

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115BR-1 & 115BR-2	HARDIN	83	1
FED. ROAD DIST. NO. 9		ILLINOIS	CONTRACT NO. 78026	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL NOTES AND STANDARDS
3.	SUMMARY OF QUANTITIES
4.	TYPICAL SECTIONS
5.-6.	SCHEDULES OF QUANTITIES (SECTION 115BR-1)
7.-8.	SCHEDULES OF QUANTITIES (SECTION 115BR-2)
9.	PLAN AND PROFILE (SECTION 115BR-1)
10.	STAGE I CONSTRUCTION (SECTION 115BR-1)
11.	STAGE II CONSTRUCTION (SECTION 115BR-1)
12.	EROSION CONTROL PLAN (SECTION 115BR-1)
13.	PAVEMENT MARKINGS (SECTION 115BR-1)
14.	PLAN AND PROFILE (SECTION 115BR-2)
15.	STAGE I CONSTRUCTION (SECTION 115BR-2)
16.	STAGE II CONSTRUCTION (SECTION 115BR-2)
17.	EROSION CONTROL PLAN (SECTION 115BR-2)
18.	PAVEMENT MARKINGS (SECTION 115BR-2)
19.	WIDE LOAD DETOUR
20.-35.	STRUCTURE PLANS (SECTION 115BR-1)
36.-46.	EXISTING STRUCTURE PLANS (SECTION 115BR-1)
47.-61.	STRUCTURE PLANS (SECTION 115BR-2)
62.-71.	EXISTING STRUCTURE PLANS (SECTION 115BR-2)
72.-78.	STATION CROSS SECTIONS (SECTION 115BR-1)
79.-83.	STATION CROSS SECTIONS (SECTION 115BR-2)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

F.A.P. ROUTE 782 (IL. ROUTE 1)
SECTION 115BR-1 & 115BR-2
PROJECT: BHF-0782 (010)
HARDIN COUNTY
C-99-006-08

PCC DECK BEAM SUPERSTRUCTURE REPLACEMENT
OVER HARRIS CREEK (SECTION 115BR-1) SN035-0001
PCC DECK BEAM SUPERSTRUCTURE REPLACEMENT
OVER BRANCH OF ROCK CREEK (SECTION 115BR-2) SN035-0003

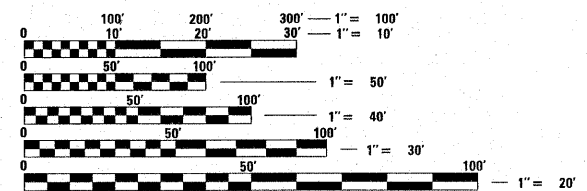


SEC. 115BR-1 & SEC. 115BR-2	
FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL (NON URBAN)
DESIGN SPEED:	55 MPH
POSTED SPEED:	55 MPH
ADT:	1500 (2005)
PV:	72%
TRUCKS:	28%

UTILITIES

SHAWNEE TELEPHONE COMPANY
ATTN: JOHN BOURLAND
P.O. BOX 97
EQUALITY, ILLINOIS 62934
(618) 276-4211

SOUTHEASTERN ILLINOIS ELECTRIC COOP
ATTN: ERIC JUNG
585 HIGHWAY 142 S.
ELDORADO, ILLINOIS 62930
(618) 273-2611



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
1-800-891-0123
OR 811

PROJECT ENGINEER
PROJECT MANAGER

CONTRACT NO. 78026



IMPROVEMENT BEGINS
STATION 926+88.67

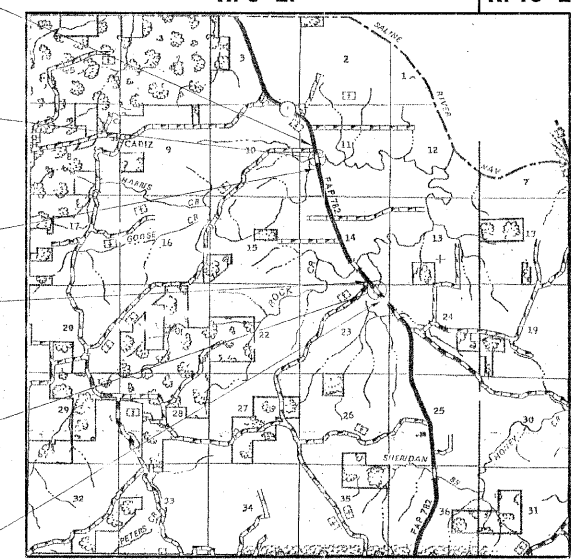
STA. 927+65 - SPECIAL BRIDGE DESIGN
PRECAST PRESTRESSED CONCRETE DECK
BEAM SUPERSTRUCTURE REPLACEMENT.
TWO SPANS: 39'-4 1/2", 39'-4 1/2"
33'-0" RDWY.; SKEW = 16°30'
STRUCTURE NO. 035-0001

IMPROVEMENT ENDS
STATION 928+41.33

IMPROVEMENT BEGINS
STATION 1015+10.22

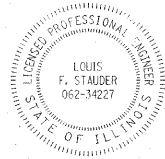
STA. 1015+71.72 - SPECIAL BRIDGE DESIGN
PRECAST PRESTRESSED CONCRETE DECK
BEAM SUPERSTRUCTURE REPLACEMENT.
SINGLE SPAN @ 48'-1 1/2"
33'-0" RDWY.; SKEW = 27°
STRUCTURE NO. 035-0003

IMPROVEMENT ENDS
STATION 1017+33.22



LOCATION MAP
APPROXIMATE SCALE: 0 1 MILE

GROSS AND NET LENGTH OF SECTION 115BR-1	=	152.66 FT.	=	0.029 MI.
NET ROADWAY LENGTH	=	152.66 FT.	=	0.029 MI.
BRIDGE LENGTH SN 035-0001	=	80.66 FT.	=	0.015 MI.
GROSS AND NET LENGTH OF SECTION 115BR-2	=	223.00 FT.	=	0.042 MI.
NET ROADWAY LENGTH	=	223.00 FT.	=	0.042 MI.
BRIDGE LENGTH SN 035-0003	=	51.00 FT.	=	0.01 MI.



Louis F. Stauder 11/8/2008
ILLINOIS PROFESSIONAL LICENSE NO. 34227
(EXPIRATION DATE: 11/30/09)

DESIGN DESIGNATION
N.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 28, 20 08
Max C. Lamer
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 21, 20 08
Eric E. Harau
ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 20 08
Christine M. Radtke
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PROJECT ENGINEER: DAVID PICHE (618) 351-5227

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1 115BR-2	HARDIN	83	2
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78026		

GENERAL NOTES

- 1) THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.
- 2) EXCEPT AS NOTED ON THE PLANS PAVEMENT GRADES SHOWN ARE AT THE TOP OF THE PAVEMENT SURFACES.
- 3) ALL SAWCUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED IN THE PAY ITEM INVOLVED. THE MINIMUM SAW DEPTH IN THE PAVEMENT SHALL BE 1 1/2" UNLESS OTHERWISE NOTED.
- 4) 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.
- 5) ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THE PLANS.
- 6) 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.
- 7) 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 - 0.09 GAL./SQ.YD.
 INTERMEDIATE LIFTS(FOG COAT) - 0.04 GAL./SQ.YD.
 ON AGGREGATE SURFACE - 0.32 GAL./SQ.YD.
 AGGREGATE (PRIME COAT) - 0.0015 TONS/SQ.YD.

 RIPRAP - 1.50 TONS/CU.YD.
- 8) ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH THE CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- 9) ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS SHALL BE FERTILIZED AND SEEDED. SEEDING SHALL BE CLASS 2A ACCORDING TO THE APPLICABLE ARTICLES OF SECTION 250 OF THE STANDARD SPECIFICATIONS. SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.
- 10) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF 48 HOURS ADVANCED NOTICE IS REQUIRED.
- 11) EXISTING TRAFFIC BARRIER TERMINALS TO BE REMOVED SHALL BE PAID FOR AS GUARDRAIL REMOVAL.
- 13) TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING.

- 14) 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.
- 15) THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE PRIME COAT, SURFACE COURSE, AND BINDER COURSE.
- 16) 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.
- 17) 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.
- 18) 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.
- 19) THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 300 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.
- 20) 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.
- 21) 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.
- 23) ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.
- 24) NARROW BRIDGE SIGNS WITH ADVISORY TAGS "11 FT 6 IN" FOR STAGE I AND "10 FT 6 IN" FOR STAGE II SHALL BE ERECTED BETWEEN ONE ROAD CONSTRUCTION AHEAD AND THE SIGNAL AHEAD SIGNS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION, STANDARD 701321
- 25) ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STATION 924+00 AND STATION 930+50 AND BETWEEN STATION 1012+12 AND STATION 1019+10. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUNDLINE, AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR GREATER.
- 26) VERTICAL ADJUSTMENT OF GUARDRAIL AT EACH REQUIRED LOCATION WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR TRAFFIC BARRIER TERMINAL TYPE 6A.
- 27) WHILE SIGNAL HEADS ARE MOUNTED IN PLACE, BUT NOT YET IN OPERATION, THEY SHALL BE SECURELY COVERED IN WHITE PLASTIC.
- 28) 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.
- 29) COMMITMENTS:
NONE

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

HIGHWAY STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 001001-01 AREAS OF REINFORCEMENT BARS
- 280001-04 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 PAVEMENT JOINTS
- 420401-06 BRIDGE APPROACH PAVEMENT
- 515001-02 NAME PLATE FOR BRIDGES
- 631032-03 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 631051-01 TRAFFIC BARRIER TERMINAL, TYPE 11
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-01 REFLECTOR MARKER AND MOUNTING DETAILS
- 701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
- 701321-09 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701326-02 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
- 701901 TRAFFIC CONTROL DEVICES
- 704001-04 TEMPORARY CONCRETE BARRIER
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

- PREPARED BY: Joe Zdaniewicz
DISTRICT STUDIES & PLANS ENGINEER
- EXAMINED BY: James Lewis Emery
DISTRICT LAND ACQUISITION ENGINEER
- EXAMINED BY: Carrie Nelson
DISTRICT PROGRAM DEVELOPMENT ENGINEER
- EXAMINED BY: Therri Grammel
DISTRICT OPERATIONS ENGINEER
- EXAMINED BY: Joseph Lynn
DISTRICT CONSTRUCTION ENGINEER
- EXAMINED BY: Bruce Pochler
DISTRICT MATERIALS ENGINEER
- EXAMINED BY: Jim Andrew
DISTRICT PROJECT IMPLEMENTATION ENGINEER
- EXAMINED BY: Danny H. Stanton
ASSISTANT REGIONAL ENGINEER
- APPROVED BY: Mary C. Lami
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

DATE Jan 28 2008

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-C916-1 DATE: 01/18/08
DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

GENERAL NOTES

IL. ROUTE 1
F.A.P. ROUTE 782 / SECTION 115BR-1 & 115BR-2
HARDIN COUNTY
STATION 927+65 & STATION 1012+12
STRUCTURE NO. 035-0001 & 035-0003

SUMMARY OF QUANTITIES

CODE #	ITEM	UNIT	TOTAL QUANTITY	HBP FUNDING 80% FEDERAL 20% STATE SN 035-0001 X080-2A	HBP FUNDING 80% FEDERAL 20% STATE SN 035-0003 X080-2A
20200100	EARTH EXCAVATION	CU YD	165	74	91
20400800	FURNISHED EXCAVATION	CU YD	10	10	0
25000210	SEEDING, CLASS 2A	ACRE	0.10	0.07	0.03
25000350	SEEDING, CLASS 7	ACRE	0.10	0.07	0.03
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	16	10	6
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	10	6	4
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	10	6	4
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.21	0.14	0.07
25100115	MULCH, METHOD 2	ACRE	0.21	0.14	0.07
25100630	EROSION CONTROL BLANKET	SQ YD	379	267	112
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	41	27	14
28000400	PERIMETER EROSION BARRIER	FOOT	1705	880	825
35600720	HOT-MIX ASPHALT BASE COURSE WIDENING, 11"	SQ YD	464	221	243
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	344	172	172
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	72	36	36
44000100	PAVEMENT REMOVAL	SQ YD	156	77	79
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	144	72	72
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2	1	1
50102400	CONCRETE REMOVAL	CU YD	2.4	0.0	2.4
50300225	CONCRETE STRUCTURES	CU YD	10.4	5.0	5.4
50300260	BRIDGE DECK GROOVING	SQ YD	570	350	220
50300300	PROTECTIVE COAT	SQ YD	570	350	220
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	795	495	300
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	4188	2599	1589
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	8110	4880	3230
50800515	BAR SPLICERS	EACH	153	92	61
50901050	STEEL RAILING, TYPE SM	FOOT	469	291	178
50901125	STEEL RAILING (TEMPORARY)	FOOT	131	83	48
51500100	NAME PLATES	EACH	2	1	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	72	35	37
59000200	EPOXY CRACK INJECTION	FOOT	31	27	4
*63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	4	4
63200310	GUARDRAIL REMOVAL	FOOT	352	176	176
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	3	3
67100100	MOBILIZATION	L SUM	1	0.5	0.5

SUMMARY OF QUANTITIES

CODE #	ITEM	UNIT	TOTAL QUANTITY	HBP FUNDING 80% FEDERAL 20% STATE SN 035-0001 X080-2A	HBP FUNDING 80% FEDERAL 20% STATE SN 035-0003 X080-2A
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5	0.5
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20	10	10
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	12	6	6
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	6	6
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	9667	4539	5128
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48	24	24
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1878	973	905
70400100	TEMPORARY CONCRETE BARRIER	FOOT	775	400	375
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	588	288	300
70500690	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 11	EACH	4	2	2
*78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	4267	1735	2532
*78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	21	11	10
*78200405	GUARDRAIL MARKERS	EACH	14	8	6
*78200500	BARRIER WALL MARKERS	EACH	37	19	18
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1411	651	760
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	21	11	10
X0324744	REMOVAL OF EXISTING PRECAST CONCRETE UNITS	SQ FT	794	495	299
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	17	5	12
X0325326	TEMPORARY TRAFFIC CONTROL REMOVAL	L SUM	1	1	0
X0325864	BRIDGE APPROACH PAVEMENT REMOVAL	SQ YD	274	132	142
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	570	350	220
X8900030	REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT	EACH	1	1	0
XX006661	UNINTERRUPTABLE POWER SUPPLY	EACH	2	1	1
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	66	44	22
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	2	2

* SPECIALITY ITEM

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

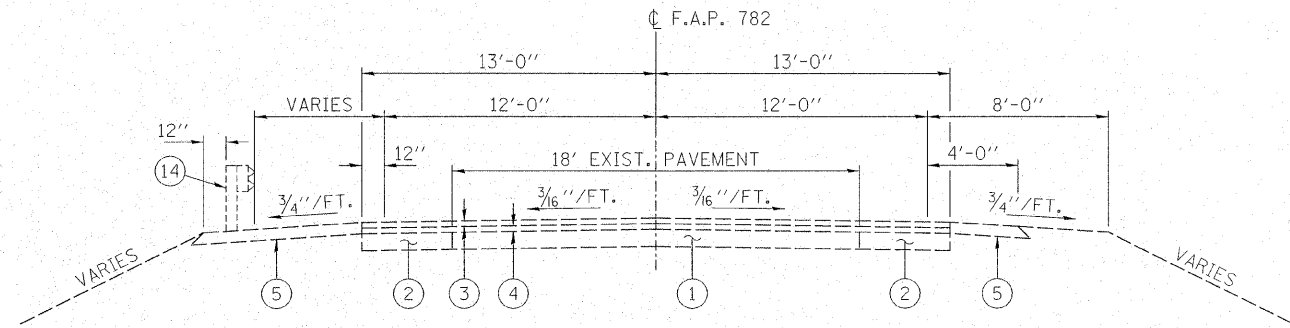
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: L.P.S. CHECKED: S.W.M. DRAWN: D.T.M.

SUMMARY OF QUANTITIES

IL. ROUTE 1
F.A.P. ROUTE 782 / SECTION 115BR-1 & 115BR-2
HARDIN COUNTY
STATION 927+65 & STATION 1015+71.72
STRUCTURE NO. 035-0001 & 035-0003

Rev.

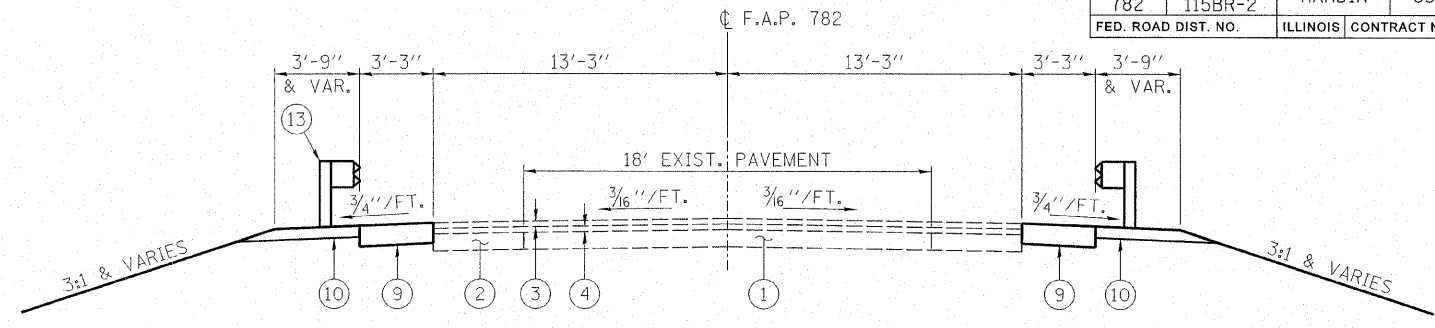
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1 115BR-2	HARDIN	83	4
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78026	



EXISTING TYPICAL CROSS SECTION

SEC. 115BR-1 / SN 035-0001
 STA. 924+09.00 TO STA. 927+02.00
 STA. 928+24.00 TO STA. 931+80.00

SEC. 115BR-2 / SN 035-0003
 STA. 1012+32.50 TO STA. 1015+21.00
 STA. 1016+23.00 TO STA. 1019+23.50

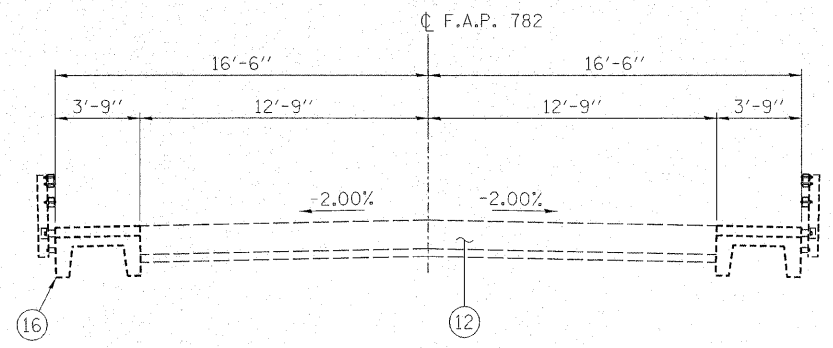


PROPOSED TYPICAL CROSS SECTION

SEC. 115BR-1 / SN 035-0001
 STA. 925+25.00 TO STA. 926+88.67
 STA. 928+41.33 TO STA. 930+00.00

SEC. 115BR-2 / SN 035-0003
 STA. 1013+45.00 TO STA. 1015+10.22
 STA. 1017+33.22 TO STA. 1018+00.00

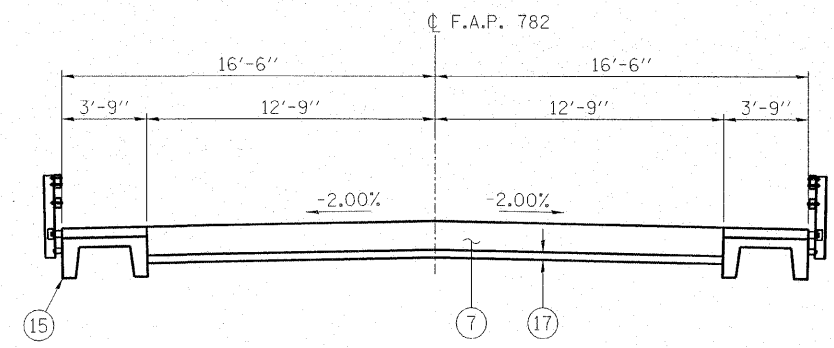
NOTE:
 AGGREGATE SHOULDERS ARE TO BE PLACED ONLY IN AREAS WHERE TRAFFIC BARRIER TERMINAL, TYPE 6A ARE TO BE INSTALLED.



EXISTING TYPICAL CROSS SECTION

SEC. 115BR-1 / SN 035-0001
 STA. 927+02.00 TO STA. 927+19.75
 STA. 928+06.46 TO STA. 928+24.00

SEC. 115BR-2 / SN 035-0003
 STA. 1015+21.00 TO STA. 1015+46.22
 STA. 1015+97.22 TO STA. 1016+23.00



PROPOSED TYPICAL CROSS SECTION

SEC. 115BR-1 / SN 035-0001
 STA. 926+88.67 TO STA. 926+94.67 (PCC CONNECTOR)
 STA. 926+94.67 TO STA. 927+24.67 (APPROACH SLAB)
 STA. 928+05.33 TO STA. 928+35.33 (APPROACH SLAB)
 STA. 928+35.33 TO STA. 928+41.33 (PCC CONNECTOR)

SEC. 115BR-2 / SN 035-0003
 STA. 1015+10.22 TO STA. 1015+16.22 (PCC CONNECTOR)
 STA. 1015+16.22 TO STA. 1015+46.22 (APPROACH SLAB)
 STA. 1016+97.22 TO STA. 1017+27.22 (APPROACH SLAB)
 STA. 1017+27.22 TO STA. 1017+33.22 (PCC CONNECTOR)

LEGEND

- ① EXIST CONCRETE PAVEMENT
- ② EXISTING BASE COURSE WIDENING 9"
- ③ EXISTING H.M.A. BINDER COURSE 1.5" MIN.
- ④ EXISTING H.M.A. SURFACE COURSE 1.5"
- ⑤ EXISTING AGGREGATE SHOULDERS TYPE A, 6"
- ⑥ EXISTING PCC BASE COURSE, 10"
- ⑦ BRIDGE APPROACH PAVEMENT
- ⑧ BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
- ⑨ H.M.A. BASE COURSE WIDENING 11"
- ⑩ AGGREGATE SHOULDERS TYPE A 6"
- ⑪ TEMPORARY PAVEMENT MARKINGS
- ⑫ EXISTING BRIDGE APPROACH PAVEMENT
- ⑬ TRAFFIC BARRIER TERMINAL, TYPE 6A
- ⑭ EXISTING GUARDRAIL
- ⑮ PROPOSED PRECAST SLAB WITH CONCRETE WEARING SURFACE
- ⑯ EXISTING PRECAST SLAB WITH CONCRETE WEARING SURFACE
- ⑰ SUB-BASE GRANULAR MATERIAL TYPE A 4" (COST INCLUDED WITH BRIDGE APPROACH PAVEMENT)

PAVEMENT DESIGN (MECHANISTIC)

DESIGN PERIOD 5 YEARS LOADING HS 20-44 (80,000 LBS)

STRUCTURAL DESIGN TRAFFIC (SDT) = 2011 (1783.8)

PV = 1266 SU = 214 MU = 303

ROAD/STREET CLASSIFICATION: CLASS III

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE

P = 50% S = 50% MU = 50%

TRAFFIC FACTOR ACTUAL TF 0.35 AC TYPE 64-22

MINIMUM TF 0.95

PG GRADE: BINDER = 64-22 SURFACE = 64-22

SUBGRADE SUPPORT RATING

SSR= POOR (STA. TO STA.)

SSR= POOR (STA. TO STA.)

MIXTURE REQUIREMENTS	
LOCATION(S):	IL RTE 1 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: (GRADATION MIXTURE):	IL 19.0
FRICTION AGGREGATE:	NONE
MIXTURE WEIGHTS:	112 LBS \ SY \ INCH THICKNESS

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

TYPICAL CROSS SECTIONS

IL. ROUTE 1
 F.A.P. ROUTE 782 / SECTION 115BR-1 & 115BR-2
 HARDIN COUNTY
 STATION 927+65 & STATION 1015+71.72
 STRUCTURE NO. 035-0001 & 035-0003

ROADWAY SCHEDULE						
LOCATION	BRIDGE APPROACH PAVEMENT (SPECIAL)	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	HOT-MIX ASPHALT BASE COURSE WIDENING 11"	AGGREGATE SHOULDERS TYPE A 6"	BRIDGE APPROACH PAVEMENT REMOVAL	PAVEMENT REMOVAL
	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD
FAP 782 IL RTE 1						
STAGE I						
RT STA 929+25 TO RT 927+24.67	38	8	54	18	27	19
RT STA 928+05.33 TO RT 929+75	38	8	56	18	32	15
LT STA 929+50 TO LT 927+24.67	0	0	58	0	0	0
LT STA 928+05.33 TO LT 930+00	0	0	53	0	0	0
STAGE II						
LT STA 929+50 TO LT 927+24.67	48	10	0	18	39	19
LT STA 928+05.33 TO LT 930+00	48	10	0	18	34	24
TOTAL	172	36	221	72	132	77

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 782 IL RTE 1							
STAGE I							
STA. 929+25 TO STA. 927+24.67	37		25.00%	100.00%	28	5	23
STA. 928+05.33 TO STA. 930+00	35		25.00%	100.00%	26	55	-29
STAGE II							
STA. 925+50 TO STA. 927+24.67	0		25.00%	100.00%	0	2	-2
STA. 928+05.33 TO STA. 930+00	2		25.00%	100.00%	2	4	-2
	74	0			56	66	-10

FURNISHED EXCAVATION REQUIRED = 10 CU.YD.

EROSION CONTROL								
LOCATION	SEEDING CLASS 2A SPECIAL	SEEDING CLASS 7	TEMPORARY EROSION CONTROL SEEDING*	NITROGEN FERTILIZER NUTRIENT**	PHOSPHORUS FERTILIZER NUTRIENT 90 LBS/ACRE	POTASSIUM FERTILIZER NUTRIENT 90 LBS/ACRE	AGRICULTURAL GROUND LIMESTONE 2 TONS/ACRE	MULCH METHOD 2
	ACRE	ACRE	LBS	LBS	LBS	LBS	TONS	ACRE
FAP 782 IL RTE 1								
STAGE I								
STA. 926+40.76 TO STA. 927+24.67	0.012	0.012	5	2	1	1	0.02	0.024
STA. 928+05.33 TO STA. 928+73.47	0.033	0.033	13	5	3	3	0.07	0.066
STAGE II								
STA. 926+56.53 TO STA. 927+24.67	0.013	0.013	5	2	1	1	0.03	0.026
STA. 928+05.33 TO STA. 928+89.24	0.010	0.010	4	1	1	1	0.02	0.020
TOTAL	0.068	0.068	27	10	6	6	0.14	0.136

* 100 LBS/ACRE FOR 4 APPLICATIONS

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

EROSION CONTROL BLANKET	
LOCATION	SQ YD
FAP 782 IL RTE 1	
STAGE I	
RT. STA. 926+50 TO RT. STA. 927+24.67	60
RT. STA. 928+05.33 TO RT. STA. 928+75	158
STAGE II	
LT. STA. 928+05.33 TO LT. STA. 928+75	49
TOTAL	267

PERIMETER EROSION BARRIER	
LOCATION	FOOT
FAP 782 IL RTE 1	
STAGE I	
LT. STA. 925+50 TO LT. STA. 927+24.67	205
LT. STA. 928+05.23 TO LT. STA. 930+00	215
STAGE II	
RT. STA. 925+25 TO RT. STA. 927+24.67	220
RT. STA. 928+05.33 TO RT. STA. 929+75	240
TOTAL	880

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

SCHEDULE OF QUANTITIES

IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	6
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78026	

MAINTENANCE OF TRAFFIC								
LOCATION	TEMPORARY CONCRETE BARRIER	TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 11	RELOCATE TEMPORARY CONCRETE BARRIER	BARRIER WALL MARKERS	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY RUMBLE STRIPS	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3
	FOOT	EACH	FOOT	EACH	EACH	EACH	EACH	EACH
STAGE I								
924+09.00 TO 931+80.00					1	6	2	
925+86.98 TO 927+24.48	137.5			7				
927+14.19 TO 927+24.48		1						
928+07.40 TO 928+17.69		1						
928+07.40 TO 929+57.40	150			7				
STAGE II								
924+59.00 TO 931+30.00								2
925+70.00 TO 927+07.50			137.5					
927+07.50 TO 928+20.00	112.5			5				
928+20.00 TO 929+70.00			150					
TOTAL	400	2	287.5	19	1	6	2	2

PAVEMENT MARKING SCHEDULE									
LOCATION	TEMPORARY			EPOXY PAVEMENT MARKING PERMANENT		WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	24" SINGLE WHITE STOP BAR	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE				
	FOOT	FOOT	FOOT	FOOT	FOOT				
FAP 782 IL RTE 1									
STAGE I									
RT. STA. 924+09 TO RT. STA. 931+80							206		
LT. STA. 924+09 TO LT. STA. 931+80							257		
CL. STA. 924+09 TO CL. STA. 931+80							45		11
RT. STA. 925+65 TO RT. STA. 928+50							95		
RT. STA. 925+65							24		
LT. STA. 929+85							24		
RT STA. 924+09	12								
LT. STA. 924+09 TO RT. STA. 931+80		771					254		
RT. STA. 924+09 TO LT. STA. 926+24		215					71		
LT. STA. 926+24 TO LT. STA. 929+20		296					98		
LT. STA. 929+20 TO RT. STA. 931+80		260					86		
LT STA. 931+80	12								
STAGE II									
RT STA. 924+09							24		
RT. STA. 924+42 TO RT. STA. 930+58		616					203		
LT. STA. 924+69 TO RT. STA. 926+20		151					50		
RT. STA. 926+20 TO RT. STA. 929+20		300					99		
RT. STA. 929+20 TO LT. STA. 931+15		195					64		
LT STA. 931+80							24		
RT. STA. 924+09 TO RT. STA. 931+80		771		771					
LT. STA. 924+09 TO LT. STA. 931+80		771		771					
CL. STA. 924+09 TO CL. STA. 931+80			193		193			11	
SUBTOTAL	24	4346	193	1542	193	973	651	11	11
TOTAL	24		4539		1735	973	651	11	11

GUARDRAIL				
	GUARDRAIL REMOVAL	* VERTICAL ADJUSTMENT OF GUARDRAIL	TRAFFIC BARRIER TERMINAL TYPE 6A	GUARDRAIL MARKERS
	FOOT	FOOT	EACH	EACH
STAGE I				
RT. STA. 926+40.76 TO RT. STA. 926+84.66	44			
RT. STA. 926+40.76 TO RT. STA. 926+84.66			1	
RT. STA. 926+15.76 TO RT. STA. 926+40.76		25		
RT. STA. 928+29.57 TO RT. STA. 928+73.47	44			
RT. STA. 928+29.57 TO RT. STA. 928+73.47			1	
RT. STA. 928+73.47 TO RT. STA. 928+98.47		25		
RT. STA. 926+40.76 TO RT. STA. 928+73.47				4
STAGE II				
LT. STA. 926+56.53 TO LT. STA. 927+00.43	44			
LT. STA. 926+56.53 TO LT. STA. 927+00.43			1	
LT. STA. 926+31.53 TO LT. STA. 926+56.53		25		
LT. STA. 928+45.34 TO LT. STA. 928+89.24	44			
LT. STA. 928+45.34 TO LT. STA. 928+89.24			1	
LT. STA. 928+89.24 TO LT. STA. 929+14.24		25		
LT. STA. 926+56.53 TO LT. STA. 928+89.24				4
TOTAL	176	100	4	8

* COST OF VERTICAL ADJUSTMENT OF GUARDRAIL IS INCLUDED IN TRAFFIC BARRIER TERMINAL TYPE 6A

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0916-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

SCHEDULE OF QUANTITIES

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

ROADWAY SCHEDULE						
LOCATION	BRIDGE APPROACH PAVEMENT (SPECIAL)	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	HOT-MIX ASPHALT BASE COURSE WIDENING 11"	AGGREGATE SHOULDERS TYPE A 6"	BRIDGE APPROACH PAVEMENT REMOVAL	PAVEMENT REMOVAL
	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD
FAP 782 IL RTE 1						
STAGE I						
RT STA 1013+80.00 TO RT 1015+39.55			58			
RT STA 1016+28.70 TO RT 1017+75.00			53			
LT STA 1013+45.00 TO LT 1015+46.22	38	8	61	18	27	24
LT STA 1015+97.22 TO LT 1018+00.00	38	8	71	18	36	22
STAGE II						
RT STA 1014+95.65 TO RT 1015+46.22	48	10		18	44	12
RT STA 1015+97.22 TO RT 1016+72.60	48	10		18	35	21
TOTAL	172	36	243	72	142	79

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 782 IL RTE 1							
STAGE I							
1013+45.00 TO 1015+45.46	43		25.00%	100.00%	32	0	32
1015+97.22 TO 1018+00.00	44		25.00%	100.00%	33	0	33
STAGE II							
1012+12.00 TO 1015+45.46	3		25.00%	100.00%	2	29	-27
1015+97.22 TO 1019+10.00	1		25.00%	100.00%	1	16	-15
TOTAL	91	0			68	45	23
WASTE =						23	CU.YD.

EROSION CONTROL								
LOCATION	SEEDING CLASS 2A SPECIAL	SEEDING CLASS 7	TEMPORARY EROSION CONTROL SEEDING *	NITROGEN FERTILIZER NUTRIENT**	PHOSPHORUS FERTILIZER NUTRIENT 90 LBS/ACRE	POTASSIUM FERTILIZER NUTRIENT 90 LBS/ACRE	AGRICULTURAL GROUND LIMESTONE 2 TONS/ACRE	MULCH METHOD 2
	ACRE	ACRE	LBS	LBS	LBS	LBS	TONS	ACRE
FAP 782 IL RTE 1								
STAGE I								
LT STA 1014+70.84 TO LT 1015+45.46	0.004	0.004	2	1	1	1	0.01	0.008
LT STA 1015+97.22 TO LT 1016+47.79	0.003	0.003	1	1	1	1	0.01	0.006
STAGE II								
RT STA 1014+95.65 TO RT 1015+45.46	0.015	0.015	6	2	1	1	0.03	0.030
RT STA 1015+97.22 TO RT 1016+72.60	0.012	0.012	5	2	1	1	0.02	0.024
TOTAL	0.034	0.034	14	6	4	4	0.07	0.068

* 100 LBS/ACRE FOR 4 APPLICATIONS

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

EROSION CONTROL BLANKET	
LOCATION	SQ YD
FAP 782 IL RTE 1	
STAGE I	
RT STA 1014+95.65 TO RT STA 1015+45.46	65
RT STA 1015+97.22 TO RT STA 1016+72.60	47
TOTAL	112

PERIMETER EROSION BARRIER	
LOCATION	FOOT
FAP 782 IL RTE 1	
STAGE I	
LT. STA. 1013+45.00 TO LT. STA. 1015+40.00	215
LT. STA. 1015+90.00 TO LT. STA. 1018+00.00	230
RT. STA. 1013+80.00 TO RT. STA. 1015+50.00	200
RT. STA. 1016+20.00 TO RT. STA. 1017+80.00	180
TOTAL	825

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

SCHEDULE OF QUANTITIES
 IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	HARDIN	83	8
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78026	

MAINTENANCE OF TRAFFIC								
LOCATION	TEMPORARY CONCRETE BARRIER	TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 11	RELOCATE TEMPORARY CONCRETE BARRIER	BARRIER WALL MARKERS	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY RUMBLE STRIPS	IMPACT ATTENUATORS TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3	IMPACT ATTENUATORS RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3
	FOOT	EACH	FOOT	EACH	EACH	EACH	EACH	EACH
STAGE I								
1013+59.75 TO 1017+87.92					1	6	2	
1013+99.75 TO 1015+49.75	150			7				
1015+39.75 TO 1015+49.75		1						
1015+97.92 TO 1016+07.92		1						
1015+97.92 TO 1017+47.92	150			7				
STAGE II								
1013+57.52 TO 1017+92.50								2
1013+87.50 TO 1015+37.5			150					
1015+37.5 TO 1016+12.5	75			4				
1016+12.5 TO 1017+62.50			150					
TOTAL	375	2	300	18	1	6	2	2

PAVEMENT MARKING SCHEDULE											
LOCATION	TEMPORARY				EPOXY PAVEMENT MARKING PERMANENT			WORK ZONE PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL
	24" SINGLE WHITE STOP BAR	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE	4" SOLID YELLOW CENTERLINE	4" SINGLE WHITE EDGE LINE	4" SKIPPED DASHED YELLOW CENTERLINE	4" SOLID YELLOW CENTERLINE				
	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT	FOOT				
FAP 782 IL RTE 1											
STAGE I											
RT. STA. 1012+32.50 TO RT. STA. 1019+23.50									230		
LT. STA. 1012+29.21 TO LT. STA. 1015+04.00								91			
LT. STA. 1016+27.00 TO LT. STA. 1019+12.46								99			
CL. STA. 1012+32.50 TO CL. STA. 1019+23.50								340		10	
RT. STA. 1012+32.50 TO RT. STA. 1019+23.50	12	691						205			
LT. STA. 1012+32.50 TO RT. STA. 1014+37.25		205						46			
RT. STA. 1014+37.25 TO RT. STA. 1017+10.42		273						90			
RT. STA. 1017+10.42 TO LT. STA. 1019+23.50	12	213						60			
STAGE II											
RT STA. 1012+32.50								24			
RT. STA. 1012+32.50 TO RT. STA. 1019+23.50								228			
LT. STA. 1012+99.21 TO LT. STA. 1018+92.46		593									
RT. STA. 1012+42.50 TO LT. STA. 1014+37.50		195									
LT. STA. 1014+37.50 TO LT. STA. 1017+12.50		275									
LT. STA. 1017+12.50 TO RT. STA. 1018+63.60		151									
LT. STA. 1012+32.50 TO LT. STA. 1019+23.50								228			
LT STA. 1019+23.50								24			
RT. STA. 1012+32.50 TO RT. STA. 1019+23.50		691			691						
LT. STA. 1012+32.50 TO LT. STA. 1019+23.50		691			691						
LT. CL STA. 1012+32.50 TO LT. CL STA. 1018+00.00				568						568	
CL STA. 1012+32.50 TO CL STA. 1014+20.00			47			47					
RT. CL STA. 1014+20.00 TO RT. CL STA. 1019+23.50				504						504	
CL STA. 1018+00.00 TO LT. CL STA. 1019+23.50			31							31	
CL STA. 1012+32.50 TO LT. CL STA. 1019+23.50									10		
SUBTOTAL	24	3978	78	1072	1382	78	1072	905	760	10	10
TOTAL	24		5128			2532		905	760	10	10

GUARDRAIL				
LOCATION	GUARDRAIL REMOVAL	*VERTICAL ADJUSTMENT OF GUARDRAIL	TRAFFIC BARRIER TERMINAL TYPE 6A	GUARDRAIL MARKERS
	FOOT	FOOT	EACH	EACH
STAGE I				
LT. STA. 1014+70.84 TO LT. STA. 1015+14.74	44			
LT. STA. 1014+70.84 TO LT. STA. 1015+14.74			1	
LT. STA. 1014+45.84 TO LT. STA. 1014+70.84		25		
LT. STA. 1016+03.89 TO LT. STA. 1016+47.79	44			
LT. STA. 1016+03.89 TO LT. STA. 1016+47.79			1	
LT. STA. 1016+47.79 TO LT. STA. 1016+72.79		25		
LT. STA. 1014+70.84 TO LT. STA. 1016+47.79				3
STAGE II				
RT. STA. 1014+95.65 TO RT. STA. 1015+39.55	44			
RT. STA. 1014+95.65 TO RT. STA. 1015+39.55			1	
RT. STA. 1014+70.65 TO RT. STA. 1014+95.65		25		
RT. STA. 1016+28.70 TO RT. STA. 1016+72.60	44			
RT. STA. 1016+28.70 TO RT. STA. 1016+72.60			1	
RT. STA. 1016+72.60 TO RT. STA. 1016+97.60		25		
RT. STA. 1014+95.65 TO RT. STA. 1016+72.60				3
TOTAL	176	100	4	6
* COST OF VERTICAL ADJUSTMENT OF GUARDRAIL IS INCLUDED IN TRAFFIC BARRIER TERMINAL TYPE 6A				

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

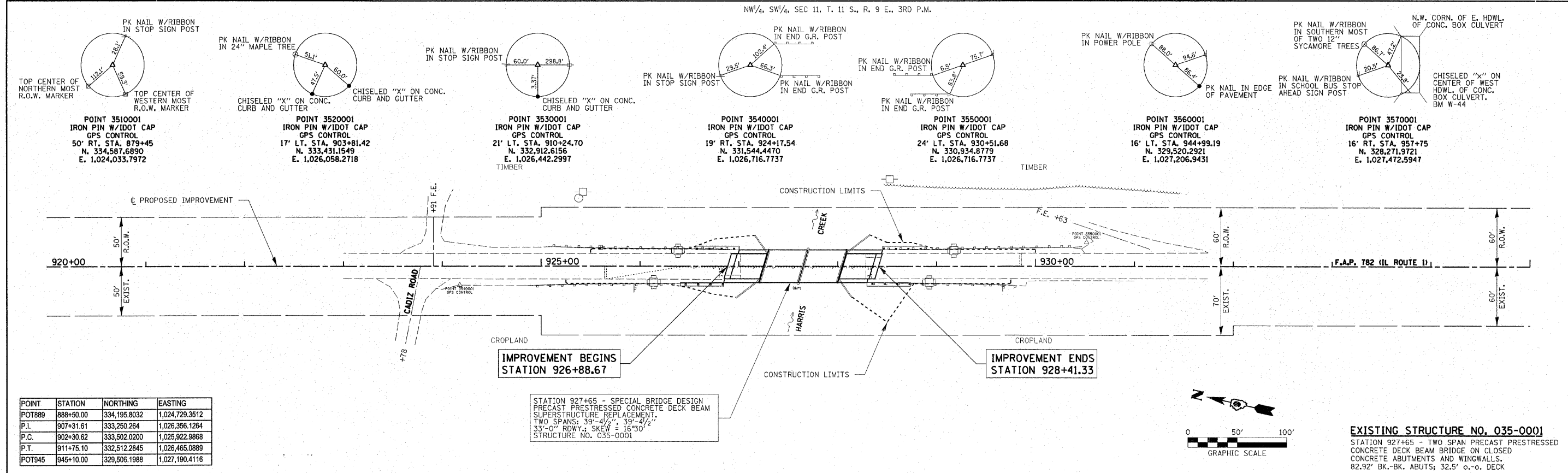
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

SCHEDULE OF QUANTITIES

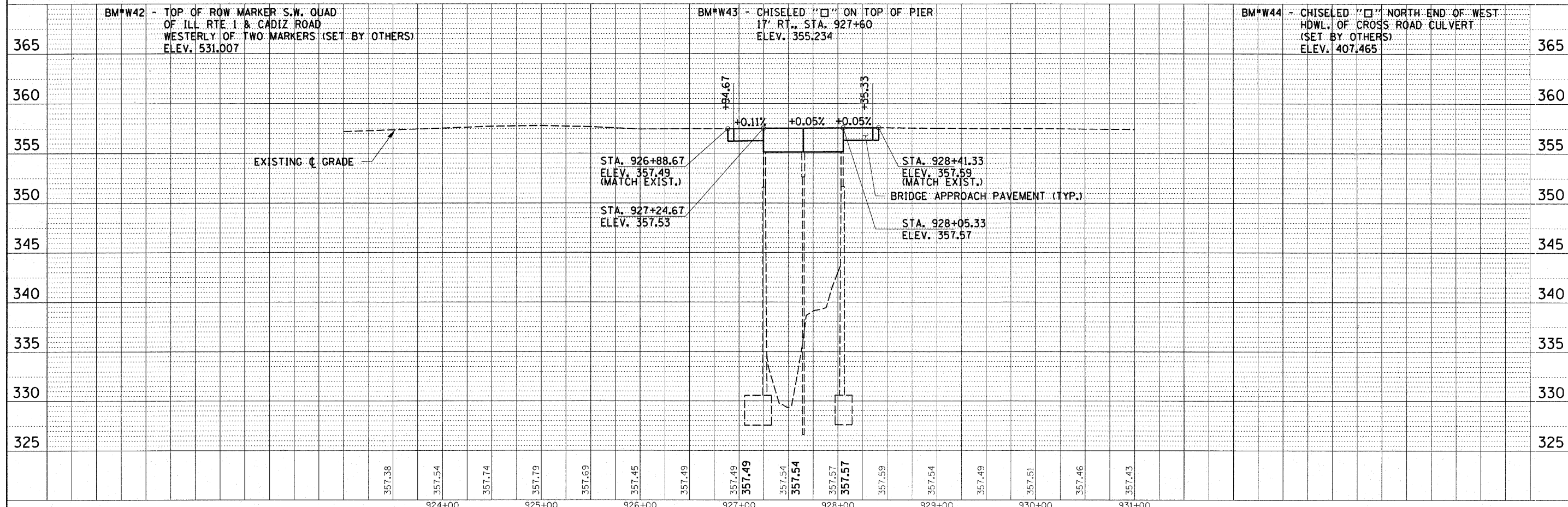
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

DATE: _____ BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 RT. OF WAY CHECKED: _____
 PLOT FILE NAME: _____

DATE: _____ BY: _____
 SURVEYED: _____
 PLOTTED: _____
 CHECKED: _____
 RT. OF WAY CHECKED: _____
 PLOT FILE NAME: _____

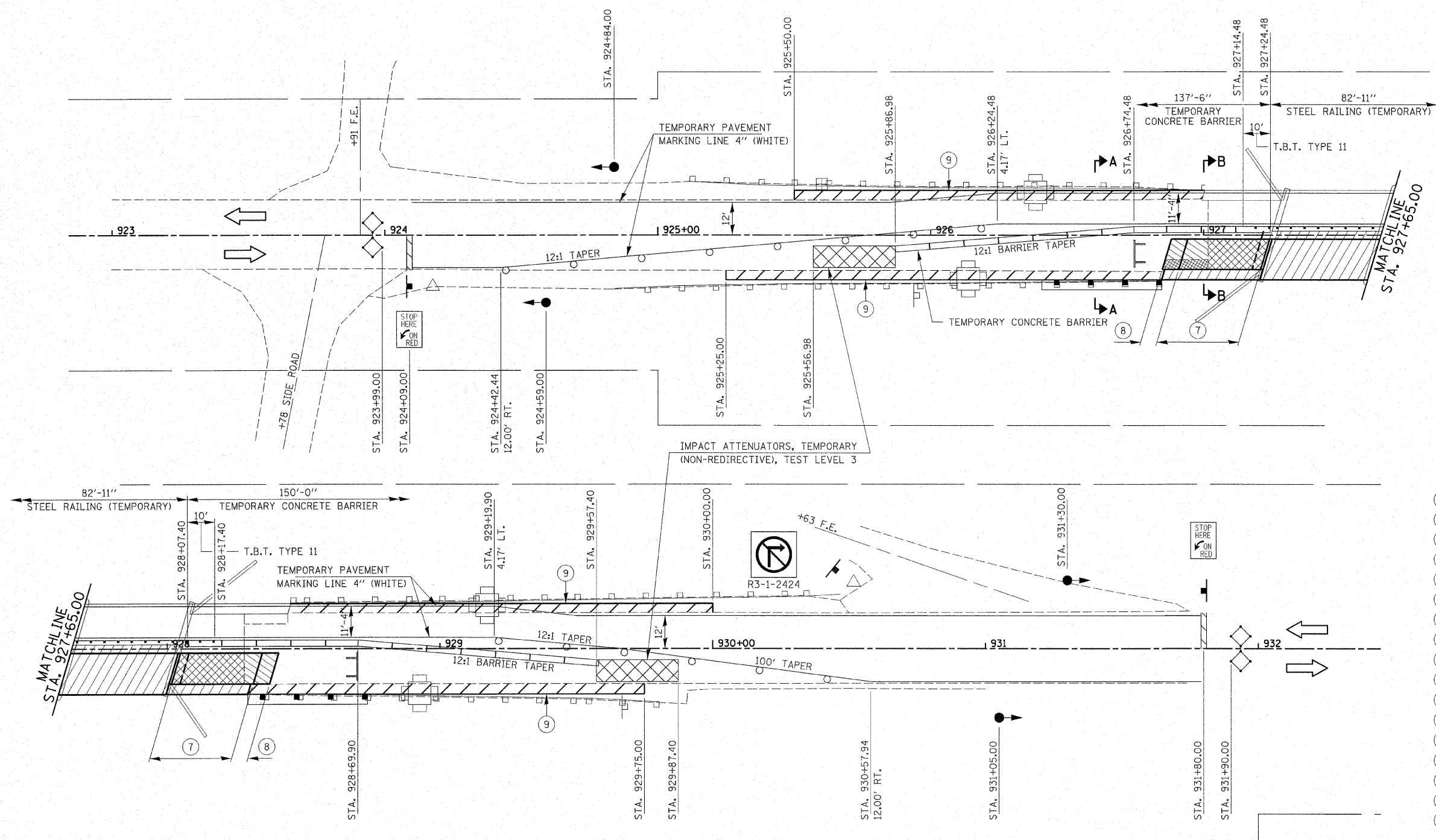


POINT	STATION	NORTHING	EASTING
POT889	889+50.00	334,195.8032	1,024,729.3512
P.I.	907+31.61	333,250.284	1,026,356.1264
P.C.	902+30.62	333,502.0200	1,025,922.9868
P.T.	911+75.10	332,512.2845	1,026,465.0889
POT945	945+10.00	329,506.1988	1,027,190.4116

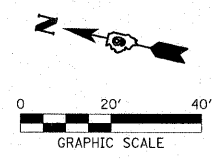


FILE NAME = 0350001-sht-pp1.dgn	USER NAME =	DESIGNED - L.F.S.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	IL. ROUTE 1 PLAN & PROFILE	F.A.P. RTE. 782	SECTION 115-BR-1	COUNTY HARDIN	TOTAL SHEETS 83	SHEET NO. 9
PLOT SCALE =	CHECKED - S.W.M.	REVISED -	CONTRACT NO.								
PLOT DATE = 1/23/2008	DATE - 01/18/08	REVISED -	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT								
SCALE: SHEET NO. 1 OF 1 SHEETS		STA. TO STA.									

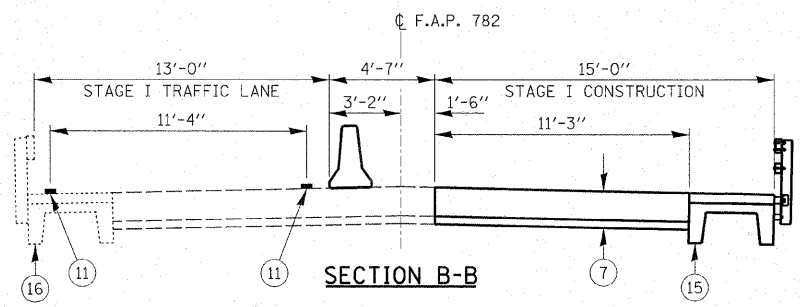
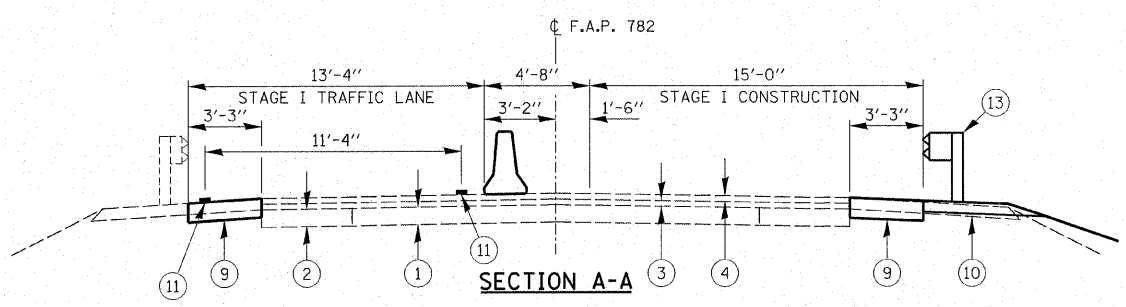
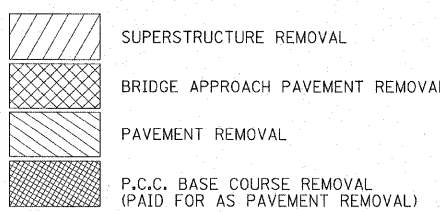
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	10
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78026		



- GENERAL NOTES**
- TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
 - SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
 - COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER
 - CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
 - STEEL RAILING (TEMPORARY) AND TEMPORARY CONCRETE BARRIER SHALL BE CONNECTED ACCORDING TO "TRAFFIC BARRIER TERMINAL TYPE 11, STANDARD 631051."
 - EXISTING TEMPORARY TRAFFIC SYSTEM SHALL BE REMOVED AND PAID FOR AS REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT EACH.



- LEGEND**
- EXIST CONCRETE PAVEMENT
 - EXISTING BASE COURSE WIDENING 9"
 - EXISTING H.M.A. BINDER COURSE 1.5" MIN.
 - EXISTING H.M.A. SURFACE COURSE 1.5"
 - EXISTING AGGREGATE SHOULDERS TYPE A, 6"
 - EXISTING PCC BASE COURSE, 10"
 - BRIDGE APPROACH PAVEMENT
 - BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
 - H.M.A. BASE COURSE WIDENING 11"
 - AGGREGATE SHOULDERS TYPE A 6"
 - TEMPORARY PAVEMENT MARKINGS
 - EXISTING BRIDGE APPROACH PAVEMENT
 - TRAFFIC BARRIER TERMINAL, TYPE 6A
 - EXISTING GUARDRAIL
 - PROPOSED PRECAST SLAB WITH CONCRETE WEARING SURFACE
 - EXISTING PRECAST SLAB WITH CONCRETE WEARING SURFACE
 - SUB-BASE GRANULAR MATERIAL TYPE A 4" (COST INCLUDED WITH BRIDGE APPROACH PAVEMENT)



HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

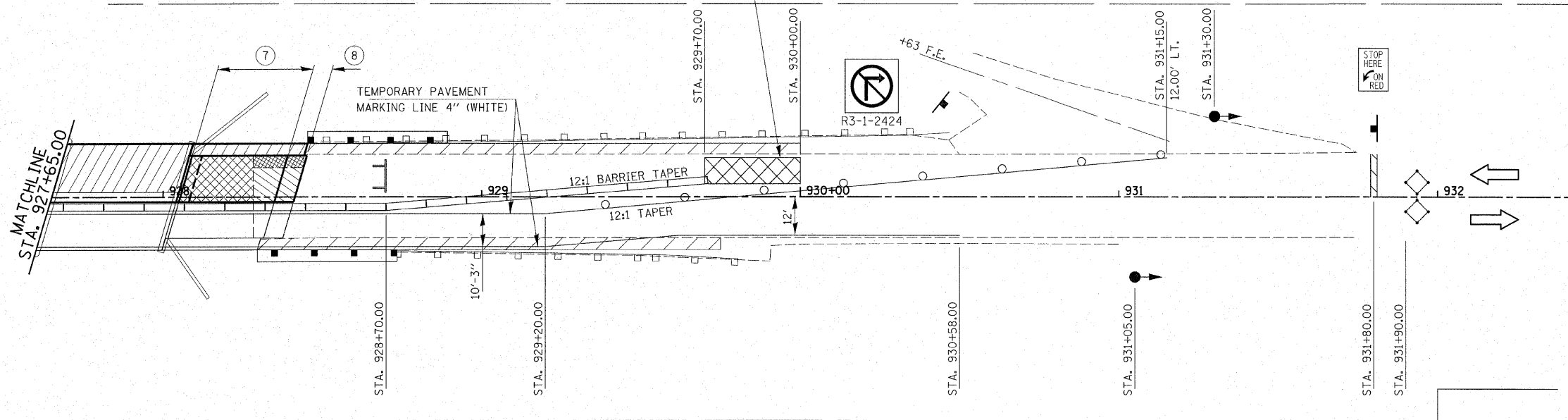
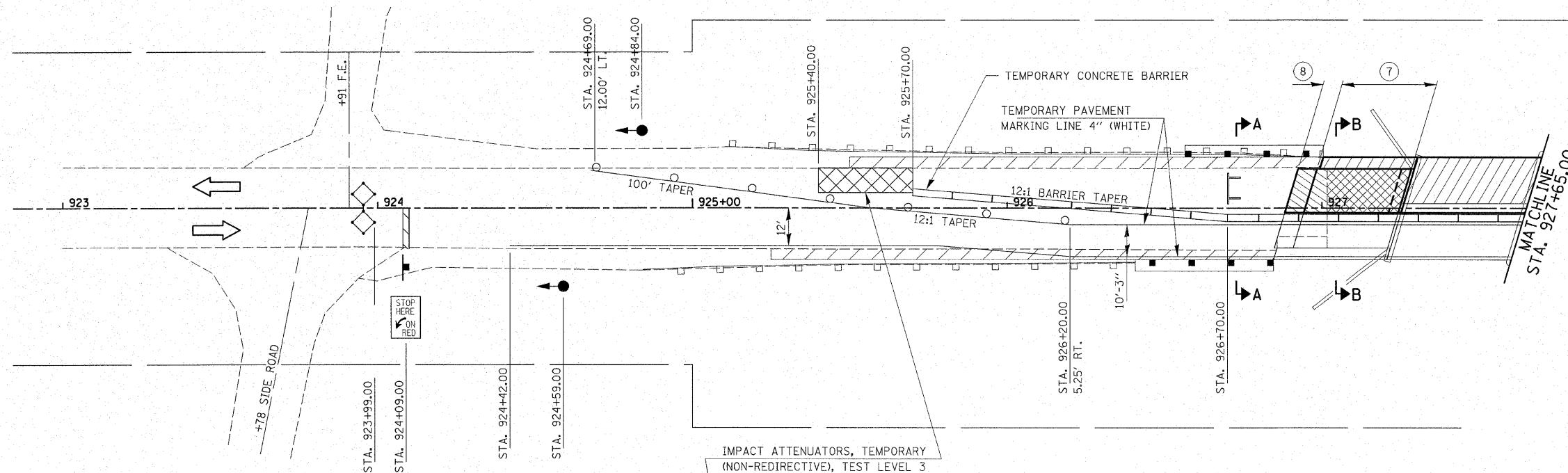
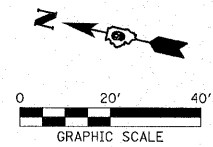
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

STAGE I CONSTRUCTION
 IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	11
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78026	

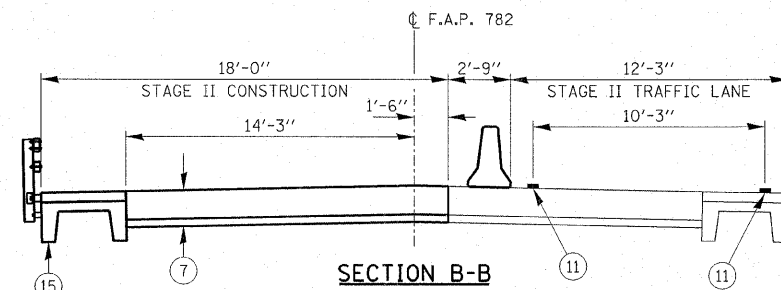
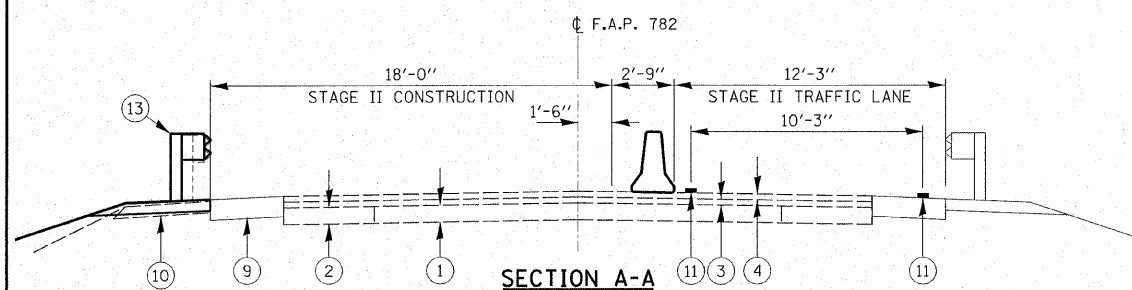
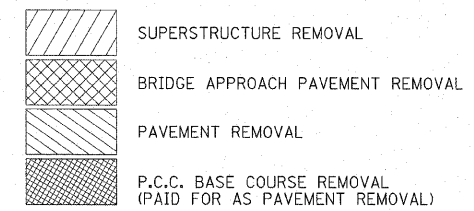
GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. STEEL RAILING (TEMPORARY) AND TEMPORARY CONCRETE BARRIER SHALL BE CONNECTED ACCORDING TO "TRAFFIC BARRIER TERMINAL TYPE 11, STANDARD 631051."



