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STANDARDS

SEE SHEET NO. 3

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISIONS OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.P. 68 (ILL. 23)
SECTION 1 BR & 1 BR-1
LASALLE COUNTY

PROJECT ACBHF-68(74)

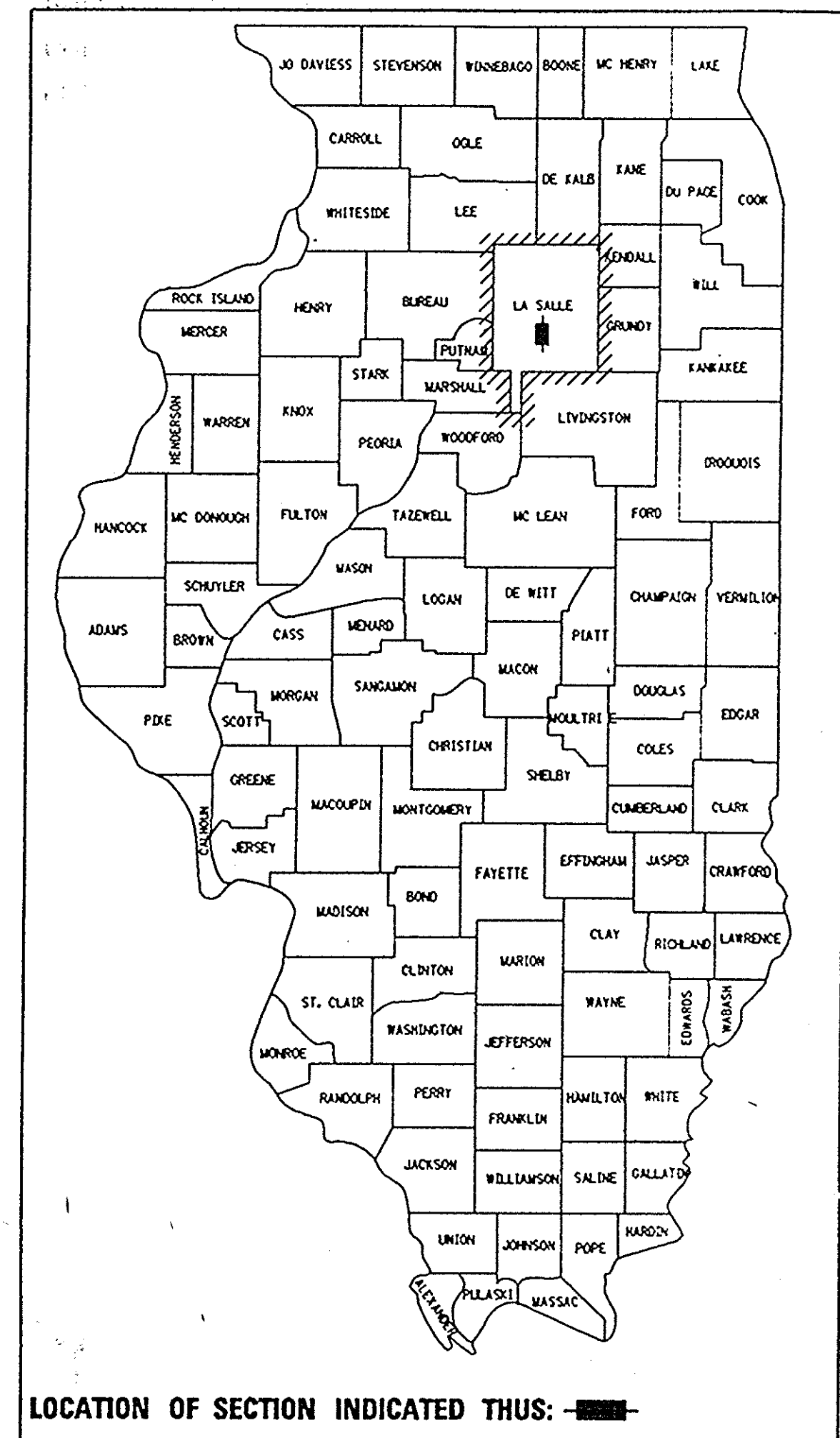
C-93-021-94

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
68	*	LASALLE	53	1

* BR & 1 BR-1

P-93-053-90

D-93-027-93



LOCATION OF SECTION INDICATED THUS:

ADT 5750

P.C. = 89.8% S.U. = 2.0% M.U. = 8.2%

MINOR ARTERIAL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 20 1994
Raymond E. Dalton
DISTRICT ENGINEER

PROJECT DEVELOPMENT AND IMPLEMENTATION SECTION

July 29 1994
Harry Gault
ENGINEER OF DESIGN AND ENVIRONMENT
July 29 1994
James P. St. John
DIRECTOR, DIVISION OF HIGHWAYS

As From SPF 1.0 8/5/94

END CONSTRUCTION
STA. 631+00

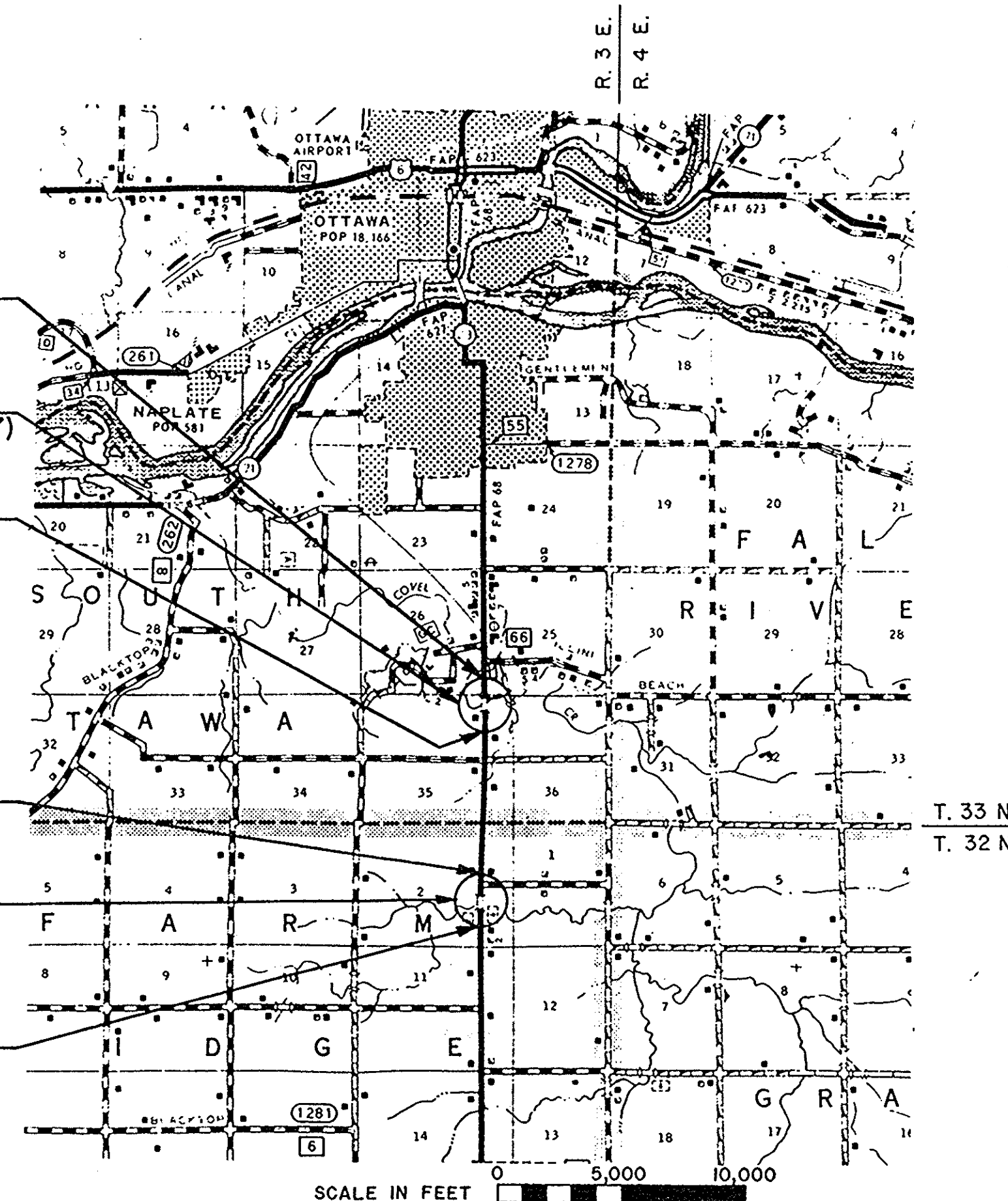
STA. 626+41 F.A.P. 68 IL. 23
OVER COVEL CREEK (S.N. 050-0047)

BEGIN CONSTRUCTION
STA. 622+00

END CONSTRUCTION
STA. 545+50

STA. 542+97 F.A.P. 68 IL. 23
OVER BRANCH OF COVEL CREEK
(S.N. 050-0048)

BEGIN CONSTRUCTION
STA. 540+35



GROSS AND NET LENGTH OF PROJECT: 1,415 FT. = 0.268 MI.

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____

JULIE 1-800-892-0123

DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: STEVE ANDREWS
UNIT CHIEF: MARK YOUNG
TOWNSHIP: SOUTH OTTAWA, FARM RIDGE

CONTRACT NO. 86482

LASALLE COUNTY

SECTION: 1 BR & 1 BR-1

ROUTE: F.A.P. 68 (ILL. 23)

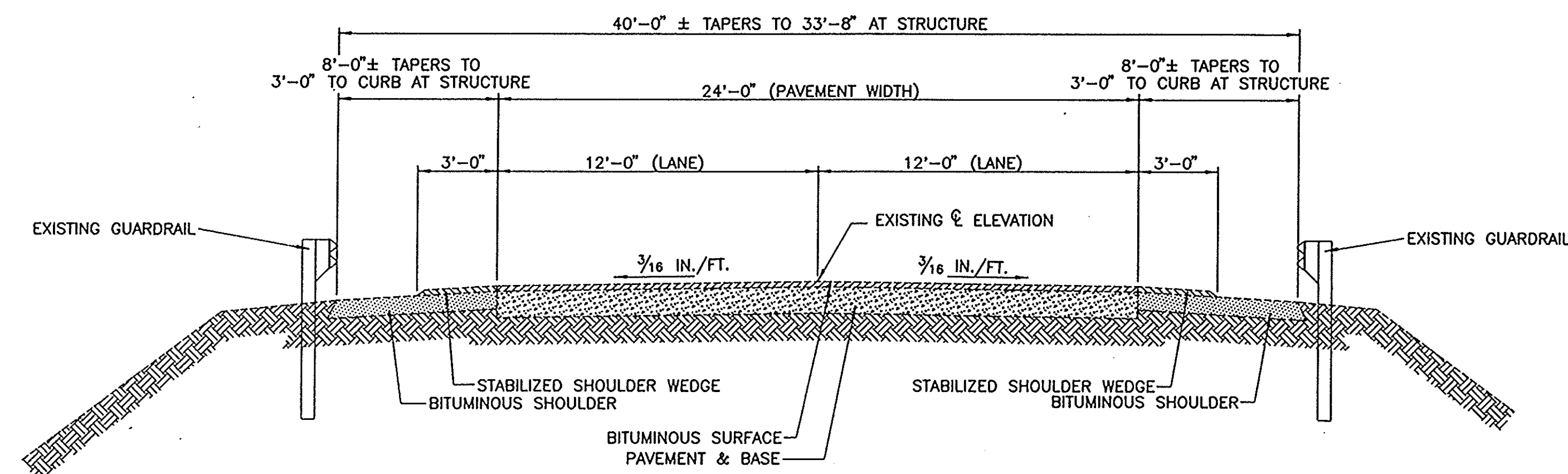
AS BUILT



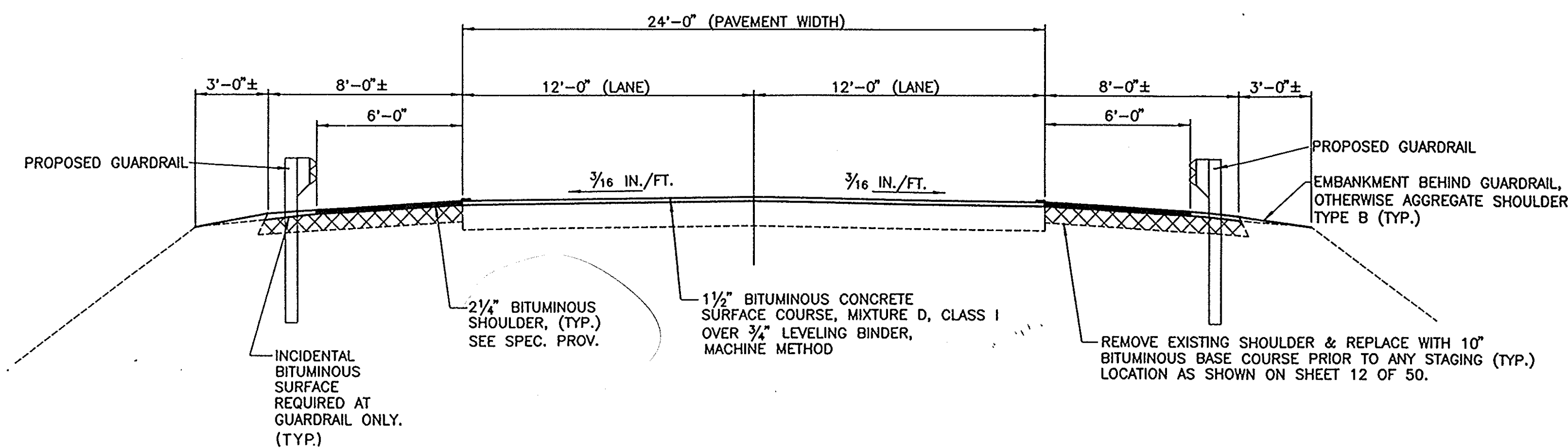
Eugene Gordon
6-7-94

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

ILLINOIS ROUTE 23 STRUCTURE NO. 050-0047



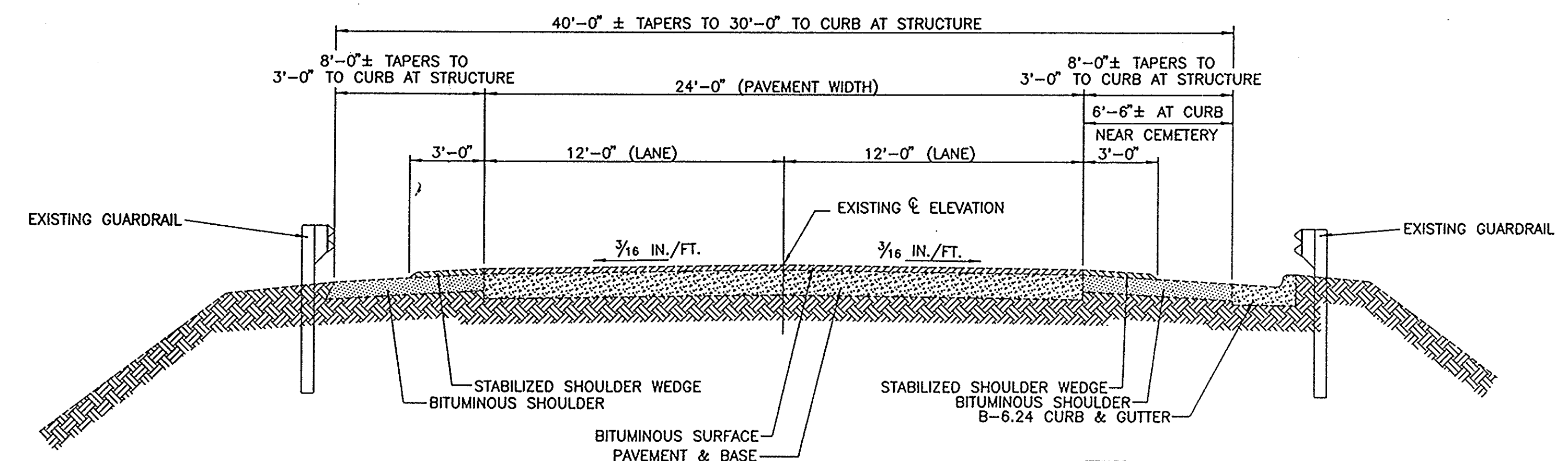
EXISTING TYPICAL SECTION



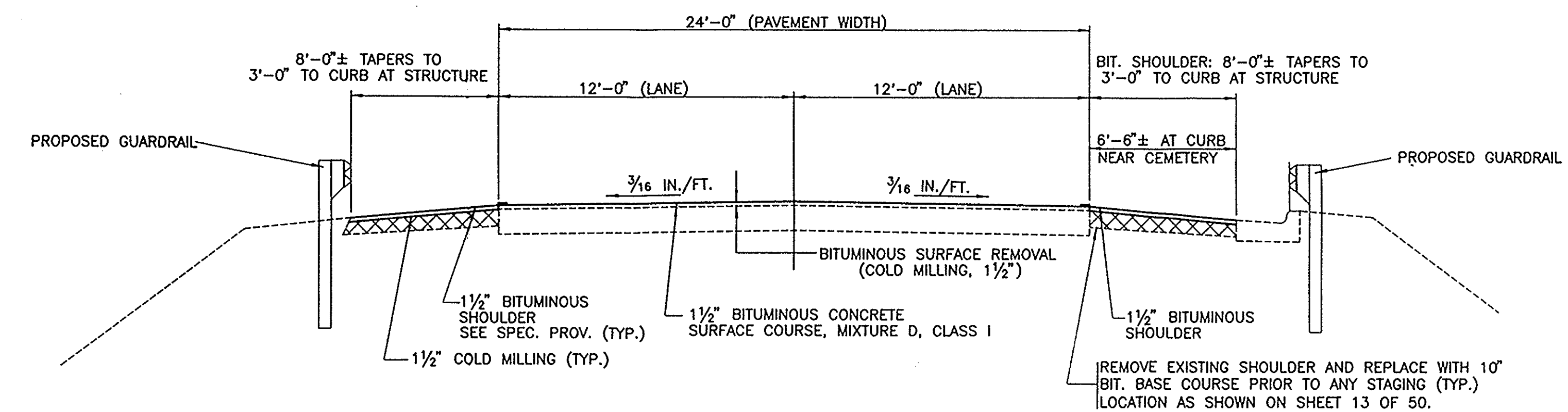
PROPOSED TYPICAL SECTION

ILLINOIS ROUTE 23 STRUCTURE NO. 050-0048

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 68	BR&1BR	LASALLE	53	2
F.H.W.A. REG. 4	ILLINOIS	PROJECT		



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

GENERAL NOTES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	*	LASALLE	53	3
STA. 68	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS			

* 1BR & 1BR-1

HIGHWAY STANDARDS

- 1686-4 SYMBOLS AND ABBREVIATIONS
- 2113-3 DETAIL OF NAME PLATE FOR BRIDGES
- 2135-1 PERMANENT SURVEY MARKERS
- 2228-5 METAL END SECTION FOR PIPE CULVERTS
- 2230-17 STEEL PLATE BEAM GUARDRAIL
- 2258-5 PAVED DITCH
- 2298-10 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE
- 2299-14 DESIGN OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE
- 2300-4 FLAGGER TRAFFIC CONTROL SIGN
- 2301-5 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO-LANE, TWO-WAY, RURAL, DAY OR NIGHT
- 2302-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY, RURAL, DAY OR NIGHT OPERATIONS
- 2303-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, RURAL DAY OPERATIONS ONLY
- 2305-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY, TRAFFIC RURAL MOVING OPERATIONS, DAY OPERATIONS ONLY
- 2306-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, RURAL MOVING OPERATIONS, DAY OPERATIONS ONLY
- 2307-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, SHORT -TIME OPERATIONS, DAY OR NIGHT OPERATIONS
- 2308-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, RURAL DAY MOVING OPERATIONS
- 2309-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, RURAL ONE LANE CLOSURE BRIDGE REPAIR, DAY OR NIGHT
- 2311-10 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO WAY TRAFFIC, WIDENING OF PAVEMENT, DAY OR NIGHT
- 2323-14 PAVEMENT JOINTS
- 2336-5 TRAFFIC BARRIER TERMINAL, TYPE 1
- 2340-5 TRAFFIC BARRIER TERMINAL, TYPE 5 & 5A
- 2370-1 DETAILS OF DETECTOR INSTALLATIONS
- 2381-1 TEMPORARY EROSION CONTROL SYSTEMS
- 2383-4 TEMPORARY CONCRETE BARRIER
- 2394 TYPICAL LAYOUT FOR DETECTOR LOOPS
- 2409-2 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE TWO-LANE, TWO-WAY TRAFFIC, RURAL ONE LANE CLOSURE BRIDGE REPAIR, DAY OR NIGHT
- 2442-2 BRIDGE APPROACH PAVEMENT
- 2443-2 BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)

GENERAL NOTES

THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUB-SECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

ALL SAW CUTTING OF EXISTING PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE MINIMUM SAW CUT DEPTH SHALL BE 1-1/2" UNLESS OTHERWISE SPECIFIED IN THE PLANS.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED.

THE CONTRACTOR SHALL INSPECT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS, TRAFFIC, AND OTHER ITEMS THAT AFFECT THE CONTRACT AND THE CONSTRUCTION OF THE IMPROVEMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.

THE BITUMINOUS SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY AND IN A WORKMANLIKE MANNER; AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN IN THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR WILL BE REQUIRED TO SAW CUT THE BITUMINOUS SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN IN THE PLANS DETAILS. THIS WORK SHALL BE INCIDENTAL TO THE BITUMINOUS QUANTITIES.

ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. THE CONTRACTOR WILL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED. THE VEGETATION SUSTAINING SOIL REQUIRED SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EMBANKMENT.

THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO EMBANKMENT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.

SEEDING WILL NOT BE PERMITTED AT ANYTIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. AREAS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER.

RATES OF APPLICATION

BITUMINOUS MATERIALS (PRIME COAT)	0.08	GALLON PER SQ. YD.
AGGREGATE (PRIME COAT)	0.002	TONS PER SQ. YD.
FERTILIZER		
NITROGEN NUTRIENT	90	POUNDS PER ACRE
PHOSPHORUS NUTRIENT	90	POUNDS PER ACRE
POTASSIUM NUTRIENT	90	POUNDS PER ACRE
BITUMINOUS CONCRETE SURFACE COURSE	112	POUNDS PER SQ. YD. PER INCH OF THICKNESS
LEVEL BINDER (MACHINE METHOD)	112	POUNDS PER SQ. YD. PER INCH OF THICKNESS
GRANULAR MATERIALS	2.05	TONS PER CU. YD.
SHORT TERM PAVEMENT MARKING	4 FT.	PER 40 FT. OF APPLICATION

UTILITIES KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

GTE TELEPHONE COMPANY
AMERITECH
ILLINOIS POWER COMPANY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

REVIEWED BY: *Gregory L. Mount*
DISTRICT STUDIES & PLANS ENGINEER

DATE: MAY 2, 1994

EXAMINED BY: *D. P. Hatcher*
DISTRICT CONSTRUCTION ENGINEER

Joe J. Quinn
DISTRICT MATERIALS ENGINEER

Mark K. Kiser
DISTRICT OPERATIONS ENGINEERS

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers — Aurora, Illinois

REVISIONS

DESIGNED	RTP	DRAWN	JES	APPROVED	DATE 12/14/93	BOOK	SCALE	CAD DWG.	\\IL\93030\NOTES	JOB NO. 222-93030-00
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GENERAL NOTES

F.A.P. 68 IL. 23 SECTION 1BR & 1BR-1 LASALLE COUNTY
STA. 626+41 S.N. 050-0047 STA. 542+92 S.N. 050-0048

SHEET

3

OF 53

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-68	1BR & 1BR-1	LA SALLE	53	4
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES									
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE				FINAL QUANTITY	
				BRIDGE X071 - 2A (1 - BR)	BRIDGE SFTY - 2D (1 BR - 1)	ROADWAY SFTY - 3Q (1 - BR)	ROADWAY SFTY - 3Q (1 BR - 1)		
20100110	TREE REMOVAL (6 TO 15' DIAMETER)	UNIT	79			79		103	
20300100	CHANNEL EXCAVATION	CU. YD.	1435			1293	142	65	
20500150	EMBANKMENT	CU. YD.	308			108	200	0	
20700220	POROUS GRANULAR EMBANKMENT	CU. YD.	81			81		44.6	
25000200	SEEDING, CLASS 2	ACRE	0.4			0.23	0.17	0.6	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	38			22	16	54	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	38			22	16	54	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	38			22	16	54	
25100630	EROSION CONTROL BLANKET	SQ. YD.	1767			988	779	2352.6	
28000300	TEMPORARY DITCH CHECK	EACH	20			20		0	
28000400	PERIMETER EROSION BAR	FOOT	350			350		0	
28100109	STONE RIP RAP, CLASS A	SQ. YD.	725	725				148.9	
28100807	STONE DUMPED RIP RAP, CLASS A	TON	365			365		421.4	
28200100	FILTER FABRIC FOR USE WITH RIP RAP	SQ. YD.	725	725				0	
35500700	BITUMINOUS BASE COURSE	SQ. YD.	620			533	87	673.5	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	380			240	140	430	
40600300	AGGREGATE (PRIME COAT)	TON	10			6	4	3	
40600570	LEVELING BINDER (MACHINE METHOD), MIXTURE C, TYPE 2	TON	58			58		156.2	
40600850	BITUMINOUS CONCRETE BASE COURSE, MIXTURE D, CLASS I, TYPE 2	TON	276		34	148	94	266.2	
40800040	INCIDENTAL BITUMINOUS COATING	TON	32			32		0	
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ. YD.	250			250		250	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ. YD.	32			32		0	
44000006	BITUMINOUS SURFACE REPAIR, 1 1/2"	SQ. YD.	1745				1745	1624.2	
44000030	BITUMINOUS SURFACE REPAIR, VARIABLE DEPTH	SQ. YD.	534			534		620.1	
44000100	PAVEMENT REMOVAL	SQ. YD.	288			288		374.9	
44000910	BITUMINOUS CONCRETE REPAIR (DECK)	SQ. YD.	334		334			334	
44004000	PAVED DITCH REMOVAL	FOOT	193			193		193	
44004250	PAVED SHOULDER REMOVAL	SQ. YD.	620			533	87	683.8	
48101200	AGGREGATE SHOULDER, TYPE B	TON	154			154		101.7	
48201000	BITUMINOUS SHOULDER	TON	181			126	55	120.7	
50101500	REMOVAL OF EXISTING STRUCTURES	EACH	1	1				1	
50102400	CONCRETE REMOVAL	CU. YD.	41.5	25.6	15.9			50.8	
50200100	STRUCTURE EXCAVATION	CU. YD.	58	58				58	
50300100	FLOOR DRAINS	EACH	36	16				36	
50300120	PREFORMED JOINT SEAL, 2 1/2"	FOOT	43			43		43	
50300130	PREFORMED JOINT SEAL, 4"	FOOT	136	93		43		136	
50300225	CONCRETE STRUCTURES	CU. YD.	80.4	80.4				80.4	
50300255	CONCRETE SUPER STRUCTURES	CU. YD.	222.5	207	15.5			222.5	
50300260	BRIDGE DECK GROOVING	SQ. YD.	631	631				631	
50300300	PROTECTIVE COAT	SQ. YD.	406	156		250		173.0	
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	12				12	
50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12	12				12	
50301245	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.	17	6	11			13.52	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L. SUM	1	1				1	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	9705		9705			9705	
50500505	STUD SHEAR CONNECTOR	EACH	3252	3252				3252	
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	9		9			9	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	59680	57660	2020			59680	
50901001	STEEL BRIDGE RAIL	FOOT	208		208			208	
51201400	FURNISHING STEEL PILES 5" X 42	FOOT	62	62				62	
51202700	DRIVING STEEL PILES	FOOT	62	62				62	
51203400	TEST PILE STEEL HP 10 X 42	EACH	1	1				1	
51500100	NAME PLATES	EACH	1	1				1	

SUMMARY OF QUANTITIES				CONSTRUCTION TYPE CODE				FINAL QUANTITY
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	BRIDGE X071 - 2A (1 - BR)	BRIDGE SFTY - 2D (1 BR - 1)	ROADWAY SFTY - 3Q (1 - BR)	ROADWAY SFTY - 3Q (1 BR - 1)	
54213447	END SECTIONS 12"	EACH	4			4		2
55100500	STORM SEWER REMOVAL 12"	FOOT	121			114	7	121
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ. YD.	334		334			334
58700200	BRIDGE SEAT SEALER	SQ. FT.	251	251				251
59000100	EPOXY CRACK SEALING	FOOT	178	28	150			40.4
60100945	PIPE DRAINS 12"	FOOT	159			152	7	159
60900220	TYPE C INLET BOX, STANDARD 2443	EACH	4			4		4
60900515	CONCRETE THRUST BLOCKS	EACH	4			4		0
60104650	SLOPE WALL REMOVAL	SQ. YD.	433	382	51			328.8
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	1787.5			1125	662.5	1612.5
63100035	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	6			2	4	6
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4				4	4
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4					4
63200310	GUARD RAIL REMOVAL	FOOT	2222			1342	880	1342
63300990	REMOVE AND RE-ERECT RAIL ELEMENT OF EXISTING GUARD RAIL	FOOT	375			287.5	87.5	0
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	1			1		1
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL. MO.	8			6	2	7.5
90100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 2306	L. SUM	1			0.5	0.5	1
90100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 2309	EACH	1				1	1
90100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 2409	EACH	1			1		1
90301810	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3960			2930	1030	0
90301830	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	130				130	0
90301900	SHORT - TERM PAVEMENT MARKING	FOOT	144			92	52	200
90400100	TEMPORARY CONCRETE BARRIER	FOOT	550			550		470
90400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	484			484		484
90400300	TEMPORARY CONCRETE BARRIER, TERMINAL SECTION	EACH	2			2		2
* T5020200	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3960			2930	1030	3531
* T5020400	PAINT PAVEMENT MARKING - LINE 6"	FOOT	130				130	440
* T5040100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	14			8	6	17
* T5070100	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	14			8	6	5
* T5080200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTORS	EACH	10			10		10
* T5100300	GUARD RAIL REFLECTORS	EACH	60			36	24	59
Z0002600	BAR SPLICERS	EACH	591	567	24			591
Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ. YD.	37			37		5
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	4			4		0
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ. YD.	75			75		207.2
Z0056200	SAND MODULE IMPACT ATTENUATOR (RELOCATE)	EACH	24				24	24
Z0056400	SAND MODULE IMPACT ATTENUATOR (TEMPORARY)	EACH	24			4		4
Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	4					
X9011210	TEMPORARY TRAFFIC SIGNALS	EACH	2				1	2
X0840200	TRAFFIC BARRIER TERMINAL (SPECIAL)	EACH	4				2	2
S1100300	SLOPE WALL GUARDRAIL ENDS	SQYD	433	382	51			328.8
* - CONSTRUCTION TYPE CODE SFTY-3N				DOLLAR				57.16
* - INDICATES SPECIALTY ITEM				EACH				1
X9311000 LIGHTING				EACH				264.16
FAC05000 CONCRETE REPAIR (CONCRETE, 2084)				DOLLAR				1626.5
FAC04000 REPAIR EXIST FIELD DFC				DOLLAR				1
X9304000 REINFORCE BRIDGE RAIL (-2004)				L SUM				35.5
9301000 FIELD CONNECTOR				SQYD				454.92
9301001 SLOPE WALL VOIDS				DOLLAR				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-68	*	LASALLE	53	5
FED. ROAD DIST. NO.		ILLINOIS PROJECT		

* 1BR & 1BR-1

PAVING SCHEDULE

STATION TO STATION	LENGTH	SURFACE WIDTH	BIT. SURFACE REMOVAL (COLD MILLING) VARIABLE DEPTH	LEVELING BINDER (MACH. METHOD) MIX. C. TYPE 2	BIT. CONCRETE SURFACE COURSE MIX. D. CLASS 1	BITUMINOUS SHOULDER	BITUMINOUS MATERIALS (PRIME COAT)	BRIDGE APPROACH PAVEMENT (SPECIAL)	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	PROTECTIVE COAT	BITUMINOUS BASE COURSE, 1"	AGGREGATE (PRIME COAT)	PAVED SHOULDER REMOVAL	AGGREGATE SHOULDERS, TYPE B	PAVEMENT REMOVAL	INCIDENTAL BITUMINOUS SURFACING
	(FT.)	(FT.)	(SQ. YD.)	(TON)	(TON)	(TON)	(GALLON)	(SQ. YD.)	(SQ. YD.)	(SQ. YD.)	(SQ. YD.)	(TON)	(SQ. YD.)	(TON)	(SQ. YD.)	(TON)
622+00 to 625+18.9	318.9	36-40	267	28	72		68					1.7		75		
		SHOULDER = 8±				55	48					1.2				17
625+18.9 TO 625+24.9	6	24					3		16			0.1				
		SHOULDER = 6.83				4										1
625+24.9 TO 625+54.9	30	37.83						125		125						
627+27.1 TO 627+57.1	30	37.83						125		125						
627+57.1 TO 627+63.1	6	24					3		16			0.1				
		SHOULDER = 6.83				4										1
627+63.1 to 631+00	336.9	36-40	267	30	76		72					1.7		79		
		SHOULDER = 8±				63	48					1.2				13
624+56 TO 625+35,LT.	79	SHOULDER = 6±									71		71			
627+24 TO 628+20,LT.	96	SHOULDER = 6±									175		175			
624+10 TO 625+32,RT.	122	SHOULDER = 6±									109		109			
627+70 TO 628+70,RT.	100	SHOULDER = 6±									178		178			
625+18.92 TO 625+54.92	36	36													144	
627+27.08 TO 627+63.08	36	36													144	
TOTAL			534	58	148	126	240	250	32	250	533	6.0	533	154	288	32

DRAINAGE SCHEDULE

STATION TO STATION	LOCATION	OFFSET FROM CENTERLINE	STORM SEWER REMOVAL 12"	TYPE C INLET BOX STD. 2443	PIPE DRAINS 12"	END SECTION 12"	CONCRETE THRUST BLOCK	STONE DUMPED RIPRAP, CLASS A-4	PAVED DITCH REMOVAL
		(FT.)	FT.	(EACH)	FT.	(EACH)	(EACH)	(TON)	
625+30	LT.	18		1	44	1	1		
625+36	LT.	18	41						
625+52	RT.	18		1	44	1	1		
625+56	RT.	18	40						
627+27	LT.	18	20						
627+31	LT.	18		1	30	1	1		
627+46	RT.	18	13						
627+52	RT.	18		1	34	1	1		
627+46 TO 627+66	RT.	55							20
627+40 TO 629+00	RT.	48-55						175	
622+60 TO 624+60	RT.	± 55						190	173
TOTAL			114	4	152	4	4	365	193

TREE REMOVAL SCHEDULE

STATION	OFFSET	REMARKS	TREE REMOVAL 6 - 15 IN. DIA. INCH DIA.
627+46	68' RT.		12
627+65	53' RT.		15
628+09	50' RT.	STUMP	6
628+09	47' RT.		9
628+41	37' RT.		10
628+60	37' RT.	STUMP	12
628+60	37' RT.		15
TOTALS			79

NOTE: ONLY THE TREES SPECIFIED IN THIS SCHEDULE ARE TO BE REMOVED. ALL OTHER TREES GREATER THAN OR EQUAL TO 6 INCHES IN DIAMETER MUST REMAIN UNDISTURBED.

EROSION CONTROL SCHEDULE

LOCATION	TEMP DITCH CHECKS	PERIMETER EROSION BARR.
	(EACH)	FT.
AS DIRECTED BY ENGINEER	20	350
TOTAL	20	350

PAVEMENT MARKING SCHEDULE

STATION TO STATION	OFFSET FROM & LOCATION	PAINT PAVEMENT MARKING LINE 4"	TEMPORARY PAVEMENT MARKING LINE 4"	SHORT TERM PAVEMENT MARKING
		FT.	FT.	FT.
622+00 TO 631+00	11.83' LT.	900	900	
622+00 TO 631+00	11.83' RT.	900	900	
622+00 TO 631+00	0.23' LT.	900	900	
622+00 TO 631+00	0.23' RT.	230	230	92
TOTAL		2930	2930	92

EARTHWORK QUANTITIES

STATION TO STATION	EARTH EXCAV. CUT	EMBANK. FILL	ADJUSTED FILL (FILL X1.25)	CHANNEL EXCAVATION	REMARKS
	(CU. YD.)	(CU. YD.)	(CU. YD.)	(CU. YD.)	
625+00(±) TO 628+00(±)		8	10	1293	
SHOULDER WIDENING TRANSITION AT TBT, TY. 1 (TYP. 2 LOCATIONS)		100	125		
TOTAL		108	135	1293	

NOTE: Proposed SPBGR lengths are based on the use of the CAT system for the Traffic Barrier Terminal (Special). If other systems are used the proposed SPBGR lengths are to be adjusted accordingly.

GUARDRAIL AND BARRIER SCHEDULE

STATION TO STATION	LOCATION	GUARD-RAIL REMOVAL	TRAFFIC BARRIER TERMINAL TYPE 6	TRAFFIC BARRIER TERMINAL TYPE 1	S.P.B.G.R. TYPE A	GUARD RAIL REFLECTORS	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	TEMPORARY CONCRETE BARRIER	TEMPORARY CONCRETE BARRIER TERMINAL SECT.	RELOCATE TEMPORARY CONCRETE BARRIER	SAND MODULE IMPACT ATTENUATOR, TEMPORARY	SAND MODULE IMPACT ATTENUATOR, RELOCATE	REMOVE & RE-ERECT RAIL ELEMENT OF EXISTING GUARD-RAIL	TRAFFIC BARRIER TERMINAL (SPECIAL)
		FT.	(EACH)	(EACH)	FT.	(EACH)	(EACH)	FT.	(EACH)	FT.	EACH	EACH	FT.	FT.
620+60.6 TO 620+87.6	LT.					1								1
620+87.6 TO 625+12.6	LT.				425	10								
625+12.6 TO 625+39.6	LT.		1			1								
620+59 TO 625+43	LT.	484											87.5	
627+16 TO 629+41	LT.	225											200	
625+32 TO 627+25	LT.						5							
627+18.6 TO 627+45.6	LT.		1			1								
627+45.6 TO 629+20.6	LT.				175	5								
629+20.6 TO 629+47.6	LT.			1		1								
622+33.6 TO 622+60.6	RT.					1								1
622+60.6 TO 625+35.6	RT.				275	7								
625+35.6 TO 625+62.6	RT.		1			1								
625+55 TO 627+48	RT.						5							
627+41.6 TO 627+68.6	RT.		1			1								
627+68.6 TO 630+18.6	RT.				250	6								
630+18.6 TO 630+45.6	RT.			1		1								
622+38 TO 625+66	RT.	328												
627+39 TO 630+44	RT.	305												
624+57 TO 628+27	LT. STAGE I							470	2		24			
624+17 TO 628+67	RT. STAGE II							80		484		24		
TOTAL		1342	4	2	1125	36	10	550	2	484	24	24	287.5	2

SCHEDULE OF QUANTITIES
F.A.P. 68 (IL. 23) SECTION 1BR

STA. 626+41 (S.N. 050-0047)
LASALLE COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP-68	*	LASALLE	53	5A
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

* 1BR & 1BR-1

S.N. 050-0048

PAVING SCHEDULE									
STATION TO STATION	LENGTH	SURFACE WIDTH	BIT. SURFACE REMOVAL (COLD MILLING) 1 1/2"	BIT. CONCRETE SURFACE COURSE MIX D, CLASS 1	BITUMINOUS SHOULDER	BITUMINOUS MATERIALS (PRIME COAT)	PAVED SHOULDER REMOVAL	AGGREGATE (PRIME COAT)	BITUMINOUS BASE COURSE 10"
	(FT.)	(FT.)	(SQ. YD.)	(TON)	(TON)	(GALLON)	(SQ. YD.)	(TON)	(SQ. YD.)
540+35 TO 542+00	165	37-38.5	734	37	25	59		1.6	
542+00 TO 542+45.75	45.75	34-37	181	11	5	15		0.5	
543+48.25 TO 545+50	201.75	34-40	830	46	25	66		1.9	
542+10 TO 542+38,LT.	28	4					13		13
543+41 TO 543+80,LT.	39	5					22		22
542+15 TO 542+53,RT.	38	7					30		30
543+56 TO 543+95,RT.	39	5					22		22
TOTAL			1745	94	55	140	87	4.0	87

PAVEMENT MARKING SCHEDULE						
STATION TO STATION	OFFSET FROM & LOCATION	PAINT PAVEMENT MARKING LINE 4"	PAINT PAVEMENT MARKING LINE 6"	TEMPORARY PAVEMENT MARKING LINE 4"	TEMPORARY PAVEMENT MARKING LINE 6"	SHORT TERM PAVEMENT MARKING
		FT.	FT.	FT.	FT.	FT.
540+35 TO 545+50	11.83' LT.	515		515		
540+35 TO 545+50	11.83' RT.	515		515		
540+35 TO 545+50	0'		130		130	52
TOTAL		1030	130	1030	130	52

GUARDRAIL SCHEDULE							
STATION TO STATION	LOCATION	GUARD-RAIL REMOVAL	TRAFFIC BARRIER TERMINAL TYPE 1	S.P.B.G.R. TYPE A	TRAFFIC BARRIER TERMINAL TYPE 5A	GUARDRAIL REFLECTORS	REMOVE & RE-ERECT RAIL ELEMENT OF EXISTING GUARDRAIL
		FT.	(EACH)	FT.	(EACH)	(EACH)	FT.
540+34 TO 541+63	RT.	128		75		4	
540+41 TO 542+38	LT.	196	1	150	1	5	37.5
542+02 TO 542+54	RT.	50	1	12.50	1	2	
543+40 TO 546+56	LT.	318	1	275	1	8	50
543+56 TO 545+41	RT.	188	1	150	1	5	
TOTAL		880	4	662.5	4	24	87.5

NOTE: Proposed SPBGR lengths are based on the use of the CAT system for the Traffic Barrier Terminal (Special). If other systems are used the proposed SPBGR lengths are to be adjusted accordingly.

EARTHWORK QUANTITIES					
STATION TO STATION	EARTH EXCAV. CUT	EMBANK. FILL	ADJUSTED FILL (FILL X1.25)	CHANNEL EXCAVATION	REMARKS
	(CU. YD.)	(CU. YD.)	(CU. YD.)	(CU. YD.)	
542+00(±) TO 544+00(±)		0	0	142	
SHOULDER WIDENING TRANSITION AT TBT, TY. 1 (TYP. 4 LOCATIONS)		200	250		
TOTAL		200	250	142	

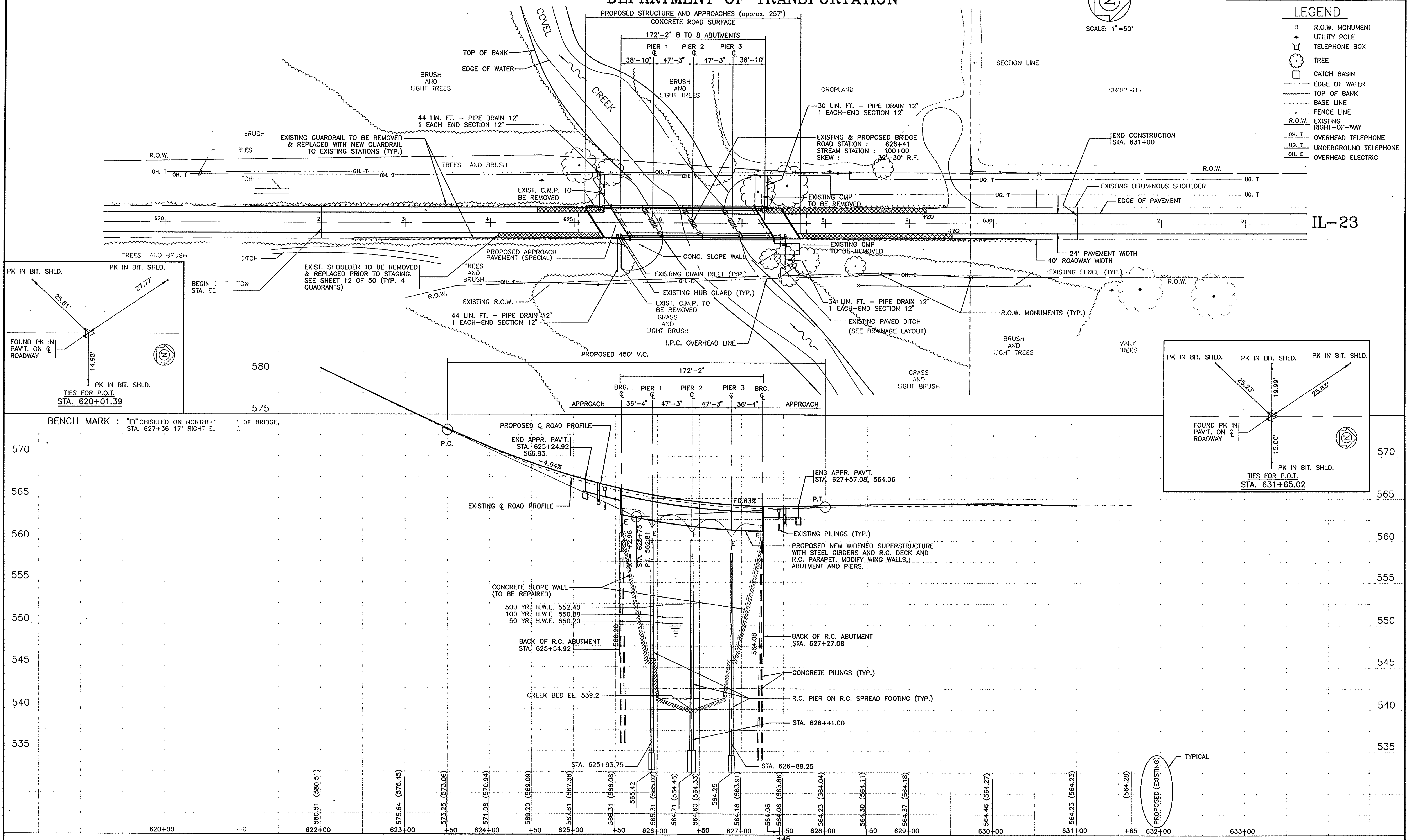
SEEDING SCHEDULE					
STATION TO STATION	SEEDING CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET
	(ACRE)	(POUND)	(POUND)	(POUND)	(SQ. YD.)
540+35-542+38, LT.	0.02	2	2	2	91
543+56-545+50, RT.	0.02	2	2	2	87
543+40-545+50, LT.	0.02	2	2	2	94
AT TBT, TY. 1 FOR "SHOULDER WIDENING TRANSITION" (TYP. 6 LOCATIONS)	0.11	10	10	10	507
TOTAL	0.17	16	16	16	779

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1 BR	LASALLE	53	6
STA.		STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	P-93-053-90	



- | | |
|---|--------------------------|
|  | R.O.W. MONUMENT |
|  | UTILITY POLE |
|  | TELEPHONE BOX |
|  | TREE |
|  | CATCH BASIN |
|  | EDGE OF WATER |
|  | TOP OF BANK |
|  | BASE LINE |
|  | FENCE LINE |
| <u>R.O.W.</u> | EXISTING
RIGHT-OF-WAY |
| <u>OH. T</u> | OVERHEAD TELEPHONE |
| <u>UG. T</u> | UNDERGROUND TELEPHONE |
| <u>OH. E</u> | OVERHEAD ELECTRIC |

IL-23



WALTER E. DEUCHER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

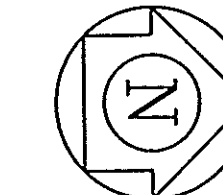
DESIGNED WKZ	DRAWN JES	APPROVED EEG	DATE 12/15/93	BOOK	SCALE	HORIZ.: 1"=50' VERT.: 1"=5'	CAD DWG.	\\IL\93030\23SECN	JOB NO.	222/93030
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PLAN & PROFILE			SH
F.A.P. Route 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY			
SECTION 1BR	STATION 626+41	S.N. 050-0047	OF

EET
6
53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	7
STA. 540+00	TO STA. 545+00	ILLINOIS	PROJECT NO. P-93-053-90	



SCALE: 1" = 50'

LEGEND

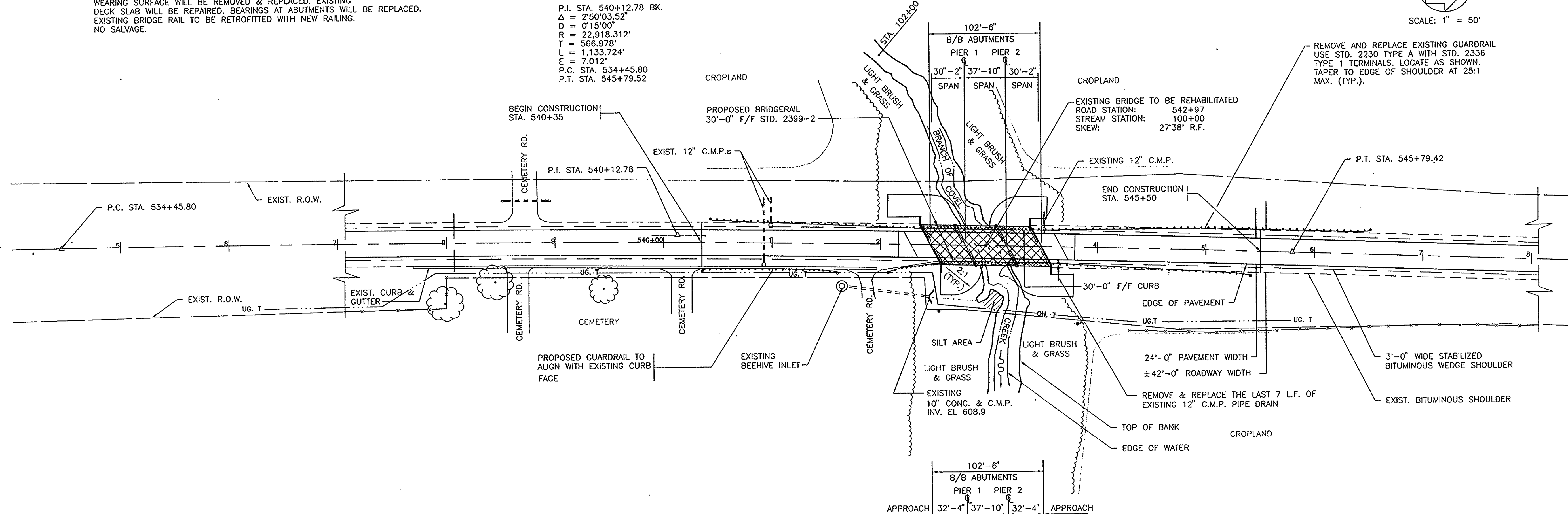
- UTILITY POLE
- TREE
- CATCH BASIN
- EDGE OF WATER
- TOP OF BANK
- CL. ROAD
- FENCE LINE
- EXIST. BRIDGE TO BE REHABILITATED
- EXISTING RIGHT-OF-WAY
- UG. T. UNDERGROUND TELEPHONE
- OH. T. OVERHEAD TELEPHONE

IL. - 23

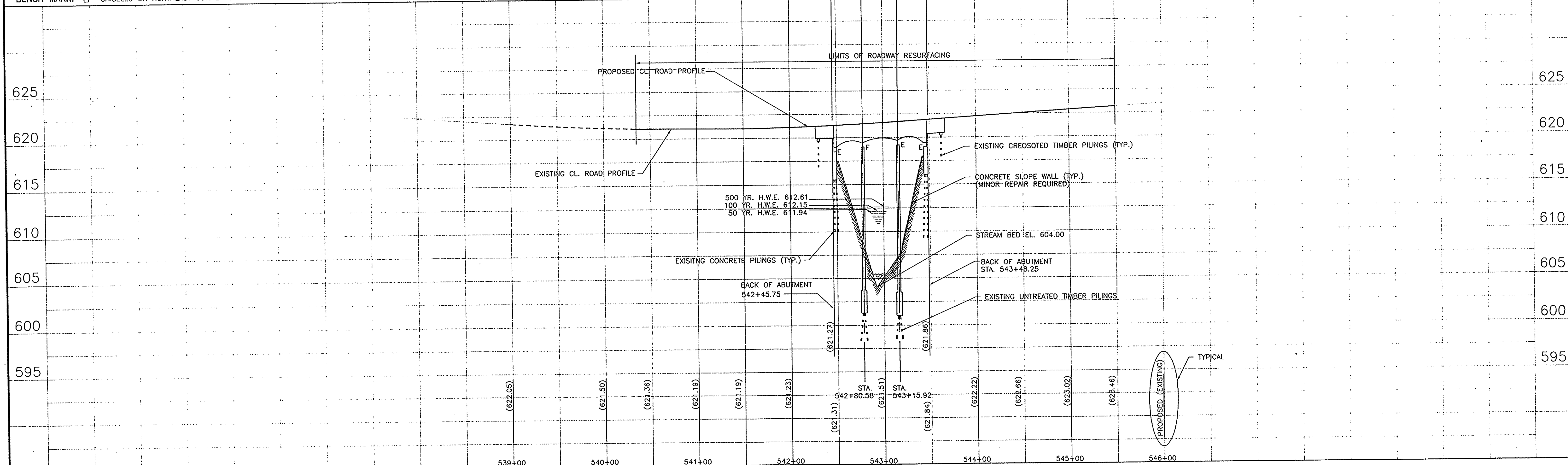
EXISTING STRUCTURE S.N. 050-0048 - THREE SPAN R.C. BRIDGE WITH A TOTAL LENGTH OF 102'-6" B/B ABUTMENTS AND WIDTH OF 30'-0" F/F CURBS. THE EXISTING WATERPROOFING MEMBRANE AND WEARING SURFACE WILL BE REMOVED & REPLACED. EXISTING DECK SLAB WILL BE REPAIRED. BEARINGS AT ABUTMENTS WILL BE REPLACED. EXISTING BRIDGE RAIL TO BE RETROFITTED WITH NEW RAILING. NO SALVAGE.

EXISTING HORIZONTAL CURVE

P.I. STA. 540+12.78 BK.
Δ = 2°50'03.52"
D = 0°15'00"
R = 22,918.312'
T = 566.978'
L = 1,133.724'
E = 7.012'
P.C. STA. 534+45.80
P.T. STA. 545+79.52



BENCH MARK: "□" CHISELED ON NORTHEAST CORNER OF BRIDGE EL. 622.41 U.S.G.S.



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Consulting Engineers - Aurora, Illinois

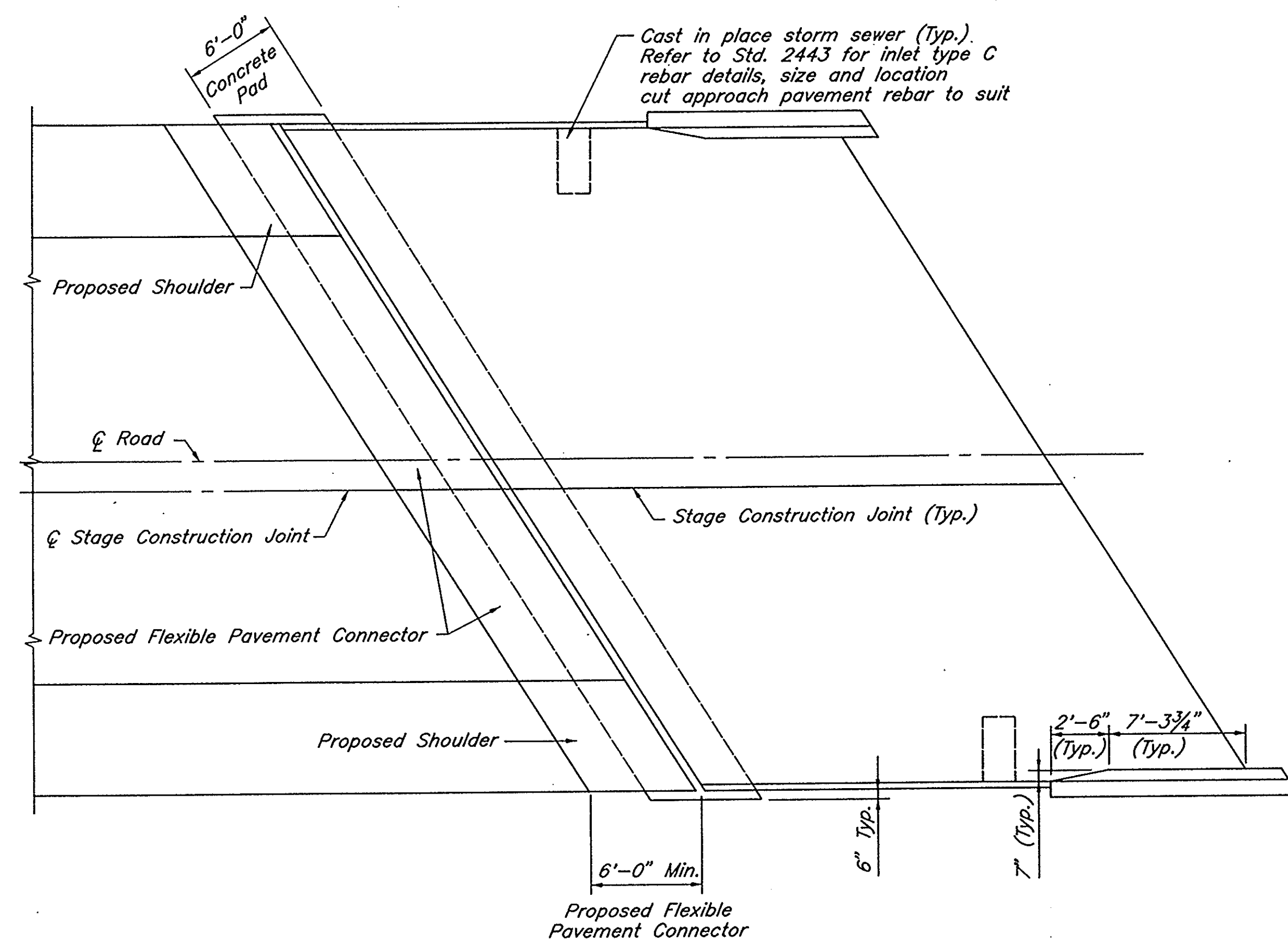
REVISIONS

DESIGNED	WKZ	DRAWN	JES	APPROVED	DATE	BOOK	SCALE	NOTE	IL	93030\5-23SEC	JOB NO.	222/93030/00
					10/27/93							

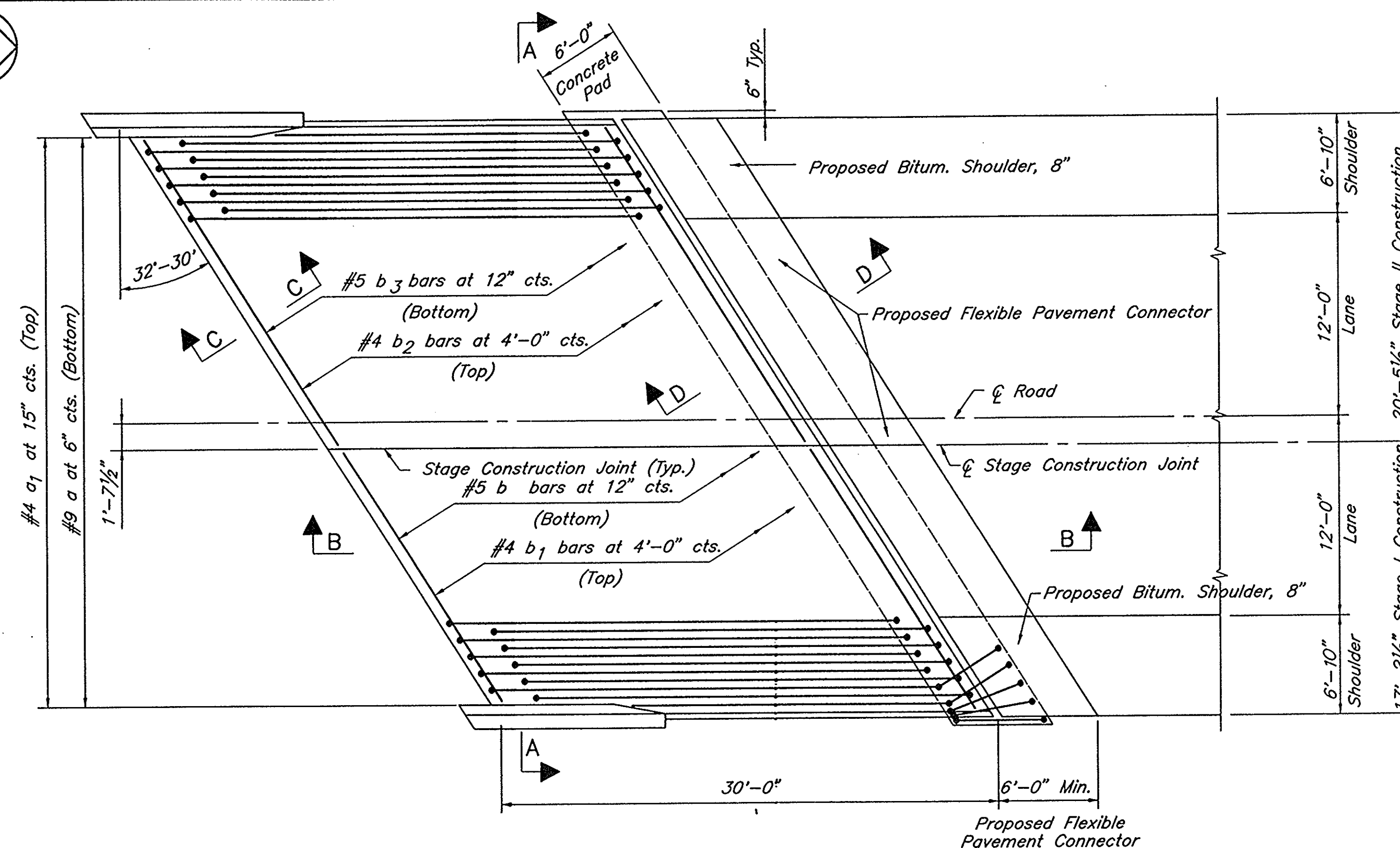
PLAN & PROFILE
F.A.P. Route 68 (IL. Route 23) OVER BRANCH OF COVELL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
7
OF 53

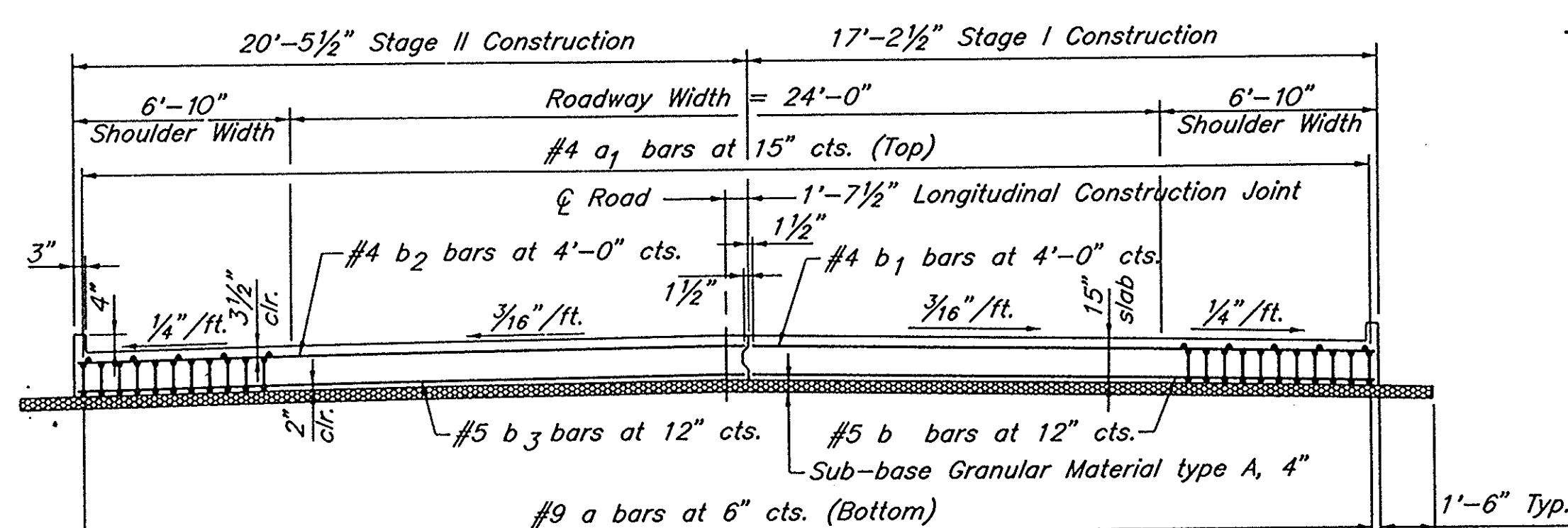
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	PROJECT NO.		



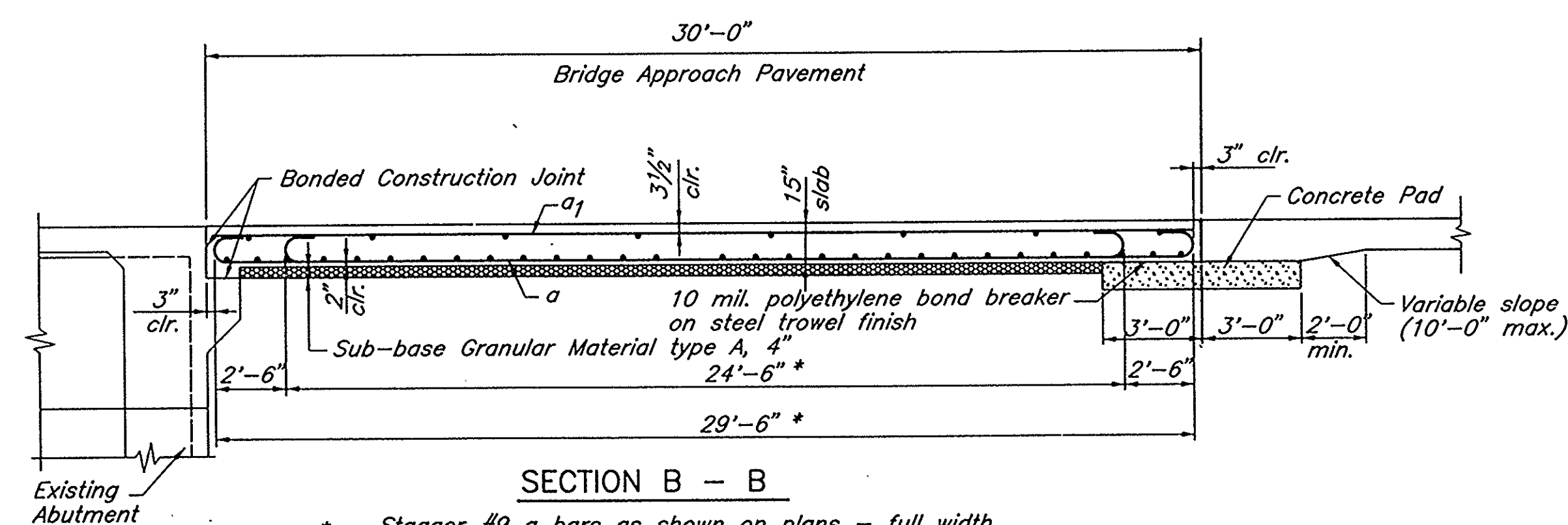
SOUTH PLAN



NORTH PLAN

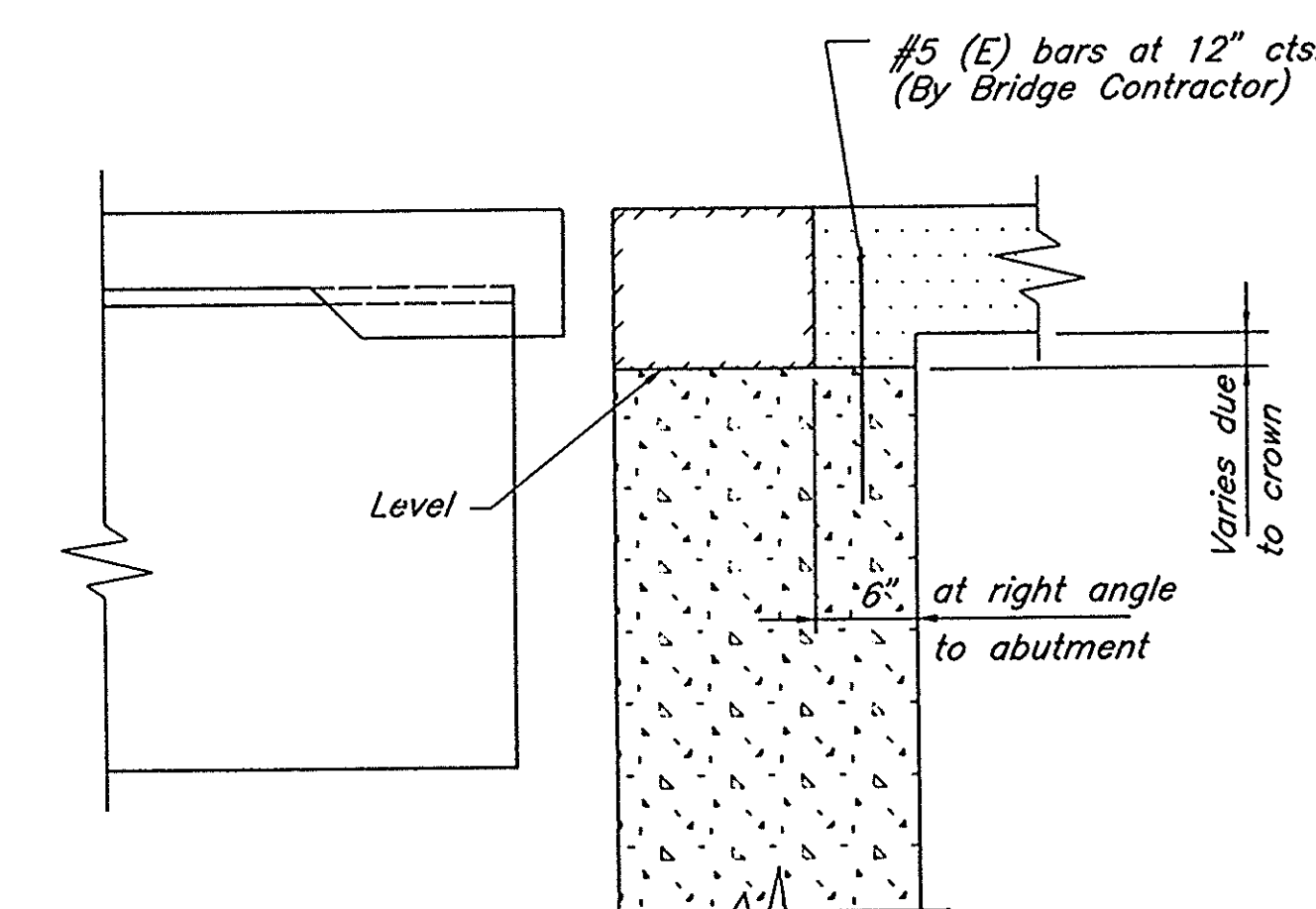


SECTION A - A

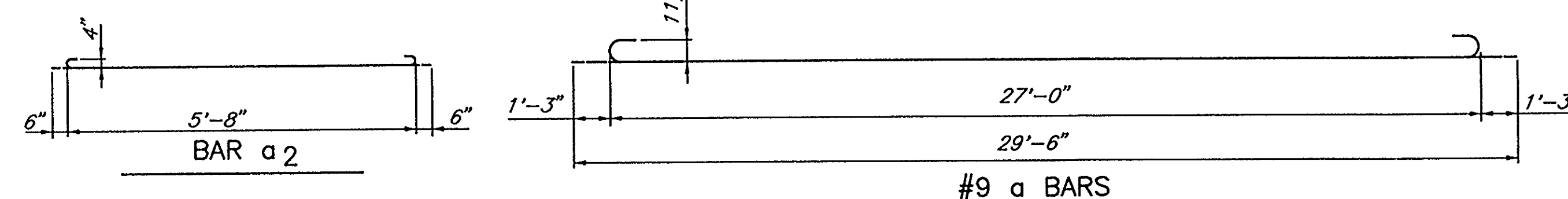


SECTION B - B

* - Stagger #9 a bars as shown on plans - full width



SECTION C - C



#9 a BARS

BILL OF MATERIAL *

(37'-10" PAVEMENT & SHOULDER; 32'-30' SKEW R.F.)

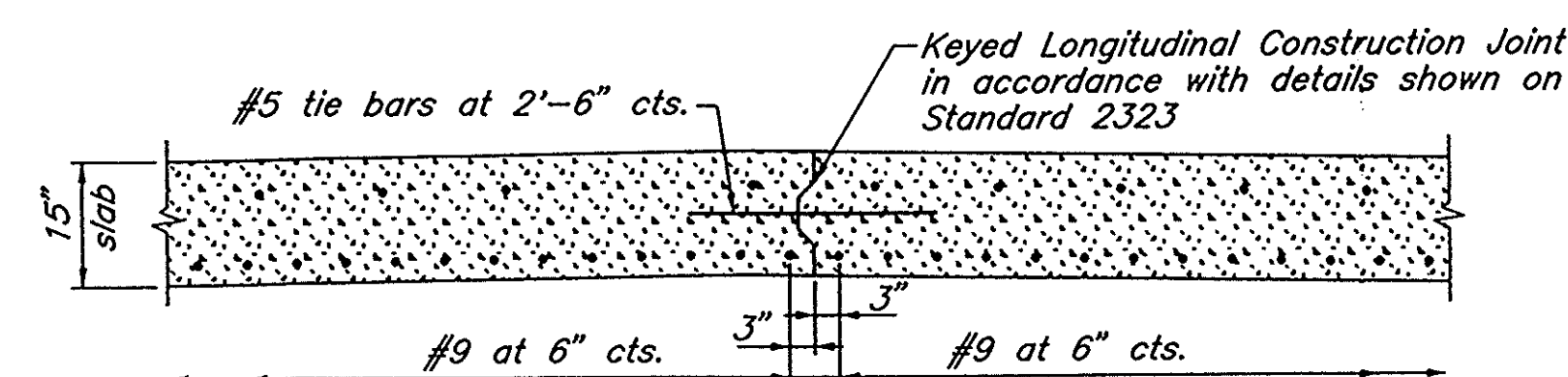
Bar	No.	Size	Length	Shape
a	152	#9	29'-6"	
a ₁	62	#4	29'-6"	_____
a ₂	92	#4	6'-8"	
a ₃	92	#4	5'-8"	_____
b	52	#5	20'-3"	_____
b ₁	14	#4	20'-3"	_____
b ₂	14	#4	24'-1"	_____
b ₃	52	#5	24'-1"	_____
h	48	#5	20'-10"	_____
h ₁	48	#5	24'-8"	_____
Tie	26	#5	4'-0"	_____
Class PV Concrete			Cu. Yd.	122
Reinforcement Bars (Epoxy Coated)			Lbs.	22,440
Slab Area			Sq. Yds.	250

See
Note
2

* For Two Bridge Approach Pavement

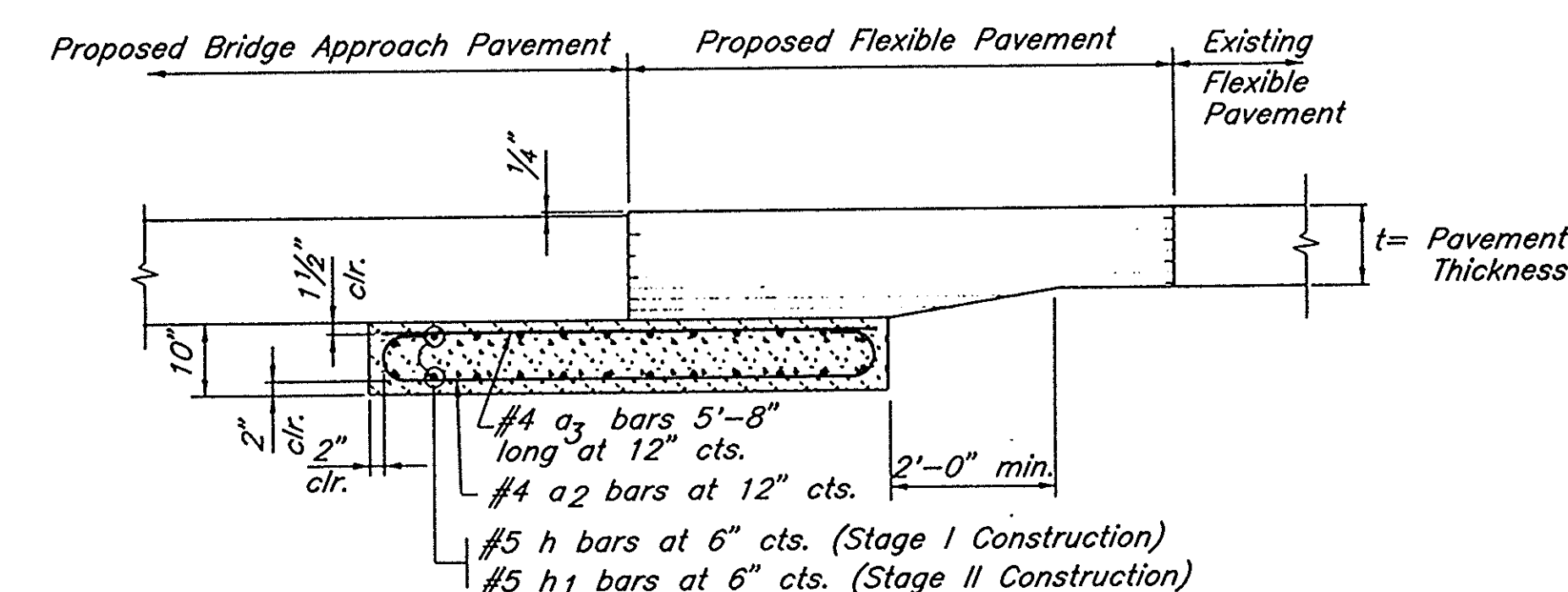
GENERAL NOTES

1. The cost of tie bars, preformed joint seal, 10 mil. polyethylene bond breaker, sub-base, concrete pad (including reinforcement and excavation) shall be considered as included in the unit cost of the BRIDGE APPROACH PAVEMENT (SPECIAL).
2. Not a pay item.
3. Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53, Grade 60 and shall be epoxy coated.
4. The contract unit price "Sq. Yd." for BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) or BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) shall include the placing of all required materials to construct a complete connector of the type specified.
5. North Bridge Approach Pavement is similar to South Bridge Approach Pavement.
6. Cut a, a1, b, & b1-3 bars to suit to miss new Wing Wall Parapets.



