

08-03-2018 LETTING ITEM 046

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

F.A.I. ROUTE 57 (I-57)  
SECTION D9 APPROACH PAVEMENT 2018-1  
PROJECT NHPP-RYK9(171)  
APPROACH SLAB REPLACEMENTS  
I-57 OVER IL 3  
ALEXANDER COUNTY  
C-99-093-18

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3-6

**TRAFFIC DATA**

2014 ADT I-57 = 10,800 (TWO WAY)  
45% TRUCKS

**TOWNSHIPS:**

CACHE NO. 2

DESIGN DESIGNATION: N/A  
COORDINATE SYSTEM: ILLINOIS COORDINATE SYSTEM, WEST ZONE  
POSTED SPEED LIMIT: 70

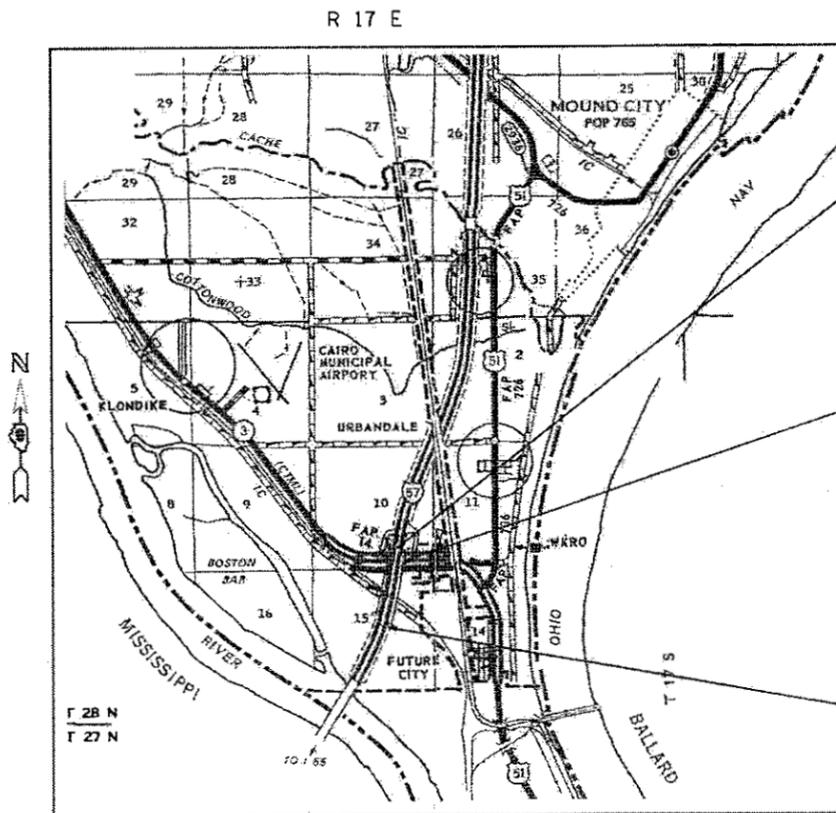
J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: DAVID PICHE  
PROJECT DESIGNER: CHRIS LAMPORT

CONTRACT NO. 78663

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	1
ILLINOIS CONTRACT NO. 78663				

D-99-060-18



PROPOSED PROJECT BEGINS  
STA 1087 + 71 (SB)  
STA 1088 + 33 (NB)

PROPOSED REPAIRS OVER IL RT 3  
STRUCTURE NO. 002-0024 (SB)  
& STRUCTURE NO. 002-0023 (NB)

T 28 N

PROPOSED PROJECT ENDS  
STA 1121 + 21 (SB)  
STA 1122 + 27 (NB)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED *May 9 2018*  
*Jeffrey A. Klein*  
REGION FIVE ENGINEER

*June 29 2018*  
ENGINEER OF DESIGN AND ENVIRONMENT

*June 29 2018*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

**GENERAL NOTES**

- 1) 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.
- 2) 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.
- 3) TO RETAIN THE TEMPORARY CONCRETE BARRIER FOR STAGE 2 TRAFFIC, THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER 2 (#5) BAR SPLICERS OR 2 CAST IN PLACE INSERTS AT 6" CENTERS AT THE MID-DEPTH OF THE PCC BRIDGE APPROACH PAVEMENT CONNECTORS. THE BAR SPLICERS OR INSERTS SHALL HAVE A MINIMUM PROOF LOAD OF 5,000 POUNDS. ALONG WITH THE ANCHORING DEVICES THE CONTRACTOR SHALL PROVIDE ONE STEEL RETAINER PLATE, AND 2 1/2" DIAMETER BOLT AND WASHERS EVERY 6 FEET AS SHOWN ON DETAIL II ON STANDARD R-27 FOR STAGE 2 TRAFFIC. THIS WORK SHALL BE INCLUDED IN THE COST OF TEMPORARY CONCRETE BARRIER, NO ADDITIONAL COMPENSATION SHALL BE PROVIDED.
- 4) COMMITMENTS: NONE AS OF MAY 11, 2018.

**INDEX OF SHEETS**

- |       |  |
|-------|--|
| 1     | COVER SHEET  |
| 2     | INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, SIGNATURE BLOCK |
| 3-6   | SUMMARY OF QUANTITIES  |
| 7-8   | STAGE CONSTRUCTION DETAILS, STAGES 1 AND 2                         |
| 9     | RAMP CLOSURE DETOUR  |
| 10    | MAX WIDTH SIGNAGE  |
| 11    | STAGED TRAFFIC WIDTHS  |
| 12-21 | APPROACH SLAB REPLACEMENT DETAILS                                  |
| 22    | BASE SHEET R-27  |

**MIXTURE REQUIREMENTS**

LOCATION(S):	HOT-MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS, MIX C, N70, IL-9.5
AC/PG:	PG64-22
ABR% (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0%, @ NDES = 70
MIXTURE COMPOSITION (GRADATION):	IL-9.5
FRICTION AGGREGATE:	C SURFACE
MIXTURE WEIGHT:	112LBS / SQ YD / IN
QUALITY MGMT PROGRAM:	OC/OA

**ILLINOIS HIGHWAY STANDARDS**

- |           |  |
|-----------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS                                     |
| 001001-02 | AREAS OF REINFORCEMENT BARS  |
| 420001-09 | PAVEMENT JOINTS  |
| 420401-12 | PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB                                |
| 442101-08 | CLASS B PATCHES  |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL   |
| 631031-15 | TRAFFIC BARRIER TERMINAL, TYPE 6   |
| 642001-02 | SHOULDER RUMBLE, 16 IN.  |
| 701101-05 | OFF-ROAD, MULTILANE 15' TO PAVEMENT EDGE   |
| 701106-02 | OFF-ROAD, MULTILANE MORE THAN 15' AWAY   |
| 701400-09 | APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY                                      |
| 701401-11 | LANE CLOSURE FREEWAY/EXPRESSWAY  |
| 701402-12 | LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER                                   |
| 701406-11 | LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY                            |
| 701411-09 | LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH TO 55 MPH |
| 701426-09 | LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≥ 45 MPH   |
| 701451-05 | RAMP CLOSURE   |
| 701901-07 | TRAFFIC CONTROL DEVICES  |
| 704001-08 | TEMPORARY CONCRETE BARRIER   |
| 780001-05 | TYPICAL PAVEMENT MARKINGS  |
| 781001-04 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS                          |

Prepared By: \_\_\_\_\_  
DISTRICT STUDIES & PLANS ENGINEER

Examined By: Nancy Hill  
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Keel Kelly  
DISTRICT OPERATIONS ENGINEER

Examined By: KARL  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Daryl J. Thiesing  
DISTRICT CONSTRUCTION ENGINEER

Examined By: \_\_\_\_\_  
DISTRICT MATERIALS ENGINEER

# SUMMARY OF QUANTITIES

COUNTY:	ALEXANDER
ROUTE:	I-57
FUNDING:	90% FED / 10% STATE
LOCATION:	RURAL
	0047

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	357
42000080	PAVEMENT CONNECTOR (PCC) FOR BRIDGE APPROACH SLAB	SQ YD	371.0
44000100	PAVEMENT REMOVAL	SQ YD	645
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	793
44004250	PAVED SHOULDER REMOVAL	SQ YD	342.0
44200998	CLASS B PATCHES, TYPE III, 12 INCH	SQ YD	16
44201299	DOWEL BARS 1 1/2"	EACH	40
44213200	SAW CUTS	FOOT	68
48203003	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	SQ YD	793
50102400	CONCRETE REMOVAL	CU YD	258.1
50200100	STRUCTURE EXCAVATION	CU YD	195
50300225	CONCRETE STRUCTURES	CU YD	66.6
50300260	BRIDGE DECK GROOVING	SQ YD	518

FILE NAME	USER NAME	DESIGNED	REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PRE-STAGE 1 &amp; STAGE 1 CONSTRUCTION</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pu\N\JL084ERIDINTEG\Illinois.gov\FMIDT\Documents\100T Offices\District 9\Projects\786	Lampor:EP	DRAMM	REVISED			57	D9 APPROACH PAVEMENT	ALEXANDER	22	3
		CHECKED	REVISED				2018-1			CONTRACT NO. 78663
		DATE	REVISED		SCALE:					ILLINOIS FED. AID PROJECT

# SUMMARY OF QUANTITIES - CON

COUNTY:	ALEXANDER
ROUTE:	I-57
FUNDING:	90% FED / 10% STATE
LOCATION:	RURAL

CODE NUMBER	ITEM DESCRIPTION	UNIT	0047
50300300	PROTECTIVE COAT	SQ YD	641
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	258.9
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	98,750
50800515	BAR SPLICERS	EACH	604
52200010	TEMPORARY SHEET PILING	SQ FT	160
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	25
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	7
63200310	GUARDRAIL REMOVAL	FOOT	287.5
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	844
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3
67100100	MOBILIZATION	L SUM	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1

\* SPECIALTY ITEM

5/11/2018 10:00:00 AM

FILE NAME: p:\jil\04EBID\INTEG\Illinois.gov\1001\Do	USER NAME: Lempert,CP	DESIGNED: [Signature]	REVISED: [Signature]	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	PRE-STAGE 1 & STAGE 1 CONSTRUCTION	F.A.I. RTE. 57	SECTION 09 APPROACH PAVEMENT 2018-1	COUNTY ALEXANDER	TOTAL SHEETS 22	SHEET NO. 4
PLOT SCALE = 100.0000' / in.		CHECKED: [Signature]	REVISED: [Signature]	SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.		CONTRACT NO. 78663		ILLINOIS FED. AID PROJECT		
PLOT DATE: 5/11/2018		DATE: [Signature]	REVISED: [Signature]							

# SUMMARY OF QUANTITIES - CON

COUNTY: ALEXANDER  
 ROUTE: I-57  
 FUNDING: 90% FED / 10% STATE  
 LOCATION: RURAL

0047

CODE NUMBER	ITEM DESCRIPTION	UNIT	
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	1
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1
70107004	PAVEMENT MARKING BLACKOUT TAPE, 4"	FOOT	2,268
70300100	SHORT TERM PAVEMENT MARKING	FOOT	250
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	3,988
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,583
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,025
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,000
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1,583

12  
\*

\* SPECIALTY ITEM

FILE NAME: P:\N\1084EBID\INTEG\Illinois.gov\1001\Documents\1001 - Of Files\District 9\Projects\7865-Design\Drawn\Design\78653-Design.dgn	USER NAME: LempertCP	DESIGNED: _____	REVISED: _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PRE-STAGE 1 &amp; STAGE 1 CONSTRUCTION</b>	F.A.I. RTE: 57	SECTION: D9 APPROACH PAVEMENT 2018-1	COUNTY: ALEXANDER	TOTAL SHEETS: 22	SHEET NO.: 5
PLOT SCALE: 1/8" = 1'-0"	CHECKED: _____	DATE: _____	REVISED: _____	SCALE: SHEET NO. 3 OF 4 SHEETS STA. _____ TO STA. _____		CONTRACT NO. 78653		ILLINOIS FED. AID PROJECT		

