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- 4. Roadway Plan
- 5, Traffic Control Plan Bridge Repair Plans 071-0070
- 6. General Plan & Elevation
- 7. Deck Plan & Cross Section
- 8. Fixed Joint & Floordrain Details
- 9. Expansion Joint Details
- 10. -11. Bridge Joint System (Expansion)
- 12. Bar Splicer Assembly Details
- 13. Detail of Bituminous Shoulder at Guardrail (Dist. Std 23.4)
- 14. Concrete Curb Special (Dist. Std. 11.4)
- & Stop Line Sign for Temporary Signals (Dist. Std. 99.4)

STANDARDS

606001-02 Concrete Curb Type B and Combination Concrete Curb and Gutter

630001-05 Steel Plate Beam Guardrail

631031-05 Traffic Barrier Terminal, Type 6

701001-01 Off-Road Operations, 2L 2W, 4.5 m (15') Min. Away, For Speeds > 45 MPH

701201-02 Lane Closure, 2L 2W, Day Only, On-Road To 600 mm (24") Off-Road, For Speeds > 45 MPH

701306-01 Lane Closure, 2L 2W, Slow Moving Day Only Operations, For Speeds > 45 MPH

701316-03 Lane Closure, 2L 2W, Bridge Repair

701326-02 Lane Closure, 2L 2W, Pavement Widening, For Speeds > 45 MPH

702001-05 Traffic Control Devices

PROPOSED HIGHWAY PLANS FAS ROUTE 2079 (U.S. ROUTE 52) SECTION 16BR-M **OGLE COUNTY** C-92-045-05 [1] GOOSE M CANADA ШН

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

Township: Brookville

Sections: 27

Project Location Structure No. 071-0070 6 6 85 PINES

J.U.L.I.E.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

1-800-892-0123

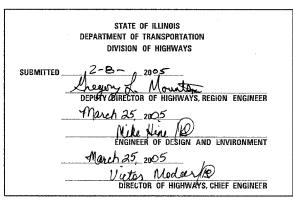
CONTRACT NO. 64A85

Net Length of Project: = 325' = 0.06 Miles Gross Length of Project: = 325' = 0.06 Miles

PRINTED BY THE AUTHORITY

D-92-046-05





OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

Code Number	Pay Item	Unit	Total Quantity
			SFTY-2A
20200500	EARTH EXCAVATION (WIDENING)	CU YD	1
20400800	FURNISHED EXCAVATION	CUYD	·
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	3
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	2
40600990	TEMPORARY RAMP	SQ YD	3
42001300	PROTECTIVE COAT	SQ YD	3
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	3
48202600	BITUMINOUS SHOULDERS SUPERPAVE 8"	SQ YD	3
48300500	PORTLAND CEMENT CONCRETE SHOULDERS 10"	SQ YD	
50102400	CONCRETE REMOVAL	CU YD	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3
50300255	BRIDGE DECK GROOVING	SQ YD	3
50300530	FLOOR DRAIN EXTENSION	EACH	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	51
60600505	CONCRETE CURB (SPECIAL)	FOOT	1
63301000	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	FOOT	4
63304805	TRAFFIC BARRIER TERMINAL REMOVAL. TYPE 6	EACH	
63301990	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	•
67100100	MOBILIZATION	L SUM	
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	······································
70100450	TRAFFIC CONTROL AND PROTECTION. STANDARD 701201	L SUM	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	9
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	10
78200405	GUARDRAIL MARKERS	EACH	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1
X0323558	BRIDGE JOINT SYSTEM (EXPANSION), 1-5/8"	FOOT	
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	1
X5030304	CONCRETE WEARING SURFACE, 4"	SQ YD	3
Z0002600	BAR SPLICERS	EACH	1
Z0003700	BEARING PAD ADJUSTMENT	EACH	
Z0017300	DOWEL REPAIR	EACH	
Z0032700	KEYWAY REPAIR	FOOT	9

*SPECIALTY ITEM

GENERAL NOTES

COUNTY TOTAL SHEET SHEETS NO. RTE. SECTION 168R-M OGLE TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 4 or 6 (modified) shall be used, except in front of properties where the grass will be mowed, then use Seeding, Class 1 (modified). Class 6 (modified) shall be used on front slopes and ditch bottoms. Class 4 shall be used behind Type A gutter, on all backslopes and areas behind the backslope, and beyond the toe of front slope on fill sections without ditches. This work will be included in the contract unit price per Cubic Meter (Cubic Yard) for EARTH EXCAVATION.

Fertilizer shall be applied to all disturbed areas and incorporated into the seedbed prior to seeding or placement of sod at the rate specified in Sections 250 and 252 of the Standard Specifications. This work shall be included in the cost of EARTH EXCAVATION.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the EARTH EXCAVATION.

The following Mixture Requirements are applicable for this project:

Mixture Uses(s):	Mainline & Shoulder	Bottom Shoulder
PG:	64-22	58-22
RAP%: (Max)		
Design Air Voids	4.2%	2%
Mixture Composition		
(Gradation Mixture)	IL 12.5 or 9.5	IL 19.0 or BAM
Friction Aggregate	D	С
20 Year ESAL		

Install a "TO ACTUATE SIGNAL" sign for the traffic signal detector loops. The detail of this sign is included in the plans. This work will be included in the cost of TRAFFIC CONTROL AND PROTECTION STANDARD 701316.

This structure will retain the same number 071-0070.

At bridge expansion joints, if temporary expansion joint bulkheads are attached to adjacent deck slabs or abutments for support, the Contractor shall cut the attachments as soon as the concrete has set to prevent joint damage due to horizontal contraction or expansion.

The excavated materials from earth excavation widening, grading and shaping ditches, and excavating and grading shoulders shall be used to build up the shoulder throughout the job.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mr. Mike Lenox

Mr. Mark Burks

ComEd 815/490-2869

Citizens/Frontier 217/854-4013

Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which are not members of JULIE and should be notified individually by the contractor:

Mr. Dennis Schultz IDOT-District 2 819 Depot Ave Dixon IL 61021

815/284-5469

Previously pugmilled stockpiles of "Type A" older than 1 month will not be approved for use until a moisture check is run to verify moisture content. Material shipped to projects without being tested will not be

A quantity of 50 Cubic Yards of Furnish Excavation has been included to further build up the shoulders, if the Engineer determines that the excavated materials from the job are insufficient to bring the shoulders to the proper slope.