LEGEND

- 1 EXIST CONCRETE PAVEMENT
- 2 EXISTING BASE COURSE WIDENING 9"
- 3 EXISTING H.M.A. BINDER COURSE 1.5" MIN.
- 4 EXISTING H.M.A. SURFACE COURSE 1.5"
- 5 EXISTING AGGREGATE SHOULDERS TYPE A, 6"
- 6 EXISTING PCC BASE COURSE, 10"
- 7 BRIDGE APPROACH PAVEMENT
- 8 BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
- 9 H.M.A. BASE COURSE WIDENING 11"
- 10 AGGREGATE SHOULDERS TYPE A 6"
- 11 TEMPORARY PAVEMENT MARKINGS
- 12 EXISTING BRIDGE APPROACH PAVEMENT
- 13 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 14 EXISTING GUARDRAIL
- 15 PROPOSED PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 16 EXISTING PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 17 SUB-BASE GRANULAR MATERIAL TYPE A 4" (COST INCLUDED WITH BRIDGE APPROACH PAVEMENT)



HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

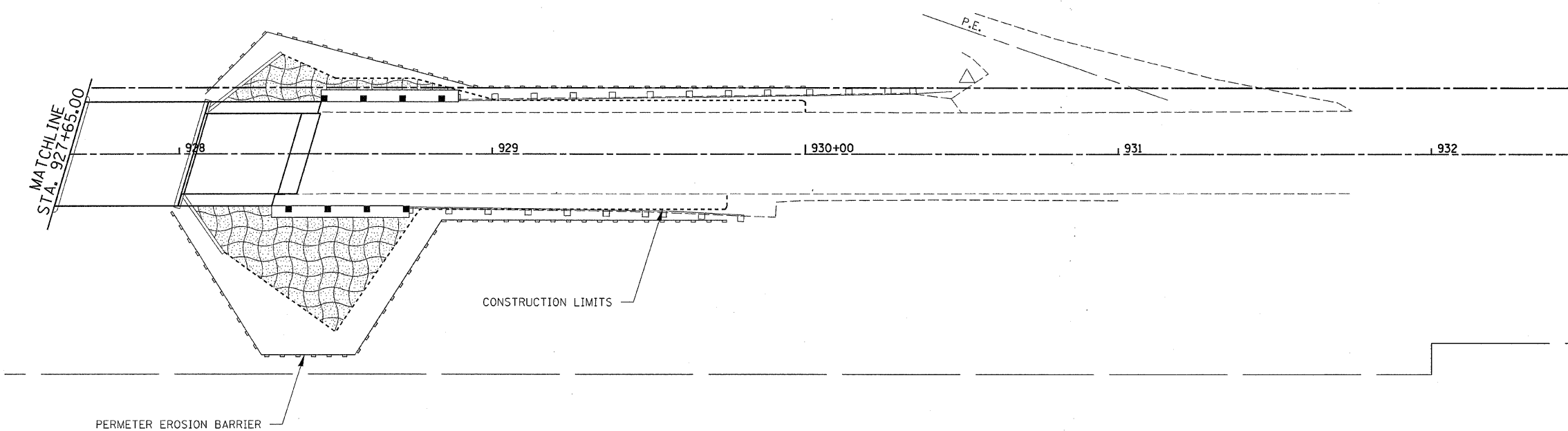
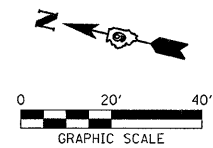
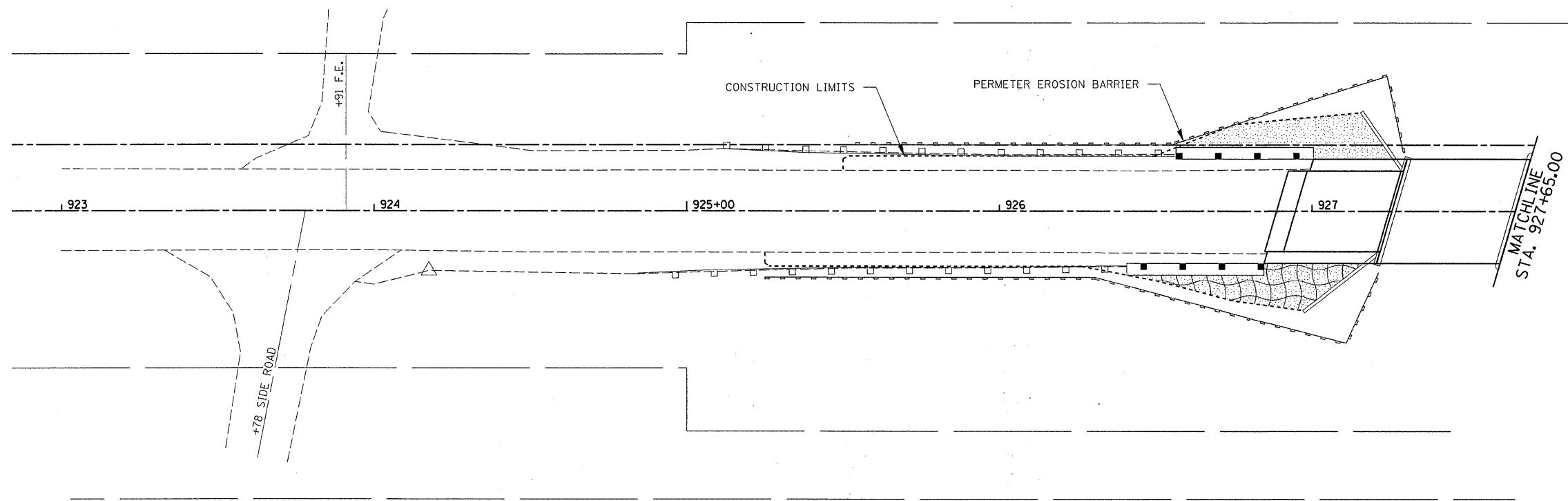
3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

STAGE II CONSTRUCTION
 IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	12
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 78026	



LEGEND

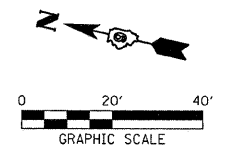
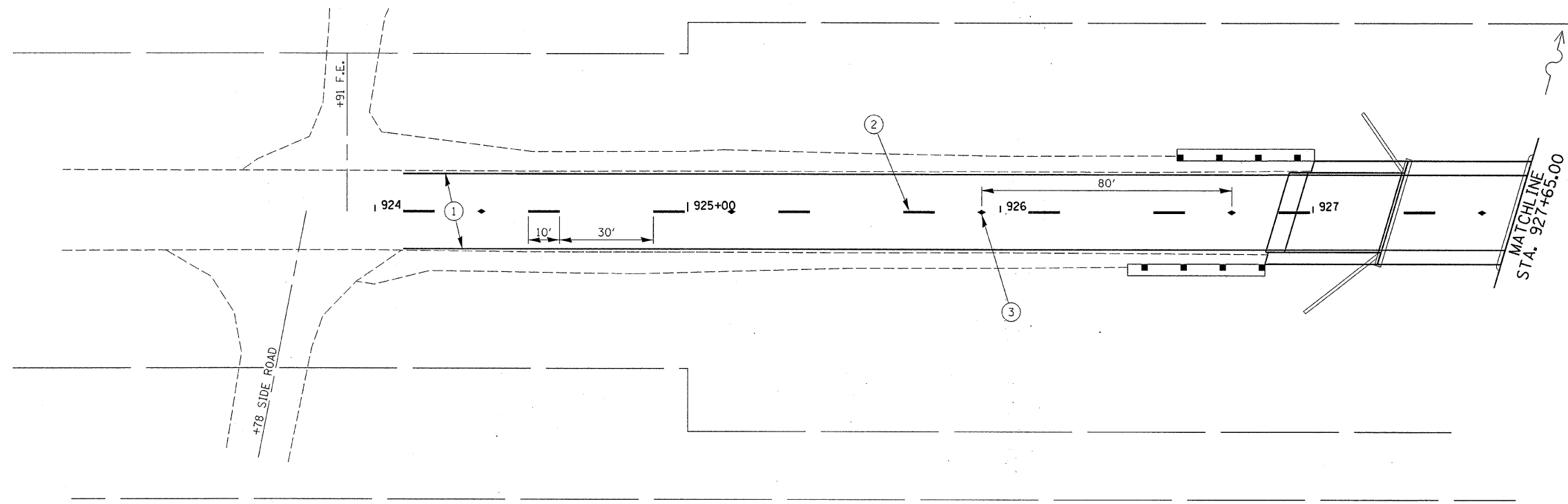
	PERMETER EROSION BARRIER
	SEEDING
	EROSION CONTROL BLANKET

	HAMPTON, LENZINI & RENWICK, INC. CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS	
	3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	
	ELGIN	• SPRINGFIELD
	PROJECT NUMBER: 12-98-0016-1	DATE: 01/16/08
DESIGNED: L.F.S.	CHECKED: S.W.M.	DRAWN: D.T.M.

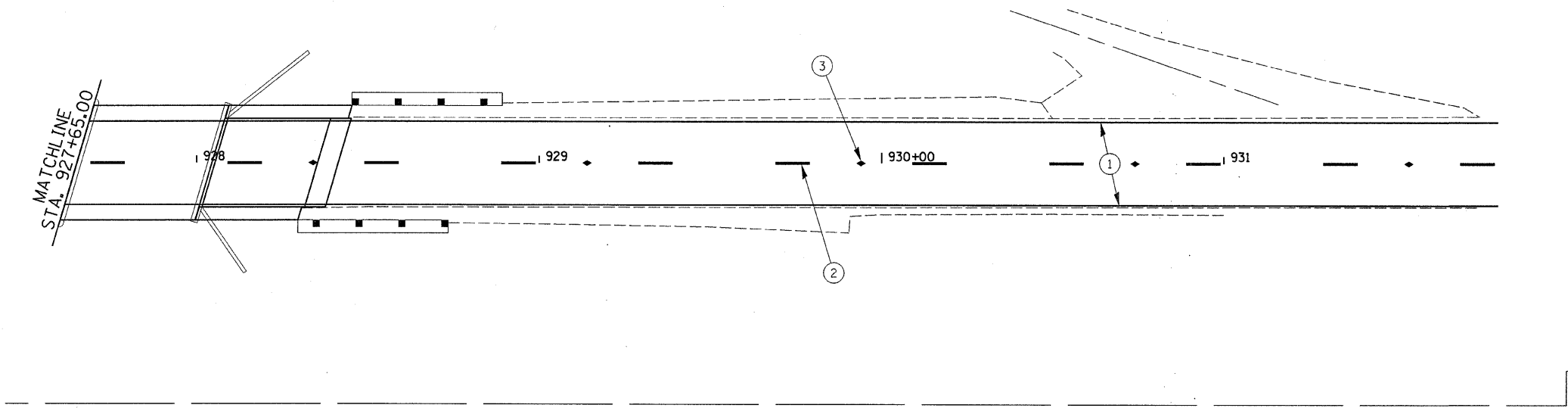
EROSION CONTROL PLAN

IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	13
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78028		



- LEGEND**
- ① EPOXY PAVEMENT MARKING LINE 4" (WHITE)
 - ② EPOXY PAVEMENT MARKING LINE 4" (SKIP-DASH YELLOW)
 - ③ RAISED REFLECTIVE PAVEMENT MARKERS



HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

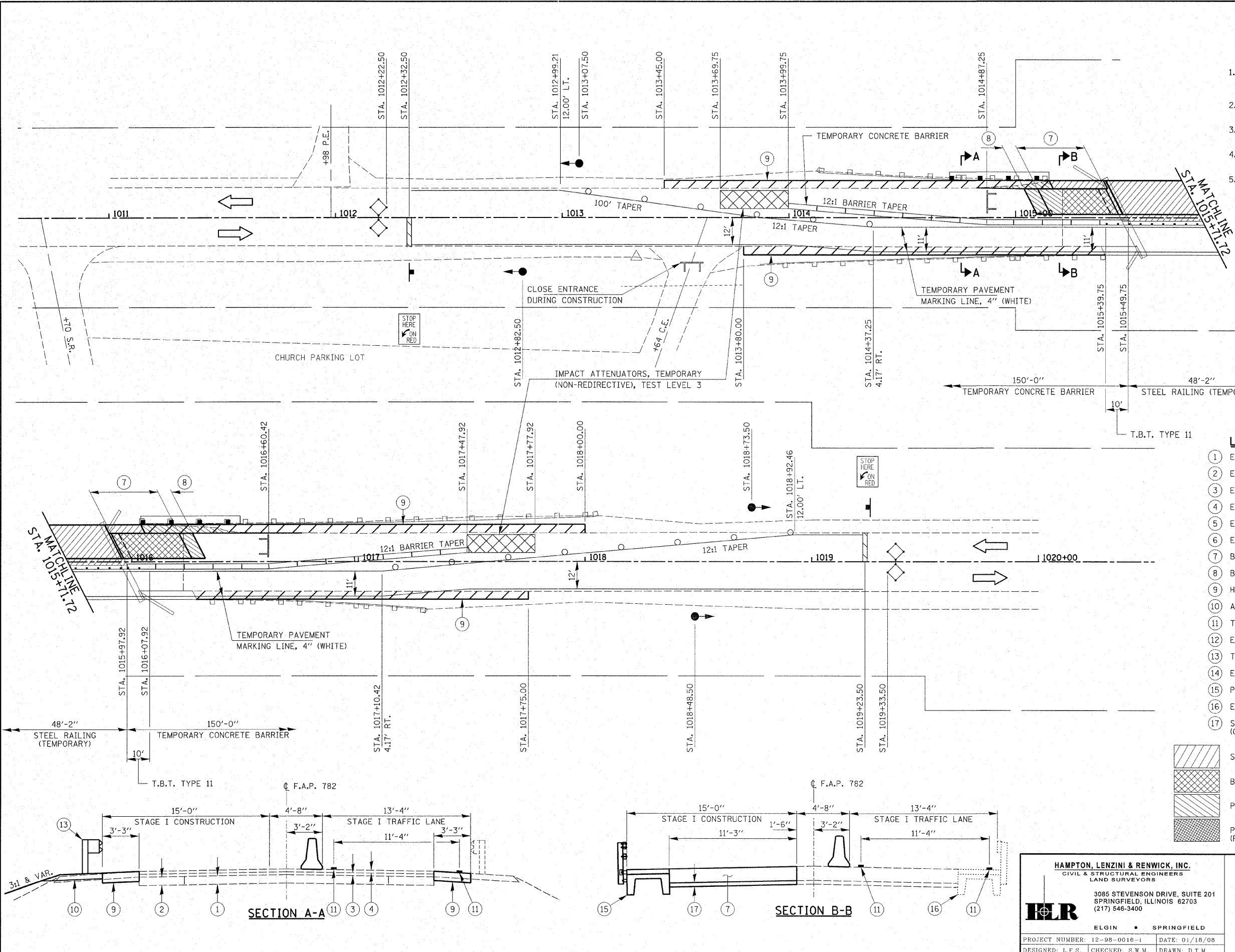
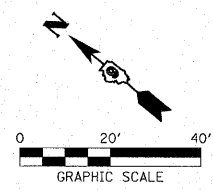
PAVEMENT MARKINGS

IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	HARDIN	83	15
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78026		

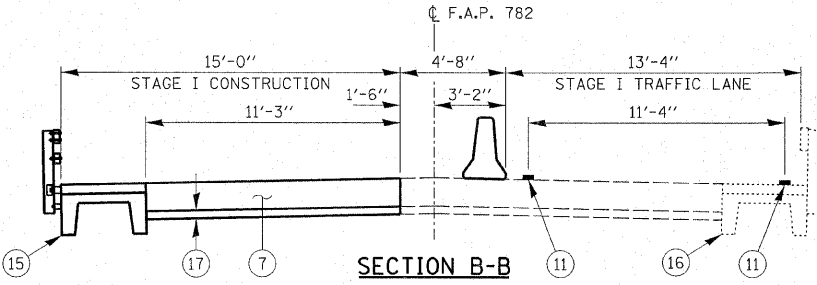
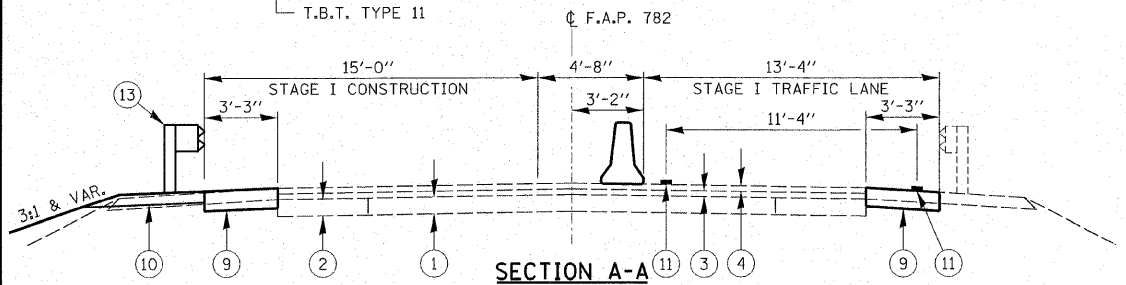
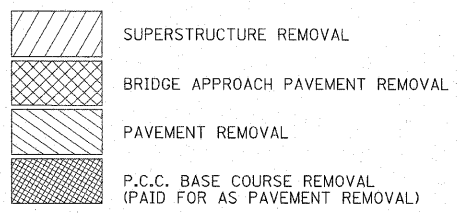
GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. STEEL RAILING (TEMPORARY) AND TEMPORARY CONCRETE BARRIER SHALL BE CONNECTED ACCORDING TO "TRAFFIC BARRIER TERMINAL TYPE 11, STANDARD 631051."



LEGEND

- 1 EXIST CONCRETE PAVEMENT
- 2 EXISTING BASE COURSE WIDENING 9"
- 3 EXISTING H.M.A. BINDER COURSE 1.5" MIN.
- 4 EXISTING H.M.A. SURFACE COURSE 1.5"
- 5 EXISTING AGGREGATE SHOULDERS TYPE A, 6"
- 6 EXISTING PCC BASE COURSE, 10"
- 7 BRIDGE APPROACH PAVEMENT
- 8 BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
- 9 H.M.A. BASE COURSE WIDENING 11"
- 10 AGGREGATE SHOULDERS TYPE A 6"
- 11 TEMPORARY PAVEMENT MARKINGS
- 12 EXISTING BRIDGE APPROACH PAVEMENT
- 13 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 14 EXISTING GUARDRAIL
- 15 PROPOSED PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 16 EXISTING PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 17 SUB-BASE GRANULAR MATERIAL TYPE A 4" (COST INCLUDED WITH BRIDGE APPROACH PAVEMENT)



HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

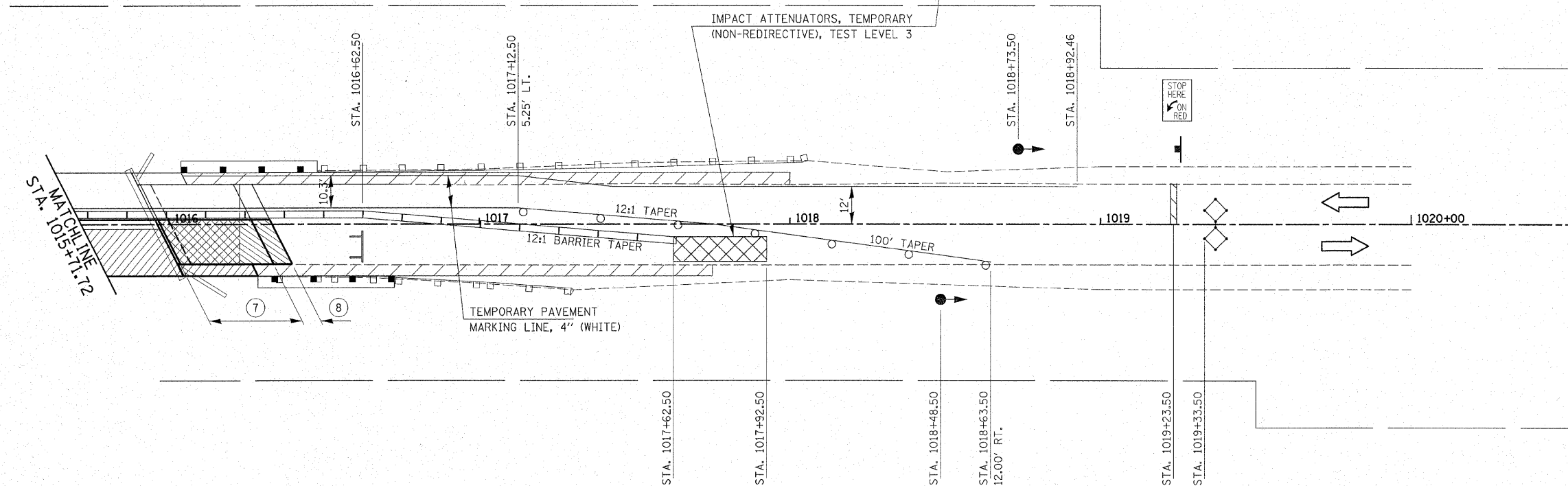
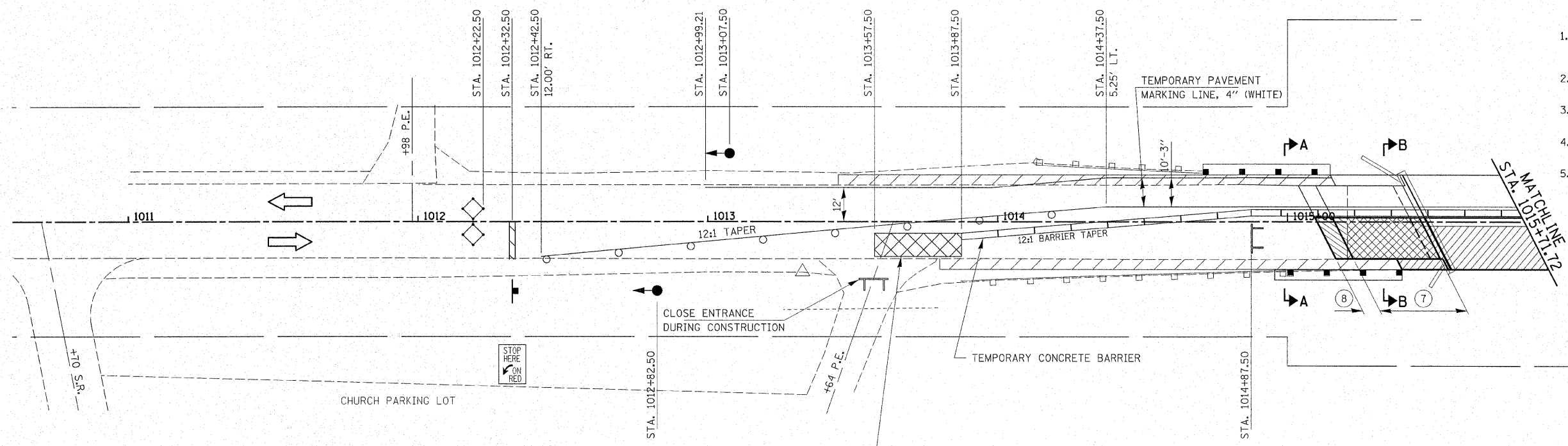
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

STAGE I CONSTRUCTION
 I.L. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	HARDIN	83	16
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 78026			

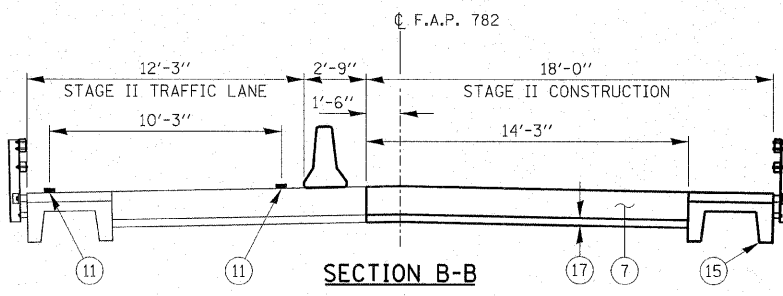
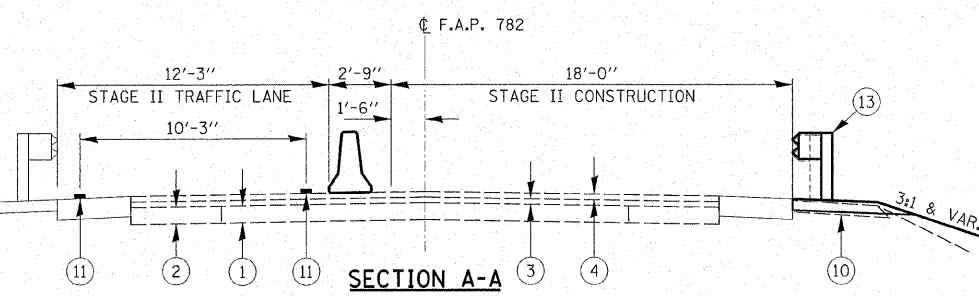
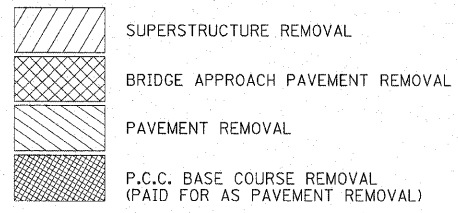
GENERAL NOTES

1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321."
2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER
4. CONSTRUCT TEMPORARY RUMBLE STRIPS AT LOCATIONS SHOWN ON STANDARD 701321.
5. STEEL RAILING (TEMPORARY) AND TEMPORARY CONCRETE BARRIER SHALL BE CONNECTED ACCORDING TO "TRAFFIC BARRIER TERMINAL TYPE 11, STANDARD 631051."



LEGEND

- 1 EXIST CONCRETE PAVEMENT
- 2 EXISTING BASE COURSE WIDENING 9"
- 3 EXISTING H.M.A. BINDER COURSE 1.5" MIN.
- 4 EXISTING H.M.A. SURFACE COURSE 1.5"
- 5 EXISTING AGGREGATE SHOULDERS TYPE A, 6"
- 6 EXISTING PCC BASE COURSE, 10"
- 7 BRIDGE APPROACH PAVEMENT
- 8 BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)
- 9 H.M.A. BASE COURSE WIDENING 11"
- 10 AGGREGATE SHOULDERS TYPE A 6"
- 11 TEMPORARY PAVEMENT MARKINGS
- 12 EXISTING BRIDGE APPROACH PAVEMENT
- 13 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 14 EXISTING GUARDRAIL
- 15 PROPOSED PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 16 EXISTING PRECAST SLAB WITH CONCRETE WEARING SURFACE
- 17 SUB-BASE GRANULAR MATERIAL TYPE A 4" (COST INCLUDED WITH BRIDGE APPROACH PAVEMENT)

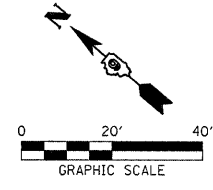
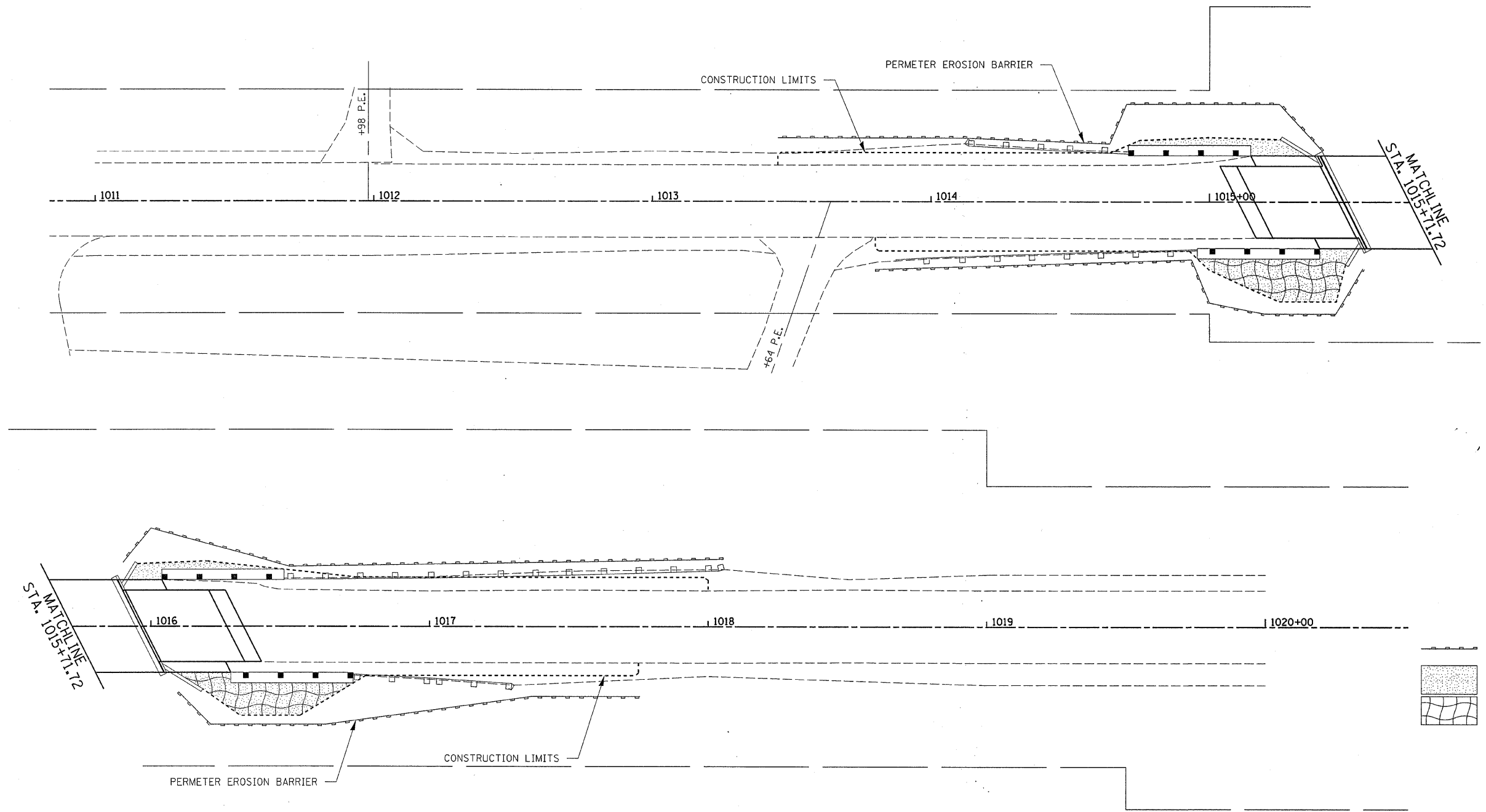


HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

STAGE II CONSTRUCTION
 I.L. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	HARDIN	83	17
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 78026		



LEGEND

	PERIMETER EROSION BARRIER
	SEEDING
	EROSION CONTROL BLANKET

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

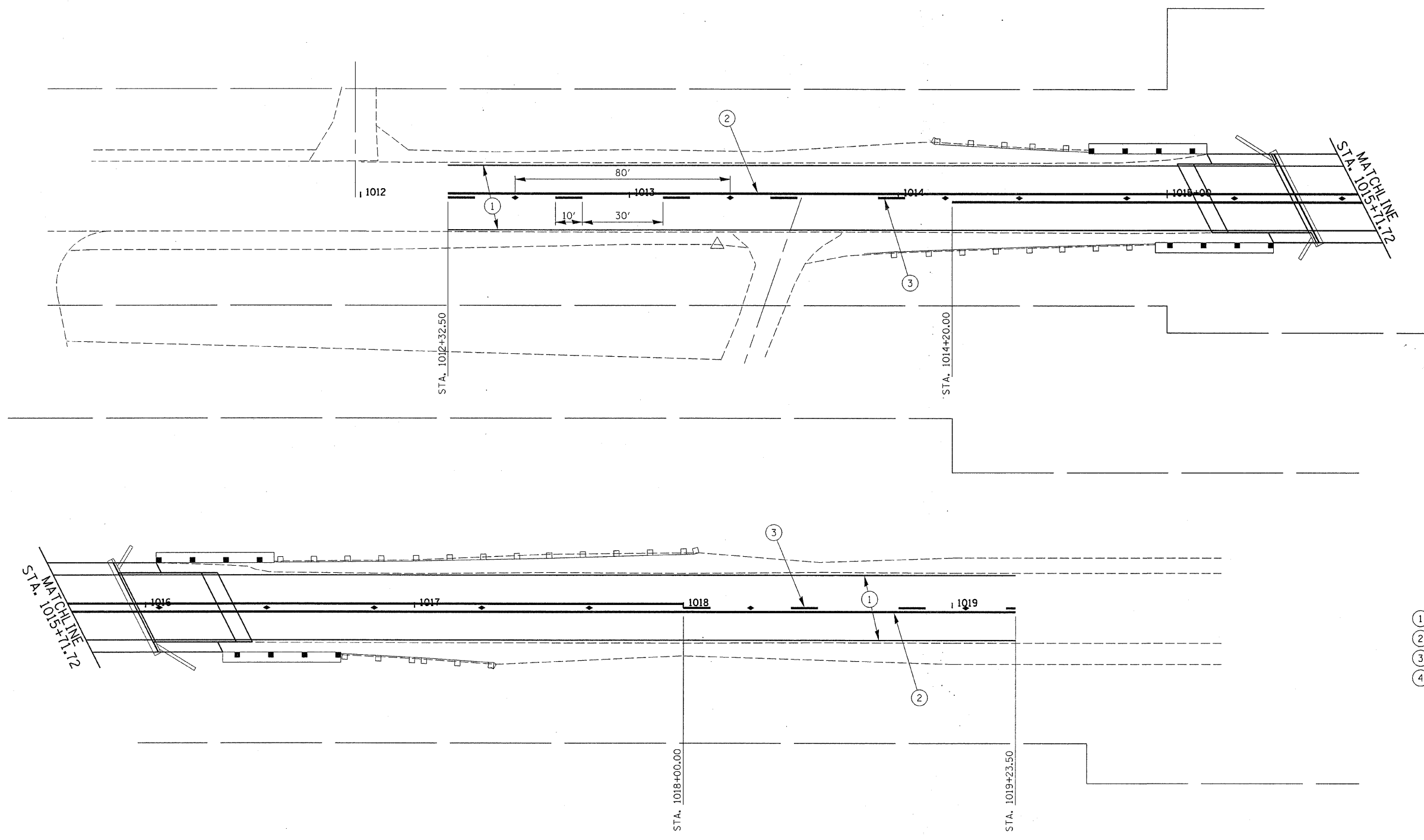
3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.F.S. CHECKED: S.W.M. DRAWN: D.T.M.

EROSION CONTROL PLAN
 I.L. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	HARDIN	83	18
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 78026		



- LEGEND**
- ① EPOXY PAVEMENT MARKING LINE 4" (WHITE)
 - ② EPOXY PAVEMENT MARKING LINE 4" (SOLID YELLOW)
 - ③ EPOXY PAVEMENT MARKING LINE 4" (SKIP-DASH YELLOW)
 - ④ RAISED REFLECTIVE PAVEMENT MARKERS

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

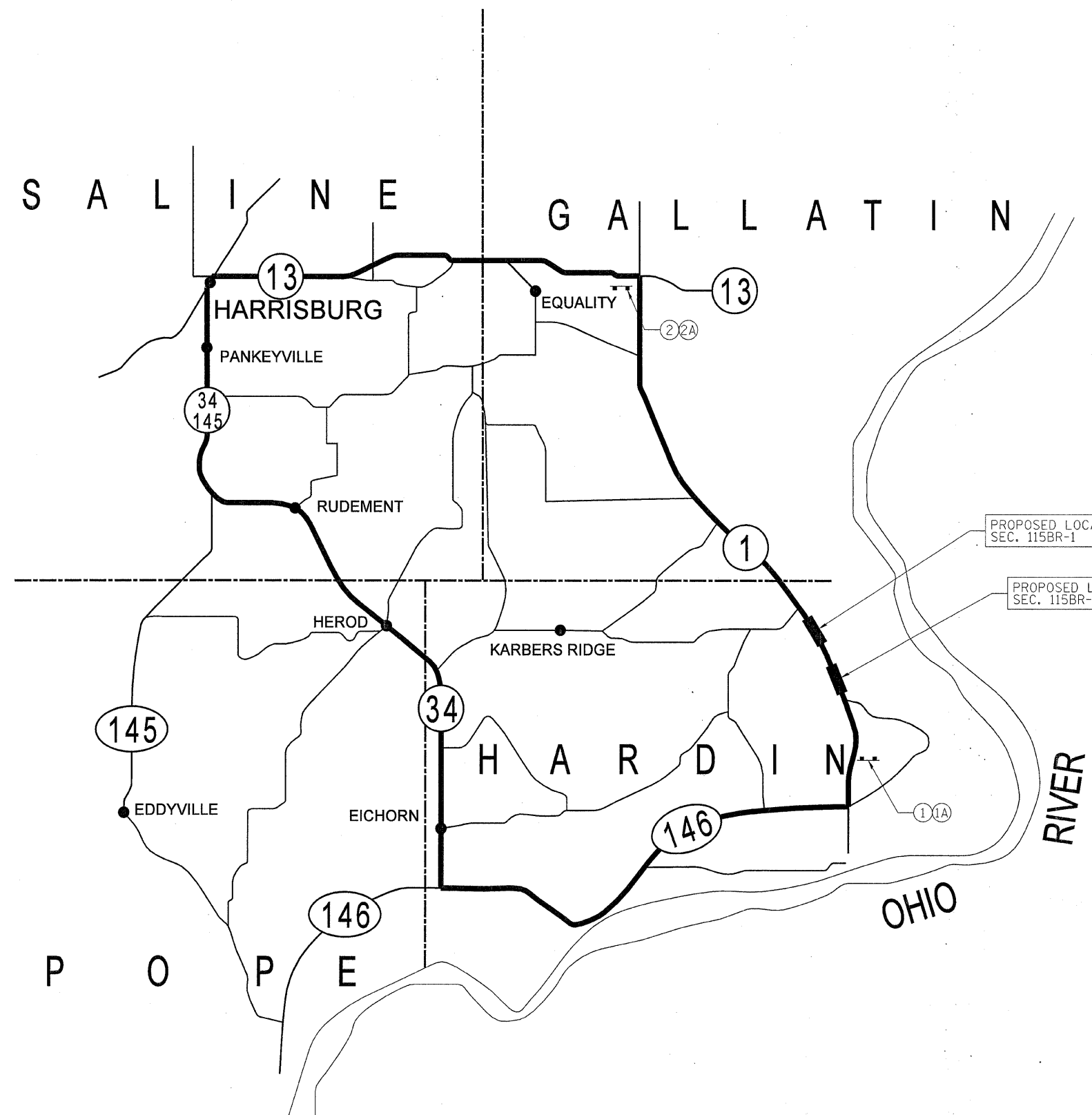
3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: L.P.S. CHECKED: S.W.M. DRAWN: D.T.M.

PAVEMENT MARKINGS
 I.L. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+71.72
 STRUCTURE NO. 035-0003

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1 115BR-2	HARDIN	83	19
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 78026		



STAGE I

①

WIDE LOADS OVER 11'-6"		
DETOUR VIA		
WEST ILLINOIS	NORTH ILLINOIS	EAST ILLINOIS
146	34	13

60"x90"

②

WIDE LOADS OVER 11'-6"		
DETOUR VIA		
WEST ILLINOIS	SOUTH US	EAST US
13	34	146

60"x90"

STAGE II

①A

WIDE LOADS OVER 10'-6"		
DETOUR VIA		
WEST ILLINOIS	NORTH ILLINOIS	EAST ILLINOIS
146	34	13

60"x90"

②A

WIDE LOADS OVER 10'-6"		
DETOUR VIA		
WEST ILLINOIS	SOUTH US	EAST US
13	34	146

60"x90"

DETOUR NOTES

1. THE CONTRACTOR SHALL ERECT THE SIGN AT THE LOCATION DIRECTED BY THE RESIDENT ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGN POSTS HARDWARE AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE EACH. FOR TRAFFIC CONTROL AND PROTECTION STD. 701321 AND NO OTHER COMPENSATION SHALL BE ALLOWED.
3. THE RESIDENT ENGINEER SHALL GIVE I.D.O.T., BUREAU OF OPERATIONS PERMIT SECTION TWO WEEKS NOTICE BEFORE IMPLEMENTING ANY LANE WIDTH RESTRICTIONS.

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1	DATE: 01/18/08
DESIGNED: L.P.S.	CHECKED: S.W.M.
DRAWN: D.T.M.	

WIDE LOAD DETOUR

IL. ROUTE 1
 F.A.P. ROUTE 782 / SECTION 115BR-1 & 115BR-2
 HARDIN COUNTY
 STATION 927+65 & STATION 1015+71.72
 STRUCTURE NO. 035-0001 & 035-0003

BENCHMARK: Chiseled Square on top of Pier.
SN 035-0001, Station 927+60, 17' right, Elevation 355.23

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE: SN 035-0001 was originally built in 1935 as S.B.I. Route 140, Section 115AC. In 1980, the superstructure was replaced and widened, a pier was added, and precast concrete bridge slabs were utilized to widen the approaches. The superstructure consists of two 21" deck beam simple spans. The substructure consists of two reinforced concrete closed abutments on timber piles and a pile bent pier. The back-to-back abutments length is 82'-11"; the out-to-out width is 33'-0". The existing superstructure, approach pavements, and approach shoulder bridge slabs shall be removed and replaced using stage construction to maintain traffic.

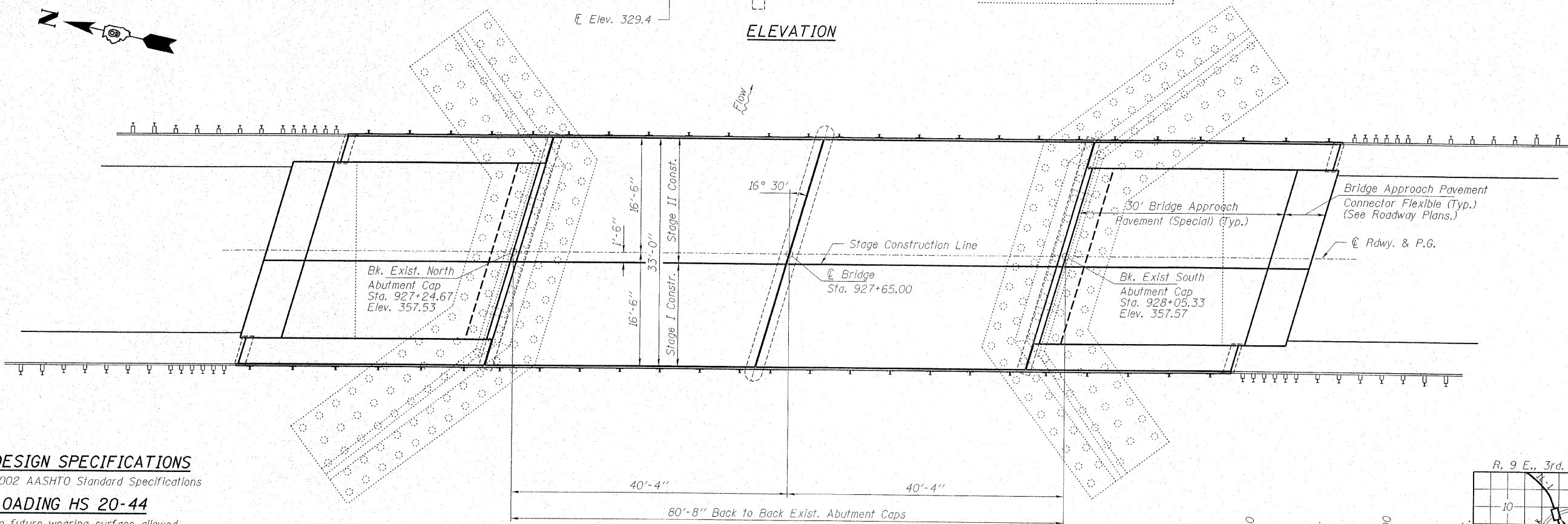
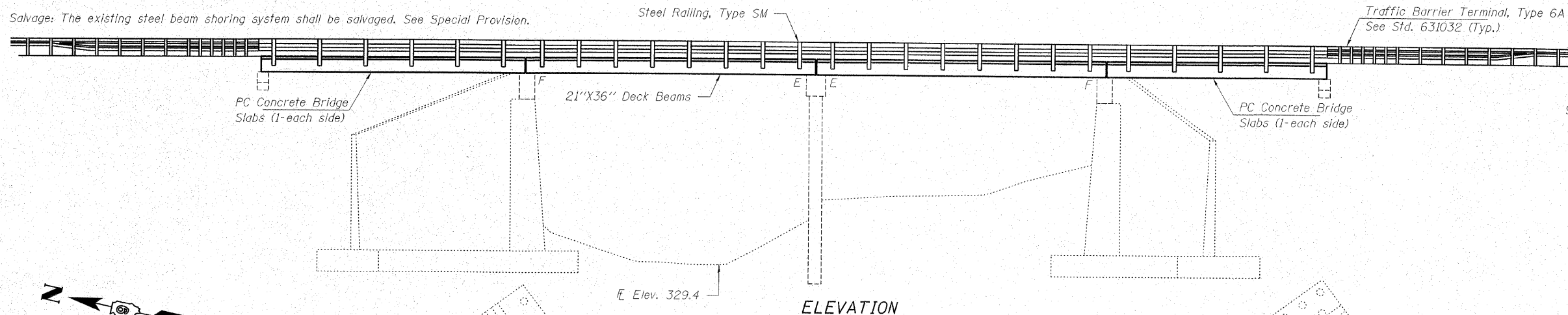
Salvage: The existing steel beam shoring system shall be salvaged. See Special Provision.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	20
SHEET NO. 1 16 SHEETS				

Contract #78026

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. General Details
3. Stage Construction Details
4. Steel Railing (Temporary)
5. Temporary Concrete Barrier For Stage Construction
6. Superstructure
- 7-8. Superstructure Details
- 9-10. Approach Details
11. Steel Railing, Type SM with Concrete Wearing Surface
12. Expansion Joint
13. North Abutment
14. South Abutment
15. Pier
16. Bar Splicer Assembly Details



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING HS 20-44

No future wearing surface allowed

DESIGN STRESSES

FIELD UNITS

$f'_c = 5,000$ psi (Concrete Wearing Surface)
 $f'_c = 3,500$ psi (All Concrete except CWS)
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_ci = 4,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f'_si = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (Reinf.)

PRECAST UNITS

$f'_c = 4,500$ psi
 $f_y = 60,000$ psi (Reinf.)

SCOPE OF WORK

1. Remove existing superstructure, approach pavements, and approach shoulder bridge slabs.
2. Repair substructure as specified.
3. Construct a new two span PPC deck beam superstructure with concrete wearing surface, approach pavements and approach shoulders with Precast Concrete Bridge Slabs with concrete wearing surface.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

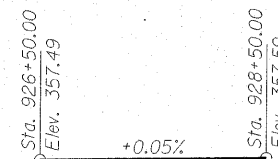
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



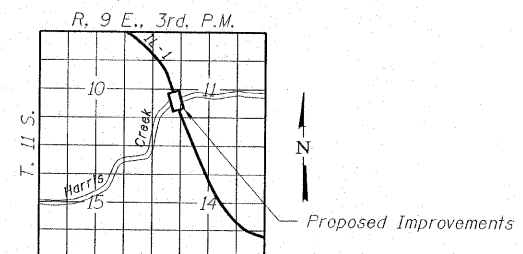
Michael D. Ciura
ILLINOIS STRUCTURAL NO. 081-5984

1-18-2008

Expires 11-30-08



PROFILE GRADE
(Along ϕ Rdwy.)



LOCATION SKETCH

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

GENERAL PLAN AND ELEVATION

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 2
F.A.P. 782	115BR-1	Hardin	83	21	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.
 Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
 Concrete Sealer shall be applied to abutment bearing seats (new concrete only).
 All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300 Type 1 unless noted otherwise.
 Side retainers shall be AASHTO M270 Grade 36 minimum.
 No in-stream work will be allowed on this project.
 The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
 If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (21" Depth).
 The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
 Repair of the substructure shall be completed prior to placement of the new deck beams.
 Reinforcement bars designated (E) shall be epoxy coated.

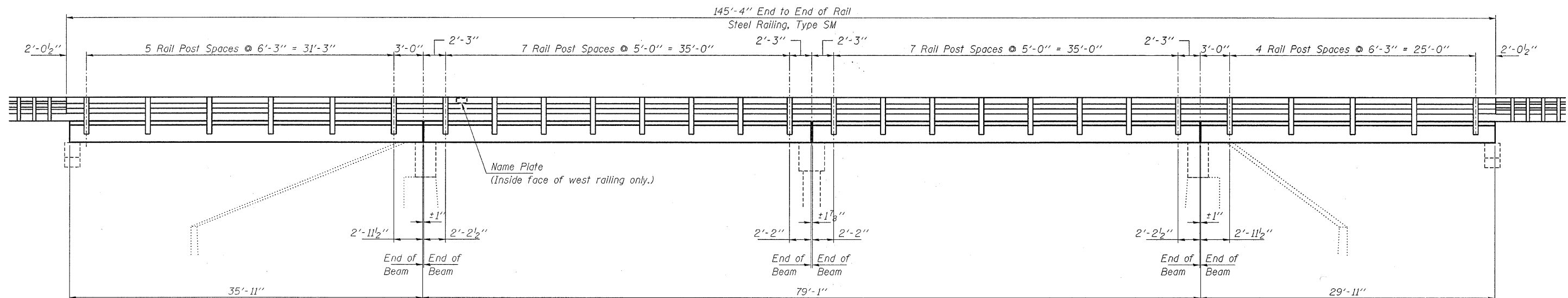
STATION 927+65
REBUILT 200 BY
STATE OF ILLINOIS
FA RT 782 SEC 115BR-1
LOADING HS20
STR. NO. 035-0001

NAME PLATE
See Std. 515001

Note: The existing name plate shall be cleaned and relocated adjacent to the new plate. Cost included with Name Plates.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Bridge Deck Grooving	Sq. Yd.	350		350
Protective Coat	Sq. Yd.	350		350
Precast Concrete Bridge Slab	Sq. Ft.	495		495
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2,599		2,599
Reinforcement Bars, Epoxy Coated	Pound	4,400	480	4,880
Bar Splicers	Each	84	8	92
Steel Railing, Type SM	Foot	291		291
Steel Railing (Temporary)	Foot	83		83
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	35		35
Epoxy Crack Injection	Foot		27	27
Asbestos Bearing Pad Removal	Each			44
Removal of Existing Precast Concrete Units	Sq. Ft.	495		495
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.		5	5
Concrete Wearing Surface, 5"	Sq. Yd.	350		350
Concrete Structures	Cu. Yd.		5.0	5.0



RAILING ELEVATION
(Showing outside face of West Railing)
(East Rail spacing similar but rotated 180°)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

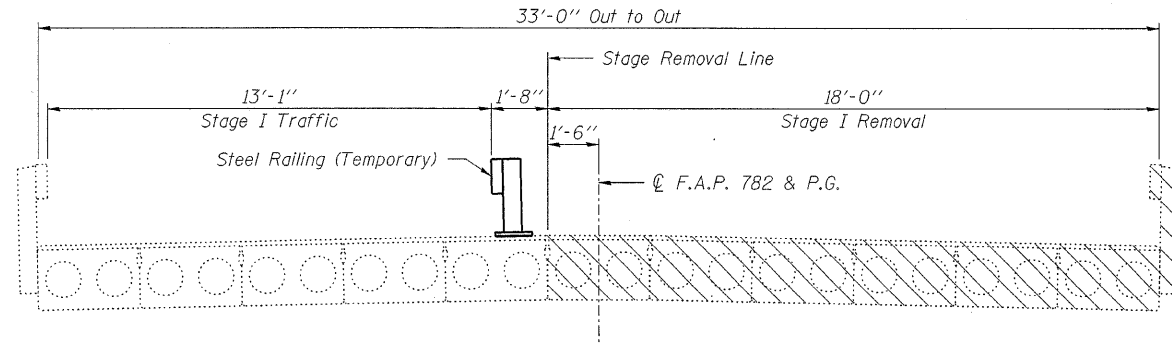
GENERAL DETAILS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

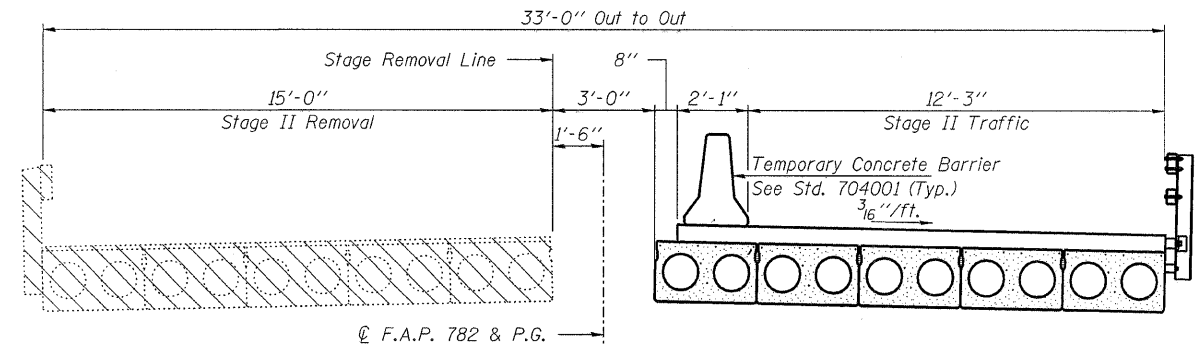
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
16 SHEETS

Contract #78026

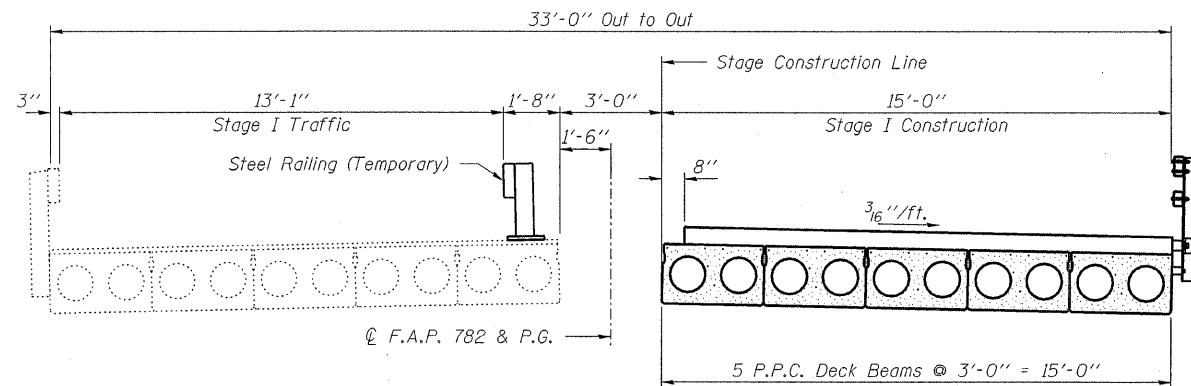


STAGE I REMOVAL

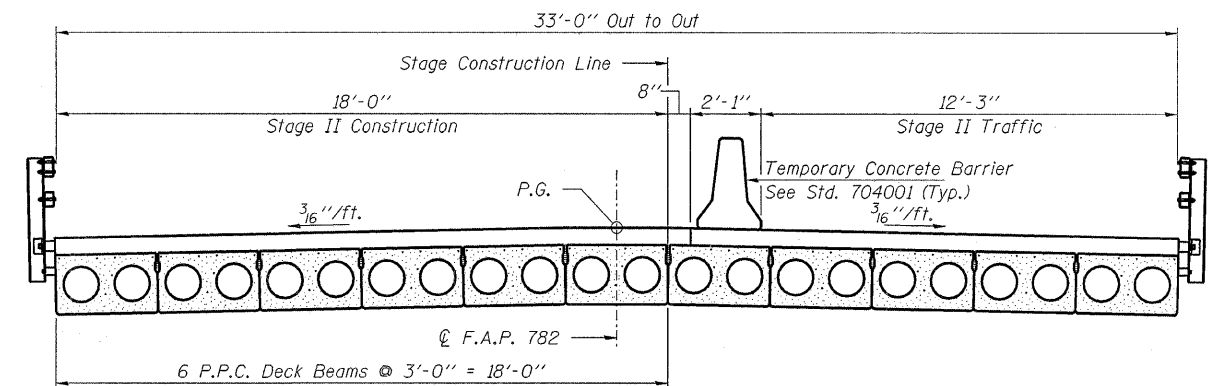


STAGE II REMOVAL

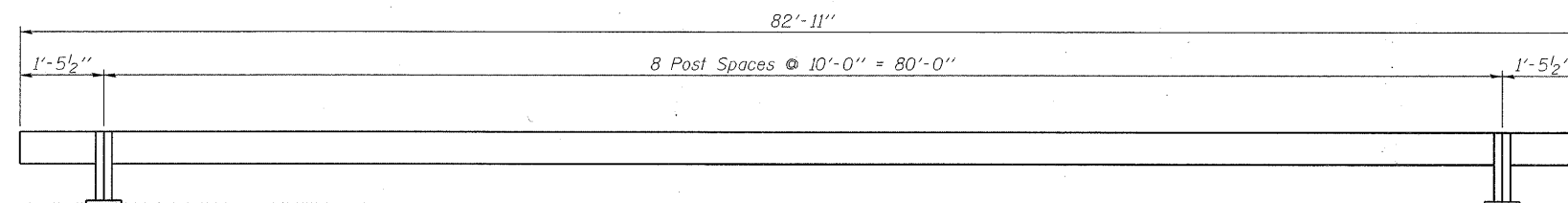
- Notes:
1. All views are looking Southeast.
 2. See Sheet 7 of 16 for shear key clamping details.
 3. See Roadway Plans for quantity of Temporary Concrete Barrier.



