

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|--------|--------------------|-----------|
| 103 | 102B-1 | PERRY | 18 | 1 |
| ILLINOIS | | | CONTRACT NO. 78091 | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

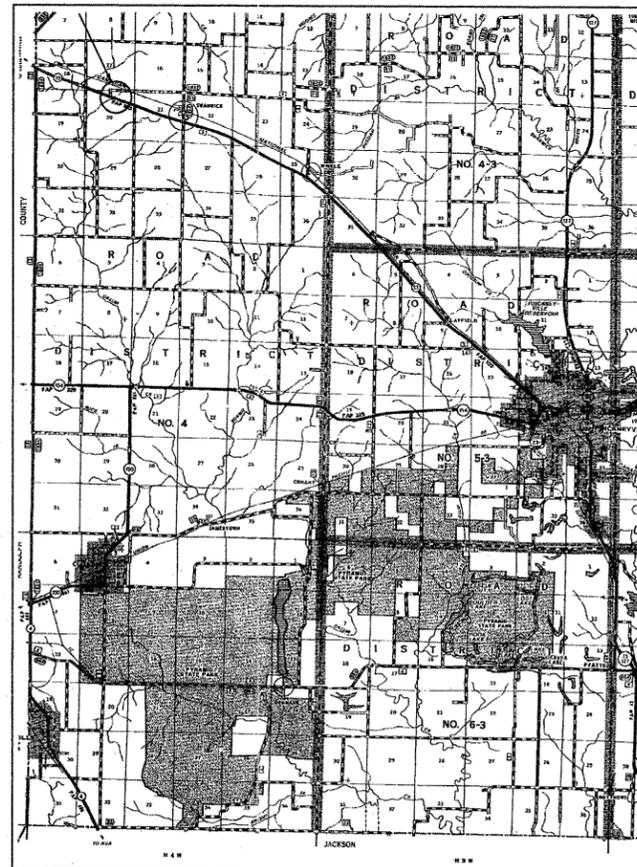
PROJECT ACF-0103(069)
FAP ROUTE 103 (IL RT 13)
SECTION 102B-1
BOX CULVERT REPLACEMENT
STRUCTURE NO. 073-7073
OVER UNNAMED STREAM
PERRY COUNTY

D-99-001-09



PROJECT LOCATION
SN 073-7073

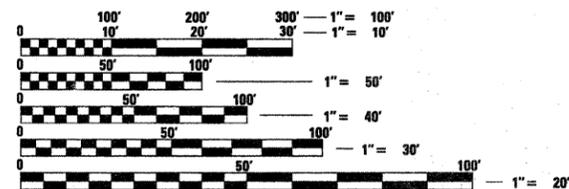
C-99-001-09



GROSS LENGTH = 68 FT

NET LENGTH = 68 FT

FOR INDEX OF SHEETS, SEE SHEET NO. 2



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

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

PROJECT ENGINEER: BILL PORTER
PROJECT MANAGER: DAVID PICHE 618-351-5227

CONTRACT NO. 78091

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 17 2011
M. C. Lums
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13 2011
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

May 13 2011
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

HIGHWAY STANDARDS

| STANDARD NO. | DESCRIPTION |
|--------------|---|
| 000001-06 | STANDARDS, SYMBOLS, AND ABBREVIATIONS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-05 | TEMPORARY EROSION CONTROL SYSTEMS |
| 420001-07 | PAVEMENT JOINTS |
| 420101-04 | JOINTED PCC PAVEMENT |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 666001-01 | RIGHT-OF-WAY MARKERS |
| 701001-02 | OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY |
| 701006-03 | OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE |
| 701011-01 | OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY |
| 701201-04 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY |
| 701321-11 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER |
| 701326-04 | LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 704001-06 | TEMPORARY CONCRETE BARRIER |
| 720001-01 | SIGN PANEL MOUNTING DETAILS |
| 720006-06 | SIGN PANEL ERECTION DETAILS |
| 720011-01 | METAL POSTS FOR SIGNS, MARKERS & DELINEATORS |
| 729001-01 | APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS AND MARKERS) |
| 780001-02 | TYPICAL PAVEMENT MARKINGS |
| 781001-03 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS |

INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 1 | COVER SHEET |
| 2 | INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND MIXTURE REQUIREMENTS |
| 3 | SUMMARY OF QUANTITIES |
| 4 | CULVERT ELEVATION |
| 5 | SCHEDULES |
| 6 | STAGED CONSTRUCTION |
| 7 | EROSION CONTROL AND DRAINAGE |
| 8 | TYPICAL SECTION |
| 9 | STAGING DETAILS |
| 10 | STRUCTURE PLANS |
| 11 | PLAN/PROFILE |
| 12-13 | DISTRICT STANDARDS |
| 14-18 | CROSS SECTIONS |

COMMITMENTS

NONE

GENERAL NOTES

THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES

| | |
|-------------------------------|--|
| ALL BITUMINOUS CONCRETE ----- | 2.392 METRIC TONS/CU. METER (2.016 TONS/ CU. YD.) |
| ALL AGGREGATE ----- | 2.43 METRIC TONS/ CU. METER (2.05 TONS/ CU. YD.) |
| BITUMINOUS MATERIALS: | |
| ON PAVEMENT ----- | 0.41 LITERS/SQ. METER (0.09 GAL./SQ. YD.) |
| INTERMEDIATE LIFTS ----- | 0.41 LITERS/SQ. METER (0.09 GAL./SQ. YD.) |
| (FOG COAT) | |
| ON AGGREGATE SURFACE ---- | 1.45 LITERS/SQ. METER (0.32 GAL./SQ. YD.) |
| AGGREGATE (PRIME COAT) ----- | 0.0016 METRIC TONS/SQ. METER (0.0015 TONS/SQ. YD.) |
| RIPRAP ----- | 1.78 METRIC TONS/CU. METER (1.5 TONS/CU. YD.) |

EMBANKMENT SHALL BE CONSTRUCTED USING STRUCTURE EXCAVATION

IF THE CONTRACTOR ELECTS TO USE PCC BASE COURSE WIDENING, SUCH WIDENING SHALL BE PRIMED ACCORDING TO ARTICLE 406.02, EXCEPT THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST OF THE WIDENING

AT ALL LOCATIONS WHERE EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT-MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKINGS SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN EDGE LINES ARE REMOVED.

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

MIX REQUIREMENTS

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

| | |
|--------------|--|
| Prepared By: | <i>Joe Zdaniewicz</i> DISTRICT STUDIES & PLANS ENGINEER |
| Examined By: | <i>James Lewis Emery</i> DISTRICT LAND ACQUISITION ENGINEER |
| Examined By: | <i>Conie Nelson</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER |
| Examined By: | <i>Kelley</i> DISTRICT OPERATIONS ENGINEER |
| Examined By: | <i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER |
| Examined By: | <i>Brian W. Feltz</i> DISTRICT MATERIALS ENGINEER |
| Approved By: | <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER |
| DATE: | March 17 2011 |

| | | | | | | | | | | |
|---|---------------------|------------|---------------------------|---|--|----------------|---------|--------|-----------------|--------------|
| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| c:\pw\work\pwwork\porterc\dms49697\d978091.shd.MISC.dgn | DRAWN - | REVISED - | 103 | | | 102B-1 | PERRY | 18 | 02 | |
| PLOT SCALE = 50.0000' / IN. | CHECKED - | REVISED - | CONTRACT NO. 78091 | | | | | | | |
| PLOT DATE = 3/22/2011 | DATE - | REVISED - | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | | | SCALE: | SHEET NO. OF SHEETS STA. | TO STA. | | | | |

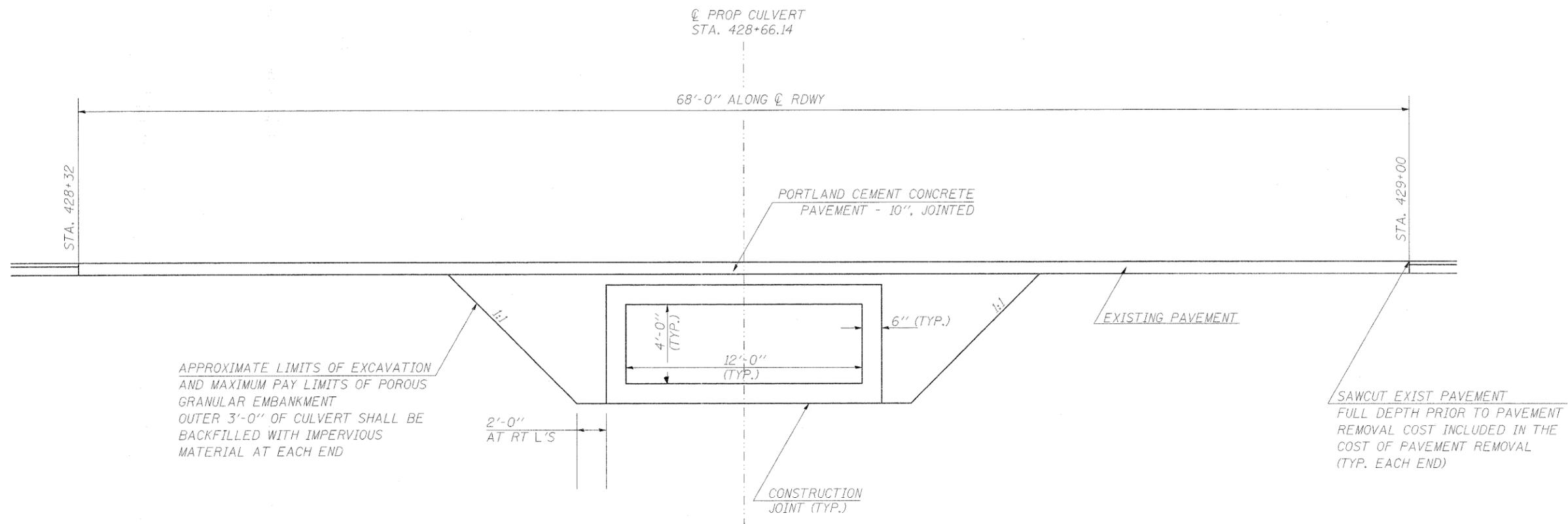
SUMMARY OF QUANTITIES

| CODE NUMBER | ITEM DESCRIPTION | UNIT | STP FUNDING 80% FEDERAL 20% STATE | CONSTRUCTION TYPE CODE |
|-------------|---|-------|---|---------------------------|
| | | | | 0040 SN073-7073 |
| 20200100 | EARTH EXCAVATION | CU YD | | 389 |
| 20700220 | POROUS GRANULAR EMBANKMENT | CU YD | | 122 |
| * 25000200 | SEEDING, CLASS 2 | ACRE | | 0.16 |
| * 25000350 | SEEDING, CLASS 7 | ACRE | | 0.16 |
| * 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | | 15 |
| * 25000500 | PHOSPHORUS FERTILIZER NUTRIENT | POUND | | 15 |
| * 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | | 15 |
| * 25000700 | AGRICULTURAL GROUND LIMESTONE | TON | | 0.32 |
| * 25100115 | MULCH, METHOD 2 | ACRE | | 0.16 |
| * 25100630 | EROSION CONTROL BLANKET | SQ YD | | 763 |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING | POUND | | 16 |
| 28000305 | TEMPORARY DITCH CHECKS | FOOT | | 16 |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | | 409 |
| 28100105 | STONE RIPRAP, CLASS A3 | SQ YD | | 55 |
| 28200200 | FILTER FABRIC | SQ YD | | 55 |
| 35600716 | HDT-MIX ASPHALT BASE COURSE WIDENING, 10" | SQ YD | | 116 |
| 42000501 | PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED) | SQ YD | | 235 |
| 42001300 | PROTECTIVE COAT | SQ YD | | 235 |
| 44000100 | PAVEMENT REMOVAL | SQ YD | | 189 |
| 48101600 | AGGREGATE SHOULDERS, TYPE B 8' | SQ YD | | 16 |
| 50100300 | REMOVAL OF EXISTING STRUCTURES NO. 1 | EACH | | 1 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | | 25,650 |
| 50800515 | BAR SPLICERS | EACH | | 66 |
| 51500100 | NAME PLATES | EACH | | 1 |
| 54003000 | CONCRETE BOX CULVERTS | CU YD | | 68.3 |