The final top 100 mm (four inches) of soil in any right-of-way area disturbed by the Contractor must be capable of supporting vegetation. The soil must be from the A horizon (zero to 2' deep) of soil profiles of local soils.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications. A minimum of 48 hours advance notice is required for non-emergency work. The JULIE number is 800-892-0123. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Mr. Mike Lenox ComEd 815/490-2869 Mr. Mark Burks

Citizens/Frontier 217/854-4013

Following are the known utilities located within the project limits or immediately adjacent to the project construction limits which

by the contractor: Mr. Dennis Schultz IDOT-District 2

815/284-5469

are not members of JULIE and should be notified individually

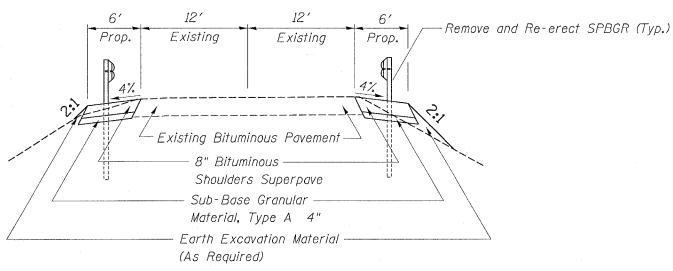
819 Depot Ave Dixon IL 61021

SUMMARY OF QUANTITIES & GENERAL NOTES US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) SECTION 16BR-M OGLE COUNTY STRUCTURE NUMBER 071-0070

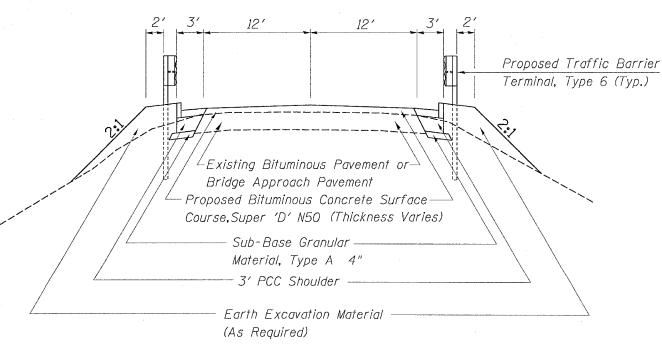
F.A.S. RTE.	SECTION	С	OUNT	•	TOTAL	SHEET NO.
2079	16BR~M		OGLE	:	14	3
STA.		TO	STA.			
FED. RO	AD DIST. NO. IL	LINOIS	FED.	dla	PROJECT	

TYPICAL SECTIONS

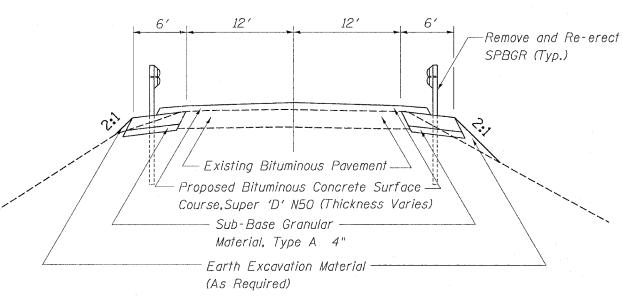
Sta. 969+35 to 969+87 Sta. 973+12 to 973+70



