F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	1
	ILLINOIS	CONTRACT NO. 78231		

INDEX OF SHEETS 11-21-14 LETTING ITEM 111

SHEET NO. DESCRIPTION

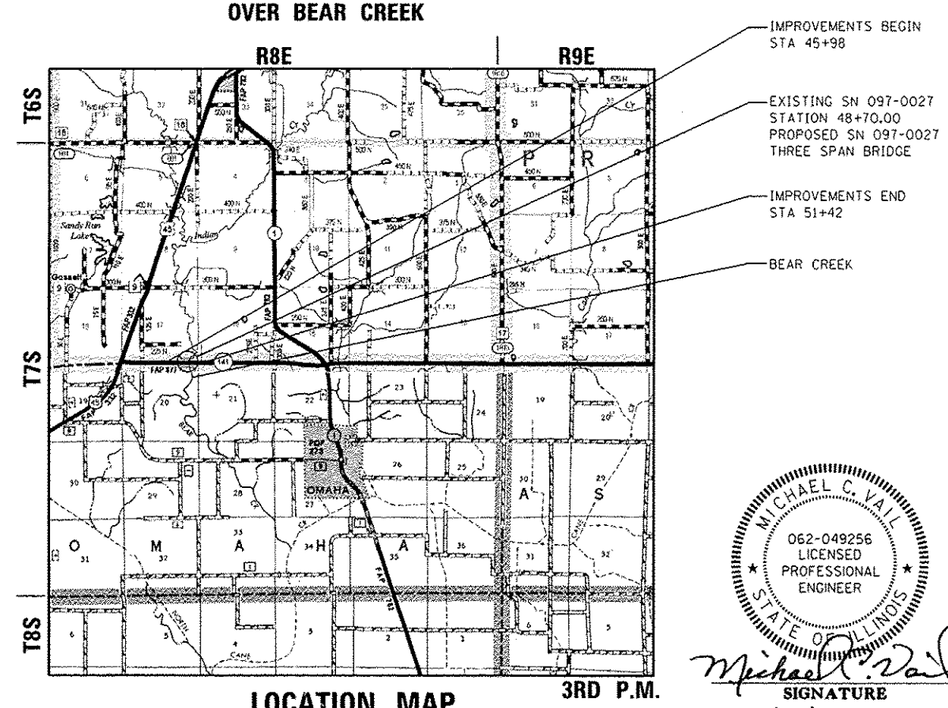
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAP ROUTE 877 (IL 141)
SECTION 100B-1
PROJECT ACF-0877 (014)
WHITE COUNTY

C-99-010-11

BRIDGE DECK REPLACEMENT OVER BEAR CREEK



LOCATION MAP

SCALE
0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 25000 30000 FEET

DESIGN DESIGNATION: N.A.

100B-1

GROSS LENGTH	=	544.00 FT. =	0.103 MI
NET LENGTH	=	544.00 FT. =	0.103 MI

D-99-008-11

LOCATION OF SECTION INDICATED THUS: –

FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL (NON-URBAN)
DESIGN SPEED:	55 mph
POSTED SPEED:	55 mph
ADT:	1480 (2011)
PV:	89.7%
TRUCKS:	10.3%
TOWNSHIP:	INDIAN CREEK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 21 20 14
Jeffrey L. Kiesa
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
Oct 17 20 14
John D. Baranzelli, PE /a
ENGINEER OF DESIGN AND ENVIRONMENT
Oct 17 20 14
Omer Osman PE /a
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

MICHAEL C. VAIL
062-049256
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

Michael C. Vail
SIGNATURE
7/11/2014
DATE

LIC. EXP. DATE : 11-30-15
QUIGG ENGINEERING INC.

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

DISTRICT 9 NO. (618)549-2171
PROJECT ENGINEER: DAVID PICHE
PROJECT MANAGER

CONTRACT NO. 78231

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-10	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482006-03	HMA SHOULDER ADJACENT TO RIGID PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTIONS FOR PIPE CULVERTS
609006-05	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
630001-10	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-12	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' MIN. FROM EOP, 45MPH+
701901-03	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-04	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

1. THE ENGINEER SHALL DETERMINE CURING TIME FOR THE VARIOUS HMA LIFTS.
2. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
3. TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW HMA SHOULDERS. COST TO BE INCLUDED IN HMA SHOULDERS, 8".
4. AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
6. THE THICKNESS OF HMA MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA MIXTURE IS PLACED.
7. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
8. FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT	2.016 TONS/CU YD (112 LBS/SQ YD/IN)
ALL AGGREGATE	2.05 TONS/CU YD
BITUMINOUS MATERIALS:	
ON PAVEMENT	0.05 LB/SQ FT
INTERMEDIATE LIFTS (FOG COAT)	0.025 LB/SQ FT
ON AGGREGATE SURFACE	0.25 LB/SQ FT
AGGREGATE (PRIME COAT)	0.0015 TONS/SQ YD (3 LB/SQ YD)
RIPRAP	1.50 TONS/SQ YD

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED.
10. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
11. ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
12. TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.
13. ALL OBSTRUCTIONS WHICH ARE WITHIN 18' (CLEAR ZONE) OF THE EDGE OF THE ROADWAY AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED FROM STATION 45+53 TO 51+87. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 4 IN. OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 4 IN. OR GREATER.
14. EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
15. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
16. ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.
17. EARTHWORK COMPACTION SHALL BE TO THE SATISFACTION OF THE ENGINEER.
18. ATTAINMENT OF PROPER CROWN OR SUPERELEVATION SHALL BE FULLY ACCOMPLISHED WITH THE HOT MIX ASPHALT SURFACE REMOVAL OR HOT MIX ASPHALT BINDER COURSE OR LEVELING BINDER, WHEN SPECIFIED.
19. PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.
20. IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.
21. THE COST FOR THE REMOVAL OF THE EXISTING AGGREGATE SHOULDERS SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

COMMITMENTS

AS OF AUGUST 15, 2014, THE FOLLOWING COMMITMENTS HAVE BEEN MADE. REFER TO COMMITMENT FILE FOR ANY COMMITMENTS AFTER THIS DATE.

1. THE WHITE COUNTY SHERIFF'S DEPARTMENT SHALL BE CONTACTED PRIOR TO THE 2 WEEK NOTIFICATION SIGNING AND PRIOR TO ANY WORK INVOLVING TRAFFIC CONTROL AND PROTECTION THAT AFFECTS THE PUBLIC.
PHONE : 618-382-5321

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREPARED BY: _____ DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: _____ DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: _____ DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: _____ DISTRICT OPERATIONS ENGINEER

EXAMINED BY: _____ DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: _____ DISTRICT CONSTRUCTION ENGINEER

EXAMINED BY: _____ DISTRICT MATERIALS ENGINEER

FILE NAME = D978231-sht-gennote.dgn
MODEL = Default
PLOT DRIVER = 1001.PDF.plotfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -	
FILE NAME = D978231-sht-gennote.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 48.0000 '/ in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/8/2014	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & STANDARDS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	2
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 80% FEDERAL 20% STATE ROADWAY 0004 NONE	CONSTRUCTION CODE 80% FEDERAL 20% STATE BRIDGE 0014 NONE
20200100	EARTH EXCAVATION	CU YD	315	315	
20400800	FURNISHED EXCAVATION	CU YD	780	780	
25000210	SEEDING, CLASS 2A	ACRE	0.75	0.75	
25000350	SEEDING, CLASS 7	ACRE	0.75	0.75	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	76	76	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	76	76	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	76	76	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.4	1.4	
25100115	MULCH, METHOD 2	ACRE	0.75	0.75	
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	3028	3028	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	126	126	
28000305	TEMPORARY DITCH CHECKS	FOOT	43	43	
28000400	PERIMETER EROSION BARRIER	FOOT	1208	1208	
28100105	STONE RIPRAP, CLASS A3	SQ YD	39	39	

* SEE SPECIAL PROVISIONS
△ DENOTES SPECIALTY ITEM

FILE NAME = D978231-sht-SDD.dgn
MODEL = Default
PLOT DRIVER = IDOT_PDF.plotfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-SDD.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE - 8/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	3
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: 80% FEDERAL 20% STATE ROADWAY 0004 NONE	CONSTRUCTION CODE: 80% FEDERAL 20% STATE BRIDGE 0014 NONE
28100109	STONE RIPRAP, CLASS A5	SQ YD	182		182
28200200	FILTER FABRIC	SQ YD	126		126
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	842	842	
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	36	36	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	176	176	
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	92	92	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	76	76	
44000100	PAVEMENT REMOVAL	SQ YD	233	233	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	418	418	
50102400	CONCRETE REMOVAL	CU YD	19.8		19.8
50104650	SLOPE WALL REMOVAL	SQ YD	70		70
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1
50200100	STRUCTURE EXCAVATION	CU YD	120		120
50300100	FLOOR DRAINS	EACH	20		20

* SEE SPECIAL PROVISIONS
Δ DENOTES SPECIALTY ITEM

FILE NAME = 0478231-sht-500.dgn
MODEL =
PLOT DRIVER = 1001.PDFsaltofg

QUIGG ENGINEERING INC

USER NAME = walker	DESIGNED - MCV	REVISED -
FILE NAME = 0478231-sht-500.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE - 8/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	4
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 80% FEDERAL 20% STATE ROADWAY 0004 NONE	CONSTRUCTION CODE 80% FEDERAL 20% STATE BRIDGE 0014 NONE
50300225	CONCRETE STRUCTURES	CU YD	54.8		54.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	316.5		316.5
50300260	BRIDGE DECK GROOVING	SQ YD	800		800
50300300	PROTECTIVE COAT	SQ YD	1036		1036
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5180		5180
50500505	STUD SHEAR CONNECTORS	EACH	2880		2880
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	77150		77150
50800515	BAR SPLICERS	EACH	70		70
51100300	SLOPE WALL 6 INCH	SQ YD	40		40
51500100	NAME PLATES	EACH	1		1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	68		68
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6		6
52100505	ANCHOR BOLTS, 5/8"	EACH	36		36

* SEE SPECIAL PROVISIONS
Δ DENOTES SPECIALTY ITEM

FILE NAME = 0978231-sht-500.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.ollotfg

QUIGG ENGINEERING INC

USER NAME = walker	DESIGNED - MCV	REVISED -
FILE NAME = 0978231-sht-500.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE - 8/12	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	5
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT		

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 80% FEDERAL 20% STATE ROADWAY 0004 NONE	CONSTRUCTION CODE 80% FEDERAL 20% STATE BRIDGE 0014 NONE
	54215547	METAL END SECTIONS 12"	EACH	4	4	
	58700300	CONCRETE SEALER	SQ FT	330		330
*	59000200	EPOXY CRACK INJECTION	FOOT	36		36
*	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	80		80
	60100945	PIPE DRAINS 12"	FOOT	290	290	
	60900140	TYPE B INLET BOX, STANDARD 609006	EACH	4	4	
	60900515	CONCRETE THRUST BLOCKS	EACH	4	4	
Δ	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	125	125	
Δ	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
Δ	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
	63200310	GUARDRAIL REMOVAL	FOOT	998	998	
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	5	
	67100100	MOBILIZATION	L SUM	1	0.5	0.5
*	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	8	8	

* SEE SPECIAL PROVISIONS
Δ DENOTES SPECIALTY ITEM

FILE NAME = D978231-sht-500.dgn
MODEL = Default
PLOT DRIVER = 100.PDF.pltcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-500.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/9/2014	DATE - 4/14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	6
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT		

948.76011987652

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE 80% FEDERAL 20% STATE ROADWAY 0004 NONE	CONSTRUCTION CODE 80% FEDERAL 20% STATE BRIDGE 0014 NONE
	70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
Δ	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1428	1428	
Δ	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	5	5	
Δ	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3	3	
Δ	78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16	
Δ	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6	
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	108		108
*	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	18		18
*	Z0001903	STRUCTURAL STEEL REMOVAL	POUND	2760		2760
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	140		140

* SEE SPECIAL PROVISIONS
Δ DENOTES SPECIALTY ITEM

FILE NAME = c:\pw_work\pwidot\lavenderba\d0406607\D978231-sht-SQD.dgn
MODEL = $MODEL$
PLOT DRIVER = $PLTDRVS$

QUIGG ENGINEERING INC

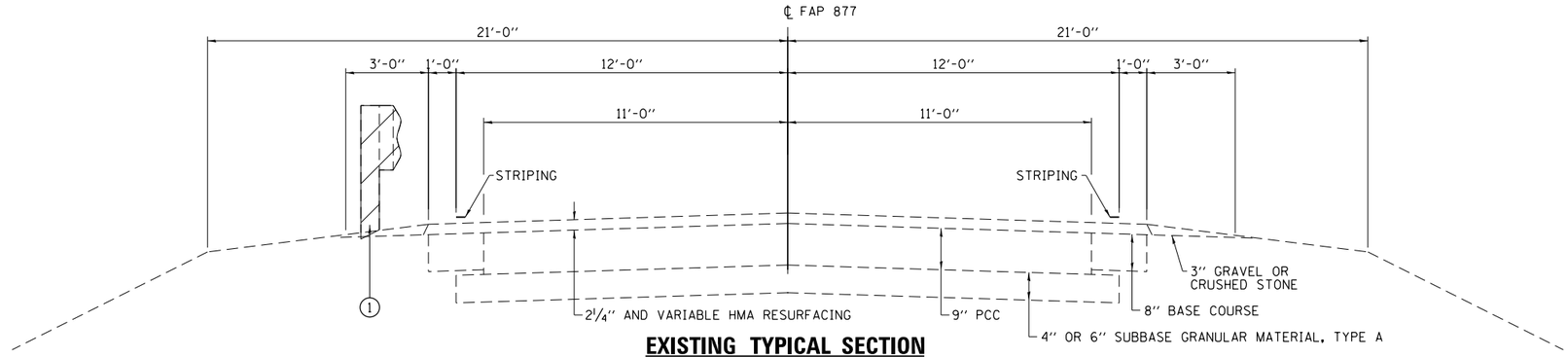
USER NAME = lavenderba	DESIGNED - MCV	REVISED -	
FILE NAME = D470231-sht-SQD.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/22/2014	DATE - 8/12	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	1008-1	WHITE	54	7
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			



AT GUARDRAIL

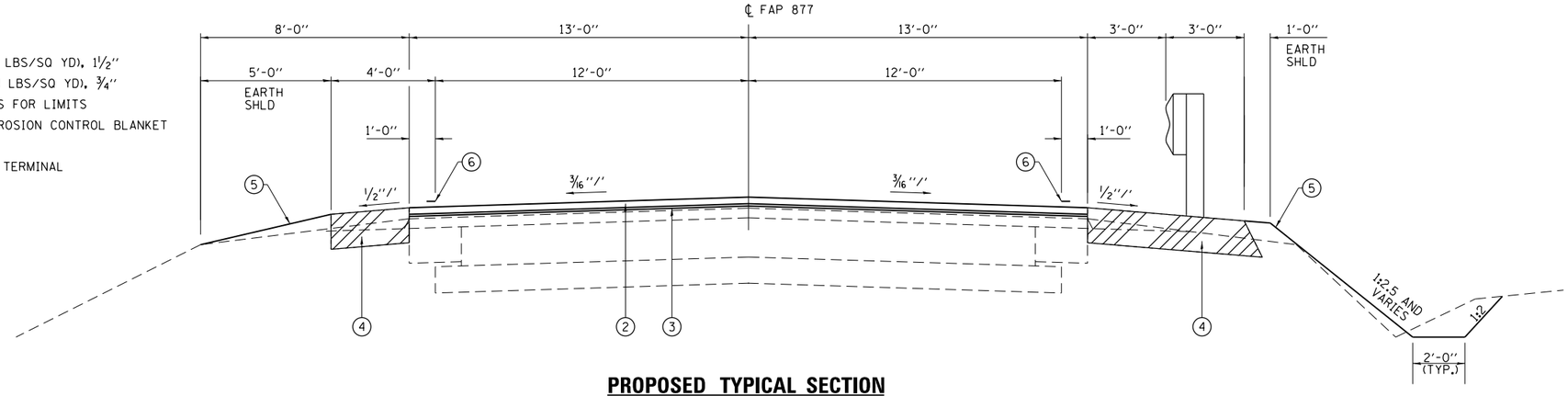
EXISTING TYPICAL SECTION
STA 45+53 TO 47+80
STA 49+60 TO 51+87

NO GUARDRAIL

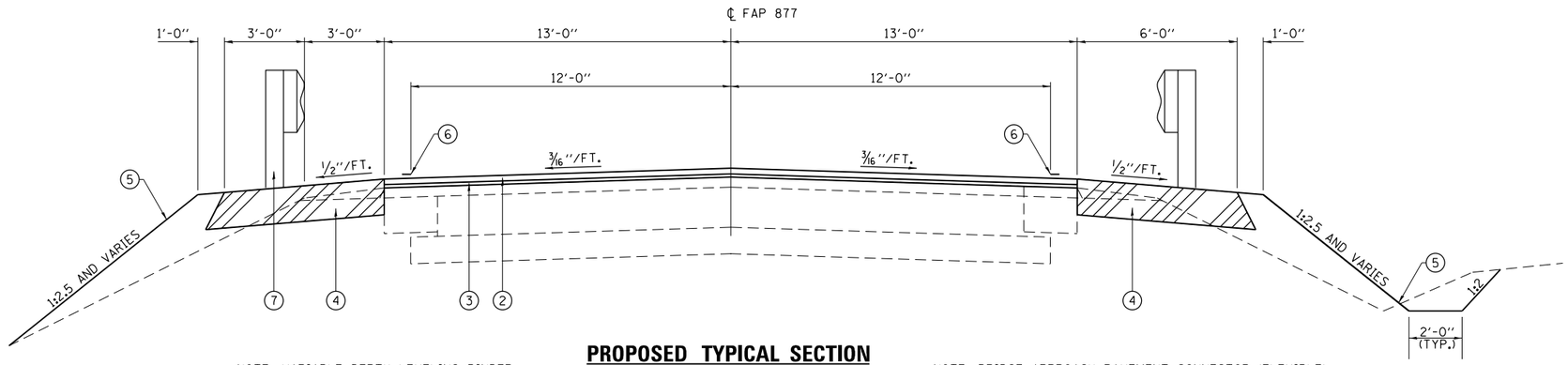
NOTE: EXISTING BRIDGE APPROACH PAVEMENT
STA 47+40 TO 47+80 AND
STA 49+60 TO 50+00

LEGEND

1. GUARDRAIL REMOVAL
2. HMA SURFACE COURSE, MIX C, N90 (168 LBS/SQ YD), 1½"
3. LEVELING BINDER (MACHINE METHOD) (84 LBS/SQ YD), ¾"
4. HMA SHOULDERS, 8" - SEE PLAN SHEETS FOR LIMITS
5. SEEDING, CLASS 2A AND HEAVY DUTY EROSION CONTROL BLANKET
6. PAINT PAVEMENT MARKING - LINE 4"
7. SPBGR, TY A 6' POSTS OR APPLICABLE TERMINAL SECTION (SEE PLANS), TYP



PROPOSED TYPICAL SECTION
STA 45+53 TO 46+60



NOTE: VARIABLE DEPTH LEVELING BINDER
(MACHINE METHOD) STA 50+00 TO 51+00

PROPOSED TYPICAL SECTION
STA 46+60 TO 47+50
STA 49+90 TO 50+79

NOTE: BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
STA 47+40 TO 47+50
STA 49+90 TO 50+00

FILE NAME = D978231-sht-typical.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.pltcfg

QUIGG ENGINEERING INC

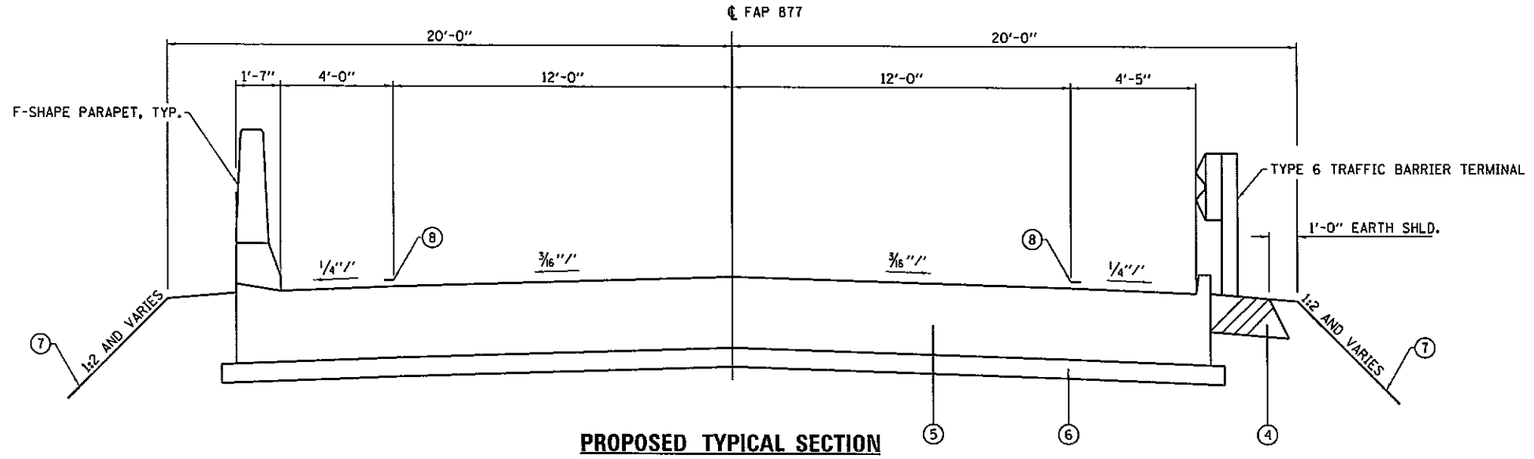
USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-typical.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	8
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

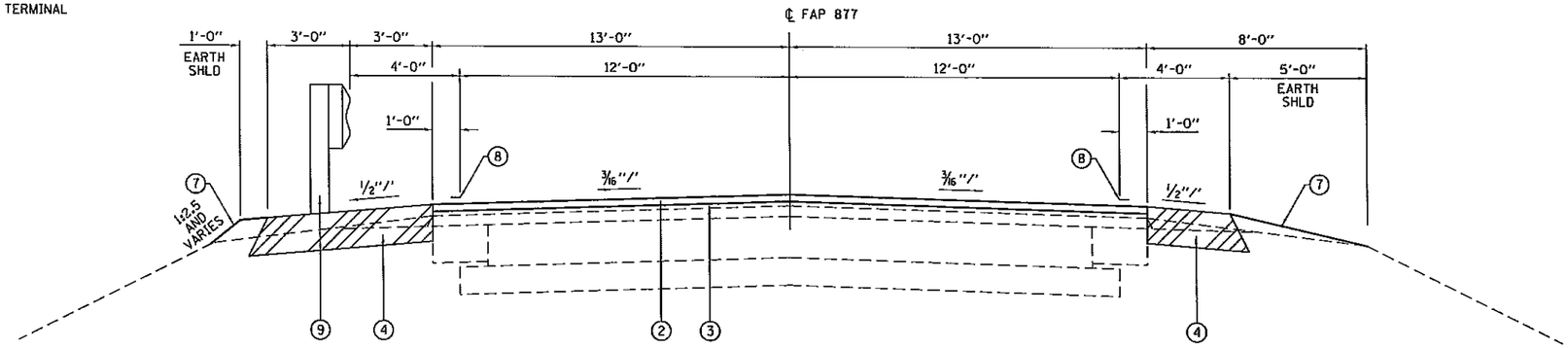


PROPOSED TYPICAL SECTION
STA 47+50 TO 47+80
STA 49+60 TO 49+90

NEAR ABUTMENT **AT APPROACH FOOTING**

LEGEND

1. GUARDRAIL REMOVAL
2. HMA SURFACE COURSE, MIX C, N90 (168 LBS/SQ YD), 1½"
3. LEVELING BINDER (MACHINE METHOD) (84 LBS/SQ YD), ¾"
4. HMA SHOULDERS, 8" - SEE PLAN SHEETS FOR LIMITS
5. 15" BRIDGE APPROACH PAVEMENT
6. 4" GRANULAR SUB-BASE TYPE B
7. SEEDING, CLASS 2A AND HEAVY DUTY EROSION CONTROL BLANKET
8. PAINT PAVEMENT MARKING - LINE 4"
9. SPBGR, TY A 6' POSTS OR APPLICABLE TERMINAL SECTION (SEE PLANS), TYP



PROPOSED TYPICAL SECTION
STA 50+79 TO 51+87

HMA MIXTURES REQUIREMENTS

LOCATION(S):	HMA SURFACING	LEVELING BINDER	HMA SHOULDERS
MIXTURE USE(S):	HMA SURFACE CSE, MIX C, N90	LEVELING BINDER (MM) N90	HMA SHOULDERS
AC/PG GRADE:	PG64-22	PG64-22	PG58-22
RAP % (MAX): ***	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION	SEE SPECIAL PROVISION
DESIGN AIR VOIDS	4.0%	4.0%	2.0% @ N30
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5	IL-9.5	HMA SHOULDERS
FRICTION AGGREGATE:	C SURFACE	NONE	NONE

*** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED AS DETERMINED BY THE ENGINEER.

FILE NAME = D978231-sht-typical.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-typical.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	1008-1	WHITE	54	9
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

EARTHWORK SCHEDULE

LOCATION			EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT (NOT A PAY ITEM)	BALANCE WASTE (+) OR SHORTAGE (-)
STA	TO	STA	CU YD	CU YD	CU YD	CU YD
45+50.00		47+80.00	230	173	520	-347
49+60.00		52+00.00	85	64	260	-196
		TOTALS	315	237	780	-543

NOTES:
1. ASSUME 25% SHRINKAGE

EROSION CONTROL SCHEDULE

LOCATION				TEMPORARY EROSION CONTROL SEEDING (2 APPS)	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER
STA	TO	STA	OFF	POUND	FOOT	FOOT
45+53.00		47+83.54		15		263
45+53.00		47+83.54		53		407
49+56.46		51+87.00		38		278
49+56.46		51+87.00		20		260
46+25.00		46+25.00	60.5' RT		14	
47+00.00		47+00.00	61.5' RT		17	
47+75.00		47+75.00	71.5' RT		12	
			TOTALS	126	43	1208

PAVEMENT MARKING SCHEDULE

LOCATION				DESCRIPTION	PAINT PAVEMENT MARKING - LINE 4"
STA	TO	STA	OFF		FOOT
45+53.00		51+87.00		SKIP-DASH	160
45+53.00		51+87.00		LT EDGE	634
45+53.00		51+87.00		RT EDGE	634
			TOTALS		1428

GUARDRAIL SCHEDULE

LOCATION	SPBGR, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE 6	TRAFFIC BARRIER TERMINAL TYPE 1 (SPL) TAN	GUARDRAIL MARKERS, TYPE A	TERMINAL MARKER - DIRECT APPLIED
	FOOT	EACH	EACH	EACH	EACH
STRUCTURE NO. 097-0027 - SW	62.5	1	1	4	1
STRUCTURE NO. 097-0027 - SE		1	1	4	1
STRUCTURE NO. 097-0027 - NW		1	1	4	1
STRUCTURE NO. 097-0027 - NE	62.5	1	1	4	1
TOTALS	125	4	4	16	4

SEEDING SCHEDULE

LOCATION				MULCH METHOD 2	SEEDING, CLASS 2A	SEEDING CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	HEAVY DUTY EROS CONT BLANKET
STA	TO	STA	OFF	ACRE	ACRE	ACRE	POUND	POUND	POUND	TON	SQ YD
45+53.00		47+83.54	LT	0.11	0.11	0.11	9	9	9	0.2	357
45+53.00		47+83.54	RT	0.30	0.30	0.30	32	32	32	0.6	1275
49+56.46		51+87.00	LT	0.22	0.22	0.22	23	23	23	0.4	912
49+56.46		51+87.00	RT	0.12	0.12	0.12	12	12	12	0.2	484
		TOTALS		0.75	0.75	0.75	76	76	76	1.4	3028

REMOVAL SCHEDULE

LOCATION				HMA SURF REM - BUTT JOINT	PAVEMENT REMOVAL
STA	TO	STA	OFF	SQ YD	SQ YD
45+53.00		45+83.00		89	
51+57.00		51+87.00		87	
47+40.00		47+80.00			115 •
49+60.00		50+00.00			118 •
			TOTALS	176	233

• INCLUDES REMOVAL OF BRIDGE APPROACH

RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE

LOCATION		RAISED REFL PVMT MKR	RAISED REFL PVMT MKR (BRIDGE)	RAISED REFL PVMT MKR REMOVAL
STA	OFF	EACH	EACH	EACH
STA 45+86.00		1		1
STA 46+66.00		1		1
STA 47+46.00		1		1
STA 48+26.00			1	
STA 49+06.00			1	
STA 49+86.00			1	1
STA 50+66.00		1		1
STA 51+46.00		1		1
TOTALS		5	3	6

GUARDRAIL REMOVAL SCHEDULE

LOCATION	FOOT
SN 097-0027 - (IL 141) RT	499
SN 097-0027 - (IL 141) LT	499
TOTALS	998

PAVING SCHEDULE

LOCATION				LEVELING BINDER (MM), N90	HMA SURFACE CSE, MIX "C", N90	BRIDGE APPR PVMT CONNECTOR (FLEXIBLE)	BITUMINOUS MATERIALS (PRIME COAT)
STA	TO	STA	OFF	TON	TON	SQ YD	POUND
46+03.00		47+40.00		18			99
50+00.00		51+37.00		18			99
45+53.00		47+40.00			46		257
50+00.00		51+87.00			46		257
47+40.00		47+50.00				38	65
49+90.00		50+00.00				38	65
			TOTALS	36	92	76	842

SHOULDER SCHEDULE

LOCATION				HMA SHOULDERS, 8"
STA	TO	STA	OFF	SQ YD
45+53.00		45+98.00	RT	15
45+53.00		45+98.00	LT	15
51+42.00		51+87.00	RT	15
51+42.00		51+87.00	LT	15
45+98.00		47+65.00	RT	115
45+98.00		47+65.00	LT	94
49+60.00		51+42.00	RT	94
49+60.00		51+42.00	LT	115
			TOTALS	478

DRAINAGE SCHEDULE

LOCATION		METAL END SECTIONS 12"	PIPE DRAINS 12"	TYPE B INLET BOX, STD 609006	CONCRETE THRUST BLOCKS	STONE RIPRAP, CLASS A3
STA	OFF	EACH	FOOT	EACH	EACH	SQ YD
47+63.25	16' RT	1	72	1	1	12
47+63.25	16' LT	1	62	1	1	11
49+76.75	16' RT	1	83	1	1	9
49+76.75	16' LT	1	73	1	1	7
TOTALS		4	290	4	4	39

FILE NAME = D978231-sht-schedule.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-schedule.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	10
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

LEGEND

HMA SHOULDERS, 8"

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

HMA SURFACE REMOVAL-BUTT JOINT

SEC. 17, T7S, R8E, 3RD P.M.

