06-15-12 LETTING ITEM 223

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR-176	05-15103-00-BR	KNOX	97	1
	05-15106-01-BR ILLINOIS	CONTRACT NO.	89429	

INDEX OF SHEETS

LIST OF STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
515001-03	NAME PLATES FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
630001-10	STEEL PLATE BEAM GUARDRAIL
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT OF WAY MARKERS
701001-02	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701901-02	TRAFFIC CONTROL DEVICES
720006-03	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
729001-01	APPLICATIONS OF TYPES A&B METAL POSTS (FOR SIGNS & MARKERS)
B.L.R. 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
B.L.R. 23-4	TRAFFIC BARRIER TERMINAL TYPE 1
B.L.R. 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

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

0 5' 10' 15' — 1"= 5'

0 10' 20' 30' — 1"= 10'

0 50' 100' — 1"= 40'

50' 100' — 1"= 20'

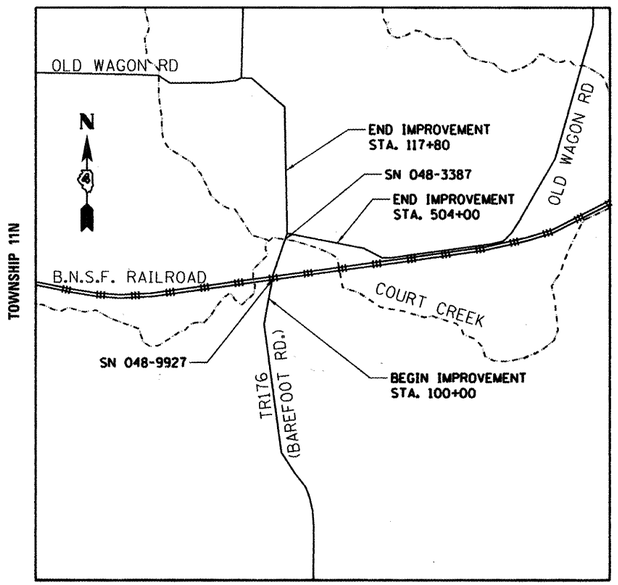
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CAT* 033323-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED BRIDGE REPLACEMENT

BAREFOOT ROAD (TR-176)
KNOX COUNTY AND PERSIFER ROAD DISTRICT
SECTION 05-15103-00-BR & 05-15106-01-BR
PROJECT NO. BROS-0095 (128)
JOB NO. C-94-128-06



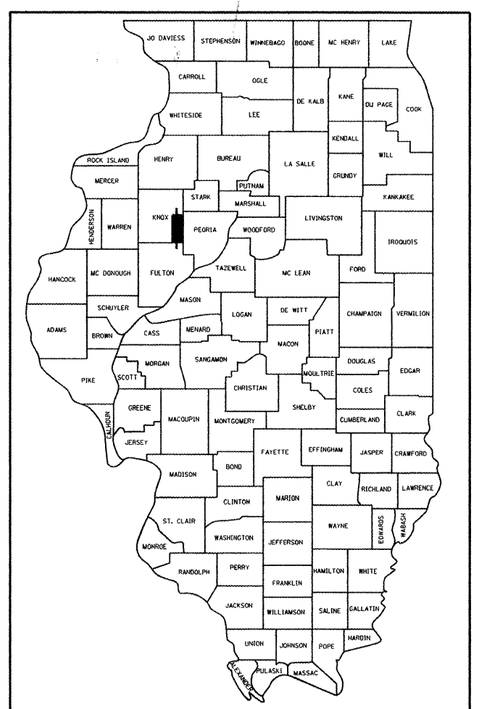
RANGE 3E

GROSS LENGTH = 2165.00 FT. = 0.41 MILE
NET LENGTH = 2165.00 FT. = 0.41 MILE

ADT (2011) = 175, SU/MU=6%
HIGHWAY CLASS: IV
FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
DESIGN POLICY: BLR MANUAL

VARIANCES GRANTED: ENTRANCE ON EAST SIDE OF TR 176 HAS A GRADE OF 20% INSTEAD OF THE BLR MAXIMUM OF 15% TO LIMIT PROJECT IMPACTS.

COMMITMENTS: PRIOR TO STARTING CONSTRUCTION LOCAL EMERGENCY, SCHOOL AND POSTAL SERVICES WILL BE CONTACTED ABOUT THE CHANGES IN TRAVEL PATTERNS.



LOCATION OF SECTION INDICATED THUS: –

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LICENSED PROFESSIONAL ENGINEER — LUCINDA A. LOOS — 062-056268 — STATE OF ILLINOIS

DATE SIGNED : 12/12/2011

LIC. EXP. DATE : 11/30/2013

DATE: 12/06/11

HANSON
Hanson Professional Services Inc.
7625 N. University St., Suite 200
Peoria, Illinois 61614
Offices Nationwide

APPROVED 12/20 20 11
William Kell SPE
PERSIFER ROAD DISTRICT COMMISSIONER

APPROVED 12/20 20 11
Duane J. Ratermann
COUNTY ENGINEER

PASSED 01/05 20 12
DISTRICT FOUR ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review January 5 20 12
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

1. THE CONSTRUCTION SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", CURRENT EDITION.
2. ALL REFERENCES TO THE "DEPARTMENT" OR "ENGINEER" IN THE I.D.O.T. STANDARD SPECIFICATIONS SHALL BE CONSTRUED TO MEAN THE OWNER OR HIS AGENT.
3. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
6. ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
7. ALL THE ELEVATIONS, STATIONS, AND OFFSETS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
8. ALL PAVEMENT REMOVALS SHALL BE FULL DEPTH SAW CUT AT THE LIMITS TO BE REMOVED. THE COST OF THE SAW CUT IS INCLUDED IN PAVEMENT REMOVAL.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
10. EXCESS MATERIAL, IF NOT USED FOR OTHER ON-SITE PURPOSES, SHALL BE HAULED OFF-SITE AT CONTRACTOR'S EXPENSE.
11. THE WORK AREA SHALL BE POSITIVELY DRAINED DURING CONSTRUCTION. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
12. THE OWNER RESERVES THE RIGHT TO REDUCE ANY QUANTITY OR DELETE PAY ITEMS FROM THIS CONTRACT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
13. APPLICATION RATES:
    NUTRIENTS: 90 LB/ACRE
14. THE CONTRACTOR SHALL USE ANY ON SITE MATERIAL DEEMED SUITABLE BY THE ENGINEER BEFORE ANY NEW FILL IS HAULED TO THE SITE.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
16. CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE BEFORE BIDDING.
17. COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.
18. ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS
    THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.

UTILITIES

CORN BELT ENERGY
1702 W. PERU STREET
PRINCETON, IL 61356-8826
ATTN: IAN CARDOSI
800.879.0339 X304

BUCKEYE PIPE LINE
3670 S HADDEN ROAD
MAZON, IL 60444
ATTN: GREG RAMSEY
CELL: 815-651-9472
OFFICE: 815-448-2491

CENTURY LINK
416 MARGARET STREET
PEKIN, IL 61554
ATTN: DARRELL SCHMIDT
309.477.0255

LEGEND

EXISTING MANHOLE	GAS
CONTROL POINT	TELEPHONE
EXISTING TELEPHONE PEDESTAL	CABLE TELEVISION
EXISTING GUY	FIBER OPTIC
EXISTING POWER POLE	WATER
EXISTING CULVERT	PIPE CULVERT
EXISTING SIGN	OVERHEAD ELECTRIC
EXISTING TREE	FENCE
EXISTING R.O.W. MARKER	SECTION LINE
PROPOSED SIGN	PROPERTY LINE
	PROPOSED R.O.W.
	EXISTING R.O.W.
	PERMANENT EASEMENT
	TEMPORARY EASEMENT
	EXISTING TREE LINE

UTILITY NOTE

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

FILE NAME = c:\pwise_work\do_not_delete\dms27369\c-802gen.dgn	USER NAME = dawso00878	DESIGNED	MGD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND LEGEND			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN	DLC	REVISED -					TR176	05-15103-00-BR	KNOX	97	2
	PLOT SCALE = 10.0000 ' / in.	CHECKED	CAL	REVISED -						05-15106-01-BR	CONTRACT NO. 89429		
	PLOT DATE = 12\23\2011	DATE	12/6/11	REVISED -		SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.		ILLINOIS	FED. AID PROJECT BROS 0095 (128)		

PAY ITEM #	DESCRIPTION	UNIT	TOTAL	05-15103-00-BR	05-15106-01-BR
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	1634	710	924
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	225	91	134
20200100	EARTH EXCAVATION	CU YD	10491	1996	8495
20400800	FURNISHED EXCAVATION	CU YD	15057	5044	10013
20800150	TRENCH BACKFILL	CU YD	178	74	104
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	16330	5348	10982
25000210	SEEDING, CLASS 2A	ACRE	2.25	0.70	1.55
25000305	SEEDING, CLASS 3A	ACRE	1.25	0.42	0.83
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	315	101	214
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	315	101	214
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	315	101	214
25100115	MULCH, METHOD 2	ACRE	2.25	0.70	1.55
25100630	EROSION CONTROL BLANKET	SQ YD	6427	2414	4013
25100900	TURF REINFORCEMENT MAT	SQ YD	1379	353	1026
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	339	111	228
28000305	TEMPORARY DITCH CHECKS	FOOT	1201.5	553.5	648
28000400	PERIMETER EROSION BARRIER	FOOT	2063	827	1236
28000500	INLET AND PIPE PROTECTION	EACH	5	1	4
28100105	STONE RIPRAP, CLASS A3	SQ YD	58	58	0
28100107	STONE RIPRAP, CLASS A4	SQ YD	938	0	938
28100125	STONE RIPRAP, CLASS B3	SQ YD	9	9	0
28200200	FILTER FABRIC	SQ YD	1062	124	938
35100100	AGGREGATE BASE COURSE, TYPE A	TON	2588	863	1725
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	140	0	140
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	8	0	8
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	41	41	0
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	33	33	0
44000100	PAVEMENT REMOVAL	SQ YD	3778	1311	2467
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	1106	375	731
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	0	1
50105220	PIPE CULVERT REMOVAL	FOOT	151	62	89
50200100	STRUCTURE EXCAVATION	CU YD	390	191	199
50300225	CONCRETE STRUCTURES	CU YD	223.6	170.9	52.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	205.3	10.4	194.9
50300260	BRIDGE DECK GROOVING	SQ YD	269	0	269
50300280	CONCRETE ENCASEMENT	CU YD	6.8	3.4	3.4
50300300	PROTECTIVE COAT	SQ YD	369	69	300
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	4010	4010	0
50400735	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BULB T-BEAMS 63"	FOOT	436	0	436
50800105	REINFORCEMENT BARS	POUND	14020	14020	0

PAY ITEM #	DESCRIPTION	UNIT	TOTAL	05-15103-00-BR	05-15106-01-BR
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	69890	23800	46090
50800515	BAR SPLICERS	EACH	50	0	50
△ 50900205	STEEL RAILING, TYPE S1	FOOT	265	0	265
△ 50900305	STEEL RAILING, TYPE T1	FOOT	339	339	0
51100100	SLOPE WALL 4 INCH	SQ YD	27	27	0
51201600	FURNISHING STEEL PILES HP 12X53	FOOT	284	284	0
51201610	FURNISHING STEEL PILES HP 12X63	FOOT	416	0	416
51202305	DRIVING PILES	FOOT	700	284	416
51203600	TEST PILE STEEL HP 12X53	EACH	2	2	0
51203610	TEST PILE STEEL HP 12X63	EACH	2	0	2
51204650	PILE SHOES	EACH	20	10	10
51500100	NAME PLATES	EACH	2	1	1
51603000	DRILLED SHAFT IN SOIL	CU YD	43.6	43.6	0
51604000	DRILLED SHAFT IN ROCK	CU YD	36.3	36.3	0
542C1060	PIPE CULVERTS, CLASS C, TYPE 2 15"	FOOT	24	0	24
542C1069	PIPE CULVERTS, CLASS C, TYPE 2 24"	FOOT	50	0	50
542C1909	PIPE CULVERTS, CLASS C, TYPE 3 24"	FOOT	157	0	157
542C3370	PIPE CULVERTS, CLASS C, TYPE 5 15"	FOOT	111.5	111.5	0
54213450	END SECTIONS 15"	EACH	4	2	2
54213459	END SECTIONS 24"	EACH	4	0	4
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	409	409	0
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1171	1171	0
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	92	0	92
60240301	INLETS, TYPE B, TYPE 8 GRATE	EACH	1	0	1
△ 63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	1175	425	750
△ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	8	4	4
△ 63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	137.5	0	137.5
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	23	7	16
△ 78200410	GUARDRAIL MARKERS, TYPE A	EACH	24	7	17
△ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	6	2	4
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	89	0	89
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.5	0.5
XX000856	MAILBOX REMOVAL AND RELOCATION	EACH	1	0	1
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	42	0	42
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5
Z0022800	FENCE REMOVAL	FOOT	2703	808	1895
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	132	0	132
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1	0
Z0065704	BITUMINOUS COATED AGGREGATE SLOPEWALL 6"	SQ YD	348	348	0
67100100	MOBILIZATION	L SUM	1	0.5	0.5
△ LR631020	TRAFFIC BARRIER TERMINAL TYPE 1	EACH	6	2	4

△ SPECIALTY ITEMS

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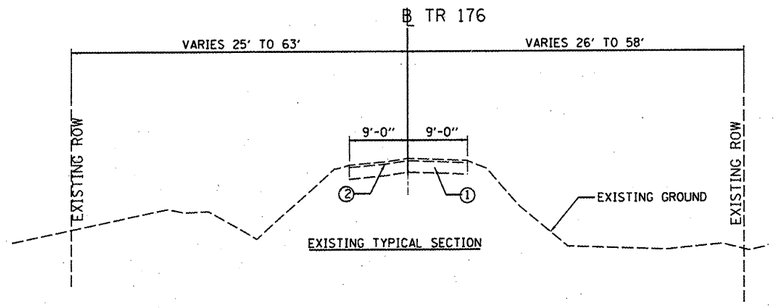
	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

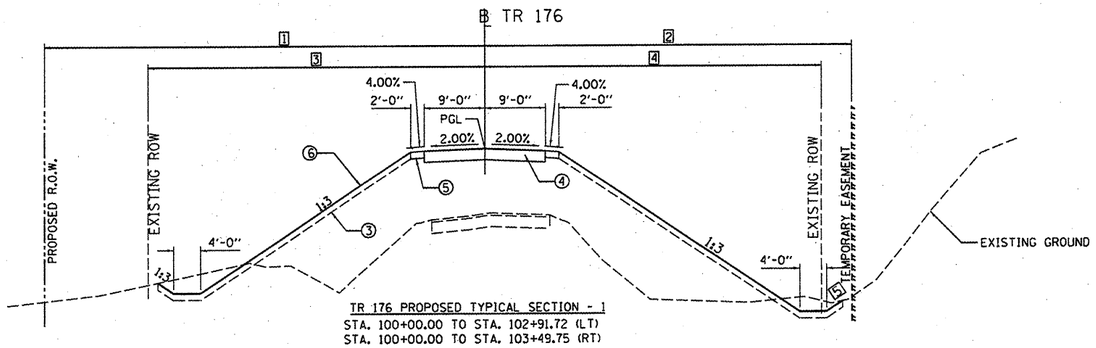
SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	3
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



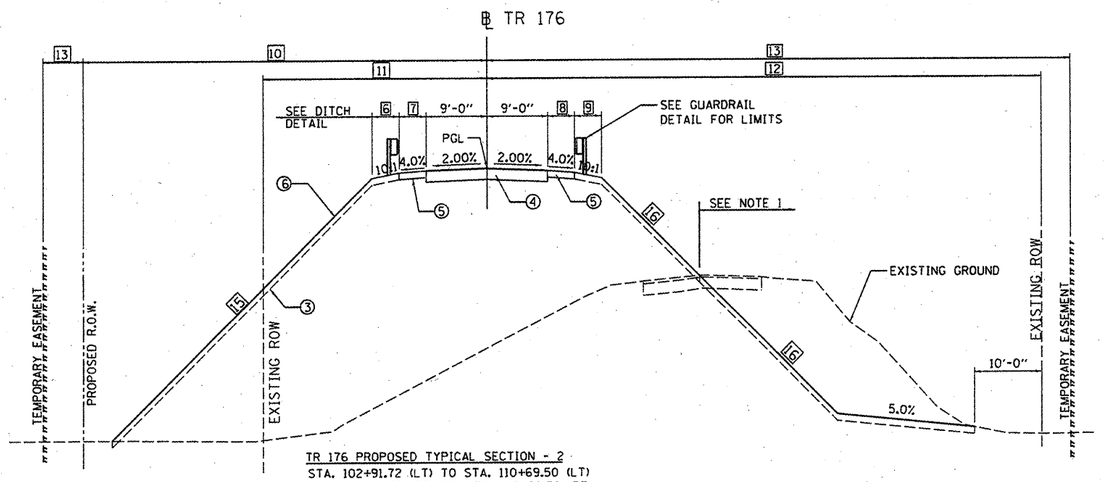
EXISTING TYPICAL SECTION



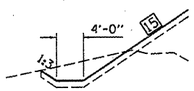
TR 176 PROPOSED TYPICAL SECTION - 1
STA. 100+00.00 TO STA. 102+91.72 (LT)
STA. 100+00.00 TO STA. 103+49.75 (RT)

LEGEND

① EXISTING 10" GRAVEL
② EXISTING 2" TAR AND CHIP
③ PROPOSED FURNISH AND PLACE TOPSOIL, 4"
④ PROPOSED AGGREGATE BASE COURSE, TYPE A, 12"
⑤ PROPOSED AGGREGATE SHOULDER, TYPE A, 6"
⑥ PROPOSED SEEDING CLASS, 2A (SLOPES ≤ 1:3) OR SEEDING CLASS, 3A (SLOPES > 1:3) PROPOSED MULCH METHOD 2 (BOTH SEEDING CLASSES)



TR 176 PROPOSED TYPICAL SECTION - 2
STA. 102+91.72 (LT) TO STA. 110+69.50 (LT)
STA. 103+49.75 (RT) TO STA. 110+69.50 (RT)



DITCH DETAIL
STA. 102+91.71 TO
STA. 104+22.97

BRIDGE OMMISSION
STA. 104+62.34 (LT) TO STA. 106+32.68 (LT)
STA. 104+70.38 (RT) TO STA. 106+39.71 (RT)

NOTES:
1. REMOVE EXISTING ROADWAY EMBANKMENT STA. 108+00.00 TO STA. 110+69.50 (SEE CROSS SECTIONS FOR ADDITIONAL DETAILS)

1 PROPOSED R.O.W. (LEFT)
STA. 100+00.00 TO STA. 101+50.00 = 0'-0"
STA. 101+50.00 = TRANSITION FROM 0'-0" TO 50'-0"
STA. 102+75.00 TO STA. 102+91.72 = TRANSITION FROM 50'-0" TO 75'-6"

2 TEMPORARY EASEMENT (RIGHT)
STA. 100+00.00 TO STA. 103+00.00 = 0'-0"
STA. 103+00.00 TO STA. 103+49.75 = 65'-0"

3 EXISTING R.O.W. (LEFT)
STA. 100+00.00 TO STA. 102+91.72 = TRANSITION FROM 27'-10" TO 38'-0

4 EXISTING R.O.W. (RIGHT)
STA. 100+00.00 TO STA. 101+30.17 = TRANSITION FROM 47'-10" TO 59'-0
STA. 101+30.17 TO STA. 103+49.75 = TRANSITION FROM 59'-0" TO 58'-5"

5 DITCH SLOPES (RIGHT)
STA. 100+00.00 TO STA. 101+50.00 = 1:2
STA. 101+50.00 TO STA. 102+00.00 = TRANSITION FROM 1:2 TO 1:3
STA. 102+00.00 TO STA. 103+49.75 = 1:3

6 GUARDRAIL WIDENING (LEFT)
STA. 102+91.72 TO STA. 103+12.34 = TRANSITION FROM 0'-0" TO 10'-9"
STA. 103+12.34 TO STA. 103+37.34 = TRANSITION FROM 10'-9" TO 10'-4"
STA. 103+37.34 TO STA. 103+62.34 = TRANSITION FROM 10'-4" TO 4'-0"
STA. 103+62.34 TO STA. 104+62.34 = 4'-0"
STA. 106+32.68 TO STA. 110+69.50 = 4'-0"

7 SHOULDER WIDTH (LEFT)
STA. 102+91.72 TO STA. 103+62.34 = TRANSITION FROM 2'-0" TO 3'-0"
STA. 103+62.34 TO STA. 104+62.34 = 3'-0"
STA. 106+32.68 TO STA. 106+56.67 = TRANSITION FROM 3'-0" TO 4'-0"
STA. 106+56.67 TO STA. 110+07.00 = 4'-0"
STA. 110+07.00 TO STA. 110+32.00 = TRANSITION FROM 4'-0" TO 3'-0"
STA. 110+32.00 TO STA. 110+69.50 = 3'-0"

8 SHOULDER WIDTH (RIGHT)
STA. 103+49.75 TO STA. 104+20.37 = TRANSITION FROM 2'-0" TO 3'-0"
STA. 104+20.37 TO STA. 104+70.38 = 3'-0"
STA. 106+39.71 TO STA. 106+64.69 = TRANSITION FROM 3'-0" TO 4'-0"
STA. 106+64.69 TO STA. 110+07.00 = 4'-0"
STA. 110+07.00 TO STA. 110+32.00 = TRANSITION FROM 4'-0" TO 3'-0"
STA. 110+32.00 TO STA. 110+69.50 = 3'-0"

9 GUARDRAIL WIDENING (RIGHT)
STA. 103+49.75 TO STA. 103+70.38 = TRANSITION FORM 0'-0" TO 10'-9"
STA. 103+70.38 TO STA. 103+95.37 = TRANSITION FROM 10'-9" TO 10'-4"
STA. 103+95.37 TO STA. 104+20.37 = TRANSITION FROM 10'-4" TO 4'-0"
STA. 104+20.37 TO STA. 104+70.38 = 4'-0"
STA. 106+39.71 TO STA. 10+69.50 = 4'-0"

10 PROPOSED R.O.W. (LEFT)
STA. 102+91.72 TO STA. 104+00.00 = TRANSITION FROM 75'-6" TO 95'-0"
STA. 104+00.00 TO STA. 104+62.34 = 95'-0"
STA. 106+32.68 TO STA. 107+00.00 = 90'-0"
STA. 107+00.00 TO STA. 109+30.00 = TRANSITION FROM 90'-0" TO 60'-0"
STA. 109+30.00 TO STA. 110+69.50 = 60'-0"

11 EXISTING R.O.W. (LEFT)
STA. 102+91.72 TO STA. 104+62.34 = TRANSITION FROM 38'-0" TO 41'-10"
STA. 106+32.68 TO STA. 106+74.46 = TRANSITION FROM 58'-2" TO 52'-9"
STA. 106+74.46 TO STA. 107+72.75 = TRANSITION FROM 52'-9" TO 33'-1"
STA. 107+72.75 TO STA. 108+70.28 = TRANSITION FROM 33'-1" TO 7'-5"
STA. 108+70.28 TO STA. 109+68.57 = TRANSITION FROM 7'-5" TO 12'-3" (RIGHT)
STA. 109+68.57 TO STA. 110+69.50 = TRANSITION FROM 12'-3" (RIGHT) TO 25'-2" (RIGHT)

12 EXISTING R.O.W. (RIGHT)
STA. 103+49.75 TO STA. 104+70.38 = TRANSITION FROM 58'-5" TO 58'-3"
STA. 106+39.71 TO SAT. 109+69.95 = TRANSITION FROM 49'-6" TO 74'-10"
STA. 109+69.95 TO SAT. 110+69.50 = TRANSITION FROM 74'-10" TO 102'-3"

13 TEMPORARY EASEMENT (RIGHT)
STA. 103+49.75 TO STA. 104+70.38 = 65'-0"
STA. 106+39.71 TO STA. 107+00.00 = TRANSITION 66'-2" TO 70'-0"
STA. 107+00.00 TO STA. 110+00.00 = TRANSITION FROM 70'-0" TO 109'-0"
STA. 110+00.00 TO STA. 110+69.50 = 0'-0"

14 TEMPORARY EASEMENT (LEFT)
STA. 102+91.72 TO STA. 104+62.34 = 0'-0"
STA. 106+32.68 TO STA. 108+55.00 = 0'-0"
STA. 108+55.00 TO STA. 110+30.00 = 10'-0"
STA. 110+30.00 TO STA. 110+69.50 = 0'-0"

15 DITCH SLOPE (LEFT)
STA. 102+91.72 TO STA. 103+75.00 = 1:3
STA. 103+75.00 TO STA. 104+22.97 = TRANSITION FROM 1:3 TO 1:2
STA. 104+22.97 TO 110+69.50 = 1:2

16 DITCH SLOPE (RIGHT)
STA. 103+49.75 TO STA. 104+22.97 = 1:3
STA. 104+22.97 TO STA. 104+50.00 = TRANSITION FROM 1:3 TO 1:2
STA. 104+50.00 TO STA. 104+70.38 = 1:2
STA. 106+39.71 TO STA. 110+69.50 = 1:2

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
TYPICAL SECTIONS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

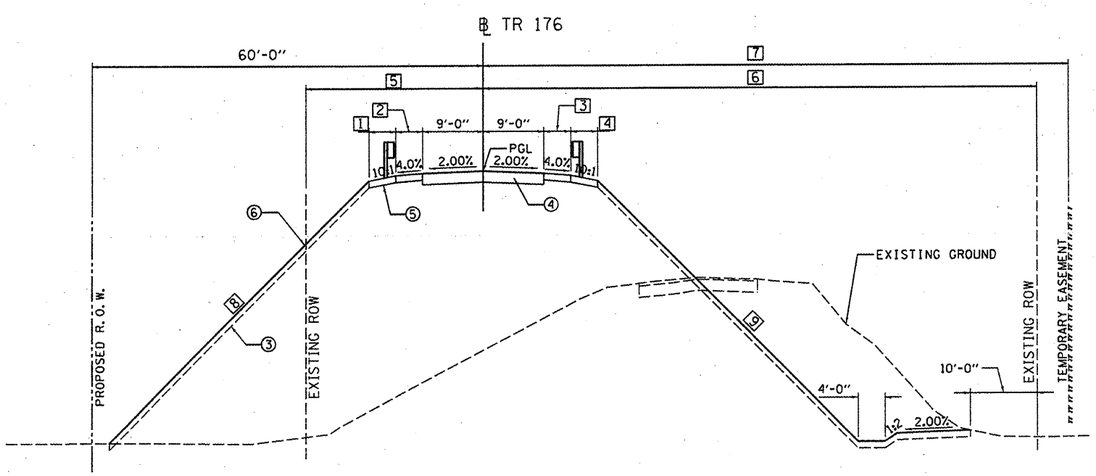
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	4
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

BRIDGE OMMISSION
STA. 110+69.50 TO STA. 111+79.50

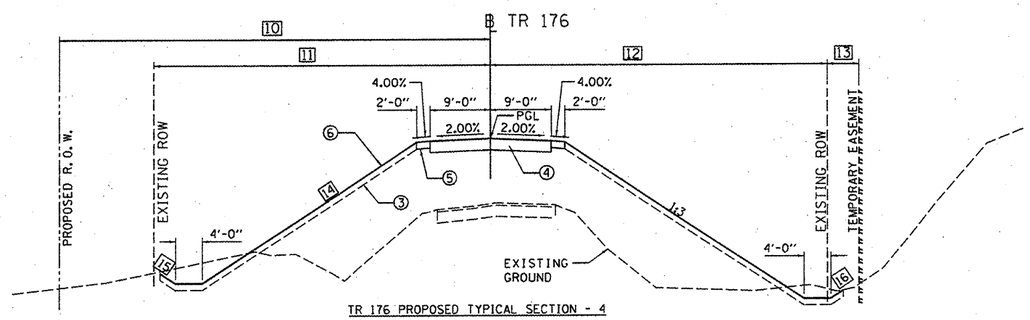
INTERSECTION OMMISSION (RT ONLY)
STA. 111+79.50 TO STA. 112+91.84

LEGEND

① EXISTING 10" GRAVEL
② EXISTING 2" TAR AND CHIP
③ PROPOSED FURNISH AND PLACE TOPSOIL, 4"
④ PROPOSED AGGREGATE BASE COURSE, TYPE A, 12"
⑤ PROPOSED AGGREGATE SHOULDER, TYPE A, 6"
⑥ PROPOSED SEEDING CLASS, 2A (SLOPES ≤ 1:3) OR SEEDING CLASS, 3A (SLOPES > 1:3)
PROPOSED MULCH METHOD 2 (BOTH SEEDING CLASSES)



TR 176 PROPOSED TYPICAL SECTION - 3
STA. 111+79.50 (LT) TO STA. 113+31.48 (LT)
STA. 112+91.84 (RT) TO STA. 114+57.13 (RT)



TR 176 PROPOSED TYPICAL SECTION - 4
STA. 113+31.48 (LT) TO STA. 117+80.00 (LT)
STA. 114+57.13 (RT) TO STA. 117+80.00 (RT)

[1] GUARDRAIL WIDENING (LEFT)
STA. 111+79.50 TO STA. 112+64.48 = 4'-0"
STA. 112+64.48 TO STA. 112+79.48 = TRANSITION FROM 4'-0" TO 10'-8"
STA. 112+79.48 TO STA. 113+04.48 = TRANSITION FROM 10'-8" TO 11'-4"
STA. 113+04.48 TO STA. 113+31.48 = TRANSITION FROM 11'-4" TO 0'-0"

[2] SHOULDER WIDTH (LEFT)
STA. 111+75.50 TO STA. 112+17.00 = 2'-0"
STA. 112+17.00 TO STA. 112+42.00 = TRANSITION FROM 2'-0" TO 4'-0"
STA. 112+42.00 TO STA. 112+54.48 = 4'-0"
STA. 112+54.48 TO STA. 113+31.48 = TRANSITION FROM 4'-0" TO 2'-0"
STA. 113+31.48 TO 117+80.00= 2'-0"

[3] SHOULDER WIDTH (RIGHT)
STA. 112+91.84 TO STA. 113+80.46 = 4'-0"
STA. 113+80.46 TO STA. 114+57.13 = TRANSITION FROM 4'-0" TO 2'-0"

[4] GUARDRAIL WIDENING (RIGHT)
STA. 112+90.85 TO STA. 113+90.52 = 4'-0"
STA. 113+90.52 TO STA. 114+05.37 = TRANSITION FROM 4'-0" TO 10'-11"
STA. 114+05.37 TO STA. 114+30.21 = TRANSITION FROM 10'-11" TO 11'-7"
STA. 114+30.21 TO STA. 114+57.13 = TRANSITION FROM 11'-7" TO 0'-0"

[5] EXISTING R.O.W. (LEFT)
STA. 111+79.50 TO STA. 111+91.74 = TRANSITION FROM 39'-4" (RIGHT) TO 40'-11" (RIGHT)
STA. 111+91.74 TO STA. 113+31.48 = TRANSITION FROM 40'-11" (RIGHT) TO 17'-0" (RIGHT)

[6] EXISTING R.O.W. (RIGHT)
STA. 112+91.84 TO STA. 114+38.17 = TRANSITION FROM 93'-4" TO 58'-1"
STA. 114+38.17 TO STA. 114+57.13 = TRANSITION FROM 58'-1" TO 55'-4"

[7] TEMPORARY EASEMENT (RIGHT)
STA. 112+91.84 TO STA. 112+94.33 = 0'-0"
STA. 112+94.33 TO STA. 114+57.13 = TRANSITION FROM 105'-0" TO 78'-4"

[8] FORESLOPE (LEFT)
STA. 111+79.50 TO STA. 112+00.00 = 1:2
STA. 112+00.00 TO STA. 112+50.00 = TRANSITION FROM 1:2 TO 1:3
STA. 112+50.00 TO STA. 113+31.48 = 1:3

[9] FORESLOPE (RIGHT)
STA. 112+91.84 TO STA. 113+00.00 = 1:2
STA. 113+00.00 TO STA. 113+50.00 = TRANSITION FROM 1:2 TO 1:2.5
STA. 113+50.00 TO STA. 114+00.00 = 1:2.5
STA. 114+00.00 TO STA. 114+30.35 = TRANSITION FROM 1:2.5 TO 1:3
STA. 114+30.35 TO STA. 114+57.13 = 1:3

[10] PROPOSED R.O.W. (LEFT)
STA. 113+31.48 TO STA. 114+00.00 = 60'-0"
STA. 114+00.00 TO STA. 116+25.00 = TRANSITION FROM 60'-0" TO 70'-0"
STA. 116+25.00 TO STA. 117+25.00 = TRANSITION FROM 70'-0" TO 31'-9"
STA. 117+25.00 TO STA. 117+80.00 = N/A

[11] EXISTING R.O.W. (LEFT)
STA. 103+31.48 TO STA. 113+52.19 = TRANSITION FROM 17'-0" (RIGHT) TO 13'-6" (RIGHT)
STA. 113+52.19 TO STA. 115+48.34 = TRANSITION FROM 13'-6" (RIGHT) TO 32'-4"
STA. 115+48.34 TO STA. 116+50.36 = TRANSITION FROM 34'-4" TO 34'-8"
STA. 116+50.36 TO STA. 117+80.00 = TRANSITION FROM 34'-8" TO 28'-2"

[12] EXISTING R.O.W. (RIGHT)
STA. 114+57.13 TO STA. 117+06.27 = TRANSITION FROM 55'-4" TO 37'-3"
STA. 117+06.27 TO 117+80.00 = 37'-3"

[13] TEMPORARY EASEMENT (RIGHT)
STA. 114+57.13 TO STA. 117+80.00 = TRANSITION FROM 78'-4" TO 60'-0"

[14] FORESLOPE (LEFT)
STA. 113+31.48 TO STA. 117+00.00 = 1:3
STA. 117+00.00 TO STA. 117+50.00 = TRANSITION FROM 1:3 TO 1:6
STA. 117+50.00 TO STA. 117+80.00 = 1:6

[15] BACKSLOPE (LEFT)
STA. 113+31.48 TO STA. 114+00.00 = 1:3
STA. 114+00.00 TO STA. 114+25.00 = TRANSITION FROM 1:3 TO 1:2
STA. 114+25.00 TO STA. 116+50.00 = 1:2
STA. 116+50.00 TO STA. 117+00.00 = TRANSITION FROM 1:2 TO 1:3

[16] BACKSLOPE (RIGHT)
STA. 114+57.13 TO STA. 115+50.00 = 1:3
STA. 115+50.00 TO STA. 116+00.00 = TRANSITION FROM 1:3 TO 1:2
STA. 116+00.00 TO STA. 117+50.00 = 1:2
STA. 117+50.00 TO STA. 117+80.00 = TRANSITION TO EXISTING

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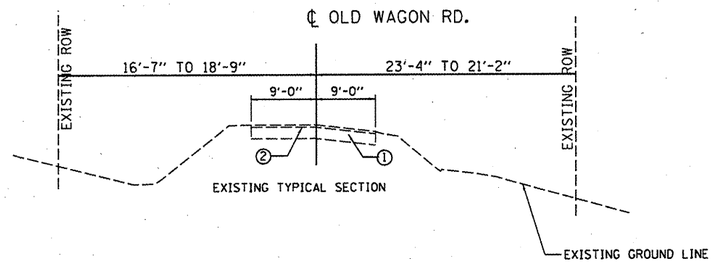
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

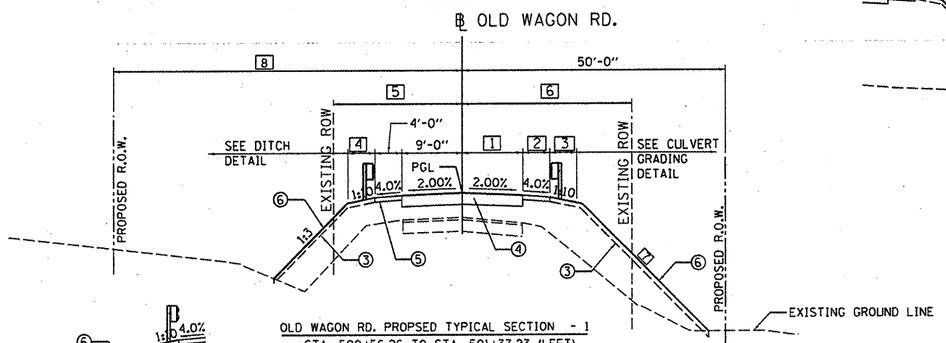
TR 176 (BAREFOOT ROAD)
TYPICAL SECTIONS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

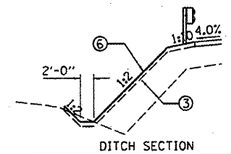
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	5
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



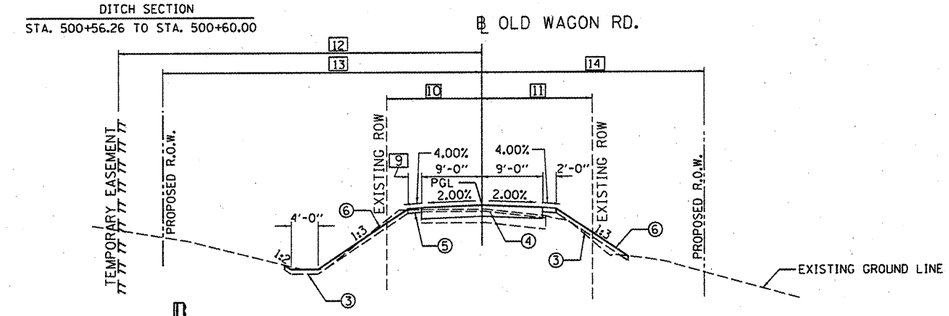
INTERSECTION OMMISSION
STA. 500+00.00 TO STA. 500+56.26



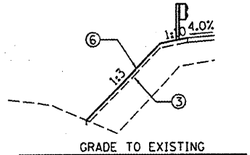
OLD WAGON RD. PROPSED TYPICAL SECTION - 1
STA. 500+56.26 TO STA. 501+37.23 (LEFT)
STA. 500+56.26 TO STA. 502+18.26 (RIGHT)



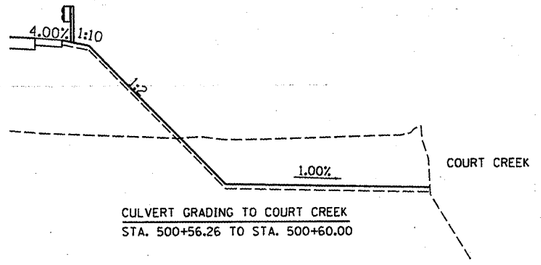
DITCH SECTION
STA. 500+56.26 TO STA. 500+60.00



OLD WAGON RD. PROPOSED TYPICAL SECTION - 2
STA. 501+37.23 TO STA. 504+00.00 (LEFT)
STA. 502+18.26 TO STA. 504+00.00 (RIGHT)



GRADE TO EXISTING
STA. 501+37.23 TO STA. 501+75.00



CULVERT GRADING TO COURT CREEK
STA. 500+56.26 TO STA. 500+60.00

LEGEND

① EXISTING 10" GRAVEL
② EXISTING 2" TAR AND CHIP
③ PROPOSED FURNISH AND PLACE TOPSOIL, 4"
④ PROPOSED AGGREGATE BASE COURSE, TYPE A, 12"
⑤ PROPOSED AGGREGATE SHOULDER, TYPE A, 6"
⑥ PROPOSED SEEDING CLASS, 2A (SLOPES ≤ 1:3) OR SEEDING CLASS, 3A (SLOPES > 1:3)
PROPOSED MULCH METHOD 2 (BOTH SEEDING CLASSES)

[1] LANE WIDTH (RIGHT)
STA. 500+56.26 TO SAT. 501+04.68 = TRANSITION FROM 13'-10" TO 9'-0"
STA. 501+04.68 TO STA. 502+18.26 = TRANSITION FROM 9'-0"

[2] SHOULDER WIDTH (RIGHT)
STA. 500+56.26 TO SAT. 501+41.26 = 4'-0"
STA. 501+41.26 TO STA. 502+48.26 = TRANSITION FROM 4'-0" TO 2'-0"

[3] GUARDRAIL WIDENING (RIGHT)
STA. 500+56.26 TO STA. 501+35.59 = 4'-0"
STA. 501+35.59 TO STA. 501+46.58 = TRANSITION FROM 4'-0" TO 4'-3"
STA. 501+46.58 TO STA. 501+61.58 = TRANSITION FROM 4'-3" TO 10'-8"
STA. 501+61.58 TO STA. 501+86.58 = TRANSITION FROM 10'-8" TO 11'-3"
STA. 501+86.58 TO STA. 502+13.58 = TRANSITION FROM 11'-3" TO 0'-0"

[4] GUARDRAIL WIDENING (LEFT)
STA. 500+56.26 TO STA. 500+60.23 = 4'-0"
STA. 501+51.26 TO STA. 501+37.23 = TRANSITION FROM 4'-0" TO 2'-0"

[5] EXISTING R.O.W. (LEFT)
STA. 501+03.48 TO STA. 501+37.23 = TRANSITION FROM 16'-7" TO 16'-10"

[6] EXISTING R.O.W. (RIGHT)
STA. 501+13.87 TO STA. 502+18.26 = TRANSITION FROM 23'-4" TO 22'-7"

[7] SIDE SLOPE (RIGHT)
STA. 500+56.26 TO STA. 501+75.00 = 1:2
STA. 501+75.00 TO STA. 502+00.00 = TRANSITION FROM 1:2 TO 1:2.5
STA. 502+00.00 TO STA. 502+16.71 = TRANSITION FROM 1:2.5 TO 1:3
STA. 502+16.71 TO STA. 502+18.26 = 1:3

[8] PROPOSED R.O.W. (LEFT)
STA. 500+93.43 TO STA. 501+37.23 = TRANSITION FROM 50'-10" TO 35'-0"

[9] SHOULDER WIDTH (LEFT)
STA. 501+37.23 TO STA. 502+04.29 = 2'-0"
STA. 502+04.29 TO STA. 502+37.91 = 8'-0"
STA. 502+37.91 TO STA. 502+52.91 = TRANSITION FROM 8'-0" TO 2'-0"
STA. 502+52.91 TO STA. 504+00.00 = 2'-0"

[10] EXISTING R.O.W. (LEFT)
STA. 501+03.48 TO STA. 504+00.00 = TRANSITION FROM 16'-10" TO 18'-9"

[11] EXISTING R.O.W. (RIGHT)
STA. 502+18.26 TO STA. 504+00.00 = TRANSITION FROM 22'-7" TO 21'-3"

[12] TEMPORARY EASEMENT (LEFT)
STA. 501+95.00 TO STA. 502+30.00 = 45'-0"

[13] PROPOSED R.O.W. (LEFT)
STA. 501+37.23 TO STA. 502+75.00 = 35'-0"
STA. 502+75.00 TO STA. 503+00.00 = TRANSITION FROM 35'-0" TO 30'-0"
STA. 503+00.00 TO STA. 503+80.00 = 30'-0"
STA. 503+80.00 TO STA. 504+00.00 = 0'-0"

[14] PROPOSED R.O.W. (RIGHT)
STA. 502+18.26 TO STA. 502+30.00 = 50'-0"
STA. 502+30.00 TO STA. 503+50.00 = 30'-0"
STA. 503+50.00 TO STA. 504+00.00 = 0'-0"

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OLD WAGON ROAD
TYPICAL SECTIONS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	6
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT	BRDS 0095 (128)	

EARTHWORK SUMMARY

LOCATION	EARTH EXCAVATION (Cu Yd)	EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE (Cu Yd)	EMBANKMENT (Cu Yd)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (Cu Yd)	UNSUITABLE MATERIAL
BAREFOOT ROAD (TR 176)					
STA. 100+00.00 TO STA. 104+61.01	1287	965	3373	-2408	0
STA. 106+41.69 TO STA. 108+00.00	709	532	3168	-2636	0
STA. 108+00.00 TO STA. 110+61.00	1550	1162	10835	-9673	0
STA. 111+88.00 TO STA. 117+80.00	6637	4978	4302	676	0
OLD WAGON ROAD					
STA.500+60.00 TO STA. 504+00.00	308	231	1247	-1016	0
TOTAL	10491	7868	22925	-15057	0

DRIVEWAY SCHEDULE

LOCATION		AGGREGATE SURFACE COURSE, TYPE A	AGGREGATE FOR TEMPORARY ACCESS
		TON	TON
BEGIN STATION	END STATION		
BAREFOOT ROAD (TR 176)			
100+00.00	104+92.84	0	0
106+19.29	108+00.00	0	0
108+00.00	110+71.86	123	0
111+60.80	117+80.00	0	0
OLD WAGON ROAD			
501+50.00	504+00.00	17	8
TOTAL		140	8

REMOVAL SCHEDULE

LOCATION		PAVEMENT REMOVAL	PIPE CULVERT REMOVAL	FENCE REMOVAL	MAILBOX REMOVAL AND RELOCATION
		SQ YD	FOOT	FOOT	EACH
BEGIN STATION	END STATION				
BAREFOOT ROAD (TR 176)					
100+00.00	104+92.84	966	62	344	0
106+19.29	108+00.00	345	0	464	0
108+00.00	110+71.86	521	0	550	0
111+60.80	117+80.00	1443	0	1166	0
OLD WAGON ROAD					
501+50.00	504+00.00	503	89	179	1
TOTAL		3778	151	2703	1

PAVEMENT AND SHOULDER SCHEDULE

LOCATION		AGGREGATE BASE COURSE, TYPE A	AGGREGATE SHOULDERS, TYPE A 6"
		TON	SQ YD
BEGIN STATION	END STATION		
BAREFOOT ROAD (TR 176)			
100+00.00	104+92.84	636	232
106+19.29	108+00.00	225	143
108+00.00	110+71.86	328	208
111+60.80	117+80.00	1055	399
OLD WAGON ROAD			
501+50.00	504+00.00	342	124
TOTAL		2588	1106

TREE REMOVAL SCHEDULE

LOCATION		(6-15)	OVER 15
		UNIT	UNIT
BEGIN STATION	END STATION		
BAREFOOT ROAD (TR 176)			
100+00.00	105+00.00	277.5	55.5
105+00.00	110+50.00	768.0	84.5
110+50.00	115+00.00	258.5	66.0
115+00.00	117+80.00	281.5	17.0
OLD WAGON ROAD			
501+50.00	504+00.00	48.0	0.0
TOTAL		1634	225

TEMPORARY DITCH CHECK SCHEDULE

LOCATION				
STATION	OFFSET	LT/RT	LENGTH	UNIT
100+22.99	15.33	LT	13.5	FOOT
100+25.00	15.94	RT	13.5	FOOT
100+44.89	16.75	LT	13.5	FOOT
100+50.00	16.69	RT	13.5	FOOT
100+66.79	17.24	LT	13.5	FOOT
100+75.00	17.61	RT	13.5	FOOT
100+97.06	17.96	LT	13.5	FOOT
101+00.00	18.54	RT	13.5	FOOT
101+25.00	20.35	RT	13.5	FOOT
101+32.35	18.66	LT	13.5	FOOT
101+50.00	22.15	RT	13.5	FOOT
101+61.54	20.41	LT	13.5	FOOT
101+75.00	24.85	RT	13.5	FOOT
101+84.62	23.24	LT	13.5	FOOT
102+05.00	28.60	RT	13.5	FOOT
102+07.69	26.12	LT	13.5	FOOT
102+30.77	29.11	LT	13.5	FOOT
102+35.00	34.73	RT	13.5	FOOT
102+53.85	32.10	LT	13.5	FOOT
102+65.00	39.34	RT	13.5	FOOT
102+76.92	35.09	LT	13.5	FOOT
102+95.00	42.49	RT	13.5	FOOT
103+00.00	38.10	LT	13.5	FOOT
103+10.00	44.06	RT	13.5	FOOT
103+12.50	43.82	LT	13.5	FOOT
103+22.50	45.37	RT	13.5	FOOT
103+25.00	49.54	LT	13.5	FOOT
103+35.00	46.66	RT	13.5	FOOT
103+37.50	55.27	LT	13.5	FOOT
103+47.50	47.99	RT	13.5	FOOT
103+50.00	60.99	LT	13.5	FOOT
103+60.00	49.30	RT	13.5	FOOT
103+62.50	65.83	LT	13.5	FOOT
103+72.50	50.61	RT	13.5	FOOT
103+75.00	70.33	LT	13.5	FOOT
103+85.00	53.14	RT	13.5	FOOT
103+87.50	70.17	LT	13.5	FOOT
103+97.50	55.80	RT	13.5	FOOT
104+00.00	70.02	LT	13.5	FOOT
104+10.00	56.20	RT	13.5	FOOT
104+12.50	69.66	LT	13.5	FOOT
112+80.75	49.24	RT	13.5	FOOT
113+00.00	46.50	RT	13.5	FOOT
113+00.29	49.13	LT	13.5	FOOT
113+10.00	45.59	LT	13.5	FOOT

TEMPORARY DITCH CHECK SCHEDULE

LOCATION				
STATION	OFFSET	LT/RT	LENGTH	UNIT
113+15.00	45.44	RT	13.5	FOOT
113+20.00	41.95	LT	13.5	FOOT
113+30.00	38.31	LT	13.5	FOOT
113+30.00	44.37	RT	13.5	FOOT
113+45.00	43.31	RT	13.5	FOOT
113+60.00	41.88	RT	13.5	FOOT
113+75.00	27.11	LT	13.5	FOOT
113+75.00	40.26	RT	13.5	FOOT
113+90.00	38.64	RT	13.5	FOOT
114+00.08	21.40	LT	13.5	FOOT
114+05.00	36.38	RT	13.5	FOOT
114+25.00	20.68	LT	13.5	FOOT
114+25.00	31.63	RT	13.5	FOOT
114+45.00	28.74	RT	13.5	FOOT
114+50.00	20.27	LT	13.5	FOOT
114+65.00	26.99	RT	13.5	FOOT
114+75.00	20.74	LT	13.5	FOOT
114+85.00	25.54	RT	13.5	FOOT
115+00.00	20.91	LT	13.5	FOOT
115+05.00	24.30	RT	13.5	FOOT
115+25.00	22.01	LT	13.5	FOOT
115+25.00	23.28	RT	13.5	FOOT
115+45.00	22.46	RT	13.5	FOOT
115+50.00	22.80	LT	13.5	FOOT
115+65.00	21.13	RT	13.5	FOOT
115+75.00	23.35	LT	13.5	FOOT
115+85.00	19.77	RT	13.5	FOOT
116+00.00	23.60	LT	13.5	FOOT
116+05.00	18.96	RT	13.5	FOOT
116+24.52	19.41	RT	13.5	FOOT
116+25.00	22.87	LT	13.5	FOOT
116+50.00	21.84	LT	13.5	FOOT
116+50.94	20.25	RT	13.5	FOOT
116+75.00	20.11	LT	13.5	FOOT
116+77.52	19.77	RT	13.5	FOOT
117+04.10	19.36	RT	13.5	FOOT
117+30.91	17.68	RT	13.5	FOOT
117+54.05	16.62	RT	13.5	FOOT
117+71.42	16.49	RT	13.5	FOOT
501+06.23	49.57	LT	13.5	FOOT
501+40.84	41.96	LT	13.5	FOOT
501+77.60	39.01	LT	13.5	FOOT
502+50.42	32.22	LT	13.5	FOOT
502+99.97	26.03	LT	13.5	FOOT
TOTAL			1201.5	FOOT

STONE RIPRAP AND EROSION CONTROL BLANKET SCHEDULE

LOCATION		STONE RIPRAP, CLASS A3	STONE RIPRAP, CLASS A4	STONE RIPRAP, CLASS B3	FILTER FABRIC	EROSION CONTROL BLANKET	TURF REINFORCEMENT MAT
		SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD
BEGIN STATION	END STATION						
BAREFOOT ROAD (TR 176)							
100+00.00	104+92.84	0	0	9	9	606	353
106+19.29	108+00.00	0	0	0	0	1808	0
108+00.00	110+71.86	0	0	0	0	1365	0
111+60.80	117+80.00	0	0	0	0	2615	967
OLD WAGON ROAD							
501+50.00	504+00.00	0	0	0	0	33	59
FROM STRUCTURE PLANS		58	938	0	1053	0	0
TOTAL		58	938	9	1062	6427	1379

TEMPORARY EROSION CONTROL SCHEDULE

LOCATION		PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION	TEMPORARY EROSION CONTROL SEEDING
		FOOT	EACH	POUNDS
BEGIN STATION	END STATION			
BAREFOOT ROAD (TR 176)				
100+00.00	104+92.84	495	1	69
106+19.29	108+00.00	332	0	42
108+00.00	110+71.86	489	0	76
111+60.80	117+80.00	282	1	134
OLD WAGON ROAD				
501+50.00	504+00.00	465	3	18
TOTAL		2063	5	339

TOPSOIL, SEEDING, & FERTLIZER NUTRIENTS

LOCATION		TOPSOIL FURNISH AND PLACE, 4"	SEEDING, CLASS 2A	SEEDING, CLASS 3A	MULCH, METHOD 2	NITROGEN FERTILIZER NUTRIENT 90 (LB/ACRE)	PHOSPHOROUS FERTILIZER NUTRIENT 90 (LB/ACRE)	POTASSIUM FERTILIZER NUTRIENT 90 (LB/ACRE)
		SQ YD	ACRE	ACRE	ACRE	POUND	POUND	POUND
BEGIN STATION	END STATION							
BAREFOOT ROAD (TR 176)								
100+00.00	104+92.84	3343	0.60	0.10	0.60	63	63	63
106+19.29	108+00.00	2005	0.10	0.32	0.10	38	38	38
108+00.00	110+71.86	3640	0.50	0.25	0.50	68	68	68
111+60.80	117+80.00	6498	0.85	0.53	0.85	124	124	124
OLD WAGON ROAD								
501+50.00	504+00.00	846	0.20	0.05	0.20	22	22	22
TOTAL		16330	2.25	1.25	2.25	315	315	315

END SECTIONS SCHEDULE

LOCATION		END SECTIONS 15"	END SECTIONS 24"
BEGIN STATION	END STATION	EACH	EACH
BAREFOOT ROAD (TR 176)			
100+00.00	104+92.84	2	0
106+19.29	108+00.00	0	0
108+00.00	110+71.86	0	0
111+60.80	117+80.00	2	0
OLD WAGON ROAD			
501+50.00	504+00.00	0	4
TOTAL		4	4

GUARDRAIL SCHEDULE

LOCATION		STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	GUARDRAIL MARKERS, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 1	TRAFFIC BARRIER TERMINAL, TYPE 5A
		FOOT	FOOT	EACH	EACH	EACH
BEGIN STATION	END STATION					
BAREFOOT ROAD (TR 176)						
100+00.00	104+92.84	125	0	3	2	2
106+19.29	108+00.00	300	0	4	0	2
108+00.00	110+71.86	425	100	6	0	2
111+60.80	117+80.00	225	37.5	11	2	2
OLD WAGON ROAD						
501+50.00	504+00.00	100	0	0	2	0
TOTAL		1175	137.5	24	6	8

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	PLOT DATE = 02\02\2012	DATE	1/12/12	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	7
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

CONTROL POINT #86
NORTHING = 1549826.66
EASTING = 2285476.41
STA. 97+32.41,
OS 16.11' LT.

STA 97+17.75
NORTHING = 1549815.93
EASTING = 2285495.50

PC Sta 97+17.75

NORTHING = 1549954.13
EASTING = 2285461.26

PI Sta 98+60.13

PROP. CURVE KNOX04
PI STA. = 98+60.13
Δ = 23° 49' 20" (RT)
D = 8° 29' 18"
R = 675.00'
T = 142.38'
L = 280.65'
E = 14.85'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 97+17.75
P.T. STA. = 99+98.40

PT Sta 99+98.40

℄ PR. TR176
(BAREFOOT RD.)

PROPOSED R.O.W.

EXISTING R.O.W.

