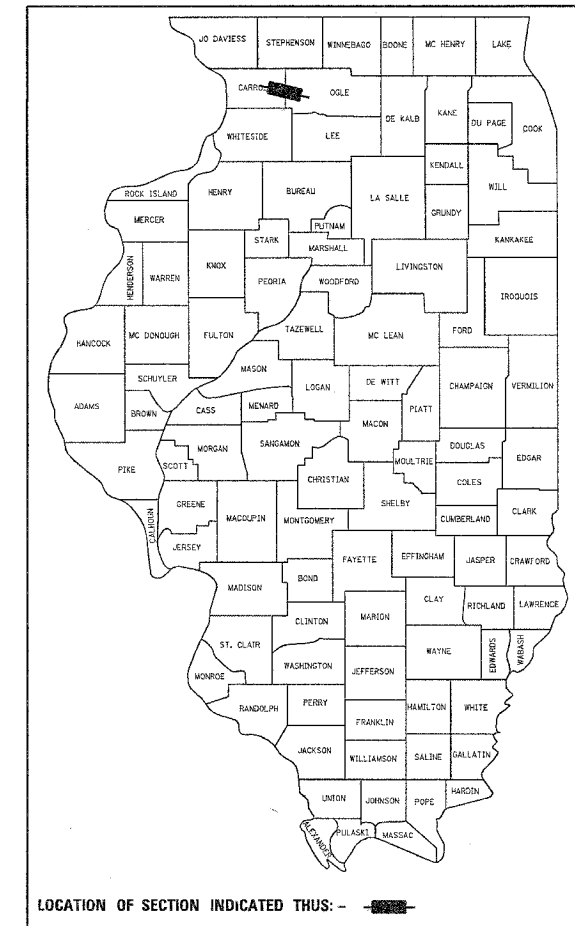


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	1

D-92-046-05



INDEX OF SHEETS

1. Cover Sheet, Index of Sheets
2. Summary of Quantities, General Notes
3. Typical Sections
4. Roadway Plan
5. Traffic Control Plan
 Bridge Repair Plans 071-0070
6. General Plan & Elevation
7. Deck Plan & Cross Section
8. Fixed Joint & Floodrain 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)

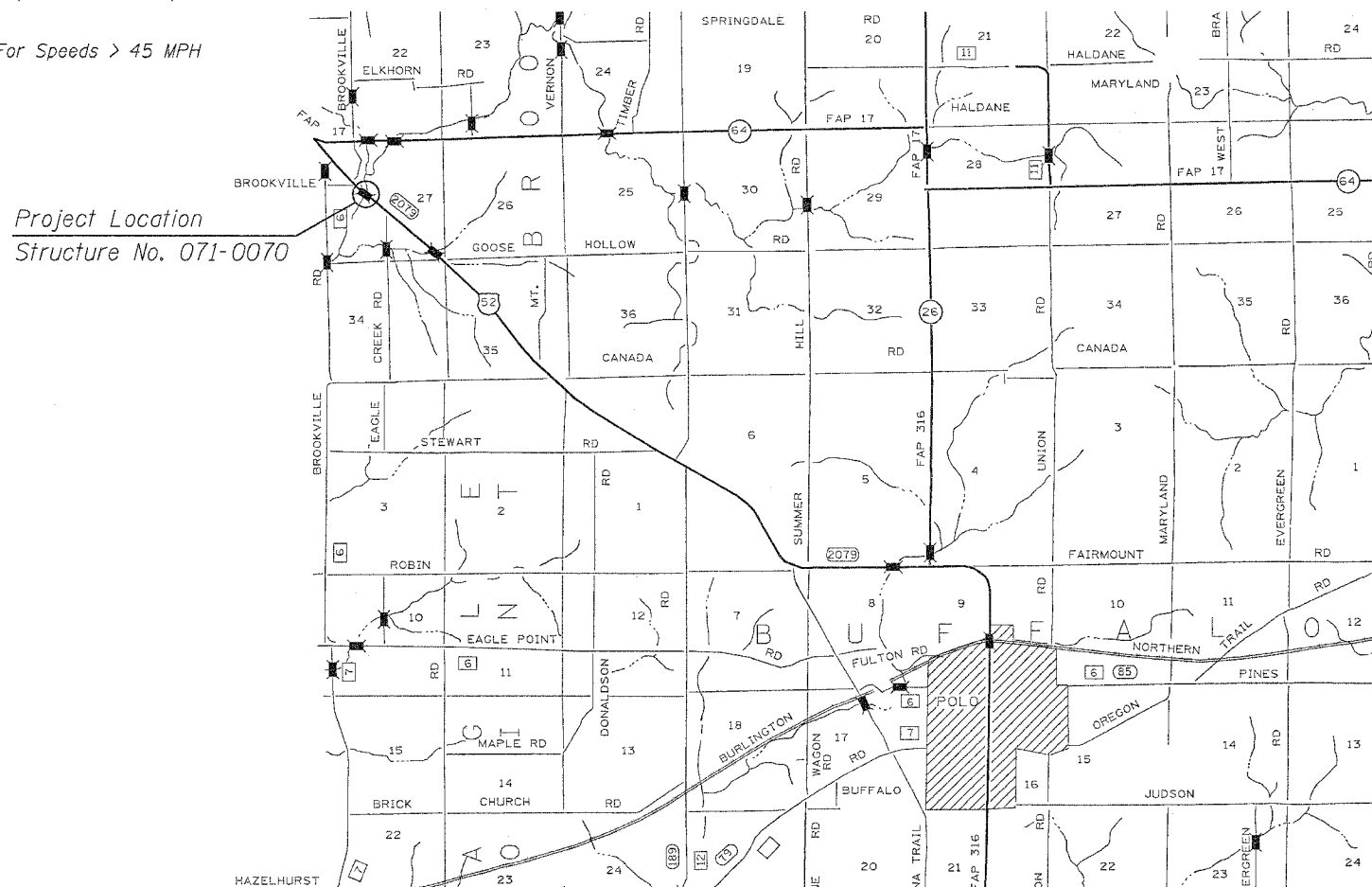
STANDARDS

- 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

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

FAS ROUTE 2079 (U.S. ROUTE 52)
SECTION 16BR-M
OGLE COUNTY

C-92-045-05



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

Township: Brookville
Sections: 27

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

CONTRACT NO. 64A85

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 2-B-2005
Sherry L. Mountain
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 25, 2005
Nike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
March 25, 2005
Victor Mader
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

SUMMARY OF QUANTITIES

Code Number	Pay Item	Unit	Total Quantity
			SFTY-2A
20200500	EARTH EXCAVATION (WIDENING)	CU YD	116
20400800	FURNISHED EXCAVATION	CU YD	50
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	344
40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	200
40600990	TEMPORARY RAMP	SQ YD	300
42001300	PROTECTIVE COAT	SQ YD	372
44001205	BITUMINOUS CONCRETE SURFACE REMOVAL COMPLETE	SQ YD	379
48202600	BITUMINOUS SHOULDERS SUPERPAVE 8"	SQ YD	322
48300500	PORTLAND CEMENT CONCRETE SHOULDERS 10"	SQ YD	24
50102400	CONCRETE REMOVAL	CU YD	2.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3.3
50300260	BRIDGE DECK GROOVING	SQ YD	345
50300530	FLOOR DRAIN EXTENSION	EACH	12
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	418
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5176
60600505	CONCRETE CURB (SPECIAL)	FOOT	120
63301000	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL	FOOT	428
63304805	TRAFFIC BARRIER TERMINAL REMOVAL, TYPE 6	EACH	4
63301990	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	44
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	943
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	24
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	272
*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1026
78200405	GUARDRAIL MARKERS	EACH	12
78300100	PAVEMENT MARKING REMOVAL	SQ FT	195
X0323558	BRIDGE JOINT SYSTEM (EXPANSION), 1-5/8"	FOOT	31
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	110
X5030304	CONCRETE WEARING SURFACE, 4"	SQ YD	372
Z0002600	BAR SPLICERS	EACH	130
Z0003700	BEARING PAD ADJUSTMENT	EACH	78
Z0017300	DOWEL REPAIR	EACH	90
Z0032700	KEYWAY REPAIR	FOOT	960

*SPECIALTY ITEM

CONTRACT NO. 64A85

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

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	C
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 815/284-5469
IDOT-District 2
819 Depot Ave
Dixon IL 61021

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 accepted.

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:

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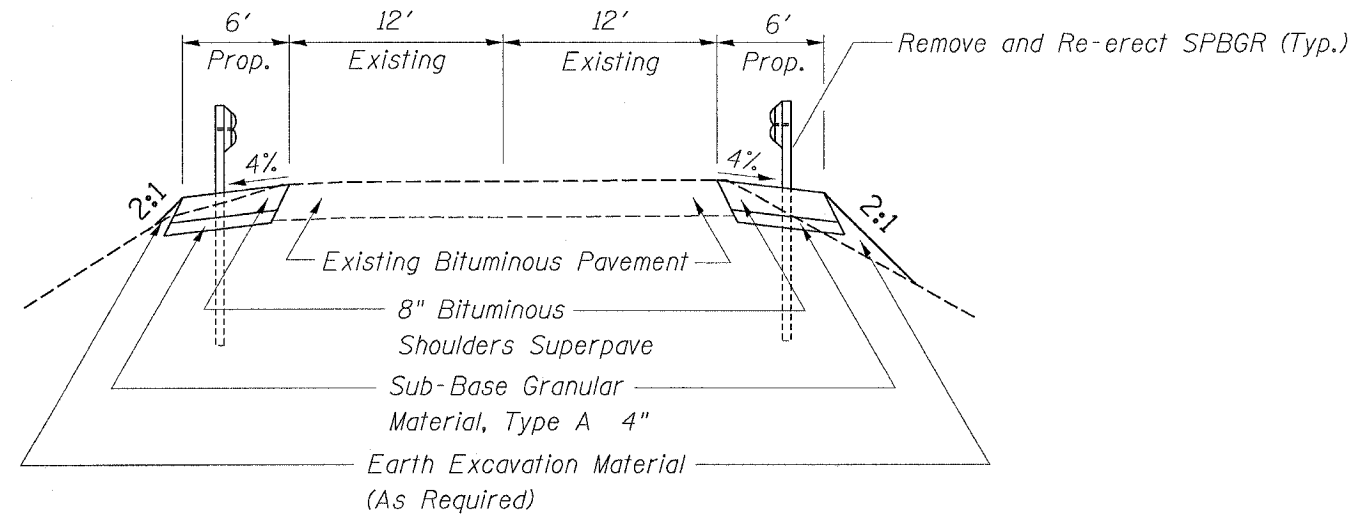
SUMMARY OF QUANTITIES & GENERAL NOTES
US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)
SECTION 16BR-M
OGLE COUNTY
STRUCTURE NUMBER 071-0070