LONGITUDINAL CONSTRUCTION JOINT

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



SECTION D - D FLEXIBLE PAVEMENT

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Consulting Engineers - Aurora, Illinois

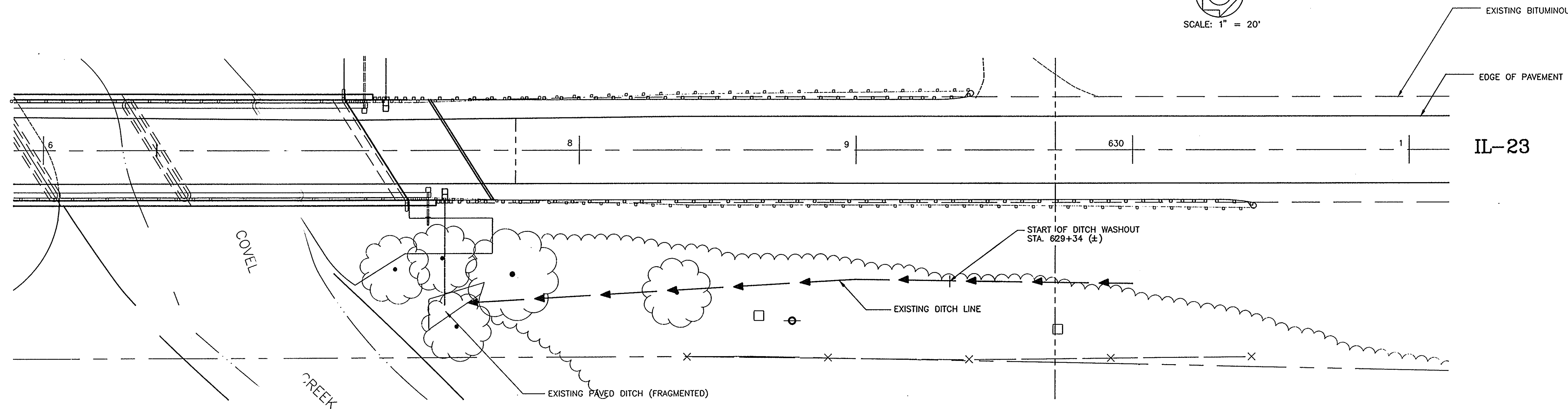
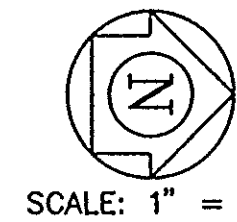
REVISIONS									
DESIGNED	RTP	DRAWN	GWR	APPROVED	DATE 11/08/93	BOOK	SCALE 1=3.75	CAD DWG. D:\IL\93030\BR-APPR	JOB NO. 222/93030

BRIDGE APPROACH PAVEMENT (SPECIAL)
F.A.P. ROUTE 68 (IL. ROUTE 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1 BR STATION 626+41 S.N. 050-0047

SHEET 8
OF 5

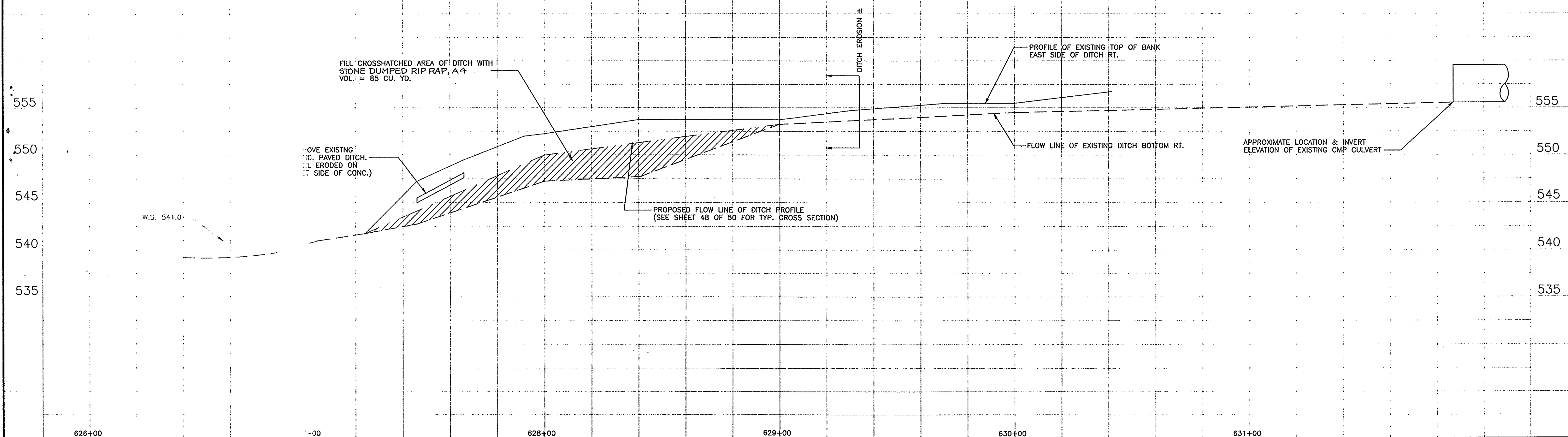
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1 BR	LASALLE	53	9
STA.	STA.	STA.	STA.	STA.
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT	P-93-053-90		



LEGEND

- R.O.W. MONUMENT
- UTILITY POLE
- TREE
- EDGE OF WATER
- TOP OF BANK
- BASE LINE
- x- FENCE LINE



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED RTP DRAWN JES APPROVED DATE 11/29/93 BOOK SCALE HORIZ: 1"=20' VERT: 1"=5' CAD DWG. \IL\93030\RAIN JOB NO. 222/93030/00

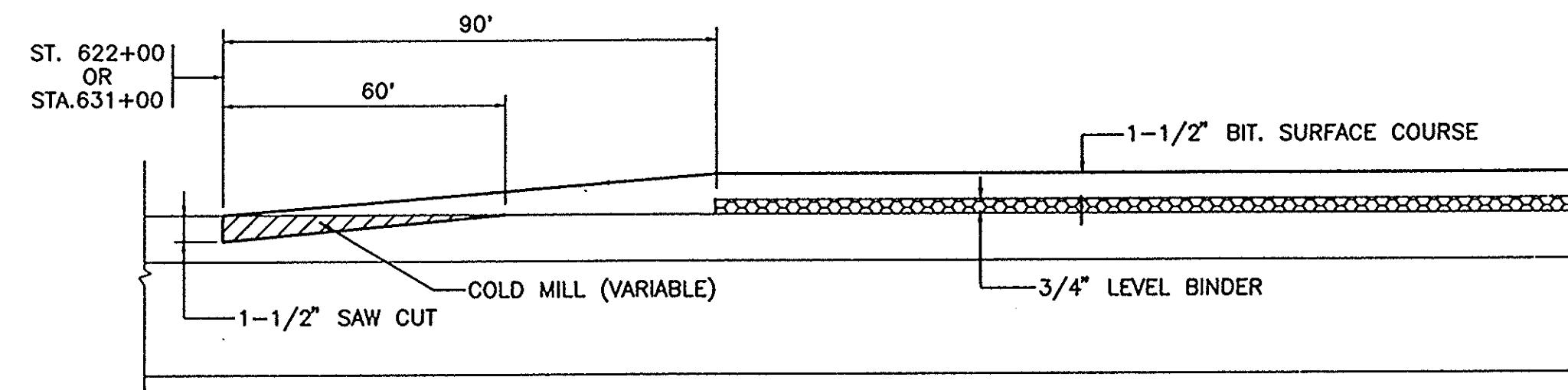
DRAINAGE LAYOUT
F.A.P. Route (IL. Route 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1 BR STATION 626+41 S.N. 050-0047

SHEET
9
OF 53

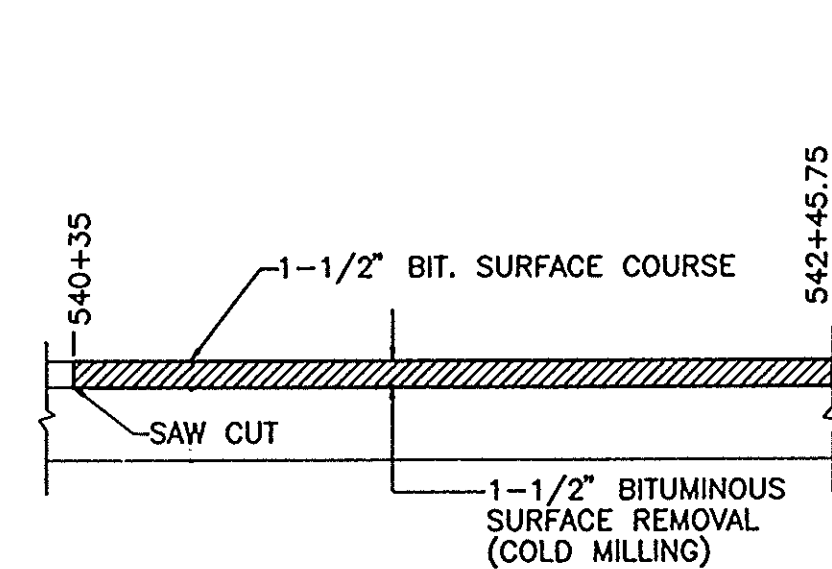
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	*	LASALLE	53	10
STA. 622+00 TO STA. 631+00				
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT NO. P-93-053-90		

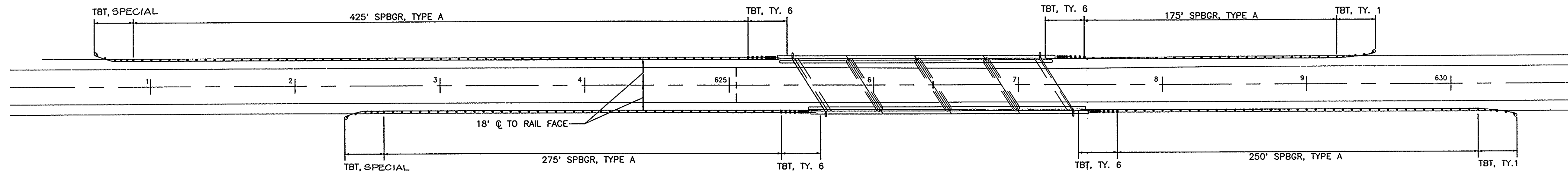
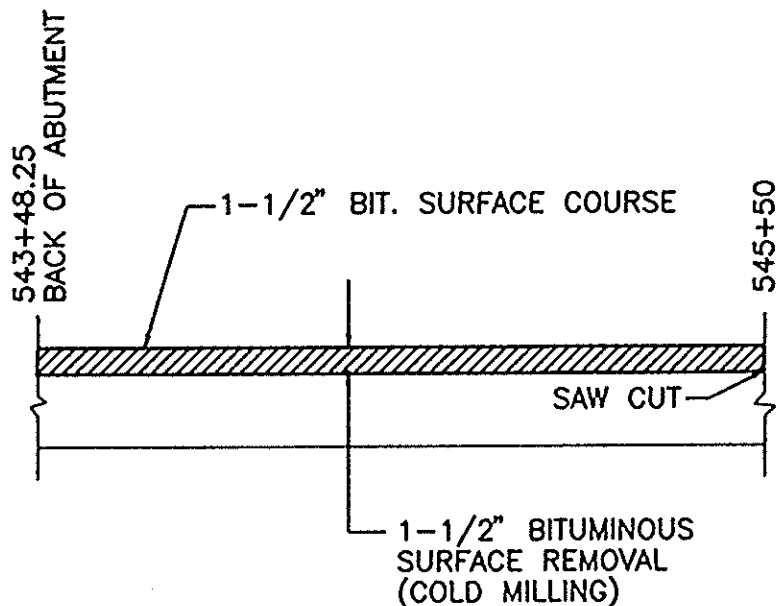
* 1BR & 1BR-1



PAVEMENT TRANSITION DETAIL
(S.N. 050-0047)

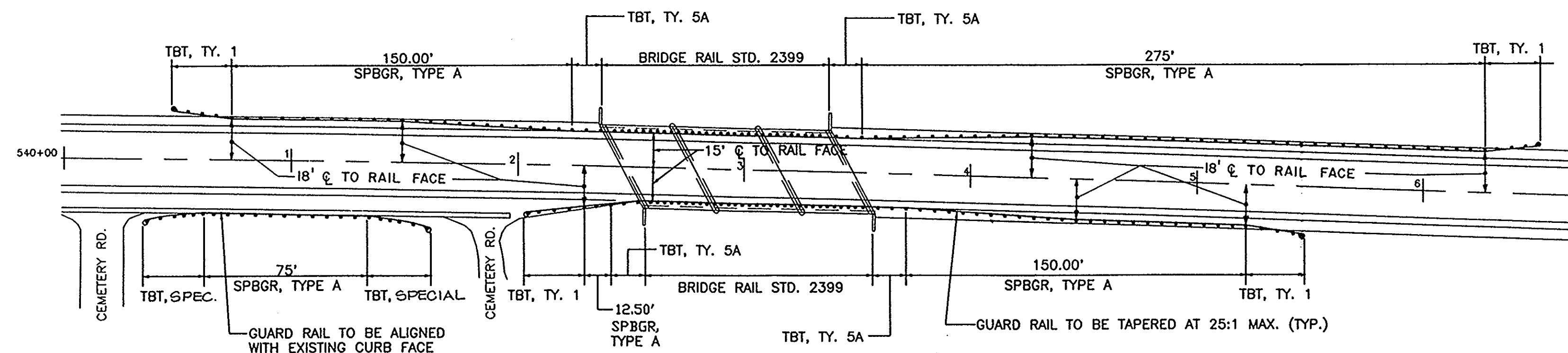


PAVEMENT TRANSITION DETAIL
(S.N. 050-0048)



GUARD RAIL DETAIL
(S.N. 050-0047)

- NOTE:
1. REMOVE EXISTING GUARD RAILS AND REPLACE WITH GUARD RAILS AND BARRIER TERMINALS OF TYPE SHOWN
 2. SPBGR - STEEL PLATE BEAM GUARD RAIL
 3. TBT - TRAFFIC BARRIER TERMINAL



GUARD RAIL DETAIL
(S.N. 050-0048)

- NOTE:
1. REMOVE EXISTING GUARD RAILS AND REPLACE WITH GUARD RAILS AND BARRIER TERMINALS OF TYPE SHOWN
 2. SPBGR - STEEL PLATE BEAM GUARD RAIL
 3. TBT - TRAFFIC BARRIER TERMINAL

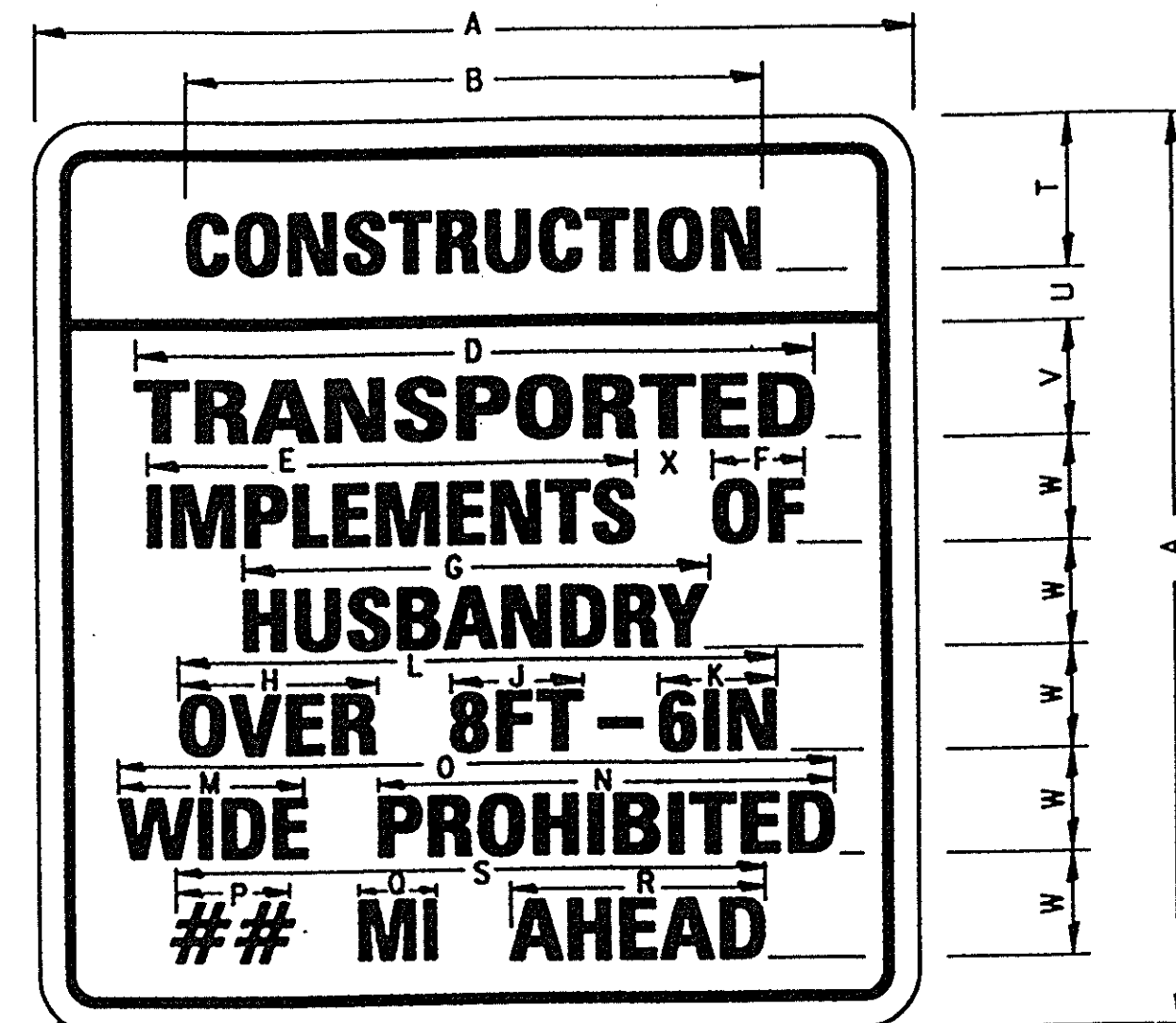
WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

DESIGNED	RTP	DRAWN	JES	APPROVED	DATE	12/15/93	BOOK	SCALE	1"=40'	CAD DWG.	\\IL\93030\23DET1	JOB NO.	222-93030
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MISCELLANEOUS DETAILS
F.A.P. 68 IL. 23 SECTION 1BR & 1BR-1 LASALLE COUNTY
STA. 626+41 S.N. 050-0047 STA. 542+92 S.N. 050-0048

SHEET
10
OF
53

ILLINOIS STANDARD W20-1102



COLOR: LEGEND AND BORDER
BACKGROUND (TOP)
BACKGROUND (BOTTOM)

BLACK NON-REFLECTORIZED
ORANGE REFLECTORIZED
WHITE REFLECTORIZED

SIGN SIZE	A	B	C	D	E	F	G	H	J	K	L
48 x 48	48.0	31.6	3.0	37.1	26.8	5.0	25.5	10.9	7.2	6.4	28.8

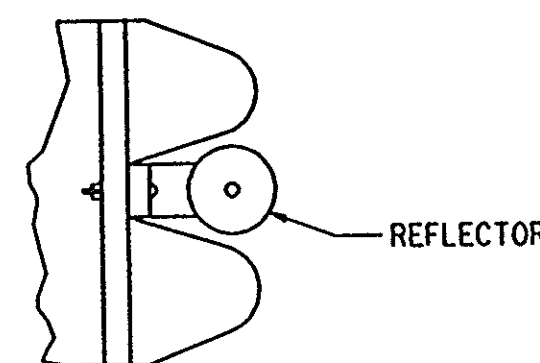
SIGN SIZE	M	N	O	P	Q	R	S	T	U	V	W	X
48 x 48	24.9	38.9	5.3	4.0	13.8	31.3	8.0	2.8	6.0	5.5	4.1	

SIGN SIZE	1	2	3	4	5	6	7	GIN	DER	STD.
48 x 48	4C	4C	4C	4C	4C	4C	4C	0.8	1.2	84-48s

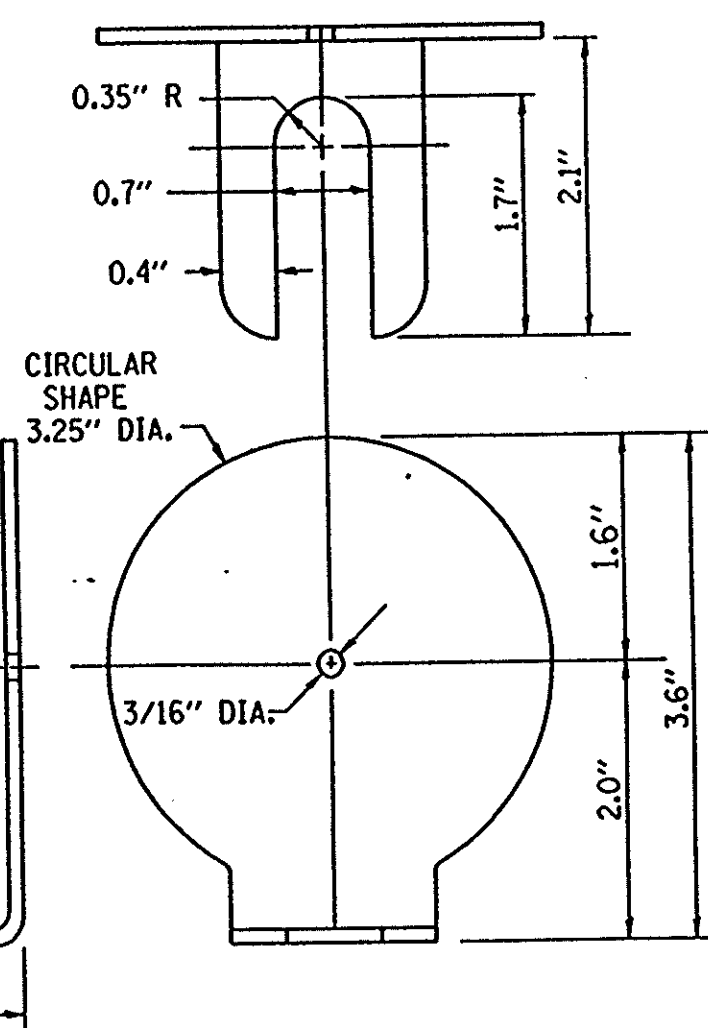
ALL DIMENSIONS IN INCHES

NOTES:

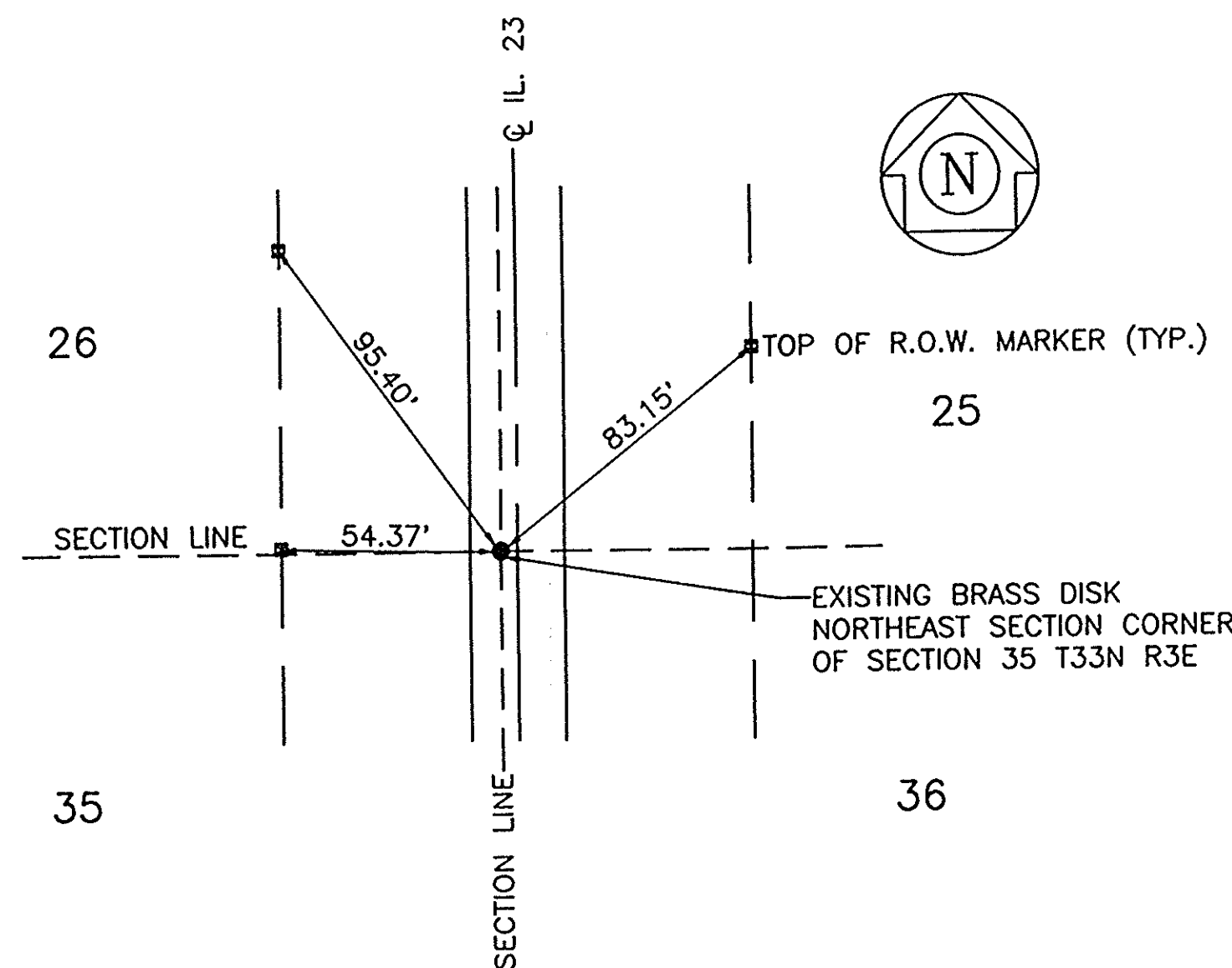
- BRACKET IS TO BE FABRICATED FROM 12 GA. (MIN.) STEEL GALVANIZED IN ACCORDANCE WITH AASHTO M III
- BRACKET "FOOT" SHALL BE PLACED BETWEEN THE BOLT HEAD AND THE PLATE WASHER (IF PRESENT).
- REFLECTORS SHALL MEET THE REQUIREMENTS OF ARTICLE 784.07 OF THE STANDARD SPECIFICATIONS
- BI-DIRECTIONAL OR TWO SINGLE REFLECTOR UNITS SHALL BE PLACED BACK TO BACK ON THE BRACKETS, AND THE REFLECTORS SHALL BE FASTENED TO THE BRACKETS WITH ALUMINUM RIVETS.
- FURNISHING AND INSTALLING THE COMPLETE REFLECTOR UNIT WILL BE PAID AT THE CONTRACT UNIT PRICE EACH FOR GUARDRAIL REFLECTORS.
- TYPICAL MOUNTING WITH REFLECTOR ON THREE BEAM RAIL, THE BRACKETS SHALL BE ATTACHED TO THE UPPER SPLICE BOLTS.



GUARD RAIL REFLECTORS DETAIL

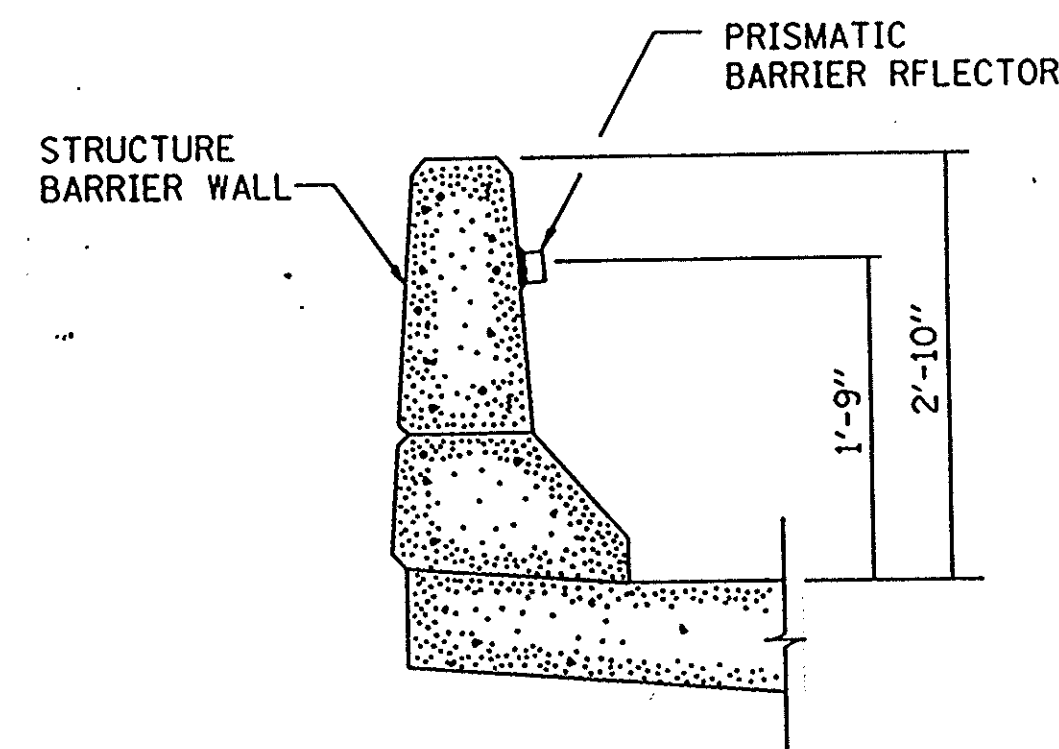


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



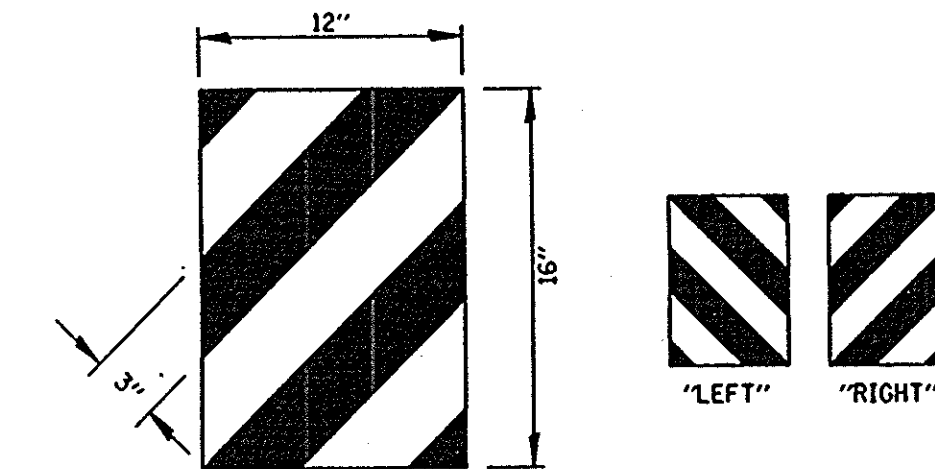
PERMANENT SURVEY MARKER TYPE 1
(S.N. 050-0047)

TIES ARE TO BE MAINTAINED BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL FURNISH, INSTALL, AND MARK THE NEW PERMANENT SURVEY MARKER TYPE 1.

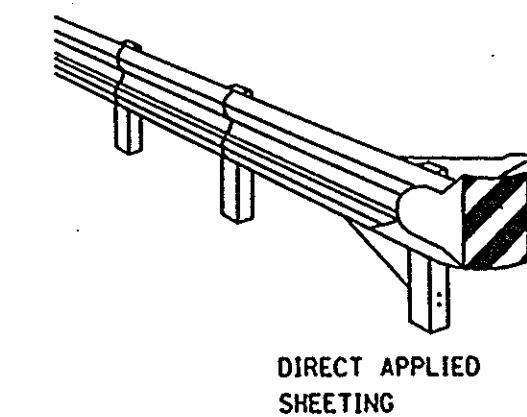


REFER TO THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS ADOPTED APRIL 1, 1989, SECTION T508 FOR ADDITIONAL INFORMATION.

PRISMATIC BARRIER REFLECTOR DETAIL



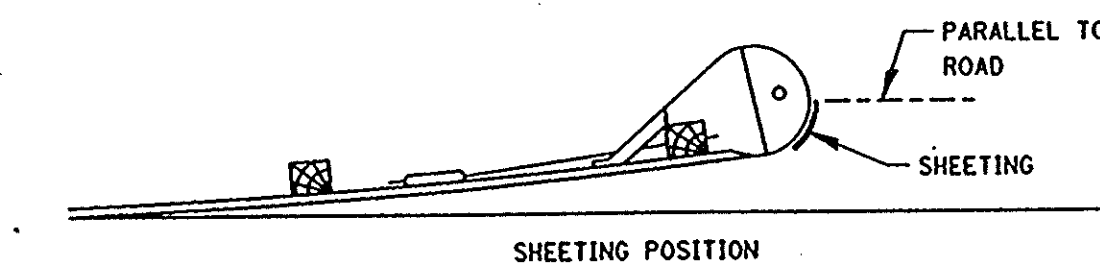
COLOR: BLACK/YELLOW REFLECTORIZED; TYPE A HIGH INTENSITY
OM - 1100 (L OR R) DIRECT APPLIED REFLECTIVE SHEETING



DIRECT APPLIED SHEETING

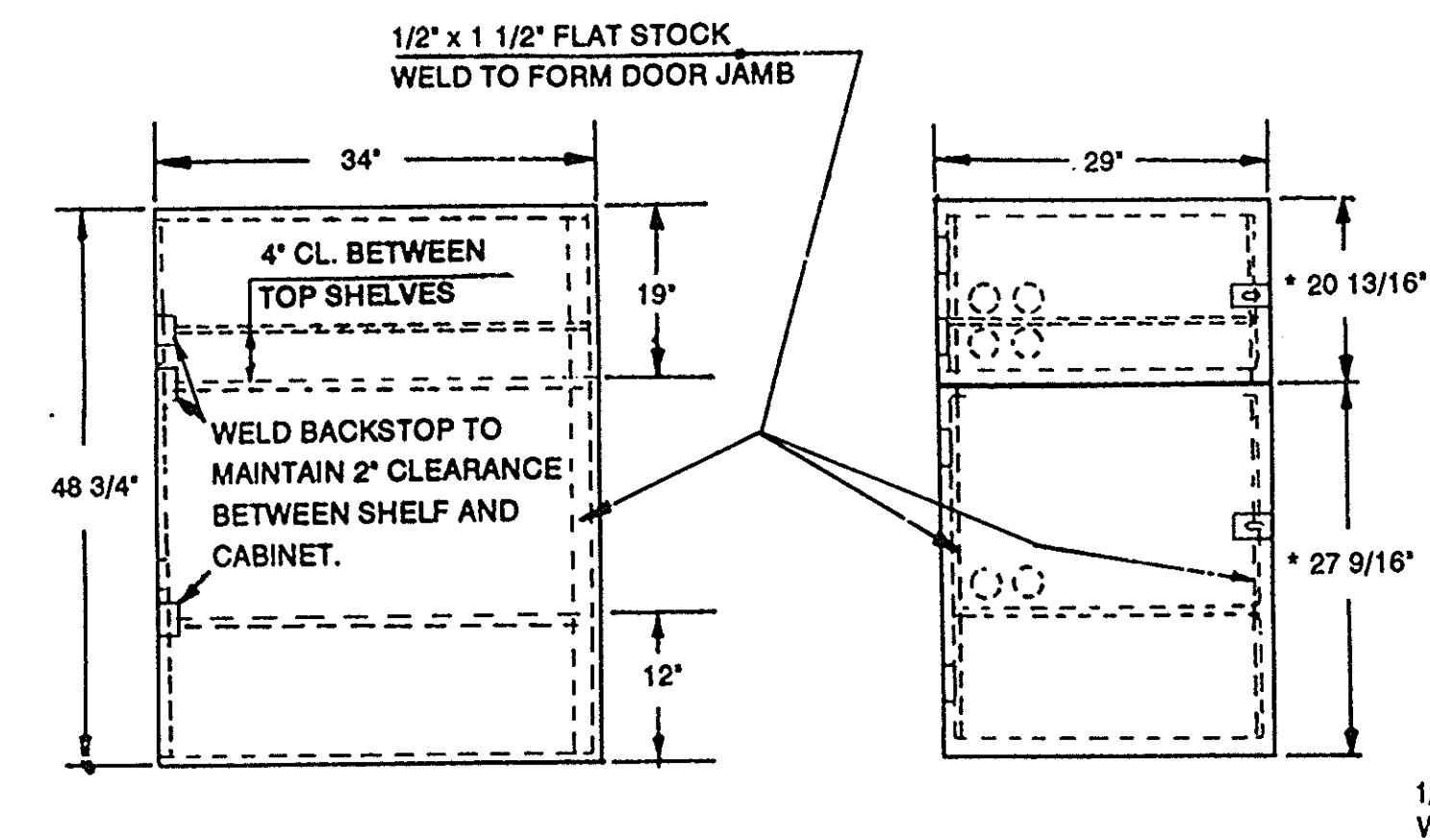
GENERAL NOTES

- THE SURFACE SHALL BE CLEANED USING A 5%-8% PHOSPHORIC ACID SOLUTION AND RINSED WITH CLEAN WATER OR CLEANED AS RECOMMENDED BY THE SHEETING MANUFACTURER AND APPROVED BY THE ENGINEER.
- FURNISHING AND INSTALLING THE REFLECTIVE SHEETING ALONG WITH TERMINAL END SURFACE CLEANING SHALL ALL BE INCLUDED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR TERMINAL MARKER-DIRECT APPLIED.



SHEETING POSITION

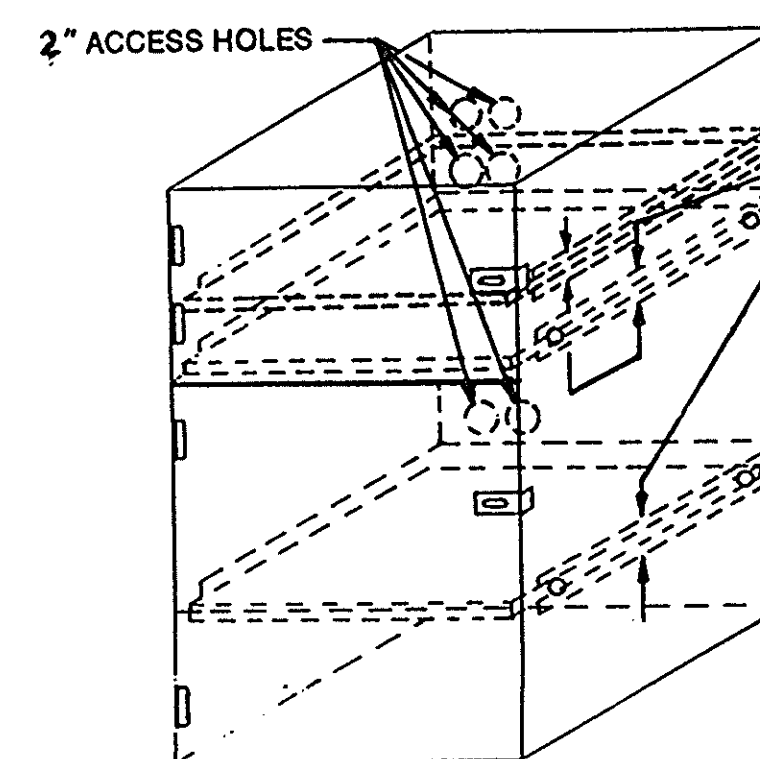
REFLECTIVE SHEETING FOR TERMINALS



SIDE VIEW

FRONT VIEW

* ALLOWS FOR 1/8" CLEARANCE AT TOP AND BOTTOM OF CABINET AND BETWEEN DOORS.



FLAT STOCK DIMENSIONS VARY DEPENDING ON TYPE OF ROLLER ASSEMBLY.

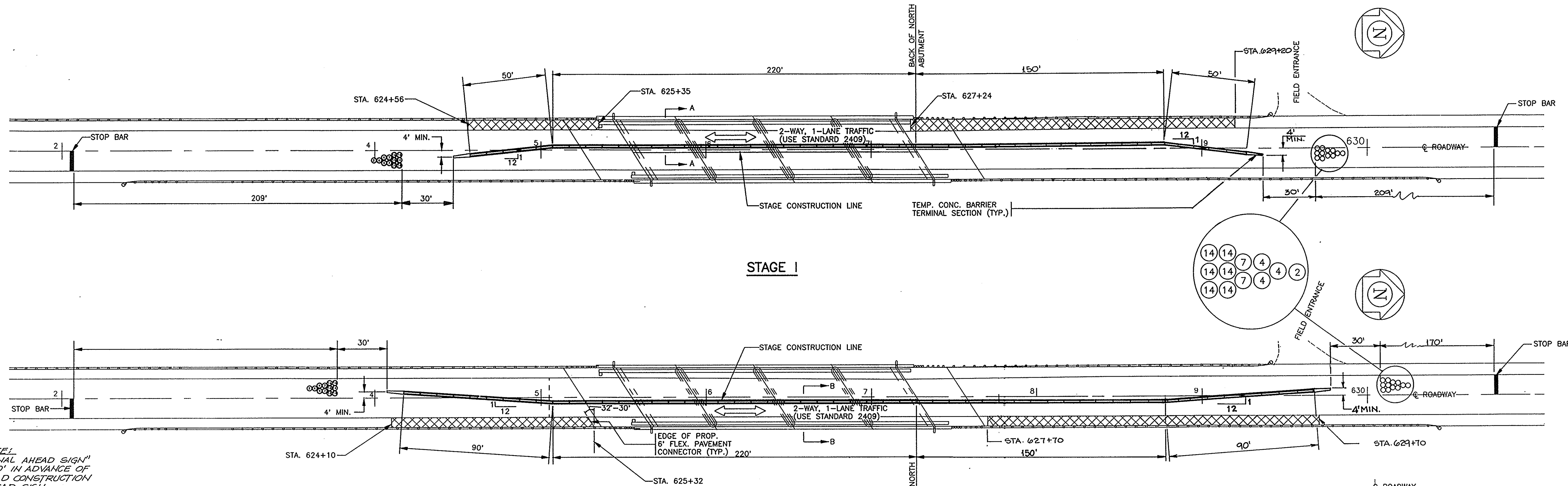
NOTES:

- USE 16 GAUGE STEEL FOR CABINET.
- THE TOP SHELVES SHALL SLIDE IN OR OUT WITH THE TOP DOOR OPEN.
- ALL HINGES AND HASPS WILL BE WELDED TO THE CABINET.
- ALL EDGES SHALL BE GRIND SMOOTH.
- TWO (2") ACCESS HOLES WILL BE REQUIRED FOR EACH SHELF.
- CABINET SHALL BE PAINTED WITH TWO COATS OF FLAT PAINT.

LOCKABLE COMPUTER CABINET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	12
STA. 624+10	TO STA. 629+70	ILLINOIS	PROJECT NO. P-93-053-90	



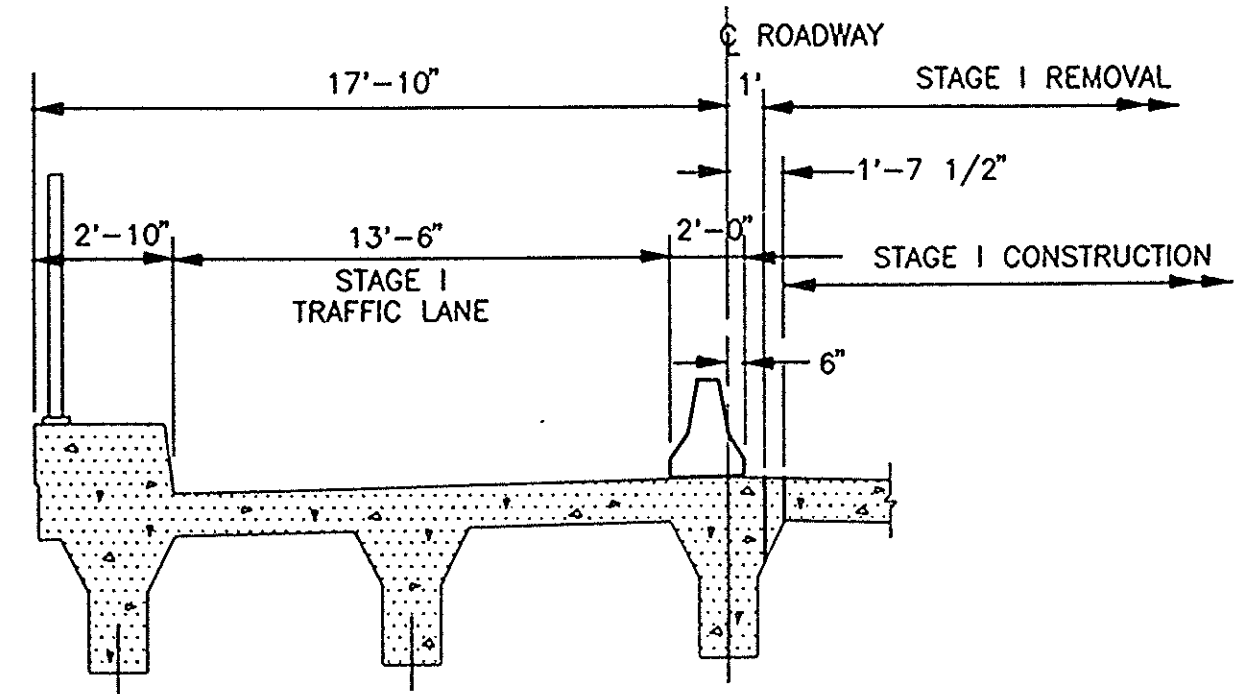
NOTE: "SIGNAL AHEAD SIGN" 1000' IN ADVANCE OF ROAD CONSTRUCTION AHEAD SIGN.

WITH FLASHING LIGHT
& FLAG

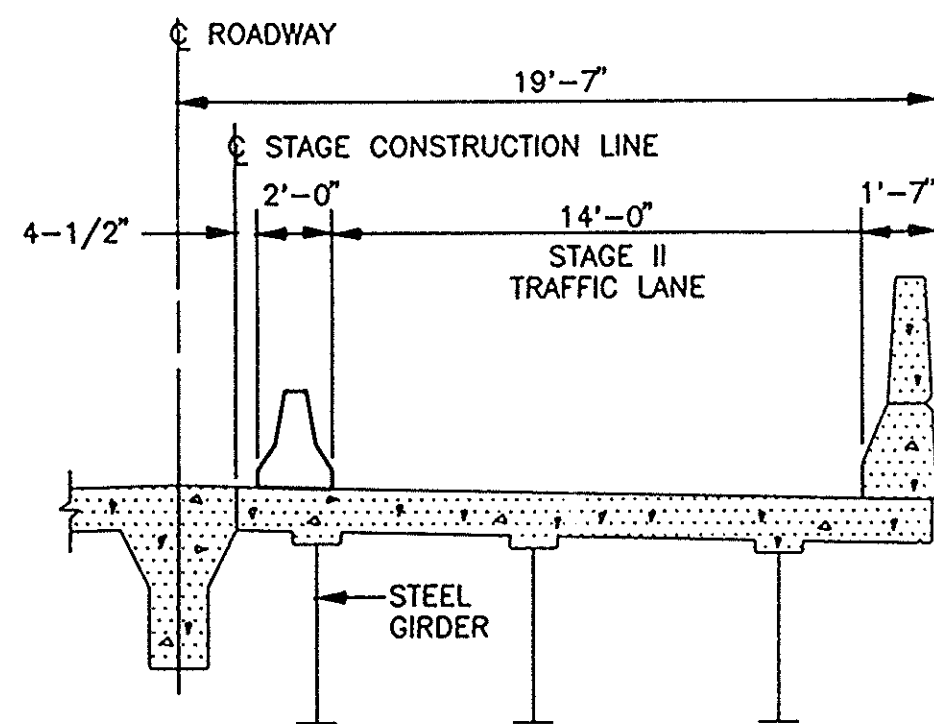
LEGEND

- TEMPORARY CONCRETE BARRIER (STD. 2383)
- TEMPORARY CONCRETE BARRIER, TERMINAL SECTION (STD. 2383)
- SAND MODULE IMPACT ATTENUATOR (TEMPORARY)
NO. = WEIGHT IN HUNDRED POUNDS
- EXISTING SHOULDERS THAT WILL BE REMOVED AND REPLACED WITH 10" THICK BITUMINOUS BASE COURSE PRIOR TO ANY STAGING

- NOTES:
- USE TRAFFIC STANDARD 2409 FOR TRAFFIC CONTROL AND PROTECTION BUT ARRANGEMENT OF TEMPORARY CONCRETE BARRIERS AND SAND MODULE IMPACT ATTENUATORS SHALL BE AS SHOWN ABOVE.
 - TEMPORARY CONCRETE BARRIERS AND SAND MODULE IMPACT ATTENUATORS FROM STAGE I SHALL BE RELOCATED FOR STAGE II TRAFFIC CONTROL.



SECTION A-A
BRIDGE SECTION STAGE I



SECTION B-B
BRIDGE SECTION STAGE II

WALTER E. DEUCHLE ASSOCIATES, INC.
Consulting Engineer - Aurora, Illinois

REVISIONS

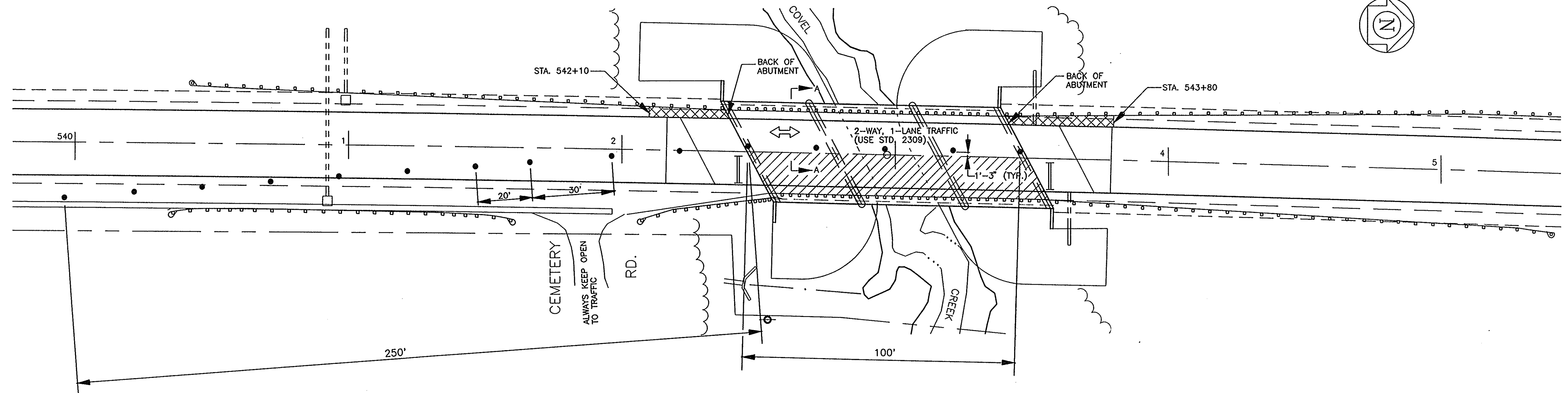
DESIGNED RTP DRAWN JES APPROVED DATE 10/27/93 BOOK SCALE 1"=30' CAD DWG. \IL\93030\TRAF47 JOB NO. 222-93030

TRAFFIC CONTROL & PROTECTION
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

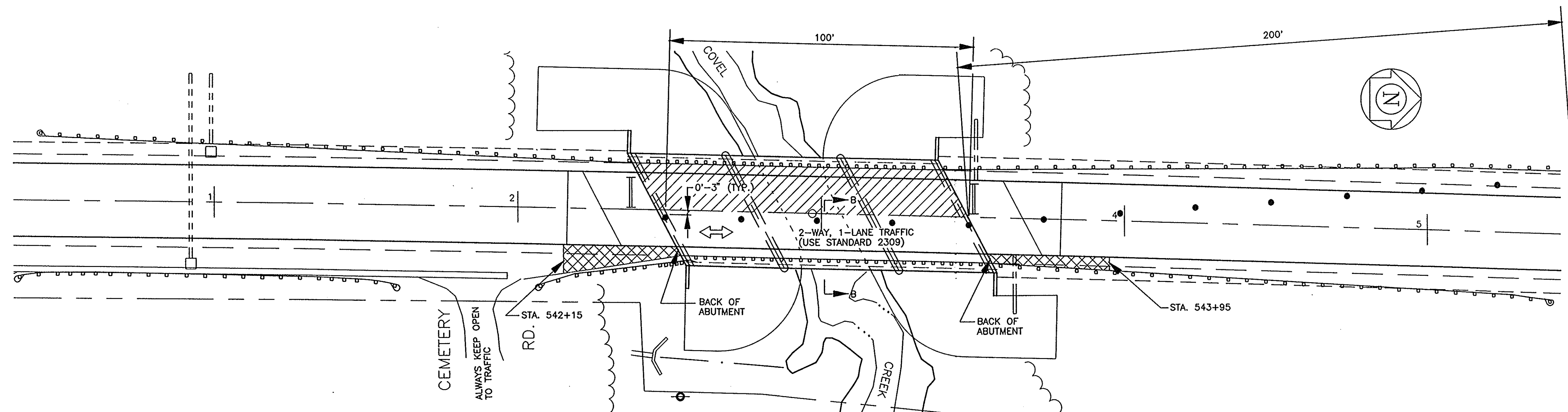
SHEET
12
OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	13
STA. 542+10	TO STA. 543+80			
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT NO. P-93-053-90		



STAGE 1

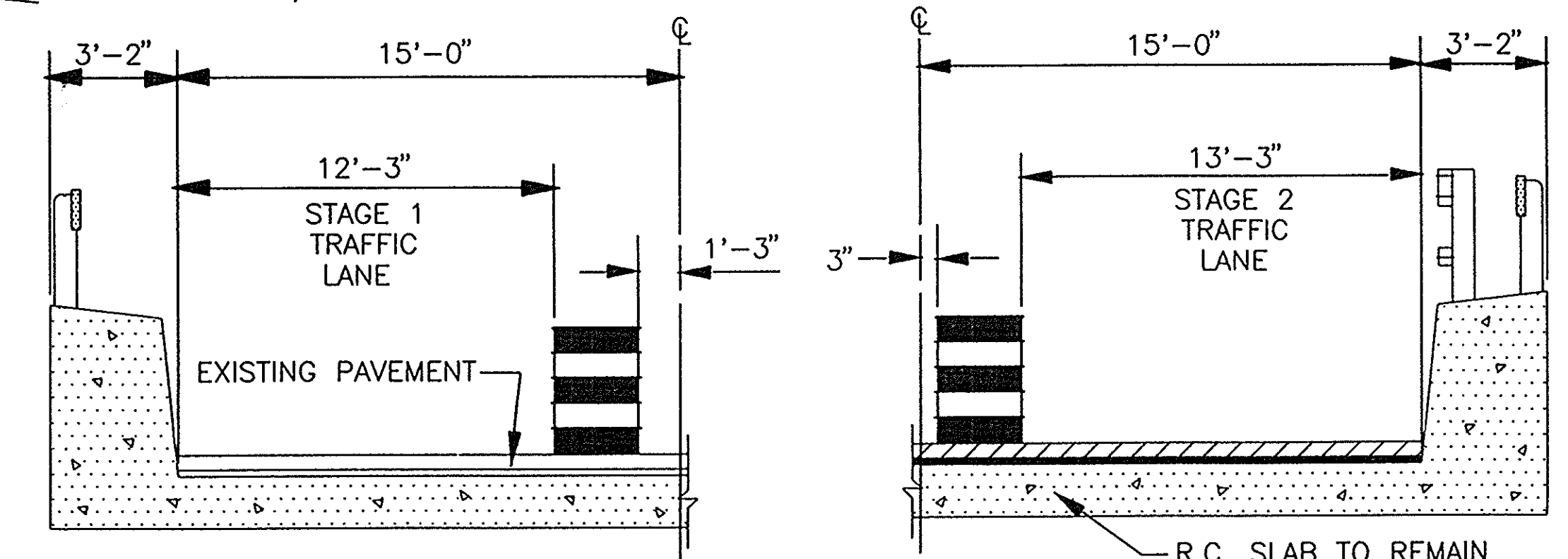


STAGE 2

LEGEND

- TYPE III BARRICADES
- DRUMS PER STD. 2299
- WORK AREA
- EXISTING SHOULDERS TO BE REMOVED AND REPLACED WITH 10" THICK BITUMINOUS BASE COURSE PRIOR TO STAGING.

- NOTES:
1. USE TRAFFIC STANDARD 2309 FOR TRAFFIC CONTROL AND PROTECTION BUT ARRANGEMENT OF DRUMS (STD. 2299) SHALL BE AS SHOWN ABOVE.
 2. DRUMS AND BARRICADES FROM STAGE 1 SHALL BE RELOCATED FOR STAGE 2 TRAFFIC CONTROL.
 3. DRUMS ARE SPACED AT 25 ft. CENTERS UNLESS NOTED.



SECTION A-A
BRIDGE SECTION STAGE 1

SECTION B-B
BRIDGE SECTION STAGE 2

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers — Aurora, Illinois

DESIGNED	RTP	DRAWN	JES	APPROVED	DATE	10/28/93	BOOK	SCALE	1" = 20'	CAD DWG.	FILE	93030\TRAF	JOB NO.	222-93030
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TRAFFIC CONTROL & PROTECTION
F.A.P. Route 68 (IL. Route 23) OVER BRANCH OF COVELL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
13
OF
53

EXISTING STRUCTURE : S.N. 050-0047 - FOUR SPAN CONTINUOUS R.C. BRIDGE WITH A TOTAL LENGTH OF 172'-2" B/B ABUTMENTS AND A WIDTH OF 30'-0" F/F OF CURBS. THE SUPERSTRUCTURE WILL BE REMOVED AND REPLACED WITH A R.C. DECK ON STEEL WIDE FLANGE BEAMS WITH A WIDTH OF 36'-0" F/F OF PARAPETS, WINGWALLS TO BE MODIFIED, PIER CAPS TO BE EXTENDED, & BEARING TO BE REPLACED. NEW APPROACH PAVEMENTS AND SHOULDER PAVEMENTS WITH DRAINS & CURB WILL BE INSTALLED. NEW GUARDRAIL WILL BE INSTALLED, NO SALVAGE.

TRAFFIC : TRAFFIC WILL BE STAGED DURING CONSTRUCTION.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1 BR	LASALLE	53	14
STA.		STA.		
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT P-83-053-80		

SHEET NO. /
24 SHEETS

TOTAL BILL OF MATERIALS

	ITEM	UNIT	SUPER	SUB	TOTAL
	REMOVAL OF EXISTING SUPERSTRUCTURE	EACH	1		1
	FLOOR DRAINS	EACH	16		16
	CONCRETE SUPERSTRUCTURES	CU. YD.	207		207
	CONCRETE STRUCTURES	CU. YD.		80.4	80.4
*	PROTECTIVE COAT	SQ. YD.	156		156
	STONE RIPRAP CLASS A5	SQ. YD.		725	725
	PREFORMED JOINT SEAL, 4"	FT.	93		93
	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12
	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12		12
	FURNISHING & ERECTING STRUCTURAL STEEL	L. S.	1		1
	REINFORCEMENT BARS, EPOXY COATED	LBS.	50,600	7,060	57,660
	SLOPE WALL REMOVAL & REPLACEMENT (6'')	SQ. YD.		382	382
	FURNISHING STEEL PILES, HP 10X42	FT.		62	62
	DRIVING STEEL PILES	FT.		62	62
	TEST PILE STEEL, HP 10X42	EACH		1	1
	NAME PLATES	EACH	1		1
	BRIDGE DECK GROOVING	SQ. YD.	631		631
	BAR SPLICERS	EACH	551	16	567
	FILTER FABRIC FOR USE WITH RIPRAP	SQ. YD.		725	725
	STUD SHEAR CONNECTORS	EACH	3,252		3,252
	BRIDGE SEAT SEALER	SQ. FT.		251	251
	EPOXY CRACK SEALING	FT.		28	28
	FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")	SQ. FT.		6	6
	CONCRETE REMOVAL	CU. YD.		25.6	25.6
	STRUCTURE EXCAVATION	CU. YD.		58	58

* Top and inside faces of Parapets Only.

DESIGN STRESSES

EXISTING STRUCTURES
 $f_s = 20,000 \text{ psi (Reinf.)}$
 $f_c = 800 \text{ psi (Sub.)}$

NEW CONSTRUCTION
 $f'c = 3500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinf.)}$
 $f_y = 50,000 \text{ psi (Struct.)}$ M-270 Gr.50
 $f_y = 36000 \text{ psi}$ M-270 Gr.36

LOADING HS20-44 For New Construction only

Allow 25#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

1992 AASHTO Specifications

SEISMIC DATA

S.P.C. : A
A = 0.04
S = 1.2

STATION 626+41
REBUILT 199 BY
STATE OF ILLINOIS
F.A.P.* 68 (IL. 23) SECTION 1BR
LOADING HS20
STRUCTURE NO. 050-0047

NAME PLATE

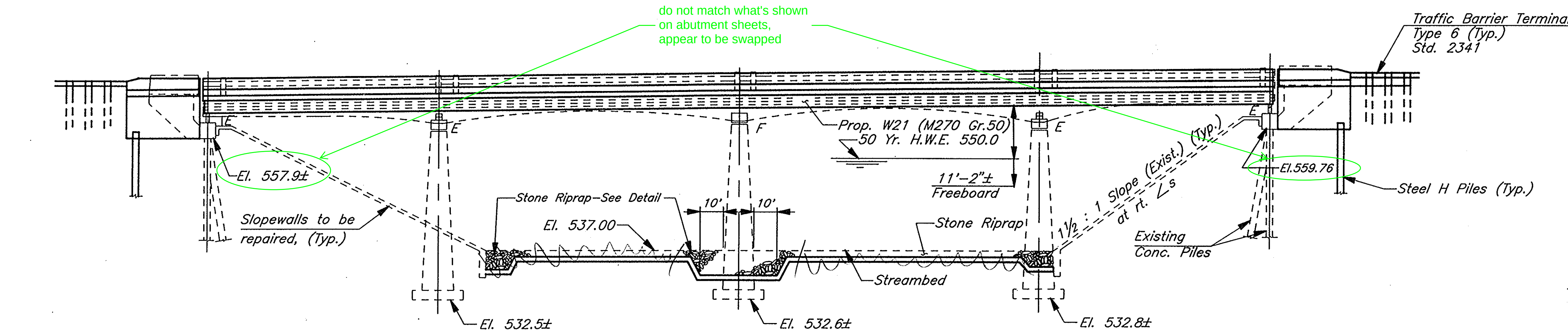
(Std. 2113)

*PROJECT ACBHF-68(74)

Ed Gordon
For WALTER E. DEUCHLER ASSOC., INC.

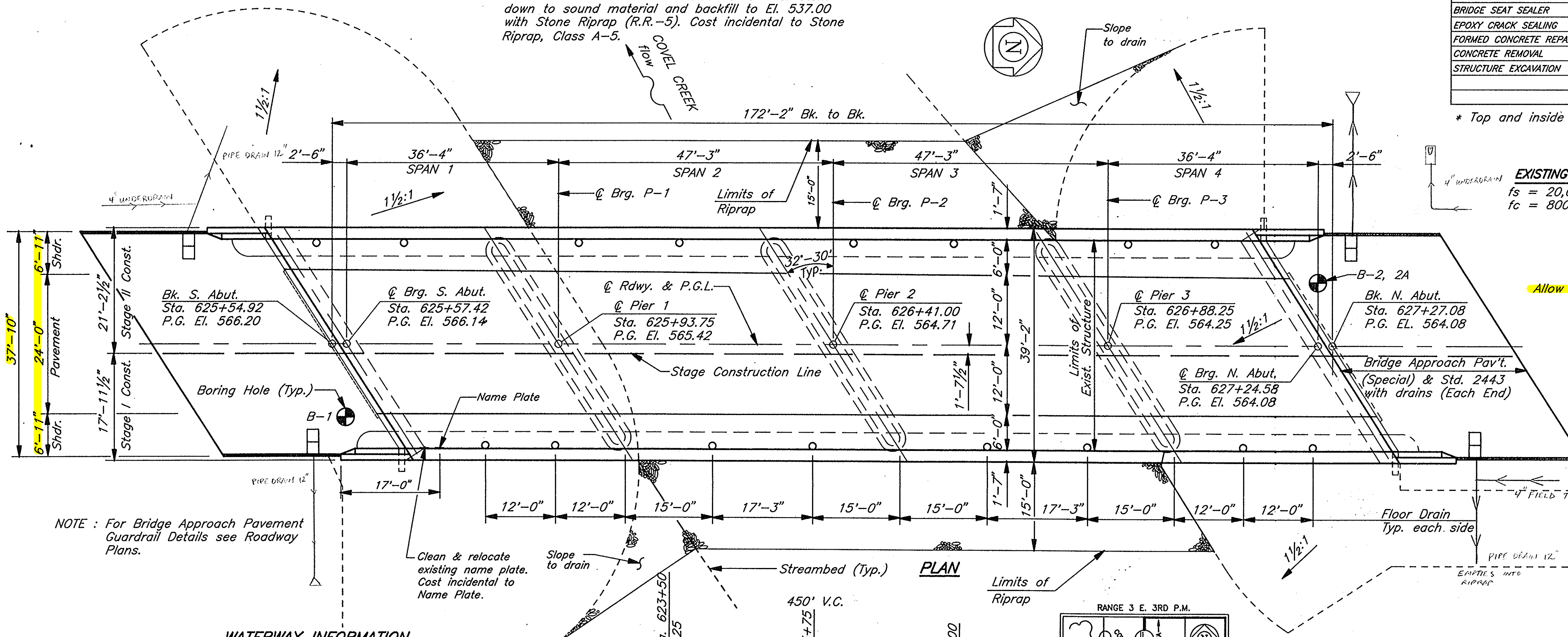
S.F. No. - 081-002873

EXPIRATION DATE : 11-30-94



ELEVATION

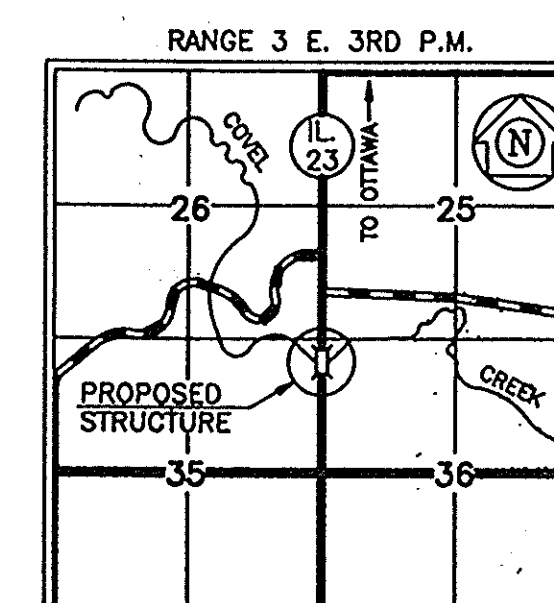
Remove all loose material within 10' of Pier stem down to sound material and backfill to El. 537.00 with Stone Riprap (R.R.-5). Cost incidental to Stone Riprap, Class A-5.



WATERWAY INFORMATION

Drainage Area = 68.0 Sq. mi. Low Grade El. 564.06 (Prop.) at Sta. 627+46 (Prop.)									
Flood	Freq. Yr.	Q. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	6720	968	968	549.8	0.2	0.2	550.0	550.0
Base	100	7630	1024	1024	550.3	0.4	0.4	550.7	550.7
Overtopping									
Max. Calc.	500	9770	1140	1140	551.3	0.9	0.9	552.2	552.2

PROFILE GRADE



LOCATION SKETCH

BUILT TO PLAN DIMENSIONS

APPROVED

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
Engineer of Bridges and Structures



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers — Aurora, Illinois

REVISIONS

DESIGNED EEG	DRAWN JES	APPROVED EEG	DATE 2/7/94	BOOK	SCALE 1"=10'	CAD DWG.	IL\93030\23GEN	JOB NO. 222/93030/00
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GENERAL PLAN & ELEVATION

F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY

SECTION 1BR STA. 626+41 S.N. 050-0047

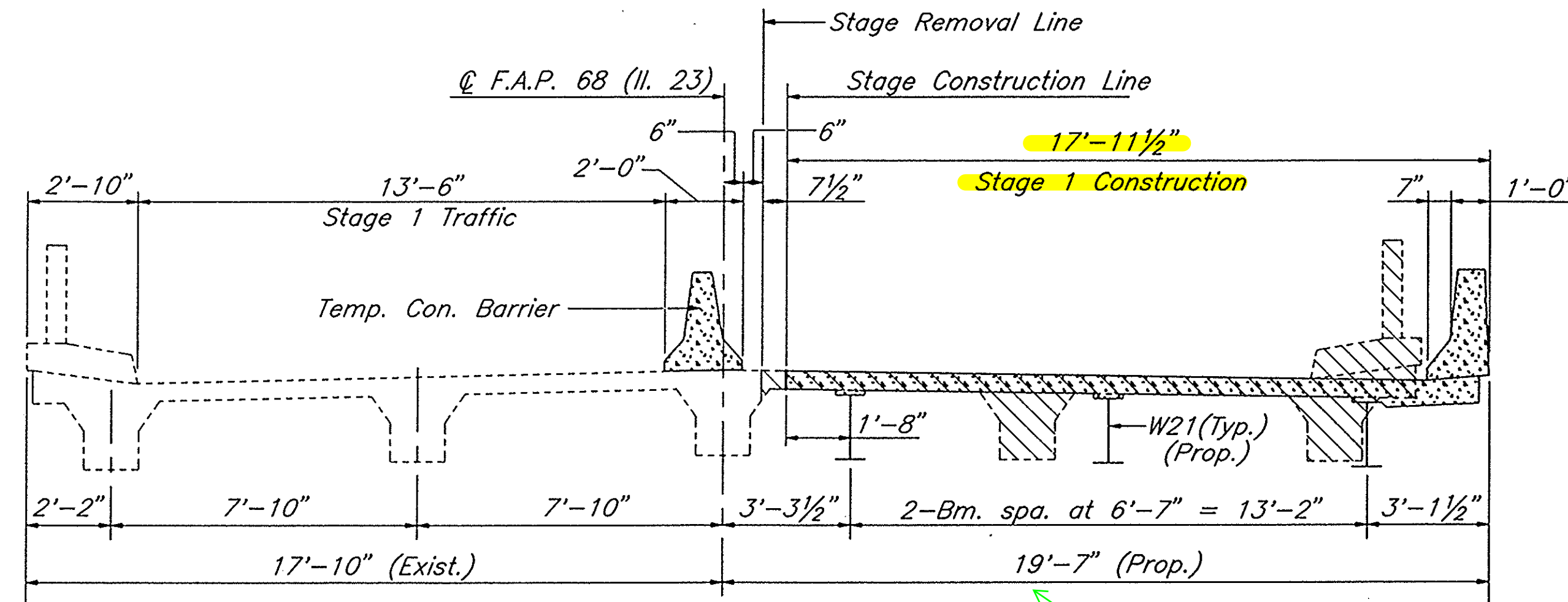
SHEET	14
OF	53

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1-BR	LASALLE	53	15
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

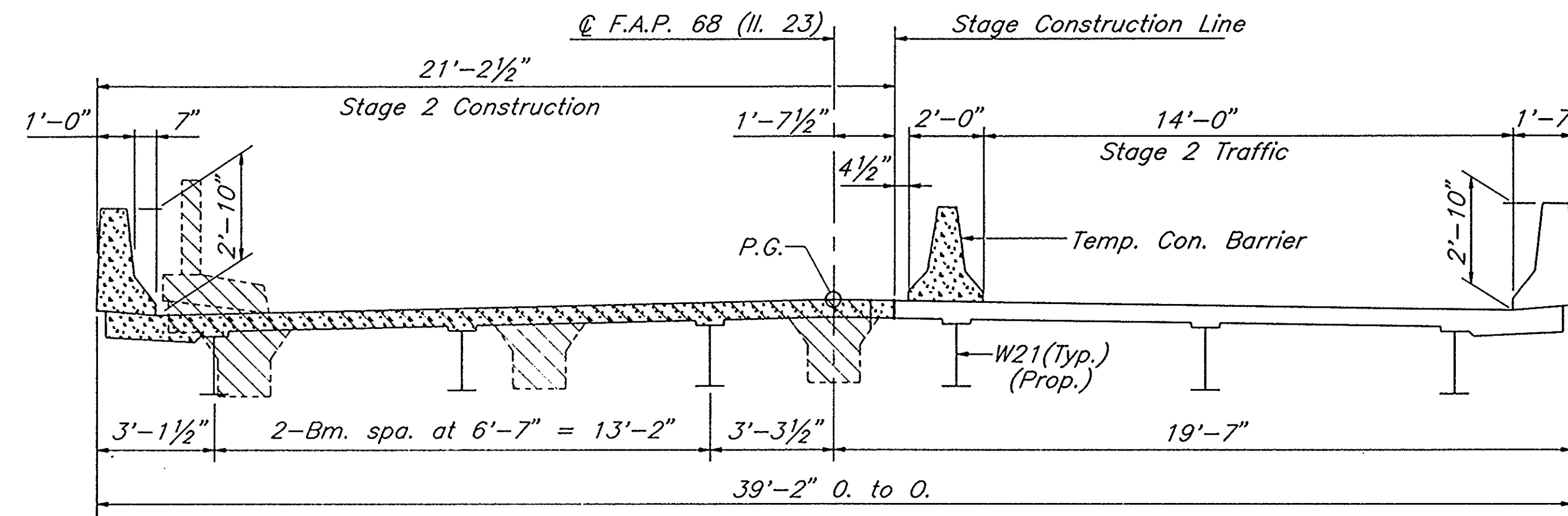
SHEET No. 2
24 SHEETS

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts $7/8"$ ϕ , open holes $15/16"$ ϕ , unless otherwise noted.
- Calculated weight of Structural Steel :
M270 Gr. 36=26,240 pounds, M270 Gr. 50=89,500 pounds
- The Inorganic Zinc-silicate / Acrylic / Acrylic Paint System shall be used for shop and field painting of Structural Steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5 G 4/8. See the Special Provisions.
- Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
- Slope wall shall be reinforced with welded wire fabric, $6" \times 6"$ - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- 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 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.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $1/8"$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $1/8"$ adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed.
- The Contractor shall drive One (1) HP10X42 test pile in a permanent location, located at NE Wing Wall as directed by the engineer before ordering remainder of piles.
- Bridge Seat Sealer shall be applied to the entire seat area of North & South Abutments.
- It is the responsibility of the Contractor to brace the soil behind the abutments to protect the roadway during stage construction.