TEMPORARY EASEMENT

BENCHMARK #403
NAIL IN PP
ELEV. = 663.94

BENCHMARK #401
NAIL IN POST
ELEV. = 642.03

MATCHLINE STA. 109+00.00

℄ EX TR 176

STA. 112+35.58 (TR176) =
STA. 500+00.00 (OLD WAGON RD.)
NORTHING = 1551313.12
EASTING = 2285698.65

CONTROL POINT #90
NORTHING = 1551547.12
EASTING = 2285647.86
ELEV. = 666.84

PC Sta 113+92.56

PROP. CURVE KNOX02

PROP. CURVE KNOX03

PT Sta 117+36.10

PC Sta 118+05.26

PT Sta 120+21.37

STA. 120+21.37
NORTHING = 1552094.44
EASTING = 2285144.16

CONTROL POINT #3
NORTHING = 1552154.30
EASTING = 2285759.41
ELEV. = 695.64

POT Sta 500+00.00

NORTHING = 1551637.38
EASTING = 2285755.29

PI Sta 115+64.75

NORTHING = 1551986.89
EASTING = 2285755.70

PI Sta 119+13.42

PROP. CURVE KNOX03
PI STA. = 119+13.42
Δ = 6° 11' 28" (LT)
D = 2° 51' 53"
R = 2,000.00'
L = 218.16'
E = 2.92'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 118+05.26
P.T. STA. = 120+21.37

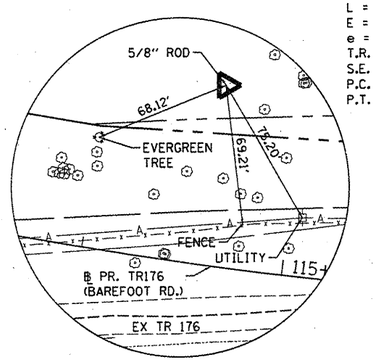
BENCHMARK #402
NAIL IN PP
ELEV. = 631.51

PROP. CURVE KNOX02
PI STA. = 115+64.75
Δ = 9° 50' 30" (LT)
D = 2° 51' 53"
R = 2,000.00'
T = 172.19'
L = 343.54'
E = 7.40'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 113+92.56
P.T. STA. = 117+36.10

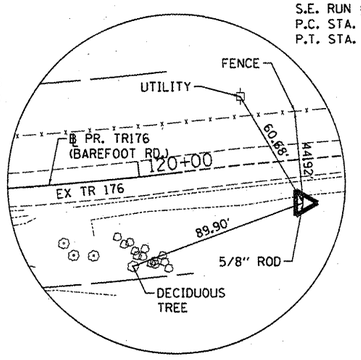
℄ OLD WAGON ROAD

STA. 505+80.37
NORTHING = 1551186.19
EASTING = 2286264.97

POT Sta 505+80.37



CONTROL POINT #90
SET 5/8" IRON ROD



CONTROL POINT #3
SET 5/8" IRON ROD

N

100 0 100 200
SCALE IN FEET

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	PLOT DATE = 02\02\2012	CHECKED CAL	REVISED -		
		DATE 1/12/12	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	8
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
102+77.16	41.47	Rt		20.0
102+88.10	41.04	Rt	8.0	
102+93.39	36.51	Rt	8.0	
103+01.46	38.62	Rt	11.0	
103+17.78	35.23	Rt	10.0	
103+18.90	38.65	Lt	6.0	
103+18.90	38.65	Lt	6.0	
103+38.77	36.98	Lt	6.0	
103+45.49	49.28	Rt	15.0	
103+56.92	33.64	Lt	8.0	
103+65.39	42.51	Rt	8.0	
103+69.44	41.34	Rt	9.0	
103+73.50	31.45	Lt	6.0	
103+78.71	54.06	Rt	10.0	
103+90.35	38.58	Lt	8.0	
103+91.20	38.09	Lt	8.0	
103+95.53	38.20	Lt	8.0	
104+07.00	42.32	Rt	10.5	

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
104+10.16	75.52	Lt		17
104+13.27	78.38	Lt	13.0	
104+21.23	45.56	Rt	9.0	
104+24.59	77.01	Lt	12.0	
104+24.89	68.74	Lt	8.0	
104+26.98	33.67	Lt	12.0	
104+28.11	35.27	Lt	13.0	
104+29.69	25.23	Lt	9.5	
104+30.03	48.76	Lt	6.0	
104+30.88	37.01	Lt	8.0	
104+44.76	42.70	Lt	6.0	
104+45.13	46.76	Lt	14.0	
104+62.72	26.66	Lt	7.0	
104+65.70	35.7	Lt		18.5
104+73.84	36.28	Lt	7.0	
104+82.37	33.87	Lt	7.5	
SHEET TOTAL			278	56

N

20 0 20 40
SCALE IN FEET

BEGIN FENCE REMOVAL
STA. 101+67.50, 33.51' LT

PROPOSED R.O.W.

CONSTRUCTION LIMITS

℄ PR. TR176
(BAREFOOT RD.)

EXISTING R.O.W.

END FENCE REMOVAL
STA. 104+54.04, 50.00' LT

EXISTING R.O.W.

END PIPE CULVERT REMOVAL
STA. 104+22.56, 27.78' LT

END FENCE REMOVAL
STA. 104+42.27, 14.12' LT

99 100+00 101 102 103 104

BEGIN FENCE REMOVAL
STA. 104+54.75, 12.79' LT

MATCHLINE STA. 105+00.00

BEGIN PAVEMENT REMOVAL
STA. 100+00.00

BEGIN PIPE CULVERT REMOVAL
STA. 104+23.48, 33.73' LT

CONSTRUCTION LIMITS

EXISTING R.O.W.

EXISTING R.O.W.

TEMPORARY EASEMENT

END PAVEMENT REMOVAL
STA. 104+92.84

LEGEND

- TREE REMOVAL
- END SECTION REMOVAL
- FENCE REMOVAL
- PIPE CULVERT REMOVAL
- PAVEMENT REMOVAL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
DEMOLITION PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	9
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

LEGEND

N

20 0 20 40
SCALE IN FEET

TREE REMOVAL

END SECTION REMOVAL

FENCE REMOVAL

PIPE CULVERT REMOVAL

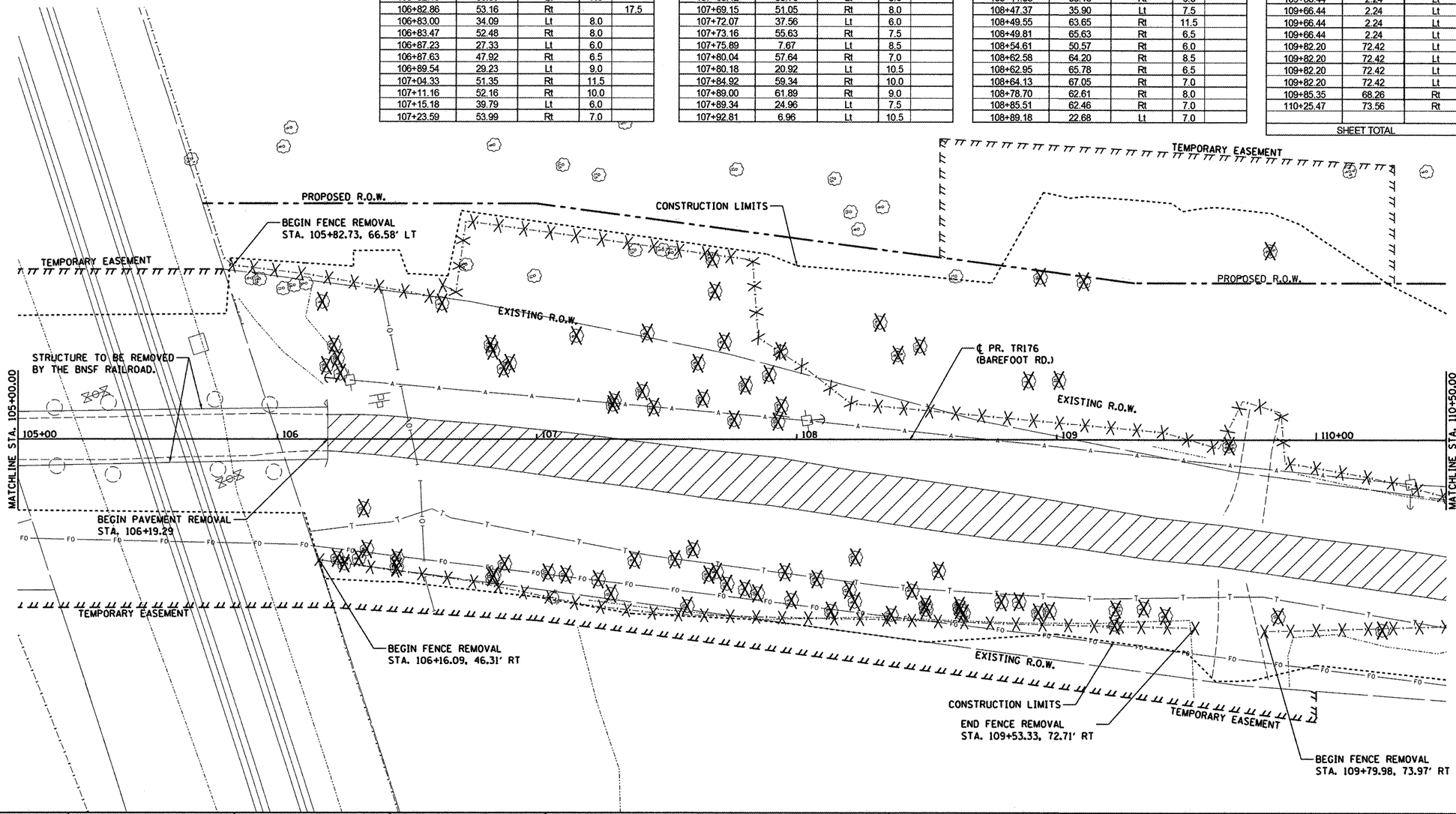
PAVEMENT REMOVAL

TREE REMOVAL SCHEDULE					
LOCATION				(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET				
106+17.18	52.84	Lt		9.0	
106+18.81	28.39	Lt		9.5	
106+21.17	36.37	Lt		6.5	
106+22.30	71.70	Rt		7.5	
106+23.05	45.60	Rt		9.5	
106+23.07	31.16	Lt		10.5	
106+24.21	25.36	Lt		7.0	
106+25.80	47.71	Rt		8.5	
106+31.40	45.58	Rt		8.0	
106+33.26	26.42	Rt		11.0	
106+34.46	42.15	Rt			18.0
106+45.99	49.14	Rt		10.0	
106+46.11	45.71	Rt		6.5	
106+63.37	52.17	Lt		9.0	
106+82.16	36.59	Lt		7.5	
106+82.86	53.16	Rt			17.5
106+83.00	34.09	Lt		8.0	
106+83.47	52.48	Rt		8.0	
106+87.23	27.33	Lt		6.0	
106+87.63	47.92	Rt		6.5	
106+89.54	29.23	Lt		9.0	
107+04.33	51.35	Rt		11.5	
107+11.16	52.16	Rt		10.0	
107+15.18	39.79	Lt		6.0	
107+23.59	53.99	Rt		7.0	

TREE REMOVAL SCHEDULE					
LOCATION				(6-15)	OVER 15
STATION	OFFSET	LT/RT			
107+28.50	59.61	Rt	11.0		
107+29.15	13.49	Lt	8.5		
107+29.73	15.03	Lt	6.5		
107+37.53	46.38	Rt	6.0		
107+40.48	18.62	Lt	10.5		
107+42.36	40.78	Lt	9.0		
107+44.92	12.46	Lt	12.0		
107+53.08	46.11	Rt	7.0		
107+57.84	64.33	Rt	12.0		
107+60.06	42.20	Rt	9.5		
107+61.93	29.17	Lt	9.5		
107+63.79	15.76	Lt	6.5		
107+66.18	52.13	Rt	9.5		
107+67.46	69.10	Lt	6.5		
107+68.42	56.76	Lt	9.0		
107+69.15	51.05	Rt	8.0		
107+72.07	37.56	Lt	6.0		
107+73.16	55.63	Rt	7.5		
107+75.89	7.67	Lt	8.5		
107+80.04	57.64	Rt	7.0		
107+80.18	20.92	Lt	10.5		
107+84.92	59.34	Rt	10.0		
107+89.00	61.89	Rt	9.0		
107+89.34	24.96	Lt	7.5		
107+92.81	6.96	Lt	10.5		

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
107+93.85	33.84	Lt	9.0	
107+94.08	13.02	Lt	6.5	
107+95.53	51.14	Rt	7.0	
108+07.72	53.84	Rt	8.5	
108+13.20	66.07	Rt	6.5	
108+20.22	57.93	Rt	12.0	
108+22.35	62.49	Rt	9.0	
108+22.64	45.31	Rt	6.5	
108+31.97	44.99	Lt	6.5	
108+36.38	67.71	Rt		15.5
108+38.90	32.55	Lt	8.0	
108+38.90	32.55	Lt	8.0	
108+38.90	32.55	Lt	8.0	
108+38.90	32.55	Lt	8.0	
108+44.38	58.18	Rt	6.0	
108+47.37	35.90	Lt	7.5	
108+49.55	63.65	Rt	11.5	
108+49.81	65.63	Rt	6.5	
108+54.61	50.57	Rt	6.0	
108+62.58	64.20	Rt	8.5	
108+62.95	65.78	Rt	6.5	
108+64.13	67.05	Rt	7.0	
108+78.70	62.61	Rt	8.0	
108+85.51	62.46	Rt	7.0	
108+89.18	22.68	Lt	7.0	

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
108+92.88	66.63	Rt		15.5
108+93.63	62.14	Lt		18.0
108+97.25	66.17	Rt	12.5	
109+00.83	22.99	Lt	12.0	
109+10.39	60.63	Lt	9.0	
109+10.39	60.63	Lt	9.0	
109+10.39	60.63	Lt	9.0	
109+22.76	65.41	Rt	9.0	
109+22.76	65.41	Rt	8.0	
109+22.76	65.41	Rt	7.5	
109+33.61	64.95	Rt	9.0	
109+41.94	67.91	Rt	9.0	
109+66.44	2.24	Lt	6.0	
109+66.44	2.24	Lt	6.0	
109+66.44	2.24	Lt	6.0	
109+66.44	2.24	Lt	6.0	
109+66.44	2.24	Lt	6.0	
109+66.44	2.24	Lt	6.0	
109+82.20	72.42	Lt	6.0	
109+82.20	72.42	Lt	6.0	
109+82.20	72.42	Lt	6.0	
109+82.20	72.42	Lt	6.0	
109+85.35	68.26	Rt	11.0	
110+25.47	73.56	Rt	8.5	
SHEET TOTAL			768	85



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
DEMOLITION PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	10
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

N

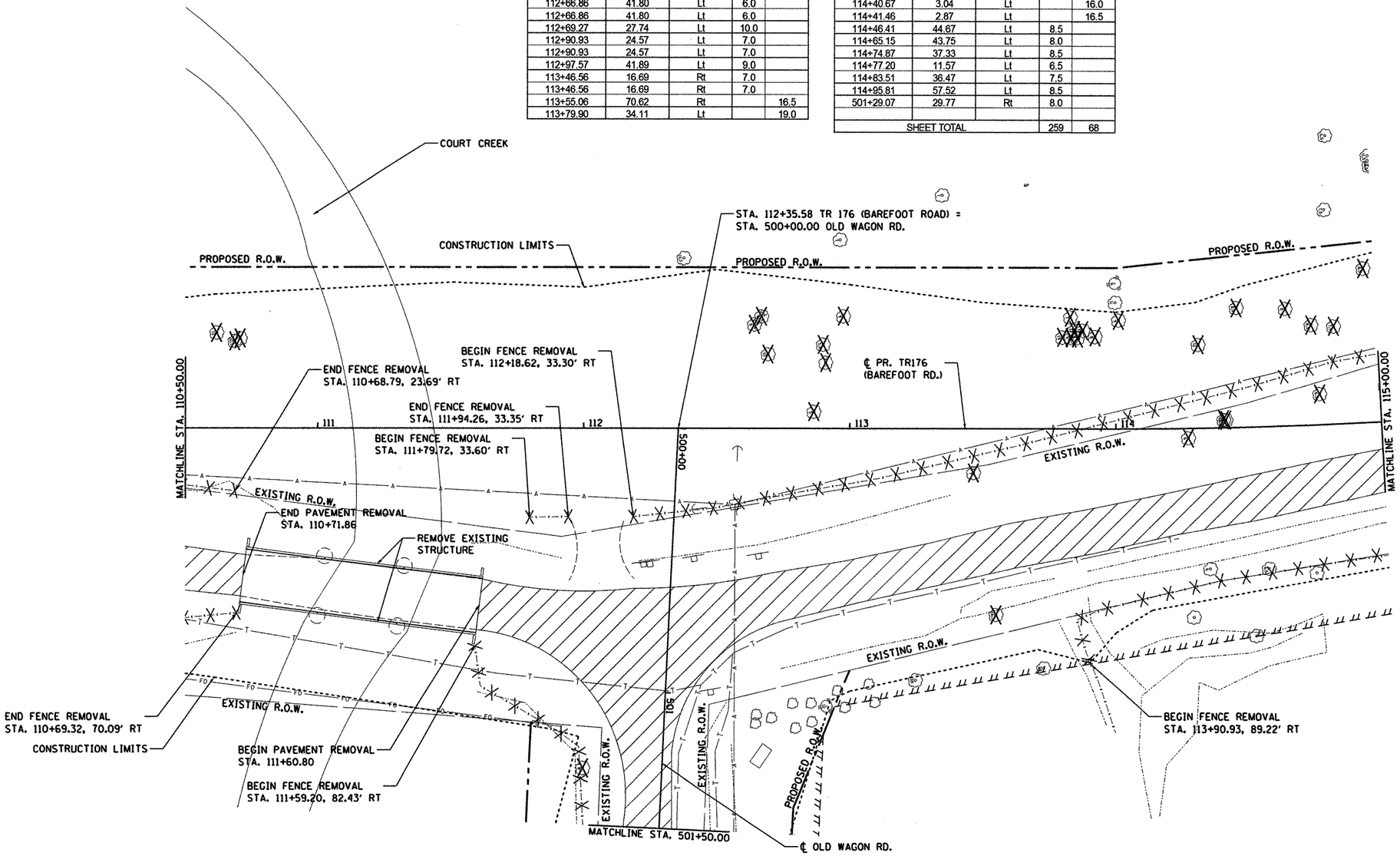
20 0 20 40
SCALE IN FEET

LEGEND

- TREE REMOVAL
- END SECTION REMOVAL
- FENCE REMOVAL
- PIPE CULVERT REMOVAL
- PAVEMENT REMOVAL

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
110+61.87	35.68	Lt	12.0	
110+68.72	32.55	Lt	12.5	
110+70.76	33.58	Lt	6.0	
112+64.16	38.81	Lt	6.0	
112+64.16	38.81	Lt	6.0	
112+64.16	38.81	Lt	6.0	
112+64.16	38.81	Lt	6.0	
112+66.86	41.80	Lt	6.0	
112+66.86	41.80	Lt	6.0	
112+66.86	41.80	Lt	6.0	
112+66.86	41.80	Lt	6.0	
112+69.27	27.74	Lt	10.0	
112+90.93	24.57	Lt	7.0	
112+90.93	24.57	Lt	7.0	
112+97.57	41.89	Lt	9.0	
113+46.56	16.69	Rt	7.0	
113+46.56	16.69	Rt	7.0	
113+55.06	70.62	Rt		16.5
113+79.90	34.11	Lt		19.0

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
113+82.84	41.64	Lt	7.0	
113+83.18	34.04	Lt	6.0	
113+84.43	36.74	Lt	13.0	
113+85.59	34.05	Lt	6.5	
113+87.60	36.68	Lt	10.0	
113+92.17	34.40	Lt	8.0	
114+01.09	40.51	Lt	9.0	
114+27.27	3.56	Rt	6.0	
114+31.43	31.21	Lt	12.0	
114+40.67	3.04	Lt		16.0
114+41.46	2.87	Lt		16.5
114+46.41	44.67	Lt	8.5	
114+65.15	43.75	Lt	8.0	
114+74.87	37.33	Lt	8.5	
114+77.20	11.57	Lt	6.5	
114+83.51	36.47	Lt	7.5	
114+95.81	57.52	Lt	8.5	
501+29.07	29.77	Rt	8.0	
SHEET TOTAL			259	68



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TR 176 (BAREFOOT ROAD)
DEMOLITION PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	11
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

N

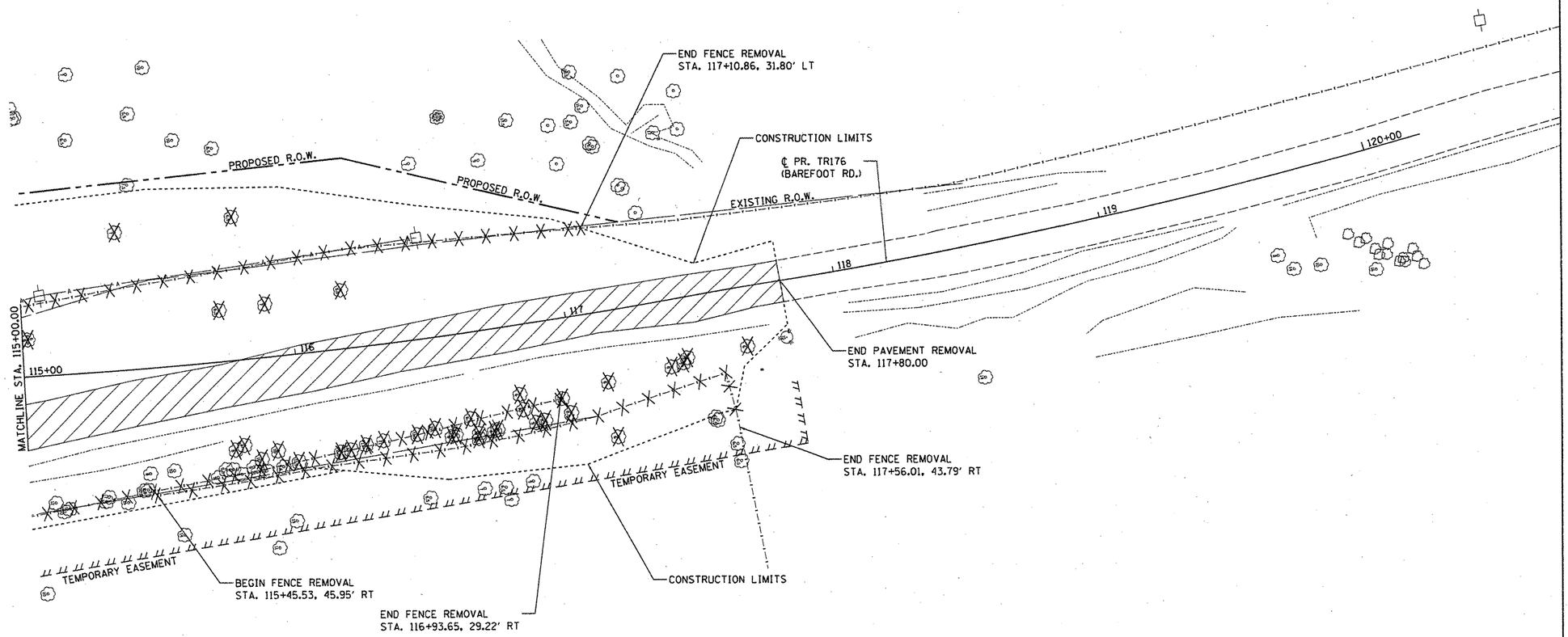
20 0 20 40
SCALE IN FEET

LEGEND

- TREE REMOVAL
- END SECTION REMOVAL
- FENCE REMOVAL
- PIPE CULVERT REMOVAL
- PAVEMENT REMOVAL

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
115+02.06	13.53	Lt	6.0	
115+02.06	13.53	Lt	6.0	
115+02.06	13.53	Lt	6.0	
115+02.06	13.53	Lt	6.0	
115+36.89	50.89	Lt	7.0	
115+73.39	18.73	Lt	6.5	
115+75.01	32.02	Rt	8.0	
115+78.28	30.70	Rt	7.0	
115+81.23	52.85	Lt	6.5	
115+84.05	36.34	Rt	10.0	
115+90.21	33.93	Rt	10.0	
115+90.48	19.43	Lt	7.0	
115+97.35	38.63	Rt	11.5	
116+12.76	36.95	Rt	8.5	
116+16.53	36.54	Rt	13.0	
116+22.03	35.34	Rt		17.0
116+28.42	34.66	Rt	7.0	
116+40.81	34.02	Rt	11.5	
116+47.43	32.66	Rt	10.0	

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
116+53.06	36.38	Rt	6.0	
116+54.56	35.96	Rt	6.5	
116+80.69	31.15	Rt	6.5	
116+62.69	38.51	Rt	9.5	
116+63.04	36.67	Rt	9.0	
116+68.47	36.65	Rt	6.0	
116+69.77	36.38	Rt	7.0	
116+79.47	25.24	Rt	6.0	
116+79.98	30.81	Rt	10.0	
116+83.92	35.94	Rt	9.0	
116+87.26	35.74	Rt	9.5	
116+94.43	29.06	Rt	7.5	
116+96.86	34.62	Rt	8.5	
117+11.90	25.85	Rt	6.0	
117+12.29	45.73	Rt	6.0	
117+35.55	24.30	Rt	8.0	
117+40.06	23.58	Rt	7.0	
117+64.22	21.70	Rt	6.0	
SHEET TOTAL			282	17



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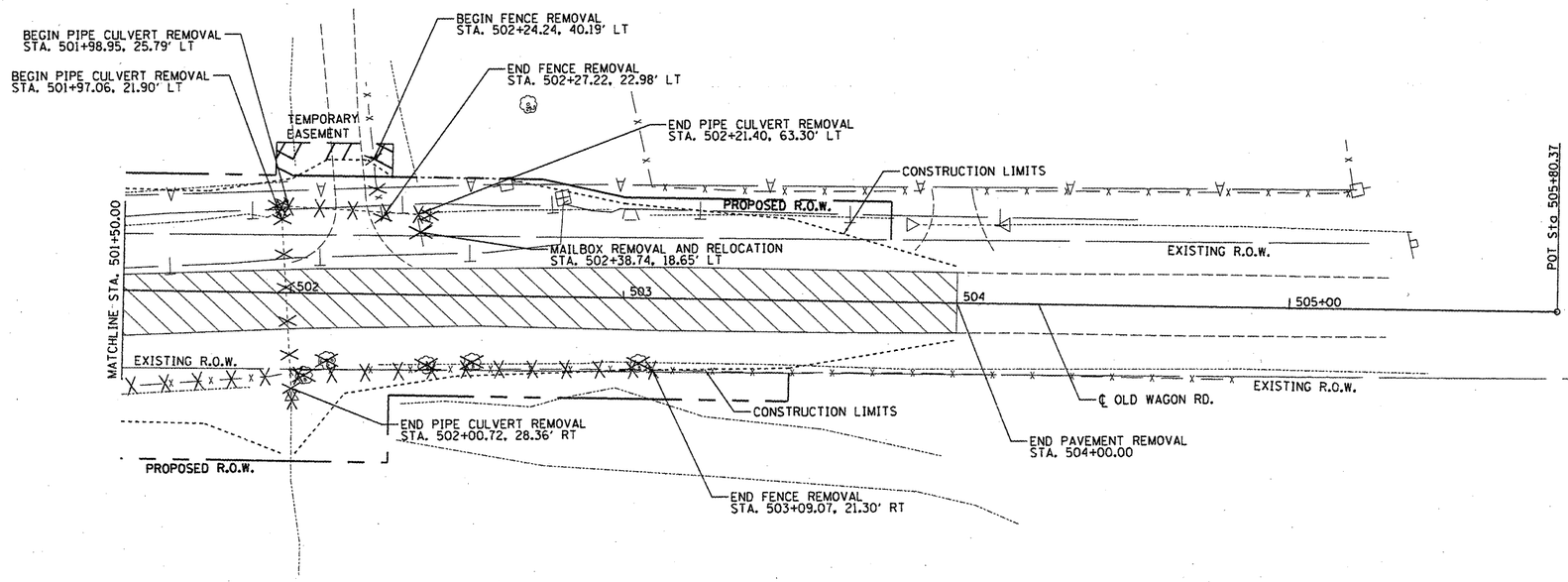
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

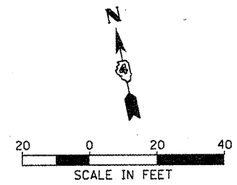
TR 176 (BAREFOOT ROAD)
DEMOLITION PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	12
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

TREE REMOVAL SCHEDULE				
LOCATION			(6-15) UNIT	OVER 15 UNIT
STATION	OFFSET	LT/RT		
502+04.43	24.40	Rt	8.0	
502+11.24	19.90	Rt	6.0	
502+11.24	19.90	Rt	6.0	
502+11.24	19.90	Rt	6.0	
502+41.21	20.83	Rt	6.0	
502+54.87	19.78	Rt	8.0	
503+04.89	19.39	Rt	8.0	
SHEET TOTAL			48	0





LEGEND

- TREE REMOVAL
- END SECTION REMOVAL
- FENCE REMOVAL
- PIPE CULVERT REMOVAL
- PAVEMENT REMOVAL

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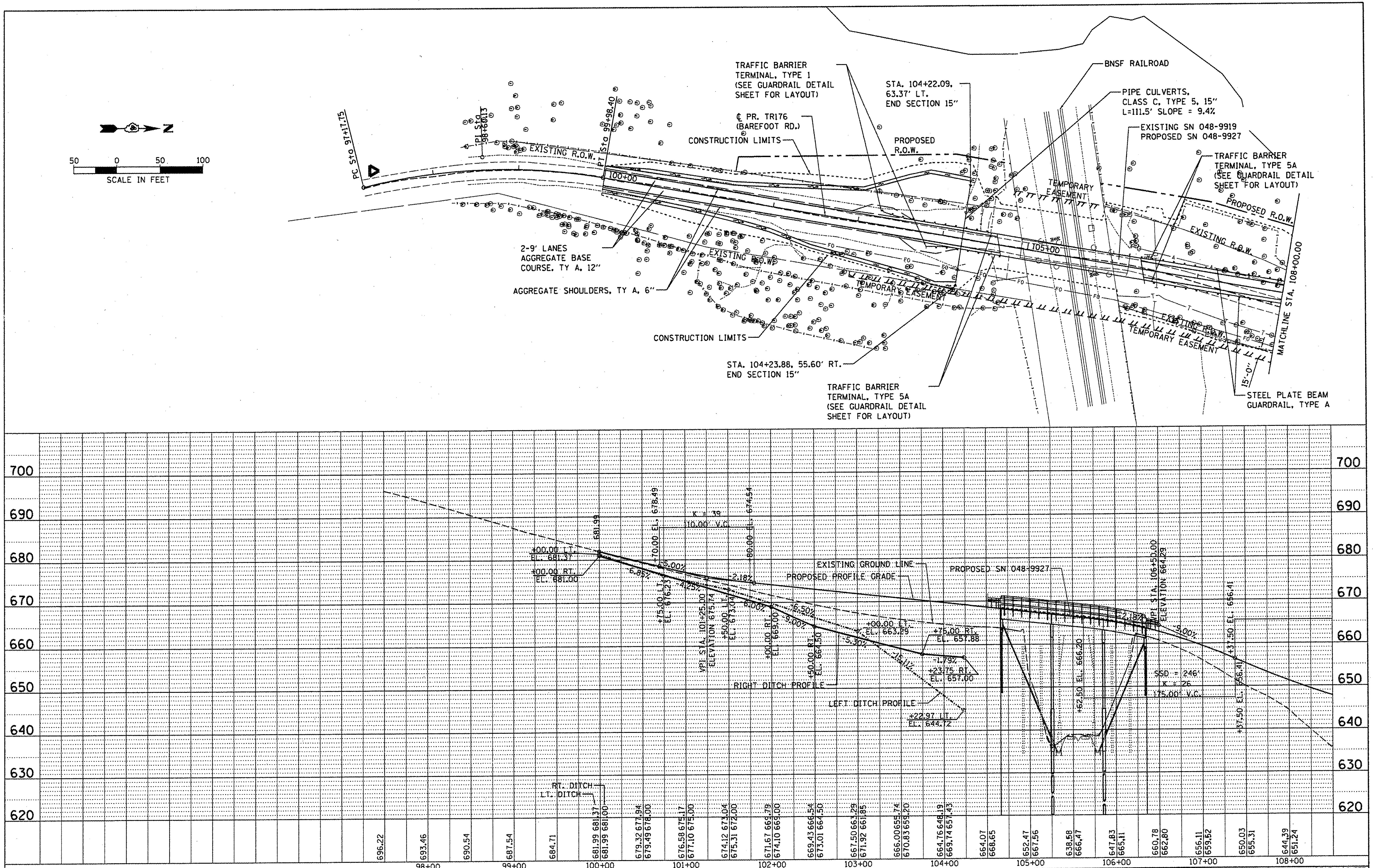
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OLD WAGON ROAD
DEMOLITION PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	13
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.O.W. CHECKED, CADD FILE NAME; NOTE BOOK NO.; BY; DATE

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

HANSON

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	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
PLAN AND PROFILE

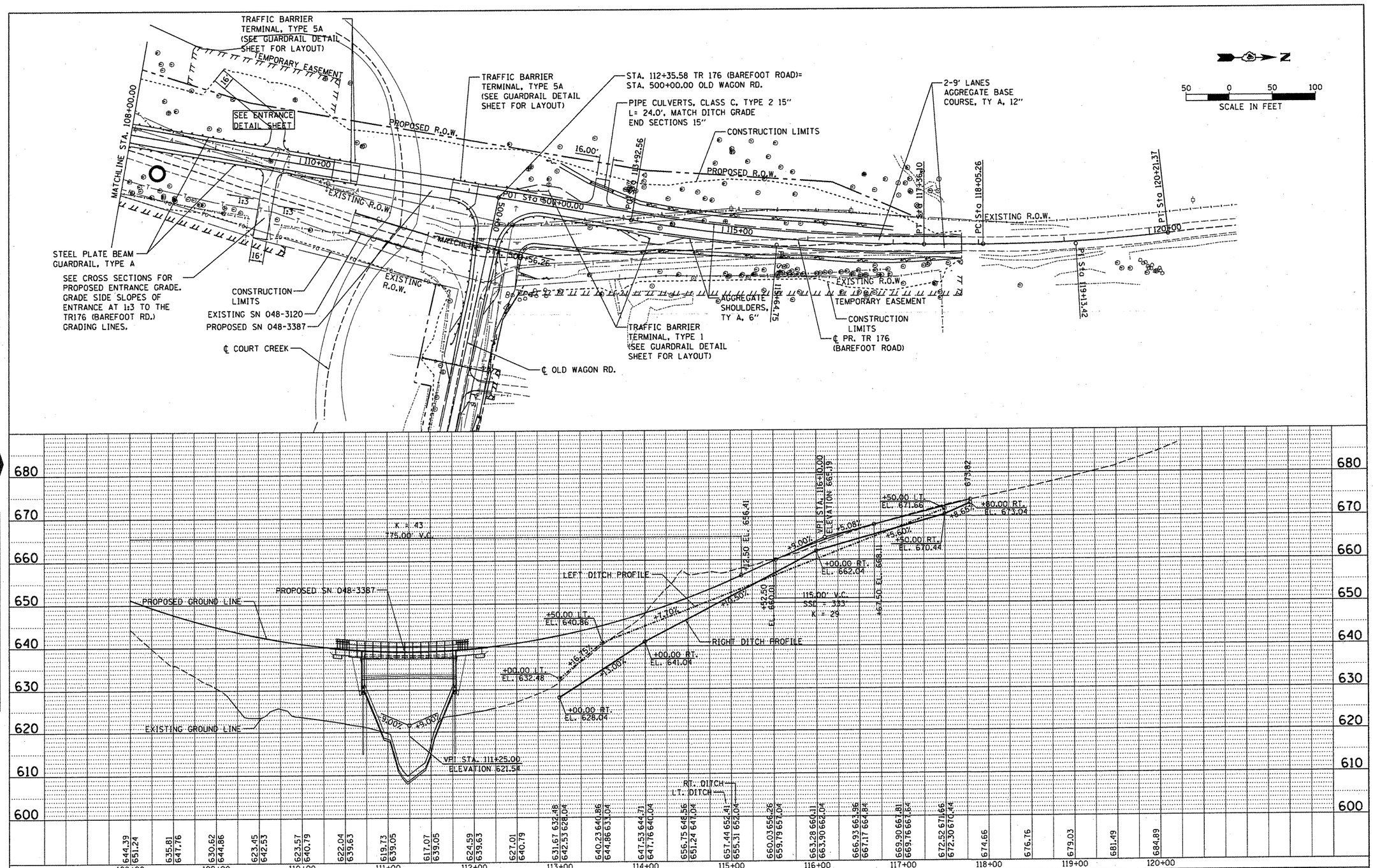
SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	14
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT	BROS 0095 (128)	

HANSON

PLAN
SURVEYED BY
DRAWN BY
ALIGNMENT CHECKED
GRADES CHECKED
R.M. NOTED
BENCHMARK NOTATIONS CHKD
NOTE BOOK
NO.
CADD FILE NAME
DATE

PROFILE
SURVEYED BY
DRAWN BY
GRADES CHECKED
R.M. NOTED
BENCHMARK NOTATIONS CHKD
NOTE BOOK
NO.
DATE



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	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
PLAN AND PROFILE

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	15
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

HANSON

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
GRADES CHECKED
BY
NOTE BOOK
NO.
DATE
BY

PROFILE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
GRADES CHECKED
BY
NOTE BOOK
NO.
STRUCTURE (STA/FTG CITED)
DATE
BY

STA. 500+60.00,
36.85' LT.
END SECTIONS 24"
INV. = 627.40

TRAFFIC BARRIER
TERMINAL, TYPE I
(SEE GUARDRAIL DETAIL
SHEET FOR LAYOUT)

STA. 502+00.00, 32.10' LT.
INLETS, TYPE B, TYPE 8 FRAME & GRATE
RIM = 624.11
E. INV = 620.84
S. INV = 620.74

PIPE CULVERTS, CLASS C, TYPE 2 24"
L= 50' @ 3.3%, U/S = 622.50 , D/S = 620.84

STA. 502+50.00, 32.31' LT.
END SECTIONS 24"
INV. = 622.50

MAILBOX REMOVAL AND RELOCATION

CONSTRUCTION LIMITS

EXISTING R.O.W.

POT STA 505+80.37

EXISTING R.O.W.

℄ OLD WAGON RD.

2-9' LANES
AGGREGATE BASE
COURSE, TY A, 12"

AGGREGATE
SHOULDERS,
TY A, 6"

PIPE CULVERTS, CLASS C, TYPE 3 24"
L= 76.0' @ 1.00%, U/S = 620.74, D/S = 620.00
STA. 502+00.00, 43.95' RT.
END SECTIONS 24"
INV. = 620.00

STEEL PLATE
BEAM GUARDRAIL,
TYPE A

℄ COURT CREEK

PIPE CULVERTS, CLASS C, TYPE 3 24"
L= 81.0' @ 1.00%, U/S = 627.40, D/S = 626.61

STA. 500+60.00, 43.78' RT.
END SECTIONS 24"
INV. = 626.61

STA. 112+35.58 TR 176 (BAREFOOT ROAD) =
STA. 500+00.00 OLD WAGON RD.

℄ PR. TR 176 (BAREFOOT ROAD)

POT STA 500+00.00

500+00

MATCH LINE STA. 504+55.26

EXISTING R.O.W.

TEMP.
EASEMENT

PROPOSED
R.O.W.

110+00

EXISTING R.O.W.

112+92.56

N

50 0 50 100
SCALE IN FEET

680
670
660
650
640
630
620
610
600

STA. 500+09.01
ELEVATION 640.21

640.40

-2.11%

-5.00%

DITCH CONTINUES
ALONG BAREFOOT ROAD

627.40

+75.00 EL. 631.91

K = 40
150.00' V.C.

625.00 EL. 627.20

626.23

-5.00%

-1.29%

+00.00
EL. 624.11

+3.3%

+1.00%

626.00

LEFT DITCH PROFILE

VPI STA. 502+50.00
ELEVATION 628.16

626.17 640.40
628.05 638.16
630.79 635.66 628.22
629.72 633.16 626.48
628.91 630.74 624.11
628.16 626.86 622.50
627.32 627.59 623.00
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626.23 626.23 624.00
625.87
625.47
626.11

500+00 501+00 502+00 503+00 504+00 505+00

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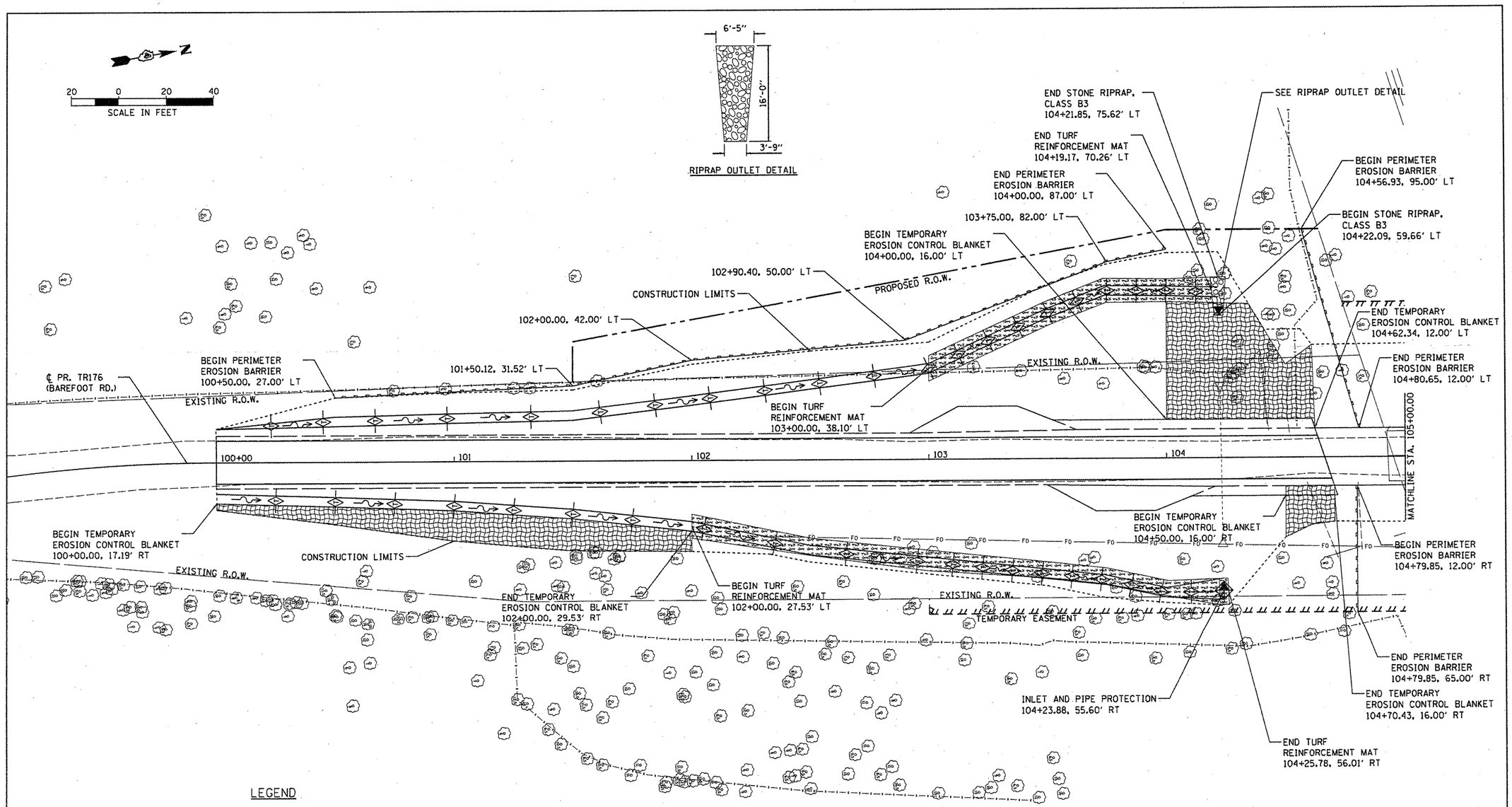
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OLD WAGON ROAD
PLAN AND PROFILE

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	16
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER
- STONE RIPRAP
- TEMPORARY EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT

NOTES

1. ALL DISTURBED AREAS NOT COVERED BY RIPRAP SHALL BE SEEDED AND MULCHED. SLOPES STEEPER THAN 1:3 SHALL RECEIVE SEEDING CLASS 3A AND MULCH METHOD 2 REMAINING SLOPES SHALL RECEIVE SEEDING CLASS 2A AND MULCH METHOD 2

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	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
EROSION CONTROL PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	17
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

N

20 0 20 40
SCALE IN FEET

LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER
- STONE RIPRAP
- TEMPORARY EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT

105+84.67, 89.00' LT

END STONE
RIPRAP, A3
106+31.68, 70.00' LT

106+99.94, 89.00' LT

108+56.00, 114.30' LT

108+56.00, 68.64' LT

110+29.00, 104.00' LT

110+29.00, 59.00' LT

TEMPORARY EASEMENT

PROPOSED R.O.W.

EXISTING R.O.W.

BEGIN PERIMETER EROSION BARRIER
105+84.67, 52.80' LT

TEMPORARY EASEMENT

BEGIN TEMPORARY
EROSION CONTROL BLANKET
106+37.68, 16.24' LT

BEGIN STONE
RIPRAP, A3
106+31.68, 12.00' LT

END TEMPORARY
EROSION CONTROL BLANKET
108+50.00, 17.00' LT

℄ PR. TR176
(BAREFOOT RD.)

EXISTING R.O.W.

MATCHLINE STA. 105+00.00

105+00

106

107

108

109

110+00

MATCHLINE STA. 110+50.00

BEGIN STONE
RIPRAP, A3
106+39.71, 12.00' RT

BEGIN TEMPORARY
EROSION CONTROL BLANKET
106+47.50, 16.32' RT

BEGIN TEMPORARY
EROSION CONTROL BLANKET
109+79.09, 17.00' RT

END TEMPORARY
EROSION CONTROL BLANKET
109+59.09, 17.00' RT

TEMPORARY EASEMENT

BEGIN PERIMETER EROSION BARRIER
106+15.83, 47.24' RT

106+20.45, 61.33' RT

END PERIMETER EROSION BARRIER
106+76.82, 66.33' RT

106+67.70, 65.10' RT

EXISTING R.O.W.

CONSTRUCTION LIMITS

TEMPORARY EASEMENT

EXISTING R.O.W.

EXISTING R.O.W.

END STONE
RIPRAP, A3
106+41.50, 55.00' RT

NOTES

1. ALL DISTURBED AREAS NOT COVERED BY RIPRAP SHALL BE SEEDED AND MULCHED. SLOPES STEEPER THAN 1:3 SHALL RECEIVE SEEDING CLASS 3A AND MULCH METHOD 2 REMAINING SLOPES SHALL RECEIVE SEEDING CLASS 2A AND MULCH METHOD 2

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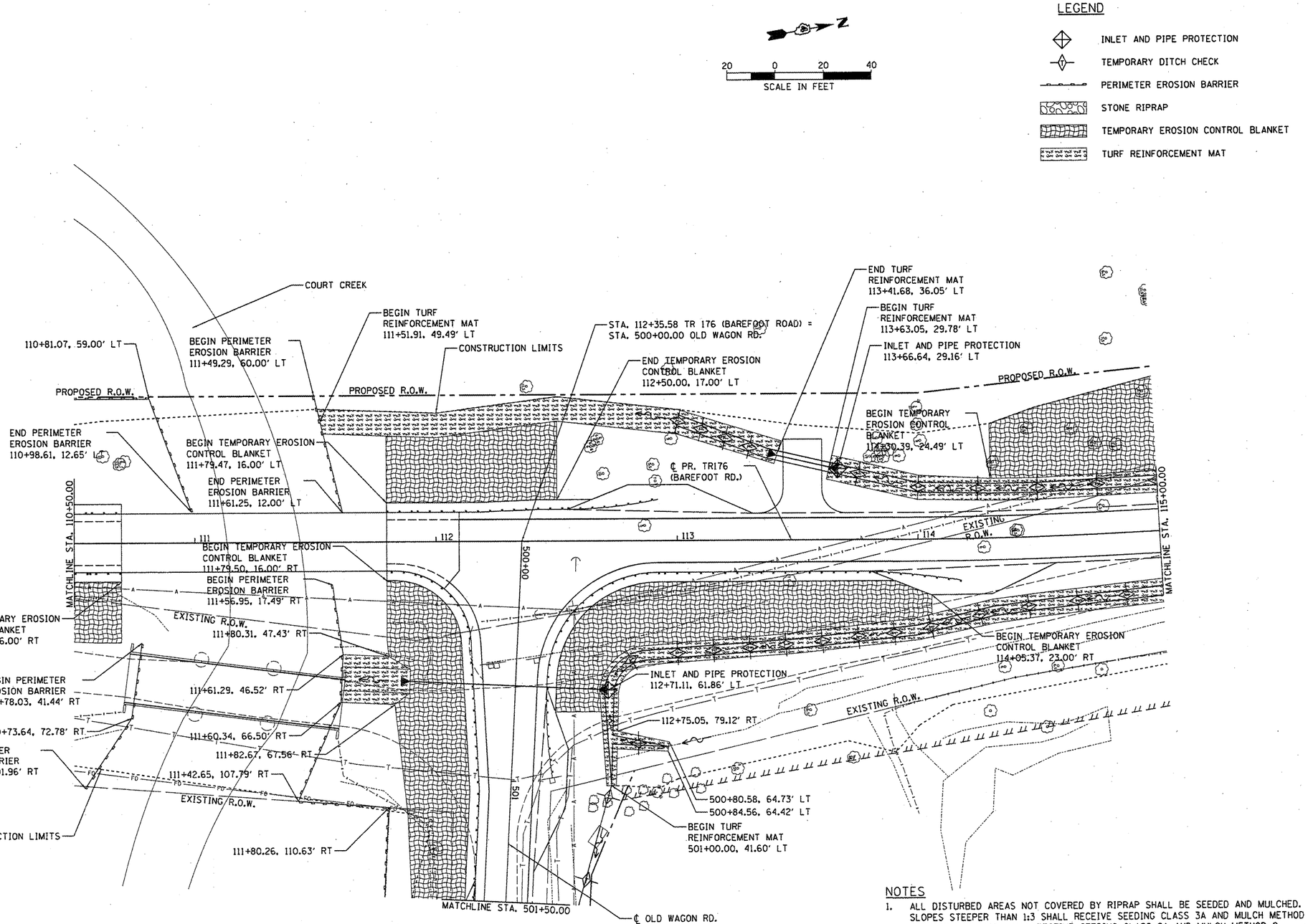
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
EROSION CONTROL PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	18
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT	BROS 0095 (128)	



NOTES

1. ALL DISTURBED AREAS NOT COVERED BY RIPRAP SHALL BE SEEDED AND MULCHED. SLOPES STEEPER THAN 1:3 SHALL RECEIVE SEEDING CLASS 3A AND MULCH METHOD 2 REMAINING SLOPES SHALL RECEIVE SEEDING CLASS 2A AND MULCH METHOD 2

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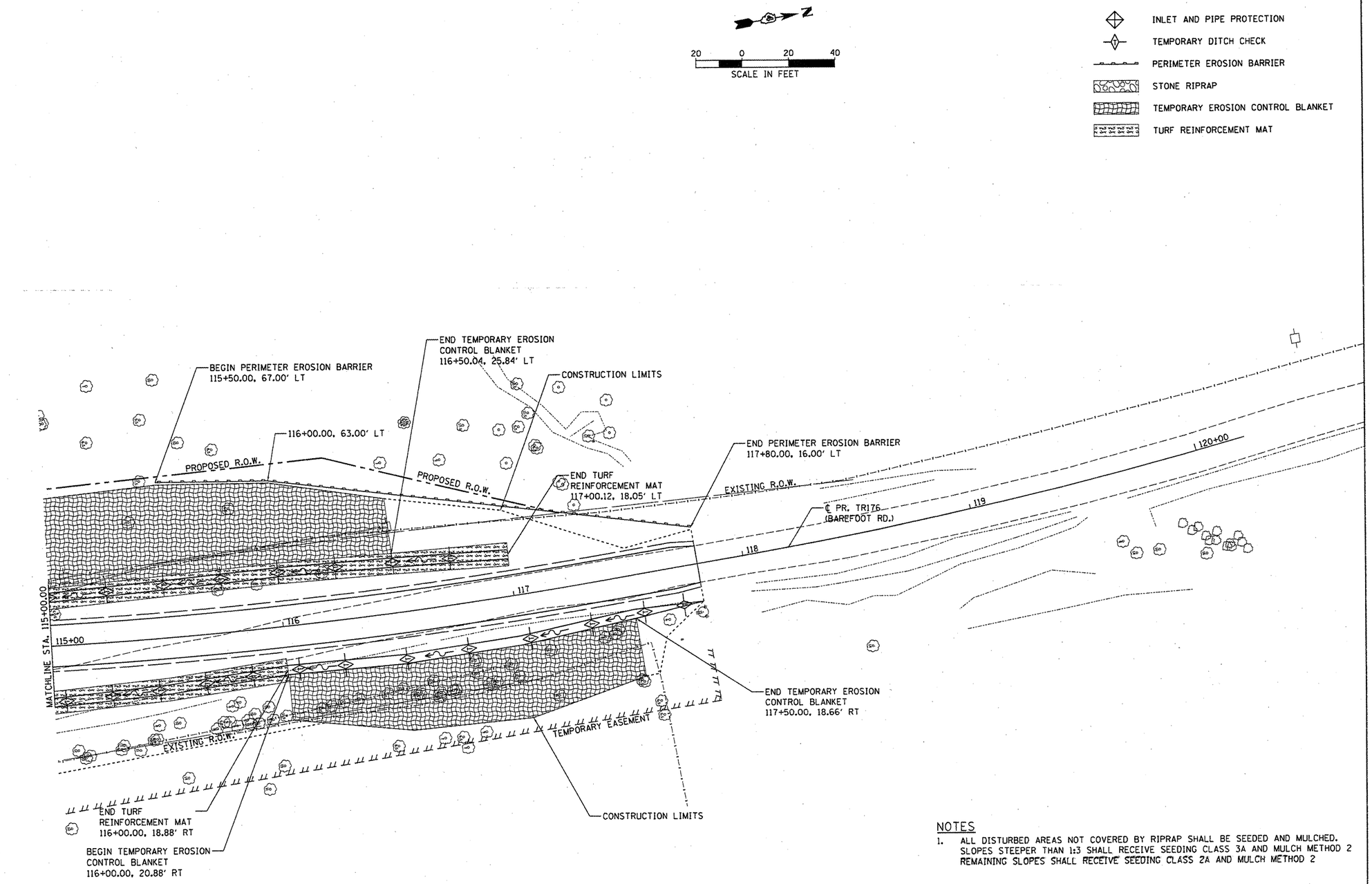
	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
EROSION CONTROL PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	19
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



NOTES

1. ALL DISTURBED AREAS NOT COVERED BY RIPRAP SHALL BE SEEDED AND MULCHED. SLOPES STEEPER THAN 1:3 SHALL RECEIVE SEEDING CLASS 3A AND MULCH METHOD 2 REMAINING SLOPES SHALL RECEIVE SEEDING CLASS 2A AND MULCH METHOD 2

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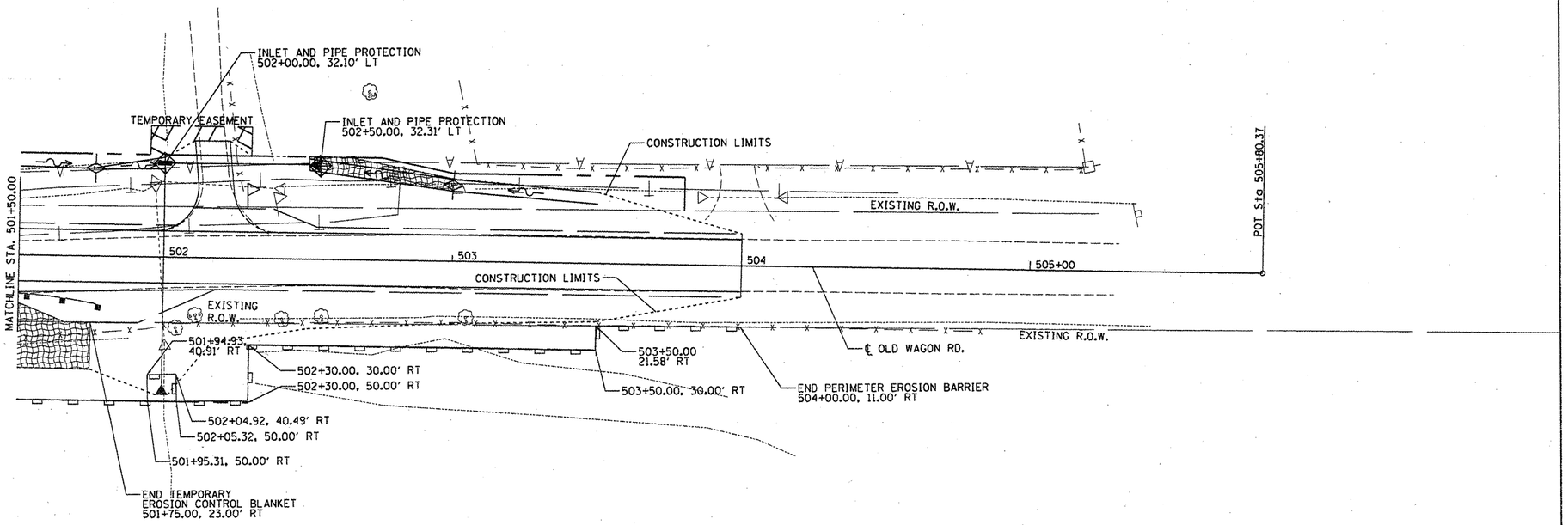
	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -

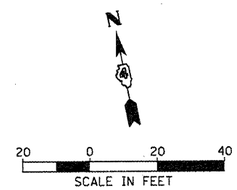
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
EROSION CONTROL PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	20
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		





LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER
- STONE RIPRAP
- TEMPORARY EROSION CONTROL BLANKET
- TURF REINFORCEMENT MAT

NOTES

1. ALL DISTURBED AREAS NOT COVERED BY RIPRAP SHALL BE SEEDED AND MULCHED. SLOPES STEEPER THAN 1:3 SHALL RECEIVE SEEDING CLASS 3A AND MULCH METHOD 2 REMAINING SLOPES SHALL RECEIVE SEEDING CLASS 2A AND MULCH METHOD 2

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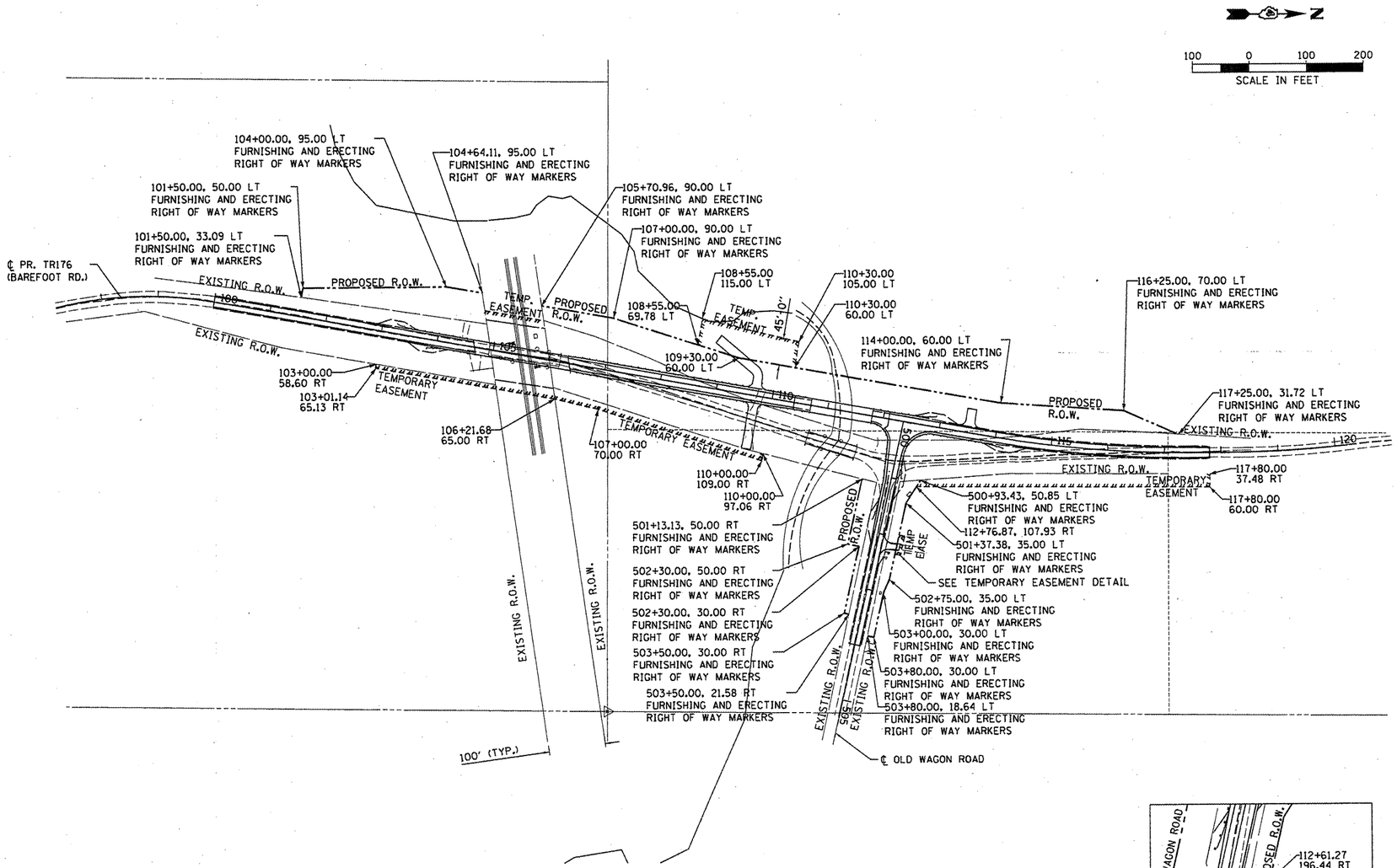
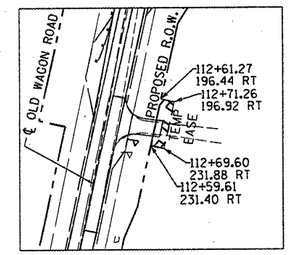
	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -	

OLD WAGON ROAD
EROSION CONTROL PLAN

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	21
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		





TEMPORARY EASEMENT DETAIL

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	PLOT SCALE = 200.0000 ' / in.	CHECKED CAL	REVISED -	
	PLOT DATE = 02\02\2012	DATE 1/12/12	REVISED -	

RIGHT OF WAY PLAN

SCALE: 1"=100' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	22
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

N

20 0 20 40
SCALE IN FEET

PROPOSED R.O.W.

