

MICHIGAN DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
MICHIGAN PROJECT BRN 0739(039)
CONTROL SECTION 39014
JOB NUMBER 81325A

US-131
OSHTEMO TOWNSHIP
KALAMAZOO COUNTY

GENERAL NOTES

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THE DESIGN OF THE SUBSTRUCTURE. THE ALLOWABLE STRESS METHOD OF DESIGN WAS USED FOR THE DESIGN OF THE SUPERSTRUCTURE.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE: GRADE S2	$f'_c = 3,000$ psi
CONCRETE: GRADE D	$f'_c = 4,000$ psi
CONCRETE: SPECIAL (DECK PANELS)	$f'_c = 6,000$ psi
CONCRETE: SPECIAL (LONG CIP CLOSURE)	$f'_c = 6,000$ psi
CONCRETE: PRESTRESSED CONCRETE	$f'_c = 3,500$ psi
	$f'_c = 7,000$ psi
	$f'_c = 5,700$ psi
STEEL REINFORCEMENT	$f_y = 60,000$ psi
STEEL REINFORCEMENT: STIRRUPS FOR PRESTRESSED BEAMS	$f_y = 60,000$ psi
STEEL: AASHTO M270 GRADE 36	$F_y = 36,000$ psi

PRESTRESSING STRANDS (DECK): (0.6% LOW RELAXATION)

ULTIMATE STRENGTH	$f'_s = 270,000$ psi
MODULUS OF ELASTICITY	28,500 ksi
FRICTION COEFFICIENT	0.14
WOBBLE COEFFICIENT	0.001/ft
ANCHOR SET	*

FIELD TESTING IN ACCORDANCE WITH SPECIAL PROVISIONS SHALL BE PERFORMED TO ESTABLISH THE ACTUAL FRICTION AND WOBBLE COEFFICIENTS AND ANCHOR SET.

MAX. JACKING STRESS: 0.80 $f'_s = 218,700$ psi
MAX. STRESS @ ANCHORAGE AFTER ANCHOR SET: 0.70 $f'_s = 189,000$ psi
MAX. STRESS ELSEWHERE AFTER ANCHOR SET: 0.74 $f'_s = 199,800$ psi

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDING TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2009 EDITION.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 1/4" IN TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

BIDDERS WILL BE FURNISHED WITH SCANNED IMAGES OF PLAN SHEETS OF THE EXISTING STRUCTURE IF REQUESTED.

THE BRIDGE IS COATED WITH LEAD BASED PAINT.

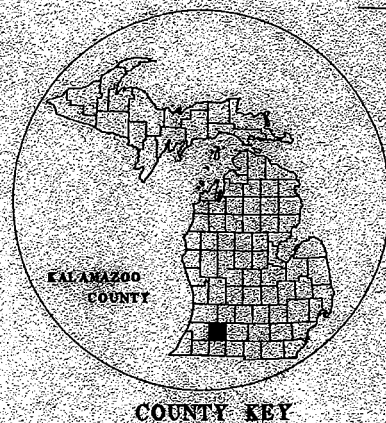
THE STATIONING AS SHOWN ON THESE PLANS FOR THE INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY CENTERLINE IS BELIEVED TO BE CORRECT. IT SHALL, HOWEVER, BE CHECKED AT THE TIME OF STARTING CONSTRUCTION, AND IF THE STATIONING SHOWN ON THE PLANS IS INCORRECT, IT SHALL BE REPORTED TO THE DESIGN OFFICE IN LANSING, AND THE STRUCTURE SHALL BE STAKED OUT USING THE ACTUAL INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY CENTERLINE AS THE CONTROL POINT.

PLAN INDEX	
BRIDGE SHEETS	
SH. NO.	DESCRIPTION
1	TITLE SHEET
1a	ELECTRIC HANDHOLE DETAILS
1b	DECK INSTRUMENTATION DETAILS
2	GENERAL PLAN OF SITE
3	BORING LOG
4-6	GENERAL PLAN OF STRUCTURE
7	EXISTING GENERAL PLAN OF SITE
8	EXISTING GENERAL PLAN OF STRUCTURE
9	ERECTION SCHEMATICS
10	PLAN OF PILES
11-15	ABUTMENT DETAILS
16-21	PIER DETAILS
22-23	PRESTRESSED CONCRETE I - BEAM DETAILS
24	INTERMEDIATE AND PIER DIAPHRAGM DETAILS
25-31	DECK PANEL DETAILS
32	AESTHETIC PARAPET RAILING DETAILS
33	ABUTMENT BACKWALL DETAILS
34	APPROACH SLAB DETAILS
35	EXPANSION JOINT DETAILS
36-38	REINFORCEMENT DETAILS

ROAD SHEETS	
SH. NO.	DESCRIPTION
39	ALIGNMENT SHEET
40-43	TYPICAL CROSS SECTIONS
44	NOTE SHEET
45	LEGEND SHEET
46	WITNESSES AND BENCHMARKS
47-53	REMOVALS, PLAN & PROFILE
54-59	MAINTAINING TRAFFIC
60	PAVEMENT MARKING SHEETS
61	PERMANENT SIGNING SHEETS

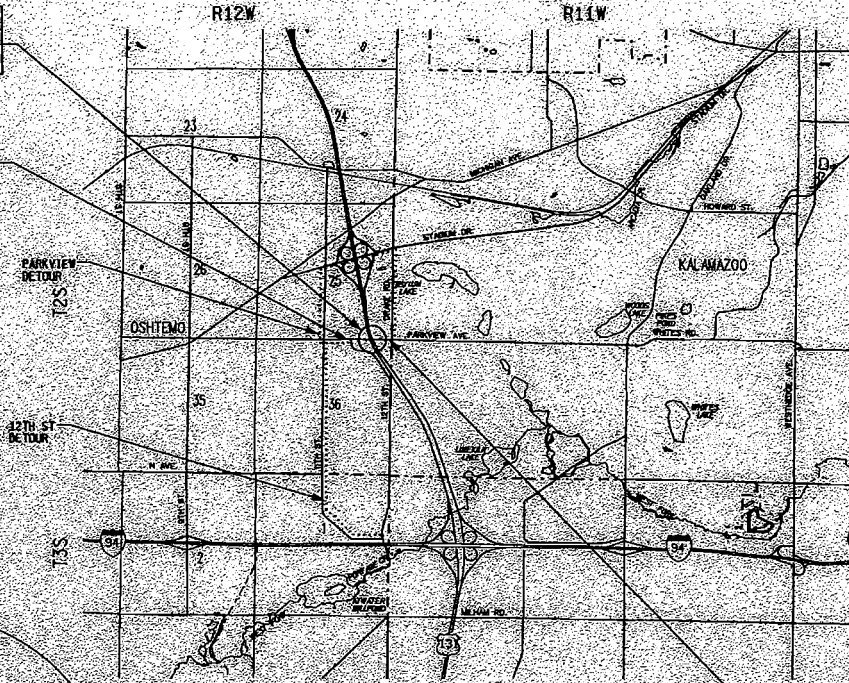
TITLE SHEET LEGEND

PROPOSED BRIDGE PROJECT	
EXISTING ROADS	
CITY STREET	
COUNTY	
STATE ROUTES	
FEDERAL DIVIDED ROUTES	
FEDERAL DIVIDED INTERSTATE ROUTES	
HOT MIX ASPHALT	
GRAVEL	
SECTION LINE	
CITY, VILLAGE OR TOWNSHIP LIMITS	
RAILROADS	
DETOURS	



501 OF 39014
PARKVIEW AVE
OVER US 131

CONTROL SECTION 39014
JOB NUMBER 81325A
POINT OF BEGINNING
STA 106+66
PROJ 1503
PR NO 1.110



CONTROL SECTION 39014
JOB NUMBER 81325A
POINT OF ENDING
STA 106+20
PROJ 1503
PR NO 1.104

GENERAL NOTES

FUTURE SCAFFOLDING OF THE PRECAST CONCRETE DECK PANELS FOR REPLACEMENT OF THE WEARING SURFACE AND WATERPROOFING SHALL REMOVE NO MORE THAN 1/4" OF CONCRETE.

CONTRACT FOR BRIDGE REPLACEMENT AND ROADWAY APPROACH WORK

THESE PLANS WERE PREPARED FOR THE MICHIGAN DEPARTMENT OF TRANSPORTATION

PARSONS

REGISTERED PROFESSIONAL ENGINEER

BRUCE L. CAMPBELL
REGISTRATION No. 43200

APPROVALS

RECOMMENDED FOR APPROVAL		7-31-07
PROJECT MANAGER		DATE
RECOMMENDED FOR APPROVAL		8/3/07
DELIVERY ENGINEER		DATE

MICHIGAN
DEPARTMENT OF TRANSPORTATION

KIRK STEUDLE DIRECTOR
APPROVED BY 8-16-07
ENGINEER OF DEVELOPMENT DATE

MDOT

GROTENHUIS
MDOT DESIGN COORDINATOR

GROTENHUIS

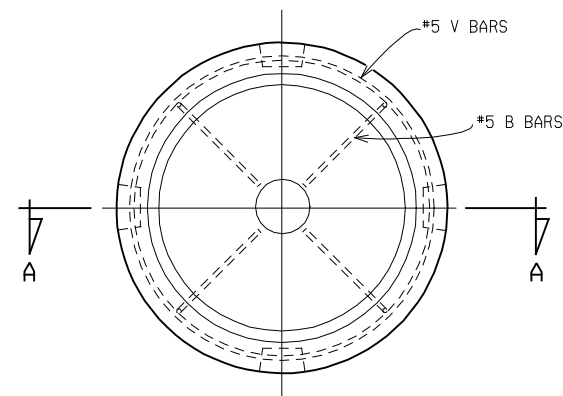
DESIGN UNIT

CONTROL SECTION	JOB NUMBER	FEDERAL PROJECT NO.	ITEM	SHEET NO.
39014	81325A	BRN 0739(039)	RR6069	1

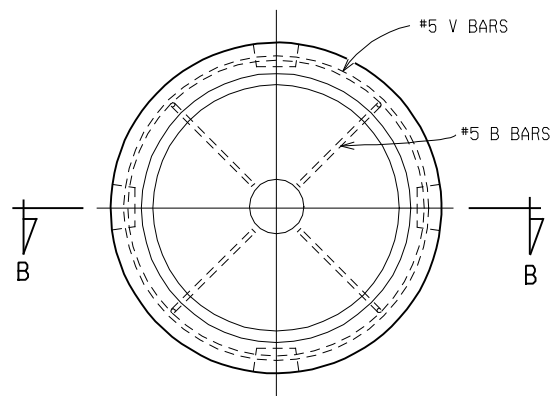
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DATE: _____
CORRECTED BY: _____
DATE: _____
JOB NUMBER: 39014 - 81325A
CHECKED BY: _____
DATE: _____
DRAWN BY: _____
FILE NAME: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN VIEW



PLAN VIEW

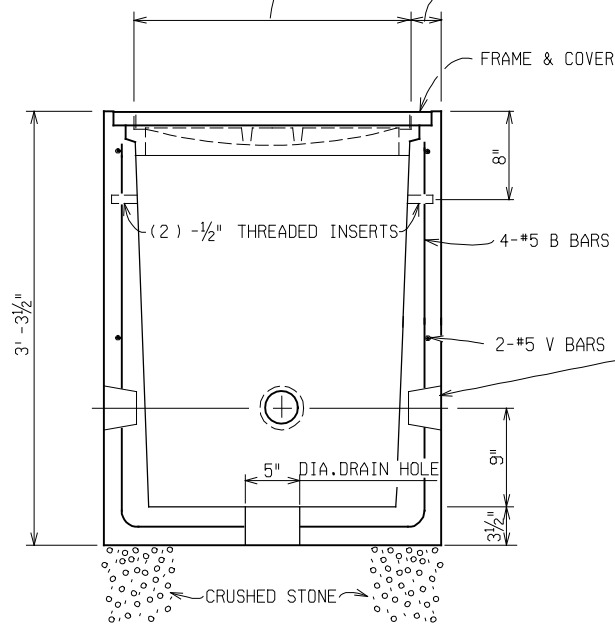
OPENING
18" FOR LIGHT DUTY COVER
24" FOR HEAVY DUTY COVER

FRAME
FRAME & COVER
SEE MATERIAL NOTES

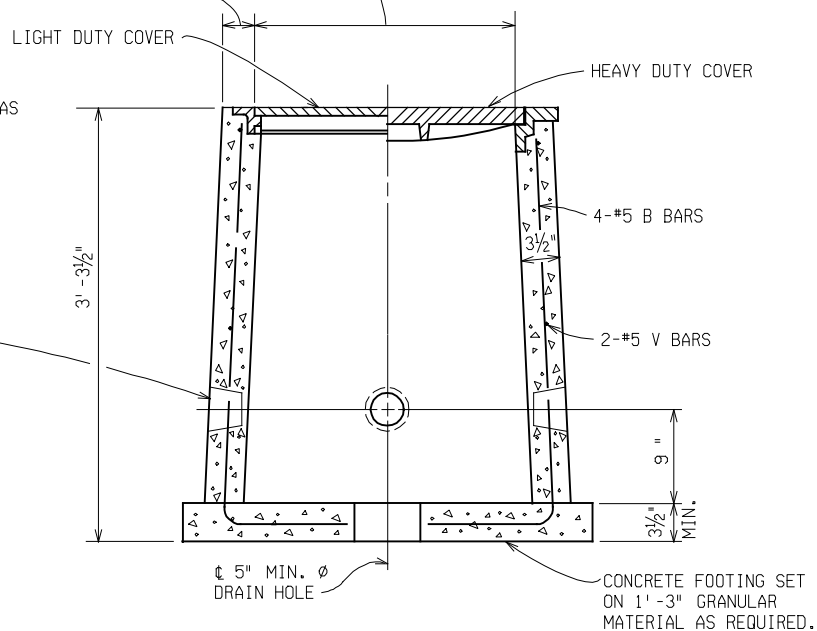
WALL THICKNESS
MIN. WALL THICKNESS FOR LIGHT DUTY COVER - 2 3/4", FOR HEAVY DUTY COVER - 3 1/2". SHOULD THE WALL BE TAPERED, A 0.3"/FT. SLOPE SHALL BE USED.

STEEL REINFORCEMENT
REINFORCEMENT SHALL BE #5 BARS AS SHOWN OR AN EQUIVALENT AREA OF STEEL USING WELDED WIRE MESH.

ENTRANCE HOLES AS REQUIRED FOR 3" & 4" CONDUIT. ADDITIONAL OPENINGS SHALL BE PROVIDED AS REQUIRED. HOLES MAY BE DRILLED IN THE FIELD.



SECTION A-A PRECAST CONCRETE HANDHOLE



SECTION B-B PRECAST CONCRETE HANDHOLE

GENERAL NOTES:

THE MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT M.D.O.T. STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY CONSTRUCT THE HANDHOLE STRUCTURE OF CONCRETE MASONRY, OR OF PRECAST REINFORCED CONCRETE.

THE INNER SURFACE OF THE HANDHOLE SHALL BE SMOOTH.

ALL CASTINGS SHALL BE CLEANED BY SAND BLASTING.

THE SEATING FACE OF THE COVER AND THE SEAT FOR THE COVER ON THE FRAME IF REQUIRED, SHALL BE GROUND OR MACHINED SO THAT THE COVER SHALL HAVE AN EVEN BEARING ON ITS SEAT TO PREVENT ROCKING OR TILTING.

THE CASTINGS SHALL BE FREE OF POURING FAULTS, BLOW HOLES, CRACKS, AND OTHER IMPERFECTIONS. THEY SHALL BE SOUND, TRUE TO FORM AND THICKNESS, CLEAN AND NEATLY FINISHED AND SHALL BE COATED WITH COAL TAR PITCH VARNISH.

HANDHOLE SHALL BE EQUIPPED WITH CABLE RACK AND HOOKS TO TRAIN CABLE.

LIGHT DUTY COVER SHALL BE BOLTED TO FRAME WITH NOT LESS THAN 2 COUNTERSUNK HEX HEAD BRONZE BOLTS.

PRECAST HANDHOLE WITH HEAVY DUTY COVER SHALL BE SET ON A CONCRETE SLAB .

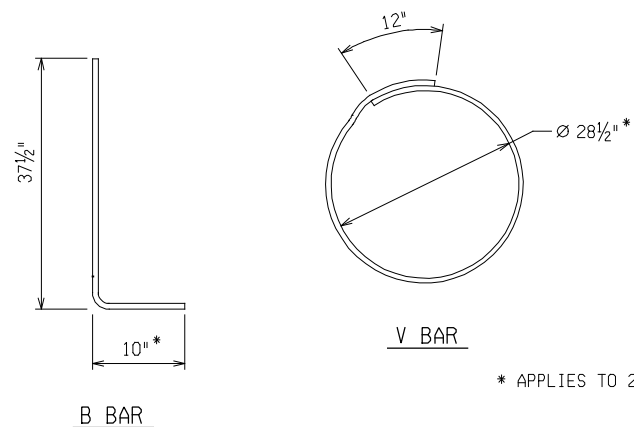
MATERIAL NOTES:

HEAVY DUTY COVERS SHALL BE CASTINGS WHICH MEET THE REQUIREMENTS OF THE CURRENT SPECIFICATIONS FOR GRAY IRON CASTINGS ASTM DESIGNATION A48 AND SHALL HAVE A MINIMUM STRENGTH AS PROVIDED FOR CLASS NO. 30B GRAY IRON CASTINGS.

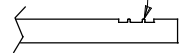
ALL CONCRETE MASONRY SHALL BE GRADE 30M.

THE HEAVY DUTY COVER & FRAME SHALL BE EAST JORDAN IRON WORKS #2860 TYPE "A" OR NEENAH FOUNDRY #R-6052 D FOR CIRCULAR COVER OR AN APPROVED EQUAL.

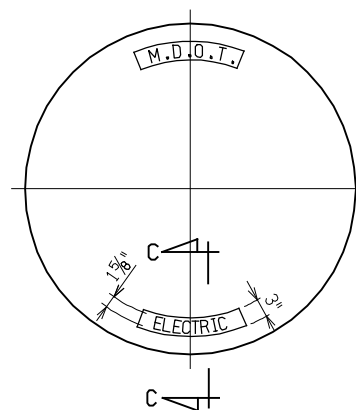
LIGHT DUTY COVER AND FRAME SHALL BE EAST JORDAN IRON WORKS #2982A-18 OR NEENAH FOUNDRY #R-6012 D FOR CIRCULAR COVER OR AN APPROVED EQUAL.



ALL LETTERING TO BE 1/4" HIGH AND FLUSH WITH SURFACE OF COVER



SECTION C-C



TOP VIEW

PARSONS

MDOT
Michigan Department of Transportation

ELECTRIC HANDHOLE DETAILS
PARKVIEW AVENUE OVER US 131

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
8/2/2007	S01 OF 39014	81325A	GROTHENHUIS	10 OF 61

FILE NAME:

DRAWN BY:

DATE:

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DATE:

