

06-13-14 LETTING ITEM 228

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP 742 ROUTE IL 2
SECTION D2 BRIDGE PAINTING 2014-1

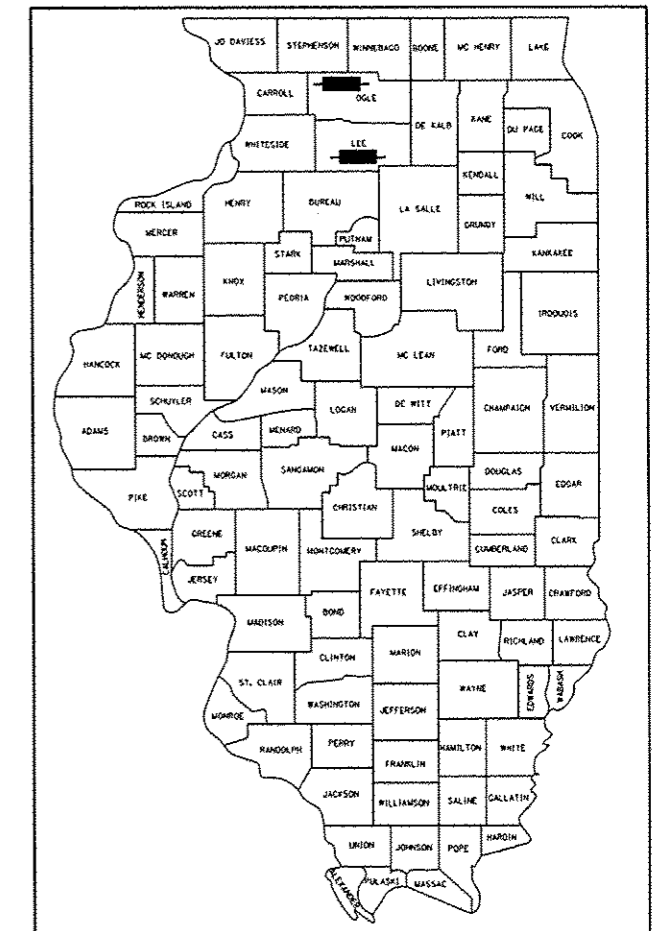
TYPE of IMPROVEMENT
PARTIAL CLEANING AND PAINTING
ON SN: 052-0063 AND SN: 071-0025
LEE / OGLE

C-92-074-13

R-10-E

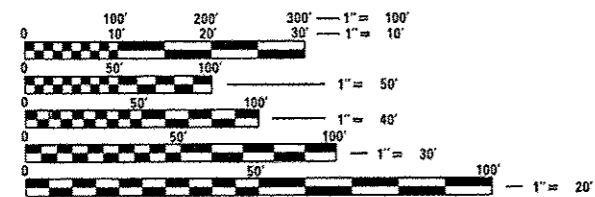
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2	D2 BRIDGE PAINTING 2014-1	LEE / OGLE	25	1
		ILLINOIS	CONTRACT NO. 64J52	

D-92-032-13



LOCATION OF SECTION INDICATED THUS: - ■ -

FOR INDEX OF SHEETS, SEE SHEET NO. 2



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 EXCAVATION
1-800-892-0123
OR 811

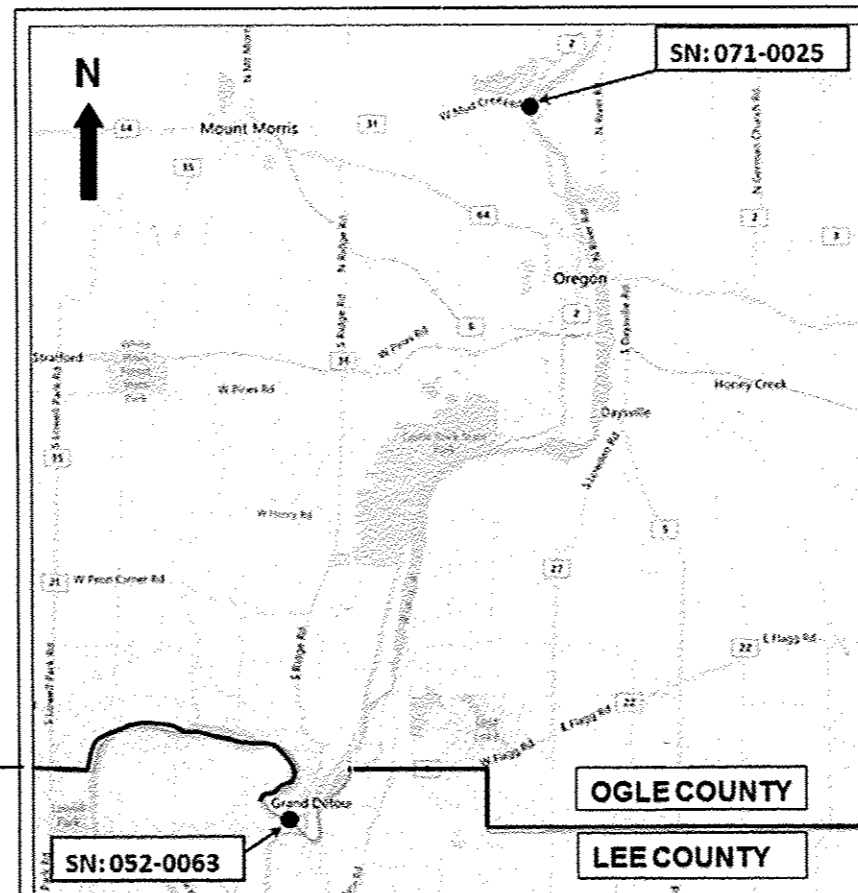
PROJECT ENGINEER:
MAHMOUD ETEMADI (815)-284-5393

DIXON TOWNSHIP, SECTION 13, 14
ROCKVALE TOWNSHIP, SECTION 28

CONTRACT NO. 64J52

T-24-N

T-22-N



OGLE COUNTY

LEE COUNTY

R-9-E

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Jan. 22nd 2014*
Paul C. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 21, 2014
John D. Baranzelli, P.E., [Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 2014
Amer Osman, P.E., [Signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

INDEX OF SHEETS

1. Cover Sheet
2. Index Sheet, State Standards, General Notes
3. Summary of Quantities
- 4-5 Traffic Control Plan for Bridge No. 1 SN: 052-0063
- 6-7 Traffic Control Plan for Bridge No. 2 SN: 071-0025
- 8 District Standards
- 9-25 Existing Bridge Plans, for Information Only

STATE STANDARDS

- 701001-02 Off-Road Operations, 2L, 2W, More than 4.5 m (15') Away
- 701006-05 OFF-Road Operations, 2L, 2W, 15' (5.5 m) TO 24" (600 mm) from pavement edge
- 701201-04 Lane Closure, 2L, 2W, Day Only, for speeds > 45 mph
- 701301-04 Lane Closure, 2L, 2W, Short Time Operations
- 701311-03 Lane Closure, 2L, 2W, Moving Operation-Day Only
- 701331-04 Lane Closure, 2L, 2W, with Run-Around, For Speeds > 45 mph
- 701701-09 Urban Lane Closure, Multilane Intersection
- 701901-03 Traffic Control Devices
- 704001-07 Temporary Concrete Barrier
- 720011-01 Metal Posts for Signs, Markers & Delineators
- 728001-01 Telescoping Steel Sign Support
- 729001-01 Applications for Types A & B Metal Posts (For Signs and Markers)

The Contractor shall seed all disturbed areas within the project limits. Seeding Class 2A shall be used. This work will be included in the contract unit price per LUMP SUM for CLEANING AND PAINTING STEEL BRIDGE NO. 1 and CLEANING AND PAINTING STEEL BRIDGE NO. 2

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 CLEANING AND PAINTING STEEL BRIDGE NO. 1 and in the cost of CLEANING AND PAINTING STEEL BRIDGE NO. 2.

Mulch Method II shall be applied over all seeded areas. This shall be included in the cost of the CLEANING AND PAINTING STEEL BRIDGE No.1 AND CLEANING AND PAINTING STEEL BRIDGE No. 2

All Borrow/Waste/Use sites must be approved by the Department prior to removing any material from the project or initiating any earthmoving activities, including temporary stockpiling outside the limits of construction.

Temporary Impact Attenuators will be measured as each for each attenuator supplied on the job as specified in the plans, and shall include the cost of renting/owning the attenuator for the time required on the job plus hauling to and from the project site, as well as one placement and removal from the roadway. This shall be paid for at the contract unit price per Each for IMPACT ATTENUATORS, TEMPORARY of the type specified.

Relocate Temporary Impact Attenuators will be paid for as Each and will be paid for each time the attenuator is required by staging to be picked up and moved to a different location on the project, whether it is to another location on the roadway or to a storage/staging location for the project. This shall be paid for at the contract unit price per Each for IMPACT ATTENUATORS, RELOCATE of the type specified.

This work shall be done in accordance with Section 704 of the Standard Specifications. Temporary Concrete Barrier will be measured in feet along the centerline of the barrier and shall include the cost of renting/owning the barrier for the time required on the job plus hauling to and from the project site, as well as one placement and removal from the roadway in accordance with Section 704 of the Standard Specification. This shall be paid for at the contract unit price per Foot for TEMPORARY CONCRETE BARRIER.

Relocate Temporary Concrete Barrier will be paid for in Feet along the centerline of the barrier, and will be paid for each time the barrier is required by staging to be picked up and moved to a different location on the project, whether it is to another location on the roadway or to a storage/staging location for the project. This shall be paid for at the contract unit price per Foot for RELOCATE TEMPORARY CONCRETE BARRIER.

The SSPC QP1 Contract certifications will be Requires for this Contract.

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.

IDOT is not a member of JULIE. If you are near any overhead lighting, intersection lighting or traffic signals, contact the IDOT Traffic Office at 815/284-5469 at least 48 hours prior to work.

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:

COMPANY/TYPE	TELEPHONE/CENTURYLINK
CONTACT INFO.	Mr. BRAD STOCKHAM (309)-477-0363 OR (800)892-0123
ADDRESS	RIVERWAY BUSINESS PARK/200 ENTERPRISE DRIVE, PEKIN, IL 61554
COMPANY/TYPE	ELECTRIC/COMMONWEALTH EDISON COMPANY
CONTACT INFO.	MS. NORA FERNANDEZ (815)490-2869 OR (800)892-0123
ADDRESS	123 ENERGY AVENUE, ROCKFORD IL, 61109
COMPANY/TYPE	TELEPHONE/FRONTIER
CONTACT INFO.	Mr. KALIN HINSHAW (815)895-1515 OR (800)892-0123
ADDRESS	112 W. ELM STREET, SYCAMORE, IL. 60178
COMPANY/TYPE	GAS/NICOR GAS CO.
CONTACT INFO.	Ms. CONSTANCE LANE (630)983-8676 OR (800)892-0123
ADDRESS	1844 FERRY ROAD, NAPERVILLE, IL. 60563-9600
COMPANY/TYPE	TELEPHONE/WINDSTREAM
CONTACT INFO.	Mr. PAUL BAUMANN (630)925-4751 OR (800)892-0123
ADDRESS	1815 S. MEYERS ROAD, SUITE 900, OAK BROOK TERRACE, IL. 60181

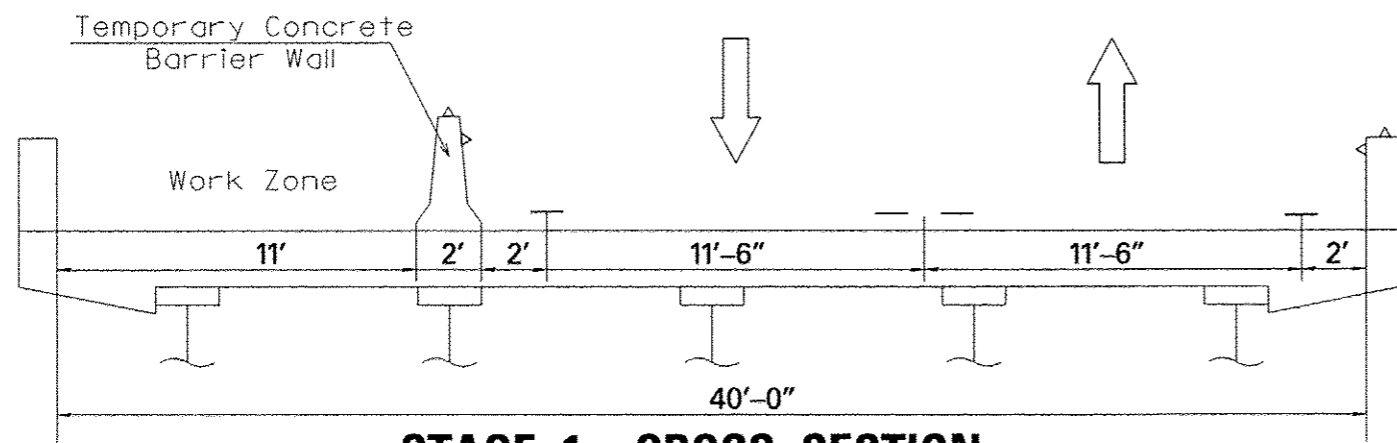
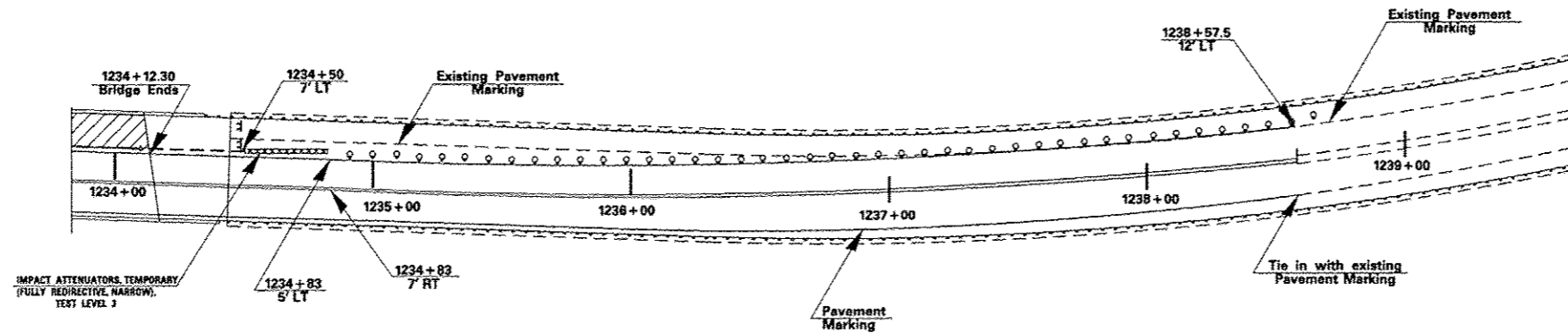
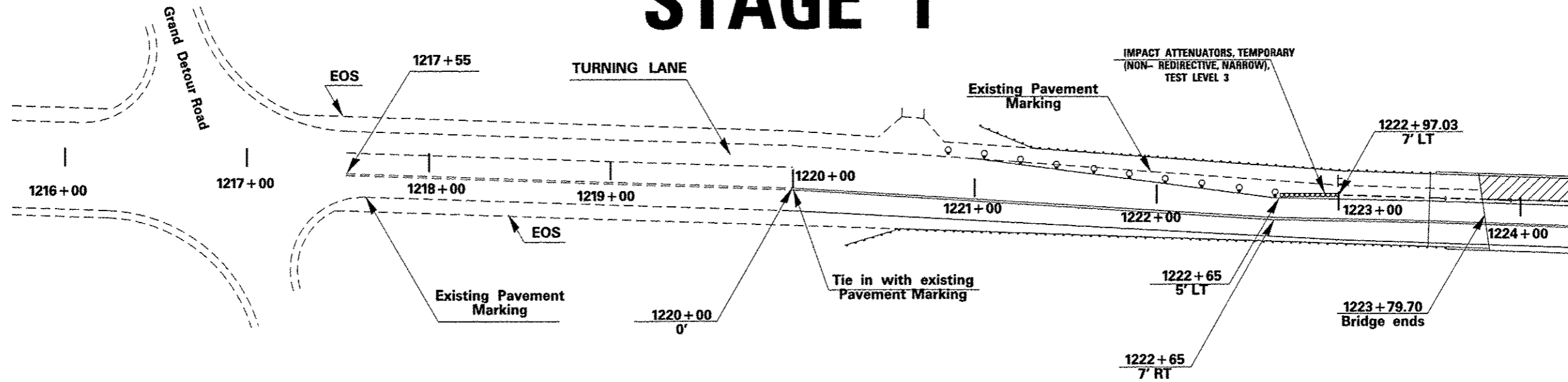
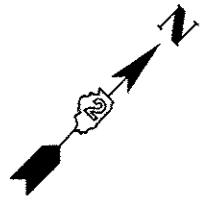
DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STATE STANDARDS, GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DRAWN -	REVISED -			IL 2	02 BRIDGE PAINTING 2014-1	LEE / OGLE	25	2	
CHECKED -	REVISED -					CONTRACT NO. 64J52			
DATE -	REVISED -			[ILLINOIS]					

4150 8 HAI

SUMMARY OF QUANTITIES					100% State Funds
					0014
Pay Item No.	Description	Units	Lee	Ogle	Total Quantity
67100100	MOBILIZATION	L SUM	0.5	0.5	1
70100200	TRAFFIC CONTROL AND PROTECTION, STANDARD 701331	EACH	1	1	2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	0.5	0.5	1
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	14,860	10,040	24,900
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4,953	3,347	8,300
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,152.97		1,152.97
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,152.97		1,152.97
70600251	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1		1
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1		1
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1		1
70600352	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1		1
* 78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT		124.8	124.8
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	14,800	7,200	22,000
* 78001140	PAINT PAVEMENT MARKING - LINE 8"	FOOT		1000	1000
* 78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT		600	600
* 78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT		20	20
78300100	PAVEMENT MARKING REMOVAL	SQ FT	2,467	2,740	5,207
Z0007114	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES	L SUM	0.5	0.5	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM		1	1

*Specialty Items

STAGE 1



STAGE 1 CROSS-SECTION

- Notes:
- Barrier wall offsets are to the traffic side of the wall
 - See Standard 701331 for additional information
 - Place type III barricades in nonworking hours

LEGEND

	Work area
	Type III barricade
	Temporary concrete barrier
	Type C Monodirectional reflector
	Impact attenuator

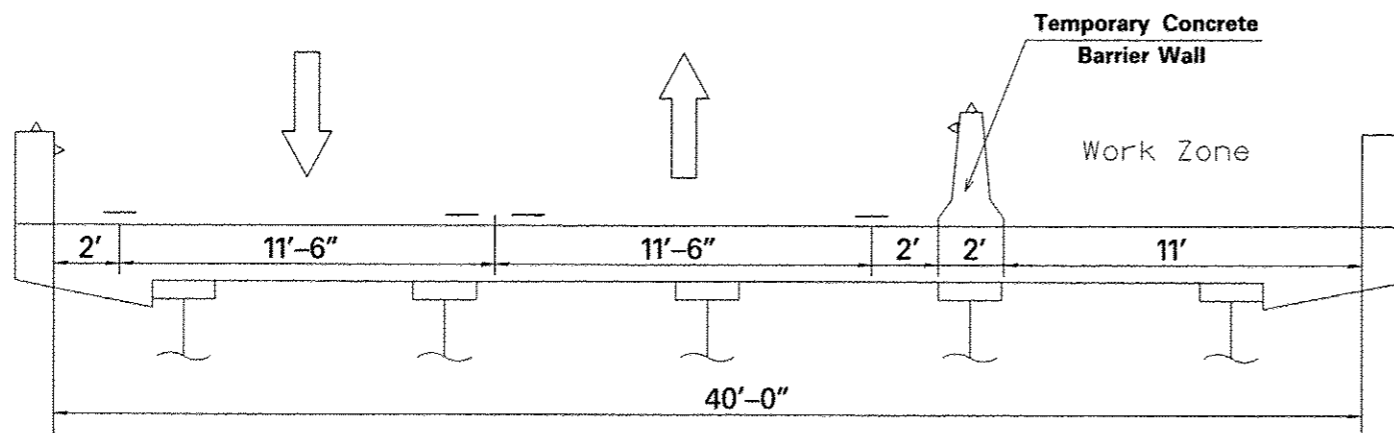
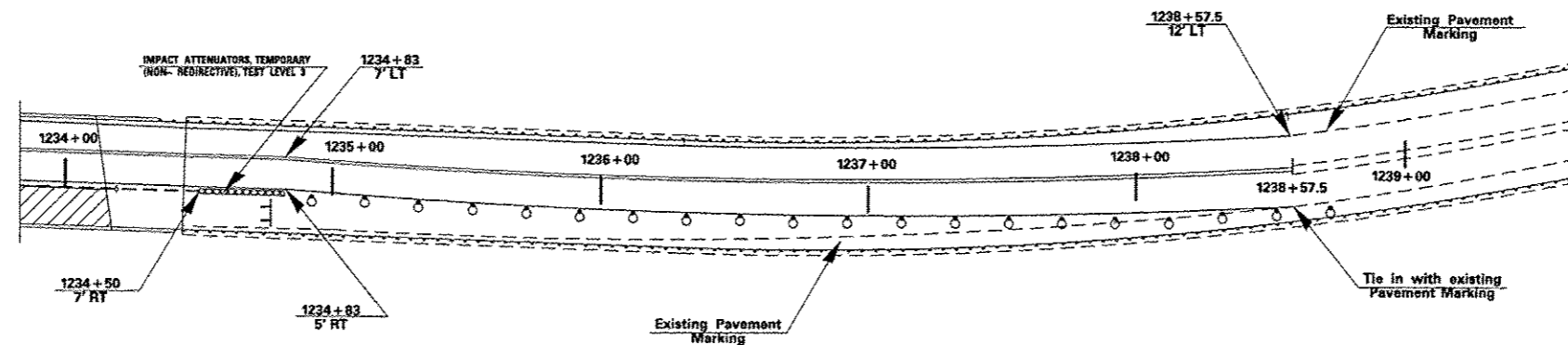
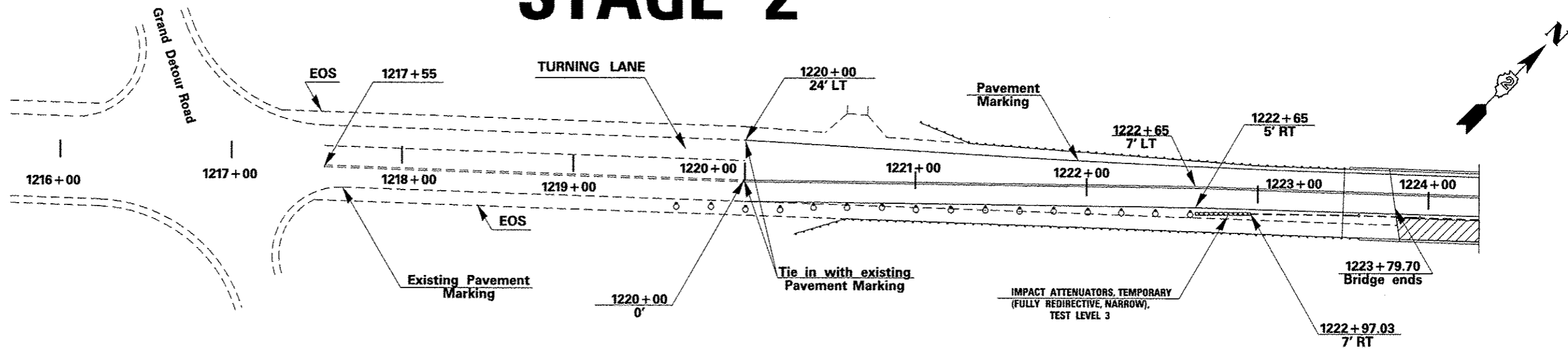
DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL STAGE 1
Bridge No.1 SN: 052-0063