TEMPORARY EASEMENT

TRAFFIC BARRIER TERMINAL, TYPE 1 (BLR 23-4)

TRAFFIC BARRIER TERMINAL, TYPE 5A (BLR 27-1)

EXISTING ROW

87.50'

103+24.85
16.00 LT

103+12.35
22.00 LT

102+91.72
11.00 LT

103+37.35
22.00 LT

STEEL PLATE BEAM GUARDRAIL TYPE A

103+62.35
12.00 LT

104+62.35
12.00 LT

104+49.85
12.00 LT

103

104

105+00

106

107

108

104+20.37
12.00 RT

104+57.88
12.00 RT

103+49.75
11.00 RT

103+70.38
22.00 RT

103+82.88
16.00 RT

103+95.37
22.00 RT

104+70.38
12.00 RT

EXISTING ROW

TEMPORARY EASEMENT

37.50'

STEEL BEAM GUARDRAIL, TYPE A

TRAFFIC BARRIER TERMINAL, TYPE 1 (BLR 23-4)

TRAFFIC BARRIER TERMINAL, TYPE 5A (BLR 27-1)

B.N.S.F. RAILROAD

EXISTING ROW

EXISTING ROW

TRAFFIC BARRIER TERMINAL, TYPE 5A (BLR 27-1)

106+31.68
12.00 LT

106+44.17
12.50 LT

106+56.68
13.00 LT

106+39.71
12.00 RT

106+64.69
13.00 RT

106+52.20
12.50 RT

TRAFFIC BARRIER TERMINAL, TYPE 5A (BLR 27-1)

STEEL PLATE BEAM GUARDRAIL TYPE A

℄ PR. TR176 (BAREFOOT RD.)

EXISTING ROW

TEMPORARY EASEMENT

TEMPORARY EASEMENT

EXISTING ROW

MATCHLINE STA. 109+00.00

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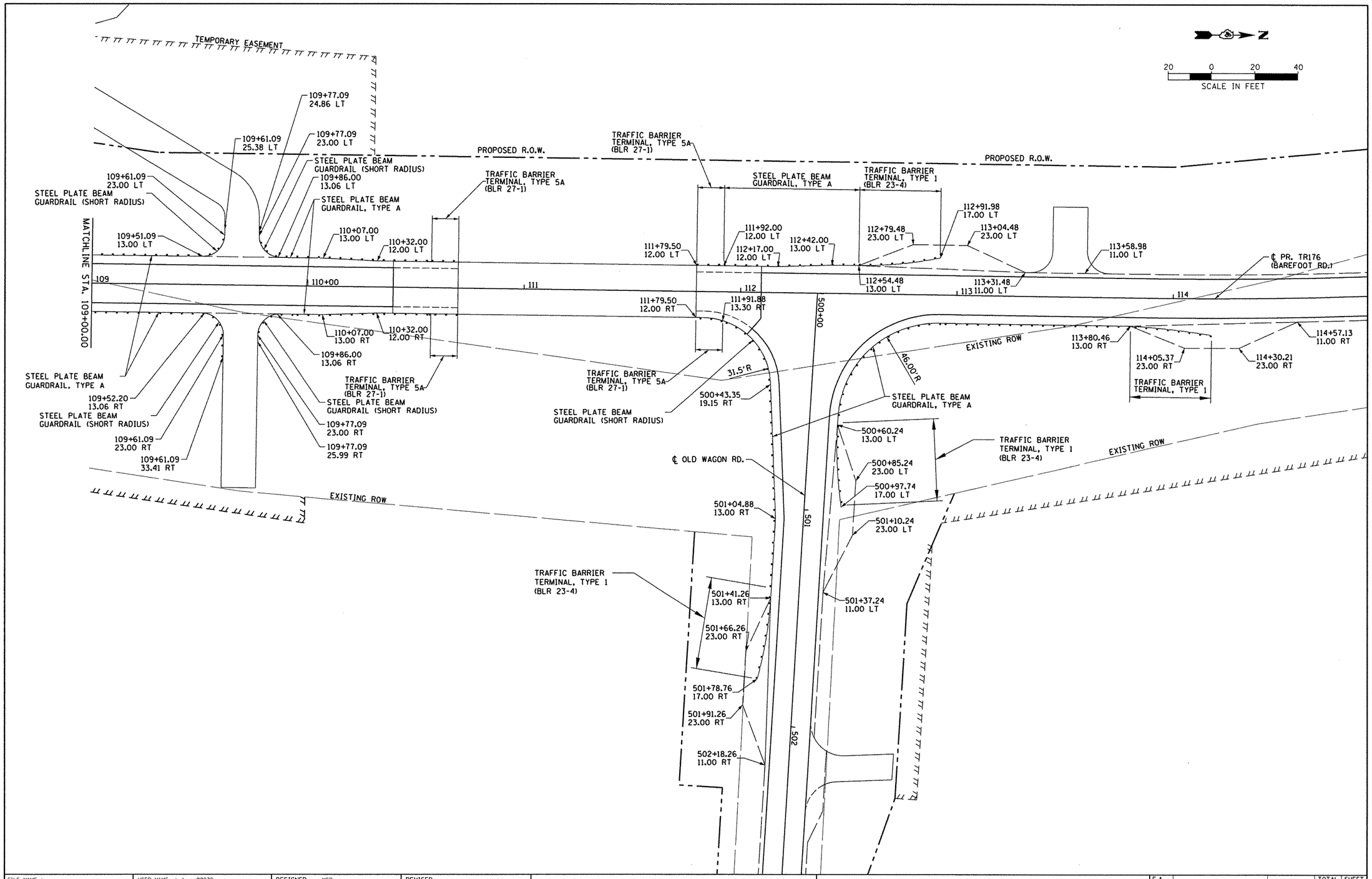
	PLOT DATE = 02\02\2012	CHECKED CAL	REVISED -	
		DATE 1/12/12	REVISED -	

GUARDRAIL DETAIL

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	23
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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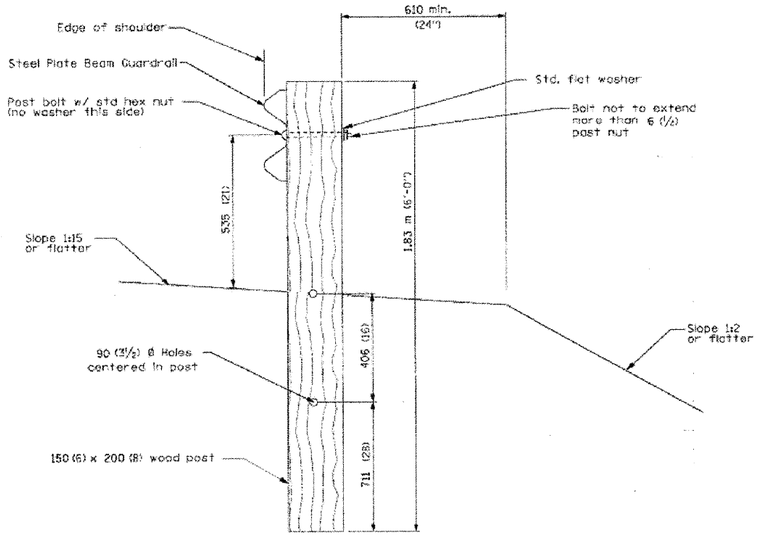
	PLOT DATE = 12\07\2011	DATE 12/6/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

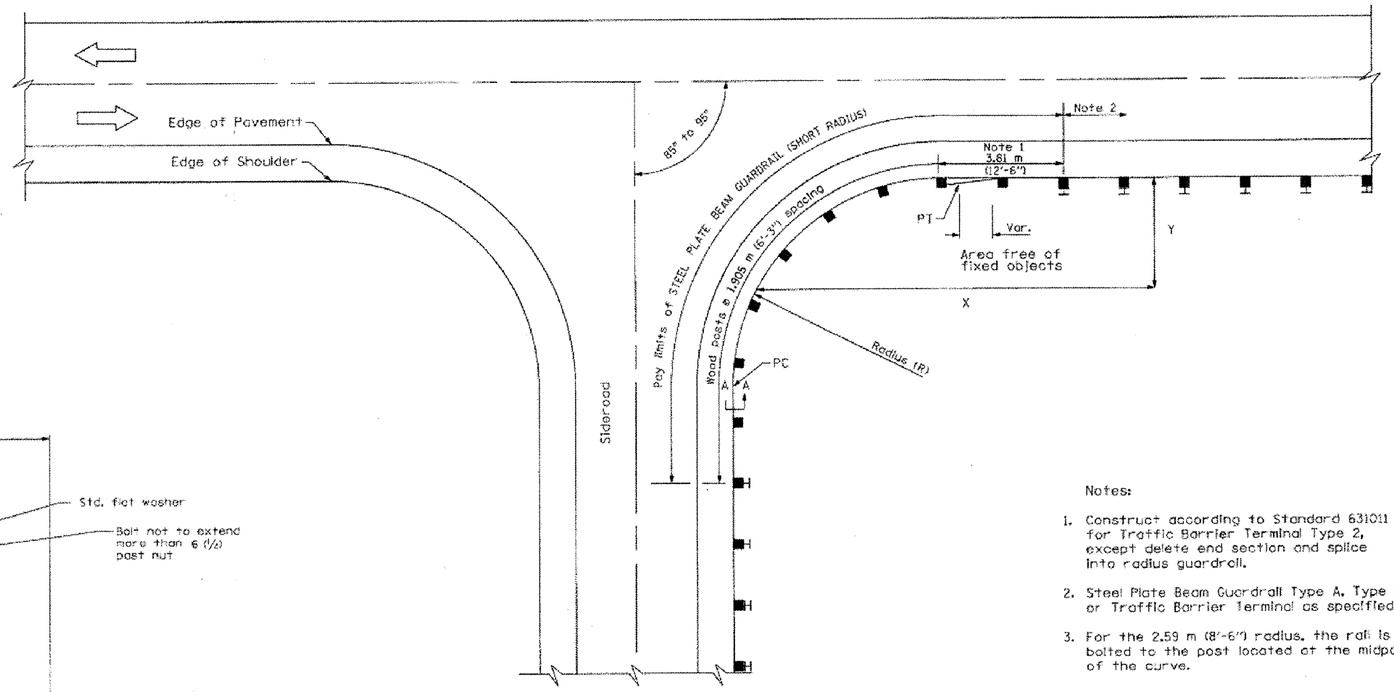
GUARDRAIL DETAIL

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	24
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



SECTION A-A



PLAN

INSTALLATION CHARACTERISTICS PER DESIGN RADIUS (R)			
R	NO. OF WOOD POSTS	X	Y
2.59 (8'-6")	5 (Note 3)	7.6 m (25')	4.6 m (15')
5.18 (17'-0")	6	9.1 m (30')	4.6 m (15')
7.77 (25'-6")	8	12.2 m (40')	6.1 m (20')
10.67 (35'-0")	11	15.2 m (50')	6.1 m (20')

Notes:

1. Construct according to Standard 631011 for Traffic Barrier Terminal Type 2, except delete end section and splice into radius guardrail.
2. Steel Plate Beam Guardrail Type A, Type B, or Traffic Barrier Terminal as specified.
3. For the 2.59 m (8'-6") radius, the rail is not bolted to the post located at the midpoint of the curve.

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

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	PLOT DATE = 12\02\2011	CHECKED CAL	REVISED -	SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.
		DATE 12/6/11		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	25
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

HANSON

PLAN | SURVEYED | PLOTTED | NOTE BOOK | NO. | BY | DATE

PROFILE | SURVEYED | PLOTTED | NOTE BOOK | NO. | BY | DATE

STA. 0+00.00 (ENTRANCE) =
STA. 109+69.09 (TR176)
NORTHING = 1551050.60
EASTING = 2285652.80

℄ PR. TR176
(BAREFOOT RD.)

0+23.00
8.00 RT
PC Sta 0+31.34
0+31.34
8.00 RT
PI Sta 0+40.00
NORTHING = 1551057.48
EASTING = 2285613.39
PT Sta 0+47.05
0+47.05
8.00 RT

0+23.00
8.00 LT
0+31.34
8.00 LT
0+47.05
8.00 LT

PROPOSED R.O.W.
EXISTING R.O.W.
℄ ENTRANCE
1:3
2%
1+00
8.00'
1+30.00
8.00 LT
POT Sta 1+40.00
NORTHING = 1550979.54
EASTING = 2285548.20
1+30.00
8.00 RT
TEMPORARY EASEMENT

PROP. CURVE C1
PI STA. = 0+40.00
Δ = 60° 00' 00" (LT)
D = 381° 58' 19"
R = 15.00'
T = 8.66'
L = 15.71'
E = 2.32'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA = 0+31.34
P.T. STA = 0+47.05

N
50 0 50 100
SCALE IN FEET

℄ TR 176
SLOPES MEASURED
AT RIGHT ANGLES
TO TR-176
VARIES
℄ ENTRANCE
1:3
2.00'
16.00'
2.00'
P.G.L.
2.0% 2.0% 2.0%
FURNISH AND PLACE
TOPSOIL, 4"
SEEDING CLASS, 2A
TEMP. EASEMENT
AGGREGATE SURFACE
COURSE, TYPE A, 6"

SECTION A-A

VPI STA. 0+09.00
ELEVATION 641.62
-4.0%
VPI STA. 0+13.00
ELEVATION 641.46
641.80
-2.0%
-15.00%
PROPOSED PROFILE GRADE
EXISTING GROUND LINE
STA. 1+30.00
ELEV. = 623.91
MATCH EXISTING

645 640 635 630 625 620 615 610 605

625.51 641.80 | 623.17 635.91 | 623.69 628.41

-+00 0+50 1+00

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		DRAWN	DLC	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED	CAL	REVISED -
	PLOT DATE = 12\02\2011	DATE	12/6/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE DETAIL

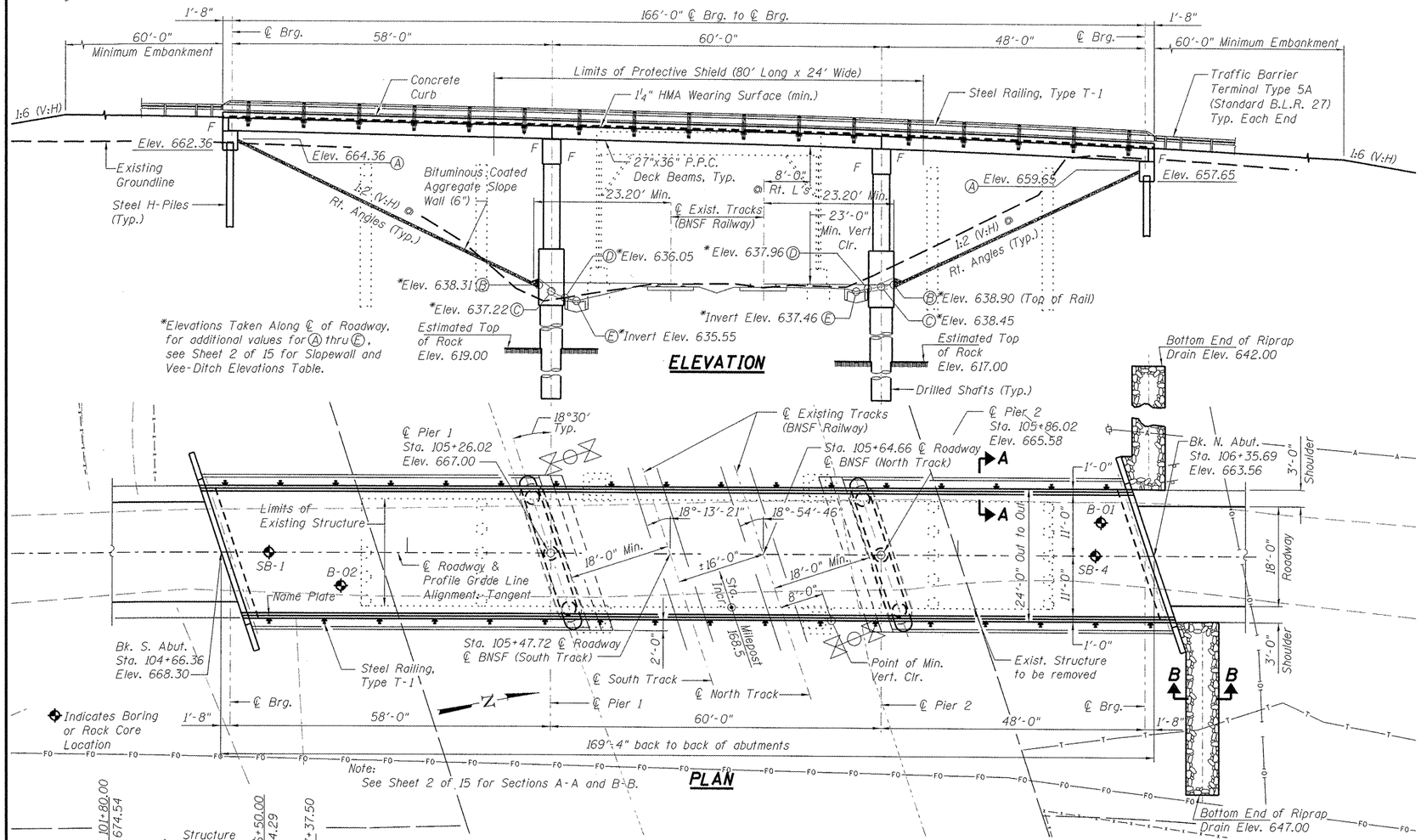
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

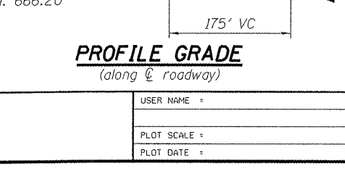
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	26
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

Bench Mark: Point 402 - Nail in east side of power pole west side of Barefoot Road approximately 45' North of Old Wagon Road ℄ - Elevation 631.51
Point 401 - Nail in west side of fence post on the east side of Barefoot Road approximately 235' south of existing south Creek Bridge abutment - Elevation 642.03

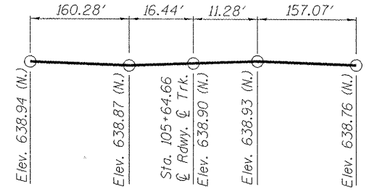
Existing Historical Structure: Structure No. 048-9919. Existing five span structure was built in 1903 and consists of approach spans of twelve lines of timber stringers which support timber deck covered with oil and chip surface. The main span is composed of the same timber deck and surface supported on steel floor beams that are attached to steel through plate girders. The structure consists of two timber pile bent abutments with timber lagging, two timber pile bent piers and two steel bent piers that are set on concrete foundations. Bk. to Bk. abutment length = 128'-6". Out to Out of deck = 19'-0". Existing road will be closed and the existing structure to be removed and replaced. The BNSF RR will remove the Existing Structure.

No Salvage.

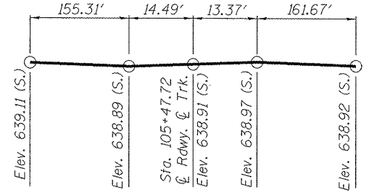




PROFILE GRADE
(along ℄ roadway)



TOP OF NORTH RAIL ELEVATIONS
NORTH BNSF TRACK
(Looking North)



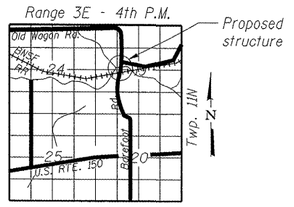
TOP OF NORTH RAIL ELEVATIONS
SOUTH BNSF TRACK
(Looking North)

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (S_1)=0.07
Design Spectral Acceleration at 0.2 sec (S_{DS})=0.12
Soil Site Class = C

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications - 5th Edition with 2010 Interims

DESIGN STRESSES
Field Units:
f'_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)
Precast Prestressed Units:
f'_c = 6,000 p.s.i.
f'_{ci} = 5,000 p.s.i.
f_{pu} = 270,000 p.s.i. ($\frac{1}{2}$" ϕ low lax. strands)
f_{pbt} = 201,960 p.s.i. ($\frac{1}{2}$" ϕ low lax. strands)
f_y = 60,000 p.s.i. (reinforcement)



LOCATION SKETCH

Michael N. Mendenhall
SIGNATURE
11-23-2011
DATE
LIC. EXP. DATE: 11-30-2012

I certify that to the best of knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges

GENERAL PLAN
BAREFOOT ROAD (TR 176) OVER BNSF RAILWAY
SEC. 05-15103-00-BR
KNOX COUNTY
STATION 105+51.03
STRUCTURE NO. 048-9927

HANSON
PROFESSIONAL DESIGN FIRM LICENSE #184-001084

FILE NAME =	USER NAME =	DESIGNED - BWC	REVISED -
		CHECKED - BWC	REVISED -
	PLOT SCALE =	DRAWN - BWC	REVISED -
	PLOT DATE =	CHECKED - MNM	REVISED -

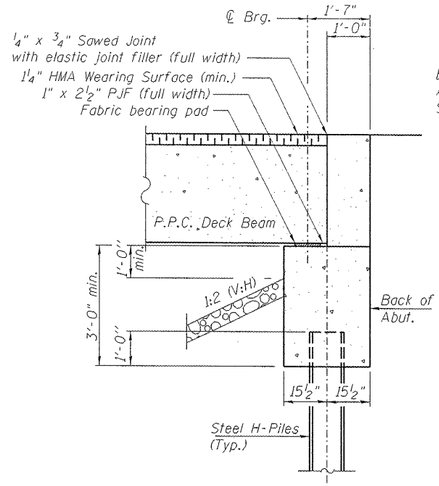
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 048-9927
SHEET NO. 01 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	27
		CONTRACT NO. 89429		
		ILLINOIS FED. AID PROJECT	BROS 0095 128	

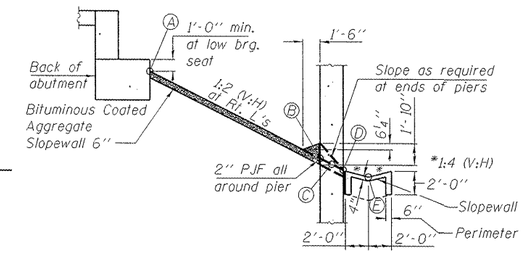
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Protective Coat shall be applied to the Top and Inside surfaces of Concrete Curbs, Top surfaces of Wingwalls, Top exposed surfaces of Backwalls and Exposed Bearing Seat Surfaces of Pier caps. Protective Coat shall not be applied to surfaces to which Waterproofing Membrane system is to be applied.
4. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
5. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.



SECTION THRU ABUTMENT

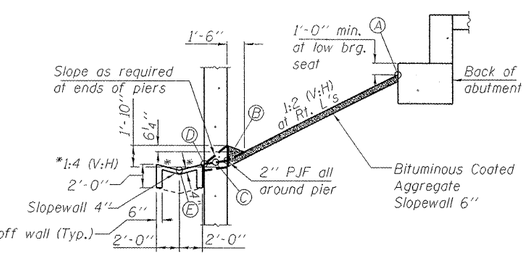
(Horiz. dim. © Rt. L's)



SECTION THRU SOUTH SLOPEWALL

(Hor. Dim. © Rt. >'s)

Note:
Reinforce 4" thick Vee-Ditch and 6" thick cut-off walls with Welded Wire Fabric 6x6-W4.0 x W4.0 wt. 58#'s/100 Sq. Ft. cntr'd. in slabs and walls. Welded Wire Fabric Included in the Cost of Slopewall 4".

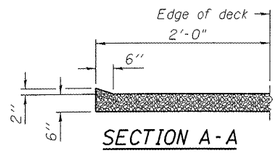


SECTION THRU NORTH SLOPEWALL

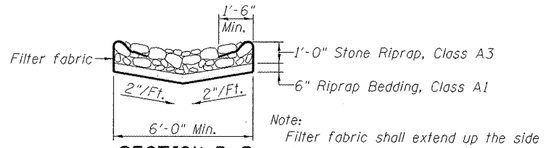
(Hor. Dim. © Rt. >'s)

ELEVATIONS - SLOPEWALLS AND VEE-DITCHES

Point	South Slopewall			North Slopewall		
	W. End	Rdwy. ℄	E. End	W. End	Rdwy. ℄	E. End
Ⓐ	664.36	664.36	664.36	659.65	659.65	659.65
Ⓑ	638.18	638.31	638.44	638.87	638.90	638.93
Ⓒ	637.08	637.22	637.36	638.34	638.45	638.55
Ⓓ	636.19	636.05	635.91	637.77	637.96	638.15
Ⓔ	635.69	635.55	635.41	637.27	637.46	637.65

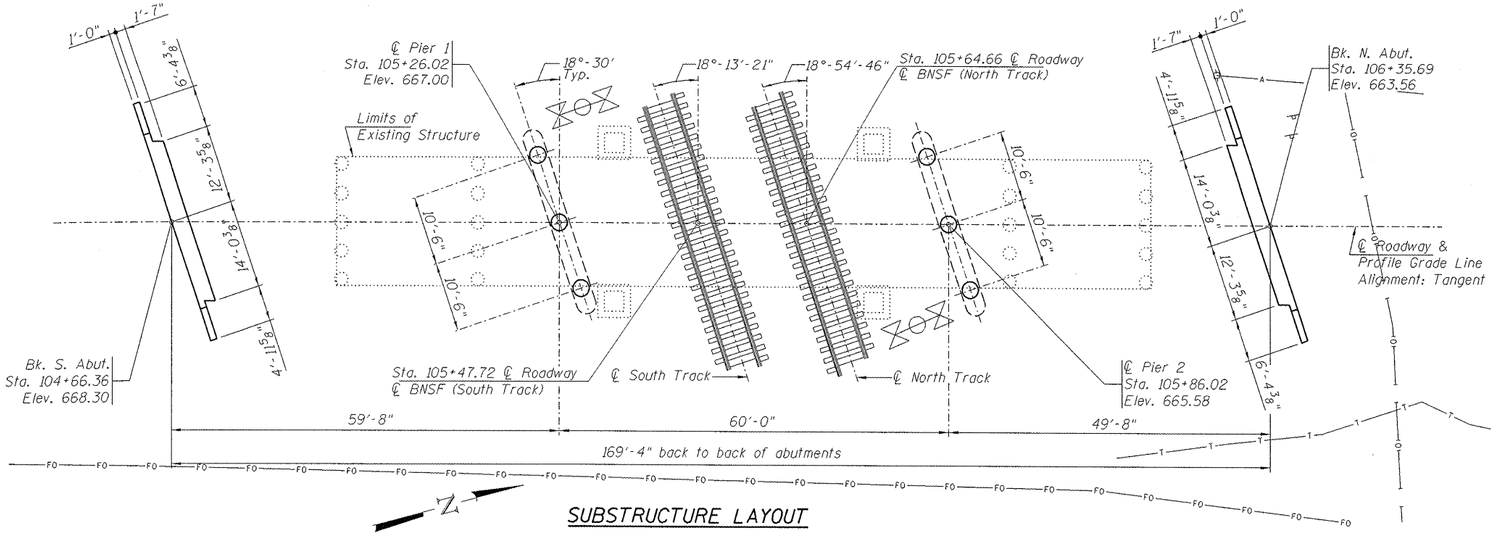


SECTION A-A



SECTION B-B

Note:
Filter fabric shall extend up the side of the trench until daylighting. Wrap fabric back into the riprap.



SUBSTRUCTURE LAYOUT

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A3	Sq. Yd.	-	58	58
Filter Fabric	Sq. Yd.	-	115	115
Bituminous Materials (Prime Coat)	Gallon	41	-	41
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	33	-	33
Structure Excavation	Cu. Yd.	-	191	191
Concrete Structures	Cu. Yd.	-	170.9	170.9
Concrete Superstructure	Cu. Yd.	10.4	-	10.4
Concrete Encasement	Cu. Yd.	-	3.4	3.4
Protective Coat	Sq. Yd.	69	-	69
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4010	-	4010
Reinforcement Bars	Pound	-	14020	14020
Reinforcement Bars, Epoxy Coated	Pound	540	23260	23800
Steel Railing, Type T1	Foot	339	-	339
Slope Wall 4 Inch	Sq. Yd.	-	27	27
Furnishing Steel Piles HP12x53	Foot	-	284	284
Driving Piles	Foot	-	284	284
Test Pile Steel HP12x53	Each	-	2	2
Pile Shoes	Each	-	10	10
Name Plates	Each	-	-	1
Drilled Shaft in Soil	Cu. Yd.	-	43.6	43.6
Drilled Shaft in Rock	Cu. Yd.	-	36.3	36.3
Waterproofing Membrane System	Sq. Yd.	409	-	409
Portland Cement Mortar Fairing Course	Foot	1171	-	1171
Bituminous Coated Aggregate Slopewall 6"	Sq. Yd.	-	348	348

T.R. 176 over BNSF R.R.
BUILT 20 BY
PERSIFER ROAD DISTRICT
KNOX COUNTY
SEC. 05-15103-00-BR
STA. 105+51.03
STR. NO. 048-9927 LOADING HL-93

LETTERING FOR NAME PLATE

Locate Name Plate on Southeast Corner of Bridge (See Standard 515001)

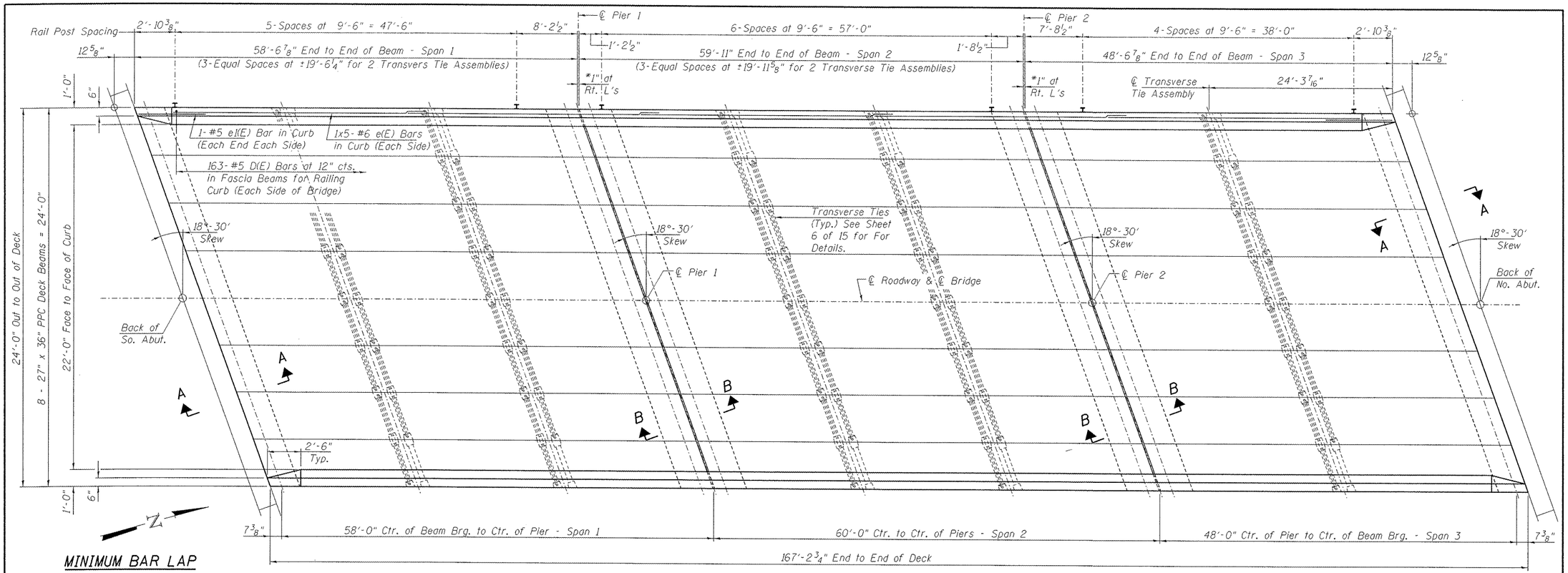
INDEX OF SHEETS

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 048-9927
SHEET NO. 02 OF 15 SHEETS

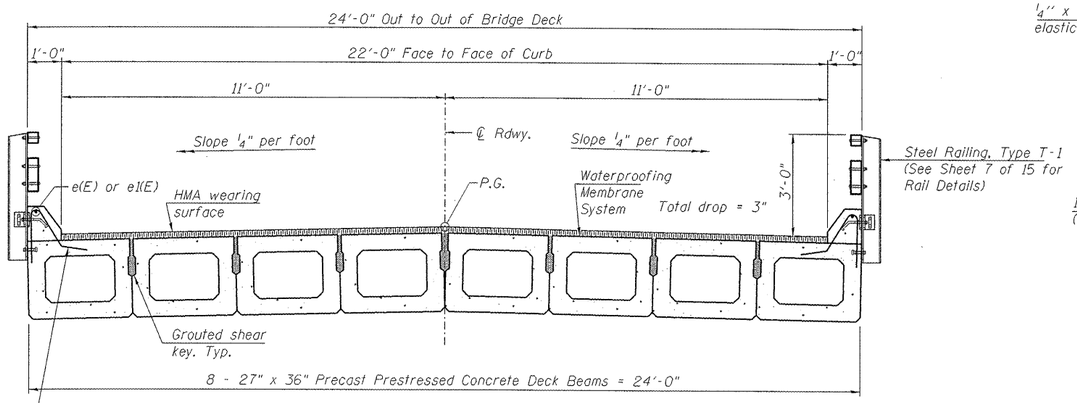
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	28
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			



PLAN

MINIMUM BAR LAP

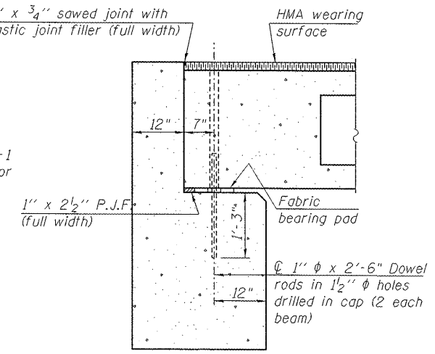
#6 bar 3'-0"



Place #5 D(E) bars at 12" cts. in fascia beam for railing curb. Omit D(E) bars in curb transition. D(E) bar included in cost of beam.

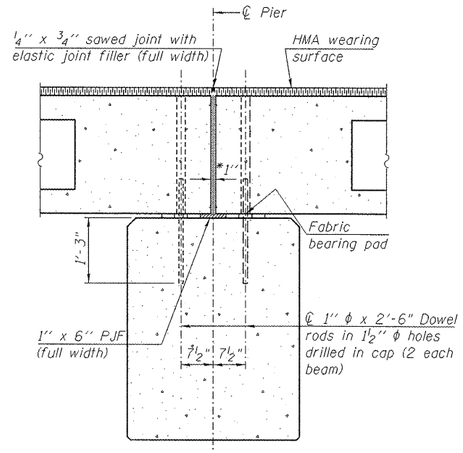
CROSS SECTION

(Looking North)



SECTION A-A

(Dimensions are at Rt. L's)
See sheet 6 of 15 for fabric bearing pad details.



SECTION B-B

(Dimensions are at Rt. L's)

*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

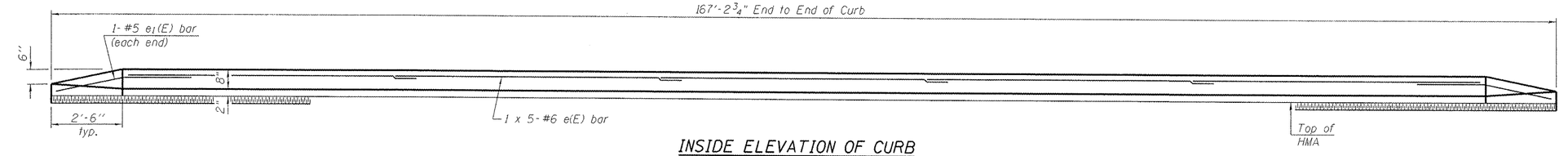
Notes:
See sheet 4 of 15 for Superstructure Details and Bill of Material.

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 048-9927
SHEET NO. 03 OF 15 SHEETS

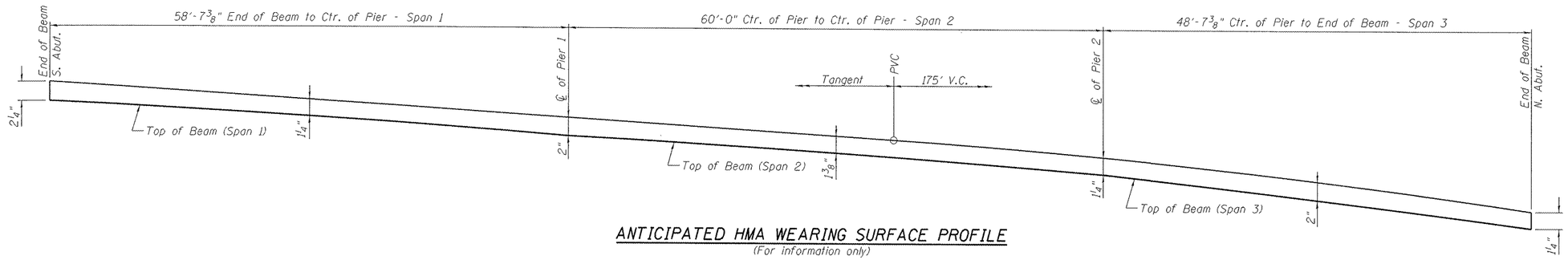
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	29
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 128		



INSIDE ELEVATION OF CURB

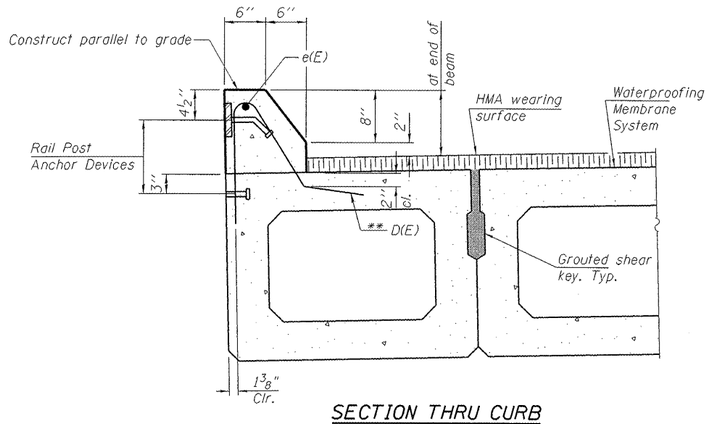
MINIMUM BAR LAP

#6 bar 3'-0"



ANTICIPATED HMA WEARING SURFACE PROFILE

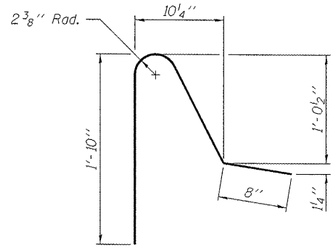
(For information only)



SECTION THRU CURB

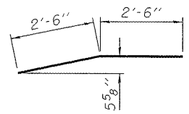
Curbs shall be poured in the field.

** Place #5 D(E) bars at 12" cts. In fascia beam for railing curb. Omit D(E) bars in curb transition. D(E) bar included in cost of beam.



BAR D(E)

(326 Required)



BAR e1(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e(E)	10	#6	34'-10"	
e1(E)	4	#5	5'-0"	
Reinforcement Bars, Epoxy Coated			Pound	540
Concrete Superstructure			Cu. Yd.	10.4
Bituminous Materials (Prime Coat)			Gallon	41
Hot-Mix Asphalt Surf. Course, Mix "C", N50			Ton	33
Water Proofing Membrane System			Sq. Yd.	409
Portland Cement Mortar Fairing Course			Foot	1171

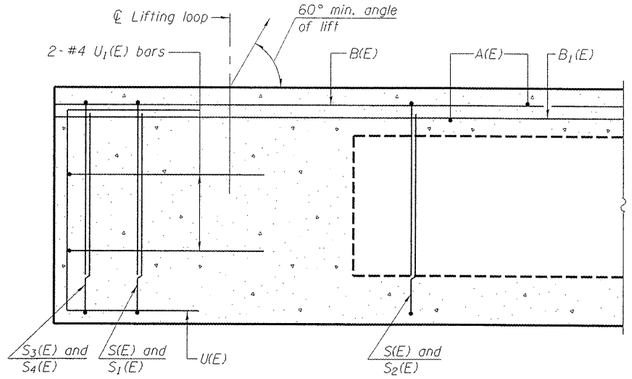
Bars indicated thus 1 x 5-#6 etc. indicates 1 line of bars with 5 lengths per line.

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

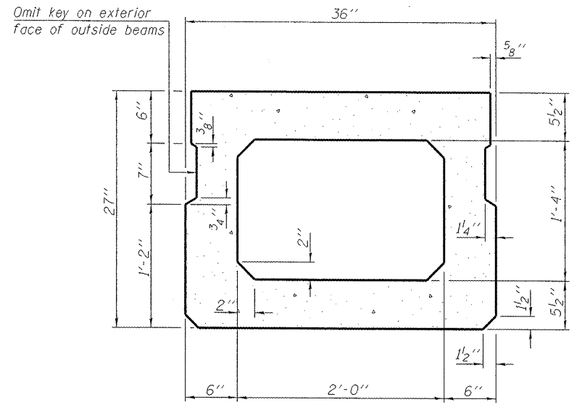
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 048-9927
SHEET NO. 04 OF 15 SHEETS

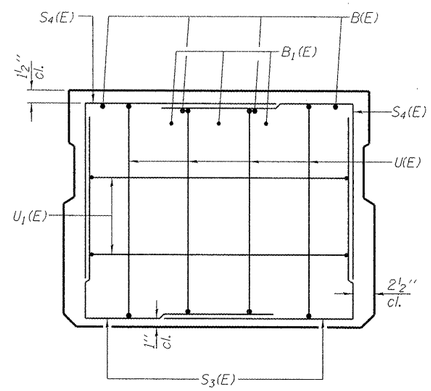
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	30
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			



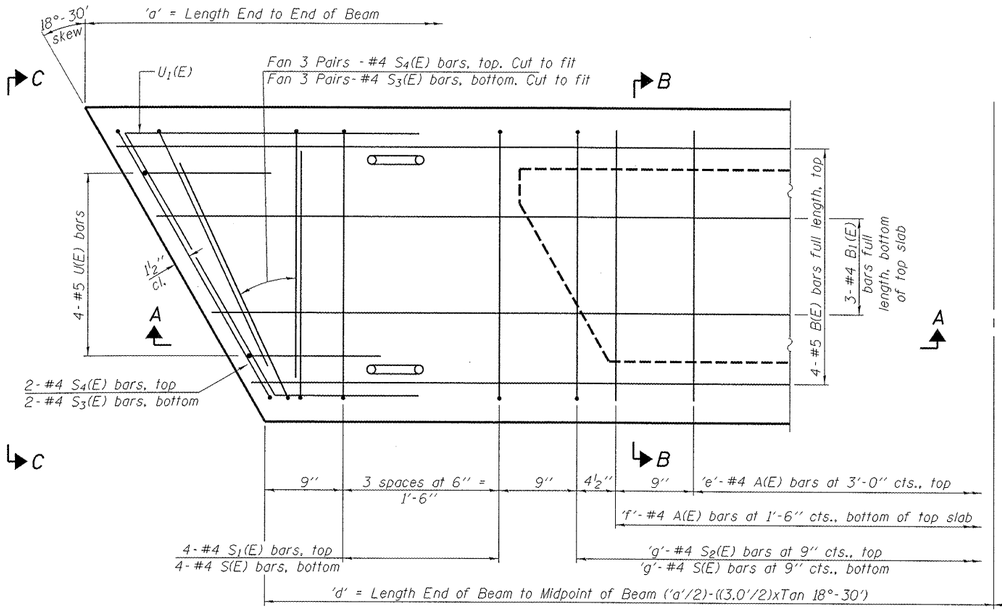
SECTION A-A



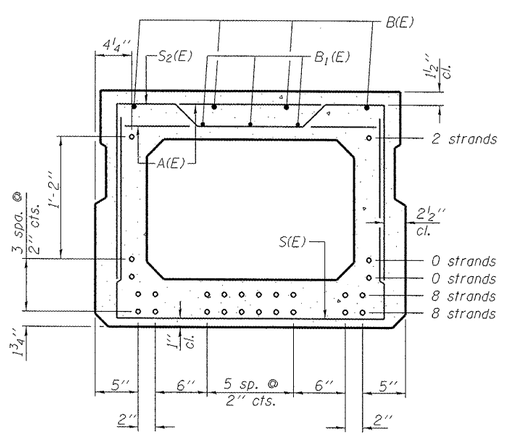
SECTION B-B
(Showing dimensions)



VIEW C-C



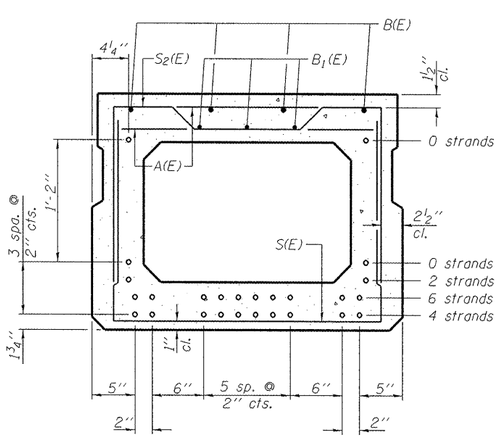
PARTIAL-PLAN VIEW



SECTION B-B (Spans 1 & 2)

(Showing reinforcement and permissible strand locations)

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



SECTION B-B (Span 3)

(Showing reinforcement and permissible strand locations)

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

Note: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
See Sheet 4 of 15 for D(E) Bars Embedded in Exterior Beams for Curb.

MINIMUM BAR LAP

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

BEAM VARIABLES

	Span 1	Span 2	Span 3
'a'	58'-6 7/8"	59'-11"	48'-6 7/8"
'd'	28'-9 7/16"	29'-5 1/2"	23'-9 7/16"
'e'	18	18	14
'f'	35	36	29
'g'	70	72	57
'h'	30'-5"	31'-1"	25'-5"
'j'	30'-2"	30'-10"	25'-2"

BAR LIST (Span 1)
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	54	#4	2'-7"	—
B(E)	8	#5	'h'	—
$B_1(E)$	6	#4	'j'	—
S(E)	80	#4	6'-5"	⊔
$S_1(E)$	8	#4	5'-11"	⊓
$S_2(E)$	72	#4	6'-2"	⊓
$S_3(E)$	16	#4	4'-3"	⌊
$S_4(E)$	16	#4	4'-0"	⌊
U(E)	8	#5	4'-6"	⊏
$U_1(E)$	4	#4	5'-11"	⌐

Note: See sheet 6 of 15 for additional details and Bill of Material.

BAR LIST (Span 2)
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	53	#4	2'-7"	—
B(E)	8	#5	'h'	—
$B_1(E)$	6	#4	'j'	—
S(E)	78	#4	6'-5"	⊔
$S_1(E)$	8	#4	5'-11"	⊓
$S_2(E)$	70	#4	6'-2"	⊓
$S_3(E)$	16	#4	4'-3"	⌊
$S_4(E)$	16	#4	4'-0"	⌊
U(E)	8	#5	4'-6"	⊏
$U_1(E)$	4	#4	5'-11"	⌐

Note: See sheet 6 of 15 for additional details and Bill of Material.

BAR LIST (Span 3)
ONE BEAM ONLY

(For information only)

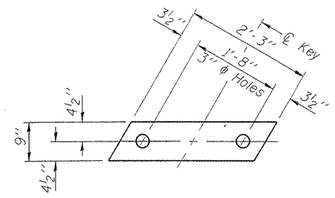
Bar	No.	Size	Length	Shape
A(E)	43	#4	2'-7"	—
B(E)	8	#5	'h'	—
$B_1(E)$	6	#4	'j'	—
S(E)	65	#4	6'-5"	⊔
$S_1(E)$	8	#4	5'-11"	⊓
$S_2(E)$	57	#4	6'-2"	⊓
$S_3(E)$	16	#4	4'-3"	⌊
$S_4(E)$	16	#4	4'-0"	⌊
U(E)	8	#5	4'-6"	⊏
$U_1(E)$	4	#4	5'-11"	⌐

Note: See sheet 6 of 15 for additional details and Bill of Material.

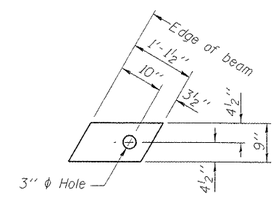
FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - JGT	REVISED -	
	PLOT SCALE =	DRAWN - Rod	REVISED -	
	PLOT DATE =	CHECKED - TEH	REVISED -	

27" x 36" PPC DECK BEAM
STRUCTURE NO. 048-9927
SHEET NO. 05 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	31
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			



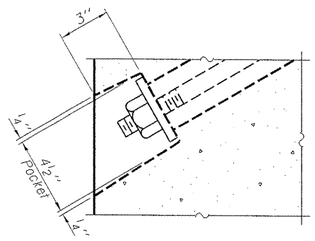
FABRIC BEARING PAD
(Interior)



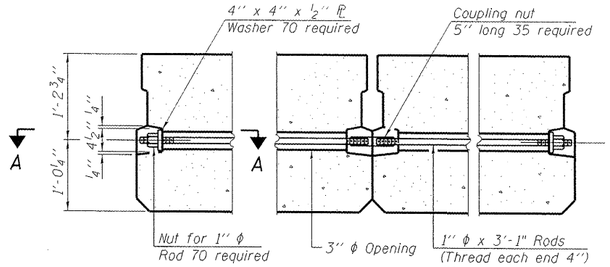
FABRIC BEARING PAD
(Exterior)

FIXED

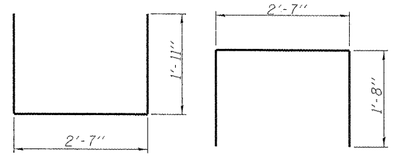
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

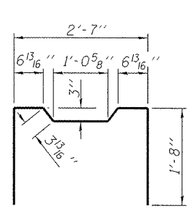


TYPICAL TRANSVERSE TIE ASSEMBLY

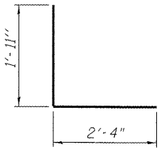


BAR S(E)

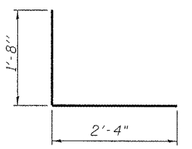
BAR S_1(E)



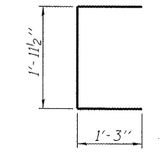
BAR S_2(E)



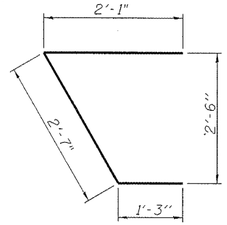
BAR S_3(E)



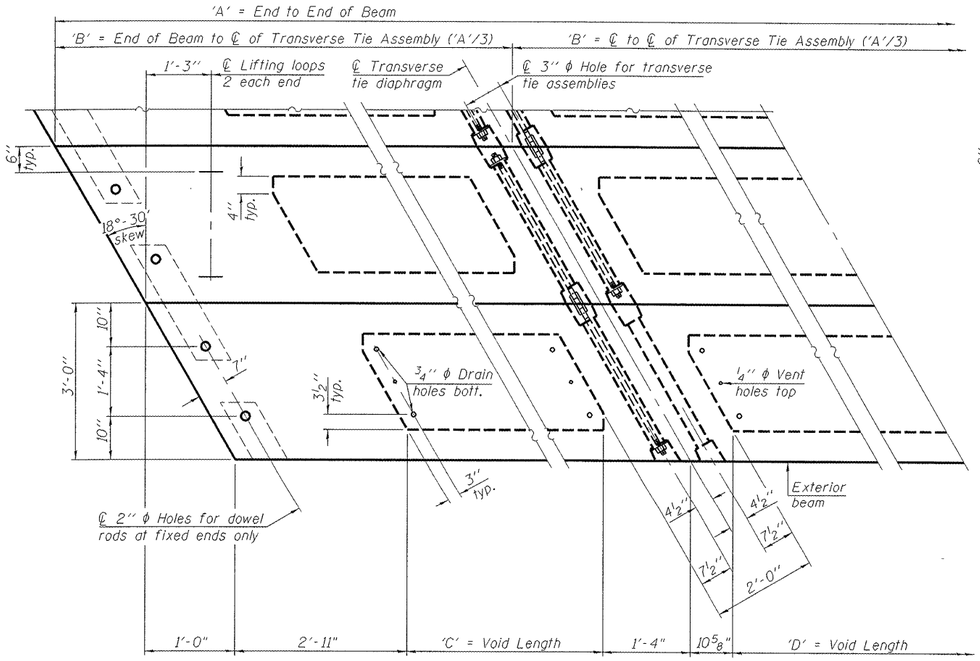
BAR S_4(E)



BAR U(E)

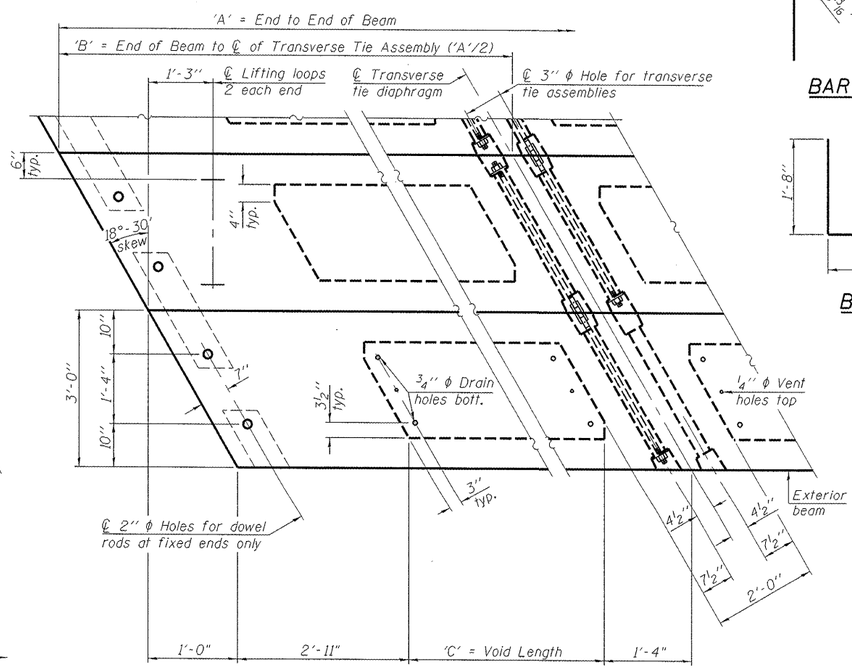


BAR U_1(E)



HALF-PLAN VIEW
(Spans 1 and 2)

Note: Connect beams in pairs with the transverse tie configuration shown. See Sheet 4 of 15 for D(E) Bars Embedded in Exterior Beams for Curb.



