

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|----------|--------------------|--------------|-----------|
| 877 | 101B-2 | WHITE | 60 | |
| FED. ROAD DIST. NO. | ILLINOIS | CONTRACT NO. 78162 | | |

INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|----------------------------------|
| 1. | COVER SHEET |
| 2. | GENERAL NOTES & STANDARDS |
| 3-8. | SUMMARY OF QUANTITIES |
| 9-12. | TYPICAL SECTIONS |
| 13-14. | SCHEDULE OF QUANTITIES |
| 15. | ALIGNMENT, TIES AND BENCHMARKS |
| 16-17. | PLAN AND PROFILE SHEETS |
| 18-19. | STAGE CONSTRUCTION SHEETS |
| 20. | MISCELLANEOUS DETAILS (ENTRANCE) |
| 21. | SURVELEVATION TRANSITION DETAILS |
| 22. | EROSION CONTROL PLAN |
| 23. | PAVEMENT MARKING PLAN |
| 24. | PAVED SHOULDER LAYOUT |
| 25. | GUARDRAIL LAYOUT |
| 26. | WIDE LOAD DETAIL |
| 27-28. | STANDARD DETAILS DISTRICT 9 |
| 29-47. | STRUCTURE PLANS |
| 48-49. | SOIL BORINGS |
| 50-60. | CROSS SECTIONS |

**PROPOSED
HIGHWAY PLANS**

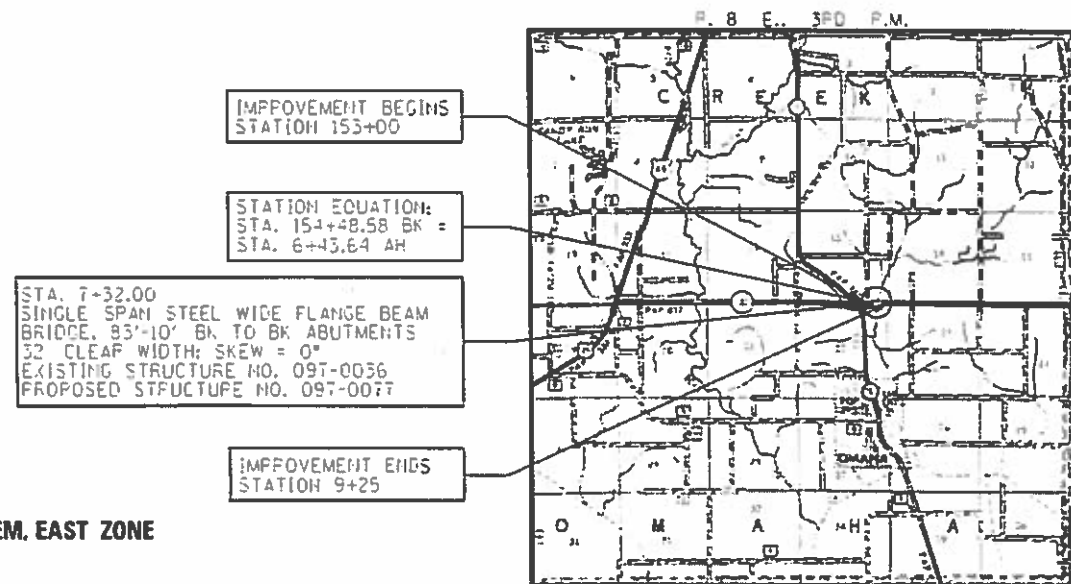
F.A.P. ROUTE 877 (IL ROUTE 141)
SECTION 101B-2
PROJECT STP-VFD4(851)
WHITE COUNTY
C-99-017-10
STRUCTURE REPLACEMENT
OVER CANE CREEK TRIBUTARY



TRAFFIC DATA

ADT: 2530 (2018)
TRUCKS: 17.43%

TOWNSHIP
INDIAN CREEK



LOCATION MAP

APPROXIMATE SCALE: 1 MILE
NET LENGTH OF PROJECT = 429.94 FEET = 0.081 MILES
GROSS LENGTH OF PROJECT = 429.94 FEET = 0.081 MILES
ROADWAY LENGTH = 346.10 FEET = 0.066 MILES
BRIDGE LENGTH = 83.84 FEET = 0.016 MILES

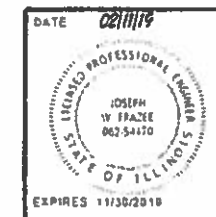
DESIGN DESIGNATION: N/A
COORDINATE SYSTEM: ILLINOIS COORDINATE SYSTEM, EAST ZONE
POSTED SPEED: 55 MPH

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

PROJECT ENGINEER: DAVID PICHE
PROJECT DESIGNER: HLR, INC.

HLR
HAMPSON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS • STRUCTURAL ENGINEERS • LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217 846 3400 www.hlrengineering.com

CONTRACT NO. 78162



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 03-15-19
[Signature]
REGION FIVE ENGINEER

May 10 2019
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2019
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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

| SUMMARY OF QUANTITIES | | | |
|-----------------------|-----------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 20200100 | EARTH EXCAVATION | CU YD | 79 |
| 20300100 | CHANNEL EXCAVATION | CU YD | 740 |
| 25000210 | SEEDING, CLASS 2A | ACRE | 0.15 |
| 25000350 | SEEDING, CLASS 7 | ACRE | 0.15 |
| 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 19 |
| 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | 12 |
| 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 12 |
| 25000700 | AGRICULTURAL GROUND LIMESTONE | TON | 0.3 |
| 25100115 | MULCH, METHOD 2 | ACRE | 0.3 |
| 25100630 | EROSION CONTROL BLANKET | SQ YD | 331 |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | 60 |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 741 |
| 28000500 | INLET AND PIPE PROTECTION | EACH | 1 |
| 28100107 | STONE RIPRAP, CLASS A4 | SQ YD | 625 |

^ SEE SPECIAL PROVISIONS

REV. - MS

| | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------|-----------------------------------------------------------------|-----------------------------------------------------|--------------------|-------------------------|--------|--------------|---------------------------|--|
| FILE NAME = p:\planroom\dot\illinois\p... | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES IL ROUTE 141 | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| HAMPTON, LENZINI AND RENWICK, INC. | DRAWN - T.W.K. | REVISED - | | | 877 | 101B-2 | WHITE | 60 | 3 | |
| 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | CHECKED - J.W.F. | REVISED - | | | CONTRACT NO. 78162 | | | | | |
| PLOT SCALE = 2.0000' / in. | DATE - *DAT* | REVISED - | | | SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA. | ILLINOIS FED. AID PROJECT | |

| SUMMARY OF QUANTITIES | | | |
|-----------------------|---------------------------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 28200200 | FILTER FABRIC | SQ YD | 625 |
| 35600716 | HOT-MIX ASPHALT BASE COURSE WIDENING, 10" | SQ YD | 238 |
| 40200500 | AGGREGATE SURFACE COURSE, TYPE A 6" | SQ YD | 41 |
| 40600290 | BITUMINOUS MATERIALS (TACK COAT) | POUND | 961 |
| 40600982 | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | SQ YD | 160 |
| 40600990 | TEMPORARY RAMP | SQ YD | 82 |
| 40600635 | LEVELING BINDER (MACHINE METHOD), N70 | TON | 151 |
| 40603315 | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 | TON | 102 |
| 42000060 | WELDED WIRE REINFORCEMENT | SQ YD | 88 |
| 42000080 | PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB | SQ YD | 112 |
| 44000100 | PAVEMENT REMOVAL | SQ YD | 411 |
| 48100700 | AGGREGATE SHOULDERS, TYPE A 8" | SQ YD | 60 |
| 48203029 | HOT-MIX ASPHALT SHOULDERS, 8" | SQ YD | 349 |
| 50100100 | REMOVAL OF EXISTING STRUCTURES | EACH | 1 |

^ SEE SPECIAL PROVISIONS

REV. - MS

| | | | | | | | | | | |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------|--------|---------|--------|--------------|-----------|
| FILE NAME = p:\planroom\dot\illinois\go | PROJECT = I-55/US-40 District 9 | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES IL ROUTE 141 | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. | 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | DRAWN - T.W.K. | REVISED - | | | 877 | 101B-2 | WHITE | 60 | 4 |
| PLOT SCALE = 2.0000' / in. | CHECKED - J.W.F. | REVISED - | CONTRACT NO. 78162 | | | | | | | |
| PLOT DATE = 3/18/2019 | DATE - *DAT* | REVISED - | SCALE: SHEET NO. 2 OF 6 SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT | | | | | | | |

| SUMMARY OF QUANTITIES | | | |
|-----------------------|-------------------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 230 |
| 50300100 | FLOOR DRAINS | EACH | 2 |
| 50300225 | CONCRETE STRUCTURES | CU YD | 60.2 |
| 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 125.7 |
| 50300260 | BRIDGE DECK GROOVING | SQ YD | 473 |
| 50300300 | PROTECTIVE COAT | SQ YD | 610 |
| 50301350 | CONCRETE SUPERSTRUCTURE (APPROACH SLAB) | CU YD | 96.4 |
| 50500105 | FURNISHING AND ERECTING STRUCTURAL STEEL | L SUM | 1 |
| 50500505 | STUD SHEAR CONNECTORS | EACH | 1350 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 71080 |
| 50800515 | BAR SPLICERS | EACH | 582 |
| 51200957 | FURNISHING METAL SHELL PILES 12" X 0.250" | FOOT | 887 |
| 51202305 | DRIVING PILES | FOOT | 887 |
| 51203200 | TEST PILE METAL SHELLS | EACH | 1 |

^ SEE SPECIAL PROVISIONS

| SUMMARY OF QUANTITIES | | | |
|-----------------------|----------------------------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 51500100 | NAME PLATES | EACH | 1 |
| 52100520 | ANCHOR BOLTS, 1" | EACH | 24 |
| 52200010 | TEMPORARY SHEET PILING | SQ FT | 1706 |
| 54262712 | METAL FLARED END SECTIONS 12" | EACH | 1 |
| 58600101 | GRANULAR BACKFILL FOR STRUCTURES | CU YD | 119 |
| 59100100 | GEOCOMPOSITE WALL DRAIN | SQ YD | 64 |
| 60100945 | PIPE DRAINS 12" | FOOT | 14 |
| 61000115 | TYPE E INLET BOX, STANDARD 610001 | EACH | 1 |
| * 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | FOOT | 125 |
| * 63100085 | TRAFFIC BARRIER TERMINAL, TYPE 6 | EACH | 4 |
| * 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 2 |
| * 63100169 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED | EACH | 2 |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 494 |
| 66201120 | CONCRETE SHOULDER CURB | FOOT | 13 |

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEM

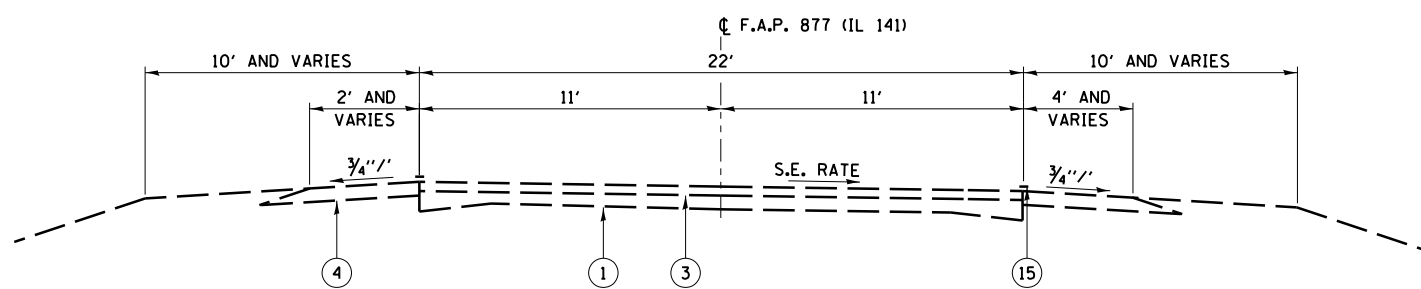
| SUMMARY OF QUANTITIES | | | |
|-----------------------|-------------------------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 12 |
| 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 | 10 |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS | EACH | 1 |
| 70106700 | TEMPORARY RUMBLE STRIPS | EACH | 6 |
| 70107025 | CHANGEABLE MESSAGE SIGN | CAL DA | 28 |
| 70300100 | SHORT TERM PAVEMENT MARKING | FOOT | 108 |
| 70300150 | SHORT TERM PAVEMENT MARKING REMOVAL | SQ FT | 37 |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | 1667 |
| 70400100 | TEMPORARY CONCRETE BARRIER | FOOT | 363 |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER | FOOT | 350 |

^ SEE SPECIAL PROVISIONS

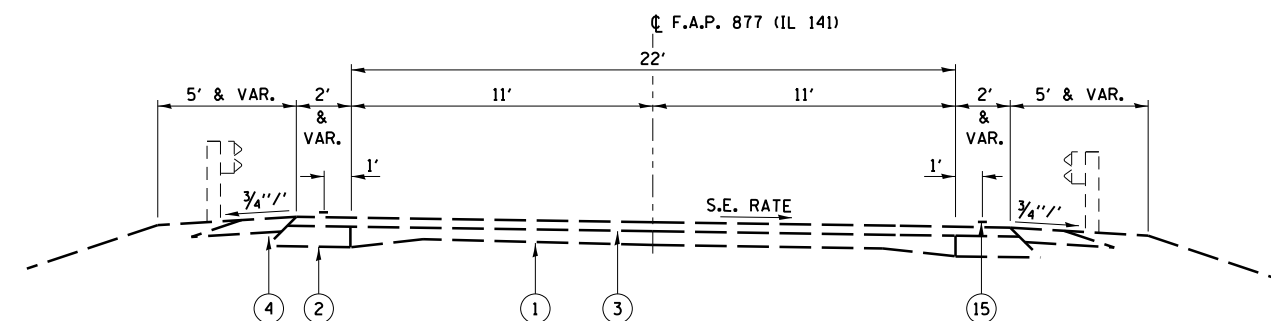
| SUMMARY OF QUANTITIES | | | |
|-----------------------|----------------------------------------------------------------|-----------------------------|--------------------------------------|
| CODE NO. | ITEM | CONSTRUCTION TYPE CODE 0010 | |
| | | UNIT | 097-0077 80% FEDERAL 20% STATE |
| 70600250 | IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3 | EACH | 2 |
| 70600350 | IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3 | EACH | 2 |
| * 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 |
| * 78001110 | PAINT PAVEMENT MARKING - LINE 4" | FOOT | 1667 |
| * 78100100 | RAISED REFLECTIVE PAVEMENT MARKER | EACH | 10 |
| * 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 6 |
| * 78200010 | BARRIER WALL REFLECTORS, TYPE B | EACH | 2 |
| 78300200 | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | EACH | 10 |
| * 86200300 | UNINTERRUPTABLE POWER SUPPLY, EXTENDED | EACH | 1 |
| ^ X0327979 | PAVEMENT MARKING REMOVAL - GRINDING | SQ FT | 286 |
| ^ X7030005 | TEMPORARY PAVEMENT MARKING REMOVAL | SQ FT | 556 |
| ^ Z0001900 | ASBESTOS BEARING PAD REMOVAL | EACH | 22 |
| Z0018002 | DRAINAGE SCUPPERS, DS-11 | EACH | 3 |
| ^ Z0046304 | PIPE UNDERDRAINS FOR STRUCTURES 4" | FOOT | 142 |

^ SEE SPECIAL PROVISIONS

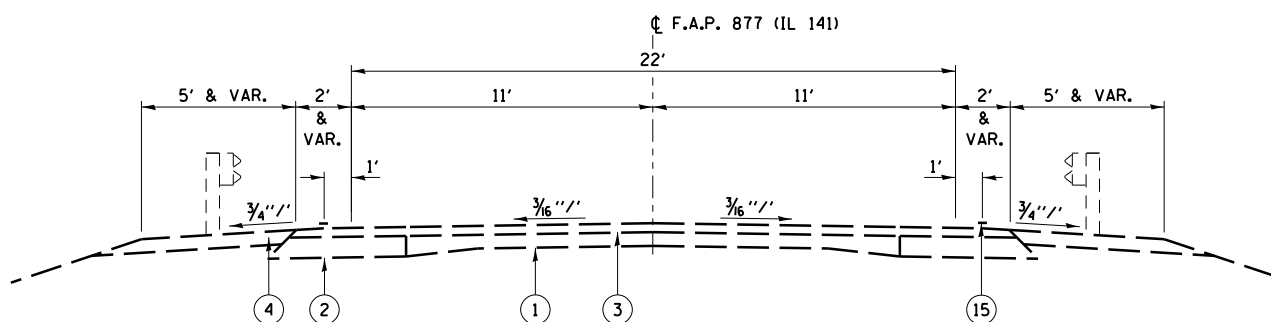
* SPECIALTY ITEM



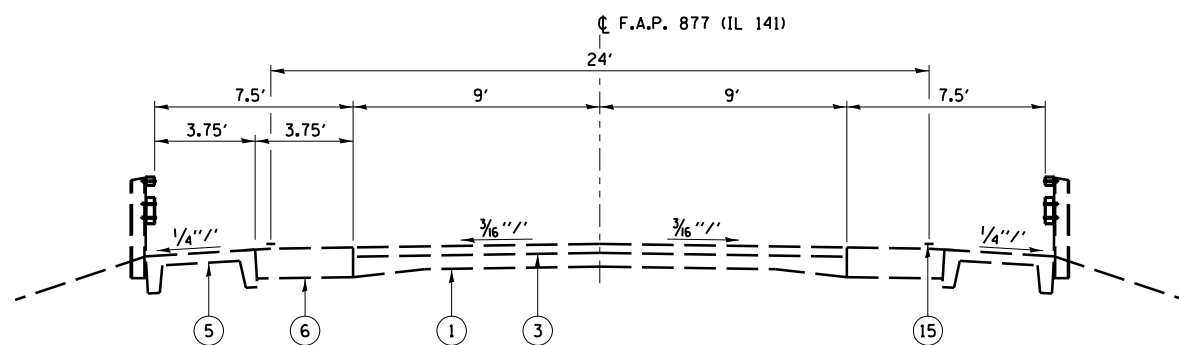
EXISTING TYPICAL CROSS SECTION
STA. 152+55.00 TO STA. 153+00.00



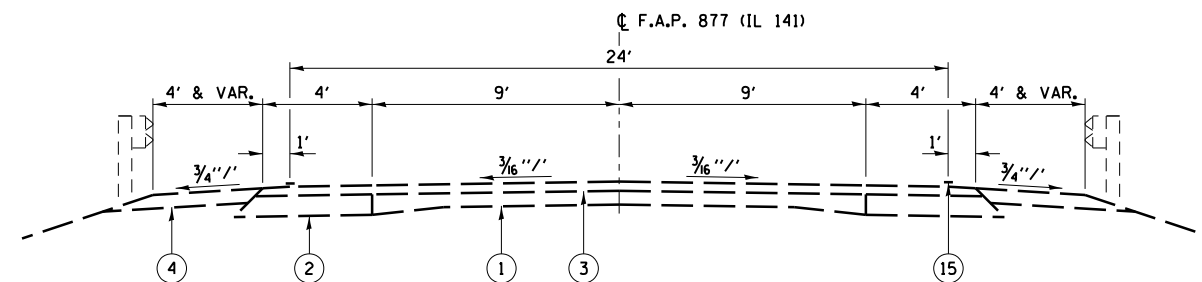
EXISTING TYPICAL CROSS SECTION
STA. 153+00.00 TO STA. 154+48.58BK = 6+43.64 AH



EXISTING TYPICAL CROSS SECTION
STA. 154+48.58BK = 6+43.64 AH TO STA. 6+93.00



EXISTING TYPICAL CROSS SECTION
STA. 6+93.00 TO STA. 7+10.47
STA. 7+53.52 TO STA. 7+72.00



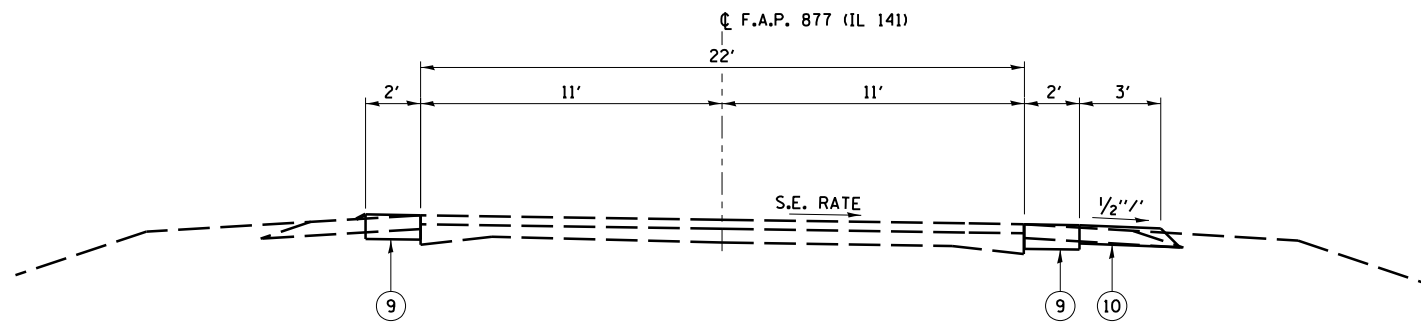
EXISTING TYPICAL CROSS SECTION
STA. 7+72.00 TO STA. 9+70.00

HMA MIXTURE REQUIREMENTS

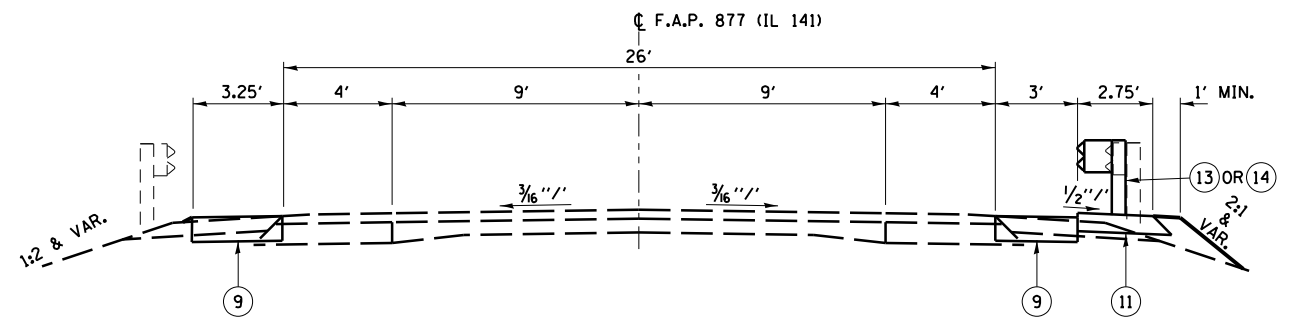
| LOCATION(S): | HMA SURFACE COURSE | HMA BINDER, BASE COURSE WIDENING, AND LEVELING BINDER | HMA SHOULDERS (LOWER LIFTS) | HMA SHOULDERS (TOP LIFT) |
|----------------------------------------------|--------------------------------|----------------------------------------------------------|----------------------------------|----------------------------------|
| MIXTURE USE(S): | HMA SURFACE COURSE, MIX C, N70 | HMA BINDER COURSE, N70, IL-19.0 | HMA BINDER COURSE, N30, IL-19.0L | HMA SURFACE COURSE, N30, IL-9.5L |
| PG: | PG 64-22 | PG 64-22 | PG 64-22 | PG 64-22 |
| ABR% (MAX): | SEE SPECIAL PROVISION | SEE SPECIAL PROVISION | SEE SPECIAL PROVISION | SEE SPECIAL PROVISION |
| DESIGN AIR VOIDS: | 4%, 70 GYRATION DESIGN | 4%, 70 GYRATION DESIGN | 4%, 30 GYRATION DESIGN | 4%, 30 GYRATION DESIGN |
| MIXTURE COMPOSITION: (MIXTURE GRADATION): | IL 9.5 | IL-19.0mm | IL-19.0L | IL 9.5 L |
| FRICTION AGGREGATE: | C SURFACE | NONE | NONE | NONE |
| MIXTURE WEIGHT: | 112 LBS / SQ YD / INCH | 112 LBS / SQ YD / INCH | 112 LBS / SQ YD / INCH | 112 LBS / SQ YD / INCH |
| QUALITY MANAGEMENT PROGRAM: | QCQA | QCQA | QCQA | QCQA |
| SUBLOT SIZE: | NA | NA | NA | NA |

LEGEND

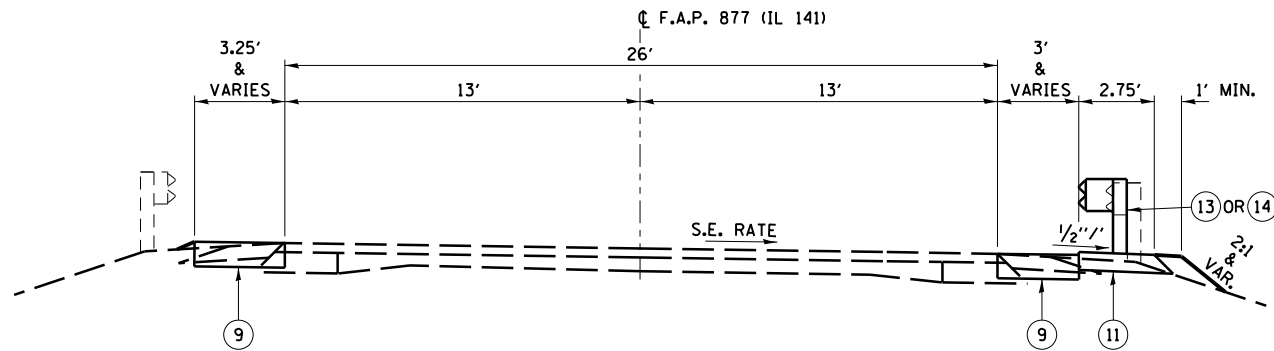
- ① EXIST CONCRETE PAVEMENT (9x6x9)
- ② EXISTING BASE COURSE WIDENING 10"
- ③ EXISTING HMA OVERLAY 3" MIN.
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS
- ⑥ EXISTING PCC PAVEMENT 10"
- ⑦ HMA LEVELING BINDER (3/4" MIN)
- ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (1 1/2" MIN)
- ⑨ HMA BASE COURSE WIDENING 10"
- ⑩ AGGREGATE SHOULDERS TYPE A 8"
- ⑪ HMA SHOULDERS 8"
- ⑫ PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
- ⑬ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑭ TRAFFIC BARRIER TERMINAL, TYPE 6
- ⑮ PAVEMENT MARKING
- ▨ PAVEMENT OR STRUCTURE REMOVAL



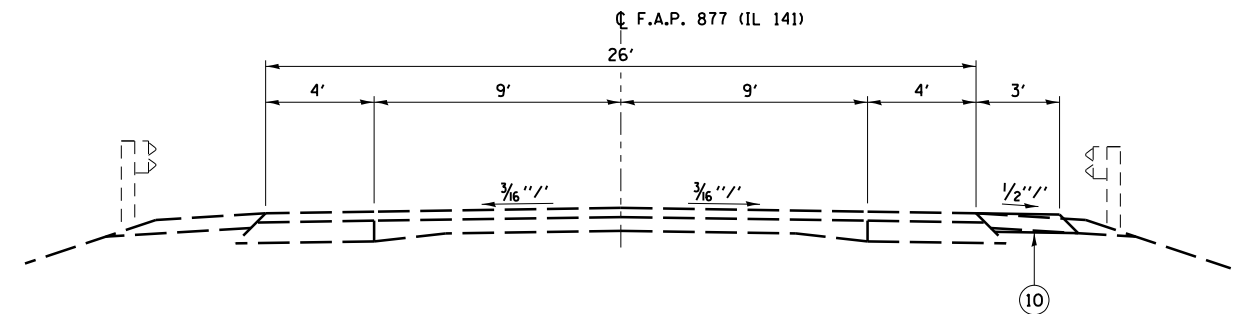
PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 152+75.00 TO STA. 153+00.00



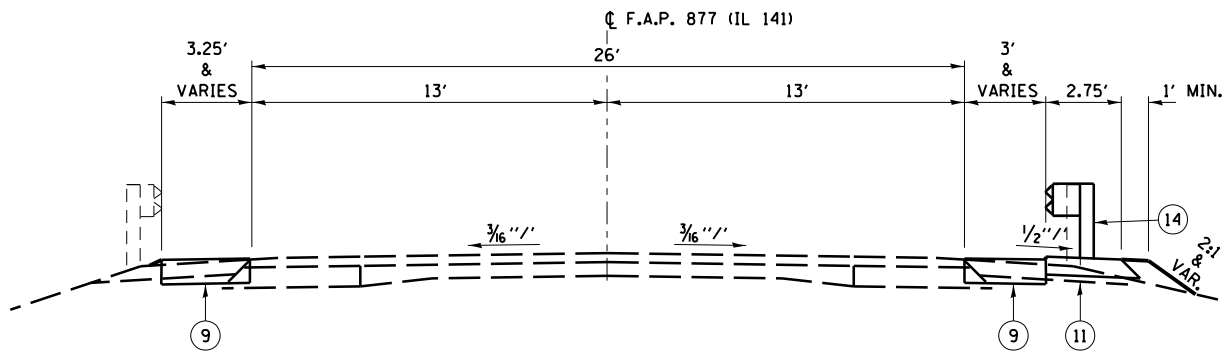
PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 8+17.92 TO STA. 9+25.00



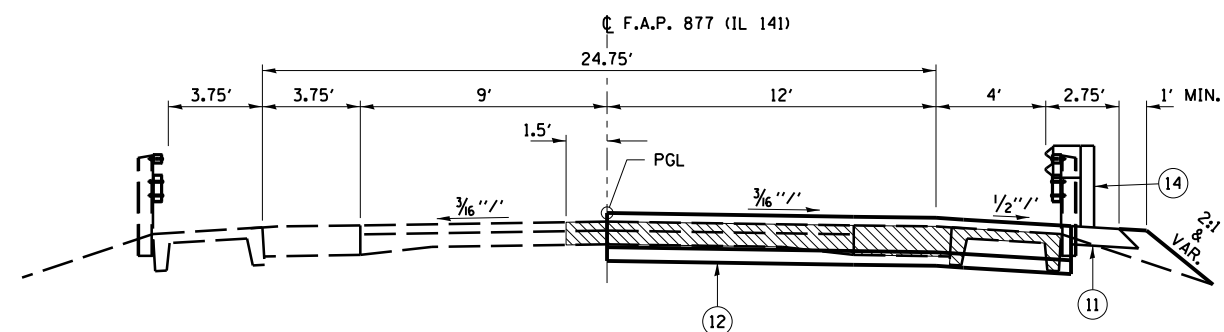
PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 153+00.00 TO STA. 154+48.58 BK = 6+43.64 AH



PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 9+25.00 TO STA. 9+70.00



PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 154+48.58 BK = 6+43.64 AH TO STA. 6+45.08

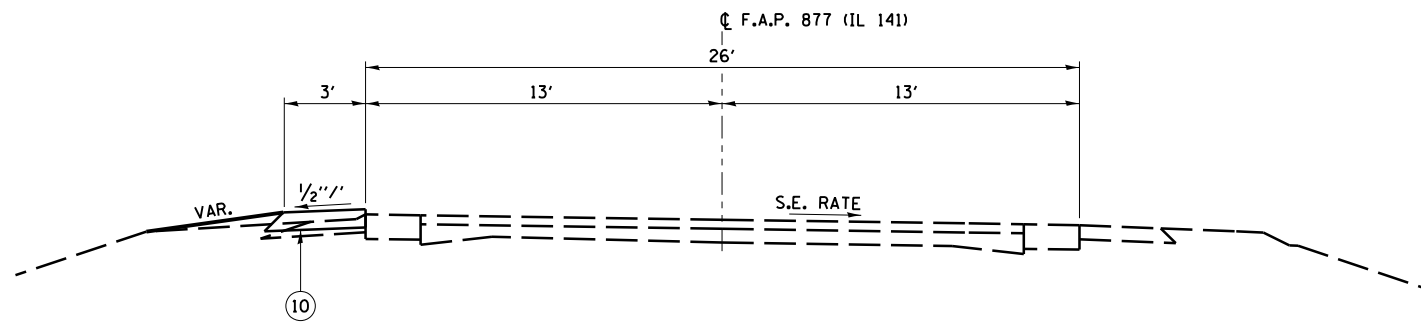


PROPOSED STAGE 1 TYPICAL CROSS SECTION
STA. 6+46.08 TO STA. 6+61.08 (PCC CONNECTOR)
STA. 6+61.08 TO STA. 6+91.08 (APPROACH SLAB)
STA. 7+72.92 TO STA. 8+02+92 (APPROACH SLAB)
STA. 8+02.92 TO STA. 8+17.92 (PCC CONNECTOR)

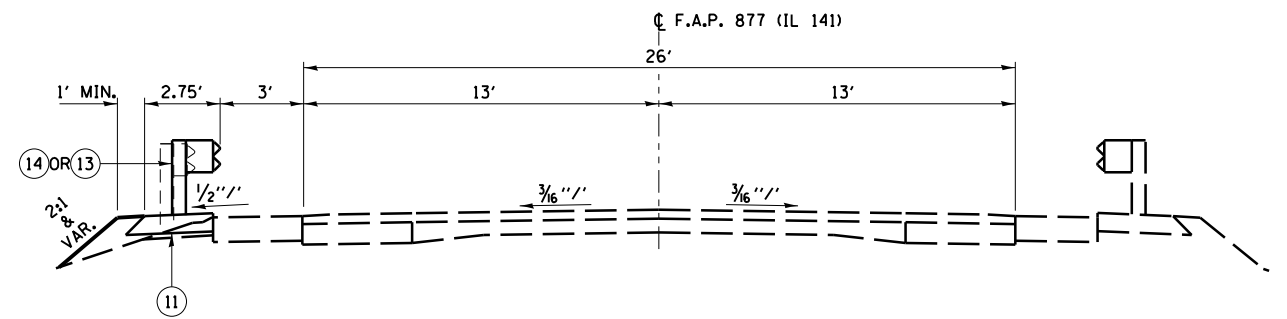
LEGEND

- ① EXIST CONCRETE PAVEMENT (9x6x9)
- ② EXISTING BASE COURSE WIDENING 10"
- ③ EXISTING HMA OVERLAY 3" MIN.
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS
- ⑥ EXISTING PCC PAVEMENT 10"
- ⑦ HMA LEVELING BINDER (3/4" MIN)
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- ⑨ HMA BASE COURSE WIDENING 10"
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- ⑬ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑭ TRAFFIC BARRIER TERMINAL, TYPE 6
- ⑮ PAVEMENT MARKING
- ▨ PAVEMENT OR STRUCTURE REMOVAL

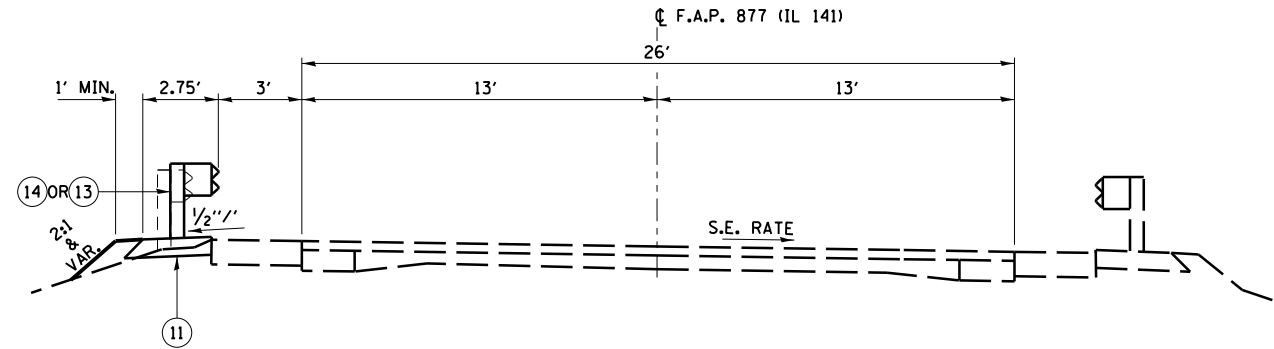
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| FILE NAME = p:\planroom\dot\illinois\go | DESIGNED - T.W.K. | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | PROPOSED STAGE 1 TYPICAL SECTIONS IL ROUTE 141 | | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 10 |
| HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | DRAWN - T.W.K. | CHECKED - J.W.F. | DATE - *DAT* | SCALE: | SHEET NO. 2 OF 4 SHEETS | STA. TO STA. | CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT | | | | |



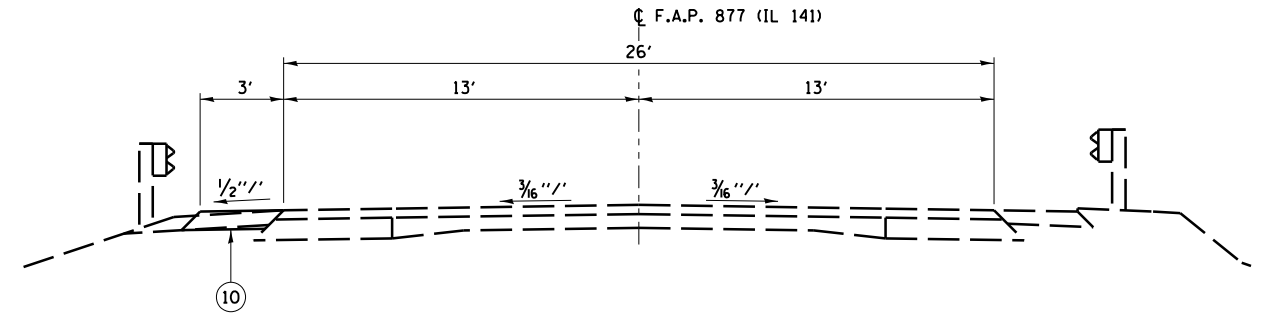
PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 152+55.00 TO STA. 153+00.00



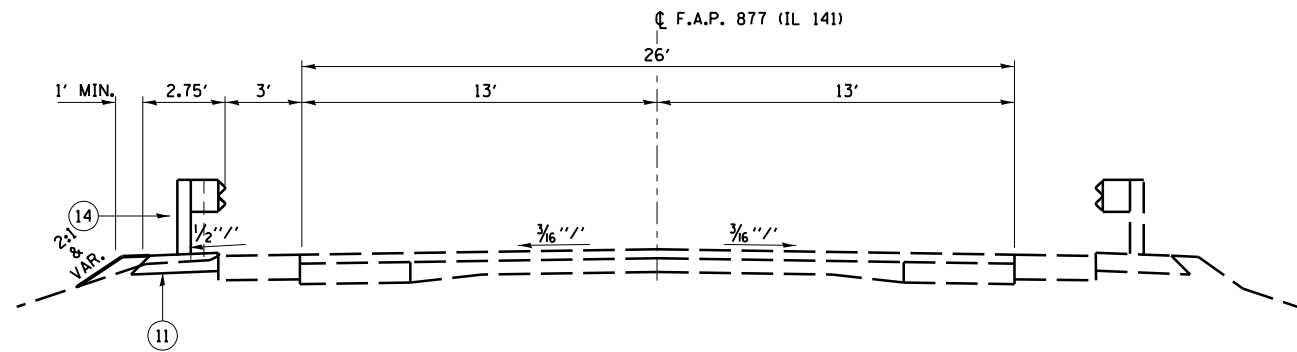
PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 8+17.92 TO STA. 9+25.00



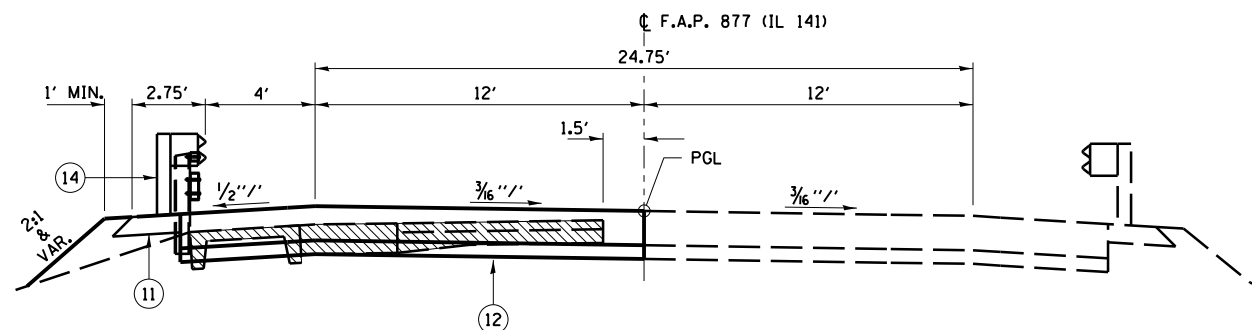
PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 153+00.00 TO STA. 154+48.58 BK = 6+43.64 AH



PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 9+25.00 TO STA. 9+70.00



PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 154+48.58 BK = 6+43.64 AH TO STA. 6+45.08

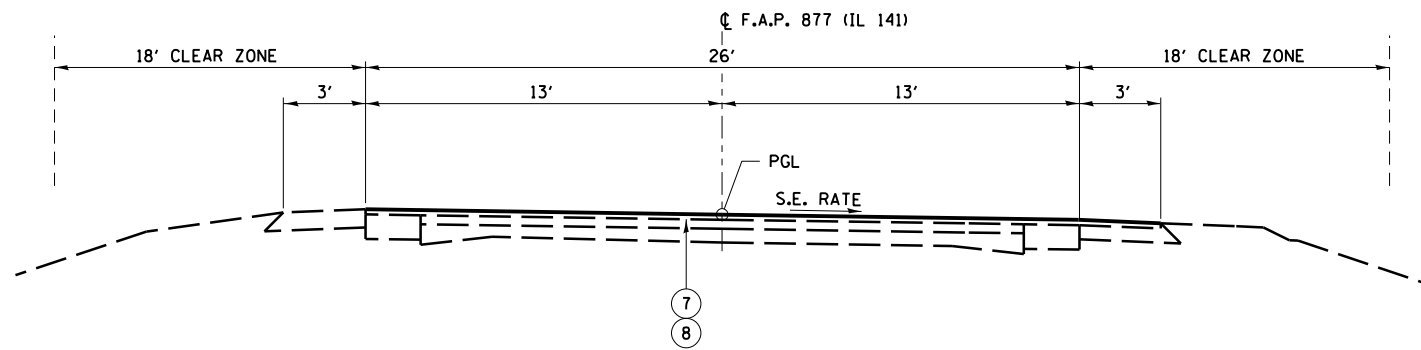


PROPOSED STAGE 2 TYPICAL CROSS SECTION
STA. 6+46.08 TO STA. 6+61.08 (PCC CONNECTOR)
STA. 6+61.08 TO STA. 6+91.08 (APPROACH SLAB)
STA. 7+72.92 TO STA. 8+02+92 (APPROACH SLAB)
STA. 8+02.92 TO STA. 8+17.92 (PCC CONNECTOR)

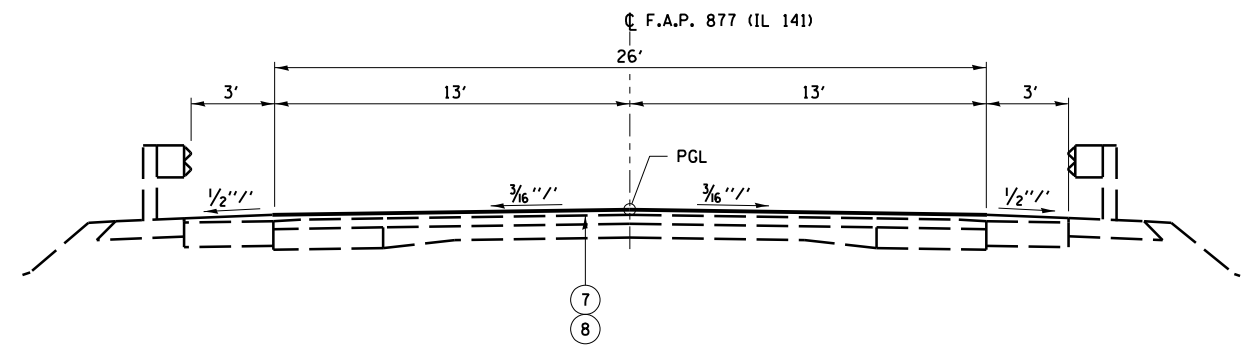
LEGEND

- ① EXIST CONCRETE PAVEMENT (9x6x9)
- ② EXISTING BASE COURSE WIDENING 10"
- ③ EXISTING HMA OVERLAY 3" MIN.
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS
- ⑥ EXISTING PCC PAVEMENT 10"
- ⑦ HMA LEVELING BINDER (3/4" MIN)
- ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (1 1/2" MIN)
- ⑨ HMA BASE COURSE WIDENING 10"
- ⑩ AGGREGATE SHOULDERS TYPE A 8"
- ⑪ HMA SHOULDERS 8"
- ⑫ PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
- ⑬ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑭ TRAFFIC BARRIER TERMINAL, TYPE 6
- ⑮ PAVEMENT MARKING
- ▨ PAVEMENT OR STRUCTURE REMOVAL

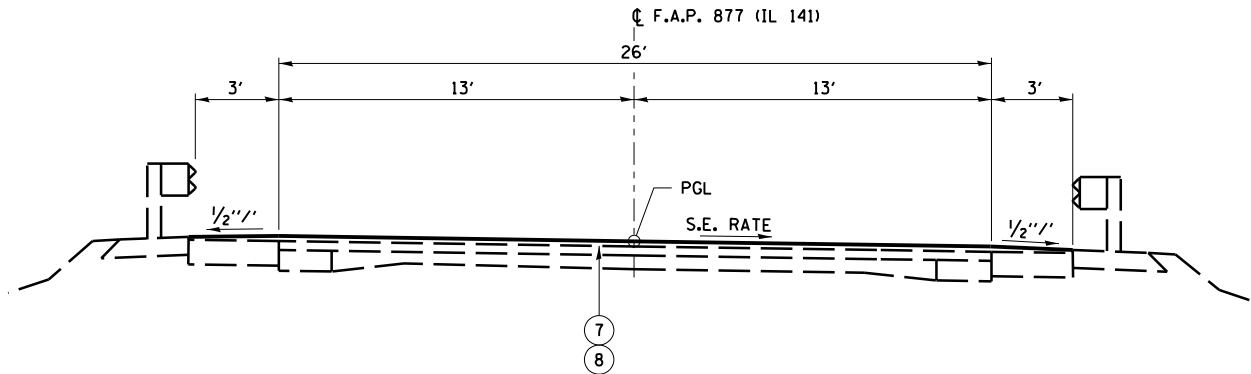
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|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|---------------------------------------------------|--|-------------------------|---------|--------------------|--------------|---------------------------|
| FILE NAME = p:\planroom\dot\illinois\... | DESIGNED - T.W.K. | REVISIONS | PROPOSED STAGE 2 TYPICAL SECTIONS | | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. | DRAWN - T.W.K. | REVISIONS | IL ROUTE 141 | | 877 | 101B-2 | WHITE | 60 | 11 |
| 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P E / S E CORP. 184.000959 | CHECKED - J.W.F. | REVISIONS | SCALE: | | SHEET NO. 3 OF 4 SHEETS | | CONTRACT NO. 78162 | | ILLINOIS FED. AID PROJECT |
| | DATE - *DAT* | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | STA. TO STA. | | | | |



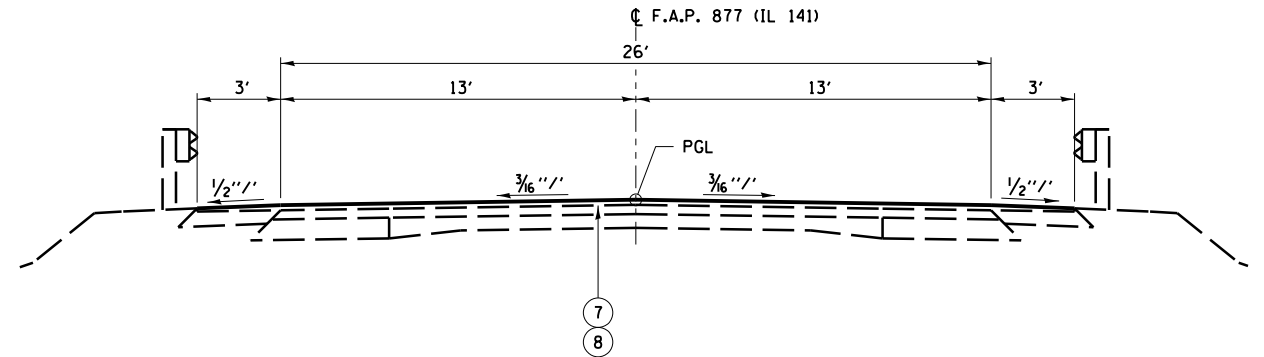
PROPOSED FINAL STAGE TYPICAL CROSS SECTION
STA. 152+55.00 TO STA. 153+00.00



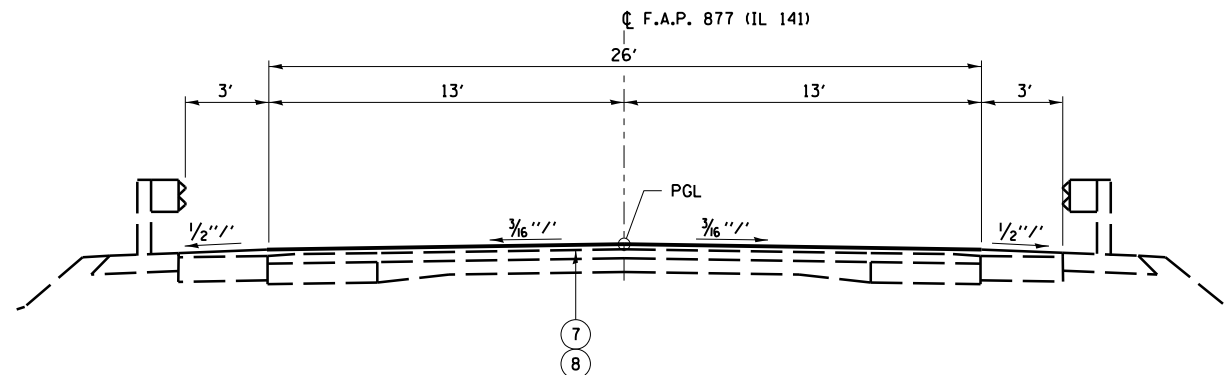
PROPOSED FINAL STAGE TYPICAL CROSS SECTION
STA. 8+17.92 TO STA. 9+25.00



PROPOSED FINAL STAGE TYPICAL CROSS SECTION
STA. 153+00.00 TO STA. 154+48.58 BK = 6+43.64 AH



PROPOSED FINAL STAGE TYPICAL CROSS SECTION
STA. 9+25.00 TO STA. 9+70.00



PROPOSED FINAL STAGE TYPICAL CROSS SECTION
STA. 154+48.58 BK = 6+43.64 AH TO STA. 6+45.08

LEGEND

- ① EXIST CONCRETE PAVEMENT (9x6x9)
- ② EXISTING BASE COURSE WIDENING 10"
- ③ EXISTING HMA OVERLAY 3" MIN.
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS
- ⑥ EXISTING PCC PAVEMENT 10"
- ⑦ HMA LEVELING BINDER (3/4" MIN)
- ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70 (1/2" MIN)
- ⑨ HMA BASE COURSE WIDENING 10"
- ⑩ AGGREGATE SHOULDERS TYPE A 8"
- ⑪ HMA SHOULDERS 8"
- ⑫ PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB
- ⑬ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑭ TRAFFIC BARRIER TERMINAL, TYPE 6
- ⑮ PAVEMENT MARKING
- ▨ PAVEMENT OR STRUCTURE REMOVAL

| | | | |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|
| FILE NAME = p:\planroom\dot\illinois\go | PROJECT NAME = I-55/US 40 Interchange | DESIGNED BY = J.S. | REVISIONS |
| HAMPTON, LENZINI AND RENWICK, INC. | 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959 | DRAWN - T.W.K. | REVISIONS |
| PLOT SCALE = 2.0000' / 1" = | CHECKED - J.W.F. | DATE - *DAT* | REVISIONS |
| PLOT DATE = 3/18/2019 | | | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PROPOSED FINAL TYPICAL SECTIONS
IL ROUTE 141**

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------------|-----------|
| 877 | 101B-2 | WHITE | 60 | 12 |
| | | | CONTRACT NO. 78162 | |
| ILLINOIS FED. AID PROJECT | | | | |

| ROADWAY SCHEDULE | | | | | | | | | | | | |
|-----------------------------------|------------------------------------------|------------------------------------|---------------------------------|---------------------------------------|--------------------------------------------|----------------|-------------------------------------------|---------------------------|---------------------------------------------------|------------------|-------------------------------|------------------------------|
| LOCATION | HOT-MIX ASPHALT BASE COURSE WIDENING 10" | AGGREGATE SURFACE COURSE TYPE A 6" | BITUMINOUS MATERIAL (TACK COAT) | LEVELING BINDER (MACHINE METHOD), N70 | HOT-MIX ASPHALT SURFACE REMOVAL BUTT-JOINT | TEMPORARY RAMP | HOT-MIX ASPHALT SURFACE COURSE MIX C, N70 | WELDED WIRE REINFORCEMENT | PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB | PAVEMENT REMOVAL | AGGREGATE SHOULDERS TYPE A 8" | HOT-MIX ASPHALT SHOULDERS 8" |
| | 35600716 | 40200500 | 40600290 | 406500635 | 40600982 | 40600990 | 40603315 | 42000060 | 42000080 | 44000100 | 48100700 | 48203029 |
| | SQ YD | SQ YD | POUND | TON | SQ YD | SQ YD | TON | SQ YD | SQ YD | SQ YD | SQ YD | SQ YD |
| FAP 877 IL RTE 141 | | | | | | | | | | | | |
| STAGE I | | | | | | | | | | | | |
| LT. STA 152+55 TO LT. STA 7+10.47 | 93 | | | | | | | | | | | |
| LT. STA 7+53.52 TO LT. STA 9+70 | 51 | | | | | | | | | | | |
| RT. STA 152+55 TO RT. STA 7+10.47 | 62 | | | | | | | 22 | 28 | 115 | 15 | 102 |
| RT. STA 7+53.52 TO RT. STA 9+70 | 32 | | | | | | | 22 | 28 | 101 | 15 | 73 |
| STAGE II | | | | | | | | | | | | |
| LT. STA 152+55 TO LT. STA 7+10.47 | | | | | | | | 22 | 28 | 93 | 15 | 86 |
| LT. STA 7+53.52 TO LT. STA 9+70 | | | | | | | | 22 | 28 | 102 | 15 | 88 |
| CL. STA 152+55 TO CL. STA 6+61.08 | | | 661 | 100 | 80 | 41 | 60 | | | | | |
| CL. STA 8+02.92 TO CL. STA 9+70 | | | 300 | 51 | 80 | 41 | 42 | | | | | |
| ENTRANCES | | 41 | | | | | | | | | | |
| TOTAL | 238 | 41 | 961 | 151 | 160 | 82 | 102 | 88 | 112 | 411 | 60 | 349 |

| STONE RIPRAP SCHEDULE | | |
|-------------------------------|-----------------------|-------------------|
| LOCATION | STONE RIPRAP CLASS A4 | FILTER FABRIC |
| | FAP 877 IL RTE 141 | 28100107 SQ YD |
| RT. STA 8+26.13 | 10 | 10 |
| FROM BRIDGE BILL OF MATERIALS | 625 | 625 |
| TOTAL | 635 | 635 |

| 28000400 PERIMETER EROSION BARRIER | |
|-------------------------------------|------|
| LOCATION | FOOT |
| FAP 877 IL RTE 141 | |
| STAGE I | |
| RT. STA 152+55 TO RT. STA 154+48.58 | 194 |
| RT. STA 6+43.64 TO RT. STA 6+80 | 36 |
| LT. STA 152+55 TO LT. STA 154+48.58 | 194 |
| LT. STA 6+43.64 TO LT. STA 6+80 | 36 |
| RT. STA 7+83 TO RT. STA 8+21 | 54 |
| RT. STA 8+30 TO RT. STA 9+13 | 95 |
| LT. STA 7+83 TO LT. STA 9+15 | 132 |
| TOTAL | 741 |

| PAVEMENT MARKING SCHEDULE | | | | | | | | | | |
|----------------------------------------|-----------------------------|-------------------------------------|--------------------------------------|-----------------------------|----------------------------------|-----------------------------|-----------------------------------|-------------------------------------------|-----------------------------|------------------------------------|
| LOCATION | SHORT TERM PAVEMENT MARKING | SHORT TERM PAVEMENT MARKING REMOVAL | TEMPORARY PAVEMENT MARKING - LINE 4" | | PAINT PAVEMENT MARKING - LINE 4" | | RAISED REFLECTIVE PAVEMENT MARKER | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | PAVEMENT REMOVAL - GRINDING | TEMPORARY PAVEMENT MARKING REMOVAL |
| | | | SINGLE WHITE EDGE LINE | SKIP-DASH YELLOW CENTERLINE | SINGLE WHITE EDGE LINE | SKIP-DASH YELLOW CENTERLINE | | | | |
| | | | 70300100 | 70300150 | 70300220 | 70300220 | | | | |
| | FOOT | SQ FT | FOOT | FOOT | FOOT | FOOT | EACH | EACH | SQ FT | SQ FT |
| FAP 877 IL RTE 141 | | | | | | | | | | |
| CL. STA 151+75.69 TO CL. STA 154+48.58 | 42 | 15 | | 68 | | 68 | 4 | 4 | 12 | 23 |
| CL. STA 6+43.64 TO CL. STA 11+11.25 | 66 | 22 | | 117 | | 117 | 6 | 6 | 11 | 39 |
| LT. STA 151+75.69 TO LT. STA 154+48.58 | | | 273 | | 273 | | | | 36 | 91 |
| LT. STA 6+43.64 TO LT. STA 11+11.25 | | | 468 | | 468 | | | | 94 | 156 |
| RT. STA 151+75.69 TO RT. STA 154+48.58 | | | 273 | | 273 | | | | 39 | 91 |
| RT. STA 6+43.64 TO RT. STA 11+11.25 | | | 468 | | 468 | | | | 94 | 156 |
| SUBTOTAL | 108 | 37 | 1482 | 185 | 1482 | 185 | 10 | 10 | 286 | 556 |
| TOTAL | 108 | 37 | 1667 | 185 | 1667 | 185 | 10 | 10 | 286 | 556 |

| SEEDING SCHEDULE | | | | | | | | |
|-----------------------------|--------------------------|-----------------|--------------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------|----------------|-------------------------------------|
| LOCATION | SEEDING CLASS 2A SPECIAL | SEEDING CLASS 7 | NITROGEN FERTILIZER NUTRIENT** | PHOSPHORUS FERTILIZER NUTRIENT 90 LBS/ACRE | POTASSIUM FERTILIZER NUTRIENT 90 LBS/ACRE | AGRICULTURAL GROUND LIMESTONE 2 TONS/ACRE | MULCH METHOD 2 | TEMPORARY EROSION CONTROL SEEDING * |
| | 25000210 | 25000350 | 25000400 | 25000500 | 25000600 | 25000700 | 25100115 | 28000250 |
| | ACRE | ACRE | LBS | LBS | LBS | TONS | ACRE | LBS |
| FAP 877 IL RTE 141 | | | | | | | | |
| STAGE I | | | | | | | | |
| RT STA 152+55 TO RT 6+90.08 | 0.04 | 0.04 | 5 | 3 | 3 | 0.08 | 0.08 | 16 |
| RT STA 7+73.92 TO RT 9+70 | 0.04 | 0.04 | 5 | 3 | 3 | 0.08 | 0.08 | 16 |
| STAGE II | | | | | | | | |
| LT STA 152+55 TO LT 6+90.08 | 0.04 | 0.04 | 5 | 3 | 3 | 0.08 | 0.08 | 16 |
| LT STA 7+73.92 TO LT 9+70 | 0.03 | 0.03 | 4 | 3 | 3 | 0.06 | 0.06 | 12 |
| TOTAL | 0.15 | 0.15 | 19 | 12 | 12 | 0.3 | 0.3 | 60 |

* 100 LBS/ACRE FOR 4 APPLICATIONS

** 90 LBS/ACRE FOR SEEDING CLASS 2A AND 40 LBS/ACRE FOR SEEDING CLASS 7

| GUARDRAIL SCHEDULE | | | | | | | | |
|--------------------------------------|-------------------------------------------------|---------------------------------|---------------------------------------------------|--------------------------------------------------|-------------------|--------------------------------|-----------------------------|--------------------------------|
| LOCATION | STEEL PLATE BEAM GUARD RAIL TYPE A 6 FOOT POSTS | TRAFFIC BARRIER TERMINAL TYPE 6 | TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) | TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (FLARED) | GUARDRAIL REMOVAL | TERMINAL MARKER DIRECT APPLIED | GUARDRAIL REFLECTORS TYPE A | BARRIER WALL REFLECTORS TYPE B |
| | 63000001 | 63100085 | 63100167 | 63100169 | 63200310 | 72501000 | 78200005 | 78200010 |
| FAP 877 IL RTE 141 | FOOT | EACH | EACH | EACH | FOOT | EACH | EACH | EACH |
| STAGE I | | | | | | | | |
| RT. STA 153+33.52 TO RT. STA 6+78.58 | 62.5 | 1 | 1 | | 129 | 1 | 2 | |
| RT. STA 6+78.56 TO RT. STA 7+85.42 | | | | | | | | 1 |
| RT. STA 7+85.42 TO RT. STA 8+72.92 | 12.5 | 1 | | 1 | 122 | 1 | 1 | |
| STAGE II | | | | | | | | |
| LT. STA 153+83.52 TO LT. STA 6+78.58 | 12.5 | 1 | 1 | | 126 | 1 | 2 | |
| LT. STA 6+78.58 TO LT. STA 7+85.42 | | | | | | | | 1 |
| LT. STA 7+85.42 TO LT. STA 8+97.92 | 37.5 | 1 | | 1 | 117 | 1 | 1 | |
| TOTAL | 125 | 4 | 2 | 2 | 494 | 4 | 6 | 2 |

| STAGING SCHEDULE | | | | | | |
|-------------------------------|----------------------------------|-------------------------|----------------------------|-------------------------------------|-------------------------------------------------------------|------------------------------------------------------------|
| LOCATION | TEMPORARY BRIDGE TRAFFIC SIGNALS | TEMPORARY RUMBLE STRIPS | TEMPORARY CONCRETE BARRIER | RELOCATE TEMPORARY CONCRETE BARRIER | IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3 | IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3 |
| | 70106500 EACH | 70106700 EACH | 70400100 FOOT | 70400200 FOOT | 70600250 EACH | 70600350 EACH |
| FAP 877 IL 141 | | | | | | |
| STAGE I | | | | | | |
| STA 151+75.69 TO STA 11+11.25 | 1 | 6 | 362.5 | | 2 | |
| STAGE II | | | | | | |
| STA 151+75.69 TO STA 11+11.25 | | | | 350 | | 2 |
| TOTAL | 1 | 6 | 363 | 350 | 2 | 2 |

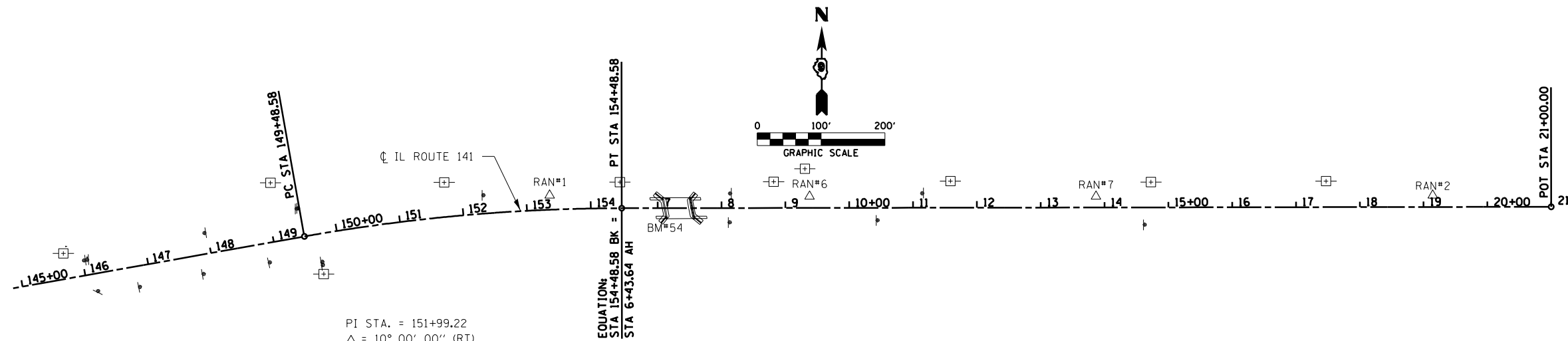
| 66201120 CONCRETE SHOULDER CURB | |
|----------------------------------|------------------------|
| LOCATION | CONCRETE SHOULDER CURB |
| | 66201120 FOOT |
| FAP 877 IL RTE 141 | |
| RT STA 8+17.92 TO RT STA 8+31.13 | 13 |
| TOTAL | 13 |

| INLET AND CULVERT SCHEDULE | | | |
|----------------------------|----------------------------|-----------------|---------------------------|
| LOCATION | TYPE E INLET BOX, STANDARD | PIPE DRAINS 12" | METAL FLARED END SECTIONS |
| | 610001 EACH | 60100945 FOOT | 54262712 EACH |
| FAP 877 IL RTE 141 | | | |
| RT STA 8+26.13 | 1 | 14 | 1 |
| TOTAL | 1 | 14 | 1 |

| 25100630 EROSION CONTROL BLANKET | |
|-----------------------------------|-------|
| LOCATION | SQ YD |
| FAP 877 IL RTE 141 | |
| STAGE I | |
| RT. STA 154+00 TO RT. STA 6+90.08 | 78 |
| RT. STA 7+73.92 TO RT. STA 8+50 | 108 |
| STAGE II | |
| LT. STA 154+00 TO LT. STA 6+90.08 | 87 |
| LT. STA 7+73.92 TO LT. STA 8+50 | 58 |
| TOTAL | 331 |

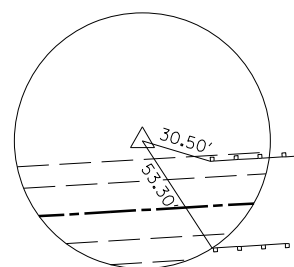
| 28000500 INLET AND PIPE PROTECTION | |
|------------------------------------|------|
| LOCATION | EACH |
| FAP 877 IL RTE 141 | |
| RT 8+26.13 | 1 |
| TOTAL | 1 |

| EARTHWORK SUMMARY | | | | | | | | | |
|--------------------|------------------|--------------------|----------------------|------------------|---------|-----------------------------------------------|---------------------|---------------------------------------------|--|
| LOCATION | EARTH EXCAVATION | CHANNEL EXCAVATION | STRUCTURE EXCAVATION | SHRINKAGE FACTOR | % USED | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%) | EMBANKMENT REQUIRED | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) | |
| | CUBIC YARD | CUBIC YARD | CUBIC YARD | | | CUBIC YARD | CUBIC YARD | CUBIC YARD | |
| FAP 877 IL 141 | | | | | | | | | |
| STAGE I | | | | | | | | | |
| 152+55 TO 6+90.08 | 47 | | | 25.00% | 100.00% | 35 | 23 | 12 | |
| 7+73.92 TO 970 | 27 | | | 25.00% | 100.00% | 20 | 53 | -33 | |
| STAGE II | | | | | | | | | |
| 152+55 TO 6+90.08 | 0 | | | 25.00% | 100.00% | 0 | 33 | -33 | |
| 7+73.92 TO 970 | 5 | | | 25.00% | 100.00% | 4 | 63 | -59 | |
| BRIDGE BILL MAT'L | | 740 | | 25.00% | 75.00% | 416 | | 416 | |
| BRIDGE BILL MAT'L | | | 230 | 25.00% | 75.00% | 129 | | 129 | |
| TOTAL | 79 | 740 | 230 | | | 604 | 172 | 432 | |
| WASTE EXCAVATION = | | | | | | | 432 | CU.YD. | |

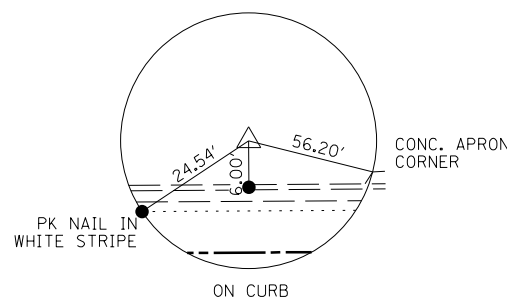


PI STA. = 151+99.22
 $\Delta = 10^\circ 00' 00''$ (RT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 250.64'$
 $L = 500.00'$
 $E = 10.94'$
 $S.E. = 3.2\%$
 $T.R. = 190$
 $S.E. RUN = 40$
 $P.C. STA = 149+48.58$
 $P.T. STA = 154+48.58$
 $S.E. TRANS.$
 $STA. 153+76.25$ TO $STA. 6+54.50$
 $STA. 8+09.50$ TO $STA. 9+56.32$

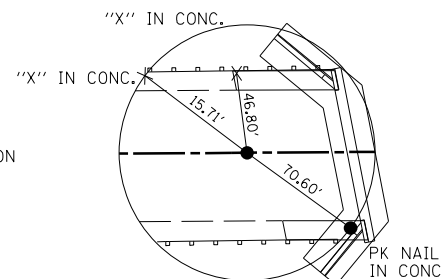
| IL 141 CENTERLINE | | | |
|-------------------|-----------|-------------|-------------|
| DESCRIPTION | STATION | NORTHING | EASTING |
| PC | 149+48.58 | 452225.3498 | 992375.0977 |
| PI | 151+99.22 | 452269.2470 | 992621.8601 |
| POB/POC | 152+12.00 | 452259.5053 | 992636.1969 |
| PT STAEQ BK= | 154+48.58 | 452269.6273 | 992872.4964 |
| STAEQ AH= | 6+43.64 | 452269.6273 | 992872.4964 |
| POE | 9+70.00 | 452270.1226 | 993198.8560 |
| POT | 21+00.00 | 452271.8375 | 994328.8582 |



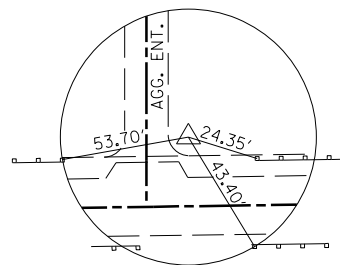
RAN#1
 FOUND IDOT/CAP
 STA. 153+36.34, 22.61' LT.
 N: 452289.849
 E: 992759.366



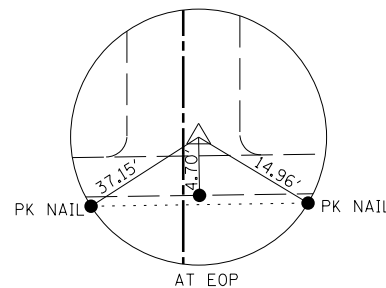
RAN#2
 FOUND IDOT/CAP
 STA. 19+14.24, 18.14' LT.
 N: 452289.695
 E: 994143.072



RAN#6
 SET IR/HLR CAP
 STA. 9+37.94, 18.20' LT.
 N: 452288.273
 E: 993166.773



RAN#6
 SET IR/HLR CAP
 STA. 9+37.94, 18.20' LT.
 N: 452288.273
 E: 993166.773



RAN#7
 SET IR/HLR CAP
 STA. 13+86.65, 17.44' LT.
 N: 452288.189
 E: 993615.481

| CONTROL POINTS | | | | | |
|----------------|-----------|----------|------------|------------|-----------|
| POINT NUMBER | STATION | OFFSET | NORTHING | EASTING | ELEVATION |
| Ran #1 | 153+36.34 | LT 22.61 | 452289.849 | 992759.366 | 377.027 |
| Ran #2 | 19+14.24 | LT 18.14 | 452289.695 | 994143.072 | 400.270 |
| Ran #6 | 9+37.94 | LT 18.20 | 452288.273 | 993166.773 | 376.876 |
| Ran #7 | 13+86.65 | LT 17.44 | 452288.189 | 993615.481 | 377.819 |

BENCHMARKS

- B.M.#54 - CHISELED "□" IN S.W. CORNER OF STR #097-0036 18' RT. STA. 7+10 ELEV. 373.959
- B.M.#55 - R.R. SPIKE IN POWER POLE, NORTH SIDE OF IL ROUTE 141 HEALY ROAD ELEV. 418.562

| | | |
|------------------------------------------------------------------------------------|-------------------|-----------|
| FILE NAME = px:\planroom\dot.illinois.gov\PROJECTS\CDDB\Sheets\0978162-sht-ATB.dwg | DESIGNED - J.F.S. | REVISED - |
| DRAWN - T.W.K. | CHECKED - J.W.F. | REVISED - |
| DATE - 3/18/2019 | DATE - *DAT* | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

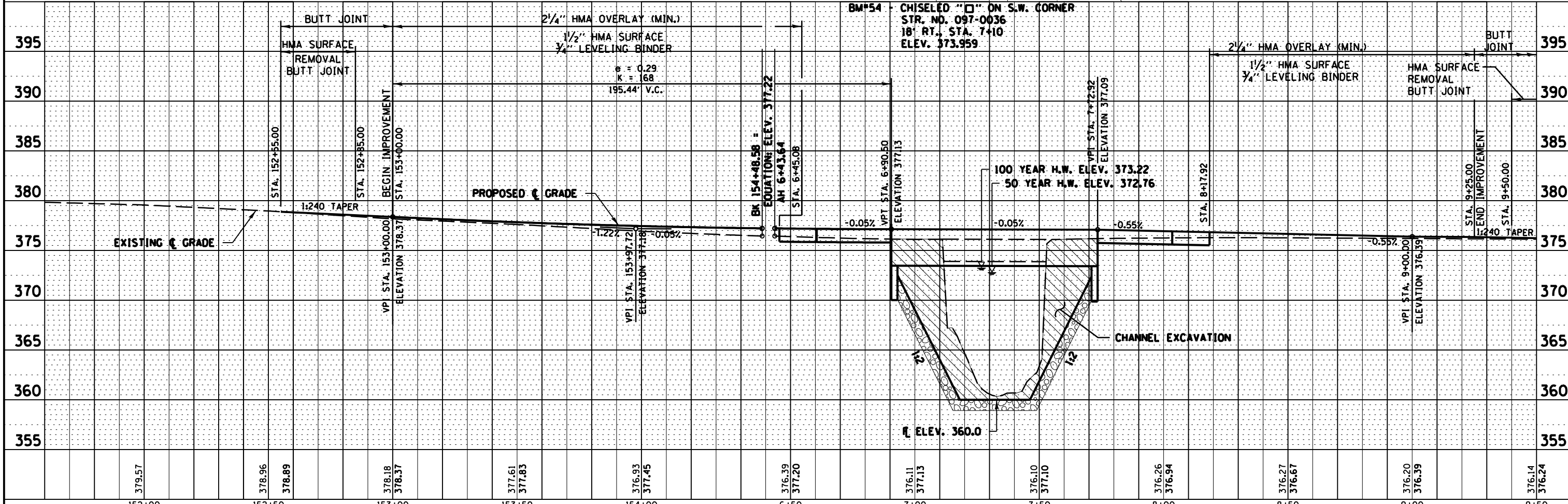
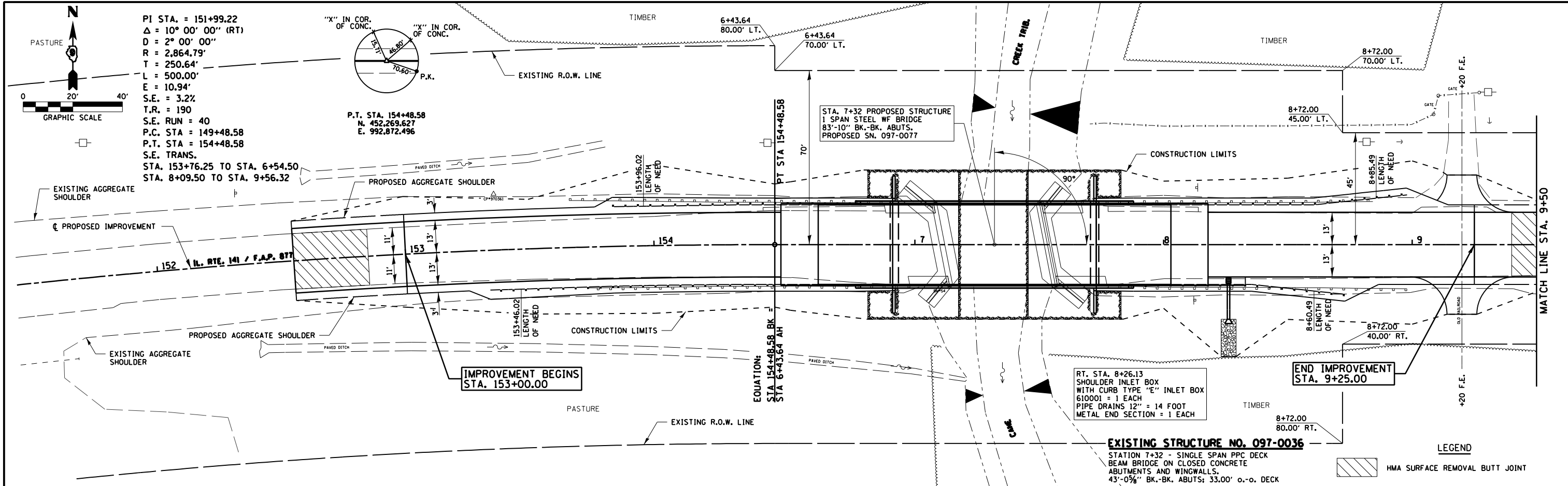
ALIGNMENT, TIES AND BENCHMARKS
IL ROUTE 141

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 877 | 101B-2 | WHITE | 60 | 15 |
| CONTRACT NO. 78162 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| | | |
|------|----------|------|
| PLAN | SURVEYED | DATE |
| | PLOTTED | BY |
| | ALIGNED | |
| | CHECKED | |
| | FILED | |
| | NO. | |

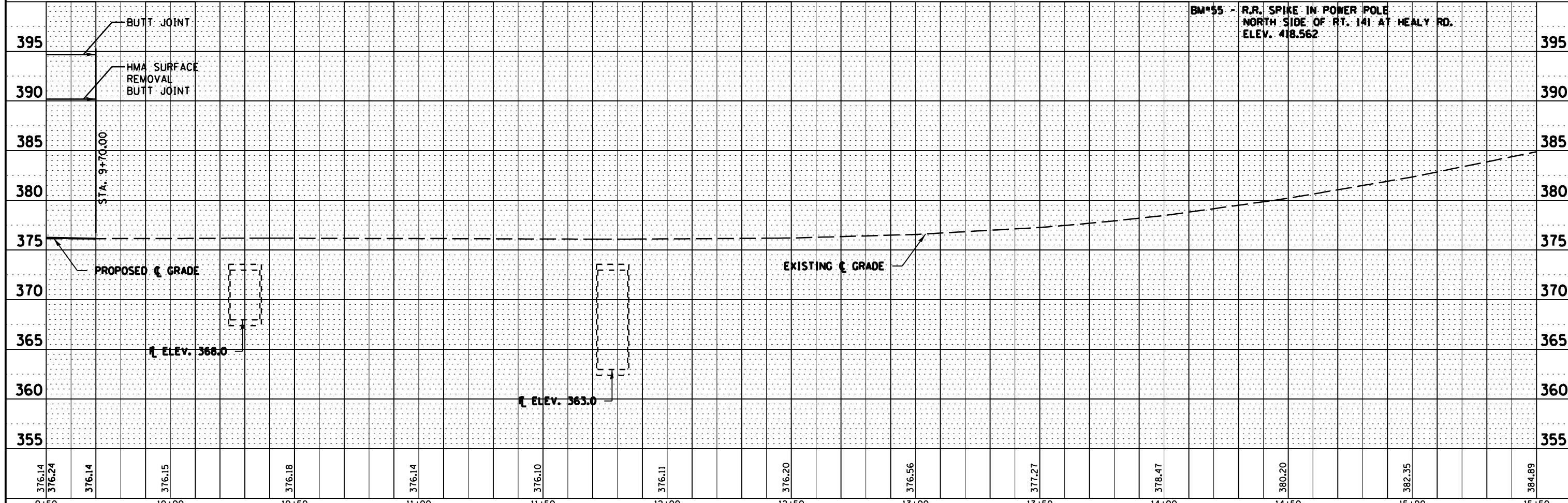
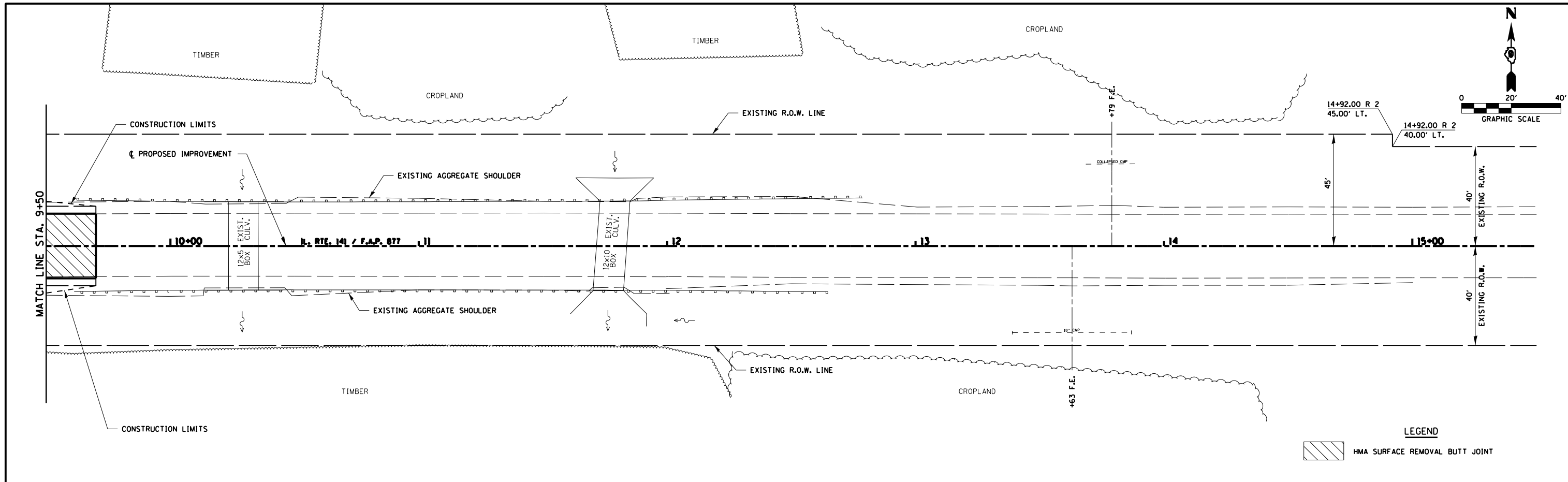
| | | |
|---------|--------------------------|------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | |
| | STRUCTURE NOTATIONS OK'D | |
| | NO. | |



| | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------|---------------------------------------------------|---------------------------------|--------------------------------|---------------------|---------------------------|--------------------|--------------|
| FILE NAME = p:\planroom\dottillinois.gov\... | DESIGNED - CABDA | REVISION | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | PLAN & PROFILE IL. ROUTE 141 | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 16 |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000999 | DRAWN - T.W.K. CHECKED - J.W.F. DATE - *DAT* | REVISION | SCALE: 20H:5V | SHEET NO. 1 OF 2 SHEETS | STA. 152+00.00 TO STA. 9+50.00 | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | CONTRACT NO. 78162 | |