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



STEEL RAILING (TEMPORARY POST SPACING)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

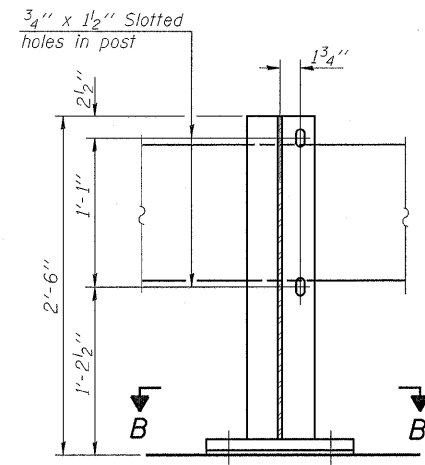
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

STAGE CONSTRUCTION DETAILS

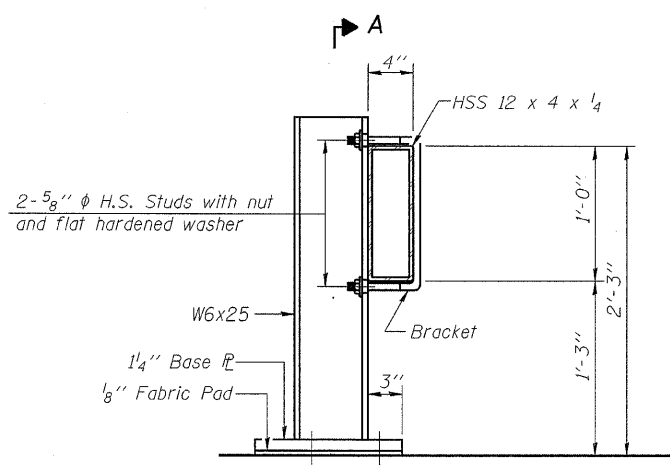
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

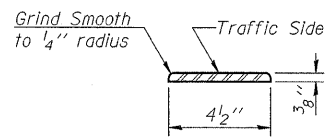
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4 16 SHEETS
F.A.P. 782	115BR-1	Hardin	83	23	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			
Contract #78026					



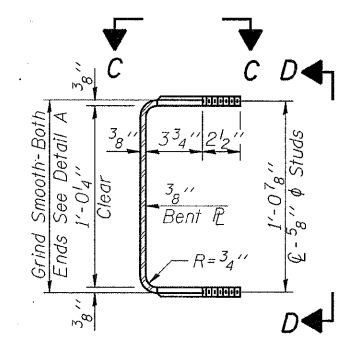
SECTION A-A



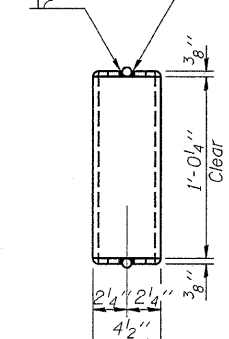
SECTION AT RAIL POST



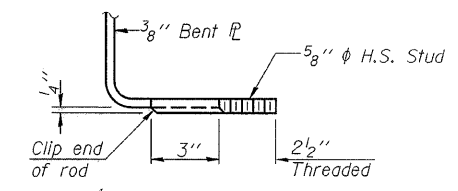
DETAIL A



SECTION THRU BRACKET

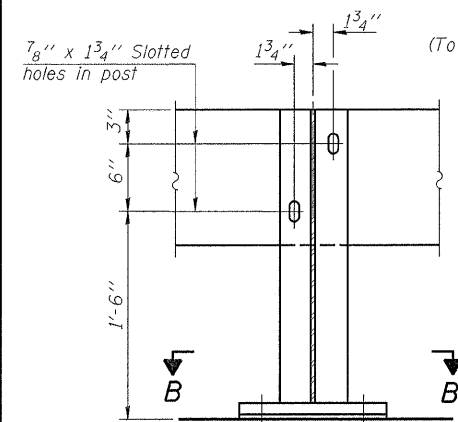


VIEW D-D



VIEW E-E

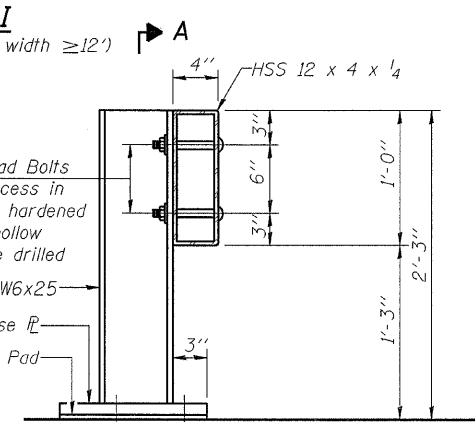
Notes:
See sheet 3 of 16 for Rail Post spacing.
The contact surfaces between post flange, rail and inside face of bracket for Alternate I shall be free of all lubricants.
The nut for 5/8" high strength studs used in Alternate I to connect bracket to post shall be tightened to a snug fit and given an additional one half turn.



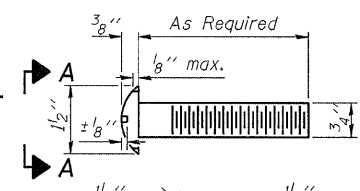
SECTION A-A

ALTERNATE I
(To be used only for Roadway width $\geq 12'$)

2-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat hardened washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.

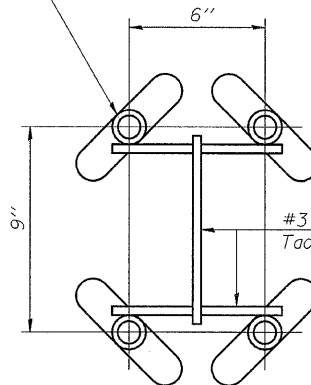


SECTION AT RAIL POST

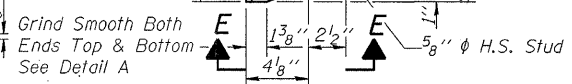


VIEW A-A
ROUND HEAD BOLT

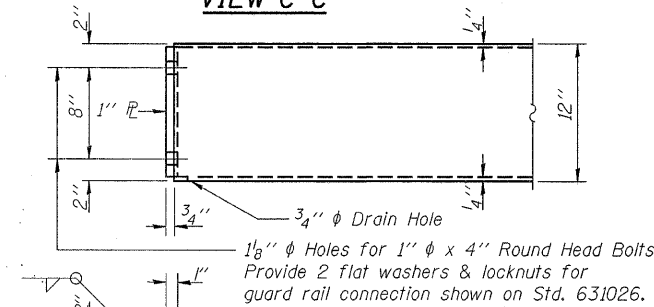
1" ϕ Flared thin slab ferrule insert. Electroplated according to ASTM B 633 Service Condition 4.



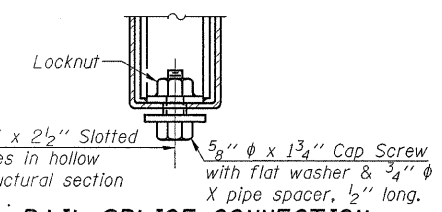
INSERT DETAIL



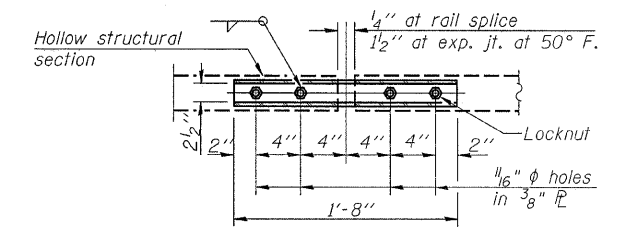
VIEW C-C



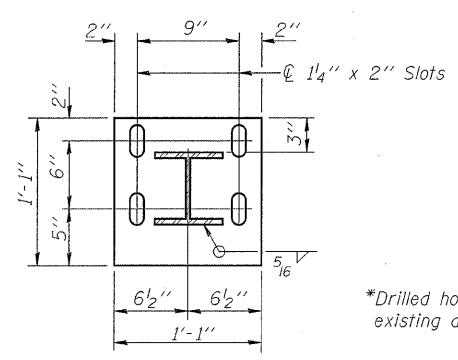
END OF RAIL DETAILS



RAIL SPLICE CONNECTION
AT EXPANSION JT.

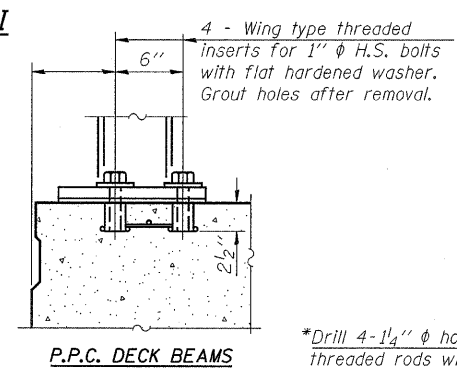


PLAN-BOTT. SPLICE
TYPICAL



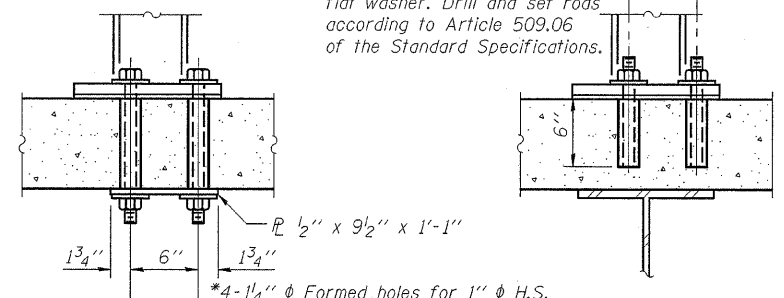
SECTION B-B

*Drilled holes for existing deck.

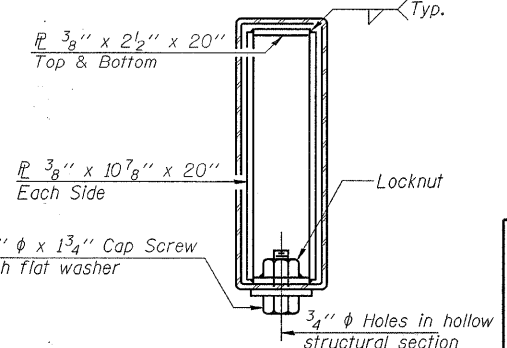


P.P.C. DECK BEAMS

*Drill 4-1 1/4" ϕ holes for 1" ϕ threaded rods with hex nut and flat washer. Drill and set rods according to Article 509.06 of the Standard Specifications.



ANCHORAGE DETAILS



SECTION AT RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Temporary)	Foot	83.0

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

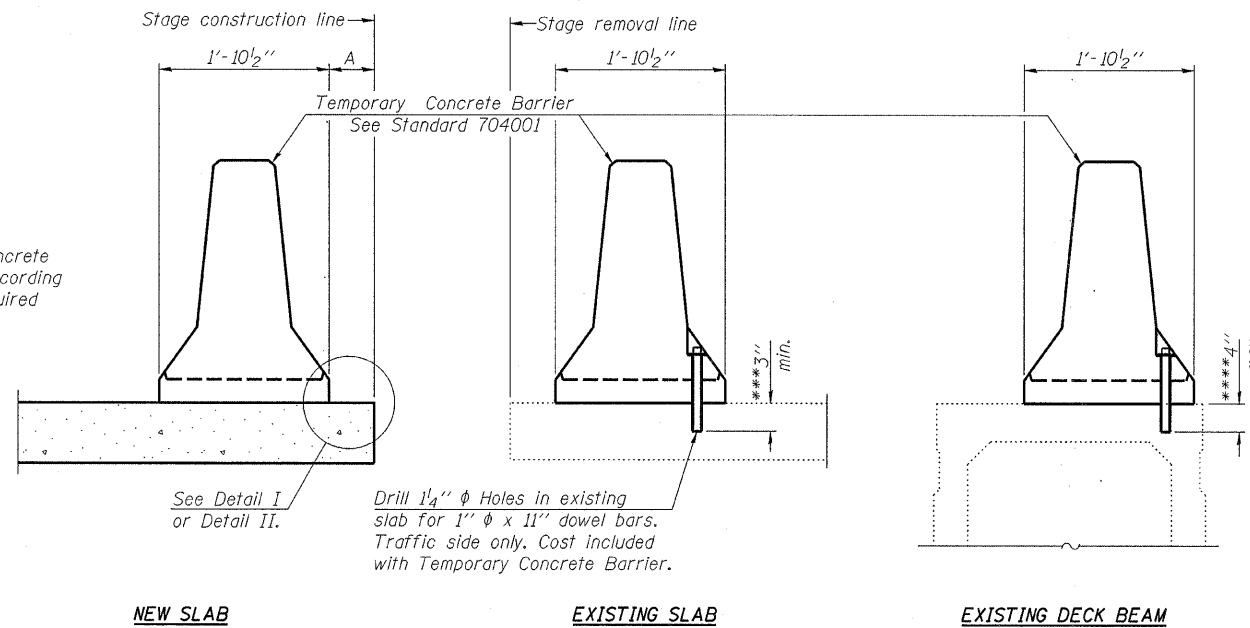
STEEL RAILING (TEMPORARY)
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 16 SHEETS
F.A.P. 782	115BR-1	Hardin	83	24	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026

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".



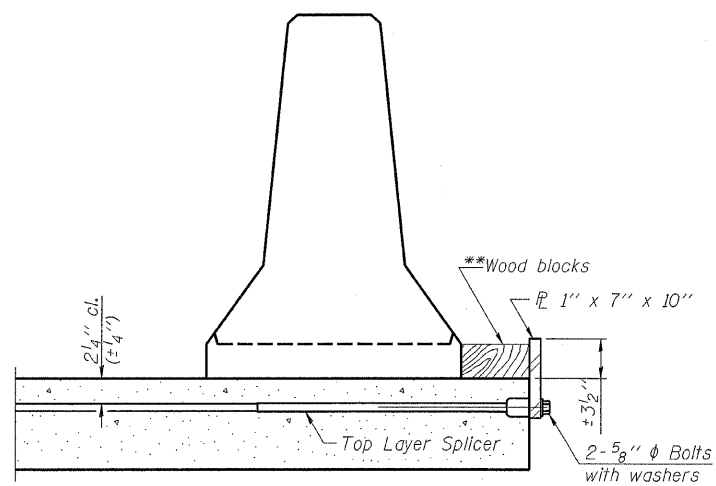
Drill 1/4" ϕ Holes in existing slab for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

NOTES

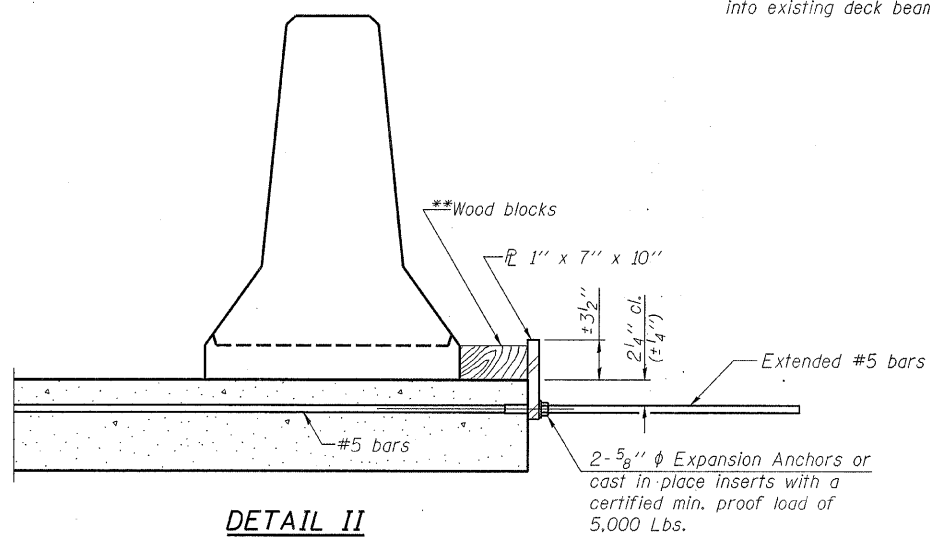
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete 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 10" 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.

SECTIONS THRU SLAB OR DECK BEAM

- ***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.

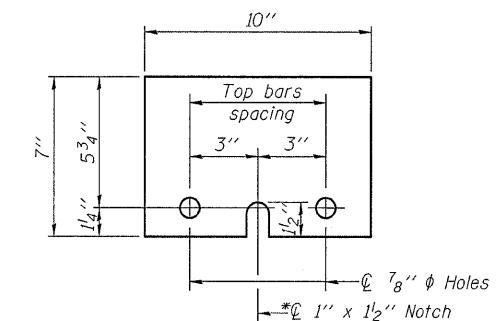


DETAIL I



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.



STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION**

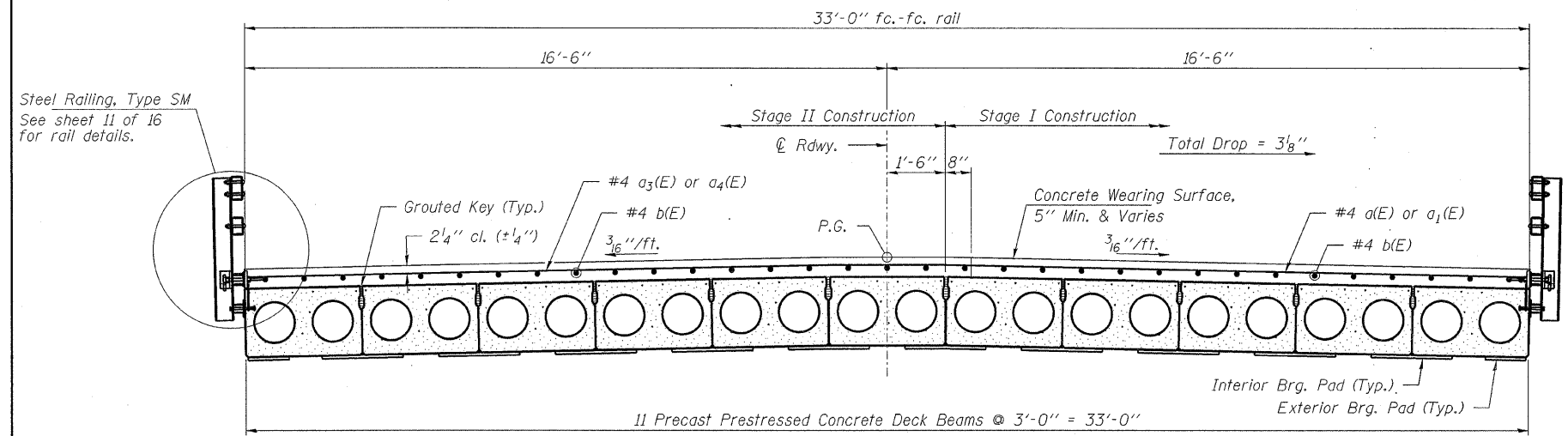
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

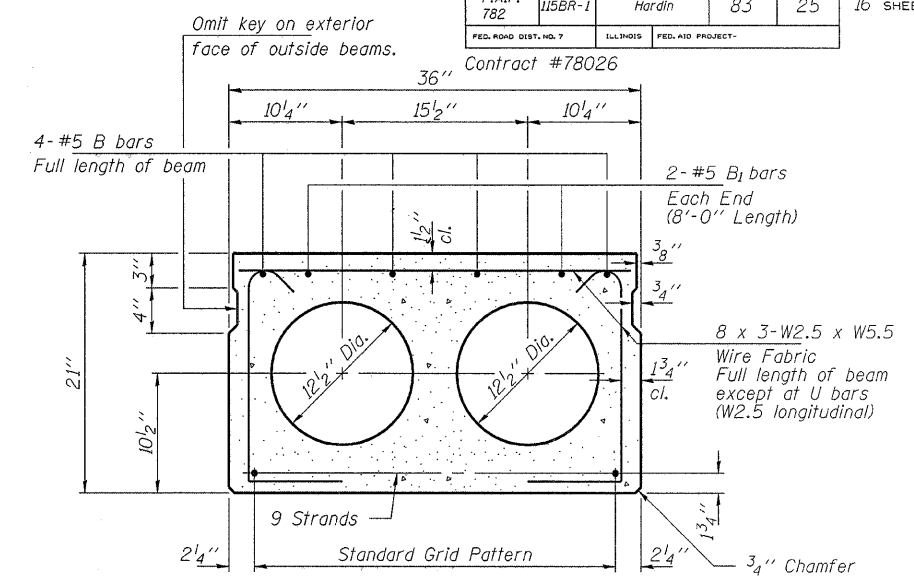
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	I15BR-1	Hardin	83	25
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.	FED. AID PROJECT	

Contract #78026

SHEET NO. 6
16 SHEETS



CROSS SECTION
(Looking Southeast)

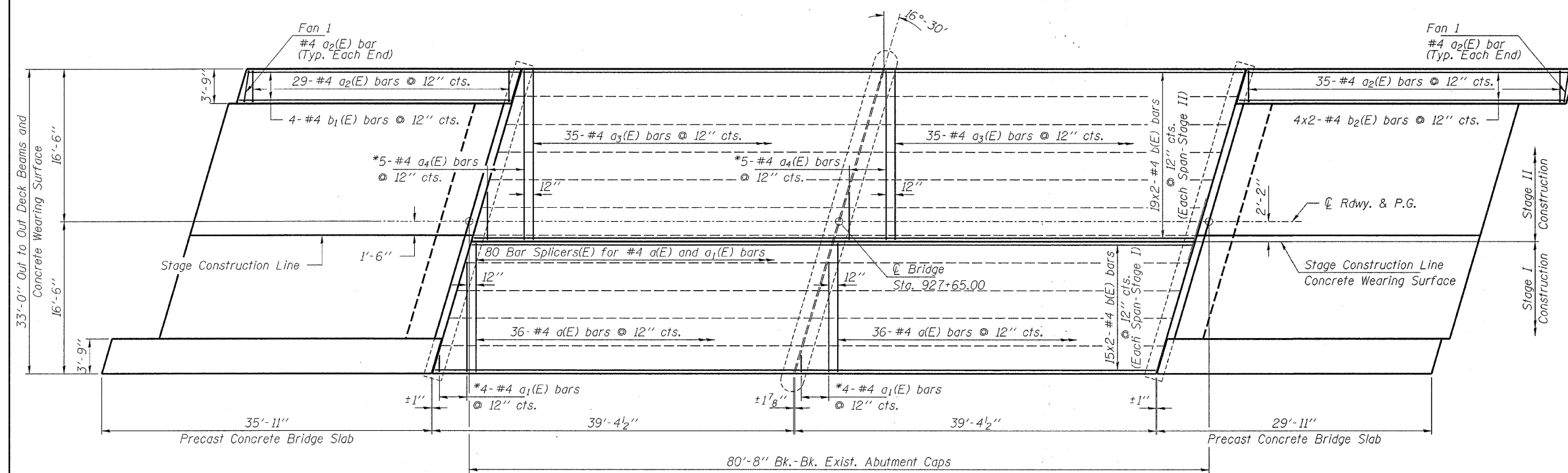


TYPICAL SECTION

9-1/2" Strands, Each Strand Stressed to 30,900 Lbs.
9-Strands 1 3/4" up

- Notes:
- Place strands symmetrically about \bar{C} of beam.
 - See Sheet 7 of 16 for additional details applicable to fascia beams.

MIN. BAR LAP
#4 bar = 1'-8"



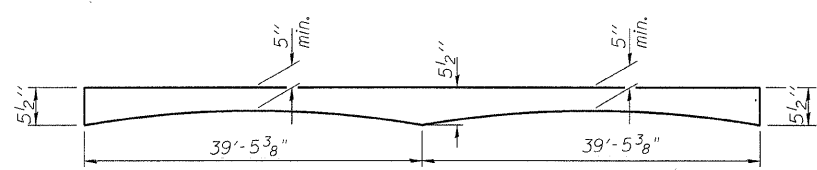
PLAN - RC WEARING SURFACE

* Order a1(E) and a4(E) bars full length, cut to fit skew and use remainder of bars in opposite end of span.

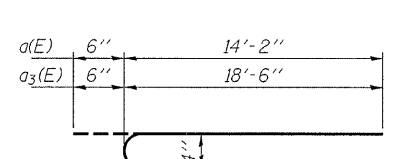
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	72	#4	14'-8"	C
a1(E)	8	#4	13'-0"	C
a2(E)	136	#4	4'-6"	C
a3(E)	70	#4	19'-0"	C
a4(E)	10	#4	17'-4"	C
b(E)	136	#4	20'-5"	—
b1(E)	8	#4	29'-8"	—
b2(E)	16	#4	18'-8"	—
Bridge Deck Grooving		Sq. Yd.	350	
Protective Coat		Sq. Yd.	350	
Precast Prestressed Concrete Deck Beams (21" Depth)		Sq. Ft.	2,599	
Reinforcement Bars, Epoxy Coated		Pound	4,400	
Concrete Wearing Surface, 5"		Sq. Yd.	350	

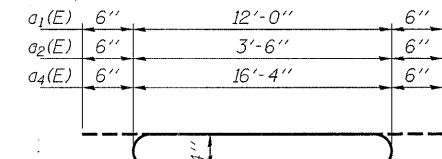
Bars indicated thus 15x2-#4 etc. indicates 15 lines of bars with 2 lengths per line. For additional superstructure details, see sheets 7 & 8 of 16.



REINFORCED CONCRETE WEARING SURFACE PROFILE



a(E) OR a3(E) BAR



a1(E), a2(E) OR a4(E) BAR

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

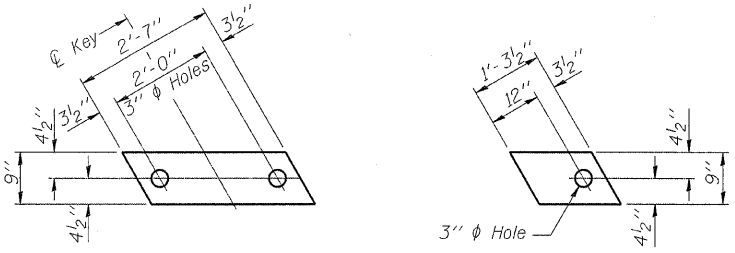
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/06
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

SUPERSTRUCTURE
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION I15BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 16 SHEETS
F.A.P. 782	115BR-1	Hardin	83	26	
FED. ROAD DIST. NO. 7		ILL. MO. 5	FED. AID PROJECT		

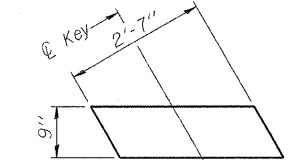
Contract #78026



FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

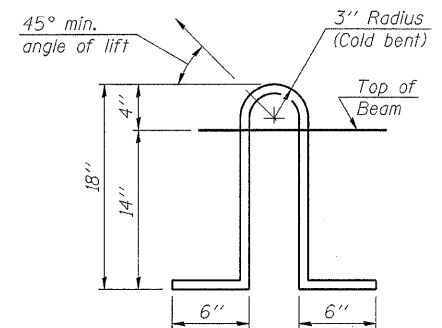
FIXED



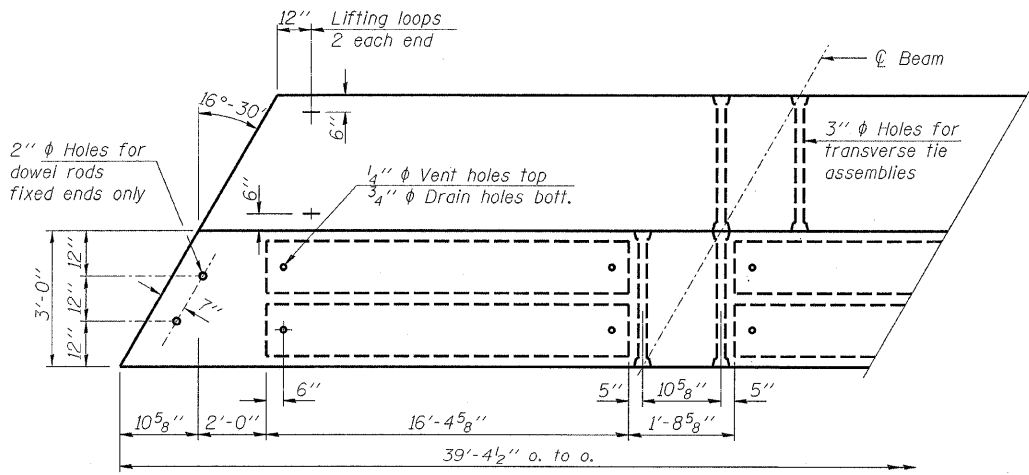
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

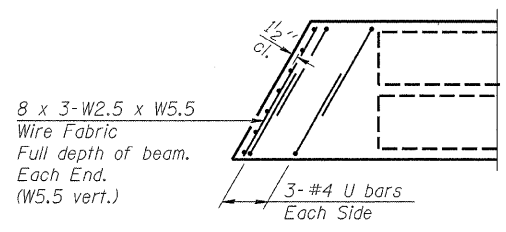
EXPANSION



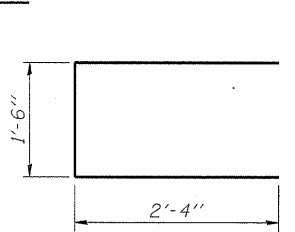
LIFTING LOOP DETAIL



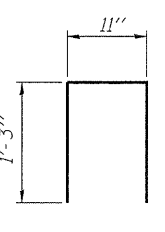
PLAN



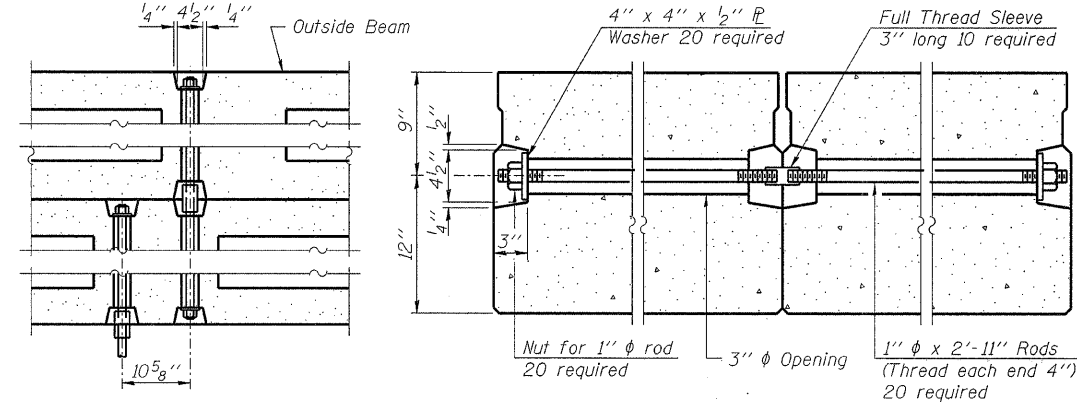
END PLAN



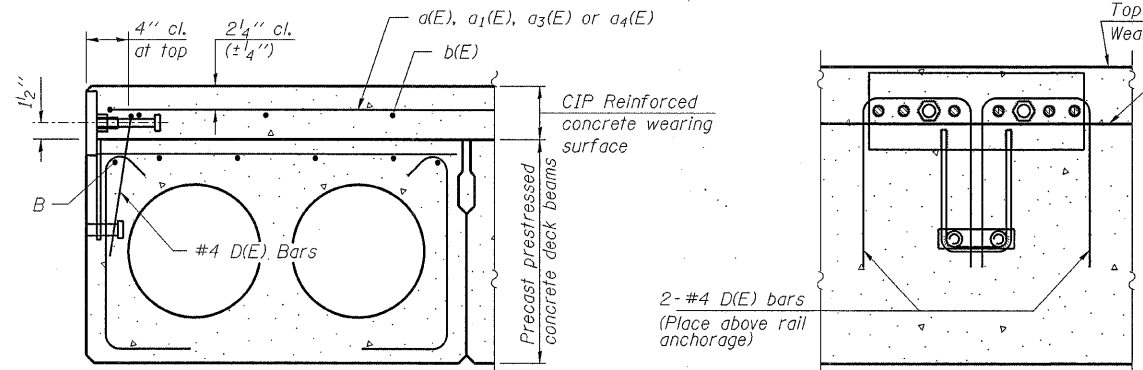
BAR U



D(E) BAR



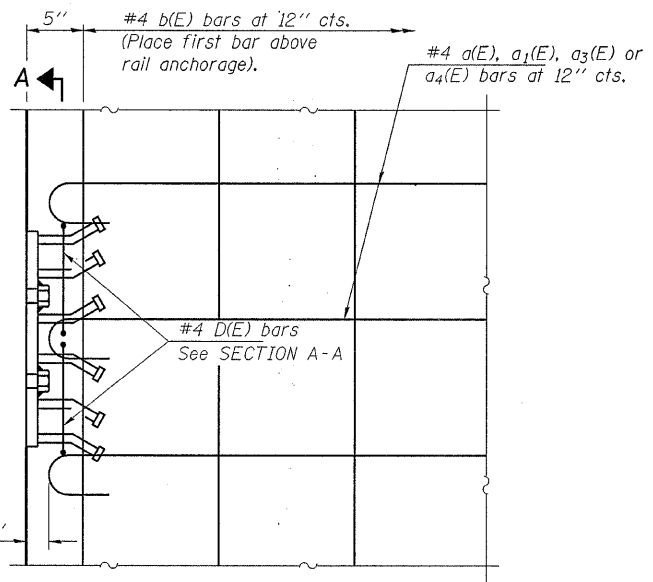
TYPICAL TRANSVERSE TIE ASSEMBLY



FASCIA BEAM CROSS SECTION

See Typical Section on Sheet 6 of 16 for strand pattern, dimensions and bar call outs.

SECTION A-A

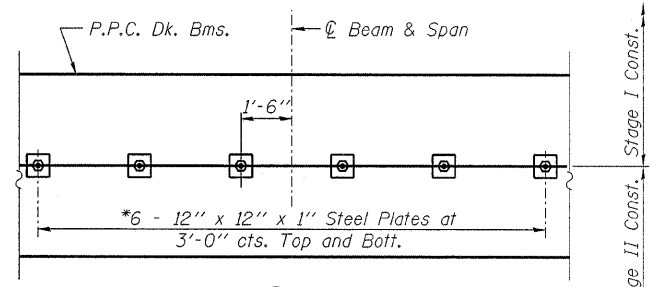


PLAN

Notes:
The rail anchorage and D(E) bar shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

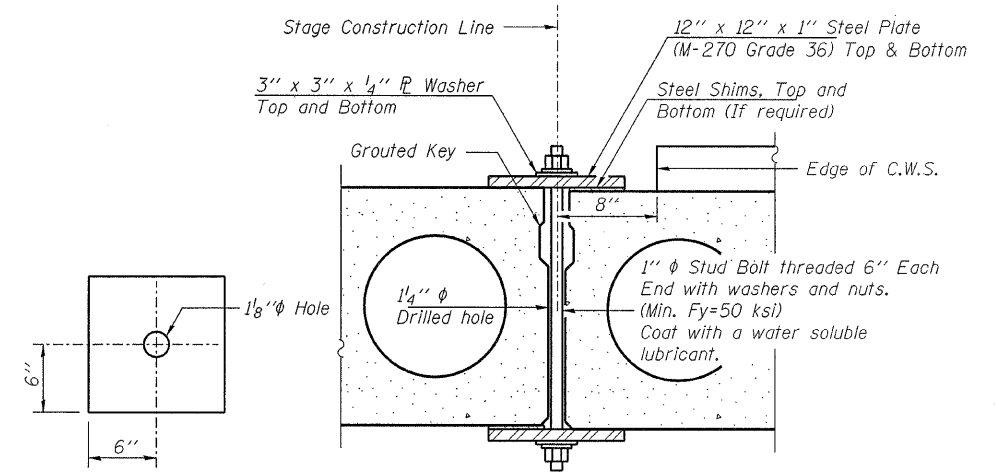
CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE
(Bridge shown, Approach similar)

NOTES
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2" φ-270 ksi strands, as shown. The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i. See Sheet 2 of 16 for location of rail anchors and additional notes.



PLAN

* Space plates to miss Temporary Bridge Rail Posts.



CLAMPING PLATE

SECTION

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Note: Cost included with Precast Prestressed Concrete Deck Beams.

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

SUPERSTRUCTURE DETAILS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-1	COUNTY Hardin	TOTAL SHEETS 83	SHEET NO. 27	SHEET NO. 8 16 SHEETS
FED. RDW. DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #78026		

NOTES

After beams have been erected, holes shall be drilled into substructure and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hours prior to grouting the shear keys.

Concrete wearing surface to be poured after grouting the shear keys.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (21" Depth) or Precast Concrete Bridge Slabs.

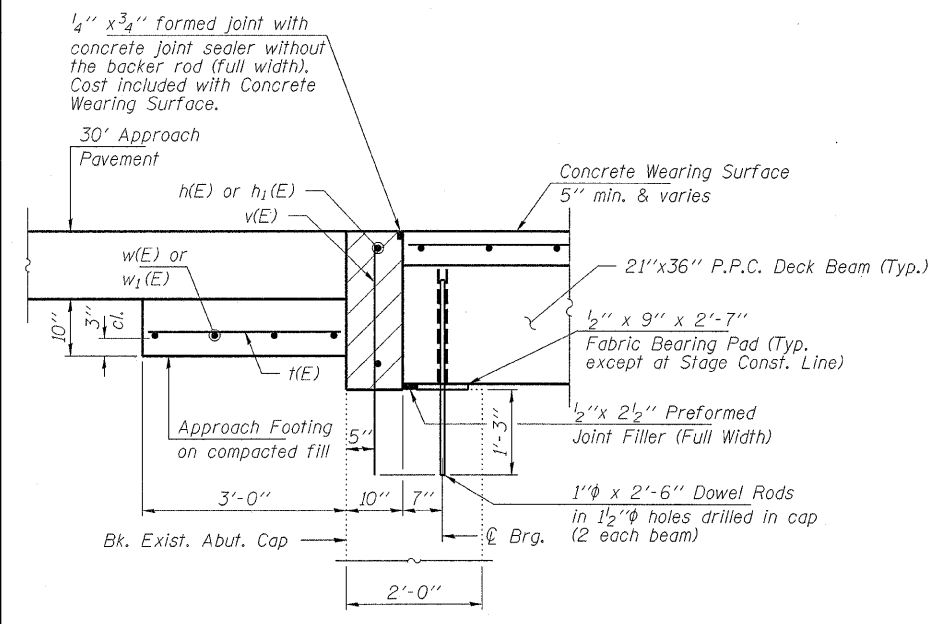
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of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

Anchor bolts for side retainers will be installed in holes drilled after members are in place.

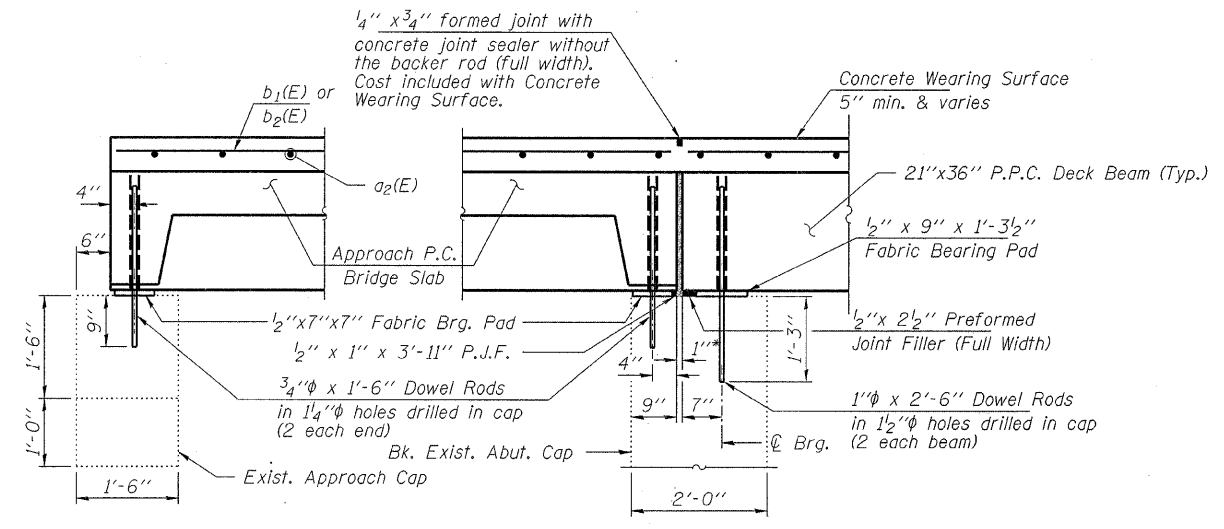
See Sheets 13 & 14 of 16 for Approach Footing and Abutment Hatch-Block reinforcement details.

Cost of Concrete in hatched areas included with Concrete Wearing Surface, 5".

All horizontal substructure dimensions shown at Rt. angles to substructure element.



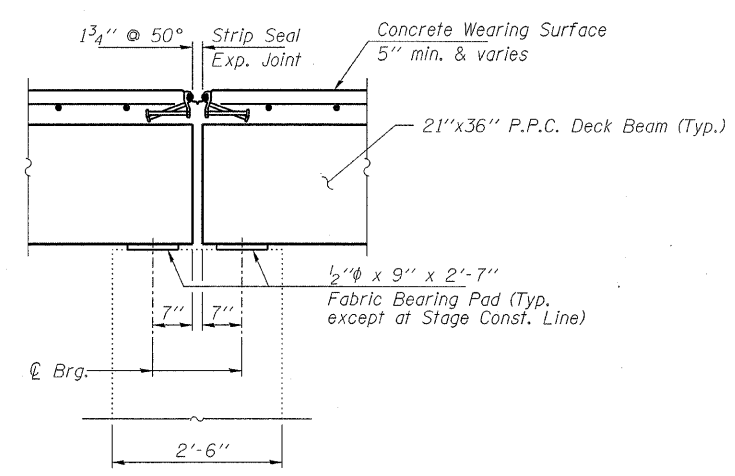
SECTION THRU ABUTMENT @ C RDWY.



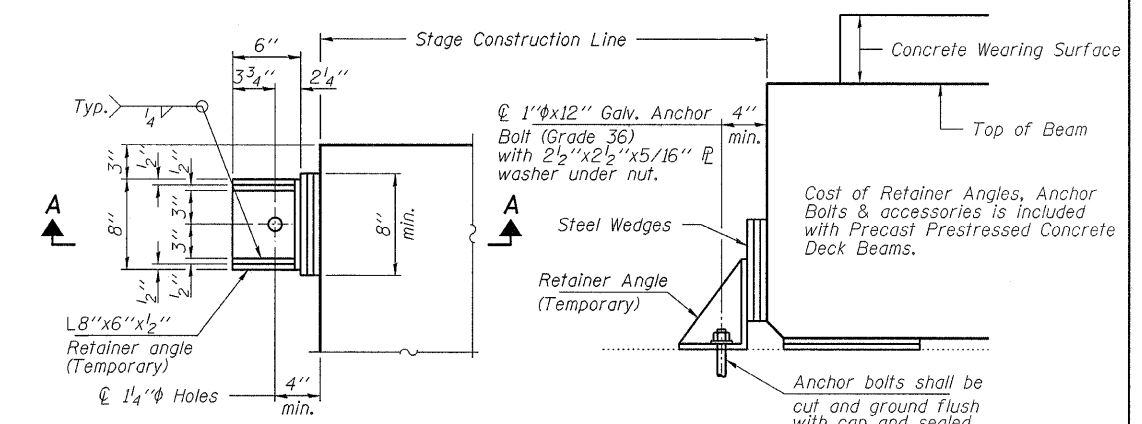
SECTION THRU ABUTMENT @ OUTSIDE BEAMS

SECTION THRU APPROACH CAP

* 1" joint between beams shall be filled w/non-shrink grout, 1" dimension may vary to accommodate variation in beam lengths.



SECTION THRU PIER @ C RDWY.



PLAN
SECTION A-A
BEAM RETAINER DETAILS
AT STAGE CONSTRUCTION LINE
(2 Required)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-08-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

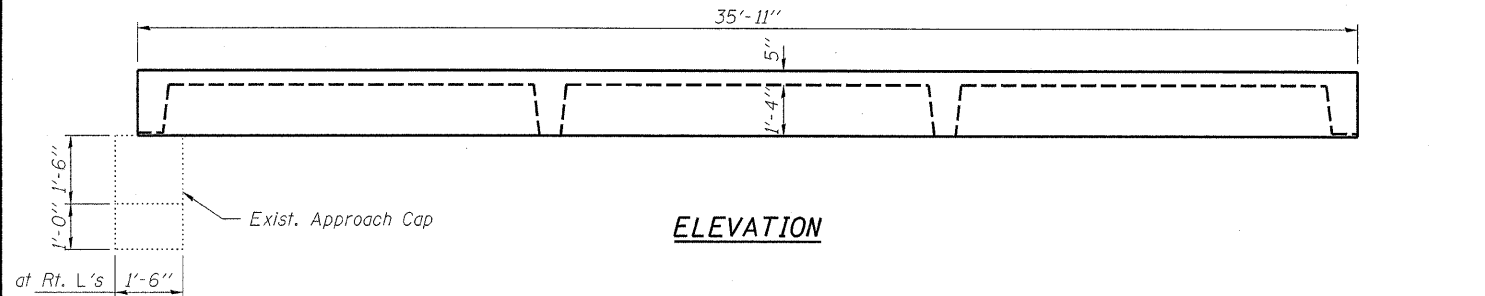
SUPERSTRUCTURE DETAILS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

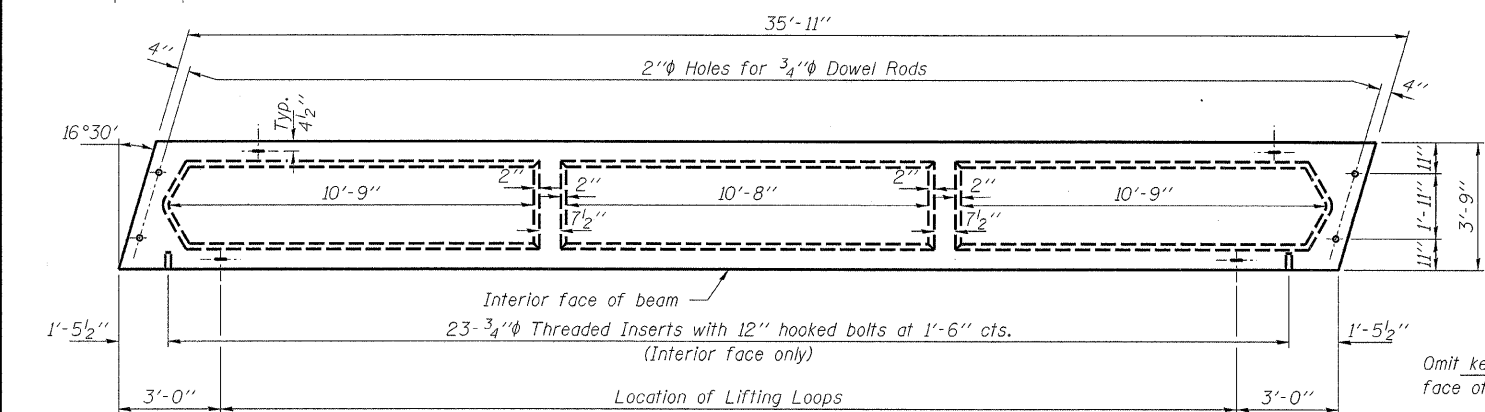
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
F.A.P. 782	115BR-1	Hardin	83	28	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

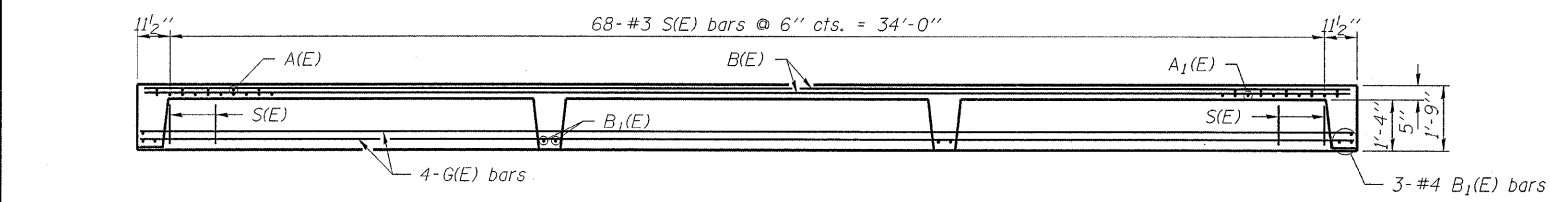
Contract #78026



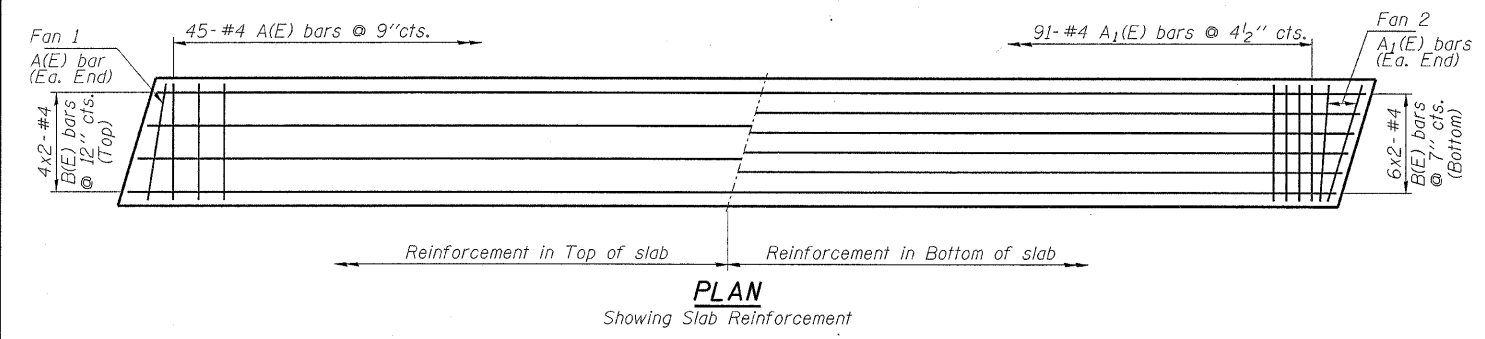
ELEVATION



TYPICAL PLAN OF APPROACH BEAM



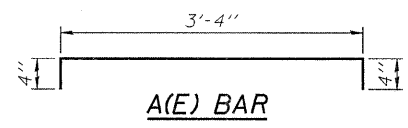
LONGITUDINAL SECTION



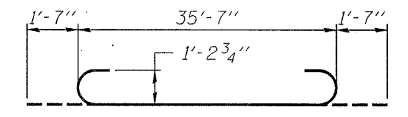
PLAN
Showing Slab Reinforcement

MATERIAL - FOR ONE BEAM

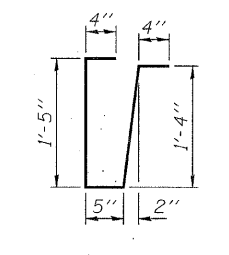
BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	47	#4	4'-0"	[U-shape]
A1(E)	95	#4	3'-3"	[Straight]
B(E)	20	#4	18'-8"	[Straight]
B1(E)	10	#4	3'-6"	[Straight]
G(E)	8	#11	38'-9"	[U-shape]
S(E)	138	#3	3'-10"	[L-shape]



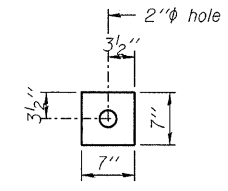
A(E) BAR



G(E) BAR

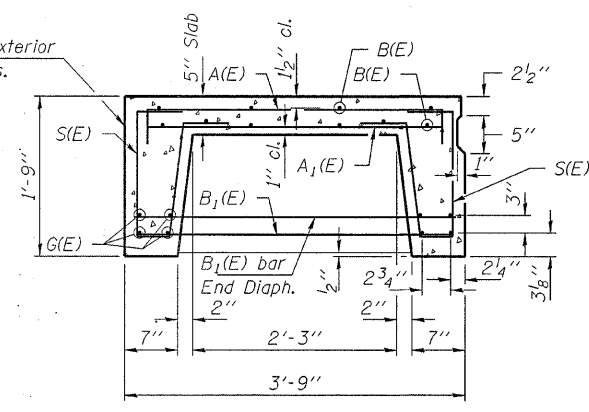


S(E) BAR



BEARING PAD

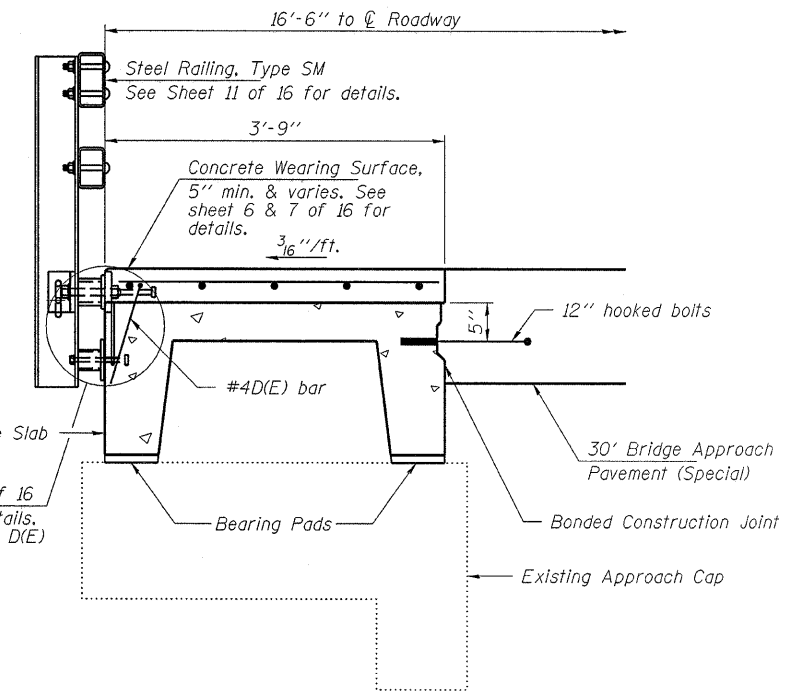
Omit key on exterior face of beams.



SECTION THRU BEAM

NOTES

Lifting loops shall be 2- 1/2 " φ-270 ksi strands, as shown.
Reinforcing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8 " fabric adjusting shims of the dimensions of the Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the slabs. Cleaning shall be done by sandblasting the keyway areas between top of the slab and the bottom edge of the key.
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs.
Required Strength, f'c, shall be 4,500 p.s.i.
See Sheet 2 of 16 for location of rail connectors and additional notes.
Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor rods and 3/4 " φ hooked bolts is included in contract Unit Price for "Precast Concrete Bridge Slab."
The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beams after Deck Beams are in final position.
Bars indicated thus 4x2-#4 etc. indicates 4 lines of bars with 2 lengths per line.
The beam detailed on this sheet is for use in the Northwest and Southeast corners of the bridge as the PC Concrete Bridge Slabs.