HALF-PLAN VIEW
(Span 3)

BEAM VARIABLES

	Span 1	Span 2	Span 3
'A'	58'-6 7/8"	59'-11"	48'-6 7/8"
'B'	± 19'-6 1/4"	± 19'-11 5/8"	24'-3 7/16"
'C'	15'-3 1/4"	15'-8 5/8"	20'-0 7/16"
'D'	17'-3 5/8"	17'-9"	-

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

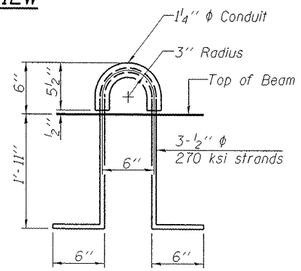
Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



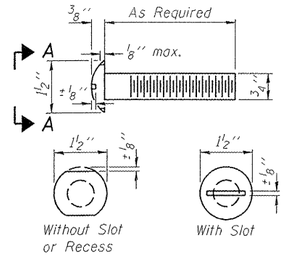
LIFTING LOOP DETAIL

BILL OF MATERIAL

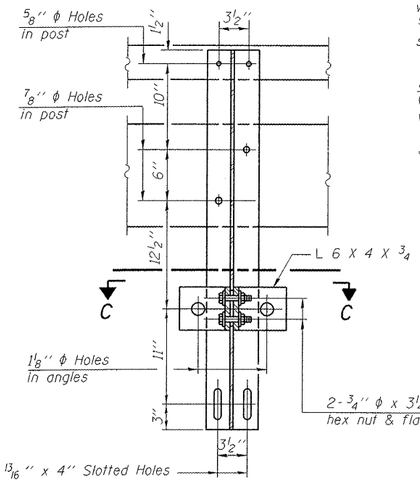
Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	4010

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	27" x 36" PPC DECK BEAM DETAILS STRUCTURE NO. 048-9927
		CHECKED - JGT	REVISED -		
	PLOT SCALE =	DRAWN - Rod	REVISED -		SHEET NO. 06 OF 15 SHEETS
	PLOT DATE =	CHECKED - TEH	REVISED -		

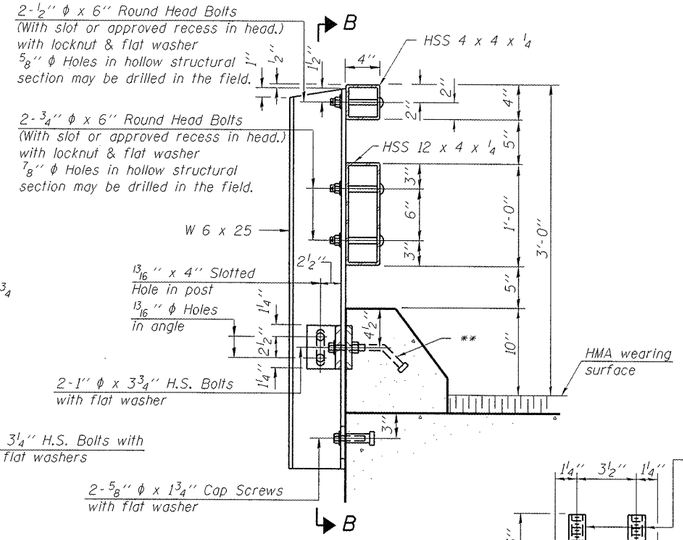
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	32
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			



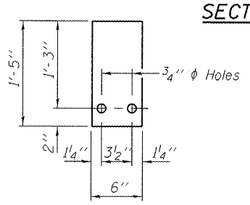
VIEW A-A ROUND HEAD BOLT



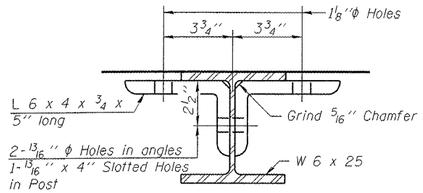
SECTION B-B



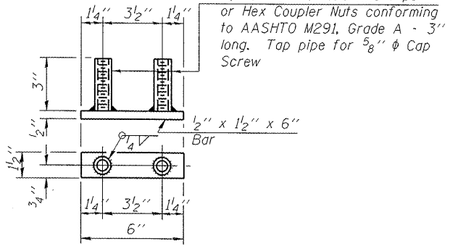
SECTION AT RAIL POST



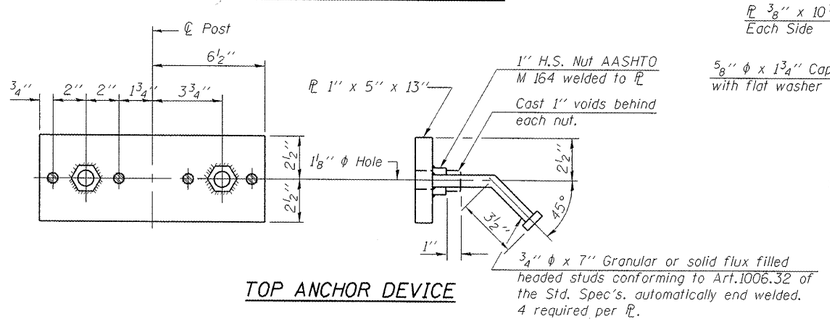
1/4" SHIM PLATE



SECTION C-C



BOTTOM ANCHOR DEVICE



TOP ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

Notes:

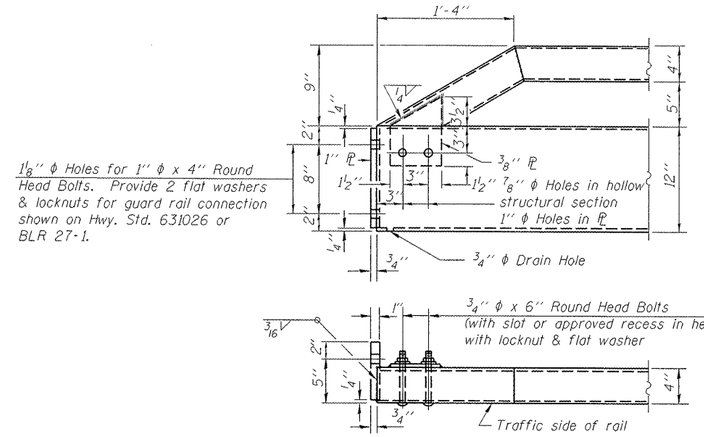
All field drilled holes shall be coated with an approved zinc rich point before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-5" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type T-1.

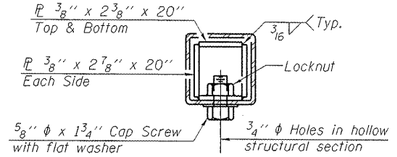
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

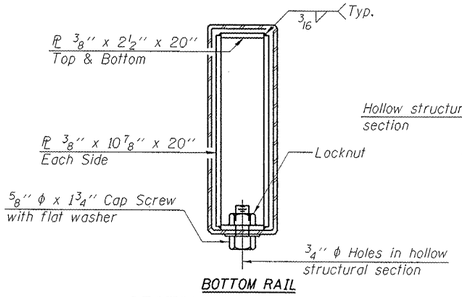
See Sheet 3 of 15 for Rail Post Spacings.



END OF RAIL DETAILS

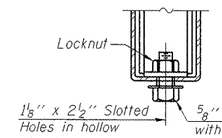


TOP RAIL

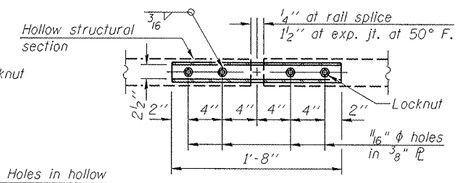


BOTTOM RAIL

SECTIONS AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE PL TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type T1	Foot	339

R-24A 7-1-10 (9'-6" Maximum Post Spacing)

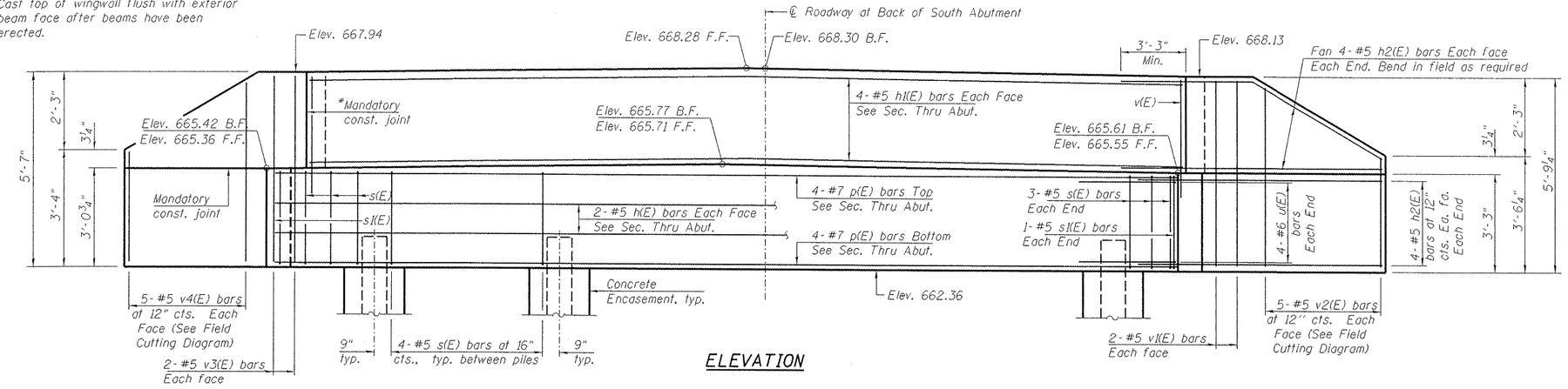
FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

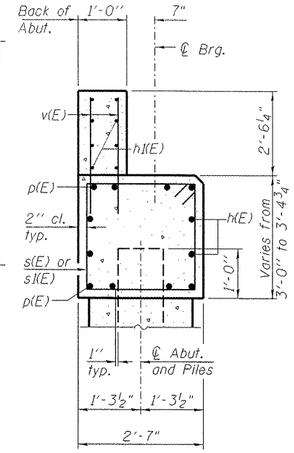
STEEL RAILING, TYPE T-1
STRUCTURE NO. 048-9927
SHEET NO. 07 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	33
		CONTRACT NO. 89429		
		ILLINOIS FED. AID PROJECT	BROS 0095 128	

* Cast top of wingwall flush with exterior beam face after beams have been erected.

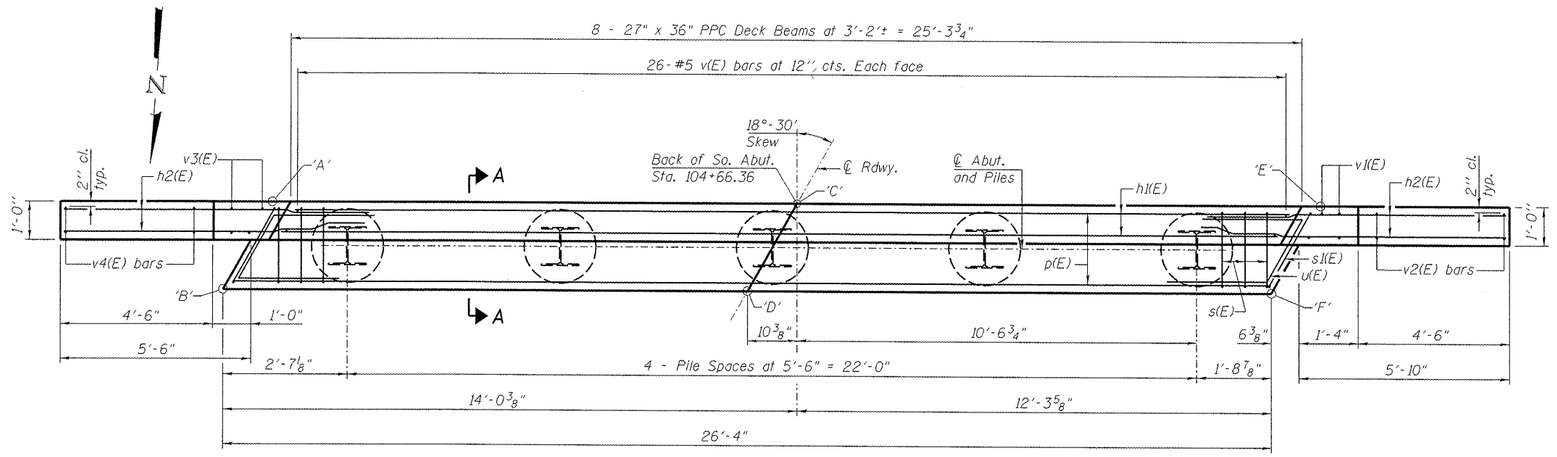


ELEVATION



SECTION A-A

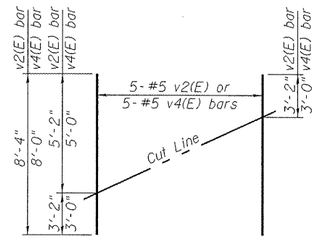
(Dimensions are at Rt. L's)



PLAN

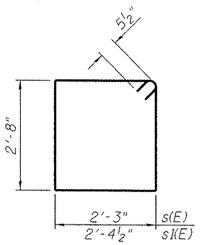
PILE DATA

Type:	HP12x53
Nominal Required Bearing:	419 Kips
Factored Resistance Available:	230 Kips
Est. Length:	39 Feet
No. Production Piles:	4 (with pile shoes)
No. Test Piles:	1 (with pile shoes)

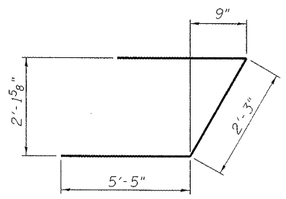


FIELD CUTTING DIAGRAM

Order v2(E) and v4(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS s(E) & s1(E)



BAR u(E)

ELEVATIONS TOP of PILE CAP

Point	Elevation
'A'	665.42
'B'	665.36
'C'	665.77
'D'	665.71
'E'	665.61
'F'	665.55

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#5	26'-0"	
h1(E)	8	#5	25'-0"	
h2(E)	32	#5	10'-0"	
p(E)	8	#7	26'-0"	
s(E)	22	#5	10'-9"	
s1(E)	2	#5	11'-0"	
u(E)	8	#6	13'-1"	
v(E)	52	#5	4'-10"	
v1(E)	4	#5	5'-5"	
v2(E)	5	#5	8'-4"	
v3(E)	4	#5	5'-3"	
v4(E)	5	#5	8'-0"	
Structure Excavation		Cu. Yd.	57	
Concrete Structures		Cu. Yd.	12.7	
Reinforcement Bars, Epoxy Coated		Pound	1890	
Furnishing Steel Piles HP12x53		Foot	156	
Driving Piles		Foot	156	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	5	
Concrete Encasement		Cu. Yd.	1.7	

Notes:
For details of piles and Concrete Encasement, see sheet 12 of 15.
Cast backwall after beams have been erected, and before HMA Wearing surface has been placed.
B.F. = Back Face
F.F. = Front face

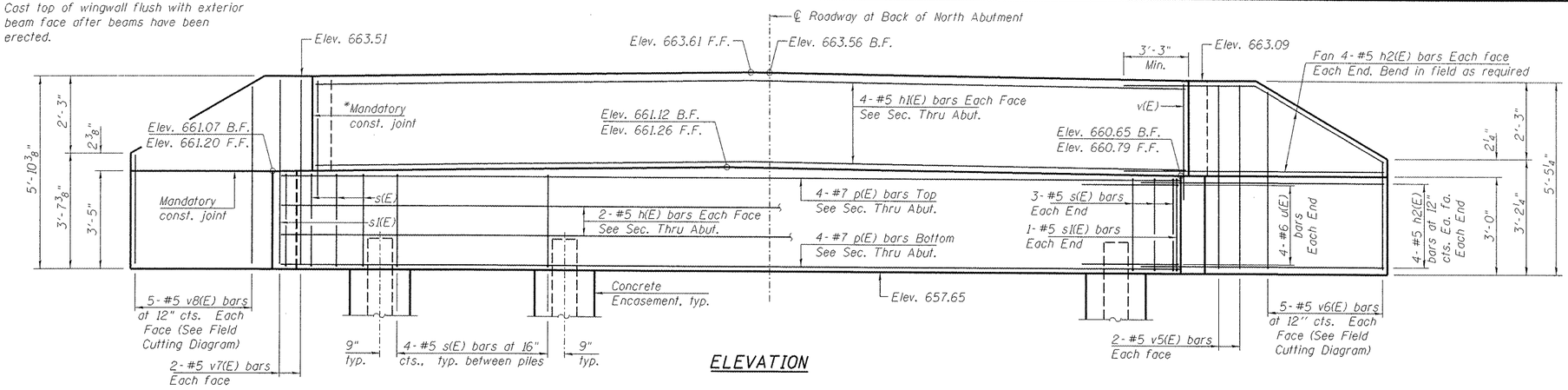
FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

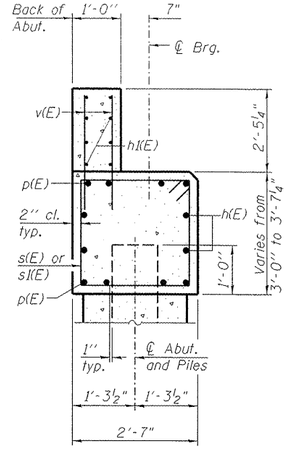
SOUTH ABUTMENT
STRUCTURE NO. 048-9927
SHEET NO. 08 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	34
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 128		

* Cast top of wingwall flush with exterior beam face after beams have been erected.

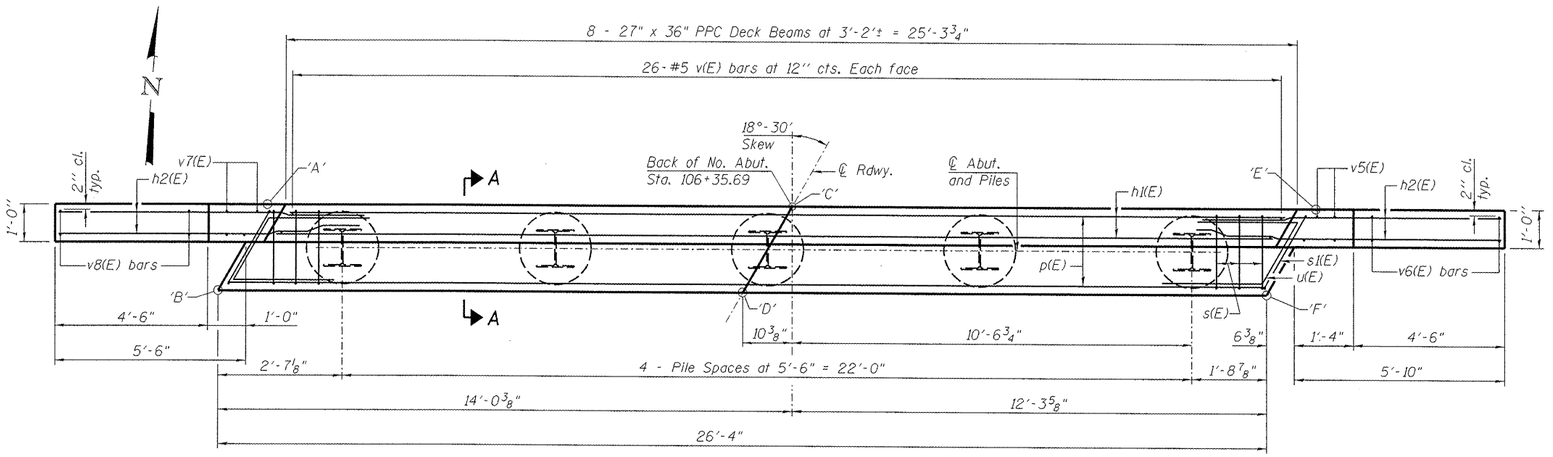


ELEVATION



SECTION A-A

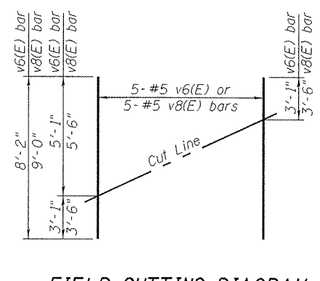
(Dimensions are at Rt. L's)



PLAN

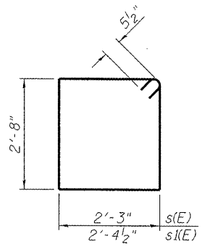
PILE DATA

Type:	HP12x53
Nominal Required Bearing:	419 Kips
Factored Resistance Available:	230 Kips
Est. Length:	32 Feet
No. Production Piles:	4 (with pile shoes)
No. Test Piles:	1 (with pile shoes)

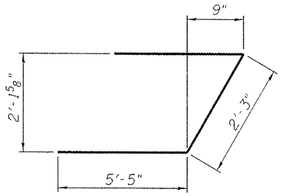


FIELD CUTTING DIAGRAM

Order v6(E) and v8(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BARS s(E) & s1(E)



BAR u(E)

ELEVATIONS TOP of PILE CAP

Point	Elevation
'A'	661.07
'B'	661.20
'C'	661.12
'D'	661.26
'E'	660.65
'F'	660.79

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#5	26'-0"	—
h1(E)	8	#5	25'-0"	—
h2(E)	32	#5	10'-0"	—
p(E)	8	#7	26'-0"	—
s(E)	22	#5	10'-9"	□
s1(E)	2	#5	11'-0"	□
u(E)	8	#6	13'-1"	⌐
v(E)	52	#5	4'-10"	—
v5(E)	4	#5	5'-1"	—
v6(E)	5	#5	8'-2"	—
v7(E)	4	#5	5'-6"	—
v8(E)	5	#5	9'-0"	—
Structure Excavation		Cu. Yd.	58	
Concrete Structures		Cu. Yd.	13.0	
Reinforcement Bars, Epoxy Coated		Pound	1900	
Furnishing Steel Piles HP12x53		Foot	128	
Driving Piles		Foot	128	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	5	
Concrete Encasement		Cu. Yd.	1.7	

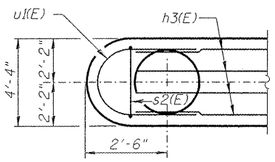
Notes:
For details of piles and Concrete Encasement, see sheet 12 of 15.
Cast backwall after beams have been erected, and before HMA Wearing surface has been placed.
B.F. = Back Face
F.F. = Front face

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

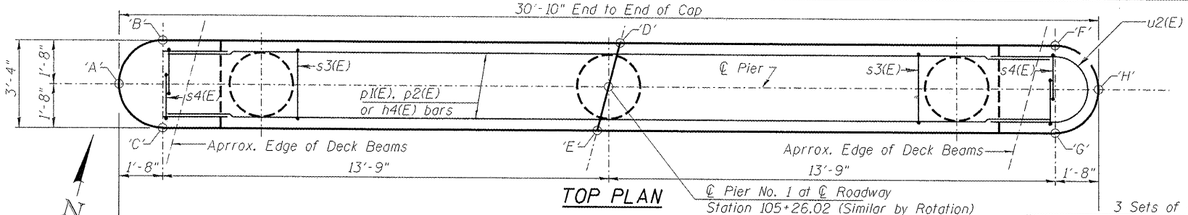
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
STRUCTURE NO. 048-9927
SHEET NO. 09 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	35
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 128		



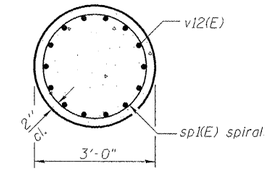
SECTION D-D



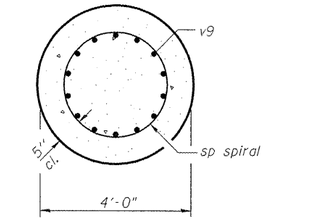
TOP PLAN

ELEVATIONS TOP of CAP

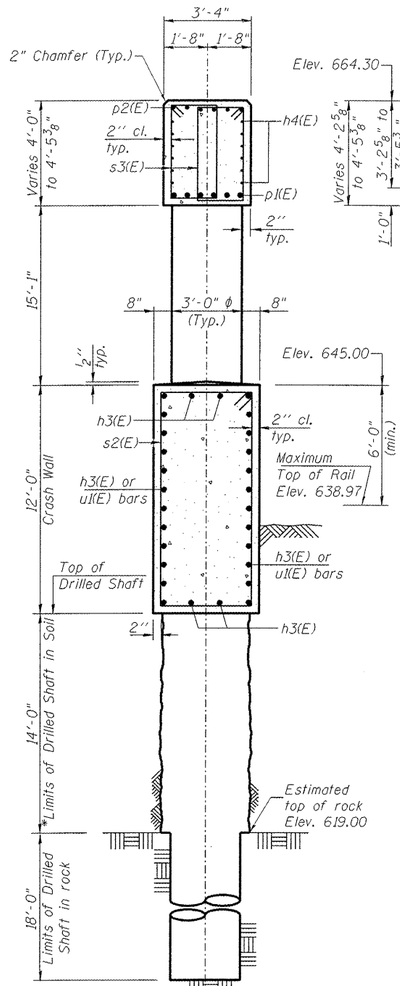
Point	Elevation
'A'	664.30
'B'	664.27
'C'	664.36
'D'	664.46
'E'	664.53
'F'	664.10
'G'	664.15
'H'	664.08



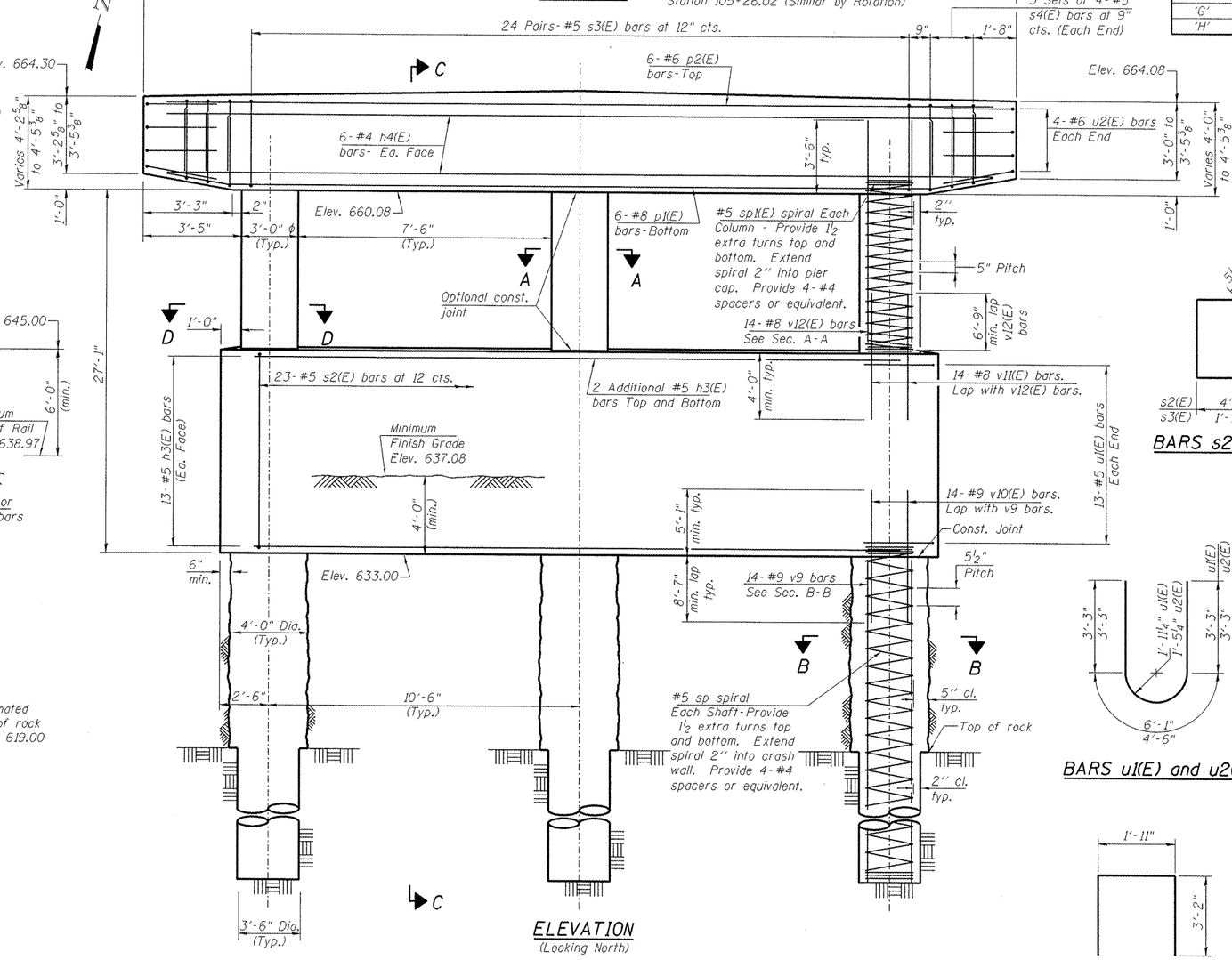
SECTION A-A



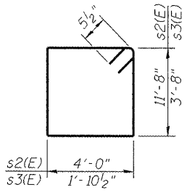
SECTION B-B



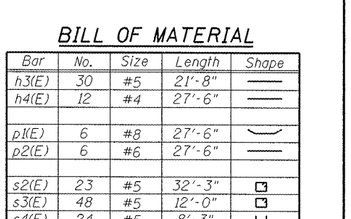
SECTION C-C



ELEVATION
(Looking North)



BARS s2(E) & s3(E)



BAR p1(E)

BARS u1(E) and u2(E)

BAR s4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	30	#5	21'-8"	—
h4(E)	12	#4	27'-6"	—
p1(E)	6	#8	27'-6"	⌒
p2(E)	6	#6	27'-6"	—
s2(E)	23	#5	32'-3"	□
s3(E)	48	#5	12'-0"	□
s4(E)	24	#5	8'-3"	⊔
sp	3	#5	32'-2"	∿∿∿
** sp1(E)	3	#5	15'-3"	∿∿∿
u1(E)	26	#5	12'-7"	⊃
u2(E)	8	#6	11'-0"	⊃
v9	42	#9	31'-10"	—
v10(E)	42	#9	13'-8"	—
v11(E)	42	#8	10'-9"	—
v12(E)	42	#8	18'-7"	—
Structure Excavation		Cu. Yd.	38	
Concrete Structures		Cu. Yd.	75.7	
Reinforcement Bars		Pound	6880	
Reinforcement Bars, Epoxy Coated		Pound	9960	
Drilled Shaft in Soil		Cu. Yd.	19.5	
Drilled Shaft in Rock		Cu. Yd.	19.2	

Cast steps monolithically with cap.
Space cap reinforcement to miss dowel bars.
Minimum lap for spirals = 3'-9" (#5 epoxy coated)
2'-6" (#5 uncoated)

** Length is height of spiral.

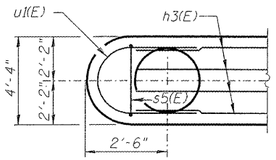
* The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

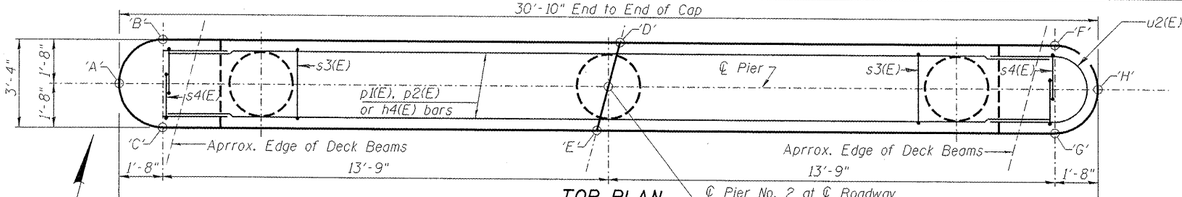
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER NO. 1
STRUCTURE NO. 048-9927
SHEET NO. 10 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	36
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			



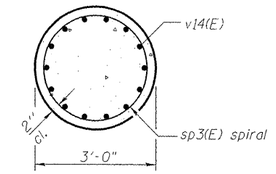
SECTION D-D



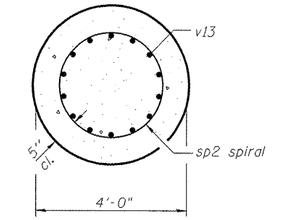
TOP PLAN

ELEVATIONS TOP of CAP

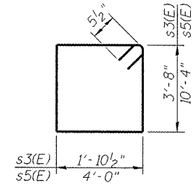
Point	Elevation
'A'	662.98
'B'	662.94
'C'	663.06
'D'	663.08
'E'	663.19
'F'	662.69
'G'	662.77
'H'	662.68



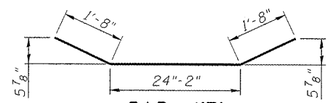
SECTION A-A



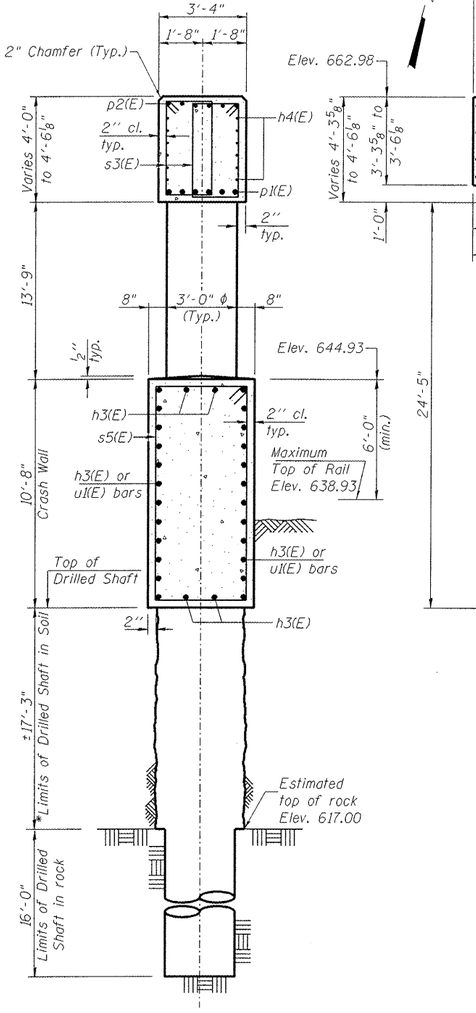
SECTION B-B



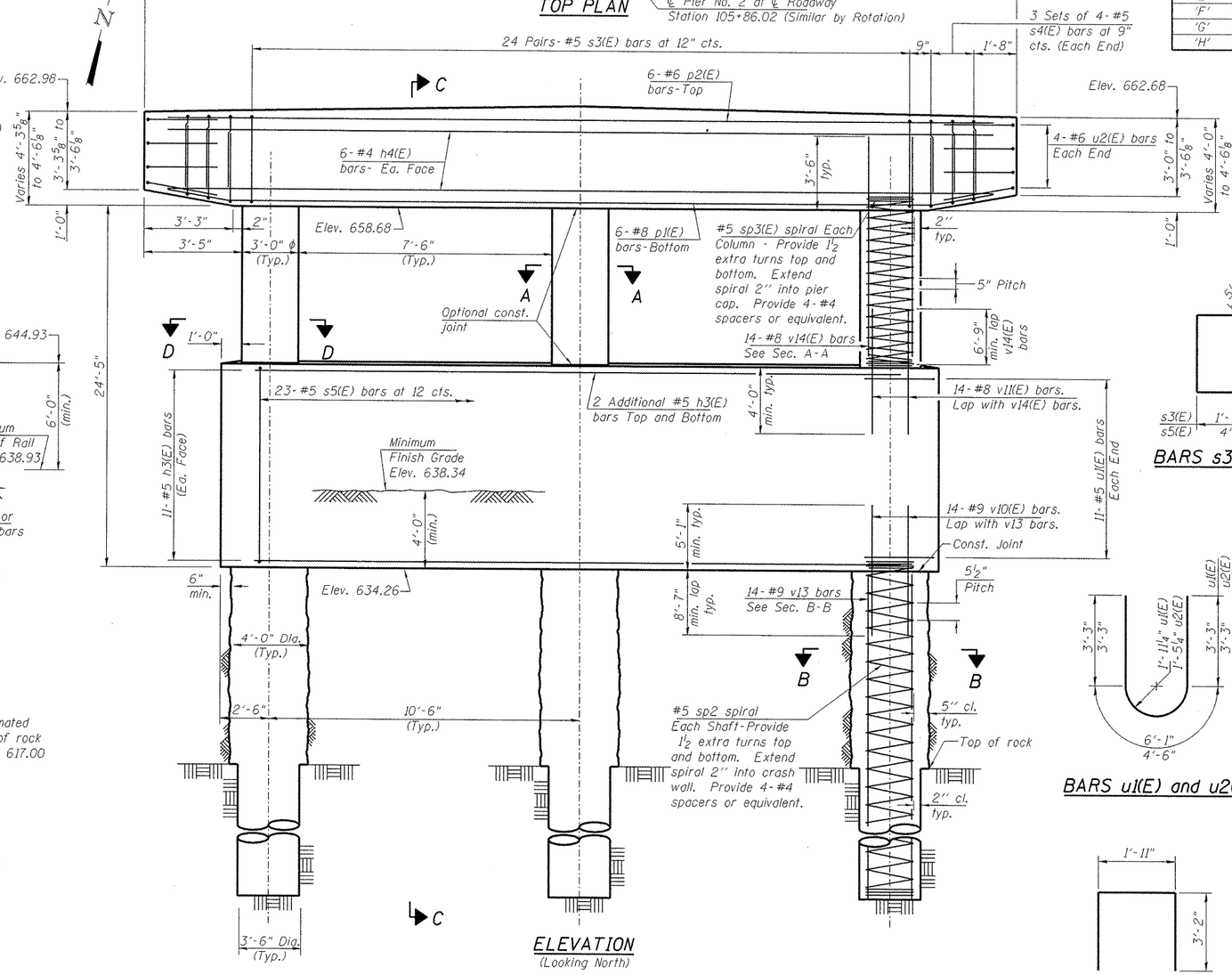
BARS s3(E) & s5(E)



BAR p1(E)



SECTION C-C



ELEVATION
(Looking North)

BARS u1(E) and u2(E)

BAR s4(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	26	#5	21'-8"	—
h4(E)	12	#4	27'-6"	—
p1(E)	6	#8	27'-6"	⌣
p2(E)	6	#6	27'-6"	—
s3(E)	48	#5	12'-0"	□
s4(E)	24	#5	8'-3"	⊔
s5(E)	23	#5	29'-7"	□
** sp2	3	#5	33'-5"	∿
** sp3(E)	3	#5	13'-11"	∿
u1(E)	22	#5	12'-7"	⊃
u2(E)	8	#6	11'-0"	⊃
v10(E)	42	#9	13'-8"	—
v11(E)	42	#8	10'-9"	—
v13	42	#9	33'-1"	—
v14(E)	42	#8	17'-3"	—
Structure Excavation			Cu. Yd.	38
Concrete Structures			Cu. Yd.	69.5
Reinforcement Bars			Pound	7140
Reinforcement Bars, Epoxy Coated			Pound	9510
Drilled Shaft in Soil			Cu. Yd.	24.1
Drilled Shaft in Rock			Cu. Yd.	17.1

Cast steps monolithically with cap.
Space cap reinforcement to miss dowel bars.
Minimum lap for spirals = 3'-9" (#5 epoxy coated)
2'-6" (#5 uncoated)

** Length is height of spiral.

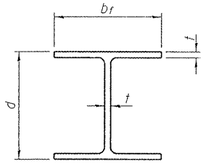
* The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

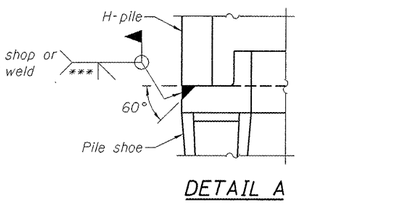
PIER NO. 2
STRUCTURE NO. 048-9927
SHEET NO. 11 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	37
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 128		



STEEL PILE TABLE

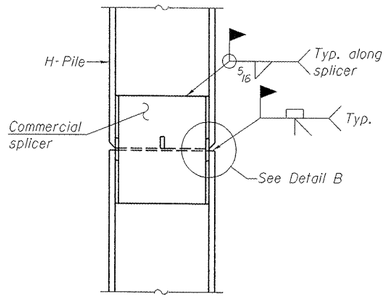
Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''



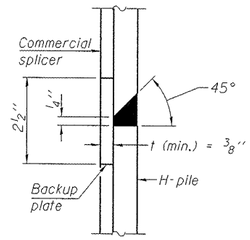
ELEVATION

DETAIL A

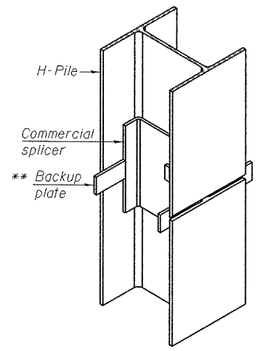
H-PILE SHOE ATTACHMENT



ELEVATION

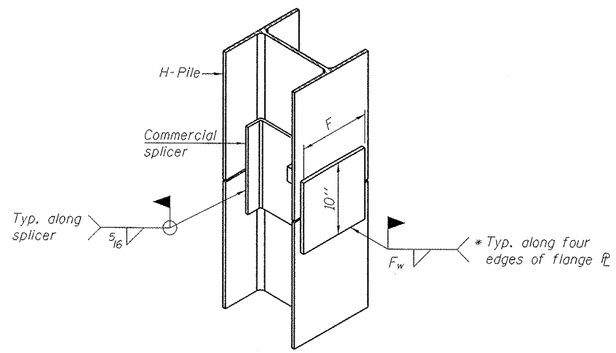


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



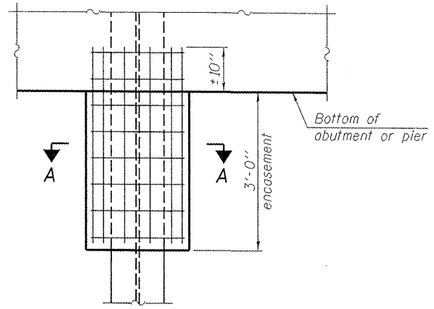
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

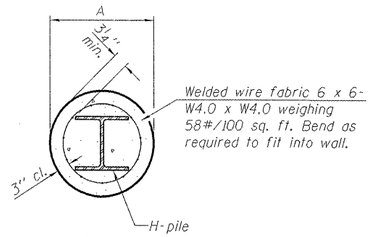
* Interrupt welds ¼'' from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



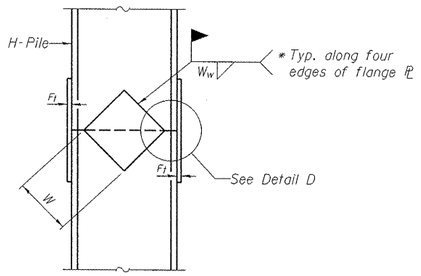
ELEVATION



SECTION A-A

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

PILE ENCASEMENT



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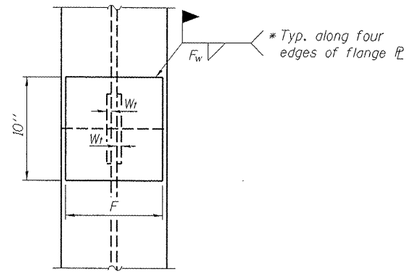
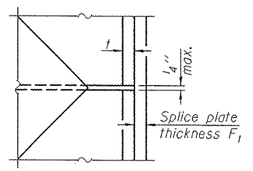


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

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

F-HP 7-1-10

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 048-9927
SHEET NO. 12 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	38
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 128			

R.R Bridge

WHITNEY & ASSOCIATES
INCORPORATED
2405 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-01
DATE 2-11-05
W. & A. FILE NO. 4108
SHEET 1 OF 6
PROJECT PERSIFER TOWNSHIP BRIDGE; #05-15103-00-BR
LOCATION Knox County, Illinois
BORING LOCATION Station 4+98; 6' Right of Centerline
DRILLED BY Fehl
BORING TYPE Hollow-Stem Auger
WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.B.S.C.
SEEPAGE WATER ENCOUNTERED AT ELEVATION None
GROUND SURFACE ELEVATION 133.4
GROUND WATER ELEVATION AT 3 HRS. None
BORING DISCONTINUED AT ELEVATION 72.4
GROUND WATER ELEVATION AT COMPLETION None

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
OIL And CHIPS	2"						
Brown Medium-Grained SAND And GRAVEL	10"						
Stiff, Light Brown, Brown And Orange-Brown SILTY CLAY With Considerable Clay Shale Fragments (Fill)	04	SS	5 4 5(9)	2.0	1.6	96	22
Very Stiff, Light Brown, Brown And Orange-Brown SILTY CLAY With Considerable Clay Shale Fragments (Fill)		SS	5 5 6(11)	2.5	2.2	97	21
Very Stiff, Light Brown CLAY LOAM	08	SS	5 6 6(12)	3.2	2.9	102	18
Stiff, Light Brown SILT LOAM	12	SS	4 5 7(12)	2.0	1.7	103	16
Stiff, Light Brown, Weathered GLACIAL SILTY CLAY TILL		SS	4 5 6(11)	2.0	1.8	115	17
Stiff, Light Brown SILTY CLAY	16	SS	4 4 4(8)	1.9	1.6	115	16
Very Stiff, Light Brown SILTY CLAY	20	SS	4 4 5(9)	1.5	1.3	96	20
Very Stiff, Light Brown And Gray-Brown CLAY		SS	4 5 6(11)	2.5	2.2	100	18
Very Stiff, Gray-Brown CLAY SHALE	24	SS	5 7 9(15) 6 7 16(23)	2.4	2.1	99	21

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

BORING LOG (CONTINUATION)

BORING NO. B-01
DATE 2-11-05
PROJECT Persifer Township Bridge; #05-15103-00-BR
LOCATION Knox County, Illinois
SHEET 2 OF 6
W. & A. FILE NO. 4108

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 1 of 6		SS	11 12 14(26)	3.5	3.2	110	18
	30	SS	13 15 17(32)	3.9	3.6	112	17
Hard, Dark Gray CLAY SHALE	34	SS	14 16 29(45)	4.5+	4.4	115	12
	38	SS	20 21 20(41)	4.5+	-	-	11
	42						
Hard, Gray SHALE	46	SS	110/6"	4.5+	-	-	8
Very Dense, Black COAL	50	SS	100/3"	-	-	-	11
	54	SS	107/3"	-	-	-	12

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

BORING LOG (CONTINUATION)

BORING NO. B-01
DATE 2-11-05
PROJECT Persifer Township Bridge; #05-15103-00-BR
LOCATION Knox County, Illinois
SHEET 3 OF 6
W. & A. FILE NO. 4108

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 2 of 6 Hard, Dark Gray SHALE	60	SS	95/3"	4.5+	-	-	8
EXPLORATORY BORING DISCONTINUED	64						
	68						
	72						
	76						
	80						
	84						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

Station 4+98.00, 6.0' Rt. (Boring Log) = Station 106+26.00, On ℄ (New Roadway Alignment)
Top of Boring: (Log Elevation) 133.4 = (New Datum Elevation) +662.4

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 1 OF 3)
STRUCTURE NO. 048-9927
SHEET NO. 13 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	39
		CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT	BROS 0095 128	

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-02
DATE 2-11-05
W. & A. FILE NO. 4108
SHEET 4 OF 6
PROJECT PERSIFER TOWNSHIP BRIDGE; #05-15103-00-BR
LOCATION Knox County, Illinois
BORING LOCATION Station 3+60; 5' Left of Centerline
DRILLED BY Fehl
BORING TYPE Hollow-Stem Auger
WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.E.S.C.
SEEPAGE WATER ENDOUNTERED AT ELEVATION None
GROUND SURFACE ELEVATION 135.0
GROUND WATER ELEVATION AT — HRS —
BORING DISCONTINUED AT ELEVATION 74.0
GROUND WATER ELEVATION AT COMPLETION None

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
OIL And CHIPS	2.5"						
Brown Medium-Grained SAND And GRAVEL	10.0"						
Stiff, Light Brown And Orange-Brown CLAY LOAM	04	SS	3 4 5(9)	1.5	1.2	103	18
		SS	4 4 5(9)	2.3	2.0	105	18
	08	SS	5 5 7(12)	1.8	1.7	108	17
Very Stiff, Light Brown SILT LOAM		SS	5 6 8(14)	2.4	2.2	109	15
Very Stiff, Light Brown, Weathered GLACIAL SILTY CLAY TILL	12	SS	6 11 13(24)	4.0	3.8	117	16
	16	SS	6 10 12(22)	4.2	4.0	118	15
Stiff, Light Brown And Orange-Brown, Weathered GLACIAL SANDY CLAY TILL		SS	4 7 9(16)	2.2	1.7	118	17
Very Stiff, Light Brown, Orange-Brown And Gray-Brown, Weathered GLACIAL SILTY CLAY TILL	20	SS	5 7 7(14)	3.0	2.7	116	18
		SS	11 12 19(31)	3.3	2.9	117	17
Very Stiff, Gray-Brown CLAY SHALE	24	SS	15 18 22(40)	2.9	2.6	110	18

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

BORING LOG (CONTINUATION)

BORING NO. B-02
DATE 2-11-05
PROJECT Persifer Township Bridge; #05-15103-00-BR
SHEET 5 OF 6
LOCATION Knox County, Illinois
W. & A. FILE NO. 4108

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
See Sheet 4 of 6		SS	13 20 25(45)	4.2	402	116	16
Hard, Gray-Brown And Black CLAY SHALE	30	SS	12 21 30(51)	4.5+	5.4	116	15
	34	SS	20 22 51(73)	4.5+	4.6	114	16
	38	SS	27 80/6"	4.5+	-	-	10
	42	SS	109/6"	4.5+	5.3	115	14
Very Dense, Black COAL	46	SS	106/4"	-	-	-	12
Hard, Black CLAY SHALE With Some Coal	54	SS	97/6"	4.5+	-	-	17

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

BORING LOG (CONTINUATION)

BORING NO. B-02
DATE 2-11-05
PROJECT Persifer Township Bridge; #05-15103-00-BR
SHEET 6 OF 6
LOCATION Knox County, Illinois
W. & A. FILE NO. 4108

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Q_p	Q_u	D_d	M_c
See Sheet 5 Of 6							
Hard, Dark Gray SHALE	60	SS	86/3"	4.5+	-	-	11
EXPLORATORY BORING DISCONTINUED							
NOTE: Benchmark (135.4) - Paint Mark On Bridge At Station 3+68; Right Of Centerline	64 68 72 76 80 84						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Q_p - CALIBRATED PENETROMETER READING - T.S.F.
Q_u - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
D_d - NATURAL DRY DENSITY - P.C.F.
M_c - NATURAL MOISTURE CONTENT - %
WHITNEY & ASSOCIATES PEORIA, ILLINOIS

Station 3+60.00, 6.0' Lt. (Boring Log) = Station 104+88.00, On ℄ (New Roadway Alignment)
Top of Boring: (Log Elevation) 135.0 = (New Datum Elevation) ±663.7

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		CHECKED - JGT	REVISED -	
	PLOT SCALE =	DRAWN - Rod	REVISED -	
	PLOT DATE =	CHECKED - TEH	REVISED -	

BORING LOGS (SHEET 2 OF 3)
STRUCTURE NO. 048-9927
SHEET NO. 14 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	40
		CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT BROS 0095 128		

Illinois Department of Transportation

ROCK CORE LOG

Date 02/01/2011

ROUTE TR-176 DESCRIPTION TR 176 Relocation (Railroad) LOGGED BY Fehl/Krusemark

SECTION 05-15103-00-BR LOCATION Persifer Township SEC. 19 TWP. 11N RNG. 3E PM

COUNTY Knox CORING METHOD Single Tube With Water

STRUCT. NO. 048-9919 CORING BARREL TYPE & SIZE NGW x 5'

Station 104+75 to 106+25 Core Diameter 2.0 in

Top of Rock Elev. (632+) 32 ft

BORING NO. SB-1 Begin Core Elev. (619+) 45 ft

Station 104+75

Offset Centerline

Ground Surface Elev. 663.9 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dark Gray CLAY SHALE (Hard, Brown Seam at 46.5')	45					
	46					
	47	1-1	37	0		
	48					
	49					
Dark Gray CLAY SHALE MC = 8.3%	50					17.4
	51					
	52	1-2	88	87		
	53					
	54					
Dark Gray CLAY SHALE MC = 13.7%	55					4.6
CORE RUN DISCONTINUED 608.9						

Color pictures of the cores Attached

Cores will be stored for examination until 07/01/2011

The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

Illinois Department of Transportation

ROCK CORE LOG

Date 01/28/2011

ROUTE TR-176 DESCRIPTION TR 176 Relocation (Railroad) LOGGED BY Fehl/Krusemark

SECTION 05-15103-00-BR LOCATION Persifer Township SEC. 19 TWP. 11N RNG. 3E PM

COUNTY Knox CORING METHOD Single Tube With Water

STRUCT. NO. 048-9919 CORING BARREL TYPE & SIZE NGW x 5'

Station 104+75 to 106+25 Core Diameter 2.0 in

Top of Rock Elev (622+) 40 ft

BORING NO. SB-4 Begin Core Elev. (617+) 45 ft

Station 106+25

Offset Centerline

Ground Surface Elev. 662.2 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SILTSTONE	45					
615.7	46					
Dark Gray CLAY SHALE	47	4-1	75	40		
	48					
MC = 9.4%	49					13.1
612.7	50					
Black COAL	51					
610.2	52					
Gray CLAY SHALE	53	4-2	92	0		
	54					
	55					
	56					
Gray CLAY SHALE MC = 9.7%	57					10.3
	58	4-3	88	58		
602.2	59					
CORE RUN DISCONTINUED	60					

Color pictures of the cores Attached

Cores will be stored for examination until 07/01/2011

The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

FILE NAME =	USER NAME =	DESIGNED - MNM	REVISED -
		CHECKED - JGT	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - TEH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

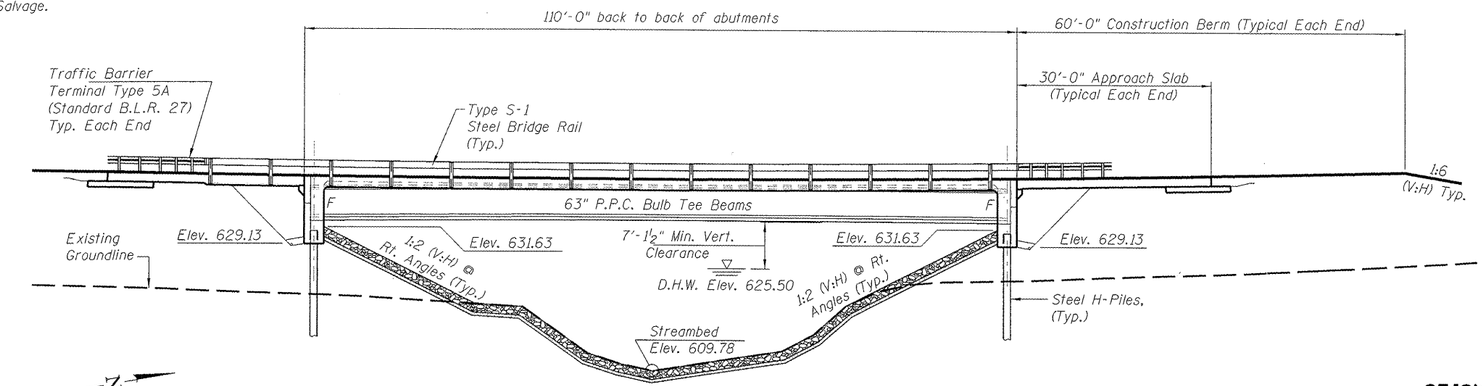
BORING LOGS (SHEET 3 OF 3)
STRUCTURE NO. 048-9927
SHEET NO. 15 OF 15 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15103-00-BR	KNOX	97	41
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 128		

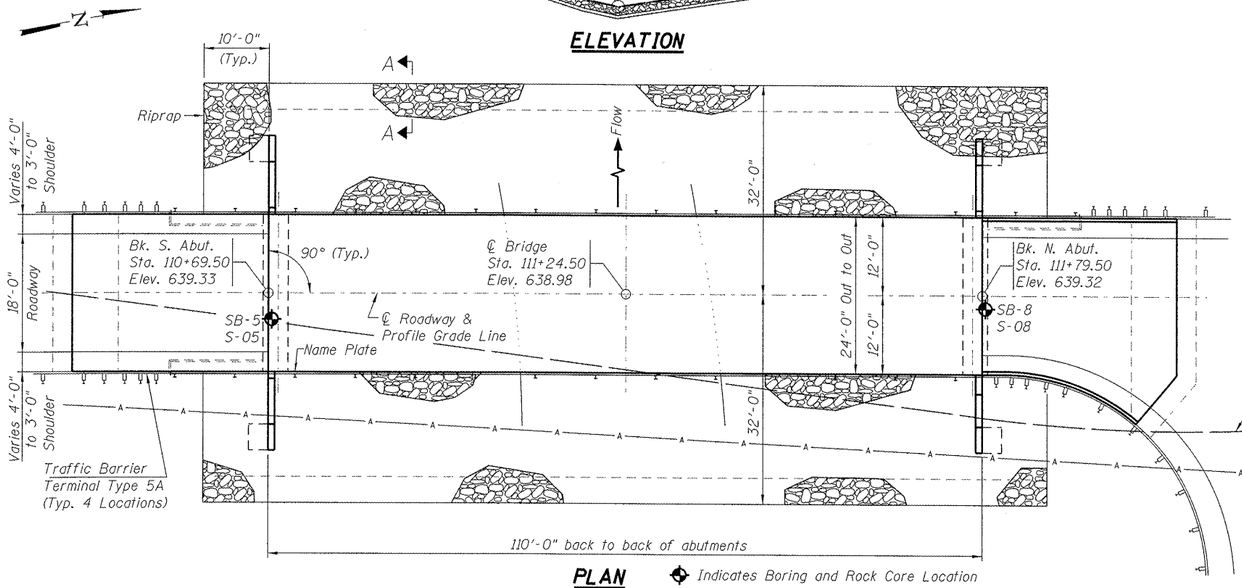
Bench Mark: Point 402 - Nail in east side of power pole west side of Barefoot Road approximately 45' North of Old Wagon Road ℄ - Elevation 631.51
Point 401 - Nail in west side of fence post on the east side of Barefoot Road approximately 235' south of existing south Creek Bridge abutment - Elevation 642.03

Existing Structure: Structure No. 048-3120. The existing three span structure (90 ft long by 21 ft wide) was constructed in 1964 and consists of seven lines of precast prestressed concrete deck beams covered with an oil and chip surface. The substructure consists of timber pile bents with cast-in-place concrete caps. Existing structure to be removed and replaced with bridge on new alignment ±60' upstream.