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

TYPICAL SECTIONS

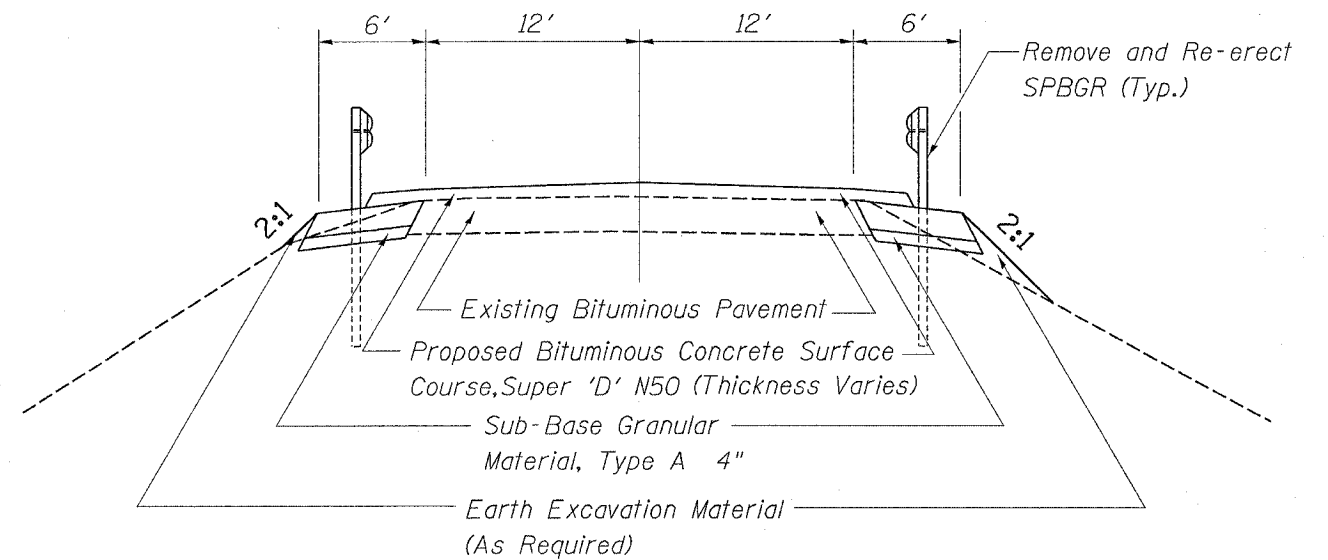
Sta. 969+35 to 969+87

Sta. 973+12 to 973+70



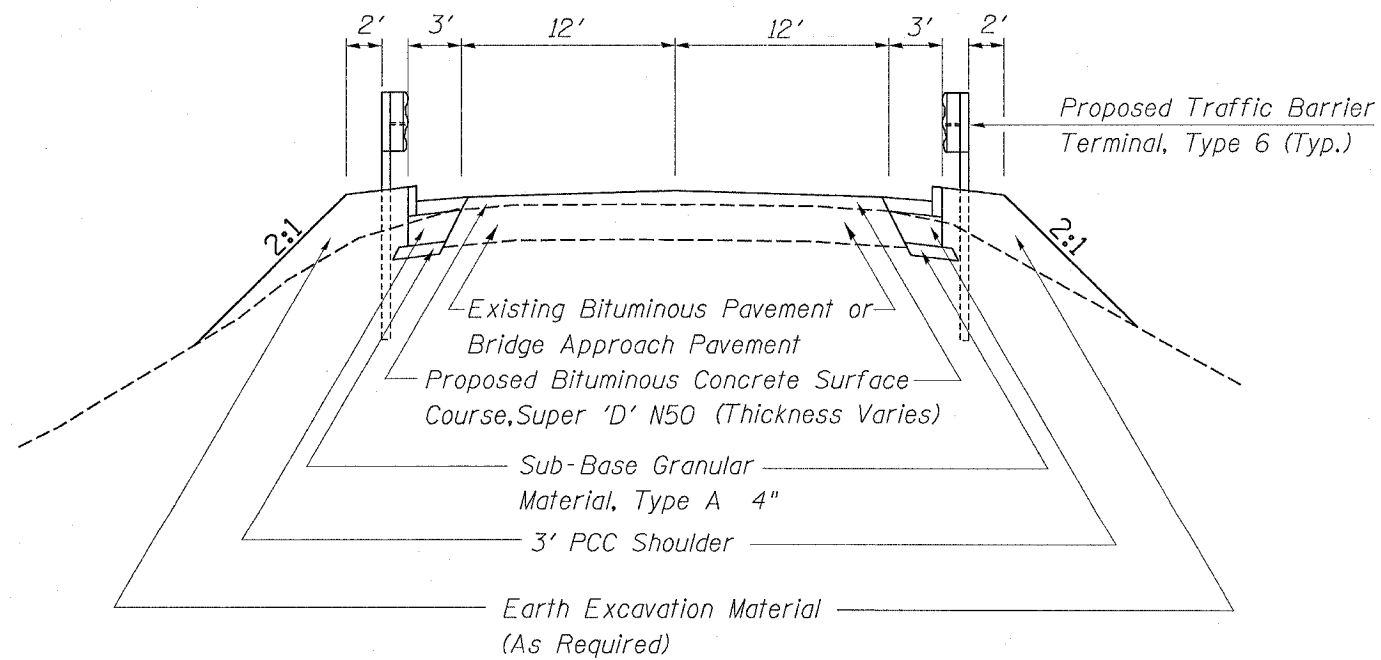
Sta. 969+87 to 970+52

Sta. 972+48 to 973+12



Sta. 970+52 to 970+87

Sta. 972+13 to 972+48

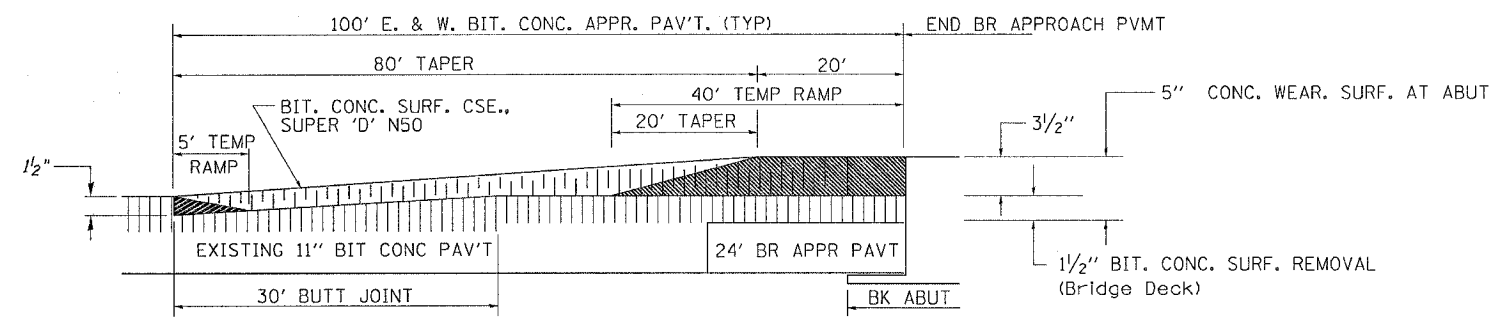
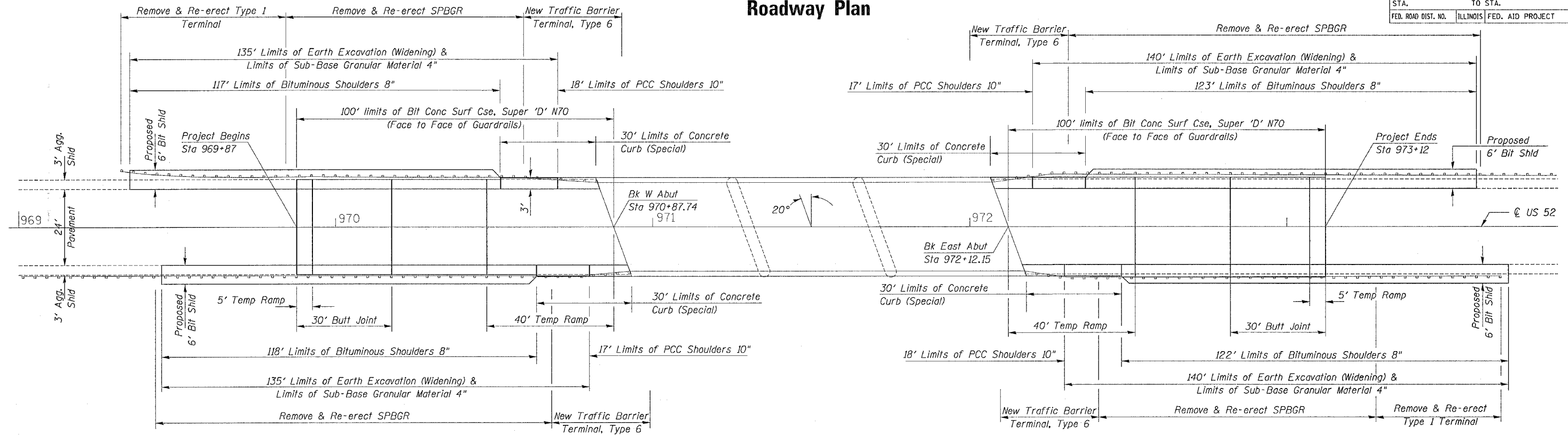


TYPICAL SECTIONS
 US 52 OVER ELKHORN CREEK
 FAS ROUTE 2079 (US 52)
 SECTION 16BR-M
 OGLE COUNTY
 STRUCTURE NUMBER 071-0070

PLOT DATE = Tue Feb 08 08:05:25 2005
 FILE NAME = D:\V\Projects\0710070.dgn
 PLOT SCALE = 30.0000' / IN.
 REFERENCE = REF#

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

Roadway Plan



APPROACH PAVEMENT PROFILE

Bit Conc Surf Cse, Super 'D' N50	Ton	Sub-Base Granular Material, Type A, 4"	Sq. Yd.
Sta. 969+88 to Sta. 970+88	55	Lt. Sta. 969+35 to 970+70	84
Sta. 972+12 to Sta. 973+12	55	Rt. Sta. 969+45 to 970+80	85
Total	110	Lt. Sta. 972+20 to 973+60	88
		Rt. Sta. 972+30 to 973+70	87
		Total	344