# SUMMARY OF QUANTITIES - CON

COUNTY: ALEXANDER  
 ROUTE: I-57  
 FUNDING: 90% FED / 10% STATE  
 LOCATION: RURAL

	CODE NUMBER	ITEM DESCRIPTION	UNIT	
				<b>0047</b>
*	78100300	REPLACEMENT REFLECTOR	EACH	50
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	50
*	80300100	LOCATING UNDERGROUND CABLE	FOOT	50
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	195
	X7015005	CHANGEABLE MESSAGE SIGN	CAL DAY	42
	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	528
	X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	72
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	195

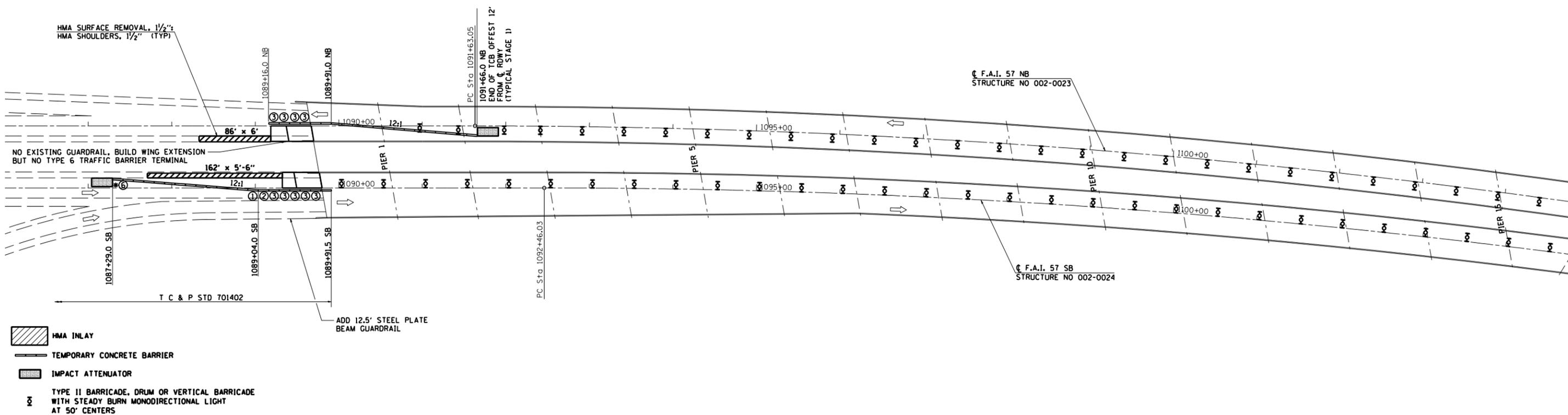
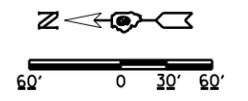
\* SPECIALTY ITEM

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FILE NAME: p:\1\1084EBID\INTEG\Illinois.gov\WIDOT\Documents\DOT Offices\District 9\Projects\78663\Drawings\78663-Design.dgn	USER NAME: LemportCP	DESIGNED: _____	REVISED: _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PRE-STAGE 1 &amp; STAGE 1 CONSTRUCTION</b>	F.A.I. RTE. ST.	SECTION: D9 APPROACH PAVEMENT 2018-1	COUNTY: ALEXANDER	TOTAL SHEETS: 22	SHEET NO.: 6
PLOT SCALE: 100.0000 / in.	CHECKED: _____	DATE: _____	REVISED: _____	SCALE: _____	SHEET NO. 4 OF 4 SHEETS	STA. _____ TO STA. _____	ILLINOIS FED. AID PROJECT CONTRACT NO. 78663			

STAGE 1 - NORTH END OF BRIDGES

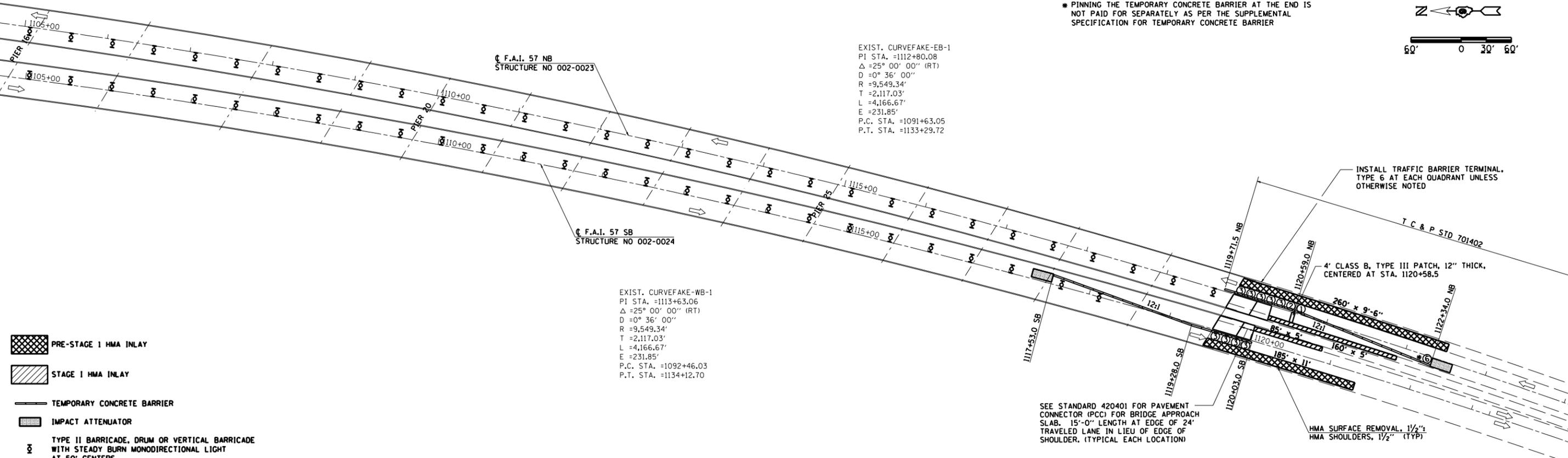
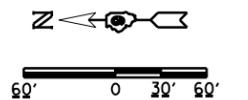
③ - NUMBER OF PINS REQUIRED PER TEMPORARY CONCRETE BARRIER SECTION. NO PINNING IS SPECIFIED OR ALLOWED ON ANY PORTIONS OF THE BRIDGE DECK, APPROACH SLAB, OR CONNECTOR THAT IS TO REMAIN IN PLACE.



- HMA INLAY
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT AT 50' CENTERS

STAGE 1 - SOUTH END OF BRIDGES

\* PINNING THE TEMPORARY CONCRETE BARRIER AT THE END IS NOT PAID FOR SEPARATELY AS PER THE SUPPLEMENTAL SPECIFICATION FOR TEMPORARY CONCRETE BARRIER



- PRE-STAGE 1 HMA INLAY
- STAGE 1 HMA INLAY
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT AT 50' CENTERS

EXIST. CURVEFAKE-EB-1  
 PI STA. =1112+80.08  
 $\Delta = 25^\circ 00' 00''$  (RT)  
 $D = 0^\circ 36' 00''$   
 $R = 9,549.34'$   
 $T = 2,117.03'$   
 $L = 4,166.67'$   
 $E = 231.85'$   
 P.C. STA. =1091+63.05  
 P.T. STA. =1133+29.72

EXIST. CURVEFAKE-WB-1  
 PI STA. =1113+63.06  
 $\Delta = 25^\circ 00' 00''$  (RT)  
 $D = 0^\circ 36' 00''$   
 $R = 9,549.34'$   
 $T = 2,117.03'$   
 $L = 4,166.67'$   
 $E = 231.85'$   
 P.C. STA. =1092+46.03  
 P.T. STA. =1134+12.70

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PLOT DATE = 5/11/2018		DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

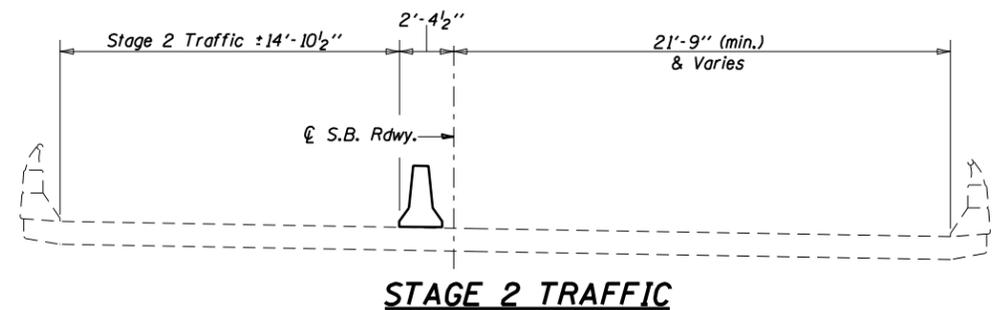
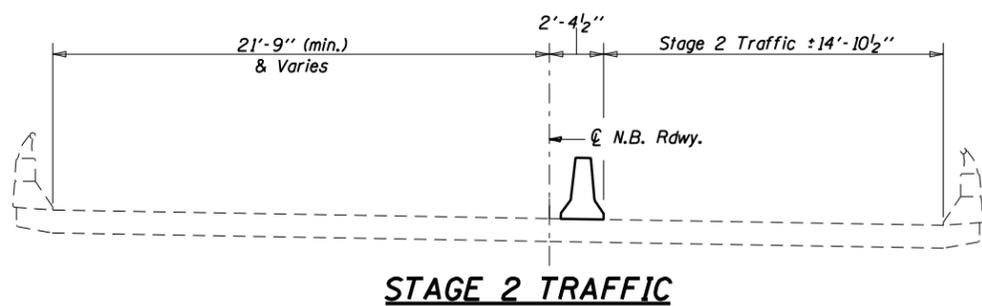
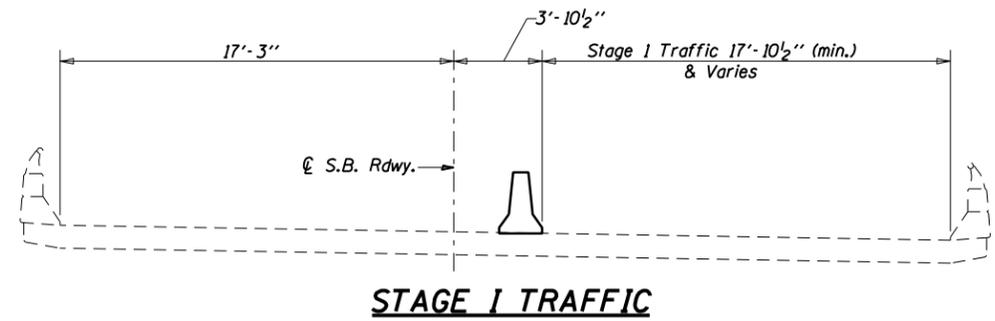
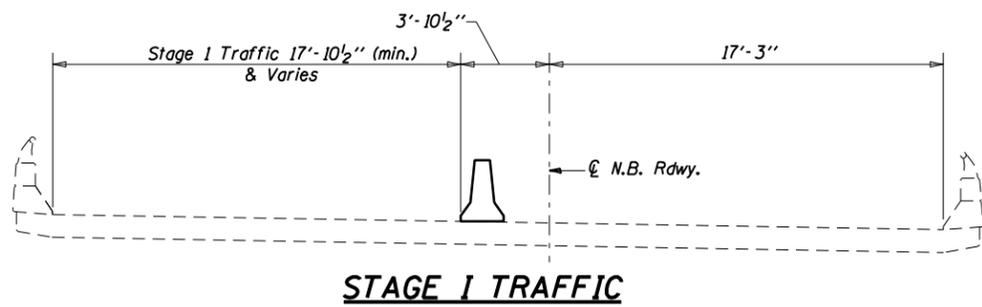
PRE-STAGE 1 & STAGE 1 CONSTRUCTION  
 SCALE: SHEET NO. 1 OF 2 SHEETS STA. TO STA.

