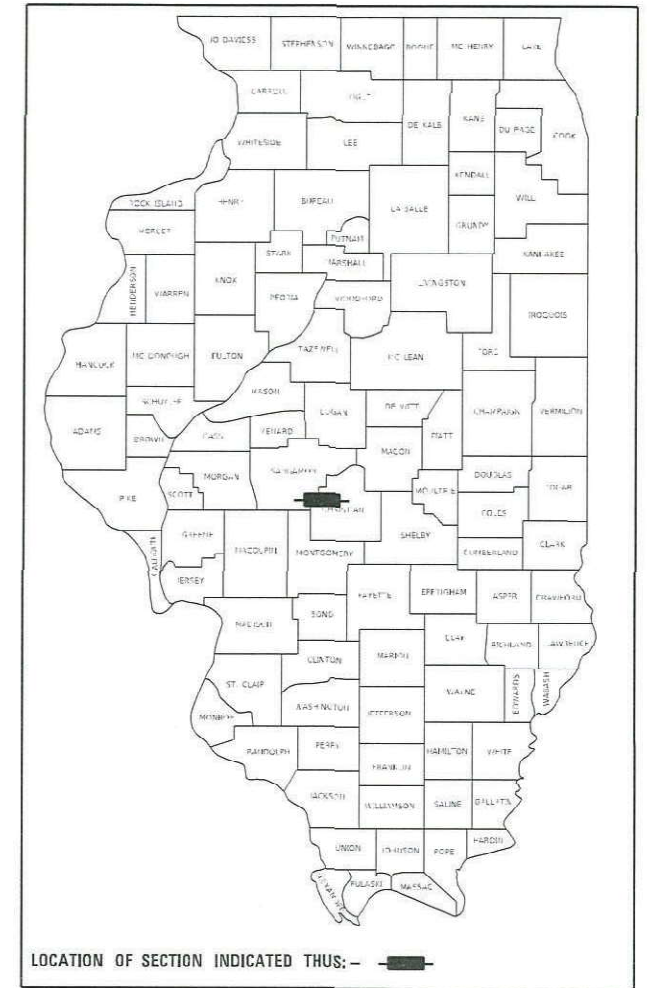


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	1
		ILLINOIS	CONTRACT NO. 72L77	

D-96-042-20



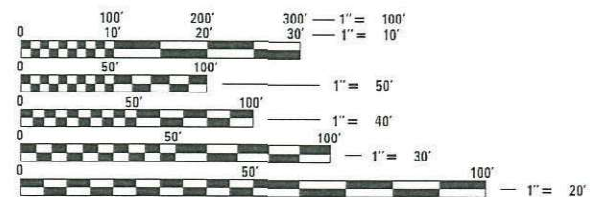
# PROPOSED CONTRACT MAINTENANCE

FAP ROUTE 753  
SECTION (142) PCC  
PROJECT (STATE)  
BRIDGE APPROACH REPLACEMENT  
CHRISTIAN COUNTY

C-96-066-20

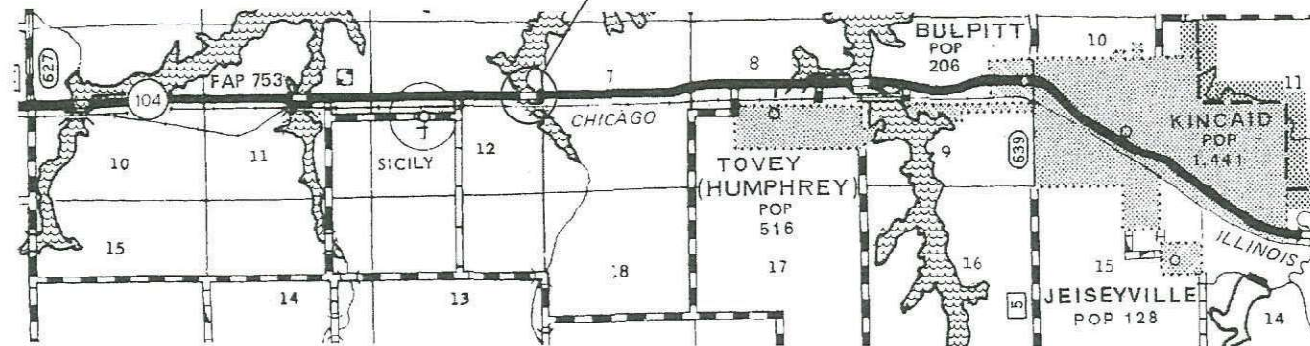
FOR INDEX OF SHEETS, SEE SHEET NO.

PROJECT LOCATION  
SN 011-0021  
IL 104 OVER LAKE SANGCHRIS  
1 MI W TOVEY



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 EXCAVATORS  
1-800-892-0123  
OR 811



BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

GROSS LENGTH = x.xx FT. = x.xxx MILE  
NET LENGTH = x.xx FT. = x.xxx MILE

CONTRACT NO. 72L77

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 20 2020  
[Signature] REGIONAL ENGINEER

May 8, 2020 [Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2020 [Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, SIGNATURES, & GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTION & ROADWAY PLAN
- 5 STAGING PLAN
- 6 TRAFFIC CONTROL PLAN
- 7-11 SN 011-0021 BRIDGE PLANS

GENERAL NOTES:


STANDARDS

- 000001-07
- 001001-02
- 001006
- 701001-02
- 701006-05
- 701201-05
- 701301-04
- 701321-18
- 701901-08
- 704001-08
- 782006-01


PAVEMENT MARKING REMOVAL SCHEDULE					
STA	TO	STA	LOC.	LINE TYPE	PAVT MARK REM (SQ FT)
STAGE I					
1247+07	-	1249+67	℄	SOLID / SKIP	136
1249+08	-	1252+76	LT	SOLID	154
1252+17	-	1255+20	℄	SOLID / SKIP	158
STAGE II					
1249+08	-	1252+76	RT	SOLID	154
TOTAL					602

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT 6**


---

EXAMINED March 16 2020  
  
 ENGINEER OF OPERATIONS

---

EXAMINED March 12 2020  
  
 ENGINEER OF PROJECT IMPLEMENTATION

---

EXAMINED March 18 2020  
  
 ENGINEER OF PROGRAM DEVELOPMENT

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	PLOT DATE = 3/19/2020	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
SCALE:		SHEET OF SHEETS		STA. TO STA.							