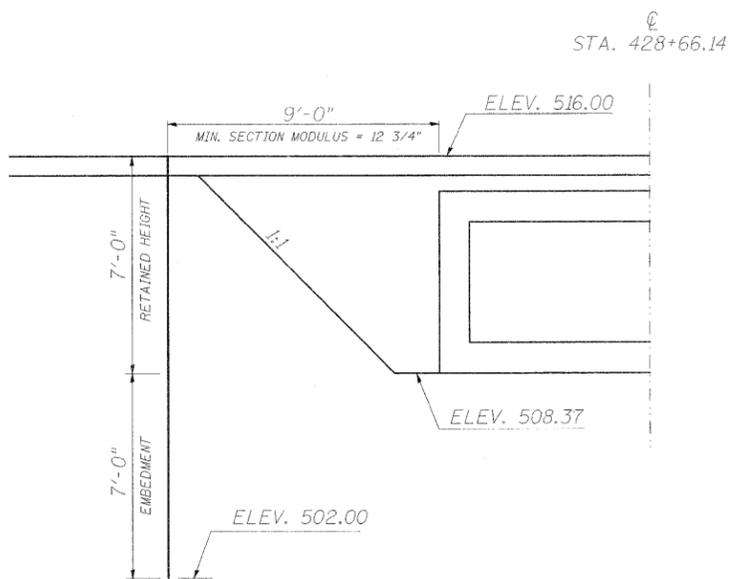
| CODE NUMBER | ITEM DESCRIPTION | UNIT | STP FUNDING 80% FEDERAL 20% STATE | CONSTRUCTION TYPE CODE |
|-------------|--|---------|---|---------------------------|
| | | | | 0040 SN073-7073 |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO. | | 3 |
| 67100100 | MOBILIZATION | L SUM | | 1 |
| 70100405 | 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 AND SURVEILLANCE | CAL DA | | 2 |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS | EACH | | 1 |
| 70106800 | CHANGEABLE MESSAGE SIGN | CAL MO | | 1 |
| 70300100 | SHORT TERM PAVEMENT MARKING | FOOT | | 45 |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | | 547 |
| 70301000 | WORK ZONE PAVEMENT MARKING REMOVAL | SQ FT | | 198 |
| 70400100 | TEMPORARY CONCRETE BARRIER | FOOT | | 325 |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER | FOOT | | 212.5 |
| * 78001110 | PAINT PAVEMENT MARKING - LINE 4" | FOOT | | 547 |
| 78300100 | PAVEMENT MARKING REMOVAL | SQ FT | | 183 |
| 86200300 | UNINTERRUPTIBLE POWER SUPPLY, EXTENDED | EACH | | 1 |
| XZ137300 | TEMPORARY SHORING | L SUM | | 1 |
| Z0026407 | TEMPORARY SHEET PILING | SQ FT | | 252 |
| Z0030250 | IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 | EACH | | 2 |
| Z0030260 | IMPACT ATTENUATORS TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3 | EACH | | 1 |
| Z0030350 | IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 | EACH | | 2 |

*SPECIALTY ITEM

TYPICAL LIMITS OF POROUS GRANULAR EMBANKMENT AT 073-7073



TEMPORARY SHEET PILING DETAIL



| | | | | | | | | | | | |
|---|----------------------|------------|-----------|---|---|--|--------------------|---------|-----------------------------|-----------------|--------------|
| FILE NAME = | USER NAME = porterwc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | CULVERT ELEVATION | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| cr:\px_work\pwidot\porterwc\dms49697\c975091.sht_MISC.dgn | | DRAWN - | REVISED - | | | | 103 | 102B-1 | PERRY | 18 | 04 |
| PLOT SCALE = 3/8" = 1' IN. | | CHECKED - | REVISED - | | SCALE: SHEET NO. OF SHEETS STA. 428+32 TO STA. 429+00 | | CONTRACT NO. 78091 | | [ILLINOIS] FED. AID PROJECT | | |
| PLOT DATE = 3/22/2011 | | DATE - | REVISED - | | | | | | | | |

EARTHWORK SCHEDULE

| LOCATION STATION TO STATION | POROUS GRANULAR EMBANKMENT | *EARTH EXCAVATION | SHRINKAGE FACTOR FOR EARTH EXCAVATION | EARTH EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE | **EMBANKMENT | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) |
|--------------------------------|-------------------------------|----------------------|---|---|--------------|---|
| | CU YD | CU YD | % | CU YD | CU YD | CU YD |
| STA 427+80 TO 428+32 | | 108 | 25 | 81 | 60 | 21 |
| STA 428+32 TO 429+00 | | 23 | 25 | 17 | 23 | -6 |
| PGE LOCATIONS | 122 | 122 | | | | 122 |
| STA 429+00 TO 430+22 | | 136 | 25 | 102 | 69 | 33 |
| TOTALS | 122 | 389 | | 200 | 152 | 170 |

*CUTS FROM CROSS SECTIONS
**FILLS FROM CROSS SECTIONS

SEEDING SCHEDULE

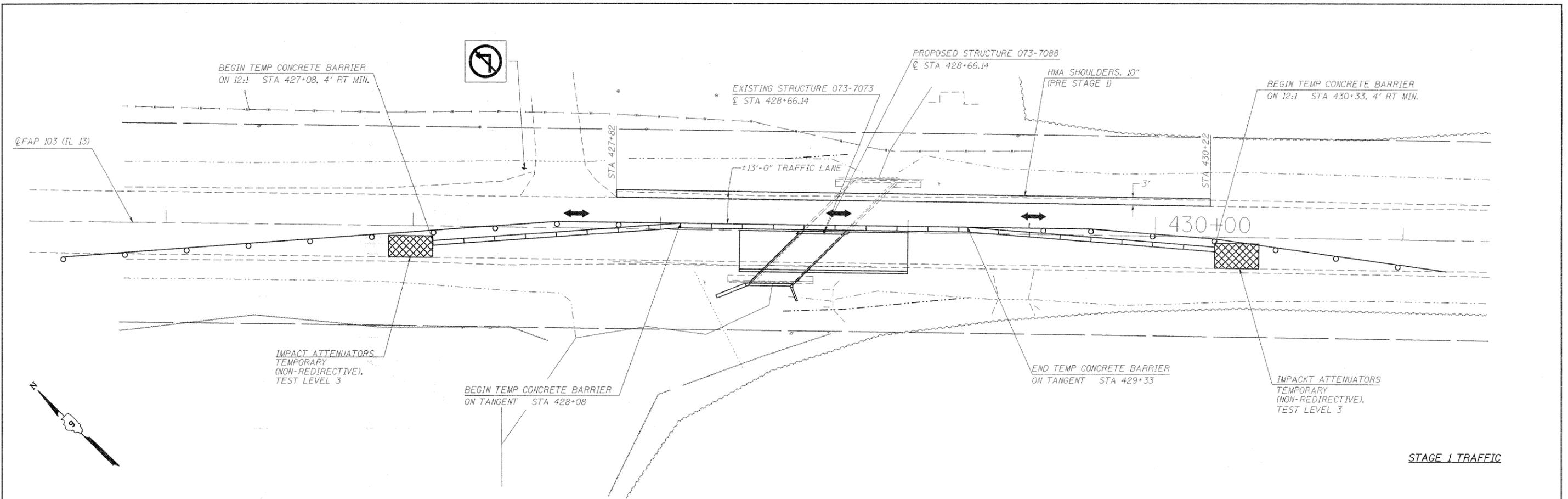
| LOCATION STATION TO STATION | TEMPORARY EROSION CONTROL SEEDING | SEEDING CLASS 1 | SEEDING CLASS 2 | NITROGEN (N) | PHOSPHOROUS (P) | POTASSIUM (K) | AGRICULTURAL GROUND LIMESTONE |
|--------------------------------|--------------------------------------|--------------------|--------------------|-----------------|--------------------|------------------|-------------------------------------|
| | POUND | ACRES | ACRES | POUND | POUND | POUND | TON |
| LT STA. 427+82 TO 430+22 | 8 | 0.08 | 0.08 | 7 | 7 | 7 | 0.16 |
| RT STA. 427+82 TO 430+22 | 8 | 0.08 | 0.08 | 8 | 8 | 8 | 0.16 |
| TOTALS | 16 | 0.16 | 0.16 | 15 | 15 | 15 | 0.32 |

REMOVAL AND PAVEMENT SCHEDULE

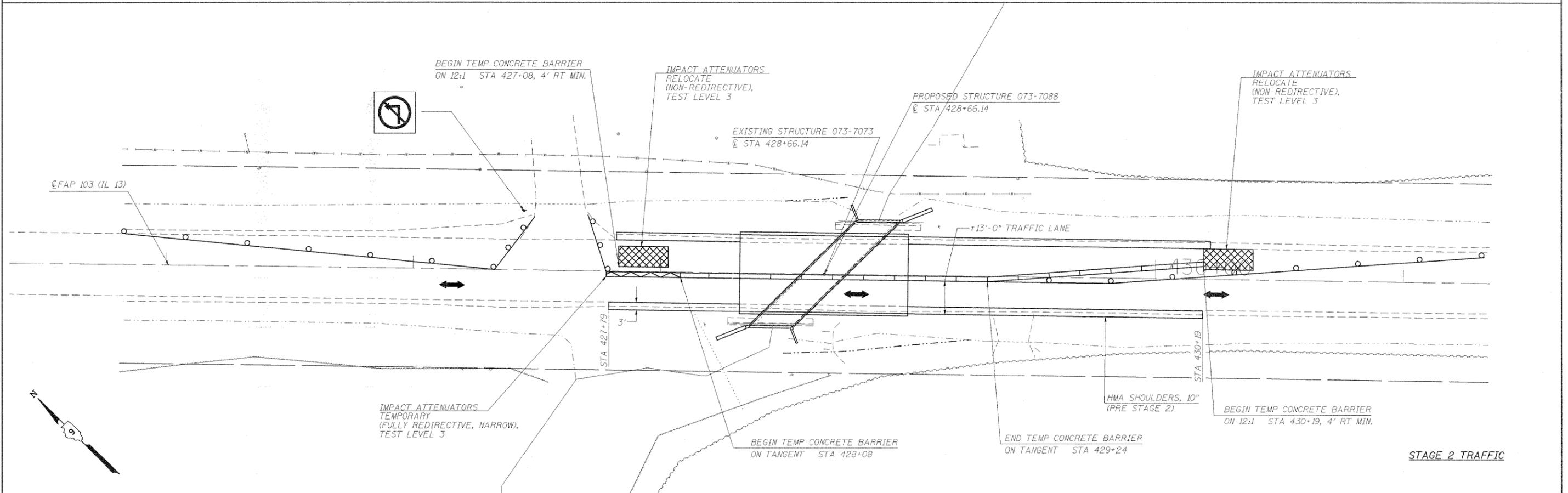
| LOCATION STATION TO STATION | PAVEMENT REMOVAL | HMA BASE COURSE WIDENING, 10'' | AGGREGATE SHLDS. TYPE B, 8'' | PORTLAND CEMENT CONCRETE PAVEMENT 10'' (JOINTED) |
|--------------------------------|---------------------|-----------------------------------|---------------------------------|--|
| | SQ YD | SQ YD | SQ YD | SQ YD |
| STA 428+32 TO 429+00 | 189 | | | 235 |
| LT STA 427+82 TO 428+32 | | 17 | | |
| LT STA 428+32 TO 429+00 | | | 8 | |
| LT STA 429+00 TO 430+22 | | 41 | | |
| RT STA 427+80 TO 428+32 | | 18 | | |
| RT STA 428+32 TO 429+00 | | | 8 | |
| RT STA 429+00 TO 430+19 | | 40 | | |
| TOTALS | 189 | 116 | 16 | 235 |

EROSION CONTROL

| LOCATION STATION TO STATION | PERIMETER EROSION BARRIER | MULCH METHOD 2 | EROSION CONTROL BLANKET | TEMPORARY DITCH CHECKS |
|--------------------------------|------------------------------|----------------|-------------------------------|---------------------------|
| | FOOT | ACRES | SQ YD | FOOT |
| NW QUAD | 43 | 0.02 | 97 | |
| NE QUAD | 104 | 0.04 | 187 | |
| SW QUAD | 160 | 0.06 | 292 | 12 |
| SE QUAD | 102 | 0.04 | 187 | 4 |
| TOTALS | 409 | 0.16 | 763 | 16 |

