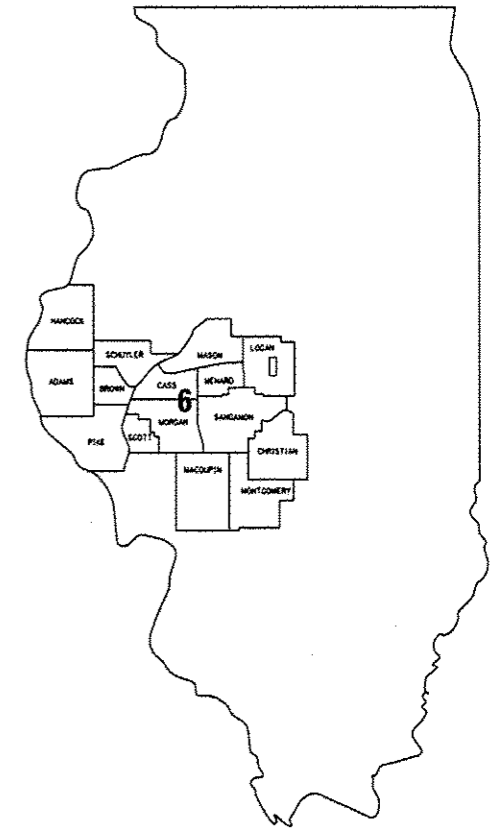


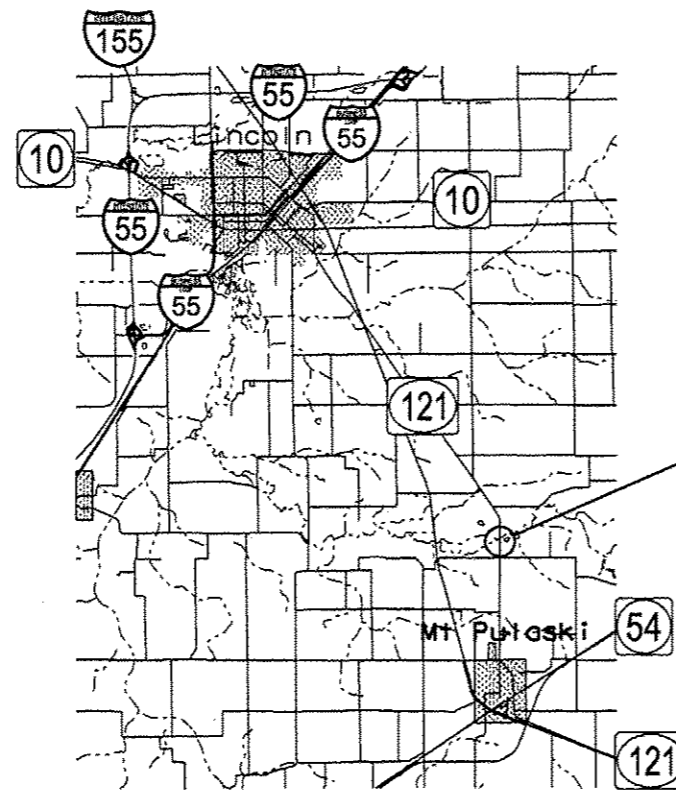
FOR INDEX OF SHEETS AND HIGHWAY STANDARDS, SEE SHEET 2.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
CONTRACT MAINTENANCE
FAP ROUTE 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY
C-96-041-13/ D-96-041-13**



LOCATION OF SECTION INDICATED THUS: 



PROJECT LOCATION
SN 054-0021
IL 121 OVER SALT CREEK
N 40° 3' 15.76"
W 89° 16' 55.62"
ADT = 3850

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

BRIDGE MAINTENANCE ENGINEER: STEVE BERAN
PHONE: (217) 785-9290
BRIDGE INSPECTION ENGINEER: DAVE COPENBARGER
PHONE: (217) 785-5306

NET LENGTH OF SECTION: 1123 FT = 0.21 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED MARCH 29 20 13

Roger Z. Driskill
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

_____ 20 _____

ENGINEER OF DESIGN AND ENVIRONMENT

_____ 20 _____

DIRECTOR, DIVISION OF HIGHWAYS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX, STANDARDS, SIGNATURES, AND GENERAL NOTES
3-5	QUANTITIES
6-8	TYPICAL SECTIONS
9	ROADWAY PLAN
10	TRAFFIC STAGING DETAIL
11	WIDTH RESTRICTION SIGNING DETAIL
12-22	BRIDGE DETAILS

STANDARDS

630001-10
701001-02
701006-04
701201-04
701301-04
701321-13
701326-04
701901-02
704001-07

GENERAL NOTES:

ALL STRUCTURAL STEEL SHALL BE AASHTO M-270 GRADE 36

REINFORCEMENT BARS SHALL BE A706 GRADE 60. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

PRIOR TO POURING THE NEW CONCRETE DECK, ALL HEAVY OR LOOSE MILL SCALE AND OTHER LOOSE OR POTENTIALLY DETRIMENTAL FOREIGN MATERIAL SHALL BE REMOVED FROM THE SURFACES IN CONTACT WITH CONCRETE. TIGHTLY ADHERED PAINT MAY REMAIN UNLESS OTHERWISE NOTED. REMOVAL SHALL BE ACCOMPLISHED BY METHODS THAT WILL NOT DAMAGE THE STEEL AND THE COST WILL BE INCLUDED IN CONCRETE REMOVAL.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

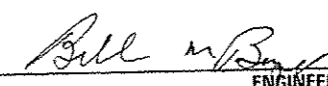
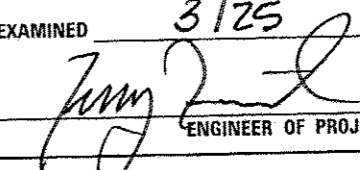

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

JOINT OPENINGS SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

MIXTURE USE(S)	HMA BASE CSE WIDENING	HMA SURFACE CSE
AC/PG	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N70	4.0% @ N70
MIX COMPOSITION (GRADATION MIXTURE)	IL - 19.0	IL - 9.5
FRICTION AGGREGATE	N/A	MIX "C"

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED	3/7 20 13
 ENGINEER OF OPERATIONS	
EXAMINED	3/25 20 13
 ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED	March 26 20 13
 ENGINEER OF PROGRAM DEVELOPMENT	

INDEX, STDS, & GENERAL NOTES
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

S U M M A R Y O F Q U A N T I T I E S

CODE NO.	ITEM	UNIT	100% State
			0014
			TOTAL QTY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	13
35650400	BASE COURSE WIDENING, 9"	SQ YD	465
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.5
40600300	AGGREGATE (PRIME COAT)	TON	2
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	356
40600990	TEMPORARY RAMP	SQ YD	85
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	105
44004250	PAVED SHOULDER REMOVAL	SQ YD	465
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	40
50102400	CONCRETE REMOVAL	CU YD	22
50300255	CONCRETE SUPERSTRUCTURE	CU YD	24
50300260	BRIDGE DECK GROOVING	SQ YD	1900
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2630
50800515	BAR SPLICERS	EACH	50
52000110	PREFORMED JOINT STRIP SEAL	FOOT	144
63301235	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	50

5

QUANTITIES
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

S U M M A R Y O F Q U A N T I T I E S

CODE NO.	ITEM	UNIT	100% State
			0014
			TOTAL QTY
67100400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5
70106500	TEMPORARY BRIDGE TRAFFIC SIGNAL	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	8
* 70300100	SHORT TERM PAVEMENT MARKING	FOOT	100
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	34
70400100	TEMPORARY CONCRETE BARRIER	FOOT	850
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	850
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	2600
78300100	PAVEMENT MARKING REMOVAL	SQ FT	700
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6

*SPECIALTY ITEM

QUANTITIES
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

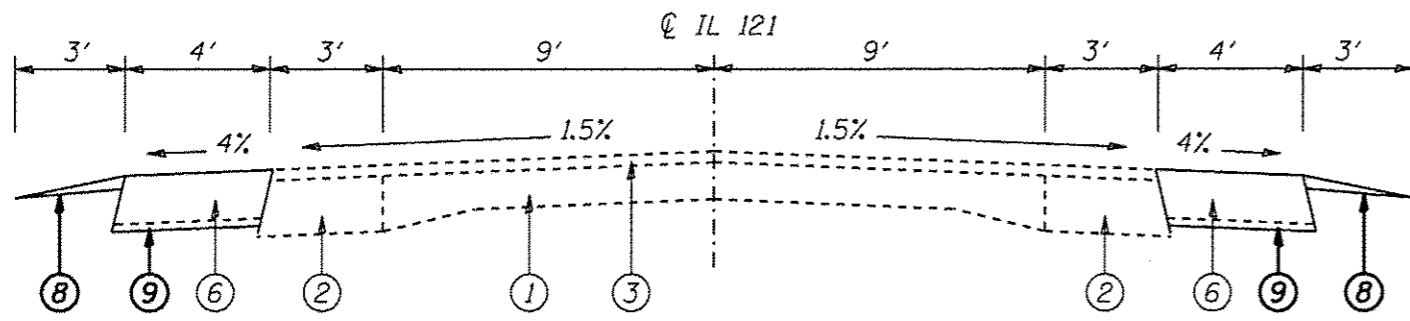
S U M M A R Y O F Q U A N T I T I E S

CODE NO.	ITEM	UNIT	100% State
			0014 TOTAL QTY
X6300210	GUARDRAIL BLOCKS	EACH	15
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1
Z0012130	BRIDGE DECK SCARIFICATION, 3/4"	SQ YD	2027
Z0012164	BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2-1/2"	SQ YD	2027
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	1
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	21
* 70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
* 70600330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE NARROW), TEST LEVEL 3	EACH	2

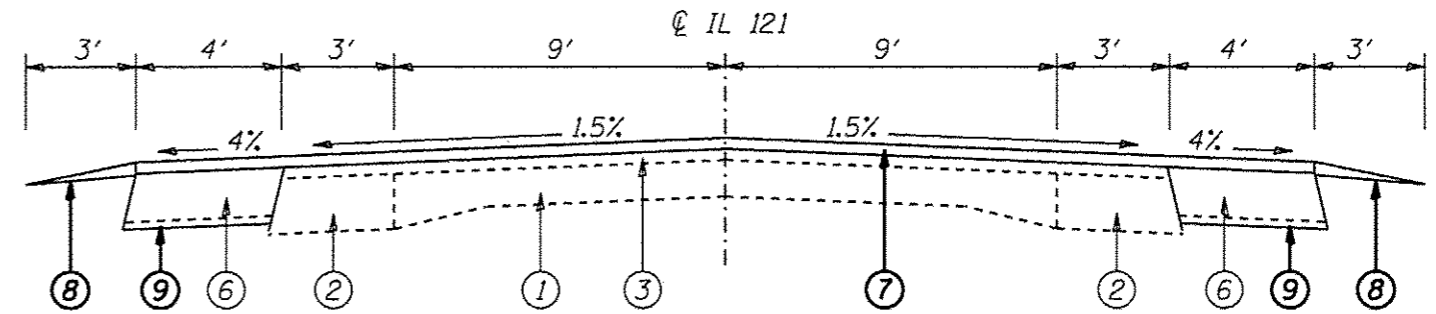
8

*SPECIALTY ITEM

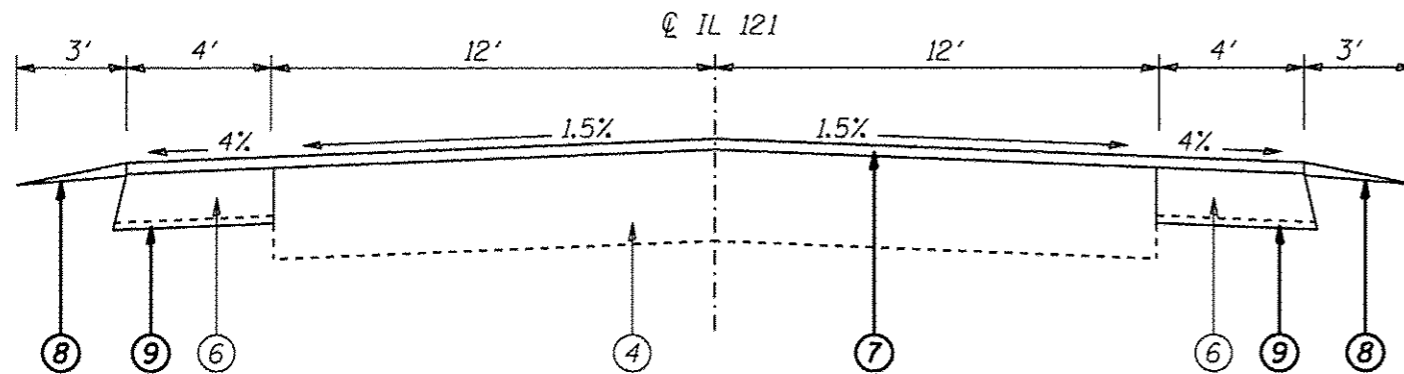
QUANTITIES
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



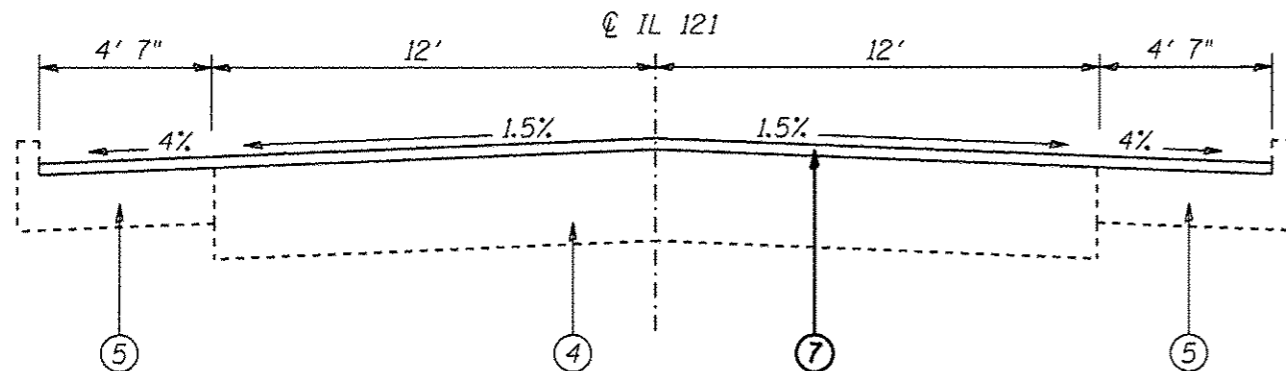
STA 273+63.00 TO STA 274+88.00
STA 283+61.00 TO STA 284+86.00



STA 274+88.00 TO STA 276+18.50
STA 282+30.50 TO STA 283+61.00



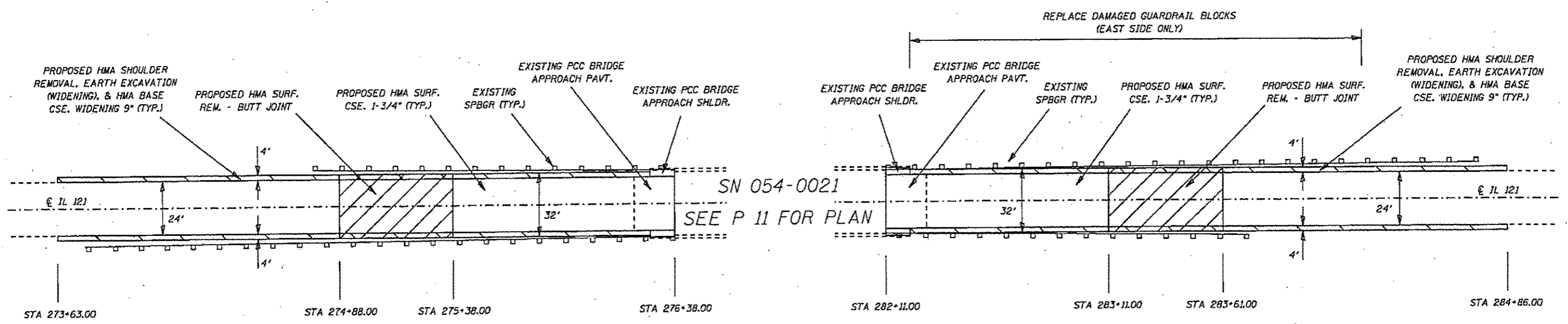
STA 276+18.50 TO STA 276+24.50
STA 282+24.50 TO STA 282+30.50



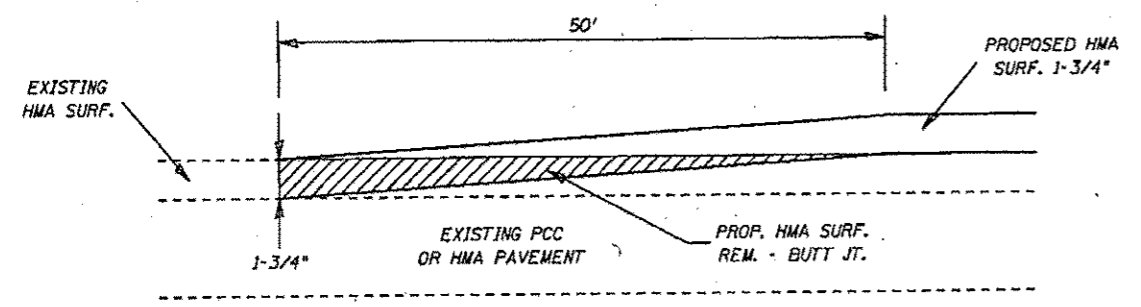
STA 276+24.50 TO STA 276+38.00
STA 282+11.00 TO STA 282+24.50
(STA 276+38.00 TO STA 282+11.00 = SN 054-0021)