No Salvage.

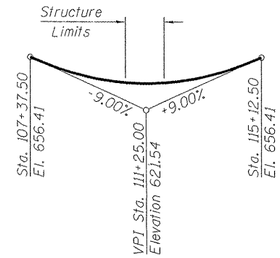


ELEVATION



PLAN

◈ Indicates Boring and Rock Core Location



LVC = 775'-0"

PROFILE GRADE

(along ℄ roadway)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (S_{D1})=0.04
Design Spectral Acceleration at 0.2 sec (S_{DS})=0.10
Soil Site Class = B

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications - 5th edition with 2010 Interims

DESIGN STRESSES

Field Units:
f'_c = 3,500 p.s.i.
f_y = 60,000 p.s.i. (reinforcement)

Precast Prestressed Units:
f'_c = 7,000 p.s.i.
f'_{ci} = 6,000 p.s.i.
f_{pu} = 270,000 p.s.i. (½" ϕ low lax. strands)
f_{pbt} = 201,960 p.s.i. (½" ϕ low lax. strands)
f_y = 60,000 p.s.i. (reinforcement)

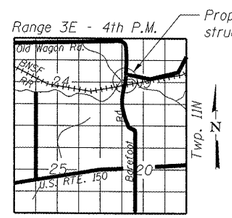
WATERWAY INFORMATION

Drainage Area = 32.2 mi²
Exist. Low Grade Elev. 628.00 @ Sta. 111+25.00
Prop. Low Grade Elev. 638.98 @ Sta. 111+25.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	4915	741.5	745.9	625.50	0.17	0.10	625.67	625.60
Base	100	7940	903	924	627.62	0.22	0.32	627.84	627.94
Max. Calc.									

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	629.13	629.13



LOCATION SKETCH

LICENSED STRUCTURAL ENGINEER
MICHAEL N. MENDENHALL
081-006657
STATE OF ILLINOIS

SIGNATURE
11-23-2011
DATE
LIC. EXP. DATE: 11-30-2012

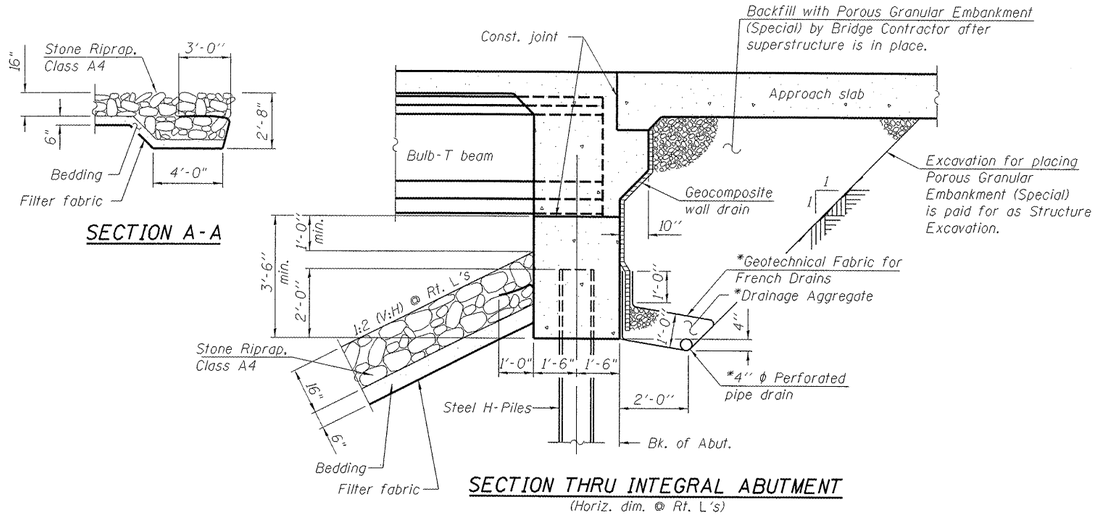
I certify that to the best of knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges

GENERAL PLAN
BAREFOOT ROAD (TR 176) OVER COURT CREEK
SEC. 05-15106-01-BR
KNOX COUNTY
STATION 111+24.50
STRUCTURE NO. 048-3387

HANSON
PROFESSIONAL DESIGN FIRM LICENSE #184-001084

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN STRUCTURE NO. 048-3387
		CHECKED - MNM	REVISED -		
	PLOT SCALE =	DRAWN - DAP	REVISED -		
	PLOT DATE =	CHECKED - JGT	REVISED -		SHEET NO. 01 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	42
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 127			



SECTION A-A

SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

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

GENERAL NOTES

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

Reinforcement bars designated (E) shall be epoxy coated.

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

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.	-	89	89
Stone Riprap, Class A4	Sq. Yd.	-	938	938
Filter Fabric	Sq. Yd.	-	938	938
Removal of Existing Structures	Each	-	-	1
Structure Excavation	Cu. Yd.	-	199	199
Concrete Structures	Cu. Yd.	-	52.7	52.7
Concrete Superstructure	Cu. Yd.	194.9	-	194.9
Bridge Deck Grooving	Sq. Yd.	269	-	269
Concrete Encasement	Cu. Yd.	-	3.4	3.4
Protective Coat	Sq. Yd.	300	-	300
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams 63"	Foot	436	-	436
Reinforcement Bars, Epoxy Coated	Pound	38420	7670	46090
Bar Splicers	Each	50	-	50
Steel Railing, Type S-1	Foot	265	-	265
Furnishing Steel Piles HP12x63	Foot	-	416	416
Driving Piles	Foot	-	416	416
Test Pile Steel HP12x63	Each	-	2	2
Pile Shoes	Each	-	10	10
Name Plates	Each	1	-	1
Geocomposite Wall Drain	Sq. Yd.	-	92	92
Pipe Underdrains for Structures 4"	Foot	-	132	132
Asbestos Bearing Pad Removal	Each	42	-	42

INDEX OF SHEETS

COURT CREEK
BUILT 20 BY
PERSIFER ROAD DISTRICT
KNOX COUNTY
SEC. 05-15106-01-BR
STATION 111+24.50
STR. NO. 048-3387 LOADING HL-93

LETTERING FOR NAME PLATE

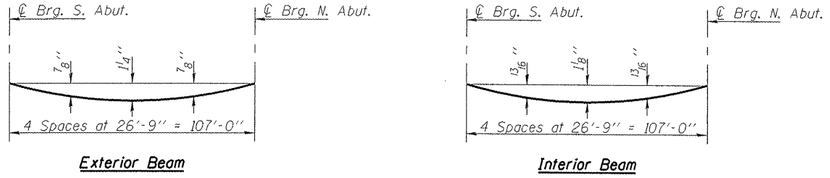
Locate Name Plate on Southeast Corner of Bridge (See Standard 515001)

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 048-3387
SHEET NO. 02 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	43
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



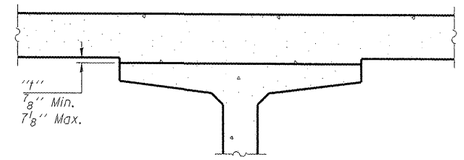
Exterior Beam

Interior Beam

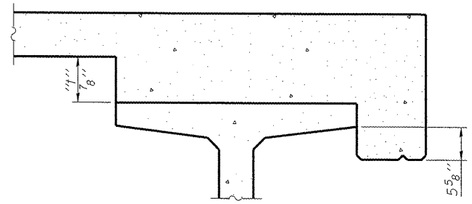
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

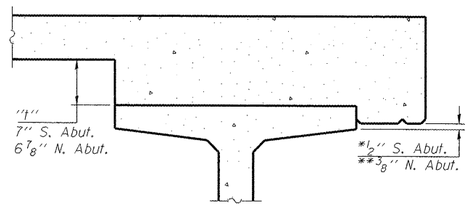
Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on the following sheet.



Interior Beams



At Minimum Fillet



At Maximum Fillet

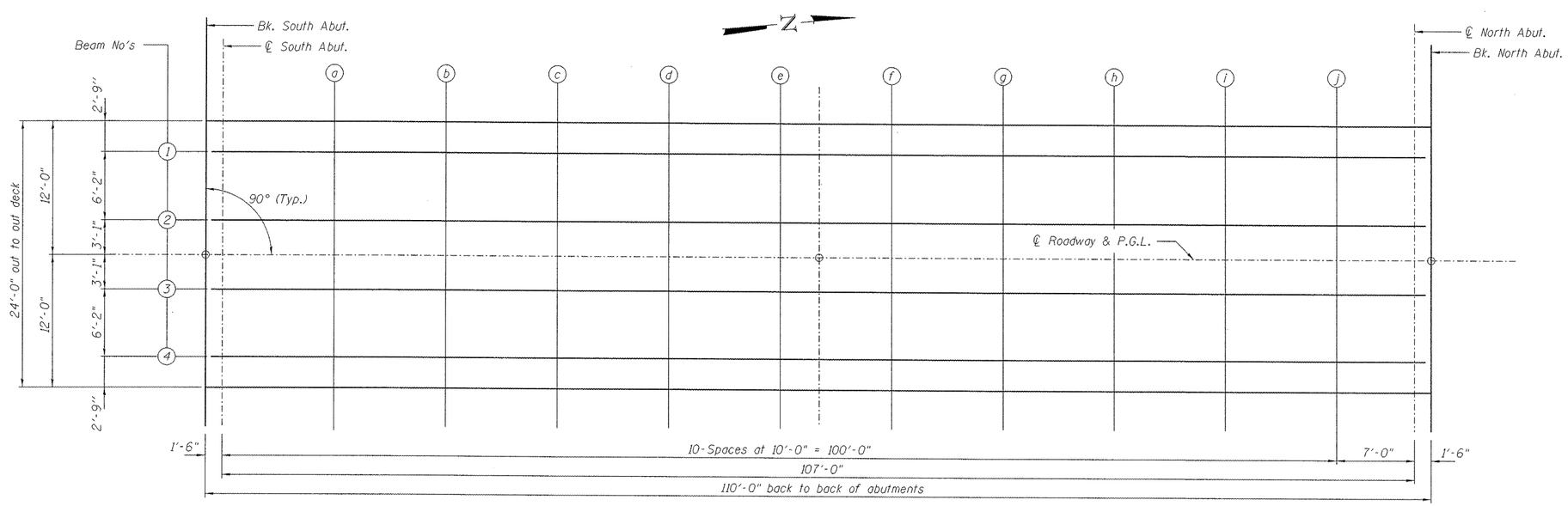
*Dimension transitions to 0" at 2'-0" from ℄ S. Abut. and to ½" below bottom of top flange at 4'-0" from ℄ S. Abut.

**Dimension transitions to ½" below bottom of top flange at 3'-6" from ℄ N. Abut.

Exterior Beams

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on the following sheet, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS (SHEET 1 OF 2) STRUCTURE NO. 048-3387 SHEET NO. 03 OF 23 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MNM	REVISED -			TR 176	05-15106-01-BR	KNOX	97	44
	PLOT SCALE =	DRAWN - DAP	REVISED -					CONTRACT NO. 89429		
	PLOT DATE =	CHECKED - JGT	REVISED -					ILLINOIS FED. AID PROJECT	BROS 0095 127	

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	110+69.50	-9.25	639.19	639.19
℄ S. Abut.	110+71.00	-9.25	639.17	639.17
a	110+81.00	-9.25	639.05	639.08
b	110+91.00	-9.25	638.96	639.02
c	111+01.00	-9.25	638.90	638.97
d	111+11.00	-9.25	638.85	638.94
e	111+21.00	-9.25	638.83	638.93
f	111+31.00	-9.25	638.83	638.93
g	111+41.00	-9.25	638.86	638.94
h	111+51.00	-9.25	638.91	638.98
i	111+61.00	-9.25	638.98	639.03
j	111+71.00	-9.25	639.07	639.09
℄ N. Abut.	111+78.00	-9.25	639.15	639.15
Bk. N. Abut.	111+79.50	-9.25	639.17	639.17

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	110+69.50	-3.08	639.28	639.28
℄ S. Abut.	110+71.00	-3.08	639.26	639.26
a	110+81.00	-3.08	639.15	639.18
b	110+91.00	-3.08	639.06	639.11
c	111+01.00	-3.08	638.99	639.07
d	111+11.00	-3.08	638.95	639.04
e	111+21.00	-3.08	638.93	639.03
f	111+31.00	-3.08	638.93	639.03
g	111+41.00	-3.08	638.95	639.04
h	111+51.00	-3.08	639.00	639.08
i	111+61.00	-3.08	639.08	639.12
j	111+71.00	-3.08	639.17	639.19
℄ N. Abut.	111+78.00	-3.08	639.25	639.25
Bk. N. Abut.	111+79.50	-3.08	639.27	639.27

℄ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	110+69.50	0.00	639.33	639.33
℄ S. Abut.	110+71.00	0.00	639.31	639.31
a	110+81.00	0.00	639.20	639.22
b	110+91.00	0.00	639.11	639.16
c	111+01.00	0.00	639.04	639.12
d	111+11.00	0.00	639.00	639.08
e	111+21.00	0.00	638.97	639.07
f	111+31.00	0.00	638.98	639.07
g	111+41.00	0.00	639.00	639.09
h	111+51.00	0.00	639.05	639.12
i	111+61.00	0.00	639.12	639.17
j	111+71.00	0.00	639.22	639.24
℄ N. Abut.	111+78.00	0.00	639.30	639.30
Bk. N. Abut.	111+79.50	0.00	639.32	639.32

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	110+69.50	3.08	639.28	639.28
℄ S. Abut.	110+71.00	3.08	639.26	639.26
a	110+81.00	3.08	639.15	639.18
b	110+91.00	3.08	639.06	639.11
c	111+01.00	3.08	638.99	639.07
d	111+11.00	3.08	638.95	639.04
e	111+21.00	3.08	638.93	639.03
f	111+31.00	3.08	638.93	639.03
g	111+41.00	3.08	638.95	639.04
h	111+51.00	3.08	639.00	639.08
i	111+61.00	3.08	639.08	639.12
j	111+71.00	3.08	639.17	639.19
℄ N. Abut.	111+78.00	3.08	639.25	639.25
Bk. N. Abut.	111+79.50	3.08	639.27	639.27

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	110+69.50	9.25	639.19	639.19
℄ S. Abut.	110+71.00	9.25	639.17	639.17
a	110+81.00	9.25	639.05	639.08
b	110+91.00	9.25	638.96	639.02
c	111+01.00	9.25	638.90	638.97
d	111+11.00	9.25	638.85	638.94
e	111+21.00	9.25	638.83	638.93
f	111+31.00	9.25	638.83	638.93
g	111+41.00	9.25	638.86	638.94
h	111+51.00	9.25	638.91	638.98
i	111+61.00	9.25	638.98	639.03
j	111+71.00	9.25	639.07	639.09
℄ N. Abut.	111+78.00	9.25	639.15	639.15
Bk. N. Abut.	111+79.50	9.25	639.17	639.17

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE = '	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SHEET 2 OF 2)
STRUCTURE NO. 048-3387
SHEET NO. 04 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	45
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

WEST EDGE OF SHOULDER

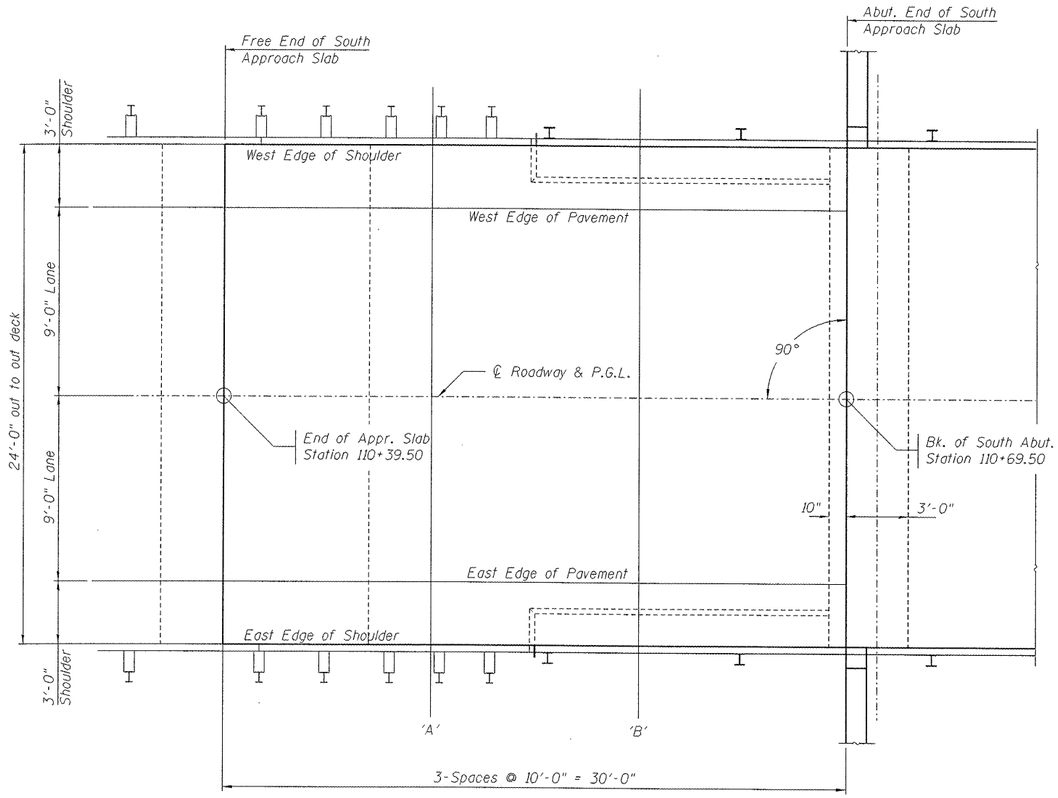
Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	110+39.50	-12.00	639.63
'A'	110+49.50	-12.00	639.45
'B'	110+59.50	-12.00	639.28
Abut. End of South Appr.	110+69.50	-12.00	639.14

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	110+39.50	-9.00	639.68
'A'	110+49.50	-9.00	639.49
'B'	110+59.50	-9.00	639.33
Abut. End of South Appr.	110+69.50	-9.00	639.19

℄ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	110+39.50	0.00	639.82
'A'	110+49.50	0.00	639.63
'B'	110+59.50	0.00	639.47
Abut. End of South Appr.	110+69.50	0.00	639.33



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	110+39.50	9.00	639.68
'A'	110+49.50	9.00	639.49
'B'	110+59.50	9.00	639.33
Abut. End of South Appr.	110+69.50	9.00	639.19

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Free End of South Appr.	110+39.50	12.00	639.63
'A'	110+49.50	12.00	639.45
'B'	110+59.50	12.00	639.28
Abut. End of South Appr.	110+69.50	12.00	639.14

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-3387
SHEET NO. 05 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	46
		CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT BROS 0095 127		

WEST EDGE OF SHOULDER

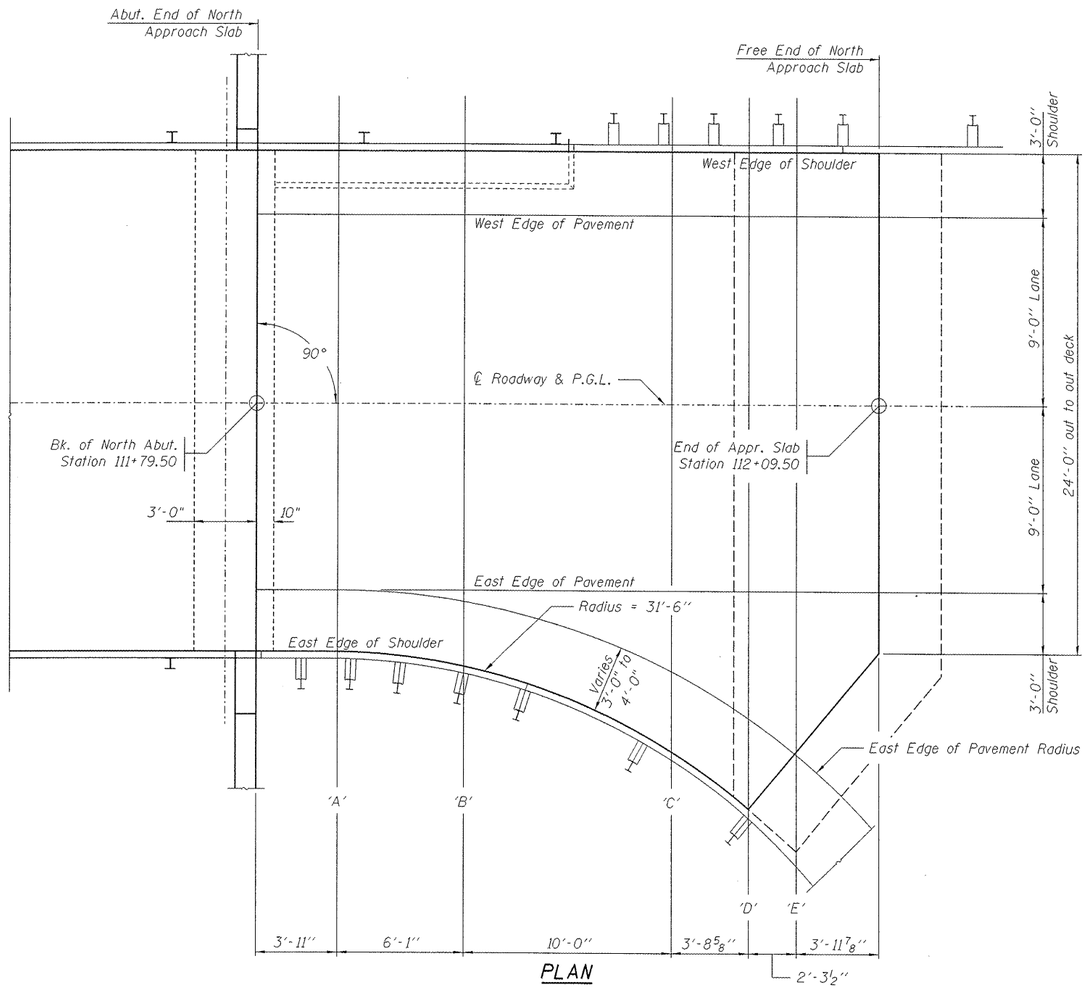
Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	-12.00	639.13
'A'	111+83.41	-12.00	639.18
'B'	111+89.50	-12.00	639.26
'C'	111+99.50	-12.00	639.40
'D'	112+03.22	-12.00	639.46
'E'	112+05.51	-12.00	639.50
Free End of North Appr.	112+09.50	-12.00	639.57

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	-9.00	639.18
'A'	111+83.41	-9.00	639.23
'B'	111+89.50	-9.00	639.31
'C'	111+99.50	-9.00	639.46
'D'	112+03.22	-9.00	639.52
'E'	112+05.51	-9.00	639.56
Free End of North Appr.	112+09.50	-9.00	639.63

℄ ROADWAY & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	0.00	639.32
'A'	111+83.41	0.00	639.37
'B'	111+89.50	0.00	639.46
'C'	111+99.50	0.00	639.62
'D'	112+03.22	0.00	639.69
'E'	112+05.51	0.00	639.73
Free End of North Appr.	112+09.50	0.00	639.81



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	9.00	639.18
'A'	111+83.41	9.00	639.23
'B'	111+89.50	9.00	639.31
'C'	111+99.50	9.00	639.46
'D'	112+03.22	9.00	639.52
'E'	112+05.51	9.00	639.56
Free End of North Appr.	112+09.50	9.00	639.63

EAST EDGE OF PAVEMENT RADIUS

Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	-	-
'A'	111+83.41	9.00	639.23
'B'	111+89.50	9.53	639.29
'C'	111+99.50	12.92	639.26
'D'	112+03.22	15.14	639.21
'E'	112+05.51	16.72	639.17
Free End of North Appr.	112+09.50	-	-

EAST EDGE OF SHOULDER

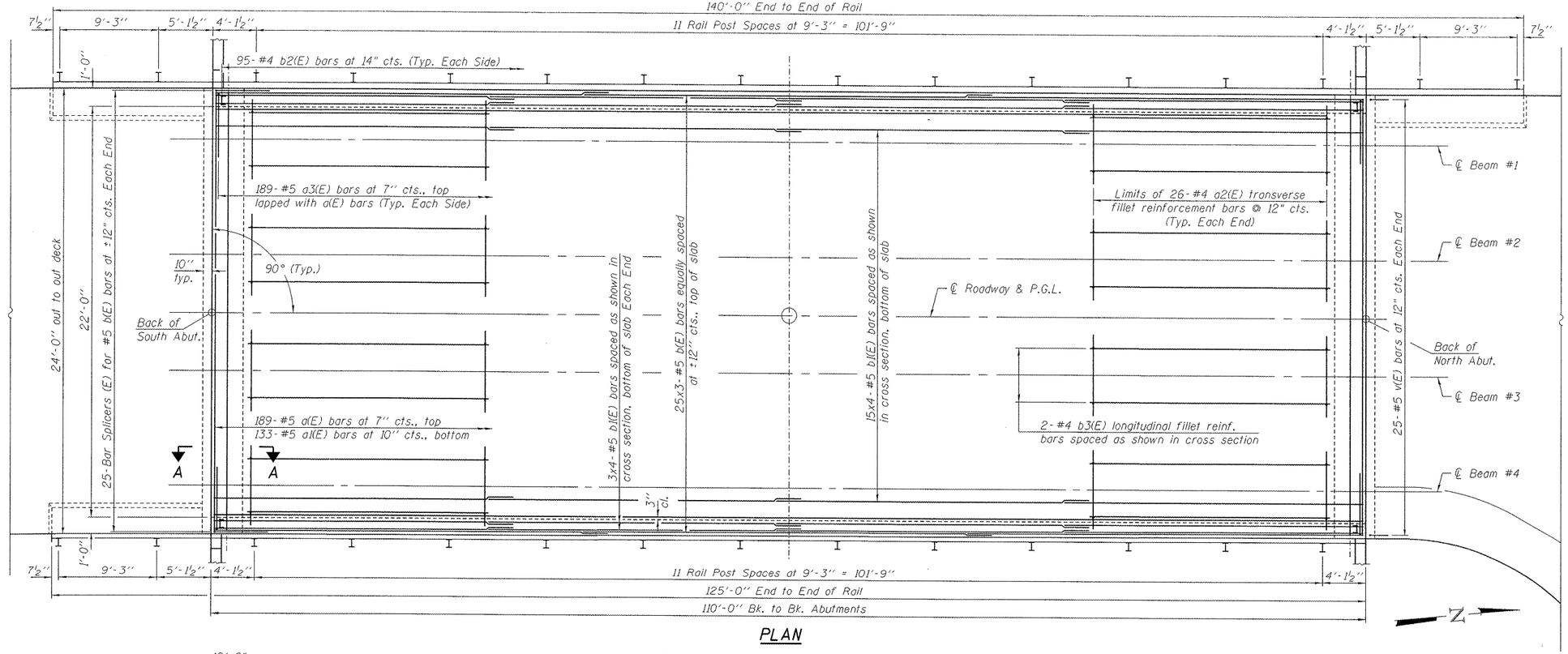
Location	Station	Offset	Theoretical Grade Elevations
Abut. End of North Appr.	111+79.50	12.00	639.13
'A'	111+83.41	12.00	639.16
'B'	111+89.50	12.70	639.19
'C'	111+99.50	16.73	639.07
'D'	112+03.22	19.43	639.00
'E'	112+05.51	-	-
Free End of North Appr.	112+09.50	-	-

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

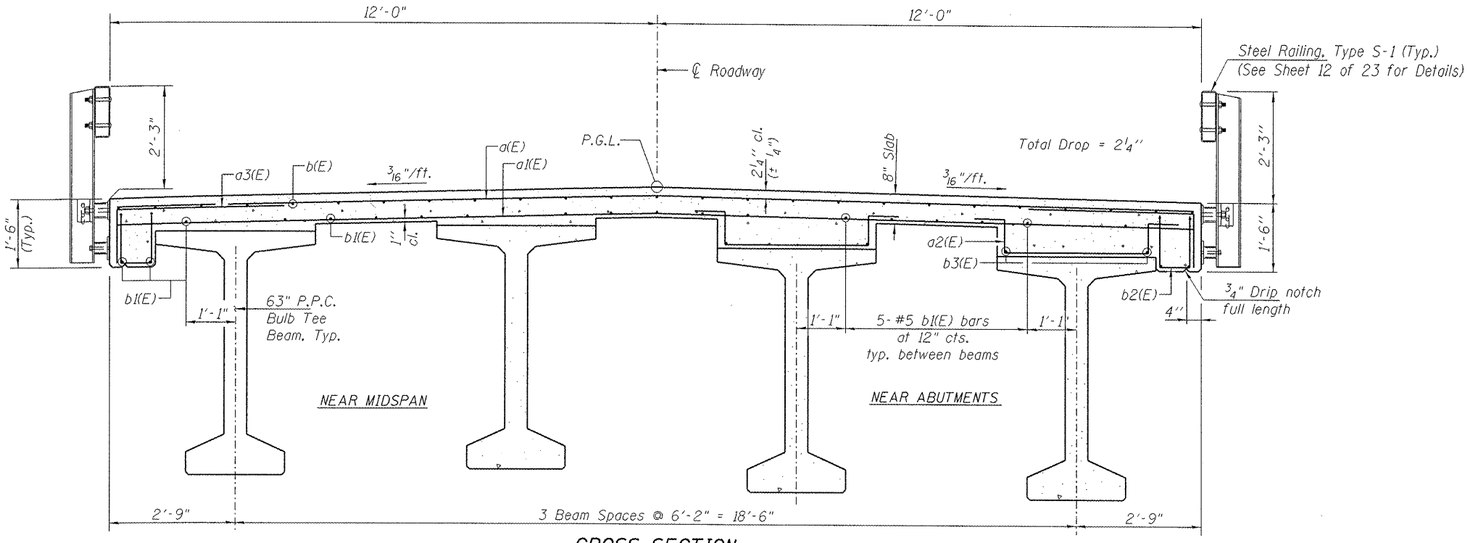
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 048-3387
SHEET NO. 06 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	47
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



PLAN



CROSS SECTION

Notes:
See Sheet 08 of 23 for superstructure details and Bill of Material.
For Section A-A and diaphragm details see Sheet 08 of 23.
Bars indicated thus 25 x 3-#5 etc. indicates 25 lines of bars with 3 lengths per line.

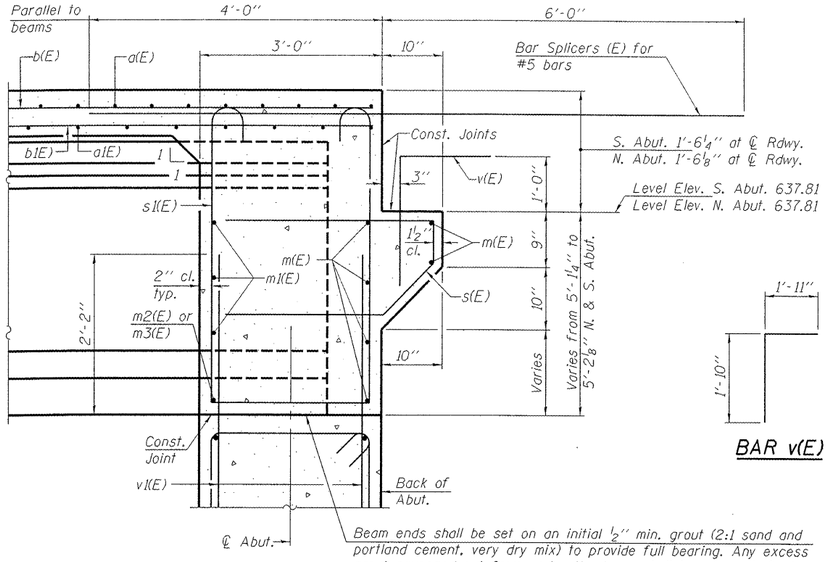
MIN. BAR LAP
#5 bar = 2'-7"

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

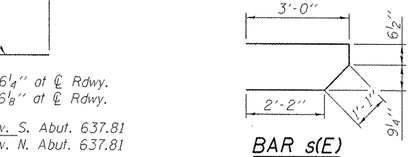
SUPERSTRUCTURE
STRUCTURE NO. 048-3387
SHEET NO. 07 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	48
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



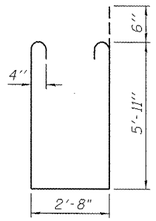
SECTION A-A

Dimensions at right angles to abutment, except as shown.

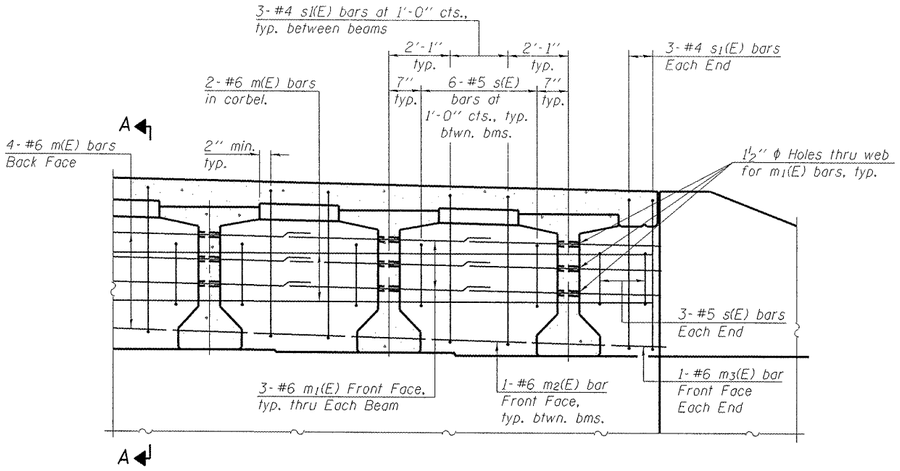


BAR s(E)

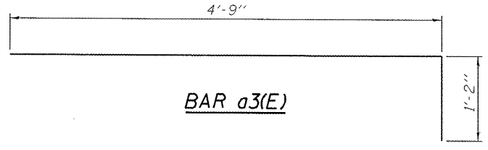
BAR v(E)



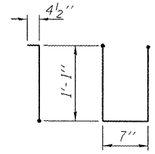
BAR s1(E)



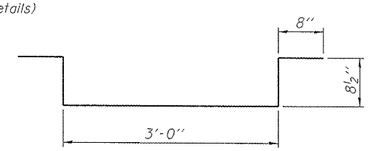
DIAPHRAGM ELEVATION AT ABUTMENT



BAR a3(E)

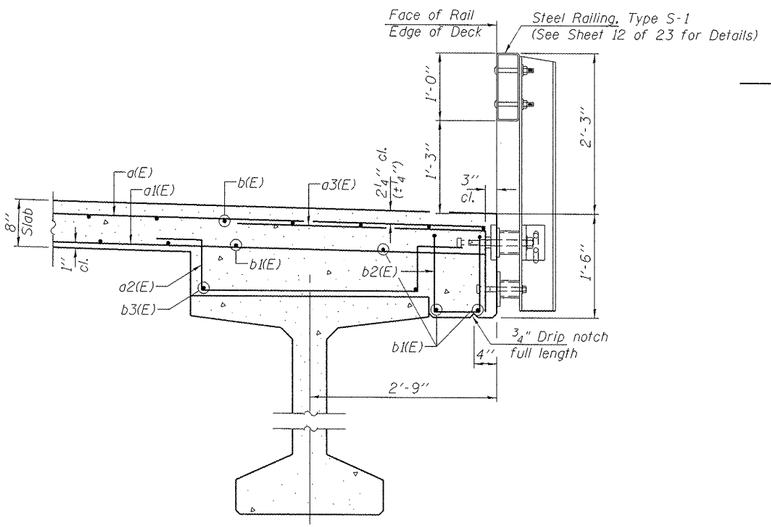


BAR b2(E)



BAR a2(E)

Notes:
Reinforcement bars in diaphragm are billed with superstructure.
Concrete in diaphragm is included with Concrete Superstructure.
The s(E) and s1(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
See Sheet 7 of 23 for location of Section A-A.



SECTION THRU OVERHANG

MIN. BAR LAP

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

SUPERSTRUCTURE BILL OF MATERIAL

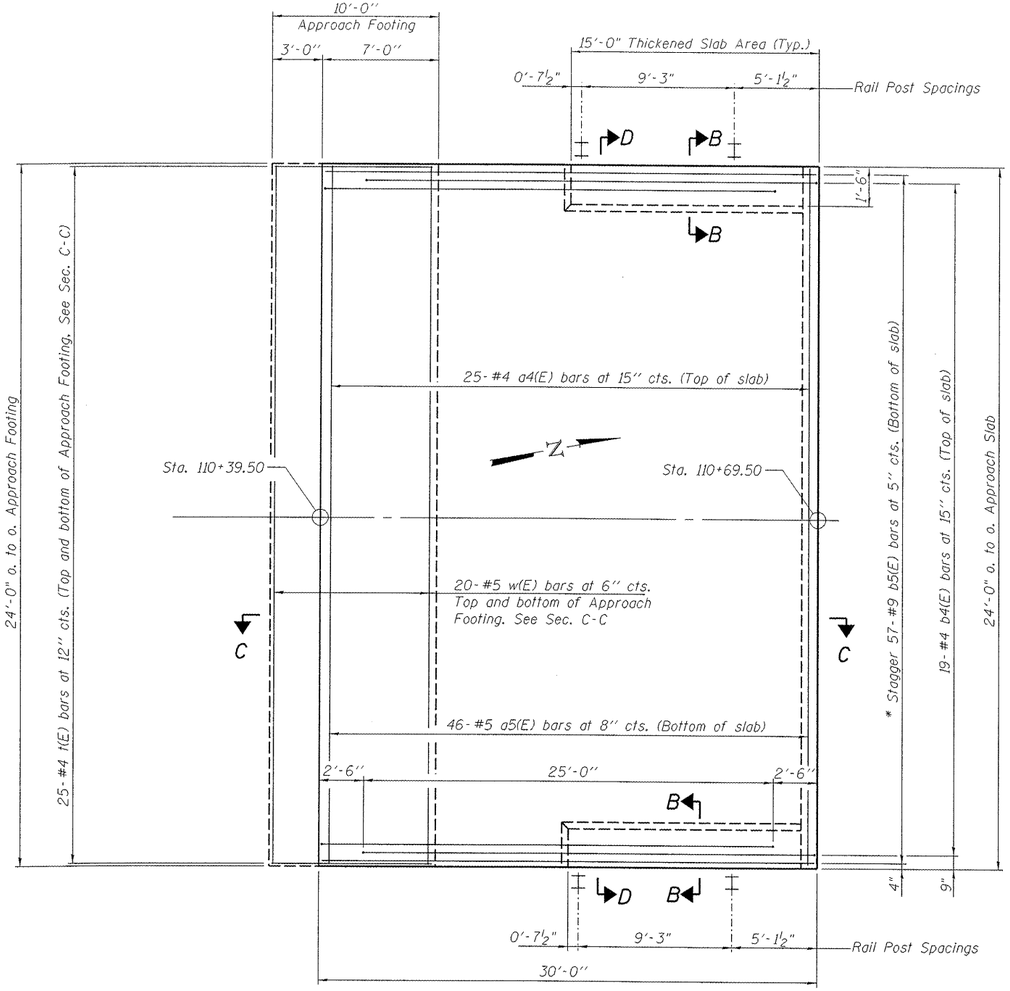
Bar	No.	Size	Length	Shape
a(E)	189	#5	23'-6"	
a1(E)	133	#5	23'-4"	
a2(E)	208	#4	5'-9"	
a3(E)	378	#5	5'-11"	
b(E)	75	#5	38'-6"	
b1(E)	84	#5	29'-6"	
b2(E)	190	#4	3'-6"	
b3(E)	16	#4	26'-0"	
m(E)	12	#6	23'-8"	
m1(E)	24	#6	9'-6"	
m2(E)	6	#6	3'-8"	
m3(E)	4	#6	1'-4"	
s(E)	48	#5	6'-10"	
s1(E)	30	#4	15'-6"	
v(E)	50	#5	3'-9"	
Reinforcement Bars, Epoxy Coated			Pound	18,980
Concrete Superstructure			Cu. Yds.	119.6

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 048-3387
SHEET NO. 08 OF 23 SHEETS

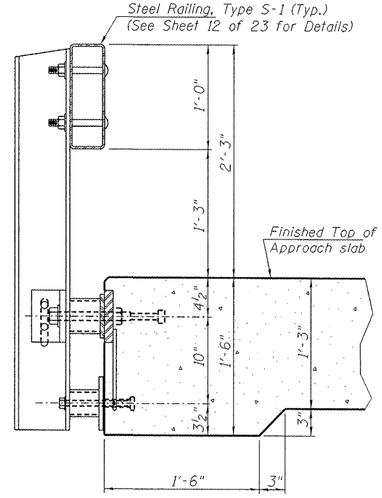
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	49
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



SOUTH APPROACH SLAB PLAN

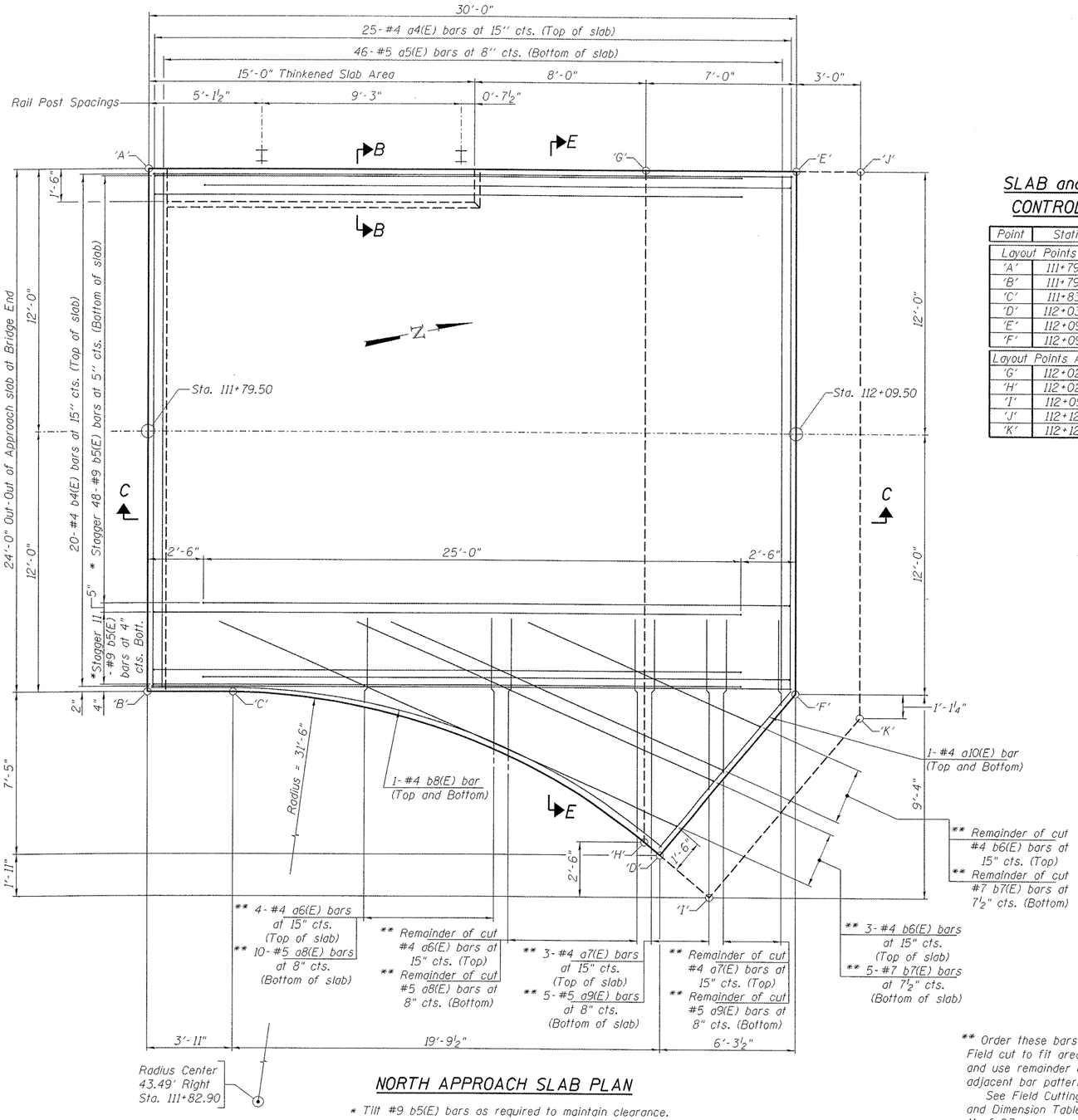
* Tilt #9 b5(E) bars as required to maintain clearance.

Notes:
See sheet 11 of 23 for Sections C-C and D-D.
a4(E) and a5(E) bar spacings measured along ℄ Rdwy.



SECTION B-B

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS (SHEET 1 OF 3) STRUCTURE NO. 048-3387	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MNM	REVISED -			TR 176	05-15106-01-BR	KNOX	97	50
	PLOT SCALE =	DRAWN - Rod	REVISED -					CONTRACT NO. 89429		
	PLOT DATE =	CHECKED - JGT	REVISED -		SHEET NO. 9 OF 23 SHEETS			ILLINOIS FED. AID PROJECT		BROS 0095 127



NORTH APPROACH SLAB PLAN

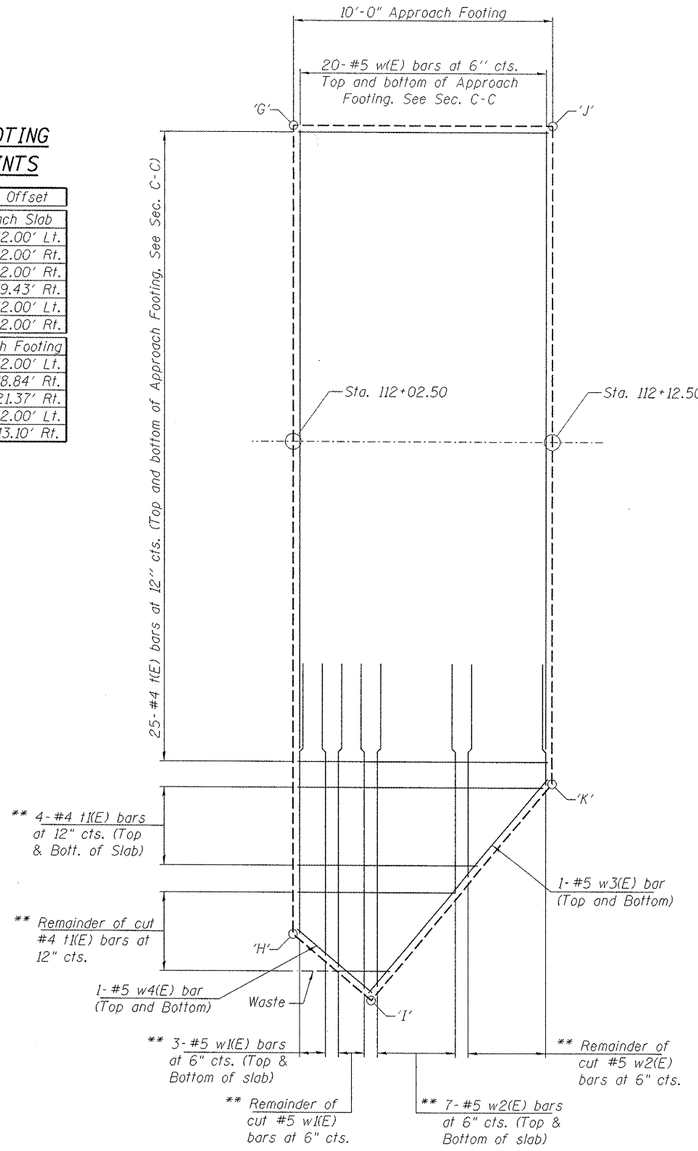
* Tilt #9 b5(E) bars as required to maintain clearance.

SLAB and FOOTING CONTROL POINTS

Point	Station	Offset
Layout Points Approach Slab		
'A'	111+79.50	12.00' Lt.
'B'	111+79.50	12.00' Rt.
'C'	111+83.41	12.00' Rt.
'D'	112+03.22	19.43' Rt.
'E'	112+09.50	12.00' Lt.
'F'	112+09.50	12.00' Rt.
Layout Points Approach Footing		
'G'	112+02.50	12.00' Lt.
'H'	112+02.50	18.84' Rt.
'I'	112+05.51	21.37' Rt.
'J'	112+12.50	12.00' Lt.
'K'	112+12.50	13.10' Rt.

** Order these bars full length. Field cut to fit area shown. and use remainder of bars in adjacent bar pattern.
See Field Cutting Diagram and Dimension Table on sheet 11 of 23.

Notes:
See sheet 9 of 23 for Section B-B.
See sheet 11 of 23 for Sections C-C and E-E.
a4(E) thru a9(E) bar spacings measured along ℄ Rdwy.



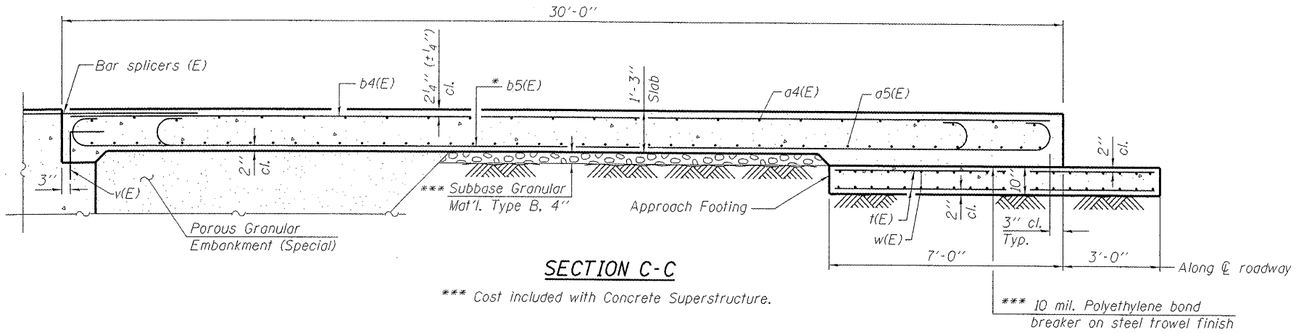
APPROACH FOOTING REINFORCEMENT PLAN

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

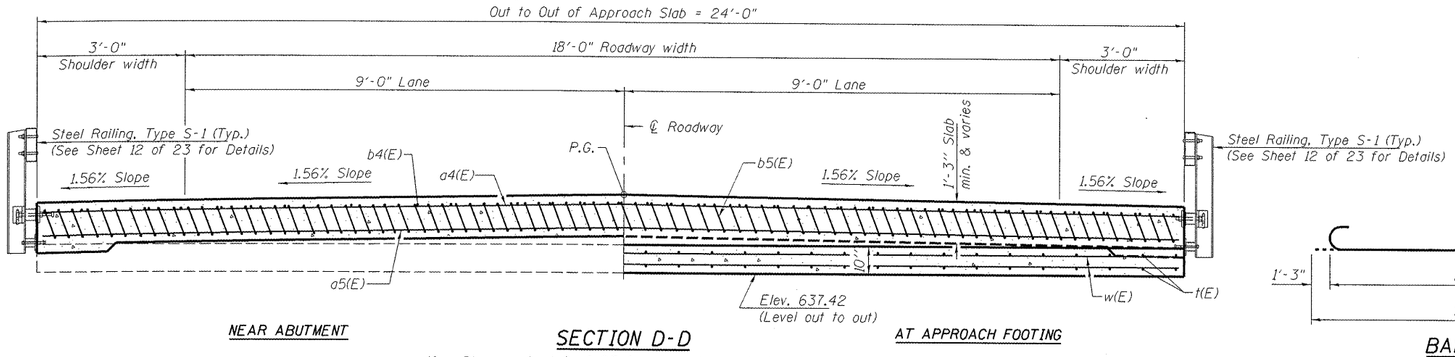
BRIDGE APPROACH SLAB DETAILS (SHEET 2 OF 3)
STRUCTURE NO. 048-3387
SHEET NO. 10 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	51
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



SECTION C-C

*** Cost included with Concrete Superstructure.



NEAR ABUTMENT

SECTION D-D

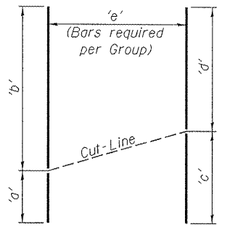
(See Plan on sheet 9 of 23 for dimensions not shown)

AT APPROACH FOOTING

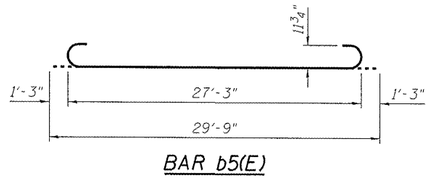
Notes:
- Approach slab concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar Details, See Sheet 8 of 23.
- The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- For bar splicer details, see sheet 18 of 23.
- Cost of excavation for approach footing included with Concrete Structures.
- For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 23.

FIELD CUTTING DIAGRAM and DIMENSION TABLE

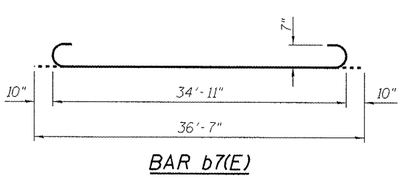
Order bars listed in the Table Pre-bent and full length. Cut as shown in the Diagram and use remainder of bars were indicated.



