 | 808+00 | 809+00 | 810+00 | 811+00 | 812+00 | 813+00 | 814+00 | 815+00 | 816+00 | 817+00 | 818+00 | 819+00 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 355.48 | 355.41 | 355.18 | 354.90 | 354.53 | 354.05 | 353.50 | 352.87 | 352.30 | 352.30 | 351.72 | 351.91 | 351.19 | 351.38 | 350.77 | 351.10 | 350.58 | 351.07 | 350.55 | 351.03 | 350.90 | 351.00 | 350.69 | 350.96 | 350.67 | 350.93 | 350.64 | 350.90 | 350.63 | 350.86 | 350.49 | 350.83 | 350.26 | 350.76 | 350.07 | 350.55 | 350.04 | 350.35 | 349.98 | 350.17 | 349.89 | 350.08 | 349.76 | 349.79 | 349.53 | 349.28 | 349.08 | 348.95 | 348.89 |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PLAN AND PROFILE (IL - 145 OVER BAY CREEK DITCH)**

FILE NAME =  
c:\work\mg\cox\1283\dms24819\078.64-sh1\Inp\F.dgn

USER NAME = cox01283  
DRAWN - BKC  
CHECKED - MH  
DATE - 04/29/11

DESIGNED - BKC  
DRAWN - BKC  
CHECKED - MH  
DATE - 04/29/11

REVISED -  
REVISED -  
REVISED -  
REVISED -

SCALE: 1:50  
SHEET NO. 1 OF 1 SHEETS  
STA. 808+00.00 TO STA. 816+55.00

F.A.P. RTE. 132  
SECTION 103BR-1  
COUNTY POPE  
TOTAL SHEETS 38  
SHEET NO. 9  
CONTRACT NO. 78164  
ILLINOIS FED. AID PROJECT

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/28/11 |

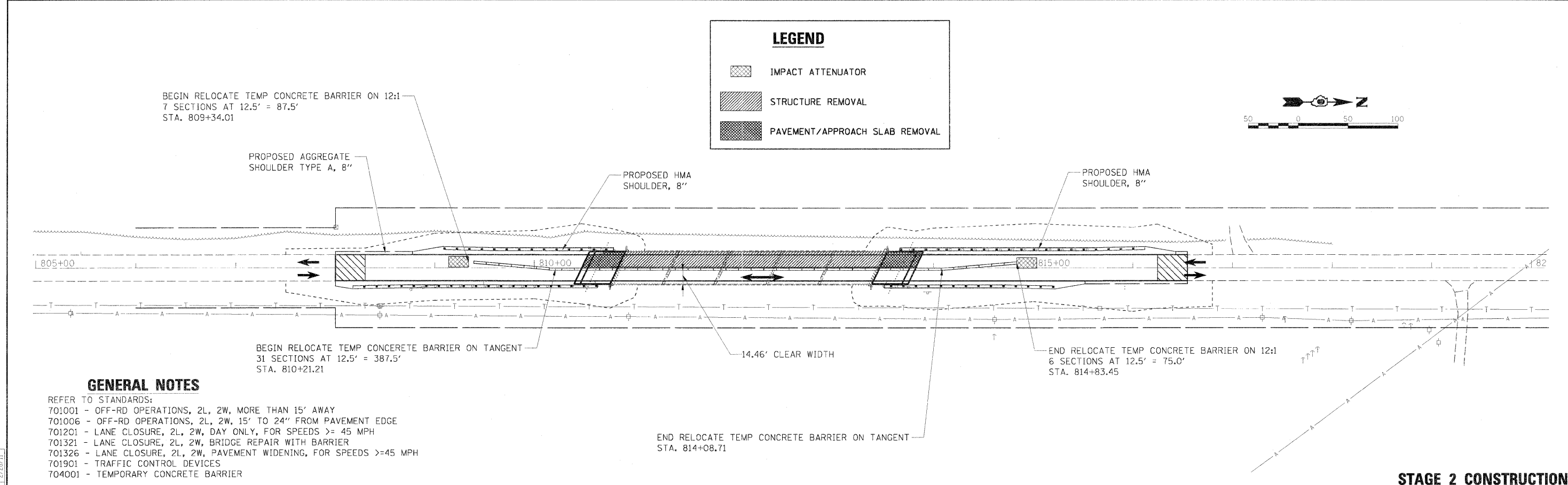
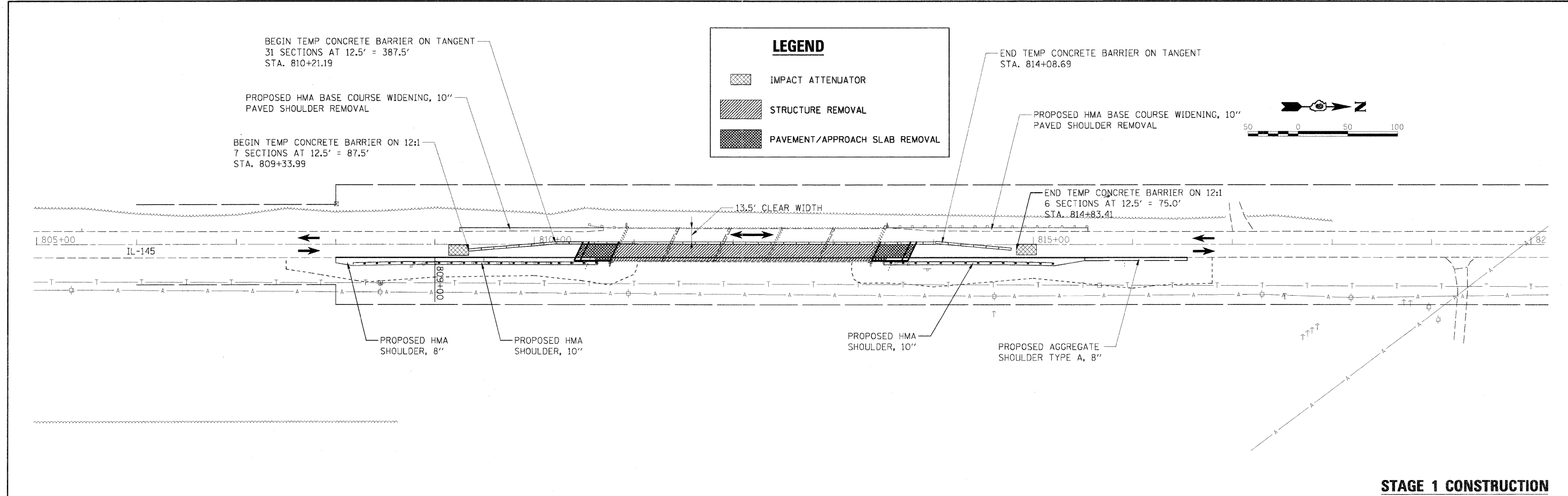
|                                   |                                   |
|-----------------------------------|-----------------------------------|
| FILE NAME =                       | USER NAME = cox81283              |
| MODEL = BRIDGE STAGE CONSTRUCTION | PLOT SCALE = 49.9999' / 1" = 100' |
|                                   | PLOT DATE = 07/22/2011            |

|                 |           |
|-----------------|-----------|
| DESIGNED - BKC  | REVISOR - |
| DRAWN - BKC     | REVISOR - |
| CHECKED - MH    | REVISOR - |
| DATE - 04/29/11 | REVISOR - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

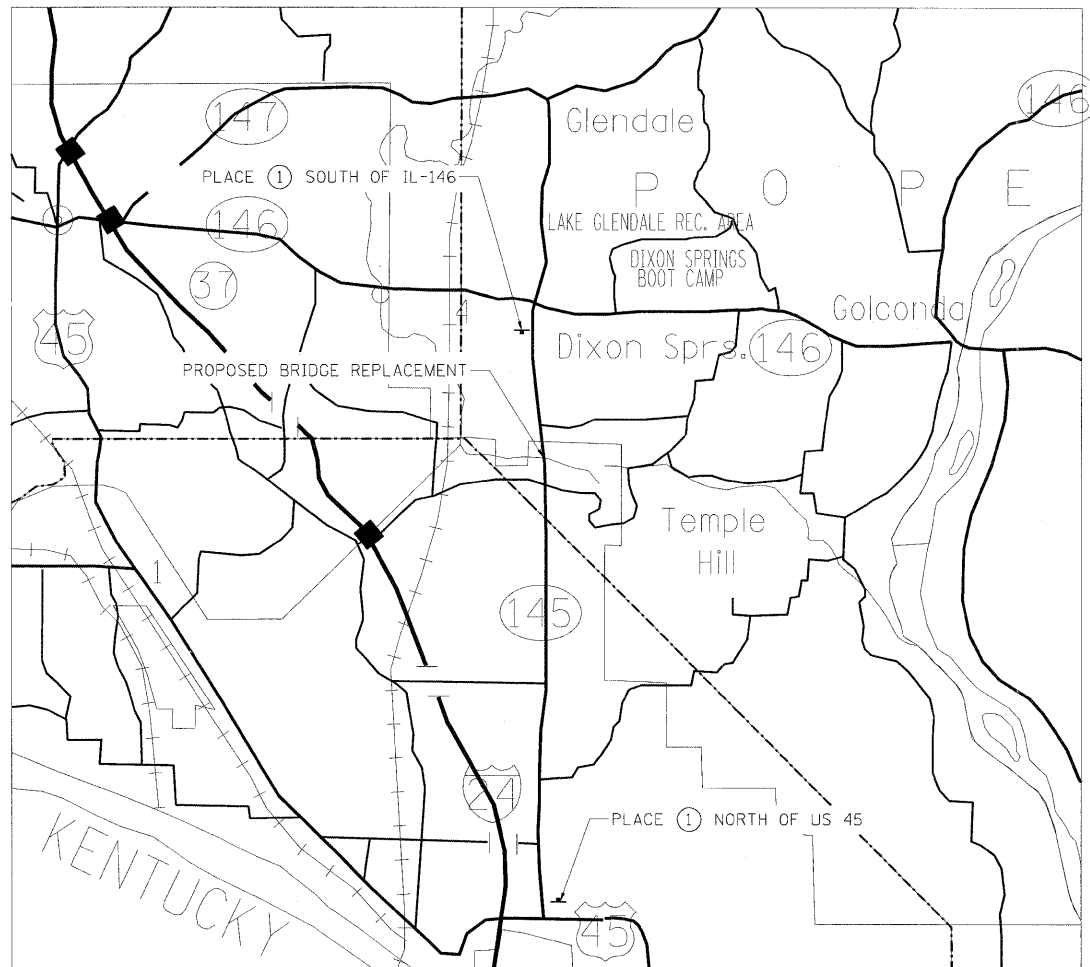
|   |  |
|---|--|
| <b>IL-145 (OVER BAY CREEK DITCH)<br/> TRAFFIC CONTROL &amp; STAGING</b> |  |
| SCALE:  | SHEET NO. OF SHEETS STA. 808+00.00 TO STA. 816+55.00 |

|                              |                 |                  |                 |              |
|------------------------------|-----------------|------------------|-----------------|--------------|
| F.A.P. RTE. 132              | SECTION 103BR-1 | COUNTY POPE      | TOTAL SHEETS 38 | SHEET NO. 10 |
| FED. ROAD DIST. NO. ILLINOIS |                 | FED. AID PROJECT |                 |              |
| CONTRACT NO. 78164           |                 |                  |                 |              |



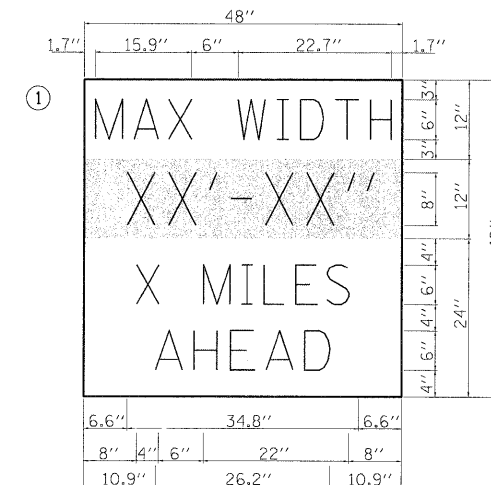
**GENERAL NOTES**

- REFER TO STANDARDS:
- 701001 - OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
  - 701006 - OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
  - 701201 - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
  - 701321 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
  - 701326 - LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
  - 701901 - TRAFFIC CONTROL DEVICES
  - 704001 - TEMPORARY CONCRETE BARRIER



**DETOUR SIGNING PLAN**

**SIGN LEGEND**



**W12-1103**

W12-1103 (WIDTH IS 8D):  
 NO BORDER, BLACK ON WHITE;  
 "MAX WIDTH" D;  
 NO BORDER, BLACK ON ORANGE;  
 "XX'-XX'" D;  
 NO BORDER, BLACK ON WHITE;  
 "X MILES" D; "AHEAD" D

**DETOUR NOTES:**

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS AS DIRECTED BY THE ENGINEER, ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 12'-0" FOR STAGE I AND 12'-11.5" FOR STAGE II OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.



|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/28/11 |

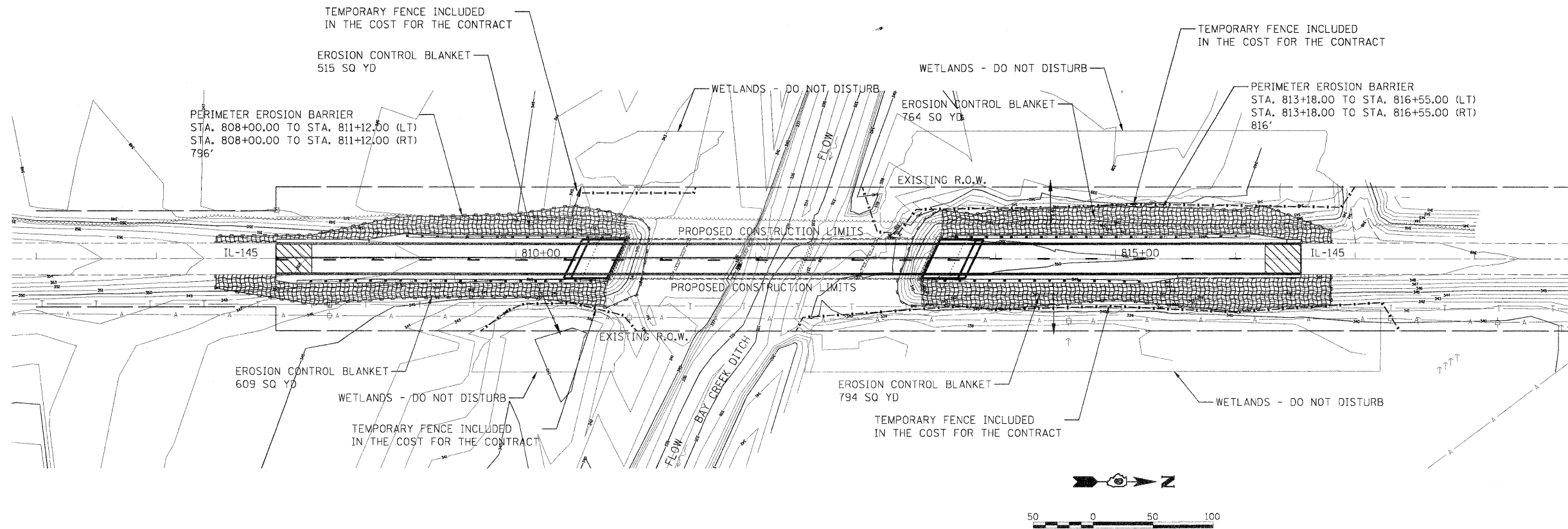
|  |                              |                 |           |
|--|------------------------------|-----------------|-----------|
| FILE NAME =  | USER NAME = cox01283         | DESIGNED - BKC  | REVISED - |
| et:\working\cox01283\dms24019\10970164-sh\detour.dgn |                              | DRAWN - BKC     | REVISED - |
| MODEL = BRIDGE STAGE CONSTRUCTION                    | PLOT SCALE = 49.9999' / 1in. | CHECKED - MH    | REVISED - |
|  | PLOT DATE = 05\30\2011       | DATE - 04/29/11 | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**




**IL-145 (OVER BAY CREEK DITCH)  
 WIDE LOAD DETOUR SIGNING**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |         |        |              |           |
|---|---------|--------|--------------|-----------|
| F.A.P. RTE.                                     | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 132   | 103BR-1 | POPE   | 38           | 11        |
| CONTRACT NO. 78164                              |         |        |              |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT |         |        |              |           |



**EROSION CONTROL LEGEND**

-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER
-  DRAINAGE PATTERN DIRECTION

**INTENDED SEQUENCE**

1. PLACEMENT OF PERIMETER EROSION BARRIER PRIOR TO COMMENCEMENT OF ANY WORK. SEE STANDARD 280001.
2. PLACEMENT OF TEMPORARY SEEDING ON GRADED SURFACES NOT HAVING PERMANENT SEEDING APPLIED.
3. PLACEMENT OF EROSION CONTROL BLANKET AFTER FINAL GRADING.
4. ONGOING MAINTENANCE OF EROSION CONTROL ELEMENTS PER THE SWPPP.
5. REMOVE TEMPORARY EROSION CONTROL ELEMENTS AFTER FINAL GRADING AND PERMANENT SEEDING ESTABLISHED AS PER THE SWPPP AND APPROVED BY THE ENGINEER.

**NOTES**

1. MAJOR GRADING SLOPES ALONG THE PROPOSED ROADWAY ARE 2:1 MAX.
2. SOILS DISTURBANCE SHALL ONLY OCCUR WITHIN THE AREAS SHOWN.
3. RECEIVING WATER FOR DRAINAGE FROM PROJECT IS BAY CREEK DITCH. BAY CREEK DITCH IS A TRIBUTARY OF THE OHIO RIVER.

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 2/28/11 |

|  |                             |                 |           |
|--|-----------------------------|-----------------|-----------|
| FILE NAME =  | USER NAME = heyen02951      | DESIGNED - BKC  | REVISED - |
| ct:\working\heyen02951\dms24019\0578164-ent-eros.dgn |                             | DRAWN - BKC     | REVISED - |
| MODEL = BRIDGE STAGE CONSTRUCTION                    | PLOT SCALE = 49.9999' / in. | CHECKED - MH    | REVISED - |
|  | PLOT DATE = 07/22/2011      | DATE - 04/29/11 | REVISED - |

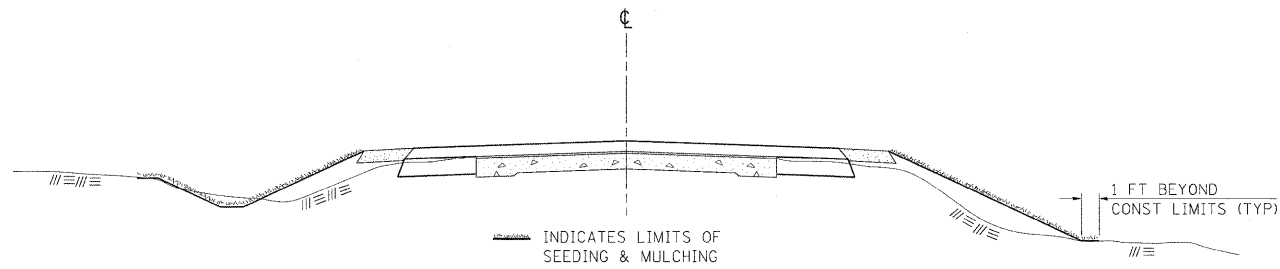
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL-145 (OVER BAY CREEK DITCH)  
TEMPORARY EROSION CONTROL PLAN**

SCALE: SHEET NO. OF SHEETS STA. 808+00.00 TO STA. 816+55.00

|   |         |        |                    |           |
|---|---------|--------|--------------------|-----------|
| F.A.P. RTE.                                   | SECTION | COUNTY | TOTAL SHEETS       | SHEET NO. |
| 132   | 103BR-1 | POPE   | 38                 | 12        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |        | CONTRACT NO. 78164 |           |

## SEEDING & MULCHING



### GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

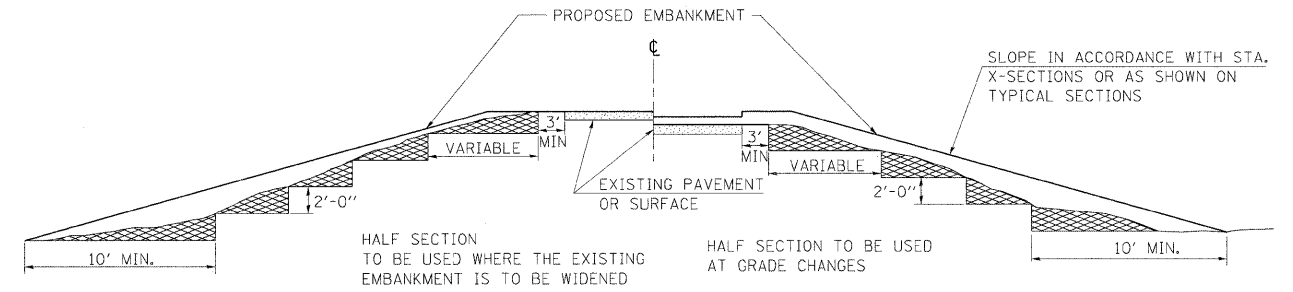
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

| REVISIONS |         |
|-----------|---------|
| REDRAWN   | 2-15-89 |
| REVISED   | 8-15-94 |
| REVISED   | 6-3-99  |
| REVISED   |         |

STD. 9-12

## TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

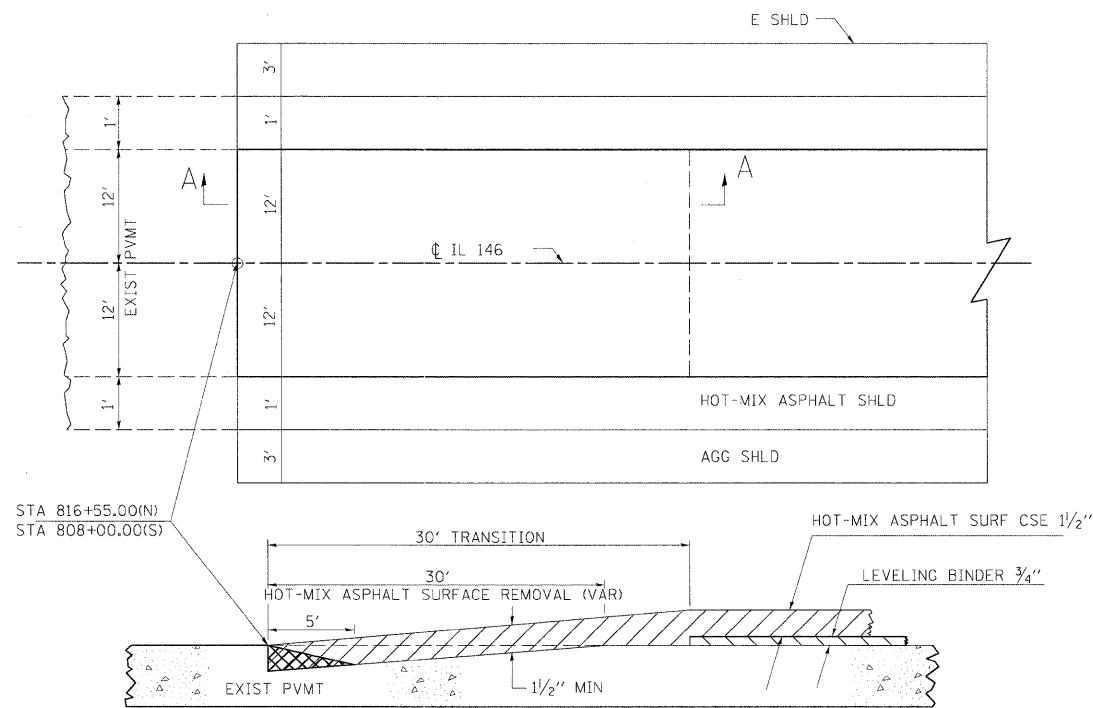


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

| REVISIONS |         |
|-----------|---------|
| REDRAWN   | 2-15-89 |
| REVISED   | 8-15-94 |
| CHECKED   | 6-3-99  |
| REVISED   |         |

STD. 9-16

## BUTT JOINT



STA 816+55.00(N)  
STA 808+00.00(S)

### SECTION A-A

| REVISIONS |          |
|-----------|----------|
| DRAWN     | 10-17-90 |
| REVISED   | 01-11-07 |
| REVISED   |          |
| REVISED   |          |

STD. 9-86

|          |     |         |
|----------|-----|---------|
| LAYOUT   | BKC | 2/7/11  |
| DRAWN    | BKC | 2/7/11  |
| REVIEWED | MH  | 1/28/11 |

|  |                            |                 |           |
|--|----------------------------|-----------------|-----------|
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| ca:\working\cox01283\dms24819\0978164-sh | standards.dgn              | DRAWN - BKC     | REVISED - |
| MODEL = Standards - 1                    | PLOT SCALE = 1,0000' / in. | CHECKED - MH    | REVISED - |
|  | PLOT DATE = 06/30/2011     | DATE - 04/29/11 | REVISED - |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL-145 (OVER BAY CREEK DITCH) STANDARDS

