

F.A.P. RTE. 328	SECTION 105B-1	COUNTY WHITE	TOTAL SHEETS 54	SHEET NO. 1
ILLINOIS			CONTRACT NO. 78161	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. ROUTE 328 (US ROUTE 45)
SECTION 105B-1
PROJECT ACF-0328(031)
WHITE COUNTY
C-99-016-10
STRUCTURE REPLACEMENT
US 45 OVER SOUTHERN OUTLET

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL NOTES AND STANDARDS
3.	SUMMARY OF QUANTITIES
4.-6.	TYPICAL SECTIONS
7.-8.	SCHEDULE OF QUANTITIES
9.	ALIGNMENT TIES AND BENCHMARKS
10.-11.	PLAN & PROFILE
12.	STAGE I CONSTRUCTION
13.	STAGE II CONSTRUCTION
14.	MISCELLANEOUS DETAILS
15.	GUARDRAIL LAYOUT
16.	EROSION CONTROL PLAN
17.	PAVEMENT MARKING PLAN
18.	PAVED SHOULDER LAYOUT
19.	WIDE LOAD DETOUR
20.-21.	DISTRICT DETAILS
22.-45.	STRUCTURE PLANS
46.-47.	SOIL BORING
48.-54.	CROSS SECTIONS

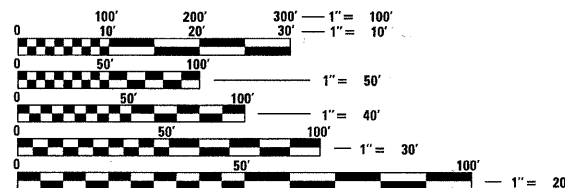
UTILITIES

ELECTRIC:
WAYNE WHITE ELEC. COOP
1501 WEST MAIN ST.
FAIRFIELD, IL 62837
(618) 824-2196



TRAFFIC DATA

FUNCTIONAL CLASSIFICATION:	OTHER PRINCIPAL ARTERIAL
DESIGN SPEED:	55 MPH
POSTED SPEED:	55 MPH
ADT:	1717 (2011)
PV:	65.17%
TRUCKS:	34.83%



MILL SHOALS TOWNSHIP

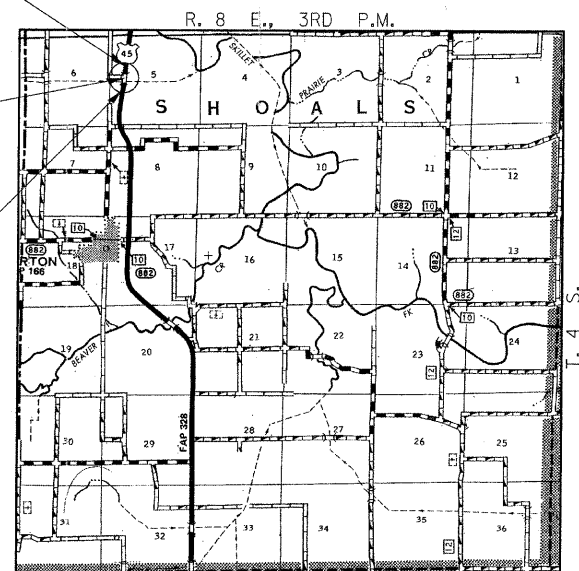
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

IMPROVEMENT BEGINS
STATION 653+78

STA. 654+78
3 SPAN STEEL WIDE FLANGE BEAM BRIDGE
127.00' BK TO BK ABUTMENTS
32' CLEAR WIDTH; SKEW = 0°
EXISTING STRUCTURE NO. 097-0021
PROPOSED STRUCTURE NO. 097-0076

IMPROVEMENT ENDS
STATION 658+26

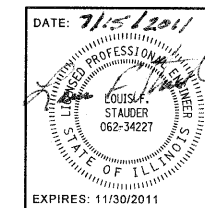


LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE

NET LENGTH OF PROJECT = 448.00 FEET = 0.085 MILES
GROSS LENGTH OF PROJECT = 448.00 FEET = 0.085 MILES
ROADWAY LENGTH = 321.00 FEET = 0.061 MILES
BRIDGE LENGTH = 127.00 FEET = 0.024 MILES

HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 3 2011
Rosa Z. Dinkel
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 14 2011
Scott E. Stett, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

October 14 2011
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: DAVID PICHE (618) 351-5277

CONTRACT NO. 78161

GENERAL NOTES

- 1 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING FIELD DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- 2 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 REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- 3 ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OR THE COPY OF THE STANDARD INCLUDED IN THE PLANS.
- 4 PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NORMAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. THE CONTRACTOR, HOWEVER, WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE FOR THE WORK. CONSTRUCTION PLANS ARE AVAILABLE FOR REVIEW AT THE DISTRICT 9 OFFICE.
- 5 THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.
- 6 ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STATION 652+50 AND STATION 658+71. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUND LINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR GREATER.
- 7 IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.
- 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./INCH OF THICKNESS)
ALL AGGREGATE 2.05 TONS/CU.YD.
BITUMINOUS MATERIALS:
ON PAVEMENT - 0.10 GAL./SQ.YD.
INTERMEDIATE LIFTS(FOG COAT) - 0.04 GAL./SQ.YD.
ON AGGREGATE SURFACE - 0.32 GAL./SQ.YD.
AGGREGATE (PRIME COAT) - 0.002 TONS/SQ.YD.

RIPRAP - 1.50 TONS/CU.YD.
- 9 TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.
- 10 TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.
- 11 EARTHWORK COMPACTION SHALL BE TO THE SATISFACTION OF THE ENGINEER.
- 12 THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE SURFACE COURSE, AND LEVELING BINDER COURSE.
- 13 WHEN WIDENING FLEXIBLE BASE PAVEMENT, THE CONTRACTOR SHALL TRIM EXISTING SURFACE AND BASE TO A FIRM, NEAR VERTICAL PLANE BEFORE CONSTRUCTING THE WIDENING. THE COST OF THIS REQUIREMENT IS INCLUDED IN THE UNIT PRICE BID FOR THE BASE COURSE WIDENING.
- 14 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.

GENERAL NOTES

- 15 THE MINIMUM VERTICAL CLEARANCE FOR PERMANENT SIGNS PLACED ON BACKSLOPES SHALL BE 0.914 m (3 FT.) MEASURED FROM A POINT DIRECTLY BENEATH THE FAR EDGE OF THE SIGN.
- 16 THE LIMITS OF ROCK AND EARTH SLOPES SHOWN IN THE CROSS SECTIONS ARE APPROXIMATE. THE ACTUAL SLOPE USED SHALL BE DETERMINED BY THE MATERIAL CLASSIFICATION AS DEFINED IN ARTICLE 202.04, AND AS DIRECTED BY THE ENGINEER.
- 17 QUANTITIES SHOWN IN THE PLANS FOR BRIDGE DECK GROOVING AND PROTECTIVE COAT INCLUDE THE BRIDGE, THE BRIDGE APPROACH PAVEMENT, AND THE BRIDGE APPROACH CONNECTORS (PCC).
- 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 IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECKS AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.16 REGARDLESS IF TRACK MOUNTED OR WHEELED.
- 21 THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 275 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- 22 THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.
- 23 VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.
- 24 ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE TURNED OFF OR COVERED.
- 25 ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.
- 26 THE HOT-MIX ASPHALT BASE COURSE WIDENING, 10 3/4" CONSTRUCTED IN PRE-STAGE 1 MAY BE INCORPORATED INTO THE FINAL HOT-MIX ASPHALT SHOULDERS, 8" DURING STAGE 2 CONSTRUCTION IF APPROVED BY THE ENGINEER. SUCH CHANGE WILL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION, BUT THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- 27 COMMITMENTS: NONE AS OF 7/15/2011

HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 PAVEMENT JOINTS
- 420401-08 BRIDGE APPROACH PAVEMENT CONNECTOR
- 515001-03 NAME PLATE FOR BRIDGES
- 601101-01 CONCRETE HEADWALL FOR PIPE DRAIN
- 630001-09 STEEL PLATE BEAM GUARDRAIL
- 630201-06 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
- 631011-07 TRAFFIC BARRIER TERMINAL, TYPE 2
- 631031-09 TRAFFIC BARRIER TERMINAL, TYPE 6
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 701001-02 OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5M (15') AWAY
- 701006-03 OFF-ROAD OPERATIONS 2L, 2W, 4.5M (15') TO 600 MM (24") FROM PAVEMENT EDGE
- 701011-02 OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701321-11 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING FOR SPEEDS > 45 MPH
- 701901-01 TRAFFIC CONTROL DEVICES
- 704001-06 TEMPORARY CONCRETE BARRIER
- 780001-02 TYPICAL PAVEMENT MARKINGS
- 781001-03 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREPARED BY: Joe Manheing
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DATE August 3 20 11

FILE NAME = 090148-sht-notes.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES AND HIGHWAY STANDARDS U.S. ROUTE 45				F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3083 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - T.W.K.	REVISED -						328	105B-1	WHITE	54	2
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-000959	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -		CONTRACT NO. 78161								
		DATE - 04/05/11	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT					

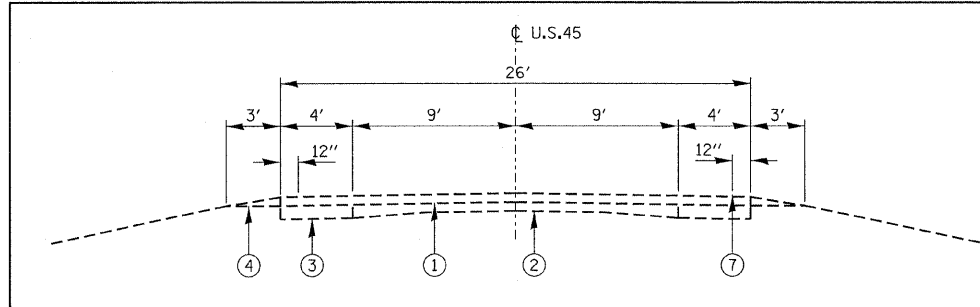
SUMMARY OF QUANTITIES			
	ITEM	UNIT	STP FUNDING 80% FEDERAL 20% STATE SN 097-0076 0011
20200100	EARTH EXCAVATION	CU YD	186
20300100	CHANNEL EXCAVATION	CU YD	850
* 25000200	SEEDING, CLASS 2	ACRE	0.25
* 25000350	SEEDING, CLASS 7	ACRE	0.25
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	32
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23
* 25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.50
* 25100115	MULCH, METHOD 2	ACRE	0.49
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	99
28000400	PERIMETER EROSION BARRIER	FOOT	919
28100107	STONE RIPRAP, CLASS A4	SQ YD	1040
28200200	FILTER FABRIC	SQ YD	1040
35600719	HOT-MIX ASPHALT BASE COURSE WIDENING, 10 3/4"	SQ YD	174
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	33
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	119
40600300	AGGREGATE (PRIME COAT)	TON	3
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	39
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	194
40600990	TEMPORARY RAMP	SQ YD	104
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	103
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	44
44000100	PAVEMENT REMOVAL	SQ YD	422
48100700	AGGREGATE SHOULDERS, TYPE A 8"	SQ YD	109
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	168
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	330
50300100	FLOOR DRAINS	EACH	8
50300225	CONCRETE STRUCTURES	CU YD	215.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	261.2
50300260	BRIDGE DECK GROOVING	SQ YD	623
50300280	CONCRETE ENCASEMENT	CU YD	17.6
50300300	PROTECTIVE COAT	SQ YD	814
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	3024
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	82510
50800515	BAR SPLICERS	EACH	818

SUMMARY OF QUANTITIES			
	ITEM	UNIT	STP FUNDING 80% FEDERAL 20% STATE SN 097-0076 0011
51201800	FURNISHING STEEL PILES HP14X73	FOOT	704
51201900	FURNISHING STEEL PILES HP14X89	FOOT	595
51202305	DRIVING PILES	FOOT	1299
51203900	TEST PILE STEEL HP14X89	EACH	2
51204650	PILE SHOES	EACH	32
51500100	NAME PLATES	EACH	1
52100505	ANCHOR BOLTS, 5/8"	EACH	24
52100520	ANCHOR BOLTS, 1"	EACH	24
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	54
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FOOT POSTS	FOOT	225
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	212
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	6
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	112
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1746
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	583
70400100	TEMPORARY CONCRETE BARRIER	FOOT	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	425
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1746
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	12
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	2
78300100	PAVEMENT MARKING REMOVAL	SQ FT	583
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10
86200300	UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	84.7
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1

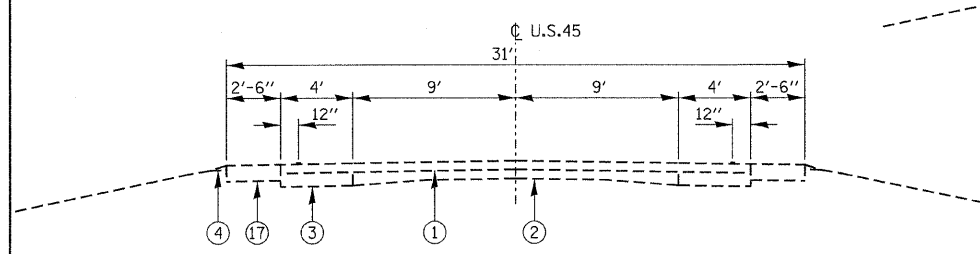
* SPECIALTY ITEM

SUMMARY OF QUANTITIES			
	ITEM	UNIT	STP FUNDING 80% FEDERAL 20% STATE SN 097-0076 0011
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1
X5080600	MECHANICAL SPLICERS	EACH	108
* X6310218	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	2
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	66
Z0026407	TEMPORARY SHEET PILING	SQ FT	758
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	130

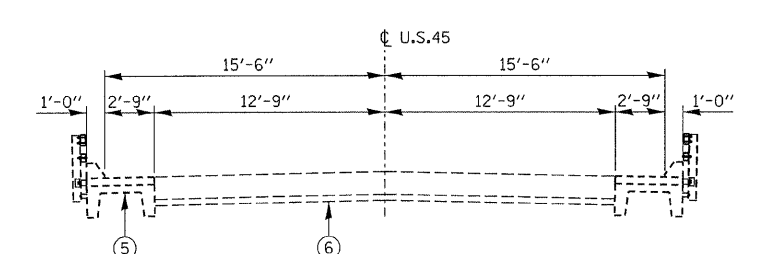
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HAMPTON, LENZINI AND RENWICK, INC. 3005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	3			
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 154-000099	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -		CONTRACT NO. 78161							
		DATE - 04/05/11	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	[ILLINOIS] FED. AID PROJECT	



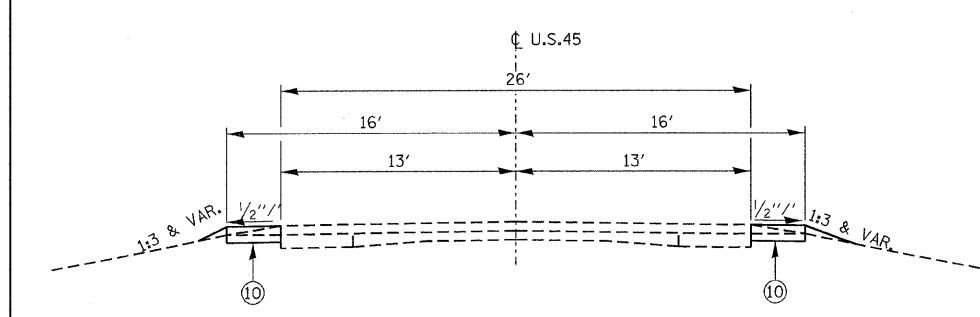
EXISTING TYPICAL CROSS SECTION
 STA. 652+49.00 TO STA. 653+36.00
 STA. 656+50.00 TO STA. 658+71.00



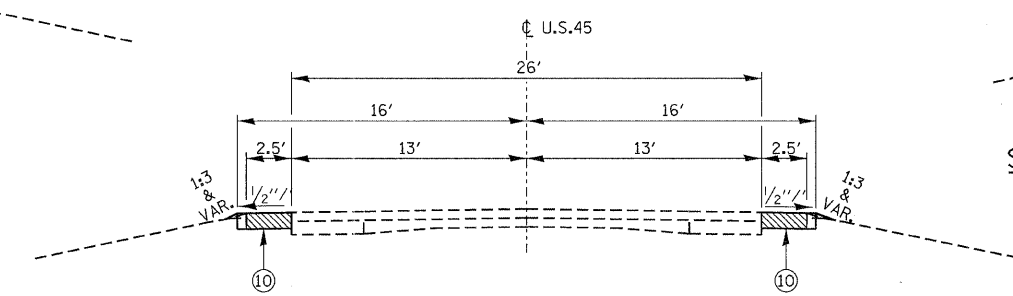
EXISTING TYPICAL CROSS SECTION
 STA. 653+36.00 TO STA. 654+16.80
 STA. 655+39.20 TO STA. 656+50.00



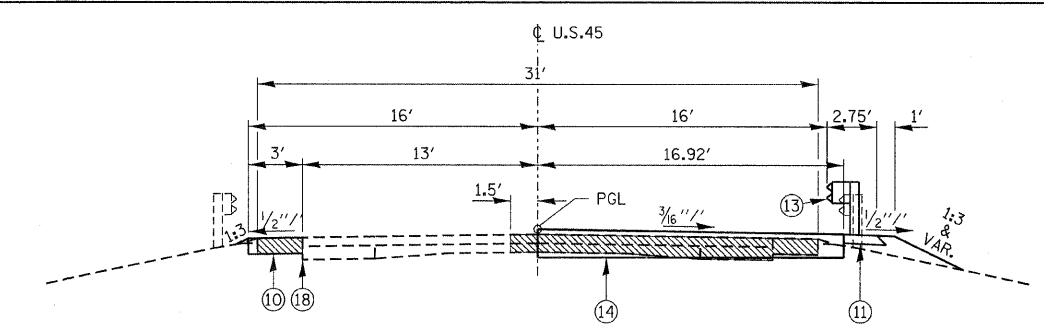
EXISTING BRIDGE APPROACH TYPICAL CROSS SECTION
 STA. 654+16.80 TO STA. 654+28.80
 STA. 655+27.20 TO STA. 655+39.20



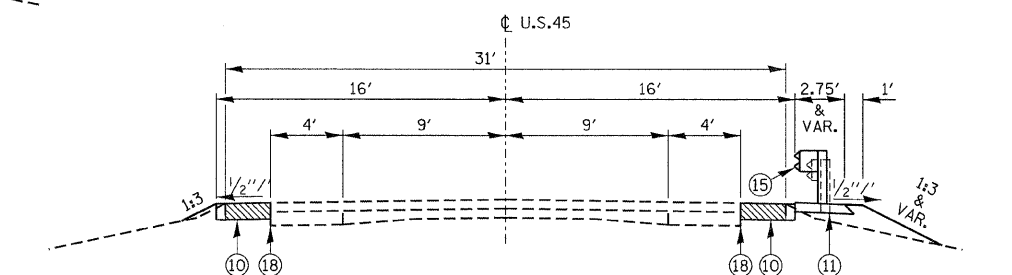
STAGE 1 TYPICAL CROSS SECTION
 STA. 652+67.00 TO STA. 653+36.00



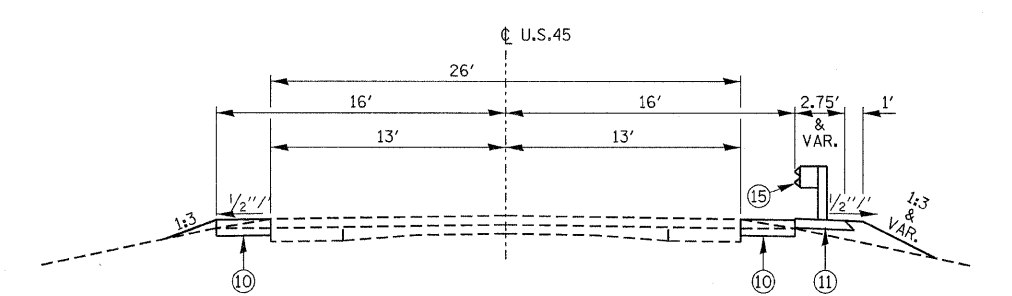
STAGE 1 TYPICAL CROSS SECTION
 STA. 653+36.00 TO STA. 653+78.50



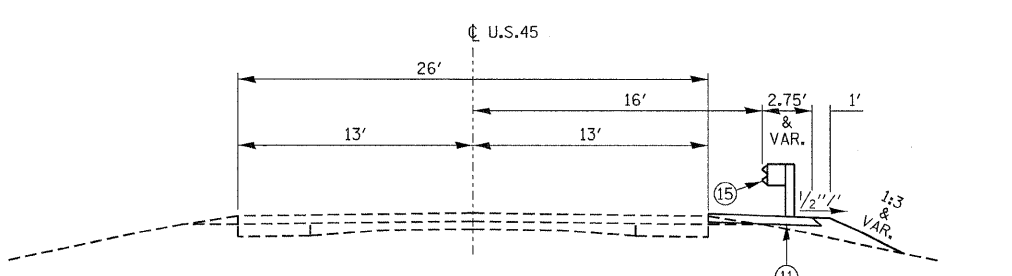
STAGE 1 APPROACH SLAB & PCC CONNECTOR TYPICAL CROSS SECTION
 STA. 653+78.50 TO STA. 653+84.50 PCC CONNECTOR
 STA. 653+84.50 TO STA. 654+14.50 APPROACH PAVEMENT
 STA. 655+41.50 TO STA. 655+71.50 APPROACH PAVEMENT
 STA. 655+71.50 TO STA. 655+77.50 PCC CONNECTOR



STAGE 1 TYPICAL CROSS SECTION
 STA. 655+77.50 TO STA. 656+50.00



STAGE 1 TYPICAL CROSS SECTION
 STA. 656+50.00 TO STA. 656+89.00



STAGE 1 TYPICAL CROSS SECTION
 STA. 656+89.00 TO STA. 657+12.00

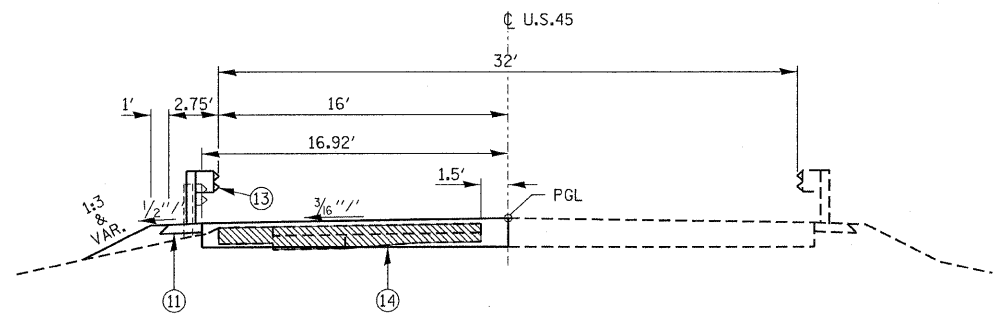
- LEGEND**
- ① EXISTING HMA OVERLAY
 - ② EXIST CONCRETE PAVEMENT
 - ③ EXISTING BASE COURSE WIDENING 9"
 - ④ EXISTING AGGREGATE SHOULDERS
 - ⑤ EXISTING PRECAST CONCRETE UNITS WITH WEARING SURFACE
 - ⑥ EXISTING BRIDGE APPROACH PAVEMENT
 - ⑦ EXISTING PAVEMENT MARKING
 - ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90 (1 1/2" MIN)
 - ⑨ LEVELING BINDER (MACHINE METHOD), N90 (3/4" MIN)
 - ⑩ HMA BASE COURSE WIDENING 10 3/4"
 - ⑪ HMA SHOULDERS 8"
 - ⑫ AGGREGATE SHOULDERS TYPE A 8"
 - ⑬ TRAFFIC BARRIER TERMINAL, TYPE 6 OR 6 (SPECIAL)
 - ⑭ BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) OR BRIDGE APPROACH PAVEMENT
 - ⑮ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
 - ⑯ PROPOSED PAVEMENT MARKING
 - ⑰ EXISTING PCC BASE COURSE WIDENING 8"
 - ⑱ SAW CUT INCLUDED WITH PAVEMENT REMOVAL
 - ▨ EXISTING PAVEMENT REMOVAL

FILE NAME = 090148-sh1-typesections.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3086 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62735	PLOT SCALE =	DRAWN - T.W.K.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000889	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -
		DATE - 04/05/11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

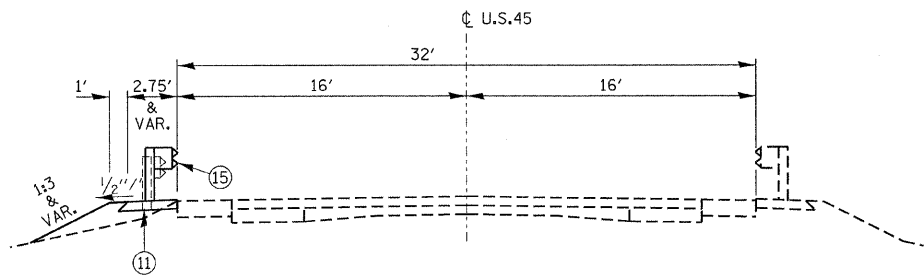
TYPICAL SECTIONS U.S. ROUTE 45	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	105B-1	WHITE	54	4
CONTRACT NO. 78161				
ILLINOIS FED. AID PROJECT				



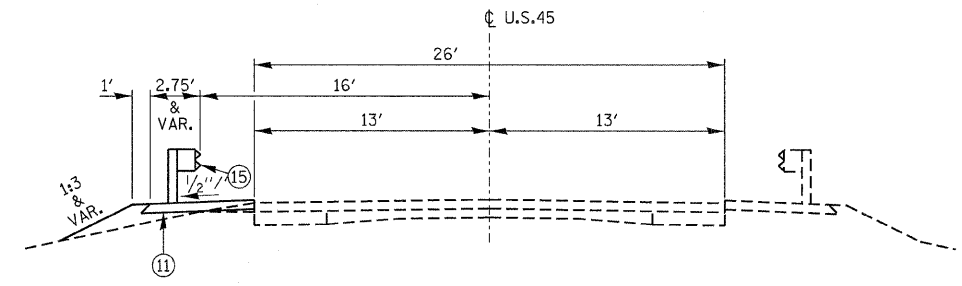
STAGE 2 APPROACH SLAB & PCC CONNECTOR TYPICAL CROSS SECTION

STA. 653+78.50 TO STA. 653+84.50 PCC CONNECTOR
 STA. 653+84.50 TO STA. 654+14.50 APPROACH PAVEMENT
 STA. 655+41.50 TO STA. 655+71.50 APPROACH PAVEMENT
 STA. 655+71.50 TO STA. 655+77.50 PCC CONNECTOR



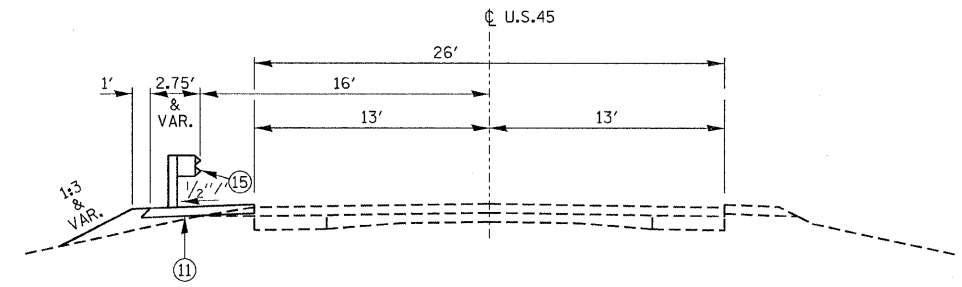
STAGE 2 TYPICAL CROSS SECTION

STA. 655+77.50 TO STA. 656+89.00



STAGE 2 TYPICAL CROSS SECTION

STA. 656+89.00 TO STA. 657+12.00



STAGE 2 TYPICAL CROSS SECTION

STA. 657+12.00 TO STA. 658+12.00

MIXTURE REQUIREMENTS	
LOCATION(S):	US 45 WIDENING
MIXTURE USE(S):	HOT-MIX ASPHALT BASE COURSE
AC/PG:	PG 64-22
RAP % (MAX):	10%
DESIGN AIR VOIDS:	4% @ Ndes 90
MIXTURE COMPOSITION:	IL 19.0
(GRADATION MIXTURE):	
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

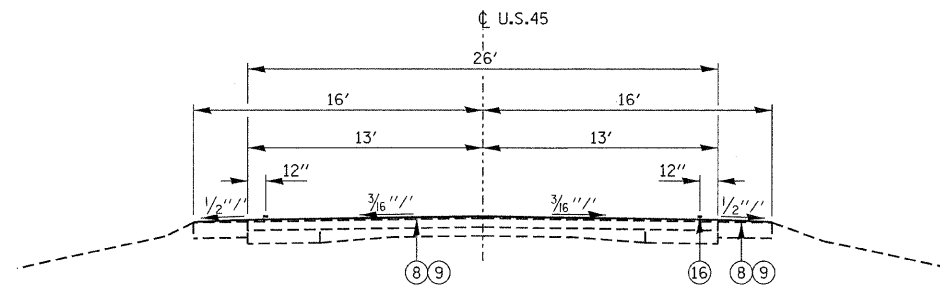
MIXTURE REQUIREMENTS	
LOCATION(S):	US 45 SURFACE
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE
AC/PG:	PG 64-22
RAP % (MAX):	10%
DESIGN AIR VOIDS:	4% @ Ndes 90
MIXTURE COMPOSITION:	IL 9.5 OR IL 12.5
(GRADATION MIXTURE):	
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

LEGEND

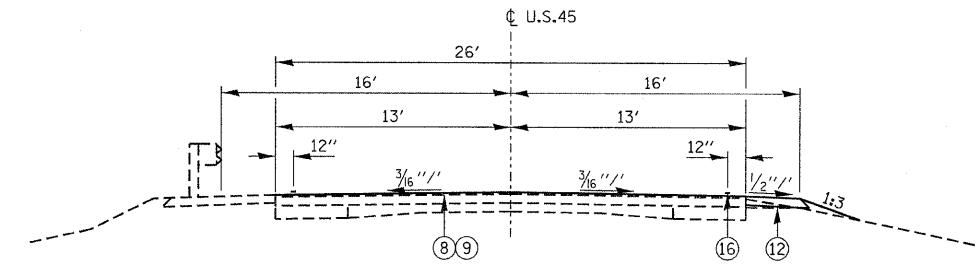
- ① EXISTING HMA OVERLAY
- ② EXIST CONCRETE PAVEMENT
- ③ EXISTING BASE COURSE WIDENING 9"
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS WITH WEARING SURFACE
- ⑥ EXISTING BRIDGE APPROACH PAVEMENT
- ⑦ EXISTING PAVEMENT MARKING
- ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90 (1 1/2" Min)
- ⑨ LEVELING BINDER (MACHINE METHOD), N90 (3/4" MIN)
- ⑩ HMA BASE COURSE WIDENING 10 3/4"
- ⑪ HMA SHOULDERS 8"
- ⑫ AGGREGATE SHOULDERS TYPE A 8"
- ⑬ TRAFFIC BARRIER TERMINAL, TYPE 6 OR 6 (SPECIAL)
- ⑭ BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) OR BRIDGE APPROACH PAVEMENT
- ⑮ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑯ PROPOSED PAVEMENT MARKING
- ⑰ EXISTING PCC BASE COURSE WIDENING 8"
- ⑱ SAW CUT INCLUDED WITH PAVEMENT REMOVAL
- ▨ EXISTING PAVEMENT REMOVAL

MIXTURE REQUIREMENTS	
LOCATION(S):	US 45 LEVELING BINDER
MIXTURE USE(S):	LEVEL BINDER (MACHINE METHOD), N90
AC/PG:	PG 64-22
RAP % (MAX):	10%
DESIGN AIR VOIDS:	4% @ Ndes 90
MIXTURE COMPOSITION:	IL 9.5 OR IL 12.5
(GRADATION MIXTURE):	
FRICTION AGGREGATE:	MIXTURE C
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

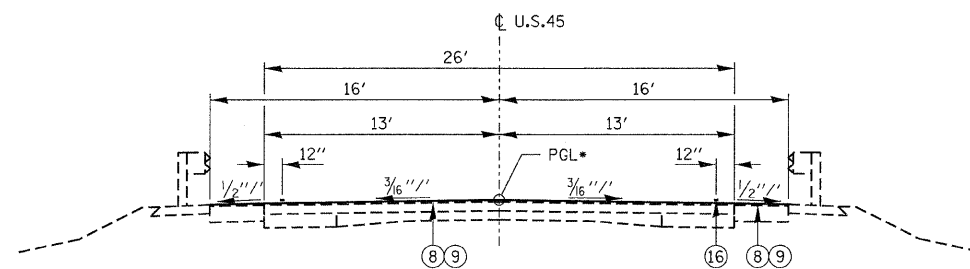
MIXTURE REQUIREMENTS	
LOCATION(S):	US 45 SHOULDERS
MIXTURE USE(S):	HOT MIX ASPHALT SHOULDERS
AC/PG:	PG 68-22
RAP % (MAX):	50%
DESIGN AIR VOIDS:	2% @ Ndes 30
MIXTURE COMPOSITION:	HMA SHOULDERS
(GRADATION MIXTURE):	
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS



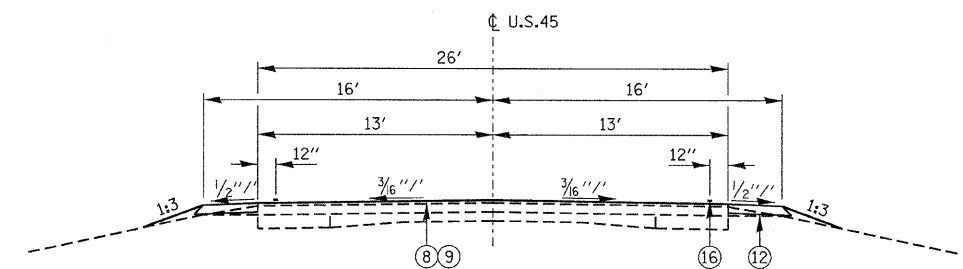
FINAL STAGE TYPICAL CROSS SECTION
STA. 653+18.00 TO STA. 653+78.50



FINAL STAGE TYPICAL CROSS SECTION
STA. 657+12.00 TO STA. 658+12.00



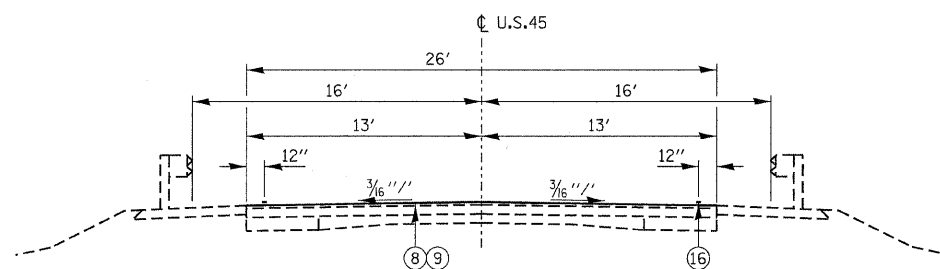
*-PGL APPLIES TO STA. 653+77.50 TO STA. 656+28.00
FINAL STAGE TYPICAL CROSS SECTION
STA. 655+77.50 TO STA. 656+89.00