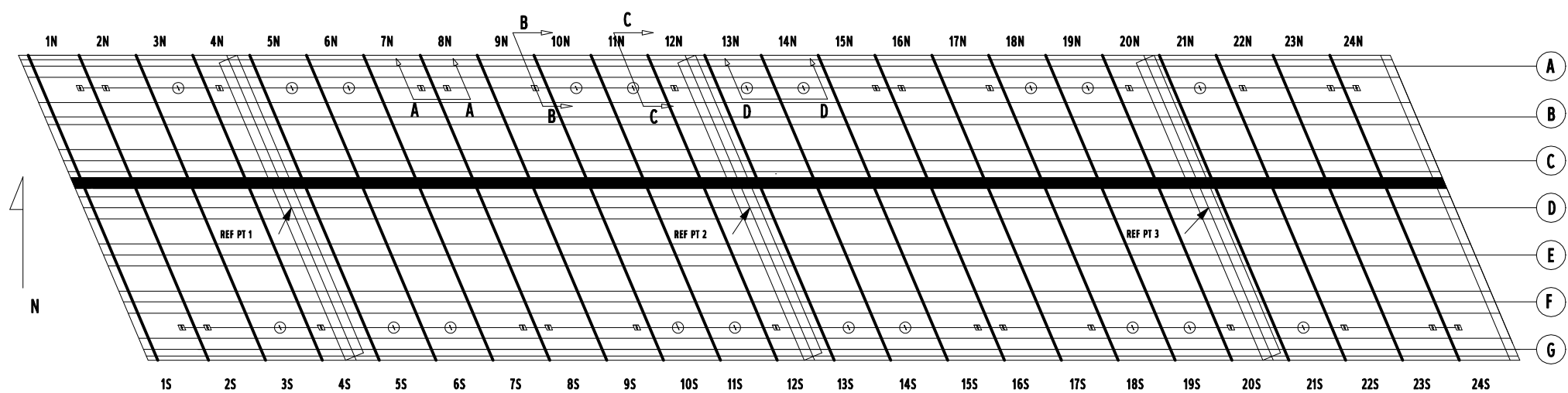
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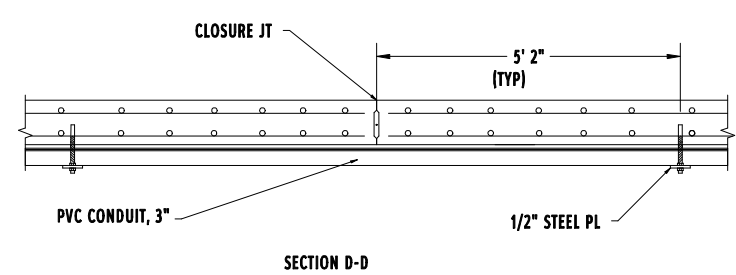
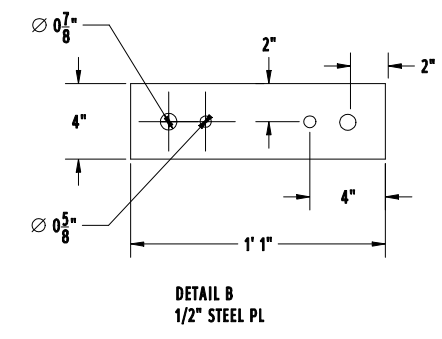
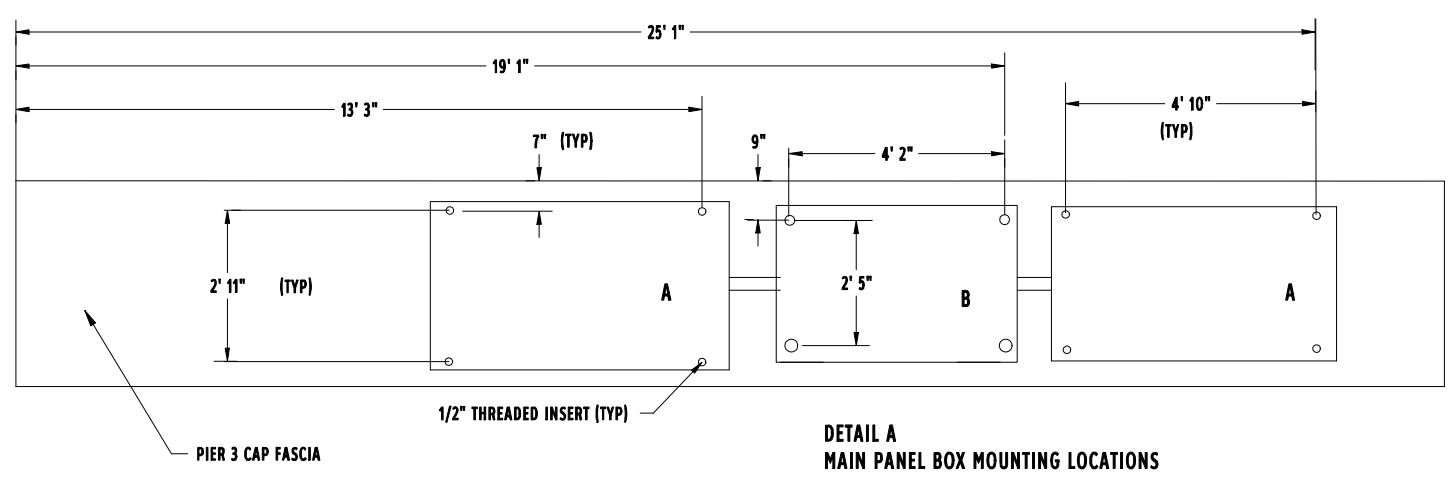
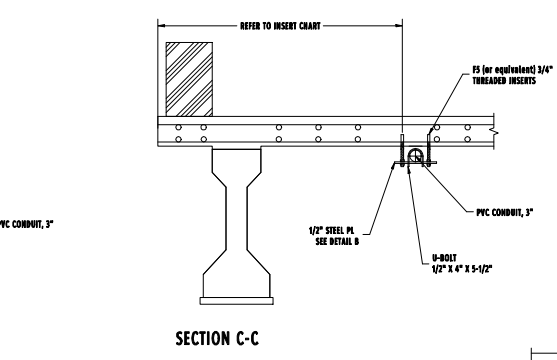
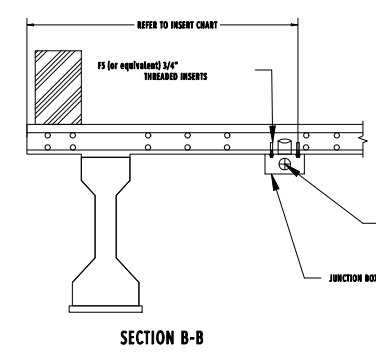
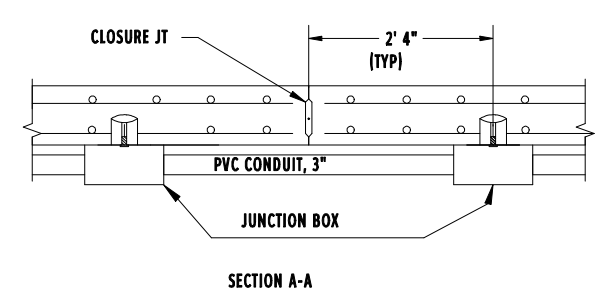
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NO.	DESCRIPTION	DATE	BY



- THREADED INSERT LOCN (TYP)
- JUNCTION BOX LOCN (TYP)

INSTRUMENTATION LAYOUT - PLAN VIEW



DETAIL FOR NORTH PANELS

PANEL	INSERT COORDINATES X, Y (IN)		PANEL	INSERT COORDINATES X, Y (IN)	
	1	2		1	2
1N	62, 74	62, 82	15N	62, 74	62, 82
2N	28, 74	28, 82	16N	62, 74	62, 82
3N	62, 74	62, 82	17N	96, 74	96, 82
4N	28, 74	28, 82	18N	28, 74	28, 82
5N	62, 74	62, 82	19N	96, 74	96, 82
6N	62, 74	62, 82	20N	62, 74	62, 82
7N	96, 74	96, 82	21N	62, 74	62, 82
8N	28, 74	28, 82	22N	28, 74	28, 82
9N	96, 74	96, 82	23N	96, 74	96, 82
10N	28, 74	28, 82	24N	28, 74	28, 82

DETAIL FOR SOUTH PANELS


PANEL	INSERT COORDINATES X, Y (IN)		PANEL	INSERT COORDINATES X, Y (IN)	
	1	2		1	2
1S	62, 74	62, 82	15S	62, 74	62, 82
2S	28, 74	28, 82	16S	62, 74	62, 82
3S	62, 74	62, 82	17S	96, 74	96, 82
4S	28, 74	28, 82	18S	28, 74	28, 82
5S	62, 74	62, 82	19S	96, 74	96, 82
6S	62, 74	62, 82	20S	62, 74	62, 82
7S	96, 74	96, 82	21S	62, 74	62, 82
8S	28, 74	28, 82	22S	28, 74	28, 82
9S	96, 74	96, 82	23S	96, 74	96, 82
10S	62, 74	62, 82	24S	28, 74	28, 82

INSERT CHART - DIMENSIONS IN INCHES MEASURED FROM FASCIA CORNER AS INDICATED


MISCELLANEOUS QUANTITIES	
1 LS	Precast Deck Panel Instrumentation and Data Collection

- NOTES:**
 THIS SHEET NOT TO SCALE
 SEE SPECIAL PROVISION FOR INSTRUMENTATION AND DATA COLLECTION
- COORDINATE THE INSTALLATION OF THE INSTRUMENTATION AND DATA COLLECTION DEVICES WITH THE FABRICATOR AND WESTERN MICHIGAN UNIVERSITY (WMU).
- PROVIDE AND INSTALL TWO (2) 3/4" DIAMETER DAYTON F-5 OR EQUIVALENT GALVANIZED FERRULE INSERTS PER PRECAST DECK PANEL AT SPACING IDENTIFIED IN THE INSERT COORDINATES TABLE.
- PROVIDE AND INSTALL TWELVE (12) 1/2" DIAMETER DAYTON F-5 OR EQUIVALENT GALVANIZED FERRULE INSERTS ON THE PIER CAP OF PIER 3 FACING THE SLOPE PAVING AT THE LOCATION AND SPACING SPECIFIED.
- INSTALL JUNCTION BOXES, MAIN PANEL BOXES (SUPPLIED BY WMU), CONDUIT, CABLES, AND WIRING AFTER THE POST TENSIONING OPERATIONS ARE COMPLETED. MODIFY THE BOXES AS NEEDED TO ACCOMMODATE CONDUITS AND CABLES. A LICENSED ELECTRICIAN IS REQUIRED FOR ELECTRICAL CONNECTIONS AND CABLE SPLICING.
- INSTALL 3" SCHEDULE 40 PVC CONDUIT RUNS WITH SUPPORTS AND CONNECTIONS AS SHOWN ON THE PLANS AND ROUTE INSTRUMENTATION CABLES (SUPPLIED BY WMU) FROM EACH DECK PANEL JUNCTION BOX TO THE MAIN PANEL LOCATIONS.
- INSTALL GALVANIZED STEEL PLATES (13" X 4" X 1/2") ACCORDING TO THE DRAWINGS AND PANELS LABELED: 3, 5, 6, 10, 11, 13, 14, 18, 19, 21 (N AND S).
- INSTALL LOW CARBON STEEL ZINC PLATED U-BOLTS (1/2" X 4" X 5-1/2") TO SECURE THE 3" CONDUIT TO THE 1/2" STEEL PLATES LOCATED BELOW PANELS 3, 5, 6, 10, 11, 13, 14, 18, 19, AND 21 (N AND S).
- INSTALL TWO (2) 110 V/10A PERMANENT GFCI ELECTRIC OUTLETS INSIDE ONE MAIN PANEL BOX, AND CONDUIT FOR SUPPLY CONNECTION AS SHOWN ON THE PLANS. ARRANGE FOR SUPPLY CONNECTION AND METER INSTALLATION WITH THE UTILITY COMPANY.
- INSTALL TWO (2) PHONE LINE INSIDE ONE MAIN PANEL BOX, AND ROUTE TO THE MAIN LINE AND ARRANGE FOR CONNECTION BY THE TELECOMMUNICATION UTILITY COMPANY.

MISCELLANEOUS QUANTITIES (FOR INFORMATION ONLY)				
MATERIALS	DESCRIPTION	QUANTITY	DIMENSIONS	COMMENTS
JUNCTION BOX	AMJ812126 OR EQUIVALENT	28	12 IN X 12 IN X 6 IN	SEE INSTRUMENTATION LAYOUT PLAN VIEW FOR LOCATIONS
ENCLOSURE "A", NEMA 4X	7235K25 OR EQUIVALENT	2	66.6 IN X 36 IN X 17.2 IN	PROVIDED BY WMU
ENCLOSURE "B", NEMA 4X	7651K76 OR EQUIVALENT	1	51.3 IN X 36.6 IN X 17.9 IN	PROVIDED BY WMU
THREADED INSERTS, 3/4 INCH, GALVANIZED	DAYTON F5 OR EQUIVALENT	96		ALL PANELS
THREADED INSERTS, 1/2 INCH, GALVANIZED	DAYTON F5 OR EQUIVALENT	12		PIER 3 PIER CAP AS SHOWN IN DETAIL A
PVC CONDUIT, SCHEDULE 40, 3 INCH		750 LFT		
STEEL PLATE, GALVANIZED		20	13 IN X 4 IN X 1/2 IN	
THREADED ROD, GALVANIZED		56	2 IN LENGTH	
THREADED ROD, GALVANIZED		40	7 IN LENGTH	
U - BOLTS, GALVANIZED	LOW CARBON STEEL	20	1/2 IN X 4 IN X 5-1/2 IN	



WESTERN MICHIGAN UNIVERSITY
1903



MDOT
Michigan Department of Transportation

DECK INSTRUMENTATION DETAILS
PARKVIEW AVENUE OVER US-131

DATE 08-08-07	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS	SHEET 18 OF 61
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DRAWN BY: S. MAHL
CHECKED BY: _____
DATE: _____
FILE NAME: parkview_instrumentation.dgn

REVISIONS			
NO.	DESCRIPTION	DATE	BY

EXISTING CURVE DATA	
SB US 131 Δ = 23°00'35" RT. R = 2864.79' T = 583.10' L = 1150.49' E = 58.74' PC 540+07.95 PI 545+91.05 PT 551+58.44	NB US 131 Δ = 24°40'40" RT. R = 2864.79' T = 626.66' L = 1233.89' E = 67.74' PC 540+10.57 PI 546+37.23 PT 552+44.46

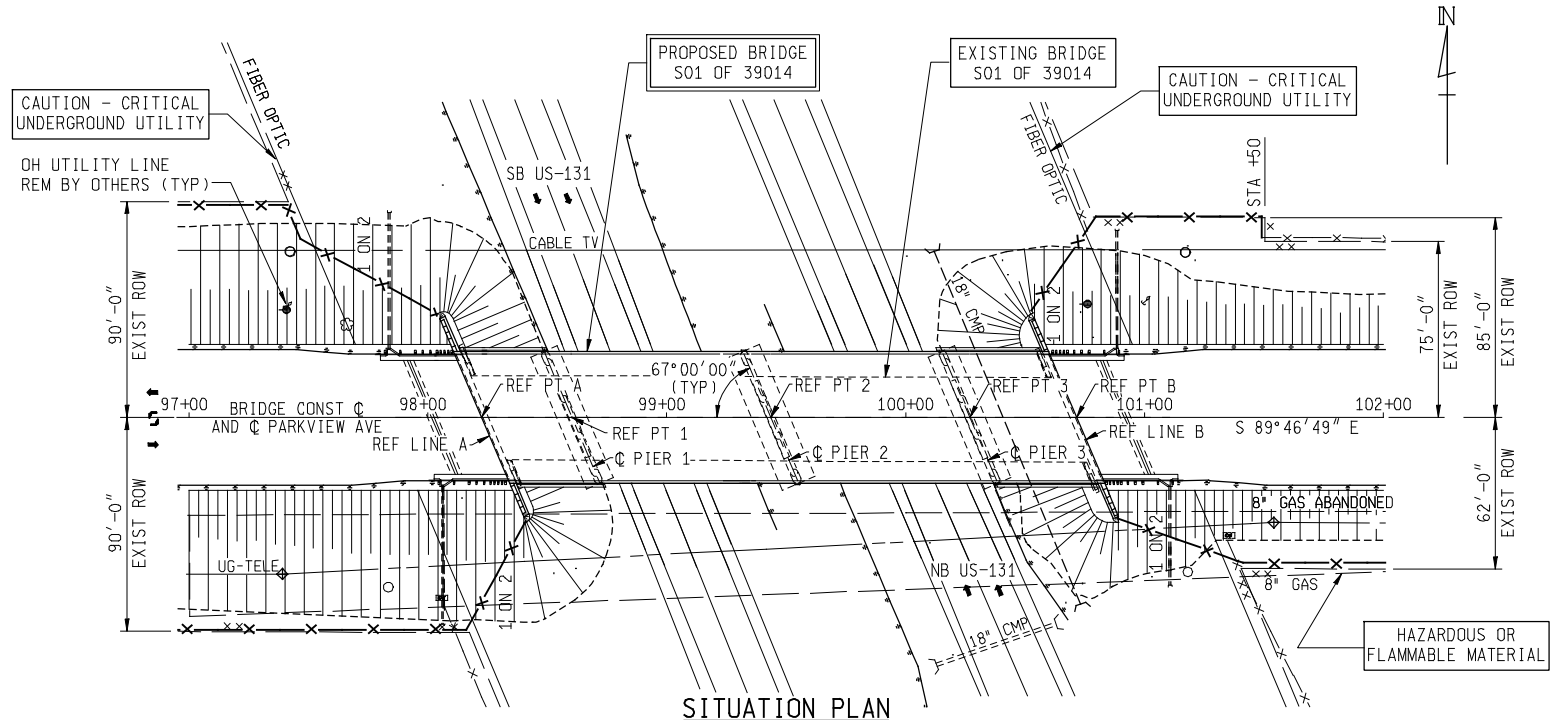
EXISTING STRUCTURE
THE EXISTING STRUCTURE IS A 4 SPAN STEEL "W" BEAM BRIDGE ON MULTI COLUMNS PIERS AND CURTAINWALL ABUTMENTS WITH CIP CONCRETE PILES. IT WAS BUILT IN 1962, PROVIDES 28'-0" CLEAR ROADWAY, AND WAS DESIGNED FOR H 20-44 LOADING.

WITNESSES
REFERENCE OFFSET POINT #: REFPTB2001
DESCRIPTION: Set Mag. nail in C of Parkview Avenue at the east side of the bridge deck of Parkview Avenue over US-131.
Station 100+68.482 Offset 0.000
COORDINATES: N - 279570.601 E - 12775753.621 Elev - 963.700
WITNESSES:
1. N14°W 17.64' Set Mag. nail on top of guard rail post.
2. S22°E 18.58' Set Mag. nail on top of guard rail post.
3. S46°E 26.86' Set Mag. nail on top of guard rail post.
4. N82°E 79.81' Set rerod w/a orange "Wade Trim Trav Pt" cap (CP#2)

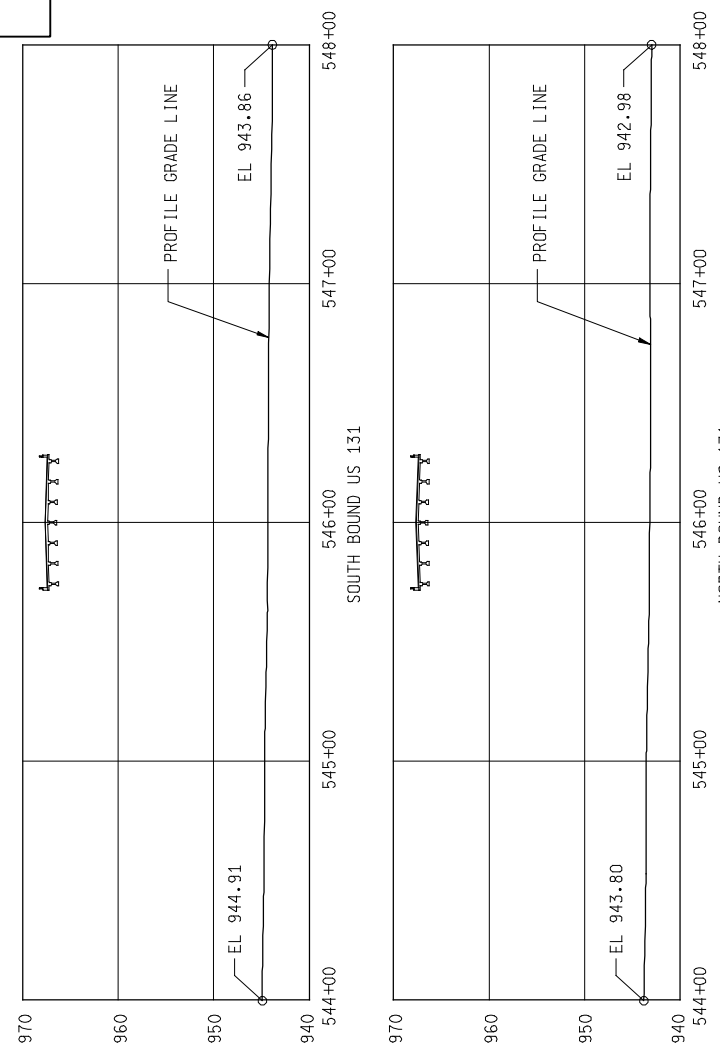
UTILITIES
SEE ROAD PLAN SHEETS, NOTE SHEET.

BENCHMARKS
BENCHMARK #: 387 (1001)
DESCRIPTION: Chisled square on the SE corner of the top tier of the SE abutment wall of the Parkview Avenue Bridge over US-131.
Station 98+16.249 Offset -22.583
COORDINATES: N - 279594.152 E - 12775501.476 Elev - 964.142
WITNESSES:
1. N5°E 5.35' Set Mag. nail in guard rail post.
2. N61°E 7.50' Set Mag. nail in guard rail post.
3. N82°E 12.47' Set Mag. nail in guard rail post.
4. S80°E 19.01' Center of "Traffic Light Ahead" sign post.

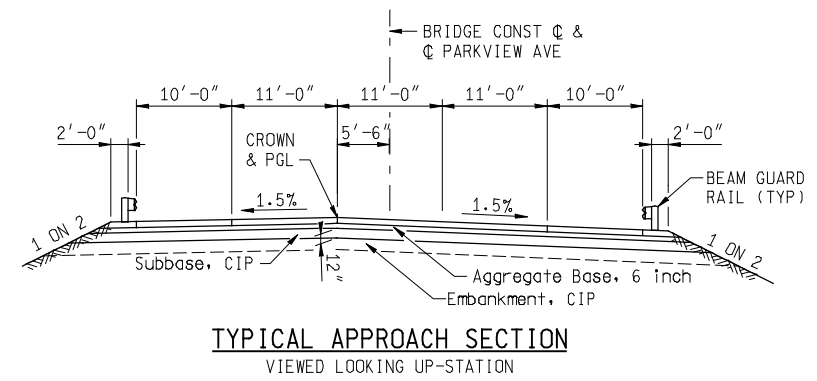
BENCHMARK #: 538 (1002)
DESCRIPTION: Chisled square on the NW corner of the top tier of the NW abutment wall of the Parkview Avenue Bridge over US-131.
Station 100+77.798 Offset 22.310
COORDINATES: N - 279548.256 E - 12775762.851 Elev - 964.194
WITNESSES:
1. S6°E 5.53' Set Mag. nail in guard rail post.
2. S27°E 5.93' Set Mag. nail in guard rail post.
3. S68°E 12.76' Set Mag. nail in guard rail post.
4. S86°W 29.00' Center of "Pass With Care" sign post.