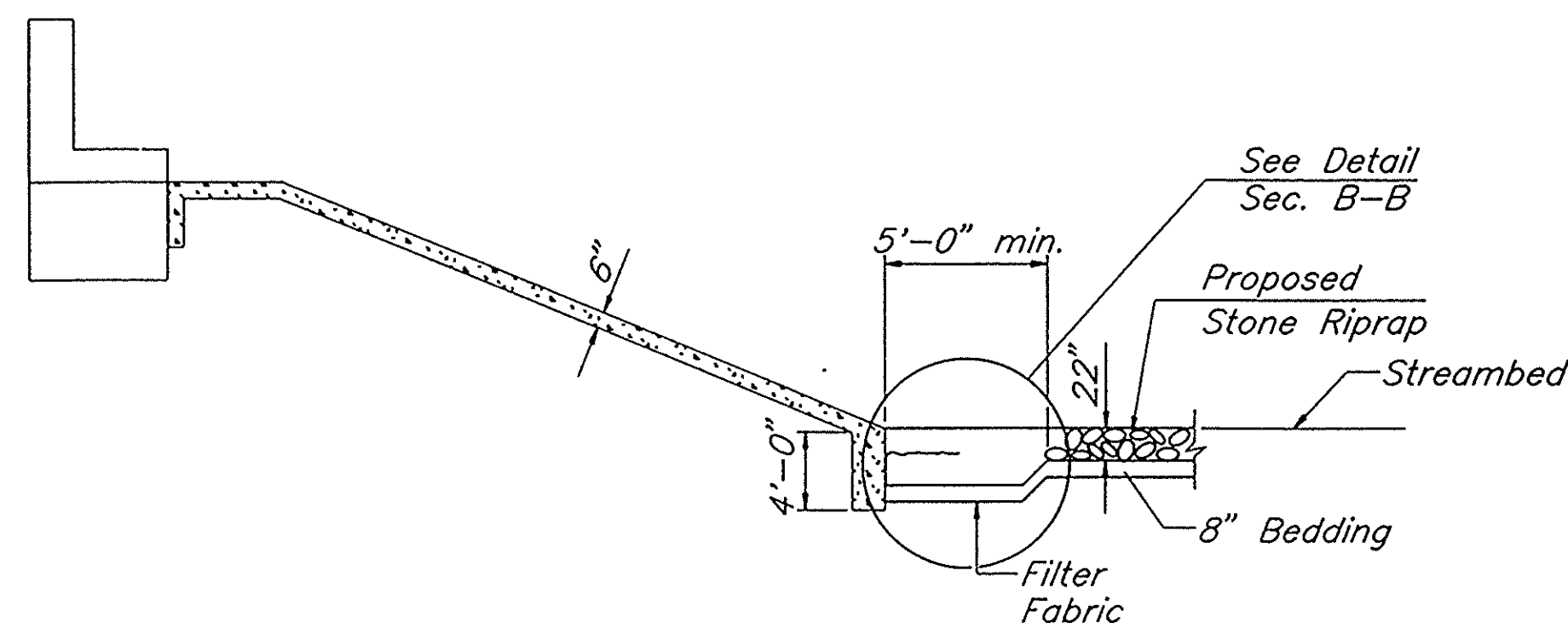


STAGE 1 CONSTRUCTION
Looking Upstation



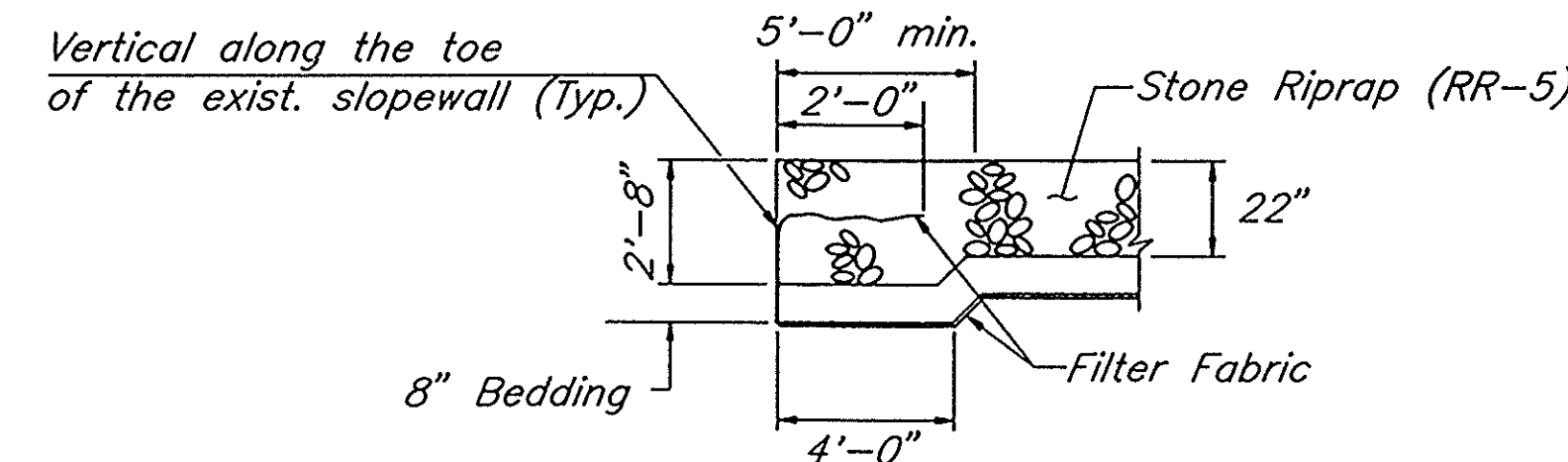
STAGE 2 CONSTRUCTION
Looking Upstation

NOTE : Hatched area represents stage removal.



RIPRAP DETAIL

NOTE : For Slopewall repair, see Sheet No. 3 of 23.



DETAIL SECTION B-B

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED EEG DRAWN JES APPROVED DATE 1/18/94 BOOK SCALE N.T.S. CAD DWG. IL\93030\23STAGE JOB NO. 222-93030-00

CONSTRUCTION STAGING & GENERAL NOTES

F.A.P. 68 (IL. ROUTE 23) OVER COVEL CREEK, LASALLE COUNTY

SECTION 1BR

STATION 626+41

S.N. 050-0047

SHEET

15

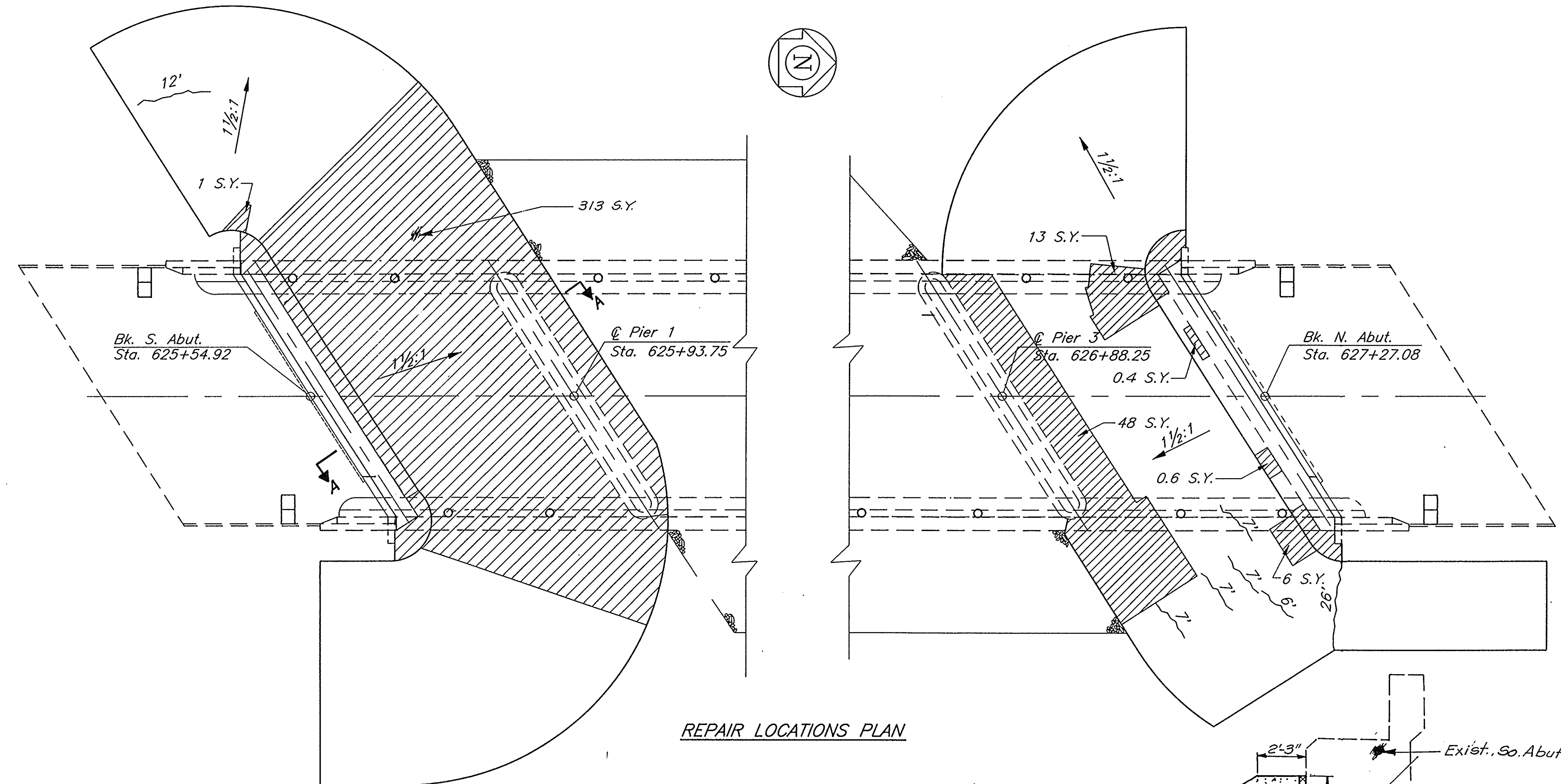
OF

53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

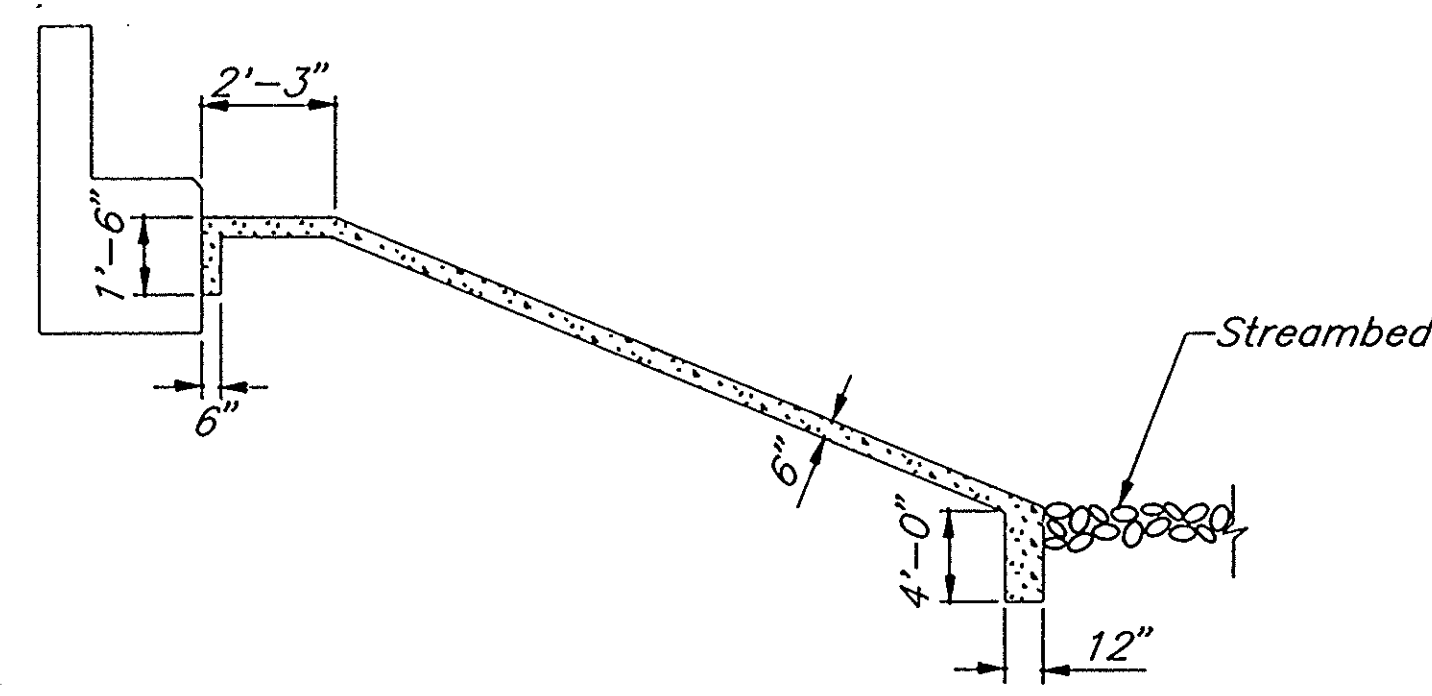
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1 BR	LASALLE	53	16
STA.	TO STA.		ILLINOIS PROJECT NO.	
FED. ROAD DIST. NO.				

SHEET NO. 3
24 SHEETS

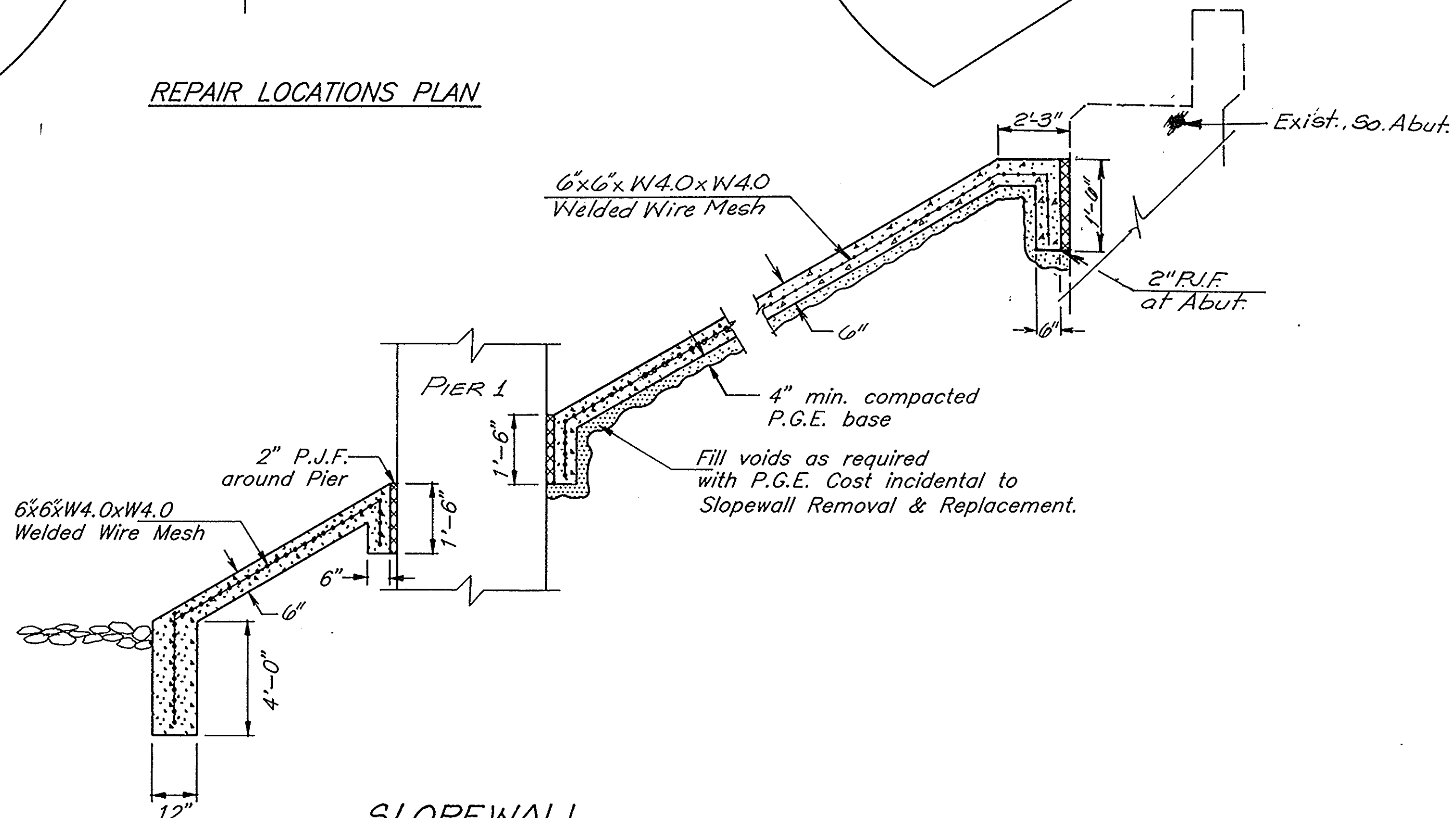


REPAIR LOCATIONS PLAN

- Area of Slopewall Removal & Replacement (6")
- Slopewall cracks to receive Cement/Sand Mortar Mix (1:1).
Cost incidental to Slopewall Removal & Replacement.



SLOPEWALL DETAIL



SLOPEWALL
SECTION A-A

NOTES :

1. Dimensions shown are along the face of Slopewall.
2. Perimeters of concrete removal areas shall be saw cut $\frac{3}{4}$ " prior to removal of concrete. Cost incidental to Slopewall Removal & Replacement.
3. Existing construction joints and joints between existing concrete and the new concrete shall be sealed with Two Component Gray Sealing Compound. Cost incidental to Slopewall Removal & Replacement. (See Special Provisions)
4. Welded Wire Fabric 6x6xW4.0xW4.0 weighing 58#/100 S.F. shall be used in the new concrete.
5. All new slopewall concrete that is in contact with a pier shall be separated by a two inch preformed joint filler.
6. Existing reinforcement extending into removed areas shall be cleaned, straightened and incorporated into the new construction. Cost incidental to Slopewall Removal & Replacement.

ITEM	TOTAL
Slopewall Removal & Replacement	382 SQ. YD.

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

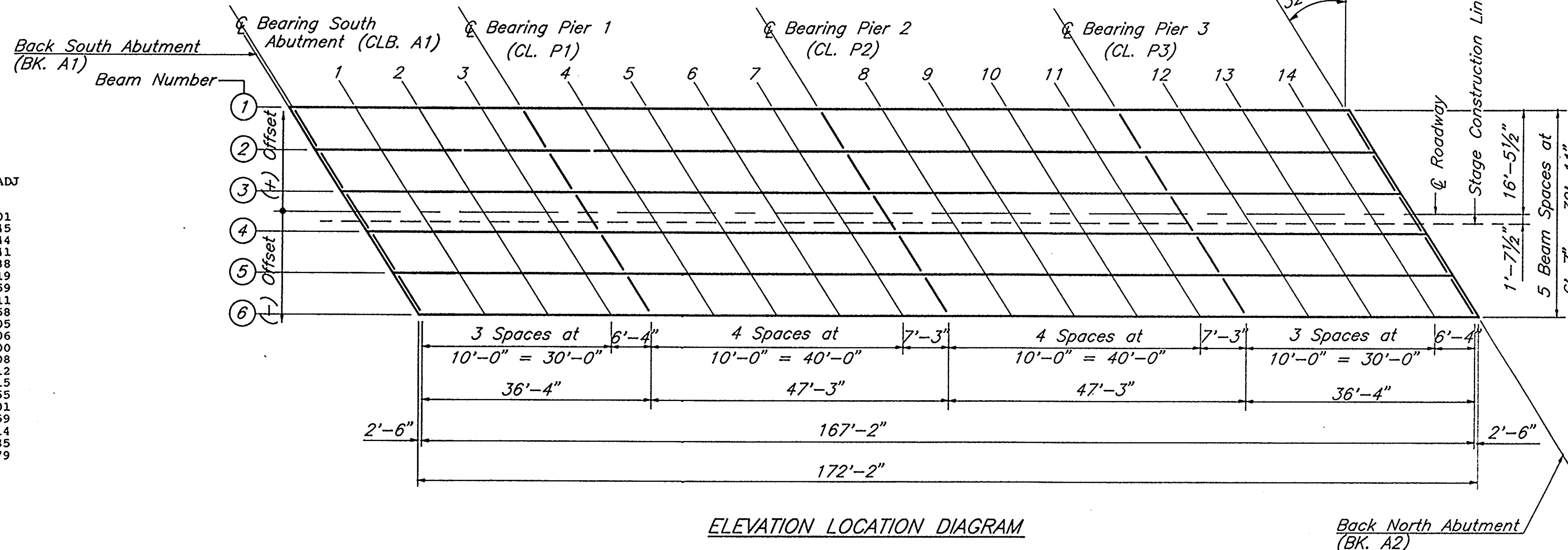
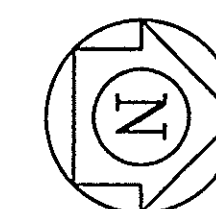
REVISIONS									
DESIGNED	EEG	DRAWN	JES	APPROVED	DATE	1/18/94	BOOK	SCALE	N.T.S.
CAD DWG.	\\IL\93030\SLOPEWL		JOB NO. 222/93030/00						

SLOPEWALL REPAIR
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET
16
OF 53

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1-BR	LASALLE	53	17
FED. ROAD DIST. NO.	ILLINOIS PROJECT			24 SHEETS



BEAM 1

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 44.434	16.458	566.161	566.161
CLB.A1	625 + 46.934	16.458	566.103	566.103
1	625 + 55.934	16.458	565.875	565.875
2	625 + 66.934	16.458	565.660	565.674
3	625 + 76.934	16.458	565.455	565.459
CL.P 1	625 + 83.266	16.458	565.332	565.332
4	625 + 93.266	16.458	565.147	565.160
5	626 + 3.266	16.458	564.974	564.999
6	626 + 13.266	16.458	564.813	564.835
7	626 + 23.266	16.458	564.663	564.669
CL.P 2	626 + 30.516	16.458	564.561	564.561
8	626 + 40.516	16.458	564.432	564.443
9	626 + 50.516	16.458	564.314	564.339
10	626 + 60.516	16.458	564.208	564.230
11	626 + 70.516	16.458	564.113	564.121
CL.P 3	626 + 77.766	16.458	564.052	564.052
12	626 + 87.766	16.458	563.978	563.986
13	626 + 97.766	16.458	563.915	563.932
14	627 + 7.766	16.458	563.864	563.875
CLB.A2	627 + 14.094	16.458	563.838	563.838
BK.A2	627 + 16.594	16.458	563.829	563.829

STRUCTURE

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 54.922	0.000	566.201	566.201
CLB.A1	625 + 57.422	0.000	566.145	566.145
1	625 + 67.422	0.000	565.930	565.944
2	625 + 77.422	0.000	565.726	565.741
3	625 + 87.422	0.000	565.534	565.538
CL.P 1	625 + 93.750	0.000	565.419	565.419
4	626 + 3.750	0.000	565.246	565.259
5	626 + 13.750	0.000	565.085	565.111
6	626 + 23.750	0.000	564.936	564.958
7	626 + 33.750	0.000	564.799	564.806
CL.P 2	626 + 41.000	0.000	564.706	564.706
8	626 + 51.000	0.000	564.589	564.600
9	626 + 61.000	0.000	564.483	564.508
10	626 + 71.000	0.000	564.389	564.412
11	626 + 81.000	0.000	564.307	564.315
CL.P 3	626 + 88.250	0.000	564.255	564.255
12	626 + 98.250	0.000	564.193	564.201
13	627 + 8.250	0.000	564.142	564.159
14	627 + 18.250	0.000	564.094	564.114
CLB.A2	627 + 24.578	0.000	564.085	564.085
BK.A2	627 + 27.078	0.000	564.079	564.079

BEAM 2

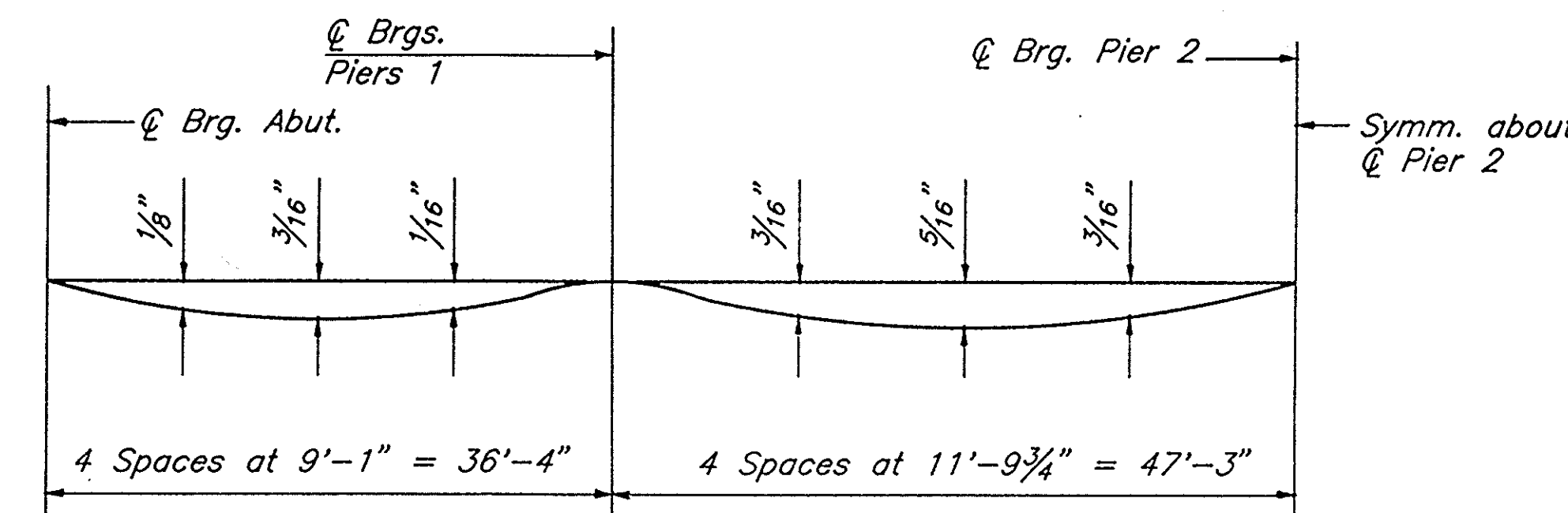
LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 48.629	9.875	566.190	566.190
CLB.A1	625 + 51.129	9.875	566.132	566.132
1	625 + 61.129	9.875	565.909	565.924
2	625 + 71.129	9.875	565.699	565.713
3	625 + 81.129	9.875	565.499	565.503
CL.P 1	625 + 87.457	9.875	565.379	565.379
4	625 + 97.457	9.875	565.199	565.212
5	626 + 7.457	9.875	565.031	565.056
6	626 + 17.457	9.875	564.874	564.896
7	626 + 27.457	9.875	564.729	564.736
CL.P 2	626 + 34.707	9.875	564.632	564.632
8	626 + 44.707	9.875	564.507	564.518
9	626 + 54.707	9.875	564.394	564.419
10	626 + 64.707	9.875	564.293	564.316
11	626 + 74.707	9.875	564.203	564.211
CL.P 3	626 + 81.957	9.875	564.145	564.145
12	626 + 91.957	9.875	564.076	564.084
13	627 + 1.957	9.875	564.018	564.035
14	627 + 11.957	9.875	563.972	563.983
CLB.A2	627 + 18.289	9.875	563.949	563.949
BK.A2	627 + 20.789	9.875	563.942	563.942

STAGE CONSTRUCTION JOINT

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 55.957	-1.625	566.152	566.152
CLB.A1	625 + 58.457	-1.625	566.097	566.097
1	625 + 67.422	-1.625	565.904	565.919
2	625 + 77.422	-1.625	565.701	565.715
3	625 + 87.422	-1.625	565.509	565.512
CL.P 1	625 + 94.785	-1.625	565.375	565.375
4	626 + 3.750	-1.625	565.221	565.233
5	626 + 13.750	-1.625	565.060	565.085
6	626 + 23.750	-1.625	564.911	564.933
7	626 + 33.750	-1.625	564.773	564.780
CL.P 2	626 + 42.035	-1.625	564.668	564.668
8	626 + 51.000	-1.625	564.563	564.575
9	626 + 61.000	-1.625	564.458	564.483
10	626 + 71.000	-1.625	564.364	564.387
11	626 + 81.000	-1.625	564.282	564.289
CL.P 3	626 + 89.285	-1.625	564.222	564.222
12	626 + 98.250	-1.625	564.167	564.175
13	627 + 8.250	-1.625	564.117	564.134
14	627 + 18.250	-1.625	564.078	564.089
CLB.A2	627 + 25.617	-1.625	564.057	564.057
BK.A2	627 + 28.117	-1.625	564.052	564.052

BEAM 5

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 61.211	-9.875	565.908	565.908
CLB.A1	625 + 63.711	-9.875	565.854	565.854
1	625 + 73.711	-9.875	565.646	565.661
2	625 + 83.711	-9.875	565.450	565.465
3	625 + 93.711	-9.875	565.265	565.269
CL.P 1	626 + 0.043	-9.875	565.155	565.155
4	626 + 10.043	-9.875	564.989	565.002
5	626 + 20.043	-9.875	564.836	564.861
6	626 + 30.043	-9.875	564.694	564.716
7	626 + 40.043	-9.875	564.564	564.570
CL.P 2	626 + 47.293	-9.875	564.477	564.477
8	626 + 57.293	-9.875	564.367	564.378
9	626 + 67.293	-9.875	564.268	564.293
10	626 + 77.293	-9.875	564.182	564.205
11	626 + 87.293	-9.875	564.107	564.115
CL.P 3	626 + 94.543	-9.875	564.060	564.060
12	627 + 4.543	-9.875	564.005	564.013
13	627 + 14.543	-9.875	563.962	563.979
14	627 + 24.543	-9.875	563.931	563.942
CLB.A2	627 + 30.871	-9.875	563.918	563.918
BK.A2	627 + 33.371	-9.875	563.913	563.913



BEAM 3

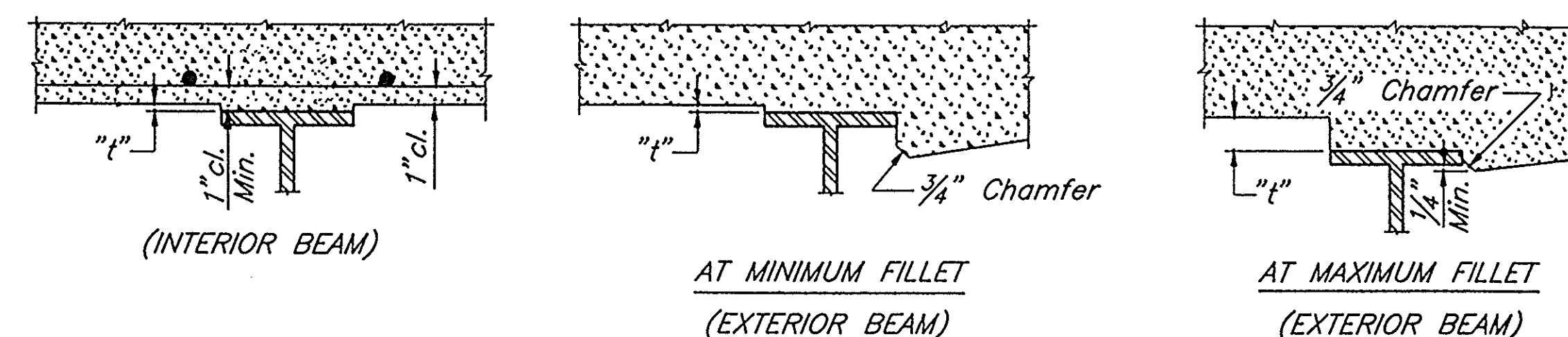
LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 52.824	3.292	566.196	566.196
CLB.A1	625 + 55.324	3.292	566.140	566.140
1	625 + 65.324	3.292	565.922	565.937
2	625 + 75.324	3.292	565.716	565.731
3	625 + 85.324	3.292	565.522	565.525
CL.P 1	625 + 91.652	3.292	565.405	565.405
4	626 + 1.652	3.292	565.230	565.243
5	626 + 11.652	3.292	565.067	565.092
6	626 + 21.652	3.292	564.915	564.937
7	626 + 31.652	3.292	564.775	564.781
CL.P 2	626 + 38.902	3.292	564.681	564.681
8	626 + 48.902	3.292	564.561	564.572
9	626 + 58.902	3.292	564.453	564.478
10	626 + 68.902	3.292	564.357	564.379
11	626 + 78.902	3.292	564.272	564.279
CL.P 3	626 + 86.152	3.292	564.218	564.218
12	627 + 6.152	3.292	564.153	564.161
13	627 + 16.152	3.292	564.101	564.117
14	627 + 26.152	3.292	564.059	564.070
CLB.A2	627 + 22.484	3.292	564.040	564.040
BK.A2	627 + 24.984	3.292	564.033	564.033

BEAM 4

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 57.016	-3.292	566.102	566.102
CLB.A1	625 + 59.516	-3.292	566.047	566.047
1	625 + 69.516	-3.292	565.835	565.849
2	625 + 79.516	-3.292	565.634	565.648
3	625 + 89.516	-3.292	565.444	565.448
CL.P 1	625 + 95.848	-3.292	565.330	565.330
4	626 + 5.848	-3.292	565.160	565.173
5	626 + 15.848	-3.292	565.002	565.027
6	626 + 25.848	-3.292	564.855	564.877
7	626 + 35.848	-3.292	564.720	564.726
CL.P 2	626 + 43.098	-3.292	564.629	564.629
8	626 + 53.098	-3.292	564.514	564.526
9	626 + 63.098	-3.292	564.411	564.436
10	626 + 73.098	-3.292	564.320	564.342
11	626 + 83.098	-3.292	564.240	564.247
CL.P 3	626 + 90.348	-3.292	564.189	564.189
12	627 + 0.348	-3.292	564.130	564.138
13	627 + 10.348	-3.292	564.082	564.099
14	627 + 20.348	-3.292	564.046	564.056
CLB.A2	627 + 26.676	-3.292	564.029	564.029
BK.A2	627 + 29.176	-3.292	564.024	564.024

BEAM 6

LOCATION	STATION	OFFSET	SLAB ELEV	SLAB ELEV ADJ
BK.A1	625 + 65.406	-16.458	565.692	565.692
CLB.A1	625 + 67.906	-16.458	565.639	565.639
1	625 + 77.906	-16.458	565.436	565.451
2	625 + 87.906	-16.458	565.245	565.260
3	625 + 97.906	-16.458	565.065	565.069
CL.P 1	626 + 4.234	-16.458	564.958	564.958
4	626 + 14.234	-16.458	564.797	564.810
5	626 + 24.234	-16.458	564.649	564.674
6	626 + 34.234	-16.458	564.512	564.534
7	626 + 44.234	-16.458	564.387	564.393
CL.P 2	626 + 51.484	-16.458	564.303	564.303
8	626 + 61.484	-16.458	564.198	564.209
9	626 + 71.484	-16.458	564.105	564.129
10	626 + 81.484	-16.458	564.023	564.046
11	626 + 91.484	-16.458	563.953	563.961
CL.P 3	626 + 98.734	-16.458	563.910	563.910
12	627 + 8.734	-16.458	563.860	563.868
13	627 + 18.734	-16.458	563.822	563.839
14	627 + 28.734	-16.458	563.796	563.796
CLB.A2	627 + 35.066	-16.458	563.785	563.785
BK.A2	627 + 37.566	-16.458	563.782	563.782

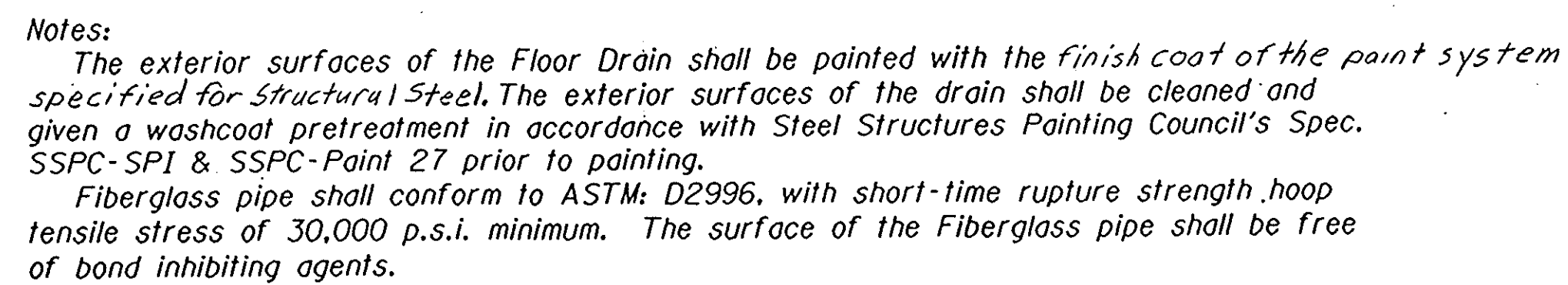


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown. These elevations subtracted from the "Slab Elevations Adjusted for Dead Load Deflection" shown, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

WALTER E. DEUCHLER ASSOCIATES,

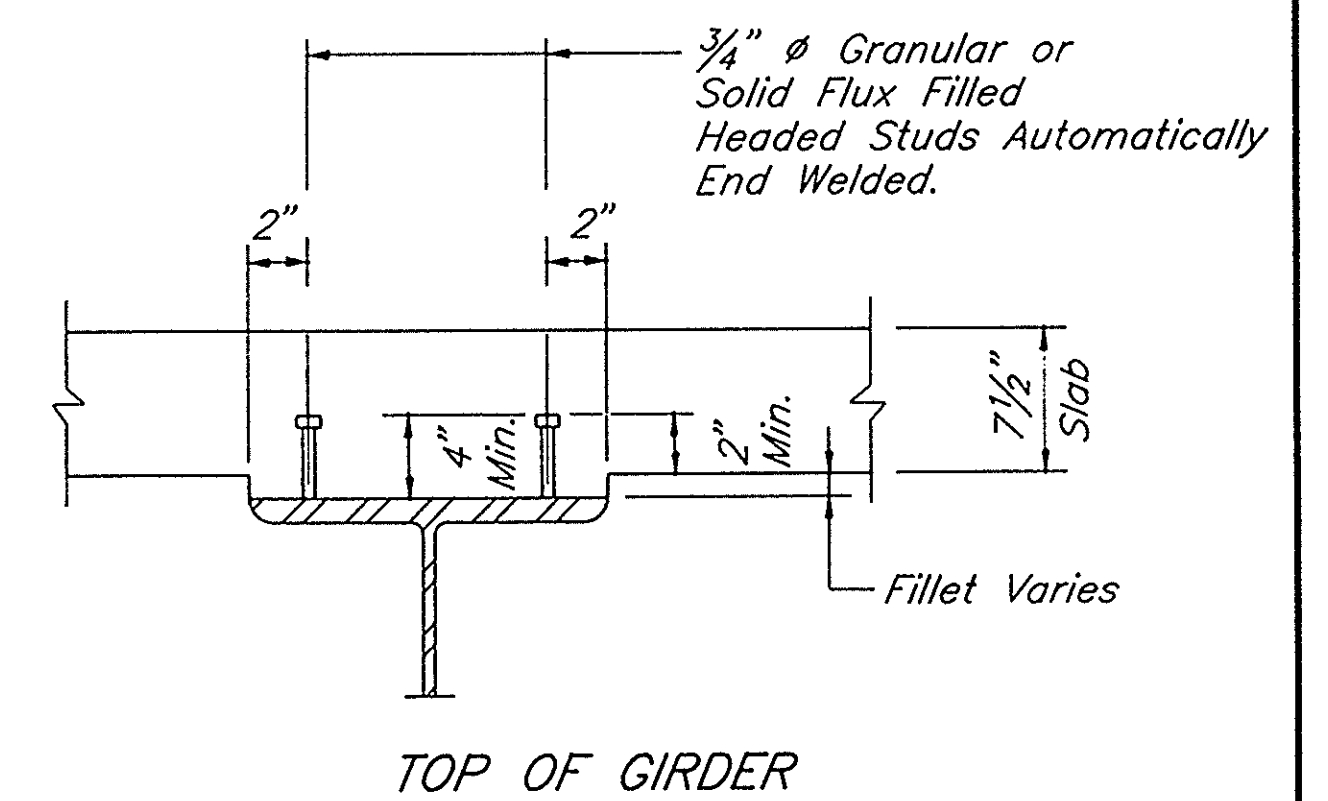
SHEET NO. 6
24 SHEETS



*Reinforcement Bars Designated (E)
shall be Epoxy Coated.*

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1-BR	LASALLE	53	20
FED. ROAD DIST. NO.		ILLINOIS PROJECT		

SHEET No. 7
24 SHEETS



STUD SHEAR CONNECTOR DETAILS
(No. Req'd. = 3252)

REVISIONS												
DESIGNED	EEG	DRAWN	JES	APPROVED	DATE	2/2/94	BOOK	SCALE	CAD DWG	IL\93030\47FRAME	JOB NO	222\93030\00

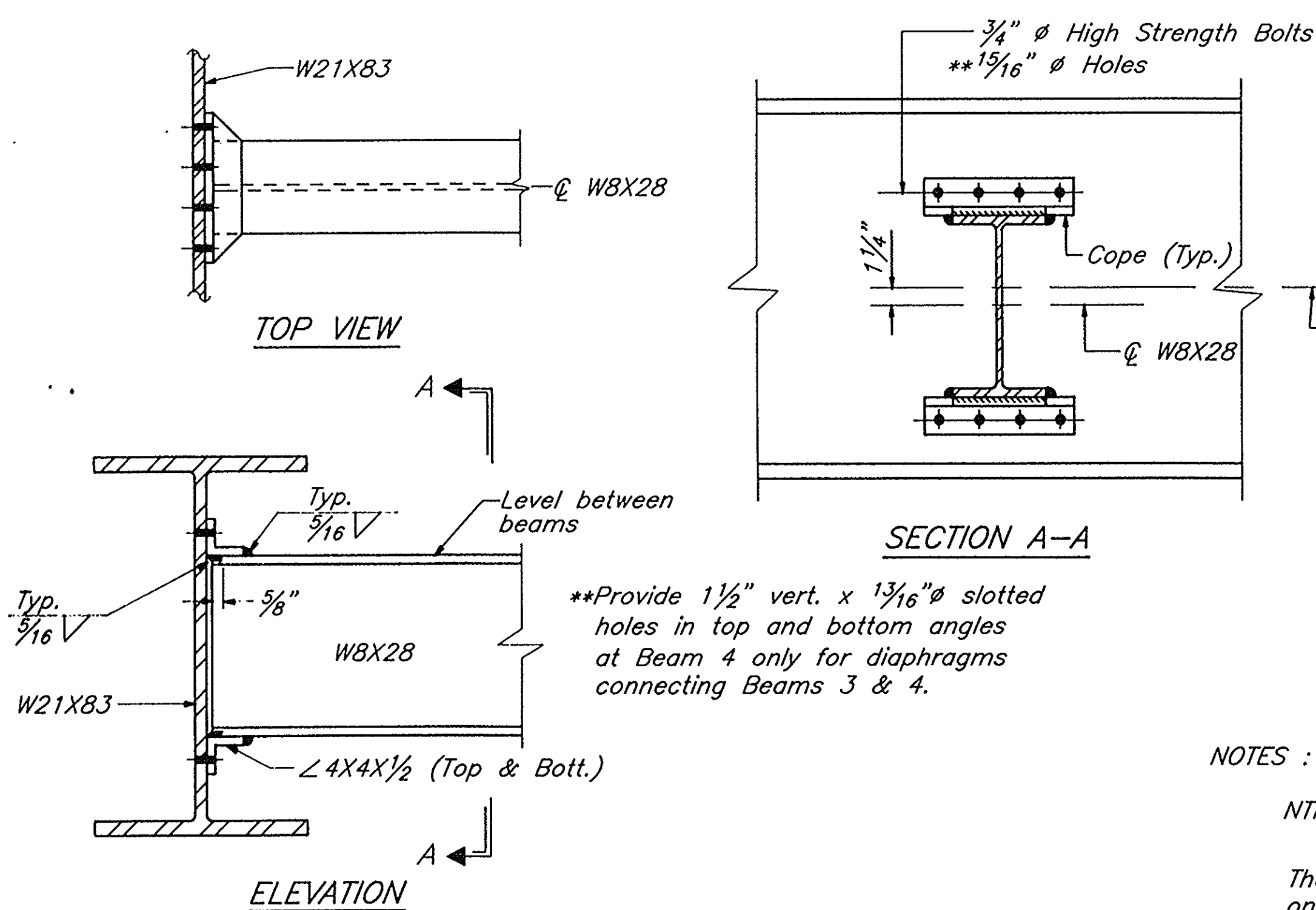
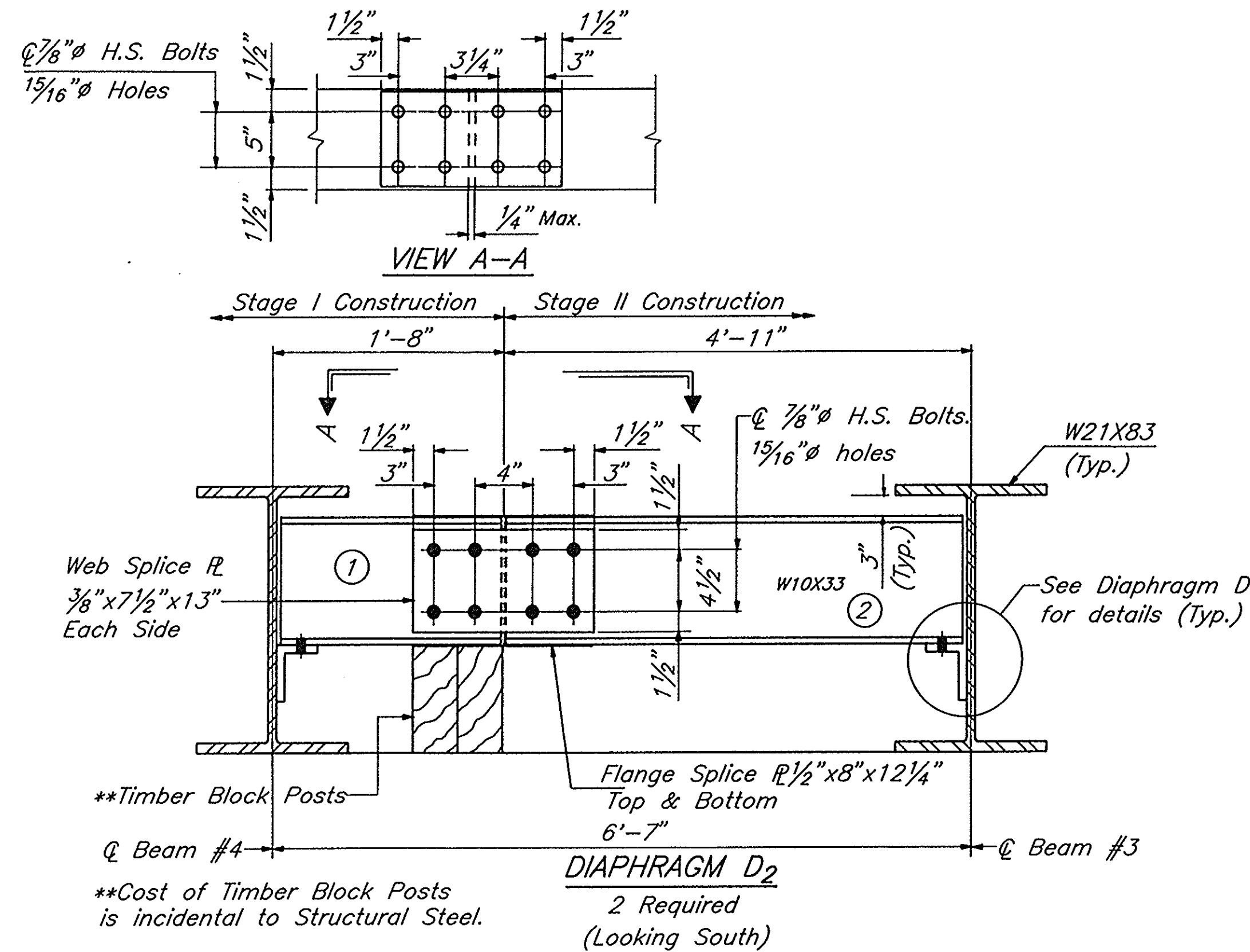
STEEL FRAMING PLAN

20

53

DIAPHRAGM D₂ CONSTRUCTION SEQUENCE

- 1.) Order Diaphragm D₂ in two sections with lengths of 4'-10 1/4" and 1'-7 1/4".
- 2.) Attach section ① of Diaphragm to Beam 4 and top flange splice R 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 #3 and top of flange splice R during Stage II Construction.
- 5.) Attach web splice plates to sections ① and ② of diaphragms.
- 6.) Remove Timber Block posts.
- 7.) Attach bottom flange splice plate to sections ① and ② of diaphragms.



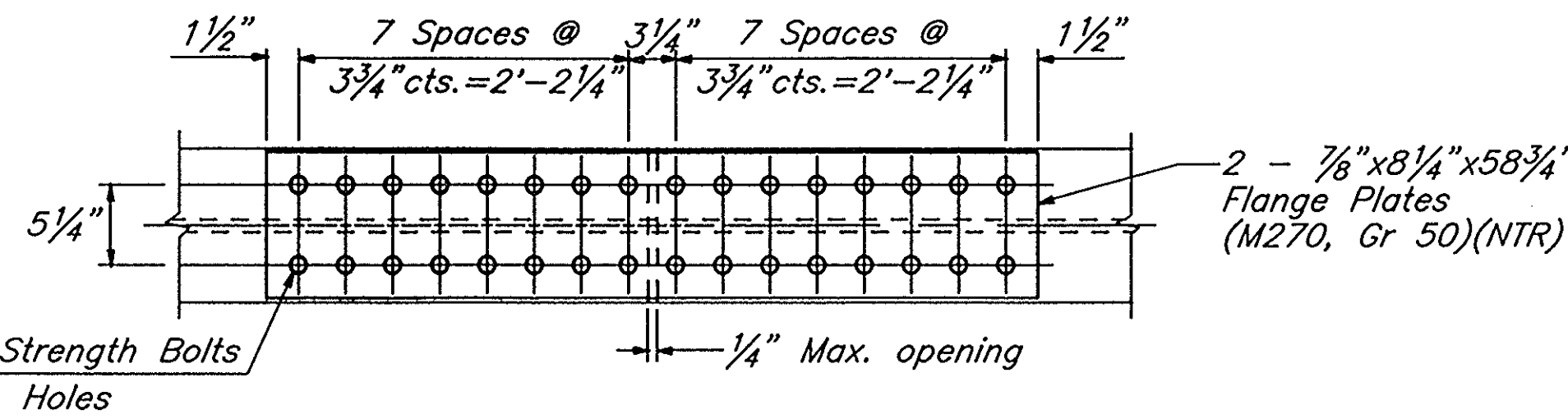
NOTES :

NTR denotes Notch Toughness Requirements.

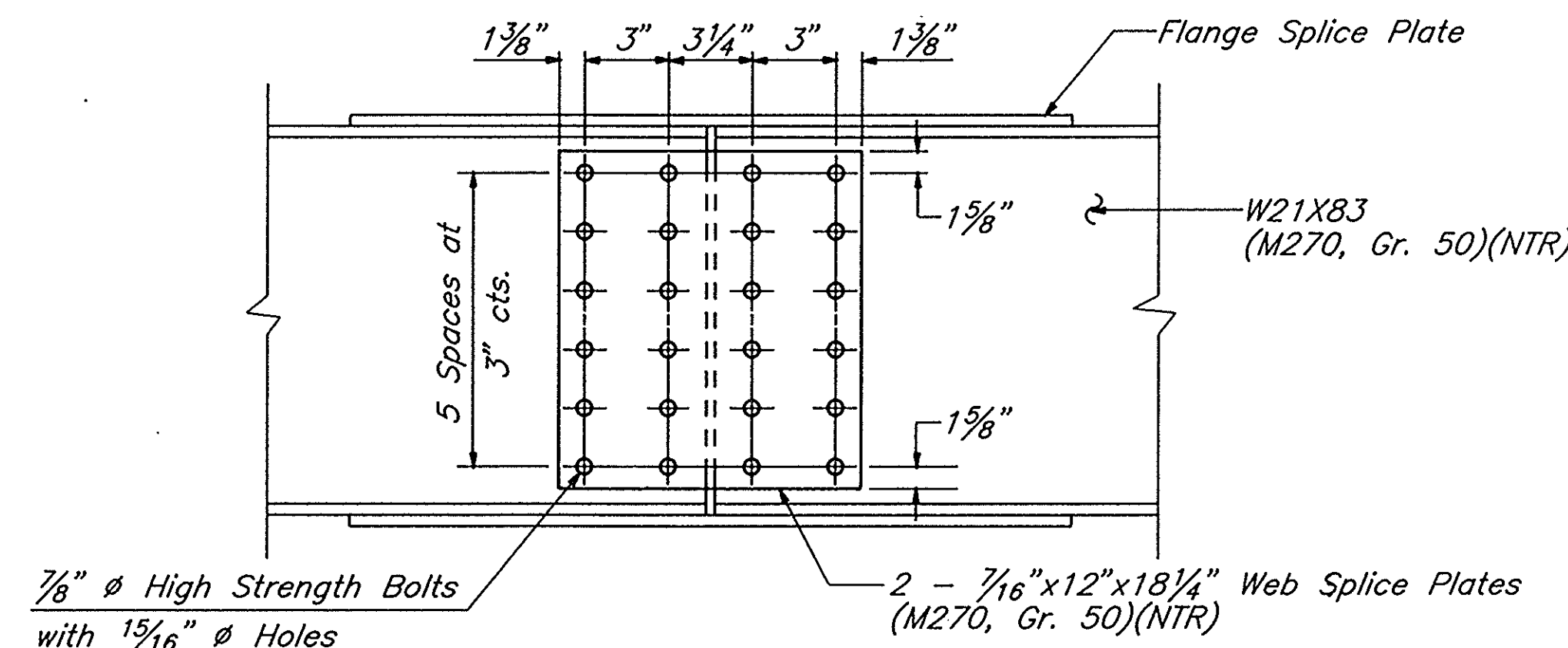
The bolts for slotted holes in angles at Beam #4 shall only be finger-tightened prior to pouring of the deck slab and then be fully-tightened after completion of the pouring for Stage II Const.

NOTE : Two hardened washers shall be required over all 1 1/16" oversize holes for diaphragms.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

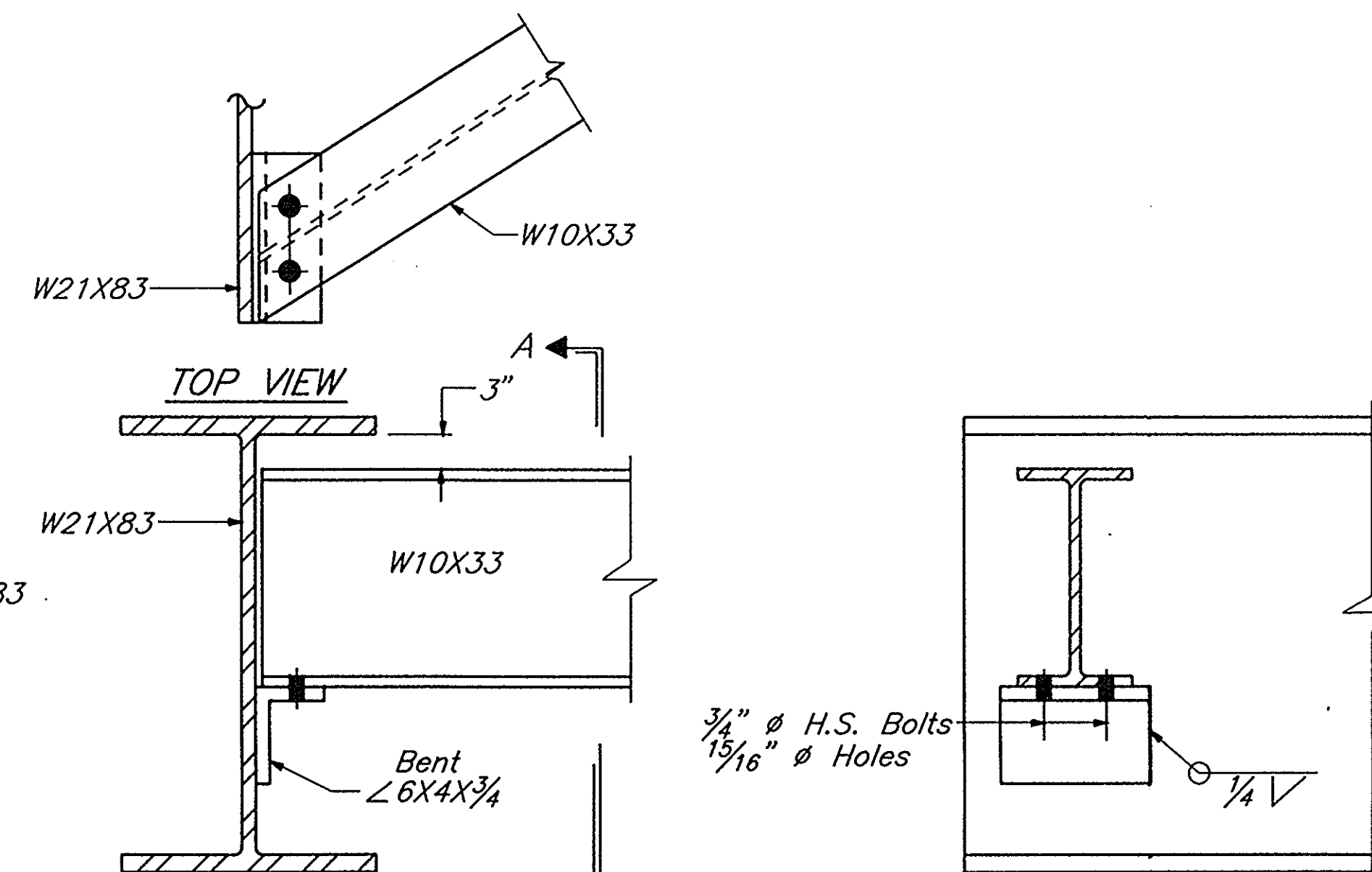


TOP VIEW OF FLANGE SPLICE PLATE



ELEVATION

FIELD SPLICE DETAIL



ELEVATION

DIAPHRAGM D (8 - Required)

SECTION A-A

INTERIOR BEAM MOMENT TABLE					
		0.4 Sp. 1 or 4	Pier 1 or 3	0.5 Sp. 2 or 3	Pier 2
Is	(in ⁴)	1830	1830	1830	1830
Ic (n)	(in ⁴)	6255		6255	
Ic (3n)	(in ⁴)	4608		4608	
Ss	(in ³)	171	171	171	171
Sc (n)	(in ³)	286		286	
Sc (3n)	(in ³)	257		257	
Q	(K/ft.)	.733	1.038	.733	1.038
MQ	(K)	65	171	70	189
SQ	(K/ft.)	.305		.305	
MSQ	(K)	31		40	
ML	(K)	196	112	248	126
M (Imp)	(K)	59	33	74	38
S3[ML+M(Imp)]	(K)	425	242	537	274
Ma	(K)	678	536	841	603
Mu	(K)				
fs Q non-comp (k.s.i.)		4.5	12.0	4.9	13.3
fs Q (comp) (k.s.i.)		1.5		1.8	
fs S3(L+Imp) (k.s.i.)		17.8	16.9	22.5	19.2
fs (Overload) (k.s.i.)		23.8	28.9	29.2	32.5
fs (Total) (k.s.i.)		30.9	37.6	38.0	42.3
VR	(K)	48.7		48.7	

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment) = 1.3 [M_Q + Ms_Q + 5/3 (M_L + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to M_Q + Ms_Q + 5/3 (M_L + I).
fs (Total) is the sum of the stresses due to 1.3 [M_Q + Ms_Q + 5/3 (M_L + I)].

INTERIOR BEAM REACTION TABLE			
	Abut.	Pier 1 or 3	Pier 2
R _Q	(K) 14.1	47.7	49.9
R _L	(K) 30.8	37.2	37.4
Imp.	(K) 9.2	10.8	10.9
R (Total)	(K) 54.1	95.7	98.1

* TOP OF BEAM ELEVATIONS								
Beam No.	Q Bearing S-Abutment	Q Bearing Pier-1	Q Splice-1	Q Splice-2	Q Bearing Pier-2	Q Splice-3	Q Bearing Pier-3	Q Bearing N-Abutment
1	565.42	564.64	564.47	564.02	563.87	563.45	563.36	563.15
2	565.44	564.69	564.52	564.09	563.94	563.54	563.46	563.26
3	565.45	564.72	564.55	564.13	563.99	563.60	563.53	563.35
4	565.36	564.64	564.48	564.07	563.94	563.57	563.50	563.34
5	565.17	564.47	564.31	563.92	563.79	563.44	563.37	563.23
6	564.95	564.27	564.12	563.74	563.62	563.28	563.22	563.10

* For Fabrication Only

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

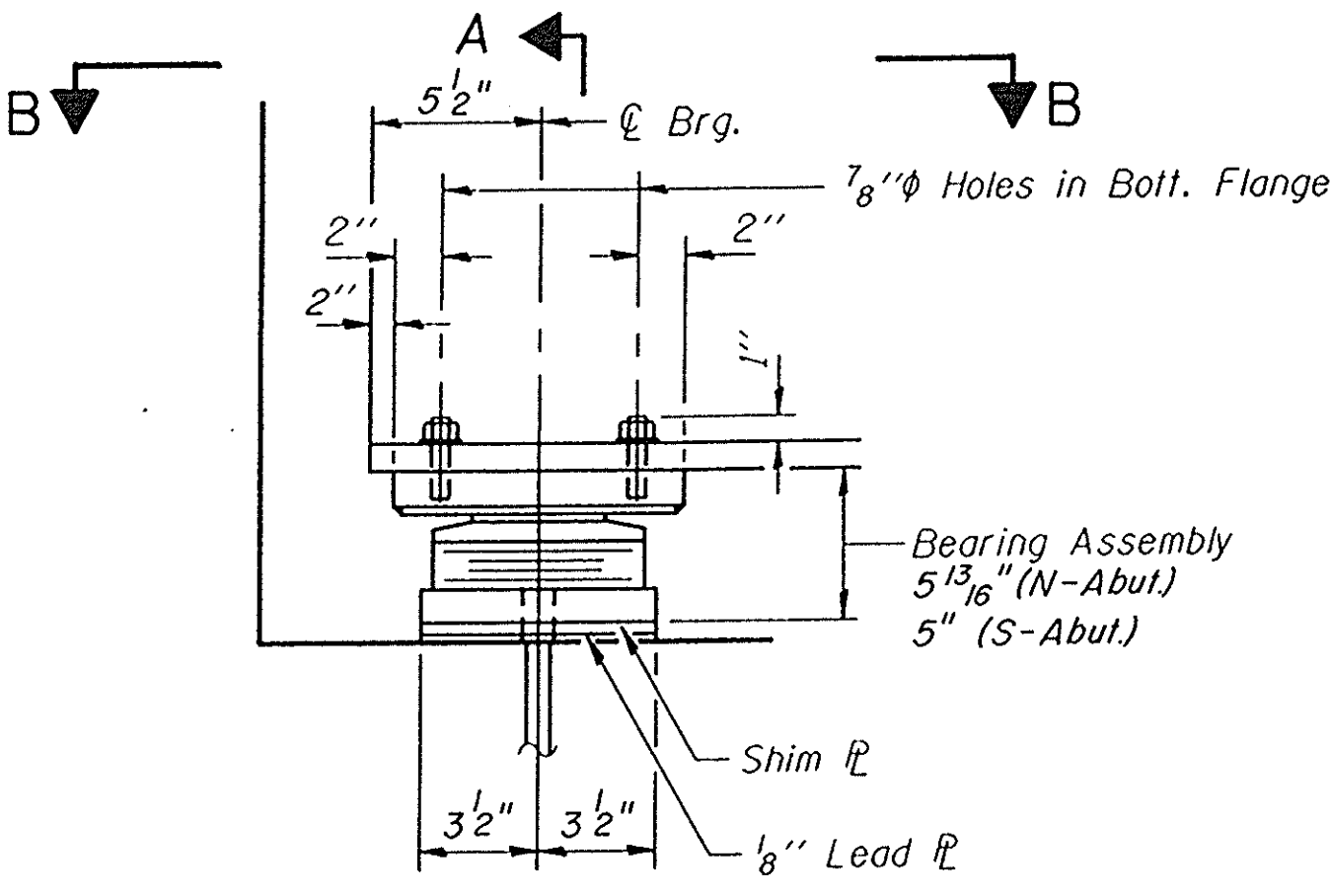
DESIGNED EEG DRAWN JES APPROVED DATE 1/24/94 BOOK SCALE N.T.S. CAD DWG. IL\93030\47DIAPH JOB NO. 222/93030/00

DIAPHRAGM CONNECTION & SPLICE DETAILS
F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1 BR STA. 626+41 S.N. 050-0047

SHEET
21
OF 53

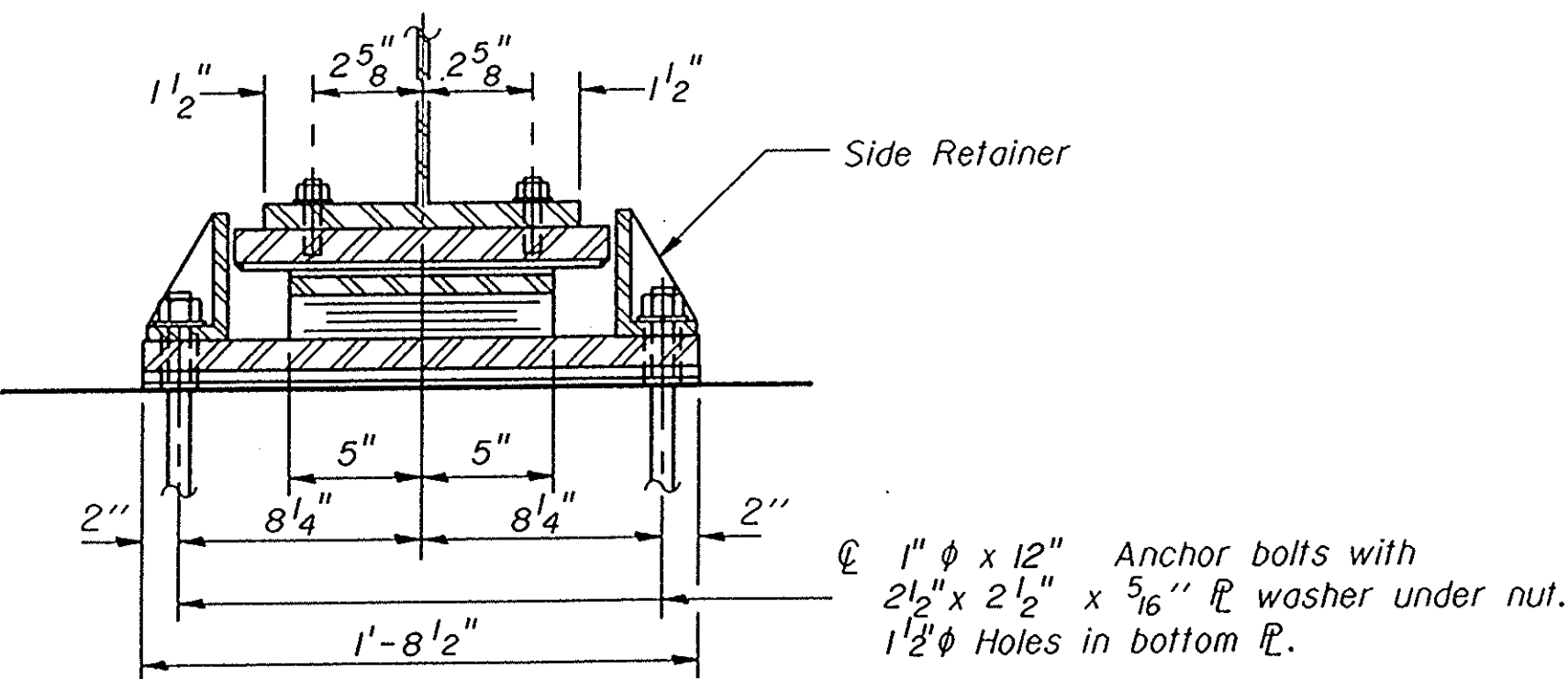
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	22
SHEET NO. 9				
24 SHEETS				

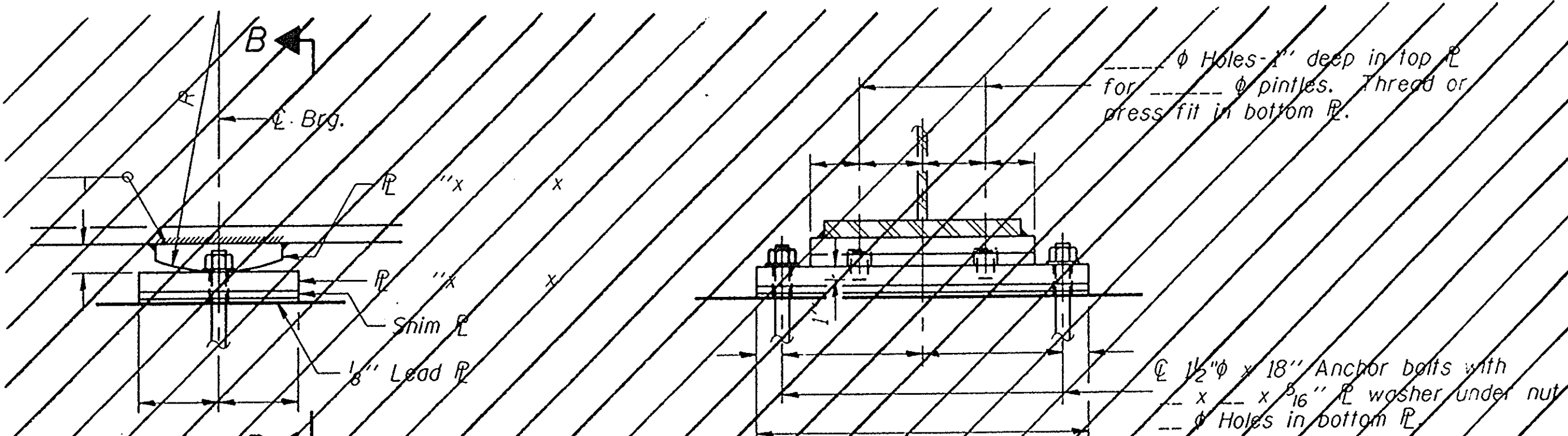


ELEVATION AT ABUT.

TYPE II TFE ELASTOMERIC EXP. BRG.