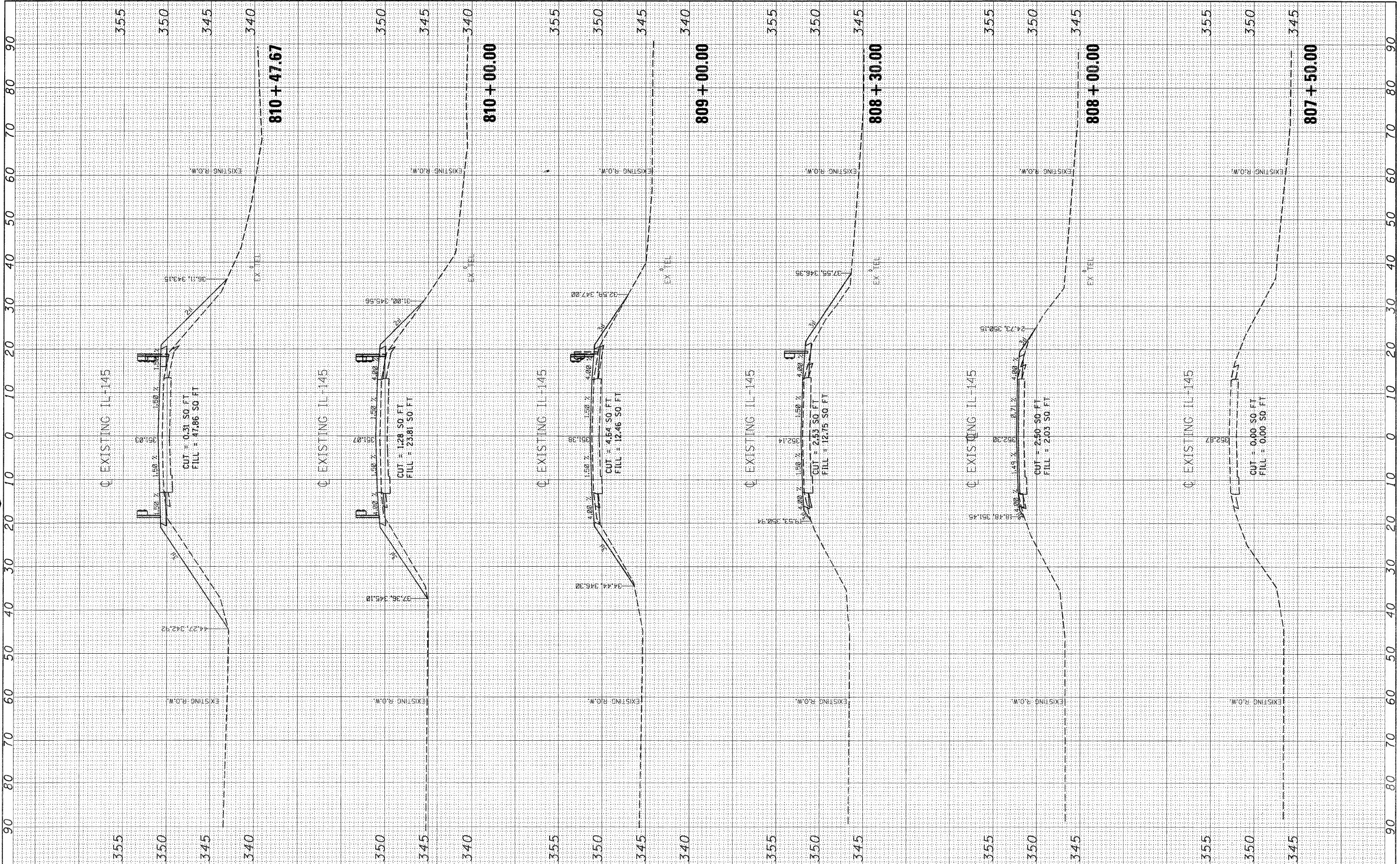
SCALE: SHEET NO. OF SHEETS STA. TO STA.

|   |         |        |              |           |
|---|---------|--------|--------------|-----------|
| F.A.P. RTE.                                   | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 132   | 103BR-1 | POPE   | 38           | 13        |
| CONTRACT NO. 78164                            |         |        |              |           |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT |         |        |              |           |



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

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



|             |             |                   |           |
|-------------|-------------|-------------------|-----------|
| FILE NAME = | USER NAME = | DESIGNED - BKC    | REVISED - |
|             |             | DRAWN - BKC       | REVISED - |
|             |             | CHECKED - MH      | REVISED - |
|             |             | DATE - 04/29/2011 | REVISED - |

|              |  |
|--------------|--|
| PLOT SCALE = |  |
| PLOT DATE =  |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 145 (OVER BAY CREEK DITCH) CROSS SECTIONS**

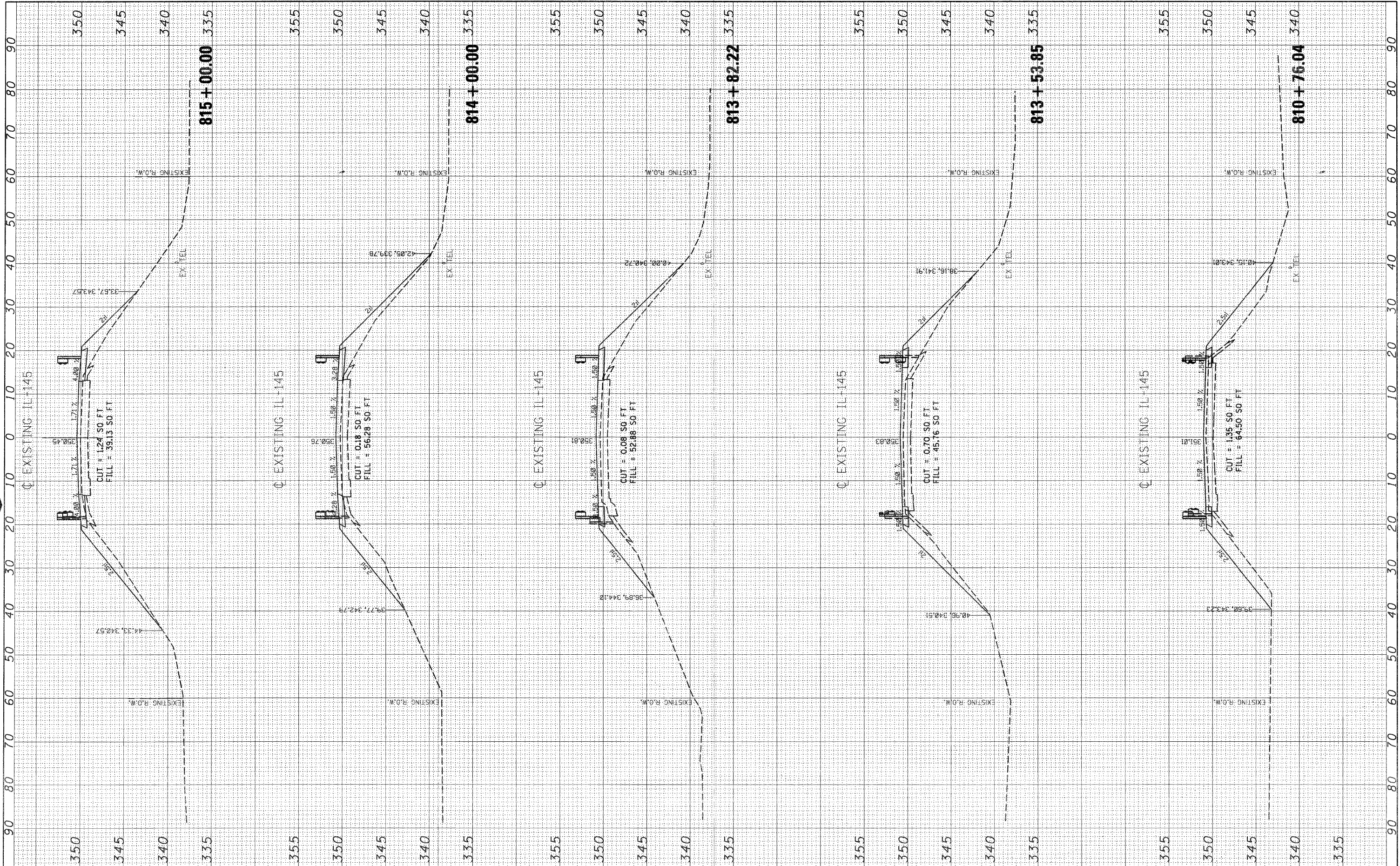
SCALE: SHEET NO. 1 OF 3 SHEETS STA. 807+50.00 TO STA. 810+47.67

| F.A.P. RTE.               | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 132                       | 103BR-1 | POPE   | 38           | 14        |
| CONTRACT NO. 78164        |         |        |              |           |
| ILLINOIS FED. AID PROJECT |         |        |              |           |



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

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

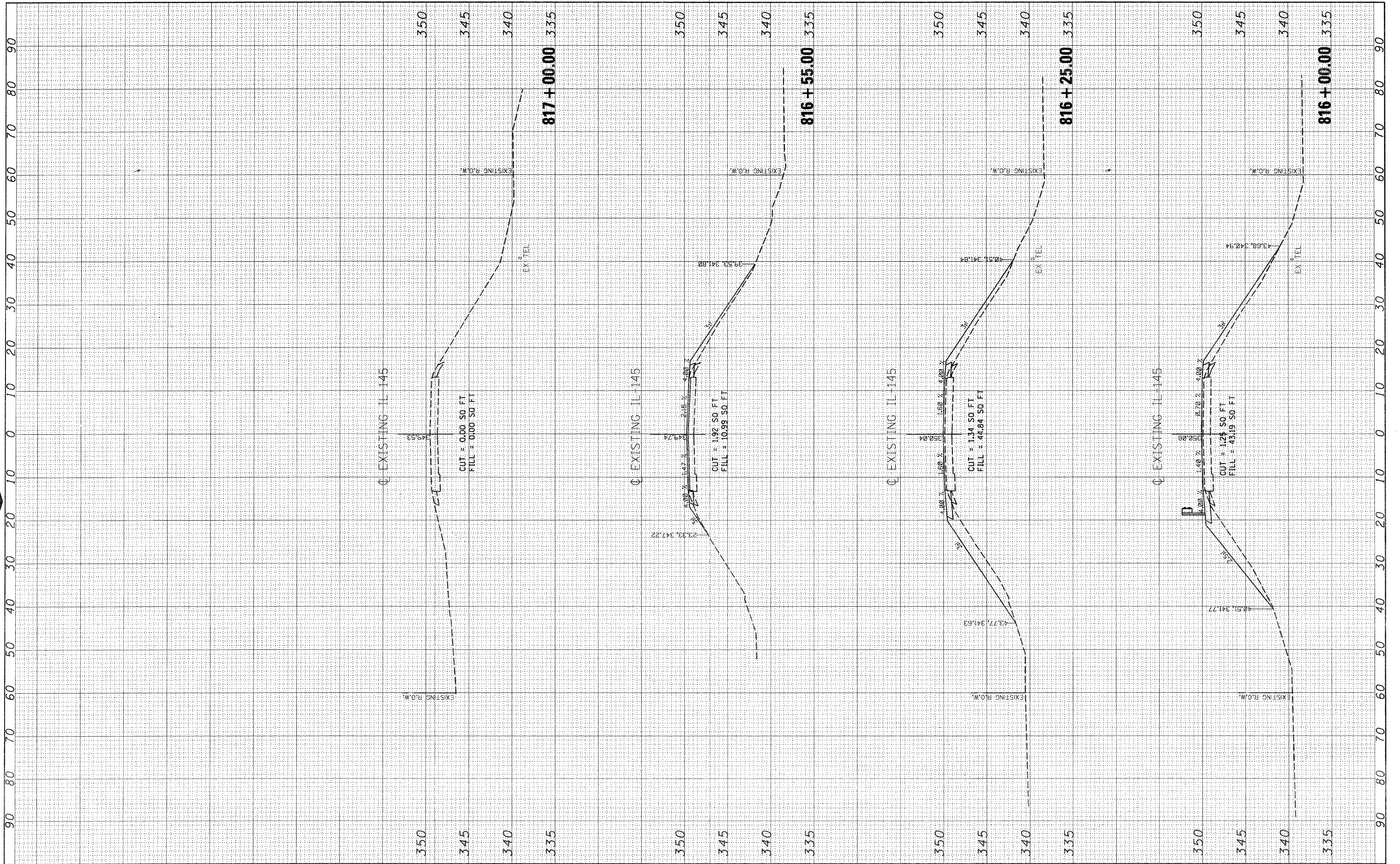


|              |                   |                |                             |   |   |                         |                                  |                    |                 |              |  |  |
|--------------|-------------------|----------------|-----------------------------|---|---|-------------------------|----------------------------------|--------------------|-----------------|--------------|--|--|
| FILE NAME =  | USER NAME =       | DESIGNED - BKC | REVISED -                   | <b>STATE OF ILLINOIS</b><br><b>DEPARTMENT OF TRANSPORTATION</b> | <b>IL 145 (OVER BAY CREEK DITCH) CROSS SECTIONS</b> | F.A.P. RTE. 132         | SECTION 103BR-1                  | COUNTY POPE        | TOTAL SHEETS 38 | SHEET NO. 15 |  |  |
| PLOT SCALE = | CHECKED - MH      | REVISED -      | SCALE:                      |   |   | SHEET NO. 2 OF 3 SHEETS | STA. 810+76.04 TO STA. 815+00.00 | CONTRACT NO. 78164 |                 |              |  |  |
| PLOT DATE =  | DATE - 04/29/2011 | REVISED -      | [ILLINOIS] FED. AID PROJECT |   |   |                         |                                  |                    |                 |              |  |  |
|              |                   |                |                             |   |   |                         |                                  |                    |                 |              |  |  |

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



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



|             |             |                   |           |
|-------------|-------------|-------------------|-----------|
| FILE NAME = | USER NAME = | DESIGNED - BKC    | REVISED - |
|             |             | DRAWN - BKC       | REVISED - |
|             |             | CHECKED - MH      | REVISED - |
|             |             | DATE - 04/29/2011 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 145 (OVER BAY CREEK DITCH) CROSS SECTIONS**

SCALE: SHEET NO. 3 OF 3 SHEETS STA. 816+00.00 TO STA. 817+00.00

|                           |                 |             |                 |                    |
|---------------------------|-----------------|-------------|-----------------|--------------------|
| F.A.P. RTE. 132           | SECTION 103BR-1 | COUNTY POPE | TOTAL SHEETS 38 | SHEET NO. 16       |
|                           |                 |             |                 | CONTRACT NO. 78164 |
| ILLINOIS FED. AID PROJECT |                 |             |                 |                    |

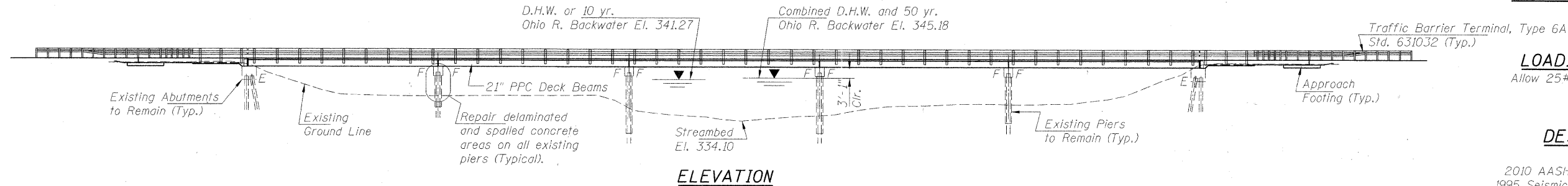
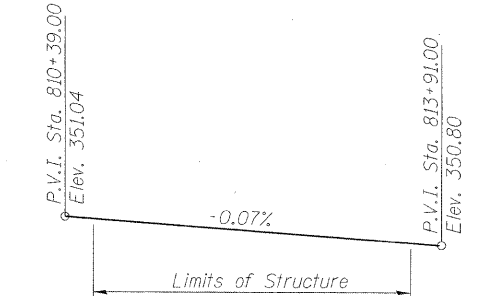


B.M.#807: Chiseled "□" on S.E. wingwall of Existing Structure No. 076-0025. El. 350.436

Existing Structure (No. 076-0025):

Originally constructed in 1934 and replaced in 1982. The original 1934 structure was removed to below grade in 1982 and replaced with a 25.5° Lt. Fwd. Skew, 5 span, 263'-9 1/4" Bk.-Bk. PPCDB structure, having span lengths of 53'-9 1/4", 52'-1", 52'-1", 52'-1", & 53'-9 1/4" and an out to out width of 34'-0". The existing  $\phi$  of Structure is at Station 812+15.00. The existing abutments are pile supported stub abutments on Concrete Piles. The existing piers are pile bent supported with a solid encased wall around Precast Concrete Piles.

The Superstructure and approach slabs are to be removed along with portions of the abutment backwalls and replaced using stage construction.  
No Salvage.



**PROFILE GRADE - IL. RTE. 145**  
(Along  $\phi$  of Roadway)

**LOADING HL-93 (NEW CONST.)**  
Allow 25#/#sq. ft. for future wearing surface

**DESIGN SPECIFICATIONS**

**NEW CONSTRUCTION**

2010 AASHTO LRFD Bridge Design Specifications  
1995 Seismic Retrofitting Manual for Highway Bridges

**EXISTING CONSTRUCTION**

2002 AASHTO Standard Specifications  
for Highway Bridges

**DESIGN STRESSES**

**FIELD UNITS (NEW CONST.)**

$f'_c$  = 5,000 psi (Concrete Wearing Surface)  
 $f'_c$  = 3,500 psi (All Concrete except CWS)  
 $f_y$  = 60,000 psi (Reinforcement)

**FIELD UNITS (EXIST. CONST.)**

$f'_c$  = 3,500 psi  
 $f_y$  = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS (NEW CONST.)**

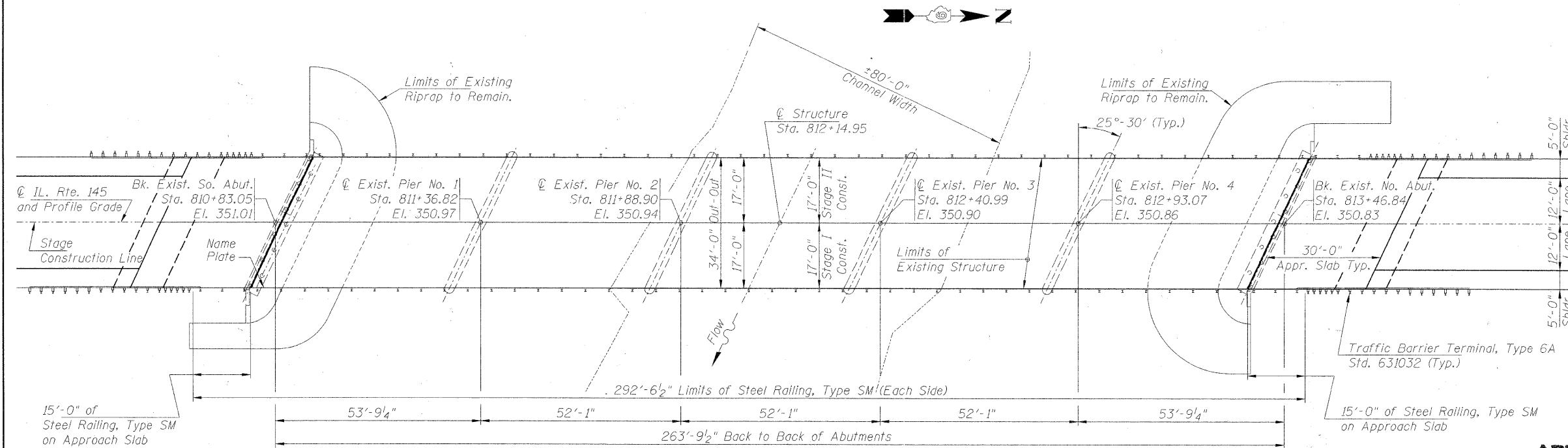
$f'_c$  = 6,000 psi  
 $f'_ci$  = 5,000 psi  
 $f_{pu}$  = 270,000 psi (1/2"  $\phi$  low lax Strands)  
 $f_{pbt}$  = 201,960 psi (1/2"  $\phi$  low lax Strands)  
 $f_y$  = 60,000 psi (Reinf.)

**SEISMIC DATA (EXIST. CONST.)**

Seismic Performance Category (SPC) = B  
Horizontal Bedrock Acceleration Coefficient (A) = 0.133g  
Site Coefficient (S) = 1.0

**DESIGN SCOUR ELEVATION TABLE**

| Design Scour Elevation (ft.) | S. Abut. | Pier 1 | Pier 2 | Pier 3 | Pier 4 | N. Abut. |
|------------------------------|----------|--------|--------|--------|--------|----------|
|                              | 345.1    | 326.9  | 324.4  | 321.1  | 324.0  | 344.9    |



**PLAN**

**WATERWAY INFORMATION TABLE**

**NORMAL DEPTH OR 10 YEAR BACKWATER FOR OHIO RIVER**

| Flood                  |  | Freq. Yr. | Q TOTAL C.F.S. | Q BRIDGE C.F.S. | Opening Sq. Ft. Exist. Prop. | Nat. H.W.E. Exist. Prop. | Head - Ft. Exist. Prop. | Headwater El. Exist. Prop. |
|------------------------|--|-----------|----------------|-----------------|------------------------------|--------------------------|-------------------------|----------------------------|
| Ten-Year               |  | 10        | 10005          | 2740            | 472.9 472.9                  | 340.78 340.78            | 1.32 1.32               | 342.10 342.10              |
| Design                 |  | 50        | 14095          | 3796            | 553.0 553.0                  | 341.27 341.27            | 1.72 1.72               | 342.99 342.99              |
| Base                   |  | 100       | 15788          | 4349            | 583.1 583.1                  | 341.44 341.44            | 1.90 1.90               | 343.34 343.34              |
| Overtopping Max. Calc. |  | 500       | 20119          | 5691            | 656.5 656.5                  | 341.85 341.85            | 2.35 2.35               | 344.20 344.20              |

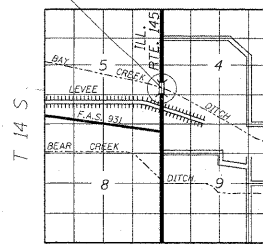
Note:  
Normal Depth solution controls for all flood events when compared to the 10-Year Ohio River Backwater.  
Normal Depth velocities are higher than Ohio Backwater Velocities.

**WATERWAY INFORMATION TABLE**

**50 YEAR OHIO RIVER BACKWATER**

| Flood                  |  | Freq. Yr. | Q TOTAL C.F.S. | Q BRIDGE C.F.S. | Opening Sq. Ft. Exist. Prop. | Nat. H.W.E. Exist. Prop. | Head - Ft. Exist. Prop. | Headwater El. Exist. Prop. |
|------------------------|--|-----------|----------------|-----------------|------------------------------|--------------------------|-------------------------|----------------------------|
| Ten-Year               |  | 10        | 10005          | 5160            | 1300.6 1300.6                | 345.17 345.17            | 0.41 0.41               | 345.58 345.58              |
| Design                 |  | 50        | 14095          | 5620            | 1302.6 1302.6                | 345.18 345.18            | 0.51 0.51               | 345.69 345.69              |
| Base                   |  | 100       | 15788          | 5866            | 1304.8 1304.8                | 345.19 345.19            | 0.56 0.56               | 345.75 345.75              |
| Overtopping Max. Calc. |  | 500       | 20119          | 6637            | 1306.7 1306.7                | 345.20 345.20            | 0.73 0.73               | 345.93 345.93              |

Existing Structure R 5 E 3rd PM



**LOCATION SKETCH**

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Carl Perry*  
ENGINEER OF BRIDGES AND STRUCTURES



Date: 7/1/11  
Exp Date: 11/30/2012

**GENERAL PLAN**  
IL. ROUTE 145 over BAY CREEK DITCH  
F.A.P. ROUTE 132 - SECTION 103BR-1  
POPE COUNTY  
STATION 812+14.95  
STRUCTURE NO. 076-0025

FILE NAME = 0760025\_78164-01-GPE.dgn

| USER NAME | DESIGNED | REVISIONS |
|-----------|----------|-----------|
| ca010283  | BWC      | -         |
|           | CHECKED  | -         |
|           | DRAWN    | -         |
|           | CHECKED  | -         |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 22 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|--------|--------------|-----------|
| 132         | 103BR-1 | POPE   | 38           | 17        |

CONTRACT NO. 78164  
[ILLINOIS] FED. AID PROJECT

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**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new beams.

STATION 812+14.95  
REBUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.P. RT. 132 SEC. 103BR-1  
LOADING HL-93  
STRUCTURE NO. 076-0025

**NAME PLATE**

See Std. 515001

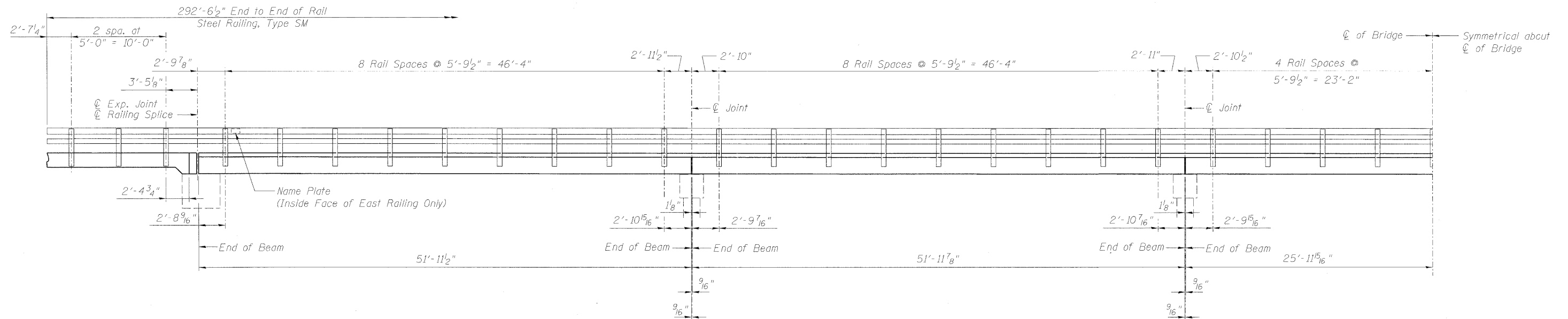
Note: The existing name plate shall be cleaned and relocated adjacent to the new plate. Cost included with Name Plates.