0-02175-6001  
SN 011-0021  
100% STATE

0-02175-6001  
SN 011-0021  
100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE/RURAL
				0047 CHRISTIAN
44201419	CLASS C PATCHES, TYPE III, 15 INCH	SQ YD	40	40
50102400	CONCRETE REMOVAL	CU YD	3.9	3.9
50300225	CONCRETE STRUCTURES	CU YD	17.2	17.2
50300260	BRIDGE DECK GROOVING	SQ YD	114	114
50300300	PROTECTIVE COAT	SQ YD	120	120
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	53.6	53.6
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	25360	25360
50800515	BAR SPLICERS	EACH	152	152
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400	400
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400	400

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE/RURAL
				0047 CHRISTIAN
70600251	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
70600352	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
*78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	2700	2700
X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SQ FT	602	602
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1	1
Z0004552	APPROACH SLAB REMOVAL	SQ YD	120	120

\* SPECIALTY ITEM

REV. - MS

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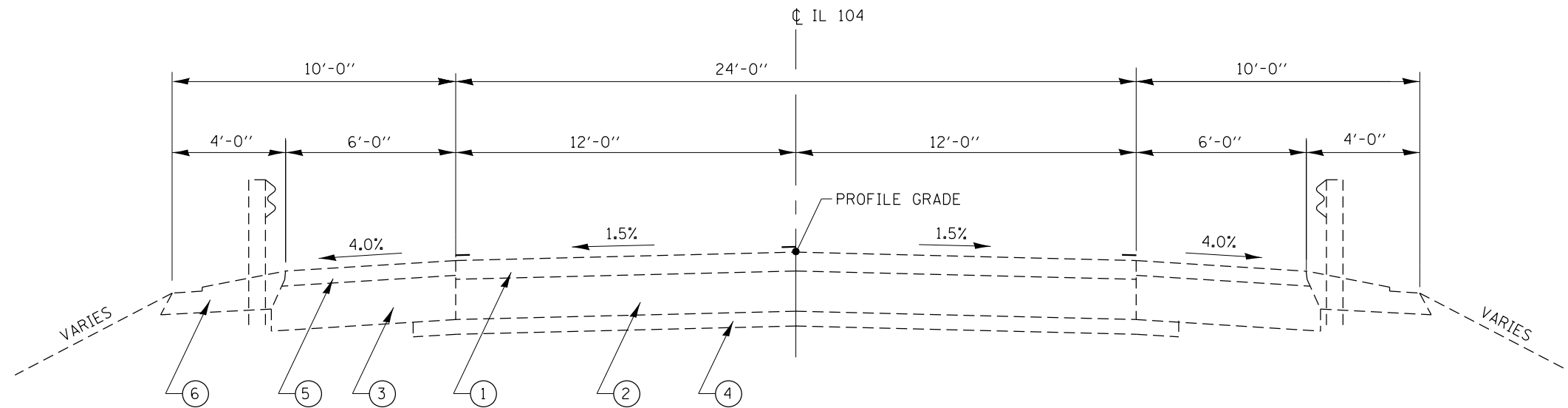
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PLOT DATE = 3/19/2020	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72L77	

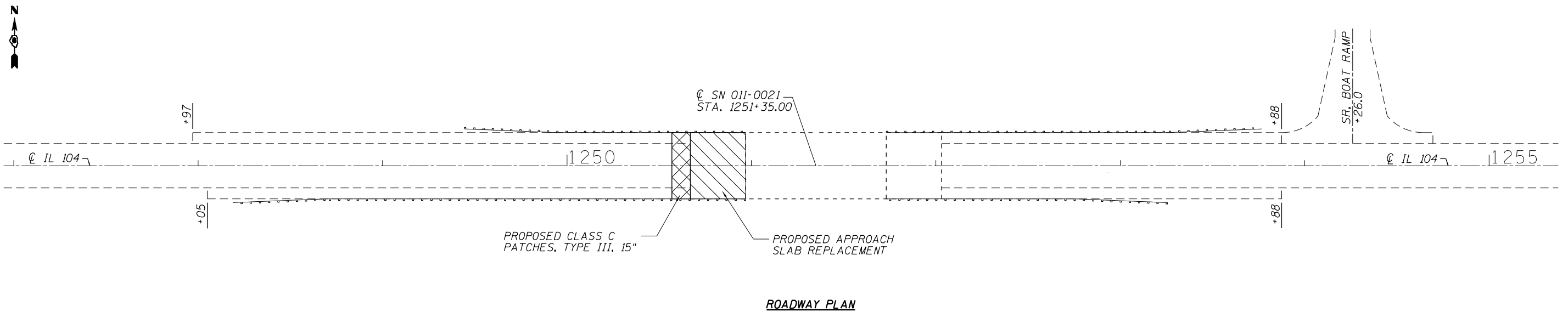


### LEGEND

- ① EXIST. HMA OVERLAYS (THICKNESS UNKNOWN)
- ② EXIST. PCC BASE COURSE 9"
- ③ EXIST. HMA BASE COURSE 12"
- ④ EXIST. AGGREGATE SUB-BASE
- ⑤ EXIST. HMA SHOULDERS (VARIABLE DEPTH)
- ⑥ EXIST. AGGREGATE SHOULDERS

### EXISTING TYPICAL SECTION

STA. 1249+19.65 TO STA. 1250+67.31



NOTE: IF THE CONTRACTOR ELECTS TO REMOVE ANY GUARDRAIL ADJACENT TO THE APPROACH SLAB CONSTRUCTION, REMOVAL AND RE-INSTALLATION OF THE GUARDRAIL COMPONENTS WILL NOT BE PAID SEPARATELY AND SHALL BE CONSIDERED AS INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE (APPROACH SLAB).

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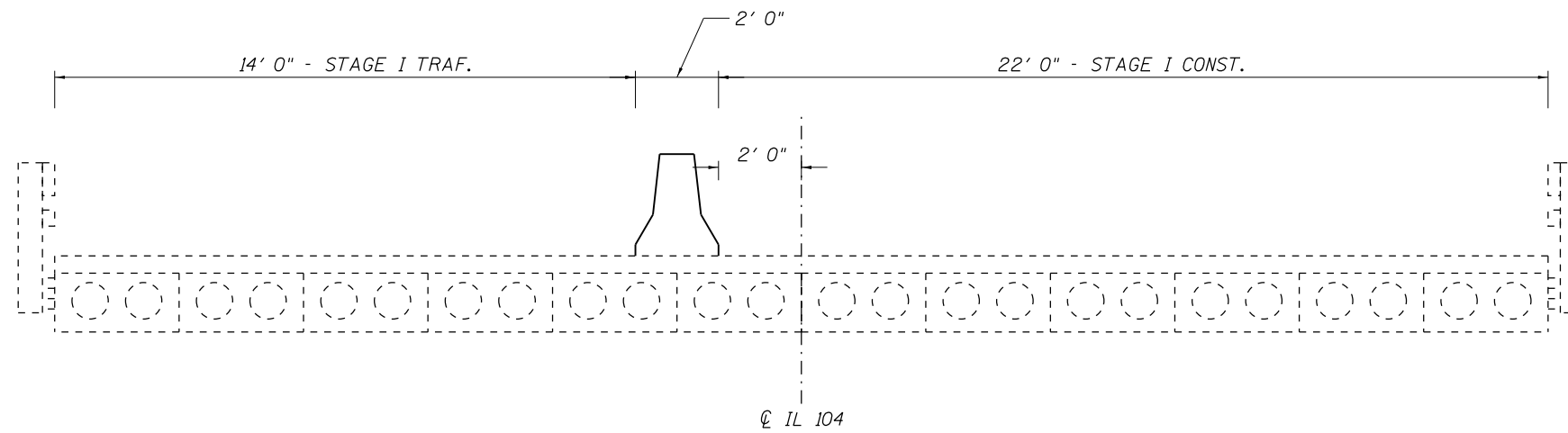
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PLOT DATE = 3/19/2020	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