SECTION A-A

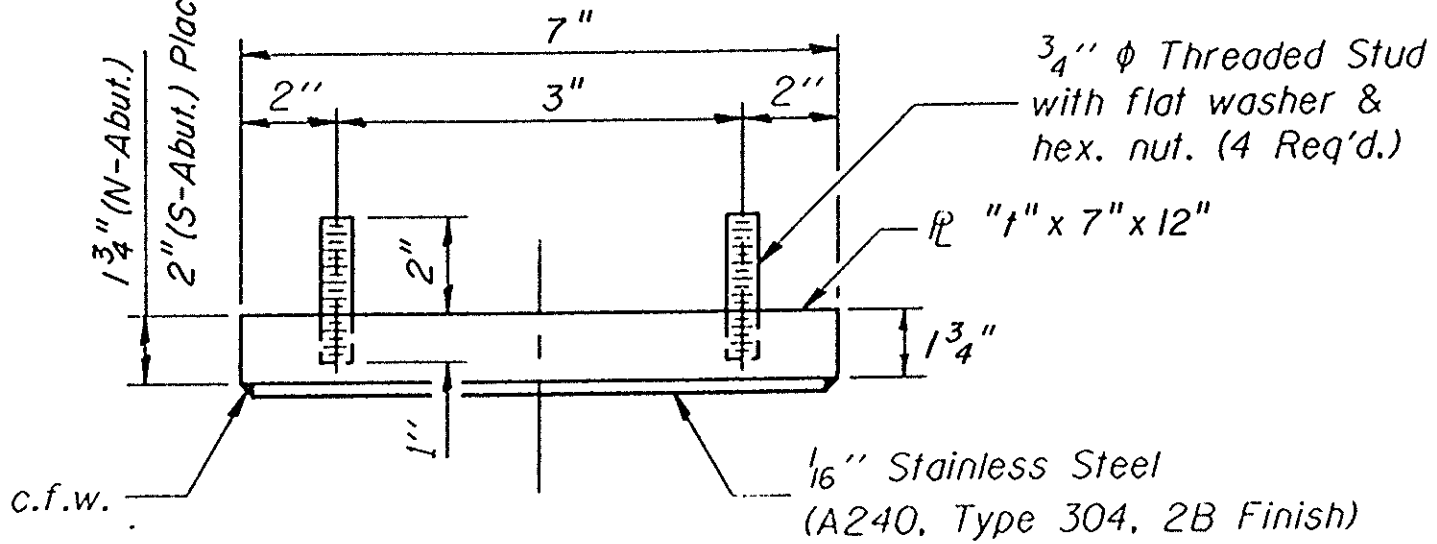


ELEVATION AT PIER

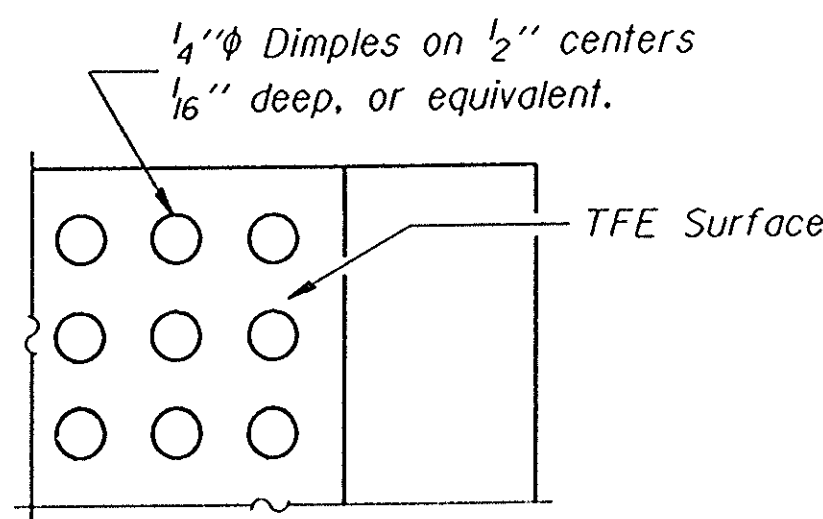
SECTION B-B

FIXED BEARING

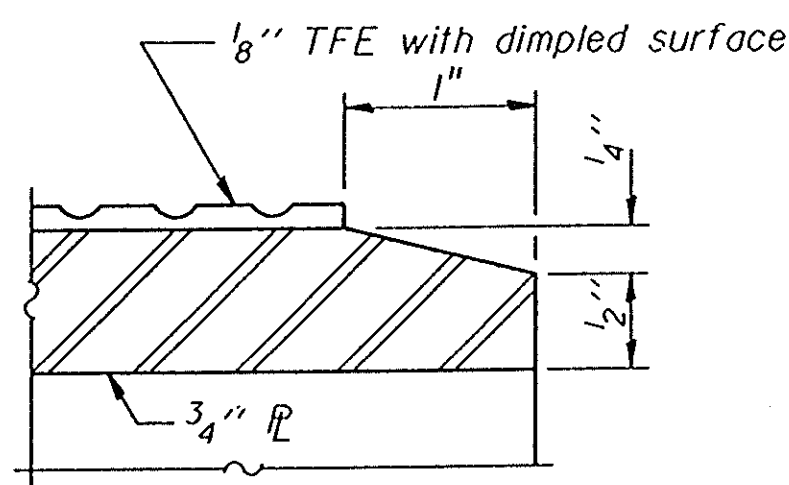
PINTLE



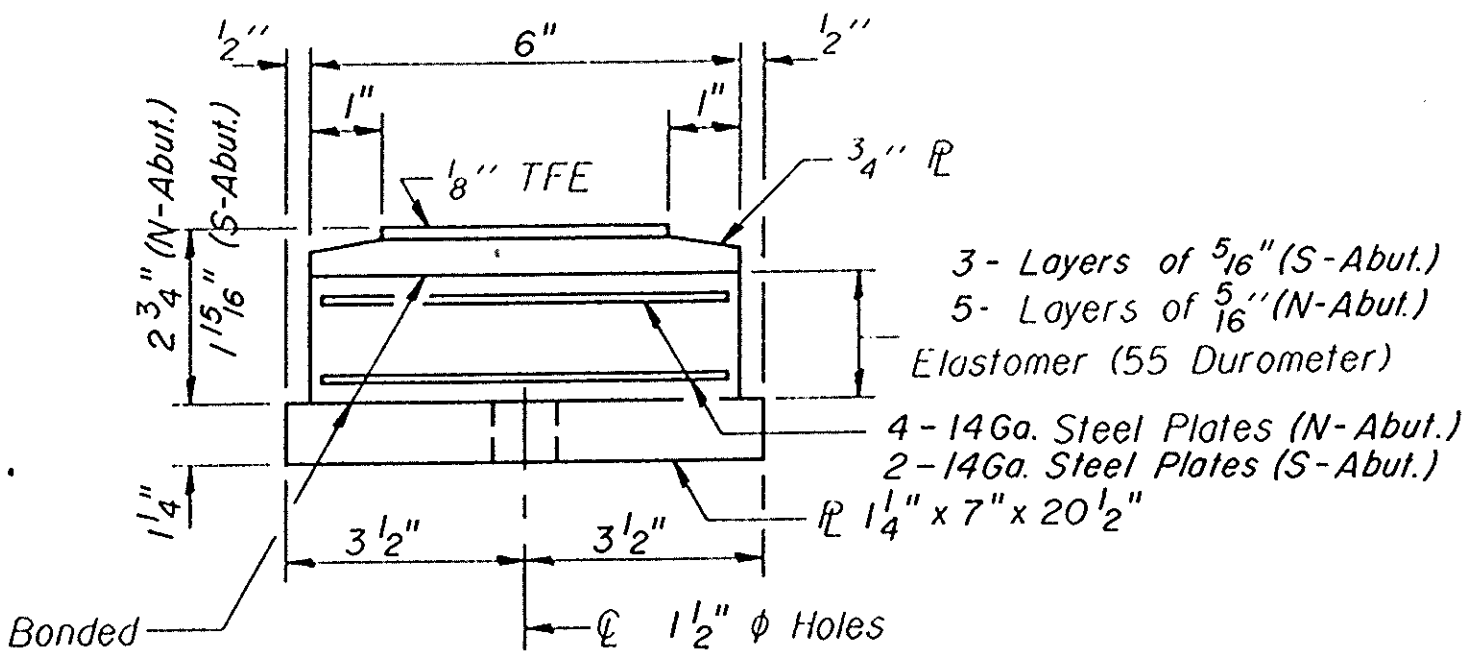
TOP BEARING ASSEMBLY



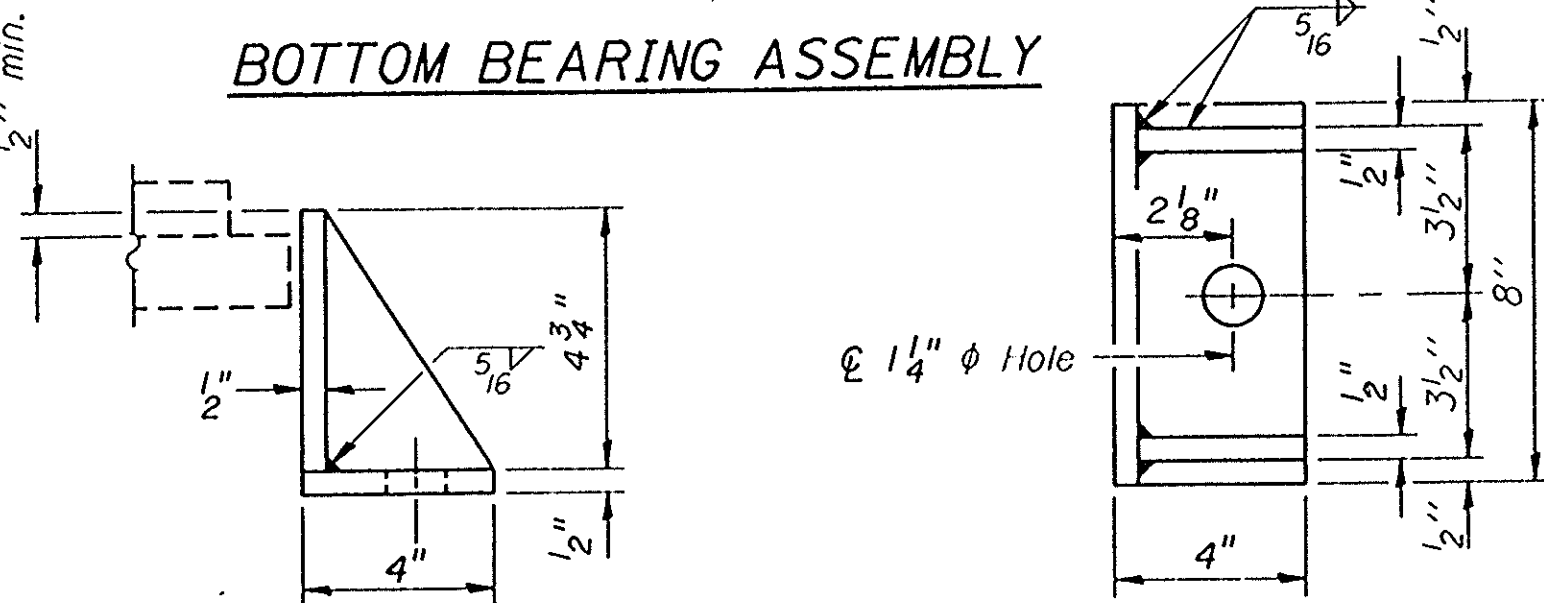
PLAN-TFE SURFACE



SECTION THRU TFE



BOTTOM BEARING ASSEMBLY

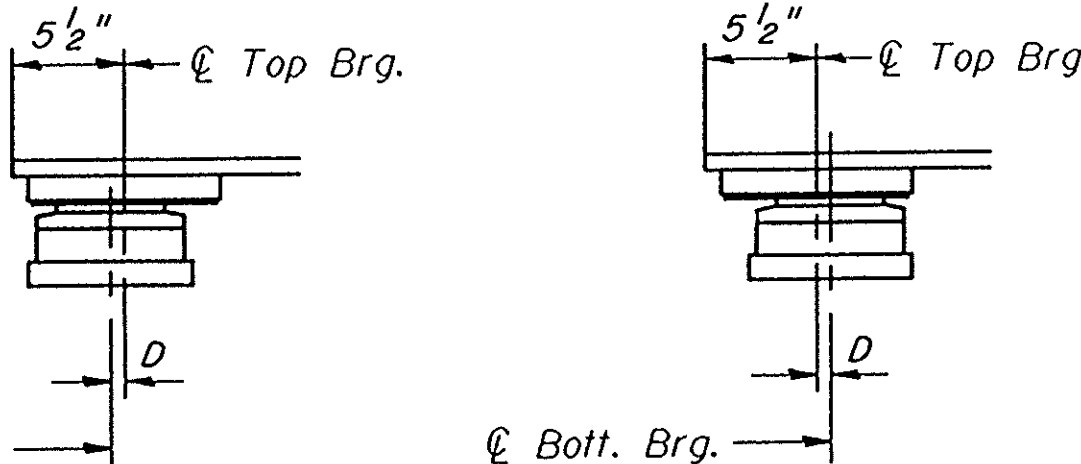


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

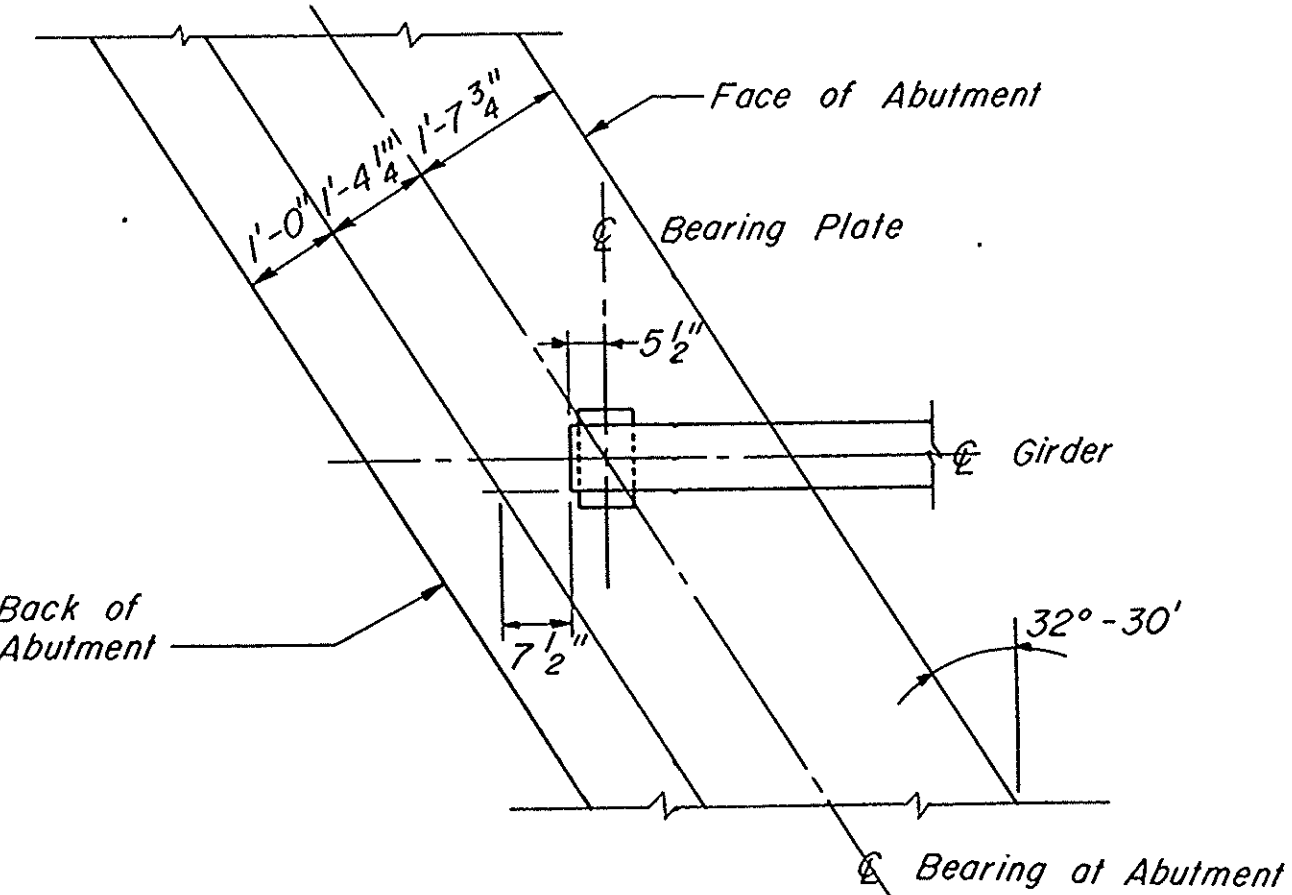
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



SECTION B-B

SHIM PLATE THICKNESS (in.)

Beam No.	1	2	3	4	5	6
N. Abut.	1	1	1 1/2	1 1/2	1	1
S. Abut.	2 1/4	2 1/2	3 1/4	2 1/8	1 3/4	1 7/8

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12

- NOTES:
- See sheet #19 of 23 for Anchor Bolt installation.
 - Dimensions shown are for both North & South Abutments unless noted.
 - "t" denotes Top Plate thickness.
 - Side retainers, shim plate and anchor bolts for Expansion bearing are incidental to the cost of Elastomeric Bearing Assembly Type II.

DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E2 2-26-93

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

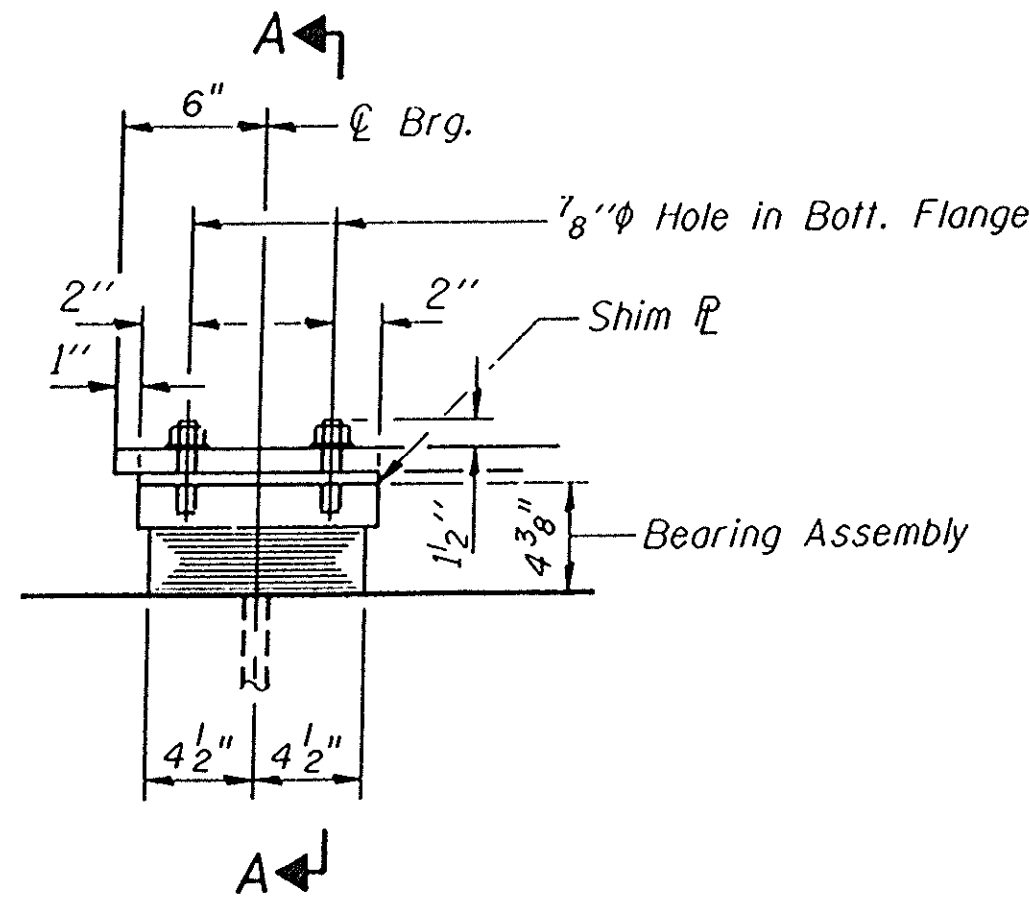
DESIGNED	RTP	DRAWN	JES	APPROVED	EEG	DATE	1/25/94	BOOK	SCALE	JOB NUMBER	222-93030
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BEARING DETAILS-NORTH & SOUTH ABUTMENTS
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

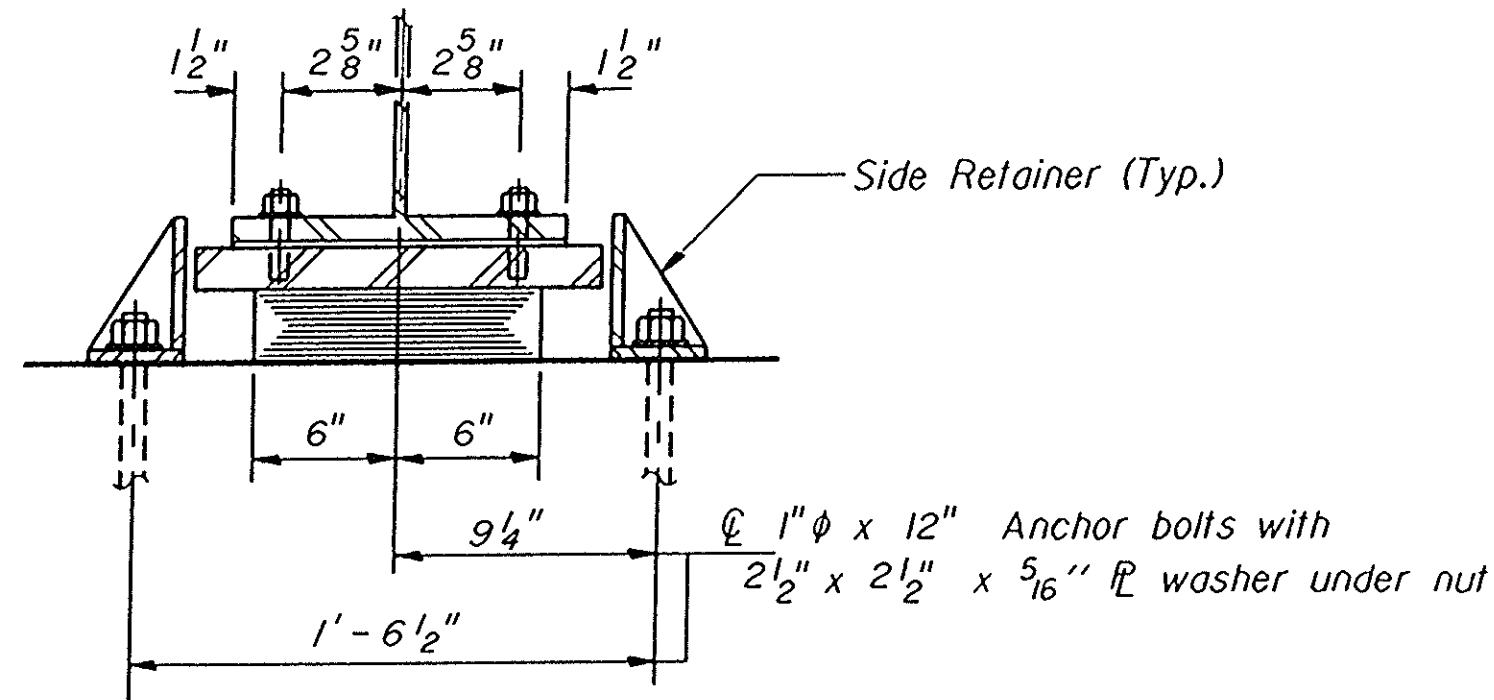
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
24 SHEETS

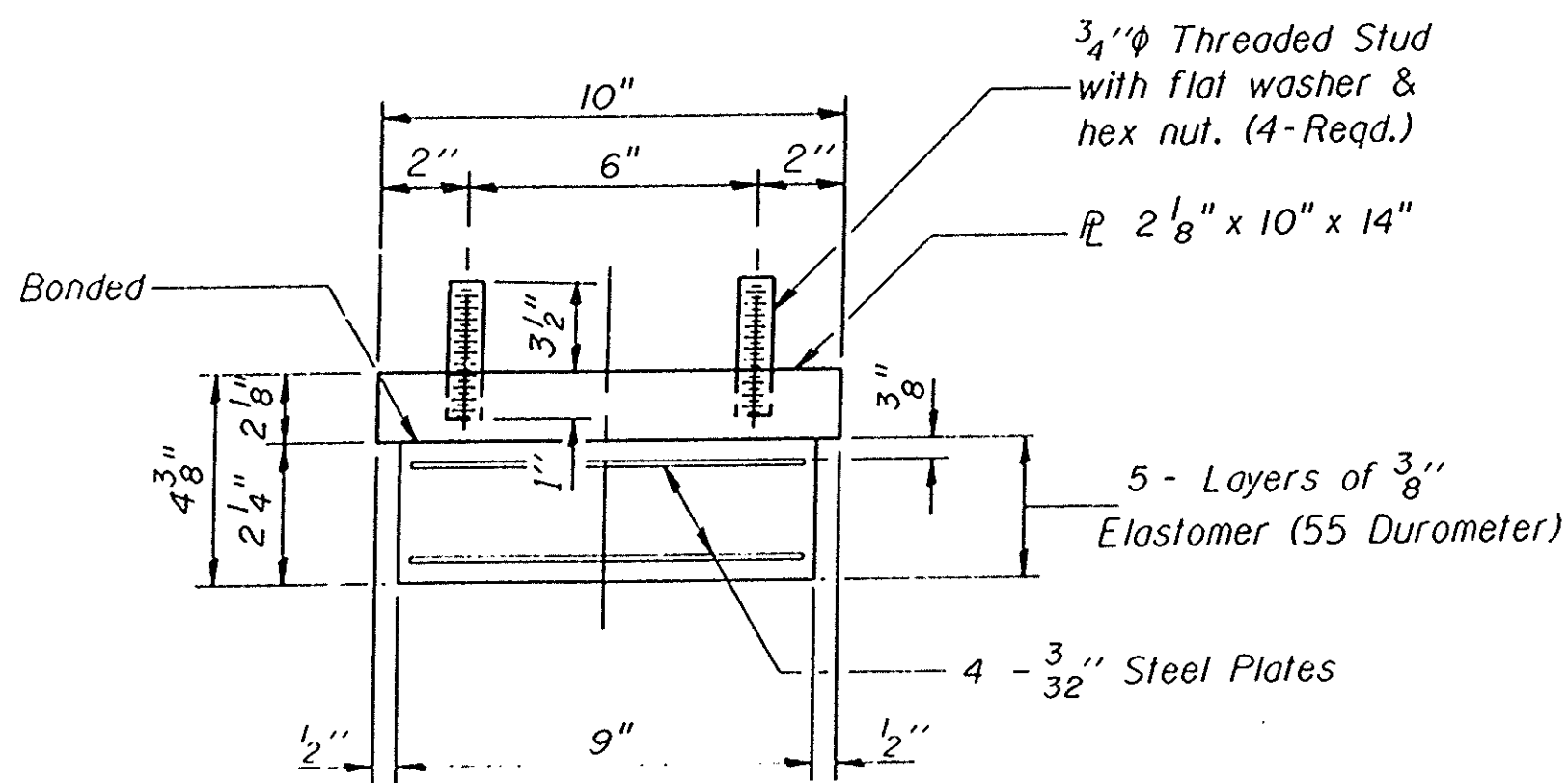


ELEVATION AT PIER No. 1 & 3



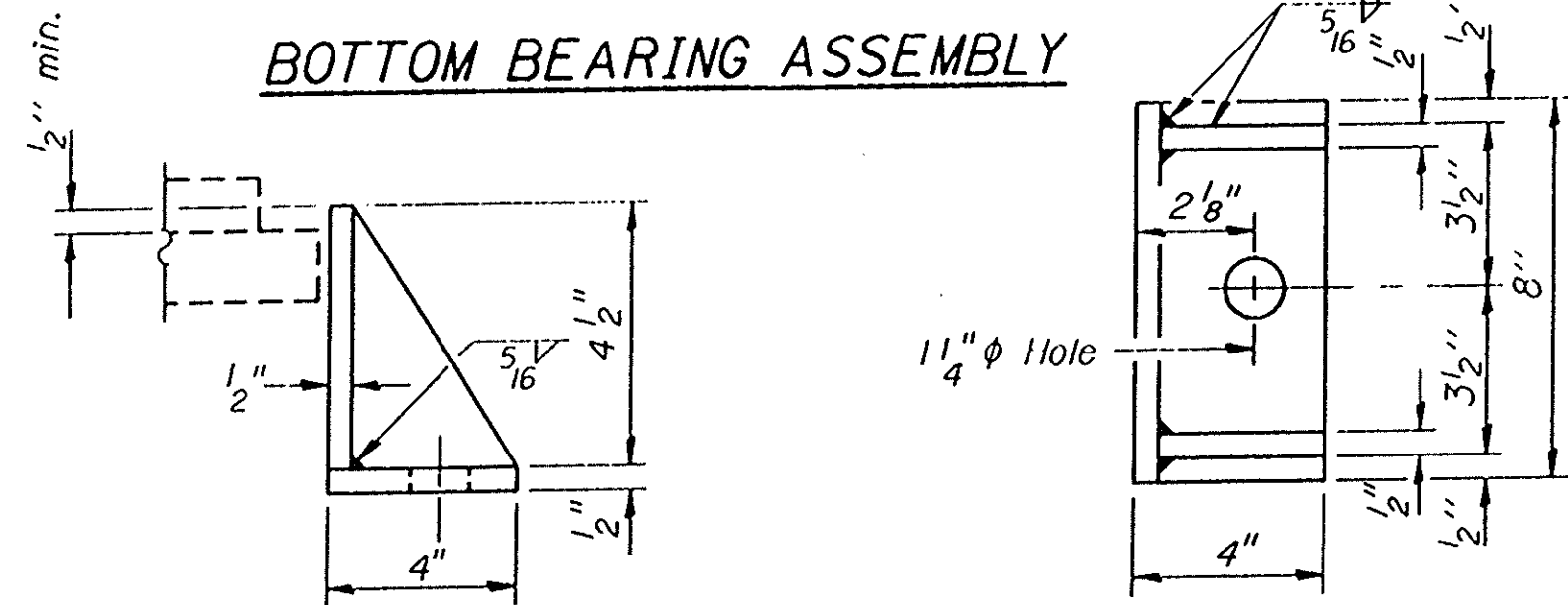
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

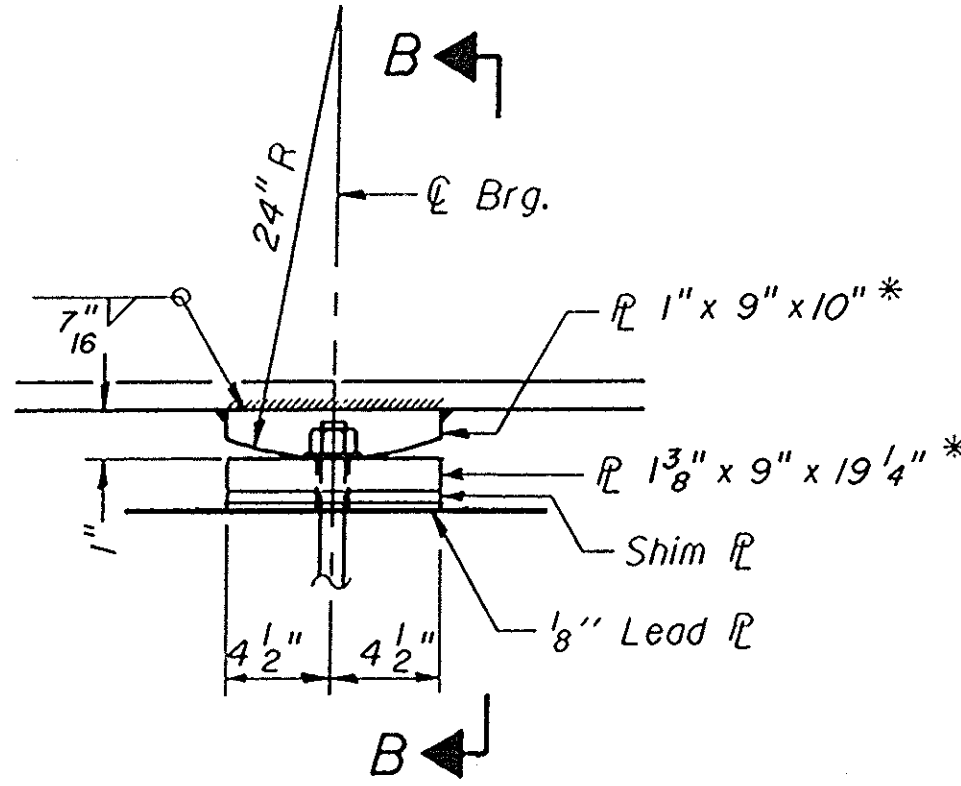
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E1 2-26-93

Notes: Anchor bolts of fixed bearings may be built into the masonry. See sheet #19 for Anchor Bolt installation.

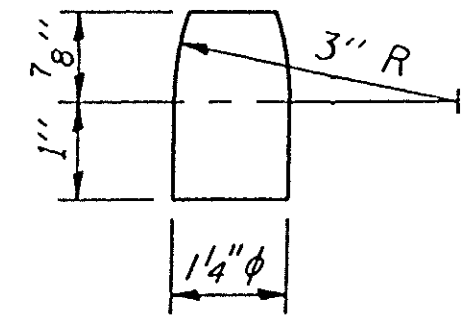
Side retainers, shim plate and anchor bolts for Expansion bearing are incidental to the cost of Elastomeric Bearing Assembly Type I.



ELEVATION AT PIER No. 2

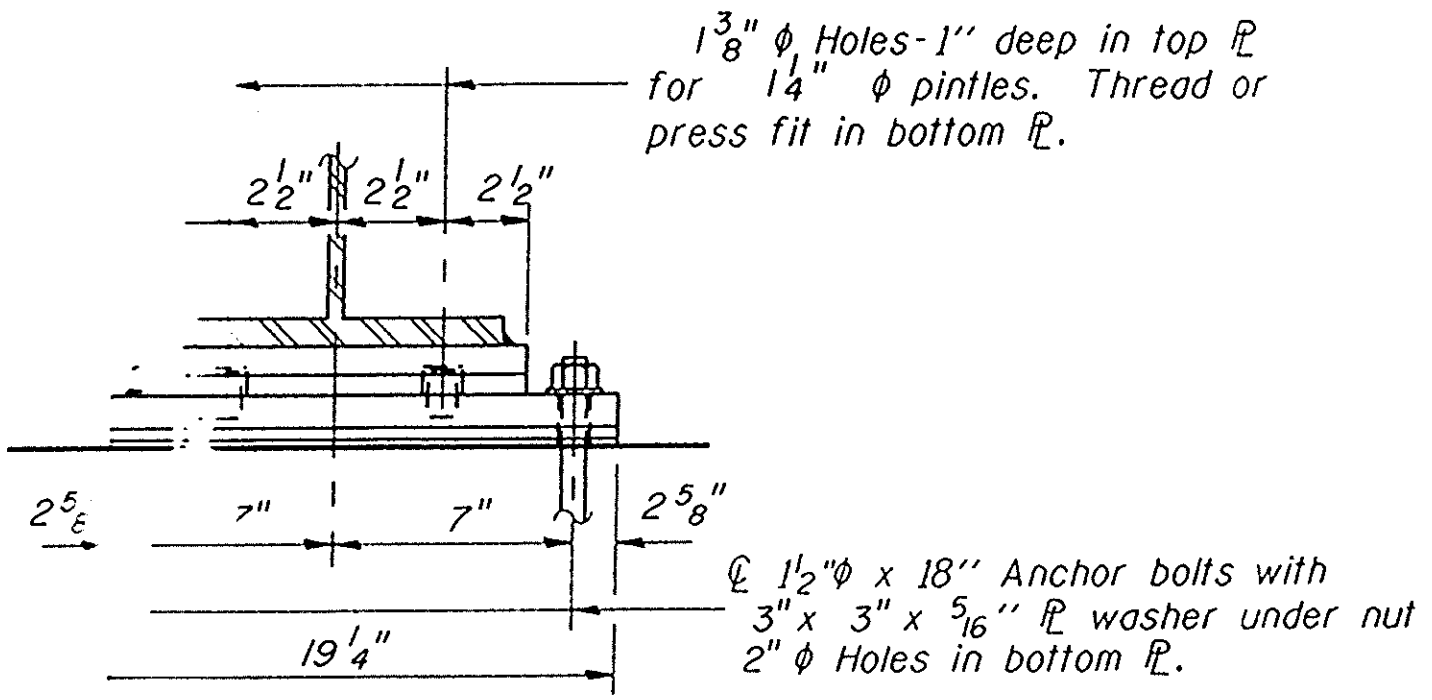
FIXED BEARING

(6 Assembly Required)



PINTLE

* AASHTO M270 Steel



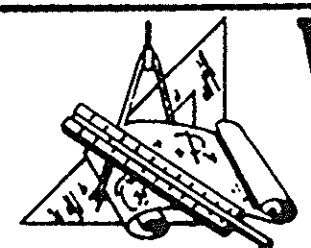
SECTION B-B

SHIM PLATE THICKNESS (INCHES)

Beam No.	1	2	3	4	5	6
Pier 1	—	5/8"	1"	—	—	—
Pier 2	—	—	1/2"	—	—	—
Pier 3	—	—	7/8"	1 1/2"	—	—

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	JOB NUMBER
RTP	JES	EEG	1/25/94			222-93030

BEARING ASSEMBLYS—PIERS NO. 1, 2 & 3
F.A.P. ROUTE 68 (..) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET
23
OF
53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	24
STA.	TO STA.	ILLINOIS	PROJECT NO. P-93-053-90	
FED. ROAD DIST. NO. 7				

SHEET NO. //
24 SHEETS

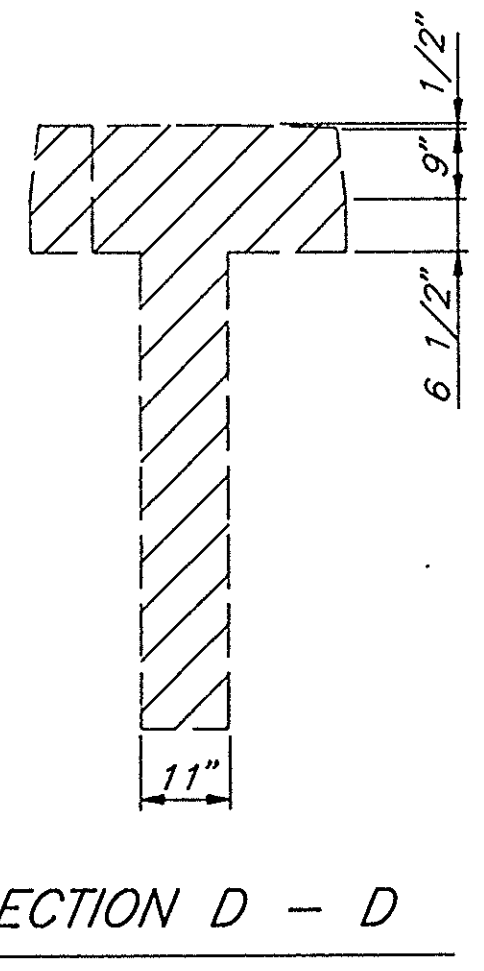
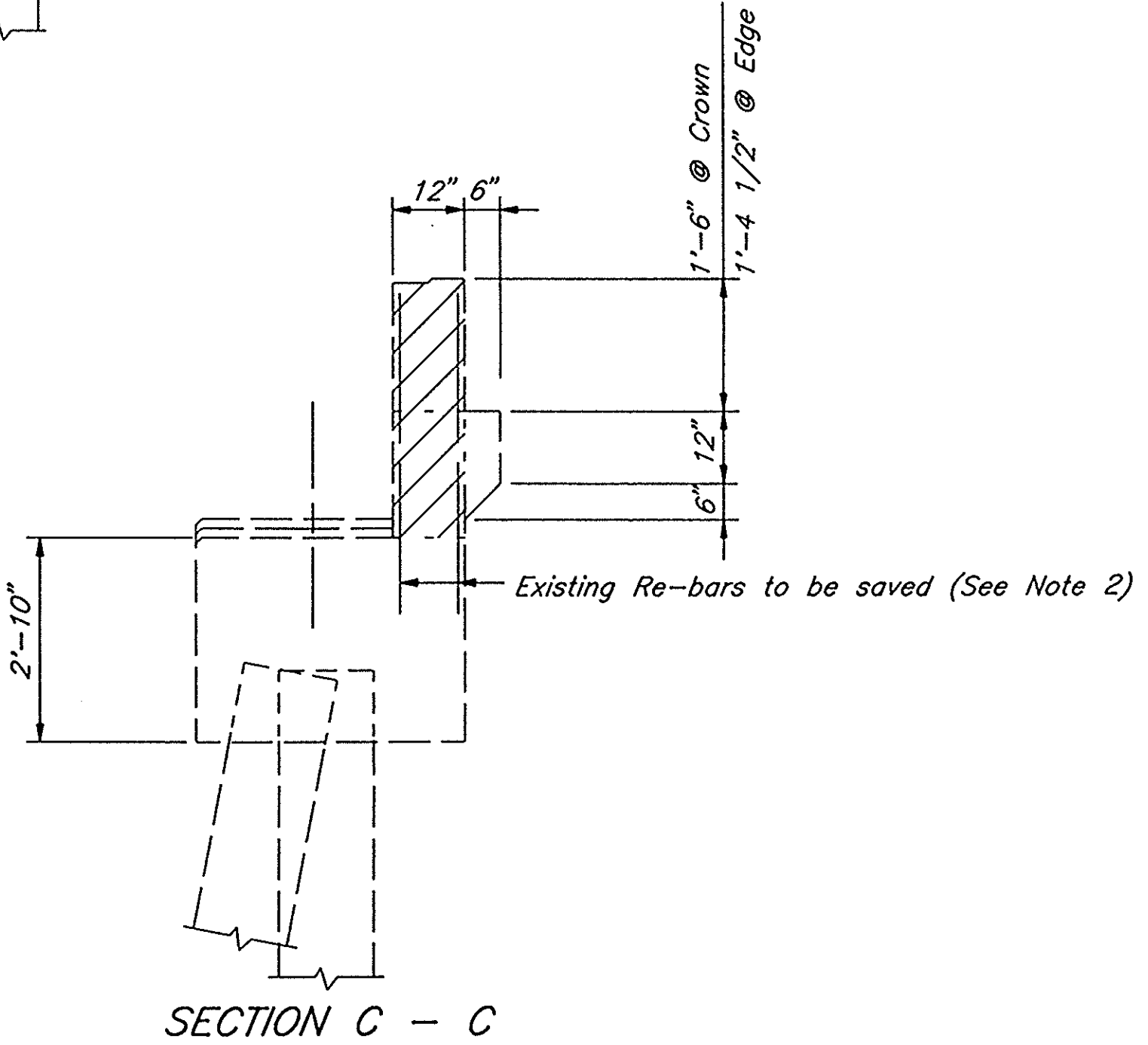
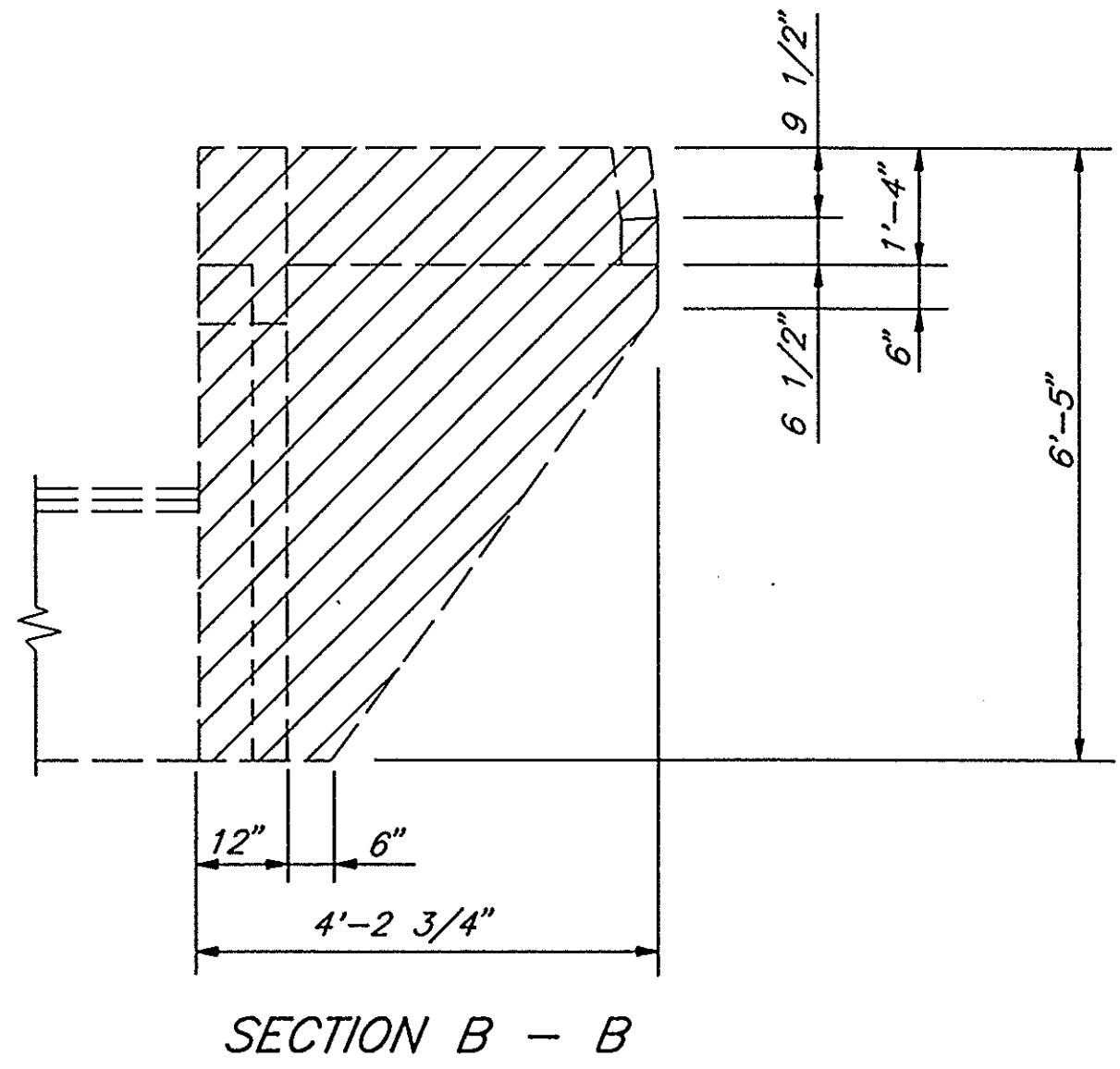
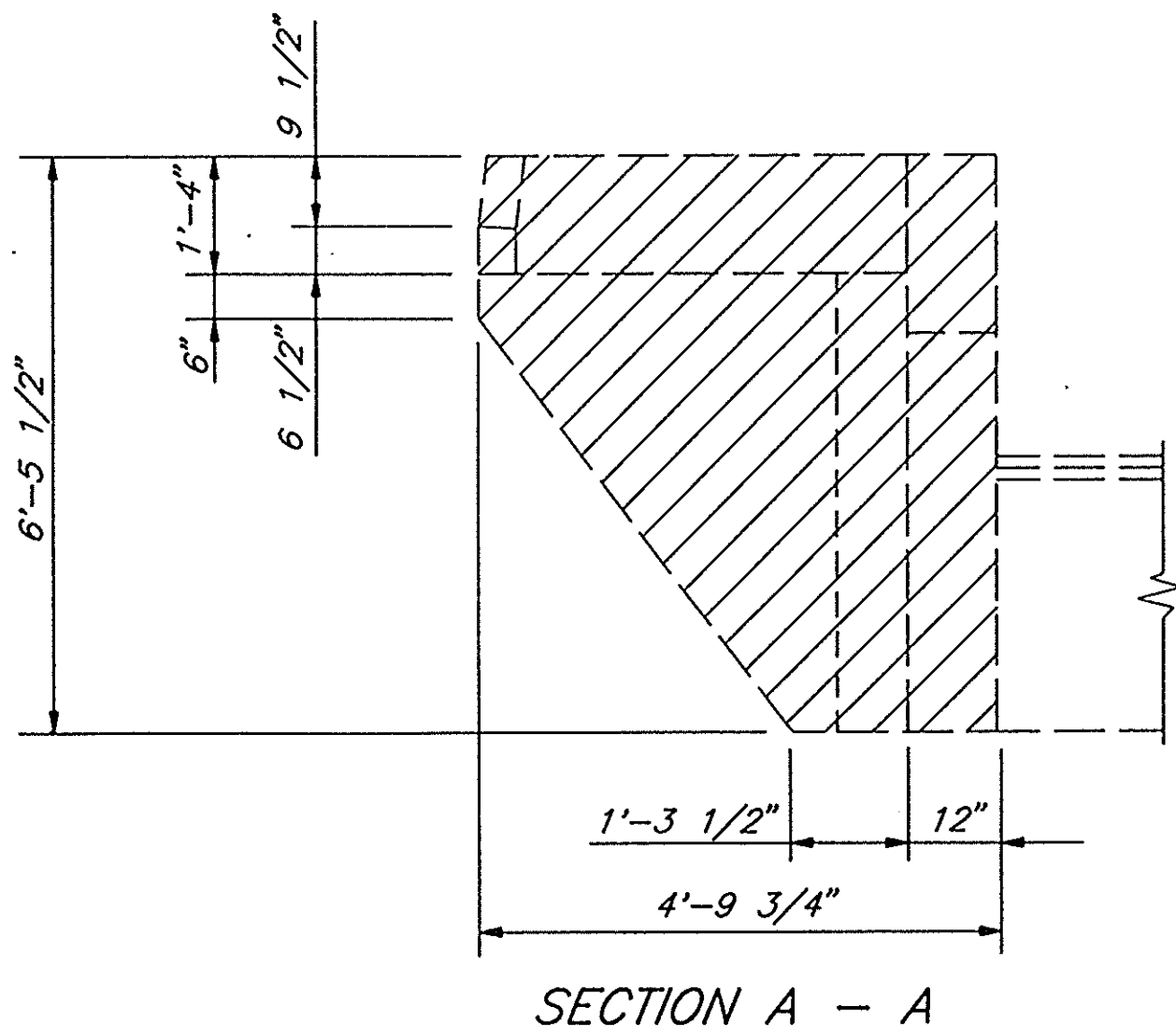
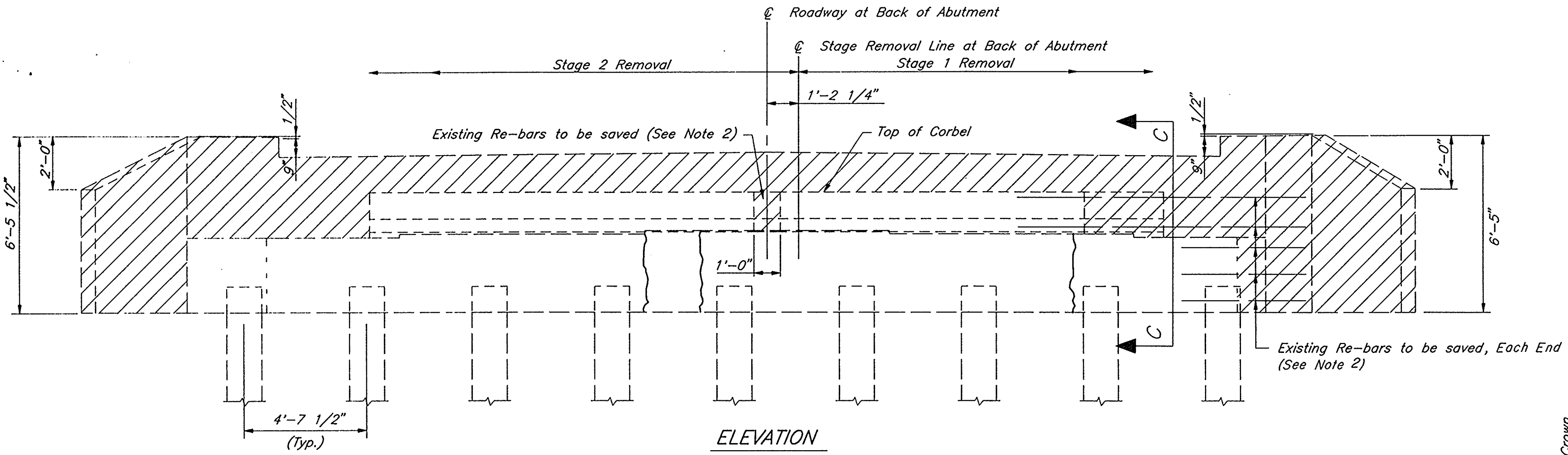
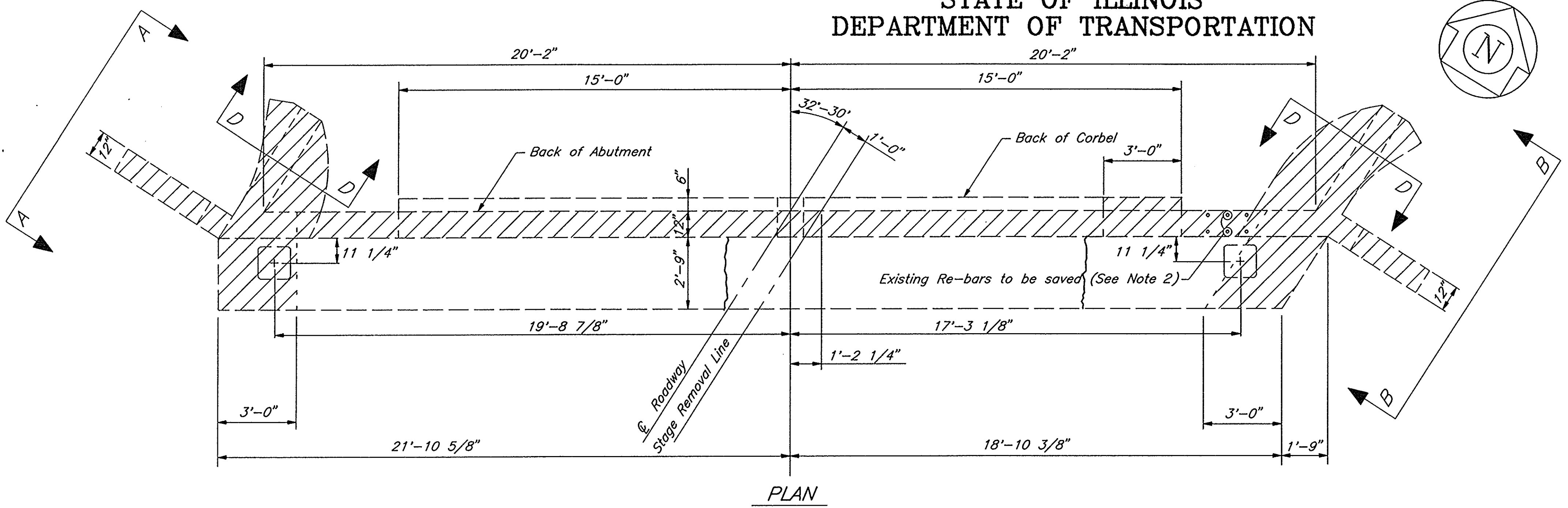
NOTES

1. Hatched areas indicate concrete sections to be removed.
2. Existing reinforcement shall be cleaned, straightened and incorporated into new construction. Cost incidental to "Concrete Removal".
3. Existing piles shall be saved and incorporated into new construction.
4. Burn existing bearing anchor bolts flush with the existing concrete surface and grind the anchor bolts smooth. Cost incidental to "Removal of Existing Superstructure."

BILL OF MATERIALS		
Item	Unit	Quantity
Concrete Removal	Cu. Yd.	9.2
Epoxy Crack Sealing	Ft.	14

LEGEND

-  Concrete to be removed
-  Abutment cracks to receive epoxy crack sealing



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS							
DESIGNED	EEG	DRAWN	GWR	APPROVED		DATE	1/14/94
BOOK		SCALE		CAD DWG.	1/2" = 30'	23AB-RMN	JOB NO. 222/93030

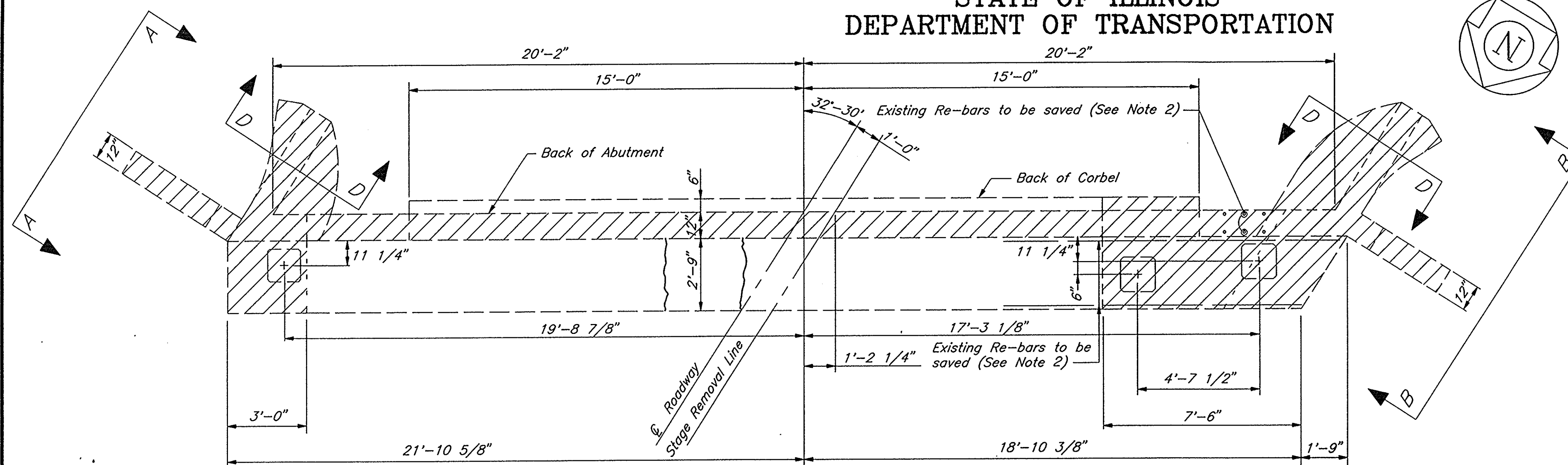
NORTH ABUTMENT - STAGE REMOVAL & REPAIR
F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET
24
OF 53

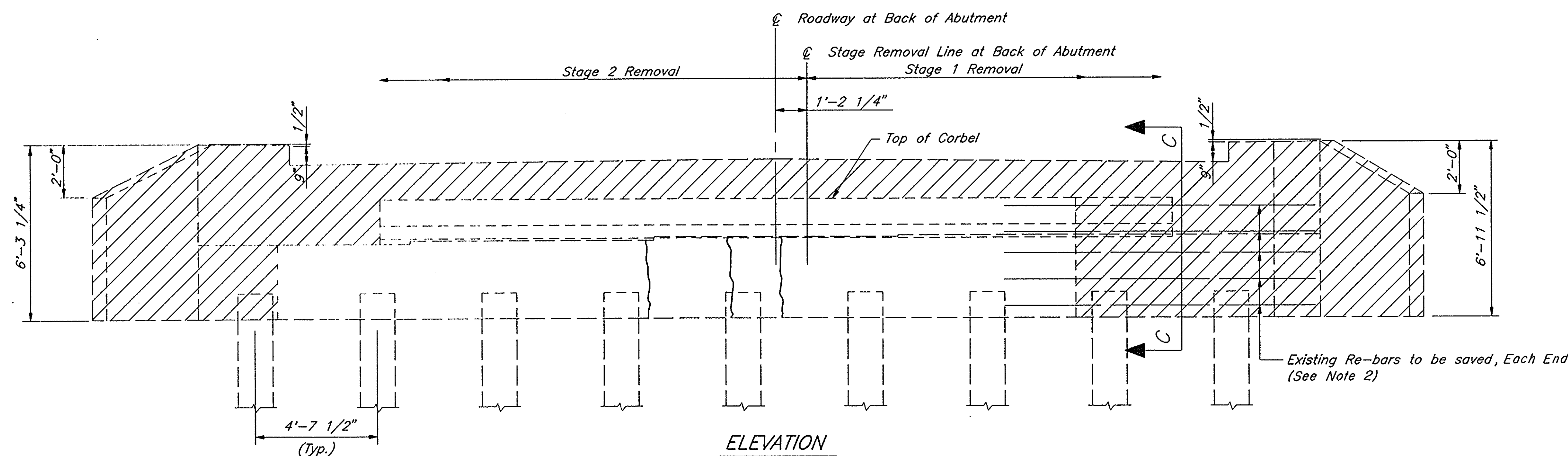
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	25
STA. 626+41	TO STA. 626+41	ILLINOIS	PROJECT NO. P-93-053-90	

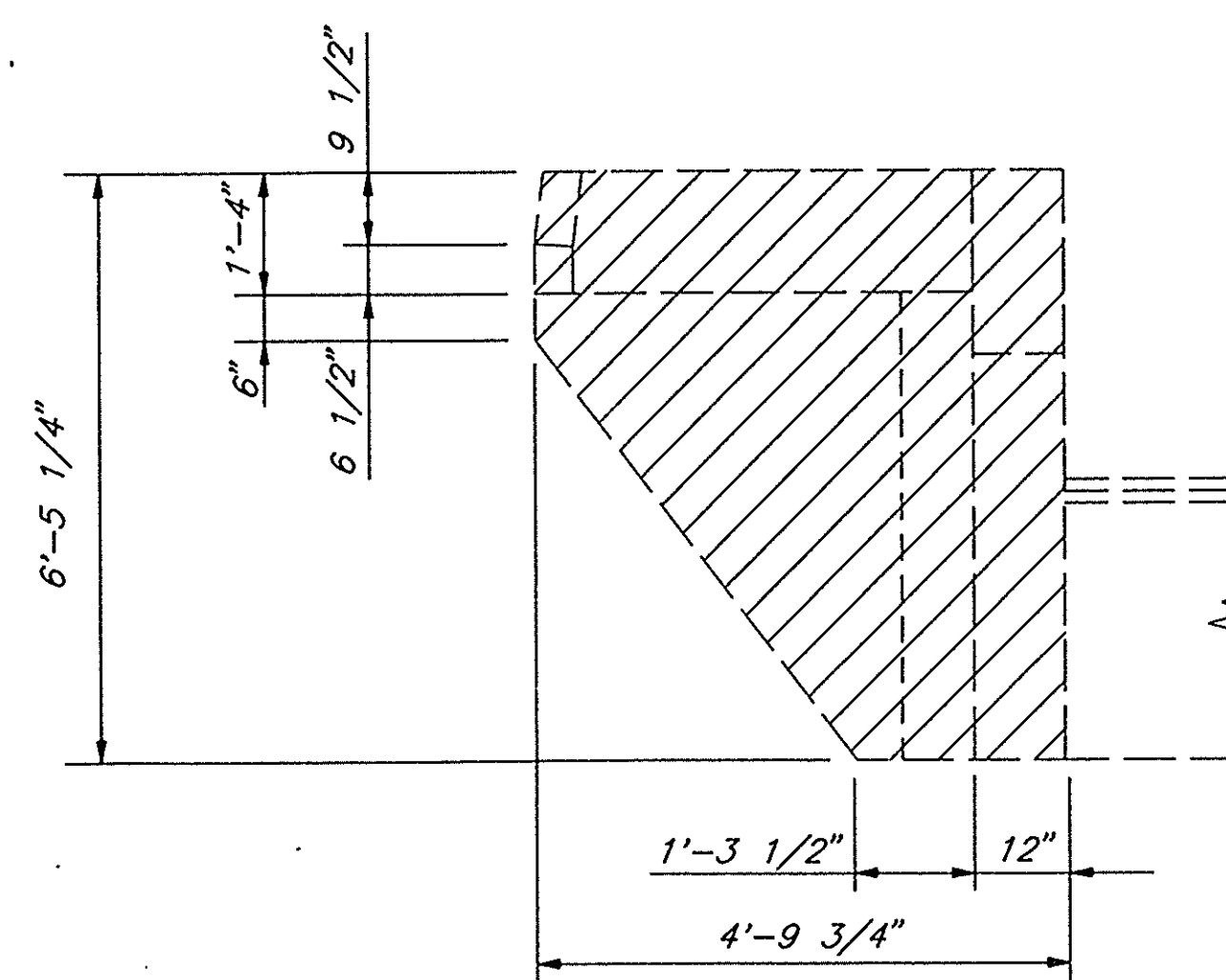
SHEET NO. 12
24 SHEETS



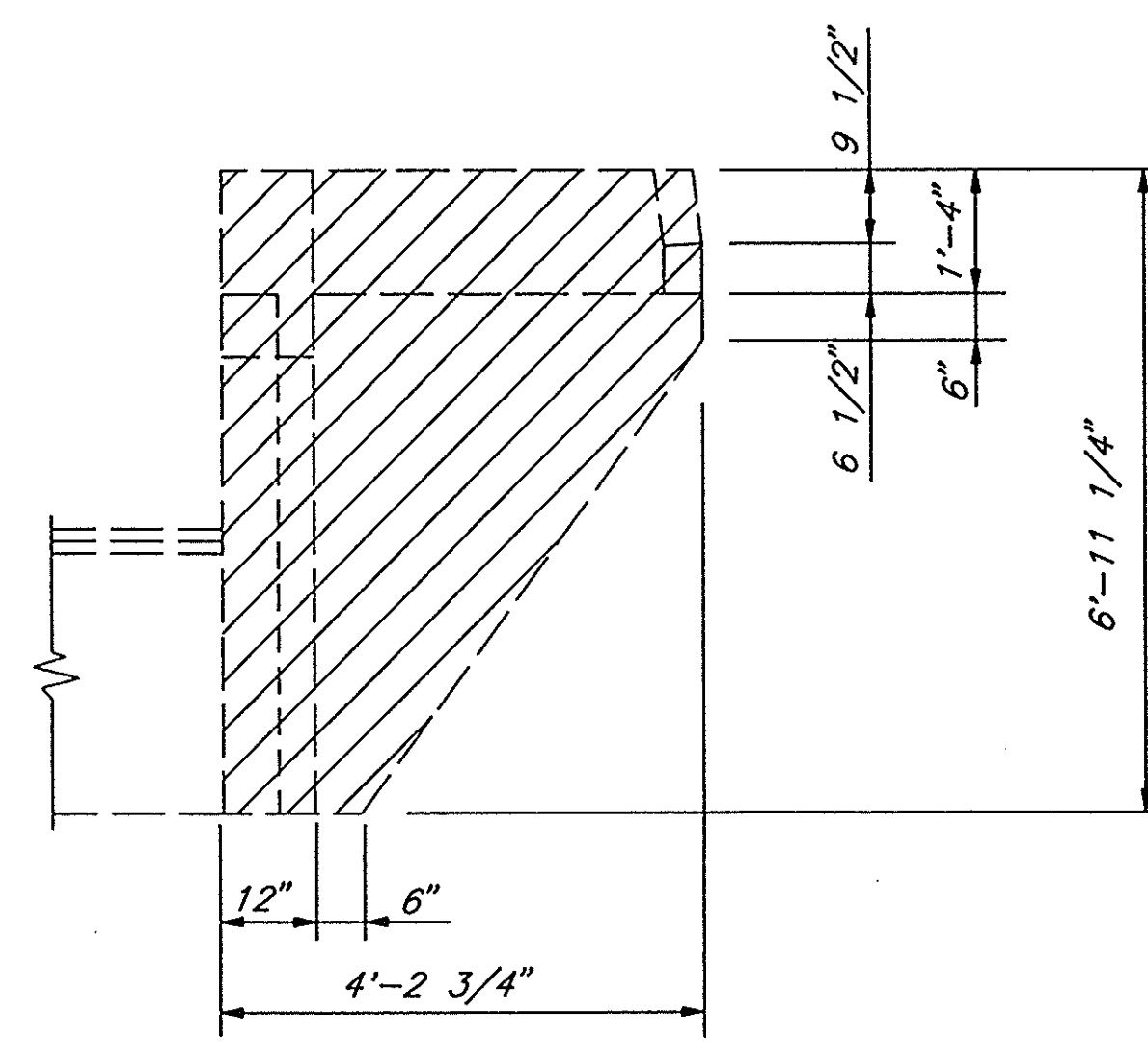
PLAN



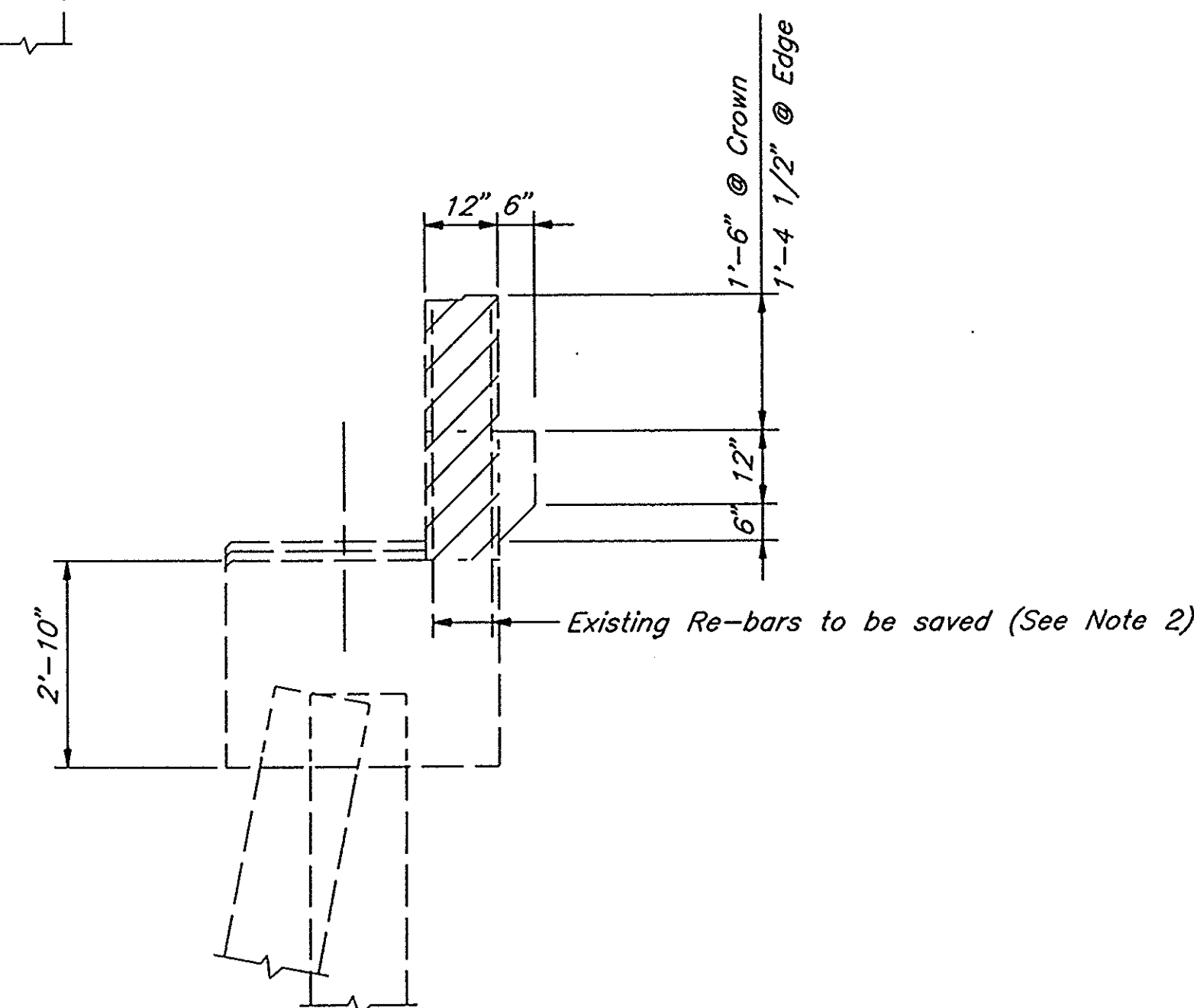
ELEVATION



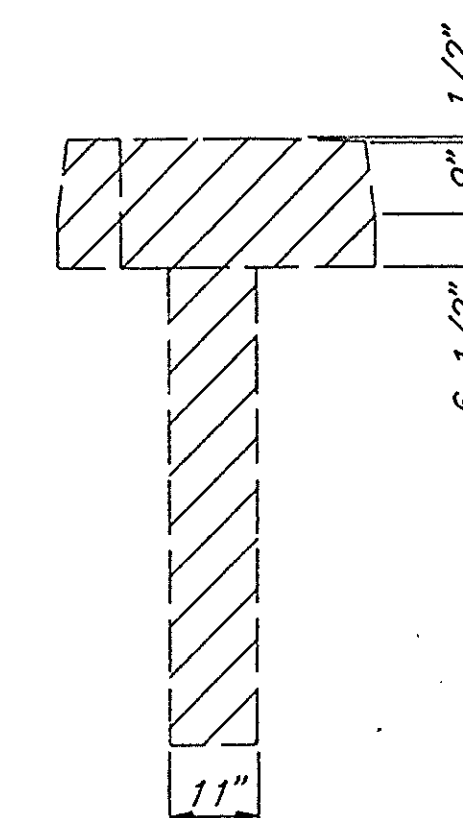
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

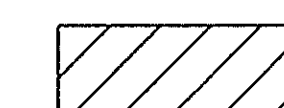
NOTES

- Hatched areas indicate concrete sections to be removed.
- Existing reinforcement shall be cleaned, straightened and incorporated into new construction. Cost incidental to "Concrete Removal".
- Existing piles shall be saved and incorporated into new construction.
- Burn existing bearing anchor bolts flush with the existing concrete surface and grind existing anchor bolts smooth. Cost incidental to "Removal of Existing Superstructure".