Sta. 970+52 to 970+87 Sta. 972+13 to 972+48



Sta. 969+87 to 970+52 Sta. 972+48 to 973+12



TYPICAL SECTIONS

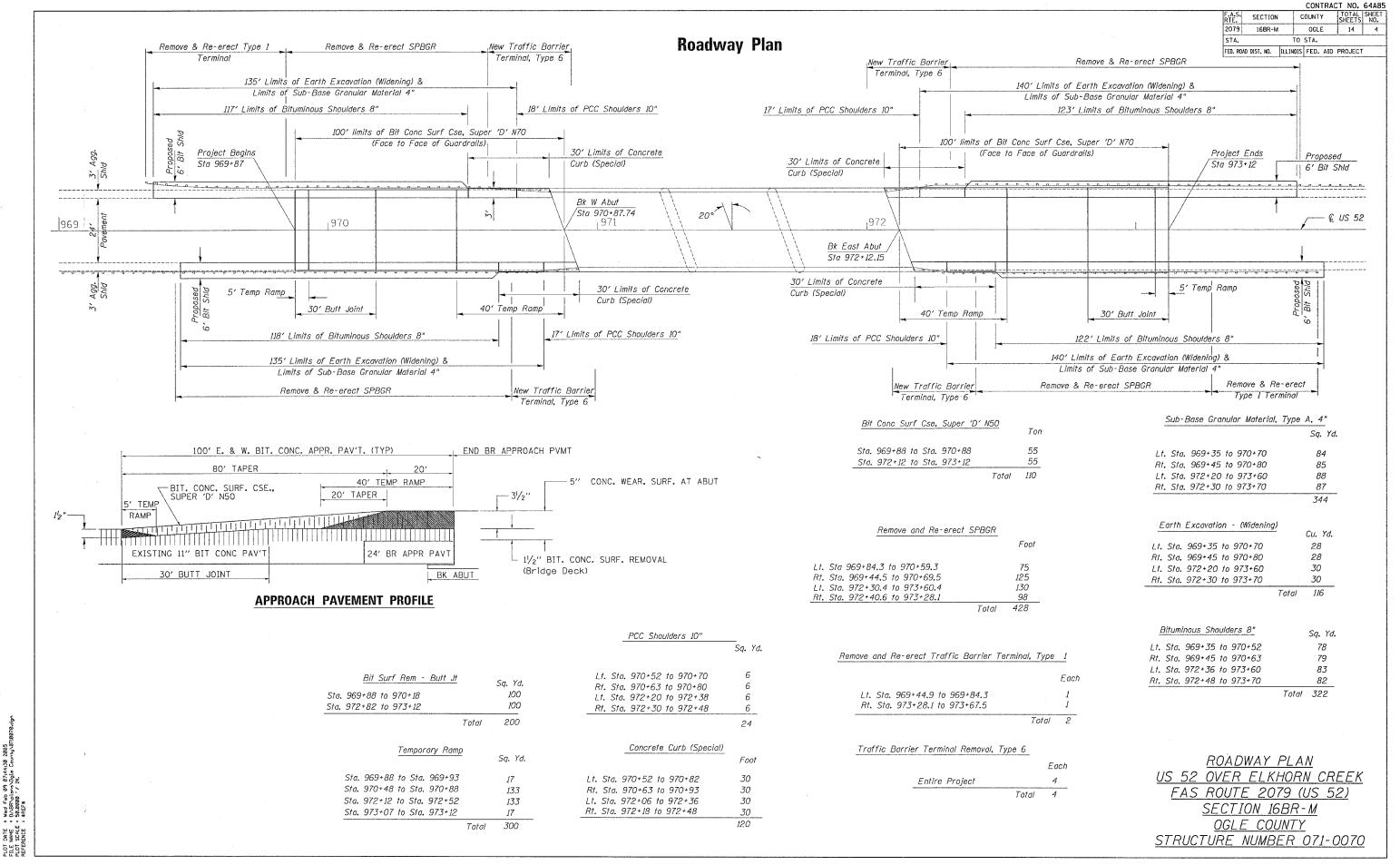
US 52 OVER ELKHORN CREEK

FAS ROUTE 2079 (US 52)

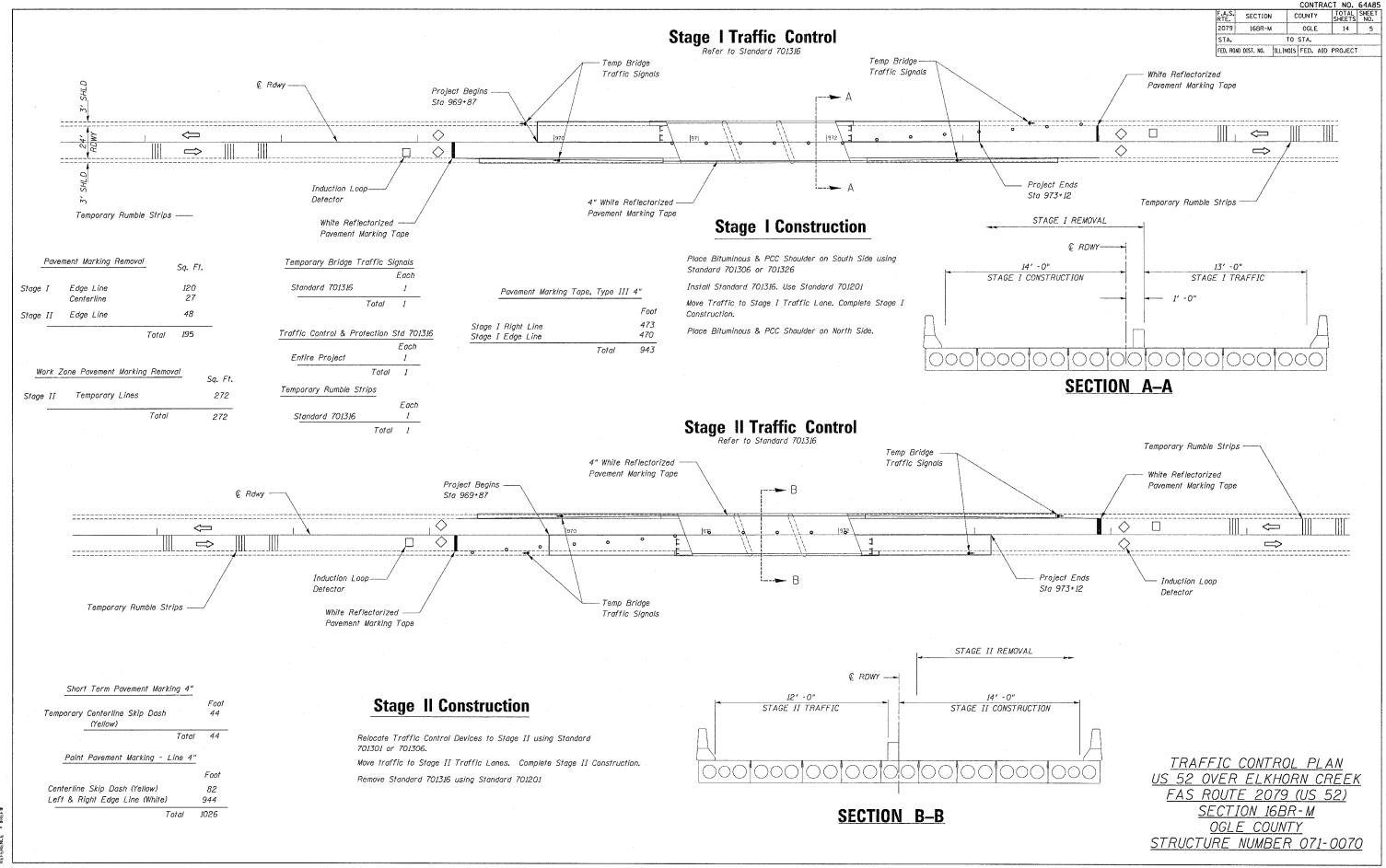
SECTION 16BR-M

OGLE COUNTY

STRUCTURE NUMBER 071-0070



DATE = Wed Feb 09 07:44:30 2005 NAME = D:\BR\plans\Ogle County\0' SCALE = 50.0000 '/ IN. RENCE = \$REF\$



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LE NAME = 0:\BR\plans\Ogle County\07:0070.dgn
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Sheet 1 of 7

General Notes

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All structural steel shall be AASHTO M 270 Grade 36, unless otherwise noted.

Reinforcement bars shall conform to the requirements of AASHTO M31, or M322

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.