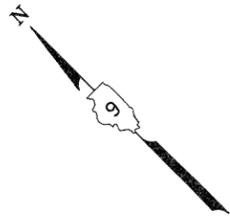


STAGE 1 TRAFFIC

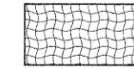


STAGE 2 TRAFFIC

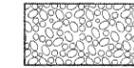
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|---|---------------------|------------|-----------|---|---------------------|---|---------|--------------------|--------------|-----------|--|
| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STAGED CONSTRUCTION | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| ca:\pw\work\pilot\porter\ca\dms49697\4978091_sht_MISC.dgn | | DRAWN - | REVISED - | | | 103 | 102B-1 | PERRY | 18 | 06 | |
| PLOT SCALE = 20,0000' / IN. | | CHECKED - | REVISED - | | | SCALE: SHEET NO. OF SHEETS STA. TO STA. | | CONTRACT NO. 78091 | | | |
| PLOT DATE = 3/22/2011 | | DATE - | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | |



LEGEND



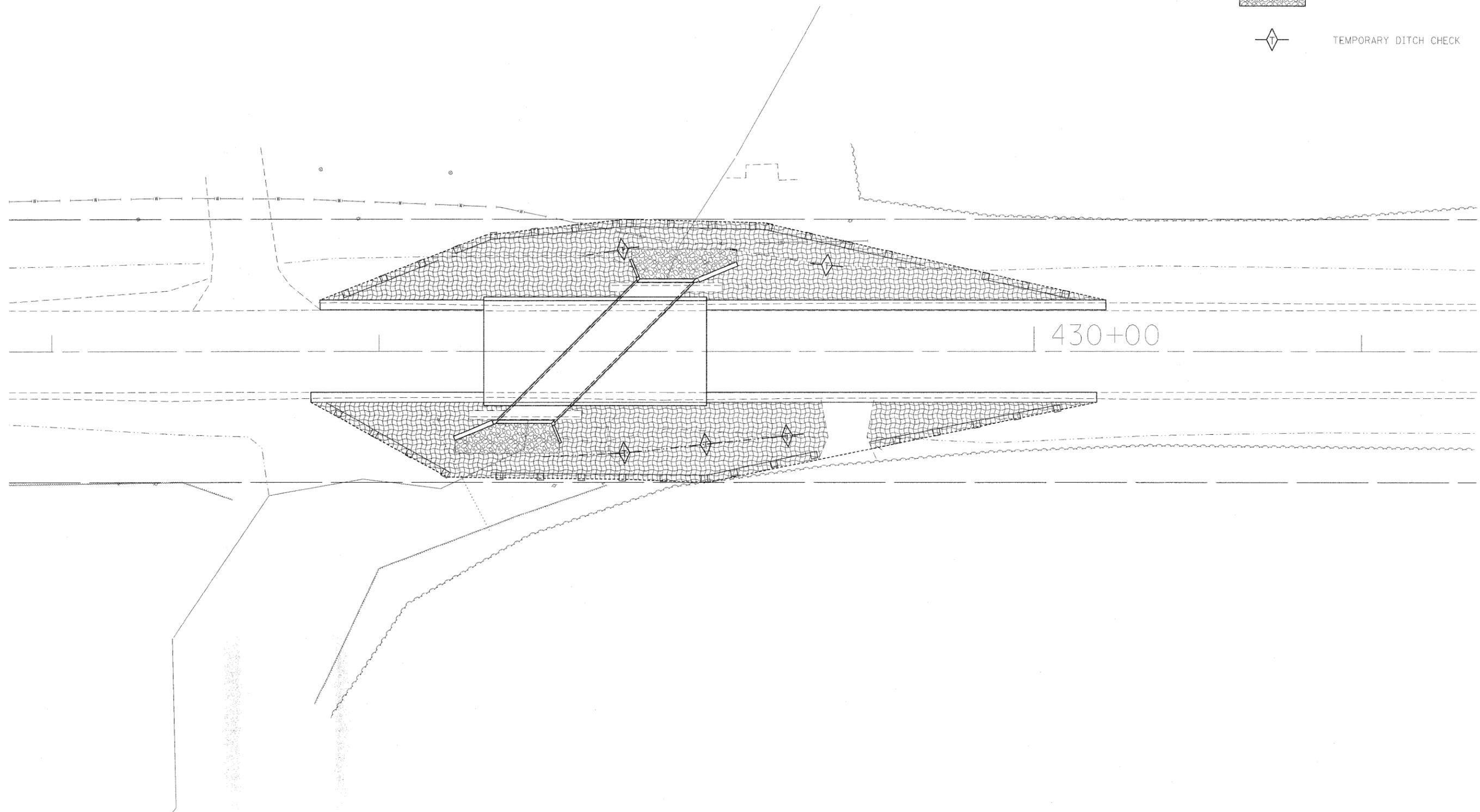
EROSION CONTROL BLANKET



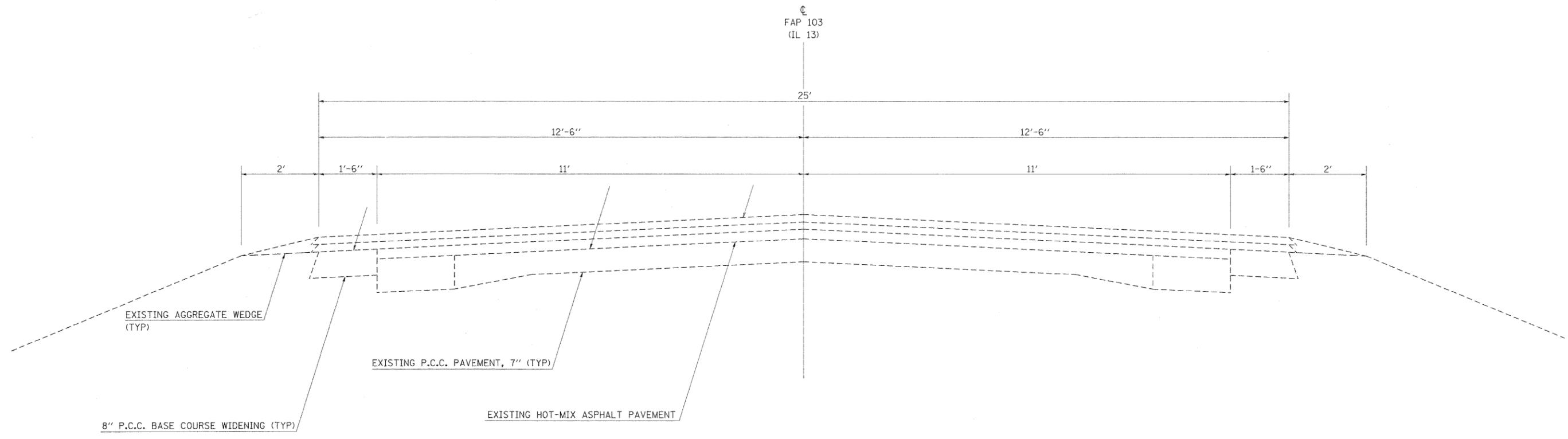
PROPOSED RIP RAP, A3



TEMPORARY DITCH CHECK



| | | | | | | | | | | | |
|---|---------------------|------------|-----------|---|-----------------------------------|--|--------------------|---------------------------|----------------------------|---------------------------|-----------|
| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | EROSION CONTROL AND DRAINAGE PLAN | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| c:\pwork\owidot\porterc\dms49697\d978891.shx_MISC.dgn | | DRAWN - | REVISED - | | | | 103 | 102B-1 | PERRY | 18 | 07 |
| PLOT SCALE = 15,0000' / IN. | | CHECKED - | REVISED - | | | | CONTRACT NO. 78091 | | | ILLINOIS FED. AID PROJECT | |
| PLOT DATE = 3/22/2011 | | DATE - | REVISED - | | | | SCALE: 15:1 | SHEET NO. 01 OF 01 SHEETS | STA. 427+00 TO STA. 431+00 | | |



EXISTING AGGREGATE WEDGE (TYP)

EXISTING P.C.C. PAVEMENT, 7" (TYP)

EXISTING HOT-MIX ASPHALT PAVEMENT

8" P.C.C. BASE COURSE WIDENING (TYP)

CL
FAP 103
(IL 13)

25'

12'-6"

12'-6"

2'

1'-6"

11'

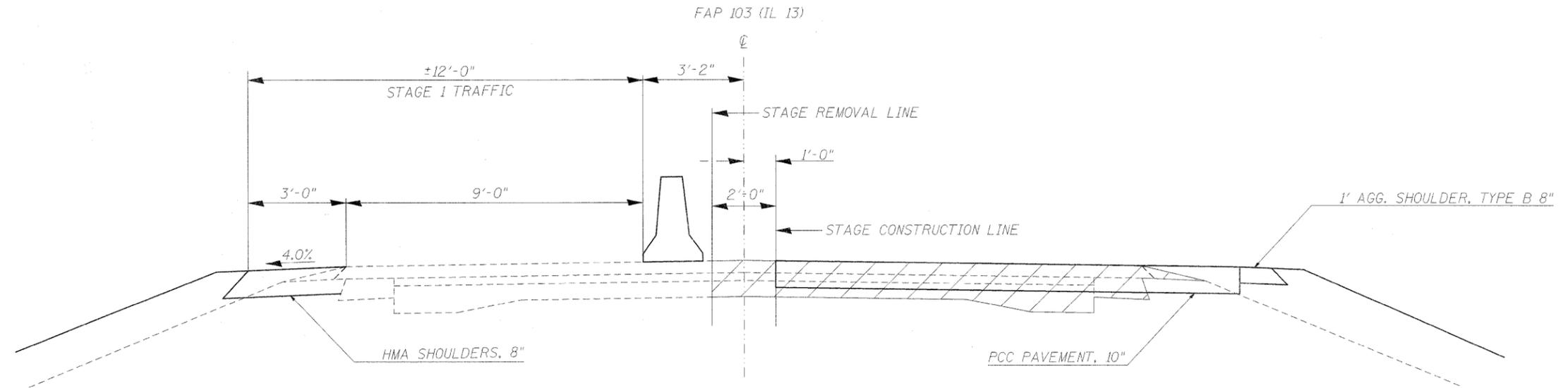
11'

1'-6"

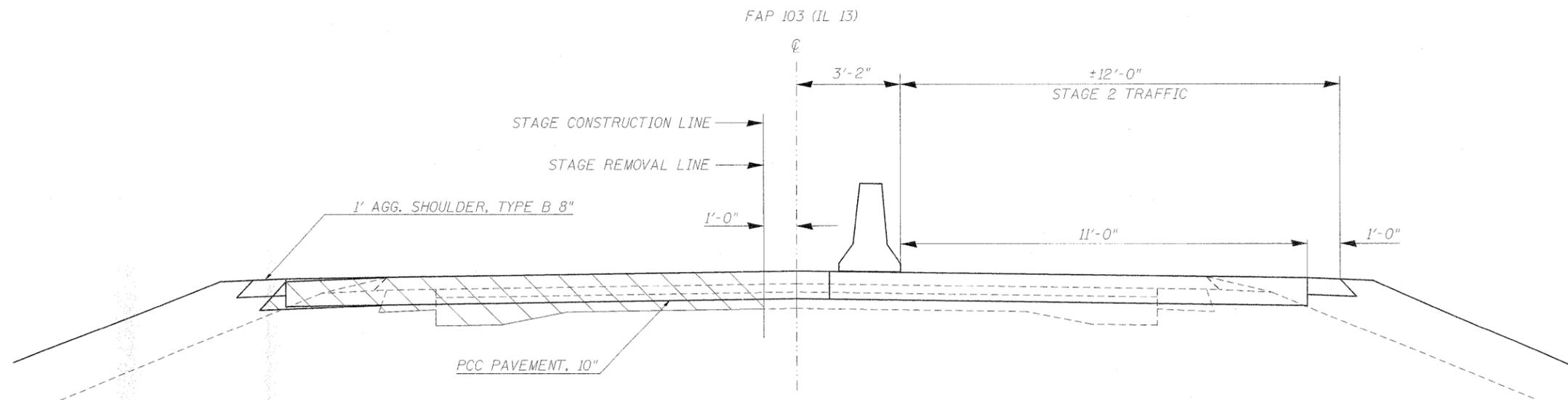
2'

| | | | | | | | | | | | | |
|---|----------------------|------------|-----------|---|--|---------------------------|-----------------------|-------------------|--------------------|-----------------------|--------------------|--|
| FILE NAME = | USER NAME = portercw | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL SECTION IL 13 OVER UNNAMED STREAM | | F.A.P. RTE. 103 | SECTION 102B-1 | COUNTY PERRY | TOTAL SHEETS 18 | SHEET NO. 08 | |
| c:\pwork\pwork\portercw\dms49697\d978091.sht_MISC.dgn | | DRAWN - | REVISED - | | SCALE: XX | SHEET NO. 01 OF 01 SHEETS | STA. N/A | TO STA. N/A | CONTRACT NO. 78091 | | | |
| | | CHECKED - | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | DATE - | REVISED - | | | | | | | | | |