BILL OF MATERIALS

Item	Unit	Quantity
Concrete Removal	Cu. Yd.	12.2
Epoxy Crack Sealing	Ft.	14

LEGEND



Concrete to be removed



Abutment cracks to receive epoxy crack sealing

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED EEG DRAIN GWR APPROVED DATE 1/14/94 BOOK SCALE CAD DWG. IL 93030 23AB-RMS JOB NO. 222/93030

SOUTH ABUTMENT - STAGE REMOVAL & REPAIR
F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

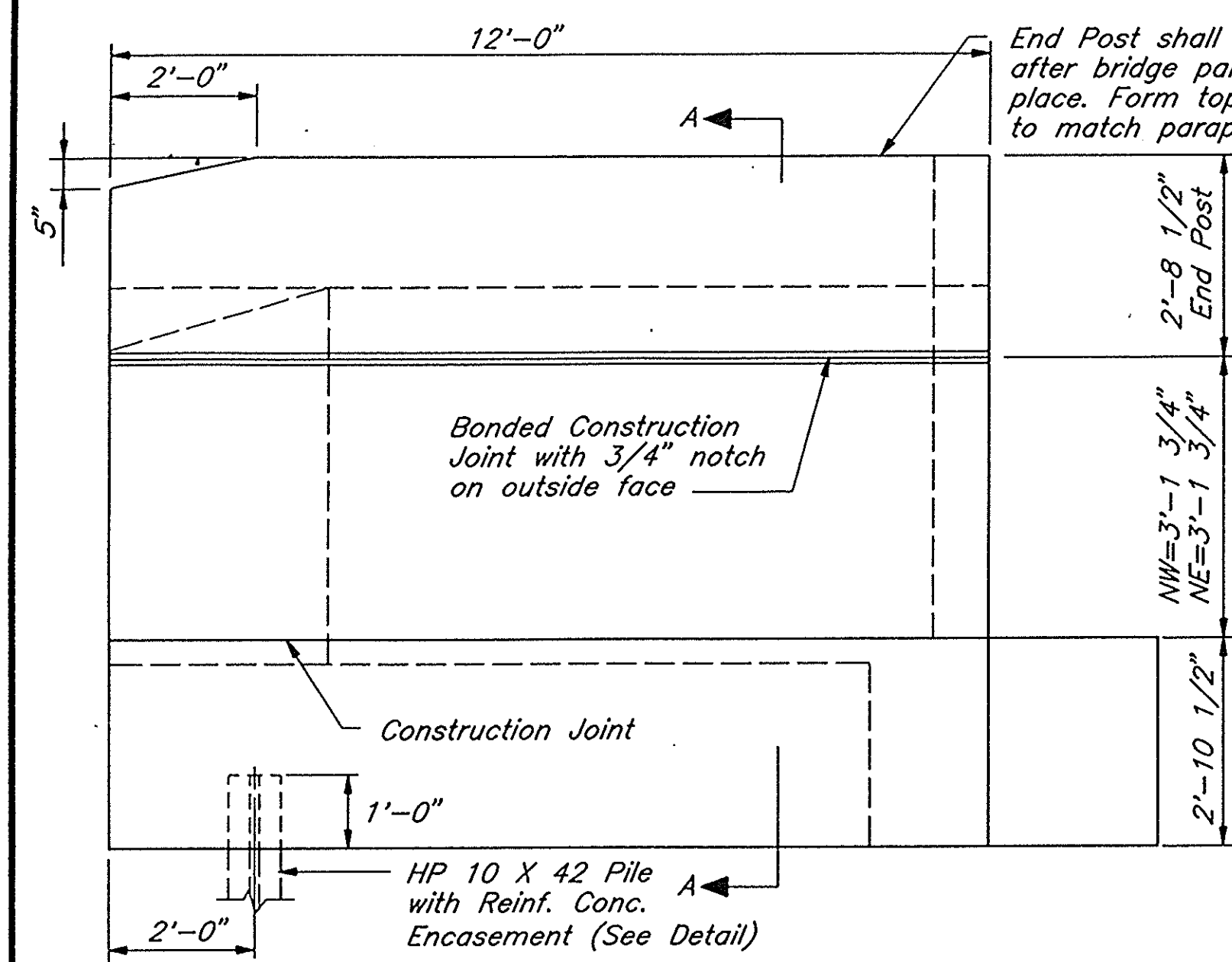
SHEET
25
OF 53

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

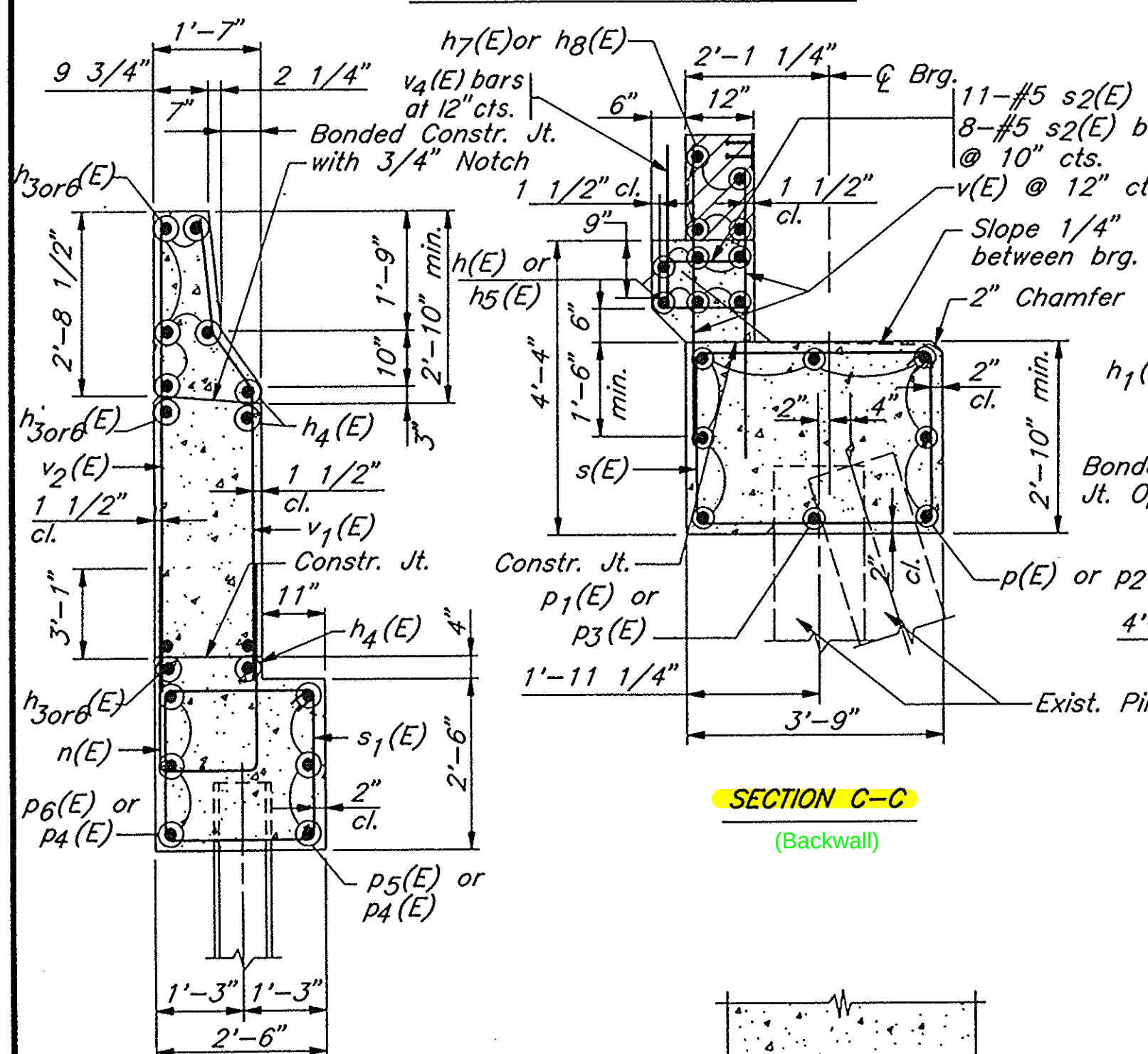
PILE DATA
Type: Steel HP 10 X 42
Capacity: Drive to Refusal
Est. Length: =22'
No. Required: One(1) on N.W.
One Test Pile o

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	26
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT NO. P-93-053-90				

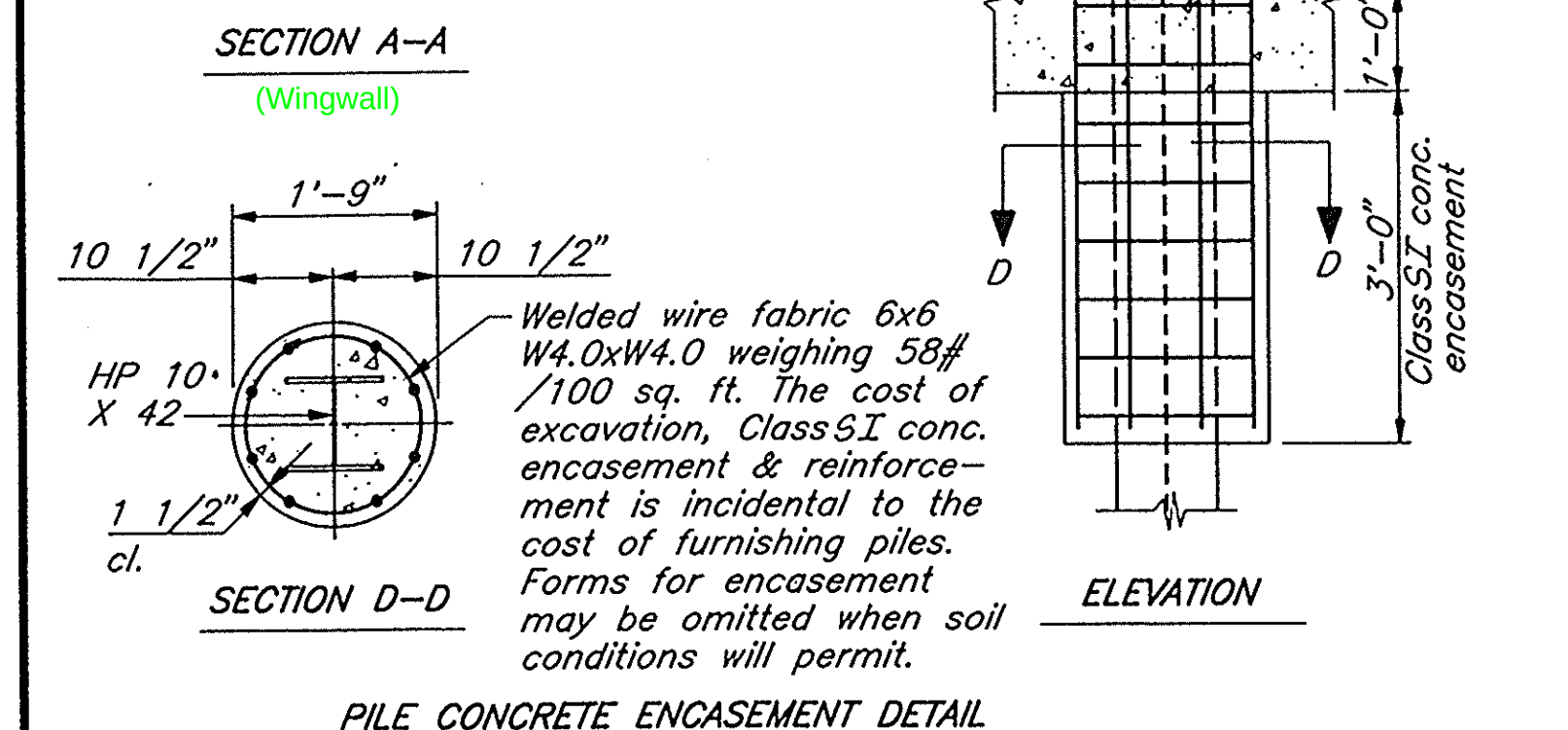
SHEET NO. 13
24 SHEETS



WEST WING WALL ELEVATION



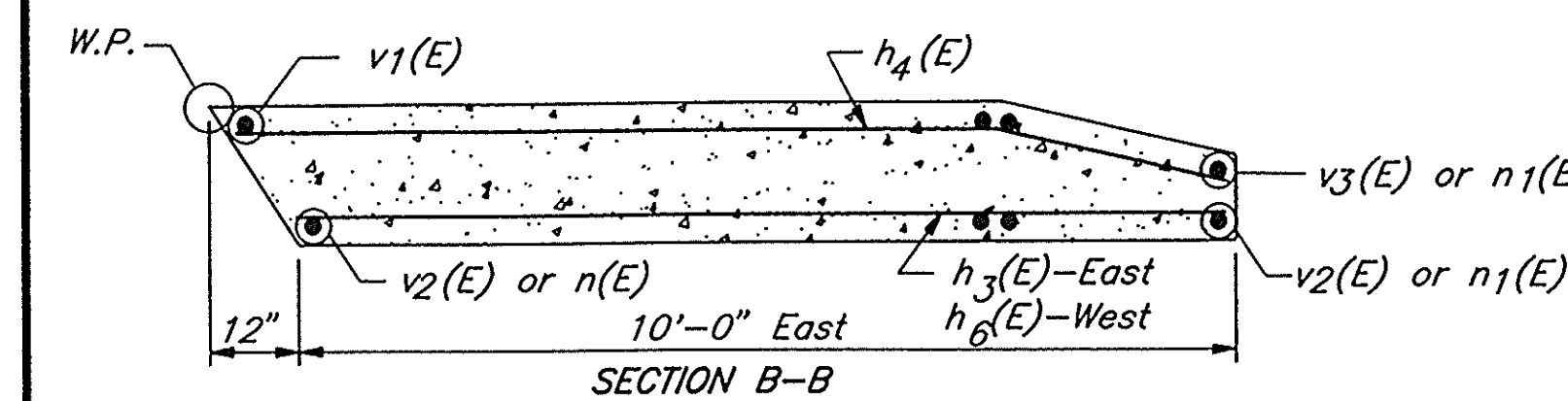
SECTION C-C
(Backwall)



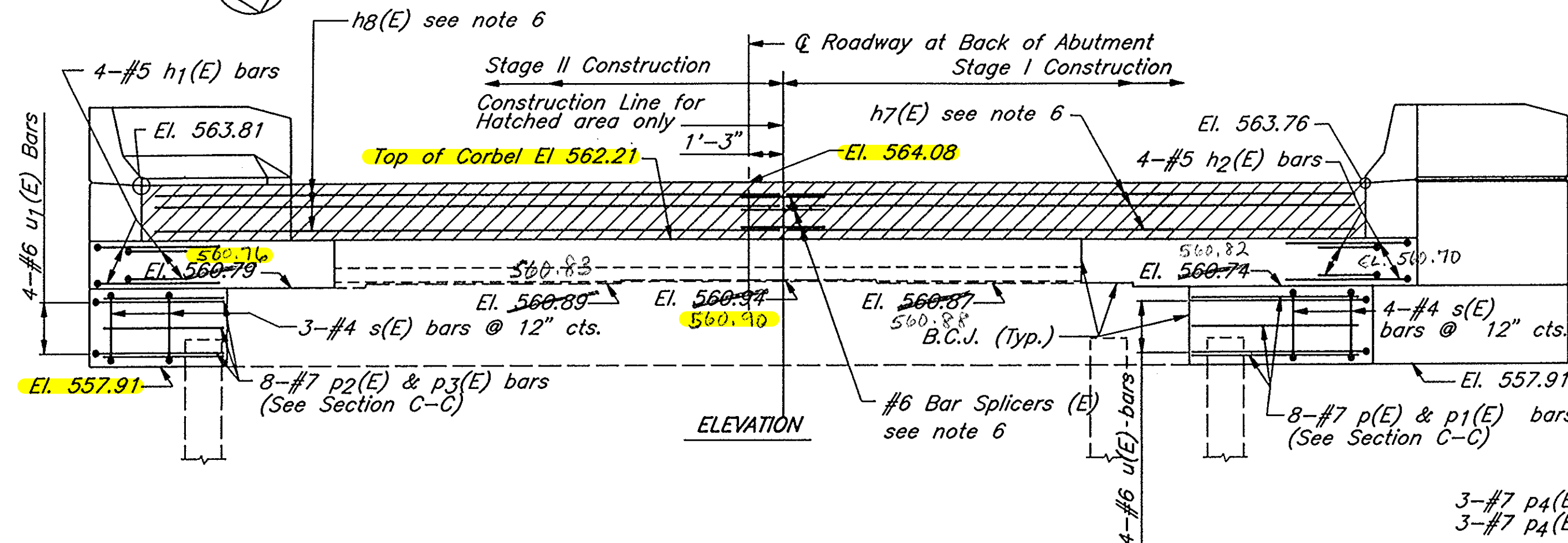
SECTION A-A
(Wingwall)

SECTION D-D

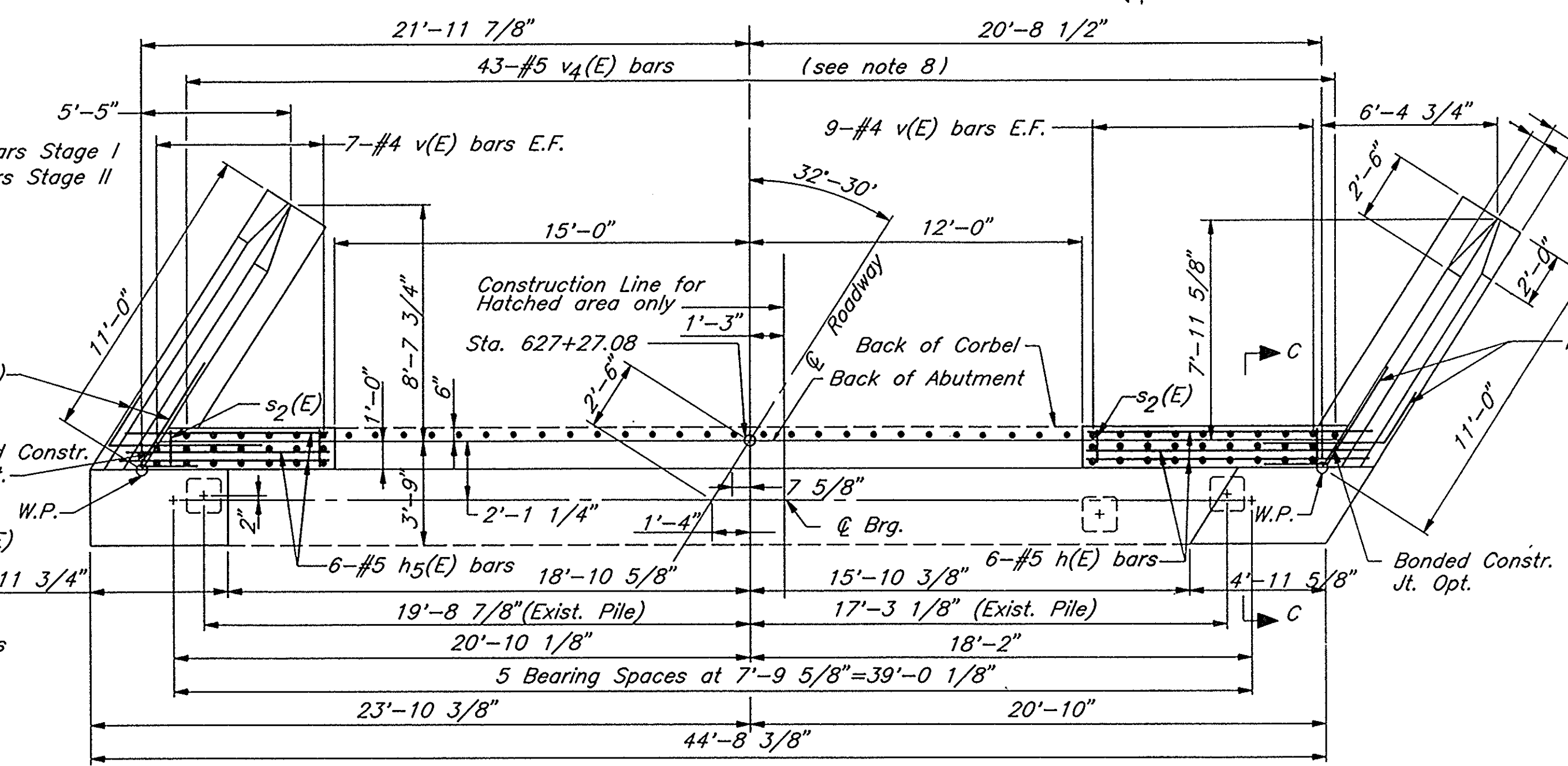
PILE CONCRETE ENCASUREMENT DETAIL



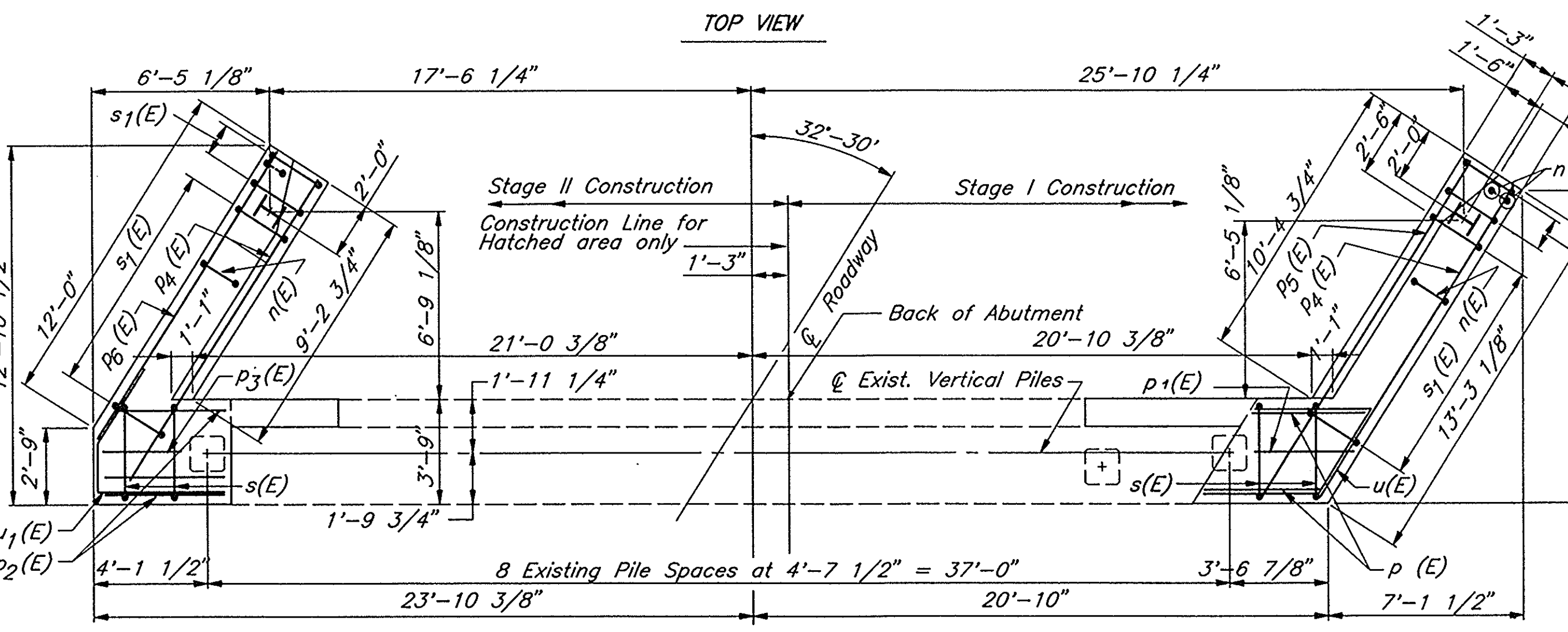
SECTION B-B



ELEVATION

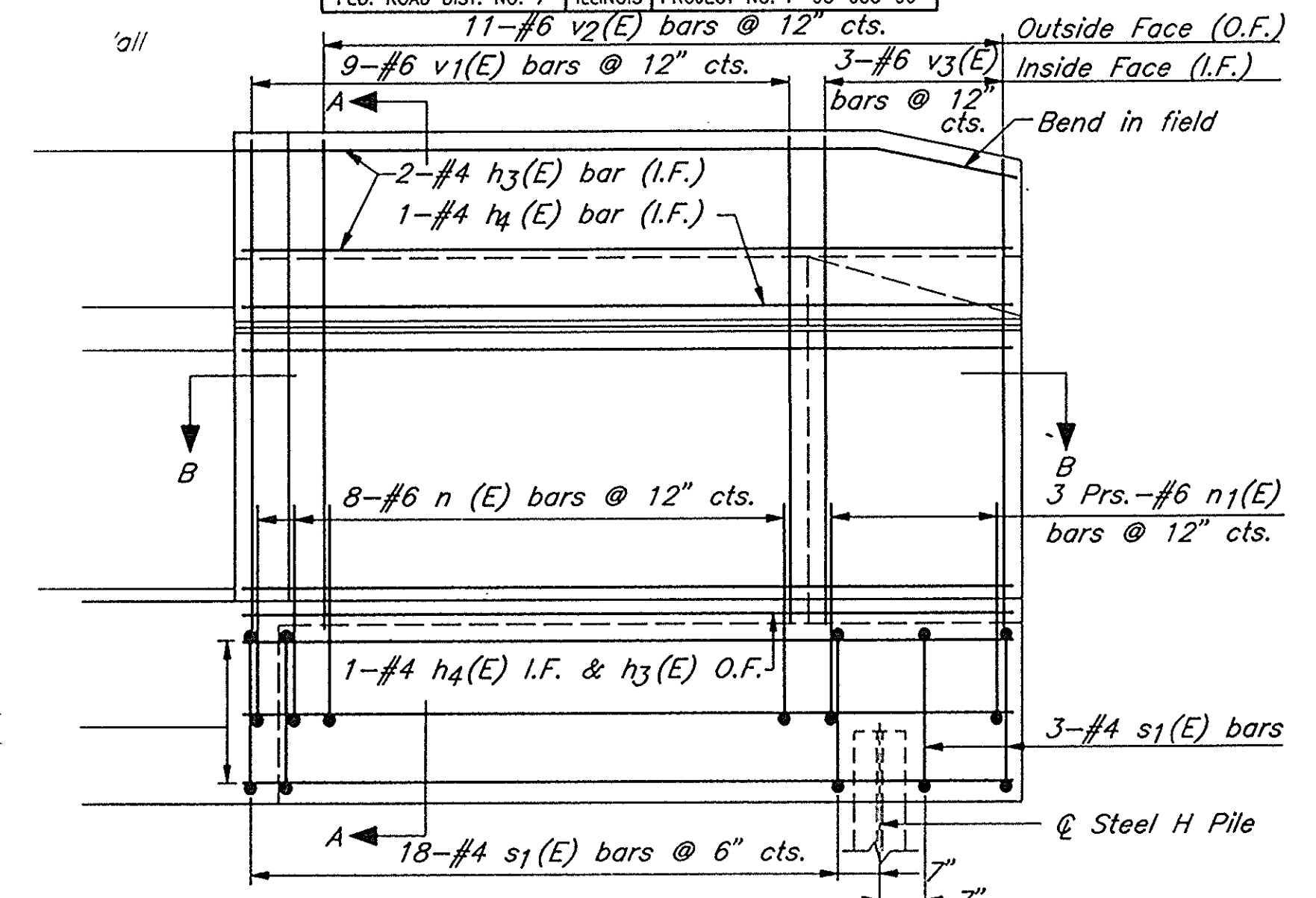


TOP VIEW

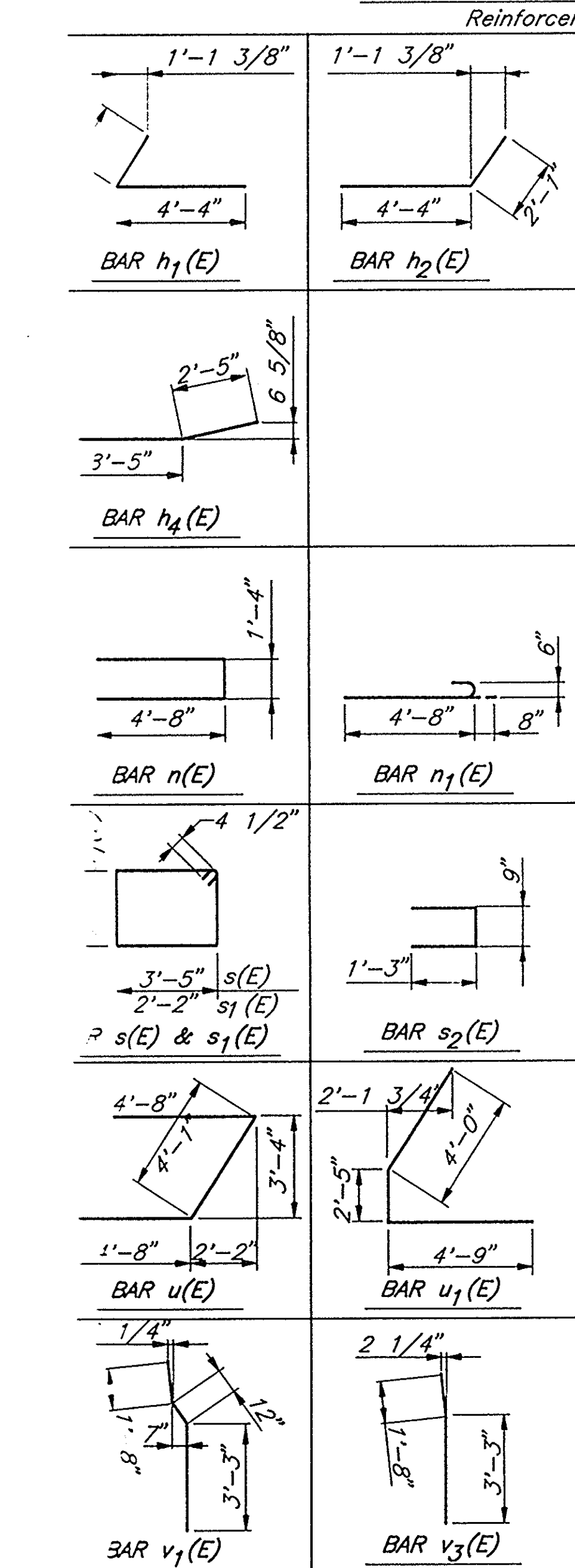


PLAN - PILE CAP

- Notes:
- 1) Space reinforcement in cap to miss anchor bolts.
 - 2) Reinforcement bars designated (E) shall be epoxy coated.
 - 3) Hatched area to be poured after superstructure forms have been removed.
 - 4) "Concrete Super Structures" in hatched area is billed with Superstructure. Quantity on sheet #18 of 23.
 - 5) All edges shall have standard 3/4" chamfer.
 - 6) Reinforcement in hatched area is billed on sheet #18 of 23.
 - 7) B.C.J. denotes Bonded Construction Joints in accordance with Art. 503.09 (a)(2) of the Standard Specification.
 - 8) Epoxy Grout v4(E) bars in existing corbel. Drilled holes shall have minimum depth of 9". See BSP-11. Cost incidental to Reinforcement Bars, Epoxy Coated.



EAST WING WALL ELEVATION



BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
h(E)	6	#5	10'-3"	
h1(E)	4	#5	6'-5"	
h2(E)	4	#5	6'-5"	
h3(E)	10	#4	9'-9"	
h4(E)	12	#4	10'-10"	
h5(E)	6	#5	7'-6"	
h6(E)	10	#4	11'-9"	
n(E)	16	#6	10'-8"	
n1(E)	12	#6	5'-4"	
p(E)	7	#7	4'-8"	
p1(E)	1	#7	3'-5"	
p2(E)	7	#7	4'-8"	
p3(E)	1	#7	3'-0"	
p4(E)	6	#7	13'-0"	
p5(E)	3	#7	14'-4"	
p6(E)	3	#7	12'-0"	
s(E)	8	#4	12'-7"	
s1(E)	42	#4	9'-5"	
s2(E)	19	#5	3'-3"	
u(E)	4	#6	13'-5"	
u1(E)	4	#6	11'-2"	
v(E)	32	#4	4'-7"	
v1(E)	20	#6	5'-11"	
v2(E)	22	#6	5'-11"	
v3(E)	6	#6	4'-11"	
v4(E)	43	#5	2'-1"	
Structure Excavation	Cu. Yds.	27		
Concrete Structures	Cu. Yds.	17		
Reinforcement Bars (Epoxy Coated)	Lbs.	2370		
HP 10 x 42 Piles	Ft.	22		
Test Piles	Each	1		

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	CAD DWG.	IL 93030\23AB-STN	JOB NO.	222/93030
EEG	GWR		2/3/94						

NORTH ABUTMENT
18 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
BR STATION 626+41 S.N. 050-0047

SHEET
26
OF 53

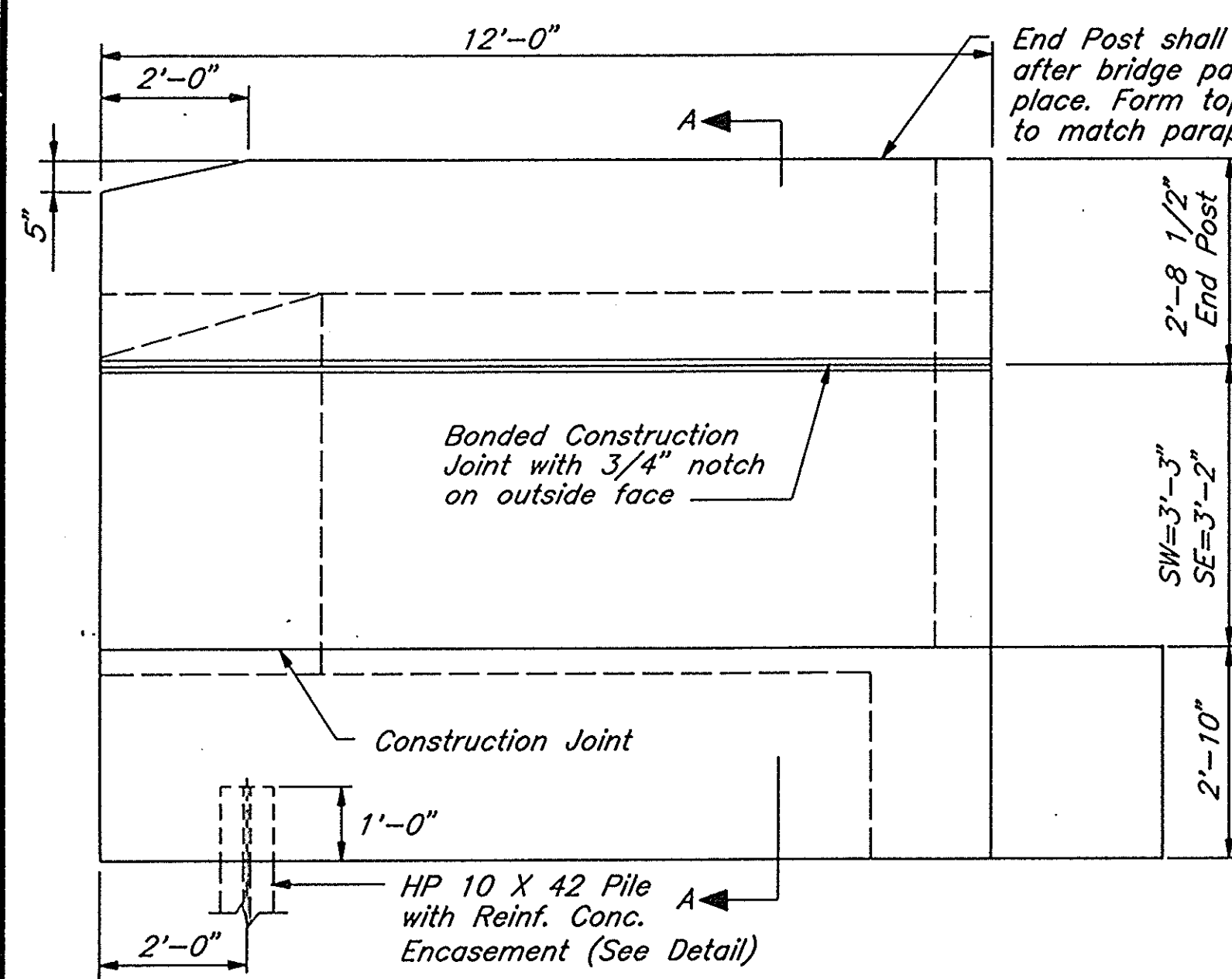
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

PILE DATA

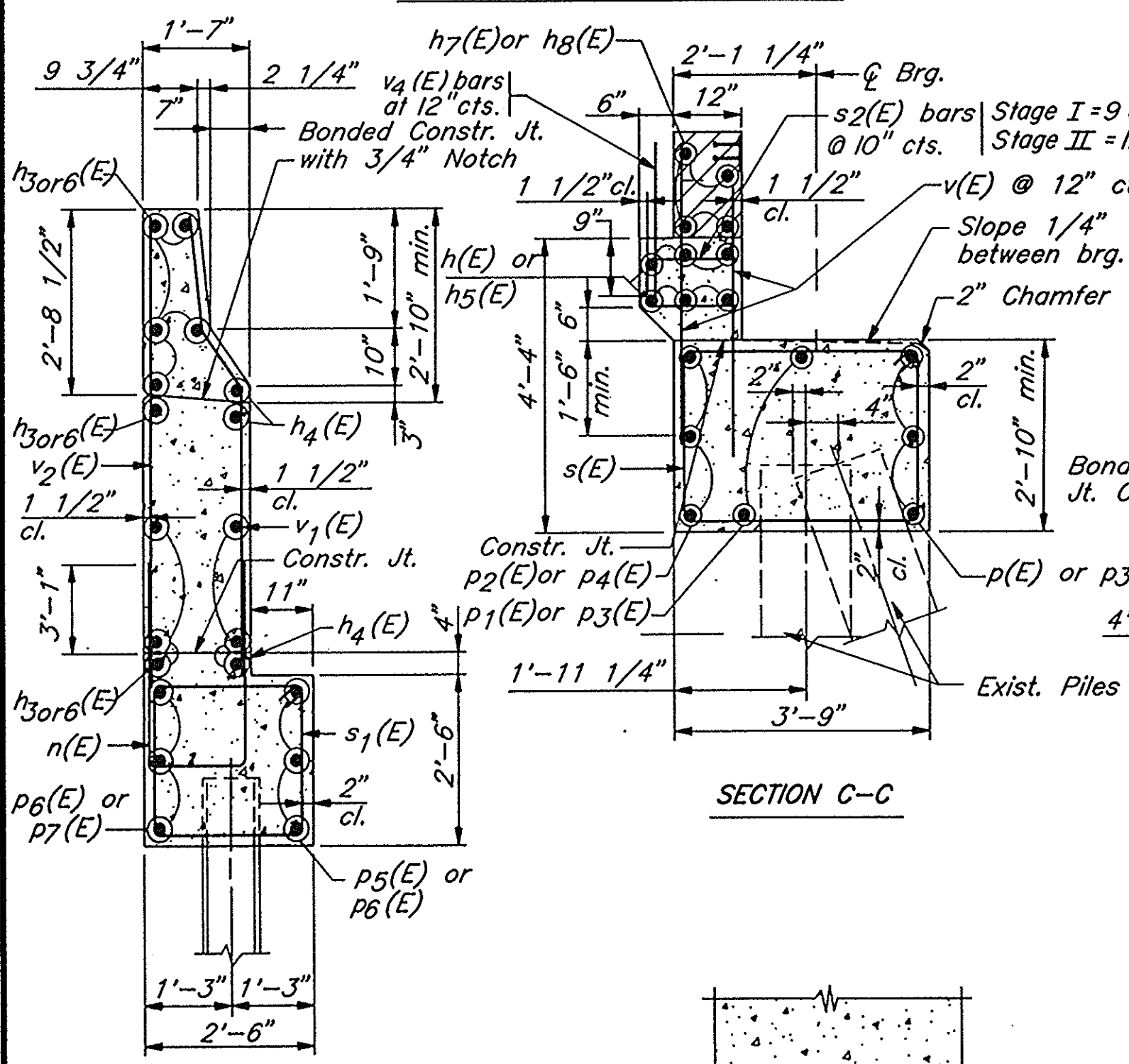
Type: Steel HP 10 X 42
Capacity: Drive to Refusal
Est. Length: =20'
No. Required: One(1) Each Wing Wall

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	27
STA. 626+00	TO STA. 626+00	ILLINOIS PROJECT NO. P-93-053-90		

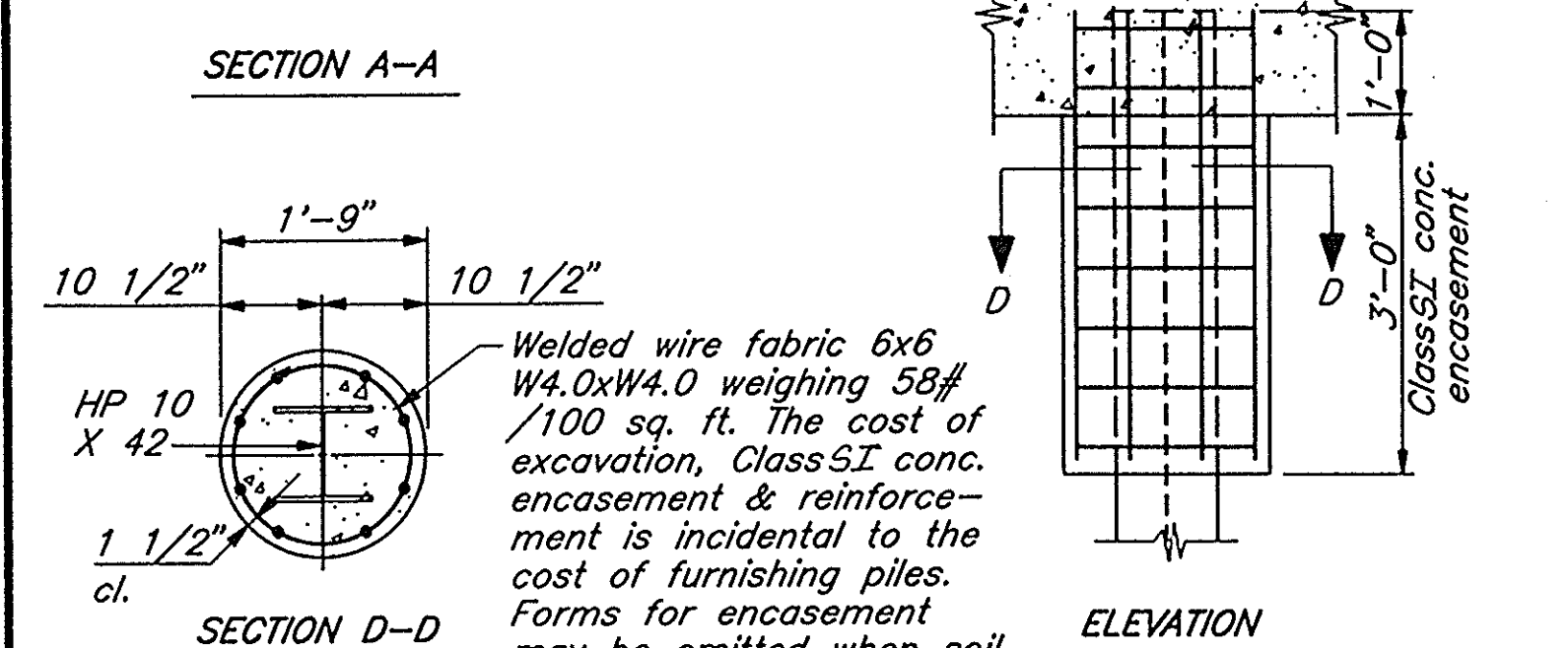
SHEET NO. 14
24 SHEETS



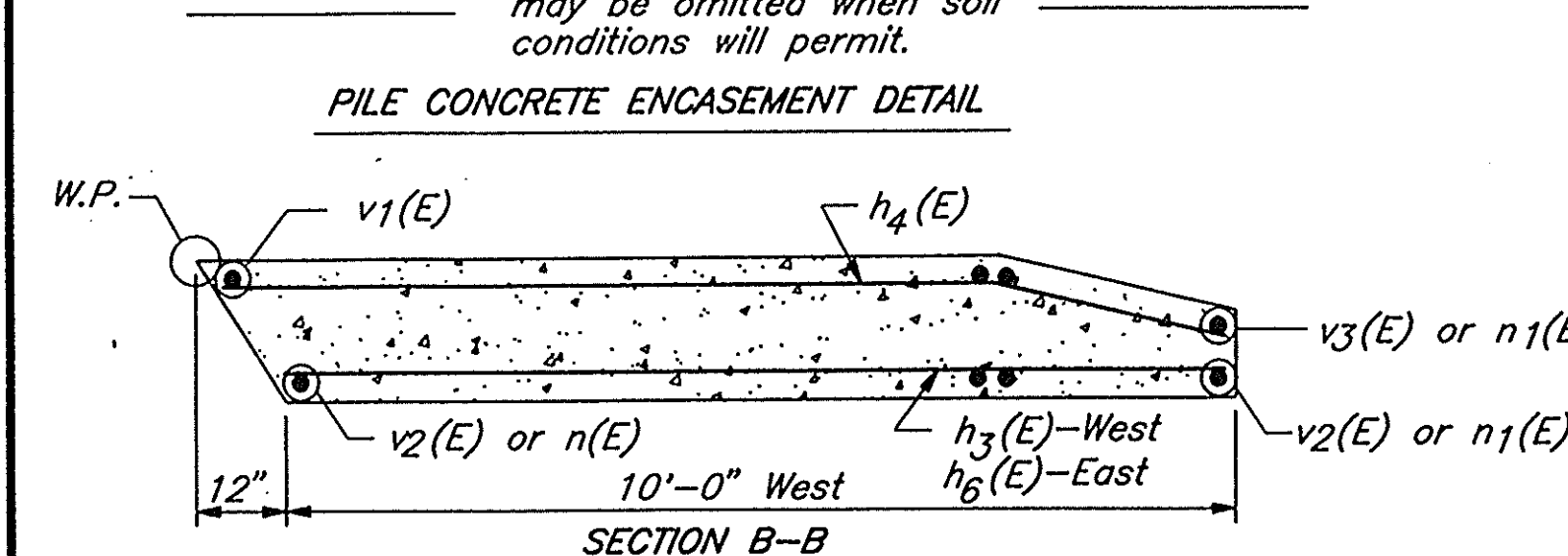
EAST WING WALL ELEVATION



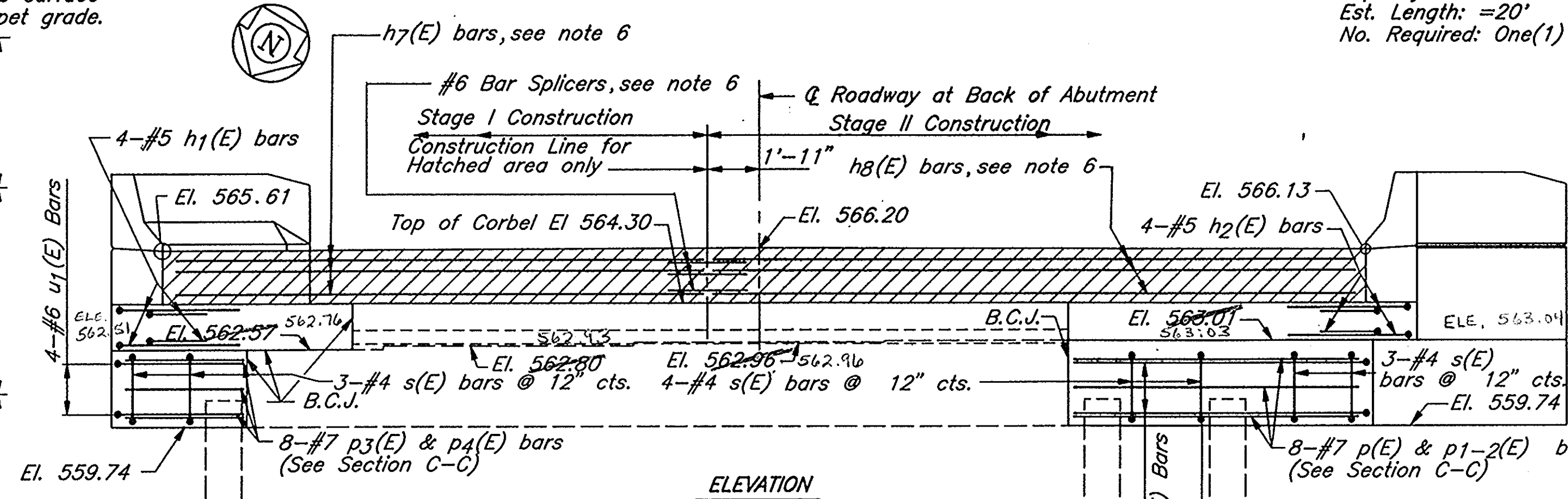
SECTION C-C



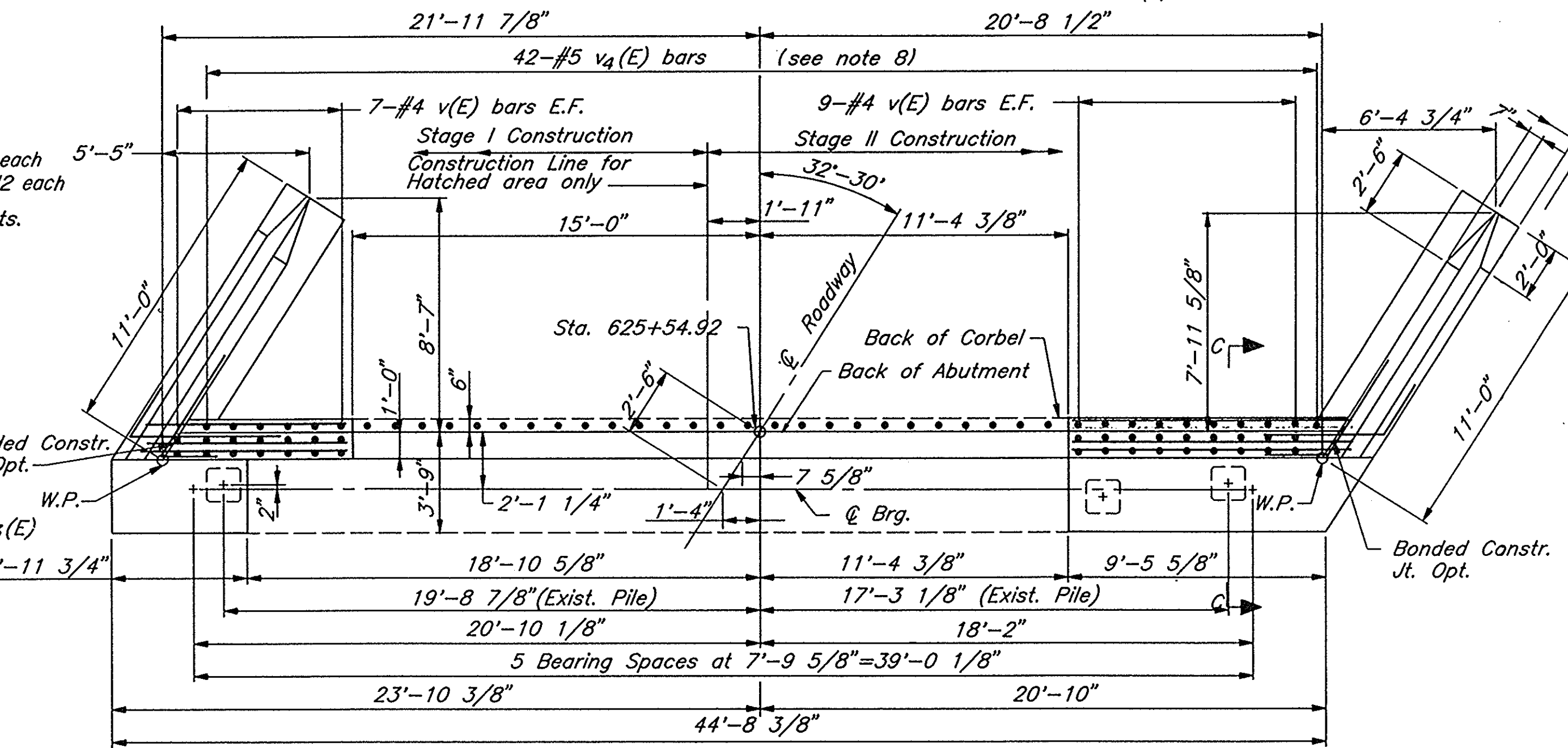
SECTION D-D



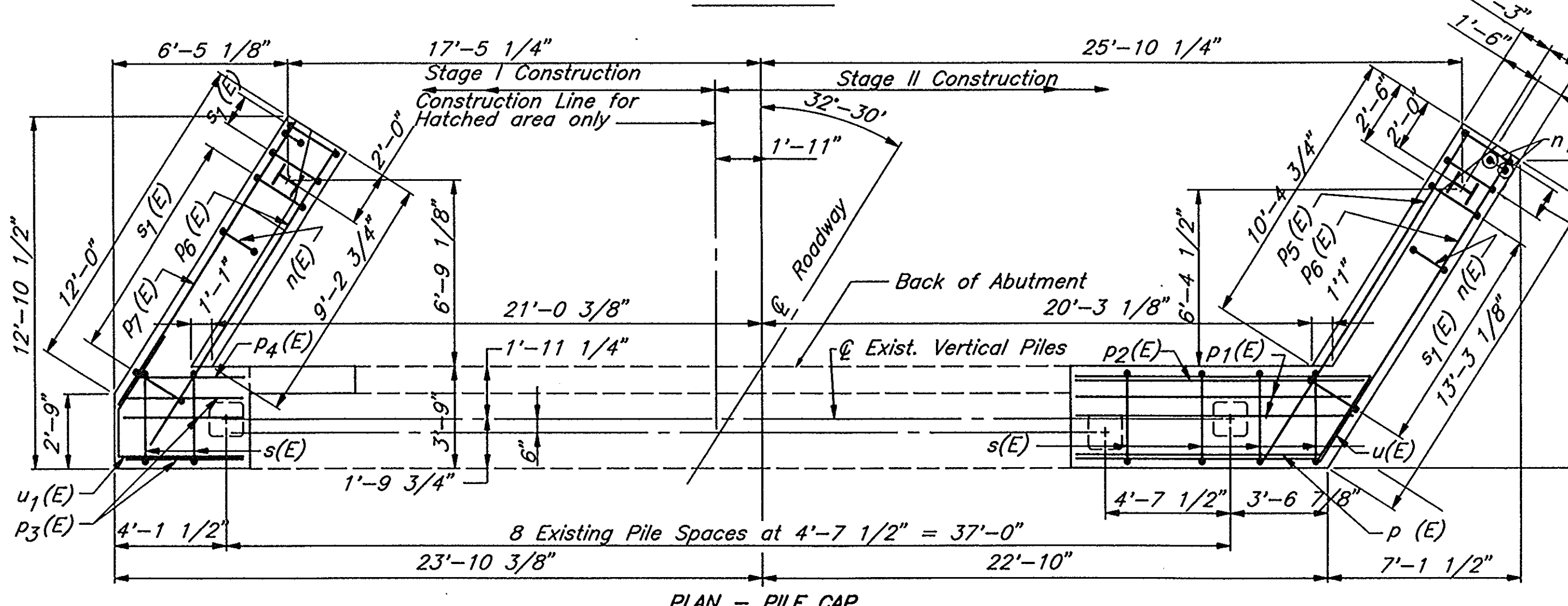
PILE CONCRETE ENCASMENT DETAIL



ELEVATION

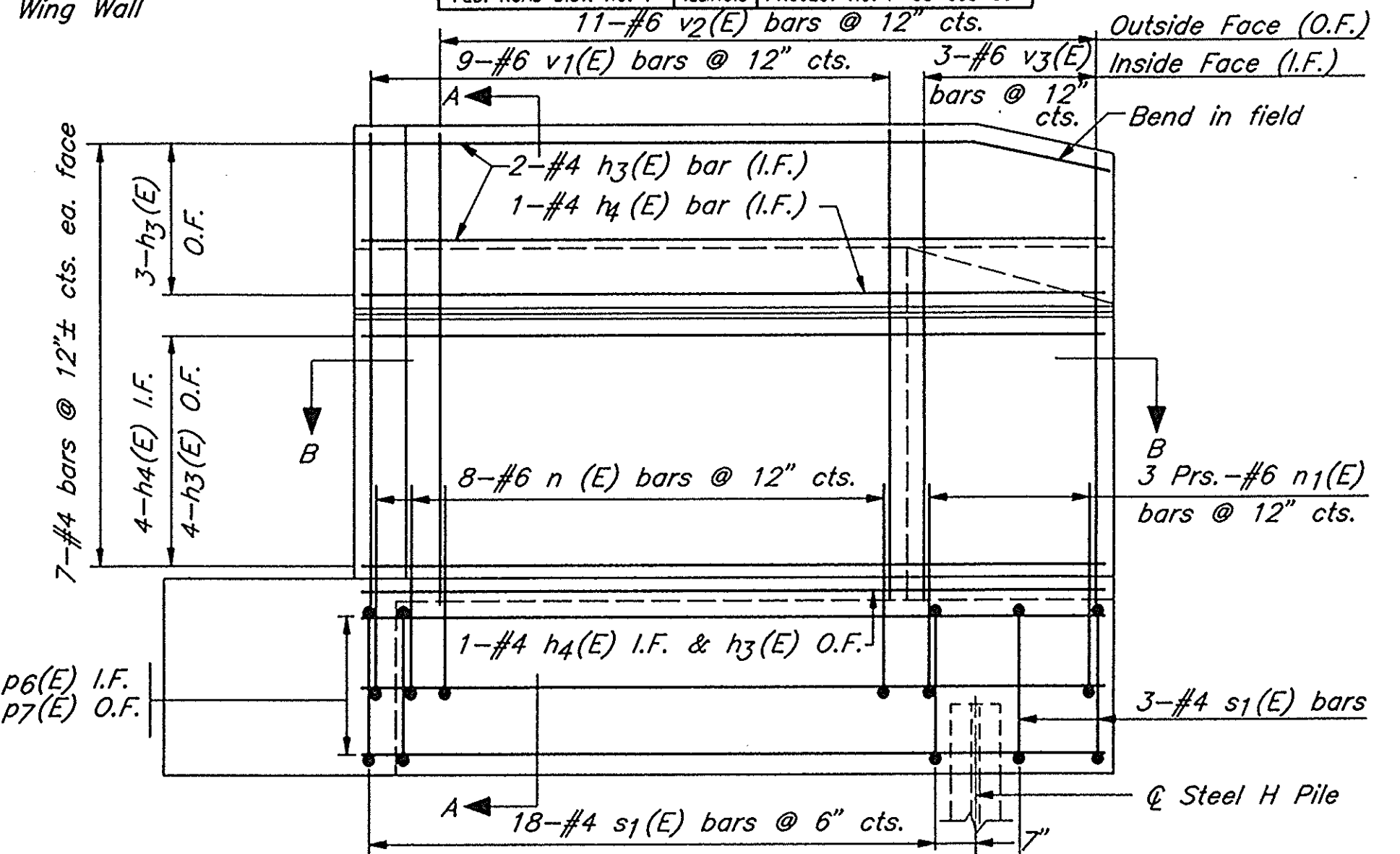


TOP VIEW

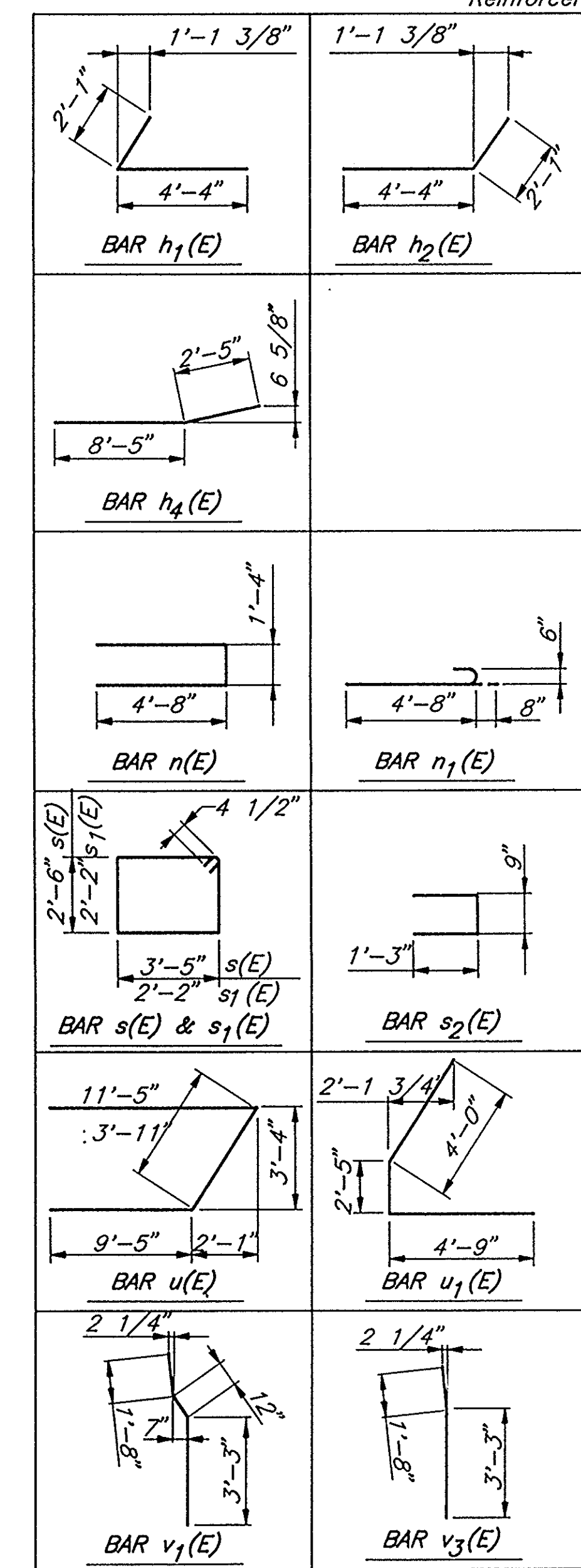


PLAN - PILE CAP

- Notes: 1) Space reinforcement in cap to miss anchor bolts.
2) Reinforcement bars designated (E) shall be epoxy coated.
3) Hatched area to be poured after superstructure forms have been removed.
4) Concrete Super Structures.
5) All edges shall have standard 3/4" chamfer.
6) Reinforcement in hatched area is billed on sheet #18 of 23.
7) B.C.U. denotes Bonded Construction Joints in accordance with Art. 503.09 (a)(2) of the Standard Specification.
8) Epoxy Grout v4(E) bars in existing corbel. Drilled holes shall have a minimum depth of 9"
Cost incidental to reinforcement Bars, Epoxy Coated.



WEST WING WALL ELEVATION



Bar	No.	Size	Length	Shape
h(E)	6	#5	10'-3"	
h1(E)	4	#5	6'-5"	
h2(E)	4	#5	6'-5"	
h3(E)	10	#4	9'-9"	
h4(E)	12	#4	10'-10"	
h5(E)	6	#5	7'-6"	
h6(E)	10	#4	11'-9"	
n(E)	16	#6	10'-8"	
n1(E)	12	#6	5'-4"	
p(E)	3	#7	9'-3"	
p1(E)	2	#7	10'-4"	
p2(E)	3	#7	11'-5"	
p3(E)	5	#7	4'-8"	
p4(E)	3	#7	4'-2"	
p5(E)	3	#7	14'-4"	
p6(E)	6	#7	13'-0"	
p7(E)	3	#7	12'-2"	
s(E)	9	#4	12'-7"	
s1(E)	42	#4	9'-5"	
s2(E)	21	#5	3'-3"	
u(E)	4	#6	24'-10"	
u1(E)	4	#6	11'-2"	
v(E)	32	#4	4'-8"	
v1(E)	20	#6	5'-11"	
v2(E)	22	#6	5'-11"	
v3(E)	6	#6	4'-11"	
v4(E)	42	#5	1'-10"	
Structure Excavation	Cu. Yds.		31	
Concrete Structures	Cu. Yds.		19.4	
Reinforcement Bars (Epoxy Coated)	Lbs.		2540	
HP 10 x 42 Piles	Ft.		40	

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

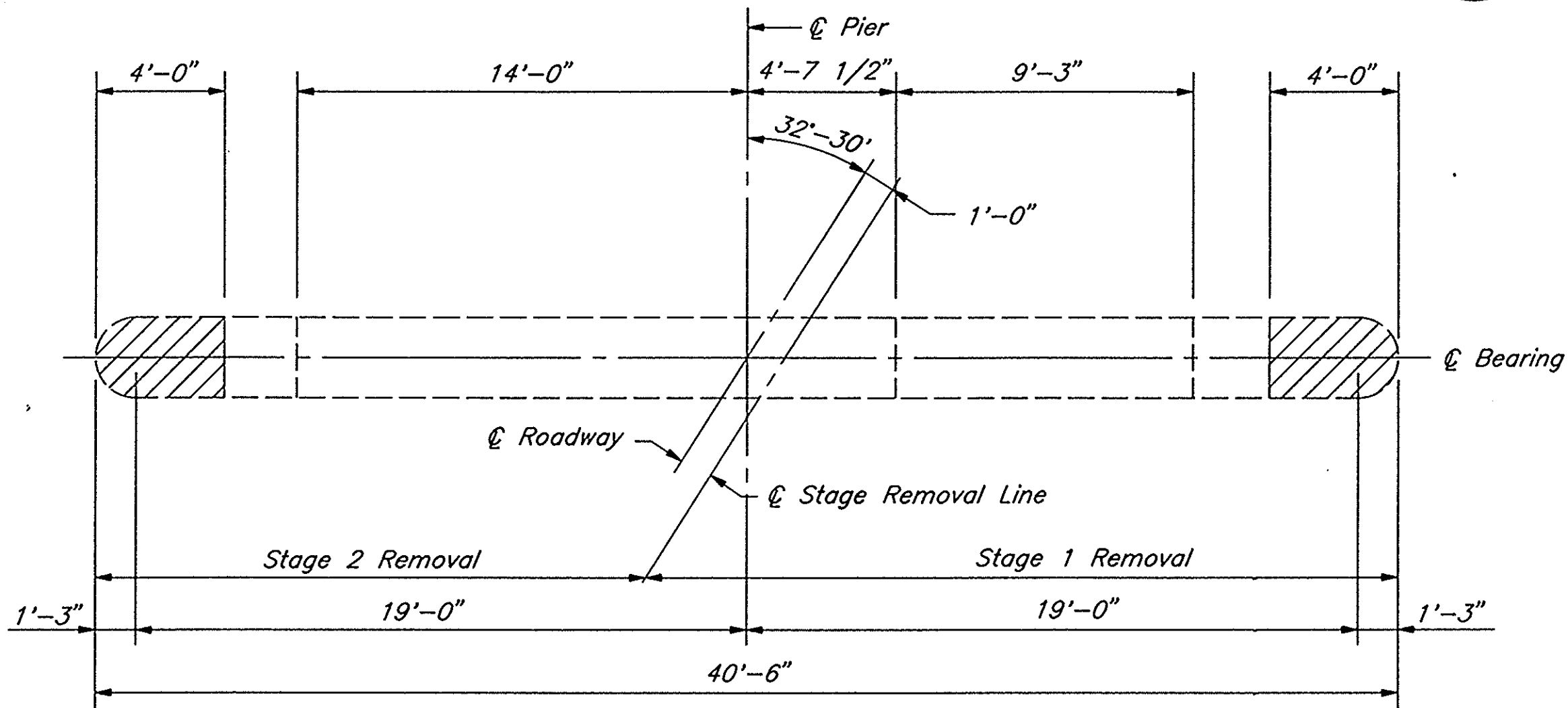
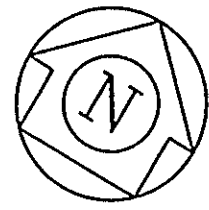
DESIGNED	EEG	DRAWN	GWR	APPROVED	DATE	2/3/94	BOOK	SCALE	CAD DWG.	IL 93030\23AB-ST5	JOB NO.	222/93030
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SOUTH ABUTMENT			SHEET
F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY	SECTION 1BR	STATION 626+41	27
S.N. 050-0047			OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

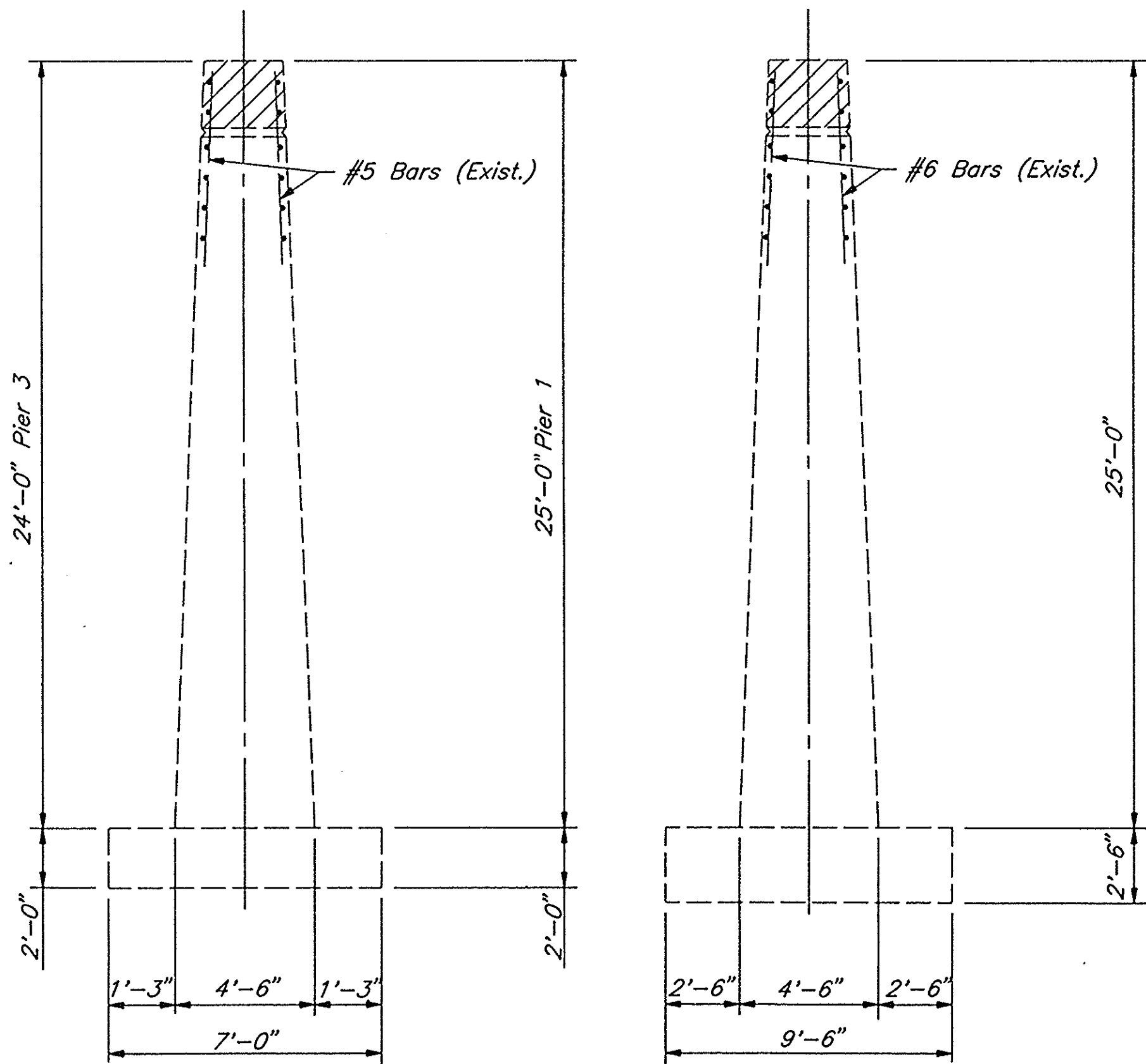
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	28
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT NO. P-93-053-90		

SHEET NO. 15
24 SHEETS



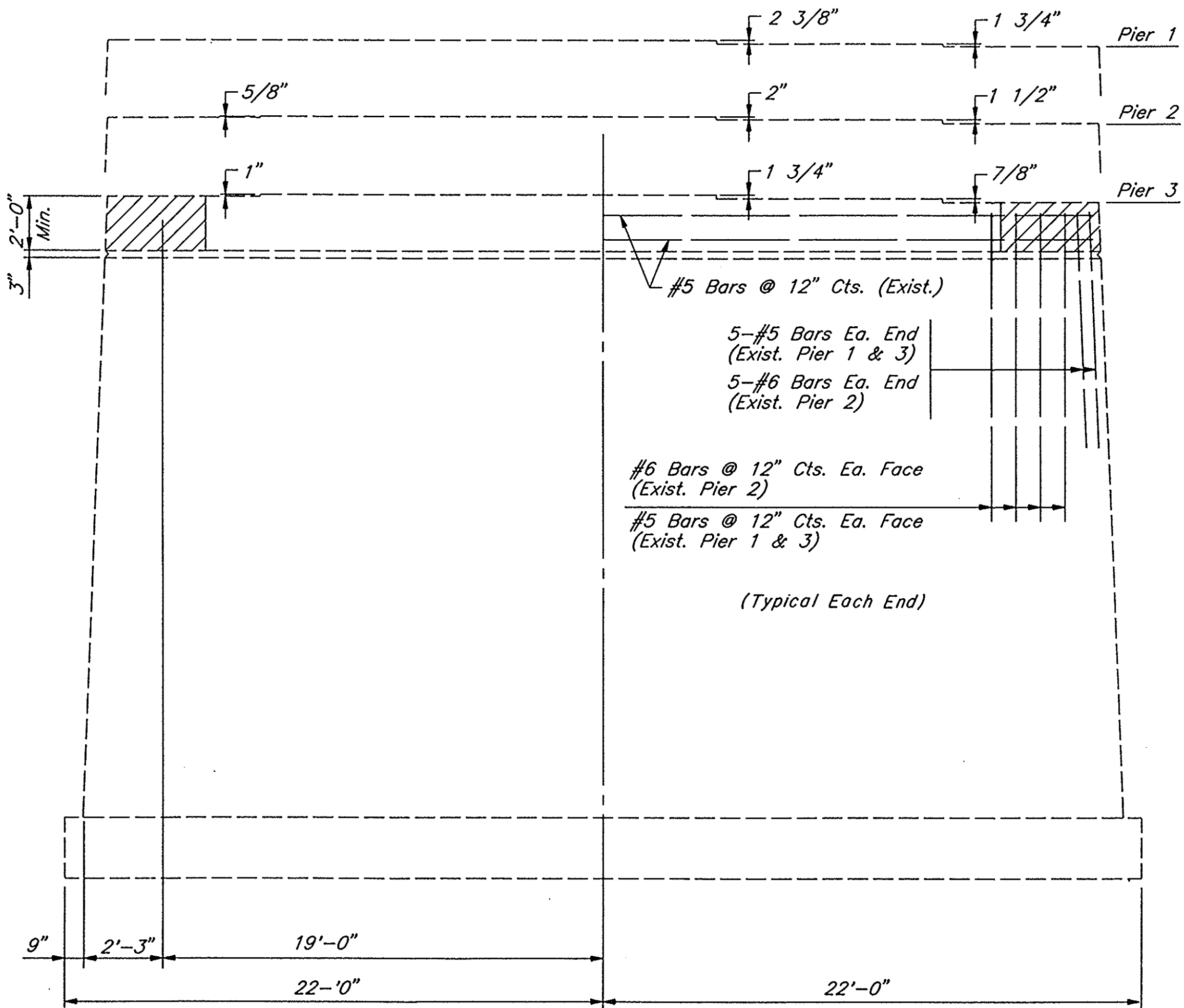
PLAN - TOP OF PIERS

- NOTES
1. Hatched areas indicate concrete sections to be removed.
 2. Existing reinforcement shall be cleaned straightened and incorporated into new construction, cost incidental to "Concrete Removal".
 3. Burn existing bearing anchor bolts flush with the existing concrete surface and grind them smooth, Cost incidental to "Removal of Existing Superstructure".
 4. Formed concrete repair required on the East and West ends of Pier # 1.



END VIEW-PIER 1 & 3

END VIEW-PIER, 2



ELEVATION

BILL OF MATERIAL		
Item	Unit	Quantity
Concrete Removal (Pier 1, 2 & 3)	Cu. Yd.	4.2
Formed Concrete Repair (Depth equal to or less than 5")	Sq. Ft.	6

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS						
DESIGNED	EEG	DRAWN	GWR	APPROVED	DATE	1/14/94
BOOK	SCALE	CAD DWG.	IL 93030	23PR-REM	JOB NO.	222/93030

PIER 1, 2 & 3 - STAGE REMOVAL & REPAIR
F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET
28
OF 53

SHEET NO. 16
24 SHEETS

1. All edges shall have standard 3/4" chamfer except as noted.
2. Pour steps monolithically with pier.
3. Space reinforcement in cap to miss anchor bolts.
4. E.F. denotes Each Face.
5. See sheet 20 of 23 for Bar Splicer details.
6. B.C.J. denotes Bonded Construction Joint, in accordance with Art. 503.09 (a)(2) of the Standard Specifications.

[illegible]

2'-0" Min.

2" cl.

2" cl.

#5 h(E), h₁(E) or h₂(E) bars

#6 v₁(E) or v₃(E) bars

Batter to match existing pier (both sides)

#5 h (E) bars, Ⓢ
(Typ. Each End)

#6 v (E) or v₂(E) bars

4"

4"

#5 h (E) bars, Ⓢ
(Typ. Each End)

ELEVATION PIER #1

Top Level Details:

- Reinforcement: #5 $h_2(E)$ bars, @ 12" cts. E.F.
- Bar Splicers: #5 Bar Splicers (E)
- Reinforcement: #5 $h_1(E)$ bars, @ 12" cts. E.F.
- Reinforcement: #6 $v_3(E)$ bars, @ 12" cts. E.F.
- Dimensions: 1'-11" (total length), 2" (top offset), 2 3/8" (bottom offset), 6" (bottom offset at right end).
- Elevations: 562.47 (left), 562.30 (middle), 562.10 (right).
- Labels: B.C.J. (Bonded Stage Construction Joint) at two locations.

Bottom Level Details:

- Reinforcement: #5 $h_2(E)$ bars, @ 12" cts. E.F.
- Bar Splicers: #5 Bar Splicers (E)
- Reinforcement: #5 $h_1(E)$ bars, @ 12" cts. E.F.
- Reinforcement: #6 $v_1(E)$ bars, @ 12" cts. E.F.
- Reinforcement: #6 $v(E)$ bars (Typ. Each End)
- Dimensions: 1 1/8" (top offset), 1 3/4" (top offset), 2" (bottom offset), 6" (bottom offset at right end).
- Elevations: 561.20 (left), 561.29 (middle), 561.20 (middle), 561.07 (right), 561.0 (right).
- Labels: B.C.J. (Bonded Stage Construction Joint) at two locations.