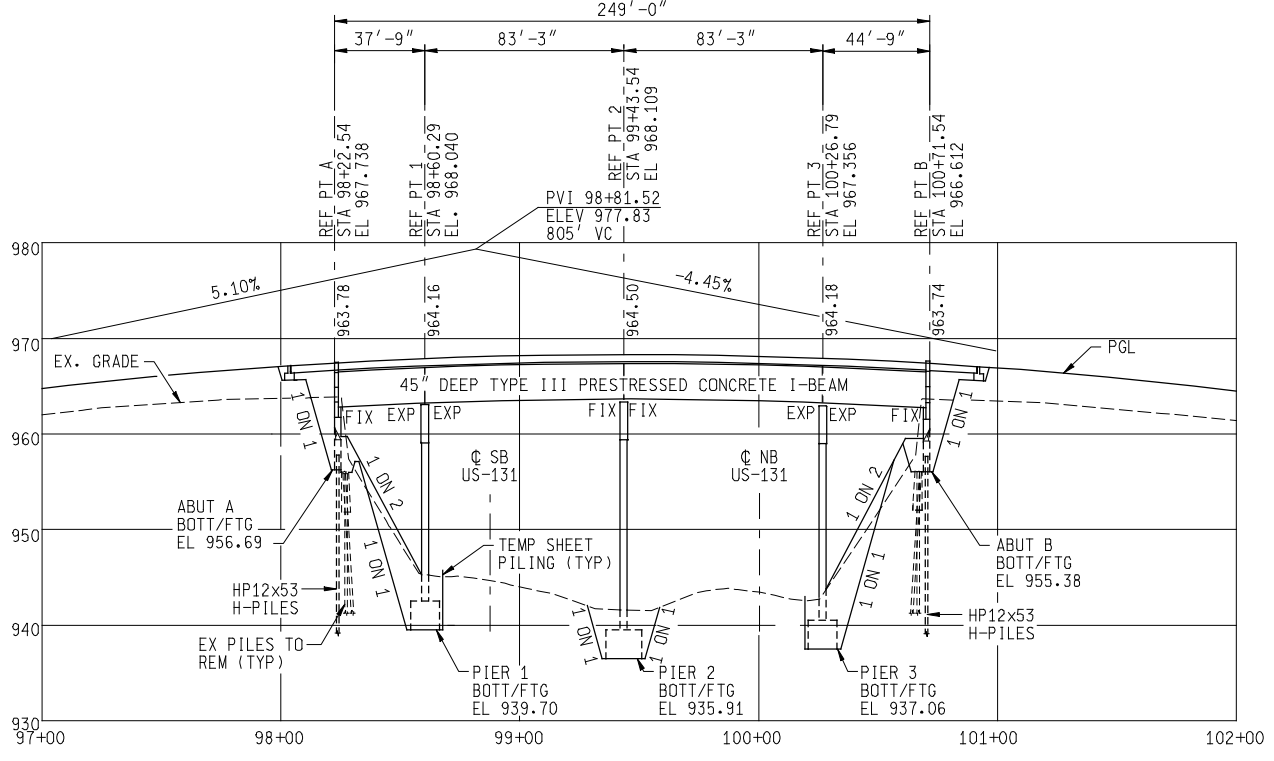
SITUATION PLAN
SCALE 1"=40'



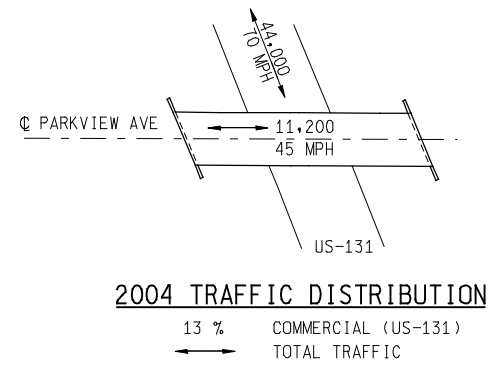
PROFILE
VERT SCALE 1"=10'
HOR SCALE 1"=40'



TYPICAL APPROACH SECTION
VIEWED LOOKING UP-STATION



PROFILE
VERT SCALE 1"=10'
HOR SCALE 1"=40'



2004 TRAFFIC DISTRIBUTION

NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES REMOVAL OF THE EXISTING BRIDGE, CONSTRUCTION OF THE PROPOSED BRIDGE, AND PLACING SLOPE PROTECTION TO THE LIMITS SHOWN. ALL OTHER WORK IS INCLUDED IN THE ROAD PLANS THAT ARE A PART OF THIS CONTRACT.
- THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE.
- THE DISTURBED GROUND ALONG US 131 SHALL BE REGRADED TO MATCH EXISTING.
- PARKVIEW AVE. TRAFFIC IS TO BE DETOURED OVER OTHER EXISTING ROADS.
- PIERS 1 AND 3 SHALL BE CONSTRUCTED AND BACKFILLED PRIOR TO PLACING OF ABUTMENT FILLS.
- PLAN ELEVATIONS REFER TO NAVD 88 DATUM.
- FUTURE SCARIFYING OF THE PRECAST CONCRETE DECK PANELS FOR REPLACEMENT OF THE WEARING SURFACE AND WATERPROOFING SHALL REMOVE NO MORE THAN 1/4" OF CONCRETE.

		GENERAL PLAN OF SITE PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 2 OF 61

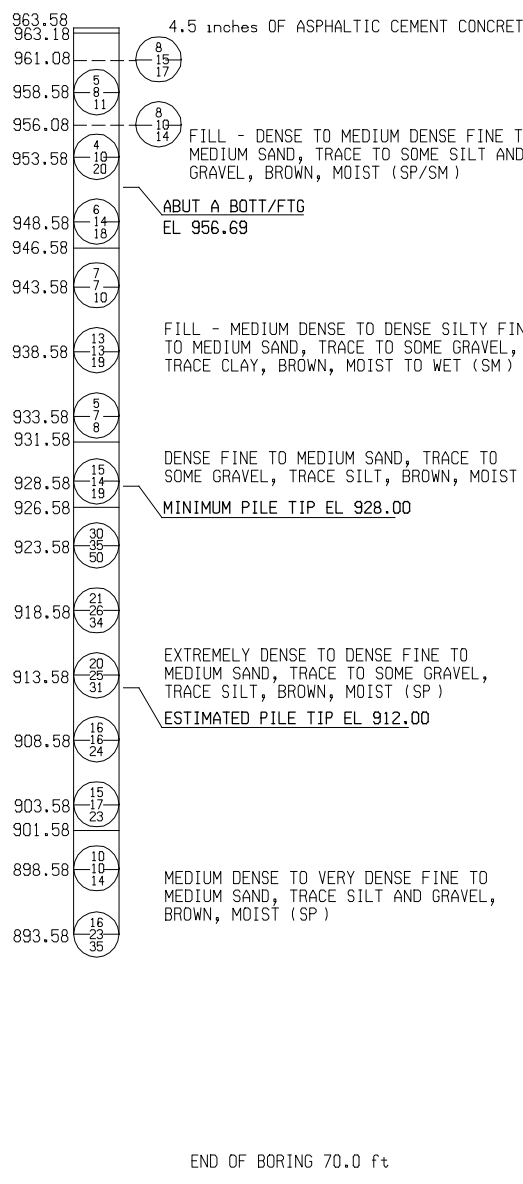
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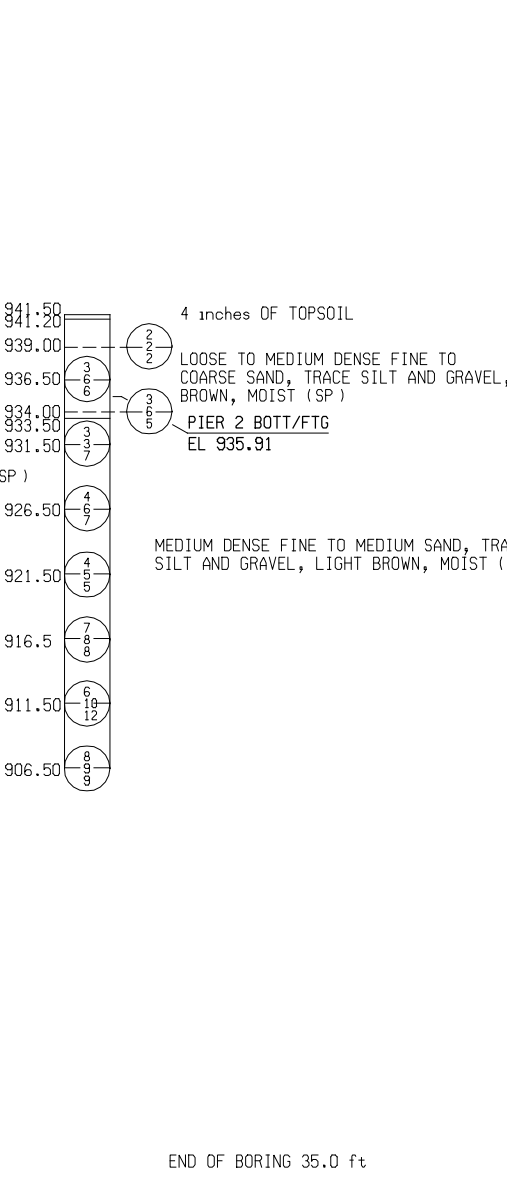
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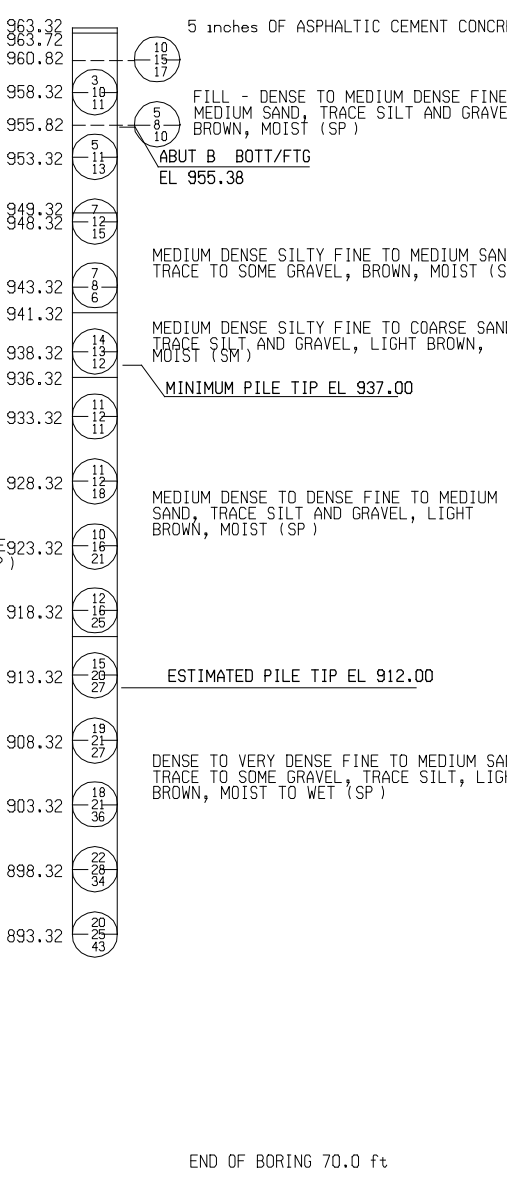
TEST BORING NO. S01-A
GROUND SURFACE ELEVATION: 963.58 ft.
DEPTH N: 279577.70
E: 12775985.09



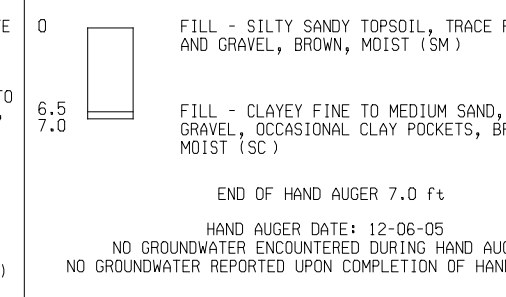
TEST BORING NO. S01-2
GROUND SURFACE ELEVATION: 941.50 ft.
DEPTH N: 279596.94
E: 12775618.00



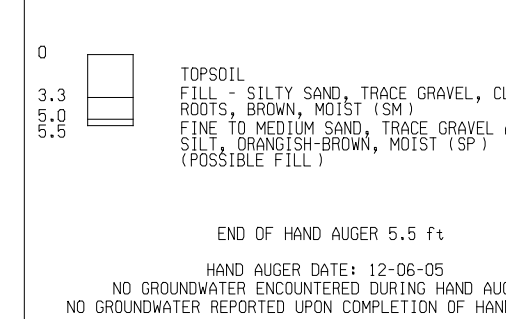
TEST BORING NO. S01-B
GROUND SURFACE ELEVATION: 963.32 ft.
DEPTH N: 279564.44
E: 12775784.73



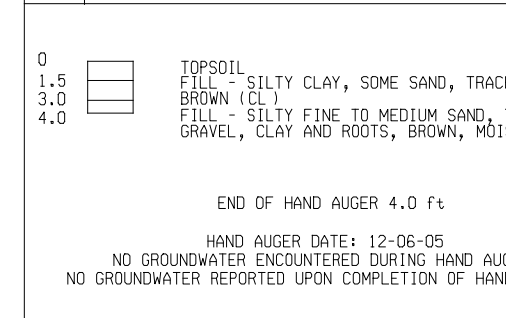
HAND AUGER NO. HA-1
GROUND SURFACE ELEVATION: 941.82 ft.
DEPTH N: 279641.21
E: 12775427.21



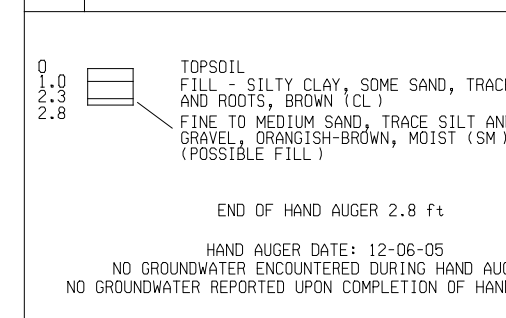
HAND AUGER NO. HA-2
GROUND SURFACE ELEVATION: 942.65 ft.
DEPTH N: 279500.62
E: 12775468.32



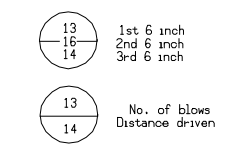
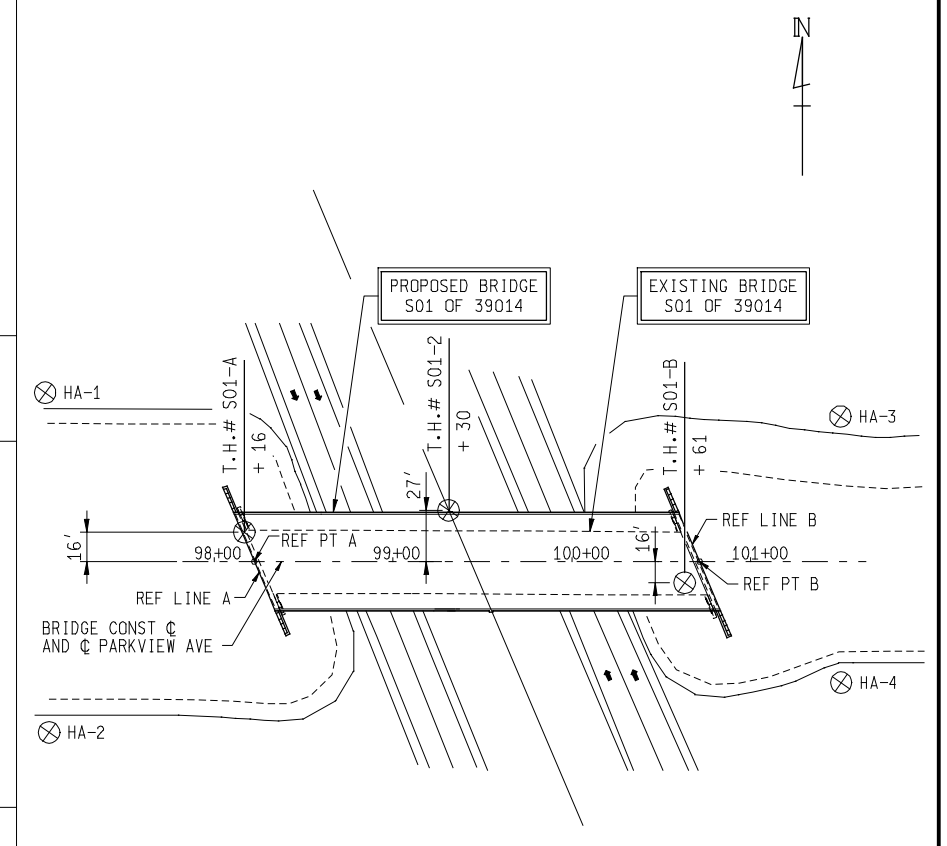
HAND AUGER NO. HA-3
GROUND SURFACE ELEVATION: 946.88 ft.
DEPTH N: 279639.53
E: 12775802.39



HAND AUGER NO. HA-4
GROUND SURFACE ELEVATION: 949.25 ft.
DEPTH N: 279505.74
E: 12775803.04



REVISIONS			
NO.	DESCRIPTION	DATE	BY



GENERAL NOTES

NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. (1 1/2" I.D.) SPLIT SPOON SAMPLER 3 SUCCESSIVE 6 inch INCREMENTS USING A 140 lb HAMMER FALLING 2.5 ft.

(WHERE THE SAMPLER IS DRIVEN DISTANCES OTHER THAN 18 inches, THE DISTANCE IS SHOWN IN THE CIRCLE WITH THE NUMBER OF BLOWS IN THE FORM OF A FRACTION.) (DISTANCE IS IN INCHES).

CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOIL RESISTANCE TO DRILLING TOOLS.

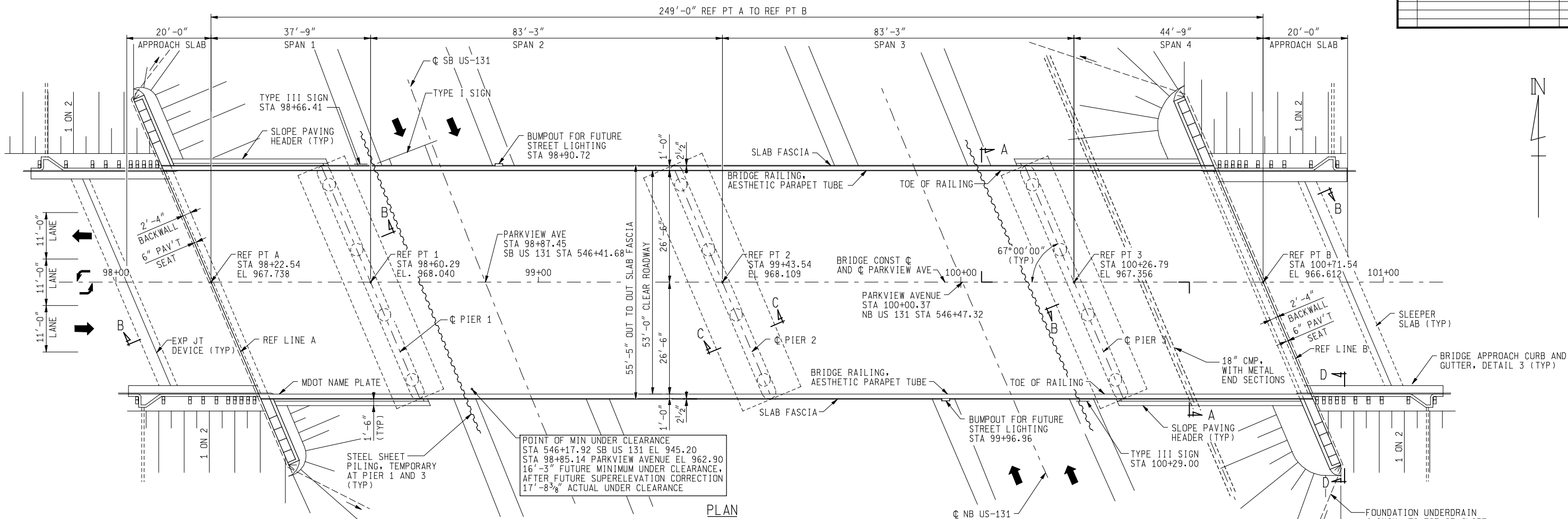
THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

GROUNDWATER LEVELS MAY FLUCTUATE AND MAY BE DIFFERENT AT THE TIME OF CONSTRUCTION.

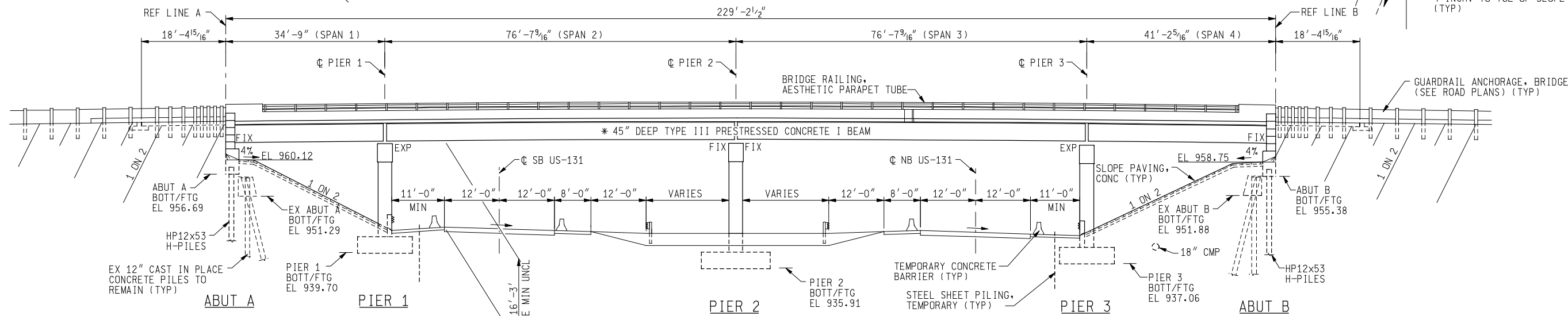
 SOMAT Engineering, Inc. Detroit - Taylor			BORING LOG PARKVIEW AVENUE OVER US 131			
			DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

DATE: _____ CORRECTED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____ FILE NAME: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN



ELEVATION

VIEWED NORMAL TO SUBSTRUCTURE UNITS
 RAILING AESTHETIC TREATMENT IS NOT SHOWN FOR CLARITY
 * 45" DEEP TYPE III PRESTRESSED CONCRETE I BEAM TYPICAL ALL SPANS

MISCELLANEOUS QUANTITIES					
1	LS	Structures, Rem	8486	Sft	False Decking
10000	Dir	Rem and Disposal of Asbestos Materials	2	Ea	Bridge Sign Connection, Conc, Type A1
1640	Cyd	Excavation, Fdn	1	Ea	Bridge Sign Connection, Conc, Type C
1943	Cyd	Backfill, Structure, CIP	1	Ea	Sign, Type I, Rem
510	Syd	Slope Paving, Conc	160	Ft	Sign, Type I, Erect, Salv
182	Ft	Slope Paving Header	2	Ea	Culv, Cl A, CSP, 18 inch
889	Sft	Steel Sheet Piling, Temp			Culv End Sect, Metal, 18 inch
551	Cyd	Conc Quality Assurance, Structure			

NOTES:

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20-44 LOADING, LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THE DESIGN OF THE SUBSTRUCTURE. THE ALLOWABLE STRESS METHOD OF DESIGN WAS USED FOR THE DESIGN OF THE SUPERSTRUCTURE.