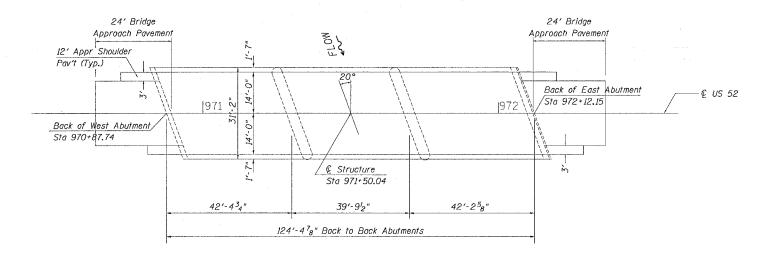
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

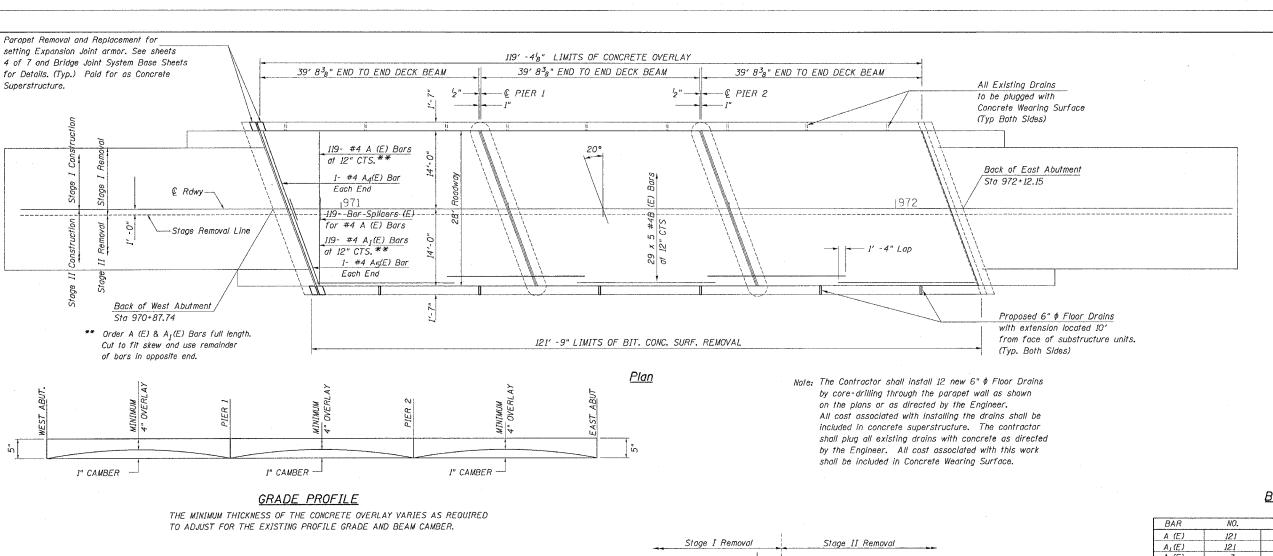
Total Bill of Materials

ITEM	UNIT	QUANTITY
BAR SPLICERS	EA	130
BIT CONC SURF REMOVAL COMPLETE	SQ YD	379
CONC WEARING SURF 4"	SQ YD	372
BR DECK GROOVING	SQ YD	345
CONC SUPERSTRUCTURE	CU YD	3.3
CONC REMOVAL	CU YD	2.9
F&E STRUCT STEEL	POUND	418
REINF BARS, EPOXY CTD	POUND	5176
KEYWAY REPAIR	FOOT	960
DOWEL REPAIR	EA	90
BEARING PAD ADJUSTMENT	EA	78
BRIDGE JOINT SYSTEM (EXPANSION), 158"	FOOT	31
PROTECTIVE COAT	SQ YD	372
FLOOR DRAIN EXTENSION	EA	12

— 17" PPC Deck Beams-East Abutment West Abutment Pier 1 Elevation



GENERAL PLAN AND ELEVATION US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) SECTION 16BR-M OGLE COUNTY STRUCTURE NUMBER 071-0070



Bill of Material

CONTRACT NO. 64A85

COUNTY TOTAL SHEET SHEETS NO.

OGLE 14

TO STA.

Sheet 2 of 7

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

F.A.S. SECTION 2079 16BR-M

STA.

BAR	NO.	SIZE	LENGTH	'	SHAPE
A (E)	121	4	13' -9"		
A,(E)	121	4	13′ - 11″		
A ₂ (E)	3	5	14′ - 7"		
A3(E)	3	5	14' -11"		
A ₄ (E)	2	4	14' - 7"		
A5(E)	2	4	14′ - 11"		
B (E)	145	4	24' -10'	'	
H (E)	6	. 6	14' -9"		
$H_{j}(E)$	6	6	17' - 3"		
U (E)	29	5	3' -8"		
BIT CONC :	SUR REM COMP	LETE		SQ YD	379
CONC WEARING SURF 4"				SQ YD	372
BR DECK GROOVING				SQ YD	345
CONC SUPE	RSTRUCTURE			CU YD	3.3
CONC REM				CU YD	2.9
F & E STR	RUCT STEEL			POUND	418
REINF BAR	RS, EPOXY CTD			POUND	5176
KEYWAY RE	PAIR			FT	960
DOWEL RE	PAIR			EA	90
BEARING F		EA	78		
BRIDGE JOINT SYSTEM (EXPANSION), 158"				FT	31
PROTECTIV	E COAT			SO YD	372
BAR SPLIC	ERS			EA	130
FLOOR DR.	AIN EXTENSIO	N		EA	12