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2	BRIDGE PAINTING 2014-	LEE / OGLE	25	4
CONTRACT NO. 64J52			ILLINOIS	

STAGE 2



STAGE 2 CROSS-SECTION

- Notes:
- Barrier wall offsets are to the traffic side of the wall
 - See Standard 701331 for additional information
 - Place type III barricades in nonworking hours

LEGEND

	Work area
	Type III barricade
	Temporary concrete barrier
	Type C Monodirectional reflector
	Impact attenuator

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

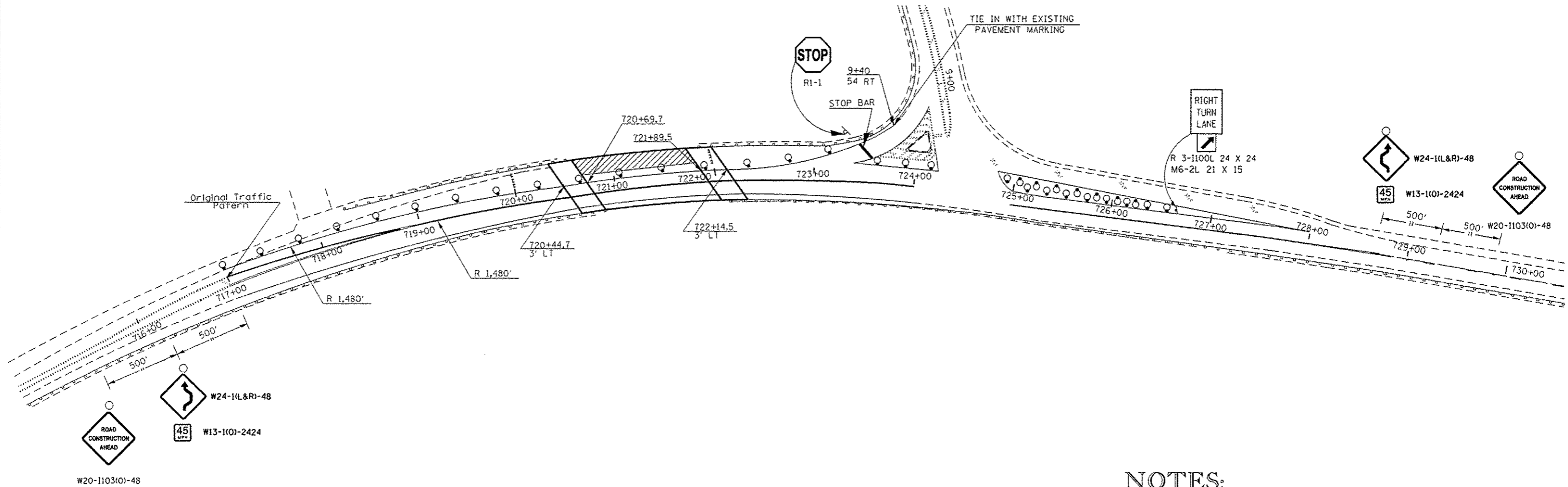
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL STAGE 2
Bridge No. 1 SN: 052-0063

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2	BRIDGE PAINTING 2014-	LEE / OGLE	25	5
CONTRACT NO. 64J52				

ILLINOIS

STAGE 1



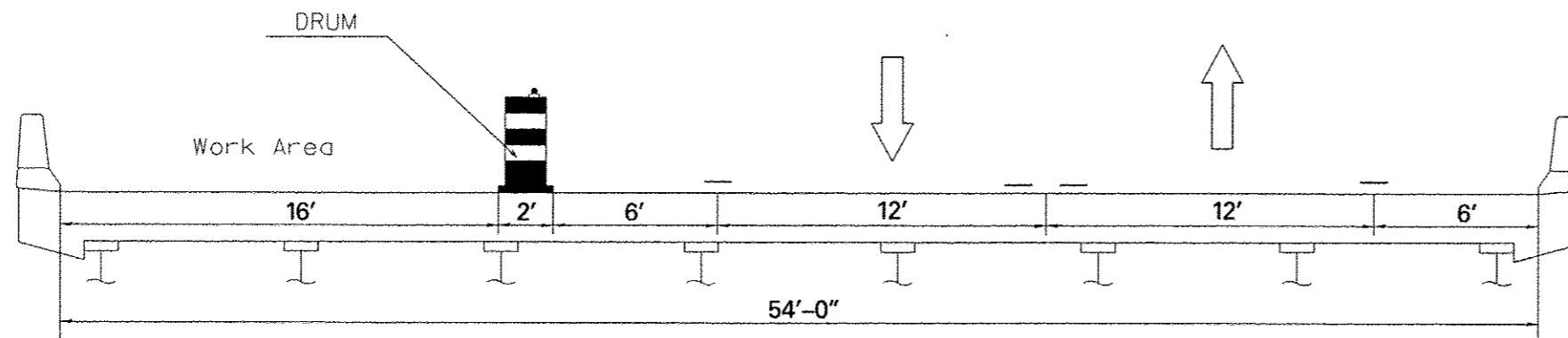
NOTES:

Type III barricade to be placed when no work is being performed.

Remove conflicting pavement marking

LEGEND:

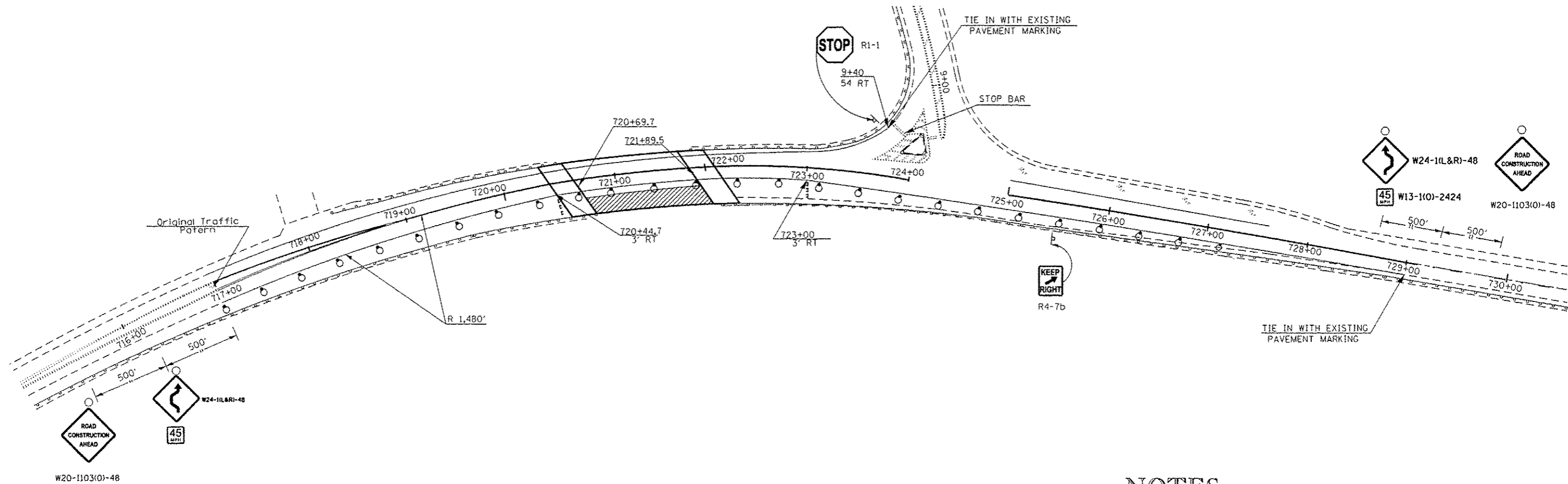
- Drum with steady burning bi-directional light to be spaced at 40 ft
- Sign with flashing light
- Work area
- Sign
- Type III barricade



STAGE 1 CROSS-SECTION

DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL STAGE 1		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -		Bridge No. 2 SN: 071-0025		IL 2 D2	BRIDGE PAINTING 2014-1	LEE / OGLE	25	6
CHECKED -	REVISED -				CONTRACT NO. 64J52				
DATE -	REVISED -				ILLINOIS				

STAGE 2



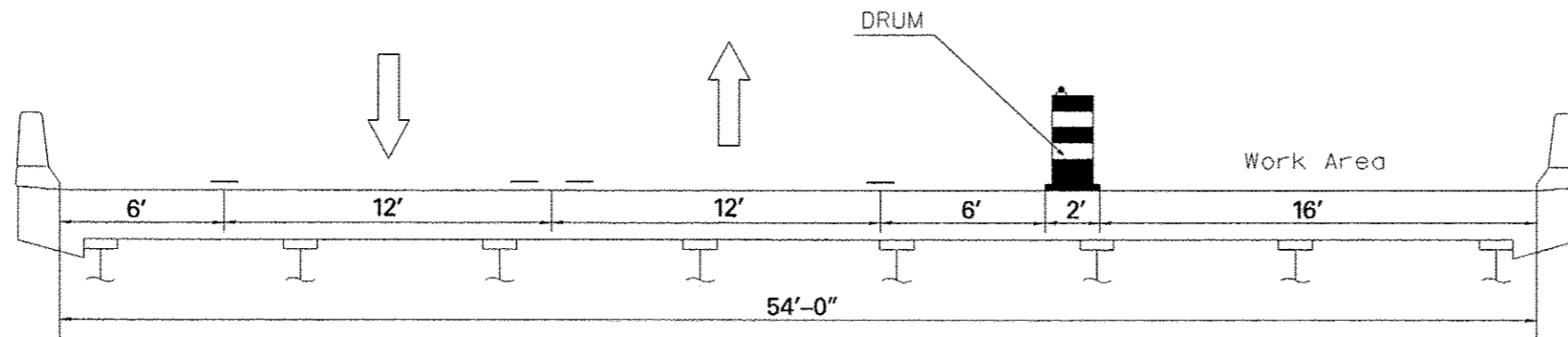
NOTES:

Type III barricade to be placed when no work is being performed.

Remove conflicting pavement marking

LEGEND:

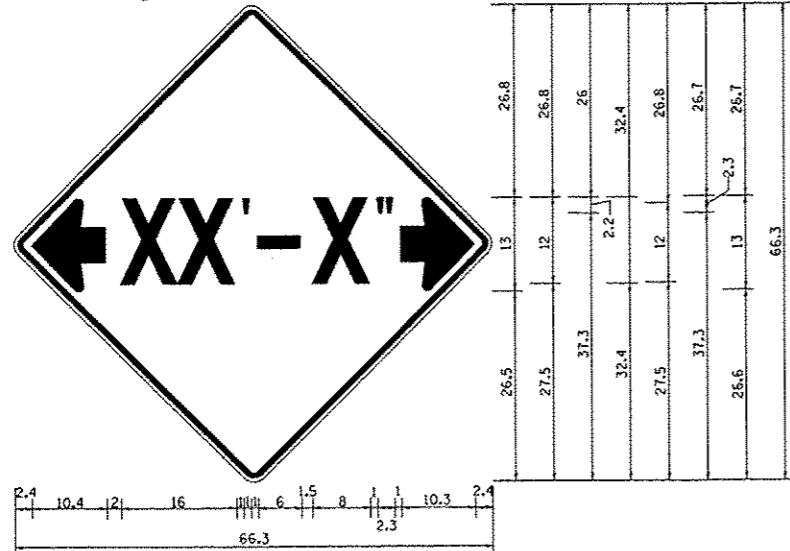
- Drum with steady burning bi-directional light to be spaced at 40 ft
- Sign with flashing light
- Work area
- Sign
- Type III barricade



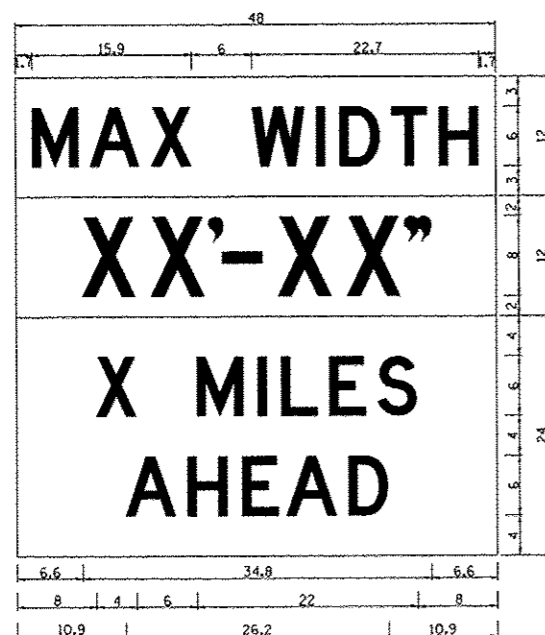
STAGE 2 CROSS-SECTION

	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL STAGE 2 Bridge No. 2 SN: 071-0025	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	7	
	CHECKED -	REVISED -			CONTRACT NO. 64J52				
	DATE -	REVISED -			ILLINOIS				

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES
 W12-2 - Horizontal Clearance Sign
 48.0" across sides, 1.9" Radius,
 0.8" Border, 0.5" Indent, Black on
 Orange; Standard Arrow Custom
 10.4" X 8.1" 180° Black II Inch
 D Series Lettering; Standard Arrow
 Custom 10.4" X 8.1" 0°



W12-1103 (Width to 8D);
 No border, Black on White;
 (MAX WIDTH) D;
 No border, Black on Orange;
 (XX'-XX'') D;
 No border, Black on White;
 (X MILES) D; (AHEAD) D;

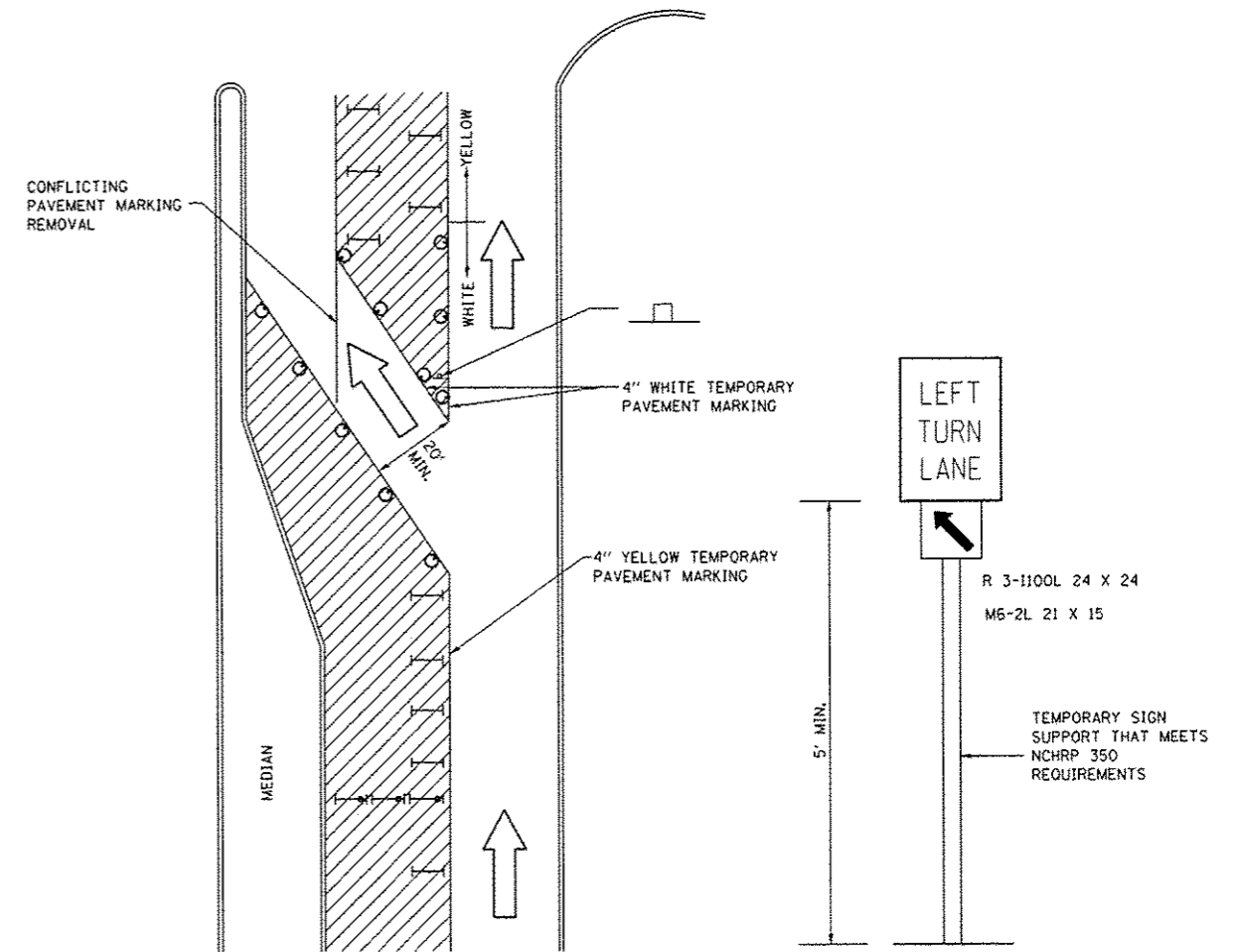
All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 5-15-09

INFORMATIONAL WARNING SIGNS (FOR NARROW TRAVEL LANES) 39.2

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)



LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT
- DRUM OR BARRICADE WITH STEADY BURN LIGHT
- SIGN (SEE DETAIL)
- TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

GENERAL NOTES

CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 IN HEIGHT.

STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.

TEMPORARY PAVEMENT MARKING SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.

THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 X 24 AND M6-2R 21 X 15 SHALL BE USED.

THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

REVISED - 10-14-11

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) 94.2

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT
STANDARDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2	D2 BRIDGE PAINTING 2014-I	LEE / OGLE	25	8
				CONTRACT NO. 64J52

[ILLINOIS]

052-0063

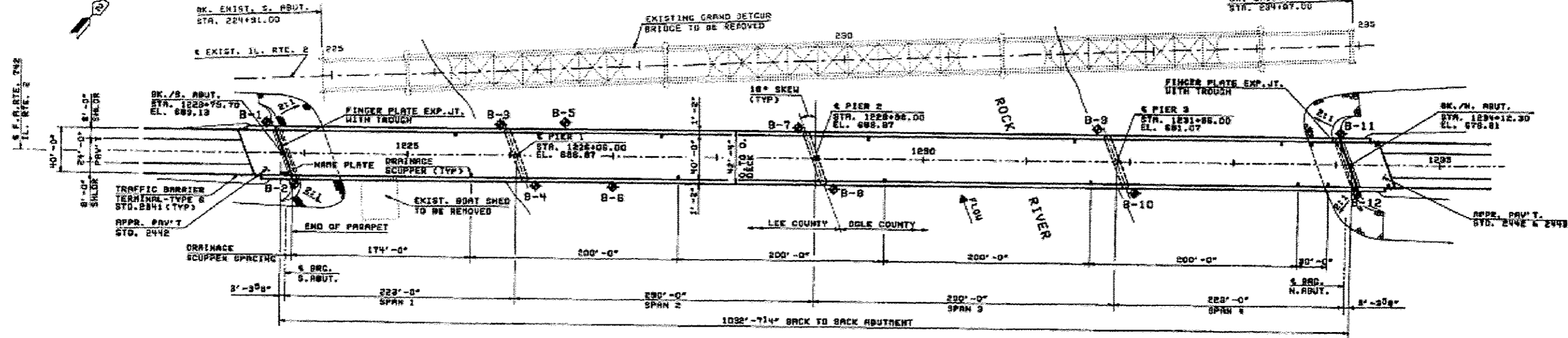
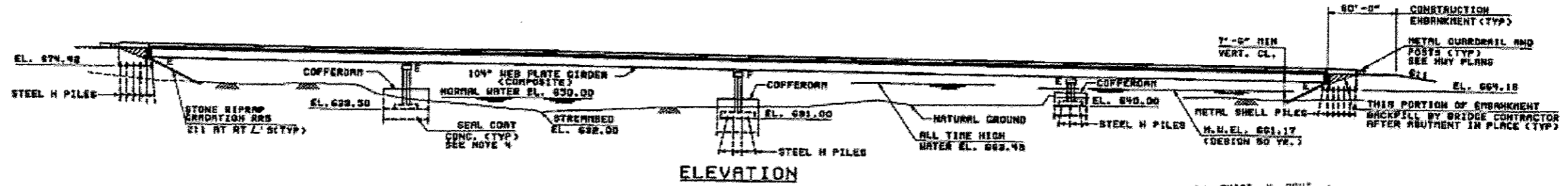
BENCH MARK:

CHISELED SQUARE, EAST END OF EXISTING SOUTH ABUTMENT AT STA. 224+90 (ALONG EXIST. 2) 20' RT. ELEV. 660.47.

FOR INFORMATION ONLY

SHEET NO. 1 OF 30

ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. RTE. 742	GD-01	LEE & OGLE	86	25
ILLINOIS FED. AID PROJECT				
STP-807-742(25)				



EXISTING STRUCTURE

STRUCTURE NO. 052-0036 SECTION 39RB-1
GRAND DETOUR BRIDGE ON ILL. RTE. 2 AT STA. 228+89 (ALONG EXIST. 2), BUILT IN 1947.
SUPERSTRUCTURE: 5 TIED ARCH SPANS & 2 PLATE GIRDER APPROACH SPANS WITH CONCRETE FILLED GRATING DECK.
SUBSTRUCTURE: 4 PIERS WITH HEAVILY CONNECTING TWO OUTSIDE COLUMNS AND ABUTMENTS WITH WALL CONNECTING THREE COLUMNS.
EXISTING BRIDGE TO BE REMOVED AFTER NEW BRIDGE IS OPEN TO TRAFFIC.

DESIGN STRESSES

STRUCTURAL STEEL: LOAD FACTOR DESIGN
 σ = 50,000 PSI - A770 GRADE 50
 σ = 36,000 PSI - A770 GRADE 36
 CONCRETE: LOAD FACTOR DESIGN
 f' = 8,500 PSI
 f_y = 60,000 PSI (REINFORCEMENT)

DESIGN SPECIFICATIONS

1989 AASHTO, 1990 & 1991 INTERIM SPECIFICATIONS
 LOADINGS: HS 20-44 ALLOW 80 LB/SQ.FT. FOR FUTURE WEARING SURFACE
 DESIGN FORCES FOR SEISMIC PERFORMANCE CATEGORY - A
 FATIGUE: 500,000 CYCLES (TRUCK LOADING)
 100,000 CYCLES (LANE LOADING)



Kishor R. Patel
 KISHOR R. PATEL
 STRUCTURAL PROJECT ENGINEER
 EXPIRES 11/30/04

NOTES:

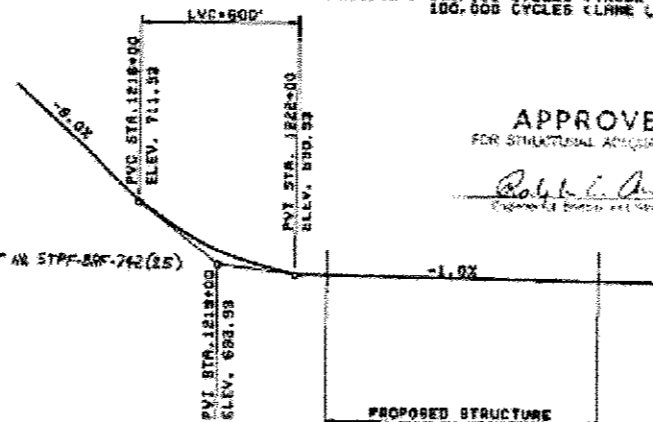
- FOR GENERAL NOTES, INDEX OF DRAWINGS, TOTAL BILL OF MATERIAL AND STONE RIPRAP DETAILS SEE DWG. NO. GD-02.
- FOR BORING LOGS SEE DWG. NOS. GD-03, GD-04 & GD-05.
- FOR REMOVAL AND REPLACEMENT OF UNSUITABLE SOIL AT NORTH ABUTMENT SEE ROADWAY DRAWINGS.
- SEAL COAT CONCRETE IS DESIGNED FOR WATER ELEVATION (661.17 + 0.50/2) = 663.5. CONTRACTOR SHALL CHECK THE SEAL COAT CONCRETE THICKNESS IN ACCORDANCE WITH ARTICLE 502.07 OF THE CONSTRUCTION MANUAL.