SEC. 20, T7S, R8E, 3RD P.M.

EX ROW

METAL END SECTIONS 12"
+63.25, 58' LT
INV = 362.05

BEAR CREEK

METAL END SECTIONS 12"
+76.75, 65' LT
INV = 358.17

PIPE DRAINS
(SEE SHEET 10)

TYPE B INLET BOX,
+63.25, 16' LT
STD 609006

℄ EX SN 097-0027
STA 48+70.00
THREE SPAN BRIDGE

TYPE B INLET BOX,
+76.75, 16' LT
STD 609006

STONE RIPRAP,
CLASS A5 (TYP)

HMA SHOULDERS, 8"

CONSTRUCTION LIMITS

TBT TY 1 (SPL)
TANGENT

TBT TY 6

62.5' SPBGR
TY A

BUTT JOINT
STA. 45+53.00

℄ IL 141

MATCH LINE STA. 51+00

HMA SHOULDERS, 8"

CONSTRUCTION LIMITS

TBT TY 1 (SPL)
TANGENT

62.5' SPBGR TY A

TBT TY 6

TYPE B INLET BOX,
+63.25, 16' RT
STD 609006

PIPE DRAINS
(SEE SHEET 10)

METAL END SECTIONS 12"
+63.25, 53' RT
INV = 361.27

TYPE B INLET BOX,
+76.75, 16' RT
STD 609006

PIPE DRAINS
(SEE SHEET 10)

METAL END SECTIONS 12"
+76.75, 73' RT
INV = 361.58

EX ROW

B.M. #09707736 ELEV. 382.746
CHISELED SQUARE ON TOP OF HUB GUARD BESIDE CONC BARRIER WALL OF SW CORNER OF SN 097-0027 OVER BEAR CREEK 2'± SOUTH OF D7 BM51 ALONG IL RTE 141 STA. 47+74± & 14'± RT.

2¼" (MIN.) HMA RESURFACING

EX PGL IL 141

STA. 45+53.00
MATCH EXISTING
ELEVATION 382.21

PI STA. 47+40
ELEVATION 382.34

PI STA. 50+00
ELEVATION 382.34

0.0%

-0.34%

DHW ELEV. = 376.80

BEGIN SD. RT.
+50.00
ELEV. = 364.04

SD. RT. +00.00
ELEV. = 363.58

SD. RT. +50.00
ELEV. = 362.93

SD. RT. +00.00
ELEV. = 362.19

SD. RT. +50.00
ELEV. = 361.46

END SD. RT.
+80.00
ELEV. = 360.55

-0.92%

-1.30%

-0.74%

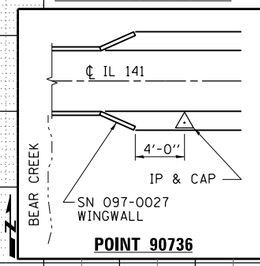
-1.46%

-3.03%

382.12 | 382.21 | 382.27 382.46 | 382.29 382.48 | 382.23 382.42 | 382.14 382.34 +40 | 382.12 382.34 | 382.13 382.34 | 382.07 382.34 | 382.10 382.34 | 382.13 382.34 | 382.01 382.34 | 381.84 382.17 | 381.81 382.00

45+00 | 45+50 | 46+00 | 46+50 | 47+00 | 47+50 | 48+00 | 48+50 | 49+00 | 49+50 | 50+00 | 50+50 | 51+00

TRAVERSE POINT



PLAN: SURVEYED; PLOTTED; ALIGNMENT CHECKED; RT. OF WAY CHECKED; CADD FILE NAME; NOTE BOOK; NO.; BY; DATE

PROFILE: SURVEYED; PLOTTED; GRADES CHECKED; BM. NOTED; STRUCTURE NOTATNS CHKD; NOTE BOOK; NO.; BY; DATE

FILE NAME = D97823i-sht-plprf.dgn
MODEL = Default
PLOT DRAWER = IDOT.PDF-plterfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 PLAN & PROFILE

SCALE: 1' = 20' | SHEET 1 OF 2 SHEETS | STA. 45+00.00 | TO STA. 51+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	11
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

SEC. 17, T7S, R8E, 3RD P.M.

SEC. 16, T7S, R8E, 3RD P.M.

N

0 20 40
SCALE IN FEET

66" CMP

CONSTRUCTION LIMITS

TBT TY 1 (SPL) TANGENT

HMA SHOULDERS, 8"

+30.65 +36.00 +42.00

6'

2

30'

BUTT JOINT STA. 51+87.00

MATCH LINE STA. 51+00

13'

13'

3'

℄ IL 141

51 52 53 54 55+00 56

+64 FE (AGG)

+62 FE (AGG)

+42.00 +57.00 +87.00

CONSTRUCTION LIMITS

HMA SHOULDERS, 8"

80'

40" CMP

EX ROW

EX ROW

SEC. 20, T7S, R8E, 3RD P.M.

SEC. 21, T7S, R8E, 3RD P.M.

LEGEND

- HMA SHOULDERS, 8"
- BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
- HMA SURFACE REMOVAL-BUTT JOINT

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHKD
NOTE BOOK
NO.
BY
DATE

2¼" (MIN.) HMA RESURFACING

ELEVATION 382.00

+42.00

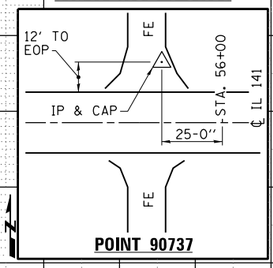
STA. 51+87.00 MATCH EXISTING ELEVATION 381.53

390 385 380 375 370 365 360 355 350

381.81 382.00 | 381.69 381.83 | 381.53 381.53 +87 | 381.48 | 381.44 | 381.47 | 381.56 | 381.64 | 381.73 | 381.83 | 381.78 | 381.73 | 381.73 | 381.73

51+00 51+50 52+00 52+50 53+00 53+50 54+00 54+50 55+00 55+50 56+00 56+50 57+00

TRAVERSE POINT



FILE NAME = D978231-sht-plnprf.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.pltcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 PLAN & PROFILE

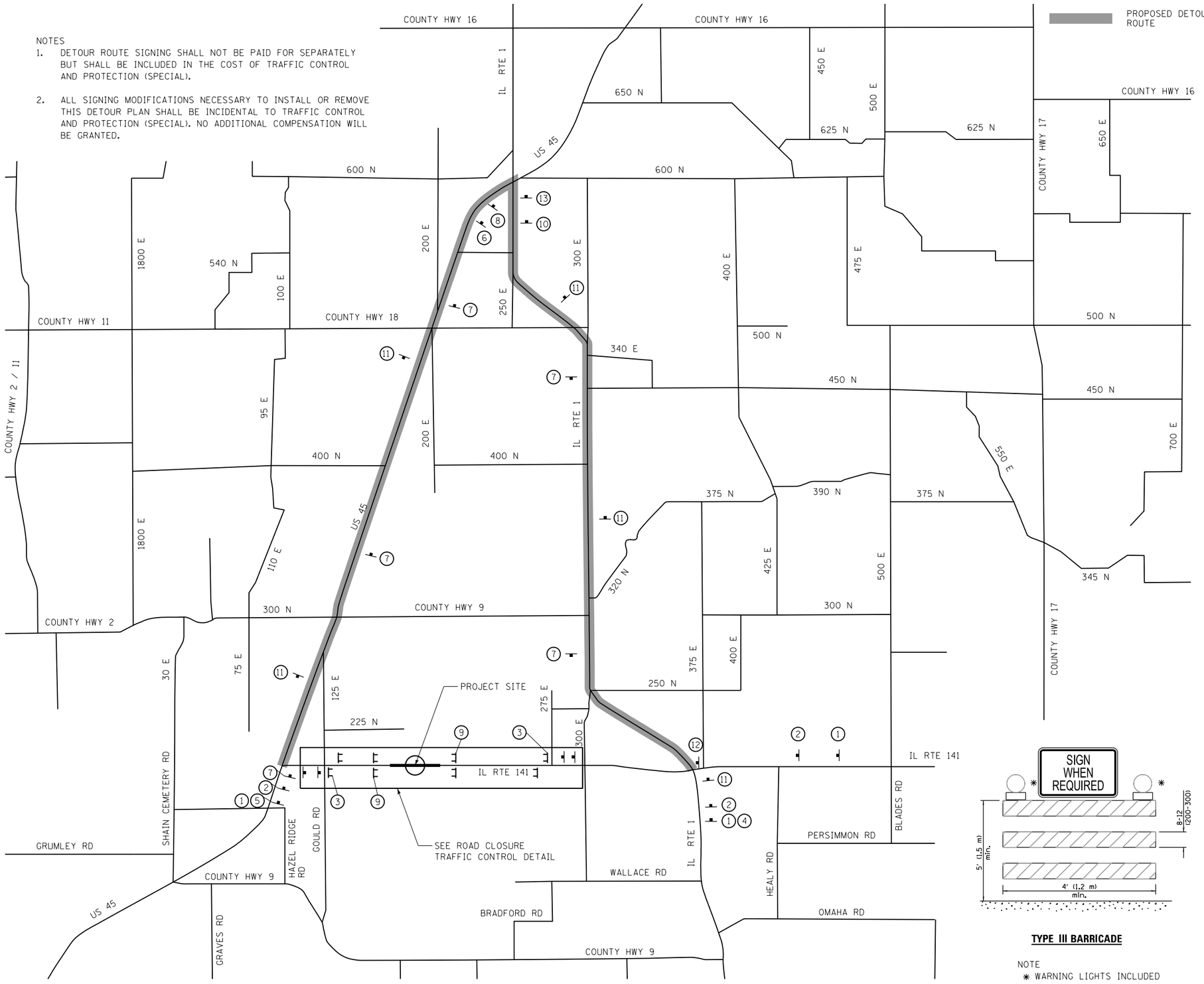
SCALE: 1" = 20' | SHEET 2 OF 2 SHEETS | STA. 51+00.00 | TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	12
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

NOTES

1. DETOUR ROUTE SIGNING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).

2. ALL SIGNING MODIFICATIONS NECESSARY TO INSTALL OR REMOVE THIS DETOUR PLAN SHALL BE INCIDENTAL TO TRAFFIC CONTROL AND PROTECTION (SPECIAL). NO ADDITIONAL COMPENSATION WILL BE GRANTED.



FLASHING HIGH INTENSITY AMBER LIGHT

① ROAD CLOSED AHEAD — W20-3 3636

② DETOUR AHEAD — W20-2 3636

FLASHING HIGH INTENSITY AMBER LIGHT

③ ROAD CLOSED TO THRU TRAFFIC — R11-4 6030 (SHALL BE MOUNTED ABOVE TYPE III BARRICADE)

④ M5-1L 2115

⑤ M5-1R 2115

⑥ DETOUR M4-8 2412
EAST M3-2 2412
141 M1-5 2424
M5-1R 2115

⑦ DETOUR M4-8 2412
EAST M3-2 2412
141 M1-5 2424
M6-3 2115

⑧ DETOUR M4-8 2412
EAST M3-2 2412
141 M1-5 2424
M6-1R 2115

⑨ ROAD CLOSED — R11-2 4830 (SHALL BE MOUNTED ABOVE TYPE III BARRICADE)

⑩ DETOUR M4-8 2412
WEST M3-4 2412
141 M1-5 2424
M5-1L 2115

⑪ DETOUR M4-8 2412
WEST M3-4 2412
141 M1-5 2424
M6-3 2115

⑫ DETOUR M4-8 2412
WEST M3-4 2412
141 M1-5 2424
M6-1R 2115

⑬ DETOUR M4-8 2412
WEST M3-4 2412
141 M1-5 2424
M6-1L 2115

TYPE III BARRICADE

NOTE
* WARNING LIGHTS INCLUDED

FILE NAME = D978231-sht-staging.dgn
MODEL = Default
PLOT DRIVER = IDOT_PDF.pltcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-staging.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

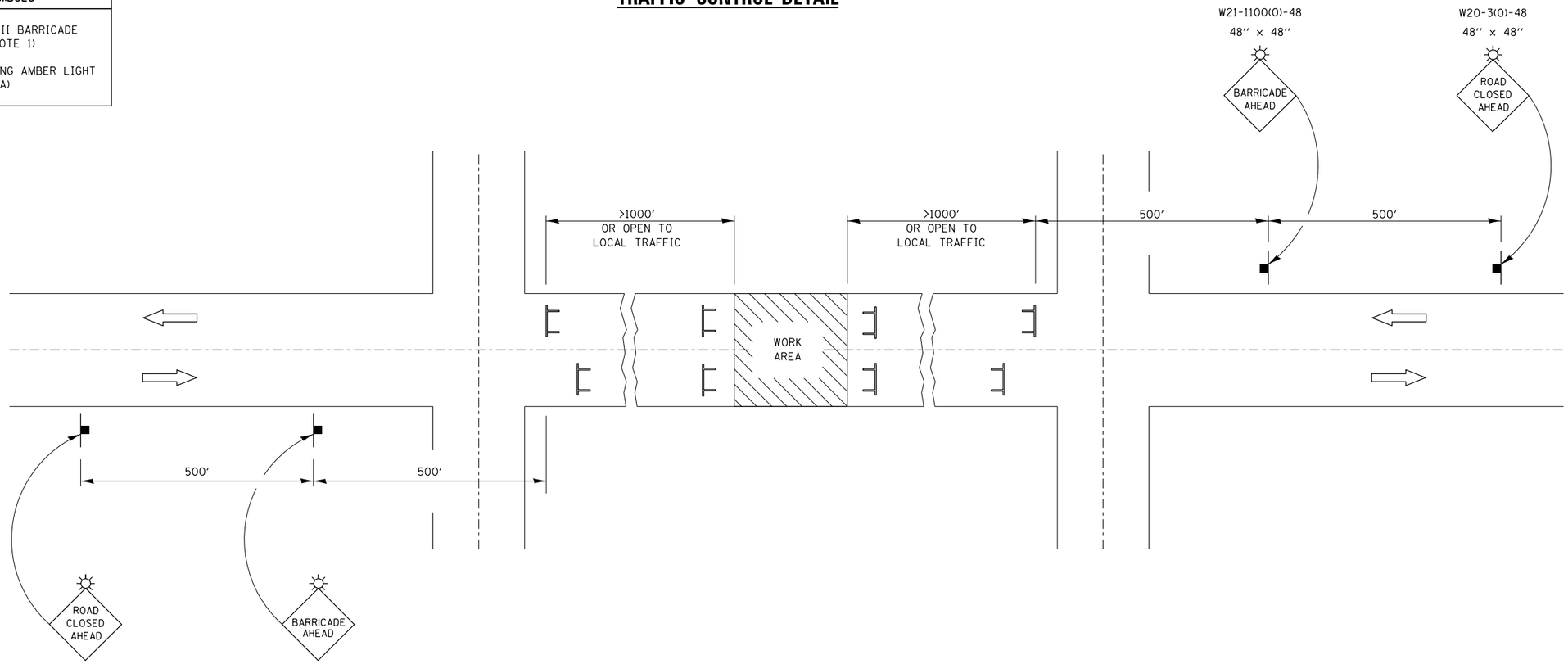
ILLINOIS ROUTE 141 DETOUR PLAN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	13
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

ROAD CLOSURE
TRAFFIC CONTROL DETAIL

SYMBOLS	
TT	TYPE III BARRICADE (SEE NOTE 1)
☼	FLASHING AMBER LIGHT (TYPE A)



GENERAL NOTES

1. TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 701901 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
2. IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
3. WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
4. STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
5. IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
6. REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TY III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
7. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
8. A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
10. FORMS BT. 725 AND BT. 726 ARE REQUIRED.
11. WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
12. AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

FILE NAME = D978231-sht-details.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED -	REVISED -
FILE NAME = D978231-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROAD CLOSURE
TRAFFIC CONTROL DETAIL

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	14
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

SEC. 17, T7S, R8E, 3RD P.M.

N

0 20 40
SCALE IN FEET

EX ROW

STONE RIPRAP, CLASS A3
11 SQ YD

+83.54
60' LT

+54.76
52' LT

263' PERIMETER
EROSION BARRIER

+50.33
21' LT

+00.00
23' LT

+90.91
23' LT

45+00 46 47 48 49 50+00

℄ IL 141

+50.33
16' RT

268' PERIMETER
EROSION BARRIER

+04.63
57' RT

+83.13
55' RT

+99.94
75' RT

139' PERIMETER
EROSION BARRIER

+00.00
79' RT

+35.89
72' RT

+83.54
68' RT

STONE RIPRAP, CLASS A3
12 SQ YD

EX ROW

STONE RIPRAP, CLASS A3
7 SQ YD

+56.46
60' LT

278' PERIMETER
EROSION BARRIER

51+00

MATCH LINE STA. 51+00

+50.00
40' RT

260' PERIMETER
EROSION BARRIER

+83.27
57' RT

+56.46
61' RT

STONE RIPRAP, CLASS A3
9 SQ YD

SEC. 20, T7S, R8E, 3RD P.M.

SEC. 16, T7S, R8E, 3RD P.M.

66" CMP

MATCH LINE STA. 51+00

+89.03
22' LT

51 52 53 54 55+00 56

℄ IL 141

+88.97
22' RT

+49.95
23' RT

40" CMP

EX ROW

SEC. 21, T7S, R8E, 3RD P.M.

LEGEND

- SEEDING, CLASS 2A AND HEAVY DUTY EROSION CONTROL BLANKET
- STONE RIPRAP, CLASS A3
- STONE RIPRAP, CLASS A5
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK

QUIGG ENGINEERING INC

USER NAME = halsteadtw	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-eros.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/14/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

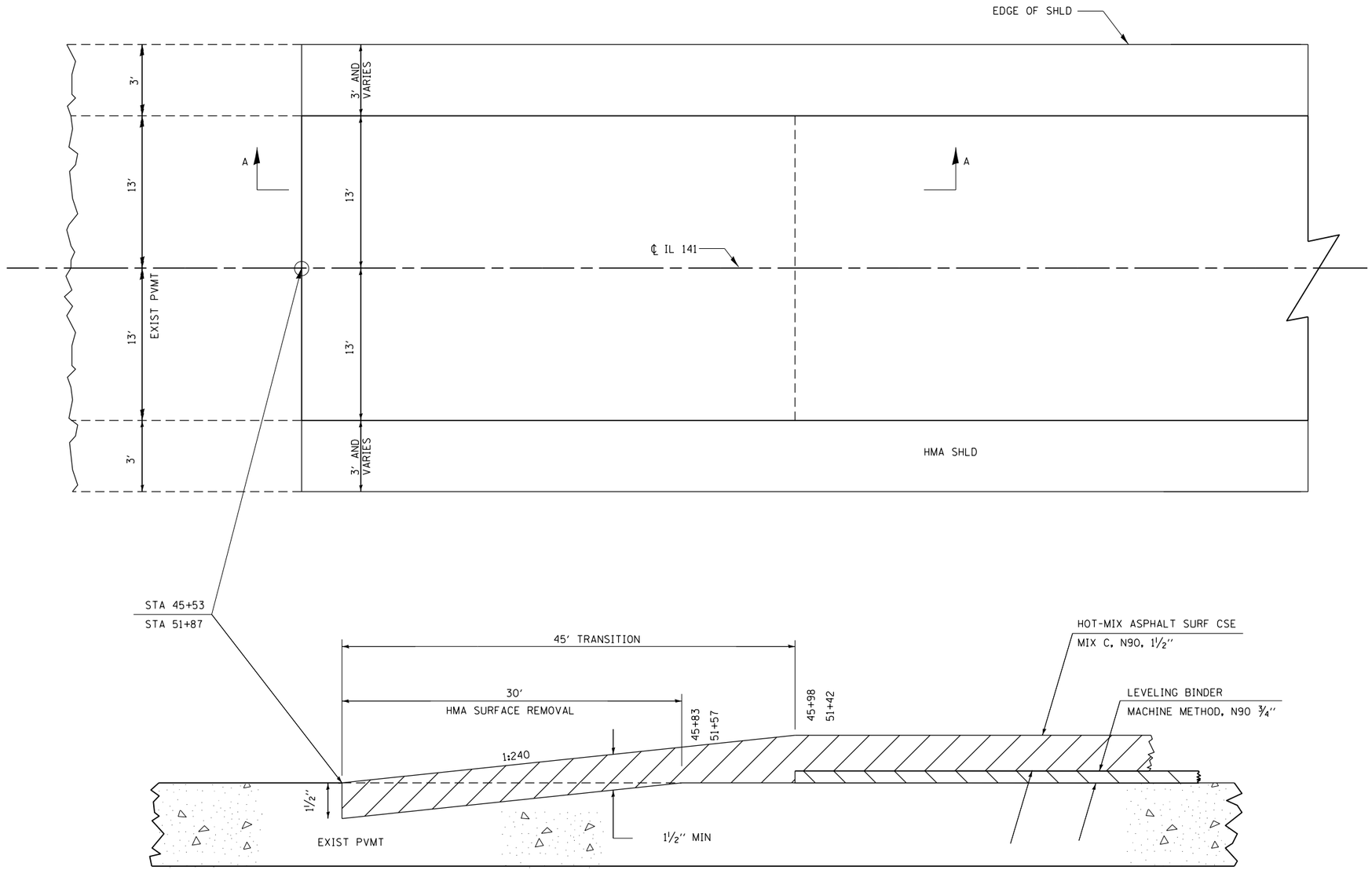
ILLINOIS ROUTE 141
EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20" | SHEET NO. 1 OF 1 SHEETS | STA. 45+00.00 TO STA. 57+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	15
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

FILE NAME = s:\pw_work\pwdot\halsteadtw\d0406687\D978231-sht-eros.dgn
MODEL = Default
PLOT DRIVER = $PLTDRVS$

BUTT JOINT



SECTION A–A

REVISIONS

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

STD. 9-86

FILE NAME = D978231-sht-details.dgn
MODEL = Default
PLOT DRIVER = IDOT-PDF.pltcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED -	REVISED -
FILE NAME = D978231-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

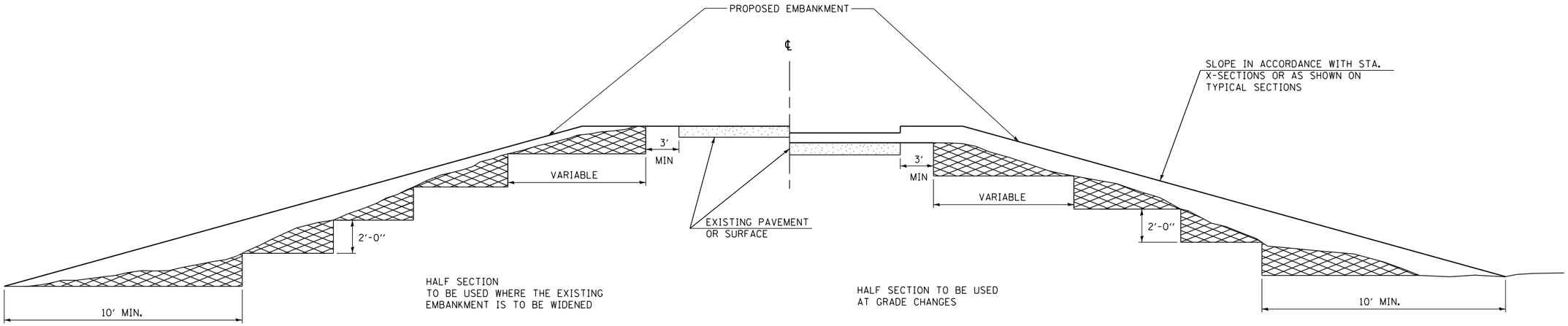
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT DETAIL

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	16
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

TYPICAL CROSS SECTION SHOWING
STEP CONSTRUCTION ON EXISTING FILL



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

REVISIONS

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

STD. 9-16

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED -	REVISED -
FILE NAME = D978231-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

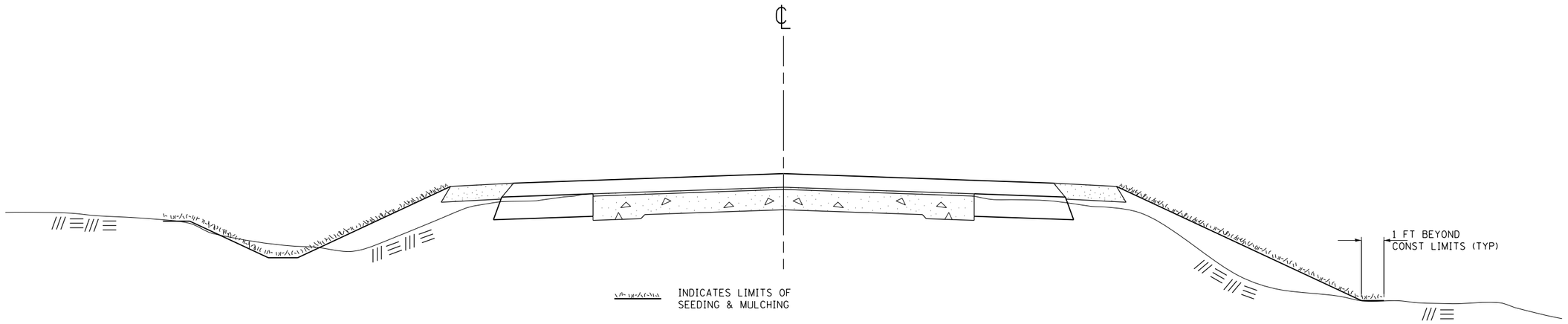
STEP CONSTRUCTION DETAIL

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	17
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

FILE NAME = D978231-sht-details.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.plotcfg

SEEDING & MULCHING



GENERAL NOTES

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

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

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

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

REVISIONS

REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

FILE NAME = D978231-sht-details.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED -	REVISED -
FILE NAME = D978231-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

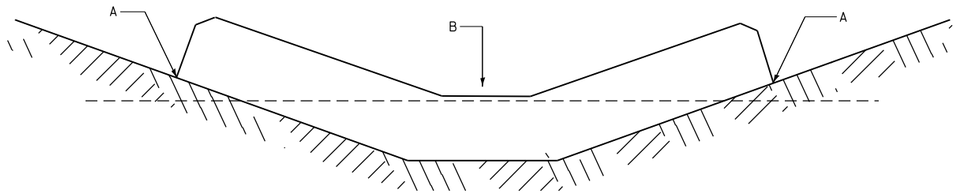
SEEDING AND MULCHING DETAIL

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	18
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

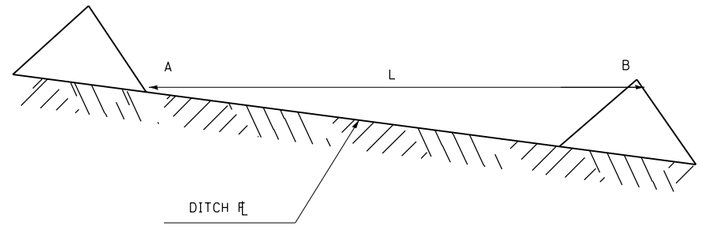
TEMPORARY DITCH CHECKS

PLACEMENT OF TEMPORARY
DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

SPACING BETWEEN TEMPORARY DITCH CHECKS



L = THE DISTANCE SUCH THAT POINTS
A AND B ARE OF EQUAL ELEVATION

B = THE LOW POINT
IN CENTER OF CHECK

REVISIONS

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

STD. 9-108

FILE NAME = D978231-sht-details.dgn
MODEL = Default
PLOT DRIVER = IDOT_PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED -	REVISED -
FILE NAME = D978231-sht-details.dgn	DRAWN -	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY DITCH CHECK DETAIL

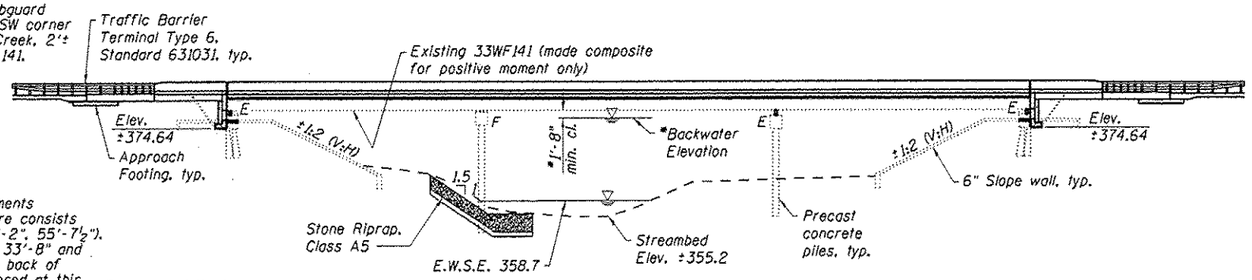
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	19
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

BENCHMARK:
Chiseled square on top of hubguard beside conc. barrier wall on SW corner of SN 097-0027 over Bear Creek, 2'± South of D7 BM 51 along IL 141. Sta. 47+74±, 14'± Rt. Elev. 382.75 (NAVD 88)

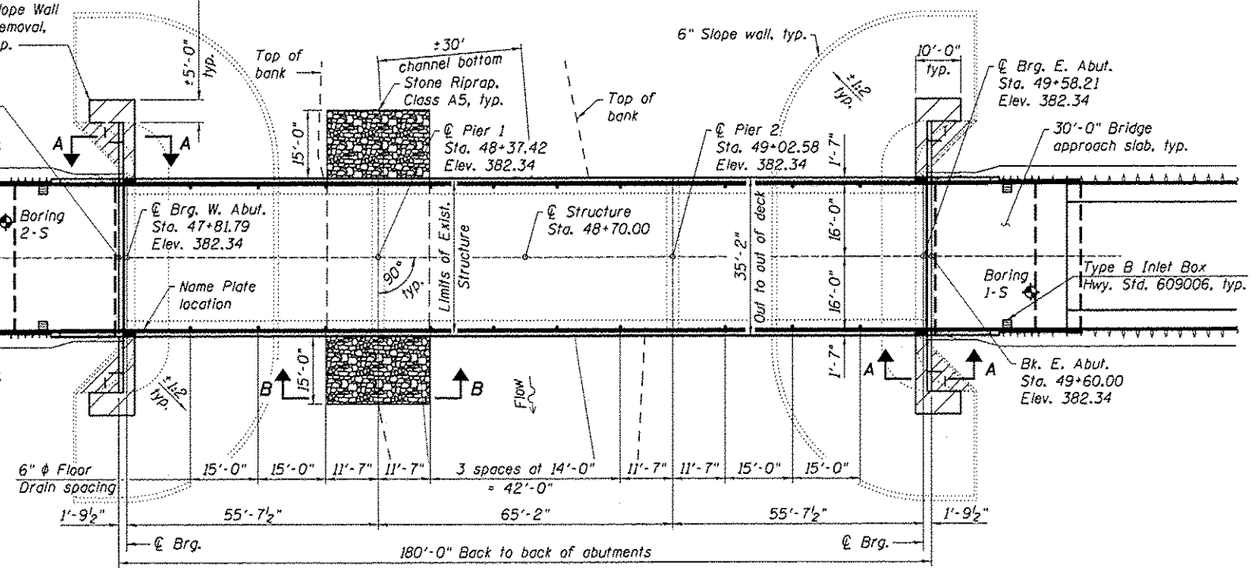
EXISTING STRUCTURE:
SN 097-0027 was originally built in 1957 as FA Rte. 113, Section 100-B. It is a non-composite steel beam superstructure on precast concrete pile supported abutments and piers. The superstructure consists of three spans (55'-7½", 65'-2", 55'-7½"). The out to out deck width is 33'-8" and the length is 180'-0" back to back of abutments. IL 141 will be closed at this location and traffic will be maintained using a detour route.