BILL OF MATERIAL Total For Two Piers				
Bar	No.	Size	Length	Shape
h (E)	40	#5	6'-11"	_____
h1(E)	12	#5	18'-0"	_____
h2(E)	12	#5	21'-0"	_____
v (E)	12	#6	5'-2"	_____
v1(E)	66	#6	3'-2"	_____
v2(E)	12	#6	5'-0"	_____
v3(E)	66	#6	3'-0"	_____
Concrete Structures			Cu. Yd.	33
Reinforcement Bars			Lbs.	1580
Epoxy Coated				
Bar Splicers (F)			Each	12

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Consulting Engineers — Aurora, Illinois

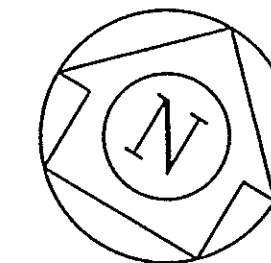
DESIGNED <i>FEG</i>	DRAWN <i>GWR</i>	APPROVED	DATE <i>1/24/94</i>	BOOK	SCALE	CAD DWG/L <i>93030\23P13-ST</i>	JOB NO. <i>222/93030</i>
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3 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
BR STATION 626+41 S.N. 050-0047

29

F 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



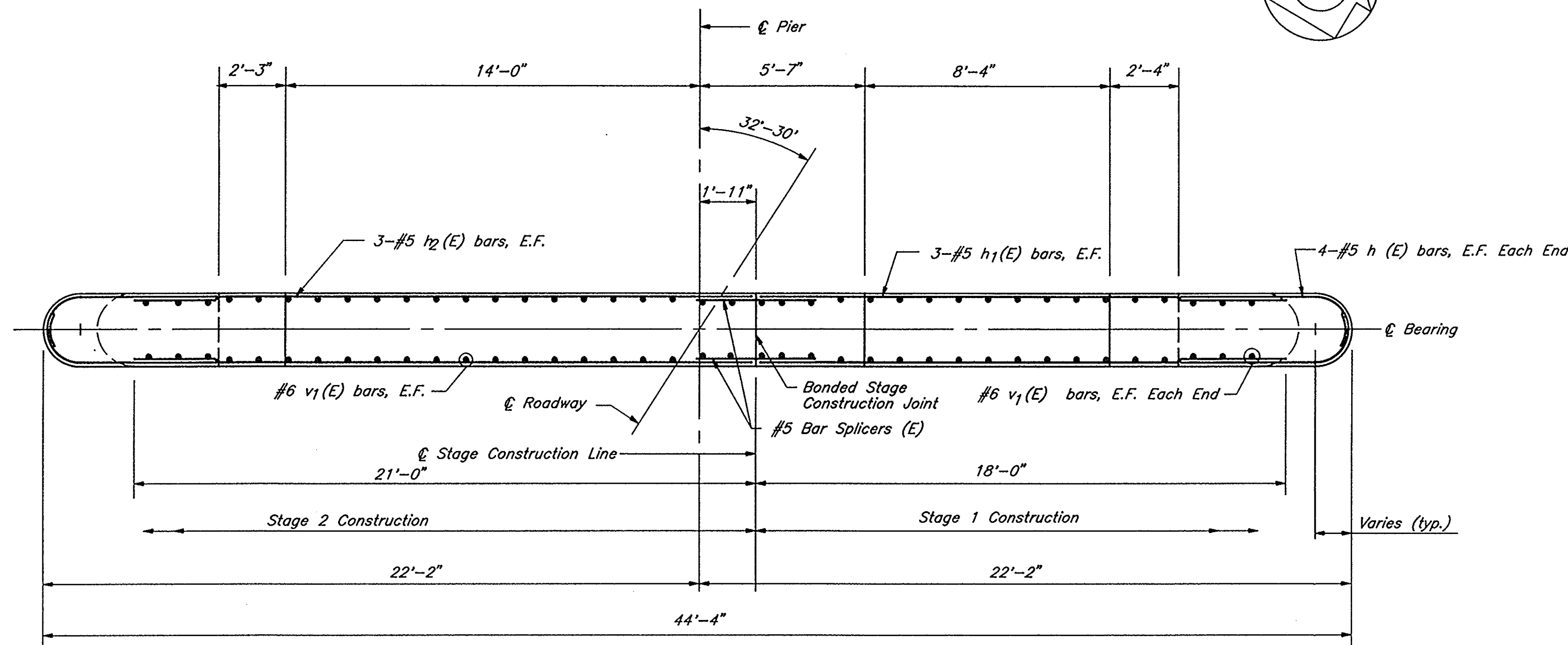
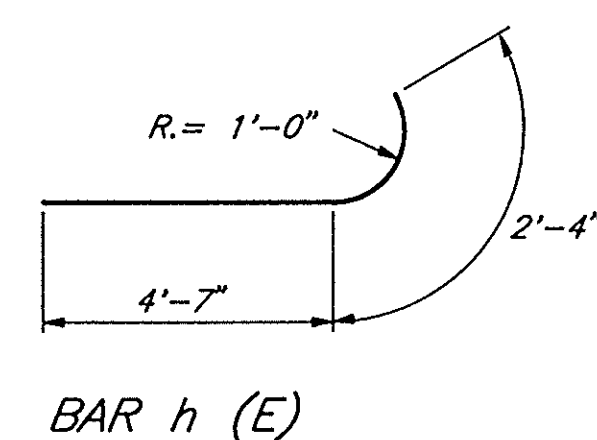
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR	LASALLE	53	30
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT NO. P-93-053-90			

SHEET NO. 17
24 SHEETS

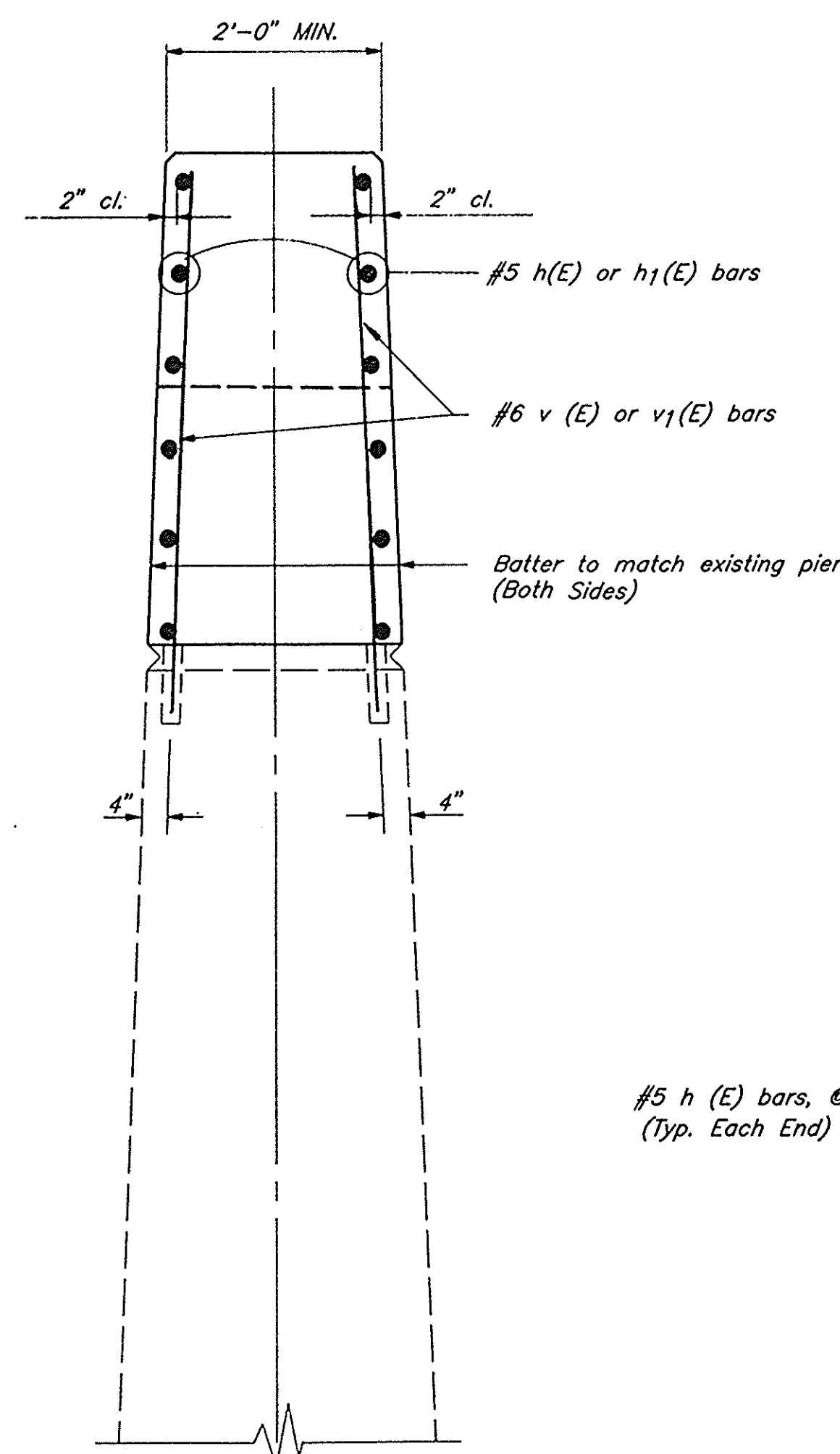
NOTES

- All edges shall have standard 3/4" chamfer except as noted.
- Pour steps monolithically with pier.
- Space reinforcement in cap to miss anchor bolts.
- E.F. denotes Each Face.
- See sheet 20 of 23 for Bar Splicer details.
- B.C.J. denotes Bonded Construction Joint, in accordance with Art. 503.09 (a)(2) of the Standard Specifications.

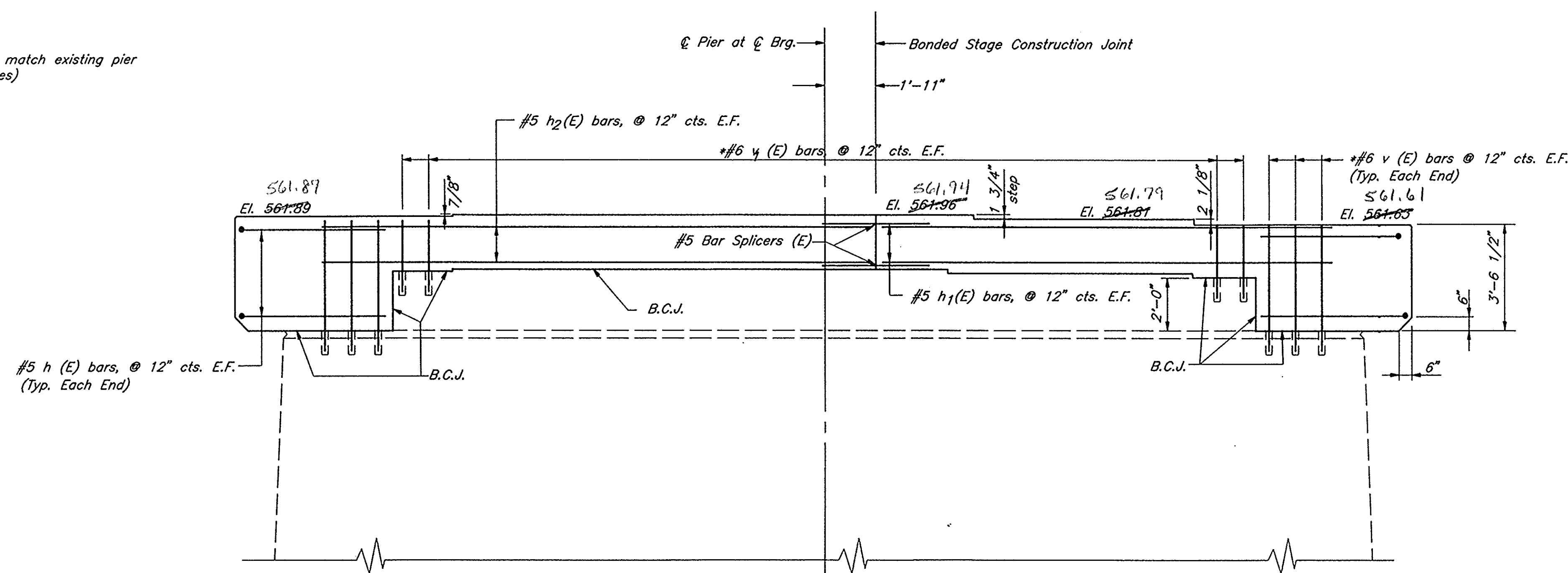
*Epoxy grout v(E) and v₁(E) bars
in drilled holes with a minimum depth of 9".
Cost incidental to Reinforcement
Bars, Epoxy Coated.



PLAN - TOP OF PIERS



END VIEW-PIER 2



ELEVATION PIER #2

BILL OF MATERIAL ONE PIER				
Bar	No.	Size	Length	Shape
h (E)	16	#5	6'-11"	
h ₁ (E)	4	#5	18'-0"	
h ₂ (E)	4	#5	21'-0"	
v (E)	12	#6	4'-2"	
v ₁ (E)	66	#6	2'-2"	
Concrete Structures				
			Cu. Yd.	11
Reinforcement Bars Epoxy Coated			Lbs.	570
Bar Splicers (E)			Each	4

Reinforcement Bars Designated (E) shall be
Epoxy Coated

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Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	CAD DWS.	JOB NO.
EEG	GWR		1/24/94			IL 93030 23P2-ST	222/93030

PIER 2 (FIXED BEARING)

F.A.P. 68 (IL. RT. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET

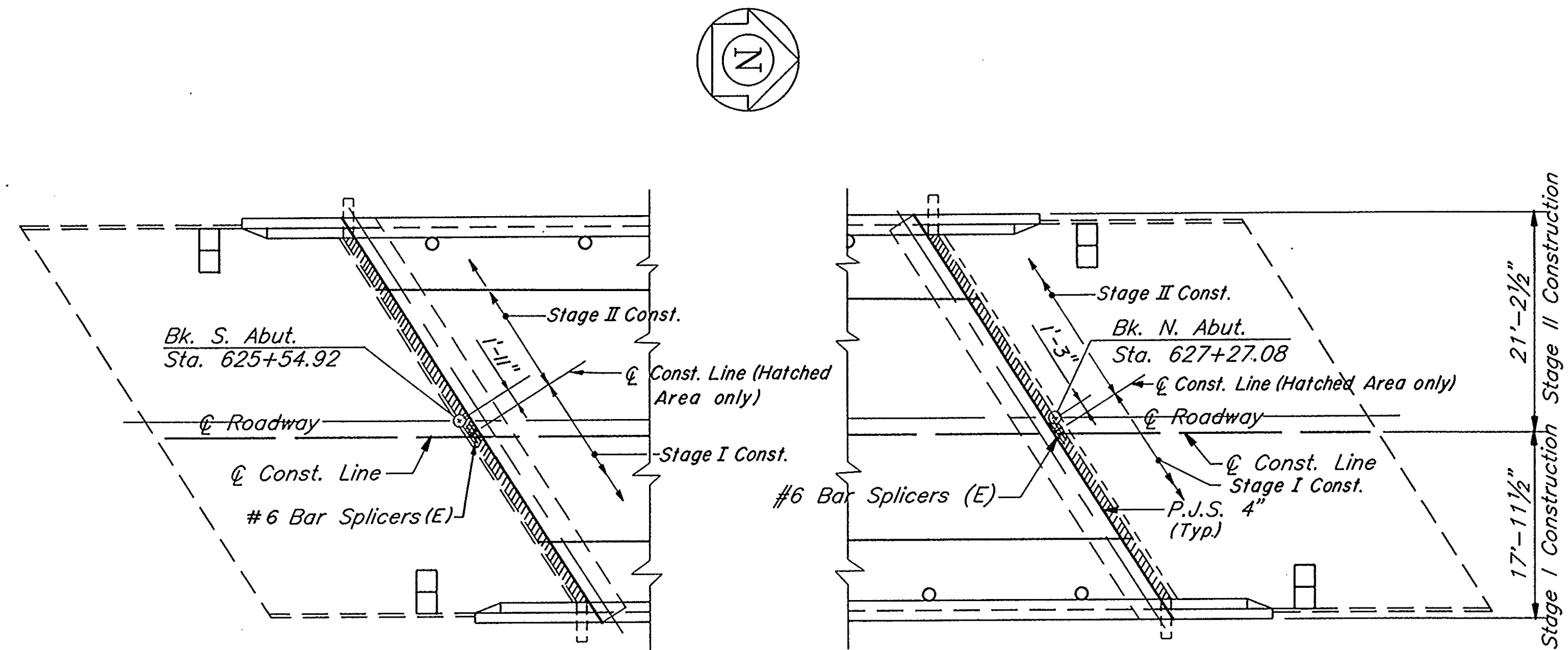
30

OF 53

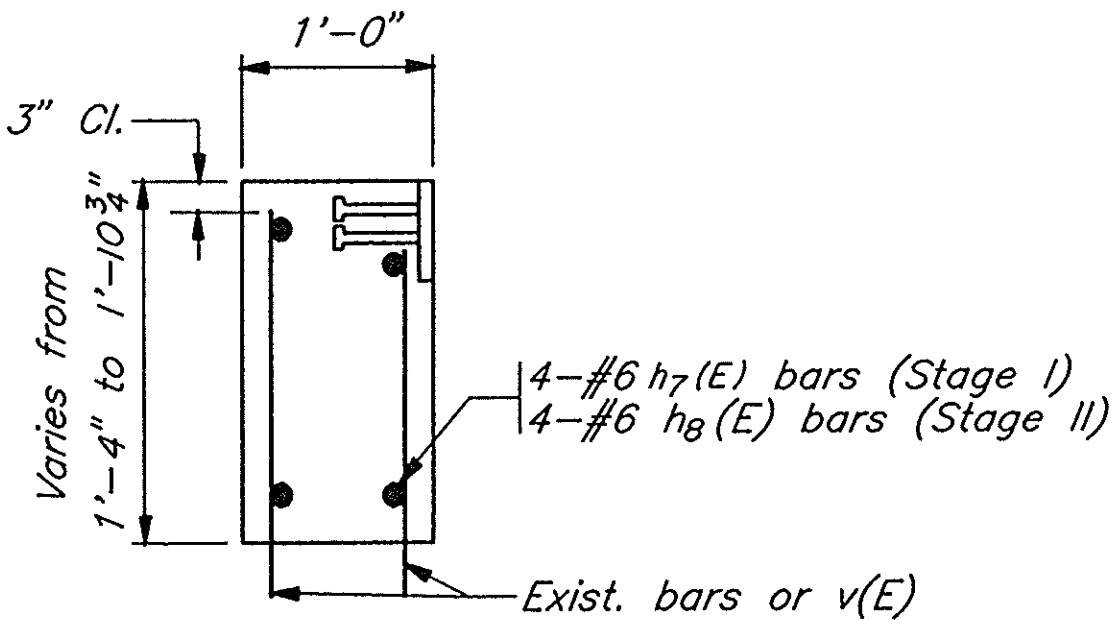
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1BR	LASALLE	53	31
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS PROJECT NO.			

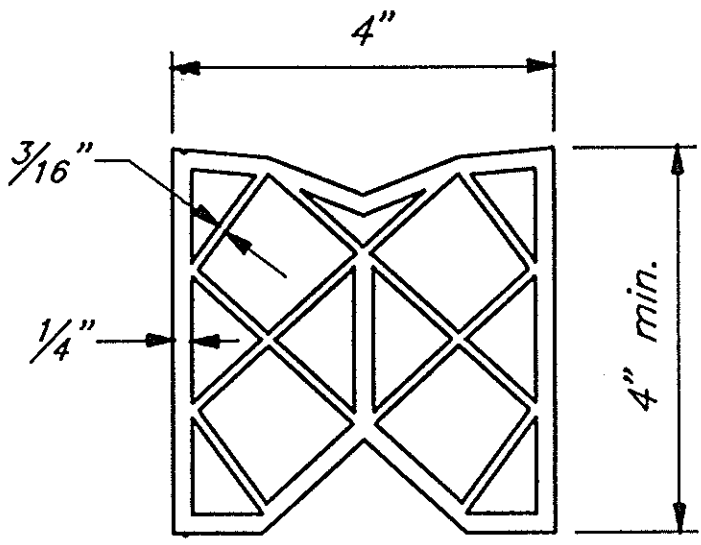
SHEET NO. 18
24 SHEETS



EXPANSION JOINT PLAN LOCATION



DETAIL B
(See Abutment Details on Sht. # 13 & 14 of 23)

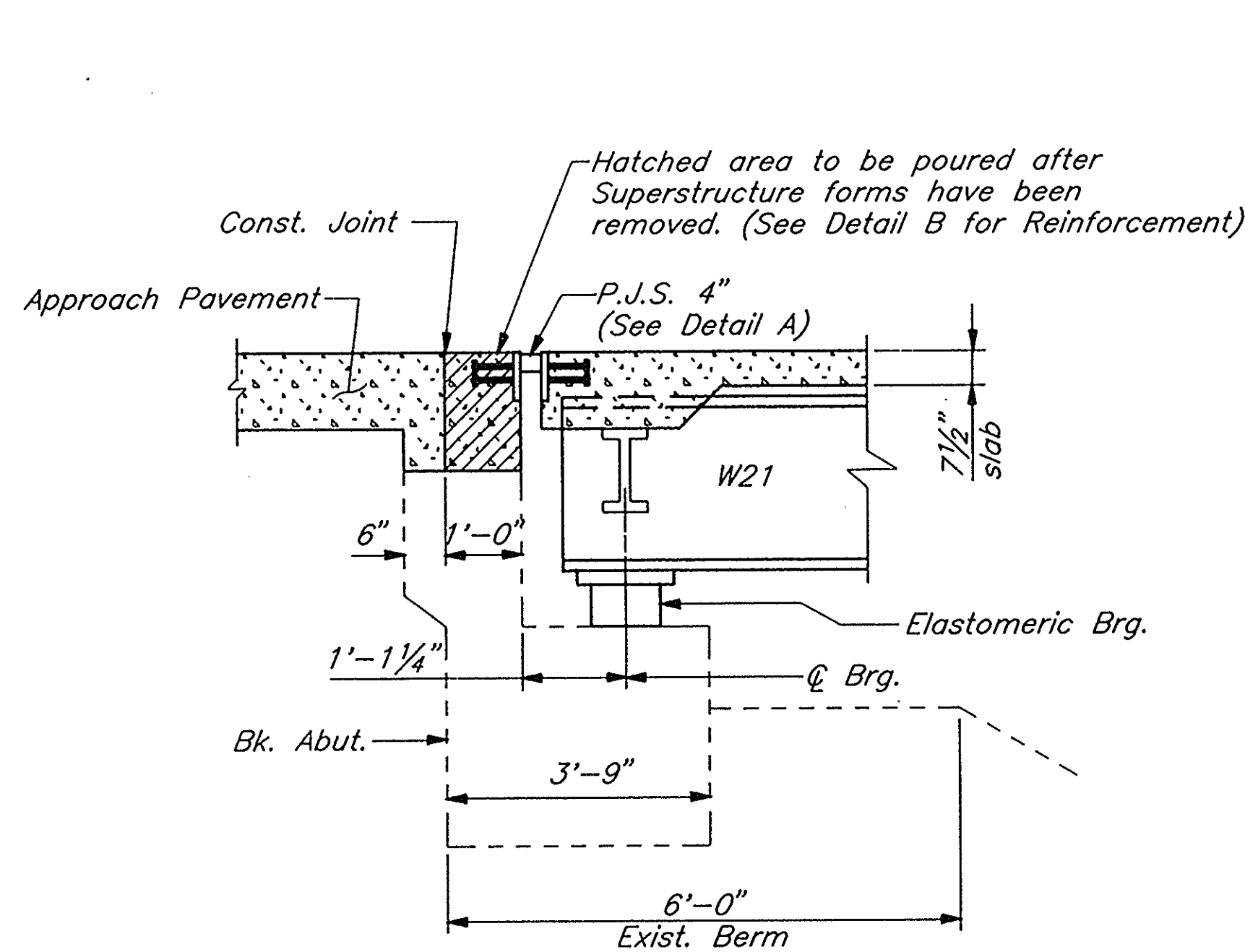


PREFORMED JOINT SEAL (4")

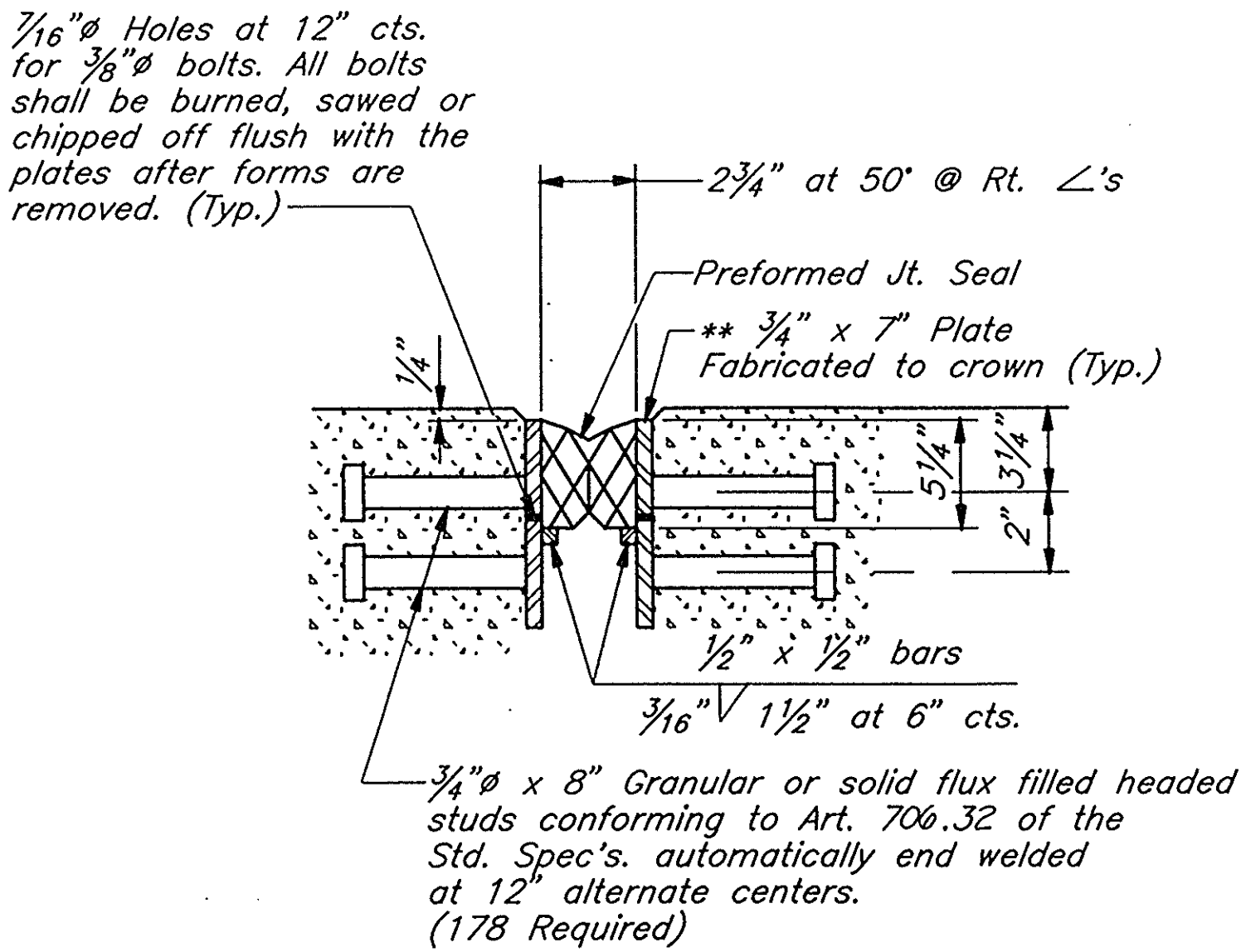
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h7(E)	8	#6	19'-1"	
h8(E)	8	#6	22'-5"	
Preformed Joint Seal, 4"			Ft.	93
Reinforcement Bars (Epoxy Coated)			Lbs.	500
Bar Splicers			Each	8
Concrete Super Structures			Cu. Yd.	6

Reinforcement bars designated (E) shall be epoxy coated.

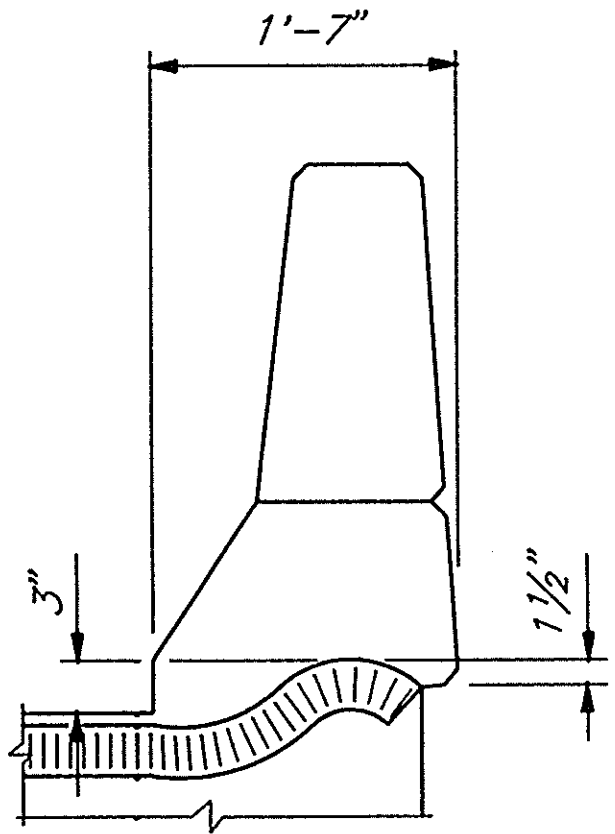


SEC. THRU ABUT.
Dimensions are Rt. Z's to Face of Abutment



** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 1/16". Seal space with Silicone Sealant suitable for Structural Steel.

DETAIL A



TYPICAL END OF SEAL TREATMENTS

NOTE : After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.

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Consulting Engineers - Aurora, Illinois

REVISIONS									
DESIGNED	RTP	DRAWN	JES	APPROVED	EEG	DATE	1/24/94	BOOK	
SCALE		CAD DWG.	/IL/93030/23EXPJT	JOB NO.	222/93030/00				

EXPANSION JOINT SEALER - NORTH & SOUTH ABUTMENTS
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

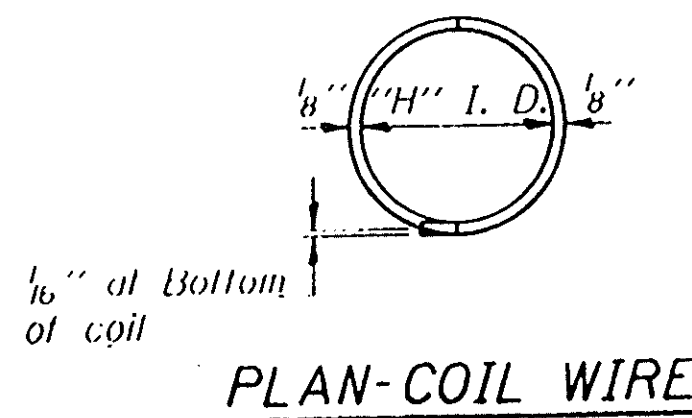
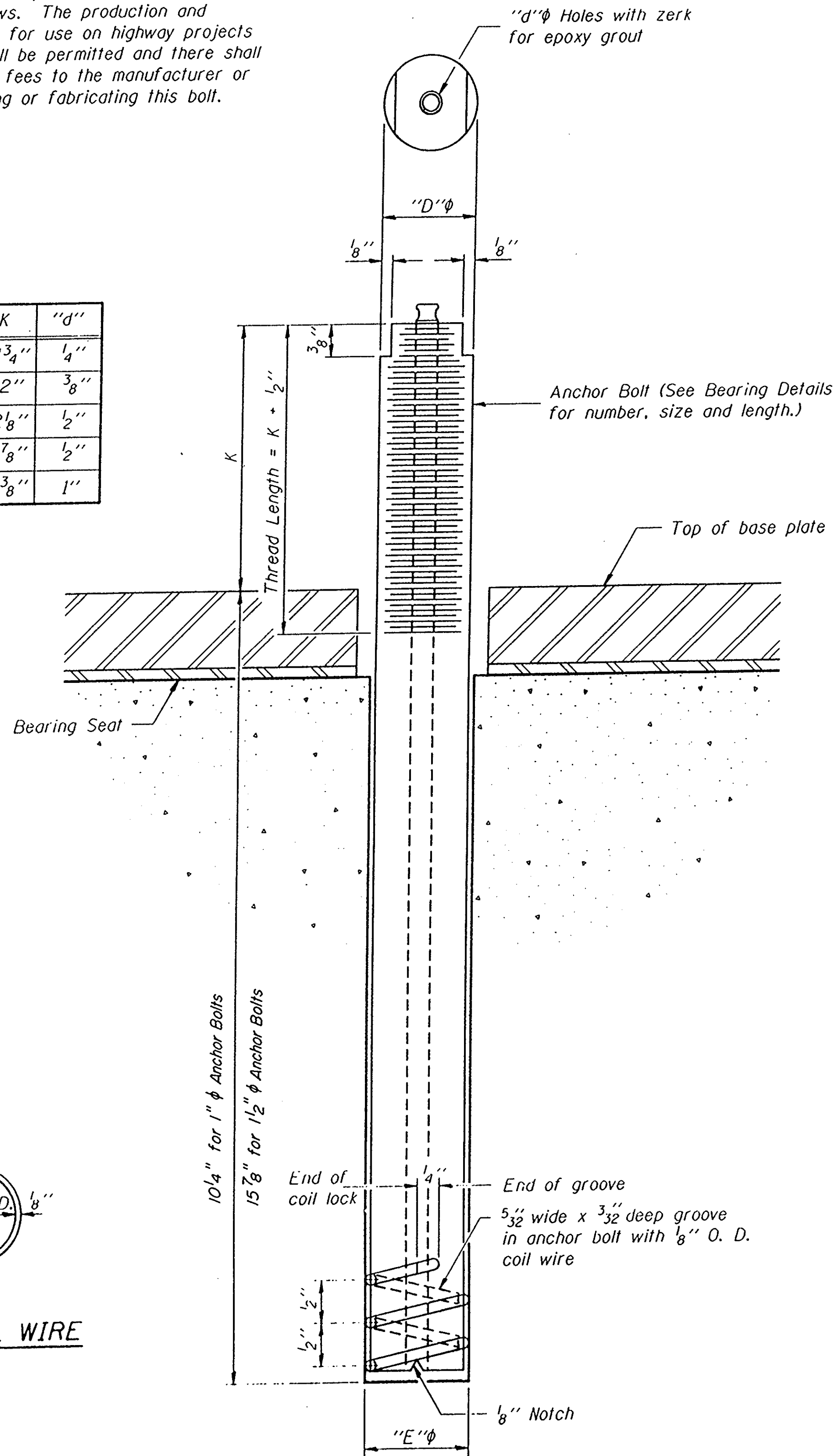
SHEET
31
OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	20% SHEETS	SHEET NO.	SHEET NO. 19
F.A.P. 68	1BR	LASALLE	53	32	29 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK
ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS
COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

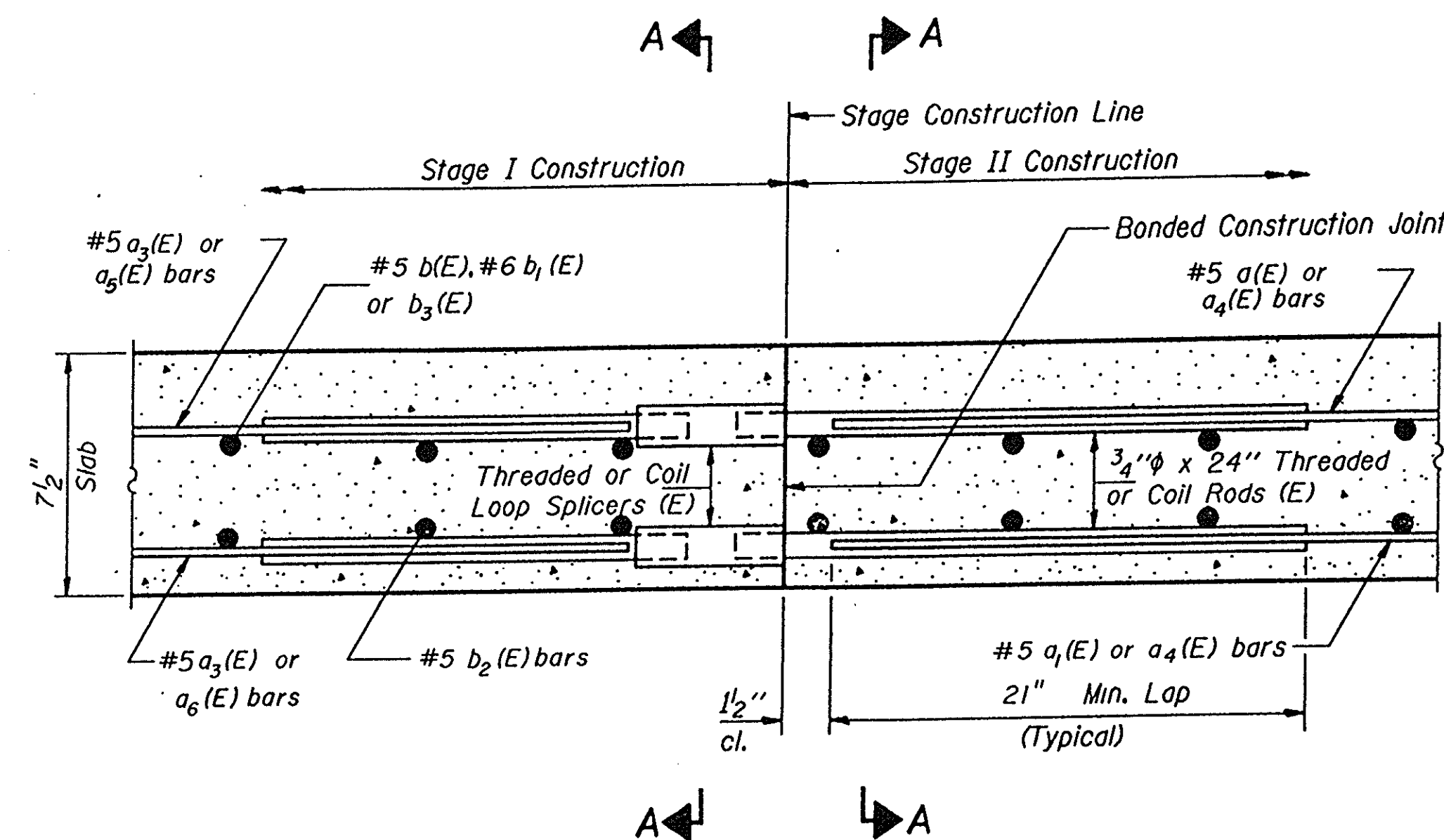
Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

ANCHOR BOLT DETAILS
FOR BEARINGS

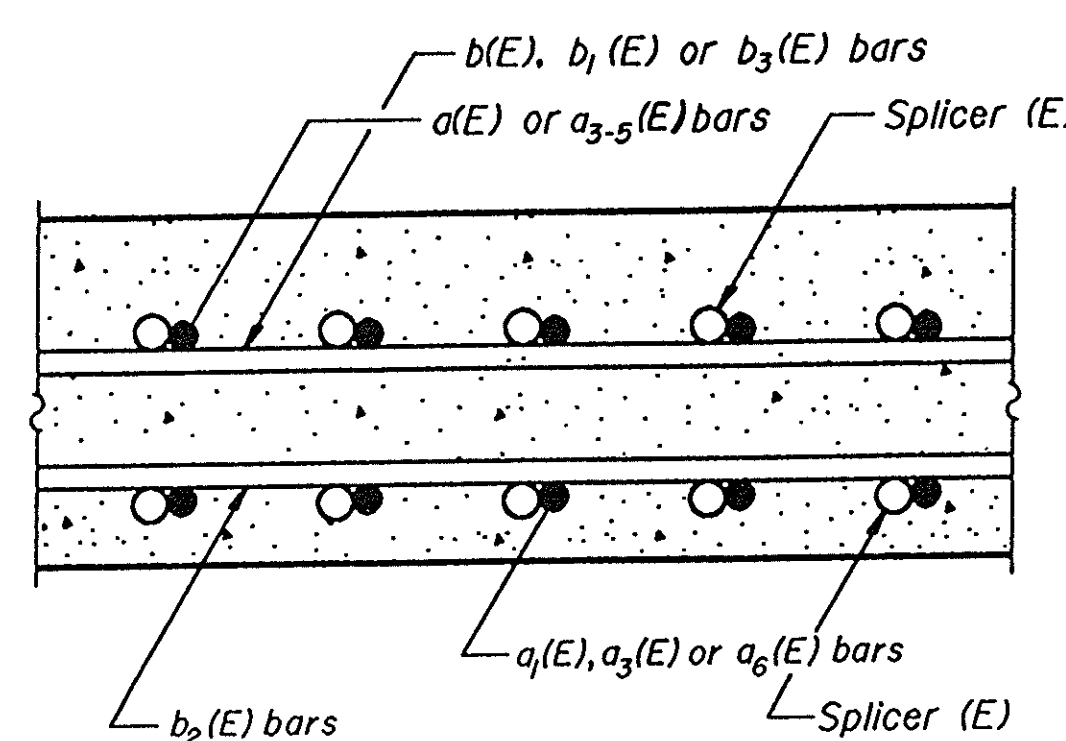
DESIGNED
CHECKED
DRAWN
CHECKED

ABB-1 7-1-91

REVISIONS						
DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	JOB NUMBER 222-93030



SECTION THRU SLAB



SECTION A-A

SPLICER DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

ROLLED THREAD DOWEL BAR



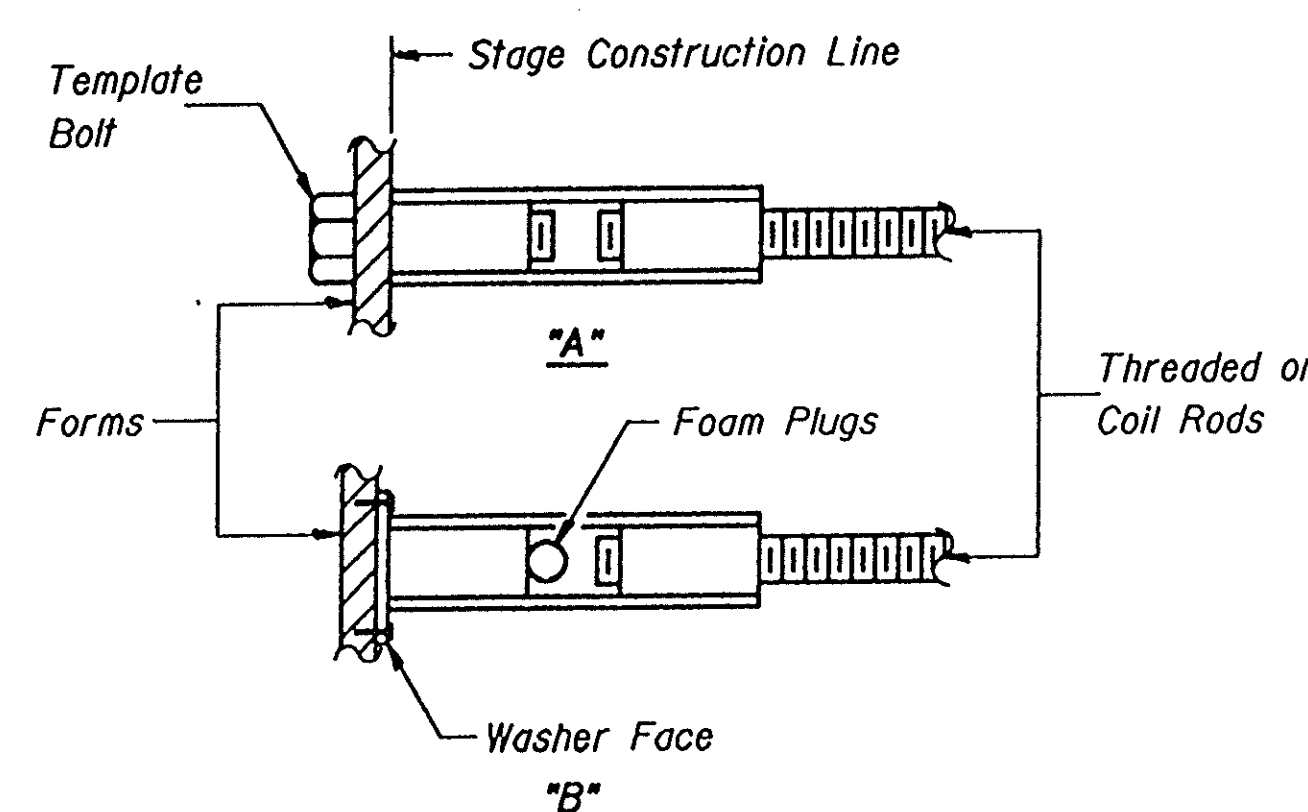
ONE PIECE



WELDED SECTIONS

SPLICER ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel 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.
Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with 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 splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{sallow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.

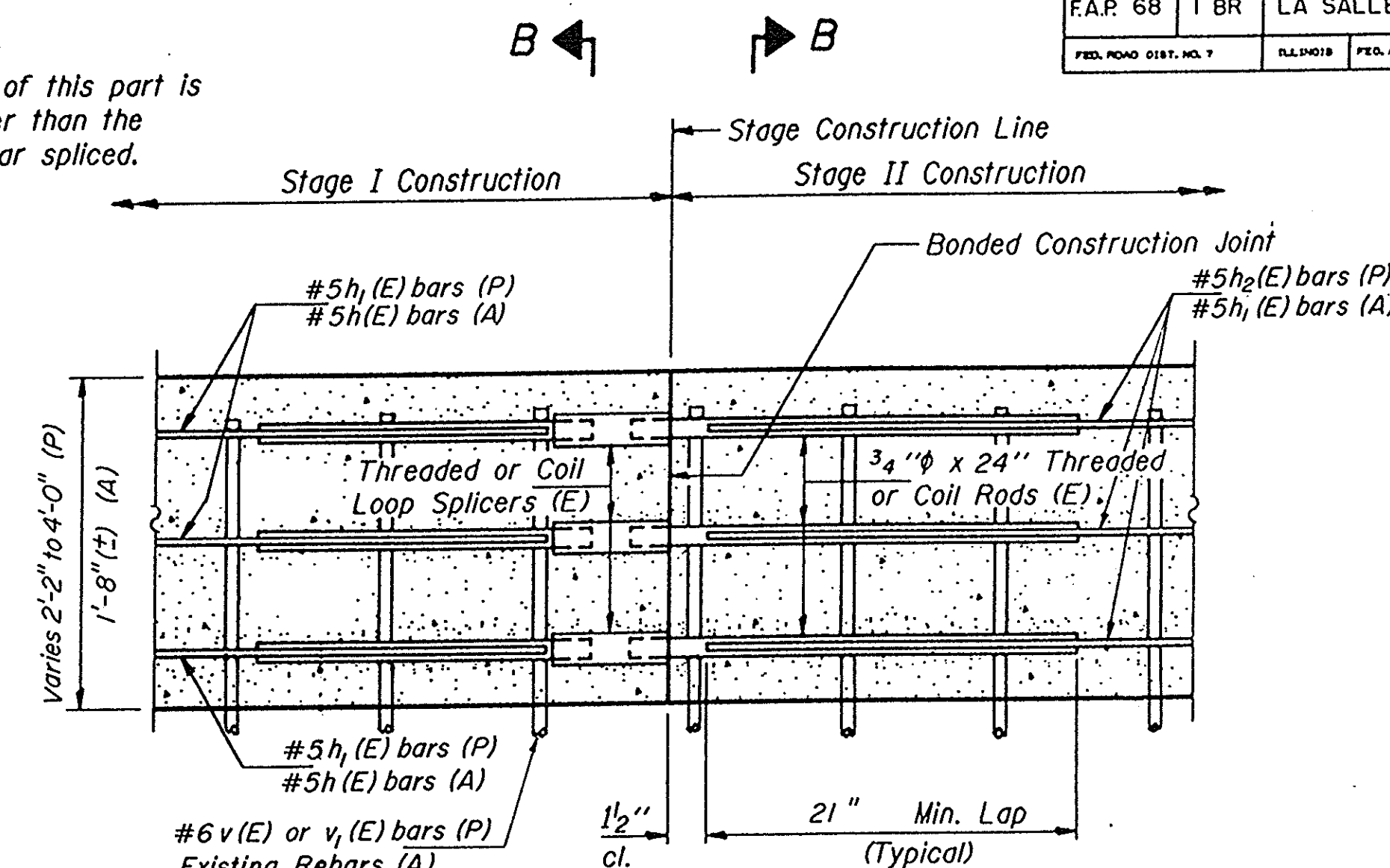
f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

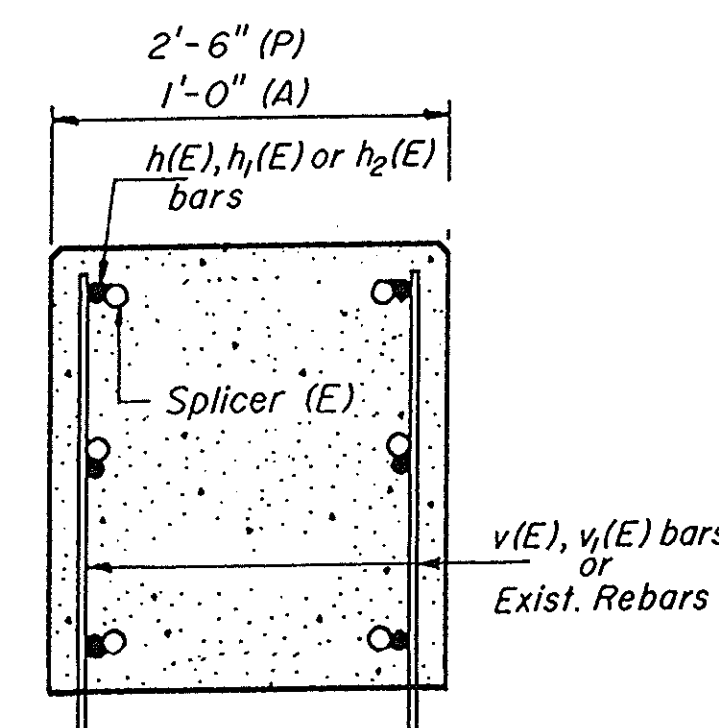
In Slabs	#5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
	#6 bar lap with 7/8" Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
In Sub-Structure	#7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension
	#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 58.9 kips-tension Minimum Pull-out Strength = 23.6 kips-tension



SECTION THRU ABUTMENTS AND PIERS

P = Pier A = Abutment

SPLICER DETAILS



SECTION B-B

Bar splicers shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price each for "BAR SPLICERS."

BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

BSD-1 12-16-91

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

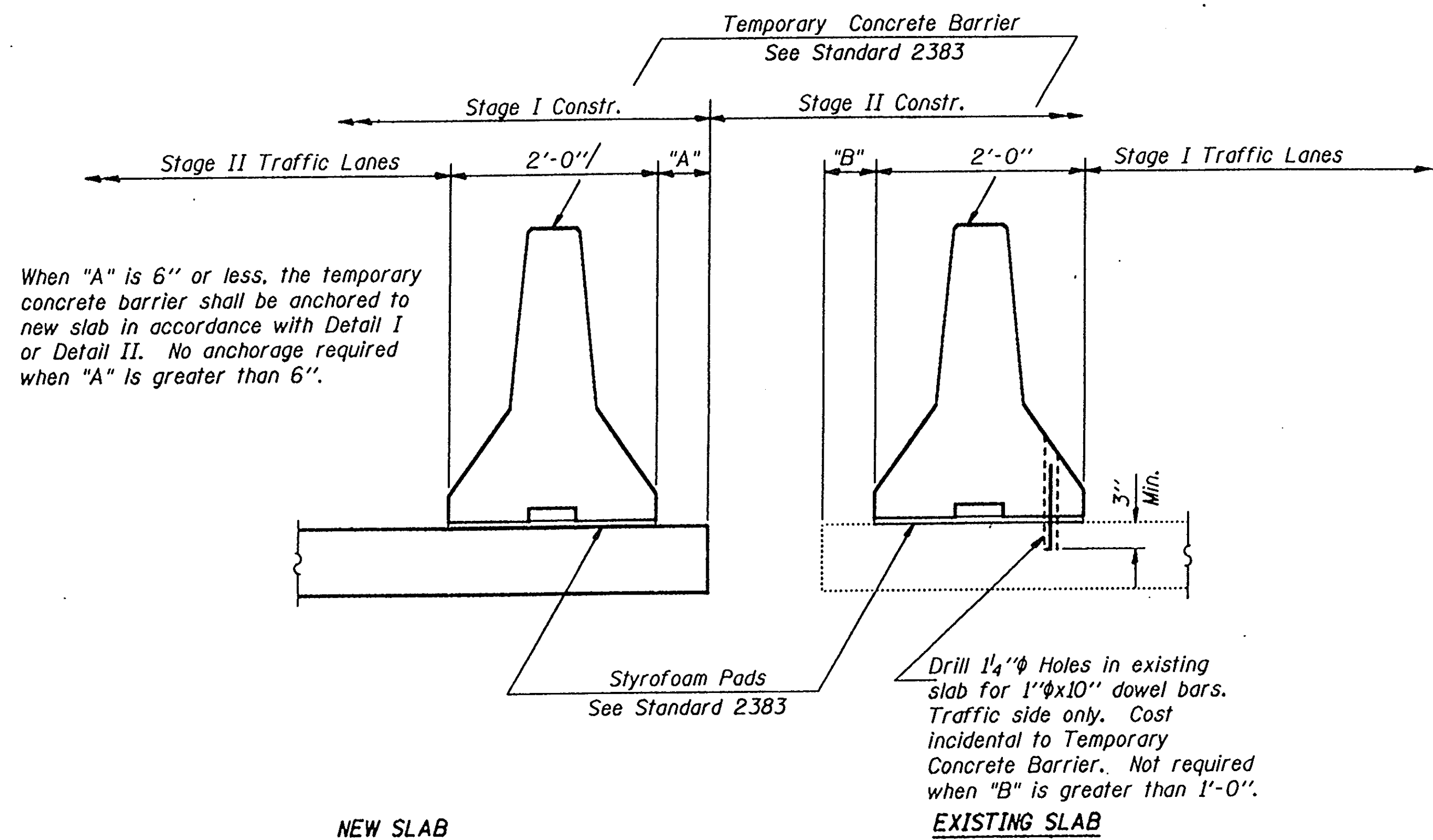
DESIGNED EEG DRAWN RTP APPROVED DATE 1/14/94 BOOK SCALE N. T. S. JOB NUMBER 222-93030

BAR SPLICER (COUPLER) DETAILS
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

SHEET
33
OF
53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

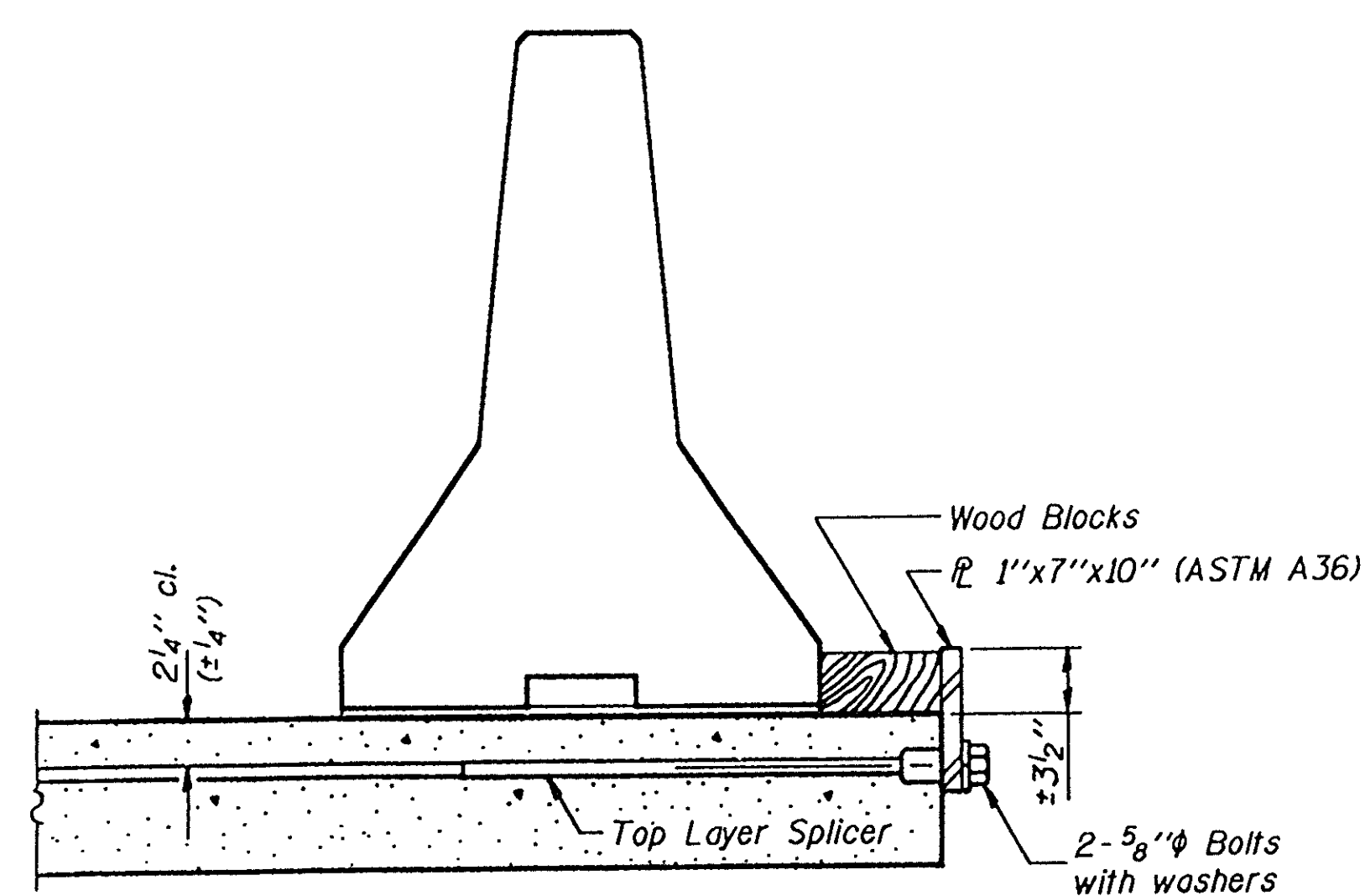
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 21
F.A.P. 68	1 BR	LA SALLE	53	34	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



NEW SLAB

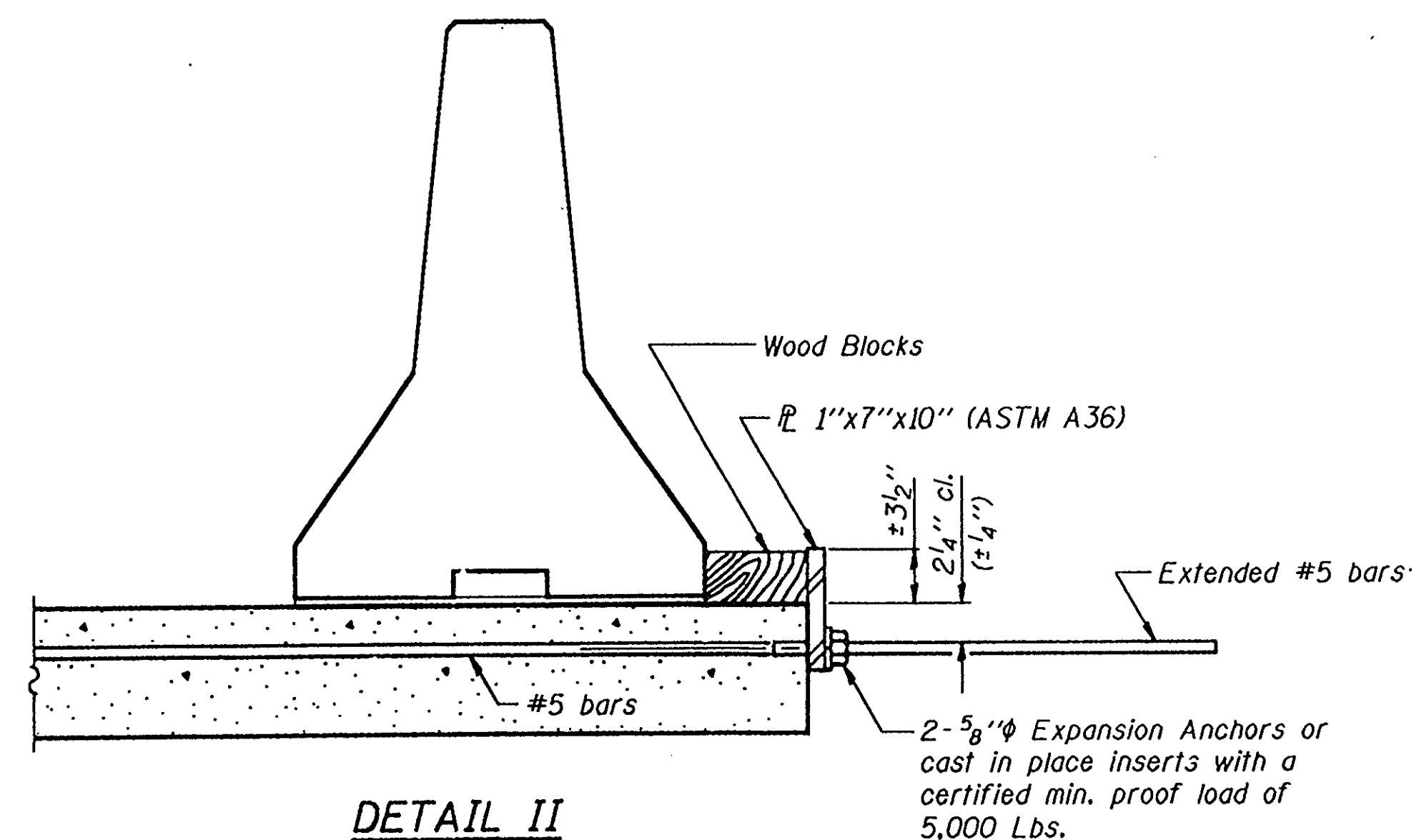
EXISTING SLAB

SECTIONS THRU SLAB



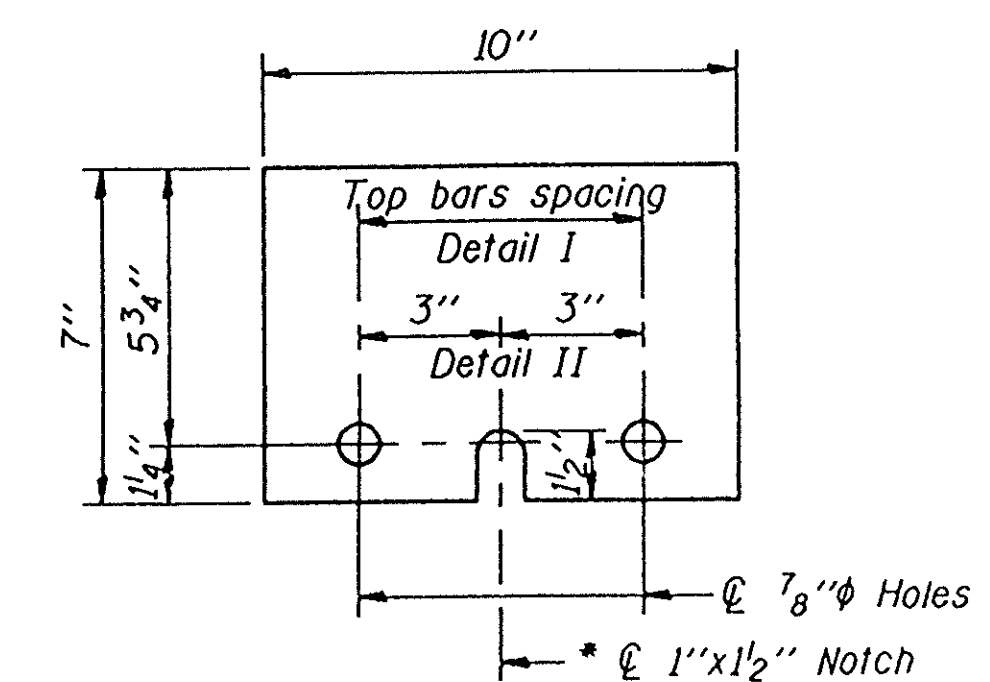
DETAIL I

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

DESIGNED
CHECKED
DRAWN
CHECKED

R-27 7-1-91

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

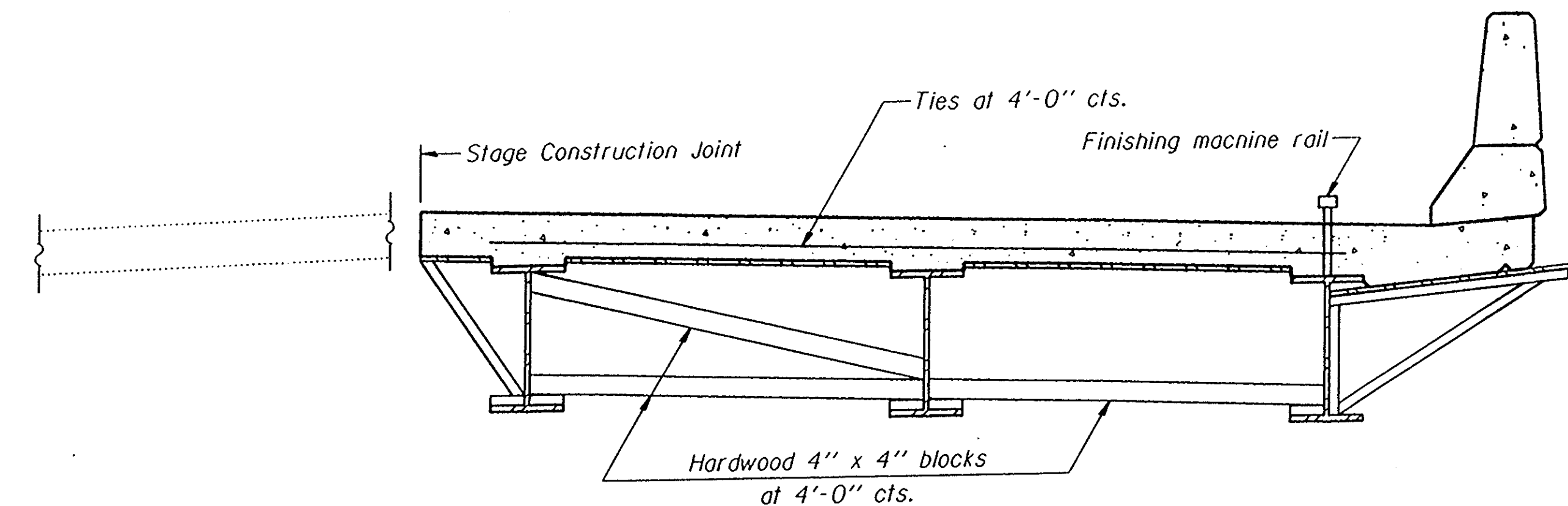
DESIGNED	DRAWN	APPROVED	DATE 1-14-94	BOOK	SCALE NOT TO SCALE	JOB NUMBER 222-93030

TEMPORARY CONCRETE BARRIER
F.A.P. ROUTE 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
SECTION 1BR STATION 626+41 S.N. 050-0047

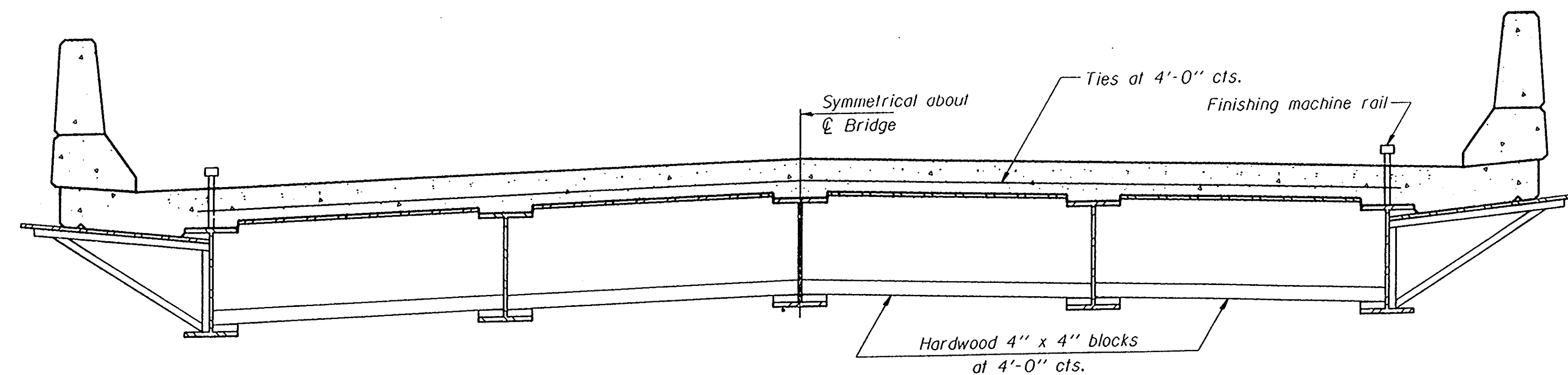
SHEET
34
OF
53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 22
F.A.P. 68	IBR	LASALLE	53	35	24 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



FORM BRACES FOR
STAGE CONSTRUCTION



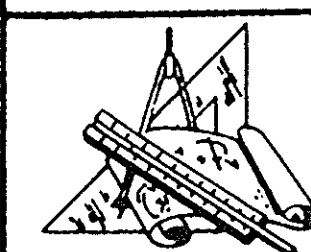
FORM BRACES FOR
STANDARD CONSTRUCTION

- The Contractor intends to use cantilever forming brackets on the exterior beams or girders, the following procedures will be required to prevent beam twisting.
- The resulting force of the leg brace of the cantilever bracket shall bear on the web and within 6 inches of the bottom flange of the beam or girder.
- a) The finishing machine rail shall be placed on the top flange of the exterior beam.
- b) The exterior beams or girders, having cantilever brackets used on them, shall be tied together at 4'-0" centers using ties as stated in Article 503.06. On stage construction, where cantilever brackets are used on only one exterior line of beams or girders, this line shall be tied to the opposite exterior line. Ties shall be minimum #4 reinforcement bars, 1/2-inch steel rod or equivalent furnished by the Contractor. The tie bars shall be placed parallel to and have the same clearance from the deck formwork as required for the bottom transverse reinforcement. Special brackets and/or reworking existing brackets may be required to maintain proper placement. No welding will be permitted to the top flange of the beam, except where permitted by the plans.
- c) Cross frames on steel girders which do not have a top strut shall not be considered a tie.
- d) Stage Construction
Hardwood 4" x 4" blocks or material of an equivalent strength shall be wedged between webs of beams in each bay and also be placed in the bay adjacent to the stage construction joint between the top flange of the beam next to the stage construction joints and the bottom flange of the adjacent beam. See drawing.
- e) Standard Construction
Hardwood 4" x 4" blocks or material of an equivalent strength shall be wedged between webs of beams in each bay. See drawing.

Additional work will not be paid for separately as the Contractor has options available to him to form the outside of the deck without using levered hangers on the exterior beams. If the Contractor elects to use cantilever brackets without following the above required procedures, he shall submit detailed plans for approval by the Engineer in accordance with Article 503.06 of the Standard Specifications for Road and Bridge Construction.

CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER

DESIGNED
CHECKED
DRAWN
CHECKED
SB-1 2-26-93



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS						
DESIGNED	DRAWN	APPROVED	DATE	BOOK	SCALE	JOB NUMBER 222-93030-00

CANTILEVER FORMING BRACKETS
F.A.P. 68 (IL. 23) OVER COVEL CREEK, LASALLE COUNTY
STATION 626+41 S.N. 050-0047

SHEET
35
OF
53

ILLINOIS DEPARTMENT OF TRANSPORTATION

District Three Materials

NW1/4 NW1/4 SECTION 36 T33N R3E 3PM

Sh. 1 of 1

02/02/93

PROJECT

BRIDGE

050-0047

Date

02/02/93

ROUTE FAP 68 (IL23)

OVER COVEL CREEK

Bored By

K. Whittington

SEC. 1-BR

STA.

626+41

Checked By

D. Lindeman

COUNTY LaSalle

Boring No. 1

Sta 626+57 S. ABUT

O/S 13' RT

Bl.

N

Qu

t/af

W

%

At

Hrs

Bl.