FOR DETAILS OF SLOPE PROTECTION, SEE STANDARD PLAN B-102-SERIES.

FALSE DECKING SHALL INCLUDE THE AREA OF SPAN 2 AND SPAN 3 OVER THE TRAVEL WAY AND SHOULDERS. THE ESTIMATED AREA IS 3308 SQUARE FEET DURING REMOVAL AND 5178 SQUARE FEET DURING PROPOSED CONSTRUCTION.

THE EXISTING TYPE I GUIDE SIGN SHALL BE REMOVED, SALVAGED AND RE-ERECTED ON A NEW BRIDGE SIGN CONNECTION, CONC, TYPE C SIGN SUPPORT. THE BRIDGE SIGN CONNECTION, TYPE C SIGN SUPPORT SHALL BE FABRICATED AND ERRECTED TO THE DIMENSIONS FOR A FUTURE 180" X 102" H SIGN IN ACCORDANCE WITH STANDARD PLAN VIII-810AE. FUTURE SIGN TO BE ERRECTED BY OTHERS. ATTACHMENT TO DECK SHALL USE ANCHOR IN PRECAST DECK PANELS AND BEAM. NO FIELD DRILLING TO DECK PANELS SHALL BE ALLOWED.

THE TYPE III SIGN SHALL BE REMOVED, SALVAGED, AND RE-ERECTED ON A NEW BRIDGE SIGN CONNECTION, CONC, TYPE A1 MOUNTED ON THE BARRIER PER A 0° SKEW CONNECTION. SEE ROAD PLANS FOR QUANTITY.

TEMPORARY CONCRETE BARRIER QUANTITIES ARE INCLUDED IN THE ROADWAY PLANS.

GENERAL PLAN OF STRUCTURE
PARKVIEW AVENUE OVER US 131

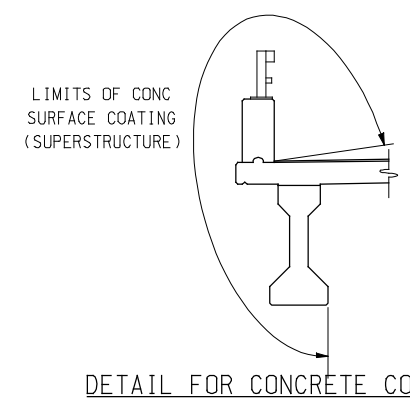
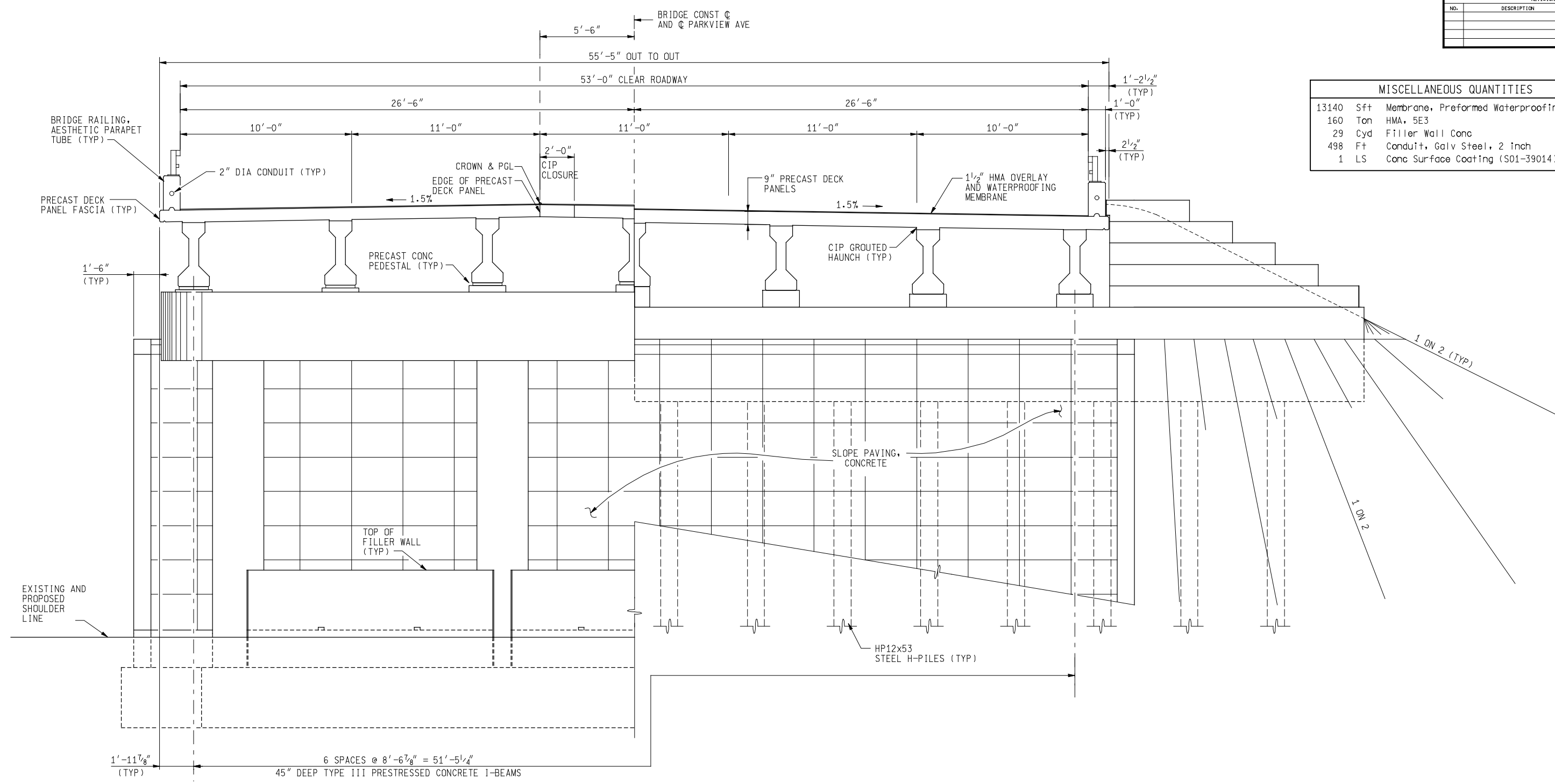
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
8/2/2007	S01 OF 39014	81325A	GROTHENHUIS	4 OF 61

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DATE: _____ CORRECTED BY: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MISCELLANEOUS QUANTITIES	
13140 Sft	Membrane, Preformed Waterproofing
160 Ton	HMA, 5E3
29 Cyd	Filler Wall Conc
498 Ft	Conduit, Galv Steel, 2 inch
1 LS	Conc Surface Coating (S01-39014)



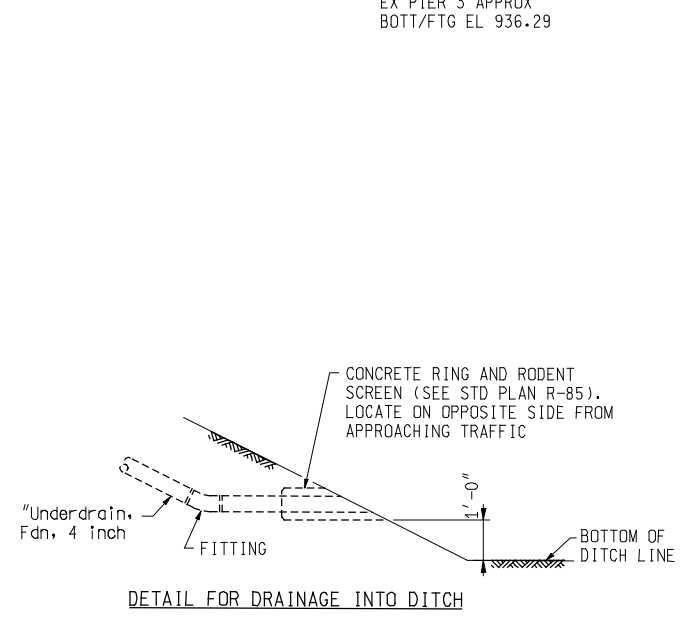
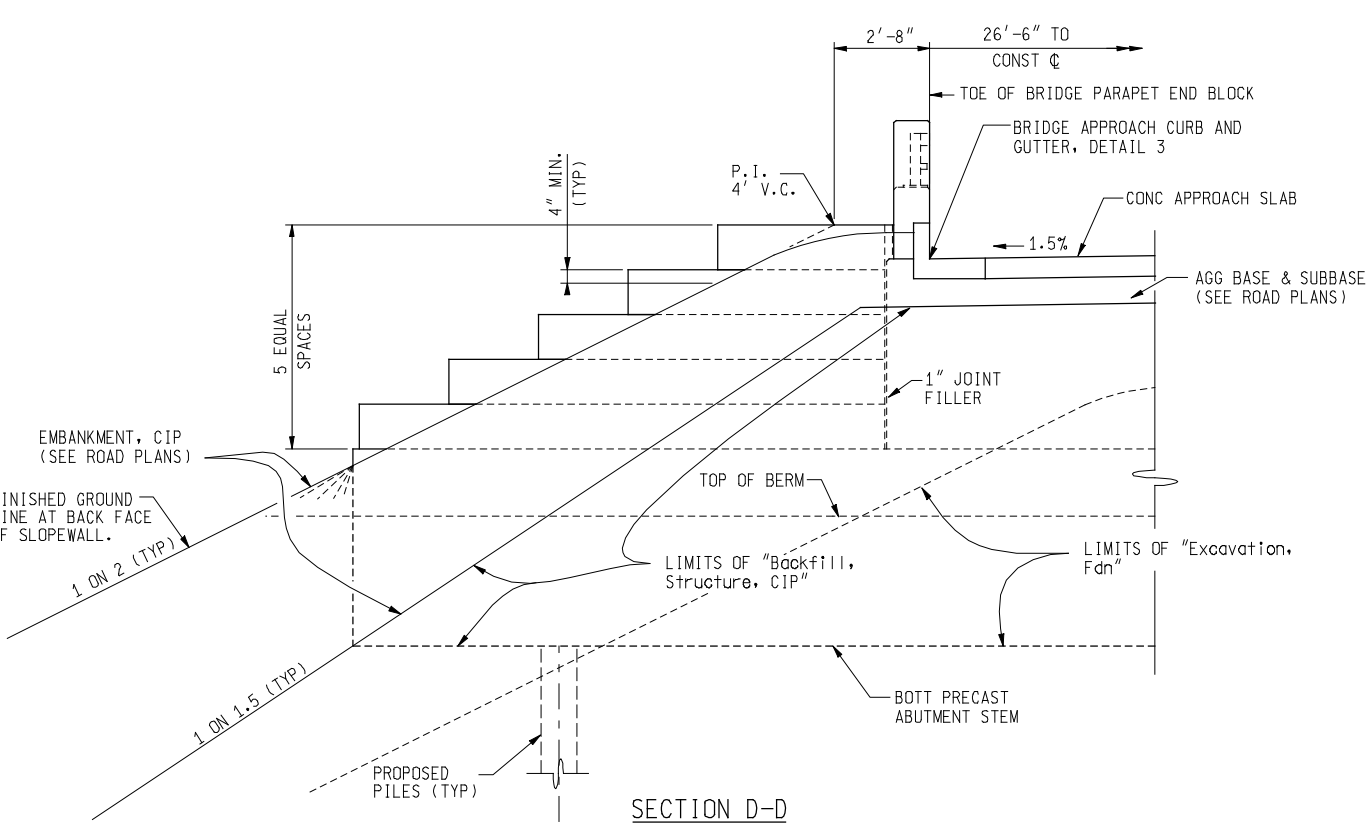
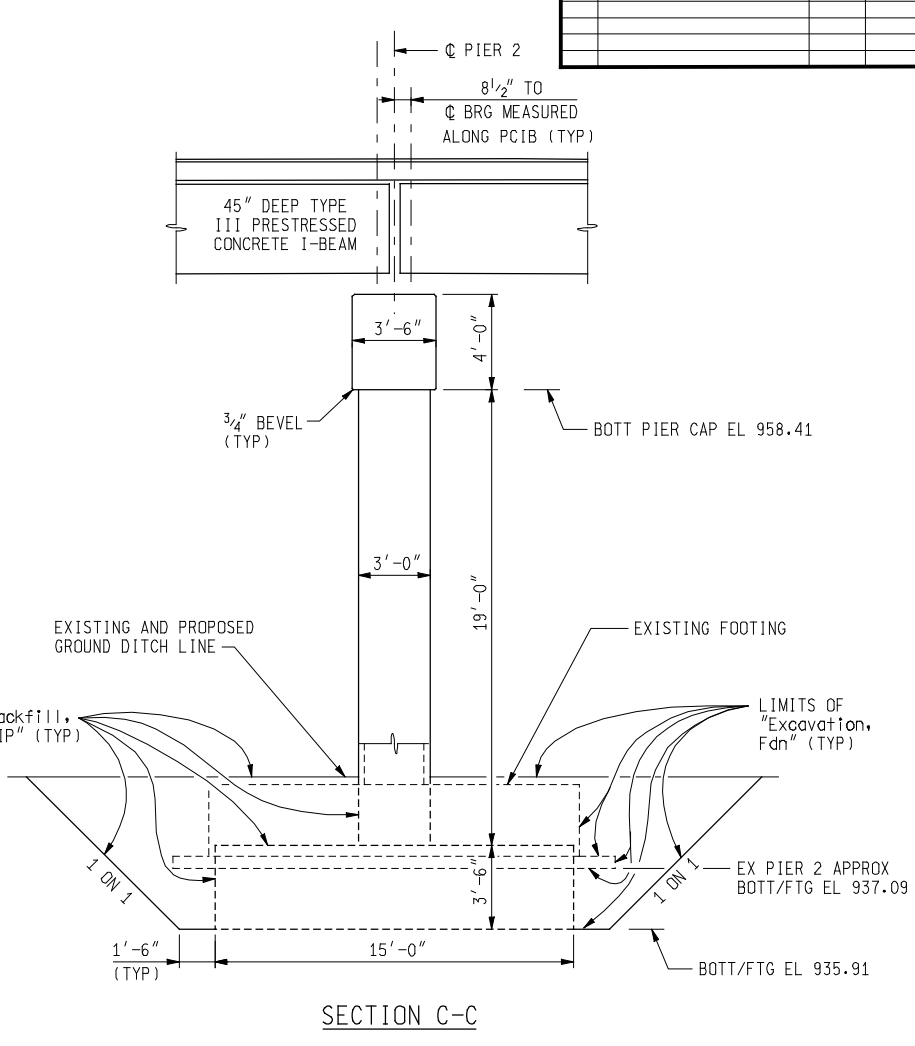
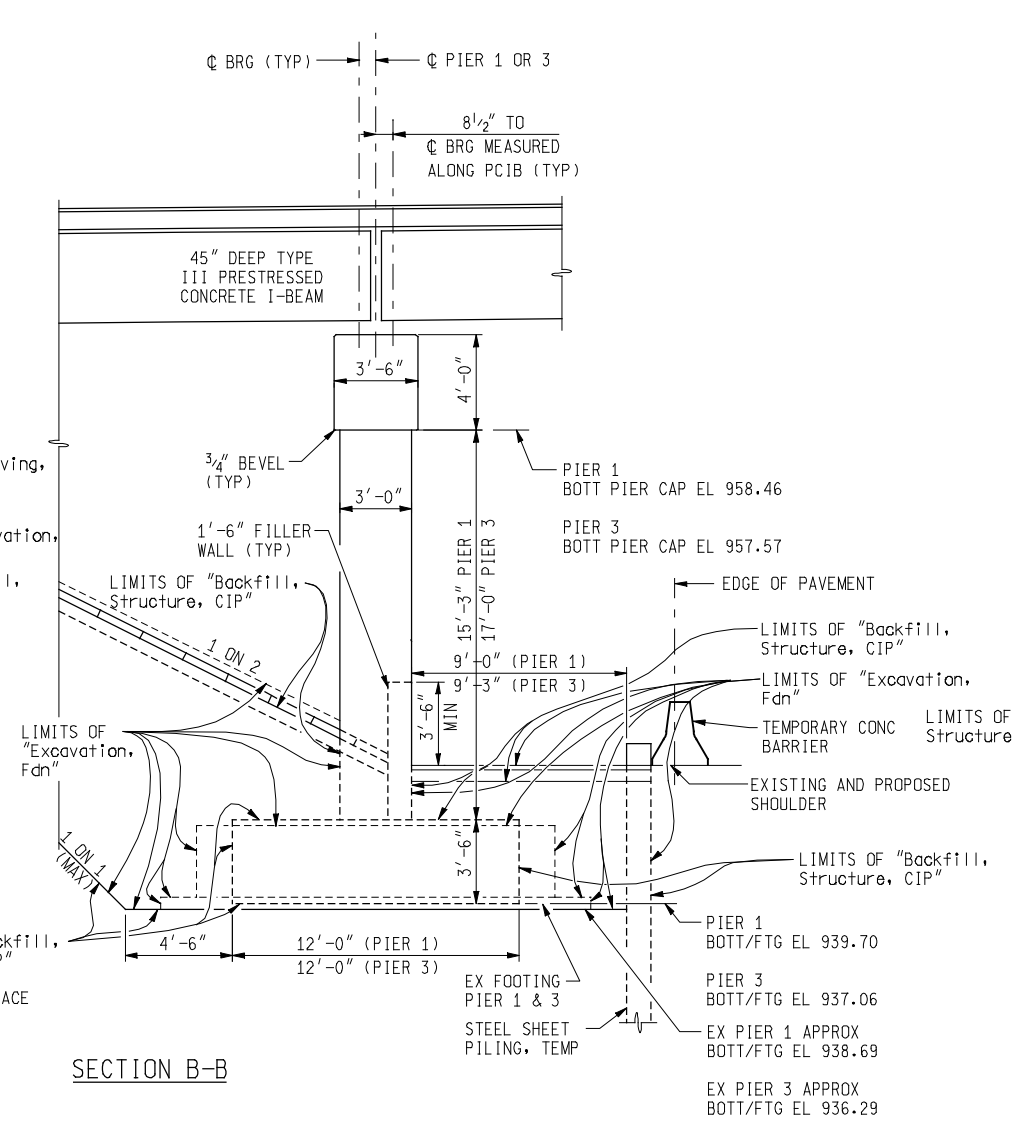
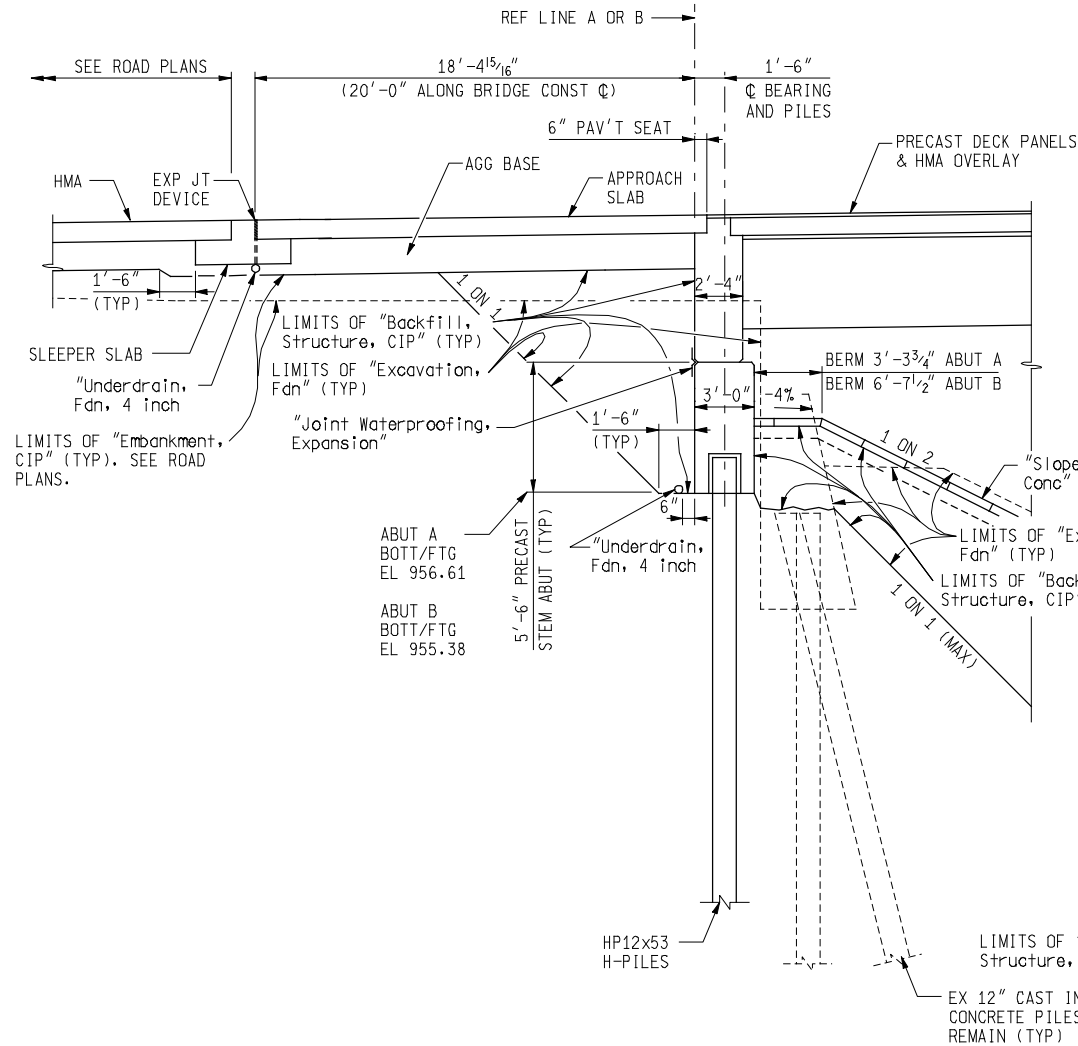
NOTES:
 CONCRETE SURFACE COATING SHALL BE APPLIED TO THE SUPERSTRUCTURE, AS SHOWN IN THE COATING DETAIL. ALL EXPOSED PIER SURFACES, FILLER WALL, ENTIRE EXPOSED SURFACE OF ABUTMENT AND BACKWALL, AND SLOPE WALLS. FOR CONTRACTORS INFORMATION ONLY, ESTIMATED QUANTITY IS 7150 SQUARE FEET.
 REFER TO ROAD SHEETS FOR HMA MIX DESIGN.