No salvage.

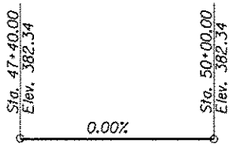


ELEVATION

* From existing bridge plans



PLAN



PROFILE GRADE
(Along ℄ Roadway)

STATION 48+70.00
RE-BUILT 201_ BY
STATE OF ILLINOIS
F.A.P. RT. 877 SEC. 100B-1
LOADING HS20-44
STR. NO. 097-0027

NAME PLATE
(See Hwy. Std. 515001)

Note:
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

SCOPE OF WORK

1. Remove existing concrete deck, approach slabs, portions of slope walls and abutment backwalls and wingwalls.
2. Repair substructure units with Epoxy Crack Injection.
3. Remove and replace expansion bearings at abutments and Pier 2.
4. Remove and replace end diaphragms.
5. Install scour countermeasures at Pier 1.
6. Construct new backwalls, wingwalls and wing extensions.
7. Repair existing concrete slope walls.
8. Install shear studs to make new deck composite in positive moment regions.
9. Construct new deck and approach slabs and install deck expansion joints.

DESIGN SPECIFICATIONS (New Const.)

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44 (New Const.)

No allowance for future wearing surface.

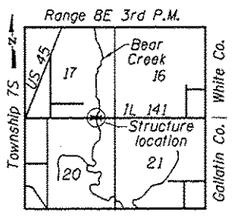
DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (M270 Grade 36)

FIELD UNITS (Exist. Construction)
fc = 1,400 psi (superstructure)
fc = 800 psi (substructure)
fs = 20,000 psi (reinforcement)
fs = 18,000 psi (structural steel)

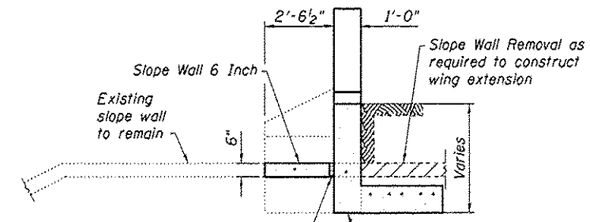
SEISMIC DATA

Seismic Performance Category (SPC) = B
Horizontal Bedrock Acceleration Coefficient (A) = 0.098g
Site Coefficient (S) = 1.5



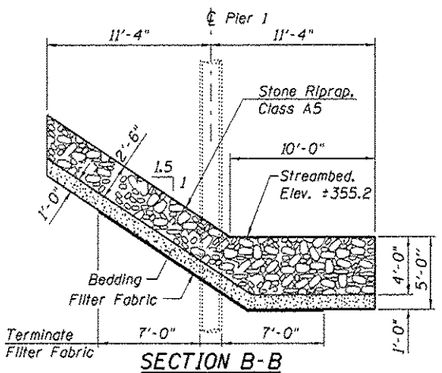
LOCATION SKETCH

STRUCTURE INDEX OF SHEETS



Notes:
Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
Existing wire fabric shall be cleaned and incorporated into the new construction. Cost included with Slope Wall Removal.

SECTION A-A



SECTION B-B

APPROVED
For Structural Adequacy Only

Engineer of Bridges & Structures

STATE OF ILLINOIS
RICHARD D. PAYNE
No. 4647
REGISTERED STRUCTURAL ENGINEER

EXPIRES 11-30-14

SIGNATURE

02-14-14
DATE

GENERAL PLAN & ELEVATION
IL 141 OVER BEAR CREEK
FAP ROUTE 877 - SECTION 100B-1
WHITE COUNTY
STATION 48+70.00
STRUCTURE NO. 097-0027

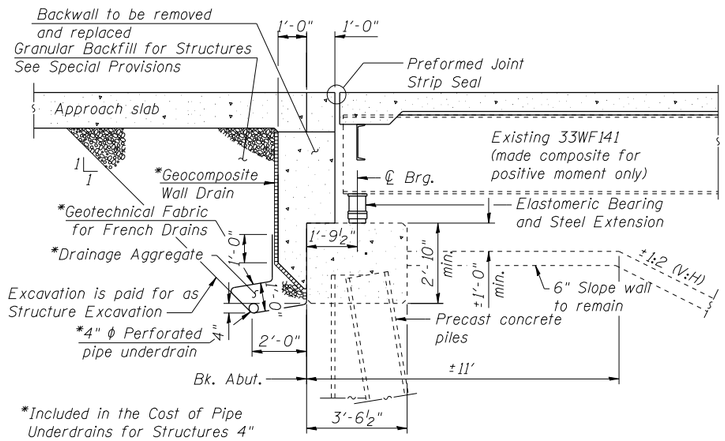
ESCA CONSULTANTS, INC.

USER NAME = lavenderbe	DESIGNED - SHL	02/13	REVISED -		
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -		
PLOT SCALE = 0.2 '/ in.	DRAWN - DWH/HAS	02/13	REVISED -		
PLOT DATE = 7/22/2014 1:39:45 PM	CHECKED - SHL	05/13	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

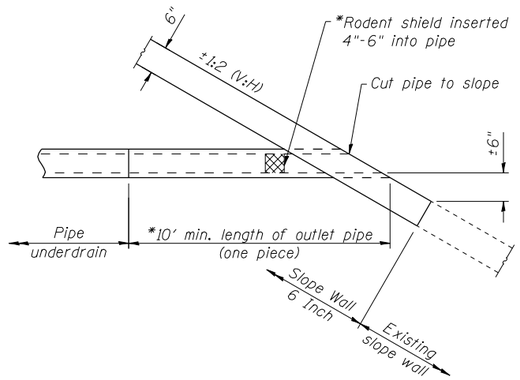
SHEET NO. 1 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	20
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			



SECTION THRU PILE SUPPORTED STUB ABUTMENTS

Note:
All drainage 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 onto the concrete slope walls. (See Pipe Underdrain Outlet Detail on this sheet).



PIPE UNDERDRAIN OUTLET DETAIL

Note:
The rodent shield shall be according to applicable portions of Article 601.05 of the Standard Specifications and Highway Standard 601101.

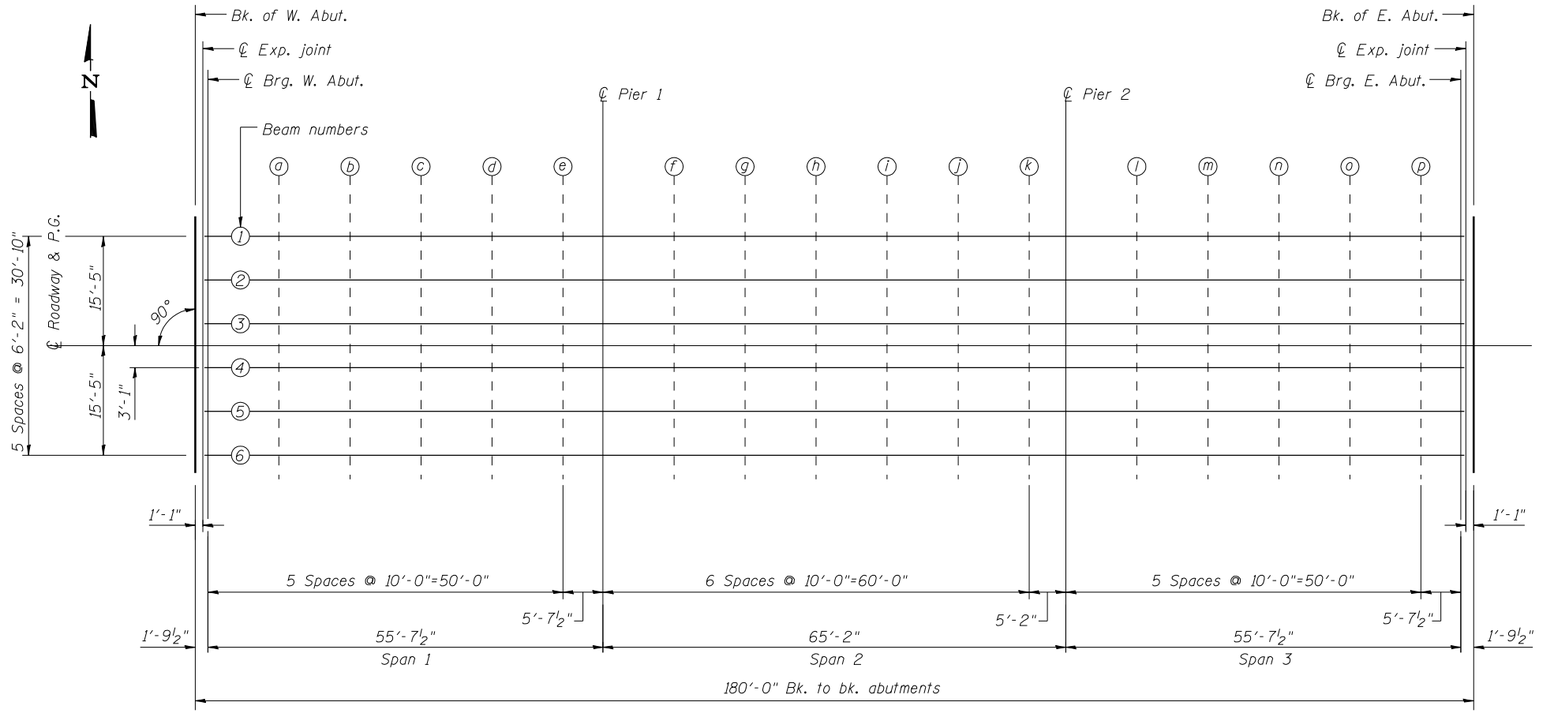
GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$" dia., holes $\frac{15}{16}$" dia., unless otherwise noted.
2. No field welding is permitted except as specified in the contract documents.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

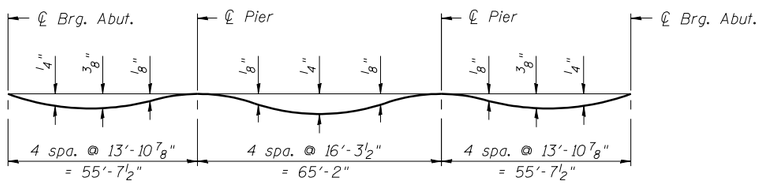
   As directed by the Engineer, existing construction accessories welded to the top flange of beams shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that can not be removed by grinding $\frac{1}{4}$" in. deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
5. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. Concrete sealer shall be applied to the designated areas of the abutments.
7. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
8. Field painting of structural steel shall be done under a separate painting contract.
9. All new structural steel shall be shop primed with an inorganic zinc rich primer per AASHTO M300, Type 1.
10. Slipforming of the parapets is not allowed.
11. Existing structural steel shall only be cleaned and painted as required by the Special Provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.	-	182	182
Filter Fabric	Sq. Yd.	-	126	126
Concrete Removal	Cu. Yd.	-	19.8	19.8
Slope Wall Removal	Sq. Yd.	-	70	70
Removal of Existing Concrete Deck	Each	1	-	1
Structure Excavation	Cu. Yd.	-	120	120
Floor Drains	Each	20	-	20
Concrete Structures	Cu. Yd.	-	54.8	54.8
Concrete Superstructure	Cu. Yd.	316.5	-	316.5
Bridge Deck Grooving	Sq. Yd.	800	-	800
Protective Coat	Sq. Yd.	1036	-	1036
Furnishing and Erecting Structural Steel	Pound	5180	-	5180
Stud Shear Connectors	Each	2880	-	2880
Reinforcement Bars, Epoxy Coated	Pound	68780	8370	77150
Bar Splicers	Each	70	-	70
Slope Wall 6 Inch	Sq. Yd.	-	40	40
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	68	-	68
Elastomeric Bearing Assembly, Type I	Each	-	12	12
Elastomeric Bearing Assembly, Type II	Each	-	6	6
Anchor Bolts, $\frac{5}{8}$"	Each	-	36	36
Concrete Sealer	Sq. Ft.	-	330	330
Epoxy Crack Injection	Foot	-	36	36
Geocomposite Wall Drain	Sq. Yd.	-	80	80
Granular Backfill for Structures	Cu. Yd.	-	108	108
Jack and Remove Existing Bearings	Each	-	18	18
Structural Steel Removal	Pound	2760	-	2760
Pipe Underdrains for Structures 4"	Foot	-	140	140



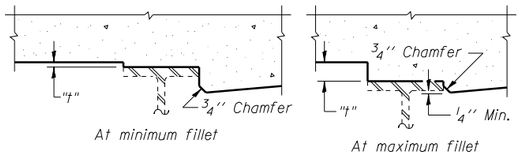
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 22.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

ESCA CONSULTANTS, INC.

USER NAME = kah		DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14		CHECKED - RDP	02/13	REVISED -	
		DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014	8:38:09 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 097-0027

SHEET NO. 3 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	22
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		

BEAM 1

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	-15.42	382.08	382.08
℄ Exp. joint	47+81.08	-15.42	382.08	382.08
℄ Brg. W. Abut.	47+81.79	-15.42	382.08	382.08
a	47+91.79	-15.42	382.08	382.10
b	48+01.79	-15.42	382.08	382.11
c	48+11.79	-15.42	382.08	382.11
d	48+21.79	-15.42	382.08	382.10
e	48+31.79	-15.42	382.08	382.09
℄ Pier 1	48+37.42	-15.42	382.08	382.08
f	48+47.42	-15.42	382.08	382.09
g	48+57.42	-15.42	382.08	382.10
h	48+67.42	-15.42	382.08	382.10
i	48+77.42	-15.42	382.08	382.10
j	48+87.42	-15.42	382.08	382.09
k	48+97.42	-15.42	382.08	382.08
℄ Pier 2	49+02.58	-15.42	382.08	382.08
l	49+12.58	-15.42	382.08	382.09
m	49+22.58	-15.42	382.08	382.10
n	49+32.58	-15.42	382.08	382.11
o	49+42.58	-15.42	382.08	382.10
p	49+52.58	-15.42	382.08	382.09
℄ Brg. E. Abut.	49+58.21	-15.42	382.08	382.08
℄ Exp. joint	49+58.92	-15.42	382.08	382.08
Bk. of E. Abut.	49+60.00	-15.42	382.08	382.08

BEAM 2

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	-9.25	382.20	382.20
℄ Exp. joint	47+81.08	-9.25	382.20	382.20
℄ Brg. W. Abut.	47+81.79	-9.25	382.20	382.20
a	47+91.79	-9.25	382.20	382.22
b	48+01.79	-9.25	382.20	382.23
c	48+11.79	-9.25	382.20	382.23
d	48+21.79	-9.25	382.20	382.22
e	48+31.79	-9.25	382.20	382.21
℄ Pier 1	48+37.42	-9.25	382.20	382.20
f	48+47.42	-9.25	382.20	382.21
g	48+57.42	-9.25	382.20	382.22
h	48+67.42	-9.25	382.20	382.22
i	48+77.42	-9.25	382.20	382.22
j	48+87.42	-9.25	382.20	382.21
k	48+97.42	-9.25	382.20	382.20
℄ Pier 2	49+02.58	-9.25	382.20	382.20
l	49+12.58	-9.25	382.20	382.21
m	49+22.58	-9.25	382.20	382.22
n	49+32.58	-9.25	382.20	382.23
o	49+42.58	-9.25	382.20	382.22
p	49+52.58	-9.25	382.20	382.21
℄ Brg. E. Abut.	49+58.21	-9.25	382.20	382.20
℄ Exp. joint	49+58.92	-9.25	382.20	382.20
Bk. of E. Abut.	49+60.00	-9.25	382.20	382.20

BEAM 3

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	-3.08	382.29	382.29
℄ Exp. joint	47+81.08	-3.08	382.29	382.29
℄ Brg. W. Abut.	47+81.79	-3.08	382.29	382.29
a	47+91.79	-3.08	382.29	382.31
b	48+01.79	-3.08	382.29	382.32
c	48+11.79	-3.08	382.29	382.32
d	48+21.79	-3.08	382.29	382.31
e	48+31.79	-3.08	382.29	382.30
℄ Pier 1	48+37.42	-3.08	382.29	382.29
f	48+47.42	-3.08	382.29	382.30
g	48+57.42	-3.08	382.29	382.31
h	48+67.42	-3.08	382.29	382.31
i	48+77.42	-3.08	382.29	382.31
j	48+87.42	-3.08	382.29	382.30
k	48+97.42	-3.08	382.29	382.29
℄ Pier 2	49+02.58	-3.08	382.29	382.29
l	49+12.58	-3.08	382.29	382.30
m	49+22.58	-3.08	382.29	382.31
n	49+32.58	-3.08	382.29	382.32
o	49+42.58	-3.08	382.29	382.31
p	49+52.58	-3.08	382.29	382.30
℄ Brg. E. Abut.	49+58.21	-3.08	382.29	382.29
℄ Exp. joint	49+58.92	-3.08	382.29	382.29
Bk. of E. Abut.	49+60.00	-3.08	382.29	382.29

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	0.00	382.34	382.34
℄ Exp. joint	47+81.08	0.00	382.34	382.34
℄ Brg. W. Abut.	47+81.79	0.00	382.34	382.34
a	47+91.79	0.00	382.34	382.36
b	48+01.79	0.00	382.34	382.37
c	48+11.79	0.00	382.34	382.37
d	48+21.79	0.00	382.34	382.36
e	48+31.79	0.00	382.34	382.35
℄ Pier 1	48+37.42	0.00	382.34	382.34
f	48+47.42	0.00	382.34	382.35
g	48+57.42	0.00	382.34	382.36
h	48+67.42	0.00	382.34	382.36
i	48+77.42	0.00	382.34	382.36
j	48+87.42	0.00	382.34	382.35
k	48+97.42	0.00	382.34	382.34
℄ Pier 2	49+02.58	0.00	382.34	382.34
l	49+12.58	0.00	382.34	382.35
m	49+22.58	0.00	382.34	382.36
n	49+32.58	0.00	382.34	382.37
o	49+42.58	0.00	382.34	382.36
p	49+52.58	0.00	382.34	382.35
℄ Brg. E. Abut.	49+58.21	0.00	382.34	382.34
℄ Exp. joint	49+58.92	0.00	382.34	382.34
Bk. of E. Abut.	49+60.00	0.00	382.34	382.34

BEAM 4

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	3.08	382.29	382.29
℄ Exp. joint	47+81.08	3.08	382.29	382.29
℄ Brg. W. Abut.	47+81.79	3.08	382.29	382.29
a	47+91.79	3.08	382.29	382.31
b	48+01.79	3.08	382.29	382.32
c	48+11.79	3.08	382.29	382.32
d	48+21.79	3.08	382.29	382.31
e	48+31.79	3.08	382.29	382.30
℄ Pier 1	48+37.42	3.08	382.29	382.29
f	48+47.42	3.08	382.29	382.30
g	48+57.42	3.08	382.29	382.31
h	48+67.42	3.08	382.29	382.31
i	48+77.42	3.08	382.29	382.31
j	48+87.42	3.08	382.29	382.30
k	48+97.42	3.08	382.29	382.29
℄ Pier 2	49+02.58	3.08	382.29	382.29
l	49+12.58	3.08	382.29	382.30
m	49+22.58	3.08	382.29	382.31
n	49+32.58	3.08	382.29	382.32
o	49+42.58	3.08	382.29	382.31
p	49+52.58	3.08	382.29	382.30
℄ Brg. E. Abut.	49+58.21	3.08	382.29	382.29
℄ Exp. joint	49+58.92	3.08	382.29	382.29
Bk. of E. Abut.	49+60.00	3.08	382.29	382.29

BEAM 5

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	9.25	382.20	382.20
℄ Exp. joint	47+81.08	9.25	382.20	382.20
℄ Brg. W. Abut.	47+81.79	9.25	382.20	382.20
a	47+91.79	9.25	382.20	382.22
b	48+01.79	9.25	382.20	382.23
c	48+11.79	9.25	382.20	382.23
d	48+21.79	9.25	382.20	382.22
e	48+31.79	9.25	382.20	382.21
℄ Pier 1	48+37.42	9.25	382.20	382.20
f	48+47.42	9.25	382.20	382.21
g	48+57.42	9.25	382.20	382.22
h	48+67.42	9.25	382.20	382.22
i	48+77.42	9.25	382.20	382.22
j	48+87.42	9.25	382.20	382.21
k	48+97.42	9.25	382.20	382.20
℄ Pier 2	49+02.58	9.25	382.20	382.20
l	49+12.58	9.25	382.20	382.21
m	49+22.58	9.25	382.20	382.22
n	49+32.58	9.25	382.20	382.23
o	49+42.58	9.25	382.20	382.22
p	49+52.58	9.25	382.20	382.21
℄ Brg. E. Abut.	49+58.21	9.25	382.20	382.20
℄ Exp. joint	49+58.92	9.25	382.20	382.20
Bk. of E. Abut.	49+60.00	9.25	382.20	382.20

BEAM 6

Location	Station	Offset (ft.)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	47+80.00	15.42	382.08	382.08
℄ Exp. joint	47+81.08	15.42	382.08	382.08
℄ Brg. W. Abut.	47+81.79	15.42	382.08	382.08
a	47+91.79	15.42	382.08	382.10
b	48+01.79	15.42	382.08	382.11
c	48+11.79	15.42	382.08	382.11
d	48+21.79	15.42	382.08	382.10
e	48+31.79	15.42	382.08	382.09
℄ Pier 1	48+37.42	15.42	382.08	382.08
f	48+47.42	15.42	382.08	382.09
g	48+57.42	15.42	382.08	382.10
h	48+67.42	15.42	382.08	382.10
i	48+77.42	15.42	382.08	382.10
j	48+87.42	15.42	382.08	382.09
k	48+97.42	15.42	382.08	382.08
℄ Pier 2	49+02.58	15.42	382.08	382.08
l	49+12.58	15.42	382.08	382.09
m	49+22.58	15.42	382.08	382.10
n	49+32.58	15.42	382.08	382.11
o	49+42.58	15.42	382.08	382.10
p	49+52.58	15.42	382.08	382.09
℄ Brg. E. Abut.	49+58.21	15.42	382.08	382.08
℄ Exp. joint	49+58.92	15.42	382.08	382.08
Bk. of E. Abut.	49+60.00	15.42	382.08	382.08

ESCA CORPORATION, INC.
CIVIL & STRUCTURAL ENGINEERS

USER NAME = kah		DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14		CHECKED - RDP	02/13	REVISED -	
		DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014	8:38:18 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 097-0027
SHEET NO. 4 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	23
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT AID		

NORTH EDGE OF SHOULDER OR SOUTH FACE OF PARAPET

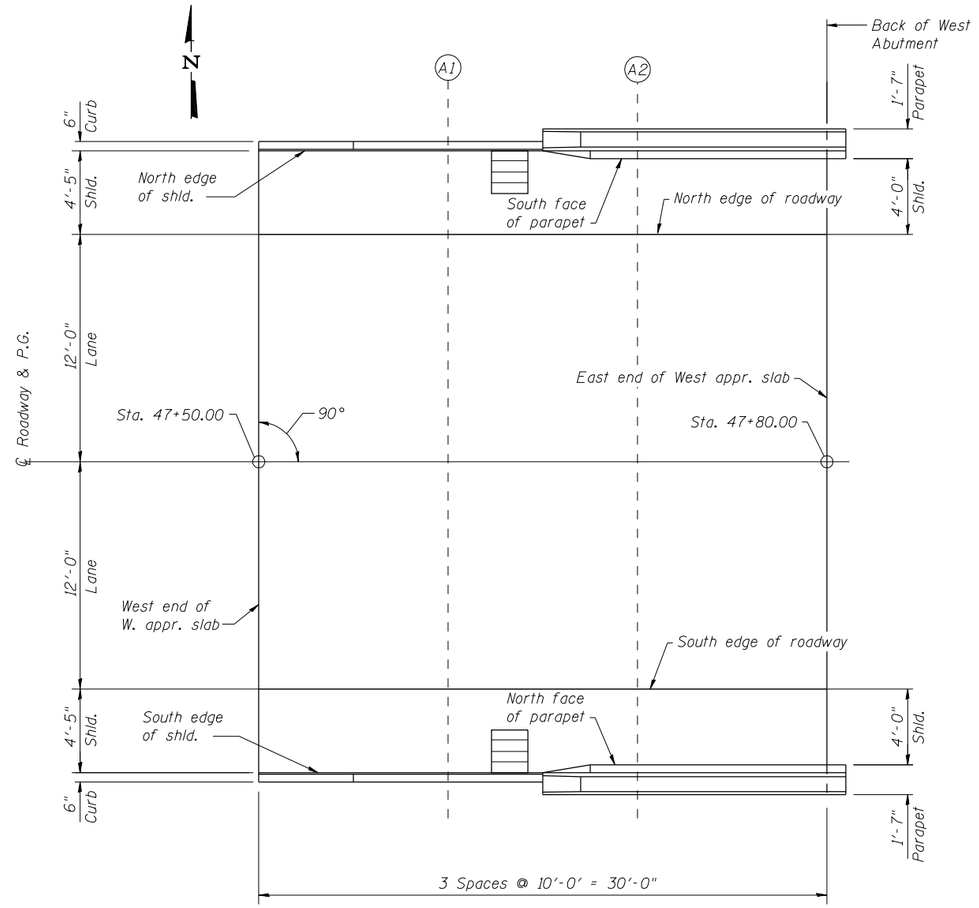
Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End W. Appr. Slab	47+50.00	-16.42	382.06
A1	47+60.00	-16.42	382.06
A2	47+70.00	-16.00	382.07
E. End W. Appr. Slab	47+80.00	-16.00	382.07

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End W. Appr. Slab	47+50.00	-12.00	382.15
A1	47+60.00	-12.00	382.15
A2	47+70.00	-12.00	382.15
E. End W. Appr. Slab	47+80.00	-12.00	382.15

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End W. Appr. Slab	47+50.00	0.00	382.34
A1	47+60.00	0.00	382.34
A2	47+70.00	0.00	382.34
E. End W. Appr. Slab	47+80.00	0.00	382.34



PLAN

SOUTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End W. Appr. Slab	47+50.00	12.00	382.15
A1	47+60.00	12.00	382.15
A2	47+70.00	12.00	382.15
E. End W. Appr. Slab	47+80.00	12.00	382.15

SOUTH EDGE OF SHOULDER OR NORTH FACE OF PARAPET

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End W. Appr. Slab	47+50.00	16.42	382.06
A1	47+60.00	16.42	382.06
A2	47+70.00	16.00	382.07
E. End W. Appr. Slab	47+80.00	16.00	382.07

ESCA CONSULTANTS, INC. BRIDGE & STRUCTURAL ENGINEERS

USER NAME = kah	DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:38:24 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 097-0027

SHEET NO. 5 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	24
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			

NORTH EDGE OF SHOULDER OR SOUTH FACE OF PARAPET

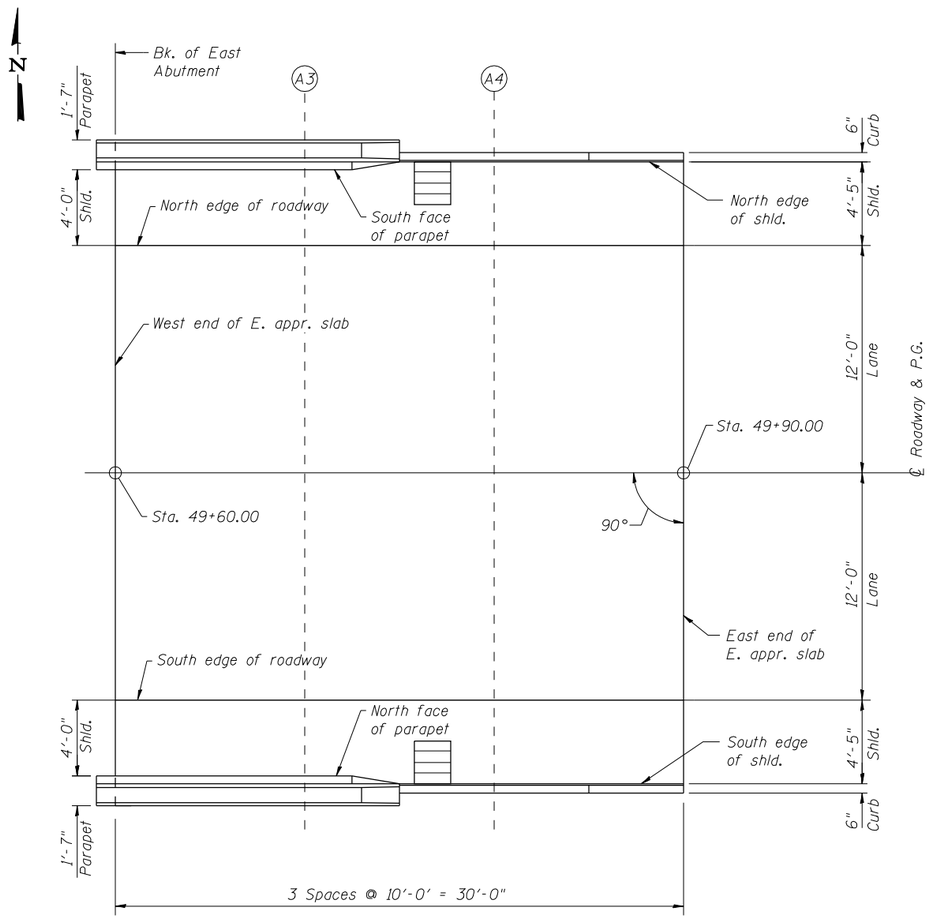
Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End E. Appr. Slab	49+60.00	-16.00	382.07
A3	49+70.00	-16.00	382.07
A4	49+80.00	-16.42	382.06
E. End E. Appr. Slab	49+90.00	-16.42	382.06

NORTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End E. Appr. Slab	49+60.00	-12.00	382.15
A3	49+70.00	-12.00	382.15
A4	49+80.00	-12.00	382.15
E. End E. Appr. Slab	49+90.00	-12.00	382.15

℄ ROADWAY & P.G.