F.A.I. RT#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	









NOTES: All Sections looking South showing minimum staging widths on both bridges.

**STAGED TRAFFIC WIDTHS  
ALEXANDER COUNTY  
S.N. 002-0023 & 002-0024**

FILE NAME =	USER NAME = LamportCP	DESIGNED -	REVISED -
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	PLOT SCALE = 8.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/11/2018	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>STAGED TRAFFIC WIDTHS</b>			
SCALE: _____	SHEET NO. _____ OF _____ SHEETS	STA. _____ TO STA. _____	

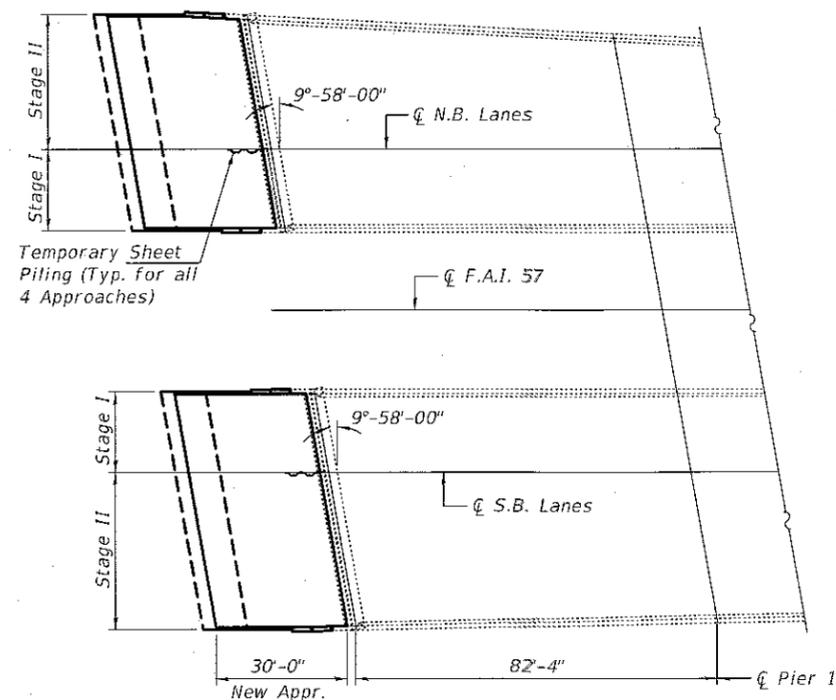
F.A.I. RT#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	09 APPROACH PAVEMENT 2018-1	ALEXANDER	22	11
CONTRACT NO. 78663			ILLINOIS FED. AID PROJECT	

**GENERAL NOTES**

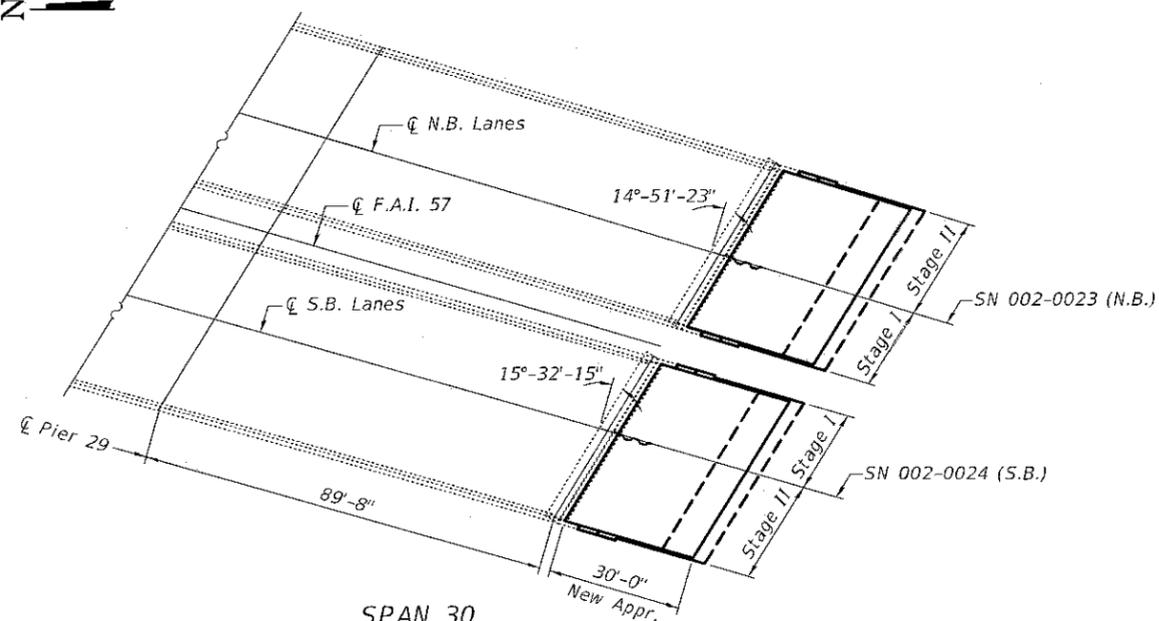
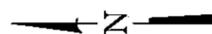
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Reinforcement bars designated (E) shall be epoxy coated. 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.



**PARTIAL ELEVATION**



**SPAN 1**



**SPAN 30**

**PARTIAL PLAN**

**CURVE DATA**

P.I. Sta. = 1112+80.09 (☉ N.B. Lanes)  
 P.I. Sta. = 1113+21.58 (☉ F.A.I. Rte. 57)  
 P.I. Sta. = 1113+63.07 (☉ S.B. Lanes)  
 $\Delta = 25^{\circ}-00'$   
 $D = 0^{\circ}-36'$   
 $R = 9549.34'$   
 $T = 2117.04'$   
 $L = 4166.67'$   
 $E = 231.85'$   
 $S.E. = 0.017'/ft.$

**S.E. ATTAINED**

N.B. Lanes: Sta. 1090+29.72 to Sta. 1092+29.72  
 Sta. 1134+63.05 to Sta. 1132+63.05

S.B. Lanes: Sta. 1091+12.70 to Sta. 1093+12.70  
 Sta. 1135+46.03 to Sta. 1133+46.03  
 (Rotated around median edge pavement)

- (A) - Abutment Repairs. See sheet 2 of 9.
- (B) - Remove & Replace existing Approach Slabs.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	258.1
Concrete Superstructure (Approach Slab)	Cu. Yd.	258.9
Concrete Structures	Cu. Yd.	66.6
Reinforcement Bars, Epoxy Coated	Pound	98750
Bar Splicers	Each	604
Protective Coat	Sq. Yd.	641
Bridge Deck Grooving	Sq. Yd.	518
Pipe Underdrains for Structures, 4"	Foot	195
Temporary Sheet Piling	Sq. Ft.	160
Granular Backfill for Structures	Cu. Yd.	195
Structure Excavation	Cu. Yd.	195

\* New concrete areas only.



Expires: November 30, 2018

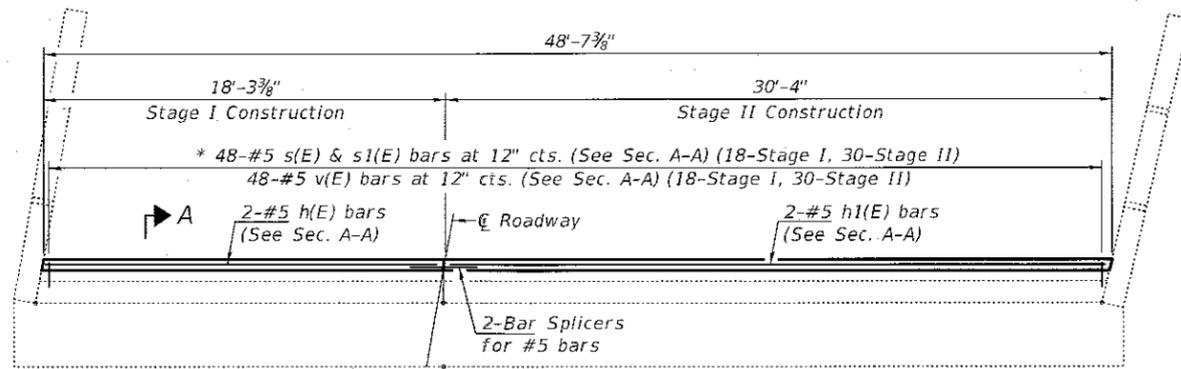
DESIGNED - <i>David Carl Puzey</i>	EXAMINED - <i>David Carl Puzey</i>	DATE - JUNE 29, 2018
CHECKED - <i>William T. Halloway</i>	PASSED - <i>David Carl Puzey</i>	REVISD -
DRAWN - STEFFEN	ENGINEER OF BRIDGES AND STRUCTURES	REVISD -
CHECKED - <i>LSB ATH</i>		

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

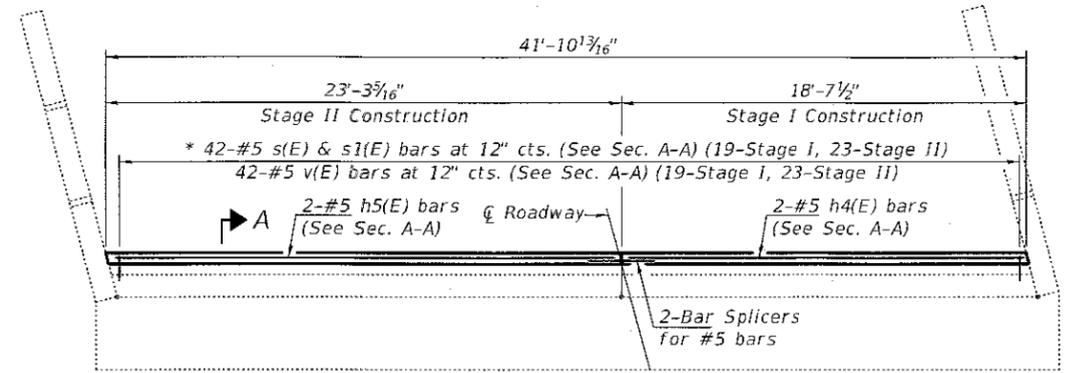
**GENERAL PLAN & ELEVATION  
 FAI RTE. 57 OVER IL RTE. 3, OUTER RD, C.N.I.C. R.R., & LEVEE RD  
 SN 002-0023 (N.B.) & -0024 (S.B.)**