STATION 1228+90
 BUILT 1991 BY
 STATE OF ILLINOIS
 F.A. RT. 742 SEC. 39RB-1
 LOADING 11520
 STR. NO. 052-0063

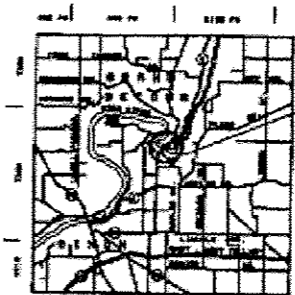
NAME PLATE
 (SEE STANDARD 2110)

WATERWAY INFORMATION

FLOOD	FREQ. YR.	Q C.F.S.	LOW GRADE ELEV. 667.82 AT STA. 228+97.85 ALONG EXISTING ILL. RTE. 2		HEAD-FT.		HEADWATER EL.		
			EXIST.	PROP.	EXIST.	PROP.	EXIST.	PROP.	
			OPENING SQ. FT.	NAT. H.W.C.	EXIST.	PROP.	EXIST.	PROP.	
DESIGN	50	54,000	13,220	13,640	661.15	0.01	0.01	661.16	661.17
BASE	100	58,200	13,920	14,370	661.90	0.02	0.01	661.92	661.92
OVERTOPPING	500+		15,340	15,850					
MAX. CALD.	500	70,900			669.41	0.02	0.01	669.43	669.43



APPROVED
 FOR STRUCTURAL ADJUSTMENT ONLY
Robert J. Adams
 Structural Engineer



REVISION	DATE	DESCRIPTION

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
BRIDGE PLANS
 GENERAL PLAN & ELEVATION
 GRAND DETOUR BRIDGE
 OVER ROCK RIVER
 F.A. RTE. 742 SECTION 39RB-1
 STA. 1228+96 LEE & OGLE COUNTIES
 STRUCTURE NUMBER 052-0063
 STEINMARK BOYNTON INC.
 CONSULTING ENGINEERS - CHICAGO, ILLINOIS

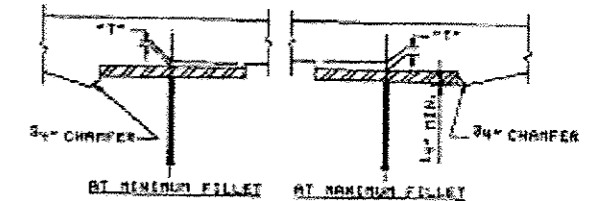
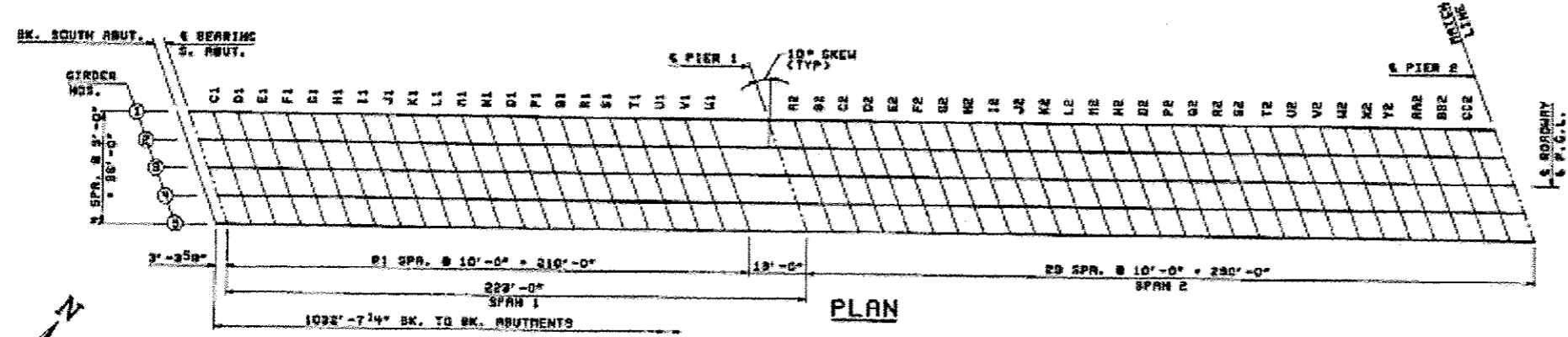
DRAWING NO.	SCALE	DATE	SHEET NO.
GD-01	N.T.S.	4-19-93	25

IN CHARGE: PCU
 DESIGNED BY: KRP
 CHECKED BY: JG
 ESTIMATED BY: JG
 CHECKED BY: KRP
 DRAFTED BY: SBR
 CHECKED BY: KRP

FOR INFORMATION ONLY

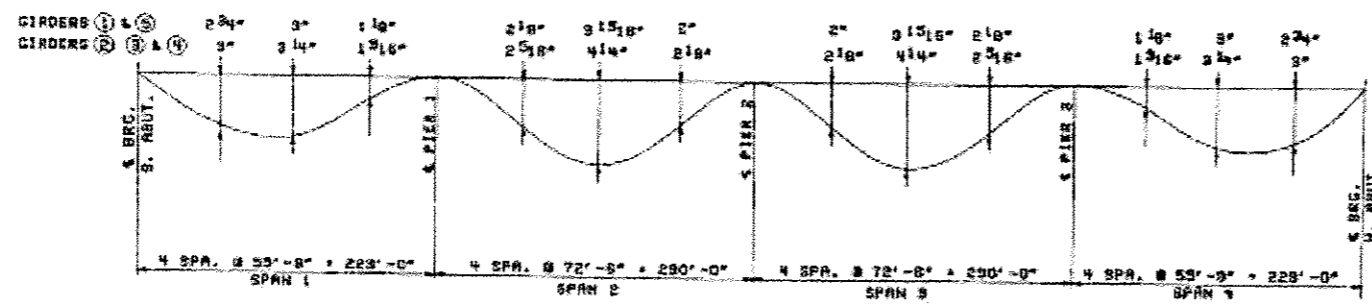
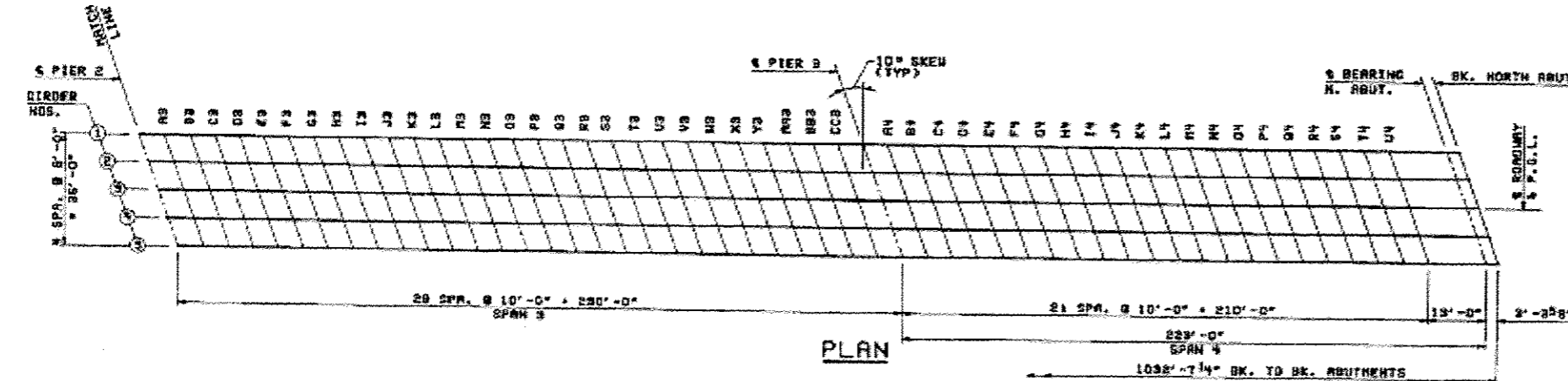
SHEET NO. 4 OF 50

ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. 742	DWB-1	LEE & OGLE	86	28
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
STPF-BRF-742 (28)				



FILLET HEIGHTS

TO DETERMINE "T": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "T" ABOVE TOP FLANGES OF GIRDERS.



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN ON DWG. NO. GD-07 AND GD-09.

NOTE:
1. WORK THIS DWG. WITH DWG. NOS. GD-07 & GD-09.

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
TOP OF SLAB ELEVATIONS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 09R0-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMAN BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-06	SCALE N.T.S.	DATE 4-17-93
		SHEET NO. 28

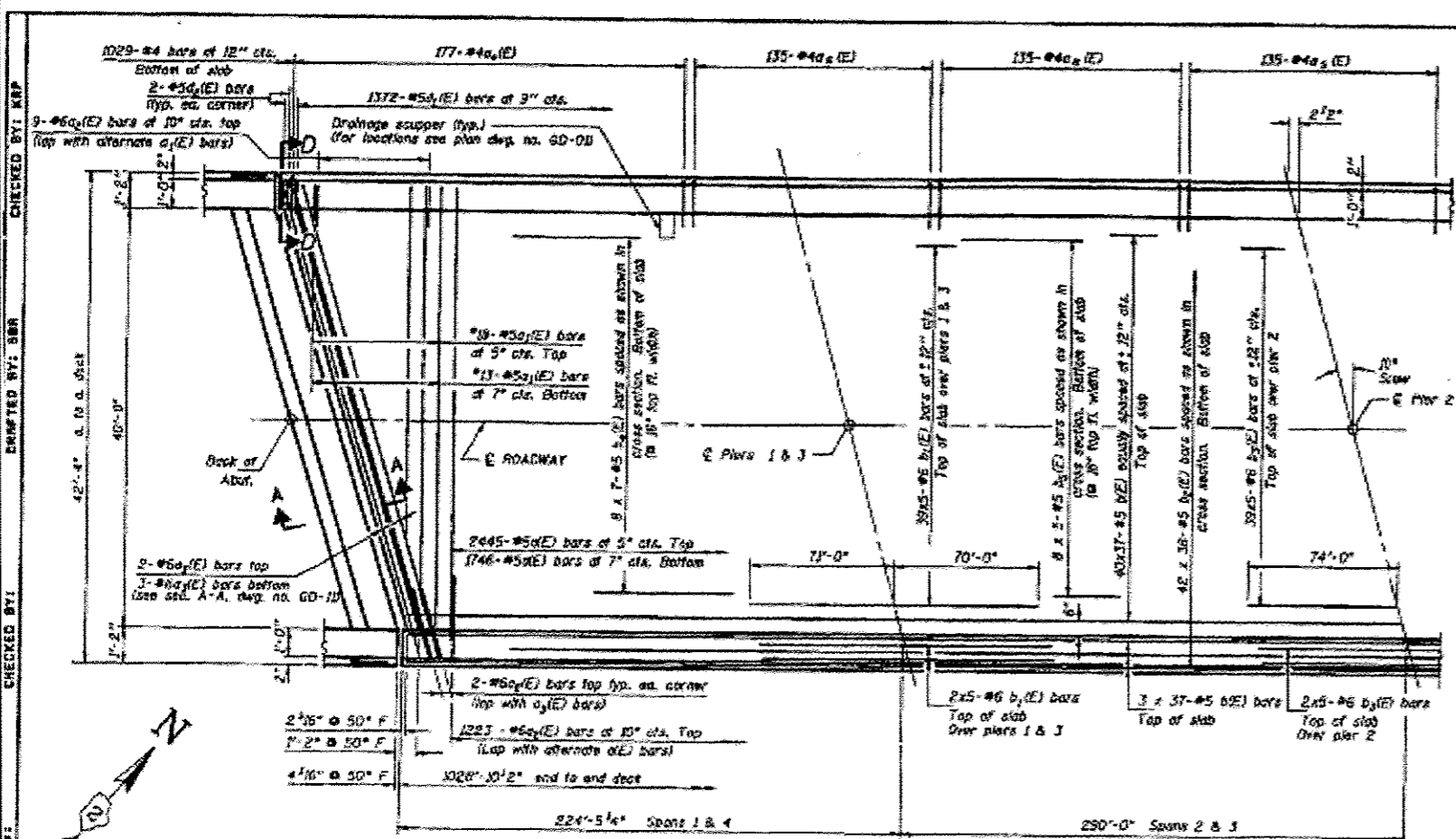
DESIGNED BY: RJP CHECKED BY: RJP
DESIGNED BY: RJP CHECKED BY: RJP
DESIGNED BY: RJP CHECKED BY: RJP
DESIGNED BY: RJP CHECKED BY: RJP

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

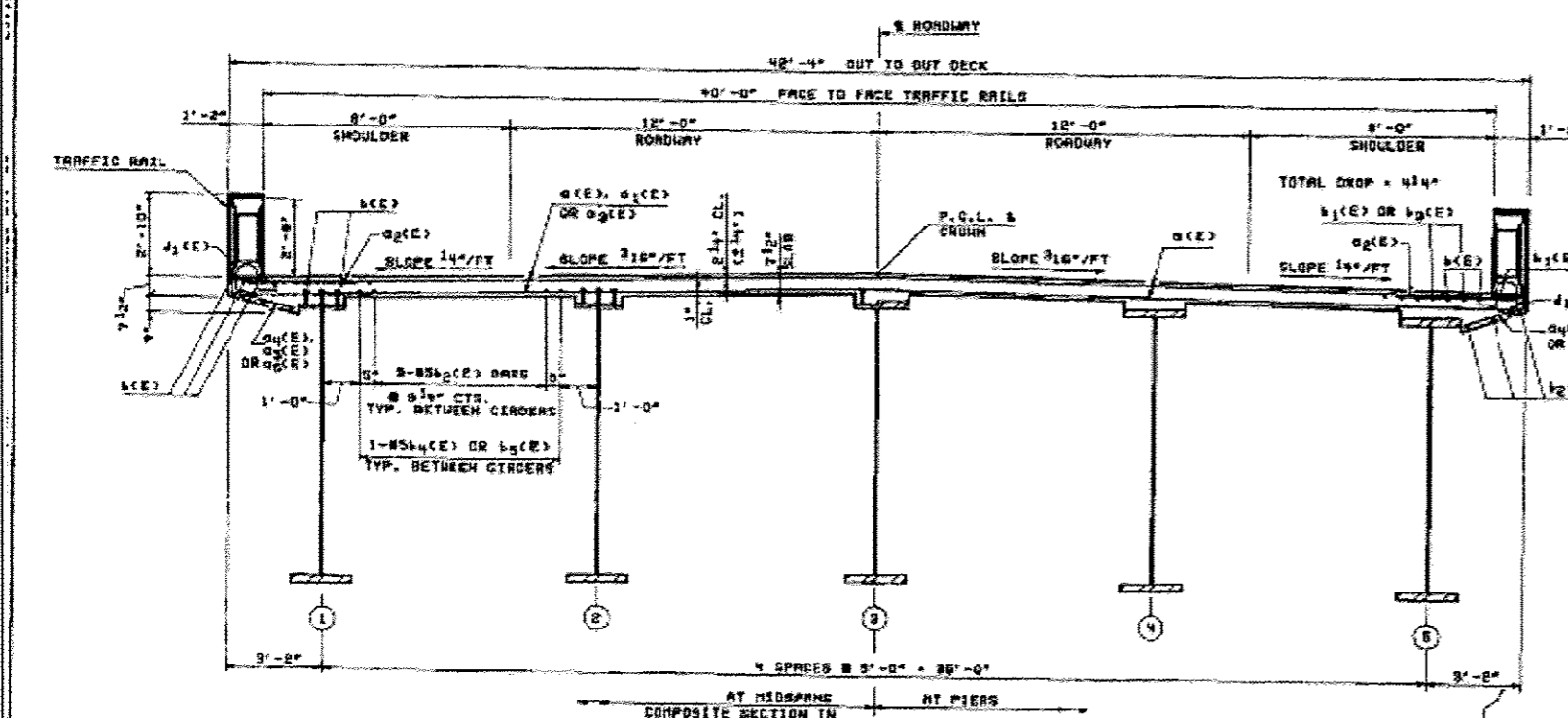
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
SN: 052-0063

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2	D2 BRIDGE PAINTING 2014-E	LEE / OGLE	25	10
CONTRACT NO. 64J52				



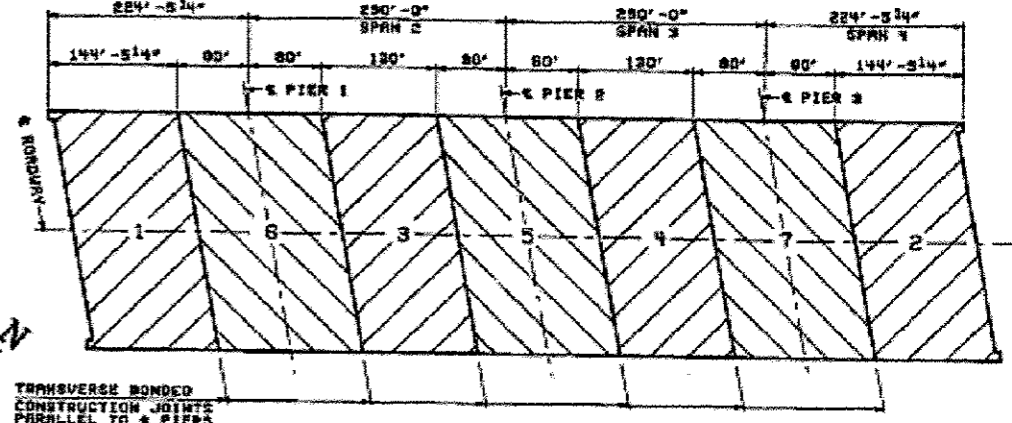
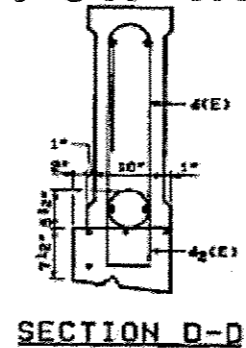
* Order #1(E) bars full length. Cut to fit slab and use remainder of bars in opposite end.



AT MIDSPAN COMPOSITE SECTION IN POSITIVE MOMENT AREAS

FOR INFORMATION ONLY

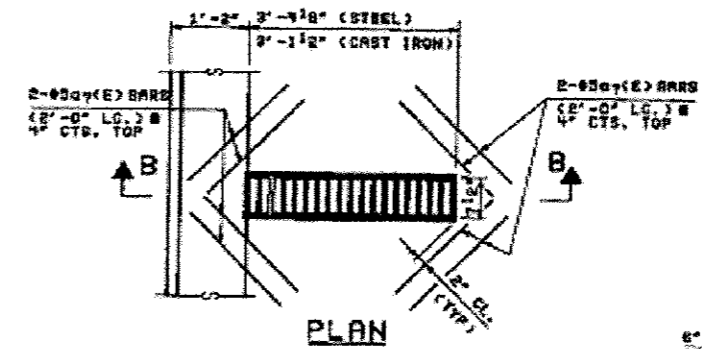
SHEET NO. 7 OF 30		ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
		F.A.P. RTE. 742	LEE & OGLE	ILLINOIS	86	31
		FED. ROAD DIST. NO. 7	ILLINOIS FED. ROAD PROJECT		STAFF BAR-742(2R)	



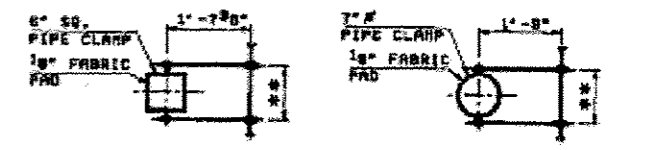
DECK POURING SEQUENCE PLAN

NOTES: (DECK POURING)

- POURING SEQUENCES SHALL BE AS SHOWN ABOVE. SEQUENCES 1 & 2 AND 3 & 4 MAY BE CAST SIMULTANEOUSLY.
- WHEN THE DECK POUR IS STOPPED FOR THE DAY AT ONE OR MORE OF THE TRANSVERSE BONDED CONSTRUCTION JOINTS IN THE DECK POURING SEQUENCE AS SHOWN, THE NEXT POUR SHALL NOT BE MADE UNTIL BOTH OF THE FOLLOWING REQUIREMENTS ARE MET:
 - AT LEAST 72 HOURS SHALL HAVE LAPSED FROM THE END OF THE PREVIOUS POUR.
 - THE CONCRETE STRENGTH SHALL HAVE ATTAINED A MINIMUM MODULUS OF RUPTURE OF 650 P.S.I. OR A MINIMUM COMPRESSIVE STRENGTH OF 3500 P.S.I.