STAGE 1

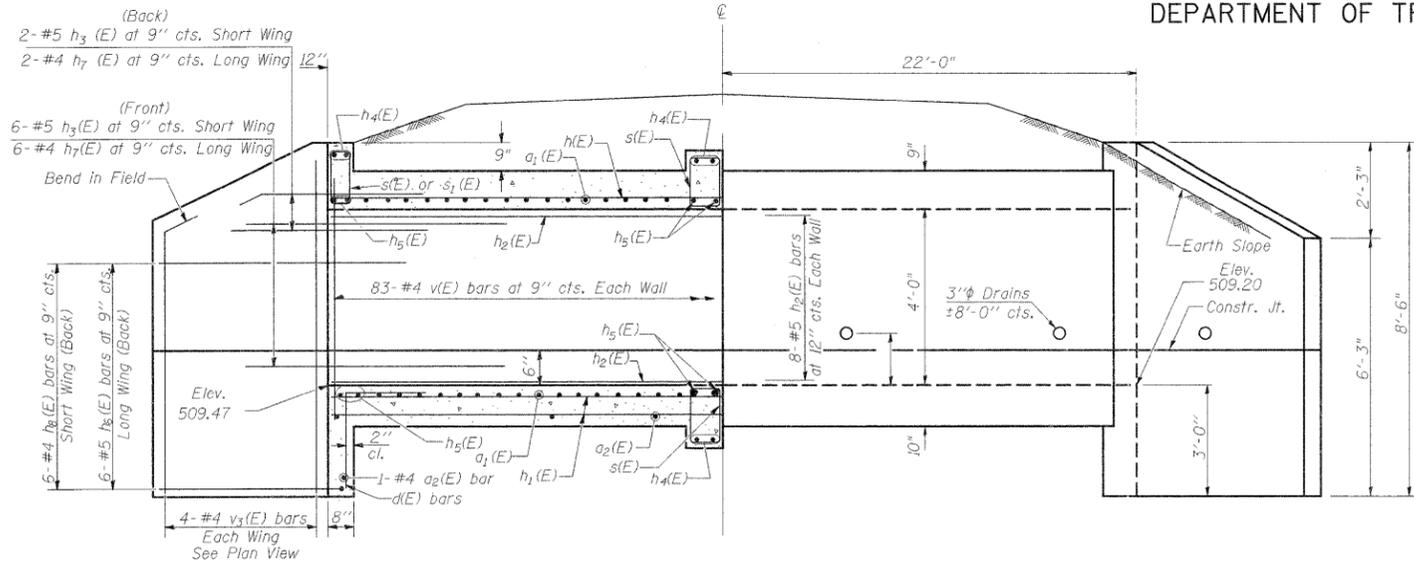


STAGE 2



| | | | | | | | | | | | | |
|---|-----------------------------|------------|-----------|---|-------------------------------|---------------------------|-------------|--------------------|---------------------------|-----------------|-----------------------|--------------------|
| FILE NAME = c:\pw\work\paxidot\porterw\dm449697\d978091_sht_MISC.dgn | USER NAME = porterw | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STAGE CONSTRUCTION DETAILS | | | F.A.P. RTE. 103 | SECTION 102B-1 | COUNTY PERRY | TOTAL SHEETS 18 | SHEET NO. 09 |
| | PLOT SCALE = 2,0000 1 / IN. | DRAWN - | REVISED - | | SCALE: | SHEET NO. 01 OF 01 SHEETS | STA. 428+32 | TO STA. 429+00 | ILLINOIS FED. AID PROJECT | | | |
| | PLOT DATE = 3/22/2011 | CHECKED - | REVISED - | | | | | CONTRACT NO. 78091 | | | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

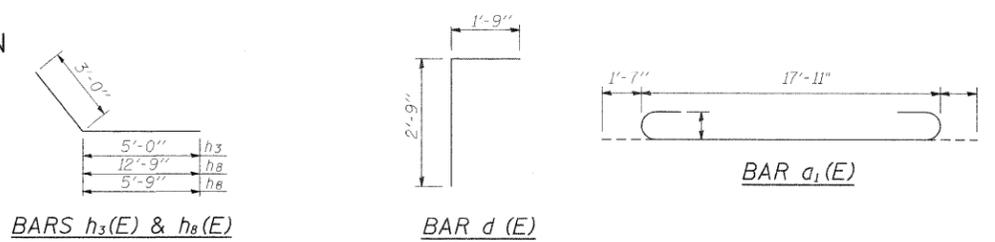


ELEVATION

Dimensions at Rt. L's to \perp Roadway

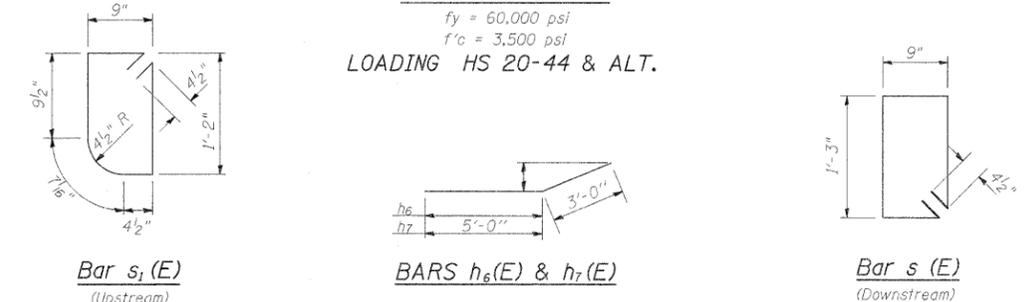
BAR SPLICERS (E)

| Bar Size | No. Assemblies Required | Location |
|----------|-------------------------|---------------------------|
| #8 | 13 | Bot. of Top Slab |
| #8 | 13 | Top of Top Slab |
| #5 | 24 | Top and Bot. of Bot. Slab |
| #5 | 16 | Side Walls |

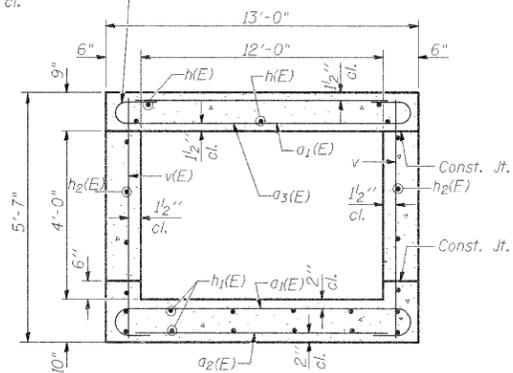


DESIGN STRESSES

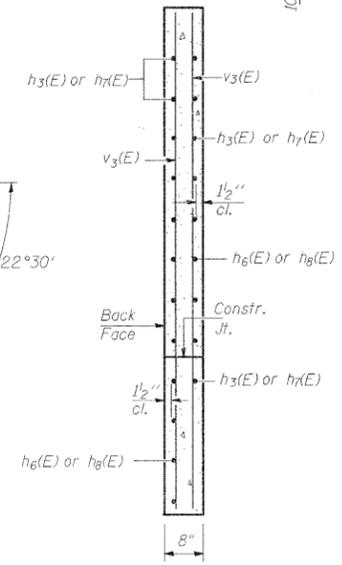
$f_y = 60,000$ psi
 $f'_c = 3,500$ psi
LOADING HS 20-44 & ALT.



Tilt hook of $a_1(E)$ bars if necessary for $1\frac{1}{2}$ " min. cl.



SECTION THRU BARREL

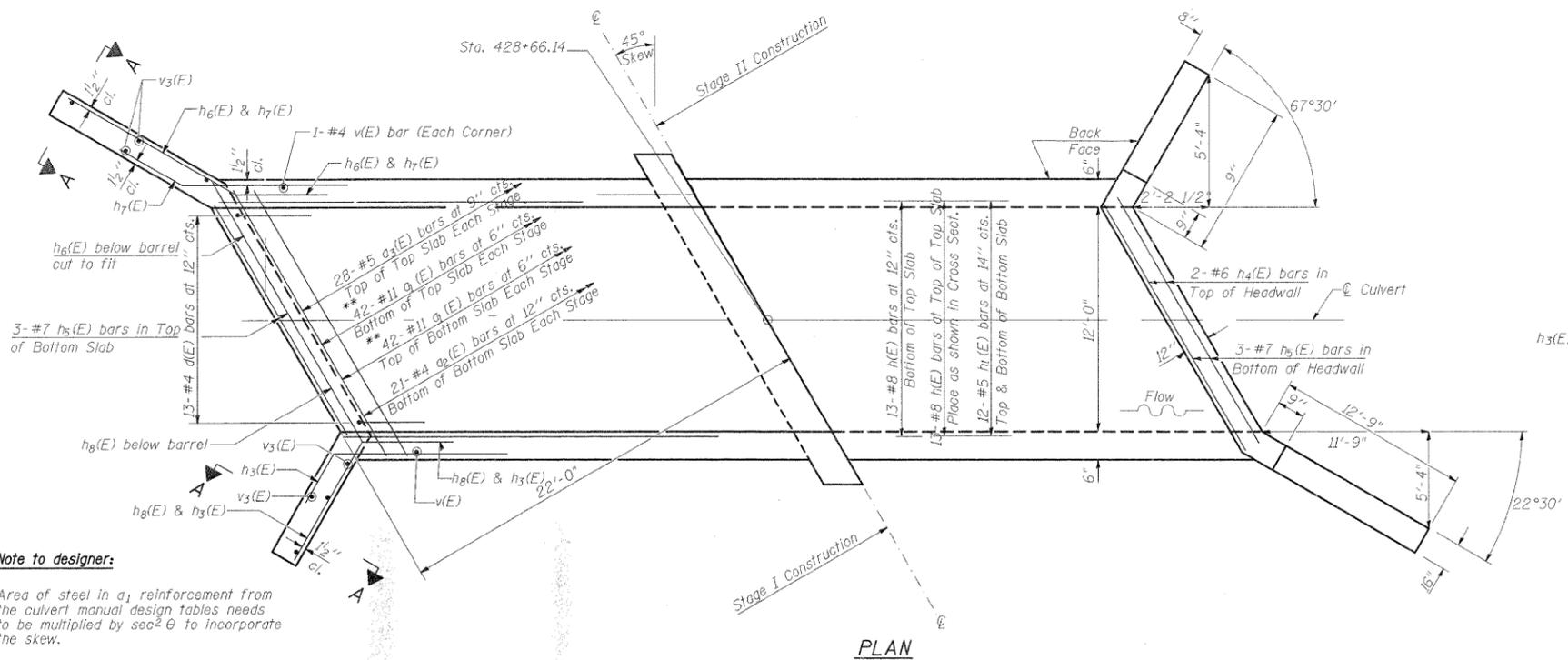


SECTION A-A

SECTION THRU HEADWALL (Up Stream End Only)

BILL OF MATERIAL

| Bar | No. | Size | Length | Shape | |
|----------------------------------|-----|------|--------|---------|--------|
| $a_1(E)$ | 168 | #11 | 21'-1" | | |
| $a_2(E)$ | 44 | #4 | 17'-8" | | |
| $a_3(E)$ | 56 | #5 | 17'-8" | | |
| $d(E)$ | 26 | #4 | 4'-6" | | |
| $h(E)$ | 26 | #8 | 31'-0" | | |
| $h_1(E)$ | 24 | #5 | 31'-0" | | |
| $h_2(E)$ | 16 | #5 | 31'-0" | | |
| $h_3(E)$ | 16 | #5 | 8'-0" | | |
| $h_4(E)$ | 6 | #6 | 17'-6" | | |
| $h_5(E)$ | 8 | #7 | 17'-6" | | |
| $h_6(E)$ | 14 | #5 | 8'-9" | | |
| $h_7(E)$ | 16 | #4 | 8'-0" | | |
| $h_8(E)$ | 14 | #4 | 15'-9" | | |
| $s(E)$ | 34 | #4 | 4'-7" | | |
| $s_1(E)$ | 17 | #4 | 4'-5" | | |
| $v(E)$ | 166 | #4 | 5'-2" | | |
| $v_3(E)$ | 16 | #4 | 8'-2" | | |
| Concrete Box Culverts | | | | Cu. Yd. | 68.3 |
| Reinforcement Bars, Epoxy Coated | | | | Pound | 25,650 |



PLAN

NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.
Reinforcement Bars designated (E) shall be Epoxy Coated.
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
All construction joints shall be bonded.
Expansion bolts shall be $\frac{3}{4}$ " ϕ x 12" hooked bolts. Hooked bolts shall extend a minimum of 9" into new concrete and have a minimum certified proof load of 4,080 lbs.