- ① EXISTING PCC PAVEMENT (9-6-9)
- ② EXISTING PCC BASE COURSE WIDENING (8")
- ③ EXISTING HMA BINDER AND SURFACE OVERLAY (VARIABLE DEPTH)
- ④ EXISTING PCC BRIDGE APPROACH PAVEMENT (13")
- ⑤ EXISTING PCC BRIDGE APPROACH SHOULDER (10")
- ⑥ EXISTING HMA SHOULDERS (8")
- ⑦ PROPOSED HMA SURFACE COURSE (1-3/4")
- ⑧ PROPOSED AGGRAGATE WEDGE SHOULDER - TYPE B
- ⑨ PROPOSED BASE COURSE WIDENING (9")

TYPICAL SECTIONS
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

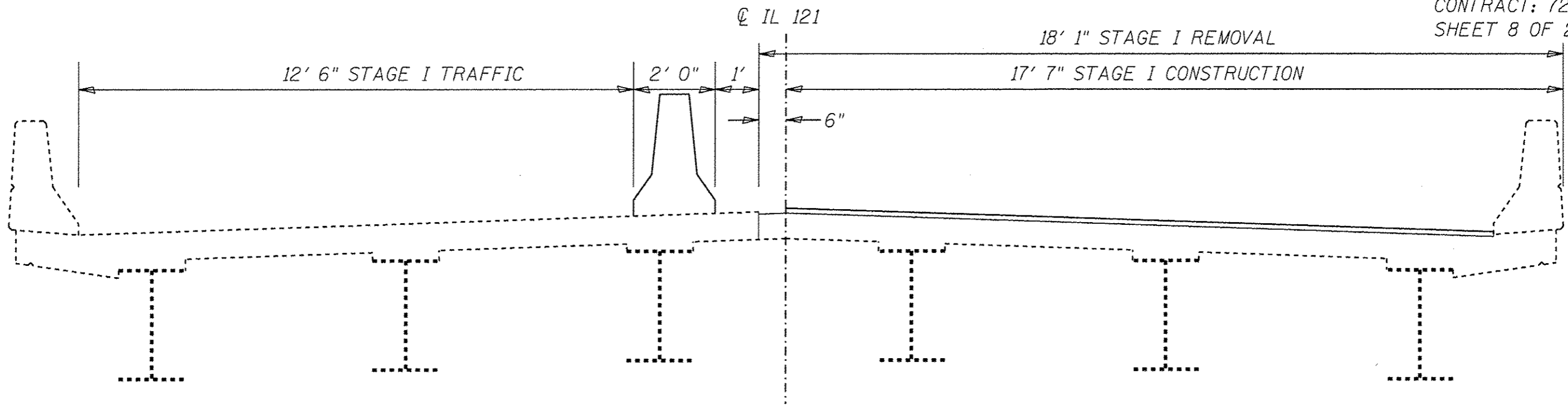


PLAN

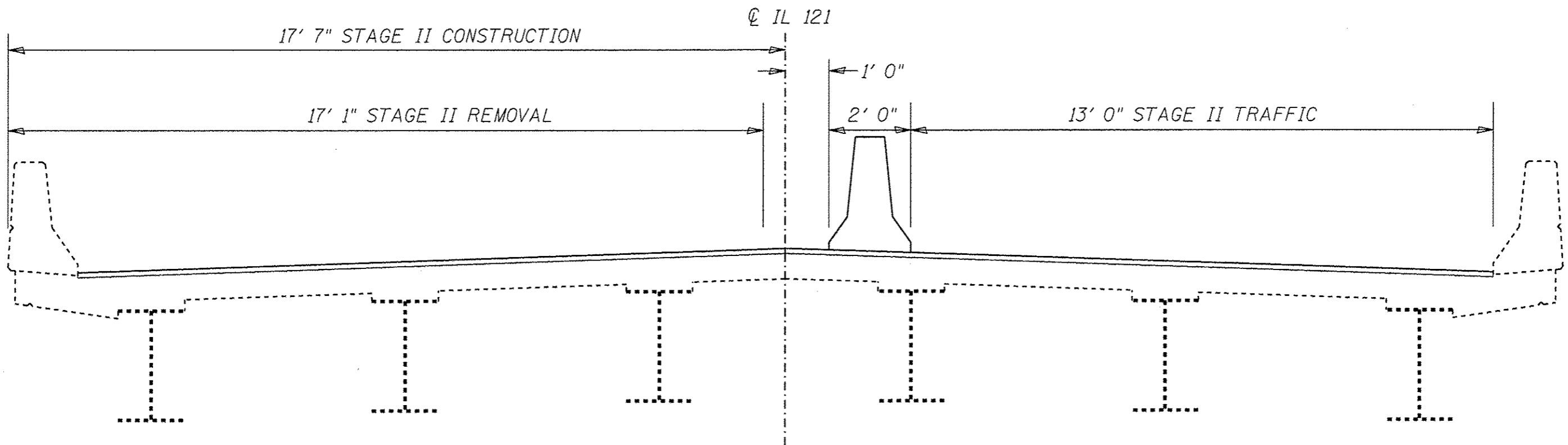


BUTT JOINT ELEVATION

ROADWAY PLAN
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

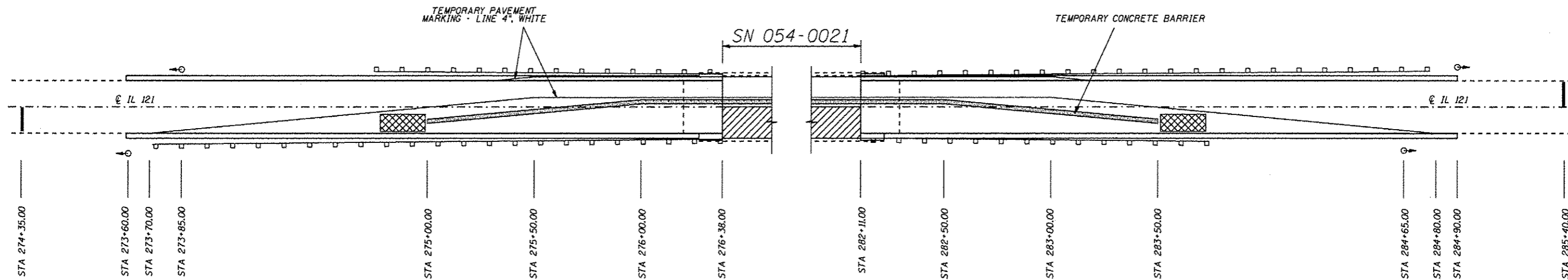


STAGE I CROSS SECTION (LOOKING SOUTH)

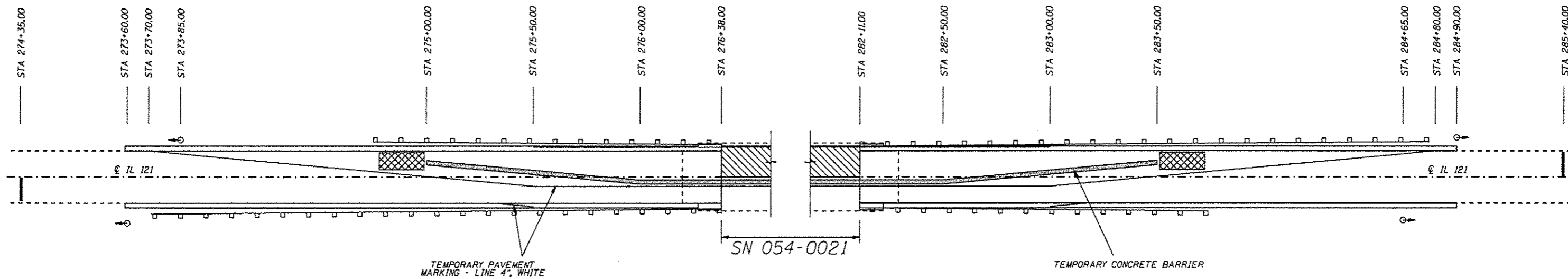
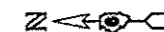


STAGE II CROSS SECTION (LOOKING SOUTH)

STAGING DETAIL
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



STAGE 1 TRAFFIC CONTROL PLAN



STAGE 2 TRAFFIC CONTROL PLAN

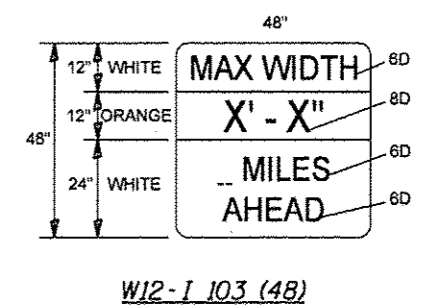
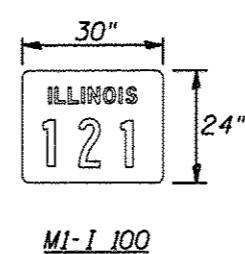
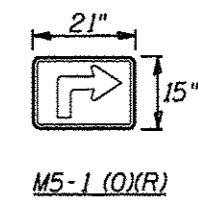
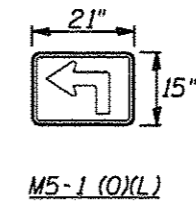
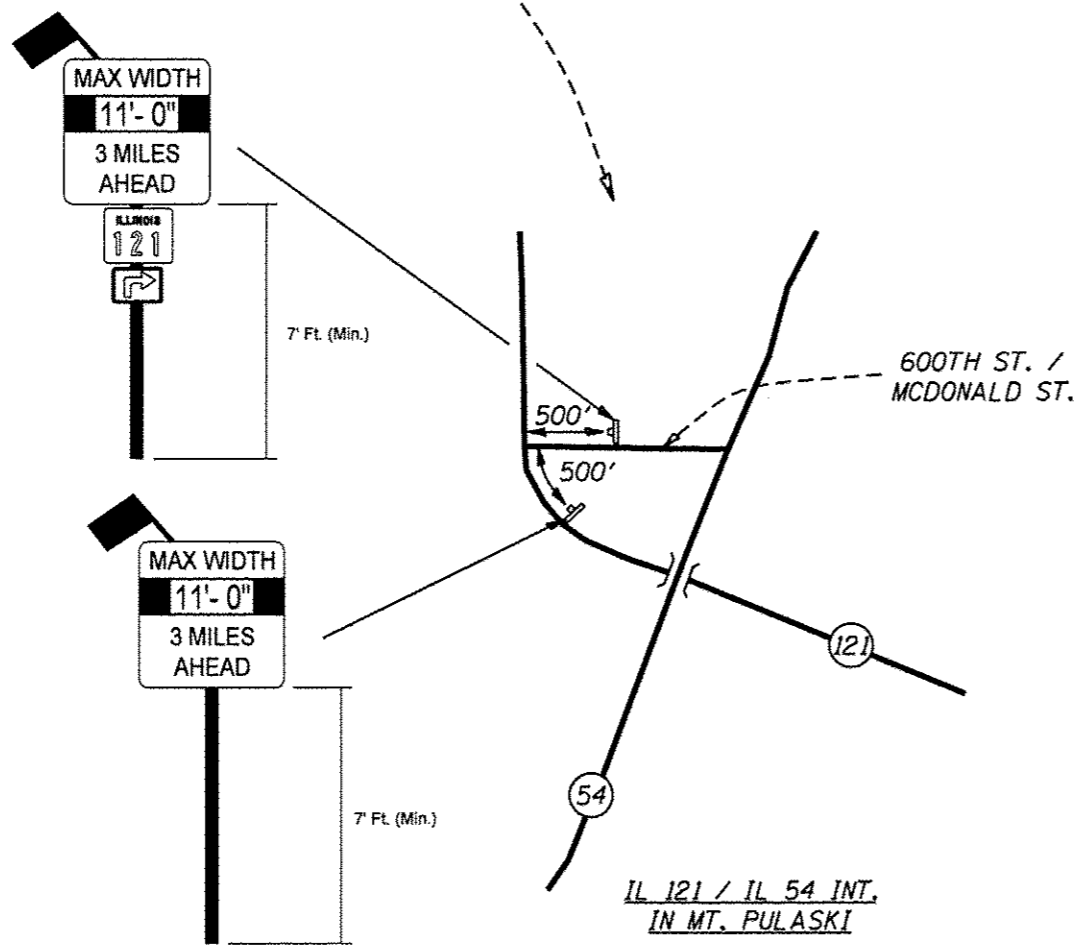
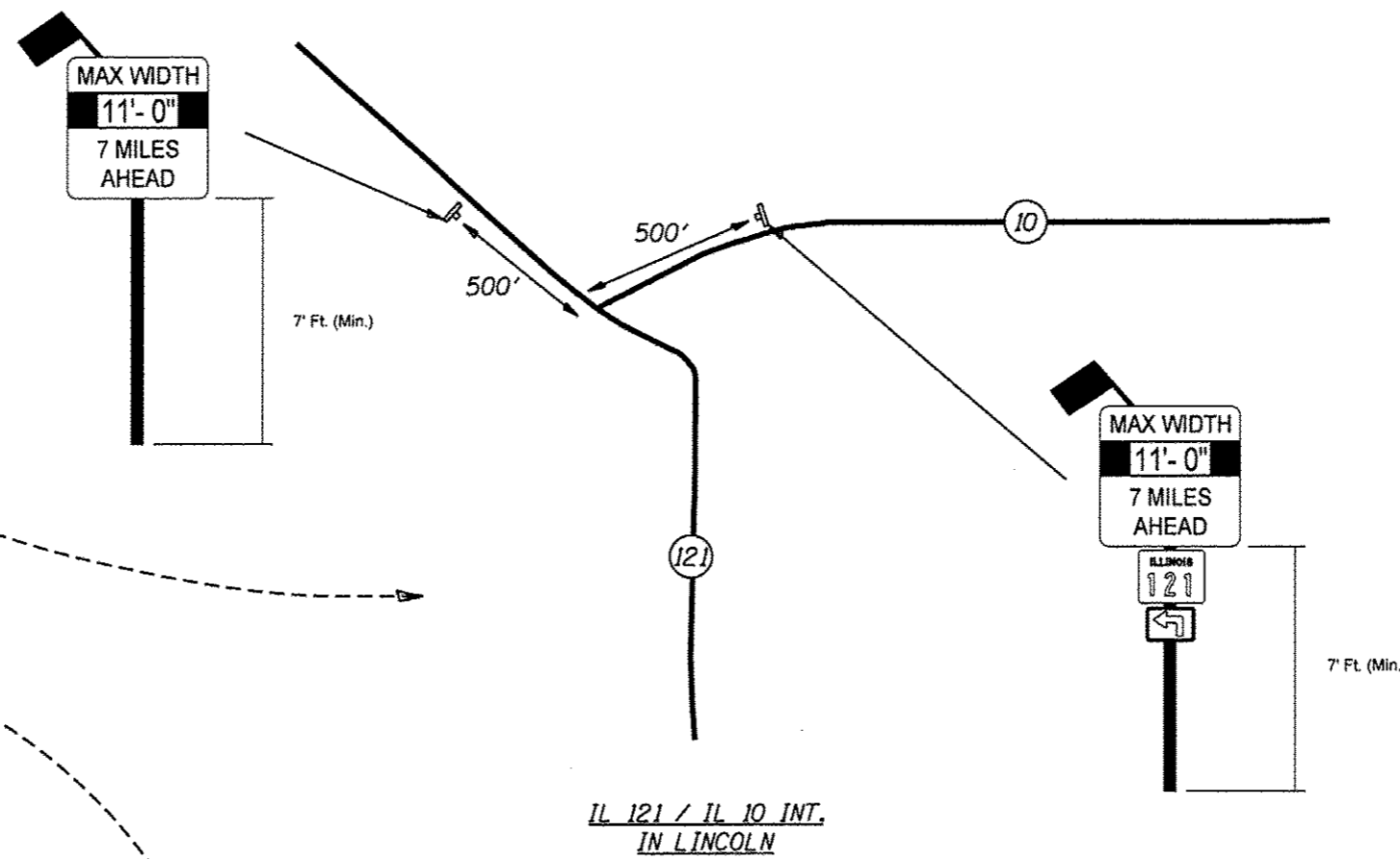
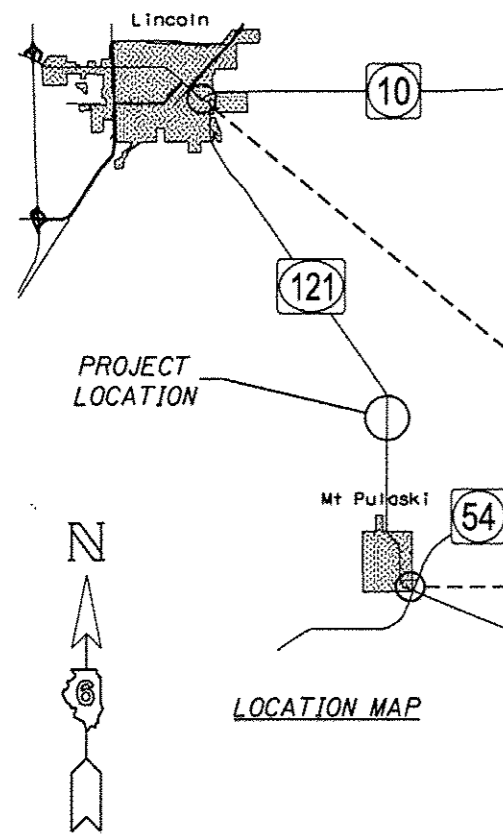
NOTES:

SIGNS, BARRICADES, AND ANY OTHER MISCELLANEOUS TRAFFIC CONTROL DEVICES NOT SHOWN ON THIS DETAIL SHALL BE AS PER STANDARD 701321-13.