Bar	'a'	'b'	'c'	'd'	'e'
a6(E)	3'-11"	9'-9"	6'-8"	7'-0"	4
a7(E)	4'-0"	11'-0"	7'-1"	7'-11"	3
a8(E)	3'-11"	9'-9"	6'-8"	7'-0"	10
a9(E)	4'-0"	11'-0"	7'-1"	7'-11"	5
b6(E)	11'-9"	23'-2"	16'-10"	18'-1"	3
b7(E)	11'-9"	23'-2"	16'-10"	18'-1"	5
t1(E)	3'-6"	9'-6"	6'-1"	6'-11"	4
w1(E)	10'-3"	12'-4"	11'-1"	11'-6"	3
w2(E)	4'-7"	12'-3"	8'-2"	8'-8"	7

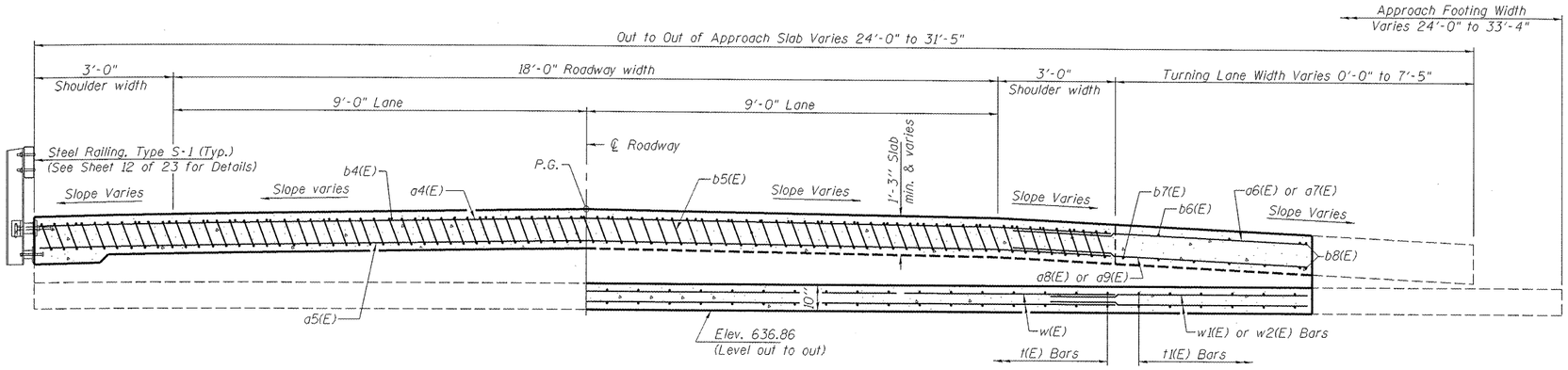


BAR b5(E)



BAR b7(E)

* Tilt #9 b5(E) bars as required to maintain clearance.



NEAR ABUTMENT

SECTION E-E

(See Plan on sheet 10 of 23 for dimensions not shown)

AT APPROACH FOOTING

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a4(E)	50	#4	23'-8"	
a5(E)	92	#5	23'-8"	
a6(E)	4	#4	13'-8"	
a7(E)	3	#4	15'-0"	
a8(E)	10	#5	13'-8"	
a9(E)	5	#5	15'-0"	
a10(E)	2	#4	9'-6"	
b4(E)	39	#4	29'-8"	
b5(E)	116	#9	29'-9"	
b6(E)	3	#4	34'-11"	
b7(E)	5	#7	36'-7"	
b8(E)	2	#4	21'-5"	
t(E)	100	#4	9'-8"	
t1(E)	8	#4	13'-0"	
w(E)	80	#5	23'-8"	
w1(E)	6	#5	22'-7"	
w2(E)	14	#5	16'-10"	
w3(E)	2	#5	10'-8"	
w4(E)	2	#5	3'-9"	
Concrete Superstructure			Cu. Yd.	75.3
Concrete Structures			Cu. Yd.	16.7
Reinforcement Bars, Epoxy Coated			Pound	19440

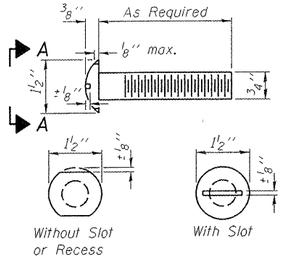
PROFESSIONAL DESIGN FIRM LICENSE #184-001084

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - Rod	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

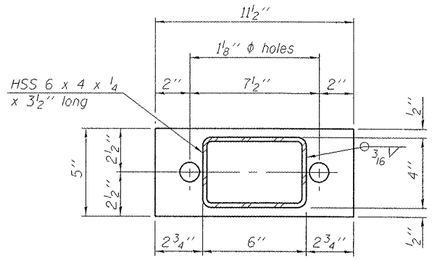
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS (SHEET 3 OF 3)
STRUCTURE NO. 048-3387
SHEET NO. 11 OF 23 SHEETS

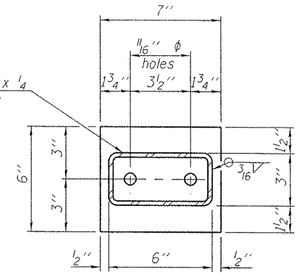
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	52
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



VIEW A-A
ROUND HEAD BOLT

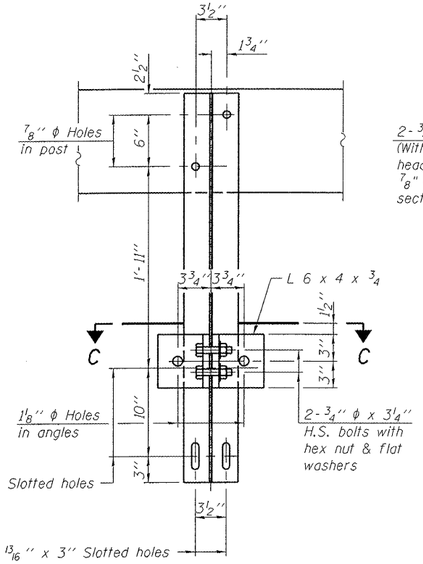


℄ 1/2" x 11 1/2" x 5"

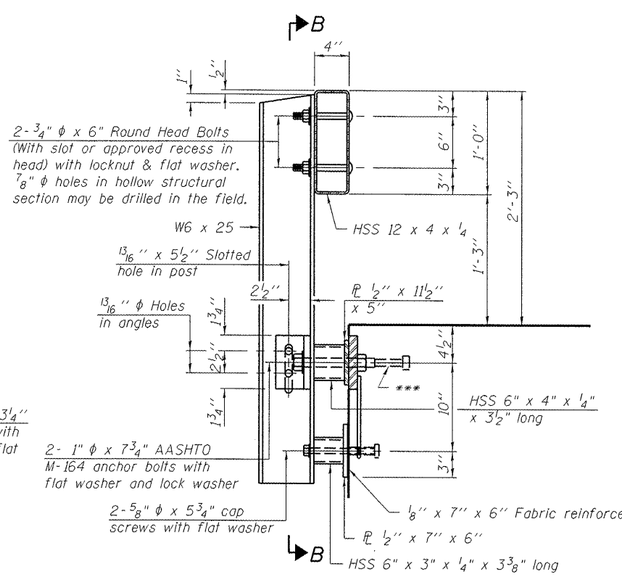


℄ 1/2" x 7" x 6"

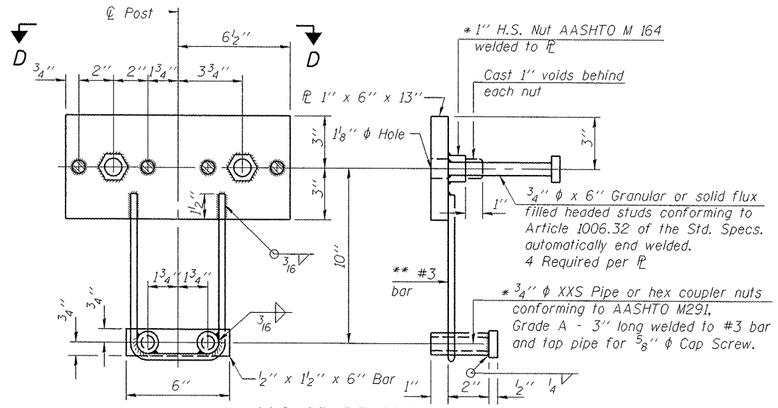
SEE SUPERSTRUCTURE AND APPROACH SLAB SHEETS FOR RAIL POST SPACING



SECTION B-B



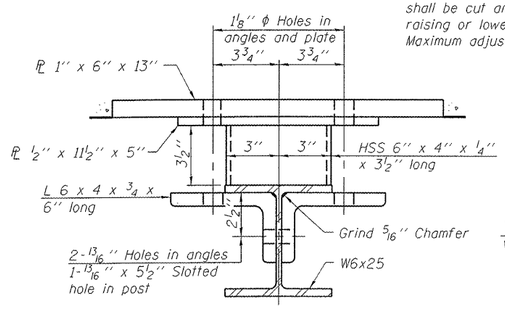
SECTION AT RAILING POST



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

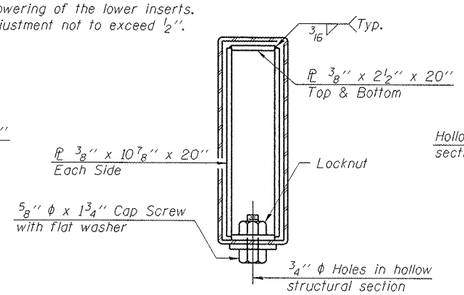
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



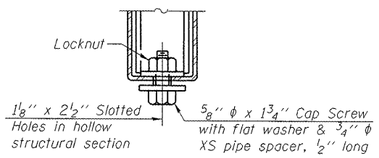
SECTION C-C

(10'-9" Maximum Post Spacing)

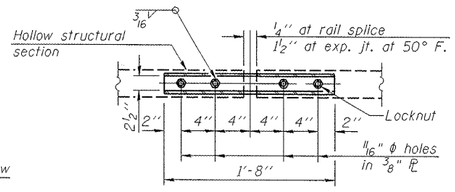
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTIONS AT RAIL SPLICE

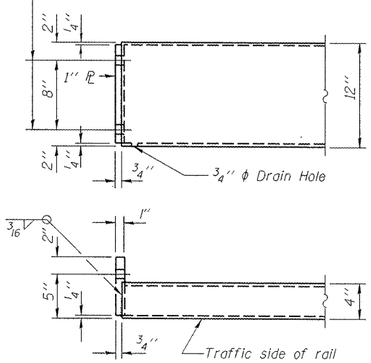


RAIL SPLICE CONNECTION AT EXPANSION JT.

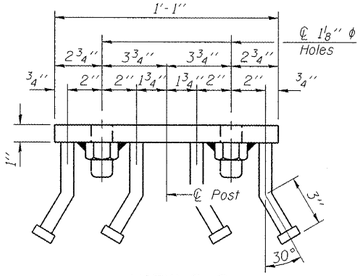


PLAN-BOTT. SPLICE ℄ TYPICAL

1 1/8" ϕ Holes for 1" ϕ x 4" Round head bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy Std. 631026 or BLR 27-1.



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

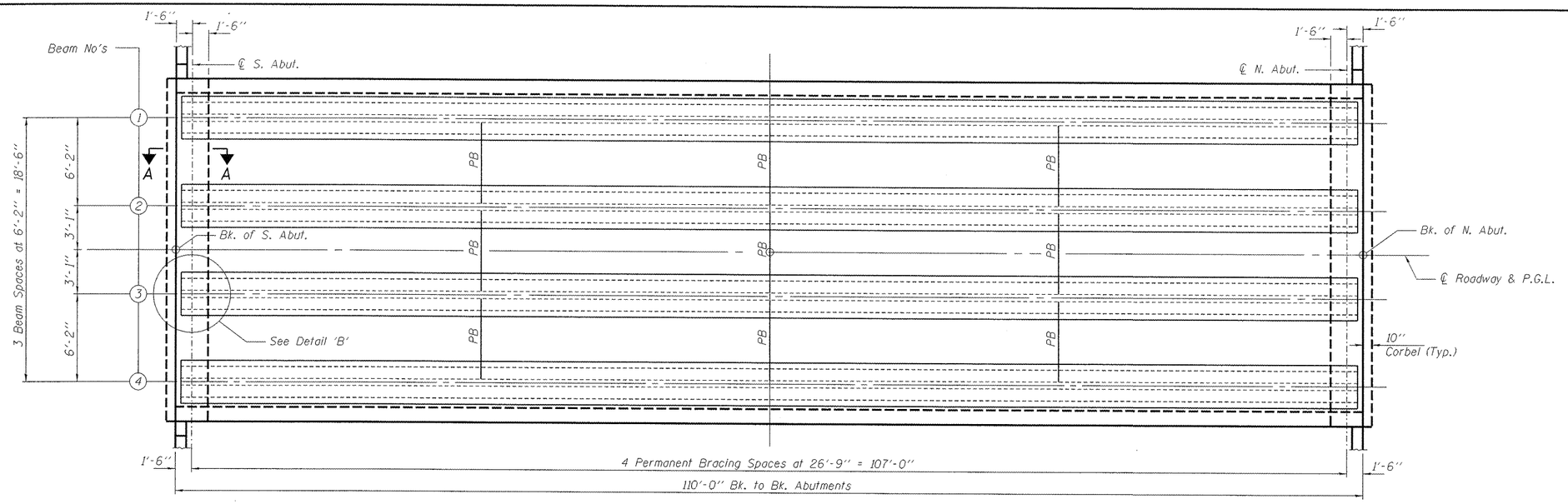
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	265

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

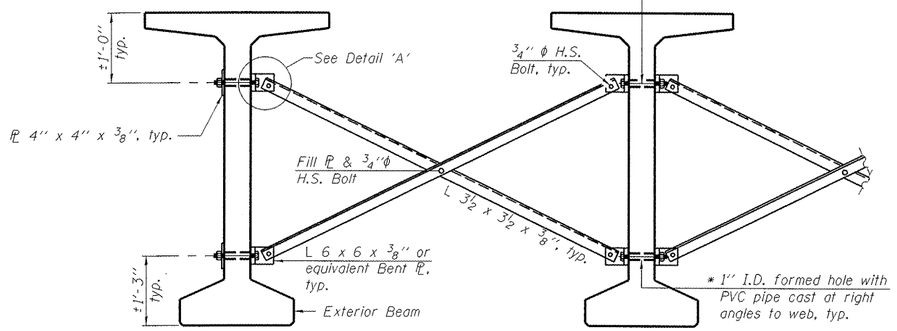
STEEL RAILING, TYPE S-1
STRUCTURE NO. 048-3387
SHEET NO. 12 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	53
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

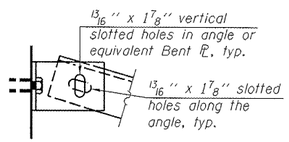


FRAMING PLAN

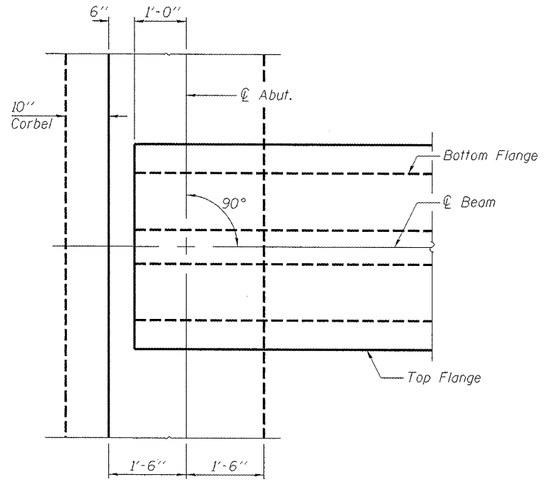
* Fabricator shall locate to miss strands within permissible tolerances.



Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 15/16"ϕ unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.
Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams.



DETAIL 'A'



DETAIL 'B'

PERMANENT BRACING DETAILS FOR BULB-T BEAMS

(9 Required)

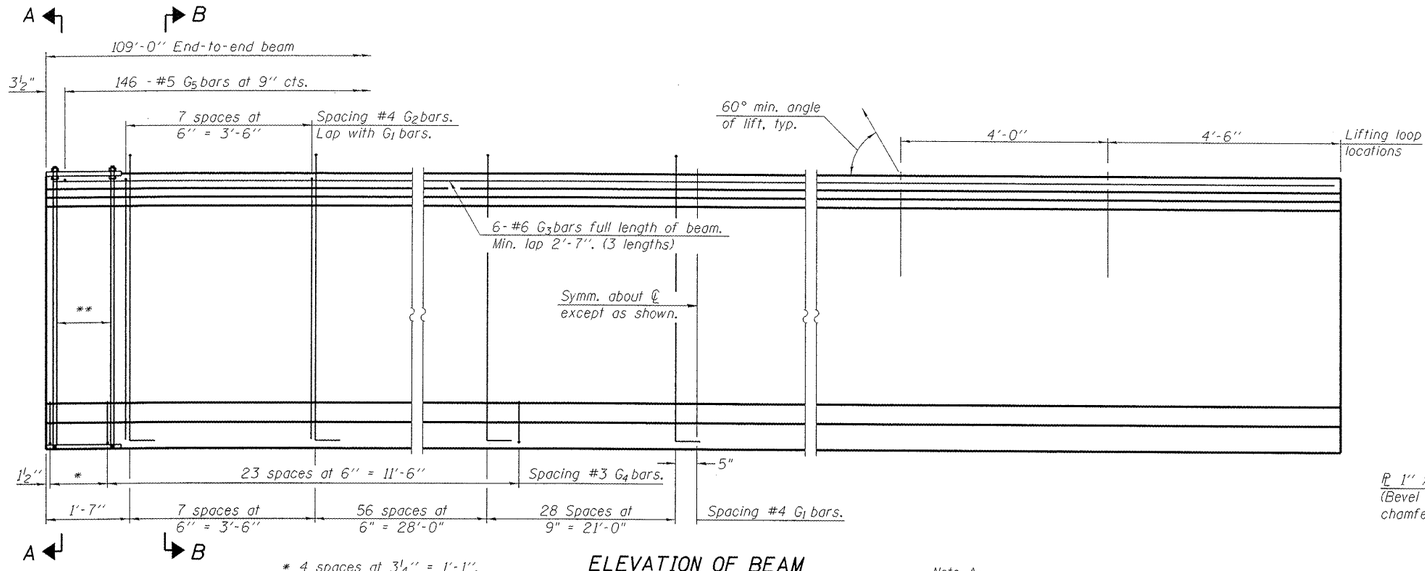
Notes: See Sheet 08 of 23 for Section A-A.

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 048-3387
SHEET NO. 13 OF 23 SHEETS

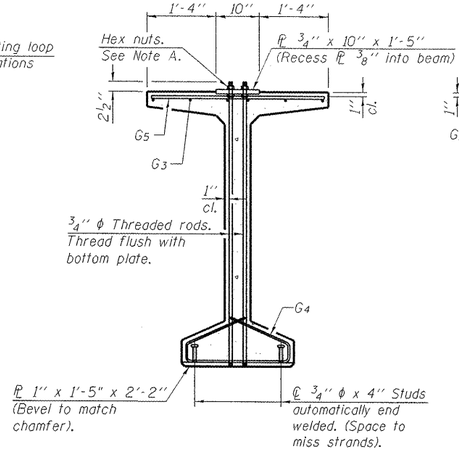
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	54
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		



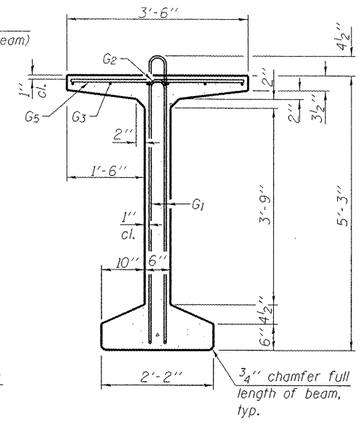
* 4 spaces at 3¼" = 1'-1".
** 5-¾" ϕ threaded dowel rods at 3¼" cts., each face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

Notes:
See sheet 15 of 23 for additional details and Bill of Material.
Required release strength, f'ci, shall be 6000 psi.

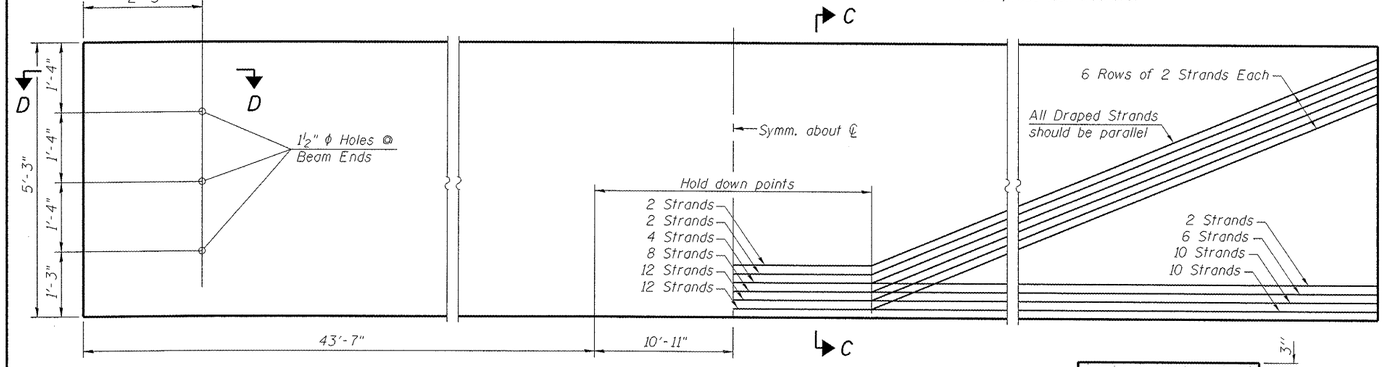


SECTION A-A



SECTION B-B

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



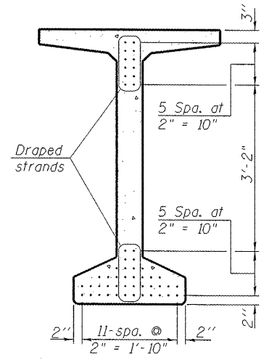
ELEVATION OF BEAM
(Showing prestressing steel)

INTERIOR BEAM MOMENT TABLE		0.5 Span
I	(in^4)	392,638
I'	(in^4)	715,759
S_b	(in^3)	12,224
S_b'	(in^3)	15,899
S_t	(in^3)	12,715
S_t'	(in^3)	39,810
DC1	(k/')	1.535
M_{DC1}	('k)	2133.1
DC2	(k/')	0.038
M_{DC2}	('k)	53.7
DW	(k/')	0.30
M_{DW}	('k)	429.3
$M_{℄ \cdot IM}$	('k)	1727.5

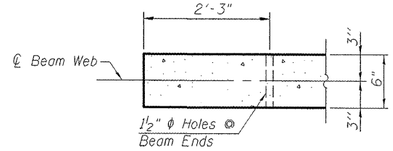
EXTERIOR BEAM MOMENT TABLE		0.5 Span
I	(in^4)	392,638
I'	(in^4)	704,486
S_b	(in^3)	12,224
S_b'	(in^3)	15,806
S_t	(in^3)	12,715
S_t'	(in^3)	38,225
DC1	(k/')	1.626
M_{DC1}	('k)	2264.3
DC2	(k/')	0.038
M_{DC2}	('k)	53.7
DW	(k/')	0.30
M_{DW}	('k)	429.3
$M_{℄ \cdot IM}$	('k)	2366.1

INTERIOR BEAM REACTION TABLE		Abut.
R_{DC1}	(k)	82.1
R_{DC2}	(k)	2.0
R_{DW}	(k)	16.0
$R_{℄ \cdot IM}$	(k)	84.1
R_{Total}	(k)	184.2

EXTERIOR BEAM REACTION TABLE		Abut.
R_{DC1}	(k)	86.9
R_{DC2}	(k)	2.0
R_{DW}	(k)	16.0
$R_{℄ \cdot IM}$	(k)	92.7
R_{Total}	(k)	197.6



SECTION C-C



SECTION D-D

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	184	#4	11'-11"	
G_2	16	#4	10'-2"	
G_3	18	#6	38'-0"	
G_4	56	#3	4'-11"	
G_5	146	#5	3'-4"	

***For information only

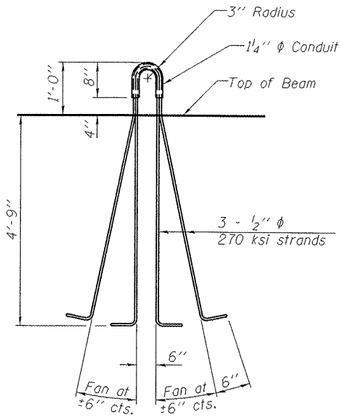
- I: Non-composite moment of inertia of beam section ($in.^4$).
- I': Composite moment of inertia of beam section ($in.^4$).
- S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
- S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
- S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
- S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
- $M_{℄ \cdot IM}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - JGT	REVISED -
	PLOT DATE =	CHECKED - MNM	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

63" PPC BULB T-BEAM
STRUCTURE NO. 048-3387
SHEET NO. 14 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	Knox	97	55
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 127			



LIFTING LOOP DETAIL

NOTES

Inserts for ¾" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

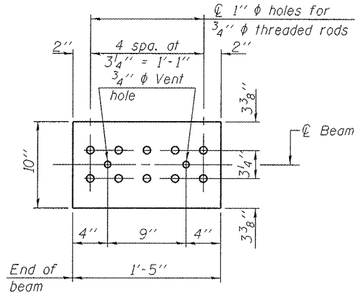
A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Tilt G_6 bars when necessary to maintain 1½" clearance.

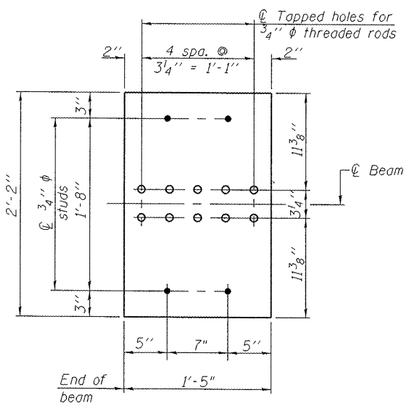
The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.

Threaded rods shall be ASTM F 1554 Grade 55.

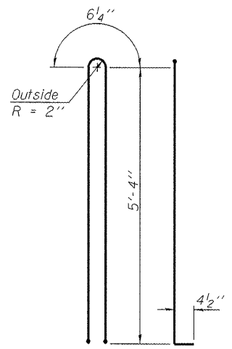


TOP PLATE

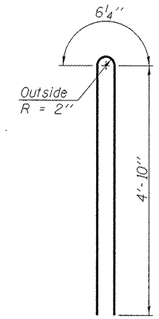


BOTTOM PLATE

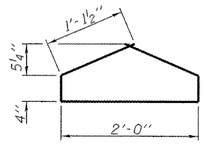
See bearing details for pintle hole locations when required.



BAR G1



BAR G2



BAR G4

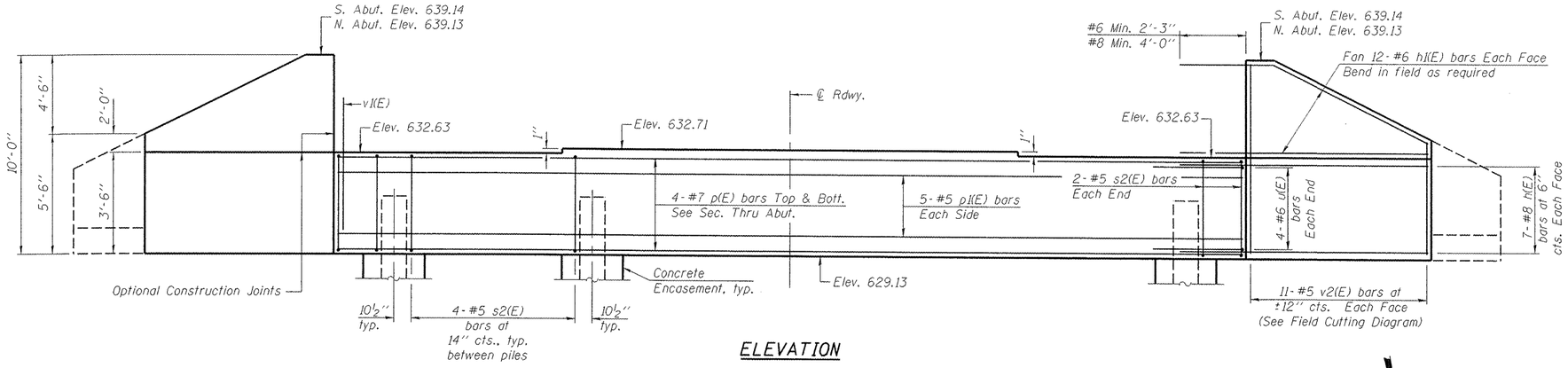
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 63"	Ft.	436

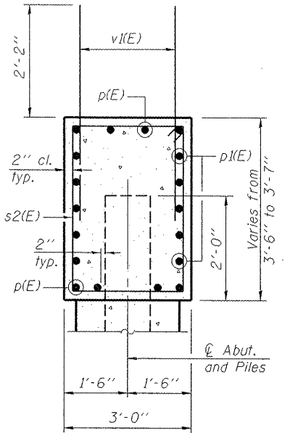
FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	63" PPC BULB T-BEAM DETAILS STRUCTURE NO. 048-3387
		CHECKED - MNM	REVISED -		SHEET NO. 15 OF 23 SHEETS
	PLOT SCALE =	DRAWN - JGT	REVISED -		
	PLOT DATE =	CHECKED - MNM	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	56
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 127			

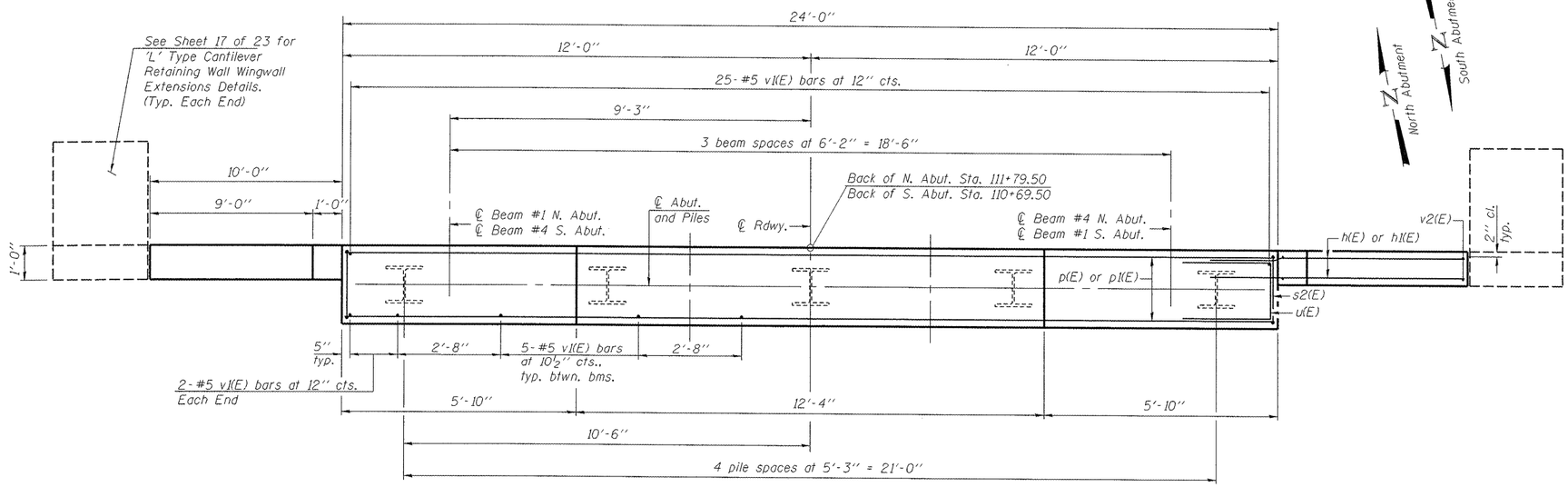
Notes:
Pour steps monolithically with cap.



ELEVATION



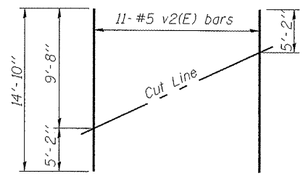
SEC. THRU ABUT.



PLAN

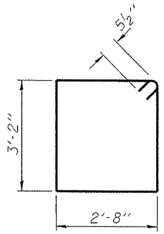
PILE DATA

Type: HP12x63
Nominal Required Bearing: 497 Kips
Factored Resistance Available: 273 Kips
Est. Length: S. Abut. 58' - N. Abut. 46'
No. Production Piles: 4 per Abut. (8 Total) with pile shoes
No. Test Piles: 1 per Abut. (2 Total) with pile shoes

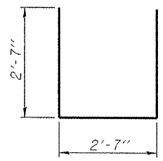


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)

BILL OF MATERIAL
2 - ABUTMENTS

Bar	No.	Size	Length	Shape
h(E)	56	#8	13'-10"	
h1(E)	96	#6	13'-2"	
p(E)	16	#7	23'-8"	
p1(E)	20	#5	23'-8"	
s2(E)	40	#5	12'-7"	
u(E)	16	#6	7'-9"	
v1(E)	88	#5	4'-4"	
v2(E)	44	#5	14'-10"	
Structure Excavation		Cu. Yd.	178	
Concrete Structures		Cu. Yd.	30.7	
Reinforcement Bars, Epoxy Coated		Pound	7020	
Furnishing Steel Piles HP12x63		Foot	416	
Driving Piles		Foot	416	
Test Pile Steel HP12x63		Each	2	
Pile Shoes		Each	10	
Concrete Encasement		Cu. Yd.	3.4	

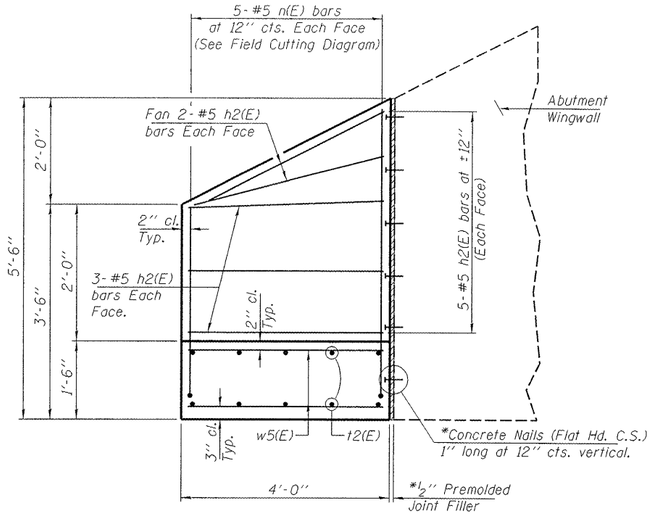
For details of Bar Splicers, see sheet 18 of 23.
For details of piles and Concrete Encasement, see sheet 19 of 23.

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

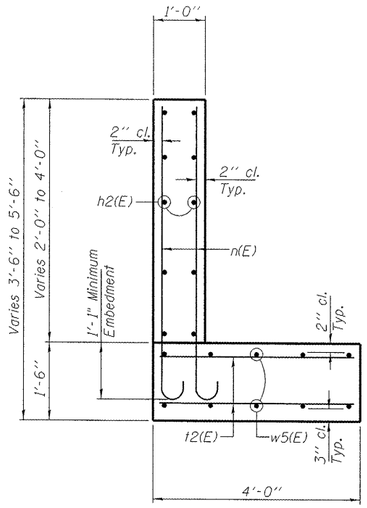
NORTH & SOUTH ABUTMENT
STRUCTURE NO. 048-3387
SHEET NO. 16 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	57
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

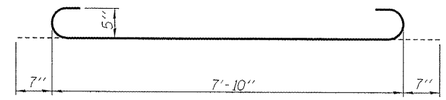


ELEVATION

*Cost included with Concrete Structures



SECTION THRU WALL

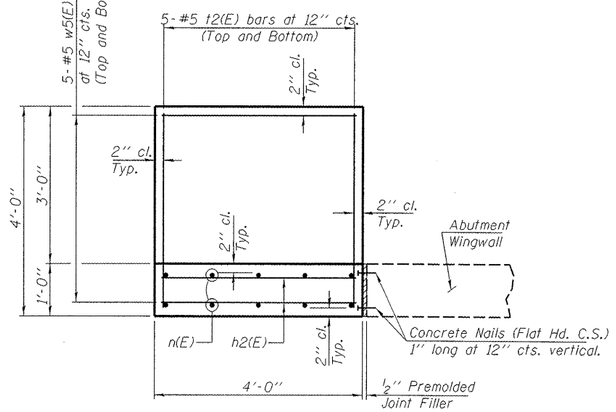


BAR n(E)

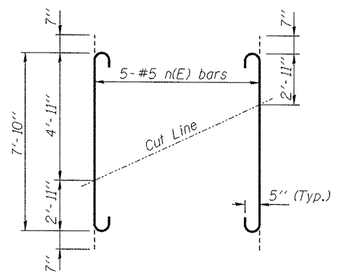
(See Field Cutting Diagram)

BILL OF MATERIAL
4 WINGWALL EXTENSIONS

Bar	No.	Size	Length	Shape
h2(E)	40	#5	3'-8"	——
n(E)	20	#5	9'-0"	⊂⊃
t2(E)	40	#5	3'-8"	——
w5(E)	40	#5	3'-8"	——
Structure Excavation		Cu. Yd.	21.0	
Concrete Structures		Cu. Yd.	5.3	
Reinforcement Bars, Epoxy Coated		Pound	650	



PLAN



FIELD CUTTING DIAGRAM

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

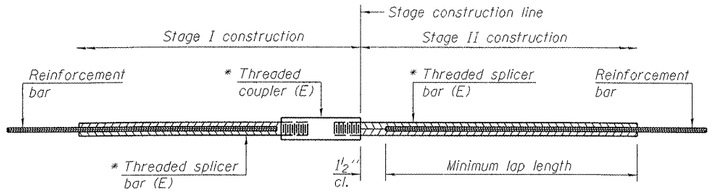
FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

'L' TYPE RETAINING WALL WING EXTENSIONS
STRUCTURE NO. 048-3387

SHEET NO. 17 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	58
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BRDS 0095 127		



STANDARD BAR SPLICER ASSEMBLY

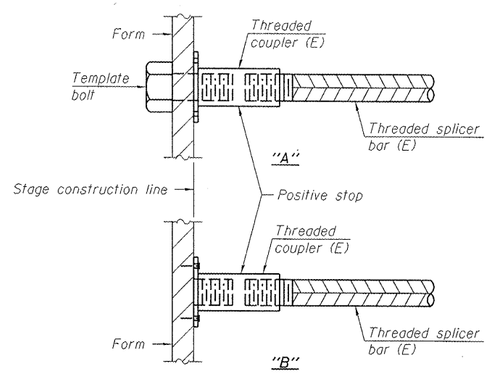
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

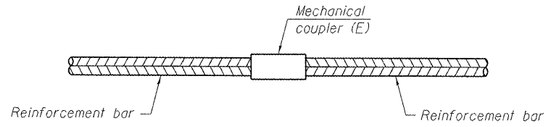
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



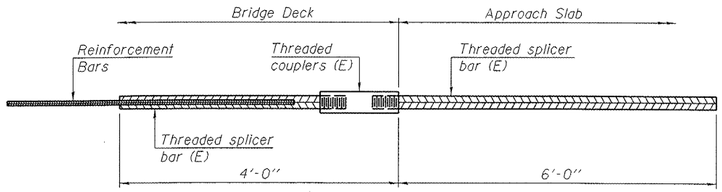
INSTALLATION AND SETTING METHODS

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



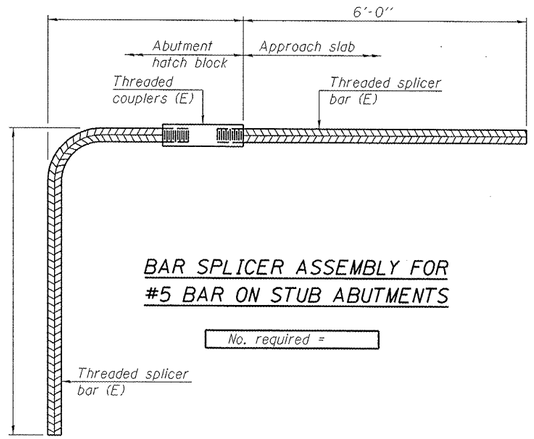
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required = 50



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 special provision for Mechanical Splicers.

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

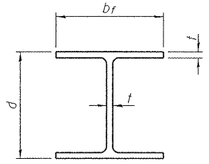
BSD-1 7-1-10

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

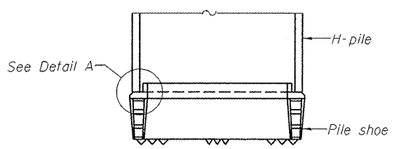
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 048-3387
SHEET NO. 18 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	59
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

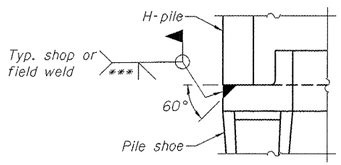


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

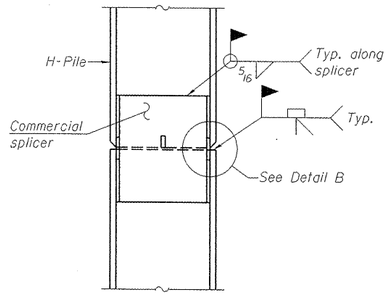


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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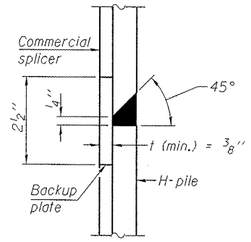
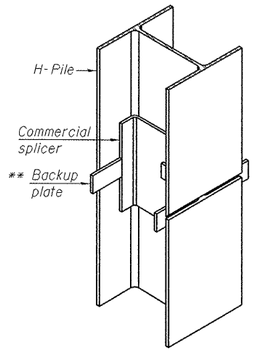
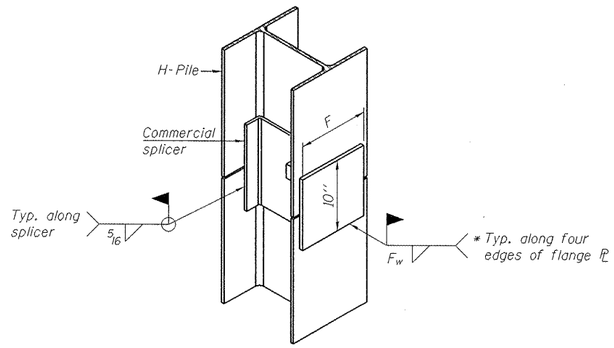


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



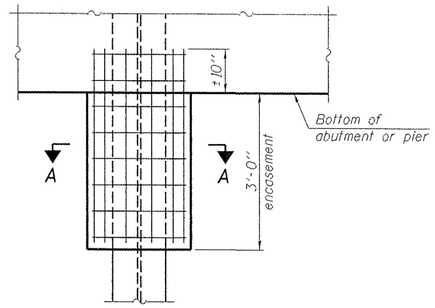
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

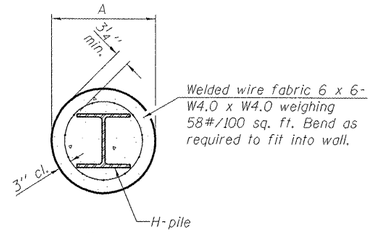
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



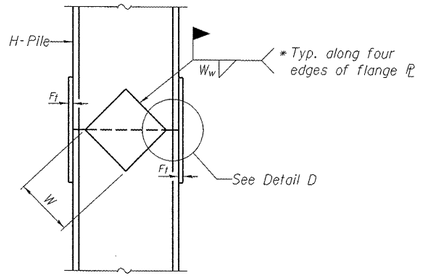
ELEVATION



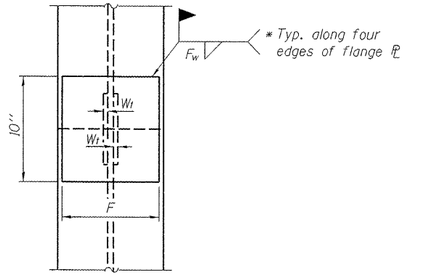
SECTION A-A

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

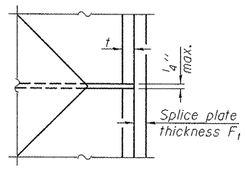
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

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

WELDED PLATE FIELD SPLICE

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

F-HP 7-1-10

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 048-3387
SHEET NO. 19 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	60
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

Illinois Department of Transportation
Division of Highways
Whitney & Associates, Inc

SOIL BORING LOG

Date 1/27/11

ROUTE TR 176 DESCRIPTION TR 176 Relocation (Creek) LOGGED BY T. Fehl

SECTION 05-15106-01-BR LOCATION Persifer Township, SEC. 19, TWP. 11N, RNG. 3R,
Latitude , Longitude

COUNTY Knox DRILLING METHOD ATV With Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 048-3120
Station 110+70 to 111+80

BORING NO. S-05
Station 110+70
Offset 4.0 ft Right
Ground Surface Elev. 622.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 594.1 ft ▼
Upon Completion 590.5 ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY CLAY Organic Topsoil (10")	621.27			
Medium, Brown SANDY CLAY LOAM DD=95 PCF		2		
		2	0.8	22
		1	B	
	-5			
		1		
		1	0.5	24
	615.60	2	B	
Medium, Dark Brown CLAY LOAM		1		
		1	0.7	26
	613.10	2	B	
Soft, Dark Brown SILTY CLAY DD=92 PCF	-10			
		1		
		2	0.3	27
	610.60	1	B	
Very Stiff, Gray CLAY		4		
		5	2.6	17
		6	B	
	607.60			
Very Stiff, Gray, NEAR CLAY SHALE DD=116 PCF	-15	5		
		6	3.2	15
		7	B	
	602.10			
Hard, Dark Gray And Gray CLAY SHALE DD=115 PCF		6		
		7	4.3	14
		9	B	
	-20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard, Dark Gray And Gray CLAY SHALE DD=119 PCF *(continued)*		8		
		9	4.8	14
		12	B	
	-10			
		14	4.4	15
	598.10	18	B	
Very Stiff, Gray CLAY SHALE DD=114 PCF	-25			
		10		
		12	2.3	16
		18	B	
	-30			
		9		
		11	2.1	16
		15	B	
	-35			
		15		
		26	2.1	17
	590.10	37	B	
Hard, Gray CLAY SHALE DD=112 PCF				
	-35			
		97/4"	-	14
	584.10			
Very Stiff, Gray CLAY SHALE DD=115 PCF	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Whitney & Associates, Inc.

SOIL BORING LOG

Date 1/27/11

ROUTE TR 176 DESCRIPTION TR 176 Relocation (Creek) LOGGED BY T. Fehl

SECTION 05-15106-01-BR LOCATION Persifer Township, SEC. 19, TWP. 11N, RNG. 3R,
Latitude , Longitude

COUNTY Knox DRILLING METHOD ATV With Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 048-3120
Station 110+70 to 111+80

BORING NO. S-05
Station 110+70
Offset 4.0 ft Right
Ground Surface Elev. 622.10 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 594.1 ft ▼
Upon Completion 590.5 ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff, Gray CLAY SHALE DD=115 PCF *(continued)*		15		
		21	3.4	15
		22	B	
	578.60			
Hard, Gray SHALE	-45			
	576.10	101/5"	4.5	12
SEE ROCK CORE LOG			P	
End of Boring				
	-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation

ROCK CORE LOG

Date 01/27/2011

ROUTE TR-176 DESCRIPTION TR 176 Relocation (Creek) LOGGED BY Fehl/Krusemark

SECTION 05-15106-01-BR LOCATION Persifer Township SEC. 19 TWP. 11N RNG. 3E PM

COUNTY Knox CORING METHOD Single Tube With Water

STRUCT. NO. 048-3120 CORING BARREL TYPE & SIZE NGW x 5'
Station 110+70 to 111+80
Core Diameter 2.0 in
Top of Rock Elev (579+) 43.5 ft
Begin Core Elev. (577+) 45 ft

BORING NO. SB-5
Station 110+70
Offset 4' Right
Ground Surface Elev. 622.1 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SILTSTONE	576.6					
Gray SHALE						
MC = 5.8%	45					
	46					
	47	5-1	47	27		30.7
	48					
	49					
	50					
	51					
Gray SHALE MC = 4.8%	52					30.8
	53	5-2	73	35		
Gray and Black, SHALE With Seam of Coal Fragments	568.6					
	54					
Gray SHALE	567.6					
	55					
	56					
Gray SANDSTONE MC = 3.8%	565.6					46.9
	57					
	58	5-3	100	86		
	59					
Gray SHALE	563.1					
	562.1					
CORE RUN DISCONTINUED	60					

Color pictures of the cores Attached
Cores will be stored for examination until 07/01/2011
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - MNM	REVISED -	
	PLOT SCALE =	DRAWN - DAP	REVISED -	
	PLOT DATE =	CHECKED - JGT	REVISED -	

BORING LOGS (SHEET 1 OF 4)
STRUCTURE NO. 048-3387
SHEET NO. 20 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	61
		CONTRACT NO. 89429		
	ILLINOIS	FED. AID PROJECT BROS 0095 127		

Illinois Department of Transportation
Division of Highways
Whitney & Associates, Inc.

SOIL BORING LOG

Date 1/26/11

ROUTE TR 176 DESCRIPTION TR 176 Relocation (Creek) LOGGED BY T. Fehl

SECTION 05-15106-01-BR LOCATION Persifer Township, SEC. 19, TWP. 11N, RNG. 3R,
Latitude , Longitude

COUNTY Knox DRILLING METHOD ATV With Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO. 048-3120
Station 110+70 to 111+80

BORING NO. S-08
Station 111+80
Offset 2.0 ft Right
Ground Surface Elev. 623.70 ft

Surface Water Elev. ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 601.5 ft ▼
Upon Completion 607.7 ft
After - Hrs. - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY CLAY Organic Topsoil (10") 622.87			
Medium, Brown SILTY CLAY	2		
	2	0.9	26
	3	B	
619.20			
-5 Stiff, Brown And Gray SILTY CLAY DD=96 PCF	2		
	3	1.7	24
	5	B	
	2		
	3	1.6	25
614.70	3	B	
-10 Medium, Brown And Gray SILTY CLAY DD=93 PCF	3		
	3	0.9	27
	3	B	
	1		
	2	0.7	28
609.20	2	B	
-15 Soft, Dark Gray CLAY LOAM DD=94 PCF	1		
	1	0.4	27
	2	B	
606.70			
Very Stiff, Gray, NEAR CLAY SHALE DD=114 PCF	5		
	6	2.1	17
	10	B	
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff, Gray, NEAR CLAY SHALE DD=114 PCF (continued)	10		
	15	2.7	16
601.70 ▼	30	B	
Stiff, Gray, NEAR CLAY SHALE DD=113 PCF	8		
	10	1.3	18
DD=116 PCF	15	B	
-25			
	9		
	12	1.5	18
	17	B	
	8		
	9	1.2	19
	13	B	
-30			
	15		
	11	2.2	15
	17	B	
589.70			
Very Stiff, Gray CLAY SHALE DD=118 PCF	29		
-35			
587.70	49	2.9	13
SEE ROCK CORE LOG End of Boring	50/1"	B	
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation

ROCK CORE LOG

Date 01/27/2011

ROUTE TR-176 DESCRIPTION TR 176 Relocation (Creek) LOGGED BY Fehl/Krusemark

SECTION 05-15106-01-BR LOCATION Persifer Township SEC. 19 TWP. 11N RNG. 3E PM

COUNTY Knox CORING METHOD Single Tube With Water

STRUCT. NO. 048-3120 CORING BARREL TYPE & SIZE NGW x 5'

Station 110+70 to 111+80 Core Diameter 2.0 in
Top of Rock Elev. (589+) 36 ft
Begin Core Elev. (588+) 36 ft

BORING NO. SB-8
Station 111+80
Offset 2' Right
Ground Surface Elev. 623.7 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Dark Gray, NEAR CLAY SHALE	36					
	37					
MC = 15.6%	38					3.5
	39	8-1	43	10		
	40					
	41					
	42					
	43					
Dark Gray, NEAR CLAY SHALE MC = 14.0%	44	8-2	50	23		4.1
	45					
578.2						
Dark Gray And Black NEAR CLAY SHALE With Shale Fragments	46					
576.7	47					
Dark Gray CLAY SHALE MC = 10.9%	48					7.1
	49	8-3	60	36		
	50					
572.7	51					
CORE RUN DISCONTINUED						

Color pictures of the cores Attached
Cores will be stored for examination until 07/01/2011
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS 138 (Rev. 3/01)

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS (SHEET 2 OF 4) STRUCTURE NO. 048-3387
		CHECKED - MNM	REVISED -		
	PLOT SCALE =	DRAWN - DAP	REVISED -		SHEET NO. 21 OF 23 SHEETS
	PLOT DATE =	CHECKED - JGT	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	62
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 127		

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-01
DATE 2-26-04
W. & A. FILE NO. 3433
SHEET 1 OF 4

PROJECT PERSIFER TOWNSHIP BRIDGE; SEC #05-15106-01BR LOCATION Knox County, IL
BORING LOCATION Station 10+51; 6' Left of Centerline DRILLED BY Fehl
BORING TYPE Hollow-Stem Auger WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.B.S.C. SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)22.8 Ft.
GROUND SURFACE ELEVATION 101.9 GROUND WATER ELEVATION AT 3 HRS (-) 9.7 Ft.
BORING DISCONTINUED AT ELEVATION 49.1 GROUND WATER ELEVATION AT COMPLETION (-)13.1 Ft.

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
BITUMINOUS CONCRETE	3"						
Brown Medium-Grained SAND And GRAVEL	10"						
Medium, Brown And Dark Brown SILTY CLAY With Trace Of Bituminous Concrete		SS	2 2 2(4)	1.0	0.8	97	20
	04						
Medium, Gray And Brown SILTY CLAY LOAM		SS	2 2 3(5)	1.0	0.8	96	22
Stiff, Gray And Brown SILTY CLAY LOAM	08	SS	2 2 3(5)	1.2	1.2	98	21
Medium, Gray And Brown SILTY CLAY		SS	2 2 4(6)	1.0	0.9	90	28
	12	SS	3 3 4(7)	0.8	0.8	97	25
	16	SS	3 4 4(8)	0.7	0.7	91	28
Soft, Gray SANDY CLAY LOAM		SS	1 2 2(4)	0.6	0.4	89	30
	20	SS	1 2 1(3)	0.5	-	-	26
Soft, Brown SANDY LOAM		SS	8 8 9(17)	2.5	2.2	111	15
Very Stiff, Gray Near CLAY SHALE	24	SS	12 17 19(36)	4.5+	4.3	115	14
Hard, Gray CLAY SHALE							

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-01
DATE 2-26-04
PROJECT Persifer Township Bridge; Sec #05-15106-01BR SHEET 2 OF 4
LOCATION Knox County, Illinois W. & A. FILE NO. 3433

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 1 Of 4							
		SS	12 31 27(58)	4.5+	5.1	117	12
	30	SS	14 20 26(46)	4.5+	4.7	117	11
Hard, Gray SHALE	34	SS	97/12"	4.5+	-	-	10
	38	SS	103/4"	4.5+	-	-	7
	42	SS	103/3"	4.5+	-	-	10
	46						
BENCHMARK (100.0) - Spike In Power Pole At Station 9+15; Left of Centerline	50	SS	93/4"	4.5+	-	-	9
AUGER REFUSAL AT (-)52.8 FEET EXPLORATORY BORING DISCONTINUED	54						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

Station 10+51.00, 6.0' Lt. (Boring Log) = Station 111+66.22, 72.74' Rt. (New Roadway Alignment)
Top of Boring: (Log Elevation) 101.9 = (New Datum Elevation) ±630.1

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -
		CHECKED - MNM	REVISED -
	PLOT SCALE =	DRAWN - DAP	REVISED -
	PLOT DATE =	CHECKED - JGT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS (SHEET 3 OF 4)
STRUCTURE NO. 048-3387
SHEET NO. 22 OF 23 SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	05-15106-01-BR	KNOX	97	63
		CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT BROS 0095 127			

WHITNEY & ASSOCIATES
INCORPORATED
2406 West Nebraska Avenue
PEORIA, ILLINOIS 61604

BORING LOG

BORING NO. B-02
DATE 2-26-04
W. & A. FILE NO. 3433
SHEET 3 OF 4
PROJECT PERSIFER TOWNSHIP BRIDGE; SEC #05-15106-01BR
LOCATION Knox County, IL
BORING LOCATION Station 9+49; 6' Left of Centerline
DRILLED BY Fehl
BORING TYPE Hollow-Stem Auger
WEATHER CONDITIONS Partly Cloudy & Mild
SOIL CLASSIFICATION SYSTEM U.S.B.S.C.
SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)22.7 Ft.
GROUND SURFACE ELEVATION 101.3
GROUND WATER ELEVATION AT - HRS. -
BORING DISCONTINUED AT ELEVATION 48.3
GROUND WATER ELEVATION AT COMPLETION (-)12.4 Ft.