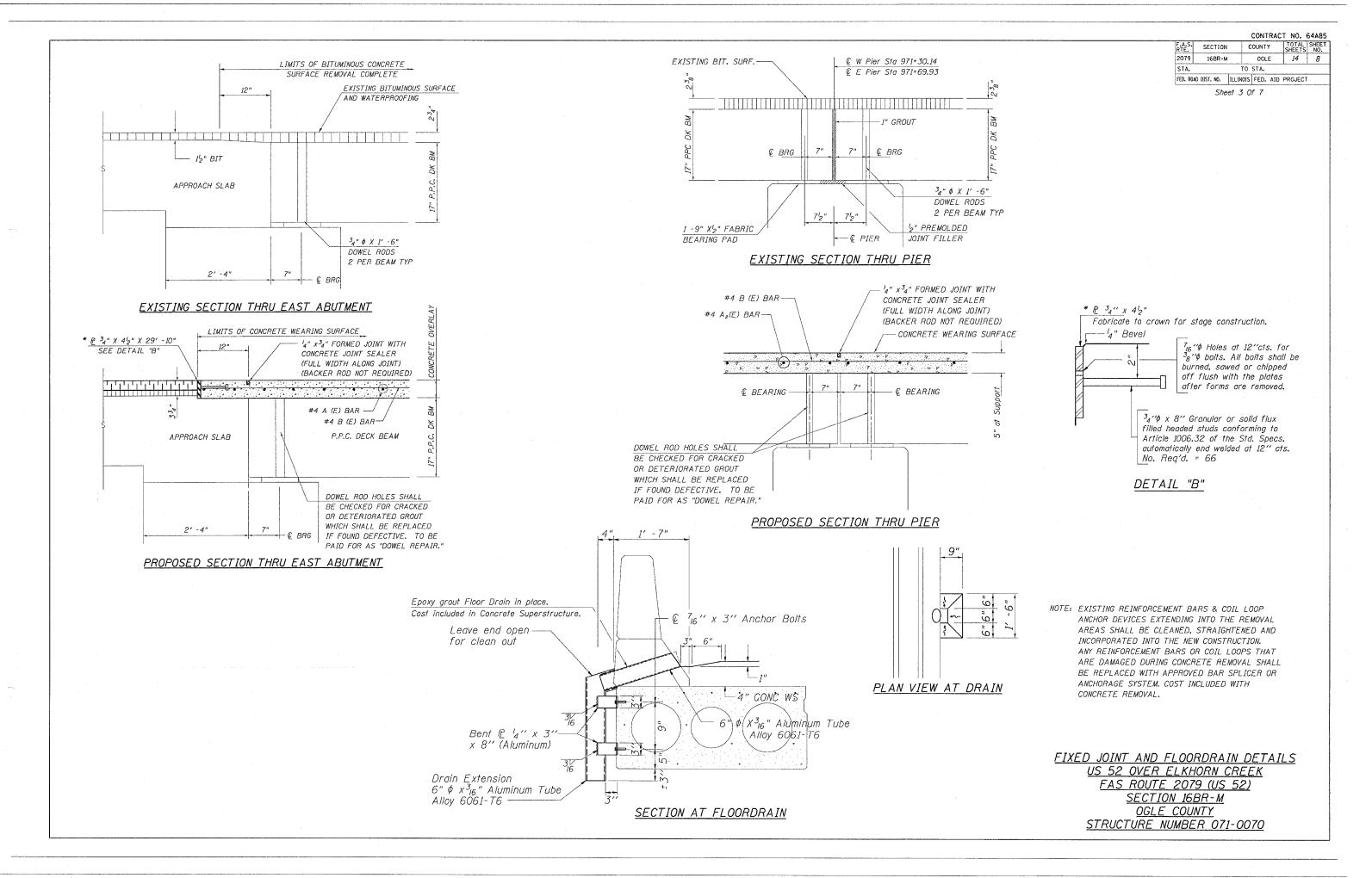
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED. BARS INDICATED THUS 34X3-#4 BARS INDICATES 34 LINES OF BARS WITH 3 LENGTHS PER LINE.

DECK PLAN & CROSS SECTION
US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)
SECTION 16BR-M
OGLE COUNTY
STRUCTURE NUMBER 071-0070

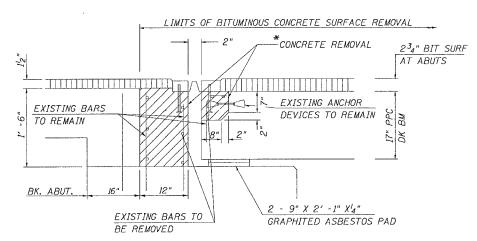
Stage II Construction Stage I Construction Symmetrical about 14' -0" 3/8" ''- O" Existing Bituminous Surface w/ Existing Drains to be Proposed Concrete #4 A (E) Bars Waterproofing Membrane to be plugged with Concrete Wearing Surface Wearing surface 4" Min at Midspan — 2" Clearance -- 1³4" -GROUT Proposed 6" \$\phi\$ Floor Drain with Extension #4 B (E) Bars 17" x 48" 17" x 36" [√]17" x 36" 17" x 36" DETAIL "A" KEYWAY REPAIR (SEE DETAIL A & SPECIAL PROV.) 9 - Precast Prestressed Concrete Deck Beams (17" Depth) 31'-0'' = THE CONTRACTOR SHALL INSTALL '8" X 9" X 9" FILL OPENINGS SURROUNDING FABRIC BEARING STAINLESS STEEL SHIMS AT BEARING PADS. PADS AT PIERS AND EAST ABUTMENT WITH EPOXY HALF CROSS SECTION GROUT. TO BE PAID FOR AS BEARING PAD ADJUSTMENT. WHERE REQUIRED ON WEST ABUTMENT. TO BE PAID FOR AS BEARING PAD ADJUSTMENT. NOTE: THE QUANTITY GIVEN FOR KEYWAY REPAIR INCLUDES THE FULL LENGTH OF ALL KEYWAYS. THE ACTUAL KEYWAY REPAIR LOCATIONS SHALL BE DETERMINED BY

THE ENGINEER AFTER REMOVAL OF THE EXISTING WEARING SURFACE.