Note to designer:
Area of steel in a_1 reinforcement from the culvert manual design tables needs to be multiplied by $\sec^2 \theta$ to incorporate the skew.

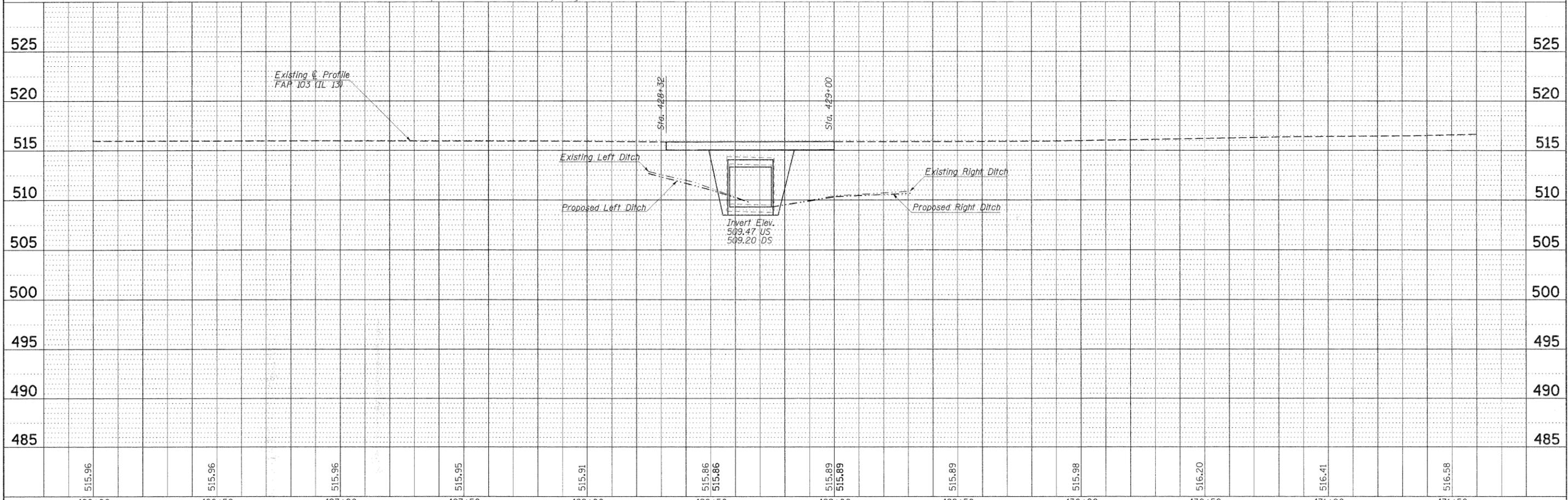
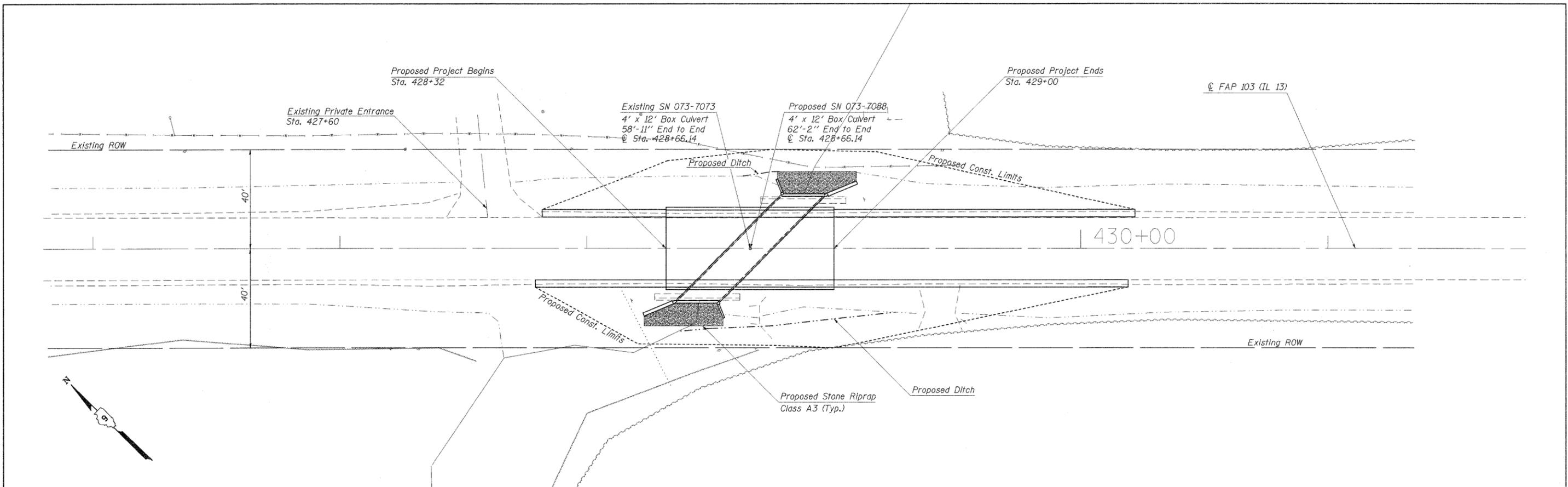
REVISIONS

| | |
|---------|---------------|
| DRAWN | 2-04 |
| REVISED | 5-09 SHT CELL |
| REVISED | |
| REVISED | |

BASED ON: SSB-H-L 6-1-2000

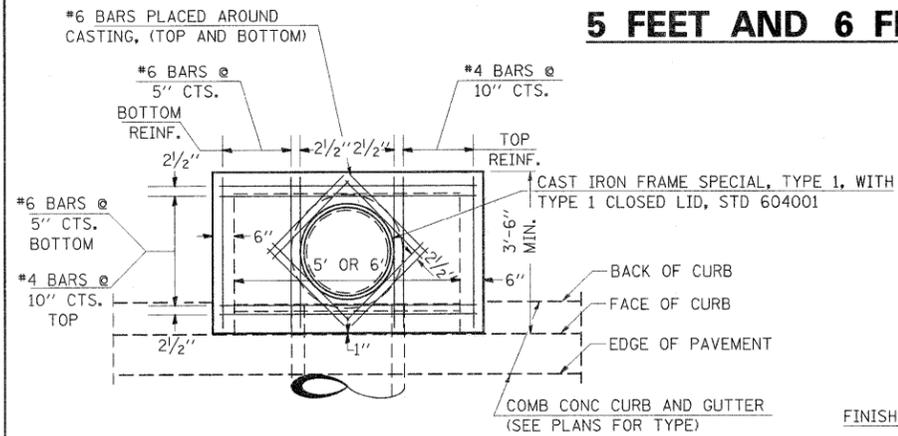
PLAN SURVEYED BY DATE
 PLOTTED CHECKED
 ALIGNED CHECKED
 NOTE BOOK NO. _____
 STRUCTURE NO. _____
 FILE NAME _____

PROFILE SURVEYED BY DATE
 PLOTTED CHECKED
 B.M. NOTED
 STRUCTURE NOTATIONS CHKD
 NOTE BOOK NO. _____
 FILE NAME _____

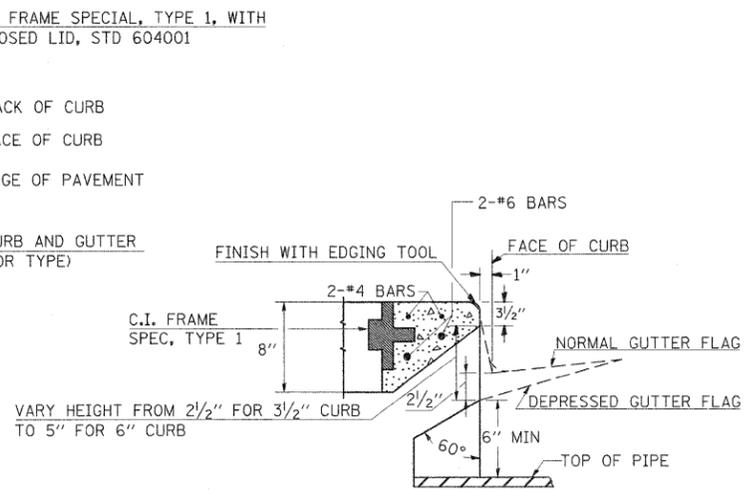


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| FILE NAME = | USER NAME = porterw | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STRUCTURE NO. 073-7073 PLAN AND PROFILE | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| ci:\pw\work\pwidot\porterw\dms49697\d4978891_sht.073-7073_pln.dgn | DRAWN - | REVISED - | 03/885 | | | 102B-1 / 13B-1 | PERRY/UNION | 18 | 11 | |
| PLOT SCALE = 20,000' / IN. | CHECKED - | REVISED - | CONTRACT NO. 78091 | | | | | | | |
| PLOT DATE = 3/22/2011 | DATE - | REVISED - | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT | | | | | | | |
| SCALE: 1"=20' | | SHEET NO. OF SHEETS | | STA. 426+00.00 TO STA. 431+50.00 | | | | | | |

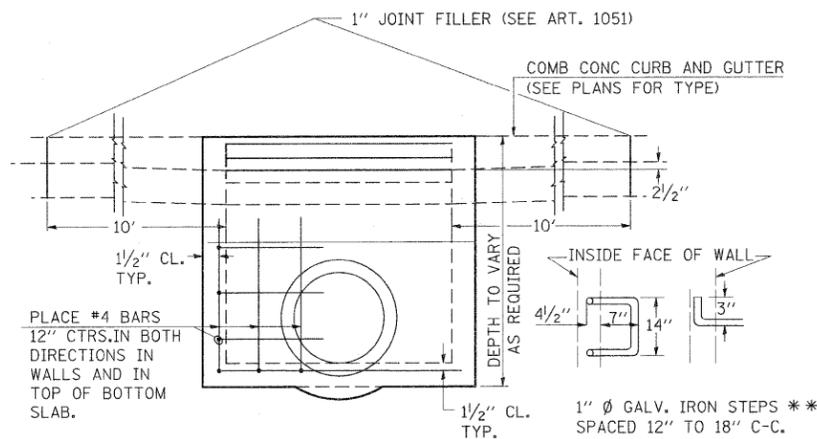
DETAILS OF INLET SPECIAL, TYPE 3, 5 FEET AND 6 FEET



PLAN



SECTION AT WEIR



ELEVATION

| DESIGN | PIPE DIA | "D" |
|--------|------------|-------|
| A | 18" & LESS | 2'-6" |
| B | 21" & 24" | 3'-0" |
| C | 27" & 30" | 3'-7" |
| D | 33" & 36" | 4'-2" |
| E | 42" | 4'-9" |
| F | 48" | 5'-0" |
| G | 54" | 6'-1" |

1" Ø GALV. IRON STEPS **
SPACED 12" TO 18" C-C.
USE WHEN INLET IS OVER
4' DEEP.