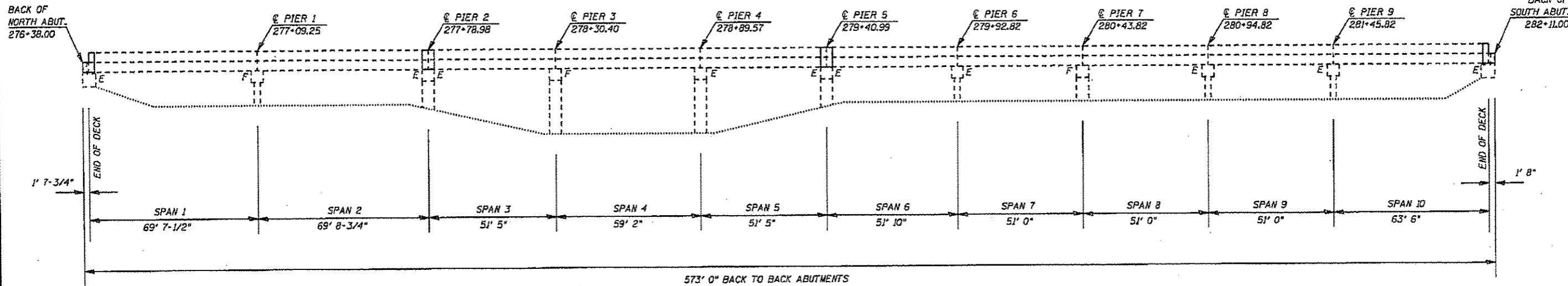
SYMBOLS ON THIS DETAIL HAVE THE SAME MEANING AS THOSE SHOWN ON STANDARD 701321-13.

MILLING AND RESURFACING OPERATIONS SHALL TAKE PLACE AFTER STAGE 2 IS COMPLETE AND BARRIER WALL HAS BEEN REMOVED. TEMPORARY RAMPS AS PER SECTION 406 OF THE STANDARD SPECIFICATIONS SHALL BE USED TO FACILITATE TRAFFIC IN THE INTERIM.

TRAFFIC CONTROL PLAN
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



WIDTH RESTRICTION SIGNING
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



ELEVATION

REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL AS NECESSARY TO FACILITATE NEW JOINT CONSTRUCTION

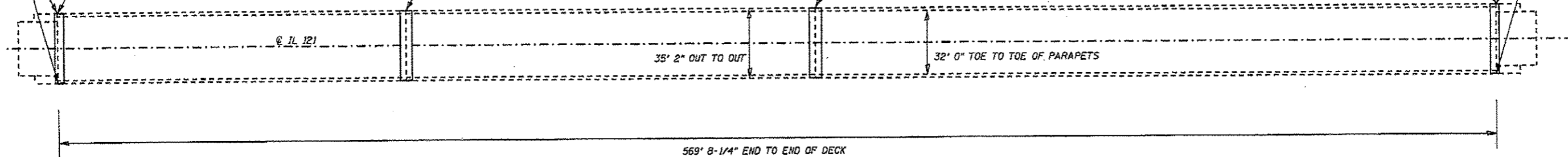
REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL AS NECESSARY TO FACILITATE NEW JOINT CONSTRUCTION

REPLACE EXISTING SILICONE JOINT WITH STRIP SEAL JOINT

REPLACE EXISTING SILICONE JOINT WITH STRIP SEAL JOINT

REPLACE EXISTING SILICONE JOINT WITH STRIP SEAL JOINT

REPLACE EXISTING SILICONE JOINT WITH STRIP SEAL JOINT



PLAN

GENERAL NOTES:

ALL STRUCTURAL STEEL SHALL BE AASHTO M-270 GRADE 36

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

PRIOR TO POURING THE NEW CONCRETE DECK, ALL HEAVY OR LOOSE MILL SCALE AND OTHER LOOSE OR POTENTIALLY DETRIMENTAL FOREIGN MATERIAL SHALL BE REMOVED FROM THE SURFACES IN CONTACT WITH CONCRETE. TIGHTLY ADHERED PAINT MAY REMAIN UNLESS OTHERWISE NOTED. REMOVAL SHALL BE ACCOMPLISHED BY METHODS THAT WILL NOT DAMAGE THE STEEL AND THE COST WILL BE INCLUDED IN CONCRETE REMOVAL.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXISTING REINFORCEMENT BARS EXTENDING INTO THE REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL SHALL BE REPLACED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST INCLUDED WITH CONCRETE REMOVAL.

JOINT OPENINGS SHALL BE ADJUSTED ACCORDING TO ARTICLE 520.04 OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

THE DECK SURFACE IN THE AREAS OF EXPANSION JOINT REPLACEMENT SHALL HAVE A TINED FINISH AS PER ARTICLE 420.09(K) OF THE STANDARD SPECIFICATIONS. COST INCLUDED WITH CONCRETE SUPERSTRUCTURE.

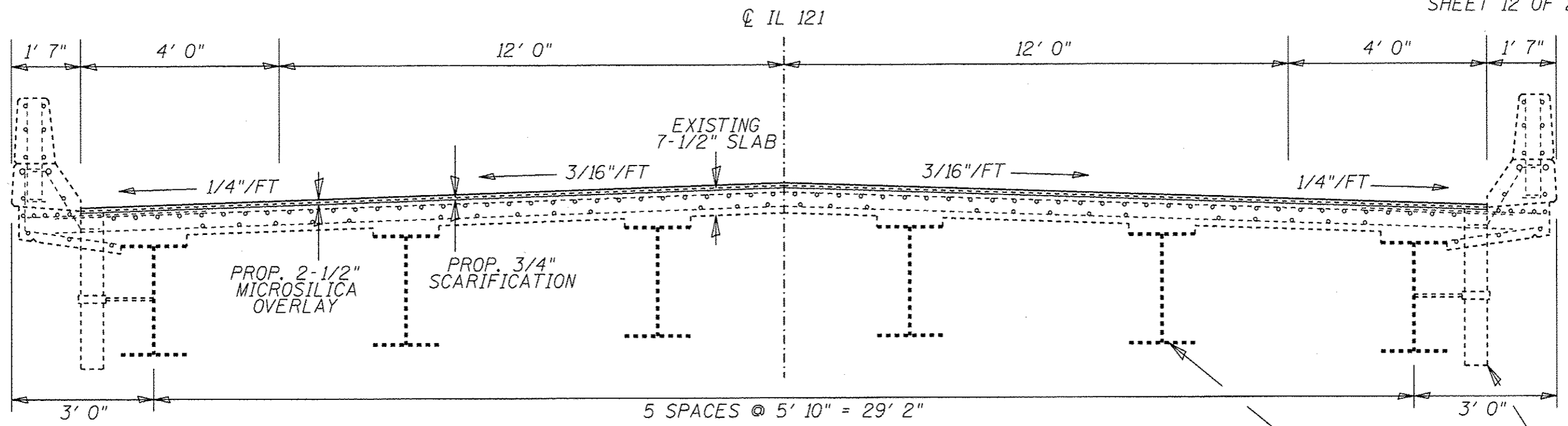
Designer: DAC
Checker: VP



David Carl Puzey 5/19/13
Expires 11/30/14

TOTAL BILL OF MATERIAL	
CONCRETE REMOVAL	22 CU YD
CONCRETE SUPERSTRUCTURE	24 CU YD
BRIDGE DECK GROOVING	1900 SQ YD
REINFORCEMENT BARS, EPOXY COATED	2630 POUND
BAR SPLICERS	50 EACH
PREFORMED JOINT STRIP SEAL	144 FOOT
REMOVE AND RE-ERECT SPBGR, ATTACHED TO STRUCTURES	50 FOOT
BRIDGE DECK MICROSILICA CONCRETE OVERLAY, 2-1/2"	2027 SQ YD
BRIDGE DECK SCARIFICATION, 3/4"	2027 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	21 SQ YD
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	1 SQ YD

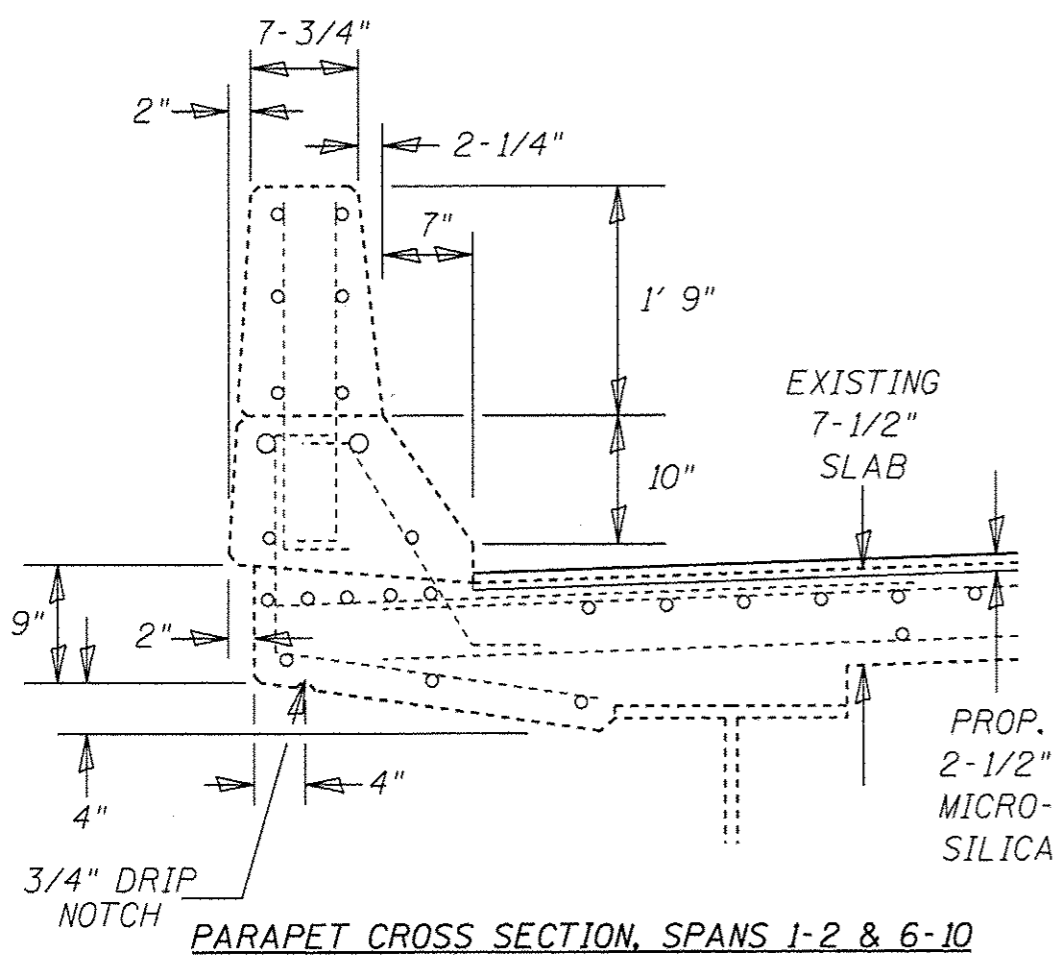
BRIDGE PLAN AND ELEVATION
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



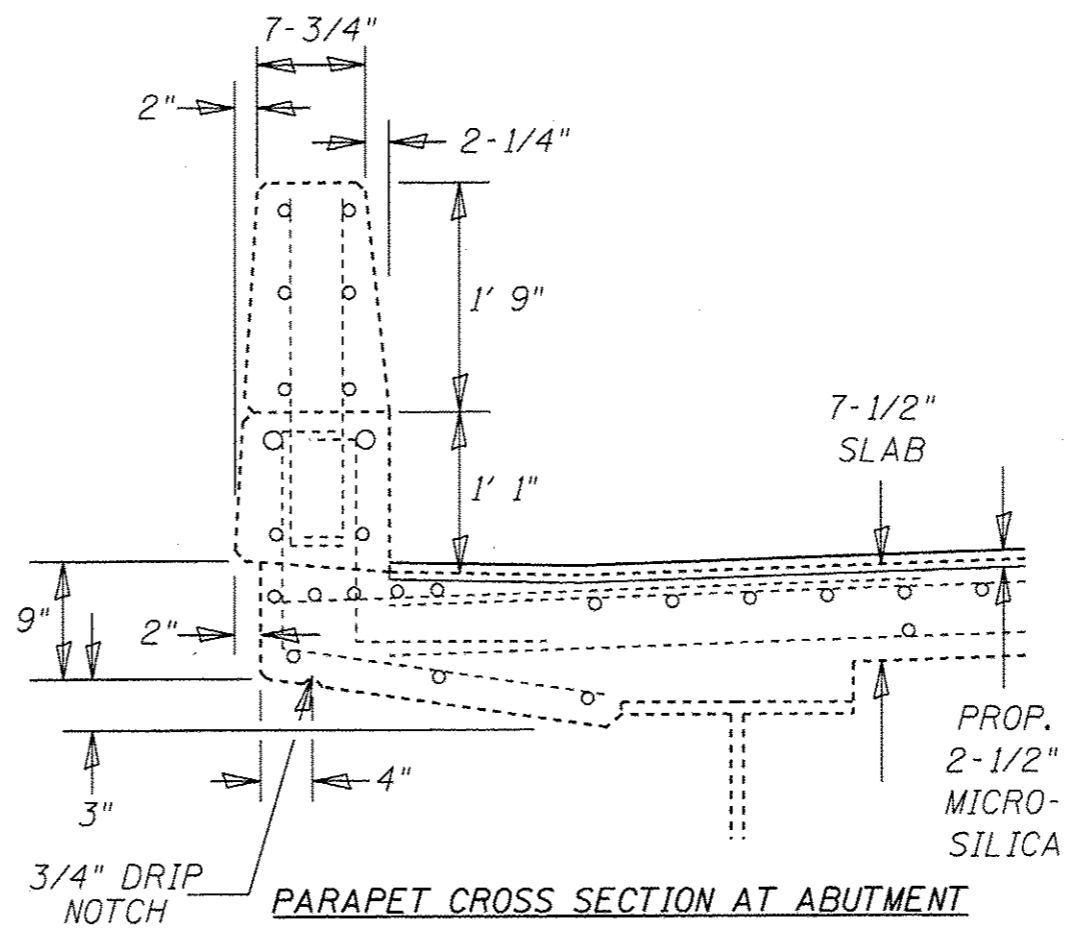
BRIDGE CROSS SECTION, SPANS 1-2 & 6-10

6" DECK DRAINS (TYP.)

