

LA CROSSE

5356-06-71

INDEX OF SHEETS

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Sheet No.	Standard Detail Drawings
Sheet No.	Sign Plates
Sheet No.	Structure Plans
Sheet No.	Computer Earthwork Data
Sheet No.	Cross Sections

TOTAL SHEETS =



DESIGN DESIGNATION

A.D.T. (2000) = 50
 A.D.T. (2020) = 436
 D.H.V. (2020) = 45
 D. = 50%-50%
 T. = 4%
 V. = 30 MPH
 E.S.A.L.S. = 58,400

CONVENTIONAL SIGNS

COUNTY LINE		COMBUSTIBLE FLUIDS (UNDER PRESSURE)	
CORPORATE LIMITS		UNDERGROUND UTILITIES	
PROPERTY LINE		GAS	
LOT LINE		ELECTRIC	
LIMITED EASEMENT		TELEPHONE	
EXISTING RIGHT OF WAY		SERVICE PEDESTAL	
NEW RIGHT OF WAY		CABLE MARKER	
REFERENCE LINE		POWER POLE	
SLOPE INTERCEPT		TELEPHONE POLE	
ORIGINAL GROUND		RAILROADS	
MARSH OR ROCK PROFILE		MARSH	
CULVERT IN PLACE		WOODED AREA	
CULVERT REQUIRED		EROSION MAT	
CULVERT REQUIRED (Profile)		RIP RAP	
SILT FENCE			
EROSION BALES			

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

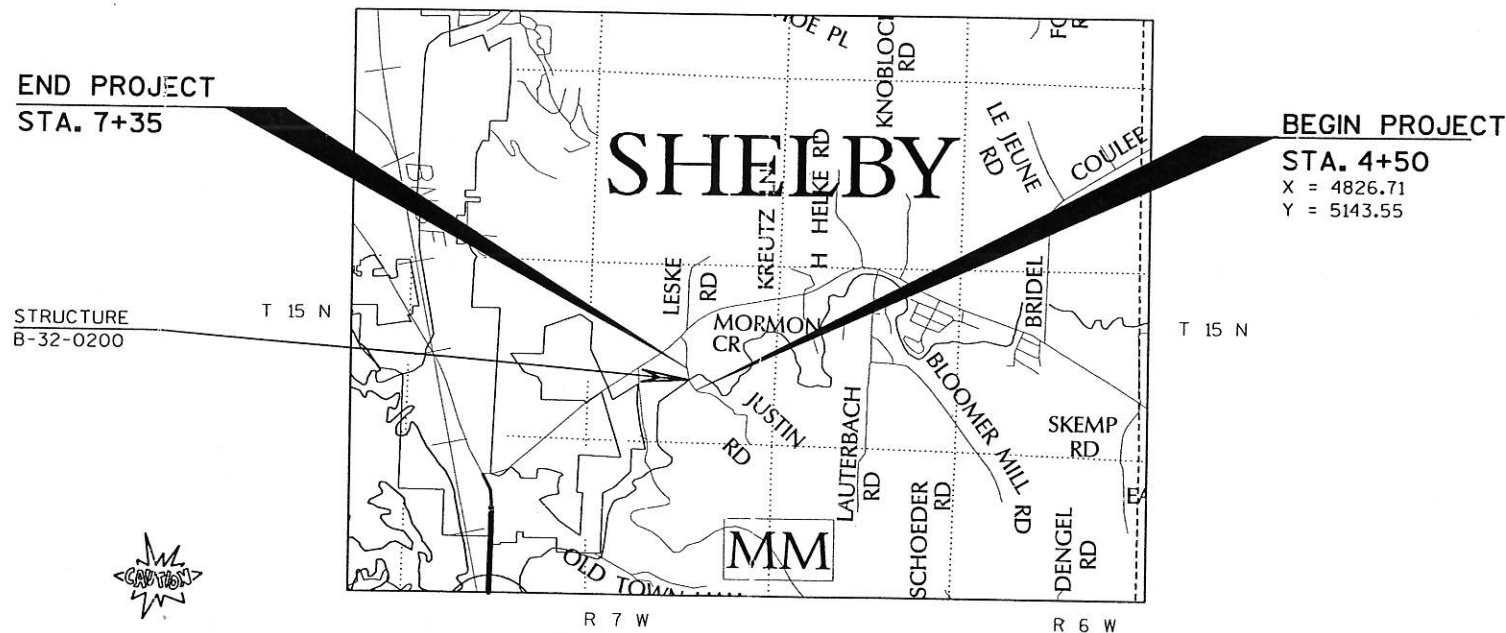
PLAN OF PROPOSED IMPROVEMENT

JUSTIN ROAD, CITY OF LA CROSSE

(MORMON CREEK BRIDGE AND APPROACHES)

LOCAL ROAD
LACROSSE COUNTY

STATE PROJECT NUMBER
 5356-06-71



LAYOUT
 SCALE 0 0.5 MI.



TOTAL NET LENGTH OF CENTERLINE = 0.054 MI. RURAL

COORDINATES ON THIS PLAN ARE REFERENCED TO AN ASSUMED COORDINATE SYSTEM.

THE ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF (NGVD) 1929

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5356-06-71		



ACCEPTED BY
CITY OF LA CROSSE

5/30/01 *Raf Tutsch*
DATE: SIGNATURE:

ACCEPTED BY
LACROSSE COUNTY

5/31/01 *Denn Ogund*
DATE: SIGNATURE:

ORIGINAL
PLANS PREPARED BY

WISCONSIN
 CHAD D. HALVERSON
 E-34364
 MADISON WIS.
 PROFESSIONAL ENGINEER

Chad Halverson 5/24/01

STRAND ASSOCIATES, INC.
 ENGINEERS

910 WEST WINGRA DRIVE
 MADISON, WISCONSIN 53715
 (608) 251-4843

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

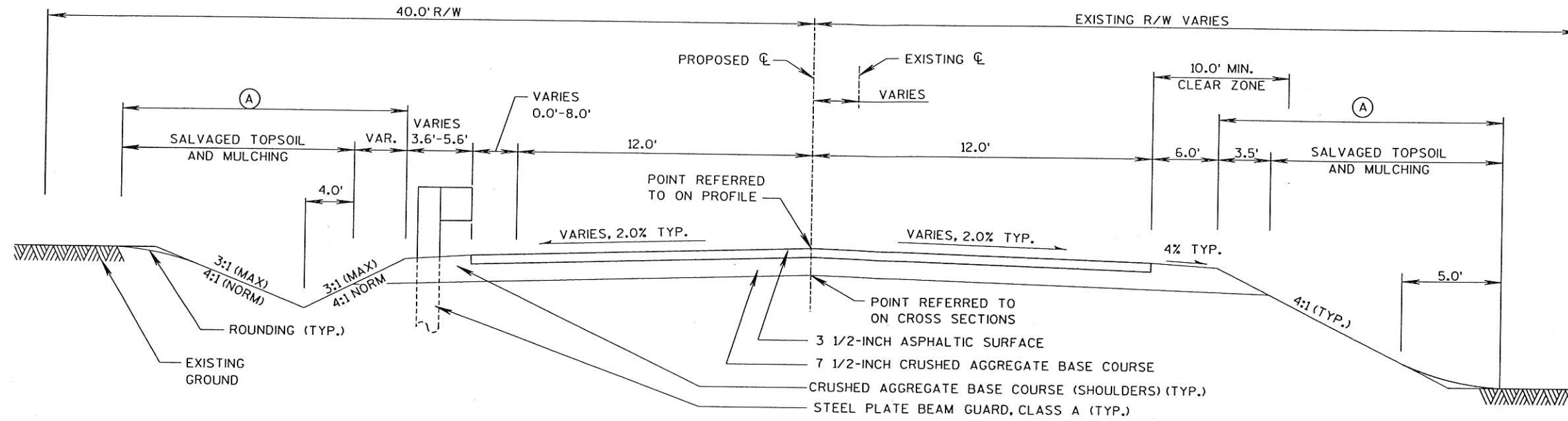
PREPARED BY

Surveyor	STRAND ASSOC.
Designer	STRAND ASSOC.
District Examiner	FRANCIS SCHELFOUT
District Supervisor	
Proj. Dev. Engineer	
C.O. Examiner	

APPROVED FOR DISTRICT OFFICE

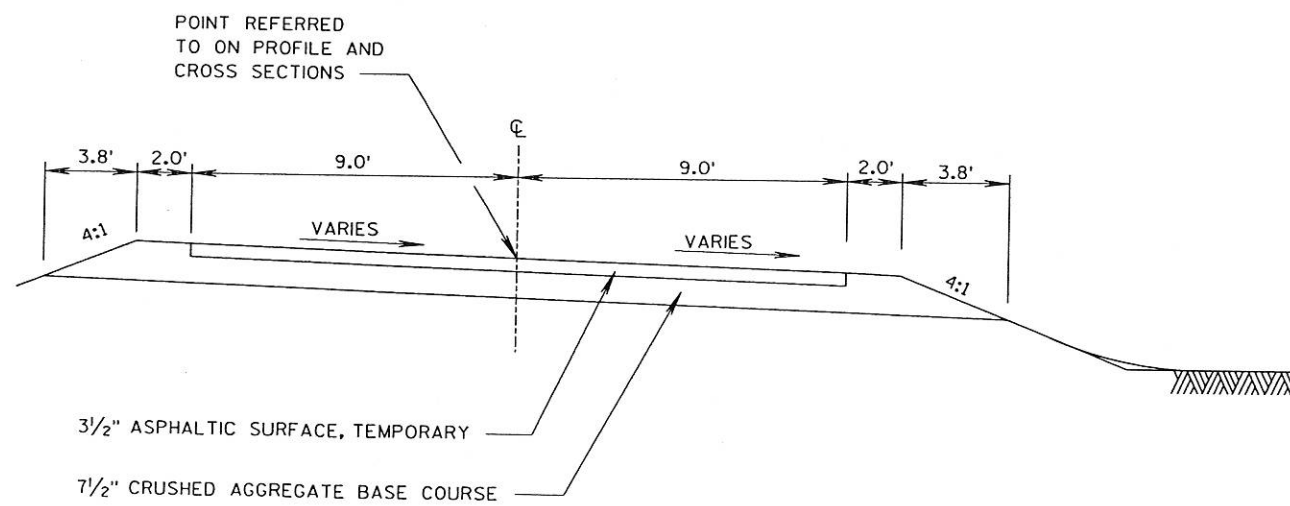
Date: 6/15/01 *Renee Priestow*

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

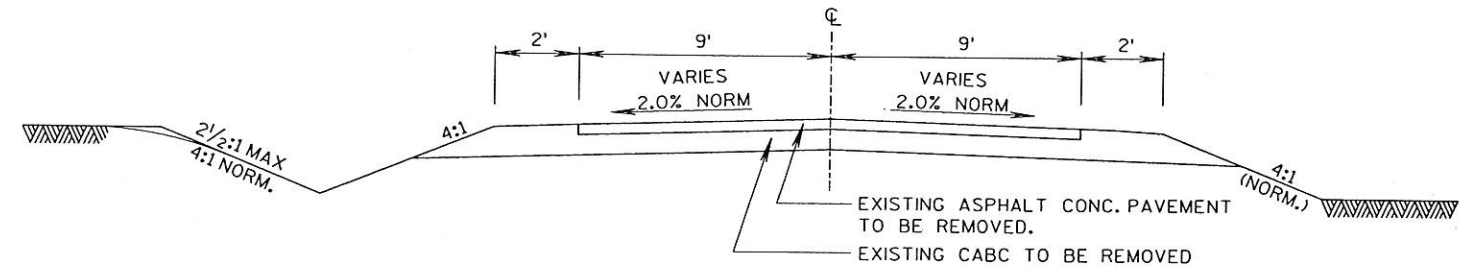


**TYPICAL SECTION
JUSTIN ROAD**

CLEAR ZONE REQ'D. ON OUTSIDE OF HORIZONTAL CURVE	
DEGREE OF CURVE	CLEAR ZONE REQ'D.
15°	15.4'



BYPASS TYPICAL SECTION



EXISTING TYPICAL SECTION

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

ABBREVIATIONS

ENGLISH STANDARD DETAIL DRAWINGS

8E8-2	TYPICAL INSTALLATIONS OF EROSION BALES
8E9-5	SILT FENCE
12A3-7	NAME PLATE (STRUCTURE)
14B15-4a & b	CLASS "A" STEEL PLATE BEAM GUARD INSTALLATION & ELEMENTS
14B18-4a	CLASS "A" STEEL PLATE BEAM GUARD (AT BRIDGE, OBSTACLES AND SIDE ROAD/DRIVEWAYS)
14B20-5a	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-5d	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
14B24-3a, b & c	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
15C6-4	SIGNING & MARKING FOR TWO LANES BRIDGES
15C12-2	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D31-1	TRAFFIC CONTROL, TEMPORARY BYPASS ROAD

ABUT.	ABUTMENT
A.D.T.	AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
B.M.	BENCH MARK
CTR.	CENTER
C.L.	CENTERLINE
CONC.	CONCRETE
DIA.	DIAMETER
DIM.	DIMENSION
D.H.V.	DESIGN HOUR TRAFFIC VOLUME
E.O.P.	EDGE OF PAVEMENT
EL.	ELEVATION
EXC.	EXCAVATION
F.F.	FRONT FACE
D.	LANE DISTRIBUTION
G.	BURIED GAS LINE
MAX.	MAXIMUM
MIN.	MINIMUM

NOR.	NORMAL
O.H.	OVERHEAD POWER LINE
P.L.E.	PERMANENT LIMITED EASEMENT
P.O.L.	POINT ON LINE
REQ'D.	REQUIRED
RDWY.	ROADWAY
SAN.	SANITARY SEWER
S.P.B.G.	STEEL PLATE BEAM GUARD
S.S.	STORM SEWER
STA.	STATION
SYM.	SYMMETRICAL
T.	PERCENT OF TRUCKS
T.I.	TEMPORARY INTEREST
TYP.	TYPICAL
V.	DESIGN SPEED
W.	BURIED WATER LINE

GENERAL NOTES

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDERS POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION SHALL FURNISH THE CONTRACTOR A MONUMENT FOR THE STRUCTURE WHICH SHALL BE SET IN THE STRUCTURE AT A TIME AND PLACE DESIGNATED BY THE ENGINEER.

BEARINGS ON THIS PLAN ARE ASSUMED AND SHOWN TO THE NEAREST SECOND.

THE LOCATIONS OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS E.C.I.P. AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE DNR.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER PRIOR TO CONSTRUCTION.

3 1/2-inch ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH ONE 13/4-inch LOWER LAYER AND ONE 13/4-inch UPPER LAYER.

3 1/2-inch ASPHALTIC SURFACE, TEMPORARY FOR THE CONSTRUCTION OF THE BYPASS SHALL BE CONSTRUCTED IN ONE LAYER.

WHEN PORTIONS OF THE EXISTING ASPHALTIC ROADWAY ARE TO BE REMOVED TO ACCOMMODATE THE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT THROUGH THE ASPHALTIC PAVEMENT SUCH THAT REMOVAL OF THE PAVEMENT WILL BE ACCOMPLISHED WITHOUT DAMAGE TO THE REMAINING PORTIONS

CUT VOLUMES SHOWN ON THE EARTHWORK SUMMARY SHEET DO NOT INCLUDE THE QUANTITY GENERATED FROM THE ITEM "EXCAVATION FOR STRUCTURES, BRIDGES B-32-0200 AND THE EXCAVATION REQUIRED TO PLACE THE ITEM "HEAVY RIPRAP."

FILL VOLUMES SHOWN ON THE EARTHWORK SUMMARY SHEET DO NOT INCLUDE THE QUANTITY REQUIRED FOR THE ITEM "STRUCTURAL BACKFILL."

THE EXCAVATION FOR HEAVY RIPRAP SHALL BE USED OUTSIDE THE 1:1 FROM THE FINISHED SHOULDER POINT.

EXCAVATED ASPHALTIC MATERIAL SHALL NOT BE PLACED IN FILL EMBANKMENTS BELOW THE 100 YEAR ELEVATION OF 676.92.

UTILITIES

TELEPHONE:
CENTURY TELEPHONE
ATTN: ED FEYEN
2615 EAST AVENUE S.
LA CROSSE, WI 54601
PH: (608) 796-5143

GAS:
XCEL ENERGY
ATTN: ED PRZYTARSKI
P.O. BOX 727
3215 COMMERCE ST.
LA CROSSE, WI 54602-0727
PH: (608) 789-3631

DNR LIAISON

JAMES DOPERALSKI, JR.
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
PH: (608) 789-5511

DESIGN CONSULTANT

CHAD HALVERSON
STRAND ASSOCIATES
PH: (608) 251-4843

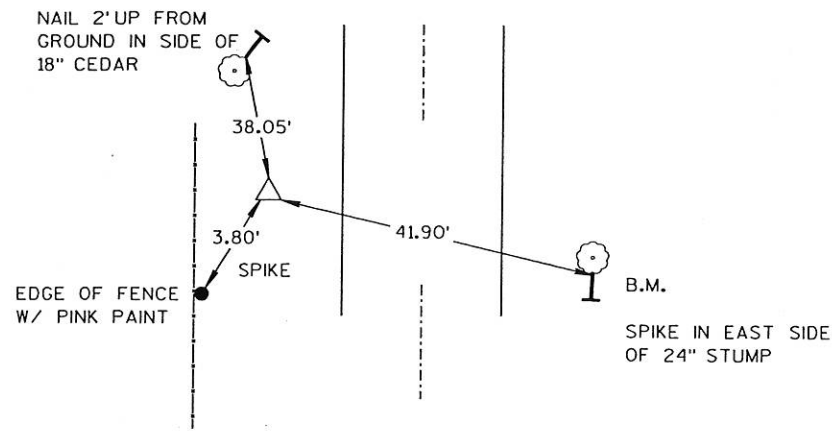


CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

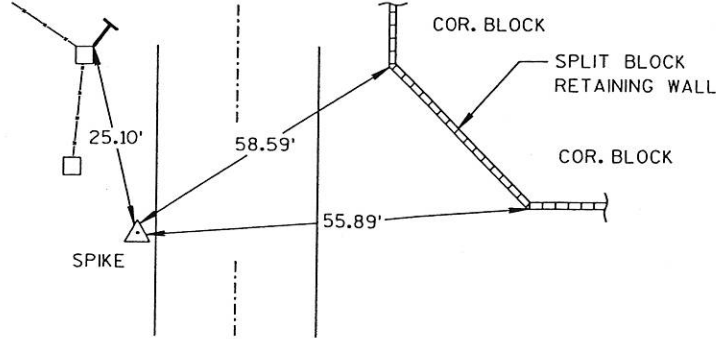
WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

LEVELS ON * 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



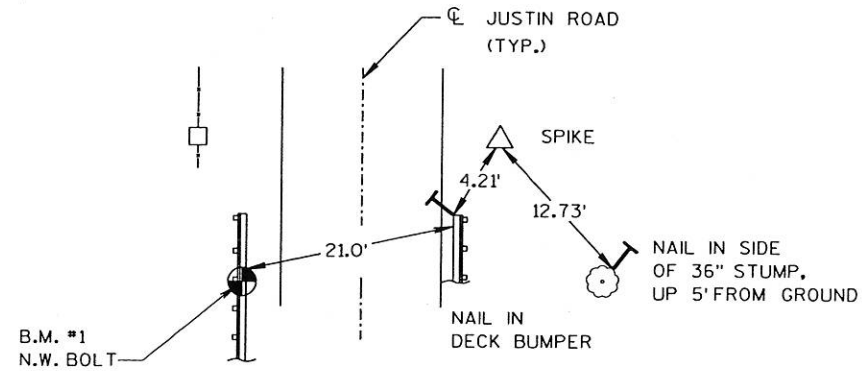
C.P. #1
SPIKE, DRIVEN IN SHOULDER 4.0' OFF EOP

STA.1+77, 13.7' LT
N=5000.000
E=5000.000
ELEV. 688.38



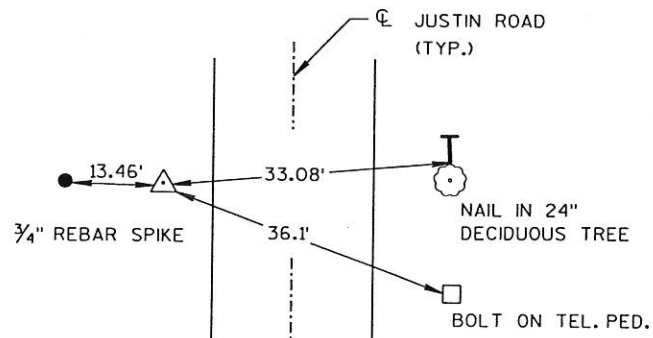
C.P. #4
SPIKE, DRIVEN IN SHOULDER 1.2' OFF EOP

STA. 10+04, 1.5' LT
N= 5725.408
E=4673.867
ELEV. 689.72



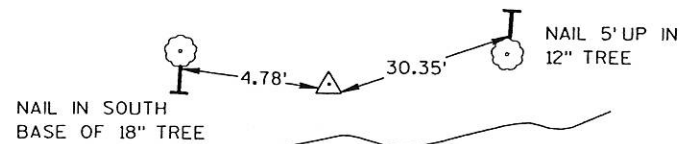
C.P. #2
SPIKE, DRIVEN IN SHOULDER 2.8' OFF EOP

STA. 6+67, 18' RT
N=5400.668
E=4764.056
ELEV. 676.23



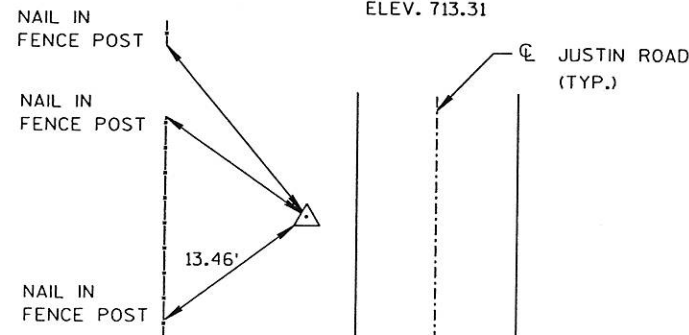
C.P. #5
SPIKE, DRIVEN IN SHOULDER 1.1' OFF EOP

STA.13+70, 12.7' LT
N=6039.797
E=4632.669
ELEV. 713.31



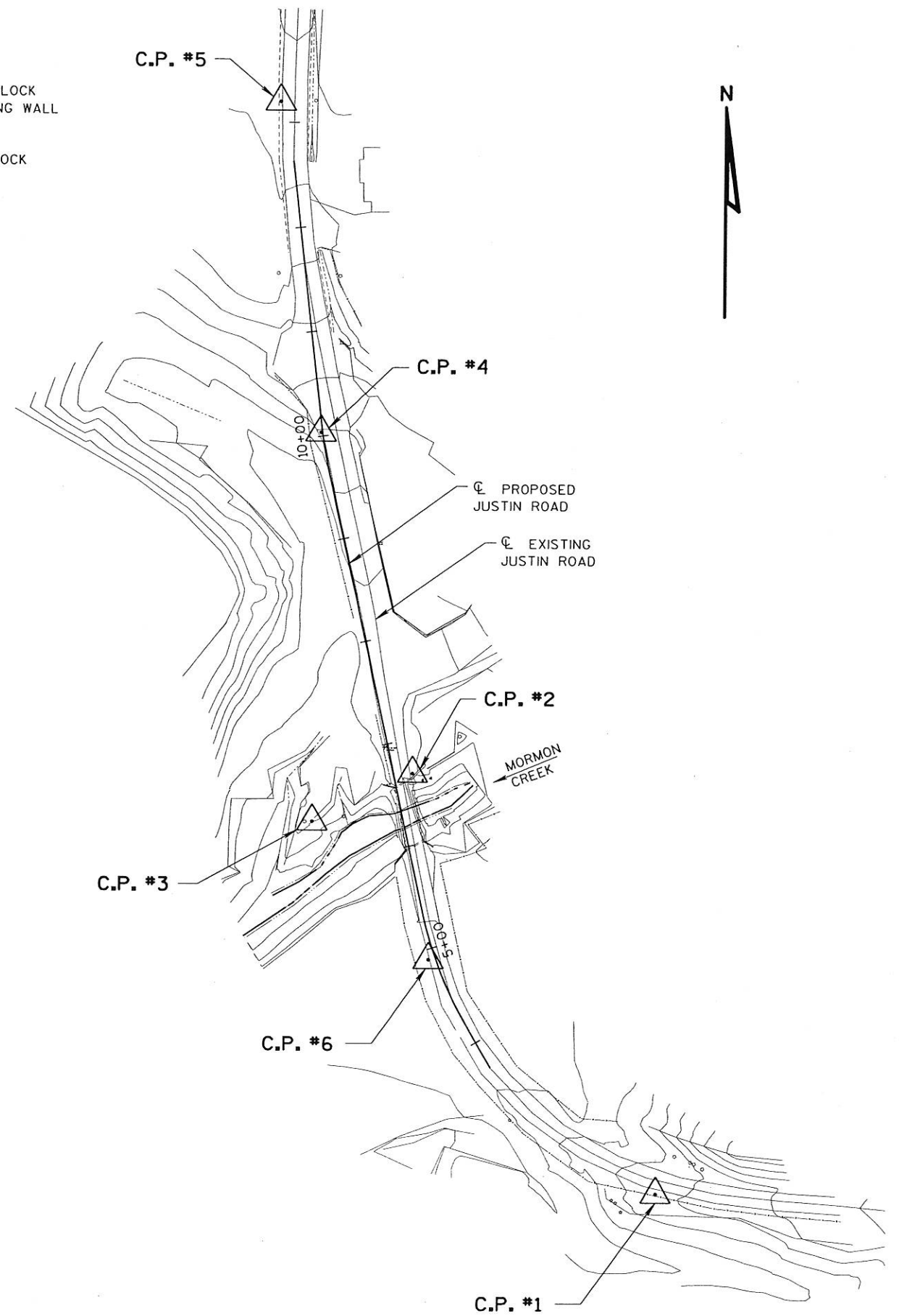
C.P. #3
SPIKE, DRIVEN IN TOP OF CREEK BANK

STA. 6+43, 85' LT
N= 5354.443
E= 4669.007
ELEV. 671.60



C.P. #6
SPIKE, DRIVEN IN SHOULDER 0.5' OFF EOP

STA.4+90.5, 6.8' LT
N=5222.6570
E=4780.9237
ELEV. 673.48



MAINLINE HORIZONTAL CURVE DATA

CURVE 1
 PISTA. = 4+78.84
 N = 5211.88
 E = 4787.40
 Da = 15°00'10"
 T = 58.52
 R = 381.90
 L = 116.14
 PC STA = 4+20.32
 N = 5161.154
 E = 4816.580
 PT STA = 5.36.45
 N = 5269.018
 E = 4774.754

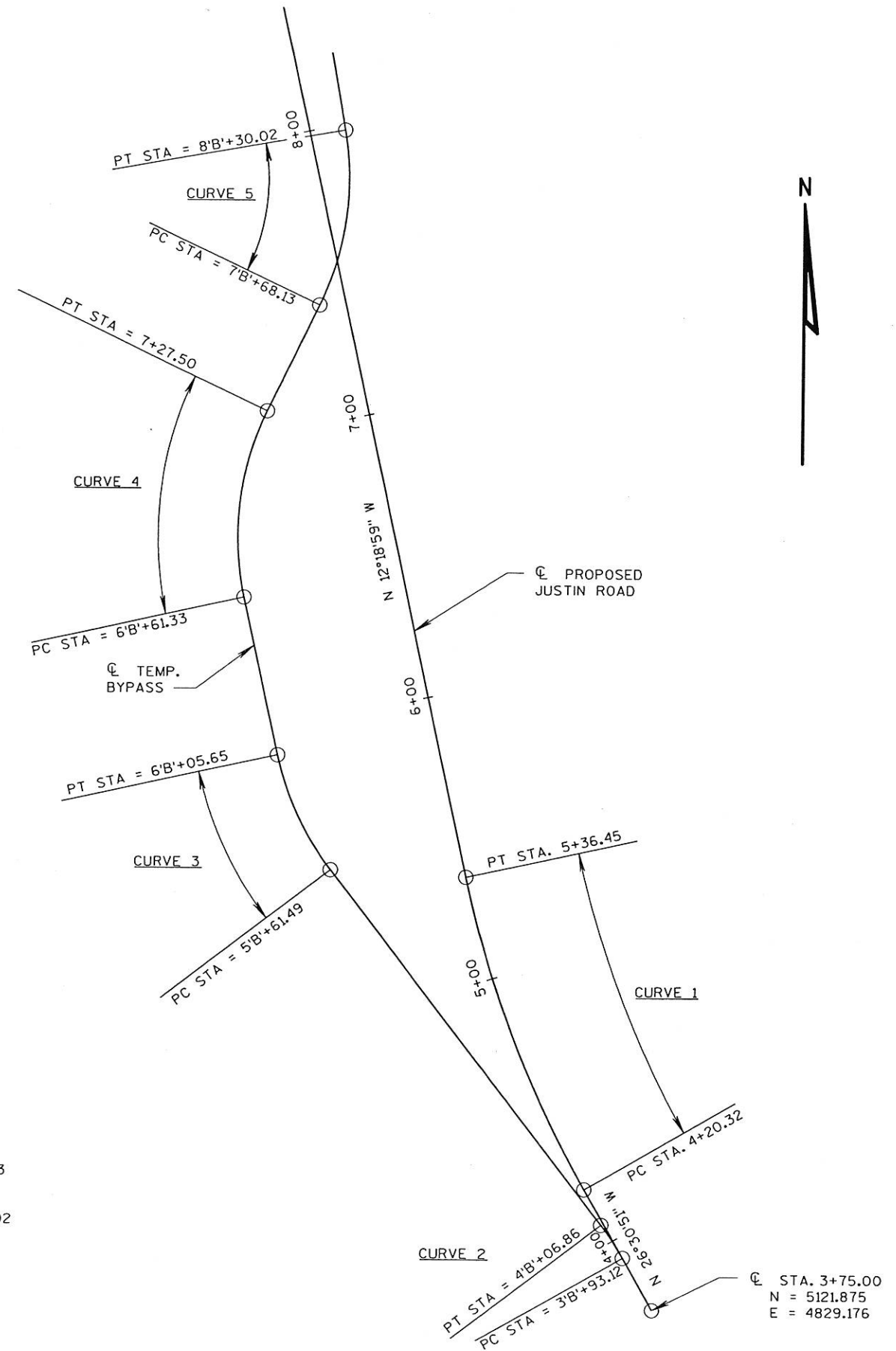
BYPASS HORIZONTAL CURVE DATA

CURVE 2
 PISTA. = 4'B'+00.00
 N = 5143.54
 E = 4826.71
 Da = 57°18'
 T = 6.88
 R = 100.00
 L = 13.74
 PC STA = 3'B'+93.12
 N = 5137.579
 E = 4830.139
 PT STA = 4'B'+06.86
 N = 5148.982
 E = 4822.493

CURVE 3
 PISTA. = 5'B'+83.94
 N = 5288.94
 E = 4714.01
 Da = 57°18'
 T = 22.44
 R = 100.00
 L = 44.15
 PC STA = 5'B'+61.49
 N = 5271.199
 E = 4727.758
 PT STA = 6'B'+05.65
 N = 5310.848
 E = 4709.158

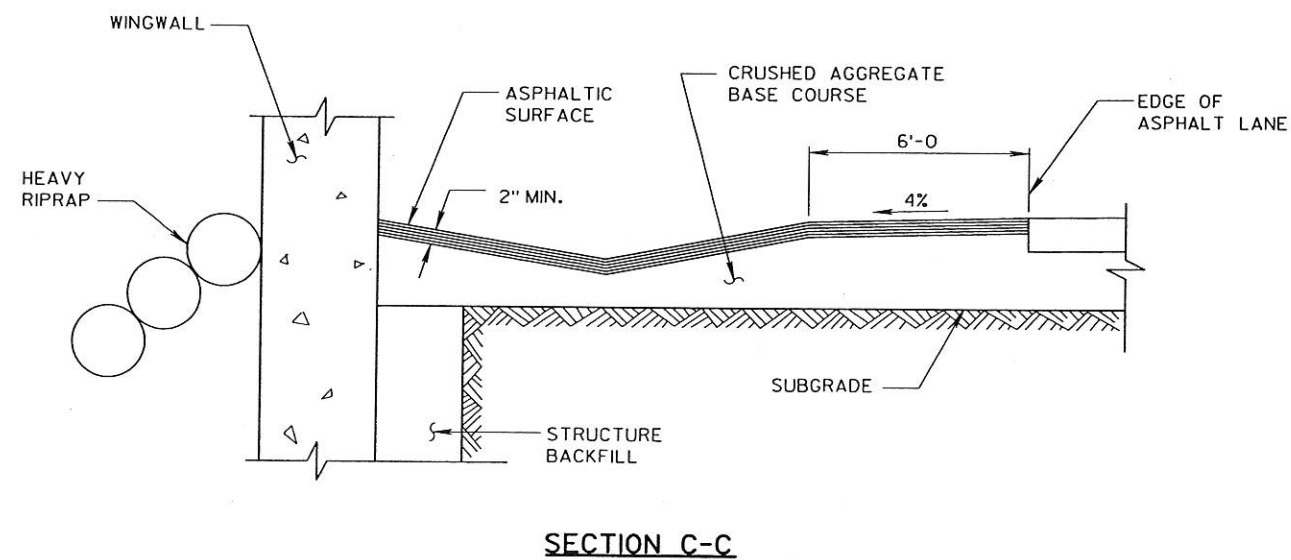
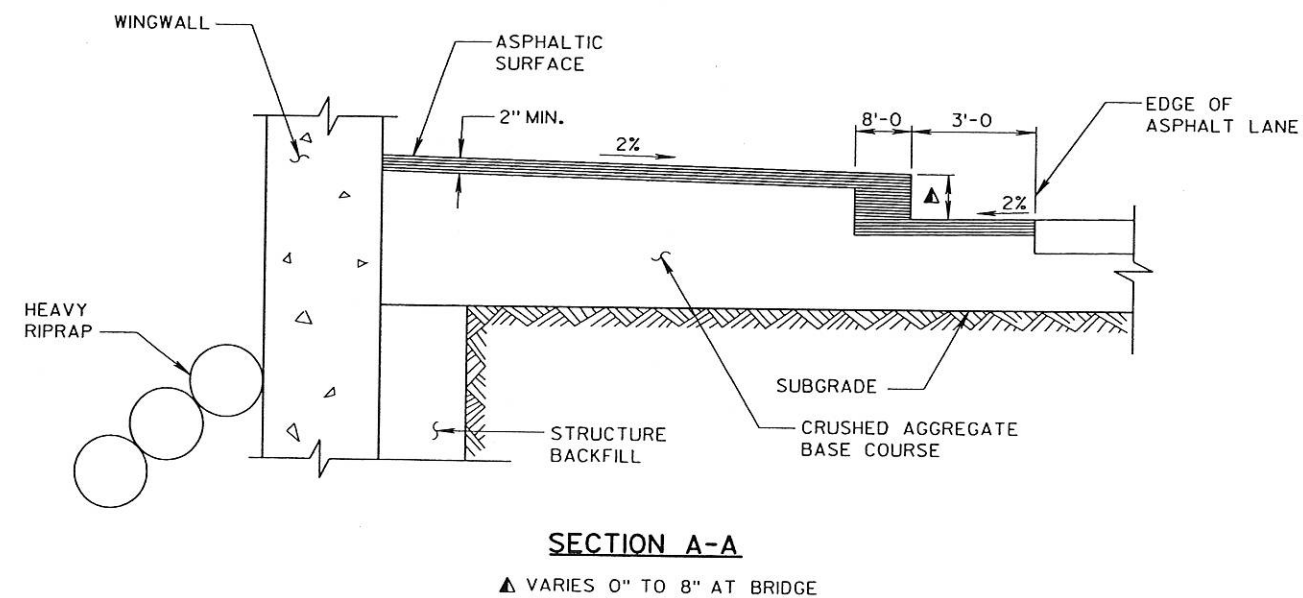
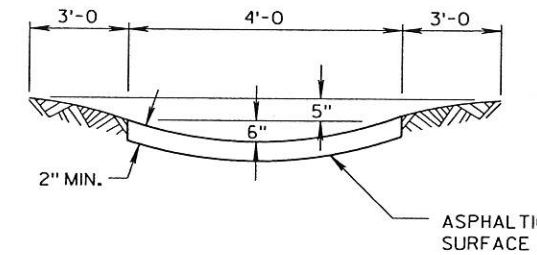
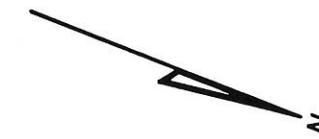
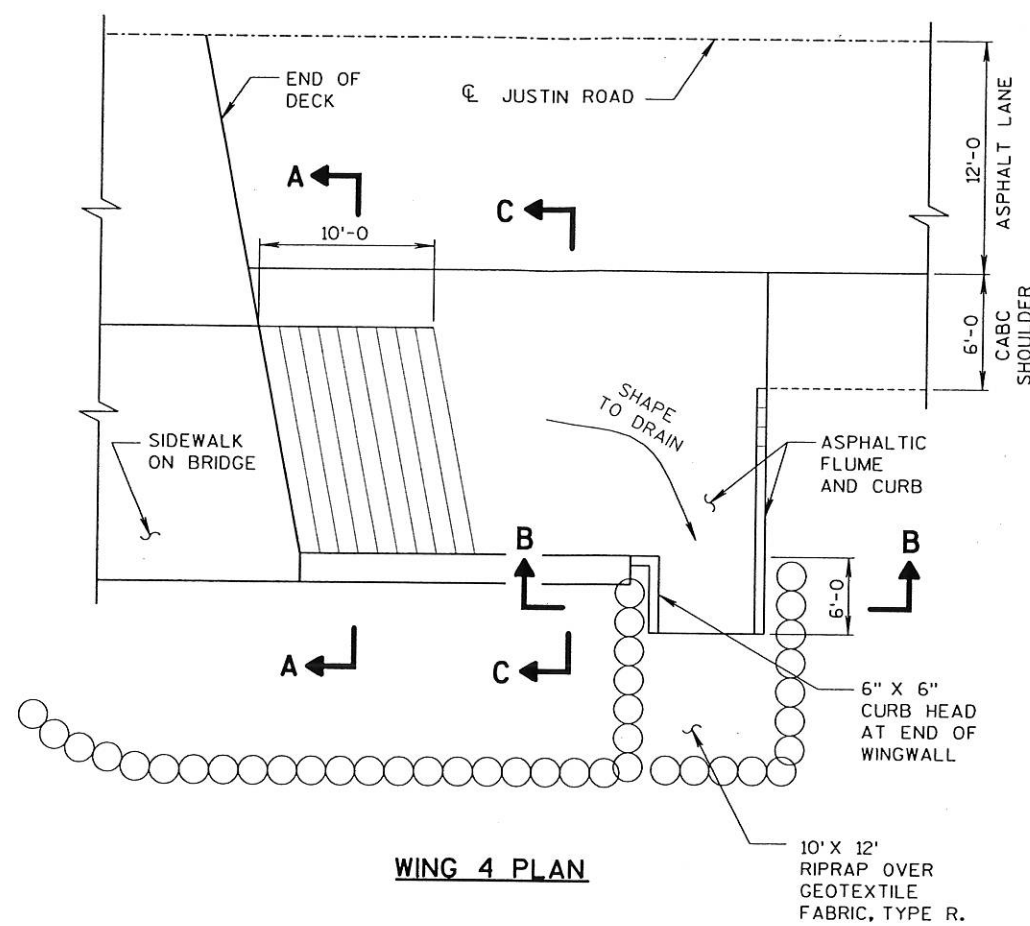
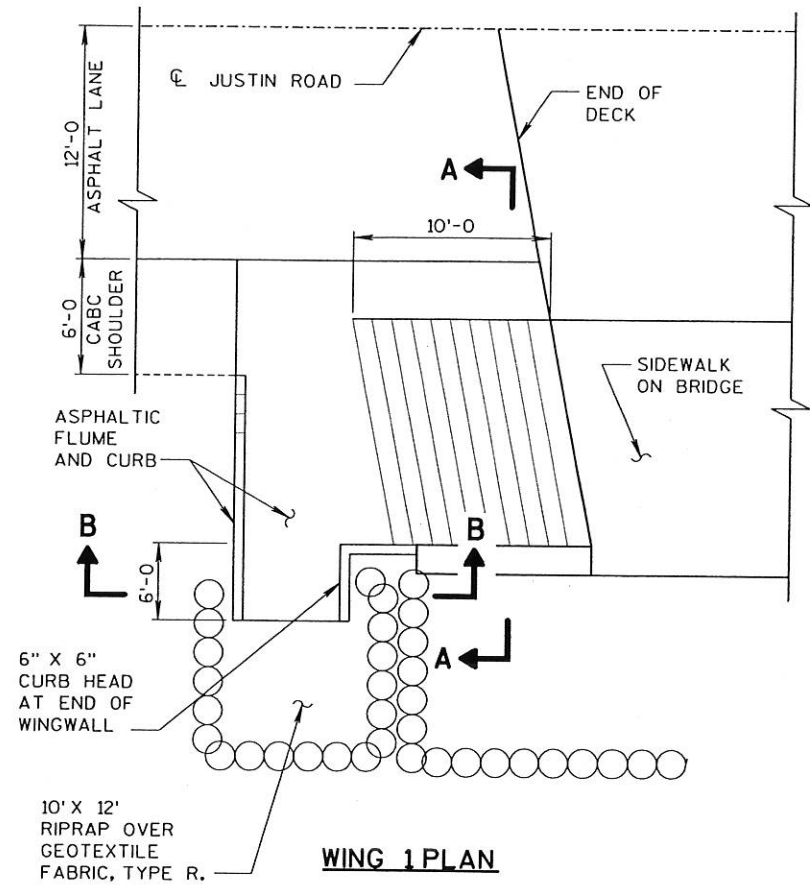
CURVE 4
 PISTA. = 6'B'+95.68
 N = 5398.75
 E = 4689.70
 Da = 57°18'
 T = 34.35
 R = 100.00
 L = 66.17
 PC STA = 6'B'+61.33
 N = 5365.213
 E = 4697.123
 PT STA = 7+27.50
 N = 5429.770
 E = 4704.448

CURVE 5
 PISTA. = 8'B'+00.10
 N = 5495.34
 E = 4735.63
 Da = 57°18'
 T = 31.97
 R = 100.00
 L = 61.89
 PC STA = 7'B'+68.13
 N = 5466.466
 E = 4721.897
 PT STA = 8'B'+30.02
 N = 5526.820
 E = 4730.059



LEVELS ON + 1.2, 3.4, 5.6, 7.8, 9.10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

LEVELS DW - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



CONVENTIONAL SIGNS AND ABBREVIATIONS

STATE LINE
COUNTY LINE
TOWNSHIP AND RANGE LINES
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
CORPORATE LIMITS
LOT, TIE AND OTHER MINOR LINES
SLOPE INTERCEPTS
UNDERGROUND FACILITY (Communications, Electric, Etc.)
FENCE
TEMPORARY INTEREST
EASEMENT (Highway, Permanent Limited or Restricted Development)
BEAM GUARD
MANHOLE, SEPTIC VENT, WELL, ETC.
GAS PUMPS
BUSHES
TREES (Deciduous) (Coniferous)
WOODS

SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS
BRIDGE
STREAM OR RIVER
CULVERT (Box, Pipe Or Cattle Pass)
R/W MONUMENT
NON-MONUMENTED R/W POINT
IRON PIN
VALVE
WINDMILL
ELECTRIC POLE
TELEPHONE POLE

CAUTION
NAME
(Type)
GAS (TYPE)
COMPENSABLE
NON-COMPENSABLE
M.H. (Type)
G.P.
1" I.P.

CURVE DATA
 PI Sta = 4+78.84
 I = 17°25'26"R
 Da = 15°00'10"
 T = 58.52
 R = 381.90
 L = 116.14
 PC Sta = 4+20.32
 PT Sta = 5+36.45

BEGIN RELOCATION ORDER
 STA 4+00
 S1°05'57"E, 3532.14' FROM THE N1/4 CORNER OF SECTION 23, T15N, R7W

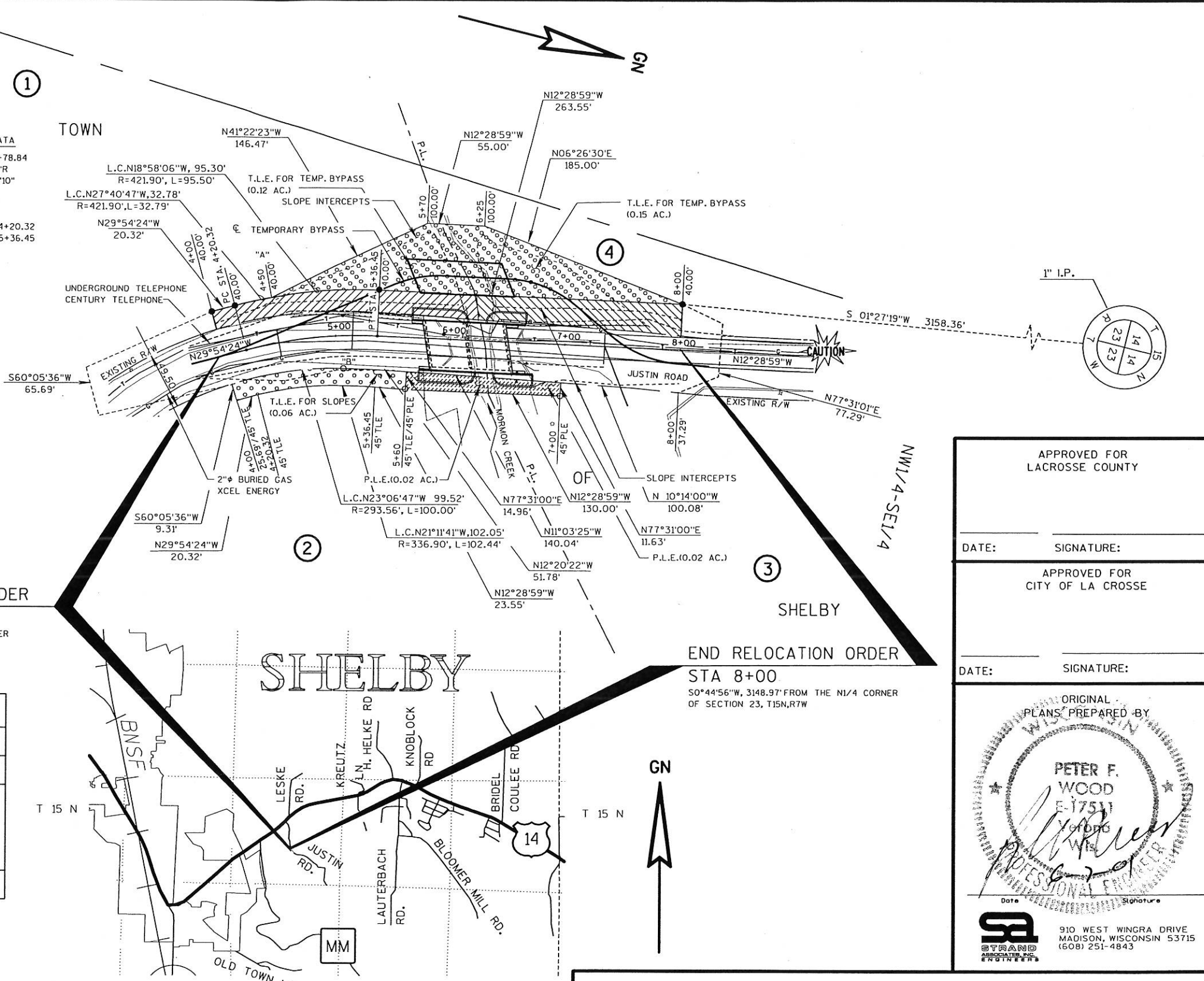
END RELOCATION ORDER
 STA 8+00
 S0°44'56"W, 3148.97' FROM THE N1/4 CORNER OF SECTION 23, T15N, R7W

SCHEDULE OF LANDS AND INTERESTS

PARCEL NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	ACRES NEW	R/W ACRES REQUIRED EXISTING	TOTAL ACRES REMAINING	PLE/TLE
1	DONALD A. & ALICE ELAINE JUSTIN	FEE, TLE	10.90	0.11	0.13	0.24	10.66 0.13 TLE
2	SCOTT & MARY ANN HERLITZKE	PLE, TLE	5.75				0.02 PLE 0.06 TLE
3	PAUL L. & JOYCE L. HERLITZKE, TRUSTEES AND SUCCESSOR TRUSTEES OF THE P&J HERLITZKE TRUST DATED FEBRUARY 21, 1994	PLE	4.92				0.02 PLE
4	TOWN OF SHELBY	FEE, TLE	0.72	0.10	0.10	0.20	0.52 0.15 TLE

NOTES

BEARINGS ON THIS PLAT ARE ASSUMED BASED ON THE WEST LINE OF THE SE 1/4 OF SECTION 23, T15N, R7W, ASSUMED TO BEAR N 02° 17' 29" E
 DIMENSIONING FOR THE NEW R/W IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.
 EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON EXISTING ROAD CENTERLINE
 RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.
 RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER "SURVEYS OF PUBLIC RECORDS".

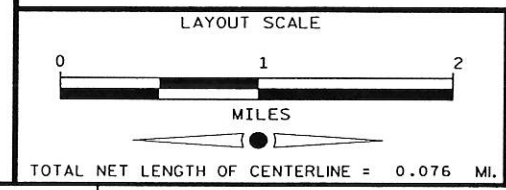


APPROVED FOR LACROSSE COUNTY
 DATE: _____ SIGNATURE: _____

APPROVED FOR CITY OF LA CROSSE
 DATE: _____ SIGNATURE: _____

ORIGINAL PLANS PREPARED BY
PETER F. WOOD
 E-1751
 PROFESSIONAL ENGINEER
 WISCONSIN

910 WEST WINGRA DRIVE
 MADISON, WISCONSIN 53715
 (608) 251-4843



STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED: _____
 DATE: _____ P.D.S. SUPERVISOR

REVISION DATE: _____

PLAT OF RIGHT OF WAY REQUIRED FOR
JUSTIN ROAD, CITY OF LA CROSSE
 MORMON CREEK BRIDGE AND APPROACHES

HIGHWAY: JUSTIN ROAD R/W PROJECT NUMBER: **5356-06-71**

COUNTY: LA CROSSE FEDERAL PROJECT NUMBER: _____

SHEET NUMBER: **4.0**

TOTAL SHEETS: **1**

CLEARING AND GRUBBING

CATEGORY	STATION - STATION	LOCATION	20101 CLEARING STA	20104 GRUBBING STA
010	5+00 - 7+00	LT & RT	2	2

EARTHWORK SUMMARY

CATEGORY	STATION - STATION	20501 COMMON CY	FILL CY*	20801 BORROW CY	WASTE CY
010	STAGE I				
	3'B'+75 to 5'B'+78	40	200	160	--
	6'B'+50 to 8'B'+00	0	710	710	--
	Stage I Total	40	910	870	--
010	STAGE II				
	4+00 to 5+78	300	40	--	260
	6+50 to 8+00	160	150	--	10
	Stage II Total	460	190	--	270
010	STAGE III				
	3'B'+75 TO 5'B'+78	210	--	--	210
	6'B'+50 TO 8'B'+00	550	--	--	550
	Stage 3 Total	760	--	--	760
	EBS (UNDISTRIBUTED)	100	--	--	--
	TOTALS	1360	1100	870	1030

* INCLUDES 25% EXPANSION FACTOR

NOTE: STRUCTURE BACKFILL QUANTITIES NOT INCLUDED IN THIS SUMMARY - SEE BRIDGE PLAN

EBS QUANTITY NOT USED TO BALANCE EARTHWORK

CRUSHED AGGREGATE BASE COURSE

CATEGORY	STATION - STATION	30404 TON
010	4'B'+00 to 5'B'+78	200
	6'B'+63 to 8'B'+00	180
	4+50 to 5+78	300
	6+50 to 7+35	300
	TOTALS	980

BREAKER RUN STONE AND GEOTEXTILE FABRIC, TYPE SAS

CATEGORY	STATION - STATION	30426 BREAKER RUN STONE TON	64501 GEOTEXTILE FABRIC TYPE SAS SY
010	UNDISTRIBUTED FOR BYPASS USE	175	300
	TOTALS	175	300

ASPHALTIC ITEMS

CATEGORY	STATION - STATION	41101 ASPHALTIC SURFACE TON	41106 ASPHALTIC SURFACE TEMPORARY TON	40204 TACK COAT GAL
010	4'B'+00 to 5'B'+78	--	47	6
	6'B'+63 to 8'B'+00	--	49	6
	4+50 to 5+78	85	--	20
	6+50 to 7+35	66	--	20
	TOTALS	151	96	52

RIPRAP AND GEOTEXTILE FABRIC, TYPE R

CATEGORY	LOCATION	60601 RIPRAP CY	64505 GEOTEXTILE FABRIC TYPE R SY
010	5+70, RT	9	23
	6+80, RT	9	23
	TOTALS	18	46

BEAM GUARD SUMMARY

CATEGORY	STATION - STATION	LOCATION	61407 STEEL THRIE BEAM STRUCTURE APPROACH L.F.	61408 STEEL PLATE BEAM GUARD, CLASS A L.F.	61435 STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL EACH
010	5+11 - 5+36	LT	--	25	1
	5+36 - 5+68	LT	33	--	--
	6+62 - 6+95	LT	33	--	--
	6+95 - 7+20	LT	--	25	1
	TOTALS		66	50	2

ASPHALTIC FLUMES, SPECIAL		
CATEGORY	LOCATION	62203 SY
010	5+70 RT	30
	6+80 RT	45
	TOTAL	75

SILT FENCE					
CATEGORY	STATION - STATION	LOCATION	62815 DELIVERED L.F.	62816 INSTALLED L.F.	62817 MAINTENANCE L.F.
010	3+85 - 6+20	RT	275	275	275
	4+00 - 6+20	LT	315	315	315
	6+30 - 7+30	RT	135	135	135
	6+20 - 8+00	LT	285	285	285
	UNDISTRIBUTED		250	250	250
	TOTALS		1260	1260	1260

MOBILIZATIONS, EROSION CONTROL	
CATEGORY	62819 EACH
010	2

MOBILIZATIONS, EMERGENCY EROSION CONTROL	
CATEGORY	62821 EACH
010	1

FINISHING ITEMS							
CATEGORY	STATION - STATION	LOCATION	62505 SALVAGED TOPSOIL SY	62702 MULCHING SY	62905 FERTILIZER, TYPE B Cwt.	63009 SEEDING, MIXTURE NO. 20 Lb.	63003 SEEDING, TEMPORARY Lb.
010	4'B'+00 - 5'B'+80	LT & RT	---	210	0.5	---	9
	6'B'+70 - 8'B'+00	LT & RT	---	230	0.5	---	9
	4+00 - 5+78	LT & RT	900	900	0.7	30	30
	6+50 - 8+00	LT & RT	700	700	0.5	20	25
	BORROW PIT		---	600	0.5	20	20
	UNDISTRIBUTED		---	300	0.3	10	7
	TOTALS		1600	2940	3	80	100

TEMPORARY DELINEATORS			
CATEGORY	STATION	LOCATION	63311 TEMPORARY DELINEATORS EACH
010	3'B'+00 TO 9'B'+30	LT & RT	30

EROSION BALES			
CATEGORY	STATION	62811 DELIVERED EACH	62812 INSTALLED EACH
010	UNDISTRIBUTED	20	20

EROSION MAT				
CATEGORY	STATION	LOCATION	62832 CLASS II TYPE B, DELIVERED SY	62833 CLASS II TYPE B, INSTALLED SY
010	4+70 TO 5+60	RT	800	800
	5+60	LT	95	95
	6+70	LT	95	95
	6+90	RT	180	180
	UNDISTRIBUTED		290	290
	TOTALS		1460	1460

WOOD POSTS, 4X4-INCH X 10 FT				
CATEGORY	STATION	LOCATION	63401 EACH	REMARKS
010	5+66	LT	1	BRIDGE CORNER
	5+74	RT	1	BRIDGE CORNER
	6+64	LT	1	BRIDGE CORNER
	6+72	RT	1	BRIDGE CORNER
	TOTAL		4	

SIGNS, TYPE II, REFLECTIVE

CATEGORY	STATION	LOCATION	SIZE	SIGN CODE	DESCRIPTION	63702 SF	REMARKS
010	5+66	LT	12"x36"	W5-52	HAZARD PANEL	3.00	BRIDGE CORNER
	5+74	RT	12"x36"	W5-52	HAZARD PANEL	3.00	BRIDGE CORNER
	6+64	LT	12"x36"	W5-52	HAZARD PANEL	3.00	BRIDGE CORNER
	6+72	RT	12"x36"	W5-52	HAZARD PANEL	3.00	BRIDGE CORNER
TOTAL						12.00	

TEMPORARY PAVEMENT MARKING

CATEGORY	STATION TO STATION	LOCATION	64901 4-INCH YELLOW LF	64904 REMOVABLE TAPE 4-INCH YELLOW LF
010	-3'B'+00 TO 3'B'+00	CL	--	600
	3'B'+00 TO 4'B'+75	CL	--	350
	4'B'+75 TO 7'B'+80	CL	610	--
	7'B'+80 TO 9'B'+30	CL	--	300
	9'B'+30 TO 13'B'+30	CL	--	600
TOTALS			610	1250

MOVING SIGNS, TYPE II

CATEGORY	LOCATION	63822 EACH
010	STA. 5+75, RT	1
	STA. 7+00, LT	1
TOTAL		2

REMOVING SIGNS, TYPE II

CATEGORY	LOCATION	63827 EACH
010	4 CORNERS OF STRUCTURE	4
TOTAL		4

REMOVING SMALL SIGN SUPPORTS

CATEGORY	LOCATION	63830 EACH
010	4 CORNERS OF STRUCTURE	4
TOTAL		4

MOVING SMALL SIGN SUPPORTS

CATEGORY	LOCATION	63840 EACH
010	STA. 5+75, RT STA. 7+00, LT	1 1
TOTAL		2

TRAFFIC CONTROL SUMMARY

CATEGORY	DESCRIPTION	SIGN CODE	SIZE in x in	EACH*
010	ROAD WORK AHEAD	W20-1	48 X 48	2
	ROAD WORK 1000 FT	W20-1	48 X 48	2
	REVERSE TURN SIGN	W01-3R	48 X 48	2
	ADVISORY SPEED 25 MPH	W013-1	24 X 24	4
	ARROW	W01-6	48 X 24	8
	REVERSE TURN SIGN	W01-3L	48 X 48	2
	HAZARD	W5-52R	12 X 36	2
	HAZARD	W5-52L	12 X 36	2
	BRIDGE OUT	R11-2	48 X 30	4
	NO PASSING ZONE	W14-3	48 X 36	2
	END ROAD WORK	G20-2A	24 X 24	2
	TOTAL SIGNS			
DRUMS				26
BARRICADES, TYPE III				20
WARNING LIGHT, TYPE A				8
WARNING LIGHT, TYPE C				14

*FOR INFORMATIONAL PURPOSES ONLY.

TRAFFIC CONTROL

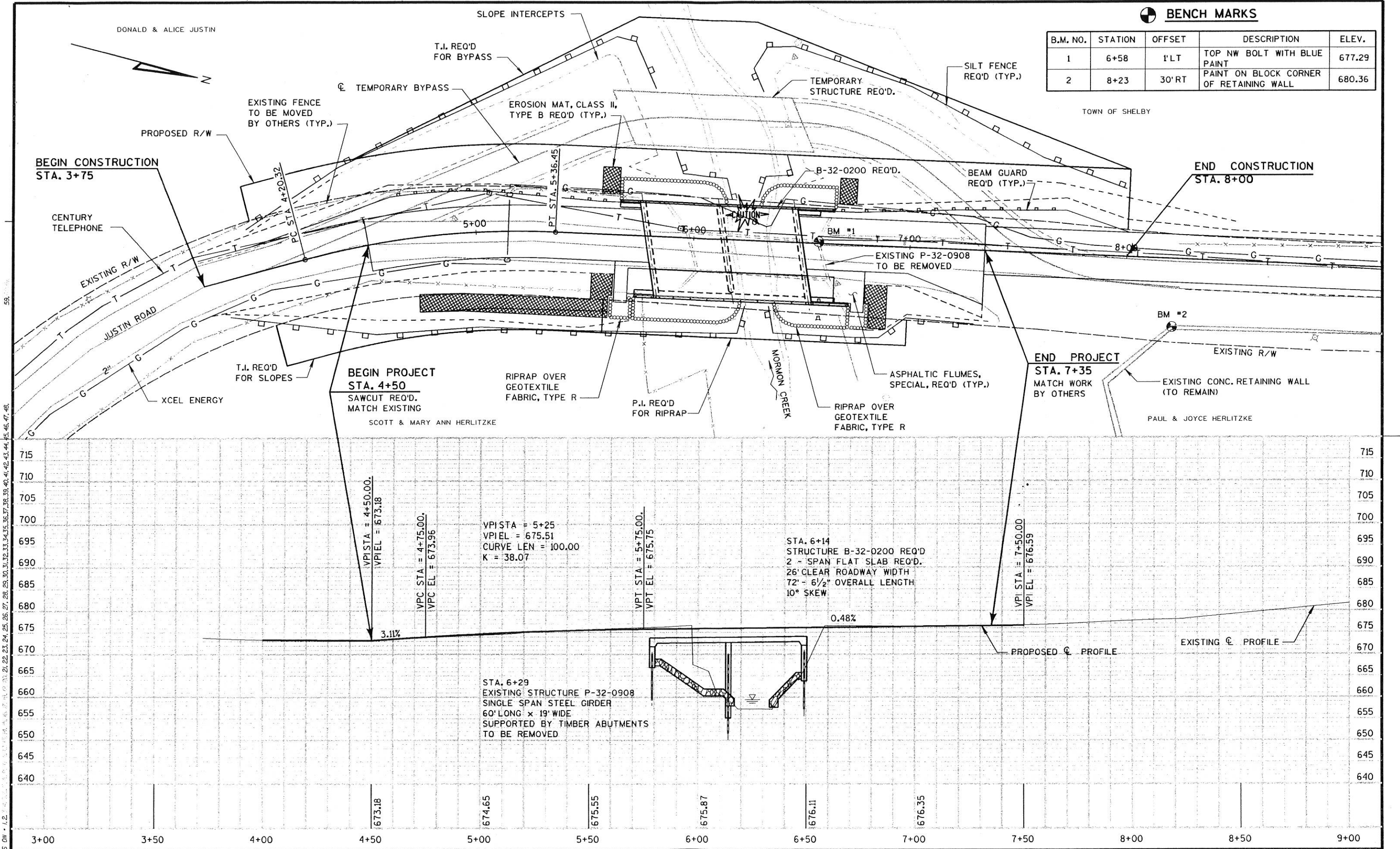
CATEGORY	DURATION DAYS	64313 DRUMS DAYS	64318 BARRICADES, TYPE III DAYS	64321 WARNING LIGHTS, TYPE A DAYS	64323 WARNING LIGHTS, TYPE C DAYS	64326 SIGNS DAYS
010	STAGE I 26	26	20	8	14	182
	STAGE II 36	936	720	288	504	1152
	STAGE III 8	--	--	--	--	48
	TEMP. LANE CLOSURES 4	--	--	--	--	24
TOTALS		962	740	296	518	1406

SAWING EXISTING PAVEMENT

CATEGORY	STATION	LOCATION	66501 L.F.
010	4+50	MAINLINE	19
	7+35	MAINLINE	27
TOTAL			46

BENCH MARKS

B.M. NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	6+58	1' LT	TOP NW BOLT WITH BLUE PAINT	677.29
2	8+23	30' RT	PAINT ON BLOCK CORNER OF RETAINING WALL	680.36

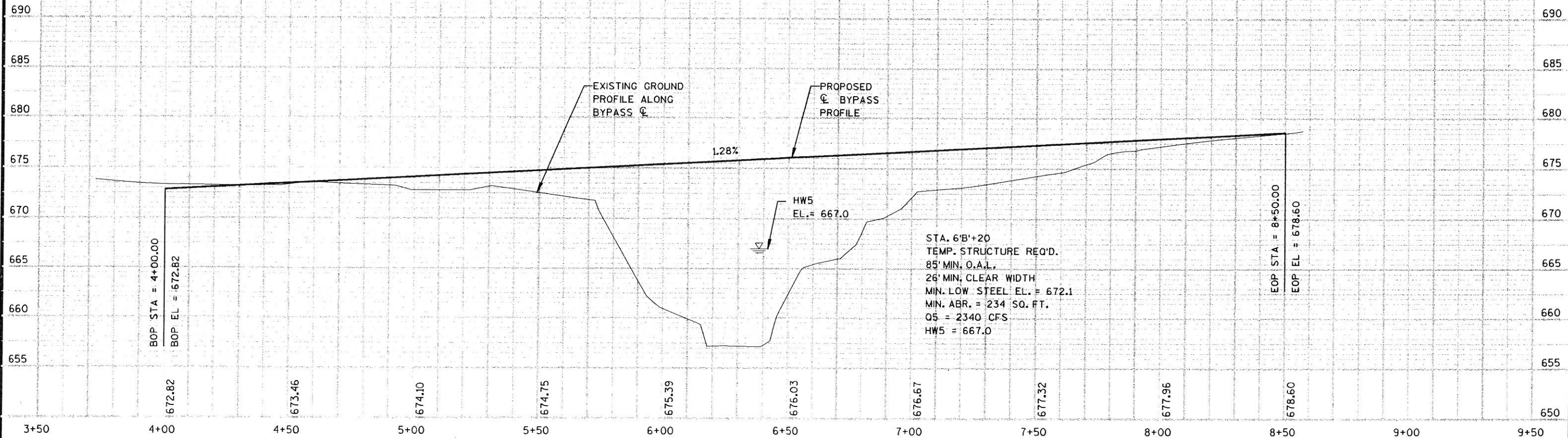
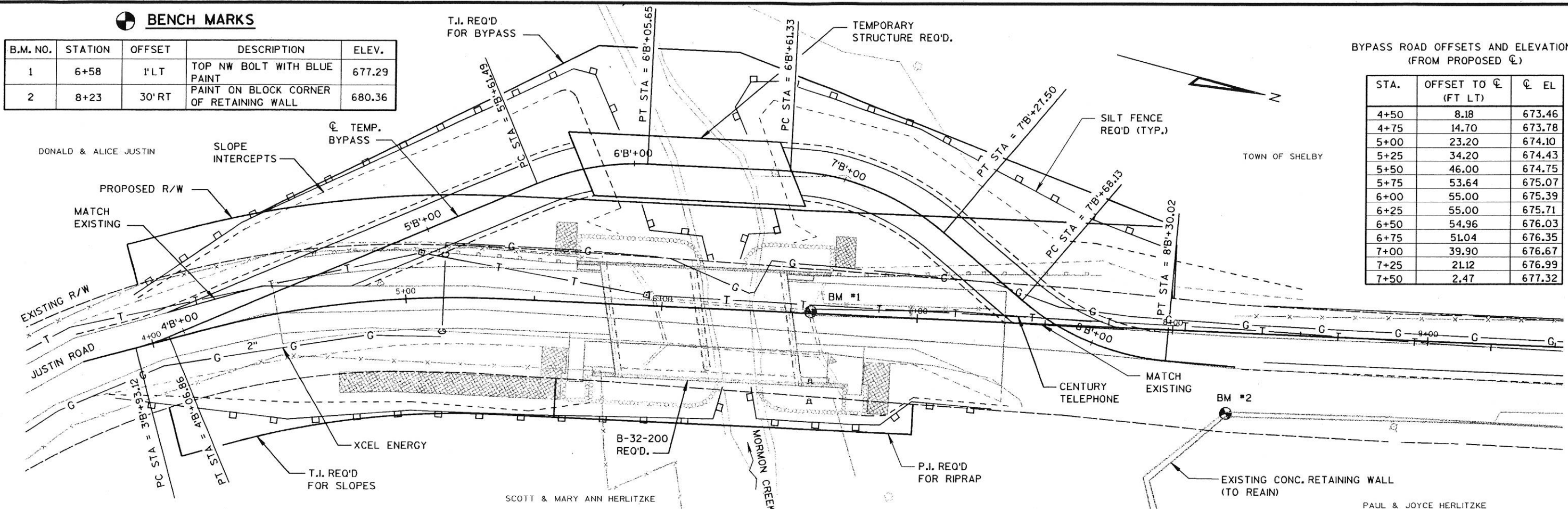


BENCH MARKS

B.M. NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	6+58	1' LT	TOP NW BOLT WITH BLUE PAINT	677.29
2	8+23	30' RT	PAINT ON BLOCK CORNER OF RETAINING WALL	680.36

BYPASS ROAD OFFSETS AND ELEVATIONS (FROM PROPOSED CL)

STA.	OFFSET TO CL (FT LT)	CL EL
4+50	8.18	673.46
4+75	14.70	673.78
5+00	23.20	674.10
5+25	34.20	674.43
5+50	46.00	674.75
5+75	53.64	675.07
6+00	55.00	675.39
6+25	55.00	675.71
6+50	54.96	676.03
6+75	51.04	676.35
7+00	39.90	676.67
7+25	21.12	676.99
7+50	2.47	677.32



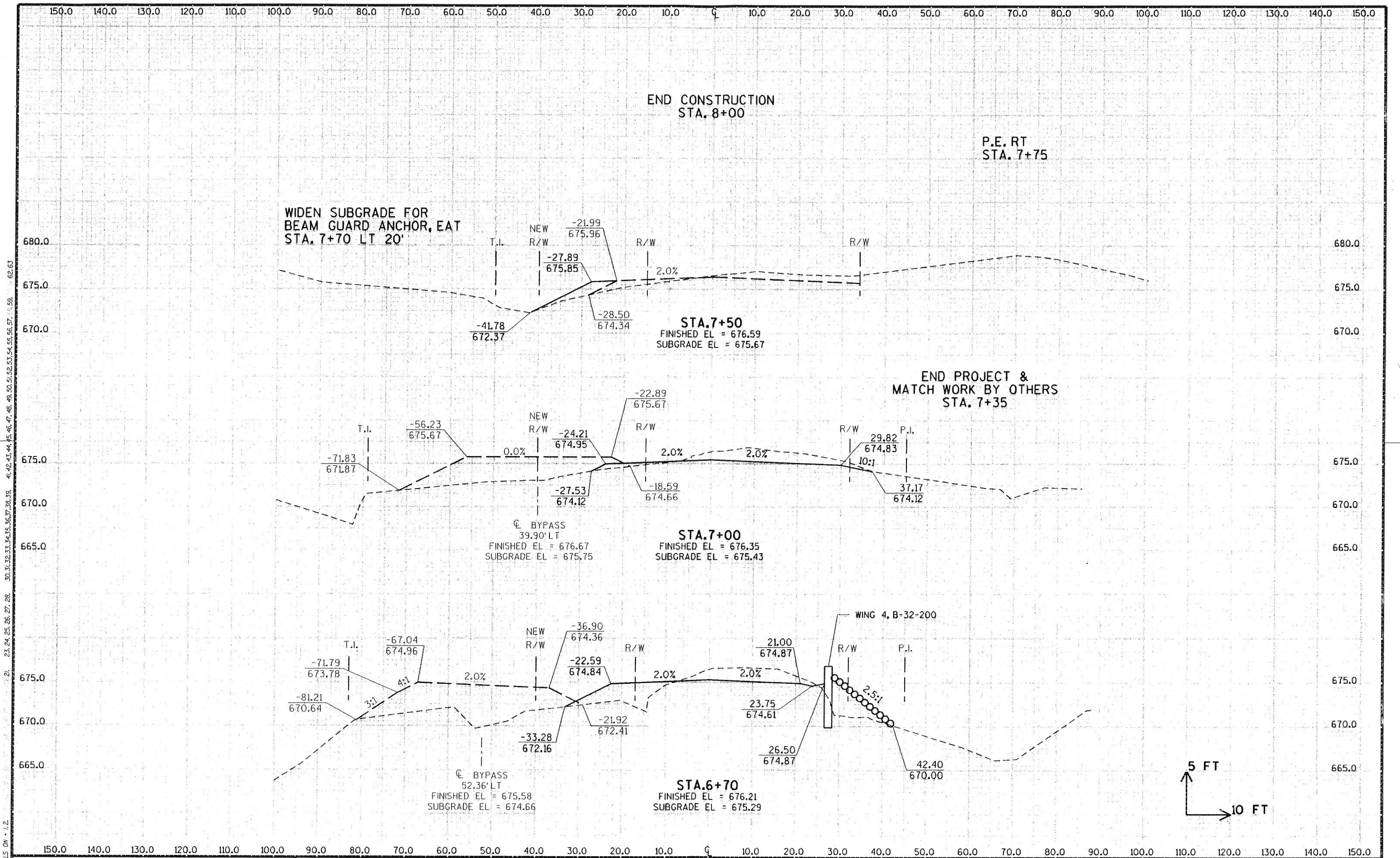
LEVELS ON - 1.2

EARTHWORK SUMMARY

STATION	END AREA COMMON SY		INCREMENTAL VOLUME COMMON CY		CUMULATIVE VOLUME COMMON CY	
	CUT	FILL	CUT	*FILL	CUT	*FILL
STAGE I						
4+00	0.00	0.00				
4+50	4.20	0.00	3.89	0.00	3.89	0.00
5+00	15.40	16.20	22.04	18.75	22.04	18.75
5+50	0.00	64.80	36.30	93.75	36.30	112.50
5+78	0.00	64.80	36.30	84.00	36.30	196.50
TEMP STRUCTURE						
6+50	0.00	139.60				
6+70	0.00	139.60	0.00	129.26	36.30	325.76
7+00	0.00	139.60	0.00	322.80	36.30	648.56
7+35	0.00	107.50	0.00	199.95	36.30	848.51
7+50	0.00	11.00	0.00	41.15	36.30	889.66
8+00	0.00	0.00	0.00	12.74	36.30	902.40
STAGE II						
4+00	0.00	0.00				
4+50	50.00	0.40	46.30	0.46	46.30	0.46
5+00	39.30	0.00	82.69	0.46	128.98	0.93
5+50	68.00	15.50	99.35	17.94	228.33	18.87
5+78	68.00	15.50	70.52	20.09	298.85	38.96
B-32-200						
6+50	35.40	61.10				
6+70	35.40	61.10	26.22	56.57	325.07	95.53
7+00	41.70	2.60	71.39	73.73	396.46	169.26
7+35	41.70	2.60	54.06	4.21	450.52	173.47
7+50	0.00	12.30	11.58	5.17	462.10	178.65
8+00	0.00	0.00	0.00	14.24	462.10	192.88
STAGE III						
4+00	0.00	0.00				
4+50	0.00	0.00	0.00	0.00	0.00	0.00
5+00	15.00	0.00	13.89	0.00	13.89	0.00
5+50	90.50	0.00	97.69	0.00	111.57	0.00
5+78	90.50	0.00	93.85	0.00	205.43	0.00
TEMP STRUCTURE						
6+50	162.80	0.00				
6+70	162.80	0.00	120.59	0.00	326.02	0.00
7+00	131.30	0.00	272.31	0.00	598.33	0.00
7+35	52.00	0.00	118.81	0.00	717.14	0.00
7+50	19.10	0.00	19.75	0.00	736.89	0.00
8+00	0.00	0.00	17.69	0.00	754.57	0.00

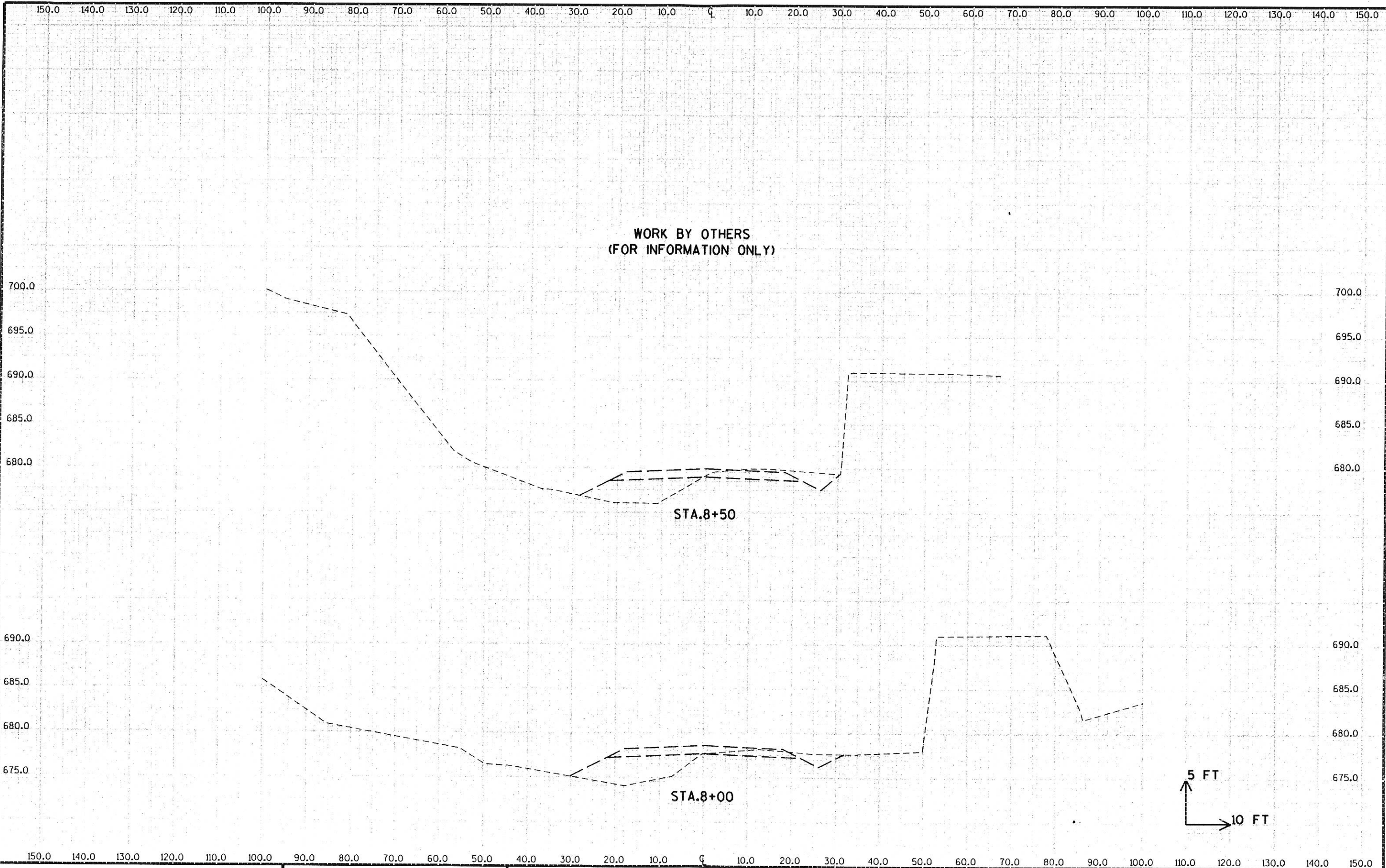
NOTE: STRUCTURE BACKFILL QUANTITIES
NOT INCLUDED IN THIS SUMMARY -
SEE BRIDGE PLAN.

* INCLUDES 25% EXPANSION FACTOR



LEVELS ON - 1.2
 1.21 23.24 25.26 27.28 30.31 32.33 34.35 36.37 38.39 41.42 43.44 45.46 47.48 49.50 51.52 53.54 55.56 57.58 62.63

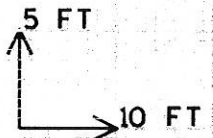
LEVELS ON - 1.2
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 62, 63



WORK BY OTHERS
(FOR INFORMATION ONLY)

STA.8+50

STA.8+00



STATE PROJECT NUMBER: 5356-06-71 HWY: JUSTIN ROAD COUNTY: LA CROSSE CROSS SECTIONS: SHEET NO: E

FILE NAME : s:\sqa\051--100\090\634\point\xs3.dgn PLOT DATE: 06/05/01 ORG DATE : PLOT NAME : Originator : PFW PLOT SCALE : WISDOT/CADD SHEET 21

DESIGN DATA

LIVE LOAD:
 DESIGN RATING _____ HS20
 INVENTORY RATING _____ HS24
 OPERATING RATING _____ HS43
 MAX. STD. PERMIT VEHICLE LOAD _____ 250 KIPS

ULTIMATE DESIGN STRESSES:
 CONCRETE MASONRY SLAB _____ f'c = 4,000 psi
 ALL OTHER _____ f'c = 3,500 psi
 HIGH STRENGTH BAR
 STEEL REINFORCEMENT _____ fy = 60,000 psi

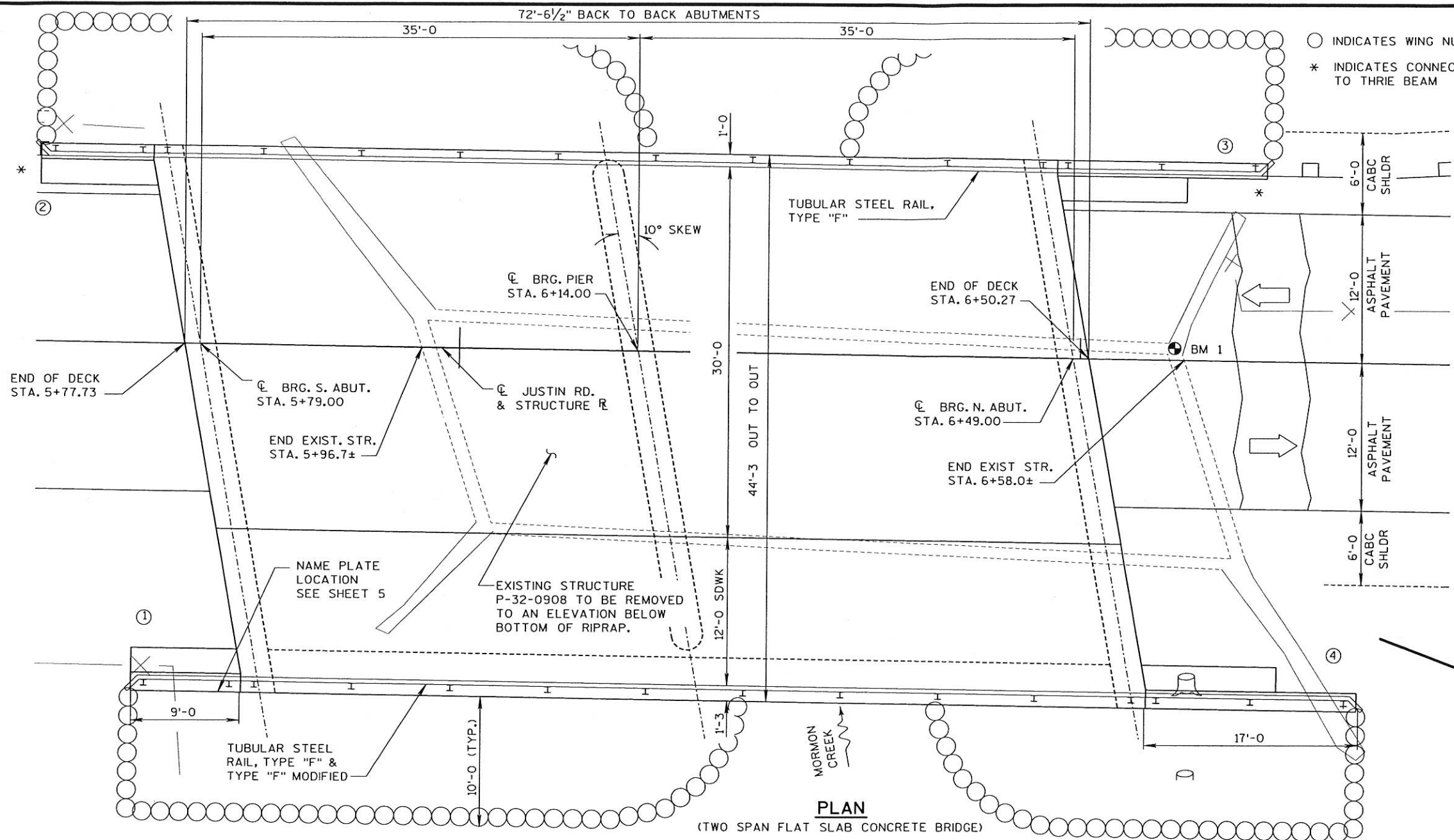
TRAFFIC DATA:
 A.D.T. (2000): 50
 A.D.T. (2020): 436
 R.D.S. = 30 mph

FOUNDATION DATA:
 ABUTMENTS AND PIERS TO BE SUPPORTED ON HP 10x42
 STEEL PILING DRIVEN TO A MIN. BEARING VALUE OF 55
 TONS. EST. LENGTH 82 FEET LONG AT ABUTMENTS AND
 AT PIER.

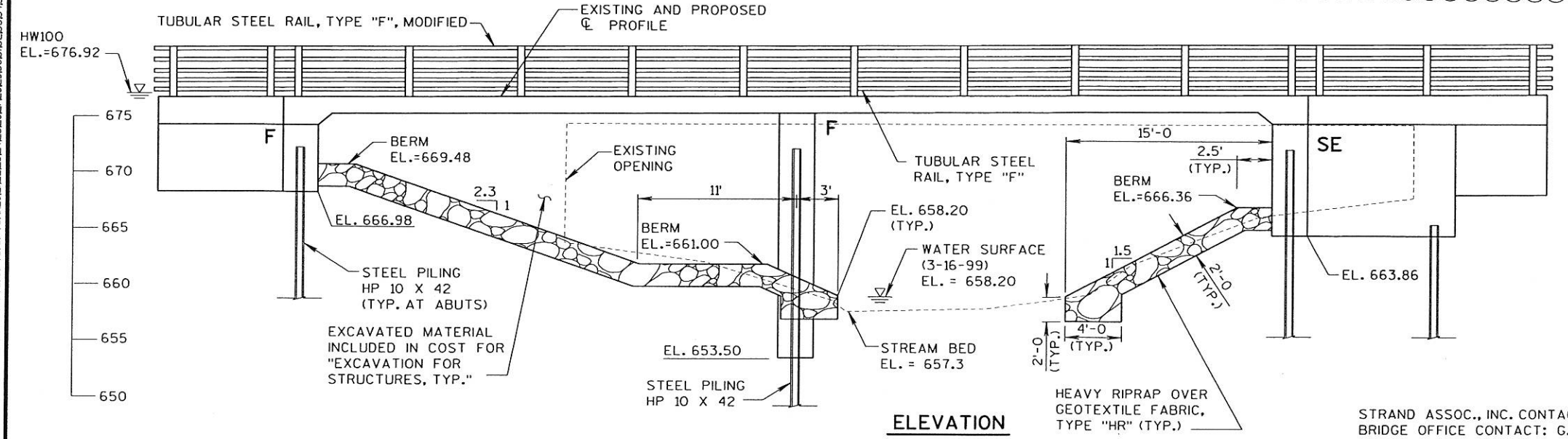
HYDRAULIC DATA

Q₁₀₀(TOTAL) _____ 10100 C.F.S.
 Q₁₀₀(THRU BRIDGE) _____ 6041 C.F.S.
 Q₁₀₀(ROAD) _____ 4059 C.F.S.
 VELOCITY (THRU BRIDGE) _____ 7.98 F.P.S.
 HW₁₀₀ _____ 676.92 FT
 WATERWAY AREA _____ 756.90 S.F.
 DRAINAGE AREA _____ 33.1 SQ. MI.
 SCOUR CRITICAL CODE _____ 5
 ROADWAY OVERTOPPING _____ 25 YEARS
 Q₂₅ _____ 5890 C.F.S.
 HW₂₅ _____ 674.72 FT

- LIST OF DRAWINGS**
1. GENERAL PLAN
 2. CROSS SECTION, QUANTITIES, NOTES AND DETAILS
 3. SUBSURFACE EXPLORATION
 4. SOUTH ABUTMENT
 5. SOUTH ABUTMENT DETAILS
 6. NORTH ABUTMENT
 7. NORTH ABUTMENT DETAILS
 8. ABUTMENT REINFORCEMENT
 9. PIER
 10. SUPERSTRUCTURE
 11. SUPERSTRUCTURE DETAILS
 12. SUPERSTRUCTURE DETAILS
 13. TUBULAR STEEL RAILING, TYPE 'F'
 14. TUBULAR STEEL RAILING, TYPE 'F', MODIFIED



PLAN
(TWO SPAN FLAT SLAB CONCRETE BRIDGE)



STRAND ASSOC., INC. CONTACT: CHAD HALVERSON (608)251-4843
 BRIDGE OFFICE CONTACT: G. H. ANDERSON (608)266-8488

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
JUSTIN ROAD OVER MORMON CREEK			
COUNTY	LaCROSSE	TOWN/CITY/VILLAGE	SHELBY
DESIGN SPEC.	AASHTO '96	LOAD	HS20
DESIGNED BY	CDH	CONSTR. WISC SPEC.	1996
DESIGN CK'D.	DJW	DRAWN BY	DNG
PLANS CK'D.	DJW		
APPROVED _____ DATE _____			
STATE BRIDGE ENGINEER			DATE
GENERAL PLAN			SHEET 1 OF 14

LEVELS ON - 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63.

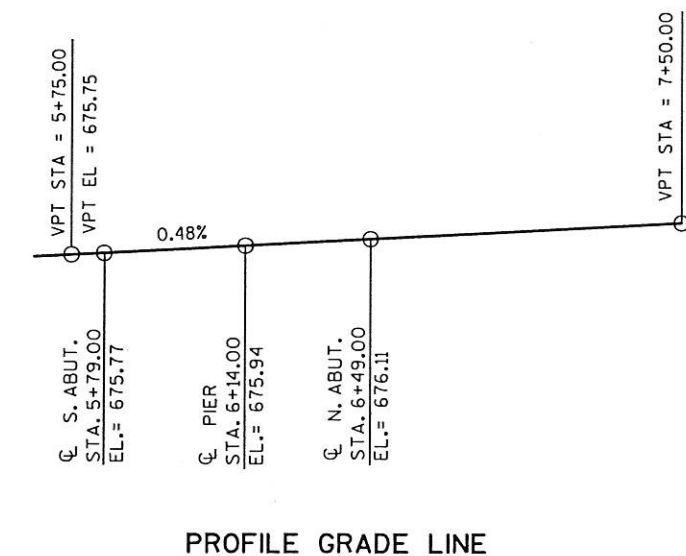
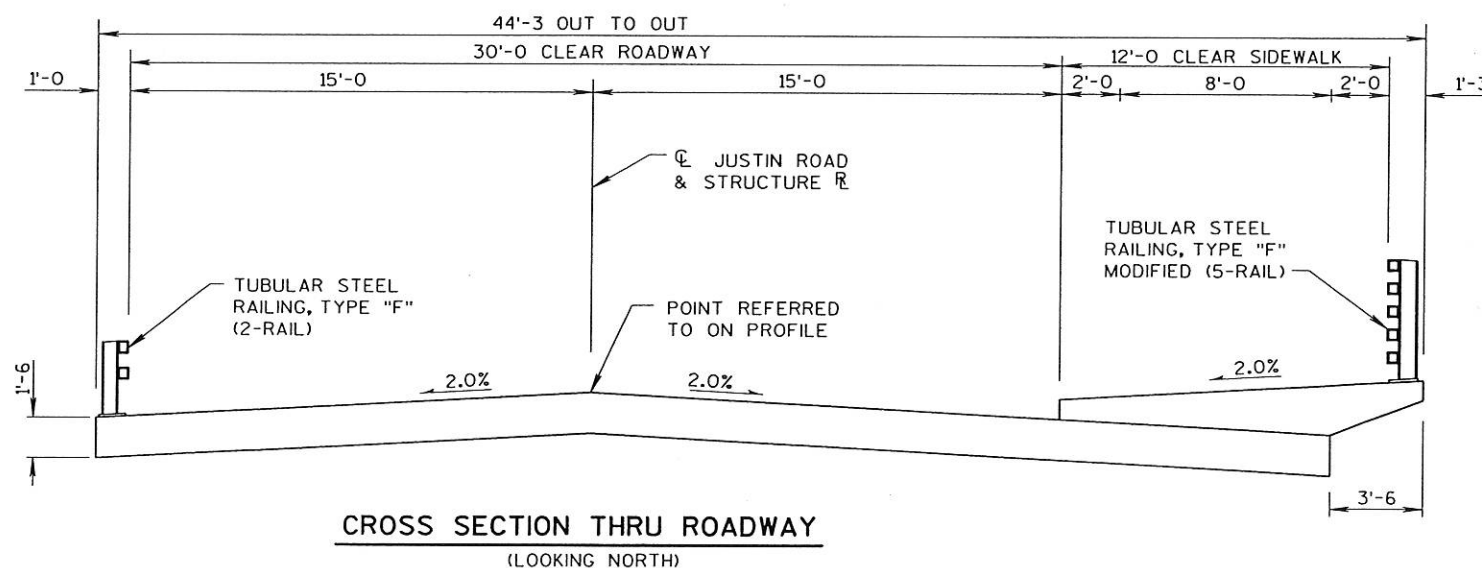
TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SOUTH ABUT.	PIER	NORTH ABUT.	SUPERS.	TOTALS
REMOVING OLD BRIDGE, STA. 6+29	L.S.	---	---	---	---	1
EXCAVATION FOR STRUCTURES, BRIDGE B-32-0200	L.S.	---	---	---	---	1
STRUCTURE BACKFILL	C.Y.	135	---	250	---	385
CONCRETE MASONRY, BRIDGES	C.Y.	42.5	76.2	73.5	202.8	395
PROTECTIVE SURFACE TREATMENT	S.Y.	---	---	---	380	380
HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	2380	3565	3550	22,190	31,685
COATED HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	1370	---	2435	18,385	22,190
STEEL PILING, DELIVERED & DRIVEN, HP 10-INCH X 42 LB.	L.F.	574	820	738	---	2132
TUBULAR STEEL RAILING, TYPE F, (2-RAIL)	L.S.	---	---	---	1	1
RUBBERIZED MEMBRANE WATERPROOFING	S.Y.	11	---	12	---	23
HEAVY RIPRAP	C.Y.	225	---	145	---	370
GEOTEXTILE FABRIC, TYPE HR	S.Y.	370	---	250	---	620
TUBULAR STEEL RAILING, TYPE F, MODIFIED (5-RAIL)	L.S.	---	---	---	1	1
QMP, READY MIXED CONCRETE MASONRY FOR BRIDGES, 5 CYLINDERS	C.Y.	42.5	76.2	73.5	202.8	395
QMP, MASONRY STRENGTH INCENTIVE, READY MIXED CONCRETE	DOL.	---	---	---	---	3792
NON-BID ITEMS						
FILLER	SIZE	1/2" & 3/4"	3/4"	1/2" & 3/4"	---	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
 BAR STEEL REINFORCEMENT SHALL BE IMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
 ALL REINFORCING BARS ARE ENGLISH AND THE FIRST ONE OR TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE.
 THE EXISTING STRUCTURE P-32-0908, A SINGLE-SPAN STEEL GIRDER STRUCTURE WITH TIMBER ABUTMENTS AND PIERS, IS TO BE REMOVED TO AN ELEVATION BELOW BOTTOM OF RIPRAP.
 THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.
 THE EMBANKMENTS ADJACENT TO THE BRIDGE WILL BE COVERED WITH HEAVY RIPRAP TO THE EXTENT SHOWN ON THE GENERAL PLAN AND IN THE ABUTMENT DETAILS OR AS DIRECTED BY THE ENGINEER.
 AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
 STEEL "HP" PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.
 ENTIRE TOP SURFACE AND EXPOSED EDGES OF DECK ARE TO BE COATED WITH PROTECTIVE SURFACE TREATMENT.
 SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

LEVELS ON - 12.3, 45.6, 7.8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63.

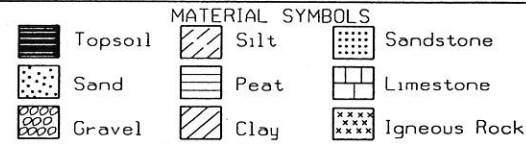


BENCH MARKS

B.M. NO.	STATION	OFFSET	DESCRIPTION	ELEV.
1	6+58	1' LT	TOP NW BOLT WITH BLUE PAINT	677.29
2	8+23	30' RT	PAINT ON BLOCK CORNER OF RETAINING WALL	680.36
3	1+54	21' RT	HEAD OF SPIKE, S. SIDE OF TREE STUMP	688.88

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY DNG	PLANS CHECKED DJW
CROSS SECTION, QUANTITIES, NOTES AND DETAILS			SHEET 2 OF 14

ABBREVIATIONS
 F—Fine M—Medium C—Coarse
 Ws—Weathered So—Sound

MATERIAL SYMBOLS


LEGEND OF PROBING
 Probing No.
 Sta.
 Elevation
 95/6=95 Blows for 6' Penetration
 Probing taken with a 140#wt.
 Falling 30' on a 2" O.D. Point.
 7 Average Blows Per Foot
 Refusal 95/6

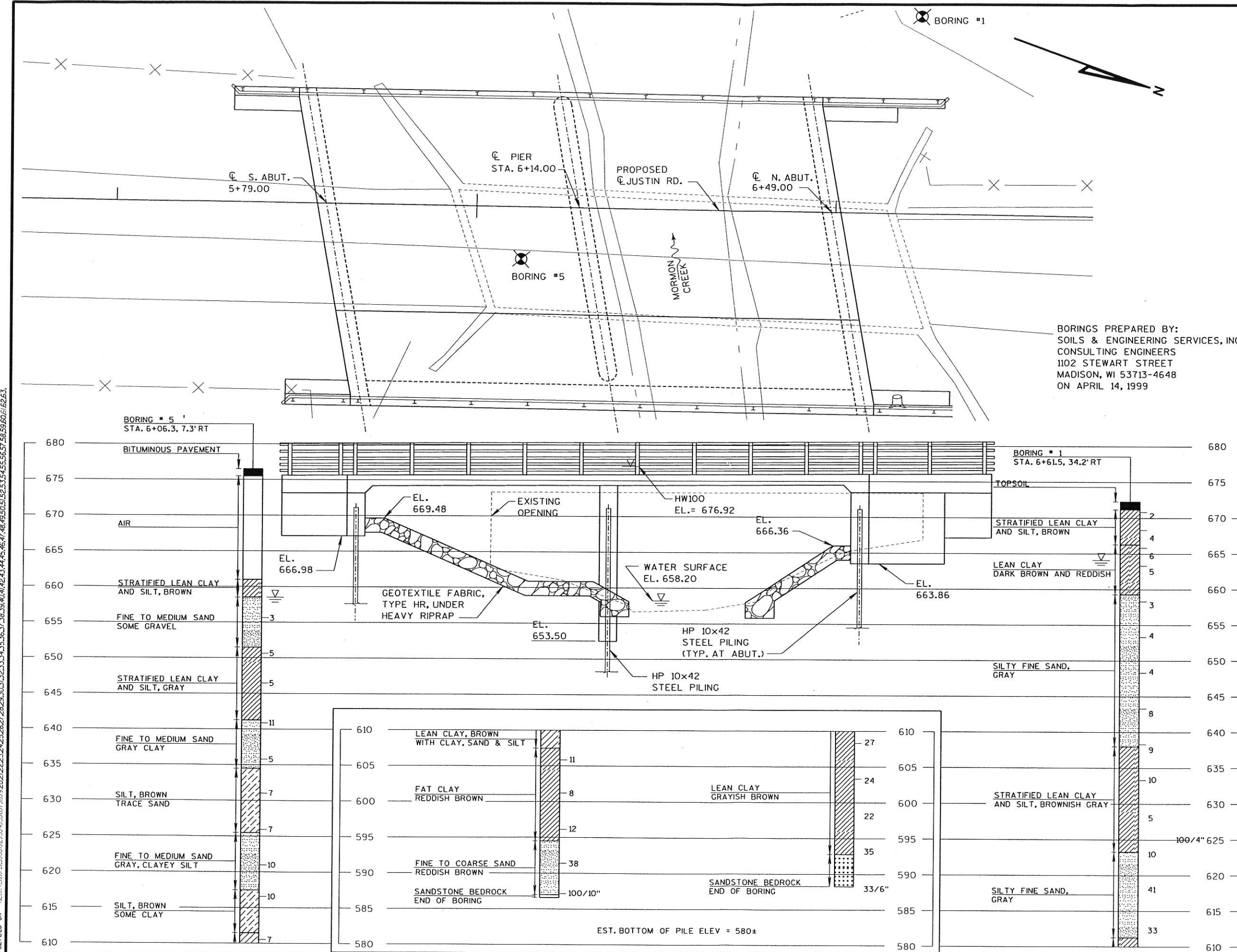
LEGEND OF BORING
 Elev. Boring No. Sta.
 Unconfined Strength → 7.7
 Blows Per Ft. Using 140# Wt. Falling 30'
 Wash Sample
 Shelby Tube — S.T.
 Ground Water Elevation
 No Ground Water Observed Above This Elevation
 Sandy Gravel
 F. Boulders or Cobbles
 Sand
 Silty Clay
 So
 Limestone

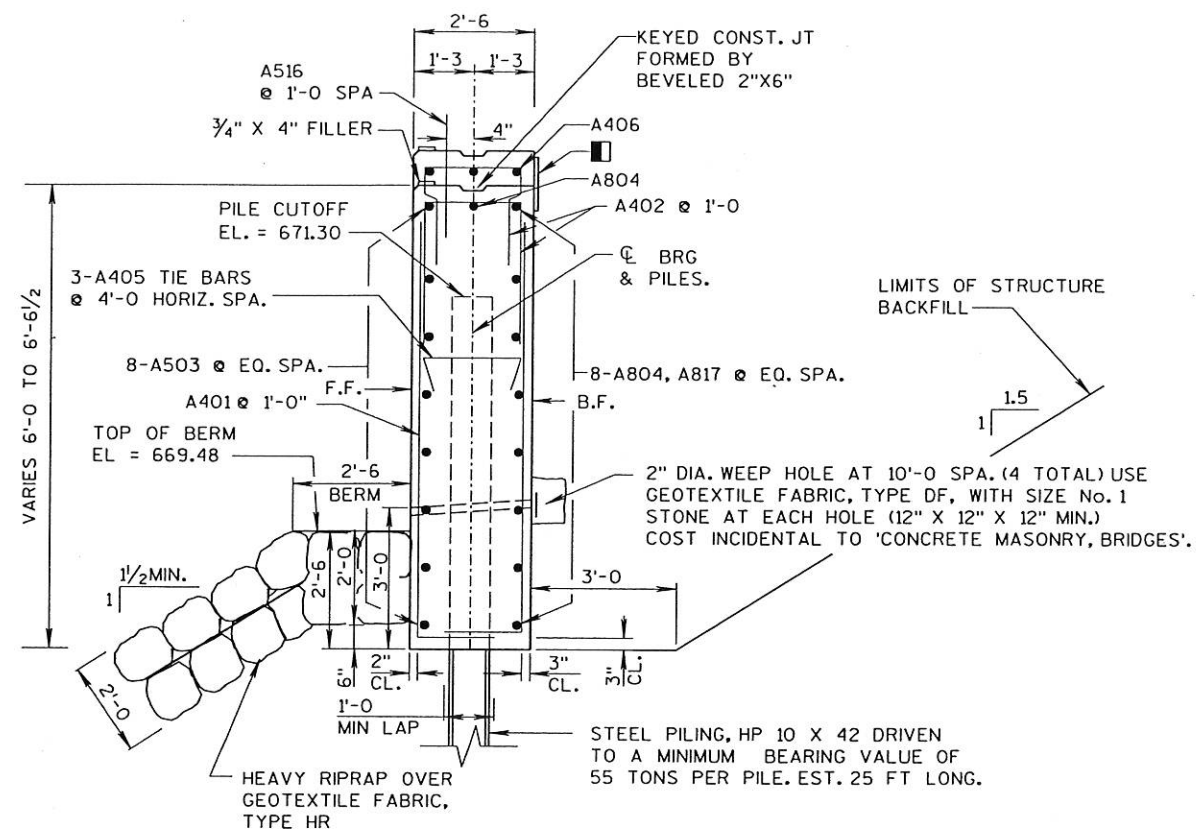
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 0.0x1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30'. The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

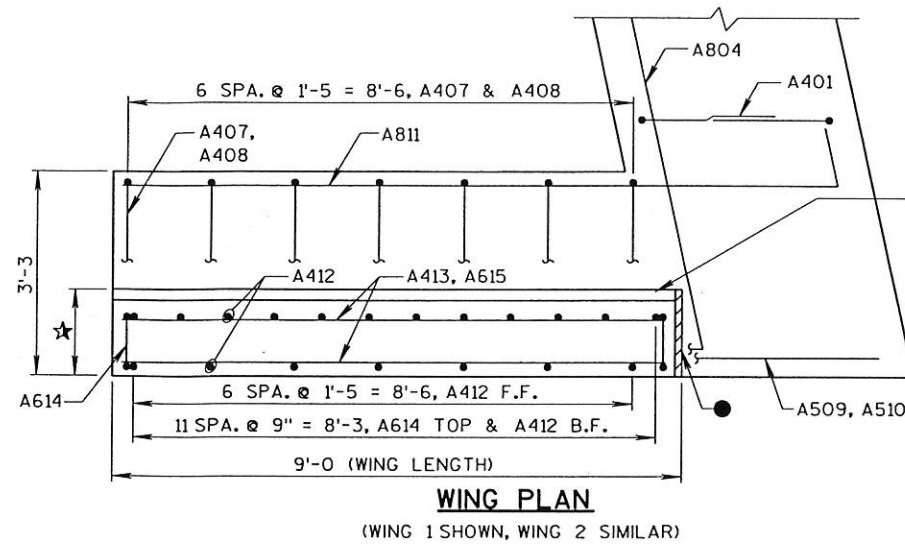
To obtain relative data concerning the character of material in and upon which the foundation might be built borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC. 1996	DRAWN BY	DNG
		PLANS CK'D.	DJW
SUBSURFACE EXPLORATION			SHEET 3 OF 14





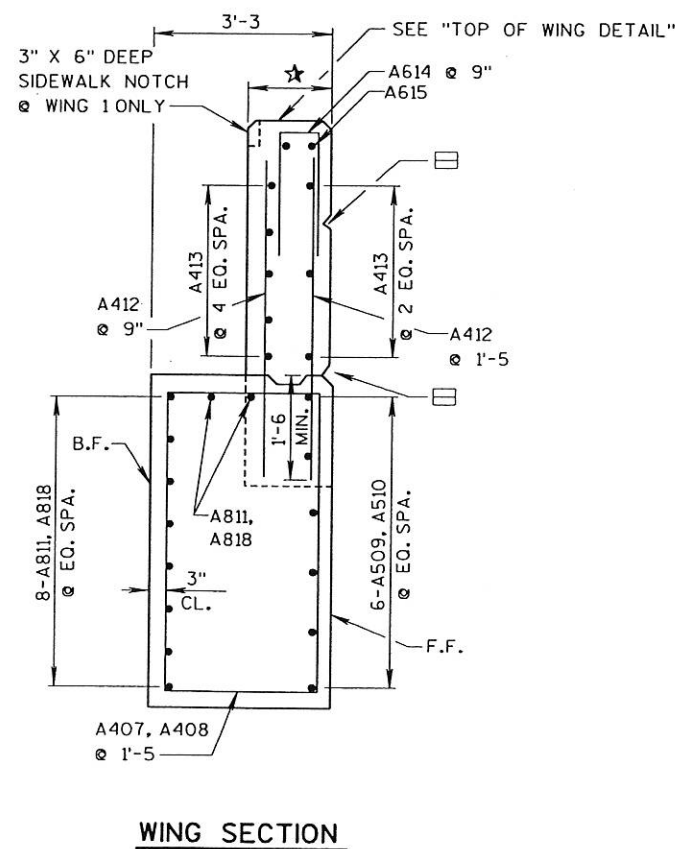
TYP. SECTION THRU ABUTMENT BODY



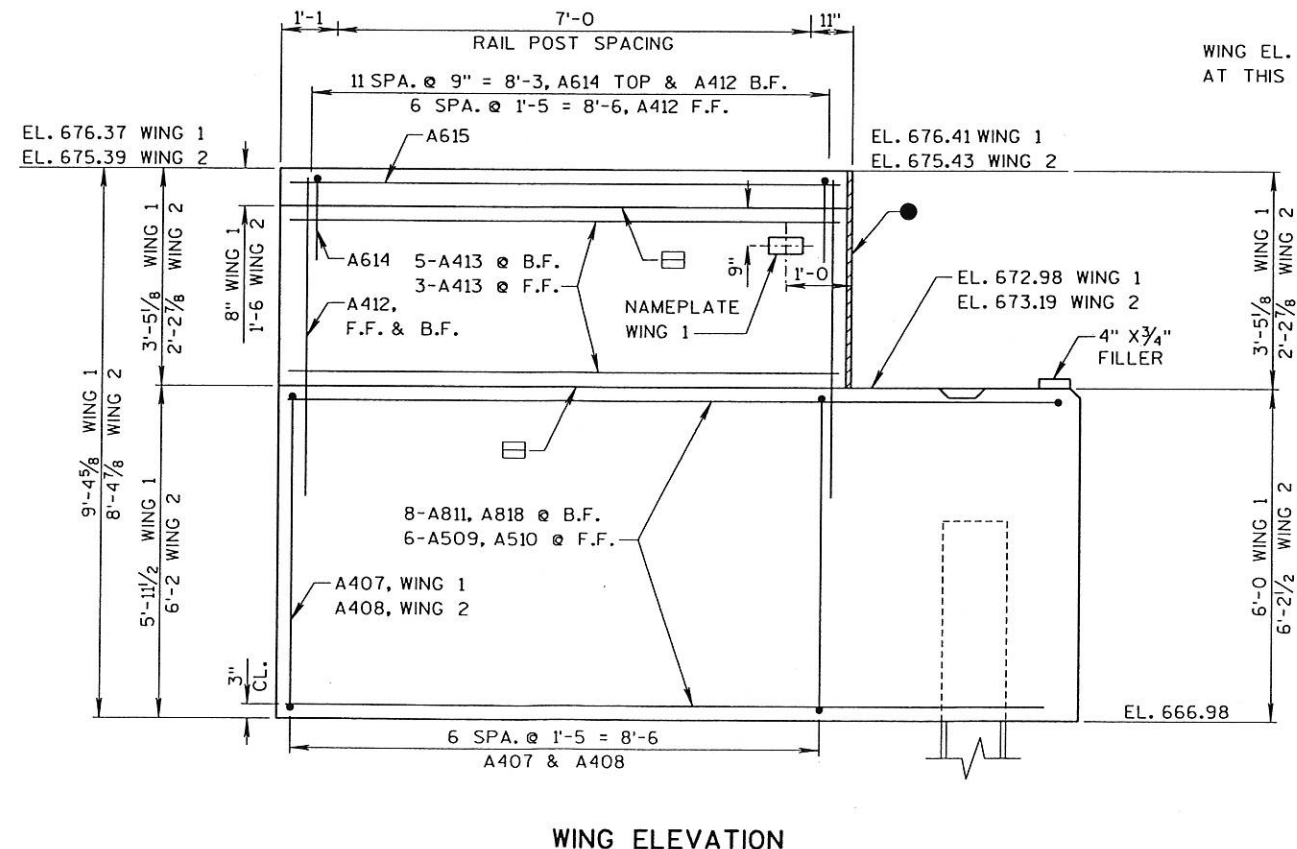
WING PLAN
(WING 1 SHOWN, WING 2 SIMILAR)

NOTES

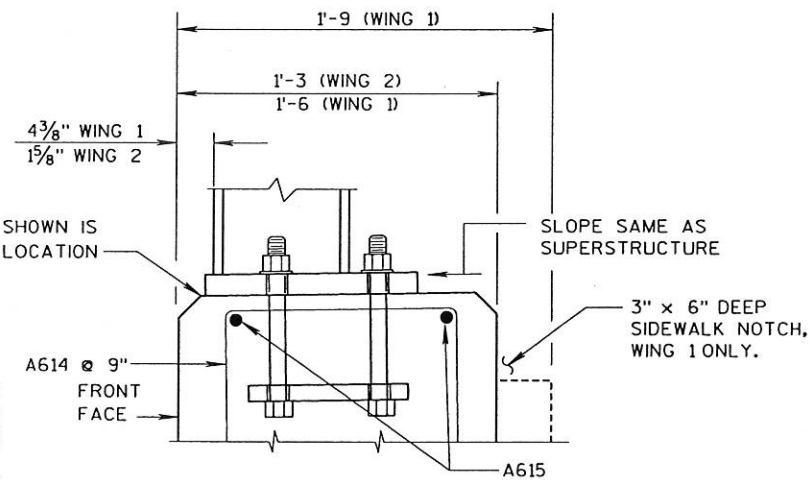
- ★ 1'-9" @ WING 1, 1'-3" @ WING 2
- OPT. CONST. JOINT. FORMED BY BEVELED 2" X 6" KEYWAY
- ▣ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ▢ 3/4" "V" GROOVE ON FRONT FACE OF WING WALL
- 1/2" FILLER. EXTEND FROM ABUT. SEAT TO TOP OF WING. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



WING SECTION



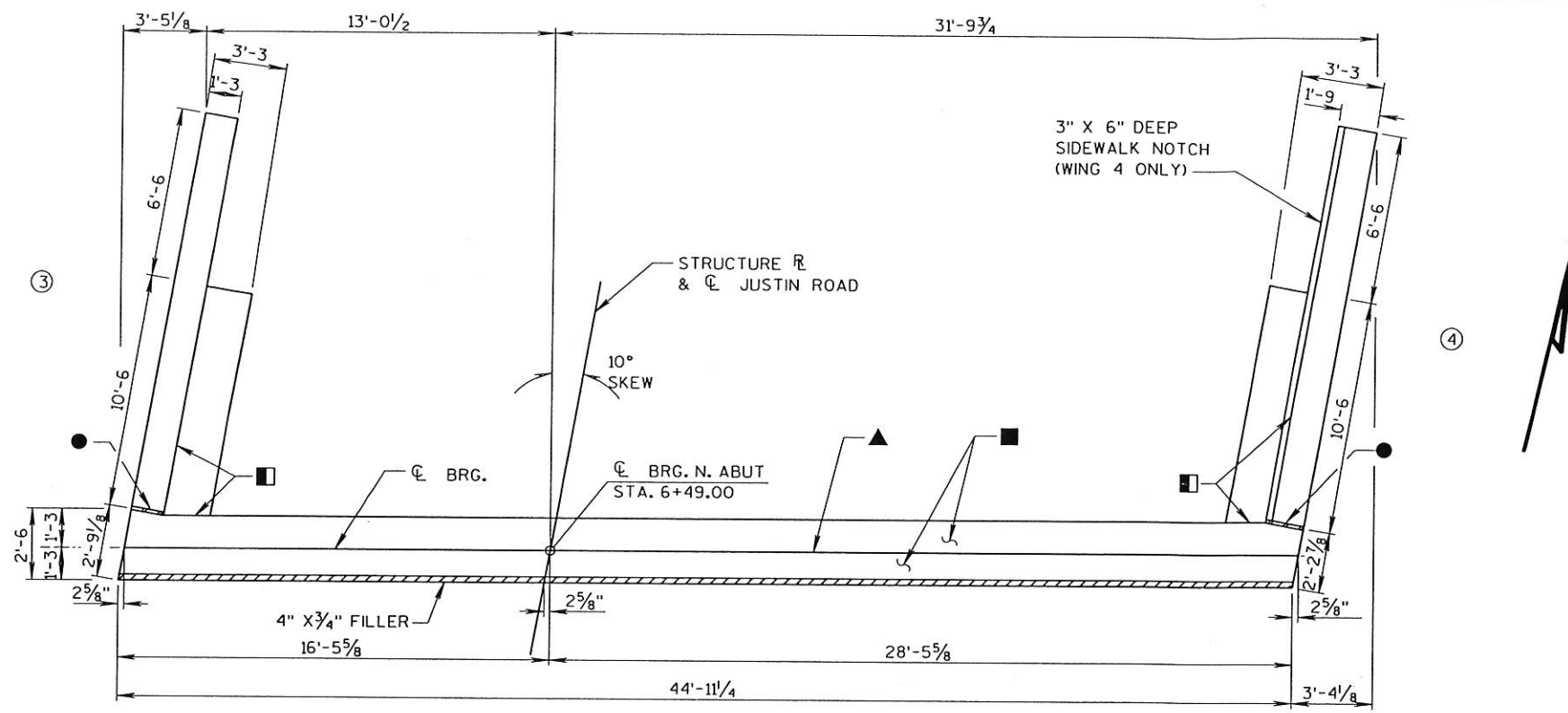
WING ELEVATION



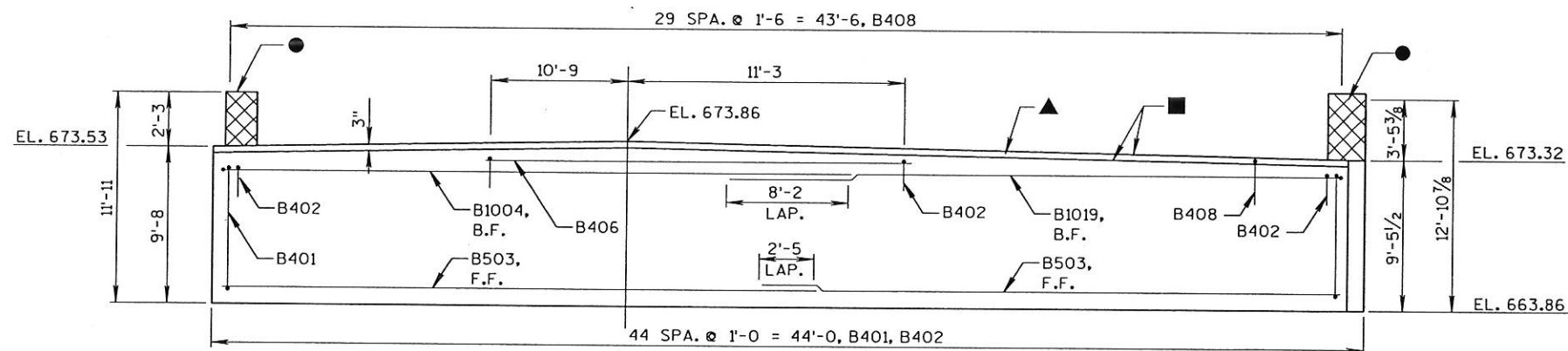
TOP OF WING DETAIL
(SEE SHEETS 13 & 14 FOR ADDITIONAL DETAILS)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
SOUTH ABUTMENT DETAILS			SHEET 5 OF 14

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63.