PLAN



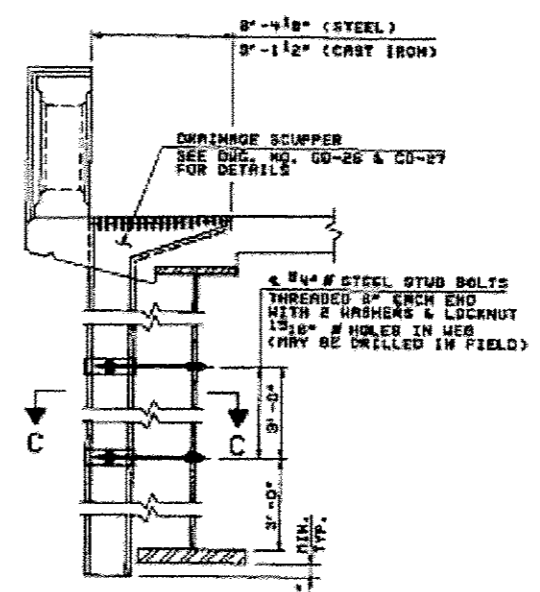
STEEL SCUPPER CAST IRON SCUPPER

** DIMENSION AS REQUIRED BY PIPE CLAMP

SECTION C-C

NOTES:

- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 - BARS INDICATED THUS 20#2-25 ETC. INDICATES 20 LINES OF BARS WITH 2 LENGTHS PER LINE.
 - FOR TRAFFIC RAIL DETAILS AND BILL OF MATERIAL SEE DIS. NO. CO-10.
 - FOR SECTION B-B & FINGER PLATE EXPANSION JT. DETAILS SEE DIS. NO. CO-11.
 - SCUPPERS SHALL BE LOCATED CLEAR OF ALL CROSS FRAMES AND SHEAR STUDS.
- MIN. BAR LAP
 #5 BAR = 2'-2"
 #6 BAR = 2'-4"



SECTION B-B

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DECK DETAILS

GRAND DETOUR BRIDGE
 OVER ROCK RIVER
 F.A.P. RTE. 742 SECTION 398B-1
 STR. 1228+96 LEE & OGLE COUNTIES
 STRUCTURE NUMBER 052-0063

STEINHAH BOYNTON INC.
 CONSULTING ENGINEERS - CHICAGO, ILLINOIS

DRAWING NO.	SCALE	DATE	SHEET NO.
GD-09	N.T.S.	4-19-93	31

REVISION	DATE	DESCRIPTION

FOR INFORMATION ONLY

SHEET NO. 9 OF 30		ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
		F.A. RTE. 742	398B-1	LEE & OGLE	86	33
		FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT	STPP-BRF-742 (25)	

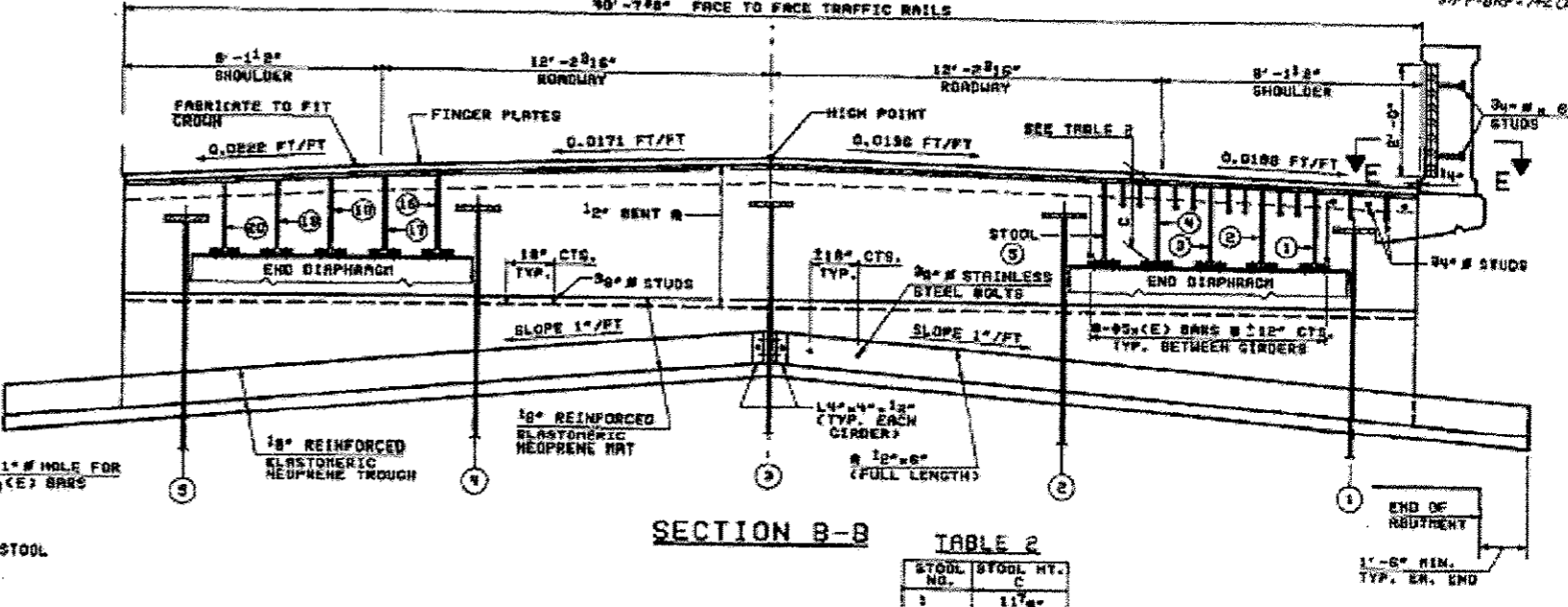
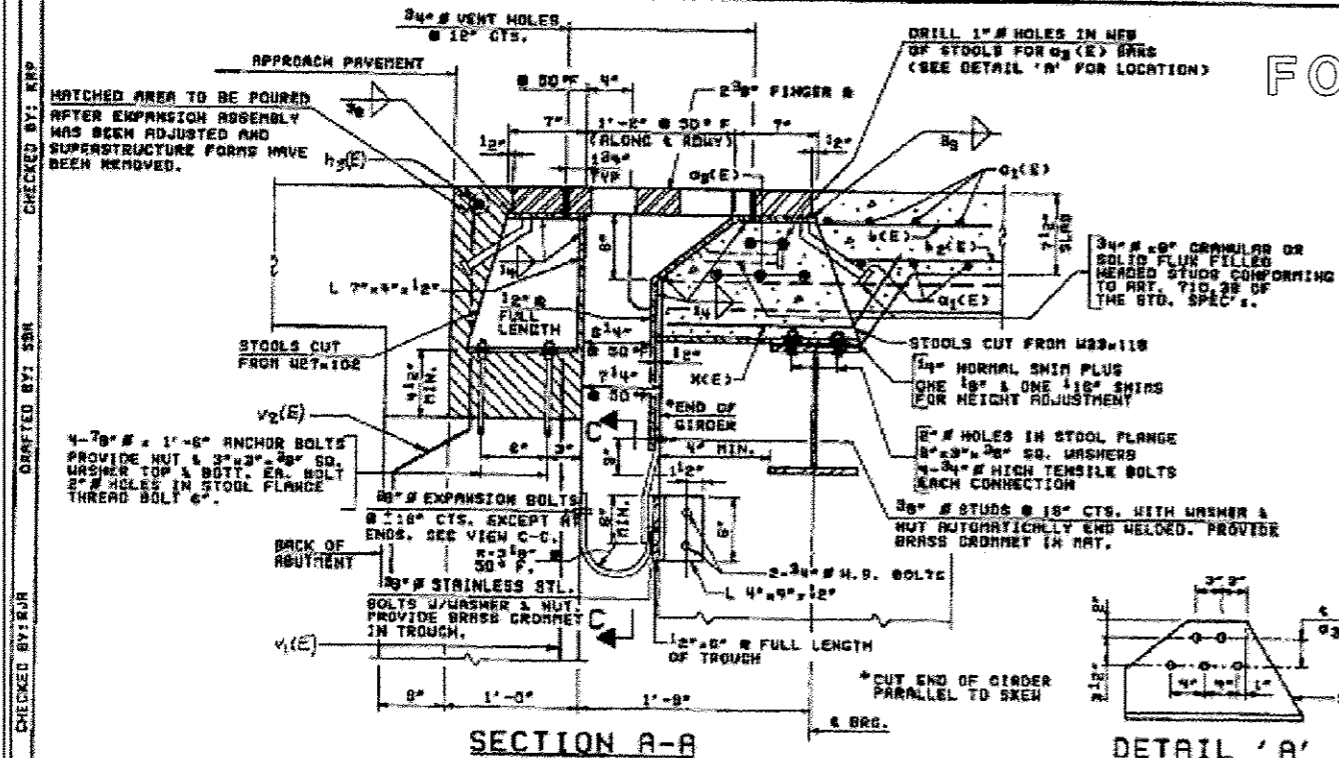
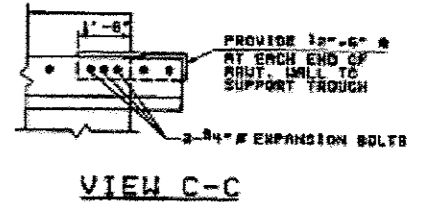


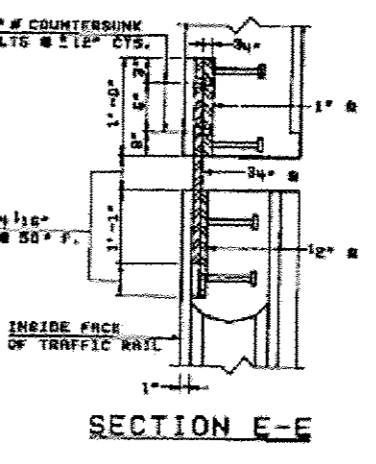
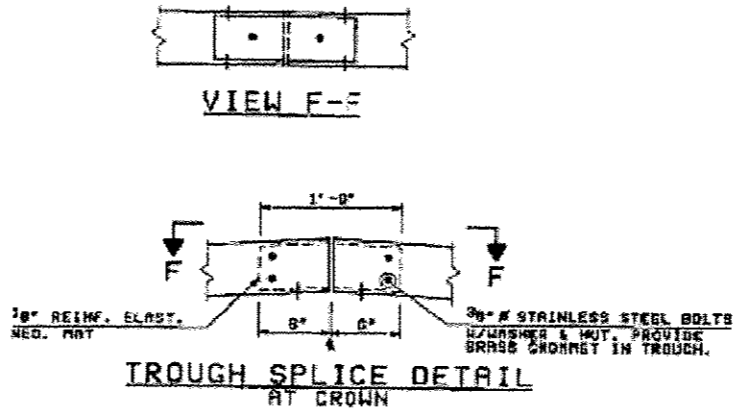
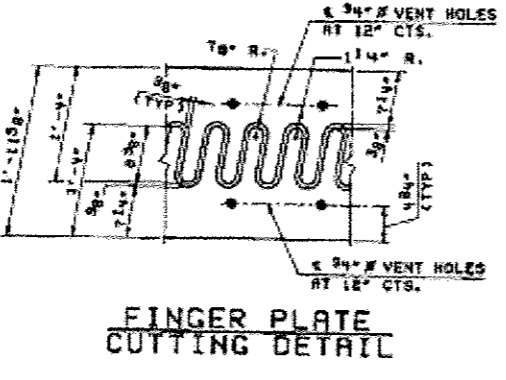
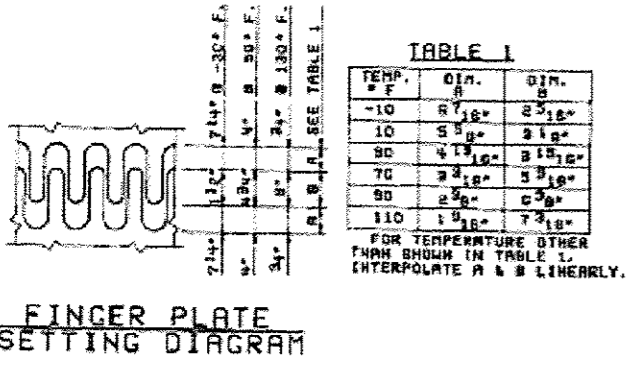
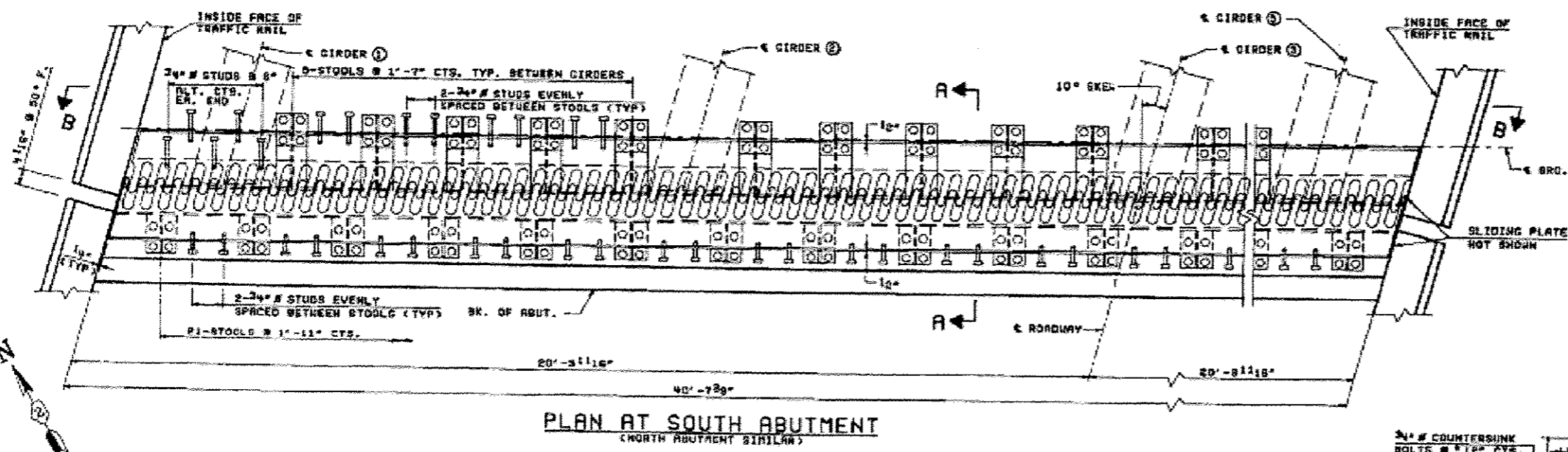
TABLE 2

STOOL NO.	STOOL HT. C
1	11 1/2"
2	12 1/2"
3	12 1/2"
4	12 1/2"
5	12 1/2"
6, 14	12 1/2"
7, 13	12 1/2"
8	12 1/2"
9	12 1/2"
10, 11	12 1/2"
12	12 1/2"
15	12 1/2"
16	12 1/2"
17	12 1/2"
18	12 1/2"
19	11 1/2"
20	11 1/2"



BILL OF MATERIAL

ITEM	UNIT	LEE COUNTY	OGLE COUNTY	TOTAL
REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LN FT	48	48	92

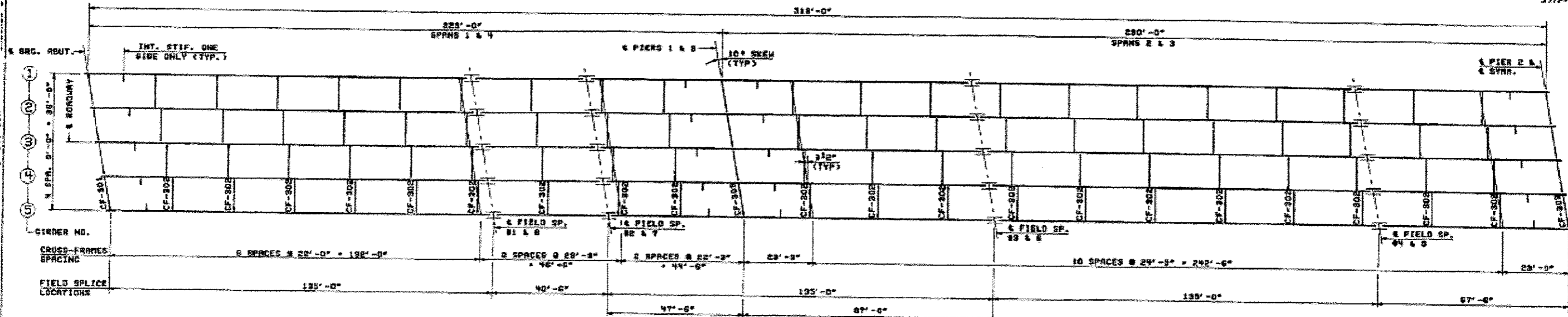


REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
FINGER PLATE EXP. JT. DETAILS @ ABUTMENTS		
GRAND DETOUR BRIDGE OVER ROCK RIVER		
F.A. RTE. 742 SECTION 398B-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINHART BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-11	SCALE N.T.S.	DATE 4-19-93 SHEET NO. 33

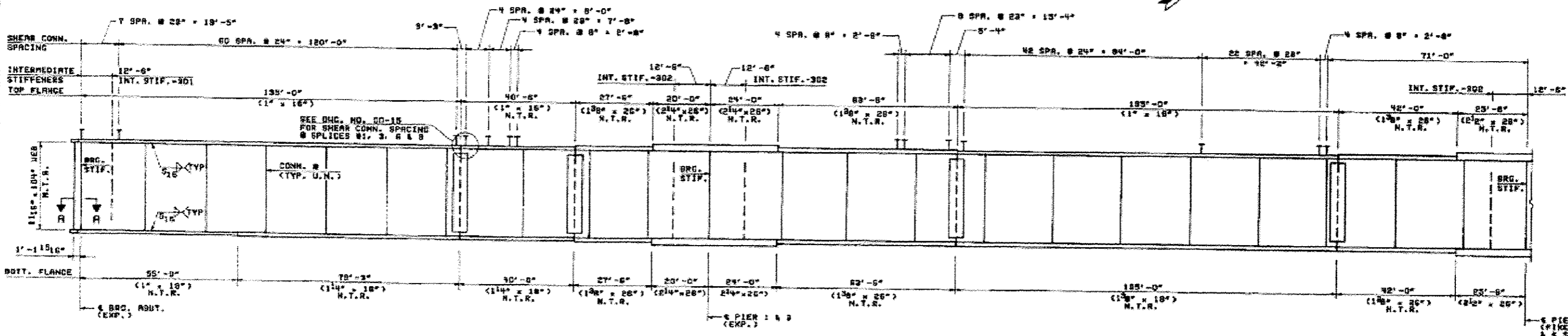
FOR INFORMATION ONLY

SHEET NO. 10 OF 50

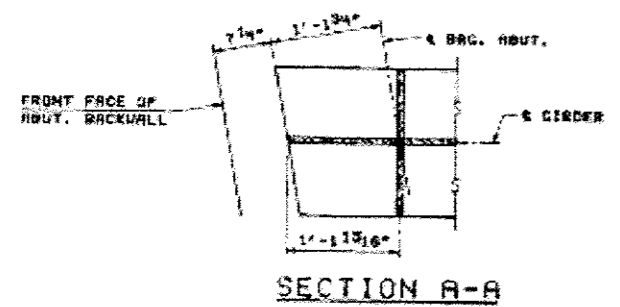
ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
P.A. 742	4	LEE & OGLE	86	34
FIG. 4000 DIST. NO. 7	ELLENBURG	FED. HIGH PROJECT	STP-BRF-742(5)	



HALF FRAMING PLAN



HALF ELEVATION



- NOTES:**
- FOR GENERAL NOTES SEE DWG. NO. CD-02.
 - ALL DIMENSIONS ARE GIVEN HORIZONTALLY & VERTICALLY AND SHALL BE ADJUSTED FOR VERTICAL PROFILE, CROSS SLOPES & CAMBERS.
 - ALL STRUCTURAL STEEL FOR FLANGES & WEBS OF MAIN GIRDERS, BEARING STIFFENERS & INTERMEDIATE STIFFENERS SHALL BE A36 TO A570 (GRADE 50).
 - N.T.R. DESIGNATES MEMBERS SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS (ZONE 2).
 - FOR ADDITIONAL DETAILS SEE DWG. NOS. CD-19 THRU CD-17.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
GIRDER FRAMING PLAN & ELEVATION
GRAND DETOUR BRIDGE
OVER ROCK RIVER
F.A. RTE. 742 SECTION 39RB-1
STA. 1228+96 LEE & OGLE COUNTIES
STRUCTURE NUMBER D52-0063
STEINBAK ROYNTON INC.
CONSULTING ENGINEERS - CHICAGO, ILLINOIS

REVISION	DATE	DESCRIPTION

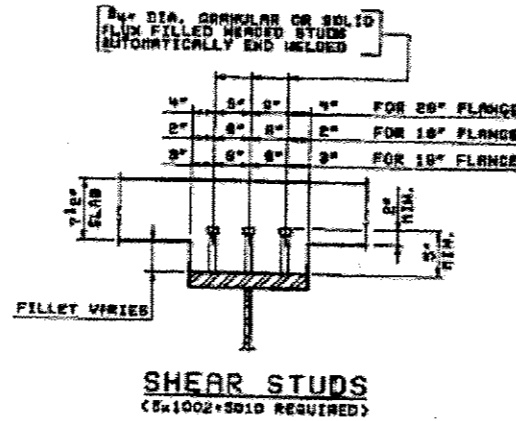
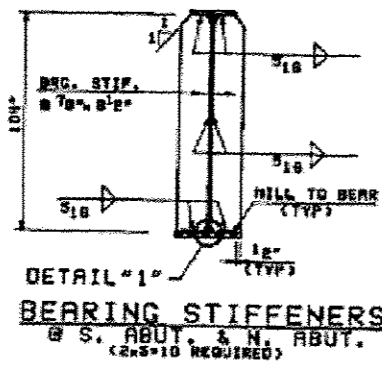
DRAWING NO. 60-1P SCALE N.T.S. DATE 4-15-93 SHEET NO. 34

DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS SN: 052-0063	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISD -			IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	13	
CHECKED -	REVISD -			CONTRACT NO. 64J52				
DATE -	REVISD -			ILLINOIS				

FOR INFORMATION ONLY

SHEET NO. 11 OF 20

ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. 742	3SRB-1	LEE & OGLE	86	35
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	STP-DRP-742(25)	



MOMENT TABLE
(COMPOSITE IN POSITIVE MOMENT AREA ONLY)

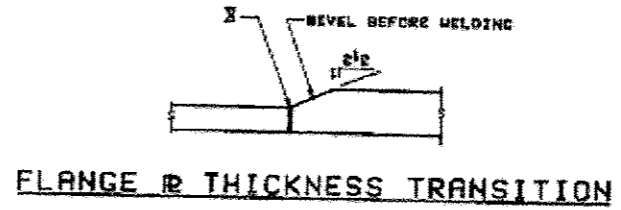
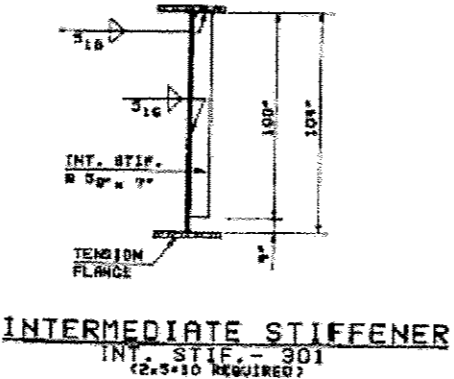
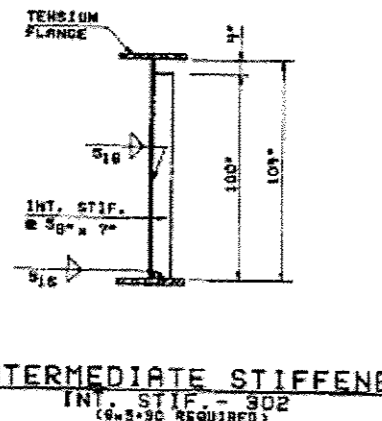
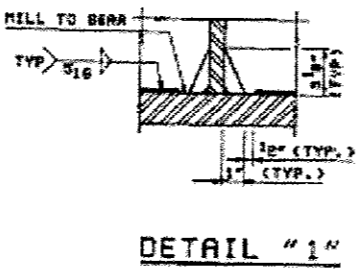
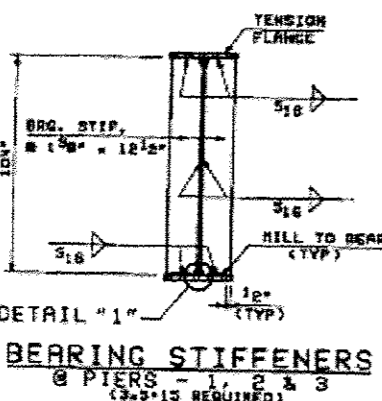
	INTERIOR GIRDER MOMENT TABLE			
	D. 4 SP. 1 D. 5 SP. 4	PIERS 1 & 3	D. 3 SP. 2 & 3	PIER 2
I_x (IN ⁴)	180785	89700	181940	488136
I_y (IN ⁴)	330024		344408	
S_x (IN ³)	242337		252235	
S_y (IN ³)	2287	7273	2616	7547
S_x (IN ³)	4436		4676	
S_y (IN ³)	3869		4107	
M DL (FT-K)	1.355	1.738	1.417	1.787
M DL (FT-K)	3928	12880	4018	14010
M SOL (FT-K)	0.350		0.350	
M SOL (FT-K)	1118		1192	
M LL (FT-K)	3372	4858	4152	5857
M IMP (FT-K)	480	610	501	616
$5/8$ (M LL+I) (FT-K)	6422	8772	7753	10005
M_u (FT-K)	14917	20289	16788	21820
f_s DL NON-COMP (KSI)	13.8	21.2	12.3	21.2
f_s DL (COMP) (KSI)	3.4		3.2	
f_s $5/8$ (LL+I) (KSI)	17.4	14.5	20.0	15.1
f_s (OVERLOAD) (KSI)	39.7	32.7	36.6	36.3
f_s (TOTAL) (KSI)	43.1	40.4	47.6	47.2
VR (K)	89.1		101.8	

INTERIOR GIRDER REACTION TABLE

	S. ABUT. & N. ABUT.	PIERS 1 & 3	PIER 2
M DL (K)	122.7	900.0	320.7
M LL (K)	78.2	191.4	204.3
M IMP. (K)	11.3	25.1	24.7
M TOTAL (K)	222.1	716.5	750.3

(1) M_u (APPLIED MOMENT) = $1.3[M DL + M SOL + 5/8 (M LL+I)]$
 (2) NON-COMPACT SECTION

I_x AND S_x ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING f_s (TOTAL AND OVERLOAD).
 I_y AND S_y ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s (TOTAL AND OVERLOAD).
 VR IS THE MAXIMUM LL + IMPACT SHEAR RANGE IN SPAN.
 f_s (TOTAL) IS THE SUM OF THE STRESSES DUE TO $1.3[M DL + M SOL + 5/8 (M LL+I)]$
 f_s (OVERLOAD) IS THE SUM OF THE STRESSES DUE TO $M DL + M SOL + 5/8 (M LL + I)$
 M DL - MOMENT DUE TO DEAD LOADS ON NON-COMPOSITE SECTION.
 M SOL - MOMENT DUE TO DEAD LOADS ON COMPOSITE SECTION.
 M LL - MOMENT DUE TO LIVE LOAD ON NON-COMPOSITE OR COMPOSITE SECTION
 I - LIVE LOAD IMPACT



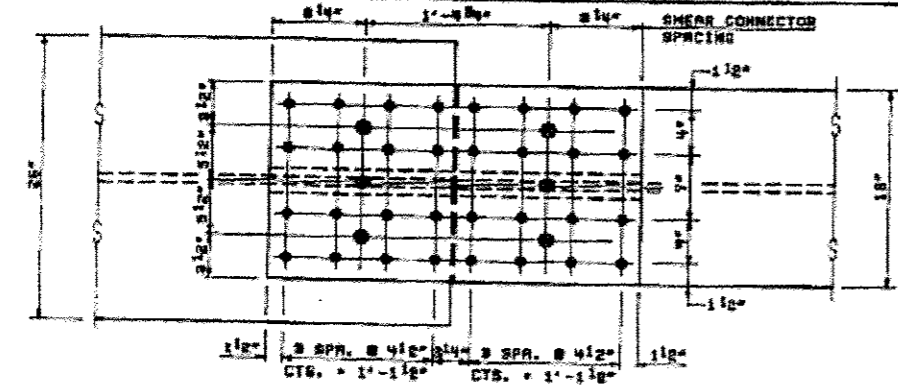
NOTES:
 1. FOR GENERAL NOTES SEE DWG. NO. GD-02.
 2. CLIP ALL STIFFENER PLATES 1" HORIZONTALLY AND 3/4" VERTICALLY AT WELD TO FLANGE CONNECTION OF ALL MAIN GIRDERS.