W33x118 (TYP.) SPANS 1-2
W30x99 (TYP.) SPANS 6-10

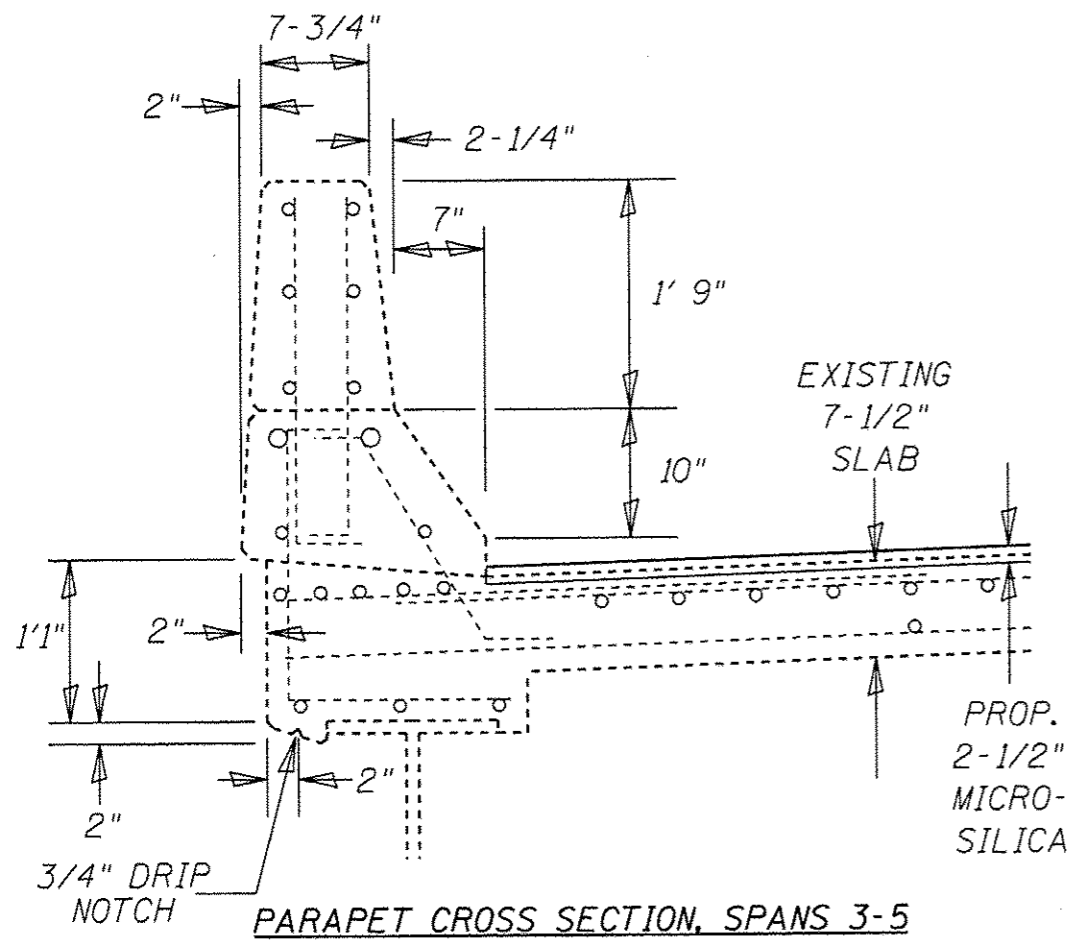
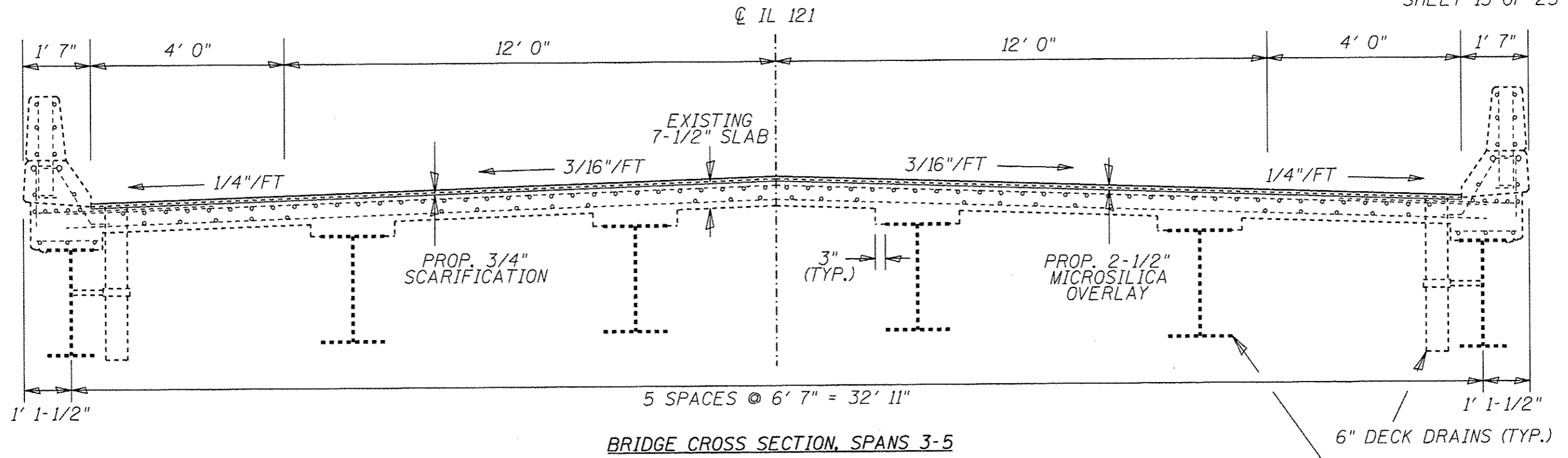


PARAPET CROSS SECTION, SPANS 1-2 & 6-10

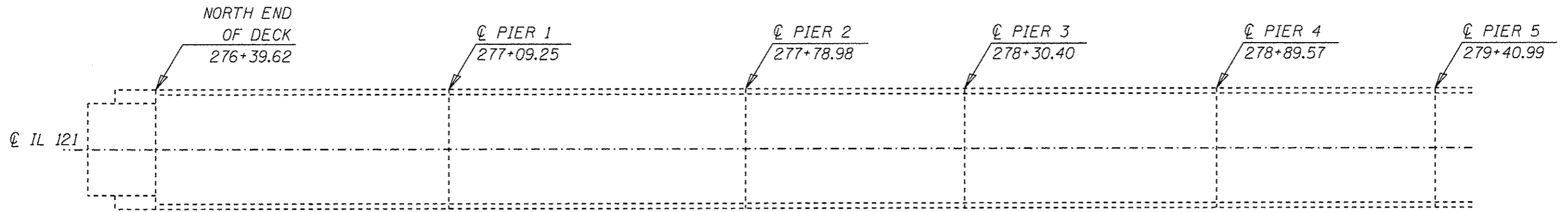


PARAPET CROSS SECTION AT ABUTMENT

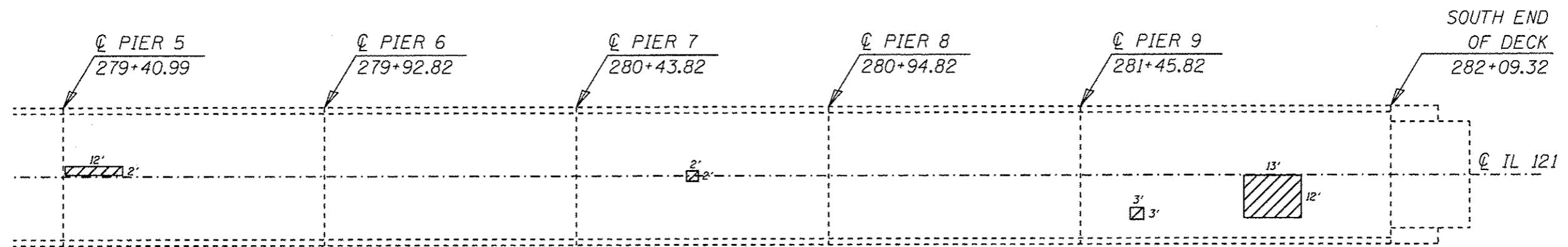
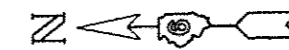
BRIDGE CROSS SECTIONS
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



BRIDGE CROSS SECTIONS
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



PATCHING PLAN (N. ABUT. - PIER 5)



PATCHING PLAN (PIER 5 - S. ABUT.)

 FULL DEPTH PATCHING AREAS

DATE OF SURVEY 1/7/2013

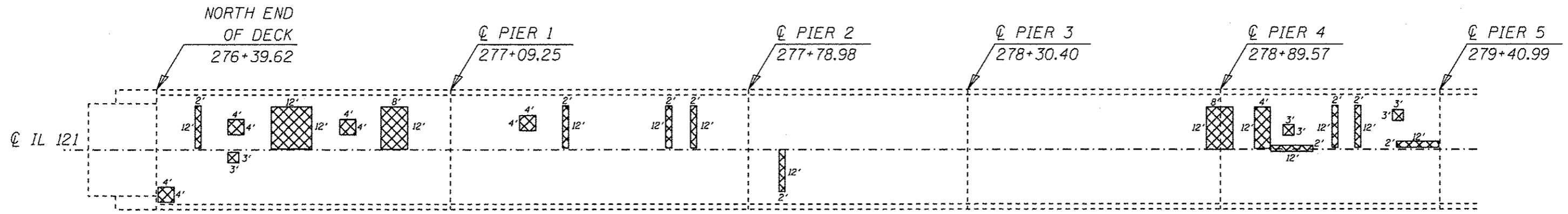
DECK SLAB REPAIR (FULL DEPTH, TYPE II) = 21 SQ YD

DECK SLAB REPAIR (FULL DEPTH, TYPE I) = 1 SQ YD

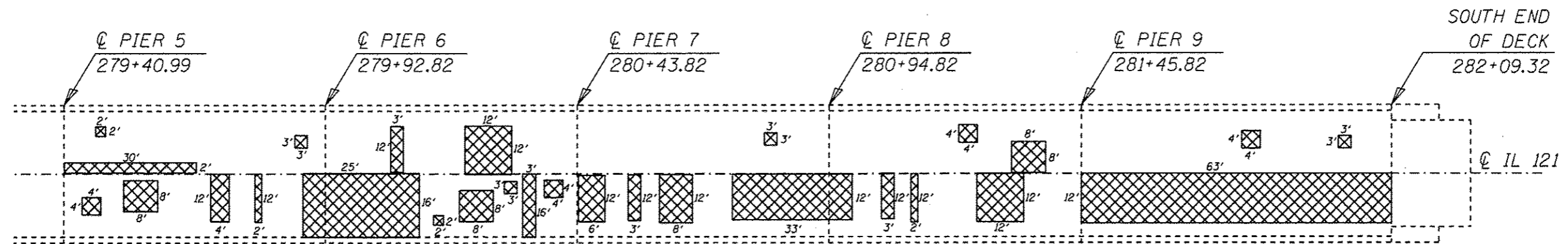
THE ENGINEER SHALL RECORD THE ACTUAL DECK SLAB REPAIR AREAS IN THE AS BUILT PLANS

NOTE: PATCHES SHOWN ARE TAKEN FROM EXISTING INSPECTION REPORTS. FULL DEPTH PATCHES SHALL ONLY BE USED IN AREAS WHERE SCARIFICATION REVEALS OR PRODUCES UNSOUND CONCRETE AS DETERMINED BY THE ENGINEER.

FULL DEPTH PATCHING PLAN
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



PATCHING PLAN (N. ABUT. - PIER 5)



PATCHING PLAN (PIER 5 - S. ABUT.)



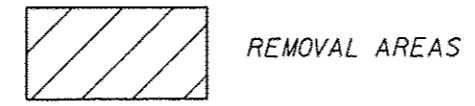
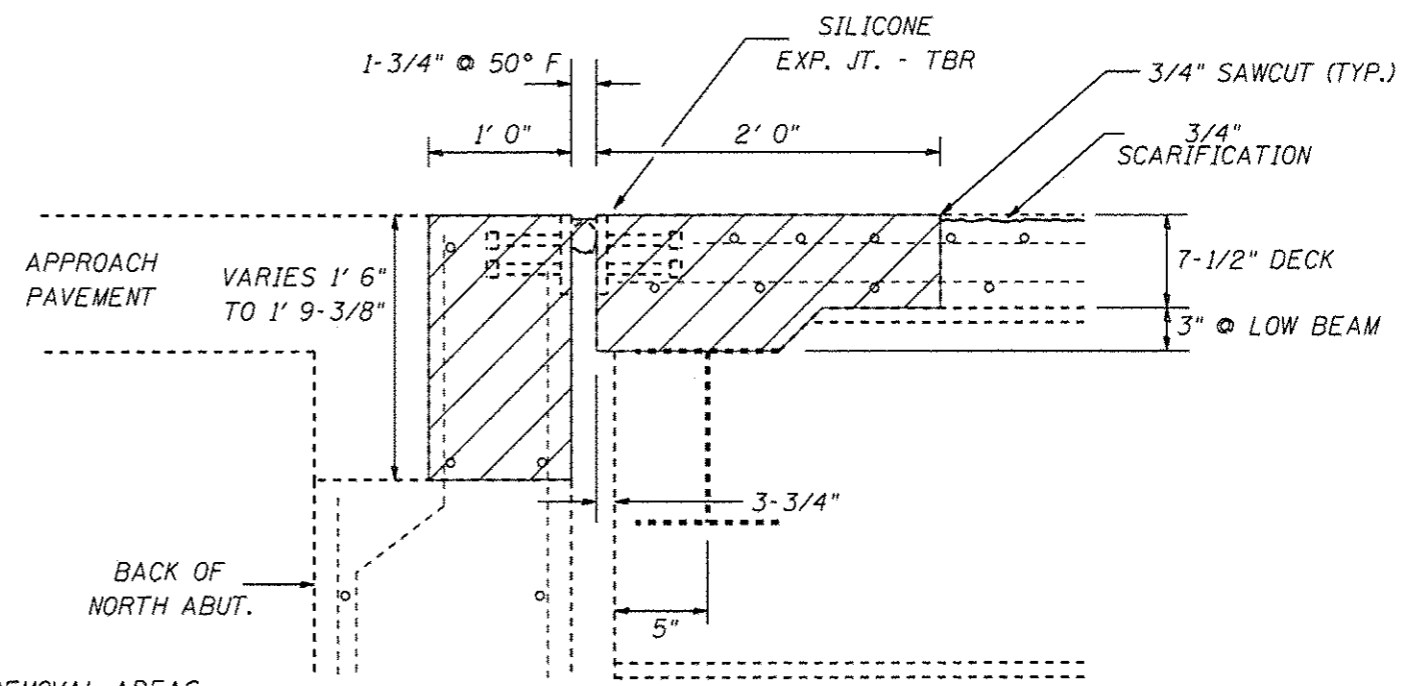
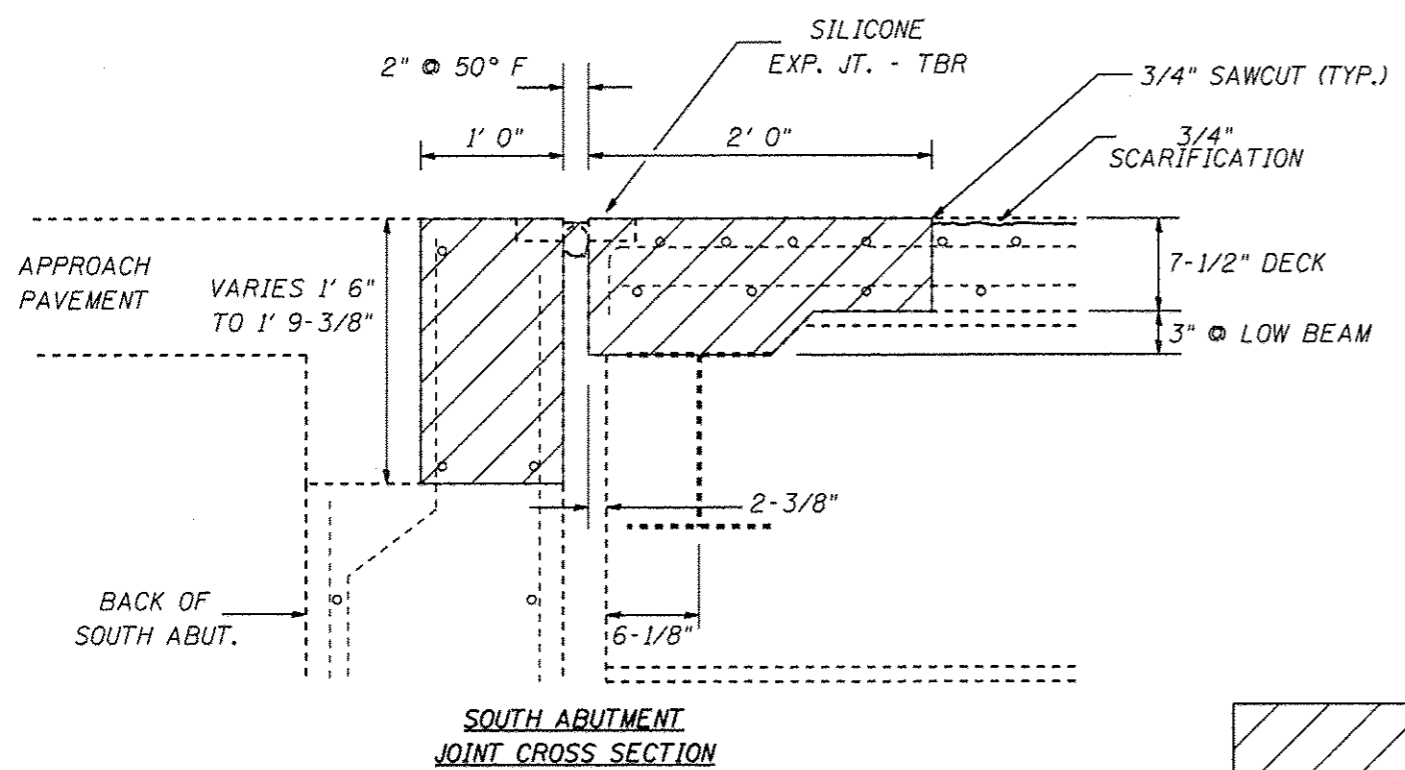
PARTIAL DEPTH PATCHING AREAS

DATE OF SURVEY 1/7/2013

PARTIAL DEPTH PATCHING = 376 SQ YD

NO PARTIAL DEPTH PATCHING QUANTITY IS INCLUDED DUE TO THE USE OF SCARIFICATION.
THIS PATCHING SURVEY IS INCLUDED FOR INFORMATION ONLY.