Remove and Re-erect SPBGR	Foot	Earth Excavation - (Widening)	Cu. Yd.
Lt. Sta. 969+84.3 to 970+59.3	75	Lt. Sta. 969+35 to 970+70	28
Rt. Sta. 969+44.5 to 970+69.5	125	Rt. Sta. 969+45 to 970+80	28
Lt. Sta. 972+30.4 to 973+60.4	130	Lt. Sta. 972+20 to 973+60	30
Rt. Sta. 972+40.6 to 973+28.1	98	Rt. Sta. 972+30 to 973+70	30
Total	428	Total	116

Bit Surf Rem - Butt Jt	Sq. Yd.	PCC Shoulders 10"	Sq. Yd.
Sta. 969+88 to 970+18	100	Lt. Sta. 970+52 to 970+70	6
Sta. 972+82 to 973+12	100	Rt. Sta. 970+63 to 970+80	6
Total	200	Lt. Sta. 972+20 to 972+38	6
		Rt. Sta. 972+30 to 972+48	6
		Total	24

Temporary Ramp	Sq. Yd.	Concrete Curb (Special)	Foot
Sta. 969+88 to Sta. 969+93	17	Lt. Sta. 970+52 to 970+82	30
Sta. 970+48 to Sta. 970+88	133	Rt. Sta. 970+63 to 970+93	30
Sta. 972+12 to Sta. 972+52	133	Lt. Sta. 972+06 to 972+36	30
Sta. 973+07 to Sta. 973+12	17	Rt. Sta. 972+18 to 972+48	30
Total	300	Total	120

Remove and Re-erect Traffic Barrier Terminal, Type 1	Each	Bituminous Shoulders 8"	Sq. Yd.
Lt. Sta. 969+44.9 to 969+84.3	1	Lt. Sta. 969+35 to 970+52	78
Rt. Sta. 973+28.1 to 973+67.5	1	Rt. Sta. 969+45 to 970+63	79
Total	2	Lt. Sta. 972+36 to 973+60	83
		Rt. Sta. 972+48 to 973+70	82
		Total	322

Traffic Barrier Terminal Removal, Type 6	Each
Entire Project	4
Total	4

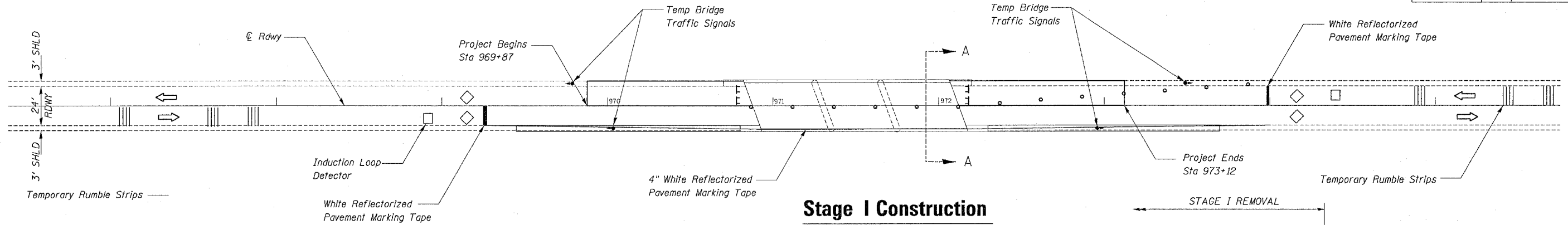
ROADWAY PLAN
US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)
SECTION 16BR-M
OGLE COUNTY
STRUCTURE NUMBER 071-0070

PLOT DATE = Wed Feb 09 07:44:30 2005
 FILE NAME = D:\BR\plans\071-0070.dgn
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 REFERENCE = WRP#

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	5
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

Stage I Traffic Control

Refer to Standard 701316



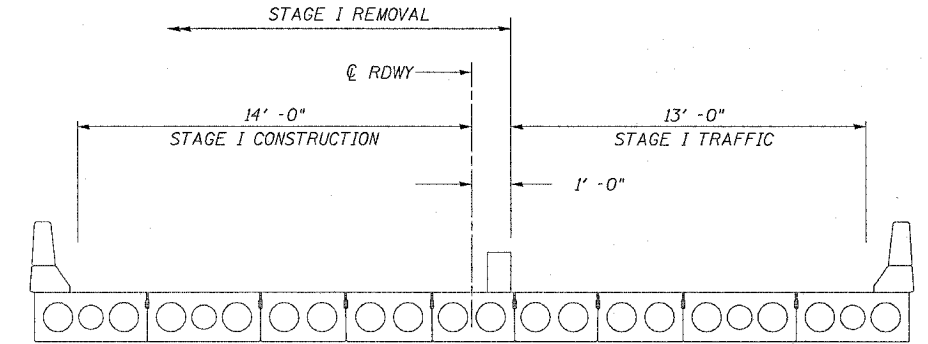
Stage I Construction

Place Bituminous & PCC Shoulder on South Side using Standard 701306 or 701326

Install Standard 701316. Use Standard 701201

Move Traffic to Stage I Traffic Lane. Complete Stage I Construction.

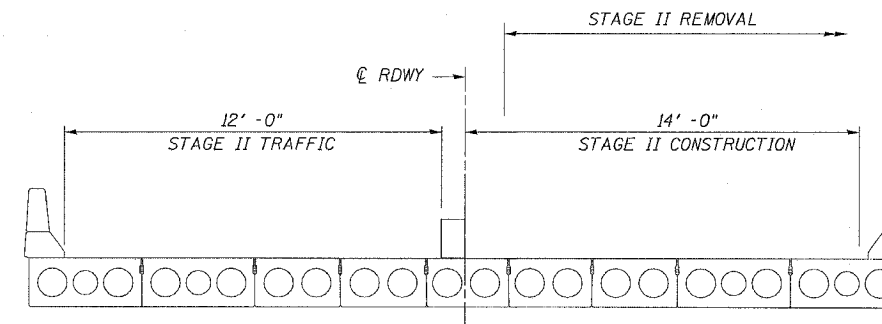
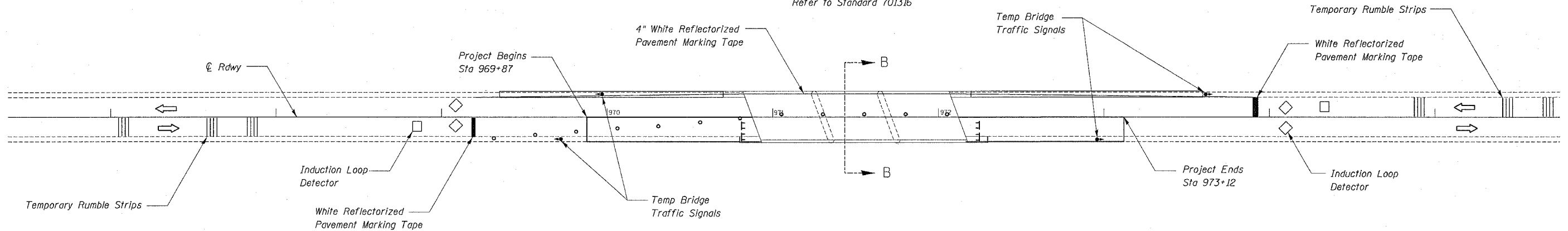
Place Bituminous & PCC Shoulder on North Side.



SECTION A-A

Stage II Traffic Control

Refer to Standard 701316



SECTION B-B

Stage II Construction

Relocate Traffic Control Devices to Stage II using Standard 701301 or 701306.

Move Traffic to Stage II Traffic Lanes. Complete Stage II Construction.

Remove Standard 701316 using Standard 701201

Pavement Marking Removal		Sq. Ft.
Stage I	Edge Line	120
	Centerline	27
Stage II	Edge Line	48
Total		195

Temporary Bridge Traffic Signals		Each
	Standard 701316	1
Total		1

Pavement Marking Tape, Type III 4"		Foot
	Stage I Right Line	473
	Stage I Edge Line	470
Total		943

Work Zone Pavement Marking Removal		Sq. Ft.
Stage II	Temporary Lines	272
Total		272

Traffic Control & Protection Std 701316		Each
	Entire Project	1
Total		1

Short Term Pavement Marking 4"		Foot
	Temporary Centerline Skip Dash (Yellow)	44
Total		44

Paint Pavement Marking - Line 4"		Foot
	Centerline Skip Dash (Yellow)	82
	Left & Right Edge Line (White)	944
Total		1026

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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 Grade 60.

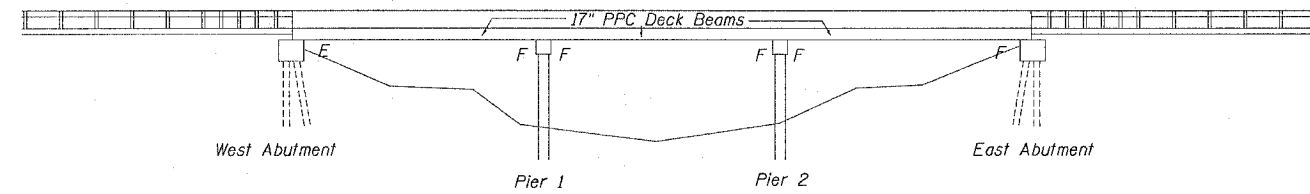
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost Included with Concrete Removal.

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.