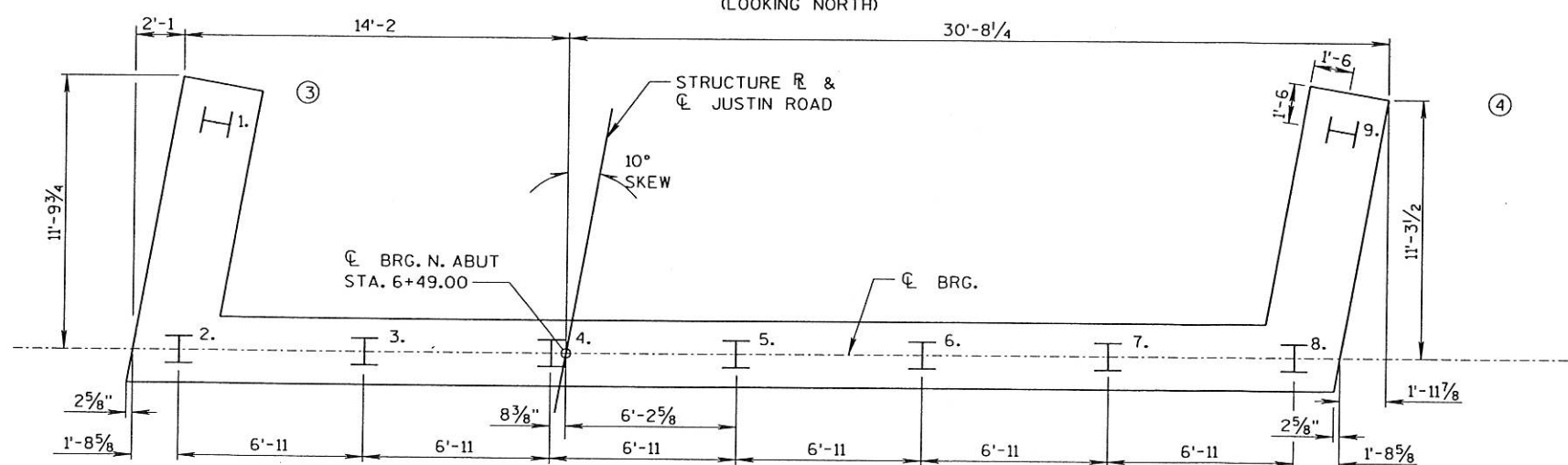


PLAN



ELEVATION

(LOOKING NORTH)



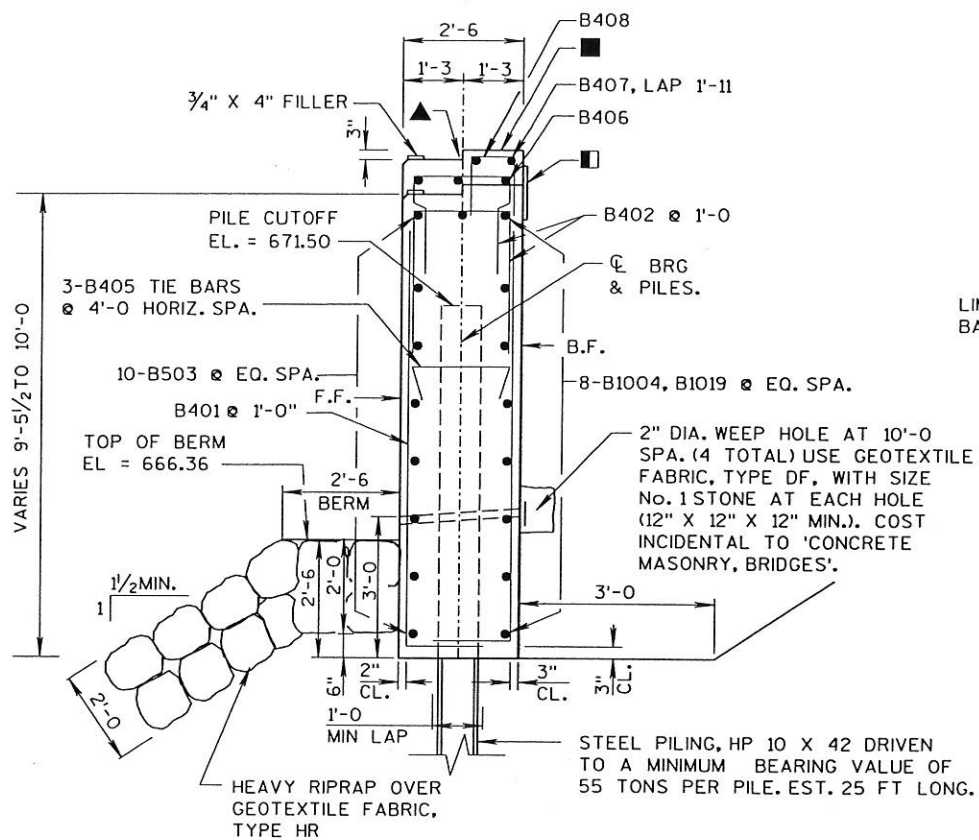
PILE PLAN

NOTES

- 1/2" FILLER. EXTEND FROM ABUT. SEAT TO TOP OF WING. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
 - ▲ 3/4" CORK FILLER ON VERTICAL FACES ONLY.
 - STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE 0.03".
 - 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- ABUTMENT SUPPORTED ON HP10X42 STEEL PILES DRIVEN TO A MINIMUM BEARING VALUE OF 55 TONS PER PILE. EST. LENGTH 82 FEET.
- SEE SHEET 4 FOR PILE SPLICE DETAIL.
- SEE SHEET 8 FOR REINFORCING DETAILS.

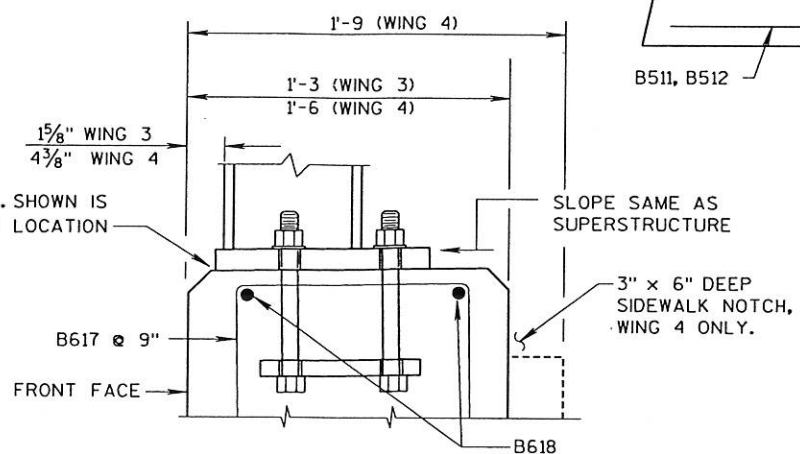
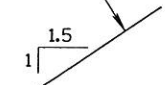
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
NORTH ABUTMENT			SHEET 6 OF 14

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.



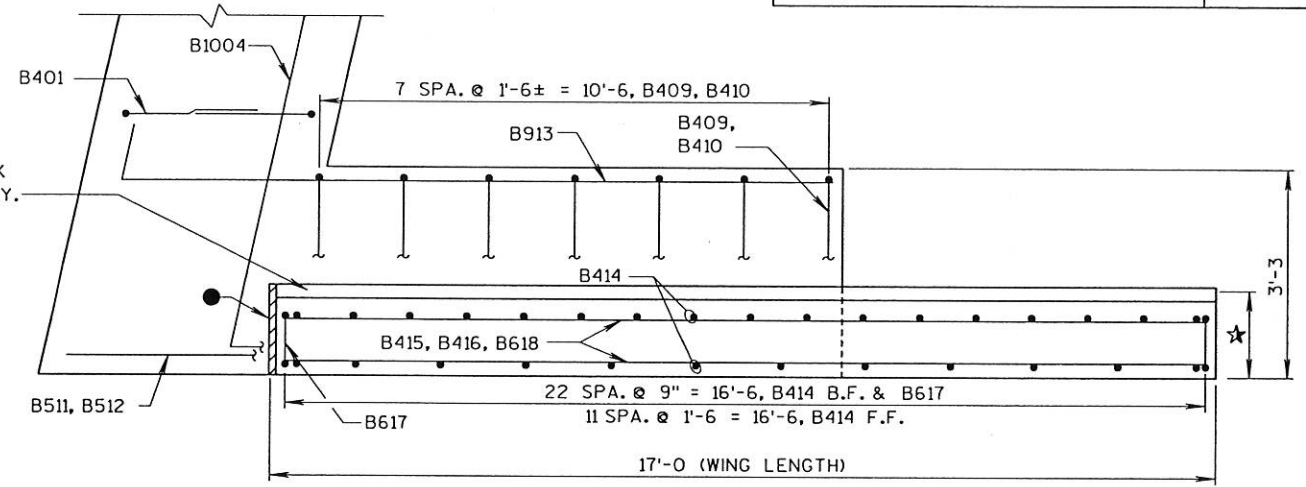
TYP. SECTION THRU ABUTMENT BODY

LIMITS OF STRUCTURE BACKFILL



TOP OF WING DETAIL

(SEE SHEETS 13 & 14 FOR ADDITIONAL DETAILS)

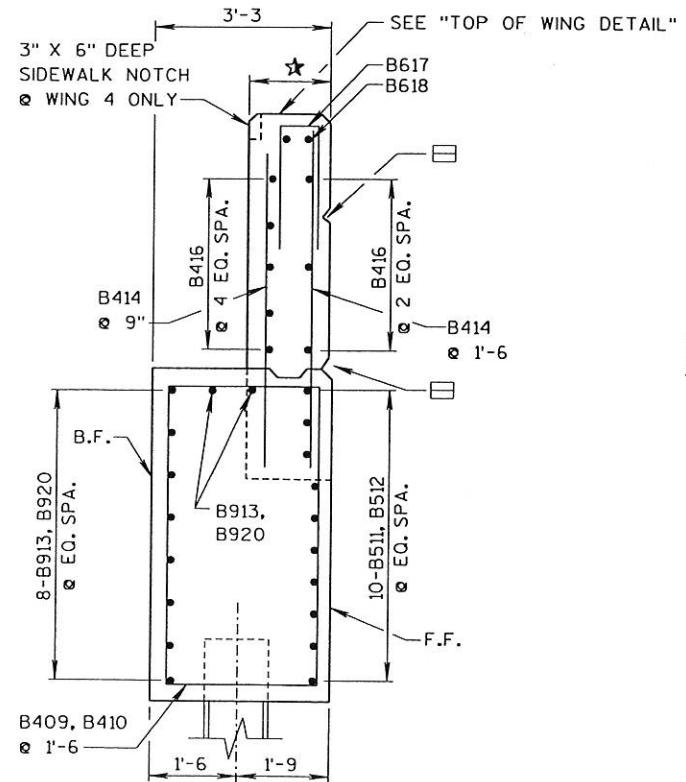


WING PLAN

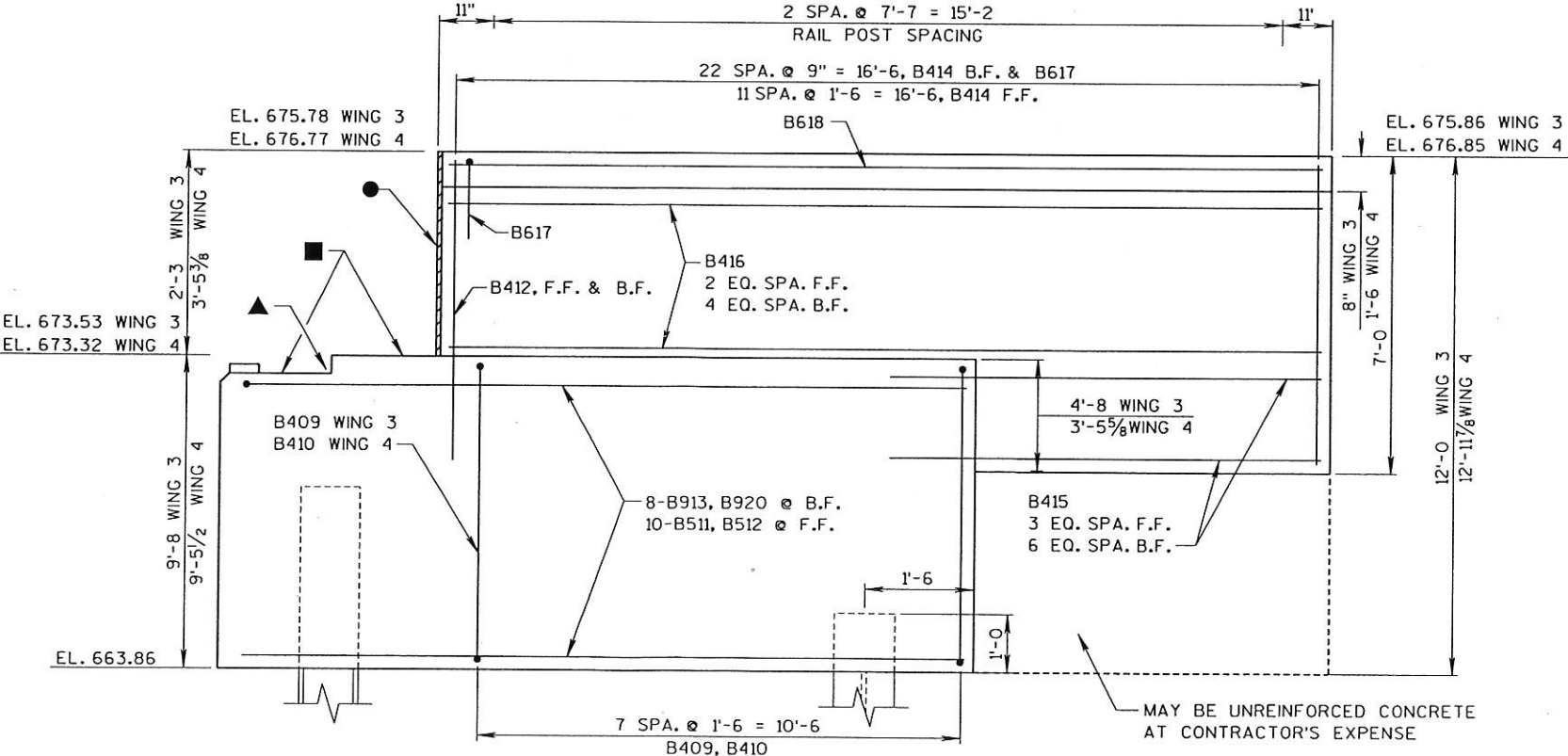
(WING 4 SHOWN, WING 3 SIMILAR)

NOTES

- ★ 1'-9 @ WING 4, 1'-3 @ WING 3
- OPT. CONST. JOINT. FORMED BY BEVELED 2" X 6" KEYWAY
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- 3/4" "V" GROOVE ON FRONT FACE OF WING WALL
- STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING AND SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE 0.03".
- ▲ 3/4" CORK FILLER ON VERTICAL FACES ONLY.
- 1/2" FILLER. EXTEND FROM ABUT. SEAT TO TOP OF WING. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE. EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.



WING SECTION



WING ELEVATION

MAY BE UNREINFORCED CONCRETE AT CONTRACTOR'S EXPENSE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
NORTH ABUTMENT DETAILS			SHEET 7 OF 14

LEVELS ON - 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63.

**SOUTH ABUTMENT
BILL OF BARS**

**COATED 1370 LBS
UNCOATED 2380 LBS**

MARK	NO.	LENGTH	BENT	COAT	LOCATION
A401	90	7'-0	X		ABUT. - BODY - VERT.
A402	45	8'-4	X		ABUT. - BODY - TOP - VERT.
A503	16	23'-7			ABUT. - BODY - F.F. - HORIZ.
A804	8	26'-0	X		ABUT. - BODY - B.F. - HORIZ.
A405	33	3'-5	X		ABUT - BODY - TIES - HORIZ
A406	3	18'-0			ABUT - BODY - TOP - HORIZ.
A407	7	17'-2	X	X	WING 1 - BODY - STIRRUPS
A408	7	17'-8	X	X	WING 2 - BODY - STIRRUPS
A509	6	11'-4		X	WING 1 - BODY - F.F. - HORIZ.
A510	6	10'-10		X	WING 2 - BODY - F.F. - HORIZ.
A811	10	12'-0	X	X	WING 1 - BODY - B.F. - HORIZ.
A412	38	5'-0		X	UPPER WINGS - VERT. - E.F.
A413	16	8'-7		X	UPPER WINGS - HORIZ. - E.F.
A614	24	3'-11	X	X	UPPER WINGS - TOP - VERT.
A615	4	8'-7		X	UPPER WINGS - TOP - HORIZ.
A516	44	2'-0			DOWELS
A817	8	26'-0	X		ABUT. BODY - B.F. - HORIZ.
A818	10	12'-7	X	X	WING 2 - BODY - B.F. - HORIZ.

NOTE: THE FIRST ONE OR TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

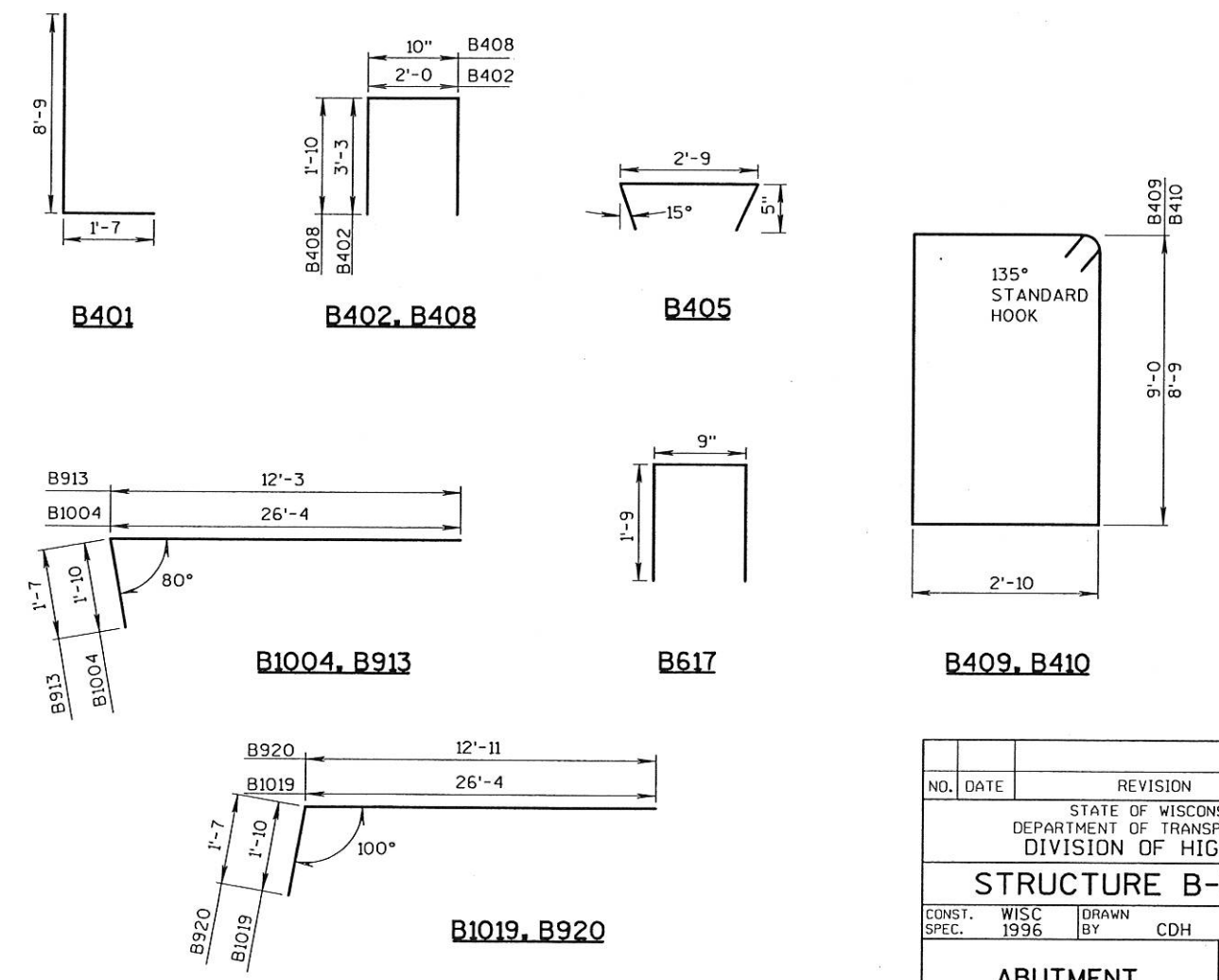
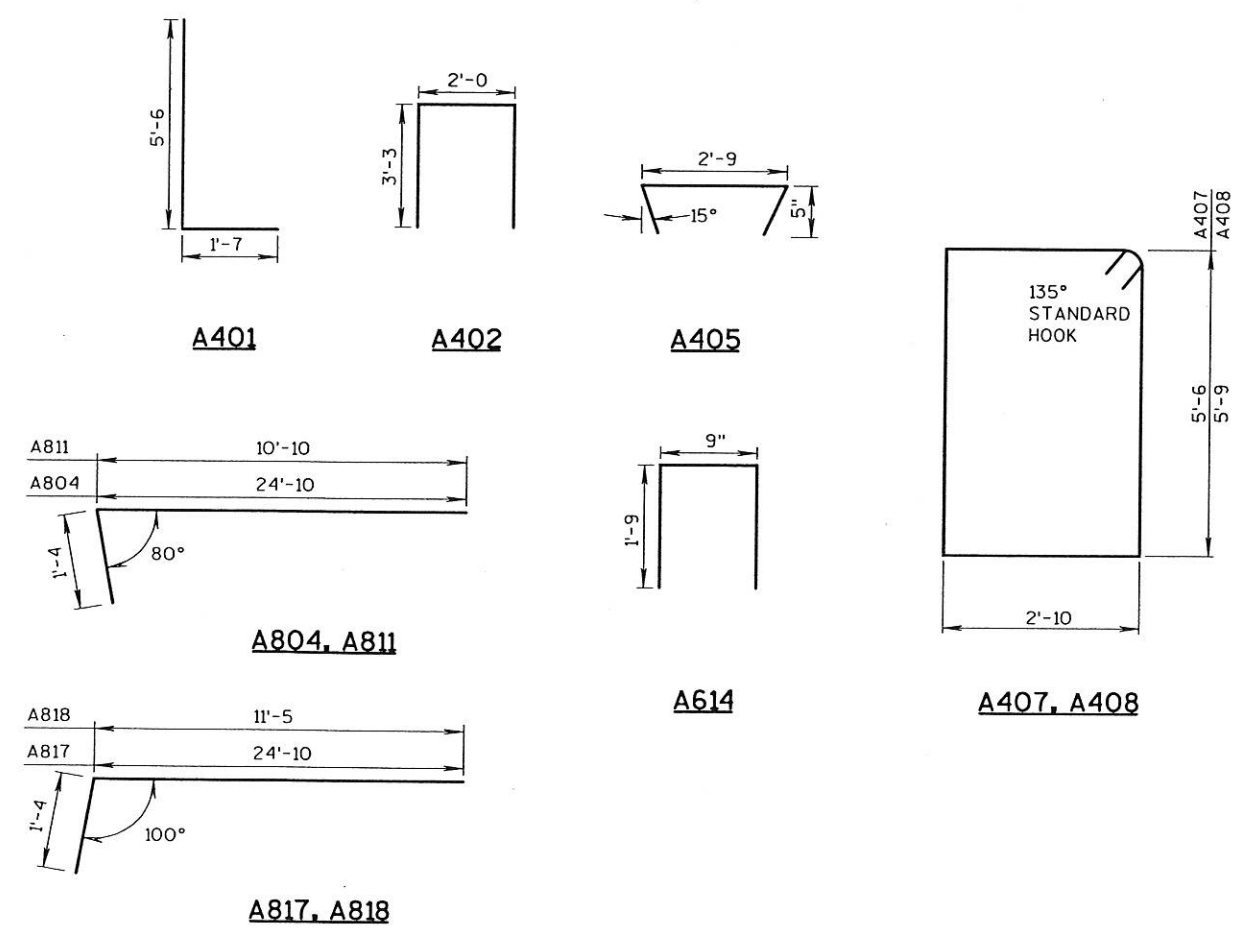
**NORTH ABUTMENT
BILL OF BARS**

**COATED 2435 LBS
UNCOATED 3550 LBS**

MARK	NO.	LENGTH	BENT	COAT	LOCATION
B401	90	10'-3	X		ABUT. - BODY - VERT.
B402	45	8'-4	X		ABUT. - BODY - TOP - VERT.
B503	20	23'-7			ABUT. - BODY - F.F. - HORIZ.
B1004	8	27'-11	X		ABUT. - BODY - B.F. - HORIZ.
B405	33	3'-5	X		ABUT - BODY - TIES - HORIZ
B406	3	22'-0			ABUT - BODY - TOP - HORIZ.
B407	4	23'-2			ABUT - BODY - TOP - HORIZ.
B408	30	4'-4	X	X	ABUT - BODY - TOP - VERT.
B409	8	24'-2	X	X	WING 3 - BODY - STIRRUPS
B410	8	23'-8	X	X	WING 4 - BODY - STIRRUPS
B511	10	12'-9		X	WING 3 - BODY - F.F. - HORIZ.
B512	10	12'-3		X	WING 4 - BODY - F.F. - HORIZ.
B913	10	13'-7	X	X	WING 3 - BODY - B.F. - HORIZ.
B414	70	6'-6		X	UPPER WINGS - VERT. - E.F.
B415	22	7'-8		X	UPPER WINGS - HORIZ. - E.F.
B416	16	16'-6		X	UPPER WINGS - HORIZ. - E.F.
B617	46	3'-11	X	X	UPPER WINGS - TOP - VERT.
B618	4	16'-6			UPPER WINGS - TOP - HORIZ.
B1019	8	27'-11	X		ABUT. - BODY - B.F. - HORIZ.
B920	10	14'-6	X	X	WING 4 - BODY - B.F. - HORIZ.