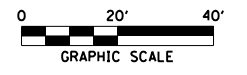
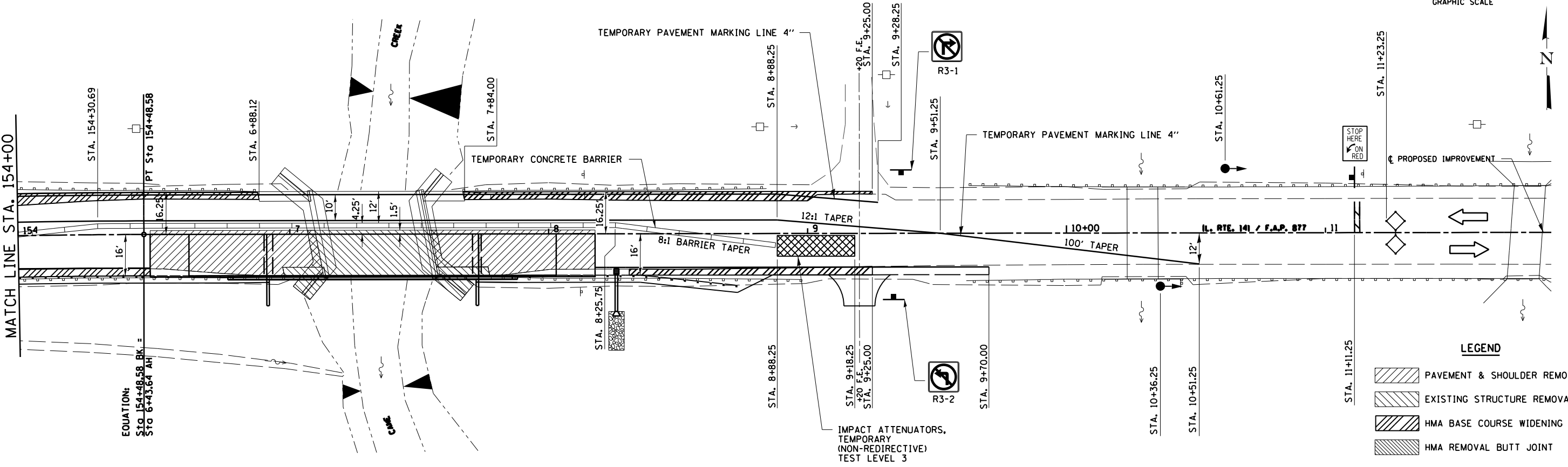
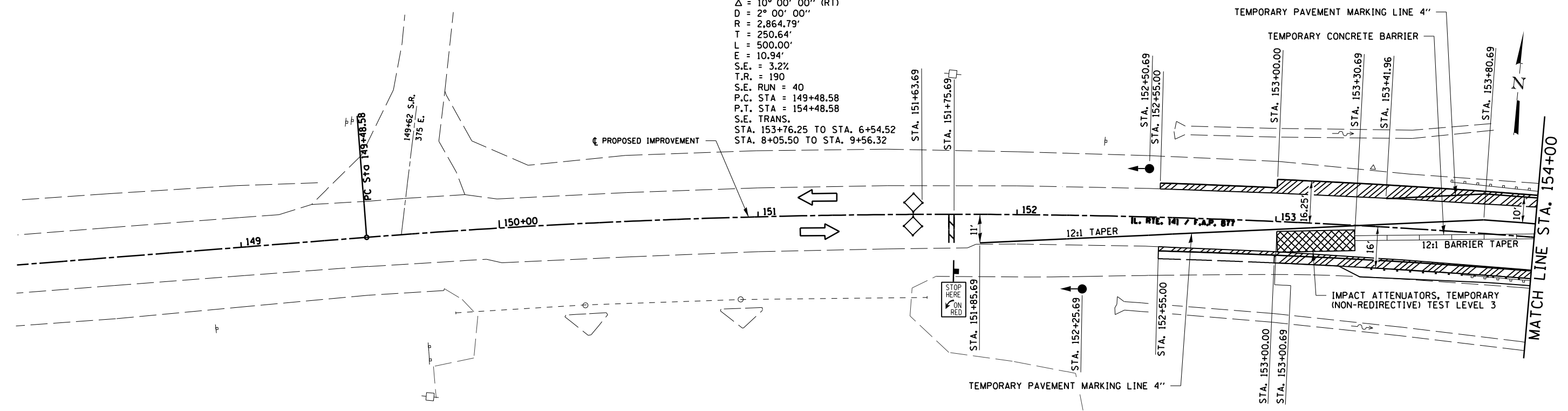
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| PLAN | SURVEYED | DATE |
| | PLOTTED | BY |
| | ALIGNED | CHECKED |
| | FILED | NO. |
| | NO. | |

| | | |
|---------|--------------------------|---------|
| PROFILE | SURVEYED | DATE |
| | PLOTTED | BY |
| | GRADES CHECKED | CHECKED |
| | STRUCTURE NOTATIONS OK'D | NO. |
| | | |



| | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|---------------------------------------------------|---------------------------------|-------------------------------|---------------------|---------------------------|--------------------|--------------|
| FILE NAME = p:\planroom\dottillinois.gov\USER Documents\WISND\Offices\District 9\Projects\Consult\FS\State\HLR\Final plans\REVISED\000.Sheets\0978162-sht-plnprf2.dgn | DESIGNED - F.S. | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | PLAN & PROFILE IL. ROUTE 141 | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 17 |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000999 | DRAWN - T.W.K. | DATE - *DAT* | SCALE: 20H:5V | SHEET NO. 2 OF 2 SHEETS | STA. 9+50.00 TO STA. 15+50.00 | FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT | CONTRACT NO. 78162 | |

PI STA. = 151+99.22
 Δ = 10° 00' 00" (RT)
 D = 2° 00' 00"
 R = 2,864.79'
 T = 250.64'
 L = 500.00'
 E = 10.94'
 S.E. = 3.2%
 T.R. = 190
 S.E. RUN = 40
 P.C. STA = 149+48.58
 P.T. STA = 154+48.58
 S.E. TRANS.
 STA. 153+76.25 TO STA. 6+54.52
 STA. 8+05.50 TO STA. 9+56.32

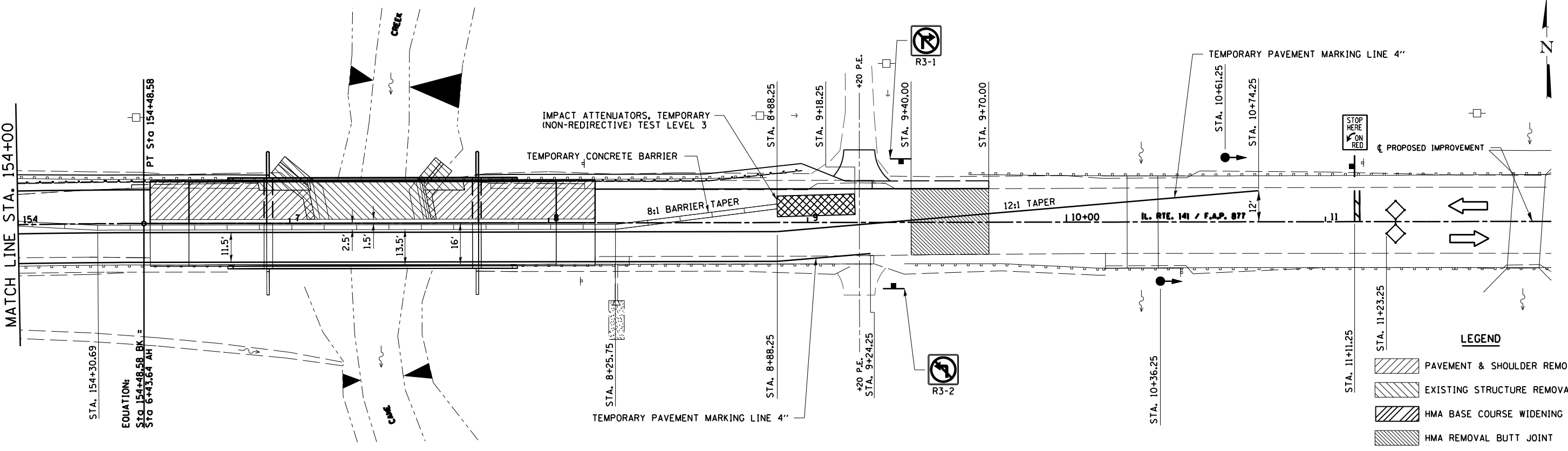
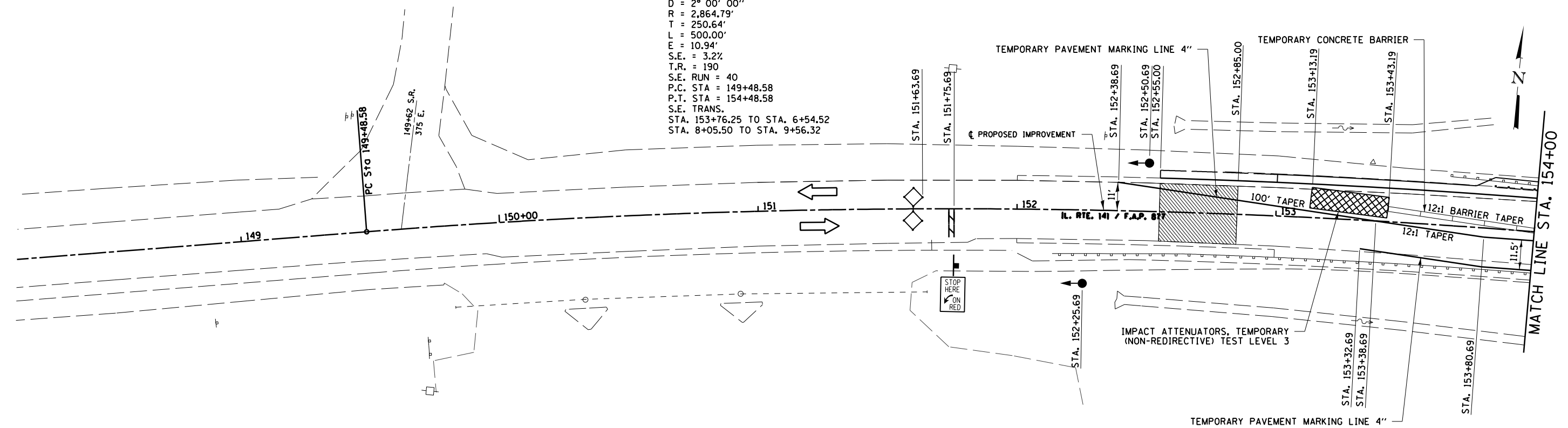


LEGEND

| | |
|--|-----------------------------|
| | PAVEMENT & SHOULDER REMOVAL |
| | EXISTING STRUCTURE REMOVAL |
| | HMA BASE COURSE WIDENING |
| | HMA REMOVAL BUTT JOINT |

| | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------|--|---------------------------------------------|-----------------------------------------------|--|-------------------------------------------------|---------------------------------------------------------------------------------|--|
| FILE NAME = p:\planroom\dott\illinois.gov\PROJECTS\CONTRACTS\SDOT\District 9\Projects\2018\LA-5\CS\03\Drawings\78162-1.dgn DRAWN - T.W.K. CHECKED - J.W.F. DATE - *DAT* | | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | | STAGE 1 CONSTRUCTION IL. ROUTE 141 | | | F.A.P. 877 SECTION 101B-2 COUNTY WHITE TOTAL SHEETS 60 SHEET NO. 18 | |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62713 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | | DESIGNED BY: T.W.K. REVISIONS: | | SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA. | | | CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT | | |

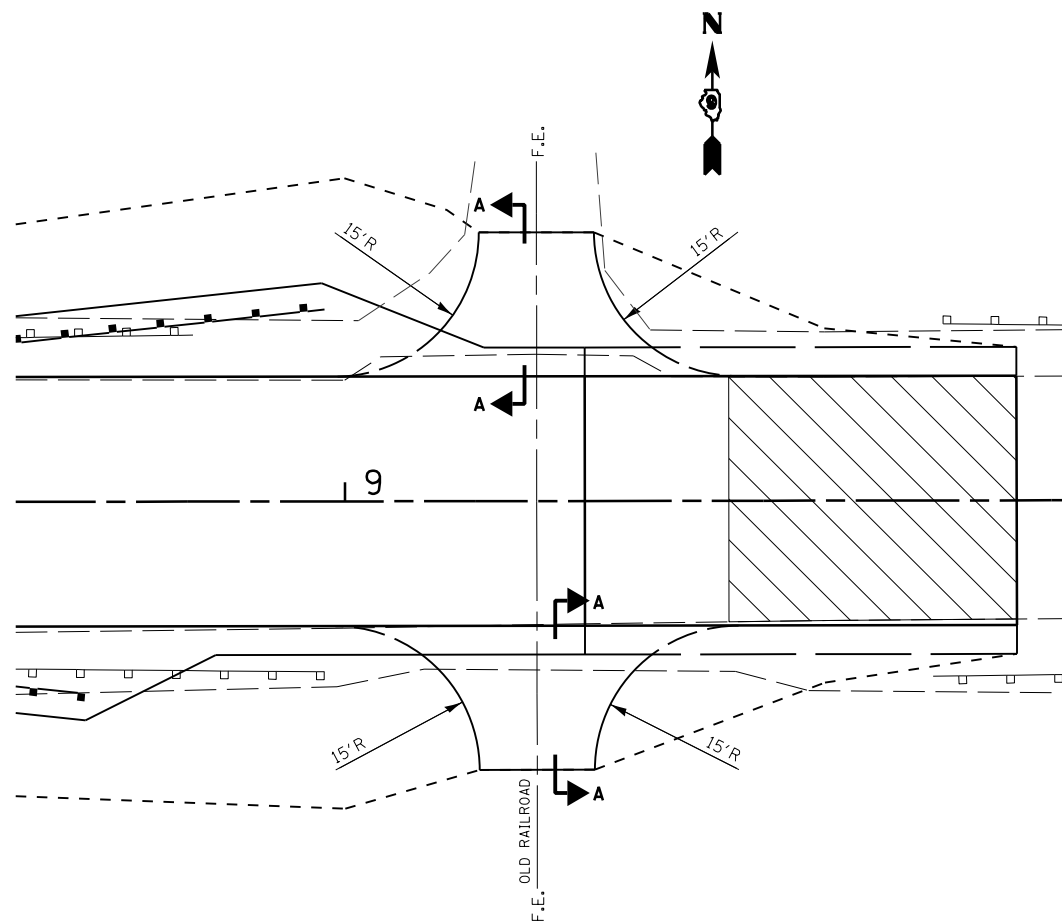
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 Δ = 10° 00' 00" (RT)
 D = 2° 00' 00"
 R = 2,864.79'
 T = 250.64'
 L = 500.00'
 E = 10.94'
 S.E. = 3.2%
 T.R. = 190
 S.E. RUN = 40
 P.C. STA = 149+48.58
 P.T. STA = 154+48.58
 S.E. TRANS.
 STA. 153+76.25 TO STA. 6+54.52
 STA. 8+05.50 TO STA. 9+56.32



LEGEND

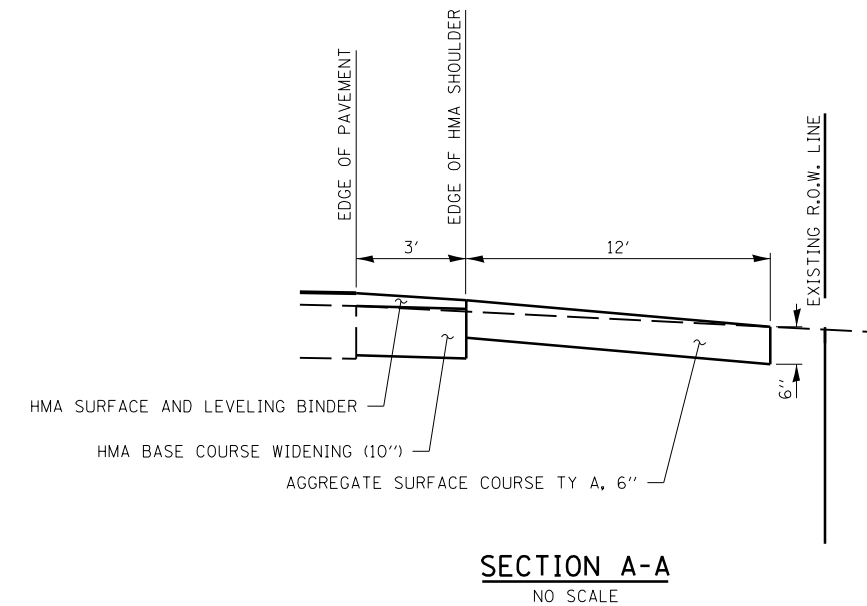
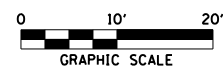
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|--|-----------------------------|
| | PAVEMENT & SHOULDER REMOVAL |
| | EXISTING STRUCTURE REMOVAL |
| | HMA BASE COURSE WIDENING |
| | HMA REMOVAL BUTT JOINT |

| | | | | | | | | | | | |
|-------------------------------------------|----------------------|--------------|-----------------------------------------------------------|--|-----------------------------------------------|---------------------------|--------------|----------------|--------------------|-----------------|--------------|
| FILE NAME = p:\planroom\dot\illinois\p... | DESIGNED BY = T.W.K. | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | STAGE 2 CONSTRUCTION IL. ROUTE 141 | | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 19 |
| DRAWN - T.W.K. | CHECKED - J.W.F. | DATE - *DAT* | SCALE: | | SHEET NO. 2 OF 2 SHEETS | | STA. TO STA. | | CONTRACT NO. 78162 | | |
| PLOT SCALE = 2.0000' / in. | | | PLOT DATE = 3/18/2019 | | | ILLINOIS FED. AID PROJECT | | | | | |

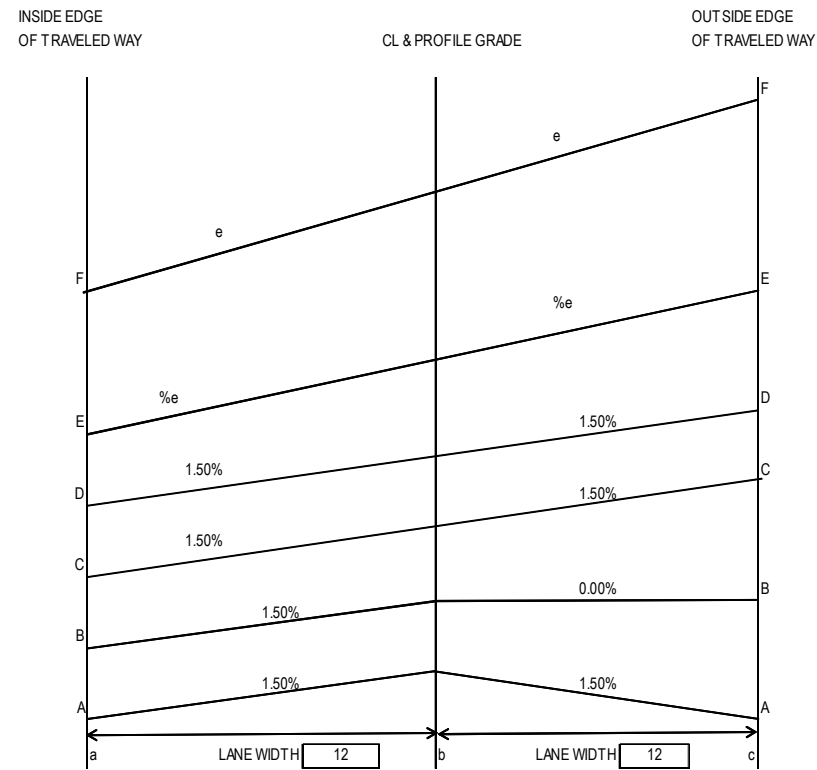
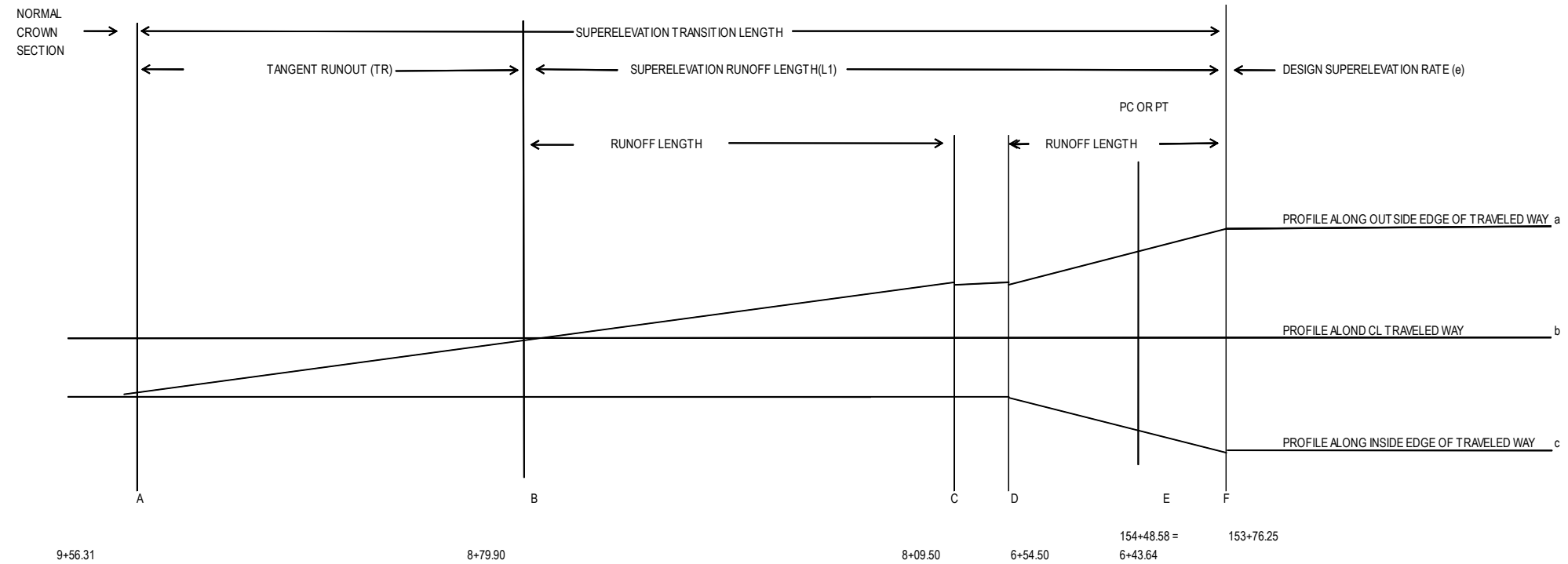


ENTRANCE DETAIL

LT. & RT. STA. 9+20



| ENTRANCE SUMMARY | | | | | |
|------------------|-----|------|---------|-------|--------|
| CL STATION | LOC | TYPE | SURFACE | WIDTH | RADIUS |
| 9+20 | LT | FE | AGG | 12 | 15' |
| 9+20 | RT | FE | AGG | 12 | 15' |



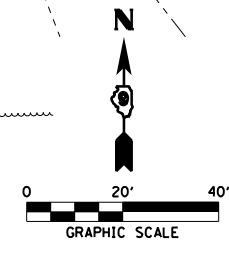
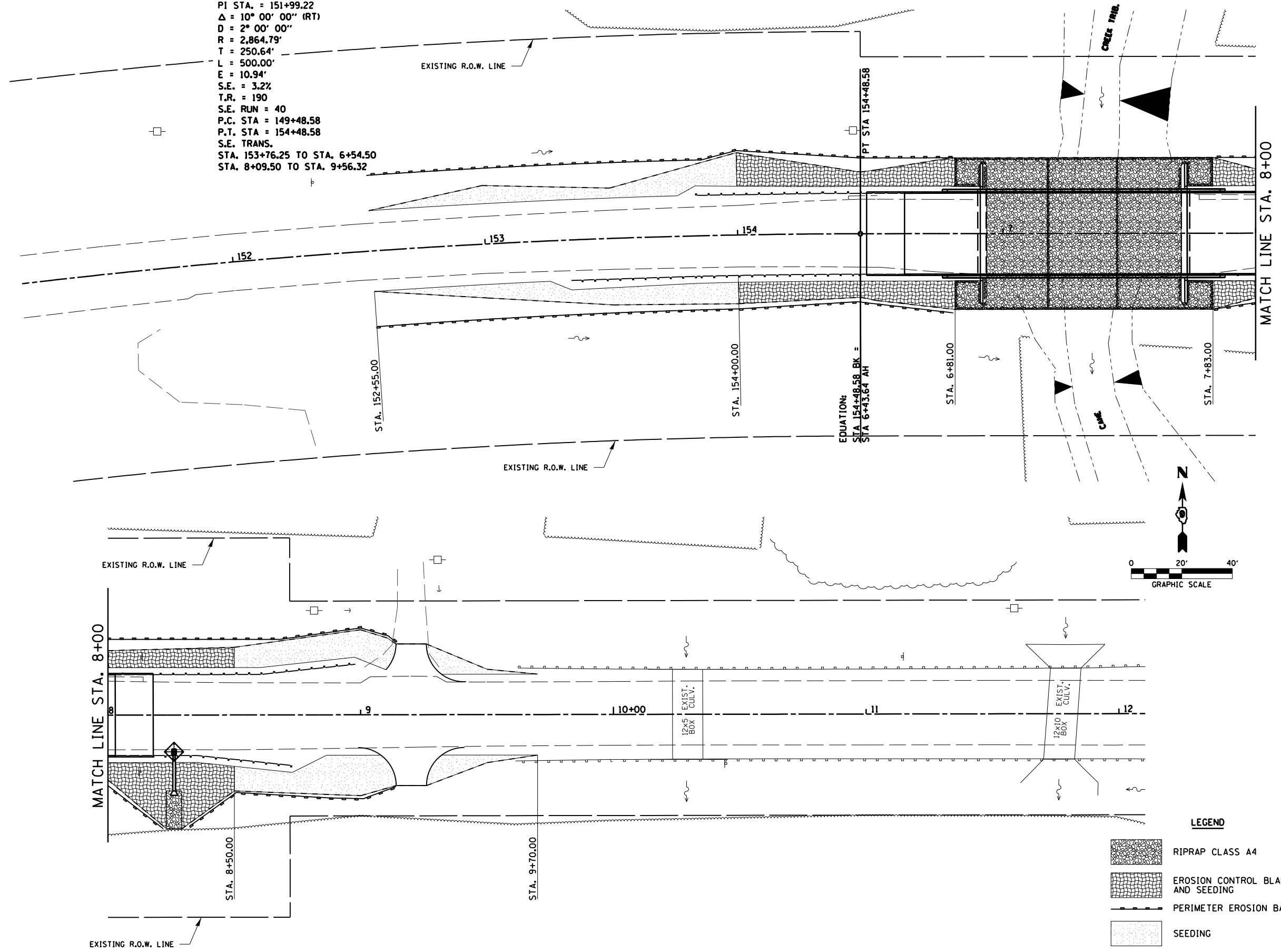
| CURVE P.I. STATION 151+99.22 TRANSITION DETAILS | | | |
|-------------------------------------------------|---------|-----|--|
| R= | 2864.79 | FT | |
| NC = | 1.50 | % | |
| LANE WIDTH= | 12 | FT. | |
| CURVE= | RIGHT | | |
| S.E.= | 3.20 | % | |

| | | 1/3 | 2/3 |
|----|-----|----------|----------|
| L1 | 190 | 63.33333 | 126.6667 |
| TR | 40 | - | - |






| CURVE STATIONS | | |
|----------------|-----------|--|
| P.C. | 149+48.58 | |
| P.T. | 154+48.58 | |

| | STATION | SUPERELEVATION | |
|---|-----------|----------------|--------|
| | | LEFT | RIGHT |
| F | 153+76.25 | -3.20% | 3.20% |
| E | 6+43.64 | -1.72% | 1.72% |
| D | 6+54.50 | -1.50% | 1.50% |
| C | 8+09.50 | -1.50% | 1.50% |
| B | 8+79.90 | -1.50% | 0.00% |
| A | 9+56.31 | -1.50% | -1.50% |

PI STA. = 151+99.22
 $\Delta = 10^\circ 00' 00''$ (RT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 250.64'$
 $L = 500.00'$
 $E = 10.94'$
 $S.E. = 3.2\%$
 $T.R. = 190$
 $S.E. RUN = 40$
 $P.C. STA = 149+48.58$
 $P.T. STA = 154+48.58$
 $S.E. TRANS.$
 $STA. 153+76.25 TO STA. 6+54.50$
 $STA. 8+09.50 TO STA. 9+56.32$



LEGEND

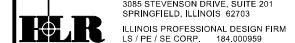
-  RIPRAP CLASS A4
-  EROSION CONTROL BLANKET AND SEEDING
-  PERIMETER EROSION BARRIER
-  SEEDING
-  INLET AND PIPE PROTECTION

| | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|
| FILE NAME = p:\planroom\dot\illinois.gov\PROJECTS\EROSION CONTROL\District 9\91022\EROSION\DATA\HLR\Final\plan\EROSION\CAD\Sheets\0978162-sht-eros.dgn | DESIGNED - L.F.S. | REVISED - |
| DRAWN - T.W.K. | REVISED - | |
| CHECKED - J.W.F. | REVISED - | |
| DATE - *DAT* | REVISED - | |

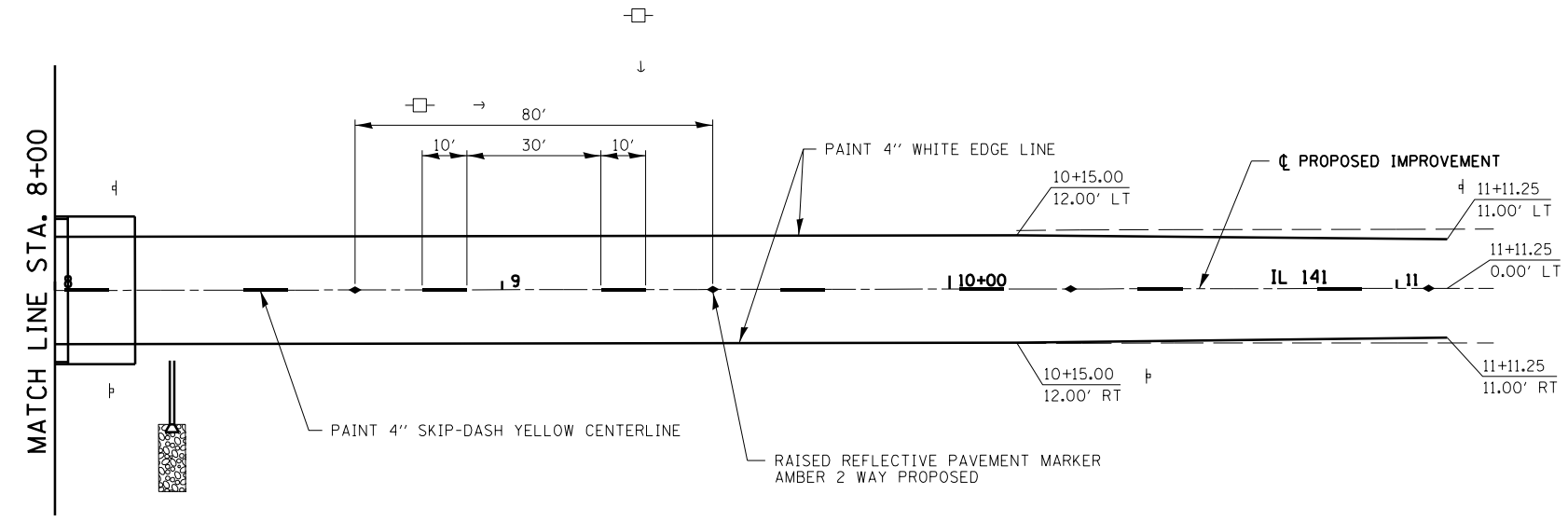
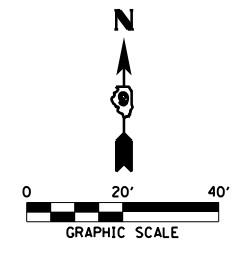
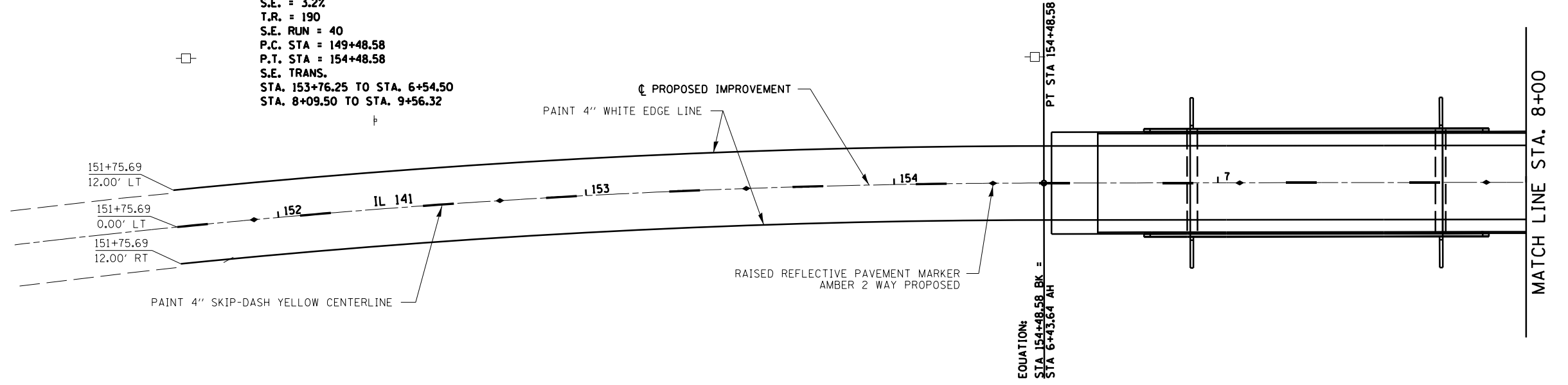
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | |
|----------------------------------------------|--------------------------------------|
| EROSION CONTROL PLAN IL ROUTE 141 | |
| SCALE: | SHEET NO. 1 OF 1 SHEETS STA. TO STA. |

| | | | | |
|---------------------------|---------|--------|--------------|-----------|
| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 877 | 101B-2 | WHITE | 60 | 22 |
| CONTRACT NO. 78162 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

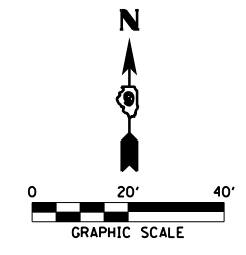
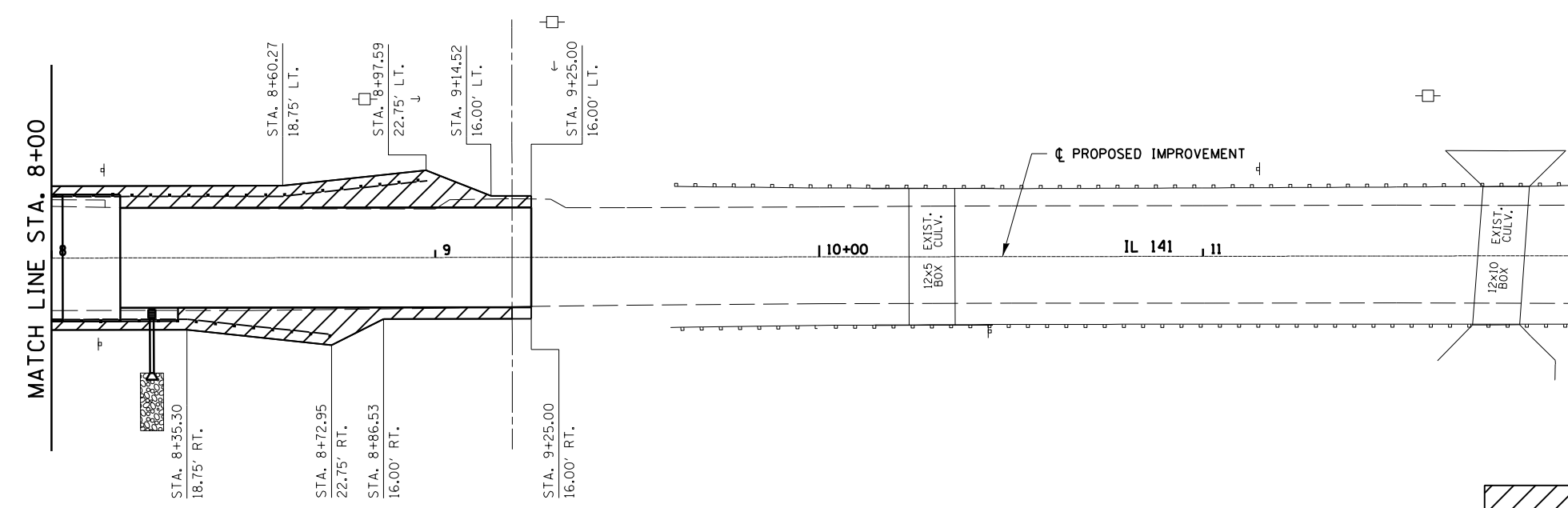
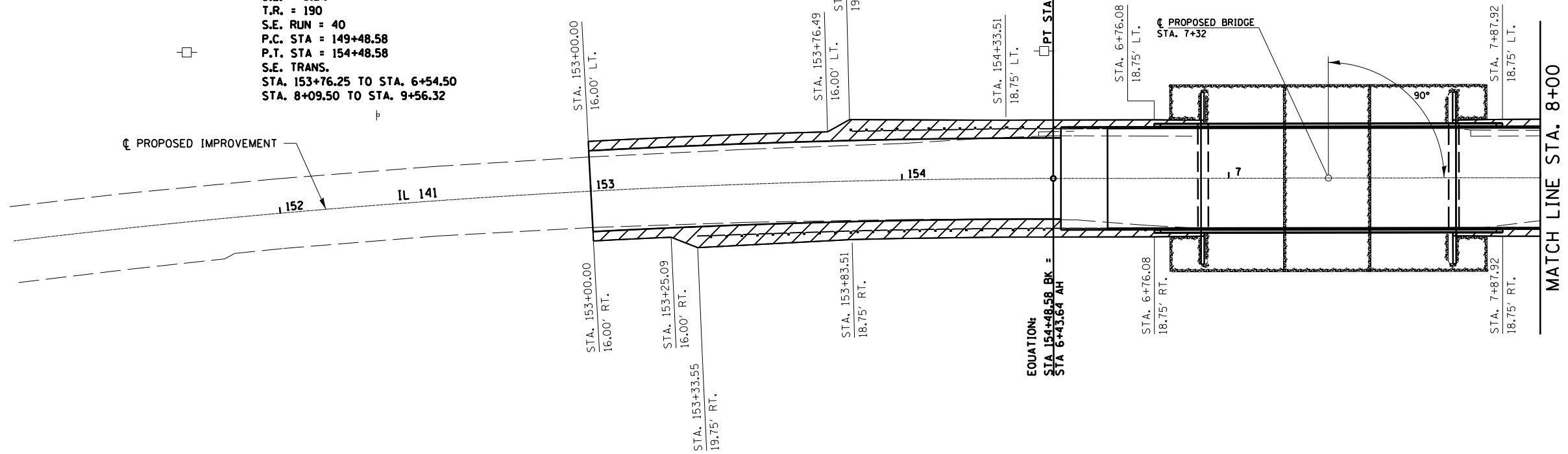