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End E. Appr. Slab	49+60.00	0.00	382.34
A3	49+70.00	0.00	382.34
A4	49+80.00	0.00	382.34
E. End E. Appr. Slab	49+90.00	0.00	382.34



PLAN

SOUTH EDGE OF ROADWAY

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End E. Appr. Slab	49+60.00	12.00	382.15
A3	49+70.00	12.00	382.15
A4	49+80.00	12.00	382.15
E. End E. Appr. Slab	49+90.00	12.00	382.15

SOUTH EDGE OF SHOULDER OR NORTH FACE OF PARAPET

Location	Station	Offset (ft.)	Theoretical Grade Elevations
W. End E. Appr. Slab	49+60.00	16.00	382.07
A3	49+70.00	16.00	382.07
A4	49+80.00	16.42	382.06
E. End E. Appr. Slab	49+90.00	16.42	382.06

ESCA CONSULTANTS, INC.

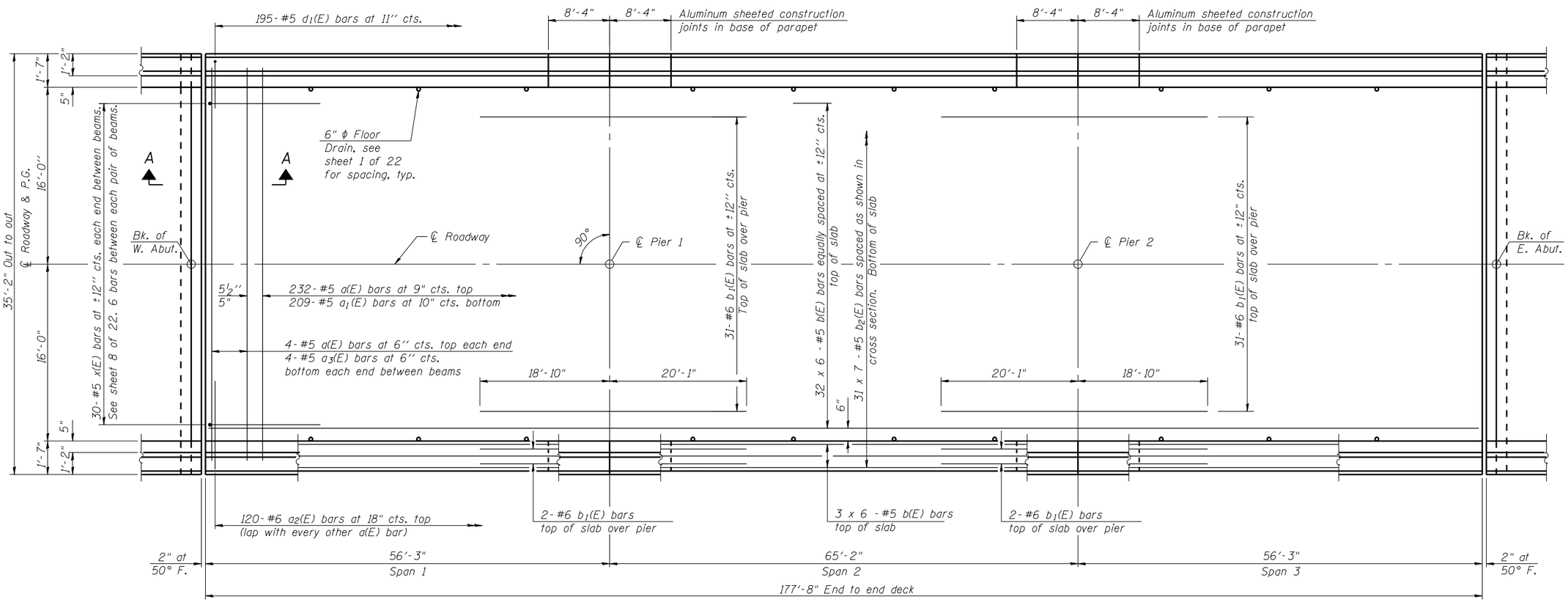
USER NAME = kah	DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:38:30 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 097-0027

SHEET NO. 6 OF 22 SHEETS

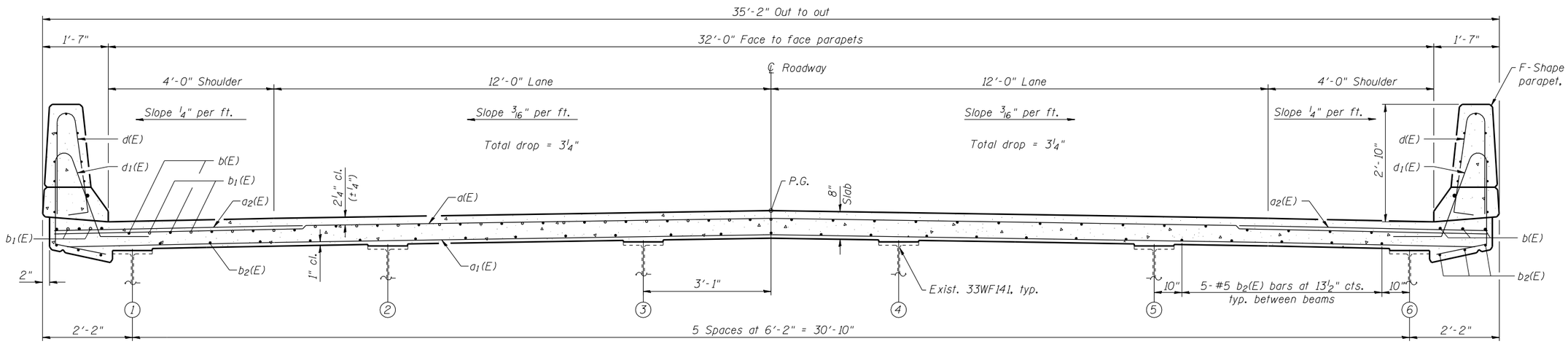
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	25
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			



PLAN

MINIMUM BAR LAP
(Slab)
#5 bar = 2'-7"

Notes:
See sheet 8 of 22 for Section A-A, superstructure details, and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 8 of 22 for parapet reinforcement.



NEAR PIER

CROSS SECTION
(Looking East)

NEAR MIDSPAN

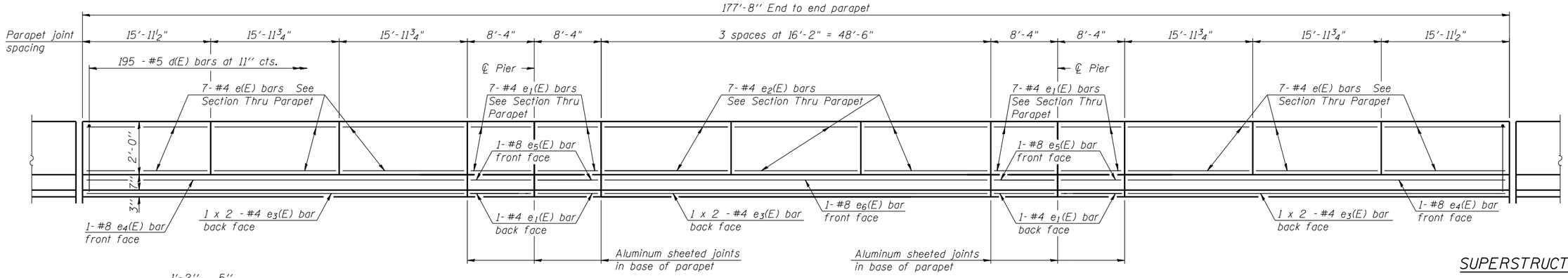
ESCA CONSULTANTS, INC.

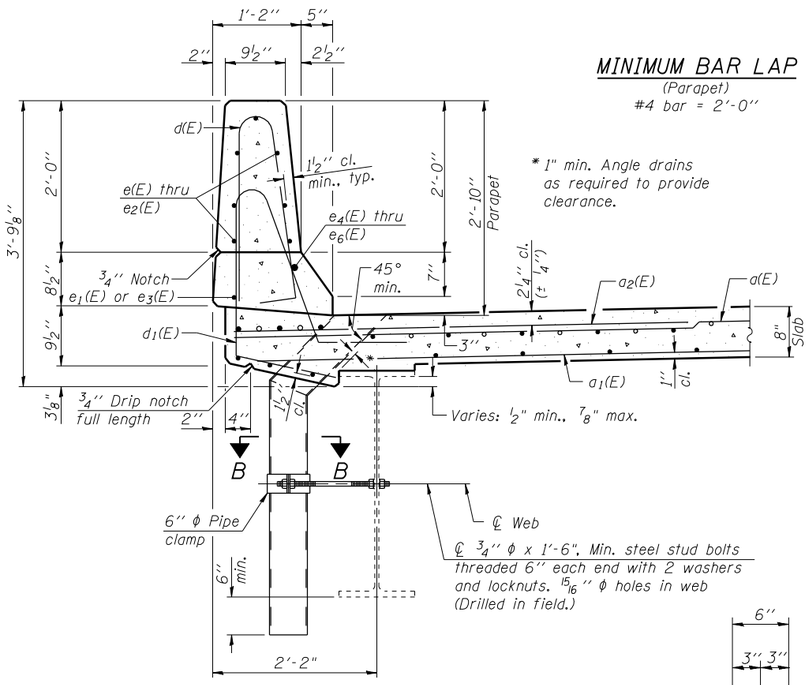
USER NAME = kah	DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:38:37 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 097-0027
SHEET NO. 7 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	26
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT AID		





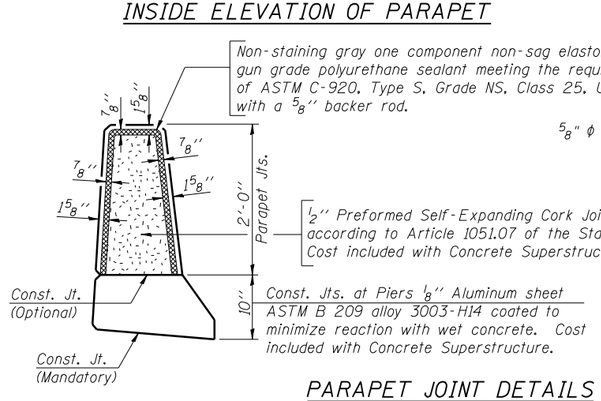
SECTION THRU PARAPET

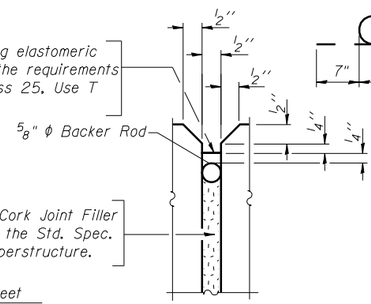
MINIMUM BAR LAP

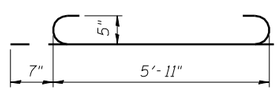
(Parapet)

#4 bar = 2'-0"

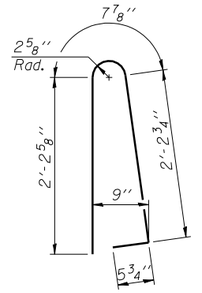
INSIDE ELEVATION OF PARAPET







a3(E) BAR



BAR d(E)

PARAPET JOINT DETAILS

Notes:

Drains shall be located clear of all diaphragms.

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in Section 506 of the Standard Specifications. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

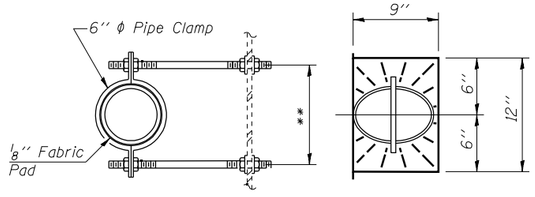
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	240	#5	34'-6"	
a1(E)	209	#5	34'-0"	
a2(E)	240	#6	6'-6"	
a3(E)	40	#5	7'-1"	
b(E)	228	#5	31'-9"	
b1(E)	70	#6	38'-11"	
b2(E)	217	#5	27'-7"	
d(E)	390	#5	5'-7"	
d1(E)	390	#5	7'-0"	
e(E)	84	#4	15'-8"	
e1(E)	64	#4	8'-0"	
e2(E)	42	#4	15'-10"	
e3(E)	12	#4	25'-2"	
e4(E)	4	#8	47'-8"	
e5(E)	8	#8	8'-1"	
e6(E)	2	#8	48'-3"	
x(E)	60	#5	6'-5"	
Concrete Superstructure			Cu. Yd.	207.8
Reinforcement Bars, Epoxy Coated			Pound	44900

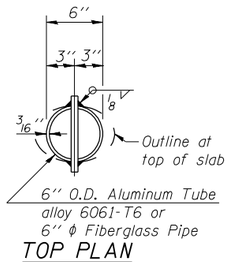
Bars indicated thus 1 x 2- #4 etc. indicates 1 line of bars with 2 lengths per line.



SECTION B-B

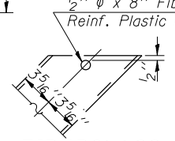
** Dimension as required by Pipe Clamp

TOP PLAN

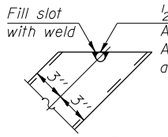


TOP PLAN

(Showing Aluminum Tube)

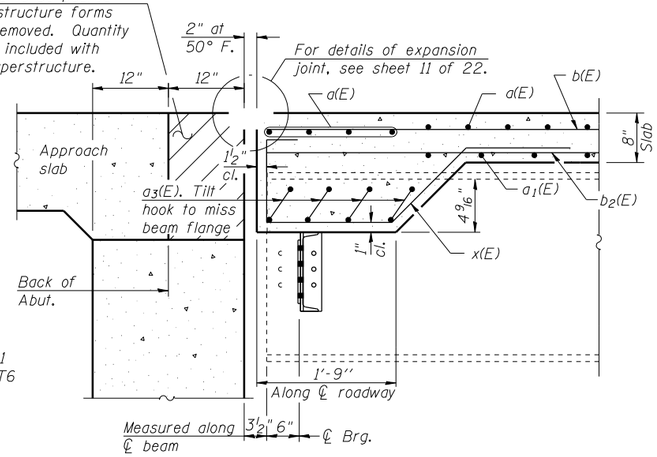


FIBERGLASS PIPE

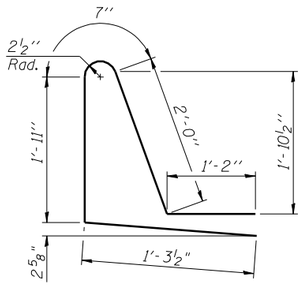


ALUMINUM TUBE

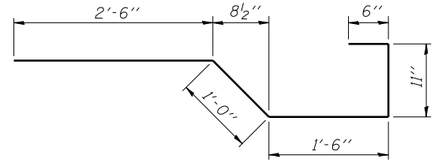
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.



SECTION A-A



BAR d1(E)



BAR x(E)

ESCA CONSULTANTS, INC.	USER NAME = koh	DESIGNED - SHL	02/13	REVISED -
	ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -
		DRAWN - DWH	02/13	REVISED -
	PLOT DATE = 7/3/2014 8:38:46 AM	CHECKED - SHL	05/13	REVISED -

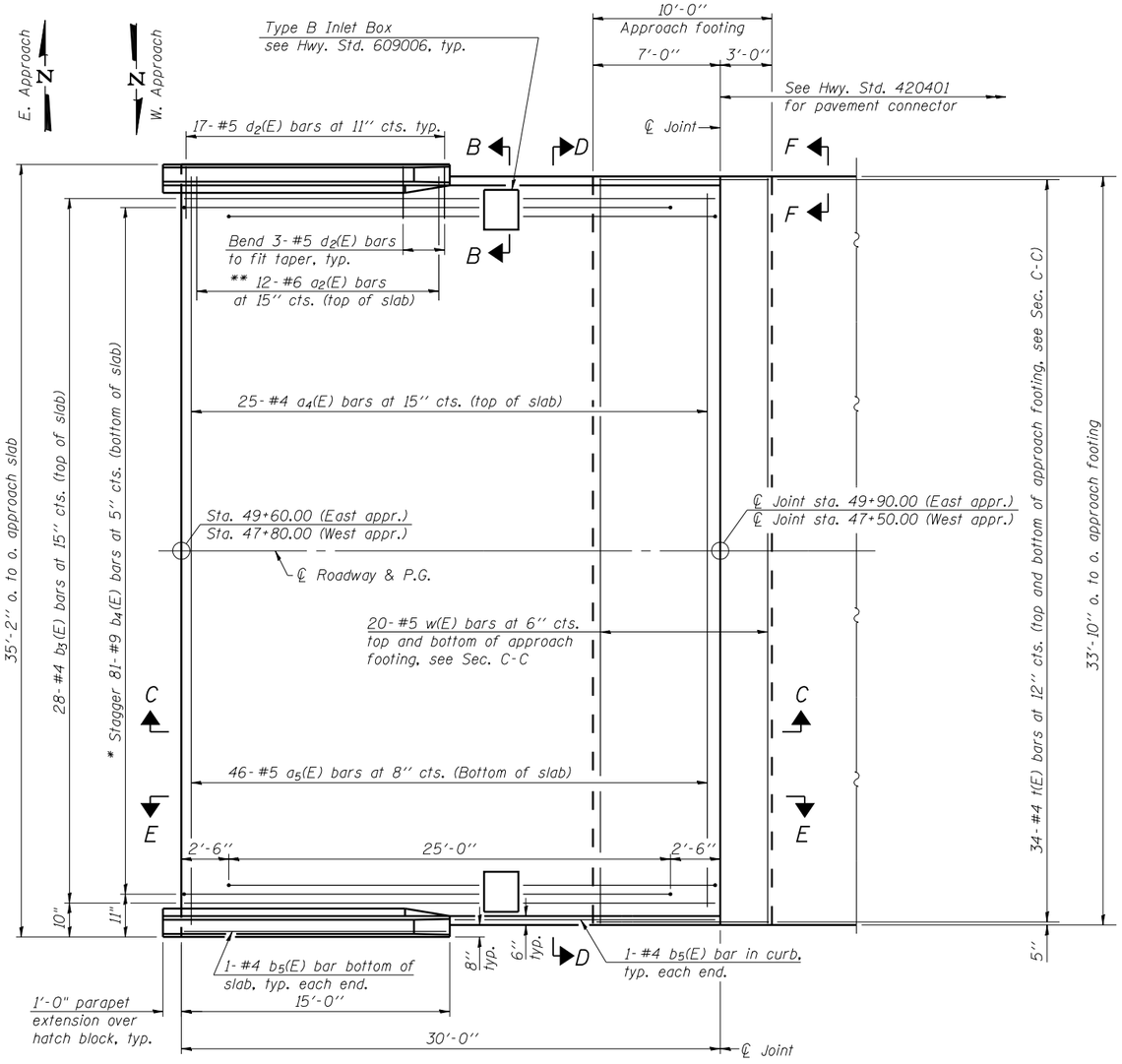
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 097-0027

SHEET NO. 8 OF 22 SHEETS

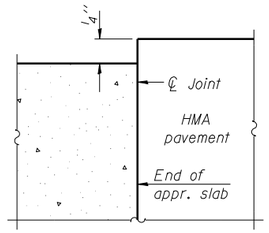
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	27
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT AID		

Notes:
See sheet 10 of 22 for Sections C-C & D-D and View E-E.
$a_2(E)$, $a_4(E)$ and $a_5(E)$ bar spacings measured along ℄ Rdwy.
Order all bars full length. Cut bars in field to clear inlet boxes.



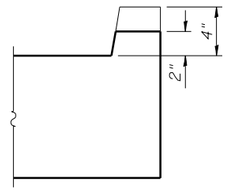
PLAN

* Tilt #9 $b_4(E)$ bars as required to maintain clearance.
** Space between $a_4(E)$ bars, typ. ea. parapet.

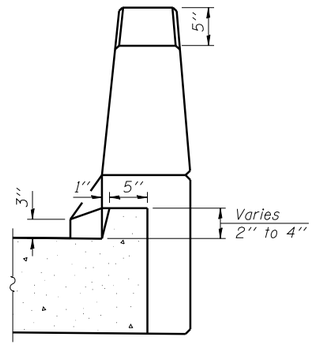


FLEXIBLE PAVEMENT

DETAIL A



VIEW F-F



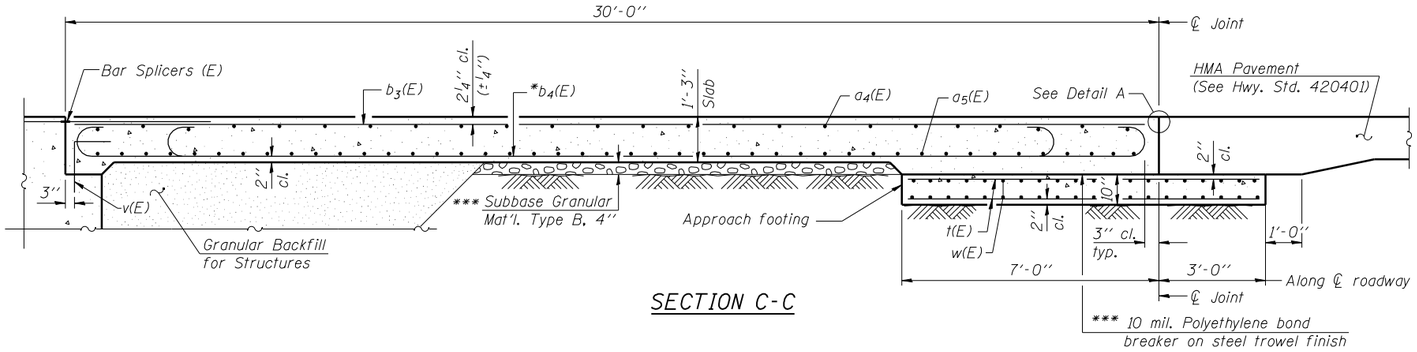
VIEW B-B

ESCA CONSULTANTS, INC.	USER NAME = koh	DESIGNED - SHL	02/13	REVISED -	
	ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
		DRAWN - DWH	02/13	REVISED -	
	PLOT DATE = 7/3/2014 8:38:57 AM	CHECKED - SHL	05/13	REVISED -	

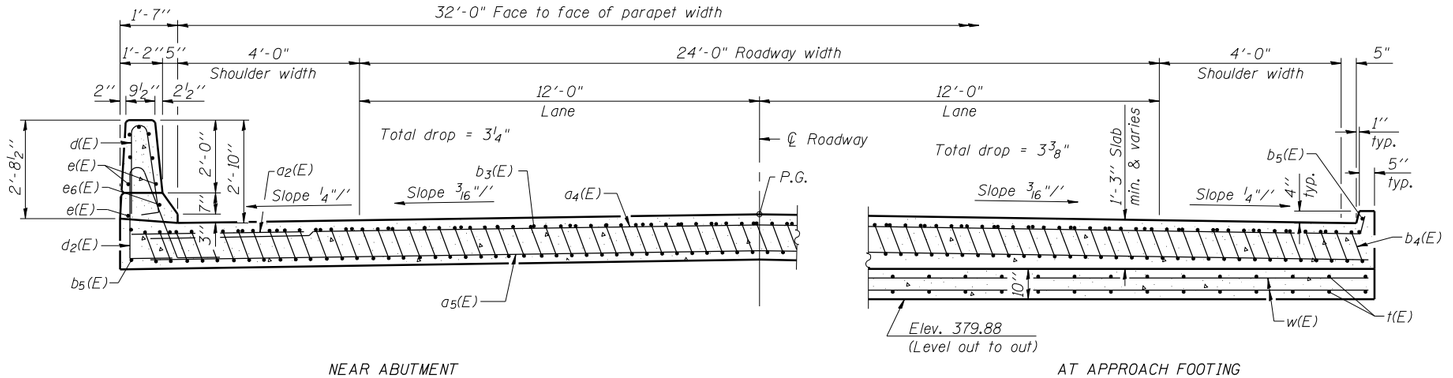
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 097-0027
SHEET NO. 9 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	28
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			



SECTION C-C

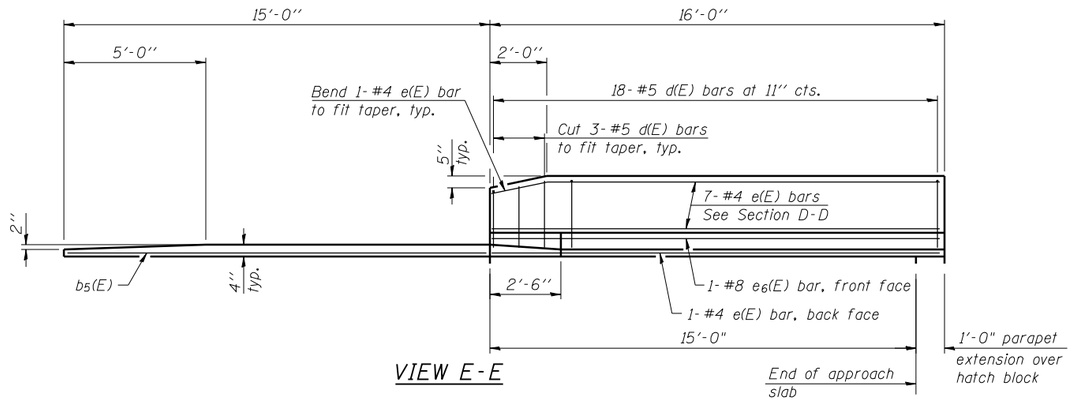


NEAR ABUTMENT

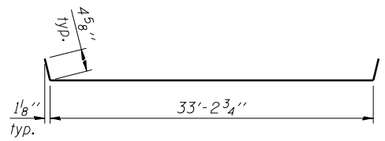
AT APPROACH FOOTING

SECTION D-D

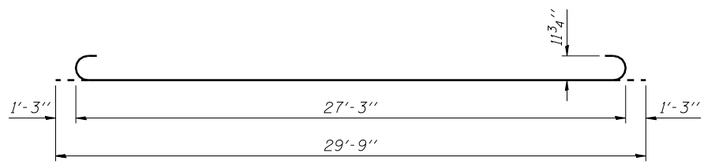
(See Plan for dimensions not shown)



VIEW E-E



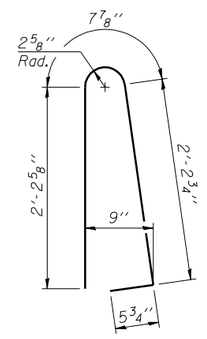
BAR a_4(E)



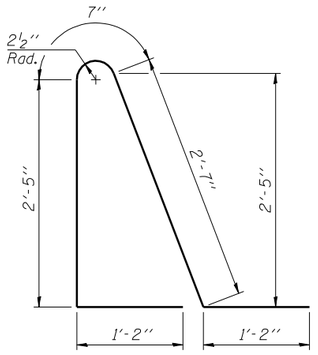
BAR b_4(E)

Notes:

See sheet 9 of 22 for Detail A and View B-B.
Approach slab and parapet 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 18 of 22.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 20 of 22.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 22.
For additional parapet details, see sheet 8 of 22.



BAR d(E)



BAR d_2(E)

* Tilt #9 b_4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_2(E)	48	#6	6'-6"	———
a_4(E)	50	#4	34'-0"	⌊——⌋
a_5(E)	92	#5	33'-6"	———
b_3(E)	56	#4	29'-8"	———
b_4(E)	162	#9	29'-9"	⊂——⊃
b_5(E)	8	#4	14'-8"	———
d(E)	72	#5	5'-7"	⌊
d_2(E)	68	#5	7'-11"	⌊
e(E)	32	#4	15'-8"	———
e_6(E)	4	#8	15'-8"	———
f(E)	136	#4	9'-8"	———
w(E)	80	#5	33'-6"	———
Concrete Structures			Cu. Yd.	20.9
Concrete Superstructure			Cu. Yd.	108.7
Reinforcement Bars, Epoxy Coated			Pound	27550

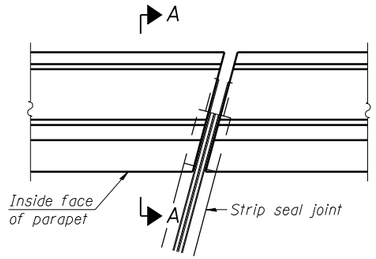
ESCA CORPORATION, INC.