**TOTAL BILL OF MATERIAL**

| ITEM   | UNIT    | SUPER  | SUB  | TOTAL  |
|--|---------|--------|------|--------|
| Removal of Existing Superstructures                                  | Each    | 1      | -    | 1      |
| Concrete Removal   | Cu. Yd. | -      | 5.3  | 5.3    |
| Concrete Structures  | Cu. Yd. | -      | 29.5 | 29.5   |
| Concrete Superstructure  | Cu. Yd. | 103.4  | -    | 103.4  |
| Bridge Deck Grooving   | Sq. Yd. | 1143   | -    | 1143   |
| Protective Coat  | Sq. Yd. | 1221   | -    | 1221   |
| Precast Prestressed Concrete Deck Beams (21" Depth)                  | Sq. Ft. | 8836   | -    | 8836   |
| Reinforcement Bars, Epoxy Coated                                     | Pound   | 39,000 | 800  | 39,800 |
| Bar Splicers   | Each    | 414    | 80   | 494    |
| Steel Railing, Type SM   | Foot    | 585    | -    | 585    |
| Name Plates  | Each    | 1      | -    | 1      |
| Preformed Joint Strip Seal   | Foot    | 76     | -    | 76     |
| Concrete Wearing Surface, 5"   | Sq. Yd. | 983    | -    | 983    |
| Structural Repair of Concrete (Depth equal to or less than 5 inches) | Sq. Ft. | -      | 84   | 84     |
| Asbestos Bearing Pad Removal   | Each    | 44     | -    | 44     |

**INDEX OF SHEETS**

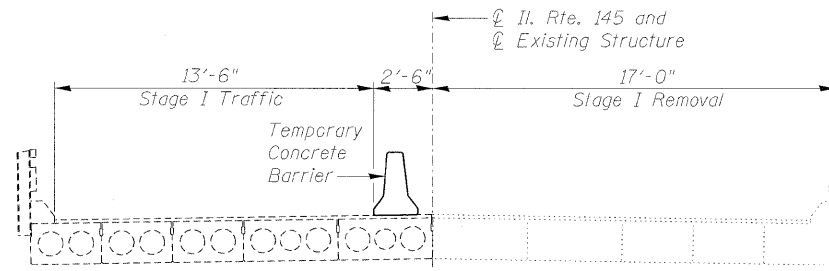
- 1 General Plan
- 2 General Data
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier for Stage Construction
- 5,6 Top of Approach Slab Elevations
- 7 Superstructure
- 8,9 Bridge Approach Slab Details
- 10-13 PPC Deck Beam Details
- 14,15 Superstructure Details
- 16 Steel Railing Details, Type SM with Concrete Wearing Surface
- 17 Preformed Joint Strip Seal
- 18 South Abutment Details
- 19 North Abutment Details
- 20 Pier 1 & 2
- 21 Pier 3 & 4
- 22 Bar Splicer Assembly and Mechanical Splicer Details



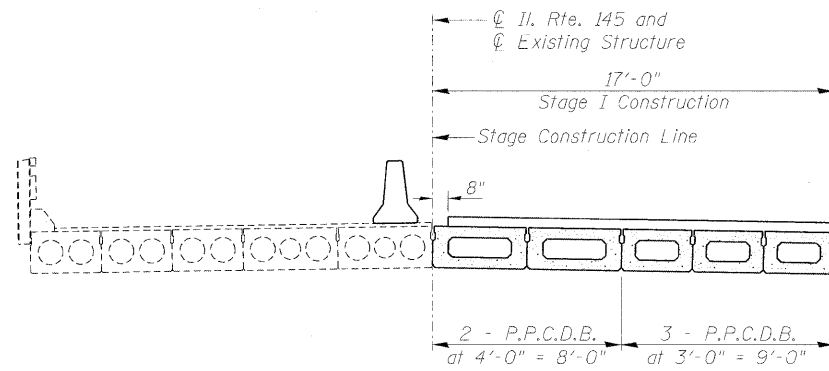
**RAILING ELEVATION**

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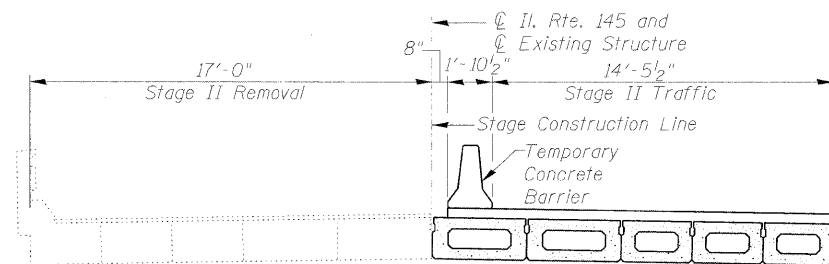
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| PLOT SCALE =                                    | DRAWN - BWC          | REVISED -      | CONTRACT NO. 78164        |   |  |                 |                 |             |                 |              |
| PLOT DATE = 07/01/2011                          | CHECKED - MNM        | REVISED -      | ILLINOIS FED. AID PROJECT |   |  |                 |                 |             |                 |              |
| SHEET NO. 2 OF 22 SHEETS                        |                      |                |                           |   |  |                 |                 |             |                 |              |



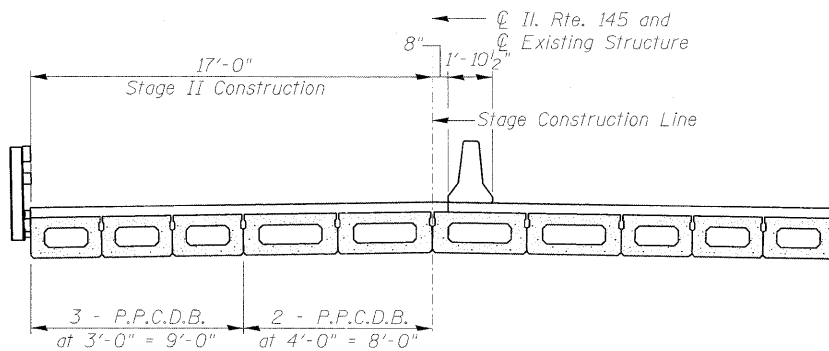
**STAGE I REMOVAL**  
Looking North



**STAGE I CONSTRUCTION**  
Looking North



**STAGE II REMOVAL**  
Looking North

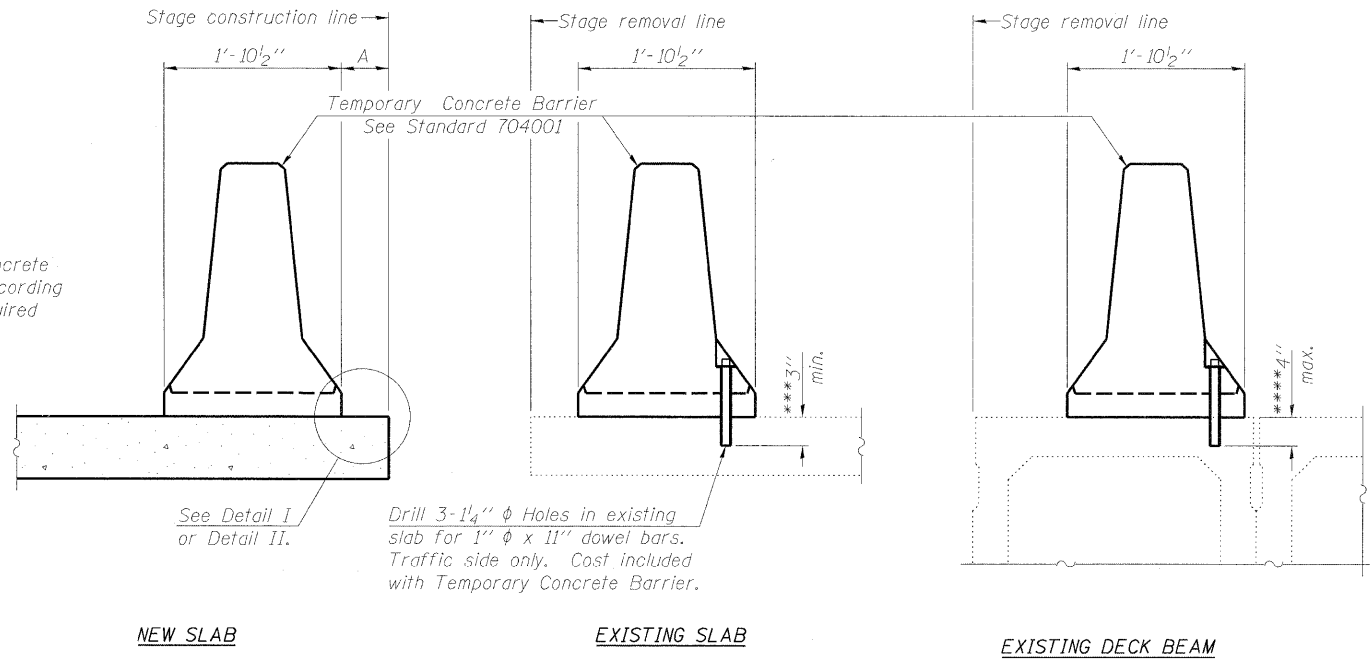


**STAGE II CONSTRUCTION**  
Looking North

Note:  
See Roadway Plans for Temporary Concrete Barrier quantities.  
See Sheet 14 of 22 for Shear Key Clamping Details.

|  |                      |                |           |   |  |                           |                   |               |                   |                |  |
|--|----------------------|----------------|-----------|---|--|---------------------------|-------------------|---------------|-------------------|----------------|--|
| FILE NAME = 0780025_78164-003-Stage_Constr.dgn | USER NAME = cox01283 | DESIGNED - BWC | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>STAGE CONSTRUCTION DETAILS<br/>STRUCTURE NO. 076-0025</b> | F.A.P. RTE. = 132         | SECTION = 103BR-1 | COUNTY = POPE | TOTAL SHEETS = 38 | SHEET NO. = 19 |  |
|  |                      | CHECKED -      | REVISED - |   |  | CONTRACT NO. 78164        |                   |               |                   |                |  |
|  |                      | DRAWN - BWC    | REVISED - |   |  | ILLINOIS FED. AID PROJECT |                   |               |                   |                |  |
|  |                      | CHECKED - MNM  | REVISED - |   |  |                           |                   |               |                   |                |  |

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

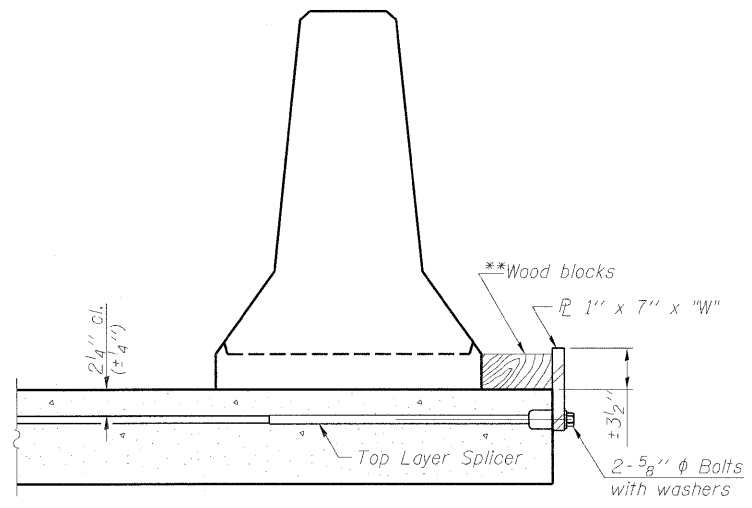
Detail I - With Bar Splicer or Couplers:  
 Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the top layer of couplers with 2- $\frac{5}{8}$ "  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
 Connect one (1) 1" x 7" x "W" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2- $\frac{5}{8}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

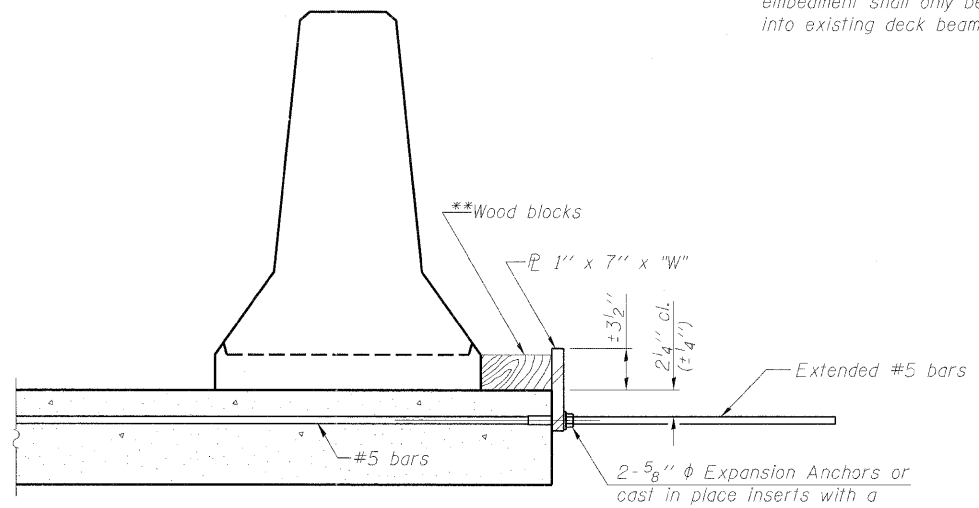
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

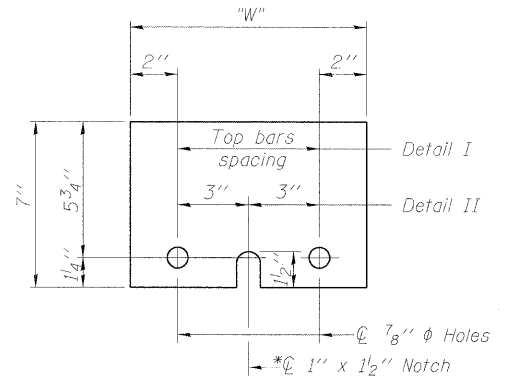
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{P}$  1" x 7" x "W"**

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

|   |                      |                |                           |   |   |                 |                 |             |                 |              |
|---|----------------------|----------------|---------------------------|---|---|-----------------|-----------------|-------------|-----------------|--------------|
| FILE NAME = 0760025_78164-004-Temp_Barr.dgn | USER NAME = cox01283 | DESIGNED - BWC | REVISED -                 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION<br/>STRUCTURE NO. 076-0025</b> | F.A.P. RTE. 132 | SECTION 103BR-1 | COUNTY POPE | TOTAL SHEETS 38 | SHEET NO. 20 |
| PLOT SCALE =                                | DRAWN - BWC          | REVISED -      | CONTRACT NO. 78164        |   |   |                 |                 |             |                 |              |
| PLOT DATE = 07/01/2011                      | CHECKED - MNM        | REVISED -      | ILLINOIS FED. AID PROJECT |   |   |                 |                 |             |                 |              |
| SHEET NO. 4 OF 22 SHEETS                    |                      |                |                           |   |   |                 |                 |             |                 |              |

WEST EDGE OF SHOULDER

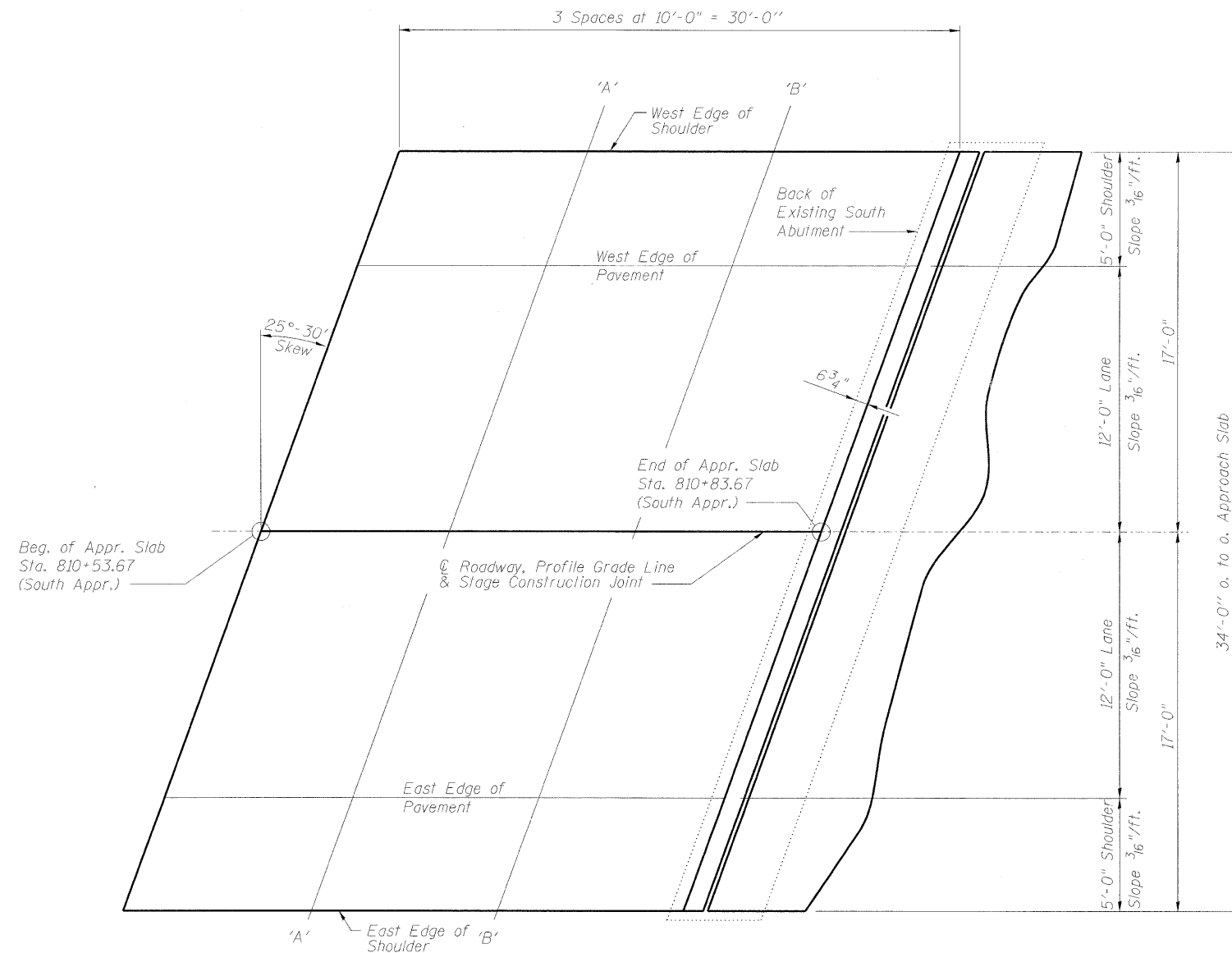
| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 810+61.78 | -17.00 | 350.76                       |
| 'A'                | 810+71.78 | -17.00 | 350.75                       |
| 'B'                | 810+81.78 | -17.00 | 350.75                       |
| End of Appr. Slab  | 810+91.78 | -17.00 | 350.74                       |

WEST EDGE OF PAVEMENT

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 810+59.39 | -12.00 | 350.84                       |
| 'A'                | 810+69.39 | -12.00 | 350.83                       |
| 'B'                | 810+79.39 | -12.00 | 350.82                       |
| End of Appr. Slab  | 810+89.39 | -12.00 | 350.82                       |

☉ ROADWAY, PROFILE GRADE LINE, & STAGE CONSTRUCTION JOINT

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 810+53.67 | 0.00   | 351.03                       |
| 'A'                | 810+63.67 | 0.00   | 351.02                       |
| 'B'                | 810+73.67 | 0.00   | 351.02                       |
| End of Appr. Slab  | 810+83.67 | 0.00   | 351.01                       |



PLAN

EAST EDGE OF PAVEMENT

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 810+47.95 | 12.00  | 350.85                       |
| 'A'                | 810+57.95 | 12.00  | 350.84                       |
| 'B'                | 810+67.95 | 12.00  | 350.83                       |
| End of Appr. Slab  | 810+77.95 | 12.00  | 350.83                       |

EAST EDGE OF SHOULDER

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 810+45.56 | 17.00  | 350.77                       |
| 'A'                | 810+55.56 | 17.00  | 350.76                       |
| 'B'                | 810+65.56 | 17.00  | 350.76                       |
| End of Appr. Slab  | 810+75.56 | 17.00  | 350.75                       |

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**WEST EDGE OF SHOULDER**

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 813+54.32 | -17.00 | 350.56                       |
| 'A'                | 813+64.32 | -17.00 | 350.55                       |
| 'B'                | 813+74.32 | -17.00 | 350.55                       |
| End of Appr. Slab  | 813+84.32 | -17.00 | 350.54                       |

**WEST EDGE OF PAVEMENT**

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 813+51.94 | -12.00 | 350.64                       |
| 'A'                | 813+61.94 | -12.00 | 350.63                       |
| 'B'                | 813+71.94 | -12.00 | 350.63                       |
| End of Appr. Slab  | 813+81.94 | -12.00 | 350.62                       |

**☉ ROADWAY, PROFILE GRADE LINE & STAGE CONSTRUCTION JOINT**

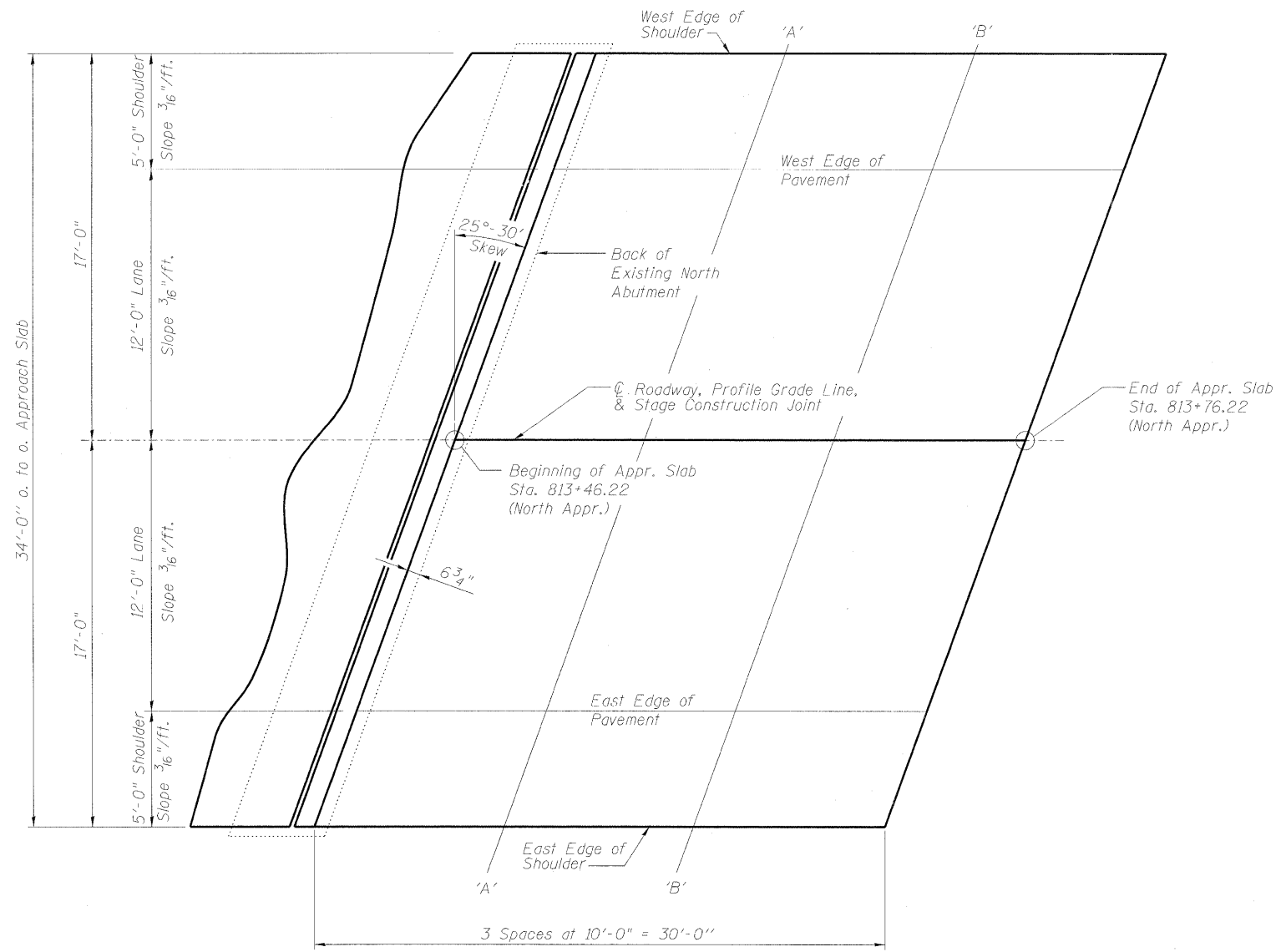
| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 813+46.22 | 0.00   | 350.83                       |
| 'A'                | 813+56.22 | 0.00   | 350.82                       |
| 'B'                | 813+66.22 | 0.00   | 350.82                       |
| End of Appr. Slab  | 813+76.22 | 0.00   | 350.81                       |

**EAST EDGE OF PAVEMENT**

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 813+40.49 | 12.00  | 350.65                       |
| 'A'                | 813+50.49 | 12.00  | 350.64                       |
| 'B'                | 813+60.49 | 12.00  | 350.63                       |
| End of Appr. Slab  | 813+70.49 | 12.00  | 350.63                       |

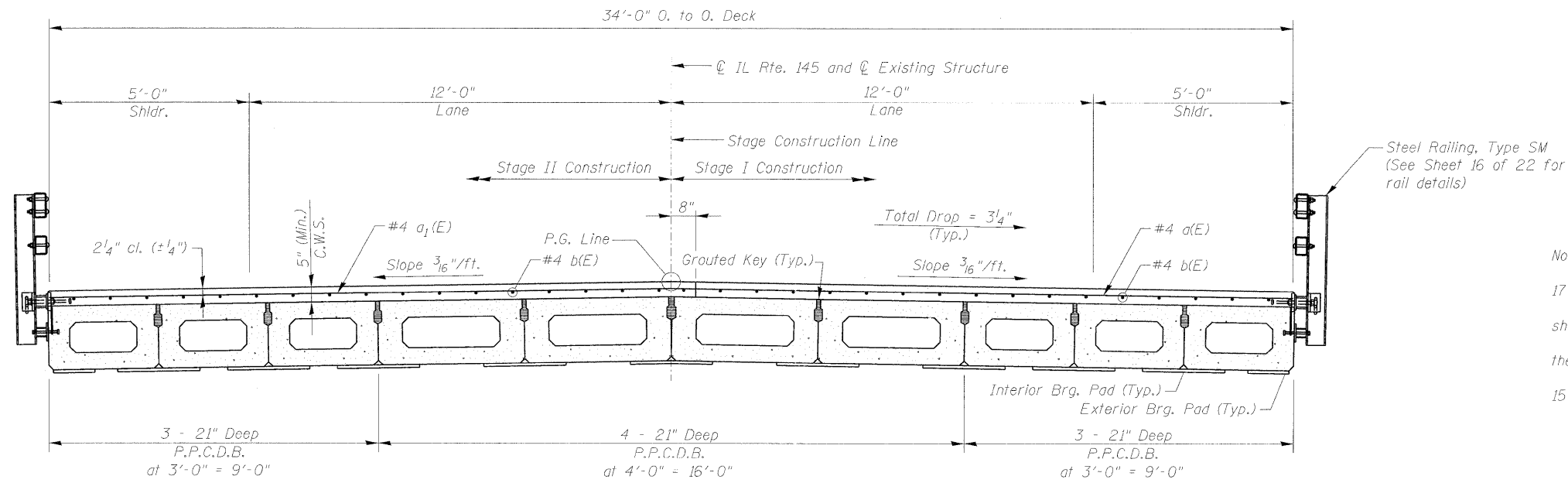
**EAST EDGE OF SHOULDER**

| Location           | Station   | Offset | Theoretical Grade Elevations |
|--------------------|-----------|--------|------------------------------|
| Beg. of Appr. Slab | 813+38.11 | 17.00  | 350.57                       |
| 'A'                | 813+48.11 | 17.00  | 350.56                       |
| 'B'                | 813+58.11 | 17.00  | 350.56                       |
| End of Appr. Slab  | 813+68.11 | 17.00  | 350.55                       |



**PLAN**

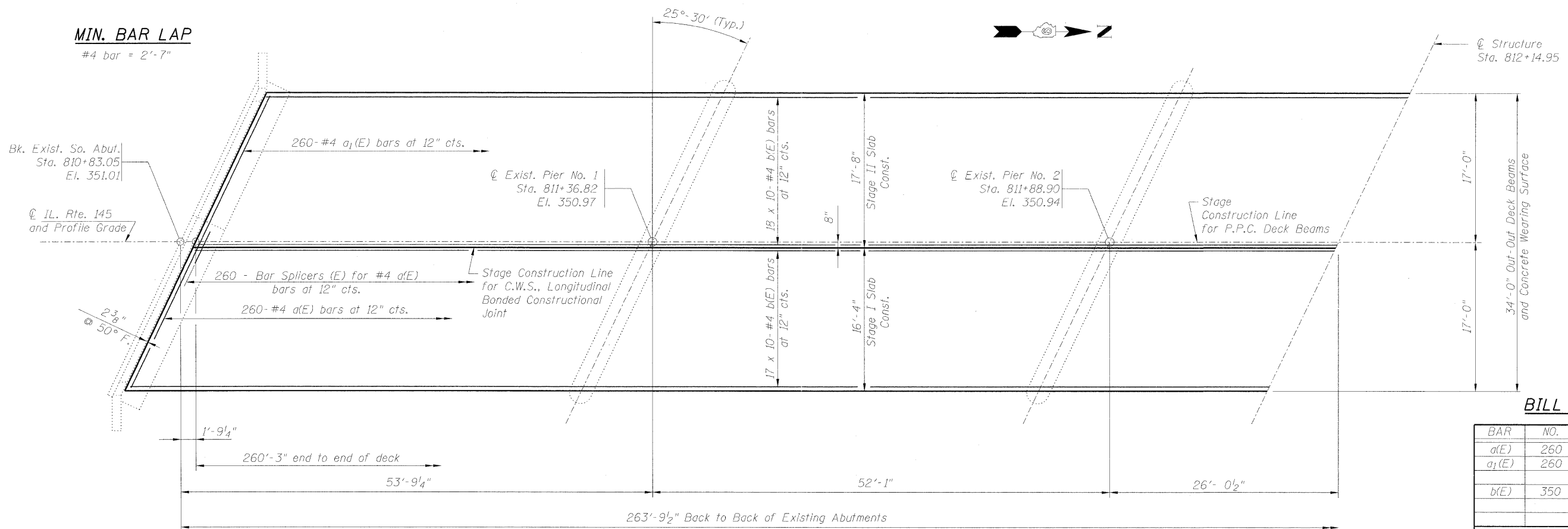
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Notes:  
 Bars indicated thus 17 x 10-#4 etc. indicates 17 lines of bars with 10 lengths per line.  
 For remainder of superstructure details, see sheets 14 & 15 of 22.  
 Spacing of a(E) bars shall be measured along the  $\phi$  of structure.  
 Tilt hooks for a(E) and a1(E) bars, see sheet 15 of 22 for details.