PI STA. = 151+99.22
 $\Delta = 10^\circ 00' 00''$ (RT)
 $D = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 250.64'$
 $L = 500.00'$
 $E = 10.94'$
 $S.E. = 3.2\%$
 $T.R. = 190$
 $S.E. RUN = 40$
 $P.C. STA = 149+48.58$
 $P.T. STA = 154+48.58$
 $S.E. TRANS.$
 $STA. 153+76.25 TO STA. 6+54.50$
 $STA. 8+09.50 TO STA. 9+56.32$



| | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|-----------------------------------------------------------------|-----------------------------------------------------|-------------------------|-------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME = p:\planroom\dot\illinois\go | DESIGNED BY = L.F.S. | REVISED BY = | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | PAVEMENT MARKING PLAN IL ROUTE 141 | | | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. | DRAWN - T.W.K. | REVISED - | | 877 | 101B-2 | WHITE | 60 | 23 | | | |
| 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | CHECKED - J.W.F. | REVISED - | | CONTRACT NO. 78162 | | | ILLINOIS FED. AID PROJECT | | | | |
| PLOT SCALE = 2.0001' / in. | DATE - *DAT* | REVISED - | | SCALE: 1:20 | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | | | | |

PI STA. = 151+99.22
 Δ = 10° 00' 00" (RT)
 D = 2° 00' 00"
 R = 2,864.79'
 T = 250.64'
 L = 500.00'
 E = 10.94'
 S.E. = 3.2%
 T.R. = 190
 S.E. RUN = 40
 P.C. STA = 149+48.58
 P.T. STA = 154+48.58
 S.E. TRANS.
 STA. 153+76.25 TO STA. 6+54.50
 STA. 8+09.50 TO STA. 9+56.32



LEGEND
 FINAL SHOULDER CONFIGURATION

FILE NAME = p:\planroom\dot.ilinois\go...
 DESIGNED - T.W.K.
 DRAWN - T.W.K.
 CHECKED - J.W.F.
 DATE - *DAT*

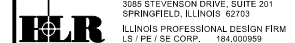
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 REVISION NO. 2: DATE, REVISION DESCRIPTION, DRAWN, CHECKED, DATE, REVISION
 REVISION NO. 3: DATE, REVISION DESCRIPTION, DRAWN, CHECKED, DATE, REVISION
 REVISION NO. 4: DATE, REVISION DESCRIPTION, DRAWN, CHECKED, DATE, REVISION

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVED SHOULDER PLAN
 IL ROUTE 141**

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

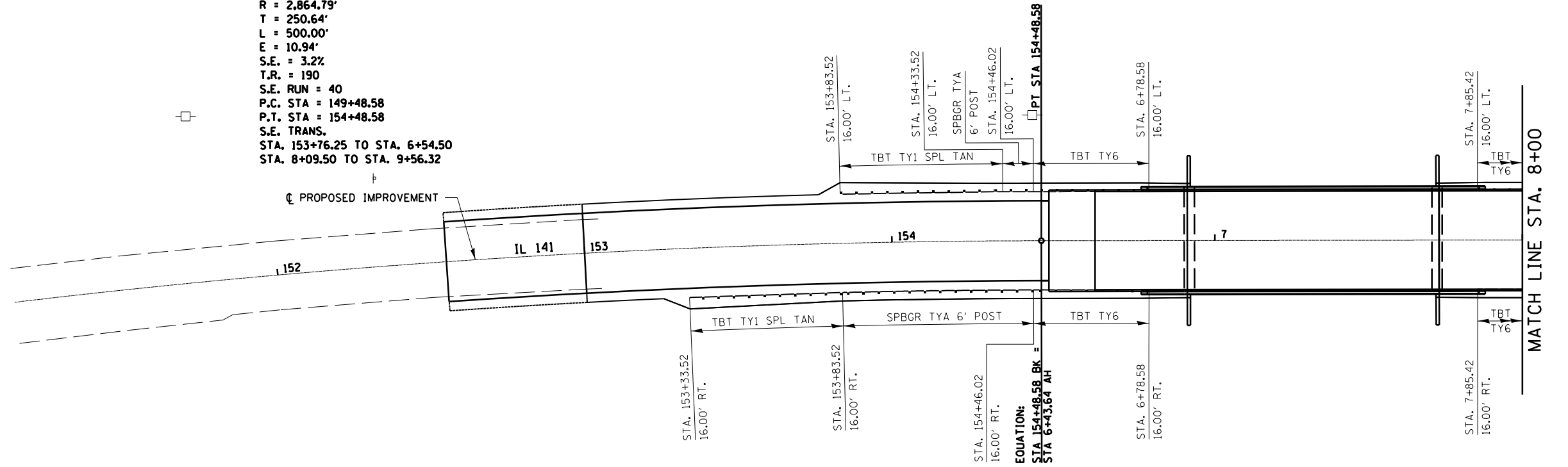
| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|---------|--------|--------------|-----------|
| 877 | 101B-2 | WHITE | 60 | 24 |
| CONTRACT NO. 78162 | | | | |



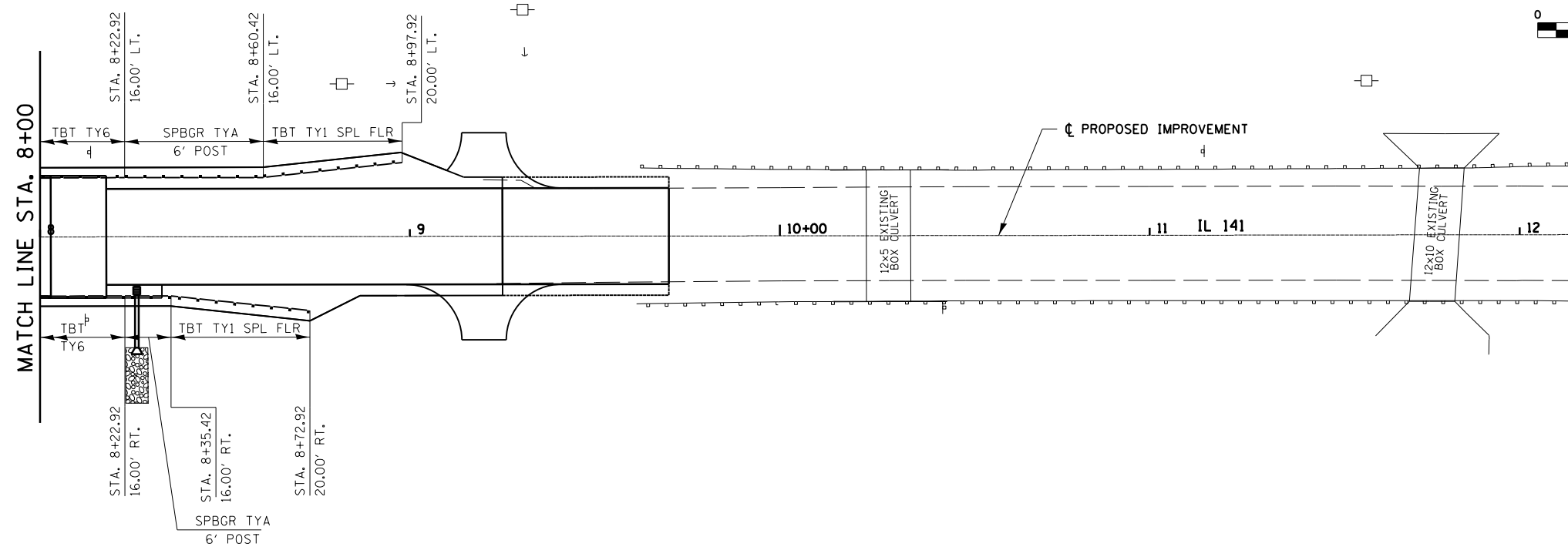
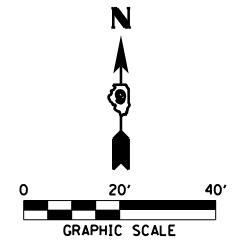
3055 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 L5 / PE / SE CORP. - 184.000959

ILLINOIS FED. AID PROJECT

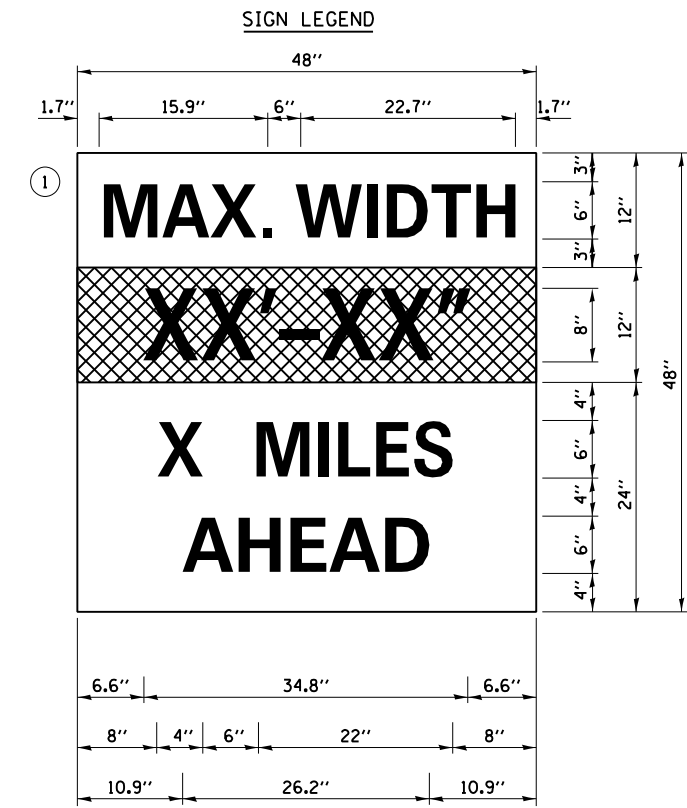
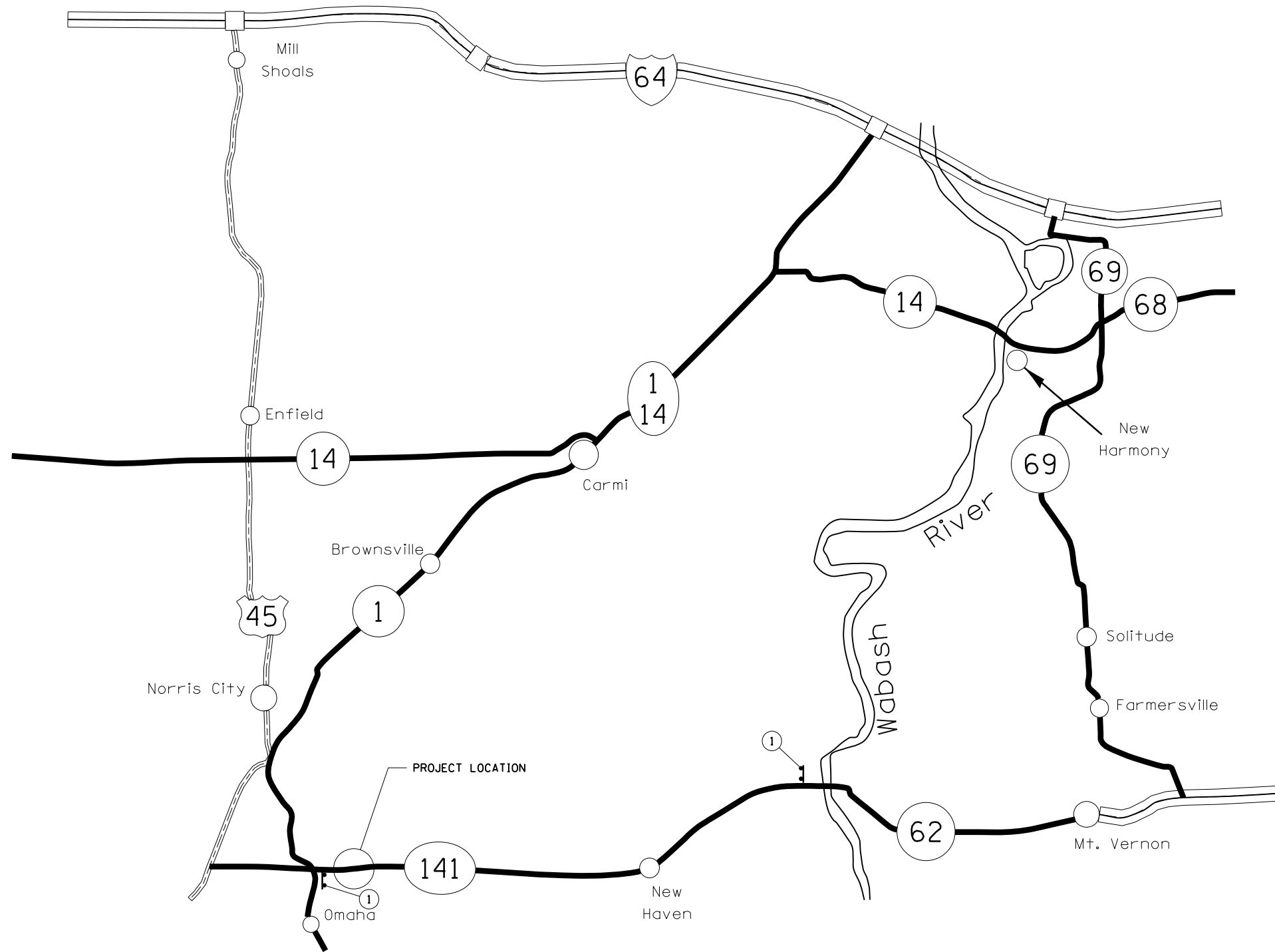
PI STA. = 151+99.22
 $\Delta = 10^\circ 00' 00''$ (RT)
 D = 2° 00' 00"
 R = 2,864.79'
 T = 250.64'
 L = 500.00'
 E = 10.94'
 S.E. = 3.2%
 T.R. = 190
 S.E. RUN = 40
 P.C. STA = 149+48.58
 P.T. STA = 154+48.58
 S.E. TRANS.
 STA. 153+76.25 TO STA. 6+54.50
 STA. 8+09.50 TO STA. 9+56.32



NOTE: THE STATIONS FOR THE POINT OF LENGTH OF NEED ARE SHOWN ON PLAN & PROFILE SHEET 16



| | | | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------|--|-----------------------------------------------------------------|--|------------------------------------------------|--|-------------------------------------------------|-------------------|-----------------|--------------------|-----------------|
| FILE NAME = p:\planning\dot\illinois\go... PROJECT NAME = ... DESIGNED BY = ... DRAWN - T.W.K. CHECKED - J.W.F. DATE - *DAT* | | REVISED - REVISED - REVISED - REVISED - | | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | GUARDRAIL LAYOUT IL ROUTE 141 | | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 25 |
| HAMPTON, LENZINI AND RENWICK, INC. 3055 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | | PLOT SCALE = 2.0001' / in. PLOT DATE = 3/18/2019 | | SCALE: | | SHEET NO. 1 OF 1 SHEETS STA. TO STA. | | CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT | | | | |

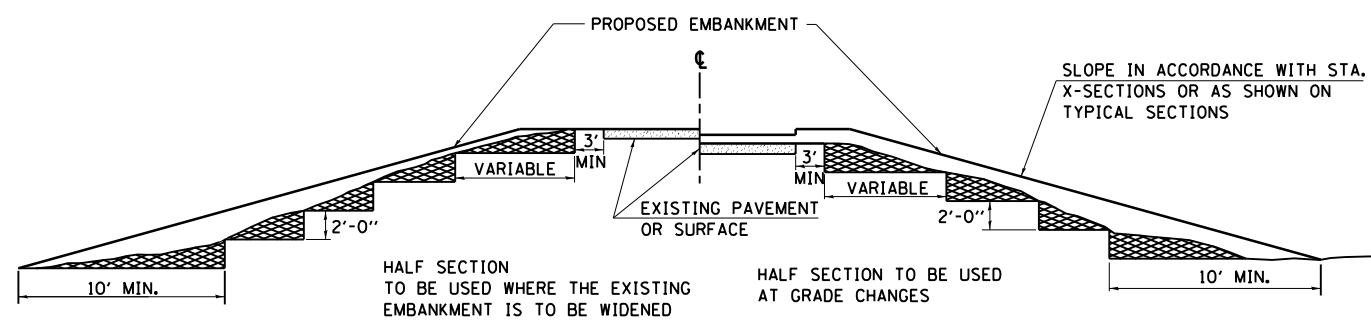



W12-1103
W12-1103 (WIDTH IS 80)
NO BORDER, BLACK ON WHITE:
"MAX WIDTH" D:
NO BORDER, BLACK ON ORANGE:
"XX'-XX'' D:
NO BORDER, BLACK ON WHITE:
"X MILES" D: "AHEAD" D:

DETOUR NOTES

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATION DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGN, 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 1'-6" LESS THAN ACTUAL STAGING WIDTHS, OR AS DIRECTED BY THE ENGINEER. THE "X" AHEAD WILL BE DETERMINED BY THE ENGINEER.

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

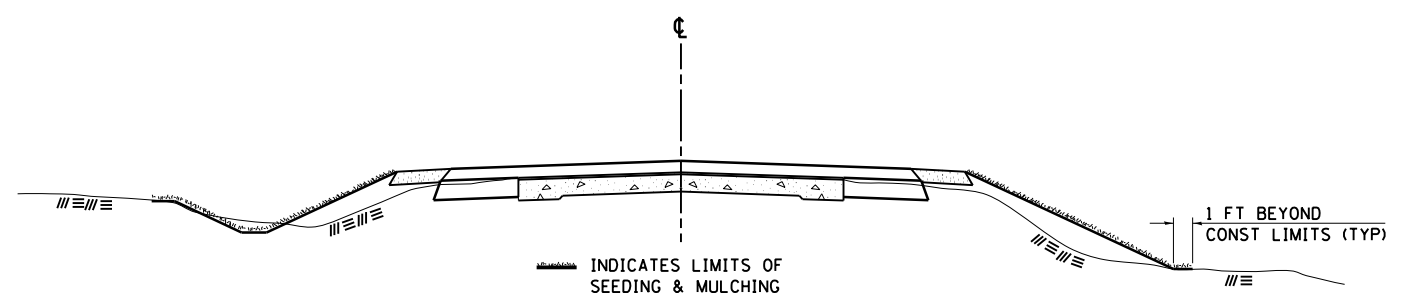


 MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

| REVISIONS | |
|-----------|---------|
| REDRAWN | 2-15-89 |
| REVISED | 8-15-94 |
| CHECKED | 6-3-99 |
| RESIZED | 5-7-08 |

STD. 9-16

SEEDING & MULCHING



GENERAL NOTES

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

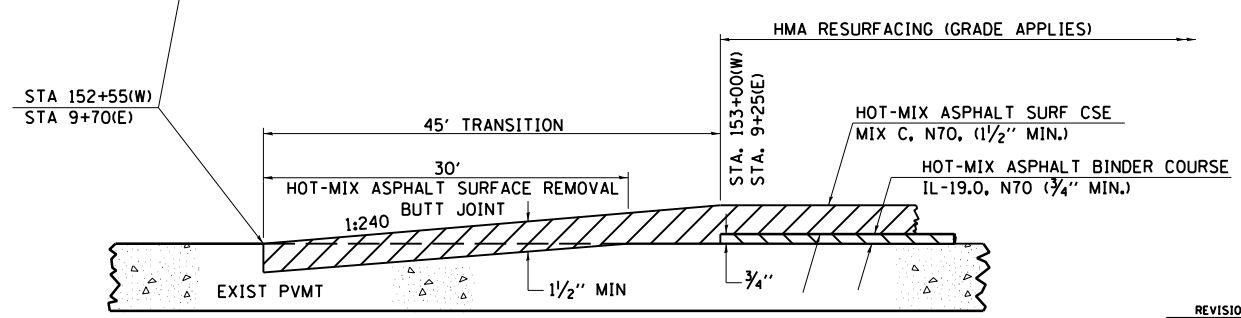
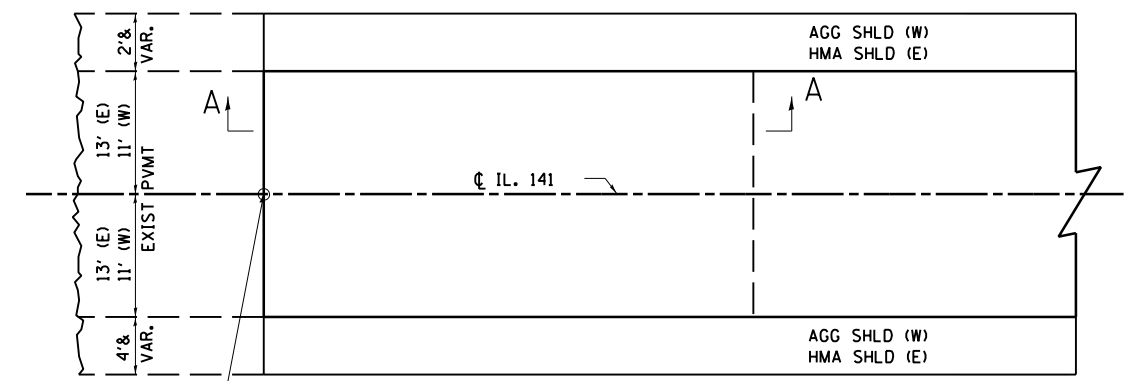
FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

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 | 3-27-08 |

STD. 9-12



SECTION A-A

| REVISIONS | |
|-----------|----------|
| DRAWN | 10-17-90 |
| REVISED | 01-11-07 |
| REVISED | 3-25-08 |
| REVISED | |

STD. 9-86

| | | |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------|
| FILE NAME = p:\planroom\dot.illinois.gov\... DESIGNED BY = L.F.S. DRAWN - T.W.K. CHECKED - J.W.F. DATE - *DAT* | PROJECT NAME = ... DESIGNED BY = L.F.S. DRAWN - T.W.K. CHECKED - J.W.F. DATE - *DAT* | REVISIONS REVISED - REVISED - REVISED - |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------|

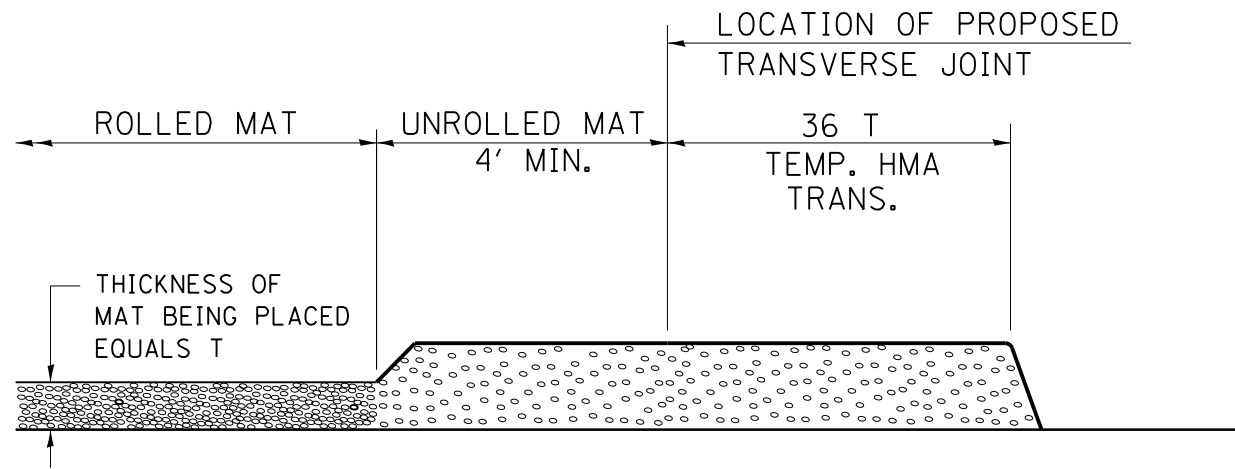
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT DETAILS
IL ROUTE 141

SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

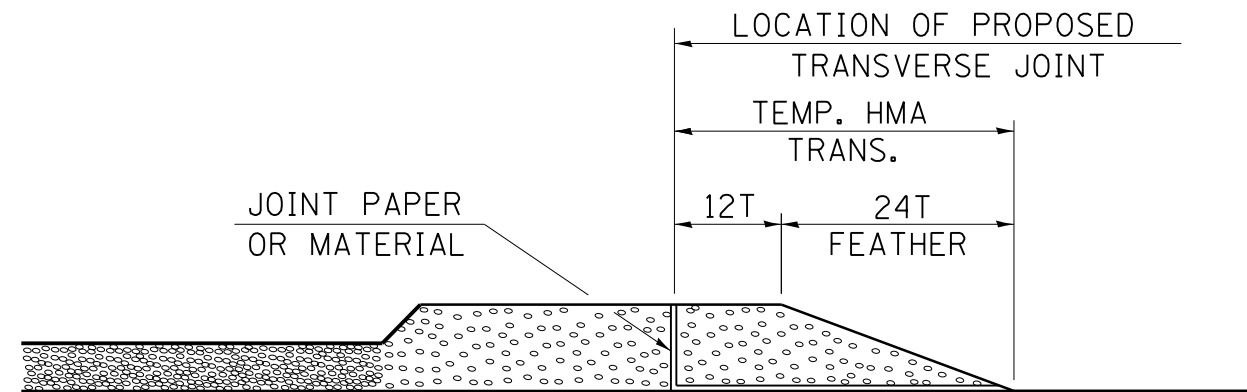
| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 877 | 101B-2 | WHITE | 60 | 27 |
| CONTRACT NO. 78162 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

TEMPORARY HOT-MIX ASPHALT TRANSITIONS



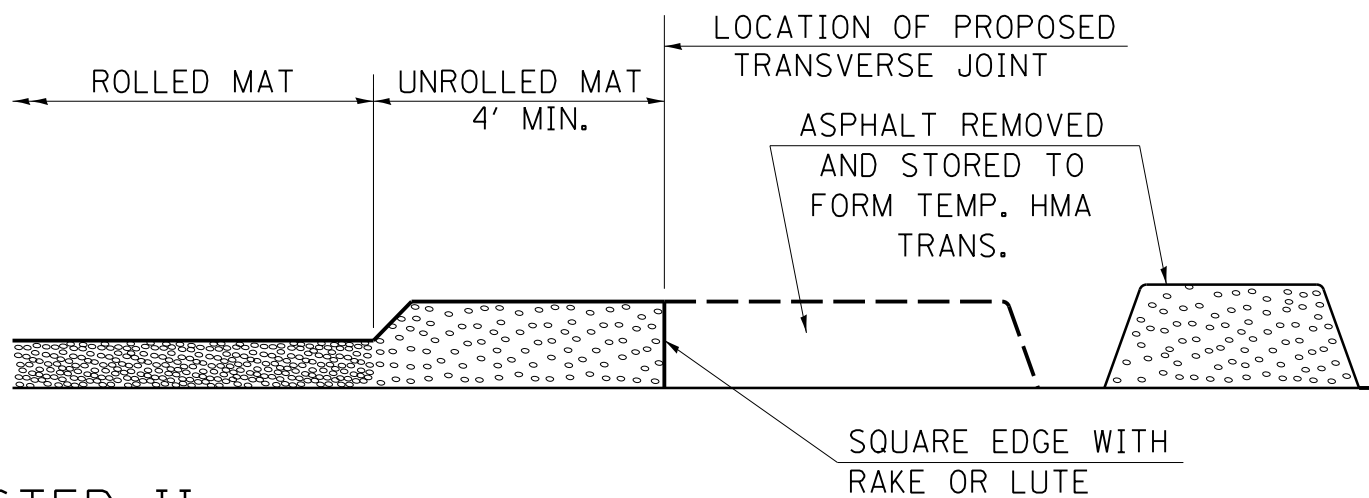
STEP I

1. PLACE HOT-MIX ASPHALT MAT, LENGTH 36 TIMES THE THICKNESS OF THE MAT BEING PLACED PAST THE PROPOSED TRANSVERSE JOINT LOCATION USING NORMAL OPERATING PROCEDURES.
2. EXTREME CARE SHOULD BE TAKEN TO MAINTAIN ENOUGH MATERIAL IN FRONT OF THE SCREED TO MAINTAIN REQUIRED PAVING DEPTH.



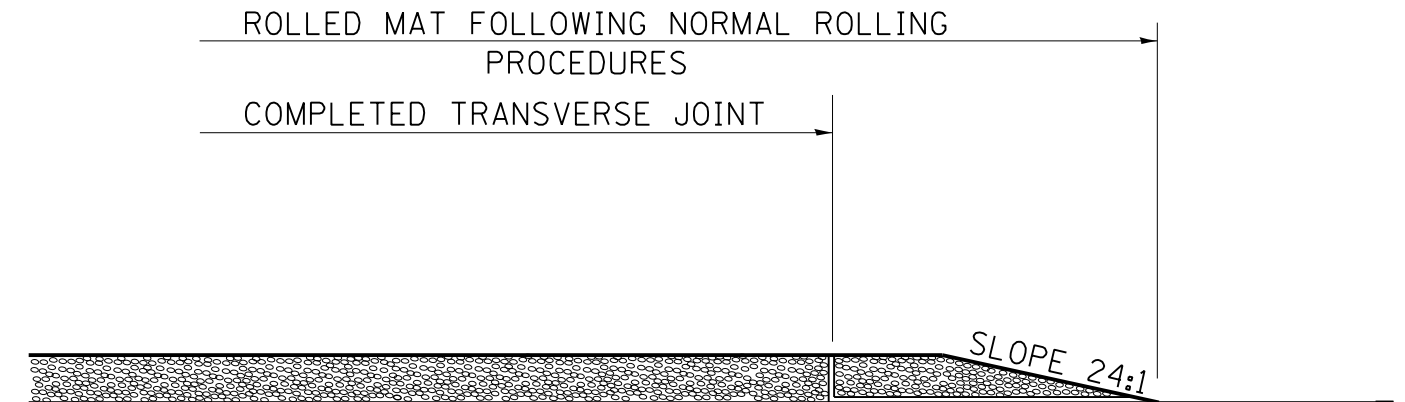
STEP III

1. JOINT PAPER OR OTHER PRESELECTED JOINT MATERIAL IS THEN PLACED IN THE CLEARED AREA AND THE EXCESS ASPHALT USED TO HAND FORM A TRANSITION TO THE DIMENSIONS SHOWN ABOVE.
2. NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



STEP II

1. MOVE THE PAVER OUT OF THE WAY AND REMOVE THE ASPHALT FROM THE AREA OF THE PROPOSED TEMPORARY HOT-MIX ASPHALT TRANSITION.
2. SQUARE UP THE END OF THE MAT WITH A RAKE OR LUTE.
3. NOTE THAT THE MAT WITHIN 4' OF THE END OF JOINT IS NOT TO BE ROLLED AT THIS TIME.



STEP IV

1. COMPLETE TEMPORARY TRANSITION BY ROLLING.
2. TO RESUME PAVING, AT THE JOINT, REMOVE TEMPORARY TRANSITION AND DISPOSE OF THE MATERIAL ACCORDING TO ART. 202.03 OF THE STD. SPECS. (COST INCLUDED IN THE CONTRACT).
3. CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 406.14 OF THE STANDARD SPECIFICATIONS.

STD. 9-26

| REVISIONS | |
|-----------|----------|
| REDRAWN | 2-15-89 |
| REVISED | 8-16-94 |
| REVISED | 01-09-07 |
| RESIZED | 05-8-08 |

| | | |
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| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-000959 | DRAWN - T.W.K. | REVISED - |
| PLOT SCALE = 2.0001' / in. | CHECKED - J.W.F. | REVISED - |
| PLOT DATE = 3/18/2019 | DATE - *DAT* | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

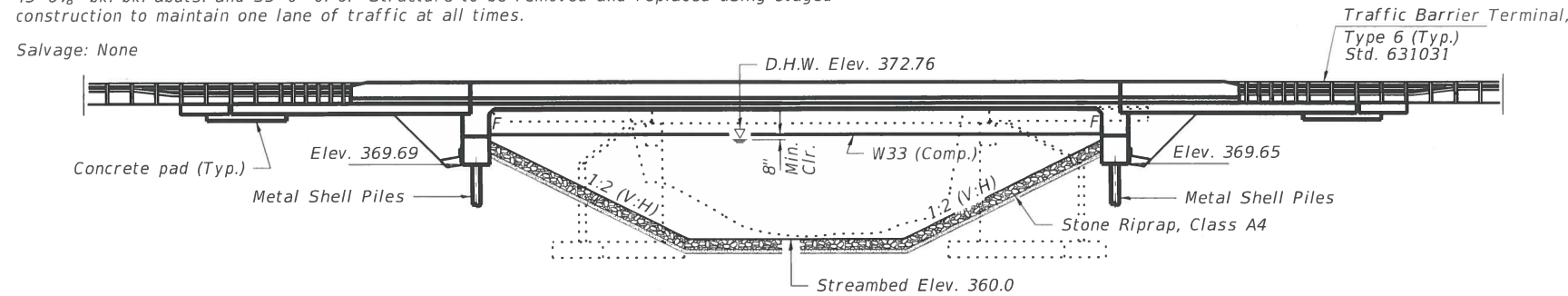
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|-------------------------|--|-------------------------|---------|--------|---------------------------|-----------|
| DISTRICT DETAILS | | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| IL ROUTE 141 | | 877 | 101B-2 | WHITE | 60 | 28 |
| SCALE: | | SHEET NO. 2 OF 2 SHEETS | | STA. | TO STA. | |
| | | | | | ILLINOIS FED. AID PROJECT | |

CONTRACT NO. 78162

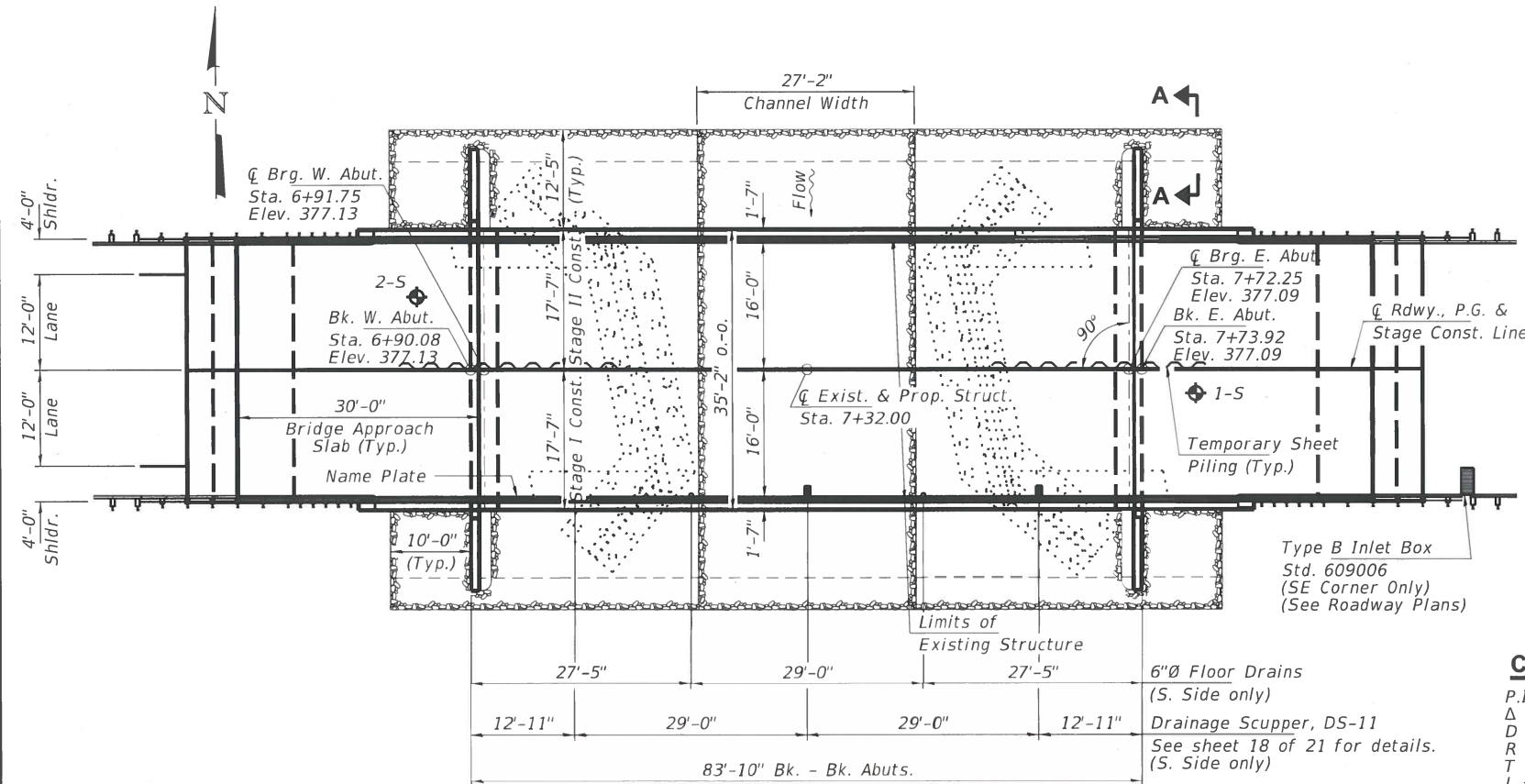
BENCHMARK: BM#54 - Chiseled "□" on SW corner SN 097-0036, 18' Rt., Sta. 7+10, Elev. 373.96

EXISTING STRUCTURE: SN 097-0036 was originally constructed in 1933 as a single span RC T-girder on RC closed abutments on untreated timber pile supported footings. In 1974 the bridge was reconstructed with a new single span PPC deck beam superstructure on widened existing abutments. The bridge is 43'-0" bk.-bk. abuts. and 33'-0" o.-o. Structure to be removed and replaced using staged construction to maintain one lane of traffic at all times.

Salvage: None



ELEVATION



PLAN

DESIGN SCOUR ELEVATION TABLE

| Event/Limit State | Design Scour Elev. (ft.) | | Item 113 |
|-------------------|--------------------------|----------|----------|
| | W. Abut. | E. Abut. | |
| Q100 | 369.69 | 369.65 | 8 |
| Q200 | 369.69 | 369.65 | |
| Design | 369.69 | 369.65 | |
| Check | 369.69 | 369.65 | |

WATERWAY INFORMATION

Drainage Area = 6.95 Sq. Mi. Proposed Low Grade Elev. 376.10 @ Sta. 11+50

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|--------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 50 | 3150 | 360 | 680 | 372.76 | 0.42 | 0.09 | 373.18 | 372.85 |
| Base | 100 | 3700 | 380 | 720 | 373.22 | 1.20 | 0.15 | 374.42 | 373.37 |
| Max. Calc. | 500 | 5130 | 400 | 730 | 373.96 | 1.74 | 0.19 | 375.70 | 374.15 |

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications.