USER NAME = koh	DESIGNED - SHL	02/13	REVISED -		
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -		
	DRAWN - DWH	02/13	REVISED -		
PLOT DATE = 7/3/2014 8:39:03 AM	CHECKED - SHL	05/13	REVISED -		

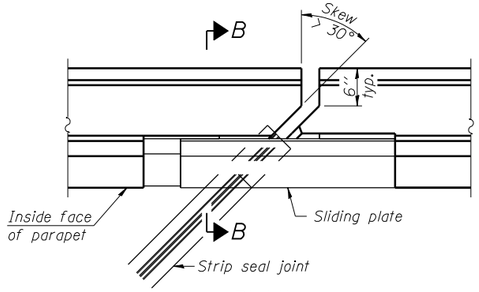
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 097-0027
SHEET NO. 10 OF 22 SHEETS

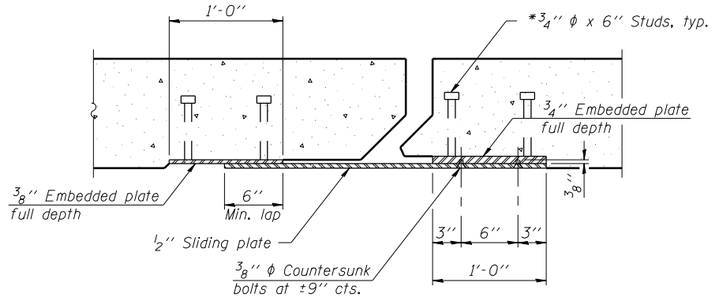
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	29
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		



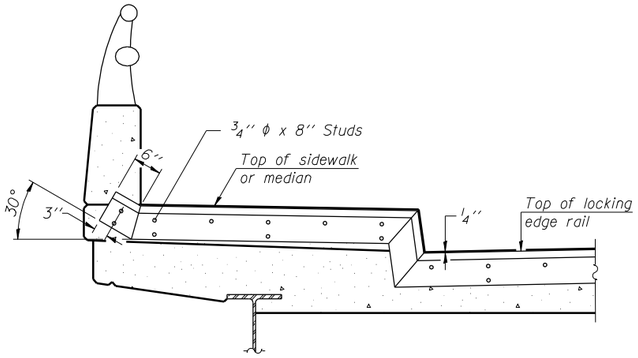
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

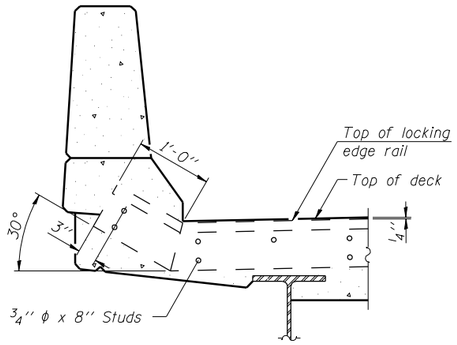


SECTION C-C

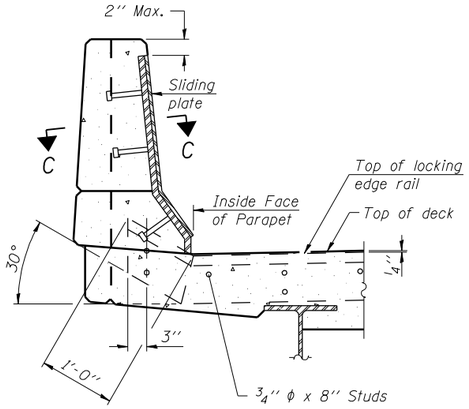


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

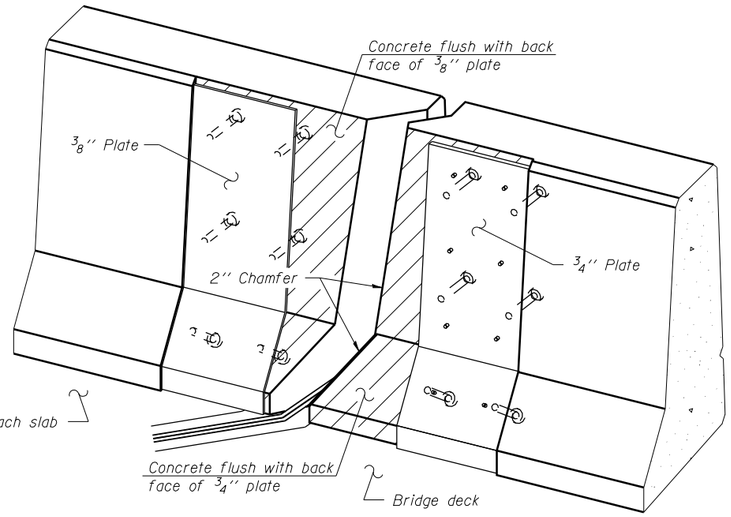
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

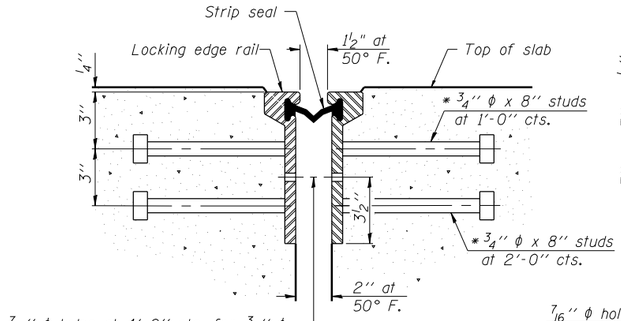
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

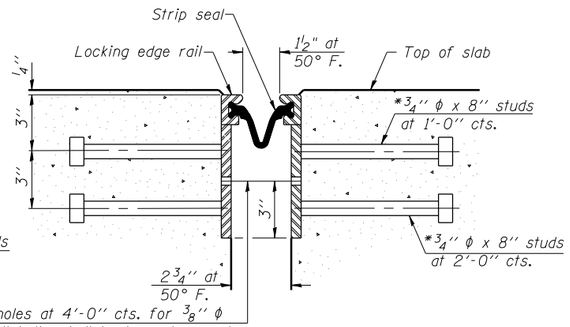
Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



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

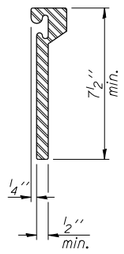
SECTION THRU ROLLED RAIL JOINT



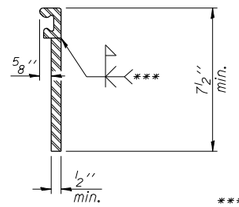
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

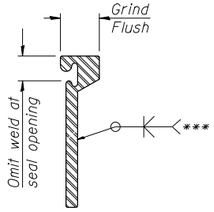
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	68

EJ-SSJ 1-27-12

ESCA CONSULTANTS, INC.

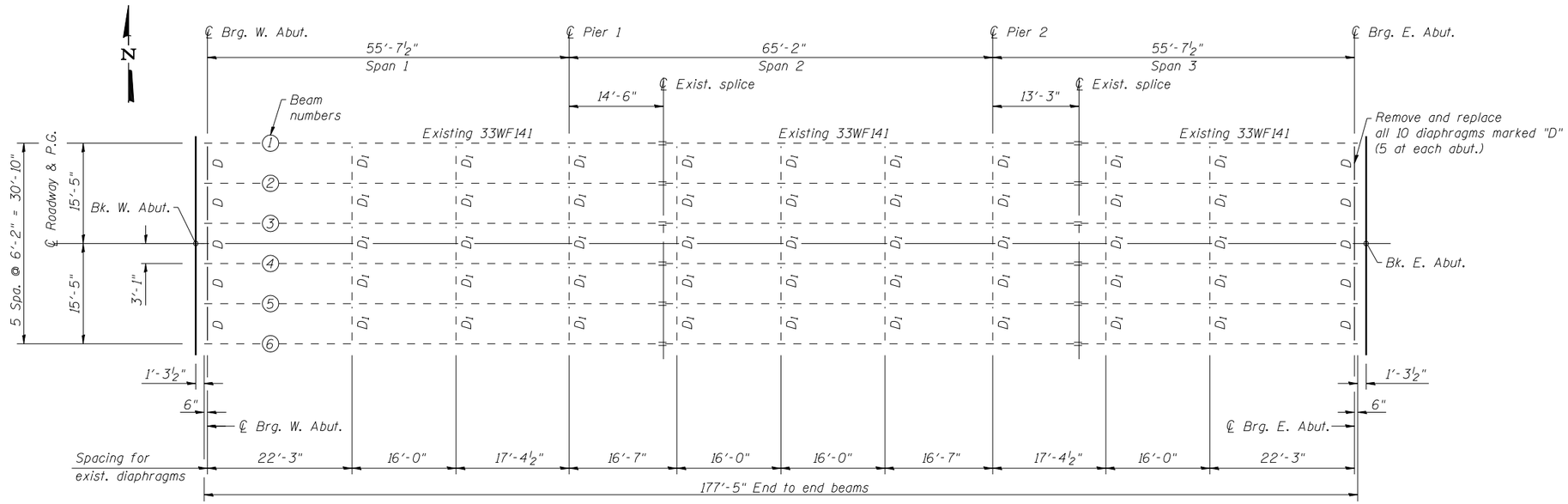
USER NAME = koh	DESIGNED - SHL	02/13	REVISED -		
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -		
	DRAWN - DWH	02/13	REVISED -		
PLOT DATE = 7/3/2014 8:39:11 AM	CHECKED - SHL	05/13	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

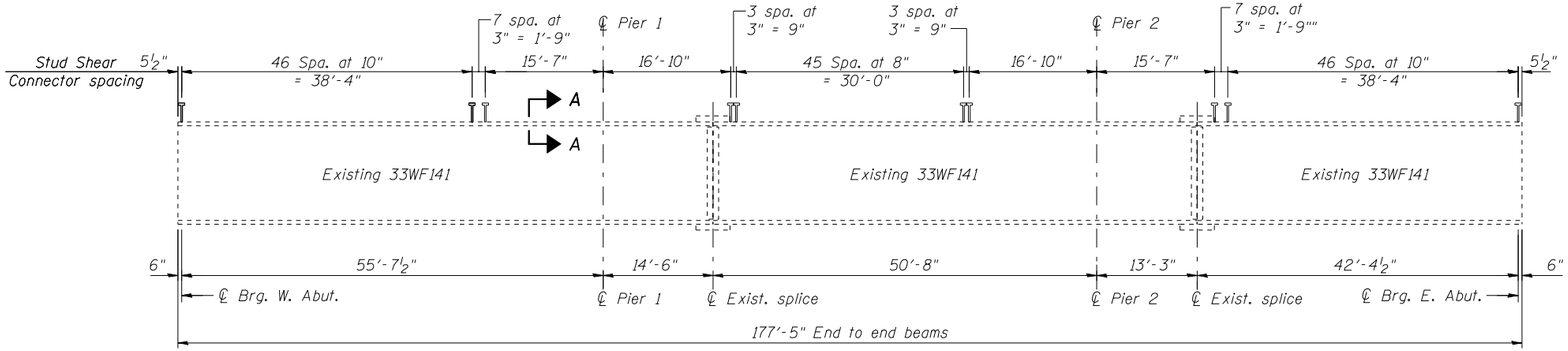
PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 097-0027
SHEET NO. 11 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	30
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			

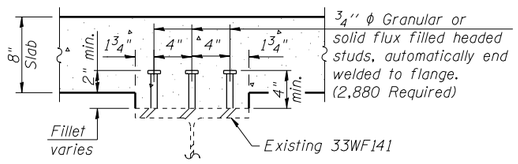
Notes:
See sheet 13 of 22 for steel details.



STEEL FRAMING PLAN

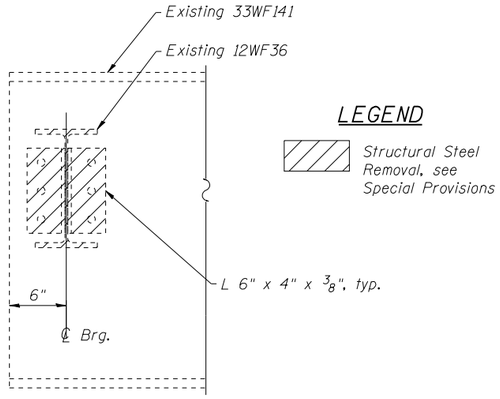


BEAM ELEVATION



SECTION A-A

ESCA CONSULTANTS, INC.	USER NAME = koh	DESIGNED - SHL	02/13	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL FRAMING PLAN STRUCTURE NO. 097-0027	F.A.P. RTE. 877
	ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -			SECTION 100B-1
		DRAWN - DWH	02/13	REVISED -			COUNTY WHITE
	PLOT DATE = 7/3/2014 8:39:17 AM	CHECKED - SHL	05/13	REVISED -		SHEET NO. 12 OF 22 SHEETS	TOTAL SHEETS 54
							SHEET NO. 31
							CONTRACT NO. 78231
							ILLINOIS FED. AID PROJECT AID



LEGEND

Structural Steel Removal, see Special Provisions

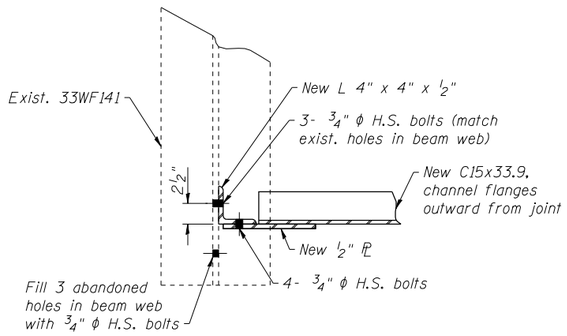
INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in^4)	7450	7450	7450
$I_c(n)$	(in^4)	19,200	-	19,200
$I_c(3n)$	(in^4)	13,990	-	13,990
S_s	(in^3)	448	448	448
$S_c(n)$	(in^3)	648	-	648
$S_c(3n)$	(in^3)	584	-	584
Z	(in^3)	-	514	-
$\mathcal{D}$	(k/')	0.793	0.943	0.793
$M\mathcal{D}$	('k)	178.5	345.1	130.9
$s\mathcal{D}$	(k/')	0.150	-	0.150
$M_s\mathcal{D}$	('k)	33.8	-	24.8
$M\mathcal{L}$	('k)	326.6	259.5	312.6
M_I	('k)	90.4	70.0	82.2
$\frac{5}{3}[M\mathcal{L}+M_I]$	('k)	695.0	549.2	658.0
M_a	('k)	1179.5	1162.5	1057.8
* M_u	('k)	2558.0	1542.0	2558.0
f_s $\mathcal{D}$ (non-comp)	(ksi)	4.78	9.24	3.51
f_s $\mathcal{D}$ (comp)	(ksi)	0.69	-	0.51
f_s $\frac{5}{3}(M\mathcal{L}+M_I)$	(ksi)	12.87	14.71	12.19
f_s (Overload)	(ksi)	18.34	23.95	16.21
** f_s (Total)	(ksi)	-	-	-
VR	(k)	45.7	-	38.6

* Compact section
** Braced non-compact and partially braced section

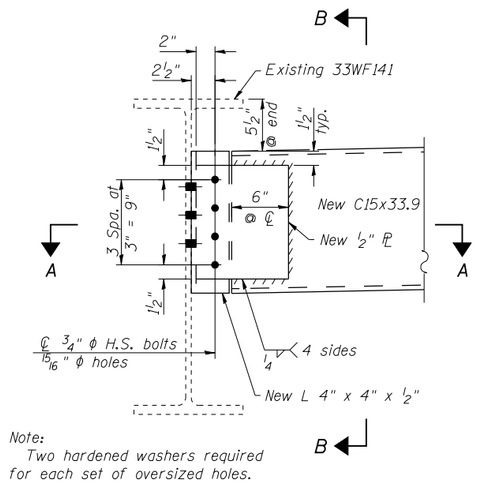
INTERIOR BEAM REACTION TABLE			
		Abut.	Pier
$R\mathcal{D}$	(k)	20.0	63.2
$R\mathcal{L}$	(k)	32.1	41.2
R_I	(k)	8.9	11.2
R_{Total}	(k)	61.0	115.6

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total and Overload) due to non-composite dead loads ($in.^4$ and $in.^3$).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total and Overload) due to short-term composite live loads ($in.^4$ and $in.^3$).
$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s(Total and Overload) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
Z: Plastic Section Modulus of the steel section in non-composite areas ($in.^3$).
$\mathcal{D}$: Un-factored non-composite dead load (kips/ft.).
$M\mathcal{D}$: Un-factored moment due to non-composite dead load (kip-ft.).
$s\mathcal{D}$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
$M_s\mathcal{D}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
$M\mathcal{L}$: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).
M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)]$
M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)$
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)]$
VR: Maximum $\mathcal{L}$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

REMOVAL OF EXISTING END DIAPHRAGM D

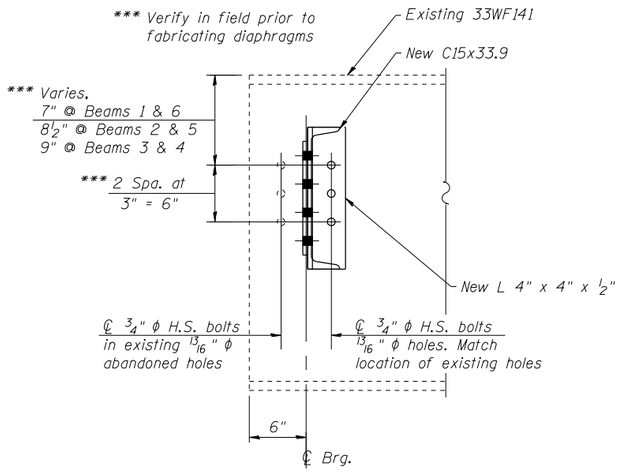


SECTION A-A



Note:
Two hardened washers required for each set of oversized holes.

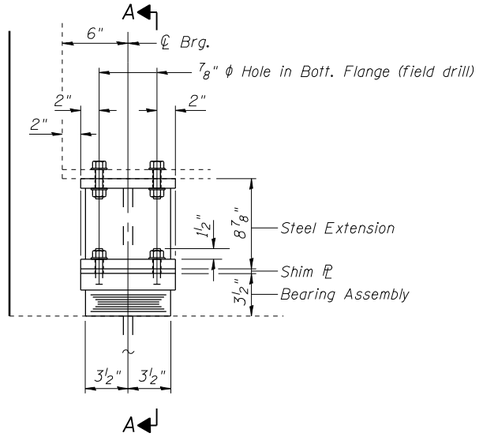
PROPOSED END DIAPHRAGM D
(10 Required)



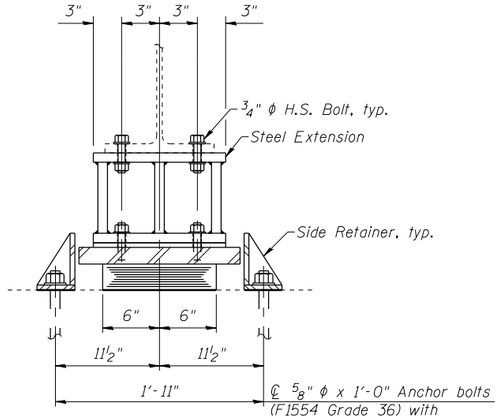
VIEW B-B

ESCA CORPORATION, INC.	USER NAME = koh	DESIGNED - SHL 02/13	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL DETAILS STRUCTURE NO. 097-0027
	ESCA PROJECT NO. 988.14	CHECKED - RDP 02/13	REVISED -		
		DRAWN - DWH 02/13	REVISED -		SHEET NO. 13 OF 22 SHEETS
	PLOT DATE = 7/3/2014 8:39:24 AM	CHECKED - SHL 05/13	REVISED -		

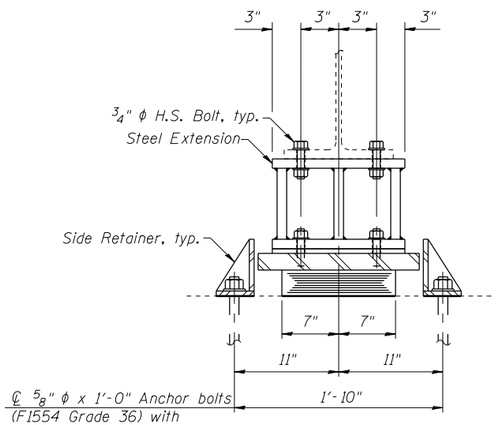
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	32
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		



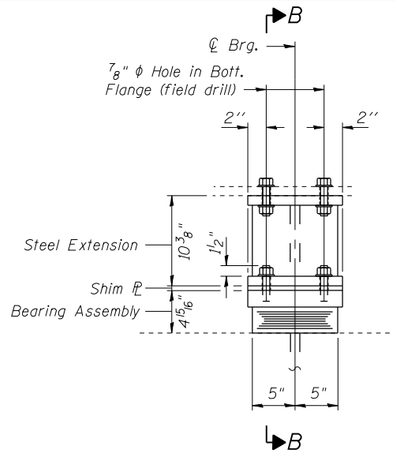
ELEVATION AT W. ABUT.



SECTION A-A



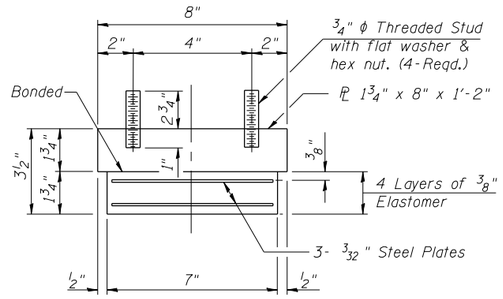
SECTION B-B

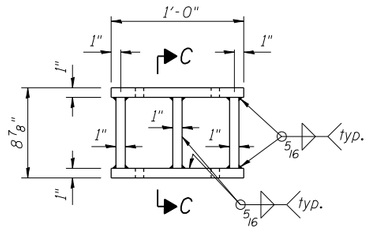


ELEVATION AT PIER 2

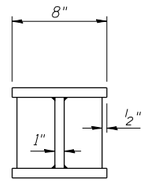
TYPE I ELASTOMERIC EXP. BRG.

TYPE I ELASTOMERIC EXP. BRG.

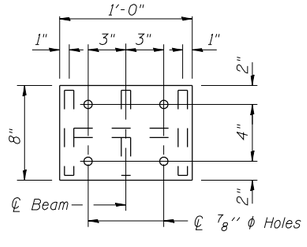




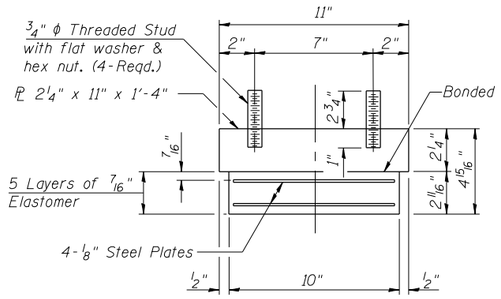
ELEVATION STEEL EXTENSION



SECTION C-C



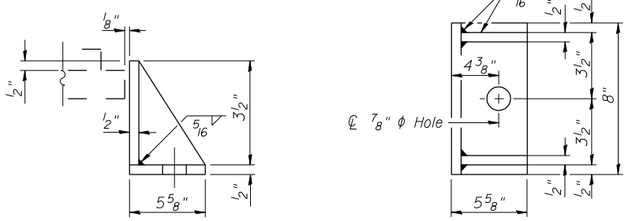
PLAN STEEL EXTENSION



WEST ABUTMENT STEEL EXTENSION

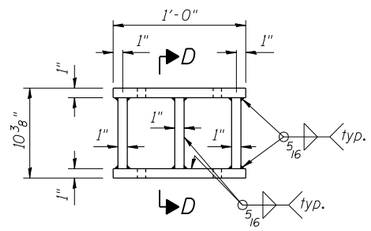
BEARING ASSEMBLY AT W. ABUT.

Note:
Shim plates shall not be placed under Bearing Assembly.

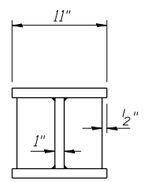


SIDE RETAINER AT W. ABUT.

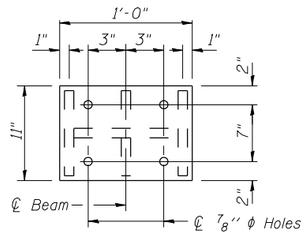
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION STEEL EXTENSION



SECTION D-D

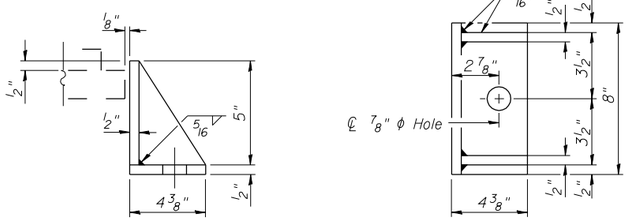


PLAN STEEL EXTENSION

PIER 2 STEEL EXTENSION

BEARING ASSEMBLY AT PIER 2

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER AT PIER 2

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Steel extensions are to be paid for as Furnishing and Erecting Structural Steel. Prior to ordering any steel extension material, the Contractor shall verify in the field all bearing height and steel extension dimensions.

Two hardened washers required for each set of oversized holes.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

See sheet 15 of 22 for details of jacking and removing existing bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolts, 5/8"	Each	24

ESCA CONSULTANTS, INC.

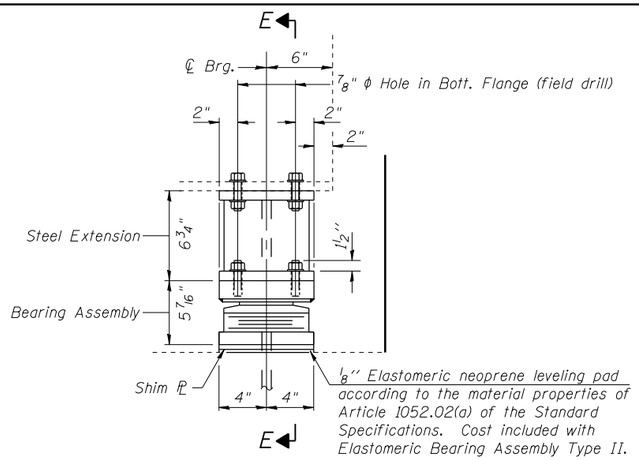
USER NAME = kah	DESIGNED - SHL	03/13	REVISED -
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -
	DRAWN - DWH	02/13	REVISED -
PLOT DATE = 7/3/2014 8:39:30 AM	CHECKED - SHL	05/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

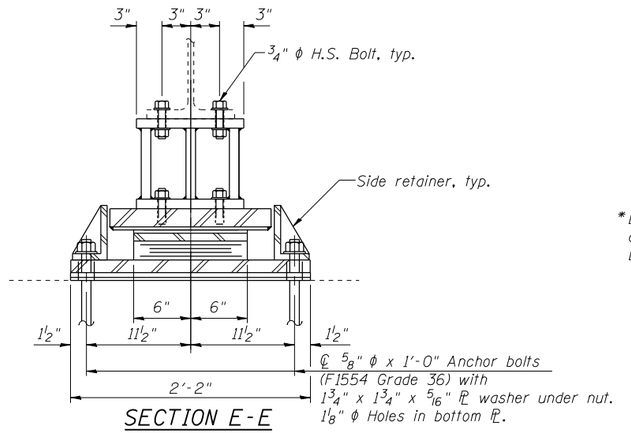
BEARING DETAILS
STRUCTURE NO. 097-0027

SHEET NO. 14 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	33
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		

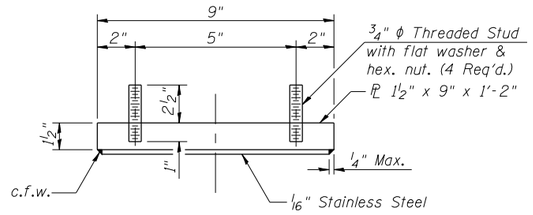


ELEVATION AT E. ABUT.

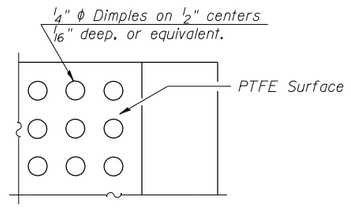


SECTION E-E

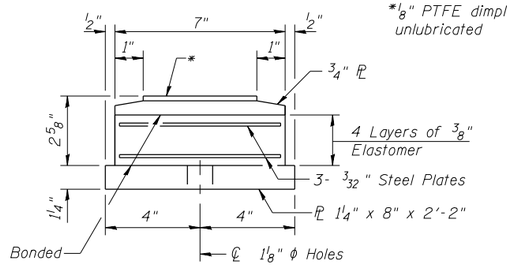
TYPE II ELASTOMERIC EXP. BRG.

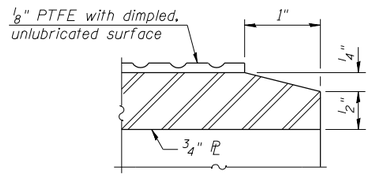


TOP BEARING ASSEMBLY AT E. ABUT.



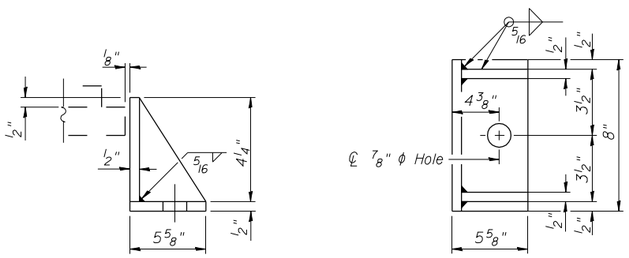
PLAN-PTFE SURFACE





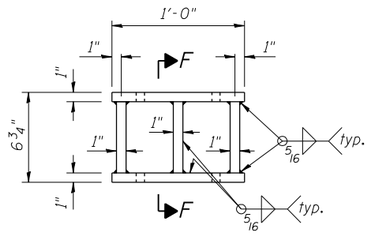
SECTION THRU PTFE

BOTTOM BEARING ASSEMBLY AT E. ABUT.

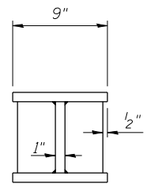


SIDE RETAINER AT E. ABUT.

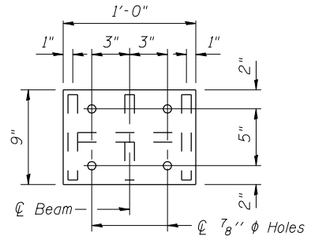
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION STEEL EXTENSION

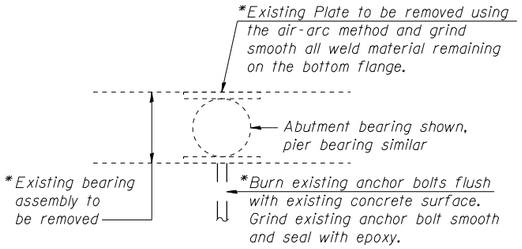


SECTION F-F



PLAN STEEL EXTENSION

EAST ABUTMENT STEEL EXTENSION



REMOVE EXISTING BEARING

(At Pier 2 & both abutments)

* Cost included in "Jack and Removal Existing Bearings"

Jack and Removal of existing Bearing Procedure:

A. Jacking and removing existing bearings shall be done after existing deck removal is complete.

B. The Contractor shall submit, for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work. This work shall be done after existing concrete deck is removed and prior to pouring of the new deck. The maximum dead load reaction per beam (weight of steel only) per bearing at each abutment is 3.6 kips. Minimum jack capacity is 8 kips at each abutment. The maximum dead load reaction per beam (weight of steel only) per bearing at Pier 2 is 10.3 kips. Minimum jack capacity is 21 kips at Pier 2.

C. The new bearings and steel extensions shall be in place and the jacks shall be lowered before the new concrete deck is poured.

D. See Special Provisions.

Notes:

Steel extensions are to be paid for as Furnishing and Erecting Structural Steel. Prior to ordering any steel extension material, the Contractor shall verify in the field all bearing height and steel extension dimensions.

Two hardened washers required for each set of oversized holes.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

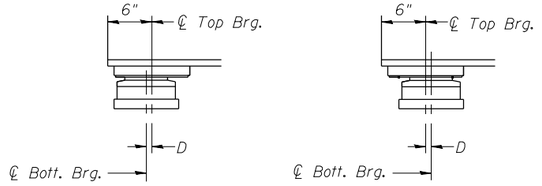
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.

The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.



BELOW 50°F.
(Move bott. brg. away from fixed brg.)

ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT E. ABUT. EXP. BRG.

D=1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6
Anchor Bolts, 5/8"	Each	12
Jack and Remove Existing Bearings	Each	18

ESCA CORPORATION, INC.	USER NAME = koh	DESIGNED - SHL	03/13	REVISED -	
	ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
		DRAWN - DWH	02/13	REVISED -	
	PLOT DATE = 7/3/2014 8:39:37 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

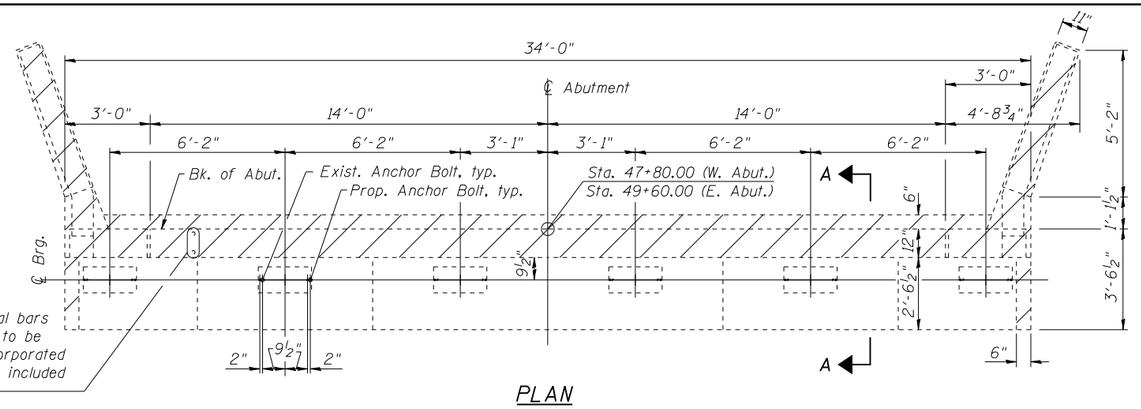
BEARING DETAILS
STRUCTURE NO. 097-0027
SHEET NO. 15 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	34
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		

LEGEND

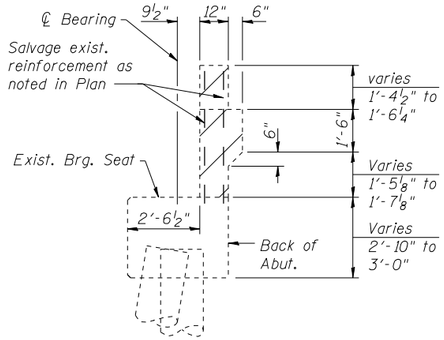
- Concrete Removal
- 3′ — Epoxy Crack Injection
- HL — Hairline crack - not to be sealed

Note:
Crack widths are $\frac{1}{8}$", $\pm\frac{1}{16}$" unless noted otherwise.