NOTES:

PROVIDE 1/2" CLEARANCE TYP. ALL REINFORCEMENT UNLESS OTHERWISE SPECIFIED.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT. SET FACE OF INLET 1" BEHIND FACE OF CURB. DEPRESS GUTTER FLOWLINE AT INLET 2 1/2" BELOW NORMAL GUTTER FLOWLINE. CONSTRUCT TRANSITION IN FLOWLINE IN 10 FEET EACH SIDE OF INLET. PIPES TO BE CONNECTED TO INLET AS SHOWN ON STORM SEWER LAYOUT.

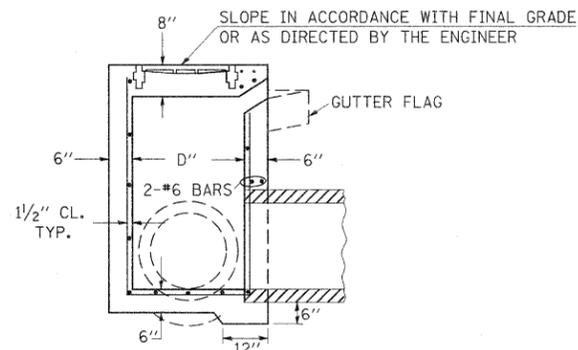
INLETS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR INLET, SPECIAL, TYPE 3, 5 FEET OR INLET, SPECIAL, TYPE 3, 6 FEET WHICH PRICE SHALL INCLUDE THE CAST IRON FRAME, SPECIAL, TYPE 1 WITH TYPE 1 CLOSED LID, THE REINFORCEMENT BARS, METAL STEPS AND JOINT FILLER.

**THE GALVONIZED IRON STEPS AS DETAILED HEREON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT WILL CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN. MAY BE USED WHEN APPROVED BY THE ENGINEER.

IF THE INLET IS NOT CAST IN PLACE THEN THE INLET SHALL BE PRODUCED ACCORDING TO THE DEPARTMENT'S CURRENT POLICY MEMORANDUM, "QUALITY CONTROL/QUALITY ASSURANCE PROGRAM FOR PRECAST CONCRETE PRODUCTS".

NOTE TO DESIGNER:

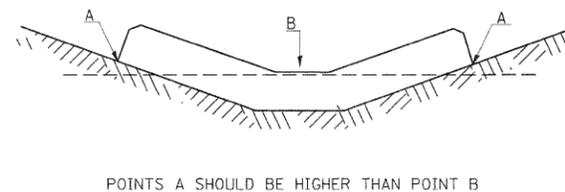
WHEN USING THIS STANDARD THE DESIGNER SHOULD ALSO CHECK BDE SPECIAL PROVISION 419 "PRECAST CONCRETE PRODUCTS".



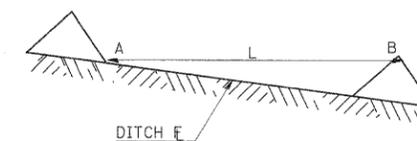
SECTION

TEMPORARY DITCH CHECKS

PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



SPACING BETWEEN TEMPORARY DITCH CHECKS



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION
B = THE LOW POINT IN CENTER OF CHECK

| REVISIONS | |
|-----------|----------|
| DRAWN | 9-01-99 |
| REVISED | 10-3-01 |
| RESIZED | 5-8-08 |
| REVISED | 05-04-10 |

STD. 9-108

STD. 9-1

| REVISIONS | |
|-----------|---------|
| REDRAWN | 2-15-89 |
| REVISED | 8-15-94 |
| REVISED | 1-19-99 |
| REVISED | 5-6-04 |
| RESIZED | 5-6-08 |

| | | | |
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| FILE NAME = | USER NAME = portercw | DESIGNED - | REVISED - |
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| PLOT SCALE = 50.0000 ' / IN. | | CHECKED - | REVISED - |
| PLOT DATE = 3/22/2011 | | DATE - | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

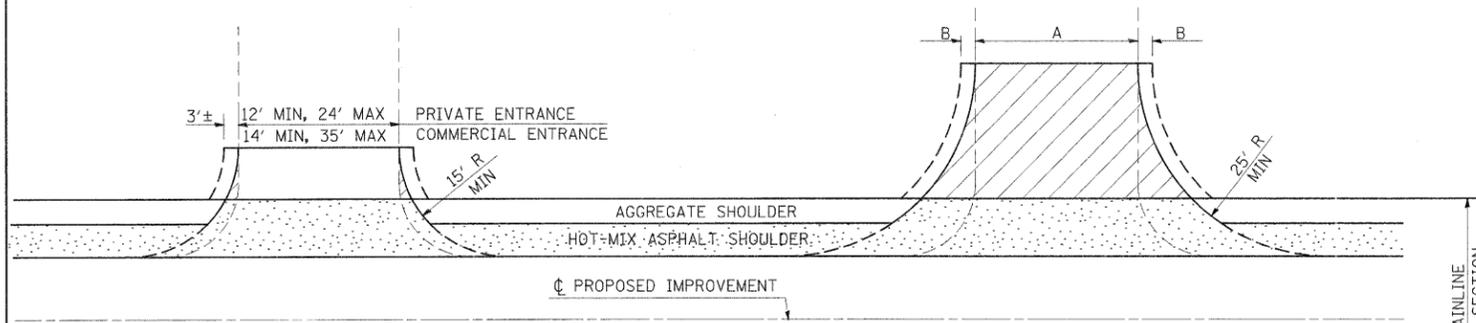
STANDARDS

SCALE: SHEET NO. OF SHEETS STA. N/A TO STA. N/A

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 103 | 102B-1 | PERRY | 18 | 12 |
| CONTRACT NO. 78091 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

RURAL SIDE APPROACH DETAILS

PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS

SIDEROAD DIMENSIONS (MIN.)

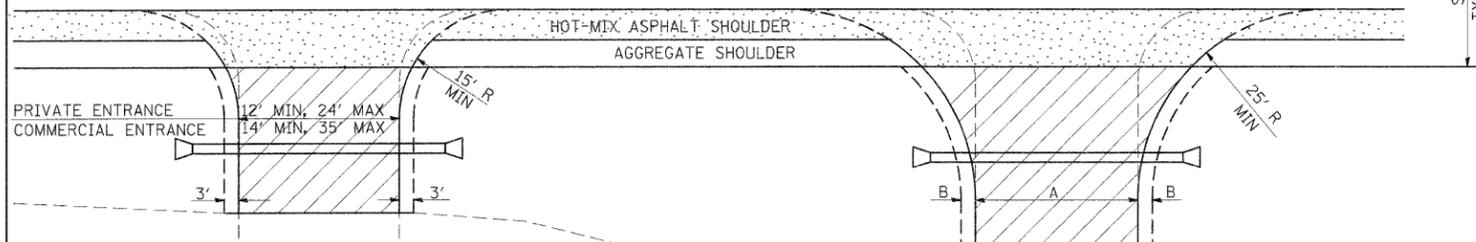
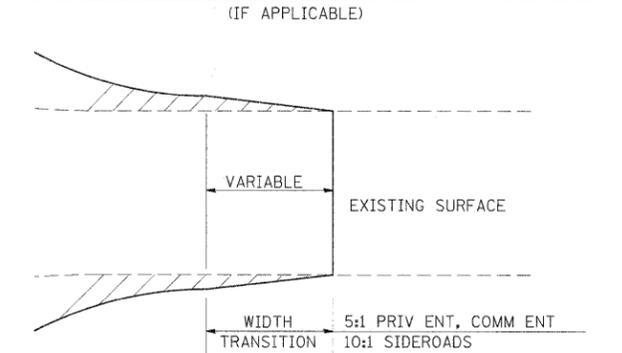
| ADT | A (FT) | B (FT) |
|------------------|--------|--------|
| 0 TO 250 | 18' | 2' |
| 250 TO 400 | 20' | 2' |
| GREATER THAN 400 | 22' | 4' |

FIELD ENTRANCE TREATMENT

CONSTRUCT MAINLINE HOT-MIX ASPHALT AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.

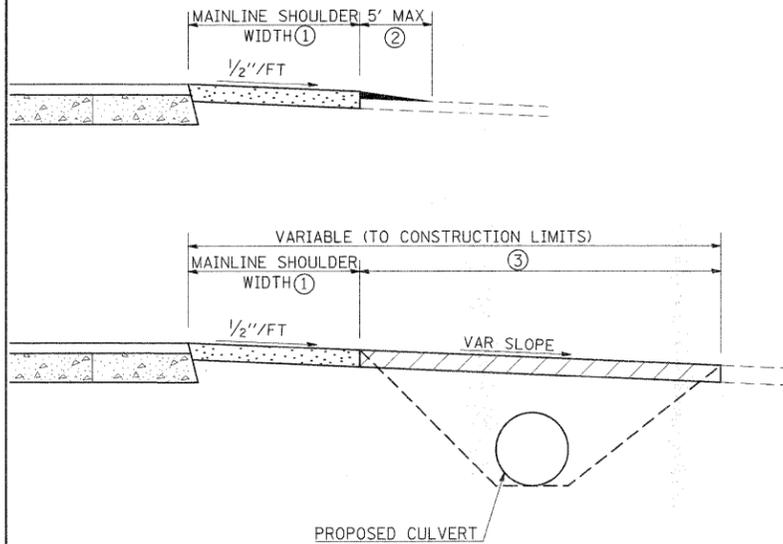
IF A PIPE IS REQUIRED, PROVIDE A 22' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

WIDTH TRANSITION DETAIL TO EXISTING



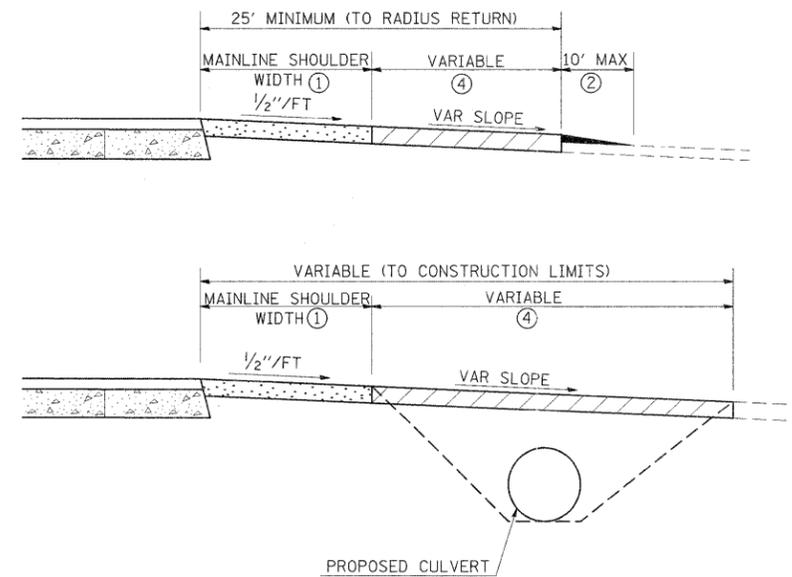
PRIVATE AND COMMERCIAL ENTRANCES (PROPOSED CULVERT)

PRIVATE AND COMMERCIAL ENTRANCES

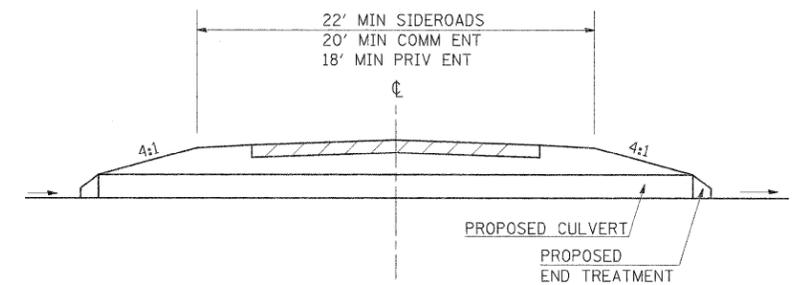


SIDEROADS (PROPOSED CULVERT)

SIDEROADS



DETAIL FOR CALCULATING CULVERT LENGTH



LEGEND

- CONSTRUCT HOT-MIX ASPHALT SHOULDER "FULL SHOULDER WIDTH" THROUGH ENTRANCE/INTERSECTION UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- IF REQUIRED, AGGREGATE TAPER FOR EXISTING GRAVEL SURFACE; HOT-MIX ASPHALT TAPER FOR EXISTING HIGHER TYPE SURFACES.
- 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" HOT-MIX ASPHALT RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING HOT-MIX ASPHALT SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- 3" MINIMUM HOT-MIX ASPHALT RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

GENERAL NOTES

- ENTRANCE LOCATIONS ARE TO COMPLY WITH IDOT'S POLICY "ACCESS TO STATE HIGHWAYS".
- IN GENERAL, RELOCATED PRIVATE ENTRANCES ARE TO HAVE A 16' WIDE SURFACE WITH 3' WIDE SHOULDERS (22' WIDE EMBANKMENT).
- SEE PLANS FOR PROPOSED PROFILE GRADES AT ENTRANCES/SIDEROADS. THE DESIRABLE MAXIMUM PROFILE GRADE FOR ENTRANCES ARE 12% FOR PE; 10% FOR CE.
- ENTRANCE PIPE CULVERTS ARE TO BE A MINIMUM 15" DIAMETER AND NORMALLY REPLACED IN KIND; SIDEROAD PIPE CULVERTS ARE GENERALLY TO BE CONCRETE (18" MINIMUM DIAMETER).
- THE INTERSECTION RADII OF SIDEROADS CONSTRUCTED TO FULL POLICY STANDARDS SHOULD COMPLY WITH THAT NOTED IN THE BUREAU OF LOCAL ROADS ADMINISTRATIVE POLICIES MANUAL (5-8-13).