PARTIAL DEPTH PATCHING PLAN
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY

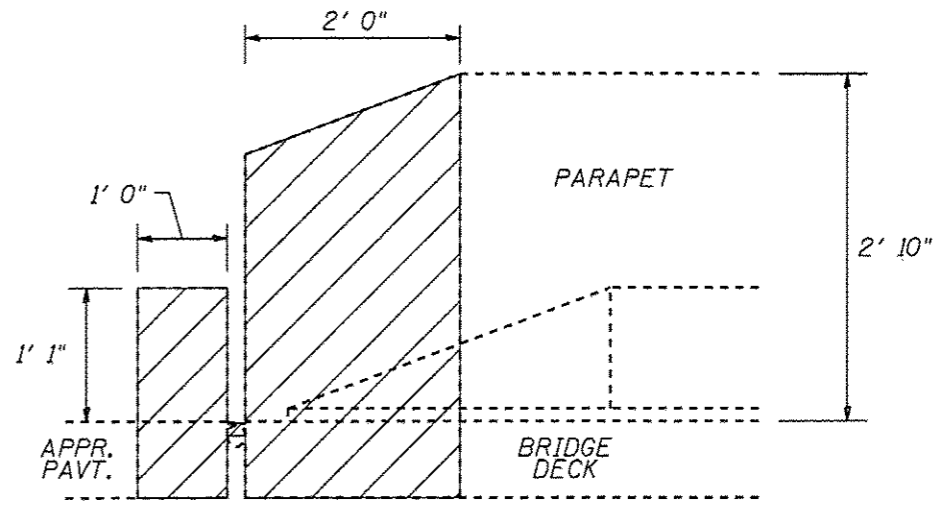
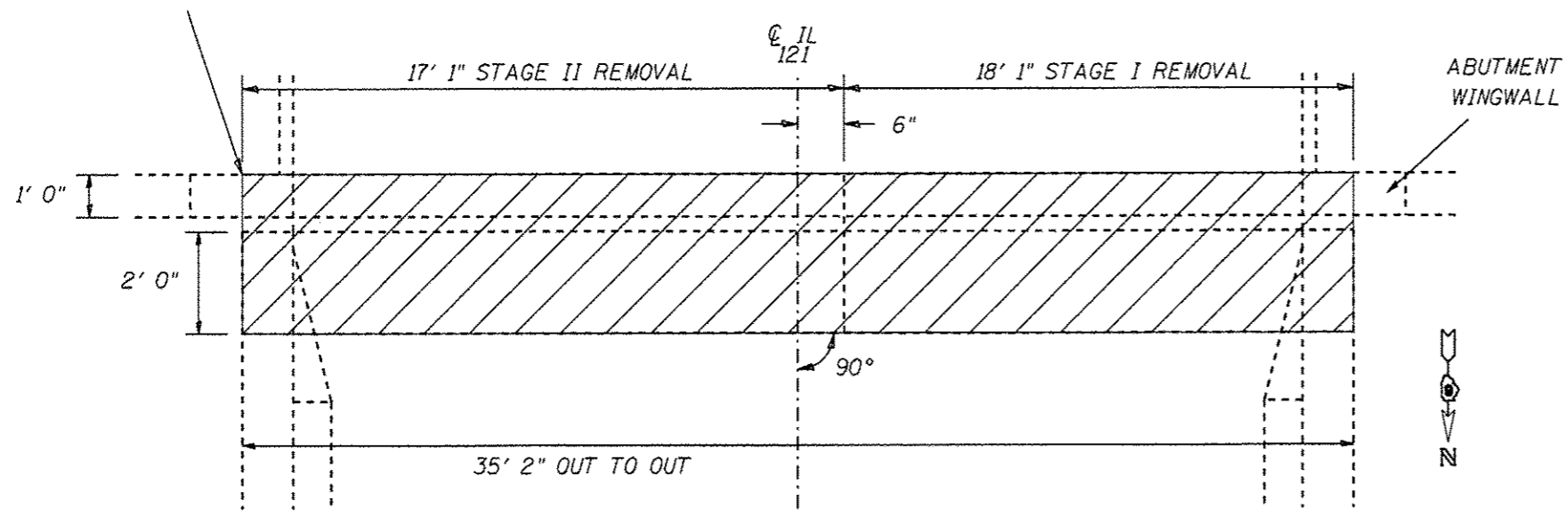


NORTH AND SOUTH ABUT. TOTAL REM.	
CONCRETE REMOVAL	10.0 CU YD

ABUTMENT WINGWALL REMOVAL SHALL STOP EVEN WITH THE BACK OF THE PARAPET AND BE THE SAME DEPTH AS THE HATCH BLOCK REMOVAL SHOWN IN THE CROSS SECTION.

THE COST FOR ANY EARTH EXCAVATION BEHIND THE WINGWALL THAT IS NECESSARY FOR FORMING THE PROPOSED CONCRETE SUPERSTRUCTURE SHALL BE INCLUDED IN THE BID PRICE FOR CONCRETE SUPERSTRUCTURE.

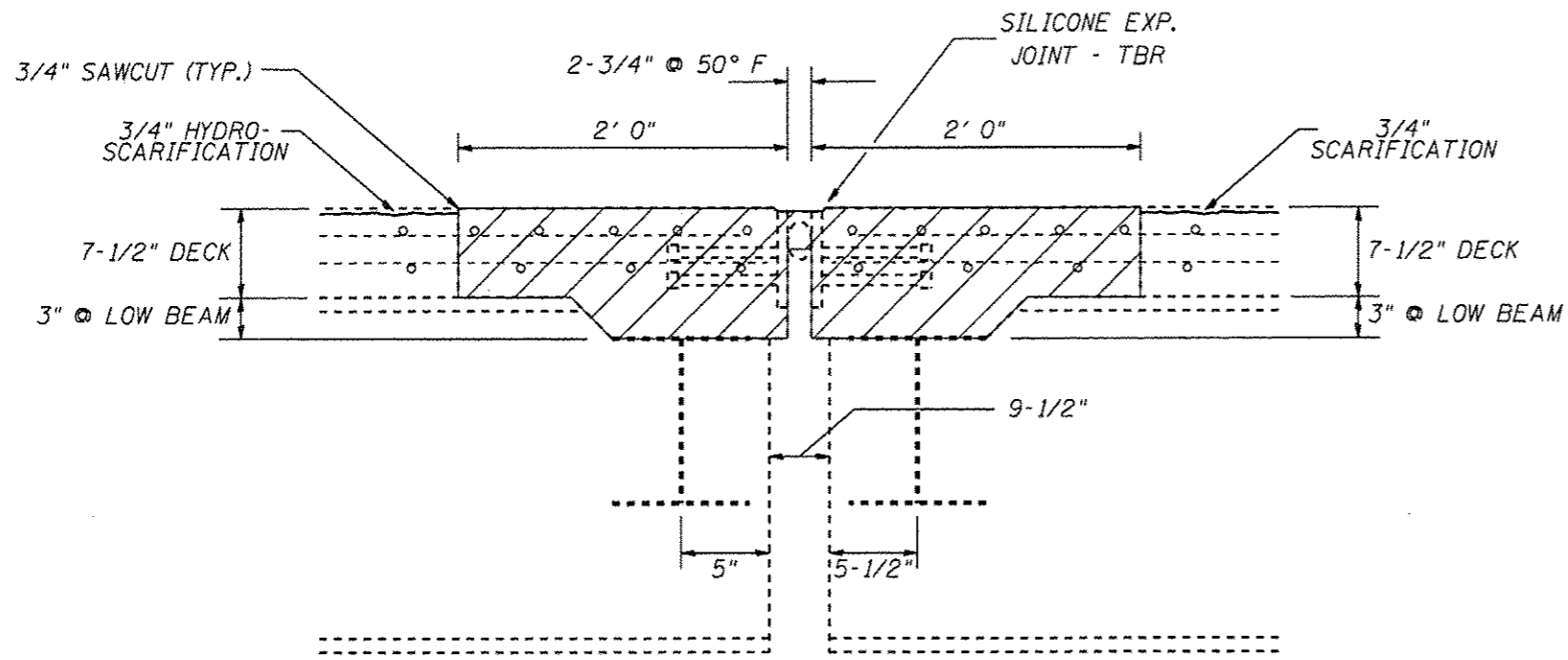
NOTE: THE COST OF JOINT REMOVAL AND DISPOSAL SHALL BE PAID AS CONCRETE REMOVAL.



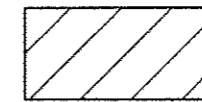
PLAN VIEW
(SOUTH ABUT. SHOWN, NORTH ABUT. SIMILAR)

ELEVATION VIEW, INSIDE PARAPET FACE

ABUT. JT. REMOVAL DETAILS
FAP 320 (IL 121)
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LOGAN COUNTY



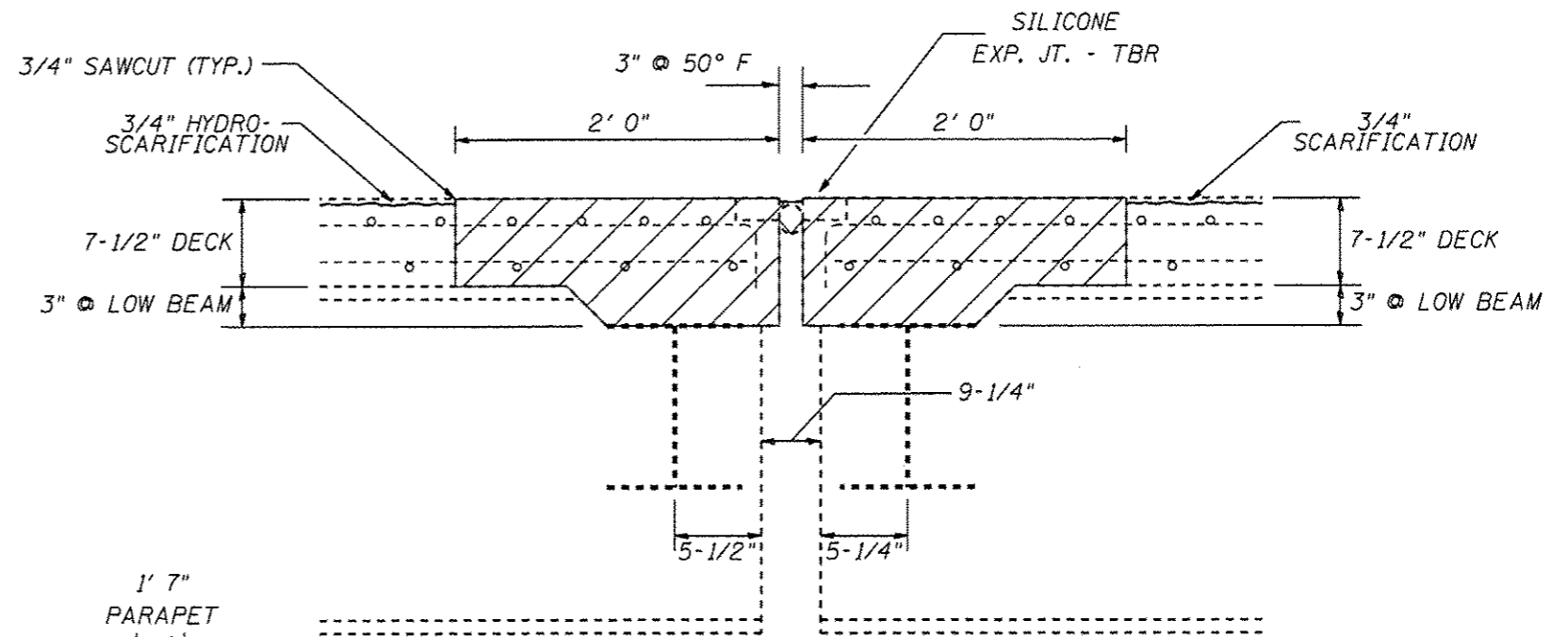
PIER 2 JOINT CROSS SECTION



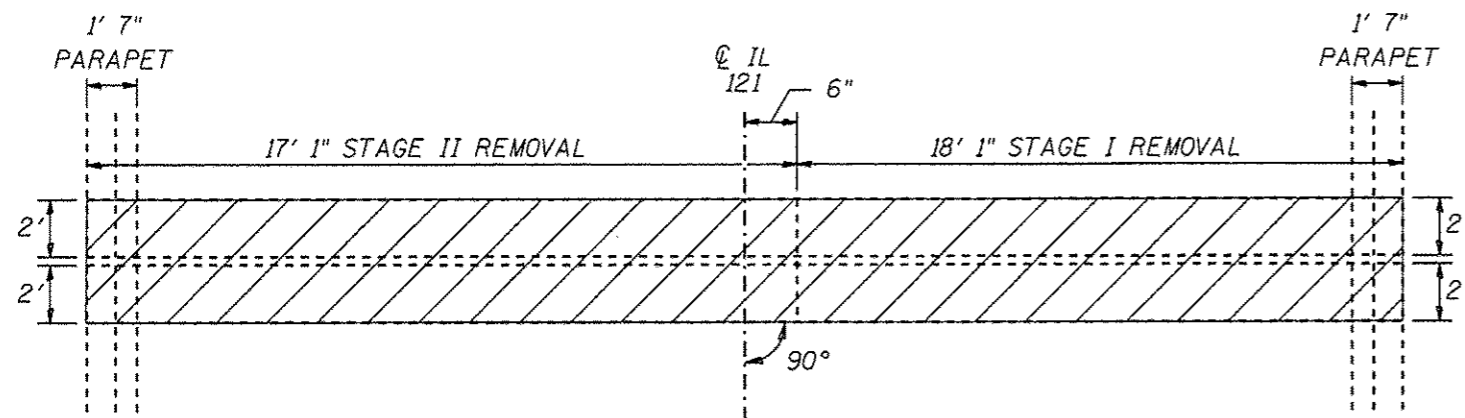
REMOVAL AREAS

PIER 2 AND PIER 5 TOTAL REM.	
CONCRETE REMOVAL	11.3 CU YD

NOTE: THE COST OF JOINT REMOVAL AND DISPOSAL SHALL BE PAID AS CONCRETE REMOVAL.