FINAL STAGE TYPICAL CROSS SECTION
STA. 658+12.00 TO STA. 658+71.00

LEGEND

- ① EXISTING HMA OVERLAY
- ② EXIST CONCRETE PAVEMENT
- ③ EXISTING BASE COURSE WIDENING 9"
- ④ EXISTING AGGREGATE SHOULDERS
- ⑤ EXISTING PRECAST CONCRETE UNITS WITH WEARING SURFACE
- ⑥ EXISTING BRIDGE APPROACH PAVEMENT
- ⑦ EXISTING PAVEMENT MARKING
- ⑧ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90 (1 1/2" Min)
- ⑨ LEVELING BINDER (MACHINE METHOD), N90 (3/4" MIN)
- ⑩ HMA BASE COURSE WIDENING 10 3/4"
- ⑪ HMA SHOULDERS 8"
- ⑫ AGGREGATE SHOULDERS TYPE A 8"
- ⑬ TRAFFIC BARRIER TERMINAL, TYPE 6 OR 6 (SPECIAL)
- ⑭ BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) OR BRIDGE APPROACH PAVEMENT
- ⑮ STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POST
- ⑯ PROPOSED PAVEMENT MARKING
- ⑰ EXISTING PCC BASE COURSE WIDENING 8"
- ⑱ SAW CUT INCLUDED WITH PAVEMENT REMOVAL
- ▨ EXISTING PAVEMENT REMOVAL



FINAL STAGE TYPICAL CROSS SECTION
STA. 656+89.00 TO STA. 657+12.00

FILE NAME = 090148-sht-typsections.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS U.S. ROUTE 45			F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 2038 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	6	CONTRACT NO. 78161		
ILR ILLINOIS PROFESSIONAL DESIGN FIRM L9 / P8 / SE CORP. 184-90099	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
		DATE - 04/05/11	REVISED -									

PAVEMENT MARKING SCHEDULE										
LOCATION	PAINT PAVEMENT MARKING				SHORT TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	TEMPORARY		PERMANENT							
	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE						
	70300220	70300220	78001110	78001110	70300100	70301000	78300100	78100100	78100105	78300200
	FOOT	FOOT	FOOT	FOOT	FOOT	SQ FT	SQ FT	EACH	EACH	EACH
FAP 328 US 45										
CL. STA 650+95 TO CL. STA 658+71		194		194	112	65	65	8	2	10
LT. STA 650+95 TO LT. STA 658+71	776		776			259	259			
RT. STA 650+95 TO RT. STA 658+71	776		776			259	259			
SUBTOTAL	1552	194	1552	194	112	583	583	8	2	10
TOTAL		1746		1746	112	583	583	8	2	10

GUARDRAIL SCHEDULE														
LOCATION	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARD RAIL TYPE A 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL TYPE 6	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL TYPE 6 (SPECIAL)	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKERS TYPE A							
								63200310	63000001	63100085	63100167	X6310218	78201000	78200410
								FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
FAP 328 US 45														
STAGE I														
LT. STA 653+89 TO LT. STA 654+16.88	28													
LT. STA 655+39.12 TO LT. STA 656+17	78													
LT. STA 653+88 TO LT. STA 654+14.50					1									
LT. STA 655+54 TO LT. STA 658+12.15		162.5	1	1		1								
LT. STA 653+88 TO LT. STA 658+12.15							7							
STAGE II														
RT. STA 653+89 TO RT. STA 654+16.88	28													
RT. STA 655+39.12 TO RT. STA 656+17	78													
RT. STA 653+88 TO RT. STA 654+14.50					1									
RT. STA 655+54 TO RT. STA 657+12.15		62.5	1	1		1								
RT. STA 653+88 TO RT. STA 657+12.15							5							
TOTAL	212	225	2	2	2	2	12							

SEEDING SCHEDULE								
LOCATION	SEEDING CLASS 2	SEEDING CLASS 7	TEMPORARY EROSION CONTROL SEEDING *	NITROGEN FERTILIZER NUTRIENT**	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2
	25000200	25000350	28000250	25000400	25000500	25000600	25000700	25100115
	ACRE	ACRE	LBS	LBS	LBS	LBS	TONS	ACRE
FAP 328 US 45								
STAGE I								
LT STA 652+45 TO LT 654+05	0.02	0.02	8	3	2	2	0.04	0.04
LT STA 655+52 TO LT 658+71	0.14	0.14	56	18	13	13	0.28	0.28
STAGE II								
RT STA 652+45 TO RT 654+05	0.02	0.02	8	2	2	2	0.04	0.04
RT STA 655+52 TO RT 658+71	0.07	0.07	27	9	6	6	0.14	0.13
TOTAL	0.25	0.25	99	32	23	23	0.50	0.49

* 100 LBS/ACRE FOR 4 APPLICATIONS
 ** 90 LBS/ACRE FOR SEEDING CLASS 2 AND 40 LBS/ACRE FOR SEEDING CLASS 7

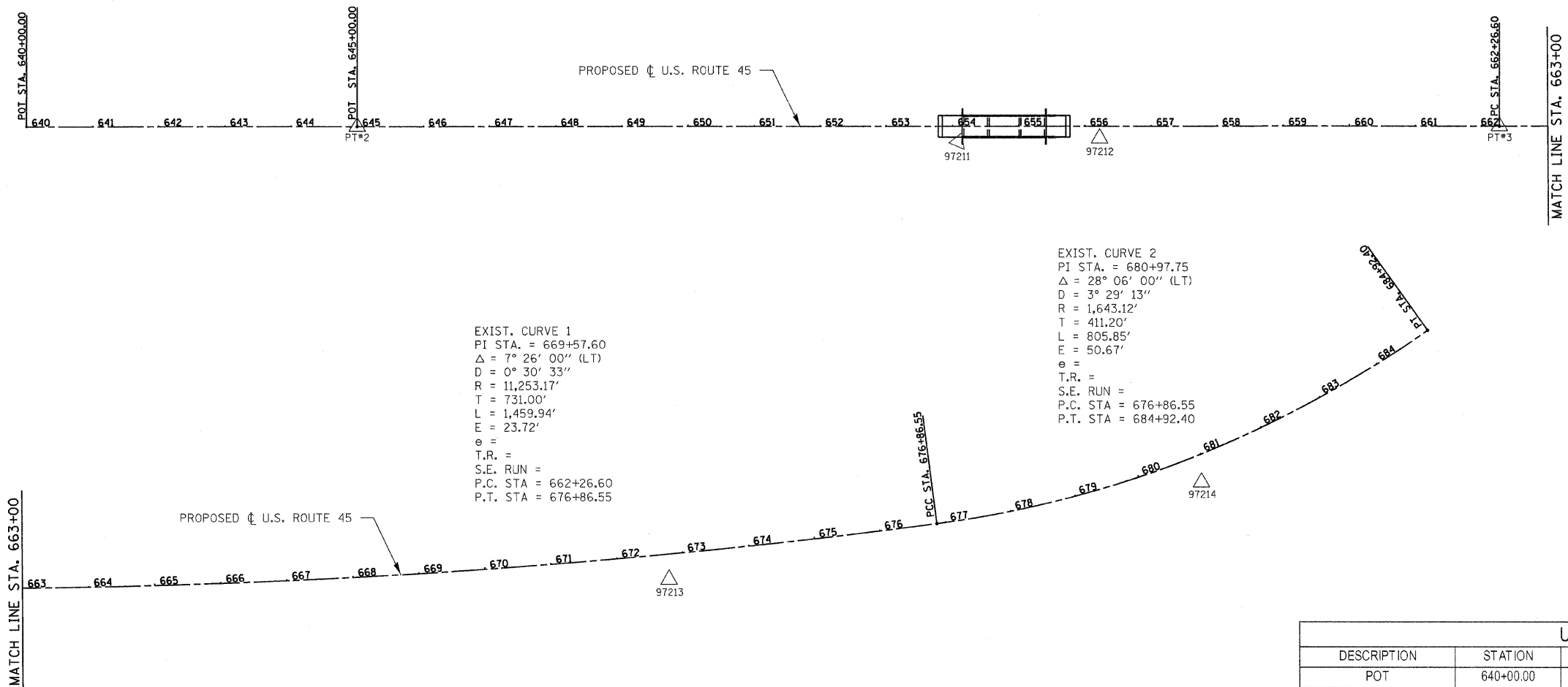
MAINTENANCE OF TRAFFIC SCHEDULE										
LOCATION	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	TEMPORARY BRIDGE TRAFFIC SIGNALS	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3					
						70400100	70400200	70106500	Z0030250	Z0030350
						FOOT	FOOT	EACH	EACH	EACH
FAP 328 IL US 45										
STAGE I										
STA 650+95 TO STA 658+67	450		1	2						
STAGE II										
STA 650+95 TO STA 658+67		425			2					
TOTAL	450	425	1	2	2					

ROADWAY SCHEDULE													
LOCATION	HOT-MIX ASPHALT SURFACE COURSE MIX C, N90	LEVELING BINDER (MACHINE METHOD) N90	HOT-MIX ASPHALT BASE COURSE WIDENING 10 3/4"	AGGREGATE SURFACE COURSE TYPE B	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	BITUMINOUS MATERIAL PRIME COAT	AGGREGATE PRIME COAT	HOT-MIX ASPHALT SURFACE REMOVAL BUTT-JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT SHOULDERS 8"	AGGREGATE SHOULDERS TYPE A 8"	BRIDGE DECK GROOVING	PROTECTIVE COAT
	40603320	40600645	35600719	40200800	42001420	40600100	40600300	40600982	40600990	48203029	48100700	50300260	50300300
	TON	TON	SQ YD	TON	SQ YD	GAL	TON	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD
FAP 328 US 45													
STAGE I													
RT STA 652+67 TO RT 657+12			74		22				18	69	22		
LT STA 652+67 TO LT 656+89			100						18				
STAGE II													
LT STA 653+18 TO LT 658+71					22				18	99	22		
									18				
CL STA. 653+18.00 TO CL STA 654+14.5	19	3		33		21	1	107	18				
CL STA 655+41.5 TO CL STA 658+71.00	84	36				98	2	87	14		65		
BRIDGE SN 097-0076												623	814
TOTAL	103	39	174	33	44	119	3	194	104	168	109	623	814

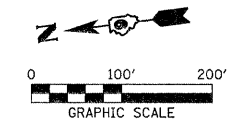
44000100 PAVEMENT REMOVAL SCHEDULE	
LOCATION	SQ YD
FAP 328 US 45	
STAGE I	
RT. STA 653+36 TO RT. STA 653+78.50	12
RT. STA 653+78.50 TO RT. STA 654+16.88	72
RT. STA 654+16.88 TO RT. STA 654+24.80	19
RT. STA 655+27.20 TO RT. STA 655+39.12	19
RT. STA 655+39.12 TO RT. STA 655+77.50	72
RT. STA 655+77.50 TO RT. STA 656+50	20
LT. STA 653+36 TO LT. STA 653+78.50	12
LT. STA 653+78.50 TO LT. STA 654+16.88	11
LT. STA 655+39.12 TO LT. STA 655+77.50	11
LT. STA 655+77.50 TO LT. STA 656+50	20
STAGE II	
LT. STA 653+78.50 TO LT. STA 654+16.88	62
LT. STA 654+16.88 TO LT. STA 654+24.80	15
LT. STA 655+27.20 TO LT. STA 655+39.12	15
LT. STA 655+39.12 TO LT. STA 655+77.50	62
TOTAL	422

EARTHWORK SUMMARY							
LOCATION	EARTH EXCAVATION	ADDITIONAL EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE(25%)	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD			CUBIC YARD	CUBIC YARD	CUBIC YARD
FAP 328 US 45							
STAGE 1							
652+67 TO 654+14.5	38		25.00%	100.00%	29	4	25
655+41.5 TO 658+71	61		25.00%	100.00%	46	72	-26
STAGE 2							
652+67 TO 654+14.5	29		25.00%	100.00%	22	22	0
655+41.5 TO 658+71	58		25.00%	100.00%	44	312	-268
CHANNEL EXCAVATION		850	25.00%	75.00%	478		478
TOTAL	186	850			619	410	209
					WASTE =	209	CU.YD.

28000400 PERIMETER EROSION BARRIER	
LOCATION	FOOT
FAP 328 US 45	
STAGE I	
LT. STA 652+67 TO LT. STA 654+05	122
LT. STA 655+52 TO LT. STA 658+71	331
RT. STA 652+45 TO RT. STA 654+05	142
RT. STA 655+52 TO RT. STA 658+71	324
TOTAL	919

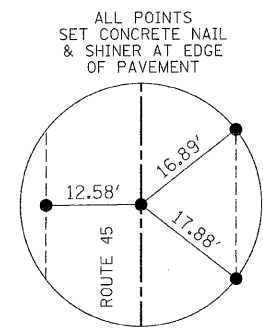


EXIST. CURVE 1
 PI STA. = 669+57.60
 $\Delta = 7^\circ 26' 00''$ (LT)
 $D = 0^\circ 30' 33''$
 $R = 11,253.17'$
 $T = 731.00'$
 $L = 1,459.94'$
 $E = 23.72'$
 $e =$
 $T.R. =$
 $S.E. RUN =$
 $P.C. STA = 662+26.60$
 $P.T. STA = 676+86.55$

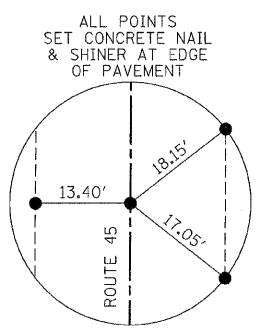


MATCH LINE STA. 663+00

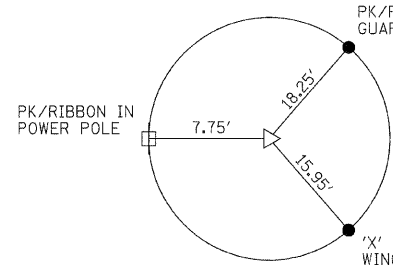
MATCH LINE STA. 663+00



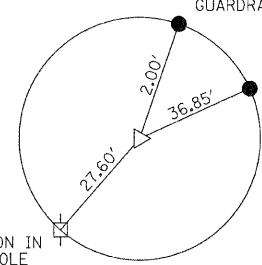
P.C.
 SET PK NAIL
 STA. 662+26.60
 N: 559379.1289
 E: 979040.1541



P.O.T.
 SET MAG NAIL
 STA. 645+15.00
 N: 561090.6357
 E: 979260.3280



CP*97211
 IRON PIN / CAP
 23.59' RT. STA. 654+08.77
 N. 560192.288
 E. 979121.043

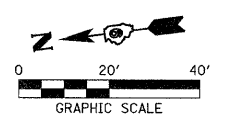


CP*97212
 IRON PIN / CAP
 18.51' RT. STA. 656+22.24
 N. 559979.922
 E. 979098.862

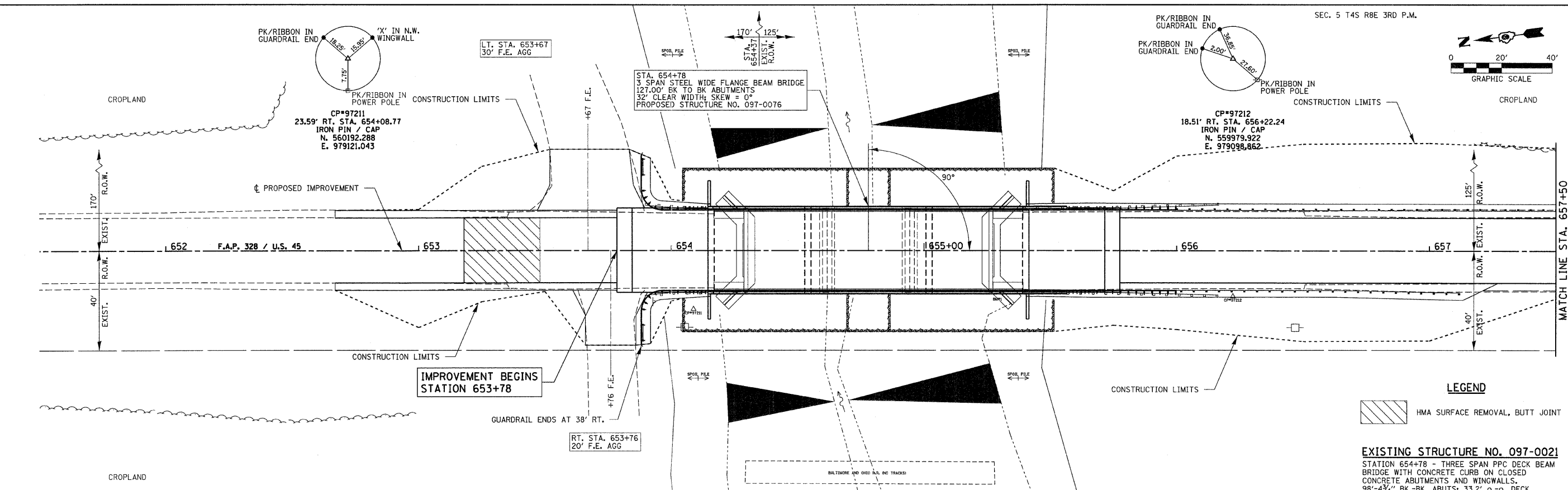
US 45 CENTERLINE					
DESCRIPTION	STATION	OFFSET	NORTHING	EASTING	ELEVATION
POT	640+00.00	0	561586.4417	979324.9538	
POT	645+00.00	0	561090.6357	979260.3280	
PC	662+26.60	0	559378.1289	979040.1541	
PI	669+57.60		558653.0993	978946.9381	
PT	676+86.55	0	557922.1031	978948.3043	

CONTROL POINTS					
POINT NUMBER	STATION	OFFSET	NORTHING	EASTING	ELEVATION
97211\CP#	654+08.77	RT. 23.59	560192.288310	979121.043710	384.340
97212\CP#	656+22.24	RT. 18.51	559979.921600	979098.861830	383.820
97213\CP#	672+75.72	RT. 38.01	558334.169480	978917.047750	379.990
97214\CP#	680+85.80	RT. 39.53	557517.276490	978958.955190	385.530
PT#2	645+00.00	0	561090.635714	979260.328811	
PT#3	662+26.60	0	559378.1289	979040.1541	

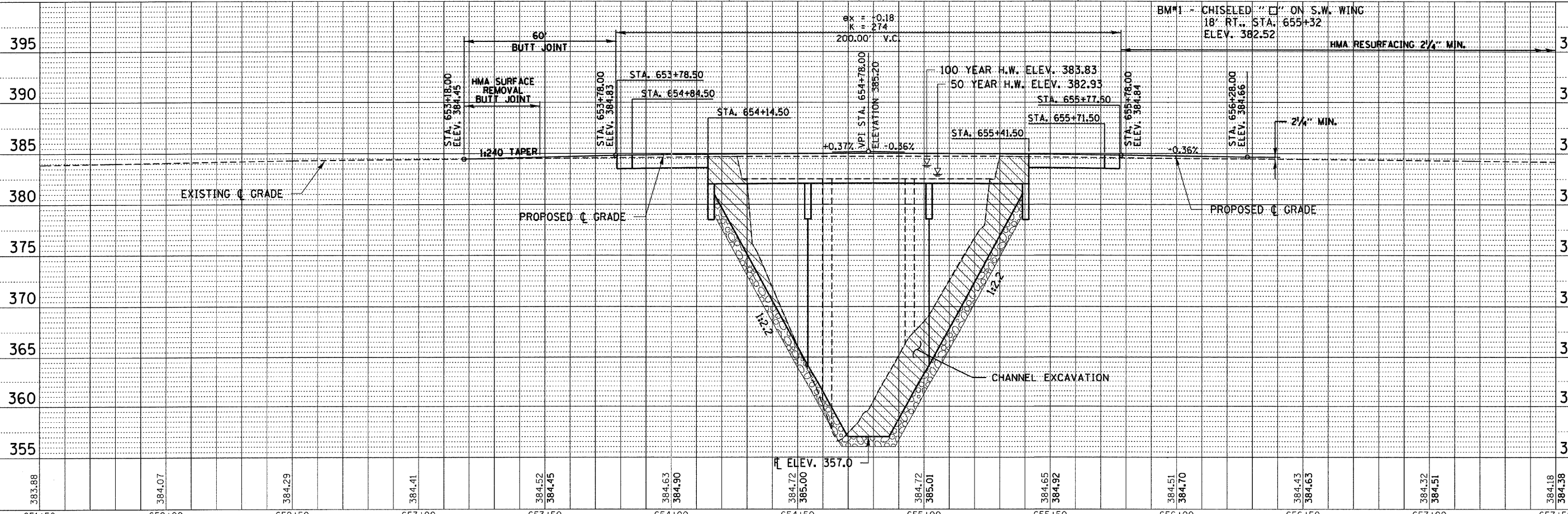
BENCHMARK
 BM#1 - CHISLED "□" ON S.W. WING
 OF STR. 097-0021
 18' RT. STA. 655+32
 ELEV. 382.52



PLAN	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	DATE	
	NO. OF WAYS CHECKED	
	CADD FILE NAME	



PROFILE	SURVEYED	DATE
	PLOTTED	BY
	CHECKED	
	DATE	
	BLM. NOTED	
	STRUCTURE NOTATIONS OK'D	



651+50	652+00	652+50	653+00	653+50	654+00	654+50	655+00	655+50	656+00	656+50	657+00	657+50
383.88	384.07	384.29	384.41	384.52 384.45	384.63 384.90	384.72 385.00	384.72 385.01	384.65 384.92	384.51 384.70	384.43 384.63	384.32 384.51	384.18 384.38

FILE NAME = 090148-ah-pp2.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 308 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-000009

USER NAME =
 PLOT SCALE =
 PLOT DATE = 7/13/2011

DESIGNED - L.F.S.
 DRAWN - D.T.M.
 CHECKED - J.W.F.
 DATE - 04/05/11

REVISED -
 REVISED -
 REVISED -
 REVISED -

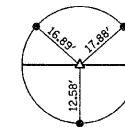
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
 US ROUTE 45
 SCALE: 20H:5V
 SHEET NO. 1 OF 2 SHEETS
 STA. 651+50.000 TO STA. 657+50.000

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	1058-1	WHITE	54	10
CONTRACT NO. 78161				
ILLINOIS FED. AID PROJECT				

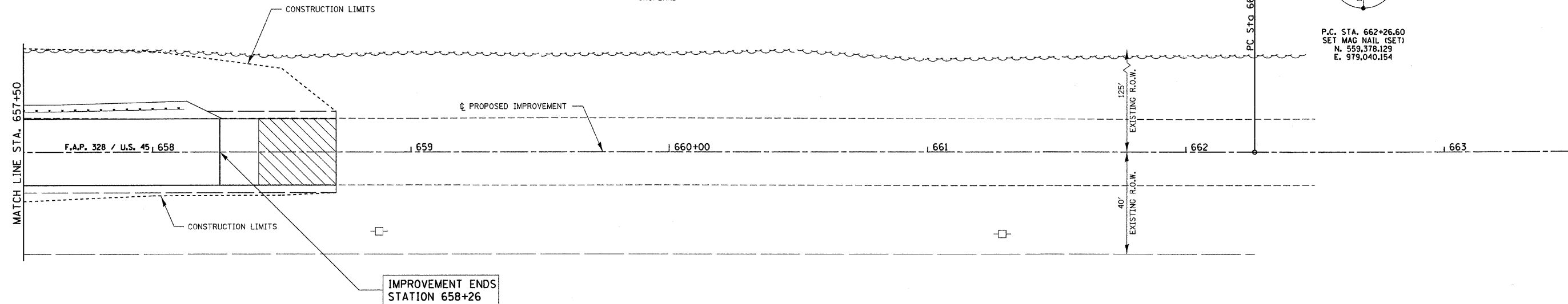
SEC. 5 T4S R8E 3RD P.M.

ALL POINTS
SET CONCRETE NAIL
& SHINER AT EDGE
OF PAVEMENT



P.C. STA. 662+26.60
SET MAG NAIL (SET)
N. 559,378.129
E. 979,040.154

CROPLAND



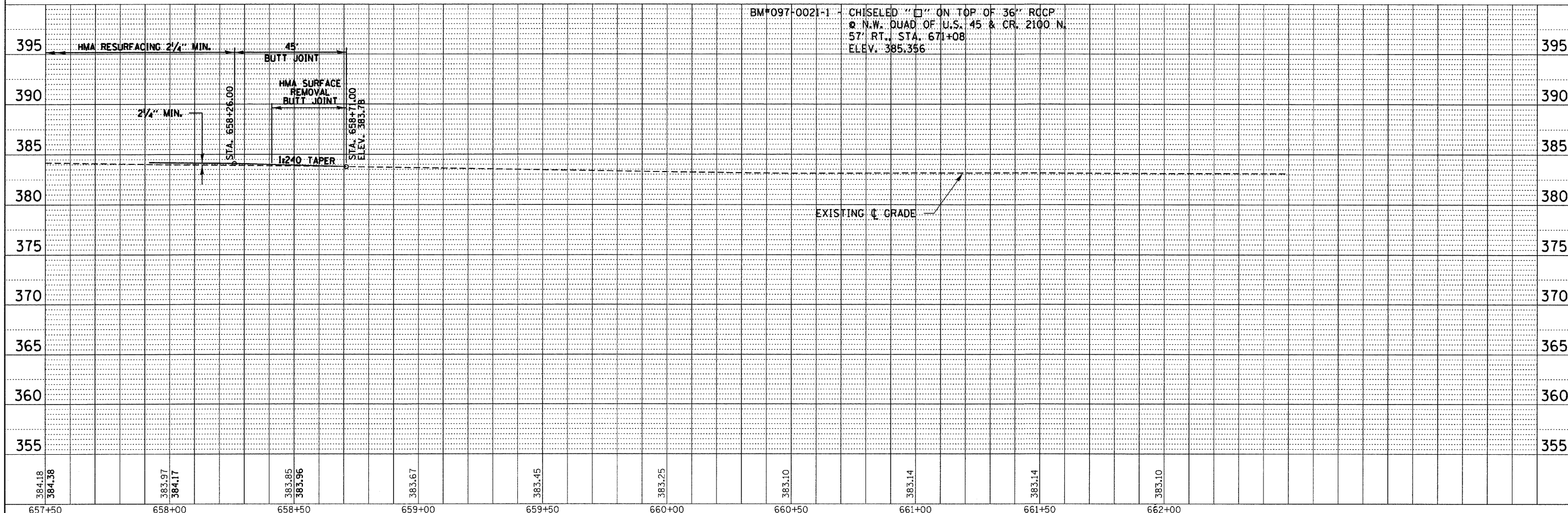
IMPROVEMENT ENDS
STATION 658+26

LEGEND

HMA SURFACE REMOVAL, BUTT JOINT

PLAN	SURVEYED	DATE
	PLOTTED	
	NOTED	
	BY	
	NO.	

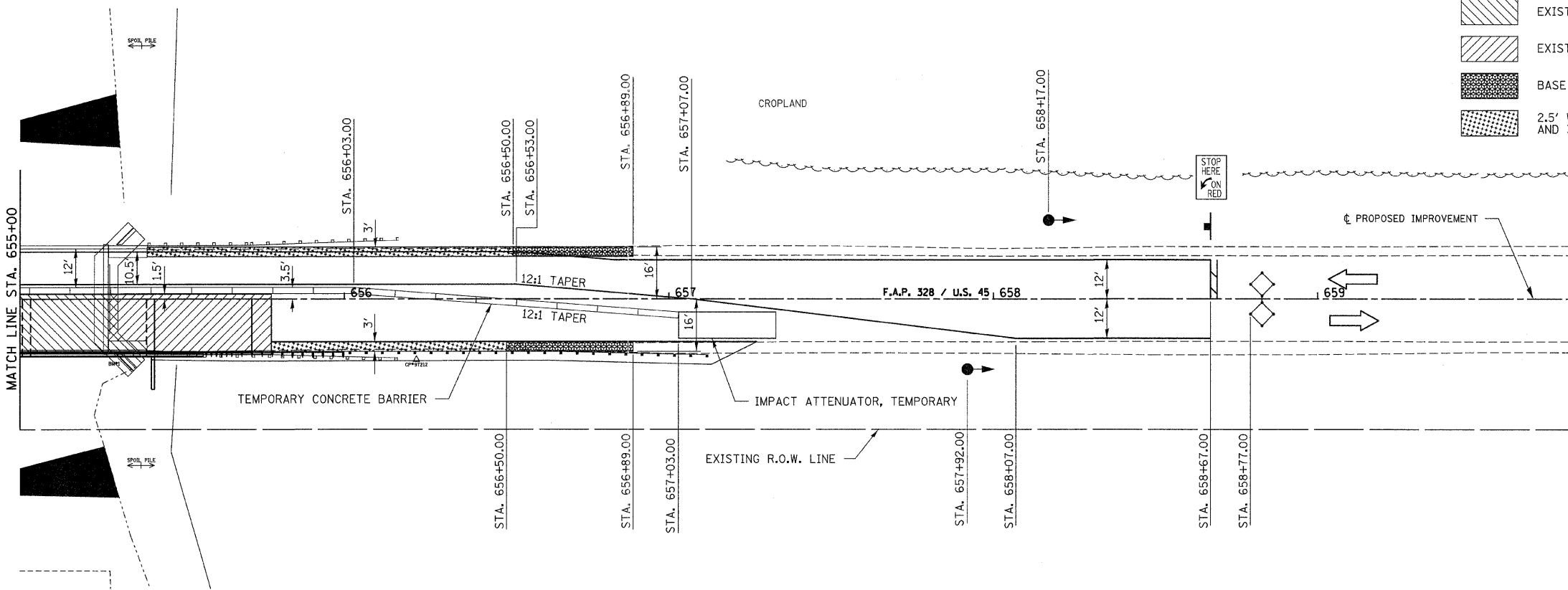
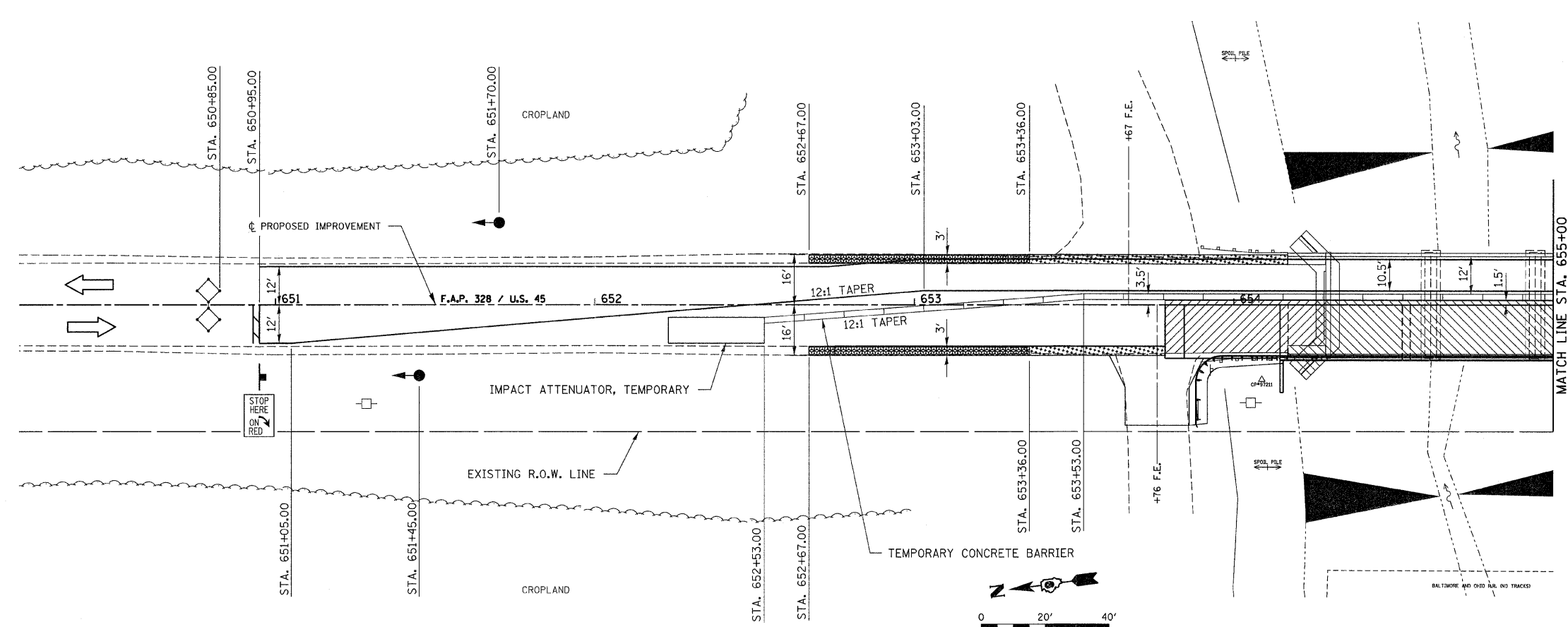
PROFILE	SURVEYED	DATE
	PLOTTED	
	NOTED	
	BY	
	NO.	