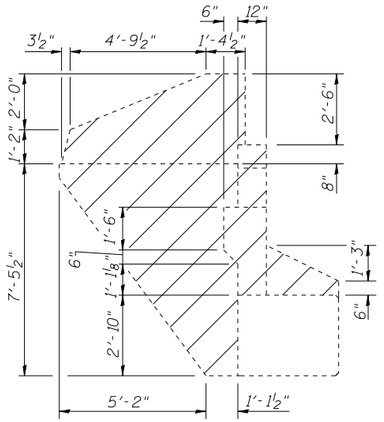


PLAN

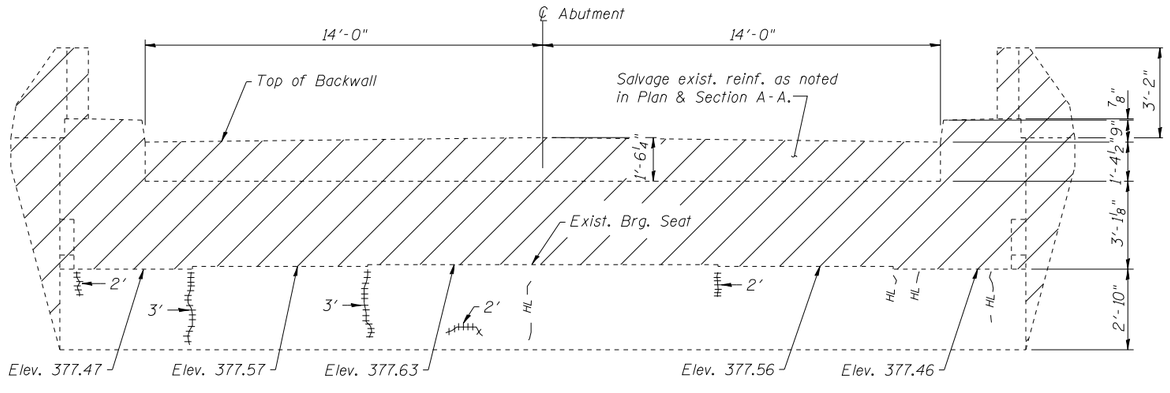
E. Abut.
W. Abut.



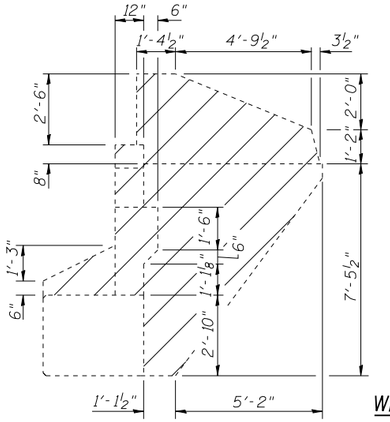
SECTION A-A



SOUTH END



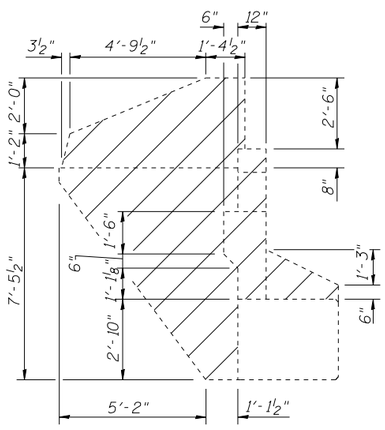
ELEVATION
WEST ABUTMENT
(Looking West)



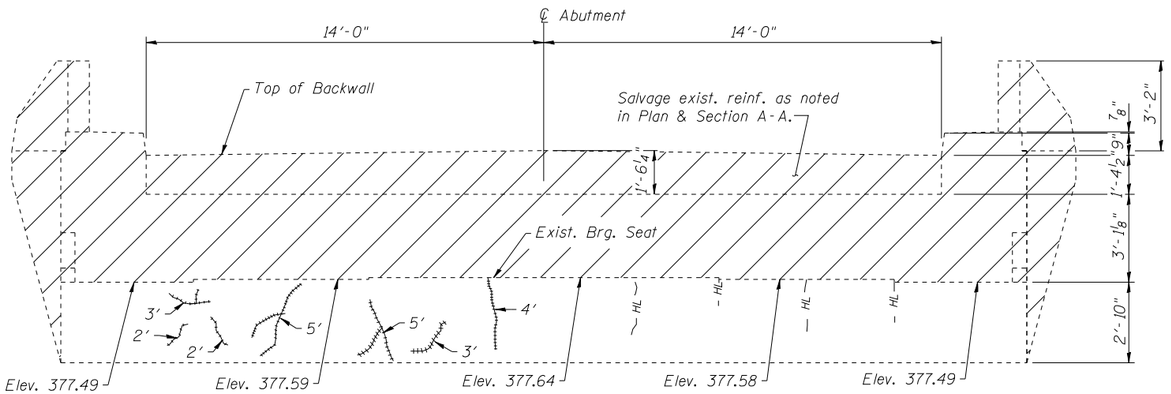
NORTH END

WEST ABUTMENT BILL OF MATERIAL

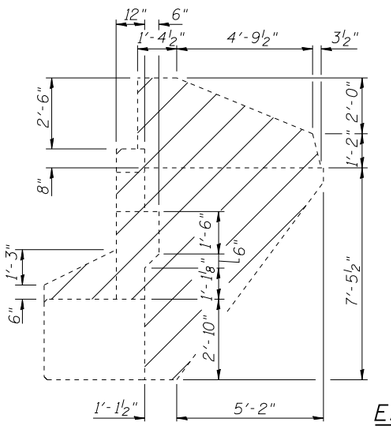
Item	Unit	Quantity
Concrete Removal	Cu. Yd.	9.9
Epoxy Crack Injection	Foot	12



NORTH END



ELEVATION
EAST ABUTMENT
(Looking East)



SOUTH END

EAST ABUTMENT BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	9.9
Epoxy Crack Injection	Foot	24

ESCA CORPORATION, INC.

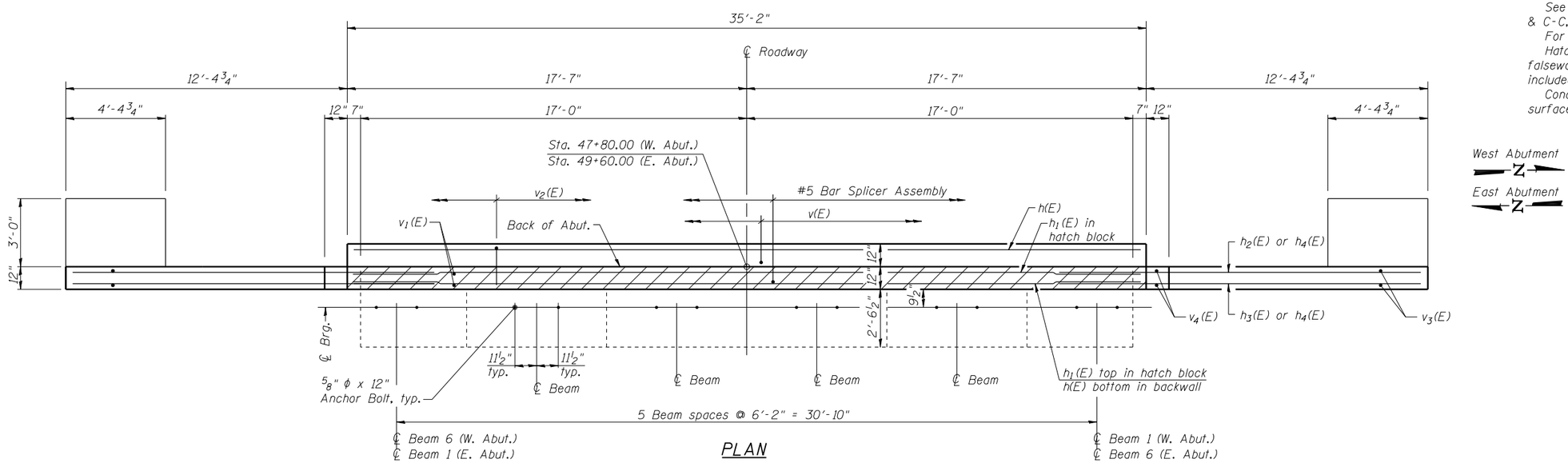
USER NAME = koh		DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14		CHECKED - RDP	02/13	REVISED -	
		DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014	8:39:46 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

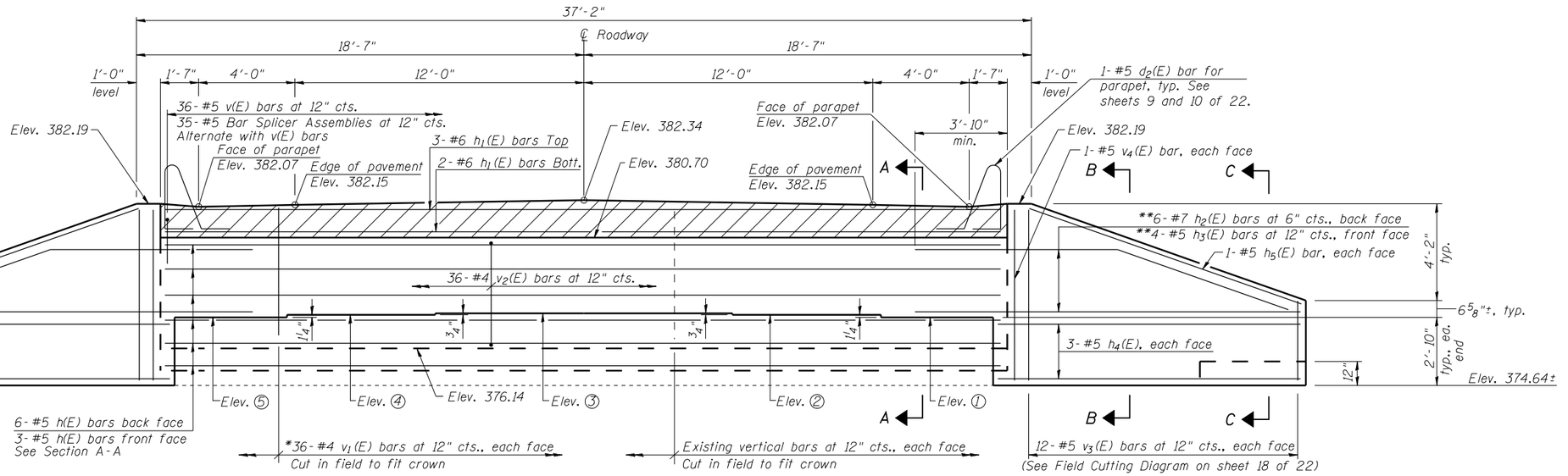
ABUTMENT REMOVAL AND REPAIRS
STRUCTURE NO. 097-0027
SHEET NO. 16 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	35
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT AID		

Notes:
See sheet 18 of 22 for Sections A-A, B-B & C-C, bar details, and Bill of Material.
For details of Bar Splicers, see sheet 20 of 22.
Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.
Concrete Sealer shall be applied to all exposed surfaces of new concrete backwalls.



PLAN



ELEVATION
(Looking East at E. Abut., Looking West at W. Abut.)

TABLE OF EXISTING BRG. SEAT ELEVATIONS

Location	W. Abut.	E. Abut.
①	377.46	377.49
②	377.56	377.58
③	377.63	377.64
④	377.57	377.59
⑤	377.47	377.49

* Alternate with existing vertical reinforcement and epoxy grout into 3/4" ϕ x 9" drilled holes as shown in Section A-A. See Section 584 of the Standard Specifications.

** Bend and cut to fit.

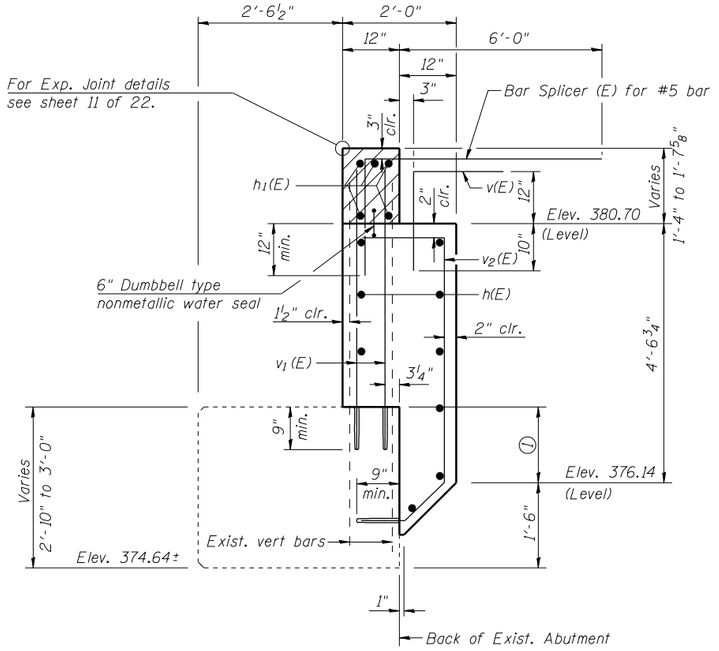
ESCA CONSULTANTS, INC.

USER NAME = koh	DESIGNED - RDP	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - SHL	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:39:52 AM	CHECKED - RDP	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

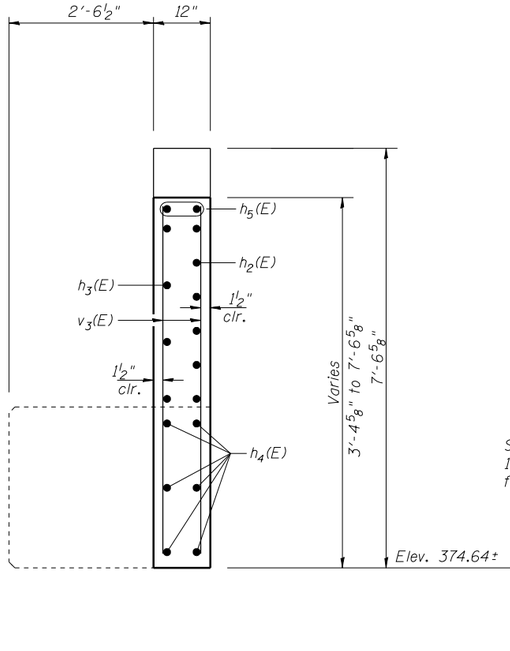
ABUTMENT DETAILS
STRUCTURE NO. 097-0027
SHEET NO. 17 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	36
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		

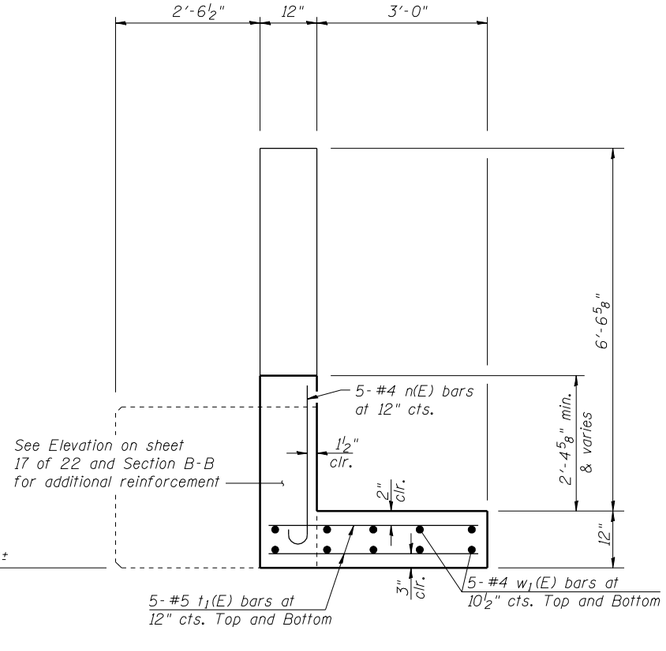


SECTION A-A

① Varies 1'-4" to 1'-6" - W. Abut.
Varies 1'-4" to 1'-5 3/4" - E. Abut.



SECTION B-B

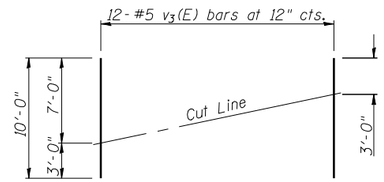


SECTION C-C

TWO ABUTMENTS
BILL OF MATERIAL

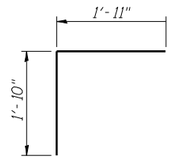
Bar	No.	Size	Length	Shape
$d_2(E)$	4	#5	7'-11"	
h(E)	18	#5	34'-10"	
$h_1(E)$	10	#6	34'-10"	
$h_2(E)$	24	#7	16'-1"	
$h_3(E)$	16	#5	16'-1"	
$h_4(E)$	24	#5	12'-7"	
$h_5(E)$	8	#5	12'-0"	
n(E)	20	#4	3'-6"	J
$t_1(E)$	40	#5	3'-8"	
v(E)	72	#5	3'-9"	
$v_1(E)$	144	#4	5'-2"	
$v_2(E)$	72	#4	7'-9"	J
$v_3(E)$	48	#5	10'-0"	
$v_4(E)$	8	#5	7'-2"	
$w_1(E)$	40	#4	4'-0"	
Structure Excavation			Cu. Yd.	120
Concrete Structures			Cu. Yd.	33.9
Reinforcement Bars, Epoxy Coated			Pound	4700
Concrete Sealer			Sq. Ft.	330

Notes:
Concrete Sealer shall be applied to all exposed surfaces of new concrete backwalls.
For details of Bar Splicers, see sheet 20 of 22.
Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.

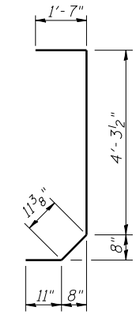


BAR $v_3(E)$

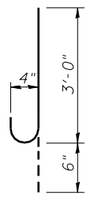
FIELD CUTTING DIAGRAM
Order $v_3(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.



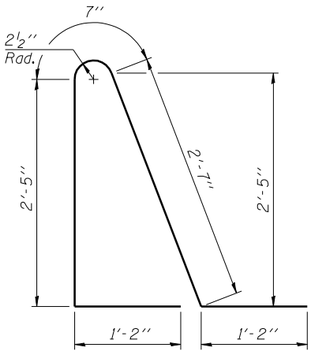
BAR v(E)



BAR $v_2(E)$



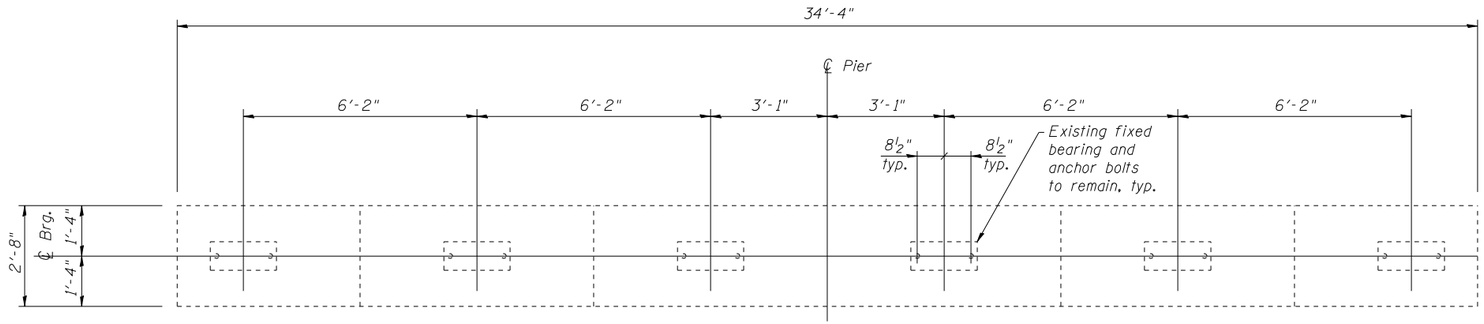
BAR n(E)



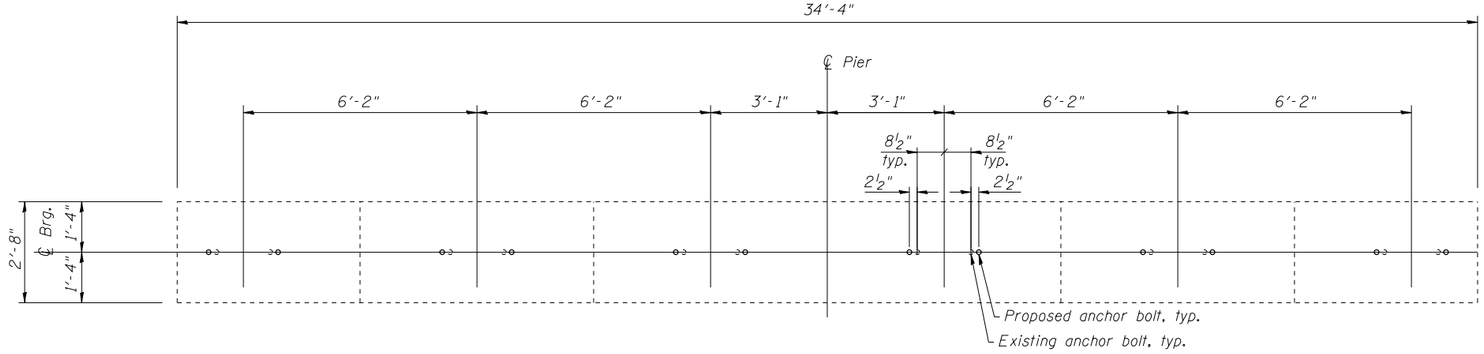
BAR $d_2(E)$

ESCA CONSULTANTS, INC.	USER NAME = koh	DESIGNED - RDP 02/13	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT DETAILS STRUCTURE NO. 097-0027
	ESCA PROJECT NO. 988.14	CHECKED - SHL 02/13	REVISED -		
		DRAWN - DWH 02/13	REVISED -		SHEET NO. 18 OF 22 SHEETS
	PLOT DATE = 7/3/2014 8:39:59 AM	CHECKED - RDP 05/13	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	37
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT AID		



PLAN - PIER 1



PLAN - PIER 2

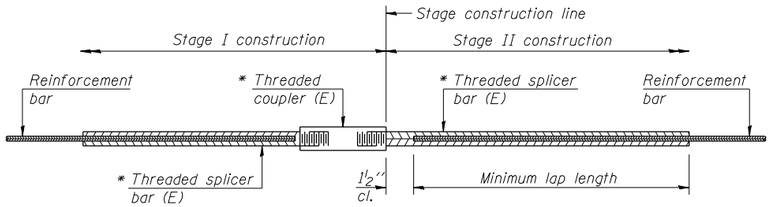
ESCA CONSULTANTS, INC.

USER NAME = kah	DESIGNED - SHL	02/13	REVISED -
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -
	DRAWN - DWH	02/13	REVISED -
PLOT DATE = 7/3/2014 8:40:06 AM	CHECKED - SHL	05/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIERS 1 & 2
STRUCTURE NO. 097-0027
SHEET NO. 19 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	38
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			



STANDARD BAR SPLICER ASSEMBLY

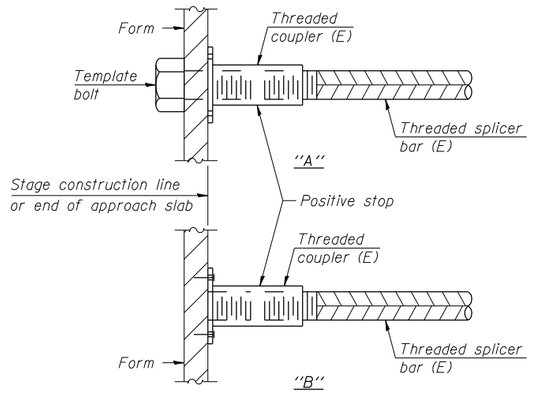
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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, Class C
Table 6: Epoxy bar, Top bar top, Class C

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

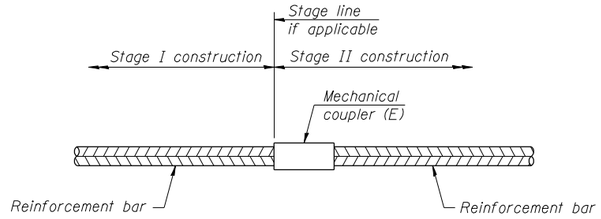
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



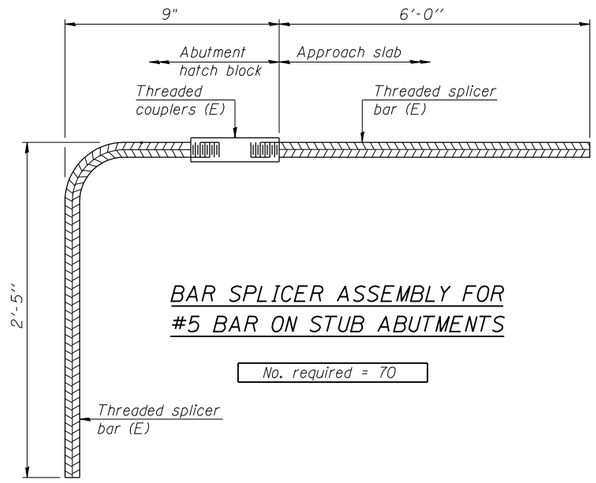
INSTALLATION AND SETTING METHODS

"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 STUB ABUTMENTS

No. required = 70

NOTES

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

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

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

BSD-1 8-31-12

ESCA CONSULTANTS, INC.

USER NAME = koh	DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:40:12 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 097-0027
SHEET NO. 20 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	39
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log

Sheet 1 of 2

FAP (IL 141) Over Bear Creek
Route: FAP 877 (IL 141) Structure Number: 097-0027 Date: 6/28/2010
Section 101,B Bored By: R Moberly
County: White Location: 0.9 mile East Jct. US 45 Checked By: R Graeff

Boring No 1-S
Station 49+82
Offset 8' Rt CL
Ground Surface 382.0 Ft

Surf Wat Elev: 358.1
Ground Water Elevation
when Drilling 345.1
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Asphalt and Concrete over crushed aggregate				Very stiff, moist, brown mottled grey, Silty Clay Loam to Silt Loam A-4	7 8	2.3S	20
380.5				355.0			
Stiff to very stiff, moist, brown, Silty Clay to Clay A7-6	1			Medium, very moist, grey mottled brown, Silty Clay Loam A-6	2		
	2 3	2.1B	16		3 3	0.8S	20
				352.5			
5.0	1			30.0 Soft, very moist, brown mottled grey, Silty Clay A7-6	1		
	2 4	1.8B	16		2 2	0.4B	31
				350.0			
	1			Medium, very moist, grey, Clay A7-6	WH		
	4 5	3.3B	16		WH 1	0.7B	23
10.0	1			35.0	WH		
	2 4	1.6B	18		1 2	0.9B	24
370.0							
Soft, very moist, brown, Silty Clay to Clay A7-6	WH				1		
	1 2	0.4B	22		1 1	0.8B	32
367.5							
15.0 Medium, very moist, brown, Silty Clay to Clay A7-6	1			40.0	WH		
	1 2	0.6B	20		WH 1	0.8B	25
365.0							
Medium, very moist, grey, Silty Clay A-6	1						
	1 3	0.8B	31				
362.5				337.5		Washed	
20.0 Very soft, very moist, grey, Silty Clay Loam to Silt Loam A-6	WH			45.0 Very loose, wet, grey, Fine Silty Sand (no recovery)	WH		
	WH WH	0.2B	30		WH WH		
360.0							
Stiff, moist, grey, Silt Loam A-4	WH						
	4 5	1.9S	24				
357.5						Washed	
25.0	3			50.0	7		

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

Sheet 2 of 2

Route: FAP 877 (IL 141)
Section: 101,B
County: White
Date: 6/28/2010

Boring No: 1-S
Station: 49+82
Offset: 8' Rt CL
Ground Surface: 382.0 Ft

DEPTH	BLOWS	Qu tsf	W%		DEPTH	BLOWS	Qu tsf	W%
Very loose, wet, grey, Fine Silty Sand (no recovery)	13 13			Hard, dry, grey, Clay Shale				
327.5								
55.0 Soft, very moist, grey, Loam to Silty Clay Loam A-4	3				80.0	100/6"		
	2 2	0.3B	24					
322.5				Hard, dry, grey, Clay Shale				
60.0 Stiff, moist to very moist, grey, Clay to Silty Clay A7-6	WH			297.0	85.0	100/4"		
	1 1	1.1B	29	Bottom of hole = 84.8 feet				
317.5				Free water observed at 37.0 feet				
				Elevation referenced to BM @ SW corner; Elev. = 382.7 feet				
				To convert "N" values to "N60" multiply by 1.25	90.0			
65.0 Stiff to very stiff, moist, grey, Clay A7-6	4			Borehold Advanced with Hollow Stem Augers (8" OD, 3.25" ID)				
	8 12	2.1B	20					
					95.0			
70.0	3							
	10 11	1.6B	20					
310.5								
Hard, dry, grey, Clay Shale								
75.0	100/6"				100.0			

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Nine Materials

Bridge Foundation Boring Log
Sheet 1 of 2

FAP [illegible] (IL 141) Over Bear Creek
Route: FAP 877 (IL 141) Structure Number: 097-0027 Date: 6/29/2010
Section 101,B Bored By: R Moberly
County: White Location: 0.9 mile East Jct. US 45 Checked By: R Graeff

Boring No 2-S
Station 47+55
Offset 8' Lt CL
Ground Surface 381.9 Ft

Surf Wat Elev: 358.1
Ground Water Elevation
when Drilling 344.9
At Completion
At: Hrs:

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Asphalt and concrete over crushed aggregate 380.4				Medium, very moist, grey mottled brown, Clay A7-6	1	0.8B	29
					2		
Stiff to very stiff, moist, brown and grey, Clay to Clay Loam A7-6	1				1		
	1	1.2B	20		2	0.6B	25
	2				2		
5.0	1			30.0	WH		
	4	3.3B	13		1	0.9B	24
	6				2		
	2				1		
	3	1.5B	18		2	0.9B	28
	3				3		
				347.4			
10.0	1			Medium, very moist, grey mottled brown, Silty Clay A-6 35.0	2		
	2	2.1B	18		2	0.9B	24
	3				3		
369.9				344.9			
Soft, very moist, grey and brown, Clay to Silty Clay A7-6	1			Stiff, moist, grey, Clay A7-6 with Sand seams	1		
	2	0.4B	22		2	1.1B	28
	2				2		
367.4				342.4			
Stiff, moist, grey and brown, Clay to Silty Clay A7-6 15.0	1			Medium to soft, very moist, grey, Clay A7-6 40.0	WH		
	2	1.5B	20		WH	0.5B	33
	3				1		
364.9							
Very soft, very moist, grey, Clay A7-6	1						
	2	0.2B	30				
	2						
362.4							
Stiff, moist, grey, Silty Clay A7-6 20.0	1			45.0	WH		
	2	1.3B	24		WH	0.5B	43
	3				WH		
359.9							
Medium, very moist, grey mottled brown, Clay A7-6	1						
	2	0.9B	28				
	3						
				332.4			
25.0	1			50.0	WH		

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

Sheet 2 of 2

Route: FAP 877 (IL 141)
Section: 101,B
County: White
Date: 6/29/2010

Boring No: 2-S
Station: 47+55
Offset: 8' Lt CL
Ground Surface: 381.9 Ft

DEPTH	BLOWS	Qu tsf	W%	DEPTH	BLOWS	Qu tsf	W%
Loose, very moist, grey, fine Silty Sand to Sand Loam A-2-4 78% Sand 17% Silt 5% Clay	3		24				
	5						
327.4							
Stiff, moist, grey, Clay to Clay Loam A7-6 55.0	3			80.0			
	6	1.1B	21				
	6						
322.4							
Very stiff, moist to damp, brown streaked grey, Clay to Clay Loam A7-6 60.0	4			85.0			
	18	2.7S	19				
	22						
317.9							
Hard, dry, grey, Clay Shale 316.9 65.0	100/3"			90.0			
Bottom of hole = 64.8 feet							
Free water observed at 37.0 feet							
Elevation referenced to BM @ SW corner; Elev. = 382.7 feet							
To convert "N" values to "N60" multiply by 1.25 70.0				95.0			
Borehole Advanced with Hollow Stem Augers (8" OD, 3.25" ID)							
75.0				100.0			

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

ESCA CONSULTANTS, INC.