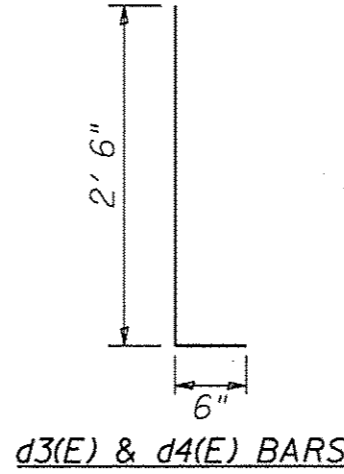
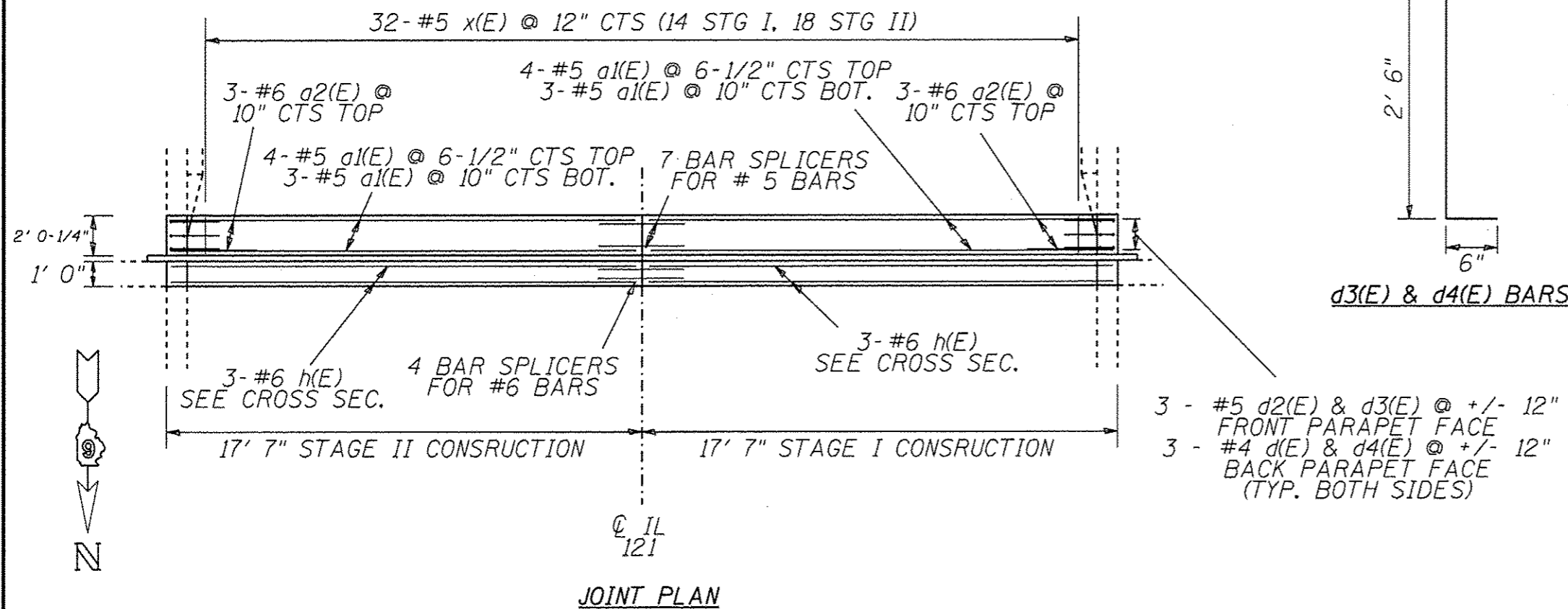
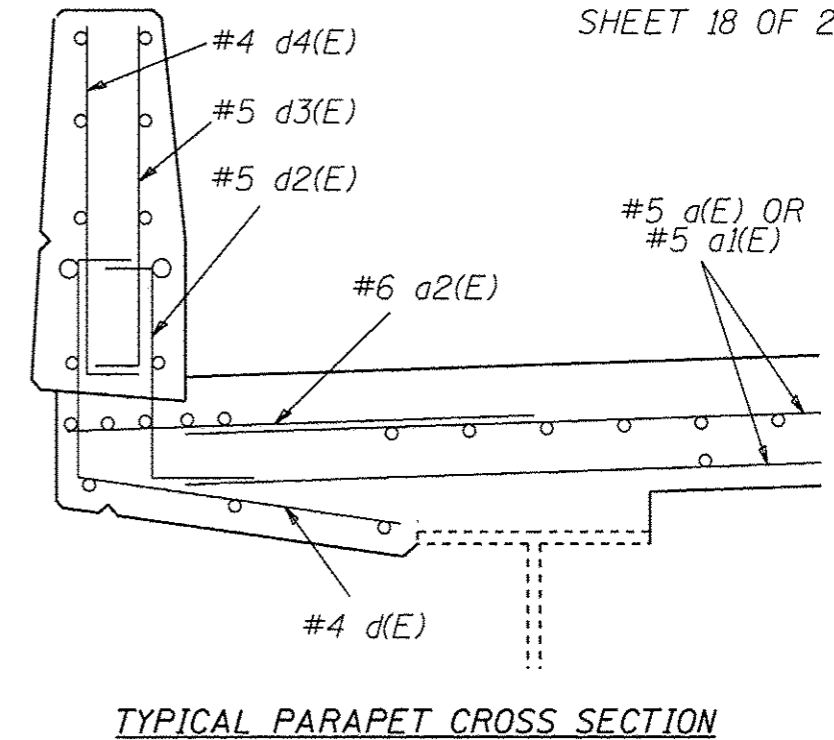
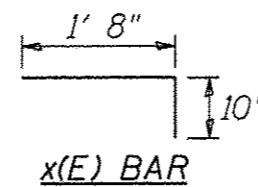
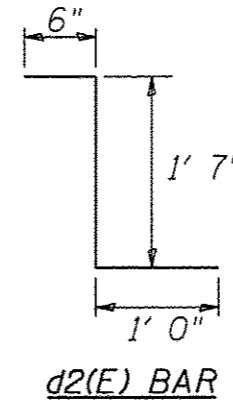
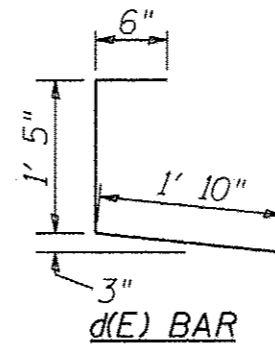
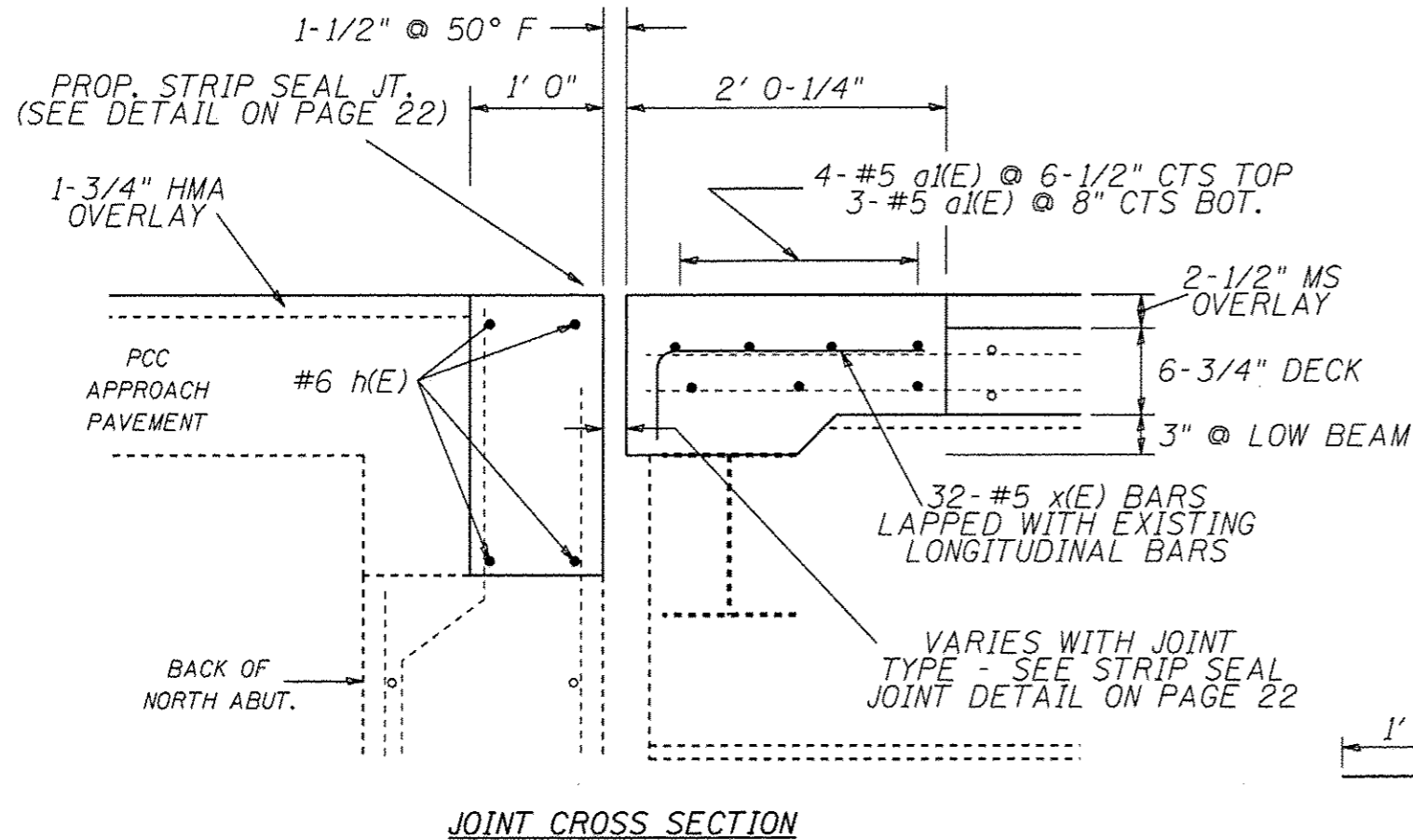
PIER 5 JOINT CROSS SECTION



PIER 2 & 5 JOINT PLAN



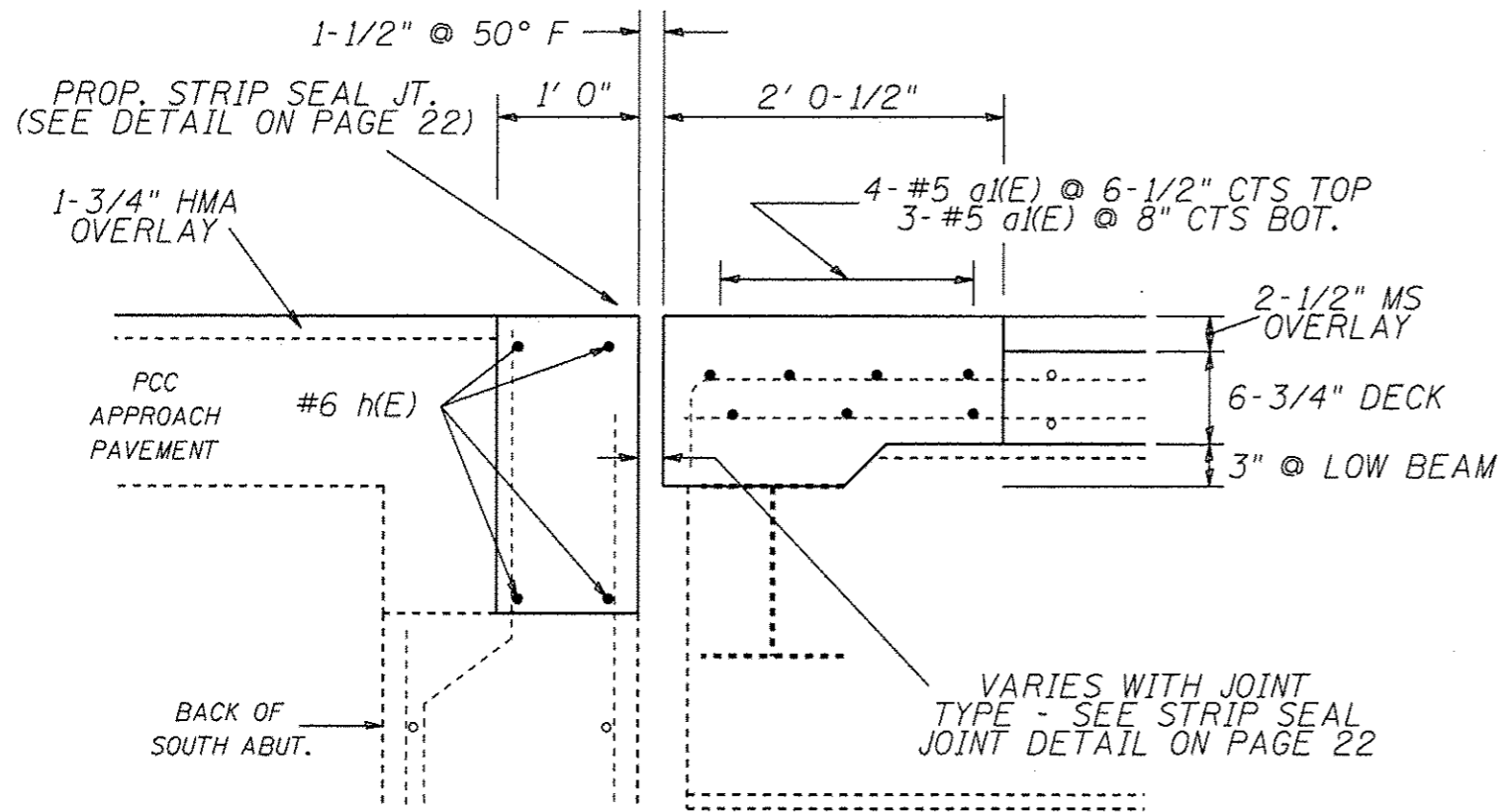
PIER 2 & 5 REMOVAL DETAILS
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



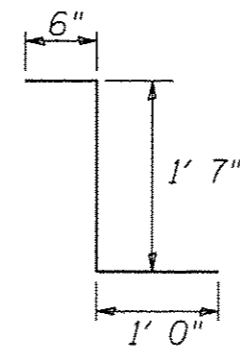
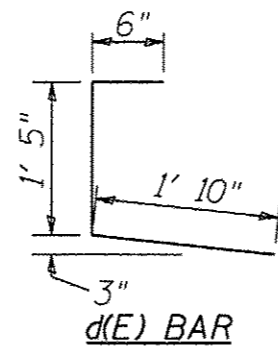
3 - #5 d2(E) & d3(E) @ +/- 12" FRONT PARAPET FACE
3 - #4 d(E) & d4(E) @ +/- 12" BACK PARAPET FACE (TYP. BOTH SIDES)

NORTH ABUTMENT BILL OF MATERIAL				
BAR	#	SIZE	LENGTH	SHAPE
a1(E)	14	5	16' 9"	—
a2(E)	6	6	4' 0"	—
d(E)	6	4	3' 9"	L
d2(E)	6	5	3' 1"	L
d3(E)	6	5	3' 0"	—
d4(E)	6	4	3' 0"	—
h(E)	8	6	16' 9"	—
x(E)	32	5	2' 6"	—
REINFORCEMENT BARS - EPOXY COATED			601 LB	
BAR SPLICERS			11 EACH	
CONCRETE SUPERSTRUCTURE			5.5 CU YD	

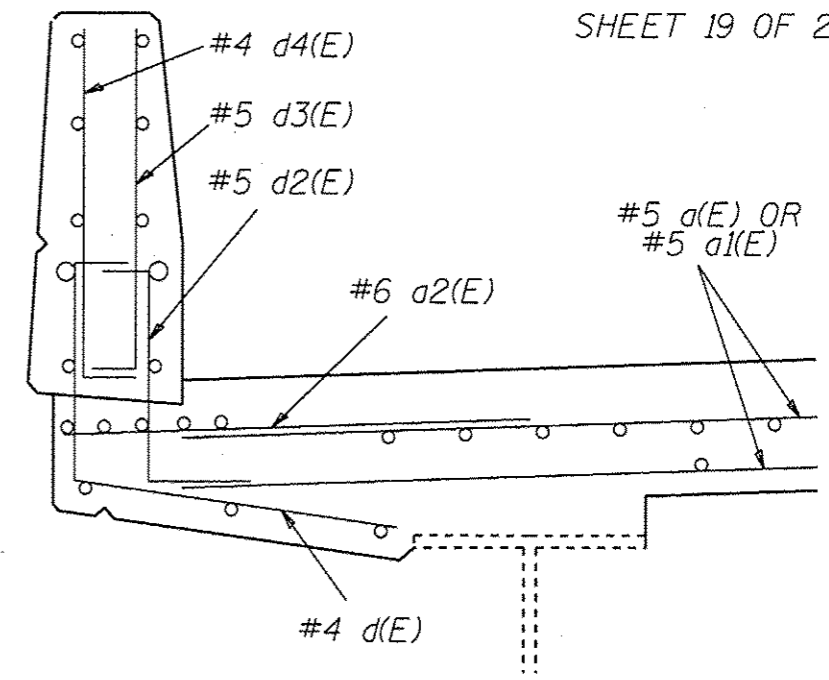
N. ABUT. JOINT REPLACEMENT
FAP 320 (IL 121)
SECTION (117) I-2
LOGAN COUNTY