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		GENERAL PLAN OF STRUCTURE PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 5 OF 61

REVISIONS			
NO.	DESCRIPTION	DATE	BY



MISCELLANEOUS QUANTITIES	
448 Ft	Underdrain, Fdn, 4 inch
8 Ea	Underdrain, Outlet Ending, 4 Inch

GENERAL PLAN OF STRUCTURE
PARKVIEW AVENUE OVER US 131

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
8/2/2007	S01 OF 39014	81325A	GROTHENHUIS	6 OF 61

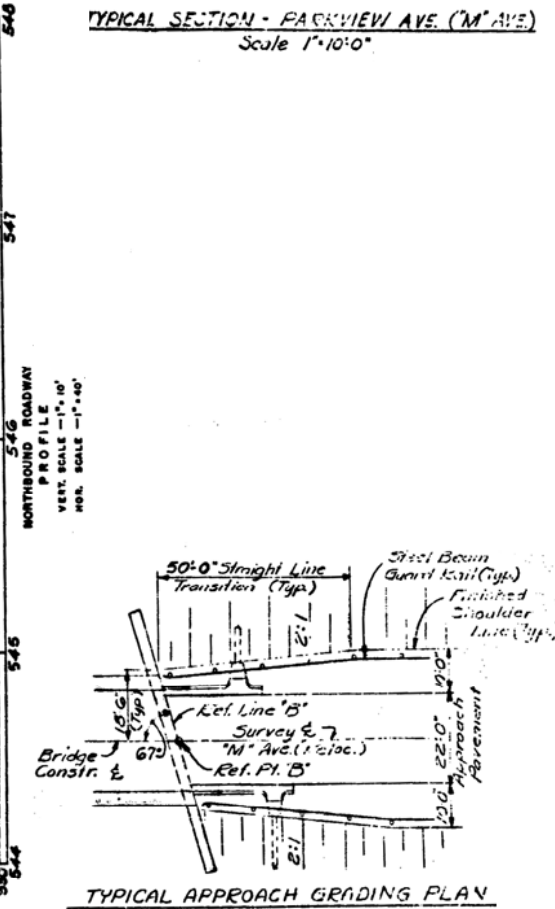
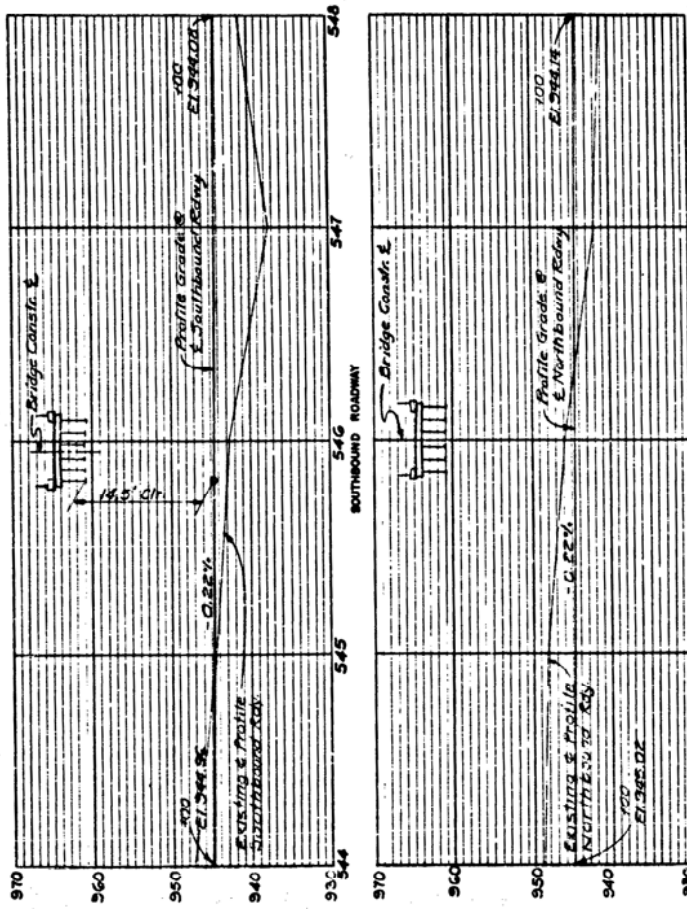
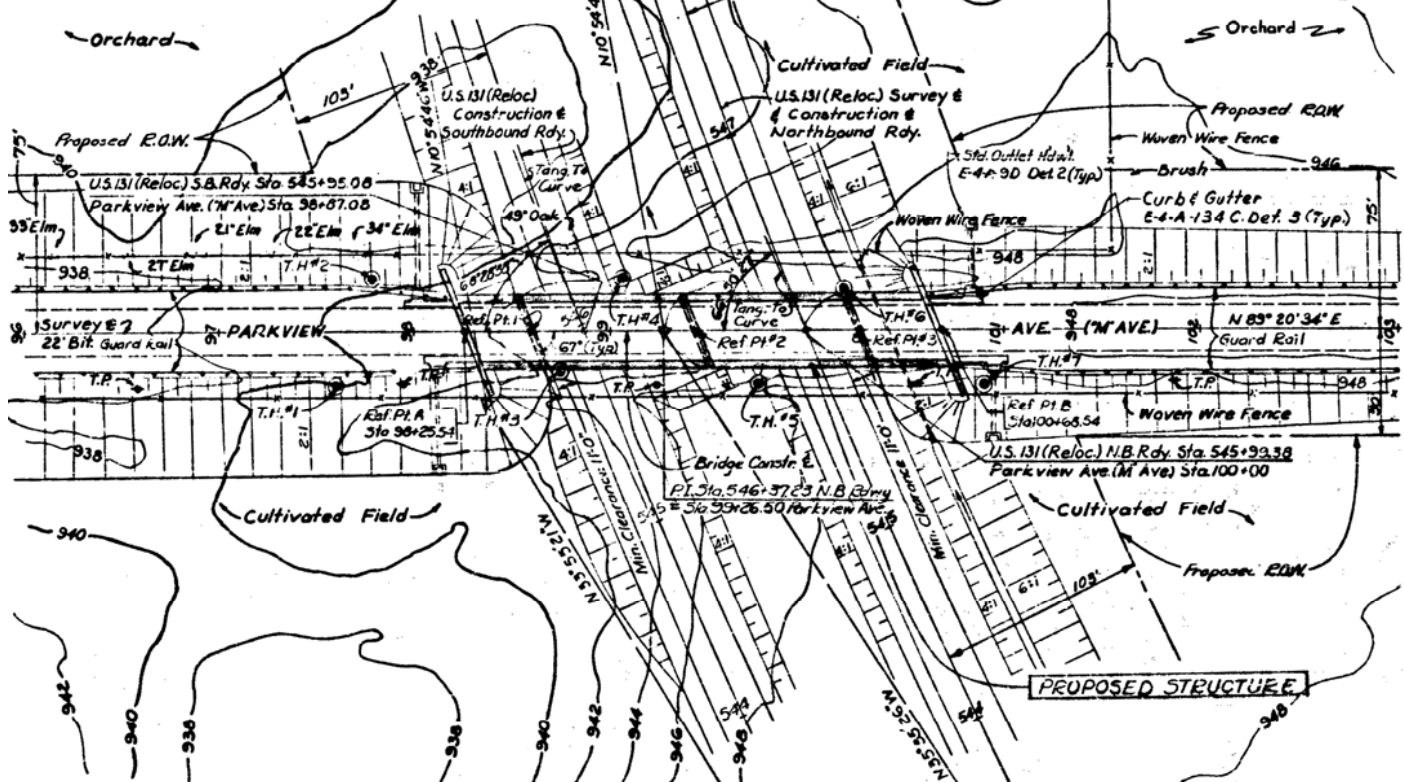
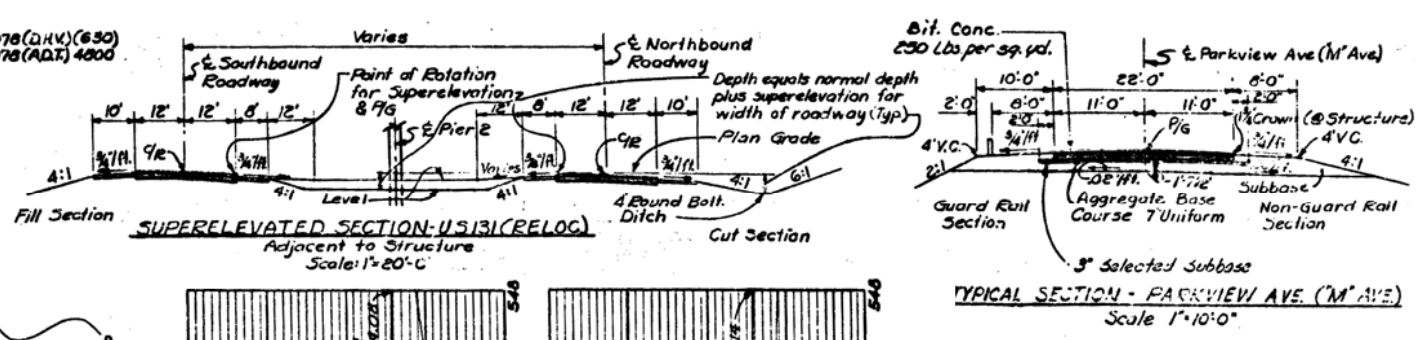
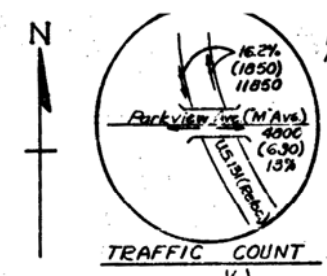
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REVISIONS			
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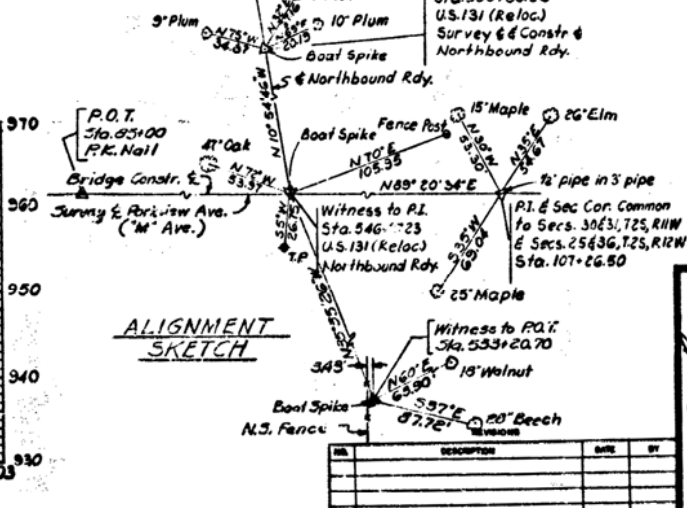
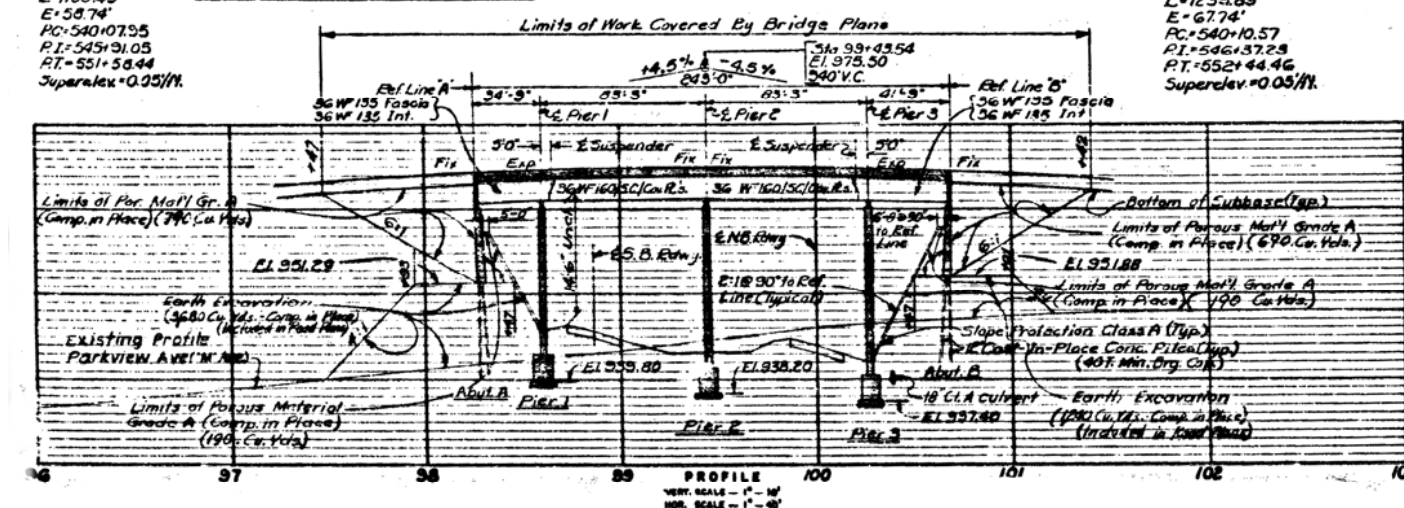
BENCH MARKS		EXISTING UTILITIES	
Bench Mark No. 106 - Elev. 938.78 P.K. Nail and B.M. Tag in N.E. Root of 2' Elm 275' Lt. of Sta. 547+27 (S.B. Survey L.)	Michigan Bell Telephone Co., Pole Line 28' South of E. Parkview Avenue carrying 9 wires and 1 cable	Sta.	Dist.
Bench Mark No. 108B - Elev. 943.55 P.K. Nail and B.M. Cap in S.E. Root of 26' Maple 85' Lt. of Sta. 106+98.	Consumers Power Company 8" S. high pressure gas line buried 30" a variable distance South of E. Parkview Ave. For distances to gas line, see table below:	95	39.6
Bench Mark No. 109 - Elev. 948.03 Chiseled Square in Concrete Foundation N.W. Corner of Storage Shed 115' Rt. of Sta. 554+93.		101	39.5
		96	42.0
		102	39.5
		97	41.0
		103	39.0
		98	40.5
		104	39.0
		99	40.0
		105	38.0
		100	42.0



S.B. Entry Curve Data
 $\Delta = 24^{\circ}00'55"$ Rt.
 $D = 2^{\circ}00'$
 $R = 2064.73'$
 $T = 583.10'$
 $L = 1150.49'$
 $E = 58.74'$
 $PC = 540+07.55$
 $PI = 545+31.05$
 $PT = 551+58.44$
 $Superelev. = 0.05/\%$

S.B. Const. & Station Equation
 $Sta. 552+18.34 \text{ Back} + 36 \text{ 552} + 44.46 \text{ Ahead}$
 $Line Slope = 25.12'$

N.B. Entry Curve Data
 $\Delta = 24^{\circ}40'40"$ Rt.
 $D = 2^{\circ}00'$
 $R = 2064.73'$
 $T = 626.66'$
 $L = 1233.89'$
 $E = 67.74'$
 $PC = 540+10.57$
 $PI = 546+37.23$
 $PT = 552+44.46$
 $Superelev. = 0.05/\%$



GENERAL NOTES

Piers 1 & 3 (and adjacent class A culvert) shall be constructed and backfilled prior to construction of the abutments.

The work covered in bridge plans includes construction of the proposed bridge, placing of porous material Grade A and placing of Slope Protection Class A to the limits shown.

Traffic is to be maintained over temporary road approx. 450' south of the existing Parkview Ave. (M Ave.)

All work, except as noted above, is included in Road Plans.

CONTROL SECTION 3901A

MICHIGAN STATE HIGHWAY DEPARTMENT
 U.S. 131 (RELOC.) CROSSING "M" AVE. 4.0 MILES SOUTHWEST OF KALAMAZOO

GENERAL PLAN OF SITE

HAZELT & ERDAL - CONSULTING ENGINEERS - FILE NO. 1307H

APPROVED: *J. U. Murray* 2/21/03
 COORDINATING ENGINEER

APPROVED: _____
 ENGINEER OF DESIGN CONSULTANTS

SOI OF 3901A

JOB NO. 81325A

DO NOT WORK FROM THIS SHEET
 THE INFORMATION SHOWN HERE
 IS FOR REFERENCE ONLY. NO
 PAY ITEMS ARE SHOWN.

PARSONS **MDOT**
 Michigan Department of Transportation

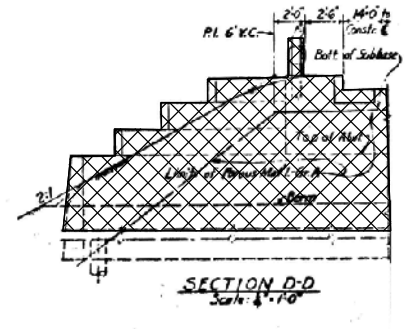
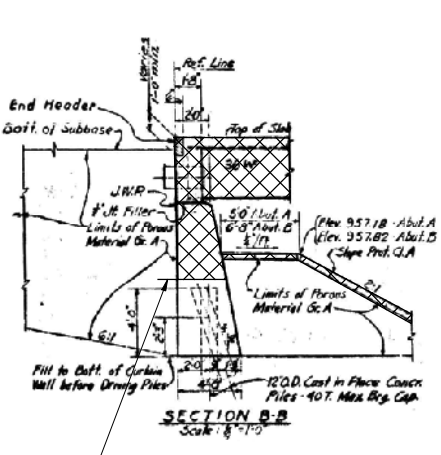
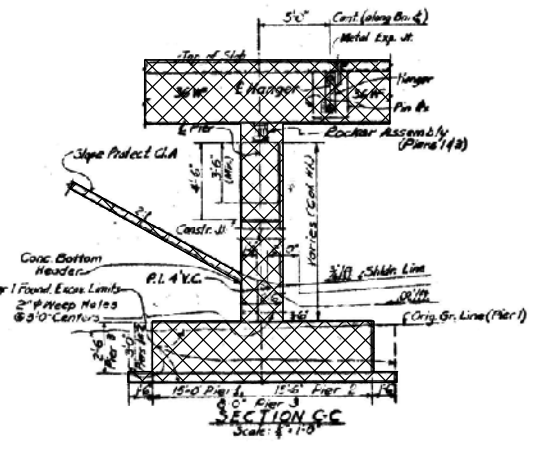
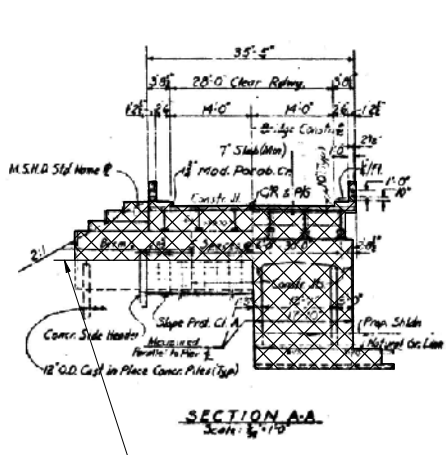
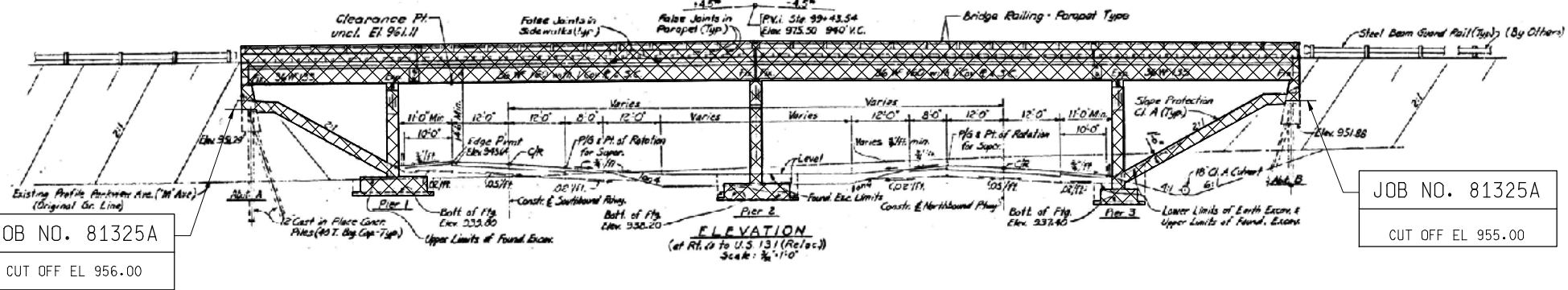
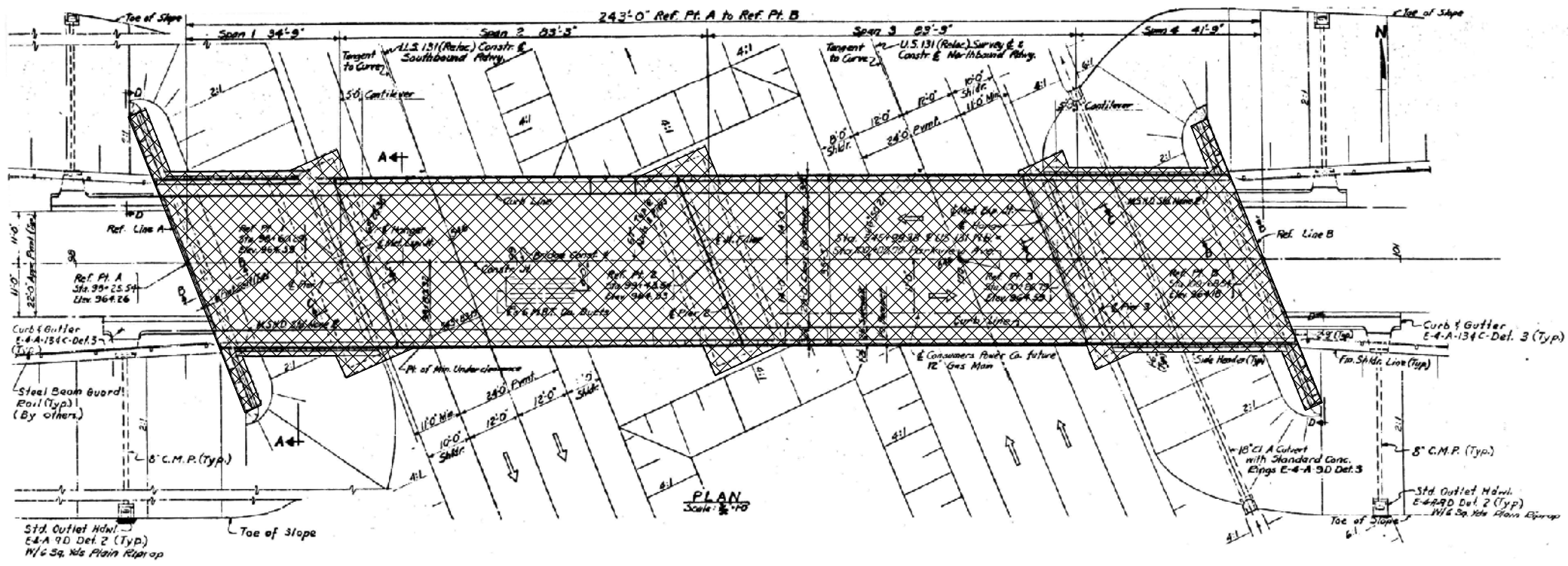
EXISTING GENERAL PLAN OF SITE
 PARKVIEW AVENUE OVER US 131

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



MISCELLANEOUS QUANTITIES

ITEM	AMOUNT	UNIT
Slope Protection Class A	820	Sq. Yds.
Beam Material for AC curbs	6700	Cu. Yds.