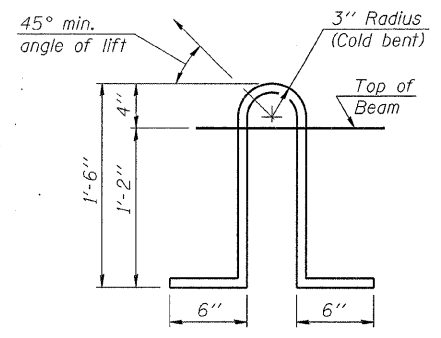


PROPOSED CROSS SECTION

See sheet 2, 7 & 11 of 16 for rail post insert details. See Sheet 7 of 16 for D(E) bar detail.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Concrete Bridge Slab	Sq. Ft.	270



LIFTING LOOP DETAIL

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

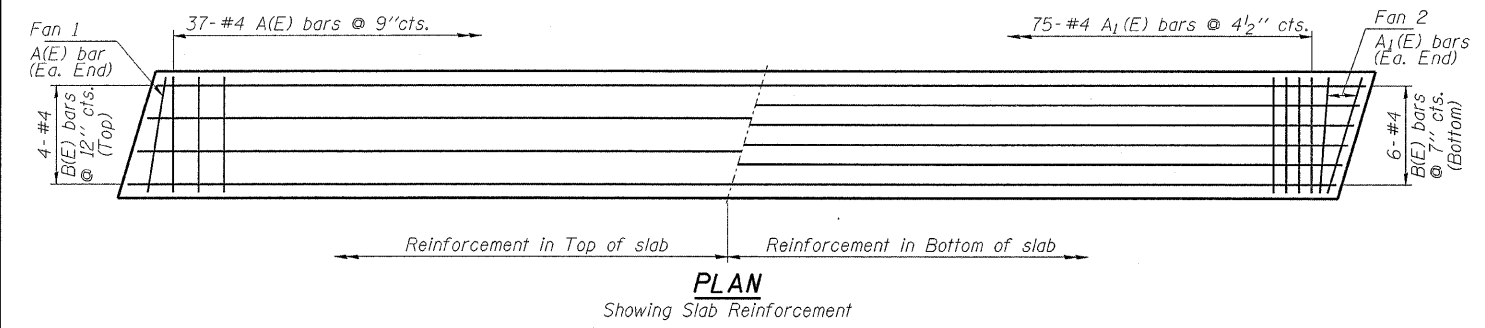
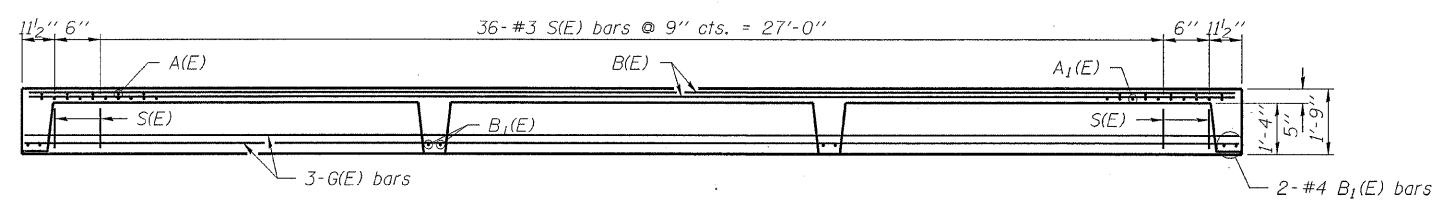
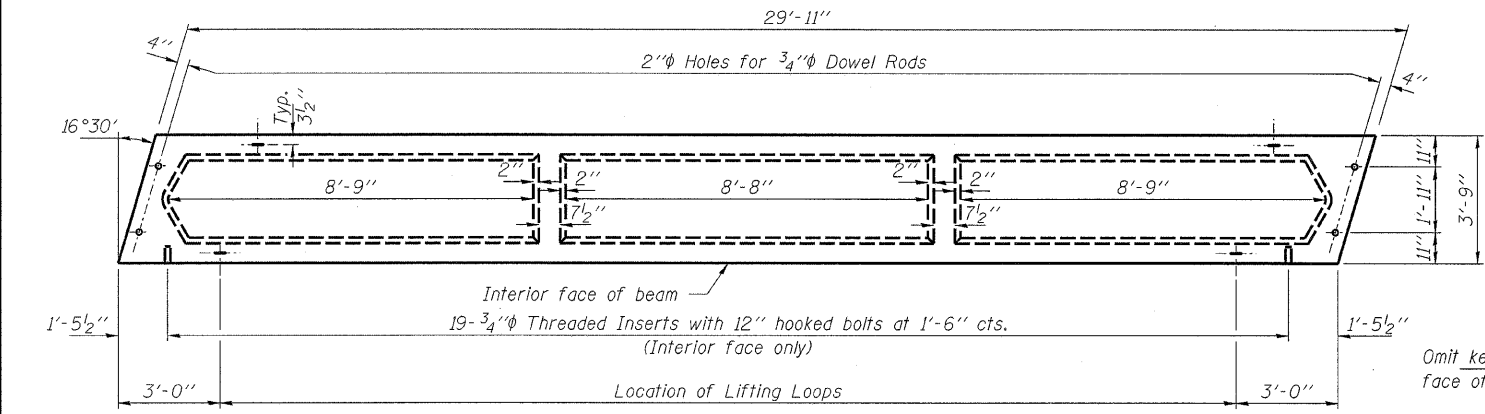
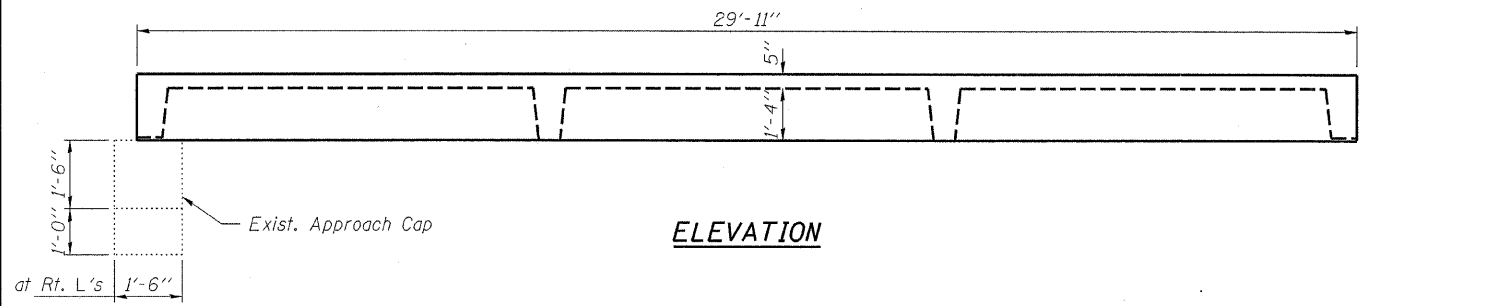
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

APPROACH DETAILS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927-65
STRUCTURE NO. 035-0001

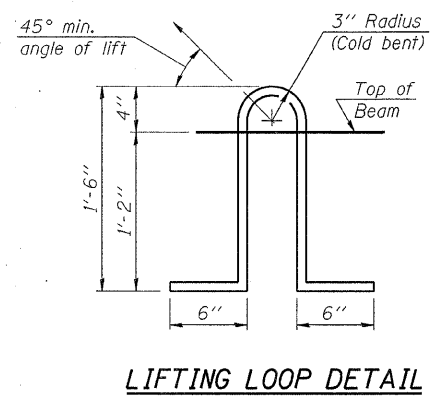
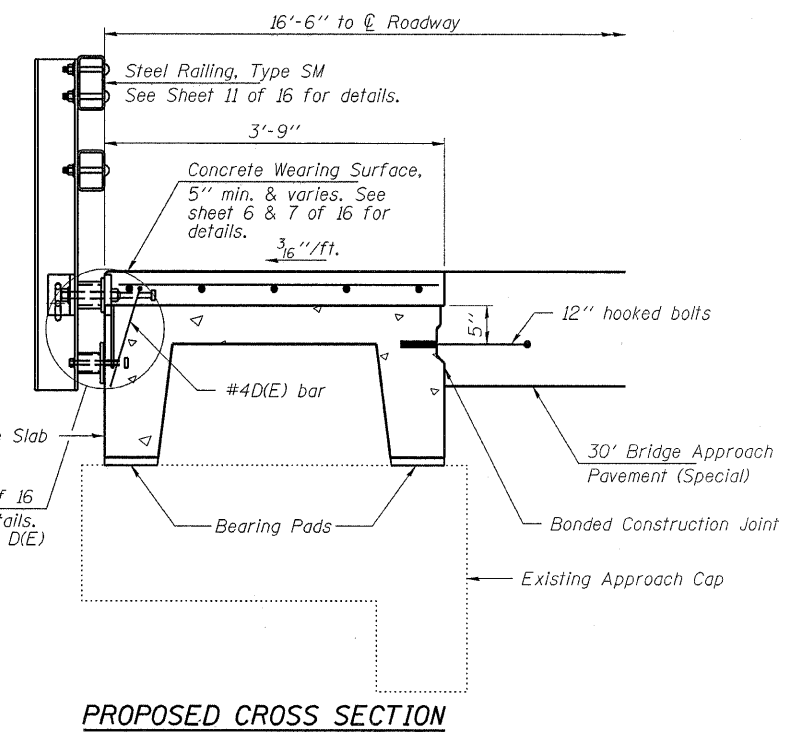
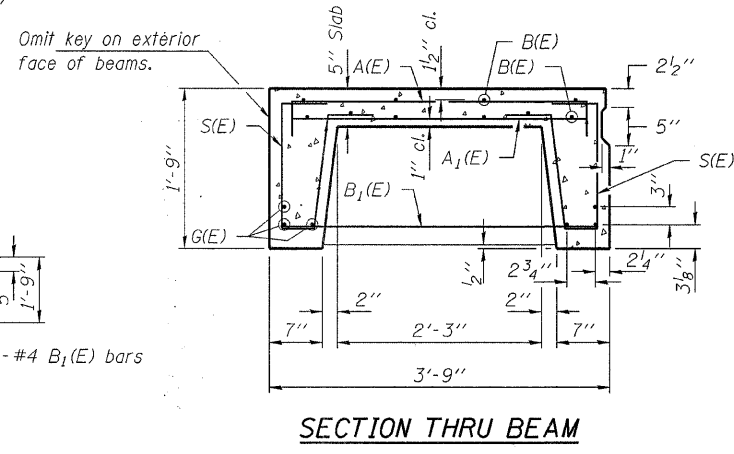
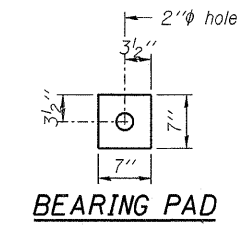
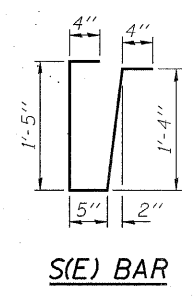
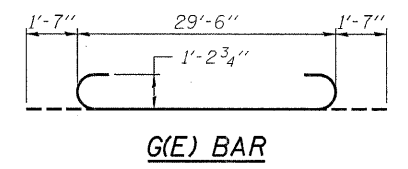
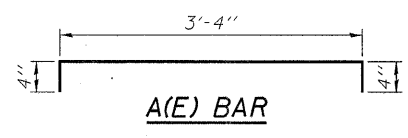
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 16 SHEETS
F.A.P. 782	115BR-1	Hardin	83	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			
Contract #78026					



MATERIAL - FOR ONE BEAM

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	39	#4	4'-0"	[]
A ₁ (E)	79	#4	3'-3"	[]
B(E)	10	#4	29'-6"	[]
B ₁ (E)	8	#4	3'-6"	[]
G(E)	6	#11	32'-8"	[]
S(E)	78	#3	3'-10"	[]



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Concrete Bridge Slab	Sq. Ft.	225

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

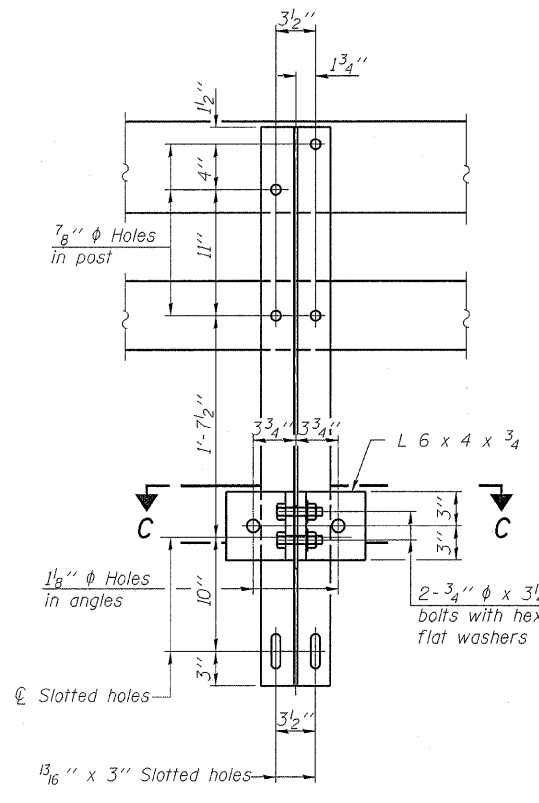
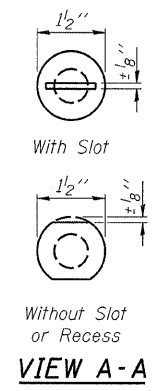
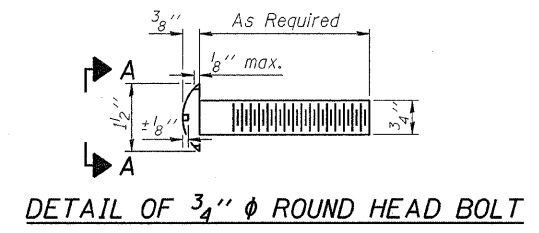
APPROACH DETAILS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

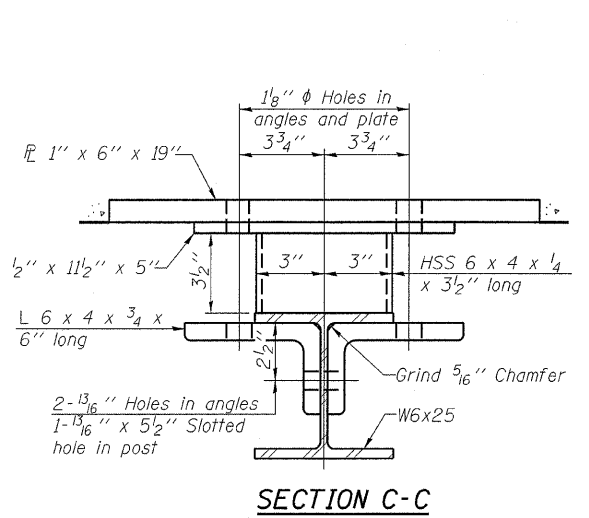
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	PERCENT COMPLETE	SHEET NO.	SHEET NO. 11
F.A.P. 782	115BR-1	Hardin	83	30	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

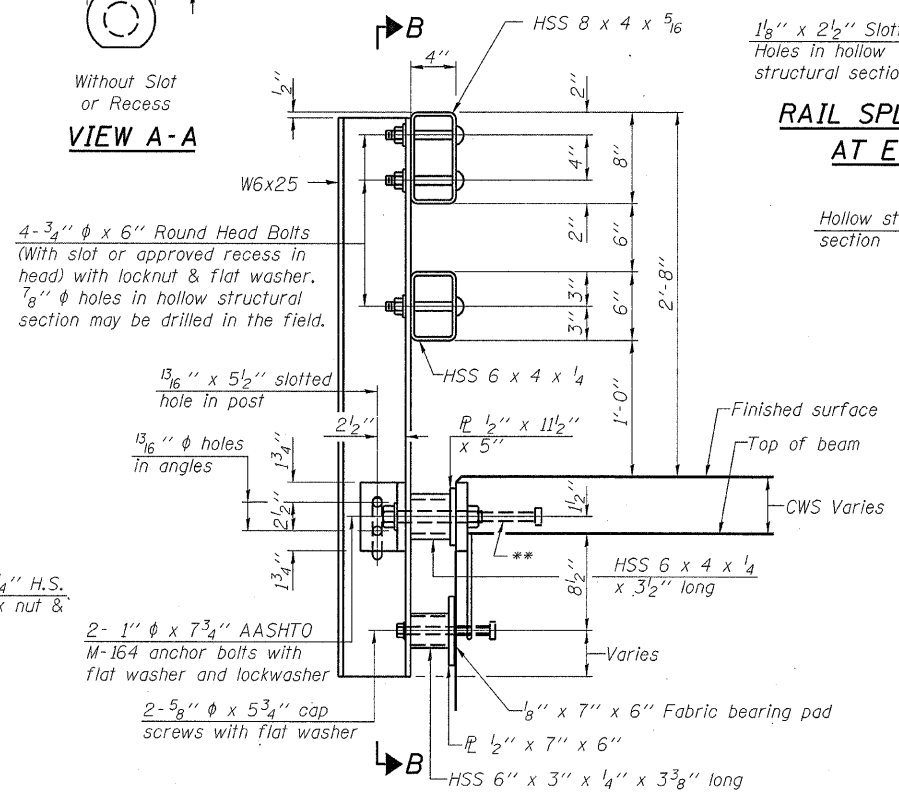
Contract #78026



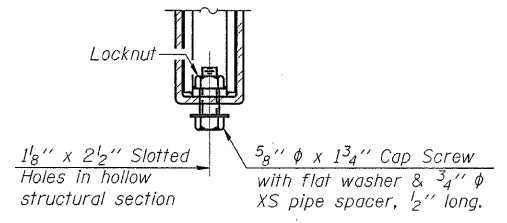
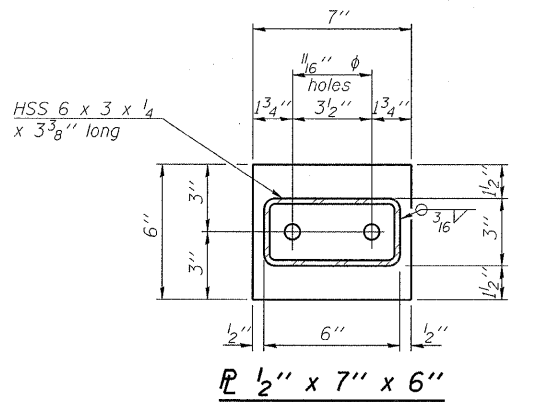
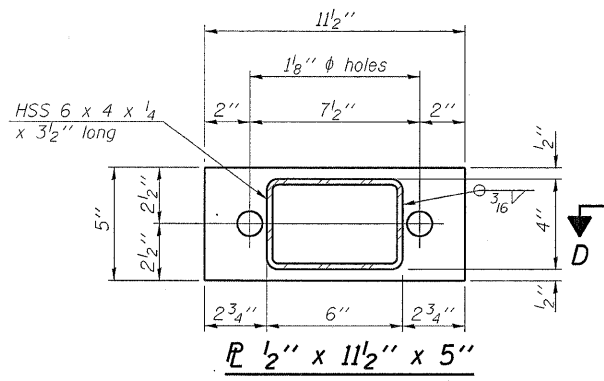
SECTION B-B



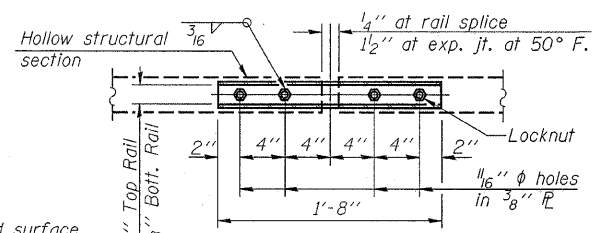
SECTION C-C



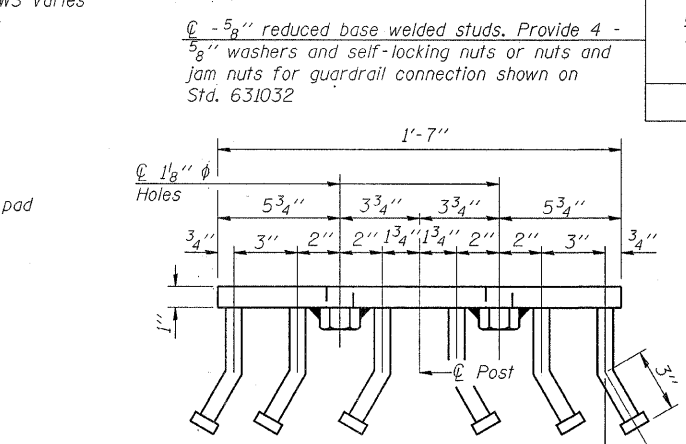
SECTION AT RAIL POST



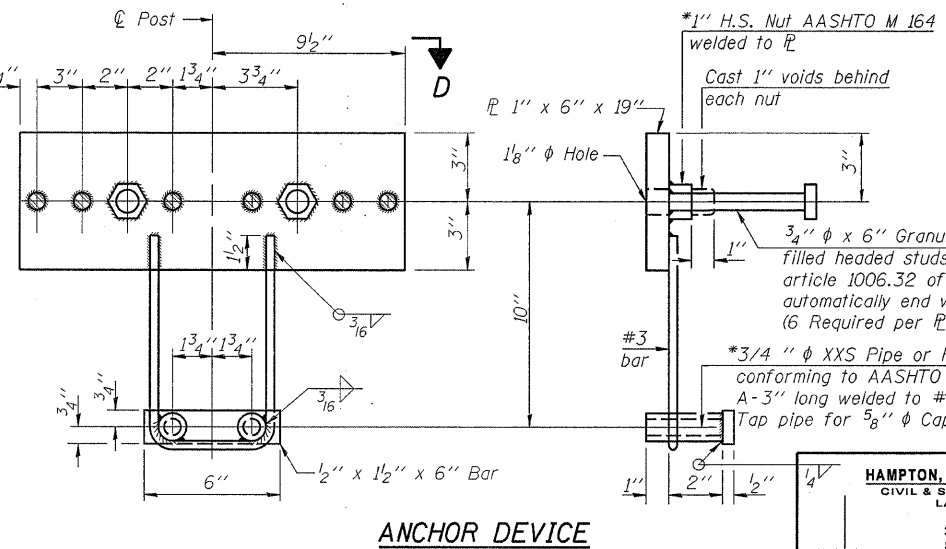
RAIL SPLICE CONNECTION
AT EXPANSION JT.



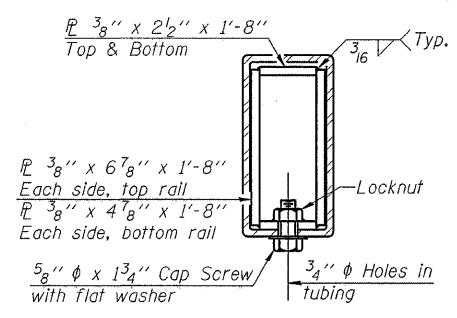
PLAN-BOTT. SPLICE R
TYPICAL



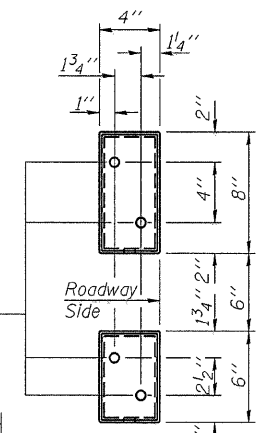
VIEW D-D



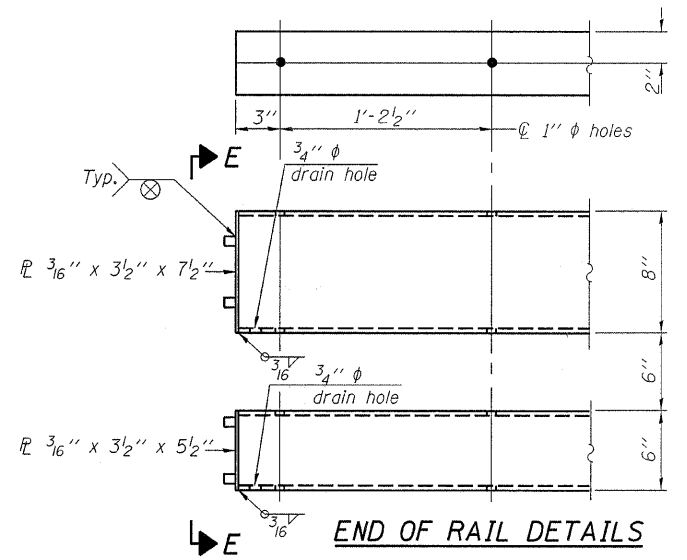
ANCHOR DEVICE



SECTION AT
RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	291

R-34CWS

9-3-07 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

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

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

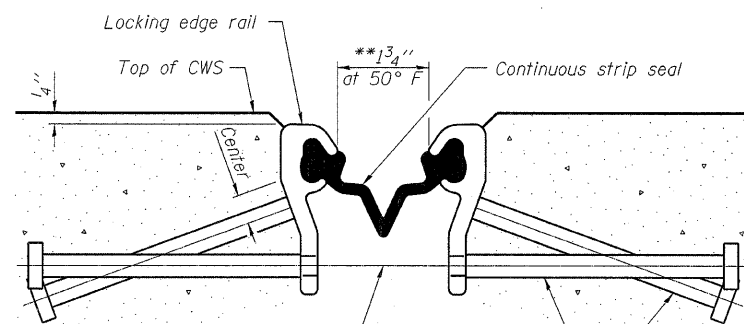
**STEEL RAILING, TYPE SM
WITH CONCRETE WEARING SURFACE**
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
F.A.P. 782	115BR-1	Hardin	83	31	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #78026

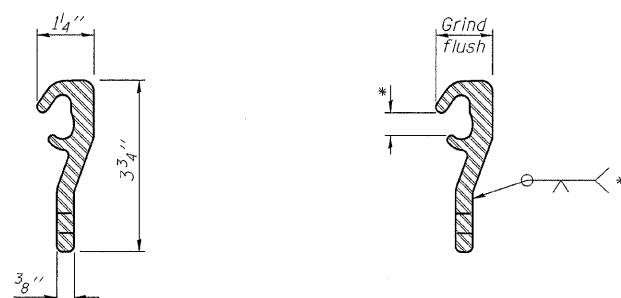
- * Omit weld at seal opening.
- ** When joint is fixed, dimension is set at 1 1/2".



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

Place 1/2" ϕ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**



LOCKING EDGE RAIL

LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The cost of Structural Steel shall be included in the item Preformed Joint Strip Seal.

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Strip Seal	Foot	35

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

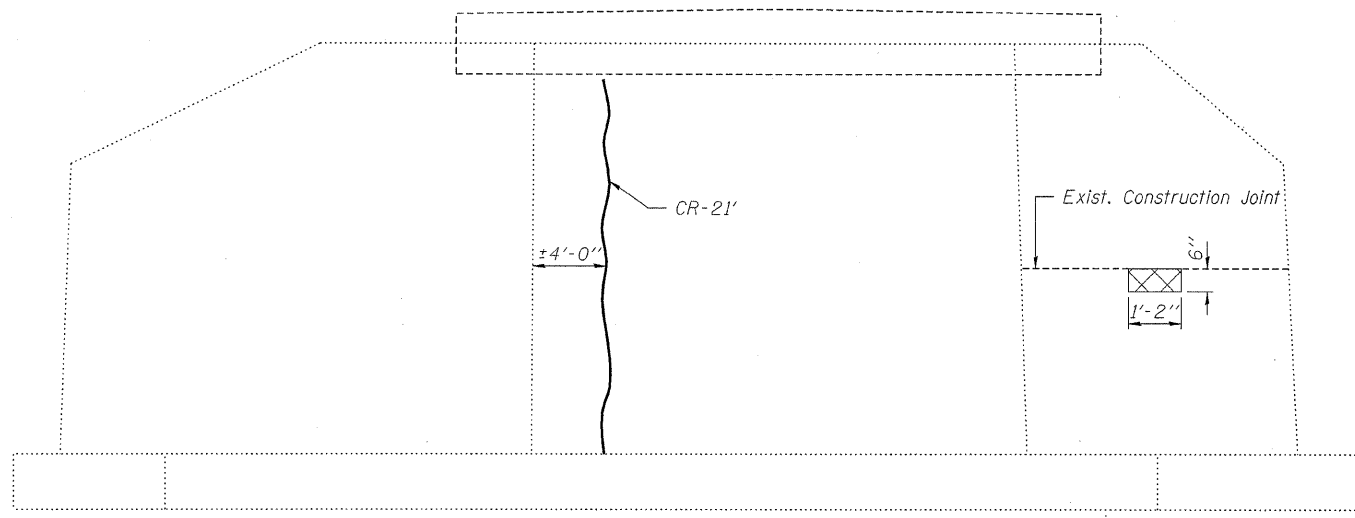
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXPANSION JOINT
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 16 SHEETS
F.A.P. 782	115BR-1	Hardin	83	32	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026



ELEVATION
(Looking North)



NOTES

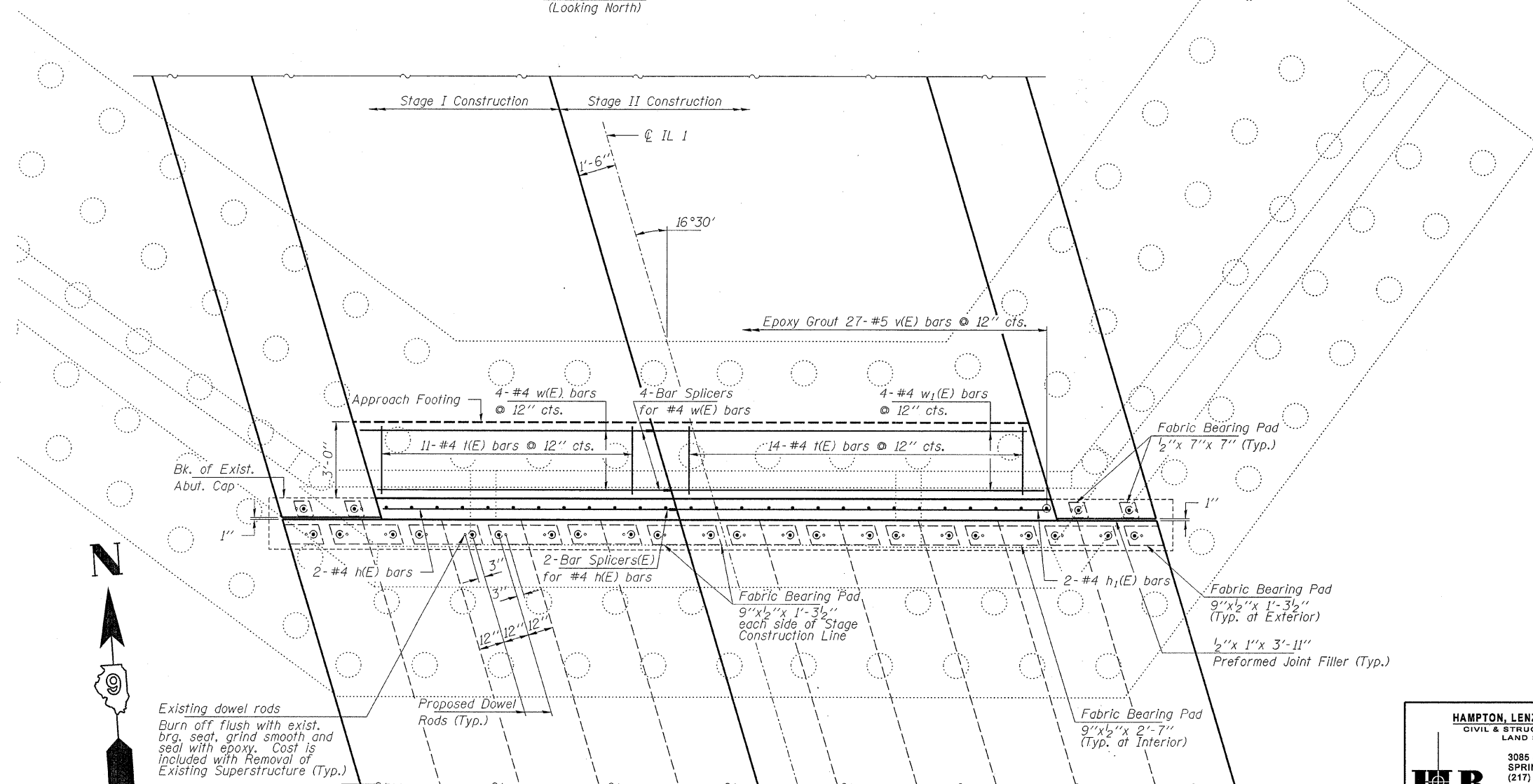
See Sheet 8 of 16 for Sections Thru Abutment views and additional reinforcement details for abutment Hatch-Block and Approach Footing.

The existing abutment bearing seat is to be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired if deemed necessary using Structural Repair of Concrete (Depth equal to or less than 5"). Concrete Sealer shall be applied to Concrete Repair areas. Cost included in Concrete Repair item.

Abutment Structural Repair of Concrete areas and Crack Repair lengths are estimated from a 10/24/2007 inspection.

REPAIR LEGEND:

-  Requires Structural Repair of Concrete (Depth Equal to or less than 5")
-  Requires Epoxy Crack Injection



PLAN

BILL OF MATERIAL - NORTH ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE	
h(E)	2	#4	11'-6"	—	
h ₁ (E)	2	#4	14'-8"	—	
t(E)	25	#4	2'-9"	—	
v(E)	27	#5	3'-4"	—	
w(E)	4	#4	11'-6"	—	
w ₁ (E)	4	#4	14'-8"	—	
Concrete Structures				Cu. Yd.	2.5
Reinforcement Bars, Epoxy Coated				Pound	240
Epoxy Crack Injection				Foot	21
Structural Repair of Concrete (Depth equal to or less than 5")				Sq. Ft.	1

Existing dowel rods
Burn off flush with exist. brg. seat, grind smooth and seal with epoxy. Cost is included with Removal of Existing Superstructure (Typ.)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

NORTH ABUTMENT
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A.P. 782	115BR-1	Hardin	83	33	16 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #78026


NOTES


See Sheet 8 of 16 for Sections Thru Abutment views and additional reinforcement details for abutment Hatch-Block and Approach Footing.

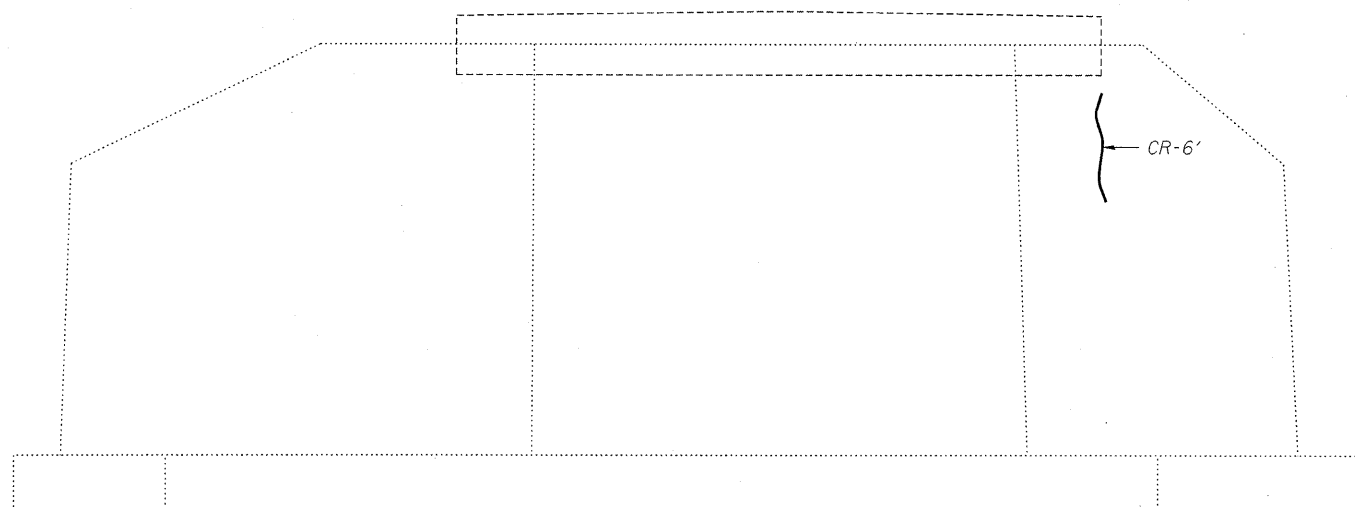
The existing abutment bearing seat is to be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired if deemed necessary using Structural Repair of Concrete (Depth equal to or less than 5"). Concrete Sealer shall be applied to Concrete Repair areas. Cost included in Concrete Repair item.

Abutment Structural Repair of Concrete areas and Crack Repair lengths are estimated from a 10/24/2007 inspection.

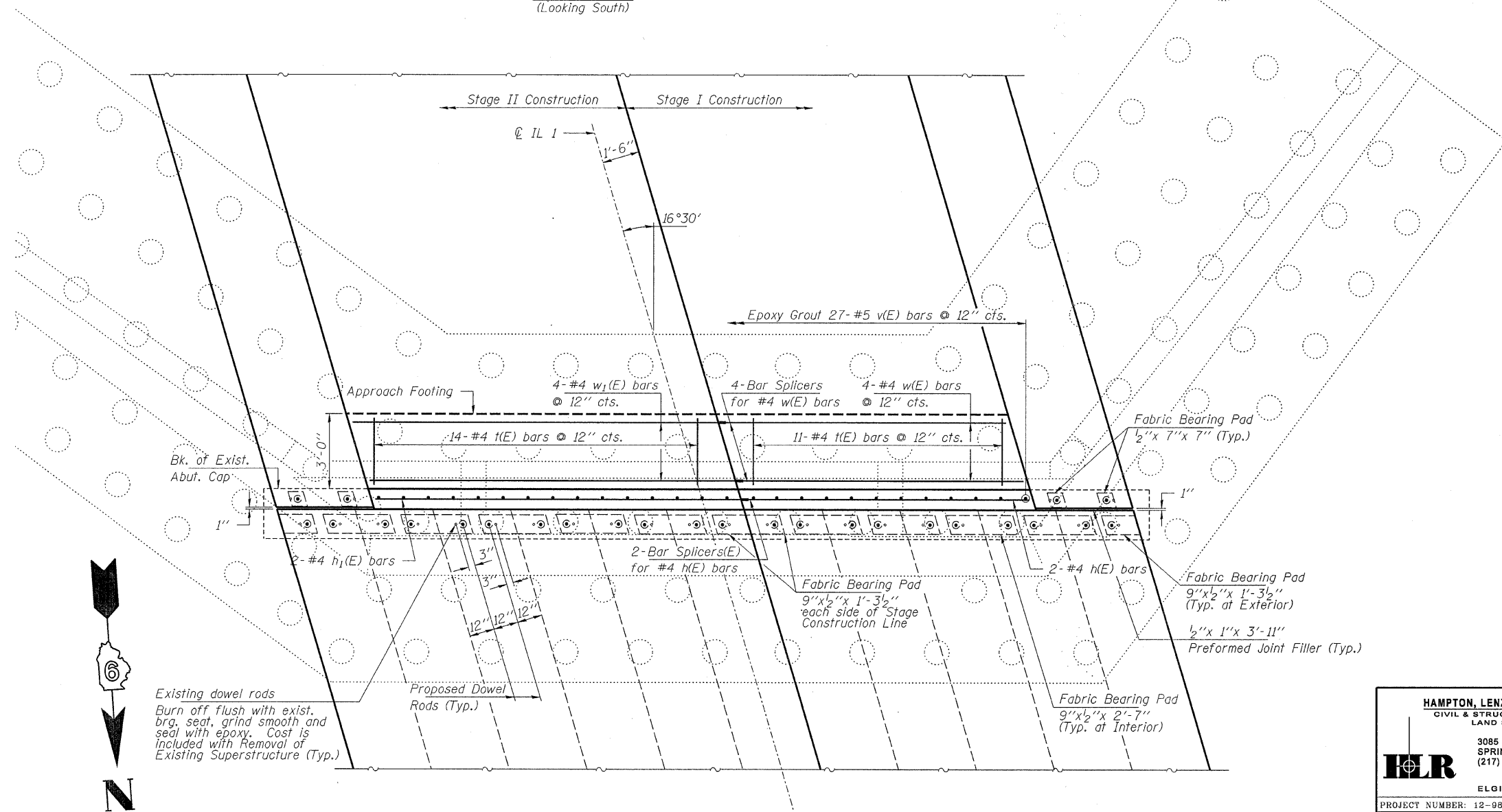
REPAIR LEGEND:

 Requires Structural Repair of Concrete (Depth Equal to or less than 5")

 Requires Epoxy Crack Injection



ELEVATION
(Looking South)



BILL OF MATERIAL - SOUTH ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	2	#4	11'-6"	—
h ₁ (E)	2	#4	14'-8"	—
t(E)	25	#4	2'-9"	—
v(E)	27	#5	3'-4"	—
w(E)	4	#4	11'-6"	—
w ₁ (E)	4	#4	14'-8"	—
Concrete Structures			Cu. Yd.	2.5
Reinforcement Bars, Epoxy Coated			Pound	240
Epoxy Crack Injection			Foot	6



Existing dowel rods
Burn off flush with exist. brg. seat, grind smooth and seal with epoxy. Cost is included with Removal of Existing Superstructure (Typ.)

Proposed Dowel Rods (Typ.)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-08-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

SOUTH ABUTMENT
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

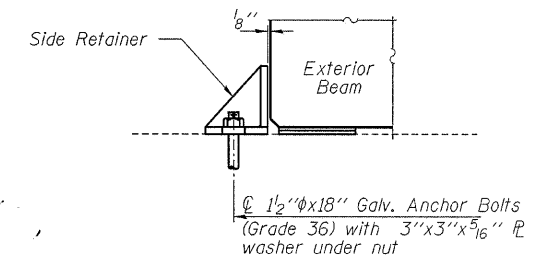
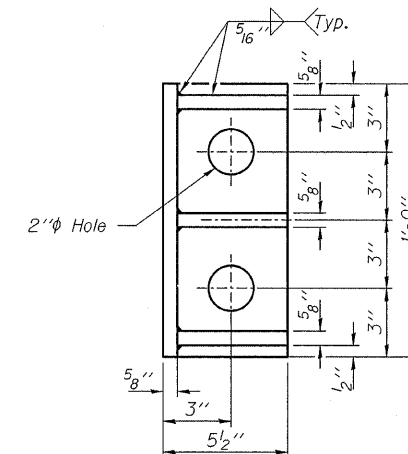
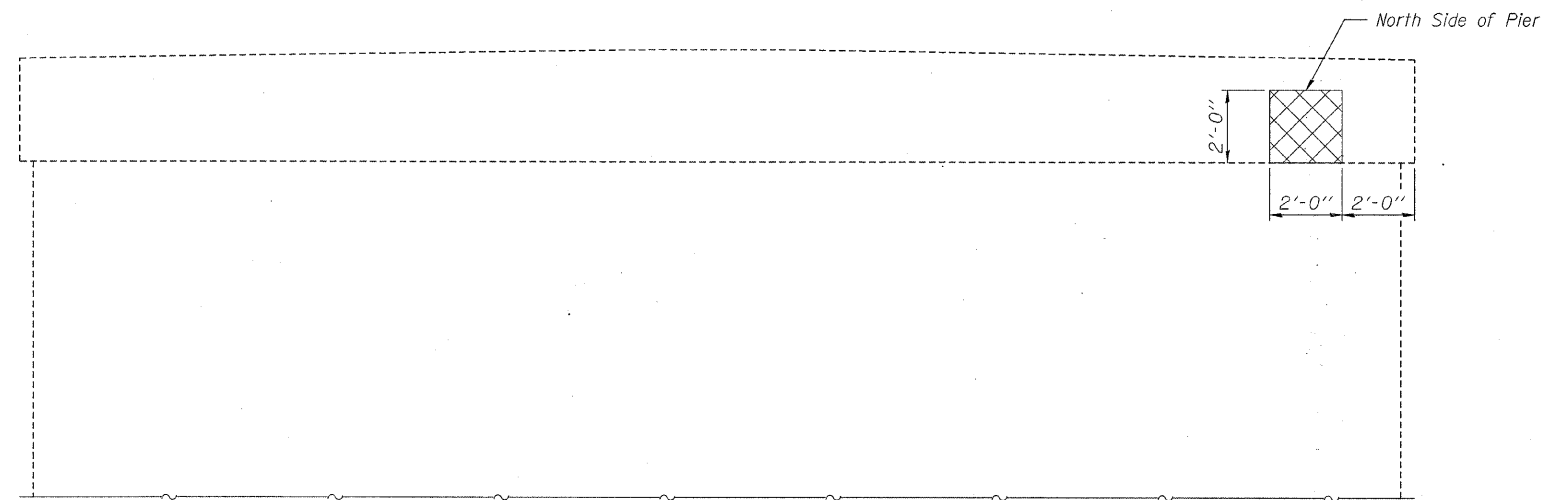
ROUTE NO. 782	SECTION 115BR-1	COUNTY Hardin	TOTAL SHEETS 83	SHEET NO. 34	SHEET NO. 15 16 SHEETS
F.A.P.		ILLINOIS		FED. AID PROJECT-	
FED. ROAD DIST. NO. 7		Contract #78026			

NOTES

See Sheet 8 of 16 for Sections Thru Pier views and additional details.
The existing pier bearing seat is to be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired if deemed necessary using Structural Repair of Concrete (Depth equal to or less than 5"). Concrete Sealer shall be applied to Concrete Repair areas. Cost included in Concrete Repair item.
Pier Structural Repair of Concrete areas and Crack Repair lengths are estimated from a 10/24/2007 inspection.

REPAIR LEGEND:

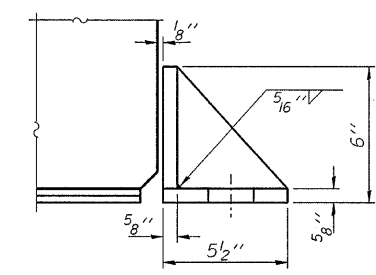
-  Requires Structural Repair of Concrete (Depth Equal to or less than 5")
-  Requires Epoxy Crack Injection



EXTERIOR BEAM RETAINER DETAILS
(4 Required)

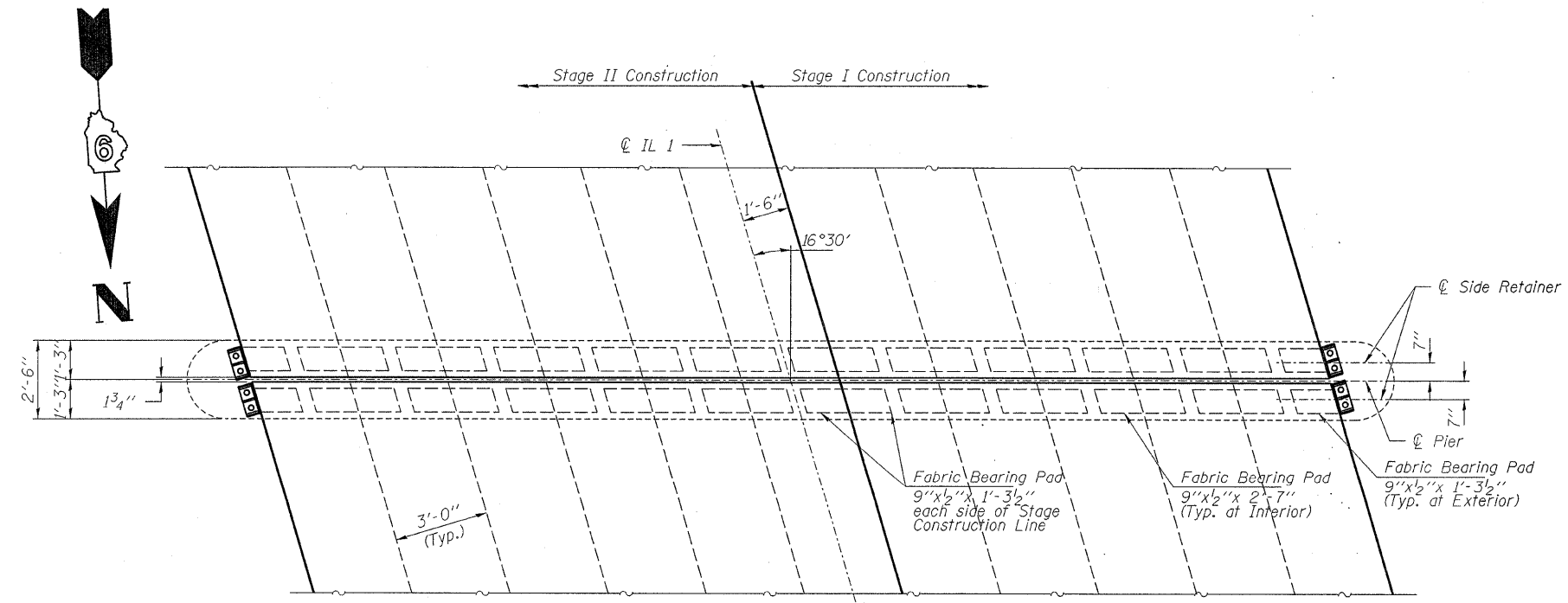
Cost of Side Retainer, Anchor Bolts & accessories are included with Precast Prestressed Concrete Deck Beams.
The side retainer shall be galvanized after shop fabrication according to AASHTO M111.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36 ksi).

Anchor bolts for side retainers may be installed in holes drilled after members are in place.
Fill 1/8" gap with shim PL to provide temporary lateral support until shear keys have been grouted and concrete wearing surface as been placed.