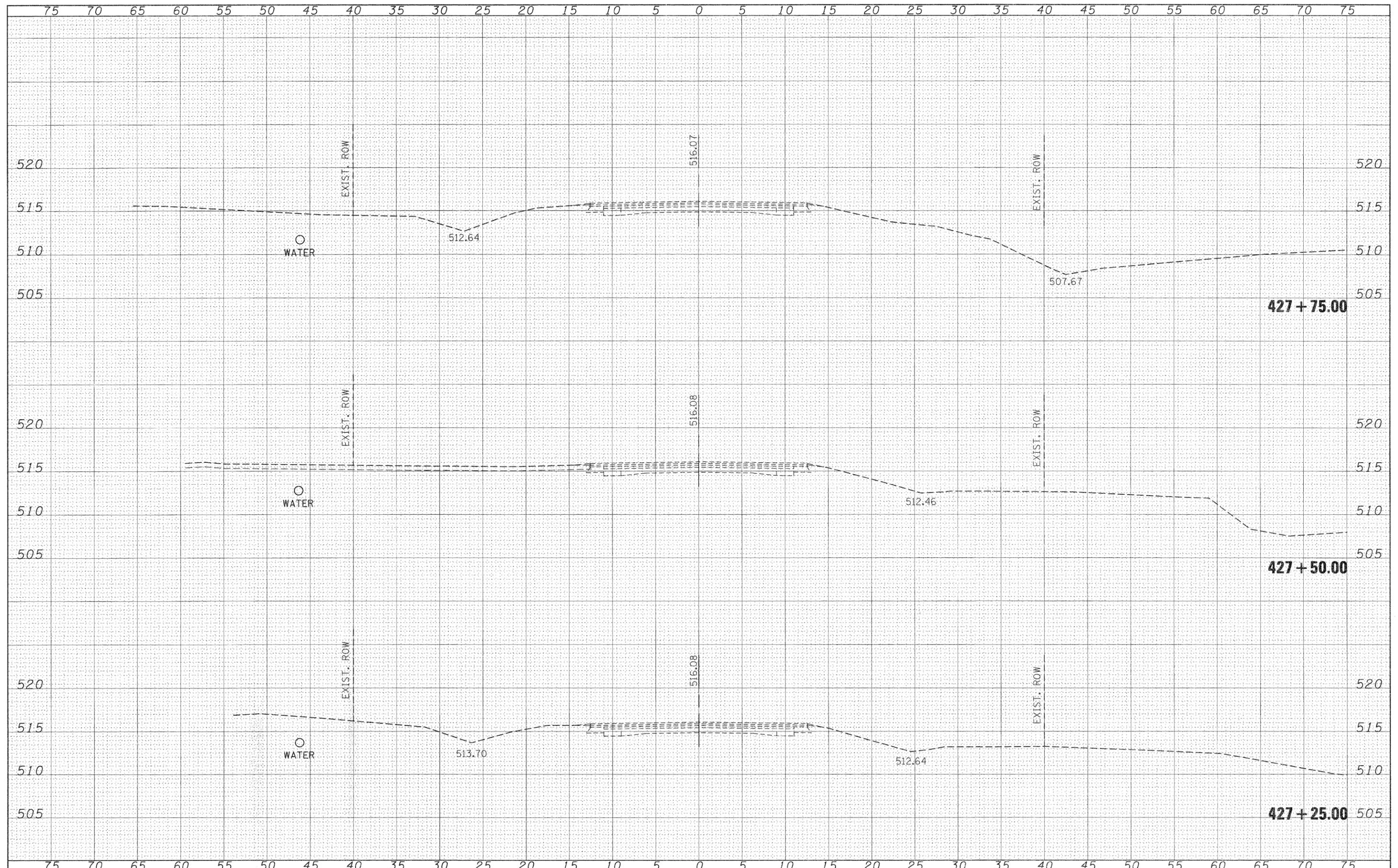
| REVISIONS | |
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| DRAWN | 3-15-91 |
| REVISED | 10-02-91 |
| REVISED | 5-15-92 |
| REVISED | 1-20-00 |
| REVISED | 01-11-07 |
| RESIZED | 5-7-08 |

STD. 9-83

| | | | | | | | | | | | |
|---|----------------------|------------|-----------|---|-----------|---------------------------|---------|--------|--------------|-----------|--|
| FILE NAME = | USER NAME = portercw | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STANDARDS | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| c:\pwork\pudot\portercw\dms49697\d978091.sht_MISC.dgn | | DRAWN - | REVISED - | | | 103 | 102B-1 | PERRY | 18 | 13 | |
| PLOT SCALE = 50.0000' / IN. | | CHECKED - | REVISED - | | | CONTRACT NO. 78091 | | | | | |
| PLOT DATE = 3/22/2011 | | DATE - | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | |

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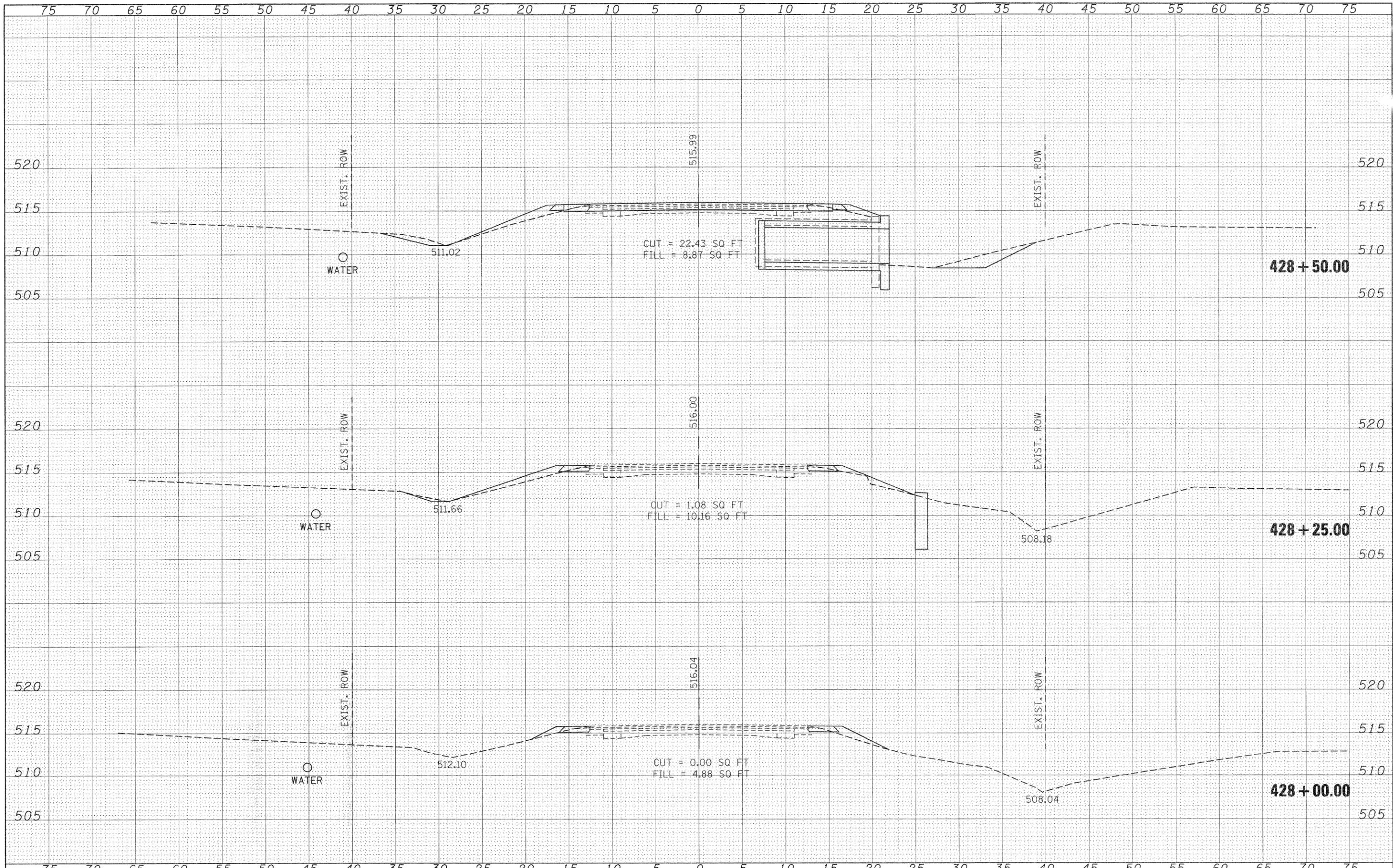
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| ORIGINAL SURVEY | |
| DESIGNED | |
| PLOTTED | |
| TEMPLATE | |
| NOTE BOOK | |
| AREAS CHECKED | |
| NO. | |



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| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL 13 OVER UNNAMED STREAM CROSS SECTIONS | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| c:\pw\work\pwsdot\porterc\dms49697\d978091_sht_073-7073_x.s.dgn | DRAWN - | REVISED - | 103 | | | 102B-1 | PERRY | 18 | 14 | |
| PLOT SCALE = 5,0002' / IN. | CHECKED - | REVISED - | CONTRACT NO. 78091 | | | | | | | |
| PLOT DATE = 3/22/2011 | DATE - | REVISED - | ILLINOIS FED. AID PROJECT | | | | | | | |
| | | | | | SCALE: 1"=5' | SHEET NO. | OF | SHEETS | STA. 427+25.0000 TO STA. 427+75.0000 | |