**DECK CROSS SECTION**  
 Looking North

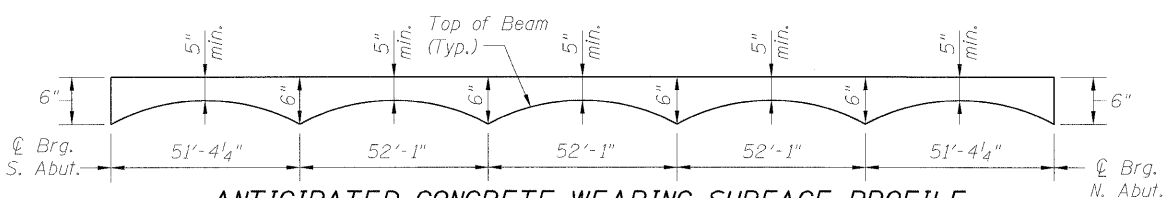
**MIN. BAR LAP**  
 #4 bar = 2'-7"



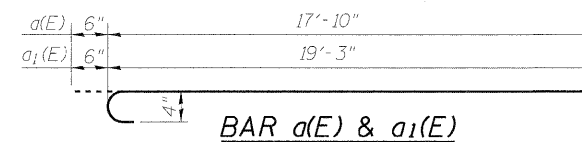
**PLAN**

**BILL OF MATERIAL**

| BAR NO.   | SIZE | LENGTH | SHAPE         |
|---|------|--------|---------------|
| a(E)  | #4   | 18'-4" | C             |
| a1(E)   | #4   | 19'-9" | C             |
| b(E)  | #4   | 28'-4" | —             |
| Reinforcement Bars, Epoxy Coated                    |      |        | Pound 13,240  |
| Concrete Wearing Surface, 5"                        |      |        | Sq. Yd. 983   |
| Bridge Deck Grooving                                |      |        | Sq. Yd. 1,143 |
| Bar Splicers  |      |        | Each 260      |
| Protective Coat                                     |      |        | Sq. Yd. 1,221 |
| Precast Prestressed Concrete Deck Beams (21" Depth) |      |        | Sq. Ft. 8836  |



**ANTICIPATED CONCRETE WEARING SURFACE PROFILE**  
 (For Information Only)



**BAR a(E) & a1(E)**

FILE NAME = 0760025\_78164-007-Superplan-sssd.dgn

USER NAME = cax01283

DESIGNED - BWC

REVISED -

CHECKED -

REVISI -

REVISED -

PLOT SCALE =

DRAWN - BWC

REVISED -

PLOT DATE = 07/01/2011

CHECKED - MNM

REVISED -

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

**SUPERSTRUCTURE**  
**STRUCTURE NO. 076-0025**

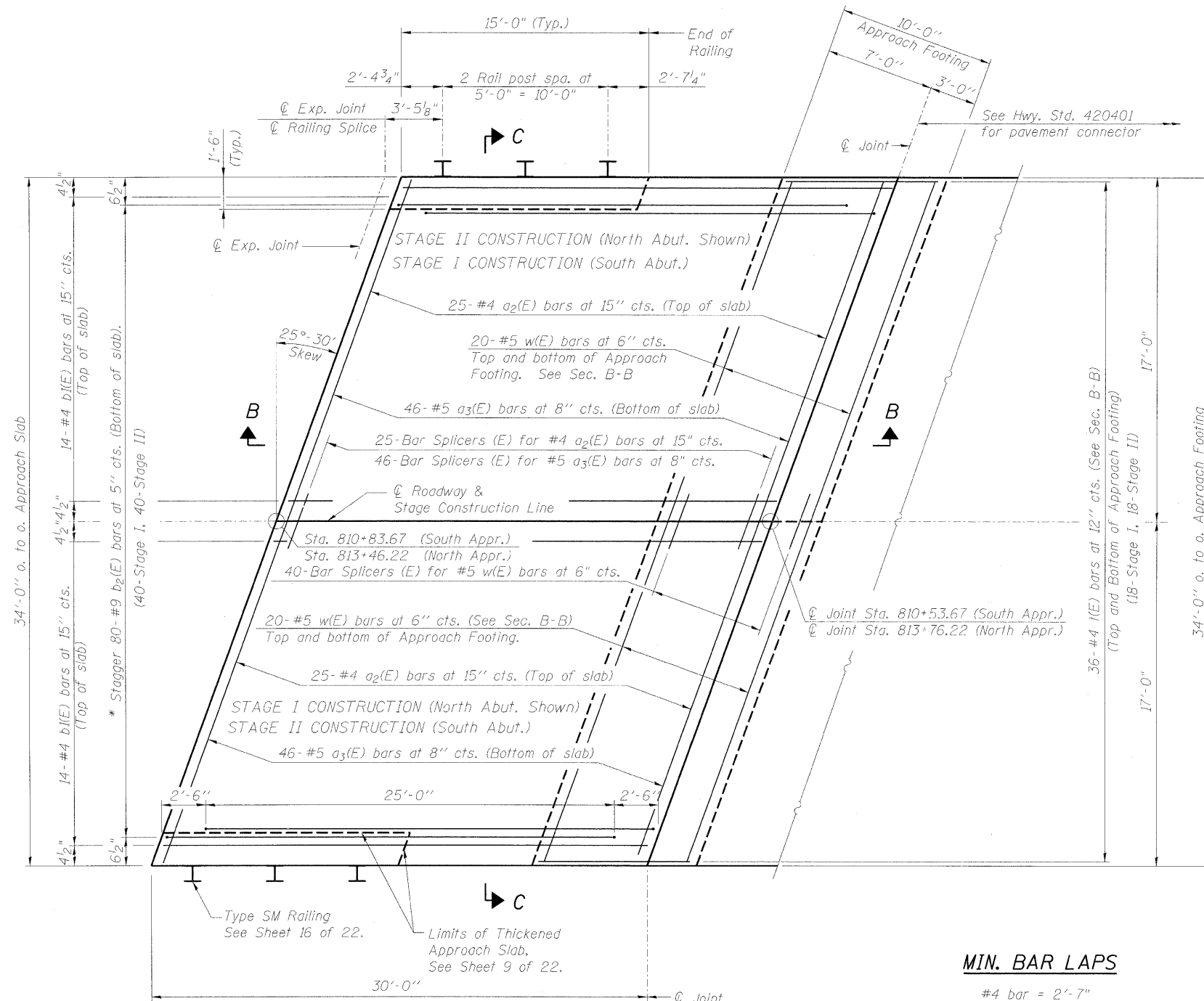
SHEET NO. 7 OF 22 SHEETS

F.A.P. RTE. 132 SECTION 103BR-1 COUNTY POPE TOTAL SHEETS 38 SHEET NO. 23

CONTRACT NO. 78164

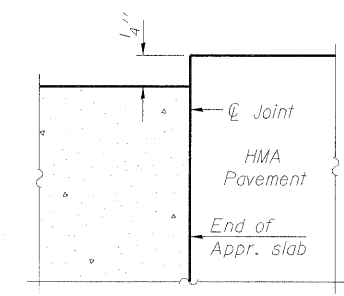
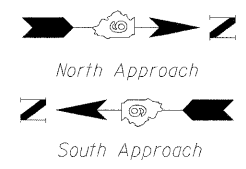
ILLINOIS FED. AID PROJECT

Notes:  
 See sheet 9 of 22 for Sections B-B & C-C.  
 $a_2(E)$  and  $a_3(E)$  bar spacings measured along  $\text{C.Rdwy.}$   
 See Sheet 16 of 22 for Railing and Railing Connection details.



**PLAN**

\* Tilt #9  $b_2(E)$  bars as required to maintain clearance.



**FLEXIBLE PAVEMENT**

**DETAIL A**

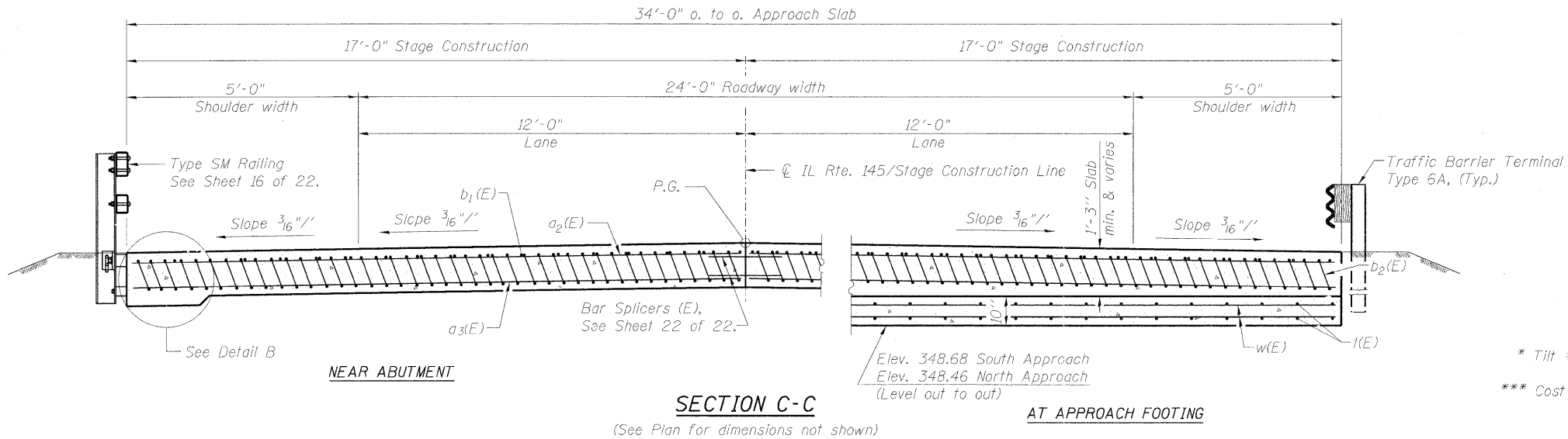
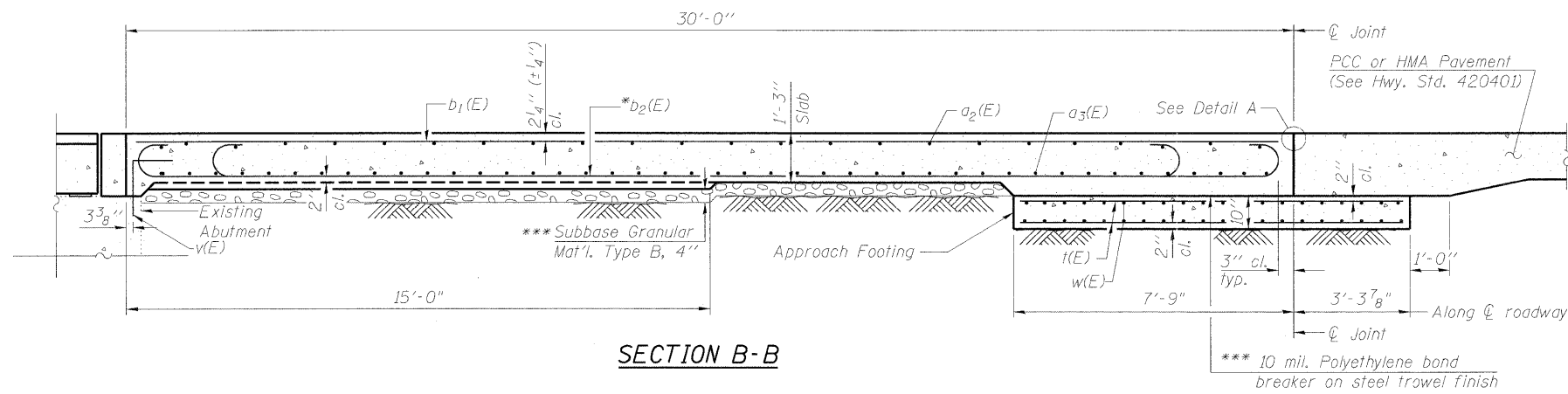
**MIN. BAR LAPS**

#4 bar = 2'-7"  
 #5 bar = 3'-3"

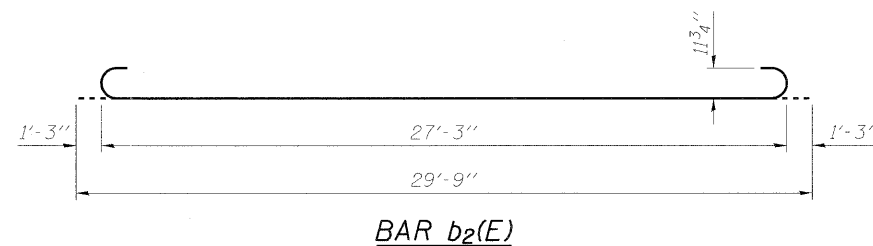
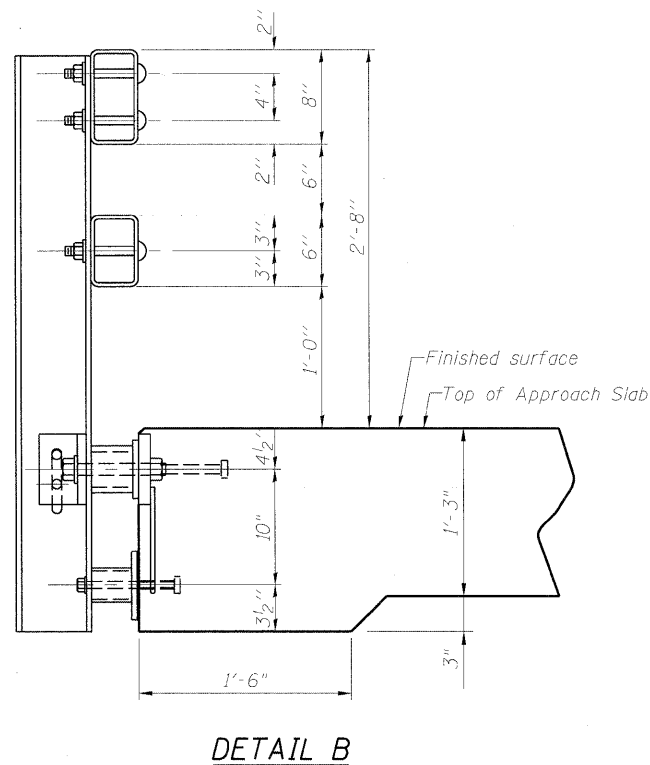
|   |                      |                |                           |   |   |                 |                 |             |                 |              |
|---|----------------------|----------------|---------------------------|---|---|-----------------|-----------------|-------------|-----------------|--------------|
| FILE NAME = 0780025_78164-008-Approach-Slab11.dgn | USER NAME = cdx01283 | DESIGNED - BWC | REVISED -                 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>BRIDGE APPROACH SLAB DETAILS (SHEET 1 of 2)<br/>STRUCTURE NO. 076-0025</b> | F.A.P. RTE. 132 | SECTION 103BR-1 | COUNTY POPE | TOTAL SHEETS 38 | SHEET NO. 24 |
| PLOT SCALE =                                      | DRAWN - BWC          | REVISED -      | CONTRACT NO. 78164        |   |   |                 |                 |             |                 |              |
| PLOT DATE = 07/01/2011                            | CHECKED - MNM        | REVISED -      | ILLINOIS FED. AID PROJECT |   |   |                 |                 |             |                 |              |
| SHEET NO. 8 OF 22 SHEETS                          |                      |                |                           |   |   |                 |                 |             |                 |              |



Notes:  
 See sheet 8 of 22 for Detail A.  
 Approach slab shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v(E) bar details, see sheets 18 & 19 of 22.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 For bar splicer details, see sheet 22 of 22.  
 Cost of excavation for approach footing included with Concrete Structures.

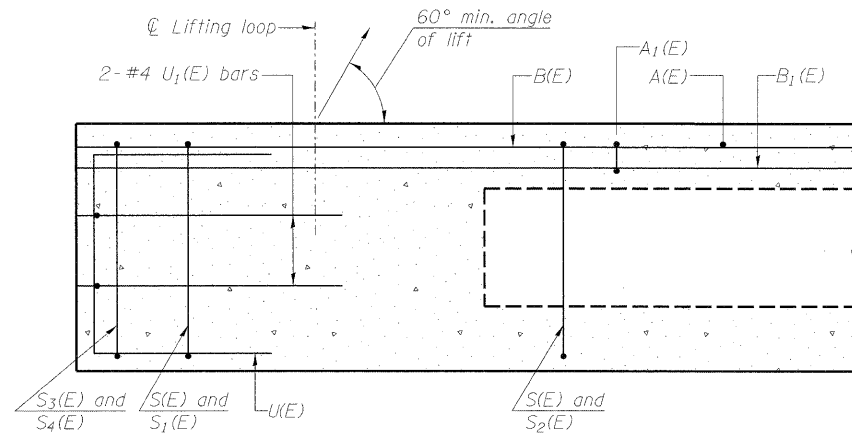


\* Tilt #9 b2(E) bars as required to maintain clearance.  
 \*\*\* Cost included with Concrete Superstructure.



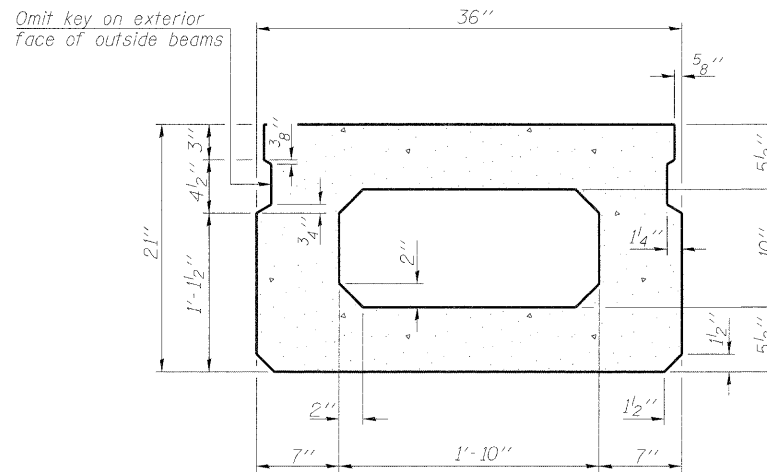
**TWO APPROACHES  
BILL OF MATERIAL**

| Bar   | No. | Size | Length                              | Shape         |
|-------|-----|------|-------------------------------------|---------------|
| a2(E) | 100 | #4   | 18'-8"                              | —             |
| a3(E) | 184 | #5   | 18'-8"                              | —             |
| b1(E) | 56  | #4   | 29'-8"                              | —             |
| b2(E) | 160 | #9   | 29'-9"                              | ⌋             |
| t(E)  | 72  | #4   | 10'-9"                              | —             |
| w(E)  | 160 | #5   | 18'-8"                              | —             |
|       |     |      | Concrete Superstructure             | Cu. Yd. 103.4 |
|       |     |      | Concrete Structures                 | Cu. Yd. 23.3  |
|       |     |      | Reinforcement Bars,<br>Epoxy Coated | Pound 25760   |
|       |     |      | Bar Splicers                        | Each 222      |

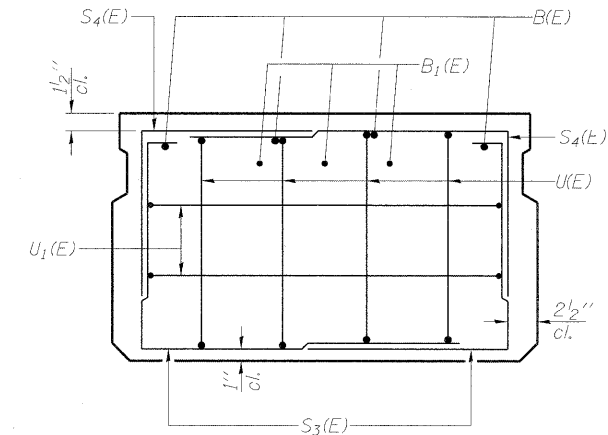


**SECTION A-A**

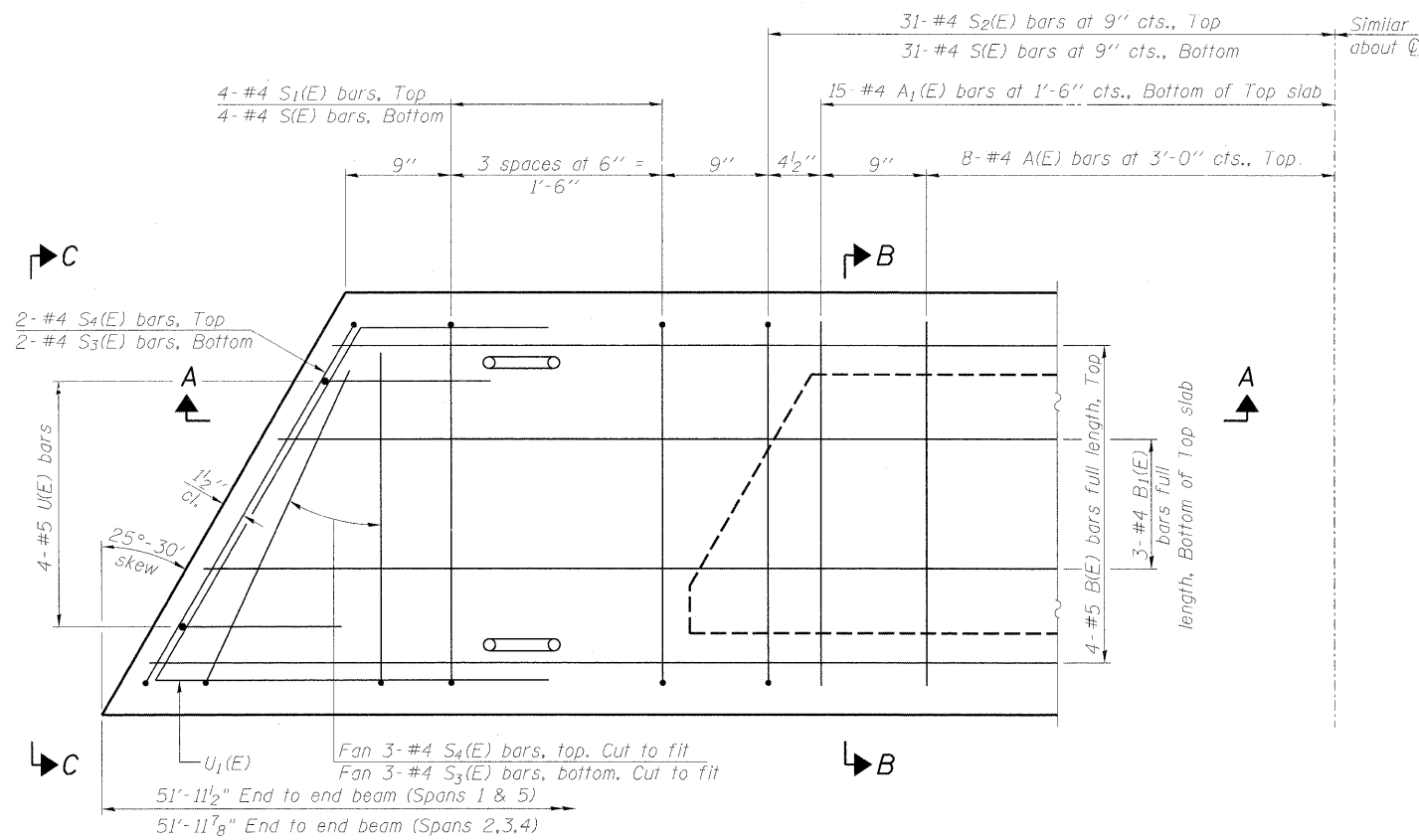
Note:  
See sheet 11 of 22 for lifting loop locations and details.