SHEET 1 OF 9 SHEETS

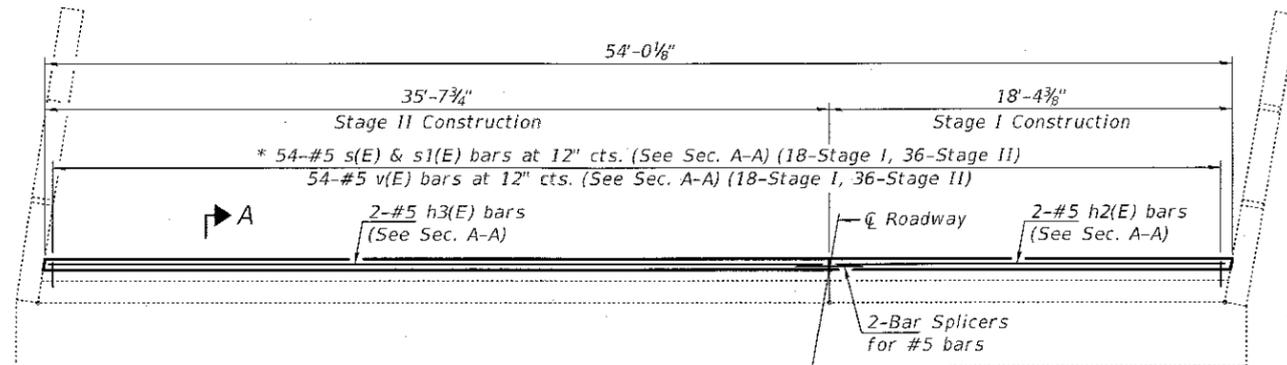
FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D8 APPROACH PAVEMENT 2018-1	ALEXANDER	22	12
			CONTRACT NO. 78663	
ILLINOIS FED. AID PROJECT				



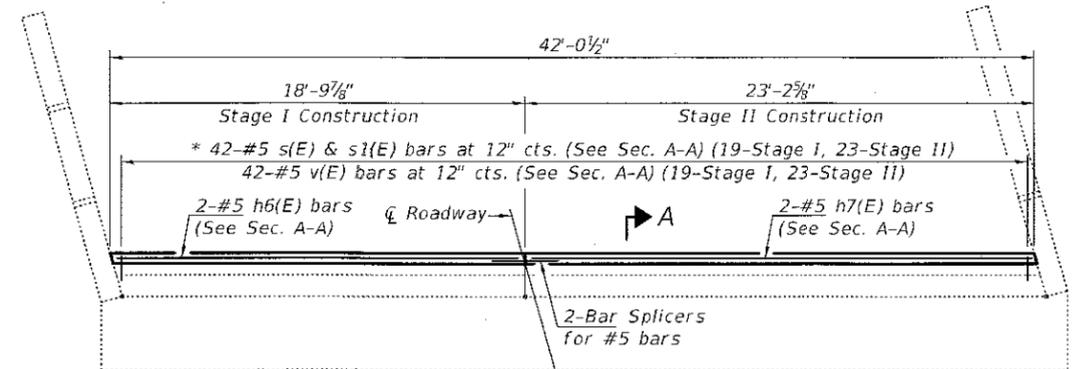
NORTH ABUTMENT (SN 002-0023)



SOUTH ABUTMENT (SN 002-0023)



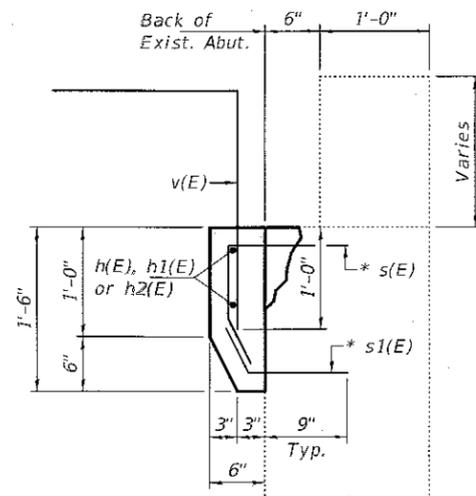
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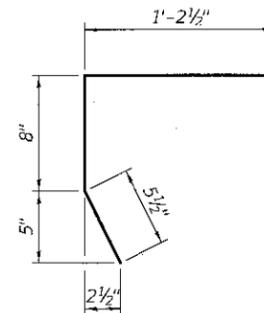
SOUTH ABUTMENT (SN 002-0024)

Note:  
Any loose or deteriorated concrete shall be removed prior to pouring new concrete. Cost included with Concrete Structures.

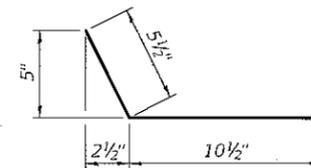
\* Epoxy grout s(E) & s1(E) bars according to Article 584 of the Standard Specifications.



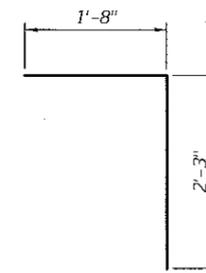
SECTION A-A



BAR s(E)



BAR s1(E)



BAR v(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	18'-0"	—
h1(E)	2	#5	30'-0"	—
h2(E)	2	#5	18'-1"	—
h3(E)	2	#5	35'-4"	—
h4(E)	2	#5	18'-4"	—
h5(E)	2	#5	23'-0"	—
h6(E)	2	#5	18'-6"	—
h7(E)	2	#5	22'-11"	—
s(E)	186	#5	2'-4"	┌
s1(E)	186	#5	1'-4"	└
v(E)	186	#5	4'-1"	└
Concrete Structures			Cu. Yd.	4.8
Bar Splicers			Each	8
Reinforcement Bars, Epoxy Coated			Pound	1890

DESIGNED - JSB  
CHECKED - ATH  
DRAWN - STEFFEN  
CHECKED - JSB ATH

EXAMINED  
PASSED  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES

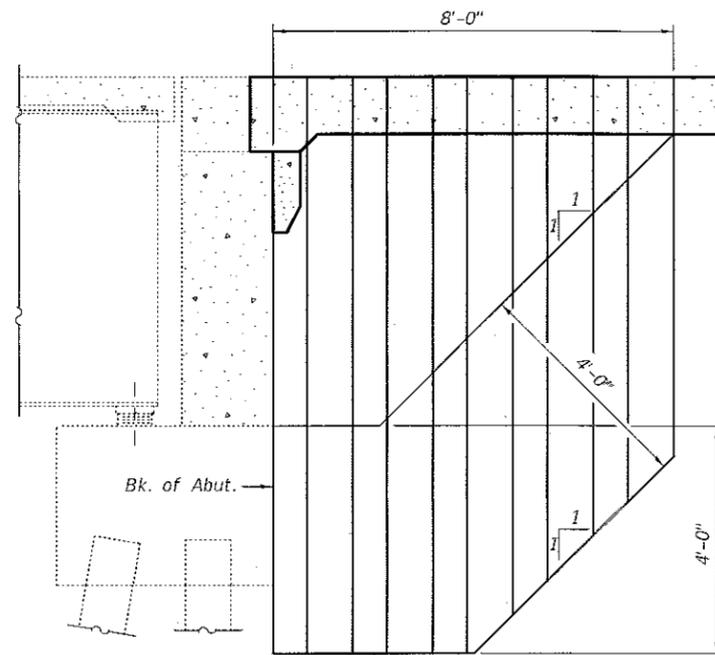
DATE - JUNE 29, 2018  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ABUTMENT REPAIR DETAILS  
SN 002-0023 (N.B.) & -0024 (S.B.)

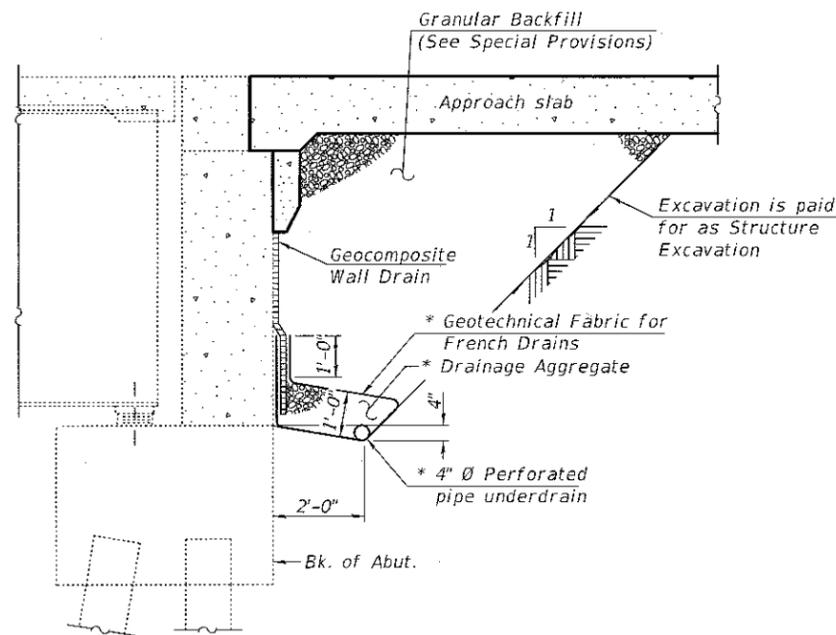
SHEET 2 OF 8 SHEETS

F.A.I. RTE. 57  
SECTION D9 APPROACH PAVEMENT 2018-1  
COUNTY ALEXANDER  
TOTAL SHEETS 22  
SHEET NO. 13  
CONTRACT NO. 78663  
ILLINOIS FED. AID PROJECT



**TEMPORARY SHEET PILING DETAILS**

(Horiz. dim at Rt. L's)  
Backfill and abut. drain not shown for clarity. See Detail this sheet.



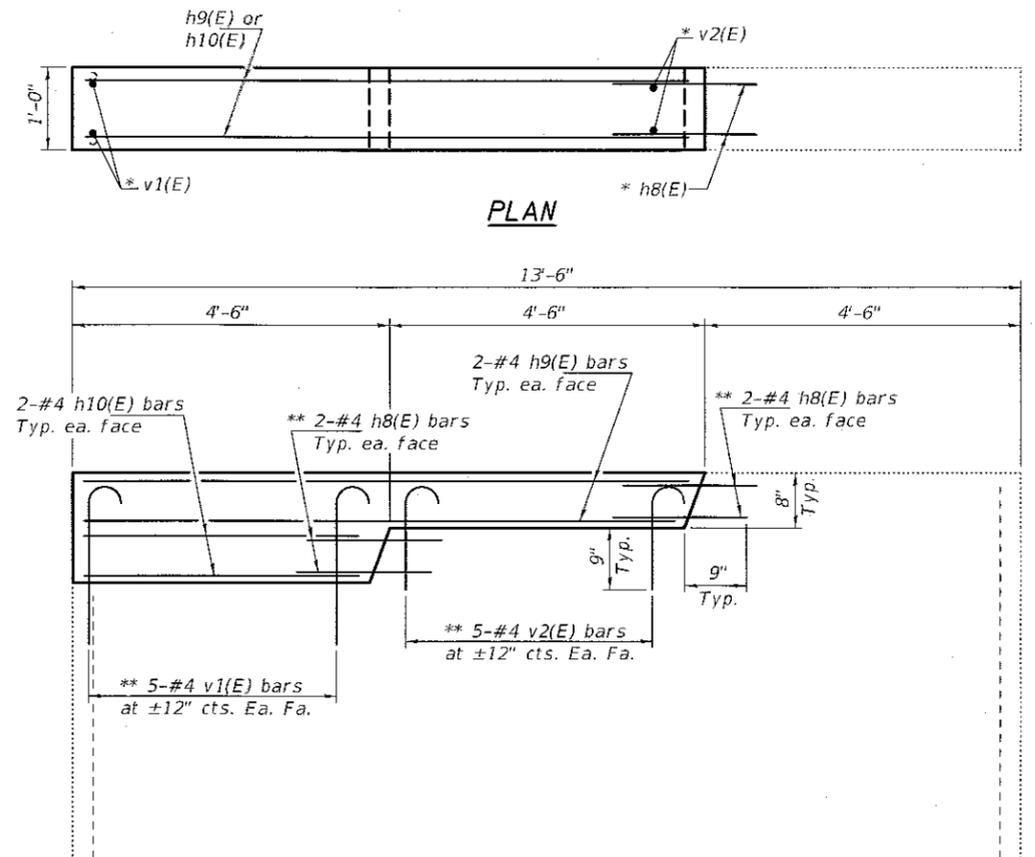
**ABUTMENT DRAIN DETAIL**

(Horiz. dim at Rt. L's)  
Temporary Sheet Piling not shown for clarity. See Detail this sheet.

\* Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

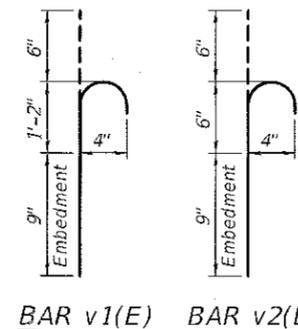
**Note:**

All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



**PROPOSED WINGWALL ELEVATION**

\*\* Epoxy grout h8(E), v1(E) & v2(E) bars in 9" min. holes according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars, Epoxy Coated.



**BILL OF MATERIAL  
8 WINGWALLS**

Bar	No.	Size	Length	Shape
h8(E)	64	#4	1'-9"	—
h9(E)	32	#4	8'-6"	—
h10(E)	32	#4	4'-0"	—
v1(E)	80	#4	2'-5"	┌
v2(E)	80	#4	1'-3"	┌
Concrete Structures			Cu. Yd.	2.6
Reinforcement Bars, Epoxy Coated			Pound	540

DESIGNED - JSB  
CHECKED - ATH  
DRAWN - STEFFEN  
CHECKED - JSB ATH

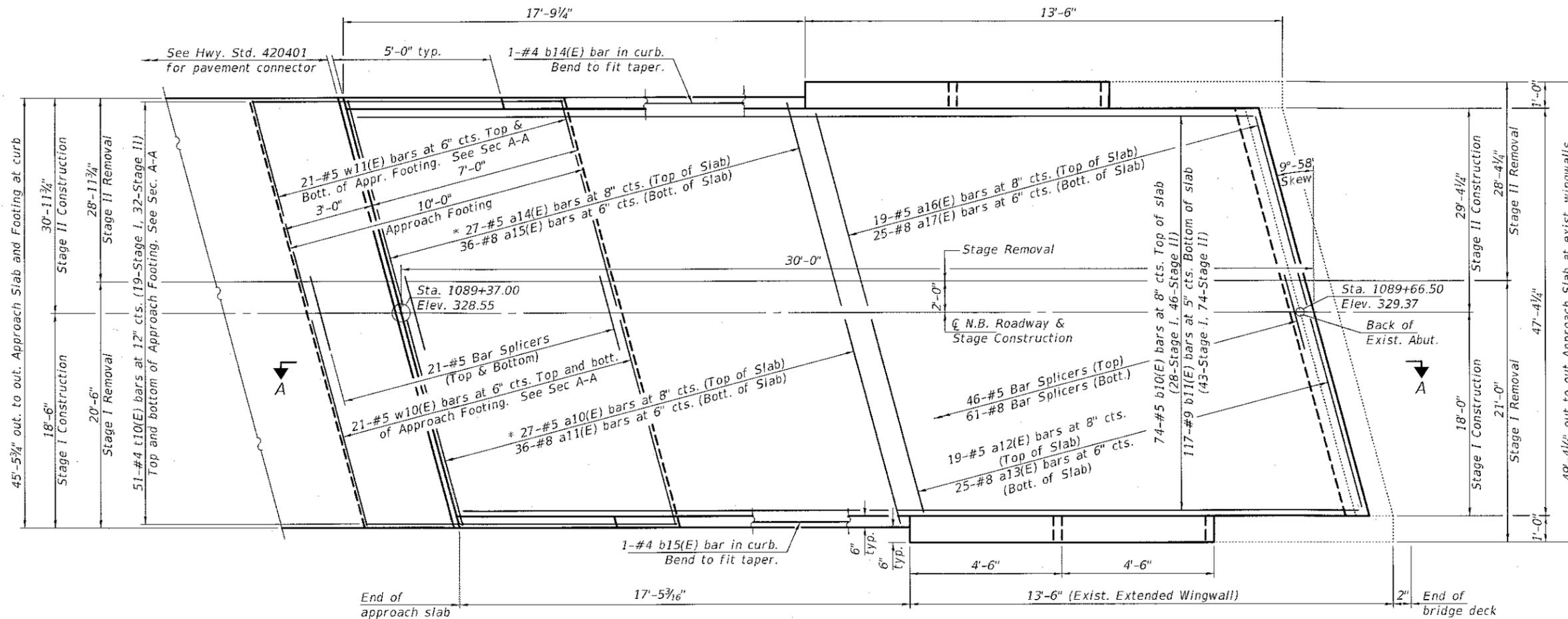
EXAMINED  
PASSED  
Timothy A. [Signature]  
ENGINEER OF STRUCTURAL SERVICES  
[Signature]  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - JUNE 29, 2018  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS  
SN 002-0023 (N.B.) & -0024 (S.B.)  
SHEET 3 OF 9 SHEETS

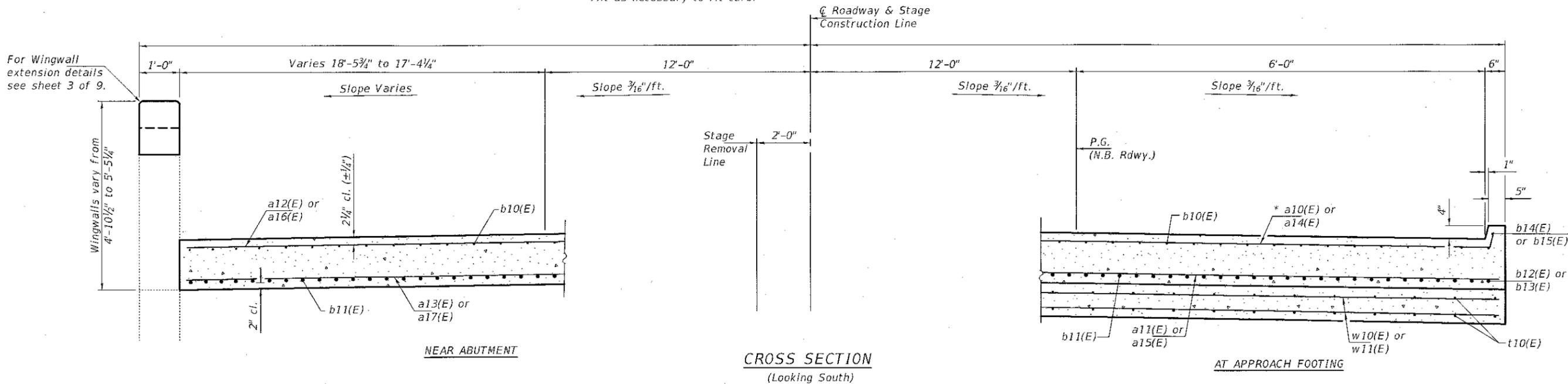
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	14
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	



**PLAN**

\* Tilt as necessary to fit curb.

Note:  
For Section A-A see sheet 8 of 9.



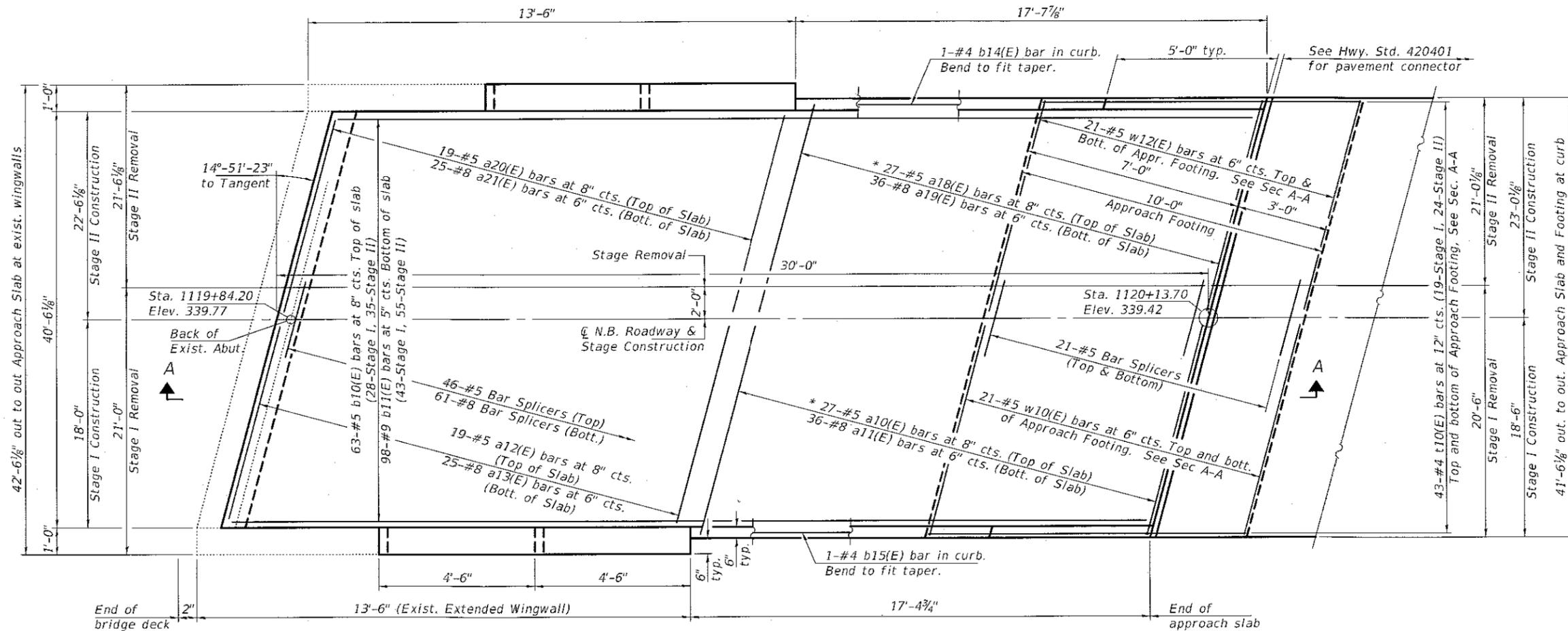
DESIGNED - JSB	EXAMINED - <i>Timothy A. Miller</i>	DATE - JUNE 29, 2018
CHECKED - ATH	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED - <i>Carl Perry</i>	REVISER -
CHECKED - JSB ATH	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**NORTH APPROACH DETAILS  
SN 002-0023 (N.B.)**

SHEET 4 OF 9 SHEETS

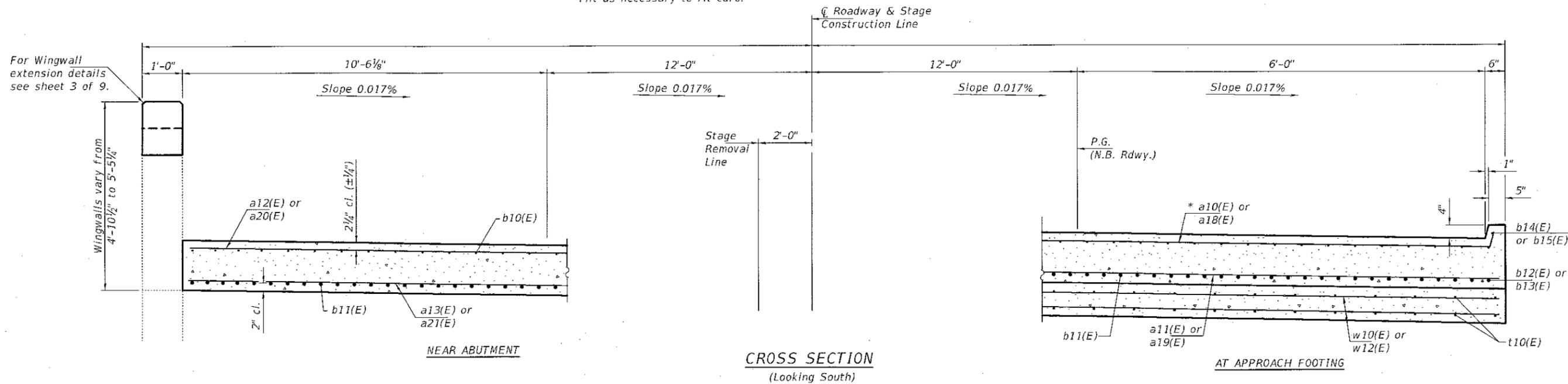
F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	15
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	



PLAN

\* Tilt as necessary to fit curb.

Note:  
For Section A-A see sheet 8 of 9.



CROSS SECTION  
(Looking South)

DESIGNED - JSB  
CHECKED - ATH  
DRAWN - STEFFEN  
CHECKED - JSB ATH

EXAMINED  
PASSED  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES

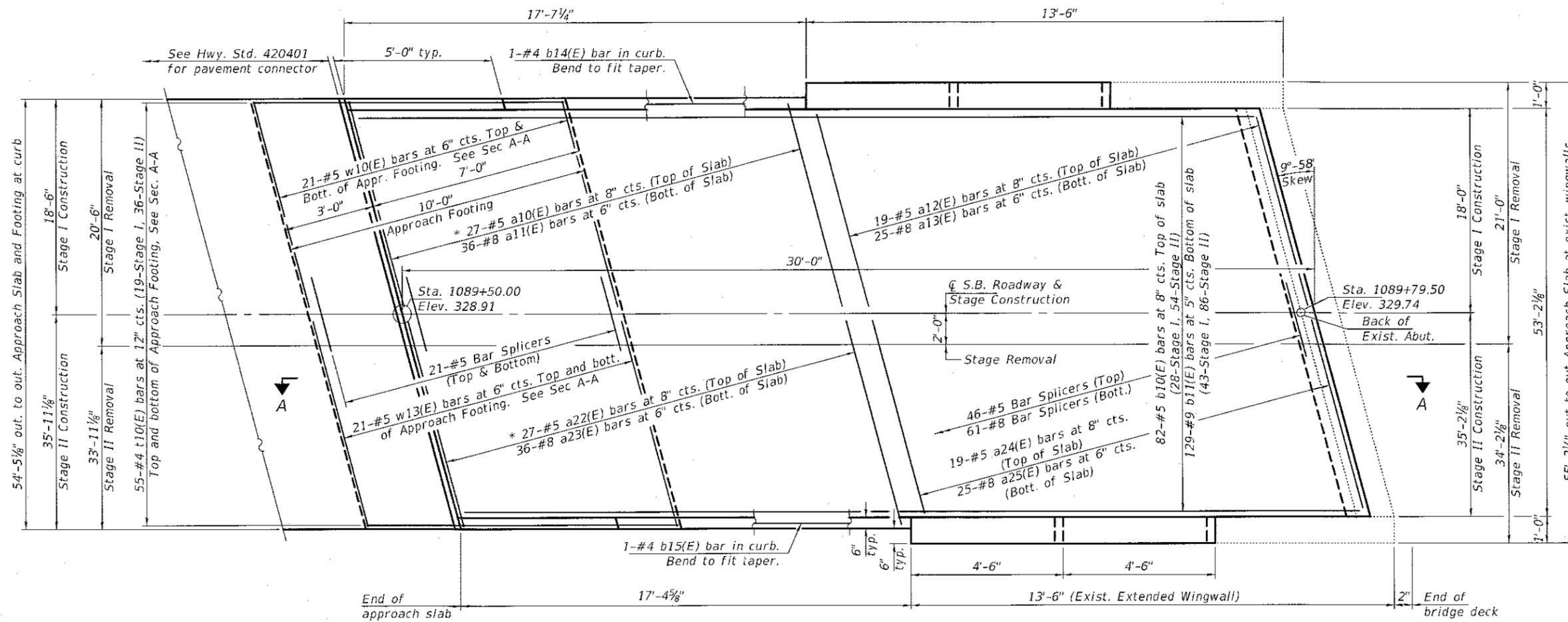
DATE - JUNE 29, 2018  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH DETAILS  
SN 002-0023 (N.B.)

SHEET 5 OF 9 SHEETS

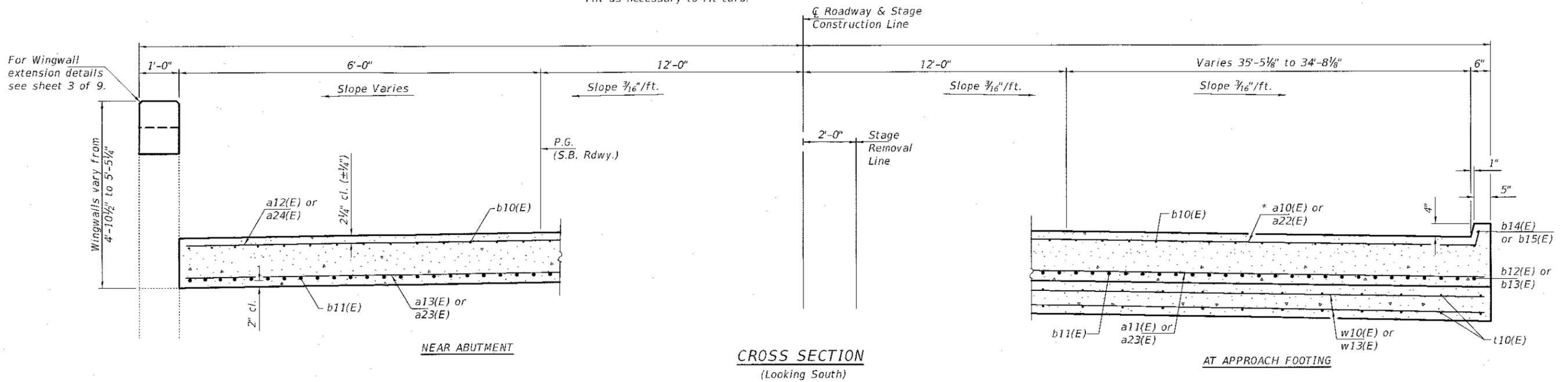
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	16
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	



**PLAN**

\* Tilt as necessary to fit curb.

Note:  
For Section A-A see sheet 8 of 9.



**CROSS SECTION**  
(Looking South)

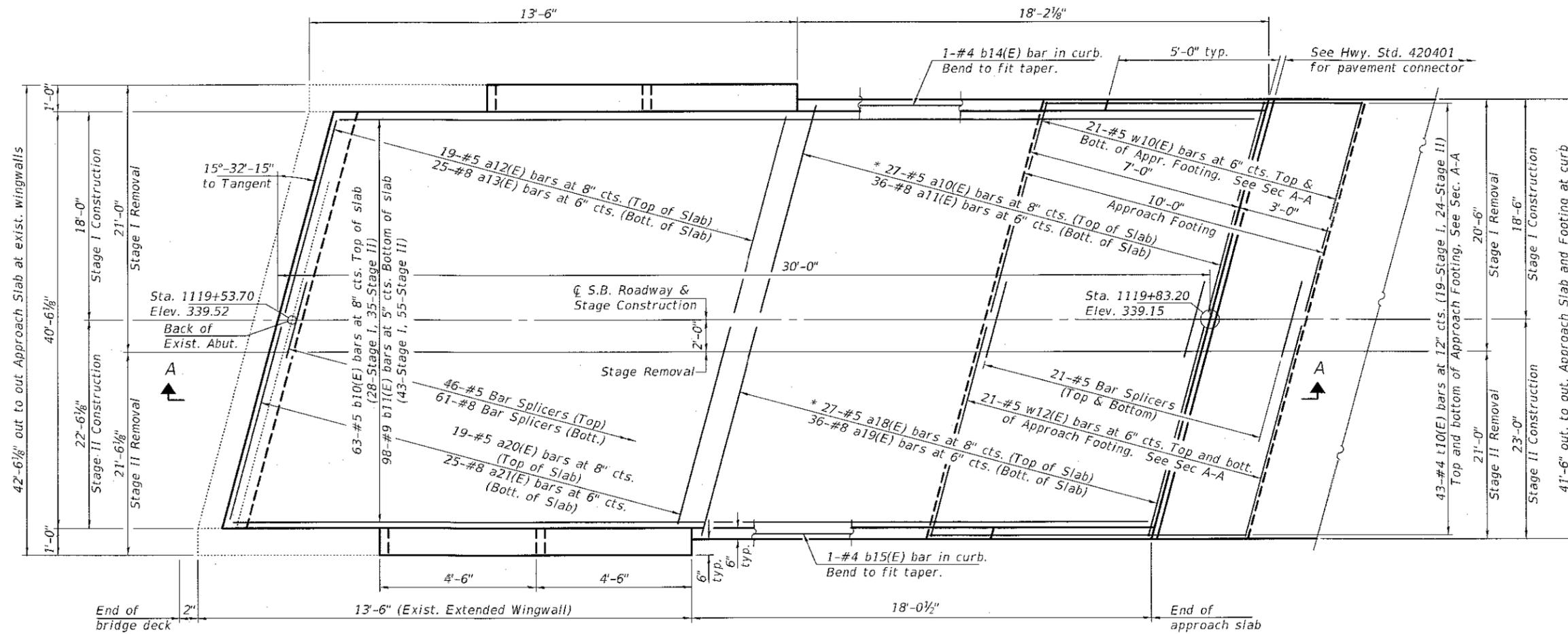
DESIGNED - JSB	EXAMINED - <i>Timothy A. Bell</i>	DATE - JUNE 29, 2018
CHECKED - ATH	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED - <i>Carl Perry</i>	REVISED -
CHECKED - JSB ATH	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**NORTH APPROACH DETAILS**  
**SN 002-0024 (S.B.)**

SHEET 6 OF 9 SHEETS

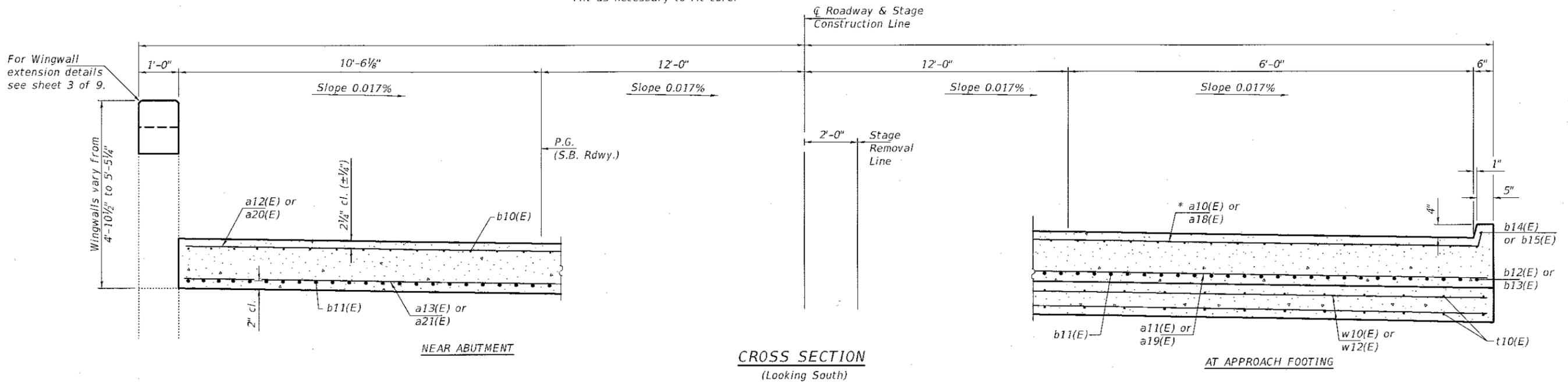
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	17
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	



PLAN

\* Tilt as necessary to fit curb.