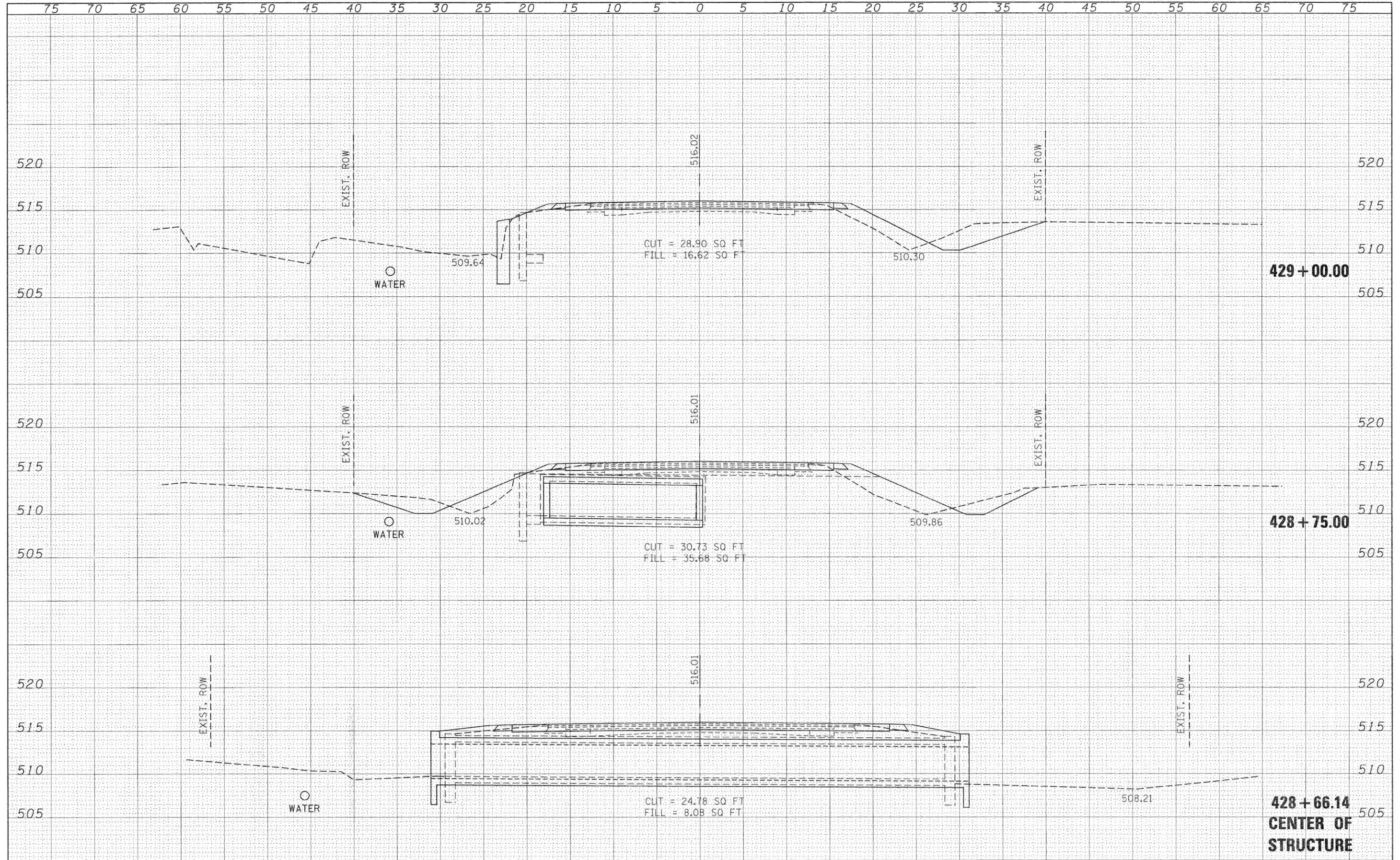
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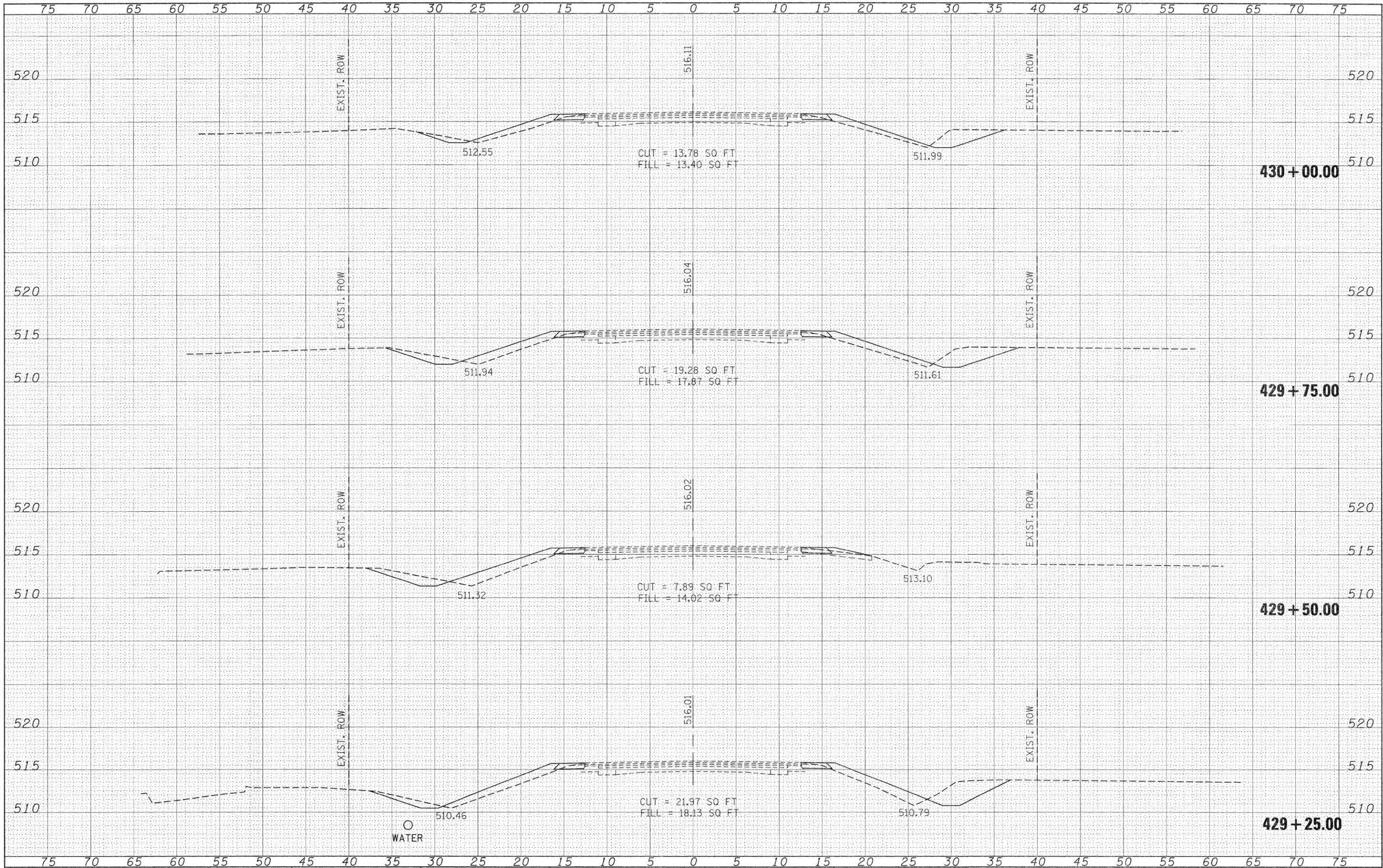
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| NO. | |



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| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL 13 OVER UNNAMED STREAM CROSS SECTIONS | | | F.A.P. RTE. 103 | SECTION 102B-1 | COUNTY PERRY | TOTAL SHEETS 18 | SHEET NO. 16 |
| at\pw_wor\p\wdot\porterc\dms49697\d978091.sh | 873-7073_xs.dgn | DRAWN - | REVISED - | | SCALE: 1"=5' | SHEET NO. OF | SHEETS | STA. 428+66.1444 TO STA. 429+00.0000 | CONTRACT NO. 78091 | | | |
| | | CHECKED - | REVISED - | | [ILLINOIS] FED. AID PROJECT | | | | | | | |
| | | DATE - | REVISED - | | | | | | | | | |

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| DATE | |
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| REVISIONS | |
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| DESCRIPTION | |
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| DESCRIPTION | |



FILE NAME = c:\pwork\pwork\porterc\dm49697\d978091.shp_073-7073.vsd.dgn

USER NAME = porterc
 PLOT SCALE = 5.0002' / IN.
 PLOT DATE = 3/22/2011

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
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 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL 13 OVER UNNAMED STREAM
 CROSS SECTIONS**

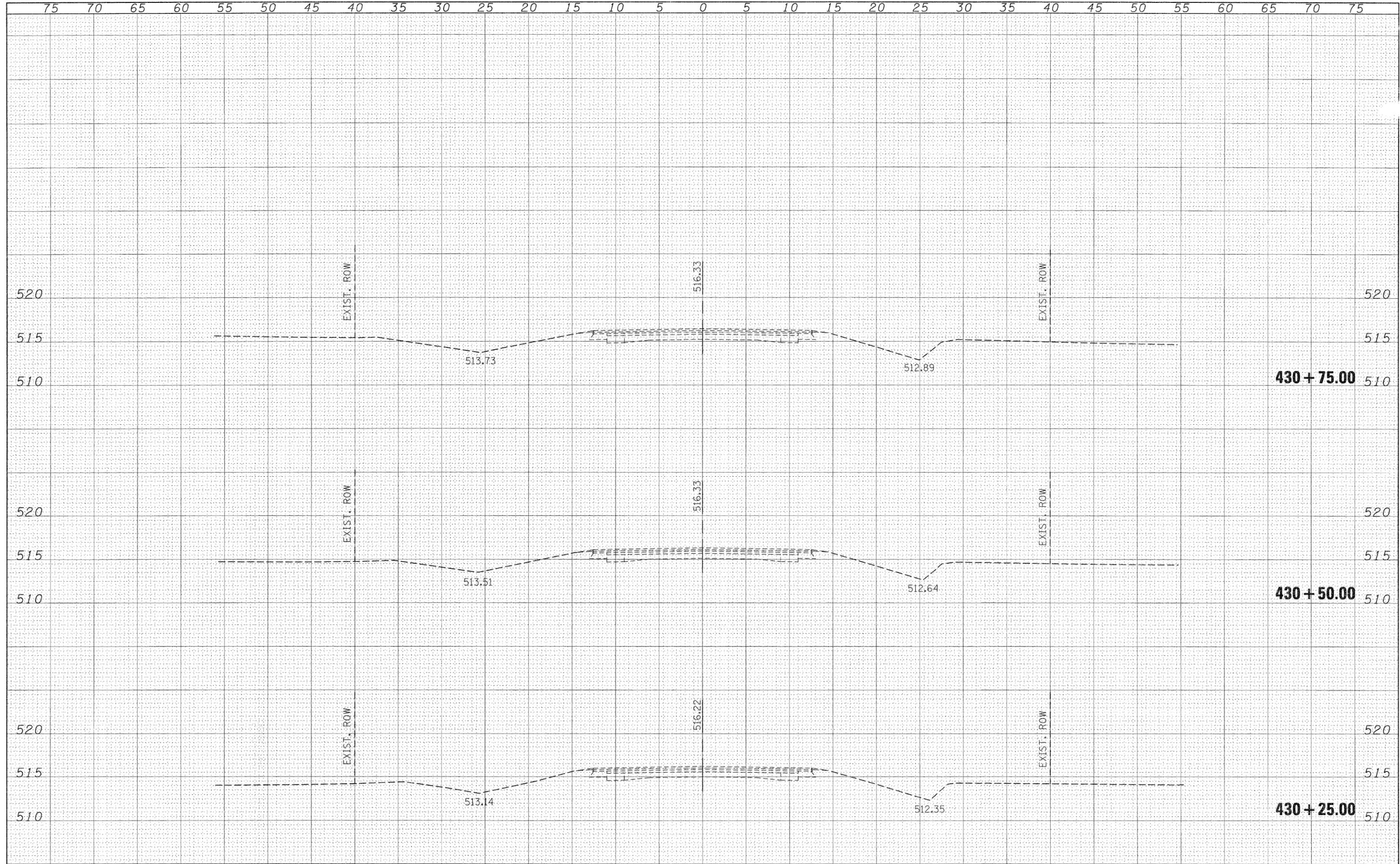
SCALE: 1"=5' SHEET NO. OF SHEETS STA. 429+25.0000 TO STA. 430+00.0000

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|--------|--------------|-----------|
| 103 | 102B-1 | PERRY | 18 | 17 |

CONTRACT NO. 78091
 ILLINOIS FED. AID PROJECT

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

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



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| FILE NAME = | USER NAME = porterc | DESIGNED - | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | IL 13 OVER UNNAMED STREAM CROSS SECTIONS | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| c:\pwork\pwork\porterc\dms49697\d978891.sh | _073-7073_x.sxdgn | DRAWN - | REVISED - | | | | | 103 | 102B-1 | PERRY | 18 | 18 |
| | PLOT SCALE = 5.0000' / IN. | CHECKED - | REVISED - | | SCALE: 1"=5' | | | SHEET NO. | OF | SHEETS | STA. 430+25.0000 TO STA. 430+75.0000 | CONTRACT NO. 78091 |
| | PLOT DATE = 3/22/2011 | DATE - | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |