F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	1
		ILLINOIS	CONTRACT NO. 61D64	

FOR INDEX OF SHEETS AND HIGHWAY STANDARDS, SEE SHEET NO. 2

PROJECT LOCATED IN LAKEMOOR, IL

STATE OF ILLINOIS 11-17-2017 LETTING ITEM 066

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU ROUTE 0186 (BAY ROAD) OVER LILY LAKE DRAIN BRIDGE REHABILITATION SECTION 14-00438-00-BR PROJECT NO.: H3X8 (612) McHENRY COUNTY DIVISION OF TRANSPORTATION

McHENRY COUNTY JOB NO.: C-91-280-15

RS&H
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

MICHAEL J. MARTIN 062-063663 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

BY: [signature] DATE: 8/1/17
MICHAEL J. MARTIN, P.E.
LICENSE EXPIRES 11/30/2017
DRAWINGS 1-16, 20, 40-45

JOHN L. RITCHIE 081-005607 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

BY: [signature] DATE: 8/1/17
JOHN L. RITCHIE, P.E., S.E.
LICENSE EXPIRES 11/30/2018
DRAWINGS 21-39

2IM GROUP
118 SOUTH CLINTON STREET, SUITE 350
CHICAGO, IL 60661

LICENSED PROFESSIONAL ENGINEER JOHN G. MORGAN 062-040169 STATE OF ILLINOIS

BY: [signature] DATE: 8/1/17
JOHN MORGAN, P.E.
LICENSE EXPIRES 11/30/2017
DRAWINGS 17-19

TRAFFIC DATA

BAY ROAD (A-26)
URBAN MINOR ARTERIAL
2013 ADT = 6,950
2040 ADT = 9,094
DESIGN SPEED = 50 MPH

0 5' 10' 15' — 1" = 5'
VERTICAL SCALE IN FEET

0 20' 40' 60' — 1" = 20'
HORIZONTAL SCALE IN FEET

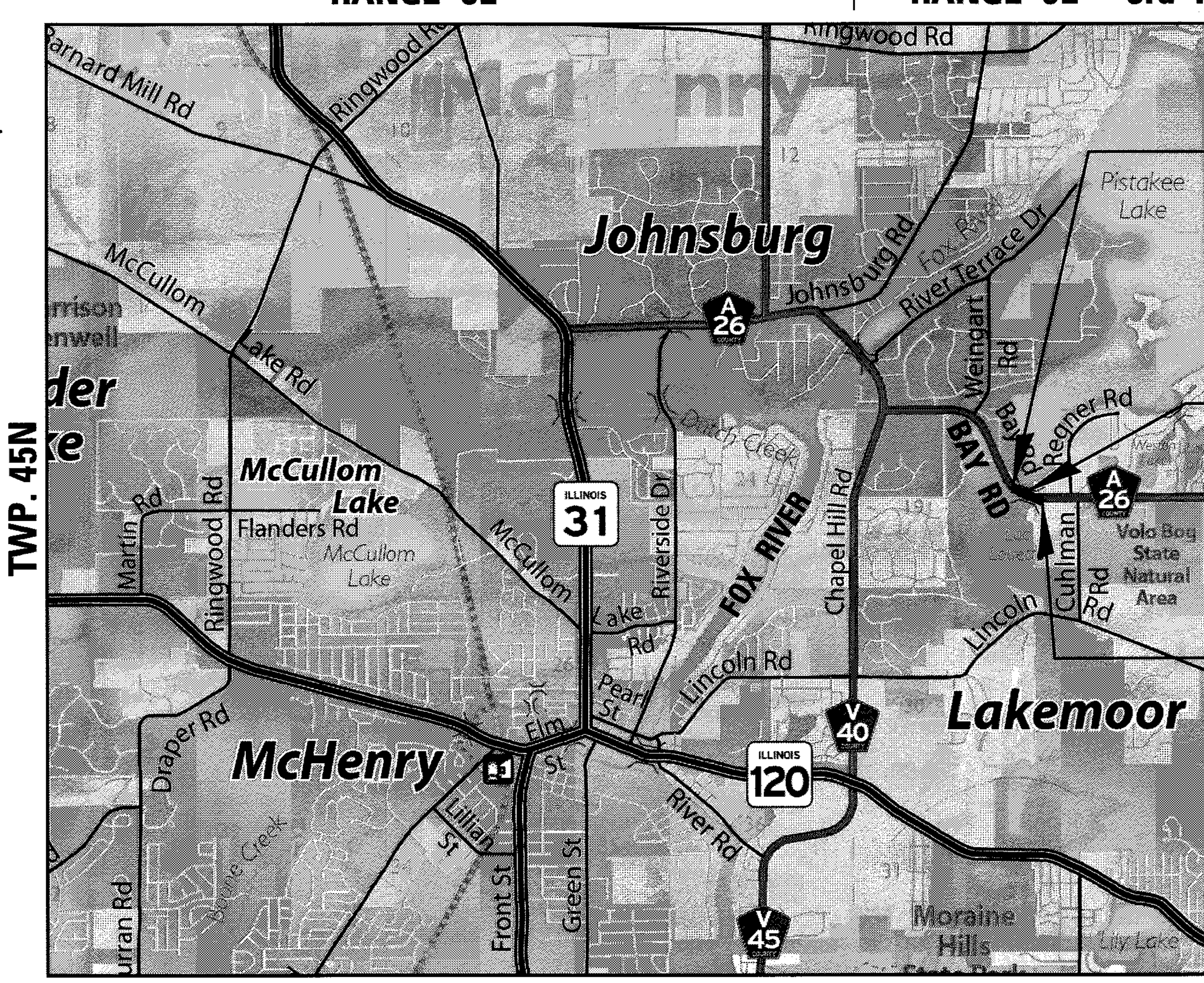
0 100' 200' 300' — 1" = 100'
SCALE IN FEET

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

RANGE 8E | RANGE 9E 3rd P.M.

TWP. 45N



BEGIN IMPROVEMENT STA. 218 + 36.54

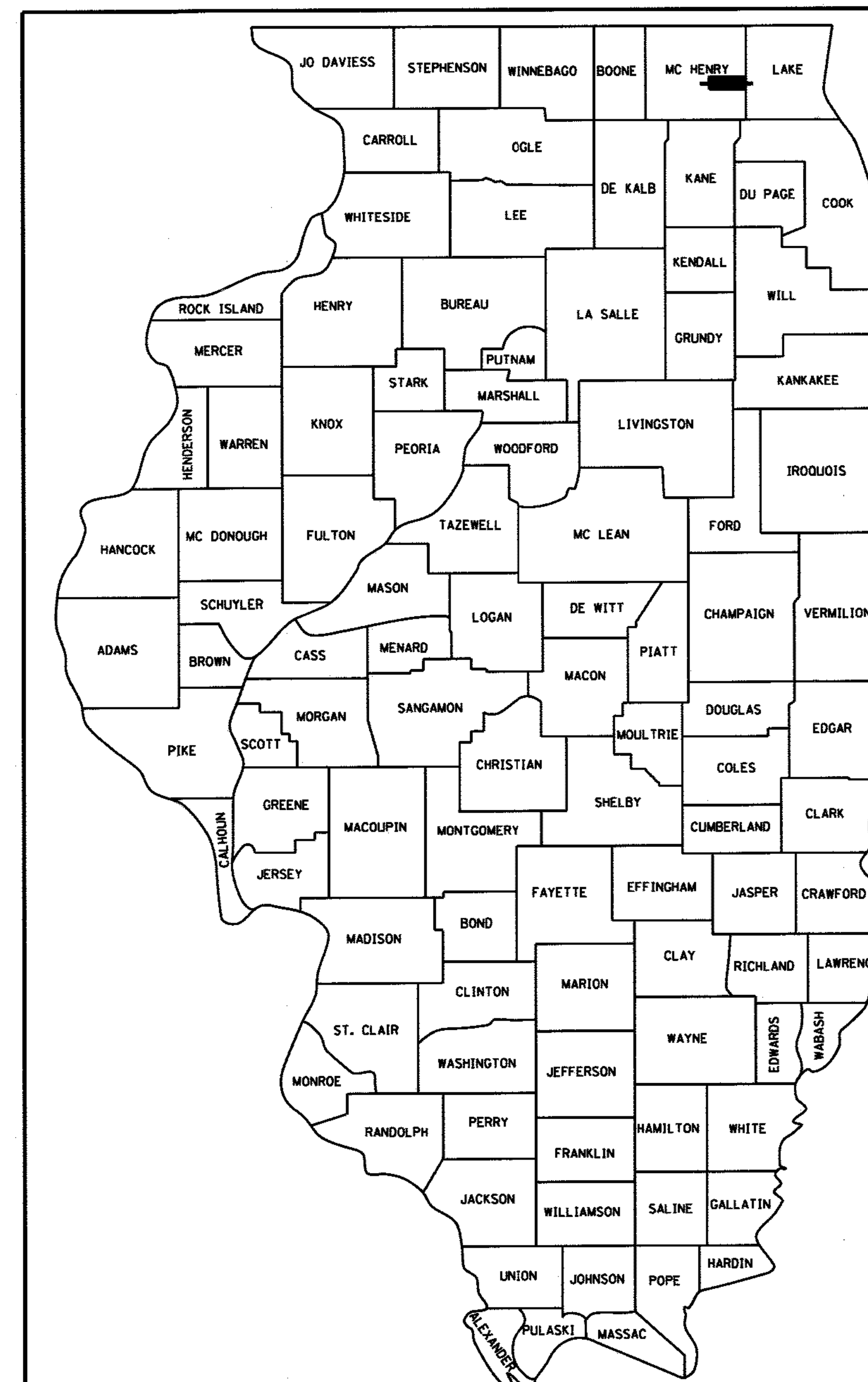
STRUCTURE NO. 056-3106

END IMPROVEMENT STA. 220 + 60.00

McHENRY TOWNSHIP

LOCATION MAP
SCALE = NOT TO SCALE

GROSS LENGTH = 223.46 FEET = 0.042 MILE
NET LENGTH = 223.46 FEET = 0.042 MILE



LOCATION OF SECTION INDICATED THUS:-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

APPROVED August 1 20 17
Joseph R. Korpalski Jr.
McHENRY COUNTY DIVISION OF TRANSPORTATION, COUNTY ENGINEER

PASSED August 31 20 2017
C Holt CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW September 1 20 17
Anthony J. Quigley / MS
REGIONAL ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 61D64

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. (847-705-4406) SCHAUMBURG, IL

INDEX OF SHEETS

INDEX OF HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHOULDER, STRIPS / SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
542401-02	METAL END SECTION FOR PIPE CULVERTS
606001-06	CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER
610001-07	SHOULDER INLET WITH CURB
630001-11	TEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-16	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS GREATER THAN OR EQUAL TO 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS AND MARKERS)
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

DISTRICT ONE STANDARD DETAILS

BD-32	BUTT JOINT AND HMA TAPER DETAILS
TC-11	TYPICAL APPLICATION RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
TC-13	TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

1. ANY REFERENCE TO "STANDARDS" THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE CURRENT IDOT HIGHWAY STANDARD REVISION AND SHALL TAKE PRECEDENCE OVER EARLIER REVISIONS THAT MAY BE REFERRED TO ELSEWHERE IN THE PLANS OR SPECIAL PROVISIONS. SHOULD A REVISED STANDARD EXIST THAT SUPERCEDES STANDARDS REFERENCED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SEEK CLARIFICATION FROM THE ENGINEER PRIOR TO ORDERING MATERIALS, SCHEDULING PERSONNEL, AND PERFORMING THE WORK. THE CONTRACTOR SHALL IDENTIFY THE CORRECT STANDARD BEFORE PERFORMING WORK.
2. NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS ARE MET, AS SET FORTH IN THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL NOT BE SET UP A YARD OR FIELD OFFICE ON PRIVATE OR COUNTY PROPERTY WITHOUT WRITTEN PERMISSION FROM OWNER.
4. SCHOOL DISTRICTS, LOCAL POLICE, LOCAL HOSPITALS, AND FIRE DEPARTMENTS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. SEE "PUBLIC SERVICES CONTACTS" ON THIS SHEET FOR CONTACT INFORMATION OF RELEVANT PARTIES.
5. THE CONTRACTOR'S SUPERINTENDENT OR AUTHORIZED AGENT AS DEFINED IN ARTICLE 105.06 OF THE STANDARD SPECIFICATIONS MUST BE AVAILABLE IN CASE OF EMERGENCIES ON A TWENTY-FOUR (24) HOUR BASIS.
6. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL OF THE PROPOSED CONCRETE TRUCK WASHOUT LOCATIONS AT THE TIME OF THE PRECONSTRUCTION CONFERENCE. RUNOFF FROM WASH AREAS SHALL BE CONTAINED IN DESIGNATED AREAS SO THAT RUNOFF DOES NOT REACH THE STORM SEWER, DITCH, OR MCHENRY COUNTY CONSERVATION DISTRICT PROPERTY.
7. ALL REFERENCES TO "ENGINEER" SHALL BE INTERPRETED TO MEAN THE RESIDENT ENGINEER.
8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO BIDDING ON THE PROJECT AND ORDERING OF MATERIALS.
9. OFFSET LOCATIONS IN THE PLANS ARE FROM THE EXISTING BASELINE, UNLESS OTHERWISE NOTED.

UTILITIES

1. THE CONTRACTOR SHALL USE HAND DIGGING TO FIRST EXPOSE ANY UNDERGROUND UTILITY WITHIN 2 FEET OF AN EXCAVATION LOCATION.
2. THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES WHEN CONSIDERED NECESSARY BY METHODS APPROVED BY THE ENGINEER, AND SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY TO PREVENT SETTLEMENT, DISPLACEMENT, OR DAMAGE TO THE UTILITIES.
3. THE CONTRACTOR SHALL BE MADE AWARE THAT ALL CONSTRUCTION VEHICLES SHALL BE LIMITED TO 15 FEET ABOVE EXISTING GRADE WHILE CROSSING UNDER COMMONWEALTH EDISON'S TRANSMISSION LINES. THE CONTRACTOR SHALL USE EXTRA CAUTION AND VIGILANCE IN OPERATING CRANES AND OTHER CONSTRUCTION EQUIPMENT NEAR OVERHEAD ELECTRICAL FACILITIES IN THE VICINITY OF THE WORK AREA.

COMMITMENTS

NONE.

PUBLIC SERVICE CONTACTS

JOHNSBURG POLICE DEPARTMENT
3611 CHAPEL HILL ROAD
JOHNSBURG, IL 60051
(815) 385-6024

LAKEMOOR POLICE DEPARTMENT
29701 WEST CONCRETE DRIVE
LAKEMOOR, IL 60041
(815) 385-4111

MCHENRY COUNTY SHERIFF'S OFFICE
2200 NORTH SEMINARY AVENUE
WOODSTOCK, IL 60098
(815) 338-2144

MCHENRY COUNTY FIRE PROTECTION DISTRICT
3610 WEST ELM STREET
MCHENRY, IL 60050
(815) 385-0075

CENTEGRA HOSPITAL - MCHENRY
4201 WEST MEDICAL CENTER DRIVE
MCHENRY, IL 60050
(815) 344-5000

JOHNSBURG SCHOOL DISTRICT 12
2222 WEST CHURCH STREET
JOHNSBURG, IL 60051
(815) 385-6916

MCHENRY COMMUNITY HIGH SCHOOL DISTRICT 156
4716 W CRYSTAL LAKE RD
MCHENRY, IL 60050
(815) 385-7900

ST. JOHN THE BAPTIST CATHOLIC SCHOOL
2304 WEST CHURCH STREET
JOHNSBURG, IL 60051
(815) 385-3959

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

S.P.	CODE	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODES BRIDGE 0014	ROADWAY 0004	TRAINEES 0042
	20200100	EARTH EXCAVATION	CU YD	101		101	
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	27		27	
	20800150	TRENCH BACKFILL	CU YD	6		6	
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	22		22	
	25000310	SEEDING, CLASS 4	ACRE	0.1		0.1	
	25100900	TURF REINFORCEMENT MAT	SQ YD	237		237	
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	10		10	
	28000400	PERIMETER EROSION BARRIER	FOOT	255		255	
	28000510	INLET FILTERS	EACH	2		2	
	28001200	TEMPORARY HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	237		237	
	28100105	STONE RIPRAP, CLASS A3	SQ YD	345	345		
SP	30300112	AGGREGATE SUBGRADE IMPROVEMENT, 12"	SQ YD	148		148	
	31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	186		186	
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1,043		1,043	
	40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	7		7	
	40600982	HOT-MIX ASPHALT SURFACE COURSE REMOVAL - BUTT JOINT	SQ YD	24		24	
	40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	26		26	
	40701881	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 10"	SQ YD	80		80	
	44000100	PAVEMENT REMOVAL	SQ YD	151		151	
	44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	224		224	
	44004250	PAVED SHOULDER REMOVAL	SQ YD	89		89	
	48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	99		99	
	48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	239		239	
	50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1		
	50102400	CONCRETE REMOVAL	CU YD	8.5	8.5		
	50200100	STRUCTURE EXCAVATION	CU YD	135	135		
	50300225	CONCRETE STRUCTURES	CU YD	13.8	13.8		
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	15.1	15.1		
	50300260	BRIDGE DECK GROOVING	SQ YD	516	516		
	50300300	PROTECTIVE COAT	SQ YD	528	528		
	50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	4,953	4,953		
	50800205	REINFORCING BARS, EPOXY COATED	POUND	10,000	10,000		
	50800515	BAR SPLICERS	EACH	121	121		
	52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	76	76		
	54213867	STEEL END SECTIONS, 12"	EACH	2		2	

	S.P.	CODE	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODES BRIDGE 0014	ROADWAY 0004	TRAINEES 0042
		59000200	EPOXY CRACK INJECTION	FOOT	4	4		
		59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	71	71		
		60106500	PIPE DRAINS, BITUMINOUS COATED CORRUGATED STEEL 12"	FOOT	27		27	
		60600605	CONCRETE CURB, TYPE B	FOOT	66.0		66.0	
		61000050	CONCRETE THRUST BLOCKS	EACH	2		2	
		61000115	TYPE E INLET BOX, STANDARD 610001	EACH	2		2	
*	BDE	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	62.5		62.5	
*		63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4		4	
*		63200310	GUARDRAIL REMOVAL	FOOT	236		236	
		67100100	MOBILIZATION	LSUM	1		1	
		70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1		1	
	REC	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1	
	BDE	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2,224		2,224	
	BDE	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48		48	
	BDE	70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1,500		1,500	
		70400100	TEMPORARY CONCRETE BARRIER	FOOT	412.5		412.5	
		70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	375.0		375.0	
		70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2		2	
		70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2		2	
*		78008210	POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4"	FOOT	2,436		2,436	
*		78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6		6	
*		78200006	GUARDRAIL REFLECTORS, TYPE B	EACH	8		8	
*		78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	36		36	
*	BDE	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	813		813	
*	BDE	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	838		838	
	GBSP	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	552	552		
		X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	135	135		
	SP	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1		1	
	BDE	X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28		28	
*	SP	X7810300	RECESSED REFLECTIVE PAVEMENT MARKER	EACH	36		36	
*	SP	Z0007124	STEEL RAILING (SPECIAL)	FOOT	207	207		
	GBSP	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	16	16		
	GBSP	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	97	97		
	SP	Z0062456	TEMPORARY PAVEMENT	SQ YD	90		90	
	BDE	Z0076600	TRAINEES	HOUR	500			500
	SP	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500			500
	SP	XX006345	TURBIDITY BARRIER	FOOT	406		406	

* SPECIALTY ITEM

LEGEND FOR S.P. COLUMN
SP INDICATES SPECIAL PROVISION
REC INDICATES IDOT RECURRING SPECIAL PROVISION
BDE INDICATES IDOT BDE SPECIAL PROVISION
GBSP INDICATES IDOT GUIDE BRIDGE SPECIAL PROVISION

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RS&H.	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

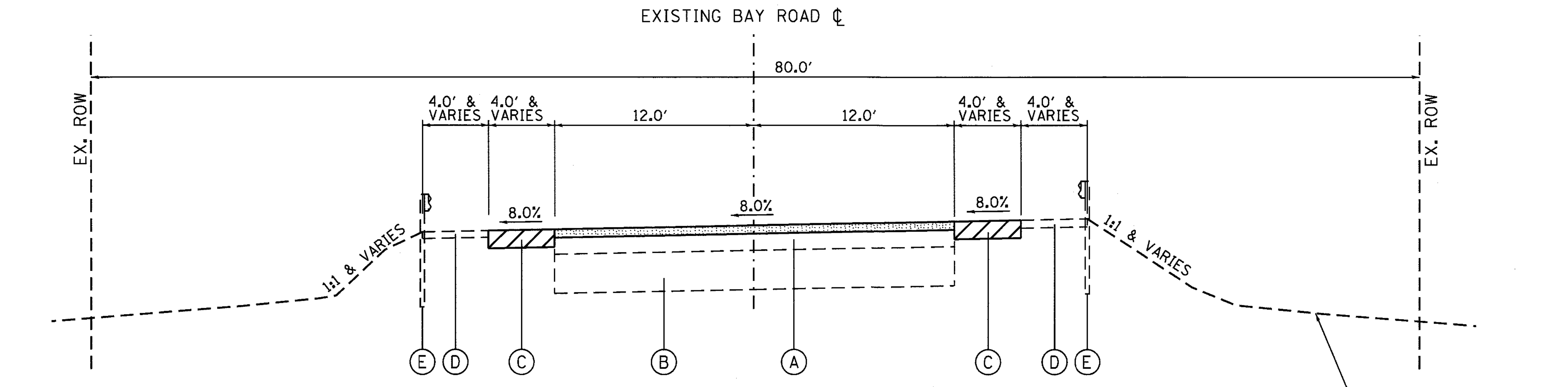
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
SUMMARY OF QUANTITIES

SCALE: NA | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	3

CONTRACT NO. 61D64
ILLINOIS | FED. AID PROJECT

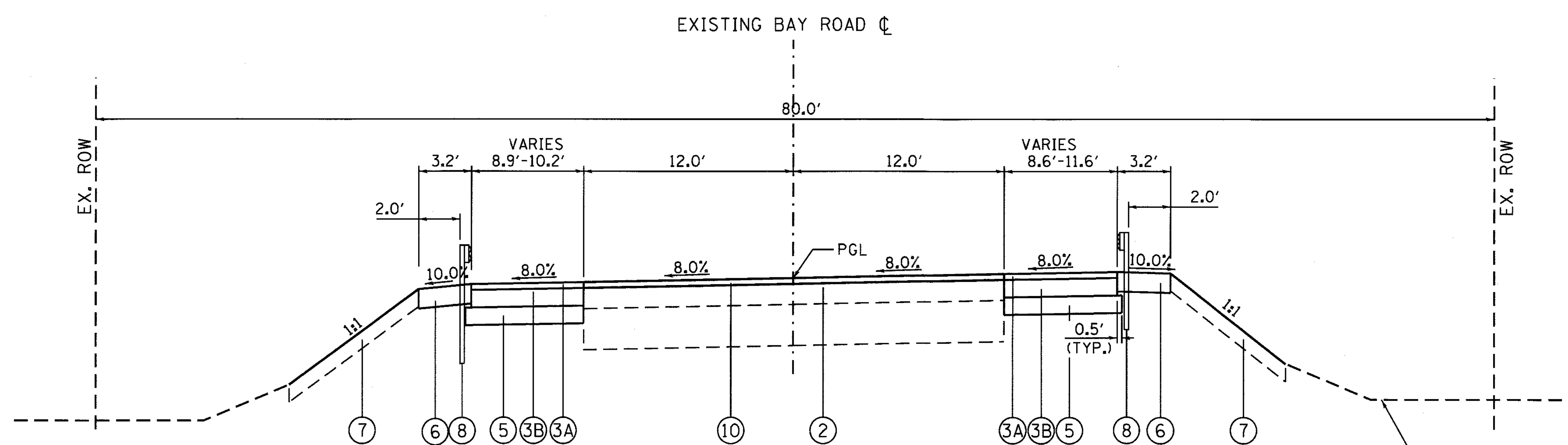


EXISTING TYPICAL SECTION

STA. 218+36.54 TO 218+79.79, BAY ROAD
STA. 220+19.44 TO 220+60.00, BAY ROAD

NOTES:

1. LEVELING BINDER SHALL BE USED TO OBTAIN THE PROPOSED SUPERELEVATION AND PROFILE PRIOR TO PLACEMENT OF SURFACE COURSE.
2. ALL LIFTS OF BASE COURSE AND SURFACE COURSE ON HMA SHOULDERS SHALL BE INCLUDED IN THE PRICE FOR HMA SHOULDERS, 8".



PROPOSED TYPICAL SECTION RESURFACING

STA. 218+36.54 TO 218+79.79, BAY ROAD
STA. 220+19.44 TO 220+60.00, BAY ROAD

EXISTING LEGEND

- (A) HOT-MIX ASPHALT PAVEMENT, ±8"
- (B) AGGREGATE SUBGRADE, ±12"
- (C) HOT-MIX ASPHALT SHOULDER, ±6"
- (D) AGGREGATE SHOULDER, ±2"
- (E) GUARDRAIL (SEE REMOVAL PLAN FOR DETAILS)
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- PAVED SHOULDER REMOVAL

PROPOSED LEGEND

- (1) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 10"
  - (1A) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
  - (1B) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 8"
- (2) LEVELING BINDER (MACHINE METHOD), N50, SEE NOTE 1
- (3) HOT-MIX ASPHALT SHOULDERS, 10", SEE NOTE 2
  - (3A) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
  - (3B) HOT-MIX ASPHALT BASE COURSE, 8"
- (4) AGGREGATE SUBGRADE IMPROVEMENT, 12"
  - (4A) CAPPING AGGREGATE, MINIMUM 3"
  - (4B) COURSE AGGREGATE, 9"
- (5) SUBBASE GRANULAR MATERIAL, TYPE B, 6"
- (6) AGGREGATE SHOULDERS, TYPE B 6"
- (7) TOPSOIL FURNISH AND PLACE, 6"
- (8) GUARDRAIL (SEE ROADWAY PLANS FOR DETAILS)
- (9) CONCRETE CURB, TYPE B
- (10) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ Ndes
PAVEMENT RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 Gyr.
LEVELING BINDER (MACHINE METHOD), N50	4% @ 50 Gyr.
FULL DEPTH PAVEMENT RECONSTRUCTION	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	4% @ 70 Gyr.
PAVED SHOULDERS	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 Gyr.
HOT-MIX ASPHALT BASE COURSE (HMA BINDER IL-19 mm)	4% @ 70 Gyr.
TEMPORARY PAVEMENT	
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	4% @ 70 Gyr.

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.

THE "AC TYPE" SHALL BE "PG 58-28" UNLESS MODIFIED BY MCDOT.

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_p2_Sht_typs_01.dgn

USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - MAW	REVISED -	
PLOT SCALE = 5.0000 '/ in.	CHECKED - MJM	REVISED -	
PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -	

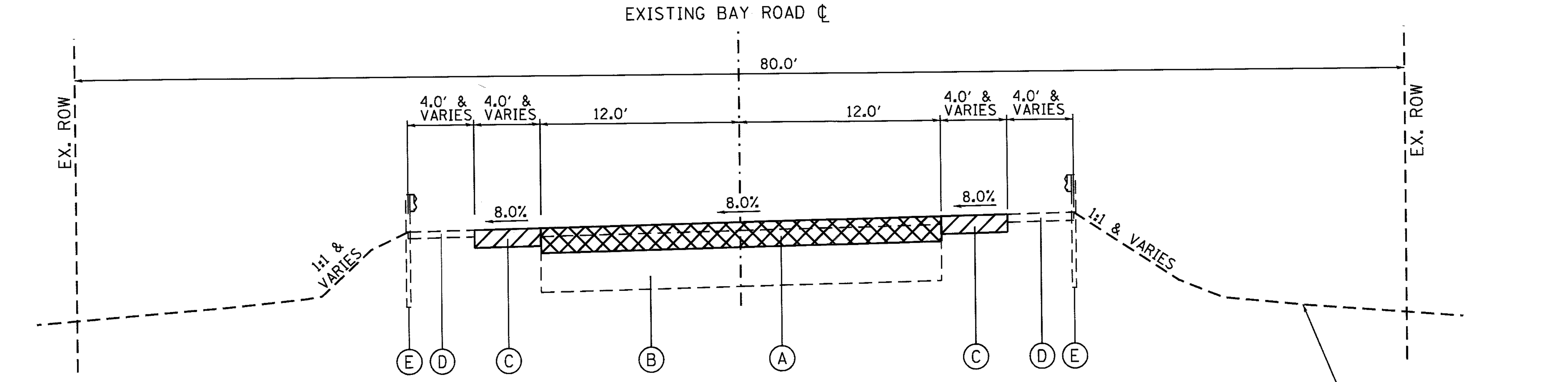
BAY ROAD OVER LILY LAKE DRAIN
TYPICAL SECTIONS

SCALE: NTS | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	4

CONTRACT NO. 61D64

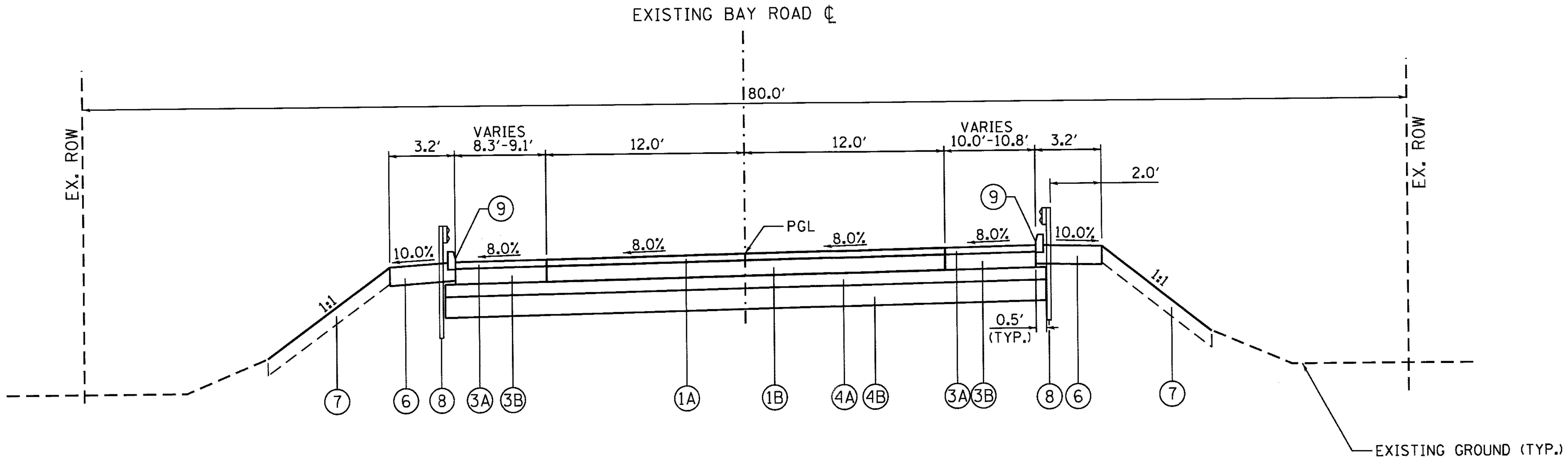
ILLINOIS FED. AID PROJECT



EXISTING TYPICAL SECTION

STA. 218+79.79 TO 218+94.79, BAY ROAD
STA. 220+04.44 TO 220+19.44, BAY ROAD

BRIDGE OMISSION: STA. 218+94.79 TO 220+04.44, BAY ROAD



PROPOSED TYPICAL SECTION RECONSTRUCTION

STA. 218+79.79 TO 218+94.79, BAY ROAD
STA. 220+04.44 TO 220+19.44, BAY ROAD

BRIDGE OMISSION: STA. 218+94.79 TO 220+04.44, BAY ROAD

EXISTING LEGEND

- (A) HOT-MIX ASPHALT PAVEMENT, ±8"
- (B) AGGREGATE SUBGRADE, ±12"
- (C) HOT-MIX ASPHALT SHOULDER, ±6"
- (D) AGGREGATE SHOULDER, ±2"
- (E) GUARDRAIL (SEE REMOVAL PLAN FOR DETAILS)
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL, 2"
- PAVED SHOULDER REMOVAL

PROPOSED LEGEND

- (1) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 10"
  - (1A) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
  - (1B) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, 8"
- (2) LEVELING BINDER (MACHINE METHOD), N50, SEE NOTE 1
- (3) HOT-MIX ASPHALT SHOULDERS, 10", SEE NOTE 2
  - (3A) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"
  - (3B) HOT-MIX ASPHALT BASE COURSE, 8"
- (4) AGGREGATE SUBGRADE IMPROVEMENT, 12"
  - (4A) CAPPING AGGREGATE, MINIMUM 3"
  - (4B) COURSE AGGREGATE, 9"
- (5) SUBBASE GRANULAR MATERIAL, TYPE B, 6"
- (6) AGGREGATE SHOULDERS, TYPE B 6"
- (7) TOPSOIL FURNISH AND PLACE, 6"
- (8) GUARDRAIL (SEE ROADWAY PLANS FOR DETAILS)
- (9) CONCRETE CURB, TYPE B
- (10) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 2"

NOTES:

1. LEVELING BINDER SHALL BE USED TO OBTAIN THE PROPOSED SUPERELEVATION AND PROFILE PRIOR TO PLACEMENT OF SURFACE COURSE.
2. ALL LIFTS OF BASE COURSE AND SURFACE COURSE ON HMA SHOULDERS SHALL BE INCLUDED IN THE PRICE FOR HMA SHOULDERS, 8".

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_p2_Sht_typs_02.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - MAW	REVISED -	
	PLOT SCALE = 5.0000 ' / in.	CHECKED - MJM	REVISED -	
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -	

BAY ROAD OVER LILY LAKE DRAIN
TYPICAL SECTIONS

SCALE: NTS | SHEET 2 OF 2 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	5
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			

LOCATION							
STATION	OFFSET	LT/RT		STATION	OFFSET	LT/RT	CONCRETE CURB, TYPE B
							FOOT
218+75.07	21.29	LT	TO	218+93.75	20.26	LT	18.7
218+81.29	22.02	RT		218+95.80	22.55	RT	14.5
220+05.44	20.26	LT		220+23.02	21.03	LT	17.6
220+03.39	22.74	RT		220+18.12	22.74	RT	14.7
						TOTAL	65.6
						USE	66.0

NOTE: STATION & OFFSETS REFER TO THE FACE OF CURB

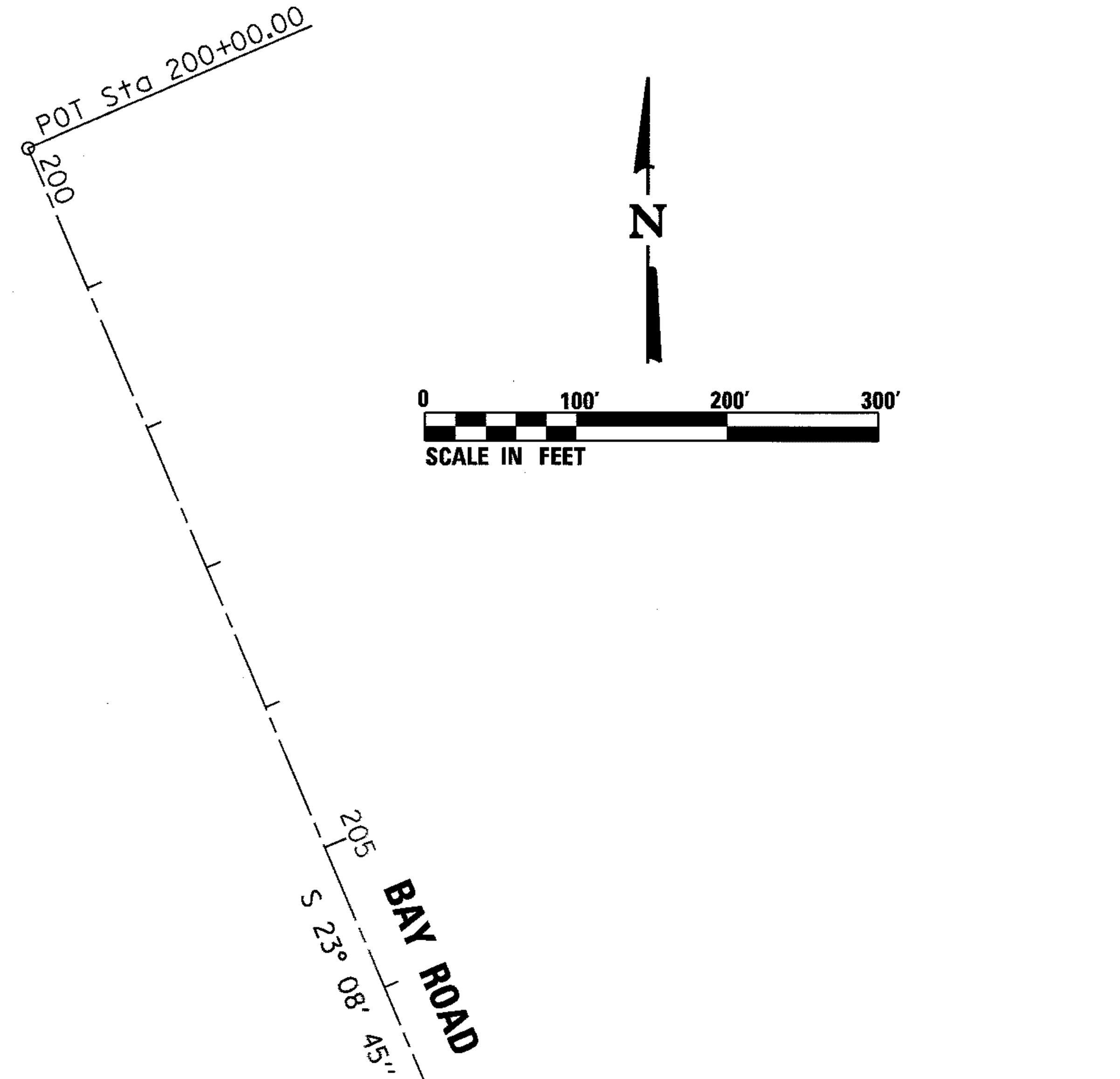
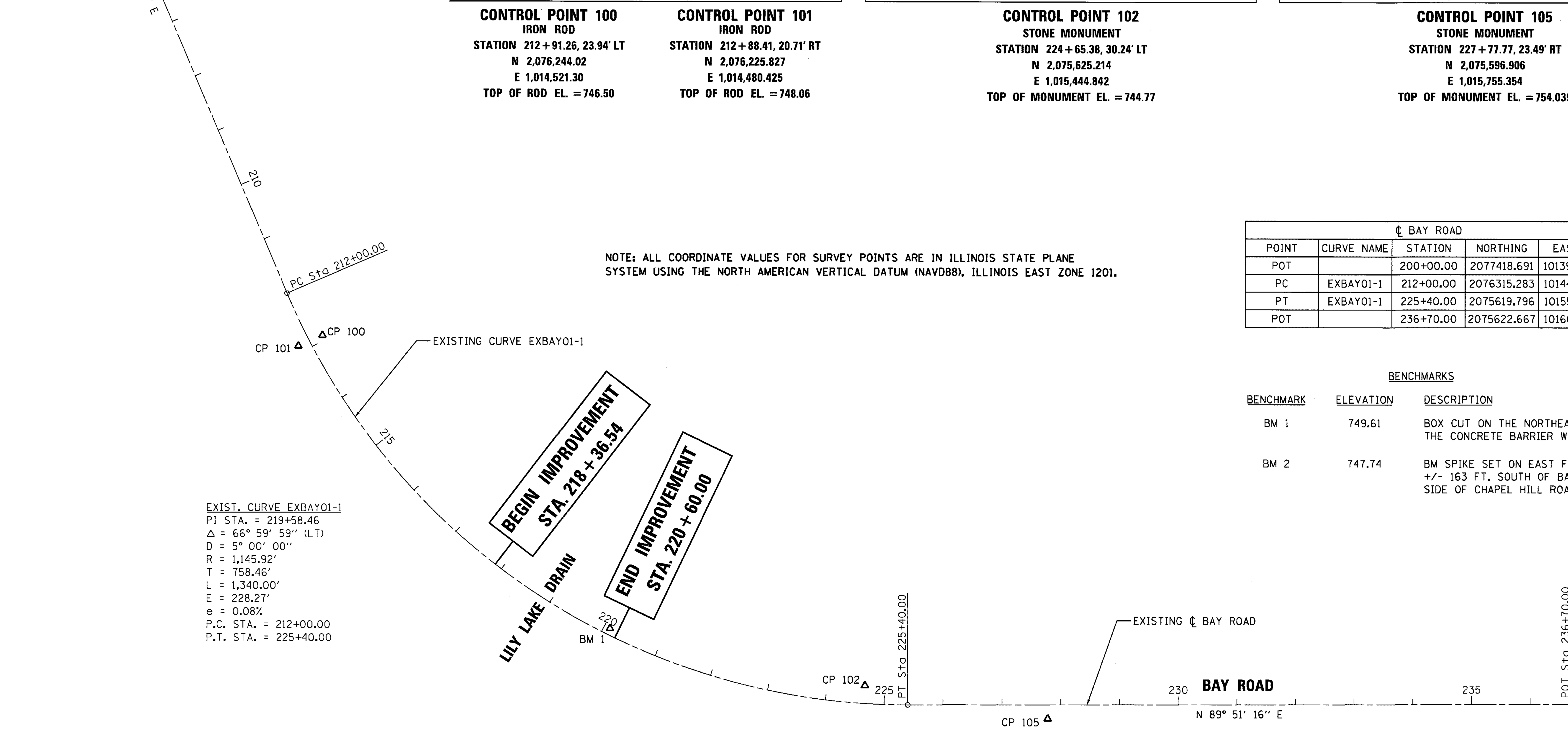
LOCATION									
STATION	OFFSET	LT/RT	TO	STATION	OFFSET	LT/RT	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6	GUARDRAIL REFLECTORS, TYPE B
							FOOT	EACH	EACH
218+28.96	20.28	RT	TO	218+53.48	21.55	RT	25.0	-	1
218+53.48	21.55	RT	TO	218+95.80	22.55	RT	-	1	1
218+37.09	22.02	LT	TO	218+49.83	22.21	LT	12.5	-	1
218+49.83	22.21	LT	TO	218+93.75	20.26	LT	-	1	1
220+03.39	22.88	RT	TO	220+45.67	23.62	RT	-	1	1
220+45.67	23.62	RT	TO	220+57.91	23.06	RT	12.5	-	1
220+05.44	20.26	LT	TO	220+49.36	21.68	LT	-	1	1
220+49.36	21.68	LT	TO	220+62.10	21.23	LT	12.5	-	1
						TOTAL	62.5	4	8

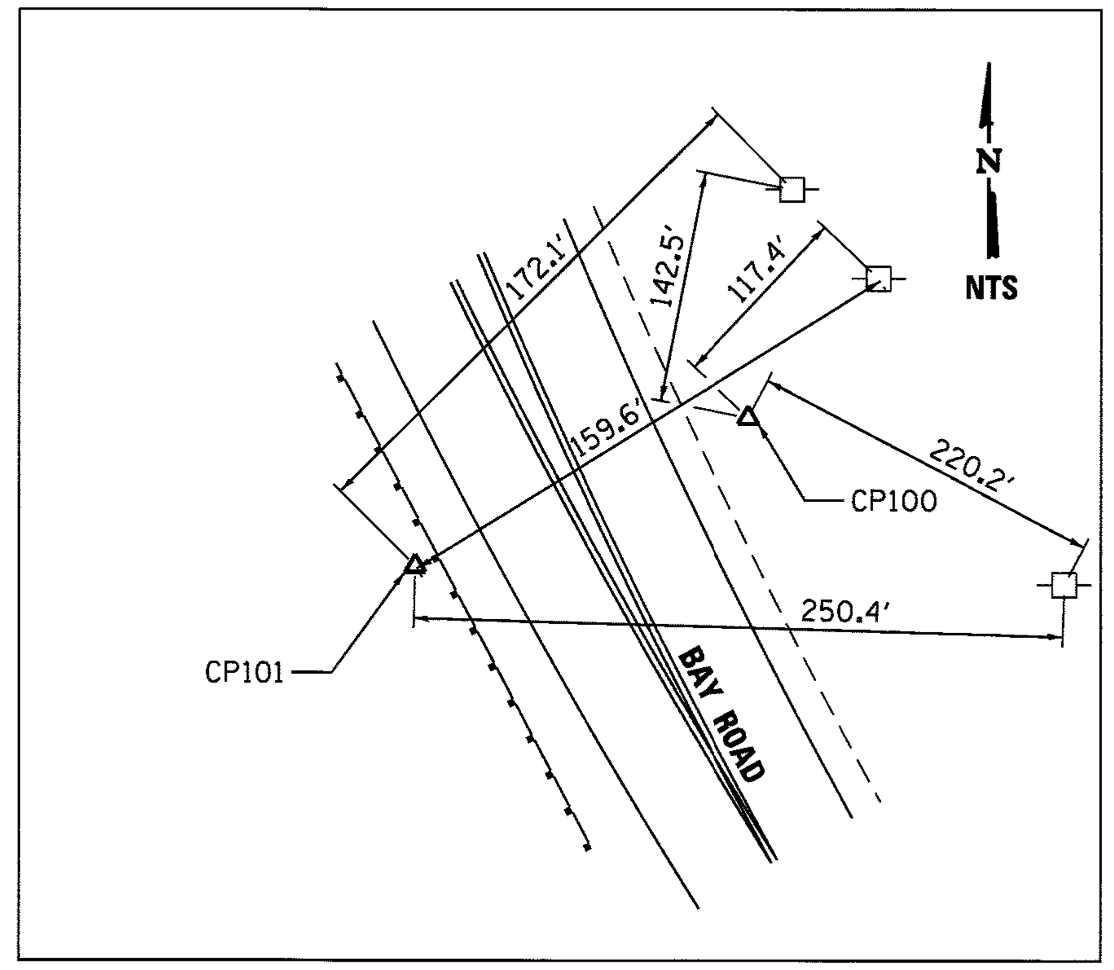
STATION	CUT		FILL		TOPSOIL		DISTANCE	EARTH EXCAVATION		EXCAVATION ADJUSTED FOR SHRINKAGE (20%)		EMBANKMENT		EARTHWORK BALANCE WASTE(+) OR SHORTAGE(-)		TOPSOIL EXCAVATION AND PLACE	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
	STAGE 1	STAGE 2	STAGE 1	STAGE 2	EXCAVATION	PLACEMENT		STAGE 1	STAGE 2	STAGE 1	STAGE 2	STAGE 1	STAGE 2	STAGE 1	STAGE 2		
	SQ FT		SQ FT		SQ FT		FT	CU YD		CU YD		CU YD		CU YD		CU YD	CU YD
218+36.54	3.26	1.66	1.58	4.85	7.45	3.17											
							18.46	3.75	2.59	3.00	2.07	1.66	10.17	1.34	-8.10	3.24	4.54
218+55.00	7.71	5.92	3.28	24.91	11.03	6.31											
							20.00	5.41	4.60	4.33	3.68	1.71	11.24	2.62	-7.56	3.77	5.00
218+75.00	6.90	6.51	1.33	5.44	7.92	3.86											
							4.79	1.22	1.15	0.98	0.92	0.24	0.97	0.74	-0.04	0.68	1.08
218+79.79	6.90	6.51	1.33	5.44	7.92	3.86											
BEGIN RECONSTRUCTION							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
218+79.79	26.99	29.00	5.93	6.28	9.10	5.03											
							13.21	13.21	14.19	10.56	11.35	2.90	3.07	7.66	8.28	2.46	2.99
218+93.00	26.99	29.00	5.93	6.28	9.10	5.03											
							1.74	1.74	1.87	1.39	1.50	0.38	0.40	1.01	1.09	0.32	0.39
218+94.74	26.99	29.00	5.93	6.28	9.10	5.03											
BRIDGE OMISSION																	
220+04.44	24.08	26.34	7.07	13.15	10.28	7.61											
							1.56	1.39	1.52	1.11	1.22	0.41	0.76	0.70	0.46	0.44	0.23
220+06.00	24.08	26.34	7.07	13.15	10.28	7.61											
							13.44	11.99	13.11	9.59	10.49	3.52	6.55	6.07	3.94	3.79	2.00
220+19.44	24.08	26.34	7.07	13.15	10.28	7.61											
END RECONSTRUCTION							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
220+19.44	8.72	8.52	0.75	8.22	8.52	4.12											
							10.56	3.41	3.33	2.73	2.67	0.29	3.21	2.44	-0.55	1.61	2.58
220+30.00	8.72	8.52	0.75	8.22	8.52	4.12											
							20.00	6.62	5.97	5.30	4.78	1.75	8.04	3.55	-3.26	3.85	5.00
220+50.00	9.16	7.61	3.98	13.49	11.01	6.29											
							10.00	1.93	1.82	1.55	1.45	0.89	2.61	0.65	-1.15	1.50	2.70
220+60.00	1.28	2.20	0.85	0.59	6.97	1.82											
							TOTAL	50.67	50.16			0.00	0.00	26.78	-6.89	21.67	26.51
							USE	101.00				0.00		19.89		22.00	27.00

RS&H. 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

FILE NAME = BR_p2_sht_schedule01.dgn

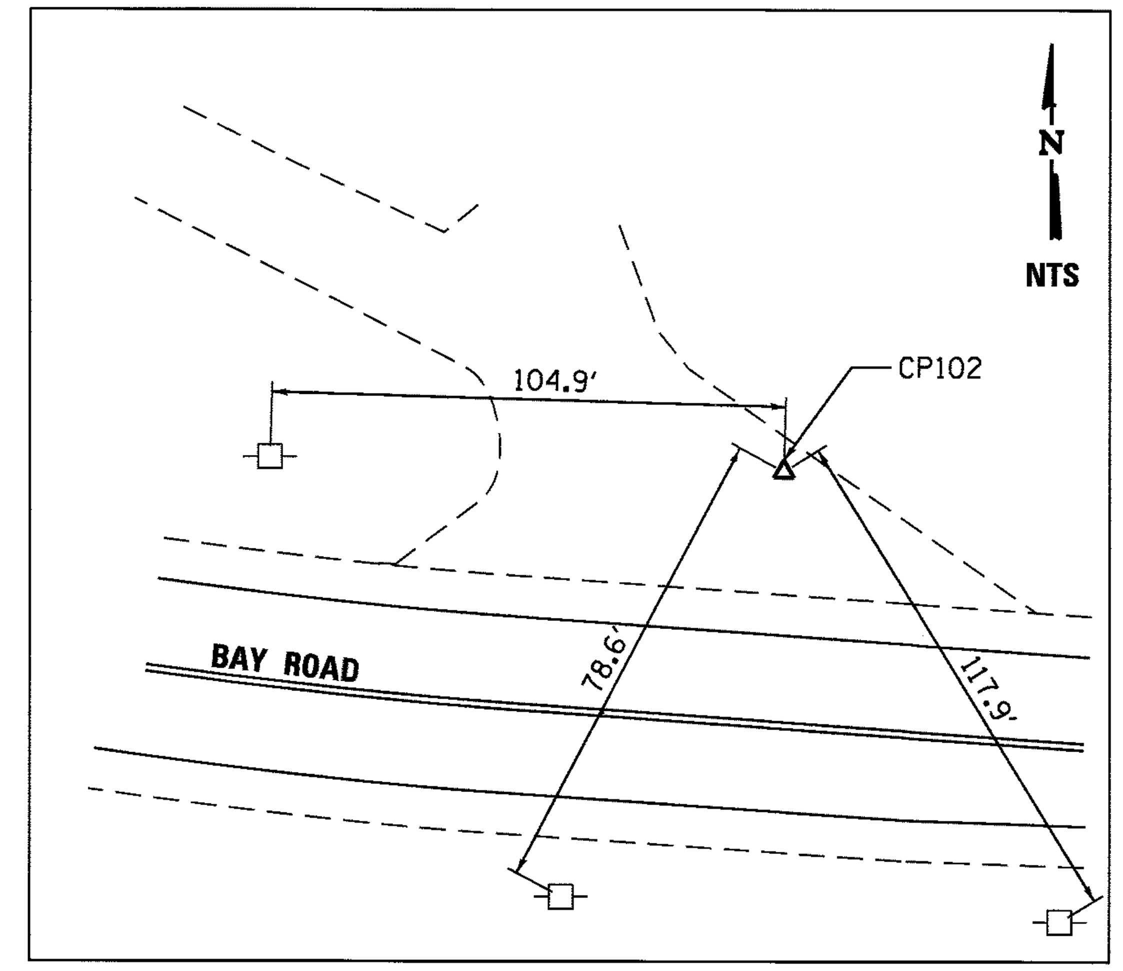
RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN SCHEDULE OF QUANTITIES	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MAW	REVISED -			0186	14-00438-00-BR	McHENRY	46	6
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -					CONTRACT NO. 61D64		
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -		SCALE: NA / SHEET 1 OF 1 SHEETS / STA. / TO STA.		ILLINOIS FED. AID PROJECT			

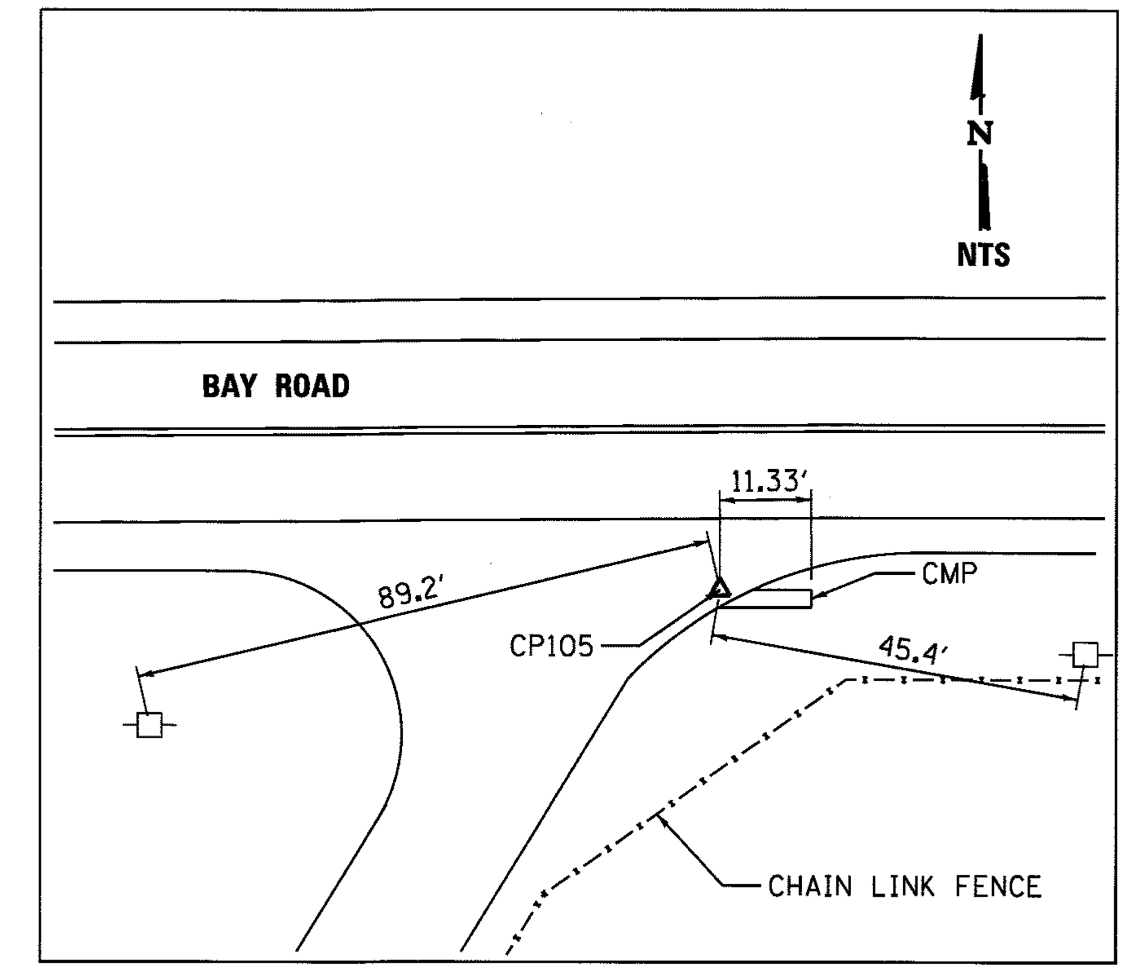


CONTROL POINT 100
IRON ROD
STATION 212+91.26, 23.94' LT
N 2,076,244.02
E 1,014,521.30
TOP OF ROD EL. =746.50

CONTROL POINT 101
IRON ROD
STATION 212+88.41, 20.71' RT
N 2,076,225.827
E 1,014,480.425
TOP OF ROD EL. =748.06



CONTROL POINT 102
STONE MONUMENT
STATION 224+65.38, 30.24' LT
N 2,075,625.214
E 1,015,444.842
TOP OF MONUMENT EL. =744.77



CONTROL POINT 105
STONE MONUMENT
STATION 227+77.77, 23.49' RT
N 2,075,596.906
E 1,015,755.354
TOP OF MONUMENT EL. =754.039

NOTE: ALL COORDINATE VALUES FOR SURVEY POINTS ARE IN ILLINOIS STATE PLANE SYSTEM USING THE NORTH AMERICAN VERTICAL DATUM (NAVD88), ILLINOIS EAST ZONE 1201.

℄ BAY ROAD				
POINT	CURVE NAME	STATION	NORTHING	EASTING
POT		200+00.00	2077418.691	1013989.244
PC	EXBAY01-1	212+00.00	2076315.283	1014460.931
PT	EXBAY01-1	225+40.00	2075619.796	1015517.525
POT		236+70.00	2075622.667	1016647.521

BENCHMARKS

BENCHMARK	ELEVATION	DESCRIPTION
BM 1	749.61	BOX CUT ON THE NORTHEAST CORNER OF THE CONCRETE BARRIER WALL AT STA. 220+04.74
BM 2	747.74	BM SPIKE SET ON EAST FACE OF LIGHT POLE +/- 163 FT. SOUTH OF BAY ROAD ON WEST SIDE OF CHAPEL HILL ROAD.

EXIST. CURVE EXBAY01-1
PI STA. = 219+58.46
Δ = 66° 59' 59" (LT)
D = 5° 00' 00"
R = 1,145.92'
T = 758.46'
L = 1,340.00'
E = 228.27'
e = 0.08%
P.C. STA. = 212+00.00
P.T. STA. = 225+40.00

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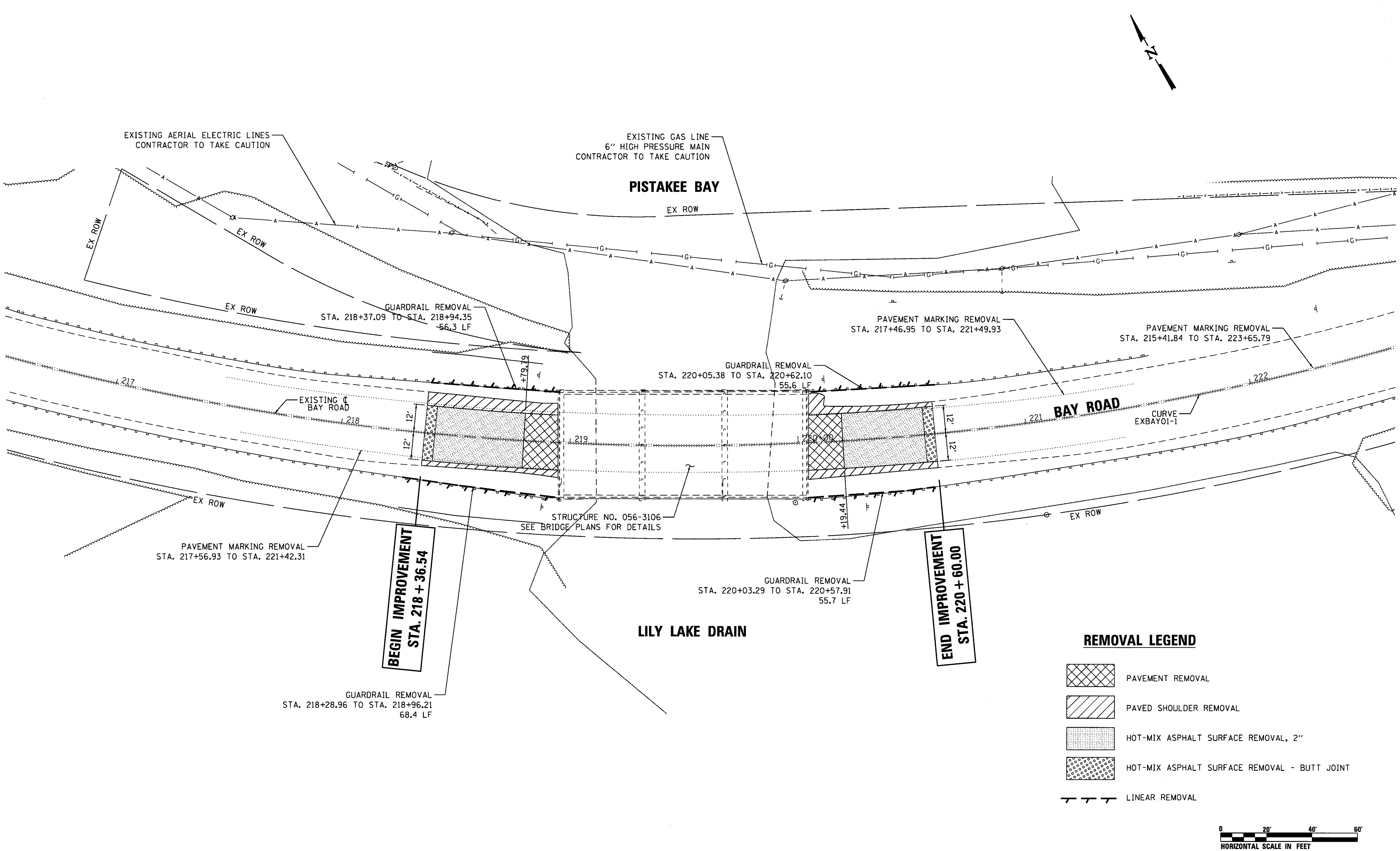


FILE NAME = BR_p2_sht_rem01.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN REMOVAL PLAN	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MAW	REVISED -			0186	14-00438-00-BR	McHENRY	46	8
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -					CONTRACT NO. 61D64		
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -		SCALE: 1" = 20' | SHEET 1 OF 1 SHEETS | STA. 217+00.00 TO STA. 222+00.00			ILLINOIS FED. AID PROJECT		

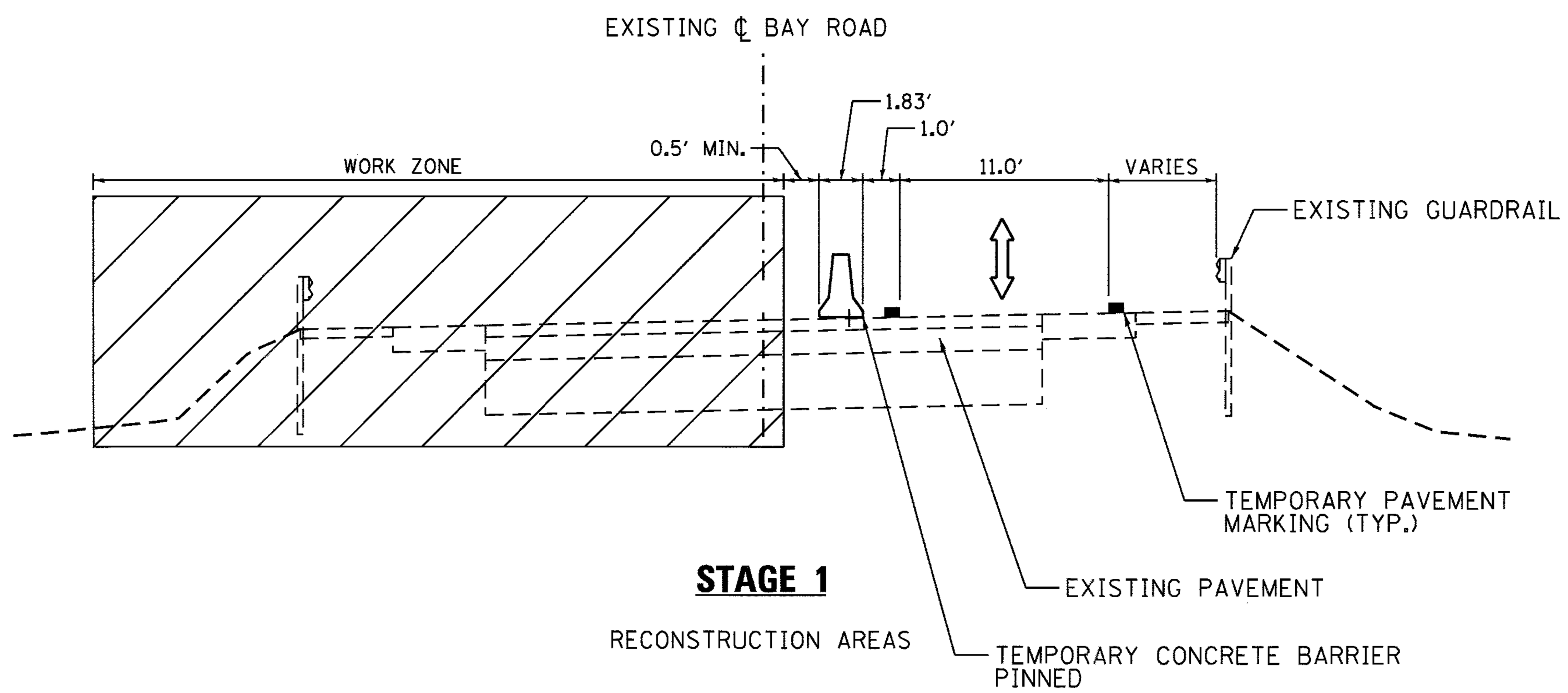
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

RS&H

USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN ROADWAY PLAN AND PROFILE	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - MAW	REVISED -			0186	14-00438-00-BR	McHENRY	46	9
PLOT SCALE = 20.0000 ′ / in.	CHECKED - MJM	REVISED -					CONTRACT NO. 61D64		
PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -		SCALE: 1″ = 20′ SHEET 1 OF 1 SHEETS STA. 217+00.00 TO STA. 222+00.00		ILLINOIS FED. AID PROJECT			

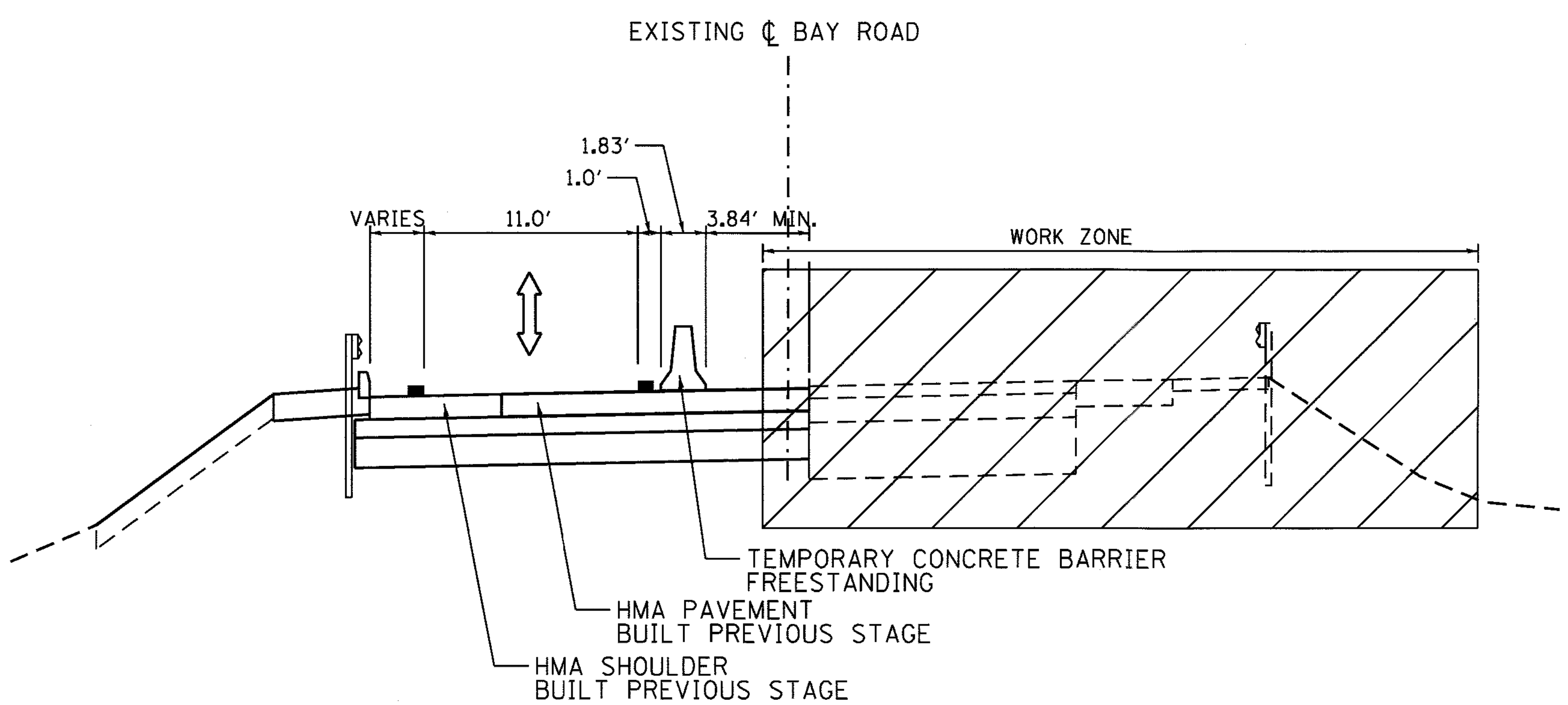
FILE NAME = BR_p2_sht_plnprf01.dgn

RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



STAGE 1

RECONSTRUCTION AREAS



STAGE 2

RECONSTRUCTION AREAS

GENERAL NOTES – TRAFFIC CONTROL

FLUORESCENT VESTS AND HARD HATS: ALL CONSTRUCTION PERSONNEL WILL BE REQUIRED TO WEAR FLUORESCENT ORANGE, FLUORESCENT YELLOW/GREEN OR A COMBINATION OF FLUORESCENT ORANGE AND FLUORESCENT YELLOW/GREEN VESTS AND HARD HATS AT ALL TIMES WHILE ON THE CONSTRUCTION SITE. COMPLIANCE WITH THIS REQUIREMENT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

THE CONTRACTOR SHALL NOT MOUNT SIGNS ON EXISTING SIGNS.

SEQUENCE OF CONSTRUCTION

PRESTAGE CONSTRUCTION (NOT SHOWN ON PLANS):

1. PLACE TEMPORARY PAVEMENT AT EASTBOUND EDGE OF PAVEMENT.

PRESTAGE TRAFFIC (NOT SHOWN ON PLANS):

UTILIZE HIGHWAY STANDARD 701326 FOR TRAFFIC CONTROL AND PROTECTION DURING EXCAVATING AND PAVING OPERATIONS.

STAGE 1 CONSTRUCTION:

1. REMOVE WESTBOUND PAVEMENT WITHIN RECONSTRUCTION LIMITS.
2. REMOVE AND REPLACE THE WESTBOUND PORTION OF BRIDGE STRUCTURE.
3. PLACE SUBGRADE AND CONSTRUCT BASE COURSE AND BINDER COURSE OF WESTBOUND PAVEMENT RECONSTRUCTION.
4. PLACE SUBGRADE AND CONSTRUCT BASE COURSE FOR WESTBOUND PAVED SHOULDER.
5. MILL WESTBOUND PAVEMENT WITHIN RESURFACING LIMITS.
6. CONSTRUCT WESTBOUND GUARDRAIL INSTALLATIONS.
7. CONSTRUCT TEMPORARY PAVEMENT TO THE LIMITS SHOWN ON THE PLANS.

STAGE 1 TRAFFIC:

PROVIDE ONE ELEVEN FOOT LANE THROUGH THE PROJECT LIMITS ON EXISTING EASTBOUND PAVEMENT AND TEMPORARY PAVEMENT. UTILIZE HIGHWAY STANDARD 701321 AND TEMPORARY TRAFFIC SIGNALS FOR TRAFFIC CONTROL AND PROTECTION. UTILIZE TEMPORARY CONCRETE BARRIER BETWEEN TRAFFIC AND THE WORK ZONE AS SHOWN ON PLANS.

STAGE 2 CONSTRUCTION:

1. REMOVE EASTBOUND PAVEMENT WITHIN RECONSTRUCTION LIMITS.
2. REMOVE AND REPLACE THE EASTBOUND PORTION OF BRIDGE STRUCTURE.
3. PLACE SUBGRADE AND CONSTRUCT BASE COURSE AND BINDER COURSE OF EASTBOUND PAVEMENT RECONSTRUCTION.
4. PLACE SUBGRADE AND CONSTRUCT BASE COURSE FOR EASTBOUND PAVED SHOULDER.
5. MILL EASTBOUND PAVEMENT WITHIN RESURFACING LIMITS.
6. CONSTRUCT EASTBOUND GUARDRAIL INSTALLATIONS.

STAGE 2 TRAFFIC:

PROVIDE ONE ELEVEN FOOT LANE THROUGH THE PROJECT LIMITS ON EXISTING WESTBOUND PAVEMENT AND TEMPORARY PAVEMENT. UTILIZE HIGHWAY STANDARD 701321 AND TEMPORARY TRAFFIC SIGNALS FOR TRAFFIC CONTROL AND PROTECTION. UTILIZE TEMPORARY CONCRETE BARRIER BETWEEN TRAFFIC AND THE WORK ZONE AS SHOWN ON PLANS.

STAGE 3 CONSTRUCTION (NOT SHOWN ON PLANS):

1. CONSTRUCT SURFACE COURSE ON EASTBOUND AND WESTBOUND PAVEMENT.
2. PLACE PERMANENT PAVEMENT MARKINGS.

STAGE 3 TRAFFIC (NOT SHOWN ON PLANS):

TRAFFIC IS IN THE PROPOSED CONFIGURATION. UTILIZE HIGHWAY STANDARD 701311 FOR TRAFFIC CONTROL AND PROTECTION.

FILE NAME = BR_p2_sht_MOTgennotes.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

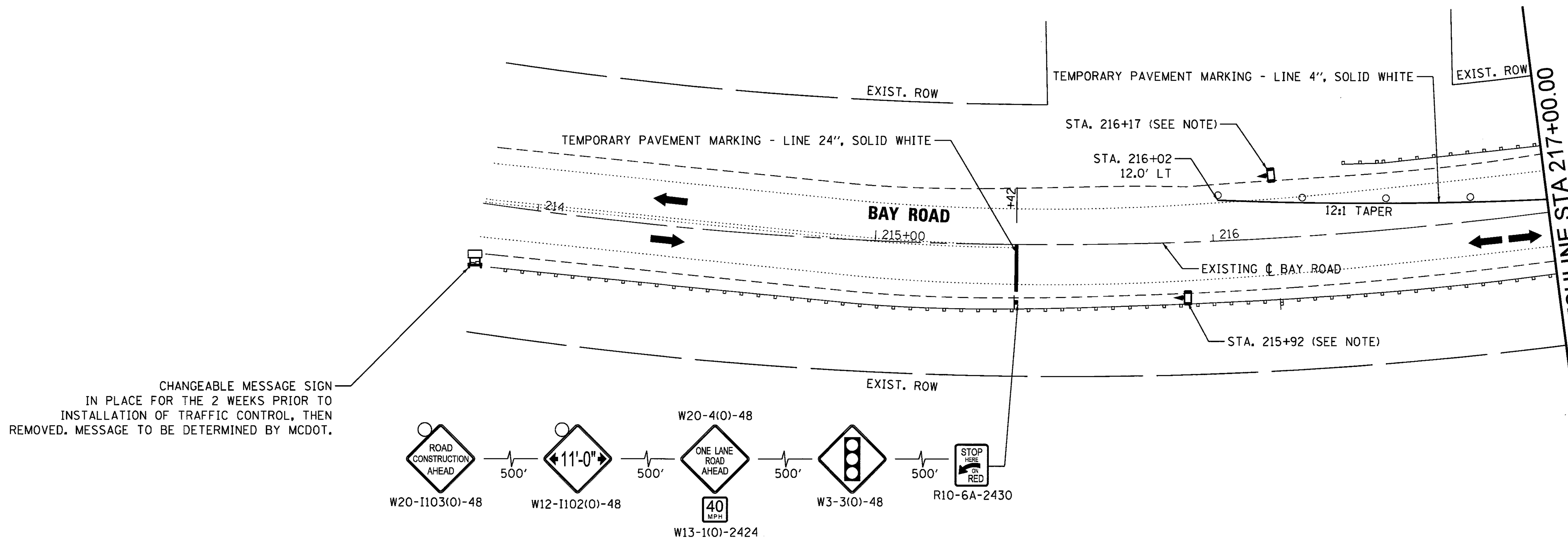
BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
GENERAL NOTES AND SEQUENCE OF CONSTRUCTION

SCALE: NA | SHEET 1 OF 1 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	10
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

0 20' 40' 60'
HORIZONTAL SCALE IN FEET



NOTE:

SEE HIGHWAY STANDARD 701321 AND SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNAL DETAILS. EXACT LOCATION AND LAYOUT OF TEMPORARY SIGNALS TO BE DETERMINED IN THE FIELD.

○ DRUM OR TYPE II BARRICADE

➡ DIRECTION OF TRAFFIC

WORK AREA

TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

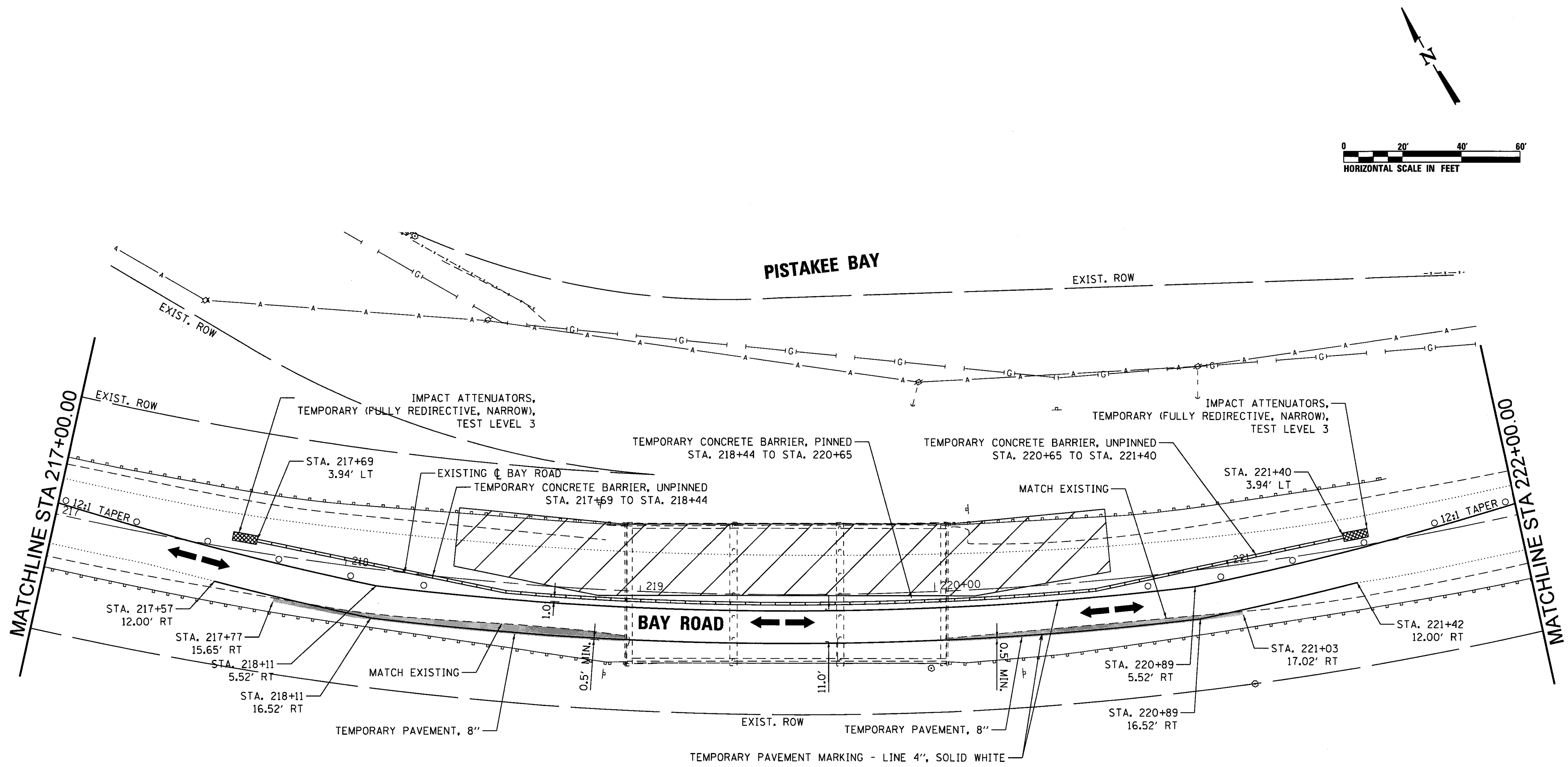
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
STAGE 1

SCALE: 1" = 20' | SHEET 1 OF 6 SHEETS | STA. 214+00.00 TO STA. 217+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	11
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			

FILE NAME = BR_p2_sht_stag1g11.dgn



LEGEND

○ DRUM OR TYPE II BARRICADE

➡ DIRECTION OF TRAFFIC

▨ WORK AREA

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

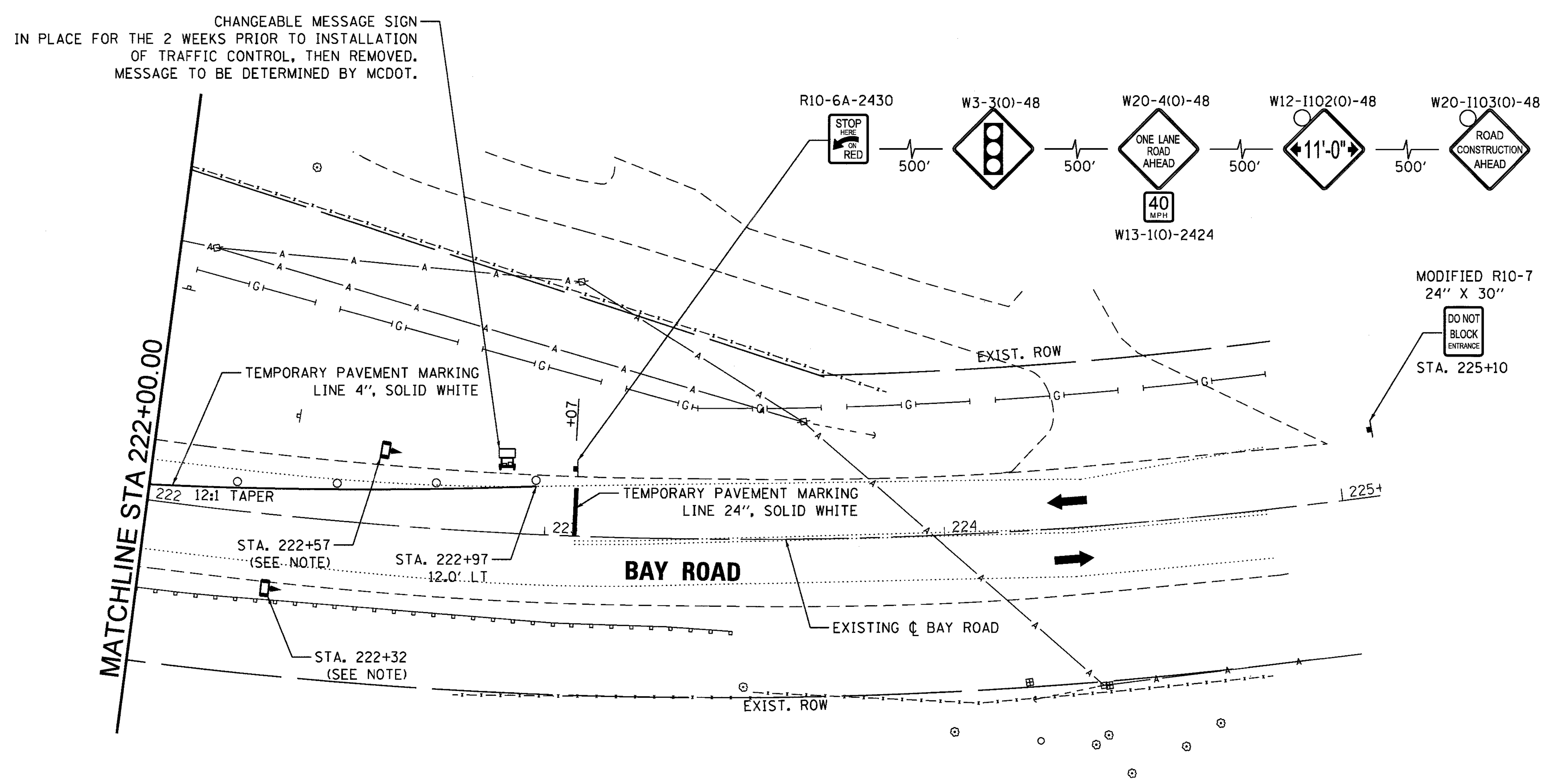
FILE NAME = BR_p2_sht_staging12.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - MAW	REVISED -	
	PLOT SCALE = 20.0000 '/ in.	CHECKED - MJM	REVISED -	
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -	

BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
STAGE 1

SCALE: 1" = 20' | SHEET 2 OF 6 SHEETS | STA. 217+00.00 TO STA. 222+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	12
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		



0 20' 40' 60'
HORIZONTAL SCALE IN FEET

NOTE:

SEE HIGHWAY STANDARD 701321 AND SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNAL DETAILS. EXACT LOCATION AND LAYOUT OF TEMPORARY SIGNALS TO BE DETERMINED IN THE FIELD.

LEGEND

- ○ DRUM OR TYPE II BARRICADE
- ➡ DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY PRTABLE BRIDGE TRAFFIC SIGNALS

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_p2_sht_staging13.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
STAGE 1

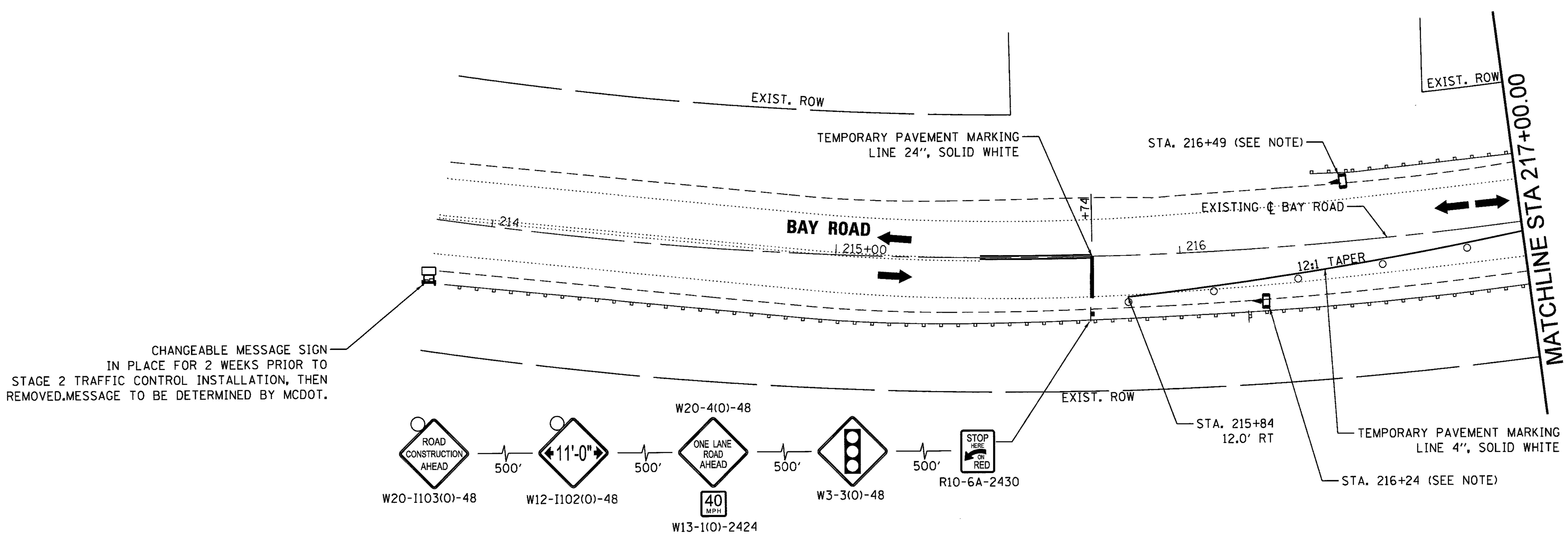
SCALE: 1" = 20' | SHEET 3 OF 6 SHEETS | STA. 222+00.00 TO STA. 225+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	13
		CONTRACT NO. 61D64		

ILLINOIS FED. AID PROJECT

RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

0 20' 40' 60'
HORIZONTAL SCALE IN FEET



NOTE:

SEE HIGHWAY STANDARD 701321 AND SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNAL DETAILS. EXACT LOCATION AND LAYOUT OF TEMPORARY SIGNALS TO BE DETERMINED IN THE FIELD.

LEGEND

- ○ DRUM OR TYPE II BARRICADE
- ➡ DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS

FILE NAME = BR_p2_sht_staging21.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

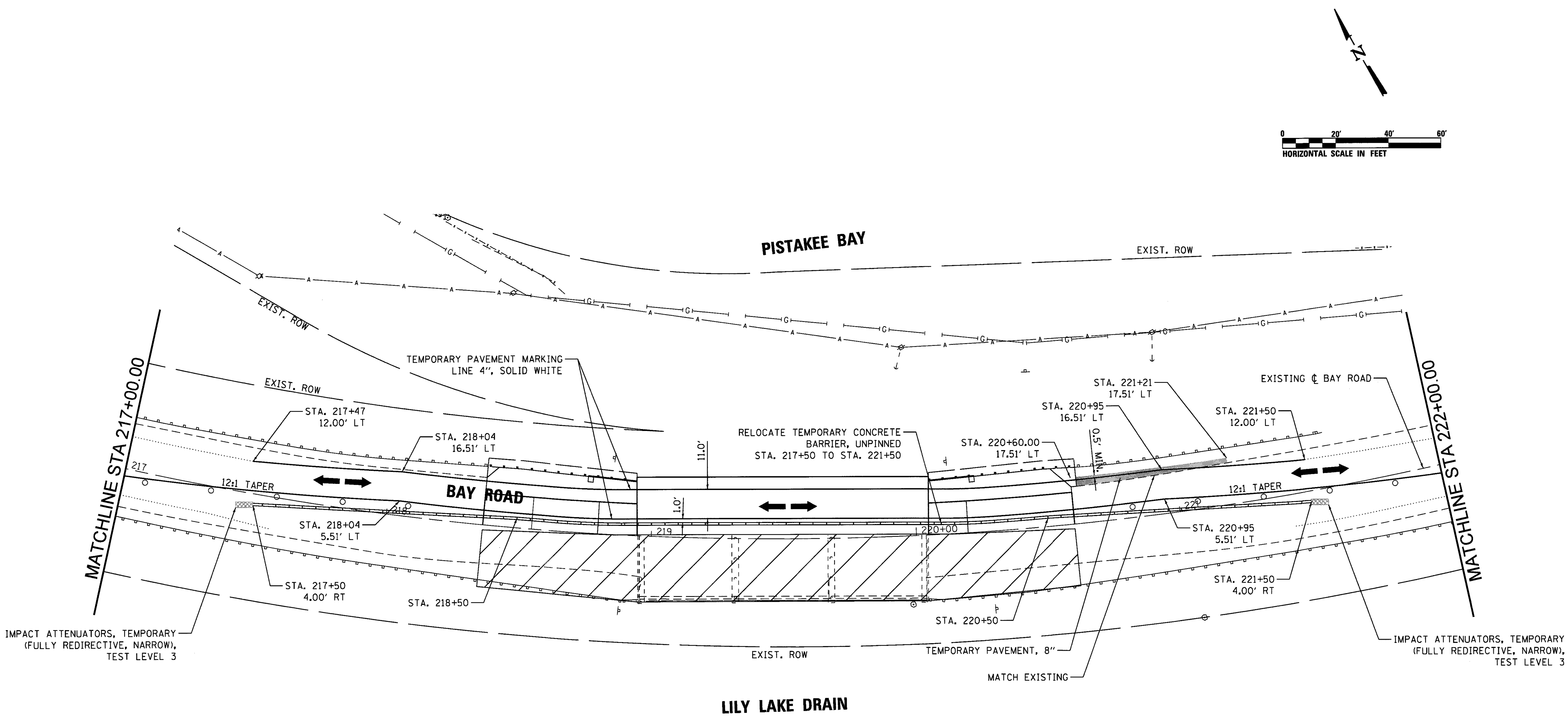
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
STAGE 2

SCALE: 1" = 20' | SHEET 4 OF 6 SHEETS | STA. 214+00.00 TO STA. 217+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	14
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174



LEGEND

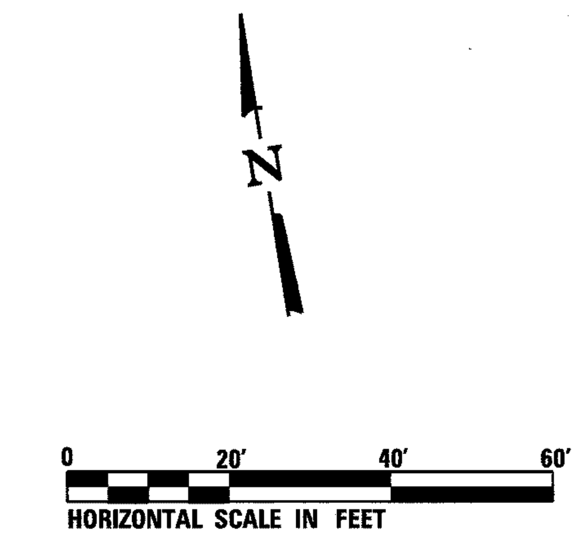
- DRUM OR TYPE II BARRICADE
- DIRECTION OF TRAFFIC
- WORK AREA

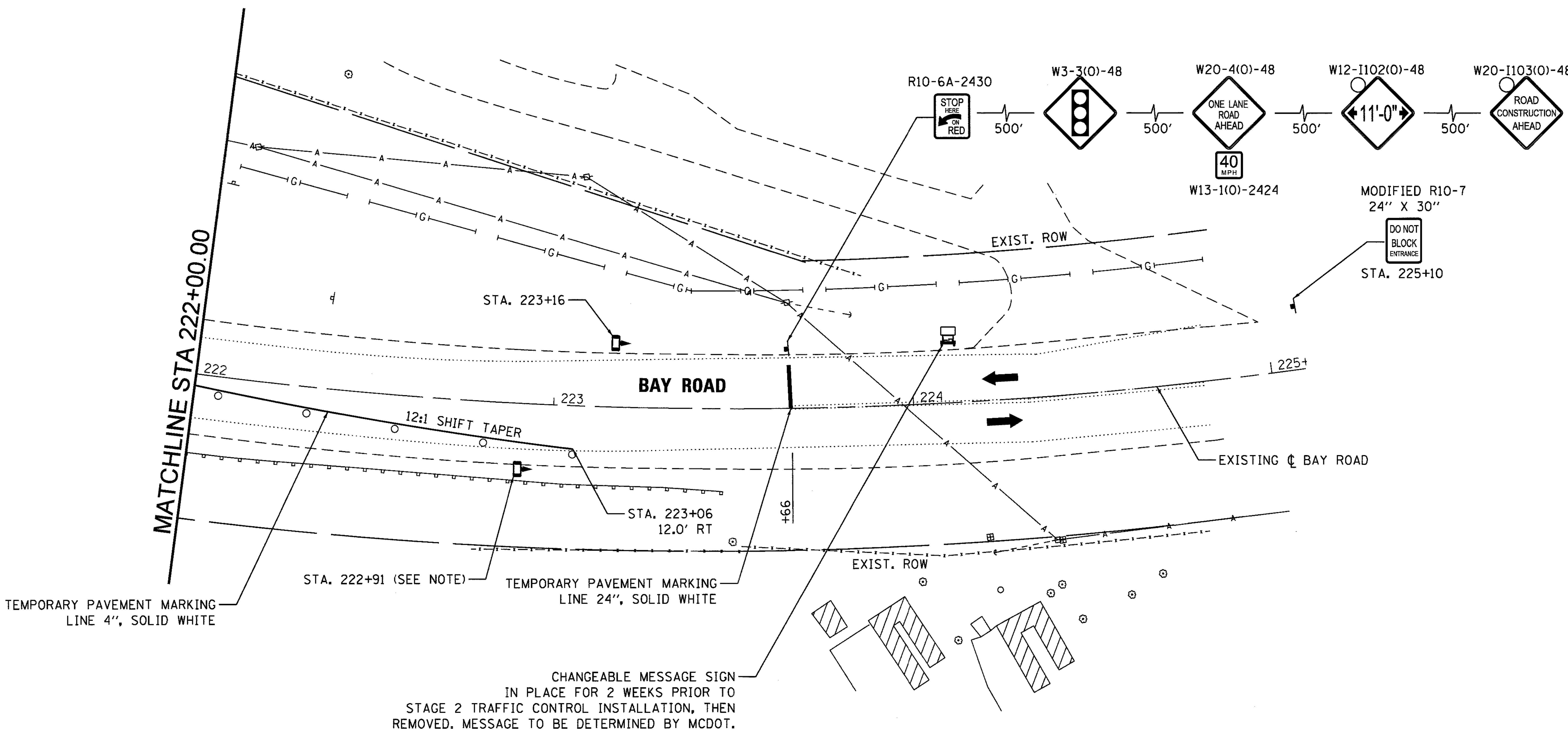
RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL STAGE 2
		DRAWN - MAW	REVISED -		
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -		
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -		SCALE: 1" = 20' SHEET 5 OF 6 SHEETS STA. 217+00.00 TO STA. 222+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	15
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

FILE NAME = BR_p2_sht_staging22.dgn

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174





NOTE:

SEE HIGHWAY STANDARD 701321 AND SPECIAL PROVISIONS FOR TEMPORARY BRIDGE TRAFFIC SIGNAL DETAILS. EXACT LOCATION AND LAYOUT OF TEMPORARY SIGNALS TO BE DETERMINED IN THE FIELD.

LEGEND

- ○ DRUM OR TYPE II BARRICADE
- ➡ DIRECTION OF TRAFFIC
- WORK AREA
- TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -
		DRAWN - MAW	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL
STAGE 2

SCALE: 1" = 20' | SHEET 6 OF 6 SHEETS | STA. 222+00.00 TO STA. 225+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	16
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

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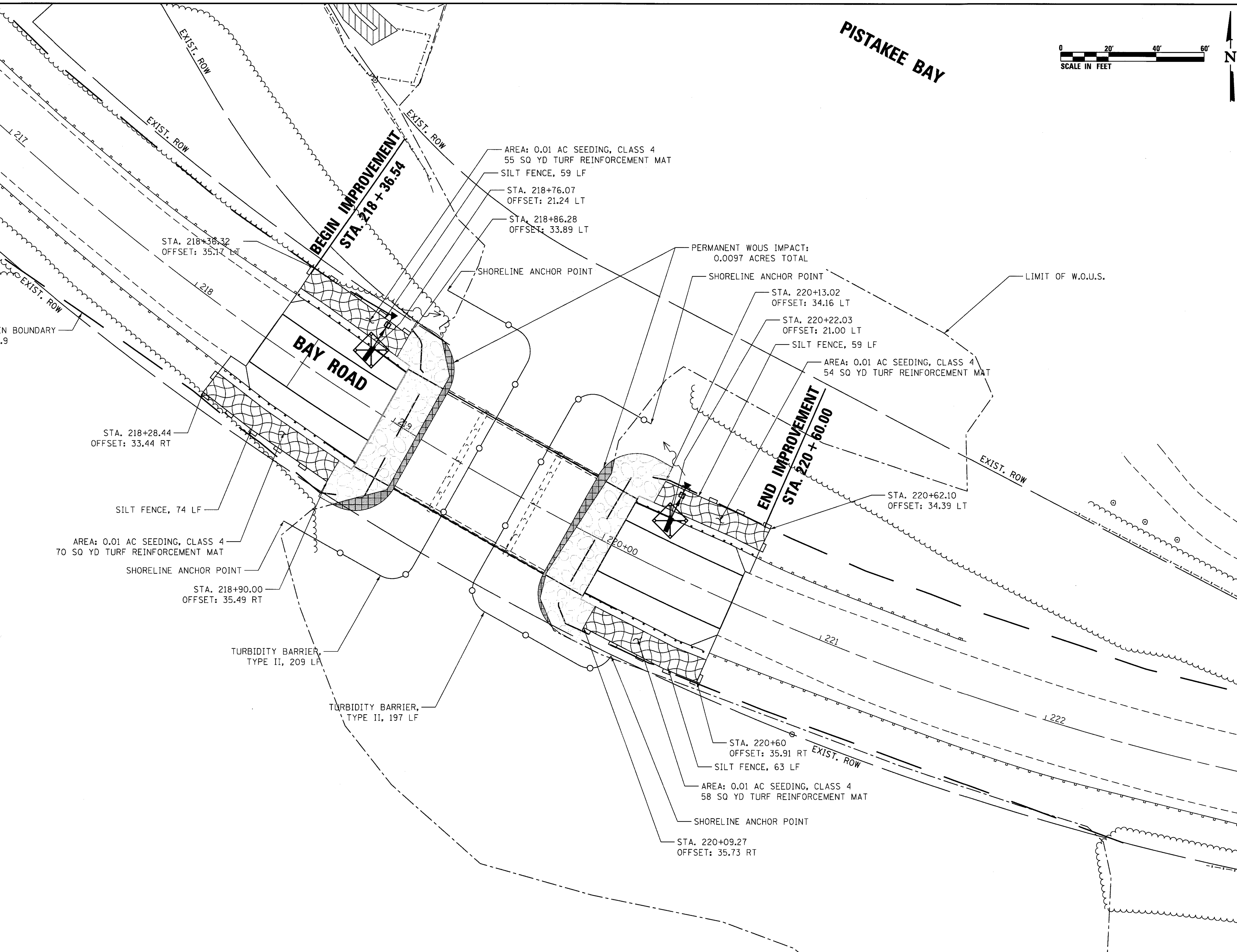

NOTES:

1. SEE IDOT STANDARD 280001-07 FOR EROSION CONTROL ITEM DETAILS.
2. ALL EROSION CONTROL MEASURES TO BE CONSIDERED INITIAL CONSTRUCTION BY THE EROSION CONTROL/LANDSCAPING CONTRACTOR.
3. ALL EROSION CONTROL MEASURES TO BE INSPECTED DAILY BY THE EROSION CONTROL LANDSCAPING CONTRACTOR. ANY MEASURES AT LEAST 50 PERCENT FULL SHALL BE CLEARED OF SEDIMENT.
4. ALL EXPOSED EARTH SHALL BE PERMANENTLY SEEDED ACCORDING TO IDOT STANDARD SPECS FOR ROAD AND BRIDGE CONSTRUCTION.
5. ALL IN-STREAM WORK, INCLUDING, BUT NOT LIMITED TO, EXCAVATION AND INSTALLATION OF RIPRAP, SHALL BE PERFORMED AFTER THE INSTALLATION OF THE TURBIDITY CURTAIN.
6. SHORELINE ANCHOR POINTS SHALL BE ATTACHED TO A NEARBY TREE OR INSTALLED POST 8" OR MORE IN DIAMETER, AT AN ELEVATION ABOVE THE ANTICIPATED HIGH WATER LEVEL. THE POST/TREE LOCATION MUST BE A MINIMUM OF 25 FEET FROM THE WATERS EDGE.

LEGEND

- TURF REINFORCEMENT MAT SEEDING, CLASS 4
- PERIMETER EROSION BARRIER (SILT FENCE)
- INLET FILTERS
- TURBIDITY BARRIER
- WETLAND/WOUS IMPACTS
- PROPOSED RIPRAP (SEE STRUCTURES SHEETS)
- FLOODPLAIN LIMIT
- EXISTING SHORELINE

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_p2_sht_ESC.dgn

2IM GROUP	2IM Group, LLC 118 South Clinton Suite 350 Chicago, IL 60661	USER NAME = martinm	DESIGNED - BR	REVISED -
			DRAWN - BR	REVISED -
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		PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

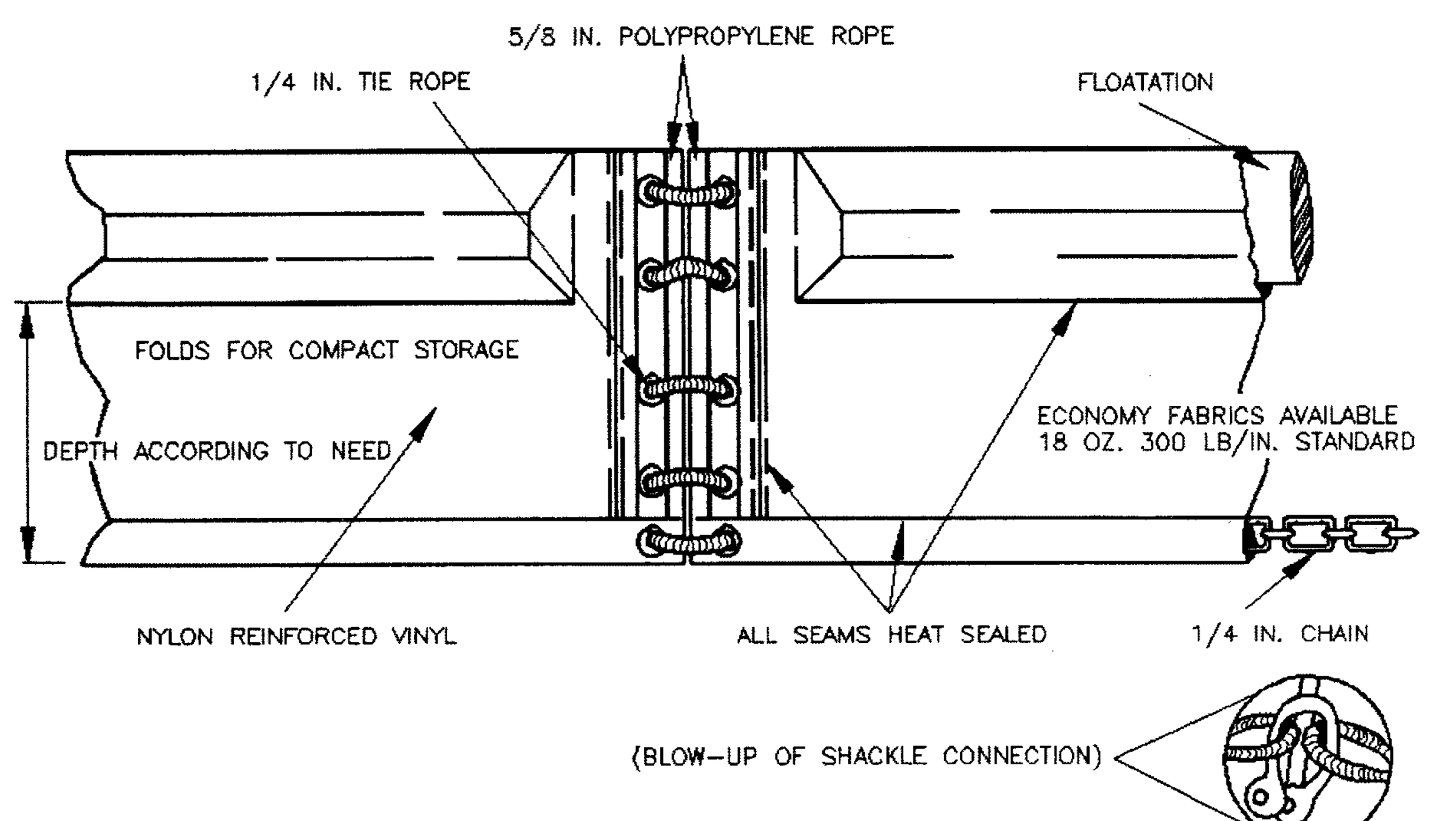
BAY ROAD OVER LILY LAKE DRAIN
EROSION AND SEDIMENT CONTROL

SCALE: 1" = 20' | SHEET 1 OF 2 SHEETS | STA. TO STA.

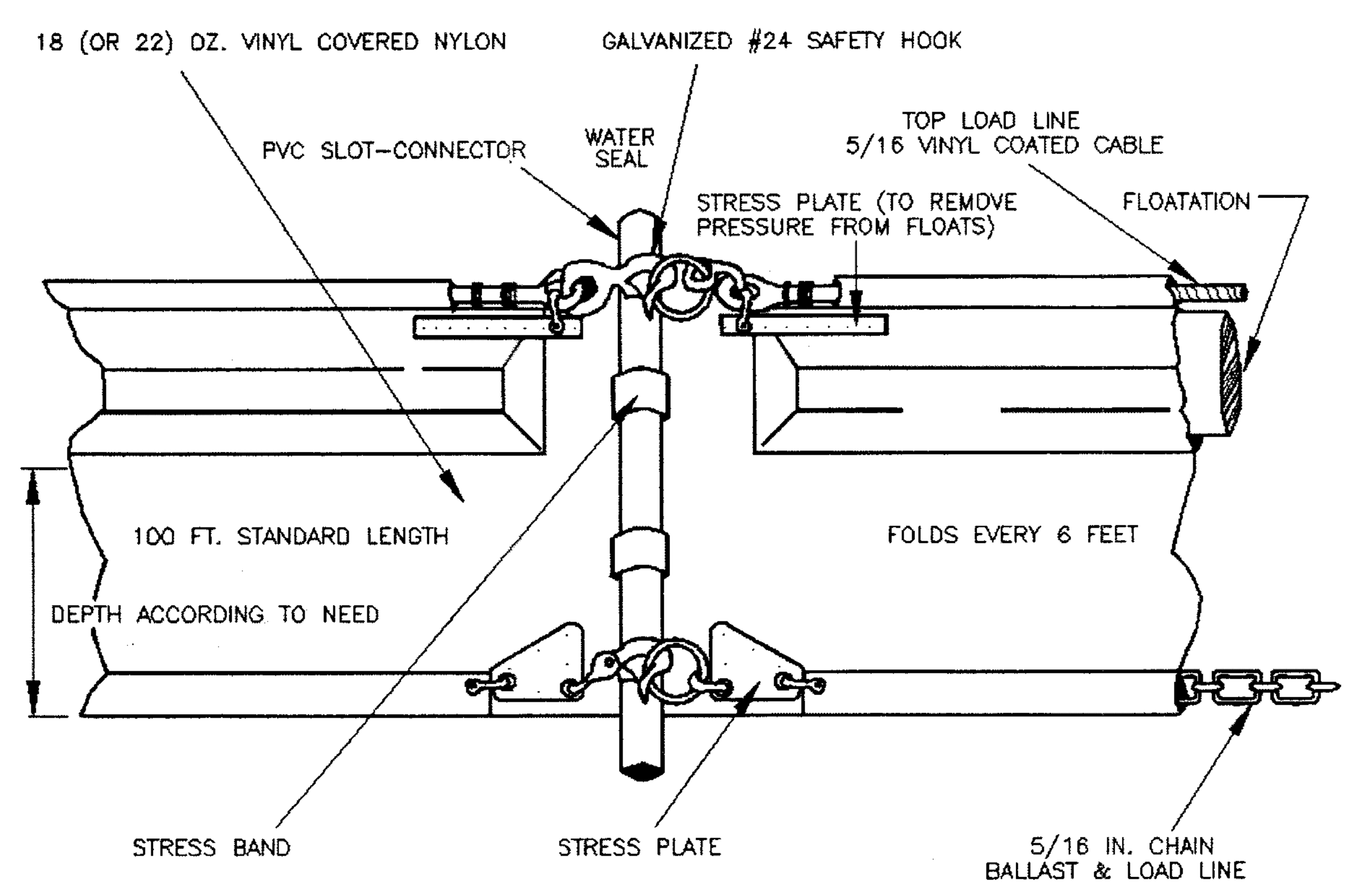
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	17
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

TURBIDITY CURTAIN

TYPE I

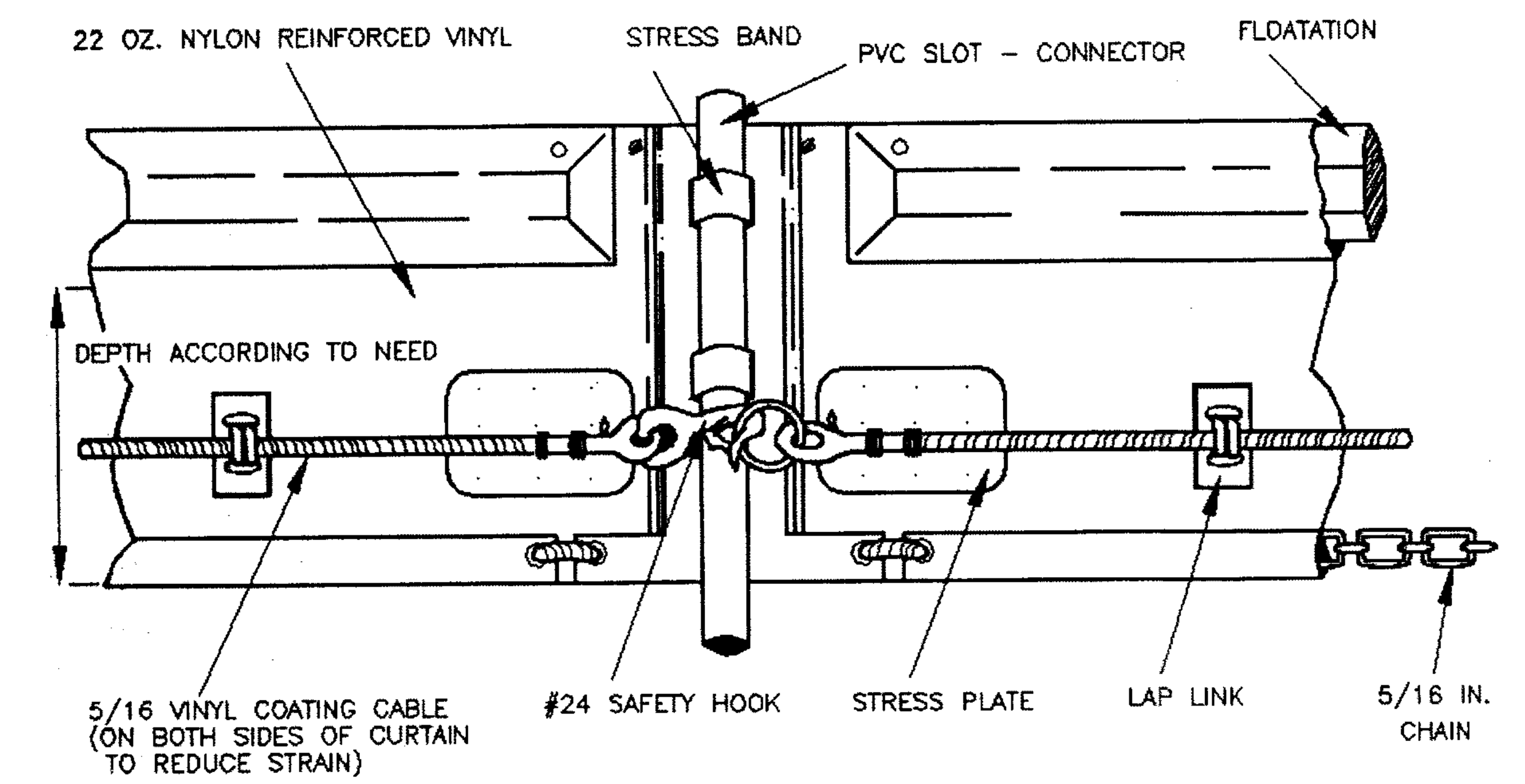


TYPE II

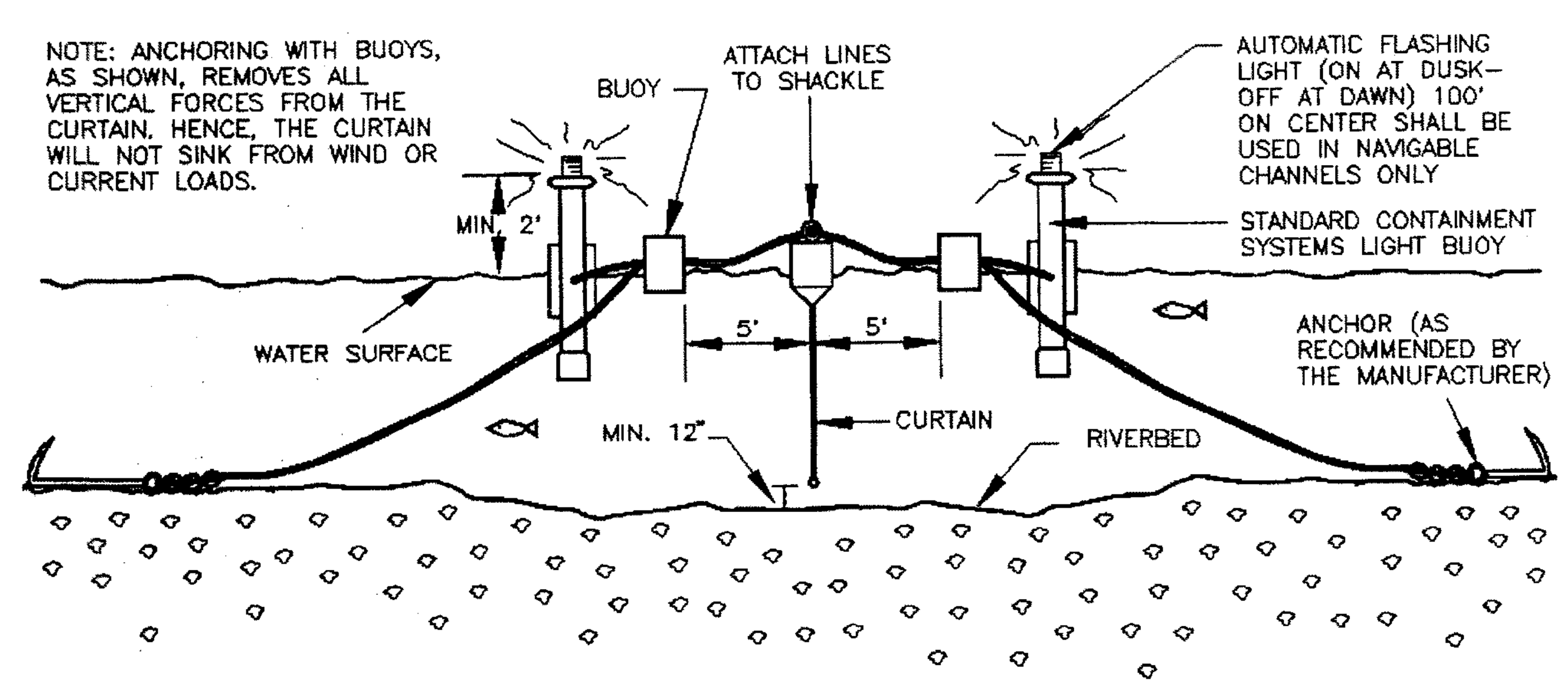


TURBIDITY CURTAIN

TYPE III

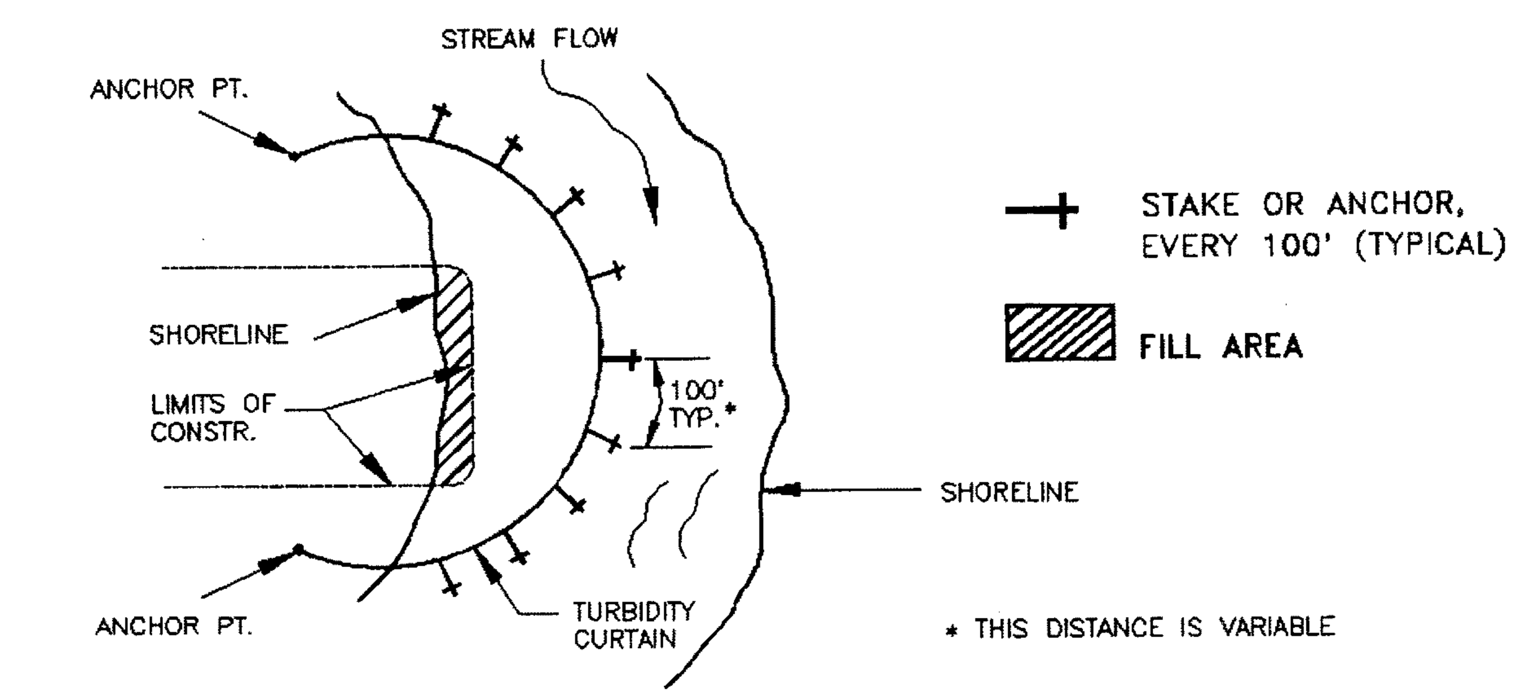


ORIENTATION WHEN INSTALLED
(TIDAL SITUATION - TYPE III)

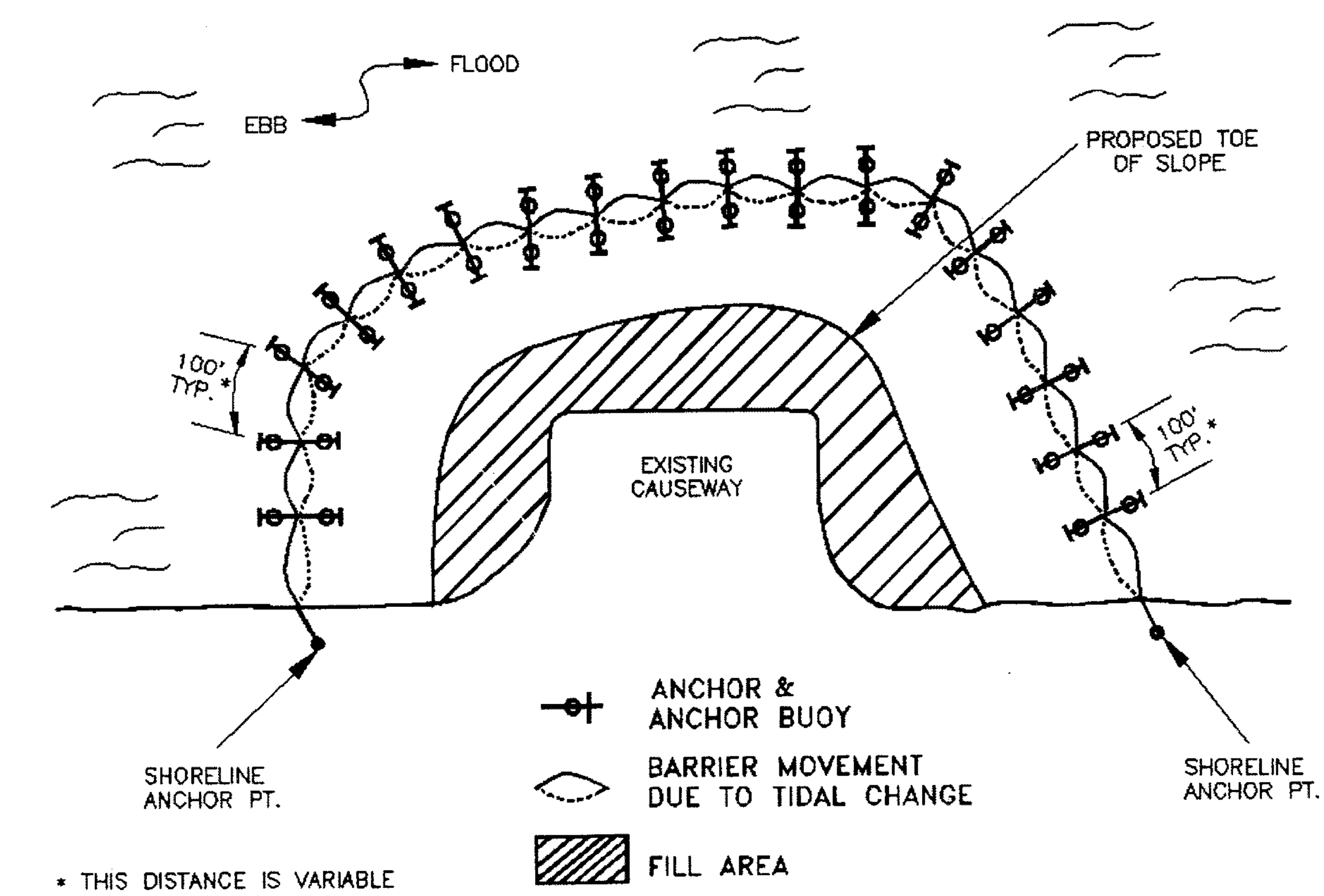


TURBIDITY CURTAIN

TYPICAL LAYOUTS:
STREAMS, PONDS & LAKES (PROTECTED & NON-TIDAL)



TIDAL WATERS AND/OR HEAVY WIND & WAVE ACTION



RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_p2_sht_ESCdetail.dgn

2IM GROUP
2IM Group, LLC
118 South Clinton
Suite 350
Chicago, IL 60661

USER NAME = martinm	DESIGNED - BR	REVISED -
	DRAWN - BR	REVISED -
PLOT SCALE = 20.0000 ' / in.	CHECKED - JM	REVISED -
PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
TURBIDITY BARRIER DETAIL

SCALE: NA | SHEET 2 OF 2 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	18
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			

LEGEND

◄	END SECTION
▬	INLET BOX
——►	STORM SEWER
— —	FLOODPLAIN LIMIT

NOTES:

1. EXACT LOCATIONS OF CONCRETE THRUST BLOCKS WILL BE DETERMINED IN THE FIELD.

0 20' 40' 60'
HORIZONTAL SCALE IN FEET

0 5' 10' 15'
VERTICAL SCALE IN FEET

RS&H. 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

2IM GROUP 2IM Group, LLC 118 South Clinton Suite 350 Chicago, IL 60661

PLAN	
NOTE BOOK	SURVEYED
NO. ___	PLOTTED
	ALIGNMENT CHECKED
	R.O.W. OR WAY CHECKED
	CADD FILE NAME

PROFILE	
NOTE BOOK	SURVEYED
NO. ___	PLOTTED
	GRADES CHECKED
	B.M. NOTED
	STRUCTURE NOTATNS CHK'D

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USER NAME = martinm	DESIGNED - JGM	REVISED -	
	DRAWN - BJR	REVISED -	
PLOT SCALE = 20.0000 ' / in.	CHECKED - YK	REVISED -	
PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
PROPOSED DRAINAGE PLAN AND PROFILE

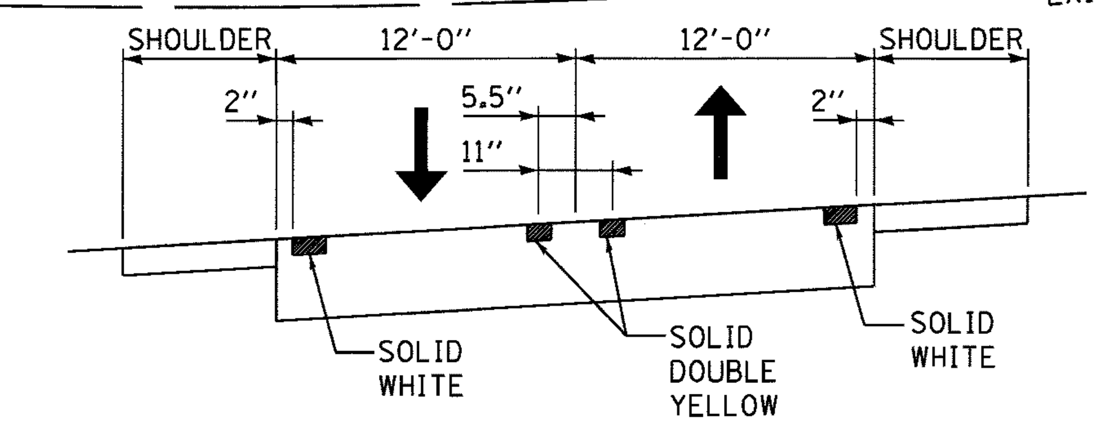
SCALE: 1" = 20' | SHEET 1 OF 1 SHEETS | STA. 217+00.00 TO STA. 222+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	19
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

NOTES:

1. ALL EXISTING SIGNS TO REMAIN IN PLACE.
2. ALL PAVEMENT MARKINGS ON THE COUNTY HIGHWAY SHALL BE POLYUREA, AND RECESSED REFLECTIVE PAVEMENT MARKERS ON THE COUNTY HIGHWAY AND WITHIN THE COUNTY HIGHWAY RIGHT-OF-WAY SHALL BE INSTALLED PER MCHENRY COUNTY DIVISION OF TRANSPORTATION AND MUTCD STANDARDS. SEE SHEET 40 FOR THE RECESSED REFLECTIVE PAVEMENT MARKER DETAIL.
3. RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE USED OVER THE LENGTH OF THE PROPOSED BRIDGE STRUCTURE.
4. SEE IDOT DISTRICT ONE STANDARDS TC-11 AND TC-13 FOR TYPICAL PAVEMENT MARKING DETAILS.



PAVEMENT MARKING PLACEMENT DETAIL

FILE NAME = BR_p2_sht_PM01.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN PAVEMENT MARKING PLAN
		DRAWN - MAW	REVISED -		
	PLOT SCALE = 20.0000 '/ in.	CHECKED - MJM	REVISED -		
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -		SCALE: 1" = 20' · SHEET 1 OF 1 SHEETS · STA. 214+00.00 TO STA. 225+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	20
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

Benchmark: Box cut on the northeast corner of the concrete barrier wall at Sta. 220+04.74, Elev. 749.61
See Sheet 7 for additional benchmarks.

Existing Structure: Bridge No. 056-3106, built in 1968 under Contract No. 27076, Federal Aid Route 13, Secondary Proejct S-13 (101), Section 68B. The structure consists of 3-span 17" PPC deck beam bridge supported on spill-through integral abutments and 2 concrete pile bent piers. 109'-8" back-to-back of abutments, 47'-4" out-to-out of deck. Traffic to be maintained using Stage Construction.

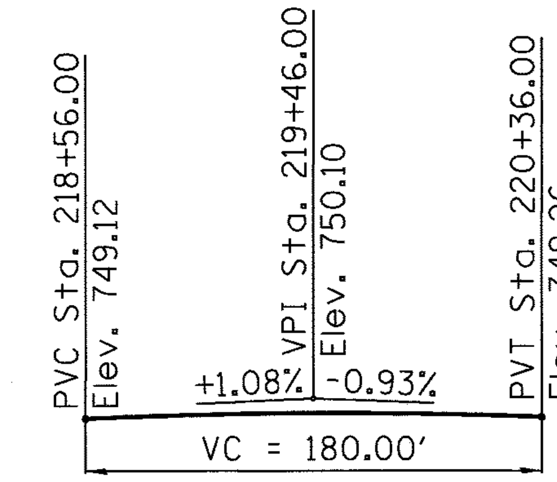
Salvage: None.

SCOPE OF WORK

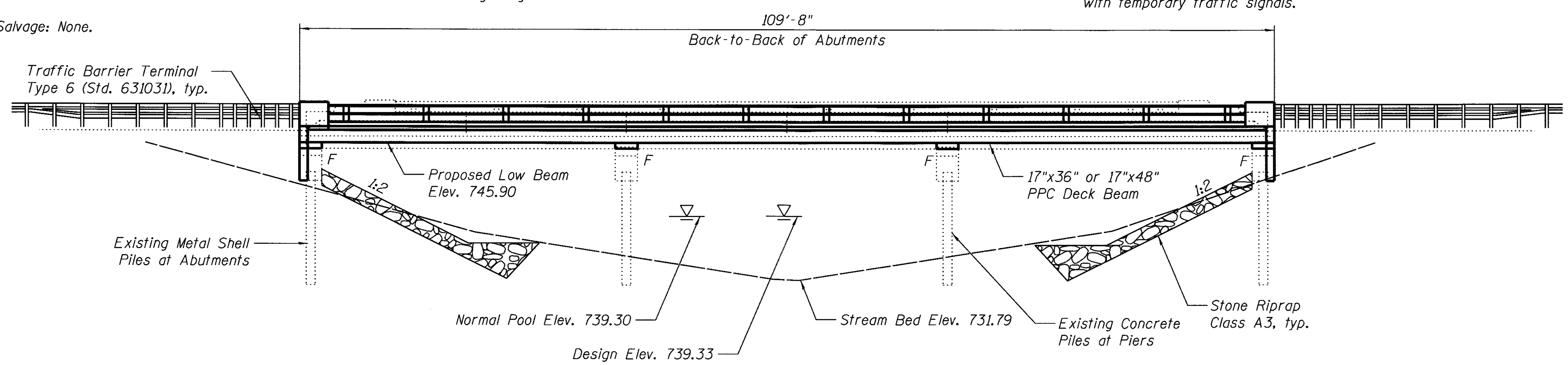
1. Remove existing overlay, parapets, railing, and deck beams.
2. Raise profile for new superstructure comprised of PPC deck beams, 5" reinforced concrete overlay, and Wyoming Railing.
3. Repair and modify substructure for new profile.
4. Maintain one, alternating direction lane during construction with temporary traffic signals.

CURVE DATA

P.I. Sta. = 219+58.46
Δ = 66°-59'-59"
D = 05°-00'-00"
R = 1,145.92'
T = 758.46'
L = 1,340.00'
E = 228.27'
e = 0.08%
P.C. Sta. = 212+00.00
P.T. Sta. = 225+40.00



PROFILE GRADE



ELEVATION

WATERWAY INFORMATION

Drainage Area = 6.90 sq. mi. Low Grade Elev. 747.05 @ Sta. 214+84.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	192	288	304	739.30	0.01	0.01	739.31	739.31
Design	30	280	288	304	739.31	0.02	0.02	739.33	739.33
Base	100	391	288	304	739.31	0.03	0.03	739.34	739.34
Overtopping									
Max. Calc.	500	542	288	304	739.32	0.06	0.06	739.38	739.08

Note: The FEMA 100-yr Flood Elevation for Pistakee lake is 741.0 at this location. This is based on the downstream 100-yr Fox River flood elevations.

INDEX OF SHEETS

Design Scour Elevations (ft.)			
W. Abut.	Pier 1	Pier 2	E. Abut.
729.58	733.70	733.60	736.97

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims

DESIGN STRESSES

FIELD UNITS (EXIST. CONSTRUCTION)

fc = 1,400 psi
fs = 20,000 psi (Reinforcement)

FIELD UNITS (NEW CONSTRUCTION)

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

PRECAST PRESTRESSES UNITS

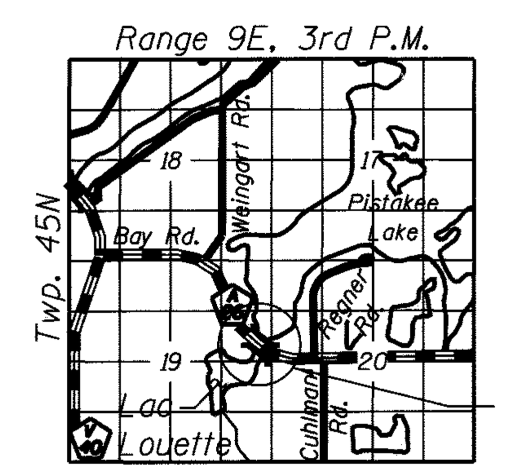
f'ci = 3,500 psi (CWS)
f'c = 6,000 psi (Deck Beams)
fs = 270,000 psi (½" ϕ low-relax strands)

LOADING HL-93

No allowance for future wearing surface.

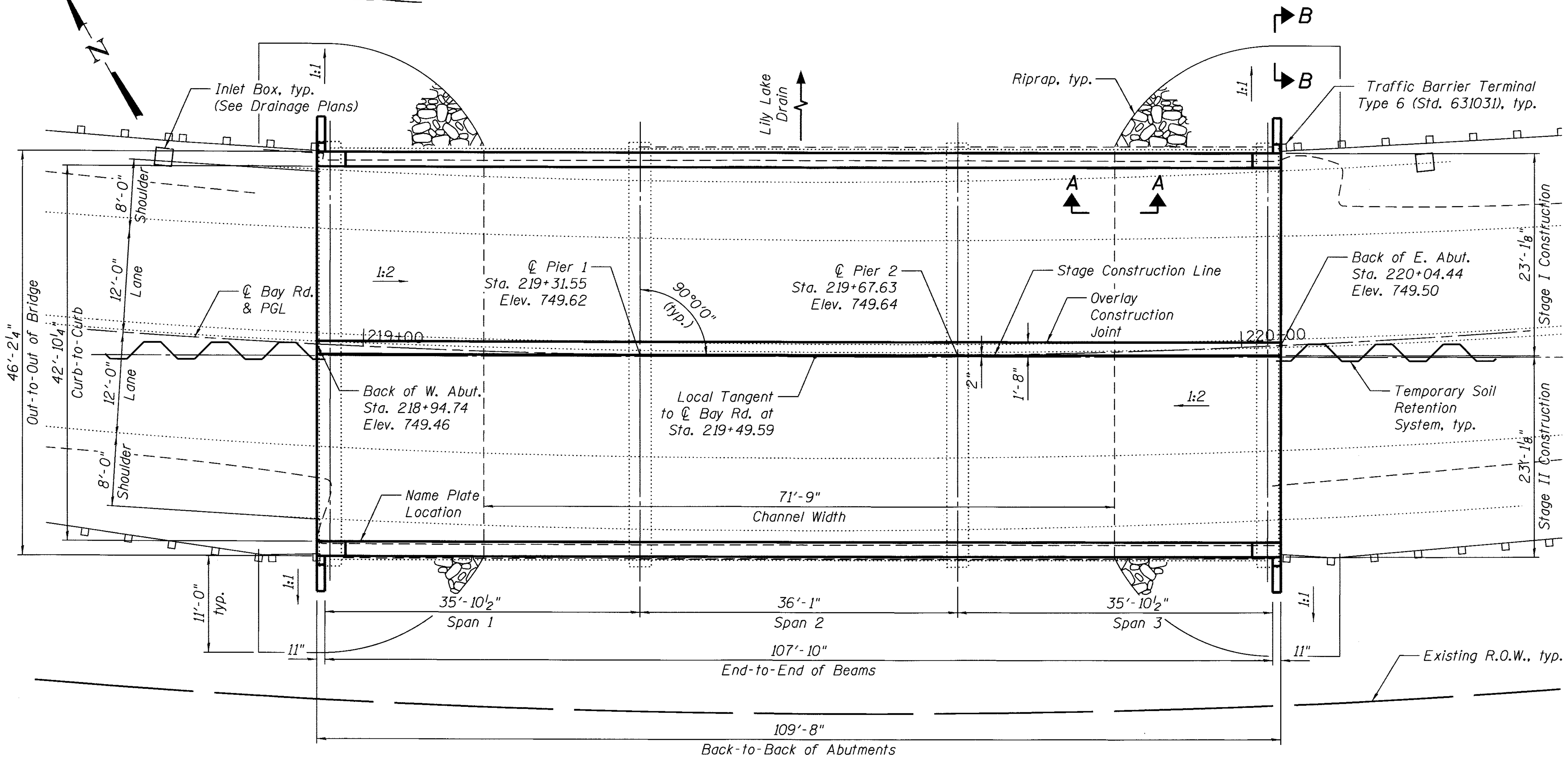
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = .027
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = .067
Soil Site Class = B



Structure Location

LOCATION SKETCH



PLAN

JOHN L. RITCHIE 081-005607 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

BY: JOHN L. RITCHIE, P.E., S.E. DATE: 9/7/17

GENERAL PLAN
BAY ROAD OVER LILY LAKE DRAIN
F.A.U. ROUTE 186
SECTION 14-00438-00-BR
MCHENRY COUNTY
STATION 219+49.71
STRUCTURE NO. 056-3106

RS&H
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR.sht.01.GPE.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN - SN 056-3106 GENERAL PLAN & ELEVATION
		CHECKED - JIK 06/29/2015	REVISED		
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED		
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED		SHEET NO. 1 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	21
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

LILY LAKE DRAIN
RE-BUILT 2017 BY
McHENRY COUNTY
DIVISION OF TRANSPORTATION
Sec. 14-00438-00-BR
F.A.U. RT. 186, STA. 219+50
STR. NO. 056-3106 LOADING HL-93

NAME PLATE

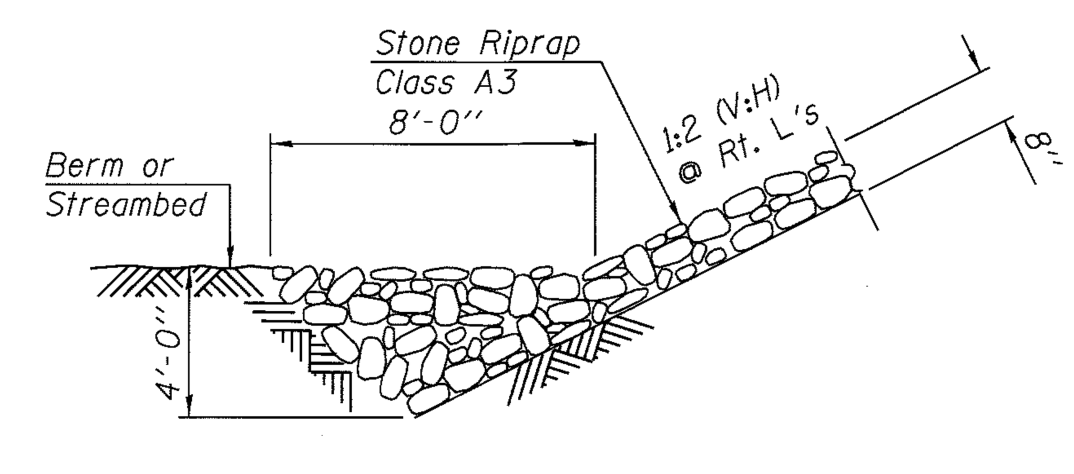
See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

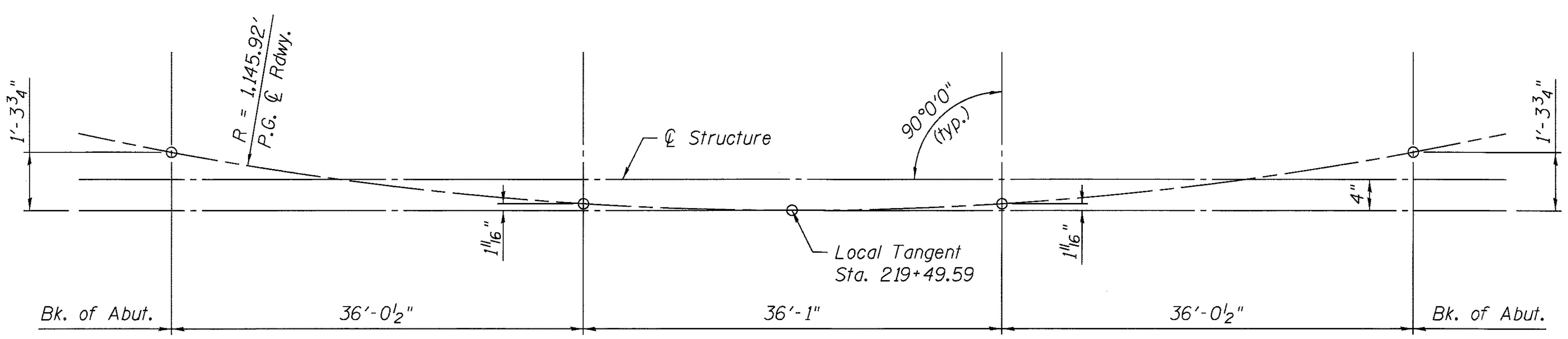
TOTAL BILL OF MATERIAL

	DESCRIPTION	UNIT	SUB	SUPER	TOTAL
	Stone Riprap, Class A3	Sq Yd	345		345
	Removal of Existing Superstructure	Each		1	1
	Concrete Removal	Cu Yd	8.5		8.5
	Structure Excavation	Cu Yd	135		135
	Concrete Structures	Cu Yd	13.8		13.8
	Concrete Superstructure	Cu Yd		15.1	15.1
	Bridge Deck Grooving	Sq Yd		516	516
	Protective Coat	Sq Yd		528	528
	Precast Prestressed Concrete Deck Beams (17" Depth)	Sq Ft		4,953	4,953
	Reinforcement Bars, Epoxy Coated	Pound	1,560	8,440	10,000
	Bar Splicers	Each	12	109	121
	Temporary Soil Retention System	Sq Yd	76		76
	Geocomposite Wall Drain	Sq Ft	71		71
	Epoxy Crack Injection	Foot	4		4
*	Structural Repair of Concrete Depth Less Than or Equal to 5"	Sq Ft	16		16
*	Concrete Wearing Surface, 5"	Sq Yd		552	552
*	Granular Backfill for Structures	Cu Yd	135		135
*	Pipe Underdrains for Structures, 4"	Foot	97		97
*	Steel Railing (Special)	Foot		207	207

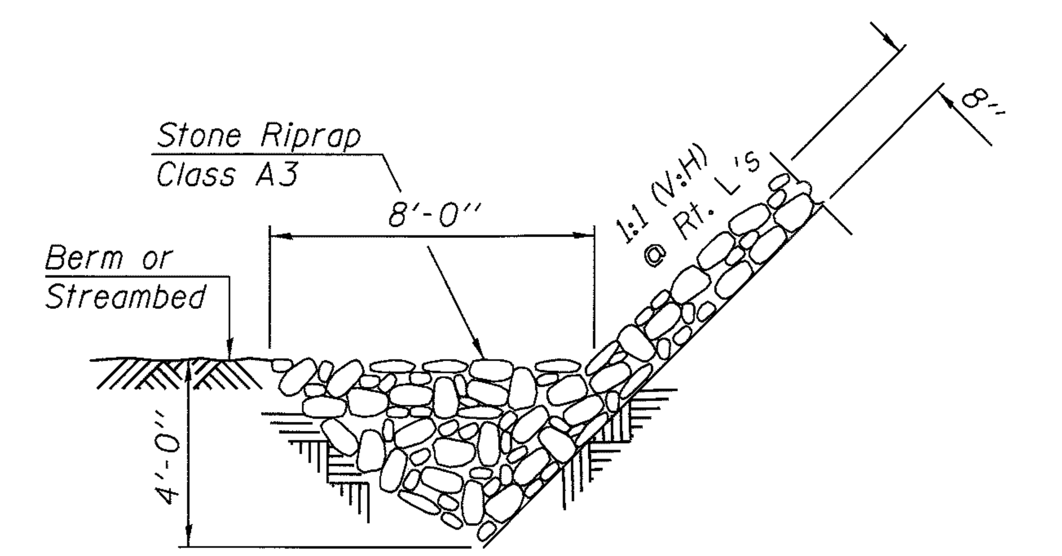
* Indicates Special Provision



SECTION A-A



OFFSET SKETCH



SECTION B-B

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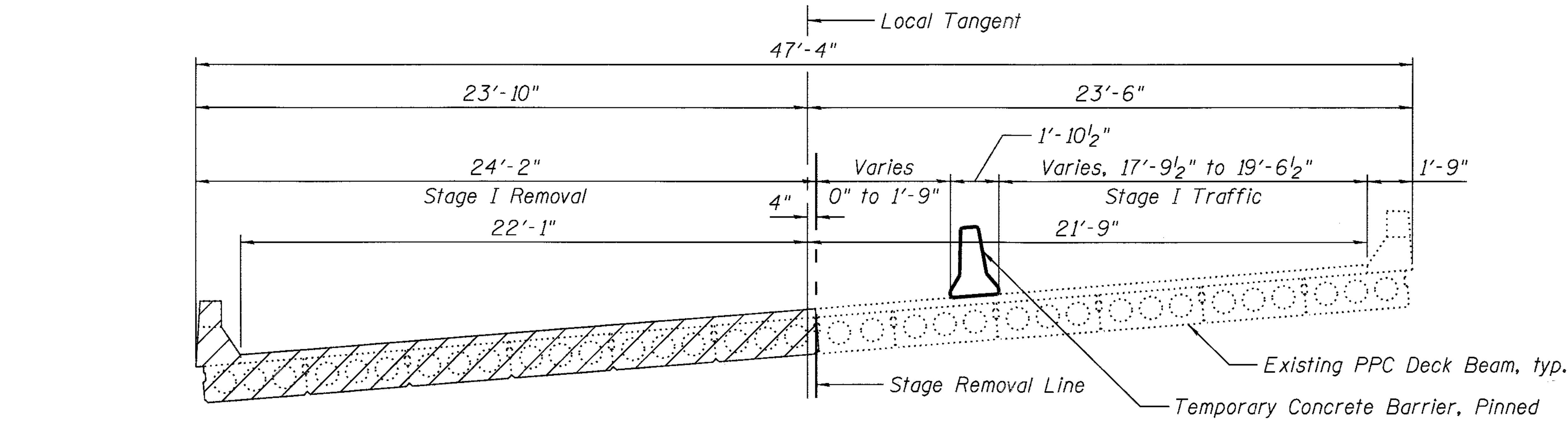
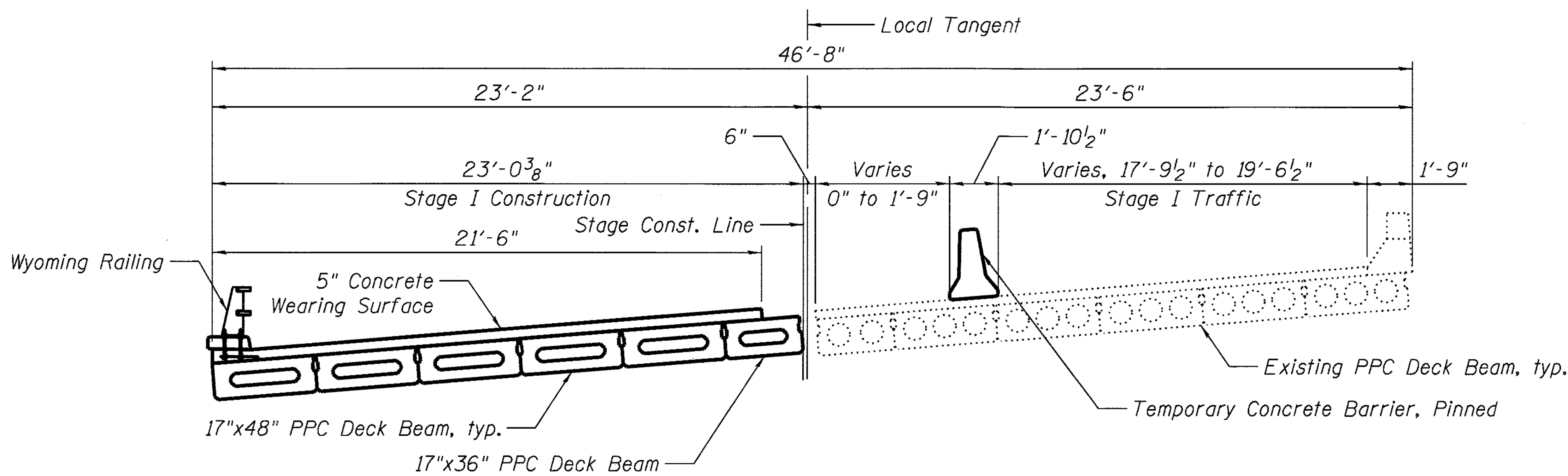
		CHECKED - JIK 06/29/2015	REVISED			0186	14-00438-00-BR	MCHENRY	46	22
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED					CONTRACT NO. 61D64		
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED		SHEET NO. 2 OF 19 SHEETS		ILLINOIS FED. AID PROJECT			

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

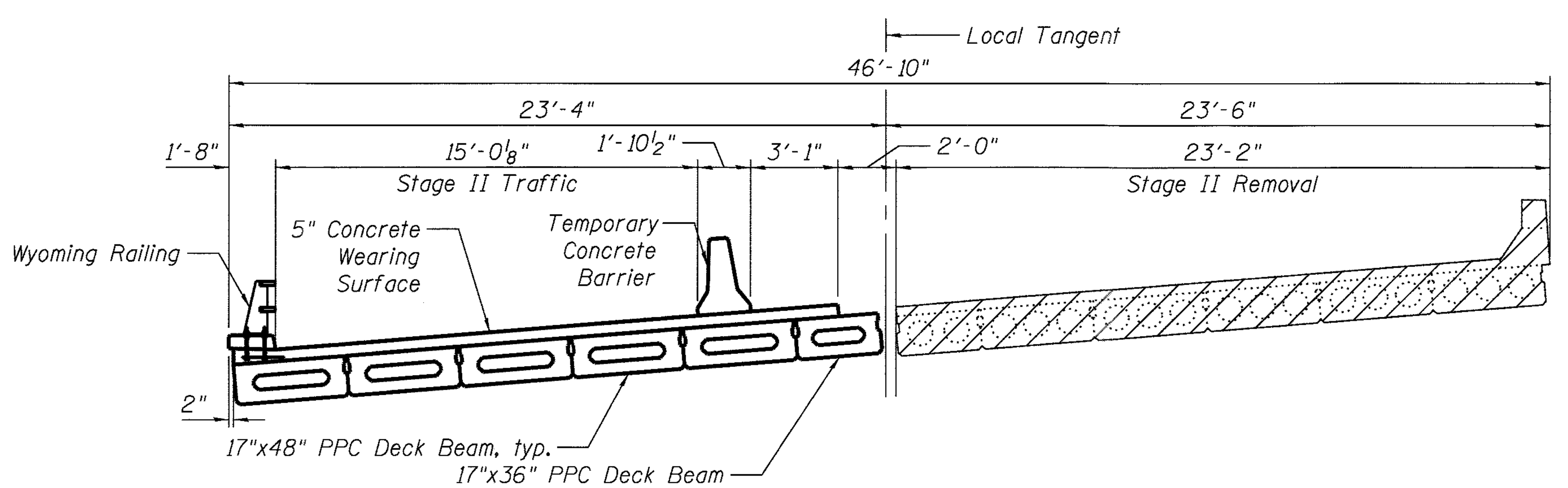


STAGE I REMOVAL

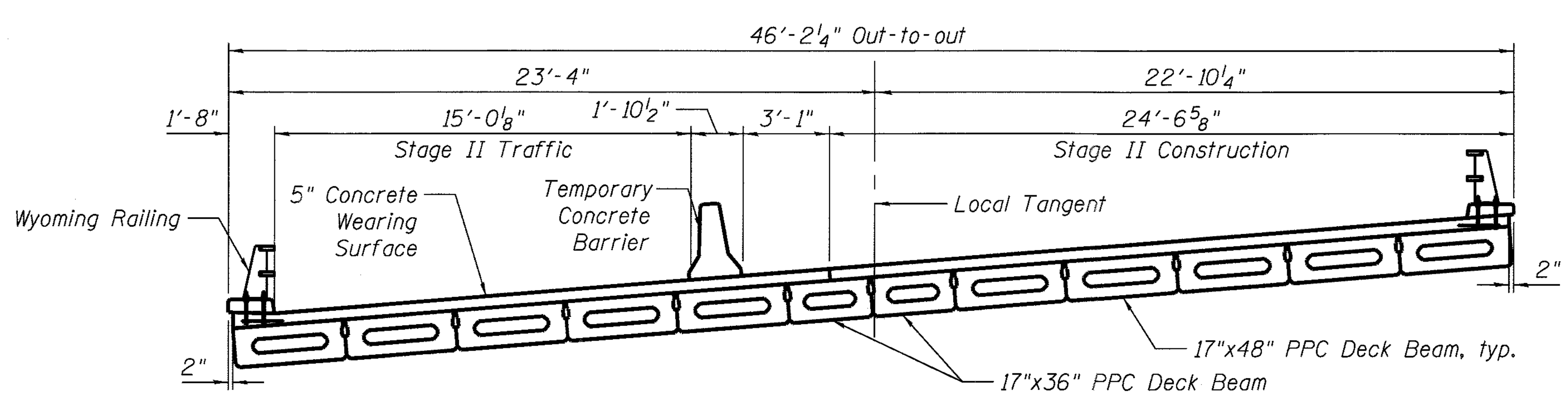
Looking East



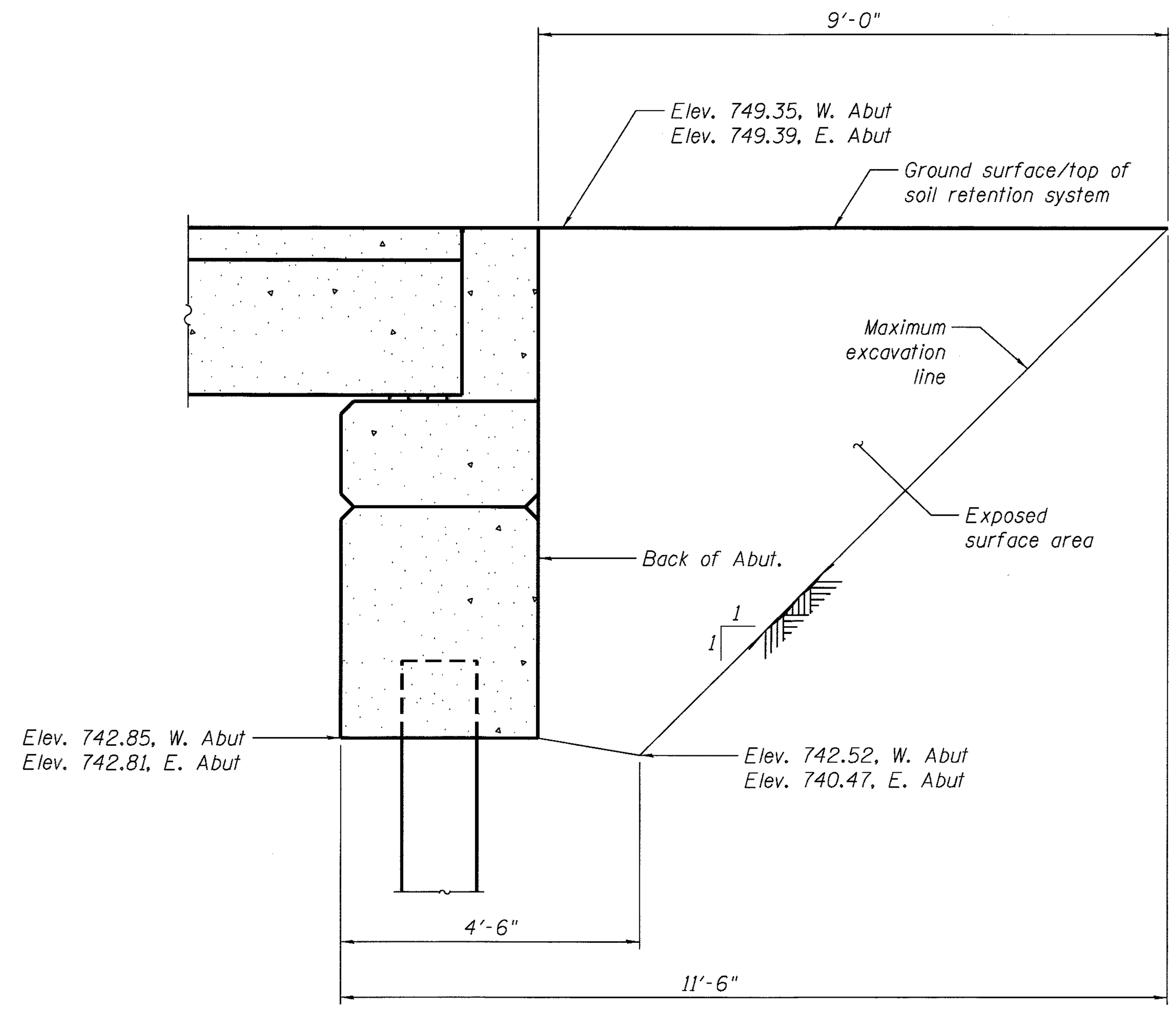
STAGE I CONSTRUCTION



STAGE II REMOVAL

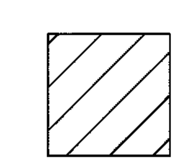


STAGE II CONSTRUCTION



TEMPORARY SOIL RETENTION SYSTEM

LEGEND



Removal of Existing Superstructure

NOTES:

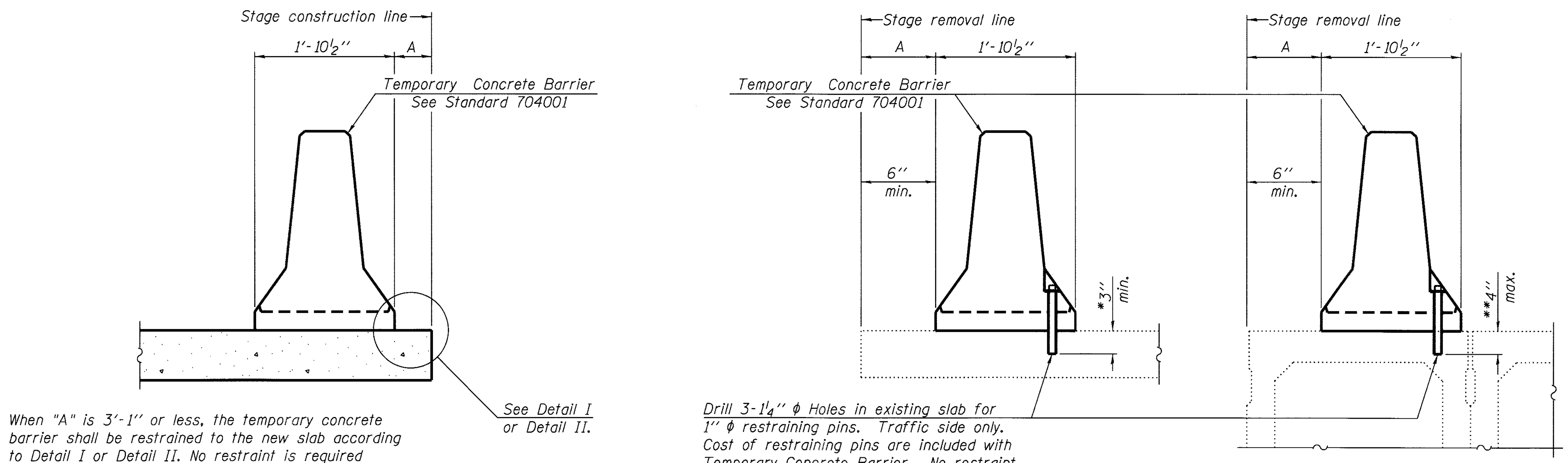
1. See Roadway Plan for Maintenance of Traffic details.
2. See Sheet 4 of 19 for Temporary Concrete Barrier.
3. Excavation behind existing abutments shall be completed before removing the existing superstructure.