**SECTION B-B**  
(Showing dimensions)

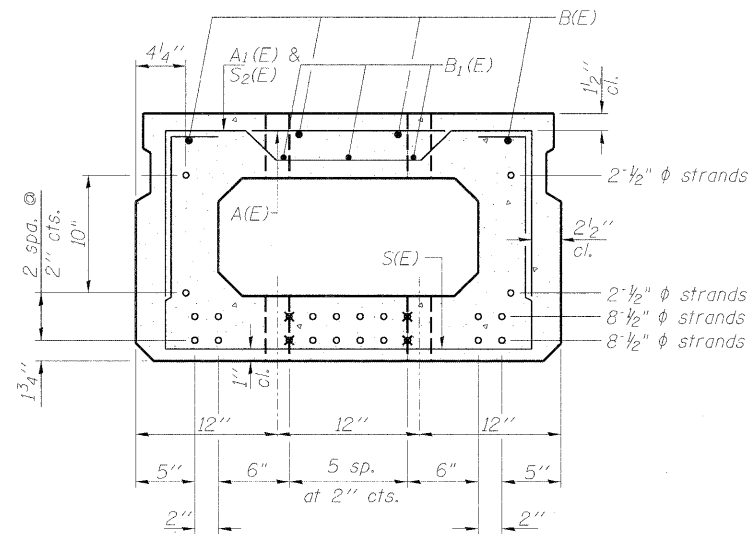


**VIEW C-C**



**PLAN VIEW**

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.



**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.

X Strands shall only be provided at permissible strand locations with more than 2" of clear cover between the dowel bar and the prestressing strand.

**MINIMUM BAR LAP**

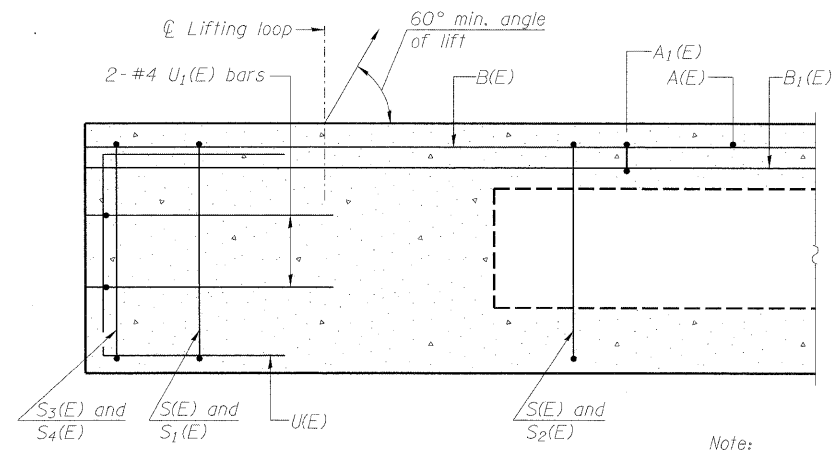
#4 bar = 2'-0"  
#5 bar = 2'-6"

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

| Bar   | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E)  | 16  | #4   | 2'-7"  | —     |
| A1(E) | 31  | #4   | 2'-10" | —     |
| B(E)  | 4   | #5   | 5'-8"  | —     |
| B1(E) | 3   | #4   | 5'-8"  | —     |
| S(E)  | 70  | #4   | 6'-5"  | U     |
| S1(E) | 8   | #4   | 4'-11" | U     |
| S2(E) | 62  | #4   | 5'-2"  | U     |
| S3(E) | 10  | #4   | 4'-5"  | U     |
| S4(E) | 10  | #4   | 3'-8"  | U     |
| U(E)  | 8   | #5   | 4'-0"  | U     |
| U1(E) | 4   | #4   | 6'-6"  | U     |

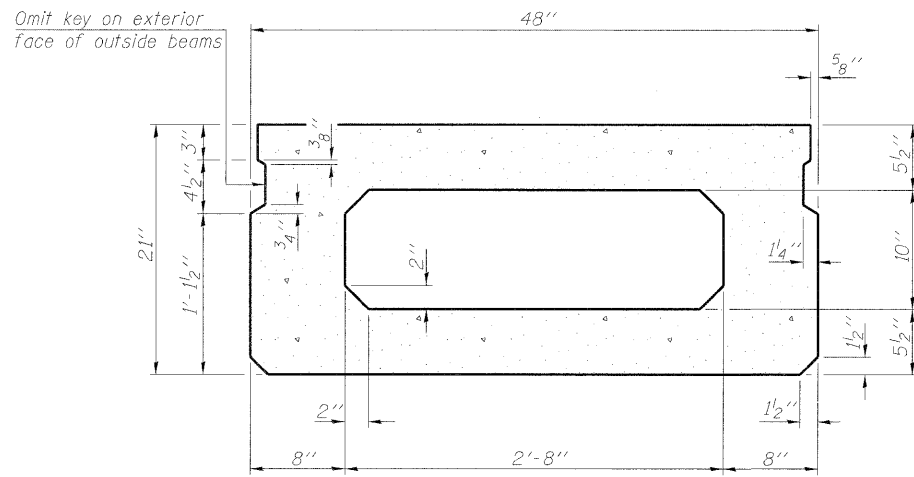
Note: See sheet 11 of 22 for additional details and Bill of Material.



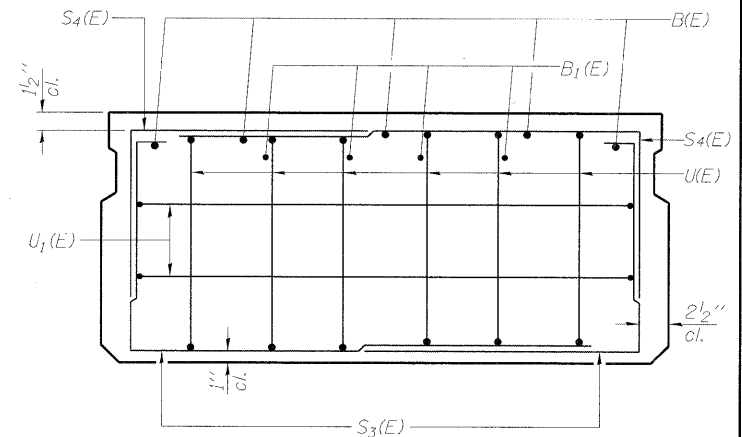


**SECTION A-A**

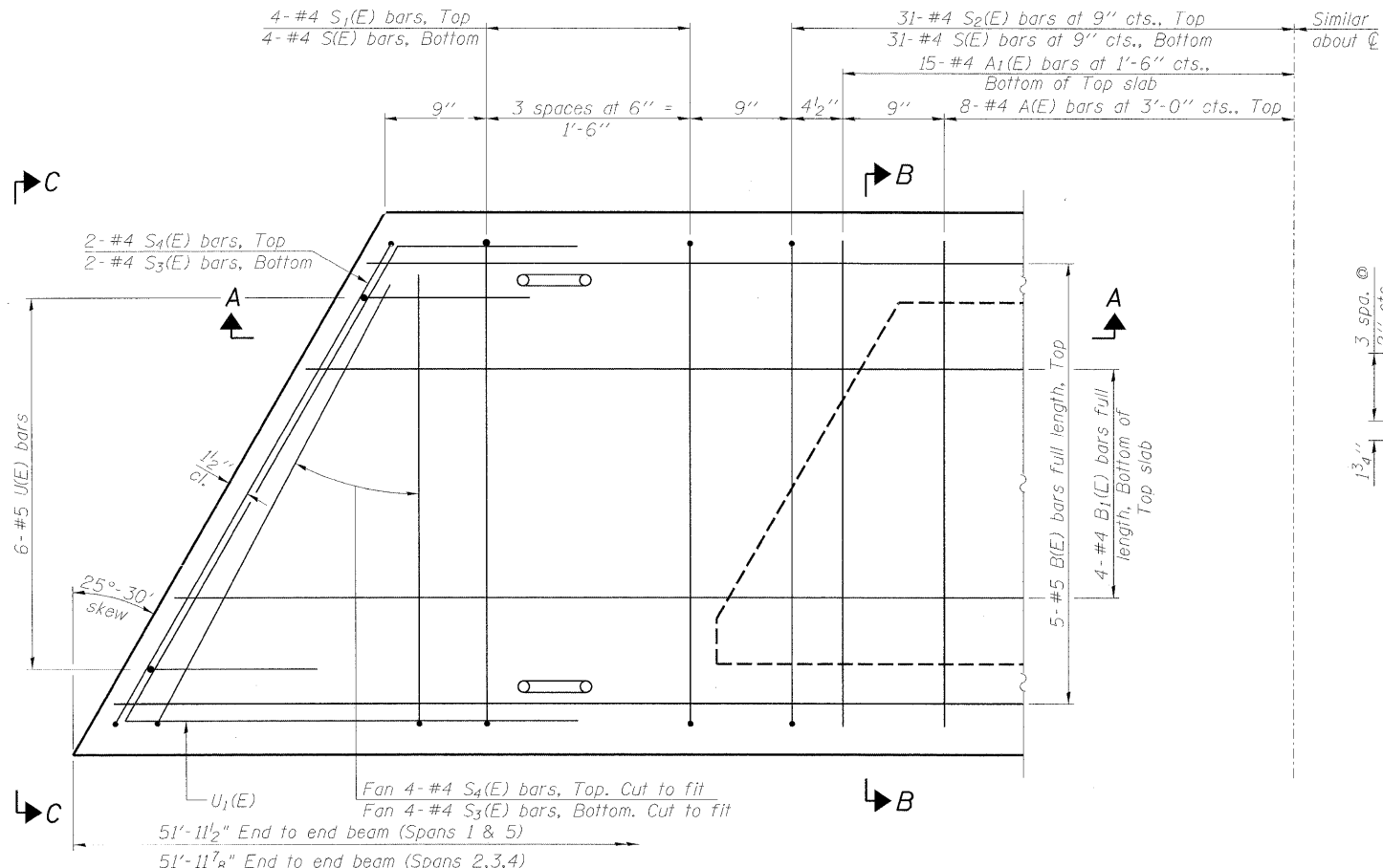
Note:  
See sheet 13 of 22 for lifting loop locations and details.



**SECTION B-B**  
(Showing dimensions)

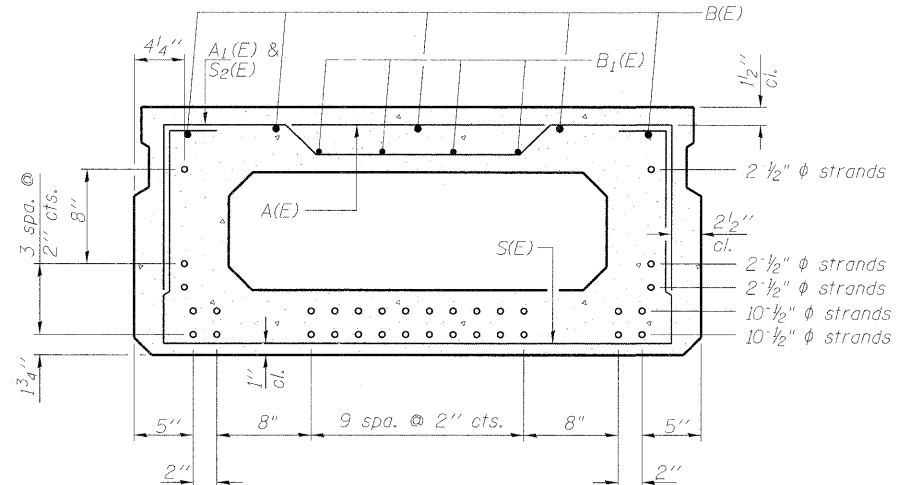


**VIEW C-C**



**PLAN VIEW**

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.



**SECTION B-B**

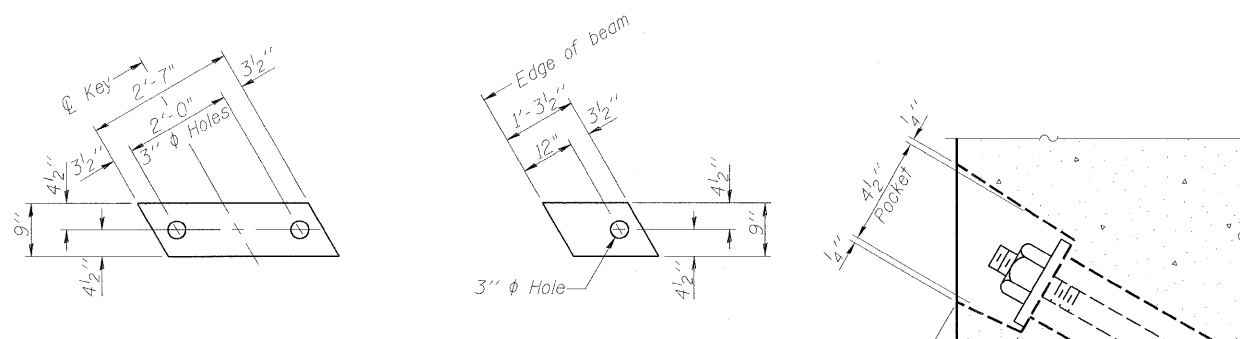
(Showing reinforcement and permissible strand locations)  
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

| Bar   | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E)  | 16  | #4   | 3'-7"  | —     |
| A1(E) | 31  | #4   | 3'-10" | ~     |
| B(E)  | 5   | #5   | 51'-8" | —     |
| B1(E) | 4   | #4   | 51'-8" | —     |
| S(E)  | 70  | #4   | 7'-5"  | ┌     |
| S1(E) | 8   | #4   | 5'-11" | ┌     |
| S2(E) | 62  | #4   | 6'-2"  | ┌     |
| S3(E) | 12  | #4   | 4'-11" | ┌     |
| S4(E) | 12  | #4   | 4'-2"  | ┌     |
| U(E)  | 12  | #5   | 4'-0"  | ┌     |
| U1(E) | 4   | #4   | 8'-1"  | ┌     |

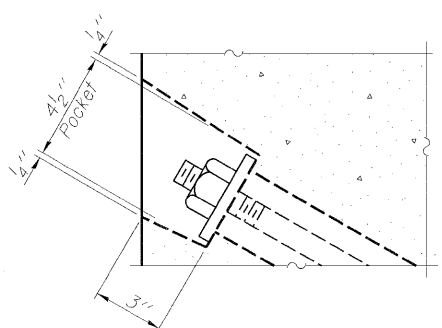
Note: See sheet 13 of 22 for additional details and Bill of Material.

**MINIMUM BAR LAP**  
#4 bar = 2'-0"  
#5 bar = 2'-6"

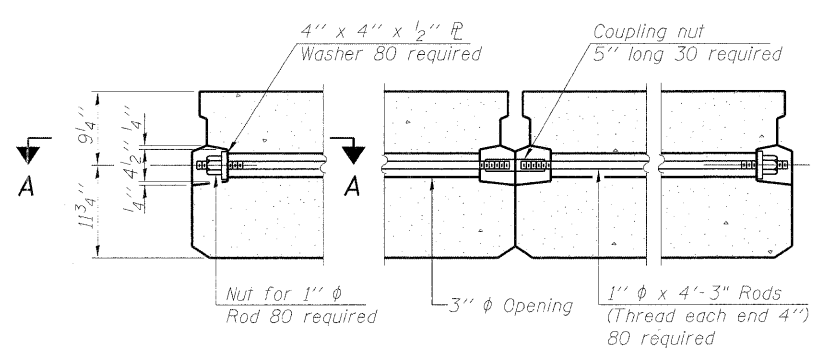


**FABRIC BEARING PAD (Interior)**  
**FABRIC BEARING PAD (Exterior)**

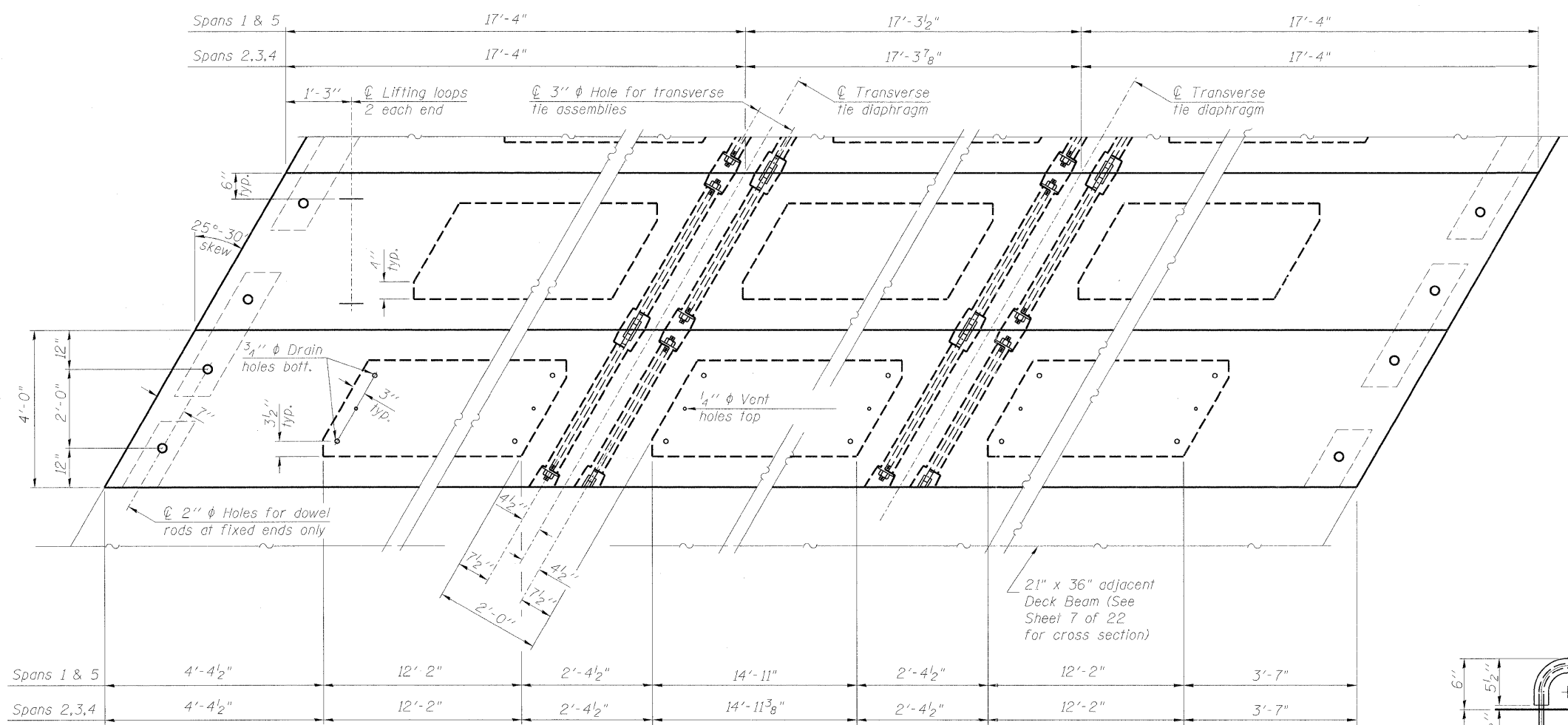
**Notes:**  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



**SECTION A-A**



**TYPICAL TRANSVERSE TIE ASSEMBLY**

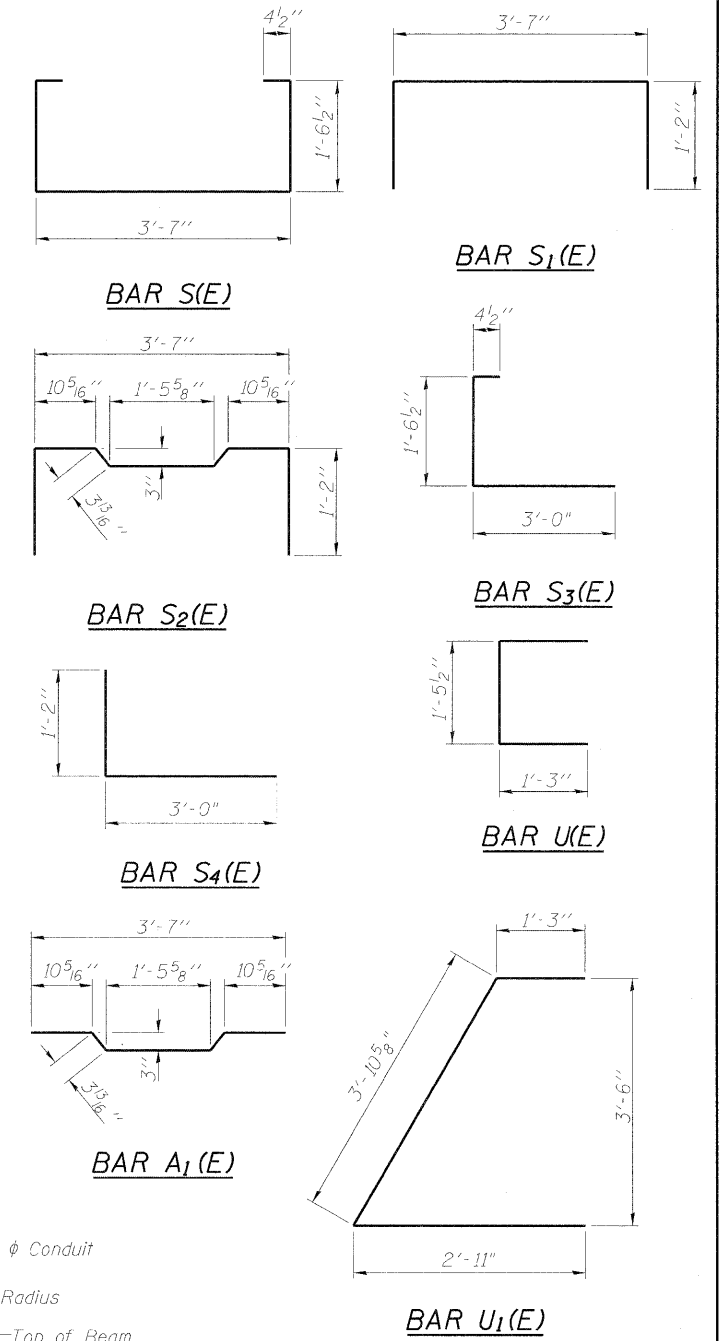


**PLAN VIEW**

**NOTES**

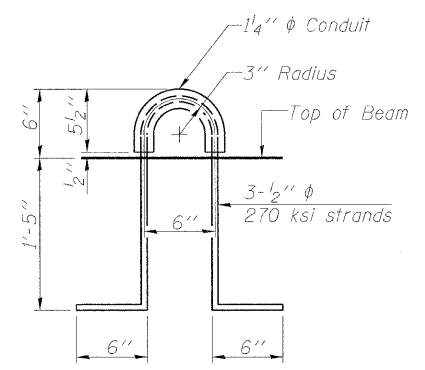
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.  
The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior 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 Special Provisions).  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2" φ 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'ci, shall be 5000 psi.

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



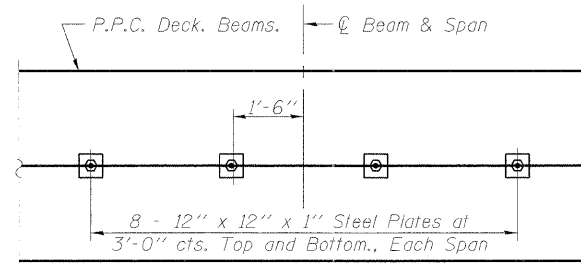
**BILL OF MATERIAL**

|   |         |      |
|---|---------|------|
| Precast Prestressed Conc. Deck Bms. (21" depth) | Sq. Ft. | 4158 |
|---|---------|------|

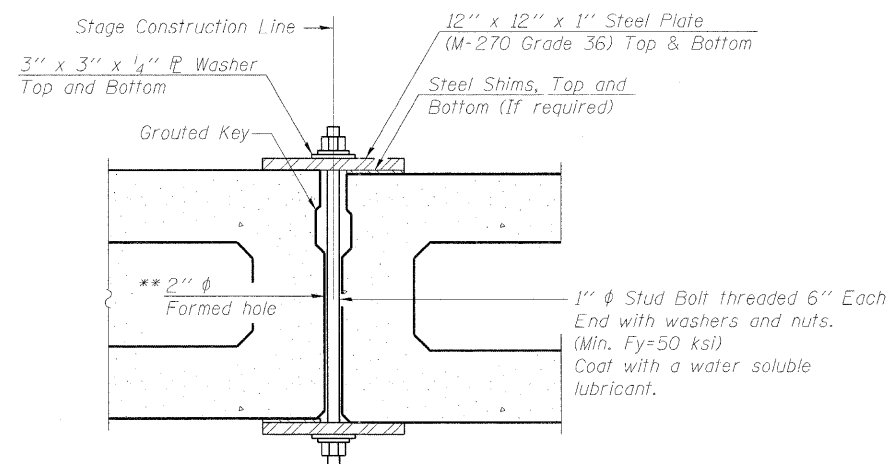


**LIFTING LOOP DETAIL**

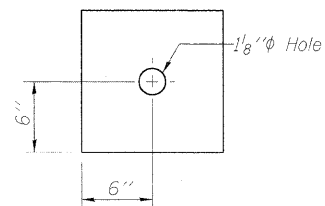
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| FILE NAME =  | USER NAME = | DESIGNED - BWC | REVISED -                 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>21" x 48" PPC DECK BEAM DETAILS<br/>STRUCTURE NO. 076-0025</b> | F.A.P. RTE. 132    | SECTION 103BR-1 | COUNTY POPE | TOTAL SHEETS 38 | SHEET NO. 29 |
| PLOT SCALE = | DRAWN - BWC | REVISED -      | SHEET NO. 13 OF 22 SHEETS |   |   | CONTRACT NO. 78164 |                 |             |                 |              |
| PLOT DATE =  | CHECKED -   | REVISED -      | ILLINOIS FED. AID PROJECT |   |   |                    |                 |             |                 |              |
|              |             |                |                           |   |   |                    |                 |             |                 |              |



**PLAN**



**SECTION**



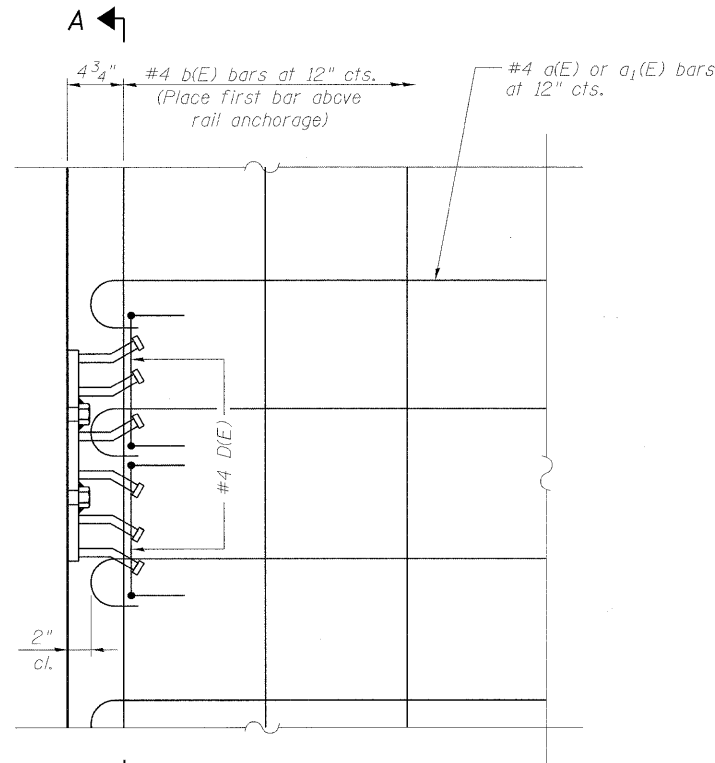
**CLAMPING PLATE**

**SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.**

Cost included with Precast Prestressed Concrete Deck Beams.  
 See Stage Construction Details for traffic lanes.