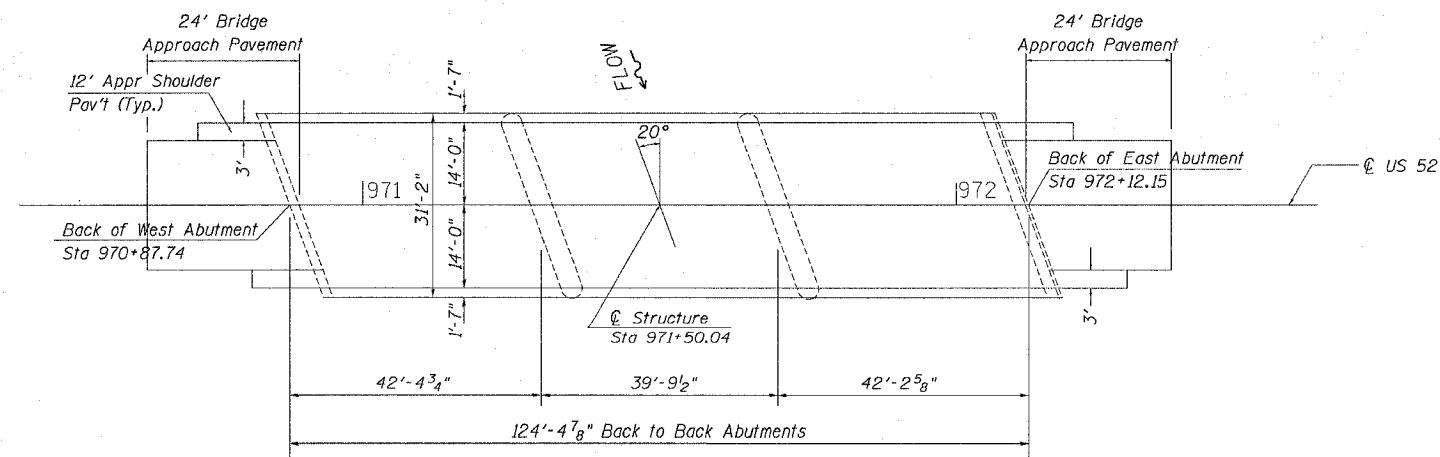
All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

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), 1 5/8"	FOOT	31
PROTECTIVE COAT	SQ YD	372
FLOOR DRAIN EXTENSION	EA	12



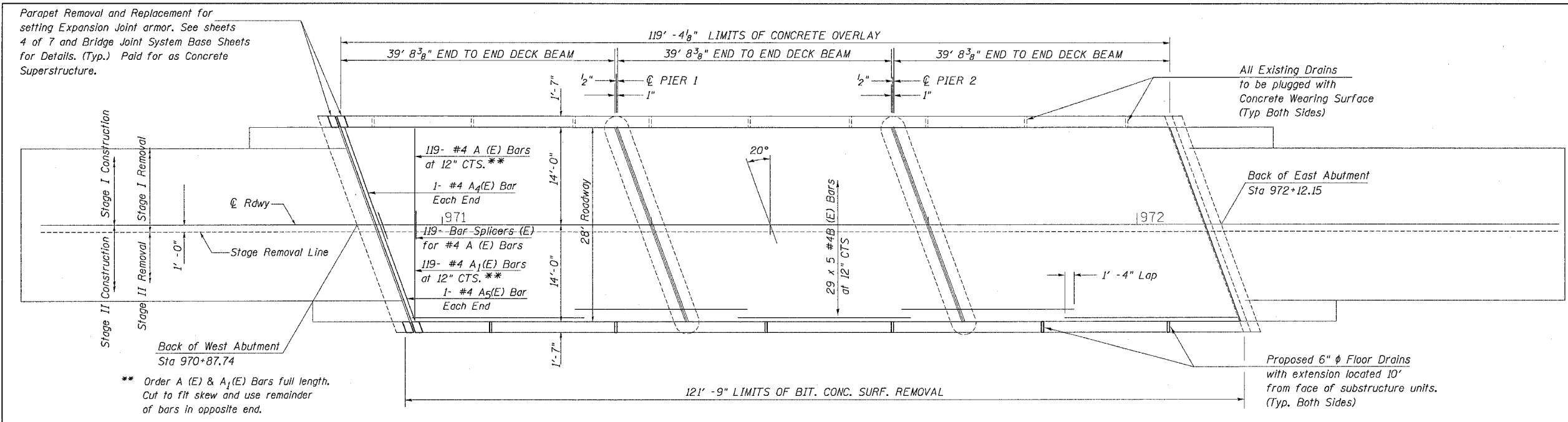
Elevation



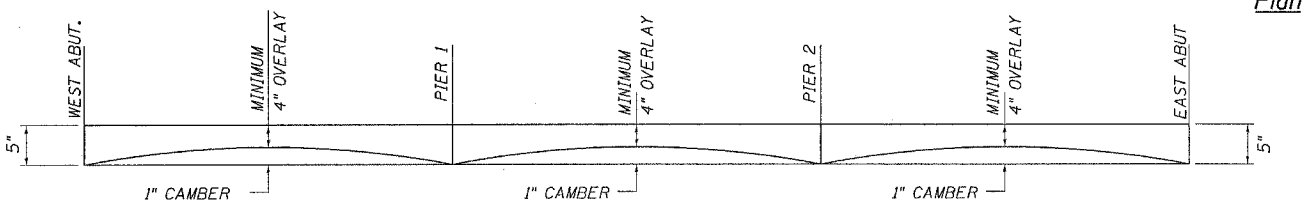
Plan

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



** Order A (E) & A1(E) Bars full length. Cut to fit skew and use remainder of bars in opposite end.



GRADE PROFILE

THE MINIMUM THICKNESS OF THE CONCRETE OVERLAY VARIES AS REQUIRED TO ADJUST FOR THE EXISTING PROFILE GRADE AND BEAM CAMBER.

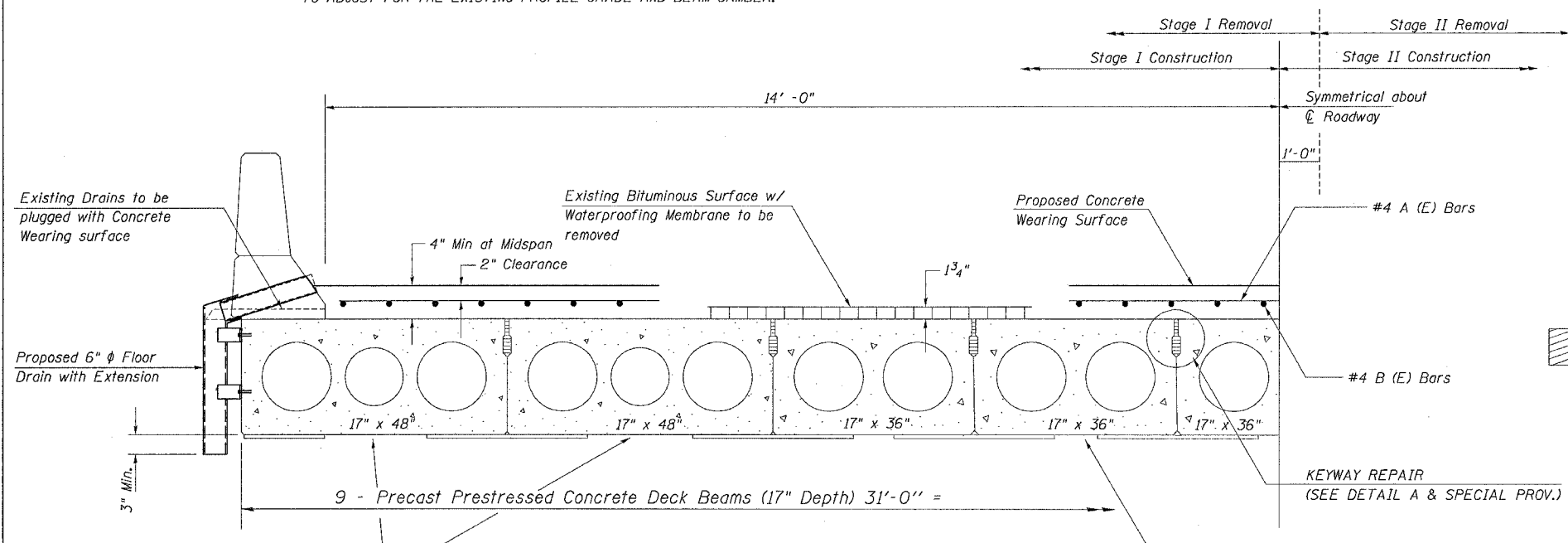
Note: The Contractor shall install 12 new 6" ϕ Floor Drains by core-drilling through the parapet wall as shown on the plans or as directed by the Engineer. All cost associated with installing the drains shall be included in concrete superstructure. The contractor shall plug all existing drains with concrete as directed by the Engineer. All cost associated with this work shall be included in Concrete Wearing Surface.

Bill of Material

BAR	NO.	SIZE	LENGTH	SHAPE
A (E)	121	4	13' - 9"	—
A1(E)	121	4	13' - 11"	—
A2(E)	3	5	14' - 7"	—
A3(E)	3	5	14' - 11"	—
A4(E)	2	4	14' - 7"	—
A5(E)	2	4	14' - 11"	—
B (E)	145	4	24' - 10"	—
H (E)	6	6	14' - 9"	—
H1(E)	6	6	17' - 3"	—
U (E)	29	5	3' - 8"	—

BIT CONC SUR REM COMPLETE	SQ YD	379
CONC WEARING SURF 4"	SQ YD	372
BR DECK GROOVING	SQ YD	345
CONC SUPERSTRUCTURE	CU YD	3.3
CONC REM	CU YD	2.9
F & E STRUCT STEEL	POUND	418
REINF BARS, EPOXY CTD	POUND	5176
KEYWAY REPAIR	FT	960
DOWEL REPAIR	EA	90
BEARING PAD ADJUSTMENT	EA	78
BRIDGE JOINT SYSTEM (EXPANSION), 1 5/8"	FT	31
PROTECTIVE COAT	SQ YD	372
BAR SPLICERS	EA	130
FLOOR DRAIN EXTENSION	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.

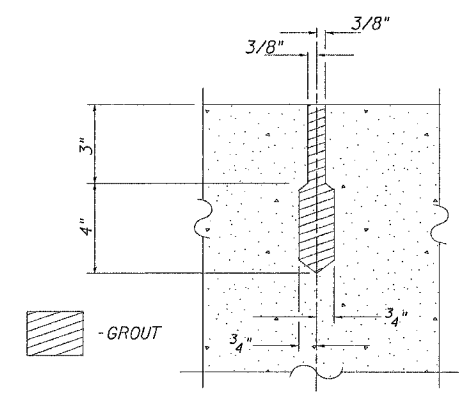


HALF CROSS SECTION

FILL OPENINGS SURROUNDING FABRIC BEARING PADS AT PIERS AND EAST ABUTMENT WITH EPOXY GROUT. TO BE PAID FOR AS BEARING PAD ADJUSTMENT.

THE CONTRACTOR SHALL INSTALL 1/8" X 9" X 9" STAINLESS STEEL SHIMS AT BEARING PADS, WHERE REQUIRED ON WEST ABUTMENT. TO BE PAID FOR AS BEARING PAD ADJUSTMENT.