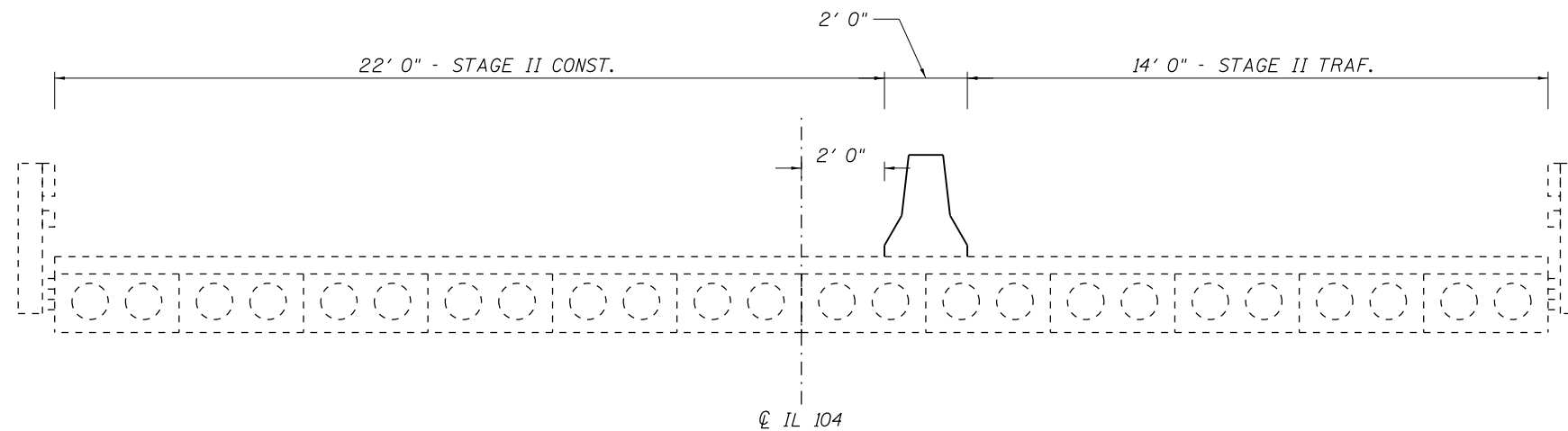
#### SUMMARY OF QUANTITIES

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753	(142) PCC	CHRISTIAN	11	4
CONTRACT NO. 72L77				
ILLINOIS FED. AID PROJECT				



**STAGE I CROSS SECTION - LOOKING EAST**



**STAGE II CROSS SECTION - LOOKING EAST**

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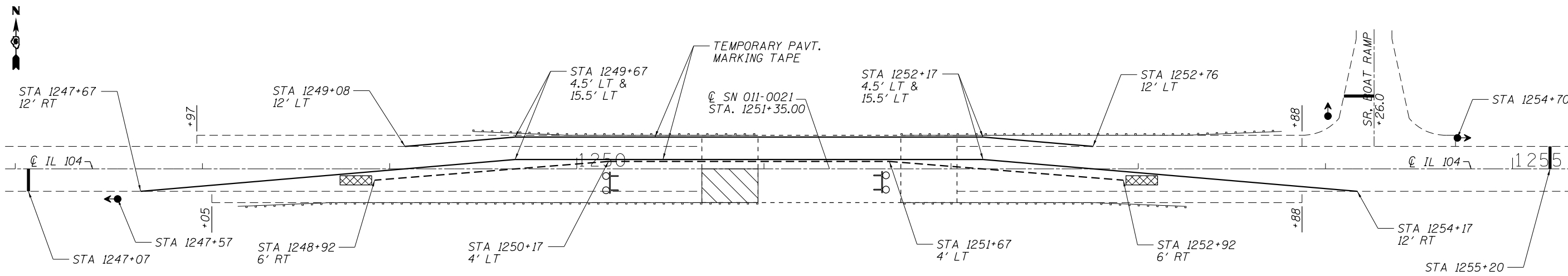
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

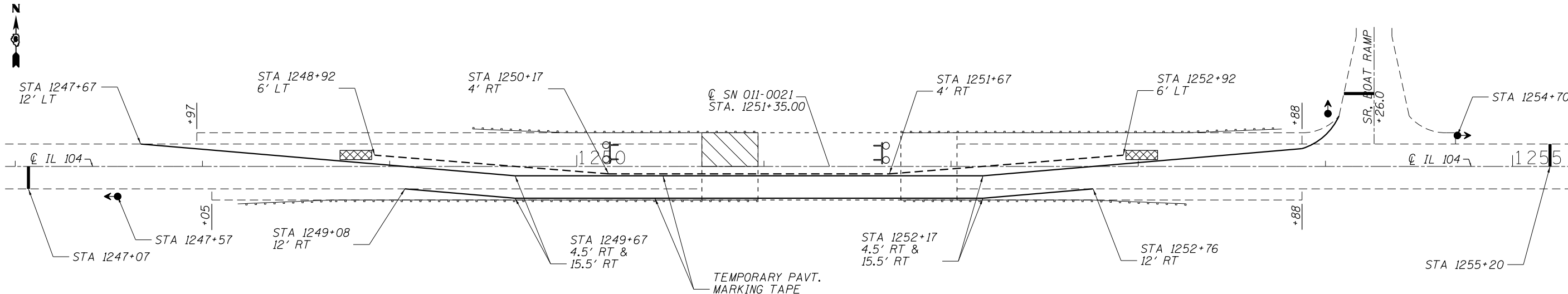
**TRAFFIC STAGING DETAIL**

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 72L77	
			ILLINOIS FED. AID PROJECT	


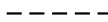





**STAGE I TRAFFIC CONTROL PLAN**



**STAGE II TRAFFIC CONTROL PLAN**

**SYMBOLS**

-  WORK AREA
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR
-  TRAFFIC SIGNAL
-  TYPE III BARRICADE WITH FLASHING LIGHTS

**TRAFFIC CONTROL NOTES:**

1. TRAFFIC CONTROL DEVICES NOT SHOWN IN THIS DETAIL SHALL BE PER STANDARD 701321. DEVICES AND TEMPORARY PAVEMENT MARKINGS SHOWN IN THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321. IMPACT ATTENUATORS, AND TEMPORARY CONCRETE BARRIER SHALL BE PAID SEPARATELY.
2. TEMPORARY CONCRETE BARRIER OFFSETS GIVEN IN THIS DETAIL REFER TO THE EDGE OF THE BARRIER NEAREST TO LIVE TRAFFIC. BARRIER WALL TAPERS SHALL BE 12:1 UNLESS OTHERWISE NOTED.
3. RUMBLE STRIPS SHOWN IN STANDARD 701321 WILL NOT BE REQUIRED.