BM*097-0021-1 CHISELED "□" ON TOP OF 36" RCPC
N.W. QUAD OF U.S. 45 & CR. 2100 N.
57' RT. STA. 671+08
ELEV. 385.356

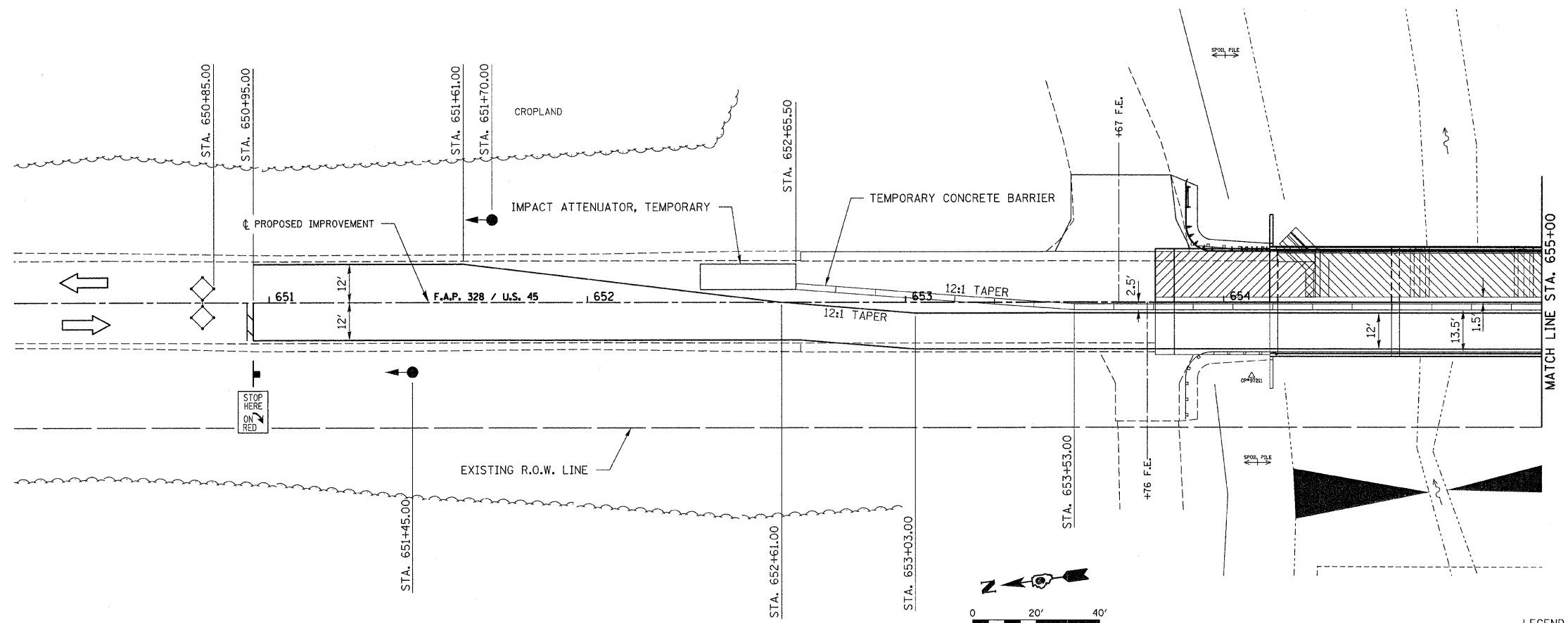
EXISTING G. GRADE





FILE NAME = 090148-ah-pp3.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE US ROUTE 45	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760	PLLOT SCALE =	DRAWN - D.T.M.	REVISED -			328	105B-1	WHITE	54	11	
ILLINOIS PROFESSIONAL DESIGN FIRM L5 / P6 / SE CORP. 184.000088	PLLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -			CONTRACT NO. 78161					
		DATE = 04/05/11	REVISED -			SCALE: 20H5V	SHEET NO. 2 OF 2 SHEETS	STA. 657+50.000 TO STA. 663+00.000	ILLINOIS FED. AID PROJECT		

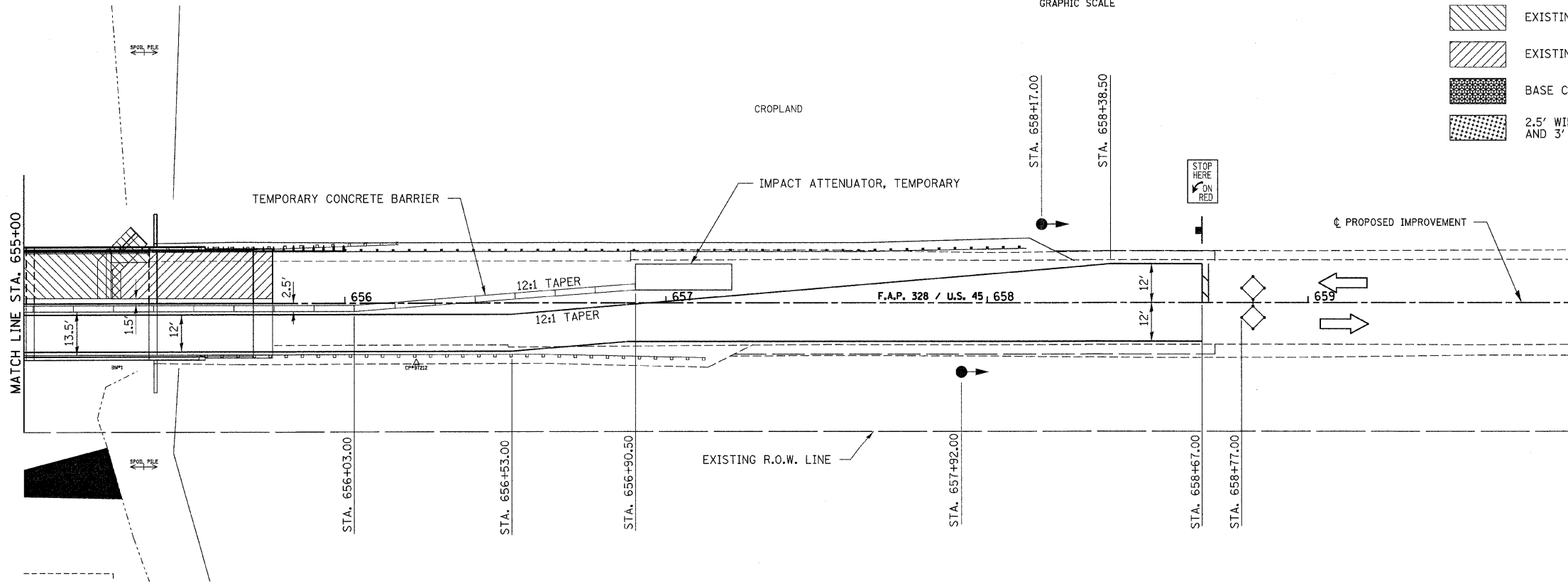


- LEGEND**
- EXISTING STRUCTURE REMOVAL
 - EXISTING PAVEMENT REMOVAL
 - BASE COURSE WIDENING
 - 2.5' WIDE PAVEMENT REMOVAL AND 3' BASE COURSE WIDENING

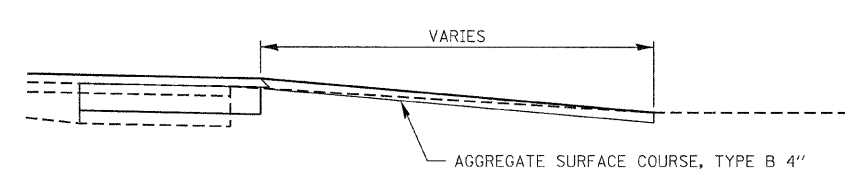
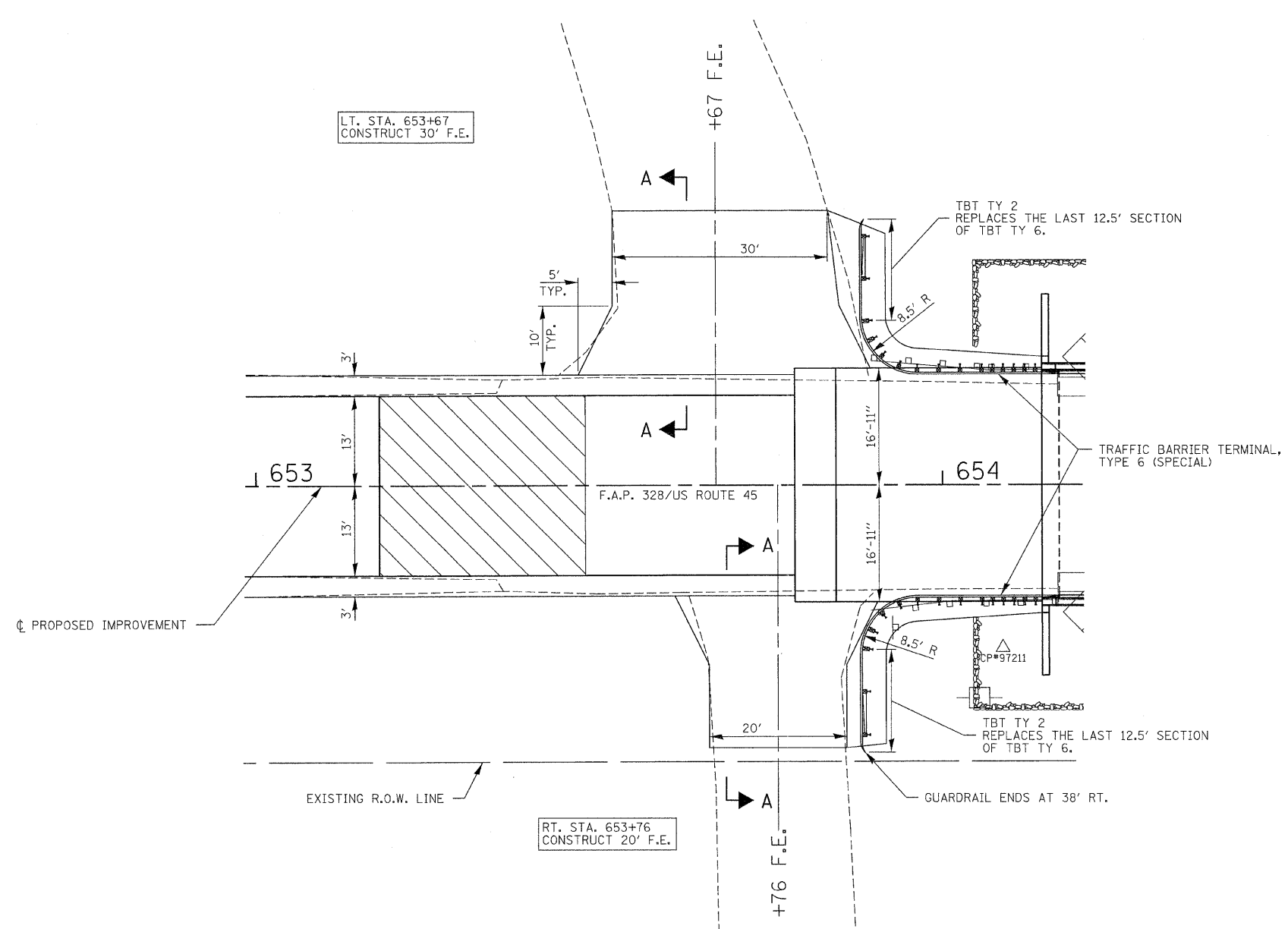
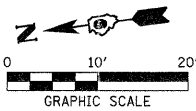
FILE NAME = 090148-sh1-stages.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE 1 PLAN VIEW US ROUTE 45			F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
HAMPTON, LENZINI AND RENWICK, INC. 3435 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - T.W.K.	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	328	105B-1	WHITE	54	12
HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00099	PLOT DATE = 7/13/2011	CHECKED - L.F.S.	REVISED -		CONTRACT NO. 78161										
		DATE - 04/05/11	REVISED -		[ILLINOIS] FED. AID PROJECT										



- LEGEND**
-  EXISTING STRUCTURE REMOVAL
 -  EXISTING PAVEMENT REMOVAL
 -  BASE COURSE WIDENING
 -  2.5' WIDE PAVEMENT REMOVAL AND 3' BASE COURSE WIDENING

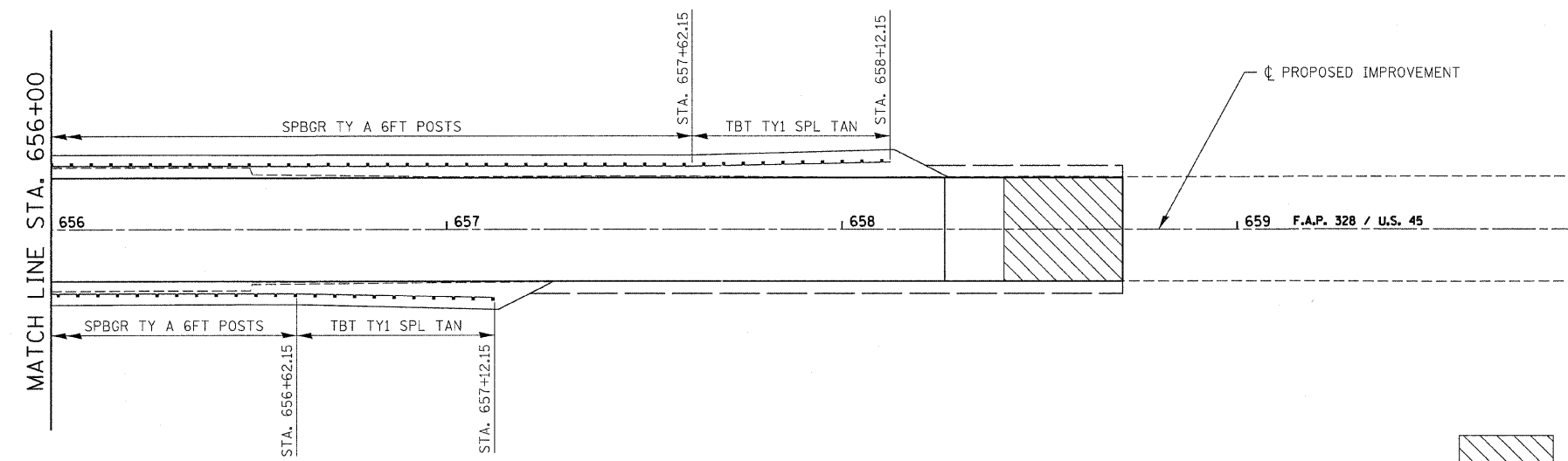
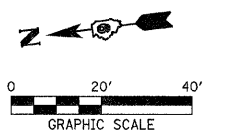
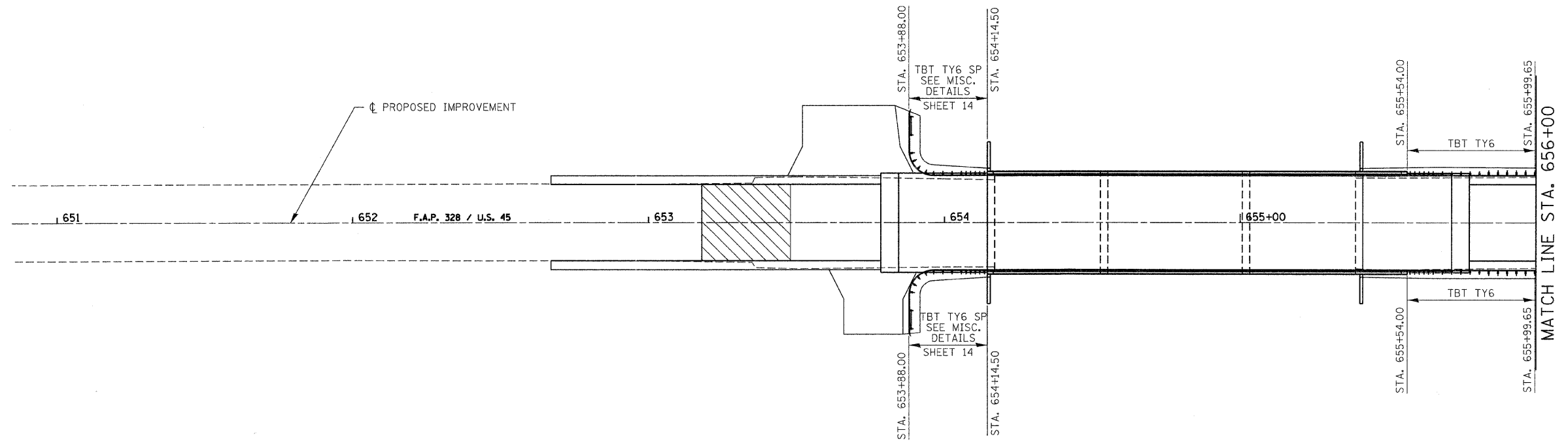


FILE NAME = 090148-shr-stages.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE 2 PLAN VIEW US ROUTE 45			F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3048 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	13			
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.003959	PLOT DATE = 7/13/2011	CHECKED - L.F.S.	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 78161				
		DATE - 04/05/11	REVISED -		ILLINOIS FED. AID PROJECT							

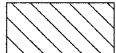


ENTRANCE AND GUARDRAIL DETAIL

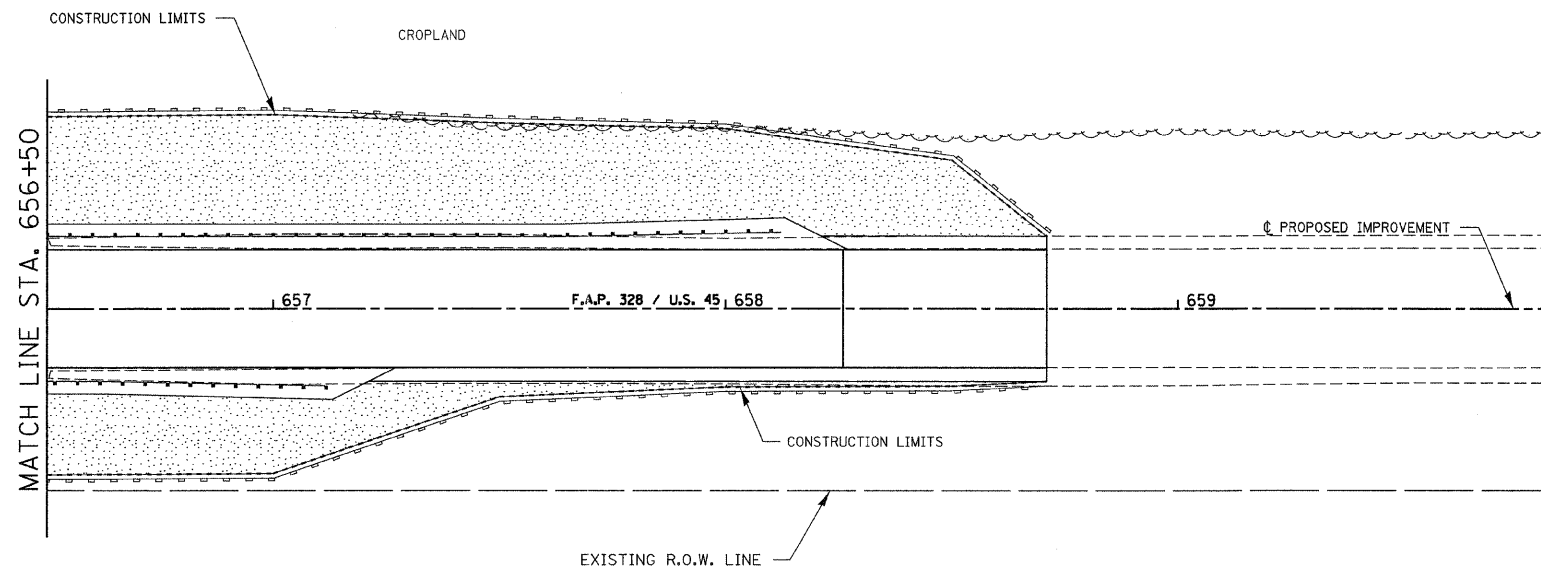
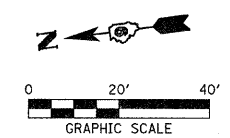
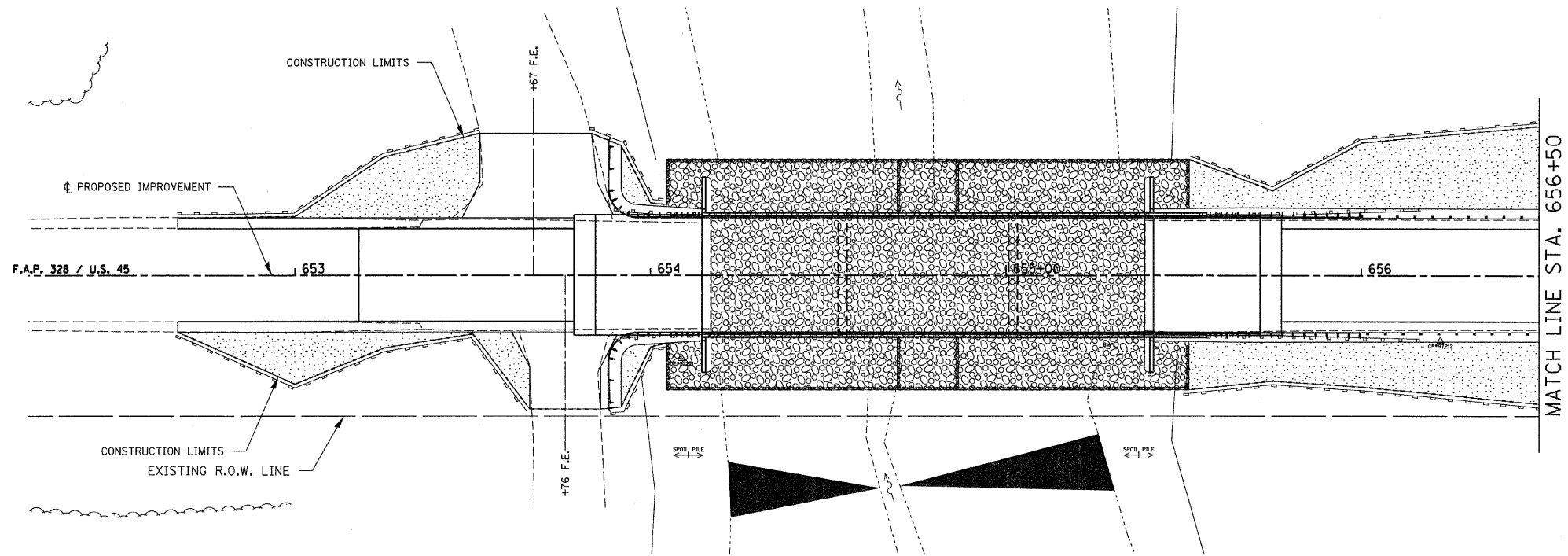
FILE NAME = 090148-sht-miscdet.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISCELLANEOUS DETAILS US ROUTE 45		F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	14	CONTRACT NO. 78161		
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002968	PLLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.	ILLINOIS FED. AID PROJECT
		DATE - 04/05/11	REVISED -									






LEGEND

 HMA SURFACE REMOVAL BUTT JOINT

FILE NAME = 090148-eh-guardrail.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GUARDRAIL LAYOUT US ROUTE 45	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2048 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	DRAWN - T.W.K.	REVISED -			328	105B-1	WHITE	54	15	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM 1.5 / PE / SE CORP. 184-000609	PLLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -			CONTRACT NO. 78161					
	DATE - 04/05/11	REVISED -	REVISED -			SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT		



LEGEND

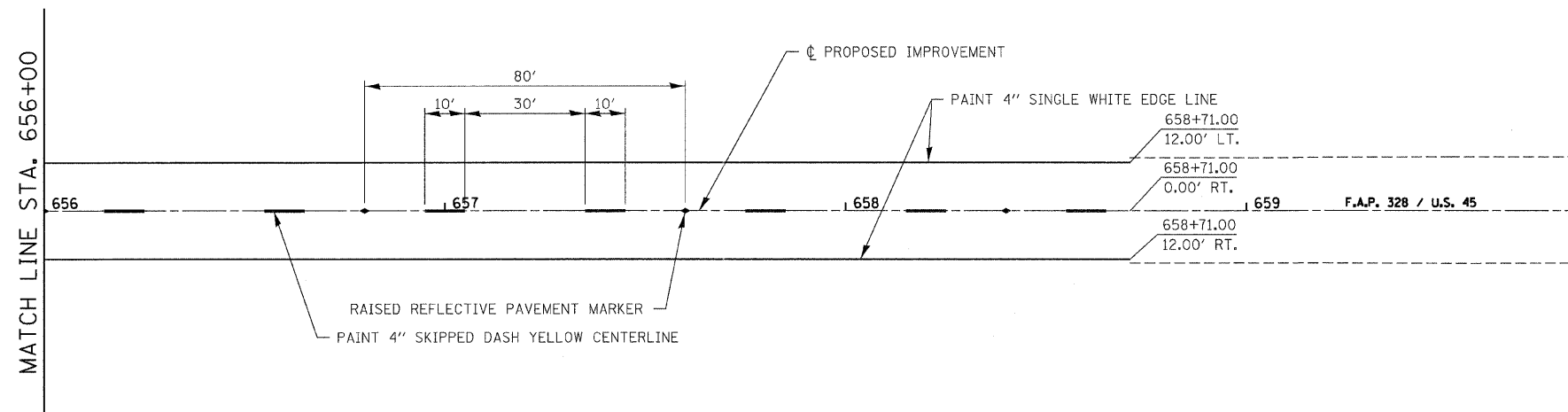
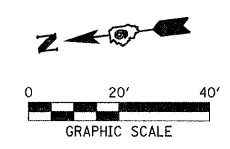
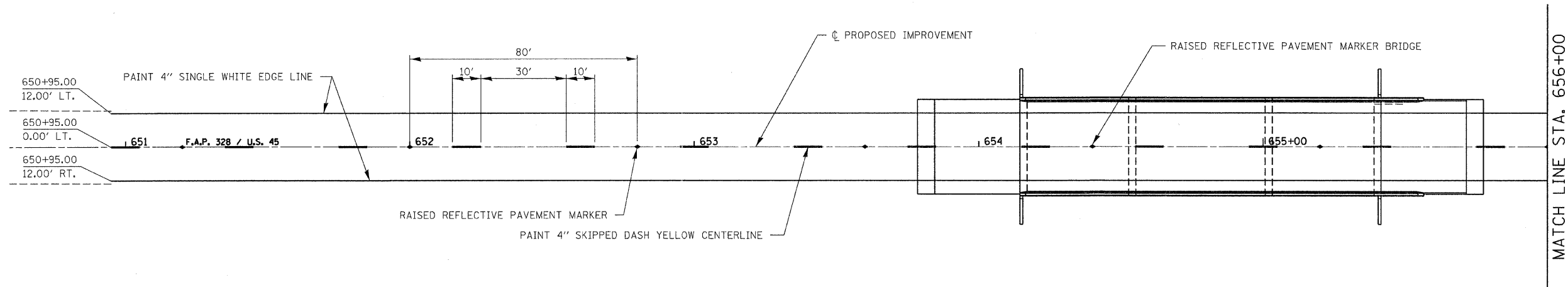
	RIPRAP CLASS A4
	PERIMETER EROSION BARRIER
	SEEDING, CLASS 2

FILE NAME = @92148-sht-erosion.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - T.W.K.	REVISED -
	PLOT SCALE =	CHECKED - J.W.F.	REVISED -
	PLOT DATE = 7/13/2011	DATE - 04/05/11	REVISED -

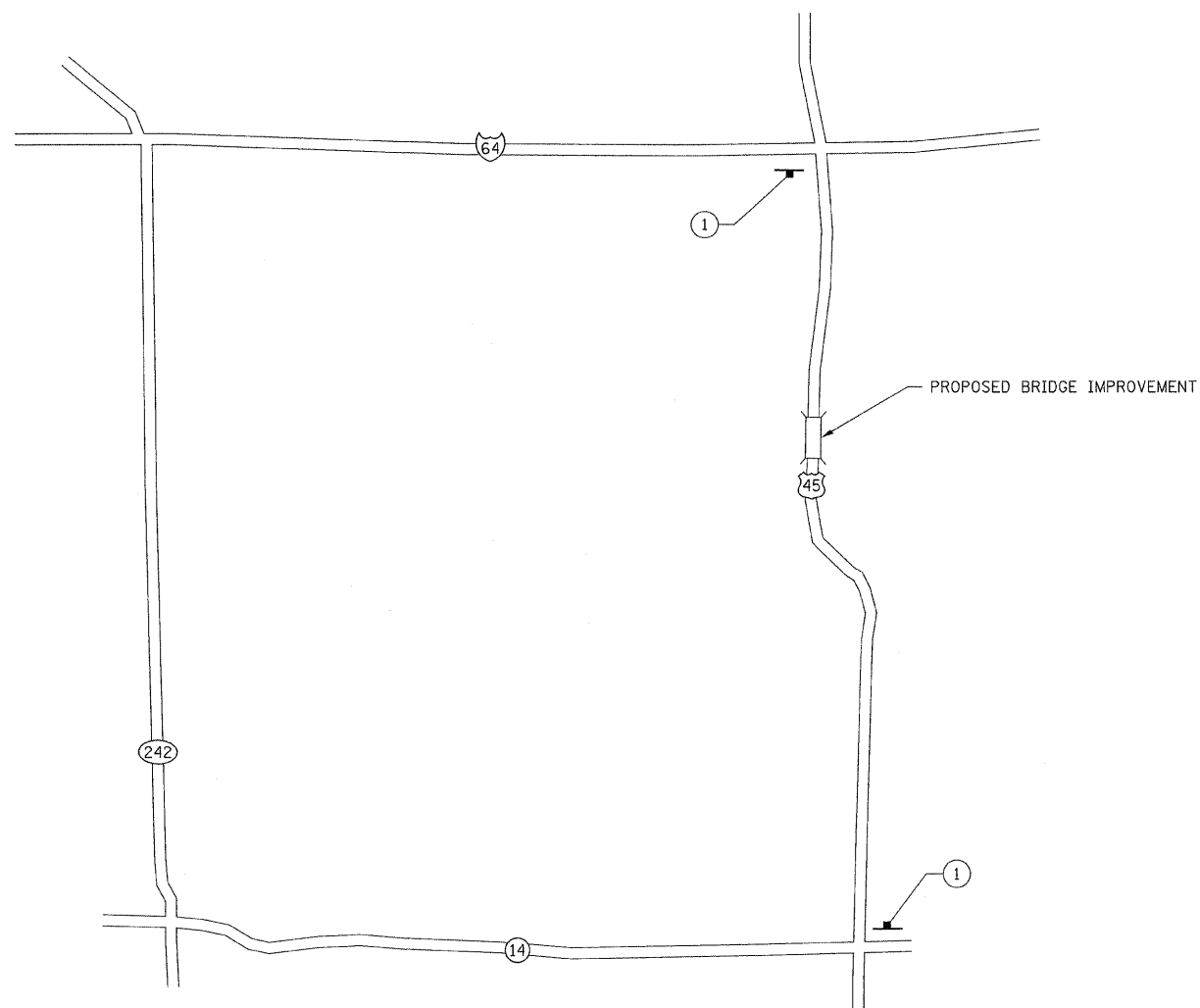
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EROSION CONTROL PLAN US ROUTE 45				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

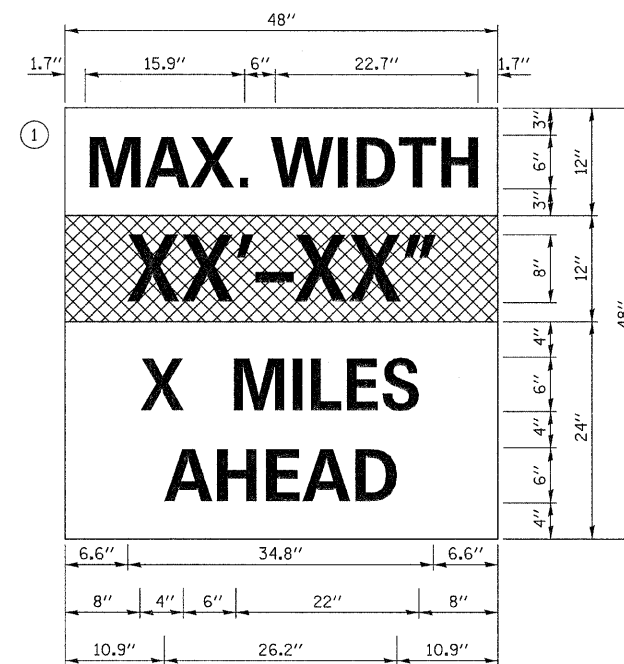
F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	105B-1	WHITE	54	16
CONTRACT NO. 78161				
ILLINOIS FED. AID PROJECT				



FILE NAME = 090148-shtrpvmkrk.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING PLAN US ROUTE 45				F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62733	PLOT SCALE =	DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	17				
HLR ILLINOIS PROFESSIONAL DESIGN FIRM 18 / PE / SE CORP. 184-000089	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 78161				
		DATE - 04/05/11	REVISED -						FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



SIGN LEGEND



W12-I103

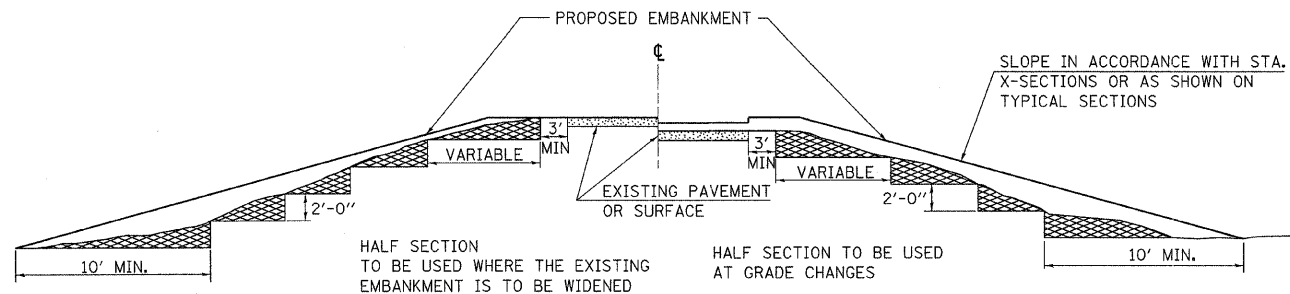
W12-I103 (WIDTH IS 80)
 NO BORDER, BLACK ON WHITE:
 "MAX WIDTH" D:
 NO BORDER, BLACK ON ORANGE:
 "XX'-XX'" D:
 NO BORDER, BLACK ON WHITE:
 "X MILES" D: "AHEAD" D:

DETOUR NOTES

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATION DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION. STD. 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-I103 SIGN SHALL BE 10'-6" FOR STAGE 1, AND 12'-0" FOR STAGE 2, OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.

FILE NAME = 092148-sht-detour.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDE LOAD DETOUR U.S. ROUTE 45			F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
HAMPTON, LENZINI AND RENWICK, INC. 3335 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703		DRAWN - T.W.K.	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	328	105B-1	WHITE	54	19
PLLOT SCALE =		CHECKED - J.W.F.	REVISED -		CONTRACT NO. 78161										
PLLOT DATE = 7/13/2011		DATE - 04/05/11	REVISED -		ILLINOIS FED. AID PROJECT										

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

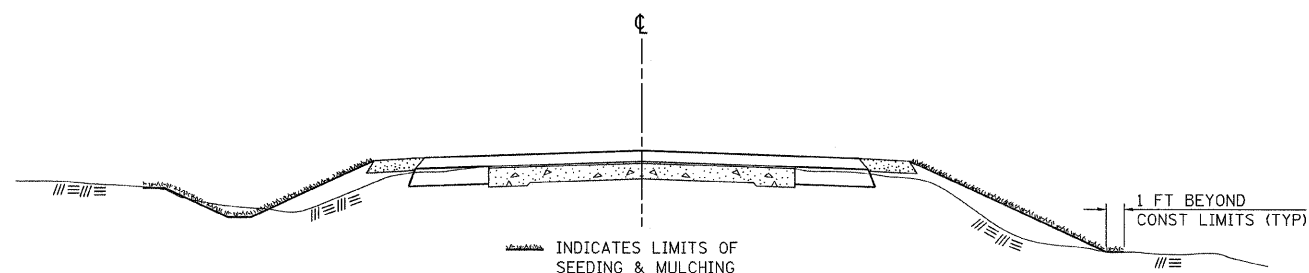


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

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

STD. 9-16

SEEDING & MULCHING



GENERAL NOTES

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

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

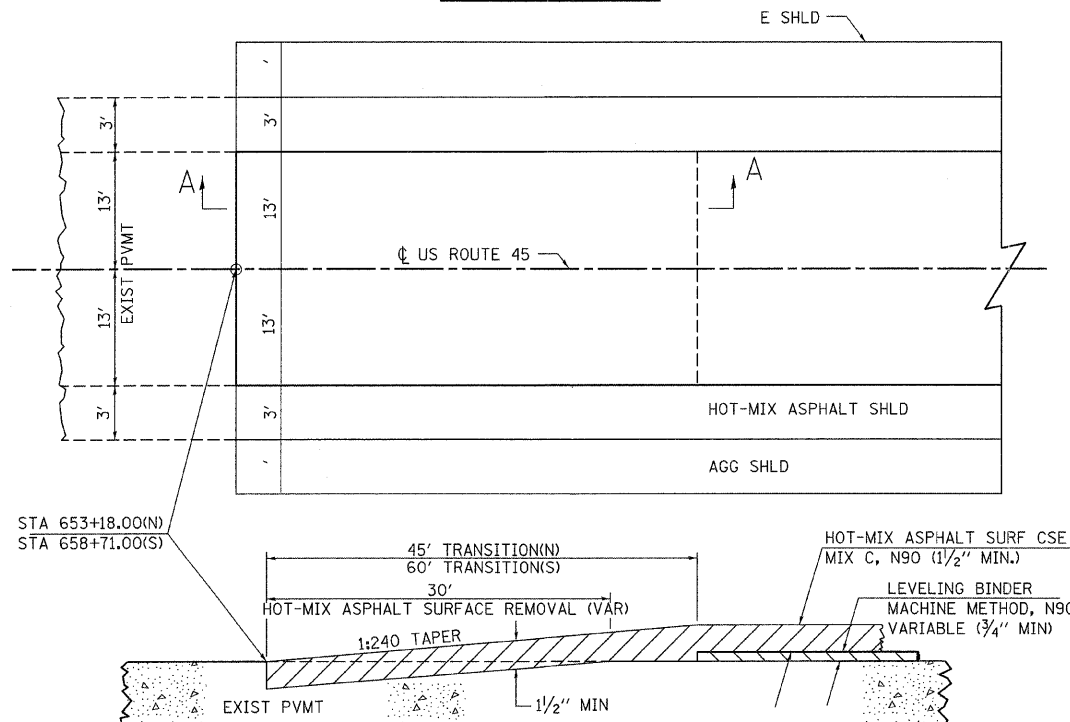
THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

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

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

STD. 9-12

BUTT JOINT



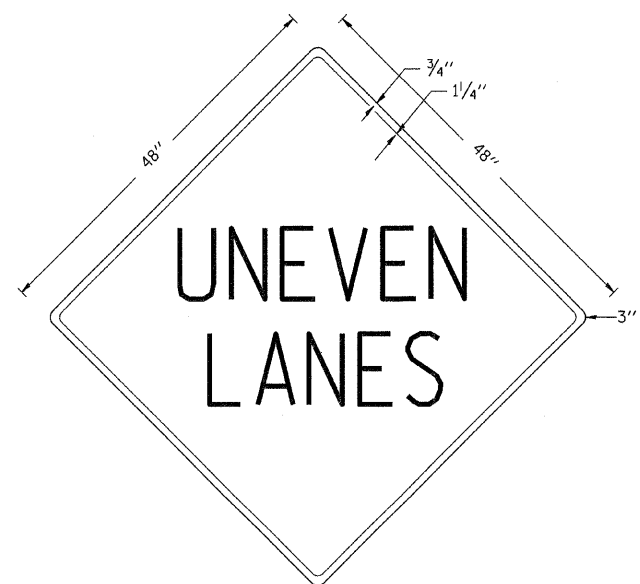
SECTION A-A

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

STD. 9-86

UNEVEN LANES SIGN

W8-11 (48" x 48")



COLORS:
LEGEND AND BORDER - BLACK NON-REFLECTORIZED
BACKGROUND - ORANGE REFLECTORIZED

NOTE: PRIOR TO ALLOWING TRAFFIC ON ANY PORTION OF THE ROADWAY THAT HAS BEEN COLDMILLED OR BEFORE RESURFACING OPERATIONS BEGIN, THE CONTRACTOR SHALL HAVE ERECTED "UNEVEN PAVEMENT" SIGNS THAT CONFORM TO THE ABOVE DETAILS. A MINIMUM OF ONE SIGN AT EACH END OF THE IMPROVEMENT WILL BE REQUIRED. THE CONTRACTOR SHALL MAINTAIN THE "UNEVEN PAVEMENT" SIGNS UNTIL THE RESURFACING OPERATIONS ARE COMPLETED.