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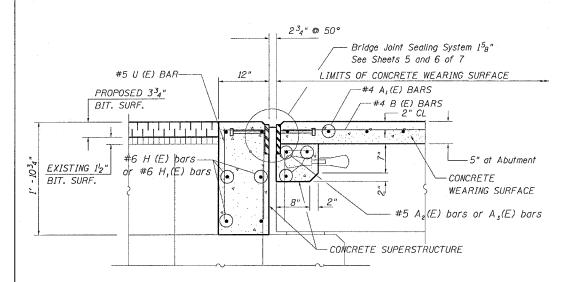


* Note: THe contractor shall use extreme care during concrete removal so as not to damage the PPC Deck Beams



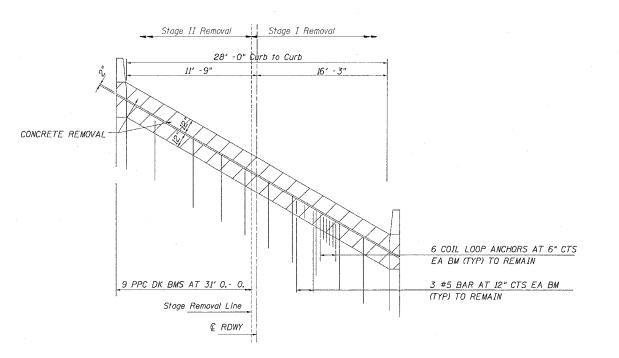
EXISTING SECTION THRU WEST ABUTMENT (EXPANSION)

NOTE: EXISTING REINFORCEMENT BARS & COIL LOOP
ANCHOR DEVICES EXTENDING INTO THE REMOVAL
AREAS SHALL BE CLEANED, STRAIGHTENED AND
INCORPORATED INTO THE NEW CONSTRUCTION.
ANY REINFORCEMENT BARS OR COIL LOOPS THAT
ARE DAMAGED DURING CONCRETE REMOVAL SHALL
BE REPLACED WITH APPROVED BAR SPLICER OR
ANCHORAGE SYSTEM. COST INCLUDED WITH
CONCRETE REMOVAL.



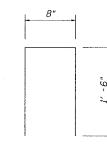
PROPOSED SECTION THRU WEST ABUTMENT (EXPANSION)

Note: Dimensions are based on PJS Joint.
If the contractor elects to use the
alternate strip seal, the dimensions
may require adjustments as detailed
on the joint base sheet.



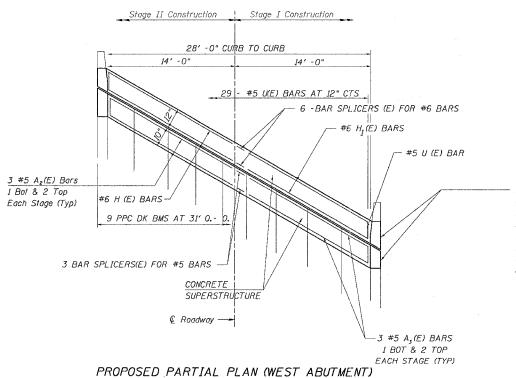
| CONTRACT NO. 64A85 | | F.A.S. | SECTION | COUNTY | STEETS NO. 2079 | 16BR-M | OGLE | 14 | 9 | | STA. | TO STA. | | FED. ROAD DIST. NO. | ILLINOIS | FED. AID | PROJECT |

Sheet 4 of 7



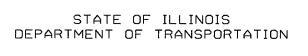
#5 U (E) BAR

EXISTING PARTIAL PLAN (WEST ABUTMENT)



Remove and replace concrete parapet for setting of expansion joint armor. Existing Reinforcement Bars extending into the removal areas shall be cleaned, straightened and incorporated into the new construction. Any Reinforcement bars that are damaged during concrete removal shall be replaced with approved bar splicer or anchorage system. Cost included in Bridge Joint System (Expansion), 158"

EXPANSION JOINT DETAILS
US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)
SECTION 16BR-M
OGLE COUNTY
STRUCTURE NUMBER 071-0070



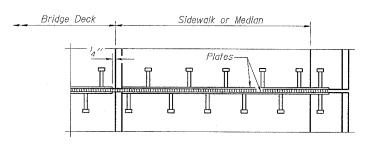
Bridge Joint System (Expansion)					
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement			
1''	2½"	1''			
1 ⁵ 8′′	4''	2"			

Contract #64A85

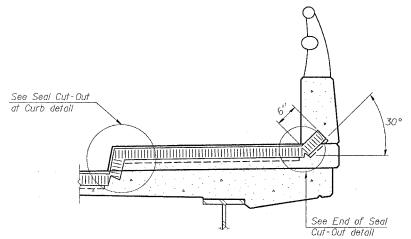
FAS	SECTION	601	INTY	TOTAL. SHEETS	SHEET NO.	SHEET	NO.	5
2079	-**	ΘGι	LE	14	10	-7 sh	EETS	
FED. ROAD DIST.	ND. 7	ILLINOIS	FEO. AID PA	DJECT-				

GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 316". Seal space with silicone sealant suitable for structural steel.



PLAN AT SIDEWALK OR MEDIAN





AT SIDEWALK OR MEDIAN*

(Showing plate and seal)

* Shorter plates with a single row of stude at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

<u>BILL</u>	<u>OF</u>	MA 7	<u> ERIAL</u>	
Item			Unit	Tot
das laint Cust-				

Item	Unit	Total
Bridge Joint System (Expansion) 1 ⁵ 8"	foot	31

(Sheet 1 of 2)

	~ 1	
φ Hole	Jt. Seal	
* -	214	<u>BRIDGE</u>
		<u>(P</u>
<u> </u>		IIC I

SECTION THRU EXPANSION JOINT

 $2^{3}4^{\prime\prime}$ at 50°F at rt. L's ($2^{l}2^{\prime\prime}$ Joint seal) $2^{3}4^{\prime\prime}$ at 50°F at rt. L's (4 $^{\prime\prime}$ Joint seal)

7₁₆" φ holes at 1'-0" cts. for " \$ bolts. All bolts shall be burned, sawed or chipped off flush with the plates

after forms are removed.

 3_4 " ϕ x 8" granular or solid flux

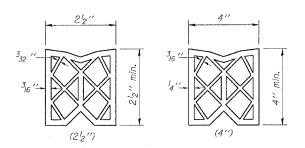
welded at 1'-0" alt. cts. (Required)

filled headed studs conforming to Article 1006.32 of the Std.

Specs., automatically end

Fabricate to crown

 $(2\frac{l_2}{2}$ and 4" joint seals)

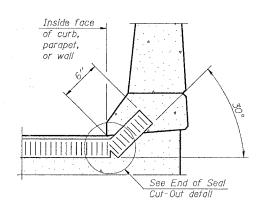


Preformed Jt. Seal

3₁₆ 1½" at 6" cts.