NOTE: THE FIRST ONE OR TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

LEVELS ON * 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.

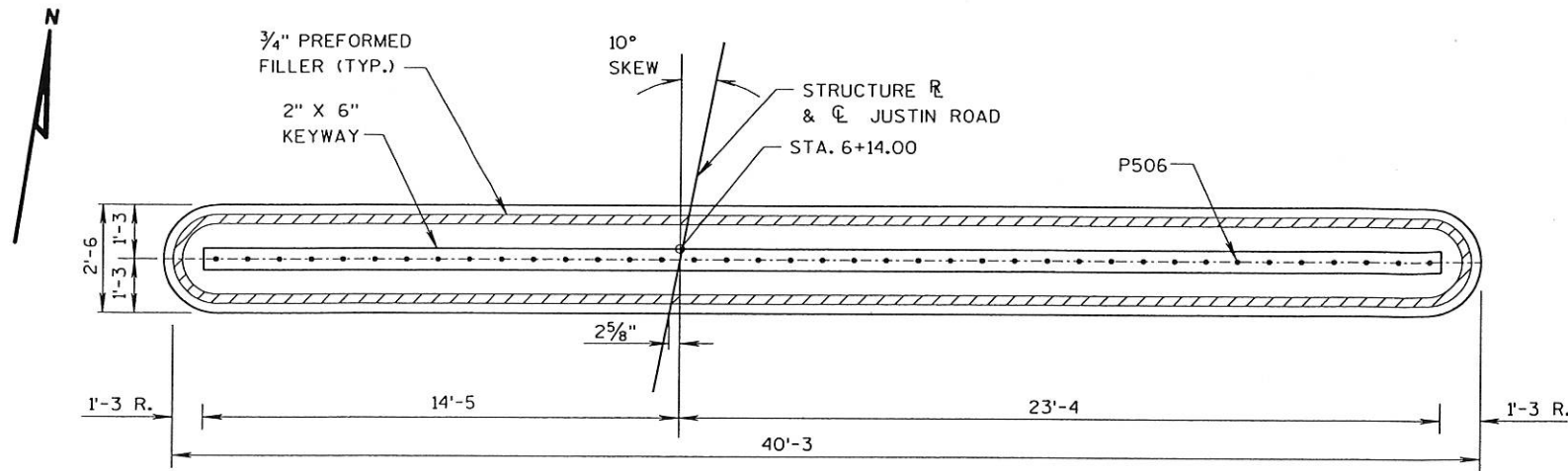


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
ABUTMENT REINFORCEMENT			SHEET 8 OF 14

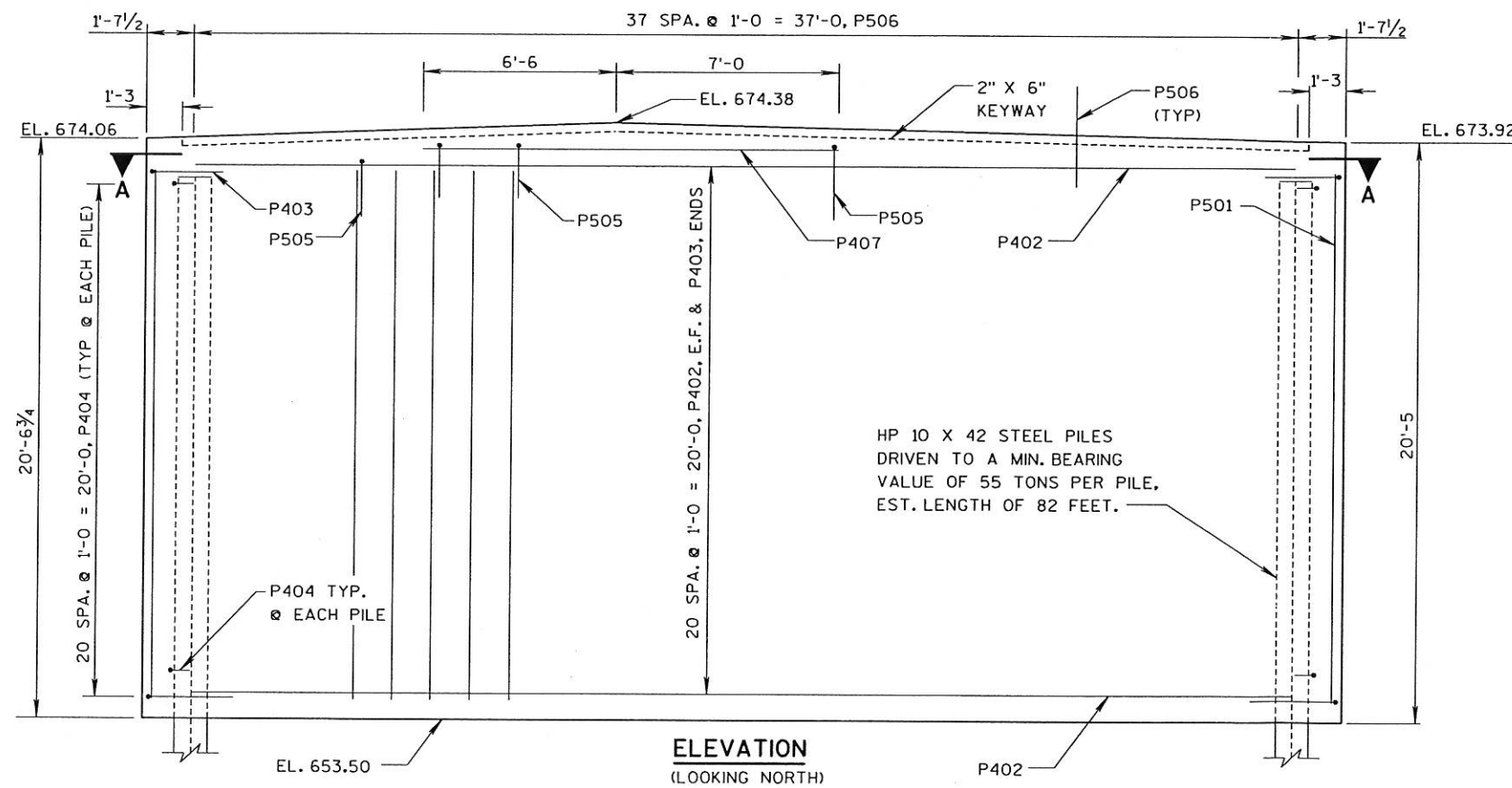
PIER BILL OF BARS UNCOATED 3565 LBS

MARK	NO. REQ'D	LENGTH	BENT	LOCATION
P501	84	19'-9"		VERT. - E.F.
P402	42	37'-5"		HORIZ. - E.F.
P403	42	5'-9"	X	HORIZ. - ENDS
P404	210	2'-9"	X	HORIZ. @ PILES
P505	20	6'-9"	X	VERT. - TOP
P506	38	2'-0"		DOWELS
P407	2	14'-0"		HORIZ. - TOP

NOTE: THE FIRST ONE OR TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

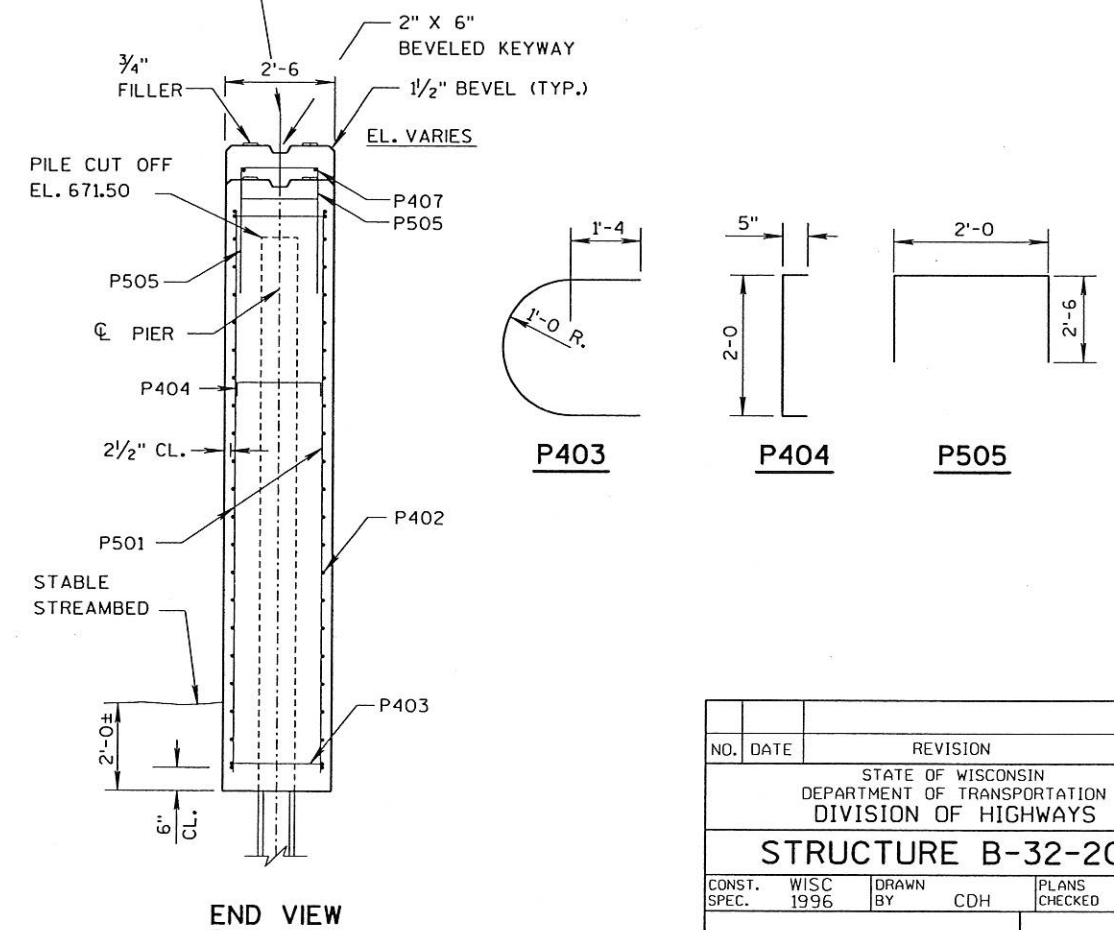


PIER PLAN

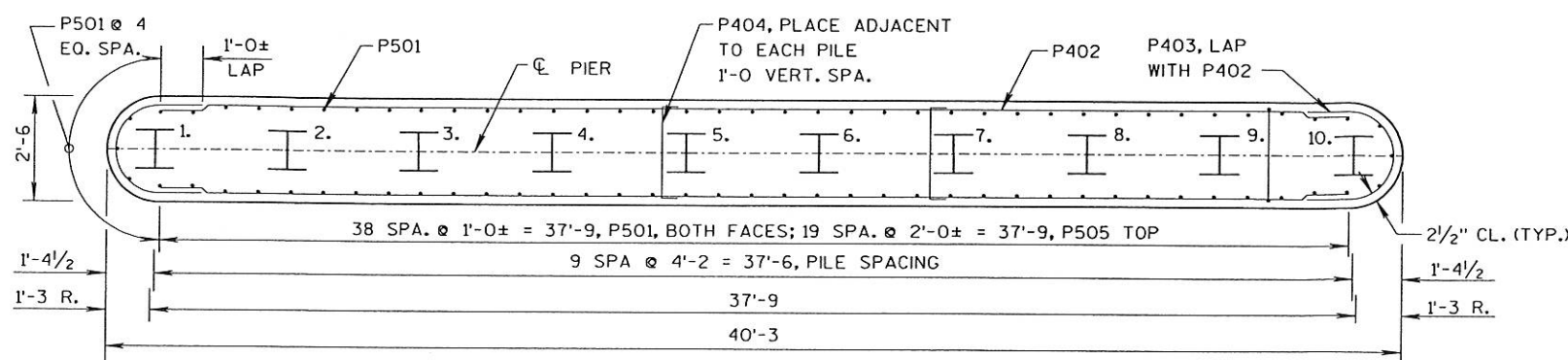


ELEVATION (LOOKING NORTH)

P506 @ 1'-0"± CTRS. MAY BE PLACED AFTER CONC. IS POURED BUT BEFORE INITIAL SET HAS OCCURED. EMBEDMENT = 1'-0"



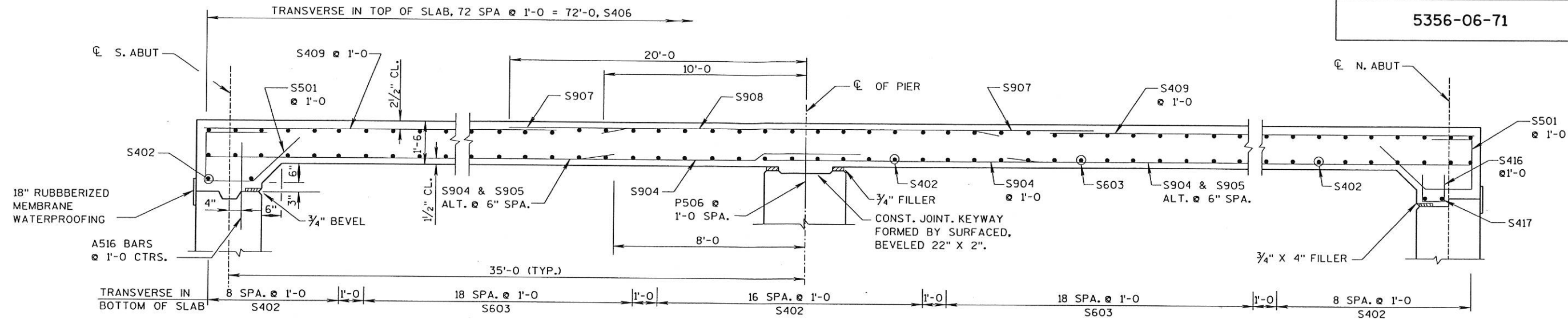
END VIEW



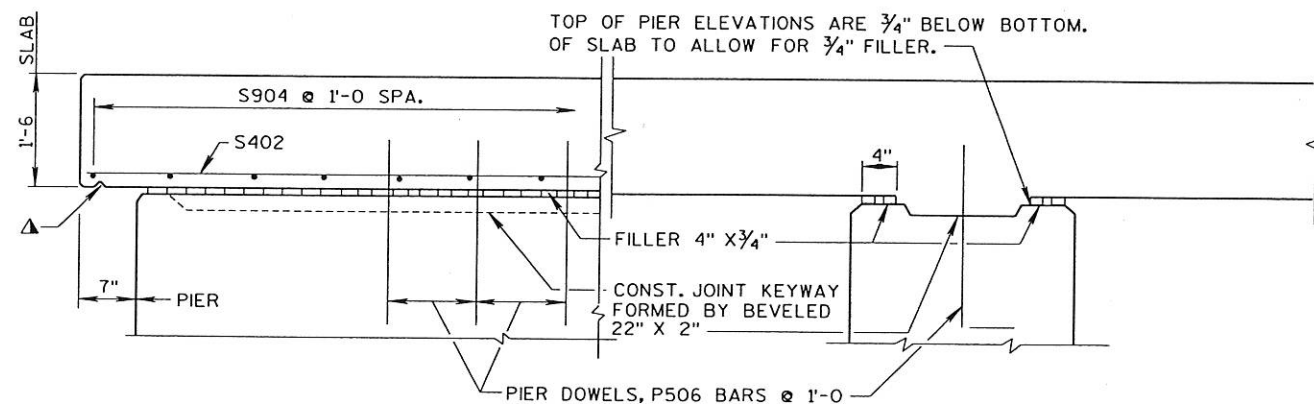
SECTION A-A

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.

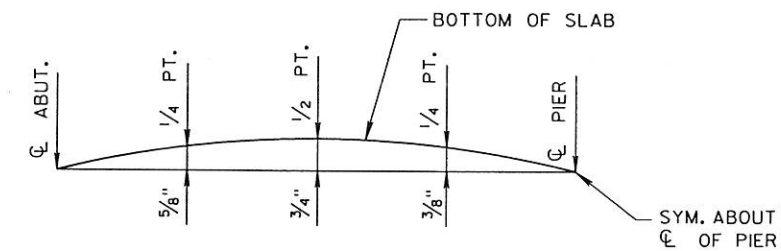
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
PIER			SHEET 9 OF 14



LONGITUDINAL SECTION

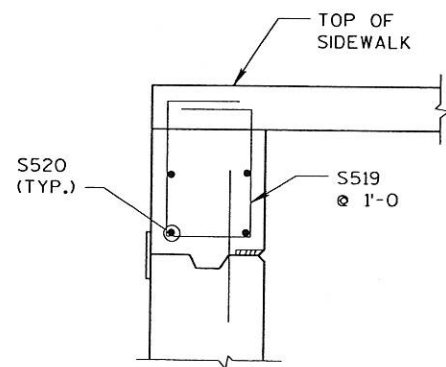


SECTIONS AT PIER



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.



SECTION B-B

(S. ABUT. SHOWN, N. ABUT. SIMILAR)

NOTES

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS(+)

▲ 3/4" CONTINUOUS DRIP GROOVE TO END 2'-0" AWAY FROM FACE OF ABUTMENT.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS. BOTH LEGS OF THE SIDEWALK DOWEL BARS (S410) SHALL BE CONTINUOUSLY SUPPORTED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY	PLANS CHECKED
		CDH	DJW
SUPERSTRUCTURE DETAILS			SHEET 11 OF 14

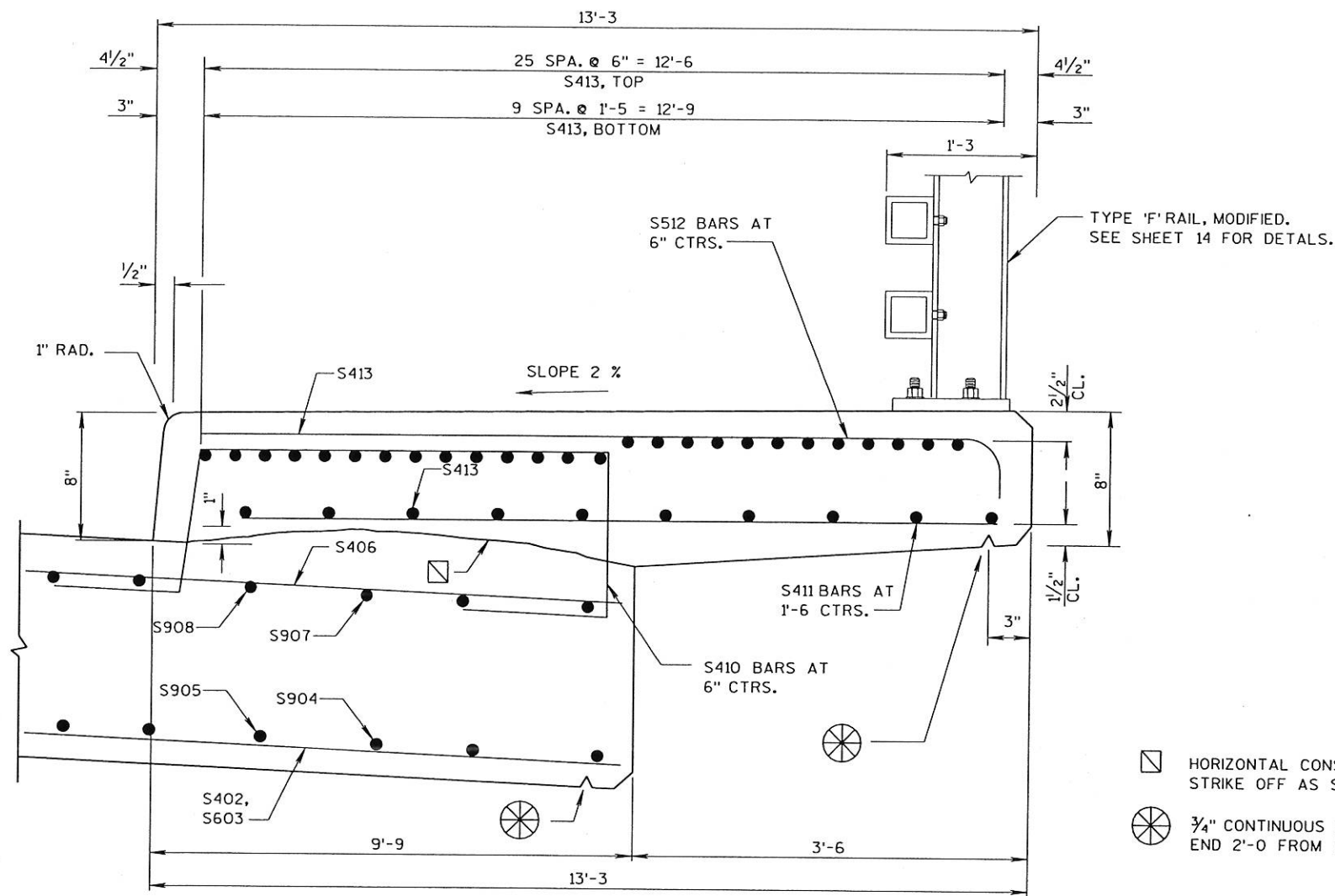
LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.