BILL OF MATERIAL - PIER

Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.	4
--	---------	---



ELEVATION

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

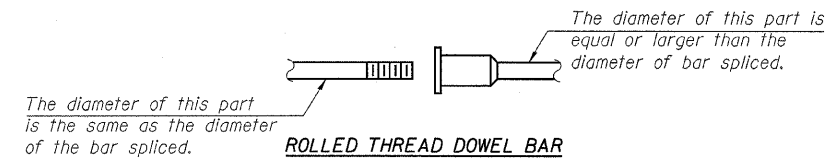
PIER

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

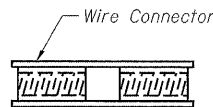
Contract #78026



ROLLED THREAD DOWEL BAR



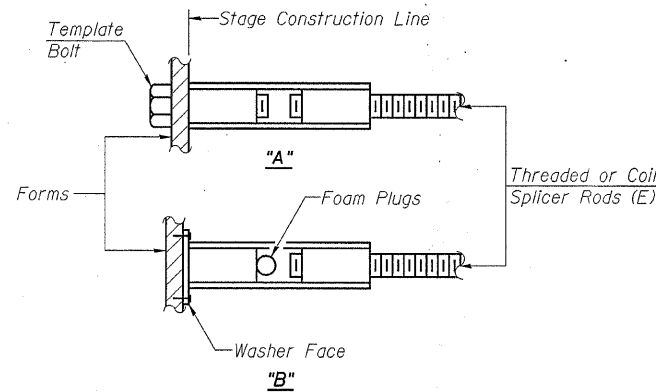
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

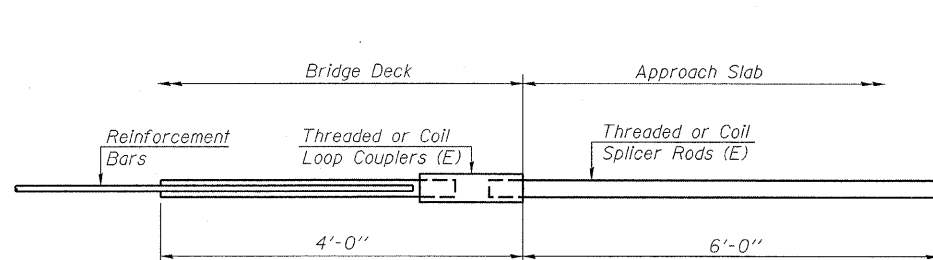
"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

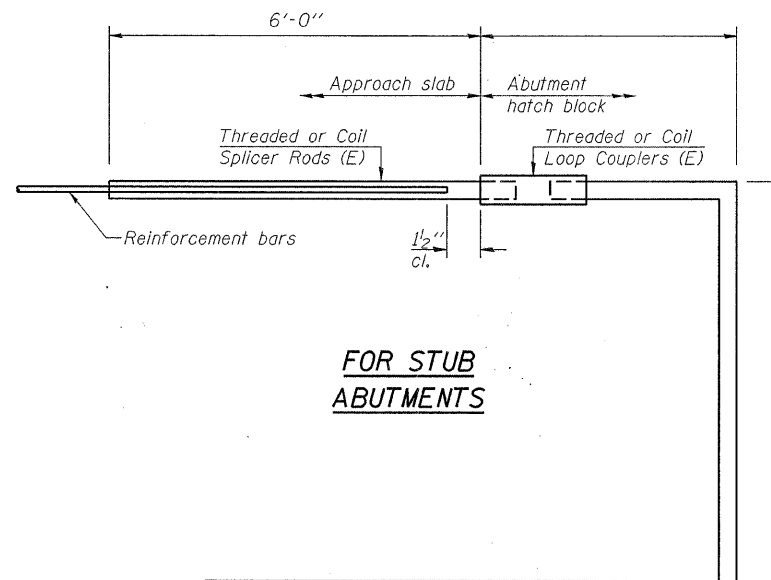
- ① Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



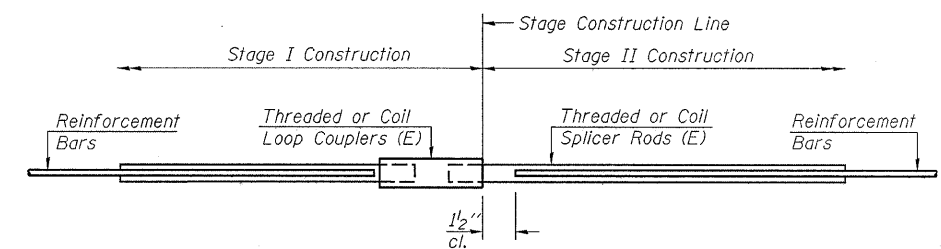
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#4	80	Conc. Wearing Surface
#4	8	Approach Footings
#4	4	Abutment Hatch Blocks

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

BAR SPLICER ASSEMBLY DETAILS

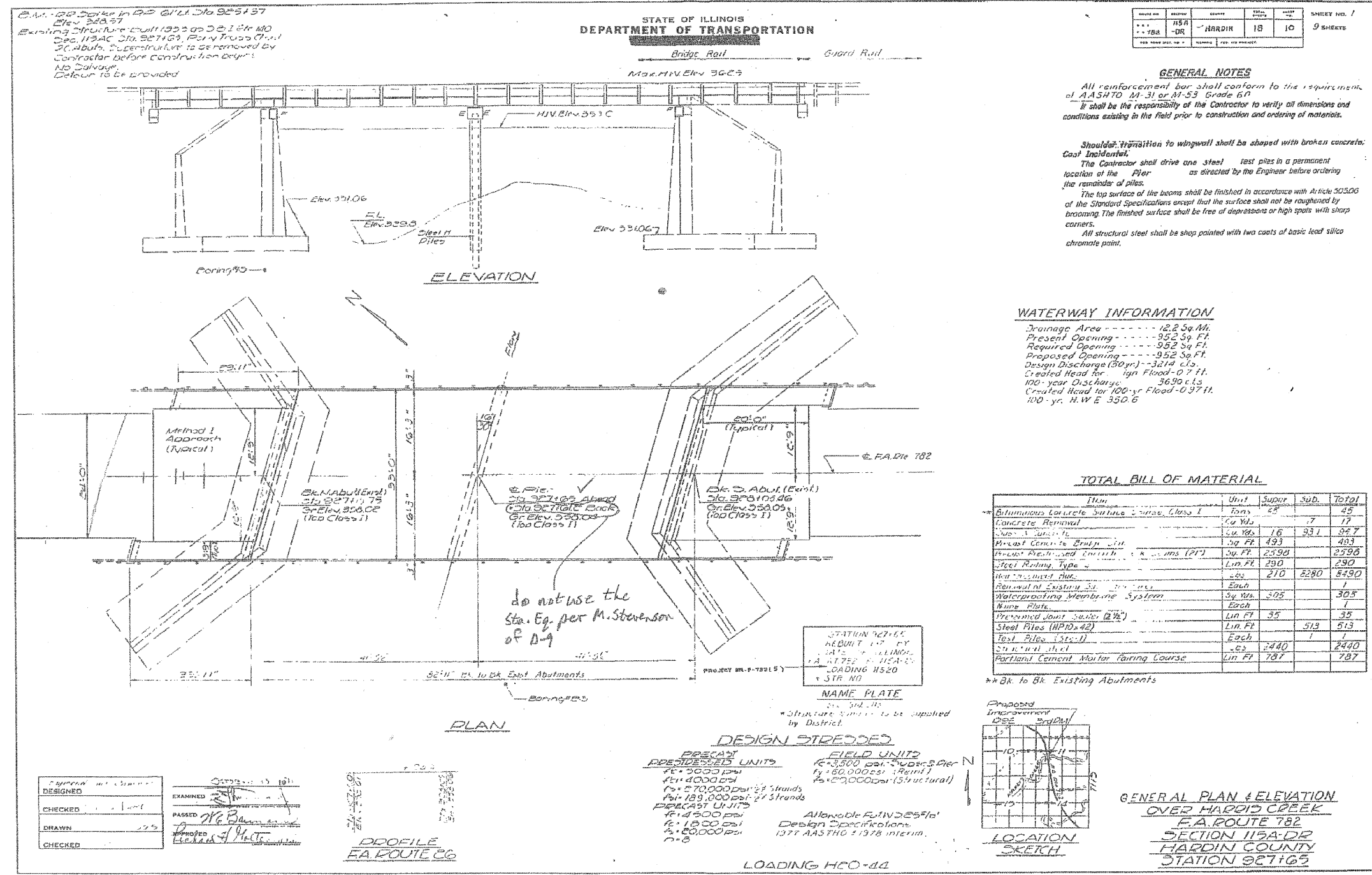
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	36
FED. ROAD DIST. NO. 7	ILL. PROJ. NO.	FED. AID PROJECT		

SHEET NO. 1
11 SHEETS

Contract #78026



HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #78026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELEVATION

SECTION THRU PRECAST UNIT

PARTIAL PLAN OF APPROACH

SECTION A-A

LONGITUDINAL SECTION

PLAN-APPR. CAP

SLAB REINFORCEMENT

FABRIC BRG. PAD

LIFTING LOOP DETAIL

BAR LIST-ONE UNIT

Reinforcement to be cast into slab

Bar	No.	Size	Length (feet)
A	97	#4	3'-3"
A ₁	49	#4	4'-0"
B	20	#4	18'-4"
B ₁	4	#4	3'-6"
B ₂	4	#4	3'-7"
G	8	#11	35'-7"
S	138	#3	3'-10"

NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x19 class wire raps with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Notes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab used bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	269
Class X Concrete	Cu Yds.	0.3

STRESSES

$f'_c = 4,500$ psi.
 $f'_t = 1,800$ psi.
 $f_s = 20,000$ psi.
 $n = 8$

LOADING HS-20

NORTH WEST & SOUTH EAST APPROACH DETAILS
 F.A. RT. 782 SEC. 115A-DR
 HARDIN COUNTY
 STATION 927+65

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

OCT 13 1971

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3086 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

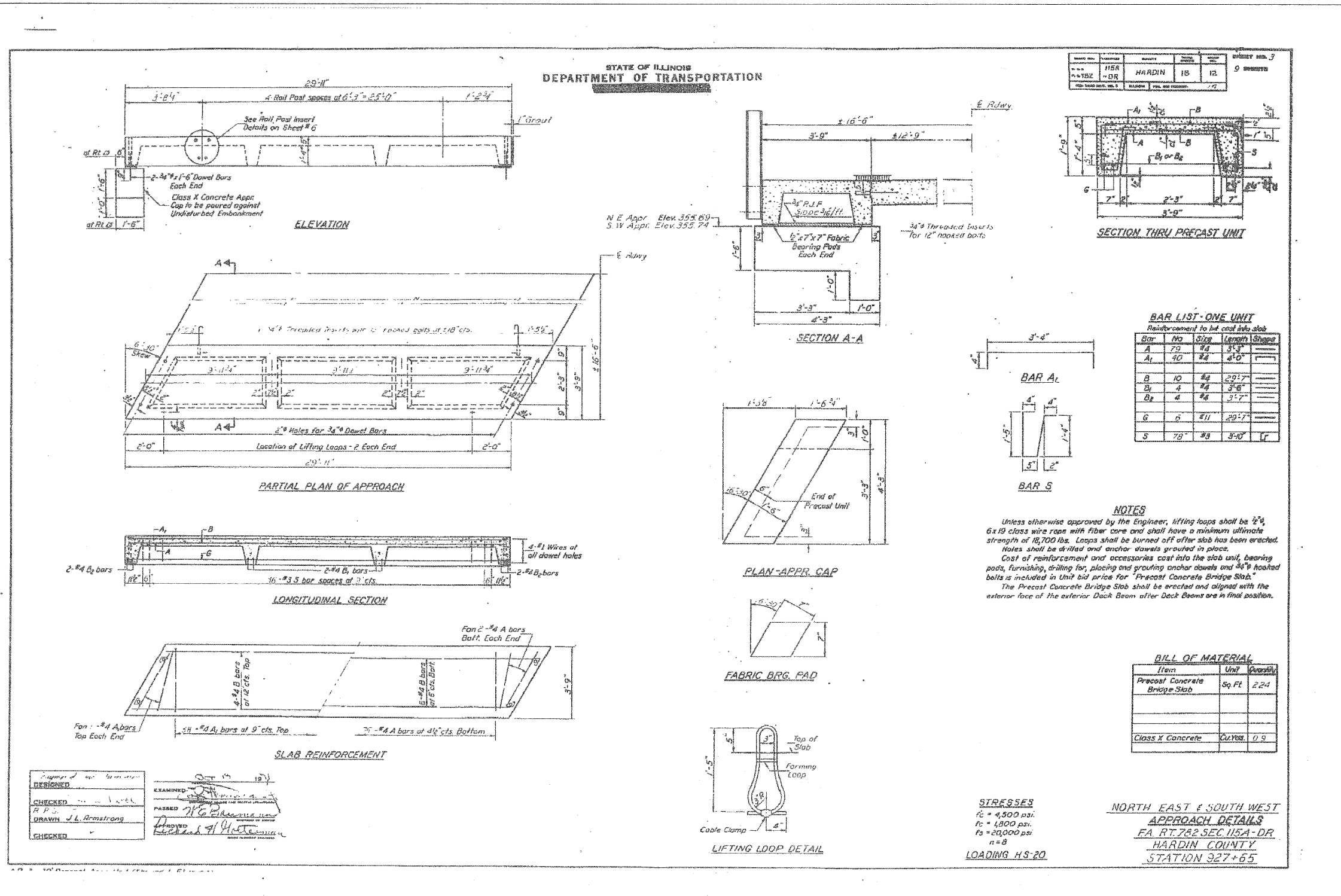
EXISTING STRUCTURE PLANS

IL. ROUTE 1 OVER HARRIS CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-1
 HARDIN COUNTY
 STATION 927+65
 STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83 38	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #78026



NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT
1	PRECAST CONCRETE BRIDGE SLAB	1	SQ. FT.	224
2	CLASS X CONCRETE	1	CU. YDS.	0.9

BAR LIST - ONE UNIT
Reinforcement to be cast into slab

Bar	No.	Size	Length	Shaping
A	70	#4	3'-3"	
A ₁	40	#4	4'-0"	
B	10	#4	29'-7"	
B ₁	4	#4	3'-6"	
B ₂	4	#4	3'-7"	
G	5	#11	29'-7"	
S	70	#8	3'-0"	LT

NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 2" x 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/8" hooked bolts is included in unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	224
Class X Concrete	Cu. Yds.	0.9

STRESSES
f_c = 4,500 psi.
f_s = 4,800 psi.
f_s = 20,000 psi.
n = 8
LOADING HS-20

NORTH EAST & SOUTH WEST
APPROACH DETAILS
FA RT 782 SEC 115A-DR
HARDIN COUNTY
STATION 927+65

DESIGNED: [Signature]
CHECKED: [Signature]
DRAWN: J.L. Armstrong
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

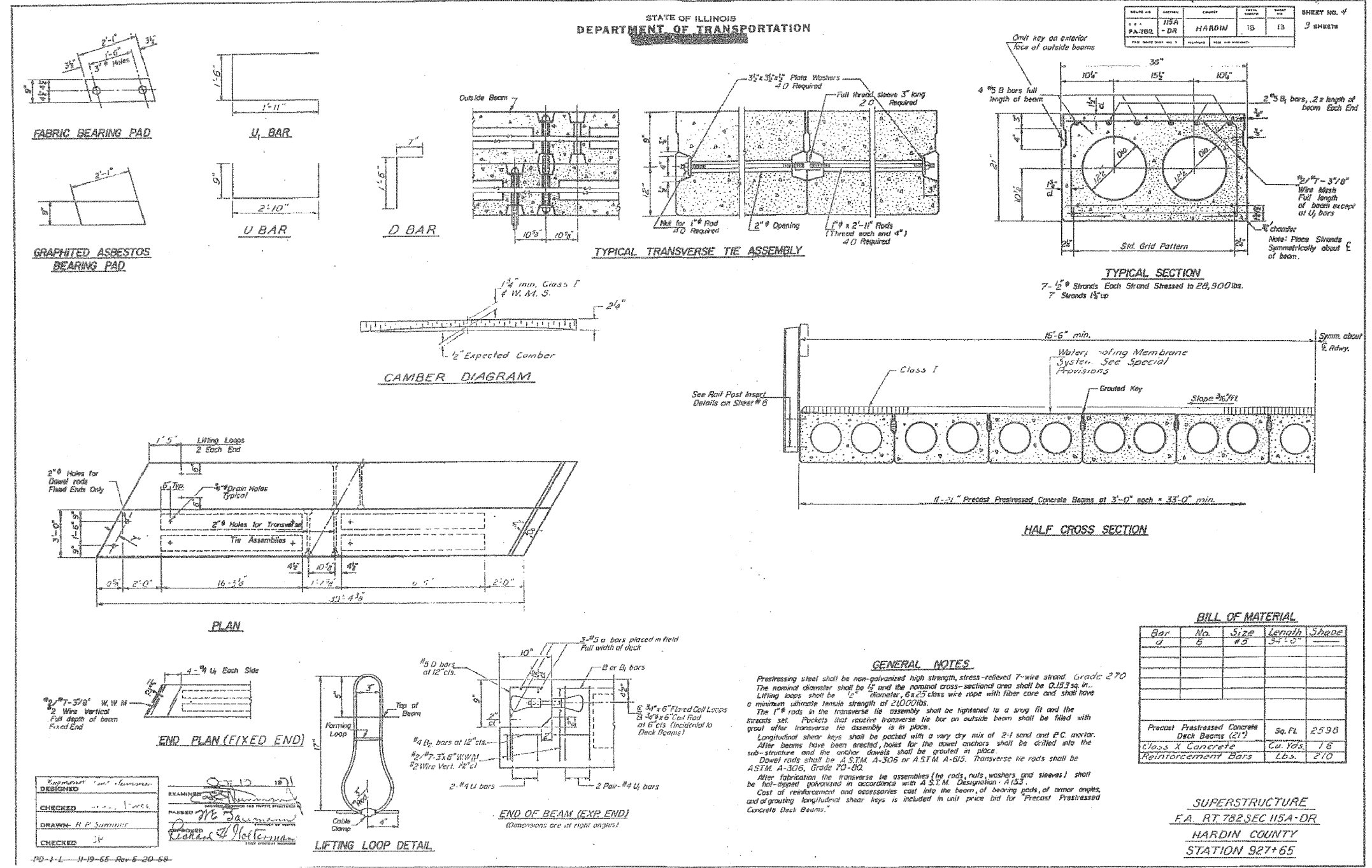
EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DIST.	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
11 SHEETS

Contract #78026



DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

PD-1-L 11-19-65 Rev. 6-20-68

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-1	COUNTY Hardin	SHEET NO. 83	SHEET NO. 40
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

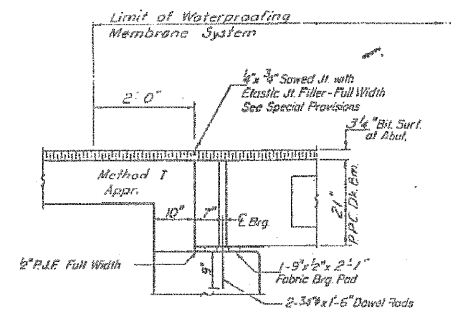
SHEET NO. 5
11 SHEETS

Contract #78026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

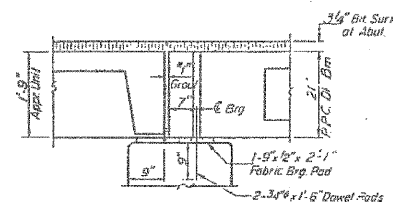
ROUTE NO. F.A.P. 782	SECTION 115A-DR	COUNTY HARDIN	SHEET NO. 18	SHEET NO. 14
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
9 SHEETS

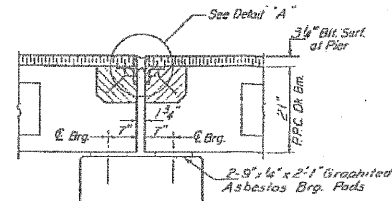


SECTION THRU ABUTS
AT E. ROWY.

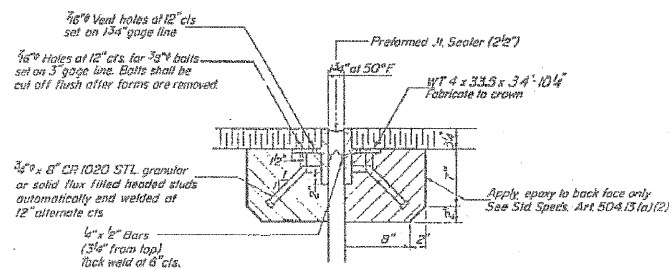
* Joint shall be packed with a very dry mix of 2:1 sand and P.C. mortar. This dimension may vary plus or minus to accommodate tolerance in beam lengths.



SECTION THRU ABUTS
AT OUTSIDE BEAM

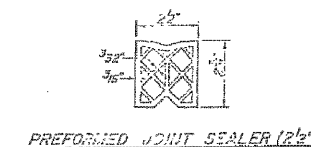


SECTION THRU PIER



DETAIL "A"

NOTE: Dimensions are at right angles.
Hatched areas to be poured after beams have been erected and joints grouted.
Ends of beams shall be aligned at the expansion joints. Any unequal variation in the beam lengths shall be placed at the fixed joint.
See End of Beam Detail for reinforcement.



PREFORMED JOINT SEALER (2")

Designed Eugene Paul Summer	DESIGNED	19
Checked E. Summer	CHECKED	
Drawn R. P. Summer	DRAWN	
Checked E.A.S.	CHECKED	

DETAILS
F.A. RT. 782 SEC. 115A-DR
HARDIN COUNTY
STATION 927+65

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

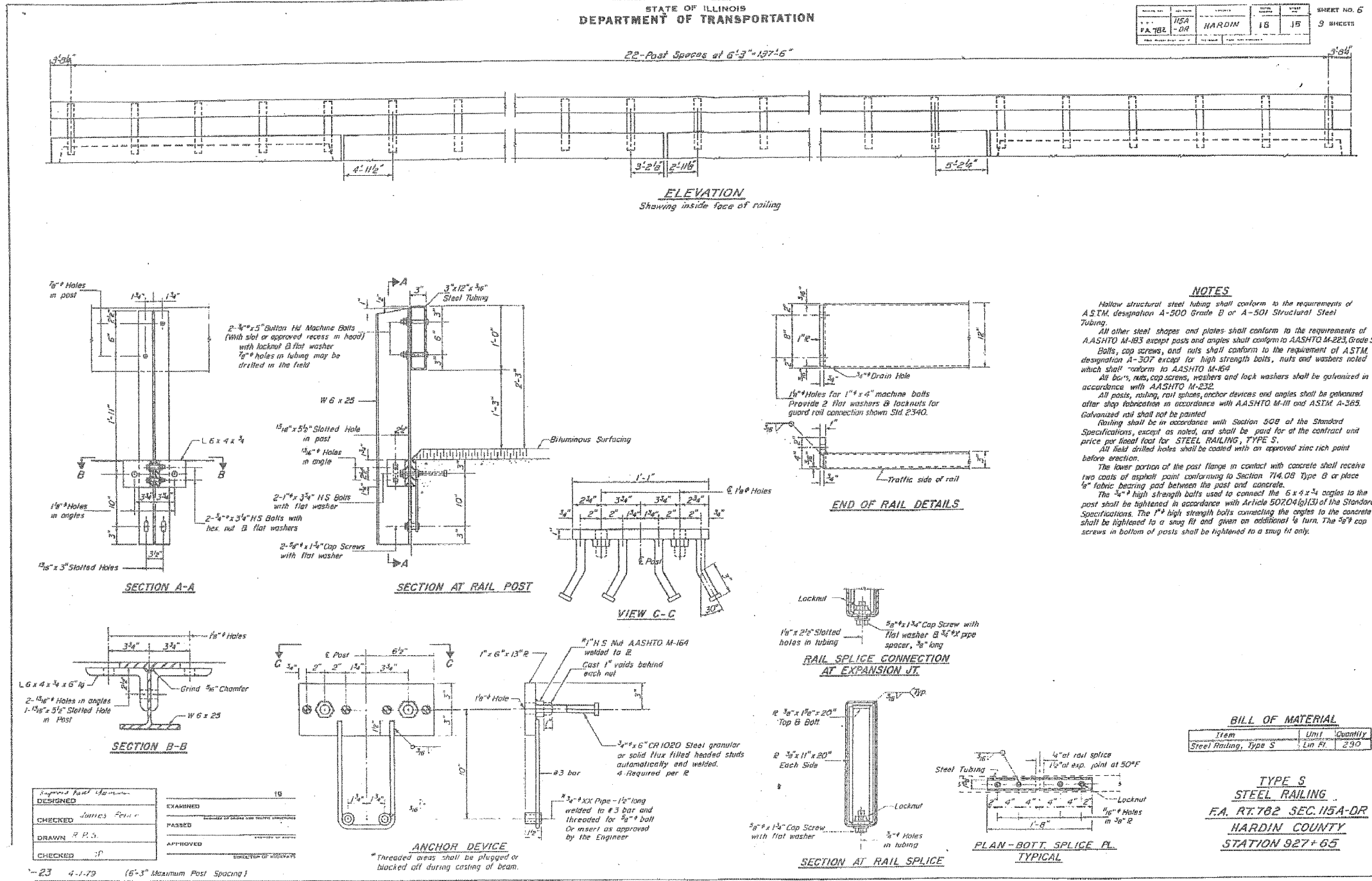
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 11 SHEETS
F.A.P. 782	115BR-1	Hardin	83	41	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026



NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B or A-501 Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bars, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-365.

Galvanized rail shall not be painted.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per linear foot for STEEL RAILING, TYPE S.

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

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 6" fabric bearing pad between the post and concrete.

The 1" high strength bolts used to connect the 6 x 4 x 1/2 angles to the post shall be tightened in accordance with Article 507.04(g)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/4 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S	Lin Ft.	230

**TYPE S
STEEL RAILING**
F.A. RT. 782 SEC. 115A-DR
HARDIN COUNTY
STATION 927+65

DESIGNED	19
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

23 4-1-79 (6'-3" Maximum Post Spacing)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

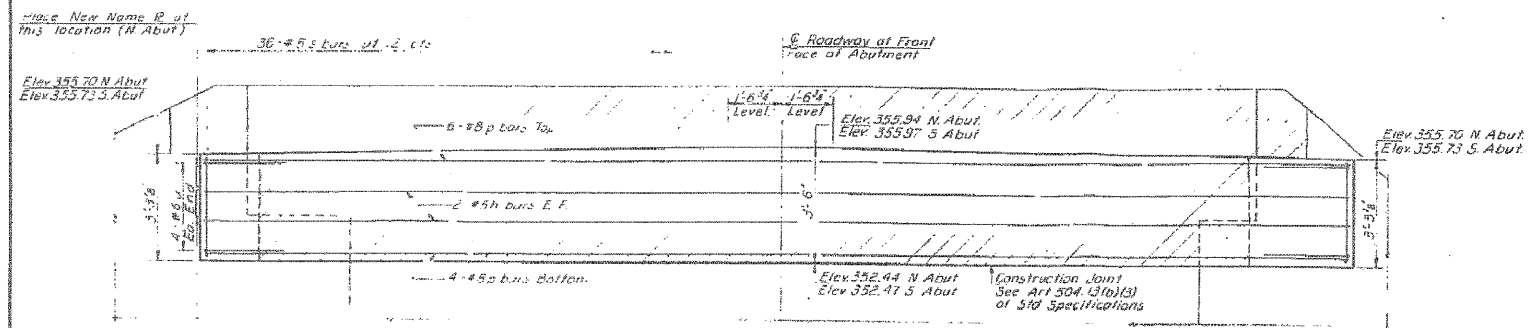
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
11 SHEETS

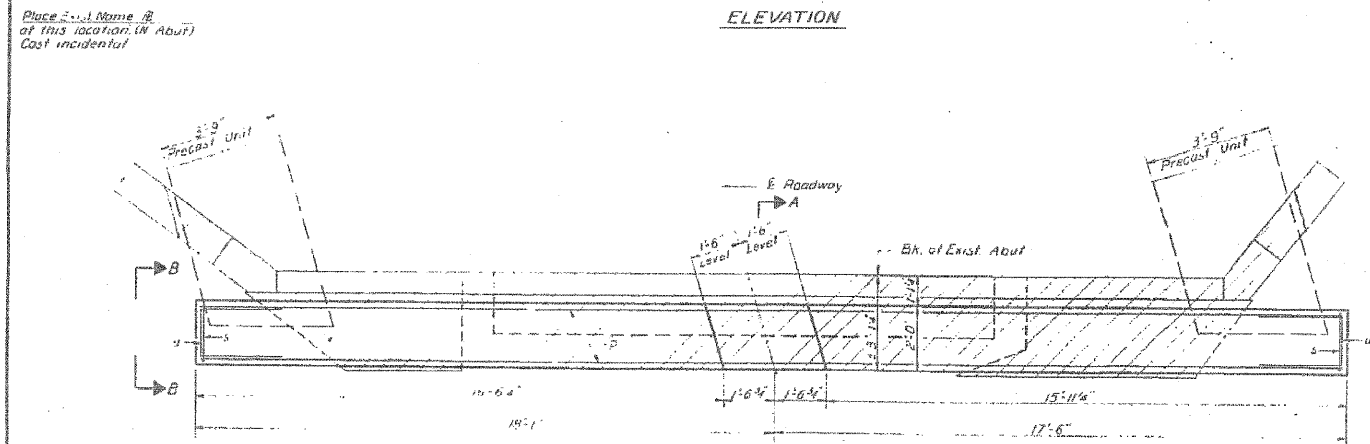
Contract #78026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	HARDIN	83	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

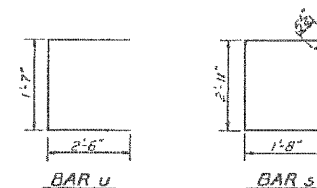


ELEVATION



PLAN

NOTES:
Hatched Areas indicate Concrete Removal.
All edges shall have standard 1/4" chamfers
except as noted



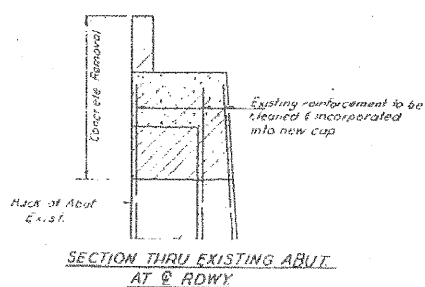
TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shops
a	8	#5	35'3"	
p	20	#8	35'3"	
s	72	#5	10'1"	18
u	16	#6	6'2"	
Class X Concrete				Cu Yds 17.9
Reinforcement Bars				Lbs. 3090
Concrete Removal				Cu Yds 17

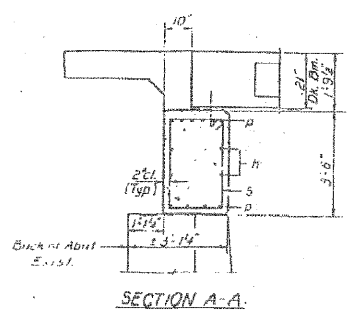
ABUTMENTS
FA. RT. 782 SEC. 115A-DR
HARDIN COUNTY
STATION 927+65

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	CHECKED

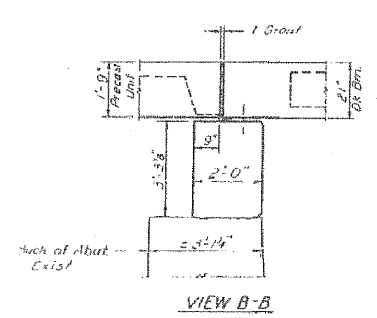
DESIGNED: [Signature]
EXAMINED: [Signature]
PASSED: [Signature]
CHECKED: [Signature]



SECTION THRU EXISTING ABUT
AT @ ROWY



SECTION A-A



VIEW B-B

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

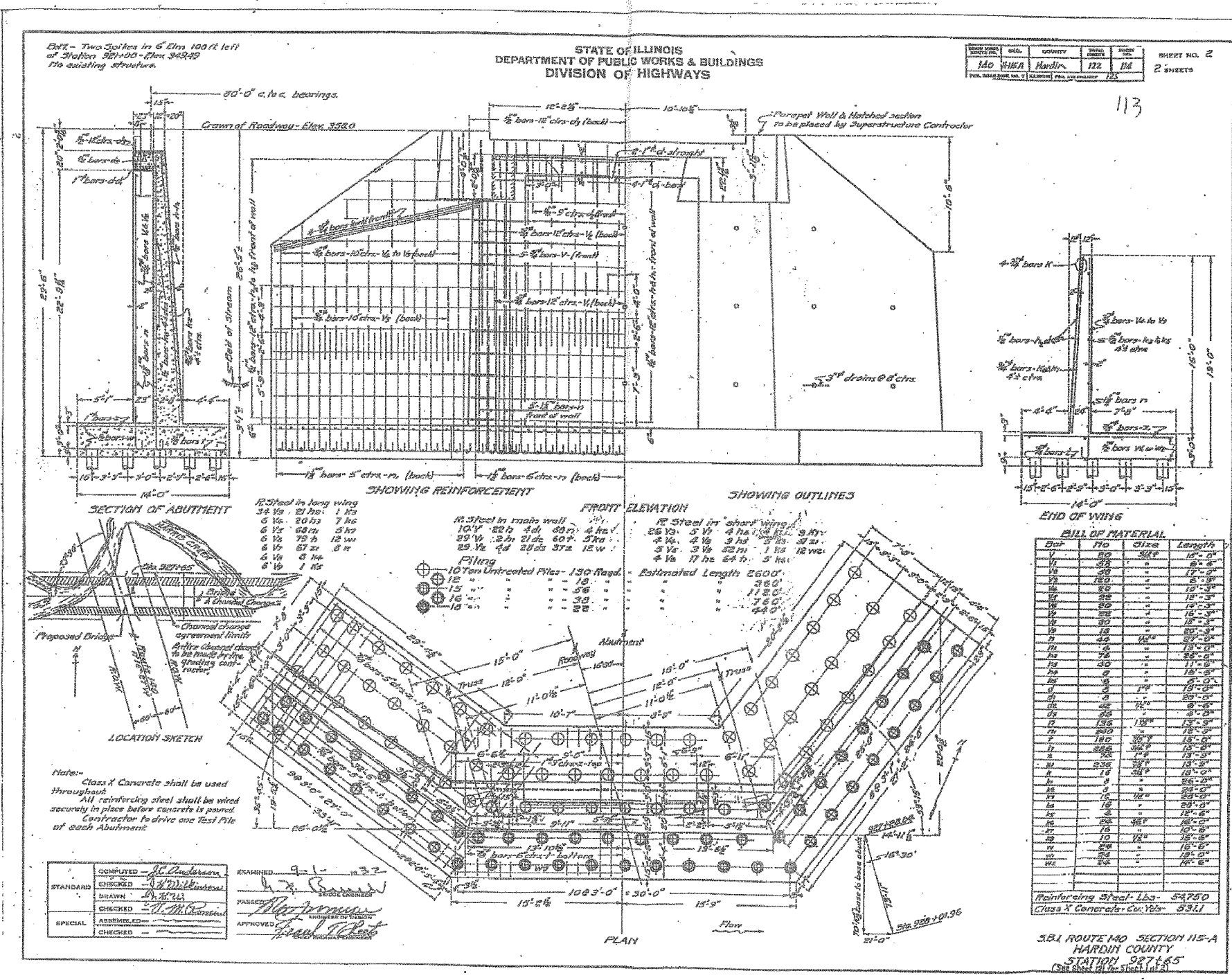
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	44
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

Contract #78026



COMPUTED	J. Anderson	EXAMINED	9-1-1932
CHECKED	H. Wilkinson	DRAWN	H. Wilkinson
CHECKED	H. Wilkinson	APPROVED	H. Wilkinson
ASSEMBLED	H. Wilkinson		
CHECKED	H. Wilkinson		

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS

IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10

11 SHEETS

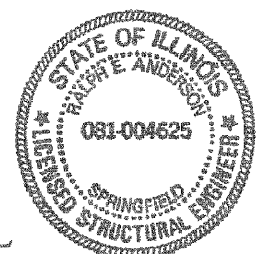
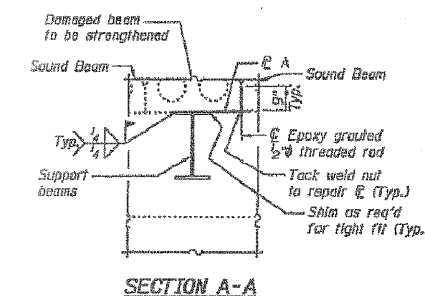
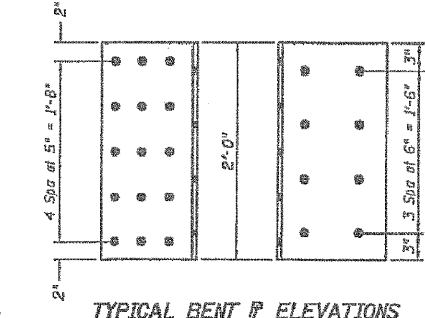
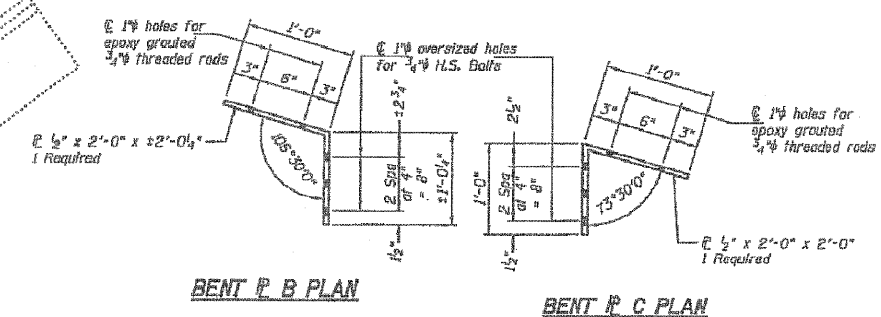
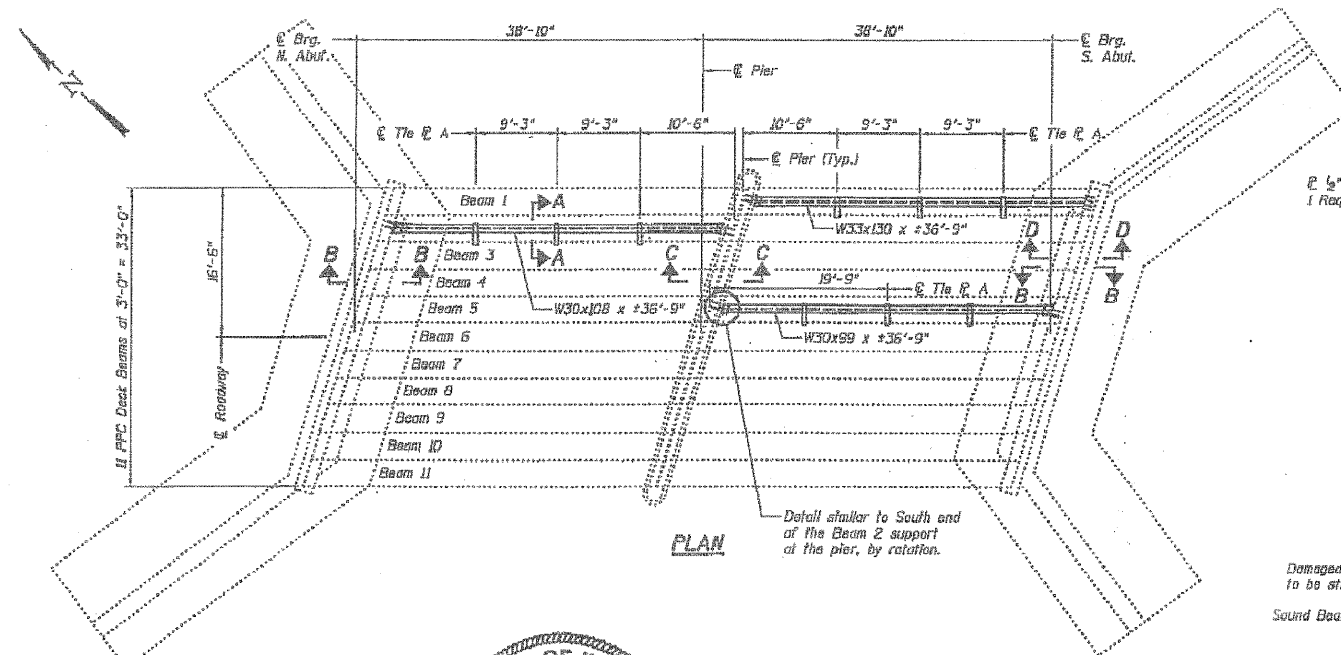
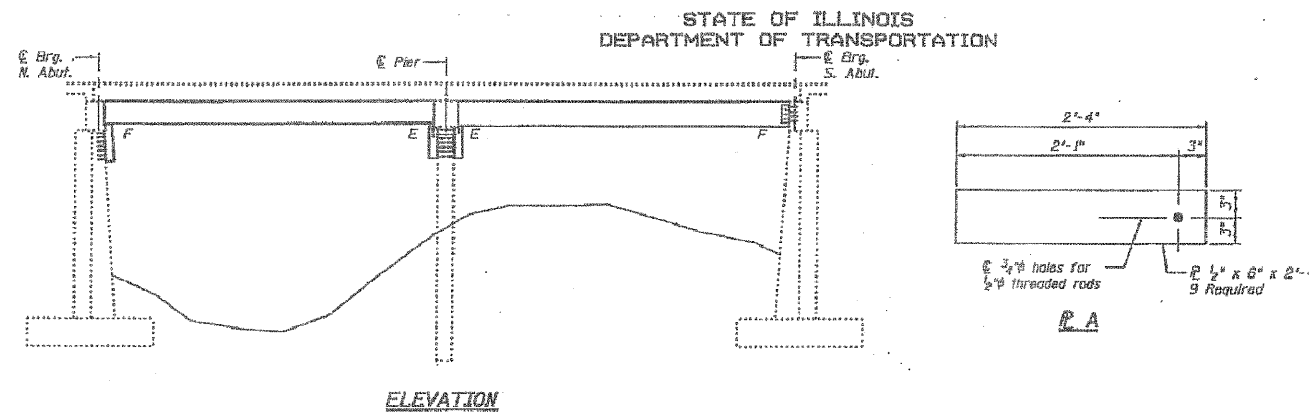
Contract #78026

ROUTE NO.	SECTION	COUNTY	STATE SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: ---

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
See Section 504 of the Standard Specifications for Epoxy Grouting of Threaded Rods.
The cost of epoxy grouting threaded rods shall be included with furnishing and erecting structural steel.



TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	M,500

DESIGNED: Adrian F. Hoffman
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: A.H. 5/8/08

JUNE 8, 2007
DESIGNED: [Signature]
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]

Expires November 30, 2008

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS

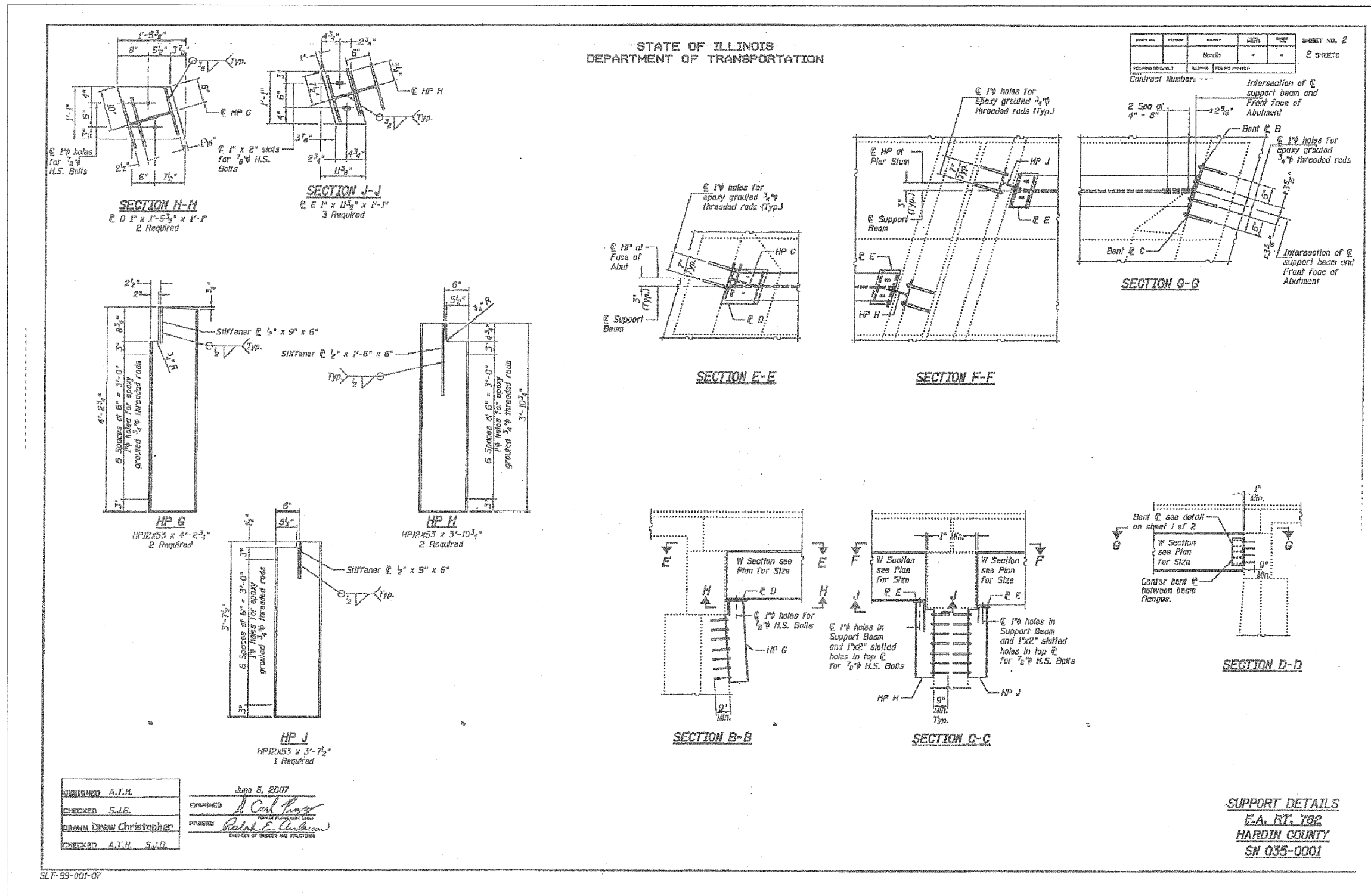
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 782	115BR-1	Hardin	83	46
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
11 SHEETS

Contract #78026



SLT-99-001-07

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0018-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: S.M.S. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER HARRIS CREEK
F.A.P. ROUTE 782 / SECTION 115BR-1
HARDIN COUNTY
STATION 927+65
STRUCTURE NO. 035-0001

BENCHMARK: Chiseled Square on top of Northwest corner of West Abutment Cap.
SN 035-0003, Station 1015+55.76, 18' right, Elevation 355.26

EXISTING STRUCTURE: SN 035-0003 was originally built in 1935 as S.B.I. Route 140, Section H-115A. In 1980, the superstructure was replaced and widened, and precast concrete bridge slabs were utilized to widen the approaches. The superstructure consists of one simple span of 21'x36" deck beams. The substructure consists of two reinforced concrete closed abutments on timber piles. The back-to-back abutments length is 48'-2 1/2"; the out-to-out width is 33'-0". The existing superstructure and the existing approach shoulder bridge slabs shall be removed and replaced using stage construction to maintain traffic.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

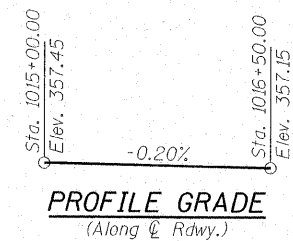
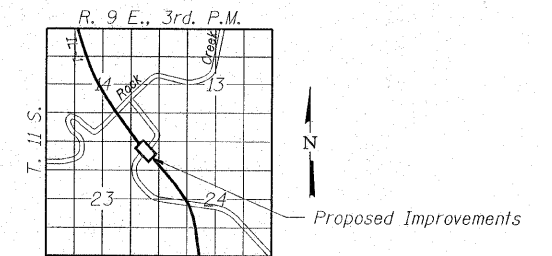
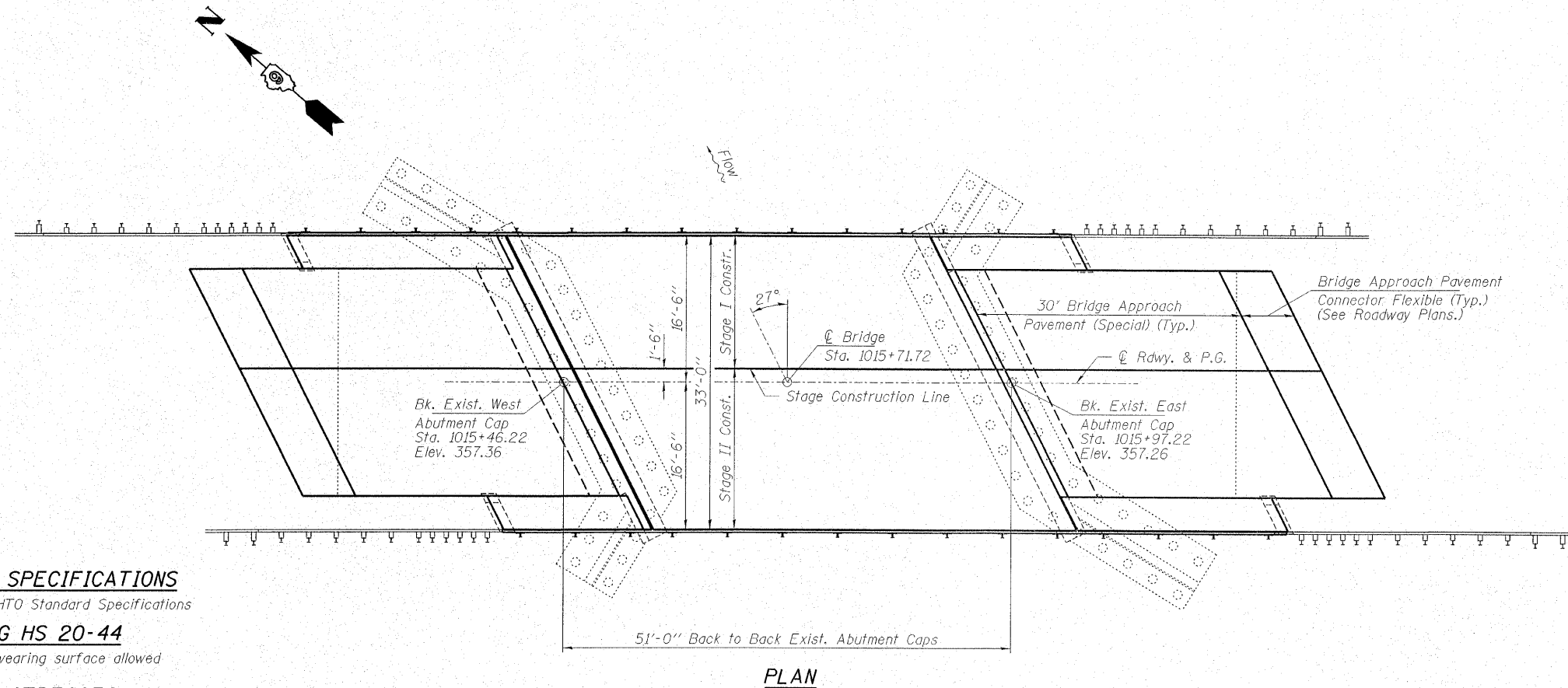
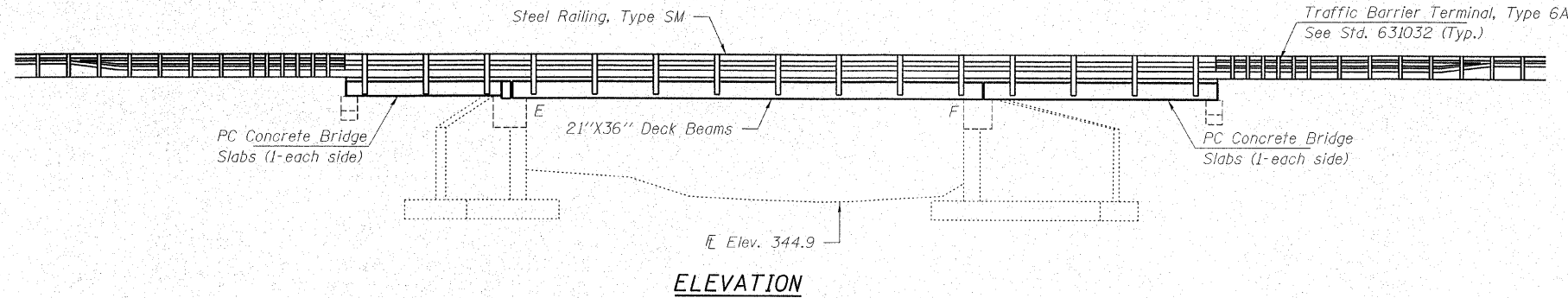
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	47
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
15 SHEETS

Contract #78026

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. General Details
3. Stage Construction Details
4. Steel Railing (Temporary)
5. Temporary Concrete Barrier For Stage Construction
6. Superstructure
- 7-8. Superstructure Details
- 9-10. Approach Details
11. Steel Railing, Type SM with Concrete Wearing Surface
12. Strip Seal Expansion Joint
13. West Abutment
14. East Abutment
15. Bar Splicer Assembly Details



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING HS 20-44

No future wearing surface allowed

DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Concrete Wearing Surface)
f'c = 3,500 psi (All Concrete except CWS)
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2" low lax. strands)
f'si = 201,960 psi (1/2" low lax. strands)
fy = 60,000 psi (Reinf.)

PRECAST UNITS

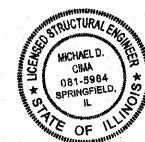
f'c = 4,500 psi
fy = 60,000 psi (Reinf.)

SCOPE OF WORK

1. Remove existing superstructure, and approach shoulder bridge slabs.
2. Repair beam bearing seats and perform other repairs at abutments as specified.
3. Construct a new single span PPCD beam superstructure with concrete wearing surface and approach shoulders with Precast Concrete Bridge Slabs with concrete wearing surface.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Michael D. Cima
ILLINOIS STRUCTURAL NO. 081-5984

1-A-7008

Expires 11-30-08

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3095 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

HLR

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

GENERAL PLAN AND ELEVATION

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 15 SHEETS
F.A.P. 782	115BR-2	Hardin	83	48	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
Concrete Sealer shall be applied to abutment bearing seats (new concrete only).
Side retainers shall be AASHTO M270 Grade 36 minimum.
No in stream work will be allowed on this project.
The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the new deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Precast Prestressed Concrete Deck Beams (21" Depth). The minimum thickness of the concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.
Repair of the substructure shall be completed prior to placement of the new deck beams. Reinforcement bars designated (E) shall be epoxy coated.

STA. 1015+72
REBUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 782 SEC. 115BR-2
LOADING HS 20
STR. NO. 035-0003

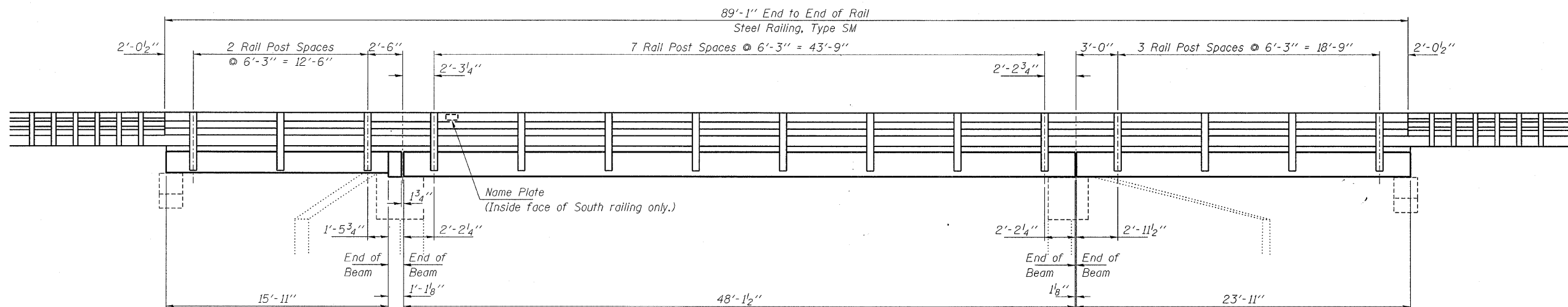
NAME PLATE

See Std. 515001

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Bridge Deck Grooving	Sq. Yd.	220.3		220.3
Protective Coat	Sq. Yd.	220.3		220.3
Precast Concrete Bridge Slab	Sq. Ft.	300		300
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,589		1,589
Reinforcement Bars, Epoxy Coated	Pound	2,680	550	3,230
Bar Splicers	Each			61
Steel Railing, Type SM	Foot	178.2		178.2
Steel Railing, (Temporary)	Foot	48.2		48.2
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	37		37
Epoxy Crack Injection	Foot		4	4
Asbestos Bearing Pad Removal	Each			22
Structural Repair of Concrete (Depth equal to or less than 5")	Sq. Ft.		12	12
Concrete Wearing Surface, 5"	Sq. Yd.	220.3		220.3
Concrete Structures	Cu. Yd.		5.4	5.4
Removal of Existing Precast Concrete Units	Sq. Ft.	299		299
Concrete Removal	Cu. Yd.	2.4		2.4



RAILING ELEVATION

(Showing outside face of South Railing)
North Rail spacing similar but rotated 180°

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

GENERAL DETAILS

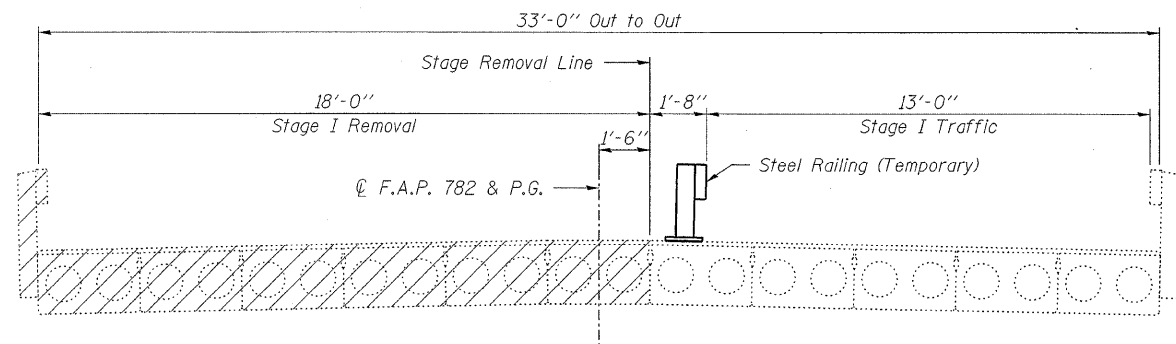
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

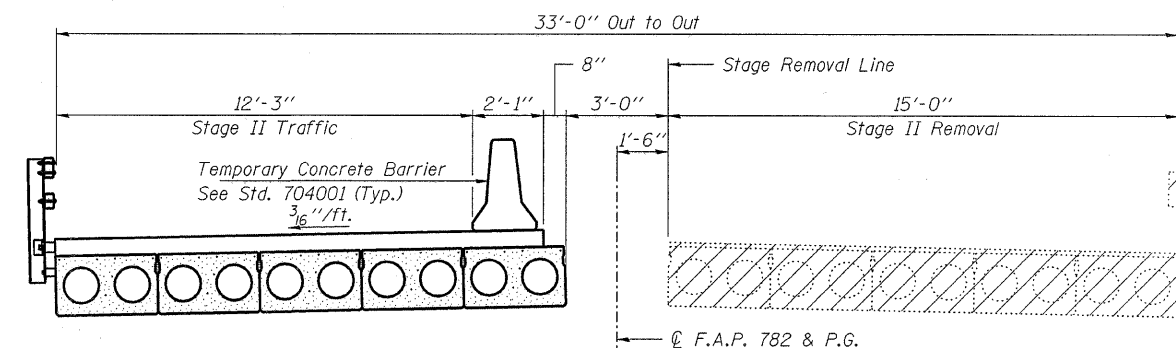
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	49
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
15 SHEETS

Contract #78026

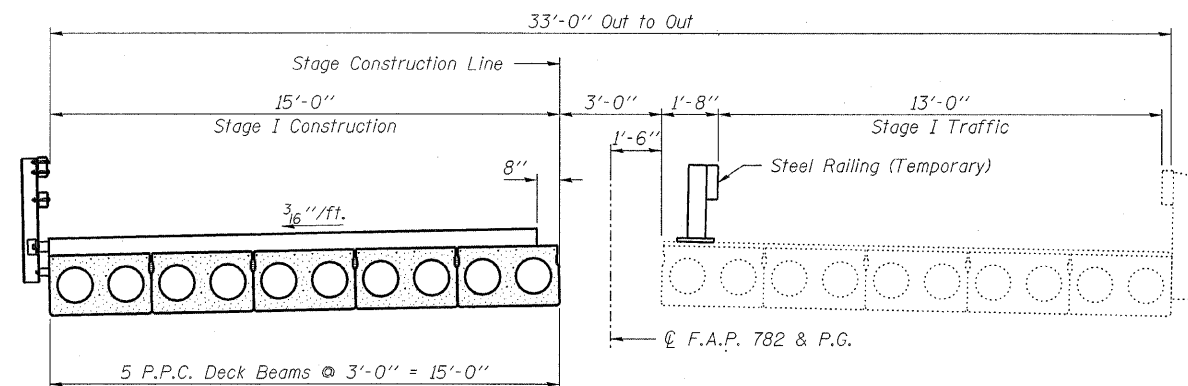


STAGE I REMOVAL

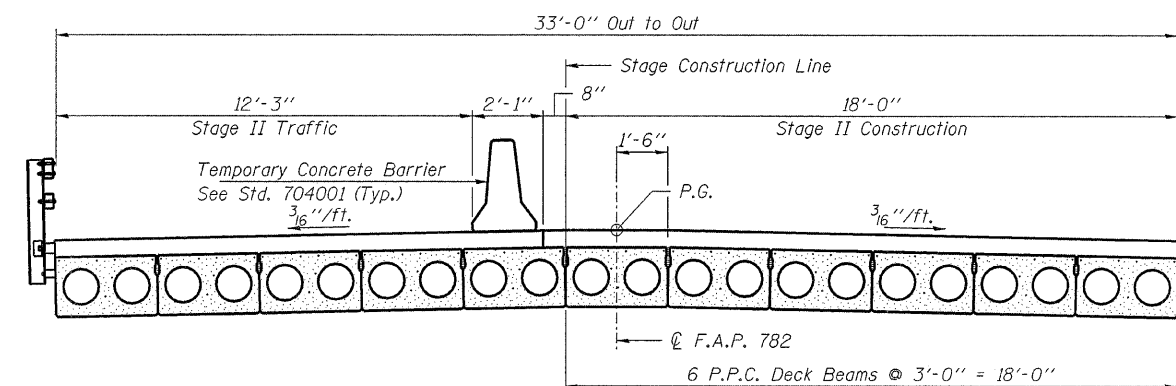


STAGE II REMOVAL

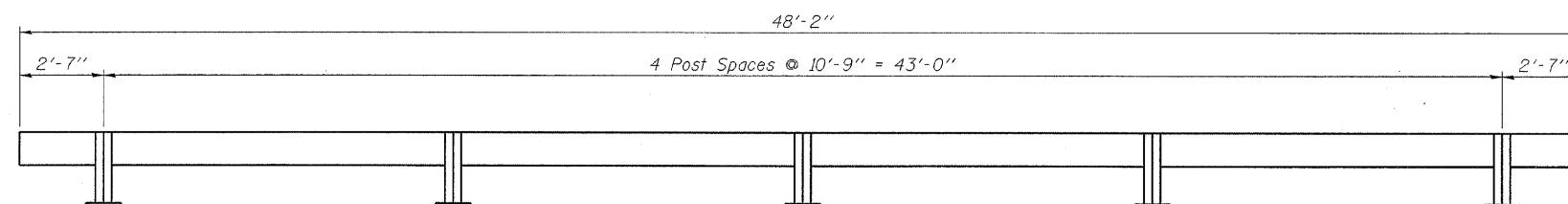
- Notes:
1. All views are looking Southeast.
 2. See Sheet 7 of 15 for shear key clamping details.
 3. See Roadway Plans for quantity of Temporary Concrete Barrier.