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
STEEL DETAILS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 3SRB-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMANN-BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-13	SCALE N.T.S.	DATE 4-17-93
		SHEET NO. 35

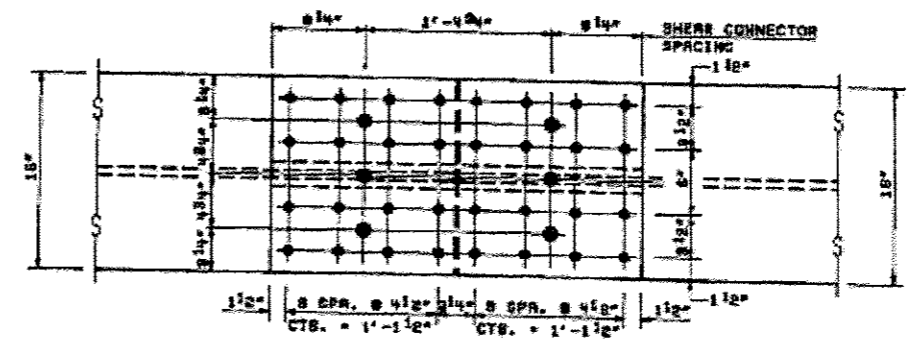
DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS SN: 052-0063	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -			IL 2 D2 BRIDGE PAINTING 2014-1	LEE / OGLE	25	14	
CHECKED -	REVISED -			ILLINOIS		CONTRACT NO. 64J52		
DATE -	REVISED -							

FOR INFORMATION ONLY

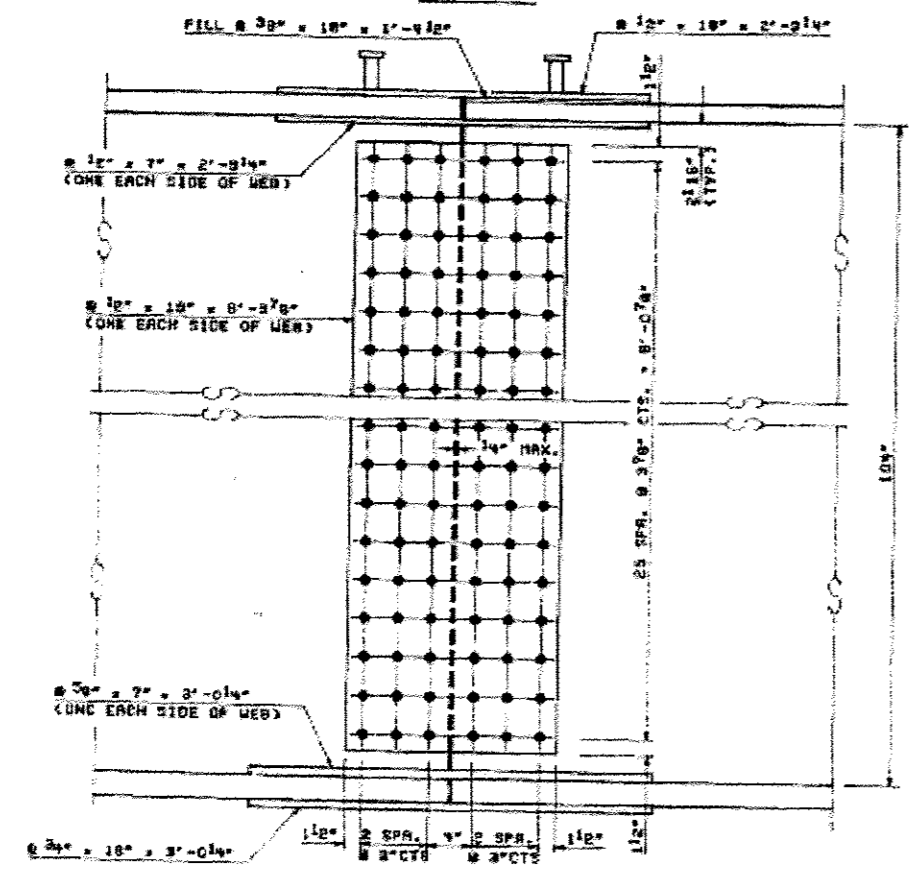
SHEET NO. 13 OF 30		ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
		F.A. RTE.	228B-	LEE & OGLE	86	37
		FED. AID PROJ. NO.	7	ILLINOIS	FED. AID PROJECT	
ST77-807-742(65)						



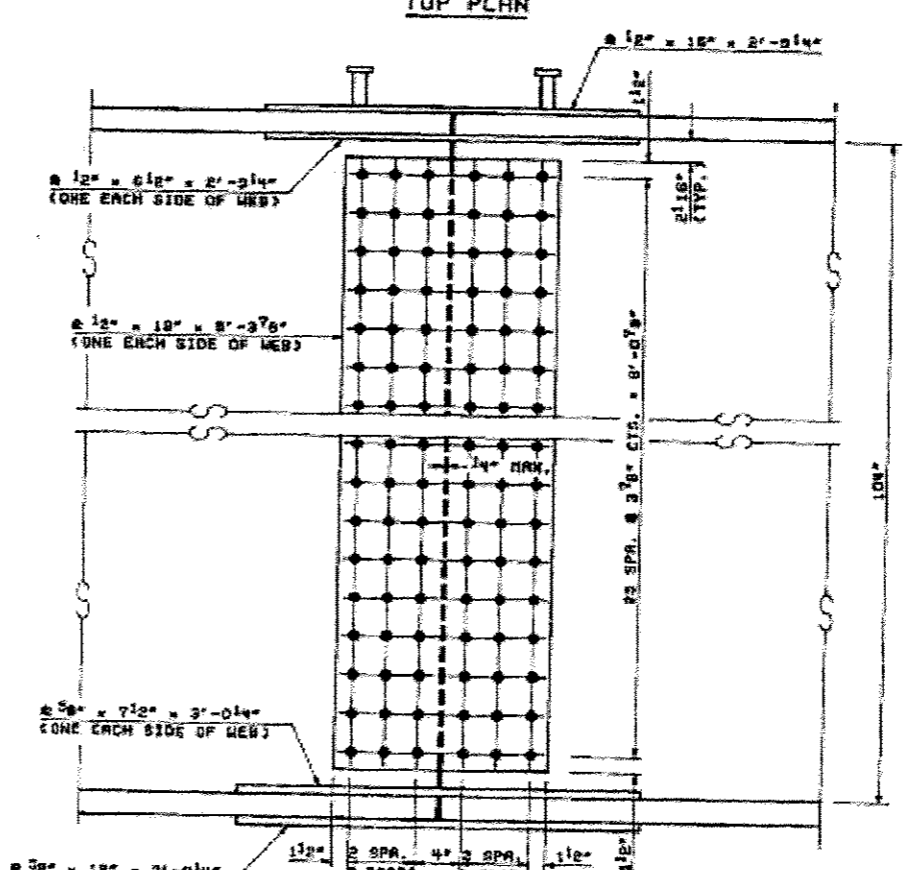
TOP PLAN



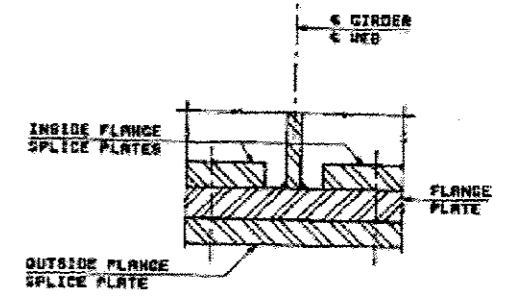
TOP PLAN



ELEVATION

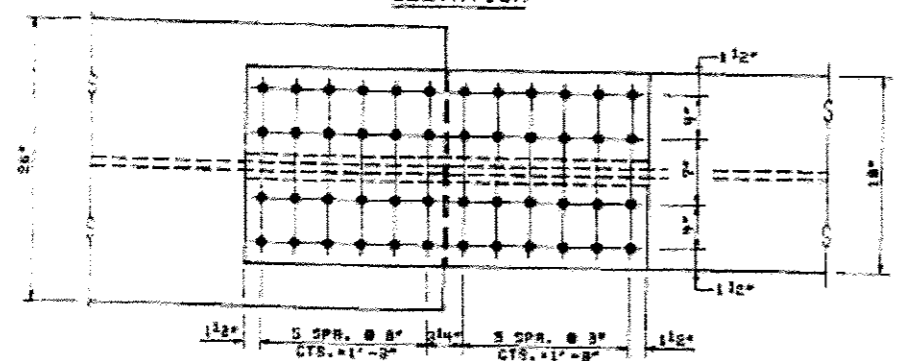


ELEVATION

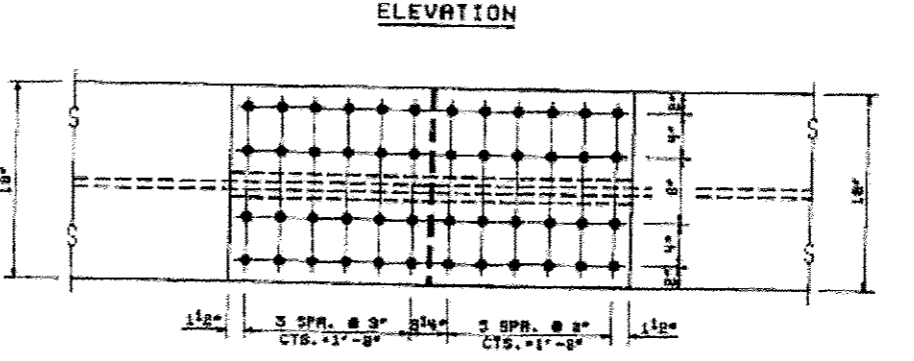


TYPICAL SPLICE SECTION

- NOTES:**
1. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" DIA., OPEN HOLES 15/16" DIA.
 2. SHEAR CONNECTOR INDICATED BY \odot IN TOP PLAN.
 3. ALL SPLICE PLATES SHALL BE A36 STEEL, GRADE 50 AND SHALL CONFORM, EXCEPT FILLER PLATES, TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS CODE 2.



BOTTOM PLAN



BOTTOM PLAN

FIELD SPLICES #3 & #6

FIELD SPLICES #1 & #8

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
FIELD SPLICES & DETAILS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 398B-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMAN BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. 60-15	SCALE N.T.S.	DATE 4-19-93
		SHEET NO. 37

CHECKED BY: MRP

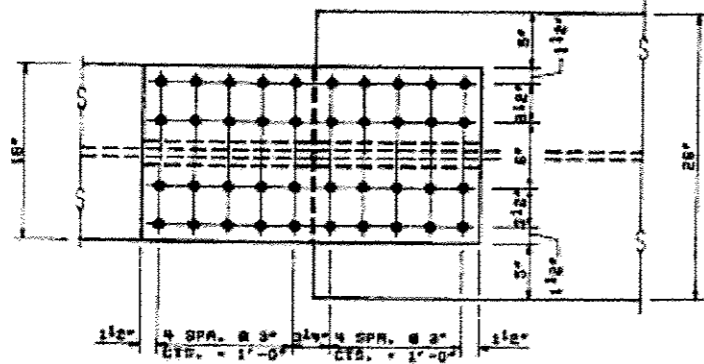
DRAWN BY: MRP

DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING BRIDGE PLANS SN: 052-0063	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -			IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	15	
CHECKED -	REVISED -			CONTRACT NO. 64J52				
DATE -	REVISED -			ILLINOIS				

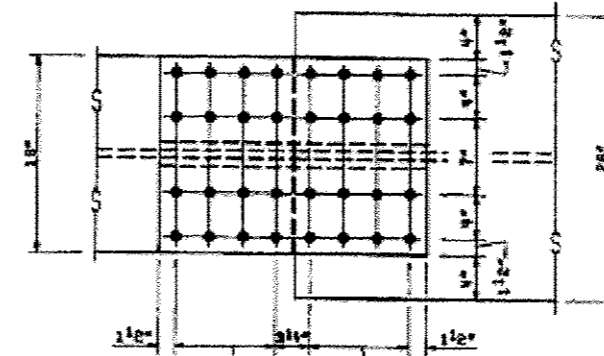
FOR INFORMATION ONLY

SHEET NO. 14 OF 30

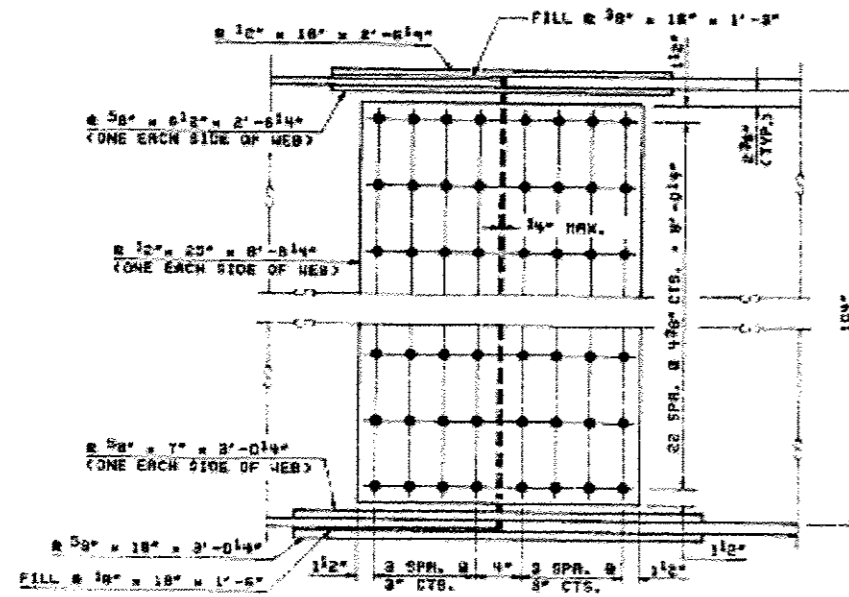
ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. 742	398B-1	LEE & OGLE	86	38
FED. ROAD DIST. NO. 7	ILLINOIS FED. AID PROJECT		STPF-BRF-742(25)	



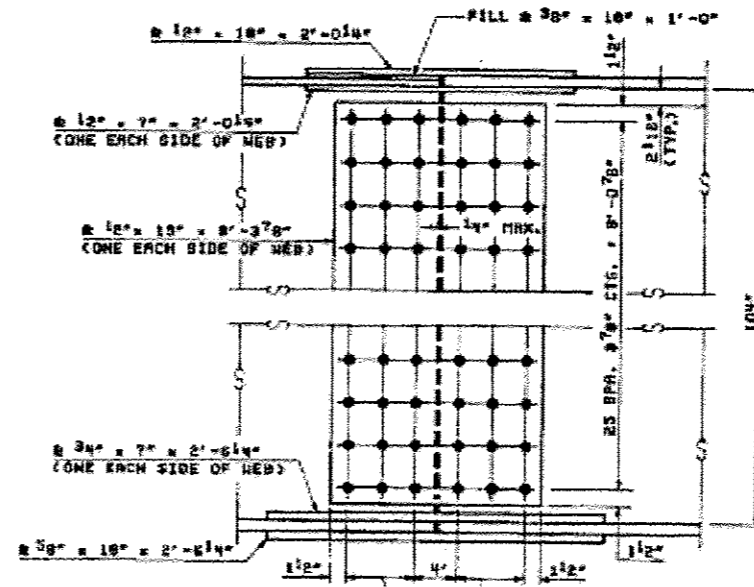
TOP PLAN



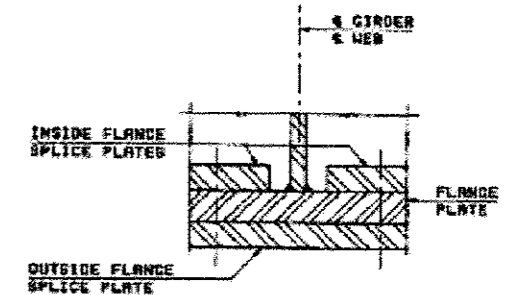
TOP PLAN



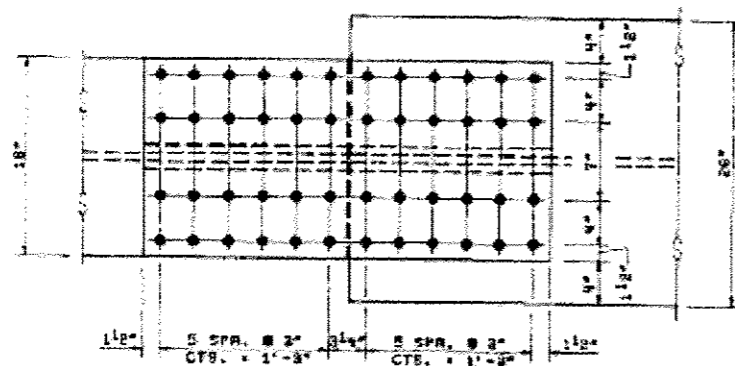
ELEVATION



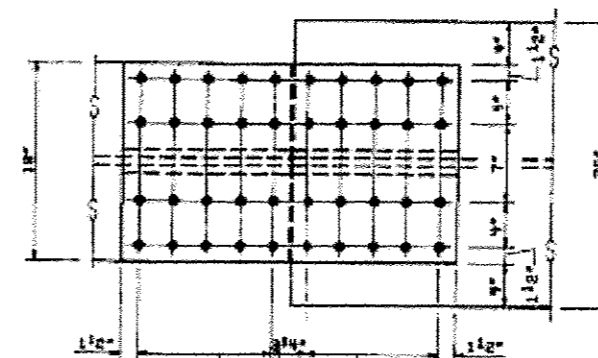
ELEVATION



TYPICAL SPLICE SECTION



BOTTOM PLAN
FIELD SPLICES #2 & #7



BOTTOM PLAN
FIELD SPLICES #4 & #5

NOTES:

1. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" DIA., OPEN HOLES 1 1/8" DIA.
2. ALL SPLICE PLATES SHALL BE ABWHTD A572, GRADE 50 AND SHALL CONFORM, EXCEPT FILLER PLATES, TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE B.

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
FIELD SPLICES & DETAILS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 398B-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMAN BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-16	SCALE N.T.S.	DATE 4-19-93
		SHEET NO. 38

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

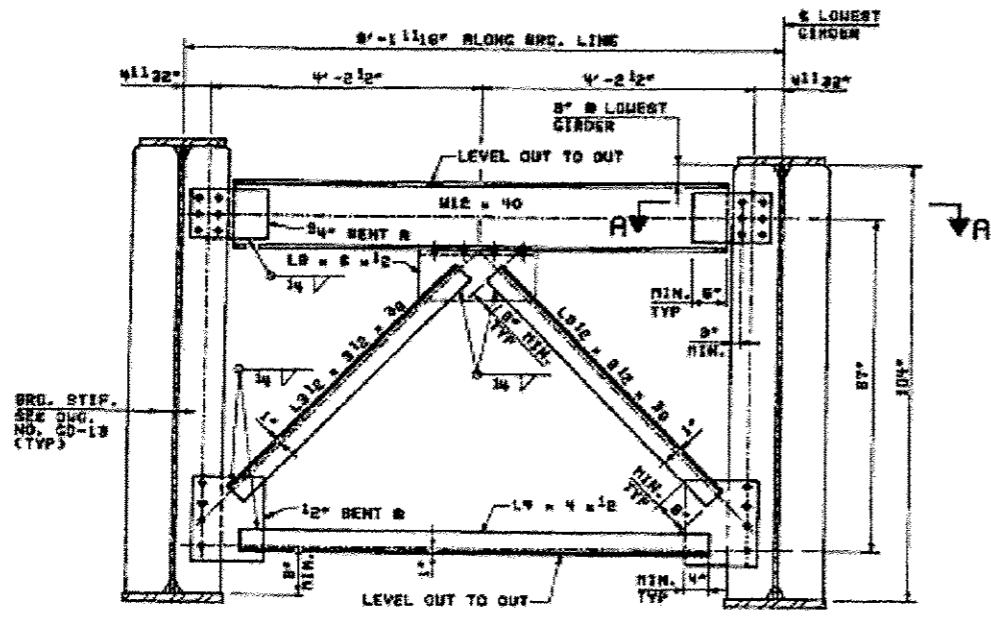
EXISTING BRIDGE PLANS
SN: 052-0063

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014	LEE / OGLE	LEE / OGLE	25	16
				CONTRACT NO. 64J52
ILLINOIS				

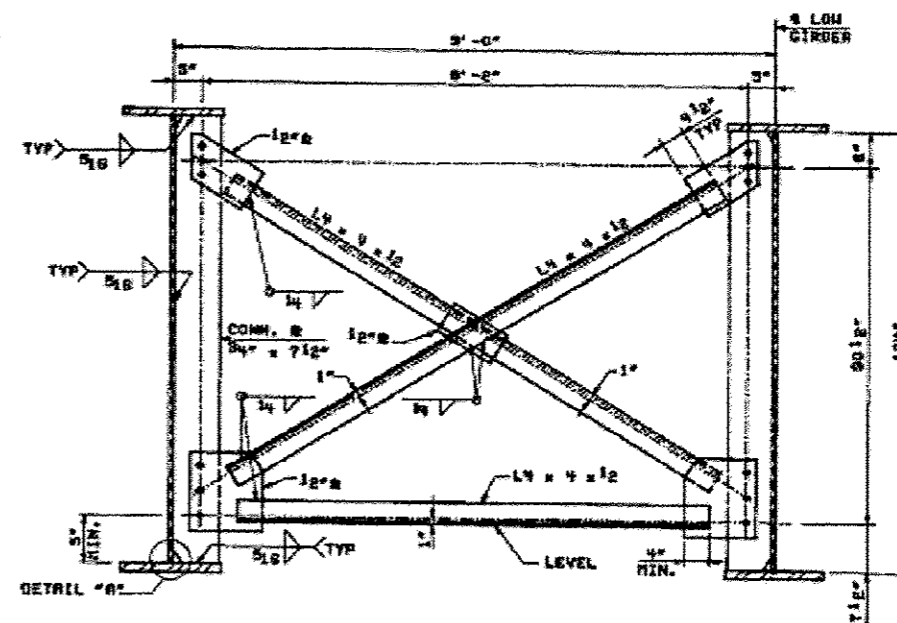
FOR INFORMATION ONLY

SHEET NO. 15 OF 30

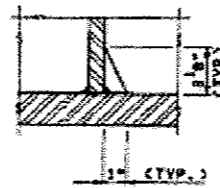
ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
F.R. 742	SRB-1	LEE & OGLE	86	39
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
STP-8RF-742 (85)				