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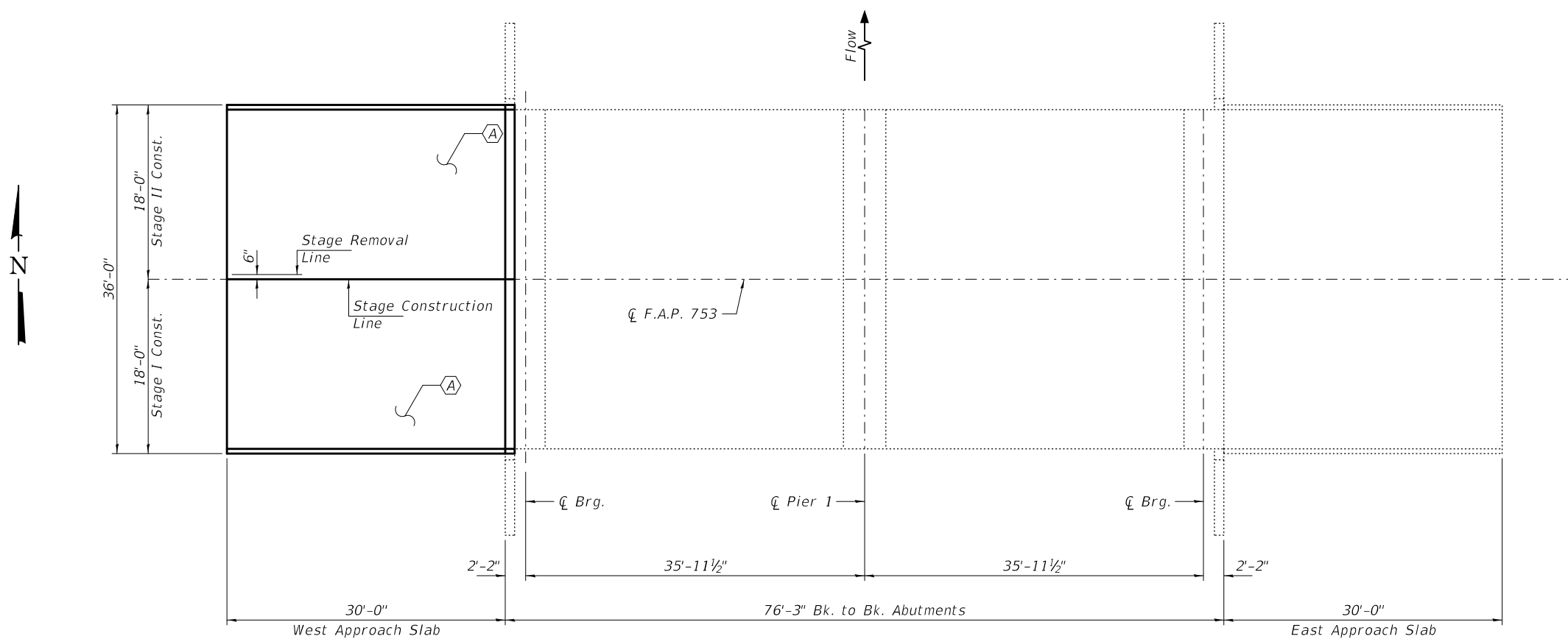
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PLOT DATE = 3/19/2020	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL PLAN**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	6
CONTRACT NO. 72L77				
ILLINOIS FED. AID PROJECT				

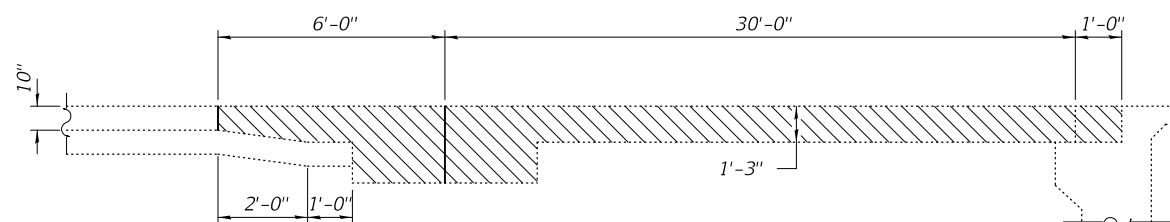


**PLAN**

(A) - Remove and Replace Approach Pavements

**NOTES**

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 Approach Slab Removal.



**EXISTING APPROACH SLAB REMOVAL DETAILS**

See sheet 4 of 4 for existing plans.  
(Shoulder and drainage elements removal is included with Approach Slab Removal)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Approach Slab Removal	Sq. Yd.	120
Concrete Removal	Cu. Yd.	3.9
Concrete Structures	Cu. Yd.	17.2
Concrete Superstructure (Approach Slab)	Cu. Yd.	53.6
Reinforcement Bars, Epoxy Coated	Pound	25360
Bar Splicers	Each	152
Bridge Deck Grooving	Sq. Yd.	114
Protective Coat	Sq. Yd.	120



EXPIRES 11-30-2020

DESIGNED - Steven M. Ryan  
CHECKED - Chi-Cheung Chau  
DRAWN - Venkat Reddy  
CHECKED - SMR CCC

EXAMINED - *Ting A. Hsu*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED - *Sh. Carl Payne*  
ENGINEER OF BRIDGES AND STRUCTURES