DETAIL "A"

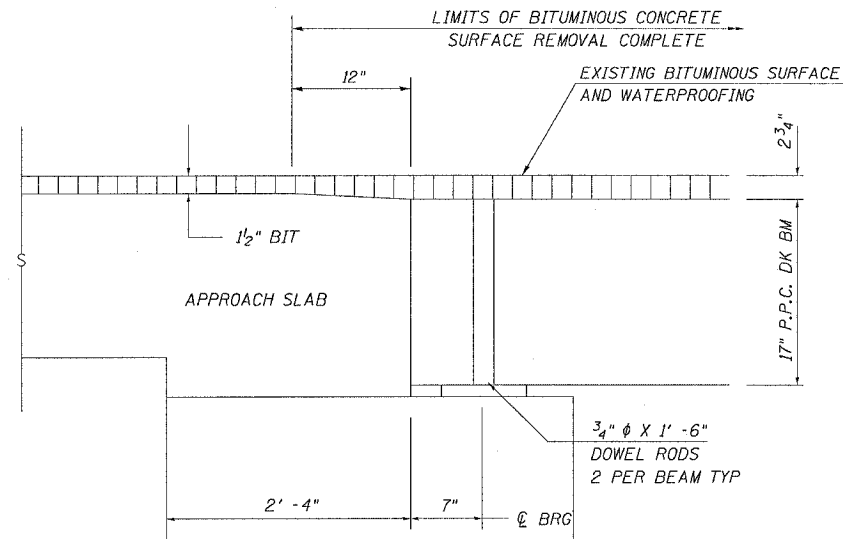


NOTE: THE QUANTITY GIVEN FOR KEYWAY REPAIR INCLUDES THE FULL LENGTH OF ALL KEYS. THE ACTUAL KEYWAY REPAIR LOCATIONS SHALL BE DETERMINED BY THE ENGINEER AFTER REMOVAL OF THE EXISTING WEARING SURFACE.

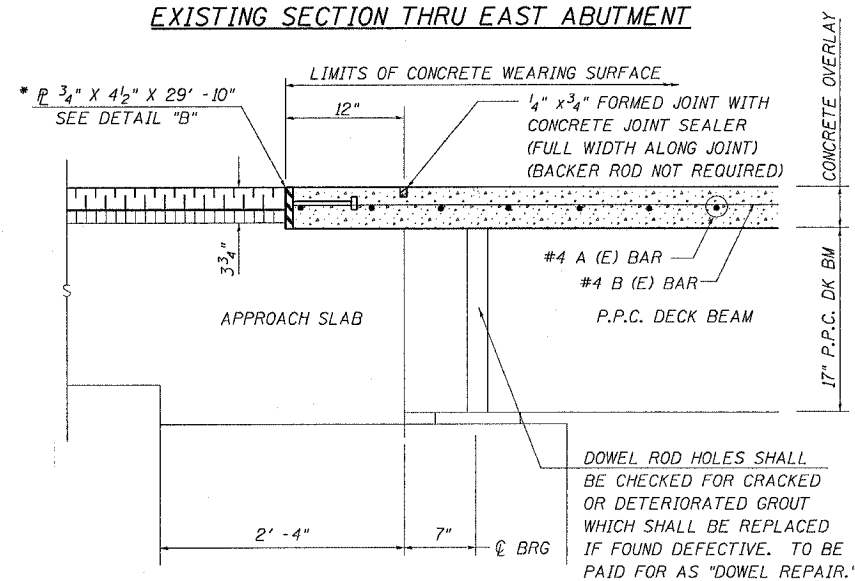
**DECK PLAN & CROSS SECTION
US 52 OVER ELKHORN CREEK
FAS ROUTE 2079 (US 52)
SECTION 16BR-M
OGLE COUNTY
STRUCTURE NUMBER 071-0070**

PLOT DATE = Tue Feb 08 08:05:28 2005
FILE NAME = D:\SRV\sp\p\p\0710070.dgn
PLOT SCALE = 50.000000 / IN
REFERENCE = REF#

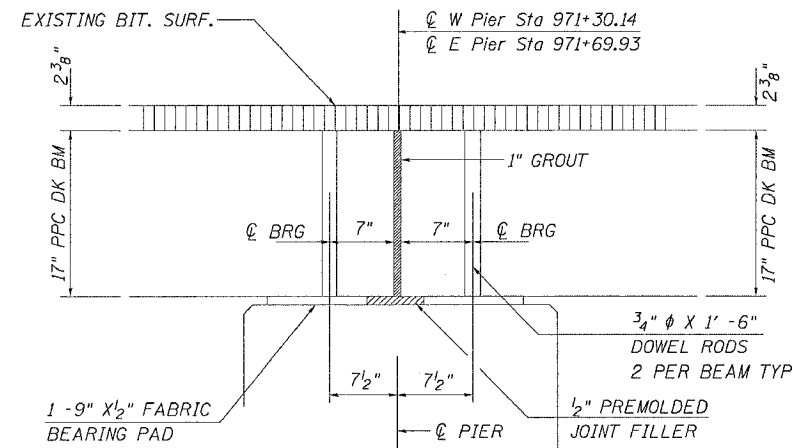
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



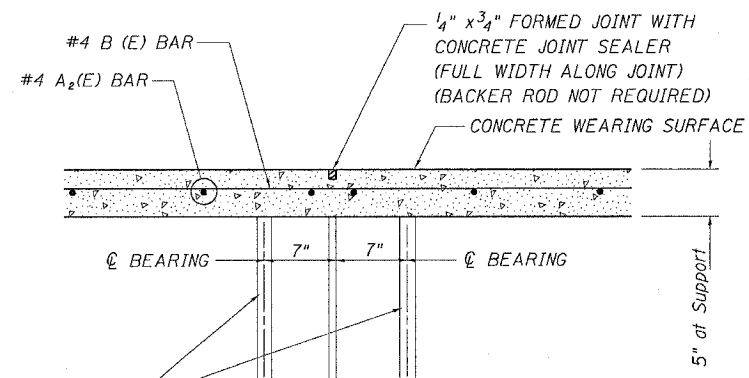
EXISTING SECTION THRU EAST ABUTMENT



PROPOSED SECTION THRU EAST ABUTMENT

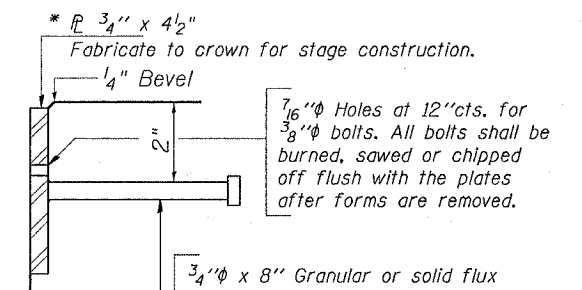


EXISTING SECTION THRU PIER



DOWEL ROD HOLES SHALL BE CHECKED FOR CRACKED OR DETERIORATED GROUT WHICH SHALL BE REPLACED IF FOUND DEFECTIVE. TO BE PAID FOR AS "DOWEL REPAIR."

PROPOSED SECTION THRU PIER



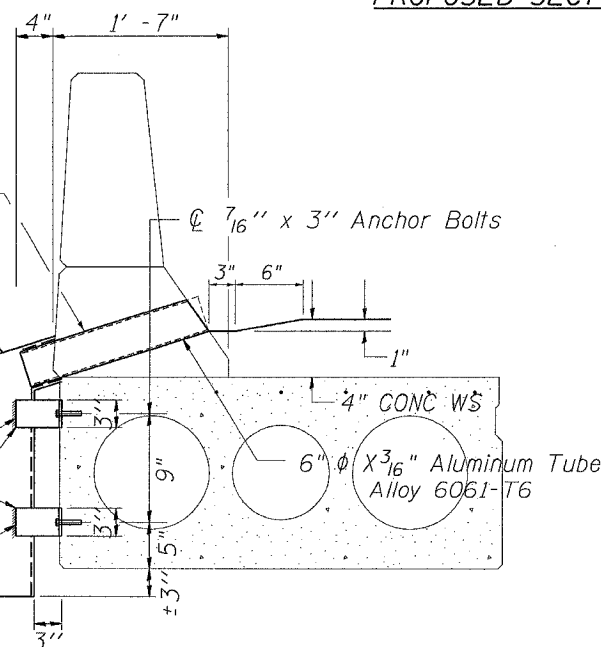
DETAIL "B"

Epoxy grout Floor Drain in place. Cost included in Concrete Superstructure.

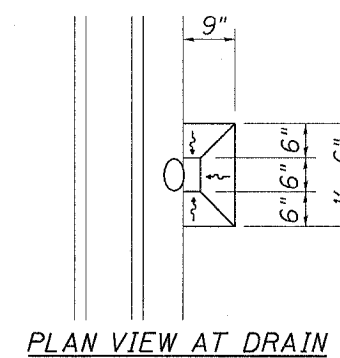
Leave end open for clean out

Bent ϕ 1/4" x 3" x 8" (Aluminum)

Drain Extension 6" ϕ x 3/16" Aluminum Tube Alloy 6061-T6



SECTION AT FLOORDRAIN



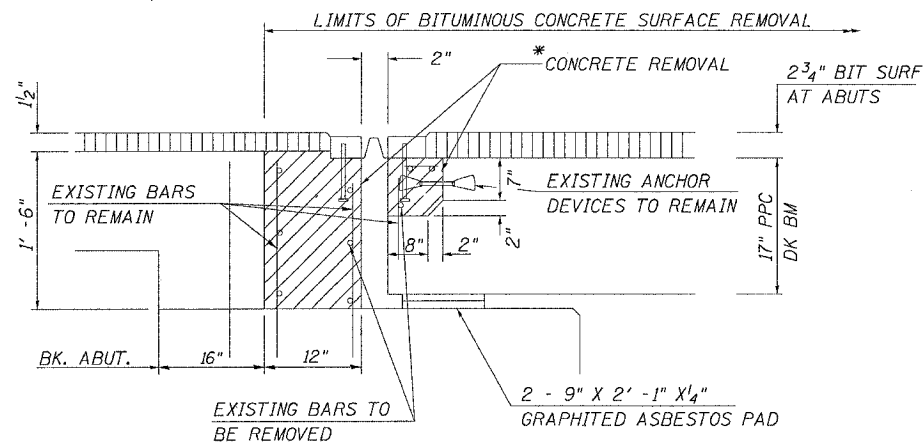
PLAN VIEW AT DRAIN

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.