IF AT ANY TIME THE SIGNS ARE IN PLACE BUT NOT APPLICABLE, THEY SHALL BE TURNED FROM THE VIEW OF MOTORISTS OR COVERED AS DIRECTED BY THE ENGINEER.

THE COST OF FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE REQUIRED SIGNS SHALL BE INCLUDED IN THE CONTRACT.

REVISIONS	
DRAWN	2-15-89
REVISED	4-5-93
REVISED	7-23-04
REVISED	8-8-08

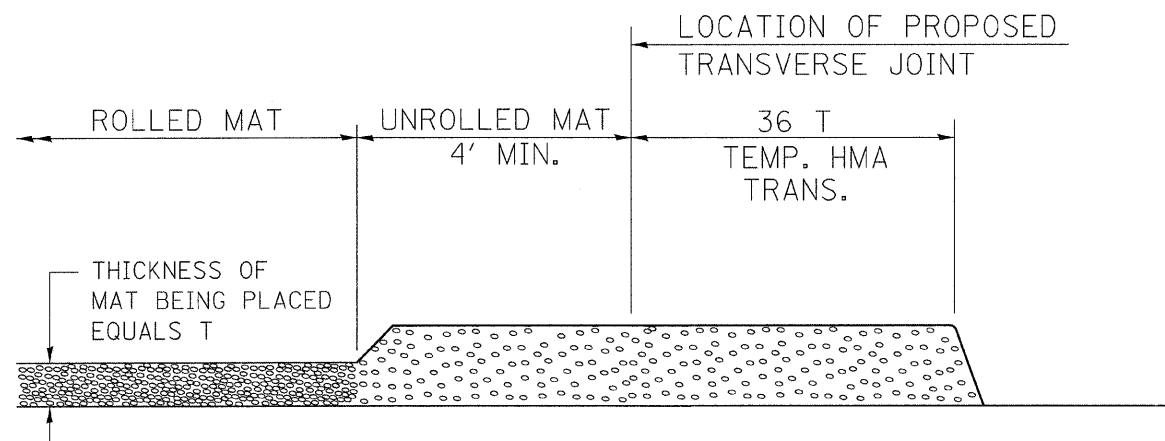
STD. 9-41

FILE NAME = 090148-shr-standards-d9.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 2085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00009	PLOT SCALE =	DRAWN - T.W.K.	REVISED -
	PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -
		DATE - 04/05/11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

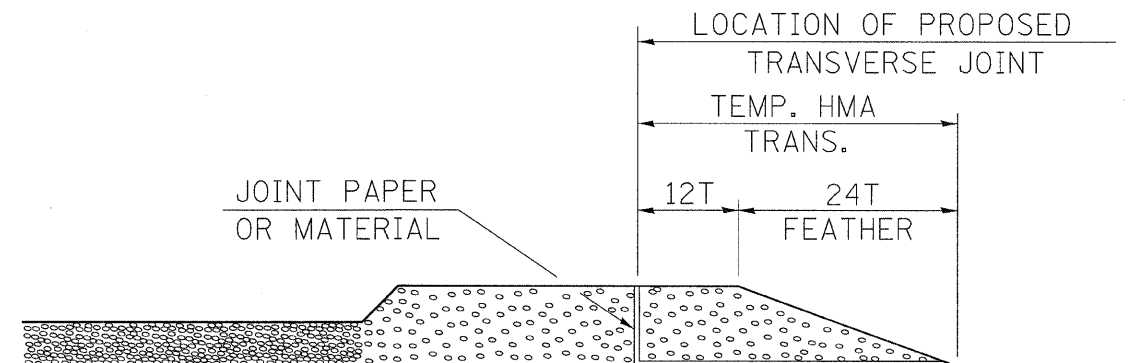
STANDARD DISTRICT 9 US ROUTE 45		F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.		328	105B-1	WHITE	54	20
		CONTRACT NO. 78161				
		ILLINOIS FED. AID PROJECT				

TEMPORARY HOT-MIX ASPHALT TRANSITIONS



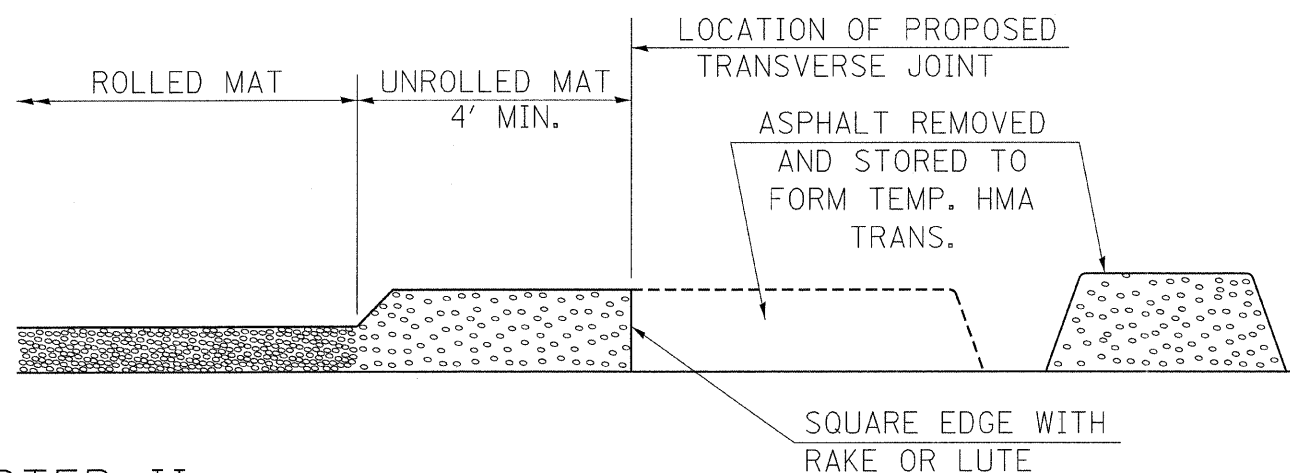
STEP I

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



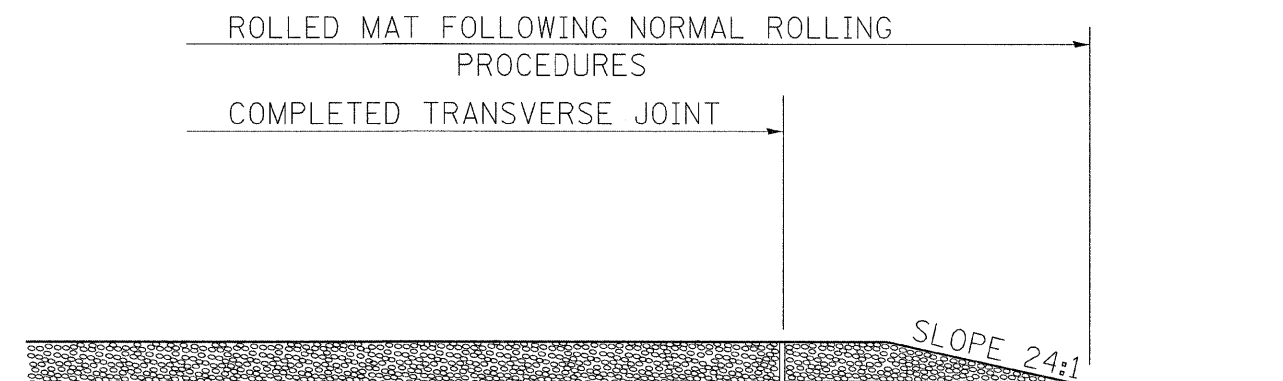
STEP III

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



STEP II

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



STEP IV

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

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

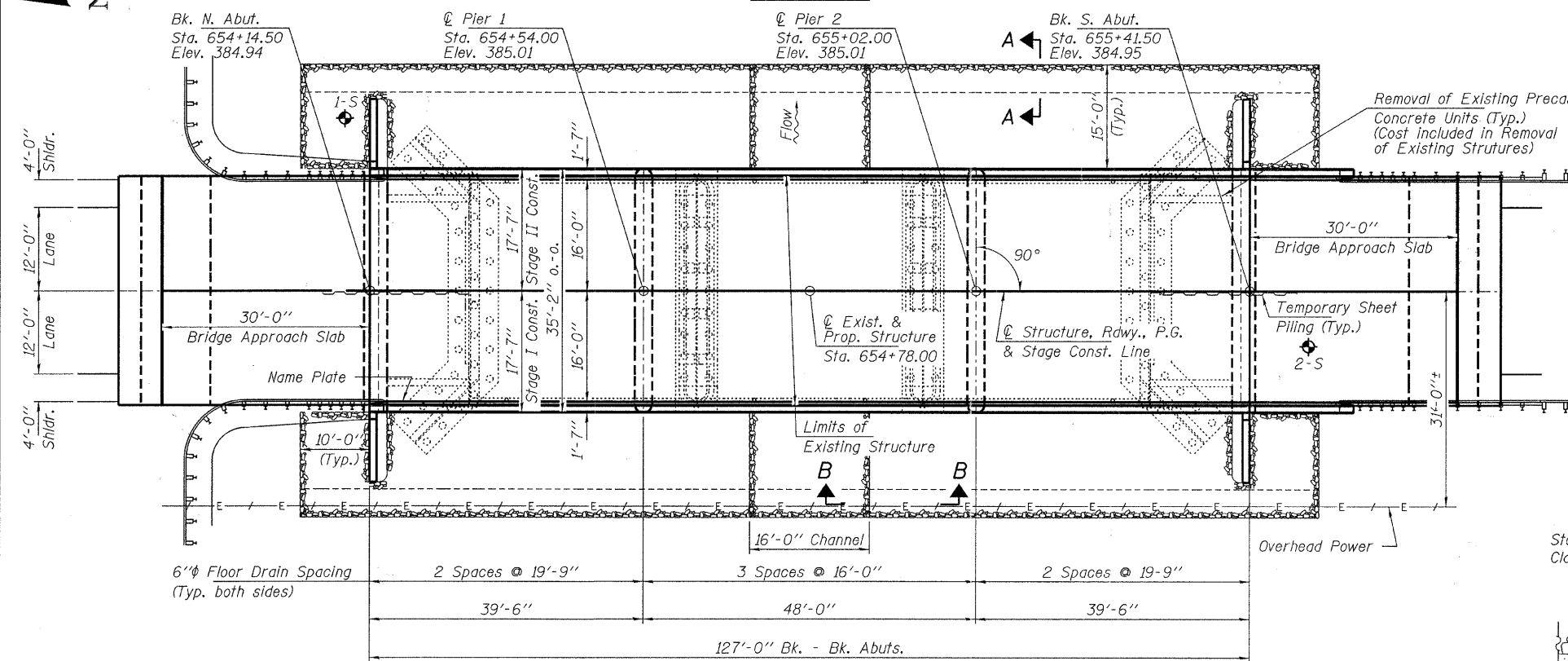
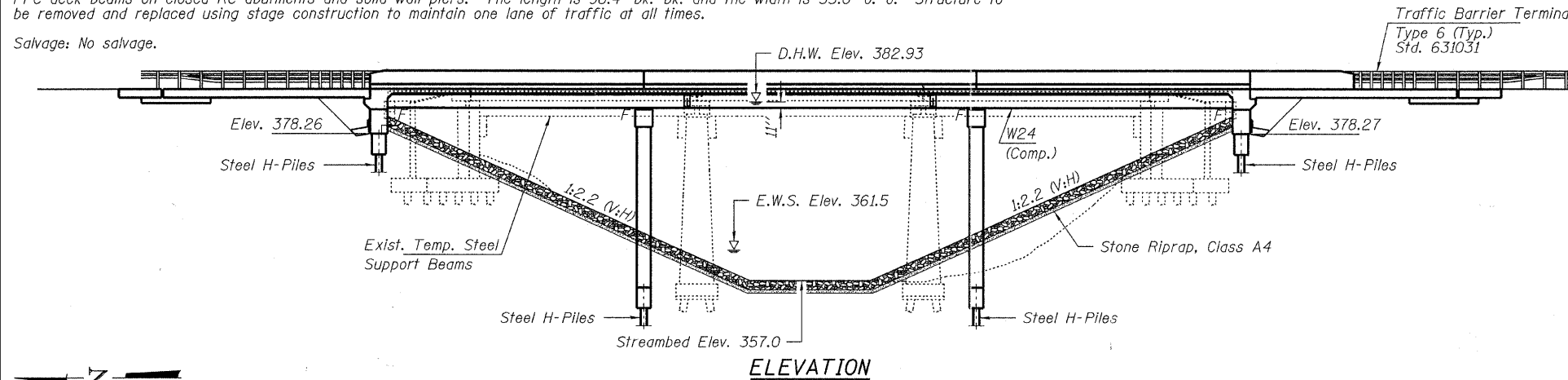
STD. 9-26

FILE NAME = 290148-slt-standards-d9.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STANDARD DETAILS DISTRICT 9 US ROUTE 45	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62708 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000989	PLOT SCALE =	DRAWN - T.W.K.	REVISED -			328	105B-1	WHITE	54	21
PLOT DATE = 7/13/2011	DATE - 04/05/11	CHECKED - J.W.F.	REVISED -			CONTRACT NO. 78161				
		DATE - 04/05/11	REVISED -			ILLINOIS FED. AID PROJECT				

BENCHMARK: Chiseled "□" in S.W. wingwall of structure 18' Rt., Sta. 655+32, Elev. 382.52.

EXISTING STRUCTURE: SN 097-0021 was originally constructed in 1928 as SBI 140, Section 105.B 105 BY-1. It was reconstructed in 1978 with a new superstructure and repairs were made in 2004 and 2008. The superstructure consists of 3 simple spans of 17' deep PPC deck beams on closed RC abutments and solid wall piers. The length is 98.4' bk.-bk. and the width is 33.0' o.-o. Structure to be removed and replaced using stage construction to maintain one lane of traffic at all times.

Salvage: No salvage.

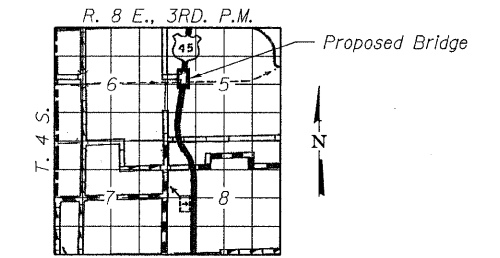


ELEVATION

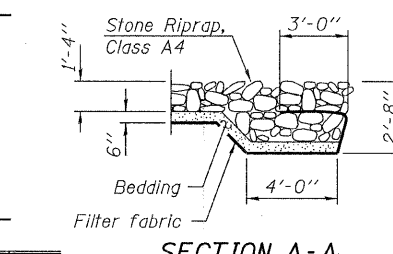
PLAN

INDEX OF STRUCTURE SHEETS

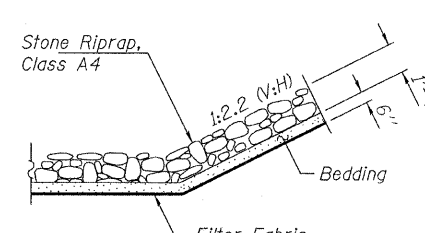
1. General Plan & Elevation
2. General Details
3. Stage Construction Details
4. Temp. Concrete Barrier for Stage Construction
- 5.-7. Top of Slab Elevations
8. Top of North Approach Slab Elevations
9. Top of South Approach Slab Elevations
10. Superstructure
- 11.-12. Superstructure Details
- 13.-14. Bridge Approach Slab Details - North
- 15.-16. Bridge Approach Slab Details - South
17. Structural Steel
18. Structural Steel Details
19. Bearing Details
20. Abutments
21. Piers
22. Bar Splicer Assembly & Mechanical Splicer Det.
23. Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller
24. HP Pile Details
- 25.-26. Borings



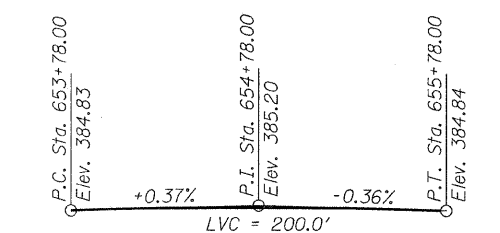
LOCATION SKETCH



SECTION A-A



SECTION B-B



PROFILE GRADE
(along centerline)

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

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

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)
 $f_y = 50,000$ psi (Structural Steel M270 GR. 50)
 $f_y = 36,000$ psi (M270 Gr. 36)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{d1}) = 0.297 g
 Design Spectral Acceleration at 0.2 sec. (S_{d5}) = 0.709 g
 Soil Site Class = D

DESIGN SCOUR ELEVATION TABLE

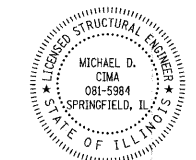
Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	378.3	357.4	357.4	378.3

WATERWAY INFORMATION

Drainage Area = 26.28 Sq. Mi. Existing Low Grade Elev. 382.66 @ Sta. 646+50
 Proposed Low Grade Elev. 382.66 @ Sta. 646+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	2960	1370	1580	381.03	0.24	0.22	381.27	381.25	
Design	50	4600	1520	1700	382.93	0.25	0.18	383.18	383.11	
Base	100	5310	1520	1700	383.83	0.10	0.08	383.93	383.91	
Overtop	50	4600	1520	1700	382.93	0.25	0.18	383.18	383.11	

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Michael D. Cova
 ENGINEER OF BRIDGES AND STRUCTURES



Michael D. Cova
 ILLINOIS STRUCTURAL NO. 081-5984

Expires 11-30-2012
 7-15-2011

GENERAL PLAN & ELEVATION
US ROUTE - 45
OVER SOUTHERN OUTLET
FAP ROUTE 328 - SECTION 105B-1
WHITE COUNTY
STATION 654+78.00
STRUCTURE NO. 097-0076

FILE NAME = 090140-shr-bridge.dgn
 USER NAME =
 DESIGNED - A.S.L.
 CHECKED - C.C.S.
 DRAWN - D.A.B.
 CHECKED - M.D.C.
 PLOT SCALE =
 PLOT DATE = 7/13/2011

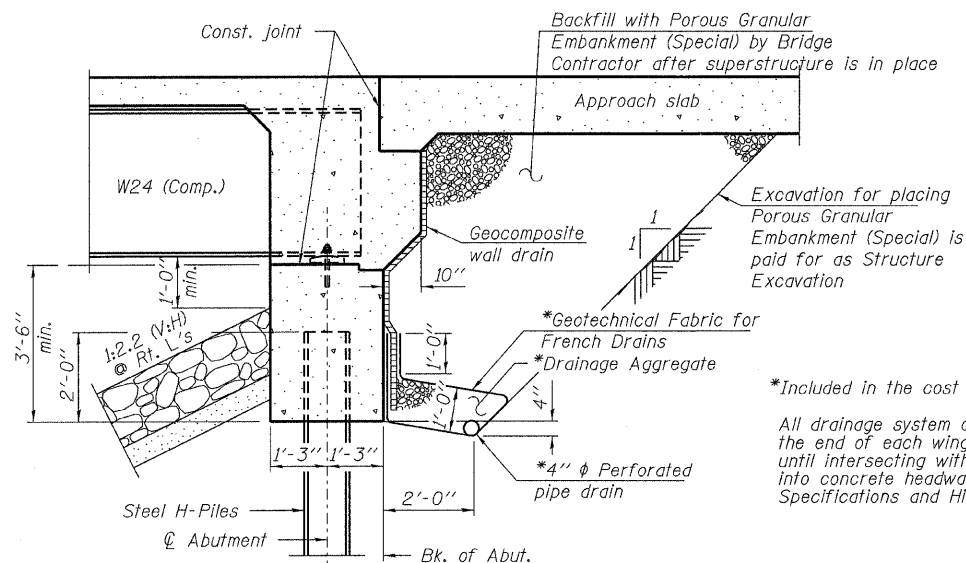
DESIGNED - A.S.L.
 CHECKED - C.C.S.
 DRAWN - D.A.B.
 CHECKED - M.D.C.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 097-0076
 SHEET NO. 1 OF 26 SHEETS

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	105B-1	WHITE	54	22
CONTRACT NO. 78161				

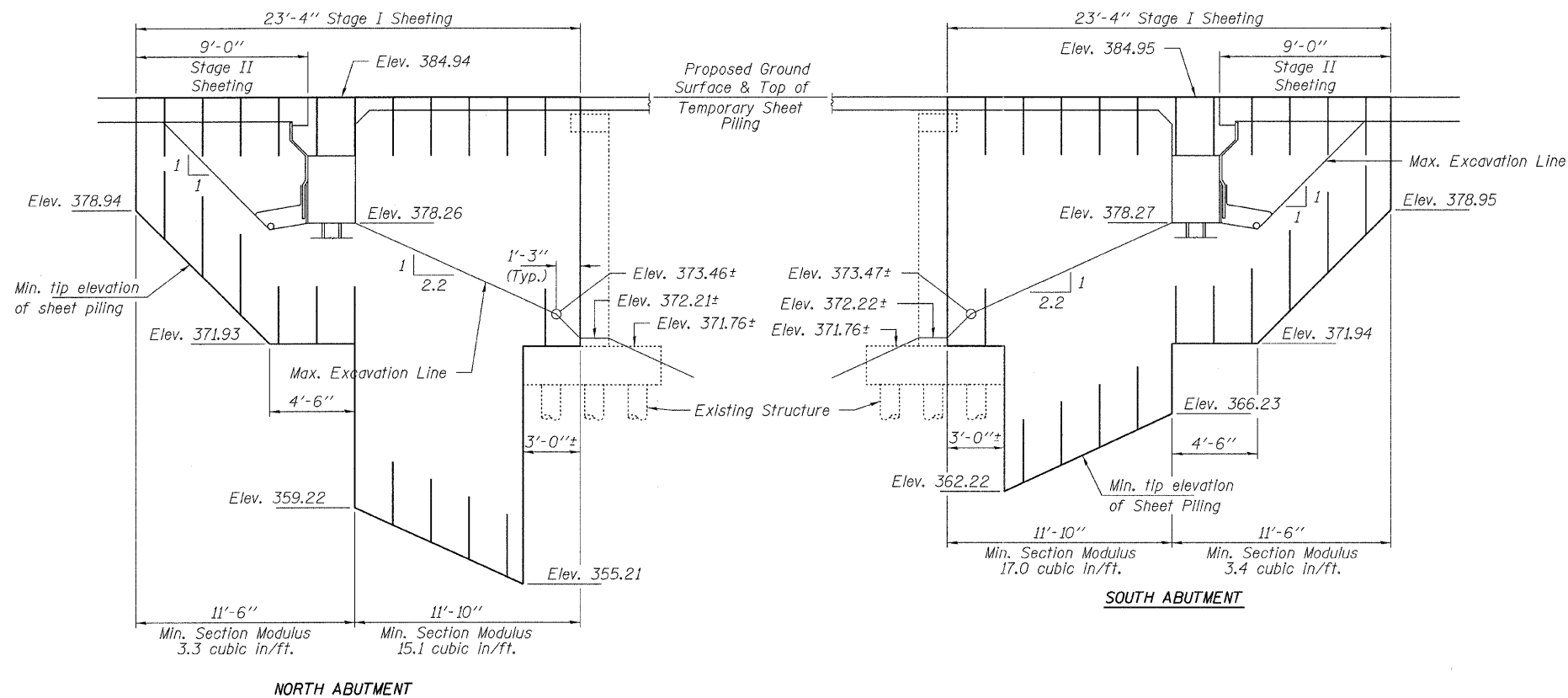
ILLINOIS FED. AID PROJECT



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

*Included in the cost of Pipe Underdrains for Structures.

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



NORTH ABUTMENT

SOUTH ABUTMENT

Note:
The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

TEMPORARY SHEET PILING AT ABUTMENTS

GENERAL NOTES

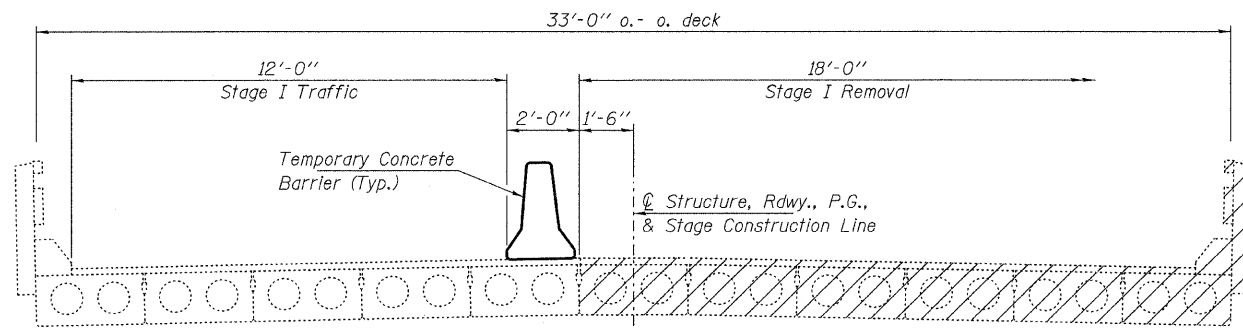
Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts.
Bolts 5/8" φ, holes 15/16" φ, unless otherwise noted.
Calculated weight of Structural Steel = 62,260 lbs. (Grade 50) and 4,750 lbs. (Grade 36).
No field welding is permitted except as specified in the contract documents.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Slip-Forming of the parapets is not allowed.

STATION 654+78.00
BUILT 2011 BY
STATE OF ILLINOIS
F.A.P. RTE. 328 SEC. 105B-1
LOADING HL-93
STR. NO. 097-0076

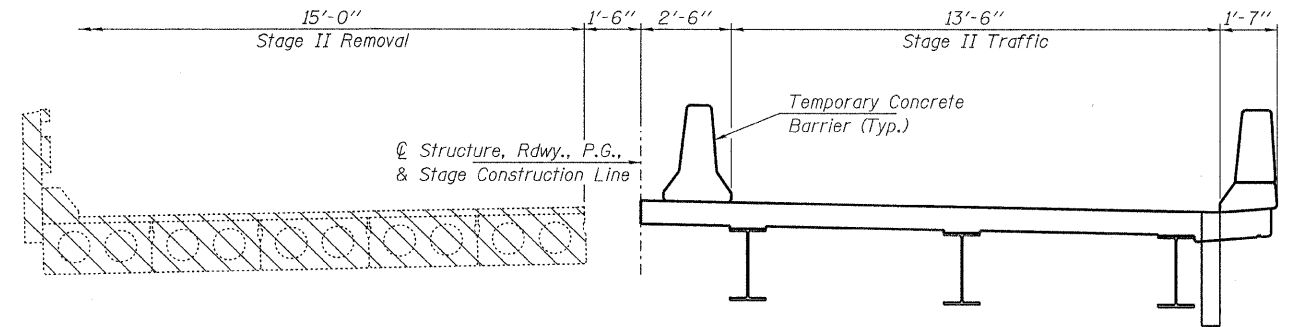
NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

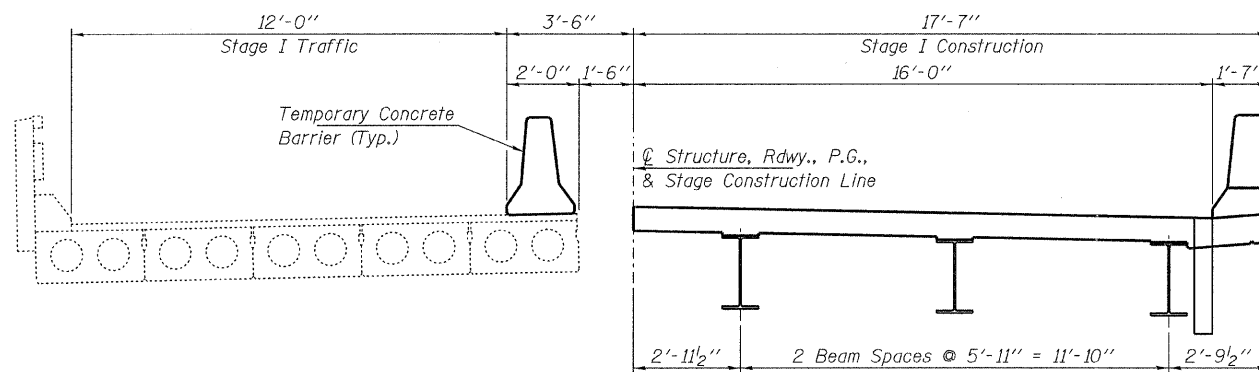
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.			1,040
Filter Fabric	Sq. Yd.			1,040
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.			330
Floor Drains	Each	8		8
Concrete Structures	Cu. Yd.		215.7	215.7
Concrete Superstructure	Cu. Yd.	261.2		261.2
Bridge Deck Grooving	Sq. Yd.	623		623
Concrete Encasement	Cu. Yd.		17.6	17.6
Protective Coat	Sq. Yd.	795	19	814
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3,024		3,024
Reinforcement Bars, Epoxy Coated	Pound	60,040	22,470	82,510
Bar Splicers	Each	674	144	818
Furnishing Steel Piles HP14x73	Foot		704	704
Furnishing Steel Piles HP14x89	Foot		595	595
Driving Piles	Foot		1,299	1,299
Test Pile Steel HP14x89	Each		2	2
Pile Shoes	Each		32	32
Name Plates	Each	1		1
Anchor Bolts, 5/8"	Each		24	24
Anchor Bolts, 1"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.		54	54
Porous Granular Embankment, Special	Cu. Yd.		84.7	84.7
Underwater Structure Excavation Protection - Loc. 1	Each		1	1
Underwater Structure Excavation Protection - Loc. 2	Each		1	1
Mechanical Splicers	Each		108	108
Asbestos Bearing Pad Removal	Each		66	66
Temporary Sheet Piling	Sq. Ft.		758	758
Pipe Underdrains for Structures 4"	Foot		130	130



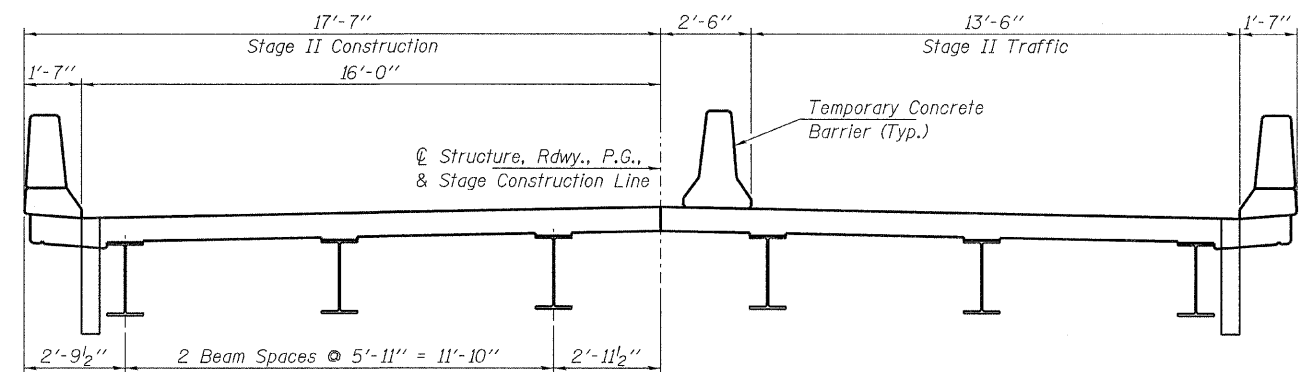
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION

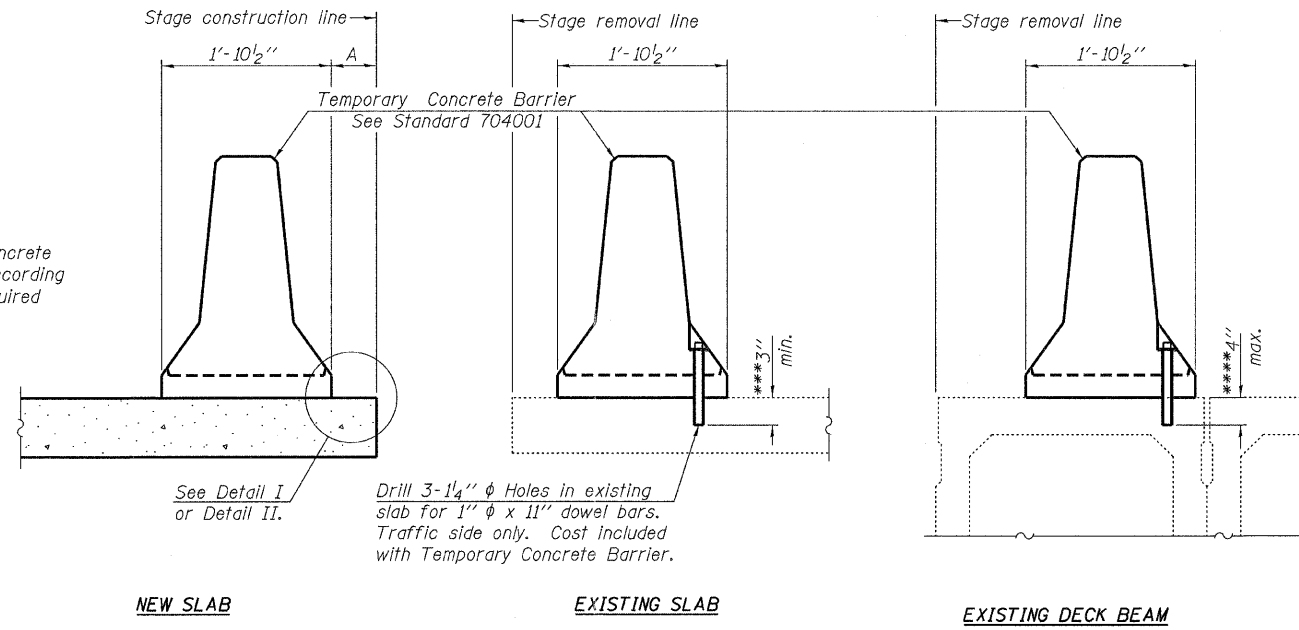


STAGE II CONSTRUCTION

Notes:
 All sections are looking South.
 Hatched areas indicate removal.
 Existing Temporary Steel Support Beams
 are not shown in the cross sections above.
 See Roadway Plans for quantity of
 Temporary Concrete Barrier.