Note:  
For Section A-A see sheet 8 of 9.



CROSS SECTION  
(Looking South)

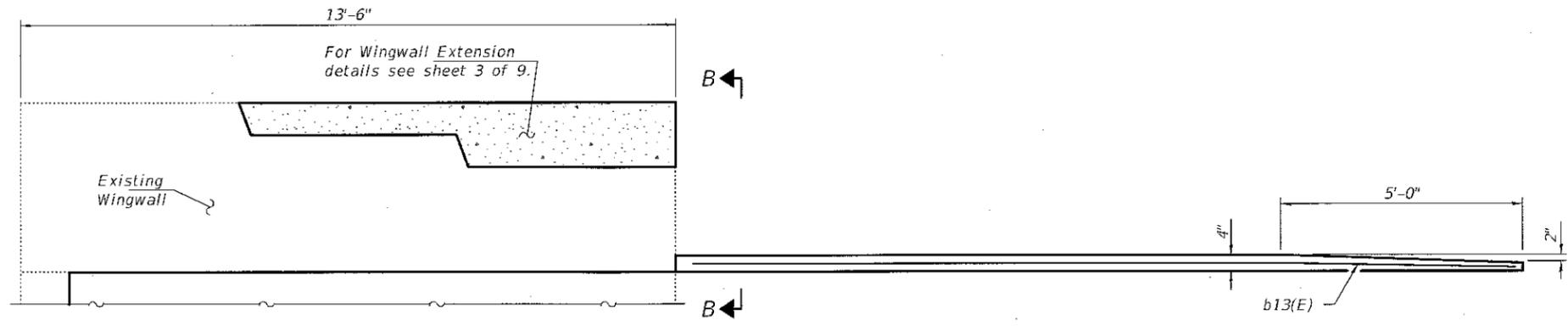
DESIGNED - JSB	EXAMINED - <i>Timothy A. ...</i>	DATE - JUNE 29, 2018
CHECKED - ATH	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED - <i>Carl ...</i>	REVISER -
CHECKED - JSB ATH	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH APPROACH DETAILS  
SN 002-0024 (S.B.)

SHEET 7 OF 9 SHEETS

F.A.I. RTE. 57	SECTION DB APPROACH PAVEMENT 2018-1	COUNTY ALEXANDER	TOTAL SHEETS 22	SHEET NO. 18
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	



INSIDE ELEVATION OF WINGWALL AND CURB

Notes:

The joint opening shall be adjusted for temperature per Article 520.04 of the Standard Specifications. However, since this detail is for jointless structures, the length of bridge used to calculate the adjustment shall be equal to half the total bridge length plus the length of the bridge approach slab.

Parapet concrete shall be paid for as Concrete Structures.

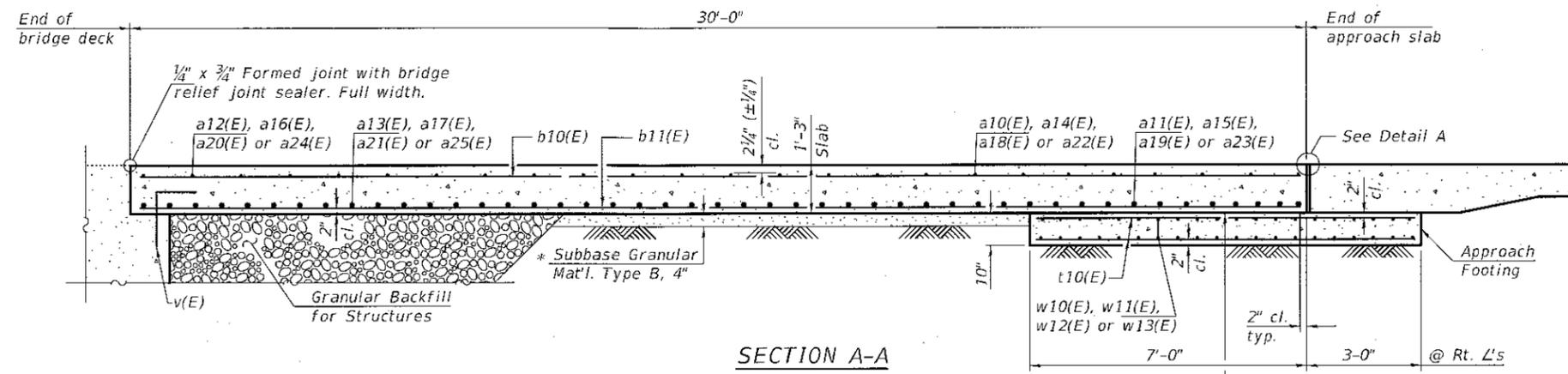
Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.

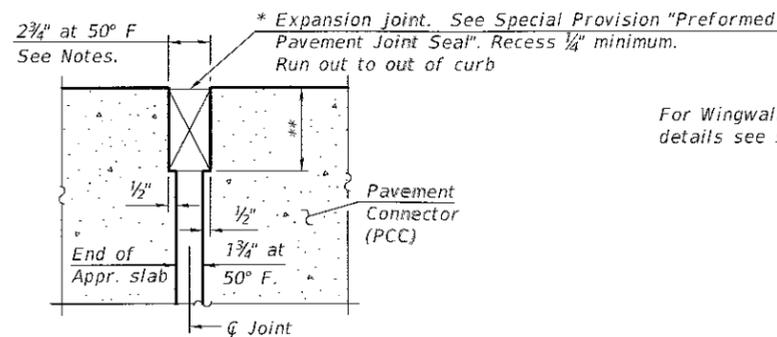
Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 3 of 9.



SECTION A-A

\* 10 mil. Polyethylene bond breaker on steel trowel finish

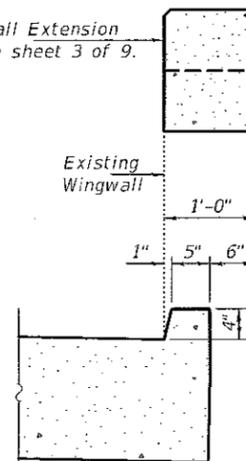


DETAIL A  
(@ Rt. L's)

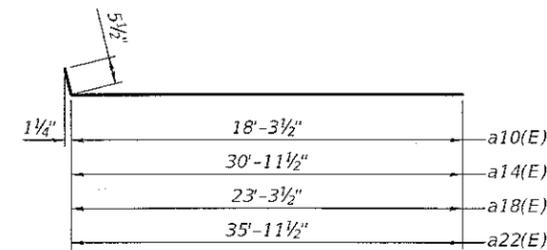
\* Cost included with Concrete Superstructure (Approach Slab).

\*\* Per manufacturer recommendations

For Wingwall Extension details see sheet 3 of 9.



VIEW B-B



BARS a10(E), a14(E),  
a18(E), & a22(E)

FOUR APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	108	#5	18'-9"	—
a11(E)	144	#8	18'-6"	—
a12(E)	76	#5	18'-0"	—
a13(E)	100	#8	18'-0"	—
a14(E)	27	#5	31'-5"	—
a15(E)	36	#8	31'-2"	—
a16(E)	19	#5	30'-8"	—
a17(E)	25	#8	30'-8"	—
a18(E)	27	#5	23'-9"	—
a19(E)	36	#8	23'-7"	—
a20(E)	19	#5	23'-0"	—
a21(E)	25	#8	23'-0"	—
a22(E)	27	#5	36'-5"	—
a23(E)	36	#8	36'-2"	—
a24(E)	19	#5	35'-8"	—
a25(E)	25	#8	35'-8"	—
b10(E)	282	#5	29'-8"	—
b11(E)	442	#9	29'-8"	—
b12(E)	4	#5	17'-6"	—
b13(E)	4	#5	17'-3"	—
b14(E)	4	#4	17'-6"	—
b15(E)	4	#4	17'-3"	—
t10(E)	384	#4	9'-8"	—
w10(E)	168	#5	18'-6"	—
w11(E)	42	#5	31'-2"	—
w12(E)	84	#5	23'-6"	—
w13(E)	42	#5	36'-2"	—
Concrete Superstructure (Approach Slab)		Cu. Yd.	258.9	
Concrete Structures		Cu. Yd.	59.2	
Reinforcement Bars, Epoxy Coated		Pound	98790	
Bar Splicers		Each	596	

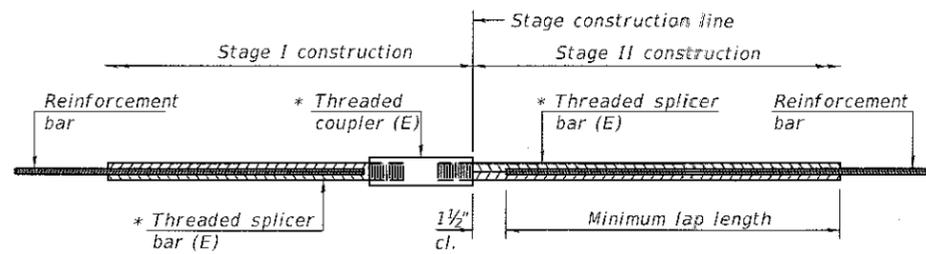
DESIGNED - JSB	EXAMINED - <i>Timothy A. [Signature]</i>	DATE - JUNE 29, 2018
CHECKED - ATH	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED - <i>Carl [Signature]</i>	REVISER -
CHECKED - JSB ATH	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS  
SN 002-0023 (N.B.) & -0024 (S.B.)

SHEET 8 OF 9 SHEETS

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	19
			CONTRACT NO. 78663	
ILLINOIS FED. AID PROJECT				

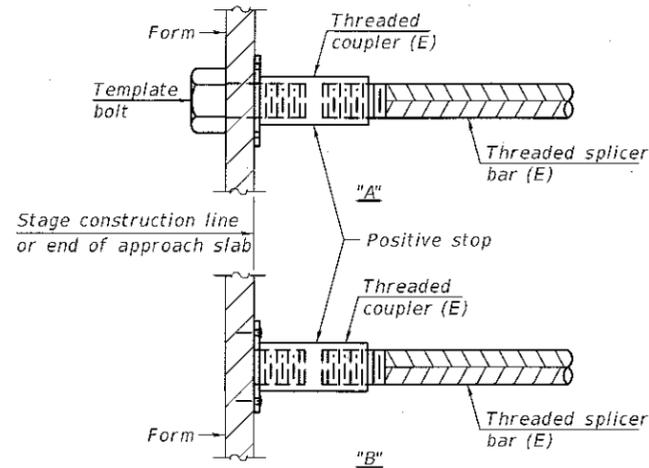


**STANDARD BAR SPLICER ASSEMBLY**

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	Minimum lap length
N. Appr. (002-0023)	#5	2	2'-7"
N. Appr. (002-0024)	#5	2	2'-7"
S. Appr. (002-0023)	#5	2	2'-7"
S. Appr. (002-0024)	#5	2	2'-7"
Approach Footings	#5	168	2'-7"
Approach Slab	#5	184	2'-7"
Approach Slab	#8	244	4'-6"

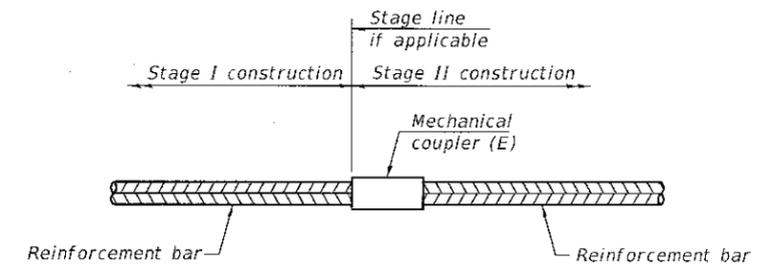


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

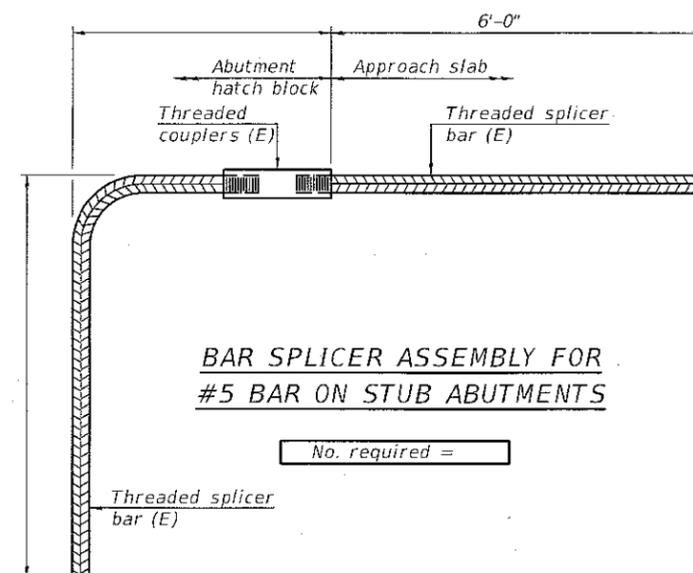
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(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.

BSD-1

2-17-2017

DESIGNED - JSB  
 CHECKED - ATH  
 DRAWN - STEFFEN  
 CHECKED - JSB ATH

EXAMINED  
 PASSED  
 ENGINEER OF STRUCTURAL SERVICES  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - JUNE 29, 2018  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

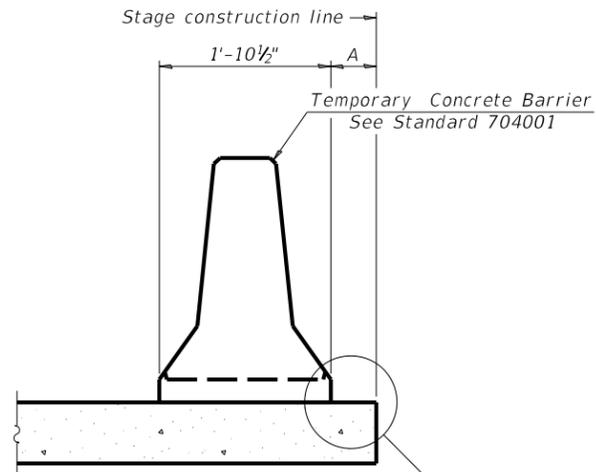
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 SN 002-0023 (N.B.) & -0024 (S.B.)

SHEET 9 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 78663	

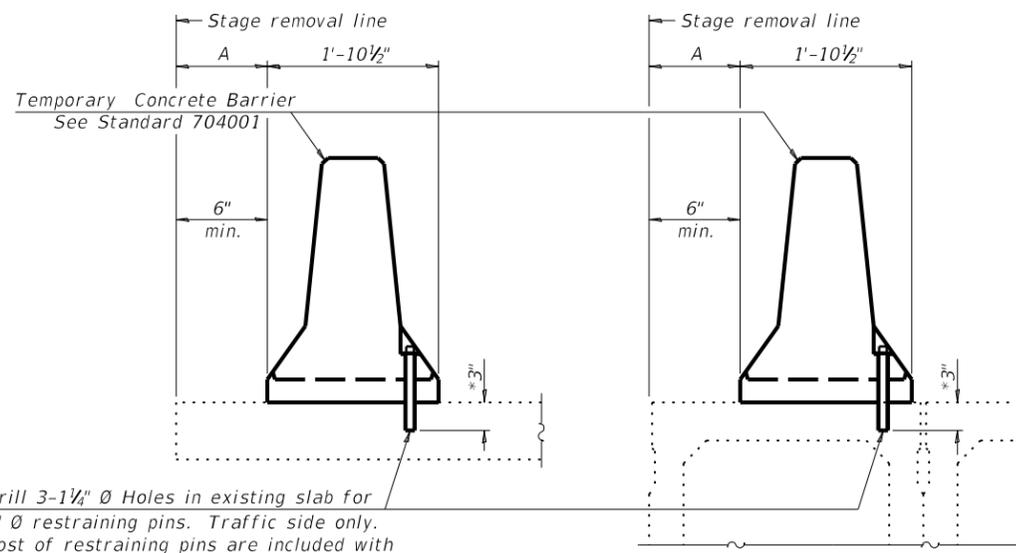
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DESIGNED - JSB	EXAMINED	DATE - JUNE 29, 2018	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REPAIR DETAILS SN 002-0023 (N.B.) &amp; -0024 (S.B.)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - ATH	<i>Timothy A. ...</i> ENGINEER OF STRUCTURAL SERVICES	REVISD -			57	D9 APPROACH PAVEMENT 2018-1	ALEXANDER	22	21	
DRAWN - STEFFEN		REVISD -			CONTRACT NO. 78663					
CHECKED - JSB ATH		<i>A. Carl ...</i> ENGINEER OF BRIDGES AND STRUCTURES			REVISD -	ILLINOIS FED. AID PROJECT				
			SHEET 9A OF 9 SHEETS							



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

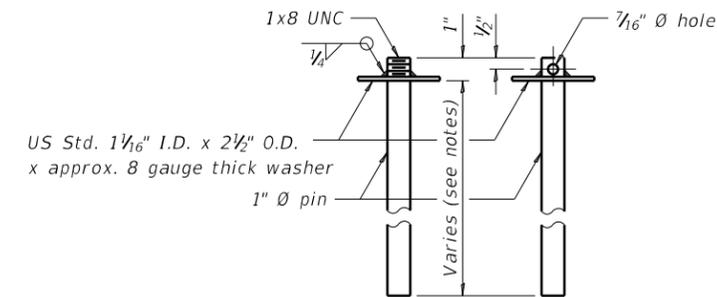
NEW SLAB OR NEW DECK BEAM



Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

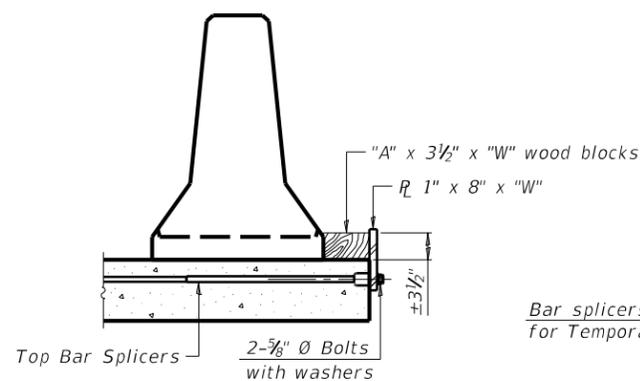
EXISTING DECK BEAM



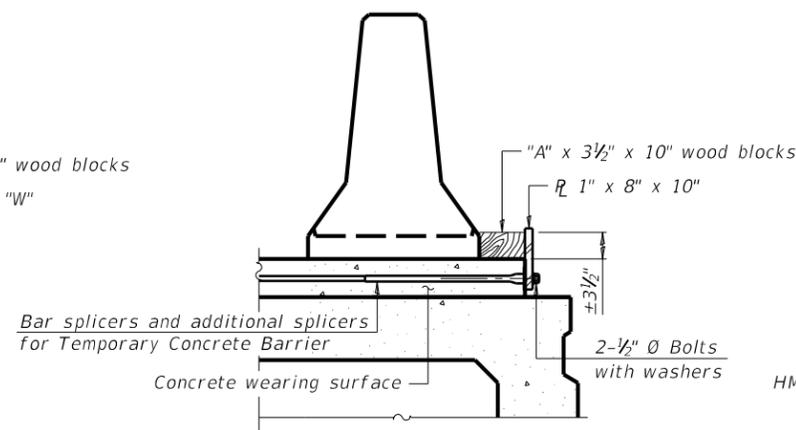
RESTRAINING PIN

\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

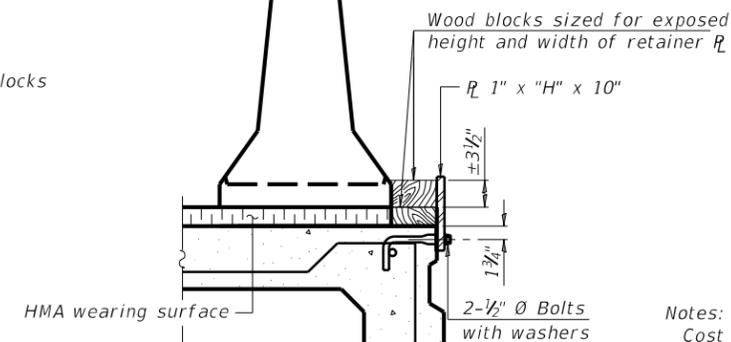
SECTIONS THRU SLAB OR DECK BEAM



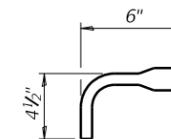
DETAIL I



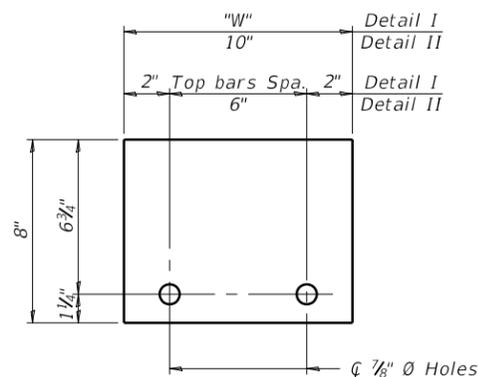
DETAIL II



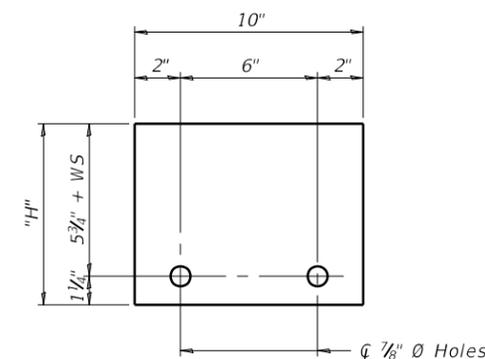
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER 1" x 8" x "W"  
(Detail I and II)



STEEL RETAINER 1" x "H" x 10"  
(Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate center of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

R-27 8-11-2017

FILE NAME =	USER NAME = LampportCP	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION STRUCTURE NO.	F.A.I. RTE#	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\11\084EBIDINTEG.11\inois.gov\PIWIDOT\Documents\DOT Offices\District 9\Projects\78663\Design\78663-Design.dgn		DRAWN -	REVISED -			51	09 APPROACH PAVEMENT 2018-1	ALEXANDER	22	22	
PLOT SCALE = 2.0000' / in.		CHECKED -	REVISED -			CONTRACT NO. 78663					
PLOT DATE = 5/11/2018		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					