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

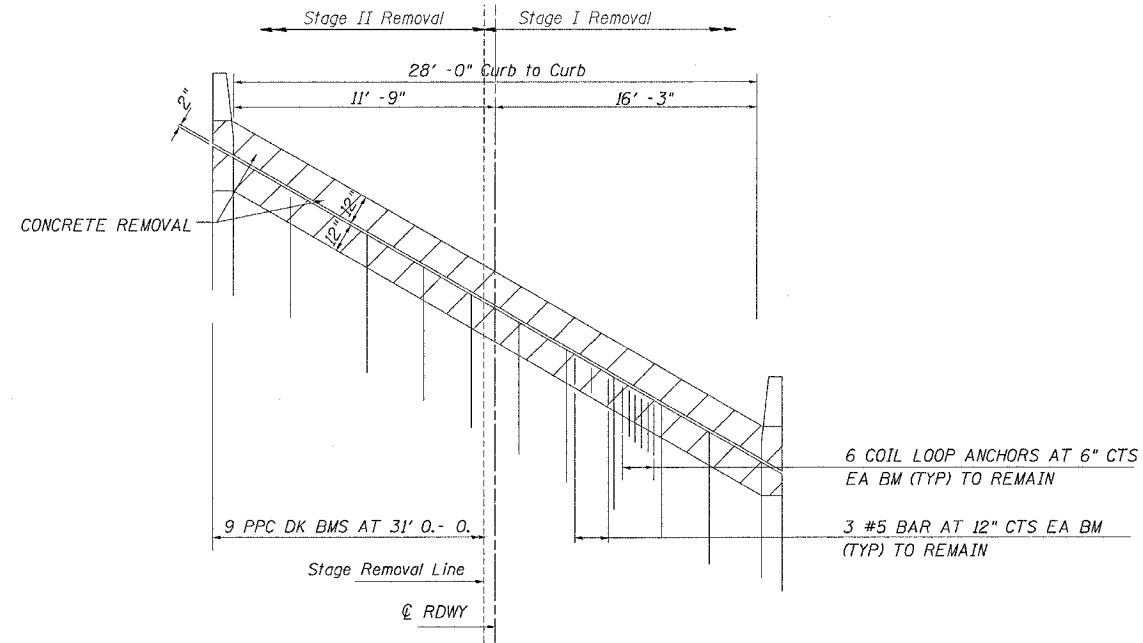
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	9
STA. TO STA.		ILLINOIS FED. AID PROJECT		

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

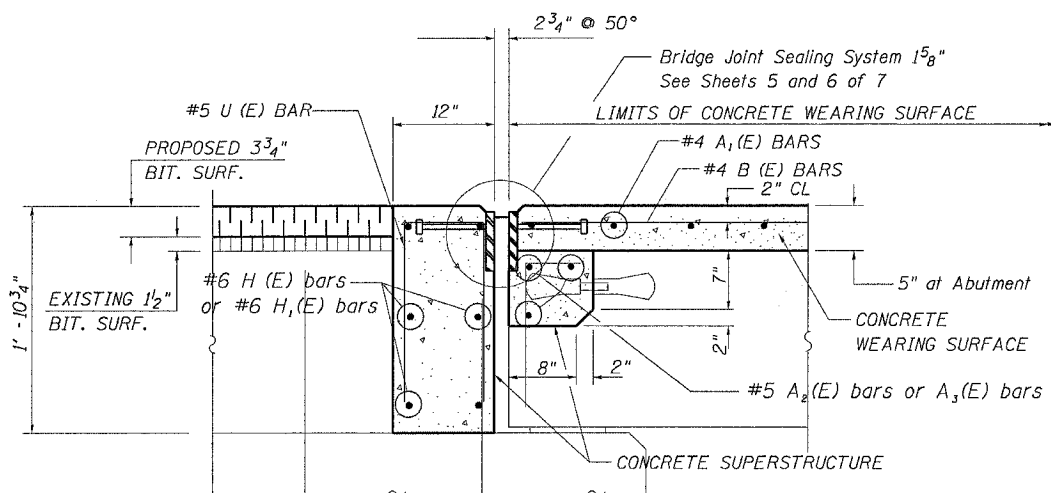
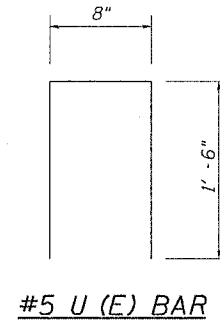


EXISTING SECTION THRU WEST ABUTMENT (EXPANSION)

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.

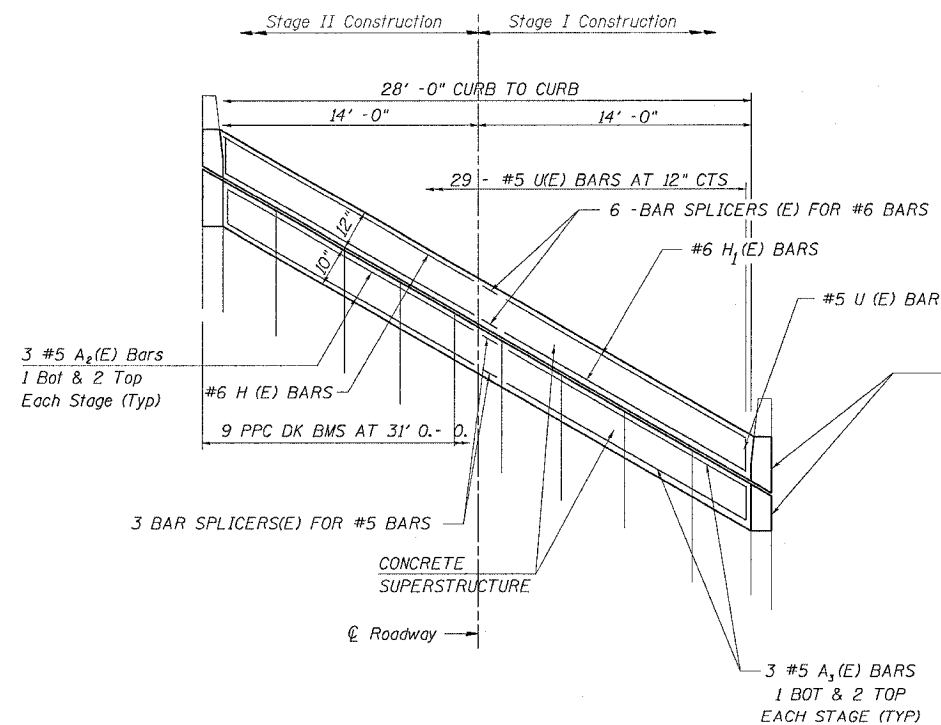


EXISTING PARTIAL PLAN (WEST ABUTMENT)



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.



PROPOSED 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), 1 5/8"

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

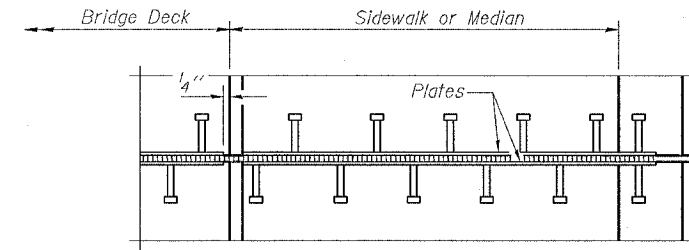
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 7 SHEETS
2079	**	OGLE	14	10	
FED. ROAD DIST. NO. 7		ILL. ROAD PROJECT			

** 16BR-M

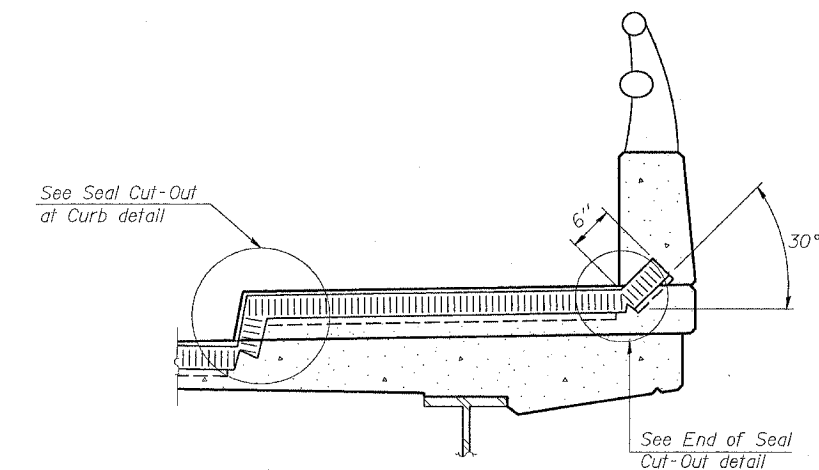
Bridge Joint System (Expansion)		
Design Movement	Required Preformed Joint Seal Size	Required Strip Seal Rated movement
1"	2 1/2"	1"
1 5/8"	4"	2"

GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". 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 studs at 12" centers may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

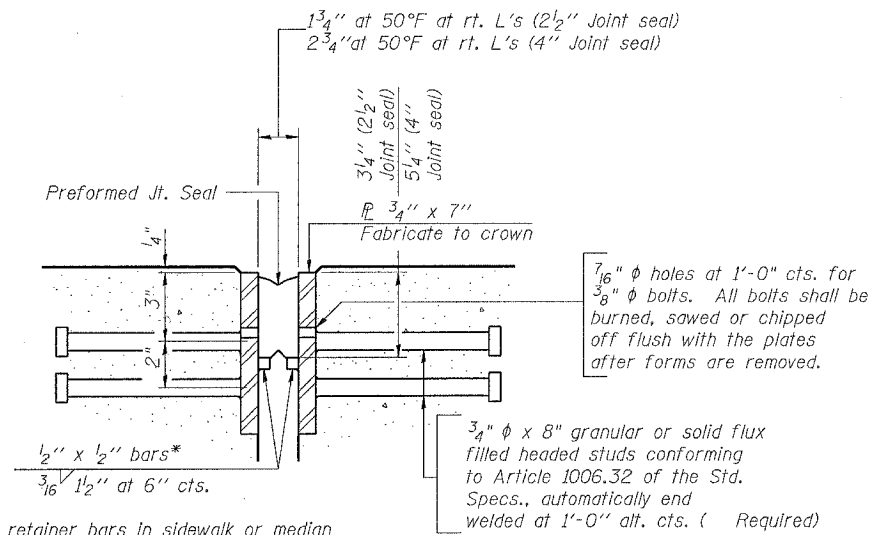
BILL OF MATERIAL

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

(Sheet 1 of 2)

**BRIDGE JOINT SYSTEM - EXPANSION
(PREFORMED JOINT SEAL)**

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



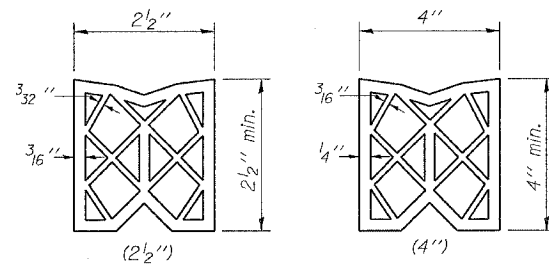
SECTION THRU EXPANSION JOINT

(2 1/2" and 4" joint seals)

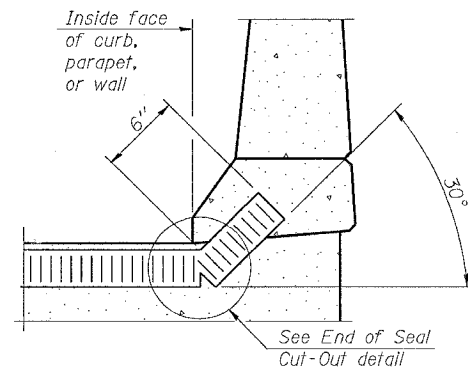
*Cut retainer bars in sidewalk or median 6" short of the sidewalk or median face.