FILE NAME = 090148-ah-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 2085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62708	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	24	
HLR ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.003959	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			ILLINOIS FED. AID PROJECT					
						SHEET NO. 3 OF 26 SHEETS					

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



SECTIONS THRU SLAB OR DECK BEAM

NOTES

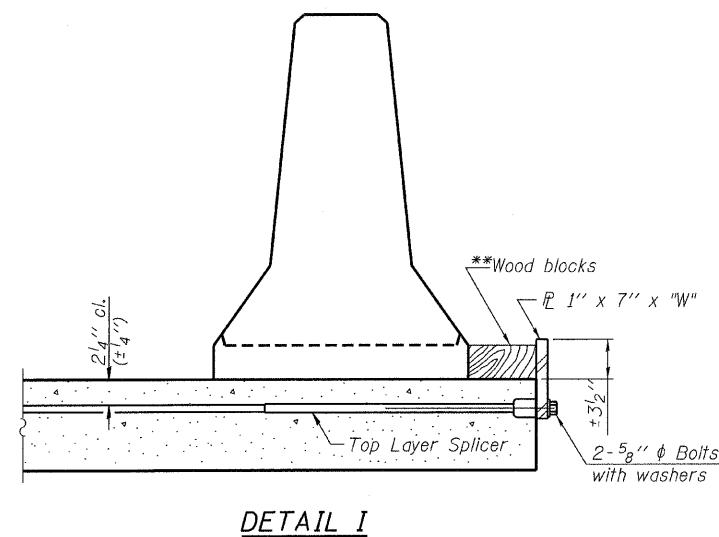
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

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

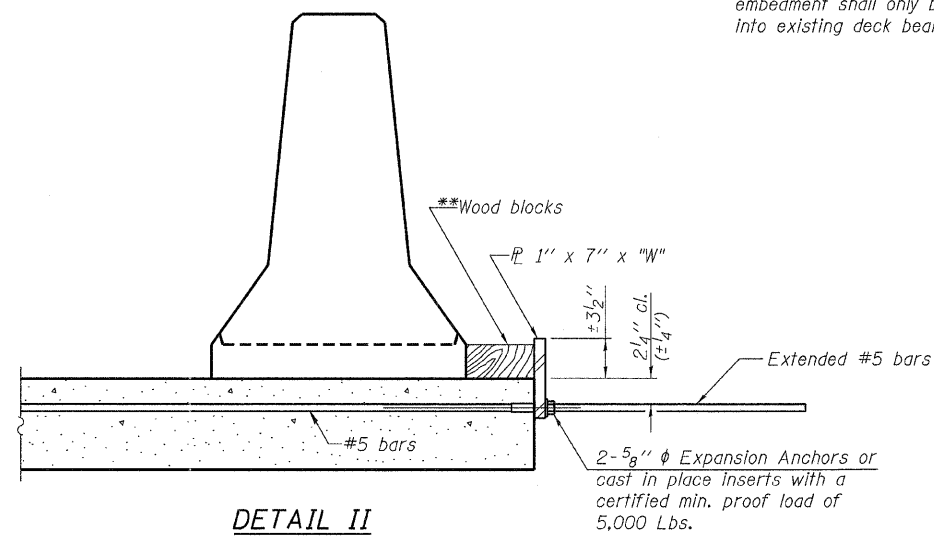
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

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



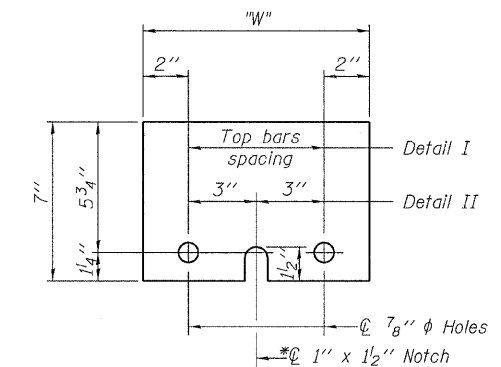
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



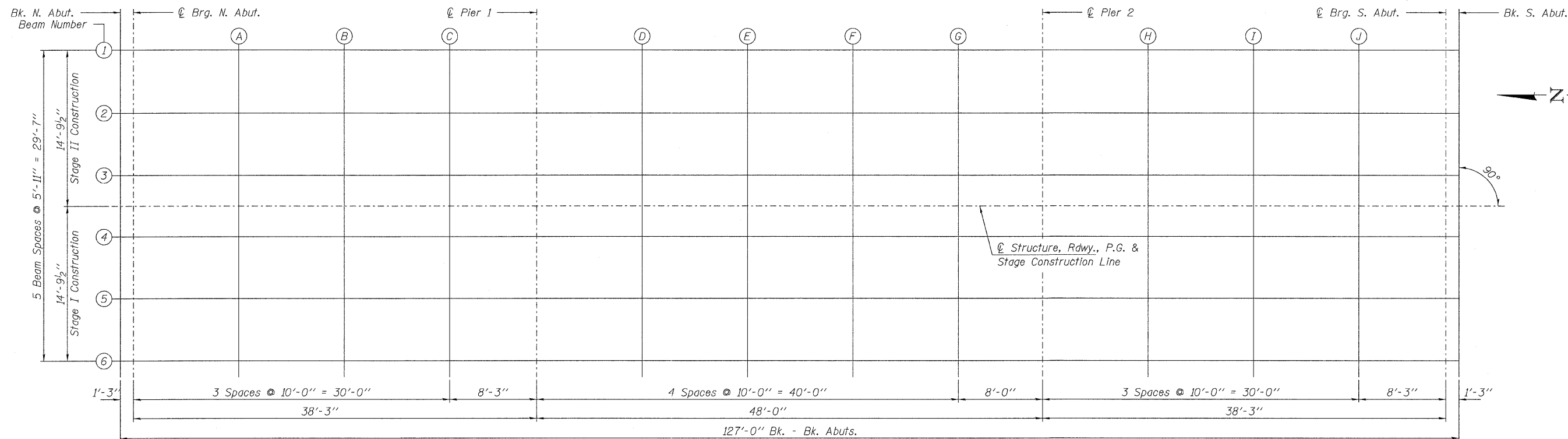
STEEL RETAINER \bar{L} 1" x 7" x "W"

* Required only with Detail II

R-27

7-1-10

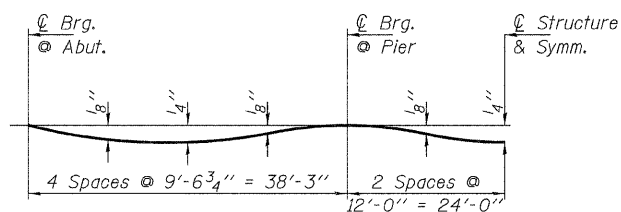
FILE NAME = 090148-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3188 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	25	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000889	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			SHEET NO. 4 OF 26 SHEETS					
						ILLINOIS FED. AID PROJECT					



BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	-14.79	384.70	384.70
☉ Brg. N. Abut.	654+15.75	-14.79	384.70	384.70
A	654+25.75	-14.79	384.72	384.73
B	654+35.75	-14.79	384.74	384.75
C	654+45.75	-14.79	384.75	384.76
☉ Pier 1	654+54.00	-14.79	384.76	384.76
D	654+64.00	-14.79	384.77	384.78
E	654+74.00	-14.79	384.77	384.79
F	654+84.00	-14.79	384.77	384.79
G	654+94.00	-14.79	384.77	384.78
☉ Pier 2	655+02.00	-14.79	384.76	384.76
H	655+12.00	-14.79	384.75	384.76
I	655+22.00	-14.79	384.74	384.76
J	655+32.00	-14.79	384.72	384.73
☉ Brg. S. Abut.	655+40.25	-14.79	384.70	384.70
Bk. S. Abut.	655+41.50	-14.79	384.70	384.70

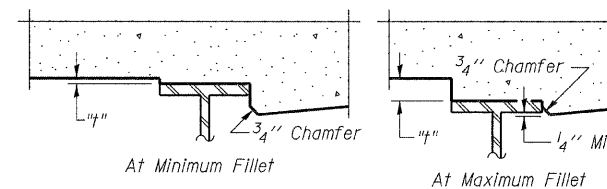
PLAN



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 sheets 5-7 of 26.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 5-7 of 26, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	-8.88	384.80	384.80
☉ Brg. N. Abut.	654+15.75	-8.88	384.81	384.81
A	654+25.75	-8.88	384.83	384.84
B	654+35.75	-8.88	384.84	384.86
C	654+45.75	-8.88	384.86	384.86
☉ Pier 1	654+54.00	-8.88	384.87	384.87
D	654+64.00	-8.88	384.88	384.89
E	654+74.00	-8.88	384.88	384.90
F	654+84.00	-8.88	384.88	384.90
G	654+94.00	-8.88	384.88	384.88
☉ Pier 2	655+02.00	-8.88	384.87	384.87
H	655+12.00	-8.88	384.86	384.87
I	655+22.00	-8.88	384.85	384.86
J	655+32.00	-8.88	384.83	384.84
☉ Brg. S. Abut.	655+40.25	-8.88	384.81	384.81
Bk. S. Abut.	655+41.50	-8.88	384.81	384.81

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	-2.96	384.90	384.90
☉ Brg. N. Abut.	654+15.75	-2.96	384.90	384.90
A	654+25.75	-2.96	384.92	384.93
B	654+35.75	-2.96	384.94	384.95
C	654+45.75	-2.96	384.95	384.96
☉ Pier 1	654+54.00	-2.96	384.96	384.96
D	654+64.00	-2.96	384.97	384.98
E	654+74.00	-2.96	384.97	384.99
F	654+84.00	-2.96	384.97	384.99
G	654+94.00	-2.96	384.97	384.98
☉ Pier 2	655+02.00	-2.96	384.96	384.96
H	655+12.00	-2.96	384.95	384.96
I	655+22.00	-2.96	384.94	384.96
J	655+32.00	-2.96	384.92	384.93
☉ Brg. S. Abut.	655+40.25	-2.96	384.90	384.90
Bk. S. Abut.	655+41.50	-2.96	384.90	384.90

☉ STRUCTURE, RDWY., P.G. & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	0.00	384.94	384.94
☉ Brg. N. Abut.	654+15.75	0.00	384.94	384.94
A	654+25.75	0.00	384.97	384.98
B	654+35.75	0.00	384.98	385.00
C	654+45.75	0.00	385.00	385.00
☉ Pier 1	654+54.00	0.00	385.01	385.01
D	654+64.00	0.00	385.01	385.02
E	654+74.00	0.00	385.02	385.04
F	654+84.00	0.00	385.02	385.04
G	654+94.00	0.00	385.01	385.02
☉ Pier 2	655+02.00	0.00	385.01	385.01
H	655+12.00	0.00	385.00	385.01
I	655+22.00	0.00	384.98	385.00
J	655+32.00	0.00	384.97	384.98
☉ Brg. S. Abut.	655+40.25	0.00	384.95	384.95
Bk. S. Abut.	655+41.50	0.00	384.95	384.95

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	2.96	384.90	384.90
☉ Brg. N. Abut.	654+15.75	2.96	384.90	384.90
A	654+25.75	2.96	384.92	384.93
B	654+35.75	2.96	384.94	384.95
C	654+45.75	2.96	384.95	384.96
☉ Pier 1	654+54.00	2.96	384.96	384.96
D	654+64.00	2.96	384.97	384.98
E	654+74.00	2.96	384.97	384.99
F	654+84.00	2.96	384.97	384.99
G	654+94.00	2.96	384.97	384.98
☉ Pier 2	655+02.00	2.96	384.96	384.96
H	655+12.00	2.96	384.95	384.96
I	655+22.00	2.96	384.94	384.96
J	655+32.00	2.96	384.92	384.93
☉ Brg. S. Abut.	655+40.25	2.96	384.90	384.90
Bk. S. Abut.	655+41.50	2.96	384.90	384.90

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	8.88	384.80	384.80
☉ Brg. N. Abut.	654+15.75	8.88	384.81	384.81
A	654+25.75	8.88	384.83	384.84
B	654+35.75	8.88	384.84	384.86
C	654+45.75	8.88	384.86	384.86
☉ Pier 1	654+54.00	8.88	384.87	384.87
D	654+64.00	8.88	384.88	384.89
E	654+74.00	8.88	384.88	384.90
F	654+84.00	8.88	384.88	384.90
G	654+94.00	8.88	384.88	384.88
☉ Pier 2	655+02.00	8.88	384.87	384.87
H	655+12.00	8.88	384.86	384.87
I	655+22.00	8.88	384.85	384.86
J	655+32.00	8.88	384.83	384.84
☉ Brg. S. Abut.	655+40.25	8.88	384.81	384.81
Bk. S. Abut.	655+41.50	8.88	384.81	384.81

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	654+14.50	14.79	384.70	384.70
☉ Brg. N. Abut.	654+15.75	14.79	384.70	384.70
A	654+25.75	14.79	384.72	384.73
B	654+35.75	14.79	384.74	384.75
C	654+45.75	14.79	384.75	384.76
☉ Pier 1	654+54.00	14.79	384.76	384.76
D	654+64.00	14.79	384.77	384.78
E	654+74.00	14.79	384.77	384.79
F	654+84.00	14.79	384.77	384.79
G	654+94.00	14.79	384.77	384.78
☉ Pier 2	655+02.00	14.79	384.76	384.76
H	655+12.00	14.79	384.75	384.76
I	655+22.00	14.79	384.74	384.76
J	655+32.00	14.79	384.72	384.73
☉ Brg. S. Abut.	655+40.25	14.79	384.70	384.70
Bk. S. Abut.	655+41.50	14.79	384.70	384.70

EAST EDGE OF SLAB

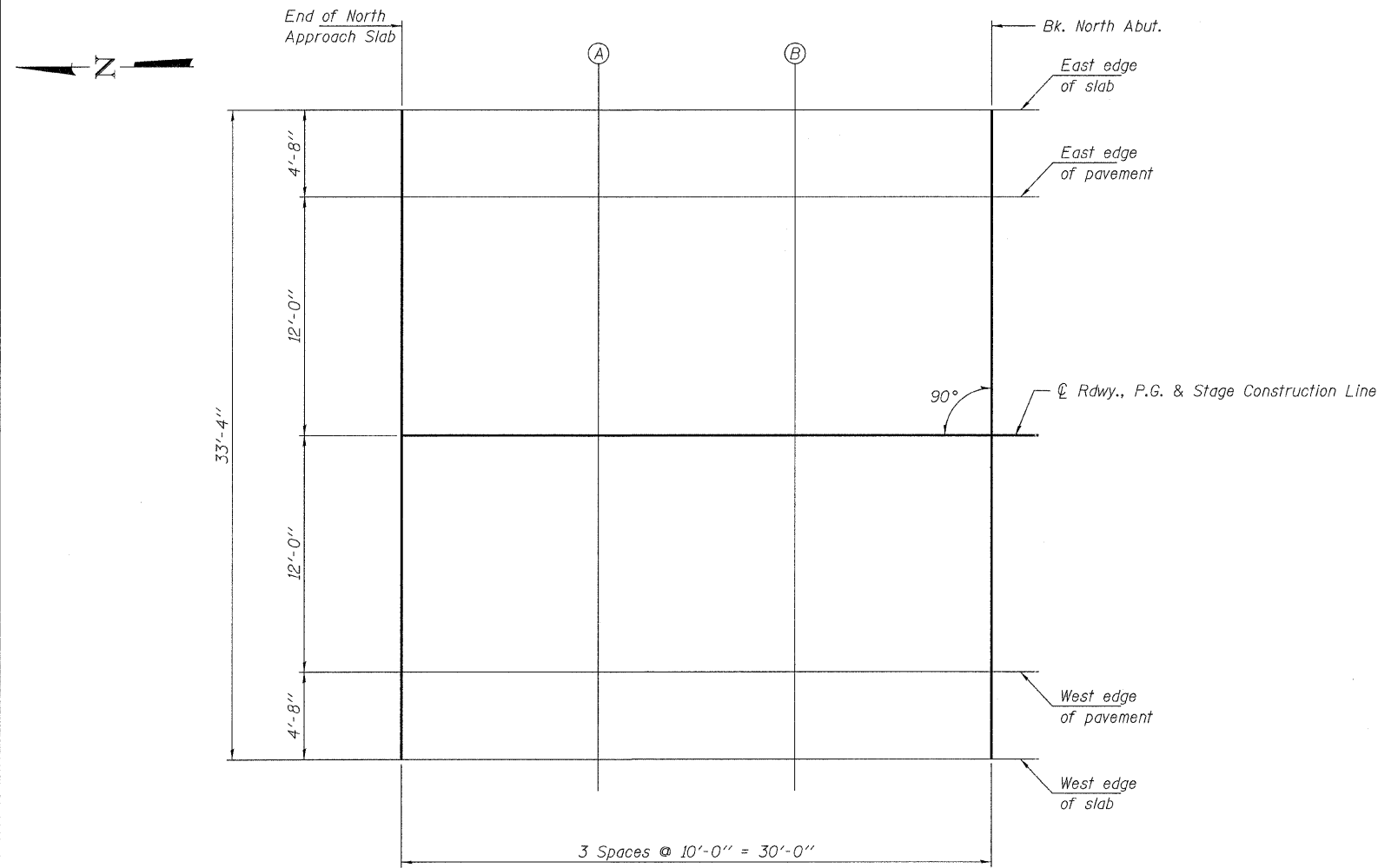
Location	Station	Offset	Theoretical Grade Elevations
End of N. Approach Slab	653+84.50	-16.67	384.57
A	653+94.50	-16.67	384.60
B	654+04.50	-16.67	384.63
Bk. N. Abutment	654+14.50	-16.67	384.66

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of N. Approach Slab	653+84.50	-12.00	384.67
A	653+94.50	-12.00	384.70
B	654+04.50	-12.00	384.73
Bk. N. Abutment	654+14.50	-12.00	384.75

☉ RDWY., P.G. & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
End of N. Approach Slab	653+84.50	0.00	384.85
A	653+94.50	0.00	384.89
B	654+04.50	0.00	384.92
Bk. N. Abutment	654+14.50	0.00	384.94



NORTH APPROACH SLAB - PLAN

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of N. Approach Slab	653+84.50	12.00	384.67
A	653+94.50	12.00	384.70
B	654+04.50	12.00	384.73
Bk. N. Abutment	654+14.50	12.00	384.75

WEST EDGE OF SLAB

Location	Station	Offset	Theoretical Grade Elevations
End of N. Approach Slab	653+84.50	16.67	384.57
A	653+94.50	16.67	384.60
B	654+04.50	16.67	384.63
Bk. N. Abutment	654+14.50	16.67	384.66

EAST CURB LINE

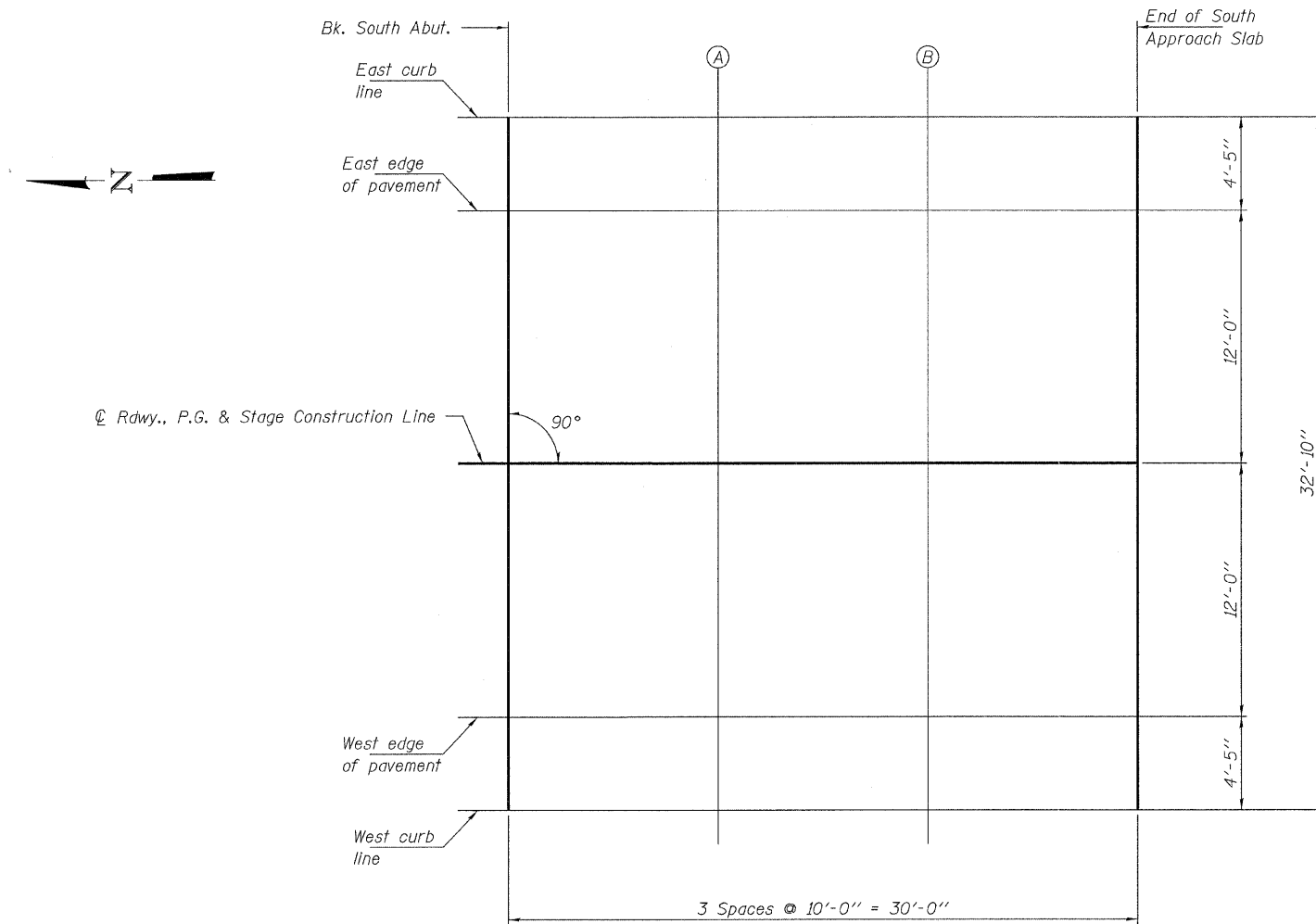
Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abutment	655+41.50	-16.42	384.67
A	655+51.50	-16.42	384.64
B	655+61.50	-16.42	384.62
End of S. Approach Slab	655+71.50	-16.42	384.58

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abutment	655+41.50	-12.00	384.76
A	655+51.50	-12.00	384.74
B	655+61.50	-12.00	384.71
End of S. Approach Slab	655+71.50	-12.00	384.68

RDWY., P.G. & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abutment	655+41.50	0.00	384.95
A	655+51.50	0.00	384.92
B	655+61.50	0.00	384.89
End of S. Approach Slab	655+71.50	0.00	384.86



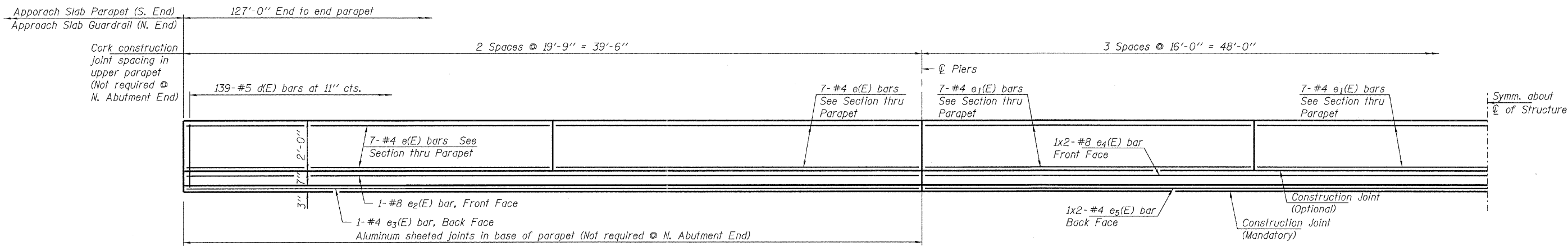
SOUTH APPROACH SLAB - PLAN

WEST EDGE OF PAVEMENT

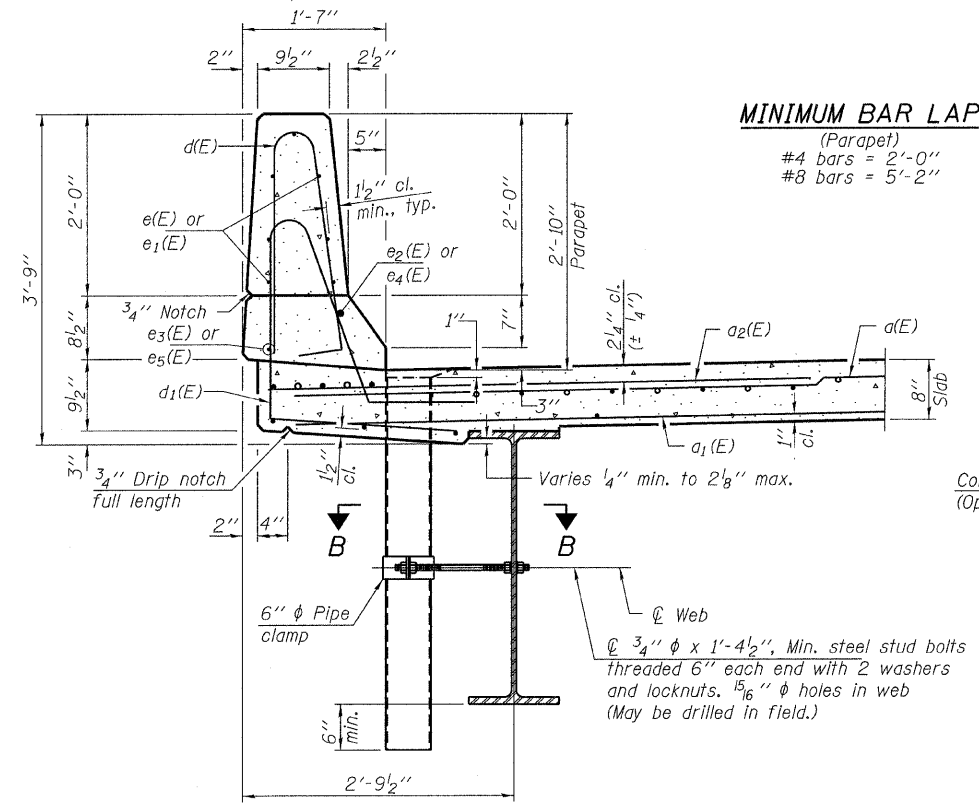
Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abutment	655+41.50	12.00	384.76
A	655+51.50	12.00	384.74
B	655+61.50	12.00	384.71
End of S. Approach Slab	655+71.50	12.00	384.68

WEST CURB LINE

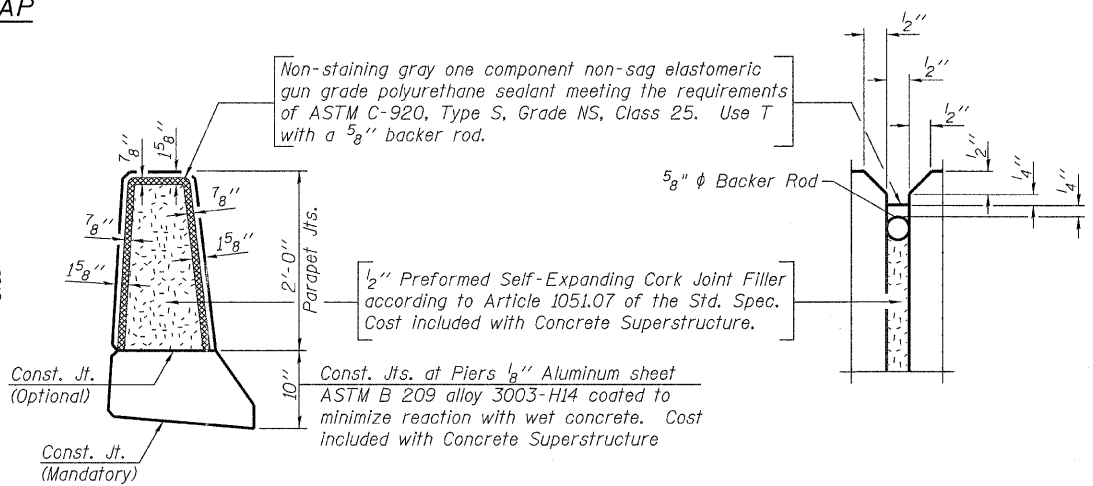
Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abutment	655+41.50	16.42	384.67
A	655+51.50	16.42	384.64
B	655+61.50	16.42	384.62
End of S. Approach Slab	655+71.50	16.42	384.58



INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET



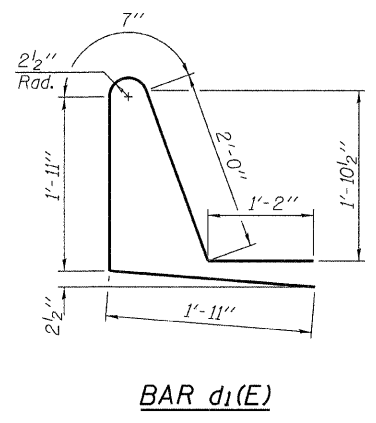
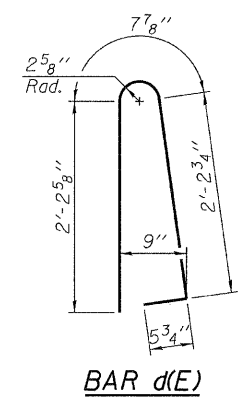
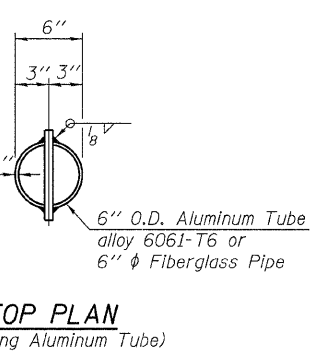
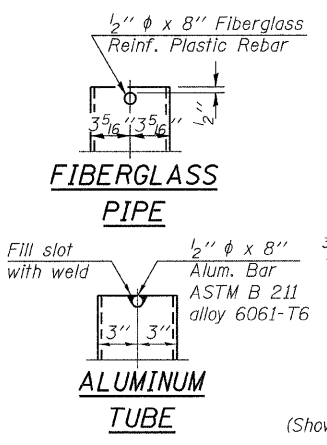
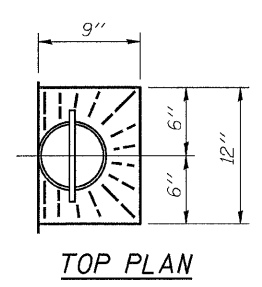
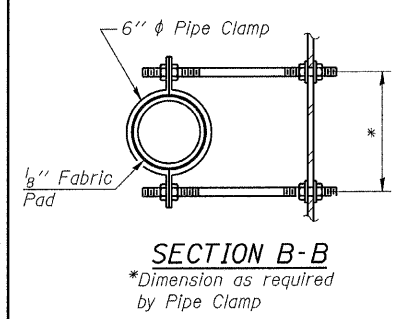
PARAPET JOINT DETAILS

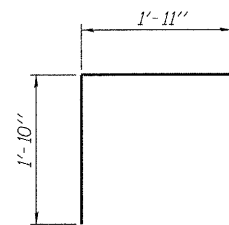
Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.
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

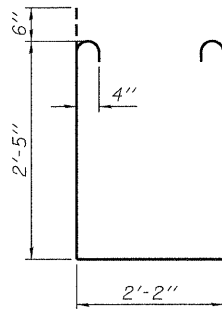
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	438	#5	17'-2"	—
a ₁ (E)	306	#5	16'-9"	—
a ₂ (E)	436	#6	6'-6"	—
b(E)	152	#5	33'-8"	—
b ₁ (E)	160	#5	27'-5"	—
b ₂ (E)	68	#6	25'-4"	—
d(E)	278	#5	5'-7"	└
d ₁ (E)	278	#5	7'-7"	└
e(E)	56	#4	19'-4"	—
e ₁ (E)	42	#4	15'-7"	—
e ₂ (E)	4	#8	39'-1"	—
e ₃ (E)	4	#4	39'-1"	—
e ₄ (E)	4	#8	26'-5"	—
e ₅ (E)	4	#4	24'-10"	—
m(E)	16	#6	17'-3"	—
m ₁ (E)	24	#6	8'-0"	—
m ₂ (E)	8	#6	5'-6"	—
m ₃ (E)	8	#6	2'-6"	—
m ₄ (E)	4	#6	16'-4"	—
s(E)	72	#5	5'-5"	└
s ₁ (E)	64	#4	8'-0"	└
v(E)	64	#5	3'-9"	└
Concrete Superstructures			Cu. Yd.	160.5
Reinforcement Bars, Epoxy Coated			Pound	37,690

Bars indicated thus 1x2-#8 etc. indicates 1 line of bars with 2 lengths per line.