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
BITUMINOUS CONCRETE	2"						
Brown Medium-Grained SAND And GRAVEL	10"						
Very Stiff, Brown And Dark Brown SILTY CLAY		SS	3 3 3(6)	2.5	2.3	102	20
Stiff, Brown SANDY CLAY	04	SS	3 4 4(8)	1.4	1.2	102	22
Stiff, Dark Gray SILTY CLAY	08	SS	3 4 3(7)	1.5	1.4	98	22
		SS	3 3 5(8)	1.8	1.8	99	21
	12	SS	2 2 2(4)	1.3	1.1	95	23
Medium, Dark Gray SILTY CLAY	16	SS	2 2 3(5)	0.8	0.6	93	26
Very Loose, Brown, Fine- To Medium-Grained SAND		SS	1 2 2(4)	-	-	-	-
	20	SS	1 2 1(3)	-	-	-	-
Medium, Dark Gray SILTY CLAY		SS	4 4 5(9)	0.8	0.7	96	23
Very Stiff, Gray Near CLAY SHALE	24	SS	6 10 11(21)	3.8	3.7	113	18

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

BORING LOG
(CONTINUATION)

BORING NO. B-02
DATE 2-26-04
PROJECT Persifer Township Bridge; Sec #05-15106-01BR
SHEET 4 OF 4
LOCATION Knox County, Illinois
W. & A. FILE NO. 3433

DESCRIPTION	DEPTH IN FEET	SAMPLE TYPE	N	Qp	Qu	Dd	Mc
See Sheet 3 Of 4			6				
		SS	10 12(22)	3.3	3.1	114	17
Hard, Gray CLAY SHALE	30	SS	6 14 26(40)	4.5+	4.7	117	15
	34	SS	10 18 32(50)	4.5+	5.5	118	13
	38						
Hard, Gray SHALE		SS	12 28 9773"	4.5+	-	-	9
	42	SS	93/3"	4.5+	-	-	11
	46						
	50	SS	102/4"	4.5+	-	-	11
AUGER REFUSAL AT (-)53.0 FEET EXPLORATORY BORING DISCONTINUED	54						

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
SS - SPLIT SPOON SAMPLE
ST - SHELBY TUBE SAMPLE
Qp - CALIBRATED PENETROMETER READING - T.S.F.
Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
Dd - NATURAL DRY DENSITY - P.C.F.
Mc - NATURAL MOISTURE CONTENT - %

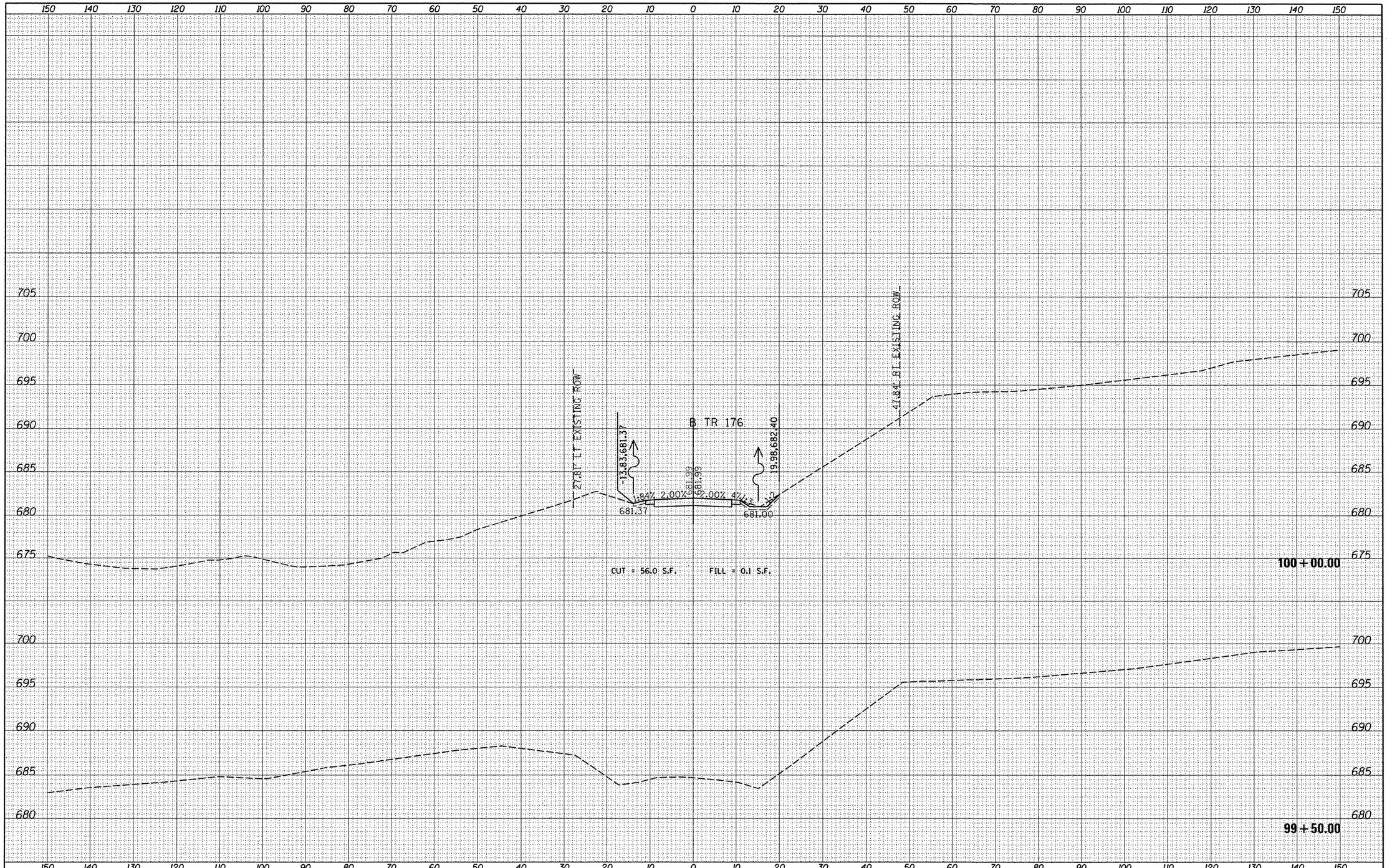
WHITNEY & ASSOCIATES
PEORIA, ILLINOIS

Station 9+49.00, 6.0' Lt. (Boring Log) = Station 110+64.70, 61.28' Rt. (New Roadway Alignment)
Top of Boring: (Log Elevation) 101.3 = (New Datum Elevation) ±630.2

FILE NAME =	USER NAME =	DESIGNED - JGT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS (SHEET 4 OF 4) STRUCTURE NO. 048-3387 SHEET NO. 23 OF 23 SHEETS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - MNM	REVISED -			TR 176	05-15106-01-BR	KNOX	97	64
	PLOT SCALE =	DRAWN - DAP	REVISED -					CONTRACT NO. 89429		
	PLOT DATE =	CHECKED - JGT	REVISED -					ILLINOIS FED. AID PROJECT BROS 0095 127		

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

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



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		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: 1"=10' | SHEET NO. OF SHEETS | STA. 99+50.00 | TO STA. 100+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	65
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

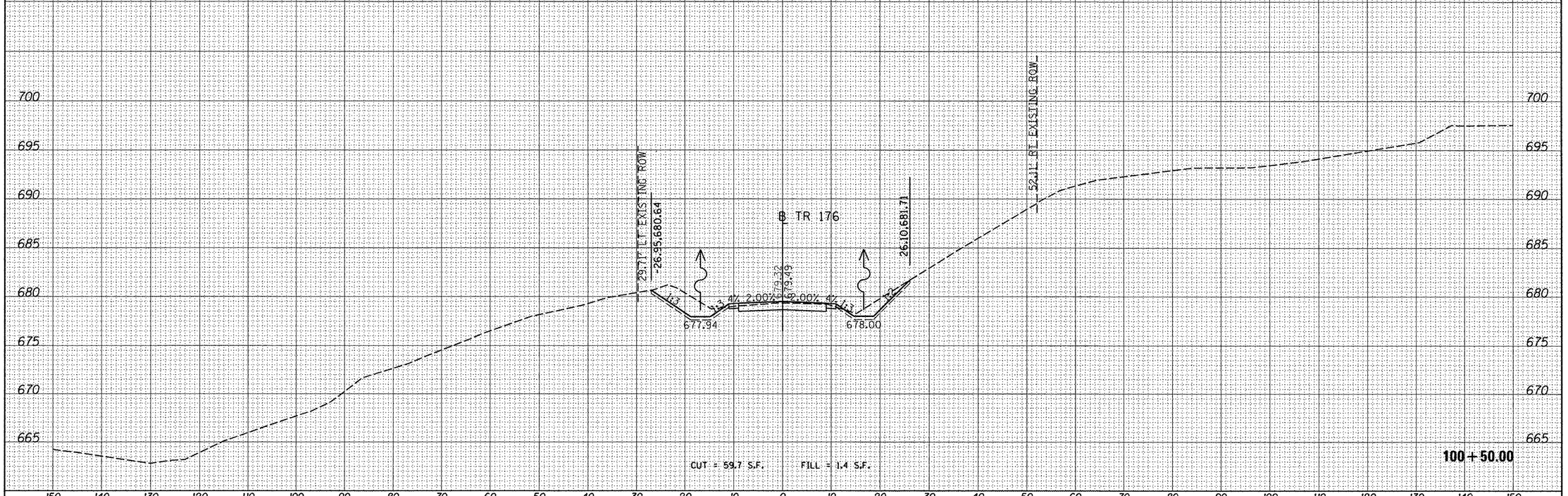
BY	DATE

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

BY	DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

700
695
690
685
680
675
670
665



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	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12\02\2011	DATE -	REVISED -

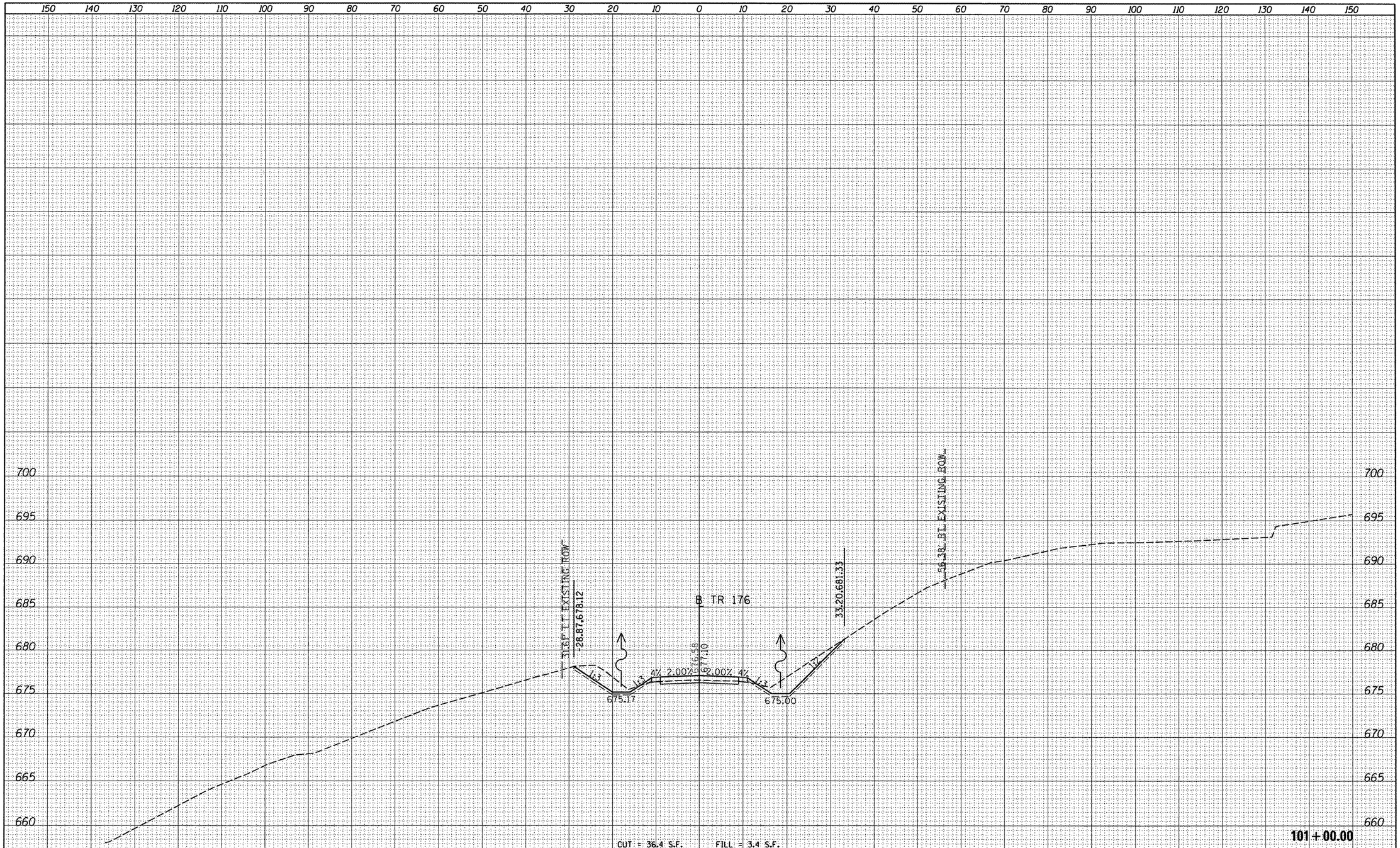
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 100+50.00 TO STA. 100+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	66
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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



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

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		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 101+00.00 | TO STA. 101+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	67
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

BY	DATE

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

BY	DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

695 690 685 680 675 670 665 660 655

PROPOSED R.O.W.

33.09' LT. EXISTING ROW

29.81,675.98

℄ TR 176

37.56,678.71

58.92' RT. EXISTING ROW

1:3 1:3 4% -2.00% 4% 1:3 1:3

674.12

675.31

673.04

672.00

CUT = 8.3 S.F. FILL = 24.0 S.F.

101 + 50.00

FILE NAME =	USER NAME = dwso00878	DESIGNED -	REVISED -
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	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

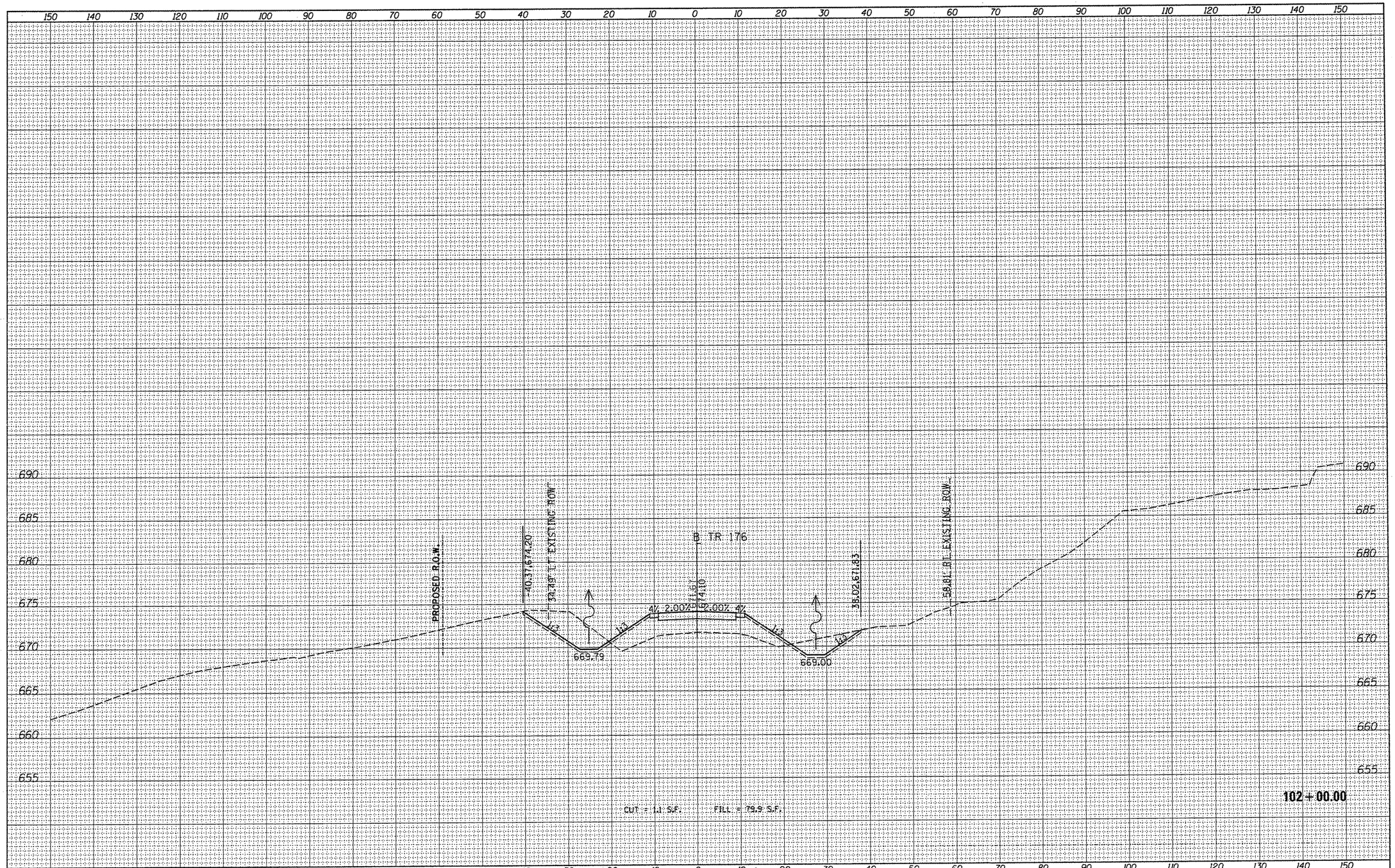
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 101+50.00 | TO STA. 101+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	68
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 102+00.00 | TO STA. 102+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	69
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

ORIGINAL SURVEY	NOTE BOOK	
	SURVEYED	
	PLOTTED	
	TEMPLATE	
NO.	AREAS CHECKED	

FINAL SURVEY	NOTE BOOK	
	SURVEYED	
	PLOTTED	
	TEMPLATE	
NO.	AREAS CHECKED	

NO.	BY	DATE

NO.	BY	DATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

685 680 675 670 665 660 655 650 645

PROPOSED R.O.W.

45.64 670.55

35.89' LT EXISTING ROW

℄ TR 176

4% 2.00% 2.00% 4%

669.43

667.01

666.54

664.57

39.98

58.71' RT EXISTING ROW

CUT = 1.8 S.F. FILL = 166.5 S.F.

102+50.00

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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

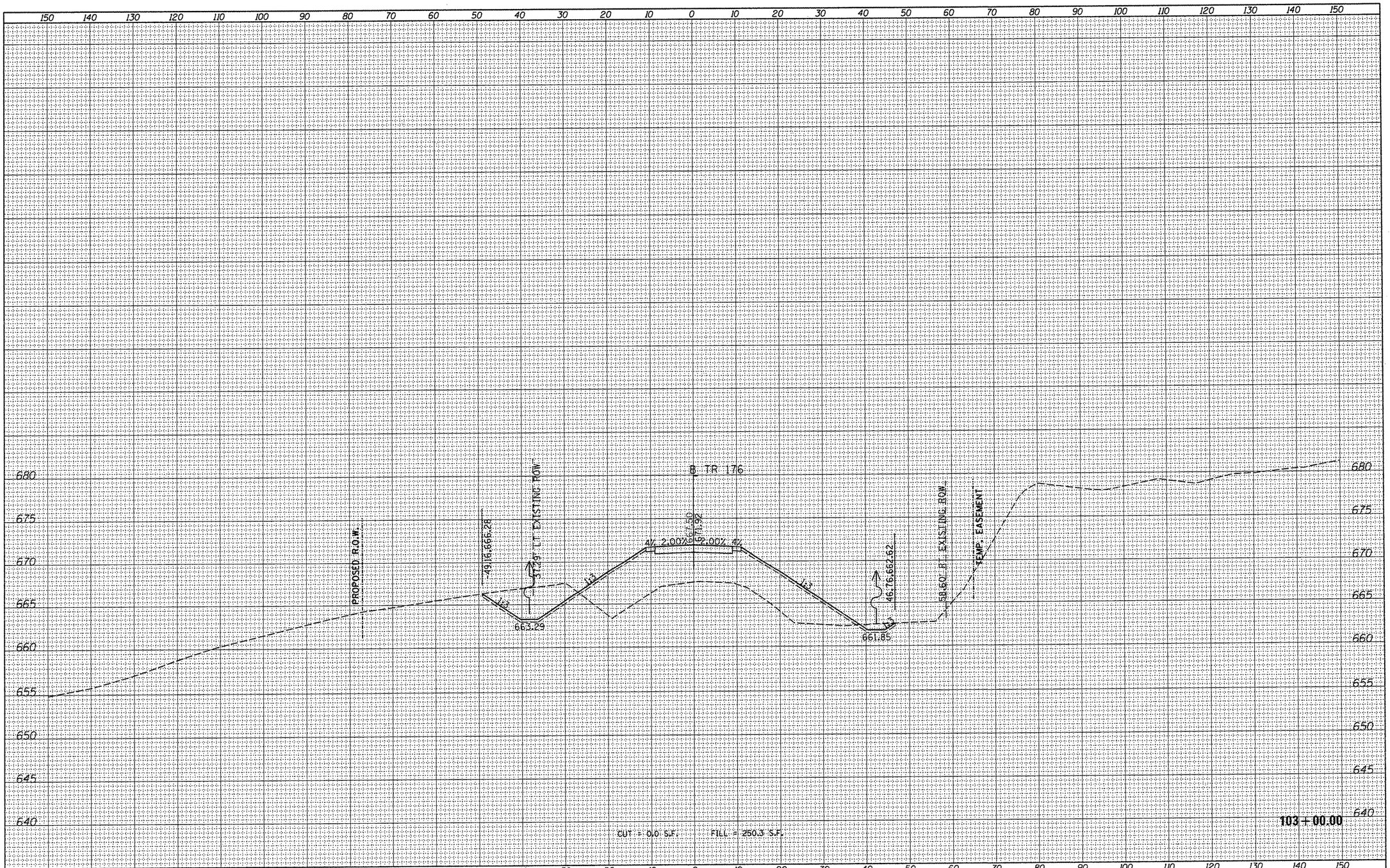
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE:	SHEET NO. OF SHEETS	STA. 102+50.00	TO STA. 102+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	70
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

ORIGINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	CROSS SECTIONS		
NO.	AREAS		
	AREAS CHECKED		DATE

FINAL SURVEY	SURVEYED	BY	
	PLOTTED		
NOTE BOOK	CROSS SECTIONS		
NO.	AREAS		
	AREAS CHECKED		DATE



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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 103+00.00 TO STA. 103+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	71
	05-15106-01-BR	CONTRACT NO. 89429		
		ILLINOIS FED. AID PROJECT	BRDS 0095 (128)	

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

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

680 675 670 665 660 655 650 645 640

B TR 176

PROPOSED R.O.W.

73.66,659.03

659.14

1.5

1.5

38.39' LT. EXISTING ROW

4% 2.00% 2.00% 4%

659.83

659.00

1.5

1.5

49.87,659.45

659.20

58.59' RT. EXISTING ROW

TEMP. EASEMENT

CUT = 0.0 S.F. FILL = 344.9 S.F.

103+50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

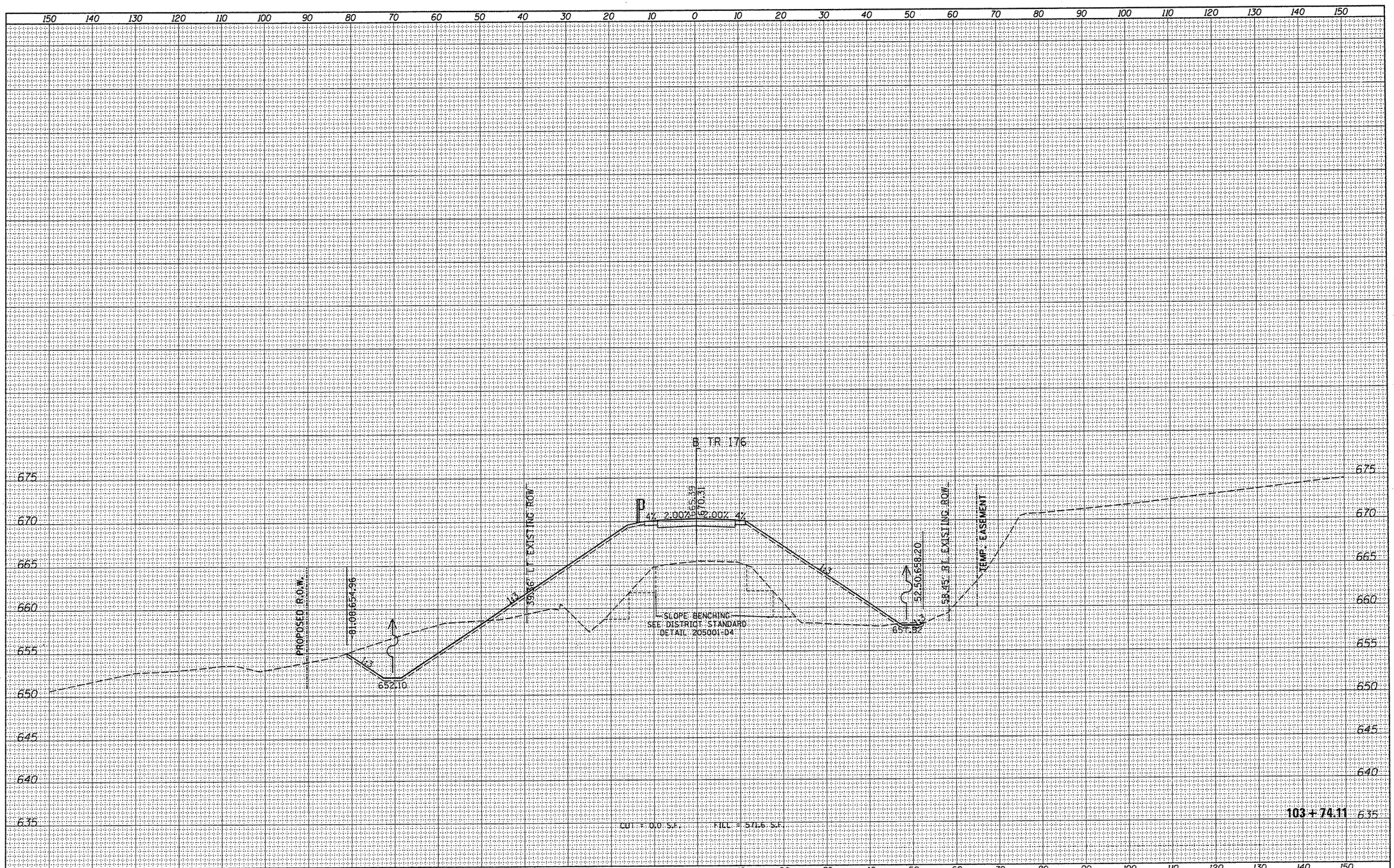
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 103+50.00 TO STA. 103+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	72
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TOPOGRAPHY		
	AREAS		
	AREAS CHECKED		

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



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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 103+74.11 | TO STA. 103+74.11

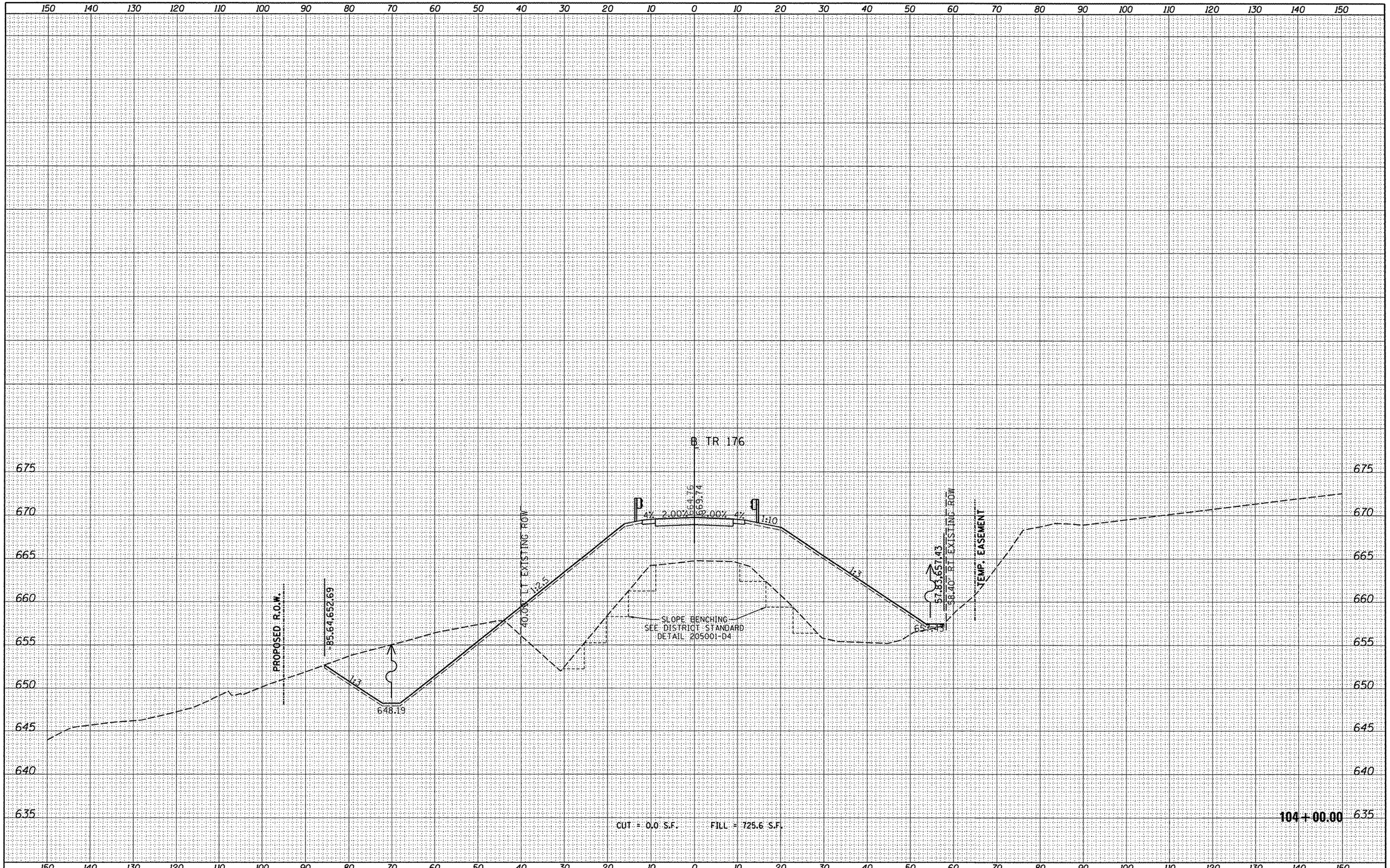
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	73
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

BY	DATE

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

BY	DATE



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

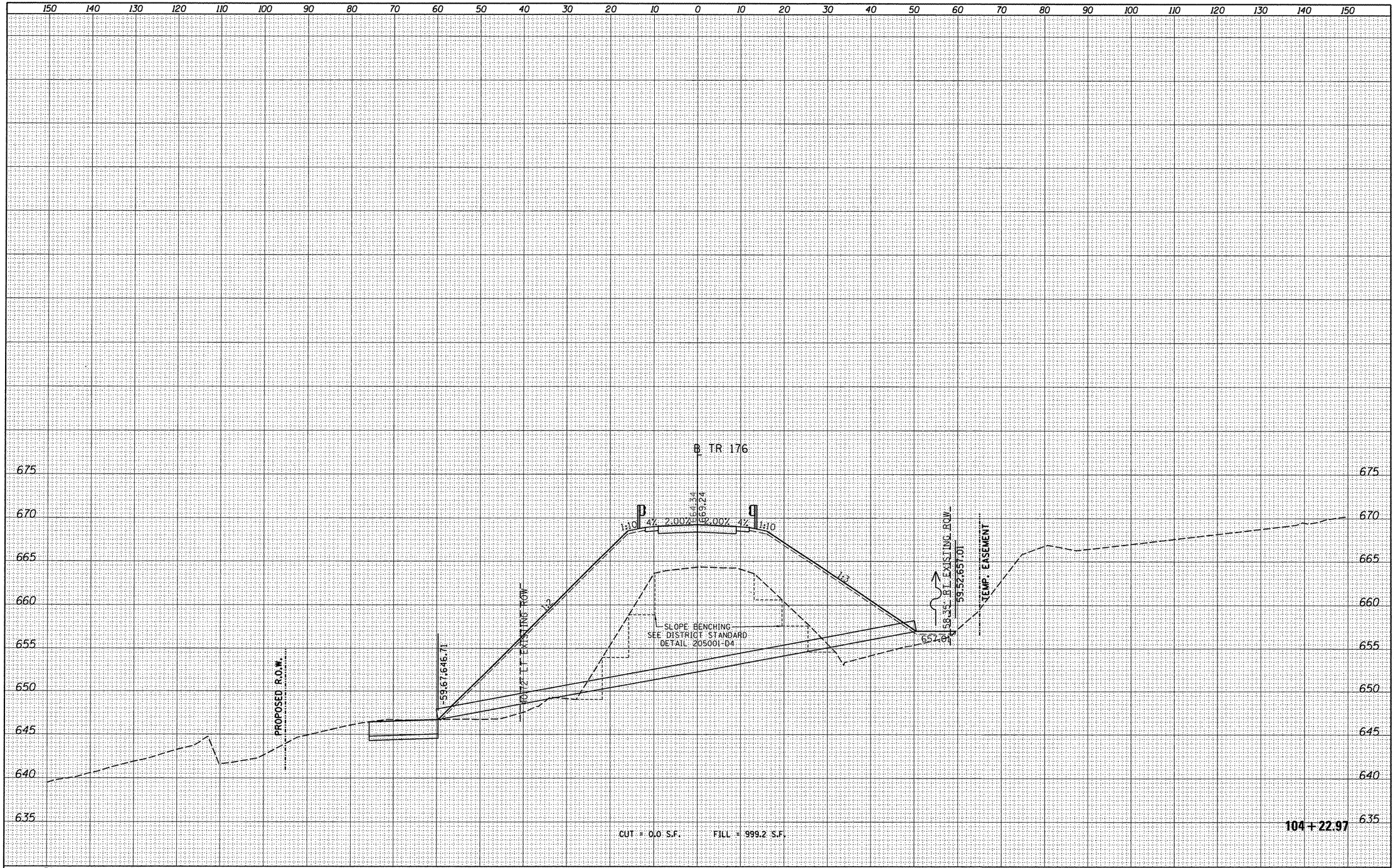
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 104+00.00 TO STA. 104+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	74
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 104+22.97 | TO STA. 104+22.97

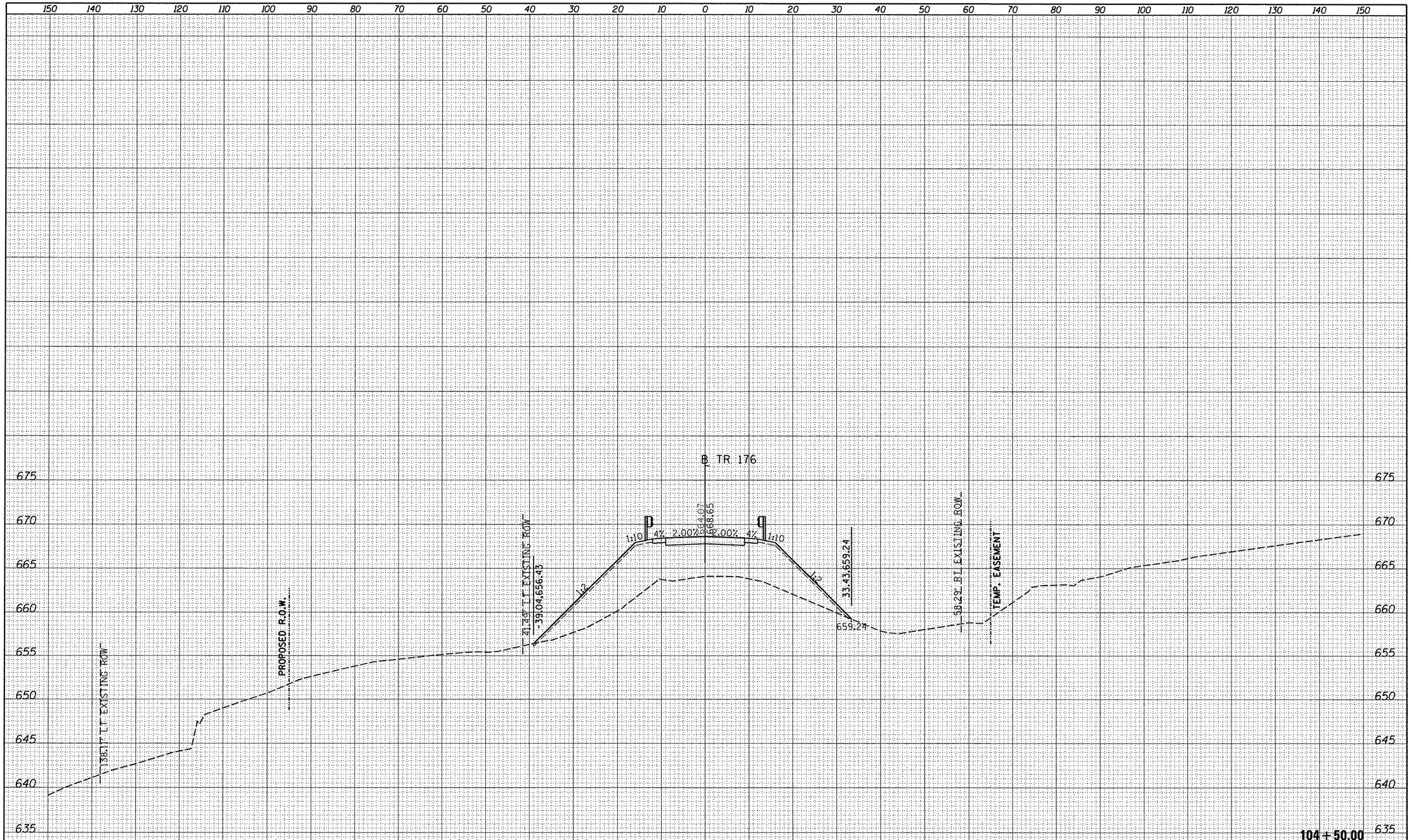
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	75
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

BY	DATE

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

BY	DATE



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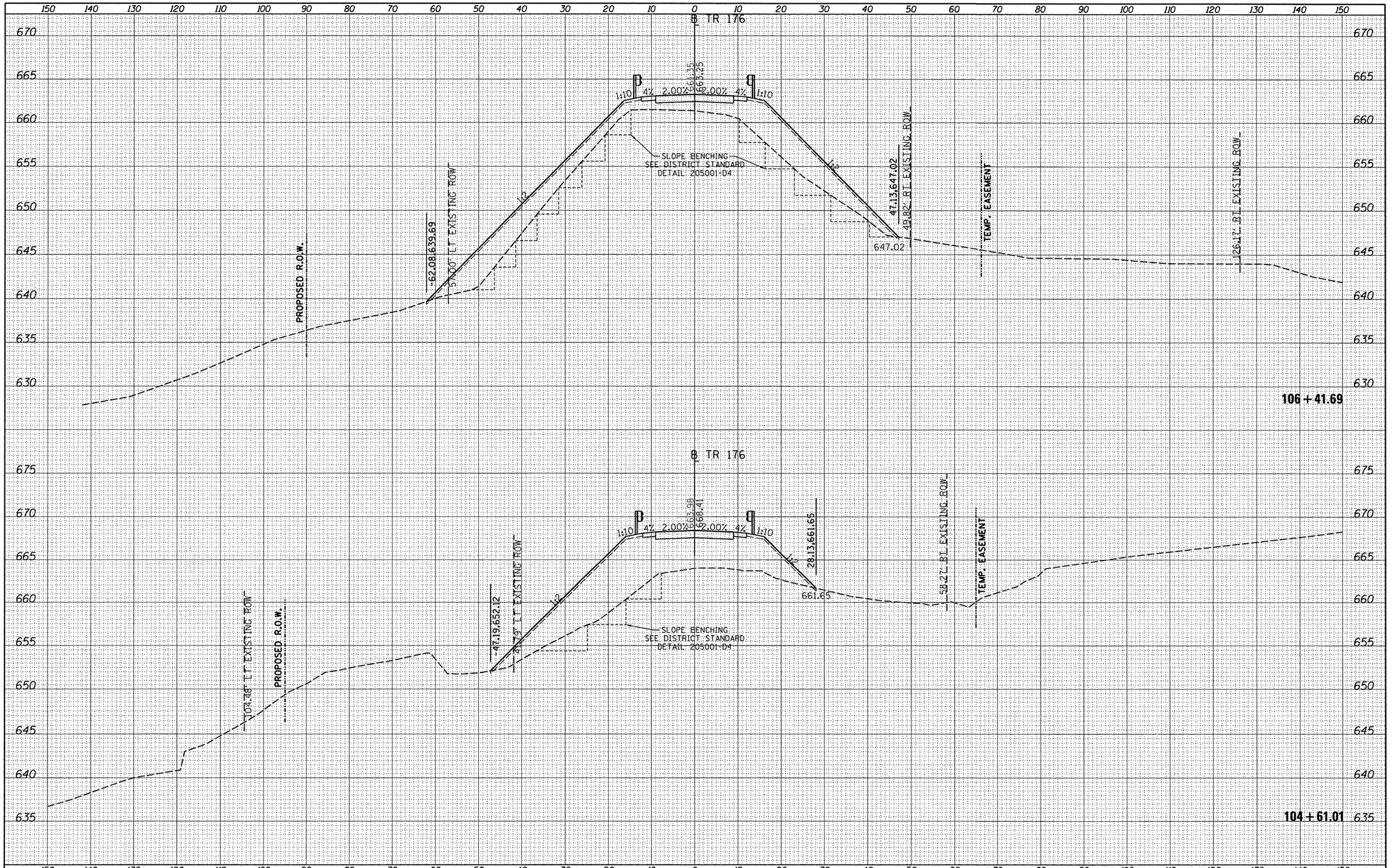
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE:	SHEET NO.	OF	SHEETS	STA. 104+50.00	TO STA. 104+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	76
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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

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

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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

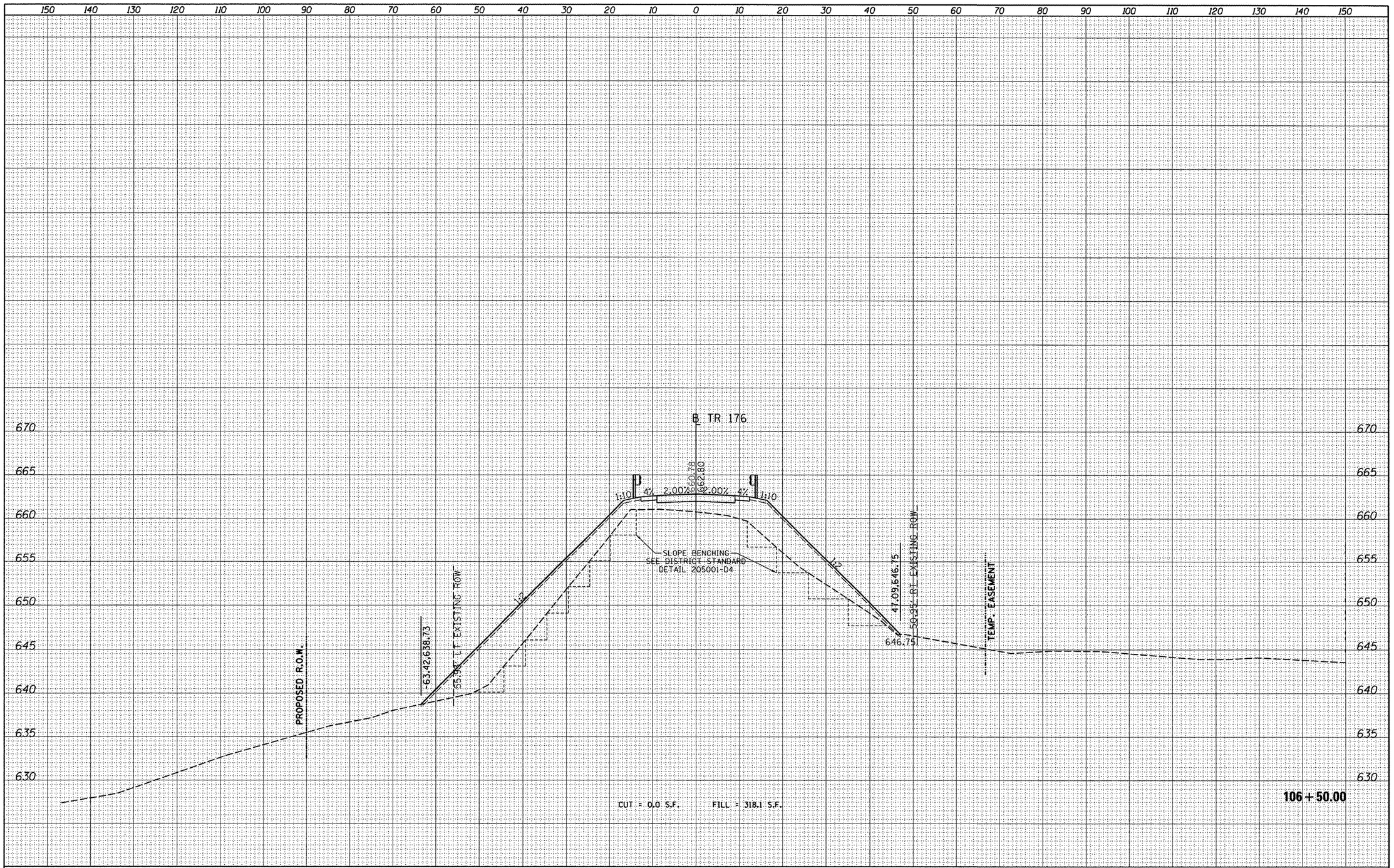
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 104+61.01 | TO STA. 106+41.69

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	77
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

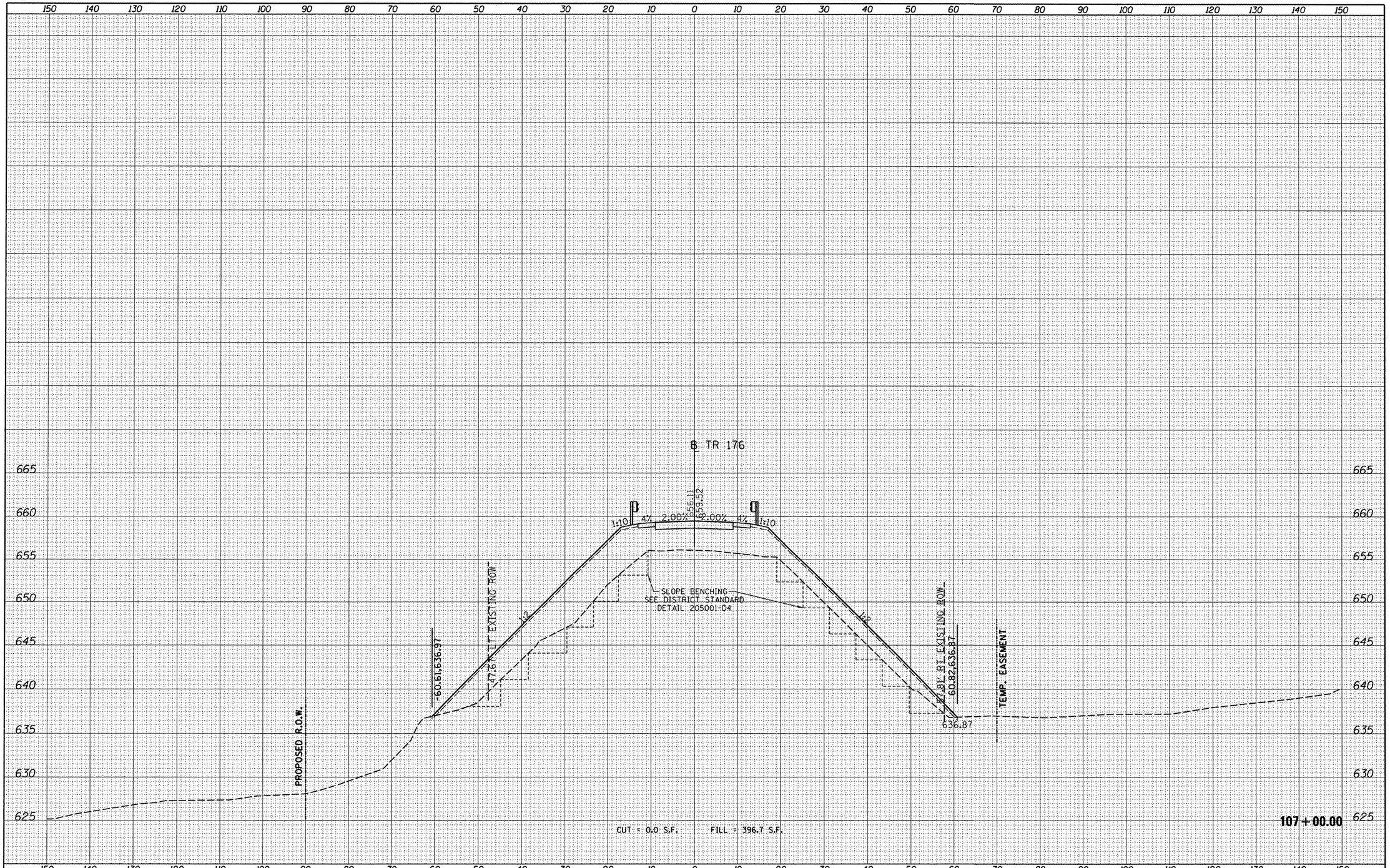
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 106+50.00 TO STA. 106+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	78
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

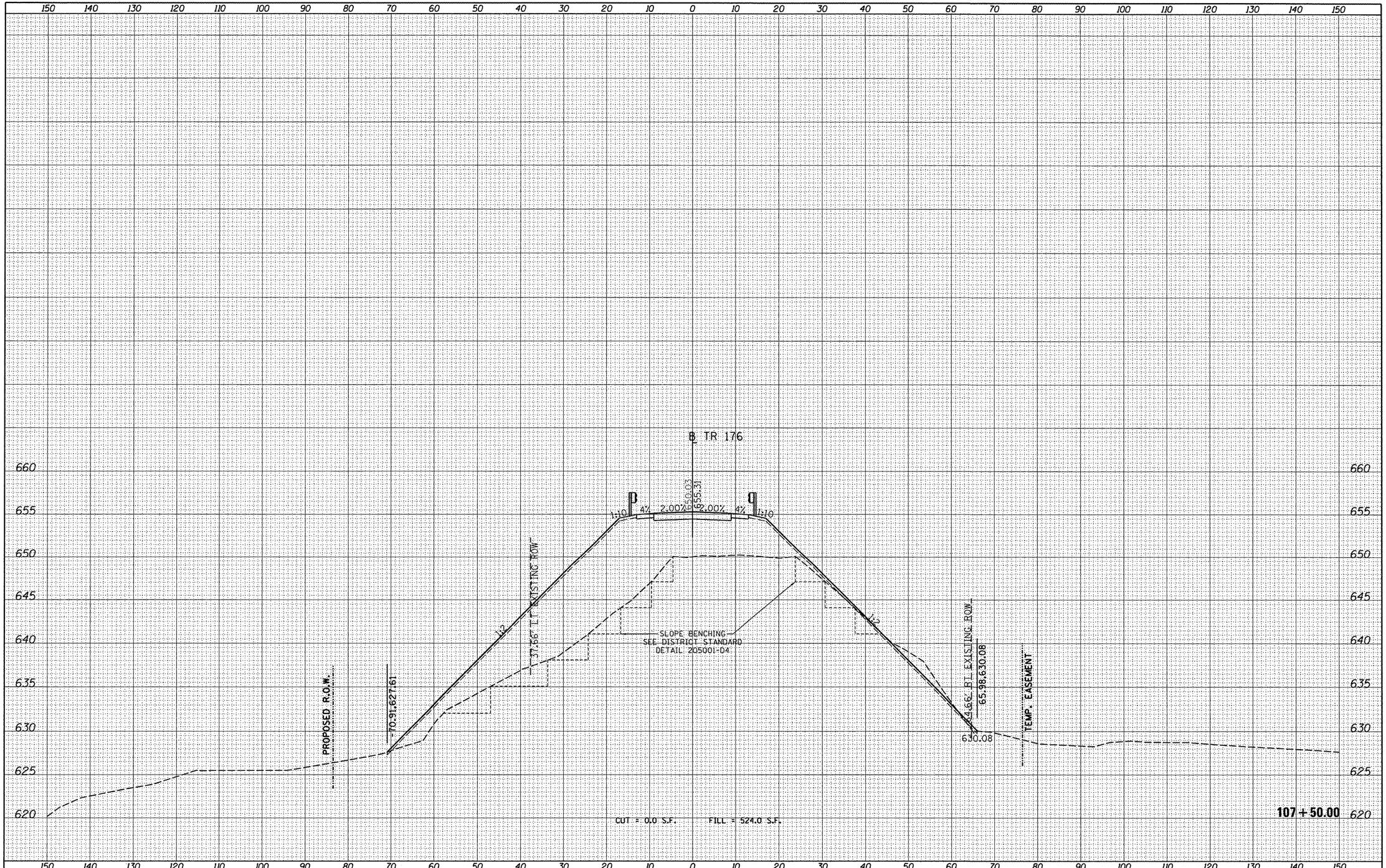
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE:	SHEET NO. OF SHEETS	STA. 107+00.00 TO STA. 107+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	79
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TAPE LIT	
NO.	AREAS CHECKED	

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK	TAPE LIT	
NO.	AREAS CHECKED	



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

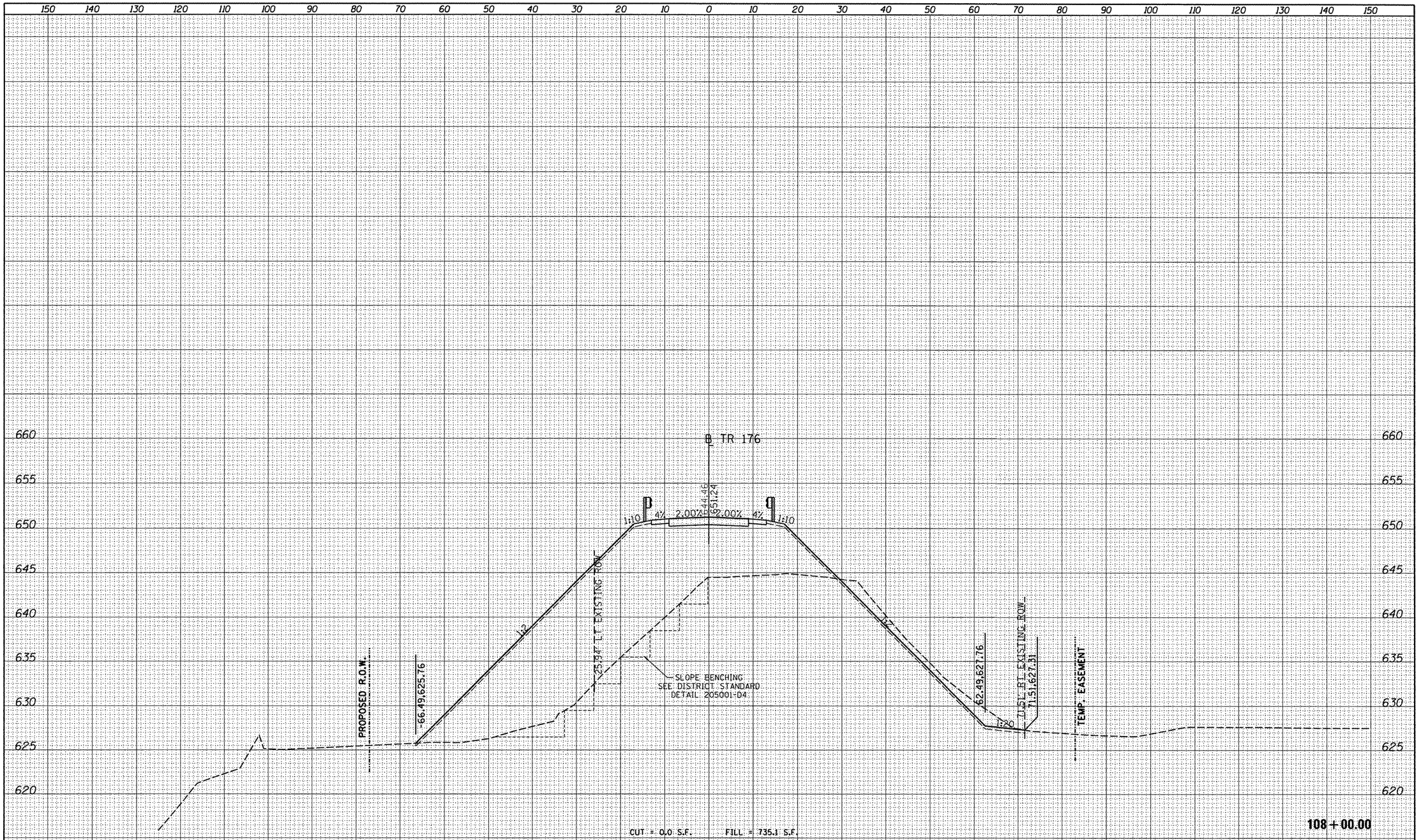
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 107+50.00 | TO STA. 107+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	80
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