*Crested Riprap shall not be used on this project.
**Includes 1000 C.Y. behind abutments, 800 C.Y. in front of abutments, 20 C.Y. under slope paving.

NOTES:
If no construction, foundation material is encountered which appears incapable of supporting the piers without settlement, the Construction Division in basing is to be contacted for instruction.

CONTROL SECTION 3901A

MICHIGAN STATE HIGHWAY DEPARTMENT
U.S. 131 RELOC. CROSSING "W" AVE. 4.0 MILES SOUTHWEST OF KALAMAZOO

GENERAL PLAN OF STRUCTURE

DATE: 8/2/2007
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

SOI of 3901A

JOB NO. 81325A

NOTES:
REMOVAL OF THE 6 - 3 1/2" Ø TRANSITE DUCTS SUSPENDED FROM THE DECK SHALL BE INCLUDED IN THE PAY ITEM "Rem and Disposal of Asbestos Materials".
HMA OVERLAY WAS ADDED TO BRIDGE IN 2002.
SALVAGE TEMPORARY SUPPORTS AT BEAM ENDS. RETAIN FOR MDOT MAINTENANCE. PAID FOR AS "Structures, Rem".
FOR REMOVAL OF CULVERT SEE ROAD PLANS.

JOB NO. 81325A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW LABELED WITH THIS PROJECT'S JOB NUMBER.

□ PROPOSED WORK
⊗ DENOTES REMOVAL PORTIONS

PARSONS **MDOT** Michigan Department of Transportation

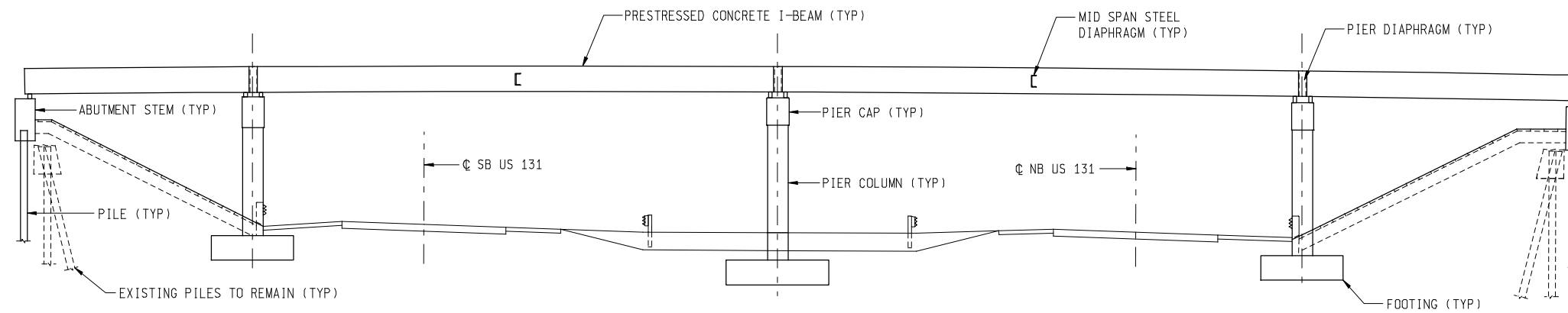
EXISTING GENERAL PLAN OF STRUCTURE (REMOVAL)
PARKVIEW AVENUE OVER US 131

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET
8/2/2007	S01 OF 39014	81325A	GROTENHUIS	8 OF 61

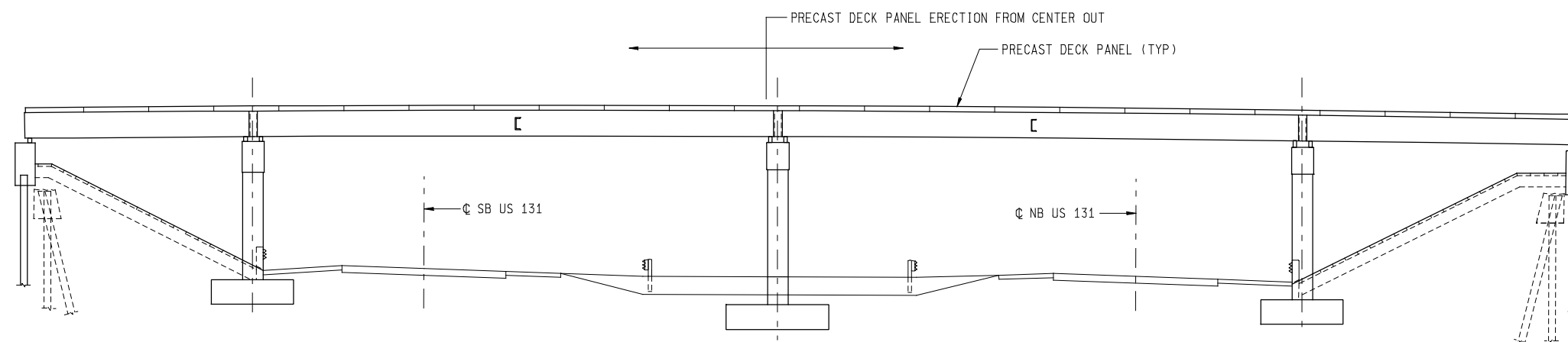
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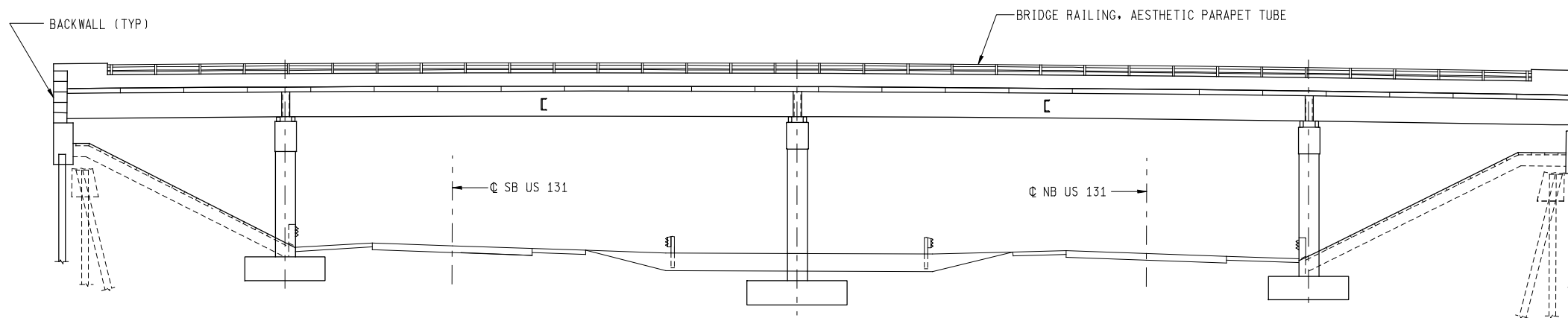
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ERECTION SEQUENCE - PHASE I



ERECTION SEQUENCE - PHASE II & III



ERECTION SEQUENCE - PHASE IV
BARRIER RAILING AESTHETIC TREATMENT
NOT SHOWN FOR CLARITY

PHASE I

CAST PIER FOOTINGS IN PLACE.
ONCE FOOTING CONCRETE REACHES A MINIMUM STRENGTH OF 2500 PSI, ERECT PRECAST PIER COLUMNS AND GROUT CONNECTIONS TO FOOTINGS. ONCE GROUT REACHES A MINIMUM STRENGTH OF 3000 PSI, ERECT PRECAST PIER CAPS AND GROUT CONNECTIONS TO COLUMNS.
AT ABUTMENTS, DRIVE PILES AND ERECT PRECAST ABUTMENT STEM ON PILES. TOP OF ABUTMENT STEMS SHALL BE CONSTRUCTED LEVEL AND TO THE PLAN ELEVATIONS.
GROUT CONNECTIONS TO PILES AND ALLOW GROUT AT PIER CAP AND PILE CONNECTIONS TO REACH A MINIMUM STRENGTH OF 3000 PSI PRIOR TO ERECTING BEAMS.
INSTALL ELASTOMERIC BEARINGS AT PIERS AND ELASTOMERIC PADS AT ABUTMENTS.
ERECT PRESTRESSED CONCRETE I-BEAMS.
ERECT MIDSPAN STEEL DIAPHRAGMS AND INSTALL FORMWORK AND REBAR FOR PIER DIAPHRAGMS.
CAST CONCRETE PIER DIAPHRAGMS.

PHASE II

CONDUCT AN AS-BUILT SURVEY OF BEAM ELEVATIONS.
CALCULATE SHIM PACK THICKNESS FOR EACH SUPPORT LOCATION.
INSTALL SHIM PACKS ON TOP OF BEAMS.
ERECT PRECAST DECK PANELS FROM CENTER OF BRIDGE OUT AS INDICATED BY ARROWS, SUPPORT ON SHIM PACKS.
INSTALL BACKING ROD AND CONNECT PT DUCTS.
CONDUCT AN AS-BUILT SURVEY AFTER ALL PRECAST DECK PANELS ARE ERECTED, PERFORM ADJUSTMENTS TO SHIM PACKS AS REQUIRED.
INSTALL FORMWORK AND REBAR FOR LONGITUDINAL CIP CLOSURE.
GROUT DECK PANEL JOINTS AND COVER FOR CURING.
CAST LONGITUDINAL CIP CLOSURE.

PHASE III

ONCE LONGITUDINAL CIP CLOSURE CONCRETE AND DECK PANEL JOINT GROUT REACHES A MINIMUM STRENGTH OF 3500 PSI, INSTALL AND STRESS LONGITUDINAL POST-TENSIONING TENDONS ACCORDING TO THE STRESSING SEQUENCE AND FORCES SPECIFIED.
INSTALL COIL BOLTS.
GROUT HAUNCH AND SHEAR CONNECTION POCKETS.

PHASE IV

INSTALL FORMWORK AND REBAR AND CAST CONCRETE BACKWALL.
INSTALL FORMWORK AND REBAR AND CAST CONCRETE BRIDGE RAILING, AESTHETIC PARAPET TUBE.
PLACE WATERPROOFING MEMBRANE AND HMA OVERLAY.

NOTES:

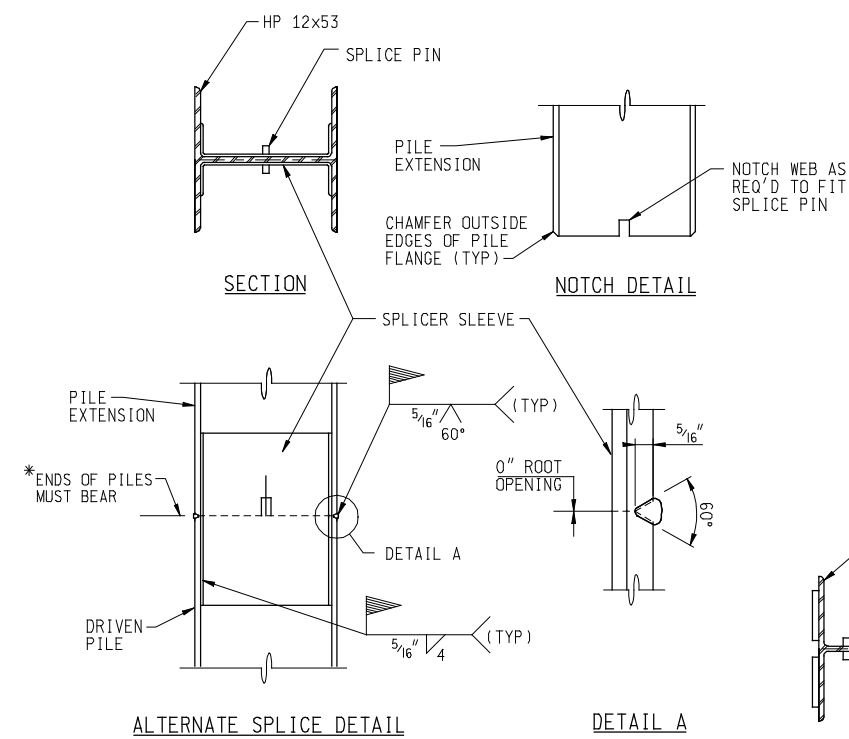
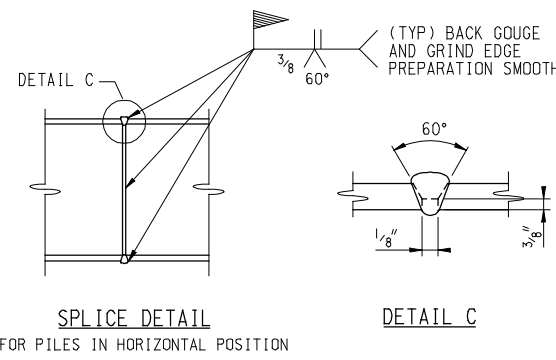
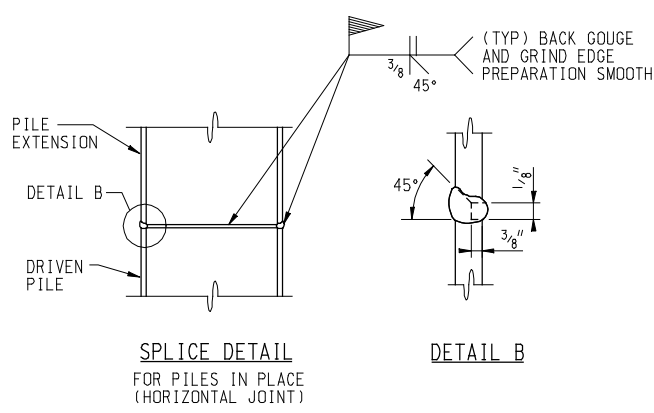
THIS SHEET DETAILS THE CONSTRUCTION SEQUENCE THAT THE CONTRACTOR SHALL FOLLOW. ANY DEVIATION FROM THE CONSTRUCTION SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL 30 DAYS PRIOR TO IMPLEMENTATION.

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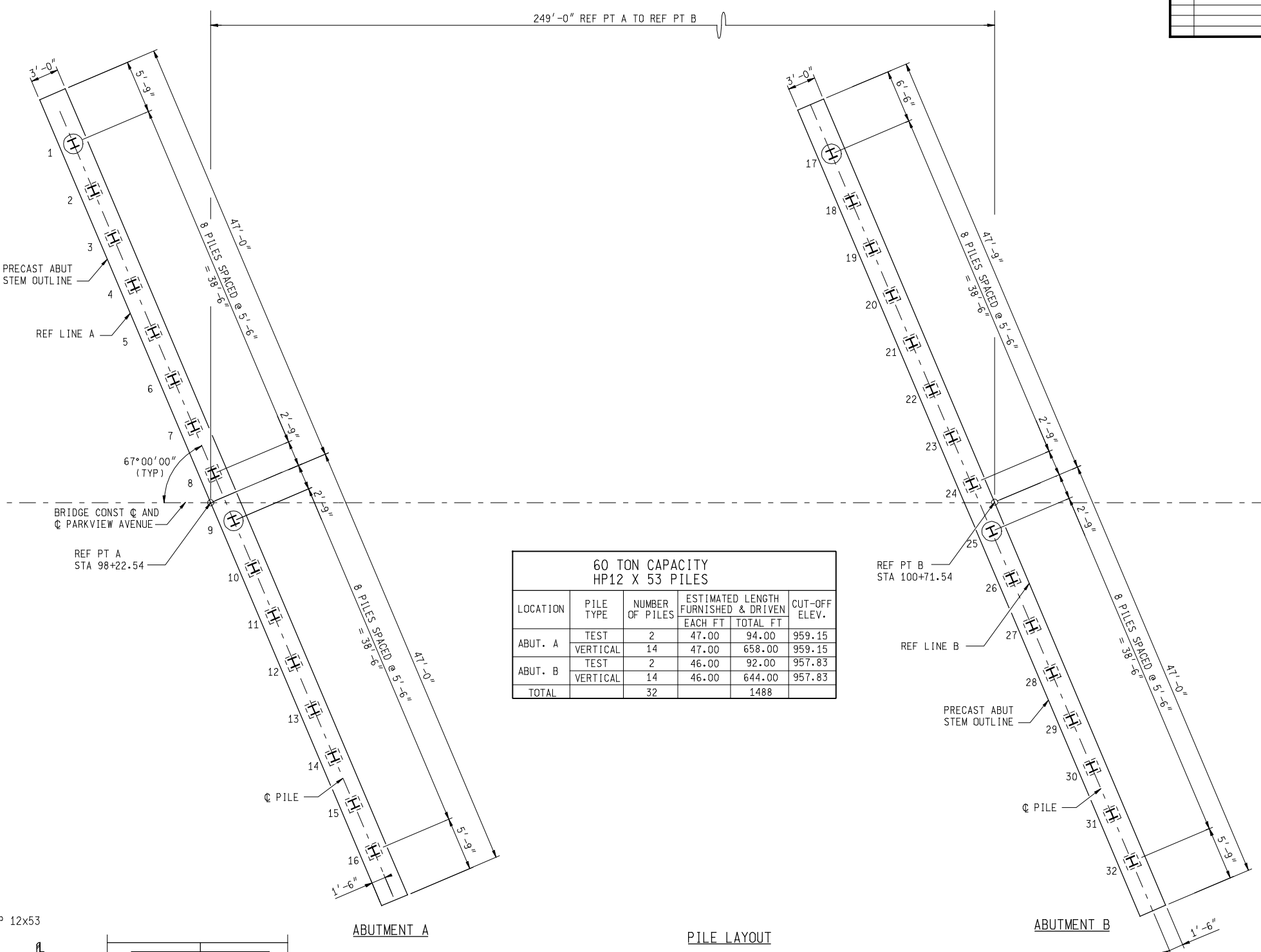
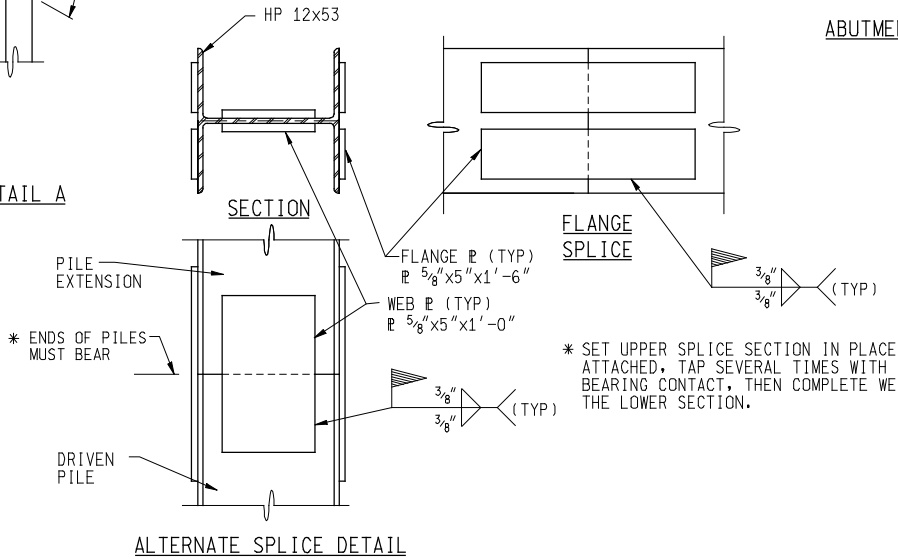
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		ERECTION SCHEMATICS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS
				SHEET 9 OF 61	

REVISIONS			
NO.	DESCRIPTION	DATE	BY



MISCELLANEOUS QUANTITIES		
1	LS	Pile Driving Equipment, Furn (S01-39014)
4	Ea	Test Pile, Steel, 12 inch
1488	F+	Pile, Steel, Furn and Driven, 12 inch
32	Ea	Pile Point, Steel



60 TON CAPACITY HP12 X 53 PILES					
LOCATION	PILE TYPE	NUMBER OF PILES	ESTIMATED LENGTH FURNISHED & DRIVEN		CUT-OFF ELEV.
			EACH FT	TOTAL FT	
ABUT. A	TEST	2	47.00	94.00	959.15
	VERTICAL	14	47.00	658.00	959.15
ABUT. B	TEST	2	46.00	92.00	957.83
	VERTICAL	14	46.00	644.00	957.83
TOTAL		32		1488	

NOTES:

- ALL PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 60 TONS.
- THE ESTIMATED PILE LENGTH IS BASED ON THE STATIC FORMULA. ESTIMATED PILE TIP ELEVATION FOR ABUTMENTS A AND B IS 912 FT.
- STEEL PILES SHALL BE HP 12 X 53.
- PILE CUT OFF ELEVATION TOLERANCE IS ± 1/4 IN. FROM THE PLAN ELEVATION.
- PILE HORIZONTAL INSTALLATION TOLERANCE IS ± 2 IN. IN ANY DIRECTION FROM THE PLAN HORIZONTAL DIMENSION.