FILE NAME = BR_sht_03_staging.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN – SN 056–3106 CONSTRUCTION STAGING	F.A.U. RTE. 0186 / SECTION 14-00438-00-BR / COUNTY MCHENRY / TOTAL SHEETS 46 / SHEET NO. 23
		CHECKED - JIK 06/29/2015	REVISED			CONTRACT NO. 61D64
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED		SHEET NO. 3 OF 19 SHEETS	ILLINOIS FED. AID PROJECT
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED			

* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I or Detail II. No restraint is required when "A" is greater than 3'-1".

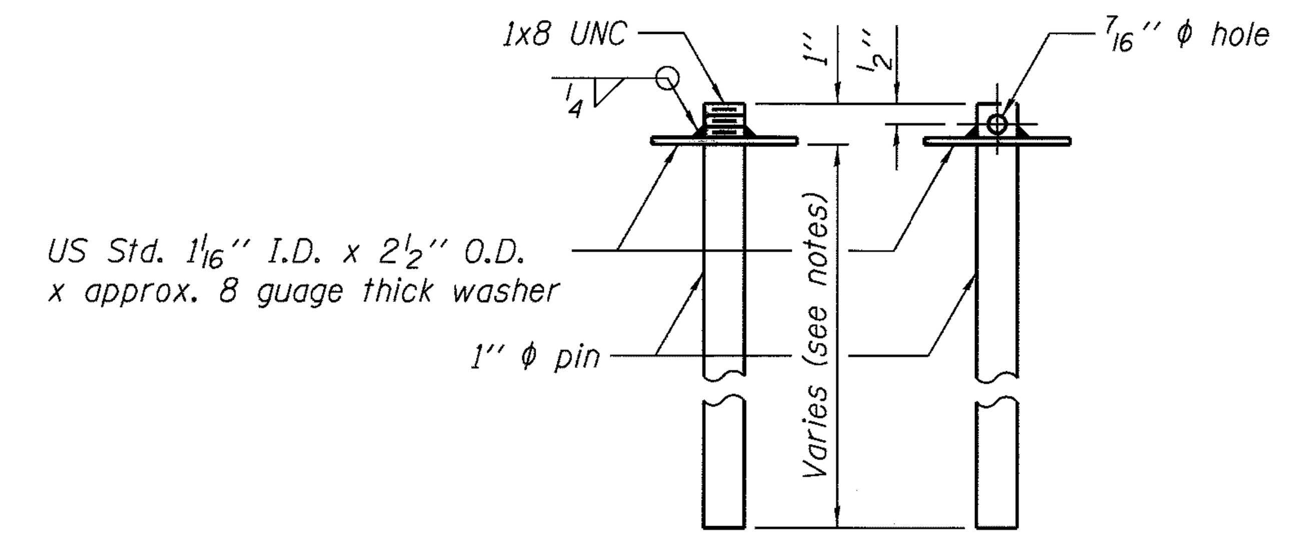
NEW SLAB

Drill 3-1¼" ϕ Holes in existing slab for 1" ϕ restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

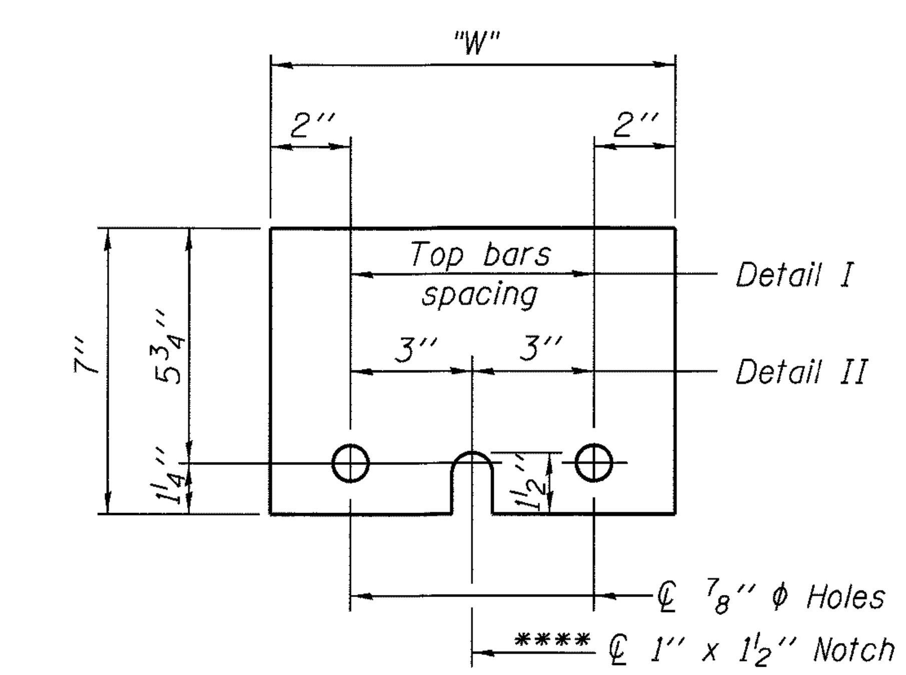
EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

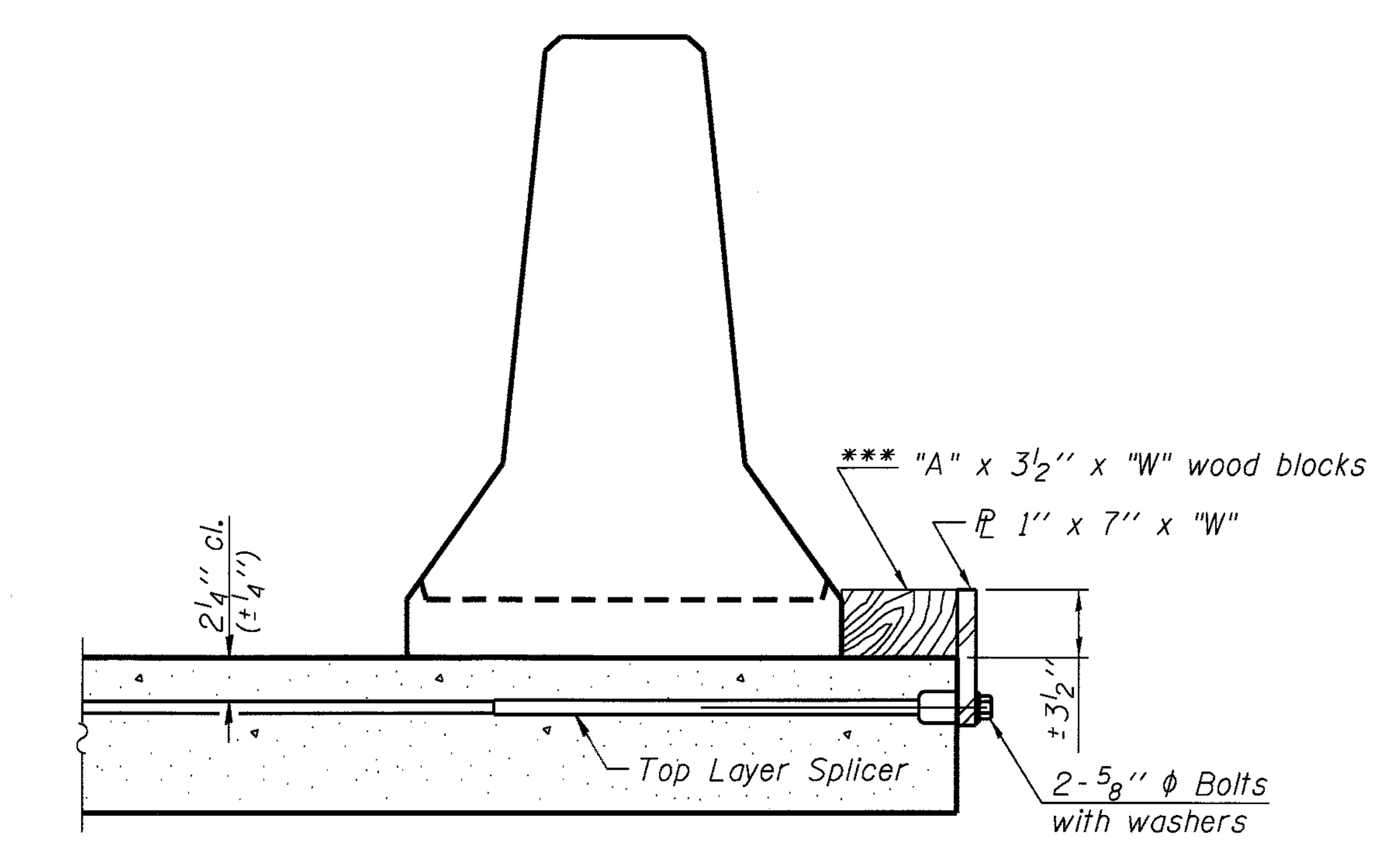


RESTRAINING PIN

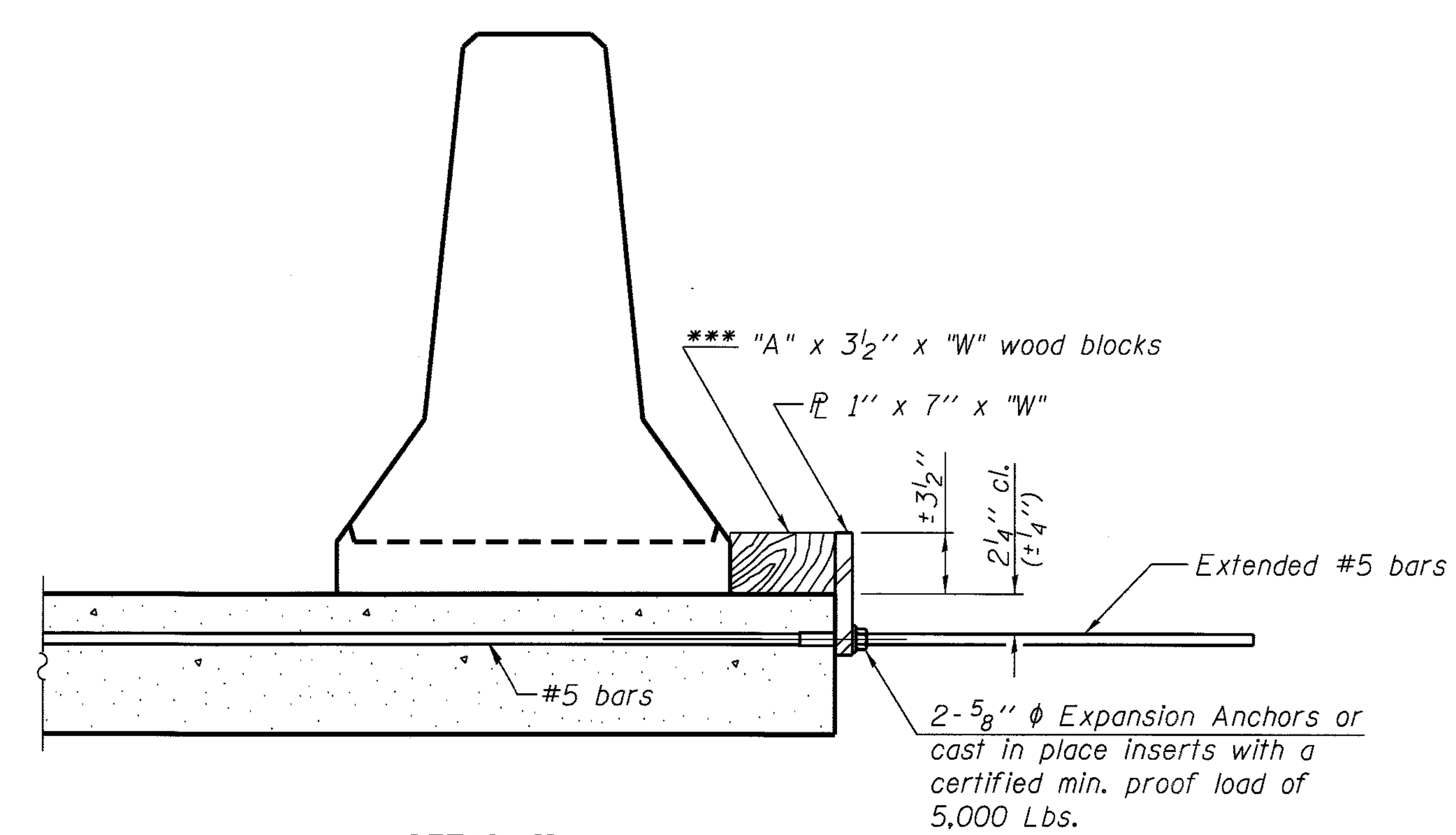


STEEL RETAINER ℙ 1" x 7" x "W"

**** Required only with Detail II



DETAIL I



DETAIL II

RETAINER ASSEMBLY

*** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7' 'x "W" steel ℙ to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℙ to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of retainer assembly is included with Temporary Concrete Barrier.

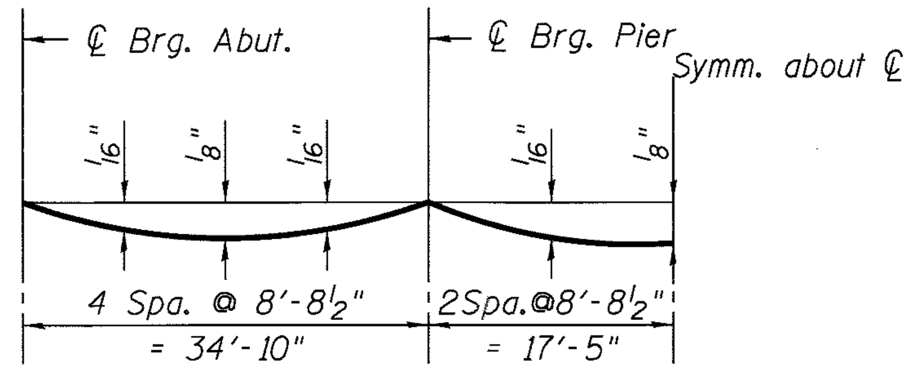
The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

R-27 2-19-16

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_sht_04_tempbarrier.dgn

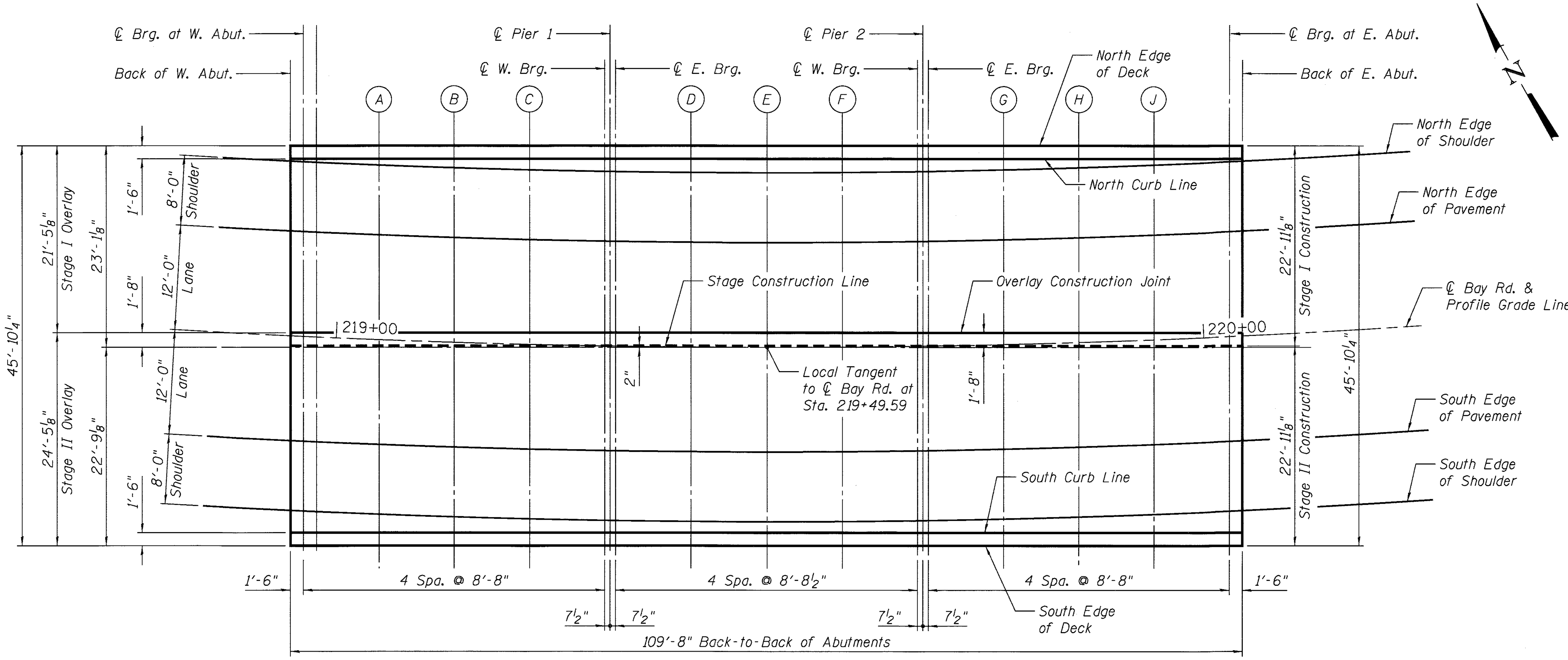
RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN - SN 056-3106 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	F.A.U. RTE. 0186	SECTION 14-00438-00-BR
		CHECKED - JIK 06/29/2015	REVISED			COUNTY	MCHENRY
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED			TOTAL SHEETS 46	SHEET NO. 24
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED		SHEET NO. 4 OF 19 SHEETS	CONTRACT NO. 61D64	ILLINOIS FED. AID PROJECT



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

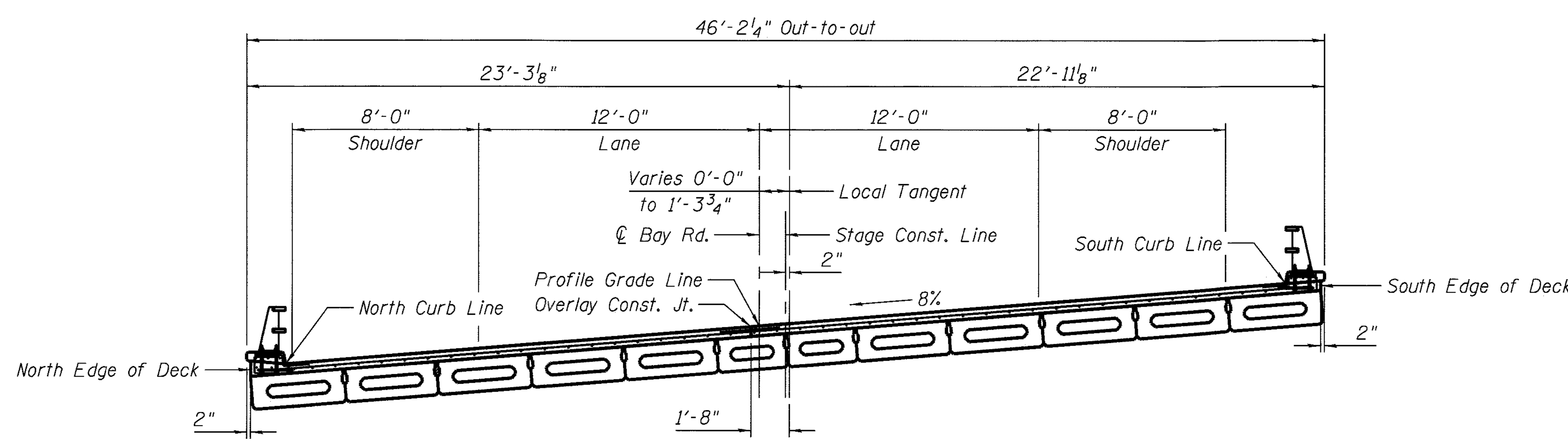
Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



PLAN

NORTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+95.88	-21.75	747.72	747.72
℄ Brg. West Abut.	218+97.35	-21.83	747.96	747.96
A	219+05.83	-22.20	747.98	747.99
B	219+14.31	-22.52	747.99	748.01
C	219+22.80	-22.76	748.01	748.02
℄ W. Brg. Pier 1	219+31.29	-22.94	748.02	748.02
℄ Pier 1	219+31.91	-22.95	748.02	748.02
℄ E. Brg. Pier 1	219+32.52	-22.96	748.02	748.02
D	219+41.05	-23.06	748.03	748.04
E	219+49.59	-23.09	748.03	748.04
F	219+58.13	-23.06	748.03	748.04
℄ W. Brg. Pier 2	219+66.66	-22.96	748.03	748.03
℄ Pier 2	219+67.27	-22.95	748.03	748.03
℄ E. Brg. Pier 2	219+67.89	-22.94	748.03	748.03
G	219+76.38	-22.76	748.03	748.04
H	219+84.87	-22.52	748.02	748.03
J	219+93.35	-22.20	748.01	748.02
℄ Brg. East Abut.	220+01.83	-21.83	748.00	748.00
Back of East Abut.	220+03.30	-21.75	748.00	748.00



SECTION

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

FILE NAME = BR_sht_05_slabelev.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - JIK 06/29/2015	REVISED	
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED	
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED	

BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
TOP OF SLAB ELEVATIONS (1 OF 3)
SHEET NO. 5 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	25

CONTRACT NO. 61D64
ILLINOIS FED. AID PROJECT

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+95.81	-20.26	747.84	747.84
℄ Brg. West Abut.	218+97.28	-20.33	747.85	747.85
A	219+05.77	-20.71	747.87	747.87
B	219+14.27	-21.02	747.88	747.89
C	219+22.77	-21.26	747.90	747.90
℄ W. Brg. Pier 1	219+31.27	-21.44	747.91	747.91
℄ Pier 1	219+31.88	-21.45	747.91	747.91
℄ E. Brg. Pier 1	219+32.50	-21.46	747.91	747.91
D	219+41.04	-21.56	747.92	747.92
E	219+49.59	-21.59	747.92	747.93
F	219+58.14	-21.56	747.92	747.93
℄ W. Brg. Pier 2	219+66.68	-21.46	747.92	747.92
℄ Pier 2	219+67.30	-21.45	747.92	747.92
℄ E. Brg. Pier 2	219+67.91	-21.44	747.92	747.92
G	219+76.41	-21.26	747.92	747.92
H	219+84.91	-21.02	747.91	747.92
J	219+93.41	-20.71	747.90	747.91
℄ Brg. East Abut.	220+01.90	-20.33	747.89	747.89
Back of East Abut.	220+03.37	-20.26	747.88	747.88

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+93.76	-20.00	747.85	747.85
℄ Brg. West Abut.	218+95.29	-20.00	747.86	747.86
A	219+04.12	-20.00	747.91	747.92
B	219+12.94	-20.00	747.96	747.97
C	219+21.77	-20.00	747.99	748.00
℄ W. Brg. Pier 1	219+30.59	-20.00	748.02	748.02
℄ Pier 1	219+31.23	-20.00	748.02	748.02
℄ E. Brg. Pier 1	219+31.86	-20.00	748.02	748.02
D	219+40.73	-20.00	748.04	748.05
E	219+49.59	-20.00	748.05	748.06
F	219+58.45	-20.00	748.05	748.05
℄ W. Brg. Pier 2	219+67.32	-20.00	748.04	748.04
℄ Pier 2	219+67.95	-20.00	748.04	748.04
℄ E. Brg. Pier 2	219+68.59	-20.00	748.03	748.03
G	219+77.41	-20.00	748.01	748.02
H	219+86.24	-20.00	747.99	748.00
J	219+95.06	-20.00	747.95	747.96
℄ Brg. East Abut.	220+03.89	-20.00	747.90	747.90
Back of East Abut.	220+05.42	-20.00	747.89	747.89

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+94.15	-12.00	748.49	748.49
℄ Brg. West Abut.	218+95.67	-12.00	748.50	748.50
A	219+04.44	-12.00	748.56	748.56
B	219+13.20	-12.00	748.60	748.61
C	219+21.96	-12.00	748.63	748.64
℄ W. Brg. Pier 1	219+30.72	-12.00	748.66	748.66
℄ Pier 1	219+31.36	-12.00	748.66	748.66
℄ E. Brg. Pier 1	219+31.99	-12.00	748.66	748.66
D	219+40.79	-12.00	748.68	748.69
E	219+49.59	-12.00	748.69	748.70
F	219+58.39	-12.00	748.69	748.69
℄ W. Brg. Pier 2	219+67.19	-12.00	748.68	748.68
℄ Pier 2	219+67.82	-12.00	748.68	748.68
℄ E. Brg. Pier 2	219+68.46	-12.00	748.67	748.67
G	219+77.22	-12.00	748.65	748.66
H	219+85.98	-12.00	748.63	748.64
J	219+94.74	-12.00	748.59	748.60
℄ Brg. East Abut.	220+03.51	-12.00	748.54	748.54
Back of East Abut.	220+05.03	-12.00	748.54	748.54

OVERLAY CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+94.88	-0.35	749.43	749.43
℄ Brg. West Abut.	218+96.37	-0.42	749.43	749.43
A	219+05.01	-0.80	749.46	749.46
B	219+13.65	-1.10	749.47	749.48
C	219+22.30	-1.34	749.49	749.50
℄ W. Brg. Pier 1	219+30.95	-1.51	749.50	749.50
℄ Pier 1	219+31.58	-1.52	749.50	749.50
℄ E. Brg. Pier 1	219+32.20	-1.53	749.50	749.50
D	219+40.89	-1.63	749.51	749.52
E	219+49.59	-1.67	749.51	749.52
F	219+58.29	-1.63	749.52	749.52
℄ W. Brg. Pier 2	219+66.98	-1.53	749.51	749.51
℄ Pier 2	219+67.60	-1.52	749.51	749.51
℄ E. Brg. Pier 2	219+68.23	-1.51	749.51	749.51
G	219+76.88	-1.34	749.51	749.52
H	219+85.53	-1.10	749.50	749.51
J	219+94.17	-0.80	749.49	749.50
℄ Brg. East Abut.	220+02.81	-0.42	749.47	749.47
Back of East Abut.	220+04.30	-0.35	749.47	749.47

PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+94.74	0.00	749.46	749.46
℄ Brg. West Abut.	218+96.24	0.00	749.47	749.47
A	219+04.91	0.00	749.52	749.53
B	219+13.58	0.00	749.56	749.57
C	219+22.25	0.00	749.59	749.60
℄ W. Brg. Pier 1	219+30.92	0.00	749.62	749.62
℄ Pier 1	219+31.55	0.00	749.62	749.62
℄ E. Brg. Pier 1	219+32.17	0.00	749.62	749.62
D	219+40.88	0.00	749.64	749.65
E	219+49.59	0.00	749.65	749.66
F	219+58.30	0.00	749.65	749.65
℄ W. Brg. Pier 2	219+67.01	0.00	749.64	749.64
℄ Pier 2	219+67.63	0.00	749.64	749.64
℄ E. Brg. Pier 2	219+68.26	0.00	749.63	749.63
G	219+76.93	0.00	749.62	749.62
H	219+85.60	0.00	749.59	749.60
J	219+94.27	0.00	749.55	749.56
℄ Brg. East Abut.	220+02.94	0.00	749.51	749.51
Back of East Abut.	220+04.44	0.00	749.50	749.50

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+95.30	12.00	750.42	750.42
℄ Brg. West Abut.	218+96.79	12.00	750.43	750.43
A	219+05.38	12.00	750.48	750.49
B	219+13.96	12.00	750.52	750.53
C	219+22.54	12.00	750.56	750.56
℄ W. Brg. Pier 1	219+31.12	12.00	750.58	750.58
℄ Pier 1	219+31.73	12.00	750.58	750.58
℄ E. Brg. Pier 1	219+32.35	12.00	750.58	750.58
D	219+40.97	12.00	750.60	750.61
E	219+49.59	12.00	750.61	750.62
F	219+58.21	12.00	750.61	750.61
℄ W. Brg. Pier 2	219+66.83	12.00	750.60	750.60
℄ Pier 2	219+67.45	12.00	750.60	750.60
℄ E. Brg. Pier 2	219+68.06	12.00	750.59	750.59
G	219+76.64	12.00	750.58	750.58
H	219+85.22	12.00	750.55	750.56
J	219+93.80	12.00	750.51	750.52
℄ Brg. East Abut.	220+02.39	12.00	750.47	750.47
Back of East Abut.	220+03.88	12.00	750.46	750.46

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+95.68	20.00	751.06	751.06
℄ Brg. West Abut.	218+97.15	20.00	751.07	751.07
A	219+05.68	20.00	751.12	751.13
B	219+14.20	20.00	751.16	751.17
C	219+22.72	20.00	751.20	751.20
℄ W. Brg. Pier 1	219+31.24	20.00	751.22	751.22
℄ Pier 1	219+31.86	20.00	751.22	751.22
℄ E. Brg. Pier 1	219+32.47	20.00	751.22	751.22
D	219+41.03	20.00	751.24	751.25
E	219+49.59	20.00	751.25	751.26
F	219+58.15	20.00	751.25	751.25
℄ W. Brg. Pier 2	219+66.71	20.00	751.24	751.24
℄ Pier 2	219+67.32	20.00	751.24	751.24
℄ E. Brg. Pier 2	219+67.94	20.00	751.24	751.24
G	219+76.46	20.00	751.22	751.22
H	219+84.98	20.00	751.19	751.20
J	219+93.50	20.00	751.16	751.16
℄ Brg. East Abut.	220+02.03	20.00	751.11	751.11
Back of East Abut.	220+03.50	20.00	751.10	751.10

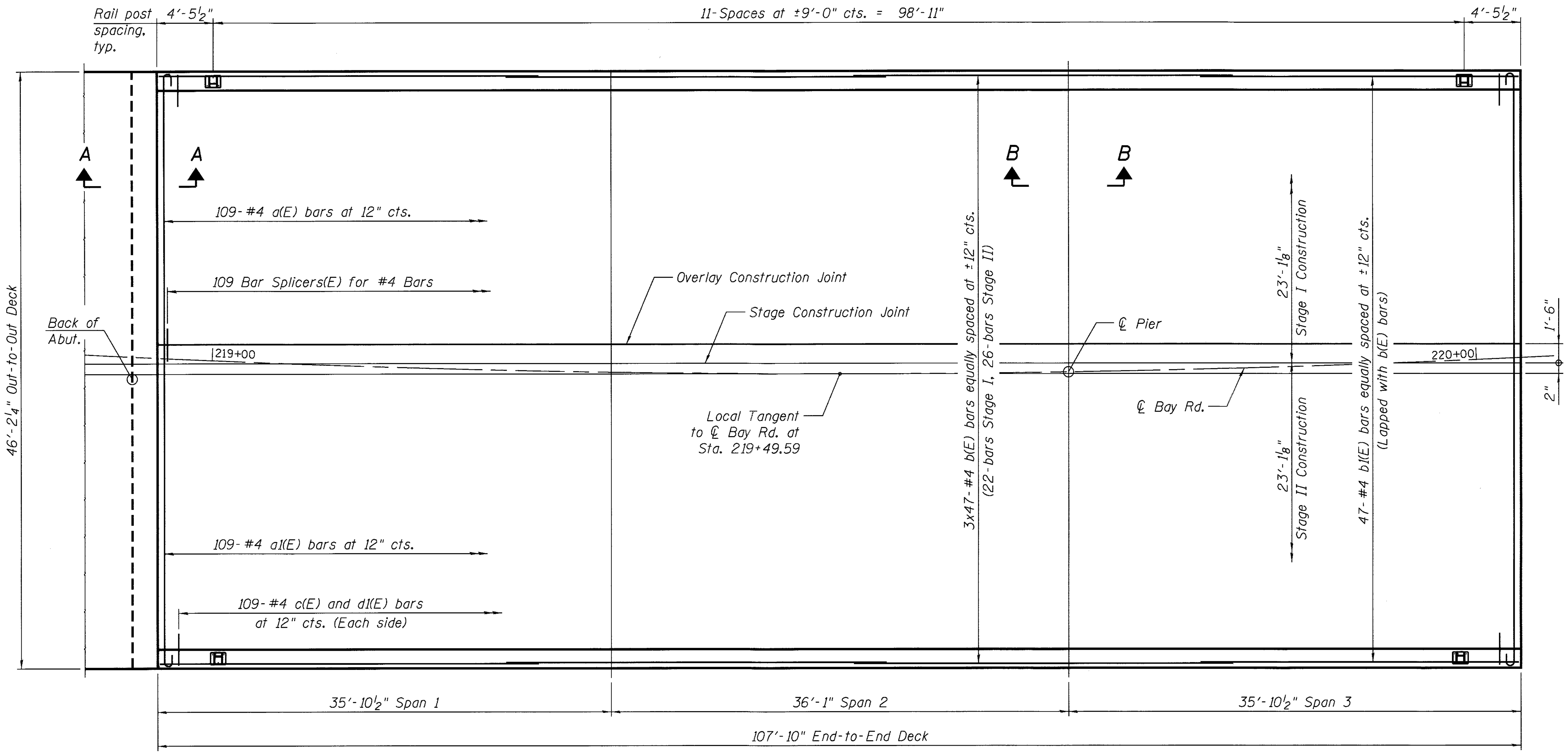
SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+93.75	22.88	751.28	751.28
℄ Brg. West Abut.	218+95.27	22.81	751.29	751.29
A	219+04.09	22.45	751.31	751.32
B	219+12.91	22.15	751.33	751.34
C	219+21.74	21.91	751.35	751.35
℄ W. Brg. Pier 1	219+30.57	21.74	751.36	751.36
℄ Pier 1	219+31.20	21.73	751.36	751.36
℄ E. Brg. Pier 1	219+31.84	21.72	751.36	751.36
D	219+40.71	21.63	751.37	751.38
E	219+49.59	21.59	751.37	751.39
F	219+58.47	21.63	751.38	751.38
℄ W. Brg. Pier 2	219+67.34	21.72	751.37	751.37
℄ Pier 2	219+67.98	21.73	751.37	751.37
℄ E. Brg. Pier 2	219+68.61	21.74	751.37	751.37
G	219+77.44	21.91	751.37	751.37
H	219+86.27	22.15	751.36	751.37
J	219+95.09	22.45	751.34	751.35
℄ Brg. East Abut.	220+03.91	22.81	751.33	751.33
Back of East Abut.	220+05.43	22.88	751.32	751.32

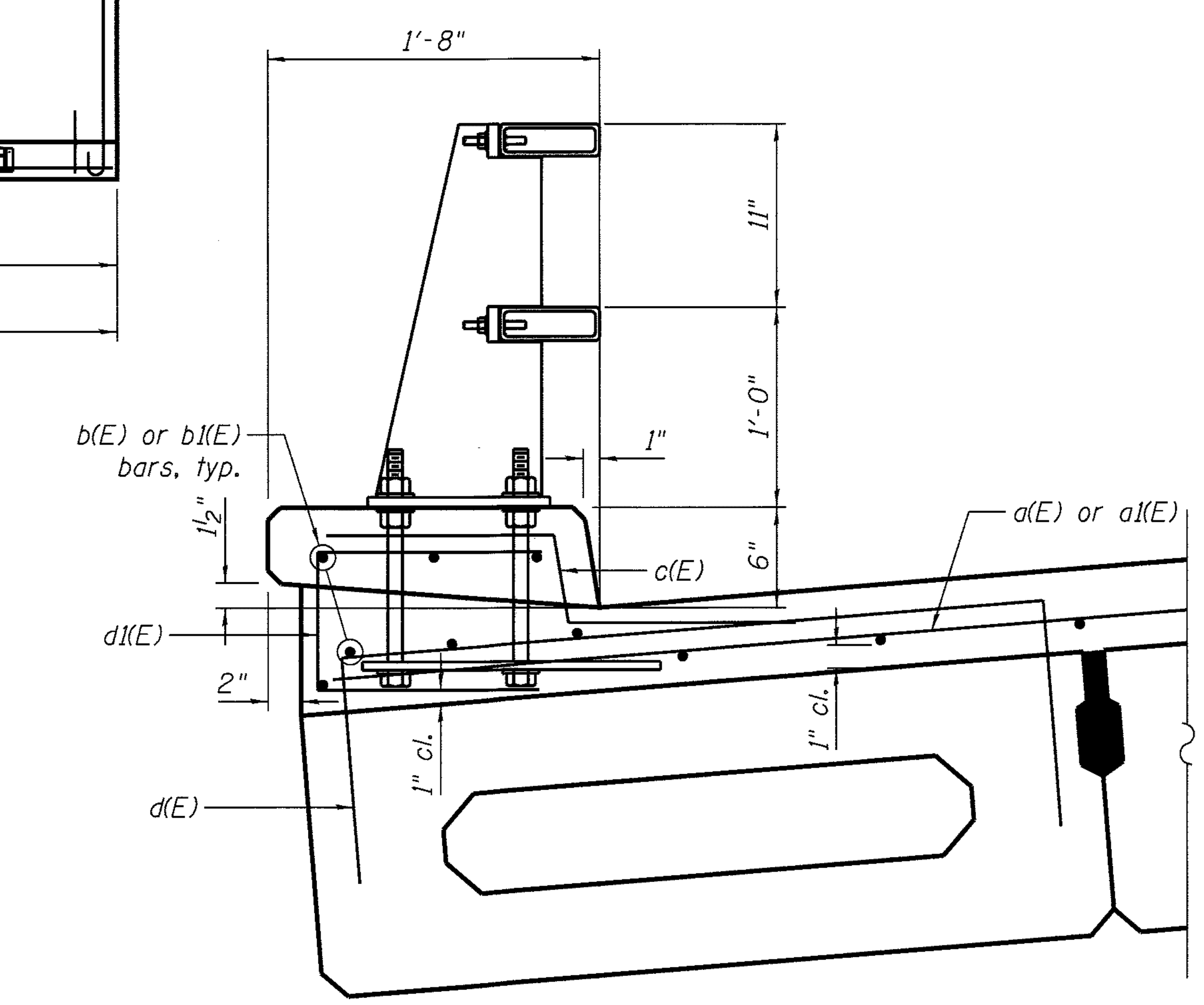
SOUTH EDGE OF DECK

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	218+93.67	24.38	751.40	751.40
℄ Brg. West Abut.	218+95.20	24.31	751.41	751.41
A	219+04.03	23.95	751.43	751.44
B	219+12.86	23.65	751.45	751.46
C	219+21.70	23.41	751.47	751.47
℄ W. Brg. Pier 1	219+30.54	23.24	751.48	751.48
℄ Pier 1	219+31.18	23.23	751.48	751.48
℄ E. Brg. Pier 1	219+31.82	23.22	751.48	751.48
D	219+40.70	23.13	751.49	751.50
E	219+49.59	23.09	751.49	751.51
F	219+58.48	23.13	751.50	751.50
℄ W. Brg. Pier 2	219+67.36	23.22	751.49	751.49
℄ Pier 2	219+68.00	23.23	751.49	751.49
℄ E. Brg. Pier 2	219+68.64	23.24	751.49	751.49
G	219+77.48	23.41	751.49	751.49
H	219+86.32	23.65	751.48	751.49
J	219+95.15	23.95	751.46	751.47
℄ Brg. East Abut.	220+03.98	24.31	751.45	751.45
Back of East Abut.	220+05.51	24.38	751.44	751.44

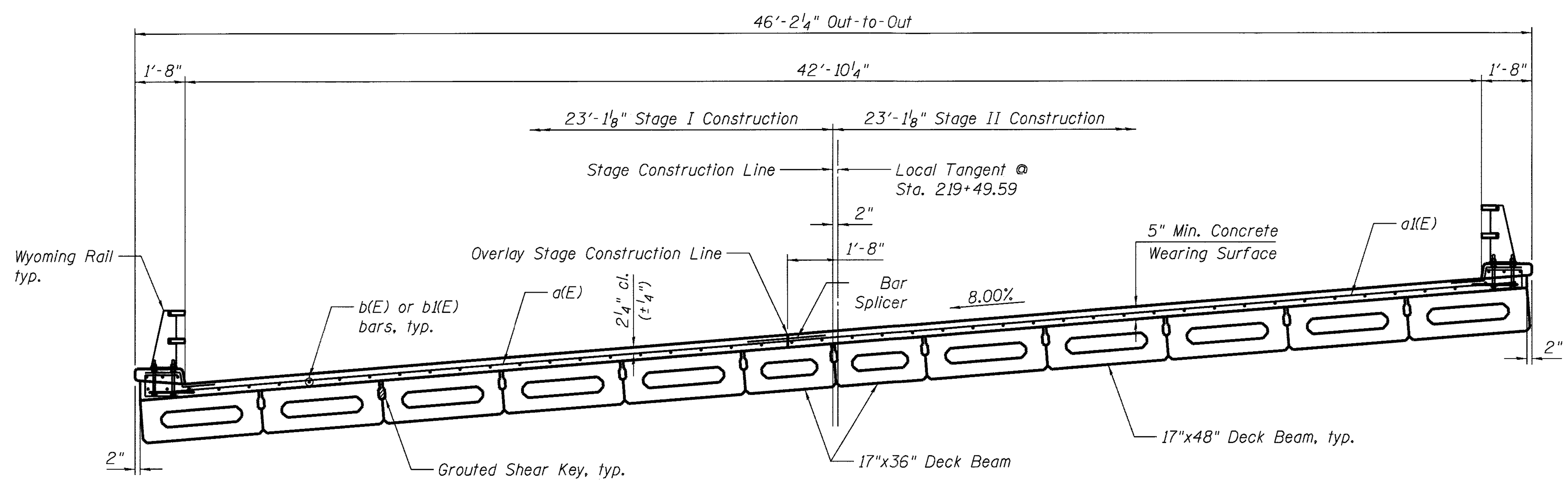
RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



PLAN



CURB AND RAILING DETAIL



CROSS SECTION
(Looking East)

MINIMUM BAR LAP
#4 bar = 2'-7"

Notes:
See sheet 9 of 19 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.
Curb is paid for as Concrete Superstructure.

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED
		CHECKED - JIK 06/29/2015	REVISED
	PLOT SCALE =	DRAWN - JLR 10/30/2015	REVISED
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

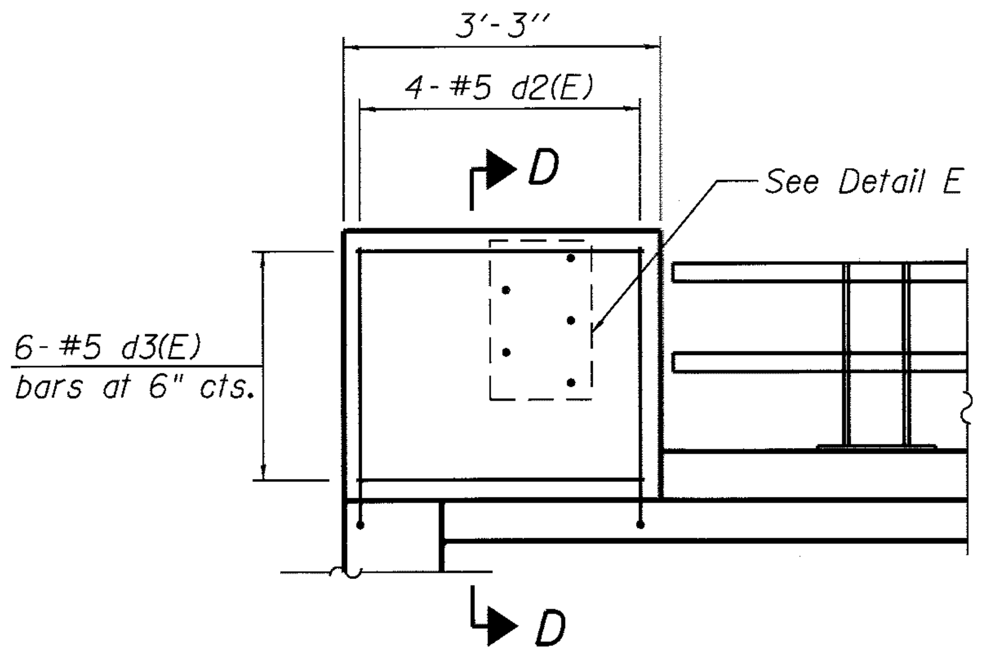
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN - SN 056-3106
SUPERSTRUCTURE

SHEET NO. 8 OF 19 SHEETS

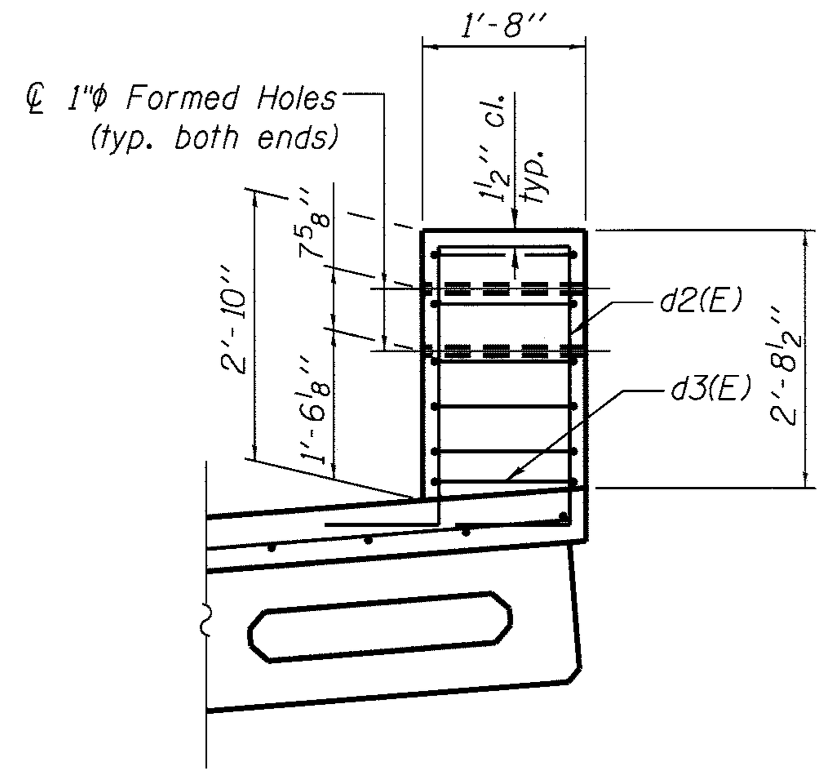
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	28
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

FILE NAME = BR_sht_08_superplan-xs.dgn

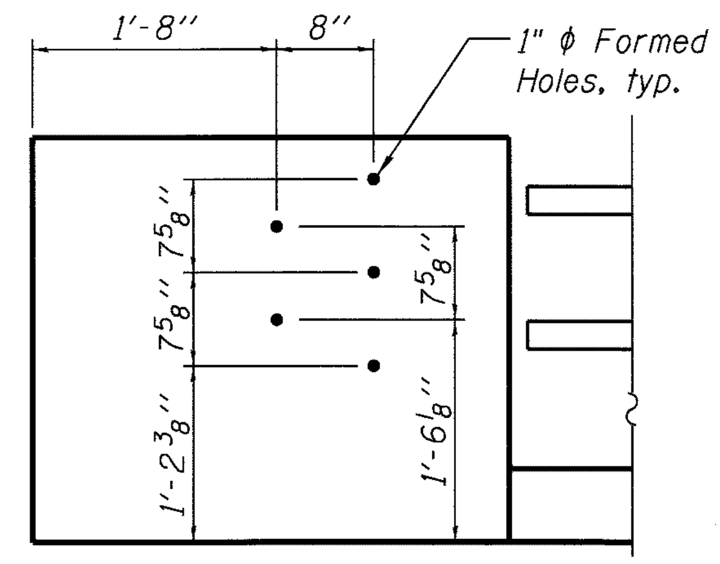


END BLOCK DETAIL

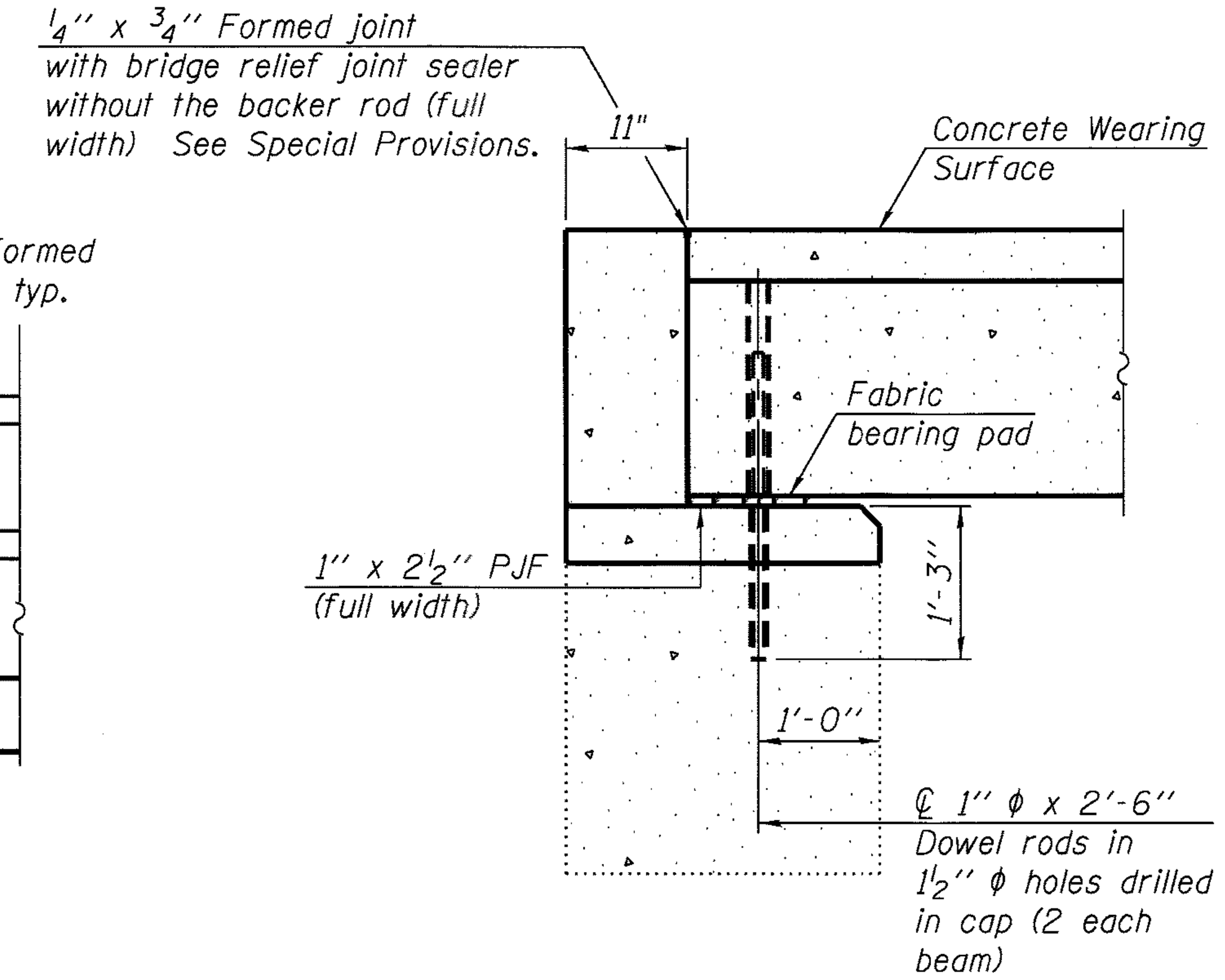
Notes:
End Block is paid for as Concrete Superstructure.



SECTION D-D

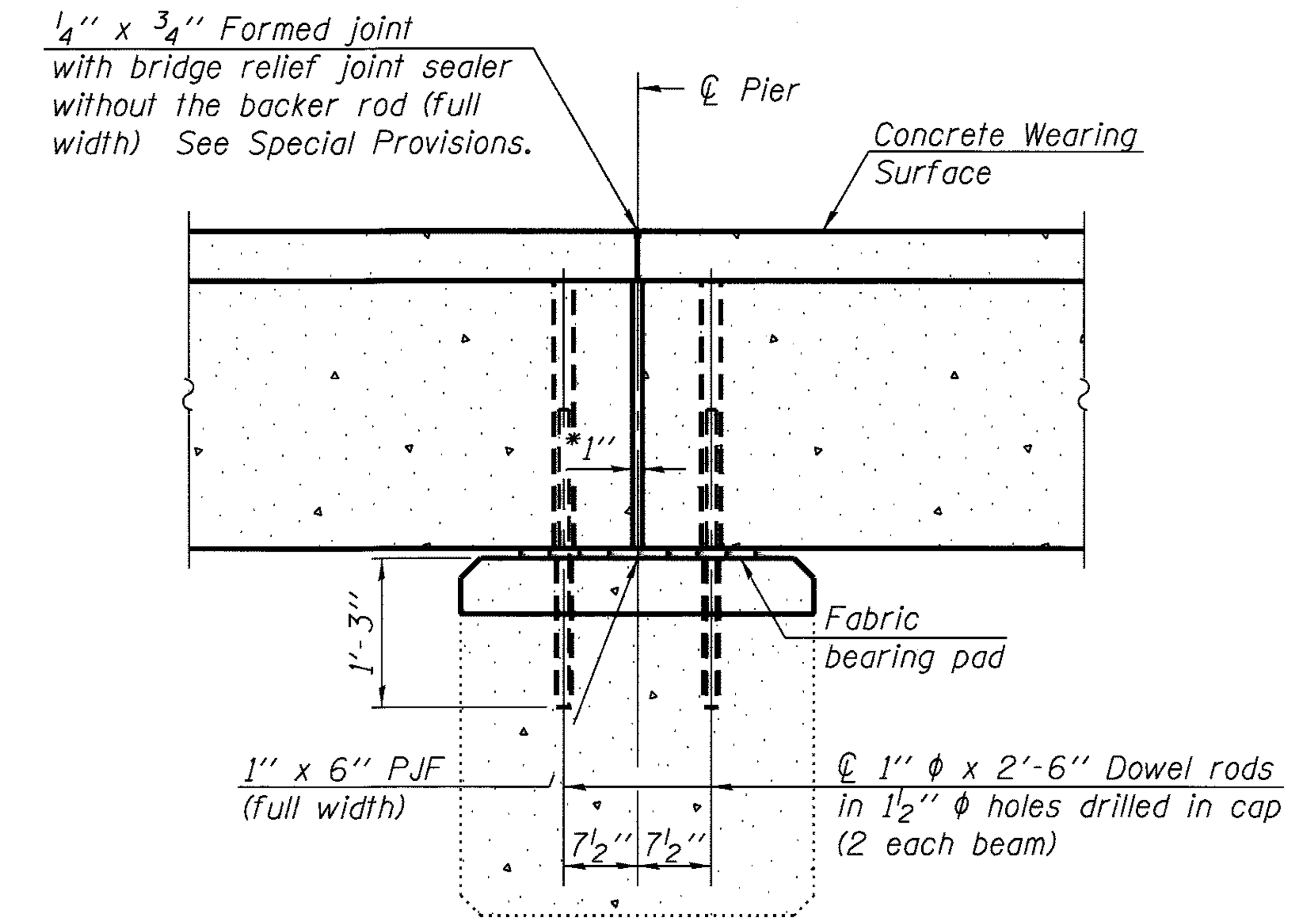


DETAIL E



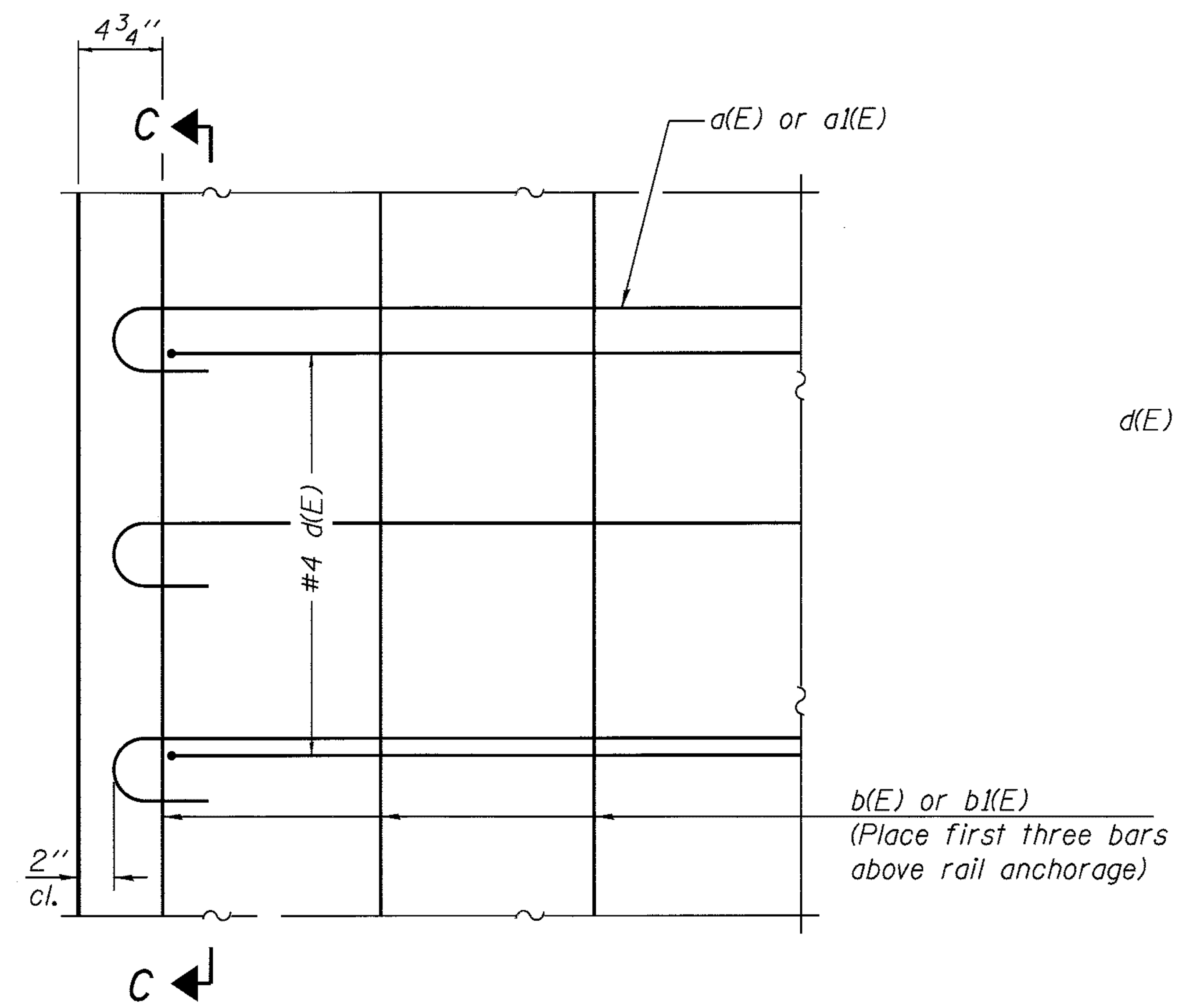
SECTION A-A

Notes:
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.
Backwall is paid for as Concrete Superstructure
See sheet 11 of 19 for fabric bearing pad details.



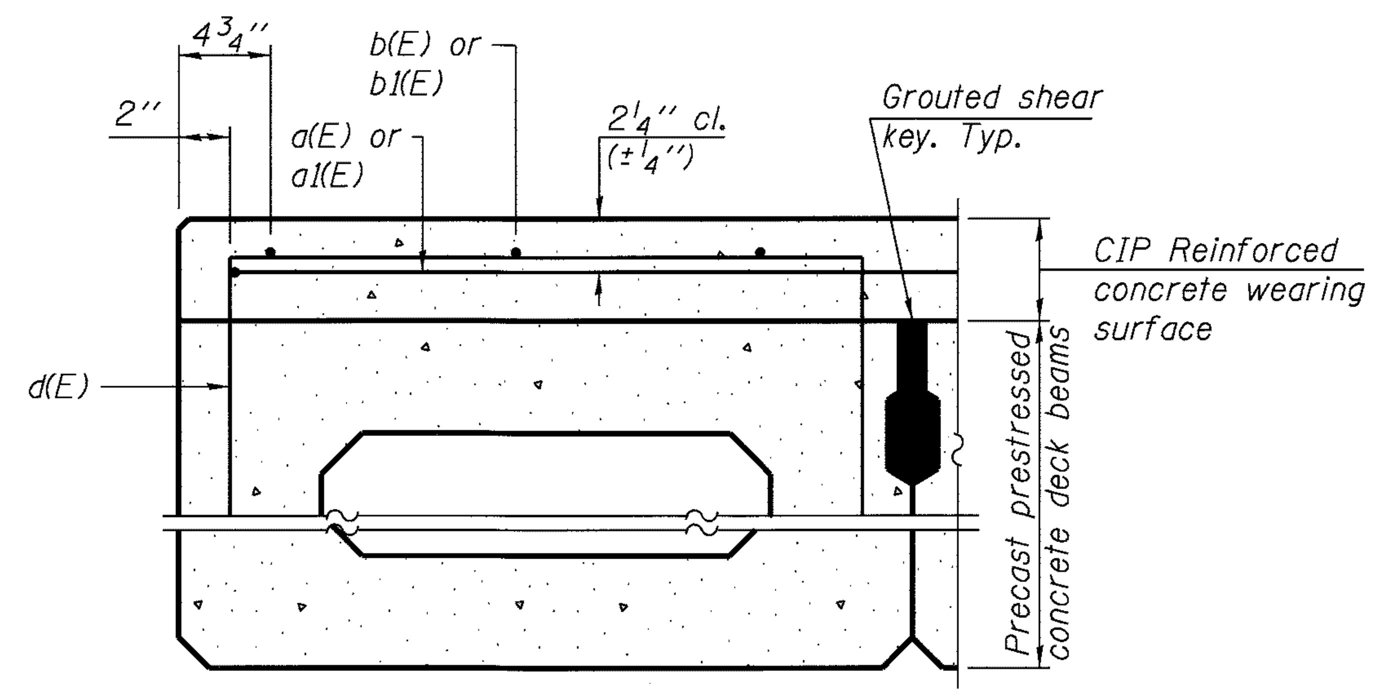
SECTION B-B

*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

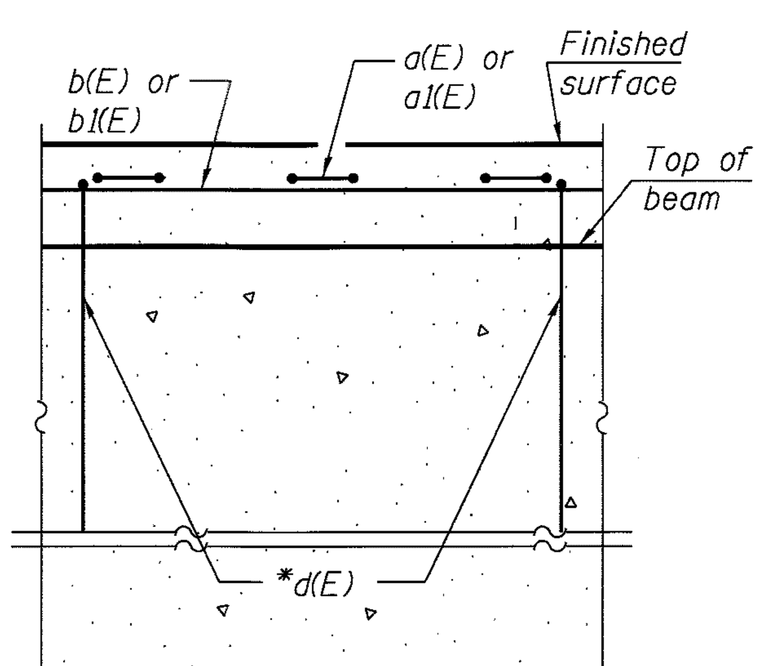


PLAN

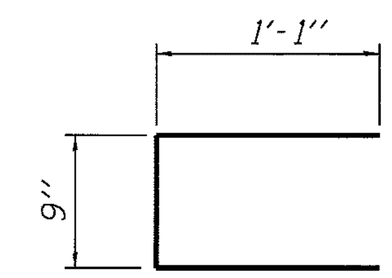
Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



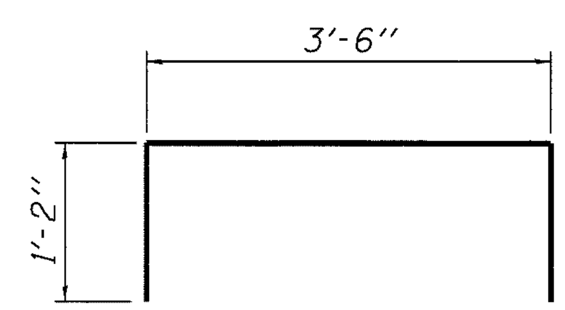
SECTION THRU FASCIA BEAM



SECTION C-C

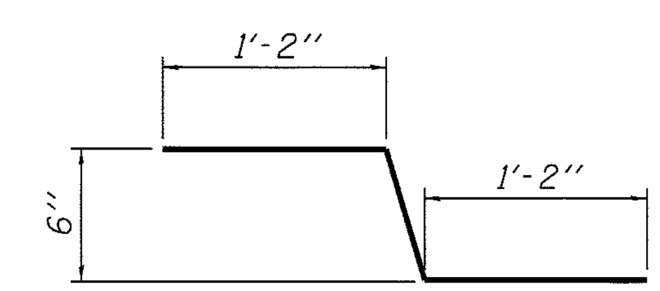


BAR d1(E)

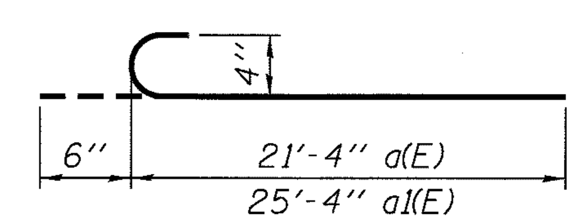


BAR d(E)

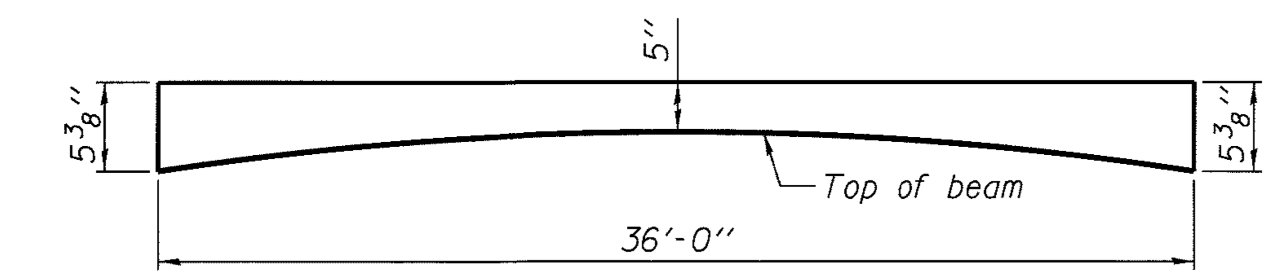
* Place 2-#4 d(E) bars in beam at each post location as shown. d(E) bar included in cost of beam.



BAR c(E)

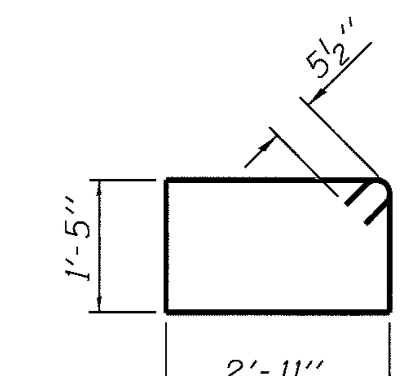


BARS a(E) & a1(E)

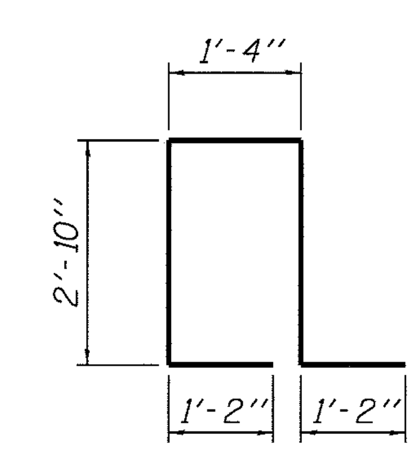


ANTICIPATED CONCRETE WEARING SURFACE PROFILE

(For information only)



BAR d3(E)



BAR d2(E)

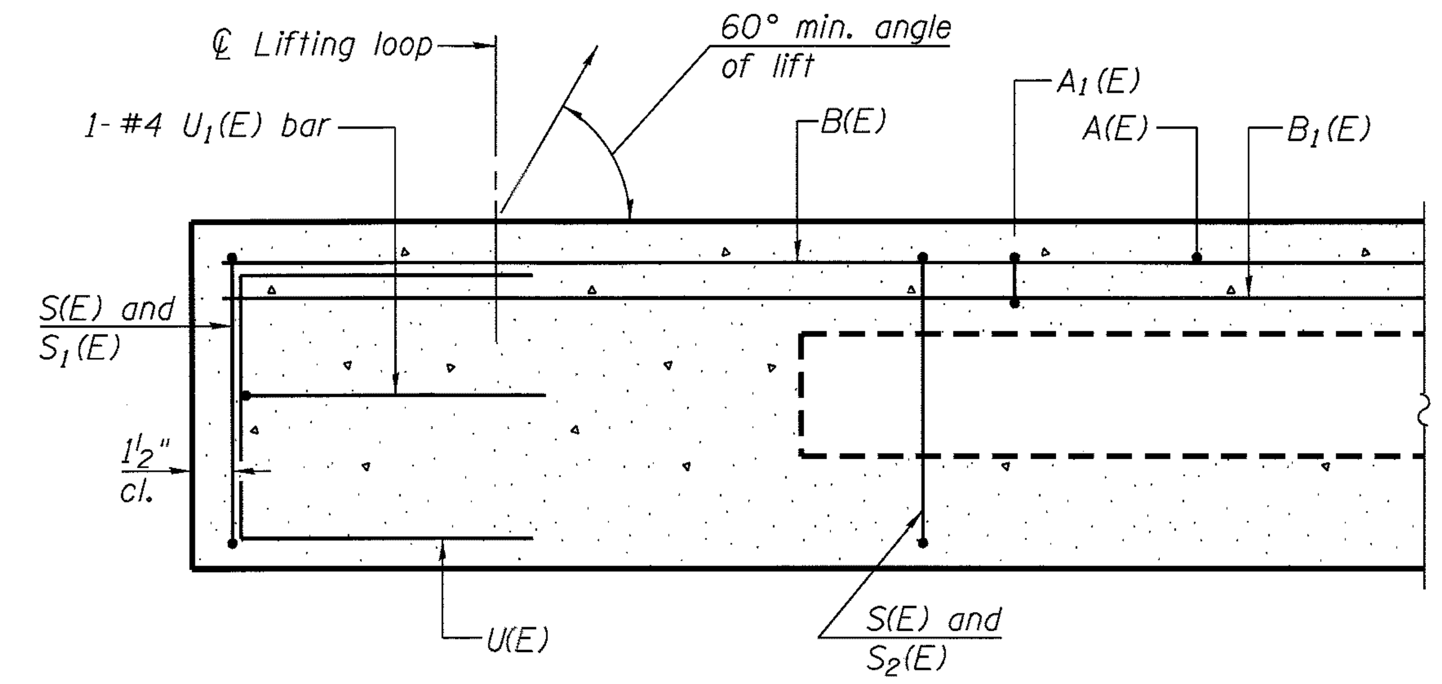
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	109	#4	21'-10"	
a1(E)	109	#4	24'-10"	
b(E)	141	#4	30'-0"	
b1(E)	47	#4	25'-3"	
c(E)	218	#4	2'-10"	
d(E)	48	#4	5'-10"	
d1(E)	218	#4	2'-11"	
d2(E)	16	#5	9'-4"	
d3(E)	24	#5	9'-7"	
Concrete Superstructure			Cu. Yd.	15.1
Reinforcement Bars, Epoxy Coated			Pound	8,440
Concrete Wearing Surface, 5"			Sq. Yd.	552

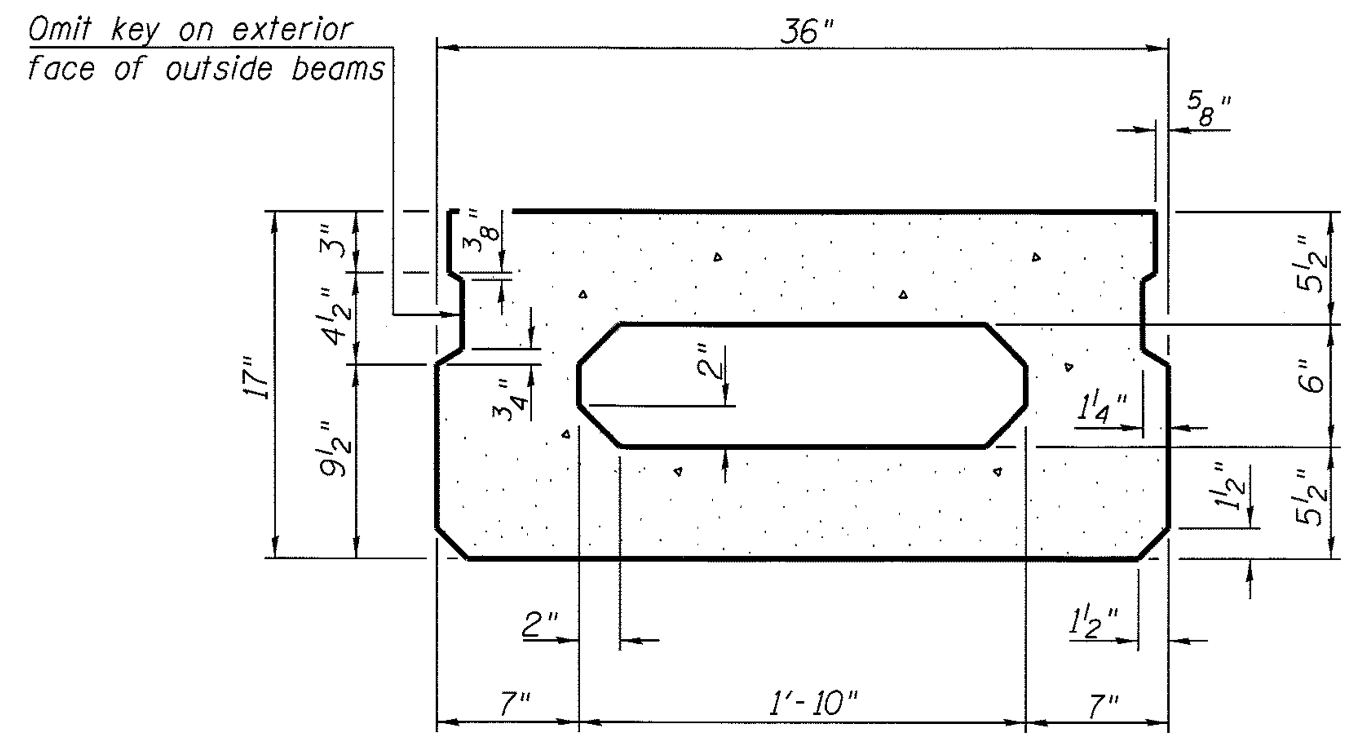
Bars indicated thus 3 x 48-#4 etc. indicates 48 lines of bars with 3 lengths per line.

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

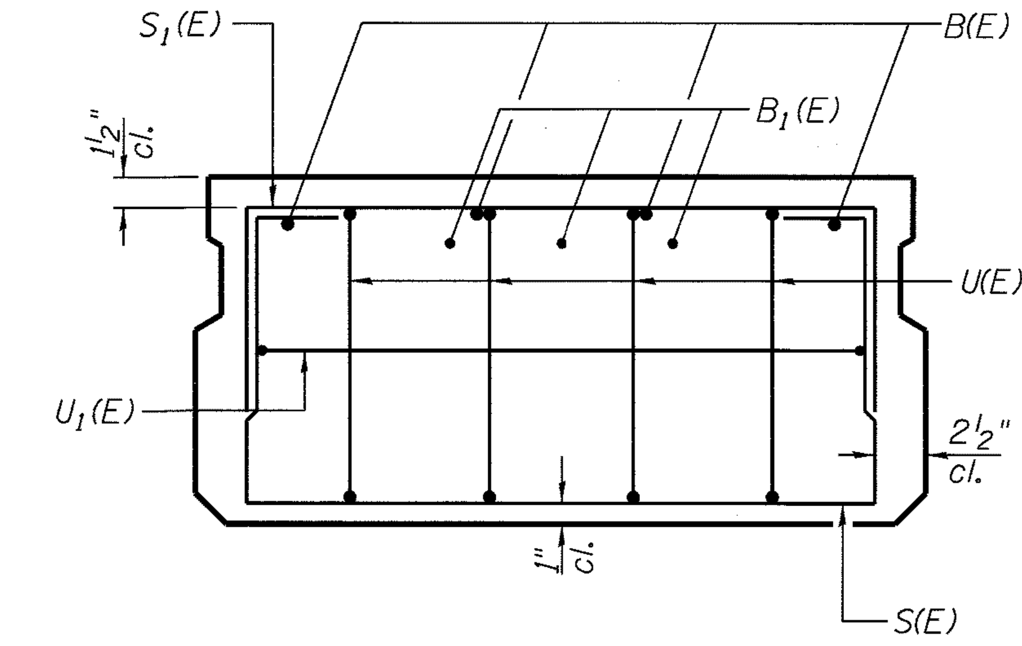


SECTION A-A

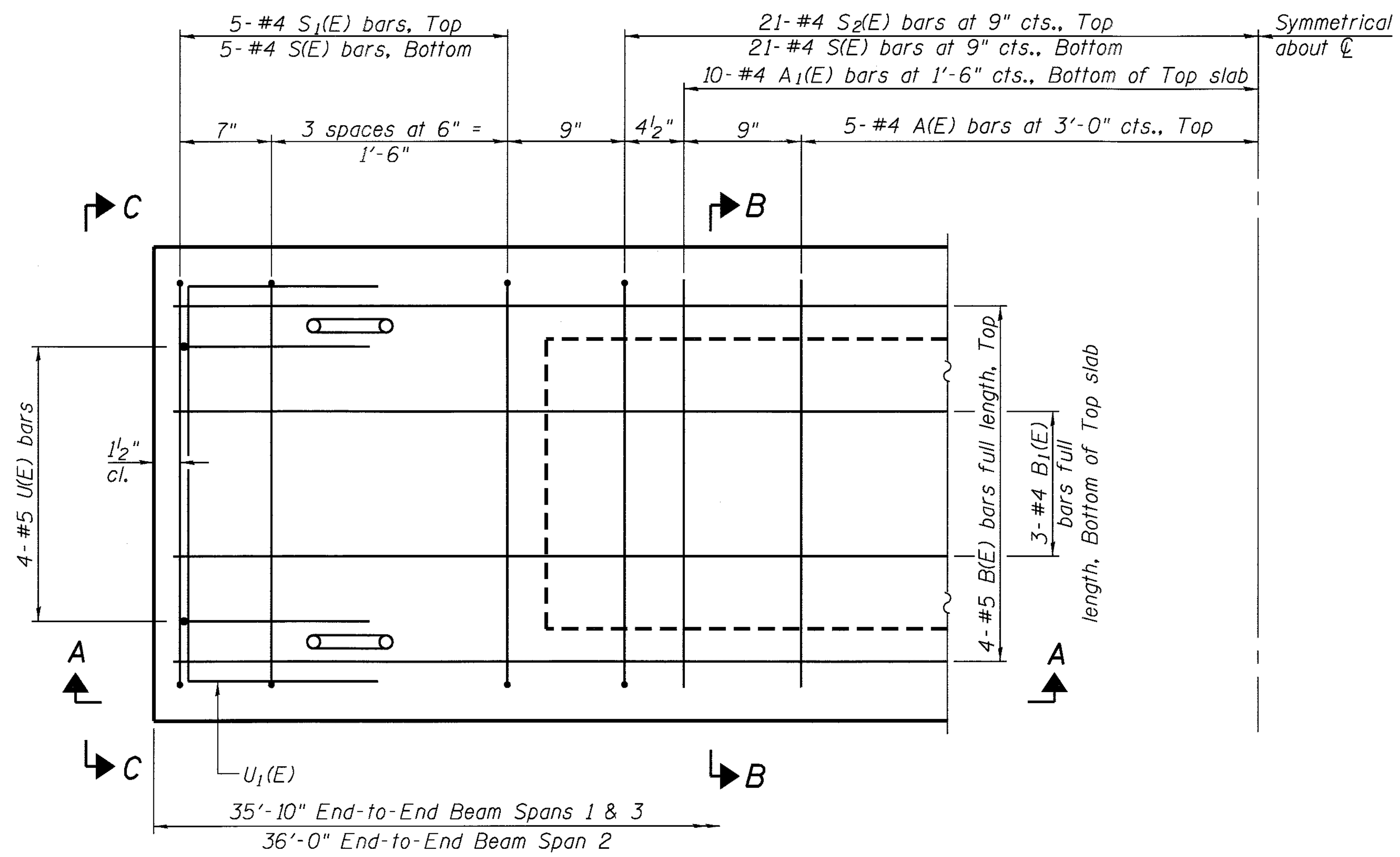


SECTION B-B

(Showing dimensions)

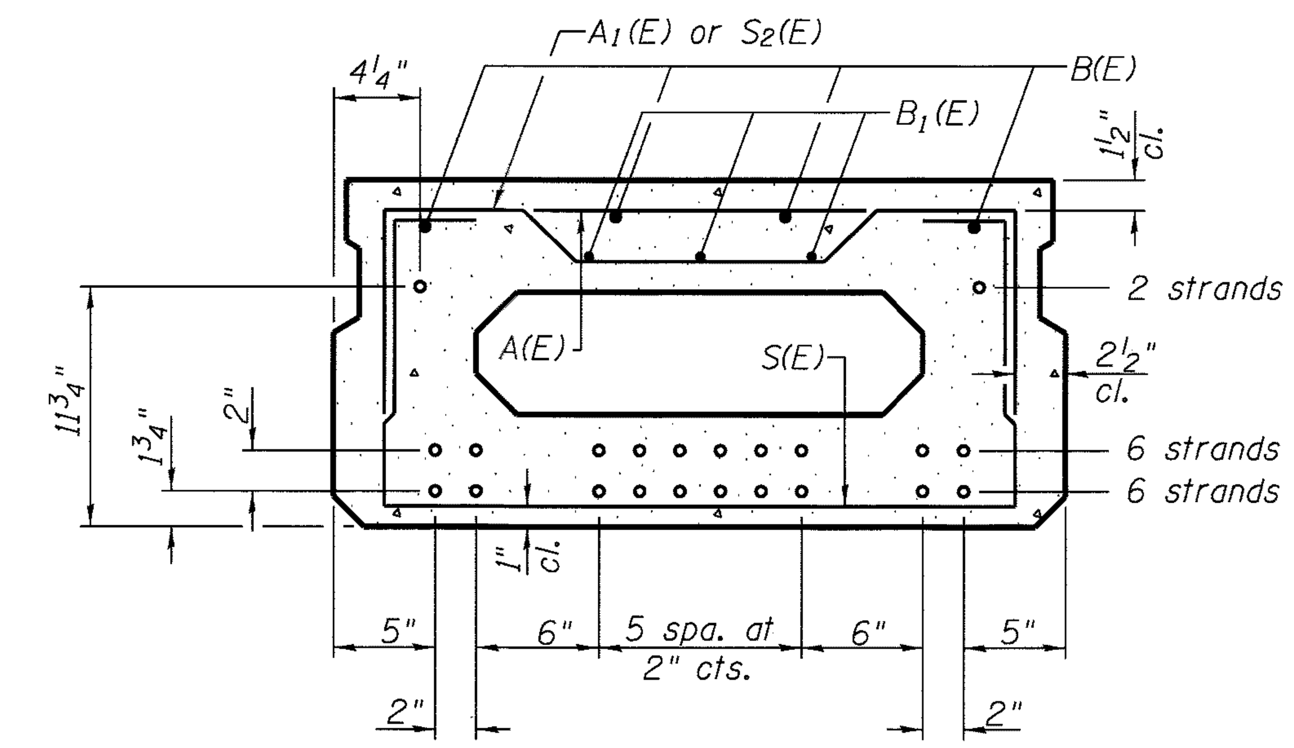


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and $S_2(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	10	#4	2'-7"	
$A_1(E)$	20	#4	2'-10"	
B(E)	4	#5	35'-6"	
$B_1(E)$	3	#4	35'-6"	
S(E)	51	#4	5'-9"	
$S_1(E)$	10	#4	4'-3"	
$S_2(E)$	41	#4	4'-6"	
U(E)	8	#5	3'-8"	
$U_1(E)$	2	#4	5'-0"	

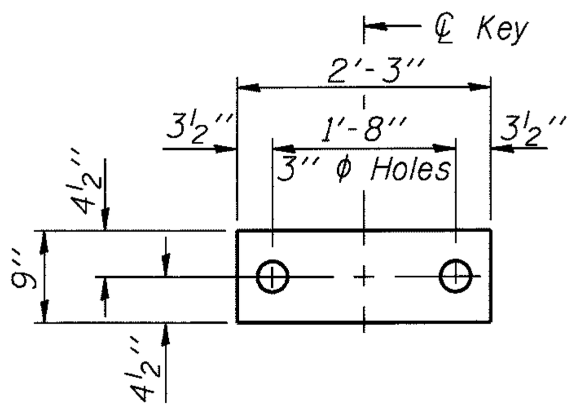
Note: See sheet 11 of 19 for additional details and Bill of Material.

PD-1736-0 06-01-16

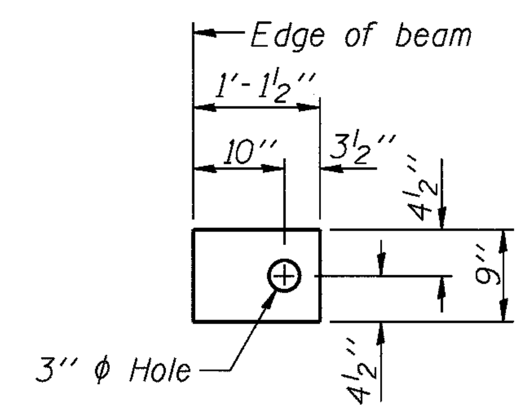
FILE NAME = BR_sht_09_17x36beam.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106 17" x 36" PPC DECK BEAM	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - JIK 06/29/2015	REVISED			0186	14-00438-00-BR	MCHENRY	46	30
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED					CONTRACT NO. 61D64		
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED		SHEET NO. 10 OF 19 SHEETS			ILLINOIS FED. AID PROJECT		

RS&H. 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174



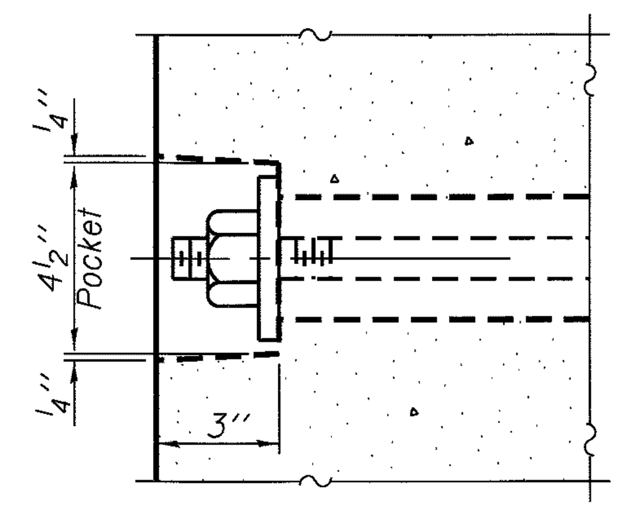
FABRIC BEARING PAD
(Interior)



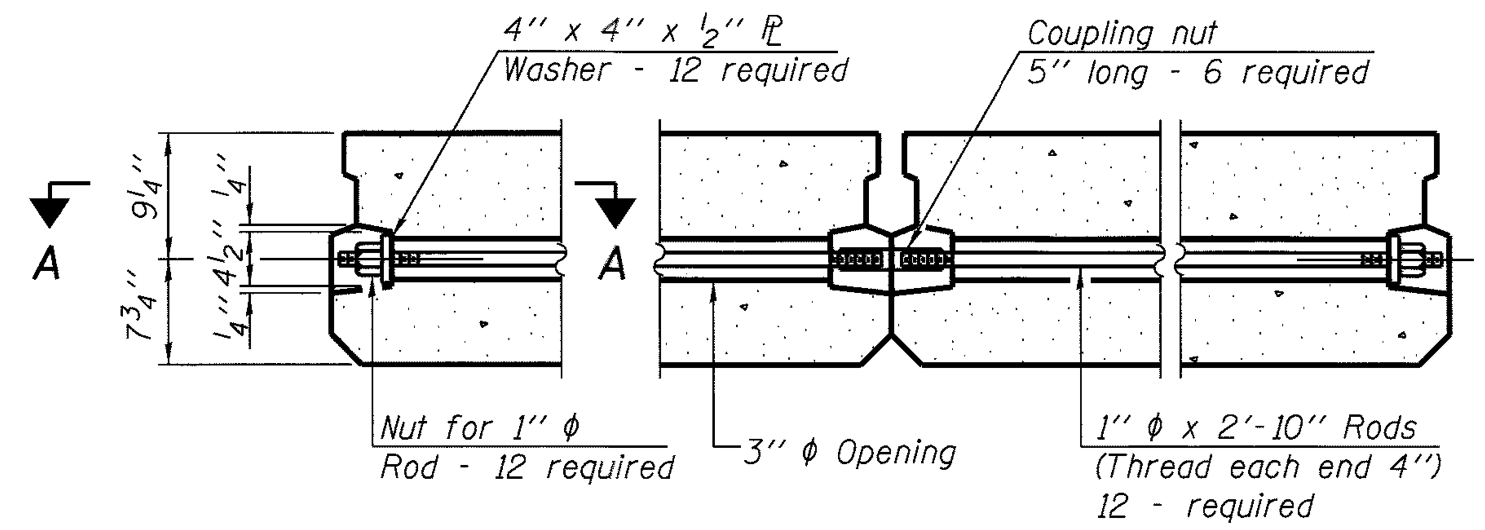
FABRIC BEARING PAD
(Exterior)

FIXED

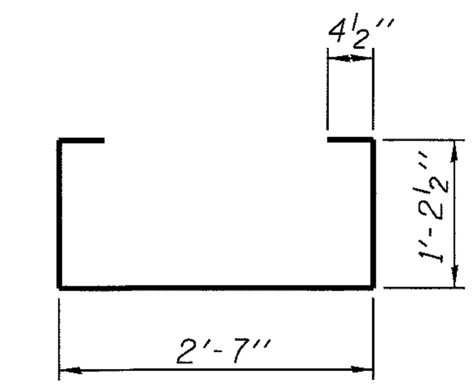
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



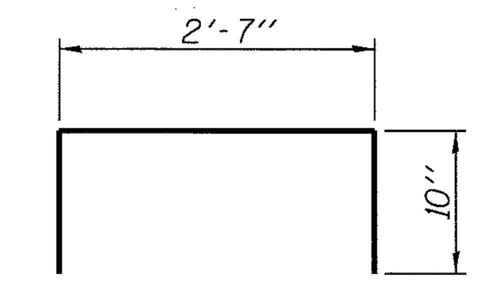
SECTION A-A



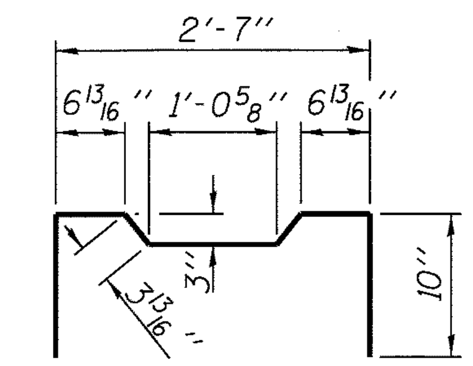
TYPICAL TRANSVERSE TIE ASSEMBLY



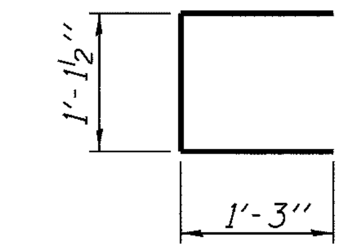
BAR S(E)



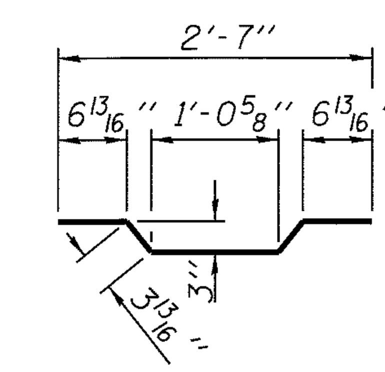
BAR S1(E)



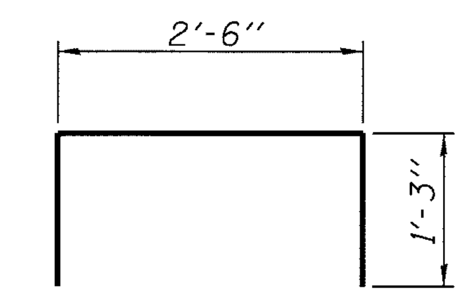
BAR S2(E)



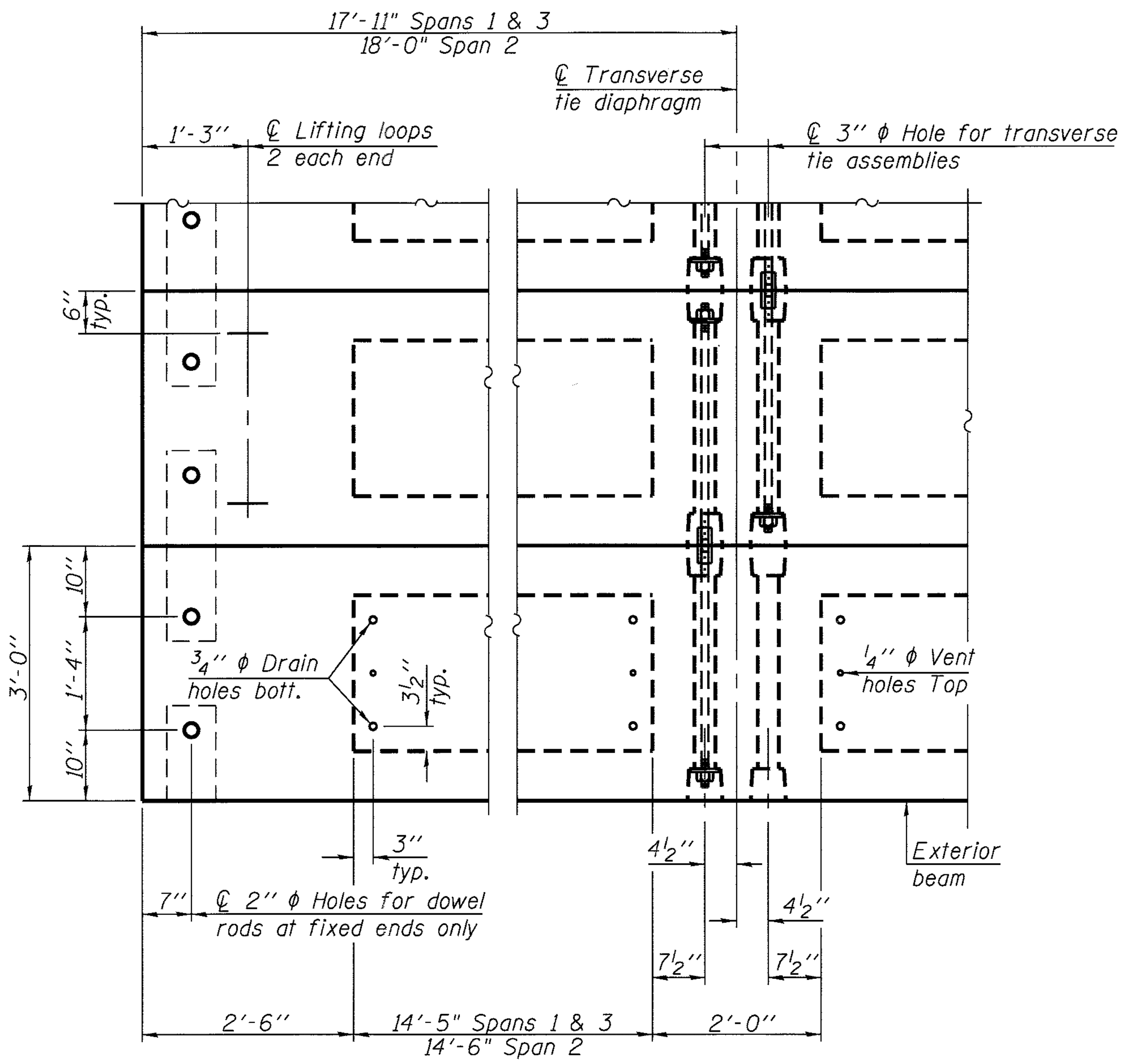
BAR U(E)



BAR A1(E)

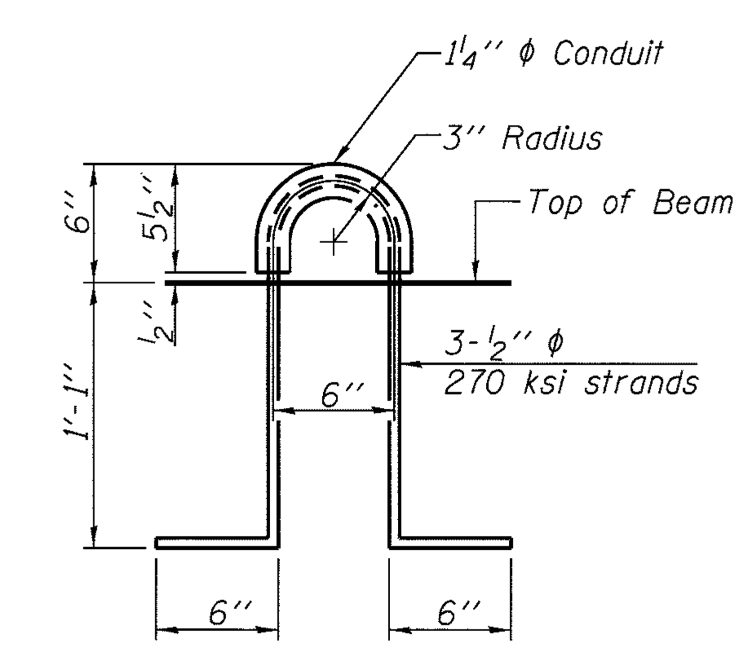


BAR U1(E)



PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" φ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	646

PD-1736-0D 1-28-16

FILE NAME = BR_sht_18_17x36beam.dgn

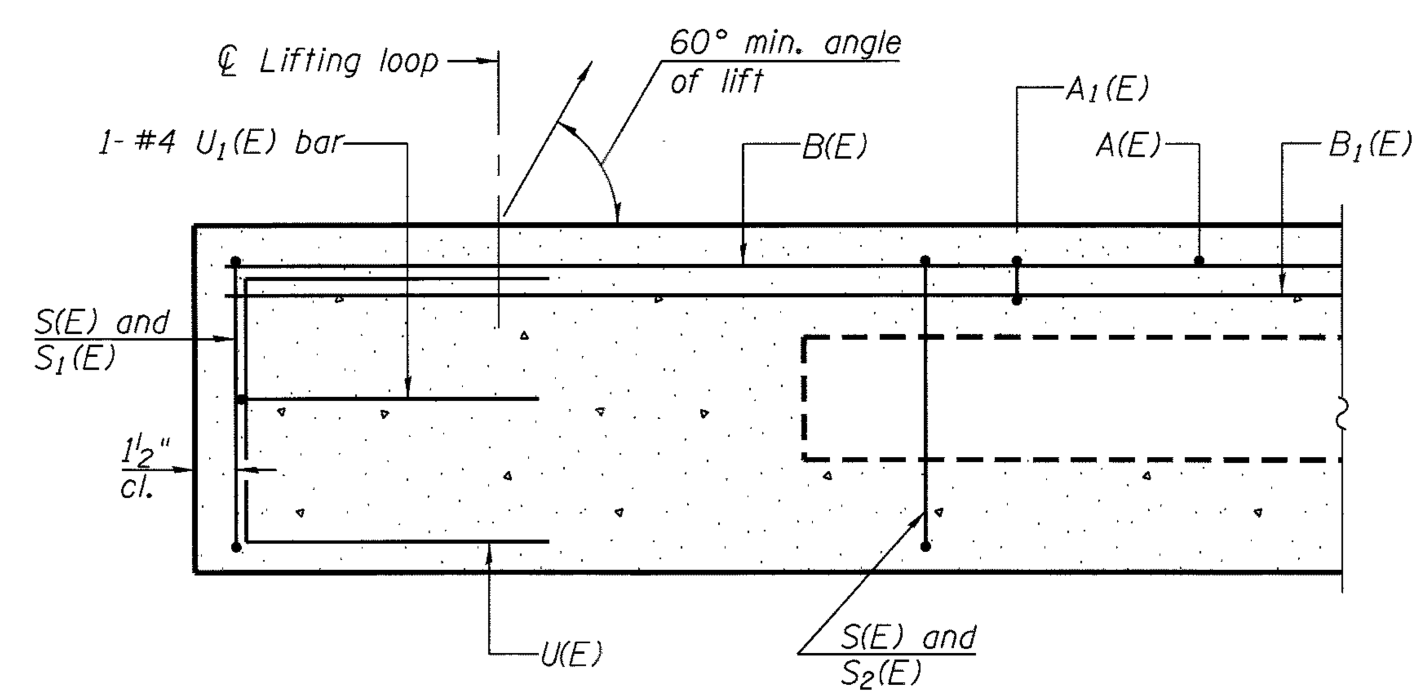
RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED
		CHECKED - JIK 06/29/2015	REVISED
	PLOT SCALE =	DRAWN - JLR 10/30/2015	REVISED
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

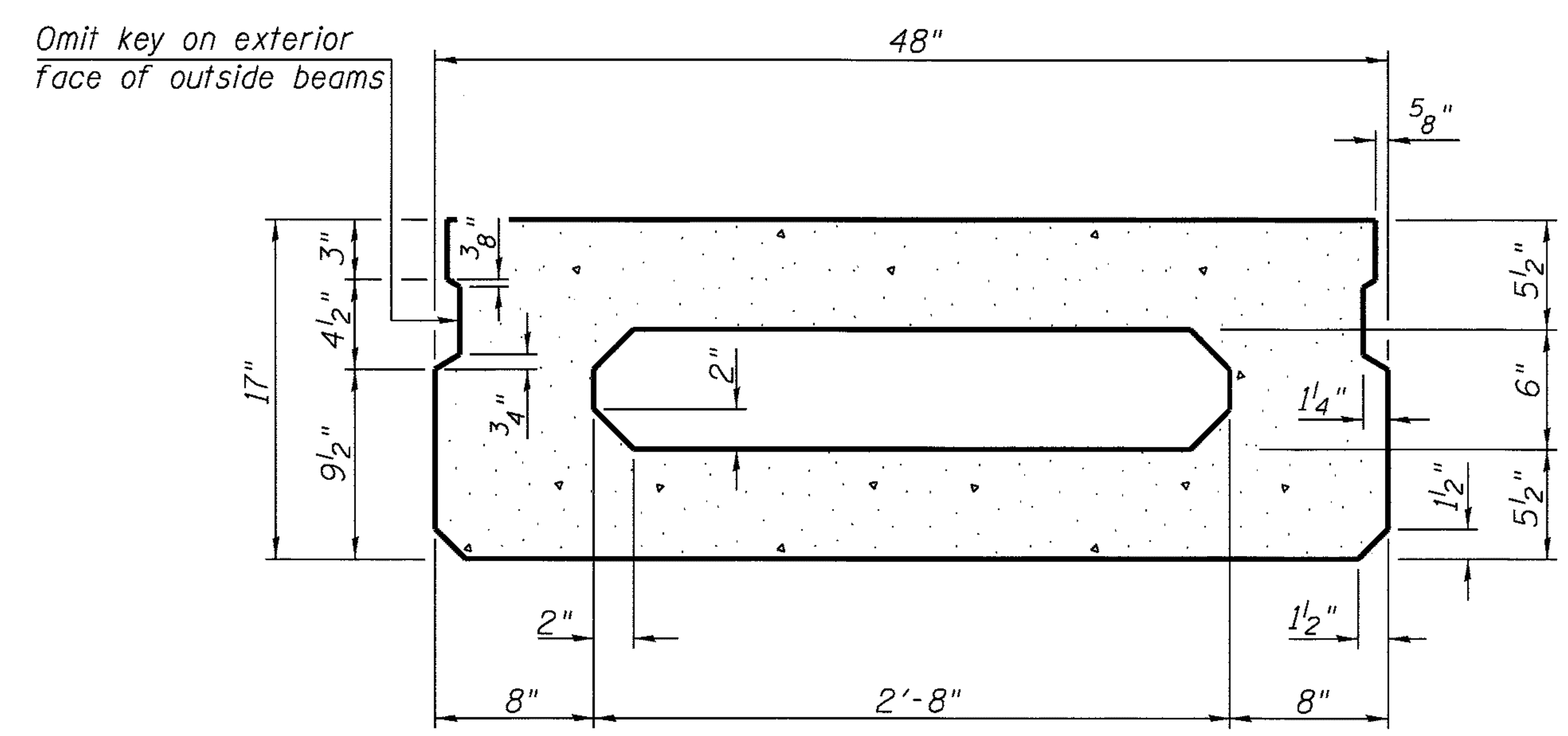
BAY ROAD OVER LILY LAKE DRAIN - SN 056-3106
17" x 36" PPC DECK BEAM DETAILS
SHEET NO. 11 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	31
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

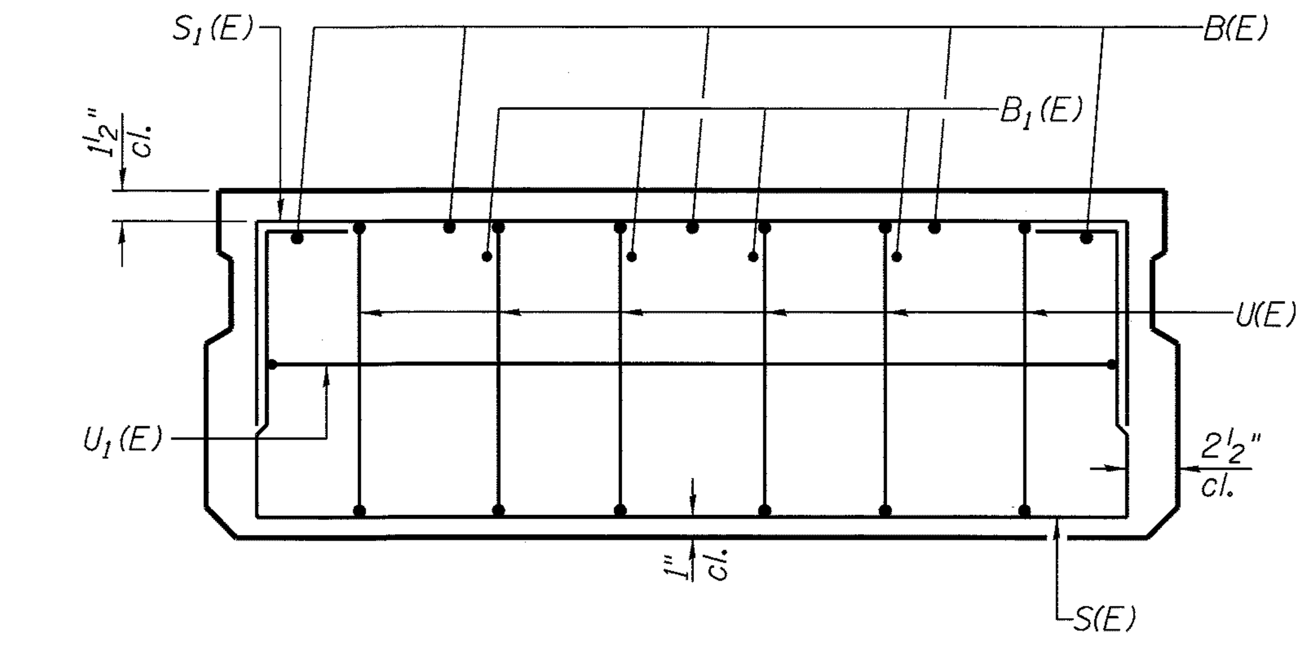
RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



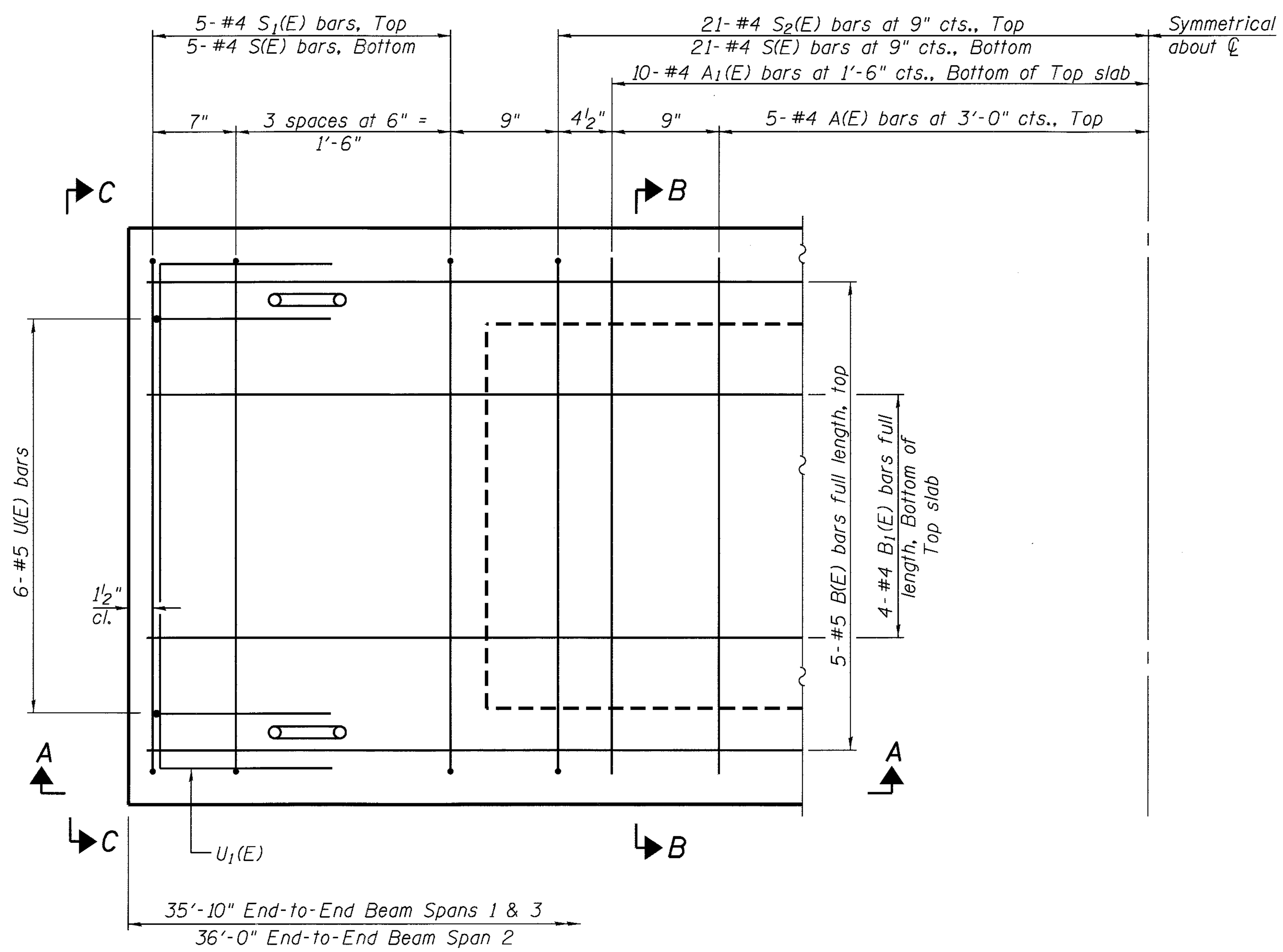
SECTION A-A



SECTION B-B
(Showing dimensions)

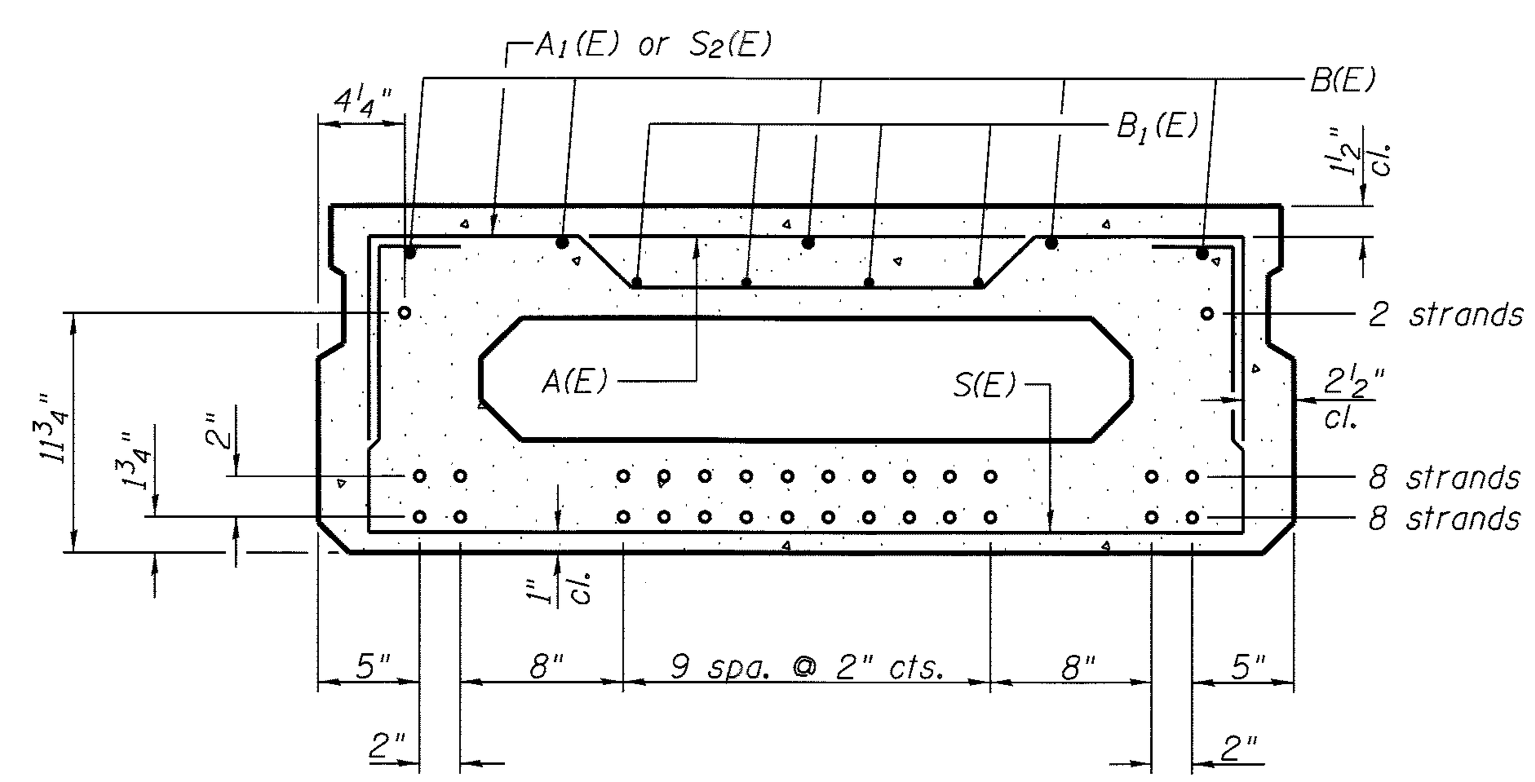


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S_2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	10	#4	3'-7"	
A_1(E)	20	#4	3'-10"	
B(E)	5	#5	35'-6"	
B_1(E)	4	#4	35'-6"	
S(E)	51	#4	6'-9"	
S_1(E)	10	#4	5'-3"	
S_2(E)	41	#4	5'-6"	
U(E)	12	#5	3'-8"	
U_1(E)	2	#4	6'-0"	

Note: See sheet 13 of 19 for additional details and Bill of Material.

PD-1748-0 06-01-16

FILE NAME = BR_sht_11_17x48beam.dgn

RS&H

USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	
	CHECKED - JIK 06/29/2015	REVISED	
PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED	
PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

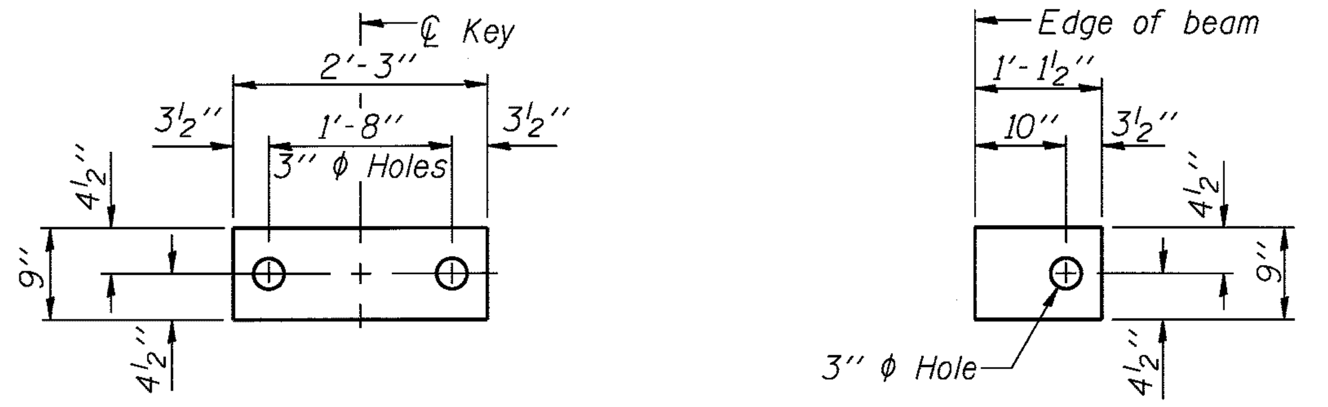
BAY ROAD OVER LILY LAKE DRAIN - SN 056-3106
17" x 48" PPC DECK BEAM

SHEET NO. 12 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	32

CONTRACT NO. 61D64

ILLINOIS FED. AID PROJECT

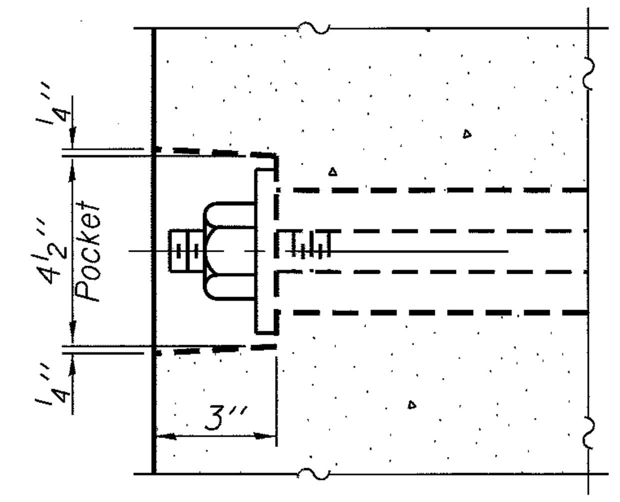


FABRIC BEARING PAD
(Interior)

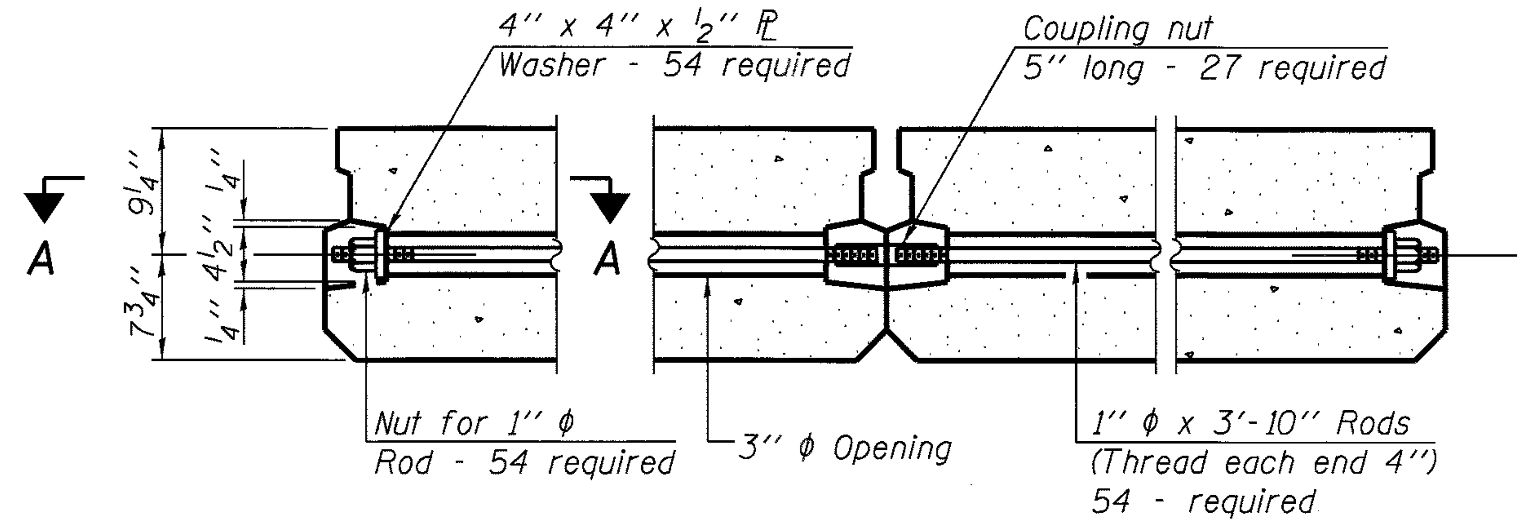
FABRIC BEARING PAD
(Exterior)

FIXED

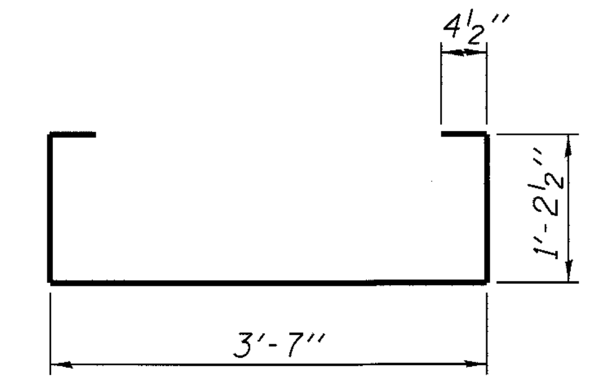
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



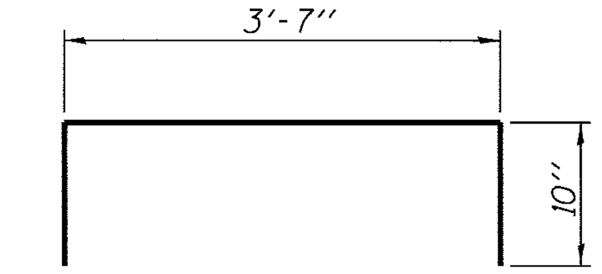
SECTION A-A



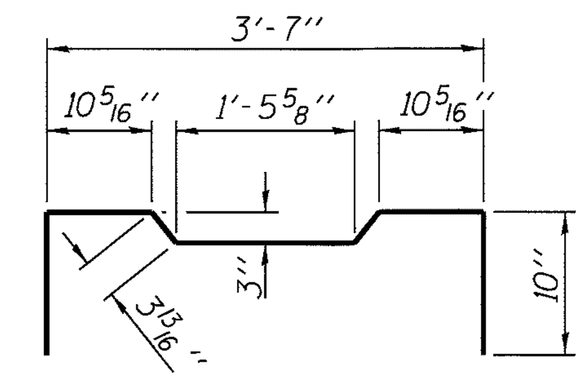
TYPICAL TRANSVERSE TIE ASSEMBLY



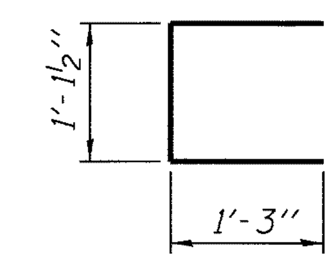
BAR S(E)



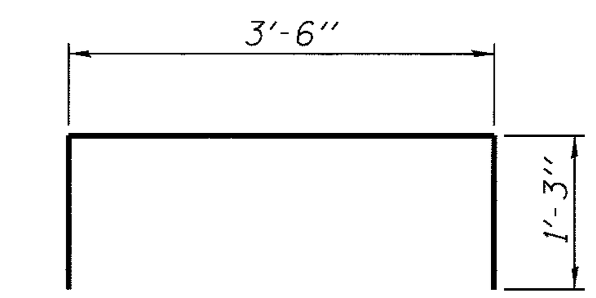
BAR S1(E)



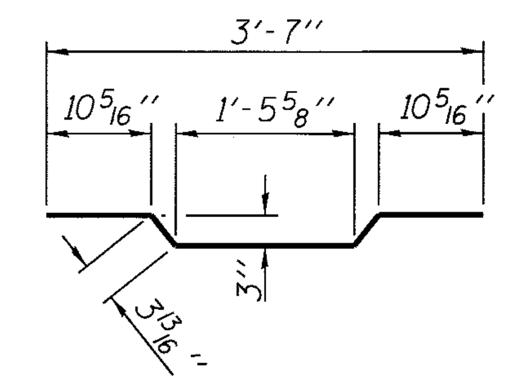
BAR S2(E)



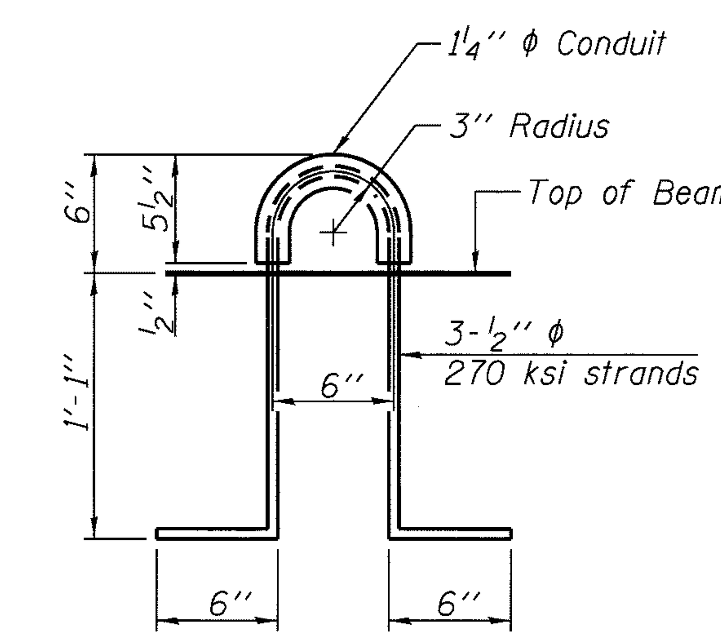
BAR U(E)



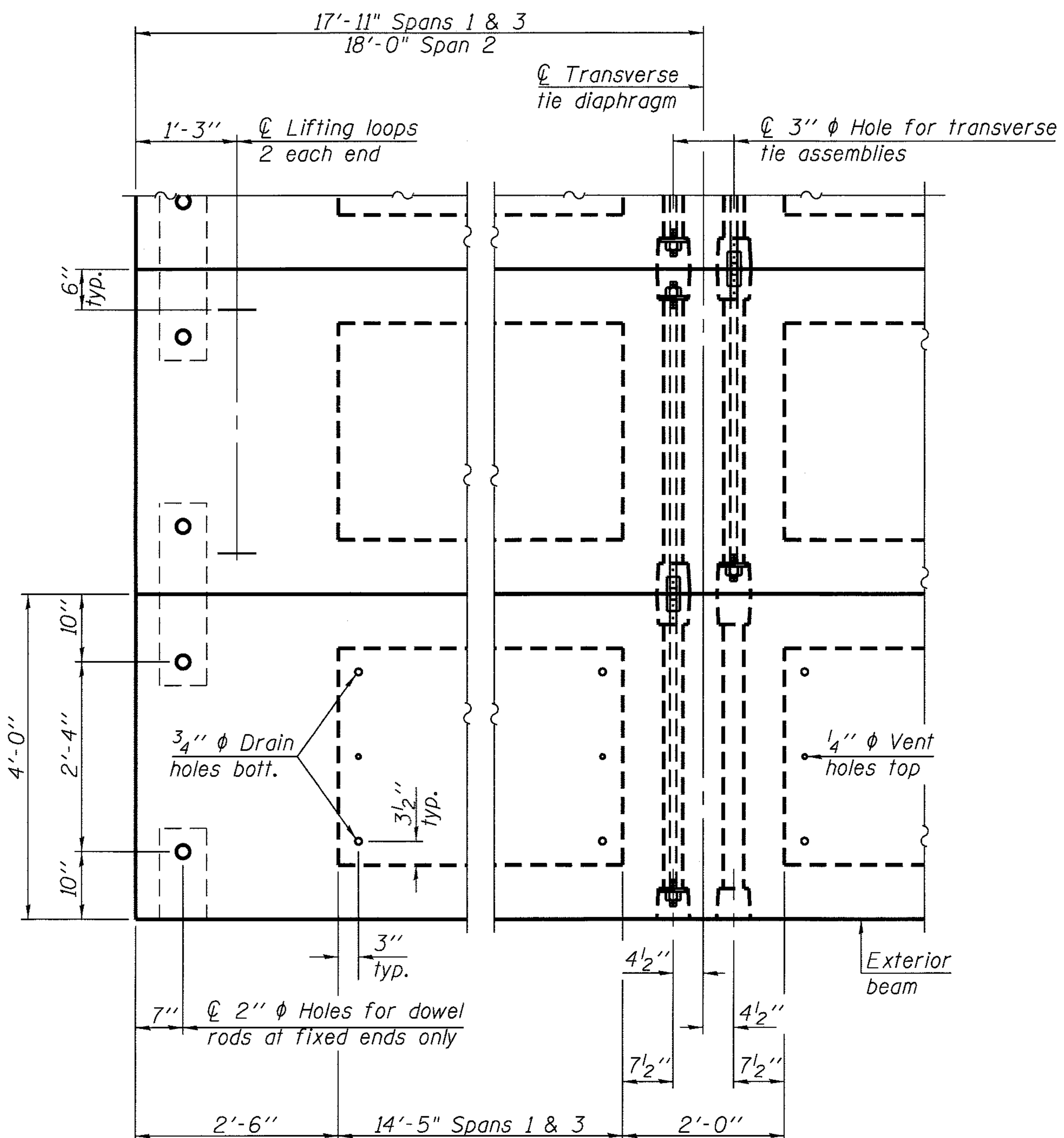
BAR U1(E)



BAR A1(E)



LIFTING LOOP DETAIL



PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	4,307

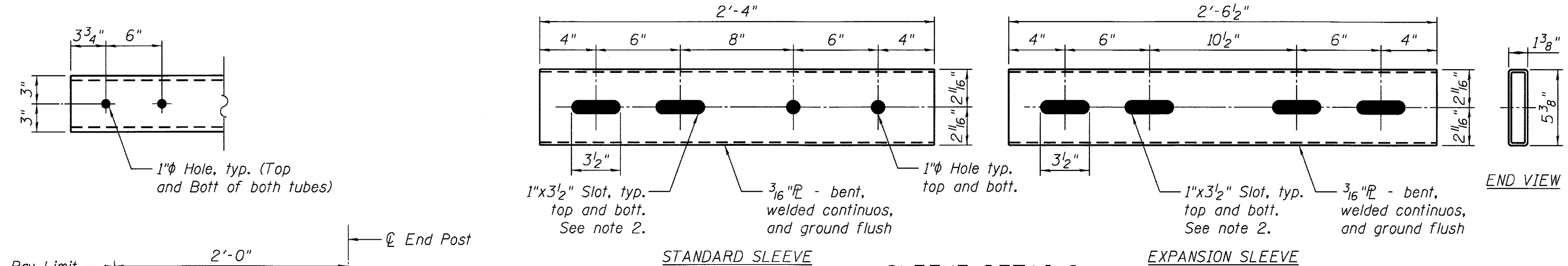
RS&H. 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

FILE NAME = BR_sht_12_17x48beam.dgn

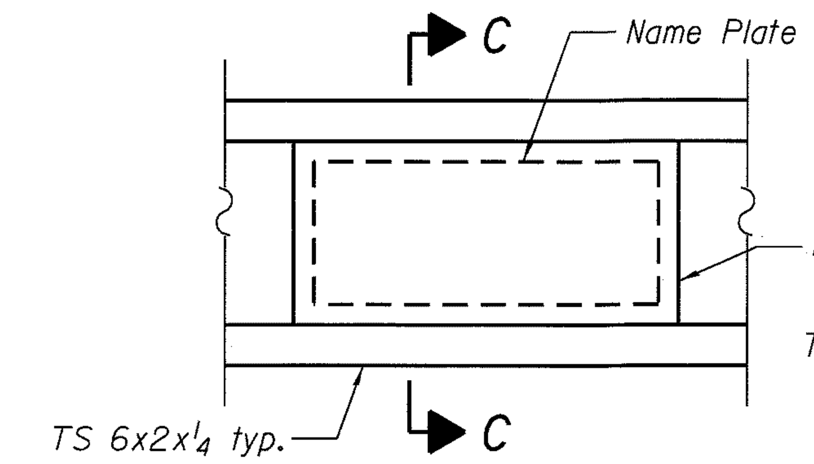
PD-1748-OD 1-28-16

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN – SN 056–3106 17" x 48" PPC DECK BEAM DETAILS
		CHECKED - JIK 06/29/2015	REVISED		
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED		
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED		SHEET NO. 13 OF 19 SHEETS

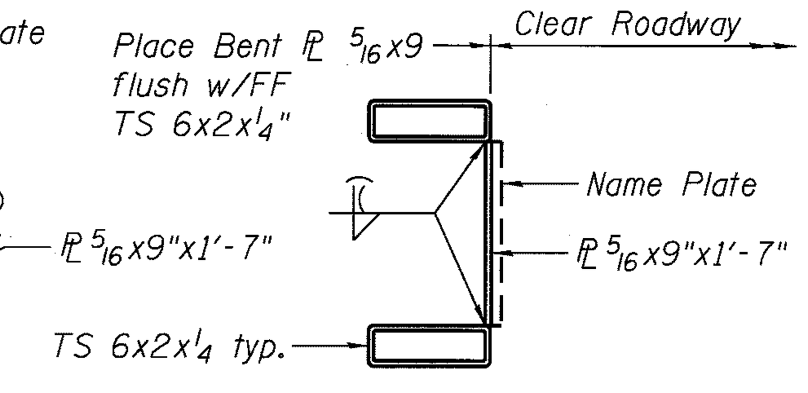
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	33
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			



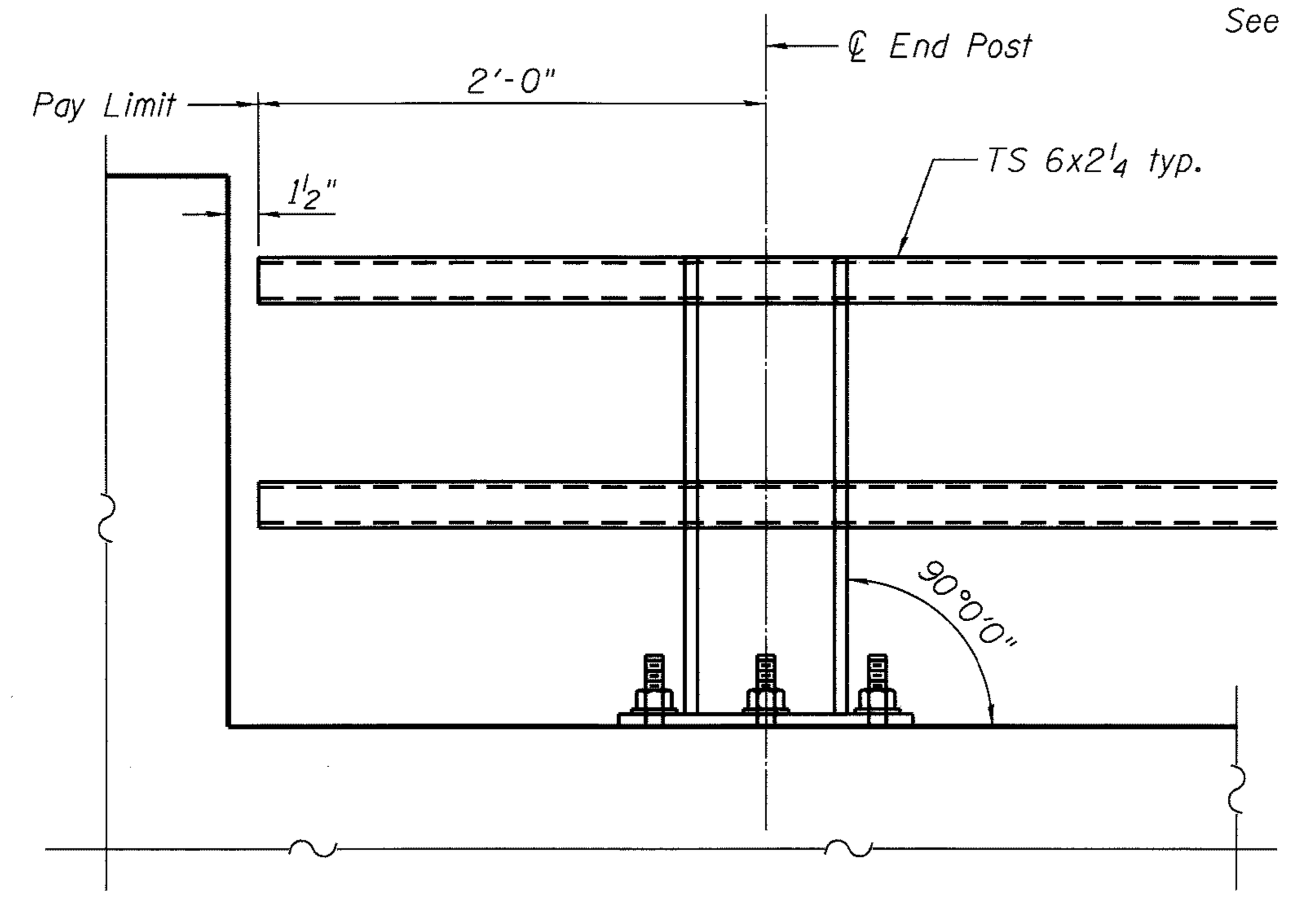
SLEEVE DETAILS



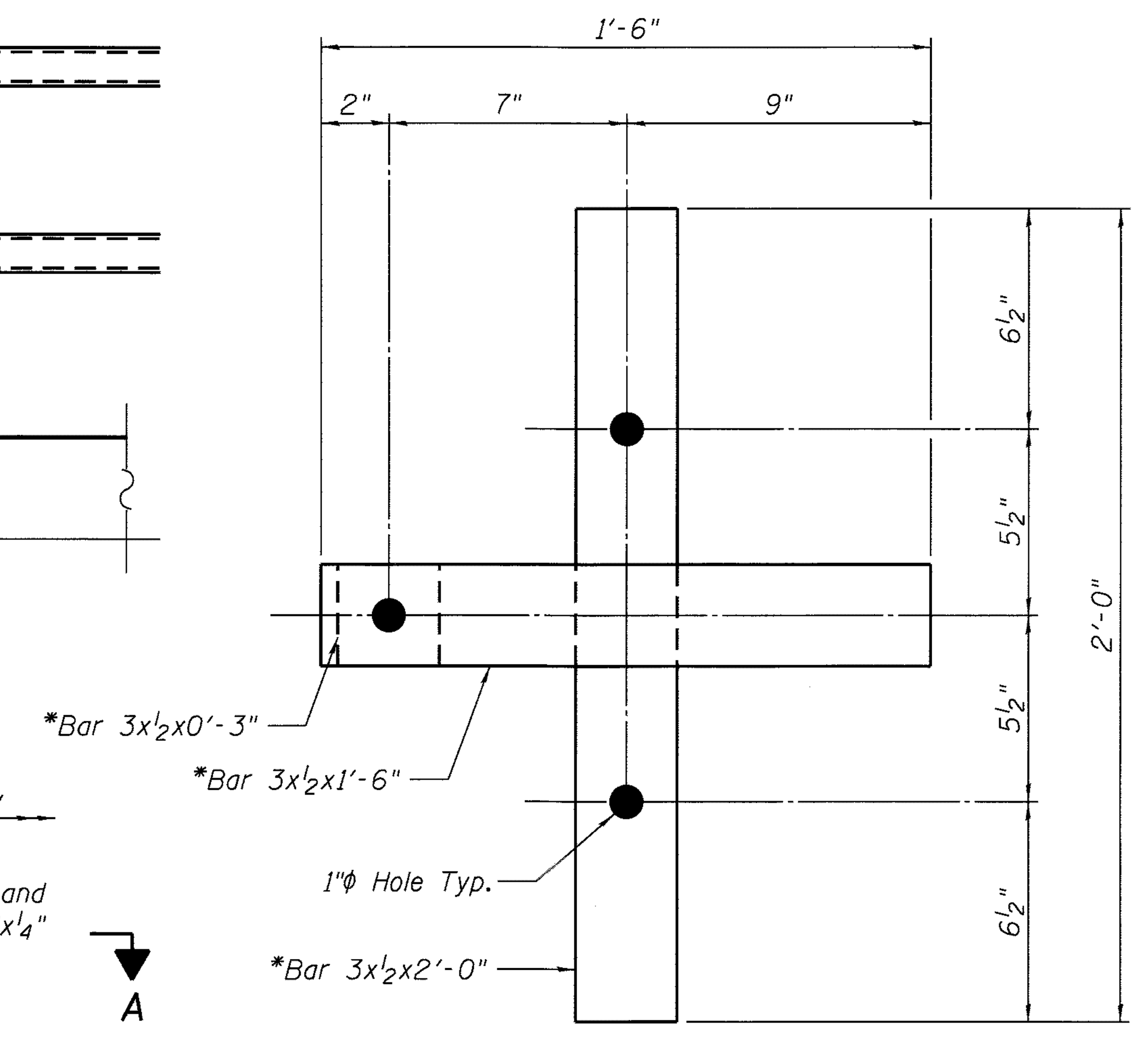
DETAIL AT NAME PLATE LOCATION



SECTION C-C

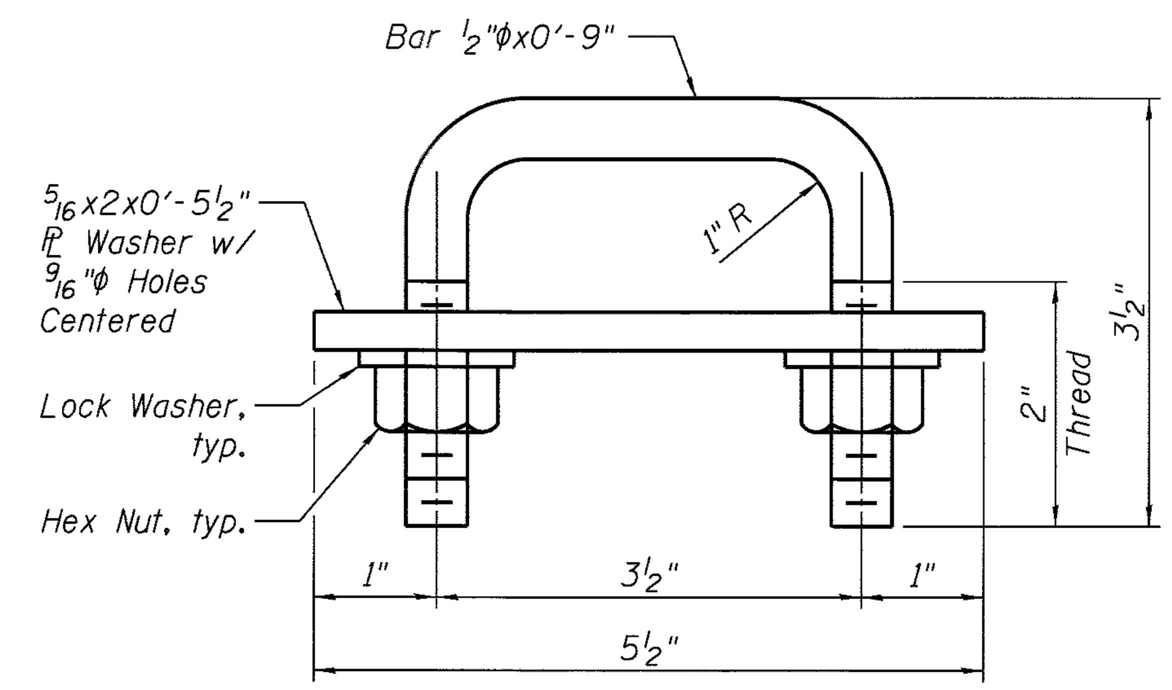


ELEVATION AT TERMINAL

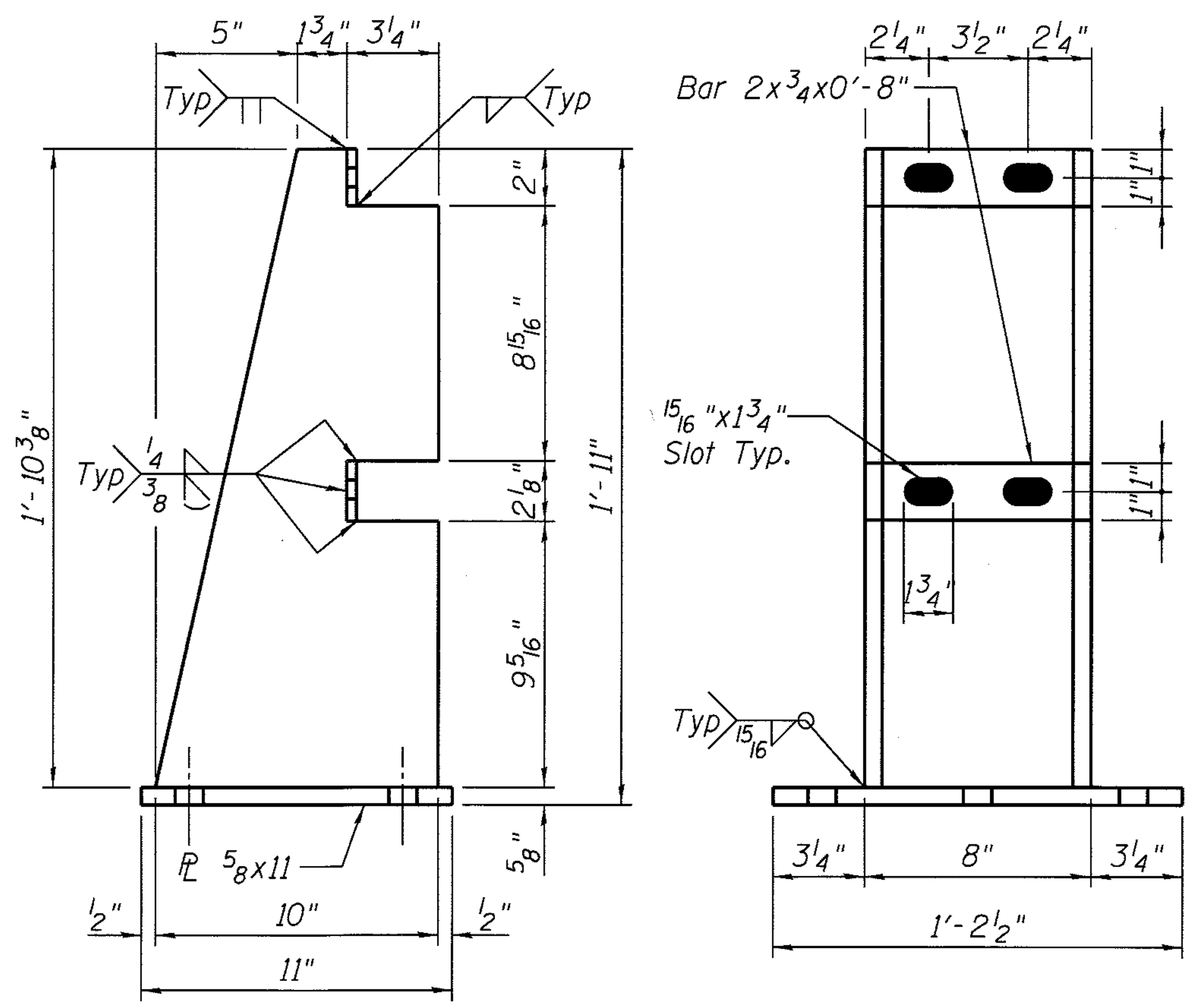


SECTION B-B

(* Not galvanized)
(Anchor bolts and slab not shown)

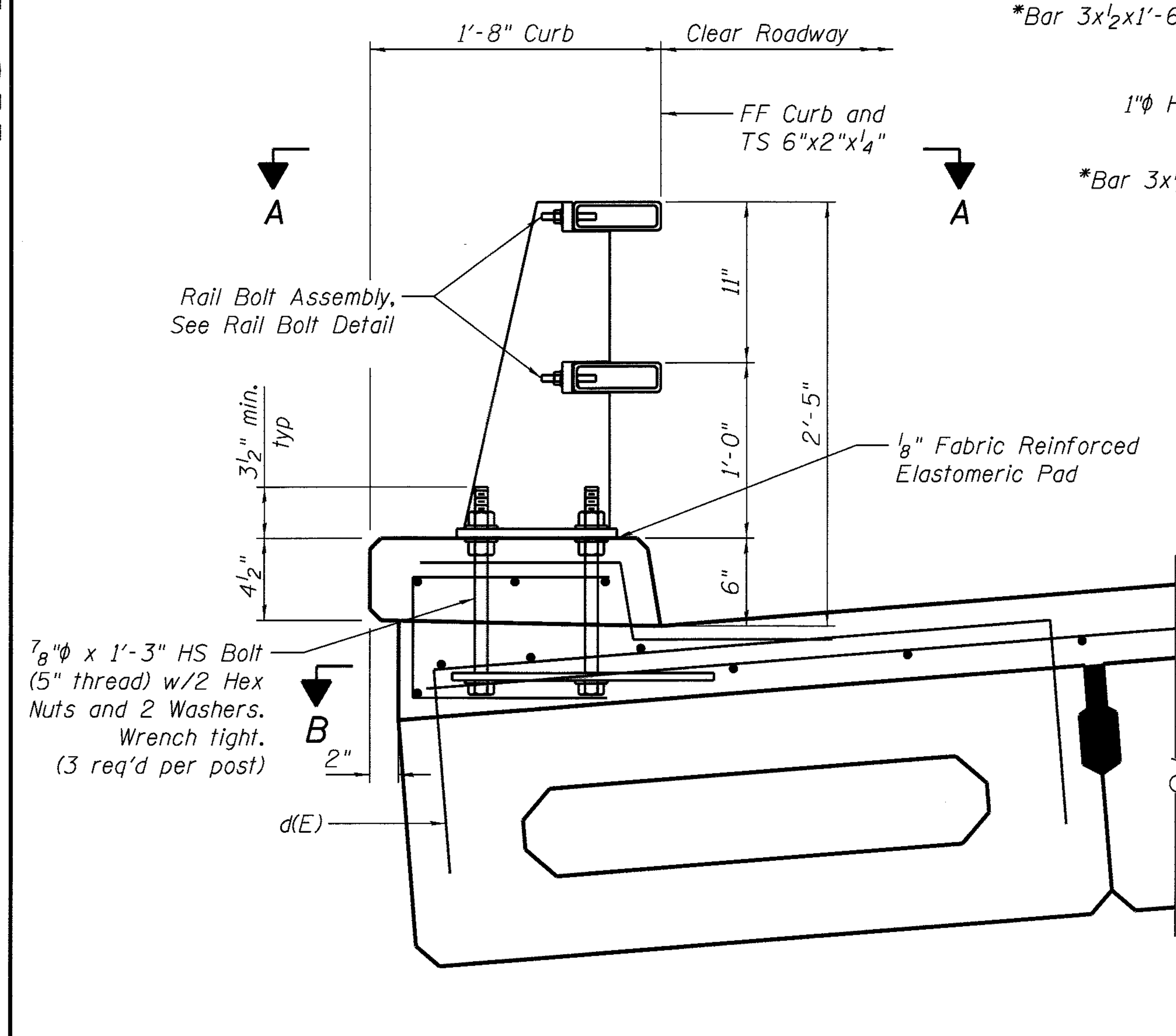


RAIL BOLT DETAIL



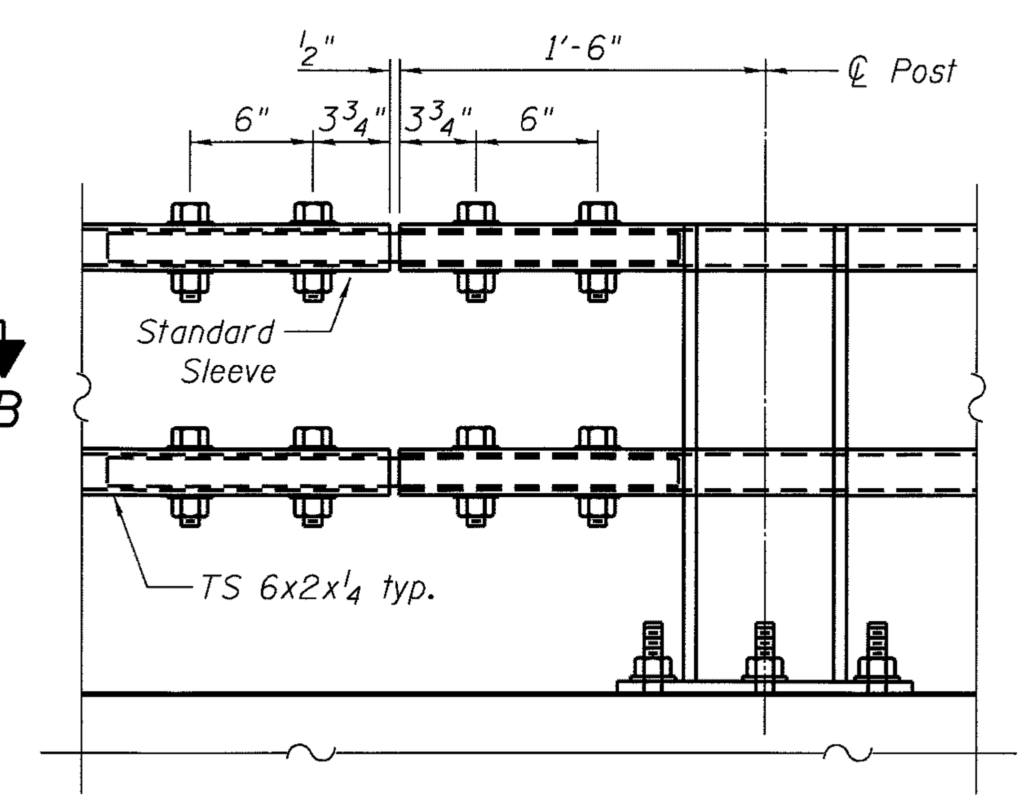
POST DETAILS

(See View A-A for anchor bolt hole spacing)

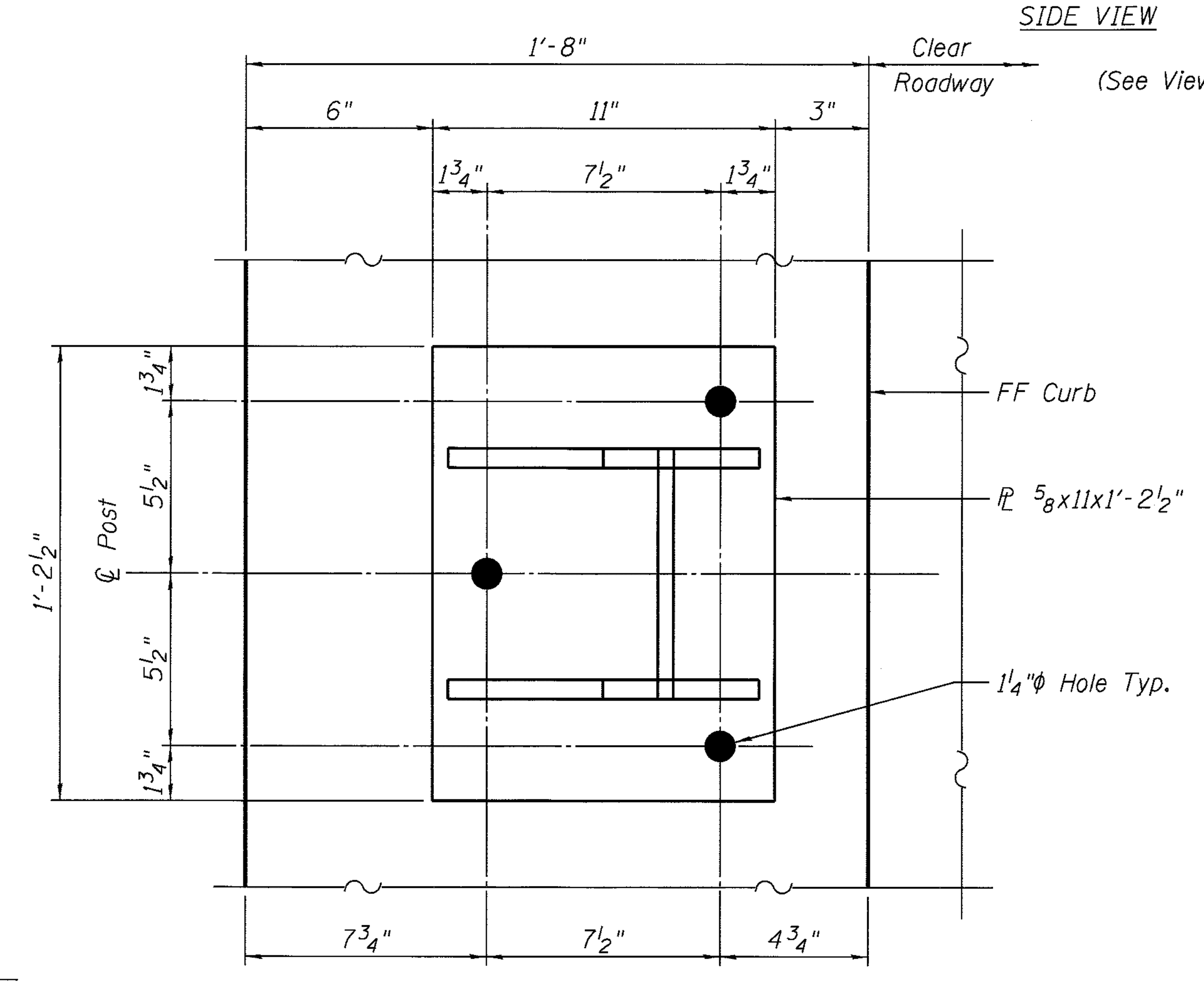


ASSEMBLY DETAIL

(Show near ℄ Post)



SPLICE DETAIL



VIEW A-A

(Anchor bolts, rails, and rail bolts not shown)

NOTES:

1. Slots may be omited in standard sleeves where bolts are required on one side of splice only.
2. Anchor bolts may be tack welded to anchorage (shop or field).
3. At post locations, drill two 1 1/16"φ holes in the rails to receive rail bolts (shop or field). See Post Details for hole splicing.
4. Rail post anchor bolts shall miss d(E) bars.
5. All steel railing elements shall be galvanized according to article 509.05 of the Standard Specifications, unless noted otherwise.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Special)	Foot	207

RS&H 525 DUNHAM ROAD, SUITE 20 ST. CHARLES, IL 60174

FILE NAME = BR_sht_XX_railing.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED
		CHECKED - JIK 06/29/2015	REVISED
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
STEEL RAILING DETAILS

SHEET NO. 14 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	34
		CONTRACT NO. 61D64		

ILLINOIS FED. AID PROJECT

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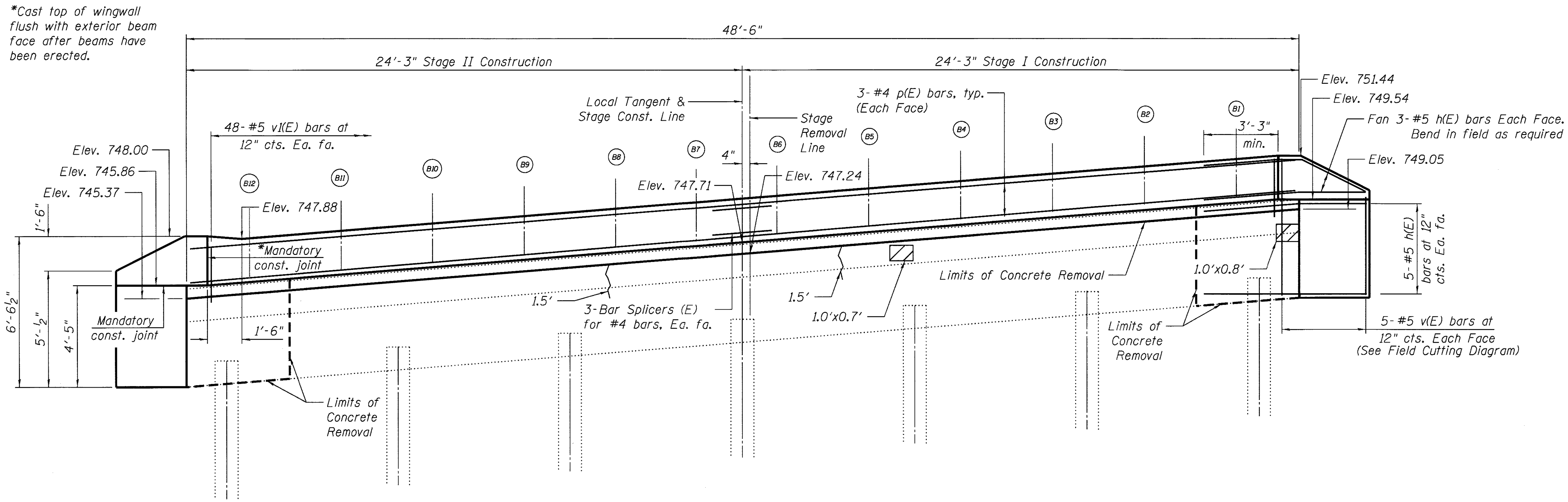
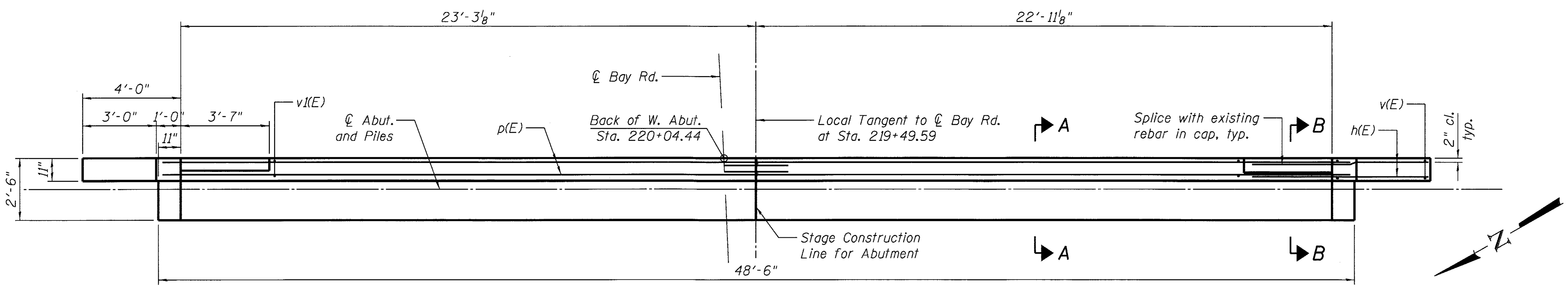
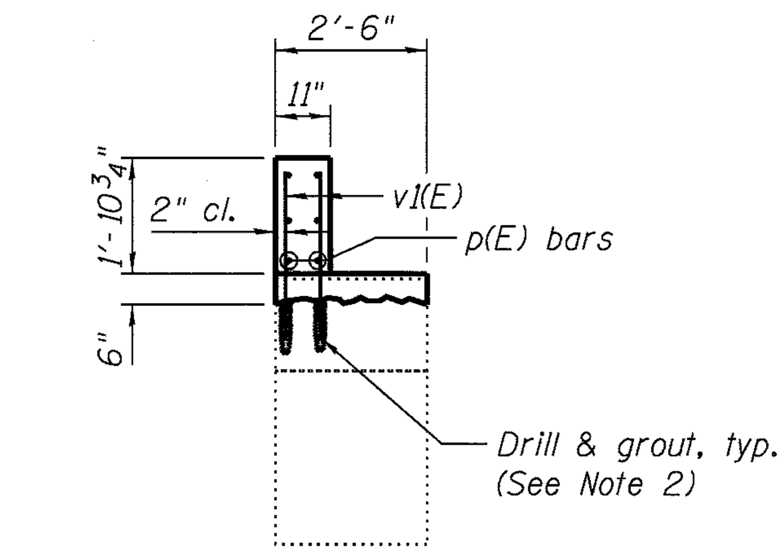
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



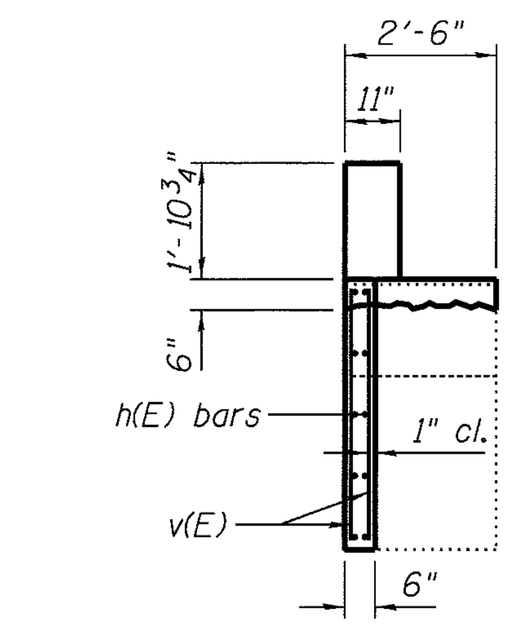
EAST ABUTMENT ELEVATION
(Looking East)



EAST ABUTMENT PLAN



SECTION A-A



SECTION B-B
(Backwall reinforcement not shown for clarity.)

LEGEND

Structural Repair of Concrete (Depth less than or equal to 5")

Low Pressure Epoxy Injection

NOTES:

1. Space drilled holes in existing cap to miss existing reinforcement.
2. Drill and epoxy grout bars in drilled holes according to Section 584 of the IDOT Standard Specifications. The cost of drilling and grouting shall be included with Concrete Structures.
3. Existing reinforcement bars which extend into the removal areas shall be cleaned and incorporated into new construction.
4. Backfill shall be placed behind the abutments after beams have been placed and overlay poured.
5. See WEST ABUTMENT sheet for Field Cutting Diagram and Bill of Material.

FILE NAME = BR_sht_XX_abut.dgn

RS&H

USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED	
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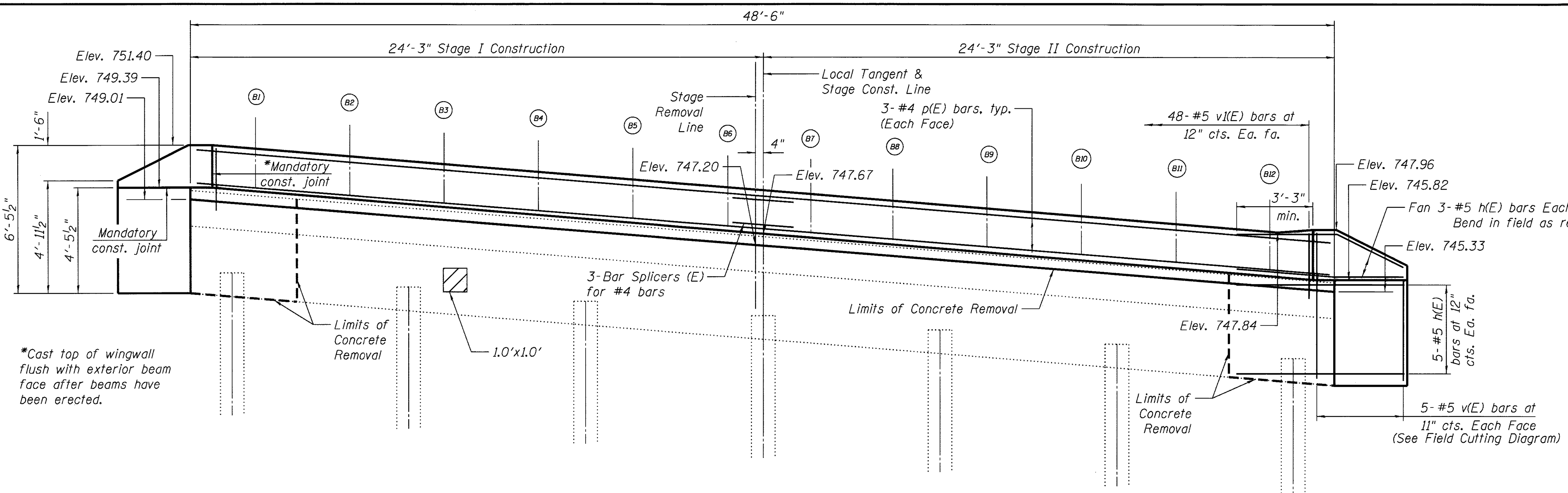
PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED	
PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
EAST ABUTMENT

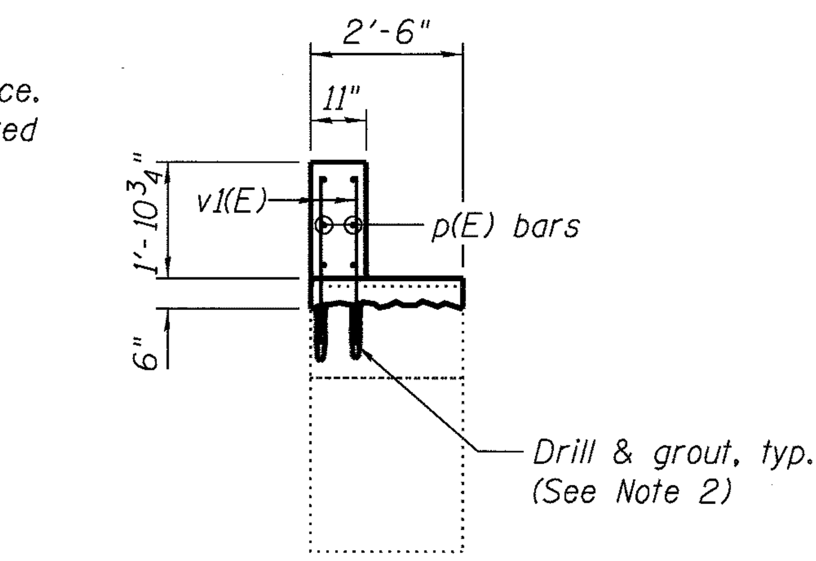
SHEET NO. 15 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	35
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		



*Cast top of wingwall flush with exterior beam face after beams have been erected.

WEST ABUTMENT ELEVATION
(Looking West)

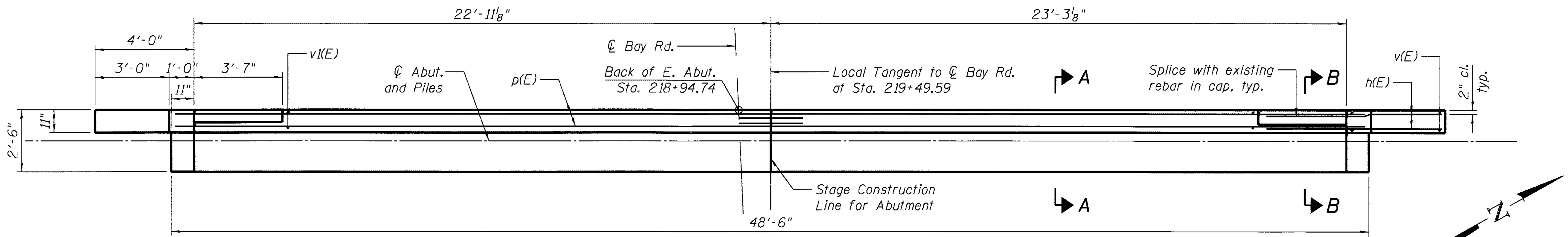


SECTION A-A

LEGEND

Structural Repair of Concrete (Depth less than or equal to 5")

Low Pressure Epoxy Injection



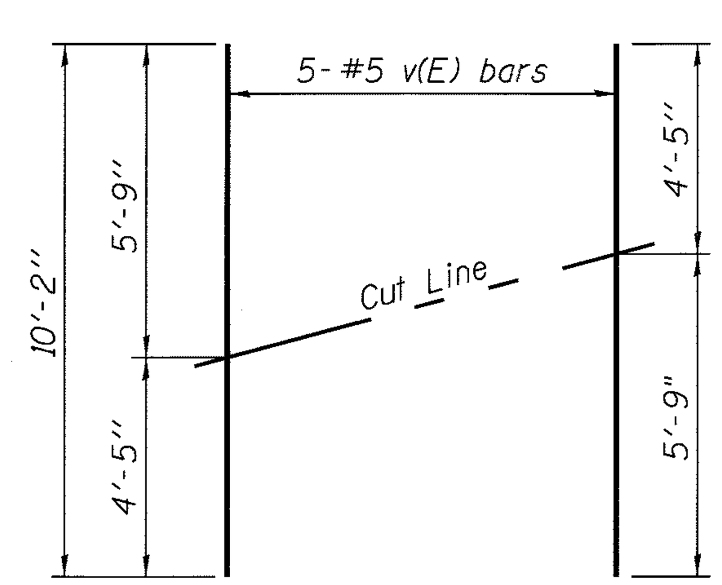
WEST ABUTMENT PLAN

NOTES:

1. Space drilled holes in existing cap to miss existing reinforcement.
2. Drill and epoxy grout bars in drilled holes according to Section 584 of the IDOT Standard Specifications. The cost of drilling and grouting shall be included with Concrete Structures.
3. Existing reinforcement bars which extend into the removal areas shall be cleaned and incorporated into new construction.
4. Backfill shall be placed behind the abutments after beams have been placed and overlay poured.
5. See Sheet 15 of 19 for Section B-B.

ABUTMENTS BILL OF MATERIAL

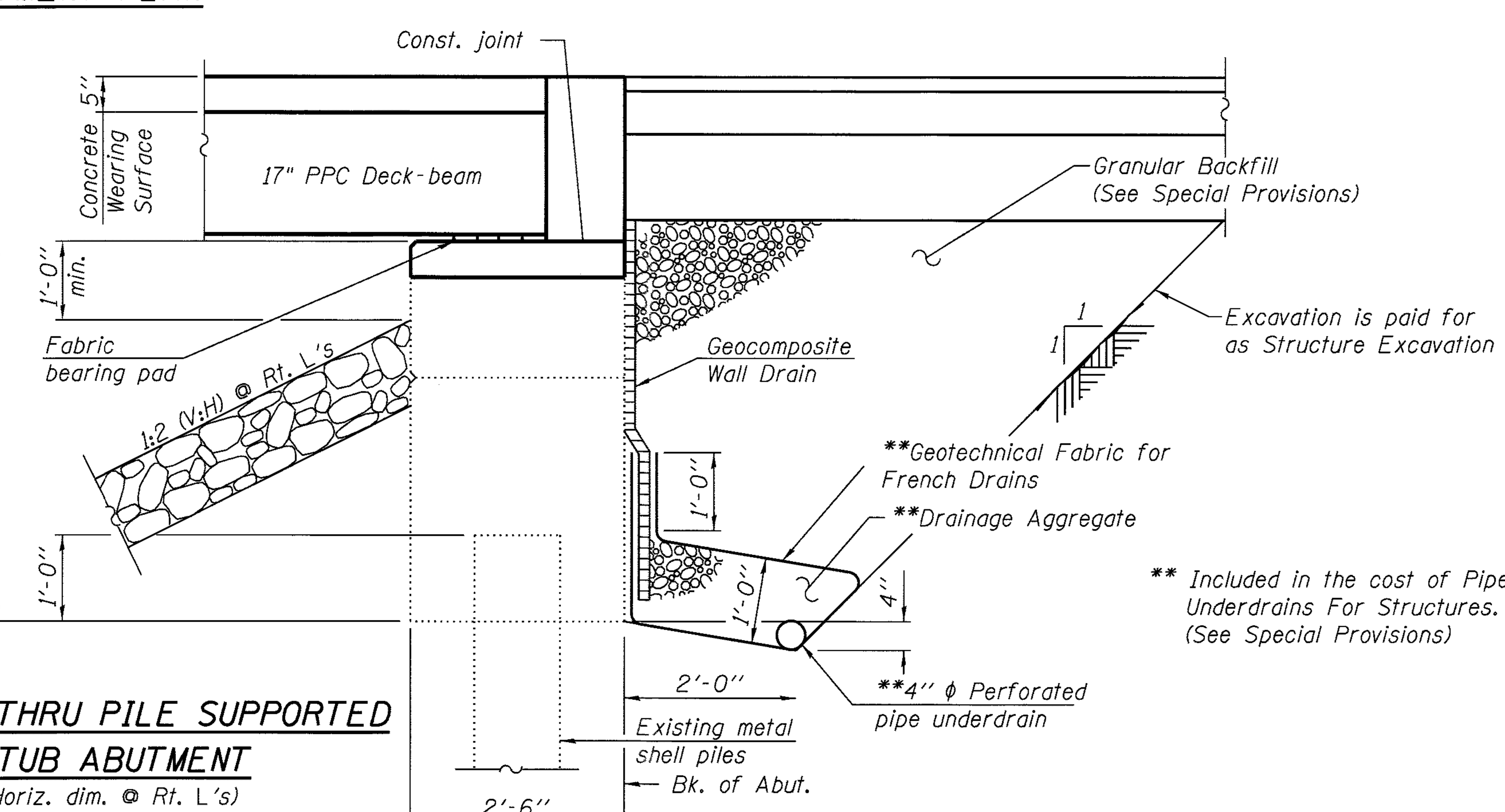
Bar	No.	Size	Length	Shape
h(E)	64	#5	7'-3"	
p(E)	24	#4	24'-3"	
v(E)	20	#5	10'-2"	
vI(E)	192	#5	2'-4"	
Concrete Removal		Cu. Yd.	5.4	
Structure Excavation		Cu. Yd.	135	
Concrete Structures		Cu. Yd.	9.2	
Reinforcement Bars, Epoxy Coated		Pound	1,554	
Geocomposite Wall Drain		Sq. Yd.	71	
Low Pressure Epoxy Injection		Foot	3	
Structural Repair of Concrete (Depth less than or equal to 5")		Sq. Ft.	3	
Granular Backfill for Structures		Cu. Yd.	135	
Pipe Underdrains for Structures, 4"		Foot	97	



FIELD CUTTING DIAGRAM

Order v(E) bars full length. Cut as shown and use remainder of bars in opposite face.

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



** Included in the cost of Pipe Underdrains For Structures. (See Special Provisions)

SECTION THRU PILE SUPPORTED STUB ABUTMENT
(Horiz. dim. @ Rt. L's)

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ST. CHARLES, IL 60174

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	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

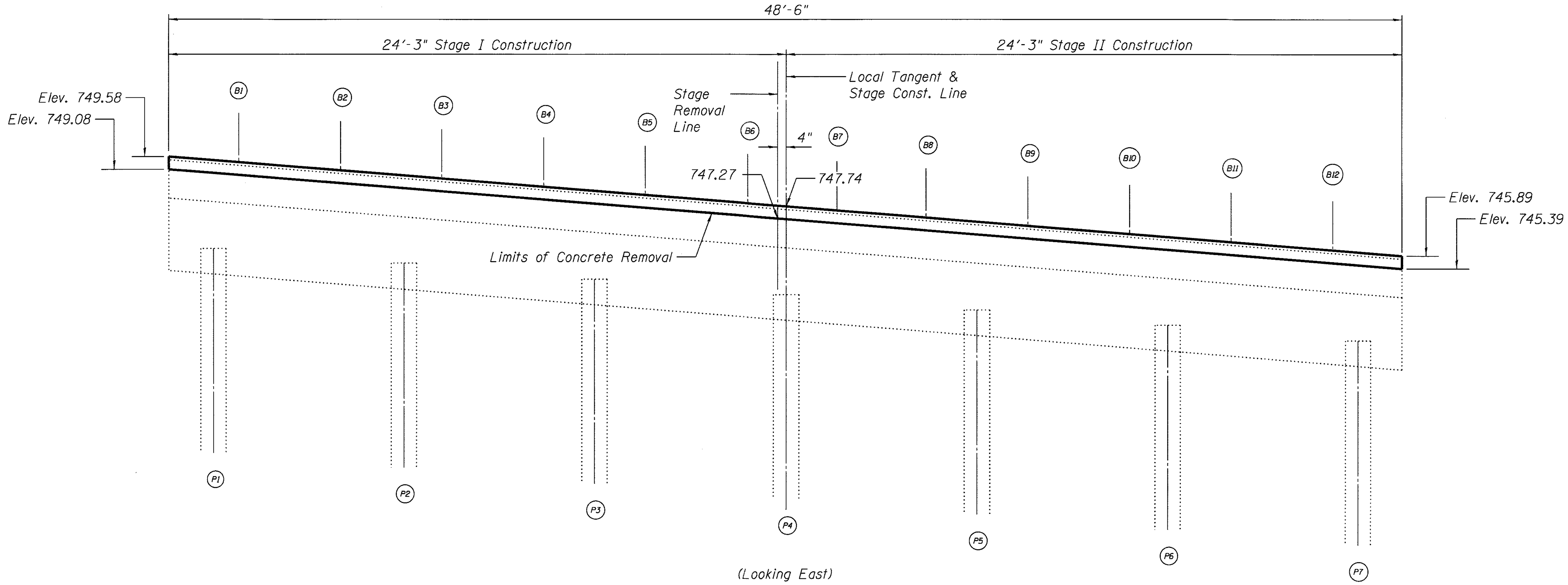
BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
WEST ABUTMENT

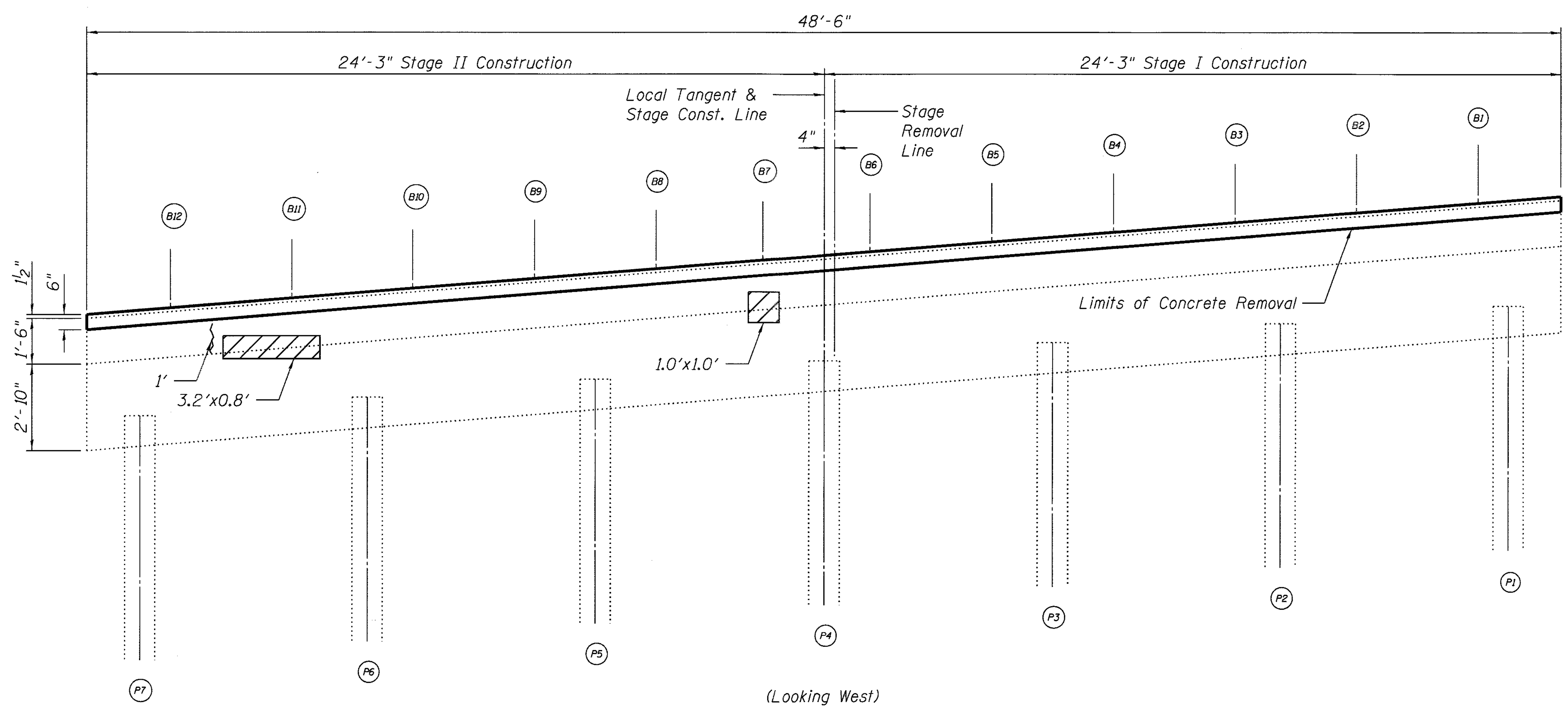
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	36

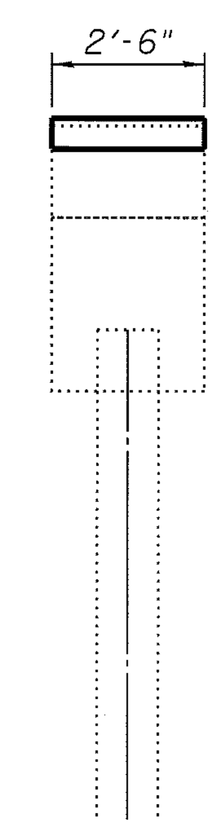
CONTRACT NO. 61D64

ILLINOIS FED. AID PROJECT

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174







PIER 1

LEGEND

Structural Repair of Concrete (Depth less than or equal to 5")

Low Pressure Epoxy Injection

NOTES:

1. Space drilled holes in existing cap to miss existing reinforcement.
2. Drill and epoxy grout bars in drilled holes according to Section 584 of the IDOT Standard Specifications. The cost of drilling and grouting shall be included with Concrete Structures.
3. Existing reinforcement bars which extend into the removal areas shall be cleaned and incorporated into new construction.

PIER 1 BILL OF MATERIAL

Concrete Removal	Cu. Yd.	1.7
Concrete Structures	Cu. Yd.	2.3
Structural Repair of Concrete (Depth less than or equal to 5")	Sq. Ft.	4
Low Pressure Epoxy Injection	Foot	1

FILE NAME = BR_sht_XX_pier1.dgn

RS&H.

USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED
	CHECKED - JIK 06/29/2015	REVISED
PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED
PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

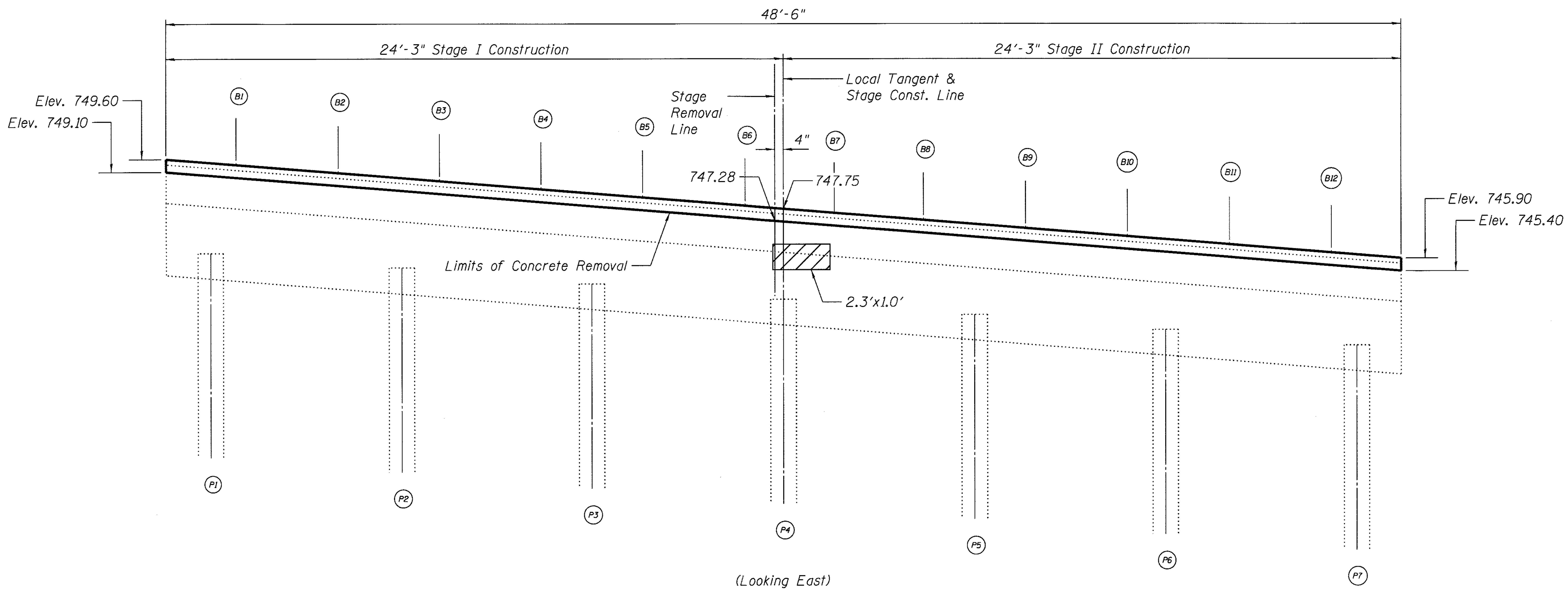
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

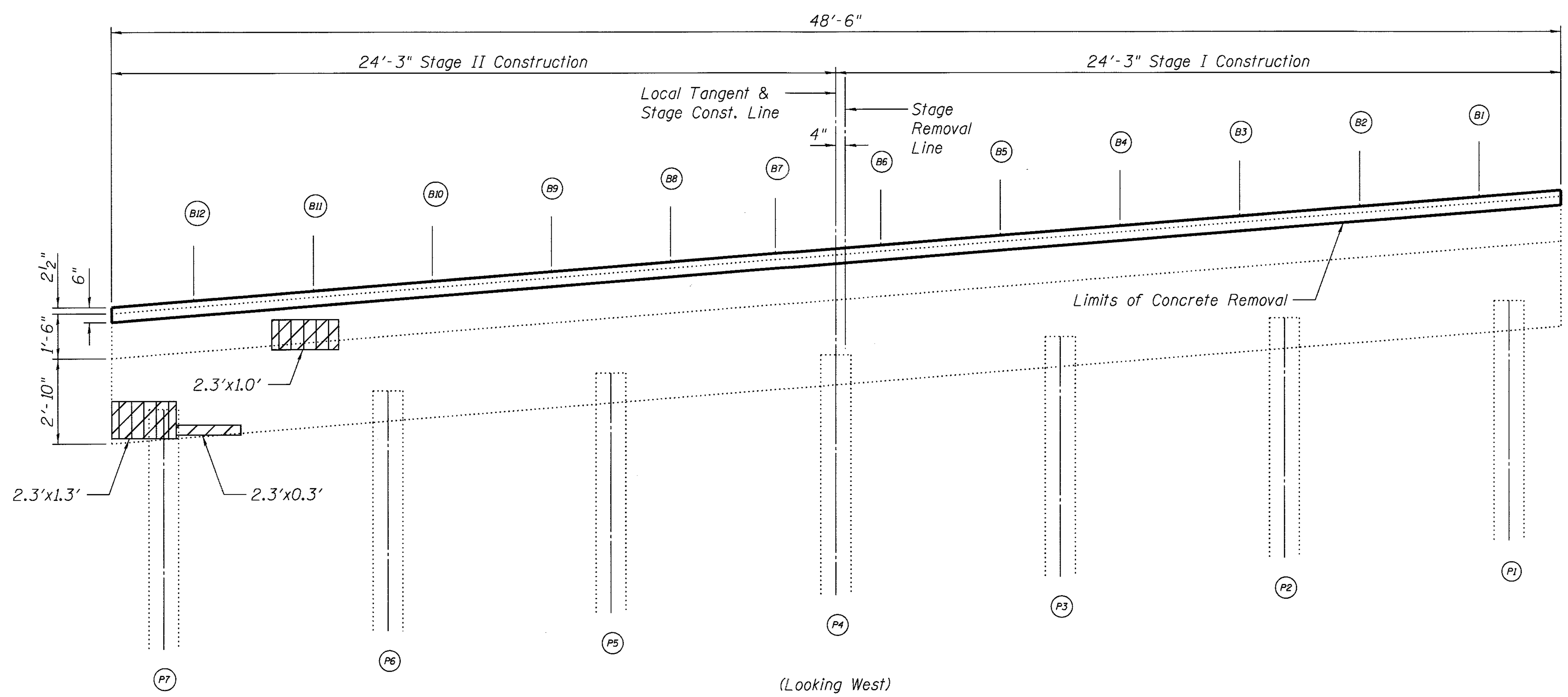
BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
PIER 1 REPAIRS

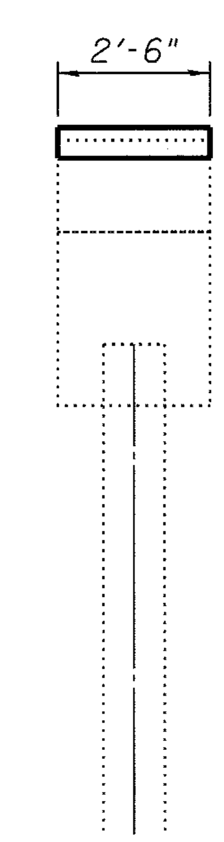
SHEET NO. 17 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	37
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			

RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174







PIER 2

LEGEND

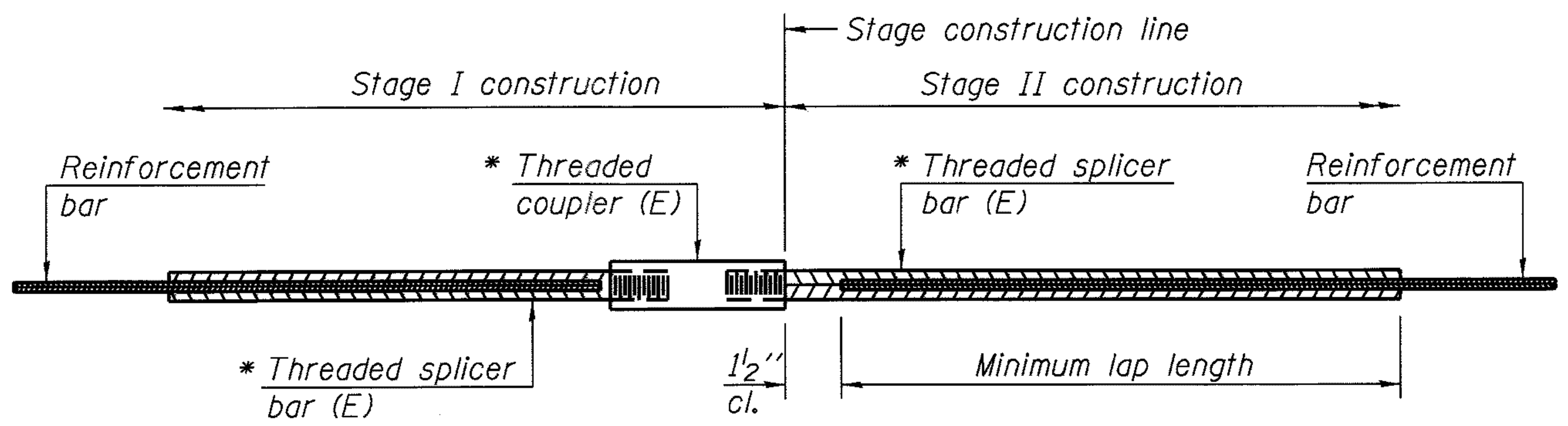
- Structural Repair of Concrete (Depth less than or equal to 5")
- Low Pressure Epoxy Injection

NOTES:

1. Space drilled holes in existing cap to miss existing reinforcement.
2. Drill and epoxy grout bars in drilled holes according to Section 584 of the IDOT Standard Specifications. The cost of drilling and grouting shall be included with Concrete Structures.
3. Existing reinforcement bars which extend into the removal areas shall be cleaned and incorporated into new construction.

PIER 2 BILL OF MATERIAL

Concrete Removal	Cu. Yd.	1.4
Concrete Structures	Cu. Yd.	2.3
Structural Repair of Concrete (Depth less than or equal to 5")	Sq. Ft.	9

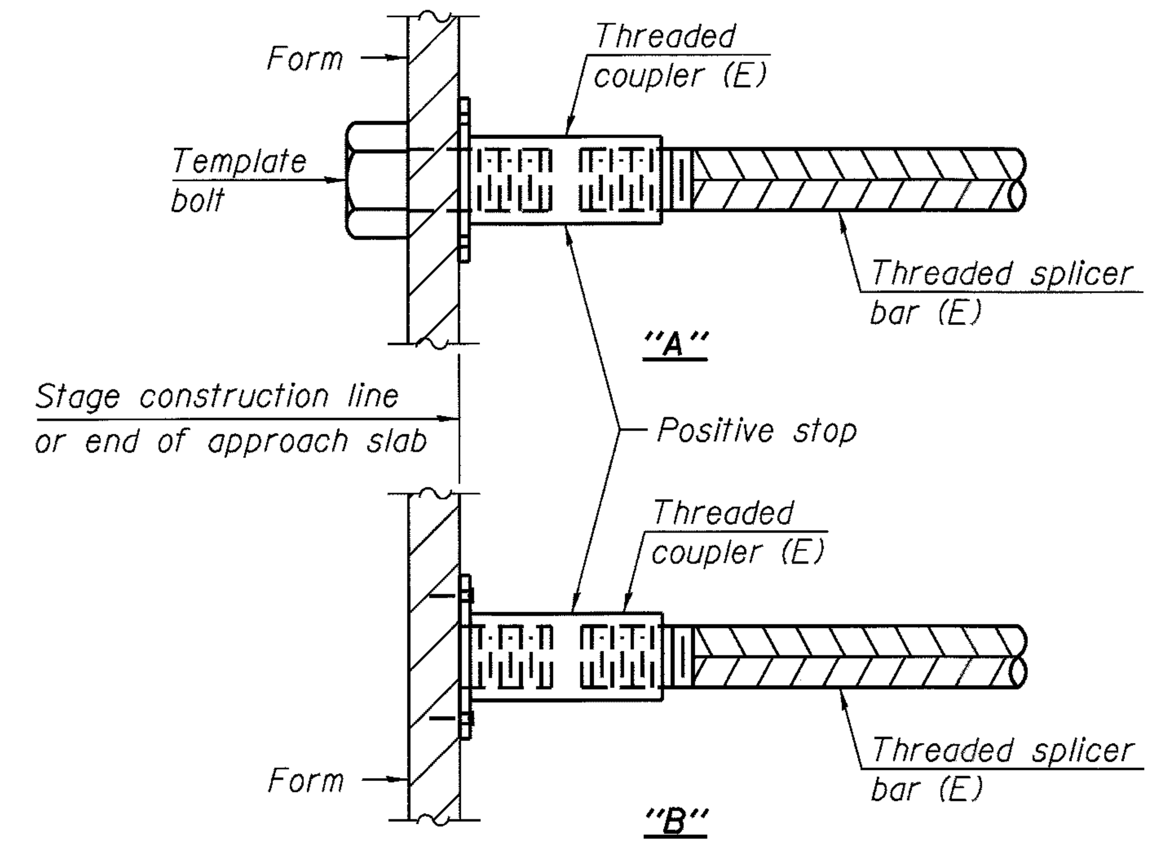


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + $1\frac{1}{2}''$ + thread length

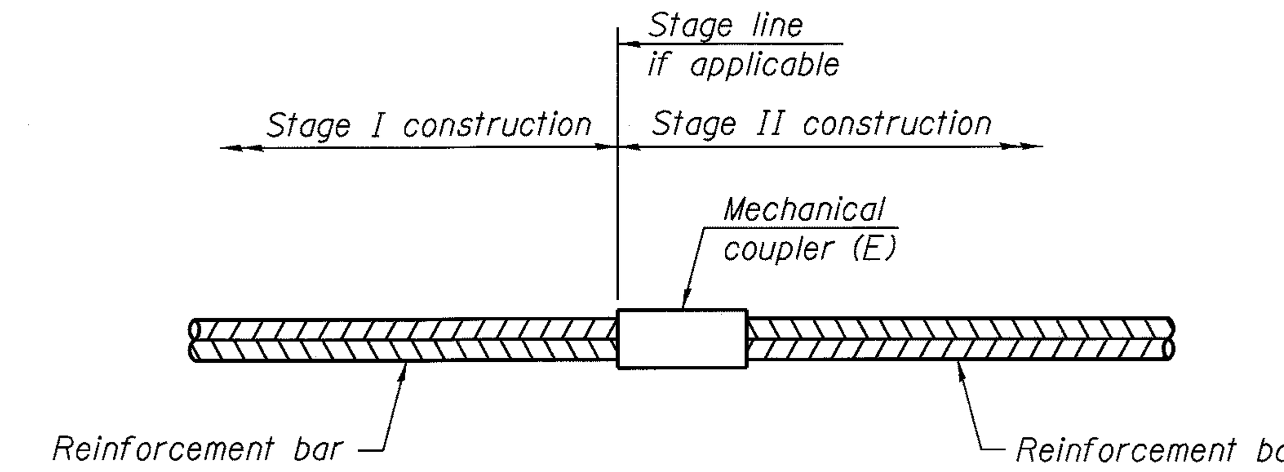
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Wearing Surface	#4	109	2'-7"
Abutments	#4	12	2'-7"



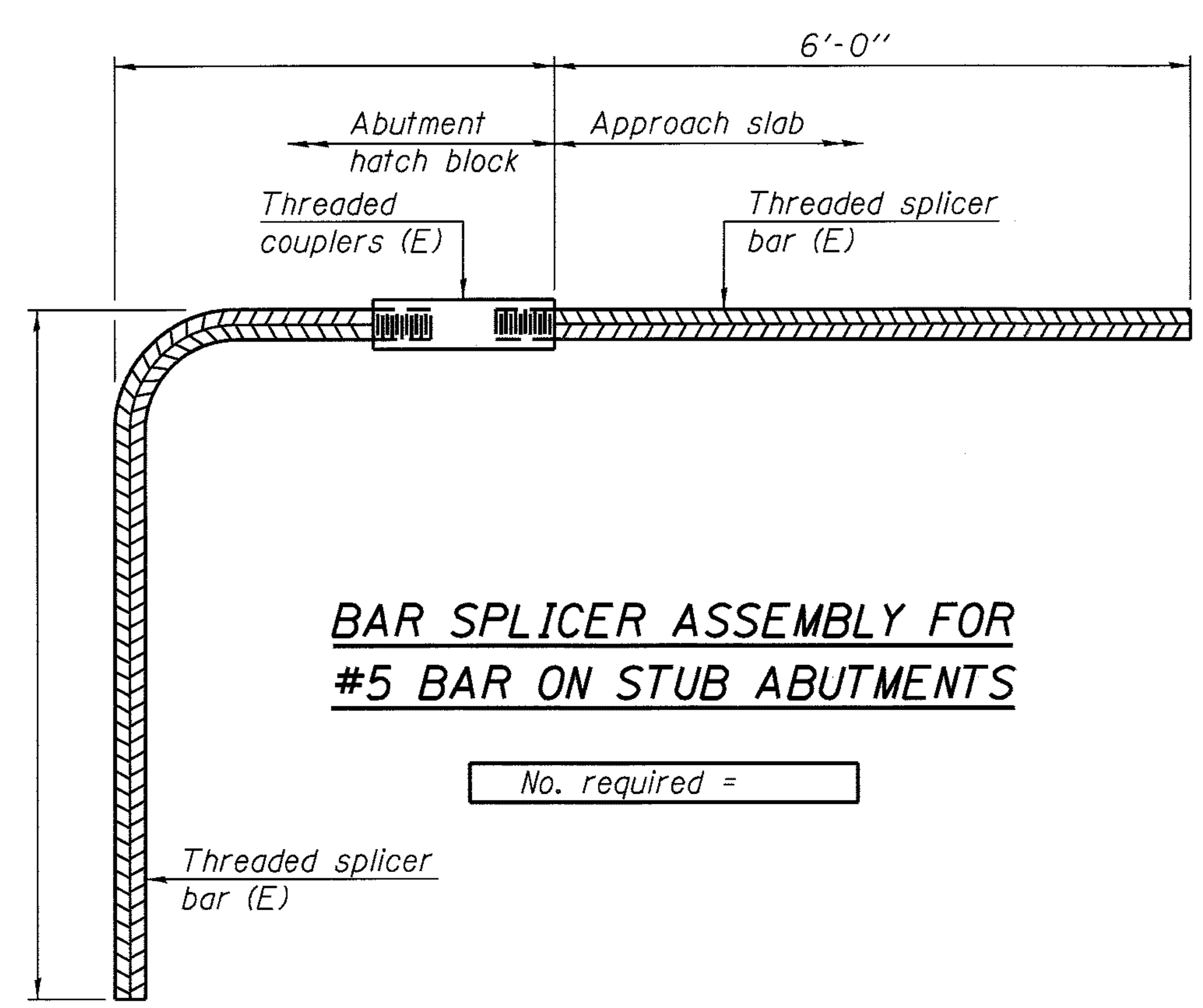
INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 6-8-15

RS&H. 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

FILE NAME = BR_sht_XX_barsplicers.dgn

RS&H	USER NAME = martinm	DESIGNED - JLR 10/30/2015	REVISED
		CHECKED - JIK 06/29/2015	REVISED
	PLOT SCALE =	DRAWN - JIK 10/30/2015	REVISED
	PLOT DATE =	CHECKED - JLR 06/29/2015	REVISED

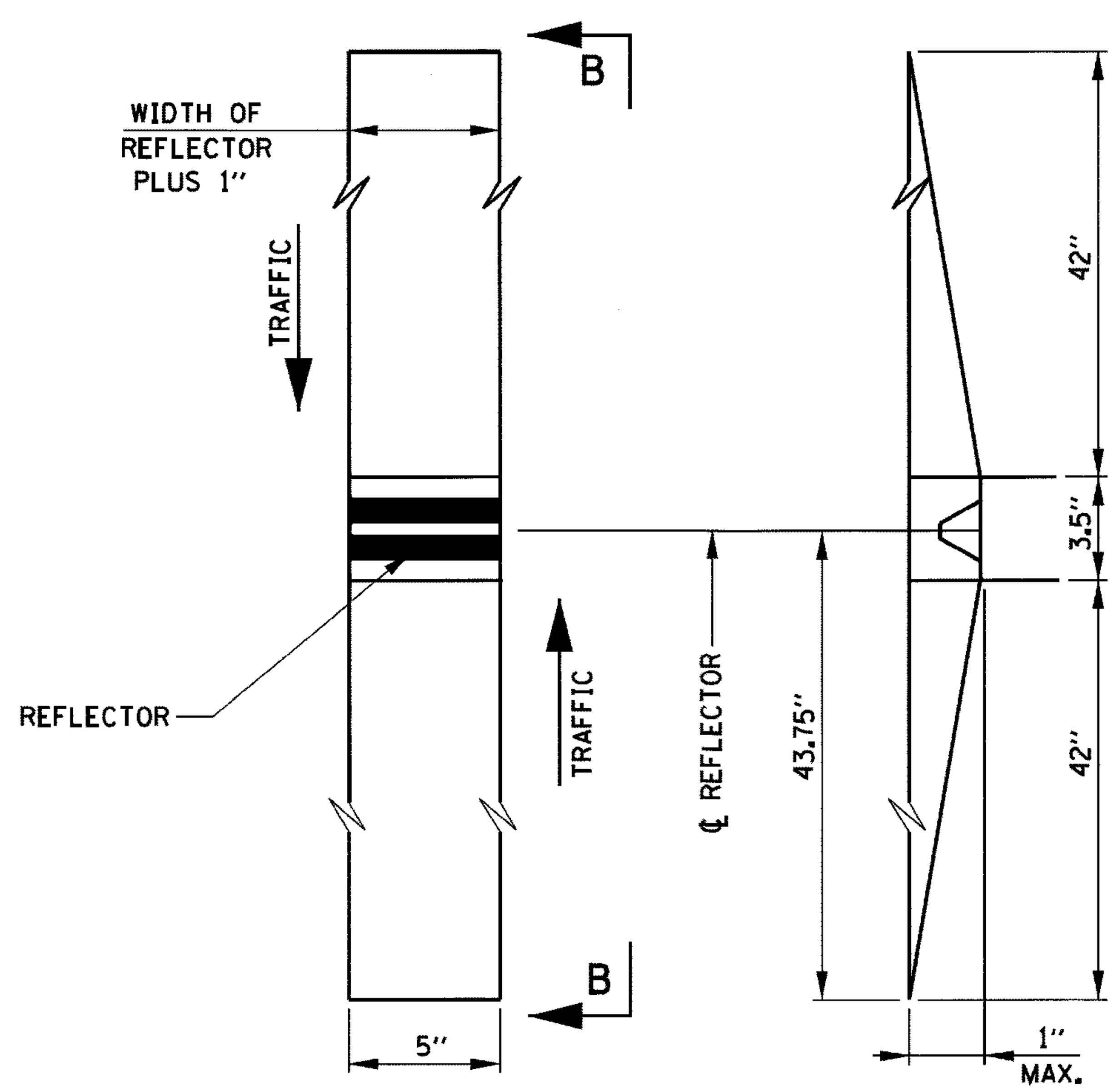
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN – SN 056-3106
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS

SHEET NO. 19 OF 19 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	MCHENRY	46	39
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

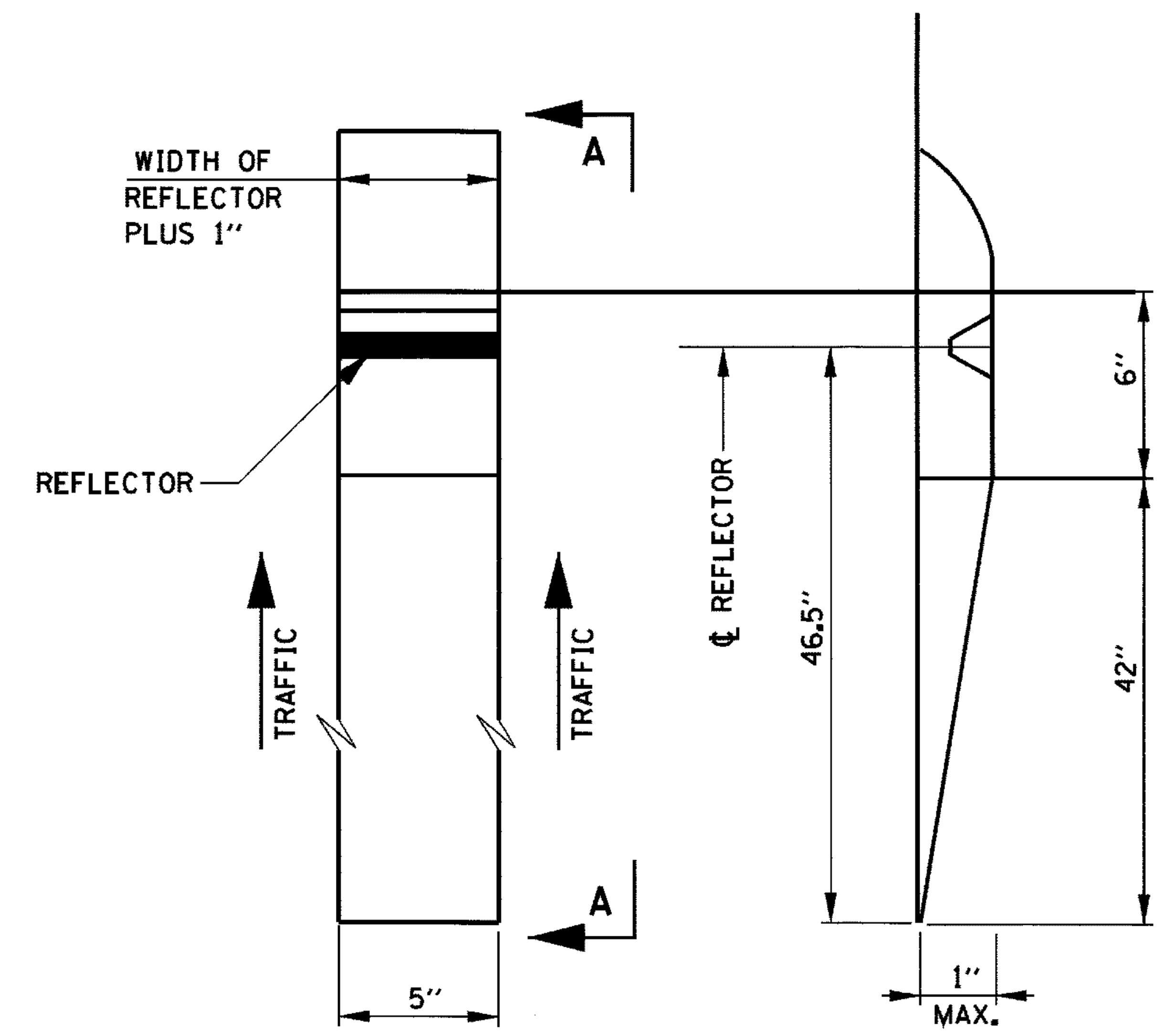
RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



PLAN VIEW

SECTION B–B

TWO WAY



PLAN VIEW

SECTION A–A

ONE WAY

RECESSED REFLECTIVE MARKERS

INSTALLATION NOTES:

1. SAWCUT IN DIMENSIONS SHOWN.
2. SAWCUT AREAS TO BE DRY AND FREE OR MATERIAL THAT ADVERSELY AFFECTS THE ADHESIVE BAND.
3. INSTALL THE REFLECTOR WITH AN APPROVED TWO-COMPONENT EPOXY ADHESIVE. EPOXY SHOULD NOT OBSCURE OR BLOCK THE LENS.
4. INSTALL TOP OF REFLECTOR ½ TO ¼ INCH BELOW THE PAVEMENT SURFACE.
5. REFLECTOR SHALL BE 3M SERIES 290.

GENERAL NOTES:

1. INSTALLATION SHALL CONFORM TO IDOT HIGHWAY STANDARD 781001-02 (OR LATEST) FOR MARKER PLACEMENT.
2. IDOT STANDARD 781001-02 SHALL BE MODIFIED TO REFLECT IN RECESSED PAVEMENT MARKERS INSTEAD OF RAISED PAVEMENT MARKERS.

FILE NAME = BR_p2_sht_RDWYdetail01.dgn

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		DRAWN - MAW	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 11/30/16	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
ROADWAY DETAIL

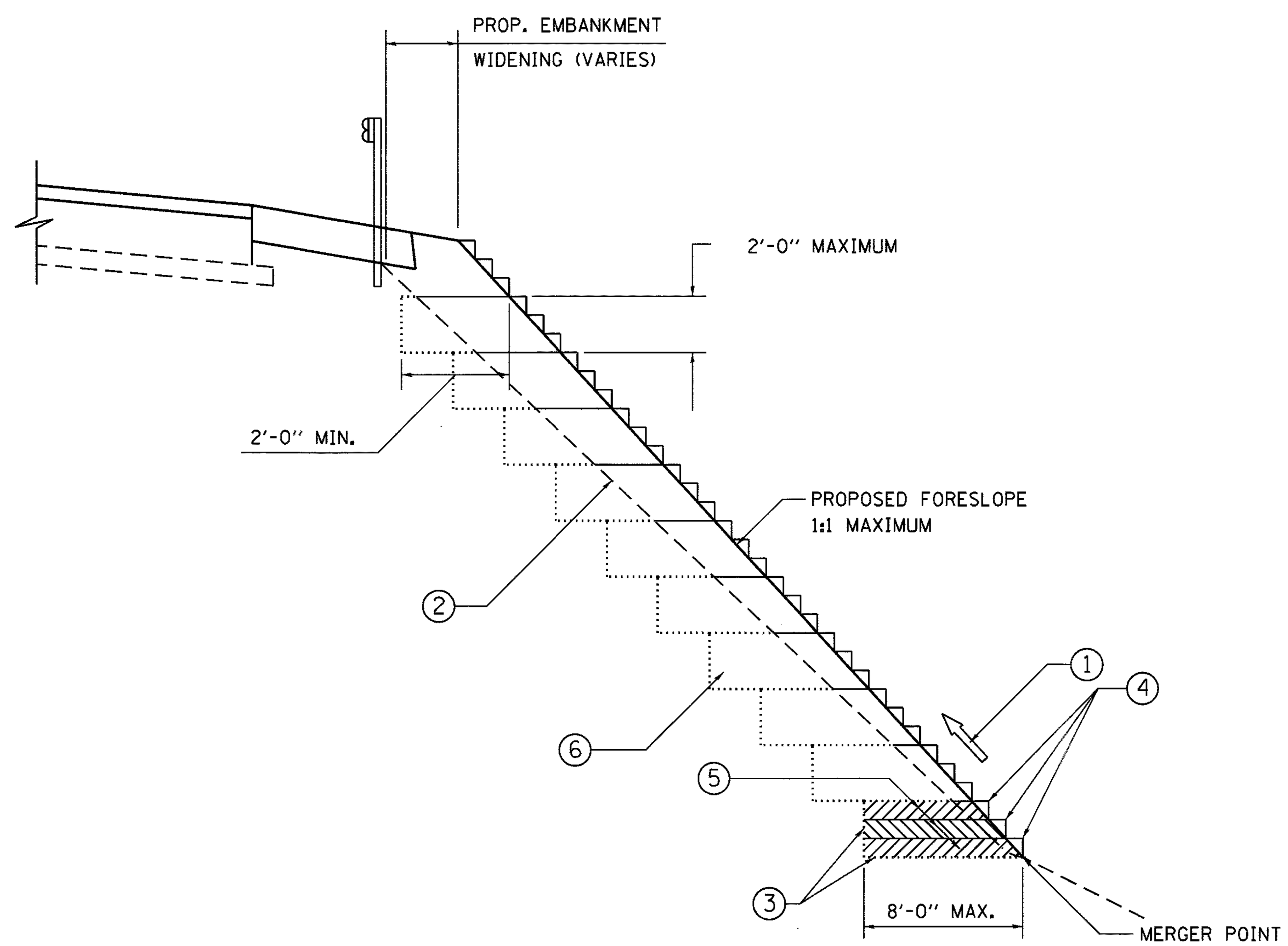
SCALE: NA | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	40

CONTRACT NO. 61D64

ILLINOIS | FED. AID PROJECT

RS&H 525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

FILE NAME = BR_p2_sht_RDWYdetail02.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN ROADWAY DETAIL	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - MAW	REVISED -			0186	14-00438-00-BR	McHENRY	46	41
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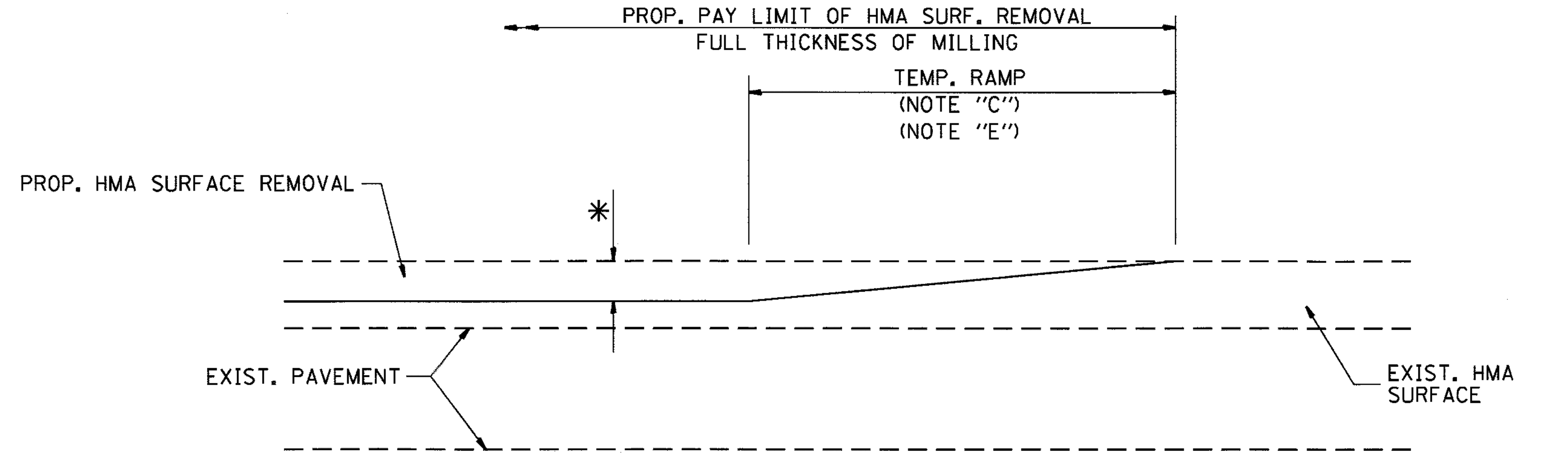
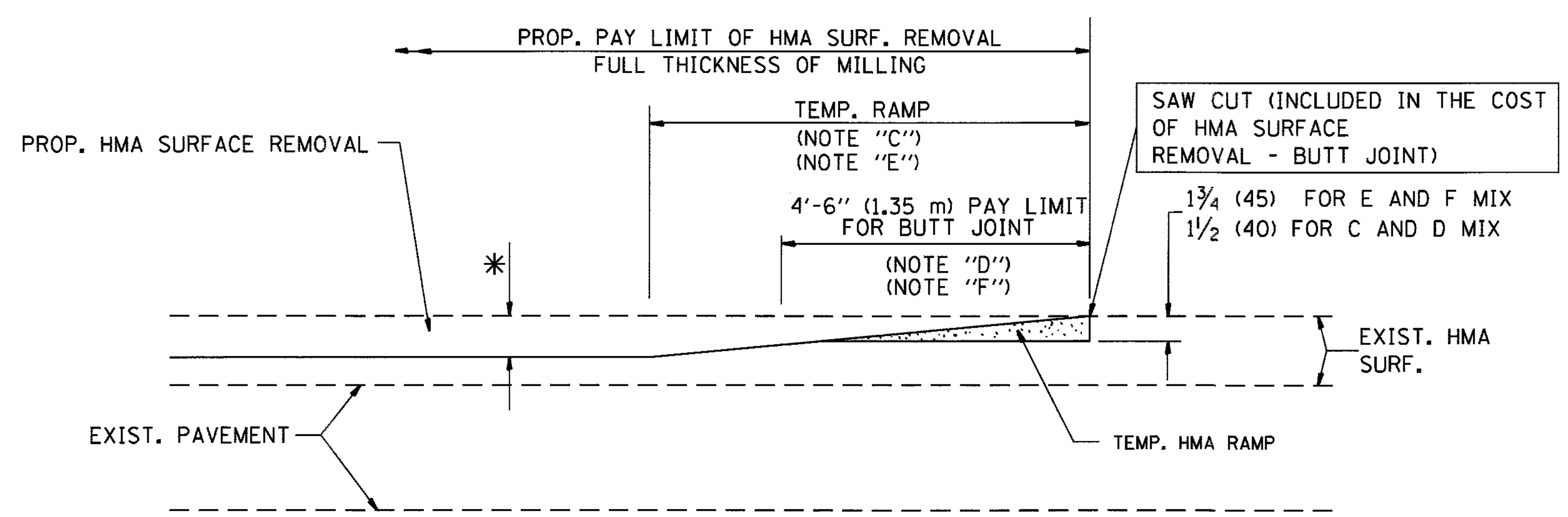


MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

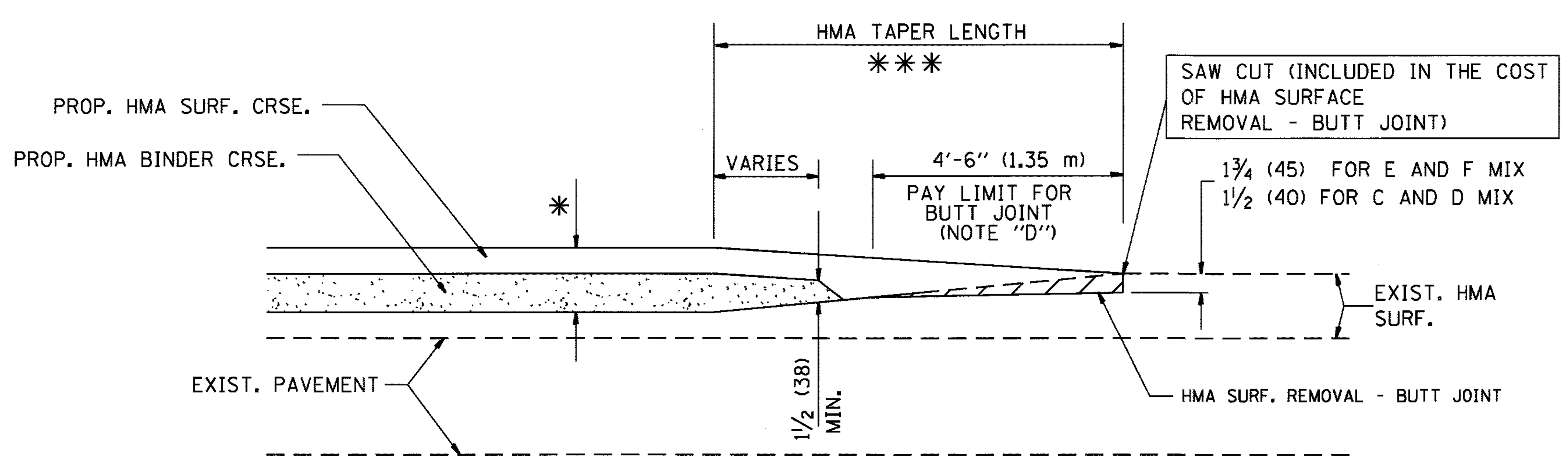


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

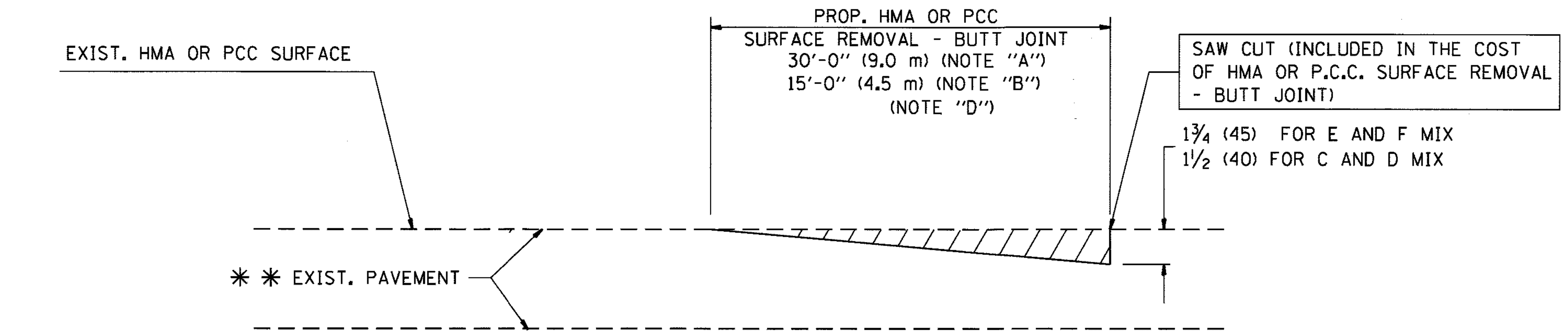
OPTION 2

TYPICAL TEMPORARY RAMP

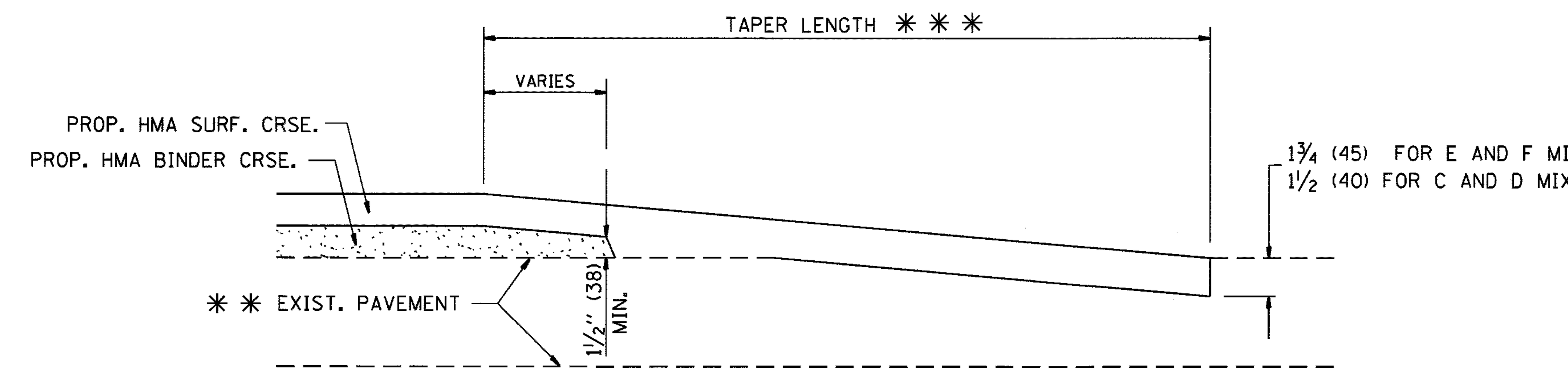


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

✳✳ PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

✳ SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

✳✳✳ 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

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

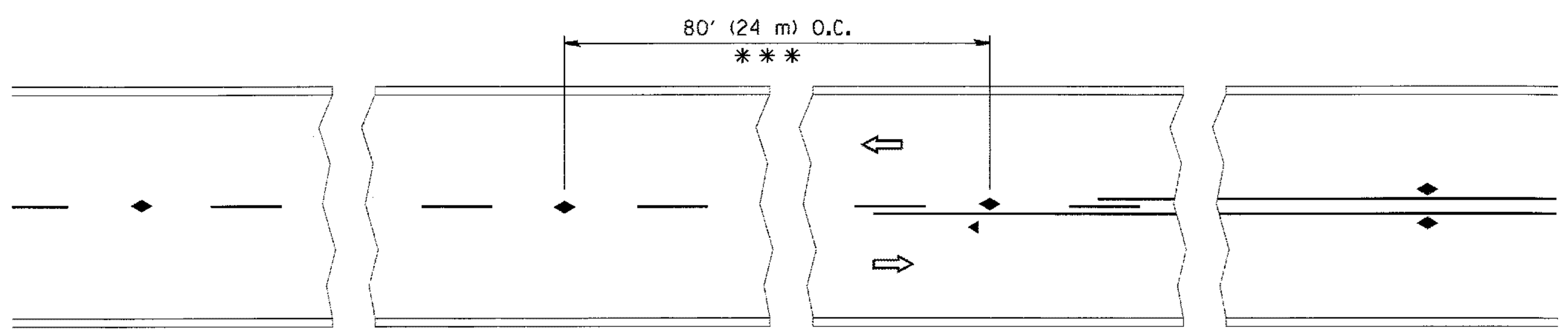
FILE NAME = BR_p2_sht_Distl_bd32.dgn	USER NAME = martinm	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 49.9999 ' / in.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 9/6/2017	DATE - 06-13-90	REVISED - R. BORO 01-01-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

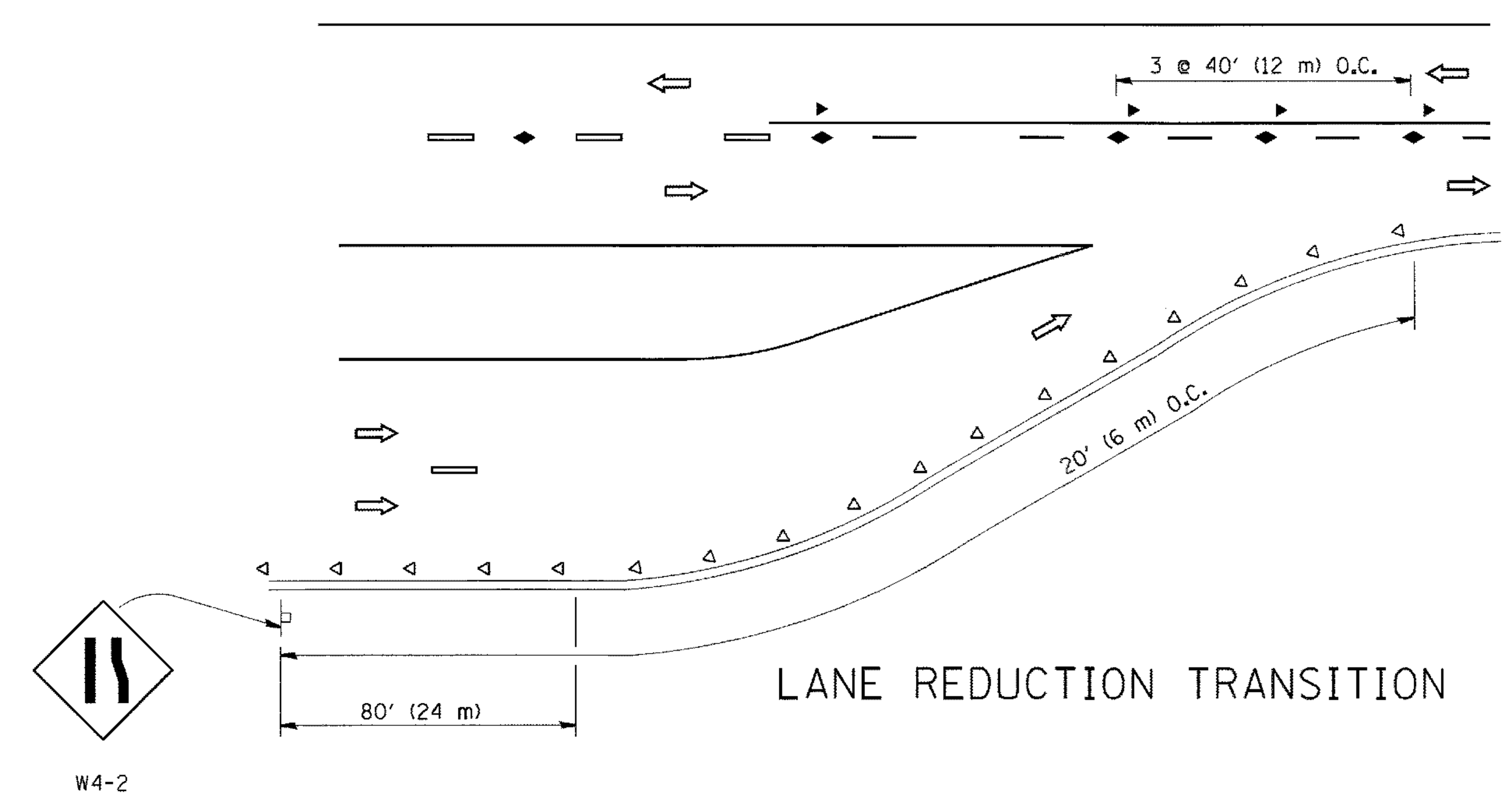
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	42
	BD400-05 BD32	CONTRACT NO. 61D64		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

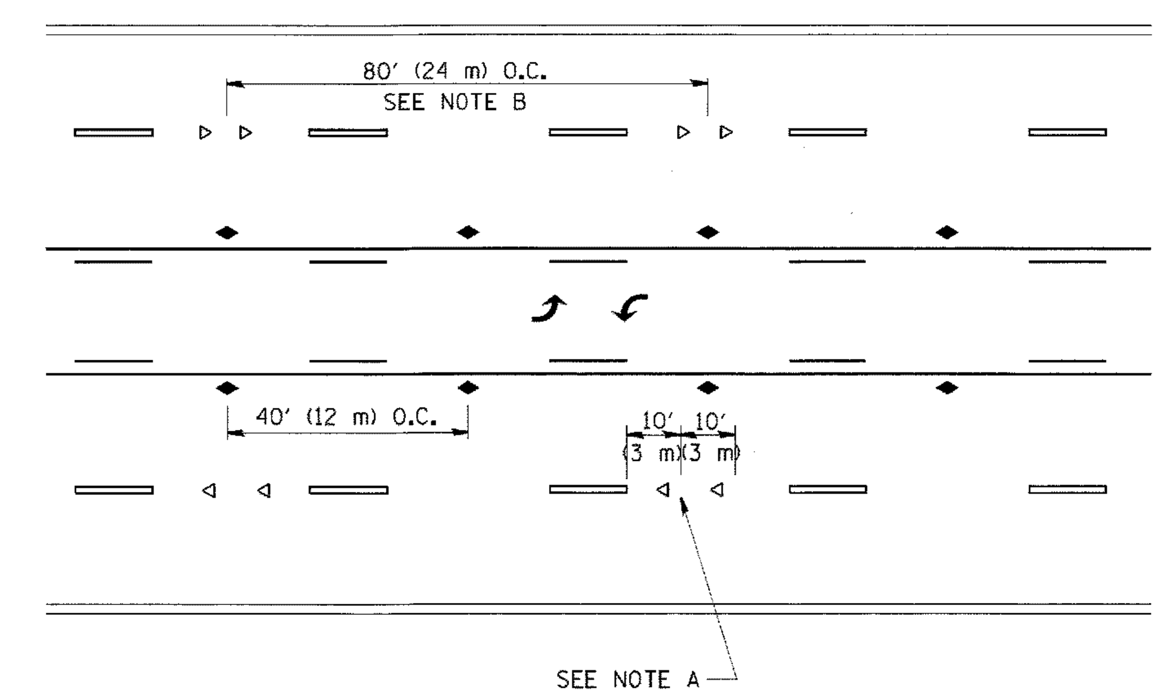


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

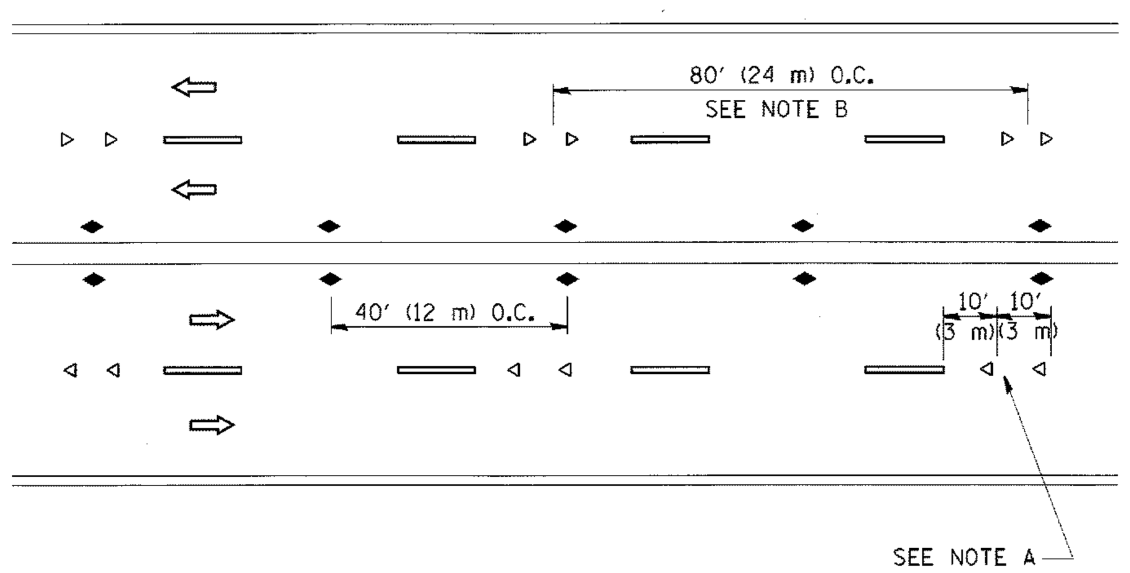
TWO-LANE/TWO-WAY



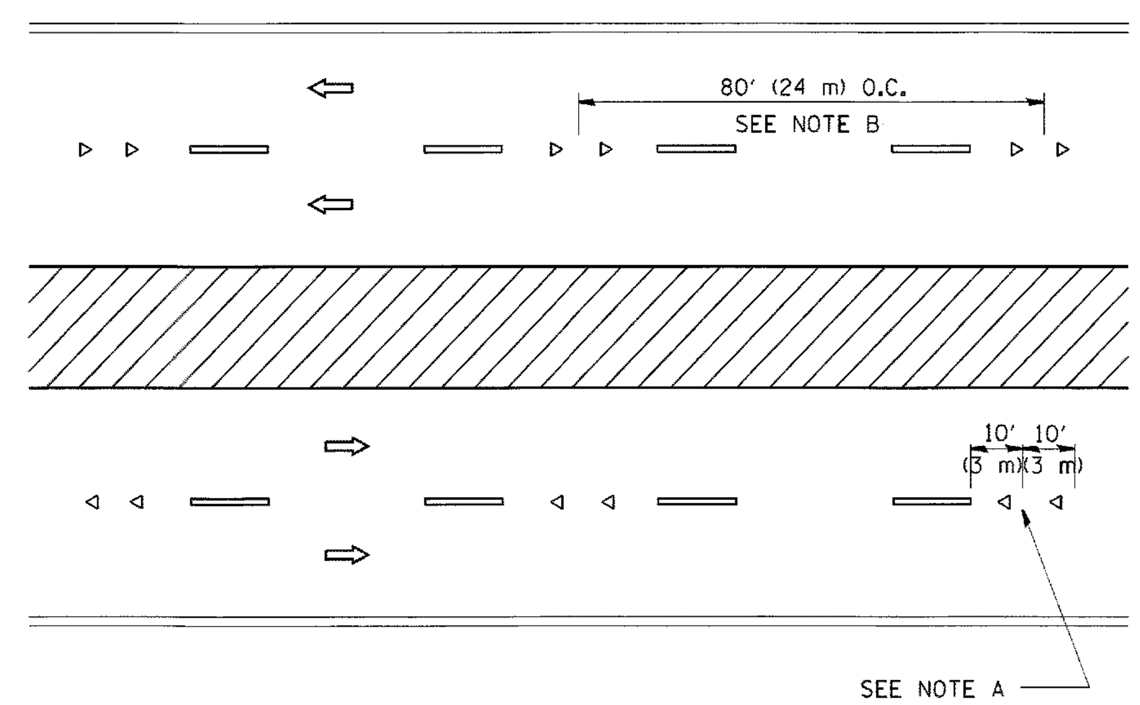
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

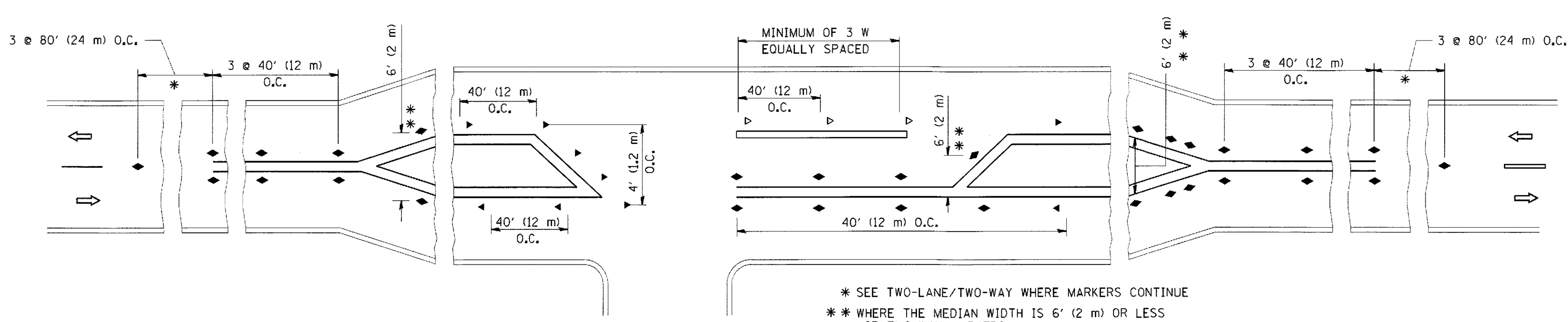
B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



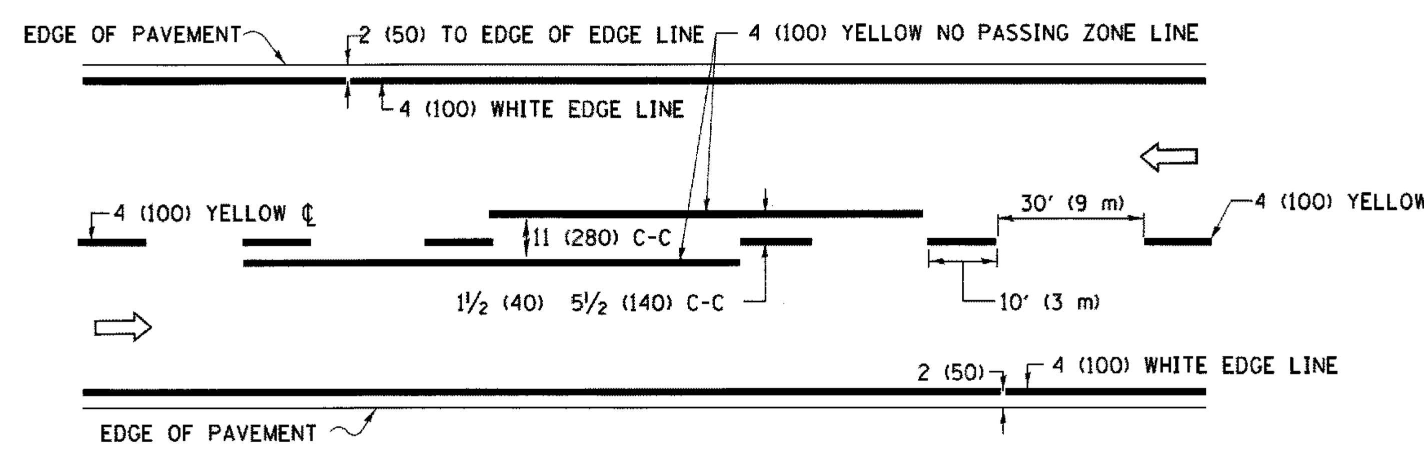
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

* * WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

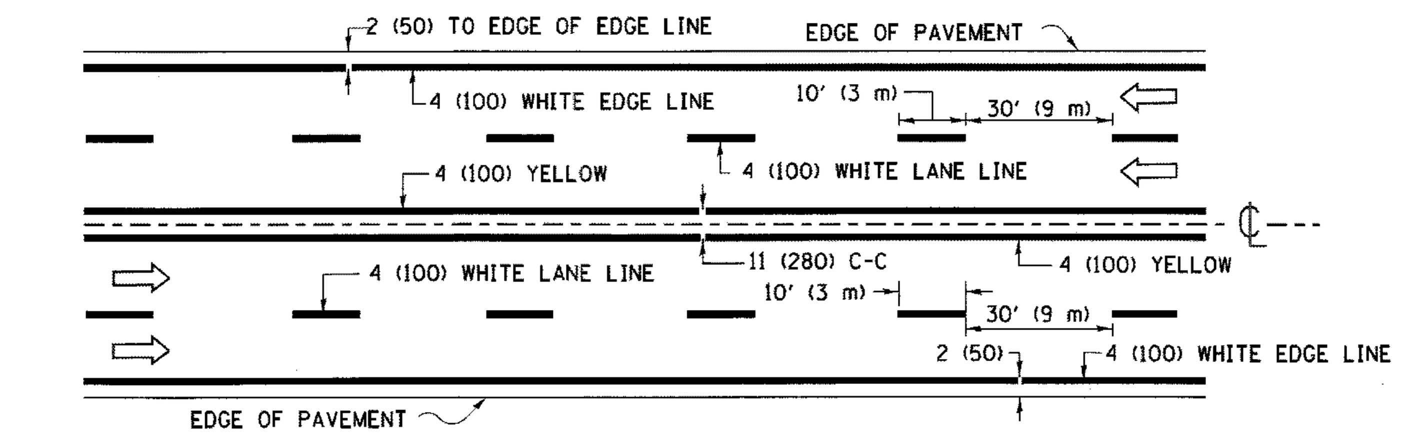
LEFT TURN

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

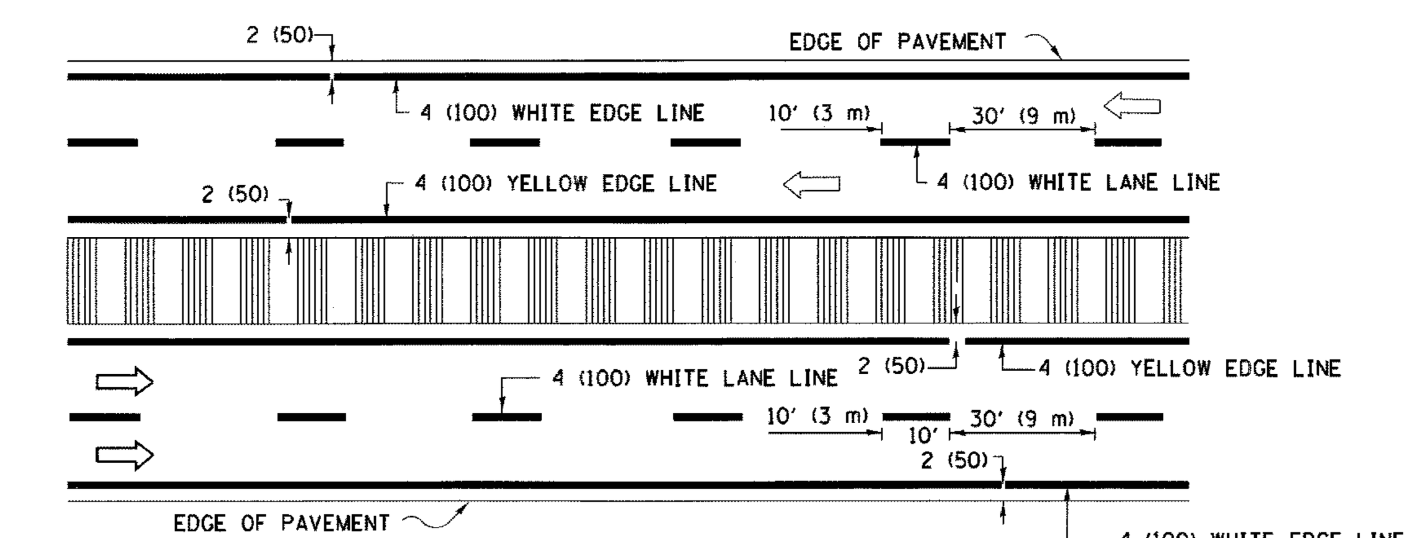
FILE NAME = c:\pw_work\pwidot\leysa\d0108315\tc11.dgn	USER NAME = leysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	F.A.U. RTE. 0186	SECTION 14-00438-00-BR	COUNTY McHENRY	TOTAL SHEETS 46 / SHEET NO. 43
		DRAWN -	REVISED - T. RAMMACHER 03-12-99				TC-11	CONTRACT NO. 61D64	
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09						



2-LANE ROADWAY

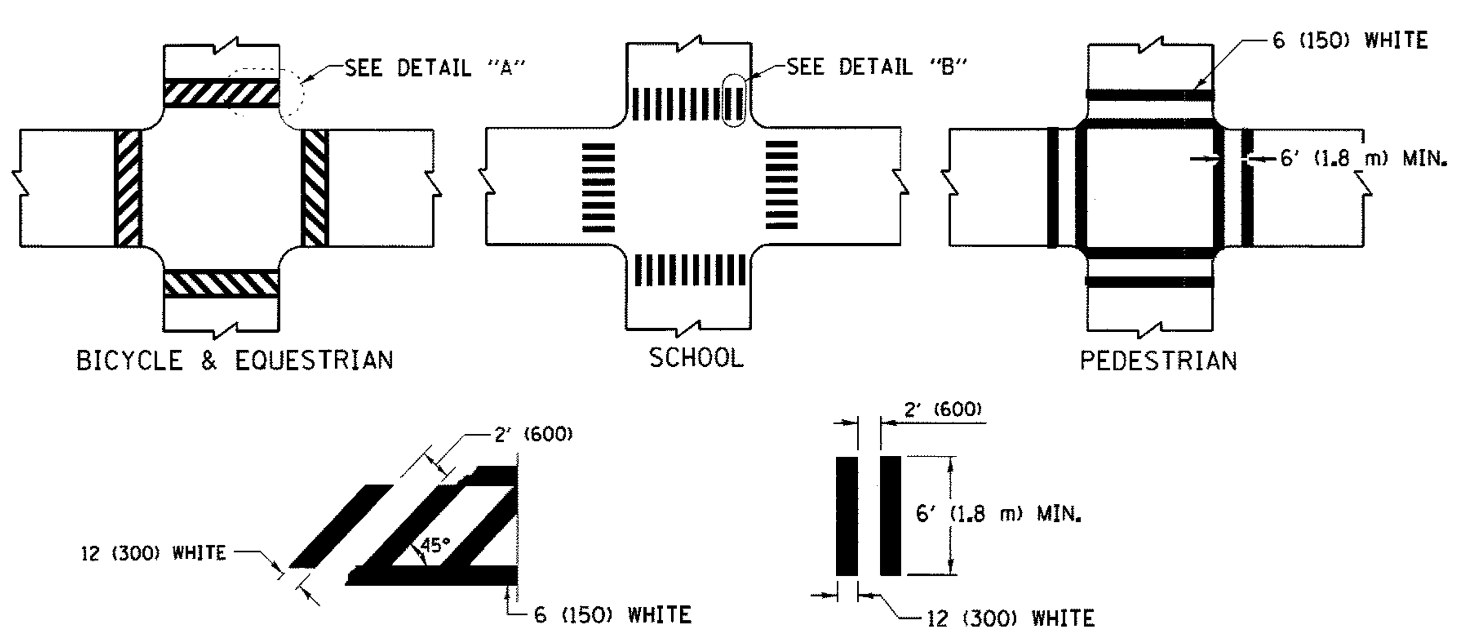


MULTI-LANE UNDIVIDED



MULTI-LANE DIVIDED
WITH MEDIAN

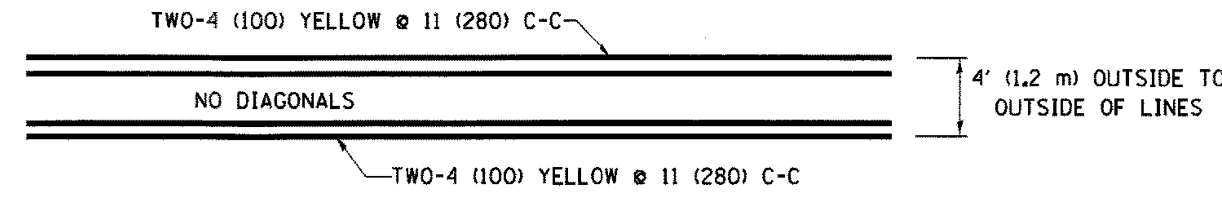
TYPICAL LANE AND EDGE LINE MARKING



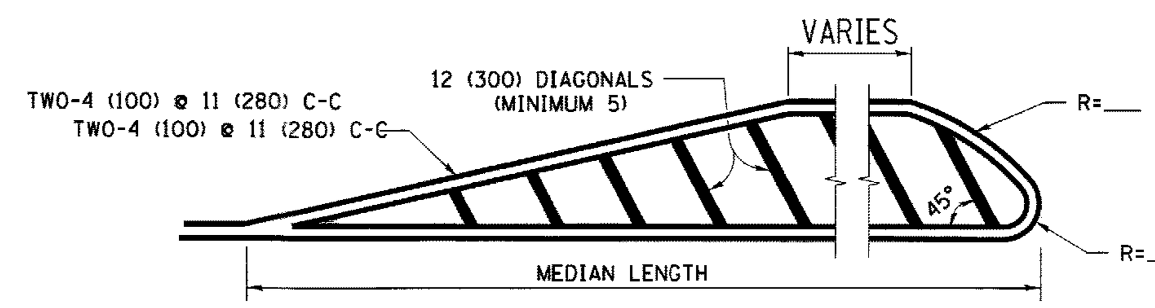
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



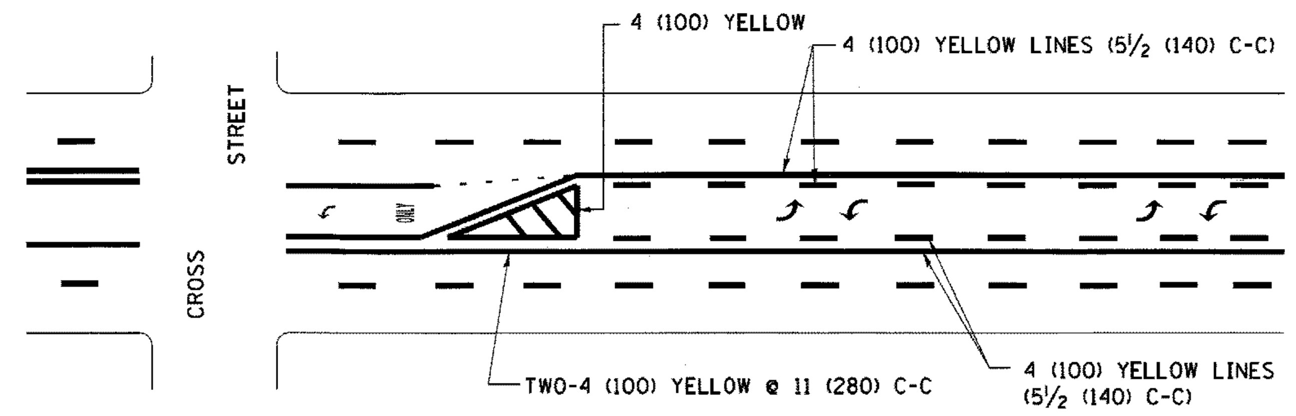
4' (1.2 m) WIDE MEDIANS ONLY



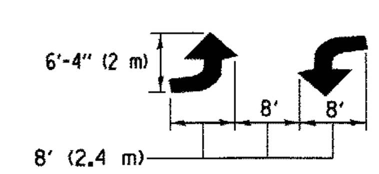
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

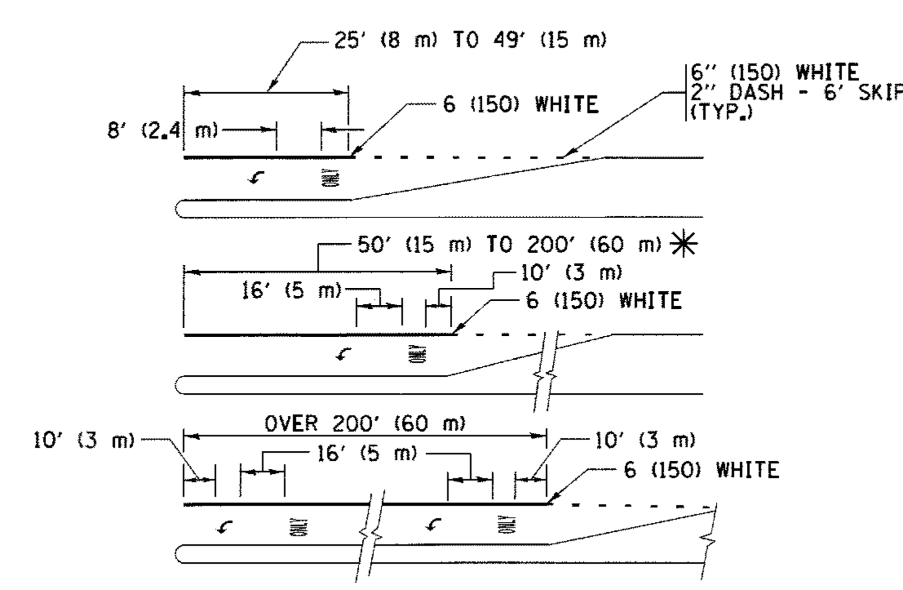


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

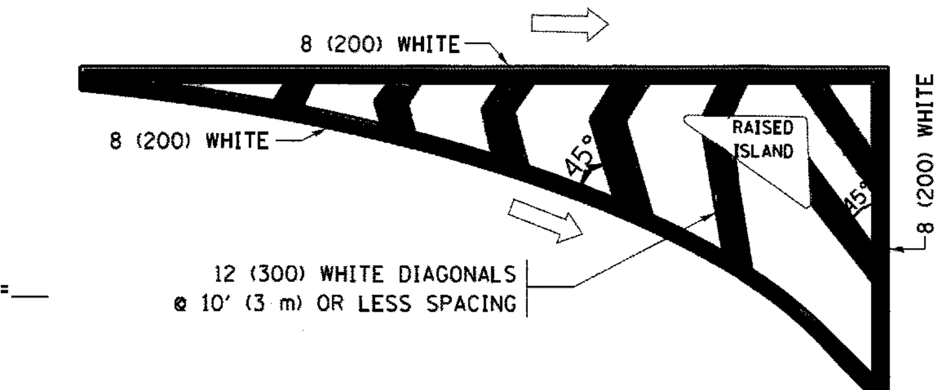


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

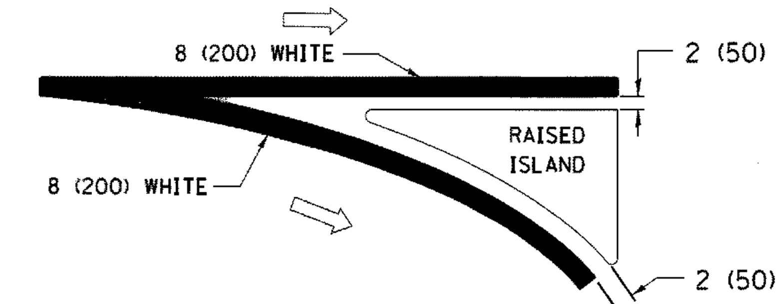
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

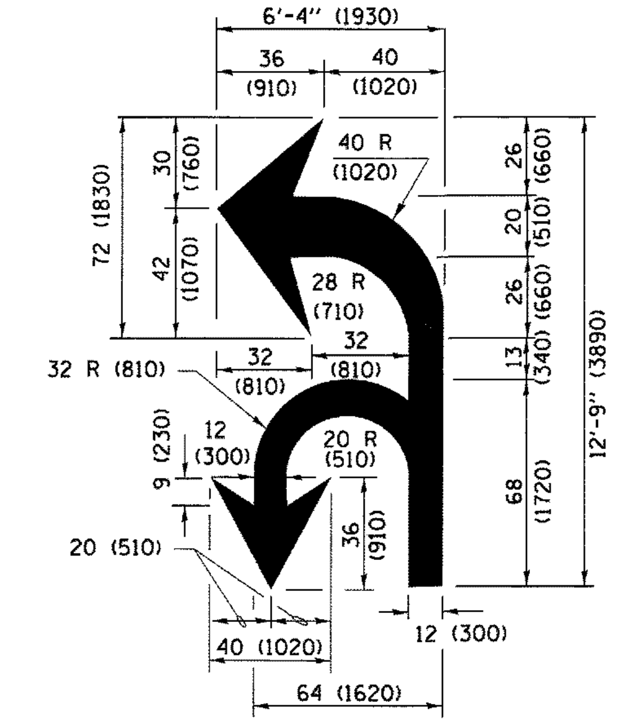


ISLAND OFFSET FROM PAVEMENT EDGE

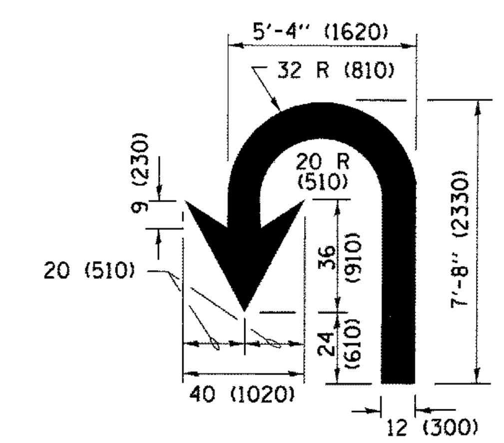


ISLAND AT PAVEMENT EDGE

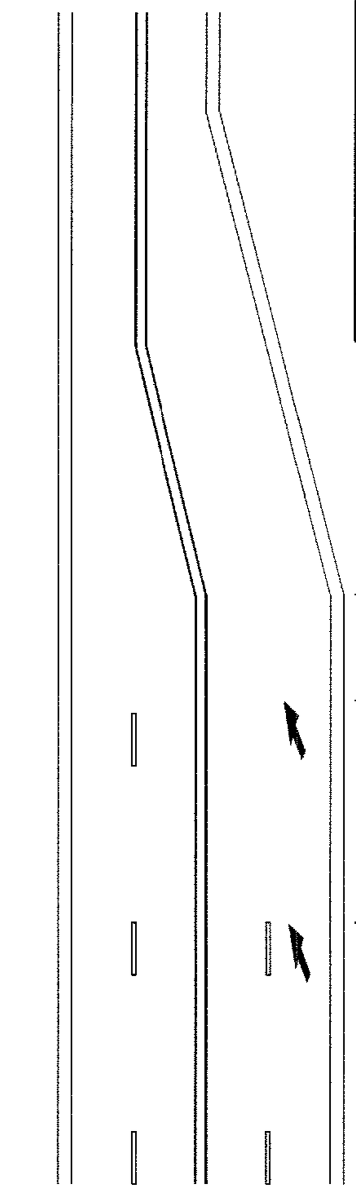
TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN



D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

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		DRAWN -	REVISED - C. JUCIUS 07-01-13
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Default	PLOT DATE = 4/13/2016	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	44
	TC-13	CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		

RS&H
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

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

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

FILE NAME = BR_p2_sht_xs01.dgn

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		DRAWN - MAW	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -
	PLOT DATE = 9/6/2017	DATE - 10/05/2016	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAY ROAD OVER LILY LAKE DRAIN
CROSS SECTIONS

SCALE: 1"=10'H/1"=5'V | SHEET 1 OF 2 SHEETS | STA. 218+00.00 TO STA. 218+93.00

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	45
		CONTRACT NO. 61D64		
	ILLINOIS FED. AID PROJECT			

RS&H
525 DUNHAM ROAD, SUITE 20
ST. CHARLES, IL 60174

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

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

FILE NAME = BR_p2_sht_xs01.dgn

RS&H	USER NAME = martinm	DESIGNED - MAW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAY ROAD OVER LILY LAKE DRAIN CROSS SECTIONS
		DRAWN - MAW	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED - MJM	REVISED -		
	PLOT DATE = 9/6/2017	DATE - 10/05/2016	REVISED -		SCALE: 1"=10'H/1"=5'V SHEET 2 OF 2 SHEETS STA. 220+06.00 TO STA. 221+00.00

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0186	14-00438-00-BR	McHENRY	46	46
		CONTRACT NO. 61D64		
		ILLINOIS FED. AID PROJECT		