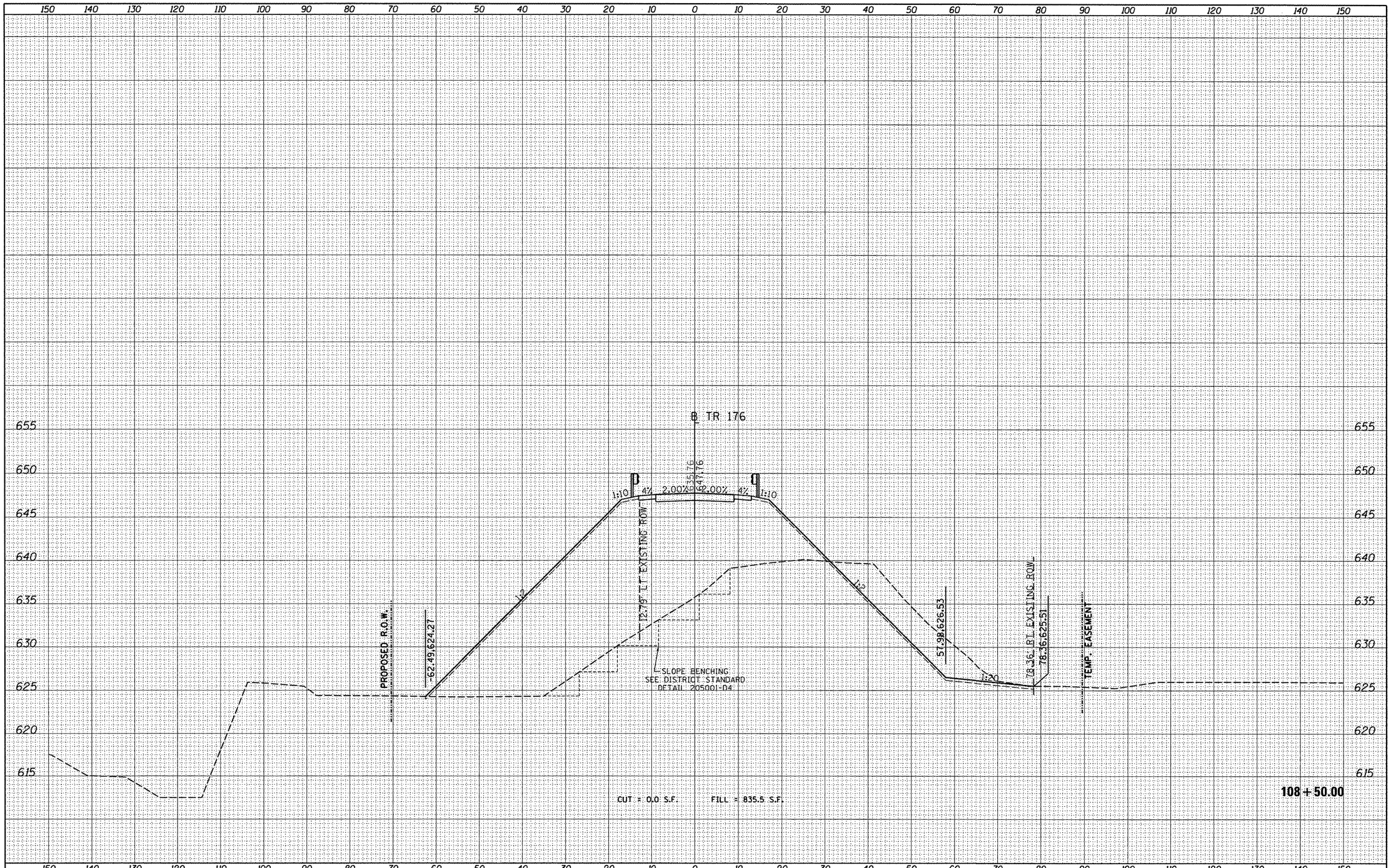
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 108+00.00 TO STA. 108+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	81
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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



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

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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

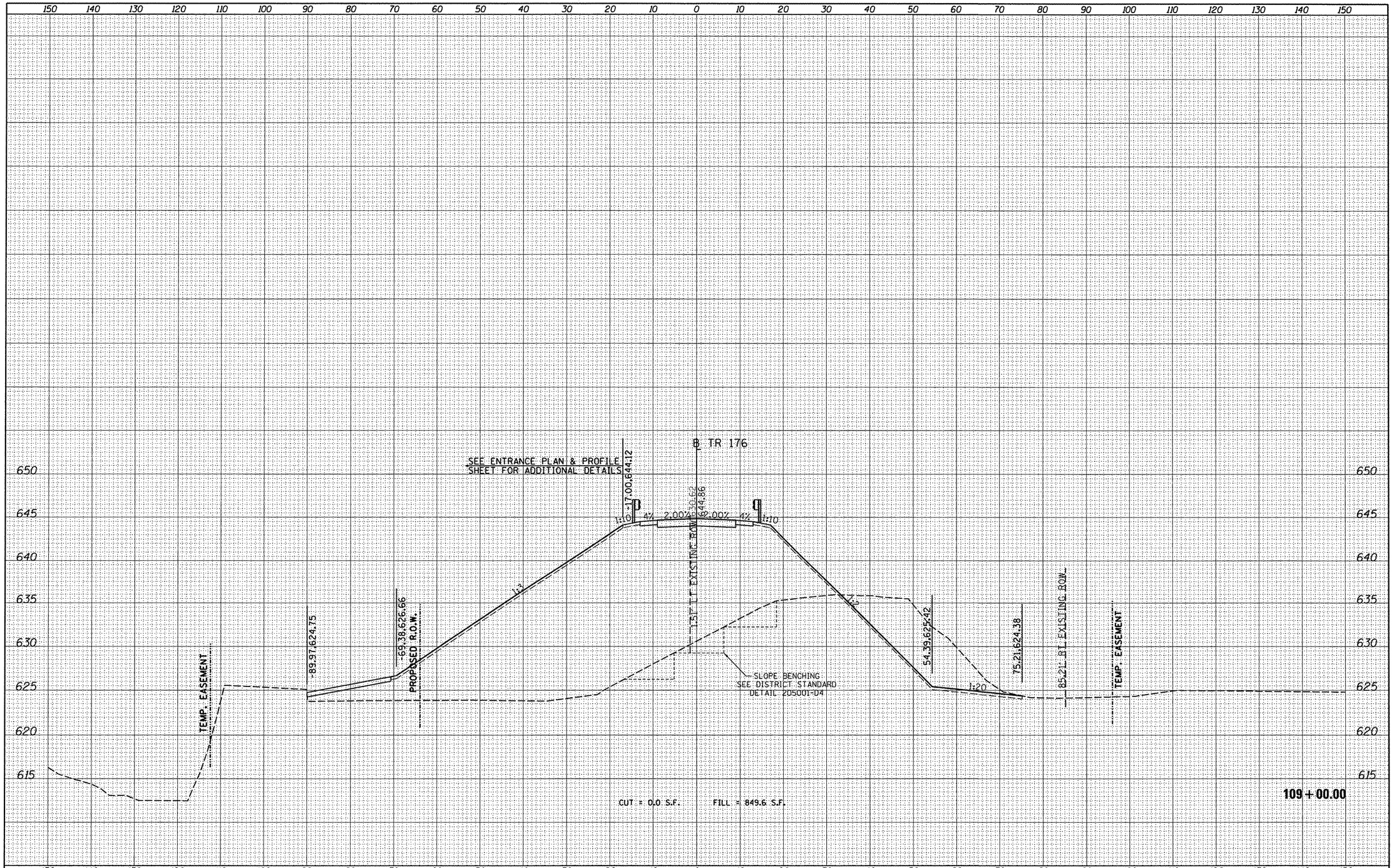
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 108+50.00 | TO STA. 108+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	82
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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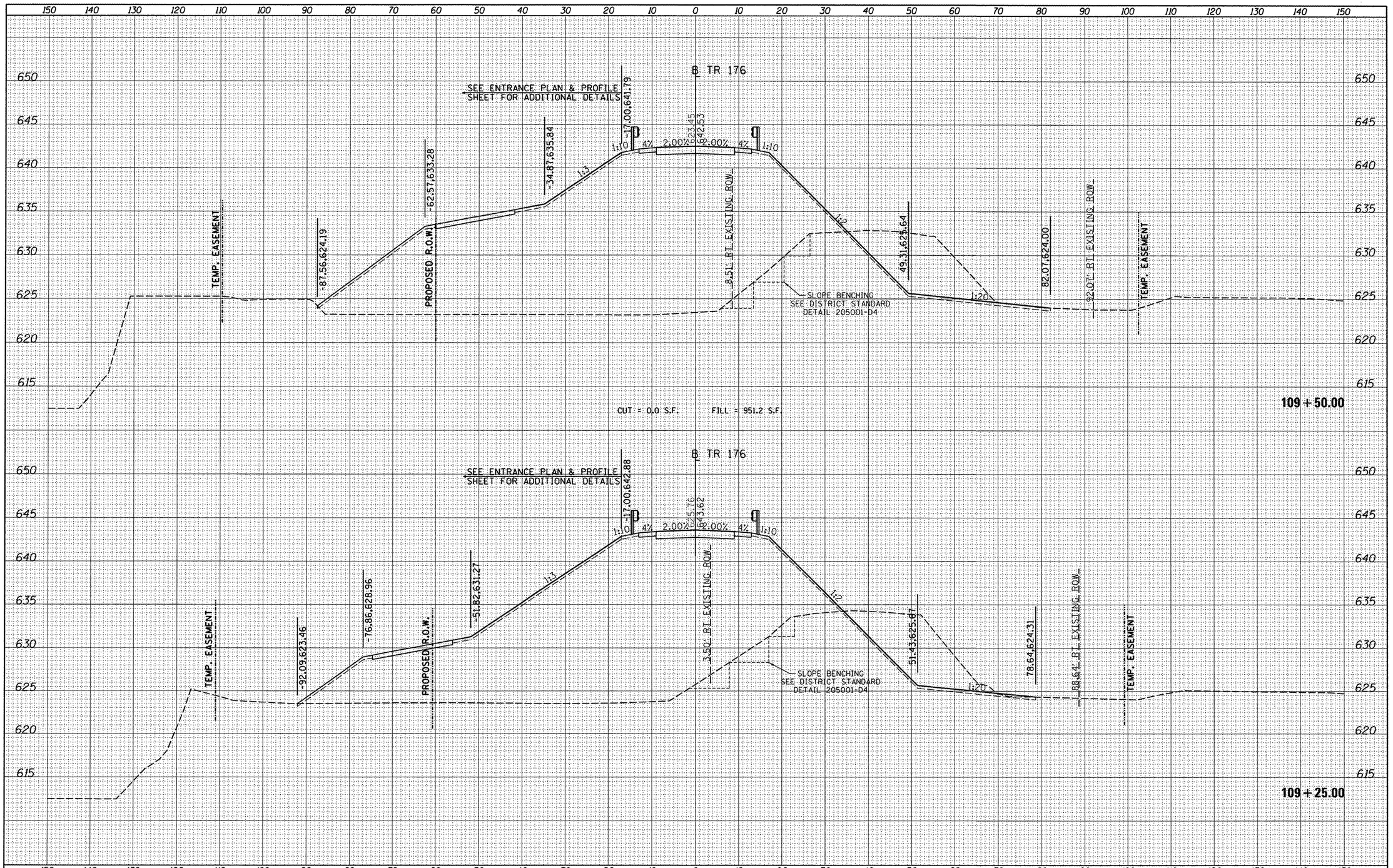
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 109+00.00 TO STA. 109+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	83
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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

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

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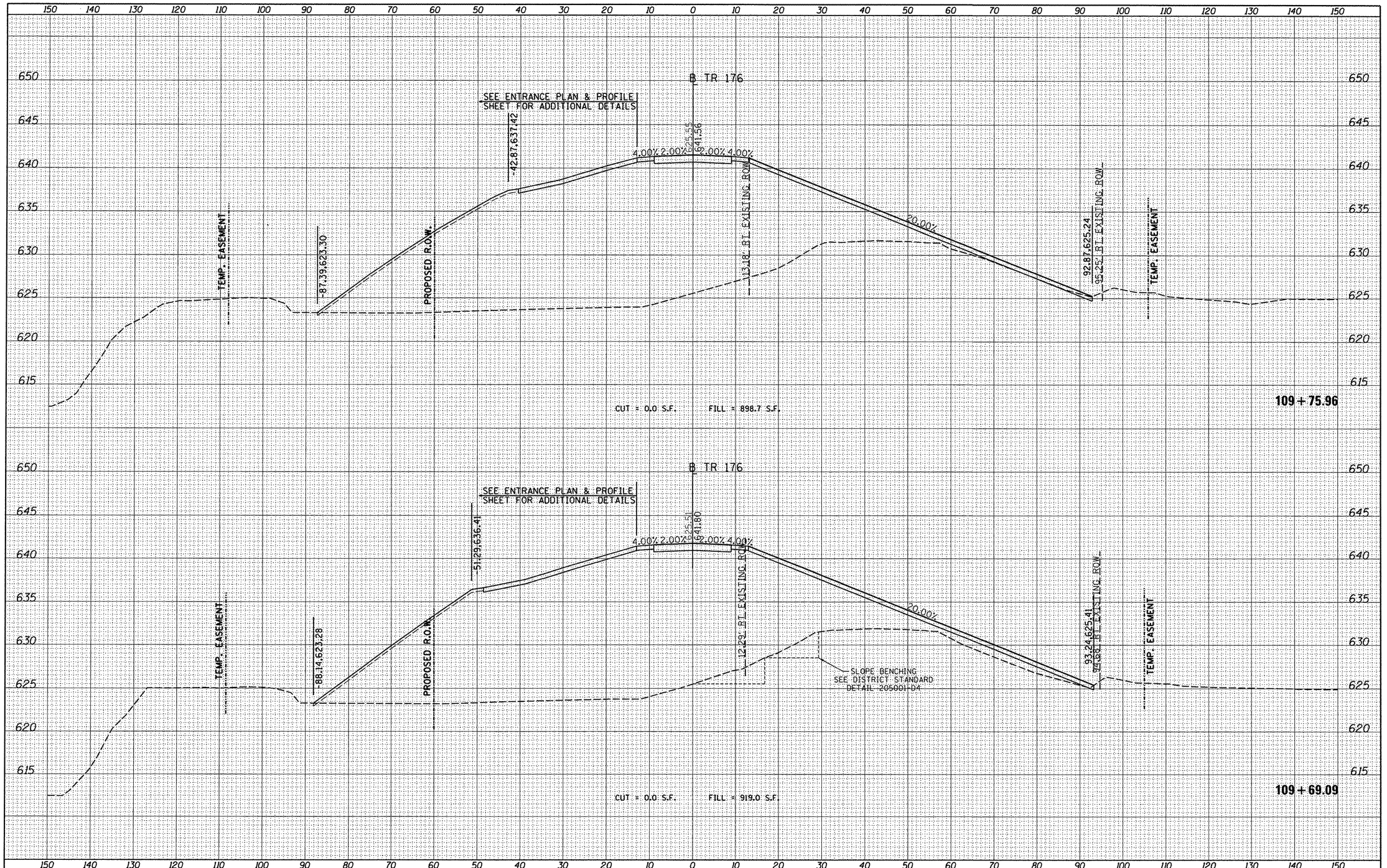
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 109+25.00 TO STA. 109+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TRI76	05-15103-00-BR	KNOX	97	84
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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

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

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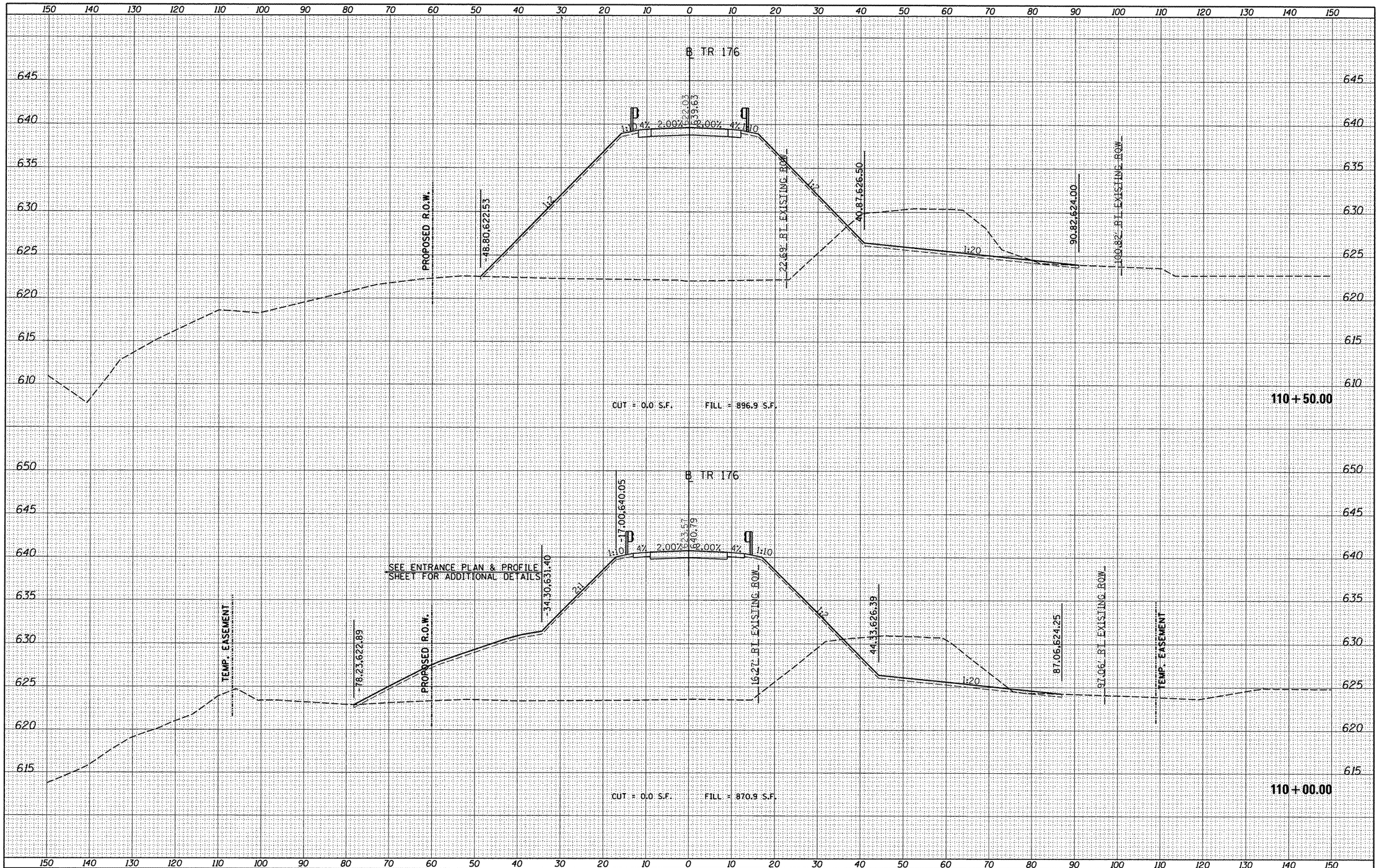
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 109+69.09 TO STA. 109+75.96

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	85
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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

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

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	PLOT DATE = 12\02\2011	DATE -	REVISED -

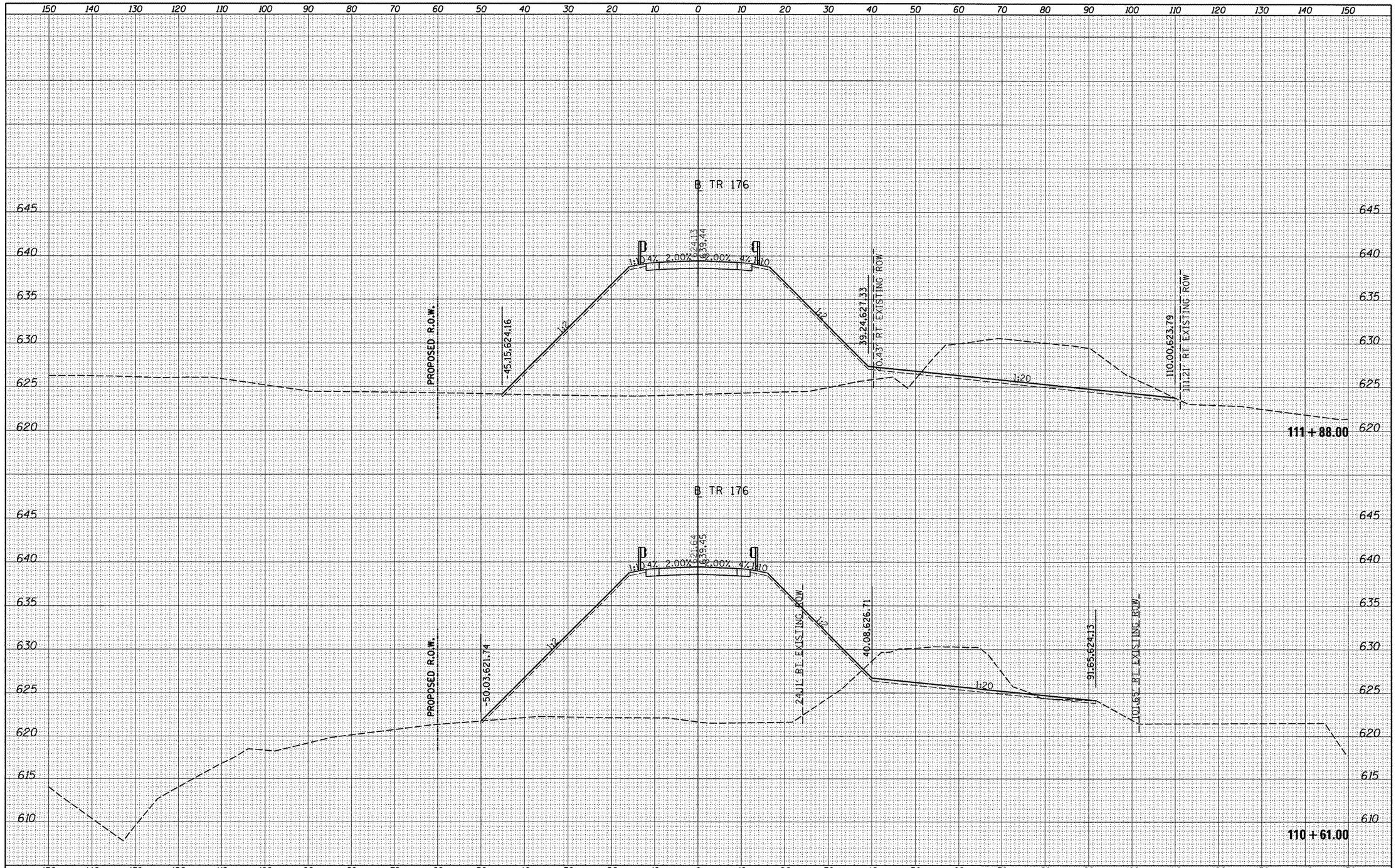
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 110+00.00 TO STA. 110+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	86
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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



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

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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

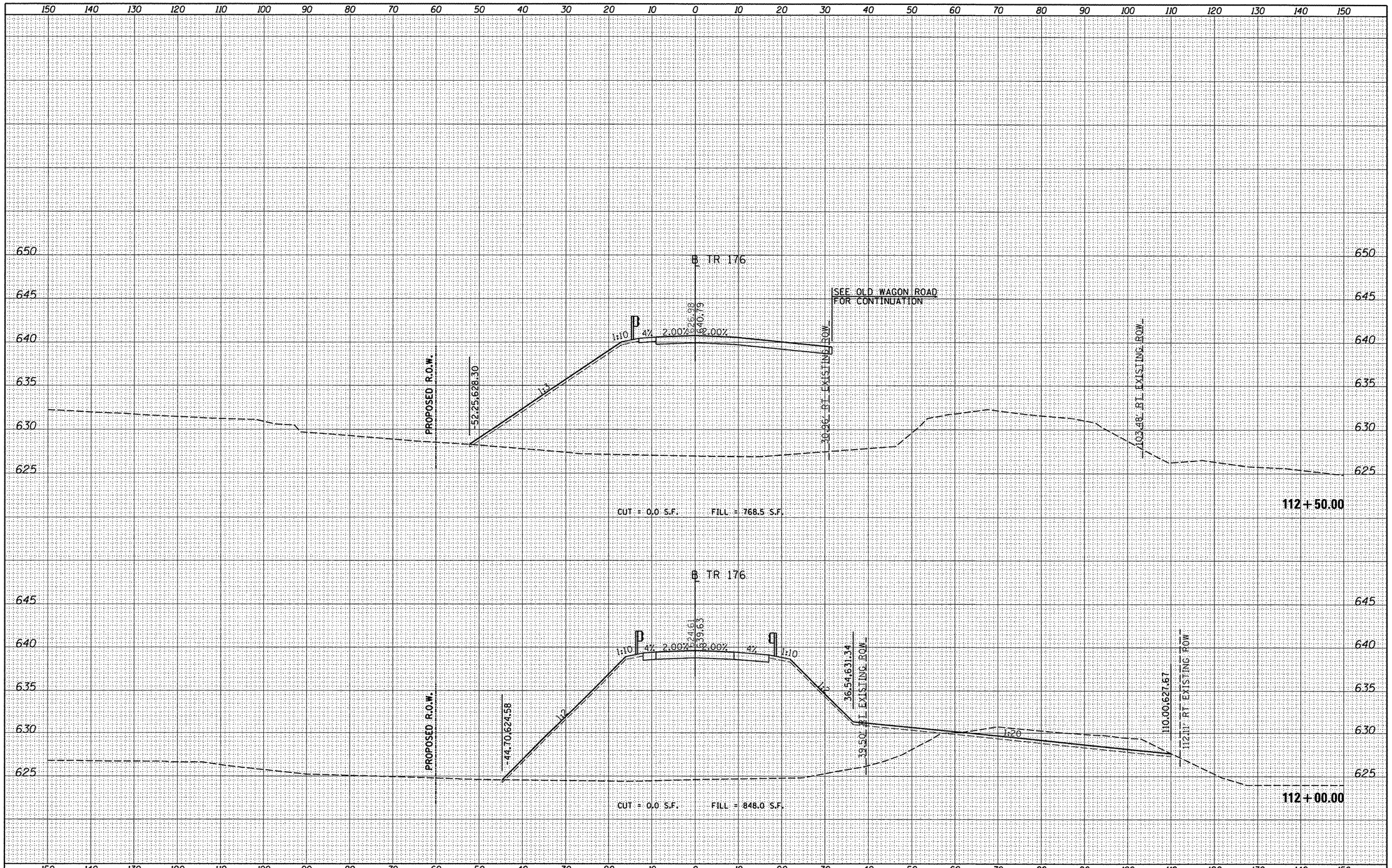
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 110+61.00 TO STA. 111+88.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	87
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 112+00.00 | TO STA. 112+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	88
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	ESTIMATE	
	AREAS	
	AREAS CHECKED	

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

665 660 655 650 645 640 635 630

PROPOSED R.O.W.

℄ TR 176

EXISTING ROW

TEMP. EASEMENT

114+00.00

43,59,651.45

644.71

641.50

641.76

641.04

42.49,642.52

57.07,642.81

67.07' RT EXISING ROW

1.98' RT

1:3 1:3 1:10 1:3 1:3

4% 2.00% 4% 1.86% 4% 2.00%

CUT = 82.3 S.F. FILL = 7.0 S.F.

113+50.00

41.00,641.72

644.86

640.23

641.91

634.54

48.58,636.36

69.24,636.77

79.24' RT EXISING ROW

1:3 1:3 1:10 1:3 1:3

8.00% 4.00% 2.00% 4% 1.91% 4% 2.00%

CUT = 0.0 S.F. FILL = 156.4 S.F.

113+00.00

46.74,633.21

642.53

642.67

628.04

52.92,630.26

81.36,630.83

91.36' RT EXISING ROW

22.42' RT EXISING ROW

1:3 1:3 1:10 1:3 1:3

1:10 4% 2.00% 2.00% 4% 1:10

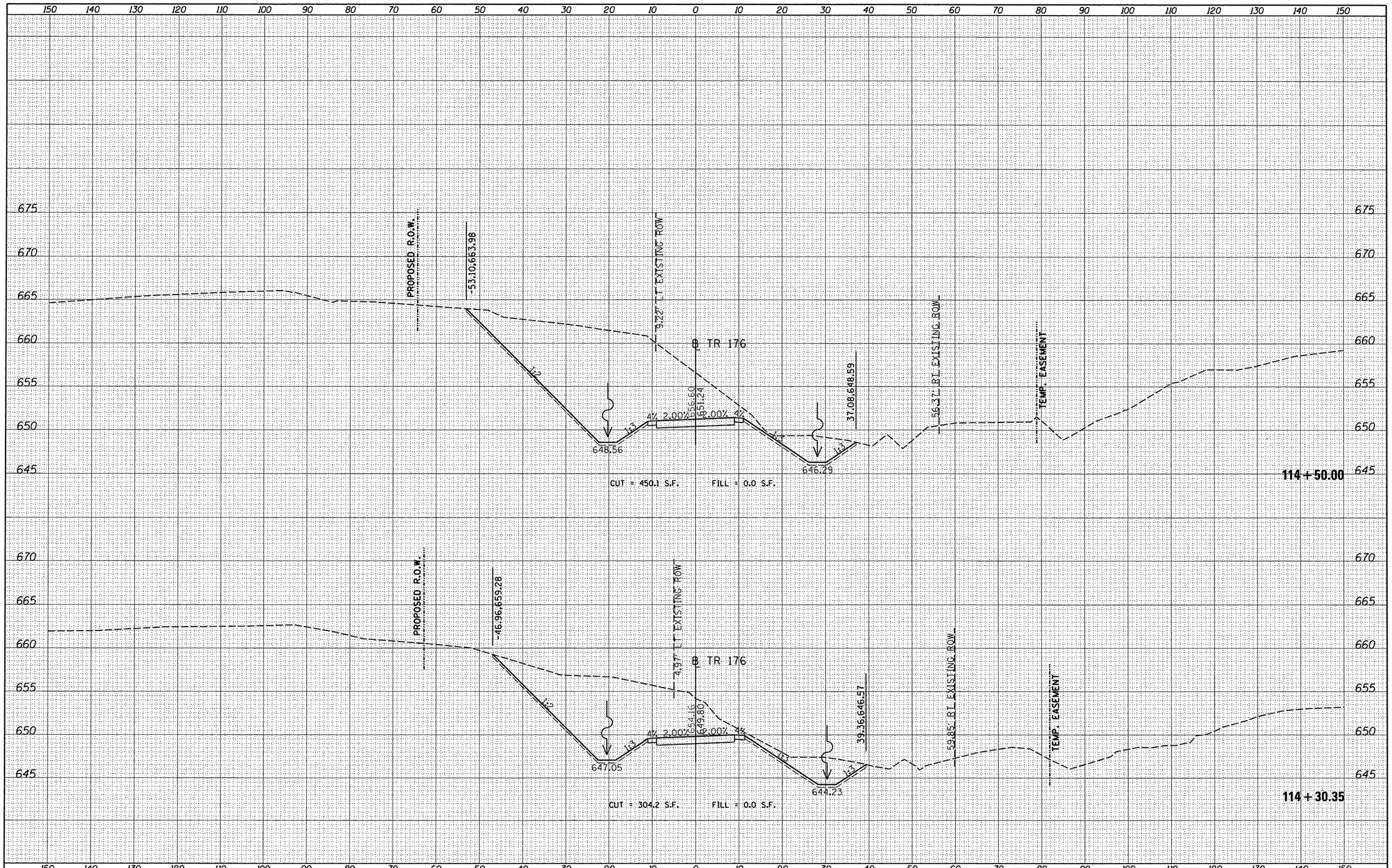
2.00%

CUT = 0.0 S.F. FILL = 525.3 S.F.

FILE NAME = c:\pwise\work\do_not_delete\dms27369\c-301_TR176.dgn	USER NAME = dawso00878	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TR 176 (BAREFOOT ROAD) CROSS SECTIONS
	PLOT SCALE = 20.0000 ' / in.	DRAWN -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 113+00.00 TO STA. 114+00.00
	PLOT DATE = 12\02\2011	CHECKED -	REVISED -		
		DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	89
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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



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

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	PLOT DATE = 12\02\2011	DATE -	REVISED -

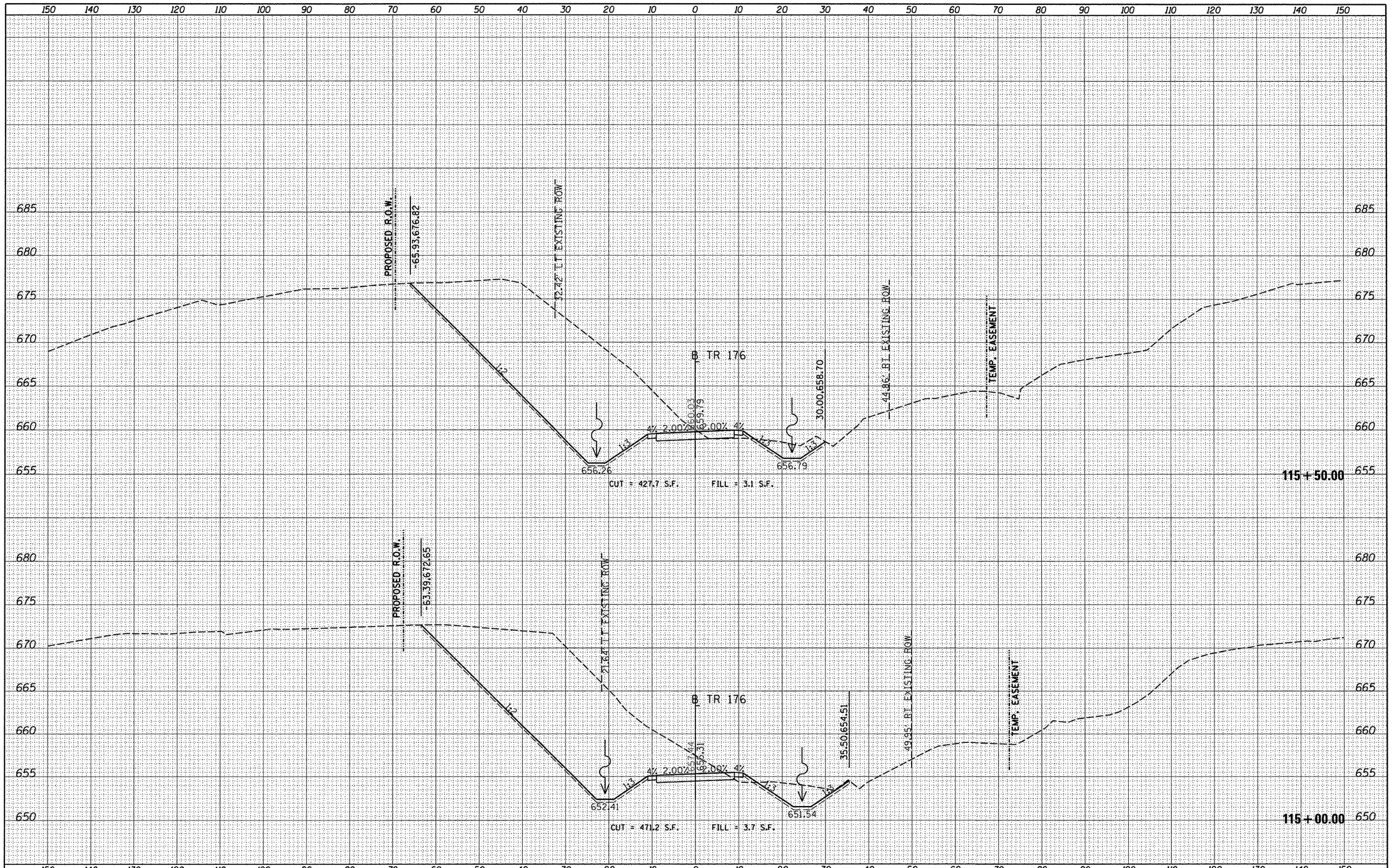
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 114+30.35 | TO STA. 114+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	90
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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



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

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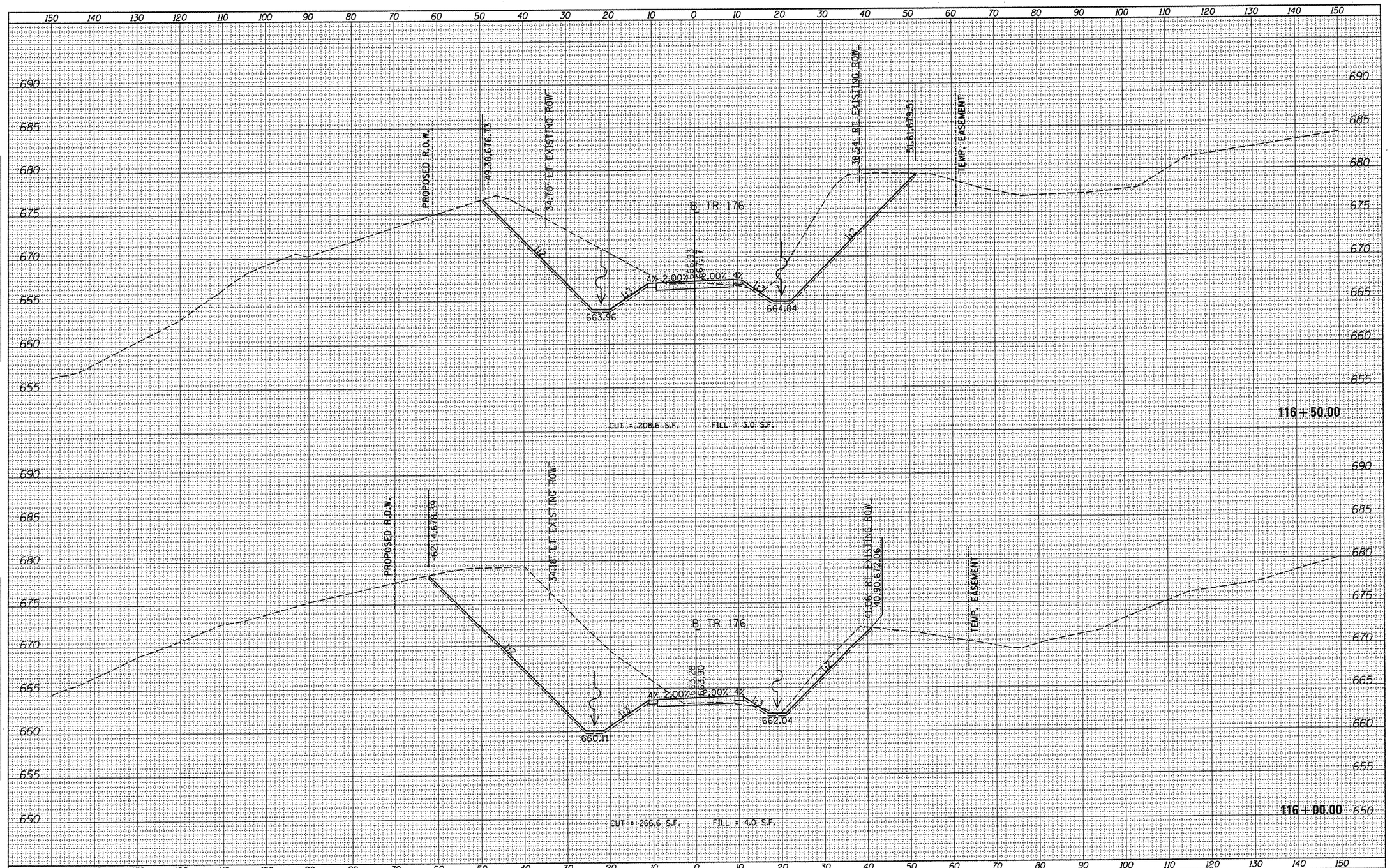
	PLOT DATE = 12\02\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 115+00.00 | TO STA. 115+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	91
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



FINAL SURVEY NOTE BOOK	SURVEYED	BY	DATE
	PLOTTED		
	TYPING SITE		
NO.	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY NOTE BOOK	SURVEYED	BY	DATE
	PLOTTED		
	TYPING SITE		
NO.	AREAS		
	AREAS CHECKED		

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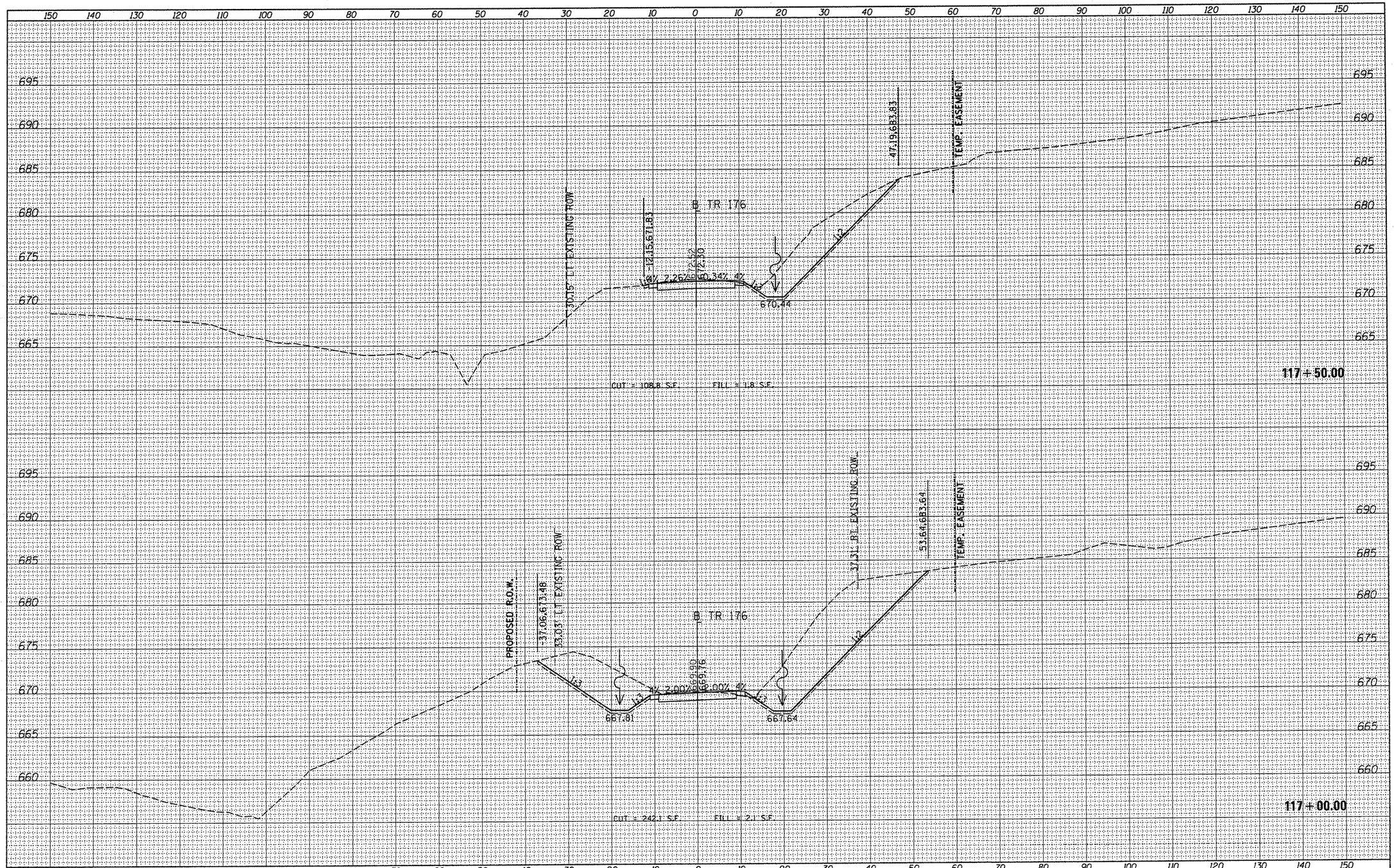
	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 116+00.00 | TO STA. 116+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	92
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



FINAL SURVEY NOTE BOOK

NO.	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

ORIGINAL SURVEY NOTE BOOK

NO.	BY	DATE

SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 117+00.00 | TO STA. 117+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	93
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

690 685 680 675 670 695

118 + 00.00

117 + 80.00

TEMP. EASEMENT

28.26' LT EXISTING ROW

15.03,672.51

℄ TR 176

13.70,673.04

4% 4.64% 6.00% 4%

673.04

FILE NAME = c:\pwise_work\do.not.delete\dms27369\c-301_TR176.dgn	USER NAME = dawso00878	DESIGNED -	REVISED -	
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	PLOT DATE = 12\02\2011	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

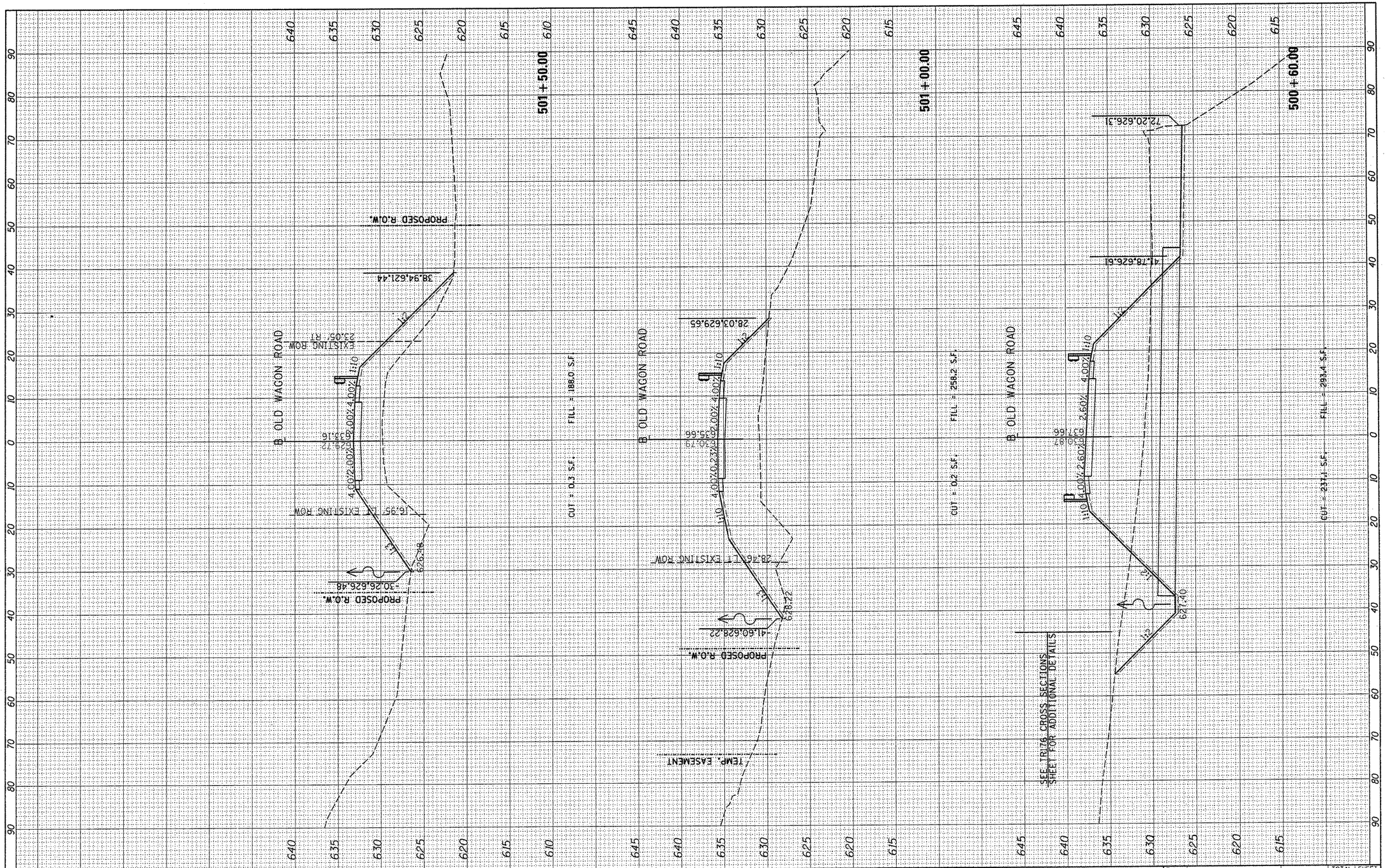
TR 176 (BAREFOOT ROAD)
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 117+80.00 | TO STA. 118+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	94
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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	PLOT DATE = 02\02\2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

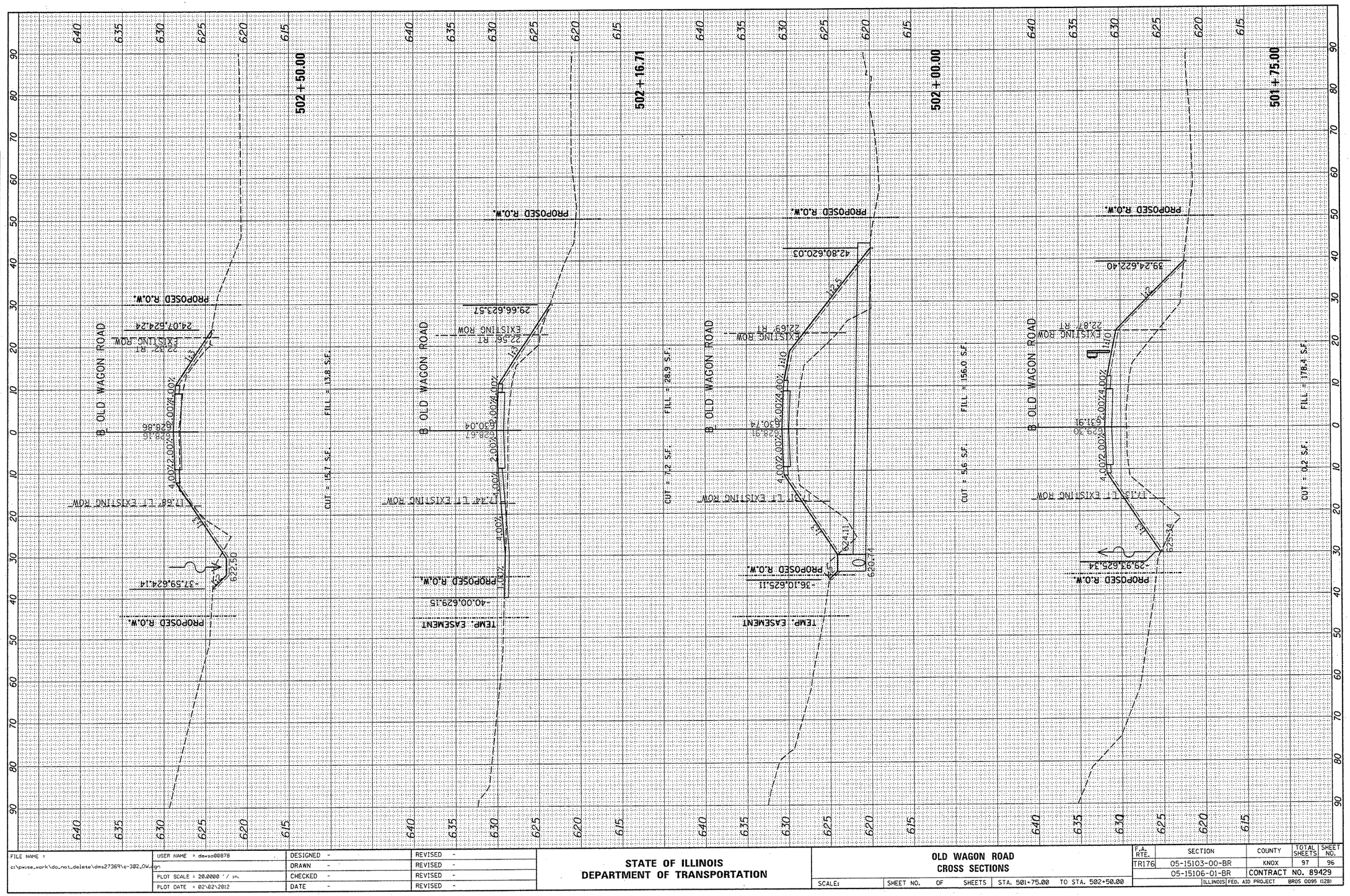
OLD WAGON ROAD
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 500+60.00 TO STA. 501+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	95
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		

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

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



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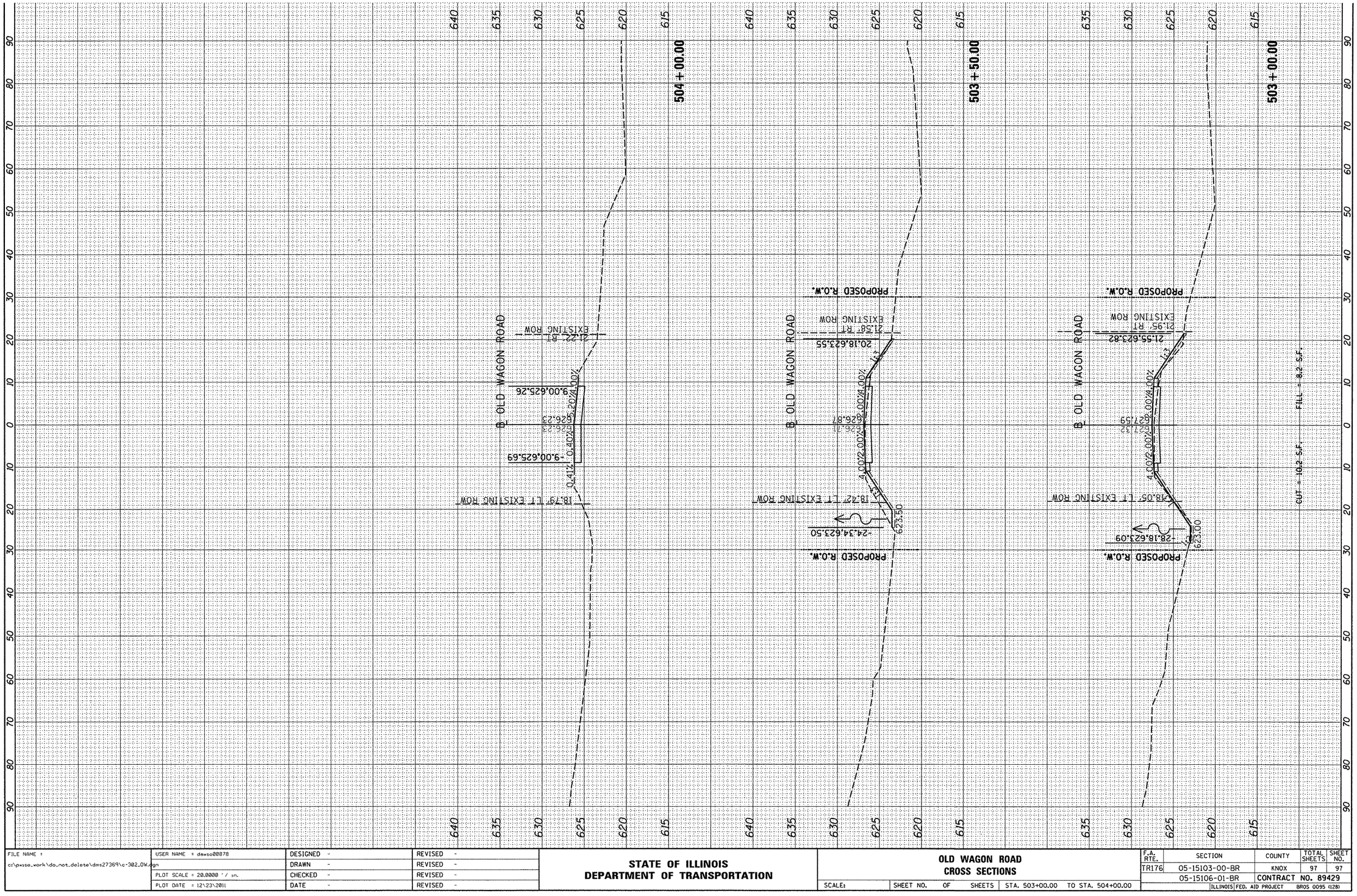
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OLD WAGON ROAD
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 501+75.00 TO STA. 502+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	96
	05-15106-01-BR	CONTRACT NO. 89429		
	ILLINOIS FED. AID PROJECT	BROS 0095 (128)		



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

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

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	PLOT DATE = 12\23\2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OLD WAGON ROAD
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 503+00.00 TO STA. 504+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR176	05-15103-00-BR	KNOX	97	97
	05-15106-01-BR	CONTRACT NO. 89429		
		ILLINOIS FED. AID PROJECT	BROS 0095 (128)	