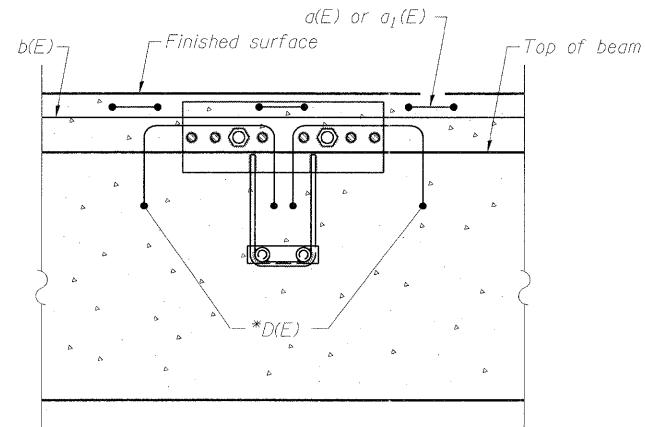
\*\* Cast semicircular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts.

|   |                        |                |           |   |   |                           |         |        |                 |              |
|---|------------------------|----------------|-----------|---|---|---------------------------|---------|--------|-----------------|--------------|
| FILE NAME =<br>0760025_78164-014-SuperDel.dgn | USER NAME = cox0283    | DESIGNED - BWC | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>SUPERSTRUCTURE DETAILS (SHEET 1 OF 2)<br/>STRUCTURE NO. 076-0025</b> | F.A.P.<br>RTE.            | SECTION | COUNTY | TOTAL<br>SHEETS | SHEET<br>NO. |
|   | PLOT SCALE =           | CHECKED - BWC  | REVISED - |   |   | 132                       | 103BR-1 | POPE   | 38              | 30           |
|   | PLOT DATE = 07/02/2011 | DRAWN - BWC    | REVISED - |   |   | CONTRACT NO. 78164        |         |        |                 |              |
|   |                        | CHECKED - MNM  | REVISED - |   |   | ILLINOIS FED. AID PROJECT |         |        |                 |              |
|   |                        |                |           |   | SHEET NO. 14 OF 22 SHEETS   |                           |         |        |                 |              |

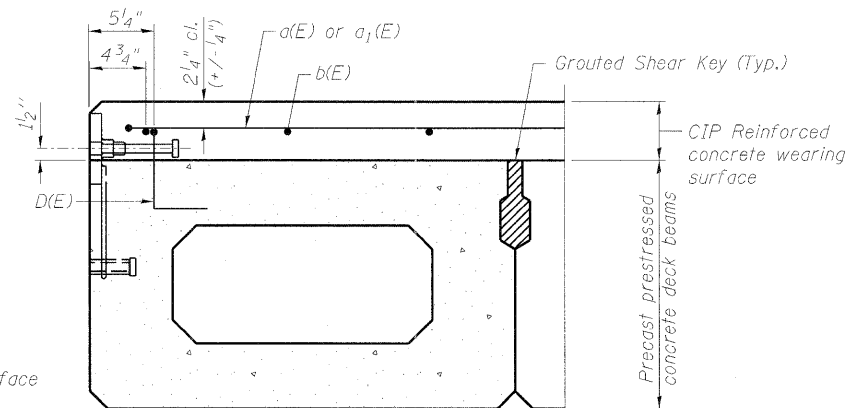


**PLAN**

Notes:  
 The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field.  
 Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.  
 See Sheet 2 of 22 for location of rail anchors.

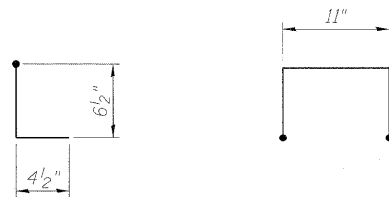


**SECTION A-A**



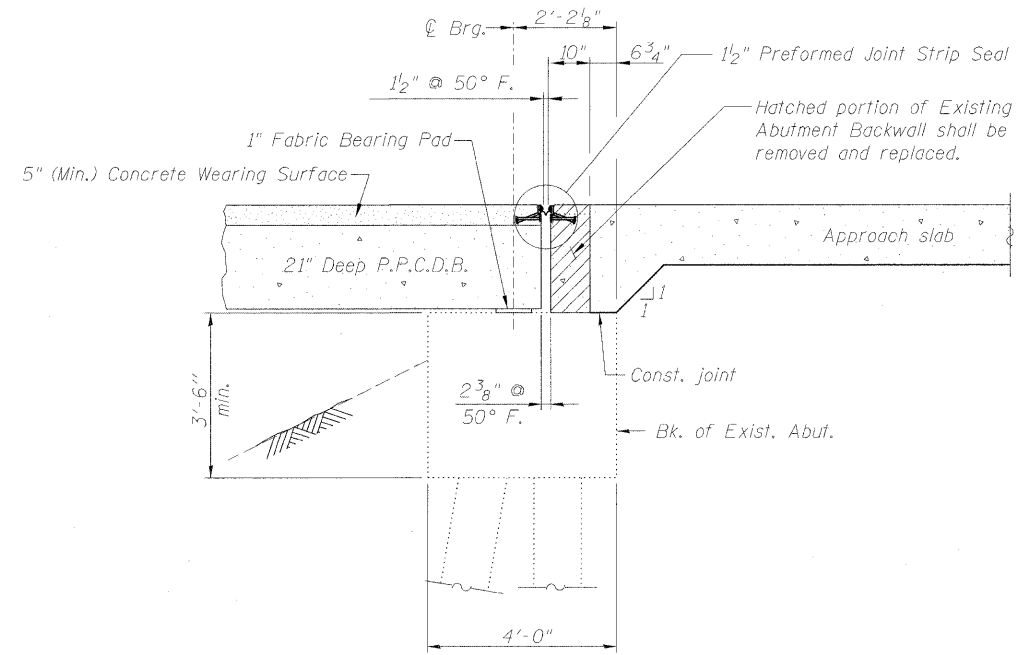
**SECTION THRU FASCIA BEAM**

**CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE**



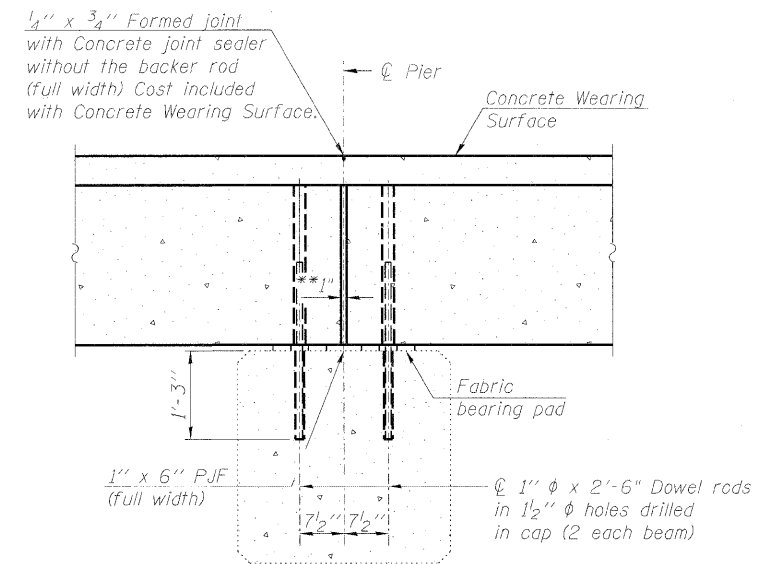
**BAR D(E)**

\* Place 2-#4 D(E) bars in beam at each post location shown. D(E) bars included in cost of beam.



**SECTION THRU EXISTING PILE SUPPORTED STUB ABUTMENT**

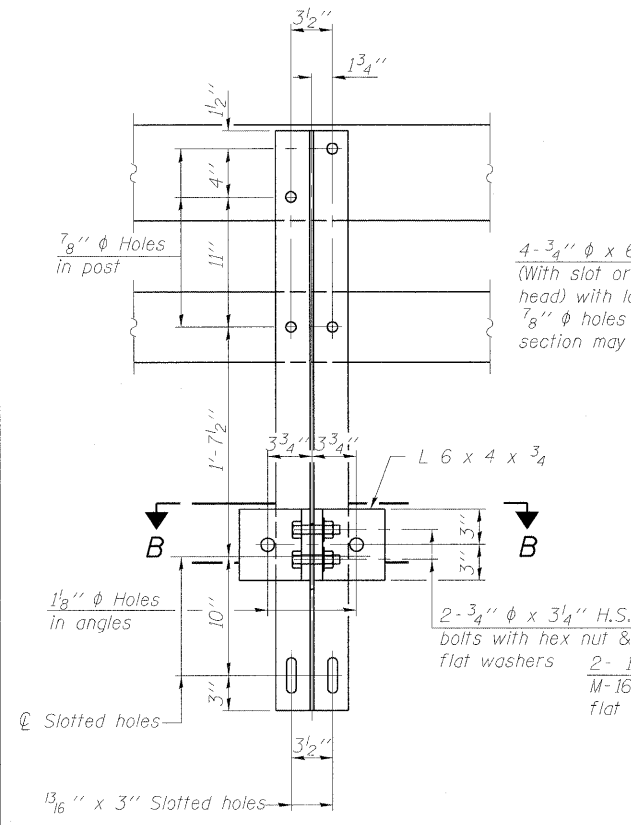
(Horiz. dim. @ Rt. L's)  
 Notes:  
 All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.  
 See Sheets 11 & 13 of 22 for fabric bearing pad details.



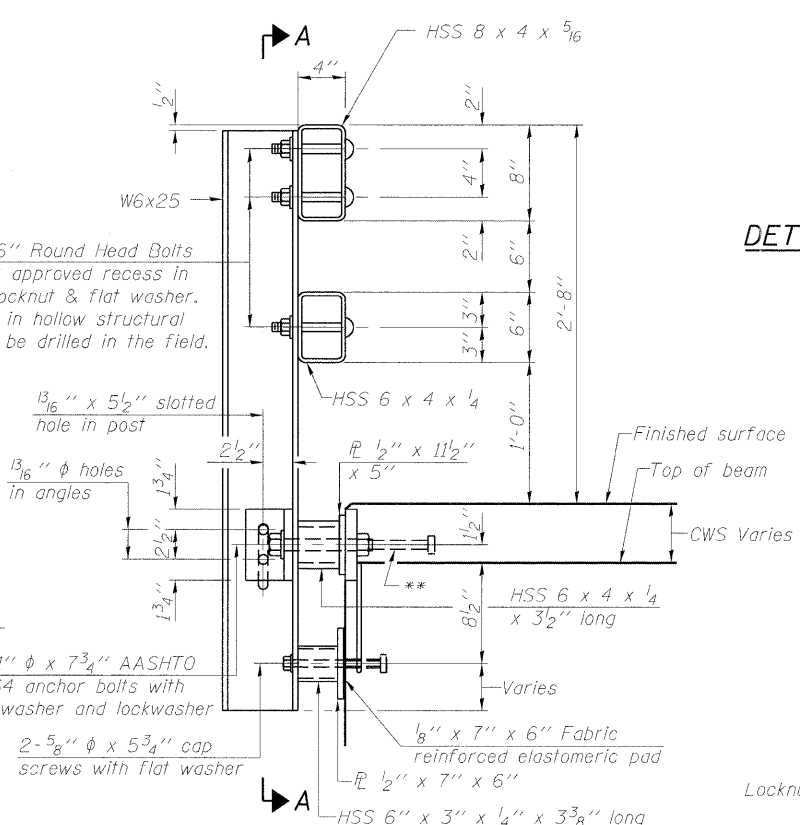
**SECTION THRU EXISTING FIXED PIER**

(Horiz. dim. @ Rt. L's)  
 \*\* 1" Jt. shall be filled with non-shrink grout.  
 1" dimension may vary to accommodate tolerance in beam lengths.  
 See Sheet 11 & 13 of 22 for fabric bearing pad details.

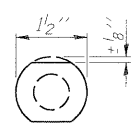
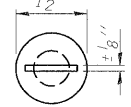
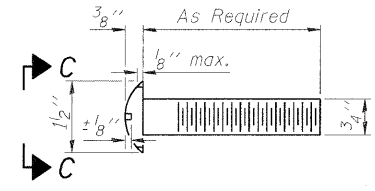
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| FILE NAME =<br>0760025_78164-015-SuperDet.dgn | USER NAME =<br>cax01283 | DESIGNED -<br>BWC | REVISED -                 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>SUPERSTRUCTURE DETAILS (SHEET 2 OF 2)<br/>STRUCTURE NO. 076-0025</b> | F.A.P.<br>RTE.<br>132 | SECTION<br>103BR-1 | COUNTY<br>POPE | TOTAL<br>SHEETS<br>38 | SHEET<br>NO.<br>31 |
| PLOT SCALE =                                  | DRAWN -<br>BWC          | REVISED -         | CONTRACT NO. 78164        |   |   |                       |                    |                |                       |                    |
| PLOT DATE =<br>07/01/2011                     | CHECKED -<br>MNM        | REVISED -         | ILLINOIS FED. AID PROJECT |   |   |                       |                    |                |                       |                    |
| SHEET NO. 15 OF 22 SHEETS                     |                         |                   |                           |   |   |                       |                    |                |                       |                    |



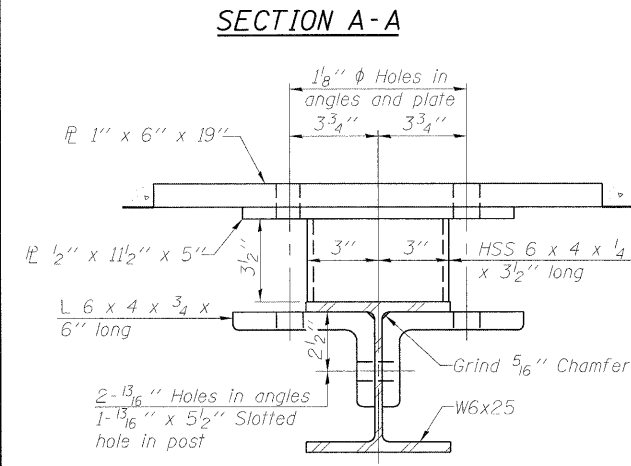
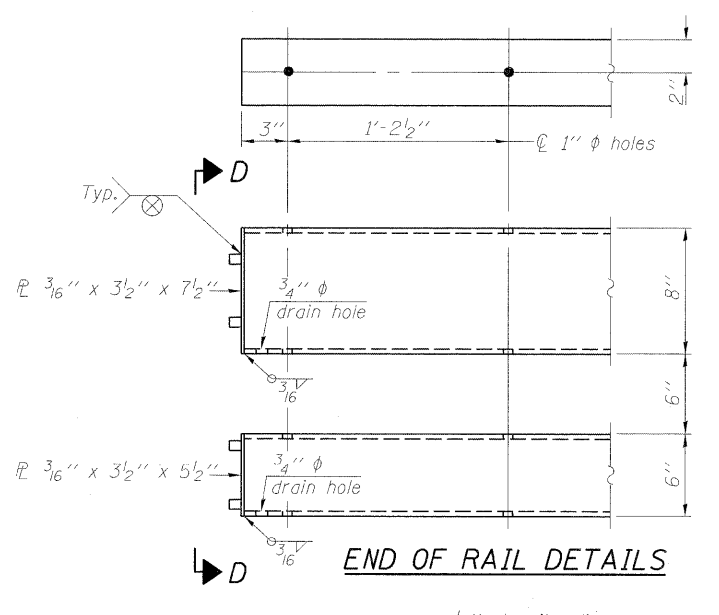
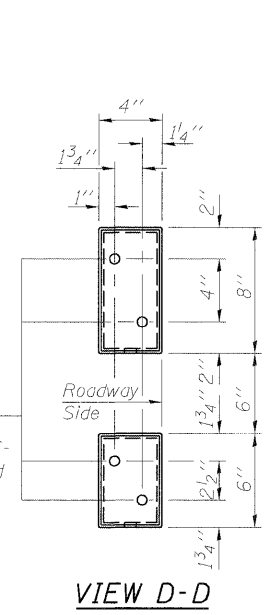
4-3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.



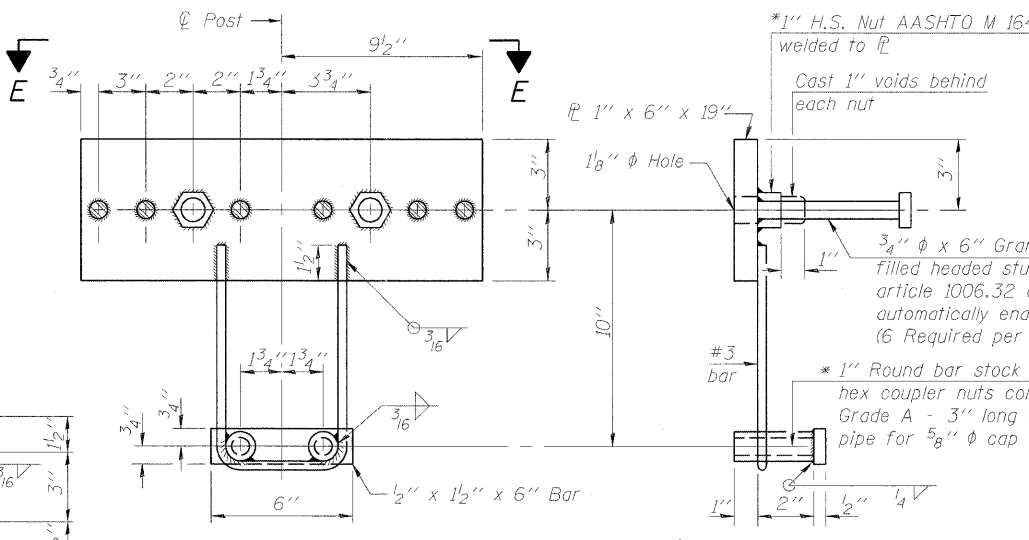
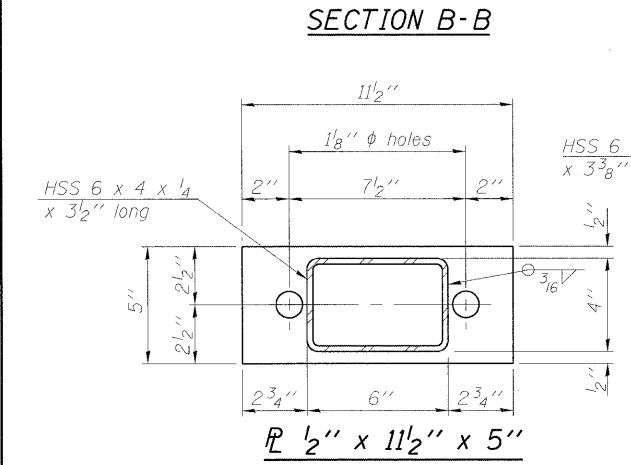
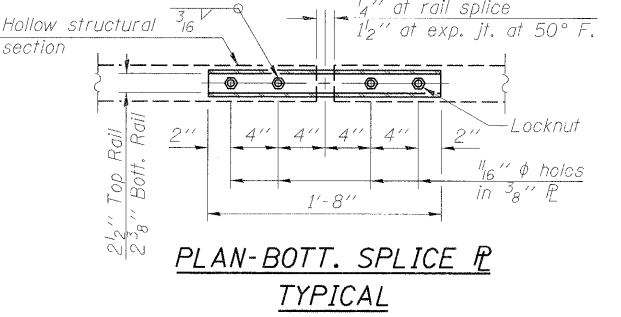
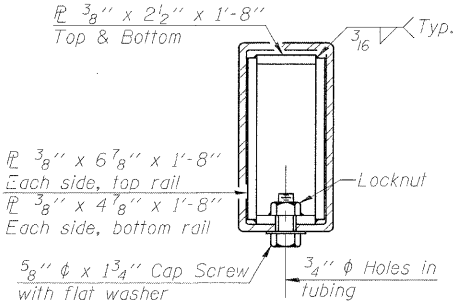
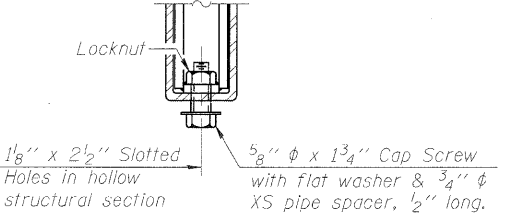
DETAIL OF 3/4" φ ROUND HEAD BOLT



VIEW C-C



RAIL SPLICE CONNECTION AT EXPANSION JT.



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

BILL OF MATERIAL

| Item                   | Unit | Quantity |
|------------------------|------|----------|
| Steel Railing, Type SM | Foot | 585      |

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.  
 Steel rail elements 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.

R-34CWS 7-1-10 (6'-3" Maximum Post Spacing) (5" minimum to 7/8" maximum CWS thickness)

|   |                      |                |           |
|---|----------------------|----------------|-----------|
| FILE NAME = 0760025_78164-016-Steel-Railing.rpdgn | USER NAME = cov01283 | DESIGNED - BWC | REVISED - |
| PLOT SCALE =                                      | DRAWN - BWC          | CHECKED - BWC  | REVISED - |
| PLOT DATE = 07/01/2011                            | CHECKED - MNM        | REVISED -      | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE  
 STRUCTURE NO. 076-0025

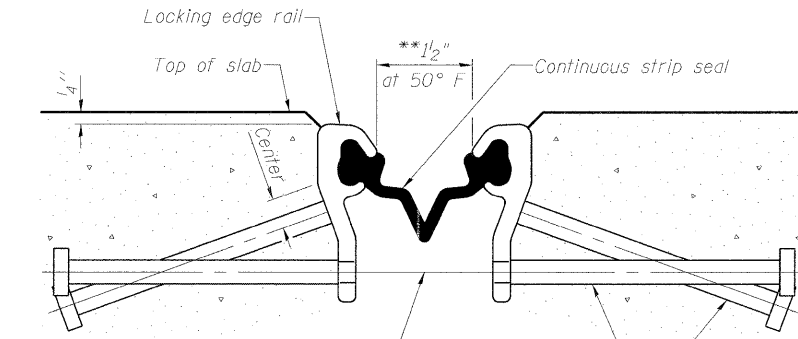
|                 |                 |             |                 |                    |
|-----------------|-----------------|-------------|-----------------|--------------------|
| F.A.P. RTE. 132 | SECTION 103BR-1 | COUNTY POPE | TOTAL SHEETS 38 | SHEET NO. 32       |
|                 |                 |             |                 | CONTRACT NO. 78164 |

SHEET NO. 16 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



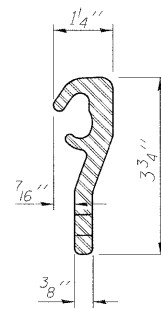
\*\*When joint is fixed, dimension is set at 1 1/2".