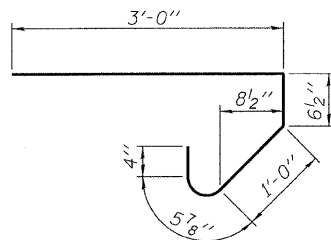




BAR v(E)



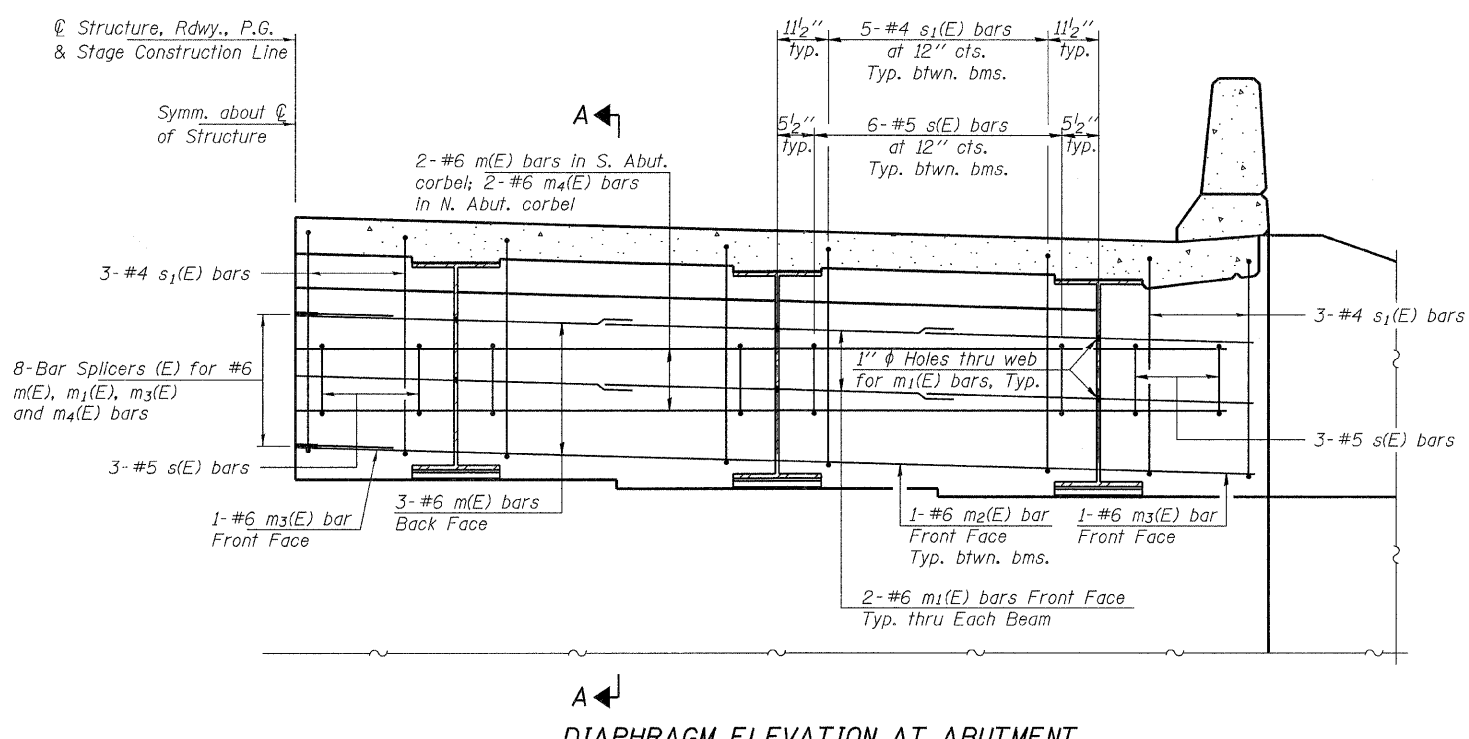
BAR s1(E)



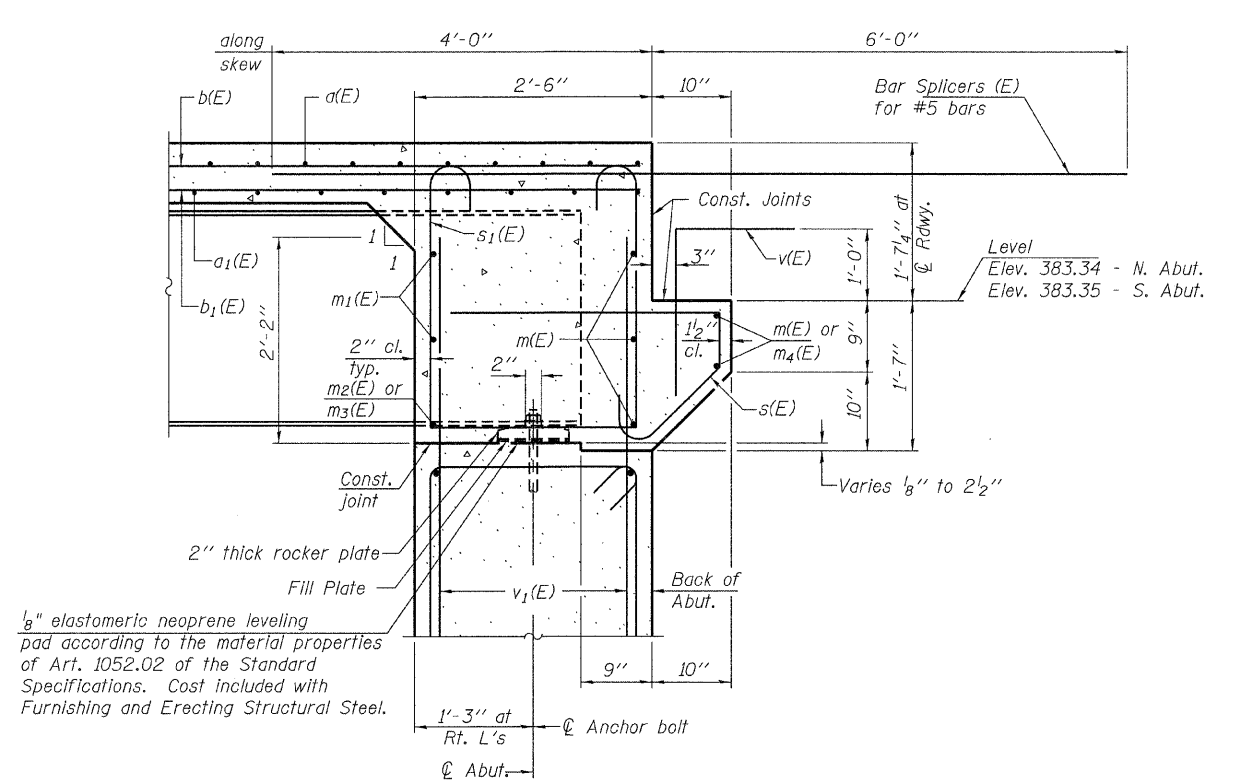
BAR s(E)

Notes:
 Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 26.
 Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 26.
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 For Bar Splicer details see sheet 22 of 26.

MIN. BAR LAP
 #6 bar = 3'-4"

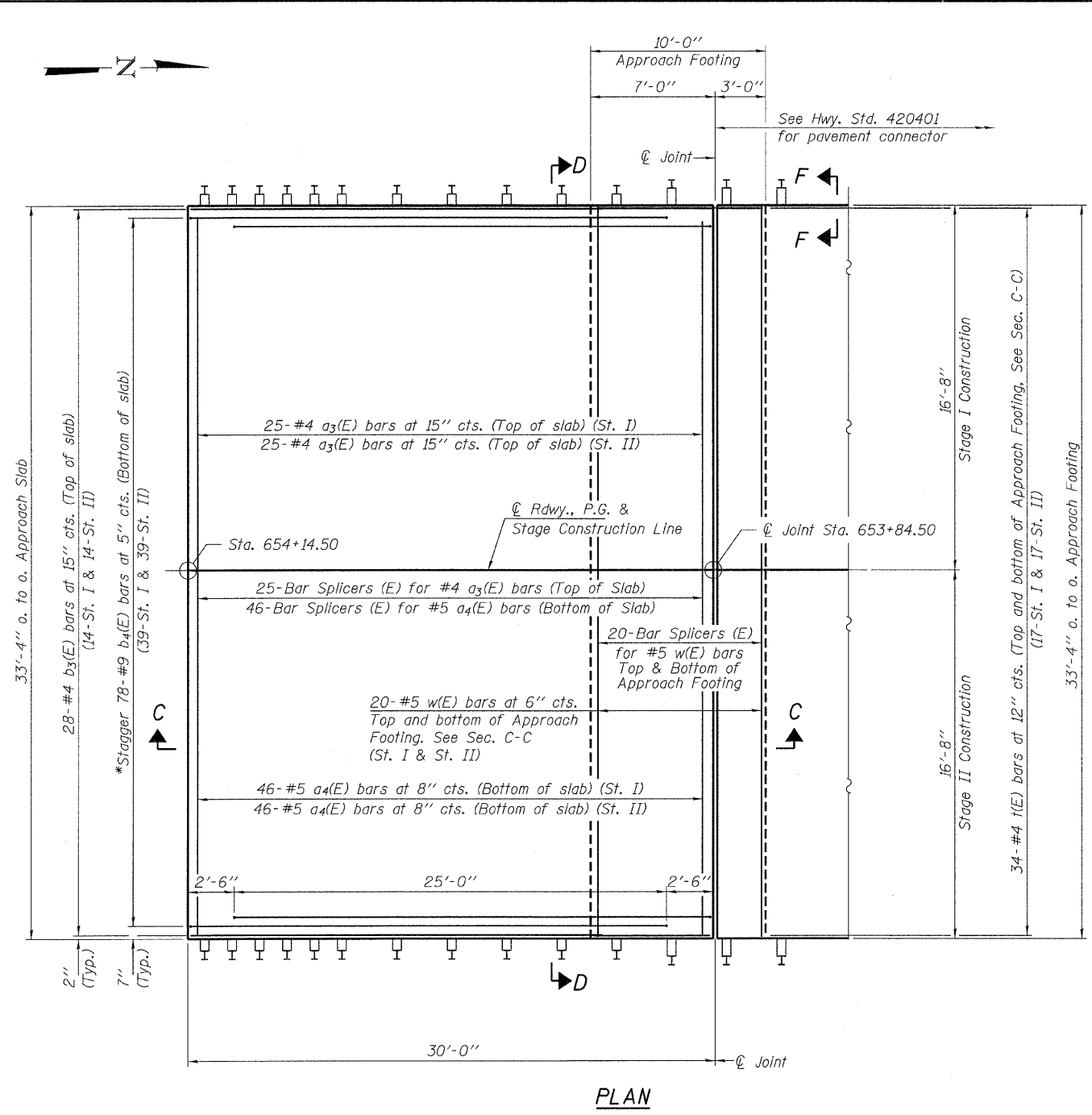


DIAPHRAGM ELEVATION AT ABUTMENT



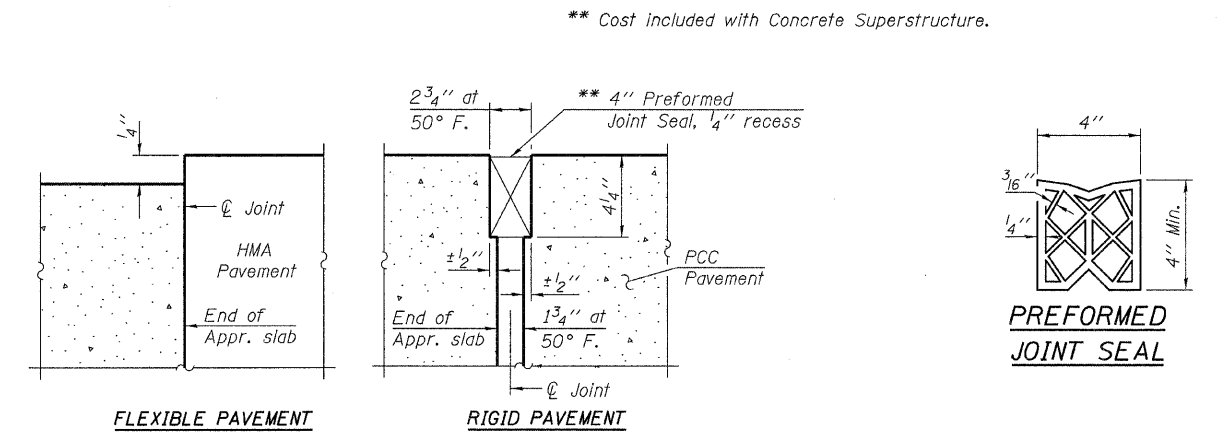
SECTION A-A
 Dimensions at right angles to abutment, except as shown.

FILE NAME = 890148-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62708	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	33	
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000569	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			ILLINOIS FED. AID PROJECT					
						SHEET NO. 12 OF 26 SHEETS					

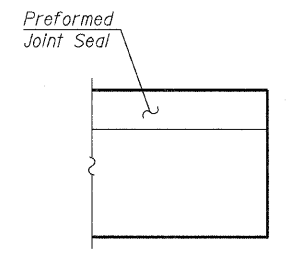


* Tilt #9 b₄(E) bars as required to maintain clearance.

Notes:
See sheet 14 of 26 for Sections C-C & D-D.
a₃(E) and a₄(E) bar spacings measured along @ Rdwy.
See sheet 14 of 26 for additional details.

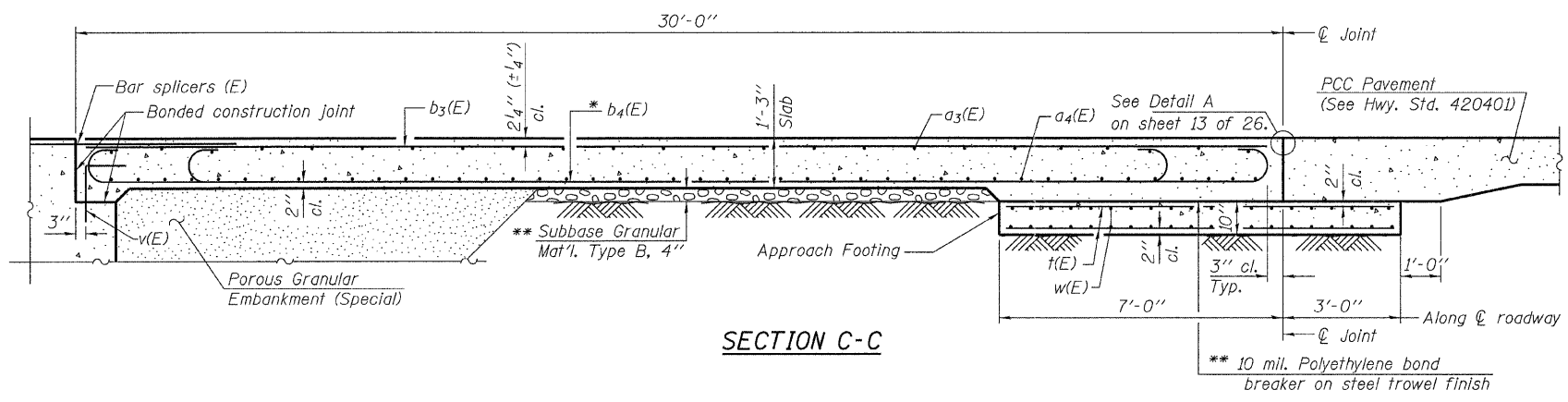


DETAIL A

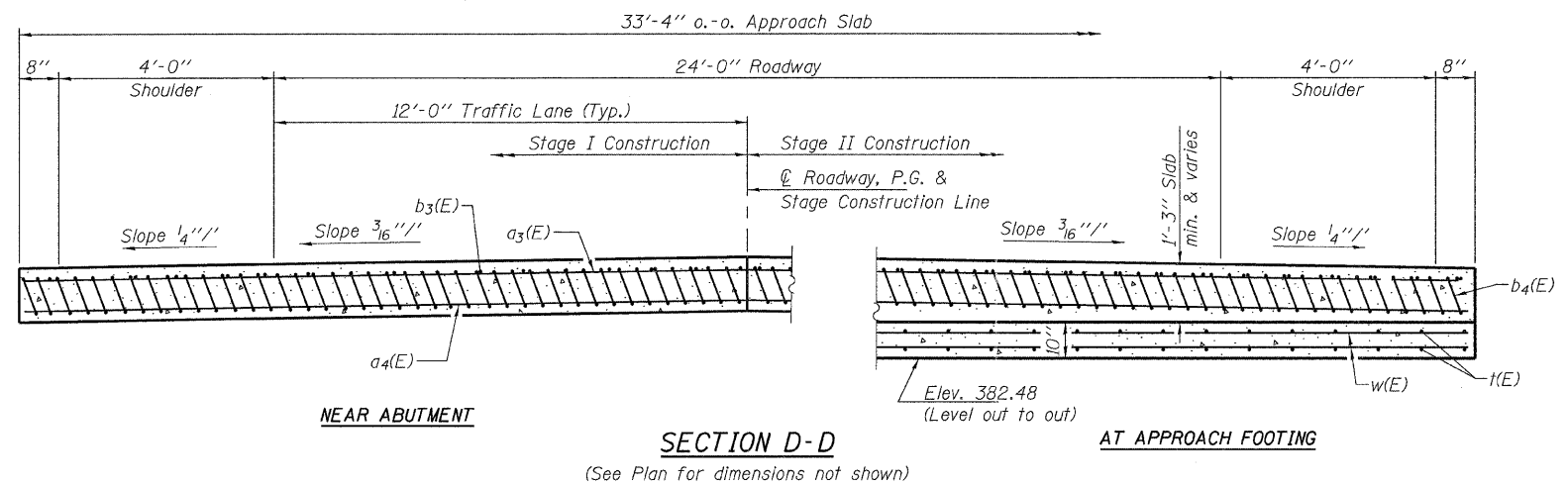


VIEW F-F

FILE NAME = 090148-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS - NORTH STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	34	
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-000889	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			ILLINOIS FED. AID PROJECT					
						SHEET NO. 13 OF 26 SHEETS					



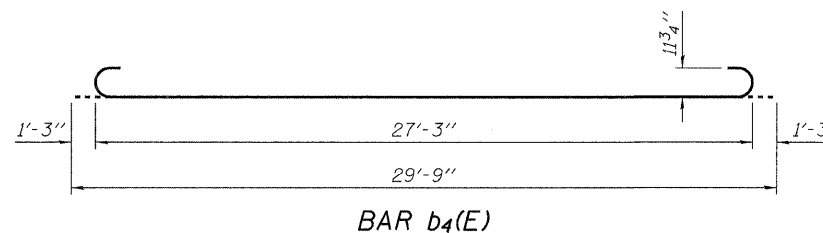
Notes:
 See sheet 13 of 26 for Detail A.
 Approach slab concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 12 of 26.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 For bar splicer details, see sheet 22 of 26.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.

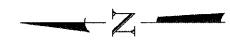


* Tilt #9 $b_4(E)$ bars as required to maintain clearance.
 ** Cost included with Concrete Superstructure.

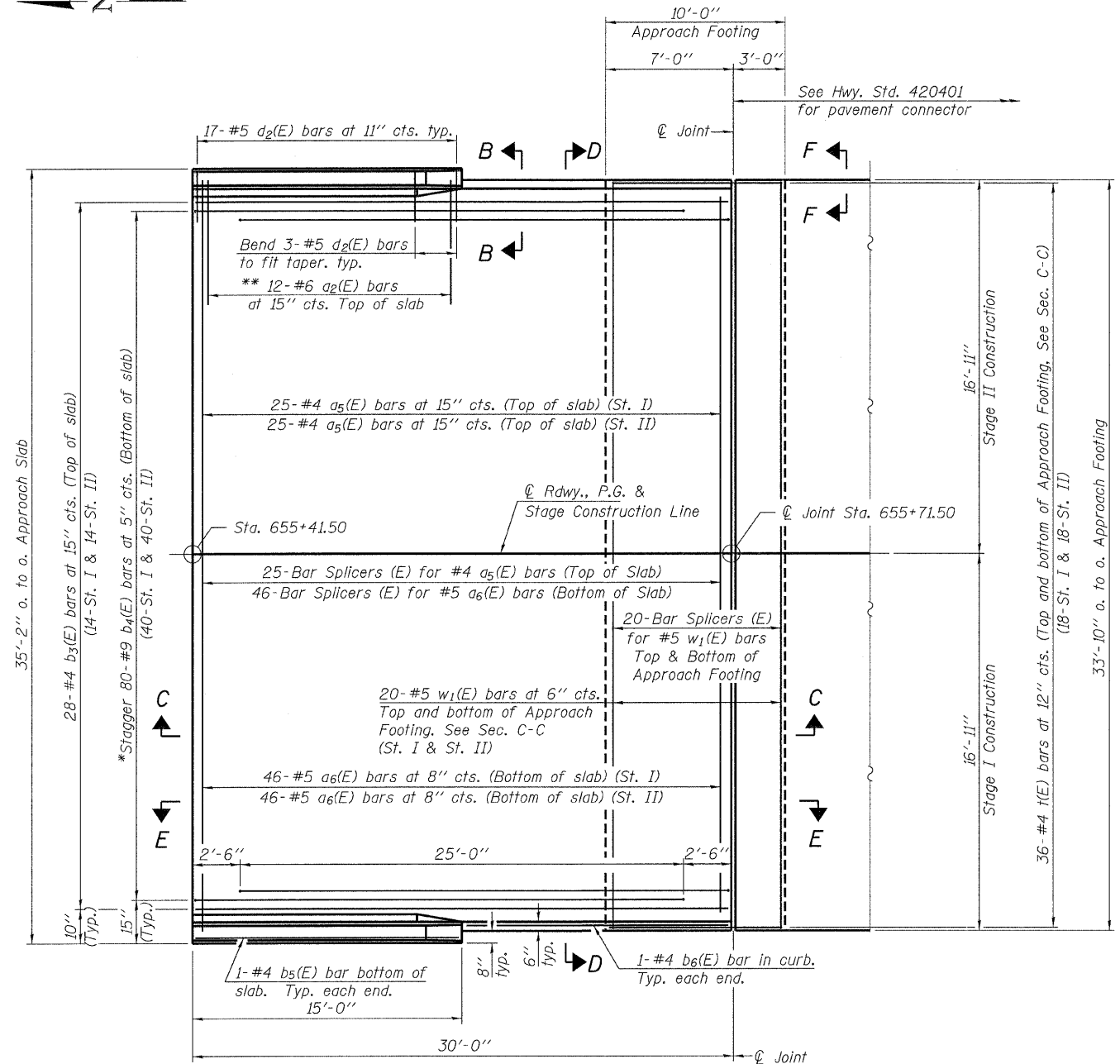
**NORTH APPROACH
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$a_3(E)$	50	#4	16'-4"	—
$a_4(E)$	92	#5	16'-4"	—
$b_3(E)$	28	#4	29'-8"	—
$b_4(E)$	78	#9	29'-9"	⌋
t(E)	68	#4	9'-8"	—
w(E)	80	#5	16'-4"	—
Concrete Structures			Cu. Yd.	10.3
Concrete Superstructure			Cu. Yd.	47.7
Reinforcement Bars, Epoxy Coated			Pound	12,360



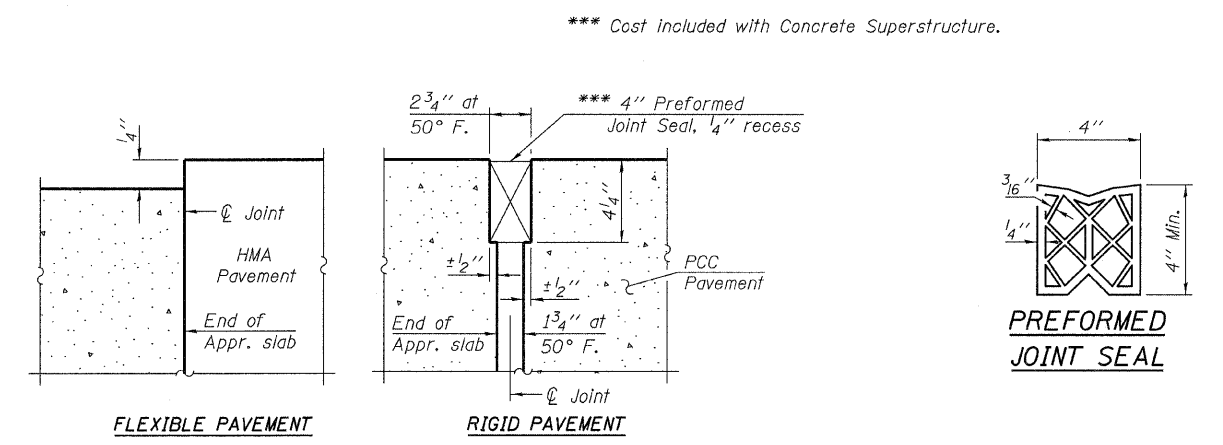


Notes:
 See sheet 16 of 26 for Sections C-C & D-D and View E-E.
 $a_5(E)$ and $a_6(E)$ bar spacings measured along \varnothing Rdwy.
 See sheet 16 of 26 for additional details.

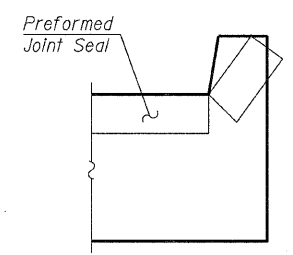


PLAN

* Tilt #9 $b_4(E)$ bars as required to maintain clearance.
 ** Space between $a_5(E)$ bars, typ. ea. parapet.

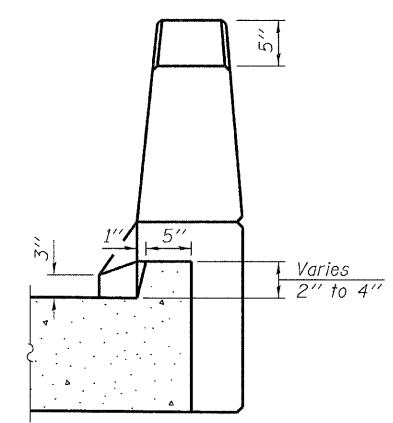


DETAIL A



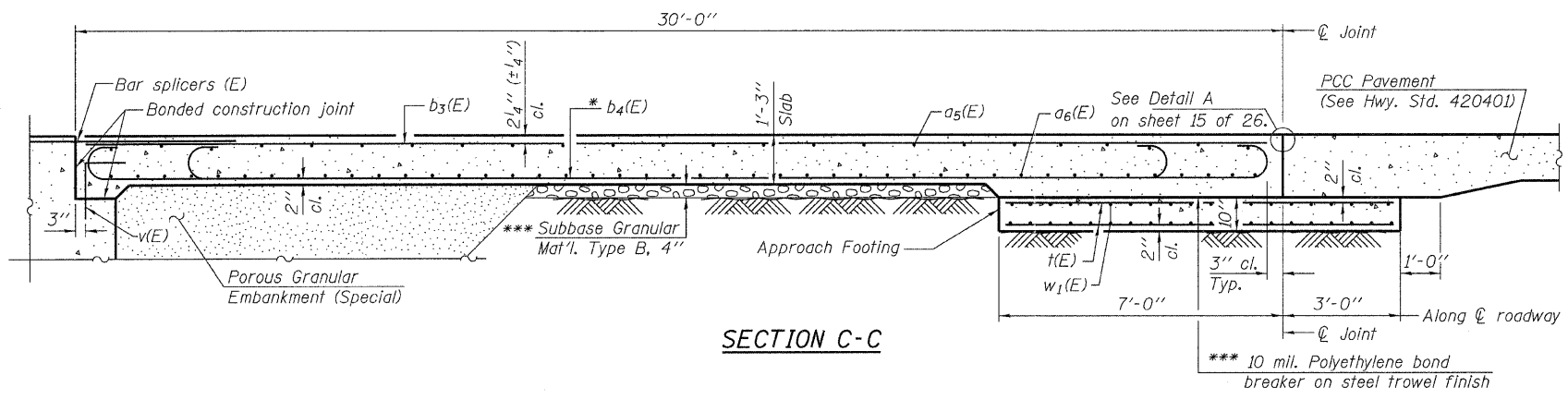
VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

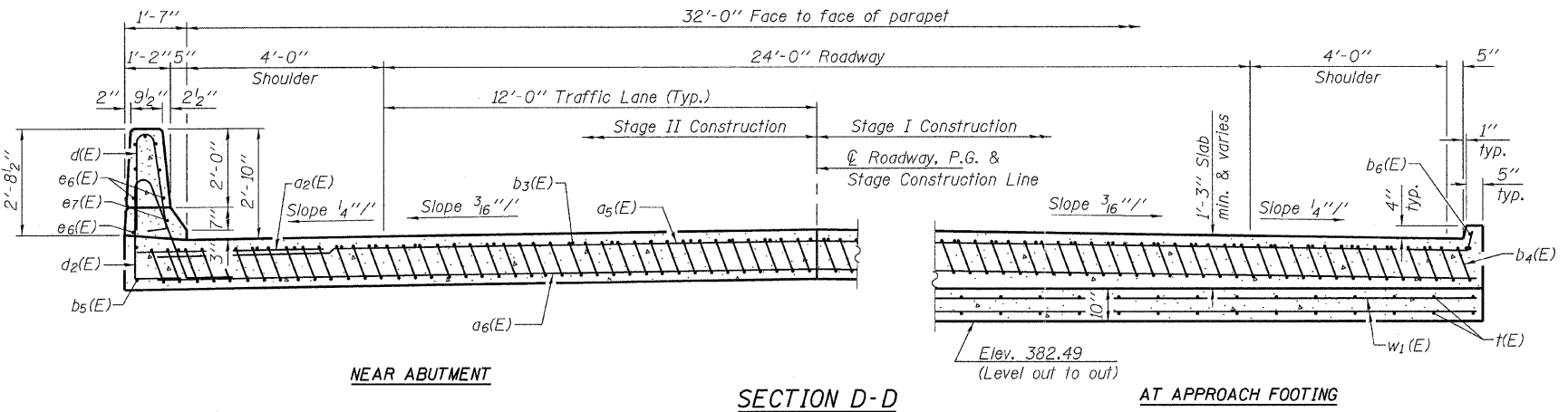


VIEW B-B

FILE NAME = 090148-sht-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS - SOUTH STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	36	
ILLINOIS PROFESSIONAL DESIGN FIRM 15 / PE / SE CORP. 184-003969	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			SHEET NO. 15 OF 26 SHEETS					
						ILLINOIS FED. AID PROJECT					

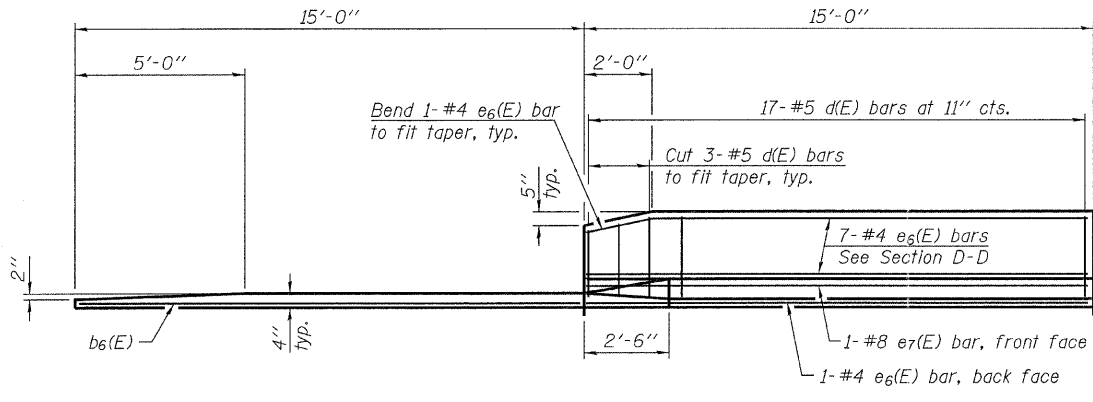


SECTION C-C

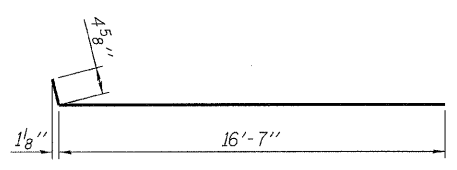


SECTION D-D

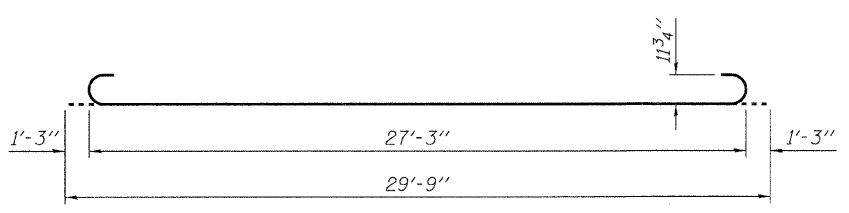
(See Plan for dimensions not shown)



VIEW E-E

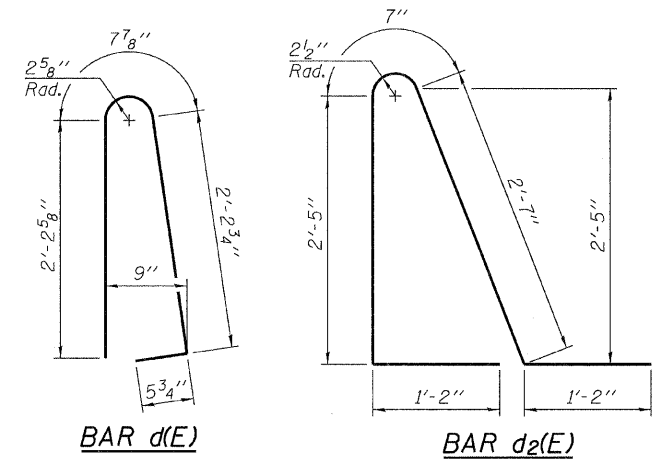


BAR a5(E)



BAR b4(E)

Notes:
 See sheet 15 of 26 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 12 of 26.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see sheet 22 of 26.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 26.
 For additional parapet details, see sheet 11 of 26.



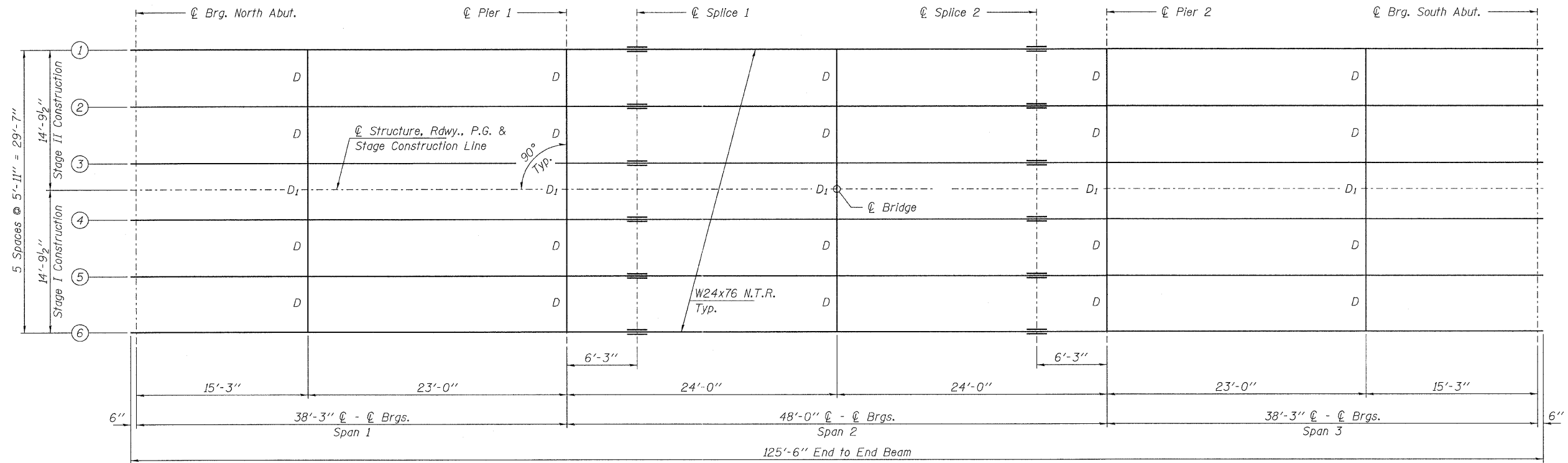
BAR d(E)

BAR d2(E)

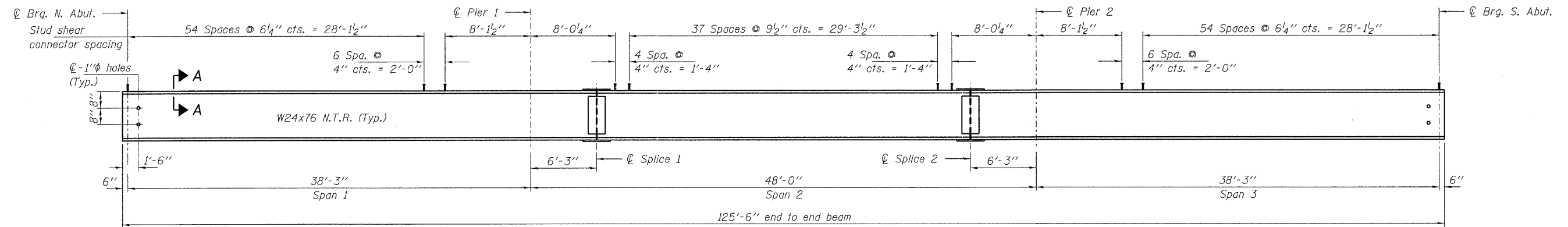
* Tilt #9 b4(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.