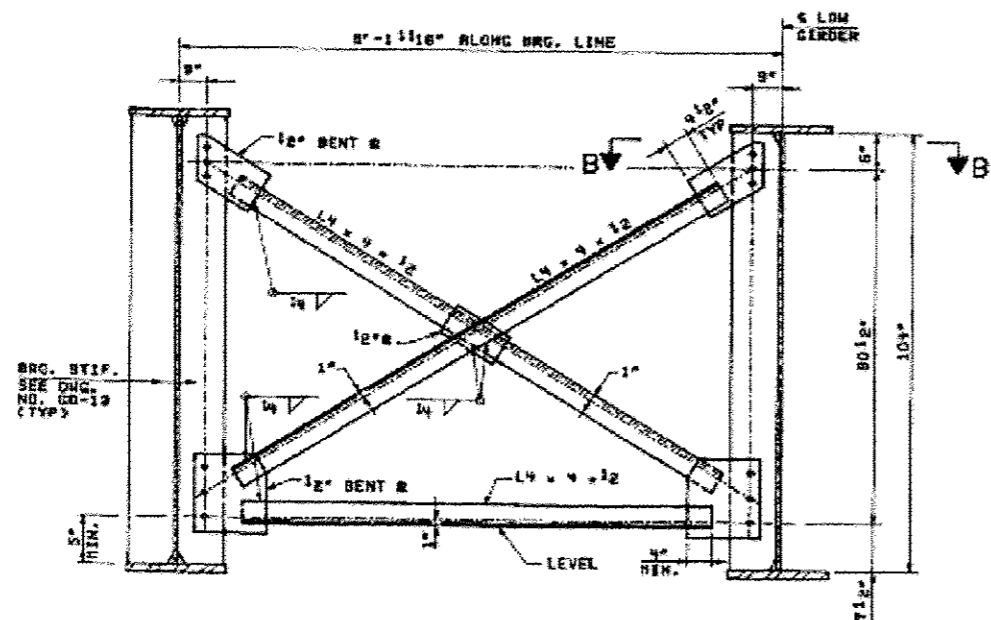
END CROSS FRAME CF - 301
@ S. ABUT. & N. ABUT.
(18 REQUIRED)



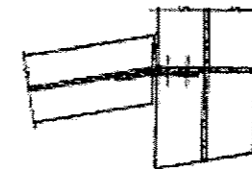
INT. CROSS FRAME CF - 302
(180 REQUIRED)



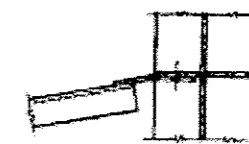
DETAIL "A"



INT. SUPPORT CROSS FRAME CF - 303
@ PIERS 1, 2 & 3
(18 REQUIRED)



SECTION A-A



SECTION B-B

NOTES:

1. PROVIDE 1 1/8" Ø HOLES FOR ALL 7/8" Ø BOLTS.
2. TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZE HOLES.

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
CROSS FRAMES		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.R. RTE. 742 SECTION 39R0-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMAN BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-17	SCALE N.T.S.	DATE 4-19-93
		SHEET NO. 39

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

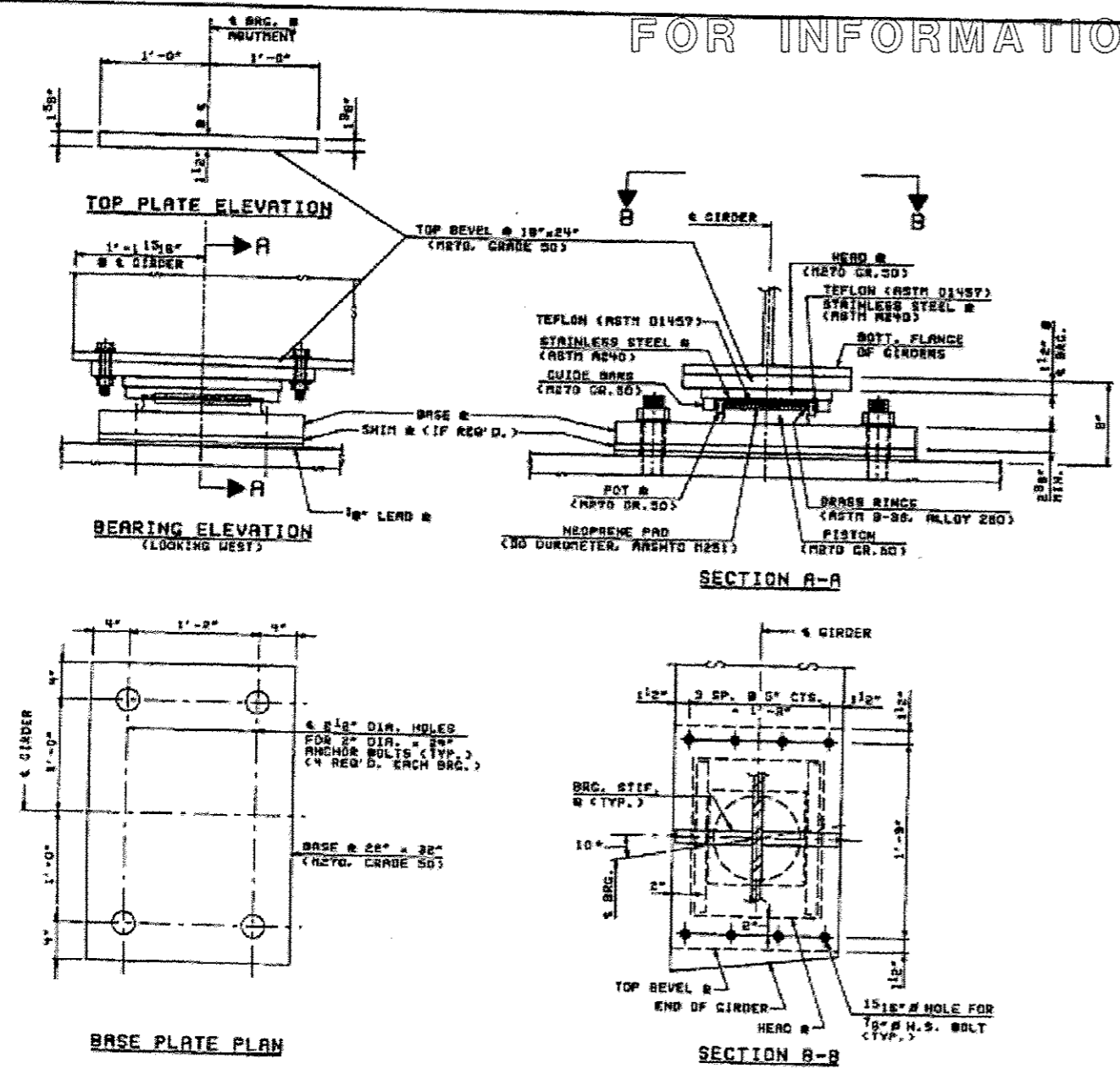
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING BRIDGE PLANS
SN: 052-0063**

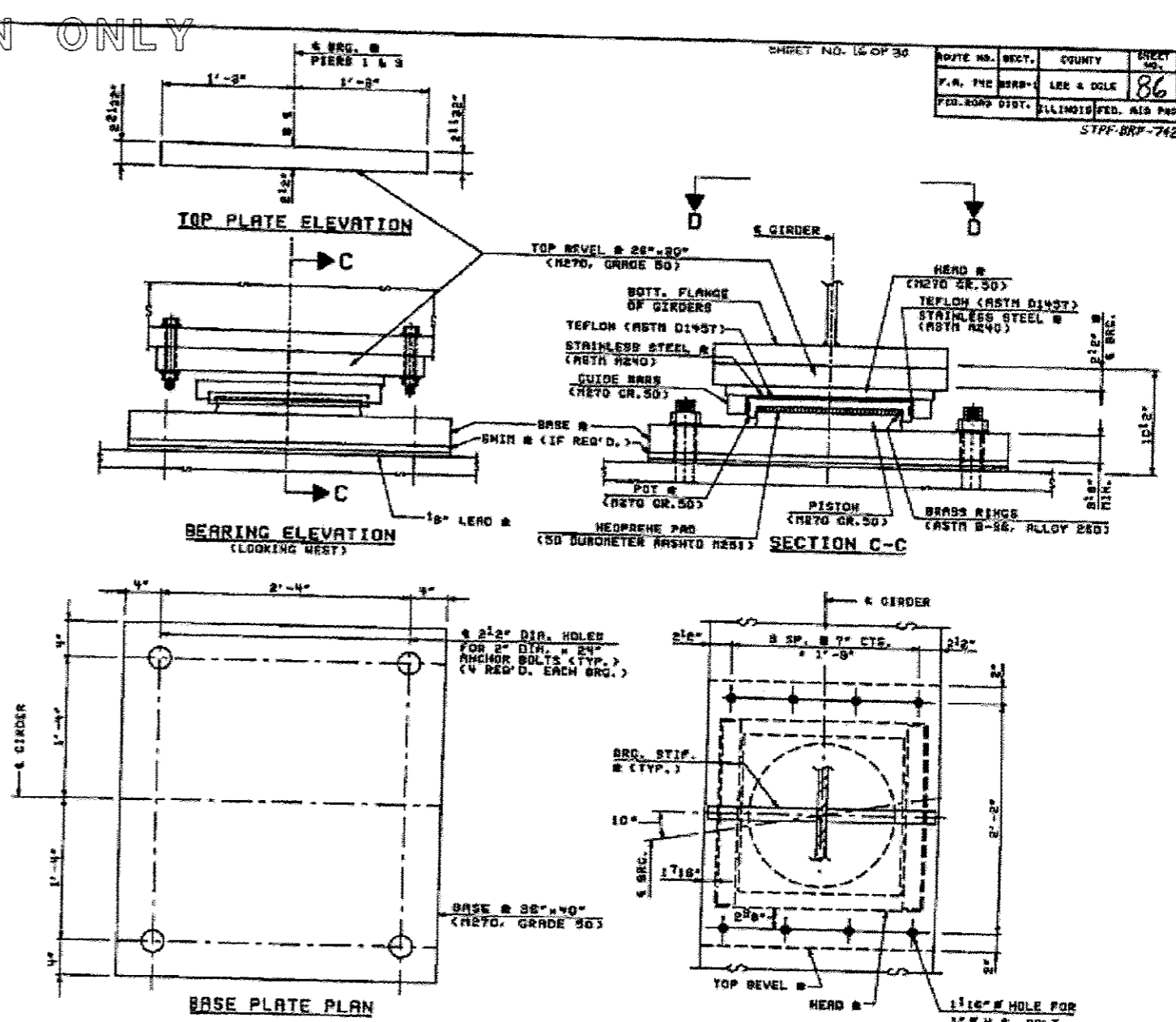
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-1	LEE / OGLE	LEE / OGLE	25	17
CONTRACT NO. 64J52				
ILLINOIS				

FOR INFORMATION ONLY

SHEET NO. 12 OF 30		ROUTE NO.	SECT.	COUNTY	SHEET NO.	TOTAL SHEETS
		F.A. P.C. 398B-1	LEE & OGLE	ILLINOIS	86	90
		STPF-BRP-742(25)				



FLOATING BEARINGS - GUIDED EXPANSION @ ABUTMENTS
 (FOR ALL GIRDERS - 2-2-10 REQUIRED)
 (S. ABUTMENT SHOWN, SCHLAK AT N. ABUTMENT)



FLOATING BEARINGS - GUIDED EXPANSION @ PIERS 1 & 3
 (FOR ALL GIRDERS - 2-2-10 REQUIRED)

BEARING DATA
N. ABUT. & S. ABUT.

MIN. DEAD LOADS	114 KIPS
MAX. DEAD LOADS	133 KIPS
LIVE LOAD + IMP	99 KIPS
TOTAL - MAXIMUM	230 KIPS

TRANSVERSE LOADS-(MAX.)	
WIND	14 KIPS
OR EARTHQUAKE	27 KIPS

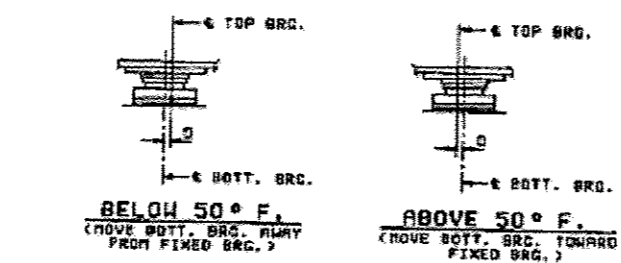
NOTATION
 MOVEMENT-(LONGITUDINAL) = 0.02 RADIAN
 MOVEMENT-(TRANSVERSE) = 0.25 INCHES

BEARING DATA
PIERS 1 & 3

MIN. DEAD LOADS	485 KIPS
MAX. DEAD LOADS	505 KIPS
LIVE LOAD + IMP	220 KIPS
TOTAL - MAXIMUM	725 KIPS

TRANSVERSE LOADS-(MAX.)	
WIND	32 KIPS
OR EARTHQUAKE	101 KIPS

NOTATION
 MOVEMENT-(LONGITUDINAL) = 0.02 RADIAN
 MOVEMENT-(TRANSVERSE) = 0.25 INCHES



SETTING ANCHOR BOLTS AT EXP. BRG.
 D = 1/8" PER EACH 100' OF EXPANSION FOR EVERY 15° TEMP. CHANGE FROM THE NORMAL TEMP. OF 30° F.

- NOTES:**
- ALL DETAILED DESIGN COMPUTATIONS, DRAWINGS & INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 - SEE DUC. NO. CD-25 FOR ANCHOR BOLT DETAILS.
 - CONTRACTOR IS RESPONSIBLE FOR ADJUSTING DIMENSIONS AS REQUIRED IN THE FIELD FOR THE ACTUAL BEARINGS USED (INCLUDING BEAT ELEVATIONS). DIMENSIONS TO BE ADJUSTED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF BEARINGS.
 - BEARING DIMENSIONS SUCH AS DIAMETER OF BRASS RINGS, PISTON, POT PLATE, HEAD PLATE, GUIDE BARS, NEOPRENE PAD, TEFLON, STAINLESS STEEL PLATE, ETC. SHALL BE AS PER MANUFACTURER FOR GIVEN BEARING DESIGN DATA.

BILL OF MATERIAL

ITEM	UNIT	LEE COUNTY		OGLE COUNTY		TOTAL
		N. ABUT.	S. ABUT.	N. ABUT.	S. ABUT.	
FLOATING BEARINGS, GUIDED EXPANSION (750 KIPS)	EACH	3	5	3	5	10
FLOATING BEARINGS, GUIDED EXPANSION (850 KIPS)	EACH	3	3	3	3	10

REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
FLOATING BEARING DETAILS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 398B-1		
STRUCTURE NUMBER 052-0063		
STEINMAN SYDNOR INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-18	SCALE N.T.S.	DATE 4-19-92
		SHEET NO. 12

CHECKED BY: RJR
 DRAFTED BY: RJR
 ESTIMATED BY: RRP
 CHECKED BY: RRP
 DRAFTED BY: RRP

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

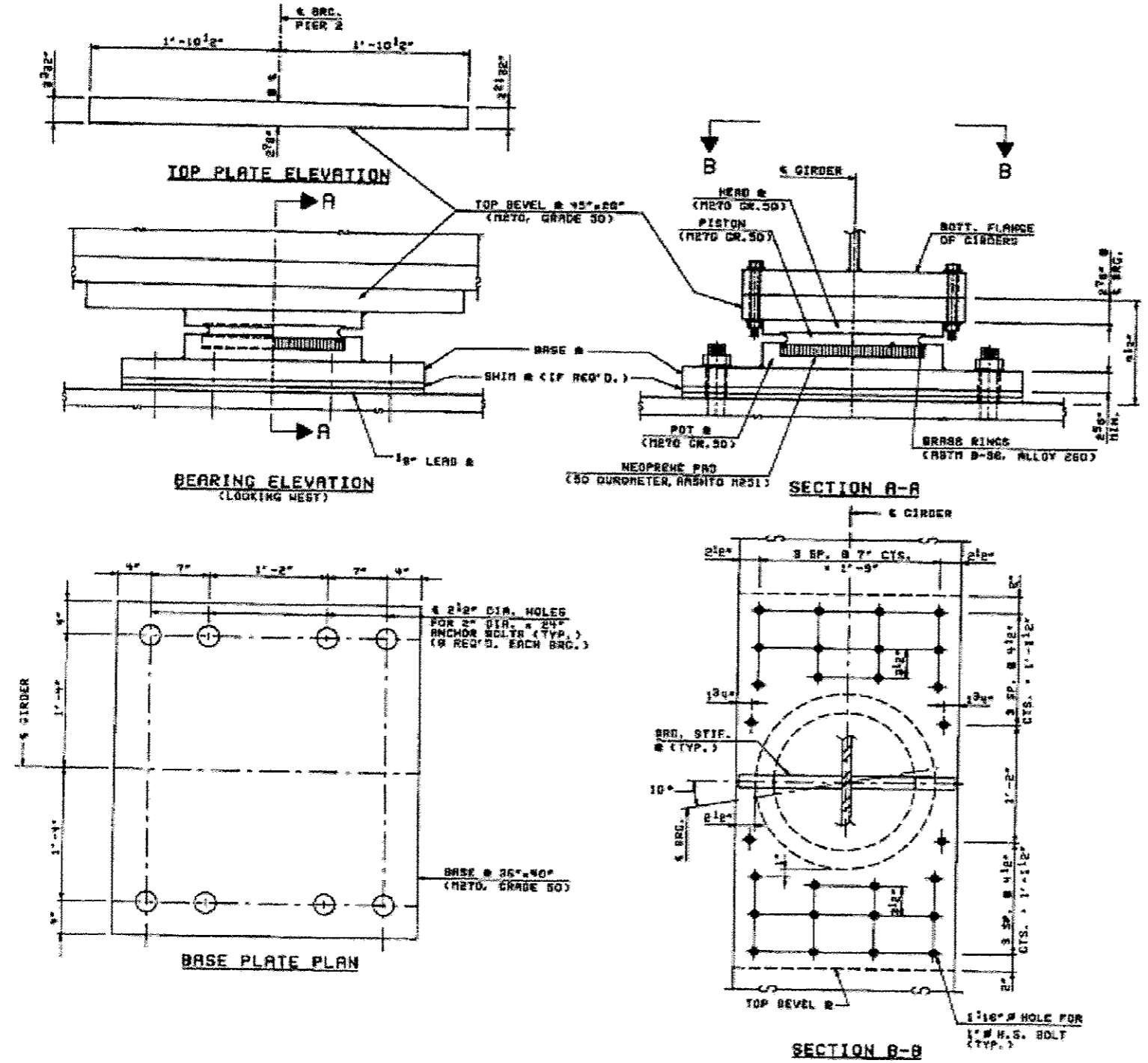
EXISTING BRIDGE PLANS
SN: 052-0063

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	18	
CONTRACT NO. 64J52				

FOR INFORMATION ONLY

SHEET NO. 17 OF 30

ROUTE NO.	DIST.	COUNTY	SHEET NO.	TOTAL SHEETS
F.A. 742	398B-1	LEE & OGLE	86	41
FED. ROAD DIST.		ILLINOIS FED. AID PROJECT		
STPP-BRF-742(26)				



BEARING DATA

PIER 2

MIN. DEAD LOADS	=	454 KIPS
MAX. DEAD LOADS	=	325 KIPS
LIVE LOAD + IMP	=	235 KIPS
TOTAL - MAXIMUM	=	760 KIPS

LONGITUDINAL LOADS-(MAX.)

WIND	=	48 KIPS
OR EARTHQUAKE	=	381 KIPS

OR

TRANSVERSE LOADS-(MAX.)

WIND	=	27 KIPS
OR EARTHQUAKE	=	105 KIPS

ROTATION = 0.02 RADIANS

MOVEMENT-(LONGITUDINAL) = — INCHES

MOVEMENT-(TRANSVERSE) = 0.25 INCHES

BILL OF MATERIAL

ITEM	UNIT	LEE COUNTY		OGLE COUNTY		TOTAL
		PIER 2	PIER 2	PIER 2	PIER 2	
FLOATING BEARINGS, FIXED (800 KIPS)	EACH	2.5	2.5	2.5	2.5	5

FLOATING BEARINGS - FIXED @ PIER 2
(FOR ALL GIRDERS - 2 REQUIRED)

- NOTES:**
- ALL DETAILED DESIGN COMPUTATIONS, DRAWINGS & INSTALLATION PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 - SEE DWG. NO. CD-29 FOR ANCHOR BOLT DETAILS.
 - ANCHOR BOLTS AT FIXED BEARINGS MAY BE BUILT INTO THE MASONRY.
 - CONTRACTOR IS RESPONSIBLE FOR ADJUSTING DIMENSIONS AS REQUIRED IN THE FIELD FOR THE ACTUAL BEARINGS USED (INCLUDING BEARING ELEVATIONS). DIMENSIONS TO BE ADJUSTED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OF BEARINGS.
 - BEARING DIMENSIONS SUCH AS DIAMETER OF BRASS RINGS, PISTON, POT PLATE, HEAD PLATE, GUIDE BRG, NEOPRENE PAD, TEFLO, STAINLESS STEEL PLATE ETC. SHALL BE AS PER MANUFACTURER FOR GIVEN BEARING DESIGN DATA.

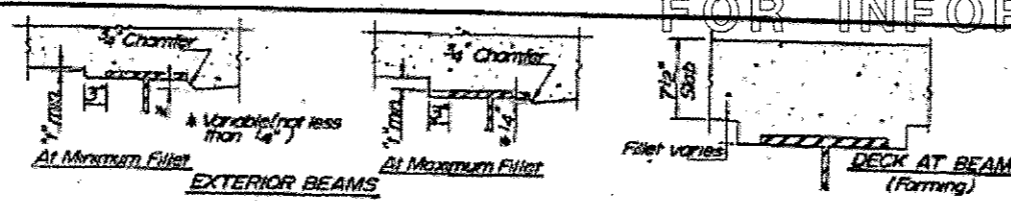
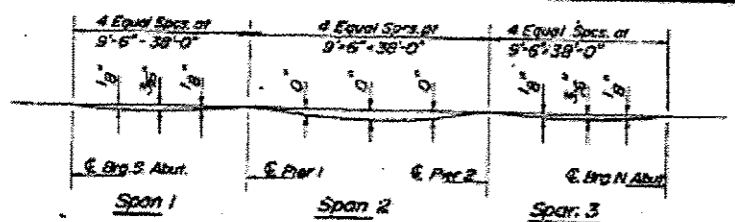
REVISION	DATE	DESCRIPTION
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		
FLOATING BEARING DETAILS		
GRAND DETOUR BRIDGE OVER ROCK RIVER F.A. RTE. 742 SECTION 398B-1 STA. 1228+96 LEE & OGLE COUNTIES STRUCTURE NUMBER 052-0063		
STEINMAN BOYNTON INC. CONSULTING ENGINEERS - CHICAGO, ILLINOIS		
DRAWING NO. GD-19	SCALE	DATE 4-19-93
		SHEET NO. 41

DESIGNED -	REVISIONS -
DRAWN -	
CHECKED -	
DATE -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING BRIDGE PLANS
SN: 052-0063**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-1	LEE / OGLE	25	19	
CONTRACT NO. 64J52				



METHOD OF DETERMINING FILLET HEIGHTS "f"
After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the station shown on Sheet 4. These elevations subtracted from the Theoretical Grade Elevations Adjusted for Dead Load Deflection shown on Sheet 4, minus floor thickness equals the fillet heights above top flange of beams.

DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete slab only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevation adjusted for dead load deflection as shown below.

SCREENED INFORMATION FOR BEAM OR GIRDER = 01

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
277A	194822.508	25.667	687.880	687.500
ERG SA	194825.309	25.667	687.880	687.500
A	194826.175	25.667	687.880	687.500
B	194844.850	25.667	687.880	687.500
C	194854.723	25.667	687.880	687.500
PIER1	194881.922	25.667	687.880	687.500
D	194871.812	25.667	687.880	687.500
E	194881.441	25.667	687.880	687.500
F	194881.207	25.667	687.880	687.500
PIER2	194885.255	25.667	687.880	687.500
G	194885.748	25.667	687.880	687.500
H	194815.810	25.667	687.880	687.500
I	194822.770	25.667	687.880	687.500
ERG NA	194825.078	25.667	687.880	687.500
ER NA	194826.607	25.667	687.880	687.500

SCREENED INFORMATION FOR BEAM OR GIRDER = 02

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194829.282	18.333	687.150	687.150
ERG SA	194829.111	18.333	687.150	687.150
A	194829.800	18.333	687.150	687.150
B	194829.825	18.333	687.150	687.150
C	194829.850	18.333	687.150	687.150
PIER1	194829.875	18.333	687.150	687.150
D	194829.900	18.333	687.150	687.150
E	194829.925	18.333	687.150	687.150
F	194829.950	18.333	687.150	687.150
PIER2	194829.975	18.333	687.150	687.150
G	194829.950	18.333	687.150	687.150
H	194822.830	18.333	687.150	687.150
I	194822.855	18.333	687.150	687.150
ERG NA	194824.328	18.333	687.150	687.150
ER NA	194824.981	18.333	687.150	687.150

SCREENED INFORMATION FOR BEAM OR GIRDER = 04

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194833.788	3.667	688.270	688.270
ERG SA	194833.623	3.667	688.270	688.270
A	194846.631	3.667	688.270	688.270
B	194868.888	3.667	688.270	688.270
C	194888.985	3.667	688.270	688.270
PIER1	194873.887	3.667	688.270	688.270
D	194883.883	3.667	688.270	688.270
E	194883.820	3.667	688.270	688.270
F	194883.788	3.667	688.270	688.270
PIER2	194881.724	3.667	688.270	688.270
G	194881.682	3.667	688.270	688.270
H	194881.654	3.667	688.270	688.270
I	194841.818	3.667	688.270	688.270
ERG NA	194840.851	3.667	688.270	688.270
ER NA	194853.024	3.667	688.270	688.270

SCREENED INFORMATION FOR BEAM OR GIRDER = 06

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194841.490	-11.000	688.390	688.390
ERG SA	194844.394	-11.000	688.390	688.390
A	194854.493	-11.000	688.390	688.390
B	194874.593	-11.000	688.390	688.390
C	194874.594	-11.000	688.390	688.390
PIER1	194882.115	-11.000	688.390	688.390
D	194892.217	-11.000	688.390	688.390
E	194892.320	-11.000	688.390	688.390
PIER2	194892.424	-11.000	688.390	688.390
F	194892.473	-11.000	688.390	688.390
G	194892.473	-11.000	688.390	688.390
H	194840.885	-11.000	688.390	688.390
I	194880.782	-11.000	688.390	688.390
ERG NA	194885.879	-11.000	688.390	688.390
ER NA	194882.434	-11.000	688.390	688.390

SCREENED INFORMATION FOR BEAM OR GIRDER = 07

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194845.400	-18.333	684.950	684.950
ERG SA	194845.327	-18.333	684.950	684.950
A	194858.404	-18.333	684.950	684.950
B	194858.822	-18.333	684.950	684.950
C	194878.830	-18.333	684.950	684.950
PIER1	194885.303	-18.333	684.950	684.950
D	194886.475	-18.333	684.950	684.950
E	194886.648	-18.333	684.950	684.950
F	194874.528	-18.333	684.950	684.950
PIER2	194882.100	-18.333	684.950	684.950
G	194882.100	-18.333	684.950	684.950
H	194845.294	-18.333	684.950	684.950
I	194885.403	-18.333	684.950	684.950
ERG NA	194883.101	-18.333	684.950	684.950
ER NA	194887.191	-18.333	684.950	684.950

SCREENED INFORMATION FOR BEAM OR GIRDER = END JT

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194847.379	-22.000	684.730	684.730
ERG SA	194850.312	-22.000	684.730	684.730
A	194850.313	-22.000	684.730	684.730
B	194870.710	-22.000	684.730	684.730
C	194880.918	-22.000	684.730	684.730
PIER1	194888.417	-22.000	684.730	684.730
D	194888.823	-22.000	684.730	684.730
E	194888.822	-22.000	684.730	684.730
F	194819.042	-22.000	684.730	684.730
PIER2	194887.178	-22.000	684.730	684.730
G	194887.380	-22.000	684.730	684.730
H	194847.800	-22.000	684.730	684.730
I	194887.823	-22.000	684.730	684.730
ERG NA	194885.309	-22.000	684.730	684.730
ER NA	194888.522	-22.000	684.730	684.730

SCREENED INFORMATION FOR BEAM OR GIRDER = 08

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194849.356	-25.667	684.510	684.510
ERG SA	194852.308	-25.667	684.510	684.510
A	194852.843	-25.667	684.510	684.510
B	194872.790	-25.667	684.510	684.510
C	194883.819	-25.667	684.510	684.510
PIER1	194880.543	-25.667	684.510	684.510
D	194890.785	-25.667	684.510	684.510
E	194891.020	-25.667	684.510	684.510
F	194892.438	-25.667	684.510	684.510
PIER2	194892.438	-25.667	684.510	684.510
G	194892.438	-25.667	684.510	684.510
H	194849.241	-25.667	684.510	684.510
I	194890.108	-25.667	684.510	684.510
ERG NA	194888.401	-25.667	684.510	684.510
ER NA	194872.008	-25.667	684.510	684.510

SCREENED INFORMATION FOR BEAM OR GIRDER = 05

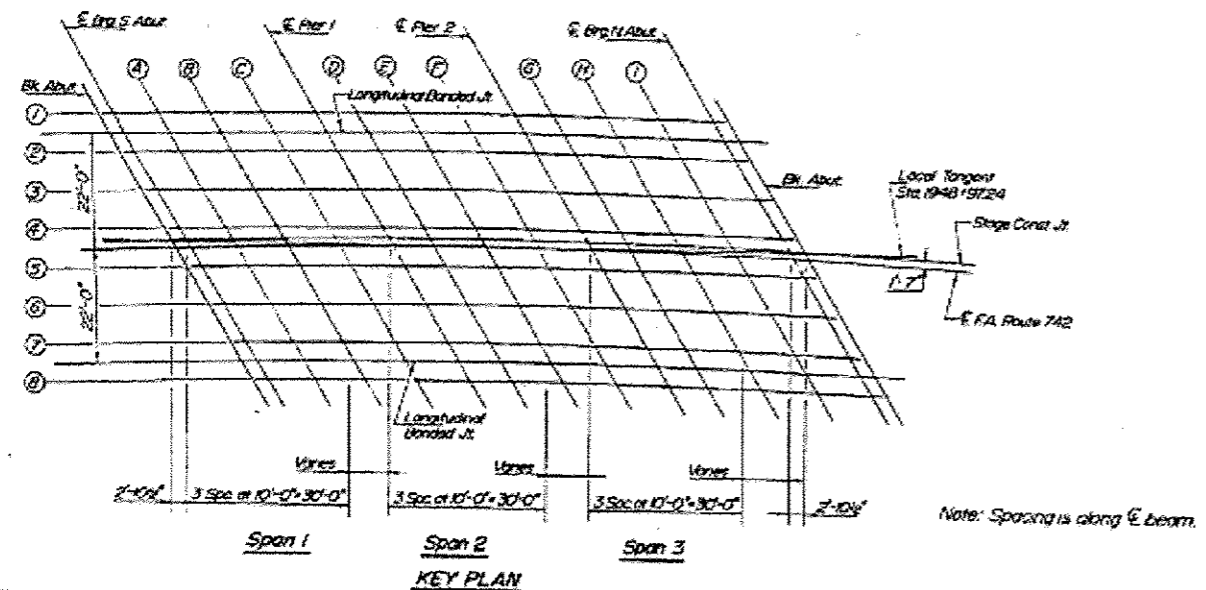
LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194834.823	1.500	688.140	688.140
ERG SA	194837.784	1.500	688.140	688.140
A	194847.781	1.500	688.140	688.140
B	194857.787	1.500	688.140	688.140
C	194867.784	1.500	688.140	688.140
PIER1	194878.080	1.500	688.140	688.140
D	194888.077	1.500	688.140	688.140
E	194888.048	1.500	688.140	688.140
F	194885.049	1.500	688.140	688.140
PIER2	194882.003	1.500	688.140	688.140
G	194882.989	1.500	688.140	688.140
H	194882.974	1.500	688.140	688.140
I	194882.974	1.500	688.140	688.140
ERG NA	194882.248	1.500	688.140	688.140
ER NA	194884.480	1.500	688.140	688.140

SCREENED INFORMATION FOR BEAM OR GIRDER = 03

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194836.704	0.000	688.710	688.710
ERG SA	194838.579	0.000	688.710	688.710
A	194848.579	0.000	688.710	688.710
B	194858.579	0.000	688.710	688.710
C	194868.579	0.000	688.710	688.710
PIER1	194878.579	0.000	688.710	688.710
D	194888.579	0.000	688.710	688.710
E	194898.579	0.000	688.710	688.710
F	194898.579	0.000	688.710	688.710
PIER2	194898.579	0.000	688.710	688.710
G	194898.579	0.000	688.710	688.710
H	194823.891	0.000	688.710	688.710
I	194823.891	0.000	688.710	688.710
ERG NA	194823.891	0.000	688.710	688.710
ER NA	194824.830	0.000	688.710	688.710

SCREENED INFORMATION FOR BEAM OR GIRDER = 09

LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
ERNA	194837.822	-3.667	688.830	688.830
ERG SA	194840.806	-3.667	688.830	688.830
A	194850.839	-3.667	688.830	688.830
B	194870.895	-3.667	688.830	688.830
C	194880.945	-3.667	688.830	688.830
PIER1	194877.977	-3.667	688.830	688.830
D	194888.010	-3.667	688.830	688.830
E	194888.045	-3.667	688.830	688.830
F	194888.078	-3.667	688.830	688.830
PIER2	194818.072	-3.667	688.830	688.830
G	194828.107	-3.667	688.830	688.830
H	194828.142	-3.667	688.830	688.830
I	194846.178	-3.667	688.830	688.830
ERG NA	194824.206	-3.667	688.830	688.830
ER NA	194827.738	-3.667	688.830	688.830



TOP OF SLAB ELEVATIONS
IL. ROUTE 2 OVER MUD CREEK
SECTION 37 BR-3
S.N. 071-0025
OGLE COUNTY

ALLEN HENDERSON & ASSOCIATES CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, ILL. PHONE: (217) 544-8033

DESIGNED -	REVISED -	STATE OF ILLINOIS	EXISTING BRIDGE PLANS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION	SN: 071-0025	IL 2 02	BRIDGE PAINTING 2014-	LEE / OGLE	25	21
CHECKED -	REVISED -							
DATE -	REVISED -							

FOR INFORMATION ONLY

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
EA 742	#	OGLE	40	22
SHEET 8 OF 16 SHEETS				

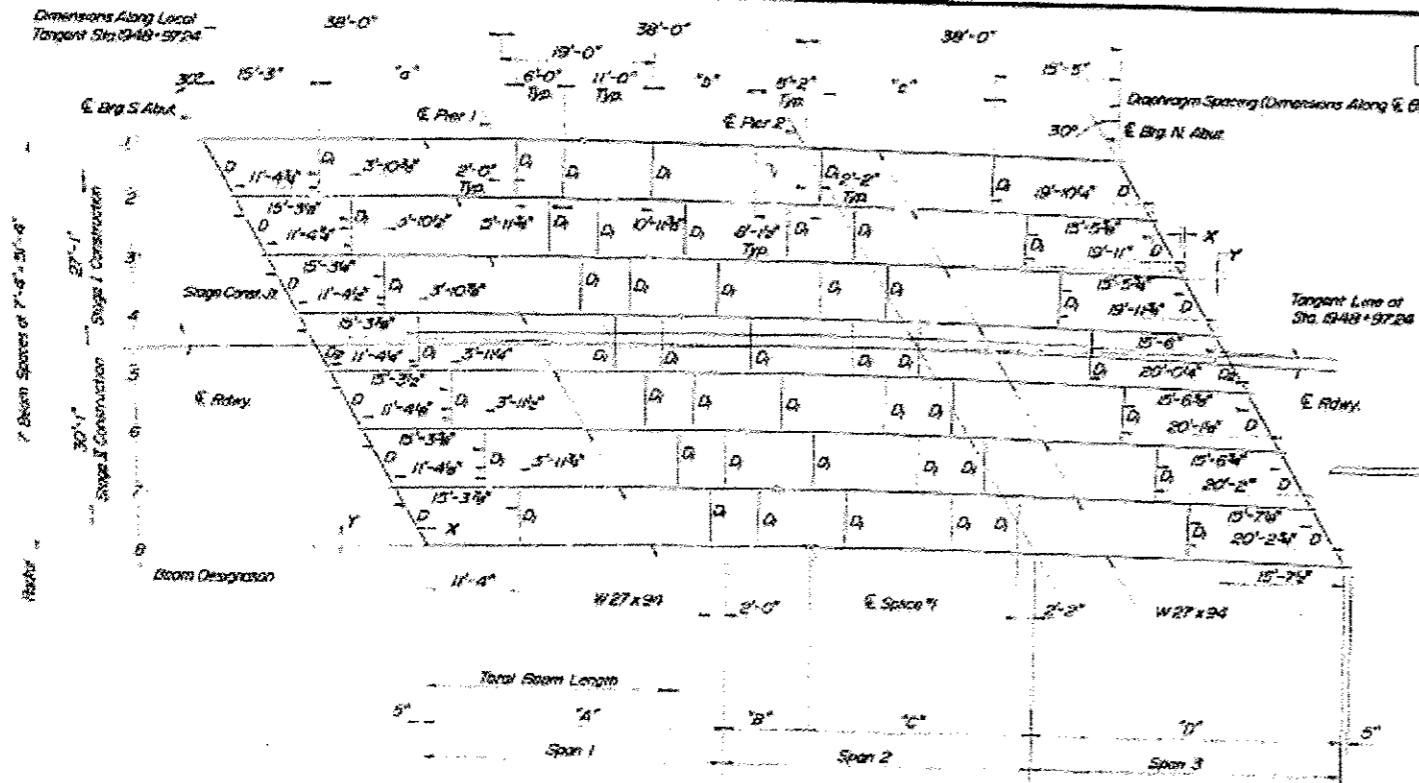
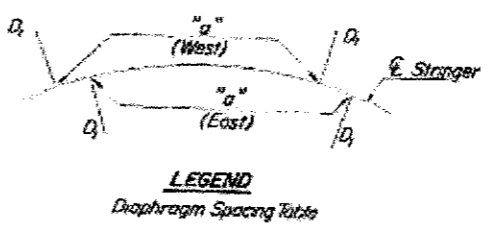


TABLE DIAPHRAGM SPACING

Beam	"a" (East)	"a" (West)	"b" (East)	"b" (West)	"c" (East)	"c" (West)
1	25'-10 1/2"		12'-5"		20'-8 1/2"	
2	24'-0 1/4"	23'-10 1/2"	12'-9 1/4"	12'-7 1/4"	20'-8 1/4"	20'-8 1/4"
3	24'-0 1/4"	23'-11 1/4"	12'-10 1/8"	12'-7 1/4"	20'-9 1/8"	20'-9 1/8"
4	24'-1 1/4"	24'-0 1/4"	12'-11 1/4"	12'-8 1/4"	20'-10 1/8"	20'-9 1/8"
5	24'-1 1/4"	24'-1 1/4"	12'-11 1/4"	12'-9 1/4"	20'-11"	20'-9 1/8"
6	24'-2 1/4"	24'-1 1/4"	13'-0 1/4"	12'-9 1/4"	20'-11 1/8"	20'-9 1/8"
7	24'-2 1/4"	24'-2 1/4"	13'-1 1/4"	12'-11"	21'-0"	20'-9 1/8"
8		24'-3 1/4"		12'-11 1/4"		20'-9 1/8"



NOTES

All dimensions are along E. beam except as noted. Dimensions X and Y are given from the respective Local Tangent of each beam at Sta. 194B+97.24.

Beams shall be fabricated to their respective radii. All dimensions are along the curve except as noted. Work this sheet with sheet nos. 9 & 10.

All diaphragms between Beams 4 & 5 shall be installed during Stage II Construction.

All stringers (W27 x 94) and splice plates shall be A.A.S.H.T.O. M 223 Grade 50.

All diaphragms, connection angles, plates and bearing plates - A.A.S.H.T.O. M 163.

FRAMING PLAN

Note: Notch Toughness Requirements are required for beams 1 thru 8 and all flange and web field splice plates.

BEAM DIMENSIONS

Beam	Radius	"A"	"B"	"C"	"D"	TOTAL BEAM LENGTH (ft)
1	1450.07'	37'-3 3/8"	10'-6"	27'-3"	38'-3 3/8"	113'-3 3/8"
2	1450.73'	37'-3 3/8"	10'-6"	27'-3 3/8"	38'-4 1/8"	113'-5 1/8"
3	1432.40'	37'-4"	10'-6"	27'-4 1/8"	38'-5 1/8"	113'-9"
4	1438.07'	37'-4 1/4"	10'-6"	27'-5 1/8"	38'-6 1/4"	113'-10 1/4"
5	1428.73'	37'-5 1/4"	10'-6"	27'-5 3/8"	38'-7 1/4"	114'-5 1/4"
6	1421.40'	37'-6"	10'-6"	27'-6 1/4"	38'-8 1/4"	114'-7 1/4"
7	1414.07'	37'-6 3/4"	10'-6"	27'-7 1/8"	38'-9 1/8"	114'-9 1/8"
8	1406.73'	37'-7 1/4"	10'-6"	27'-8 1/4"	38'-10"	114'-11 1/4"

LAYOUT DIMENSIONS

Beam	E. Abut. S	E. Pier 1	E. Pier 2	E. Abut. N
1	7'-0 1/2"	1'-0"	0'-3 1/2"	0'-5 1/2"
2	0'-11 1/2"	1'-7 3/8"	0'-2 3/8"	0'-4 3/8"
3	0'-10 1/2"	1'-5 1/2"	0'-1 1/2"	0'-3 1/2"
4	0'-9 1/2"	1'-5 1/2"	0'-1 1/2"	0'-2 1/2"
5	0'-8 1/2"	1'-5 1/2"	0'-1 1/2"	0'-1 1/2"
6	0'-7 1/2"	1'-5 1/2"	0'-1 1/2"	0'-1 1/2"
7	0'-6 1/2"	0'-11 3/8"	0'-0 1/2"	0'-1 1/2"
8	0'-4 1/2"	0'-8 1/2"	0'-0 1/2"	0'-1 1/2"

SPAN LENGTH TABLE

Beam	Span 1	Span 2	Span 3
1	37'-2 1/4"	37'-3"	38'-3 1/4"
2	37'-3 3/8"	37'-9 1/4"	38'-4 1/8"
3	37'-4"	37'-10 1/8"	38'-5 1/8"
4	37'-4 1/4"	37'-11 1/8"	38'-6 1/4"
5	37'-5 1/4"	37'-11 3/8"	38'-7 1/4"
6	37'-6"	38'-0 1/4"	38'-8 1/4"
7	37'-6 3/4"	38'-1 1/8"	38'-9 1/8"
8	37'-7 1/4"	38'-2 1/4"	38'-10"

INTERIOR BEAM MOMENT TABLE

	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.4 Span 3
I_2 (in ⁴)	3270	3270	3270	3270	3270
S_x (in ³)	243	243	243	243	243
S_y (in ³)	124	124	124	124	124
R (in)	1099	1099	1099	1099	1099
M_d (k)	124.01	155.02	153.33	154.42	152.00
M_L (k)	213.6	198.8	173.6	152.5	223.9
M_{IMP} (k)	64.1	47.7	32.7	48.8	67.2
M_a (k)	462.8	344.2	380.0	359.2	485.2
M_o (k)	762.8	649.0	547.1	671.6	603.0
M_{OL} (k)	6.4	1.2	2.0	3.8	8.9
$f_s R$ (ksi)	6.1	7.8	2.0	8.1	6.5
$f_s R_o$ (ksi)	22.85	17.00	18.75	17.39	23.06
f_w (ksi)	6.19	1.16	1.94	3.68	8.61
f_s (total) (ksi)	37.67	25.5	22.3	28.3	37.1
f_s (total) + f_w	43.9	33.2	29.0	34.8	43.3
F_b (ksi)	50	47.5	50	47.5	50

INTERIOR BEAM REACTION TABLE

	Abutments	Piers
R_2 (k)	17.1	48.7
R_4 (k)	34.2	39.9
Impact (k)	10.3	12.0
Total (k)	61.6	102.6

MOMENT TABLE LEGEND

I_2 and S_x are the moment of inertia and section modulus of the section used in computing f_s (Total and Overload).

M_d - Moment due to dead loads on section.

M_L - Moment due to live loads on section.

M_{IMP} - Moment due to impact loads on section.

M_a - Live load impact (I.I).

M_o (Applied Moment) = $1.3(M_d + M_s) + 5/8(M_L + I.I)$

f_s (total) - Sum of stresses due to $1.3(M_d + M_s) + 5/8(M_L + I.I)$.

f_s (Overload) - Sum of stresses due to $M_d + M_s + 5/8(M_L + I.I)$.

F_b - Maximum allowable stress F_{bx} or F_{by} computed according to A.A.S.H.T.O. E Guide Specifications for Horizontally Curved Highway Bridges Section 2.12 (B) and 2.15.1

f_w - Maximum allowable stress F_{wy} or F_{wx} computed according to A.A.S.H.T.O. E Guide Specifications for Horizontally Curved Highway Bridges Section 2.12 (B) and 2.15.1

f_s (total) + f_w is the sum of the stress due to $M_d + M_s + 5/8(M_L + I.I) + 5/8(M_L + I.I)$.

S_b is the section modulus for one flange plate for lateral flange bending.

M_{Lb} is the lateral bending moment for flange plate (factored).

f_w is the calculated normal stress at the edge of flange due to lateral bending (factored).