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.

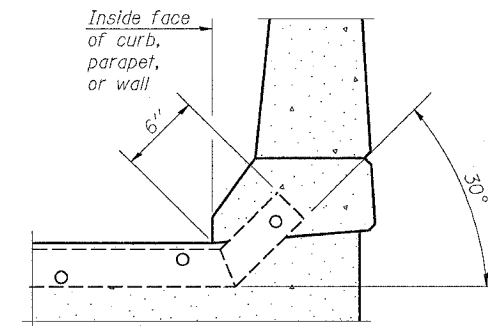
3/4" φ x 8" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts. (Required)



PREFORMED JOINT SEAL

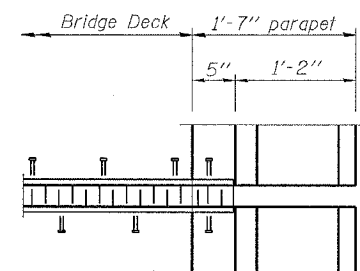


AT CURB, PARAPET, OR WALL
(Showing seal)

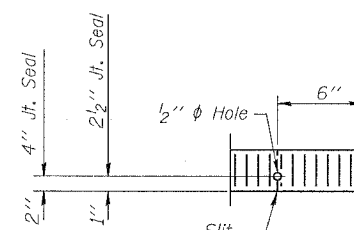


AT CURB, PARAPET, OR WALL
(Showing plate)

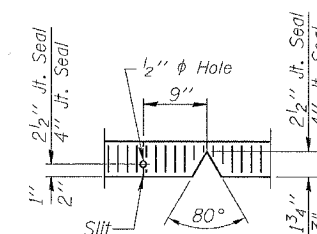
TYPICAL END TREATMENTS



PLAN AT PARAPET



END OF SEAL CUT-OUT



SEAL CUT-OUT AT CURB

DESIGNED -	200
CHECKED -	EXAMINED
DRAWN -	PASSED
CHECKED -	

EJ-BJS 10-22-04

ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
2079	**	OGLE	14	11	-7 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

16BR-M

GENERAL NOTES

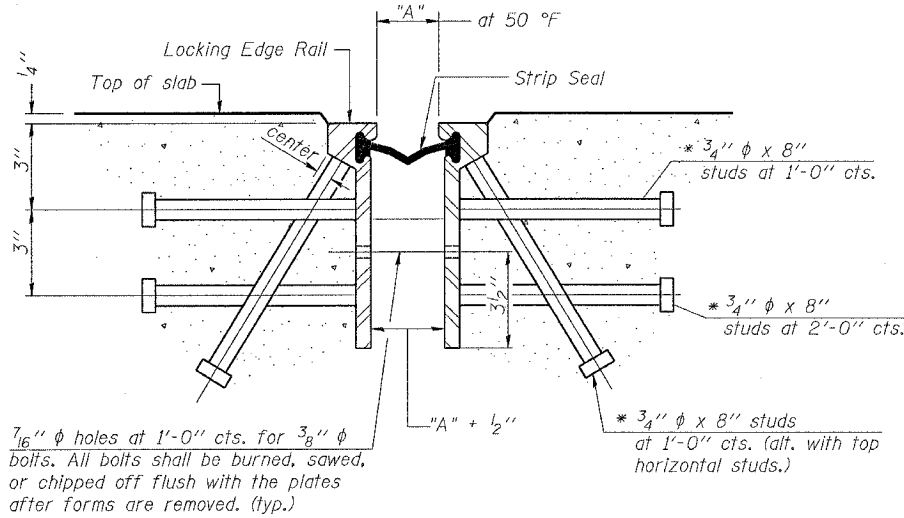
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

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

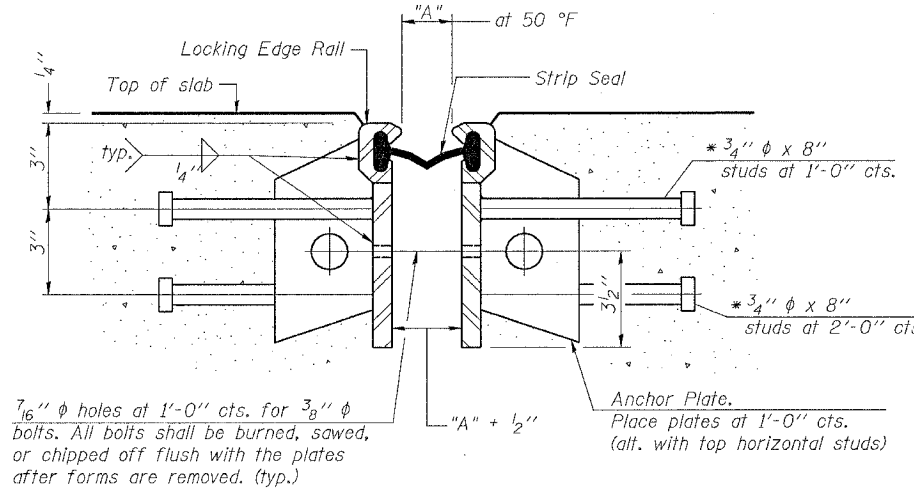
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

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 opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.



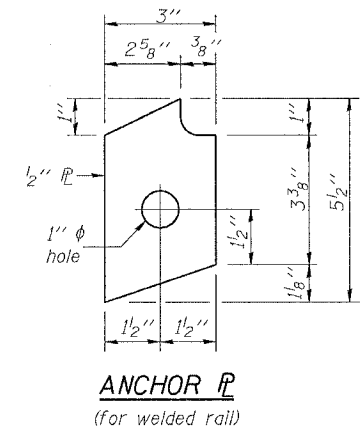
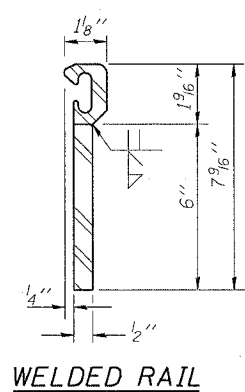
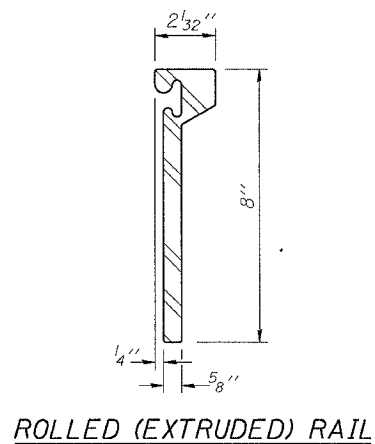
Required Strip Seal rated movement	"A"
1"	1 1/8"
2"	1 3/4"



SECTION THRU ROLLED RAIL EXP. JOINT
(Studs Required)

SECTION THRU WELDED RAIL EXP. JOINT
(Studs Required)
(Anchor Plates Required)

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

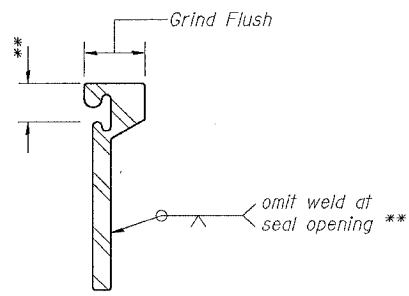


ROLLED (EXTRUDED) RAIL

WELDED RAIL

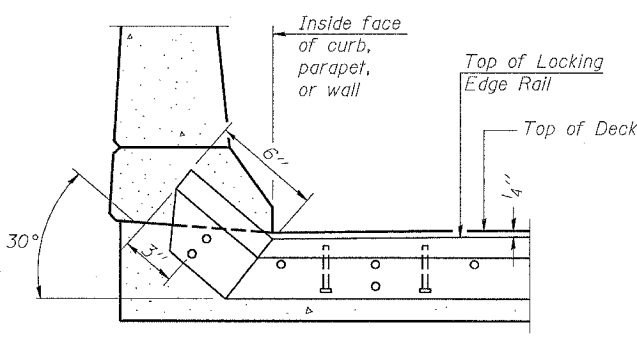
ANCHOR PL
(for welded rail)

LOCKING EDGE RAILS

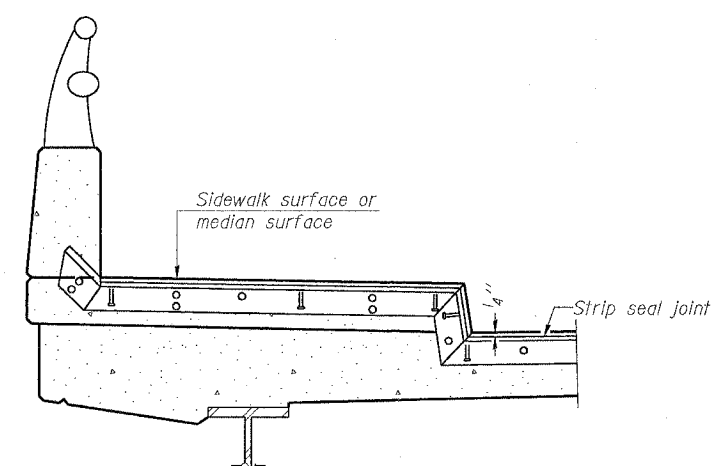


LOCKING EDGE RAIL SPLICE

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



AT CURB, PARAPET, OR WALL



AT SIDEWALK OR MEDIAN*

TYPICAL END TREATMENTS

* 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.