*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

PREFORMED JOINT SEAL

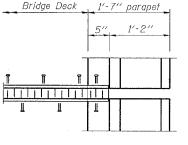


AT CURB, PARAPET, OR WALL (Showing seal)

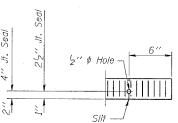
Inside face of curb, parapet, or wall

AT CURB, PARAPET, OR WALL (Showing plate)

TYPICAL END TREATMENTS



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

DESIGNED -	- 200
CHECKED -	EXAMINED
DRAWN -	ENGINEER OF STRUCTURAL SERVICES PASSED
CHECKED -	ENGINEER OF BRIDGES AND SYMUCTURES
EJ-BJS	10-22-04

<u> E JOINT SYSTEM - EXPANSION</u> PREFORMED JOINT SEAL) US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) SECTION 16BR-M OGLE COUNTY STRUCTURE NUMBER 071-0070

14

16BR-M

11

0GLE

GENERAL NOTES

a minimum thickness of $\frac{1}{4}$ ". The configuration of the

strip seal shall match the configuration of the Locking

are minimum dimensions. The actual configuration of the

Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not

The manufacturer's recommended installation methods

The joint opening and deck dimensions detailed on the superstructure are based on a preformed joint seal. If the contractor elects to use the alternate strip seal joint, the

modifications shall be made at no additional cost to the State.

opening and deck dimensions shall be modified according

to the dimensions detailed on this sheet. Required

The strip seal shall be made continuous and shall have

The height and thickness of the Locking Edge Rails shown

Locking Edge Rails may be spliced at slope discontinuities

SHEET NO. 6

-7 SHEETS

FAS

Edge Rails.

be allowed.

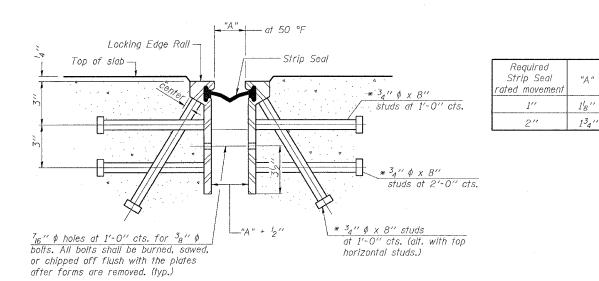
shall be followed.

2079 -**

FEO. ROAD DIST. NO. 7

and stage construction joints.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



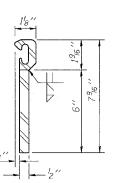
SECTION THRU ROLLED RAIL EXP. JOINT

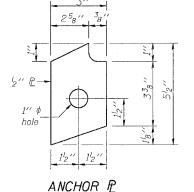
(Studs Required)

-	<u>"A"</u> at 50 °F
Locking Edge Rail Top of slab	"A" at 50 °F Strip Seal * $\frac{3}{4}$ " ϕ x 8" studs at 1'-0" cts. * $\frac{3}{4}$ " ϕ x 8" studs at 2'-0" cts.
7 ₁₆ " φ holes at 1'-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.)	Anchor Plate. "A" + l_2 " Place plates at 1'-0" cts. (alt. with top horizontal studs)

SECTION THRU WELDED RAIL EXP. JOINT

(Studs Required) (Anchor Plates Required)





(for welded rail)

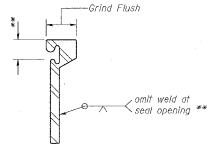
ROLLED (EXTRUDED) RAIL

WELDED RAIL

LOCKING EDGE RAILS

* Granular or solid flux filled headed studs conforming to

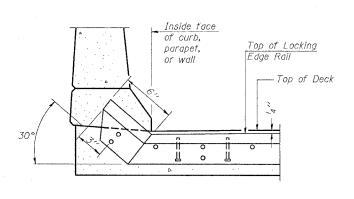
Article 1006.32 of the Std. Specs., automatically end welded.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

'		
DESIGNED -		- 200
CHECKED -	EXAMINED	
DRAWN -	PASSED	ENGINEER OF STRUCTURAL SERVICES
		ENGINEER OF BRIDGES AND STRUCTURES
CHECKED -		
EJ-BJS	10-22-04	



AT SIDEWALK OR MEDIAN*

Sidewalk surface or median surface

> * Shorter plates with a single row of studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

—Strip seal joint

(Sheet 2 of 2)

BRIDGE JOINT SYSTEM - EXPANSION (ALTERNATE-STRIP SEAL)

US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) SECTION 16BR-M OGLE COUNTY

STRUCTURE NUMBER 071-0070

AT CURB, PARAPET, OR WALL

TYPICAL END TREATMENTS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars. Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

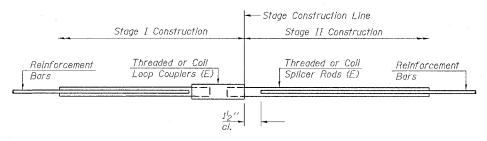
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = 1.25 x fy x A_t
- (lension in Mps), Minimum *Pull-out Strength = 1.25 x fs_{allow} x A_1 (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi. fs_{allow}= Allowable tensile stress in lapped reinforcement bars in ksi (Service Load) A₁ = Tensile stress area of lapped reinforcement bars. * = 28 day concrete

BAR SPLICER ASSEMBLIES					
		Strength Requirements			
	Splicer Rod or Dowel Bar Length		Min. Pull-Out Strength kips - tension		
#4	1'-8''	14.7	5.9		
#5	2'-0''	23.0	9.2		
#6	2'-7"	33.1	13.3		
#7	3′-5′′	45.1	<i>18.0</i>		
#8	4′-6′′	58.9	23.6		
#9	5′-9′′	75.0	30.0		
#10	7'-3''	95.0	38.0		
#11	9′-0′′	117.4	46.8		

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

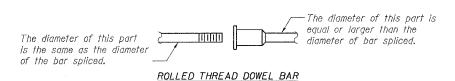


STANDARD

	Bar Size	No. Assemblies Required	Location
	#4	121	Deck
	#6	6	Abutment
	#5	3	Abutment
I			