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION



STEEL RAILING (TEMPORARY POST SPACING)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

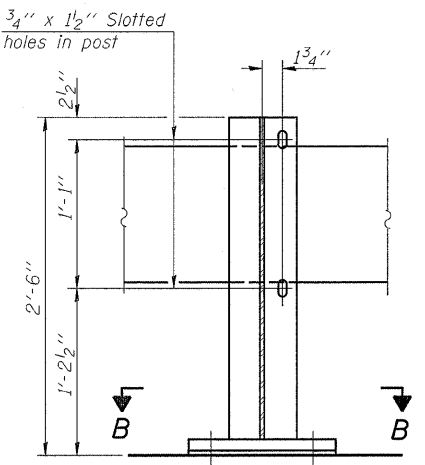
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

STAGE CONSTRUCTION DETAILS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

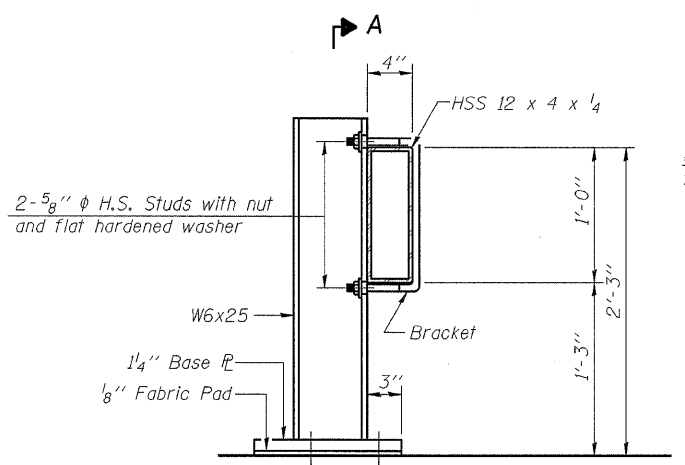
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LISTING SHEETS	SHEET NO.	SHEET NO. 4 15 SHEETS
F.A.P. 782	I15BR-2	Hardin	83	50	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

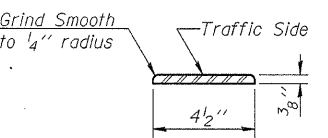
Contract #78026



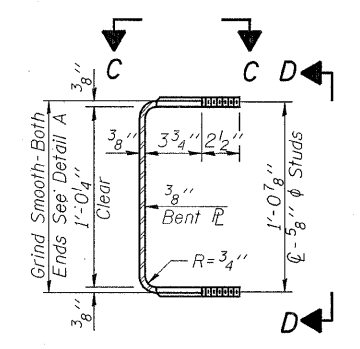
SECTION A-A



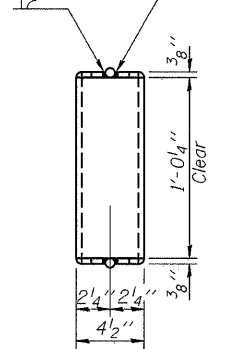
SECTION AT RAIL POST



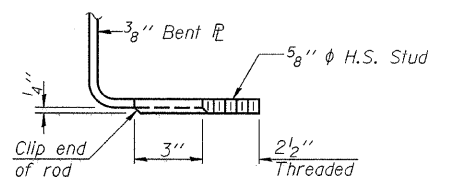
DETAIL A



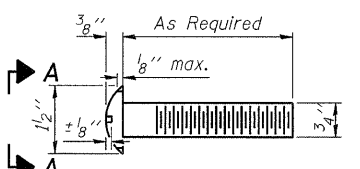
SECTION THRU BRACKET



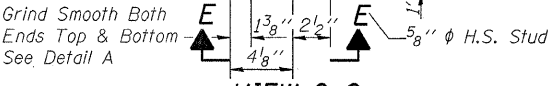
VIEW D-D



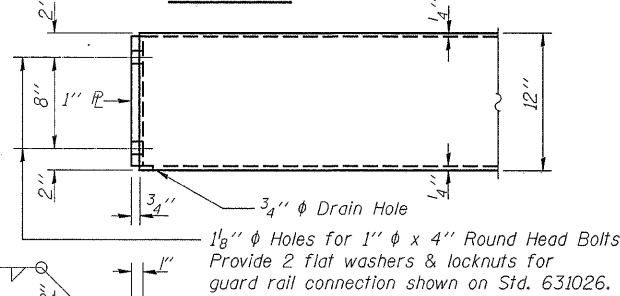
VIEW E-E



VIEW A-A
ROUND HEAD BOLT

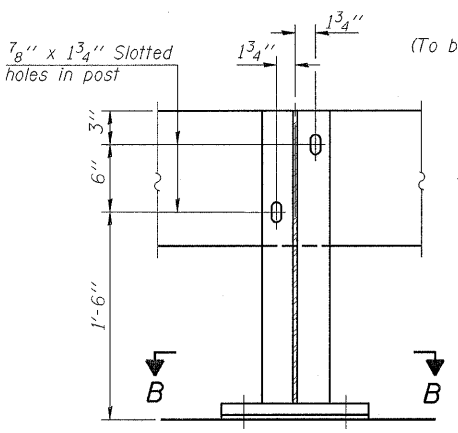


VIEW C-C

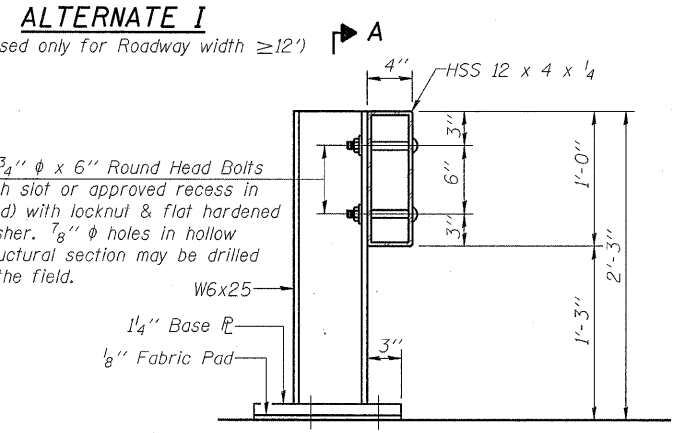


END OF RAIL DETAILS

Notes:
See sheet 3 of 15 for Rail Post spacing.
The contact surfaces between post flange, rail and inside face of bracket for Alternate I shall be free of all lubricants.
The nut for 5/8 inch high strength studs used in Alternate I to connect bracket to post shall be tightened to a snug fit and given an additional one half turn.



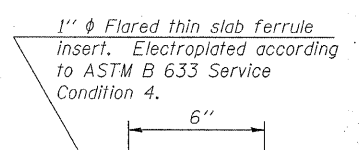
SECTION A-A



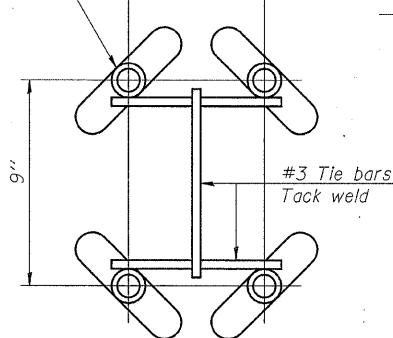
SECTION AT RAIL POST

ALTERNATE I
(To be used only for Roadway width ≥ 12')

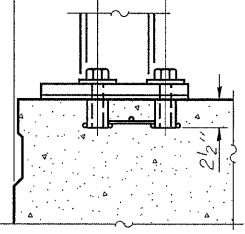
2-3/4 inch diameter Round Head Bolts (With slot or approved recess in head) with locknut & flat hardened washer. 7/8 inch diameter holes in hollow structural section may be drilled in the field.



INSERT DETAIL

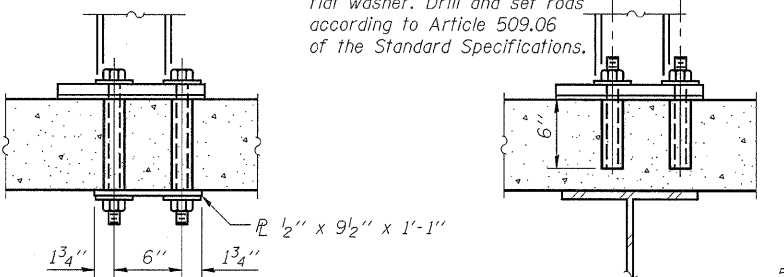


4 - Wing type threaded inserts for 1 inch diameter H.S. bolts with flat hardened washer. Grout holes after removal.

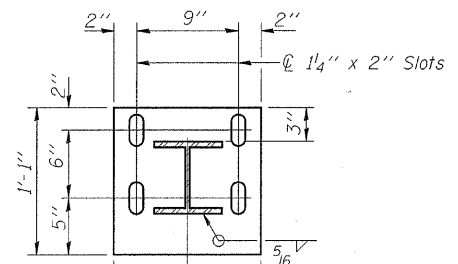


P.P.C. DECK BEAMS

*Drill 4-1 1/4 inch diameter holes for 1 inch diameter threaded rods with hex nut and flat washer. Drill and set rods according to Article 509.06 of the Standard Specifications.

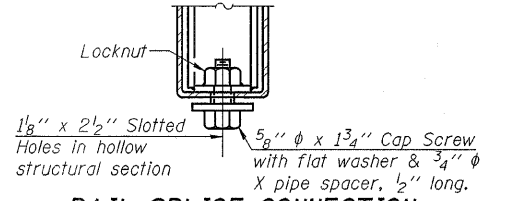


ANCHORAGE DETAILS

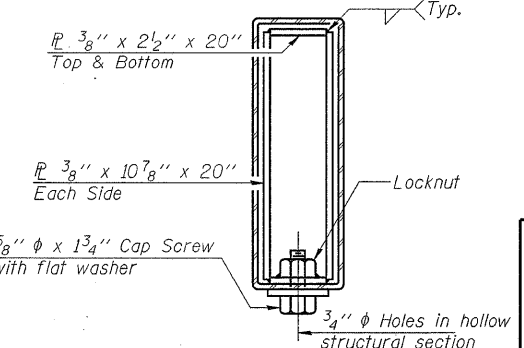


SECTION B-B

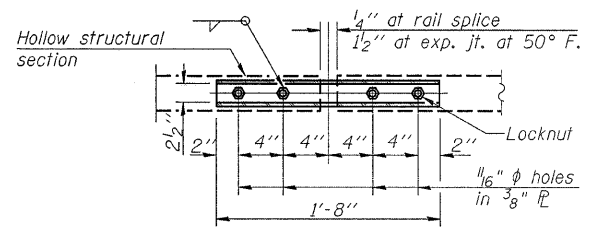
*Drilled holes for existing deck.



RAIL SPLICE CONNECTION
AT EXPANSION JT.



SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE R
TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Temporary)	Foot	48.2

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

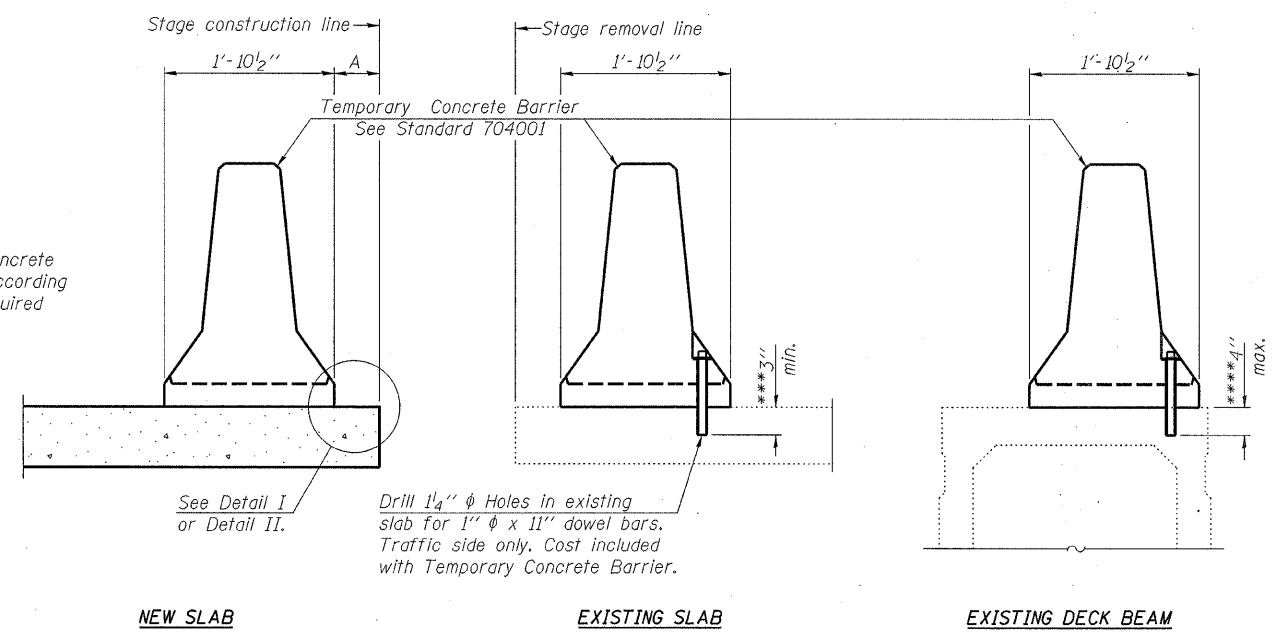
STEEL RAILING (TEMPORARY)
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION I15BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
F.A.P. 782	115BR-2	Hardin	83	51	15 SHEETS
FED. ROAD DIST. NO. 7	ILL. PROJ. NO.	FED. AID PROJECT-			

Contract #78026

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".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

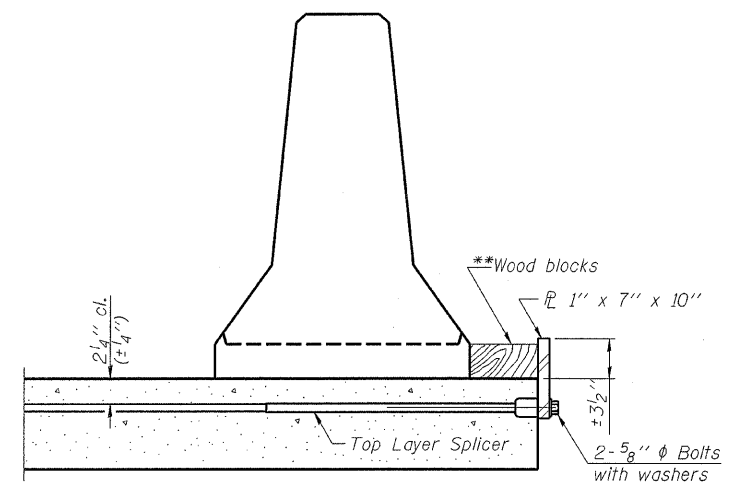
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL 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 C of each barrier panel.

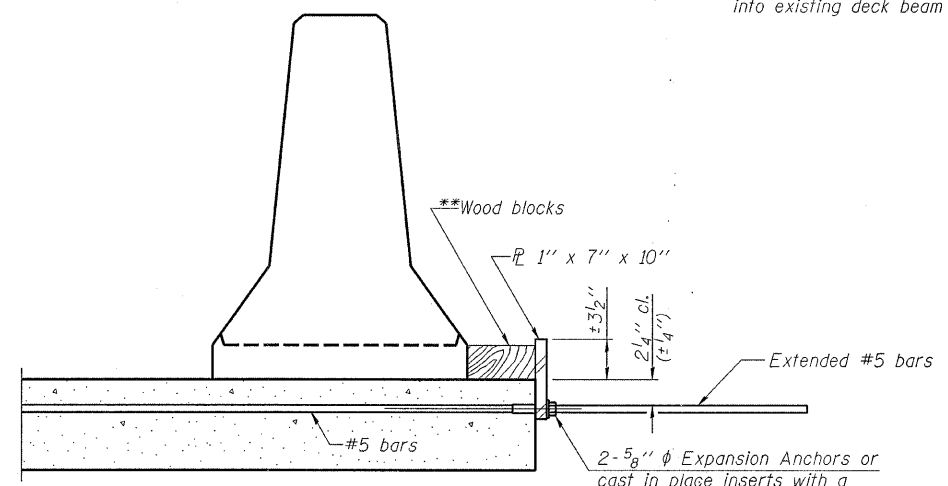
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

***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.

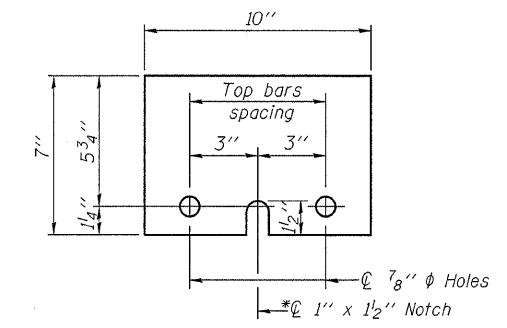


DETAIL I



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.



STEEL RETAINER PLATE 1" x 7" x 10"

* Required only with Detail II

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-08-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

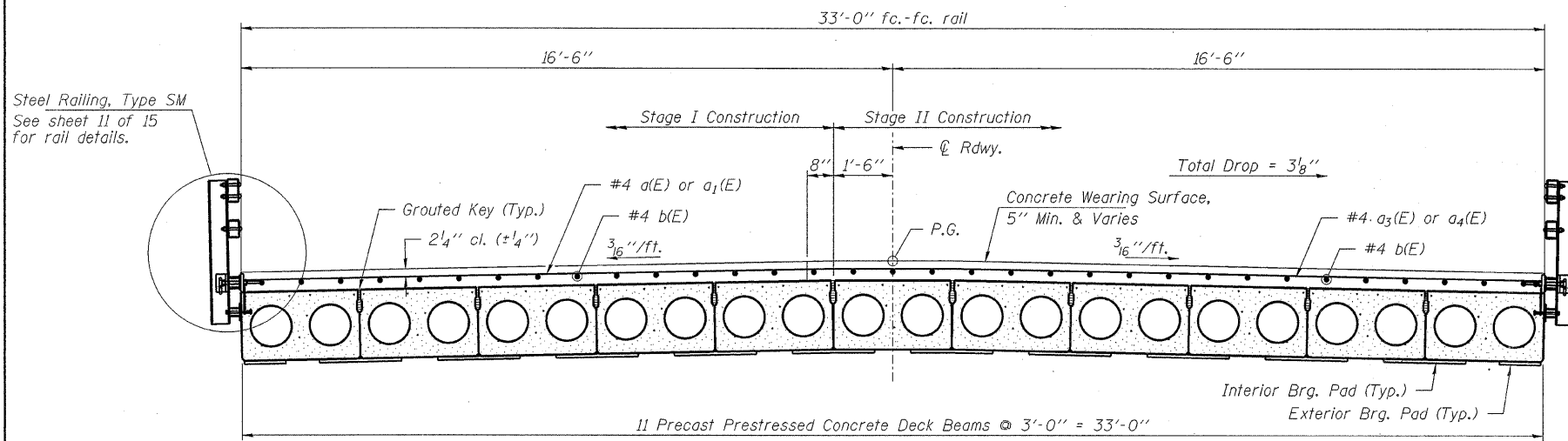
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

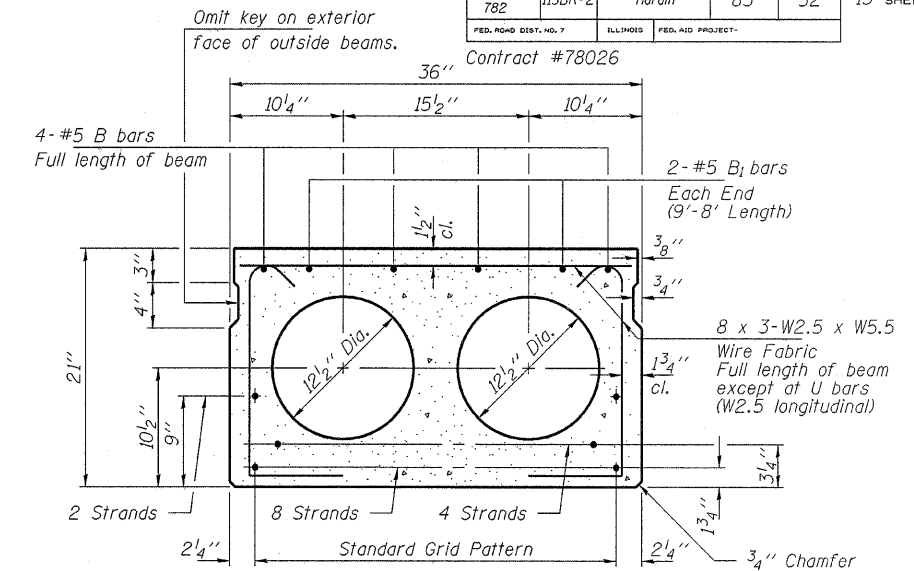
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.
F.A.P. 782	I15BR-2	Hardin	83	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
15 SHEETS



CROSS SECTION
(Looking Southeast)

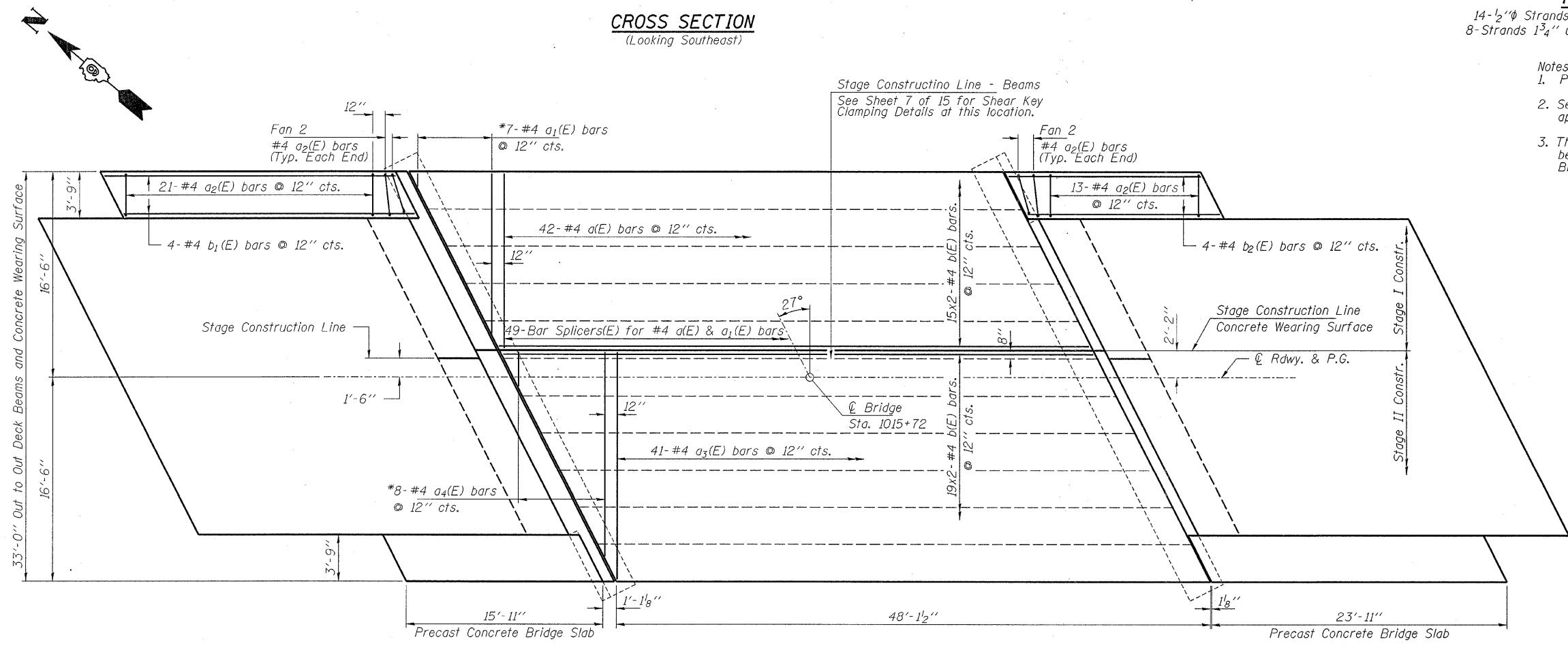


TYPICAL SECTION

14-1/2"φ Strands, Each Strand Stressed to 30,900 Lbs.
8-Strands 1 3/4" up, 4-Strands 3/4" up, 2-Strands 9" up

- Notes:
- Place strands symmetrically about C of beam.
 - See Sheet 7 of 15 for additional details applicable to fascia beams.
 - The R.C. Wearing Surface area covers the deck beams, PC Concrete Bridge Slabs and Abut. Hatch Blocks detailed on Sheet 8 of 15.

MIN. BAR LAP
#4 bar = 1'-8"

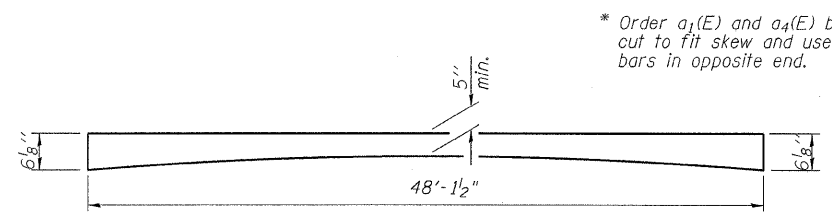


PLAN - R.C. WEARING SURFACE

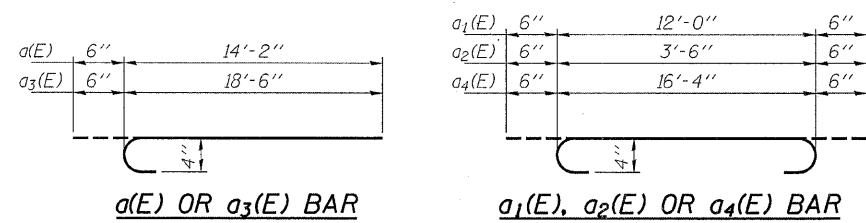
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	42	#4	14'-8"	U
a ₁ (E)	7	#4	13'-0"	U
a ₂ (E)	84	#4	4'-6"	U
a ₃ (E)	41	#4	19'-0"	U
a ₄ (E)	8	#4	17'-4"	U
b(E)	68	#4	24'-9"	—
b ₁ (E)	8	#4	23'-8"	—
b ₂ (E)	8	#4	15'-8"	—
Reinforcement Bars, Epoxy Coated			Pound	2,680
Concrete Wearing Surface, 5"			Sq. Yd.	220.3
Bridge Deck Grooving			Sq. Yd.	220.3
Precast Prestressed Concrete Deck Beams (21" Depth)			Sq. Ft.	1,589
Protective Coat			Sq. Yd.	220.3

Bars indicated thus 15x2-#4 etc. indicates 15 lines of bars with 2 lengths per line.
For additional superstructure details, see sheets 7 & 8 of 15.



REINFORCED CONCRETE WEARING SURFACE PROFILE



a(E) OR a₃(E) BAR

a₁(E), a₂(E) OR a₄(E) BAR

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

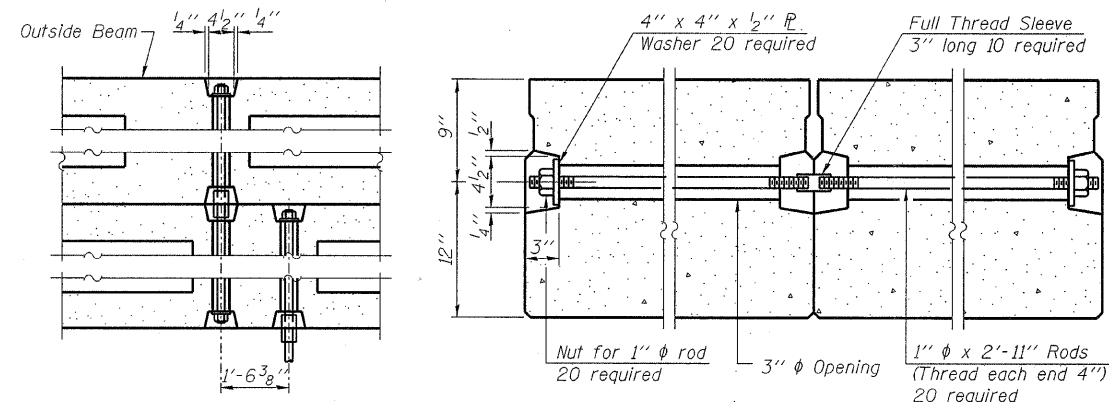
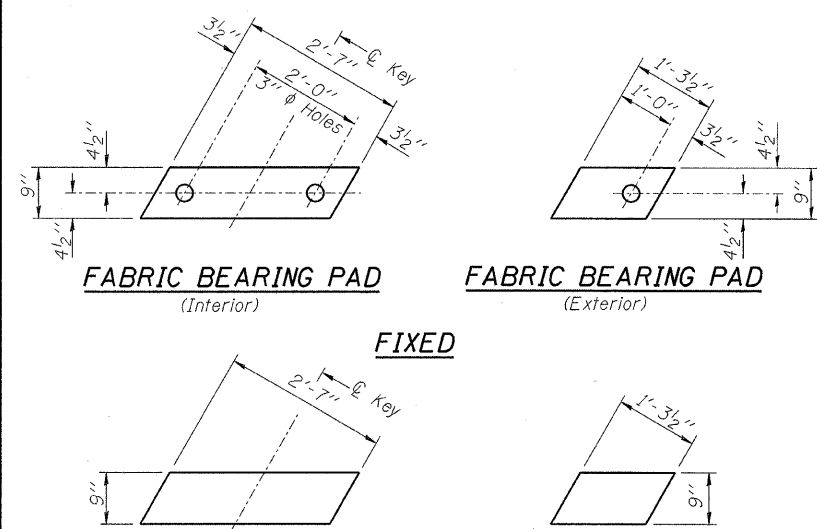
SUPERSTRUCTURE

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION I15BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 15 SHEETS
F.A.P. 782	115BR-2	Hardin	83	53	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #78026



NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2" phi-270 ksi strands, as shown.

The 1" phi rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60.

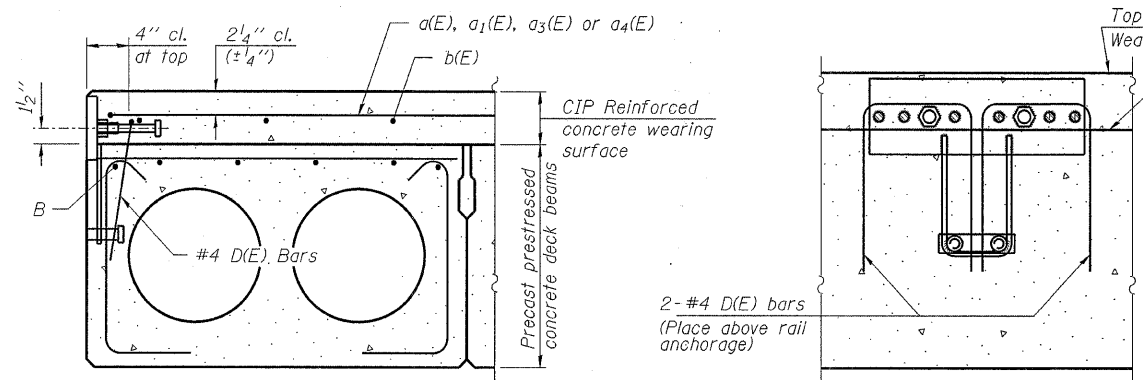
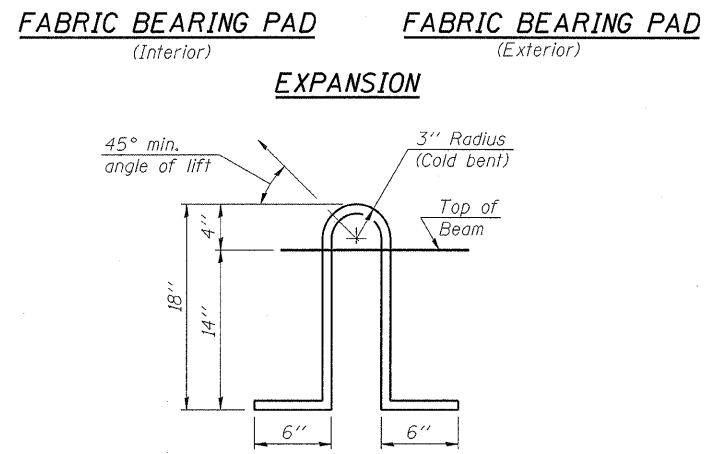
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

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

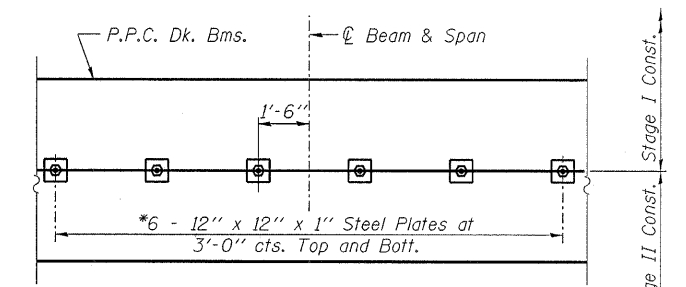
Required Release Strength, f'ci, shall be 4,000 p.s.i.

See Sheet 2 of 15 for location of rail anchors and additional notes.

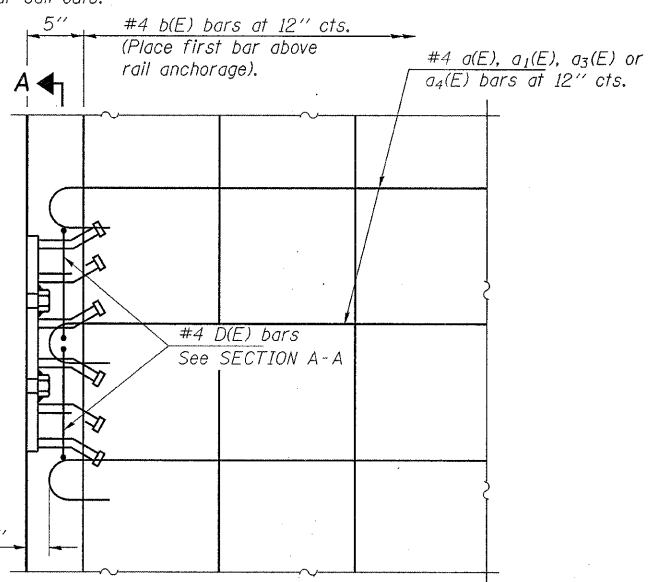
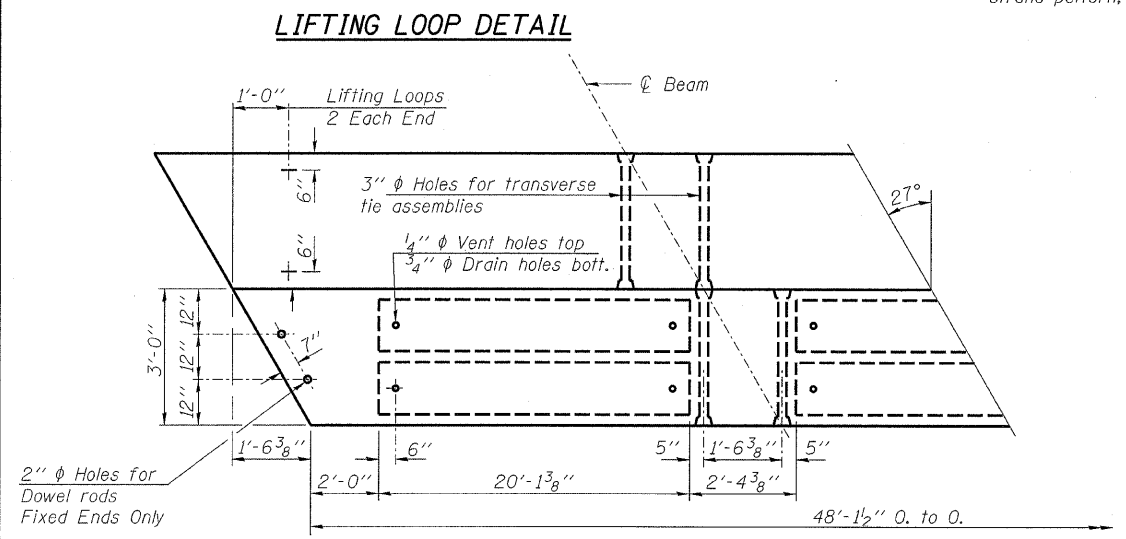


FASCIA BEAM CROSS SECTION

See Typical Section on Sheet 6 of 15 for strand pattern, dimensions and bar call outs.



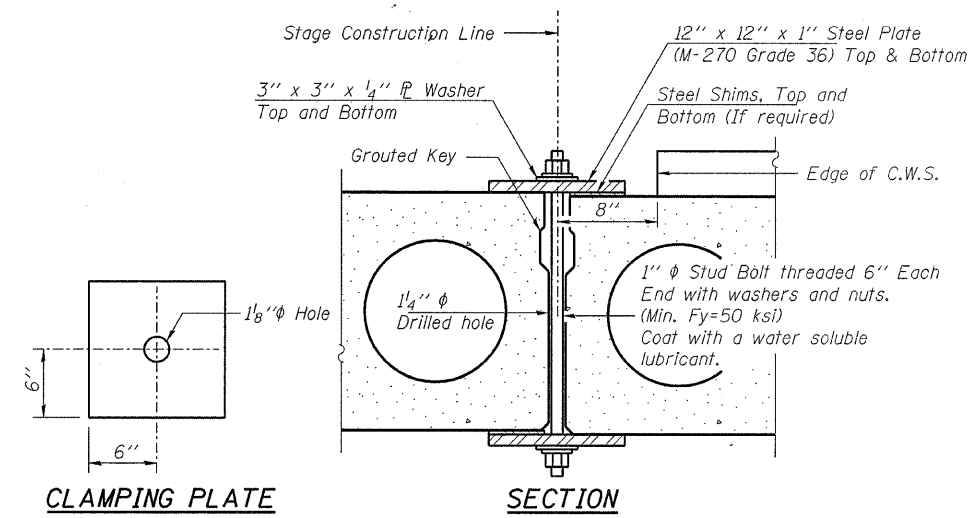
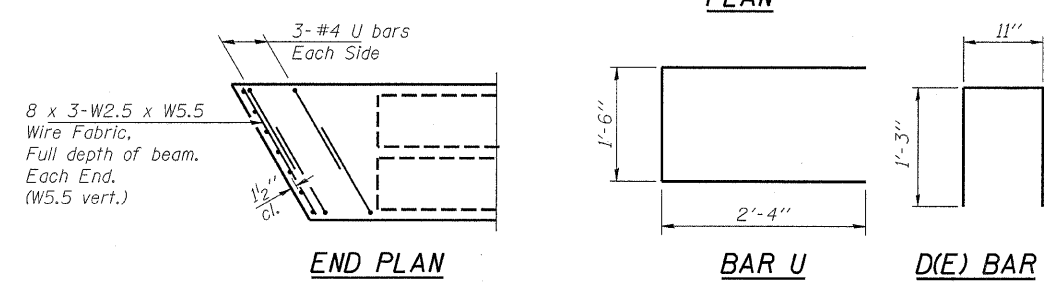
* Space plates to miss Temporary Bridge Rail Posts.



Notes:
The rail anchorage and D(E) bar shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

CONCRETE OVERLAY MODIFICATIONS FOR RAIL ANCHORAGE

(Bridge shown, Approach similar)



SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Note: Cost included with Precast Prestressed Concrete Deck Beams.

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

SUPERSTRUCTURE DETAILS

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-2	COUNTY Hardin	TOTAL SHEETS 83	SHEET NO. 54	SHEET NO. 8 15 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78026

NOTES

After beams have been erected, holes shall be drilled into substructure and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hours prior to grouting the shear keys.

Concrete wearing surface to be poured after grouting the shear keys.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (21" Depth) or Precast Concrete Bridge Slabs.

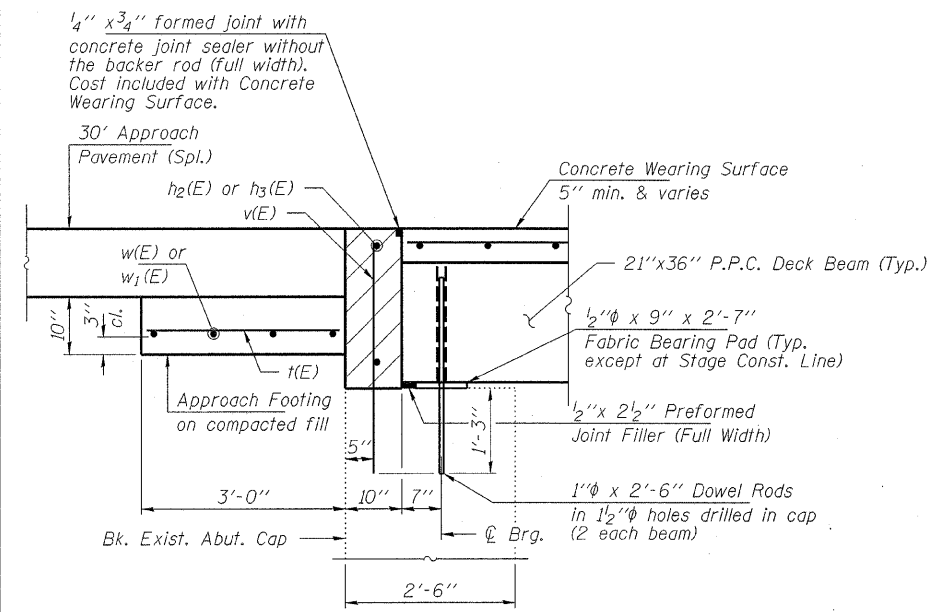
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material) of the grade(s) and diameter(s), specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu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

Anchor bolts for side retainers will be installed in holes drilled after members are in place.

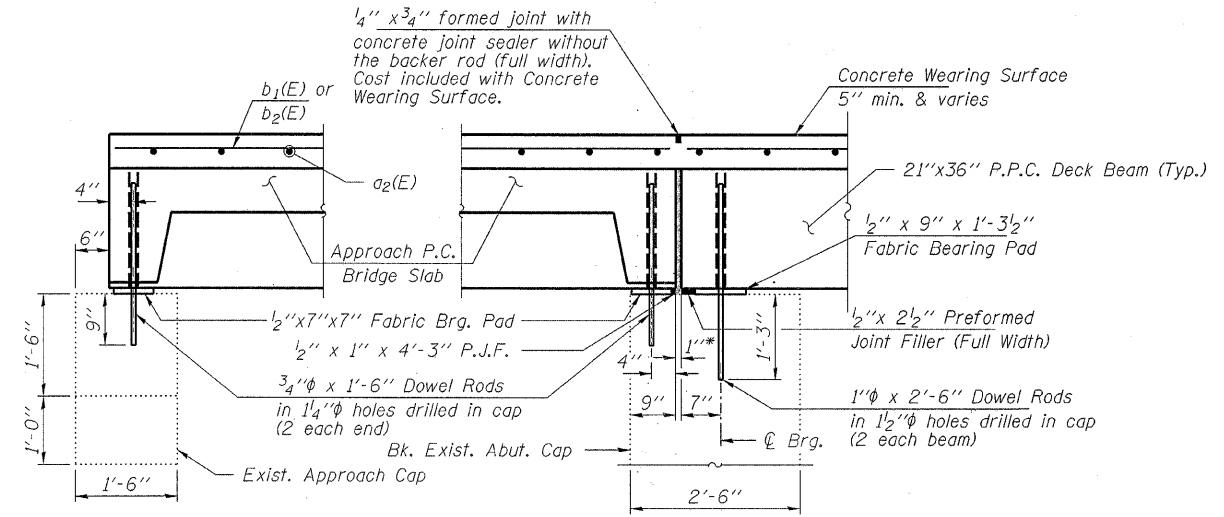
See Sheets 13 & 14 of 15 for Approach Footing and Abutment Hatch-Block reinforcement details.

Cost of Concrete in hatched areas included with Concrete Wearing Surface, 5".

All horizontal substructure dimensions shown at Rt. angles to substructure element.



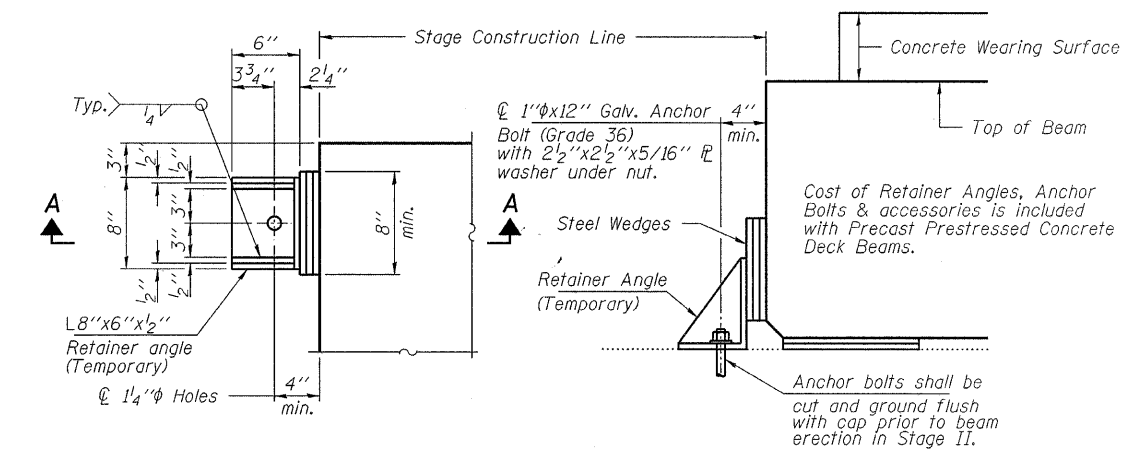
SECTION THRU EAST ABUTMENT @ RDWY.



SECTION THRU APPROACH CAP

SECTION THRU EAST ABUTMENT @ OUTSIDE BEAMS

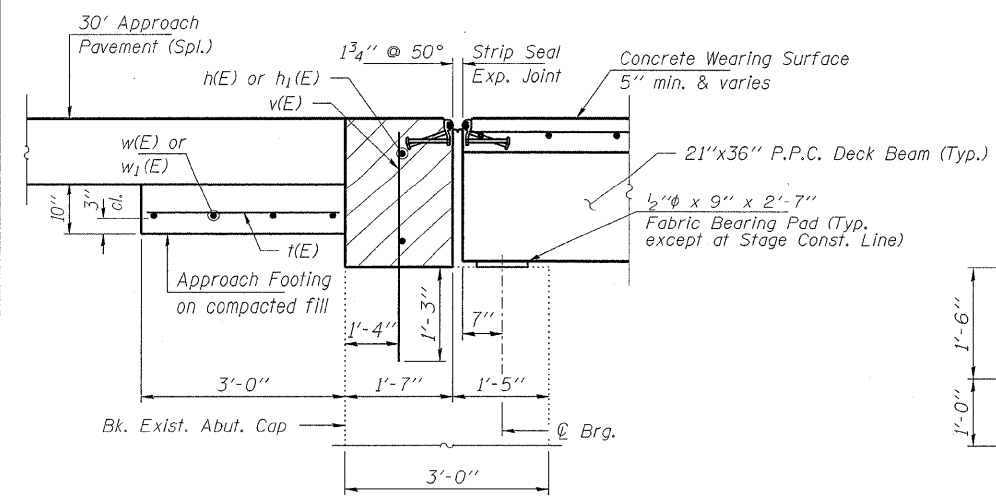
* 1" joint between beams shall be filled w/non-shrink grout. 1" dimension may vary to accommodate variation in beam lengths.



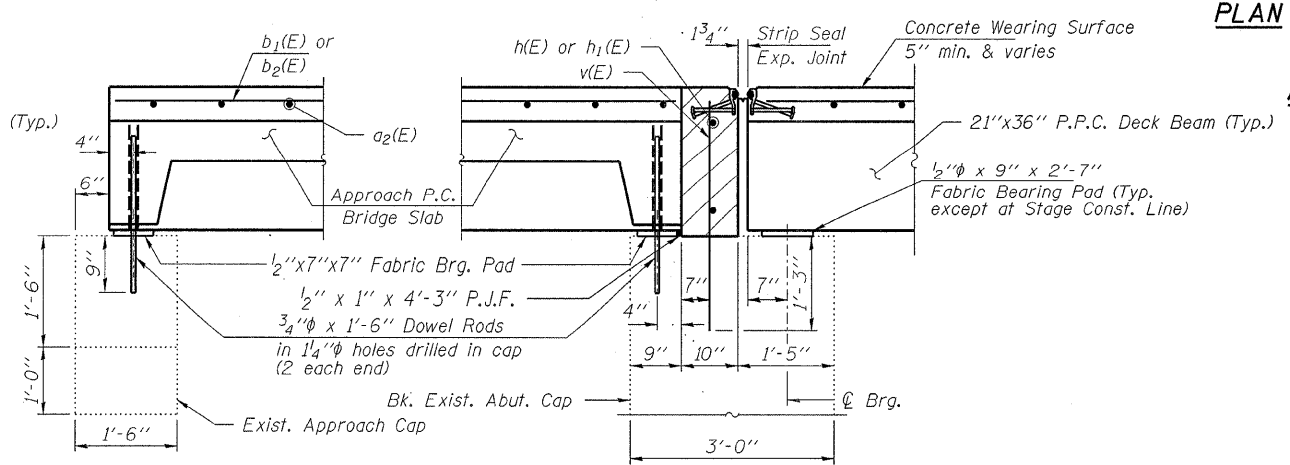
PLAN

BEAM RETAINER DETAILS AT STAGE CONSTRUCTION LINE (2 Required)

SECTION A-A



SECTION THRU WEST ABUTMENT @ RDWY.



SECTION THRU APPROACH CAP

SECTION THRU WEST ABUTMENT @ OUTSIDE BEAMS

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

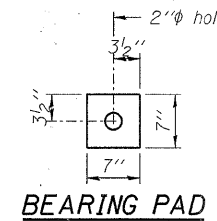
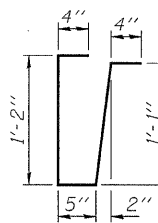
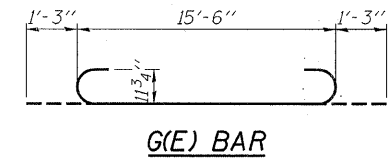
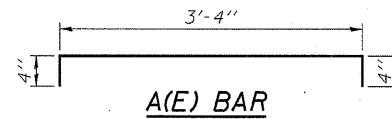
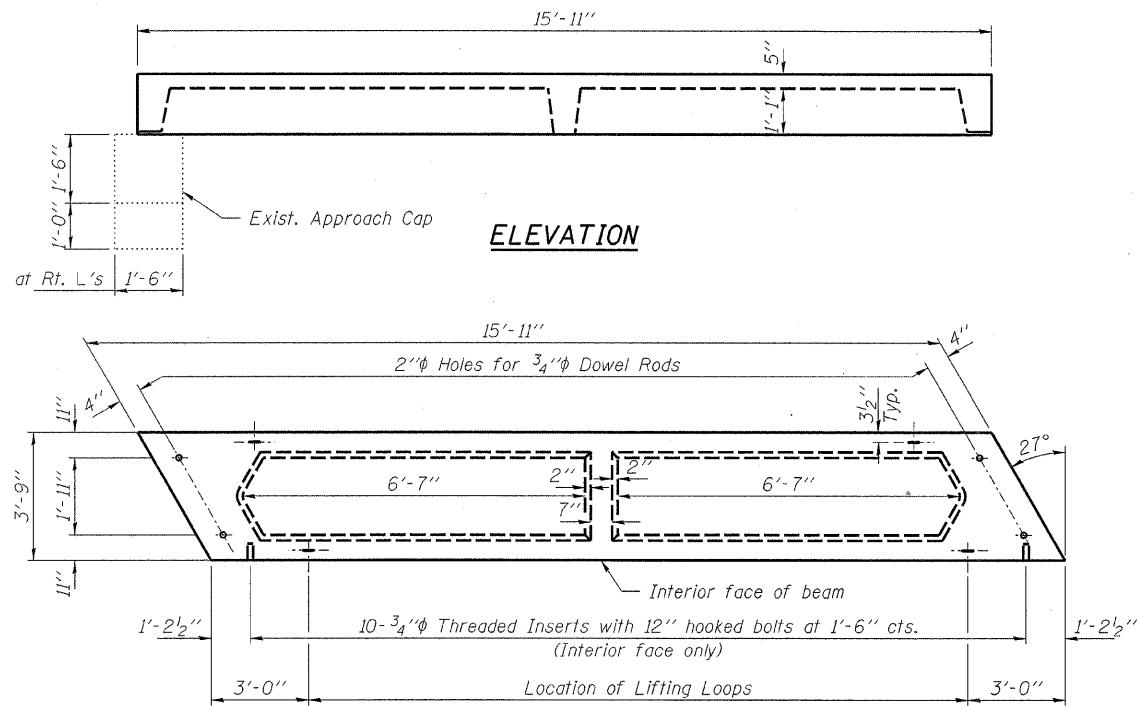
SUPERSTRUCTURE DETAILS

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

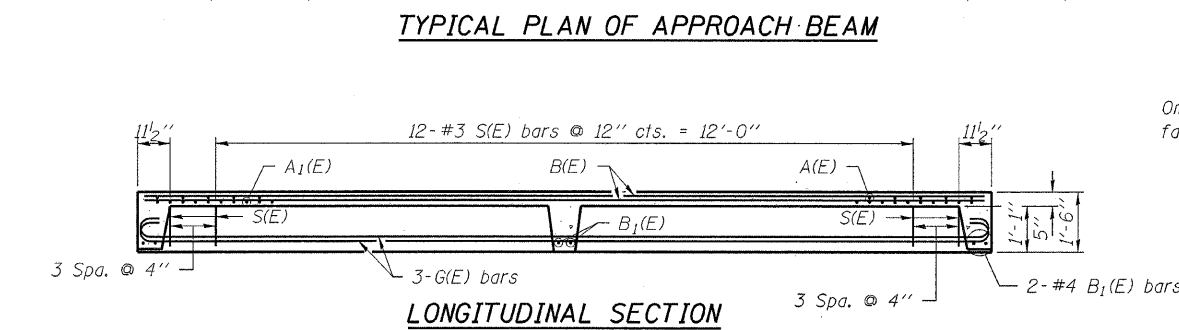
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 15 SHEETS
F.A.P. 782	115BR-2	Hardin	83	55	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #78026

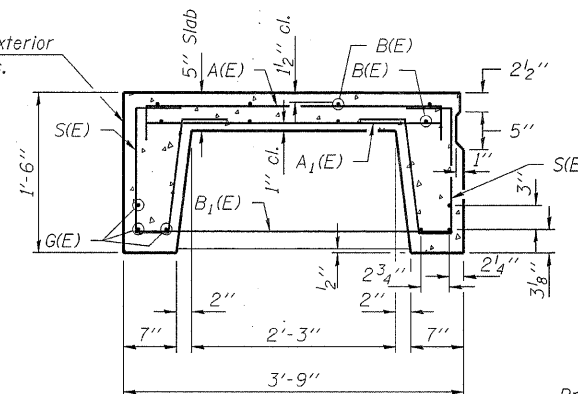


NOTES

Lifting loops shall be 2-1/2" ϕ -270 ksi strands, as shown.
Reinforcing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the slabs. Cleaning shall be done by sandblasting the keyway areas between top of the slab and the bottom edge of the key.
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs.
Required Strength, f_c , shall be 4,500 p.s.i.
See Sheet 2 of 15 for location of rail connectors and additional notes.
Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor rods and 3/4" ϕ hooked bolts is included in contract Unit Price for "Precast Concrete Bridge Slab."
The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.
The beam detailed on this sheet is for use in the Northeast and Southwest corners of the bridge as the PC Concrete Bridge Slabs.

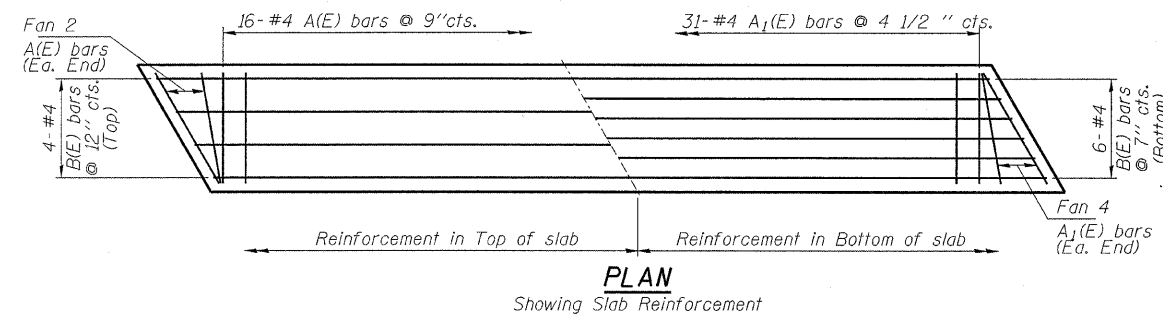


Omit key on exterior face of beams.



SECTION THRU BEAM

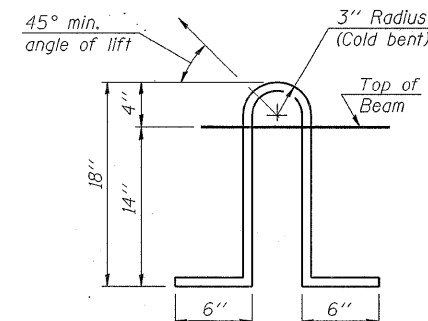
See sheet 2, 7 & 11 of 15 for rail post insert details. See Sheet 7 of 15 for D(E) bar detail.