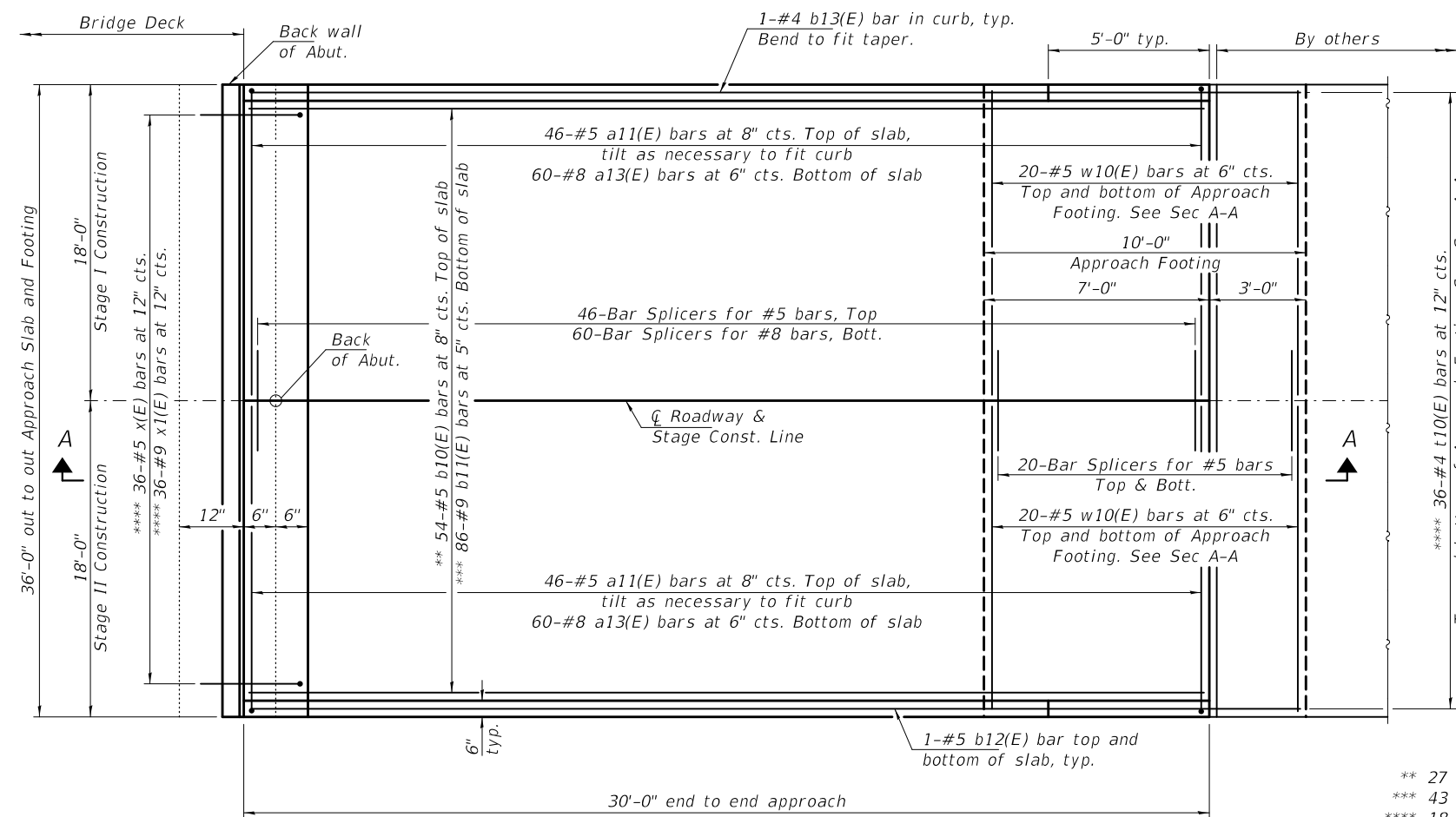
DATE - MAY 11, 2020  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN  
FAP 753 (IL - 104) OVER LAKE SANGCHRIS  
SN 011 - 0021**

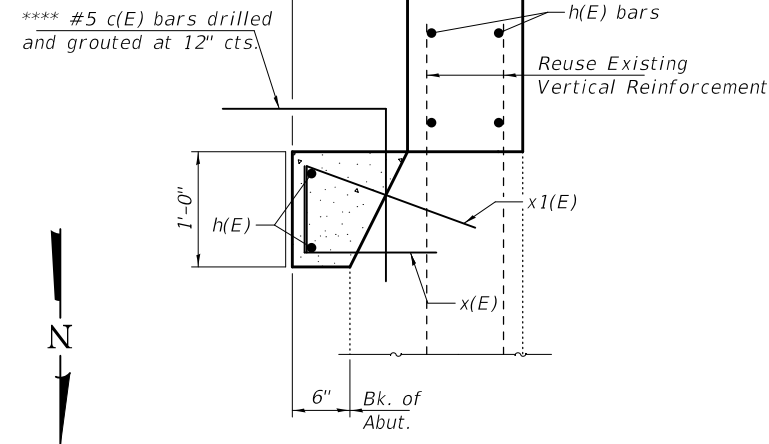
SHEET NO. 1 OF 5 SHEETS

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CONTRACT NO. 72L77				
ILLINOIS FED. AID PROJECT				



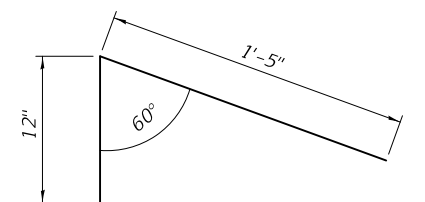
**PLAN**  
(Approach end Shown)

\*\* 27 Stage I; 27 Stage II  
 \*\*\* 43 Stage I; 43 Stage II  
 \*\*\*\* 18 Stage I; 18 Stage II

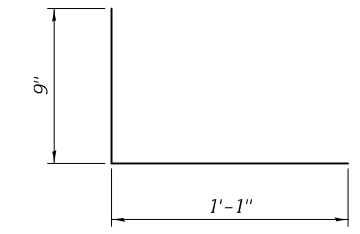


**SECTION THRU ABUTMENT**

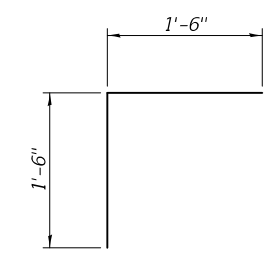
Note:  
See sheet 3 of 4 for Section A-A.



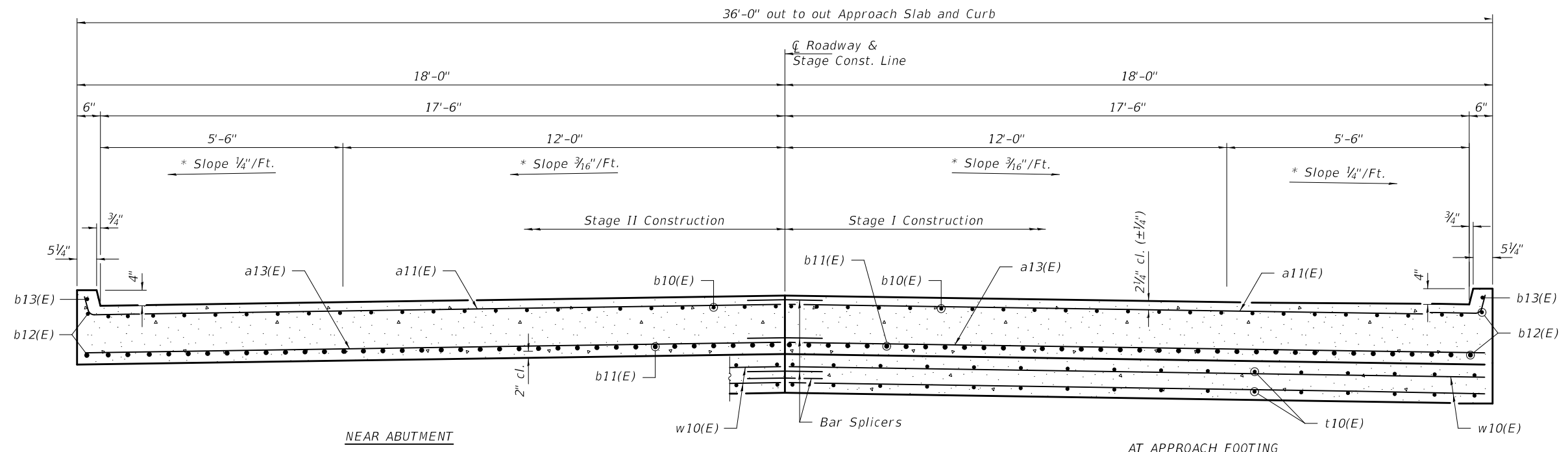
**x1(E) Bar**



**x(E) Bar**



**c(E) Bar**



**CROSS SECTION**  
(Looking East)

\* Match existing deck surface profile.