LOADING HL-93

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

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Superstructure Concrete)
 $f_y = 60,000$ psi (Reinf.)
 $f_y = 50,000$ psi (Structural Steel) (M270 GR. 50)

SEISMIC DATA

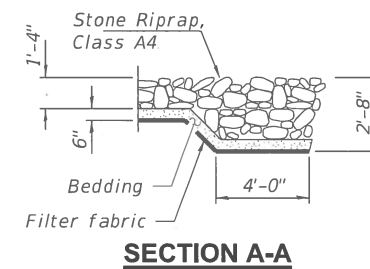
Seismic Performance Zone (SPZ) = 3
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.315 g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.741 g
 Soil Site Class = D

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

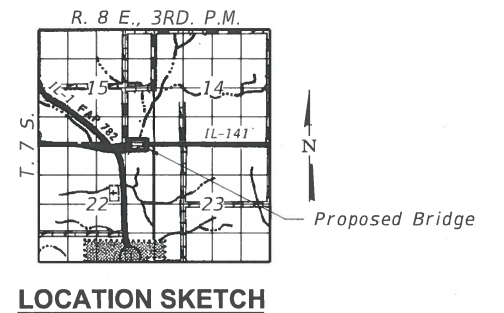
Scott M. Shoup
 ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. General Details
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
- 5-6. Top of Slab Elevations
7. Top of West Approach Slab Elevations
8. Top of East Approach Slab Elevations
9. Superstructure
- 10-11. Superstructure Details
- 12-13. Bridge Approach Slab Details
14. Structural Steel
15. Structural Steel Details
16. Abutments
17. Bar Splicer Assembly and Mechanical Splicer Details
18. Drainage Scupper, DS-11
19. Metal Shell Pile Details
- 20-21. Borings



SECTION A-A

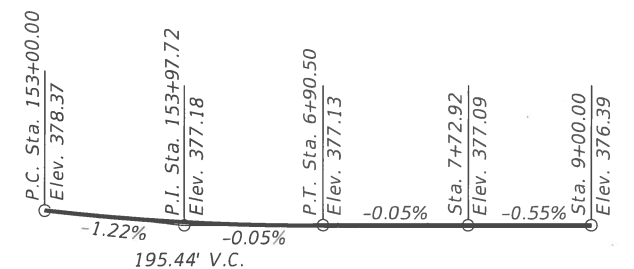


LOCATION SKETCH

CURVE DATA

P.I. Sta. 151+99.22
 $\Delta = 10^\circ 00' 00''$ (Rt.)
 $D = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 250.64'$
 $L = 500.00'$
 $E = 10.94'$
 $e = 3.2\%$
 $T.R. = 190$
 $S.E. Run = 40$
 $P.C. Sta. 149+48.58$
 $P.T. Sta. 154+48.58$
 $S.E. Transition Sta. 153+76.25$ to $Sta. 6+54.50$ (3.2% to 1.5%)
 $Sta. 8+09.50$ to $Sta. 9+56.32$ (1.5% to -1.5%)

Note:
 S.E. Transition capped to keep constant
 S.E. on structure.

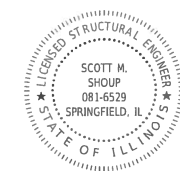


PROFILE GRADE
 (along \bar{c} roadway)

Sta. Equation: $Sta. 154+48.58$ (bk) = $Sta. 6+43.64$ (ah)

Note: West approach slab is detailed at constant -0.05% grade.

GENERAL PLAN & ELEVATION
IL ROUTE 141
OVER TRIB. CANE CREEK
FAP ROUTE 877 - SECTION 101B-2
WHITE COUNTY
STATION 7+32.00
STRUCTURE NO. 097-0077

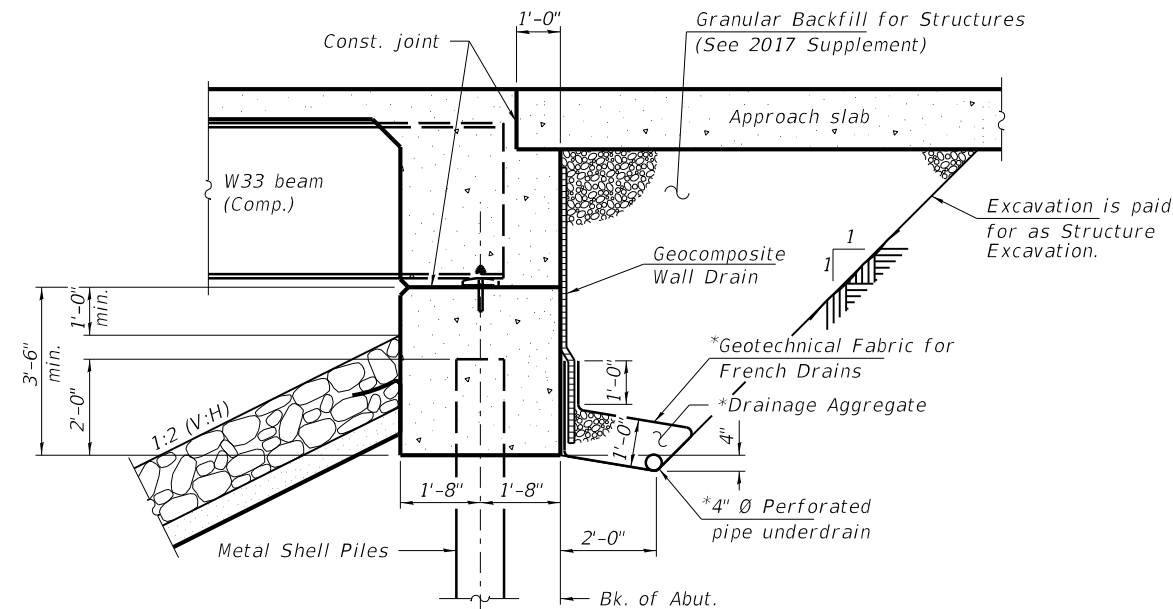


Scott M. Shoup
 02/11/2019
 ILLINOIS STRUCTURAL NO. 081-6529 Expires 11-30-2020

| | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------|-----------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------|---------|--------|--------------|-----------|----|
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| HAMPTON, LENZINI AND RENWICK, INC. 3985 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62781 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000958 | PLOT SCALE = 2,0000 / in. | DRAWN - D.A.B. | | | REVISED - | 877 | 101B-2 | WHITE | 60 | 29 |
| PLOT DATE = 3/18/2019 | CHECKED - M.D.C. | REVISED - | | | SHEET NO. 1 OF 21 SHEETS | | | | | |
| | | | | | IL 141 OVER TRIB. TO CANE CR. CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT | | | | | |

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4"Ø, holes 13/16"Ø, unless otherwise noted.
 Calculated weight of Structural Steel = 82,640 lbs. (Grade 50) and 4,900 lbs. (Grade 36).
 No field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated.
 If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
 The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8.
 Layout of slope protection system may be varied to suite ground conditions in the field as directed by the Engineer.
 Slip forming of the parapets is not allowed.



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures, 4". (See Special Provisions)

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

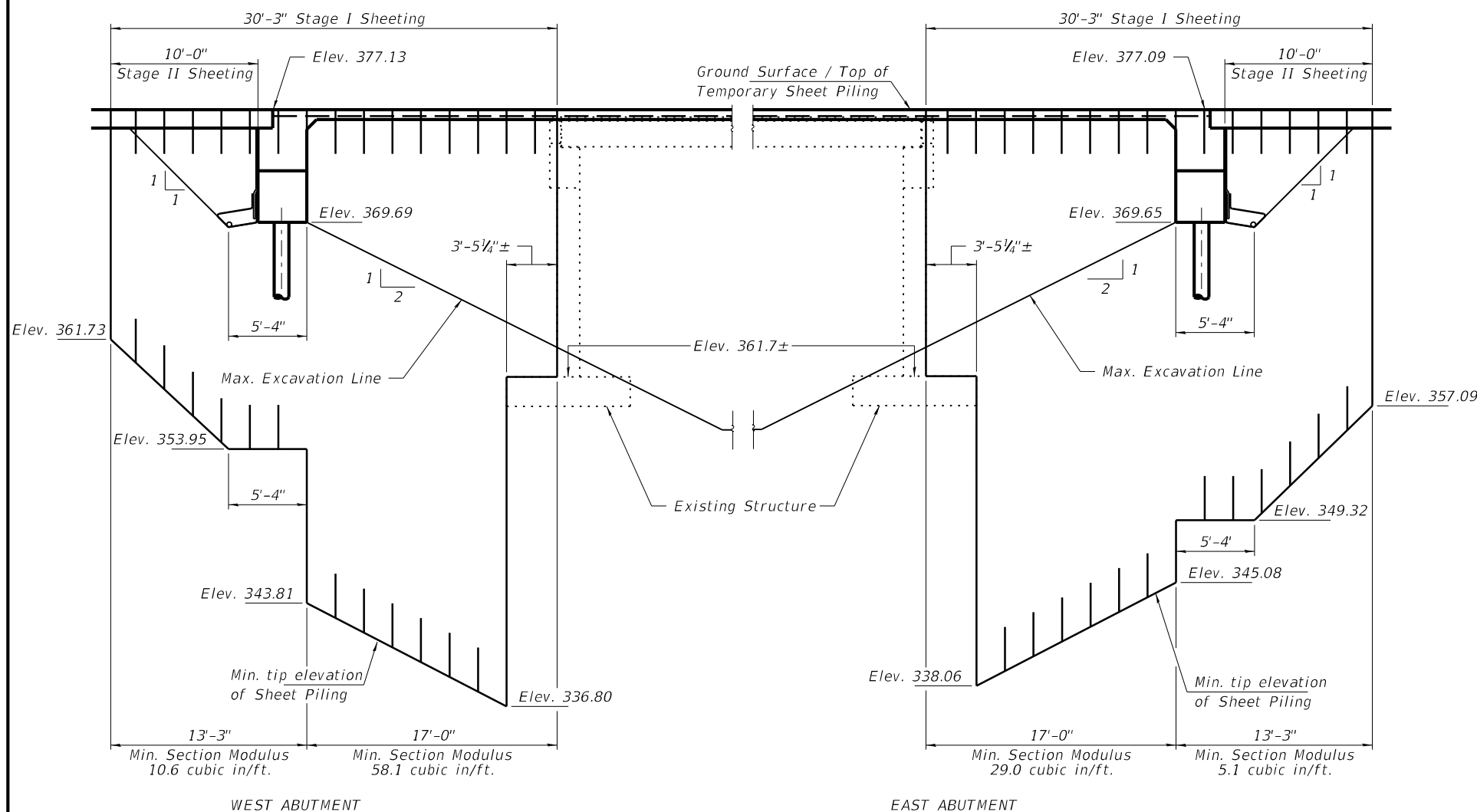
STATION 7+32
 BUILT 201_ BY
 STATE OF ILLINOIS
 F.A.P. RTE. 877 SEC. 101B-2
 LOADING HL-93
 STR. NO. 097-0077

NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|------------------------------------------|---------|--------|--------|--------|
| Stone Riprap, Class A4 | Sq. Yd. | | | 625 |
| Filter Fabric | Sq. Yd. | | | 625 |
| Removal of Existing Structures | Each | | | 1 |
| Structure Excavation | Cu. Yd. | | | 230 |
| Floor Drains | Each | 2 | | 2 |
| Concrete Structures | Cu. Yd. | | 60.2 | 60.2 |
| Concrete Superstructure | Cu. Yd. | 125.7 | | 125.7 |
| Concrete Superstructure (Approach Slab) | Cu. Yd. | 96.4 | | 96.4 |
| Bridge Deck Grooving | Sq. Yd. | 473 | | 473 |
| Protective Coat | Sq. Yd. | 610 | | 610 |
| Furnishing and Erecting Structural Steel | L. Sum | 1 | | 1 |
| Stud Shear Connectors | Each | 1,350 | | 1,350 |
| Reinforcement Bars, Epoxy Coated | Pound | 59,710 | 11,370 | 71,080 |
| Bar Splicers | Each | 466 | 116 | 582 |
| Furnishing Metal Shell Piles 12"x0.250 | Foot | | 887 | 887 |
| Driving Piles | Foot | | 887 | 887 |
| Test Pile Metal Shells | Each | | 1 | 1 |
| Name Plates | Each | 1 | | 1 |
| Anchor Bolts, 1" | Each | | 24 | 24 |
| Temporary Sheet Piling | Sq. Ft. | | | 1,706 |
| Geocomposite Wall Drain | Sq. Yd. | | | 64 |
| Asbestos Bearing Pad Removal | Each | | | 22 |
| Drainage Scuppers, DS-11 | Each | 3 | | 3 |
| Pipe Underdrains for Structures, 4" | Foot | | | 142 |
| Granular Backfill for Structures | Cu. Yd. | | | 119 |



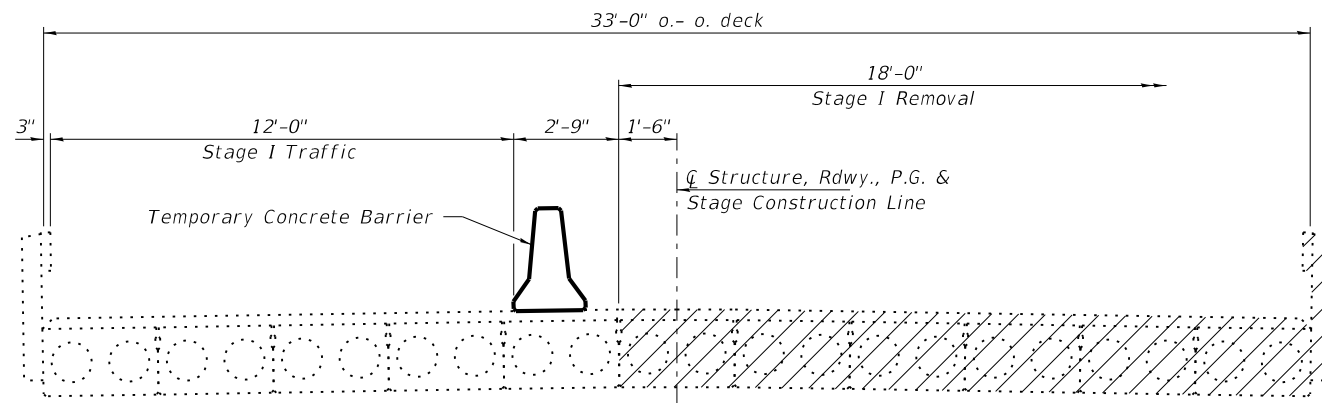
WEST ABUTMENT

EAST ABUTMENT

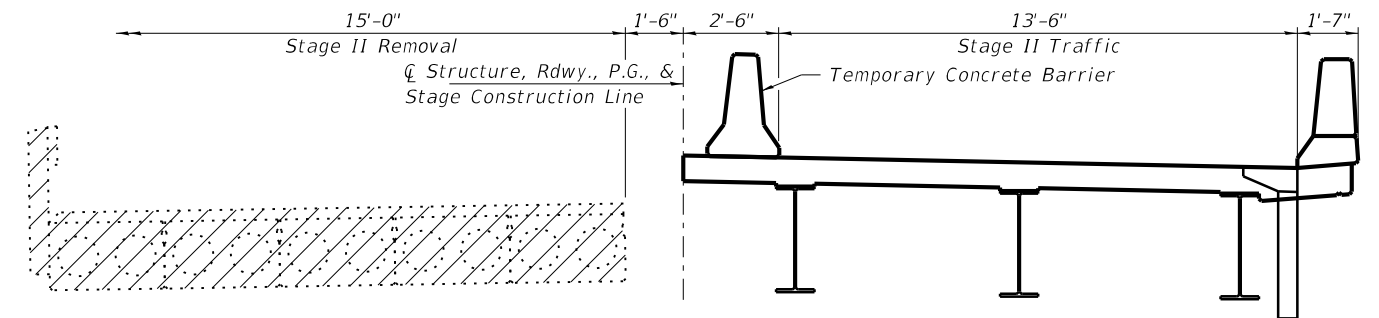
Notes:

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

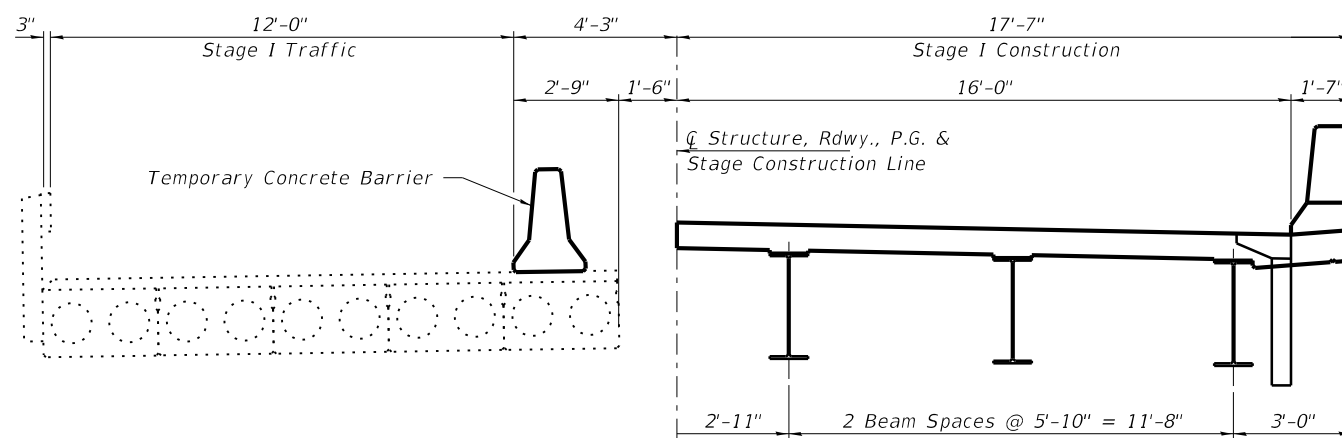
TEMPORARY SHEET PILING AT ABUTMENTS



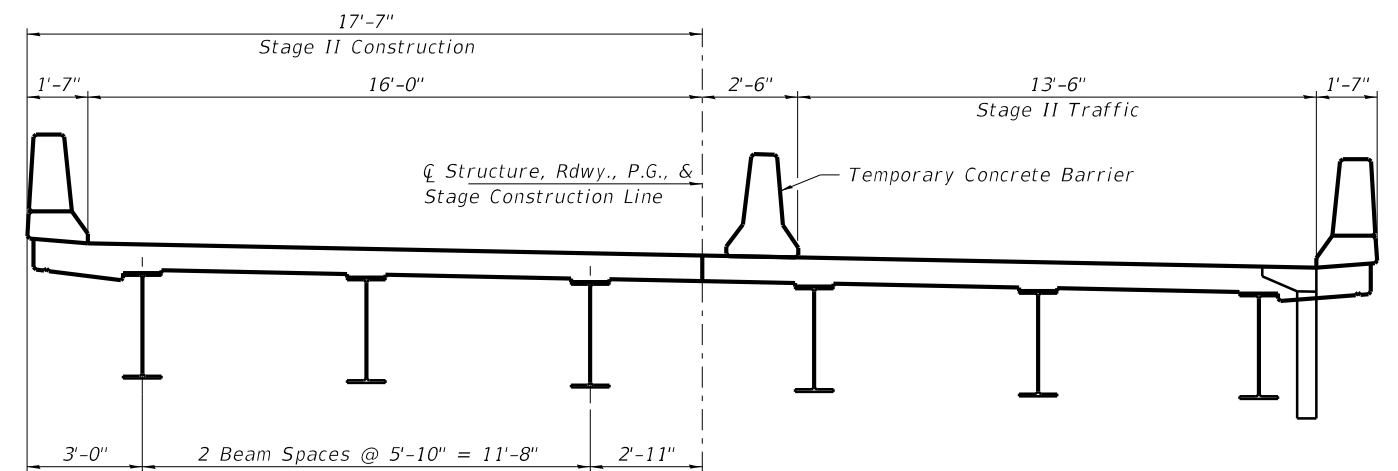
STAGE I REMOVAL



STAGE II REMOVAL

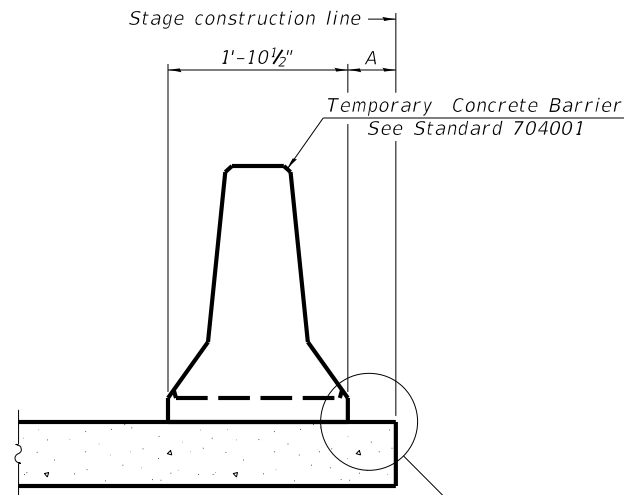


STAGE I CONSTRUCTION



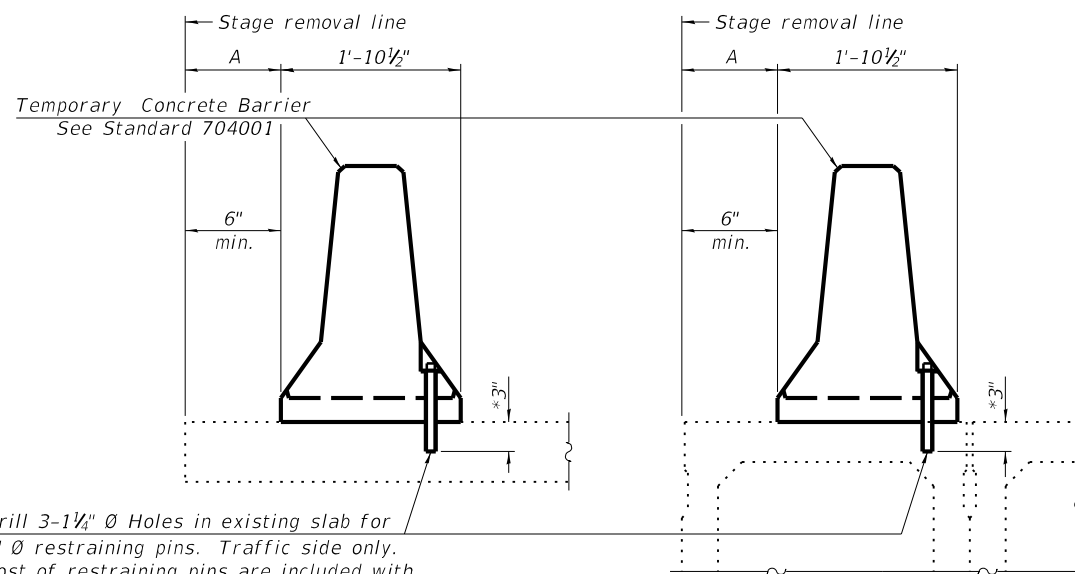
STAGE II CONSTRUCTION

Notes:
 All sections are looking East.
 Hatched areas indicate removal.
 For Temporary Concrete Barrier quantities
 see Roadway Plans.



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM



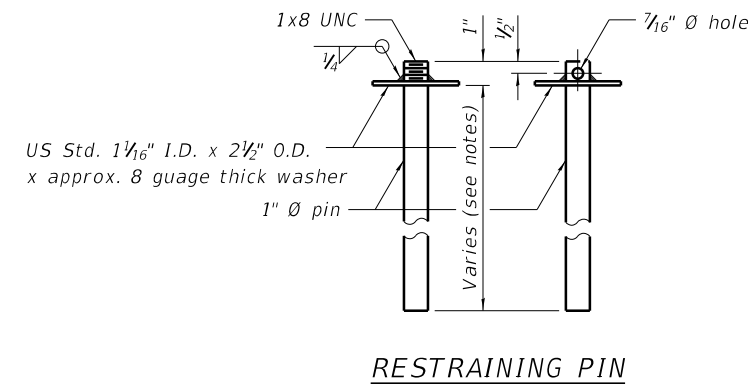
Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

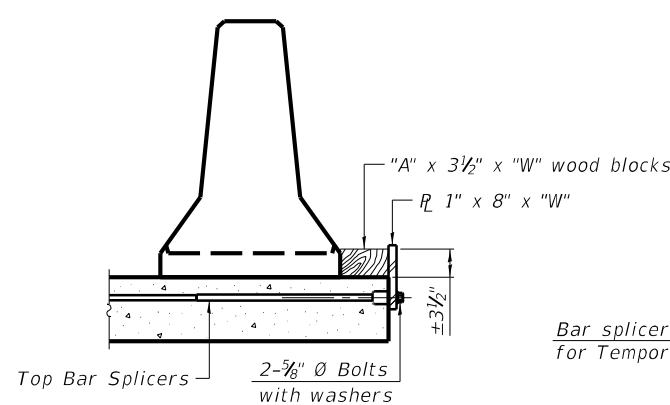
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

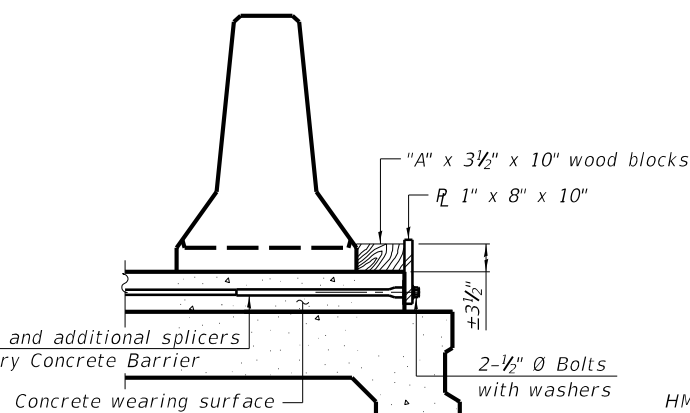
SECTIONS THRU SLAB OR DECK BEAM



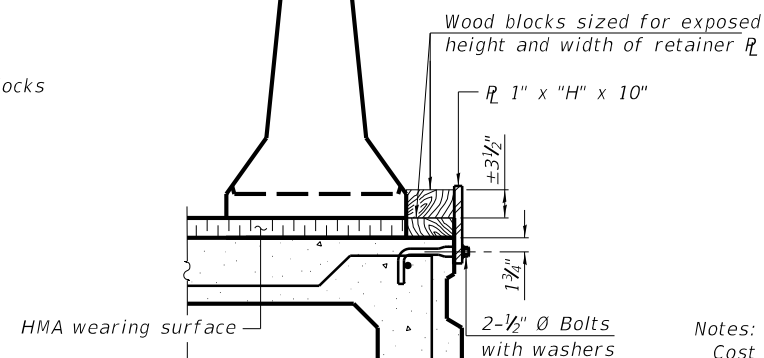
RESTRAINING PIN



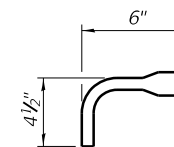
DETAIL I



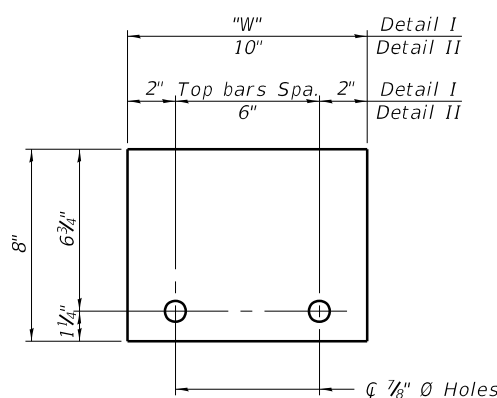
DETAIL II



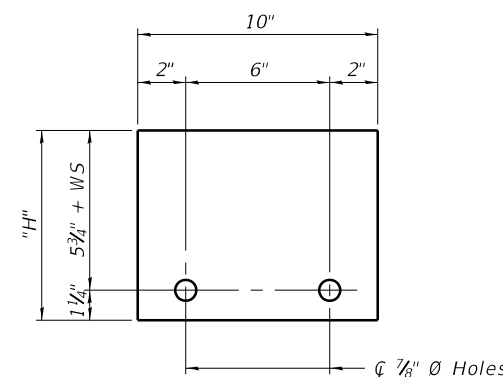
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



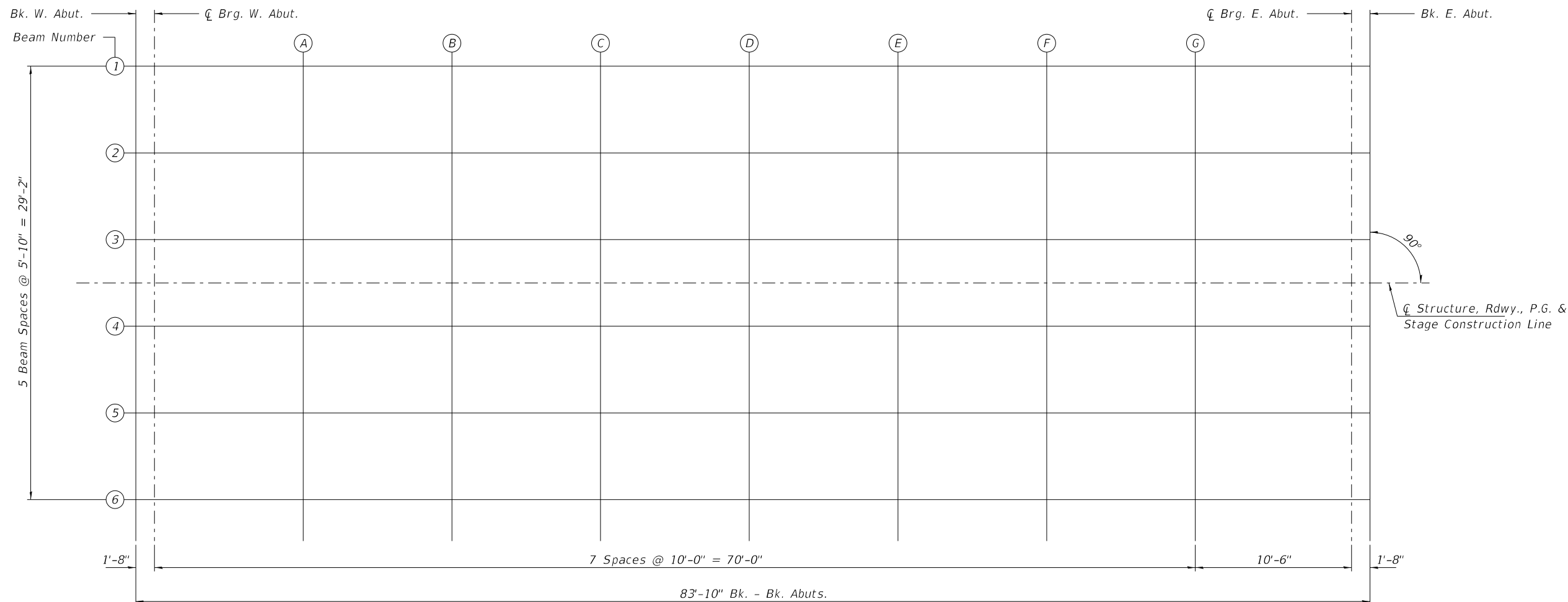
STEEL RETAINER R 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27 8-11-2017

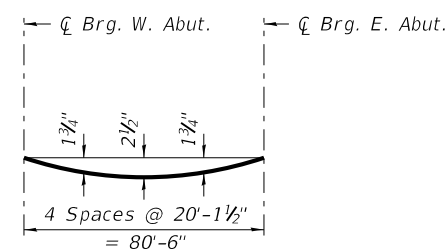
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| | PLOT SCALE = 2,000' / 1" PLOT DATE = 3/18/2019 | | | | | 877 | 101B-2 | WHITE | 60 |
| | | | | | ILLINOIS OVER TRIB. TO CANE CR. CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT | | | | |



PLAN

BEAM 1

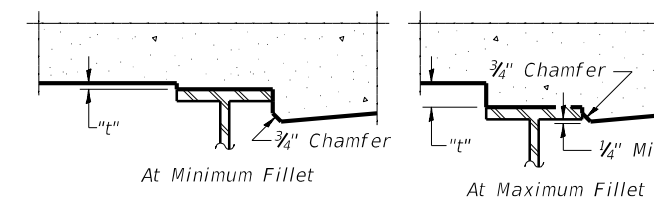
| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | -14.58 | 377.36 | 377.36 |
| ☐ Brg. W. Abut. | 6+91.75 | -14.58 | 377.36 | 377.36 |
| A | 7+01.75 | -14.58 | 377.35 | 377.43 |
| B | 7+11.75 | -14.58 | 377.35 | 377.49 |
| C | 7+21.75 | -14.58 | 377.34 | 377.53 |
| D | 7+31.75 | -14.58 | 377.34 | 377.54 |
| E | 7+41.75 | -14.58 | 377.33 | 377.52 |
| F | 7+51.75 | -14.58 | 377.33 | 377.48 |
| G | 7+61.75 | -14.58 | 377.32 | 377.41 |
| ☐ Brg. E. Abut. | 7+72.25 | -14.58 | 377.32 | 377.32 |
| Bk. E. Abut. | 7+73.92 | -14.58 | 377.32 | 377.32 |



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 5 & 6 of 21.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 5 & 6 of 21, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

| | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|-----------|
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| DATE = 3/18/2019 | CHECKED - M.D.C. | REVISIONS | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 097-0077

| | | | | |
|-------------------------------|---------|--------|--------------------|-----------|
| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 877 | 101B-2 | WHITE | 60 | 33 |
| IL 141 OVER TRIB. TO CANE CR. | | | CONTRACT NO. 78162 | |

SHEET NO. 5 OF 21 SHEETS

ILLINOIS FED. AID PROJECT

BEAM 2

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | -8.75 | 377.27 | 377.27 |
| ☒ Brg. W. Abut. | 6+91.75 | -8.75 | 377.27 | 377.27 |
| A | 7+01.75 | -8.75 | 377.26 | 377.34 |
| B | 7+11.75 | -8.75 | 377.26 | 377.40 |
| C | 7+21.75 | -8.75 | 377.25 | 377.44 |
| D | 7+31.75 | -8.75 | 377.25 | 377.45 |
| E | 7+41.75 | -8.75 | 377.24 | 377.43 |
| F | 7+51.75 | -8.75 | 377.24 | 377.39 |
| G | 7+61.75 | -8.75 | 377.23 | 377.31 |
| ☒ Brg. E. Abut. | 7+72.25 | -8.75 | 377.23 | 377.23 |
| Bk. E. Abut. | 7+73.92 | -8.75 | 377.23 | 377.23 |

BEAM 3

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | -2.92 | 377.18 | 377.18 |
| ☒ Brg. W. Abut. | 6+91.75 | -2.92 | 377.17 | 377.17 |
| A | 7+01.75 | -2.92 | 377.17 | 377.25 |
| B | 7+11.75 | -2.92 | 377.16 | 377.31 |
| C | 7+21.75 | -2.92 | 377.16 | 377.35 |
| D | 7+31.75 | -2.92 | 377.15 | 377.36 |
| E | 7+41.75 | -2.92 | 377.15 | 377.34 |
| F | 7+51.75 | -2.92 | 377.14 | 377.29 |
| G | 7+61.75 | -2.92 | 377.14 | 377.22 |
| ☒ Brg. E. Abut. | 7+72.25 | -2.92 | 377.13 | 377.13 |
| Bk. E. Abut. | 7+73.92 | -2.92 | 377.13 | 377.13 |

STRUCTURE, P.G. & STAGE CONSTRUCTION LINE

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | 0.00 | 377.13 | 377.13 |
| ☒ Brg. W. Abut. | 6+91.75 | 0.00 | 377.13 | 377.13 |
| A | 7+01.75 | 0.00 | 377.12 | 377.20 |
| B | 7+11.75 | 0.00 | 377.12 | 377.27 |
| C | 7+21.75 | 0.00 | 377.11 | 377.31 |
| D | 7+31.75 | 0.00 | 377.11 | 377.32 |
| E | 7+41.75 | 0.00 | 377.10 | 377.30 |
| F | 7+51.75 | 0.00 | 377.10 | 377.25 |
| G | 7+61.75 | 0.00 | 377.09 | 377.18 |
| ☒ Brg. E. Abut. | 7+72.25 | 0.00 | 377.09 | 377.09 |
| Bk. E. Abut. | 7+73.92 | 0.00 | 377.09 | 377.09 |

BEAM 4

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | 2.92 | 377.08 | 377.08 |
| ☒ Brg. W. Abut. | 6+91.75 | 2.92 | 377.08 | 377.08 |
| A | 7+01.75 | 2.92 | 377.08 | 377.16 |
| B | 7+11.75 | 2.92 | 377.07 | 377.22 |
| C | 7+21.75 | 2.92 | 377.07 | 377.26 |
| D | 7+31.75 | 2.92 | 377.06 | 377.27 |
| E | 7+41.75 | 2.92 | 377.06 | 377.25 |
| F | 7+51.75 | 2.92 | 377.05 | 377.20 |
| G | 7+61.75 | 2.92 | 377.05 | 377.13 |
| ☒ Brg. E. Abut. | 7+72.25 | 2.92 | 377.04 | 377.04 |
| Bk. E. Abut. | 7+73.92 | 2.92 | 377.04 | 377.04 |

BEAM 5

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | 8.75 | 376.99 | 376.99 |
| ☒ Brg. W. Abut. | 6+91.75 | 8.75 | 376.99 | 376.99 |
| A | 7+01.75 | 8.75 | 376.99 | 377.07 |
| B | 7+11.75 | 8.75 | 376.98 | 377.13 |
| C | 7+21.75 | 8.75 | 376.98 | 377.17 |
| D | 7+31.75 | 8.75 | 376.97 | 377.18 |
| E | 7+41.75 | 8.75 | 376.97 | 377.16 |
| F | 7+51.75 | 8.75 | 376.96 | 377.11 |
| G | 7+61.75 | 8.75 | 376.96 | 377.04 |
| ☒ Brg. E. Abut. | 7+72.25 | 8.75 | 376.95 | 376.95 |
| Bk. E. Abut. | 7+73.92 | 8.75 | 376.95 | 376.95 |

BEAM 6

| Location | Station | Offset | Theoretical Grade Elevations | Theoretical Grade Elevations Adjusted For Dead Load Deflection |
|-----------------|---------|--------|------------------------------|----------------------------------------------------------------|
| Bk. W. Abut. | 6+90.08 | 14.58 | 376.89 | 376.89 |
| ☒ Brg. W. Abut. | 6+91.75 | 14.58 | 376.89 | 376.89 |
| A | 7+01.75 | 14.58 | 376.88 | 376.96 |
| B | 7+11.75 | 14.58 | 376.88 | 377.02 |
| C | 7+21.75 | 14.58 | 376.87 | 377.06 |
| D | 7+31.75 | 14.58 | 376.87 | 377.08 |
| E | 7+41.75 | 14.58 | 376.86 | 377.06 |
| F | 7+51.75 | 14.58 | 376.86 | 377.01 |
| G | 7+61.75 | 14.58 | 376.85 | 376.94 |
| ☒ Brg. E. Abut. | 7+72.25 | 14.58 | 376.85 | 376.85 |
| Bk. E. Abut. | 7+73.92 | 14.58 | 376.85 | 376.85 |

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of W. Approach Slab | 6+61.08 | -16.00 | 377.39 |
| A | 6+71.08 | -16.00 | 377.39 |
| B | 6+81.08 | -16.00 | 377.38 |
| E. End of W. Approach Slab | 6+91.08 | -16.00 | 377.38 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of W. Approach Slab | 6+61.08 | -12.00 | 377.33 |
| A | 6+71.08 | -12.00 | 377.33 |
| B | 6+81.08 | -12.00 | 377.32 |
| E. End of W. Approach Slab | 6+91.08 | -12.00 | 377.32 |

STRUCTURE, P.G. & STAGE CONSTRUCTION LINE

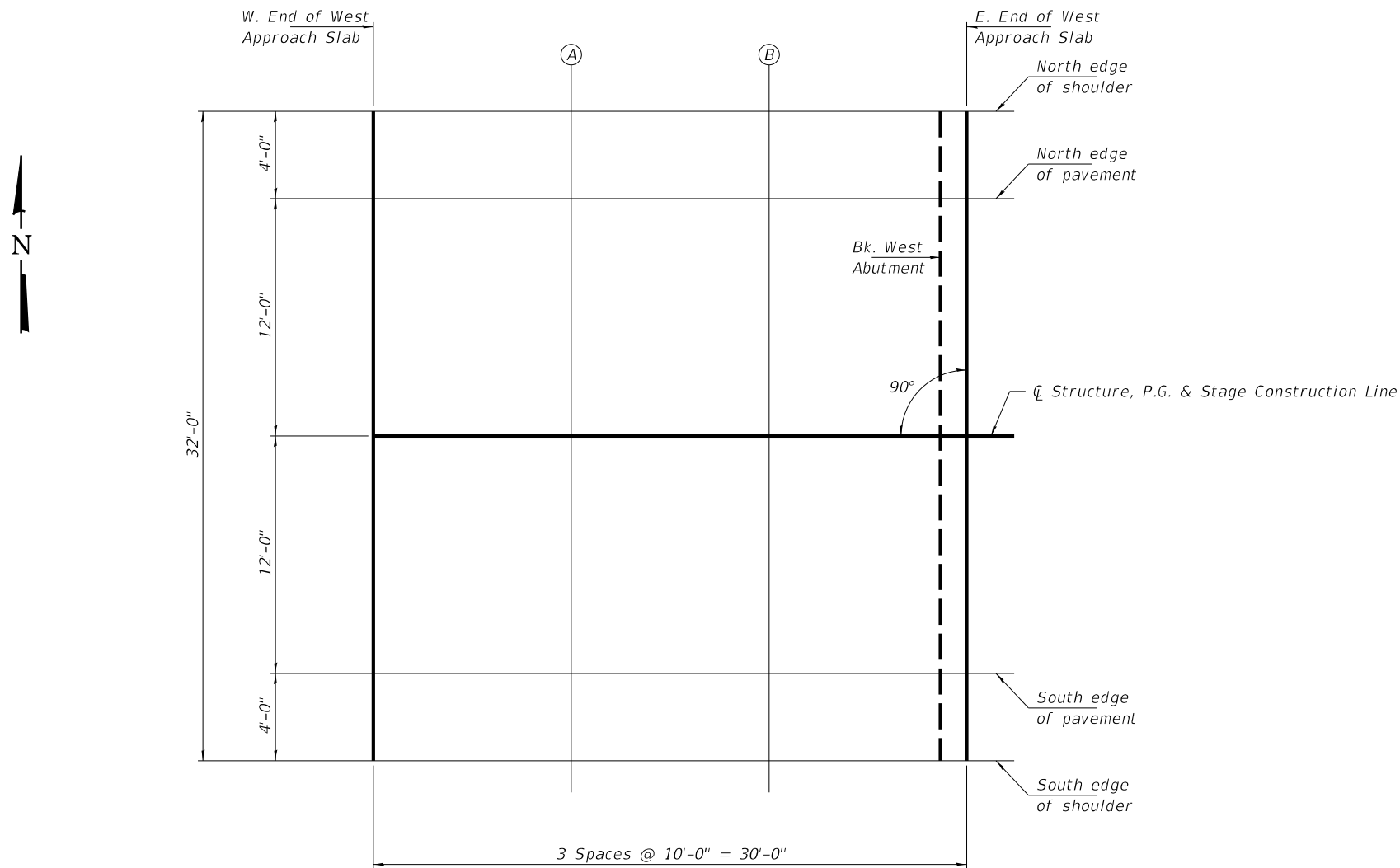
| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of W. Approach Slab | 6+61.08 | 0.00 | 377.14 |
| A | 6+71.08 | 0.00 | 377.14 |
| B | 6+81.08 | 0.00 | 377.13 |
| E. End of W. Approach Slab | 6+91.08 | 0.00 | 377.13 |

SOUTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of W. Approach Slab | 6+61.08 | 12.00 | 376.96 |
| A | 6+71.08 | 12.00 | 376.95 |
| B | 6+81.08 | 12.00 | 376.95 |
| E. End of W. Approach Slab | 6+91.08 | 12.00 | 376.94 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of W. Approach Slab | 6+61.08 | 16.00 | 376.87 |
| A | 6+71.08 | 16.00 | 376.87 |
| B | 6+81.08 | 16.00 | 376.86 |
| E. End of W. Approach Slab | 6+91.08 | 16.00 | 376.86 |



WEST APPROACH SLAB - PLAN

NORTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of E. Approach Slab | 7+72.92 | -16.00 | 377.34 |
| A | 7+82.92 | -16.00 | 377.28 |
| B | 7+92.92 | -16.00 | 377.23 |
| E. End of E. Approach Slab | 8+02.92 | -16.00 | 377.17 |

NORTH EDGE OF PAVEMENT

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of E. Approach Slab | 7+72.92 | -12.00 | 377.28 |
| A | 7+82.92 | -12.00 | 377.22 |
| B | 7+92.92 | -12.00 | 377.17 |
| E. End of E. Approach Slab | 8+02.92 | -12.00 | 377.11 |

STRUCTURE, P.G. & STAGE CONSTRUCTION LINE

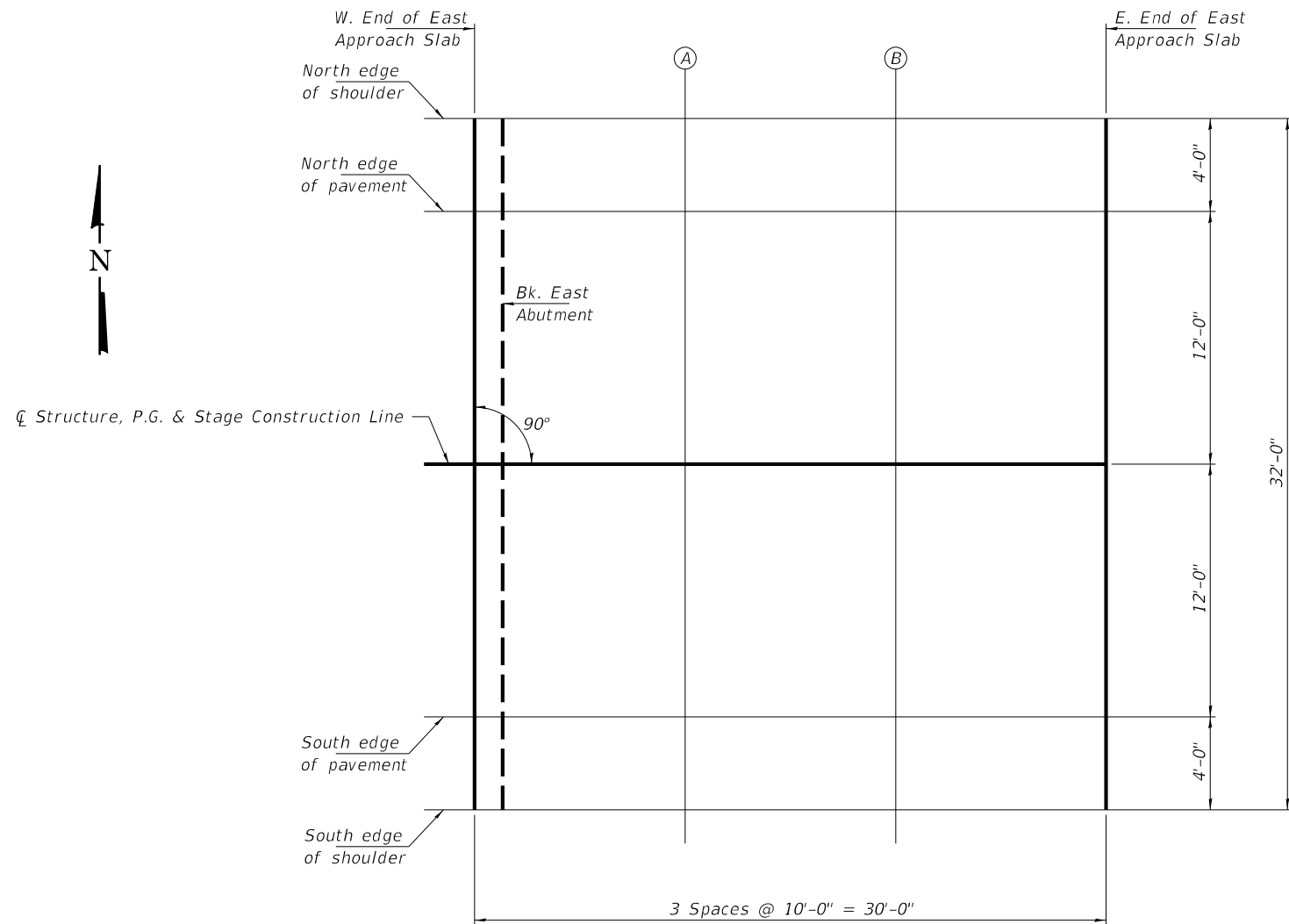
| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of E. Approach Slab | 7+72.92 | 0.00 | 377.09 |
| A | 7+82.92 | 0.00 | 377.03 |
| B | 7+92.92 | 0.00 | 376.98 |
| E. End of E. Approach Slab | 8+02.92 | 0.00 | 376.92 |

SOUTH EDGE OF PAVEMENT

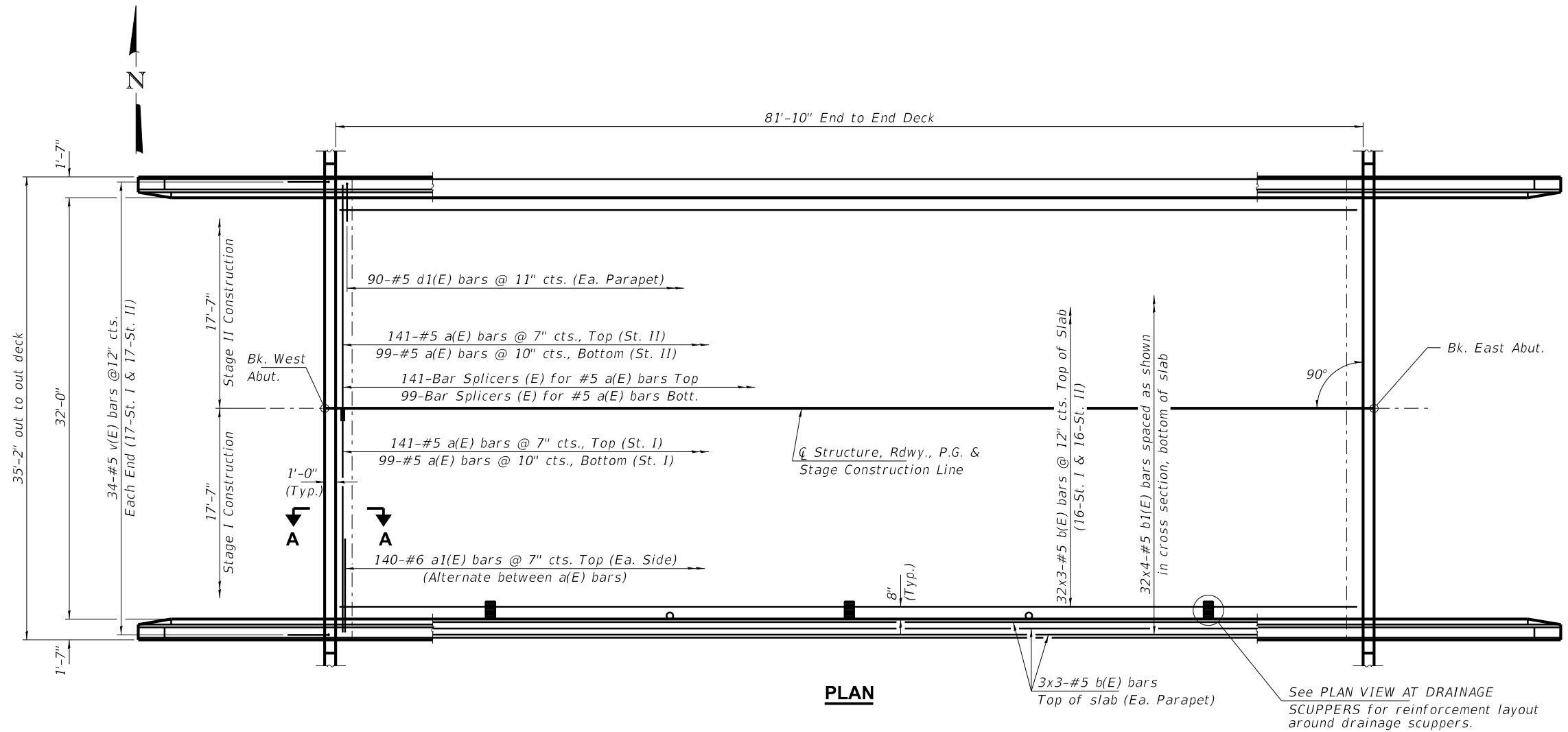
| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of E. Approach Slab | 7+72.92 | 12.00 | 376.90 |
| A | 7+82.92 | 12.00 | 376.85 |
| B | 7+92.92 | 12.00 | 376.79 |
| E. End of E. Approach Slab | 8+02.92 | 12.00 | 376.74 |

SOUTH EDGE OF SHOULDER

| Location | Station | Offset | Theoretical Grade Elevations |
|----------------------------|---------|--------|------------------------------|
| W. End of E. Approach Slab | 7+72.92 | 16.00 | 376.82 |
| A | 7+82.92 | 16.00 | 376.76 |
| B | 7+92.92 | 16.00 | 376.71 |
| E. End of E. Approach Slab | 8+02.92 | 16.00 | 376.65 |



EAST APPROACH SLAB - PLAN

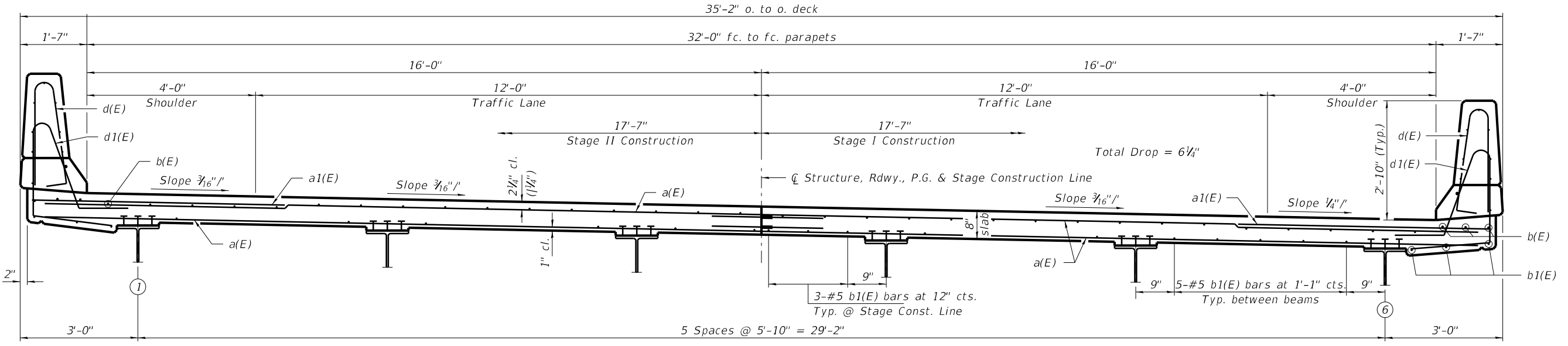


PLAN VIEW AT DRAINAGE SCUPPERS
 (Shown at DS-11 Drainage Scupper)
 Cut longitudinal reinforcement to clear drainage scuppers.

Notes:
 See sheets 10 & 11 of 21 for superstructure details and Bill of Material.
 Bars indicated thus 32x3-#5 etc. indicates 32 lines of bars with 3 lengths per line.
 See sheet 10 of 21 for parapet reinforcement.
 See sheet 11 of 21 for Section A-A.
 See sheet 17 of 21 for Bar Splicer Details.
 Cut longitudinal reinforcement to clear drainage scuppers.

PLAN

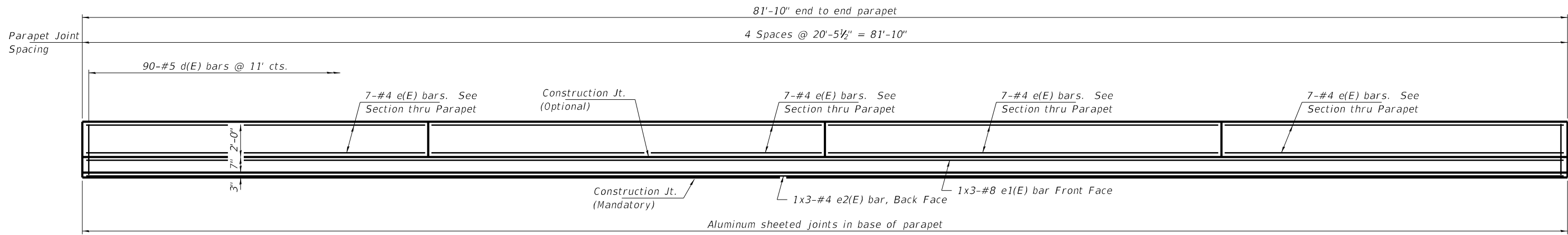
MIN. BAR LAP
 #5 bars = 3'-6"



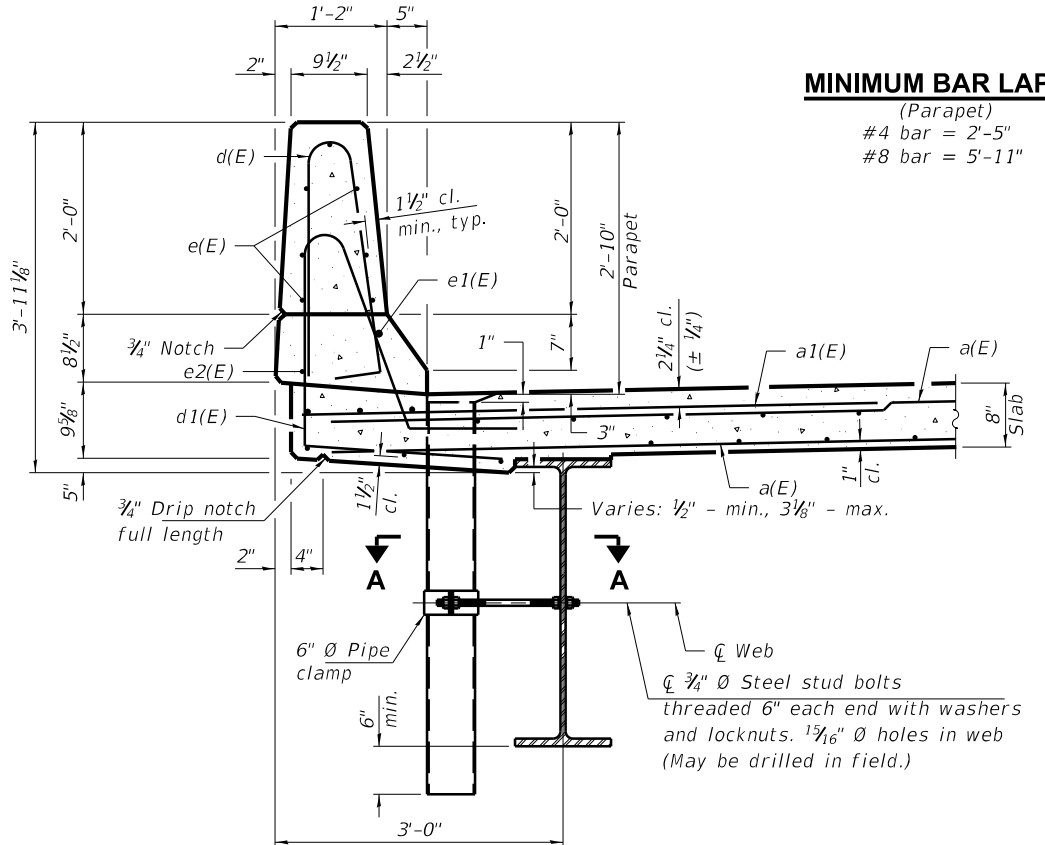
CROSS SECTION
 (Looking East)

SI-SB-1-0 8-11-2017

| | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|---------------------------------------------------|------------------------------------------|---------------------------|-------------------|-----------------|--------------------|-----------------|
| FILE NAME = pw\planroom\dot\illinois.gov\PWDOT\loc\USRDMS\Projects\78162\ConsultantData\DESIGNED_2-4-2-19\DWG_Sheets\097077-SS-1-bridge.dwg | DESIGNED - D.M.W. | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUPERSTRUCTURE STRUCTURE NO. 097-0077 | F.A.P. 877 | SECTION 101B-2 | COUNTY WHITE | TOTAL SHEETS 60 | SHEET NO. 37 |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959 | CHECKED - S.M.S. | REVISIONS | | | | | | | |
| PLOT SCALE = 2,000' / 1" | DRAWN - D.A.B. | REVISIONS | | | | | | | |
| PLOT DATE = 3/18/2019 | CHECKED - M.D.C. | REVISIONS | | | | | | | |
| SHEET NO. 9 OF 21 SHEETS | | | | | CONTRACT NO. 78162 | | | | |
| | | | | | ILLINOIS FED. AID PROJECT | | | | |

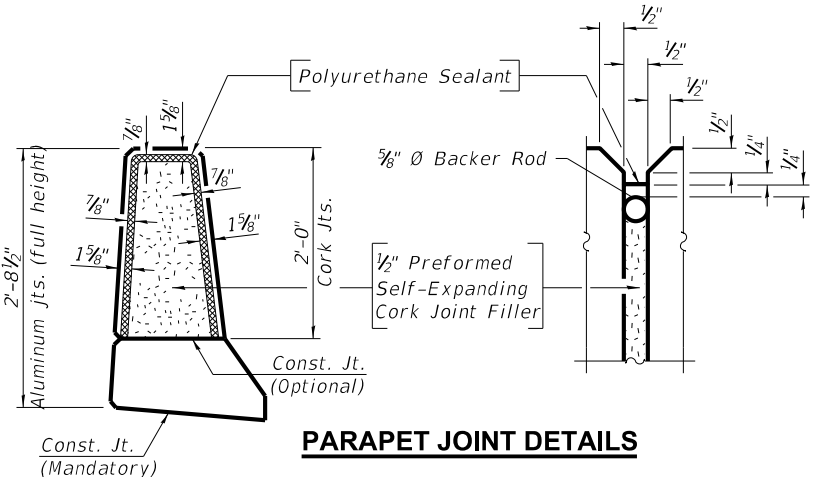


INSIDE ELEVATION OF PARAPET

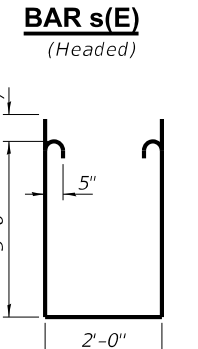
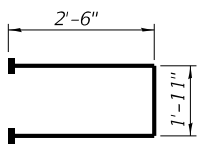
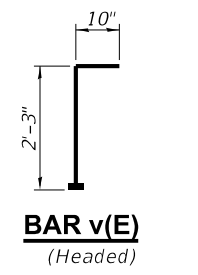


SECTION THRU PARAPET

MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-5"
#8 bar = 5'-11"



PARAPET JOINT DETAILS



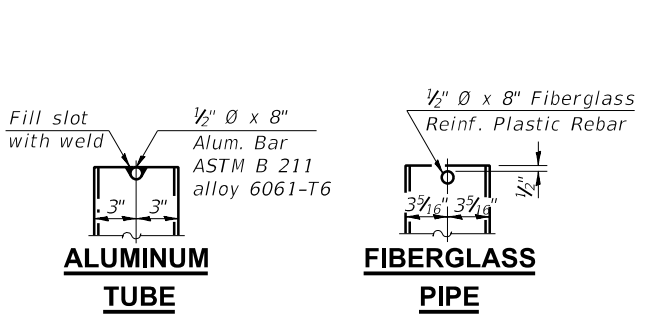
BAR s1(E)

Notes:
Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.
The top portion of aluminum floor drains shall be coated to minimize reaction with wet concrete. The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.
The 1/8" Aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructure.
The Polyurethane Sealant shall be according to Article 1050.04 of the Std. Spec. and the color shall be gray.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

SUPERSTRUCTURE BILL OF MATERIAL

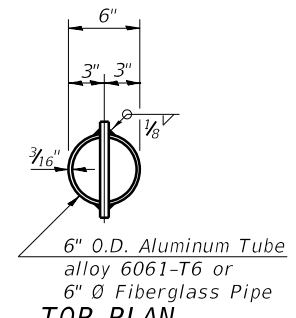
| Bar | No. | Size | Length | Shape |
|----------------------------------|-----|------|---------|--------|
| a(E) | 480 | #5 | 17'-1" | — |
| a1(E) | 280 | #6 | 6'-6" | — |
| a2(E) | 24 | #5 | 1'-6" | — |
| b(E) | 114 | #5 | 29'-6" | — |
| b1(E) | 128 | #5 | 23'-0" | — |
| d(E) | 180 | #5 | 5'-7" | ⌋ |
| d1(E) | 180 | #5 | 7'-6" | ⌋ |
| e(E) | 56 | #4 | 20'-1" | — |
| e1(E) | 6 | #8 | 31'-2" | — |
| e2(E) | 6 | #4 | 28'-10" | — |
| m(E) | 16 | #6 | 17'-3" | — |
| m1(E) | 24 | #6 | 5'-6" | — |
| m2(E) | 24 | #6 | 2'-7" | — |
| m3(E) | 24 | #5 | 4'-0" | — |
| s(E) | 62 | #5 | 6'-11" | ⌋ |
| s1(E) | 62 | #5 | 9'-2" | ⌋ |
| v(E) | 68 | #5 | 3'-1" | ⌋ |
| Concrete Superstructure | | | Cu. Yd. | 119.0 |
| Bridge Deck Grooving | | | Sq. Yd. | 273 |
| Protective Coat | | | Sq. Yd. | 360 |
| Reinforcement Bars, Epoxy Coated | | | Lbs. | 23,790 |
| Bar Splicers | | | Each | 254 |

Bars indicated thus 1x3-#4 etc. indicates 1 line of bars with 3 lengths per line.



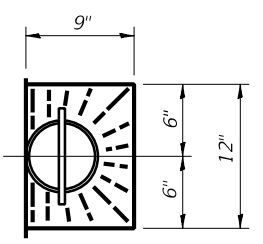
ALUMINUM TUBE

FIBERGLASS PIPE

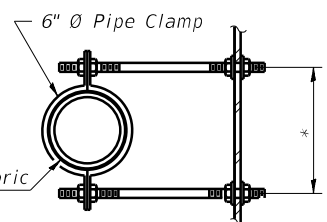


TOP PLAN

(Showing Aluminum Tube)

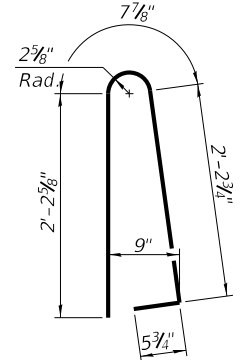


TOP PLAN

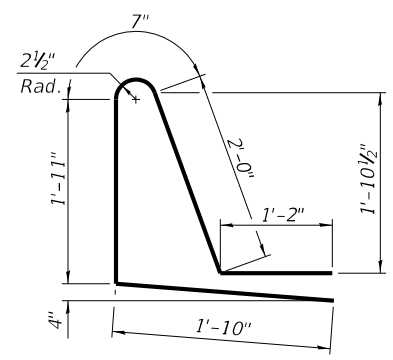


SECTION A-A

* Dimension as required by Pipe Clamp

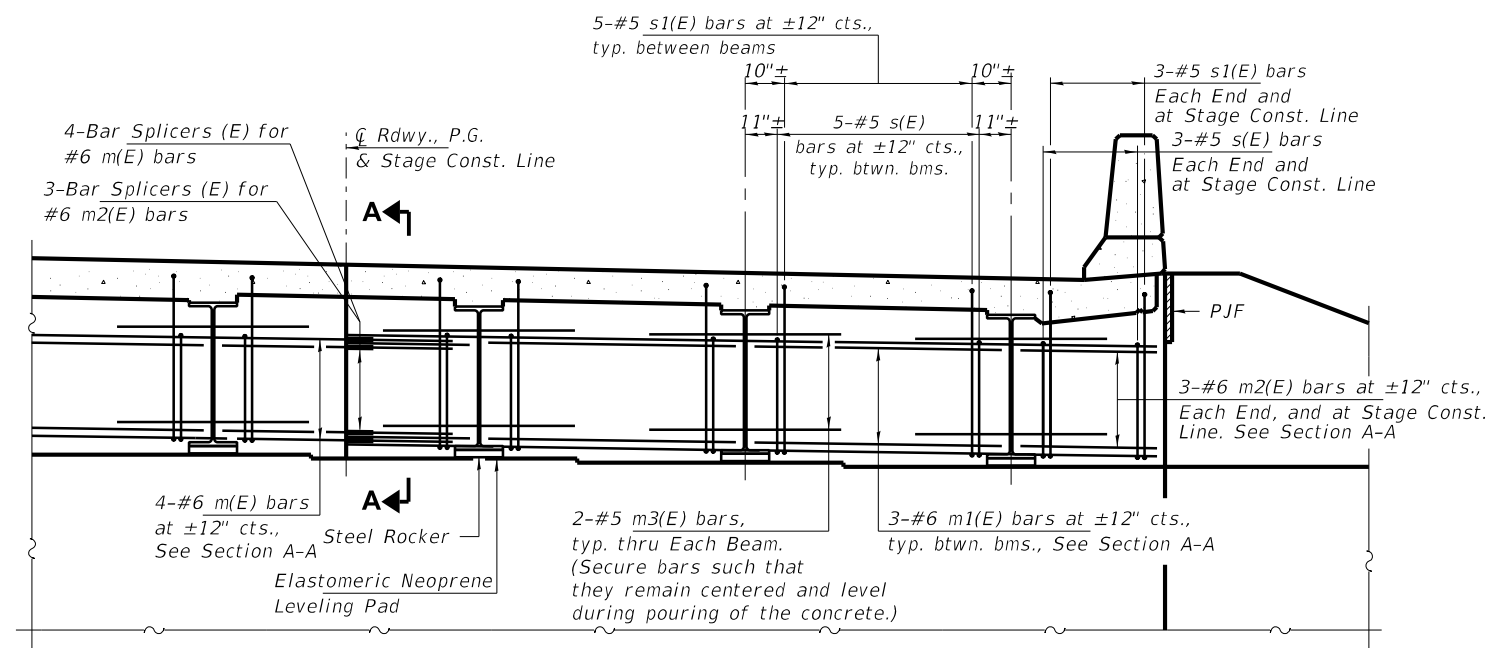


BAR d(E)

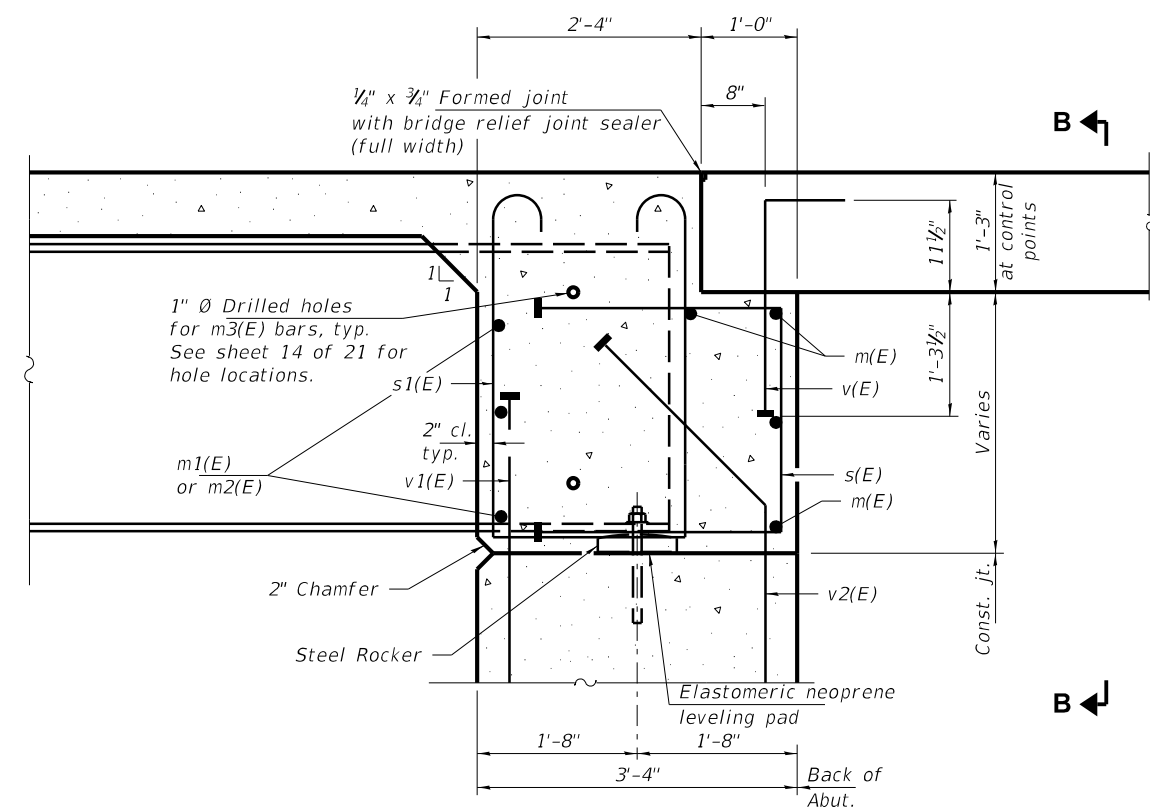


BAR d1(E)

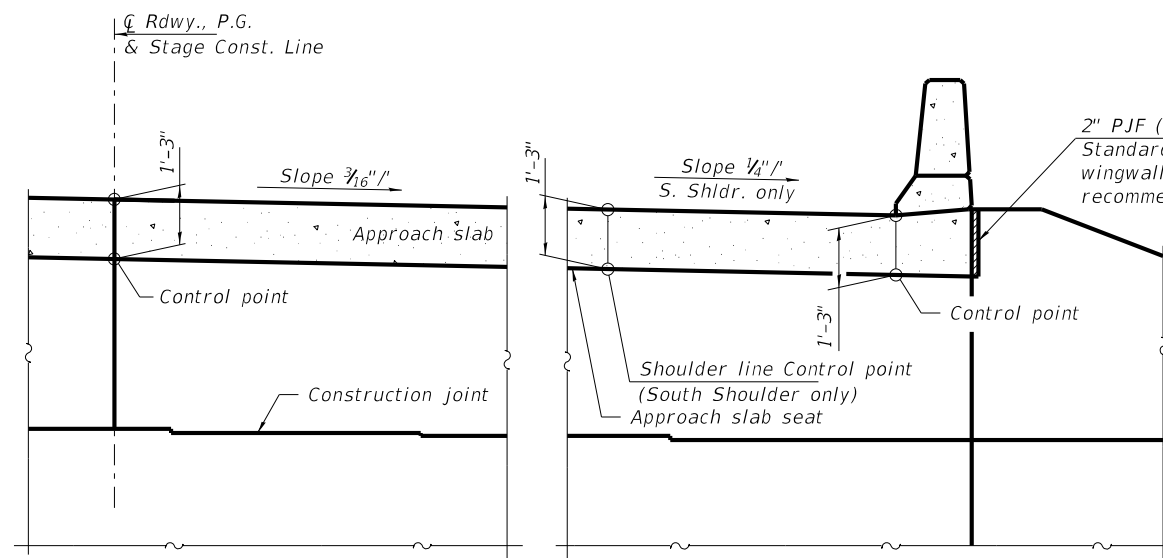
SDI-SB-1 8-11-2017



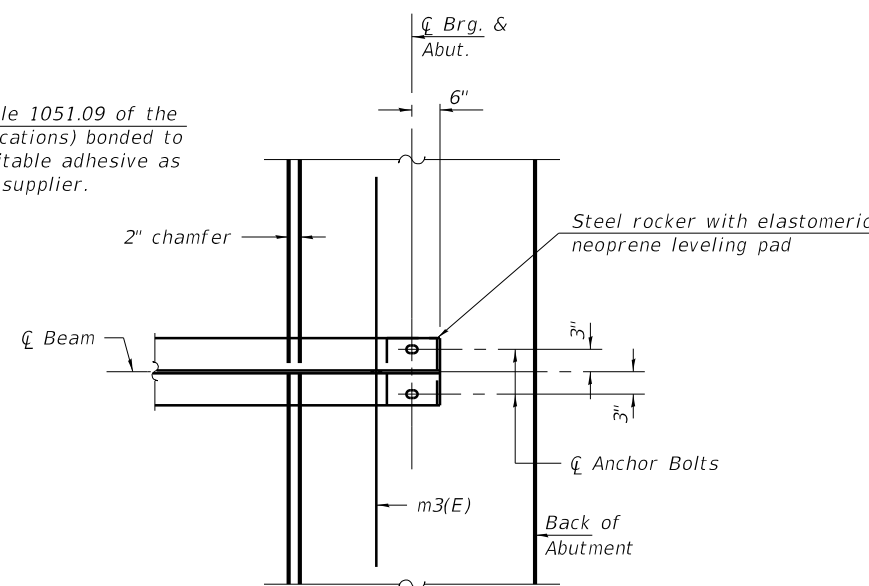
DIAPHRAGM AT ABUTMENT



SECTION A-A



SECTION B-B



PLAN AT ABUTMENT

(Showing bottom flange of beam)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 21.
 Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 21.
 For details of bars s(E), s1(E) and v(E) see sheet 10 of 21.
 The approach slab seat shall have a constant slope determined from the control points shown.
 For bearing details see sheet 15 of 21.
 Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

DIA-SB2448-0 2-17-2017

| | | | |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------|
| FILE NAME = pw2\planroom\dotc\illinois.gov\PWIDOT\Users\m... DESIGNED 2-17-2017 DRAWN - D.A.B. CHECKED - M.D.C. | PROJECT = DIA-SB2448-0 SHEET = 097-0077 DATE = 2-17-2017 SCALE = 2,000' / 1" IN. PLOT DATE = 3/18/2019 | DESIGNED - S.M.S. CHECKED - S.M.S. DRAWN - D.A.B. CHECKED - M.D.C. | REVISED - REVISED - REVISED - REVISED - |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------|

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

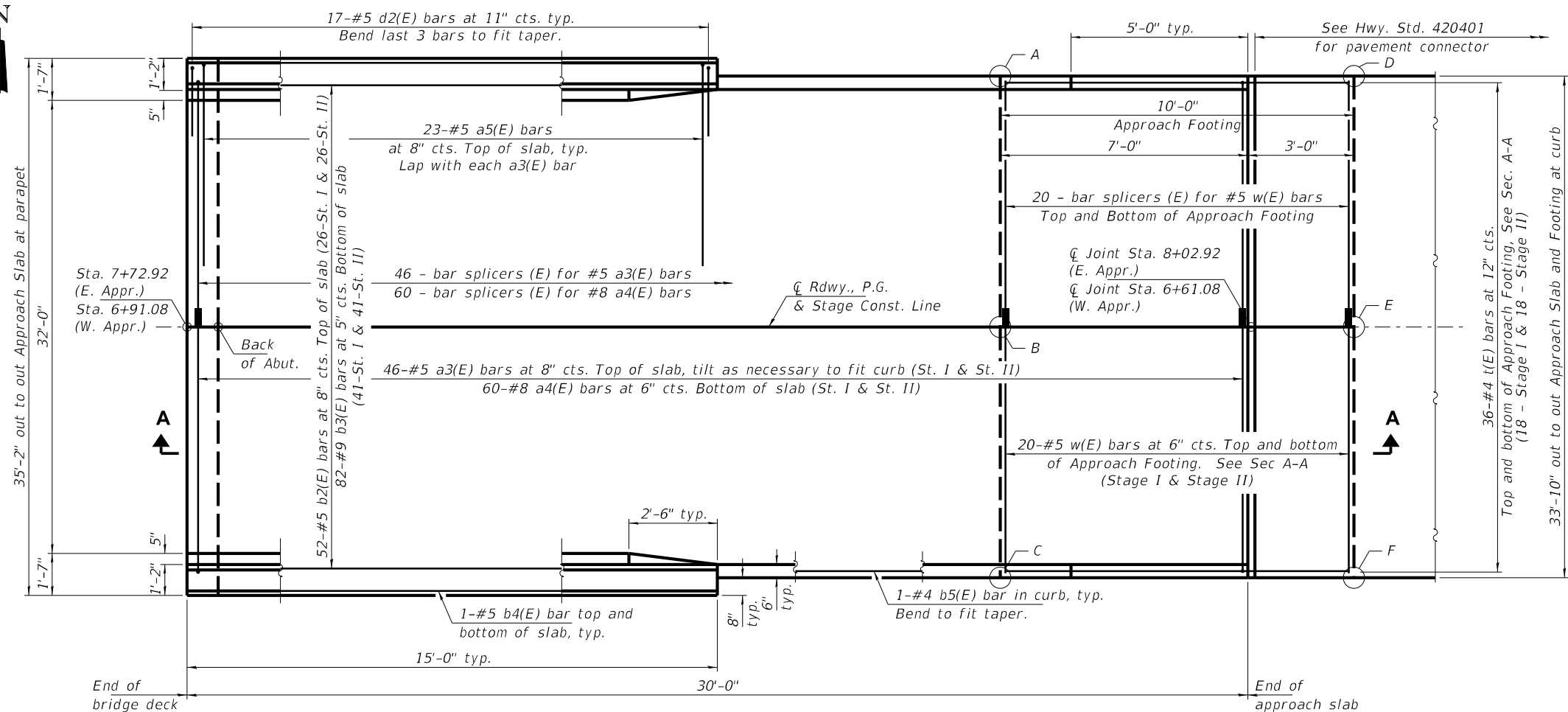
DIAPHRAGM DETAILS
STRUCTURE NO. 097-0077

SHEET NO. 11 OF 21 SHEETS

| F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------------------------|---------|--------|--------------------|-----------|
| 877 | 101B-2 | WHITE | 60 | 39 |
| IL 141 OVER TRIB. TO CANE CR. | | | CONTRACT NO. 78162 | |

ILLINOIS FED. AID PROJECT

Notes: See sheet 13 of 21 for Section A-A.