N

Qu

t/af

W

%

Ground Surface 565.7

0

Stiff Brown & Gray

SILTY CLAY with

Brown SILTY LOAM TILL

541.2

4

1.5

5

P

17

563.2

2

0.4

3

0.4

14

6

P

14

Medium to Soft

Brown SILTY CLAY

TILL (FILL)

558.7

3

0.5

4

P

15

Stiff Brown

SILTY CLAY TILL

(FILL)

555.2

4

1.7P

22

5

2.0

8

P

20

Very Stiff Black &

Gray SILTY CLAY with

GRAVEL Pebbles &

Brown & Gray SILTY

CLAY TILL

CINDERS & CLAY PIPE

AT 15'

(FILL)

546.2

5

2.5

8

2.5

14

12

B

14

Stiff Dark Gray

CLAY LOAM with

Pebbles & Pieces

of TILL

543.7

4

1.5

7

P

15

Stiff Gray SILTY CLAY

N-Std Penetr Test: 2" OD

140# Hammer Falling 30"

Sampler,

(Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

45

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Three Material
NW1/4 NW1/4 SECTION 36 T33N R3E 3PM

Bridge Foundation
Boring Log

Sh. 1 of 1
02/02/93

PROJECT _____ BRIDGE 050-0047 Date _____

ROUTE FAP 68 (IL23) OVER COVEL CREEK Bored By K. Whittington

SEC. 1-BR STA. 626+41 Checked By D. Lindeman

COUNTY LaSalle

Boring No. 2
Sta 627+24 N.ABUT
O/S 12' LT

El. N Qu t/sf W At Hrs El. N Qu t/sf W

Ground Surface 563.7 0

AUGER SAMPLE
BITUMINOUS SHOULDER
over Brown SILTY
CLAY TILL

561.2

2 3 1.1 4 B 25

Dense Dark Gray to
Black Fissile SHALE

538.7 -25

42 40 18/1" - 11

537.2

2 3 0.9 5 B 23

Stiff Brown
SILTY CLAY TILL
(FILL)

-5

2 3 0.9 5 B 23

4 4 1.2 6 B 21

554.2

2 4 1.5 5 P 21

Stiff Brown SILTY
CLAY, SILTY CLAY TILL
with Organics &
Pieces of SHALE

551.7

3 4 1.5 4 P 18

Stiff Brown SILTY
CLAY TILL, GRAVEL
Pebbles & Pieces of
Weathered SHALE

-15

5 8 1.5 3 P 15

545.7

3 2.0P 16 8 18 18 17

Brown-Gray Weathered
SHALE

544.2

-20

26 65 10/5" - 12

Dense Dark Gray to
Black Fissile SHALE

537.2

BENCHMARK CHISELED
SQUARE ON NE CORNER
OF BRIDGE 17' RT
STA. 627+36
ELEV. = 564.32

-40

-45

N-Std Penetr Test: 2" OD Sampler, 140# Hammer Falling 30" (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION										Bridge Foundation			
District Three Materials										Boring Log			
NW1/4 NW1/4 SECTION 36 T33N R3E 3PM										Sh. 1 of 1			
PROJECT <u>ROCK CORE</u>										BRIDGE <u>050-0047</u>		Date <u>02/03/93</u>	
ROUTE <u>FAP 68 (IL23)</u>										OVER <u>COVEL CREEK</u>		Bored By <u>K. Whittington</u>	
SEC. <u>1-BR</u>										STA. <u>626+41</u>		Checked By <u>D. Lindeman</u>	
COUNTY <u>LaSalle</u>													
Boring No. <u>2A</u>										Surf Wat El. <u>539.2</u>			
Sta <u>527+24 N. ABUT</u>										Grndwater El.			
O/S <u>13' LT</u>										at Compl			
El. N Qu t/sf W										At Hrs		El. N Qu t/sf W	
Ground Surface <u>563.7</u>										<u>0</u>			

ILLINOIS DEPARTMENT OF TRANSPORTATION District Three Materials				Total Feet 10.0 Strux		Rock Core Descrip.	
NW1/4		NW1/4	SECTION 36 T33N R3E 3PM		Sh. 1 of 1		
PROJECT		BRIDGE		050-0047		Date 02/03/93	
Bridge #: 050-0047		OVER COVEL CREEK		Bored By K. Whittington			
ROUTE FAP 68 (IL23)		STA.		626+41		Checked By D. Lindeman	
SEC. 1-BR		Ground Surface El.		563.7			
COUNTY LaSalle		Rock Surface El.		545.7			
Is Bored No. (93018)		Begin Coring El.		538.7			
Boring No. 2A							
Sta 627+24 N.ABUT							
O/S 13' RT							
		P R O F I L E				C O R E	
FROM EL. - TO EL.		DESCRIPTION				Notes	
538.7- 535.1	SHALE,Dense, Fissile, Calcareous, Black with 3" Fossil Layer at 536.0 & Thin Limestone Layers and Pebbles between Bedding Planes; Bedding is Horizontal		CANTON SHALE		CORE RUN 1 538.7 to 533.7 RECOVERY = 91.3 % RQD = 33.3% Qu=15.2TSF @ ELEV. 535.6 Moisture=9.4%		
535.1-533.6	SHALE,Weathered,Gray,Fissile and Horizontal		CANTON SHALE		Qu=3.9 TSF @ ELEV. 534.8 MOISTURE=14.0%		
533.6-533.3	LIMESTONE,Gray,Cone in Cone Structure Top 1",Small Pebbles & Fossils Algal Structures Replaced with Calcite		COVEL CONGLOMERATE		CORE RUN 2 533.7 to 528.7 RECOVERY = 38.8% RQD = 32.5%		
533.3-531.7	SHALE,Calcareous, Gray,Weathered				Qu=5.5 TSF @ ELEV. 533.2 MOISTURE 9.7%		
531.7-528.7	NO RECOVERY SHALE JAMMED IN CORE BARREL						
PENNSYLVANIAN SYSTEM CARBONDALE FORMATION 538.7 TO 533.6 ST. DAVID CYCLOTHEM 533.6 TO 528.7 SUMMIT CYCLOTHEM							

CORE RUN #1 BEGIN 538.7
END 533.7

Appendix C

FAP 68 (IL23)
SEC. 1-BR
LASALLE CO.
BORING 2
Sta 627+24 N. ABUT

CORE RUN (INCHES)	CORE SAMPLE	CORE RECOVERY (INCHES)	MODIFIED CORE RECOVERY (INCHES)	ELEV.
0	☐ BRACK SHALE	2.25		538.7
	☐	.5		
	☐	2.0		
	☐	.5 moist.		
10	☐ SHALE Becomes up	2.25		
	☐	2.0		
	☐ Shows bedding BRACK SHALE CALCAREOUS	3.25		
20	☐	3.0	3.6'	
	☐	3.25		
	☐ Thin limestone layers in this section	2.0		
30	☐ Thin section PLANKS (horizontal)	4.0	4	
	☐	1.75	moist.	
40	☐ 5' Fossil layers in BRACK SHALE Shows bedding	4.5	4.5 au 2	536.0
	☐	5.5	5.5 au 1	535.6
50	☐ LEANUREET GRAY Bedded Shale (horizontal)	3.75		
	☐	6.0	14'	534.8
	☐	2.75		
	☐	3.0		
	☐	1.5 moist.		
60				533.7
TOTAL		54.75/60	20/60	

CORE RECOVERY

91.3%

ROD #

33.3%

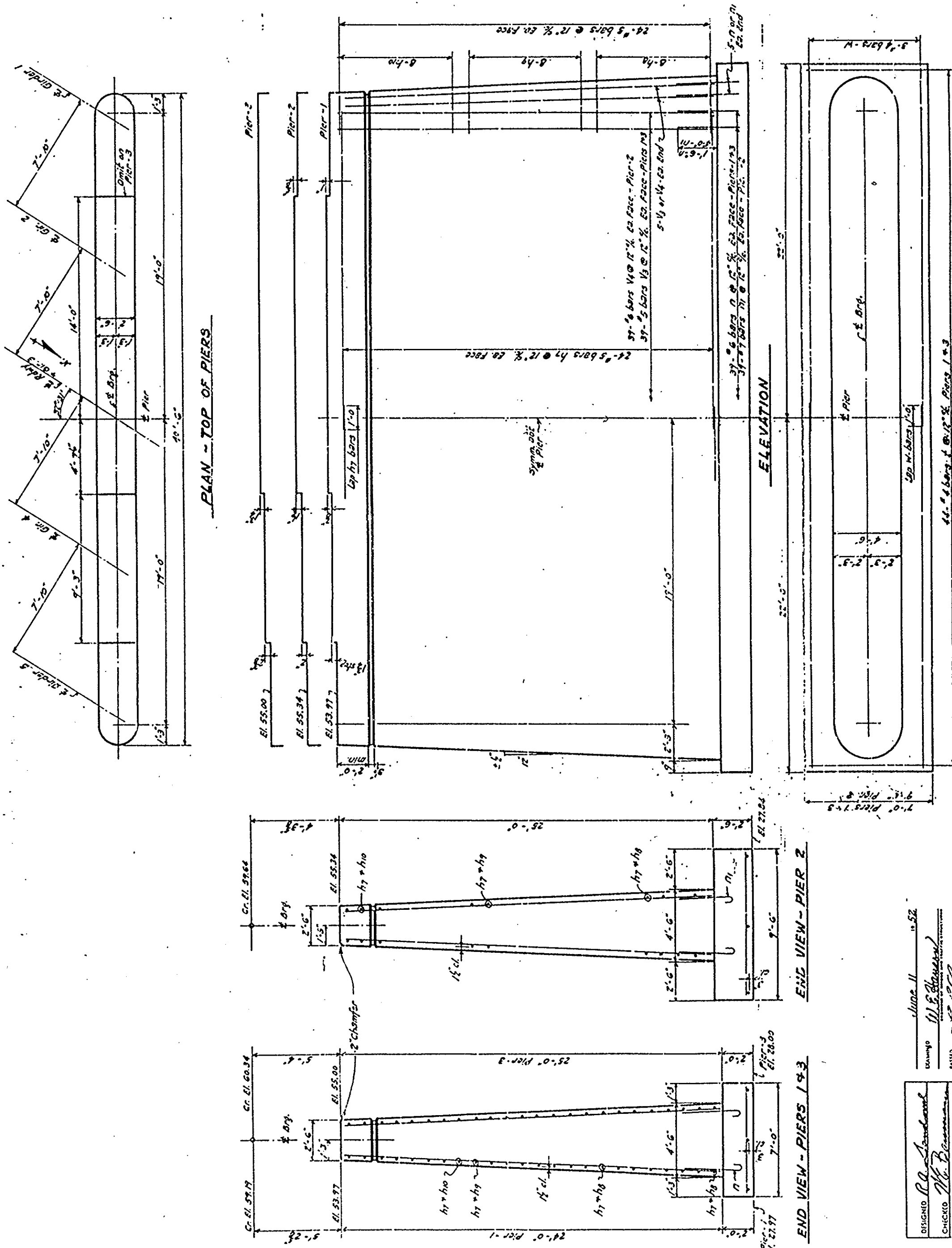
ROD (Rock Quality Designation)	Description of Rock Quality
0 - 25	V. Poor
25 - 50	Poor
50 - 75	Fair
75 - 90	Good
90 - 100	Excellent

PENNSYLVANIAN SYSTEM
LOWER ST. LOUIS CYCLOTHÈRE
CARBONATE FORMATION

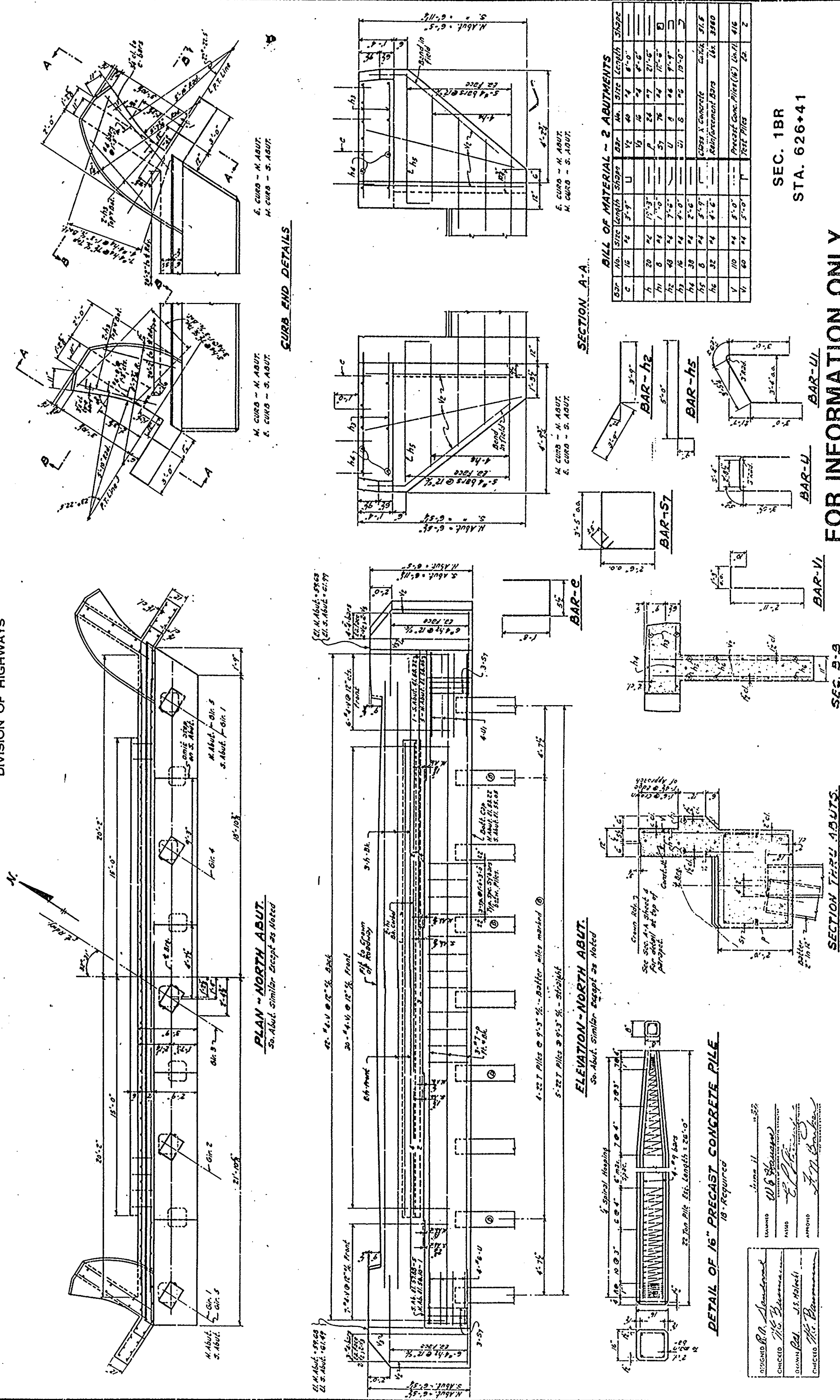
Figure C-3
MODIFIED CORE RECOVERY
AS AN INDEX OF
ROCK QUALITY

MOISTURES
BRACK AB 77.5 155.2 48.5 67.1/100 = 9.4%
GRAY S 78.0 272.1 240.3 238.8/100.7 = 19.0%

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



THIS SHEET FOR
INFORMATION ONLY

SEC. 1BR
STA. 626+41

SECTION	COUNTY	10th	SHEET
68 1BR	LABALLE	53	37
STA.	TO STA.		
FEED ROAD DIST. NO.	ILLINOIS	FEED ROAD PROJECT	

Sheet No. 24
of 24 Sheets

EXISTING STRUCTURE

S.N. 050-0048 - Three Span R.C. Bridge with a Total Length of 102'-6" B/B Abutments and Width of 30'-0" F/F Curbs. Existing Waterproofing Membrane and Wearing Surface will be Removed and Replaced. Existing Deck Slab will be Repaired. Bearings at Abutments and Pier 1 will be Replaced. Existing Bridge Rail to be Retrofitted with New Railing. No Salvage.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCH MARK:

"□" Chiseled on North east Corner of Bridge El. 622.41 U.S.G.S.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	38
STA. 542+97	TO STA. 543+00	ILLINOIS	PROJECT NO. P-93-053-90	

SHEET NO. /
12 SHEETS

GENERAL NOTES

- Reinforcement Bars shall Conform to the Requirements of AASHTO M-31, M-42 or M-53 Grade 60.
- Slope Wall shall be Reinforced with Welded Wire Fabric, 6"x 6"-W4.0 x W4.0, Weighing 58 Lbs. per 100 Sq. Ft.
- 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.
- The Structural Steel Bearing Plates and the Roller Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

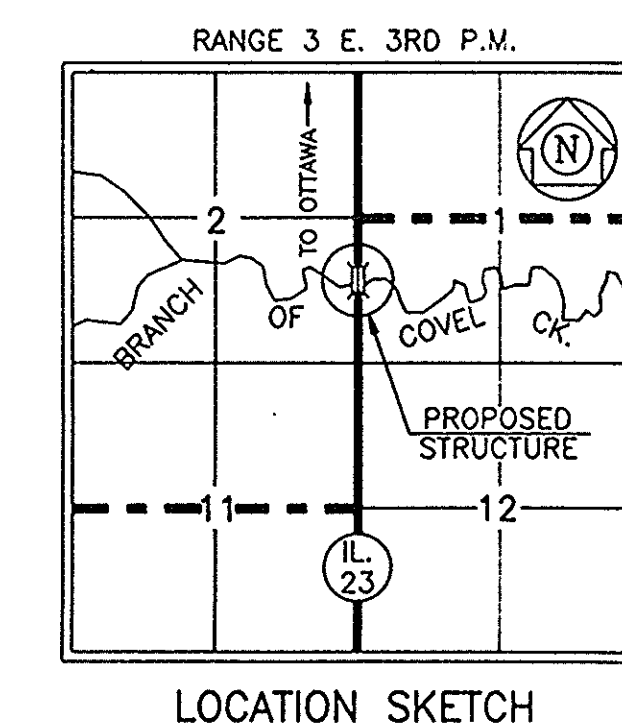
TOTAL BILL OF MATERIALS				
Item	Unit	Super	Sub	Total
Bituminous Concrete Removal (Deck)	Sq. Yds.	334		334
Concrete Removal	Cu. Yds.	15.9		15.9
Slope Wall Removal and Replacement (6")	Sq. Yds.		51	51
* Jack and Remove Existing Bearings	Each		9	9
Deck Slab Repair (Partial Depth)	Sq. Yds.	75		75
Deck Slab Repair (Full Depth, Type I, Method 1)	Sq. Yds.	37		37
Deck Slab Repair (Full Depth, Type II, Method 1)	Sq. Yds.	4.0		4.0
Epoxy Crack Sealing	Ft.	72.7	77.3	150
Concrete Super Structures	Cu. Yds.	15.5		15.5
Reinforcement Bars (Epoxy Coated)	Lbs.	2020		2020
Furnishing and Erecting Structural Steel	Lbs.	9705		9705
Preformed Joint Seal (2 1/2")	Ft.	43		43
Waterproofing Membrane System	Sq. Yds.	334		334
Bituminous Concrete Surface Course, Mix D, Class I, Type 2	Ton	34		34
Steel Bridge Rail	Ft.	208		208
Floor Drains	Each	20		20
* Formed Concrete Repair (Depth Less Than or Equal to 5")	Sq. Yds.		11	11
* Temporary Support System	Each	4		4
Bar Splicers	Each	24		24
Preformed Joint Seal (4")	Ft.	43		43

* See Special Provisions

- Existing structural steel shall be cleaned and painted in accordance with the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".
- The Inorganic Zinc-Silicate / Acrylic / Acrylic / Paint System shall be used for shop and field painting of new existing structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5 G 4/8 See the Special Provisions.

(NEW CONSTRUCTION) DESIGN STRESSES

$f_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (Reinf.)
 $f_y = 36,000$ p.s.i. (M270 Gr. 36)
 $f_y = 50,000$ p.s.i. (M270 Gr. 50)



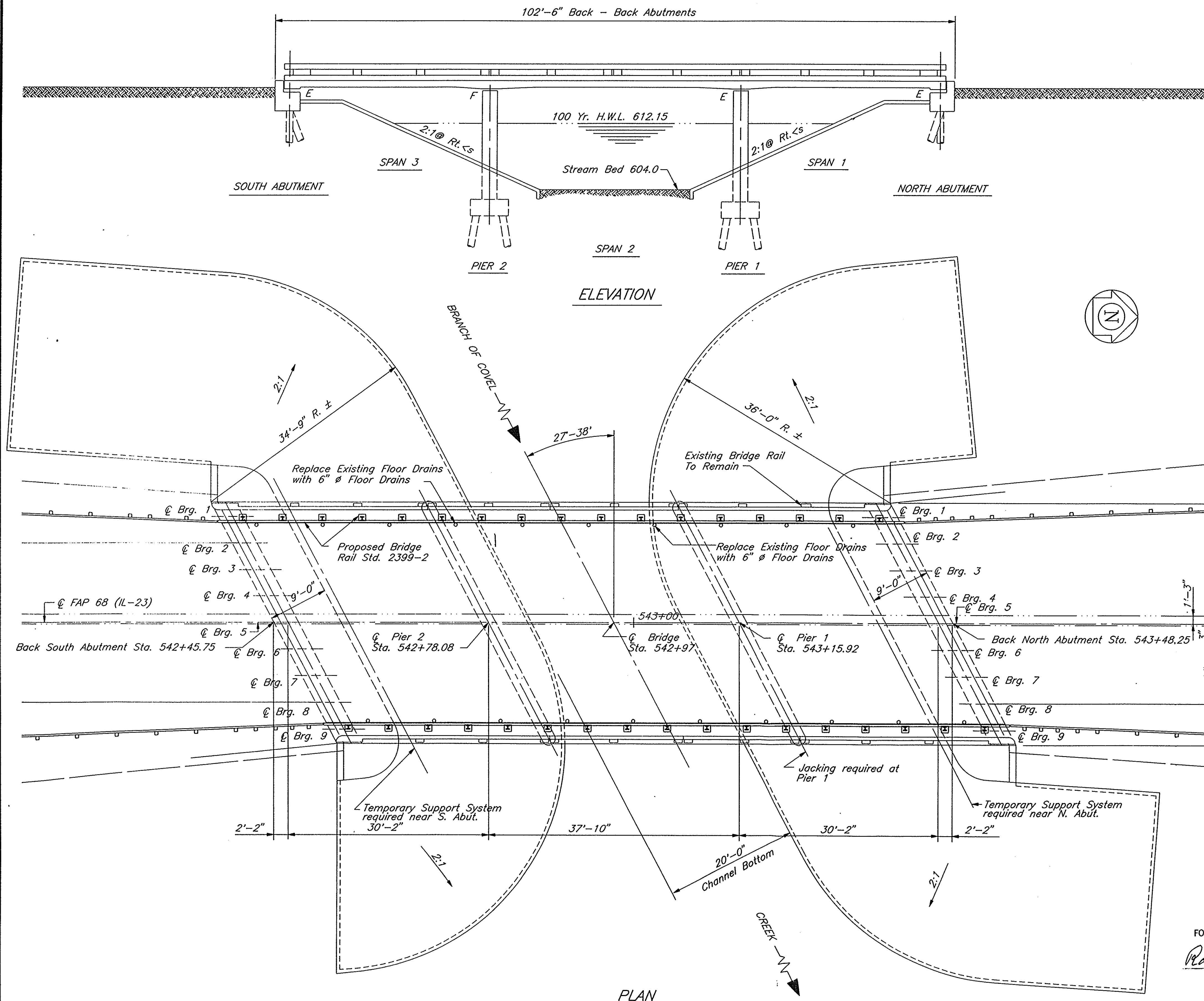
APPROVED FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
Engineer of Bridges and Structures

For WALTER E. Deuchler Assoc., Inc. Date: 2-3-94

S.E. No. 081-002873

Expiration Date: 11-30-94



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

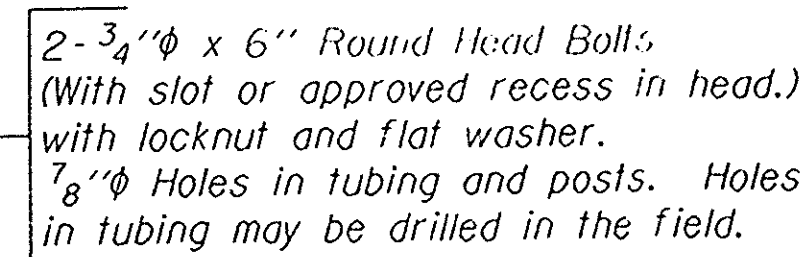
DESIGNED RM DRAWN GWR APPROVED DATE 1/27/94 BOOK SCALE CAD DWG. IL 93030 23-GP-E JOB NO. 222/93030

GENERAL PLAN & ELEVATION

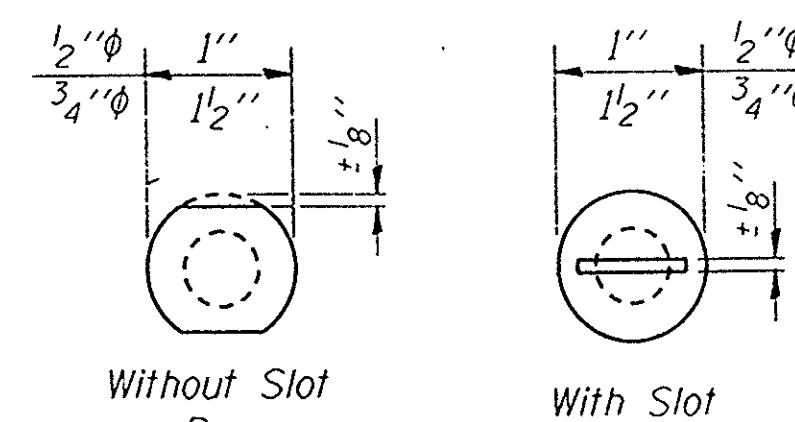
F.A.P. 68 (IL. RT. 23) OVER BRANCH OF COVELL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
38
OF 53

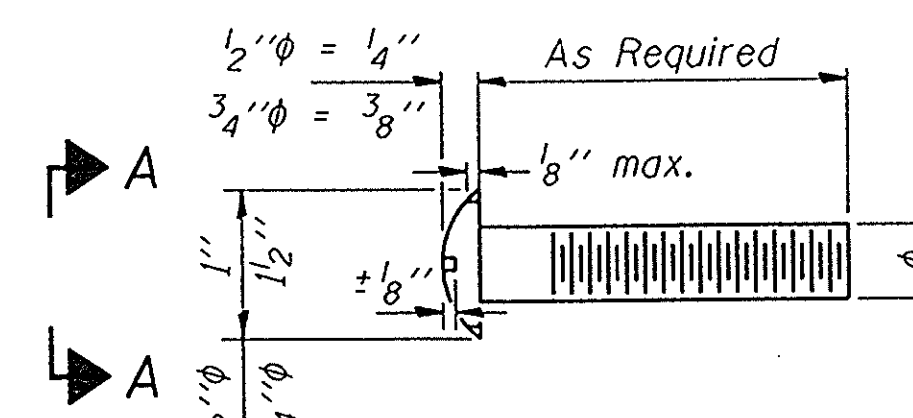
INVOICE NO.	DATE	CUSTOMER	REGION (STATE & CO.)	SHEET # OF	SHEET NO. 2
68	1BR-1	LASALLE	53	39	
BILL TO: COMPANY, INC., BOX 2		BILL TO: FEO, 610 DUNSTON		12 SHEETS	



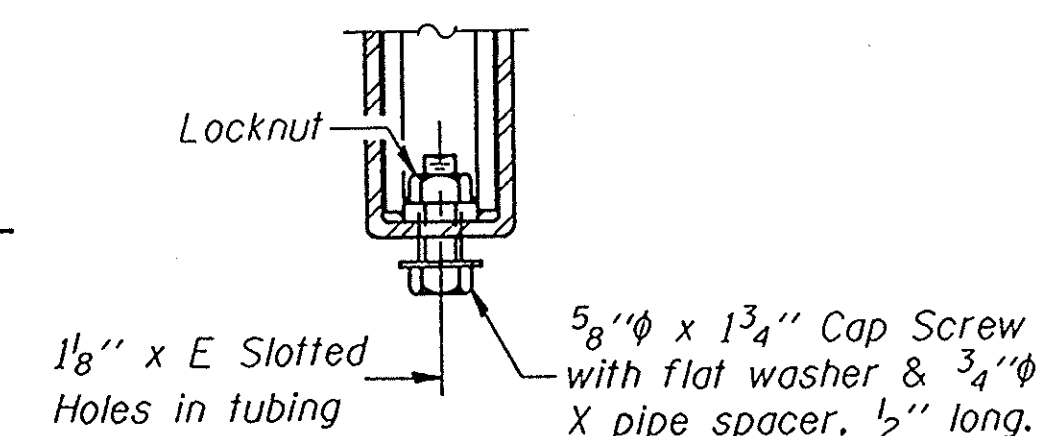
Technical drawing of a wellhead assembly. The drawing shows a cross-section of the assembly with various dimensions and components labeled. The dimensions are: 1 1/2" (vertical distance from top to first horizontal line), 4" (vertical distance between two horizontal lines), 10" (vertical distance from the bottom of the 4" section to the bottom of the assembly), and 3 1/2" (horizontal distance between two vertical lines). The components are labeled as follows: 2- 1/2"φ x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer. 5/8"φ Holes in tubing and post. Holes in tubing may be drilled in the field.



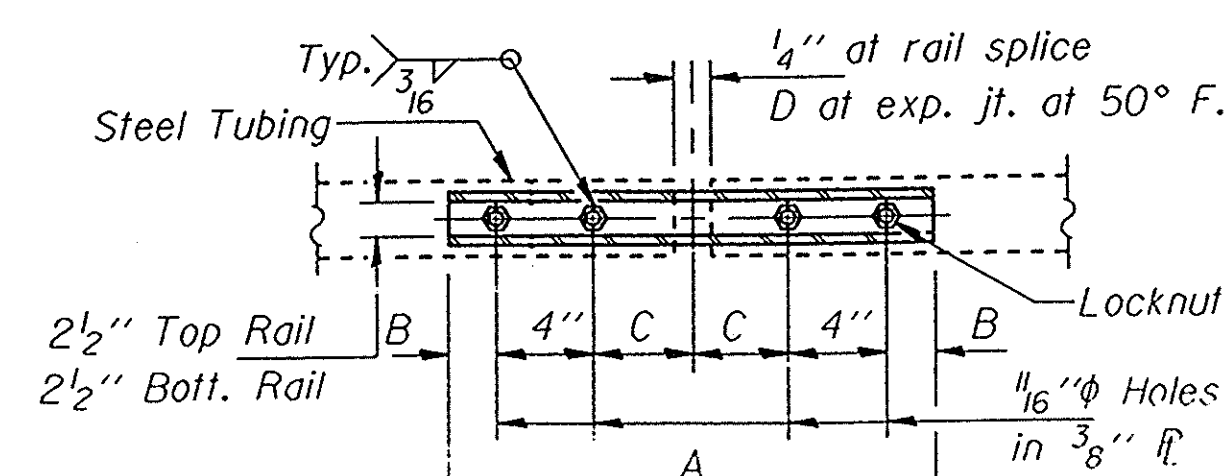
VIEW A-A



DETAIL OF 1/2"φ & 3/4"φ
ROUND HEAD BOLTS



RAIL SPLICE CONNECTION
AT EXPANSION JT.



PLAN-BOTT. SPLICE R
TYPICAL

How structural steel tubing shall conform to the requirements of ASTM designation A 500, Grade B, "Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft. lbs. at 0°F.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts shall conform to AASHTO M-270, Grade 50.

Bolts, cap screws and nuts shall conform to the requirements of ASTM designation A-307 except that threaded rods, nuts and washers shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices and anchor rods shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-36. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per lineal foot for STEEL BRIDGE RAIL.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

STEEL BRIDGE RAIL expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one $\frac{3}{8}$ " and two $\frac{1}{8}$ " steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

Expansion joint width shall be "D" at 50°F and shall be adjusted for other temperatures according to Article 503.1(c) of the Standard Specifications.

The Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge shall be a sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Nuts for 1" threaded anchor rods connecting the base plate to the concrete shall be tightened to a snug fit and given an additional $\frac{1}{2}$ turn.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail	Ft.	208

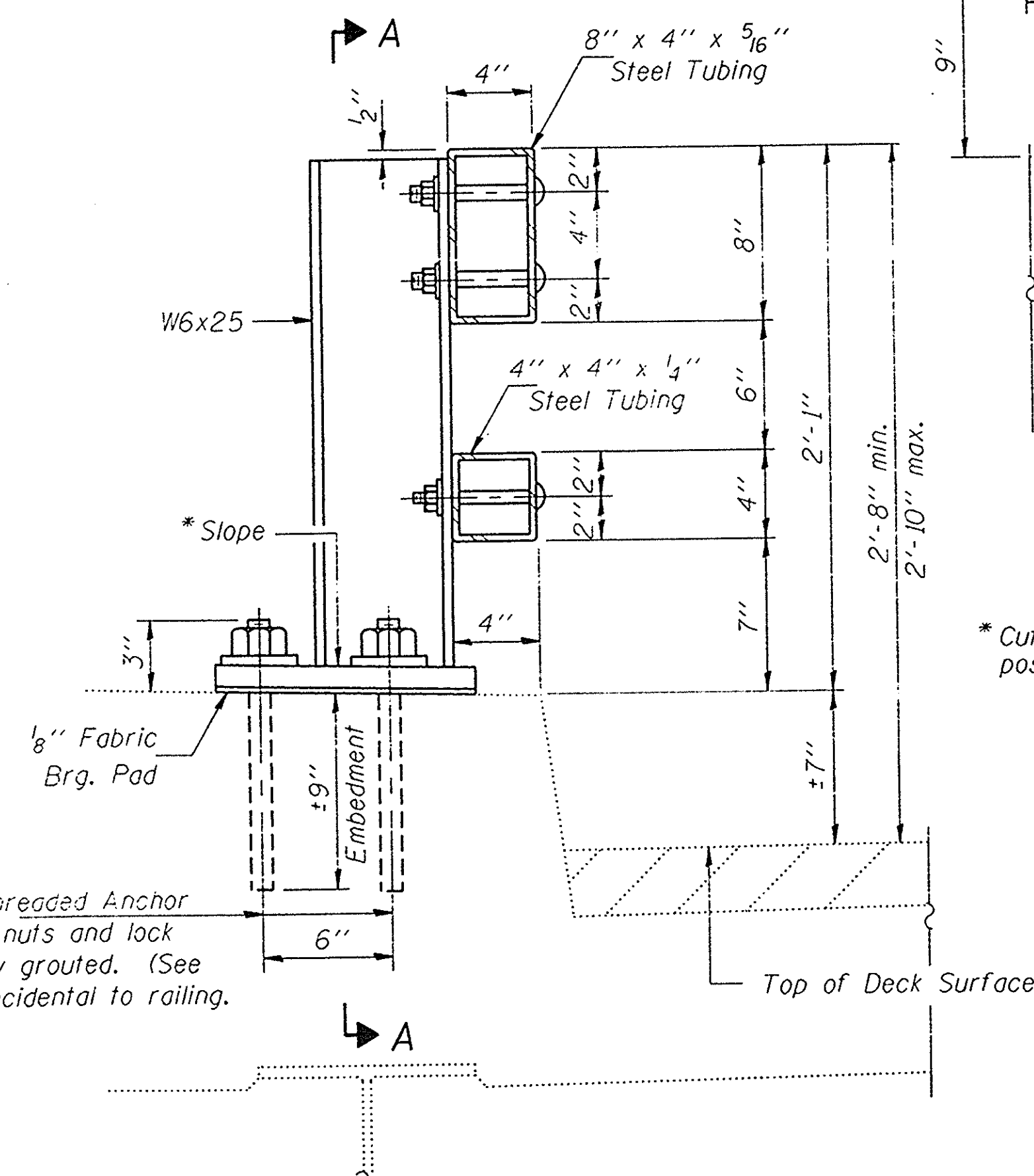
SPLICE DIMENSIONS

<i>T</i>	<i>D</i>	<i>A</i>	<i>B</i>	<i>C</i>	<i>E</i>
≤4"	2½"	1'-8"	2"	4"	2½"
>4" ≤6½"	3¾"	2'-0"	2"	5½"	3½"
>6½" ≤9"	5"	2'-4"	3½"	6½"	9"
>9" ≤13"	7"	2'-10"	4½"	8½"	11"
<i>Rail Splice</i>	1'	1'-8"	2"		—

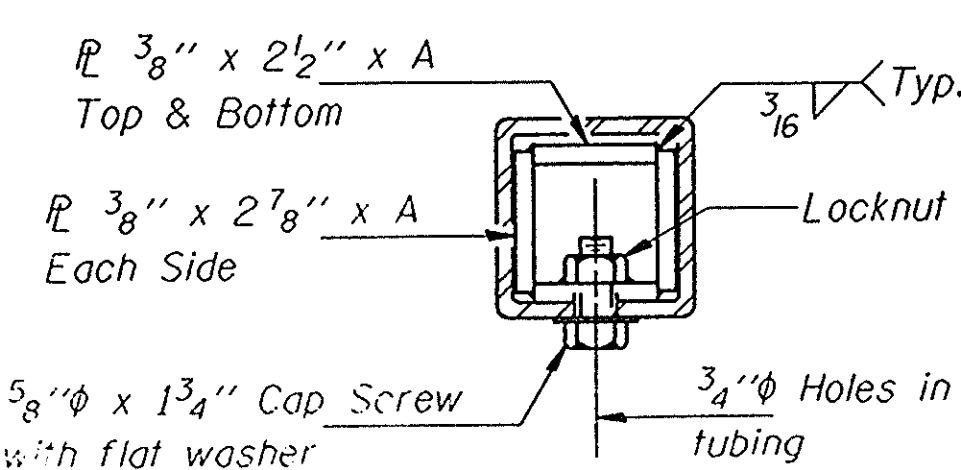
T = Total movement at expansion joint as shown on the design plans.

TYPE 2399

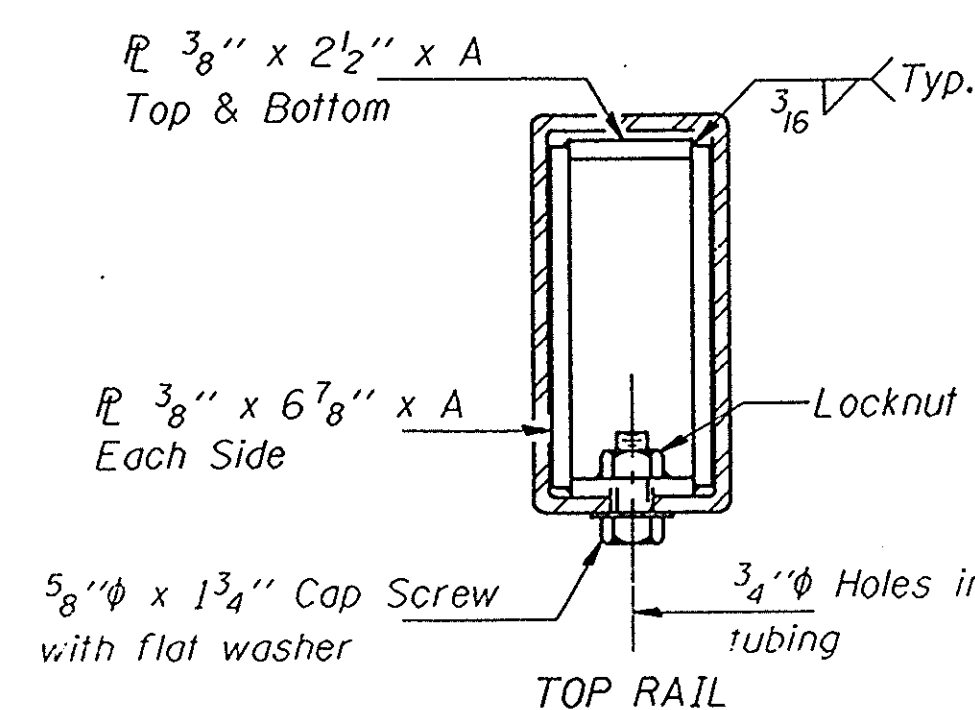
STEEL BRIDGE RAIL
CURB MOUNTED



SECTION AT RAIL POST



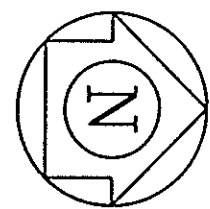
BOTTOM RAIL



TOP RAIL

SECTIONS AT RAIL SPLICE

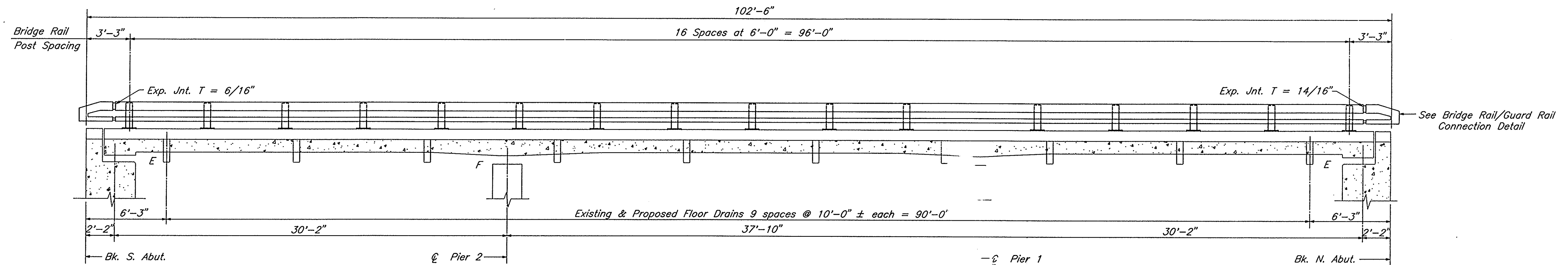
DESIGNED	EXAMINED	19
CHECKED	ENGINEER OF BRIDGE DESIGN	
DRAWN	PASSED	
CHECKED	ENGINEER OF BRIDGES AND STRUCTURE	
	APPROVED	
	DIRECTOR OF HIGHWAY	



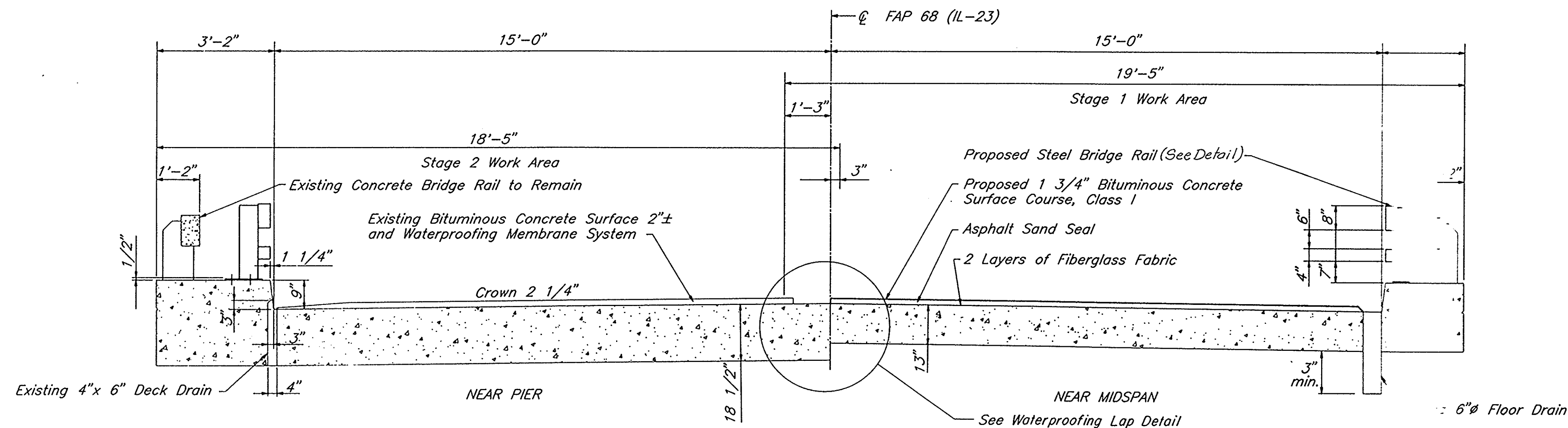
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	40
SIA	TO STA.	ILLINOIS	PROJECT NO. P-93-053-90	
FED. ROAD DIST. NO.				

SHEET NO. 3
12 SHEETS



LONGITUDINAL SECTION
Showing Inside Face of Steel Bridge Rail

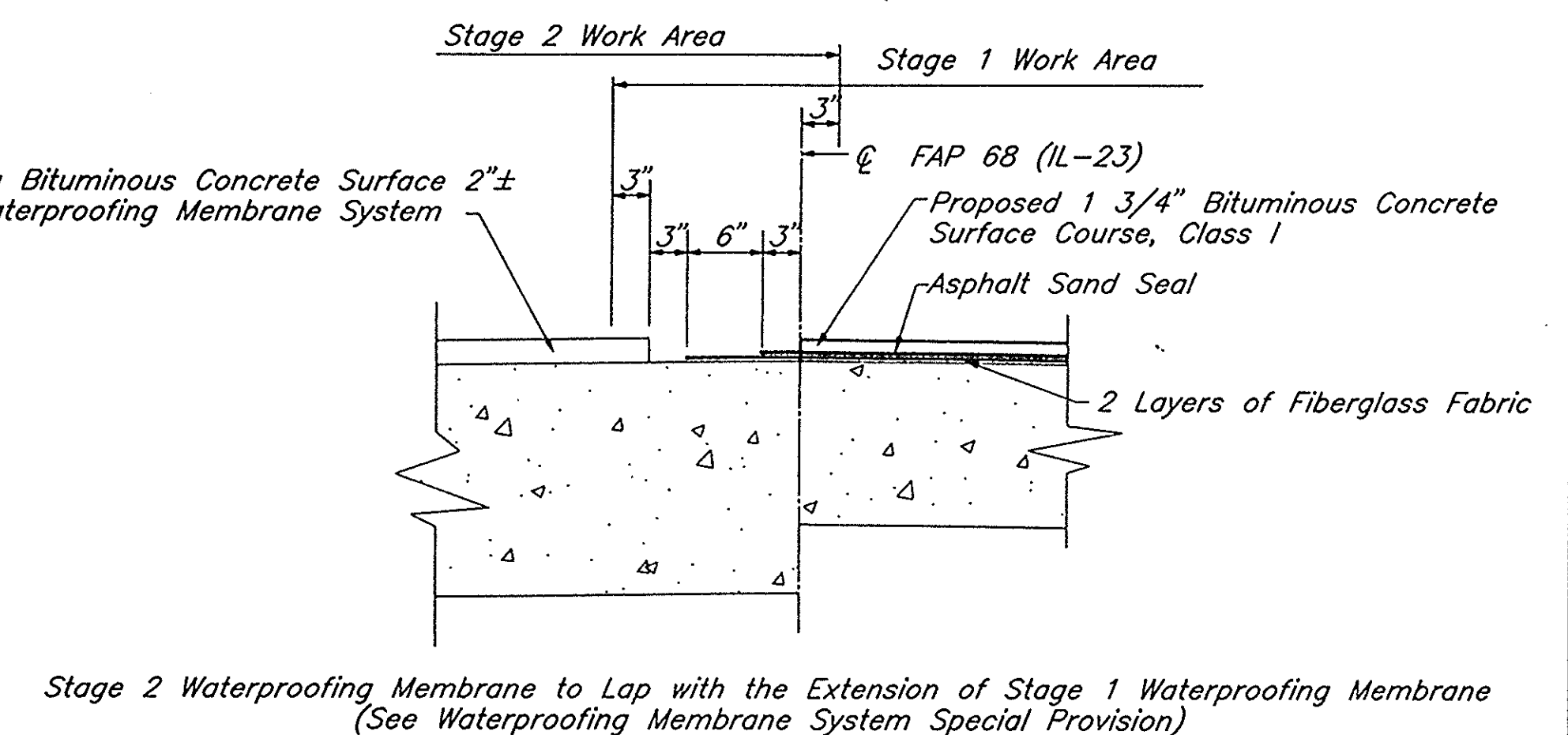


CROSS SECTION
LOOKING UPSTATION (N.)

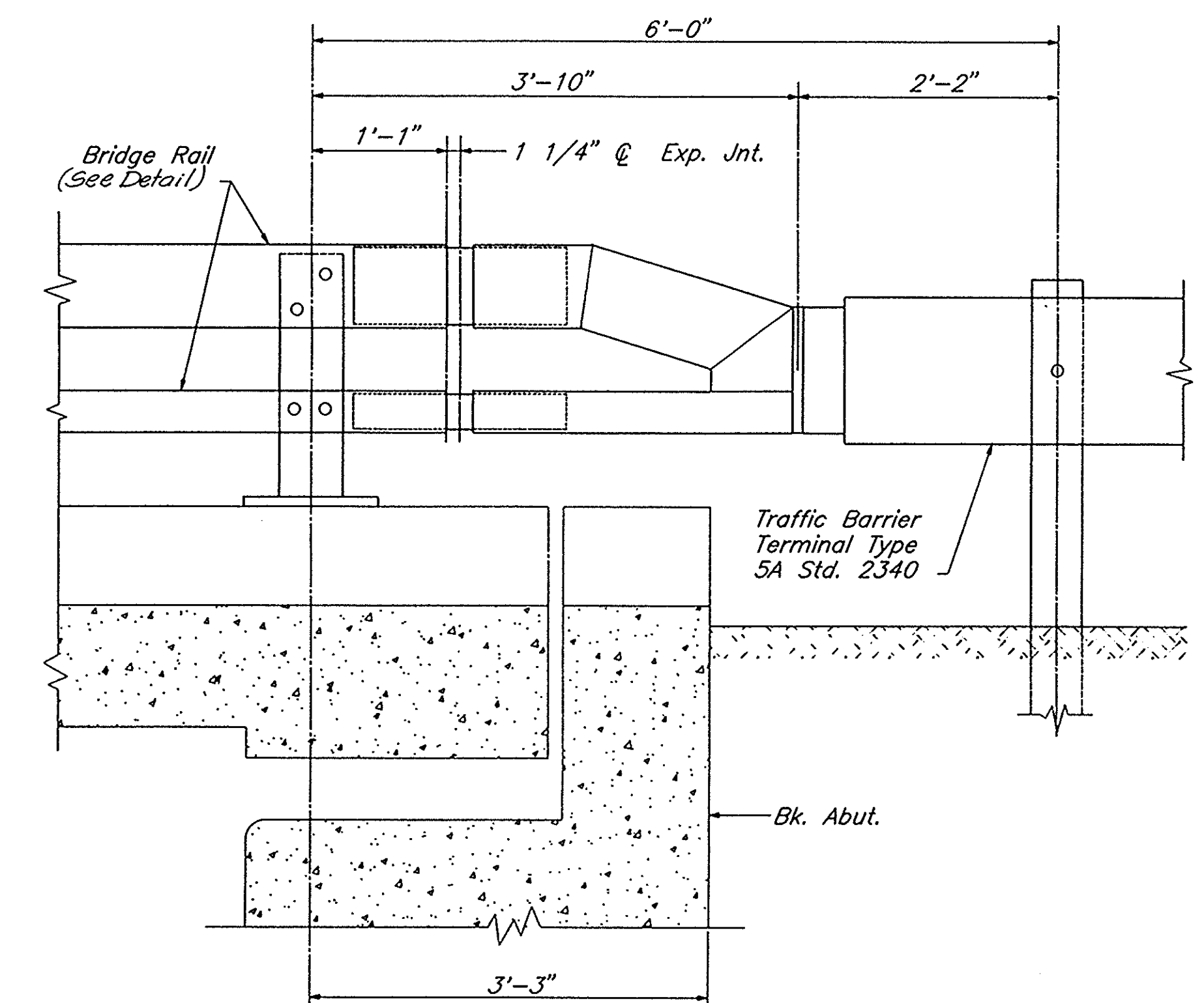
BILL OF MATERIAL	
Item	Quantity
Steel Bridge Rail	208
Floor Drains	20
Waterproofing Membrane System	334
Bituminous Conc. Surface Course, Mix. D, Cl. I Type	34
Bituminous Conc. Removal (Deck)	334

The exterior surfaces of the floor drain shall be coated by the manufacturer with pigment that matches the color of the concrete.

Fiberglass pipe shall conform to ASTM D 3379 with short-time rupture strength hoop stress of 30,000 p.s.i. minimum. The surface of the fiberglass pipe shall be free of inhibiting agents.

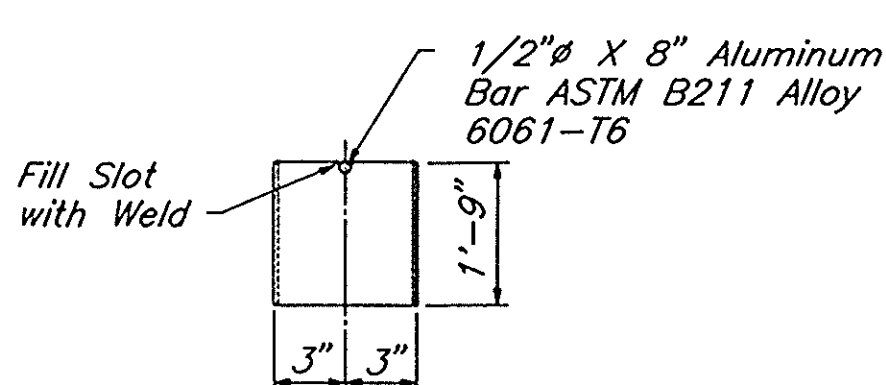


WATERPROOFING LAP DETAIL

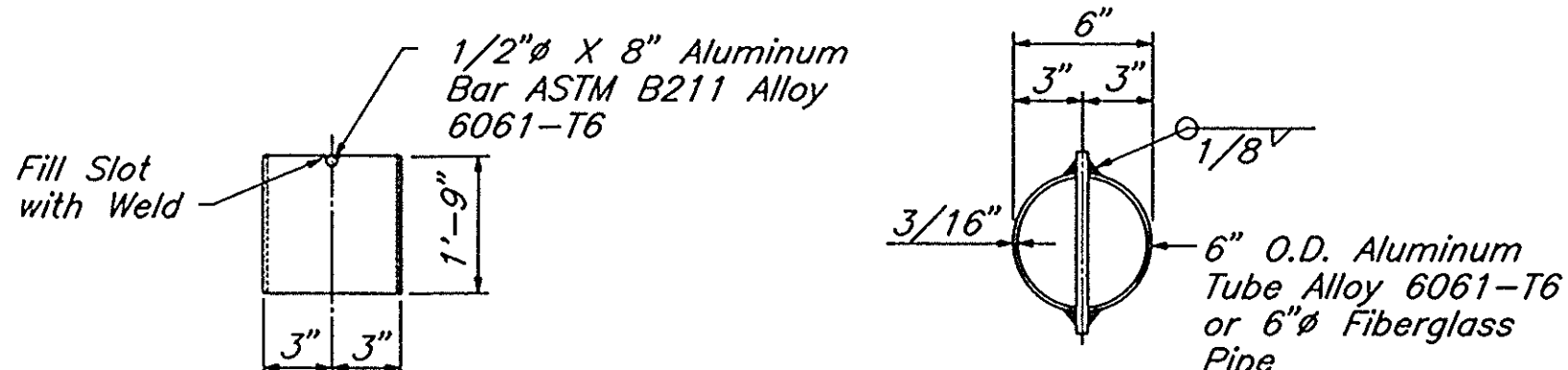


BRIDGE RAIL / GUARD RAIL CONNECTION DETAIL

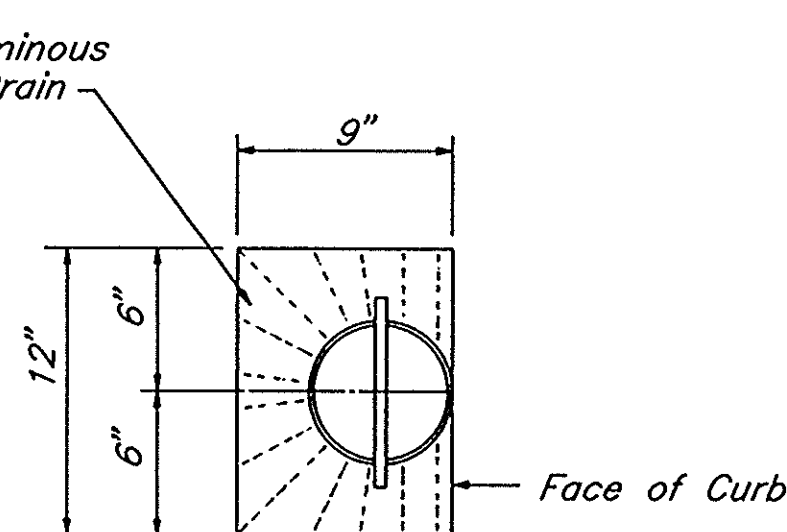
FIBERGLASS PIPE
FLOOR DRAIN



ALUMINUM TUBE
FLOOR DRAIN



TOP PLAN
FLOOR DRAIN
(Showing Aluminum Tube)



TOP PLAN

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED RM DRAWN GWR APPROVED DATE 1/27/94 BOOK SCALE CAD DWG. IL 93030 NO. 222/93030

TYPICAL SECTIONS AND DETAILS
F.A.P. 68 (IL. RT. 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

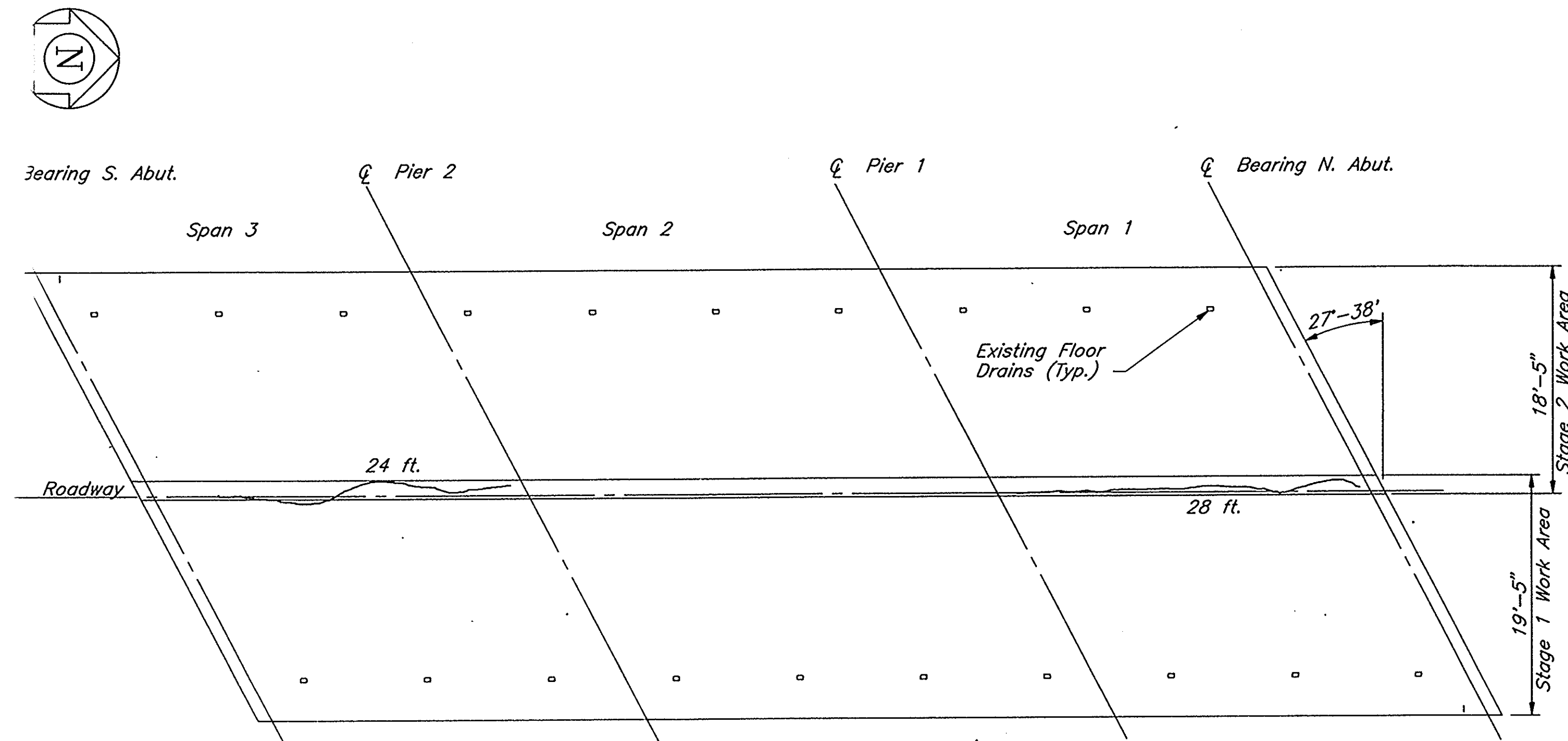
SHEET
40
OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	41
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT NO. P-93-053-90		

SHEET NO. 4
12 SHEETS

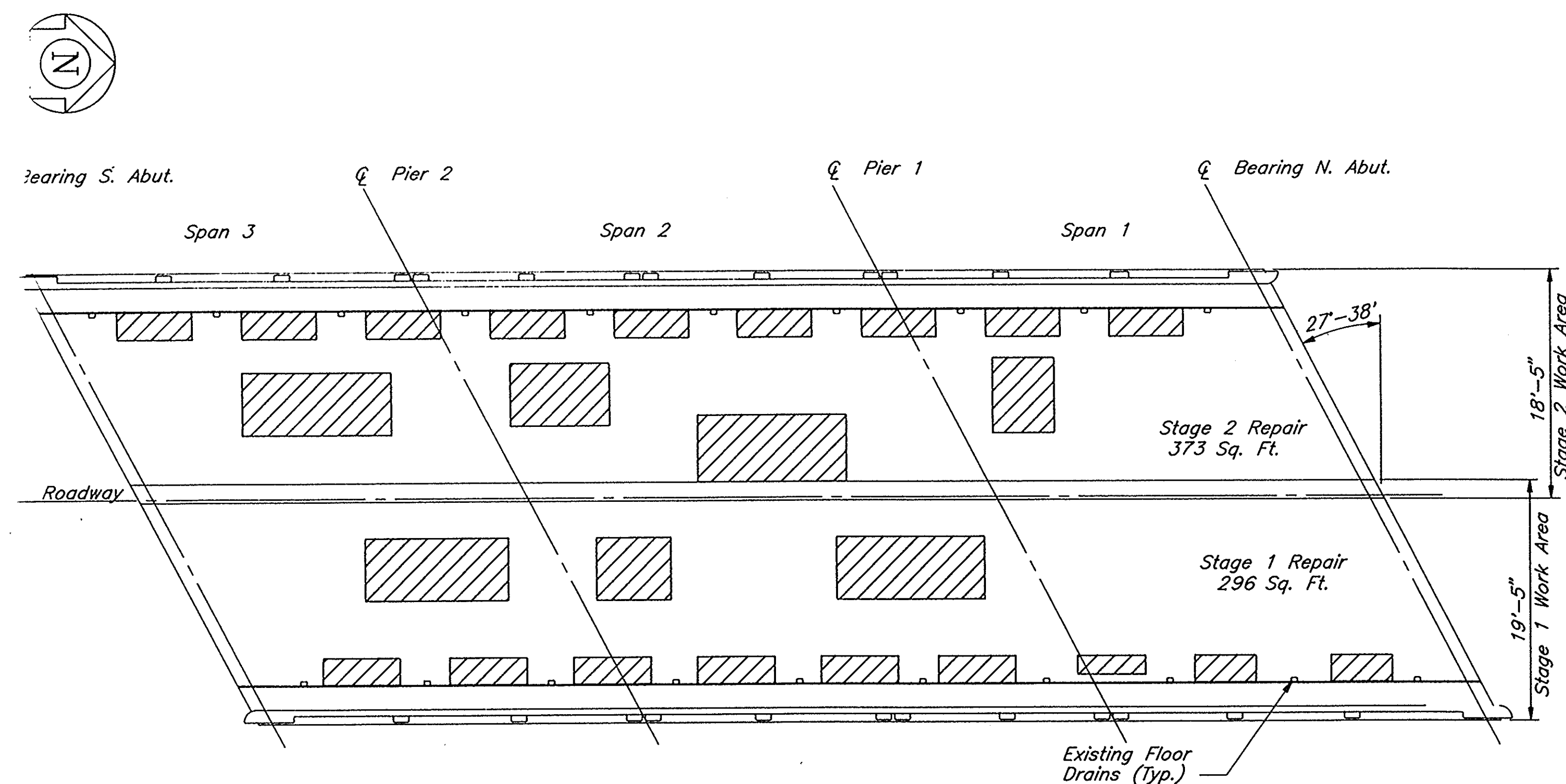
BILL OF MATERIALS		
Item	Unit	Quantity
Deck Slab Repair (Partial Depth)	Sq. Yds.	7.5
Deck Slab Repair (Full Depth, Type I, Method 1)	Sq. Yds.	3.7
Deck Slab Repair (Full Depth, Type II, Method 1)	Sq. Yds.	4.0
Epoxy Crack Sealing	Ft.	62.0



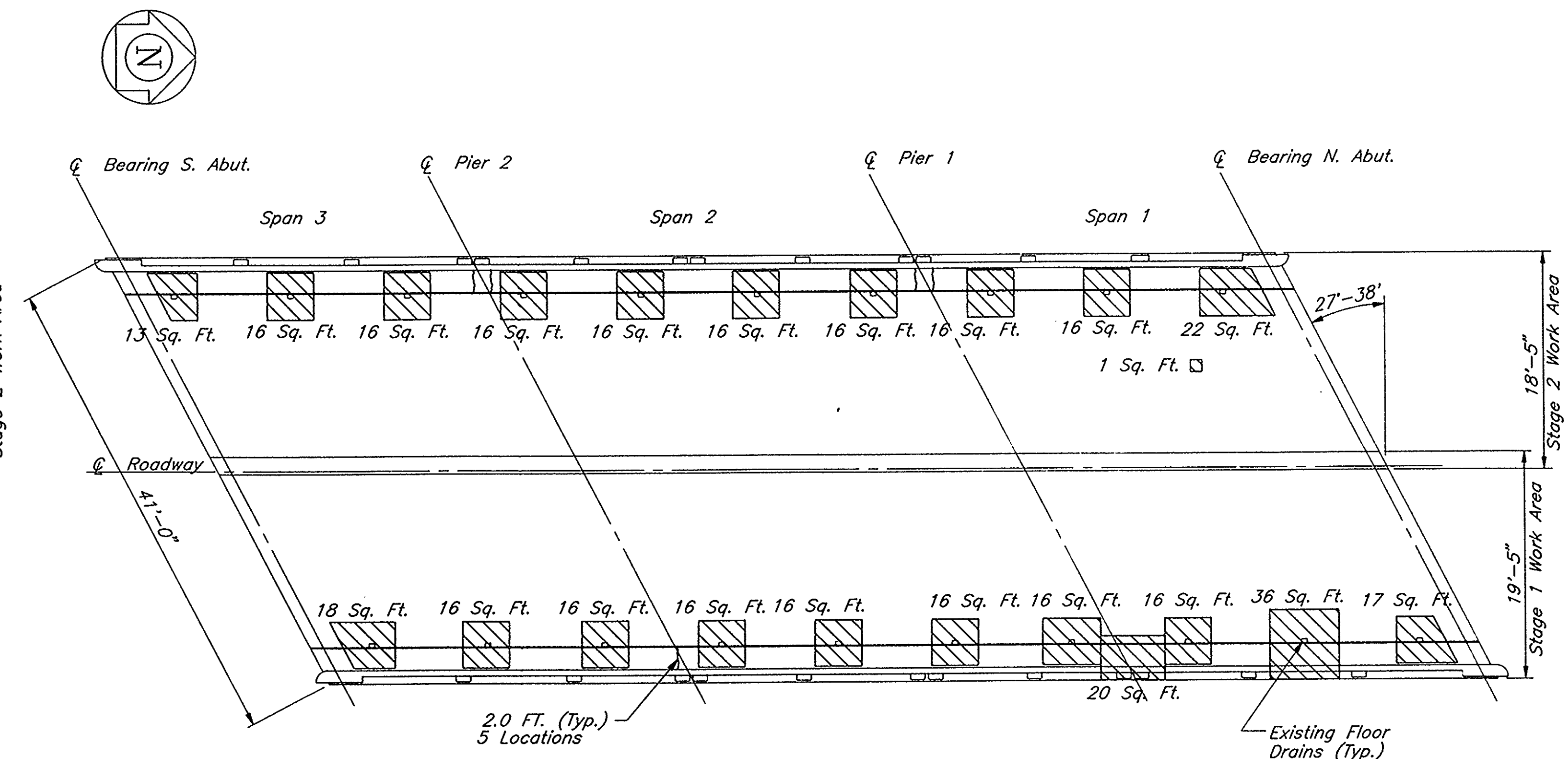
PLAN
DECK BOTTOM REPAIR
EPOXY CRACK SEALING

LEGEND

- Areas to Receive Full Depth Deck Repair - Method 1 (See Special Provisions)
- Areas to Receive Partial Depth Deck Repair - Method 1 (See Special Provisions)
- Cracks to Receive Epoxy Crack Sealing (See Special Provisions)



PLAN
DECK REPAIR
PARTIAL DEPTH - METHOD 1



PLAN
DECK REPAIR
FULL DEPTH - METHOD 1
& EPOXY CRACK SEALING

ALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS									
DESIGNED RM	DRAWN GWR	APPROVED	DATE 1/25/94	BOOK	SCALE	CAD DWG. 11	93030	23DK-REP	JOB NO. 222/93030

DECK REPAIR
F.A.P. 68 (IL. RT. 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
41
OF 53

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	42
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	PROJECT NO. P-93-053-90	

NOTES

- [illegible]

 Existing Cracks to be Sealed.

 Existing Construction Joints to be Sealed.

 Areas to Receive Slopewall Removal and Replacement

PLAN
NORTH SLOPEWALL

SECTION A-A

DETAIL 1

DETAIL 2

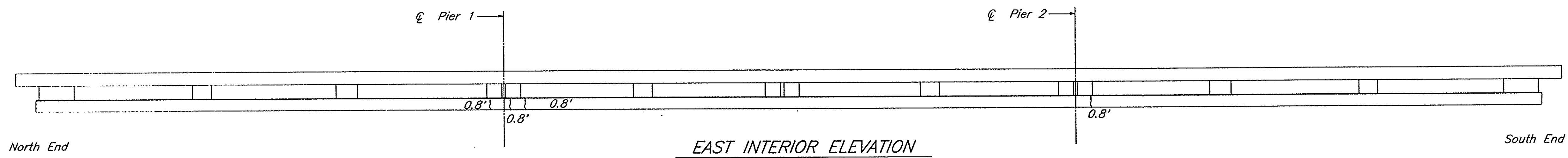
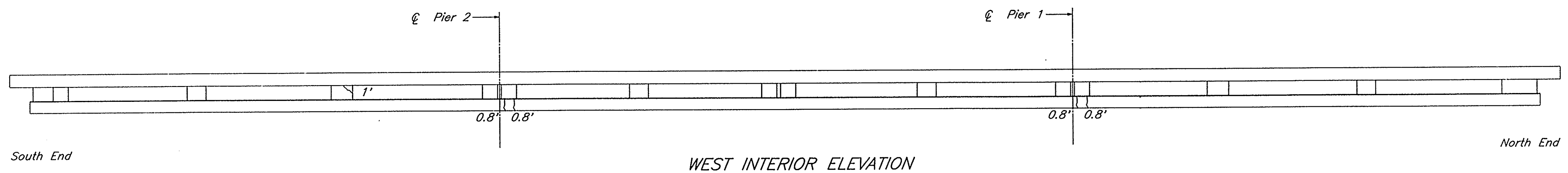
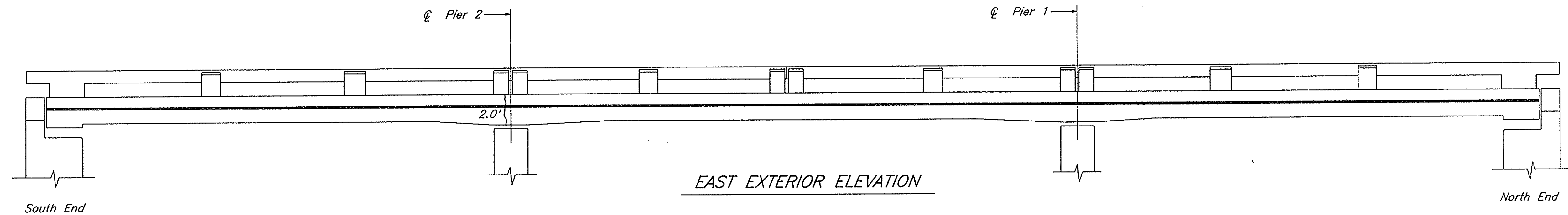
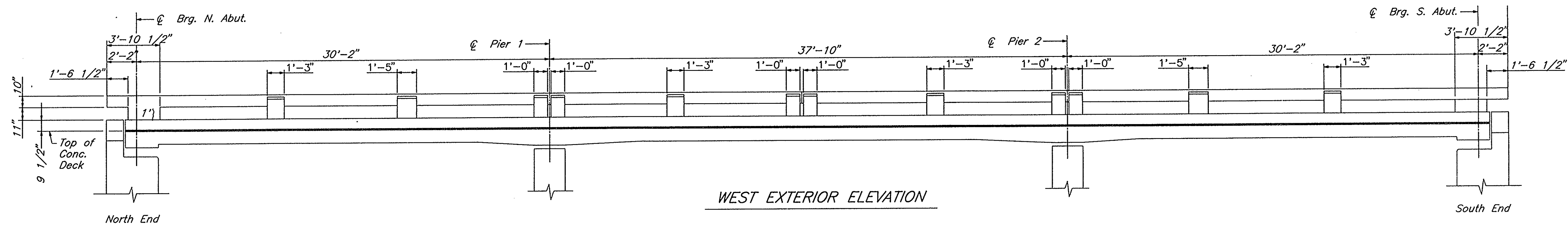
REVISIONS									
DESIGNED <i>RM</i>	DRAWN <i>GWR</i>	APPROVED	DATE <i>1/27/94</i>	BOOK	SCALE	CAD DWG. <i>IL 93030</i>	<i>23SW-REP</i>	JOB NO. <i>222/93030</i>	

HEET
42
OF 53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	43
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS PROJECT NO. P-93-053-90			

SHEET NO. 6
12 SHEETS



LEGEND

Cracks to receive Epoxy Crack Sealing

BILL OF MATERIAL				
Item	Unit	Super	Sub	Quantity
Epoxy Crack Sealing	Ft.	11		11

WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS					
DESIGNED RM	DRAWN GWR	APPROVED	DATE 1/27/94	BOOK	SCALE
CAD DWG. IL\93030\23-RAIL JOB NO. 222/93030					

BRIDGE RAIL, FASCIA REPAIR - ELEVATIONS
F.A.P. 68 (IL. RT. 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
43
OF 53

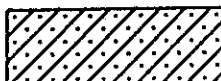
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

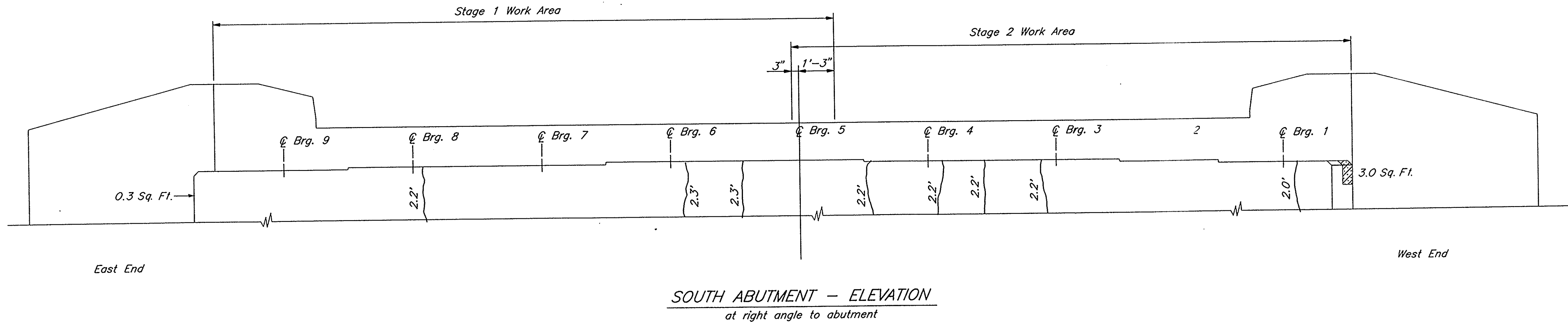
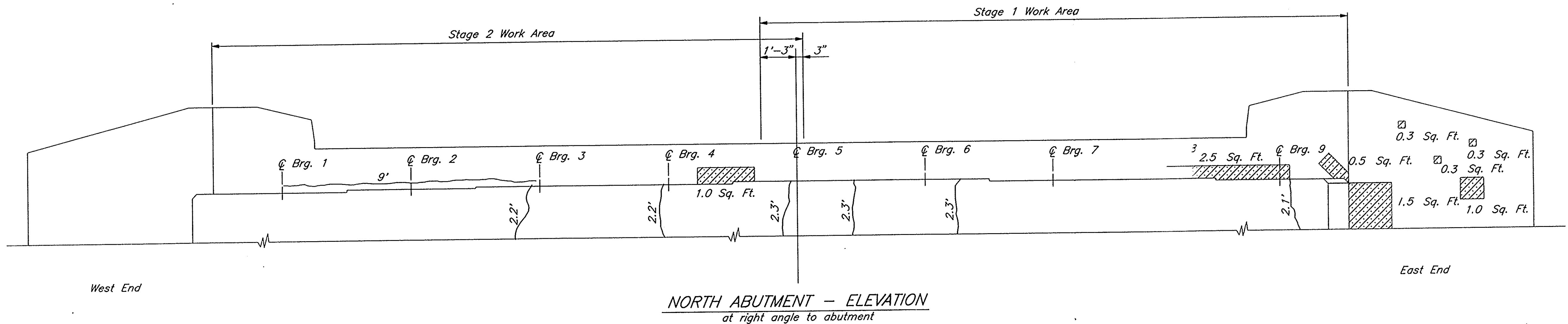
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	44
STA. TO STA.				
FED. ROAD DIST. NO. ILLINOIS PROJECT NO. P-93-053-90				

SHEET NO. 7
/2 SHEETS

BILL OF MATERIAL		
Item	Unit	Quantity
Formed Concrete Repair (Depth $\leq 5"$)	Sq. Ft.	10.7
Epoxy Crack Sealing	Ft.	42

LEGEND

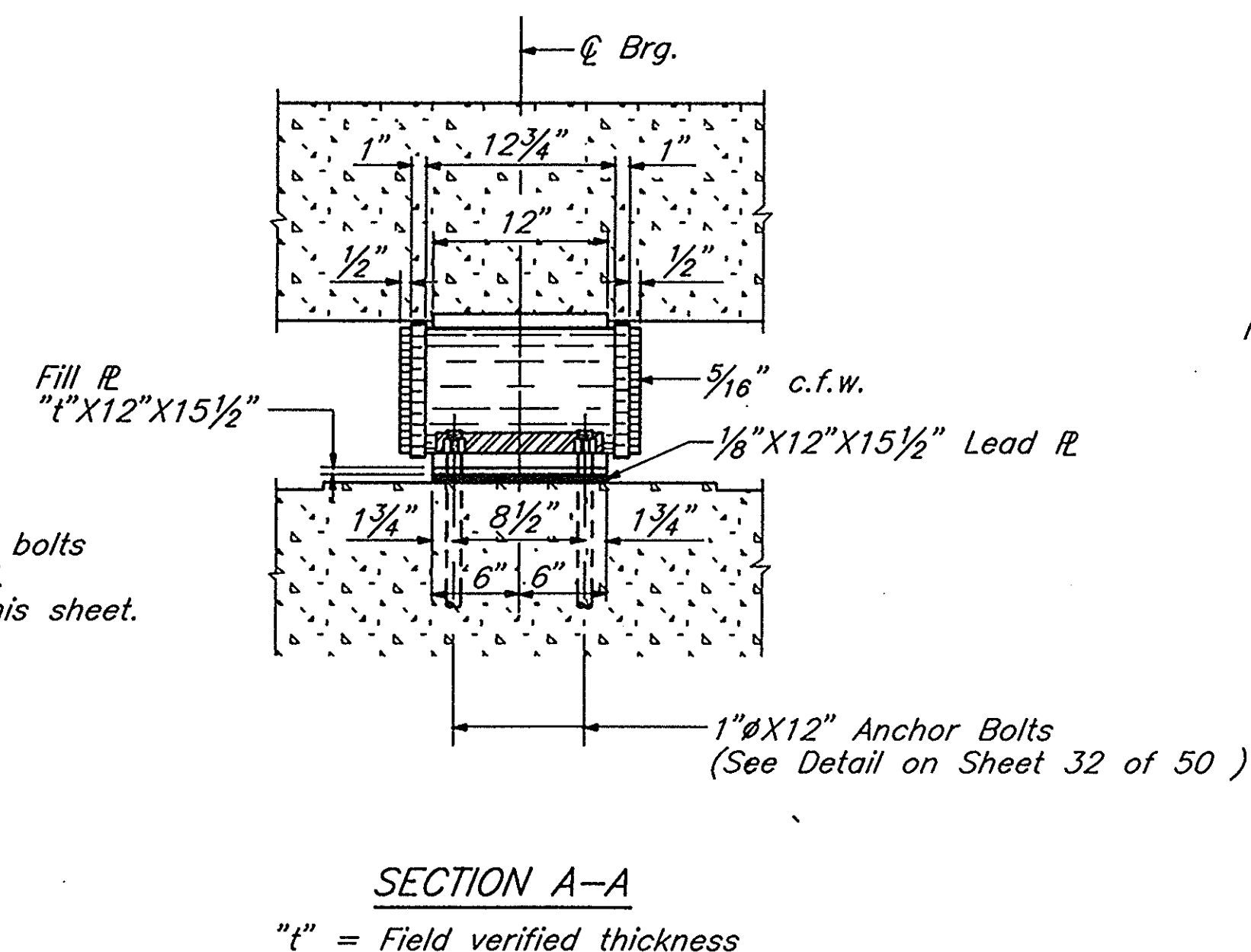
-  Areas to receive Formed Concrete Repair
-  Cracks to receive Epoxy Crack Sealing



WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS										ABUTMENT REPAIR - ELEVATION										44
										IL. RT. 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY										OF 53
										3R-1 STATION 542+97 S.N. 050-0048										
DESIGNED RM		DRAWN GWR		APPROVED		DATE 1/25/94		BOOK		SCALE		CAD DWG. IL\93030\23AB-REP		JOB NO. 222/93030						

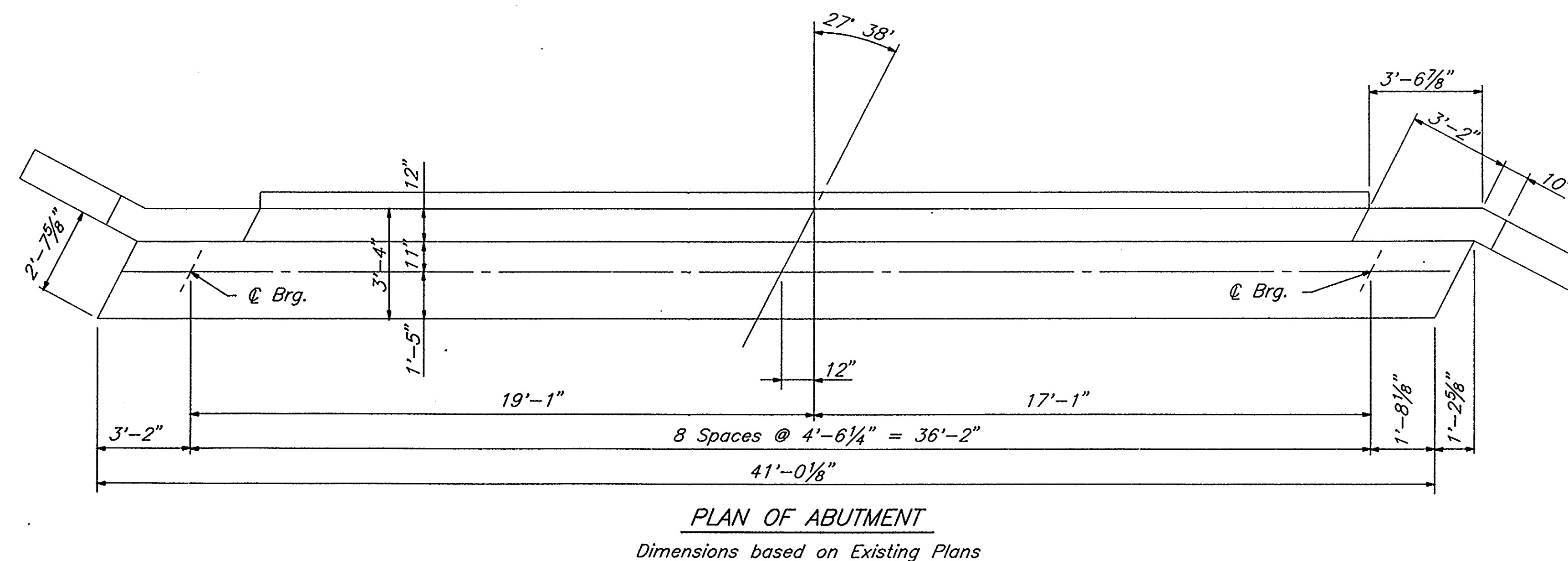
SHEET NO. 8
17 SHEETS



* Temporary Support System is required at each abutment each stage for Concrete Removal. See Special Provisions.