COATED 18,385 LBS
UNCOATED 22,190 LBS

BILL OF BARS

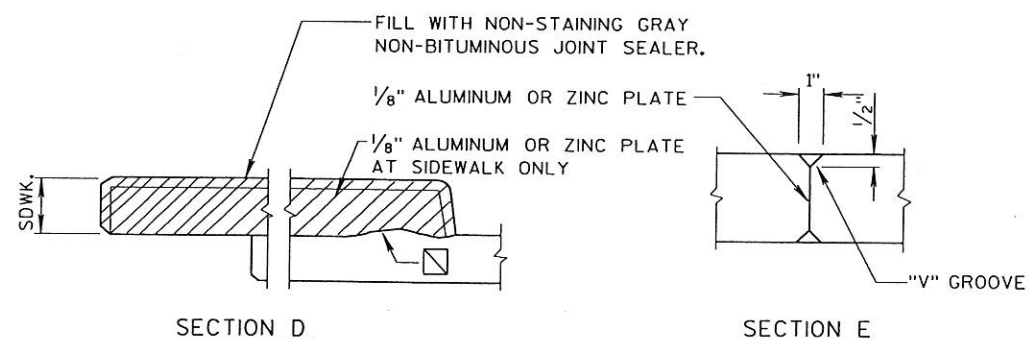
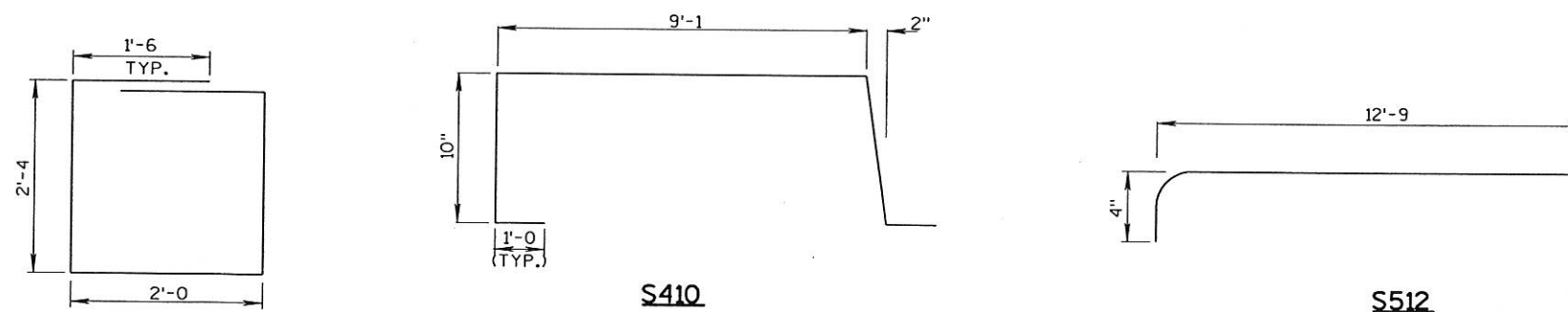
MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	82	7'-0"	X	X	END OF DECK - VERT
S402	78	21'-2"			SLAB - BOTTOM - TRANS - HORIZ.
S603	38	40'-10"			SLAB - BOTTOM - TRANS - HORIZ.
S904	82	38'-3"			SLAB - BOTTOM - LONGIT - HORIZ.
S905	80	29'-0"			SLAB - BOTTOM - LONGIT - HORIZ.
S406	73	21'-8"	X		SLAB - TOP - TRANS - HORIZ.
S907	41	40'-0"	X		SLAB - TOP - LONGIT - HORIZ.
S908	40	31'-6"	X		SLAB - TOP - LONGIT - HORIZ.
S409	41	18'-6"	X		SLAB - TOP - LONGIT - HORIZ.
S410	145	12'-8"	X	X	SIDEWALK DOWELS - VERT.
S411	49	12'-9"	X		SIDEWALK - BOTTOM - TRANS - HORIZ.
S512	145	12'-11"	X	X	SIDEWALK - TOP - TRANS - HORIZ.
S413	72	35'-9"	X		SIDEWALK - TOP & BOTTOM - LONGIT.
S614	20	12'-0"	X	X	AT RAIL ANCHORS - DECK
S615	40	4'-0"	X		AT RAIL ANCHORS
S416	46	3'-3"	X		END OF DECK - N. ABUT - VERT.
S417	4	46'-0"			END OF DECK - N. ABUT - HORIZ.
S618	20	12'-3"	X	X	AT RAIL ANCHORS - SIDEWALK
S519	8	9'-4"	X	X	END OF DECK - SIDEWALK - VERT.
S520	8	5'-6"			END OF DECK - SIDEWALK - HORIZ.

NOTE: THE FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE. DIMENSIONS FOR BENDING ARE OUT TO OUT OF BAR.



- HORIZONTAL CONSTRUCTION JOINT. STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ⊗ 3/4" CONTINUOUS DRIP GROOVE, END 2'-0" FROM FACE OF ABUT.

SECTION A-A
(AT SIDEWALK)



SIDEWALK DEFLECTION JOINT DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY CDH	PLANS CHECKED DJW
SUPERSTRUCTURE DETAILS			SHEET 12 OF 14

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.

LEGEND

- ① W6 x 25 WITH 1/4" DIA. HOLES ON EACH SIDE OF POST FOR STUD NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY (OR SIDEWALK, AS APPLICABLE). PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1" x 9 1/2" x 10" WITH 1/16" x 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ A325- 7/8" DIA. x 8" LONG HEX BOLTS (GALVANIZED) WITH A325 NUT & WASHER, 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-2" LONG AT END POST.
- ④ 1/4" x 8" x 8" FLAT BAR WITH 5/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 4 x 4 x 0.25 STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B. ATTACH TO NO. 1 WITH STUDS NO. 6.
- ⑥ 5/8" DIA. x 1 1/2" LONG SHOP WELDED STUDS WITH HEX NUT AND 2" WASHERS (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ PLATE 3/8" x 1'-4" (1'-7" ON SDWK.) x 1'-8". BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO 5.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5 FOR 7/8" DIA. A325 BOLTS W/HEX NUTS AND WASHERS.
- ⑨ SQUARE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 3 13/32".
- ⑩ TS 3 x 3 x 0.25 x (2'-4" AT EXPANSION JOINTS) & (1'-10" AT FIELD JOINTS) LONG. PROVIDE 1/2" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 5. PROVIDE 3/8" DIA. x 1/2" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

GENERAL NOTES

BID ITEM SHALL BE "TUBULAR RAILING TYPE 'F'", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

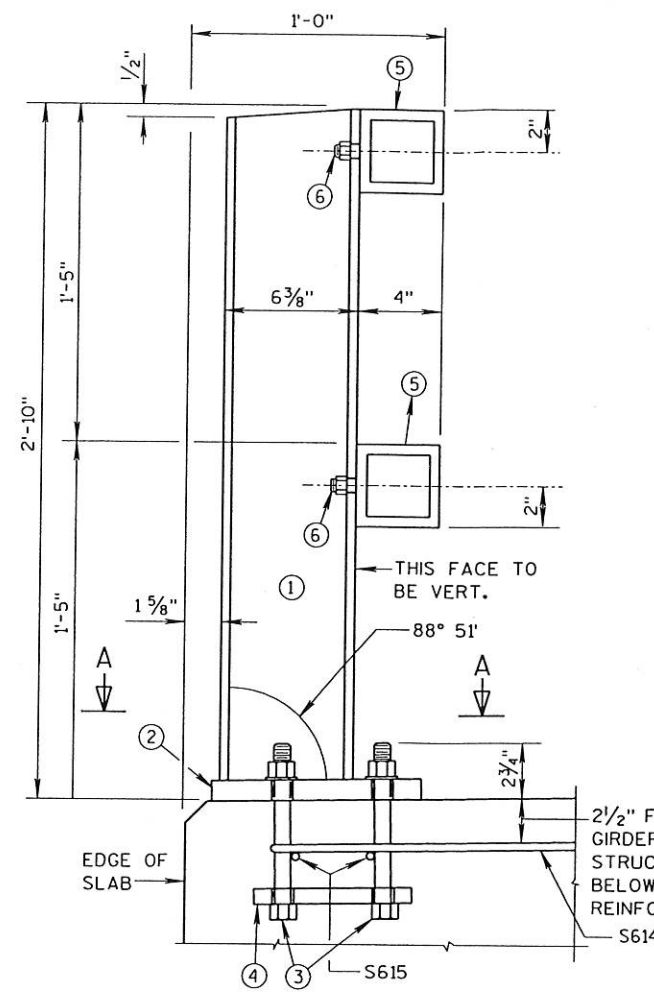
FOR RAILING NOT TO BE PAINTED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 4) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.

ALL MATERIALS USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM A709 GRADE 36 UNLESS NOTED OTHERWISE.

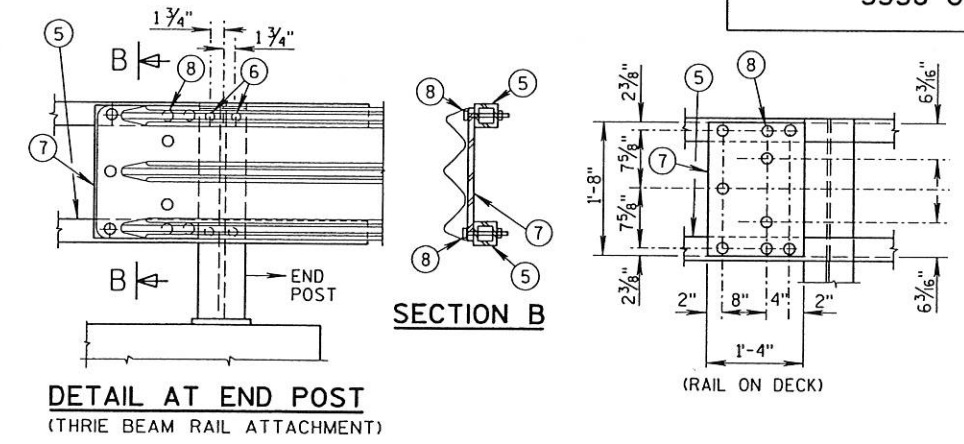
FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

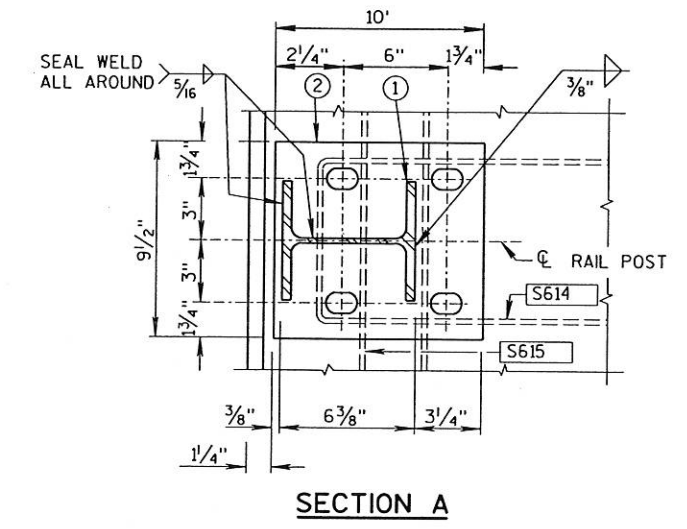
SEE SHEETS 5, 7 & 9 FOR RAIL POST SPACING.



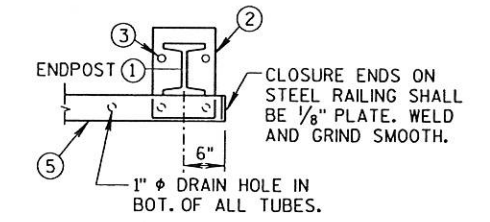
SECTION THRU RAILING ON DECK



DETAIL AT END POST (THRIE BEAM RAIL ATTACHMENT)

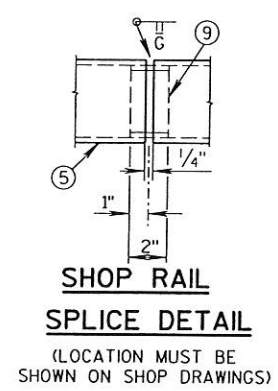


SECTION A

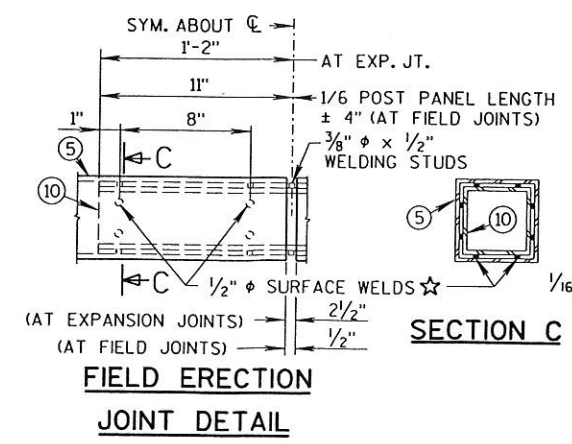


DETAIL FOR END POSTS

WITH THRIE BEAM RAIL ATTACHMENT END POST MAY BE LOCATED ON SUPERSTRUCTURE OR WINGWALLS

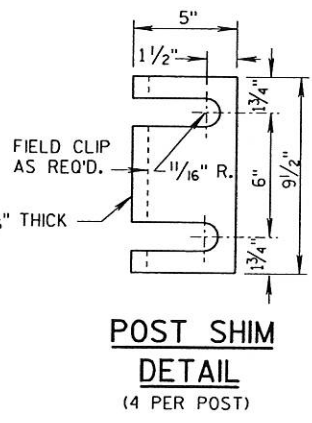


SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

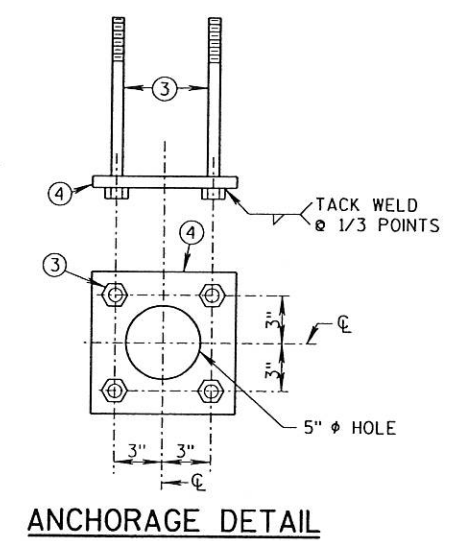


FIELD ERECTION JOINT DETAIL

☆ MIN. 3/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



POST SHIM DETAIL
(4 PER POST)



ANCHORAGE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY	DNG
PLANS CHECKED	DJW		
TUBULAR STEEL RAILING TYPE "F"			SHEET 13 OF 14

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63.

LEGEND

- ① W6 x 25 WITH 1/4" DIA. HOLES ON EACH SIDE OF POST FOR STUD NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY (OR SIDEWALK, AS APPLICABLE). PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1" x 1'-1" x 1'-1" WITH 1/16" x 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ A325- 7/8" DIA. x 8" LONG HEX BOLTS (GALVANIZED) WITH A325 NUT & WASHER, 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-2" LONG AT END POST.
- ④ 1/4" x 11" x 11" FLAT BAR WITH 15/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- ⑤ TS 4 x 4 x 0.25 STRUCTURAL TUBING, CONFORMING TO A.S.T.M. DESIGNATION A501 OR A500 GRADE B. ATTACH TO NO. 1 WITH STUDS NO. 6.
- ⑥ 5/8" DIA. x 1/2" LONG SHOP WELDED STUDS WITH HEX NUT AND 2" WASHERS (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑨ SQUARE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT" WITH A MINIMUM OUT TO OUT DIMENSION OF 3 13/32".
- ⑩ TS 3 x 3 x 0.25 x (2'-4" AT EXPANSION JOINTS) & (1'-10" AT FIELD JOINTS) LONG. PROVIDE 1/2" DIA. SURFACE WELDS ON ALL SIDES AS SHOWN. GRIND WELDS TO FIT FREE INTO I.D. OF NO. 5. PROVIDE 3/8" DIA. x 1/2" WELDING STUDS ON TOP AND BOTTOM SURFACES AT CENTERLINE.

GENERAL NOTES

BID ITEM SHALL BE "TUBULAR RAILING TYPE 'F', MODIFIED", WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

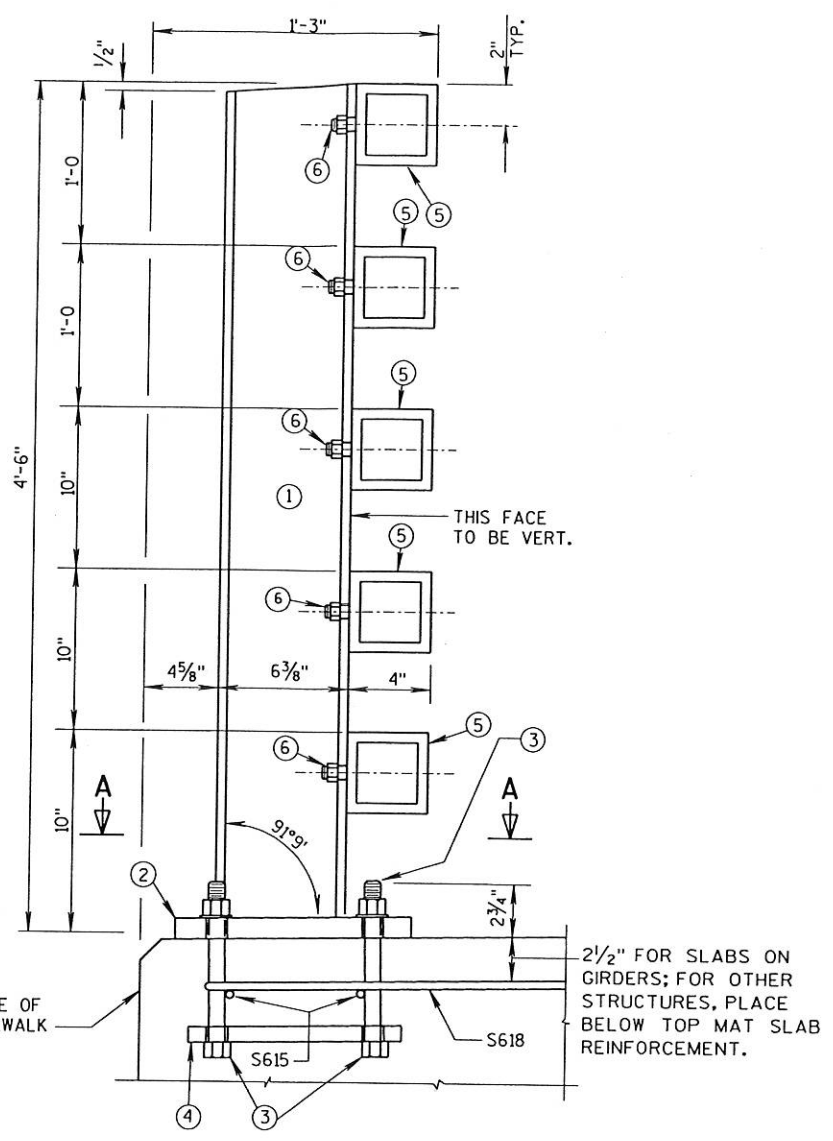
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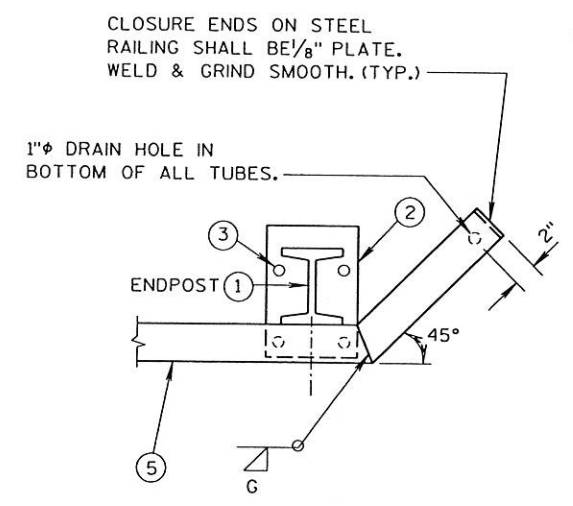
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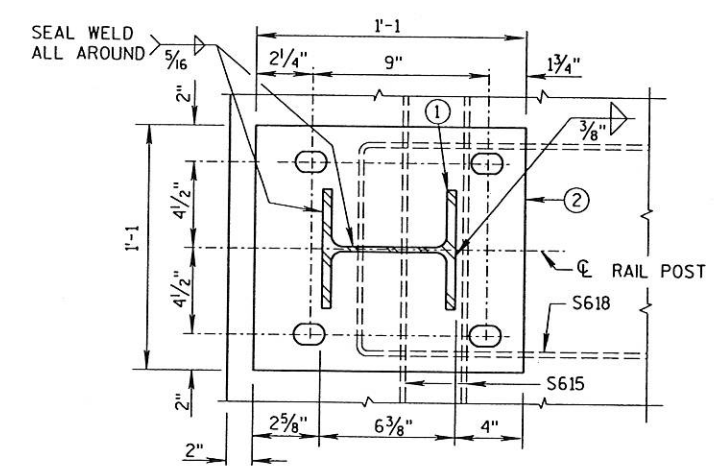
SEE SHEETS 5, 7 & 9 FOR RAIL POST SPACING.



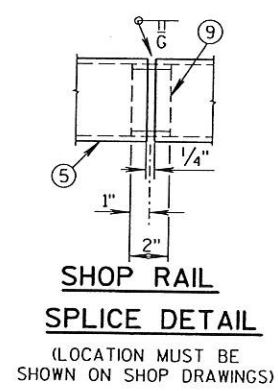
SECTION THRU RAIL - SIDEWALK



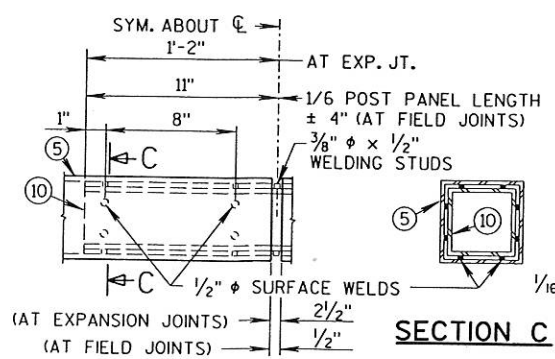
DETAIL FOR END POSTS



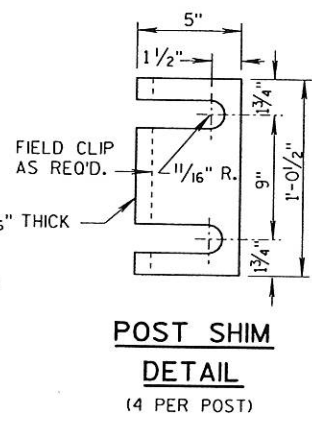
SECTION A



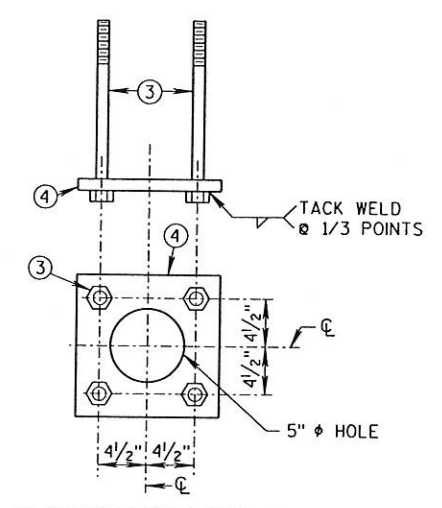
SHOP RAIL SPLICE DETAIL
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



FIELD ERECTION JOINT DETAIL
MIN. 5/8" FLAT SURFACE DIA. PUNCHINGS OR STUDS MAY BE USED AS AN ALTERNATE.



POST SHIM DETAIL
(4 PER POST)



ANCHORAGE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-32-200			
CONST. SPEC.	WISC 1996	DRAWN BY	CDH
PLANS CHECKED	DJW		
TUBULAR STEEL RAILING, TYPE "F" MODIFIED			SHEET 14 OF 14

LEVELS ON 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63.