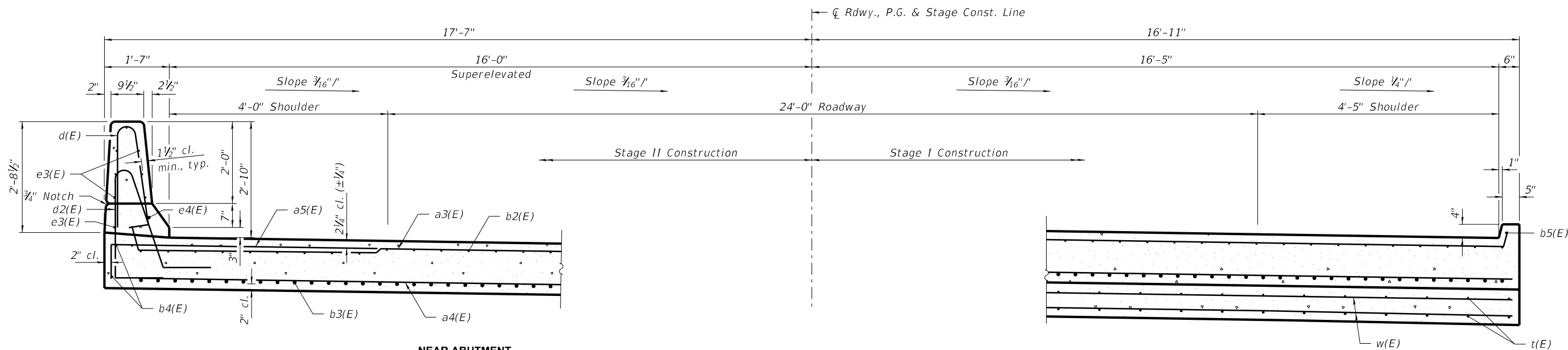


PLAN

(East approach shown, West approach similar)

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

| Point | West Approach | | East Approach | |
|-------|---------------|--------|---------------|--------|
| | Top | Bottom | Top | Bottom |
| A | 375.60 | 374.77 | 375.89 | 375.14 |
| B | 375.89 | 375.06 | 375.71 | 374.88 |
| C | 376.16 | 375.32 | 375.42 | 374.59 |
| D | 375.61 | 374.77 | 375.92 | 375.09 |
| E | 375.90 | 375.06 | 375.66 | 374.82 |
| F | 376.16 | 375.33 | 375.37 | 374.53 |



NEAR ABUTMENT

CROSS SECTION

(Looking East)

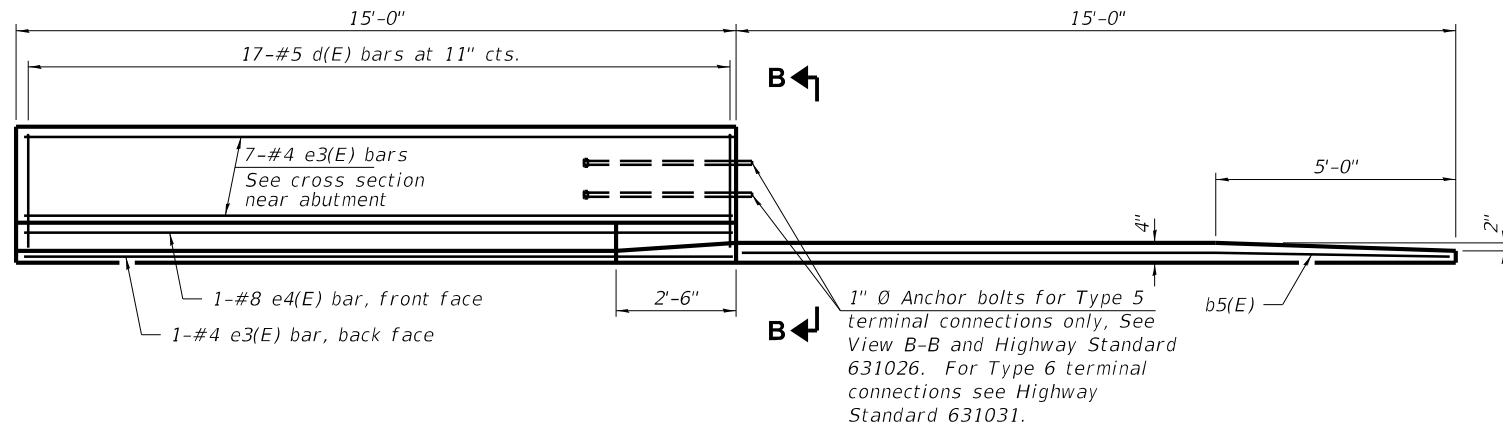
AT APPROACH FOOTING

BAIA-CIP-34FS-0 8-11-2017

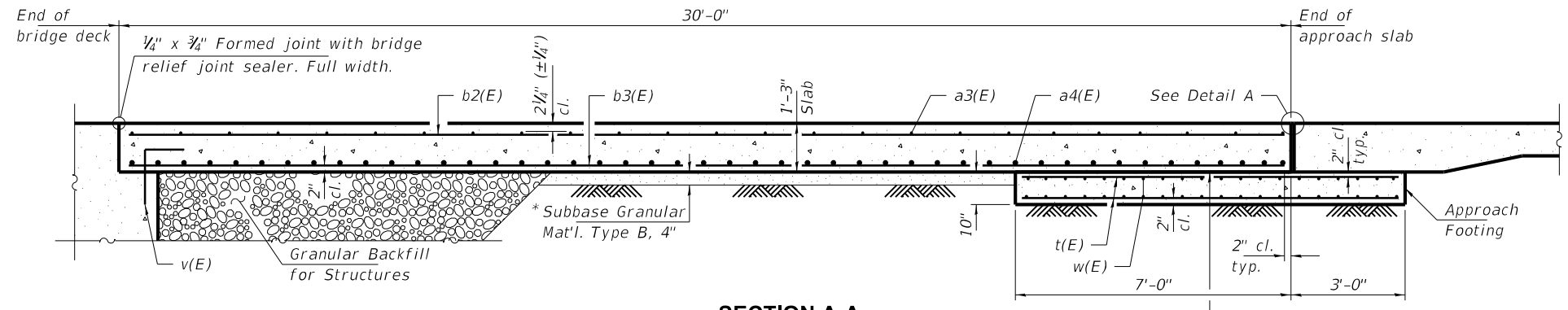
(Sheet 1 of 2)

| | | | | | | | |
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| FILE NAME = pw:\planroom\dot\illinois.gov\PWDO\T... HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959 | DESIGNED - S.M.S. CHECKED - M.D.C. | DRAWN - D.A.B. CHECKED - M.D.C. | REVISIONS REVISIONS REVISIONS REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 097-0077 | F.A.P. 877 SECTION 101B-2 COUNTY WHITE TOTAL SHEETS 60 SHEET NO. 40 | CONTRACT NO. 78162 ILLINOIS FED. AID PROJECT |
| | PLOT SCALE = 2,000' / 1" | PLOT DATE = 3/18/2019 | SHEET NO. 12 OF 21 SHEETS | | | | |

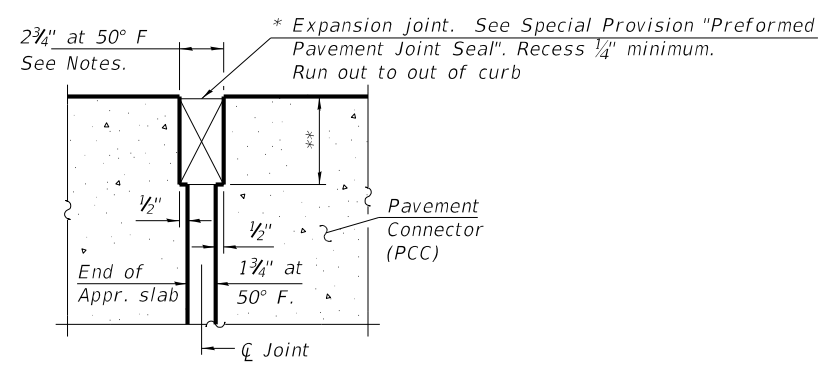
Notes:
 The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 21.



INSIDE ELEVATION OF PARAPET AND CURB

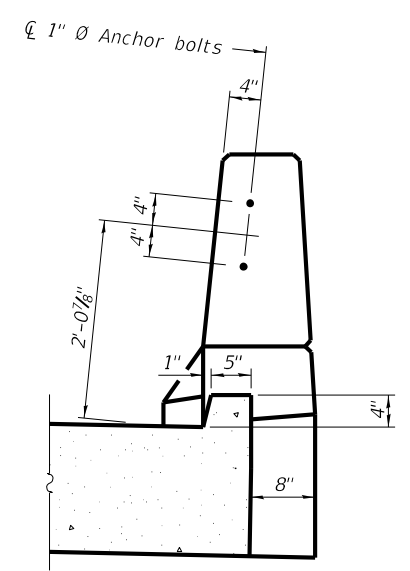


SECTION A-A

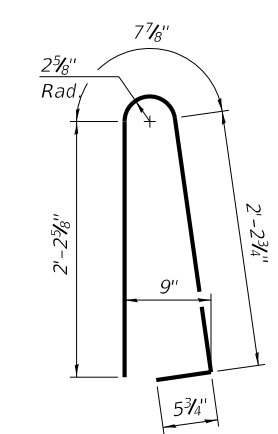


DETAIL A

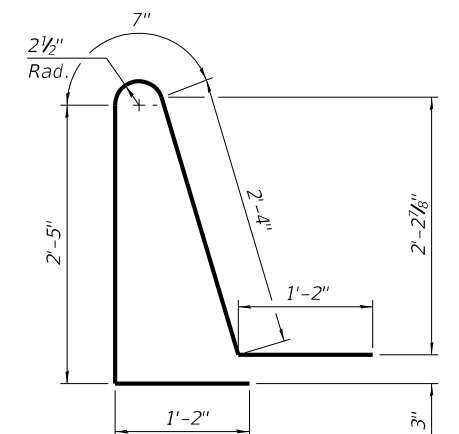
* Cost included with Concrete Superstructure (Approach Slab).
 ** Per manufacturer recommendations



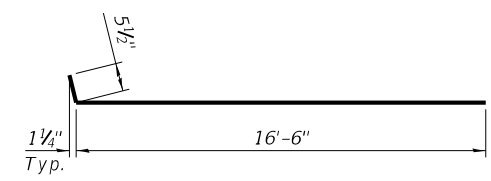
VIEW B-B



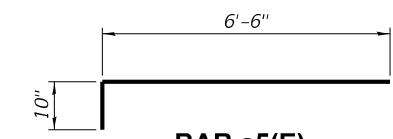
BAR d(E)



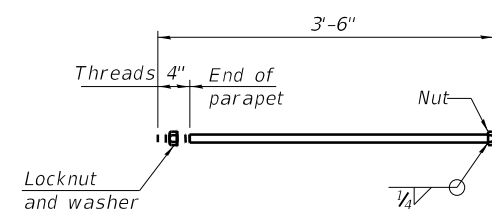
BAR d2(E)



BAR a3(E)



BAR a5(E)



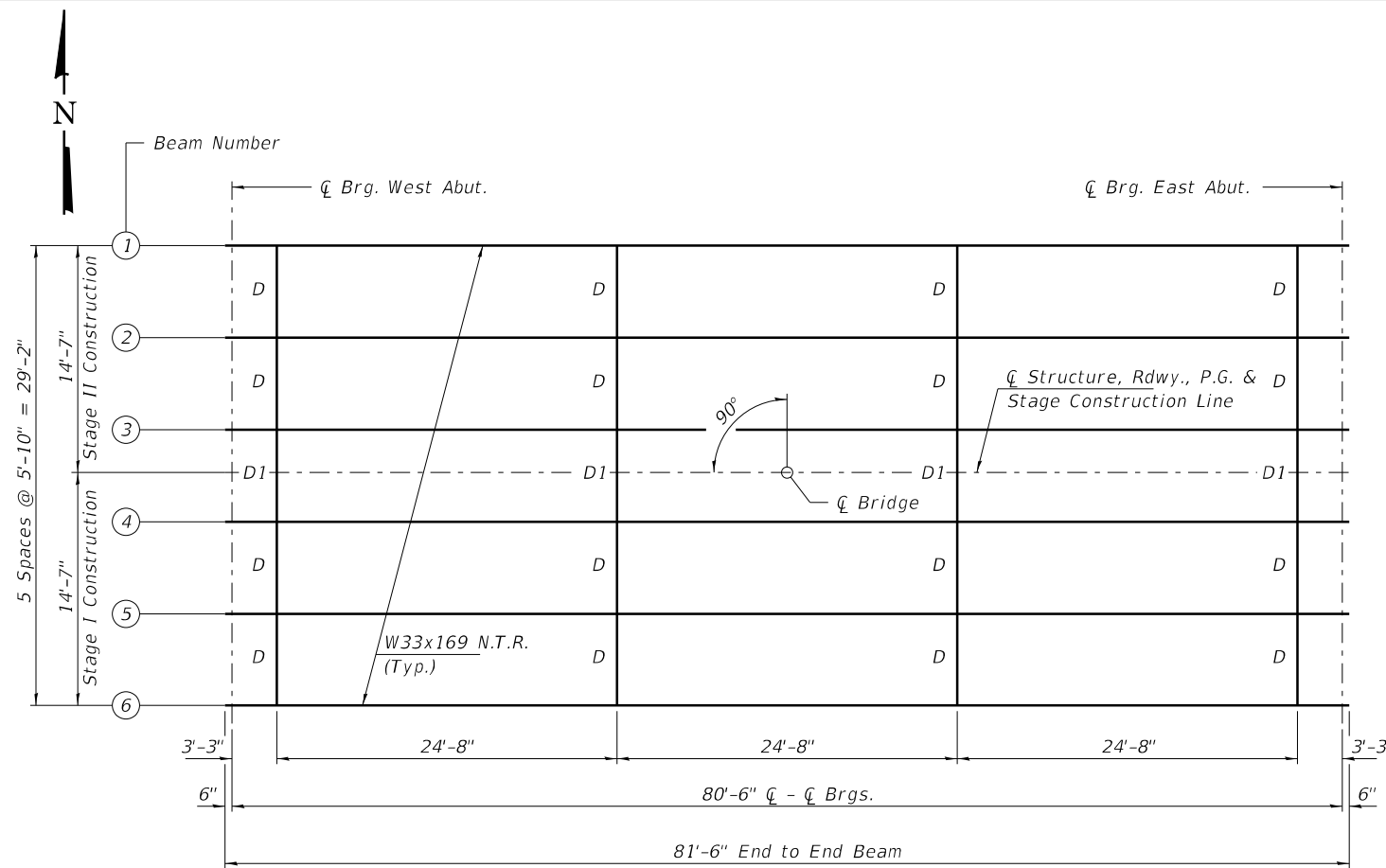
*** 1" Ø ANCHOR BOLT**
 (Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

**TWO APPROACHES
 BILL OF MATERIAL**

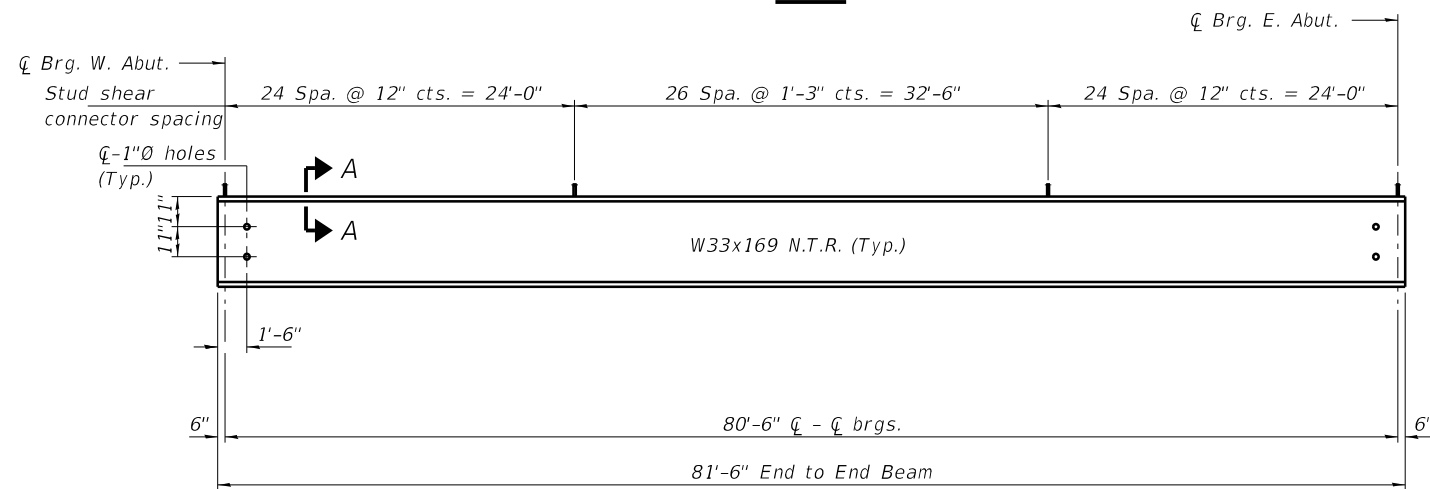
| Bar | No. | Size | Length | Shape |
|-----------------------------------------|-----|---------|--------|-------|
| a3(E) | 184 | #5 | 17'-0" | — |
| a4(E) | 240 | #8 | 16'-7" | — |
| a5(E) | 92 | #5 | 7'-4" | — |
| b2(E) | 104 | #5 | 29'-8" | — |
| b3(E) | 164 | #9 | 29'-8" | — |
| b4(E) | 8 | #5 | 14'-8" | — |
| b5(E) | 4 | #4 | 14'-8" | — |
| d(E) | 68 | #5 | 5'-7" | ⌒ |
| d2(E) | 68 | #5 | 7'-8" | ⌒ |
| e3(E) | 32 | #4 | 14'-8" | — |
| e4(E) | 4 | #8 | 14'-8" | — |
| t(E) | 144 | #4 | 9'-8" | — |
| w(E) | 160 | #5 | 16'-7" | — |
| Concrete Structures | | Cu. Yd. | 20.8 | |
| Concrete Superstructure | | Cu. Yd. | 6.7 | |
| Concrete Superstructure (Approach Slab) | | Cu. Yd. | 96.4 | |
| Reinforcement Bars, Epoxy Coated | | Pound | 39,620 | |
| Bar Splicers | | Each | 292 | |
| Bridge Deck Grooving | | Sq. Yd. | 200 | |
| Protective Coat | | Sq. Yd. | 250 | |

BAIA-CIP-34FS-0 8-11-2017

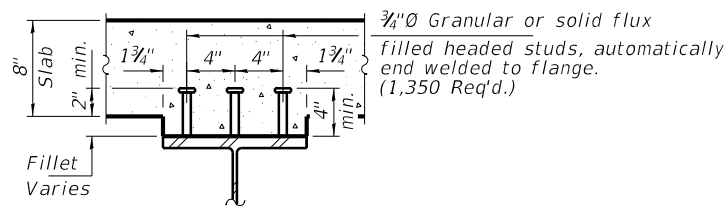
(Sheet 2 of 2)



PLAN



ELEVATION



SECTION A-A

| Location | ☐ Brg. W. Abut. | ☐ Brg. E. Abut. |
|----------|-----------------|-----------------|
| BEAM 1 | 376.65 | 376.61 |
| BEAM 2 | 376.56 | 376.52 |
| BEAM 3 | 376.47 | 376.42 |
| BEAM 4 | 376.38 | 376.34 |
| BEAM 5 | 376.28 | 376.24 |
| BEAM 6 | 376.18 | 376.14 |

TOP OF BEAM ELEVATIONS

(For fabrication only)
(Does not include Dead Load Deflections)

| GIRDER MOMENT TABLE | | |
|---------------------------|--------------------|--------|
| 0.5 Span 1 | | |
| I_s | (in ⁴) | 9,290 |
| $I_c(n)$ | (in ⁴) | 22,573 |
| $I_c(3n)$ | (in ⁴) | 16,363 |
| S_s | (in ³) | 549 |
| $S_c(n)$ | (in ³) | 775 |
| $S_c(3n)$ | (in ³) | 697 |
| DC1 | (k/ft) | 0.82 |
| MDC1 | (k) | 661 |
| DC2 | (k/ft) | 0.15 |
| MDC2 | (k) | 122 |
| DW | (k/ft) | 0.30 |
| MDW | (k) | 237 |
| LLDF | | 0.525 |
| $M_{\xi} + iM$ | (k) | 1,093 |
| M_u (Strength I) | (k) | 3,247 |
| $\phi F_m n$ | (k) | 3,762 |
| f_s DC1 | (ksi) | 14.4 |
| f_s DC2 | (ksi) | 2.1 |
| f_s DW | (ksi) | 4.1 |
| $f_s (\xi + iM)$ | (ksi) | 16.9 |
| f_s (Service II) | (ksi) | 42.6 |
| 0.95Rh Fyf | (ksi) | 47.5 |
| f_s (Total)(Strength I) | (ksi) | - |
| ϕF_n | (ksi) | - |
| Vf | (k) | 23.8 |

* Compact Sections
** Non-Compact Sections

| GIRDER REACTION TABLE | | |
|-----------------------|----------|----------|
| Abut. | | |
| | Interior | Exterior |
| LLDF | 0.658 | 0.541 |
| OCF | - | 1.00 |
| RDC1 (k) | 32.9 | 21.8 |
| RDC2 (k) | 6.1 | 5.1 |
| RDW (k) | 11.8 | 9.7 |
| R_{ξ} (k) | 59.0 | 48.5 |
| R_{iM} (k) | 13.8 | 11.3 |
| RTotal (k) | 123.6 | 96.4 |

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

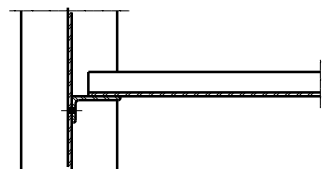
$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).

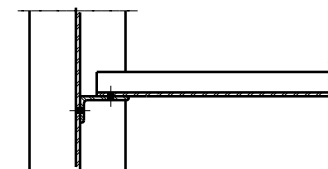
DC1: Un-factored non-composite dead load (kips/ft.).
MDC1: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 $M_{\xi} + iM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 M_u (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1 + MDC2) + 1.5 MDW + 1.75 $M_{\xi} + iM$
 $\phi F_m n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
 f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / $S_c n$
 f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / $S_c(3n)$
 f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / $S_c(3n)$
 $f_s (\xi + iM)$: Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
 $M_{\xi} + iM$ / $S_c(n)$
 f_s (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s \xi + iM$
0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
 f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 ($f_s DC1 + f_s DC2$) + 1.5 $f_s DW + 1.75 f_s$
 ϕF_n : Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
Vf: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

Note: M_{ξ} and R_{ξ} include the effects of centrifugal force and superelevation.

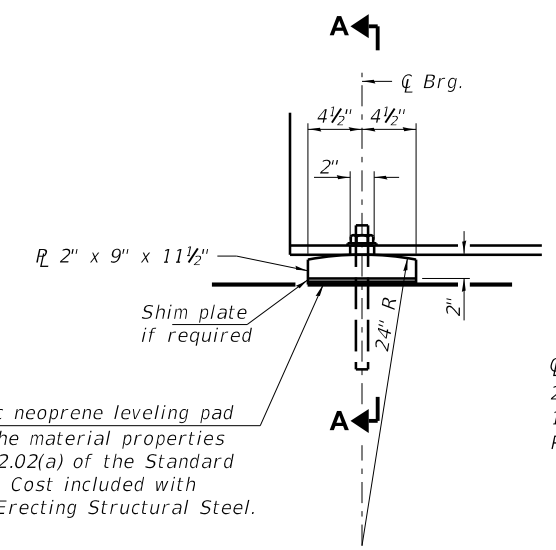
Notes:
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.
All steel beams shall be M270 Grade 50.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
For Structural Steel details see sheet 15 of 21.



SECTION A-A

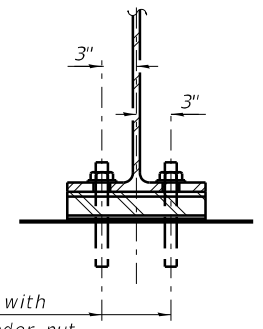


SECTION B-B

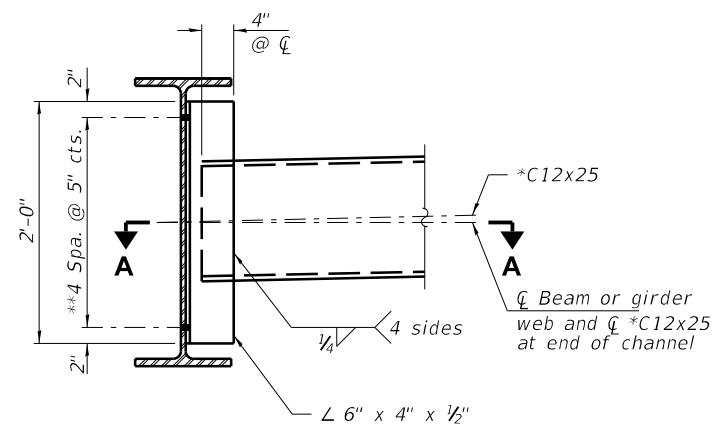


ELEVATION

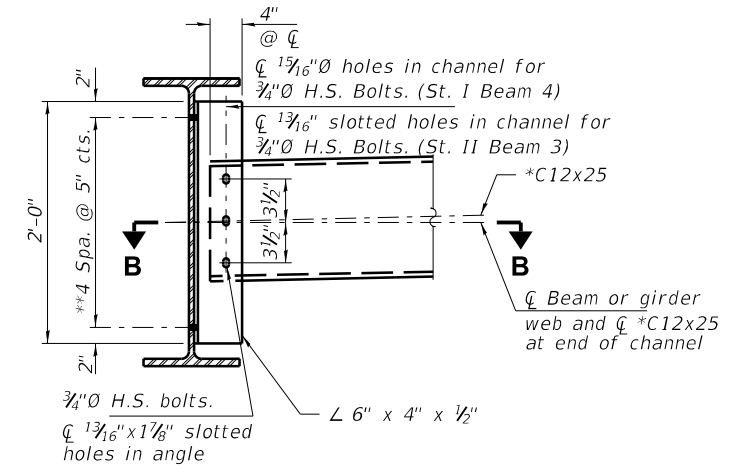
FIXED BEARING AT ABUTMENT
(12 required)



SECTION A-A



INTERIOR DIAPHRAGM D
(16 Required)



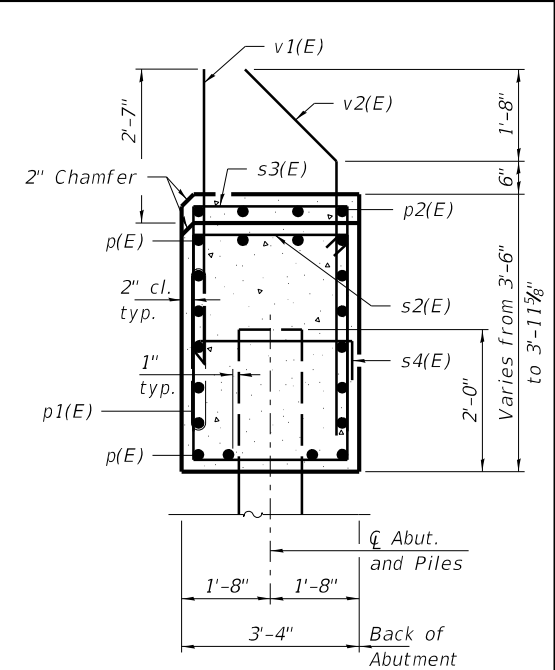
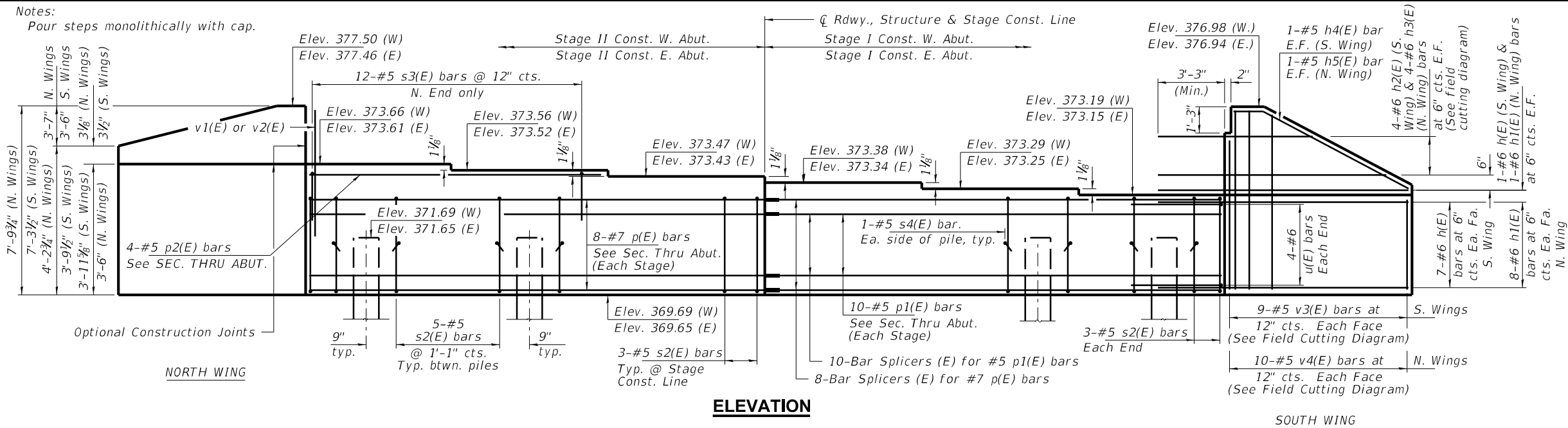
INTERIOR DIAPHRAGM D1
(4 Required)

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels (C12x30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**3/4" Ø HS bolts, 1 5/16" Ø holes
Bolts in slots shall be finger tight until the second stage pour is complete and fully tightened after completion of the deck pour for Stage II Construction. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load, allowing maximum displacement without laterally stressing main members.

BILL OF MATERIAL

| Item | Unit | Total |
|------------------|------|-------|
| Anchor Bolts, 1" | Each | 24 |

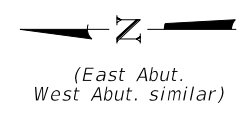
Notes:
Pour steps monolithically with cap.



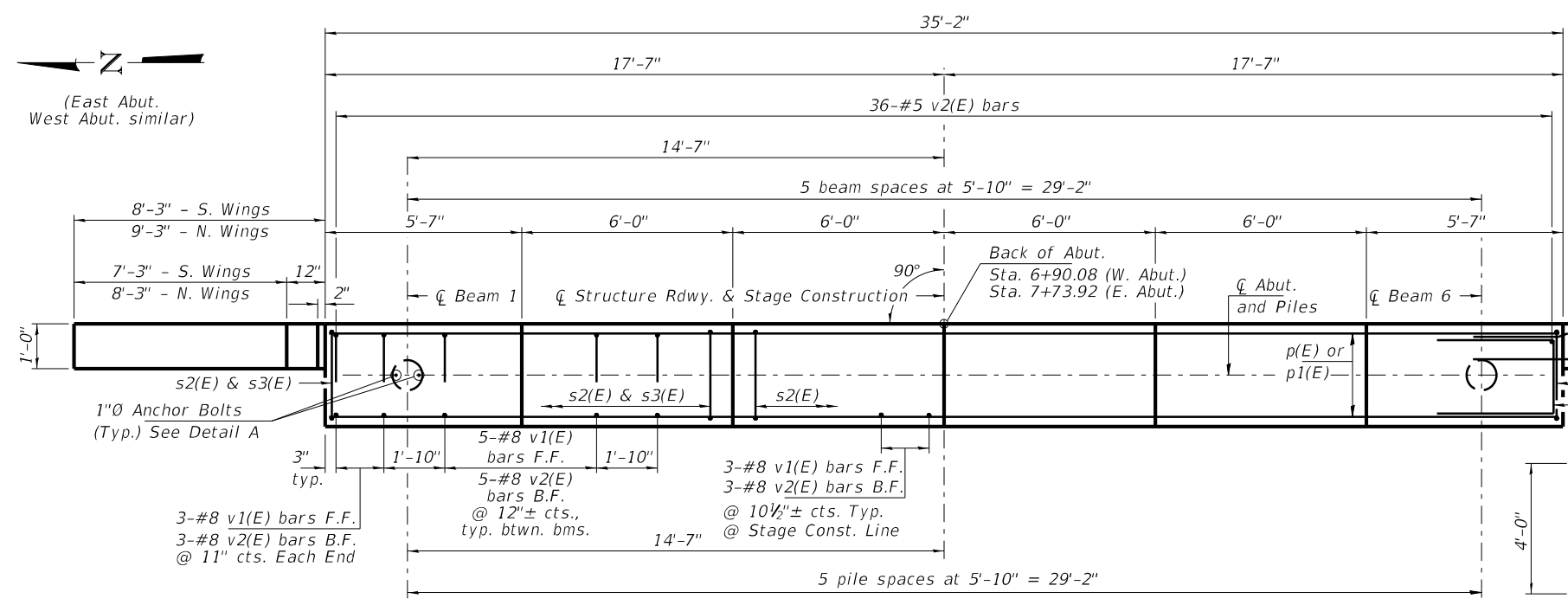
SEC. THRU ABUT.

BILL OF MATERIAL (2 ABUTMENTS)

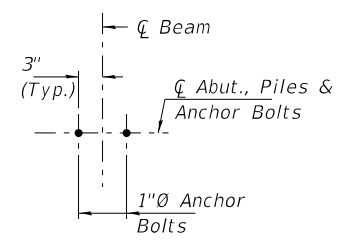
| Bar | No. | Size | Length | Shape |
|------------------------------------|-----|------|---------|-------|
| h(E) | 36 | #6 | 11'-4" | — |
| h1(E) | 36 | #6 | 12'-4" | — |
| h2(E) | 8 | #6 | 17'-1" | — |
| h3(E) | 8 | #6 | 18'-1" | — |
| h4(E) | 4 | #5 | 8'-5" | — |
| h5(E) | 4 | #5 | 9'-5" | — |
| p(E) | 32 | #7 | 17'-3" | — |
| p1(E) | 40 | #5 | 17'-3" | — |
| p2(E) | 8 | #5 | 11'-3" | — |
| s2(E) | 64 | #5 | 13'-3" | □ |
| s3(E) | 24 | #5 | 8'-2" | — |
| s4(E) | 24 | #5 | 4'-0" | — |
| u(E) | 16 | #6 | 10'-11" | — |
| v1(E) | 64 | #8 | 5'-11" | — |
| v2(E) | 64 | #8 | 6'-2" | — |
| v3(E) | 18 | #5 | 10'-5" | — |
| v4(E) | 20 | #5 | 11'-4" | — |
| Structure Excavation | | | Cu. Yd. | 230 |
| Concrete Structures | | | Cu. Yd. | 39.4 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 7,670 |
| Bar Splicers | | | Each | 36 |
| Furn. Metal Shell Piles 12"x0.250" | | | Foot | 887 |
| Driving Piles | | | Foot | 887 |
| Test Pile Metal Shells | | | Each | 1 |



(East Abut. West Abut. similar)



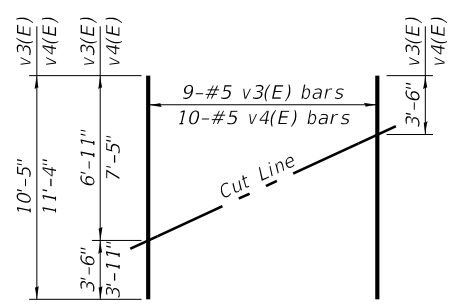
PLAN



DETAIL A

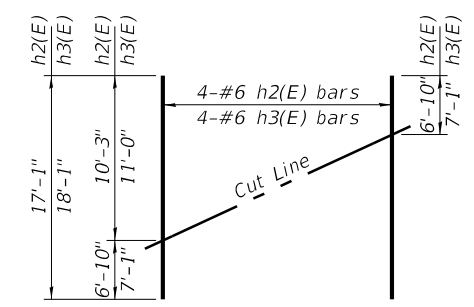
PILE DATA

Type: Metal Shell 12"x0.250"
Nominal Required Bearing: 324 Kips/pile - W. Abut.
329 Kips/pile - E. Abut.
Factored Resistance Available: 178 Kips/pile - W. Abut.
181 Kips/pile - E. Abut.
Est. Length: 85' - W. Abut.
77' - E. Abut.
No. Production Piles: 5 - W. Abut.
6 - E. Abut.
No. Test Piles: 1 (W. Abutment)



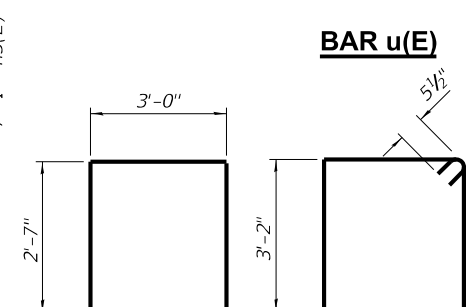
FIELD CUTTING DIAGRAM

Order v3(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.

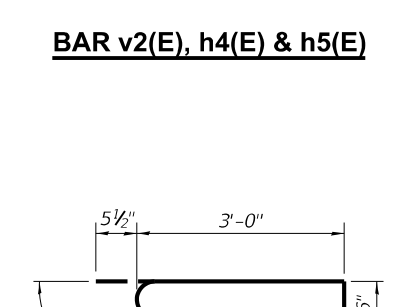


FIELD CUTTING DIAGRAM

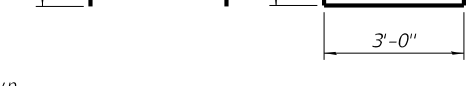
Order h2(E) and h3(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR u(E)



BAR v2(E), h4(E) & h5(E)



BAR s3(E)



BAR s2(E)

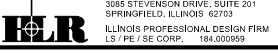


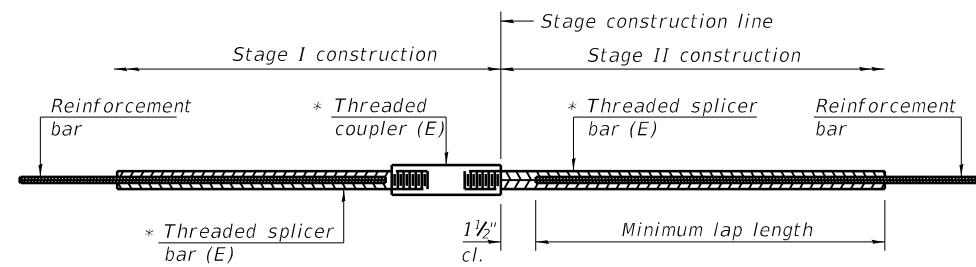
BAR s4(E)

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.
For details of Bar Splicers, see sheet 17 of 21.
For details of piles and Concrete Encasement, see sheet 19 of 21.