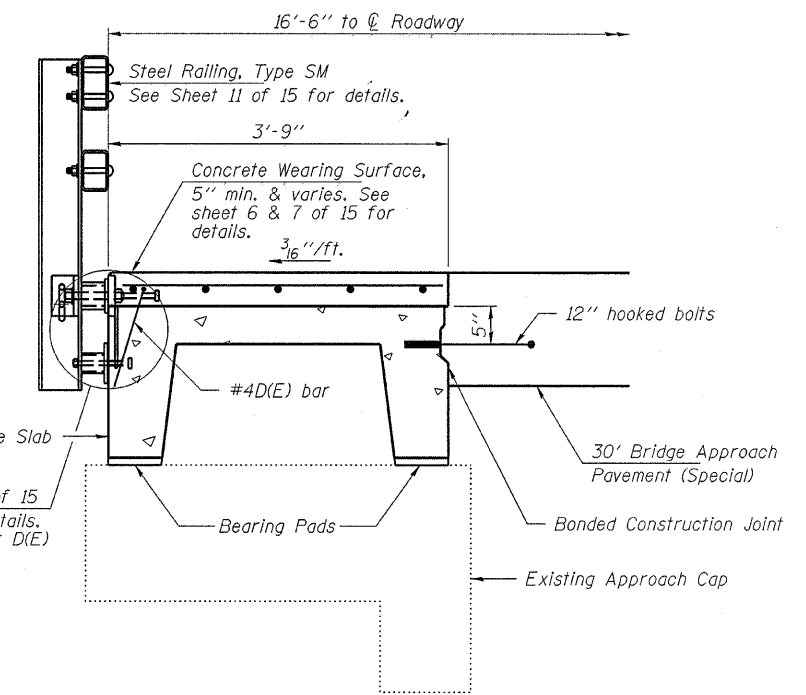
PLAN
Showing Slab Reinforcement

MATERIAL - FOR ONE BEAM

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	20	#4	4'-0"	[U-shape]
A1(E)	39	#4	3'-3"	[Horizontal bar]
B(E)	10	#4	15'-6"	[Horizontal bar]
B1(E)	6	#4	3'-6"	[Horizontal bar]
G(E)	6	#8	18'-0"	[U-shape]
S(E)	38	#3	3'-4"	[U-shape]



LIFTING LOOP DETAIL



PROPOSED CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Concrete Bridge Slab	Sq. Ft.	120

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

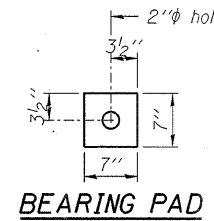
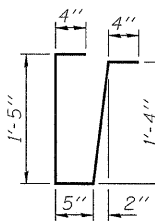
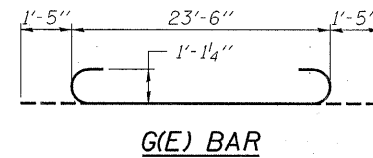
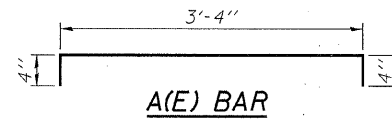
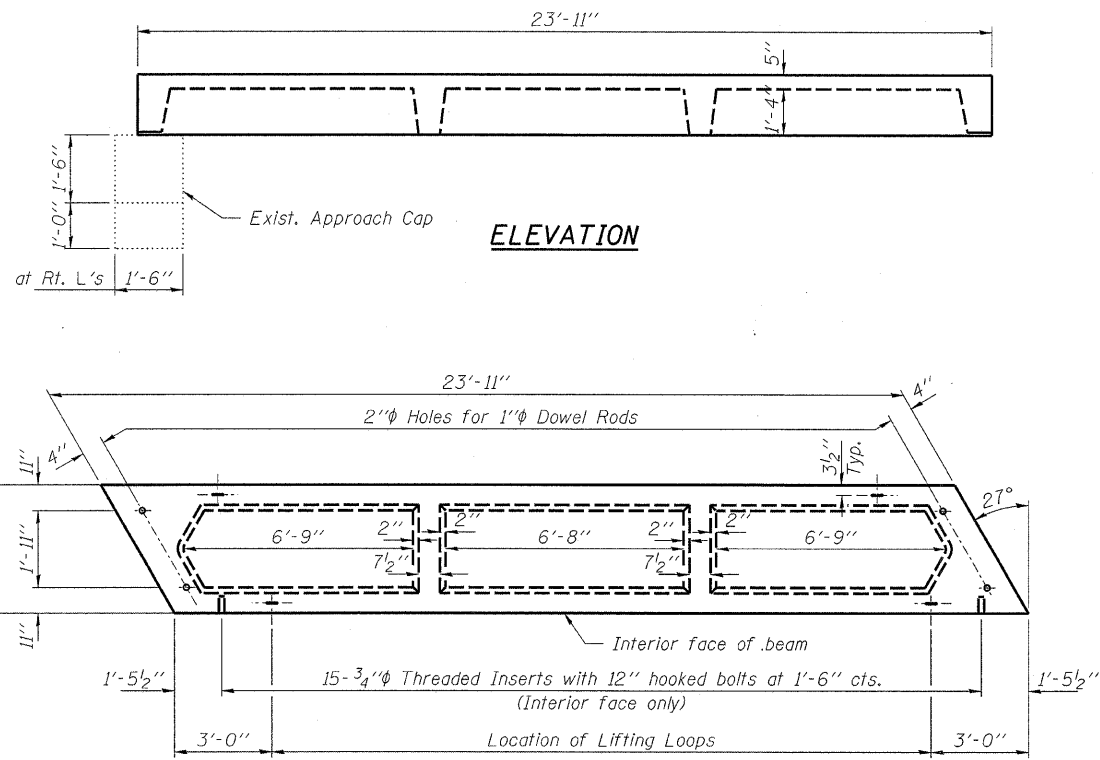
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

APPROACH DETAILS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 15 SHEETS
F.A.P. 782	115BR-2	Hardin	83	56	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

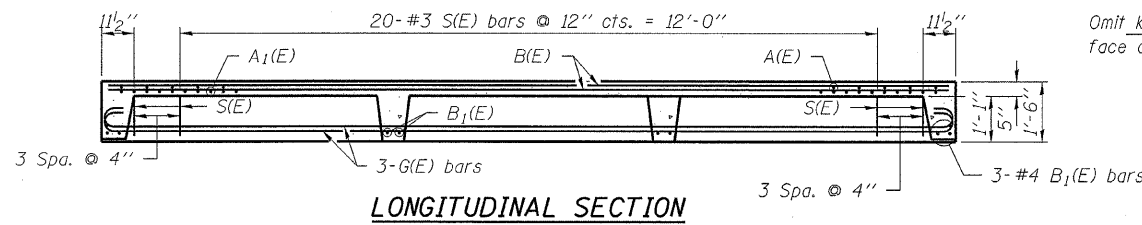
Contract #78026



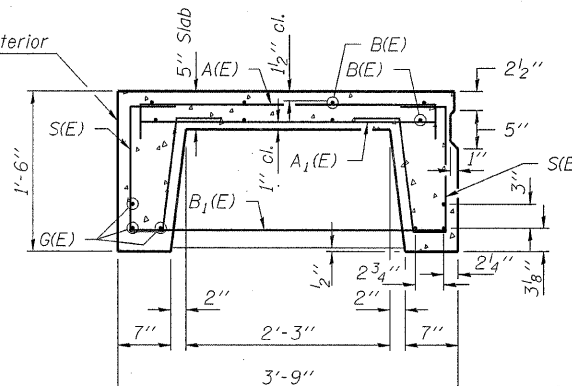
NOTES

Lifting loops shall be 2-1/2" ϕ -270 ksi strands, as shown.
Reinforcing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Bearing Pad shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the slabs. Cleaning shall be done by sandblasting the keyway areas between top of the slab and the bottom edge of the key.
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast concrete bridge slabs.
Required Strength, f'c, shall be 4,500 p.s.i.
See Sheet 2 of 15 for location of rail connectors and additional notes.
Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor rods and 3/4" ϕ hooked bolts is included in contract Unit Price for "Precast Concrete Bridge Slab."
The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.
The beam detailed on this sheet is for use in the Northwest and Southeast corners of the bridge as the PC Concrete Bridge Slabs.

TYPICAL PLAN OF APPROACH BEAM

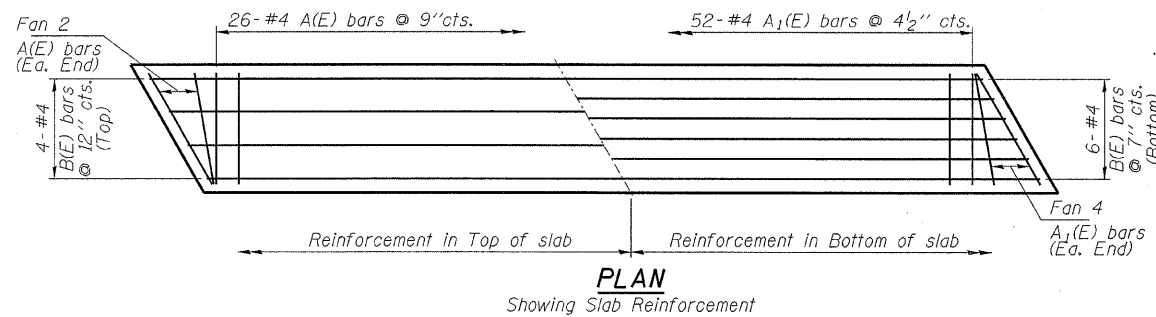


Omit key on exterior face of beams.



SECTION THRU BEAM

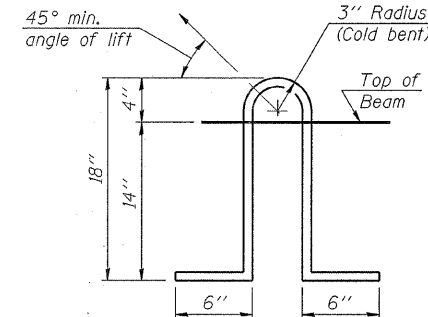
See sheet 2, 7 & 11 of 15 for rail post insert details. See Sheet 7 of 15 for D(E) bar detail.



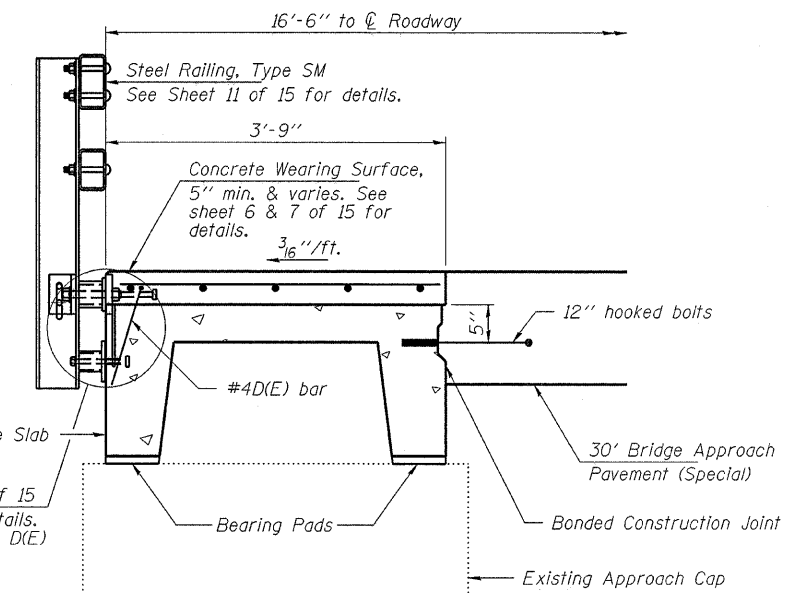
PLAN
Showing Slab Reinforcement

MATERIAL - FOR ONE BEAM

BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	30	#4	4'-0"	[]
A1(E)	60	#1	3'-3"	[]
B(E)	10	#4	23'-6"	[]
B1(E)	8	#4	3'-6"	[]
G(E)	6	#9	26'-4"	[]
S(E)	54	#3	3'-10"	[]



LIFTING LOOP DETAIL



PROPOSED CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Concrete Bridge Slab	Sq. Ft.	180

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

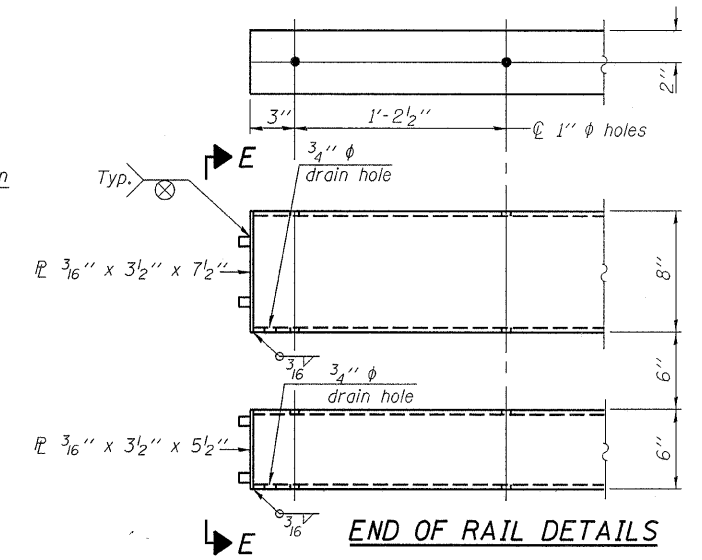
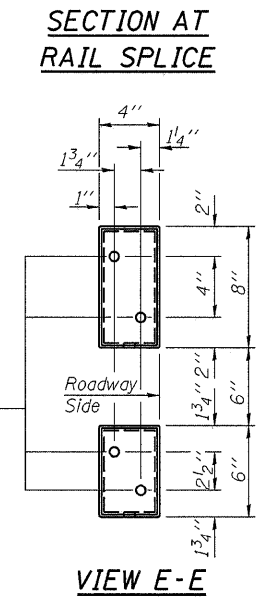
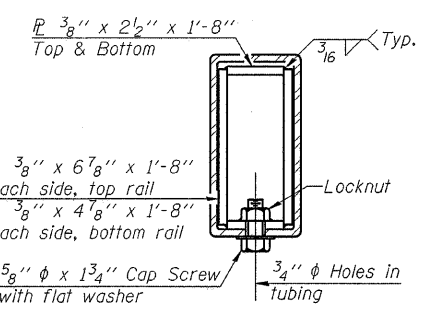
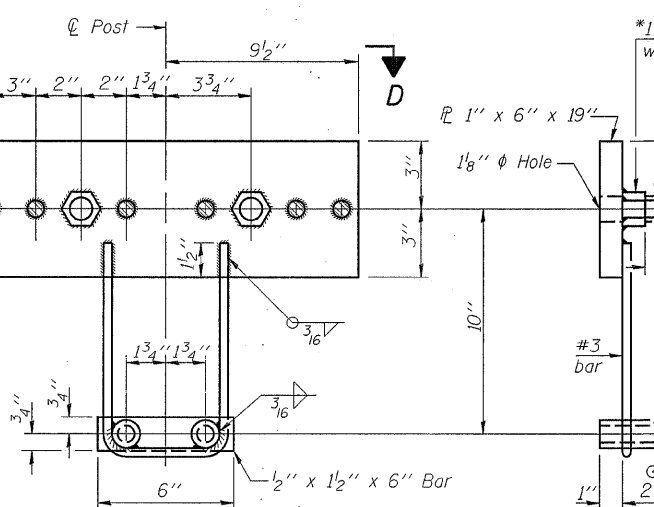
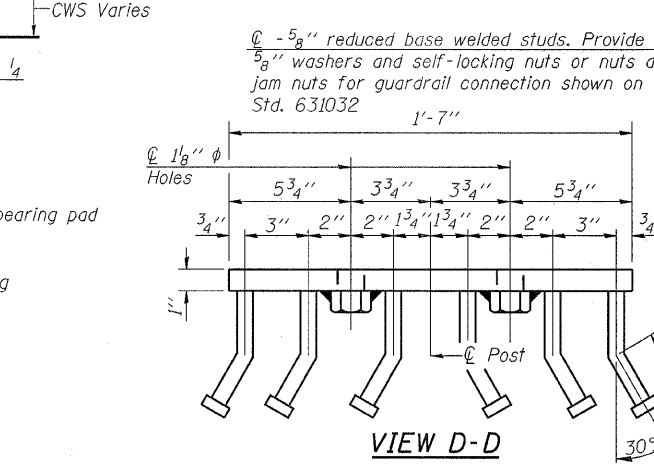
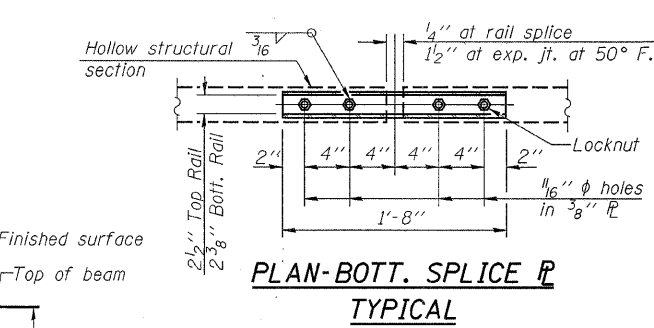
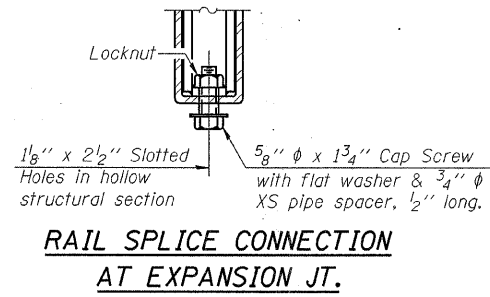
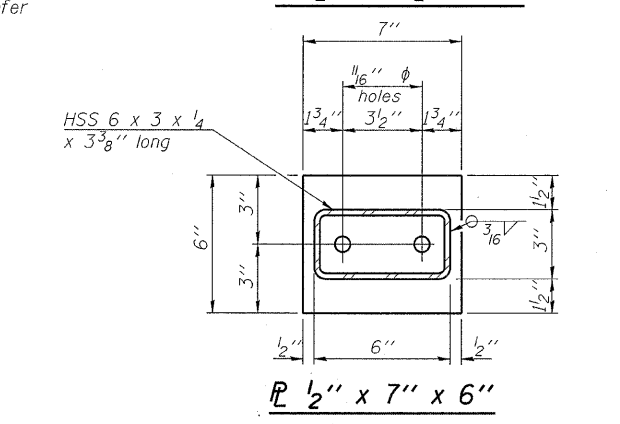
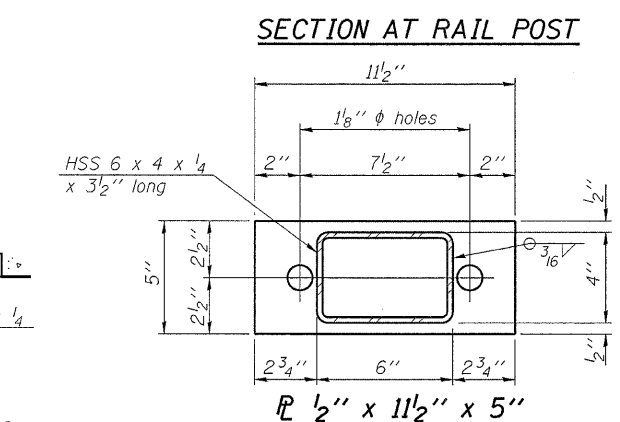
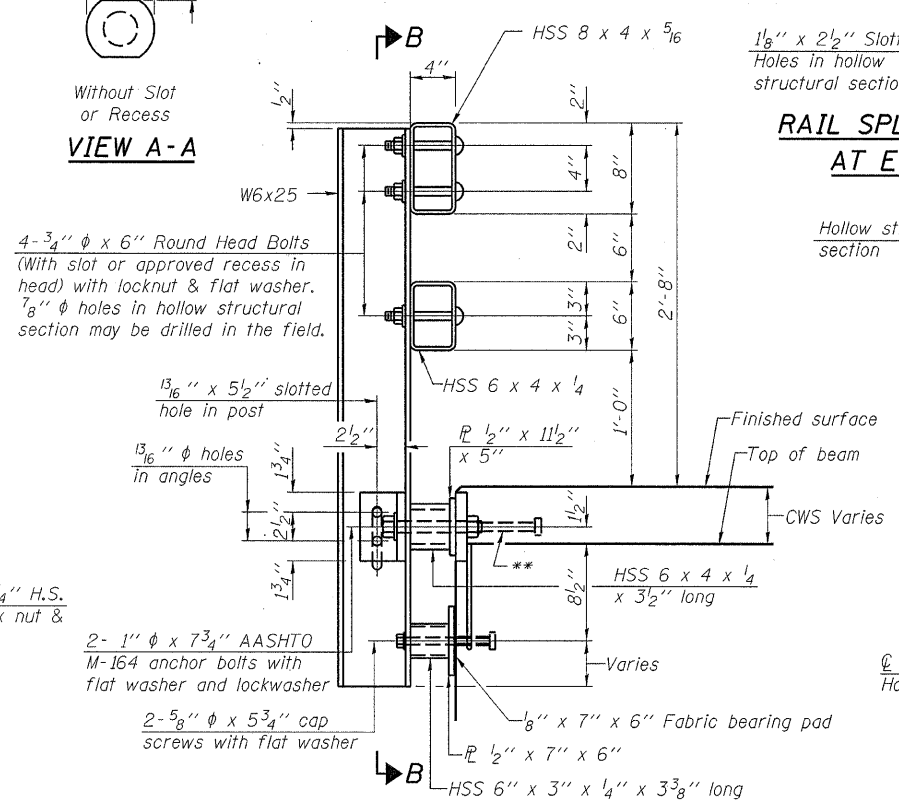
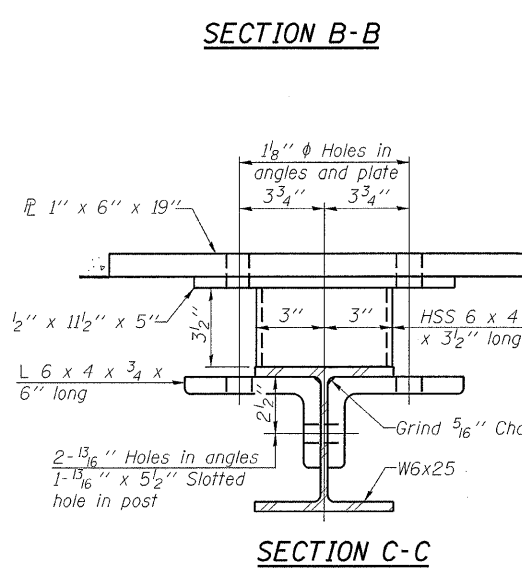
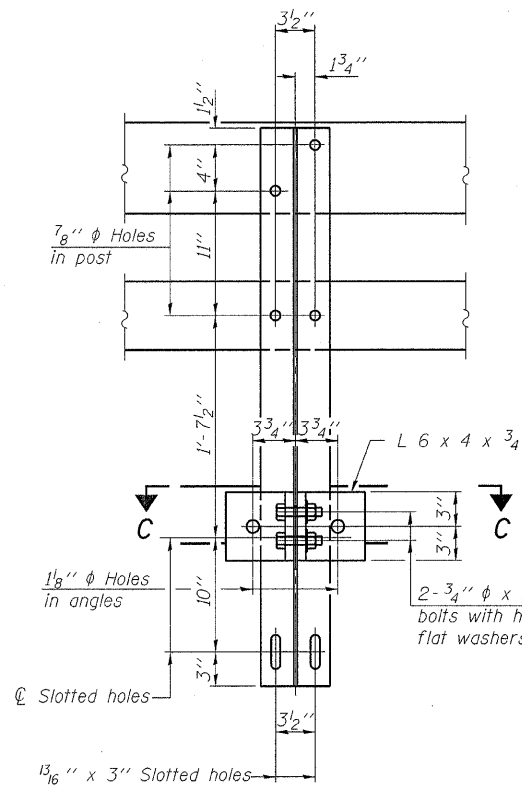
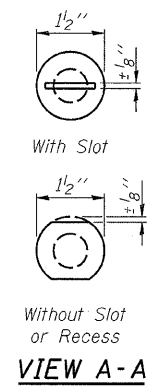
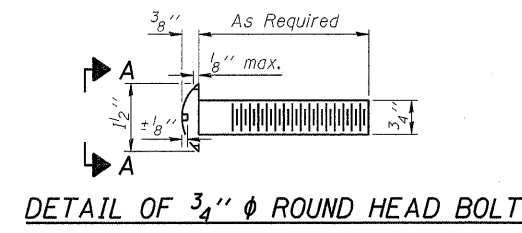
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

APPROACH DETAILS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
F.A.P. 782	115BR-2	Hardin	83	57	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026



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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	178.2

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

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

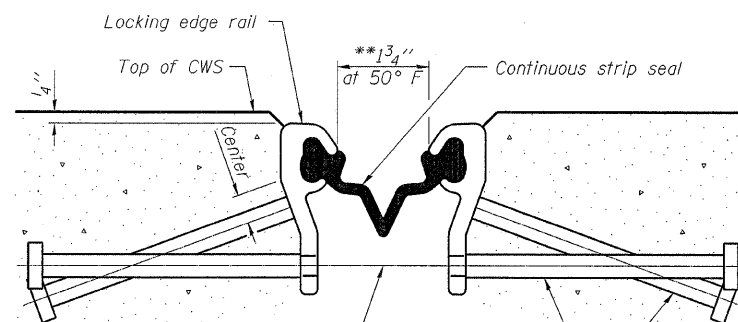
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	58
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
15 SHEETS

Contract #78026

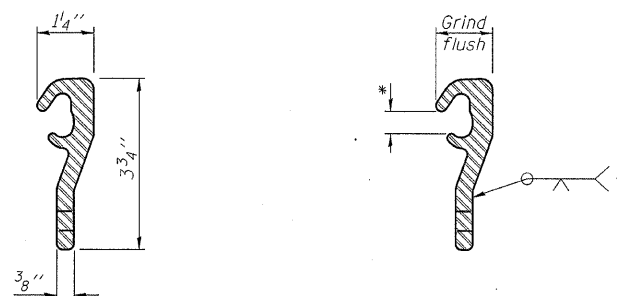
- * Omit weld at seal opening.
- ** When joint is fixed, dimension is set at 1 1/2".



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

Place 1/2" ϕ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**



LOCKING EDGE RAIL

LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

The cost of Structural Steel shall be included in the item Preformed Joint Strip Seal.

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Preformed Joint Strip Seal	Foot	37

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXPANSION JOINT
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A.P. 782	115BR-2	Hardin	83	60	15 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #78026


NOTES


See Sheet 8 of 15 for Sections Thru Abutment views and additional reinforcement details for abutment Hatch-Block and Approach Footing.

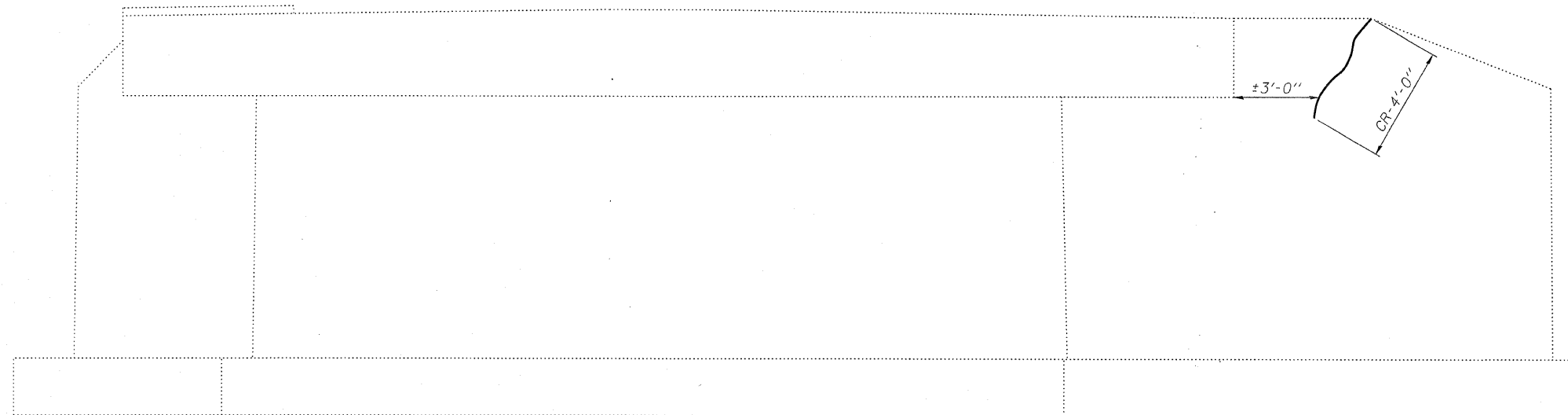
The existing abutment bearing seat is to be inspected by the Engineer after deck beam removal. Deteriorated concrete areas shall be repaired if deemed necessary using Structural Repair of Concrete (Depth equal to or less than 5"). Concrete Sealer shall be applied to Concrete Repair areas. Cost included in Concrete Repair item.

Abutment Structural Repair of Concrete areas and Crack Repair lengths are estimated from a 10/24/2007 inspection.

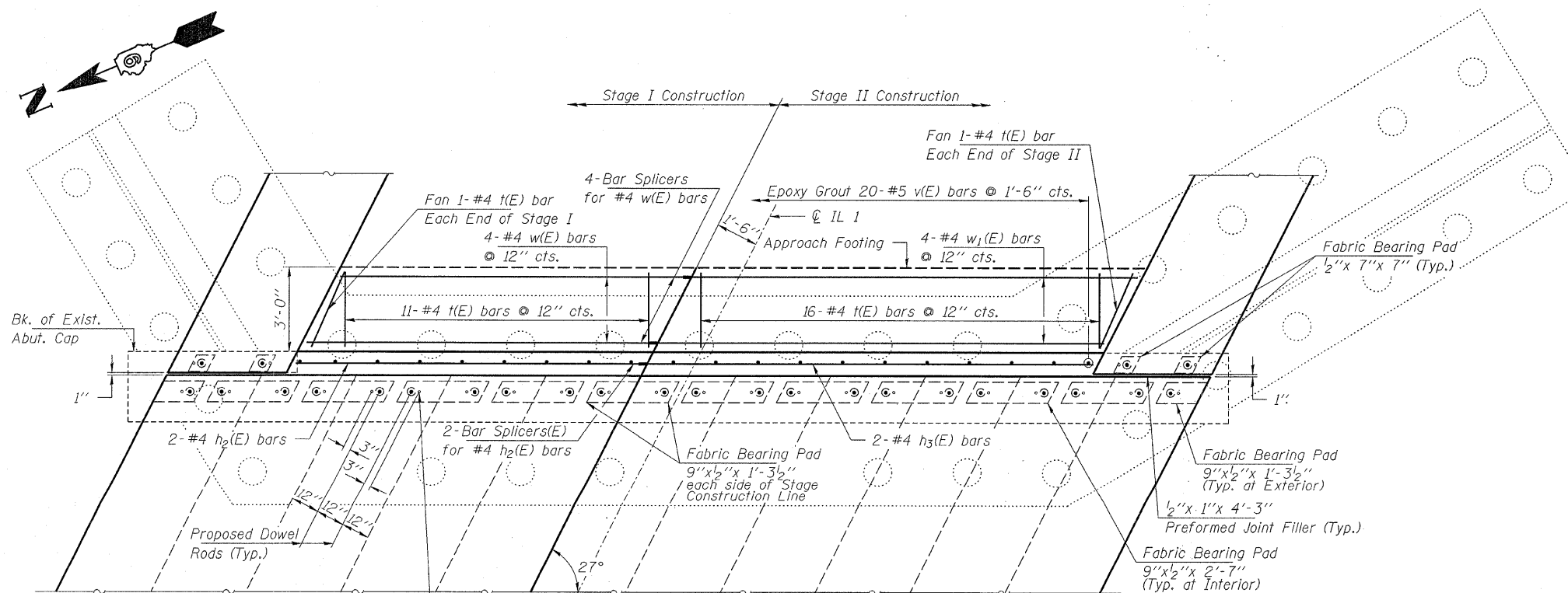
REPAIR LEGEND

 Requires Structural Repair of Concrete (Depth Equal to or less than 5")

 Requires Epoxy Crack Injection



ELEVATION
(Looking East)



PLAN

BILL OF MATERIAL - EAST ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h ₂ (E)	2	#4	12'-6"	—
h ₃ (E)	2	#4	15'-10"	—
t(E)	31	#4	2'-9"	—
v(E)	20	#5	3'-4"	—
w(E)	4	#4	12'-6"	—
w ₁ (E)	4	#4	15'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	240
Epoxy Crack Injection			Foot	4
Concrete Structures			Cu. Yd.	2.7

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

HLR

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EAST ABUTMENT
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	61
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
15 SHEETS

Contract #78026

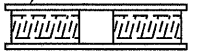
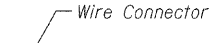
The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



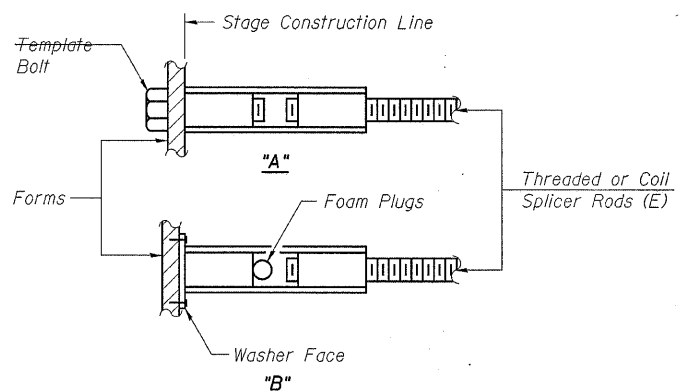
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

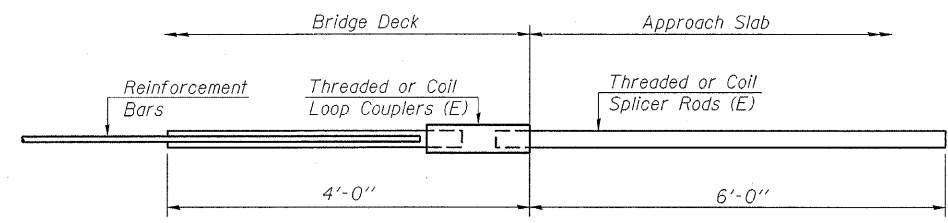
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E): Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

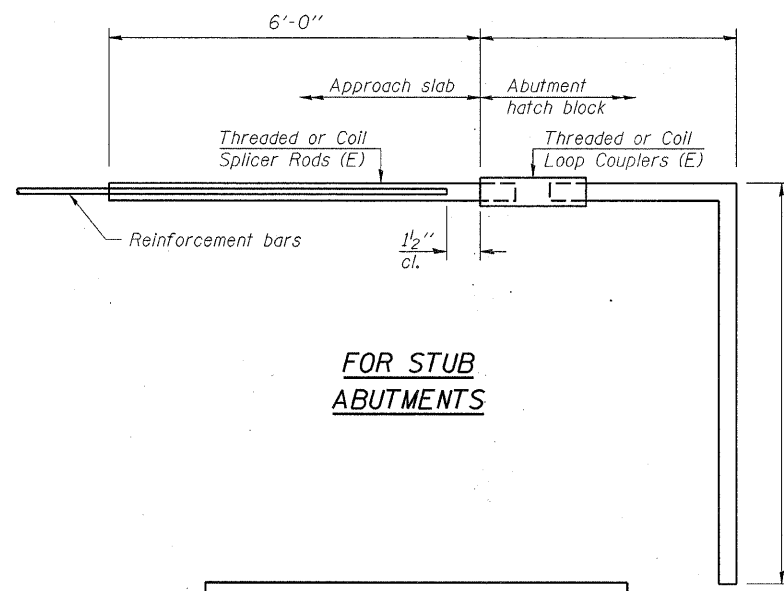
- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_f$
 - Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_f$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_f = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



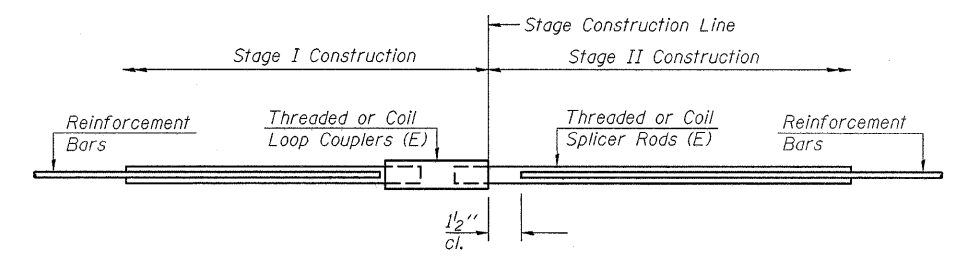
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#4	49	Conc. Wearing Surface
#4	8	Approach Footings
#4	4	Abutment Hatch Blocks

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

BAR SPLICER ASSEMBLY DETAILS

IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	62
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
10 SHEETS

Contract #78026

B.M. R.R. Spike in R.P. 4011 Sta 1015+35 Elev 352.53
Existing Structure Built as S&W R.R. No. 110A
Sta 1015+72 in 1933 Superstr. RC Deck Girder with
Substr. RC Closed Abutments. Contractor shall remove
existing superstr. using staged construction.
No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115BR-2	HARDIN	83	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

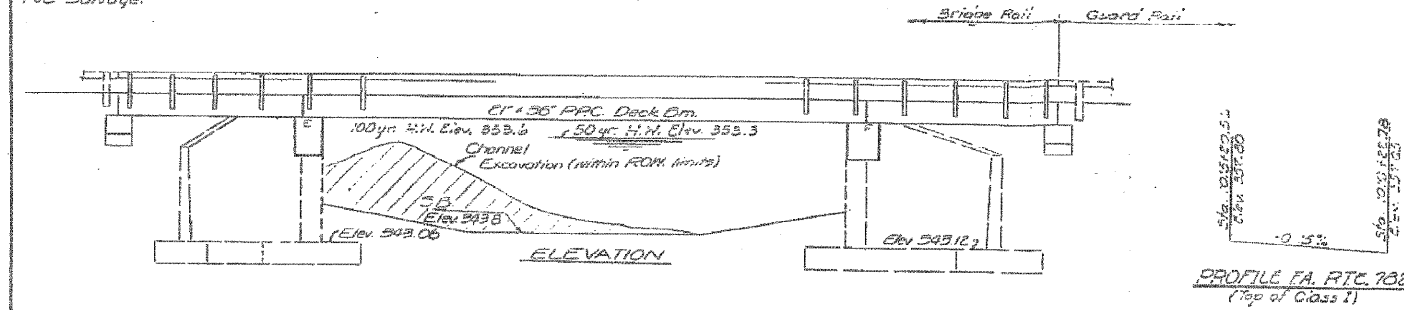
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
The top surface of the beams shall be finished in accordance with Article 503D6 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

Expansion guards which are not cast in the precast unit shall be fabricated and erected in accordance with Article 503D7(c) of the Standard Specifications and are included in quantity of structural steel.

All structural steel shall be shop primed with two coats of basic lead silico chromate paint.

Expansion bolts shall consist of self drilling expansion anchors and 3/4" x 12" hooked bolts.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

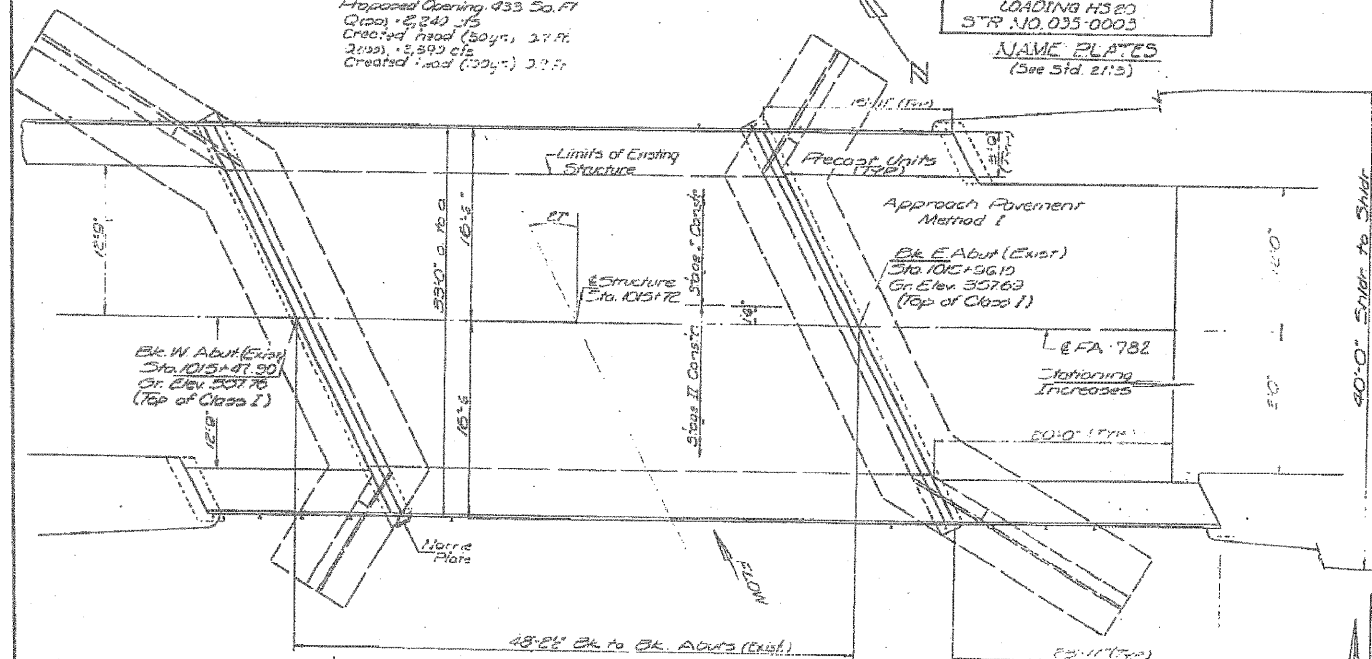


WATERWAY INFORMATION

Drainage Area: 2120 Acres
Character:ully. cov. wooded cultivated
Reach Opening: 433 Sq Ft
Present Opening: 433 Sq Ft
Proposed Opening: 433 Sq Ft
Clear: 4,240 L/S
Crossed Road (50yrs): 27 ft.
Cross: 5,890 cfs
Created Road (30yrs): 27 ft.

STA. 1015+72
REBUILT BY
STATE OF ILLINOIS
F.A. R.T.C. 782 SEC. 115A-DR-2
PROJ. BR-F-782(6)
LOADING HS20
STR. NO. 035-0003

NAME PLATES
(See Std. 2113)



TOTAL BILL OF MATERIAL

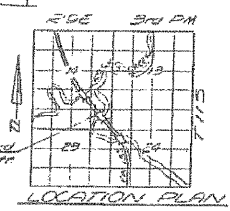
Item	Unit	Super	Sub.	Total
Class 2 Concrete	Cu. Yds	2.0	82.3	84.3
Reinforcement Bars	Lbs	120	4090	4210
Concrete Removal	Cu. Yds		12	12
Expansion Bolts (3/4")	Each		36	36
Precast Concrete Bridge Sills	Sq. Ft.	288		288
Precast Prestressed Conc. Deck Slab (27')	Sq. Ft.	1398		1398
Steel Railings Type 3	Lin. Ft.	178		178
3 1/2" Conc. Surf. Course Class 1	Tons	26		26
Structural Steel	Lbs	8600		8600
Removal of Steel Superstructure	Each	1		1
Waterproofing Membrane System	Sq. Yds	178		178
Name Plates	Each	1		1
Preformed Joint Sealer 2 1/2"	Lin. Ft.	37		37
Temporary Bridge Rail	Lin. Ft.	112		112
Furford Cement Mortar Finishing Coe	Lin. Ft.	681		681

* Bx. to Bx. Exst. Abut.

DESIGNED: J.P.	EXAMINED: J.P.
CHECKED: J.P.	PASSED: W.C. Baumann
DRAWN: J.P.	APPROVED: [Signature]
CHECKED: J.P.	

FIELD UNITS	PRECAST PRESTRESSED UNITS
f = 1000 psi	f = 3000 psi
E = 20,000 psi	E = 4000 psi
f _s = 20,000 psi	f _s = 150,000 psi (Strands)
f _s = 75,000 psi	f _s = 180,000 psi (Strands)
n = 10	

Design Specifications 1969 AASHTO (as applicable)
LOADING HS20-44



GENERAL PLAN & ELEVATION
FA. R.T.C. 782 OVER TRUB OF ROCK CREEK
F.A. R.T.C. 782 SEC. 115A-DR-2
HARDIN COUNTY
STA. 1015+72

035-0003

REV. J.S. 3-11-71 REV. J.S. 9-28-71

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/09
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

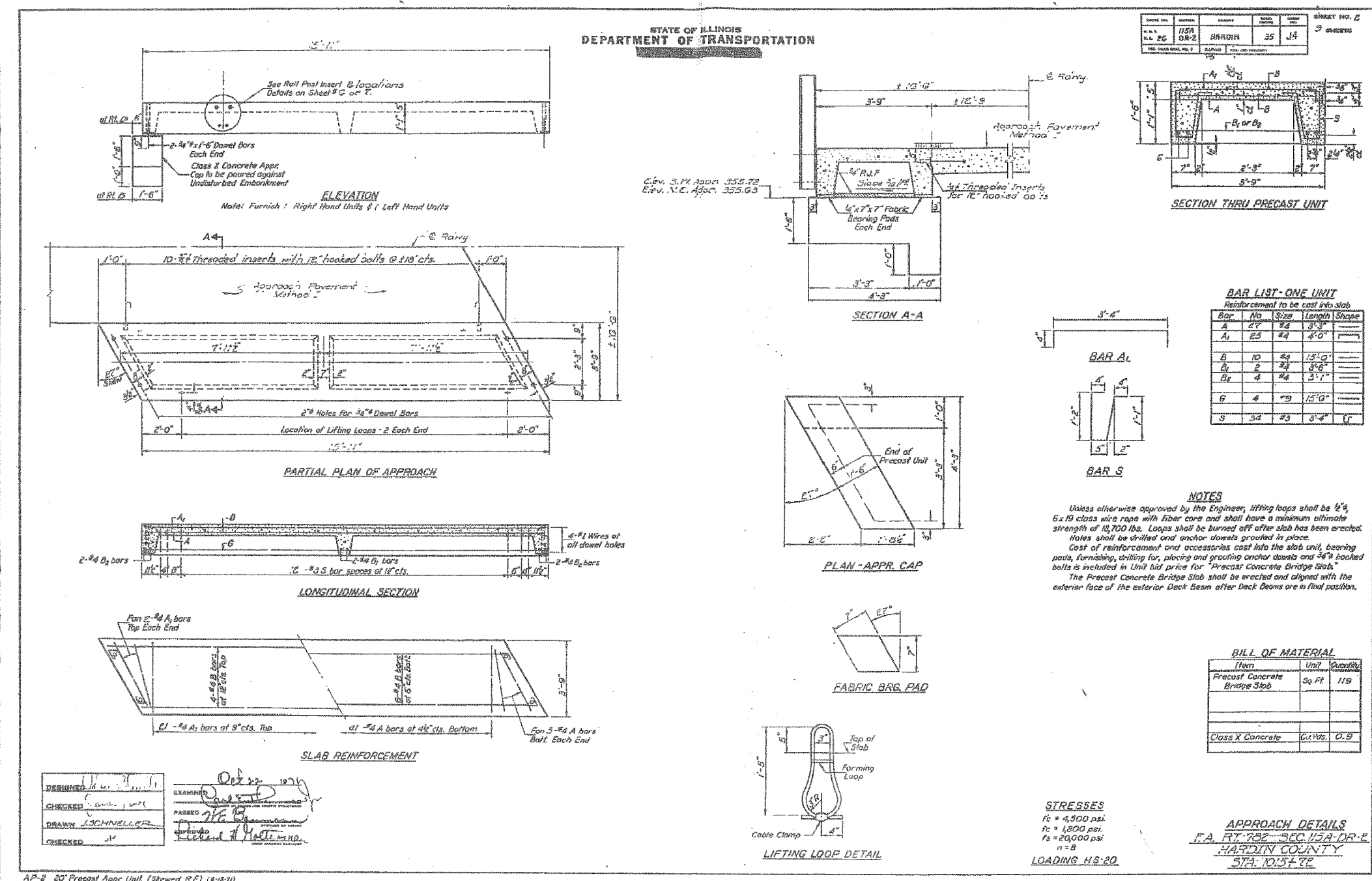
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	63
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2

10 SHEETS

Contract #78026



HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

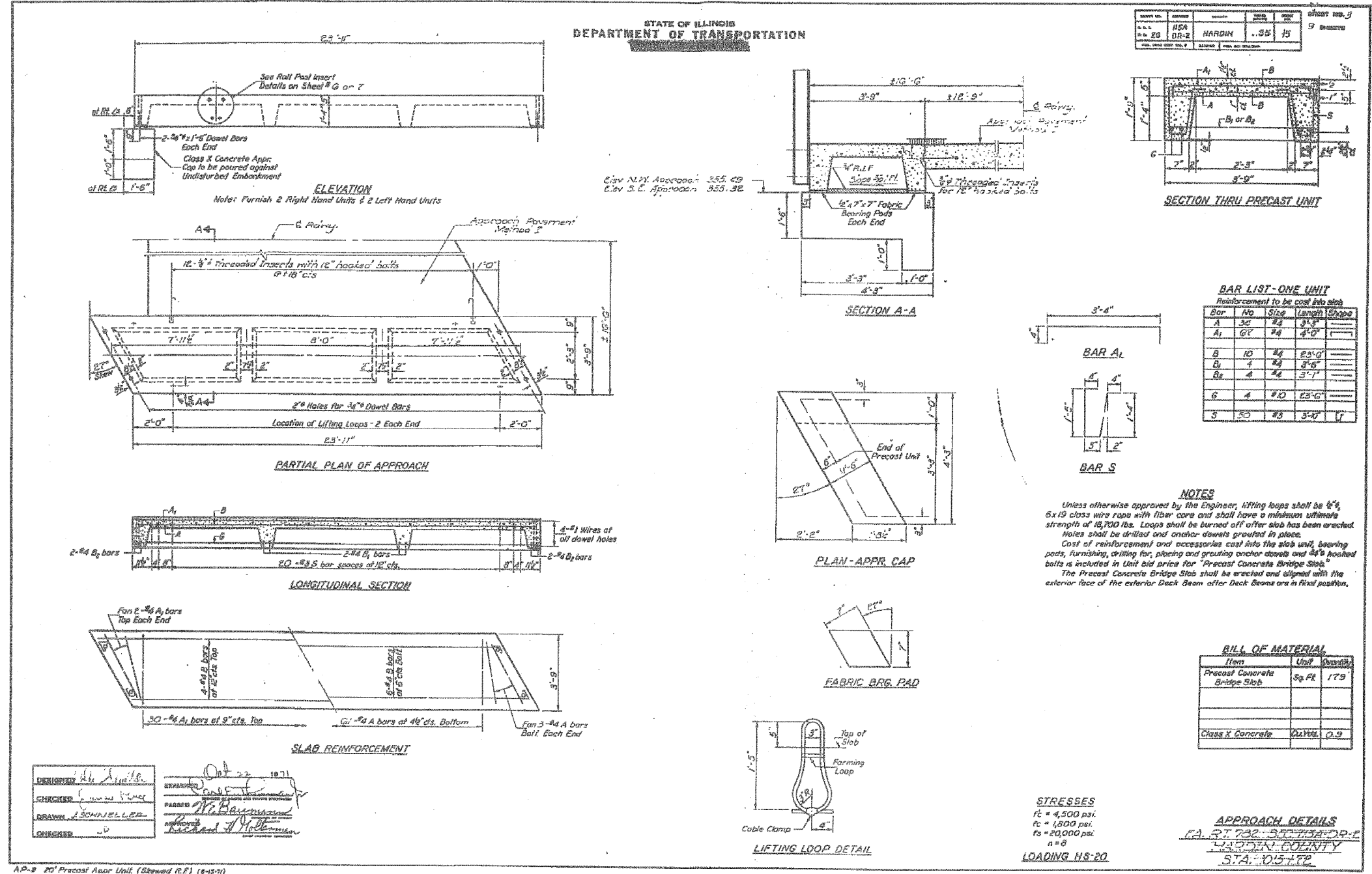
EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STA. SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83 64	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
10 SHEETS

Contract #78026



A.P.-B 20' Precast Approach Unit. (Skewed R.F.) (8-15-71)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

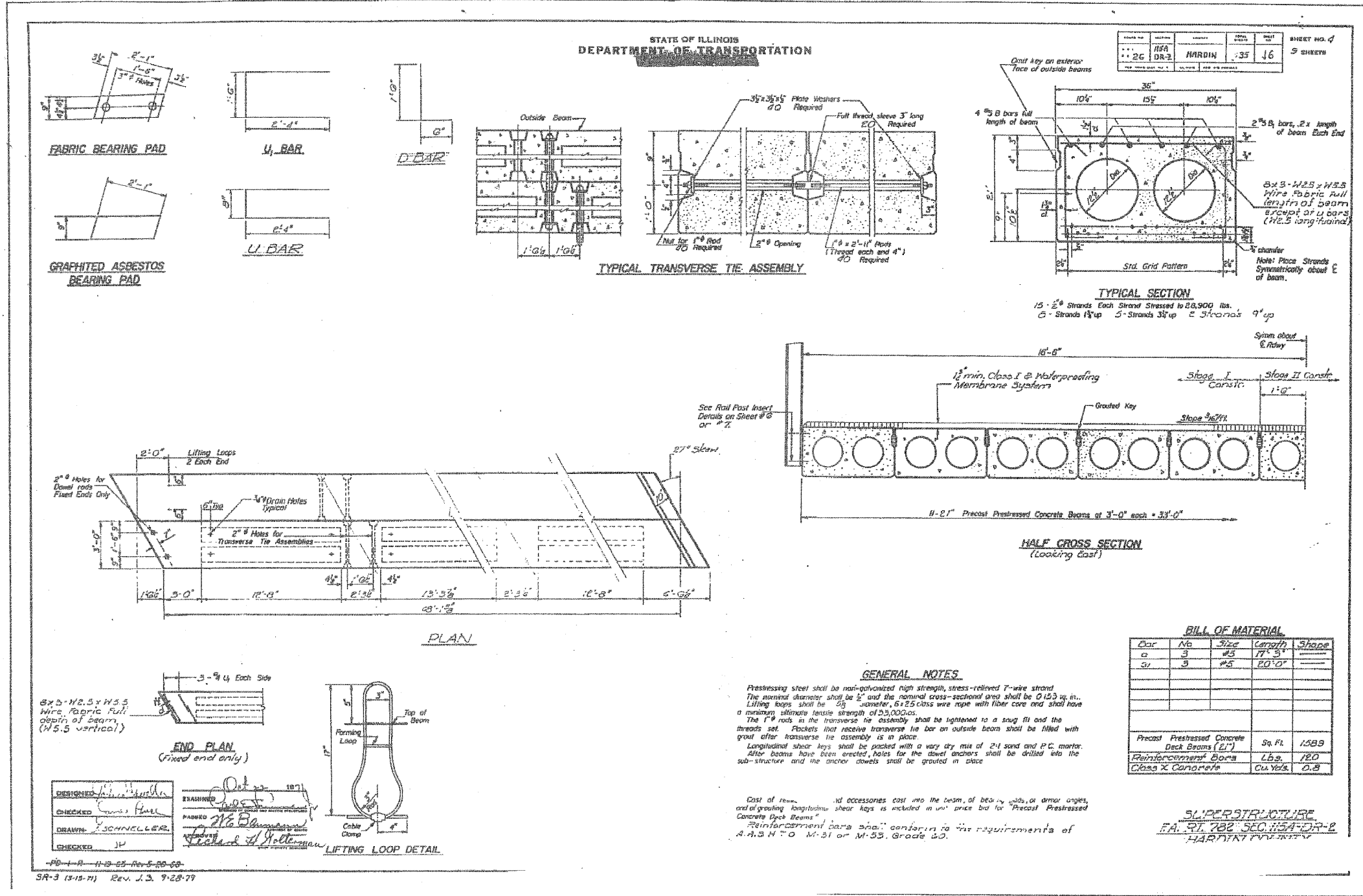
EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	65
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
10 SHEETS

Contract #78026



DATE	BY	CHECKED	SCALE	SHEET NO.
11/26/72	DR-2	HARDIN	35	16

15 - 2" Strands Each Strand Stressed to 28,500 lbs.
 5 - Strands 1 1/2" up 5 - Strands 3 1/2" up 2 Strands 9" up

BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	5	#5	17'-5"	
sv	5	#5	20'-0"	
Precast Prestressed Concrete Deck Beams (21')		Sq. Ft.	1589	
Reinforcement Bars		Lbs.	720	
Class X Concrete		Cu. Yds.	0.8	

GENERAL NOTES

Pressing steel shall be non-polymerized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3/8" diameter, 6x25 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 20,000 lbs. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place. Longitudinal shear keys shall be packed with a very dry mix of 2-1 sand and P.C. mortar. After beams have been erected, holes for the steel anchors shall be drilled into the sub-structure and the anchor dowels shall be grouted in place.

Cost of reinforcement and accessories cast into the beam of beam shall be included in unit price bid for "Precast Prestressed Concrete Deck Beams". Reinforcement bars shall conform to the requirements of A.A.H.T.O. M-31 or M-53, Grade 60.

SUPERSTRUCTURE
 F.A.P. 782 SECTION 115A-DR-2
 HARDIN COUNTY

DESIGNED	DATE	BY
CHECKED	11/26/72	DR-2
DRAWN		
CHECKED		

SR-3 (12-15-71) Rev. 1.3. 7-28-79

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400
 ELGIN • SPRINGFIELD
 PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
 IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+72
 STRUCTURE NO. 035-0003

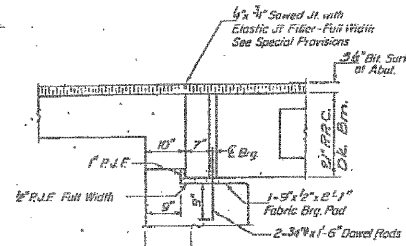
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-2	COUNTY Hardin	TOTAL SHEETS 83	SHEET NO. 66	SHEET NO. 5 10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

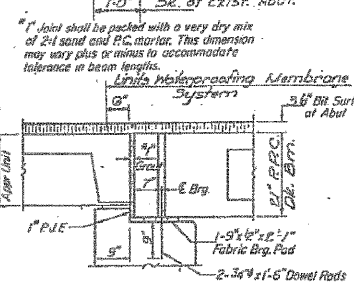
Contract #78026

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

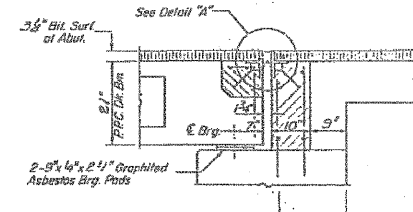
DATE 1/15/72	BY J.S.	CHECKED J.S.	DESIGNED J.S.	PROJECT NO. 12-98-0016-1	SHEET NO. 17	SHEETS 9 SHEETS
-----------------	------------	-----------------	------------------	-----------------------------	-----------------	--------------------



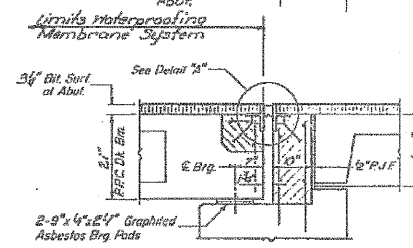
SECTION THRU E. ABUT.
AT & ROWLY
10' S.E. of Exist. Abut.