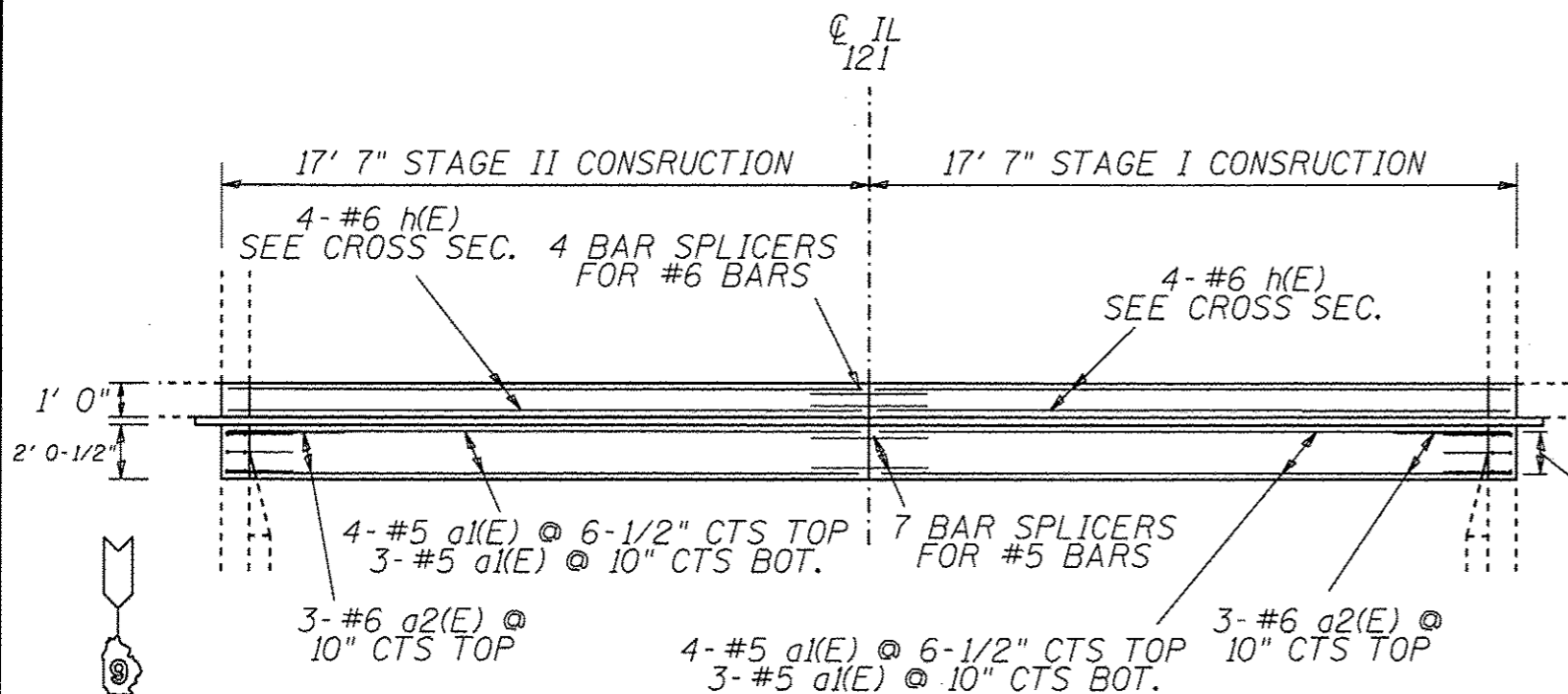
JOINT CROSS SECTION



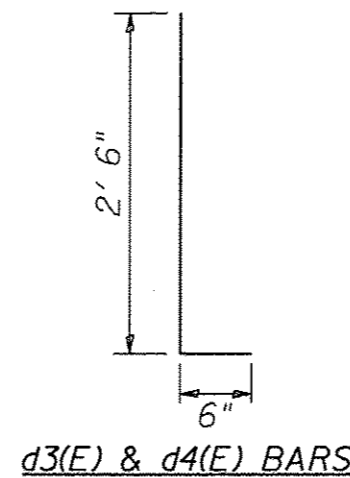
d2(E) BAR



TYPICAL PARAPET CROSS SECTION



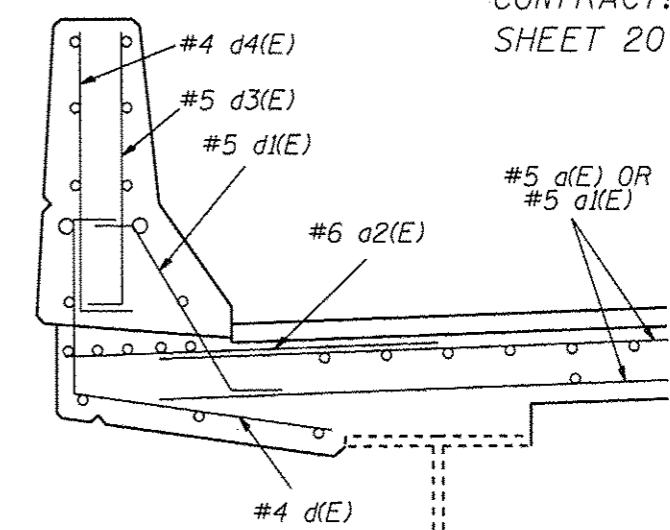
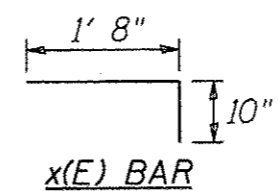
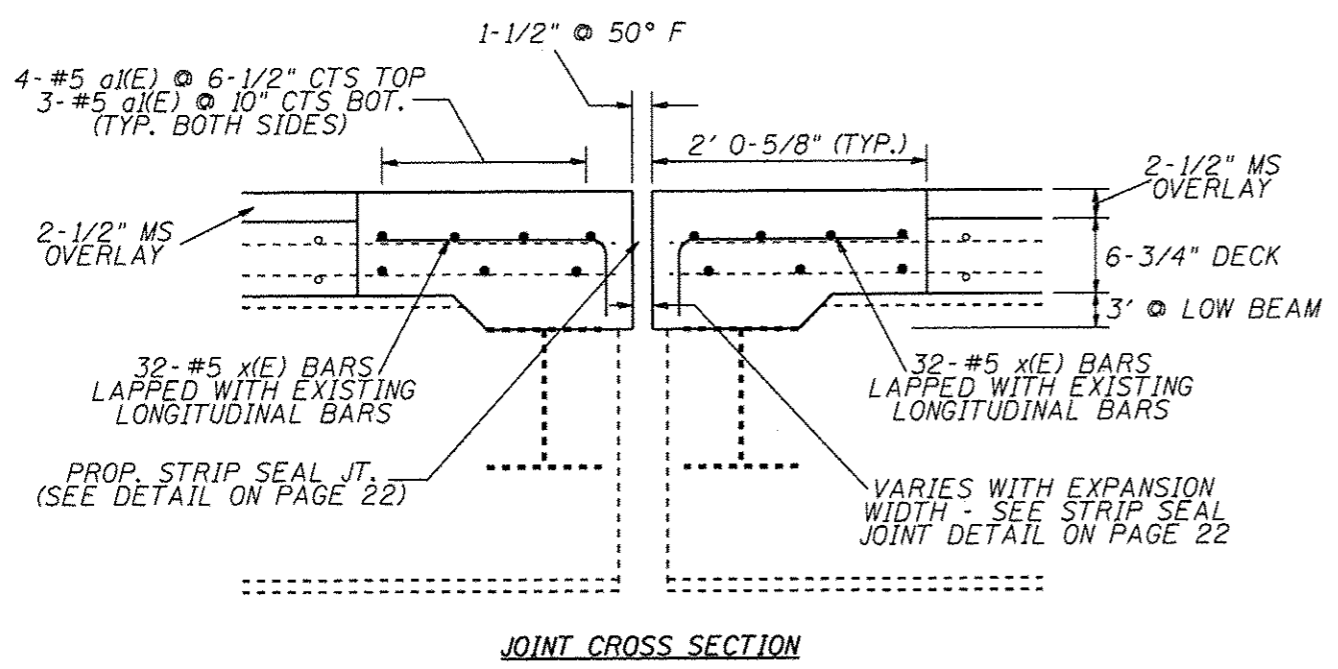
JOINT PLAN



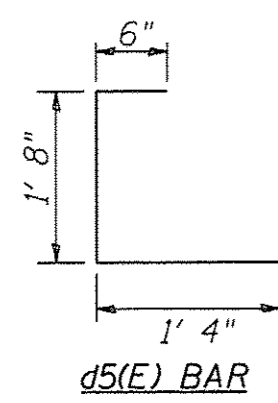
3 - #5 d2(E) & d3(E) @ +/- 12" FRONT PARAPET FACE
3 - #4 d(E) & d4(E) @ +/- 12" BACK PARAPET FACE (TYP. BOTH SIDES)

SOUTH ABUTMENT BILL OF MATERIAL				
BAR	#	SIZE	LENGTH	SHAPE
d1(E)	14	5	16' 9"	—
a2(E)	6	6	4' 0"	—
d(E)	6	4	3' 9"	L
d2(E)	6	5	3' 1"	L
d3(E)	6	5	3' 0"	—
d4(E)	6	4	3' 0"	—
h(E)	8	6	16' 9"	—
REINFORCEMENT BARS - EPOXY COATED			548 LB	
BAR SPLICERS			11 EACH	
CONCRETE SUPERSTRUCTURE			5.5 CU YD	

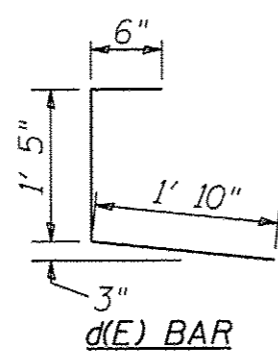
S. ABUT. JOINT REPLACEMENT
FAP 320 (IL 121)
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LOGAN COUNTY



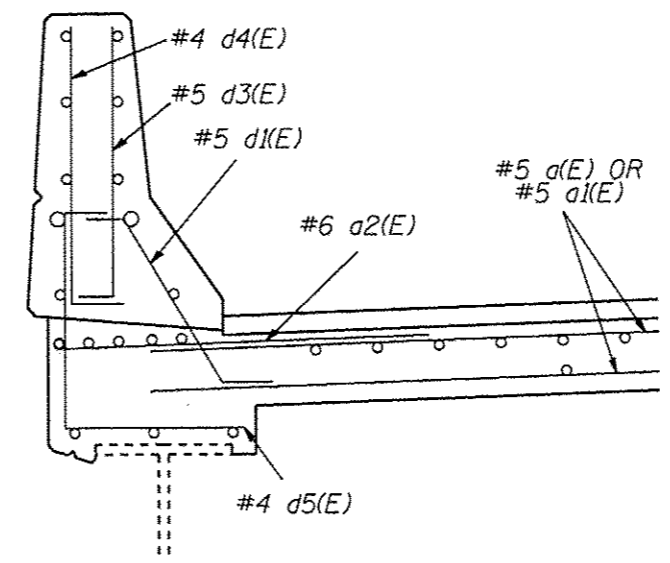
TYPICAL PARAPET CROSS SECTION
(NORTH HALF OF JOINT)



d5(E) BAR

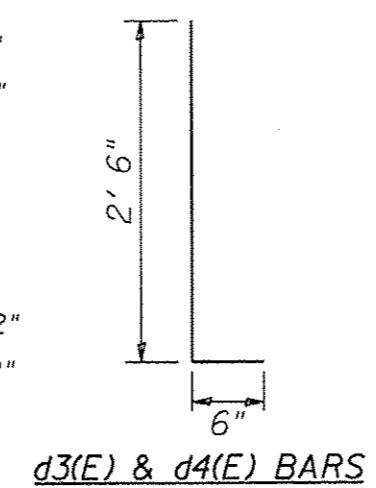
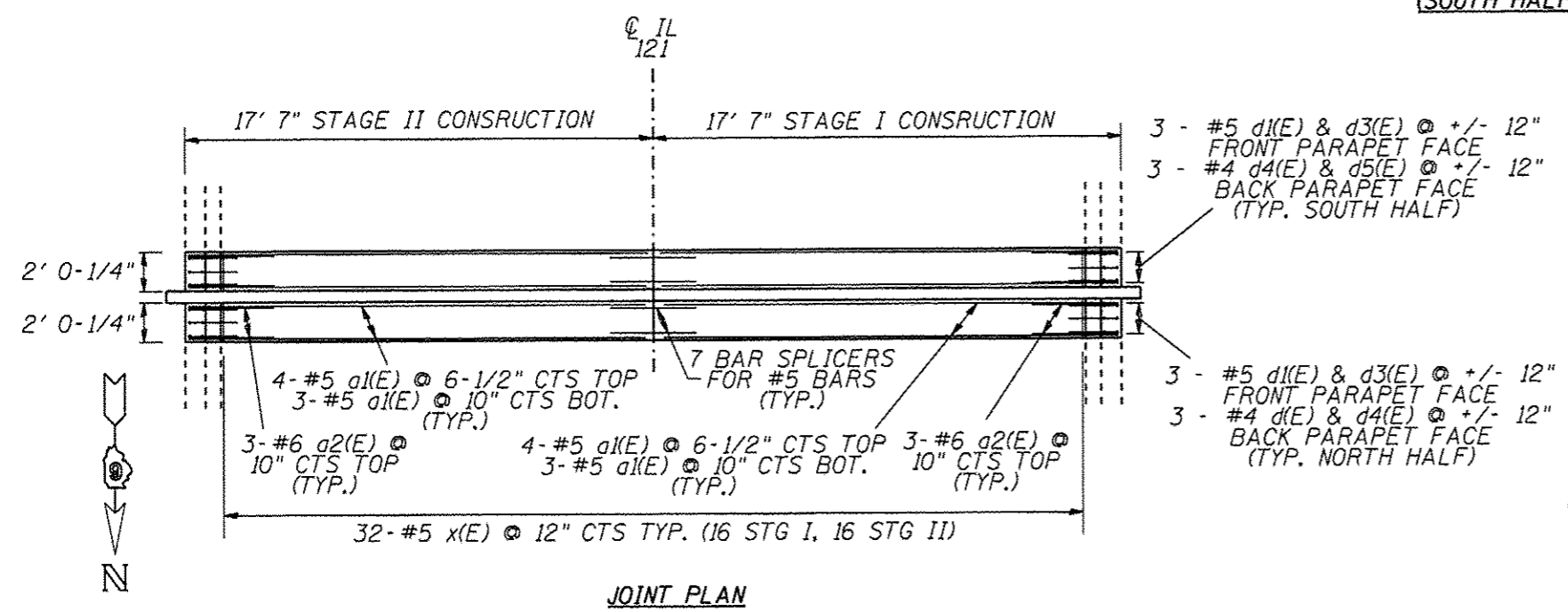


d1(E) BAR



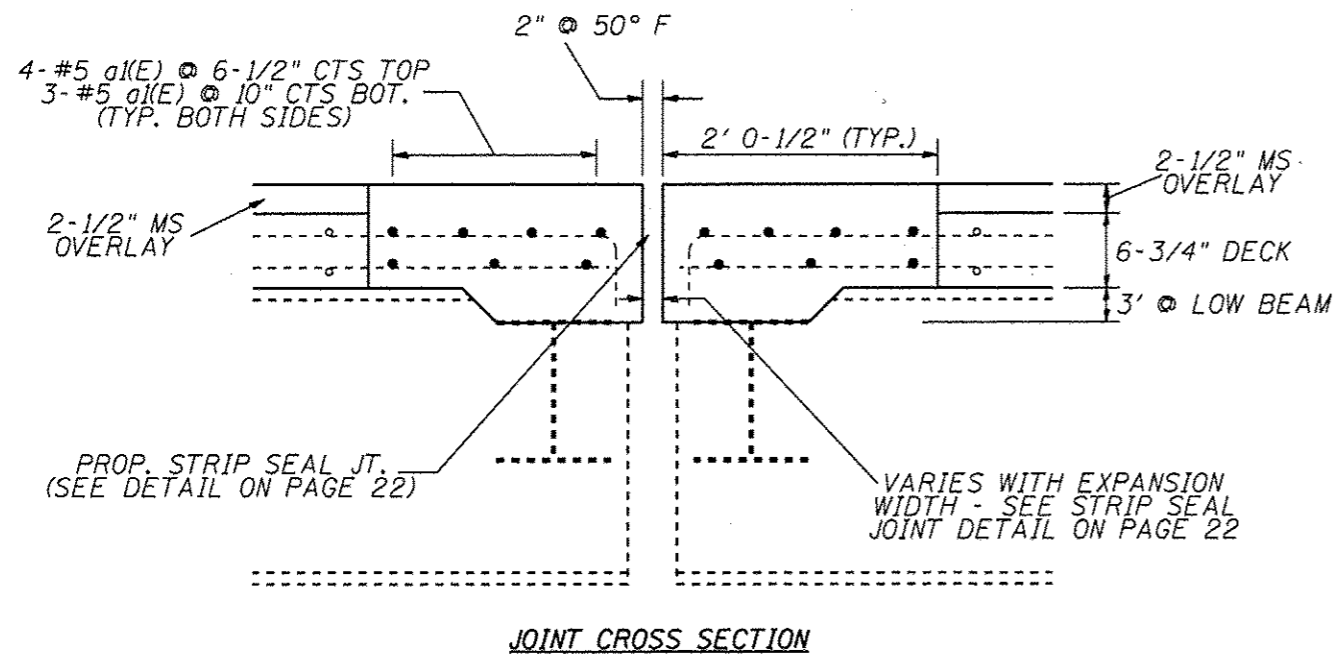
TYPICAL PARAPET CROSS SECTION
(SOUTH HALF OF JOINT)

PIER 2 BILL OF MATERIAL				
BAR	#	SIZE	LENGTH	SHAPE
a1(E)	28	5	16' 9"	—
a2(E)	12	6	4' 0"	—
d(E)	6	4	3' 9"	L
d1(E)	12	5	2' 7"	∩
d3(E)	12	5	3' 0"	—
d4(E)	12	4	3' 0"	—
d5(E)	6	4	3' 6"	L
x(E)	64	5	2' 6"	—
REINFORCEMENT BARS - EPOXY COATED				792 LB
BAR SPLICERS				14 EACH
CONCRETE SUPERSTRUCTURE				6.4 CU YD

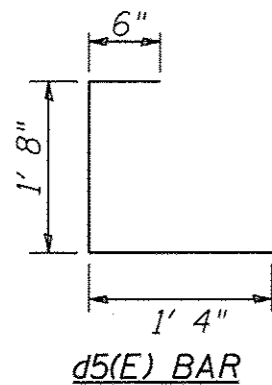


d3(E) & d4(E) BARS

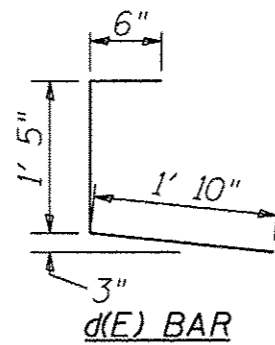
PIER 2 JOINT REPLACEMENT
FAP 320 (IL 121)
SECTION (117) I-2
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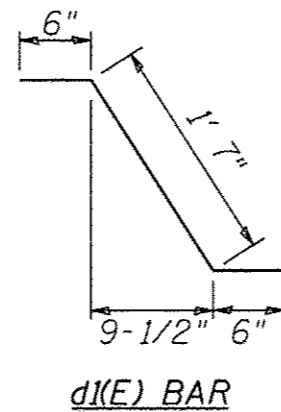
JOINT CROSS SECTION



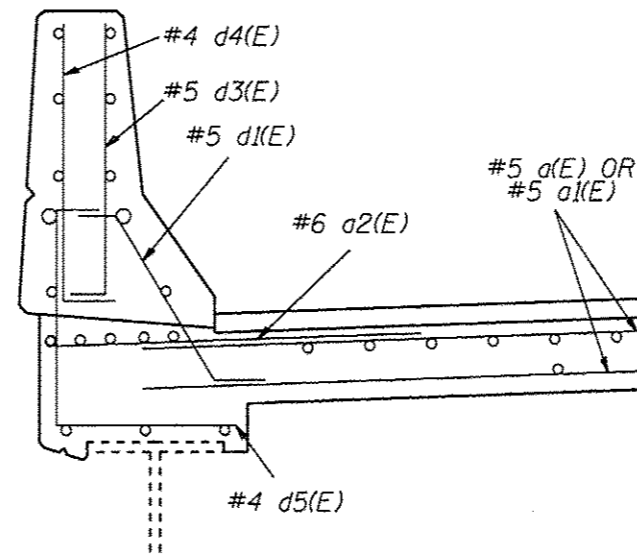
d5(E) BAR



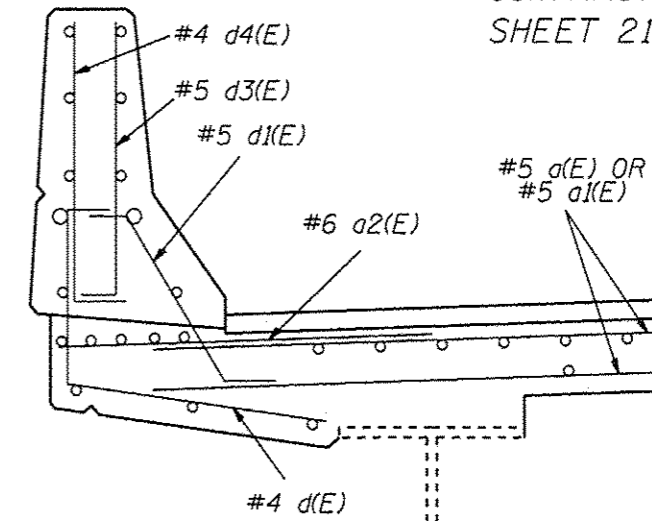
d(E) BAR



d1(E) BAR

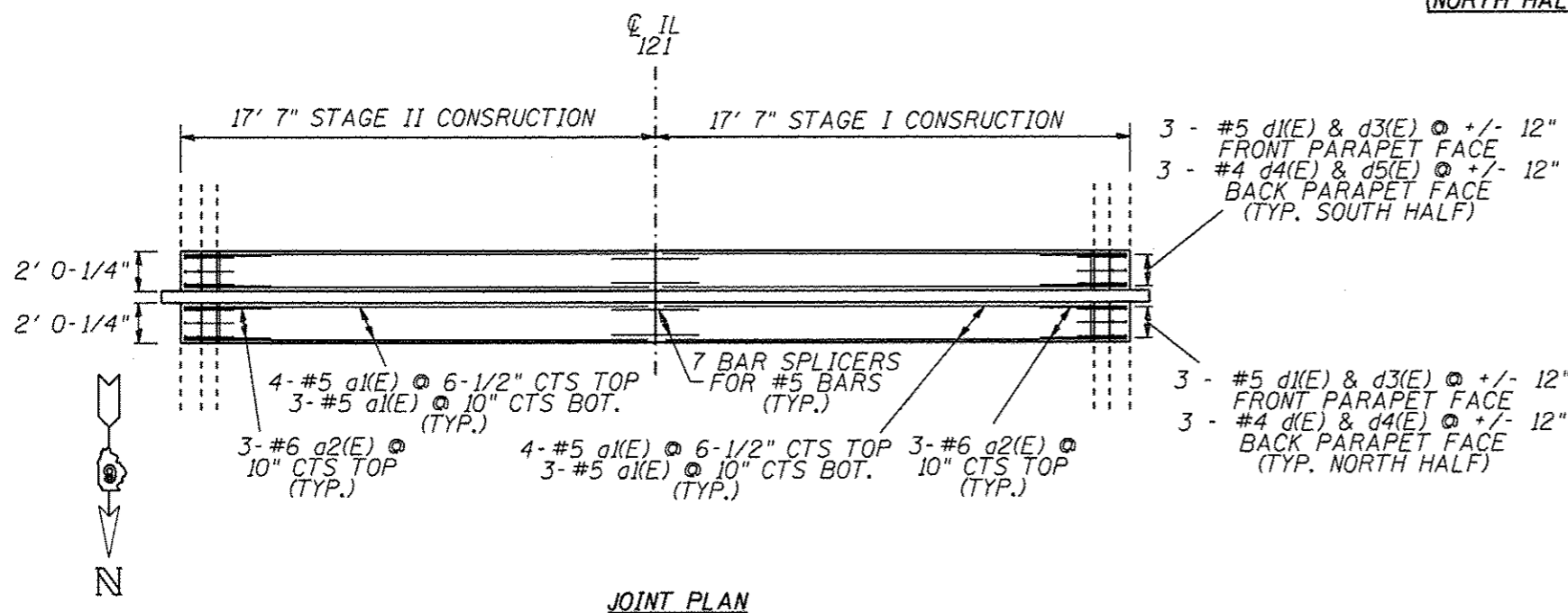


TYPICAL PARAPET CROSS SECTION
(NORTH HALF OF JOINT)

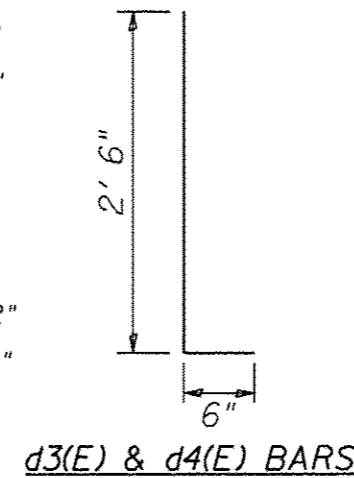


TYPICAL PARAPET CROSS SECTION
(SOUTH HALF OF JOINT)

PIER 5 BILL OF MATERIAL				
BAR	#	SIZE	LENGTH	SHAPE
d1(E)	28	5	16' 9"	—
a2(E)	12	6	4' 0"	—
d(E)	6	4	3' 9"	L
d1(E)	12	5	2' 7"	∩
d3(E)	12	5	3' 0"	—
d4(E)	12	4	3' 0"	—
d5(E)	6	4	3' 6"	L
REINFORCEMENT BARS - EPOXY COATED			685 LB	
BAR SPLICERS			14 EACH	
CONCRETE SUPERSTRUCTURE			6.4 CU YD	

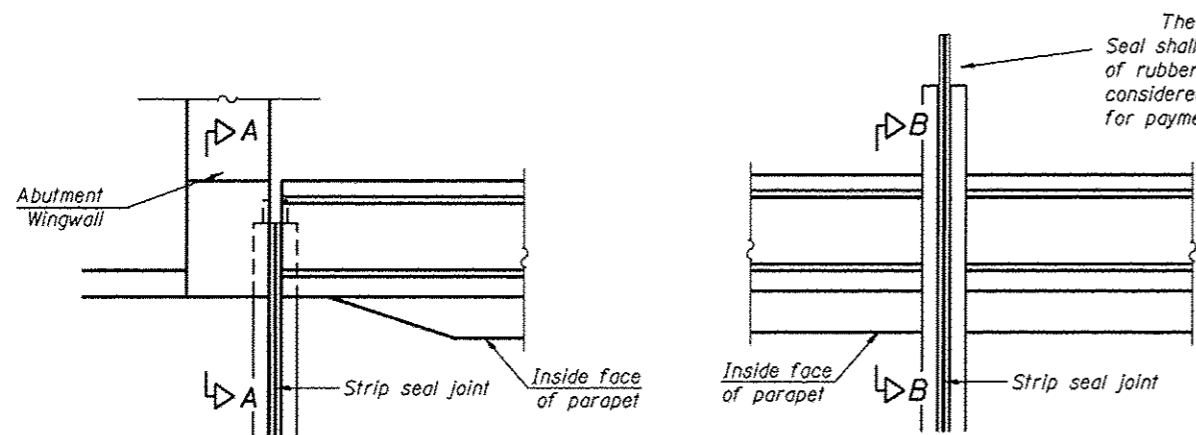


JOINT PLAN



d3(E) & d4(E) BARS

PIER 5 JOINT REPLACEMENT
FAP 320 (IL 121)
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LOGAN COUNTY



The pay limits for Preformed Joint Strip Seal shall be to the end of the steel plate. The 6" of rubber extending past the end of steel shall be considered incidental and shall not be measured for payment.

BILL OF MATERIAL

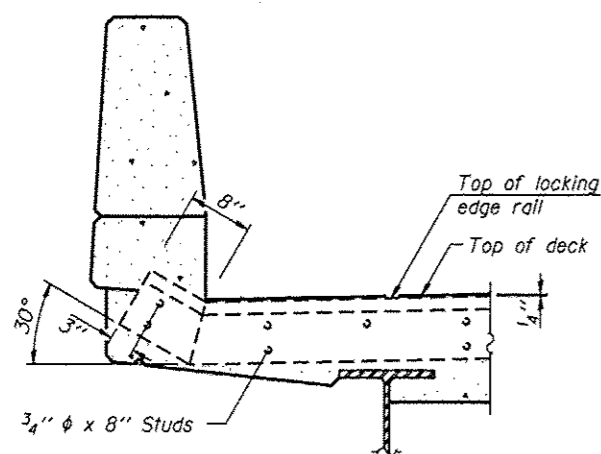
Item	Unit	Total
Preformed Joint Strip Seal	Foot	144

TABLE "A"
(All dimensions @ 50° F)

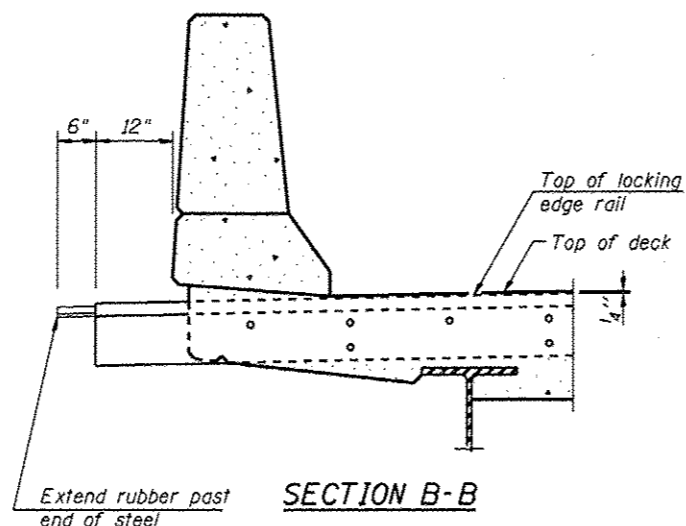
Joint	A	B	C
N. Abut.	1-1/2"	2"	2-3/4"
Pier 2	1-1/2"	2"	2-3/4"
Pier 5	2"	2-1/2"	3-1/4"
S. Abut.	1-1/2"	2"	2-3/4"

PLAN THROUGH PARAPET
(North & South Abutments)

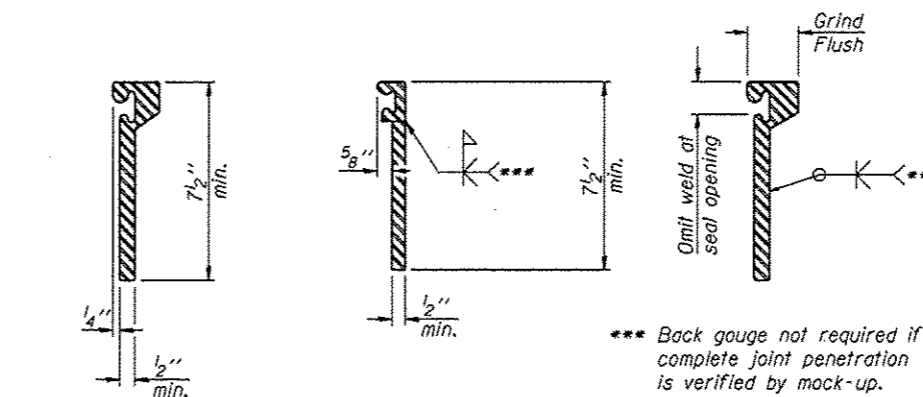
PLAN THROUGH PARAPET
(Piers 2 & 5)



SECTION A-A



SECTION B-B

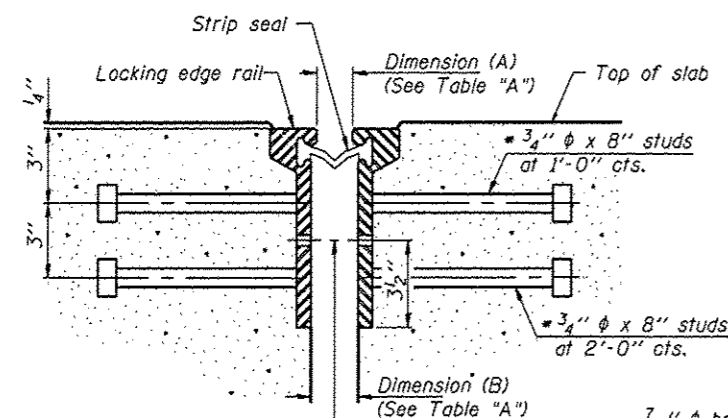


LOCKING EDGE RAILS

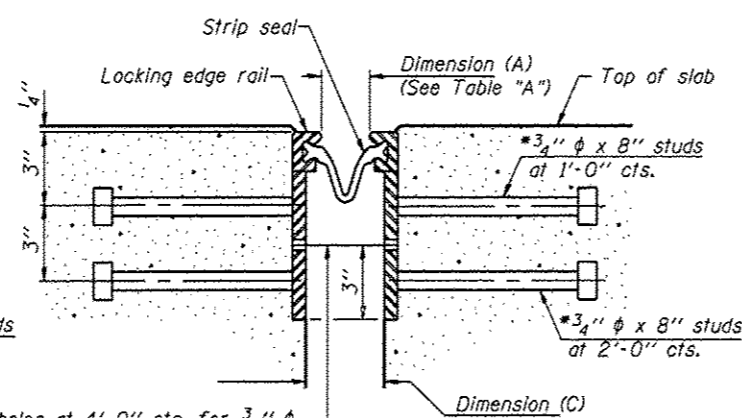
*** Back gauge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.



SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT

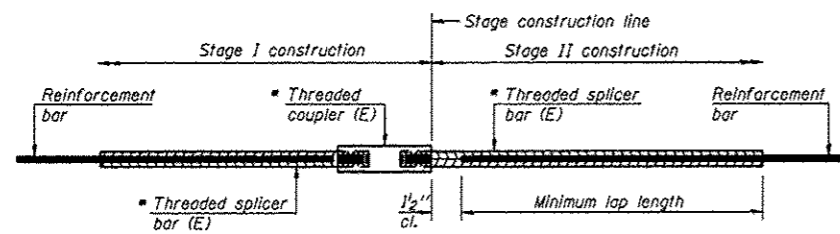
7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

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.

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

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
The manufacturer's recommended installation methods shall be followed.
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.
Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

STRIP SEAL JOINT DETAILS
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STANDARD BAR SPLICER ASSEMBLY

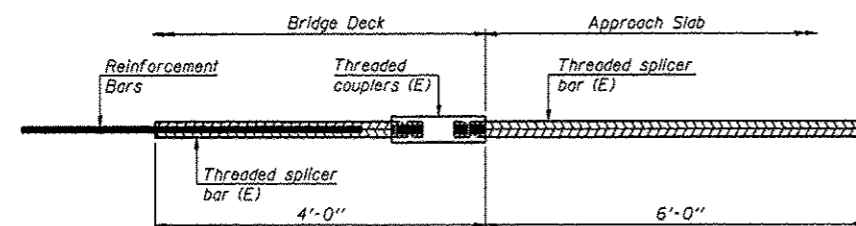
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar lap, Class C

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

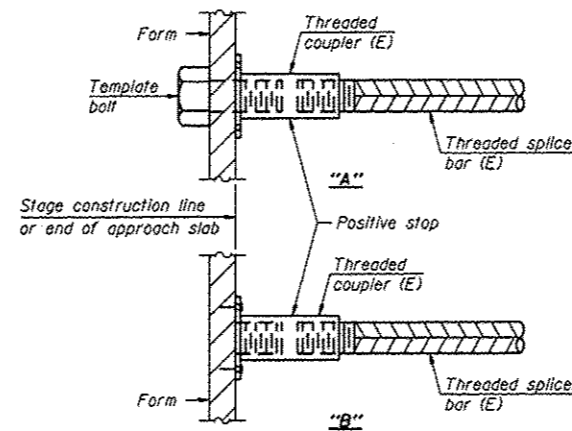
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Abuts. (Appr. Side)	#6	8	3
Abuts. (Deck Side)	#5	14	3
Deck Joints	#5	28	3



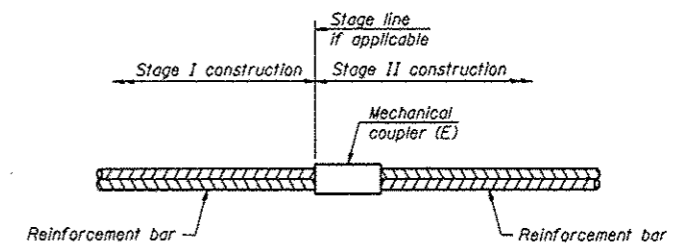
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



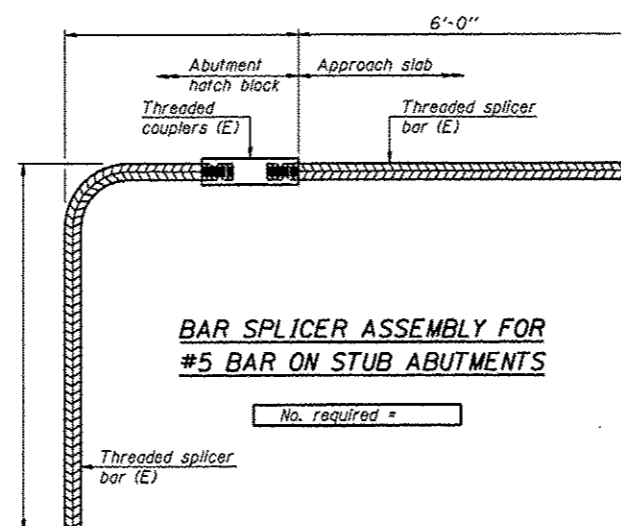
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

BAR SPLICER DETAILS
FAP 320 (IL 121)
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LOGAN COUNTY