DESIGNED -	200
CHECKED -	EXAMINED
DRAWN -	PASSED
CHECKED -	ENGINEER OF STRUCTURAL SERVICES
	ENGINEER OF BRIDGES AND STRUCTURES

EJ-BJS 10-22-04

(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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 7 SHEETS
2079	**	OGLE	14	12	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #64A85 16BR-M

NOTES

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

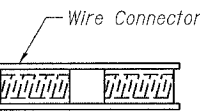
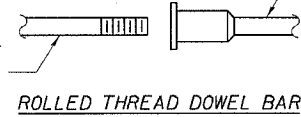
- ① Minimum Capacity = $1.25 \times f_y \times A_f$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{s_{allow}} \times A_f$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_f = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#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."

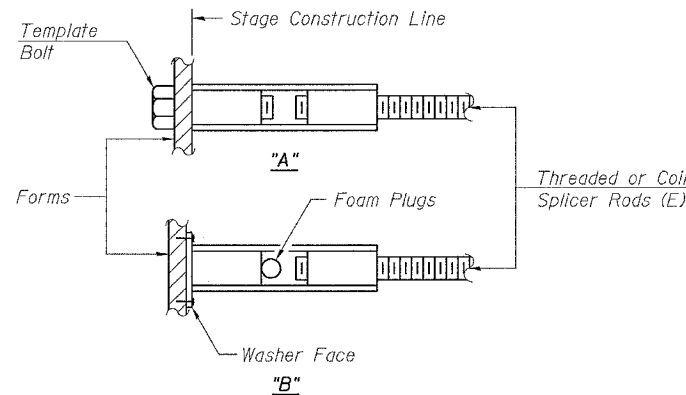
The diameter of this part is the same as the diameter of the bar spliced.



WELDED SECTIONS

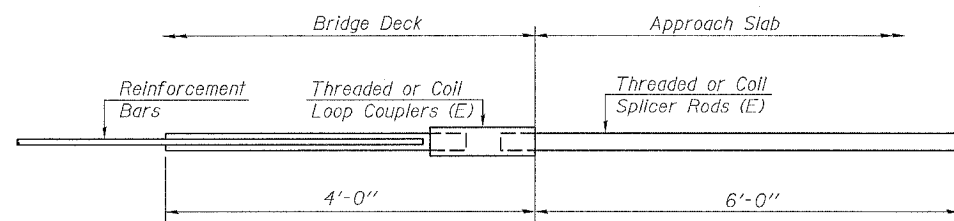
BAR SPLICER ASSEMBLY ALTERNATIVES

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



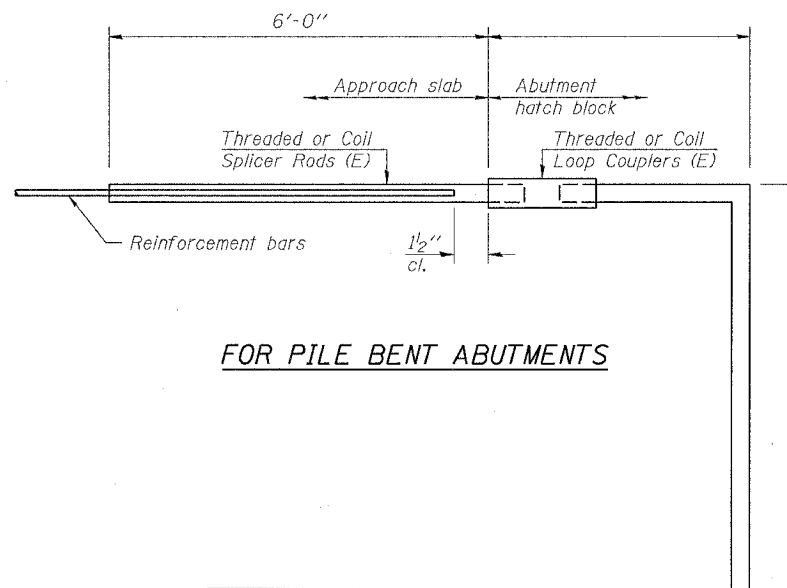
INSTALLATION AND SETTING METHODS

"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.



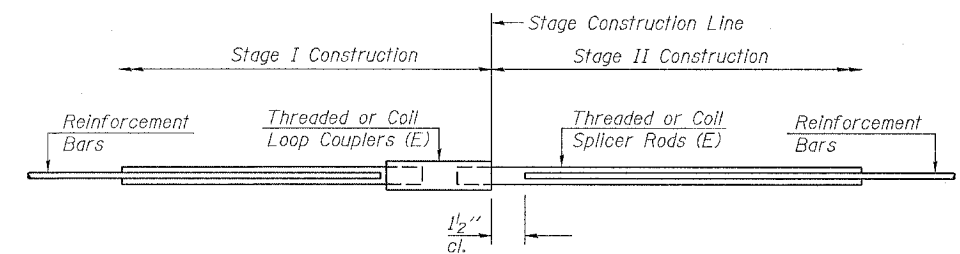
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

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



STANDARD

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

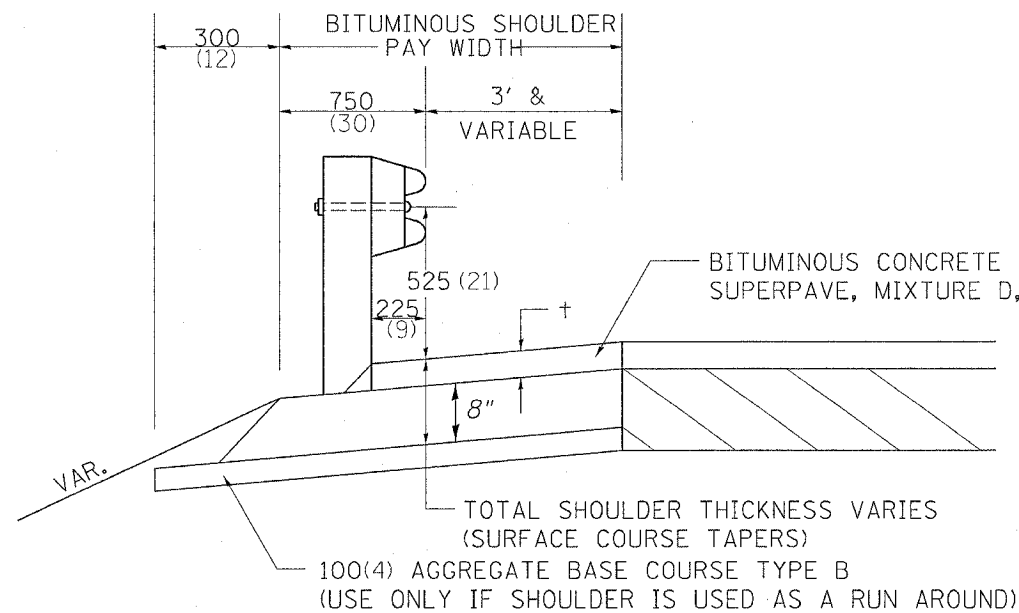
BAR SPLICER ASSEMBLY DETAILS

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

DESIGNED -	200
CHECKED -	EXAMINED
DRAWN -	PASSED ENGINEER OF STRUCTURAL SERVICES
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	13
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)
 SECTION 16BR-M
 OGLE COUNTY
 STRUCTURE NUMBER 071-0070

DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL 23.4

REVISED 1-17-02

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2079	16BR-M	OGLE	14	14
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONCRETE CURB SPECIAL

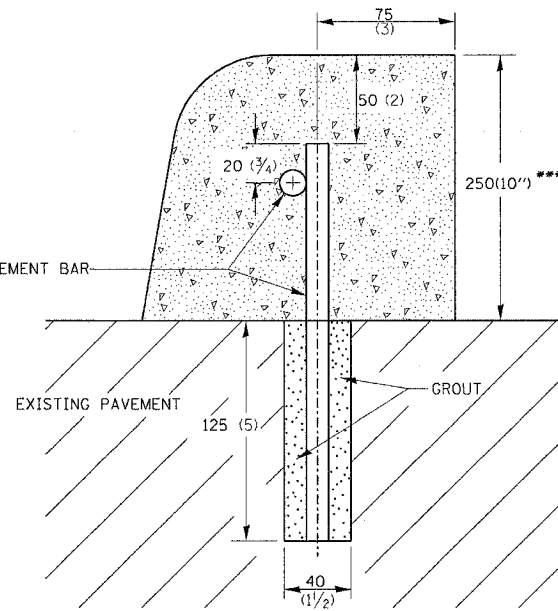
CONCRETE CURB SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 606 OF THE STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, STANDARD 606001 AND THIS DRAWING.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

HOLES 40 (1 1/2) Ø AND 125 (5) DEEP SHALL BE DRILLED IN THE EXISTING CONCRETE PAVEMENT AT 1.5M (5'-0") CENTERS. NO. 15 (NO. 4) REINFORCEMENT BARS 325 (13") LONG SHALL BE GROUDED 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.



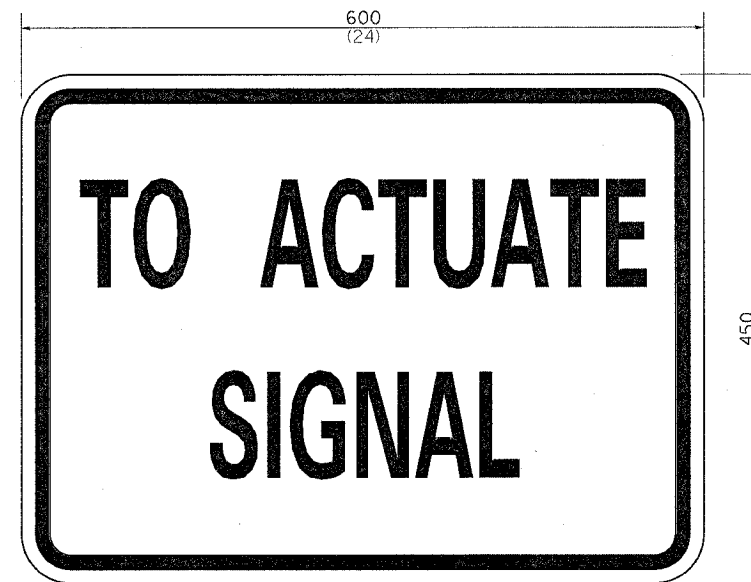
ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE NOTED.

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

CONCRETE CURB SPECIAL 11.4

REVISED 5-04-94

STOP LINE SIGN FOR TEMPORARY SIGNALS



SIZE: 600(24) x 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

PLOT DATE = 11/15/00
 FILE NAME = 16BR-M-14.dgn
 PLOT SCALE = 50.0000 / 1" = 100'
 REFERENCE = REF