SOUTH APPROACH
 BILL OF MATERIAL

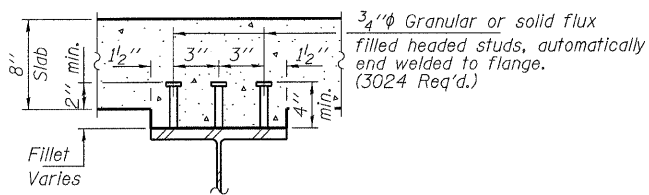
Bar	No.	Size	Length	Shape
a2(E)	24	#6	6'-6"	—
a5(E)	50	#4	17'-0"	—
a6(E)	92	#5	16'-7"	—
b3(E)	28	#4	29'-8"	—
b4(E)	80	#9	29'-9"	—
b5(E)	2	#4	14'-8"	—
b6(E)	2	#4	14'-4"	—
d(E)	34	#5	5'-7"	—
d2(E)	34	#5	7'-11"	—
e6(E)	16	#4	14'-8"	—
e7(E)	2	#8	14'-8"	—
t(E)	72	#4	9'-8"	—
w1(E)	80	#5	16'-7"	—
Concrete Structures			Cu. Yd.	10.4
Concrete Superstructure			Cu. Yd.	53.0
Reinforcement Bars, Epoxy Coated			Pound	13,640



PLAN



ELEVATION



SECTION A-A

Location	℄ Brg. N. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Splice 2	℄ Brg. Pier 2	℄ Brg. S. Abut.
BEAM 1	383.94	383.94	383.94	383.94	383.94	383.94
BEAM 2	384.04	384.05	384.05	384.05	384.05	384.05
BEAM 3	384.14	384.14	384.14	384.14	384.14	384.14
BEAM 4	384.14	384.14	384.14	384.14	384.14	384.14
BEAM 5	384.04	384.05	384.05	384.05	384.05	384.05
BEAM 6	383.94	383.94	383.94	383.94	383.94	383.94

TOP OF BEAM ELEVATIONS
(For fabrication only)
(Does not include Dead Load Deflections)

Notes:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
All beams and splices shall be M270 Grade 50.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
For Structural Steel details see sheet 18 of 26.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I_s	(in ⁴)	2100	2100	2100
$I_c(n)$	(in ⁴)	6993	-	6993
$I_c(3n)$	(in ⁴)	5237	-	5237
S_s	(in ³)	175	175	175
$S_c(n)$	(in ³)	288	-	288
$S_c(3n)$	(in ³)	260	-	260
Z	(in ³)	-	200	-
DC1	(k/')	0.70	0.70	0.70
M _{DC1}	('k)	70	132	70
DC2	(k/')	0.15	0.15	0.15
M _{DC2}	('k)	18	23	21
DW	(k/')	0.30	0.30	0.30
M _{DW}	('k)	35	45	42
$M_L + 1M$	('k)	365	204	402
M_u (Strength I)	('k)	801	618	880
$\phi_f M_n$, $\phi_f M_{nc}$	('k)	1478	661	1477
f_s DC1	(ksi)	4.8	9.1	4.8
f_s DC2	(ksi)	0.8	1.6	1.0
f_s DW	(ksi)	1.6	3.1	1.9
f_s 1.3(L+IM)	(ksi)	19.8	18.2	21.8
f_s (Service II)	(ksi)	27.0	32.0	29.5
V_f	(k)	36.2	-	36.2

* Compact sections

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier 1 or 2
R_{DC1}	(k)	33.5
R_{DC2}	(k)	7.1
R_{DW}	(k)	13.9
$R_L + 1M$	(k)	78.3
R_{Total}	(k)	132.8

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

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_L + 1M$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + 1M$

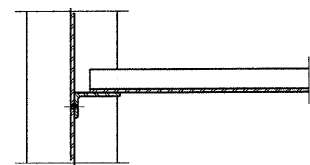
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).

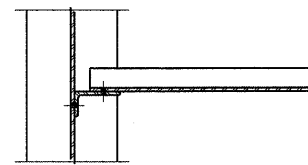
f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + 1M$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + 1M$

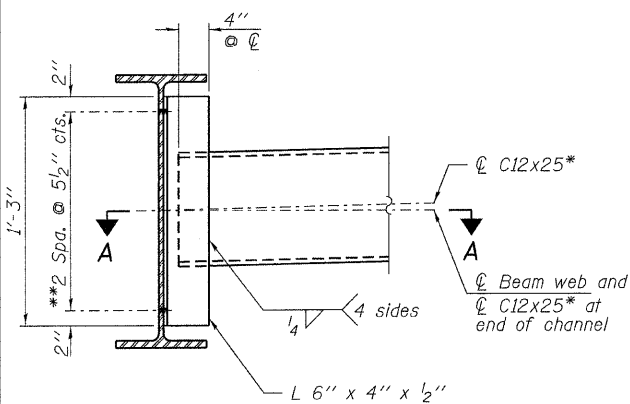
V_f : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



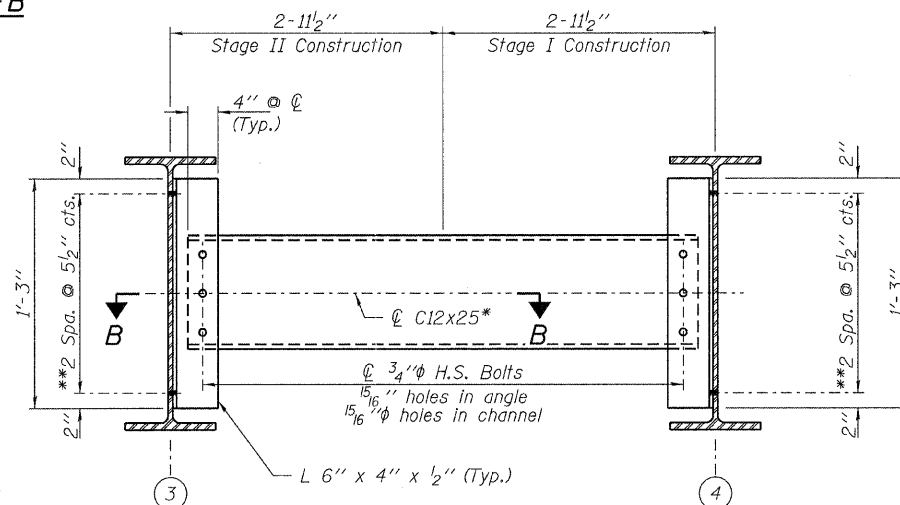
SECTION A-A



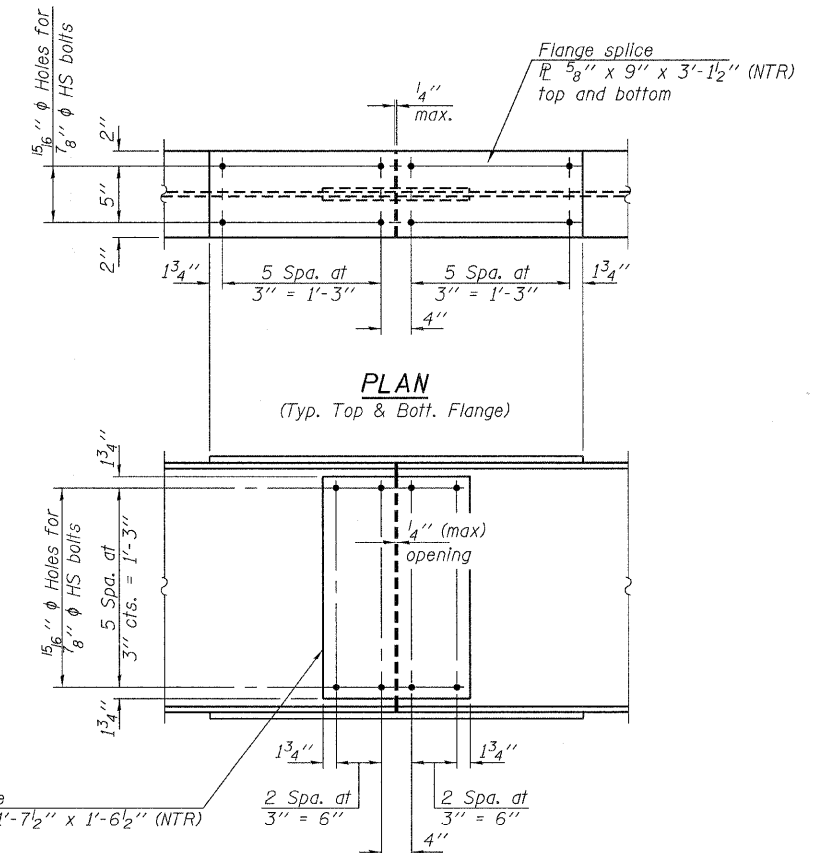
SECTION B-B



INTERIOR DIAPHRAGM D
(20 Required)

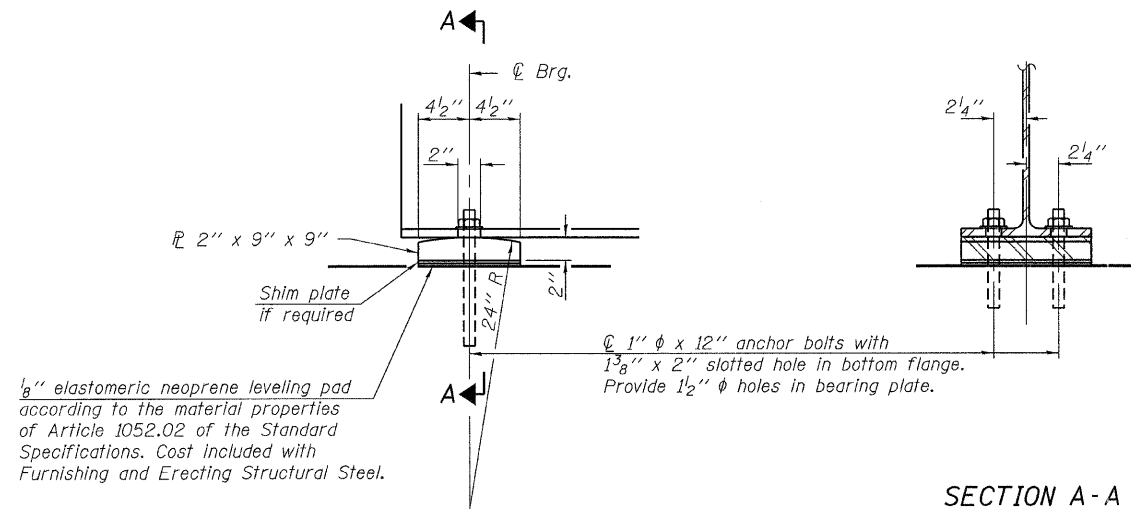


INTERIOR DIAPHRAGM D1
(5 Required)



SPlice 1 & 2 DETAIL
(12 Required)

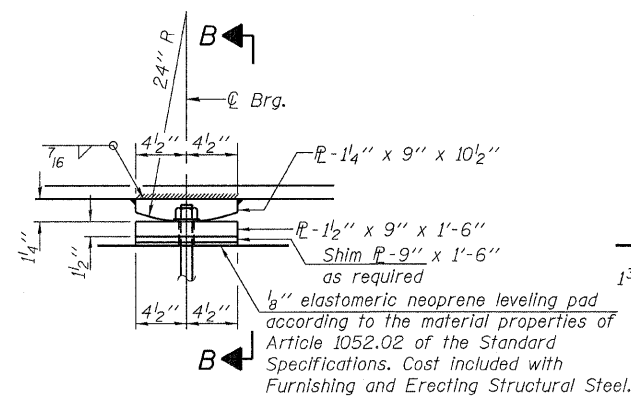
Notes:
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 All beams and splices shall be M270 Grade 50.
 *Alternate channels (C12X30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
 **3/4" ϕ HS bolts, 15/16" ϕ holes.



1/8'' elastomeric neoprene leveling pad according to the material properties of Article 1052.02 of the Standard Specifications. Cost included with Furnishing and Erecting Structural Steel.

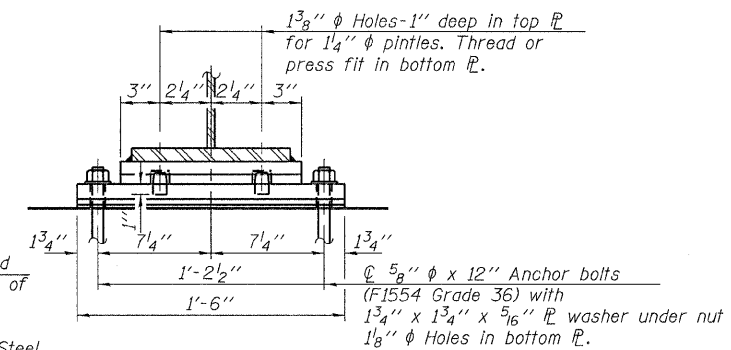
ELEVATION

FIXED BEARING AT ABUTMENT
(12 required)

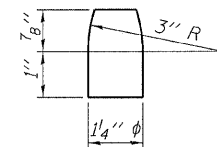


ELEVATION

FIXED BEARING AT PIER
(12 required)



SECTION B-B



PINTLE

Notes:

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.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

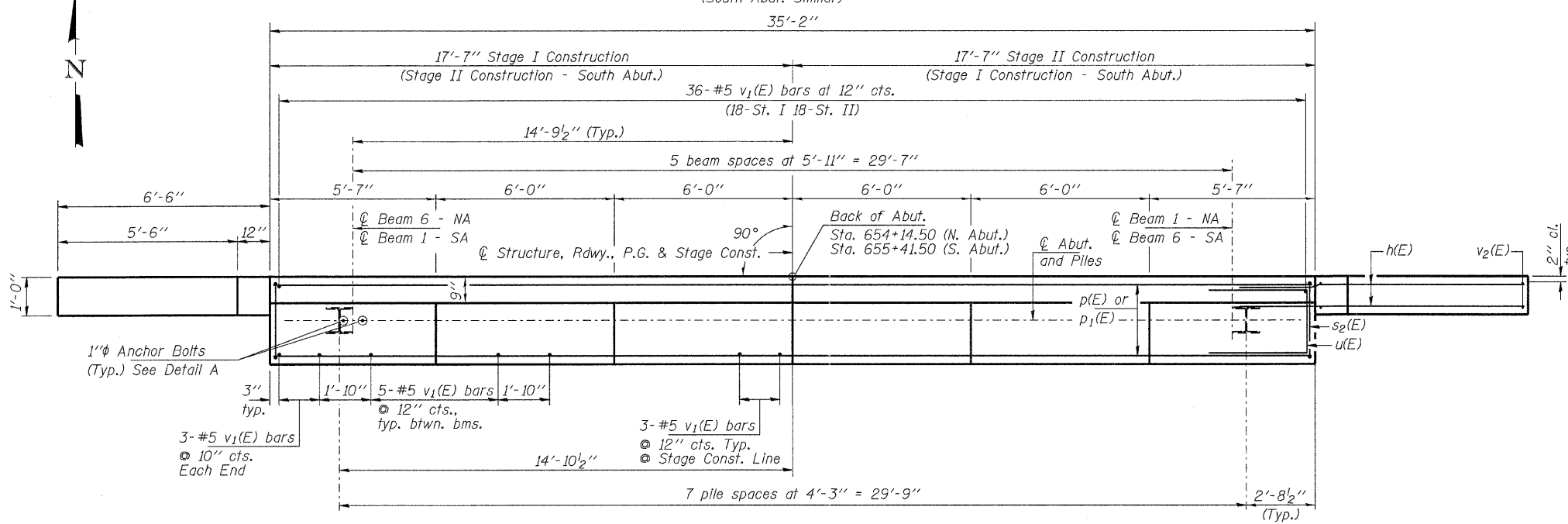
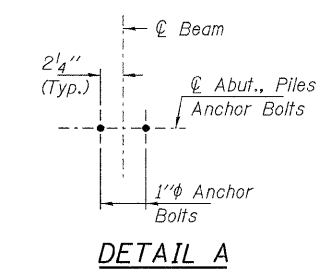
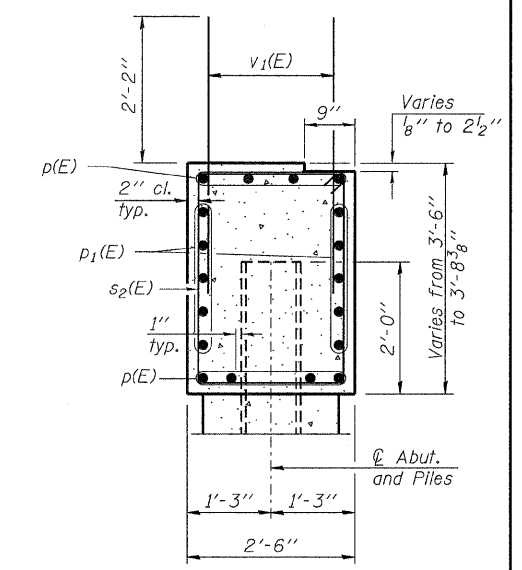
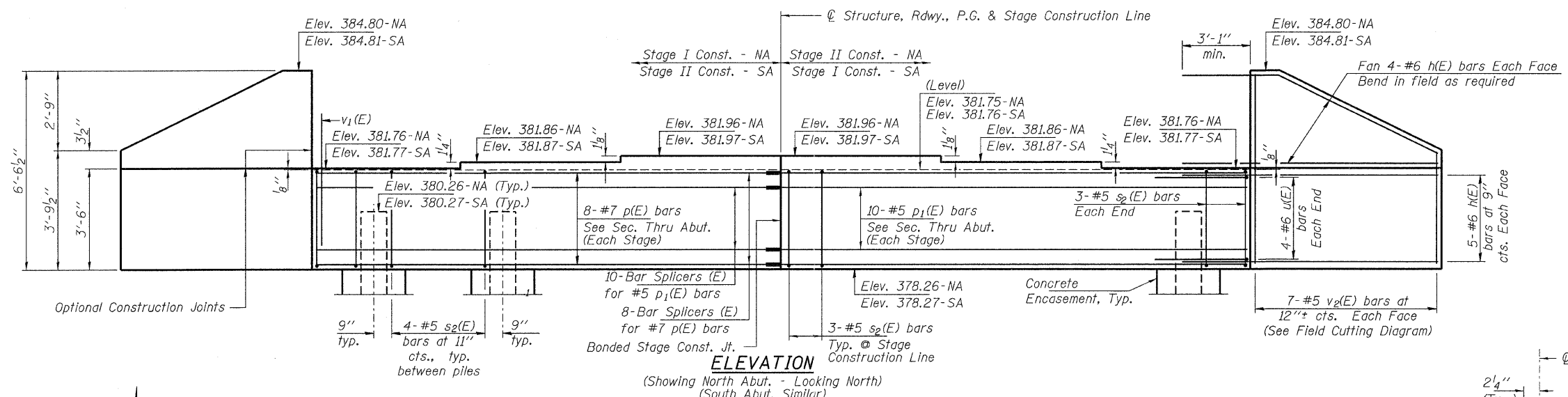
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

All structural steel for the fixed bearings including plate material and pintles shall be AASHTO M270 Grade 50 except shim plates.

BILL OF MATERIAL

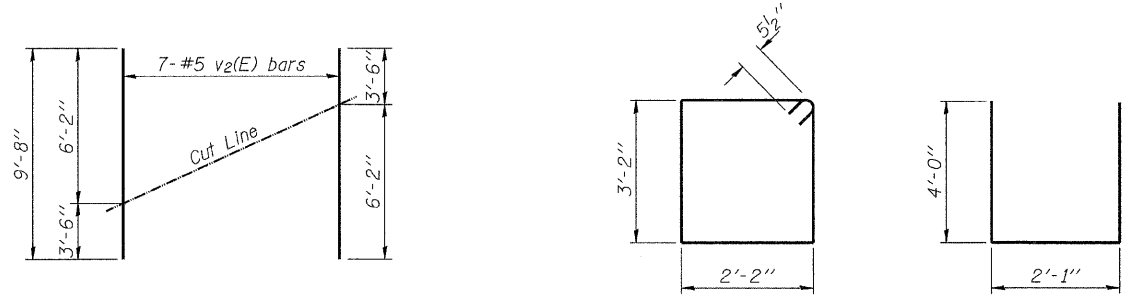
Item	Unit	Total
Anchor Bolts, 5/8''	Each	24
Anchor Bolts, 1''	Each	24



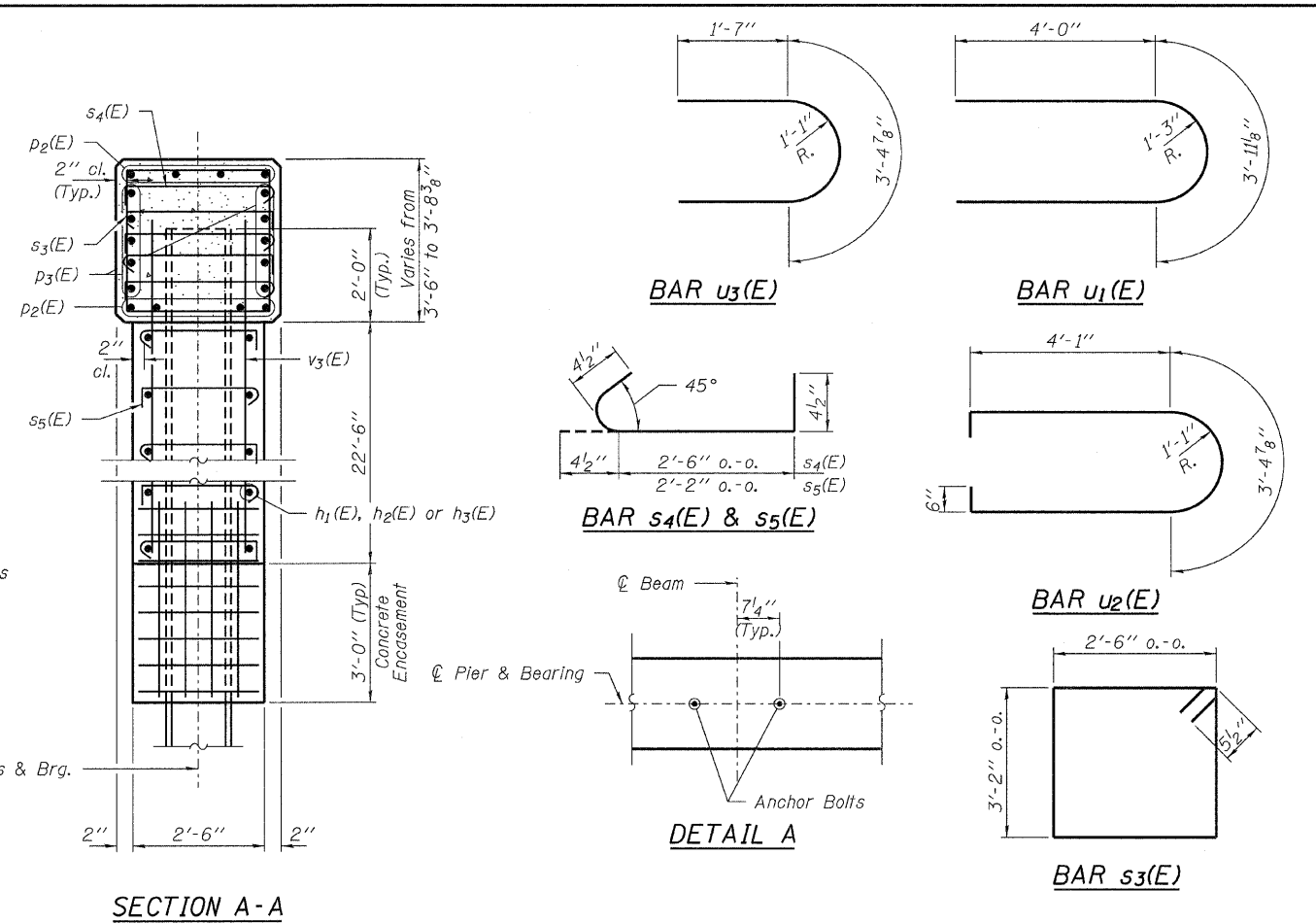
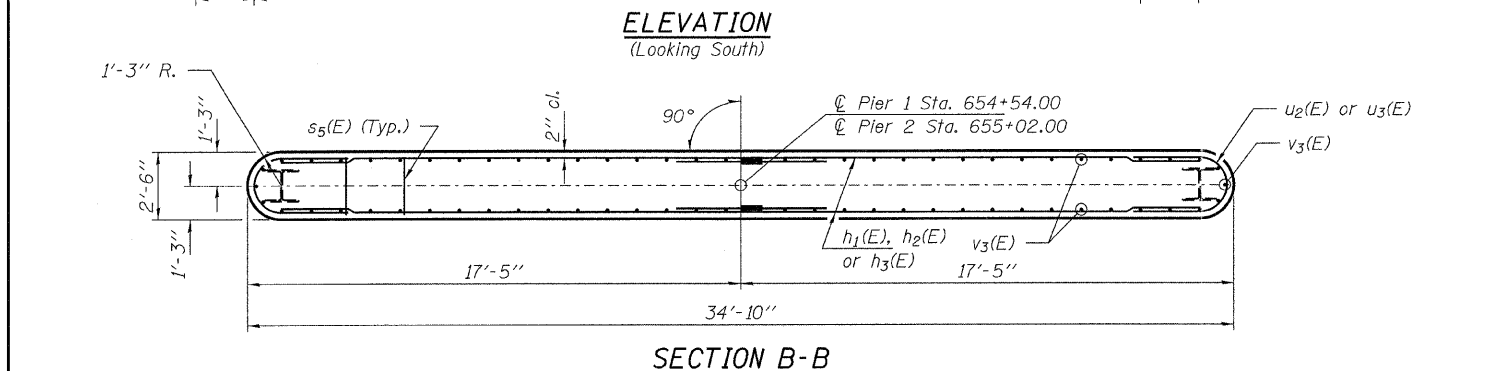
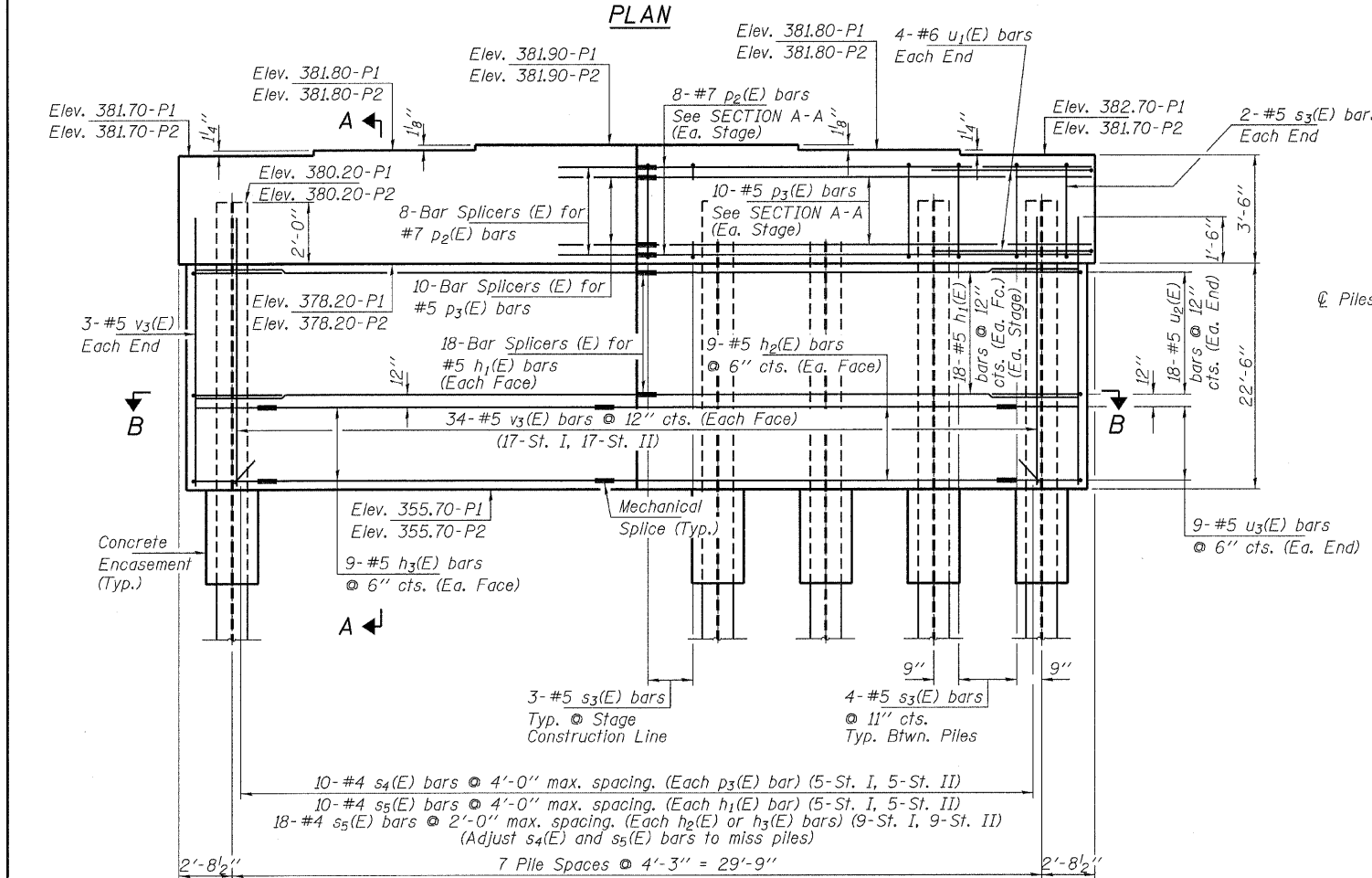
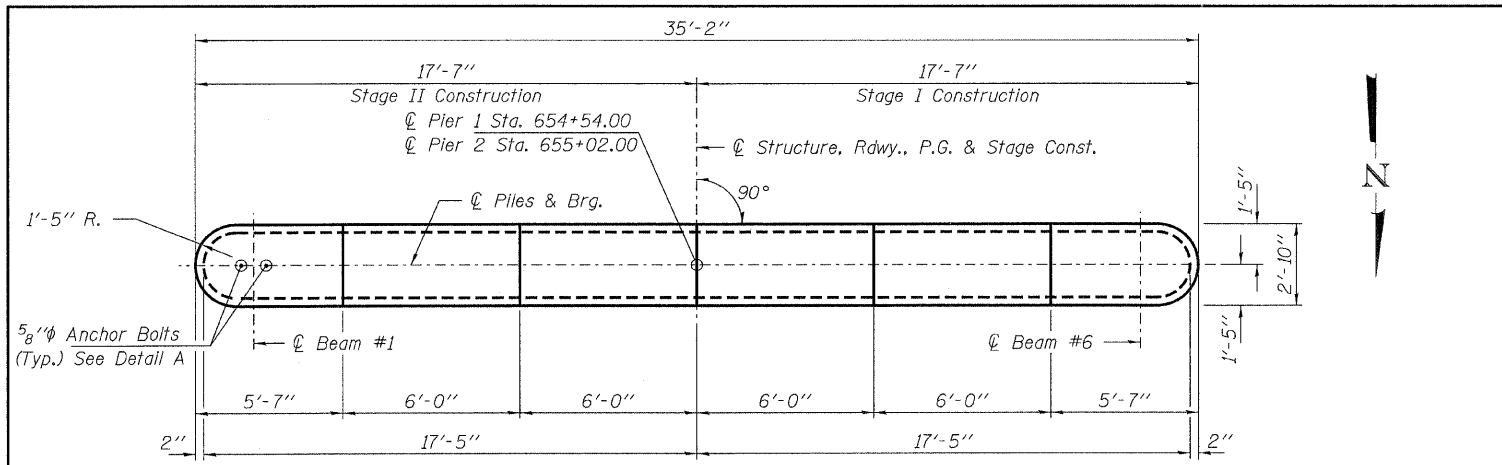
BILL OF MATERIAL (2 ABUTMENTS)

Bar	No.	Size	Length	Shape
h(E)	72	#6	10'-2"	—
p(E)	32	#7	17'-3"	—
p1(E)	40	#5	17'-3"	—
s2(E)	72	#5	11'-7"	□
u(E)	16	#6	10'-1"	□
v1(E)	136	#5	4'-4"	—
v2(E)	28	#5	9'-8"	—
Structure Excavation		Cu. Yd.	170	
Concrete Structures		Cu. Yd.	28.2	
Concrete Encasement		Cu. Yd.	8.8	
Reinforcement Bars, Epoxy Coated		Pound	4,960	
Furnishing Steel Piles HP14x89		Foot	595	
Driving Piles		Foot	595	
Test Pile Steel HP14x89		Each	2	
Pile Shoes		Each	16	

PILE DATA
Type: Steel HP14x89 with Pile Shoes
Nominal Required Bearing: 705 Kips/pile
Factored Resistance Available: 388 Kips/pile
Est. Length: 45' (North Abut.)
Est. Length: 40' (South Abut.)
No. Production Piles: 14
No. Test Piles: 2 (1-NA, 1-SA)



Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.
For details of Bar Splicers, see sheet 22 of 26.
For details of piles and Concrete Encasement, see sheet 24 of 26.



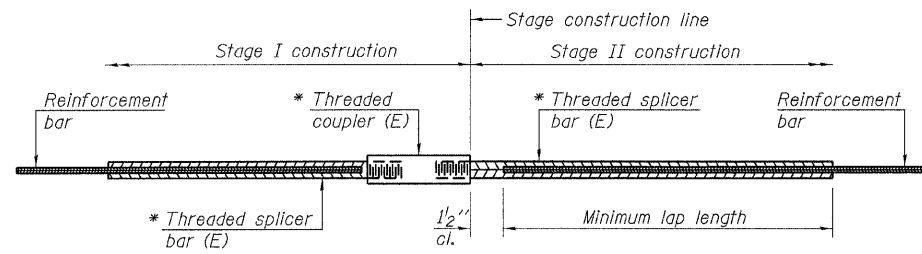
Notes:
 Pour steps monolithically with cap.
 If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 s4(E) and s5(E) bars shall enclose both the vertical and horizontal reinforcing bars. The position of the 90 and 135 degree hooked ends shall be alternated between adjacent bars as shown, both vertically and horizontally.
 Space reinforcement in the cap to miss anchor bolts.
 For details of Bar Splicers, see sheet 22 of 26.
 For details of piles and Concrete Encasement, see sheet 24 of 26.