TOP OF BEAM ELEVATIONS *

Loc.	E. Abut. S	E. Pier 1	E. Span 1	E. Pier 2	E. Abut. N
1	686.89	686.89	686.89	686.89	686.89
2	686.45	686.45	686.45	686.43	686.43
3	686.01	686.01	686.01	686.01	686.01
4	685.57	685.57	685.57	685.57	685.57
5	685.13	685.13	685.13	685.13	685.13
6	684.69	684.69	684.69	684.69	684.69
7	684.25	684.25	684.25	684.25	684.25
8	683.81	683.81	683.81	683.81	683.81

* For fabrication only

ALLEN HENDERSON & ASSOCIATES

CONSULTING CIVIL AND STRUCTURAL ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
SN: 071-0025

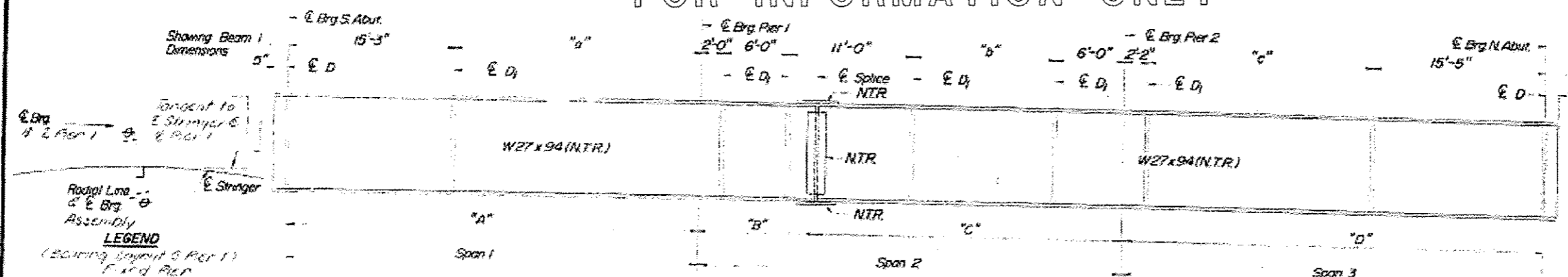
STRUCTURAL STEEL
IL ROUTE 2 OVER MUD CREEK
EA ROUTE 742
SECTION 37 BR-3
SN 071-0025
OGLE COUNTY
(FRAMING PLAN & DETAILS)

DESIGNED -	REVISOR -
DRAWN -	REVISOR -
CHECKED -	REVISOR -
DATE -	REVISOR -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-1	LEE / OGLE		25	23
CONTRACT NO. 64J52				

FOR INFORMATION ONLY

FA 742	OGLE	10	23
SHEET 9 OF 16 SHEETS			



For Dimensions "a", "b", "c" and Beams 2 thru 8 Dimensions, See Sheet No. 8 of 16 Sheets.

Cost of Timber Block Posts are incidental to Structural Steel.

LEGEND
(BEARING BEYOND 5 PER 1)
FIELD PER

Notes: For bearing layout @ S. Abut, Pier 1 & N. Abut, See Sheet No. 10 of 16 Sheets

VALUE OF ϕ
(BEARING PLACEMENT)

LOC.	BK.	#1	#2	#3	#4	#5	#6	#7	#8
E. Brg. N. Abut.	1	30°04'42"	30°15'02"	30°25'20"	30°35'36"	30°45'17"	30°55'28"	31°07'06"	31°18'06"
E. Brg. S. Abut.	2	27°51'18"	28°00'30"	28°09'48"	28°19'12"	28°28'45"	28°38'21"	28°48'06"	28°57'58"
PIER 1	3	26°40'47"	26°50'18"	26°59'25"	27°09'40"	27°19'31"	27°29'29"	27°39'35"	27°49'47"
PIER 2	4	29°19'12"	29°28'45"	29°40'08"	29°49'37"	30°00'00"	30°09'24"	30°19'43"	30°30'56"

DIMENSION I

LOC.	BK.	BTWN 1 & 2	BMS 2 & 3	BTWN 3 & 4	BMS 4 & 5	BTWN 5 & 6	BMS 6 & 7	BTWN 7 & 8
E. Brg. N. Abut.	1	8'-7 1/2"	8'-7 1/2"	8'-7 1/2"	8'-8"	8'-8 1/2"	8'-8 1/2"	8'-8 1/2"
E. Brg. S. Abut.	2	8'-2 1/2"	8'-3 1/2"	8'-3 1/2"	8'-3 1/2"	8'-3 1/2"	8'-3 1/2"	8'-3 1/2"

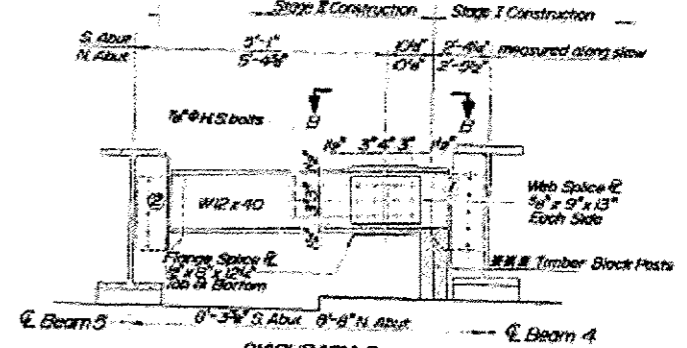
VALUE OF B

LOC.	BK.	BTWN 1 & 2	BTWN 2 & 3	BTWN 3 & 4	BTWN 4 & 5	BTWN 5 & 6	BTWN 6 & 7	BTWN 7 & 8
E. Brg. N. Abut.	1	3'-40'56"	3'-41'27"	3'-42'09"	3'-42'38"	3'-43'08"	3'-43'57"	3'-44'29"
E. Brg. S. Abut.	2	3'-23'04"	3'-23'30"	3'-24'12"	3'-24'56"	3'-25'40"	3'-26'24"	3'-27'08"

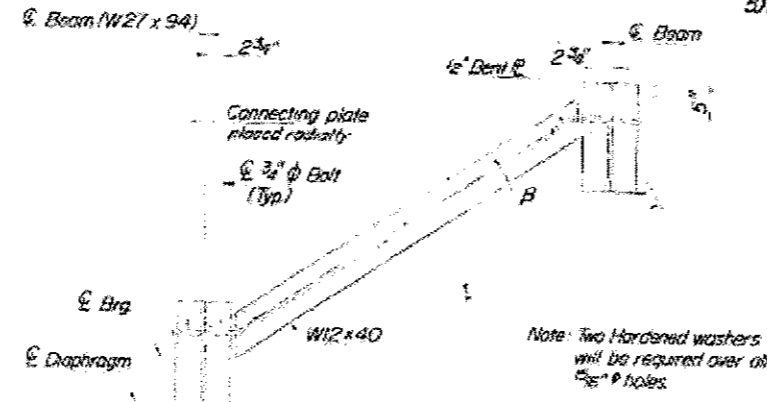
BEAM ELEVATION
For A, B, C & D and Span Dimensions
See Sheet No. 8 of 16 Sheets
Members designated N.T.R. shall conform to the Supplemental Requirements for Fibre Toughness (Zone 2)

DIAPHRAGM D₂ CONSTRUCTION SEQUENCE

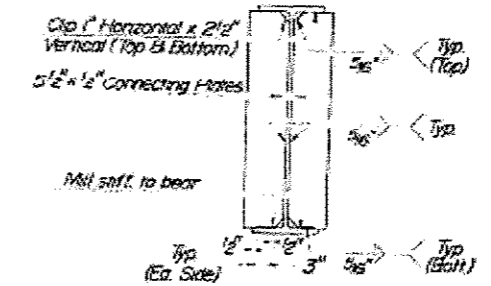
- 1) Order Diaphragm D₂ in two sections with lengths of 4'-6" @ 2'-7" S. Abut. and 5'-1" @ 2'-8" N. Abut.
- 2) Attach section (1) of Diaphragm to Beam #4 and top flange splice @ during Stage I Construction.
- 3) Place Timber Block Posts between section (1) of diaphragm and abutment bearing seat.
- 4) Attach section (2) of diaphragm to both Beam #5 and section (1) of diaphragm during Stage II Construction with splice plates.
- 5) Remove Timber Block Posts.



DIAPHRAGM D₂
2 Required (Facing South)
For details of connections to beams see Diaphragm D



SECTION A-A

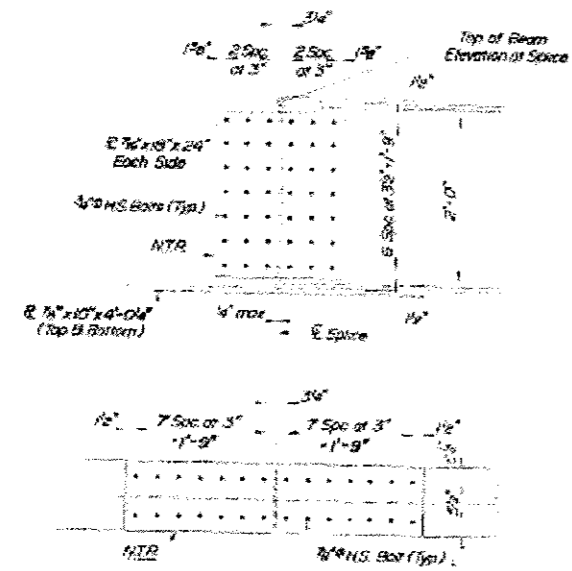


SECTION AT ABUTMENT

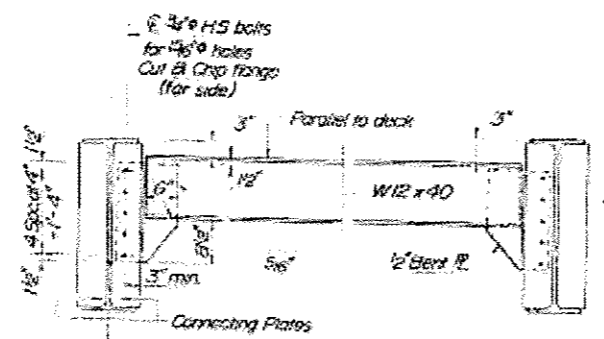
Note: Connecting Plate at Beams 1 & 8 on Inside Face of Web only.

Notes: Work this sheet with Sheet No. 11 & 12 of 16
All connecting holes for Diaphragms shall be 5/8". Two hardened washers shall be required over all oversize holes.

All stringers, flange splice plates, web splice plates - M-223, Grade 50. All Diaphragms and Connection Plates - M-103.
All connecting holes for Diaphragms shall be 5/8". Two hardened washers shall be required over all oversize holes. See Sheet No. 8 of 16 Sheets.

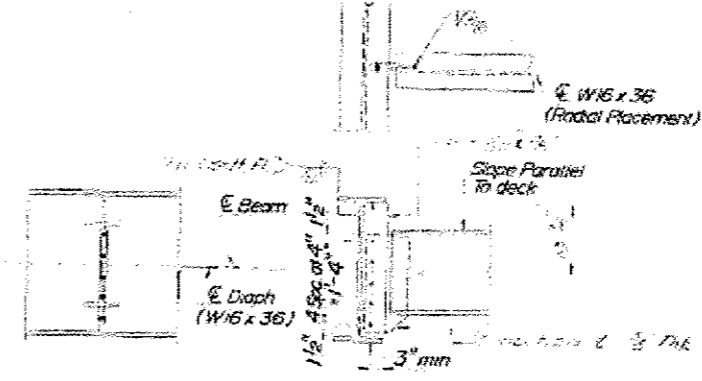


TYPICAL SPLICE DETAIL

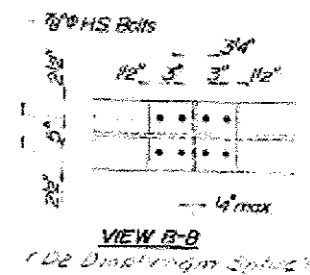


DIAPHRAGM D
(14 Required)

Note: Omit connecting plate at exterior side of exterior beam.



DIAPHRAGM D₂
(42 Required)



VIEW B-B
(D2 Diaphragm Splice)

STRUCTURAL STEEL
L. ROUTE 2 OVER MUD CREEK
FA ROUTE 742
SECTION 37BR-3
S.N. 071-0025
OGLE COUNTY

ALLEN HENDERSON & ASSOCIATES

CONSULTING CIVIL AND STRUCTURAL ENGINEERS
SPRINGFIELD, ILL. PHONE: (217) 544-8033

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

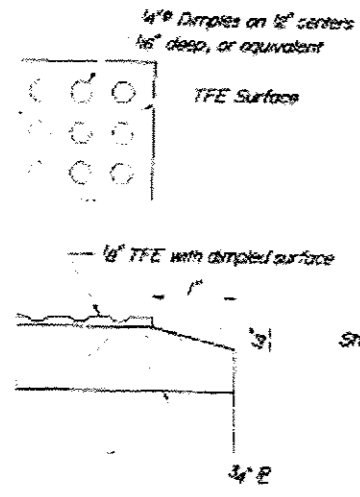
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CHECKED -	REVISED -
DATE -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	24	
CONTRACT NO. 64J52			ILLINOIS	

FOR INFORMATION ONLY

DATE	REVISION	QUANTITY	TOTAL SHEETS	SHEET NO.
#	37 BR-3	OGLE	40	24
* - FA. RTE. 742 (IL. RTE. 2)				

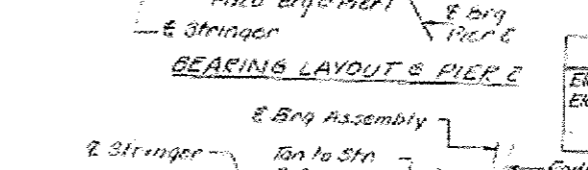
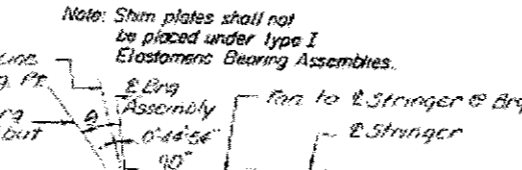
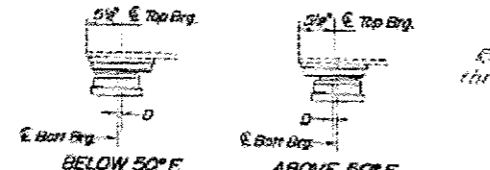
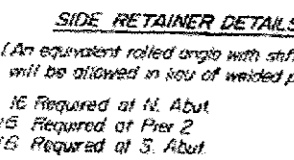
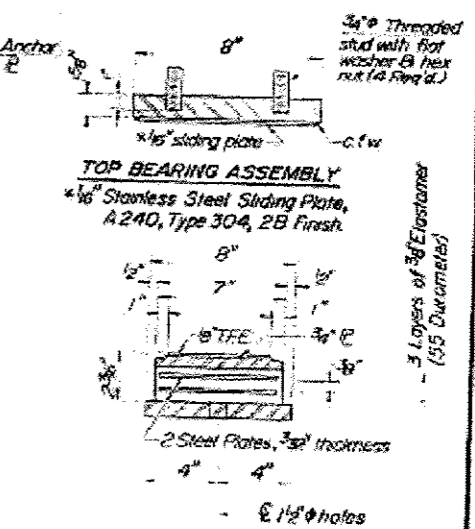
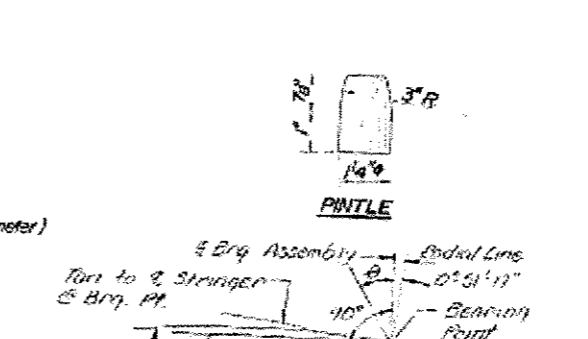
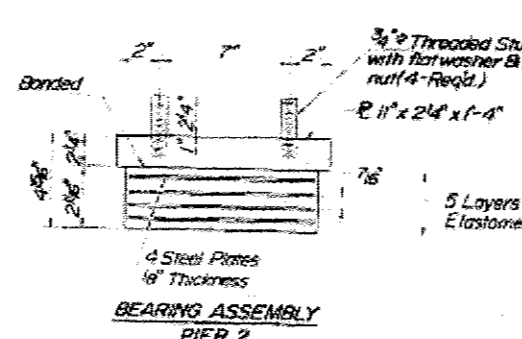
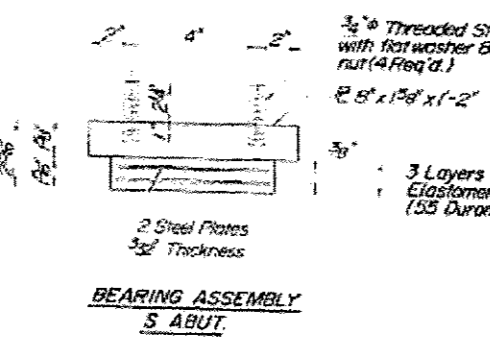
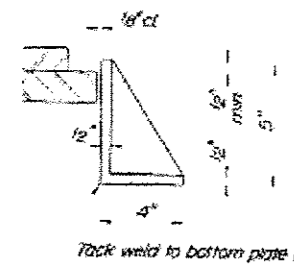
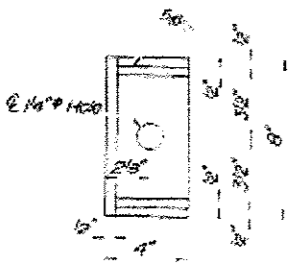
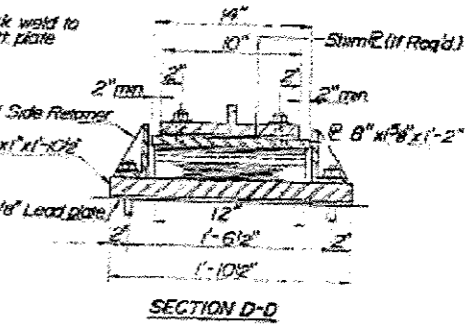
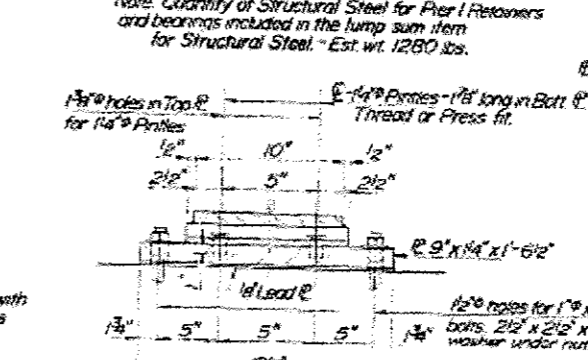
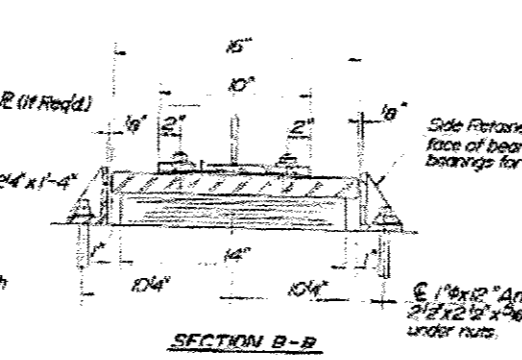
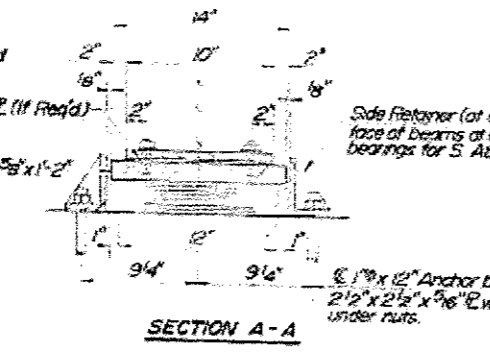
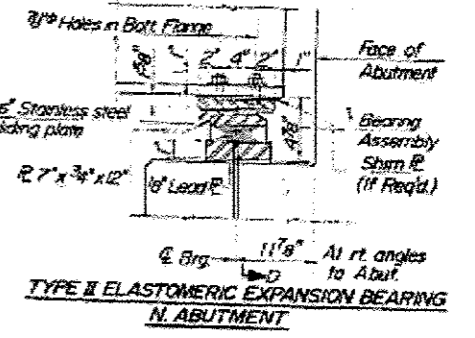
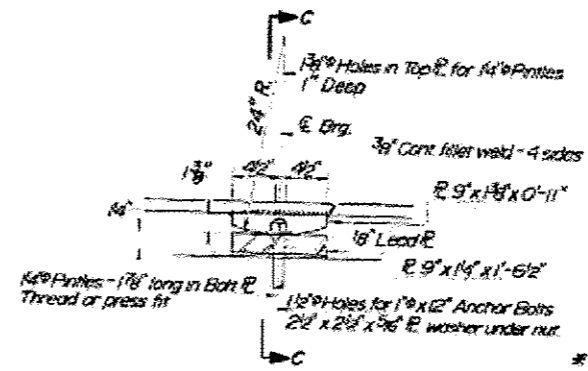
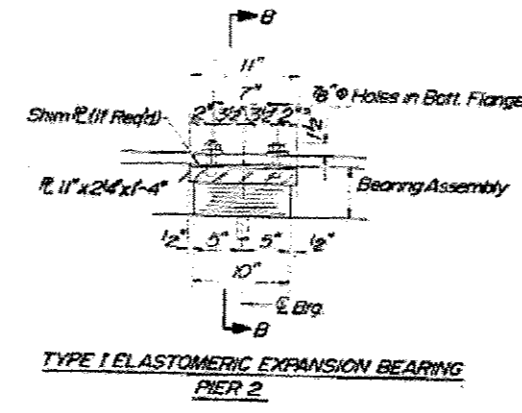
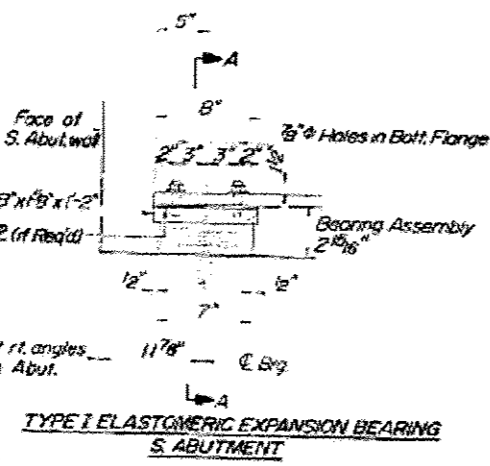
Sheet 10
16 Sheets



Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MILM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

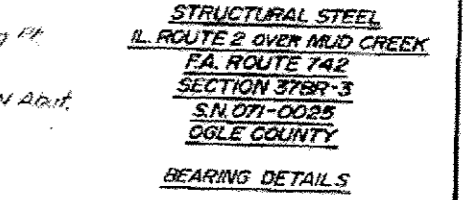
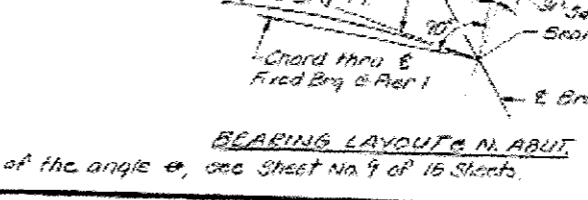
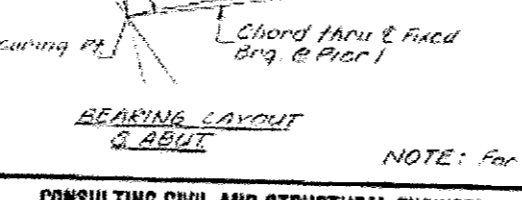
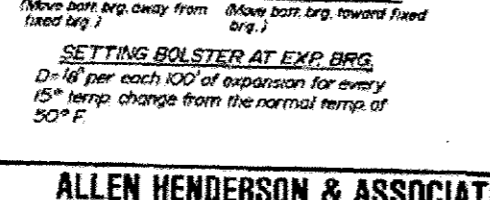
New anchor bolts of new bearing may be built into masonry.

See Sheet No. 15 of 16 for anchor bolt installation.



BILL OF MATERIAL

Item	Quantity
Elastomeric Bearing Assembly, Type I	15
Elastomeric Bearing Assembly, Type II	8



ALLEN HENDERSON & ASSOCIATES

CONSULTING CIVIL AND STRUCTURAL ENGINEERS

SPRINGFIELD, ILL.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS
SN: 071-0025

STRUCTURAL STEEL
IL. ROUTE 2 OVER MUD CREEK
FA. ROUTE 742
SECTION 37BR-3
S.N. 071-0025
OGLE COUNTY

BEARING DETAILS

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 2 D2 BRIDGE PAINTING 2014-	LEE / OGLE	25	25	
CONTRACT NO. 64J52				