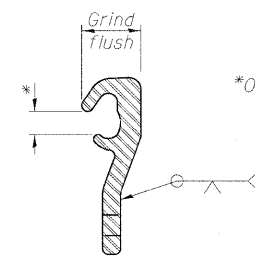
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Place 1/2"  $\phi$  x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS**



**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

FILE NAME = 0760025\_78164-017-Exp-Jt.dgn

USER NAME = cpx01283

DESIGNED - BWC

REVISED -

CHECKED -

REVISED -

PLOT SCALE =

DRAWN - BWC

REVISED -

PLOT DATE = 07/04/2011

CHECKED - MNM

REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

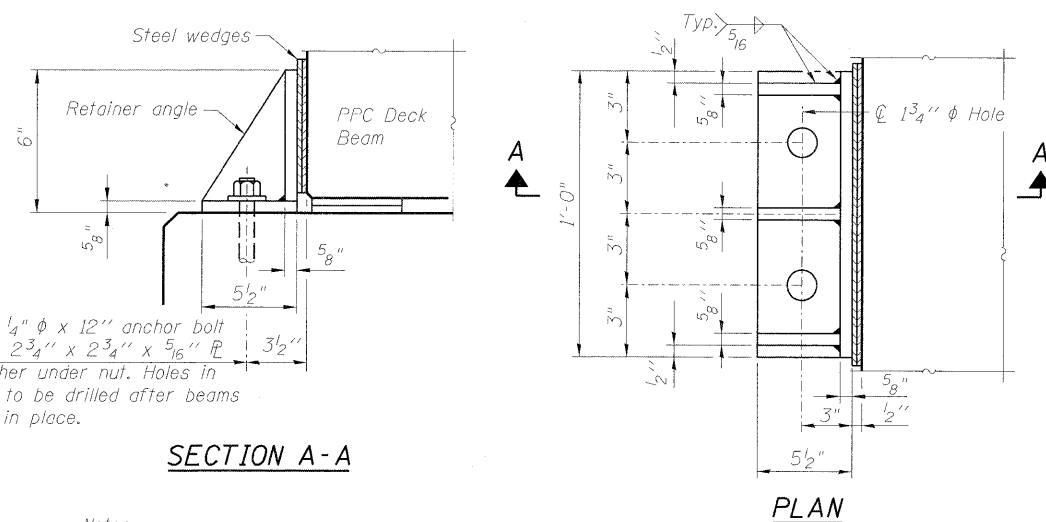
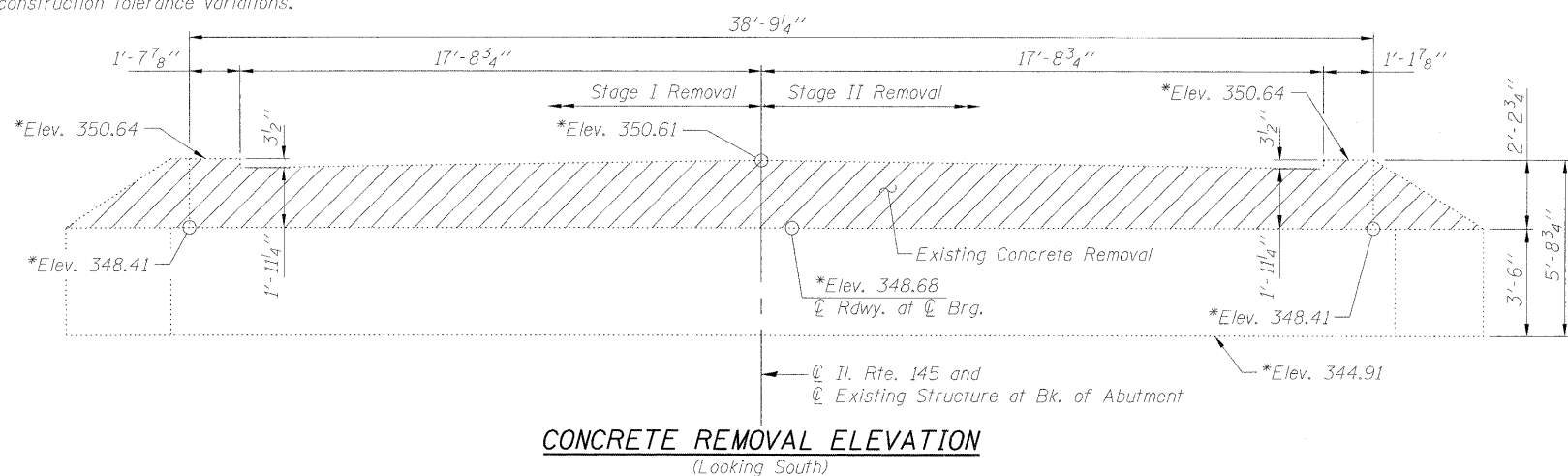
**PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 076-0025**

SHEET NO. 17 OF 22 SHEETS

|                    |                    |                |                    |                    |
|--------------------|--------------------|----------------|--------------------|--------------------|
| F.A.P. RTE.<br>132 | SECTION<br>103BR-1 | COUNTY<br>POPE | TOTAL SHEETS<br>38 | SHEET NO.<br>33    |
|                    |                    |                |                    | CONTRACT NO. 78164 |

ILLINOIS FED. AID PROJECT

\* Elevations given are from existing plans and have been adjusted by deducting 0.41 ft. The comparison data is based on a survey of the existing bearing seats, and is subject to normal construction tolerance variations.



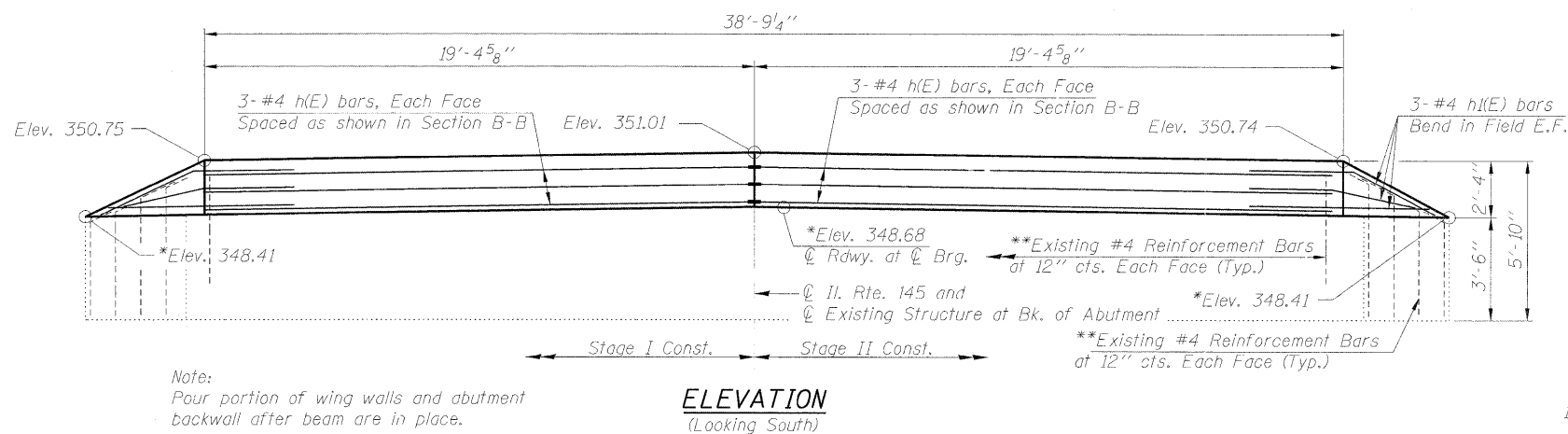
@ 1 1/4"  $\phi$  x 12" anchor bolt with 2 3/4" x 2 3/4" x 5/16" PL washer under nut. Holes in cap to be drilled after beams are in place.

SECTION A-A

PLAN

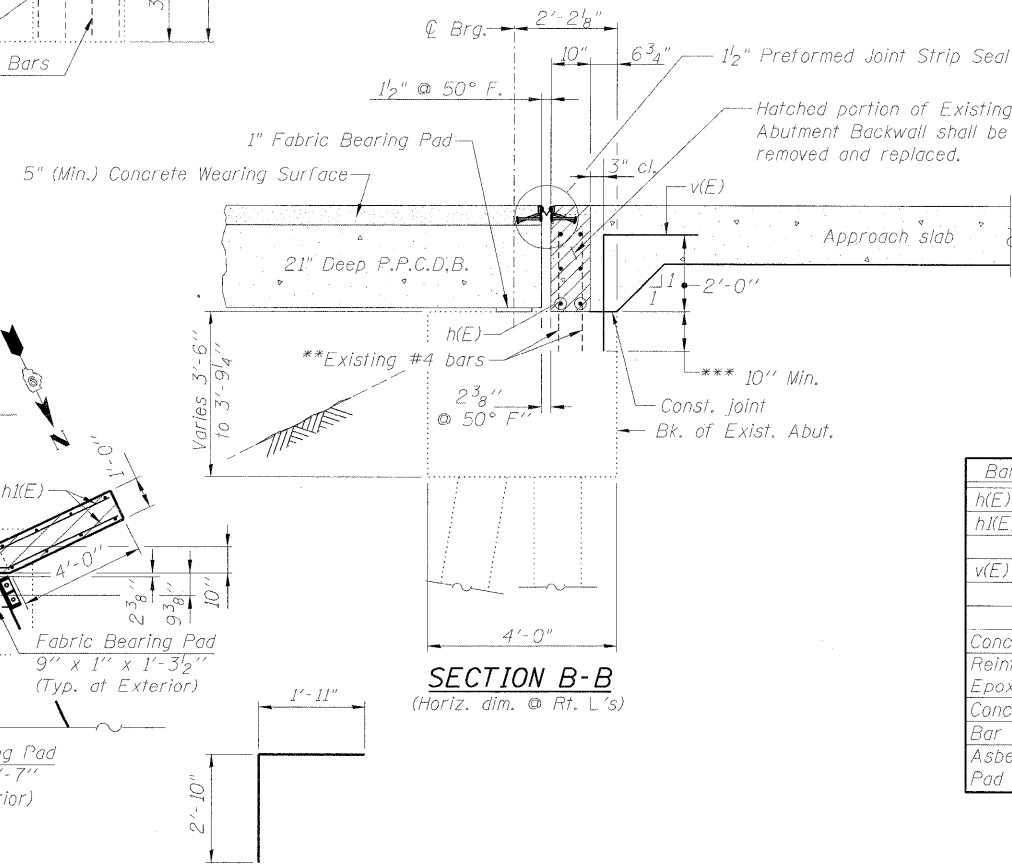
Notes:  
 Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams. Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385. Anchor bolts and plate washers shall be galvanized according to AASHTO M 232. After the notch or concrete overlay are poured and cured, the steel wedges shall be removed.

Notes:  
 \*\* Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal. Bars damaged or not salvaged shall be replaced with either drilled and epoxy grouted bars or IDOT approved mechanical bar splicer as directed by the Engineer. No additional compensation will be allowed for either method.  
 \*\*\* Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.



Note:  
 Pour portion of wing walls and abutment backwall after beam are in place.

ELEVATION (Looking South)



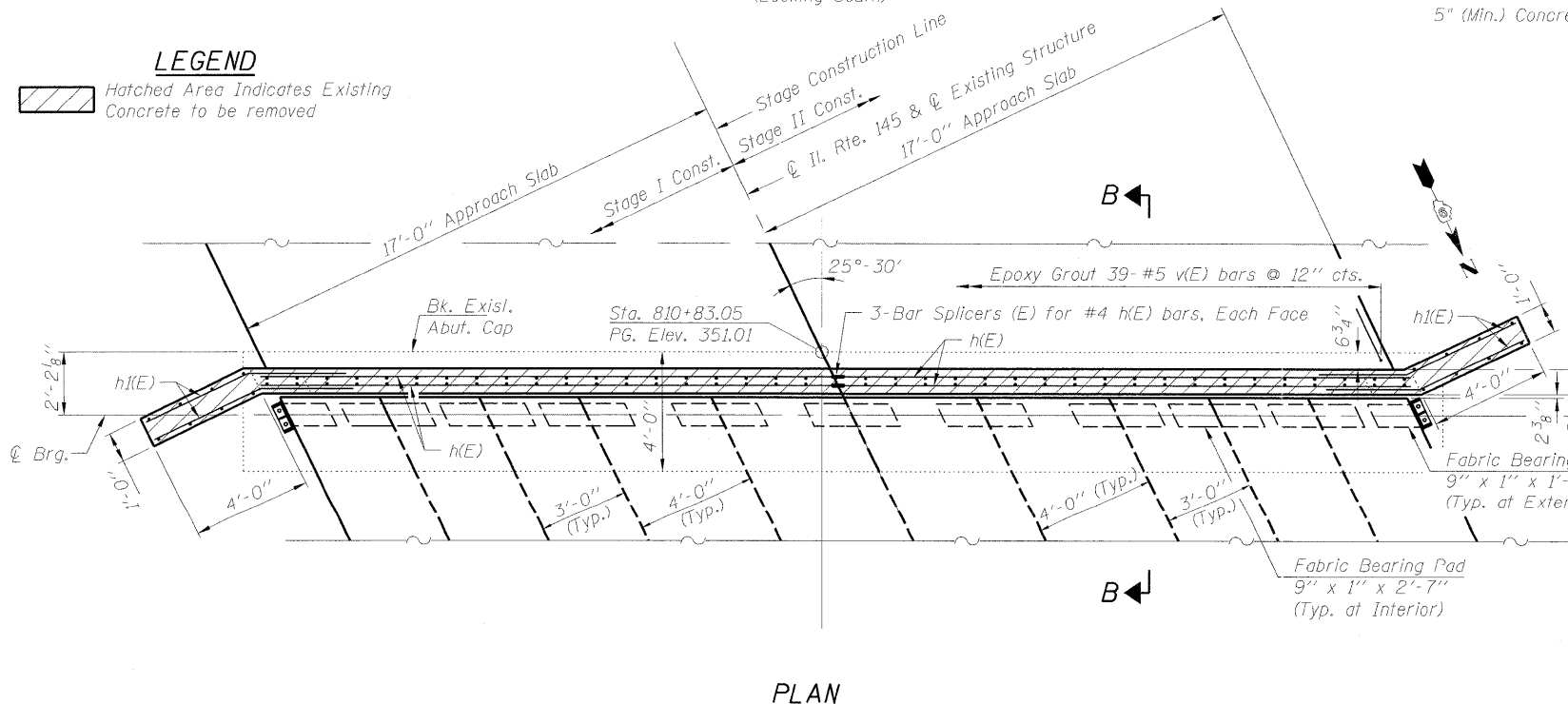
SECTION B-B (Horiz. dim. @ Rt. L's)

BAR v(E)

SOUTH ABUTMENT BILL OF MATERIAL

| Bar No.                          | Size | Length | Shape       |
|----------------------------------|------|--------|-------------|
| h(E)                             | #4   | 19'-2" | —           |
| h(E)                             | #4   | 7'-0"  | —           |
| v(E)                             | #5   | 4'-9"  | └           |
| Concrete Structures              |      |        | Cu. Yd. 3.1 |
| Reinforcement Bars, Epoxy Coated |      |        | Pound 400   |
| Concrete Removal                 |      |        | Cu. Yd. 2.6 |
| Bar Splicers                     |      |        | Each 6      |
| Asbestos Bearing Pad Removal     |      |        | Each 22     |

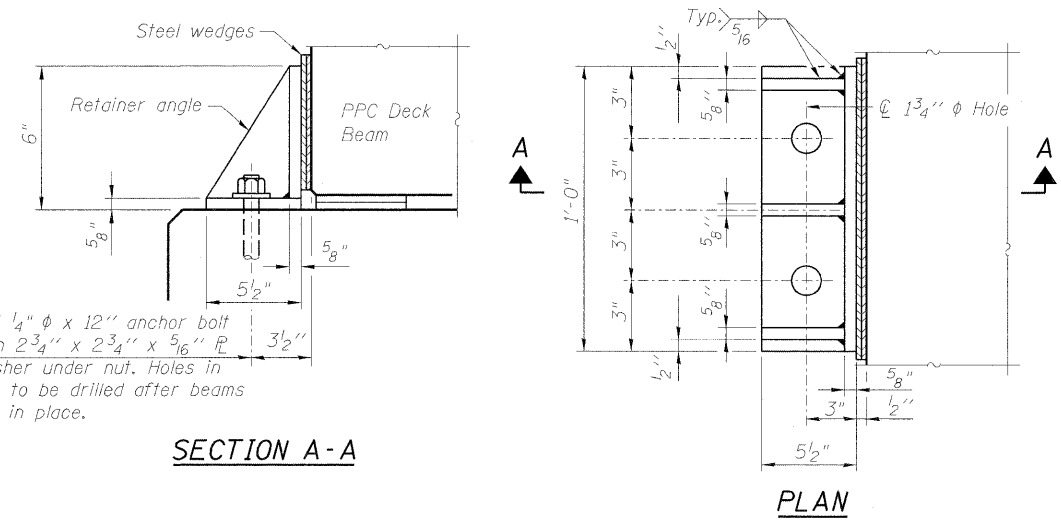
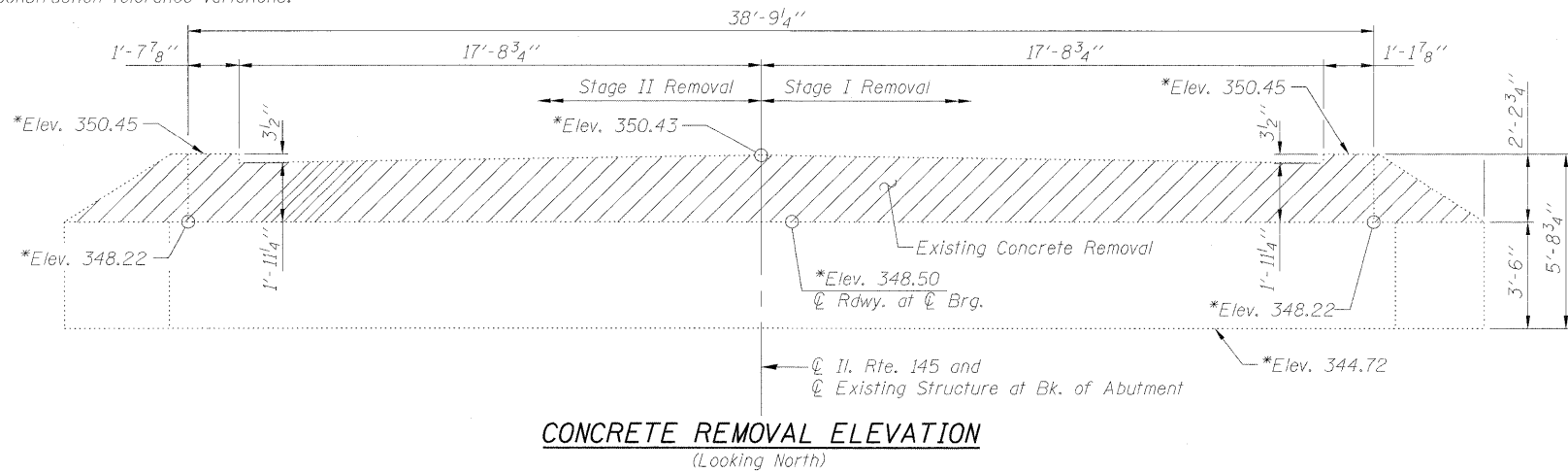
**LEGEND**  
 Hatched Area Indicates Existing Concrete to be removed



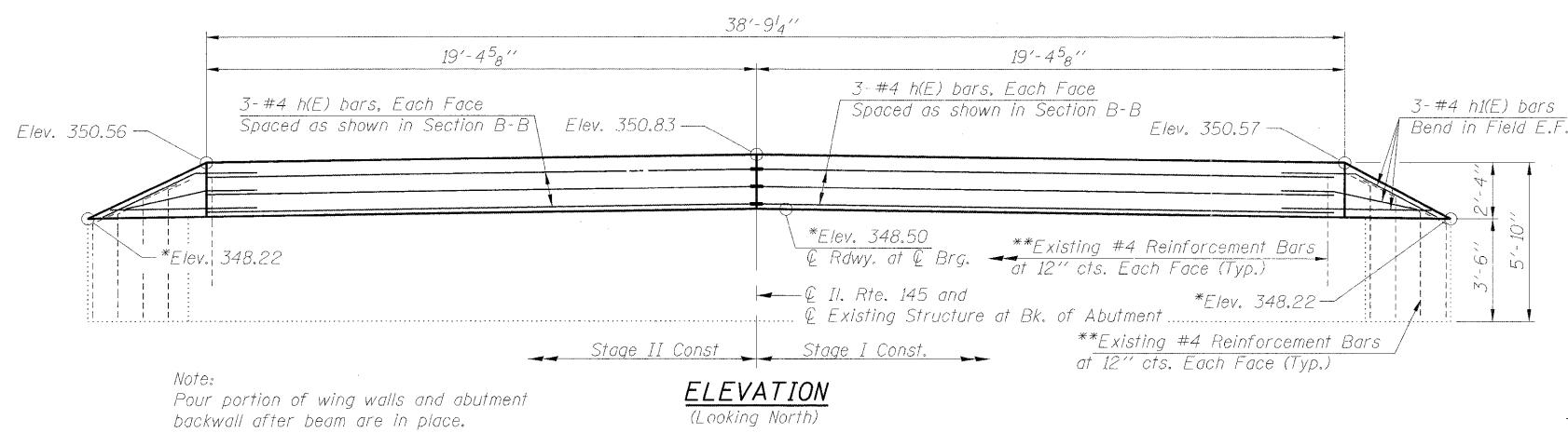
PLAN

HANSON PROFESSIONAL DESIGN FIRM LICENSE #184-001084  
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\* Elevations given are from existing plans and have been adjusted by deducting 0.41 ft. The comparison data is based on a survey of the existing bearing seats, and is subject to normal construction tolerance variations.

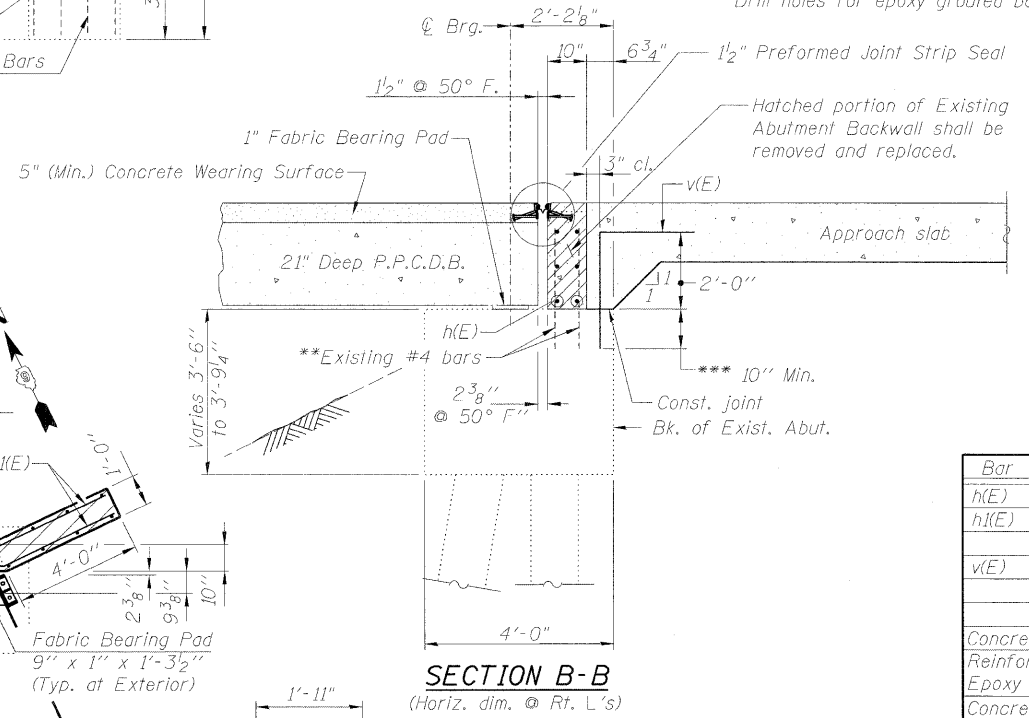
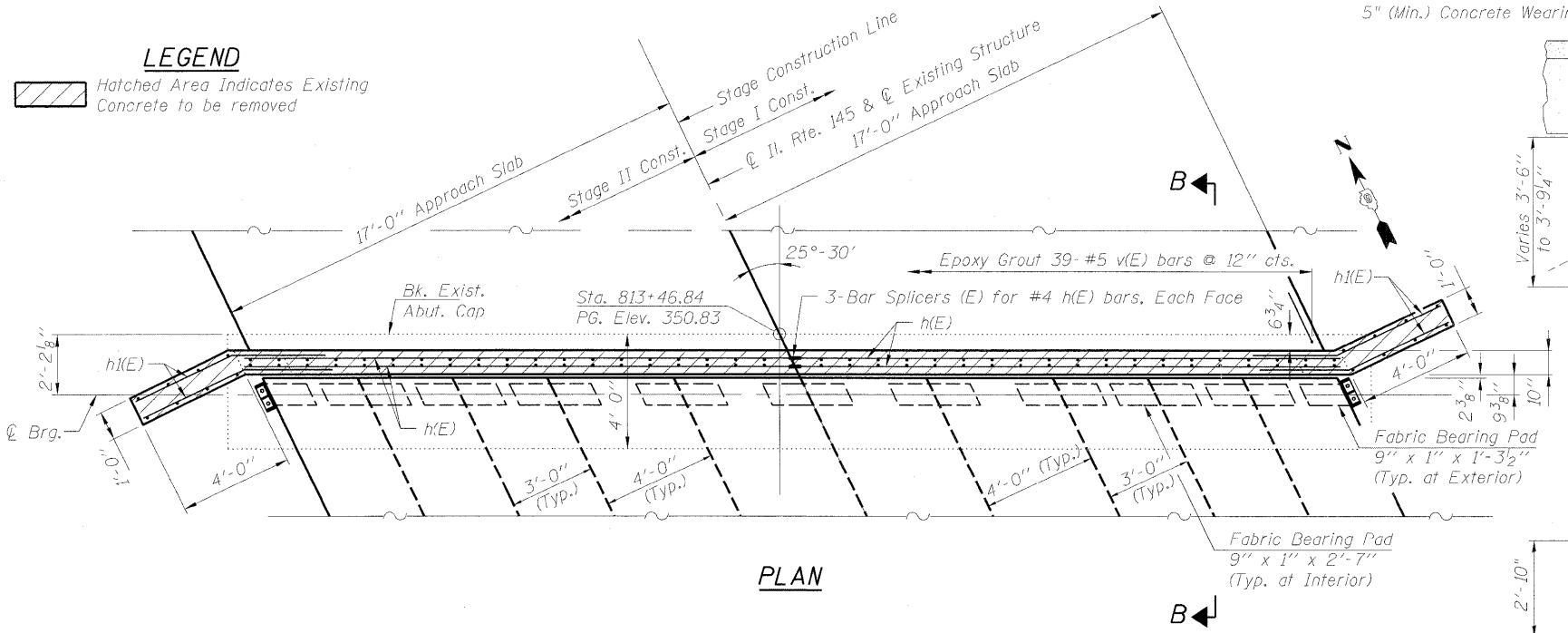


Notes:  
 Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams. Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385. Anchor bolts and plate washers shall be galvanized according to AASHTO M 232. After the notch or concrete overlay are poured and cured, the steel wedges shall be removed.



Notes:  
 \*\* Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal. Bars damaged or not salvaged shall be replaced with either drilled and epoxy grouted bars or IDOT approved mechanical bar splicer as directed by the Engineer. No additional compensation will be allowed for either method.  
 \*\*\* Bars epoxy grouted shall have an embedment sufficient to obtain 1.25 x yield strength of the reinforcing bar.  
 Drill holes for epoxy grouted bars to miss existing reinforcement.