⊥ DENOTES VERTICAL PILE
⊙ DENOTES TEST PILE

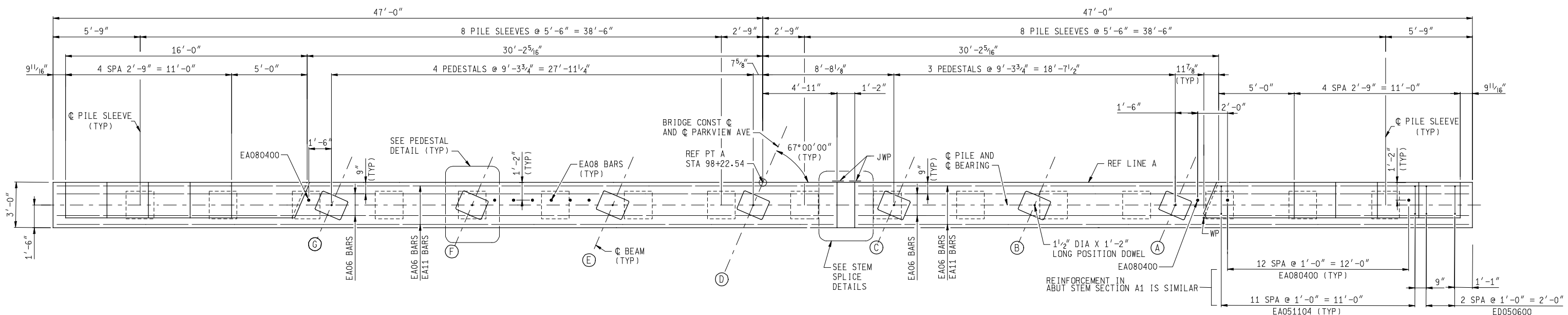
INSTALL ABUTMENT PILES IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL USE A PILE TEMPLATE, FIXED DRIVING LEADS, OR OTHER METHODS AS REQUIRED TO MAINTAIN PILE HORIZONTAL ALIGNMENT DURING DRIVING. IF AN INSTALLED PILE IS MORE THAN 2.00 IN. OUT IN ANY DIRECTION FROM PLAN HORIZONTAL DIMENSION, THEN THE CONTRACTOR SHALL EITHER ALIGN THE PILE WITHIN TOLERANCE, WITH THE METHOD SUBJECT TO THE APPROVAL OF THE ENGINEER, OR REMOVE AND REPLACE THE PILE.

		PLAN OF PILES PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 10 OF 61

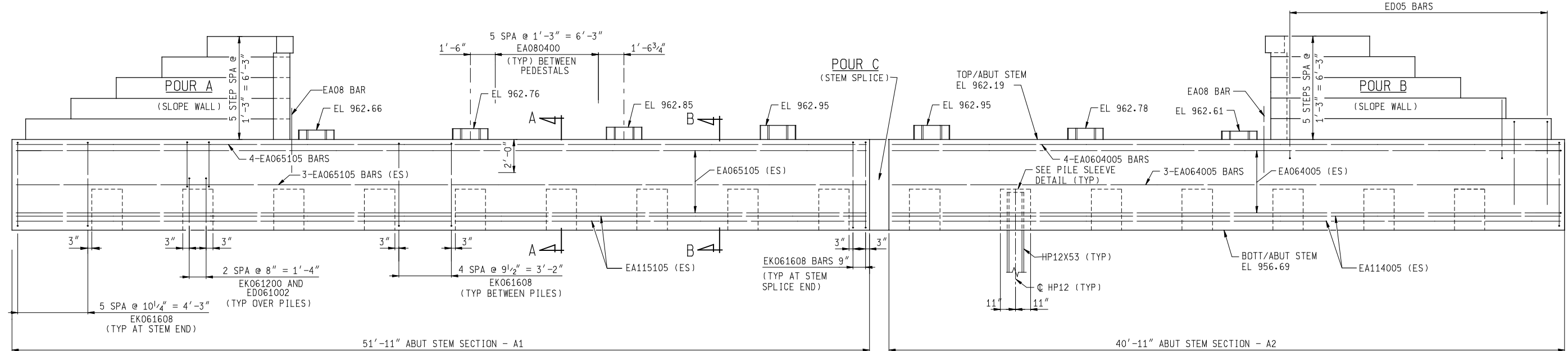
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN OF ABUTMENT A
(PILES NOT SHOWN FOR CLARITY)



ELEVATION

MISCELLANEOUS QUANTITIES		
110	Cyd	Precast Conc Substructure, Abutment
21	Cyd	Substructure Conc
189	Sft	Joint Waterproofing, Expansion

SUBSTRUCTURE CONCRETE QUANTITIES	
POUR	CUBIC YARDS
A	5.1
B	4.6
C	0.7
E	5.0
F	0.7
TOTAL CONC: 21 CYD	

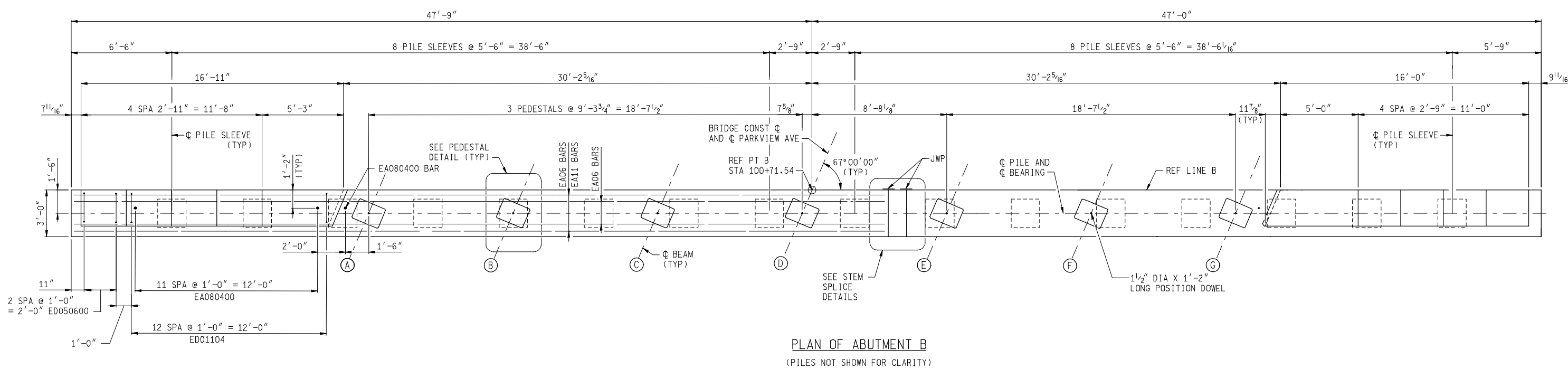
NOTES:
 (WP) DENOTES WORK POINT
 (ES) DENOTES EACH SIDE
 JWP DENOTES JOINT WATERPROOFING.
 STEM SPLICE PAID FOR AS "Substructure Conc".
 FOR PILE QUANTITIES, LAYOUT AND NOTES SEE SHEET 10.
 FOR BEVEL AND MOLDING DETAILS SEE STANDARD PLAN B-103-SERIES.
 AT NO TIME PRIOR TO ERECTING THE BEAMS, SHALL THE HEIGHT OF THE BACKFILL ON THE BACKSIDE OF THE ABUTMENT BE HIGHER THAN THE BACKFILL ON THE FRONT SIDE.
 FOR JOINT WATERPROOFING SEE SHEET 14.
 ALPHABETICAL DESIGNATION OF POURS IS NOT TO BE CONSTRUED AS A POUR SEQUENCE.

		ABUTMENT A DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

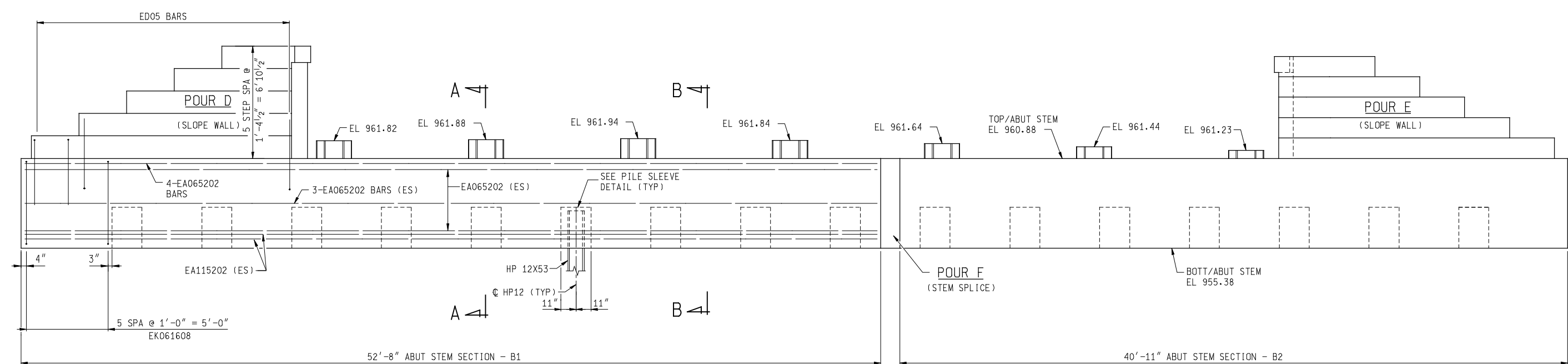
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN OF ABUTMENT B
(PILES NOT SHOWN FOR CLARITY)



ELEVATION

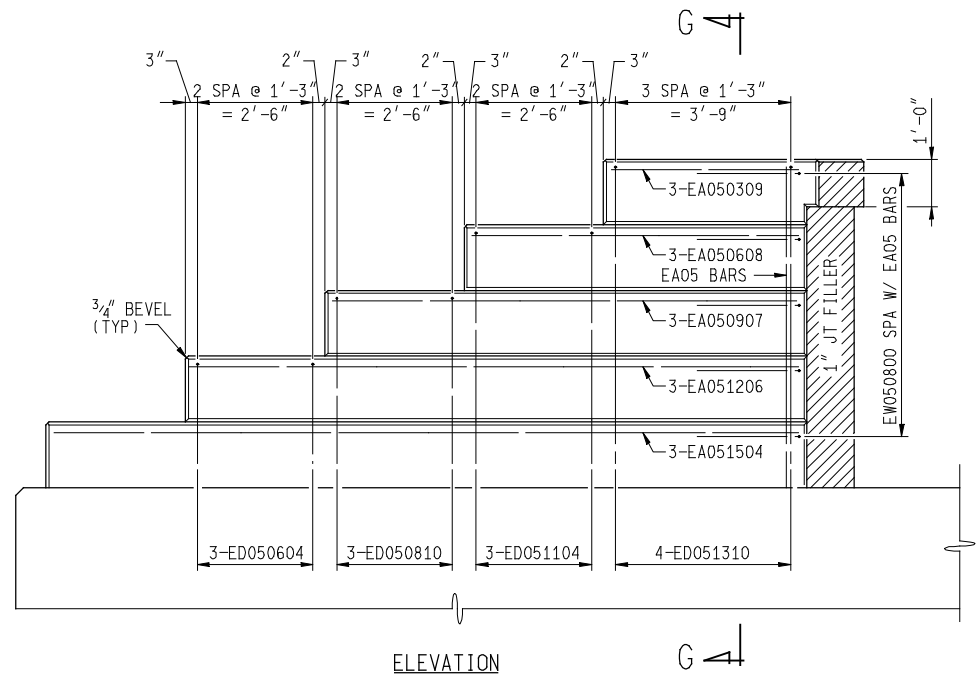
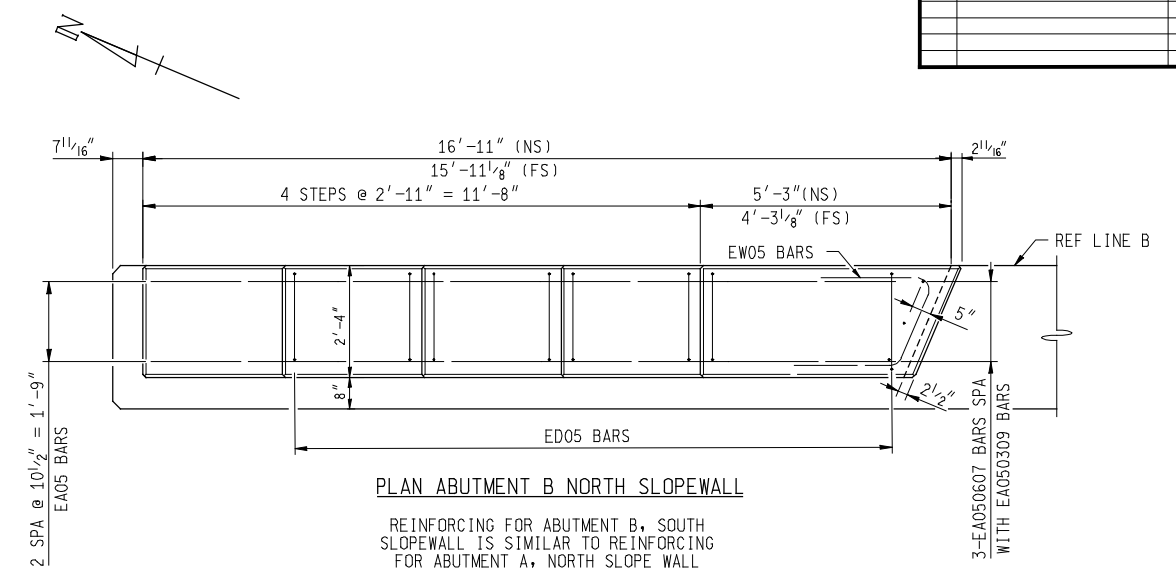
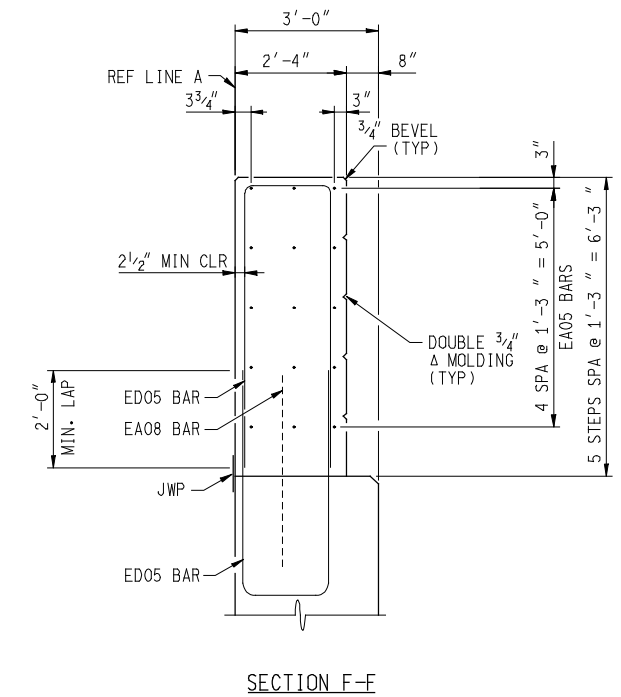
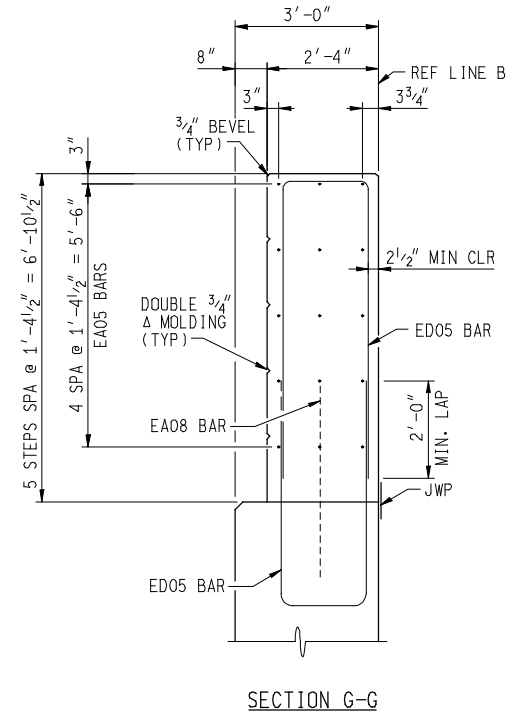
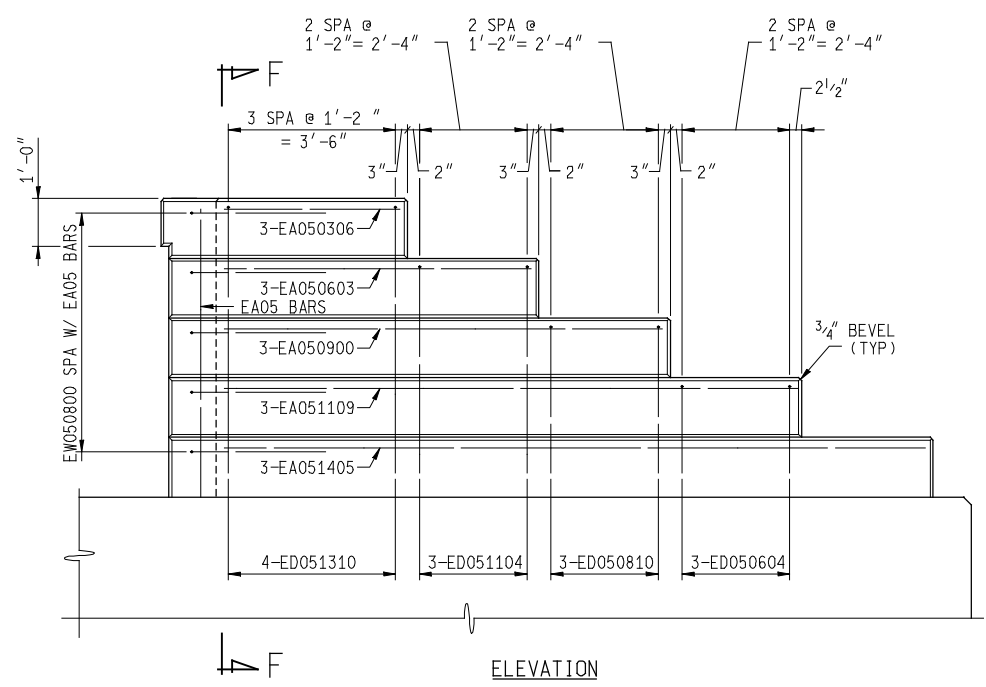
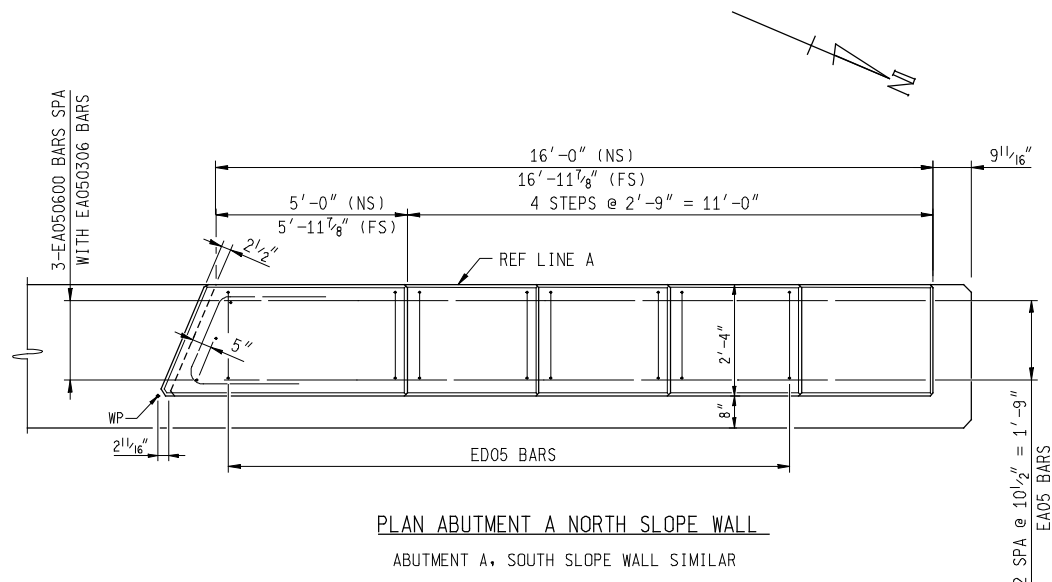
NOTES:
 JWP DENOTES JOINT WATERPROOFING.
 REINFORCING FOR ABUTMENT B IS SIMILAR TO REINFORCING FOR ABUTMENT A EXCEPT AS NOTED.
 FOR BEVEL AND MOLDING DETAILS SEE STANDARD PLAN B-103-SERIES.
 AT NO TIME PRIOR TO ERECTING THE BEAMS, SHALL THE HEIGHT OF THE BACKFILL ON THE BACKSIDE OF THE ABUTMENT BE HIGHER THAN THE BACKFILL ON THE FRONT SIDE.