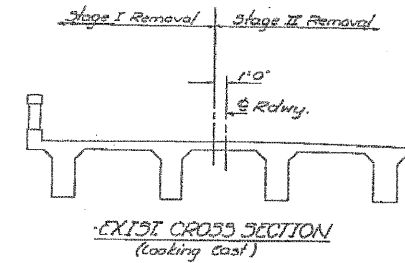
SECTION THRU E. ABUT.
AT OUTSIDE BEAM



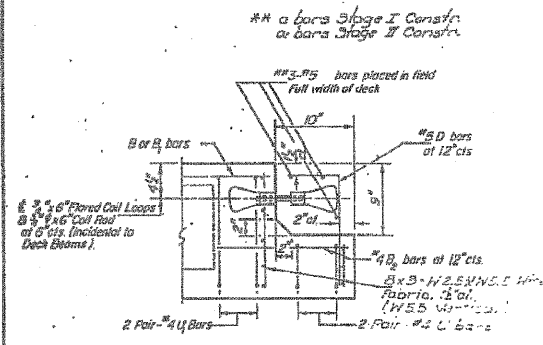
SECTION THRU W. ABUT.
AT & ROWLY



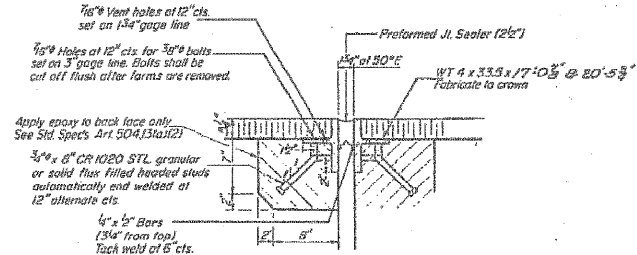
SECTION THRU W. ABUT.
AT OUTSIDE BEAM



EXIST. CROSS SECTION
(Looking East)

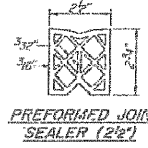


END OF BEAM (EXP. END)
(Dimensions are of right angles)



DETAIL "A"

NOTE: Dimensions are of right angles.
Hatched areas to be poured after beams have been erected and joints grouted.
Ends of beams shall be aligned at the expansion joints. Any lineal variation in the beam lengths shall be placed at the fixed joint. See End of Beam Detail for reinforcement.
Hatched Area Quantities on the beam are billed with superstr. sheet #1, on the abutment are billed with abutment sheet #2.



PREFORMED JOINT SEALER (2 1/2")

DESIGNED J.S.	EXAMINED J.S.	10
CHECKED J.S.	PLANNED J.S.	
DRAWN J.S.	APPROVED J.S.	
CHECKED J.S.	DIRECTOR OF HIGHWAYS	

W-SR-D (2-17-75)
Rev. J.S. 7-23-77

SUPERSTRUCTURE DETAILS
F.A.P. 782 SEC. 115BR-2
HARDIN COUNTY
STA. 1015+72

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400
ELGIN • SPRINGFIELD
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

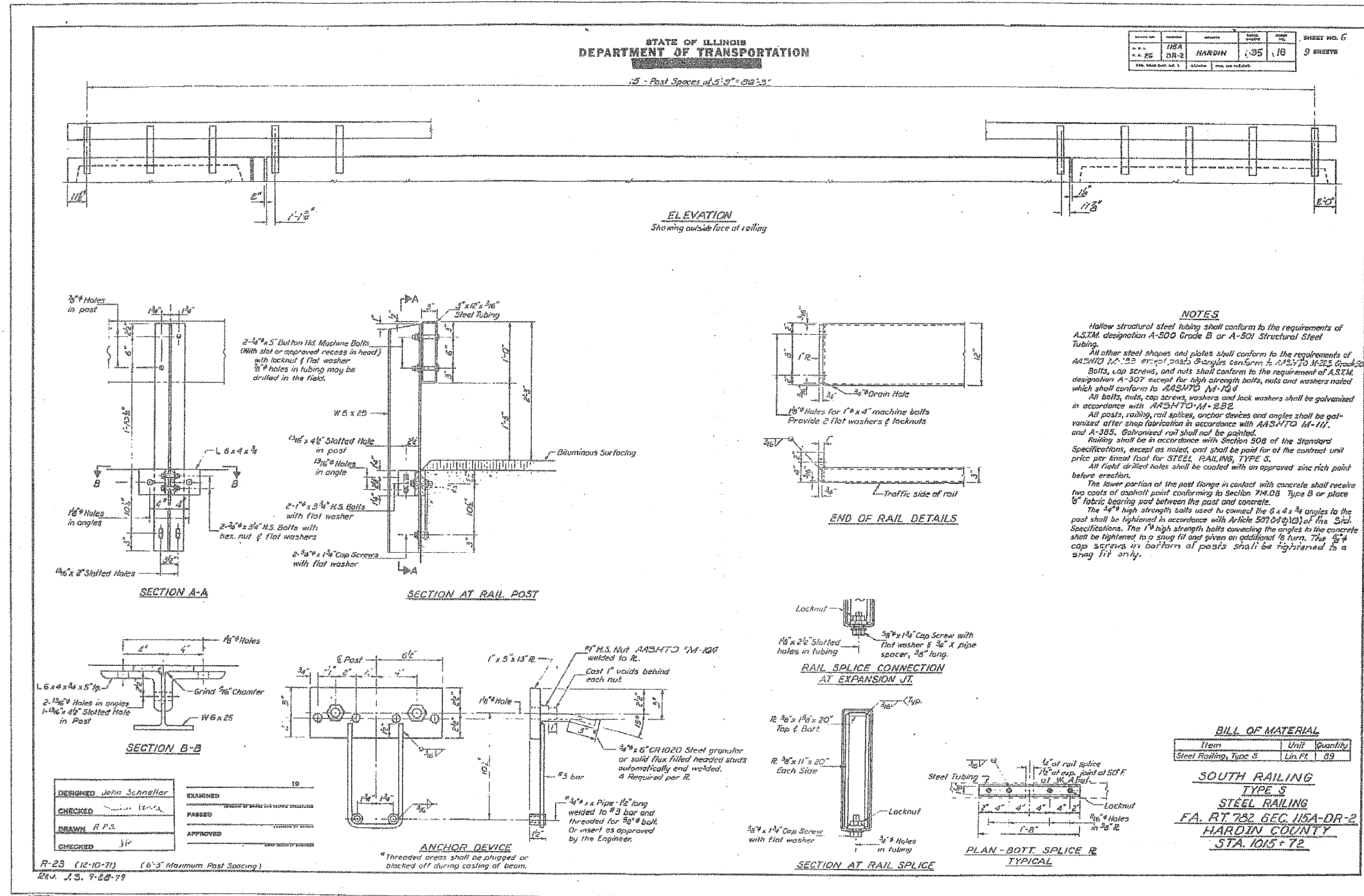
EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	67
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
10 SHEETS

Contract #78026



HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

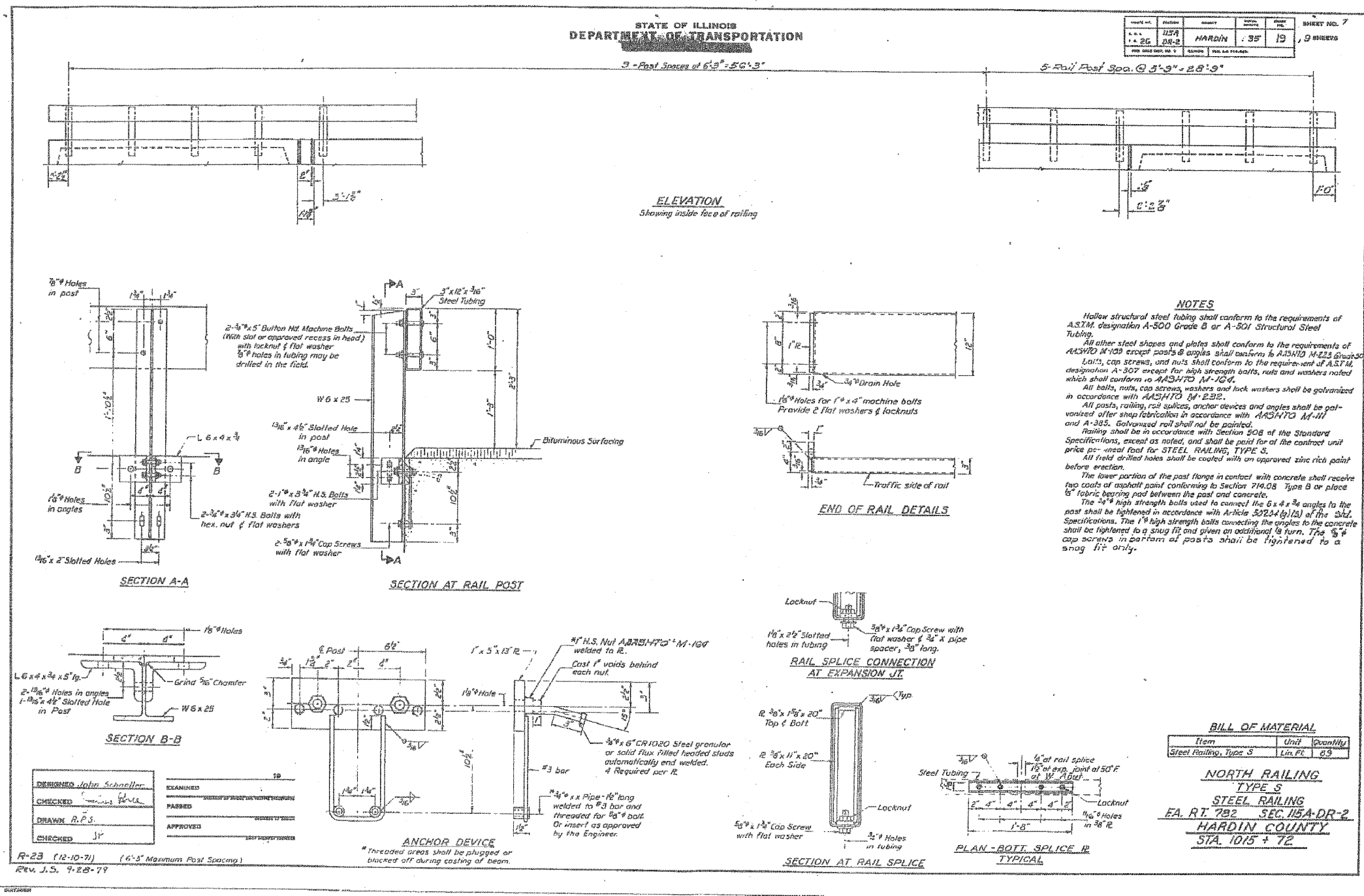
EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-2	COUNTY Hardin	SHEET NO. 83	SHEET NO. 68
FED. ROAD DIST. NO. 7		ILLINOIS		

SHEET NO. 7
10 SHEETS

Contract #78026



HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 548-3400

ELGIN • SPRINGFIELD

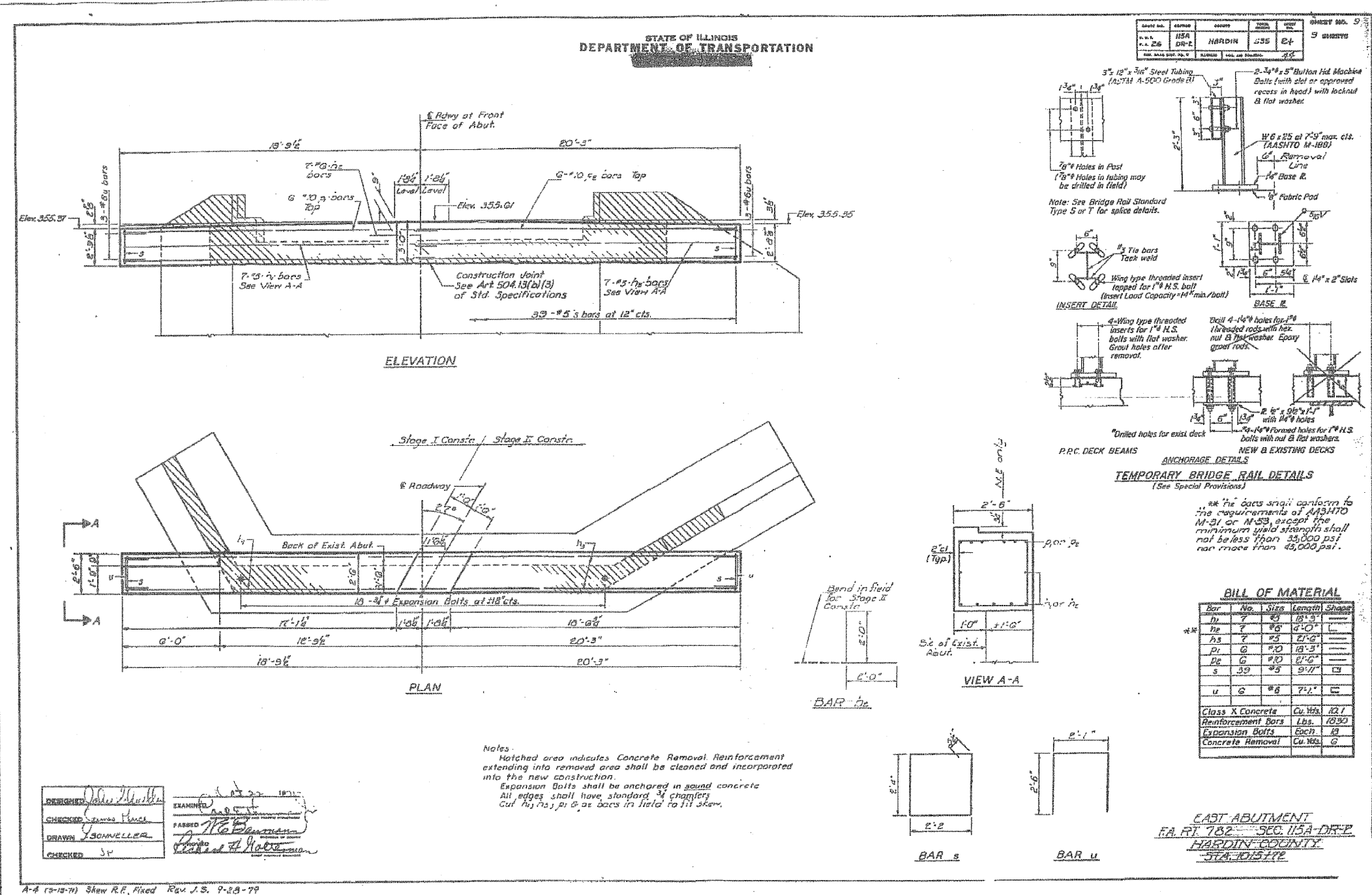
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO.
F.A.P. 782	115BR-2	Hardin	83	70	10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78026



DESIGNER: *[Signature]*
 CHECKED: *[Signature]*
 DRAWN: *[Signature]*
 EXAMINED: *[Signature]*
 PASSED: *[Signature]*
 CHECKED: *[Signature]*

Notes:
 Hatched area indicates Concrete Removal Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
 Expansion Bolts shall be anchored in sound concrete.
 All edges shall have standard 3/4 chamfers.
 Cut h3, h5, p1 & s2 bars in field to fit skew.

A-4 (3-15-77) Skew R.F., fixed Rev. J.S. 9-28-79

HAMPTON, LENZINI & RENWICK, INC.
 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 548-3400

ELGIN • SPRINGFIELD

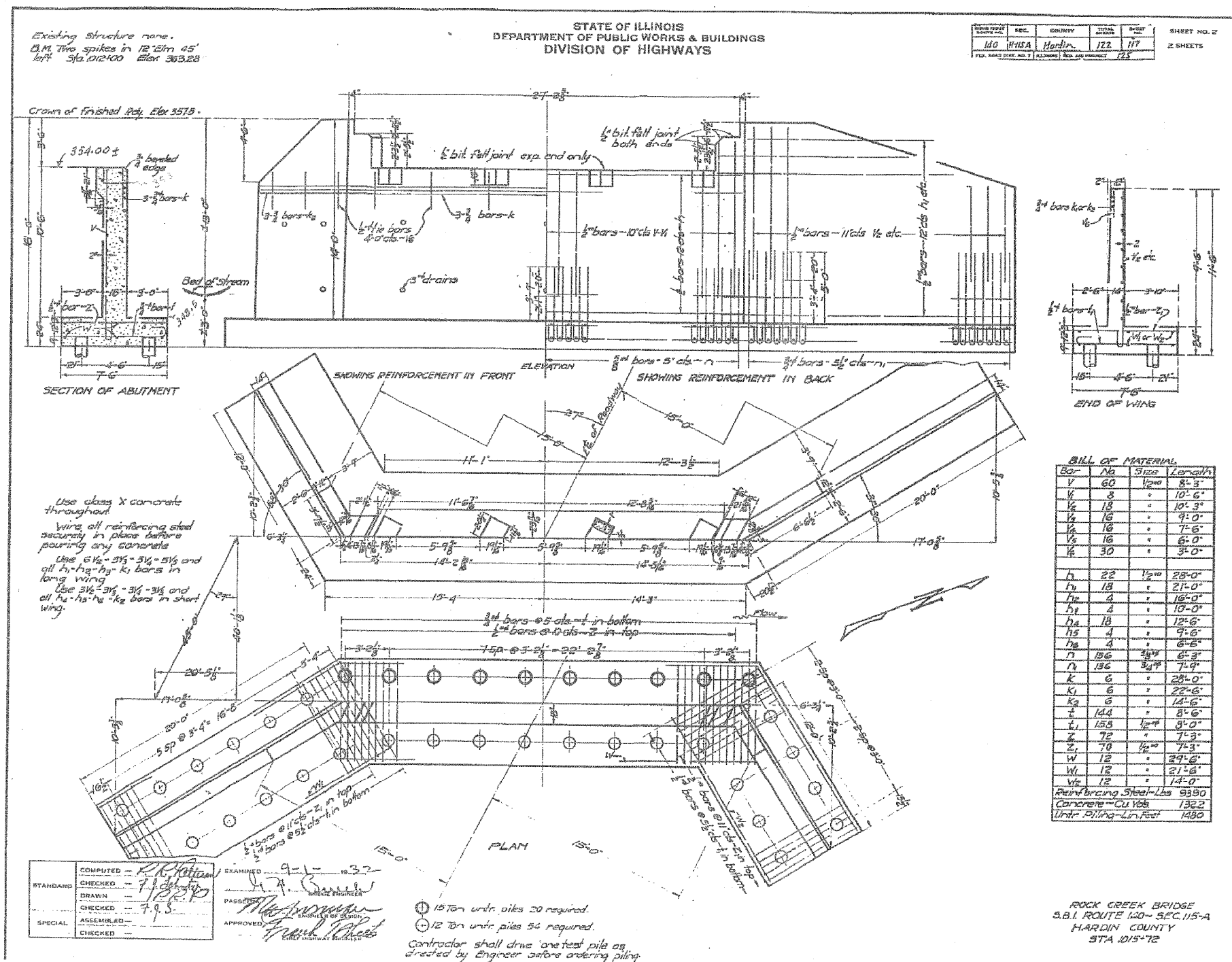
PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
 DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
 IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
 F.A.P. ROUTE 782 / SECTION 115BR-2
 HARDIN COUNTY
 STATION 1015+72
 STRUCTURE NO. 035-0003

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 782	SECTION 115BR-2	COUNTY Hardin	TOTAL SHEETS 83	SHEET NO. 71	SHEET NO. 10 10 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #78026



Existing Structure none.
D.M. Two spikes in 12" dia 45'
1st Sta. 1012+00 Elev. 363.28

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

ROUTE NO. 115	SECTION 115BR-2	COUNTY Hardin	TOTAL SHEETS 122	SHEET NO. 117	SHEET NO. 2 2 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Use class X concrete throughout
Wipe all reinforcing steel securely in place before pouring any concrete
Use 5/8" - 3/4" - 3/4" - 3/4" and all h₁ - h₂ - h₃ - h₄ bars in long wing
Use 3/4" - 3/4" - 3/4" - 3/4" and all h₁ - h₂ - h₃ - h₄ bars in short wing.

COMPUTED - R.R. Hutton
CHECKED - J. J. Smith
DRAWN - J. J. Smith
CHECKED - J. J. Smith
SPECIAL ASSEMBLED -
CHECKED -

EXAMINED - J. J. Smith
PASSED - J. J. Smith
APPROVED - J. J. Smith

15 Ton unit piles 20 required.
12 Ton unit piles 54 required.
Contractor shall drive one test pile as directed by Engineer before ordering piling.

ROCK CREEK BRIDGE
S.B.I. ROUTE 120 - SEC. 115-A
HARDIN COUNTY
STA. 1015+72

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

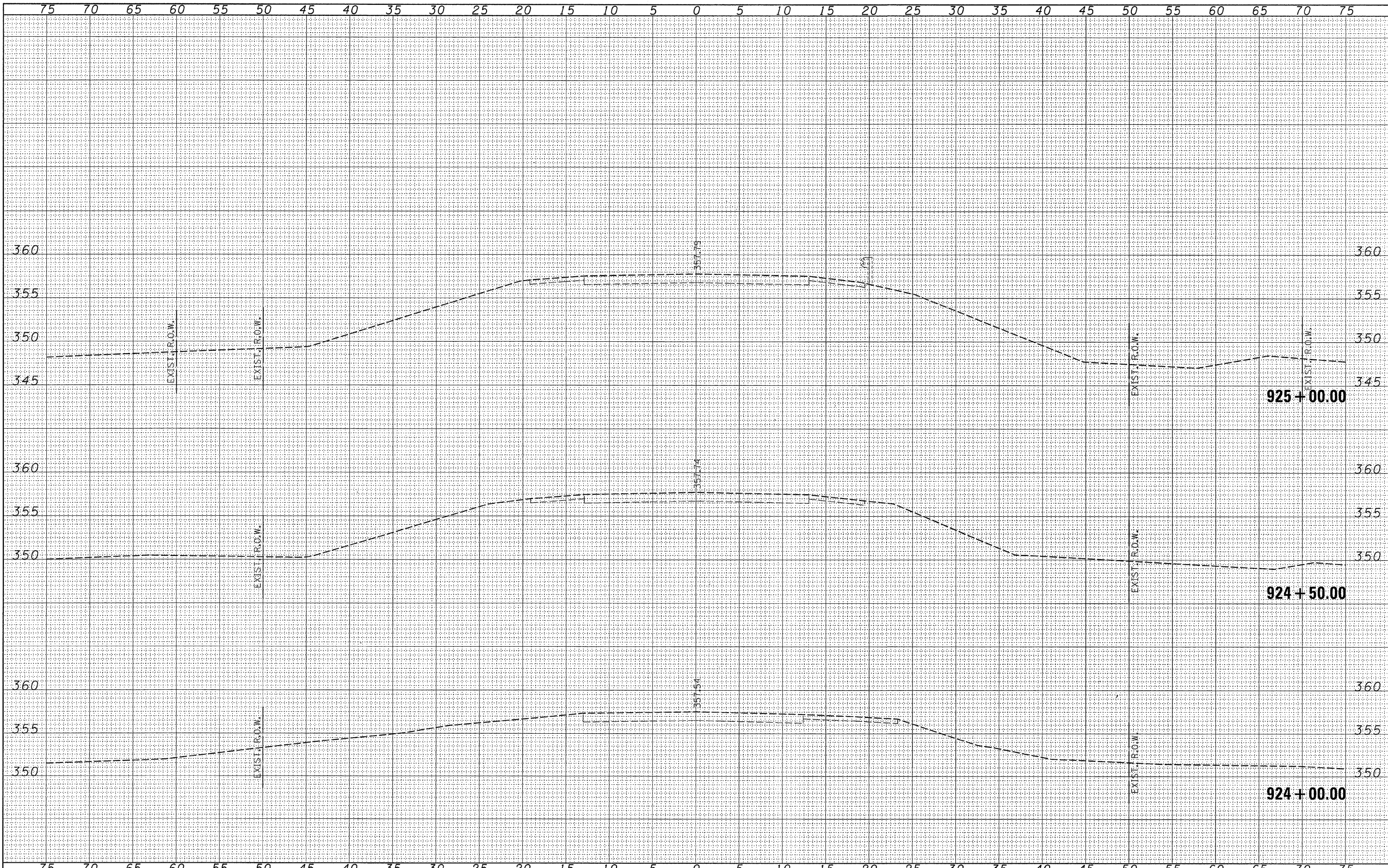
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-98-0016-1 DATE: 01/18/08
DESIGNED: M.D.C. CHECKED: P.S.L. DRAWN: D.T.M.

EXISTING STRUCTURE PLANS
IL. ROUTE 1 OVER BRANCH OF ROCK CREEK
F.A.P. ROUTE 782 / SECTION 115BR-2
HARDIN COUNTY
STATION 1015+72
STRUCTURE NO. 035-0003

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

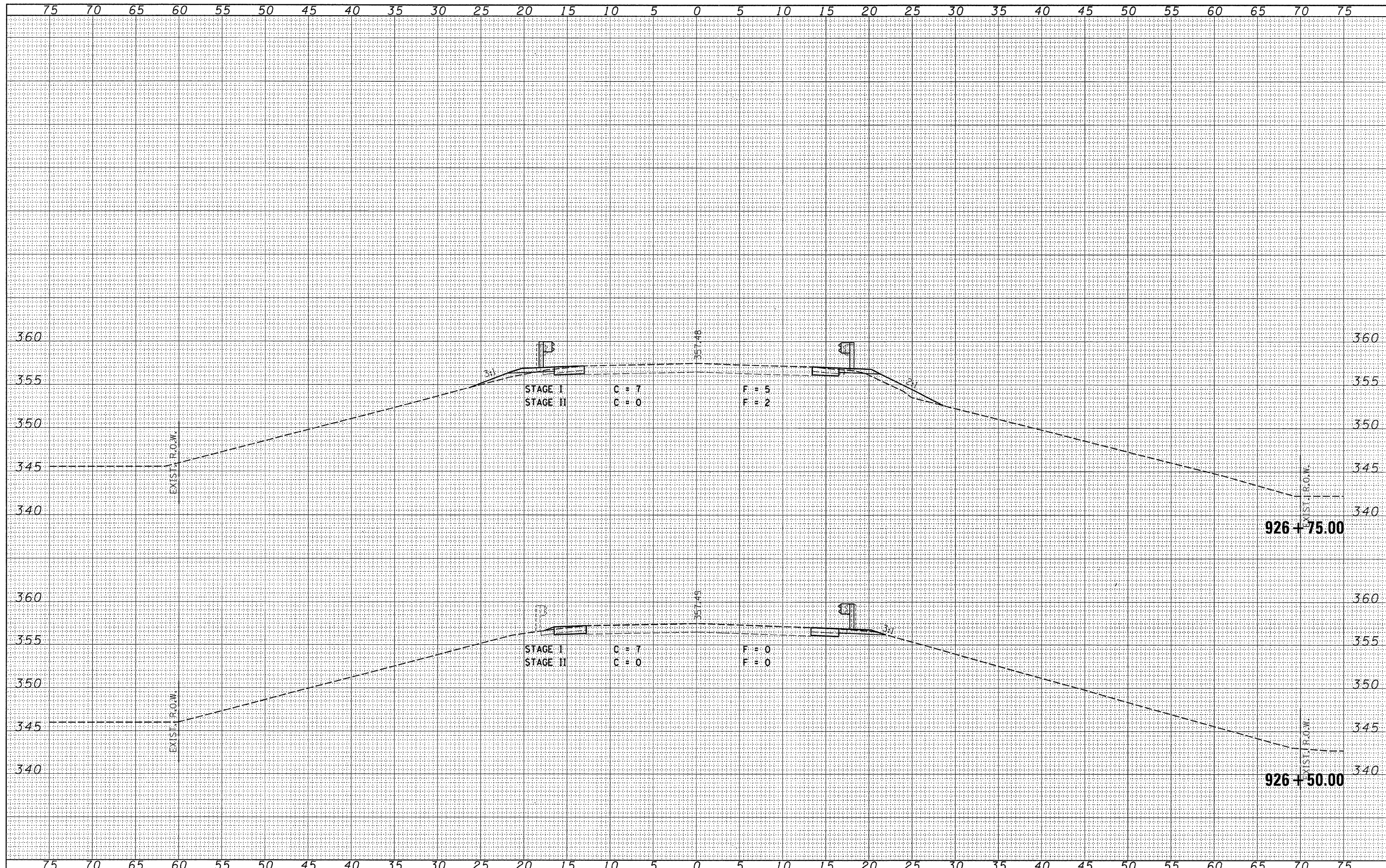
ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS	
	CHECKED	



FILE NAME = 8350801-shr-xs.dgn	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 1 - CROSS SECTIONS			F.A.P. RTE. 782	SECTION 115BR-1	COUNTY HARDIN	TOTAL SHEETS 83	SHEET NO. 72
	PLOT SCALE =	DRAWN -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 924+00.00 TO STA. 925+00.00	CONTRACT NO. 78026		ILLINOIS FED. AID PROJECT		
	PLOT DATE = 1/17/2008	CHECKED -	REVISED -									
		DATE -	REVISED -									

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	



FILE NAME = 0350001-shr-x.s.dgn
 USER NAME =
 PLDT SCALE =
 PLDT DATE = 1/17/2008

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

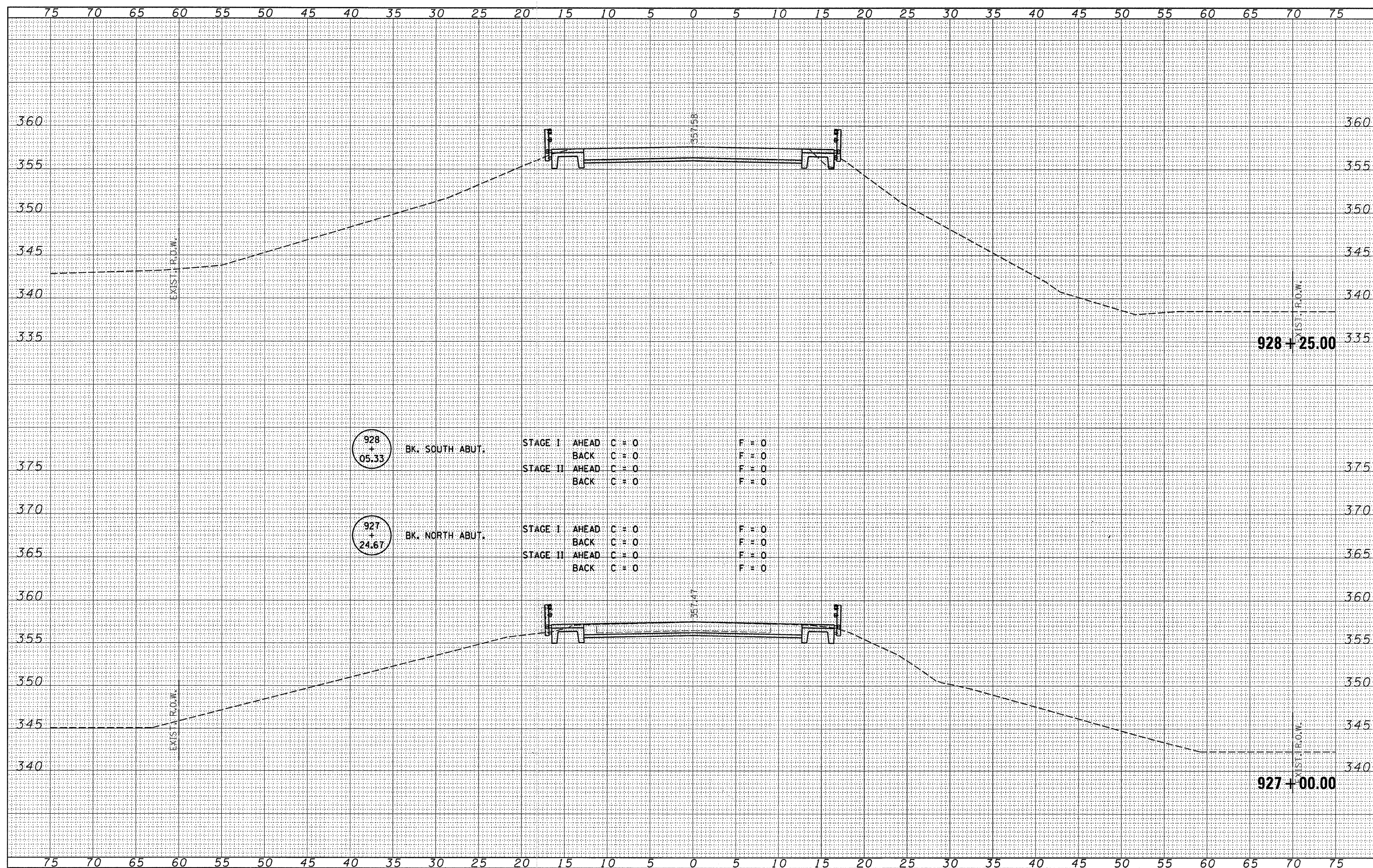
IL ROUTE 1 - CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 926+50.00 TO STA. 926+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	115BR-1	HARDIN	83	74
CONTRACT NO. 78026				
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

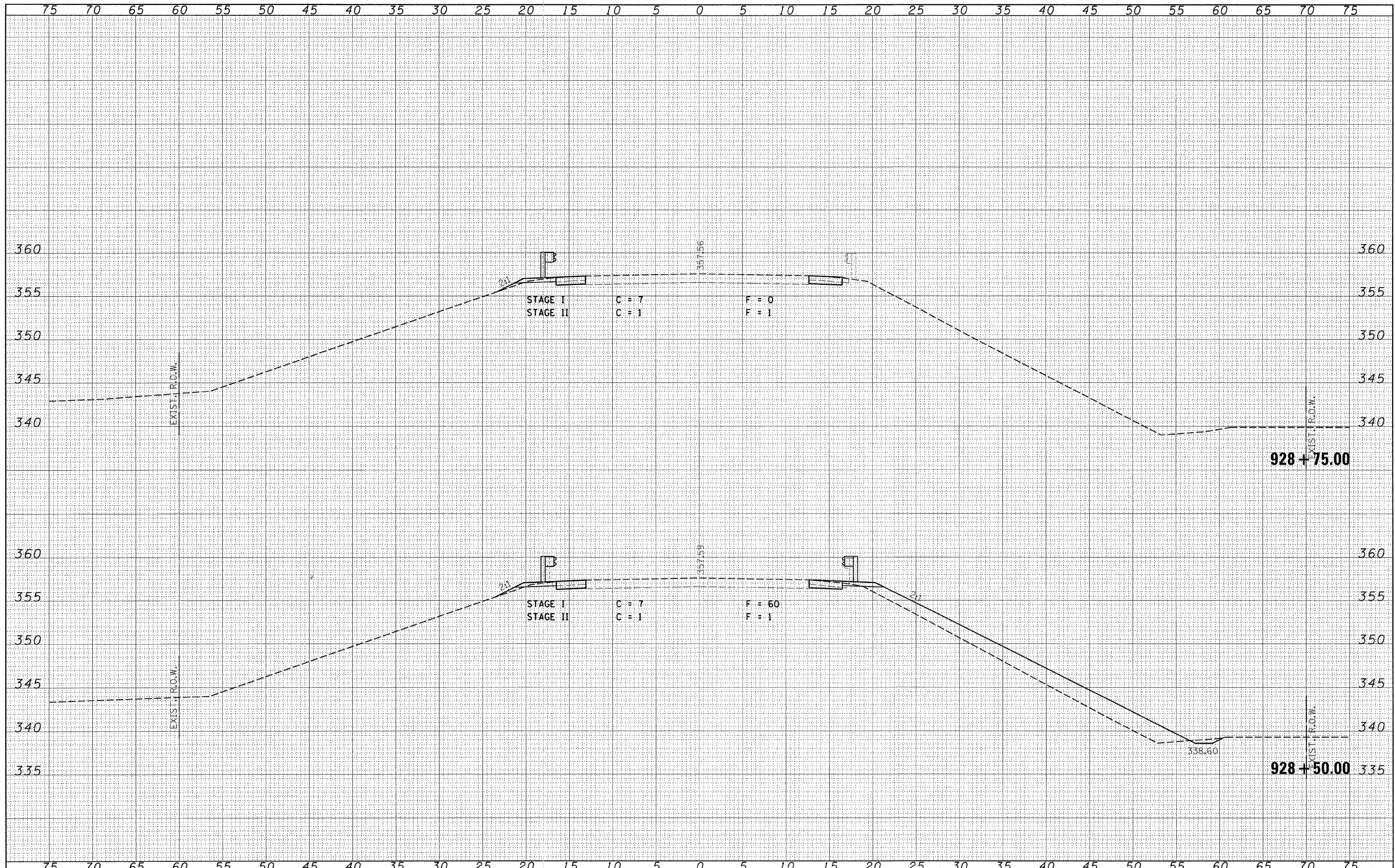
FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

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



DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME = 0350001-shr-x.s.dgn
 USER NAME =
 PLOT SCALE =
 PLOT DATE = 1/23/2008

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

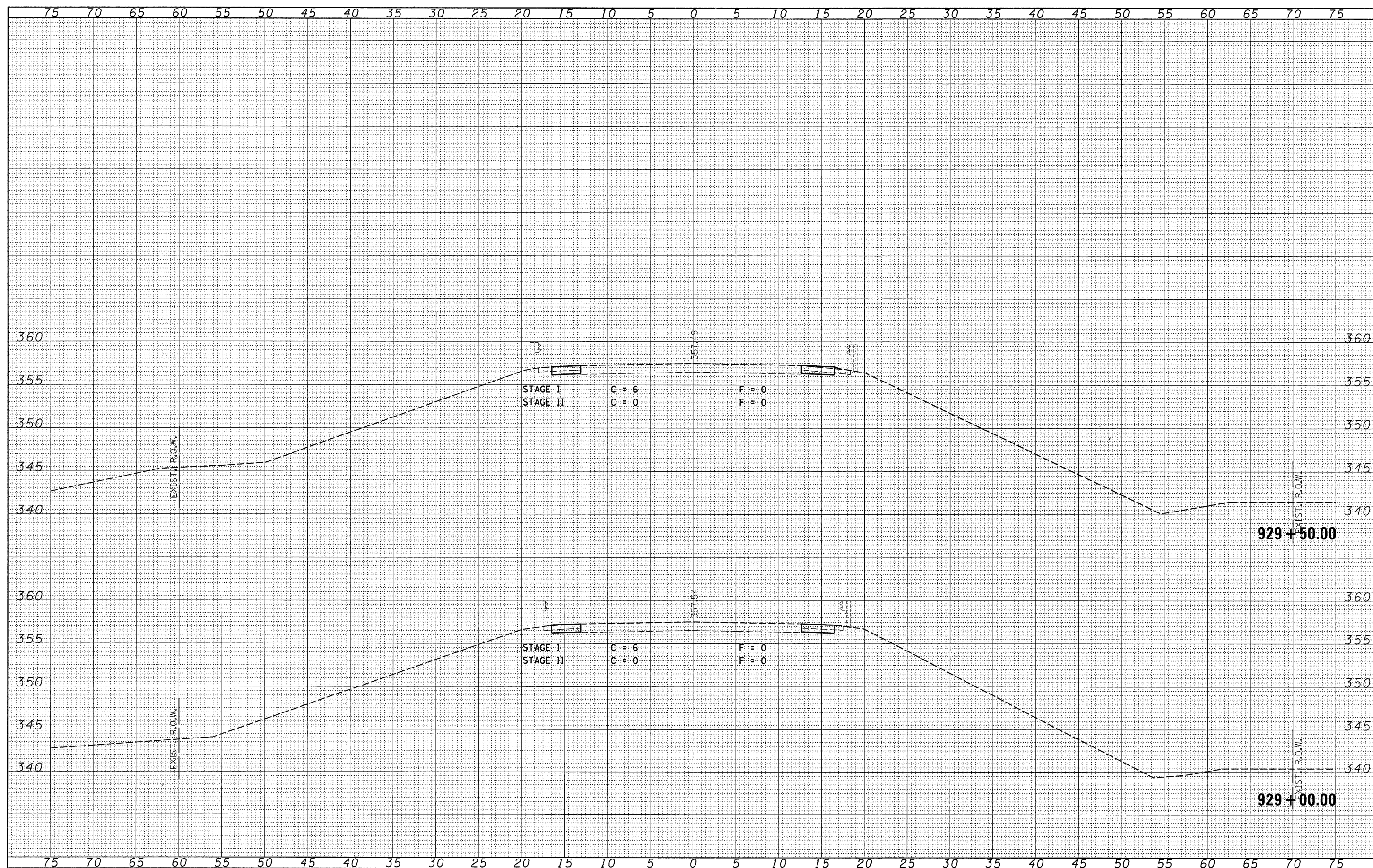
IL ROUTE 1 - CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 928+50.00 TO STA. 928+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
782	1158R-1	HARDIN	83	76
CONTRACT NO. 78026				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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

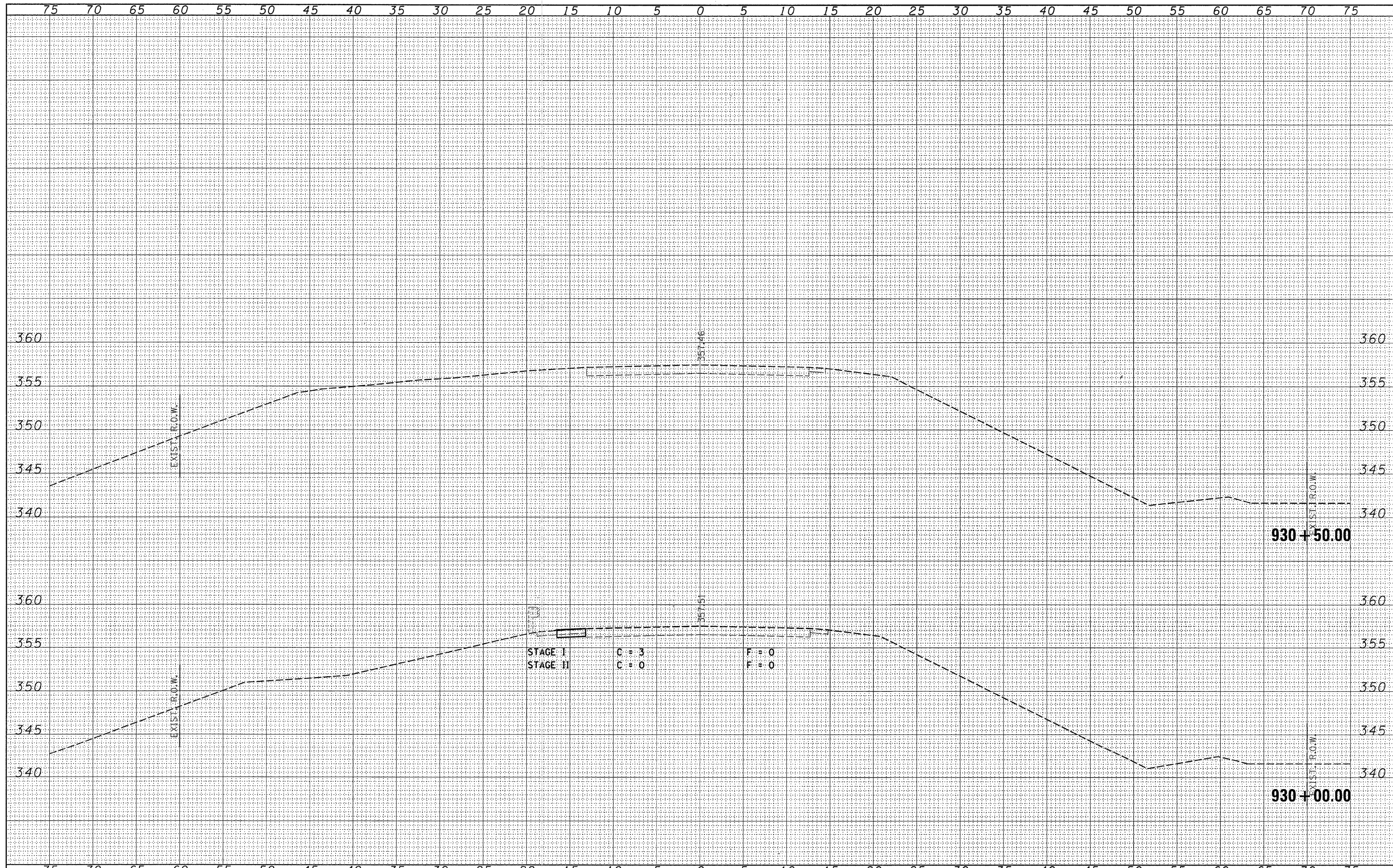
DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK NO.	
PLOTTED TEMPLATE	
AREAS CHECKED	
AREAS CHECKED	



FILE NAME = 0350001-shr-x.s.dgn	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 1 - CROSS SECTIONS		F.A.P. RTE. 782	SECTION 115BR-1	COUNTY HARDIN	TOTAL SHEETS 83	SHEET NO. 77
	PLLOT SCALE =	DRAWN -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 929+00.00 TO STA. 929+50.00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		CONTRACT NO. 78026	
	PLLOT DATE = 1/17/2008	CHECKED -	REVISED -								
		DATE -	REVISED -								

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

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



STAGE I C = 3 F = 0
 STAGE II C = 0 F = 0

FILE NAME = 0350001-sht-rs.dgn
 USER NAME =
 PLLOT SCALE =
 PLOT DATE = 1/17/2008

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

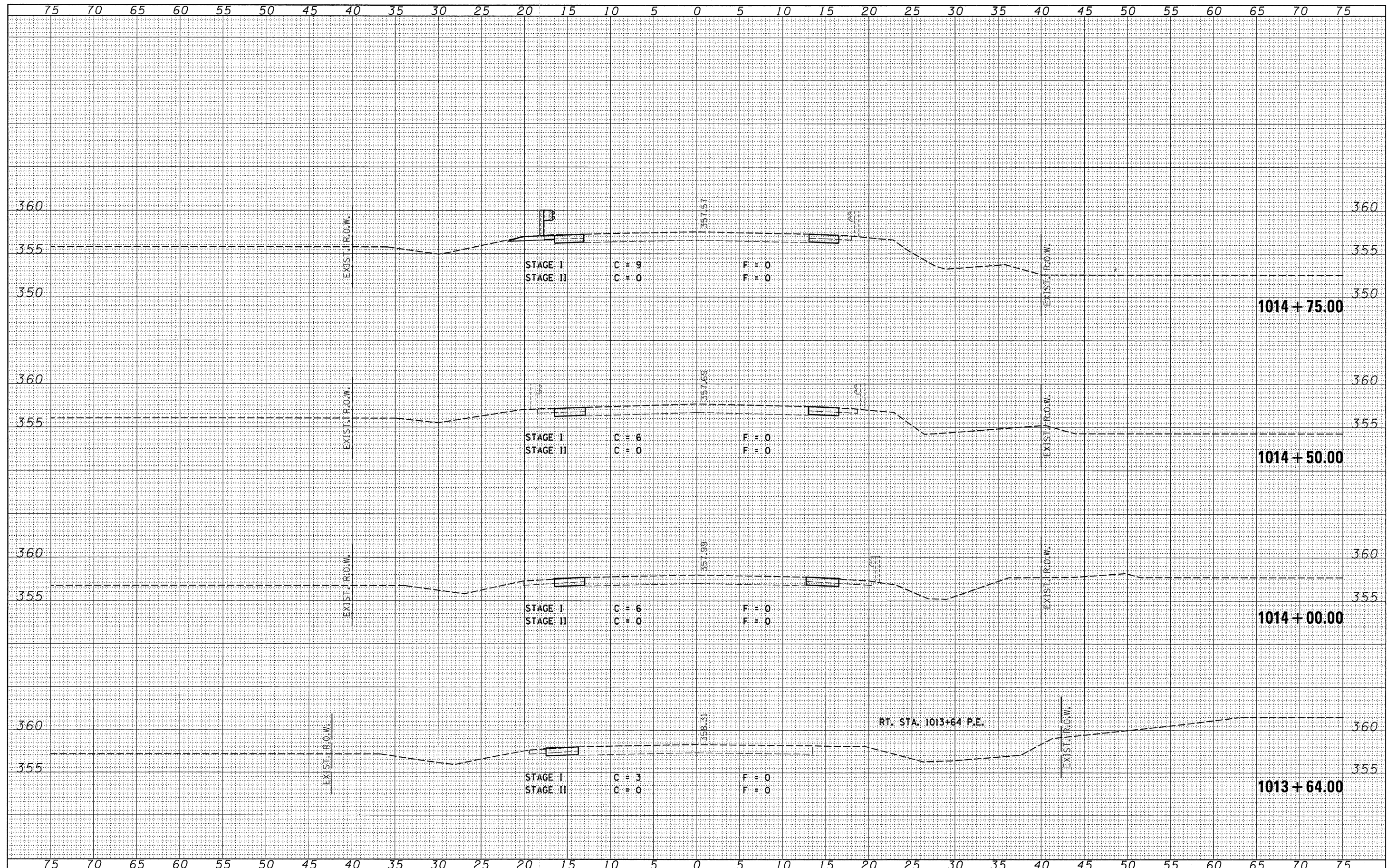
SCALE: SHEET NO. OF SHEETS STA. 930+00.00 TO STA. 930+50.00

IL ROUTE 1 - CROSS SECTIONS

F.A.P. RTE. 782	SECTION 115BR-1	COUNTY HARDIN	TOTAL SHEETS 83	SHEET NO. 78
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 78026	

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

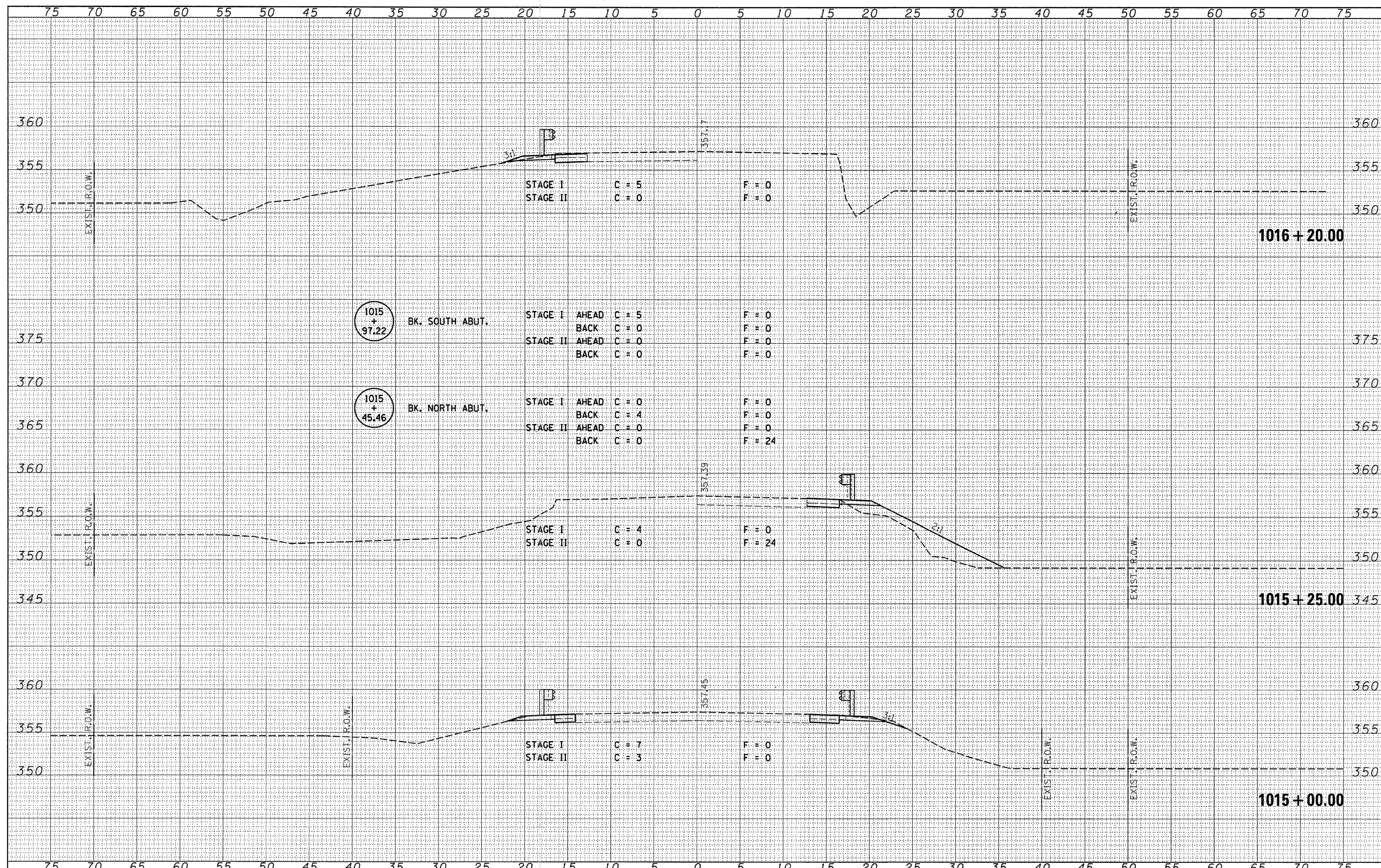
ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
NO.		
AREAS CHECKED		



FILE NAME =	USER NAME =	DESIGNED -	REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p> <p align="center">IL ROUTE 1 - CROSS SECTIONS</p>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0350003-sh1-x.s.dgn		DRAWN -	REVISED -		782	115BR-2	HARDIN	83	80
PLOT SCALE =	CHECKED -	REVISED -	REVISED -		CONTRACT NO. 78026				
PLOT DATE = 1/17/2008	DATE -	REVISED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
					SCALE:	SHEET NO.	OF	SHEETS	STA. 1013+64.00

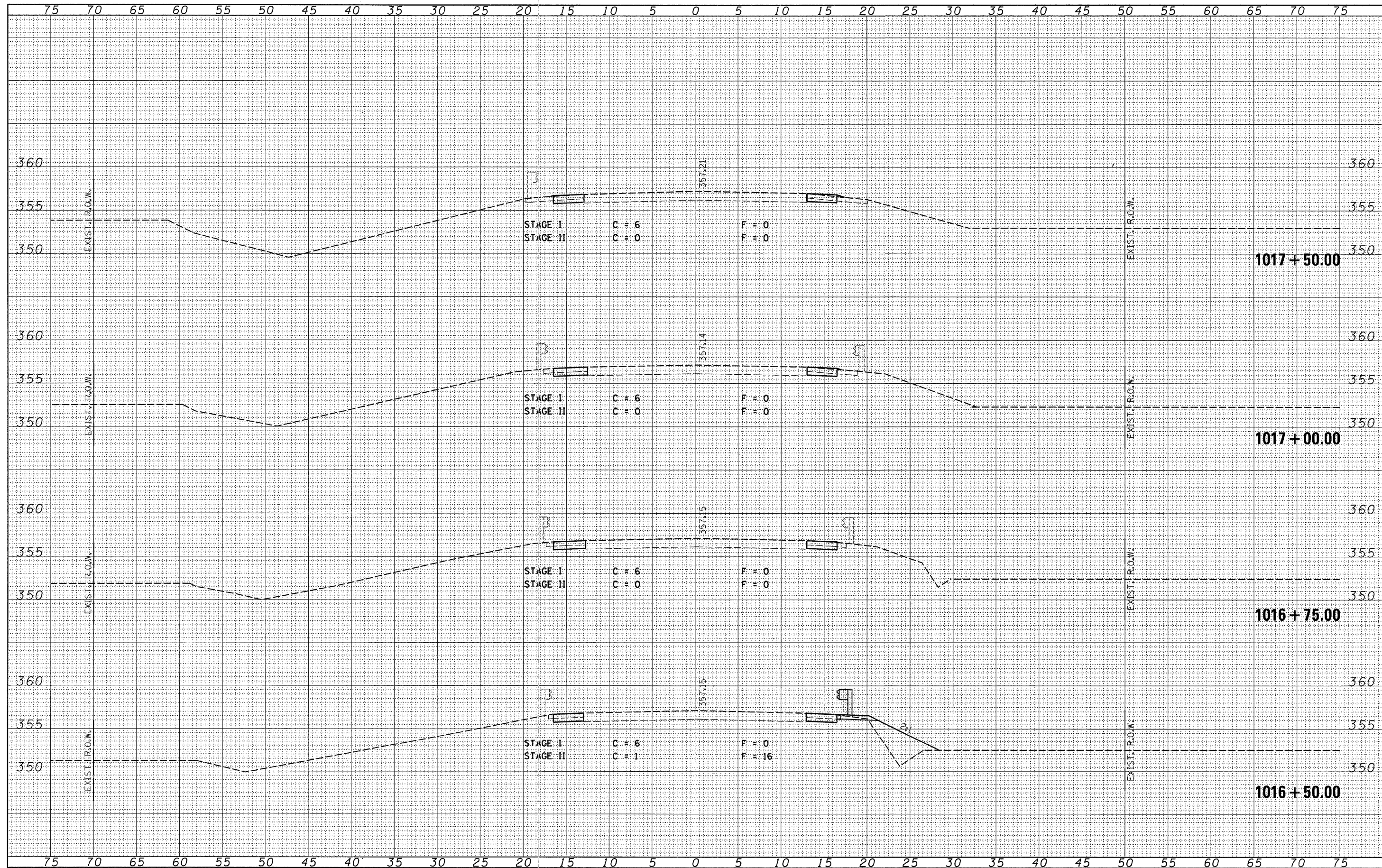
DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

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



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

ORIGINAL SURVEY NO.	SUBMITTED	DATE
	PLOTTED	
	TEMPLATE	
	AREAS CHECKED	



FILE NAME = 0350003-sh1-x.s.dgn	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 1 - CROSS SECTIONS		F.A.P. RTE. 782	SECTION 115BR-2	COUNTY HARDIN	TOTAL SHEETS 83	SHEET NO. 82		
	PLOT SCALE =	DRAWN -	REVISED -				SCALE:	SHEET NO. OF SHEETS	STA. 1016+50.00 TO STA. 1017+50.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO. 78026	
	PLOT DATE = 1/17/2008	CHECKED -	REVISED -										
		DATE -	REVISED -										