AI-2440-0 2-17-2017

| | | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------|-----------------------------------------------------------|--|---------------------------------------------|--|-------------------------------|---------|--------|--------------|-----------|
| FILE NAME = pw:\planroom\dot\illinois.gov\PWDOT\loc\USRDMA\Office\Illinois\Projects\78162\ConsultantData\DESIGNED_2-17-19\DWG\Sheets\097-0077-21.dwg | DESIGNED - 2-17-19 | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | | ABUTMENTS STRUCTURE NO. 097-0077 | | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959 | CHECKED - S.M.S. | REVISED - | | | | | 877 | 101B-2 | WHITE | 60 | 44 |
| PLOT SCALE = 2,000' / 1" | DRAWN - D.A.B. | REVISED - | | | | | IL 141 OVER TRIB. TO CANE CR. | | | | |
| PLOT DATE = 3/18/2019 | CHECKED - M.D.C. | REVISED - | | | | | CONTRACT NO. 78162 | | | | |



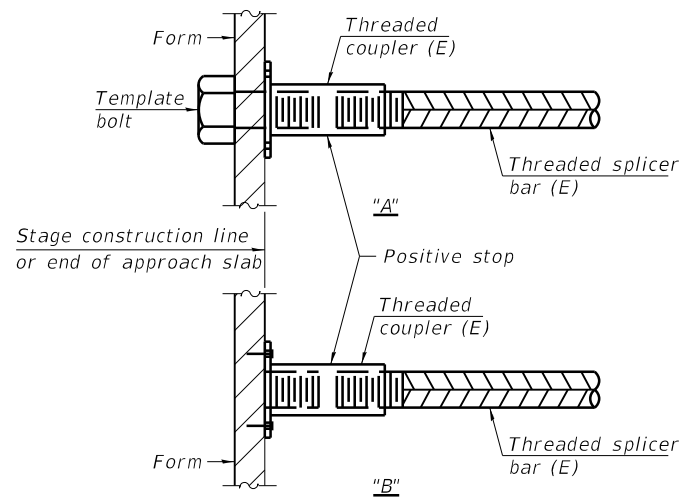


STANDARD BAR SPLICER ASSEMBLY

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

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

| Location | Bar size | No. assemblies required | Minimum lap length |
|--------------------|----------|-------------------------|--------------------|
| Deck | #5 | 240 | 3'-6" |
| Diaphragm | #6 | 14 | 4'-0" |
| Approach Slab | #5 | 92 | 3'-6" |
| Approach Slab | #8 | 120 | 4'-9" |
| Appr. Slab Footing | #5 | 80 | 3'-2" |
| Abutments | #7 | 16 | 5'-0" |
| Abutments | #5 | 20 | 3'-7" |

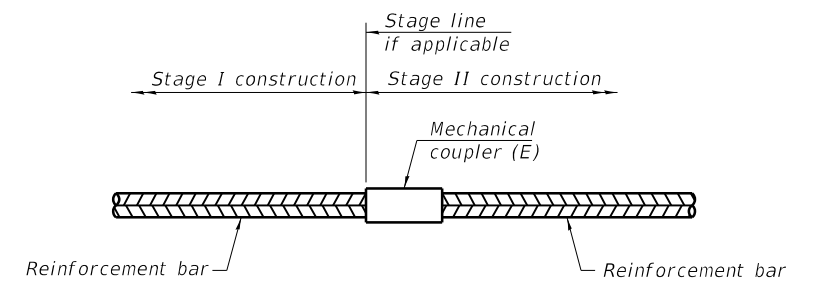


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

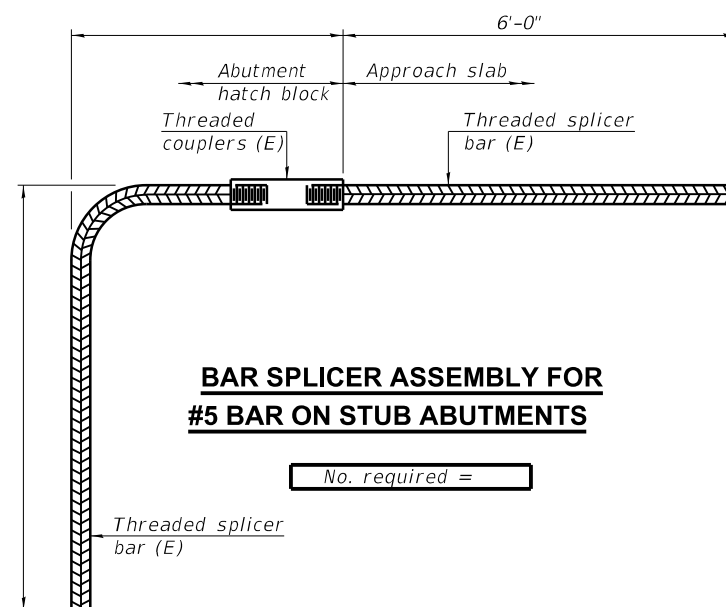
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

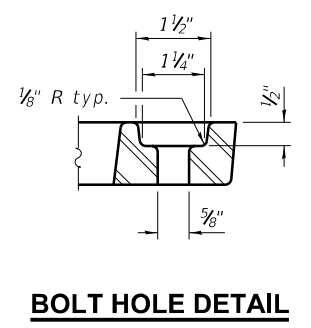
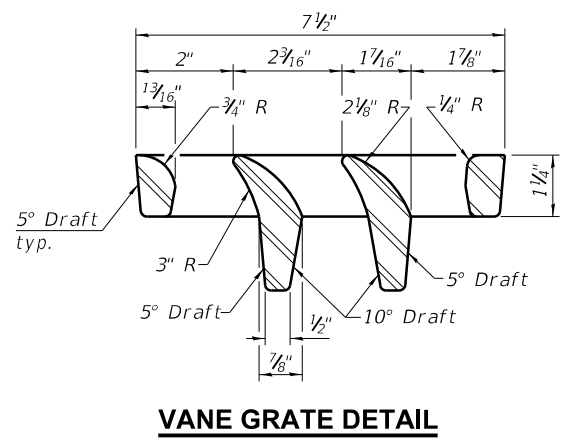
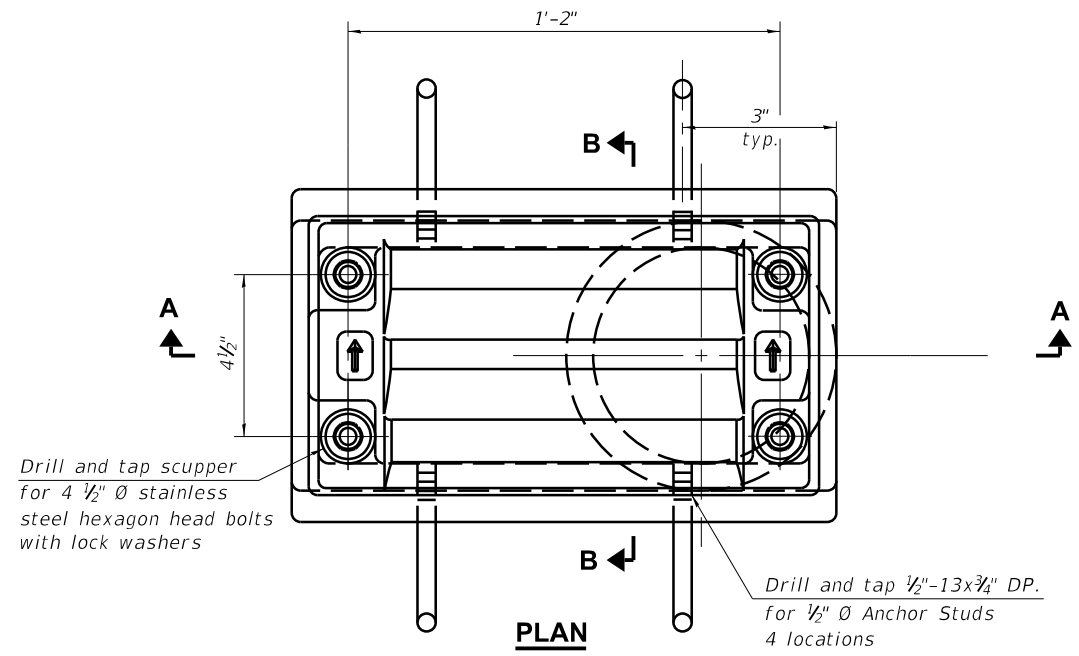
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

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 approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 2-17-2017



Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

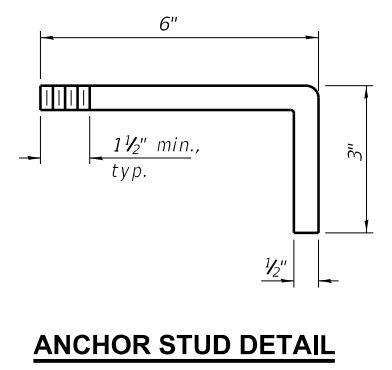
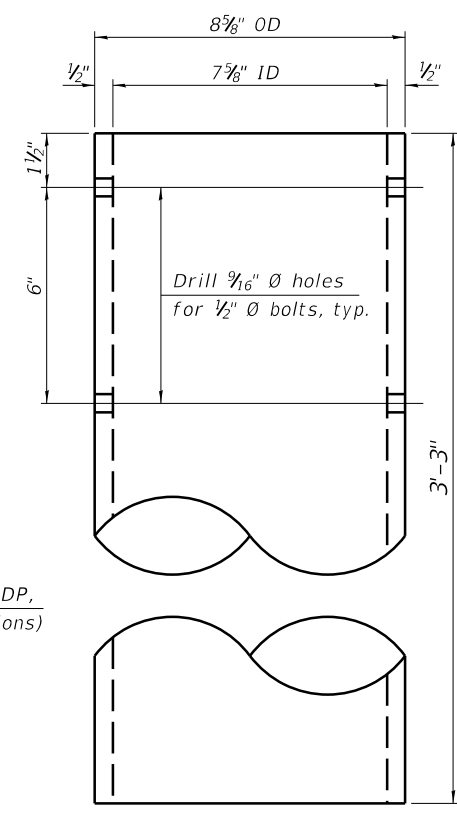
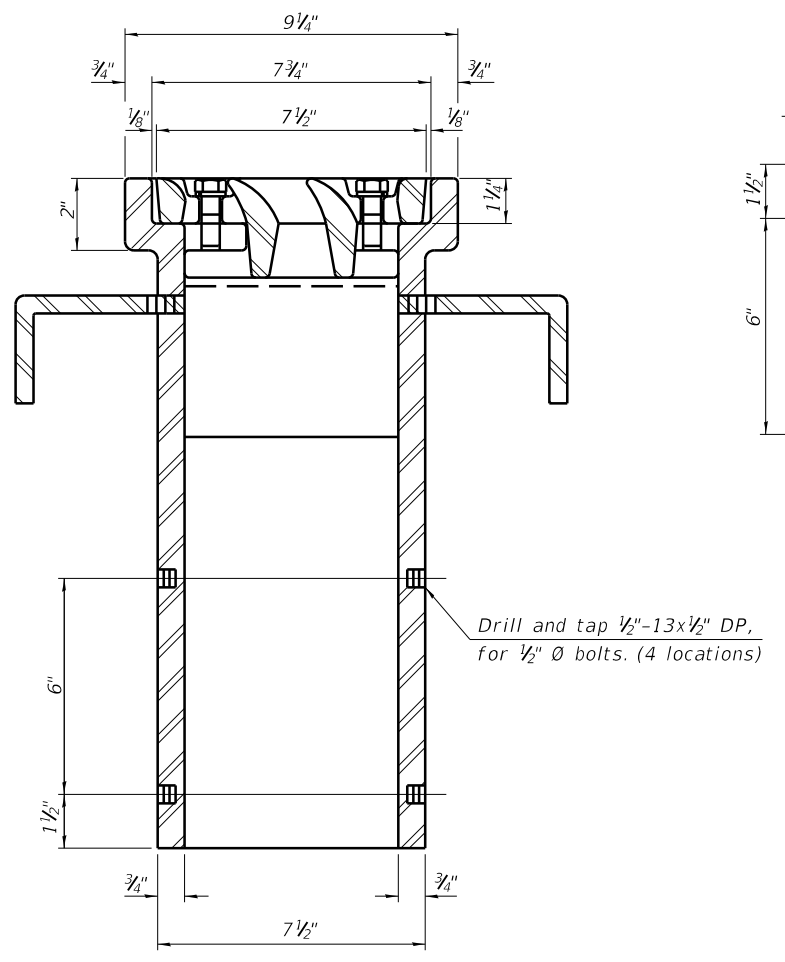
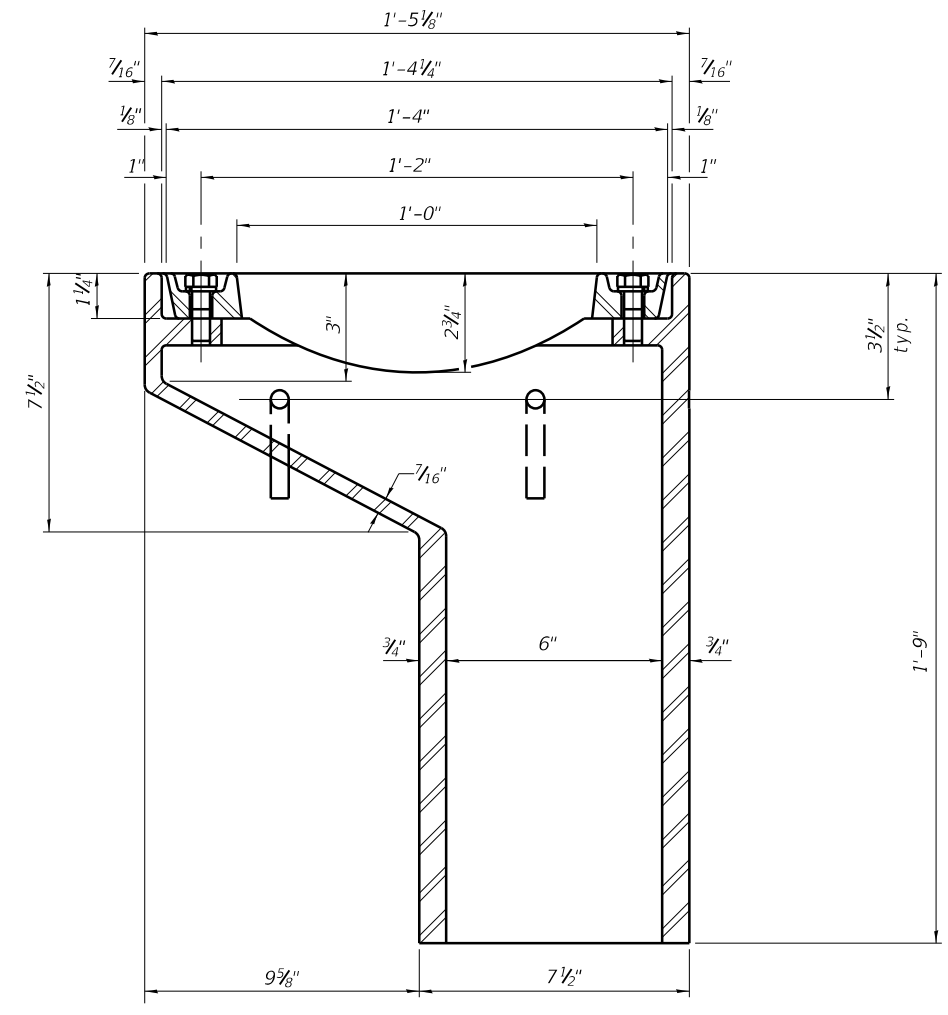
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

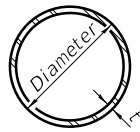


See sheet 9 of 21 for scupper location relative to parapet.

BILL OF MATERIAL

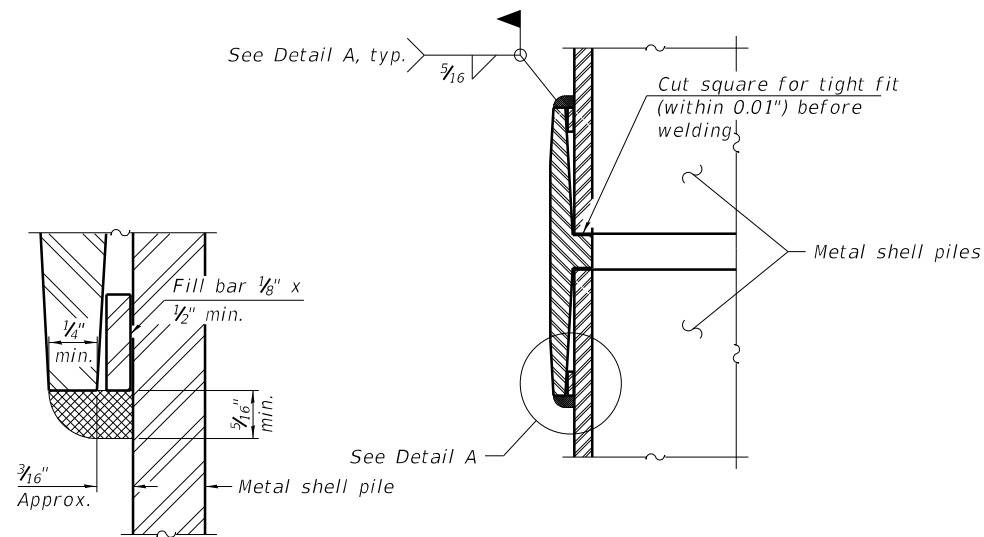
| ITEM | UNIT | QUANTITY |
|-------------------------|------|----------|
| Drainage Scupper, DS-11 | Each | 3 |

DS-11 2-17-2017

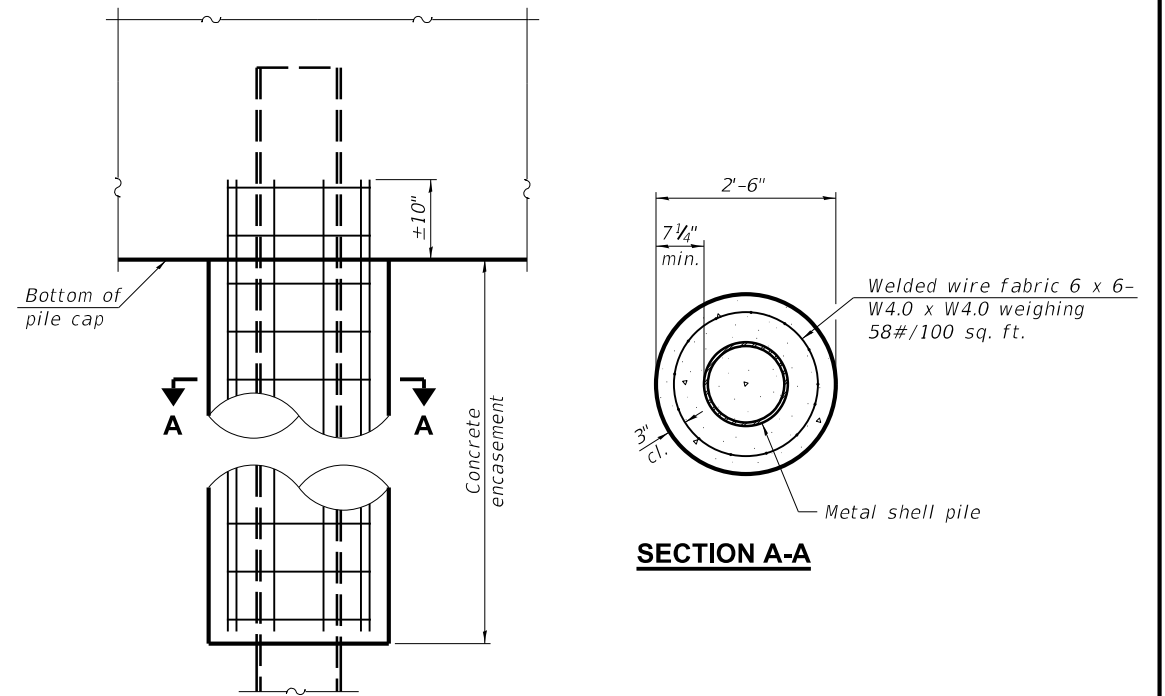


METAL SHELL PILE TABLE

| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. ³ /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12 | 0.250" | 31.37 | 0.0267 |
| PP14 | 0.250" | 36.71 | 0.0368 |
| PP14 | 0.312" | 45.61 | 0.0361 |
| PP16 | 0.312" | 52.32 | 0.0478 |
| PP16 | 0.375" | 62.64 | 0.0470 |



DETAIL A



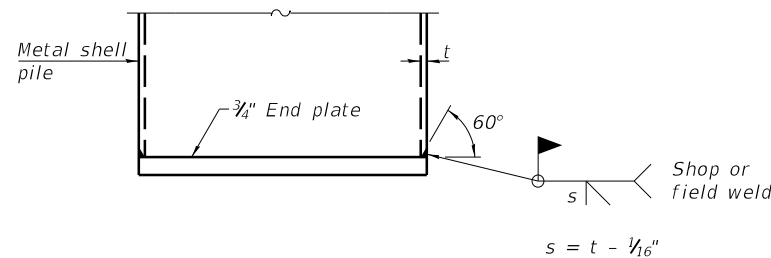
ELEVATION

SECTION A-A

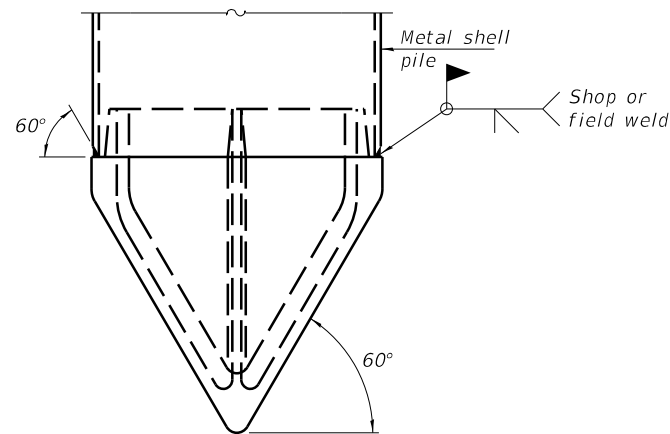
INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS

WELDED COMMERCIAL SPLICE

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

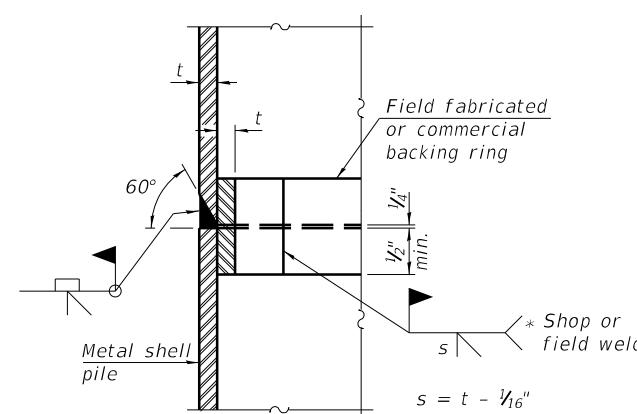


END PLATE ATTACHMENT



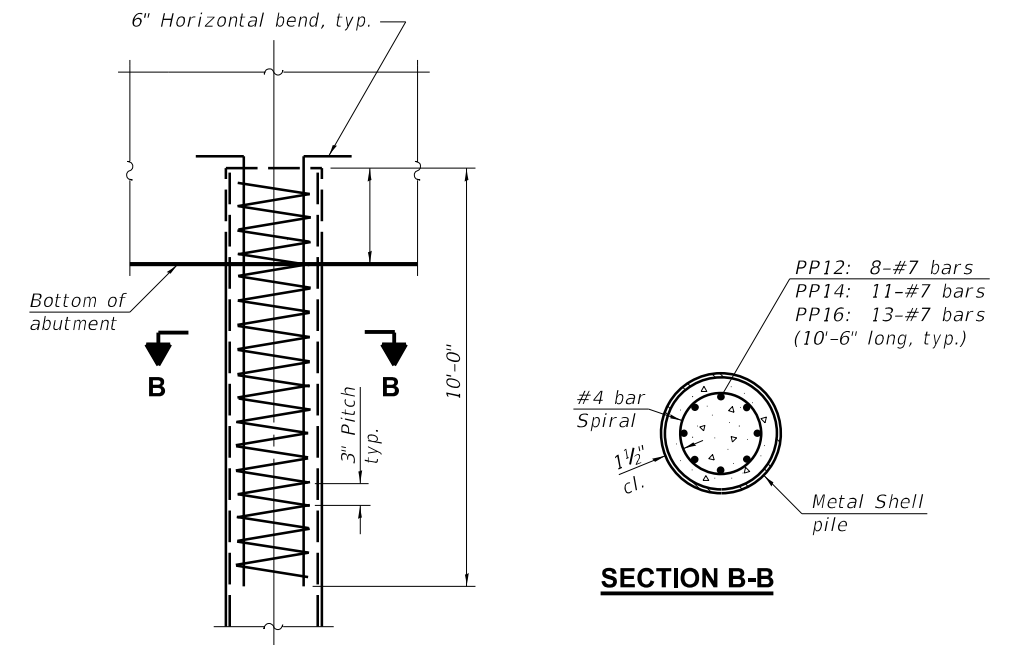
PILE SHOE ATTACHMENT

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



COMPLETE PENETRATION WELD SPLICE

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



ELEVATION

SECTION B-B

REINFORCEMENT AT ABUTMENTS

Note:
 The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS 8-11-2017

| | | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------|---------------------------|---------------------------|------------------|-------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------|--------------------|---------|------------------|--------------|-----------|
| FILE NAME = pw:\planroom\dot\illinois.gov\PWIDOT\Users\mde\Projects\78162\Consultant\Drawings\DWG_Sheets\097-0077-19-01.dwg | DESIGNED - 2-4-2-19-19-01 | CHECKED - S.M.S. | REVISIONS | DESIGNED - 2-4-2-19-19-01 | CHECKED - S.M.S. | REVISIONS | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | METAL SHELL PILE DETAILS STRUCTURE NO. 097-0077 | F.A.P. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. | 3085 STEVENSON DRIVE, SUITE 201 | SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE = 2,000' / in. | DRAWN - D.A.B. | REVISIONS | 877 | | | 101B-2 | WHITE | 60 | 47 | |
| ILLINOIS PROFESSIONAL DESIGN FIRM | 13 / PE / SE CORP. | 184.000959 | PLOT DATE = 3/18/2019 | CHECKED - M.D.C. | REVISIONS | IL 141 OVER TRIB. TO CANE CR. | | | CONTRACT NO. 78162 | | | | |
| | | | | | | | | | ILLINOIS | | FED. AID PROJECT | | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation
Boring Log

Route: FAP 877 (IL 141) Over Trib Cane Creek
Structure Number: 097-0036
Date: 10/28/2009
Section: 101BR-1
Bored By: R Moberly
Checked By: Rob Graeff
County: White
Location: 0.25 mile East Jct. IL Rte 1

Boring No: 1-S
Station: 7+77
Offset: 7' Rt CL
Ground Surface: 376.2 ft

| DEPTH | TEST | DESCRIPTION | DEPTH | TEST | DESCRIPTION |
|-------|------|---------------------------------------------------------------------|-------|------|---------------------------------------------------------------------|
| | | Asphalt, Concrete & crushed aggregate | | | Stiff, moist, grey mottled brown, Clay to Silty Clay A7-6 |
| 374.2 | | | 349.2 | | |
| | | Medium, very moist, brown, Silty Clay to Silty Clay Loam A-6 | | | Soft to medium, very moist, gray and brown, Clay to Silty Clay A7-6 |
| 371.7 | | | | | |
| | | Stiff, moist, grey, Silty Clay Loam A-4 | | | Stiff, moist, grey, Clay A7-6 |
| 369.2 | | | | | |
| | | Soft, very moist, grey, Silty Clay Loam A-4 | | | Soft, very moist, grey, Silty Clay Loam A-4 |
| 368.7 | | | | | |
| | | Medium to soft, very moist, grey, Silty Clay Loam A-6 | | | Stiff, moist, grey, Clay A7-6 |
| 368.2 | | | | | |
| | | | | | Very stiff, moist, grey, Clay A7-6 |
| 361.7 | | | | | |
| | | Stiff, moist to very moist, grey mottled brown, Silty Clay Loam A-6 | | | Stiff, moist, grey, Silty Clay to Clay A7-6 |
| 359.2 | | | | | |
| | | Medium to stiff, moist, brown mottled grey, Silty Clay to Clay A7-6 | | | Stiff, moist, grey, Clay A7-6 |
| 354.2 | | | | | |
| | | Soft, very moist, grey, Silty Clay to Clay A7-6 with Sandy seams | | | Stiff, moist, grey, Clay A7-6 |
| 351.7 | | | | | |
| 25.0 | | | 50.0 | | |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear R-Estimated P-Penetrometer)

Sheet 2 of 3
Date: 10/28/2009

Route: FAP 877 (IL 141)
Section: 101BR-1
County: White

Boring No: 1-S
Station: 7+77
Offset: 7' Rt CL
Ground Surface: 376.2 ft

| DEPTH | TEST | DESCRIPTION | DEPTH | TEST | DESCRIPTION |
|-------|------|--------------------------------------------------|-------|------|------------------------------------|
| | | Stiff, moist, grey, Clay A7-6 | | | Stiff, moist, grey, Clay A7-6 |
| 321.7 | | | 286.7 | | |
| | | Very stiff, moist, grey, Clay to Silty Clay A7-6 | | | Very stiff, moist, grey, Clay A7-6 |
| 311.7 | | | | | |
| | | Stiff, moist, grey, Silty Clay to Clay A7-6 | | | Hard, dry, grey, Clay Shale |
| 308.7 | | | | | |
| | | Very stiff, moist, grey, Clay A7-6 | | | Hard, dry, grey, Clay Shale |
| 301.7 | | | | | |
| 75.0 | | Medium, very moist, grey, Clay | | | Medium, very moist, grey, Clay |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear R-Estimated P-Penetrometer)

Sheet 3 of 3
Date: 10/28/2009

Route: FAP 877 (IL 141)
Section: 101BR-1
County: White

Boring No: 1-S
Station: 7+77
Offset: 7' Rt CL
Ground Surface: 376.2 ft

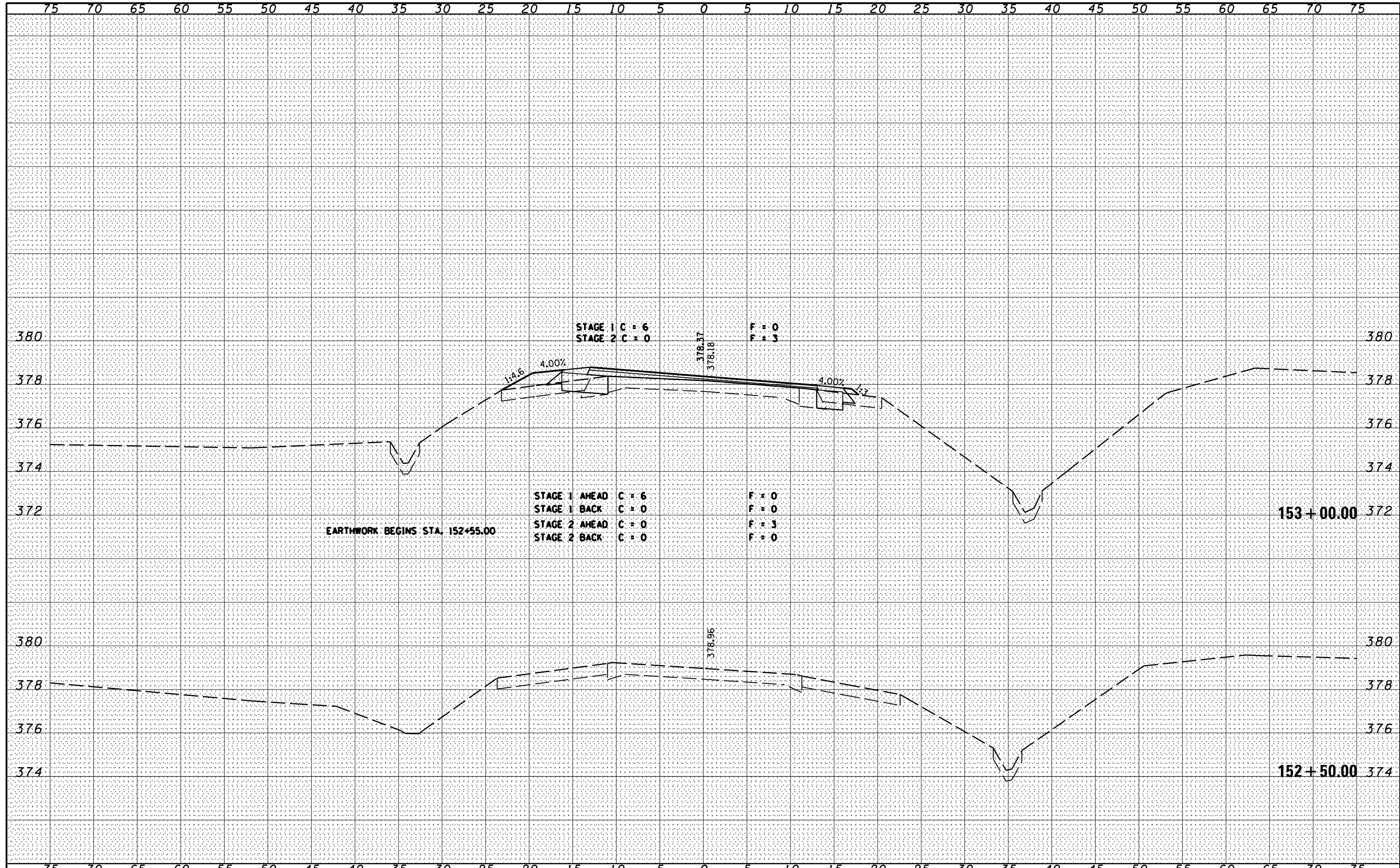
| DEPTH | TEST | DESCRIPTION | DEPTH | TEST | DESCRIPTION |
|-------|------|--------------------------------------------------------------|-------|------|-----------------------------|
| | | Hard, dry, grey, Clay Shale | | | Hard, dry, grey, Clay Shale |
| 271.2 | | | 130.0 | | |
| | | Bottom of hole = 104.6 feet | | | |
| | | Free water observed at 23.5 feet | | | |
| | | Elevation referenced to BM @ SW wingwall; Elev. = 374.0 feet | | | |
| | | Note: To convert "N" values to "NG" multiply by 1.25 | | | |
| 110.0 | | | 135.0 | | |
| | | | | | |
| 115.0 | | | 140.0 | | |
| | | | | | |
| | | | | | |
| 120.0 | | | 145.0 | | |
| | | | | | |
| 125.0 | | | 150.0 | | |

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear R-Estimated P-Penetrometer)

BORING 1-S

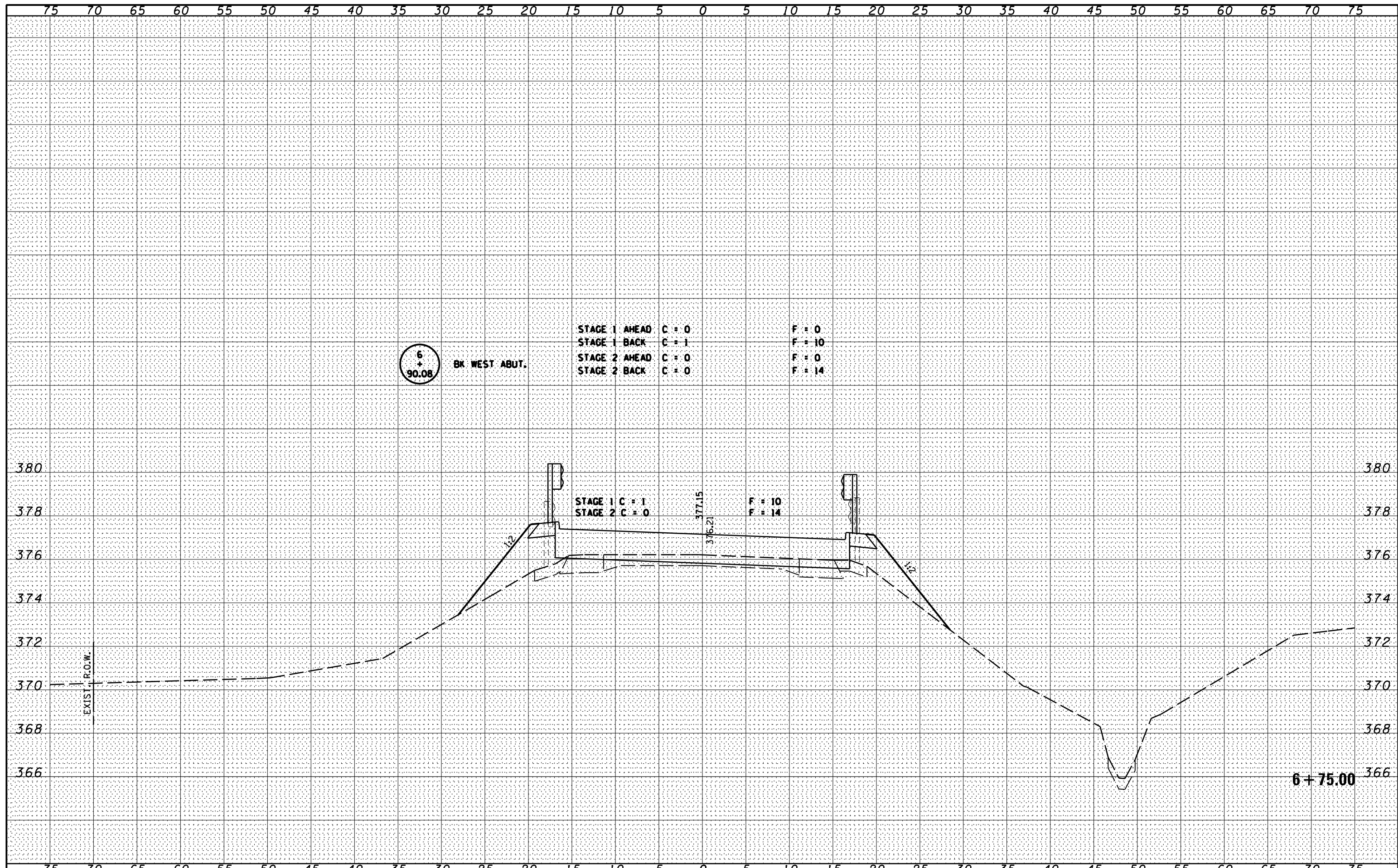
BY: _____ DATE: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

BY: _____ DATE: _____
 SURVEYED _____
 PLOTTED _____
 TEMPLATE _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

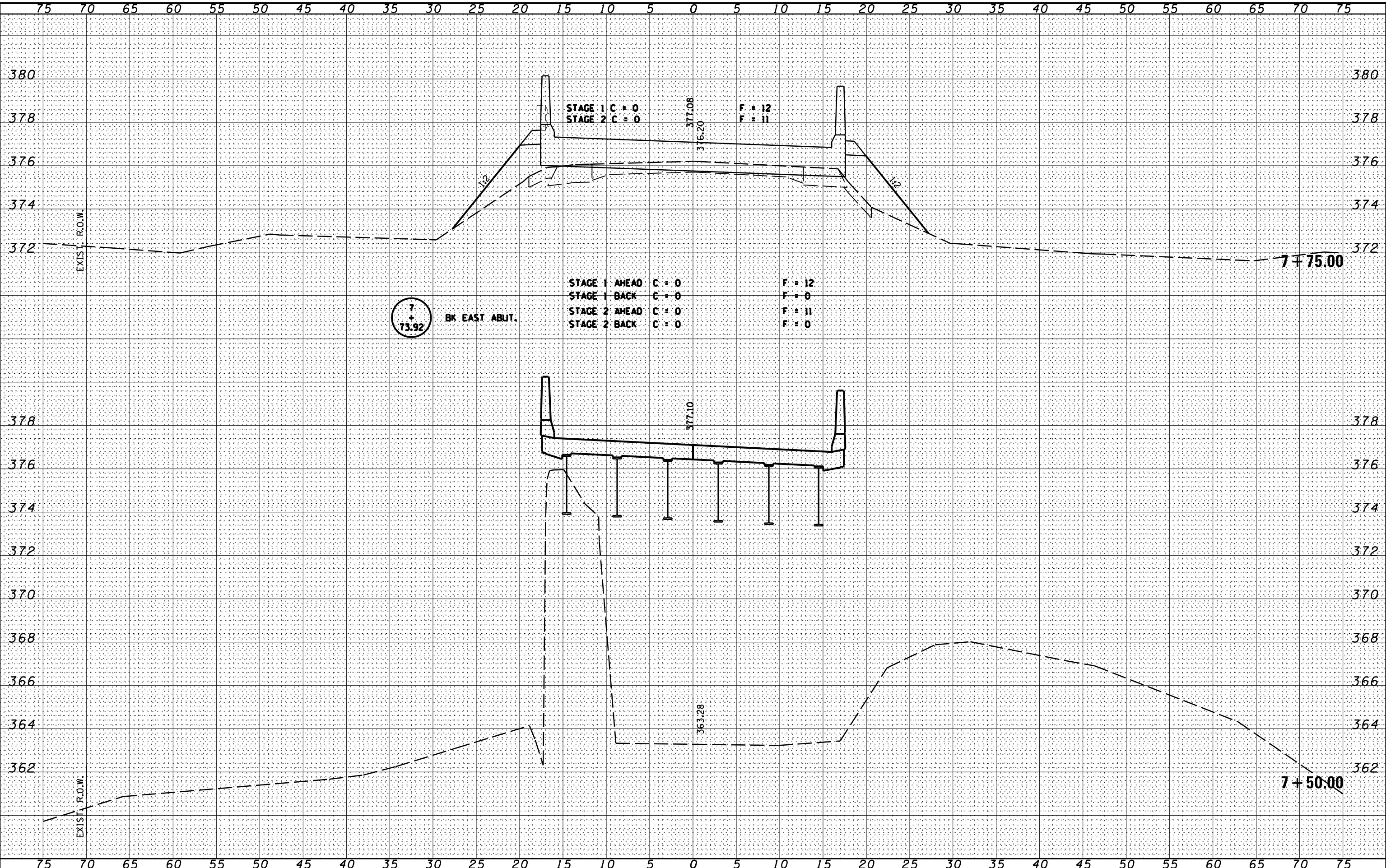


| | |
|--------------|----------|
| BY | DATE |
| | |
| FINAL SURVEY | SURVEYED |
| NOTE BOOK | PLOTTED |
| NO. | TEMPLATE |
| | AREAS |
| | CHECKED |

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



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



7
+
73.92

BK EAST ABUT.

STAGE 1 AHEAD C = 0 F = 12
 STAGE 1 BACK C = 0 F = 0
 STAGE 2 AHEAD C = 0 F = 11
 STAGE 2 BACK C = 0 F = 0