1. *Cross hatched areas indicate concrete to be removed and replaced.*
2. *Remove and properly dispose of existing bearing rollers and bottom plates.
Burn existing anchor bolts flush with existing concrete surface. Grind existing anchor bolt smooth and seal with epoxy mortar. Cost incidental to Concrete Removal.*
3. *Weight of bearing assembly does not include weight of any fill plates.*

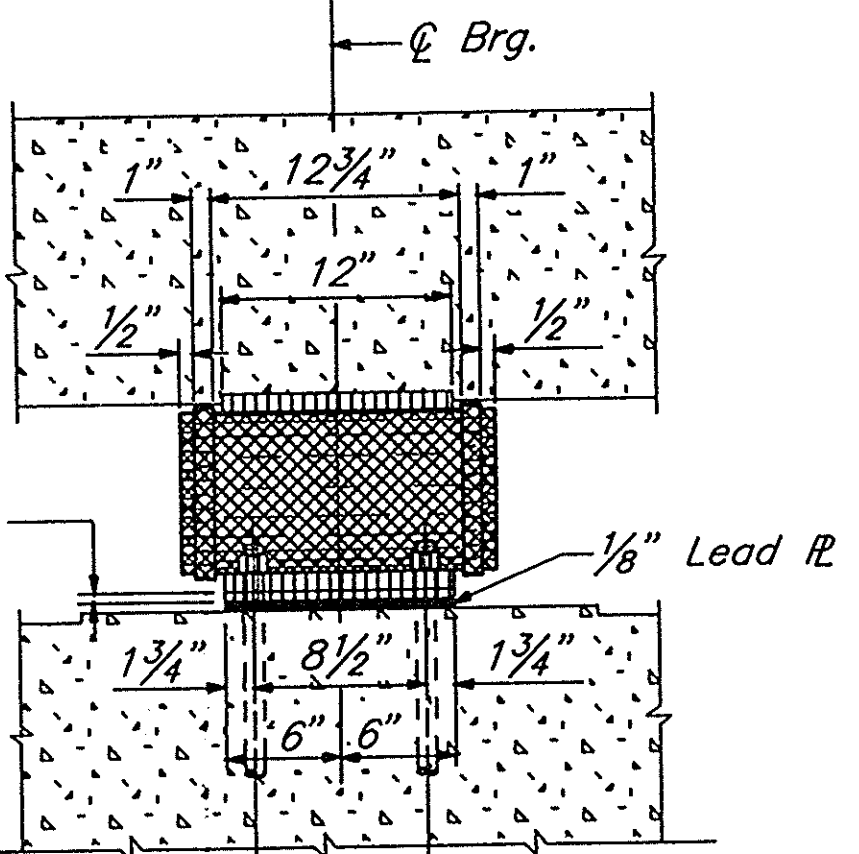
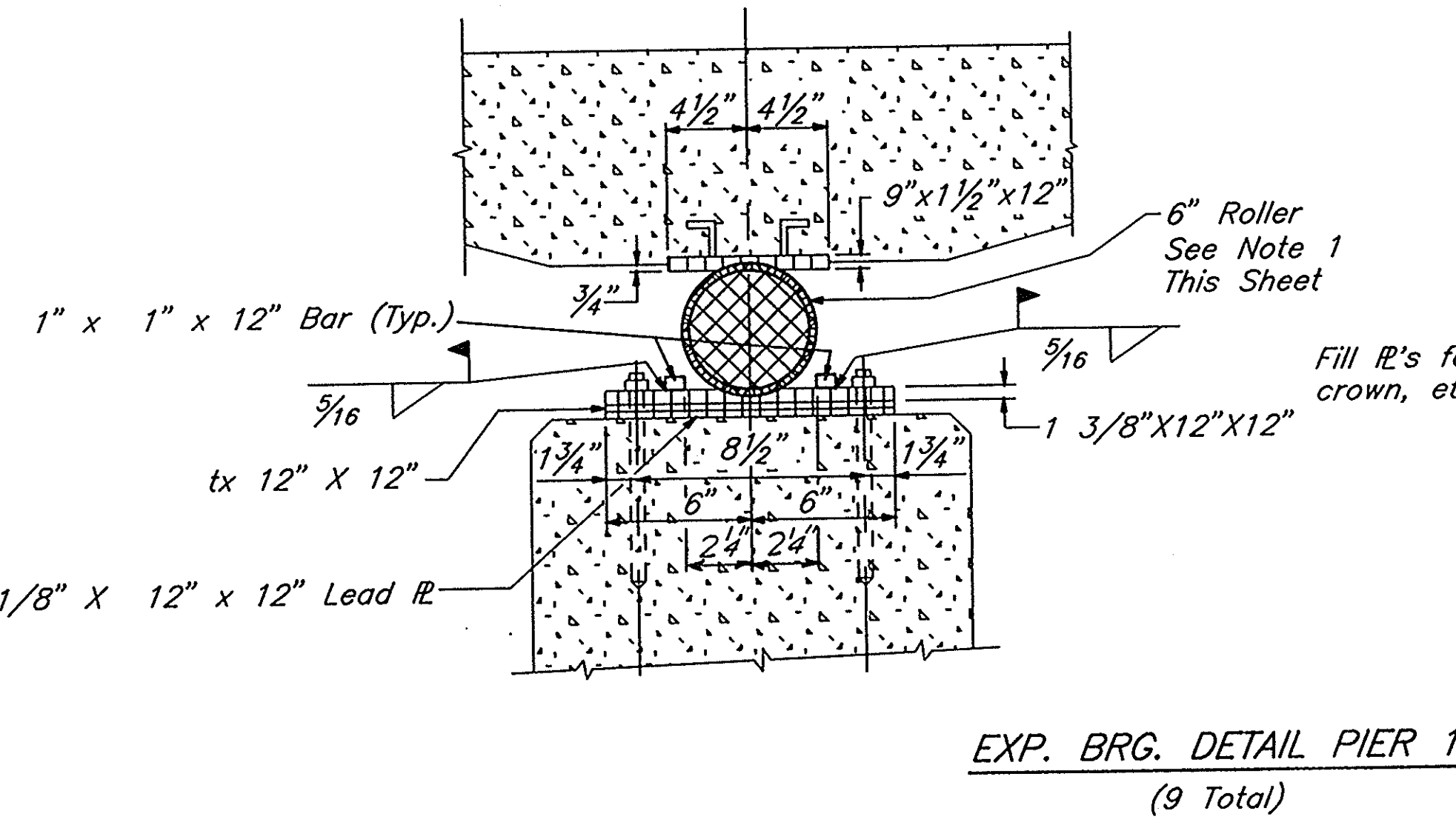
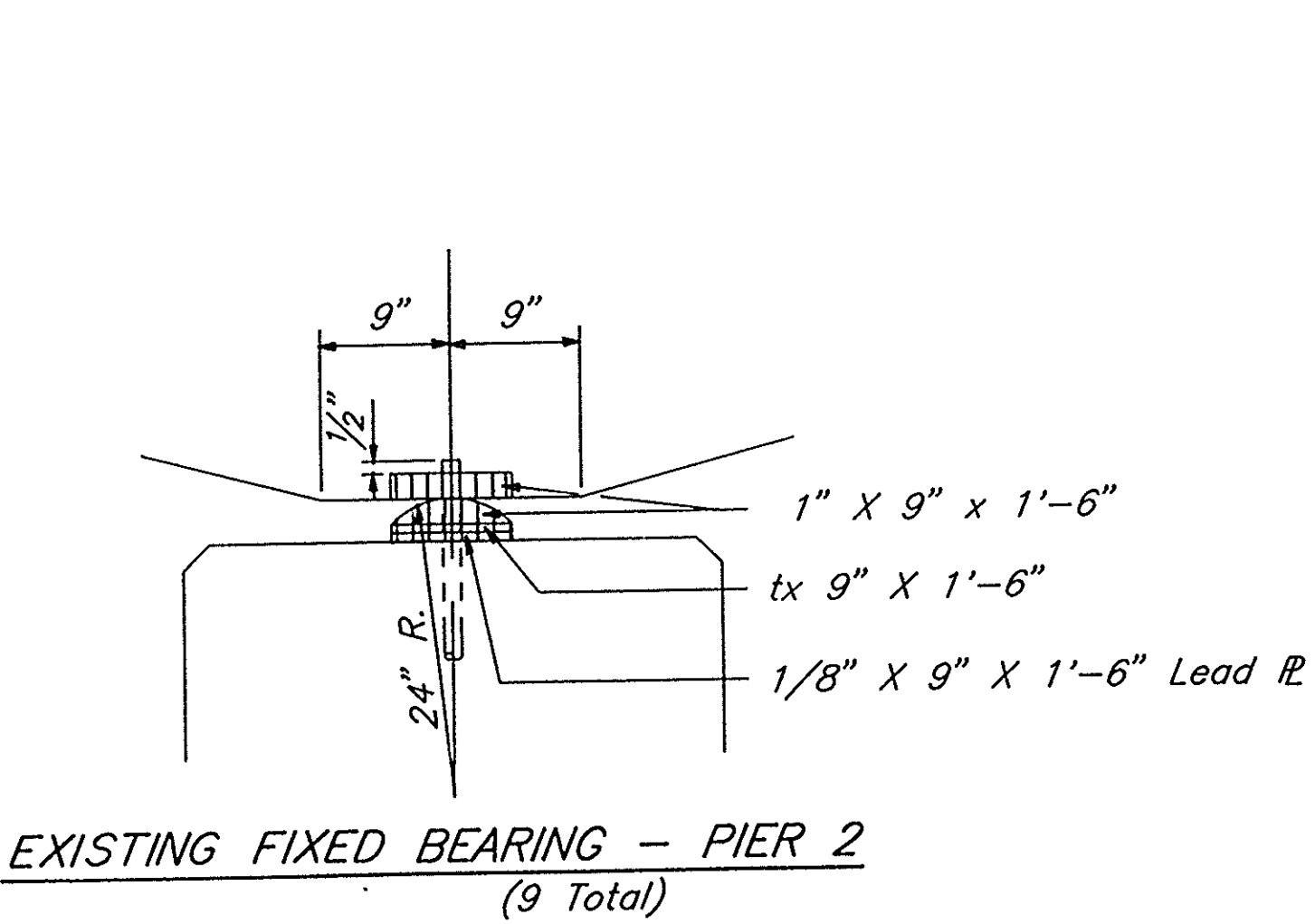
INTERIOR GIRDER REACTION TABLE		
	ABUT.	PIER
$R_{DL} \quad (K)$	11.3	40.8
$R_{LL} \quad (K)$	16.3	22.6
$R_{IMP} \quad (K)$	4.9	6.8
$R_{TOTAL} \quad (K)$	32.5	70.2



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

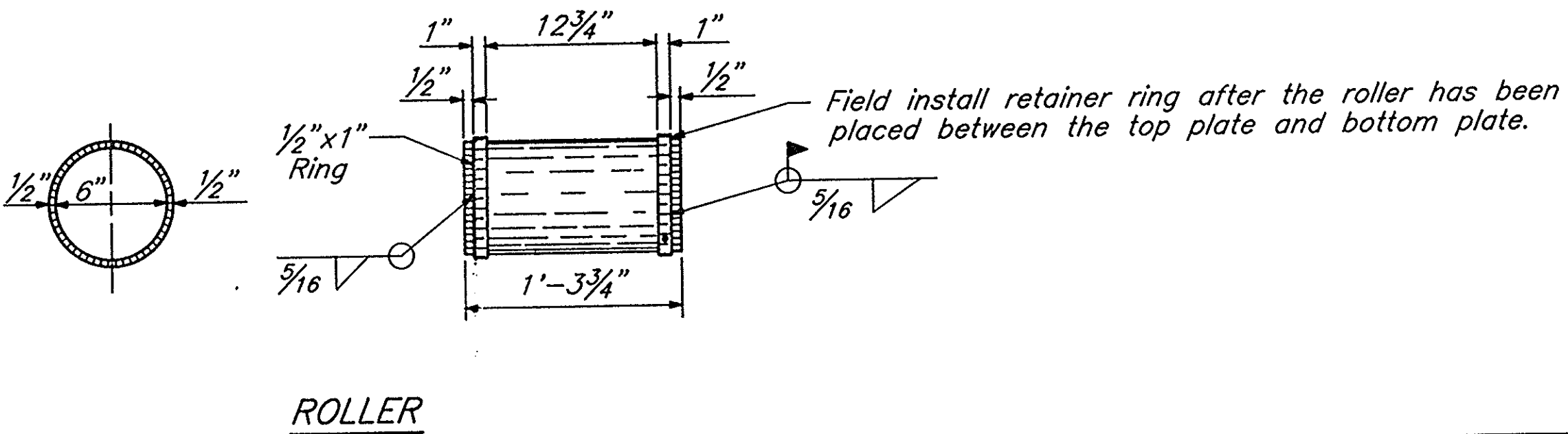
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	46
TO STA.				
FED. ROAD DIST. NO. ILLINOIS PROJECT NO.				

SHEET NO. 9
12 SHEETS

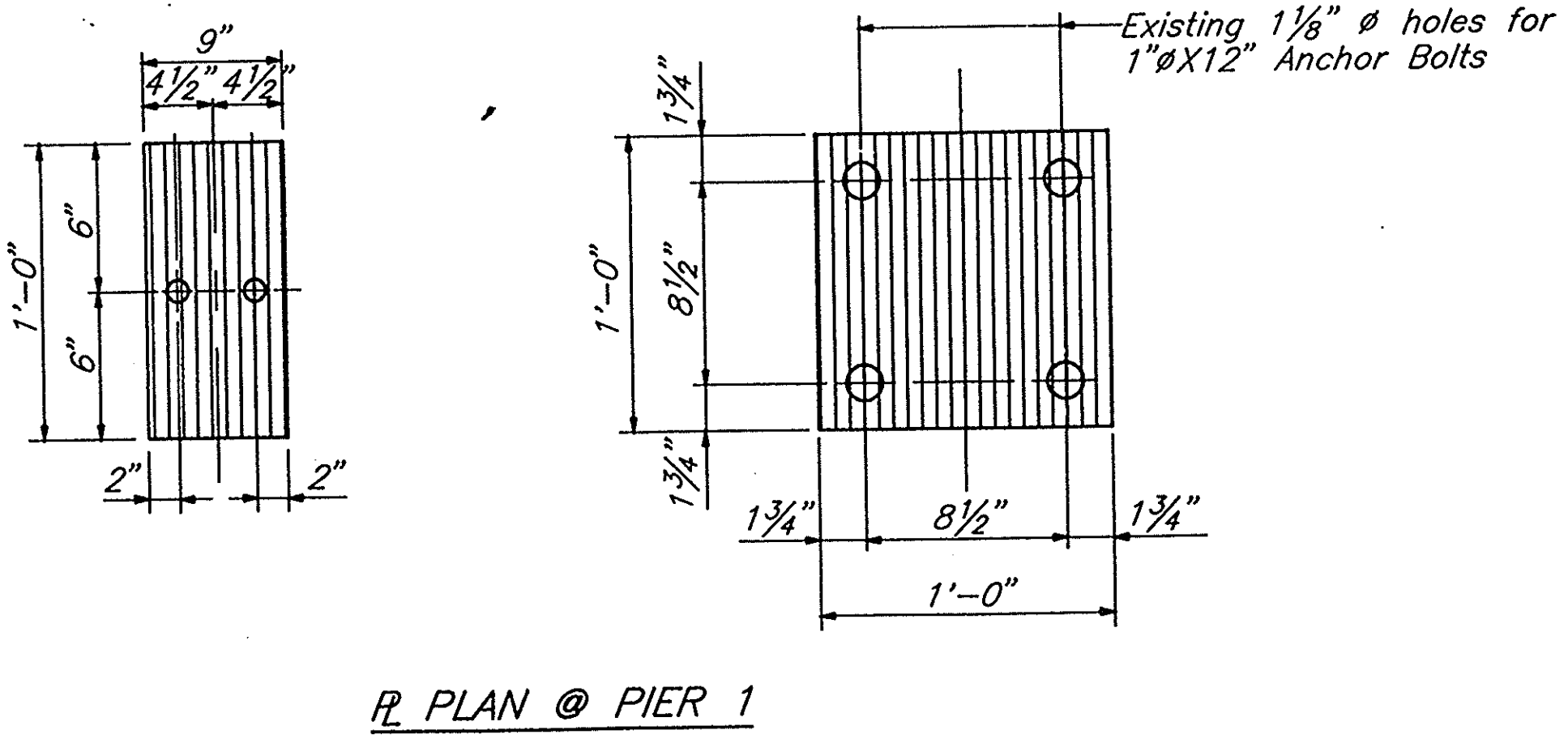
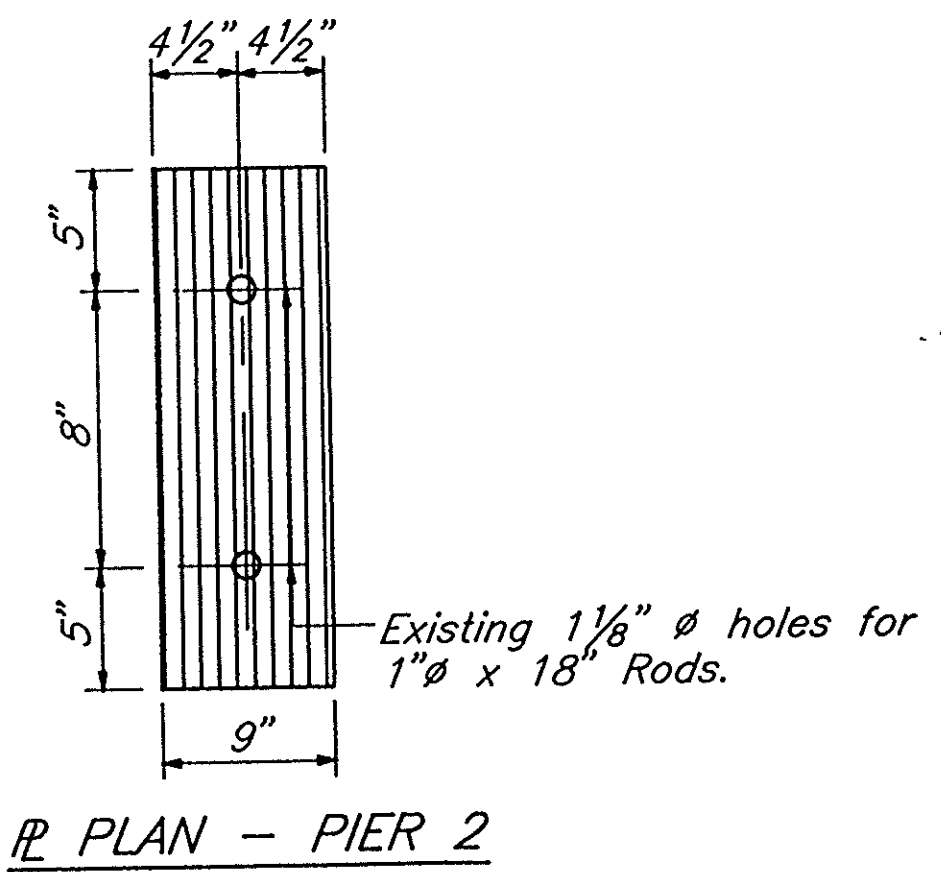


NOTES

1. Remove the existing rollers at Pier 1 and replace with rollers of the same dimensions.
2. Provide and install fill plates beneath the Pier 1 existing bottom plates, at bearing #2, to insure complete bearing. Fill plates to be the same plan dimensions as the existing Pier 1 bottom plates.



BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
Jack and Remove Existing Bearings	Each	9
Furnishing & Erecting Structural Steel	Lbs.	1250



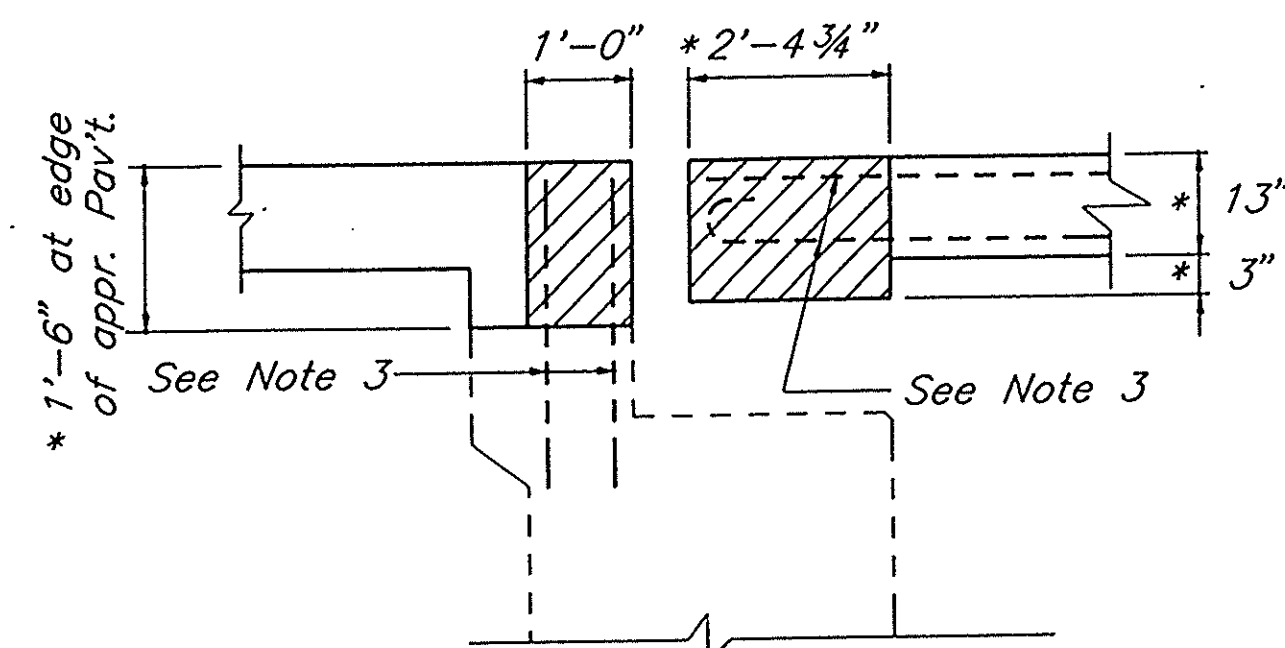
LEGEND

- Areas to "Cleaned and Painted"
- Locations to receive, "Jack and Remove Existing Bearings"

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

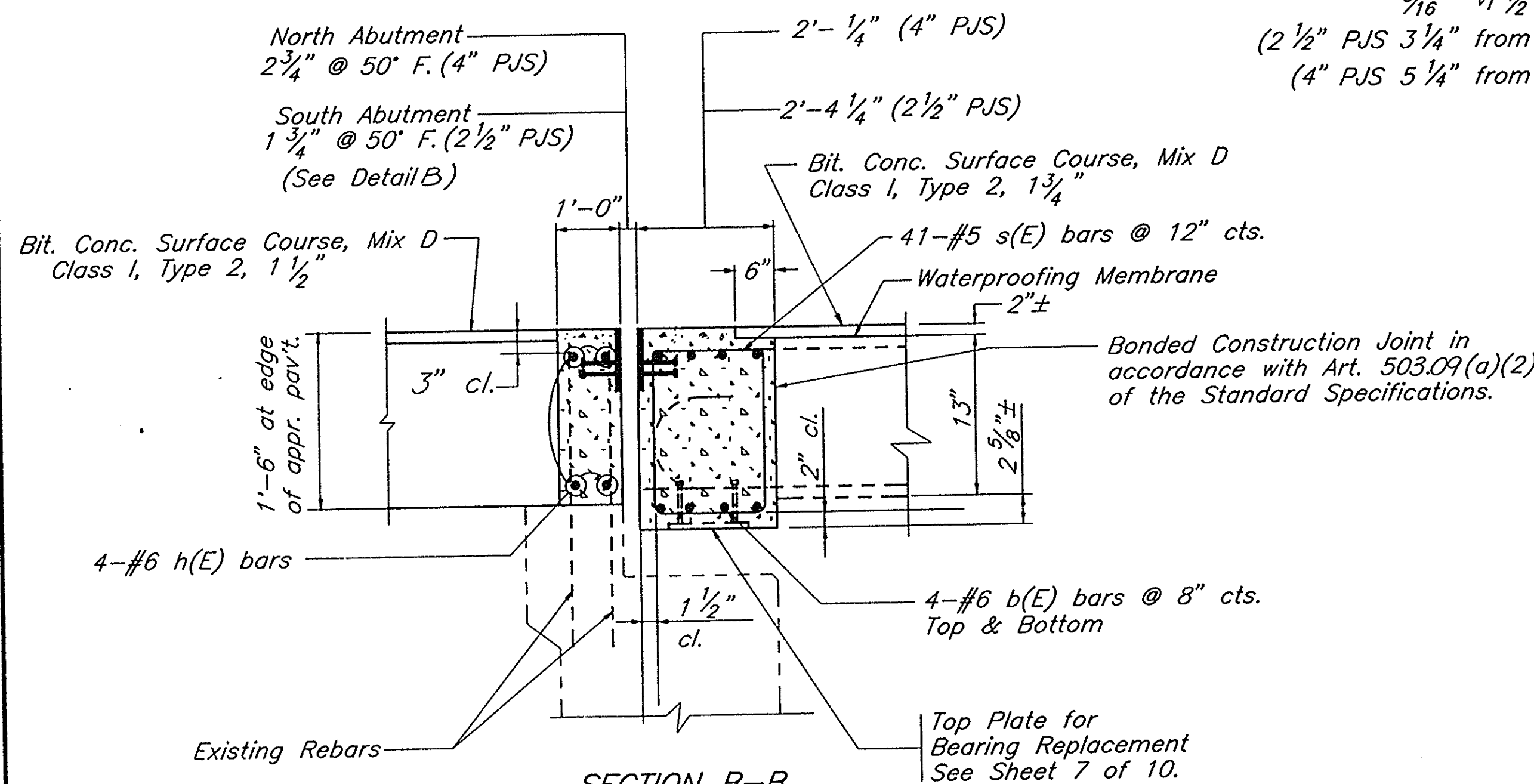
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 68	1BR-1	LASALLE	53	47
STA. 542+97	TO STA. 542+97	ILLINOIS	PROJECT NO.	

SHEET NO. 10
OF 12 SHEETS



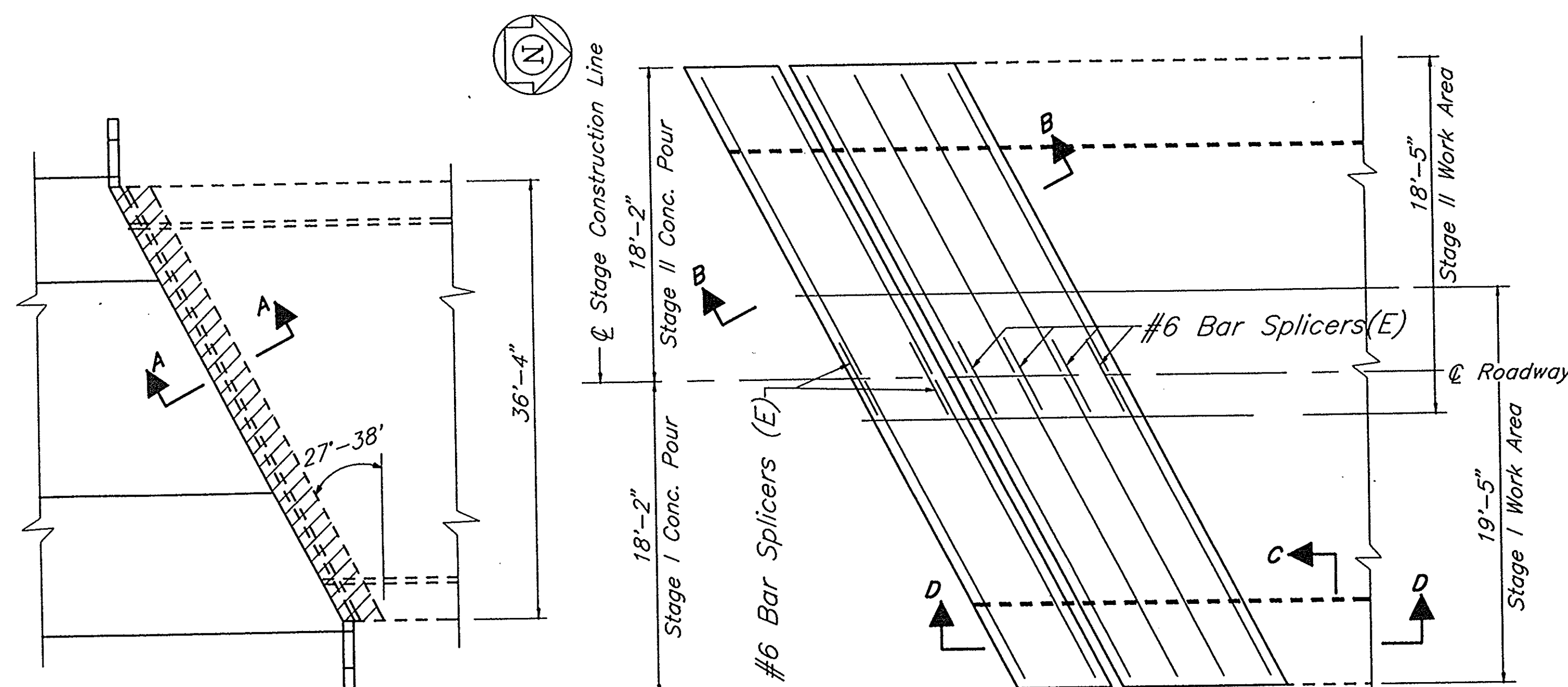
SECTION A-A

* Dimensions taken from original plans.
Dimensions are at right angle to face of abutment.



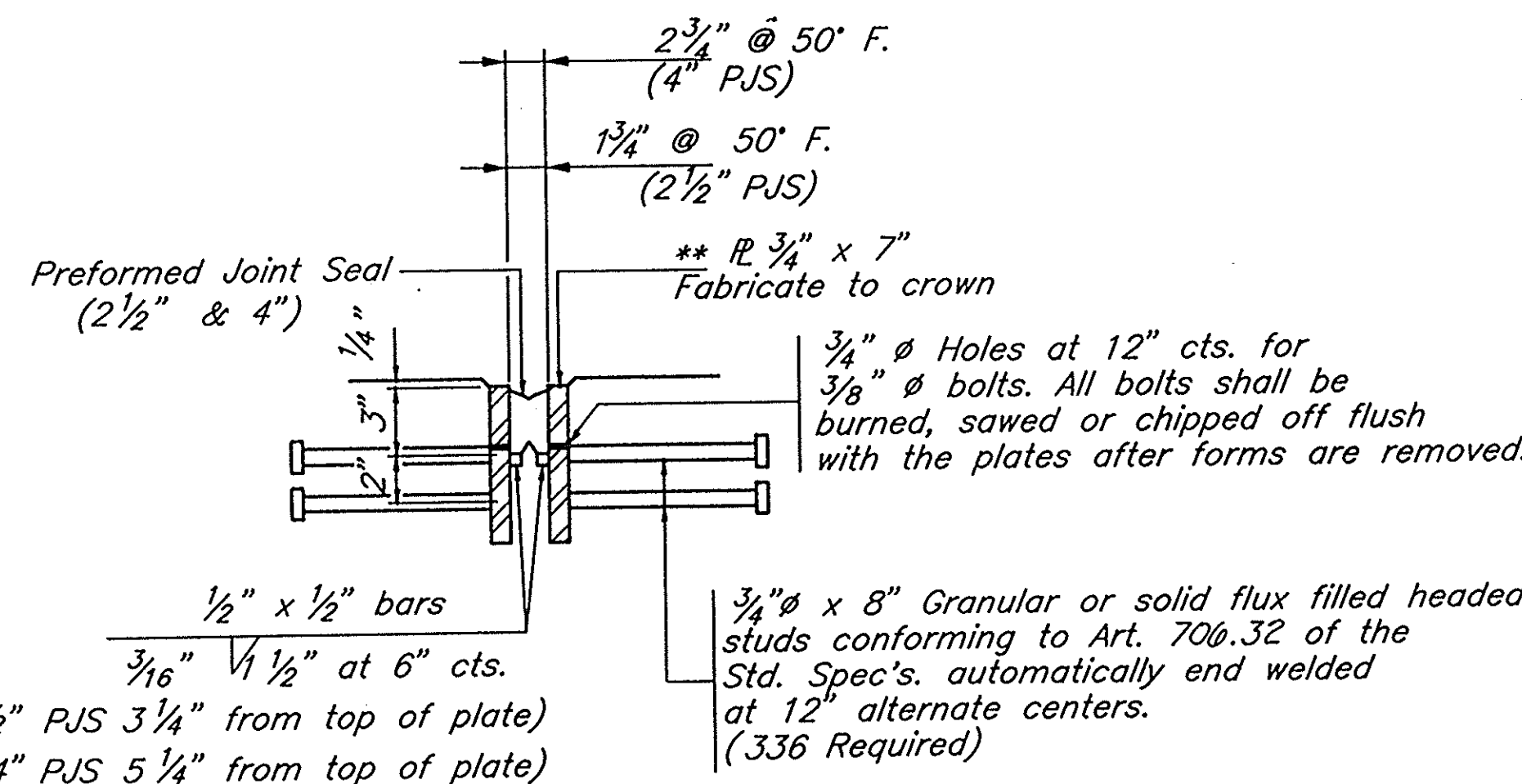
SECTION B-B

Dimensions are at right angle to face of abutment.



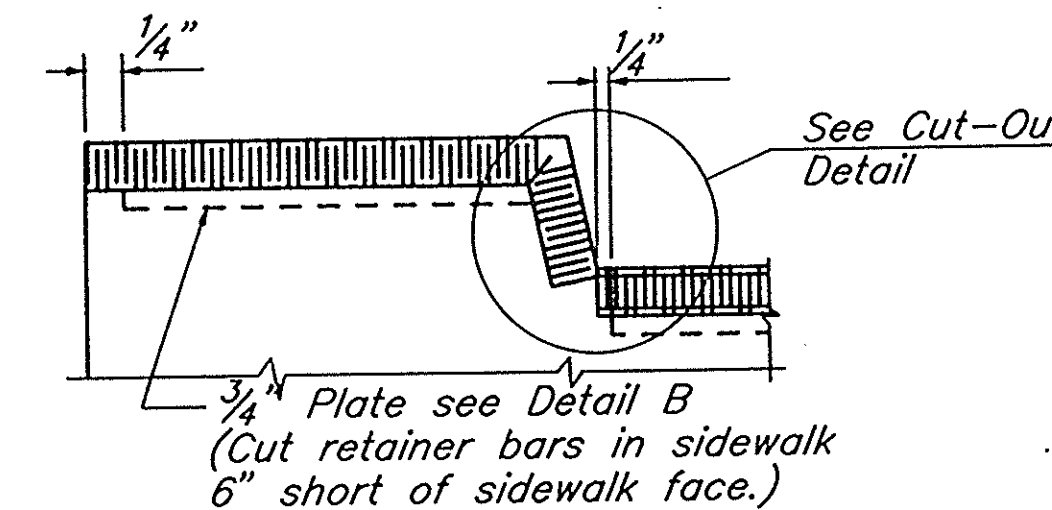
EXISTING PARTIAL PLAN

PROPOSED PARTIAL PLAN

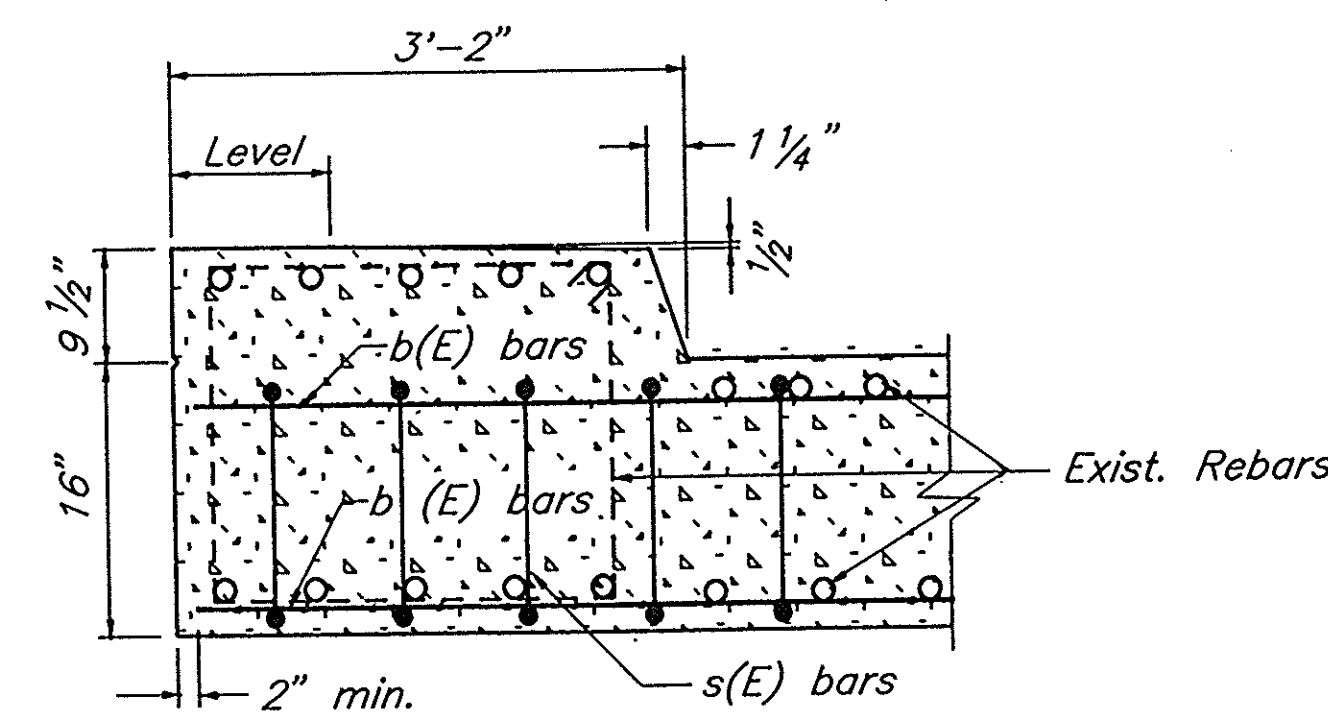


DETAIL B

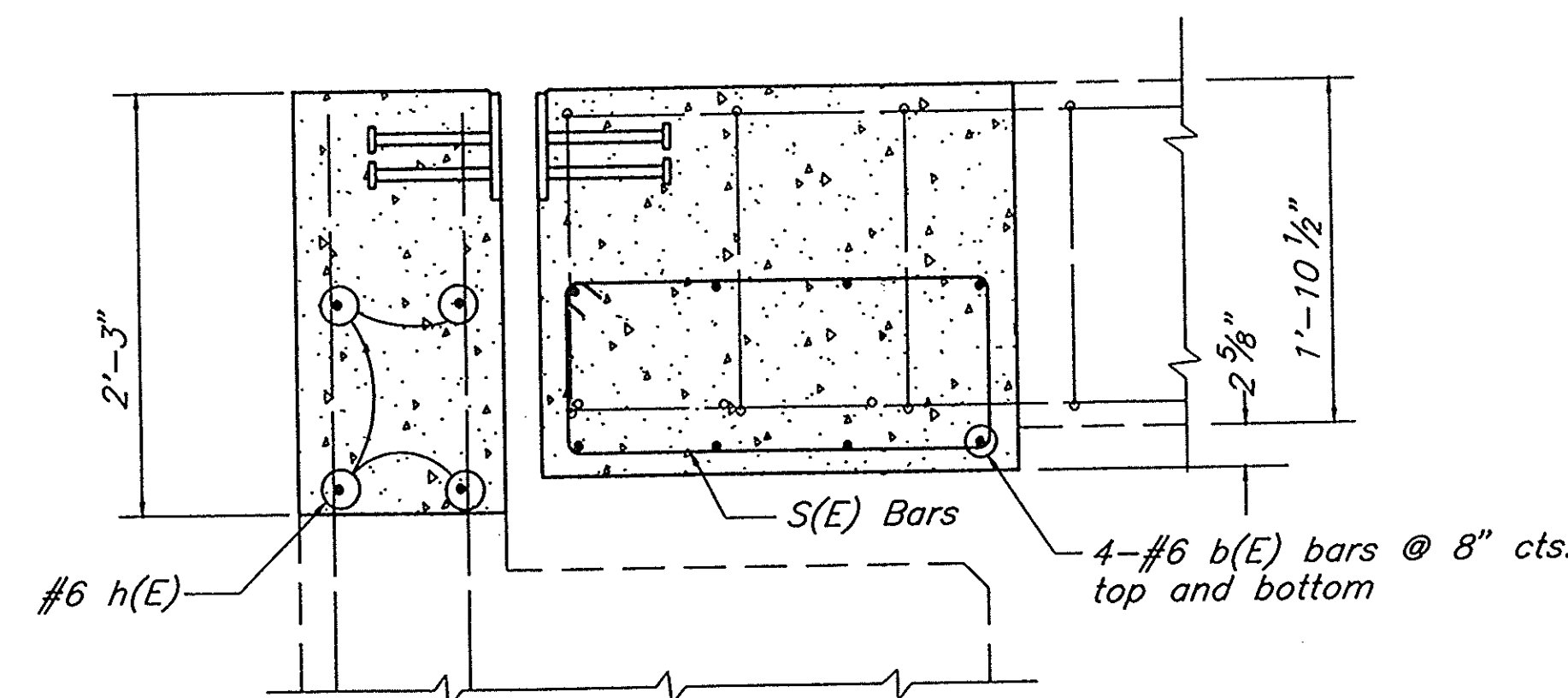
** See Note 5



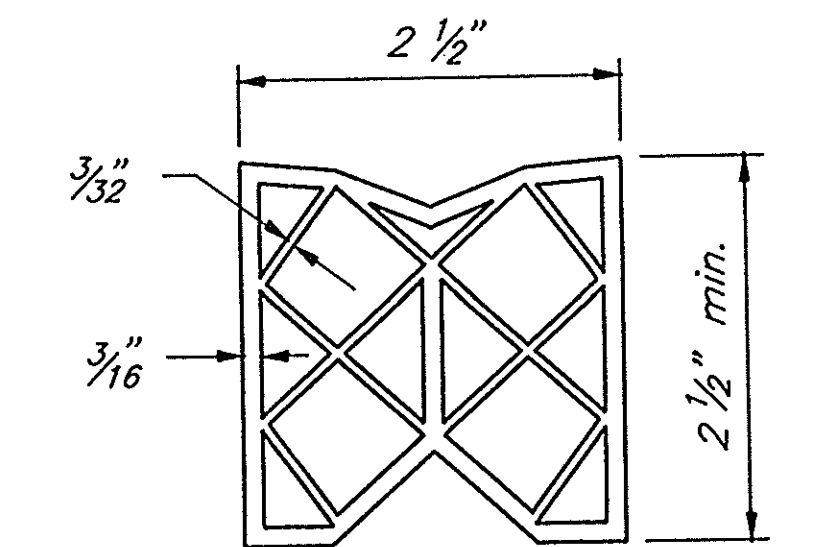
TYPICAL SEAL TREATMENT AT SIDEWALK



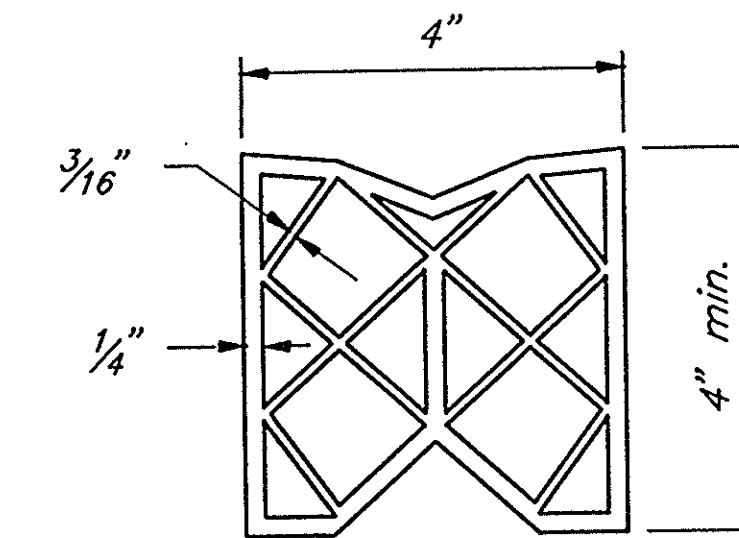
SECTION C-C



SECTION D-D



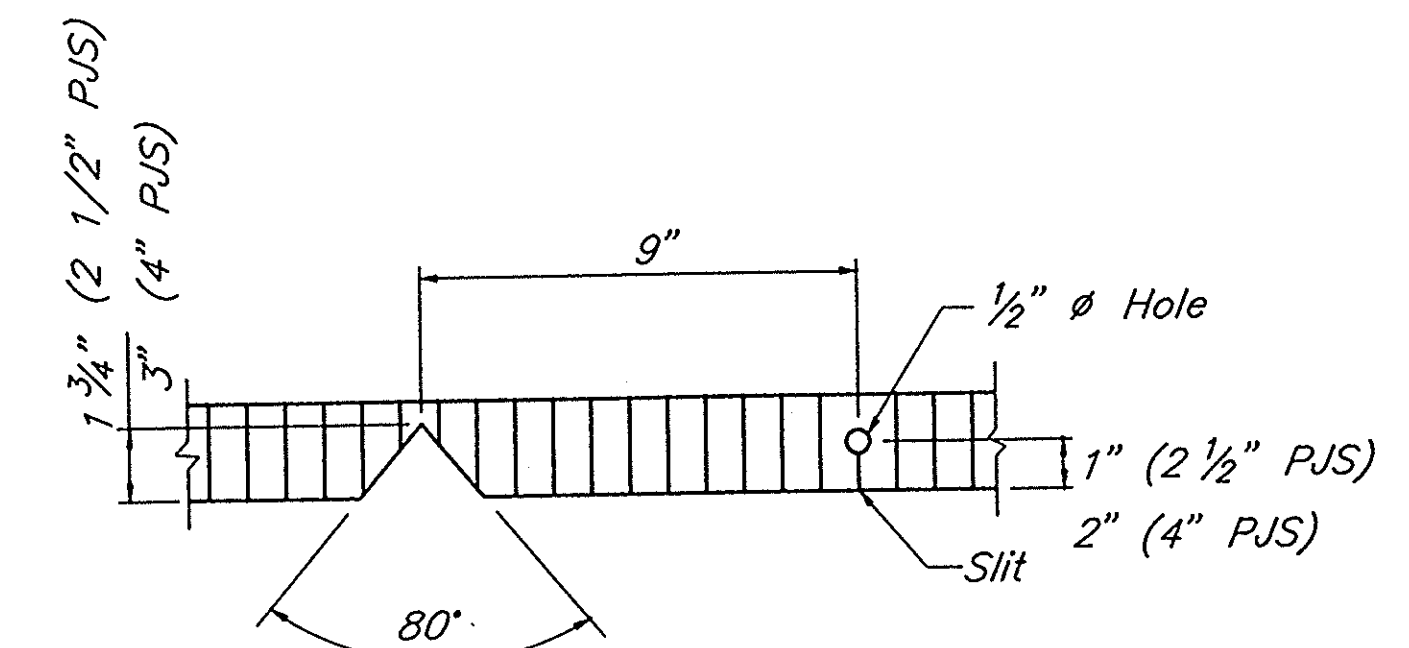
PREFORMED JOINT SEAL (2 1/2")



PREFORMED JOINT SEAL (4")

NOTES :

- Hatched areas indicate concrete sections to be removed and replaced.
- Removal areas shall be saw cut 3/4" prior to the removal of concrete.
- Existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cost incidental to "Concrete Removal".
- Reinforcement bars designated (E) shall be epoxy coated.
- Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel. After fabrication, all surfaces of the steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.
- After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.



SEAL CUT-OUT DETAIL

*** BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	16	#6	20'-2"	
b(E)	32	#6	20'-2"	
s(E)	82	#5	6'-10"	
Concrete Removal				Cu. Yd. 15.9
Concrete Superstructure				Cu. Yd. 15.5
Reinforcement Bars (Epoxy Coated)				Lbs. 2020
Preformed Joint Seal (2 1/2")				Ft. 43
Bar Splicers				Each 24
Preformed Joint Seal (4")				Ft. 43
Furnishing & Erecting Structural Steel				Lbs. 3490

*** Total For Both Abutments

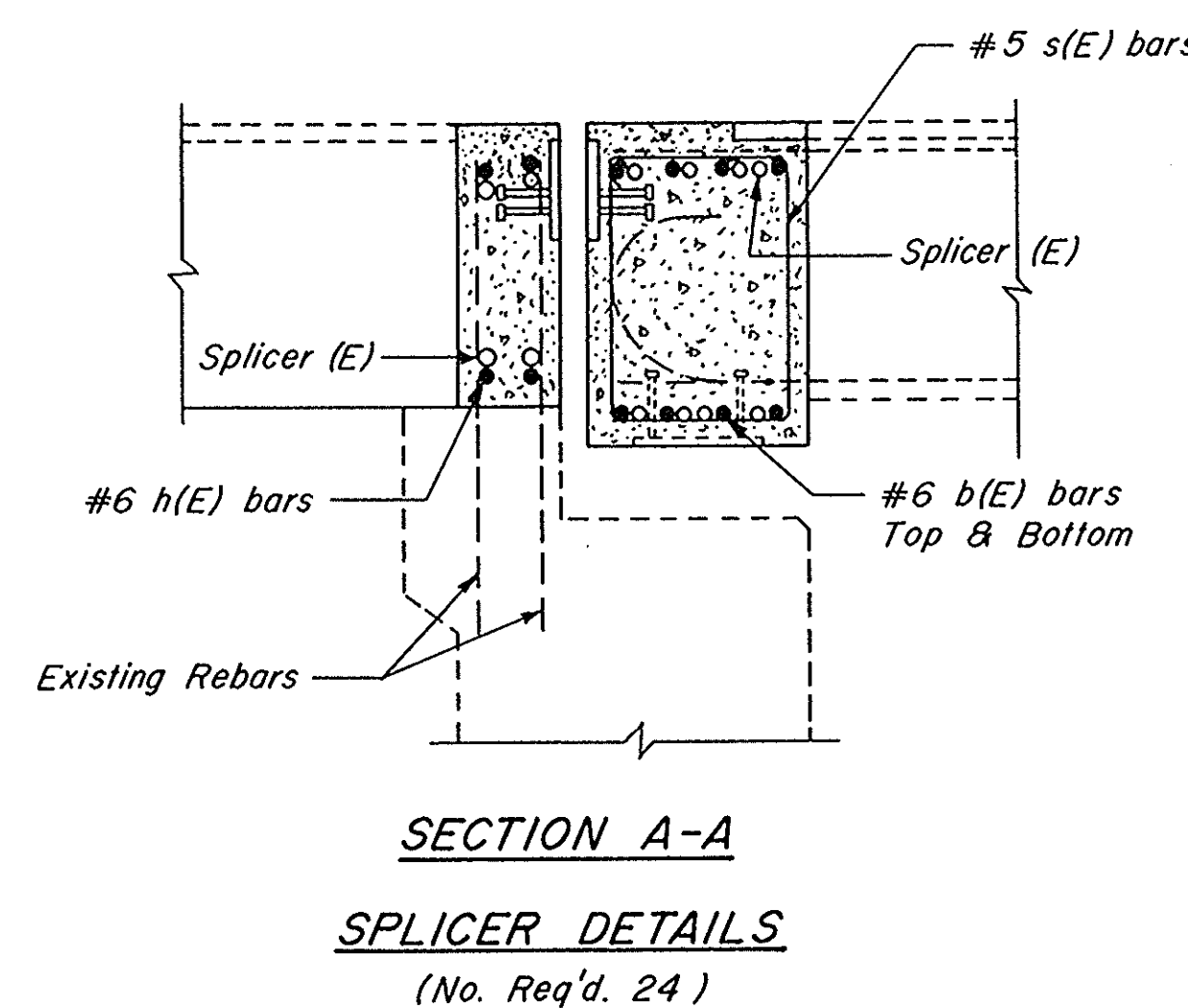
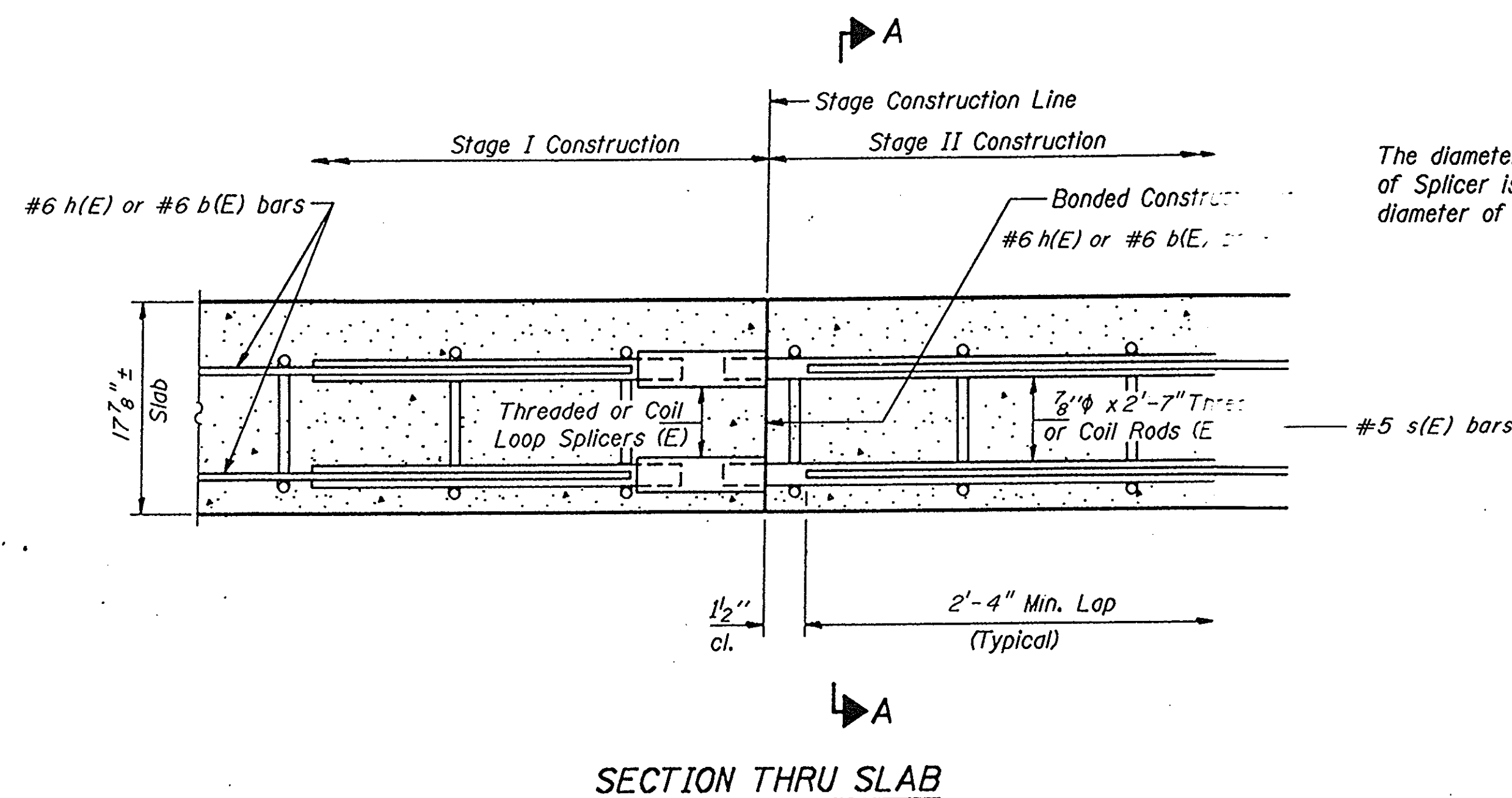
WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED	RTP	DRAWN	JES	APPROVED	DATE	2/2/94	BOOK	SCALE	N.T.S.	CAD DWG.	IL\93030\48EXPJT	JOB NO.	222/93030/00
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EXPANSION JOINT REPAIR
F.A.P. Route 68 (IL. Route 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
47
OF 53



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

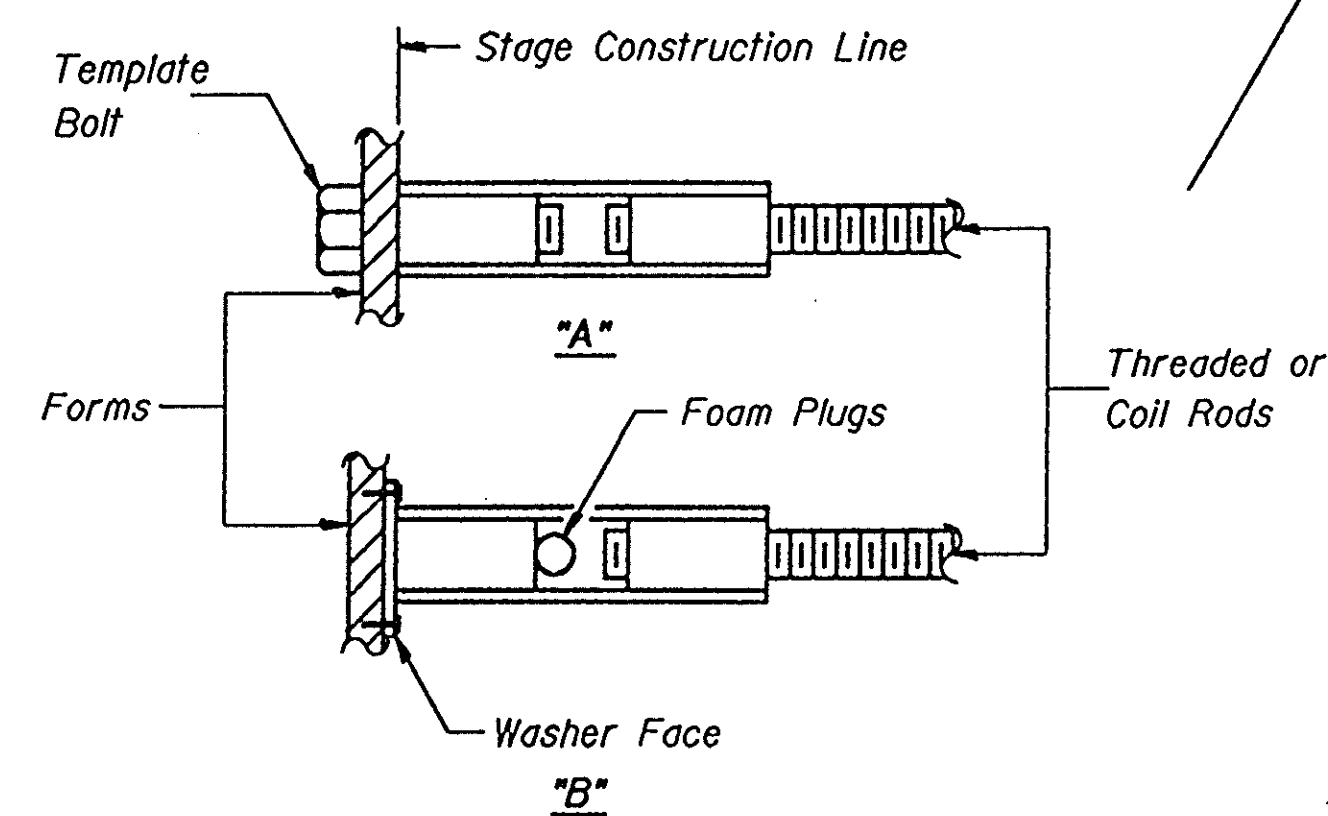
Wire Connector



WELDED SECTIONS

SPLICER ALTERNATIVES

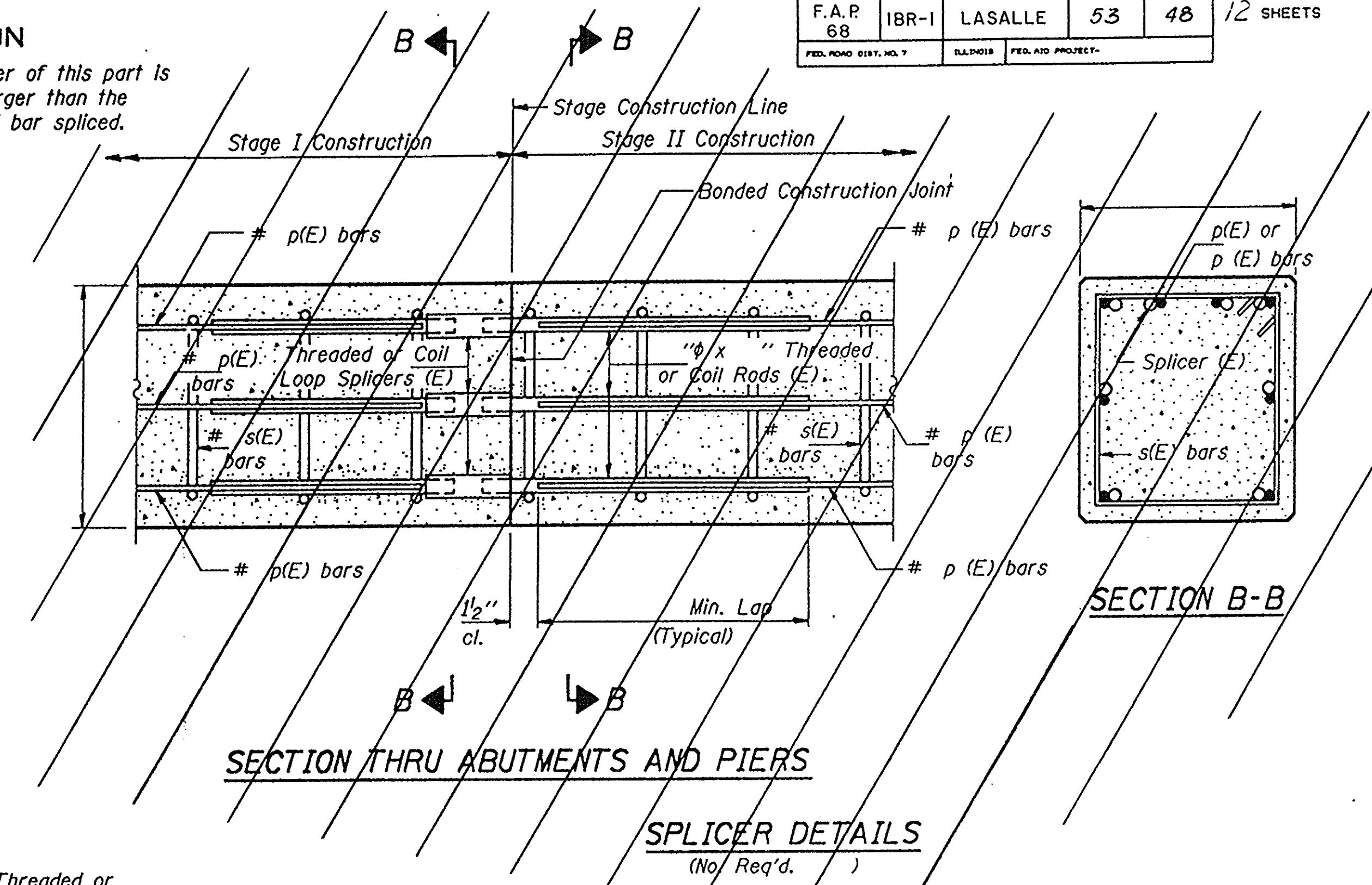
**** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.**



"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

- Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel 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.
Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with 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 splicer (coupler) assembly satisfies the following requirements:
- Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
 - Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete
- Typical Splicer (Coupler) Assembly Sizes:**
- | | | |
|------------------|---|---|
| In Slabs | #5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods | Minimum Capacity = 23.0 kips-tension
Minimum Pull-out Strength = 9.2 kips-tension |
| | #6 bar lap with 7/8" Splicer (Coupler) x 2'-7" Splicer Rods | Minimum Capacity = 33.1 kips-tension
Minimum Pull-out Strength = 13.3 kips-tension |
| In Sub-Structure | #7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods | Minimum Capacity = 45.1 kips-tension
Minimum Pull-out Strength = 18.0 kips-tension |
| | #8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods | Minimum Capacity = 58.9 kips-tension
Minimum Pull-out Strength = 23.6 kips-tension |



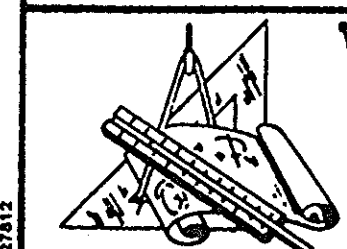
NOTES:

Bar splicers shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price each for "Bar Splicers".

**BAR SPLICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION**

DESIGNED
CHECKED
DRAWN
CHECKED

BSD-1 12-16-91



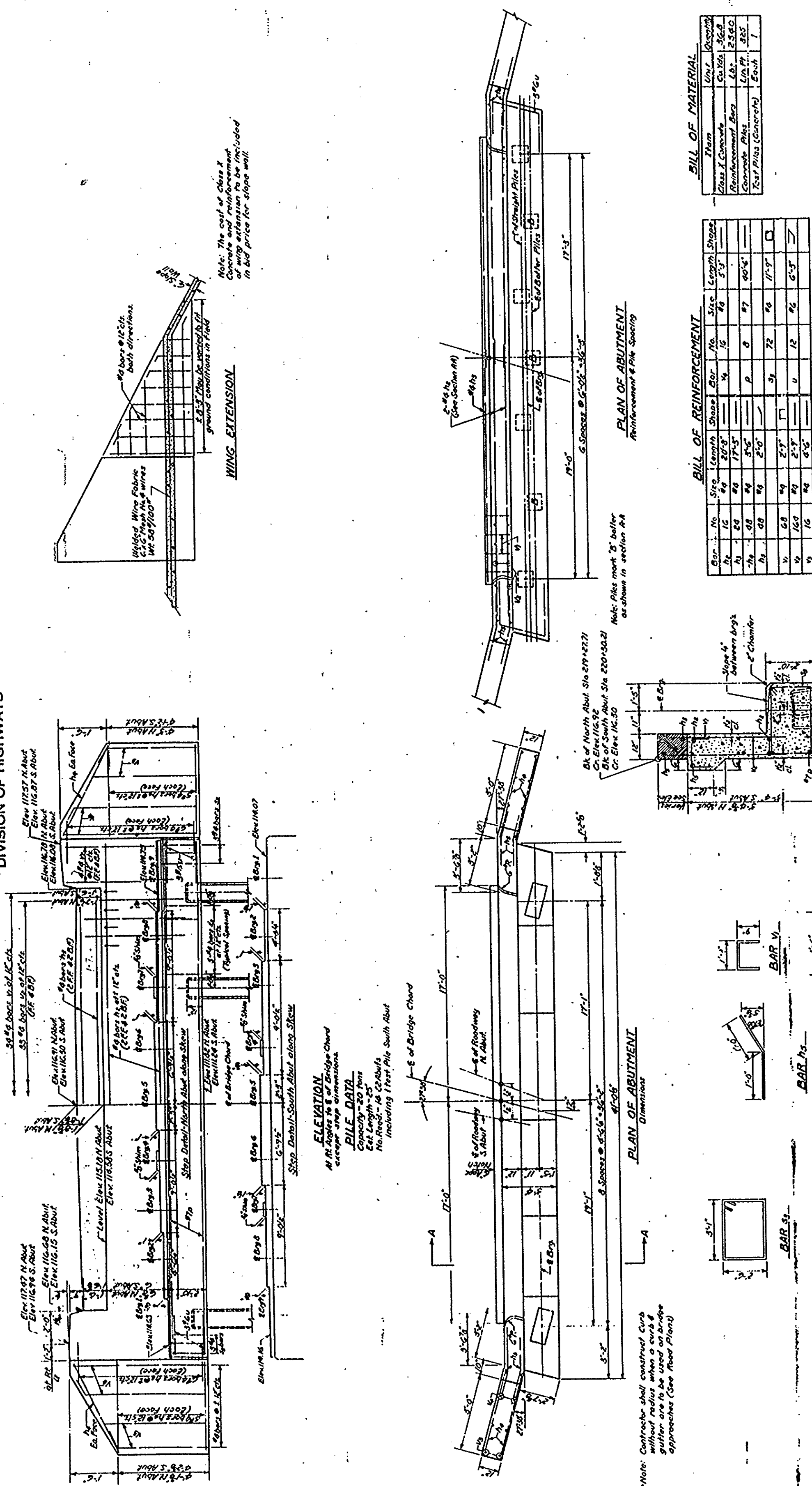
WALTER E. DEUCHLER ASSOCIATES, INC.
Consulting Engineers - Aurora, Illinois

REVISIONS

DESIGNED RTP DRAWN JES APPROVED EEG DATE 1/25/94 BOOK SCALE N.T.S. JOB NUMBER 222/93030

BAR SPLICER (COUPLER) DETAILS
F.A.P. Route 68 (IL. Route 23) OVER BRANCH OF COVEL CREEK, LASALLE COUNTY
SECTION 1BR-1 STATION 542+97 S.N. 050-0048

SHEET
48
OF
53



SEC. 1BR-1
STA. 542+97

FOR INFORMATION ONLY

SECTION A-A

DESIGNED	<i>Donald C. Pitt</i>	APPROVED	<i>W. H. Armstrong</i>	APPROVED	<i>W. H. Armstrong</i>
CHECKED	<i>W. H. Armstrong</i>	PULSED	<i>W. H. Armstrong</i>	APPROVED	<i>W. H. Armstrong</i>
DRAWN	<i>W. H. Armstrong</i>				
CHECKED	<i>W. H. Armstrong</i>				

SEC. 1BR-1
STA. 542+97.

FOR INFORMATION ONLY

HALF SECTION NEAR PIER

FORMATION ONLY

DESIGNED <i>Richard A. Davis</i>	CHECKED <i>Emmett C. Pitt</i> F. Byler	DRAWN <i>RRB</i>	CHECKED <i>P.C.B.</i>
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APPROVED RECEIVED
 PASSED RECEIVED
 EXAMINED RECEIVED
APRIL 9 1957

DESIGNED <i>Richard A. Davis</i>	CHECKED <i>Emmett C. Pitt</i> <i>F. Byhr</i>	DRAWN <i>RRB</i>	CHECKED <i>P.C.B.</i>
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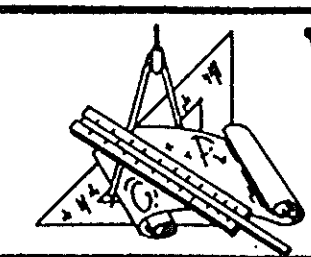
F. A. P. RTL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
08	1BR-1	LaSALLE	53	49
STA.		TO STA.		
FED. ROAD DIST. NO.	REMARKS	FED. AID PROJECT		

Sheet No. 12
of 12 Sheets

**THIS SHEET FOR
INFORMATION ONLY**

SEC. 1BR-1
STA. 542+97

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO _____	AREAS CHECKED _____		



1.	SHEET
	50
	OF 53

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 68	1 BR	LASALLE	53	52
STA. 626 +00 FED. ROAD DIST. NO. 7 ILLINOIS PROJECT P-83-053-80				

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	AREAS CHECKED	