**HATCHED BLOCK & CORBEL**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
c(E)	36	#5	3'-0"	┌
h(E)	12	#6	17'-9"	—
x(E)	36	#5	1'-10"	└
x1(E)	36	#5	2'-5"	└
Concrete Superstructure (Approach Slab)			Cu. Yd.	3.9
Reinforcement Bars, Epoxy Coated			Pound	590
Bar Splicers			Each	6

DESIGNED - SMR	EXAMINED	DATE - MAY 11, 2020
CHECKED - CCC	<i>Timothy A. ...</i>	
DRAWN - Venkat Reddy	PASSED	REVISER -
CHECKED - SMR CCC	<i>Carl ...</i>	REVISER -

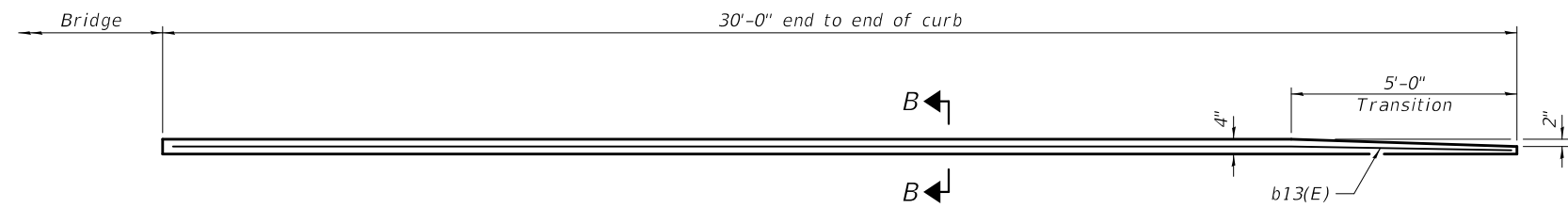
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS**  
**SN 011-0021**

SHEET NO. 2 OF 5 SHEETS

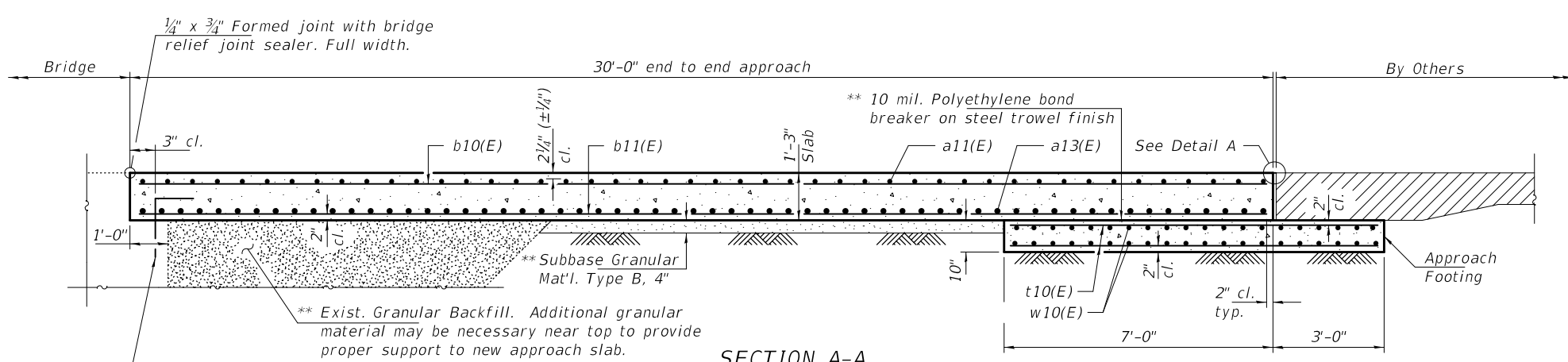
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753	(142) PCC	CHRISTIAN	11	8
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72L77	



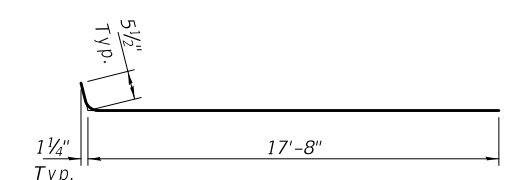


**INSIDE ELEVATION OF CURB**  
(Departing End)

Notes:  
 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<sub>max</sub>) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.

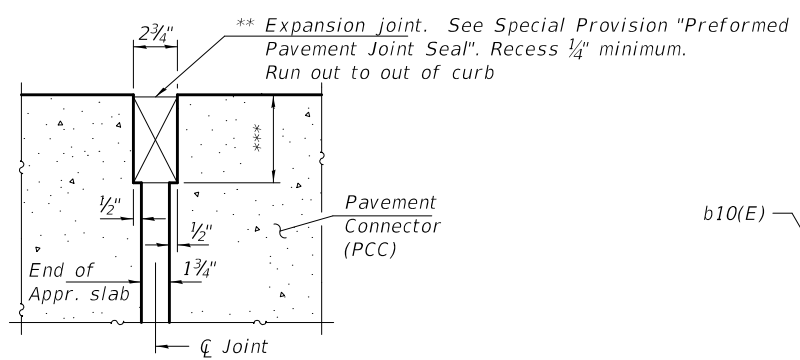


**SECTION A-A**



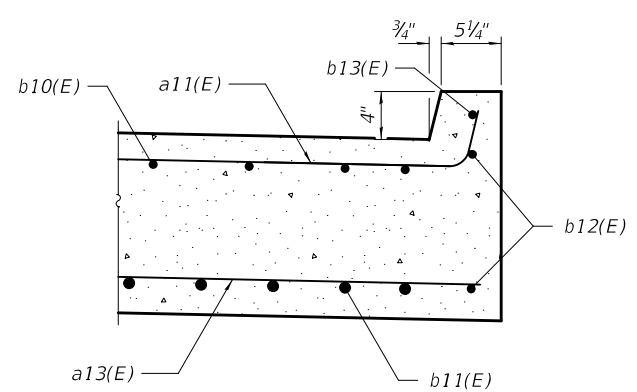
**BARS a11(E)**

#5 Dowels to be drilled and epoxy grouted at 1'-0" cts.