BAR SPLICER ASSEMBLY DETAILS

US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) SECTION 16BR-M OGLE COUNTY STRUCTURE NUMBER 071-0070

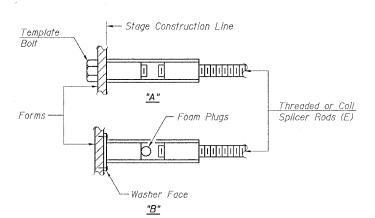


** ONE PIECE -Wire Connector

WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

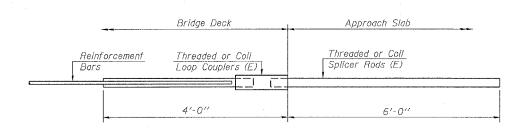
** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

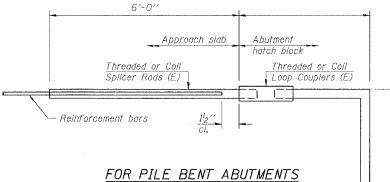
(E): Indicates epoxy coating.



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar Min. Capacity = 23.0 kips - tension Min. Pull-out Strength = 9.2 kips - tension No. Required =

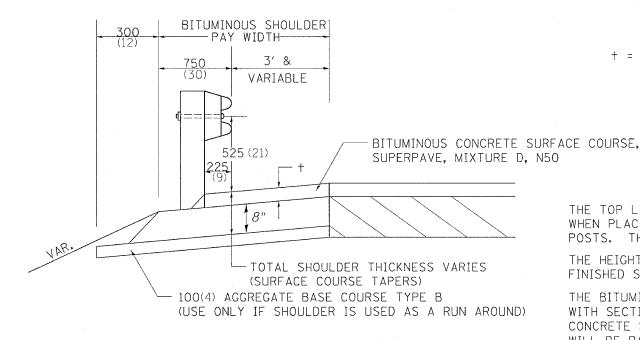
DESIGNED -	- 200
CHECKED -	EXAMINED
DRAWN -	PASSED ENGINEER OF STRUCTURAL SERVICES
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES
BSD-1	10-22-04



Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

2079 STA. TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL



+ = SEE TYPICAL SECTIONS FOR THICKNESS

GENERAL NOTES

THE TOP LIFT SHALL NOT BE PLACED BEHIND THE GUARDRAIL POSTS. WHEN PLACING THE TOP LIFT THE RAIL MUST BE REMOVED FROM THE POSTS. THE POST SHALL NOT BE REMOVED.

THE HEIGHT OF THE GUARD RAIL SHALL BE SET (21) FROM THE FINISHED SURFACE.

THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE METER (SQUARE YARD) FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED. THE REMOVAL & REINSTALLATION OF THE GUARDRAIL WILL BE INCLUDED IN THE COST OF THE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

> ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

> > US 52 OVER ELKHORN CREEK FAS ROUTE 2079 (US 52) <u>SECTION 16BR-M</u> OGLE COUNTY STRUCTURE NUMBER 071-0070

DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL

23.4

REVISED 1-17-02

	F.A.S. RTE.	SECTION	1	COUNT	Υ	TOTAL SHEETS	SHEET NO.
	2079	16BR-N	1	OGL	E	14	14
STA. T			TO	STA.			
	FED. RO	AD DEST. NO.	ILL INOI:	FED.	AID	PROJECT	

CONCRETE CURB SPECIAL

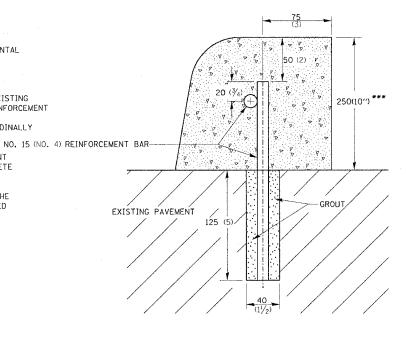
CONCRETE CURB SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, STANDARD 606001 AND THIS DRAWING.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

HOLES 40 (1 $\frac{1}{2}$) \emptyset AND 125 (5) DEEP SHALL BE DRILLED IN THE EXISTING CONCRETE PAVEMENT AT 1.5M (6'-0') CENTERS, NO. 15 (NO. 4) REINFORCEMENT BARS 325 (13') LONG SHALL BE GROUTED IN THE HOLES AND A NO. 15 (NO. 4) REINFORCEMENT BAR SHALL BE INSTALLED LONGITUDINALLY IN THE CURB.

JOINTS OF A TYPE SIMILAR TO THAT IN THE UNDERLYING PAVEMENT (EXPANSION OR CONTRACTION) SHALL BE INSTALLED IN THE CONCRETE CURB IN ALIGNMENT WITH THE JOINTS IN THE PAVEMENT.

THE COST OF ALL MATERIALS AND LABOR REQUIRED TO INSTALL THE JOINTS AND REINFORCEMENT BARS IN THE CURB SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE METER (FOOT) FOR CONCRETE CURB SPECIAL



ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

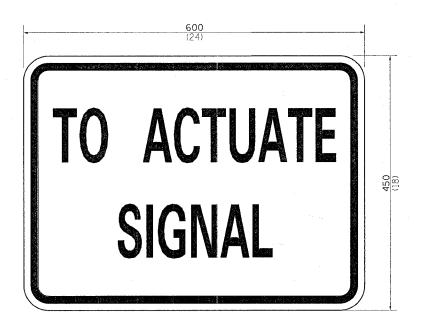
*** Curb Heigth shall be 10" to attain a ± 6" Curb when bridge approaches are overlayed with 4" ± of Bituminous Surface

CONCRETE CURB SPECIAL

REVISED 5-04-94

11.4

STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) × 450(18)

100(4) CAPITAL LETTERS - BLACK

13(1/2) BORDER - BLACK

WHITE REFLECTIVE - TYPE B ENGINEERING GRADE SHEETING

GENERAL NOTE:

THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)

SECTION 16BR-M
OGLE COUNTY

STRUCTURE NUMBER 071-0070

STOP LINE SIGN FOR TEMPORARY SIGNALS

99.4

REVISED 8-7-90