USER NAME = koh	DESIGNED - SHL	02/13	REVISED -	
ESCA PROJECT NO. 988.14	CHECKED - RDP	02/13	REVISED -	
	DRAWN - DWH	02/13	REVISED -	
PLOT DATE = 7/3/2014 8:40:28 AM	CHECKED - SHL	05/13	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS
STRUCTURE NO. 097-0027
SHEET NO. 22 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	41
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT AID			

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	SHEET NO.
F.A.P. 113	100B	White - Gallatin	11

6 SHEETS

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT F-221(5)

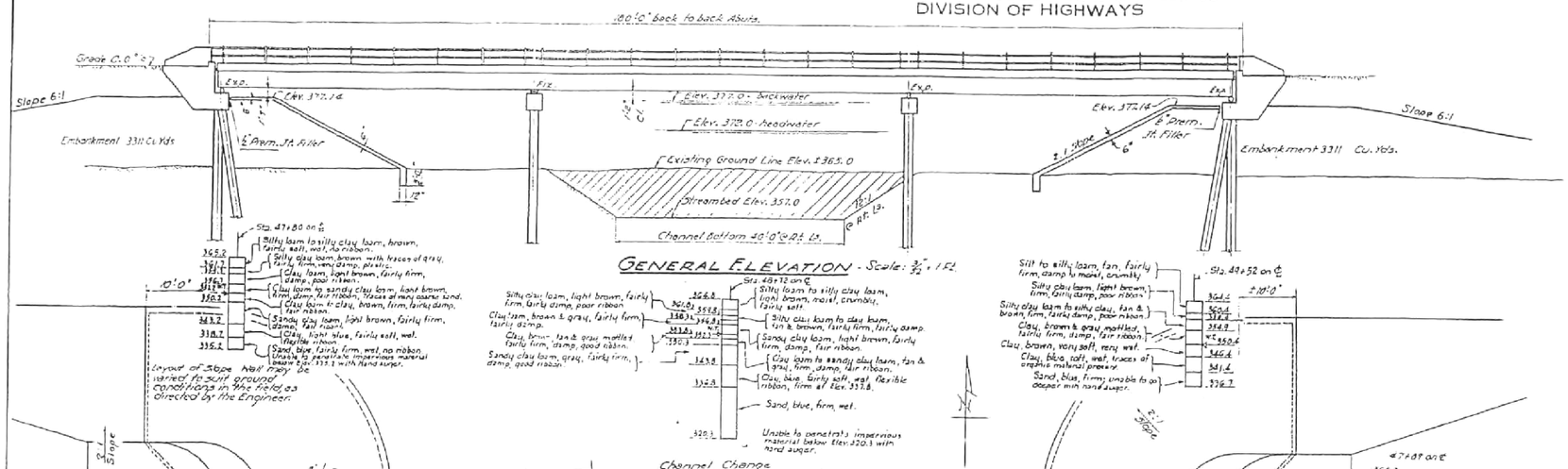
"X" Spike and Washer on 15" Elm 25'0" Sta. 46+60 Elev. 387.09 (1.3 G.S. datum plane)

Existing Structure: None

GENERAL NOTES

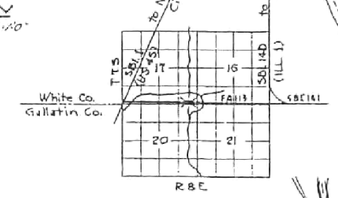
Class-X Concrete shall be used throughout.
Handrail Concrete shall be used in 4½" posts.
Concrete floor slab shall be finished in accordance with Art. 51.18 (2) of the Standard Specifications and shall be poured in one continuous operation on either side of the longitudinal construction joint.
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh 4" wires weighing 58# per 100 Sq. Ft.
All connections shall be riveted except as noted.
Rivets shall be ¾" Holes ⅞" except as noted.
Structural Steel shall receive one shop coat of red lead paint after inspection, and two field coats of aluminum paint. All paint to be furnished and applied by Contractor. See Arts. 51.11 to 51.15 inclusive of the Standard Specifications.
Railings shall be adjusted to true alignment after curbs (safety walks) have been poured.
All rollers, rockers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Art. 51.14 of the Standard Specifications and are included for payment as Structural Steel. Estimated weight = 1,320 Lbs.
Anchor bolts shall be set before riveting diaphragms over supports.
Expansion guards shall be fabricated and erected in accordance with Art. 51.10 (a) of the Standard Specifications. Ext. Height = 1.50".
Welding shall comply with Art. 55.4 (3) of the Standard Specifications.
The Contractor shall drive one test pile in a permanent location as directed by the Engineer before ordering the remainder of the piles.
Before superstructure is placed construct embankment in accordance with Sec. 16 of the Standard Specifications.
Layout of slope walls may be varied to suit ground conditions in the field, as directed by the Engineer.
Boring Data shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.

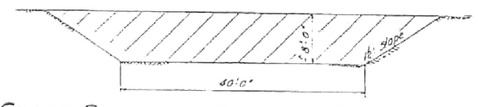
GENERAL ELEVATION - Scale: 3/32" = 1 Ft.



PLAN

Scale: 3/32"=1'0"

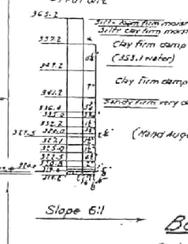




CROSS SECTION OF PROPOSED CHANNEL CHANGE

Rt. and Lt. Sta. 48+70
TO BE CONSTRUCTED UNDER SEPARATE CONTRACT

LOCATION SKETCH



Slope 6:1

BORING DATA

Inches per 10 blows 190 lb 18" drop

WATERWAY INFORMATION

Drainage Area	30.540 acres
Character	Rolling, cultivated & pasture
Req'd. Opening (25 yr flood)	1250 sq. ft.
Present Opening	none
Proposed Opening	1250 sq. ft.

STATION 48+70
BUILT 195 BY
STATE OF ILLINOIS
F.A.Rt. 113 Sec. 100-B
F.A. PROJ. F-221(5)
LOADING M20-516

LETTERING FOR NAME PLATE
See Standard 2113

TOTAL BILL OF MATERIAL

ITEM		SUPER.	SUB.	TOTAL
Class-X Concrete	Cu. Yds.	163.4	63.8	227.2
Handrail Concrete	Cu. Yds.	1.8	-	1.8
Reinforcement Bars	Lbs.	27110	4830	31920
Structural Steel	Lbs.	181060	-	181060
Metal Handrail	Lin. Ft.	359	-	359
Slope Wall	Sq. Yds.	-	-	1043
Name Plates	Each	1	-	1
Precast Conc. Pile	Lin. Ft.	-	1150	1150
Test Pile (Precast Conc.)	Each	-	1	1

DESIGN STRESSES

f_s	18000 #/in² Super.
f_c	800 #/in² Sub.
f_s	20000 #/in² Reinf.
f_s	18000 #/in² Struct.
n	10

DESIGNED M. J. Carroll
CHECKED H.W. Graham
DRAWN W.G.B. A. Miller
CHECKED Inst. C.

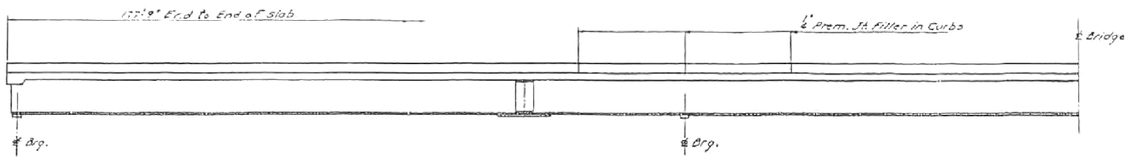
April 13 1955
EXAMINED
PASSED
APPROVED

GENERAL PLAN & ELEVATION
F.A. RTE. 113 ~ SECTION 100-B
PROJECT F-221(5)
WHITE COUNTY
STATION 48+70

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

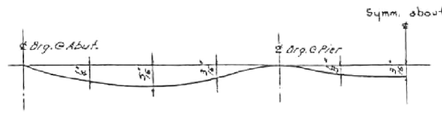
SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 113	100B	White Gallatin	11	7
I.S.R. RTE.				
F.A.S. ROUTE				
SEC.				
DIST. NO.				
ILLINOIS	FED. AID PROJECT F-221(5)			

SHEET NO. 2
6 SHEETS

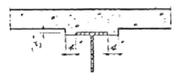


See Sheet 4 for Handrail details

HALF ELEVATION
Scale: 3/16" = 1'-0"

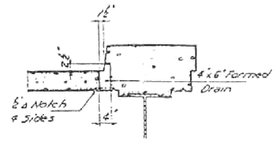


DEAD LOAD DEFLECTION DIAGRAM

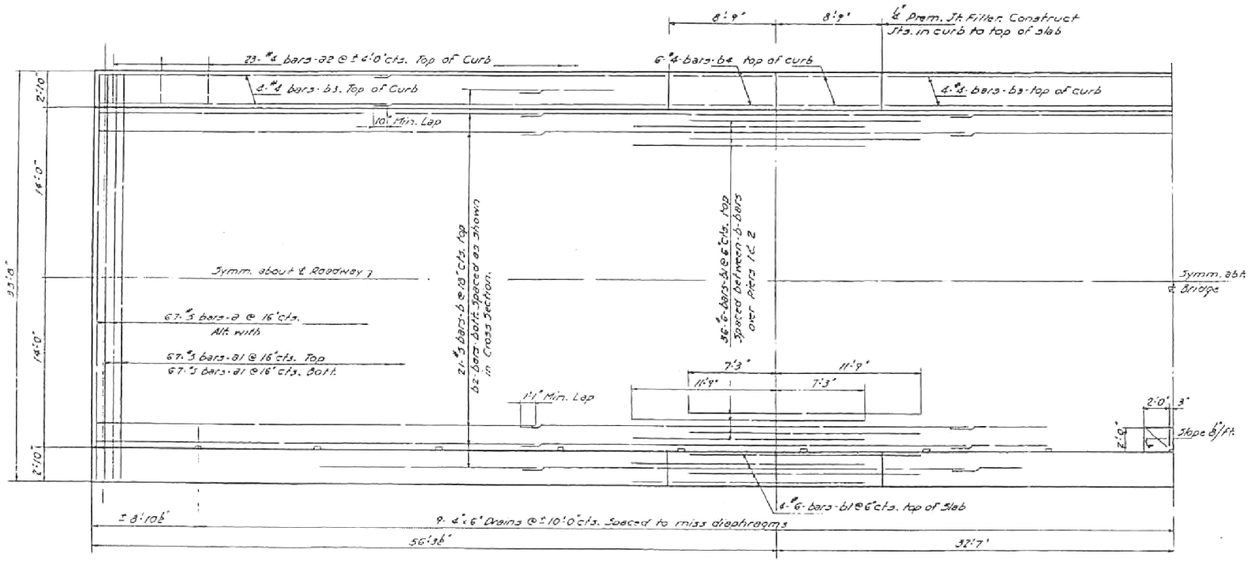


FILLET DETAILS

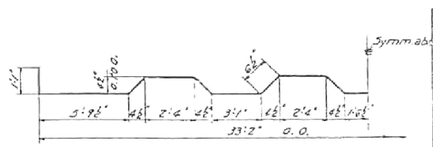
After all structural steel has been erected elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflection for these points, determined from Dead Load Deflection Diagram. The elevations so obtained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beam.



FLOOR DRAIN DETAILS



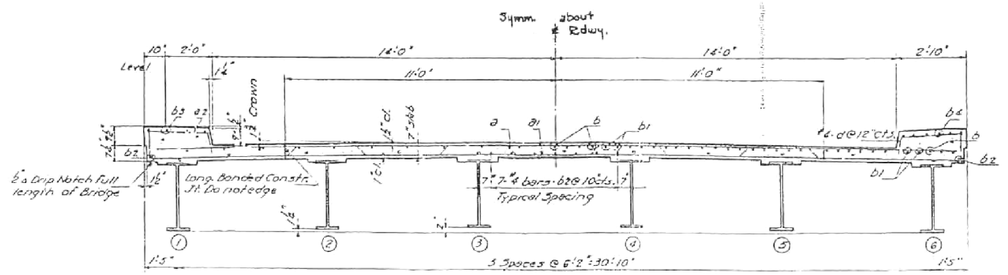
HALF PLAN
Scale 3/16" = 1'-0"



BAR 2

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	134	#5	36'-8"	
a1	268	#5	33'-0"	
a2	92	#4	2'-6"	
b	105	#5	36'-6"	
b1	88	#6	19'-0"	
b2	222	#4	30'-6"	
b3	48	#4	24'-0"	
b4	46	#4	8'-6"	
d	358	#4	1'-7"	
Class X Concrete			Cu. Yds.	163.4
Reinforcement Bars			Lbs.	26810
Structural Steel			Lbs.	181060
Name Plates			Each	1



IN SPANS — OVER PIERS 1 & 2

TYPICAL CROSS SECTION
Scale 3/8" = 1'-0"

DESIGNED	W. G. Carril	
CHECKED	H.M.Shaw	
DRAWN	W.G.C.	M. Miller
CHECKED	H.M.S.	

EXAMINED April 13 1955
PASSED
APPROVED

SUPERSTRUCTURE
F.A. RTE. 113 ~ SECTION 100-B
PROJECT F-221 (5)
WHITE COUNTY
STATION 48+70

FILE NAME = D978231-sht-existingstructure.dgn
MODEL = Default
PLOT DRIVER = 100T-PDF.plotcfg

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -	
FILE NAME = D978231-sht-existingstructure.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/8/2014	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS FOR INFORMATION ONLY

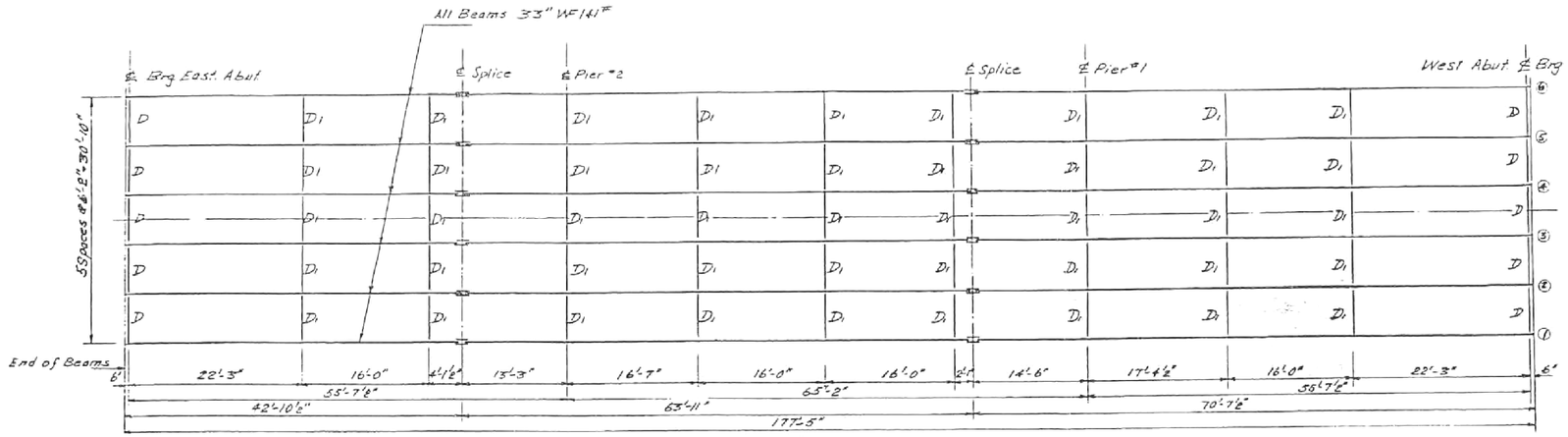
SCALE: NONE | SHEET NO. 4 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	43
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT		

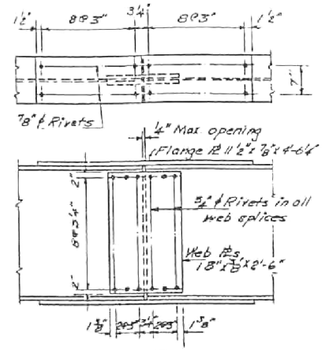
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. RTE. 113	100 B	White Gallatin	11	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT F-231(6)		

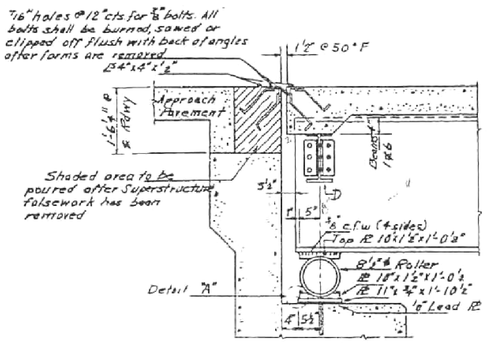
SHEET NO. 5
6 SHEETS



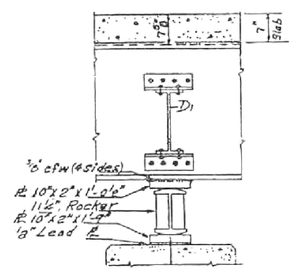
PLAN OF STRUCTURAL STEEL
Scale 1"=1'-0"



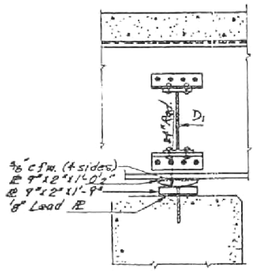
SPLICE DETAILS



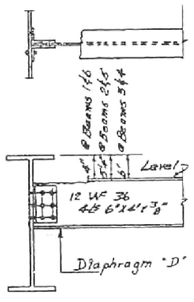
SECTION @ ABUTMENT
Scale ¾"=1'-0"

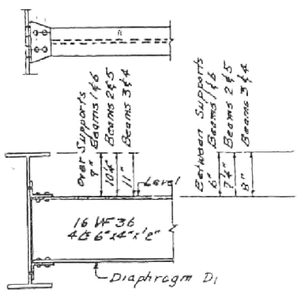


PIER #2
Scale ¾"=1'-0"

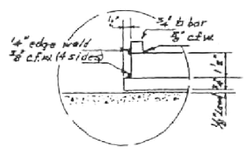


PIER #1
Scale ¾"=1'-0"

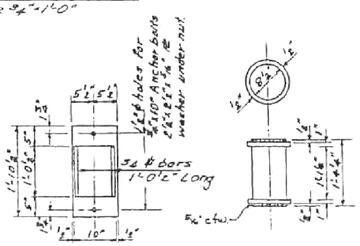




DIAPHRAGM DETAILS

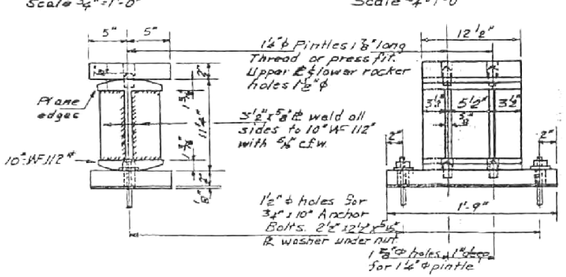


DETAIL "A"

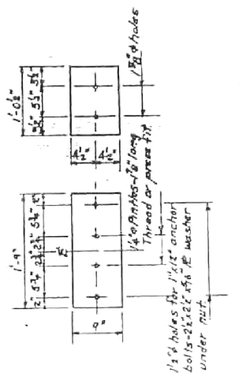


PLAN BOTTOM ℓ
East ℓ West Abut

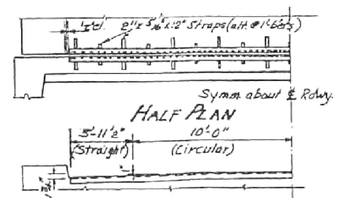
ROLLER



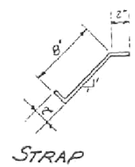
ROCKER DETAIL
Scale 1½"=1'-0"



PLAN TOP & BOTTOM ℓ'S
Pier #1

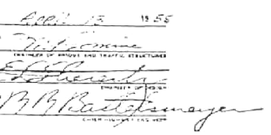


HALF ELEVATION



STRAP

EXPANSION GUARD DETAILS



PINTLE

DESIGNED	M. J. Carroll	
CHECKED	Hw Shaw	
DRAWN	WJG	J. SANDOVAL
CHECKED	Hw S	

EXAMINED Dec. 15 1956
PASSED
APPROVED

STRUCTURAL STEEL
F.A. RTE 113 SECTION 100B
WHITE COUNTY
STA 48+70

QUIGG ENGINEERING INC	USER NAME = twalker	DESIGNED - MCV	REVISED -
	FILE NAME = D978231-sht-existingstructure.dgn	DRAWN - CMM	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
	PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

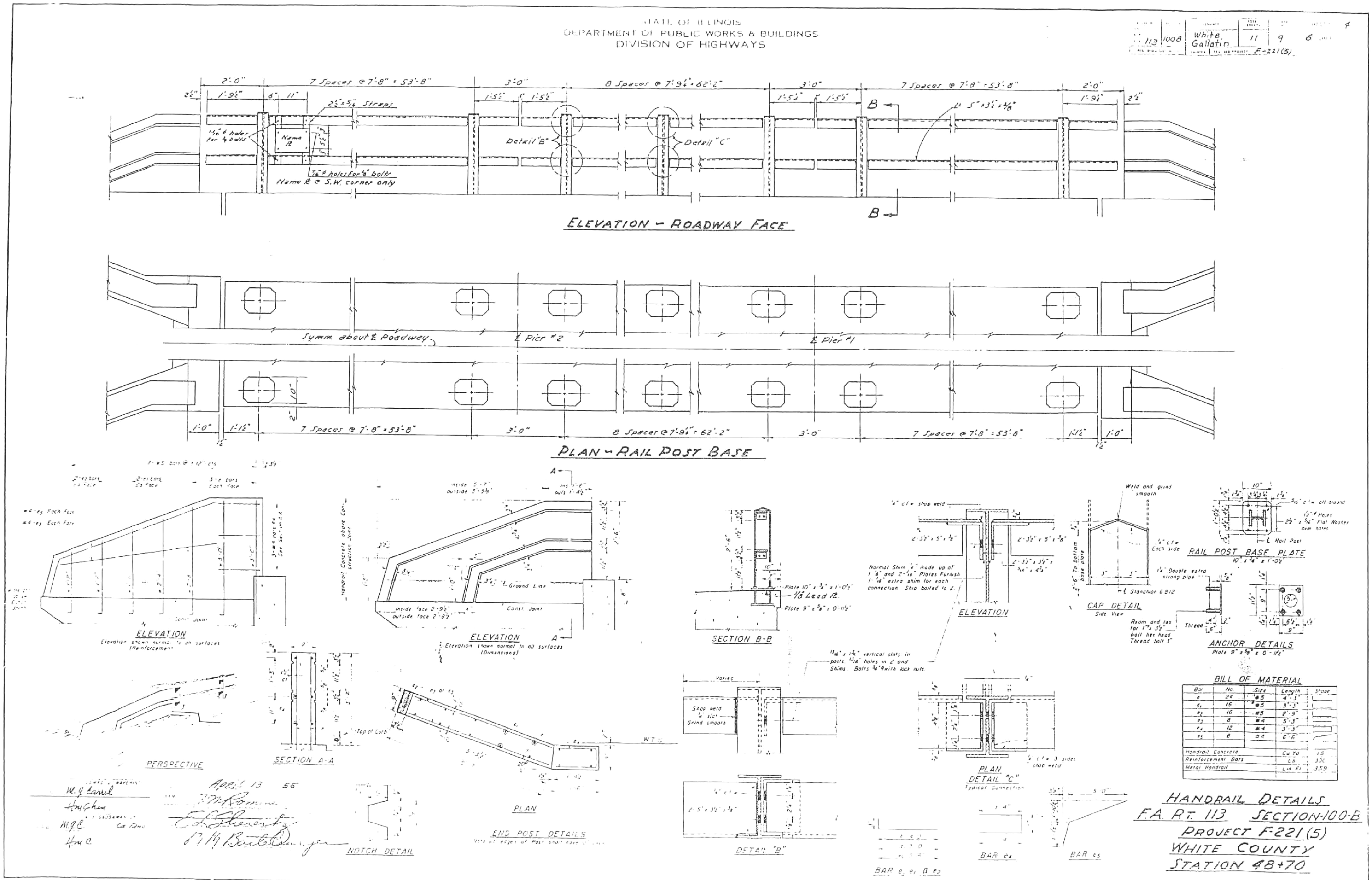
EXISTING STRUCTURE PLANS FOR INFORMATION ONLY

SCALE: NONE | SHEET NO. 5 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	44
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = D978231-sht-existingstructure.dgn
MODEL = Default
PLOT DRIVER = IDOT.PDF.olf.cfg

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e	24	#5	4'-3"	
e_1	16	#5	3'-3"	
e_2	16	#5	2'-9"	
e_3	8	#4	5'-3"	
e_4	12	#4	3'-3"	
e_5	8	#4	6'-6"	
Handrail Concrete			Cu Yd	1.9
Reinforcement Bars			Lb	330
Metal Handrail			Lin Ft	359

HANDRAIL DETAILS
F.A. RT. 113 SECTION-100-B
PROJECT F-221(5)
WHITE COUNTY
STATION 48+70

QUIGG ENGINEERING INC	USER NAME = twalker	DESIGNED - MCV	REVISED -
	FILE NAME = D978231-sht-existingstructure.dgn	DRAWN - CMM	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
	PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY

SCALE: NONE | SHEET NO. 6 OF 8 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	45

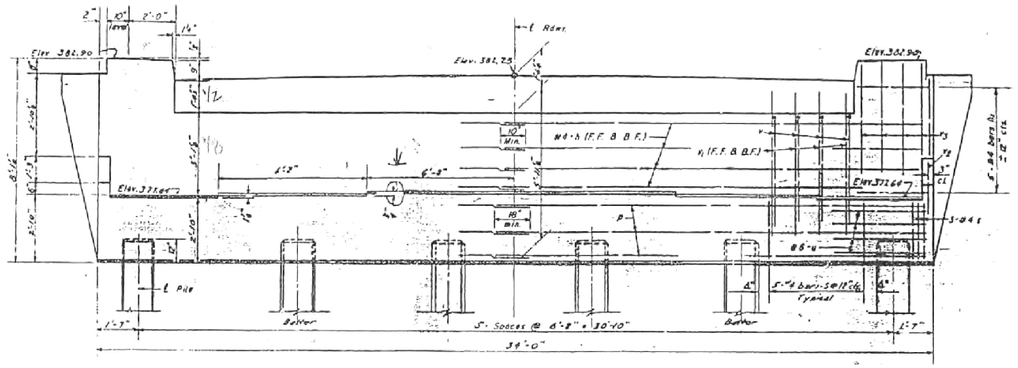
CONTRACT NO. 78231
ILLINOIS FED. AID PROJECT

FILE NAME = D978231-sht-existingstructure.dgn
MODEL = Default
PLOT DRIVER = IDOT_PDF.pltcfg

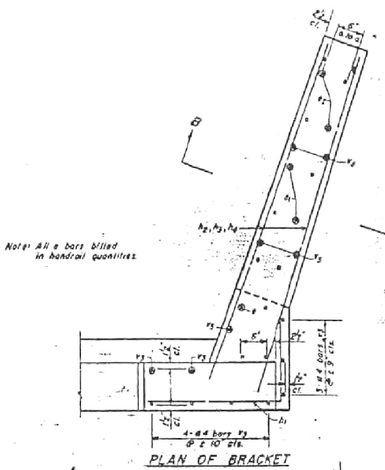
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

DISTRICT NO.	SECTION NO.	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. I. F. A. 113	100B	White - Gallatin	11	11
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT F-221(5)		

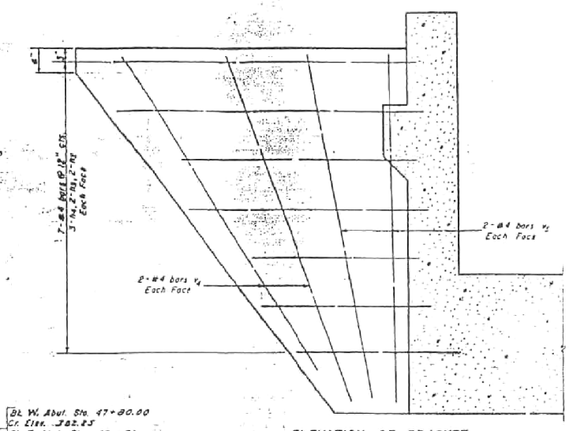
SHEETS F
& SHE



ELEVATION OF ABUTMENT

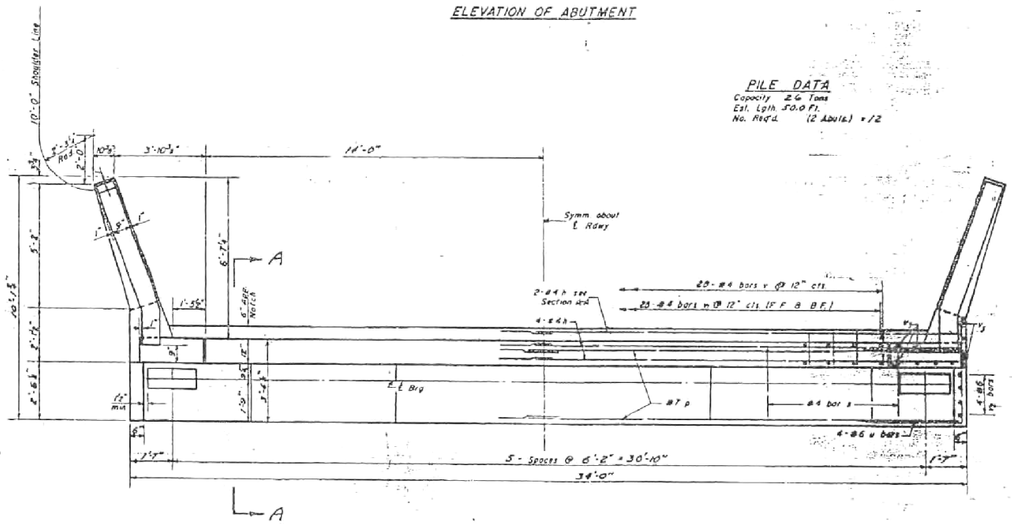


PLAN OF BRACKET

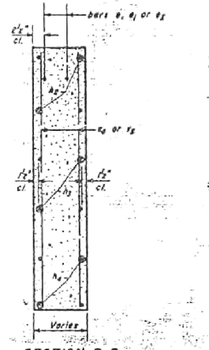


ELEVATION OF BRACKET

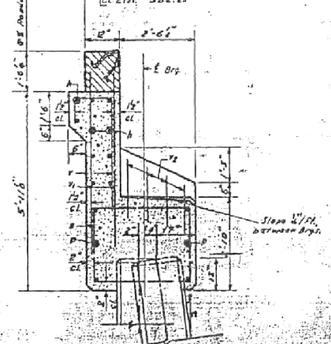
PILE DATA
Capacity 26 Tons
Est. Lgth 50.0 Ft.
No. Req'd. (2 Abuts.) = 12



PLAN OF ABUTMENT



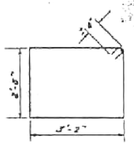
SECTION B-B



SECTION A-A

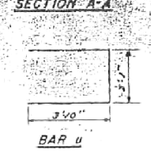
BILL OF MATERIAL - 2 ABUTMENTS

Bar	No.	Size	Length	Shape
h	40	#4	17'-6"	
h'	20	#4	9'-6"	
h2	16	#4	6'-6"	
h3	16	#4	5'-0"	
h4	24	#4	3'-8"	
p	29	#7	17'-6"	
s	62	#4	12'-0"	
t	16	#6	10'-8"	
v	56	#4	6'-0"	
v1	112	#4	5'-5"	
v2	16	#6	8'-6"	
v3	36	#4	6'-0"	
v4	16	#4	8'-0"	
v5	16	#4	7'-0"	
Class 'A' Concrete			Cu. Yd.	45.0
Reinforcement Bars			Lb.	3300
16" Precast Conc. Piles			Each	600

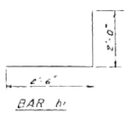


BAR s

BAR v



BAR u



BAR h

PILE DATA
Capacity ..... 26 Tons
Est Length ..... 50 FT.
No. Required 12 (2-Abuts

See sheet "5 for pile details.