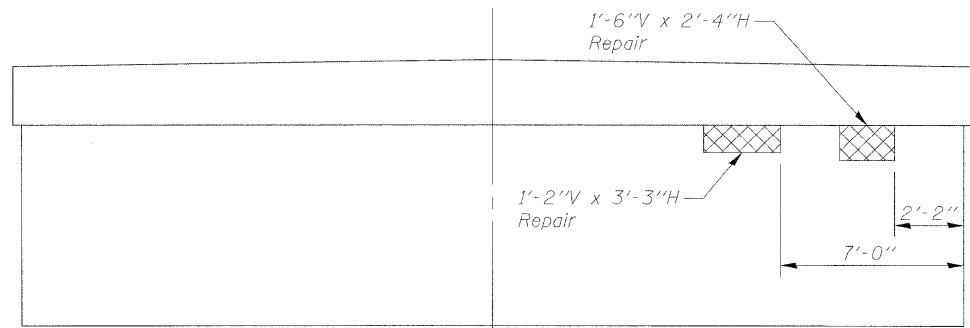
**LEGEND**  
 Hatched Area Indicates Existing Concrete to be removed



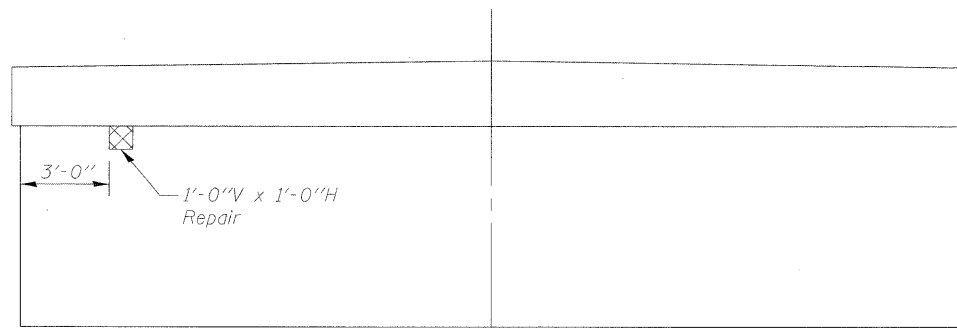
**NORTH ABUTMENT BILL OF MATERIAL**

| Bar                              | No. | Size    | Length | Shape |
|----------------------------------|-----|---------|--------|-------|
| h(E)                             | 12  | #4      | 19'-2" | —     |
| h(E)                             | 12  | #4      | 7'-0"  | —     |
| v(E)                             | 39  | #5      | 4'-9"  | └     |
| Concrete Structures              |     | Cu. Yd. |        | 3.1   |
| Reinforcement Bars, Epoxy Coated |     | Pound   |        | 400   |
| Concrete Removal                 |     | Cu. Yd. |        | 2.7   |
| Bar Splicers                     |     | Each    |        | 6     |
| Asbestos Bearing Pad Removal     |     | Each    |        | 22    |

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 PROFESSIONAL DESIGN FIRM LICENSE #184-001084  
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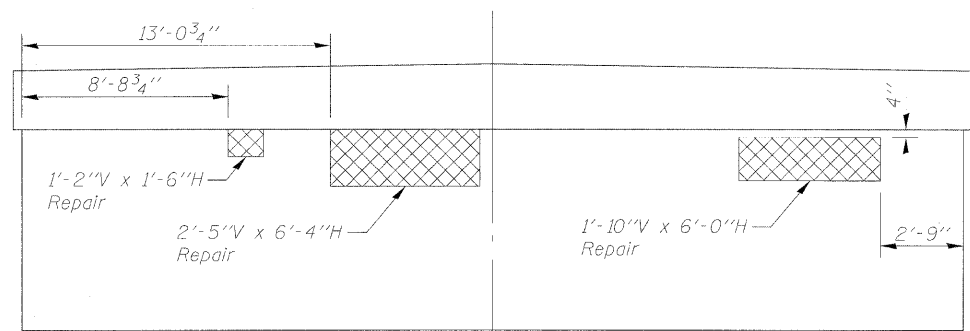


**PIER 1 - ELEVATION**  
(North Face)

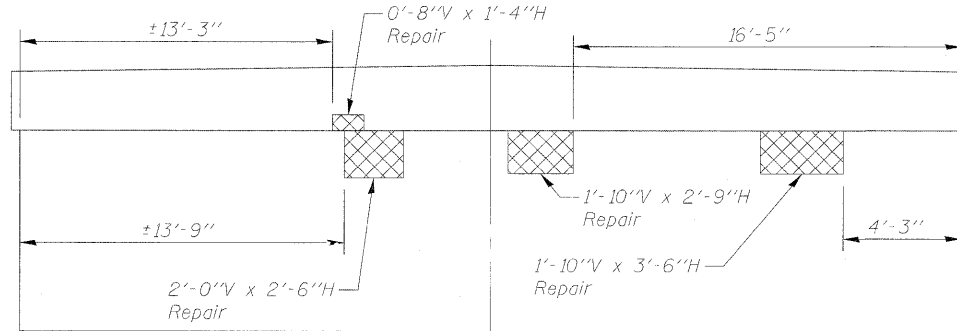


**PIER 2 - ELEVATION**  
(North Face)

Notes:  
 See Sheet 15 of 22 for Section Thru Pier cap and additional details.  
 Dimensions shown for repair are for estimating purposes only. Final limits of repair are to be determined in the field.



**PIER 1 - ELEVATION**  
(South Face)

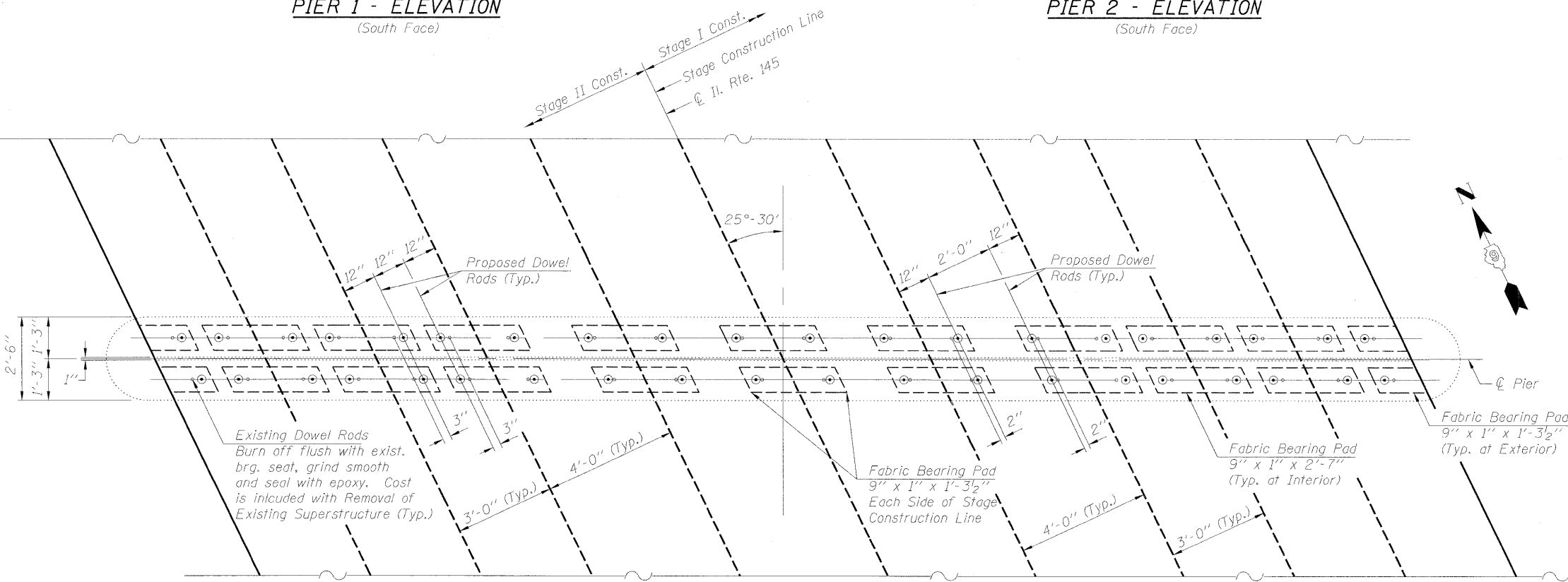


**PIER 2 - ELEVATION**  
(South Face)

**LEGEND**

Structural Repair of Concrete (Depth equal to or less than 5 inches)

V - Indicates Vertical  
 H - Indicates Horizontal



**PLAN**  
(Looking North)

**BILL OF MATERIAL**

| Item   | Unit    | Quantity |
|--|---------|----------|
| Structural Repair of Concrete (Depth equal to or less than 5 inches) | Sq. Ft. | 53.7     |

FILE NAME = 0762025\_78164-020-Pier1-2.dgn

USER NAME = cox01283

DESIGNED - BWC

REVISED -

PLOT SCALE =

CHECKED -

REVISED -

PLOT DATE = 07/01/2011

DRAWN - BWC

REVISED -

CHECKED - MNM

REVISED -

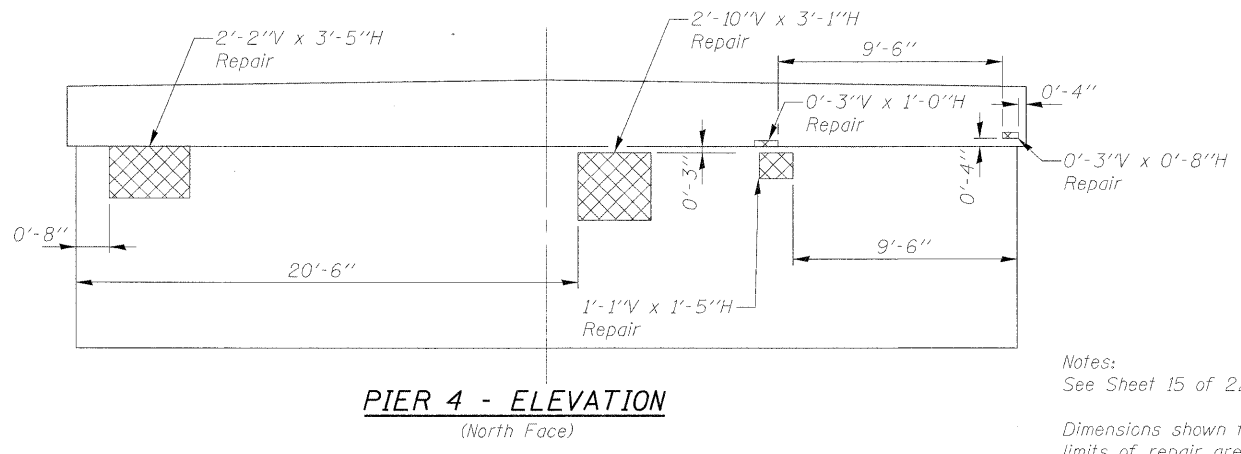
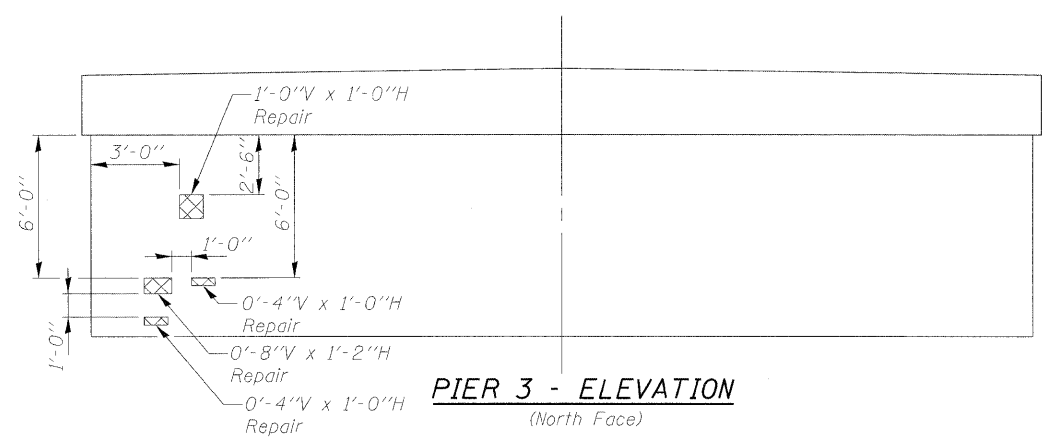
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIERS 1 & 2**  
**STRUCTURE NO. 076-0025**

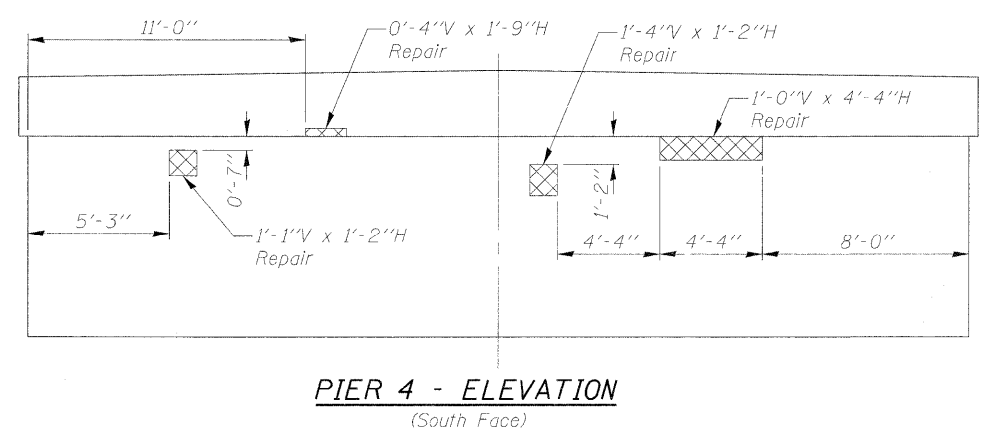
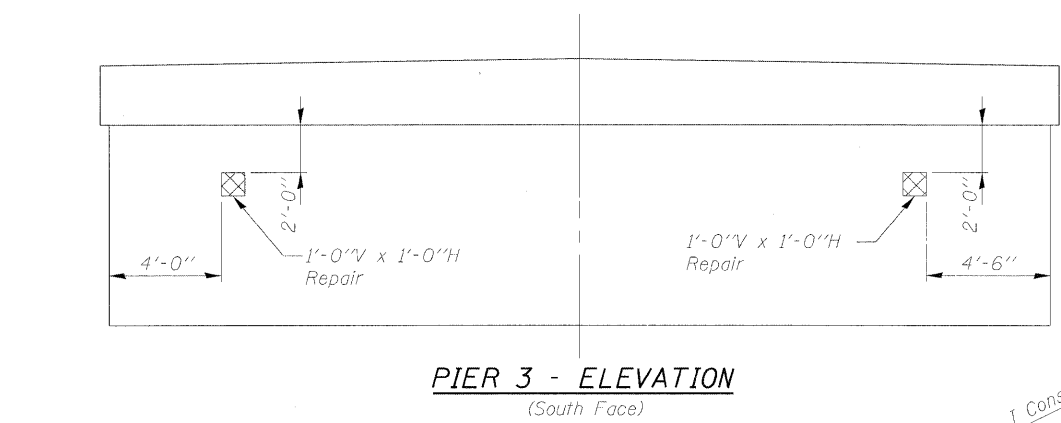
SHEET NO. 20 OF 22 SHEETS

| F.A.P. RTE.        | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|---------|--------|--------------|-----------|
| 132                | 103BR-1 | POPE   | 38           | 36        |
| CONTRACT NO. 78164 |         |        |              |           |

ILLINOIS FED. AID PROJECT



Notes:  
 See Sheet 15 of 22 for Section Thru Pier cap and additional details.  
 Dimensions shown for repair are for estimating purposes only. Final limits of repair are to be determined in the field.

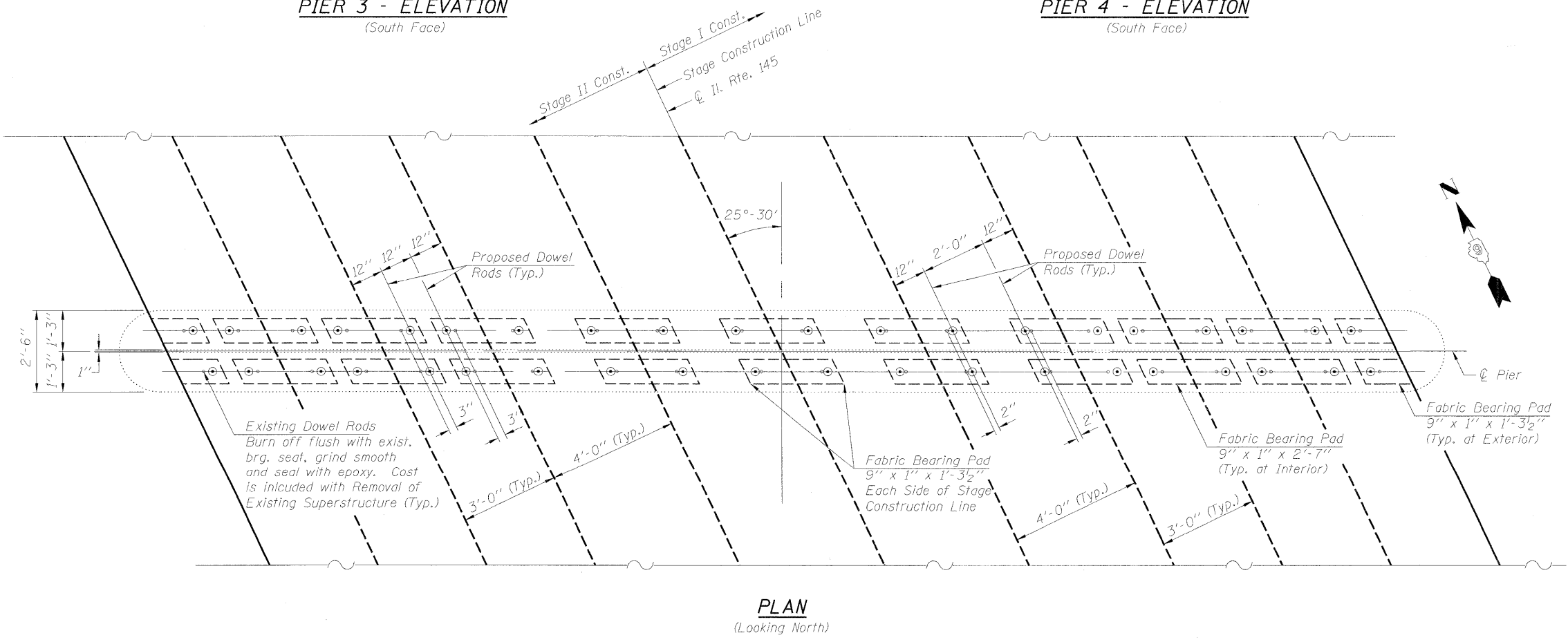


**LEGEND**

Structural Repair of Concrete (Depth equal to or less than 5 inches)

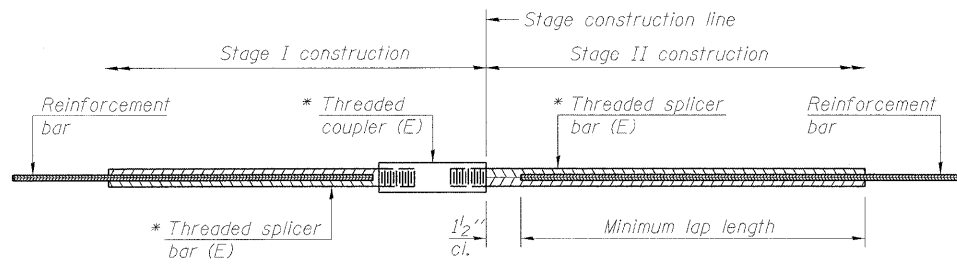
V - Indicates Vertical

H - Indicates Horizontal



**BILL OF MATERIAL**

| Item   | Unit    | Quantity |
|--|---------|----------|
| Structural Repair of Concrete (Depth equal to or less than 5 inches) | Sq. Ft. | 30.3     |



**STANDARD BAR SPLICER ASSEMBLY**

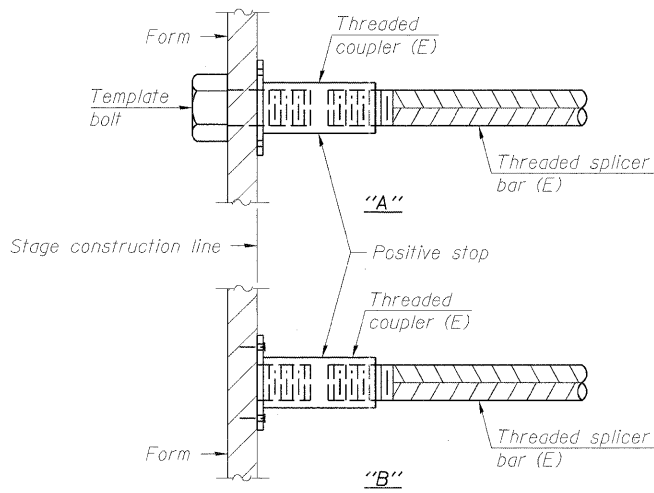
| Bar size to be spliced | Minimum Lap Lengths |         |         |         |         |
|------------------------|---------------------|---------|---------|---------|---------|
|                        | Table 1             | Table 2 | Table 3 | Table 4 | Table 5 |
| 3, 4                   | 1'-5"               | 1'-11"  | 2'-1"   | 2'-4"   | 2'-3"   |
| 5                      | 1'-9"               | 2'-5"   | 2'-7"   | 2'-11"  | 2'-10"  |
| 6                      | 2'-1"               | 2'-11"  | 3'-1"   | 3'-6"   | 3'-4"   |
| 7                      | 2'-9"               | 3'-10"  | 4'-2"   | 4'-8"   | 4'-6"   |
| 8                      | 3'-8"               | 5'-1"   | 5'-5"   | 6'-2"   | 5'-10"  |
| 9                      | 4'-7"               | 6'-5"   | 6'-10"  | 7'-9"   | 7'-5"   |

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

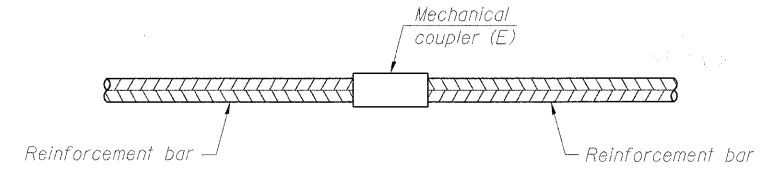
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location                 | Bar size | No. assemblies required | Table for minimum lap length |
|--------------------------|----------|-------------------------|------------------------------|
| South Abutment           | #4       | 6                       | 3                            |
| North Abutment           | #4       | 6                       | 3                            |
| South Appr Slab          | #4       | 25                      | 4                            |
| South Appr Slab          | #5       | 46                      | 3                            |
| South Appr Slab Footing  | #5       | 40                      | 3                            |
| North Appr Slab          | #4       | 25                      | 4                            |
| North Appr Slab          | #5       | 46                      | 3                            |
| North Appr Slab Footing  | #5       | 40                      | 3                            |
| Concrete Wearing Surface | #4       | 260                     | 3                            |



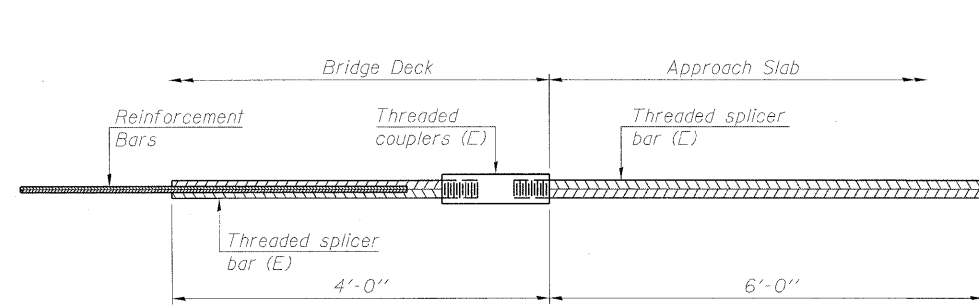
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



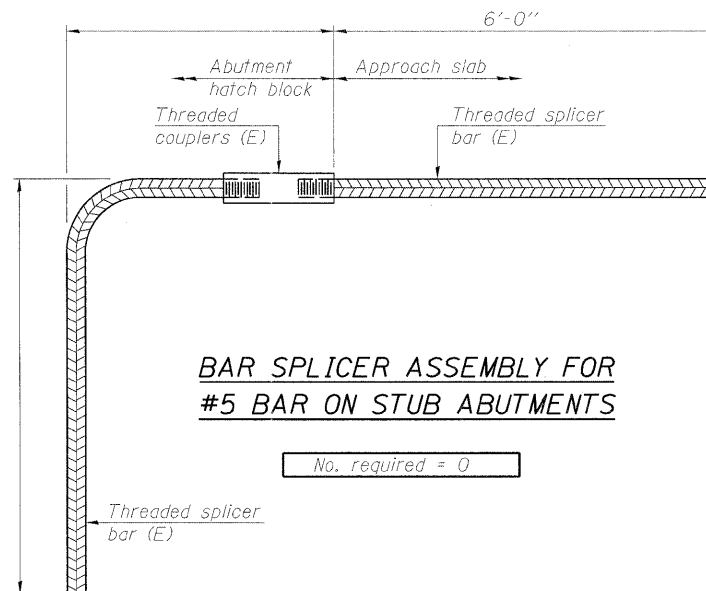
**STANDARD MECHANICAL SPLICER**

| Location | Bar size | No. assemblies required |
|----------|----------|-------------------------|
|          |          |                         |
|          |          |                         |
|          |          |                         |
|          |          |                         |



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required = 0



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required = 0

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

|   |                      |                |           |
|---|----------------------|----------------|-----------|
| FILE NAME = 0750025_78164-022-Bar_Splicer.dgn | USER NAME = cox01283 | DESIGNED - BWC | REVISED - |
|   |                      | CHECKED -      | REVISED - |
|   |                      | DRAWN - BWC    | REVISED - |
|   |                      | CHECKED - MNM  | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 076-0025**

SHEET NO. 22 OF 22 SHEETS

| F.A.P. RTE.               | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 132                       | 103BR-1 | POPE   | 38           | 38        |
| CONTRACT NO. 78164        |         |        |              |           |
| ILLINOIS FED. AID PROJECT |         |        |              |           |