**DETAIL A**

(Detail A shown, applies to Highway Standard 420401 only.  
 Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)



**SECTION B-B**

**ONE APPROACH  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a11(E)	92	#5	18'-2"	U
a13(E)	120	#8	17'-9"	—
b10(E)	54	#5	29'-8"	—
b11(E)	86	#9	29'-8"	—
b12(E)	4	#5	29'-8"	—
b13(E)	2	#4	29'-8"	—
t10(E)	72	#4	9'-8"	—
w10(E)	80	#5	22'-9"	—
Concrete Superstructure (Approach Slab)			Cu. Yd.	53.6
Concrete Structures			Cu. Yd.	13.3
Reinforcement Bars, Epoxy Coated			Pound	24470
Bar Splicers			Each	146

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

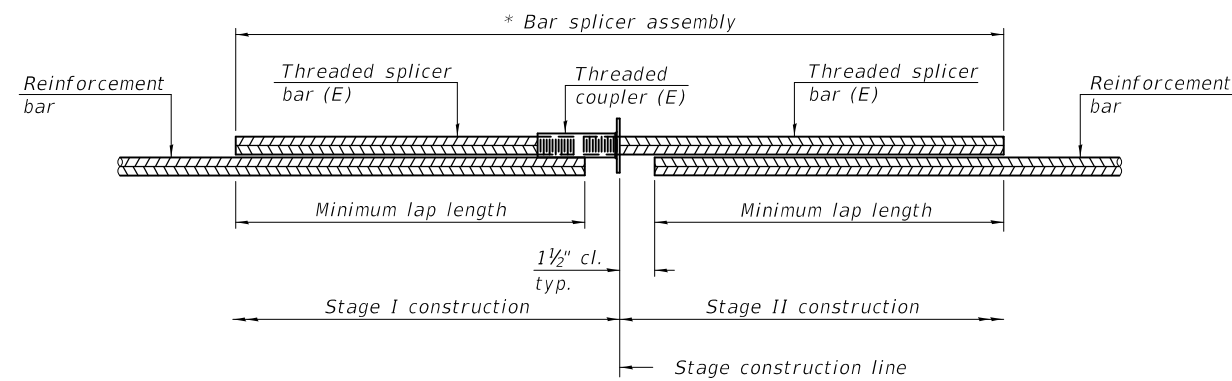
DESIGNED - SMR	EXAMINED - <i>Timothy A. Daulton</i>	DATE - MAY 11, 2020
CHECKED - CCC	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Venkat Reddy	PASSED - <i>Carl Berger</i>	REVISER -
CHECKED - SMR CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISER -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
 SN 011-0021**

SHEET NO. 3 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	9
CONTRACT NO. 72L77			ILLINOIS FED. AID PROJECT	

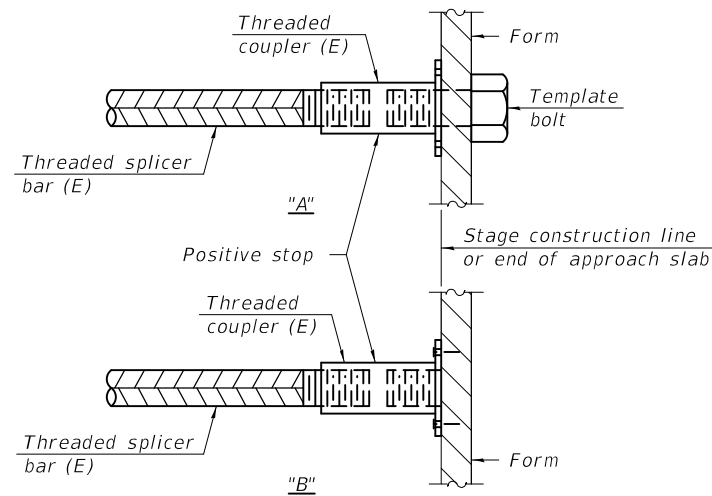


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
(All components shall be provided from one supplier)

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

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

Location	Bar size	No. assemblies required	Minimum lap length
Top Approach Slab	#5	46	3'-4"
Bottom Approach Slab	#8	60	4'-9"
Hatched Block	#6	4	5'-0"
Corbel	#6	2	4'-5"
Approach Footing	#5	40	3'-0"

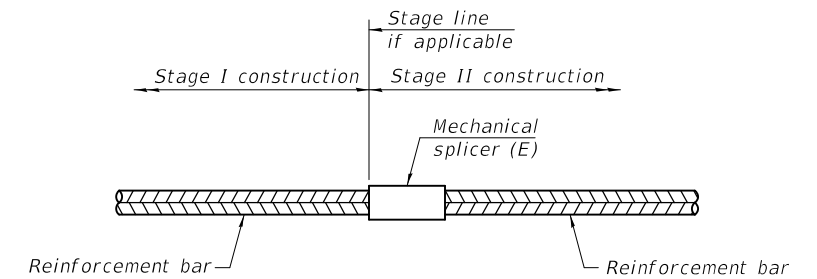


**INSTALLATION AND SETTING METHODS**

"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

**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

1-1-2020

DESIGNED - SMR  
CHECKED - CCC  
DRAWN - Venkat Reddy  
CHECKED - SMR CCC

EXAMINED  
PASSED

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

DATE - MAY 11, 2020

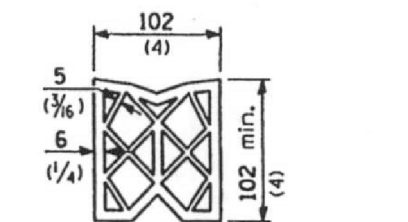
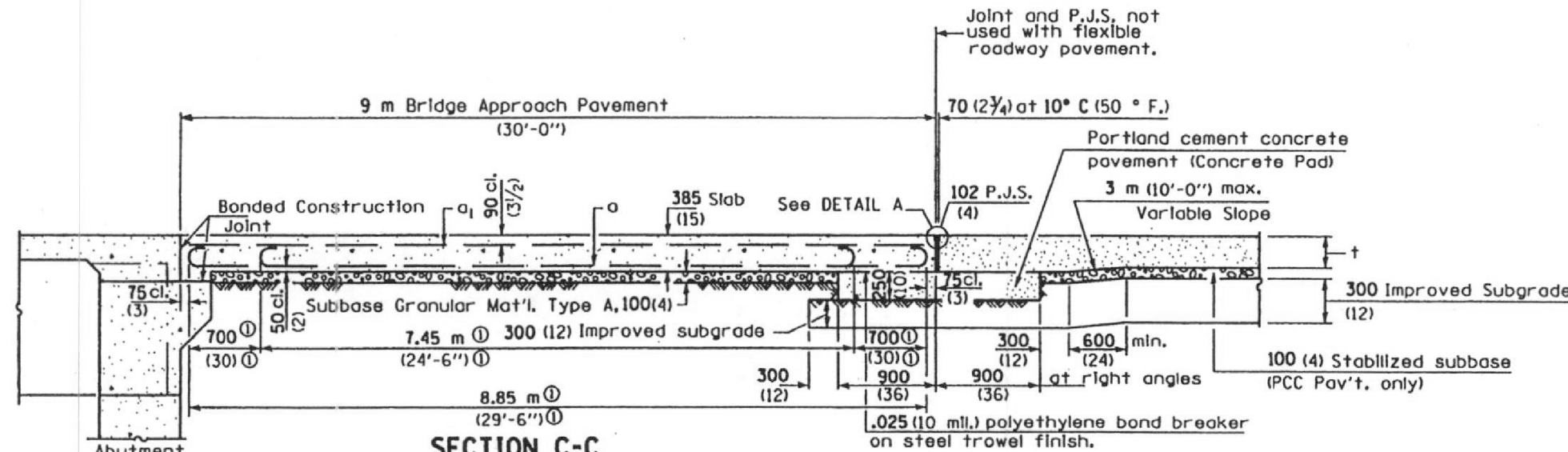
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

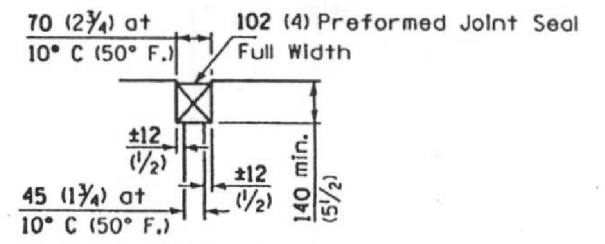
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
SN 011-0021

SHEET NO. 5 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	10
CONTRACT NO. 72L77				
ILLINOIS FED. AID PROJECT				

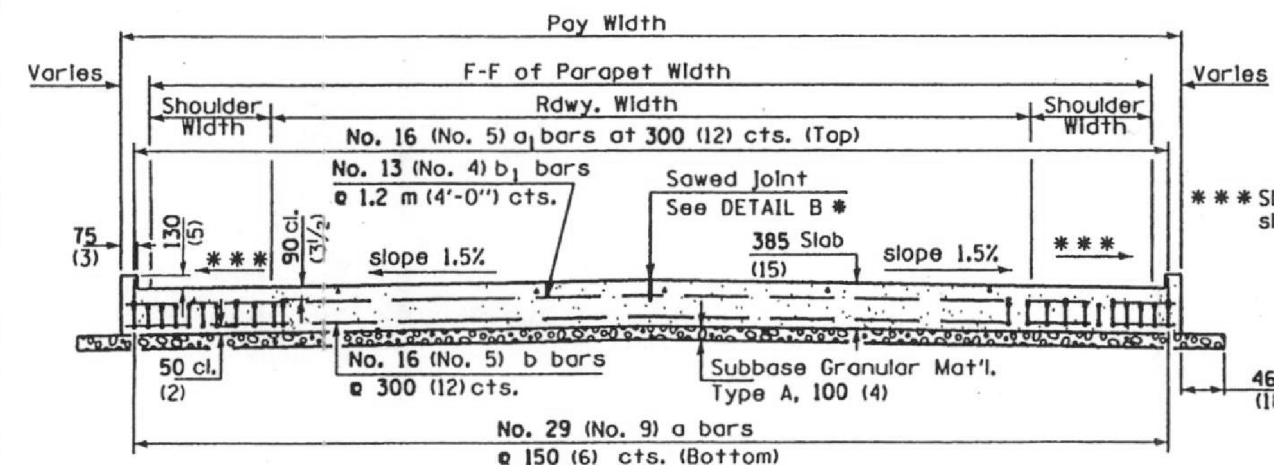


**PREFORMED JOINT SEAL**



**DETAIL A**

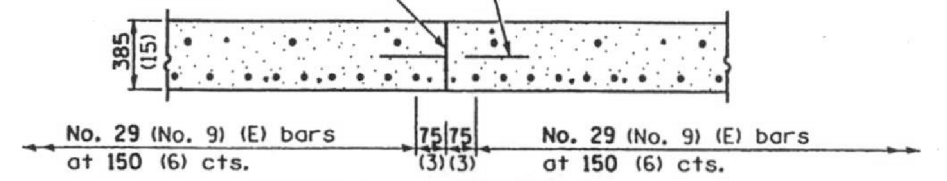
ⓐ Stagger No. 29 (No. 9) a bars as shown on plan - full width



**SECTION D-D**

(See Plan for Dimensions not shown)  
All reinforcement bars shall be epoxy coated.

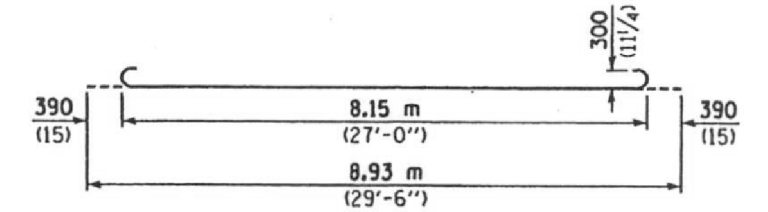
Longitudinal Construction Joint in accordance with details shown on Standard 420001.



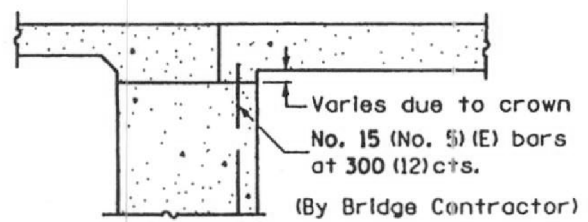
**OPTIONAL LONGITUDINAL CONSTRUCTION JOINT**

As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.

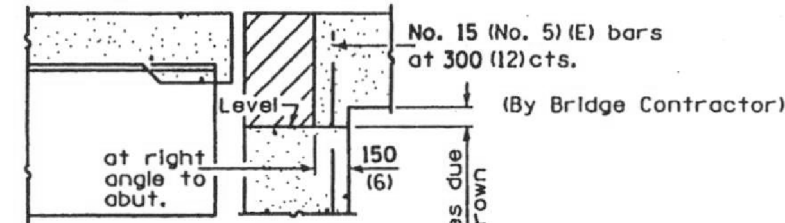
**FOR INFORMATION ONLY**



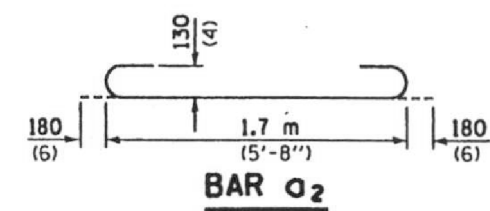
**BAR a**



**SECTION E-E (Integral Abutments)**



**SECTION E-E (Jointed Abutments)**



**BAR a2**

All dimensions are in millimeters (Inches) unless otherwise shown.

**DESIGN STRESSES**  
 $f_y = 400 \text{ MPa (60,000 p.s.i.)}$   
 $f'_c = 24 \text{ MPa (3,500 p.s.i.)}$   
 $n = 8.5$

**BRIDGE APPROACH PAVEMENT**

(Sheet 3 of 4)

**STANDARD 420401-05**

Illinois Department of Transportation  
 APPROVED January 1, 2004  
*Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES  
 APPROVED January 1, 2004  
*Michael J. Hone*  
 ENGINEER OF DESIGN AND ENVIRONMENT

DESIGNED - SMR  
 CHECKED - CCC  
 DRAWN - Venkat Reddy  
 CHECKED - SMR CCC

EXAMINED  
*Timothy A. Dredt*  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED  
*Carl Ringer*  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 11, 2020  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLAN SHEET - FOR INFORMATION ONLY  
 SN 011-0021

SHEET NO. 5 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
753	(142) PCC	CHRISTIAN	11	11
CONTRACT NO. 72L77				

ILLINOIS FED. AID PROJECT