DESIGNED	M. J. WALKER M. J. Walker	
CHECKED	H. W. Chu	
DRAWN	M. J. W. C. H. W. CHECKED	
CHECKED	H. W. C.	

EXAMINED W. M. Spence ENGINEER OF PRELIM. AND TRAFFIC STRUCTURES
PASSED E. L. Shurtz CHIEF ENGINEER
APPROVED B. B. Baldwin DIRECTOR OF PUBLIC WORKS & BUILDINGS

APRIL 13 1955

ABUTMENTS
F.A. RTE. 113 SECT. 100B
WHITE COUNTY
STA. 48+70

QUIGG ENGINEERING INC	USER NAME = twalker	DESIGNED - MCV	REVISED -
	FILE NAME = D978231-sht-existingstructure.dgn	DRAWN - CMM	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
	PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY

SCALE: NONE | SHEET NO. 7 OF 8 SHEETS | STA. | TO STA.

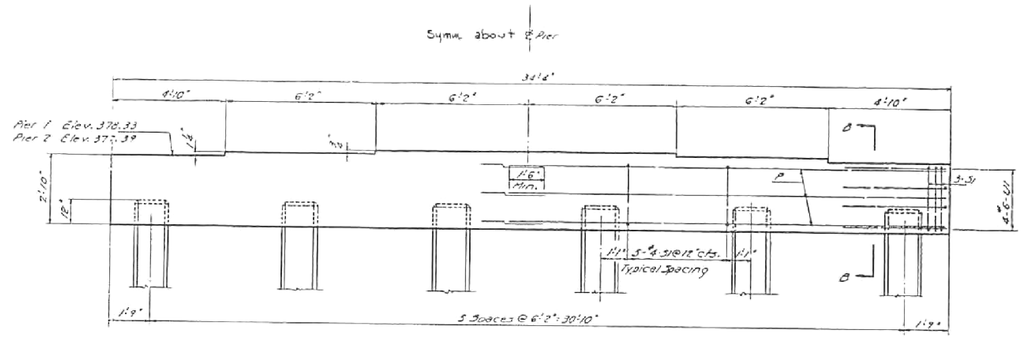
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	46
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

FILE NAME = D978231-sht-existingstructure.dgn
MODEL = Default
PLOT DRIVER = IDOT_PDF.pltcfg

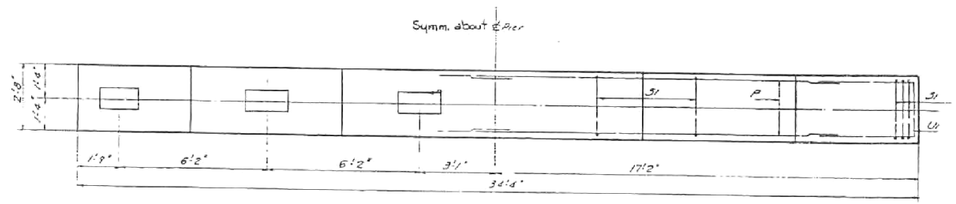
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 113	100B	White-Gallatin	11	10
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	F-221(5)	

SHEET NO. 5
6 SHEETS

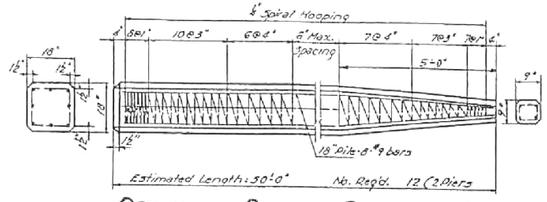


ELEVATION OF PIER
Scale: 3/8" = 1'-0"

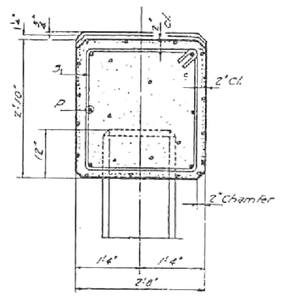


PLAN OF PIER
Scale: 3/8" = 1'-0"

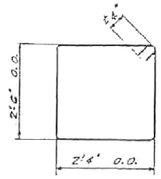
PILE DATA
Capacity 45 Tons
Est Length 50 Ft.
No. Reqd. 12 (2 Piers)



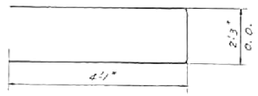
DETAIL OF PRECAST CONCRETE PILES



SECTION B-B



BAR 31



BAR U1

BILL OF MATERIAL-2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
P	24	#7	17'-6"	
31	62	#4	10'-3"	
U1	16	#6	10'-3"	
Class-X Concrete			Cu.Yds	18.3
Reinforcement Bars			Lbs.	1530
18" Precast Concrete Pile			Lin.Ft.	550
Test Pile			Each	1

DESIGNED	M. G. Carroll
CHECKED	H.W.C.
DRAWN	M.G.C.
CHECKED	H.W.C.

EXAMINED: April 13 1955
PASSED:
APPROVED:

PIERS
F.A. RTE. 113 ~ SECTION 100-B
PROJECT F-221(5)
WHITE COUNTY
STATION 48+70

FILE NAME = D978231-sht-existingstructure.dgn
MODEL = Default
PLOT DRIVER = 100.PDF.plt.cfg

QUIGG ENGINEERING INC

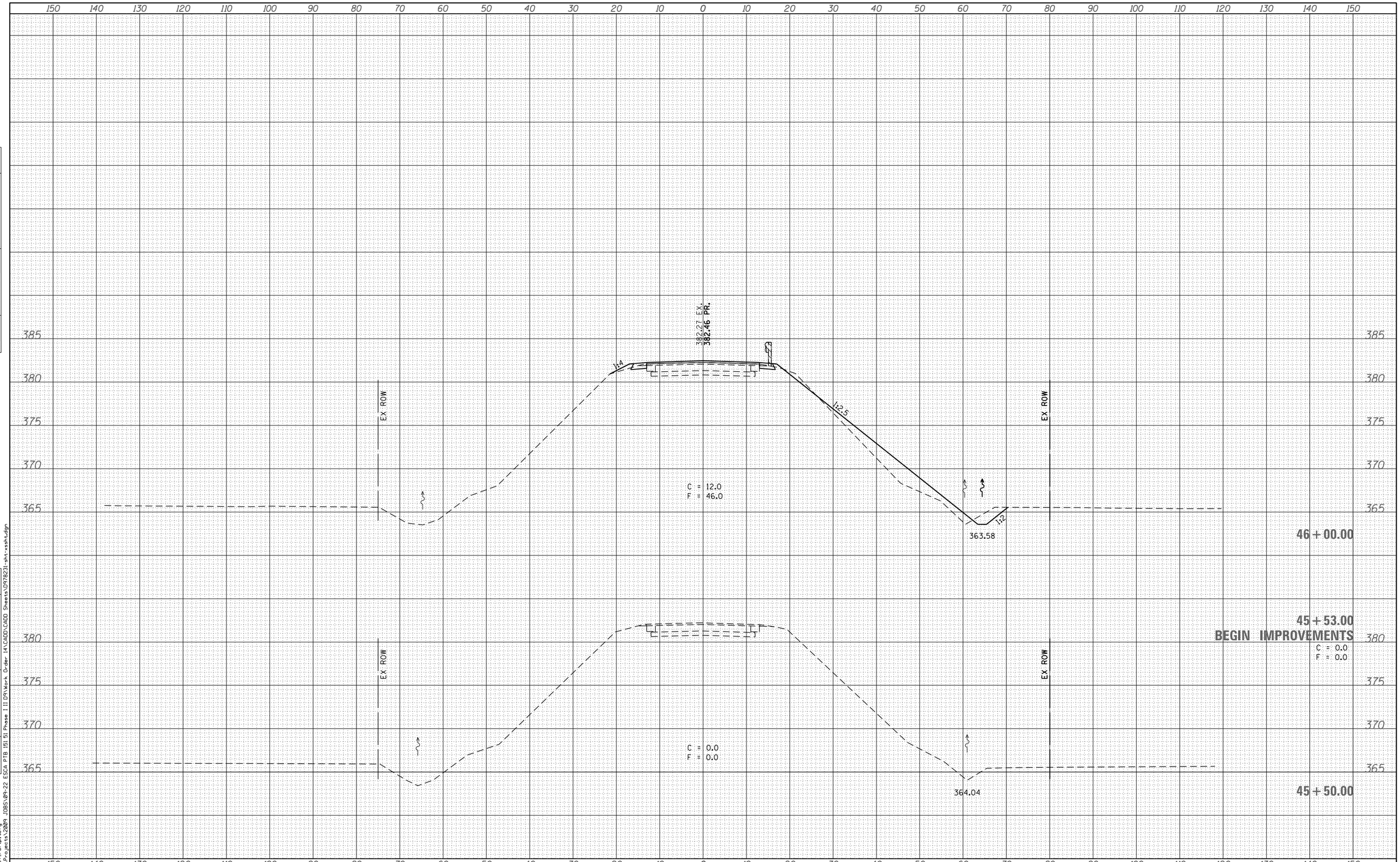
USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-existingstructure.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/8/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
FOR INFORMATION ONLY

SCALE: NONE | SHEET NO. 8 OF 8 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	47
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			



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

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

PLOT DRIVER = IDOT.PDF.ctb
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

QUIGG ENGINEERING INC

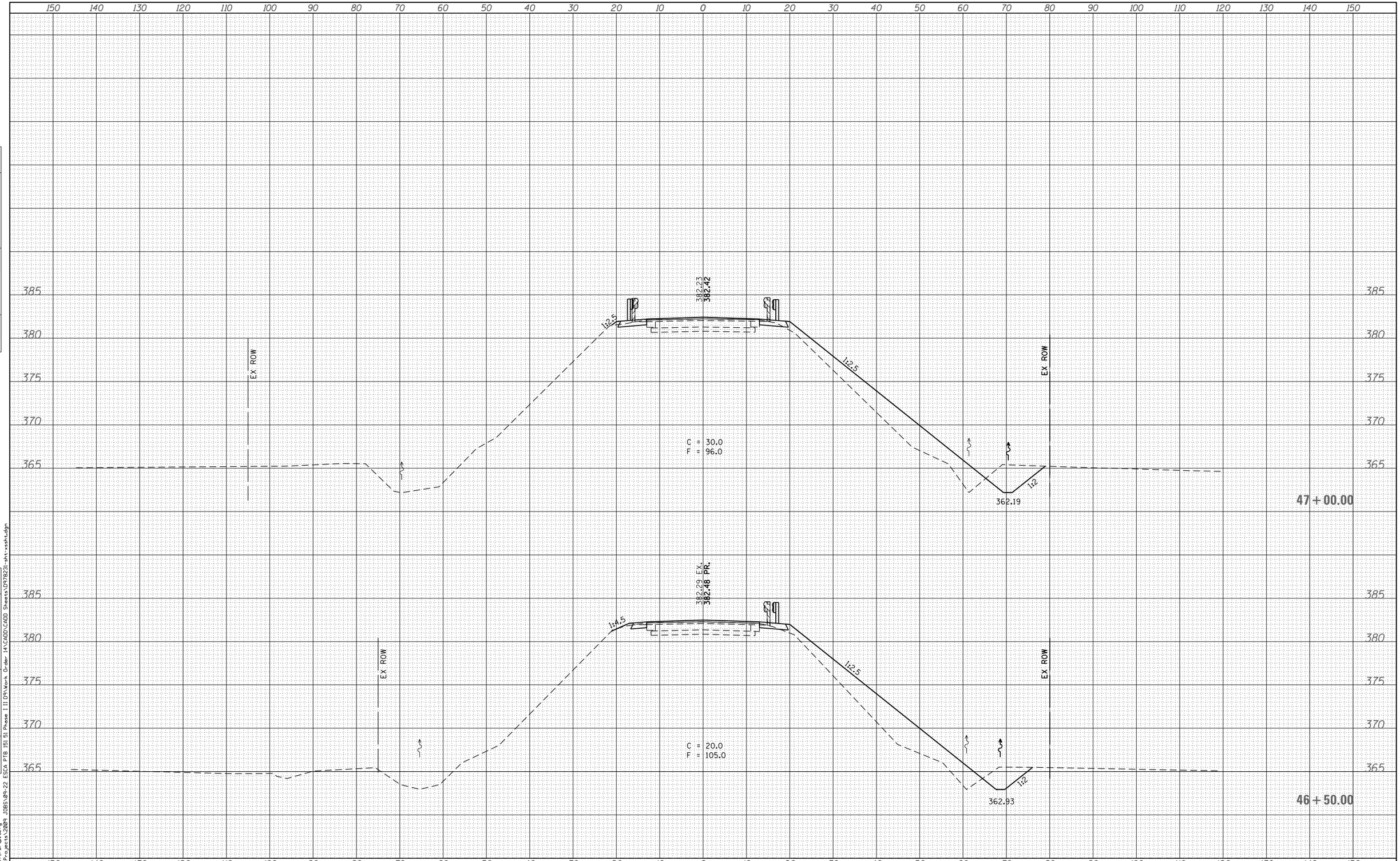
USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 1 OF 7 SHEETS | STA. 45+50.00 TO STA. 46+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	48
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT		



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

PLOT DRIVER = IDOT.PDF.ctb
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 2 OF 7 SHEETS | STA. 46+50.00 TO STA. 47+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	49
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
PLOTTED		
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

385 380 375 370 365 360

EX ROW

382.15
382.34

1:2

C = 0.0
F = 94.0

1:2

EX ROW

360.55

47 + 80.00

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

385 380 375 370 365 360

EX ROW

382.12 EX.
382.34 PR.

1:2.5

1:2

EX ROW

C = 54.0
F = 5.0

361.46

47 + 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

PLOT DRIVER = IDOT_PDF.plotcfg
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase I II\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

QUIGG ENGINEERING INC

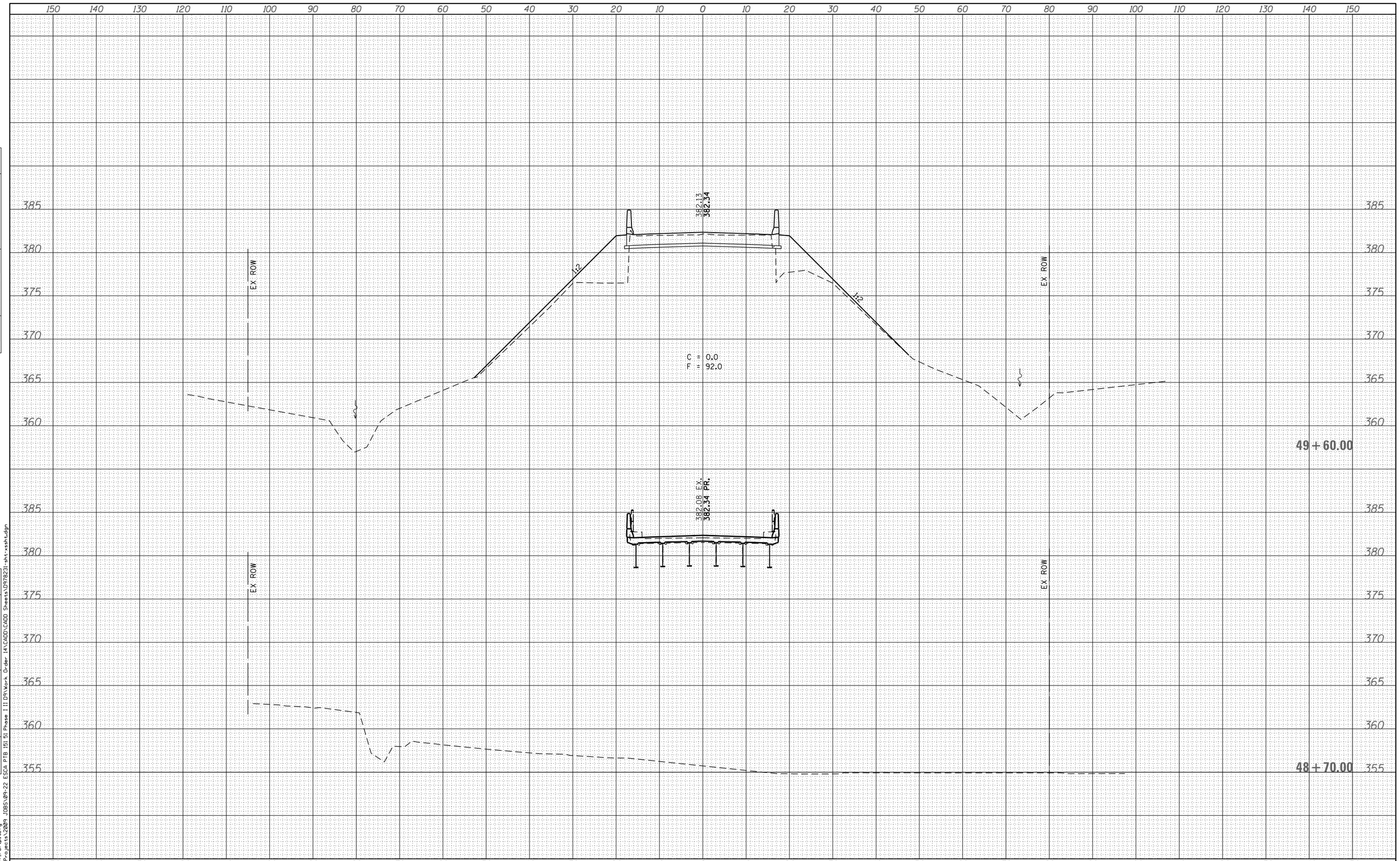
USER NAME = twalker	DESIGNED - MCV	REVISED -	
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/9/2014	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 3 OF 7 SHEETS | STA. 47+50.00 | TO STA. 47+80.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	50
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			



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				

PLOT DRIVER = IDOT_PDF.plotcfg
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -
PLOT DATE = 7/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 4 OF 7 SHEETS | STA. 48+70.00 | TO STA. 49+60.00

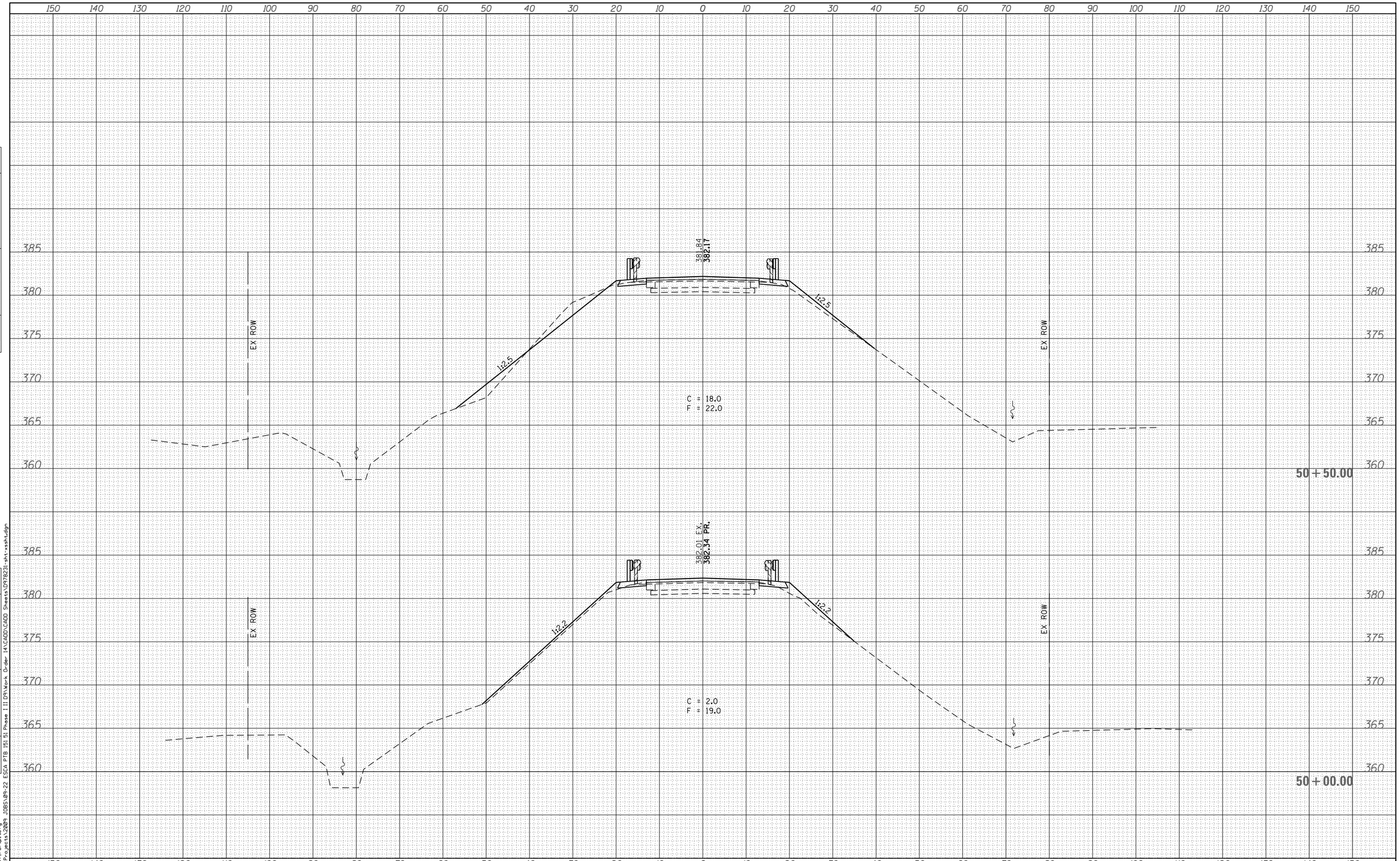
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	51
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

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



PLOT DRIVER = IDOT_PDF.plotcfg
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

QUIGG ENGINEERING INC

USER NAME = twalker	DESIGNED - MCV	REVISED -	
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/9/2014	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

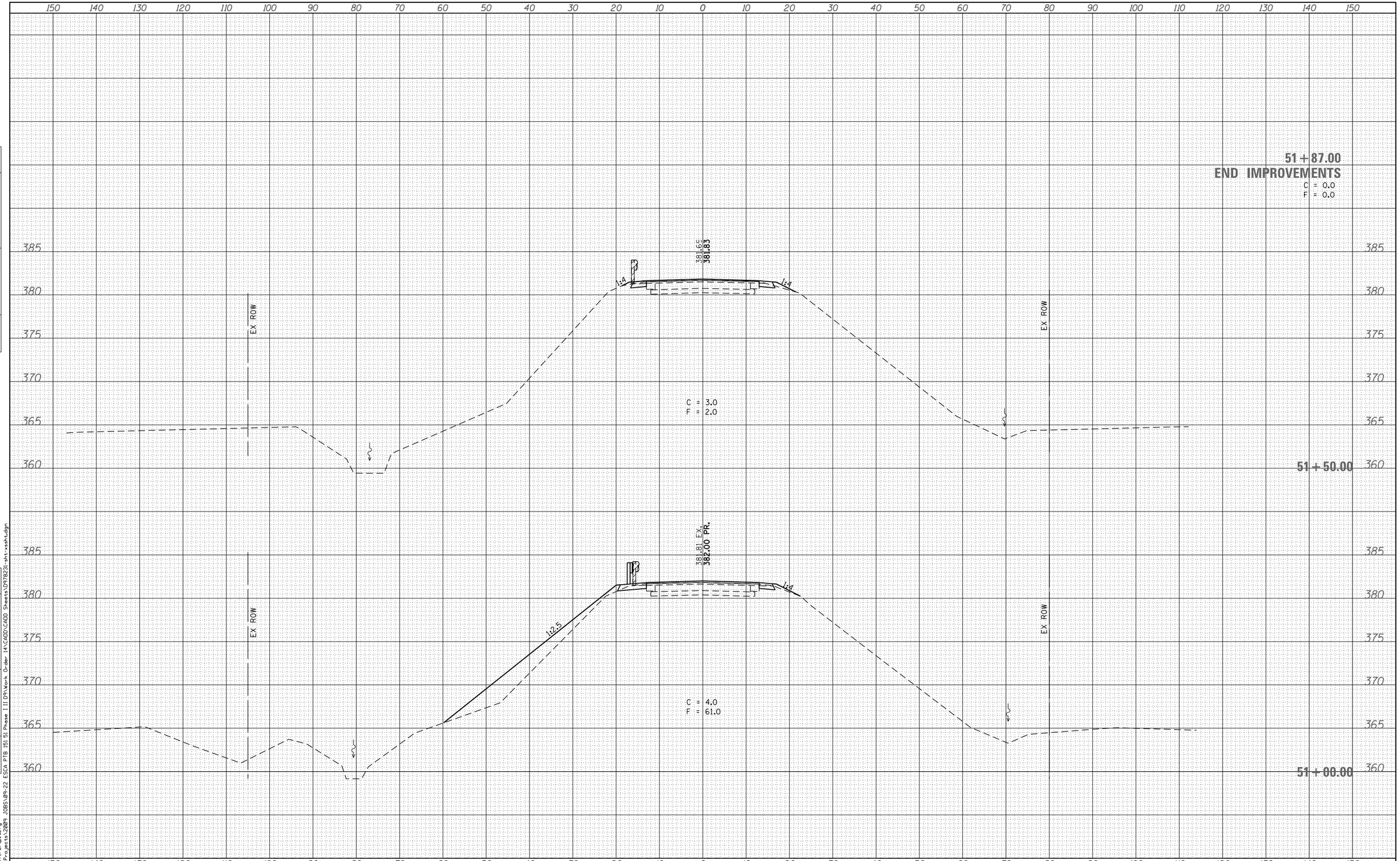
SCALE: 10H : 5V | SHEET 5 OF 7 SHEETS | STA. 50+00.00 | TO STA. 50+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	52
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

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

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

PLOT DRIVER = IDOT_PDF.plotcfg
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA PTB 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn



USER NAME = twalker	DESIGNED - MCV	REVISED -	
FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -	
PLOT DATE = 7/9/2014	DATE -	REVISED -	

QUIGG ENGINEERING INC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 6 OF 7 SHEETS | STA. 51+00.00 | TO STA. 51+50.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	53
		CONTRACT NO. 78231		
	ILLINOIS FED. AID PROJECT			

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		

PLOT DRIVER = IDOT_PDF.plotcfg
FILE NAME = S:\Projects\2009 JOBS\09-22 ESCA P1B 151 51 Phase 1 II D9\Work Order 14\CADD\CADD Sheets\D978231-sht-xssht.dgn

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

380
375
370
365
360

EX ROW

C = 0.0
F = 0.0

EX ROW

52+00.00

QUIGG ENGINEERING INC	USER NAME = twalker	DESIGNED - MCV	REVISED -
	FILE NAME = D978231-sht-xssht.dgn	DRAWN - CMM	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MTM	REVISED -
	PLOT DATE = 7/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS ROUTE 141 CROSS SECTIONS

SCALE: 10H : 5V | SHEET 7 OF 7 SHEETS | STA. 52+00.00 | TO STA. 52+00.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	54
		CONTRACT NO. 78231		
		ILLINOIS FED. AID PROJECT		