PILE DATA

Type: Steel HP14x73 with Pile Shoes
 Nominal Required Bearing: 578 Kips/pile
 Factored Resistance Available: 318 Kips/pile
 Est. Length: 46' (Pier 1)
 Est. Length: 42' (Pier 2)
 No. Production Piles: 16

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h ₁ (E)	144	#5	15'-10"	—
h ₂ (E)	72	#5	15'-7"	—
h ₃ (E)	72	#5	13'-7"	—
p ₂ (E)	32	#7	16'-0"	—
p ₃ (E)	40	#5	16'-0"	—
s ₃ (E)	68	#5	12'-3"	□
s ₄ (E)	100	#4	3'-3"	┌
s ₅ (E)	684	#4	2'-11"	┌
u ₁ (E)	16	#6	12'-0"	┌
u ₂ (E)	72	#5	12'-7"	┌
u ₃ (E)	36	#5	6'-7"	┌
v ₃ (E)	148	#5	23'-10"	—
Structure Excavation			Cu. Yd.	160
Concrete Structures			Cu. Yd.	166.8
Concrete Encasement			Cu. Yd.	8.8
Reinforcement Bars, Epoxy Coated			Pound	13,860
Furnishing Steel Piles HP14x73			Foot	704
Driving Piles			Foot	704
Pile Shoes			Each	16
Underwater Structure Excavation Protection - Loc. 1			Each	1
Underwater Structure Excavation Protection - Loc. 2			Each	1



STANDARD BAR SPLICER ASSEMBLY

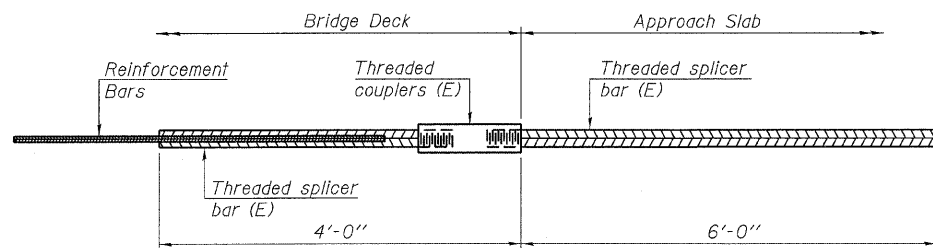
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

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

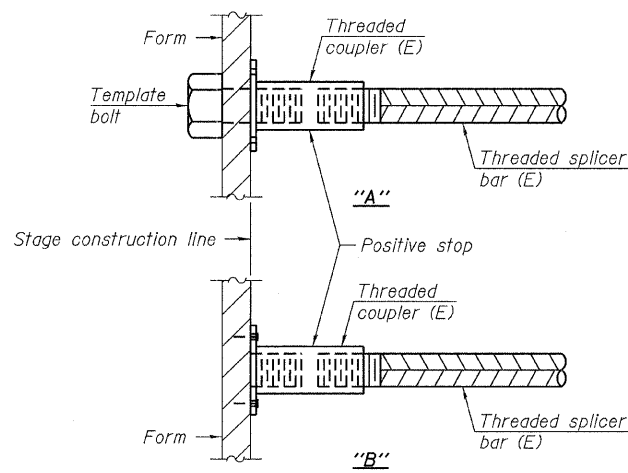
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Top of Slab	#5	219	3
Bottom of Slab	#5	153	3
Diaphragm	#6	16	5
Approach Slab	#4	50	4
Approach Slab	#5	92	3
Appr. Slab Footing	#5	80	3
Abutments	#7	16	4
Abutments	#5	20	4
Piers	#7	16	4
Piers	#5	92	4



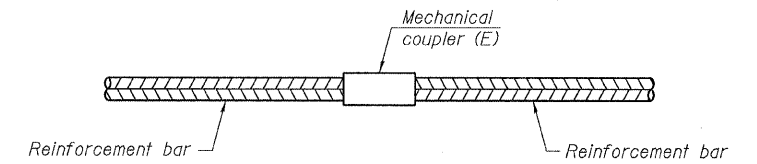
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 64



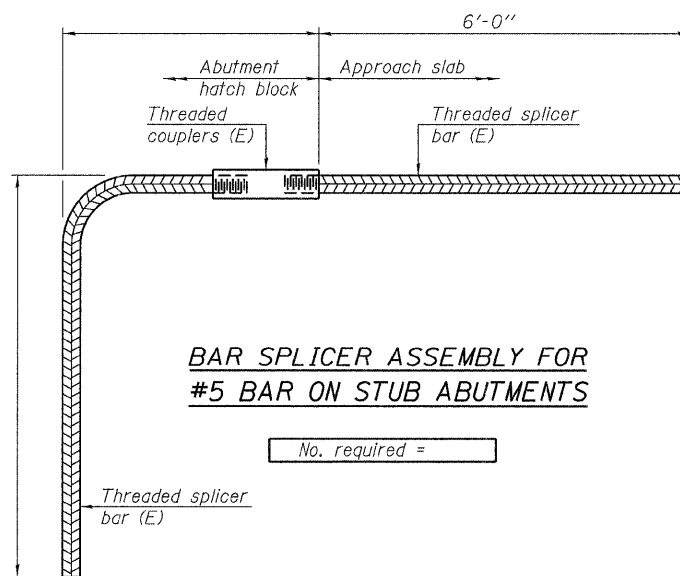
INSTALLATION AND SETTING METHODS

- "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
Piers	#5	108



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

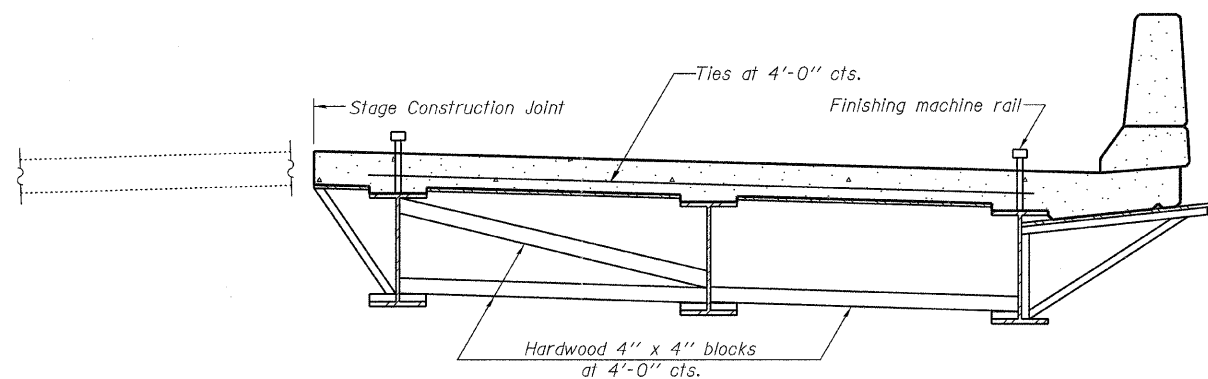
NOTES

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

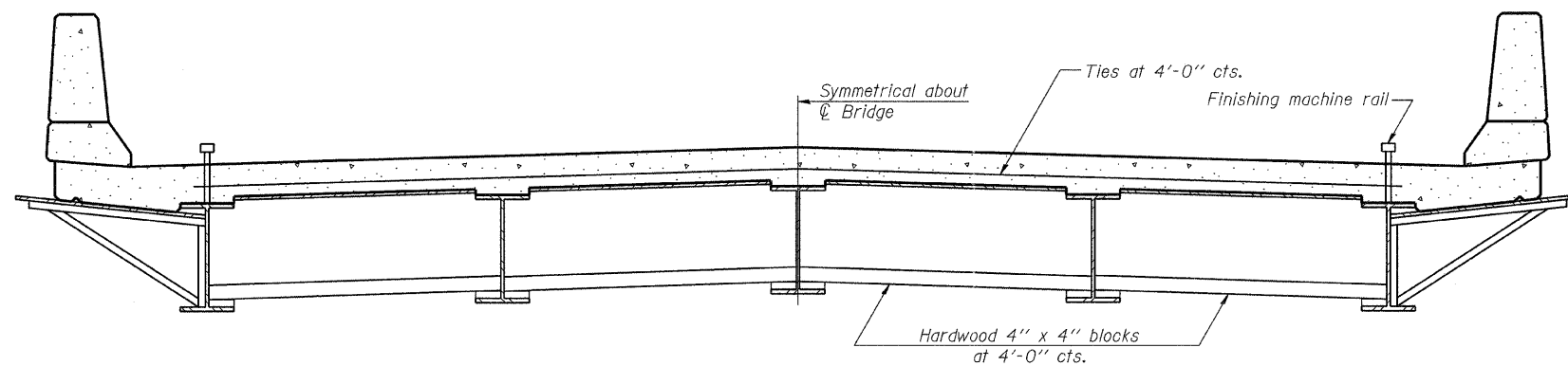
BSD-1

7-1-10

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.
 The finishing machine rails shall be placed on the top flange of the exterior beams.
 The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.
 For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STAGE CONSTRUCTION**

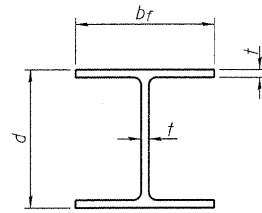


**FORM BRACES FOR
STANDARD CONSTRUCTION**

SB-1

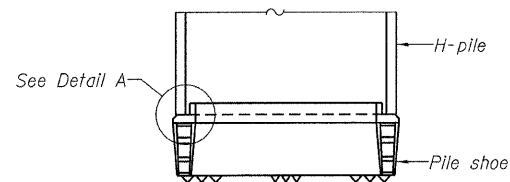
7-1-10

FILE NAME = 090140-shr-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	44	
ILR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			SHEET NO. 23 OF 26 SHEETS					
						ILLINOIS FED. AID PROJECT					

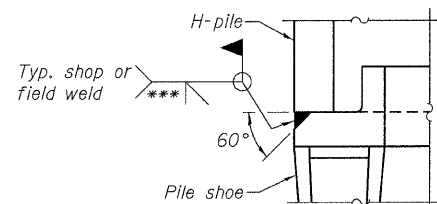


STEEL PILE TABLE

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

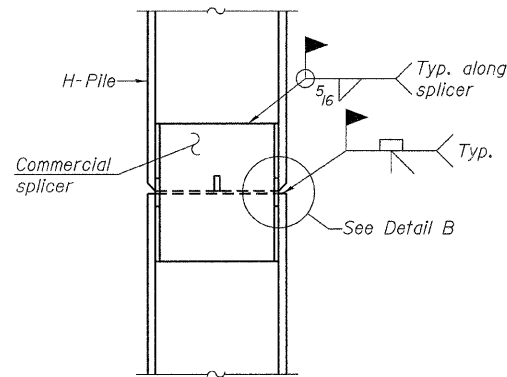


ELEVATION

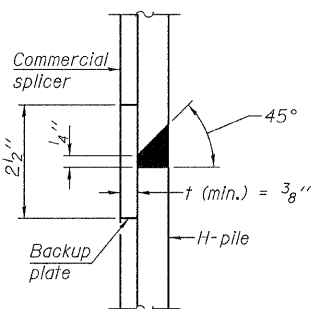


DETAIL A

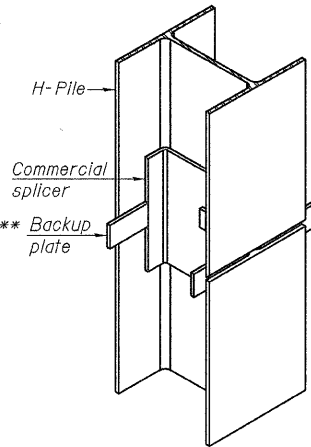
H-PILE SHOE ATTACHMENT



ELEVATION

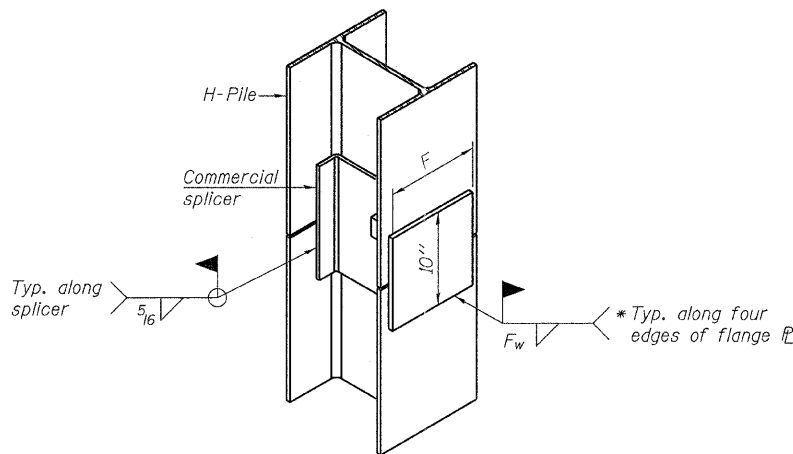


DETAIL "B"



ISOMETRIC VIEW

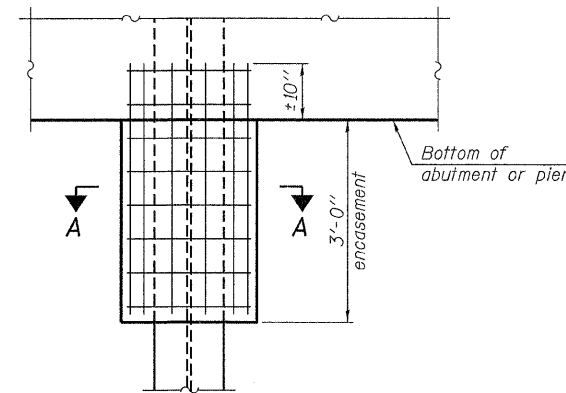
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW

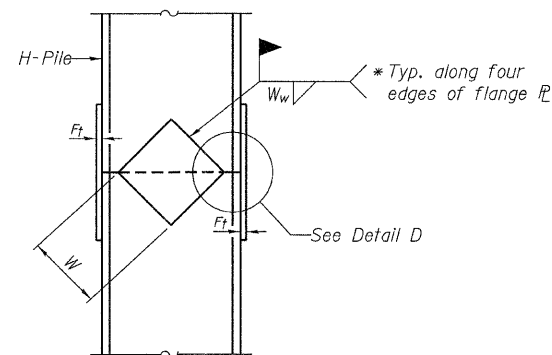
WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

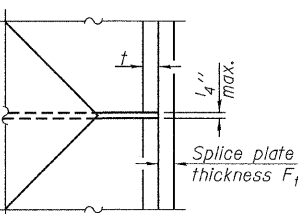


ELEVATION

PILE ENCASEMENT

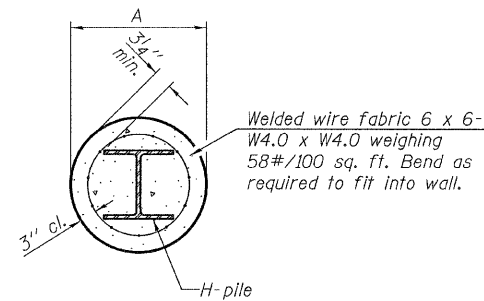


ELEVATION



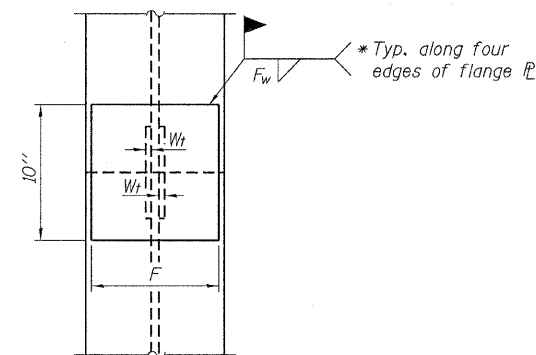
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

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



END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

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

F-HP 7-1-10

FILE NAME = 090148-ah-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	45	
ILLINOIS PROFESSIONAL DESIGN FIRM L3/P3/SE CORP. 184300899	PLOT DATE = 7/13/2011	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
		CHECKED - M.D.C.	REVISED -			ILLINOIS FED. AID PROJECT					

ILLINOIS DEPARTMENT OF TRANSPORTATION										Bridge Foundation Boring Log			
District Nine Materials										Sheet 1 of 2			
FAP 328 (US 45) Over Southern Outlet drainage ditch										Date: 5/7/2009			
Route: FAP 328 (US 45) Structure Number: 097-0021										Bored By: R Moberly			
Section: 105B, 105BY-1										Checked By: R Graeff			
County: White										Location: 2.5 miles south of Mill Shoals			
Boring No 2-S	D	B			Surf Wat Elev: 368.4	D	B						
Station 655+50	E	L			Ground Water Elevation	E	L						
Offset 8' Rt CL	P	O			when Drilling	P	O						
Ground Surface 384.6 Ft	T	W	Qu	W%	At Completion	T	W	Qu	W%				
	H	S	tsf		At: Hrs:	H	S	tsf	W%				
Asphalt					Stiff, moist, grey, Clay A7-6		4	1.8B	24				
363.1							6						
Medium to stiff, very moist, grey mottled brown, Clay A7-6		1					1						
		1	1.0B	26			3	1.7B	29				
		1					4						
355.1													
5.0	1				Very stiff, moist, grey, Clay A7-6	30.0	1						
	2	0.8B	26				4	3.1B	26				
	2						4						
377.6													
Stiff, moist, brown mottled grey, Clay A7-6		1			Stiff, moist, grey, Clay A7-6		1						
		2	1.4B	23			3	1.4B	24				
		3					4						
350.1													
10.0	1				Medium, very moist, grey, Clay to Silty Clay A-6 with a Sand layer	35.0	1						
	2	1.6B	23				2	0.7B	24				
	3						3						
372.6													
Medium, very moist, brown mottled grey, Clay A7-6		WH			Very stiff, damp, grey, weathered Clay Shale		2						
		1	0.8B	23			10	2.3S	19				
		2					21						
370.1													
Stiff, moist, grey mottled brown, Clay A7-6	15.0	1				40.0	2						
		2	1.9S	35			9						
		3					16						
342.6													
1					Hard, dry, grey, Limestone	342.1	100/1"						
1	1.6B	44											
20.0	1				Cored 42.1 to 47.1 feet								
	2	1.3B	34		100% Rec; 88% RQD								
	2												
362.6													
Medium, very moist, grey, Clay A7-6		WH			Hard, dry, dark grey, Limestone and Coal with Clay Shale layer	45.0							
		WH	0.7B	26									
		1											
360.1					Cored 47.1 to 52.1 feet								
					100% Rec; 65% RQD								
					Hard, dry, grey, Clay Shale with Clay layers	50.0							
	25.0	1											

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

ILLINOIS DEPARTMENT OF TRANSPORTATION										Bridge Foundation Boring Log			
District Nine Materials										Sheet 2 of 2			
Route: FAP 328 (US 45)										Date: 5/7/2009			
Section: 105B, 105BY-1										Bored By: R Moberly			
County: White										Location: 2.5 miles south of Mill Shoals			
Boring No: 2-S	D	B				D	B						
Station: 655+50	E	L				E	L						
Offset: 8' Rt CL	P	O				P	O						
Ground Surface: 384.6 Ft	T	W	Qu	W%		T	W	Qu	W%				
	H	S	tsf			H	S	tsf	W%				
Hard, dry, grey, Clay Shale with Clay layers													
332.6													
Cored 52.1 to 57.1 feet													
93% Rec; 58% RQD													
Hard, dry, grey, Clay Shale with Clay layers													
55.0													
80.0													
327.6													
Bottom of hole = 57.1 feet													
No free water observed													
Elevation referenced to BM @ SW wingwall; Elev. = 382.5 ft													
80.0													
To convert "N" values to "NGD" multiply by 1.25													
65.0													
90.0													
70.0													
95.0													
75.0													
100.0													

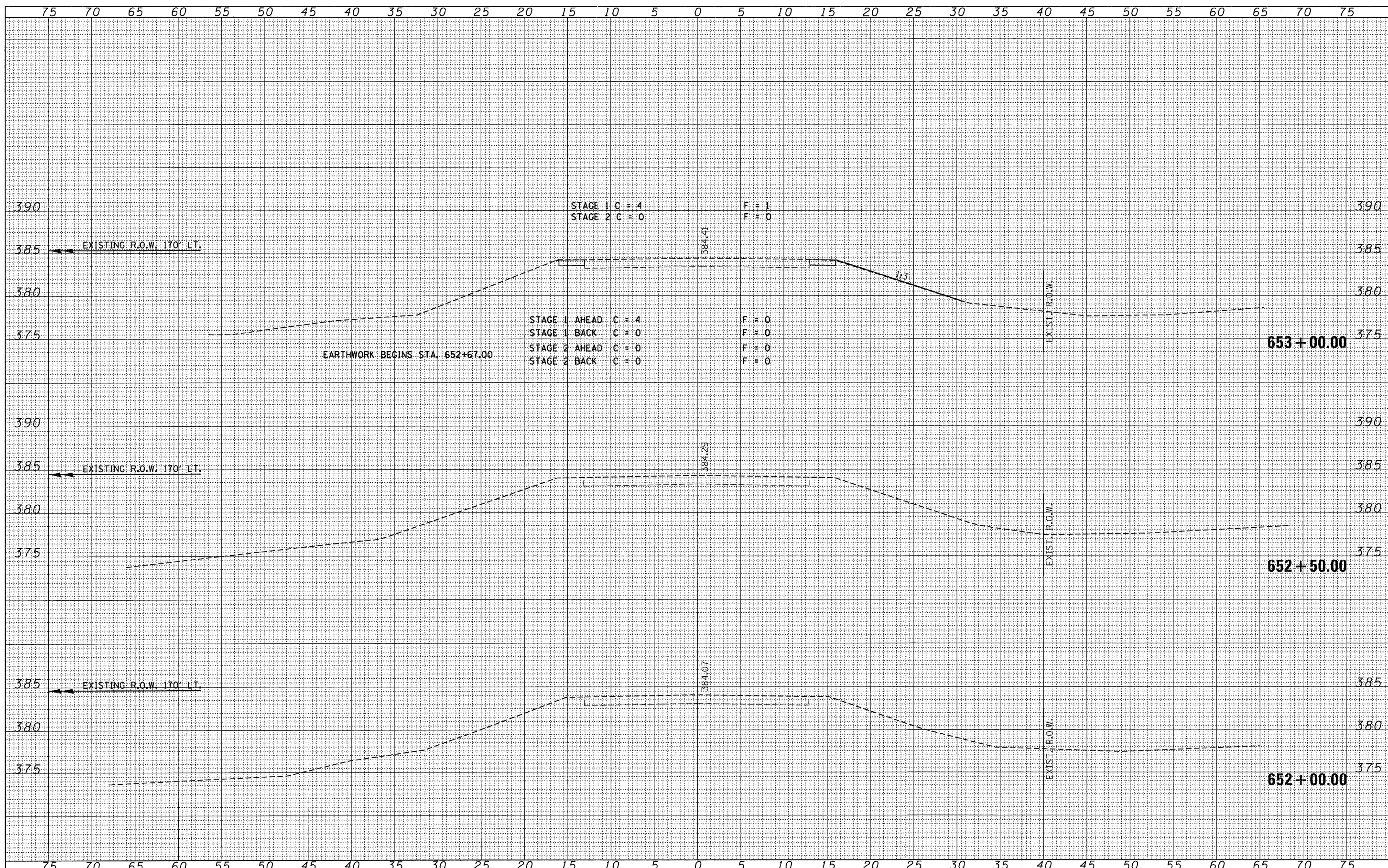
N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fall, B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 2-S

FILE NAME = 090148-sh-t-bridge.dgn	USER NAME =	DESIGNED - A.S.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORINGS STRUCTURE NO. 097-0076	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - C.C.S.	REVISED -			328	105B-1	WHITE	54	47	
3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - D.A.B.	REVISED -			CONTRACT NO. 78161					
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00059	PLOT DATE = 7/13/2011	CHECKED - M.D.C.	REVISED -			SHEET NO. 26 OF 26 SHEETS					
						ILLINOIS FED. AID PROJECT					

BY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

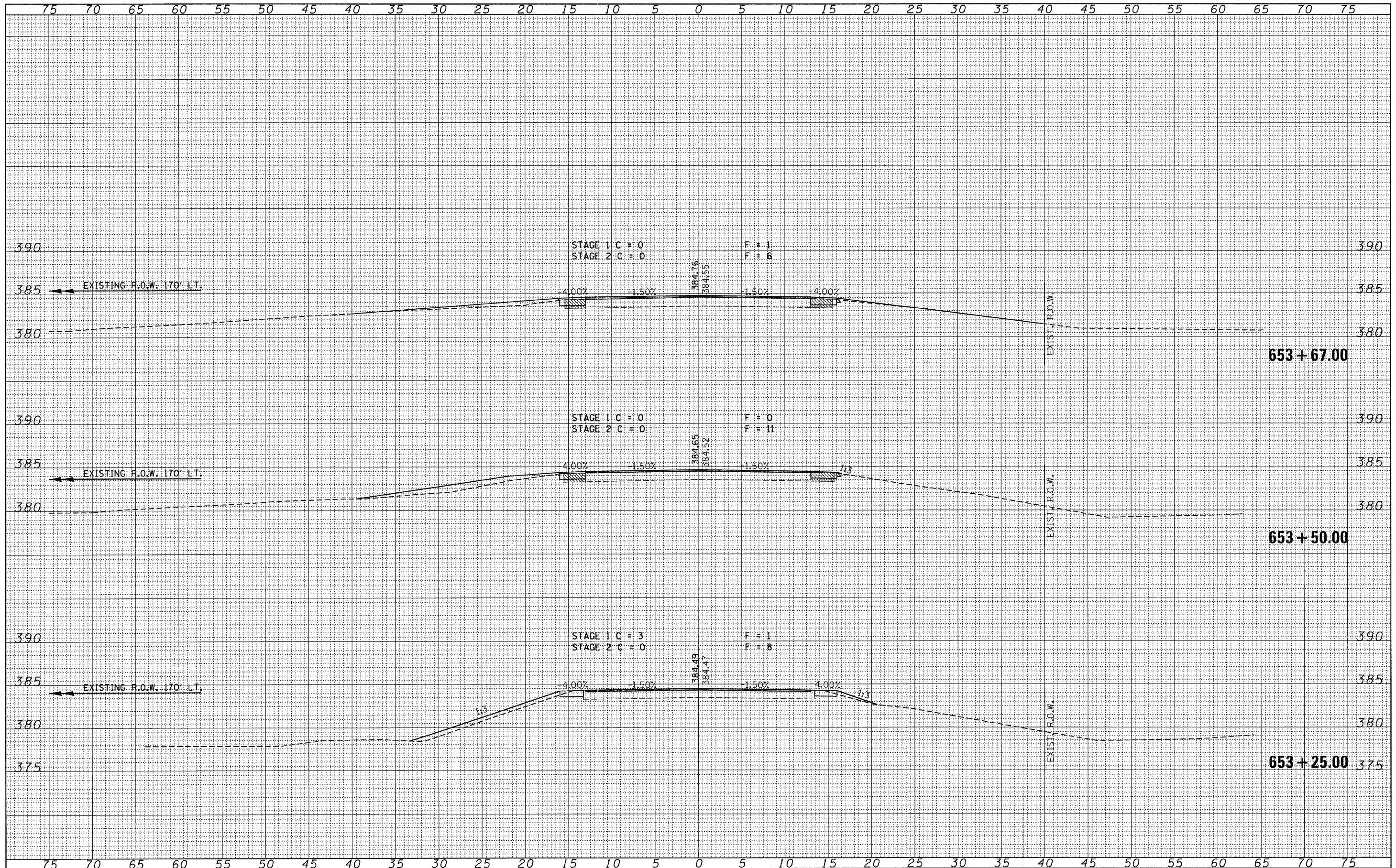
BY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
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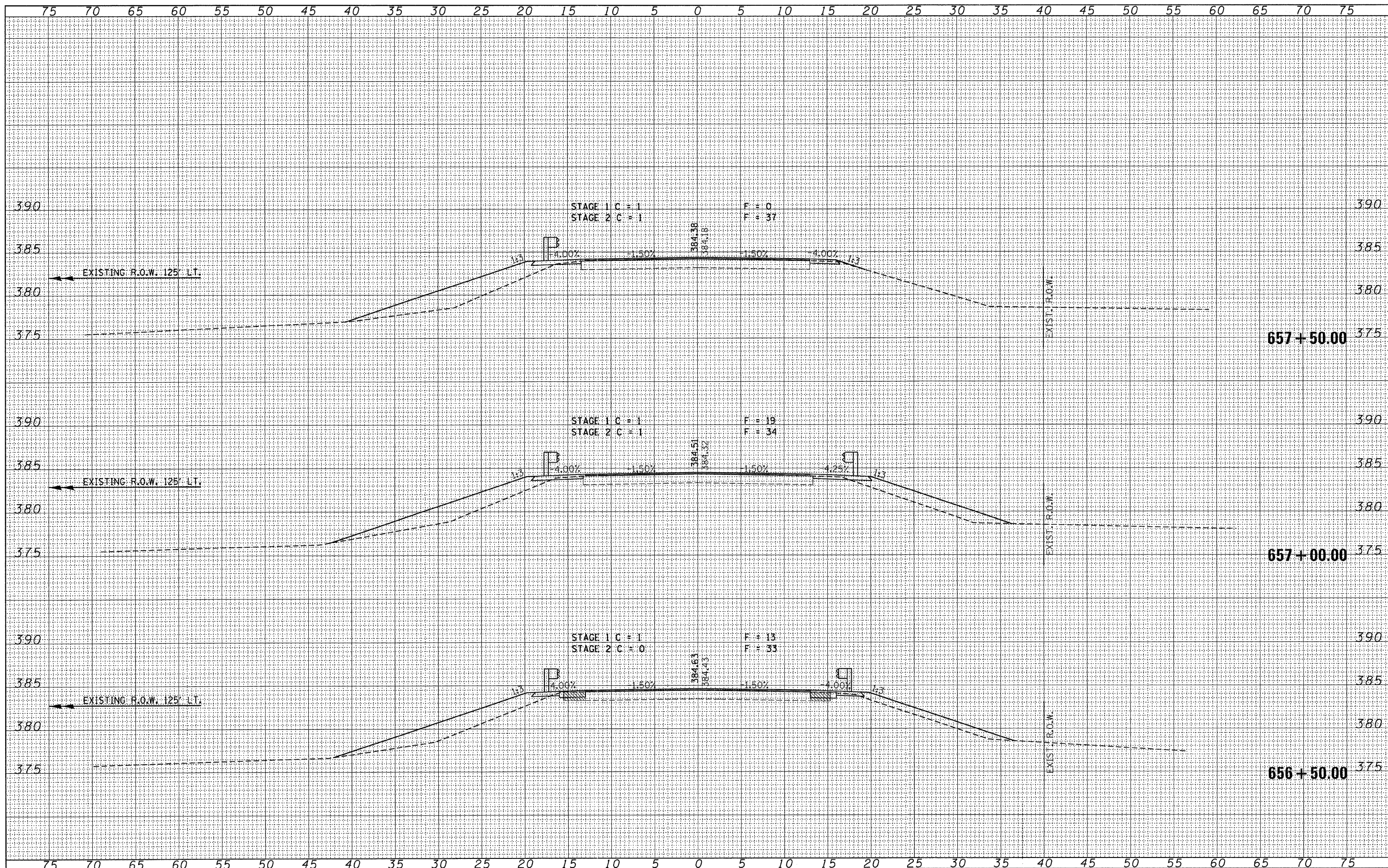
FILE NAME = 090148-ah1-xvdgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS U.S. 45	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -			328	105B-1	WHITE	54	48	
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLLOT SCALE =	CHECKED - J.W.F.	REVISED -			CONTRACT NO. 78161					
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.010995	PLLOT DATE = 7/13/2011	DATE - 04/05/11	REVISED -			SCALE: 5H:5V	SHEET NO. OF SHEETS	STA. 652+00.00 TO STA. 653+00.00		[ILLINOIS] FED. AID PROJECT	

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

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



FILE NAME = 090148-sht-xs.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS U.S. 45	F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3003 STEVENS DRIVE, SUITE 211 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / AS / CS / CP / 104.000000	PLOT SCALE =	DRAWN - T.W.K.	REVISED -			328	105B-1	WHITE	54	49	
PLOT DATE = 7/13/2011	CHECKED - J.W.F.	REVISED -	SCALE: 5H:5V			SHEET NO.	OF	SHEETS	STA. 653+25.00	TO STA. 653+67.00	CONTRACT NO. 78161
DATE - 04/05/11	REVISED -	ILLINOIS FED. AID PROJECT									



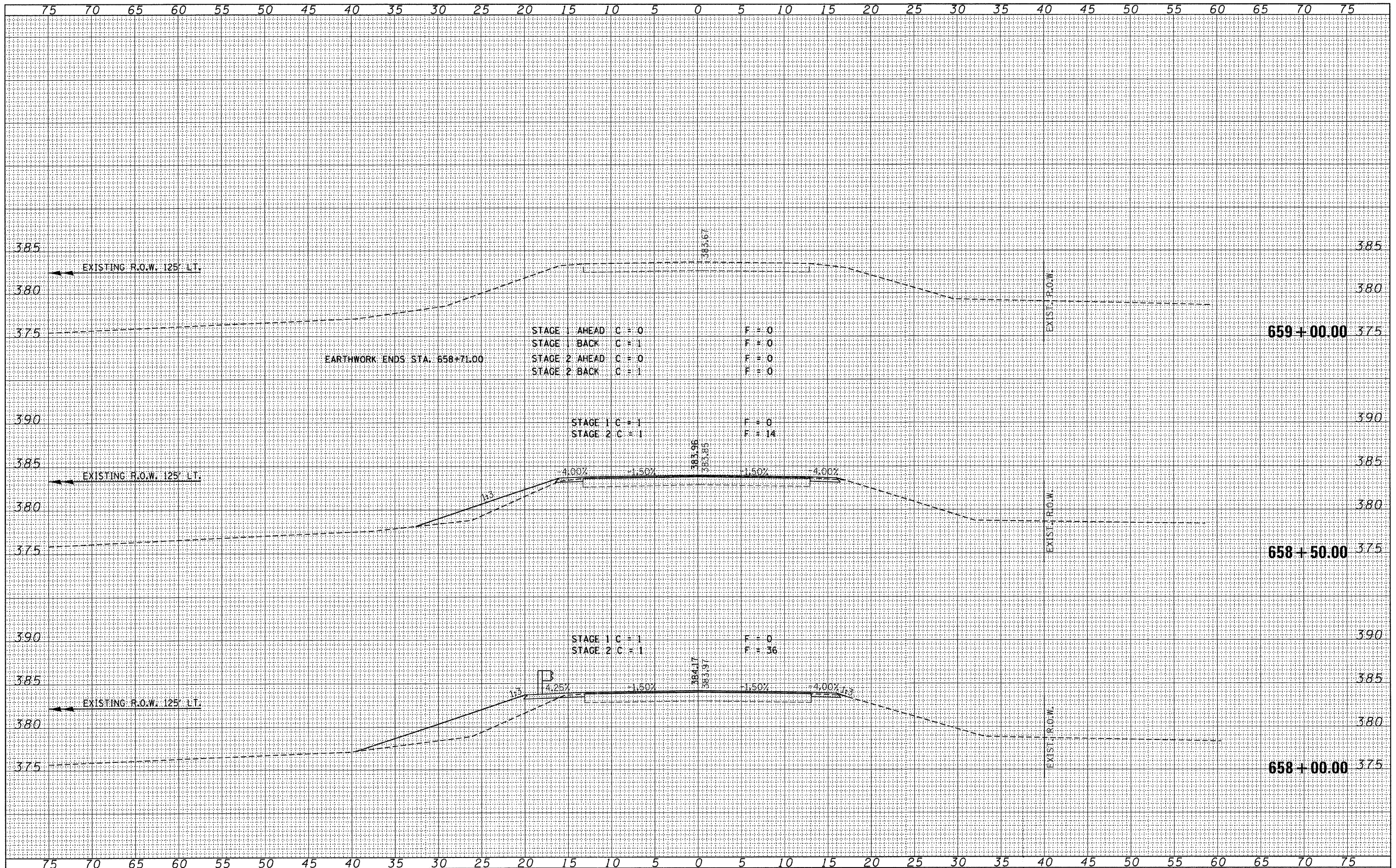
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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

FILE NAME = 090148-ah1-x.s.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS U.S. 45		F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -		328	105B-1	WHITE	54	53	CONTRACT NO. 78161		
3885 STEVENSON DRIVE, SUITE 207 SPRINGFIELD, ILLINOIS 62703		CHECKED - J.W.F.	REVISED -		SCALE: 5H:5V		SHEET NO. OF SHEETS		STA. 656+50.00 TO STA. 657+50.00		ILLINOIS FED. AID PROJECT	
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.00089		DATE - 04/05/11	REVISED -									

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME = 090148-ah1-x.s.dgn
 USER NAME =
 DESIGNED - L.F.S.
 DRAWN - T.W.K.
 CHECKED - J.W.F.
 DATE - 04/05/11

DESIGNED - L.F.S.
 DRAWN - T.W.K.
 CHECKED - J.W.F.
 DATE - 04/05/11

DESIGNED - L.F.S.
 DRAWN - T.W.K.
 CHECKED - J.W.F.
 DATE - 04/05/11

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 U.S. 45
 SCALE: 5H:5V
 SHEET NO. OF SHEETS STA. 658+00.00 TO STA. 659+00.00

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	105B-1	WHITE	54	54
CONTRACT NO. 78161			ILLINOIS FED. AID PROJECT	