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		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 12 OF 61

REVISIONS			
NO.	DESCRIPTION	DATE	BY



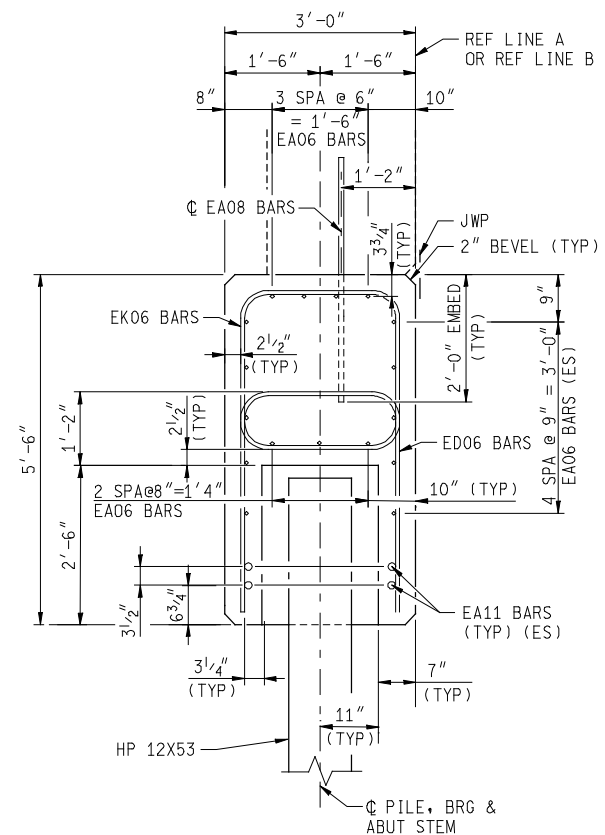
NOTES:
(NS) DENOTES NEAR SIDE
(FS) DENOTES FAR SIDE
JWP DENOTES JOINT WATERPROOFING, SEE SHEET 14

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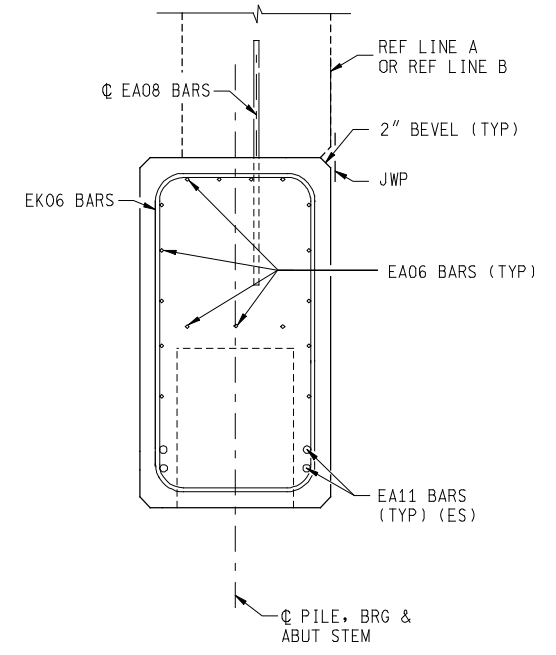
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		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
				SHEET	FILE NAME:
				13 OF 61	

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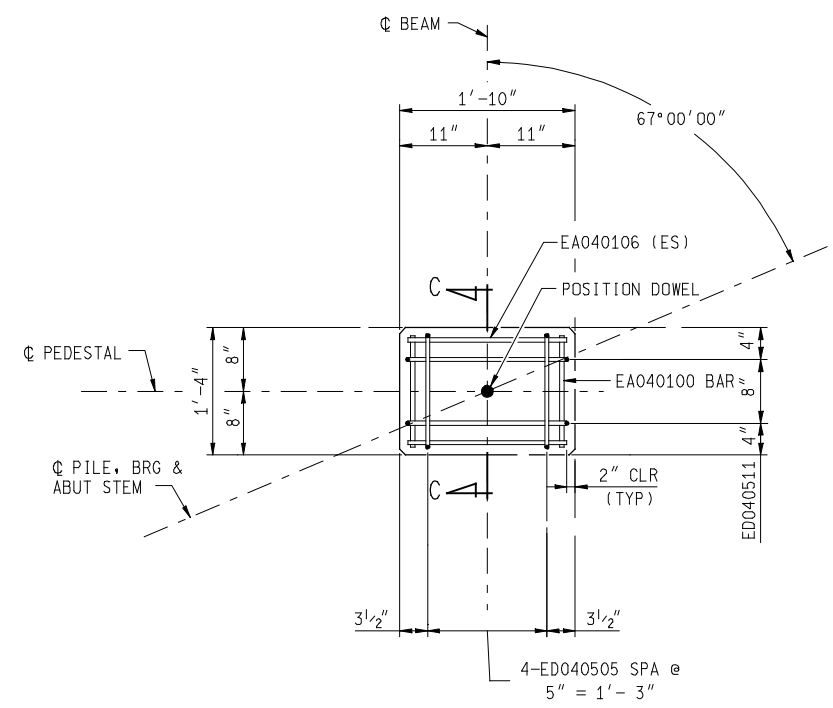
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NO.	DESCRIPTION	DATE	BY



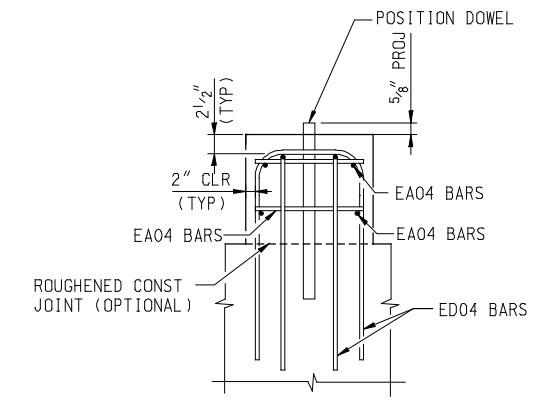
SECTION A-A
PILE GROUTING DETAIL
NOT SHOWN FOR CLARITY



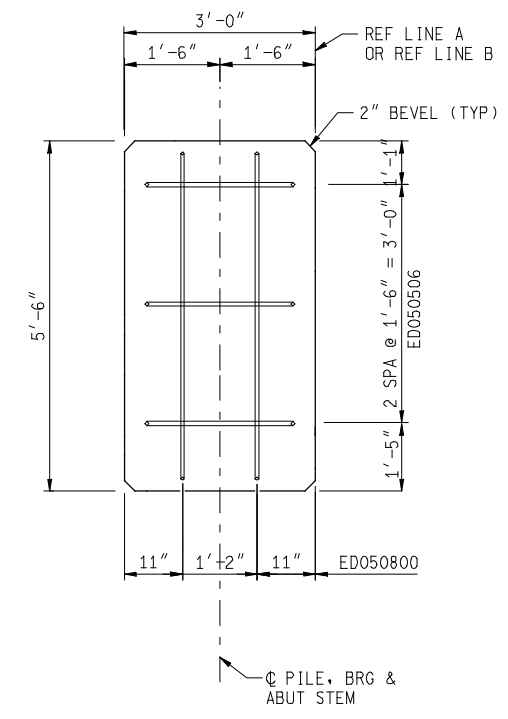
SECTION B-B



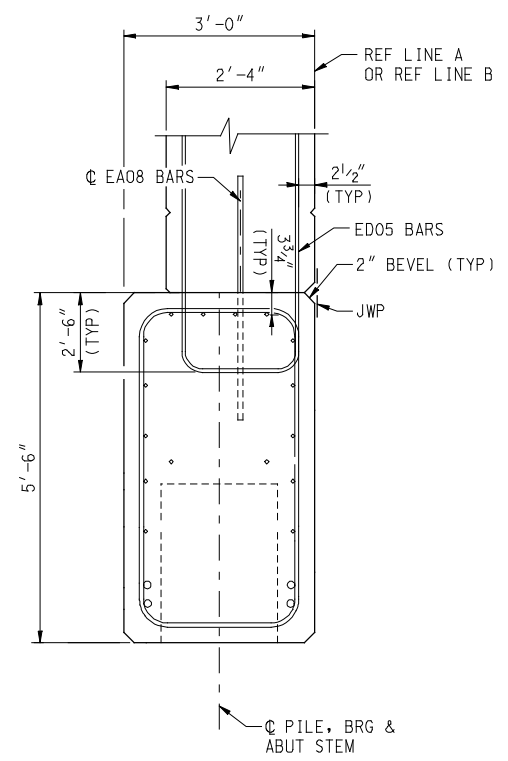
PLAN



SECTION C-C

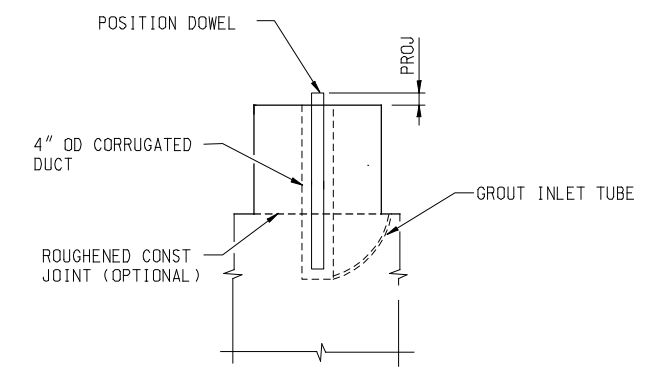


ABUTMENT STEM END VIEW



SECTION THRU ABUTMENT
STEM AT SLOPE WALL

PEDESTAL DETAIL



ALTERNATE POSITION DOWEL DETAIL

FOR USE AT ABUTMENTS AND PIER CAPS
REBAR NOT SHOWN FOR CLARITY

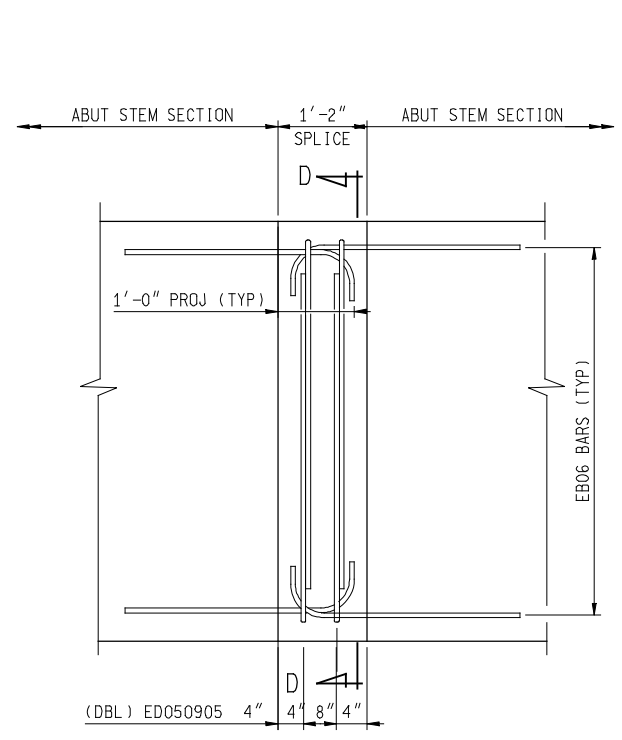
NOTES:
SEE SHEET 16 FOR POSITION DOWEL DETAILS.
POSITION DOWELS SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M232. POSITION DOWELS WILL NOT BE PAID FOR SEPARATELY; PAYMENT FOR THIS WORK SHALL BE INCLUDED IN PAYMENT FOR THE PRESTRESSED BEAMS.

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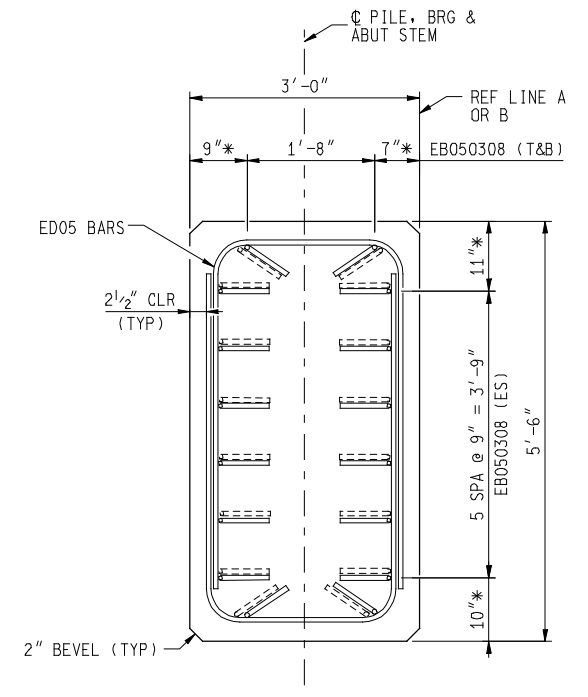
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		ABUTMENT DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

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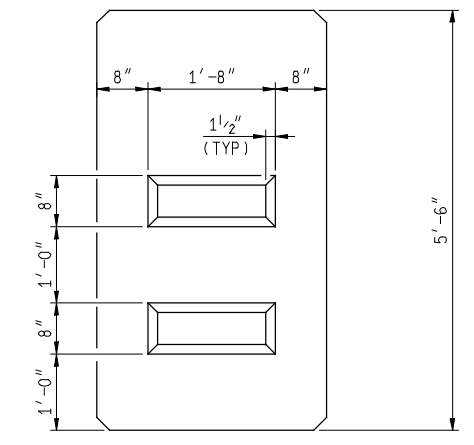
ELEVATION



SECTION D-D

*ADJUST SPACING AS NEEDED BETWEEN ABUTTING ABUTMENT STEM SECTIONS TO CLEAR.

STEM SPLICE DETAIL



SHEAR KEY DETAIL

(KEY DEPTH = 3")

NOTES:

LIFTING LOCATIONS ARE INDICATED ON THE PLANS.

THE BOTTOM OF THE PILE VOID FORMS SHALL BE SEALED AND THE ABUTMENT STEMS SECURELY SUPPORTED PRIOR TO GROUTING PILES.

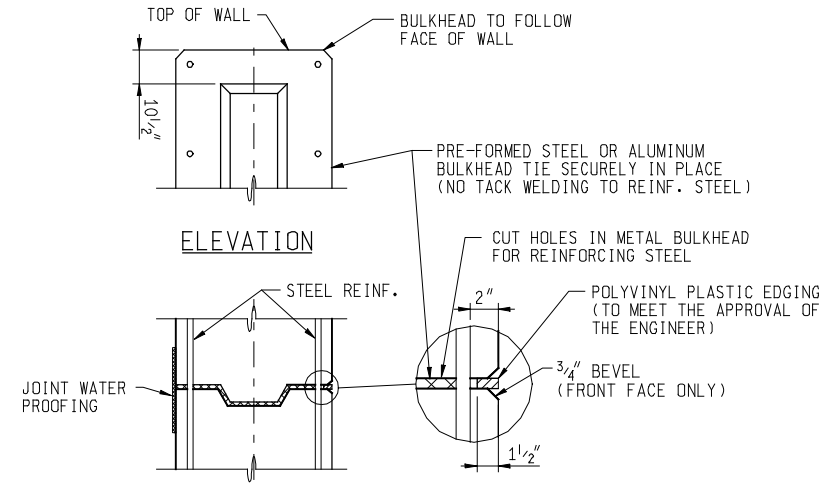
THE CONTRACTOR MAY SUBMIT OTHER ABUTMENT STEM LIFTING DEVICES AND LIFTING POINT LOCATIONS TO THE ENGINEER FOR REVIEW. ABUTMENT STEM LIFTING DEVICES ARE NOT ALLOWED AT THE LOCATION OF BEARING SEAT PEDESTALS. AFTER ABUTMENT STEMS ARE IN PLACE, LIFTING DEVICES SHALL BE REMOVED, CUT BACK 2" AND POCKETS SHALL BE PATCHED WITH CEMENT GROUT. THE CONTRACTOR SHALL SUBMIT ABUTMENT STEM TRANSPORTATION PLAN, TRANSPORTATION SUPPORT LOCATIONS, AND CALCULATIONS TO THE ENGINEER FOR REVIEW.

ALL LIFTING LOOPS MUST BE UNIFORMLY ENGAGED DURING HANDLING. SHIFT LIFTING DEVICES SLIGHTLY WHERE NECESSARY TO CLEAR REINFORCING.

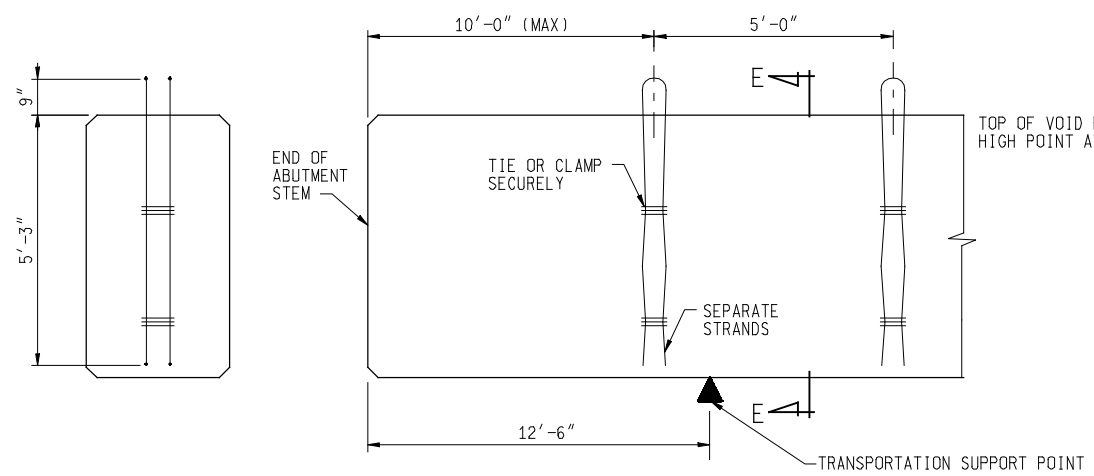
(T&B) DENOTES TOP AND BOTTOM

(DBL) DENOTES DOUBLE

(ES) DENOTES EACH SIDE



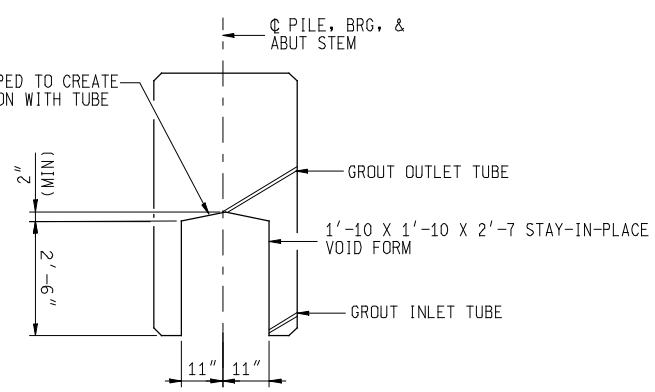
METAL BULKHEADS DETAILS



SECTION E-E

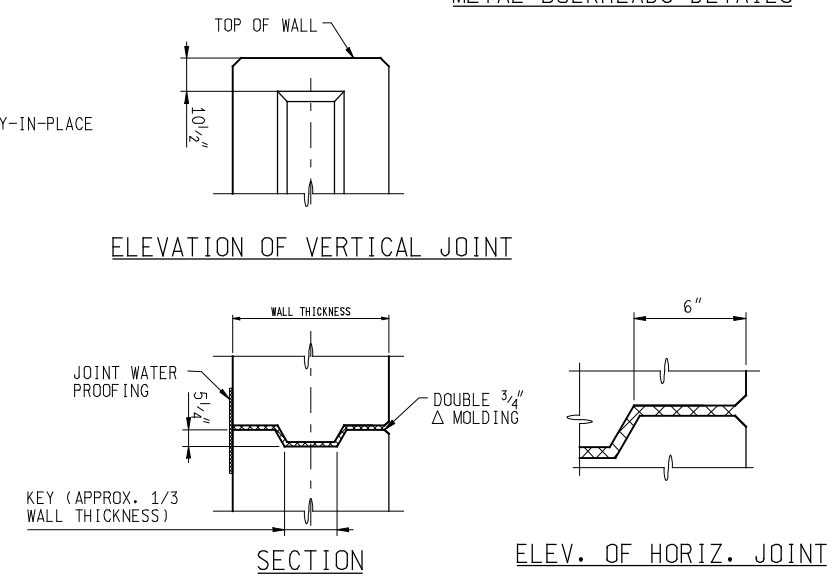
ABUTMENT STEM LIFTING DEVICE DETAIL

LIFTING DEVICE SHALL CONSIST OF 3-1/2" Ø PRE-STRESSING STRAND BENT AROUND A 5" Ø PIN. PROVIDE 4 LIFTING DEVICES AT EACH END.



PILE SLEEVE DETAIL

VOID FORM SHALL BE STAY IN PLACE FORM



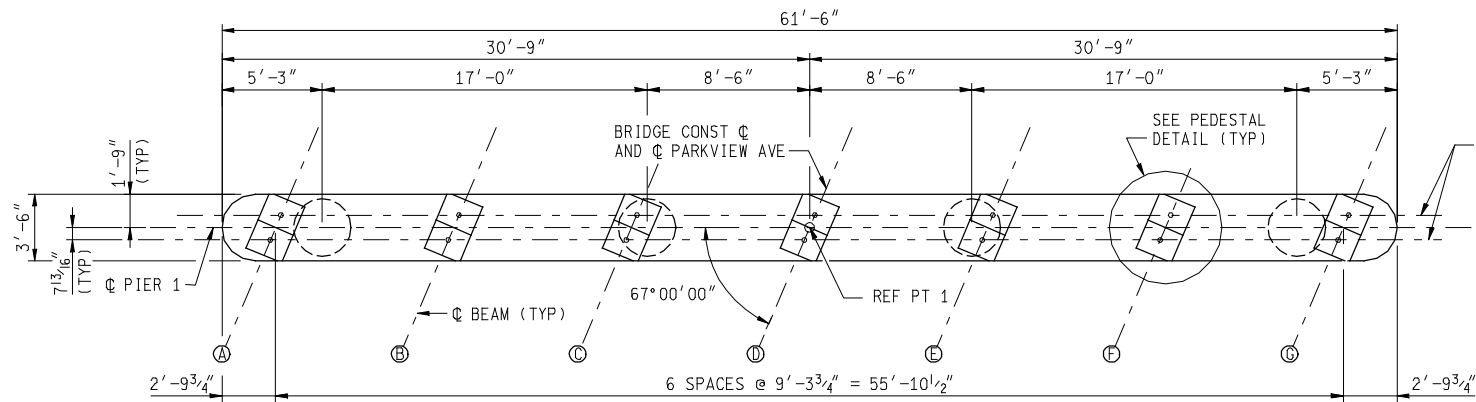
CONSTRUCTION JOINT DETAILS

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		ABUTMENT DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 15 OF 61

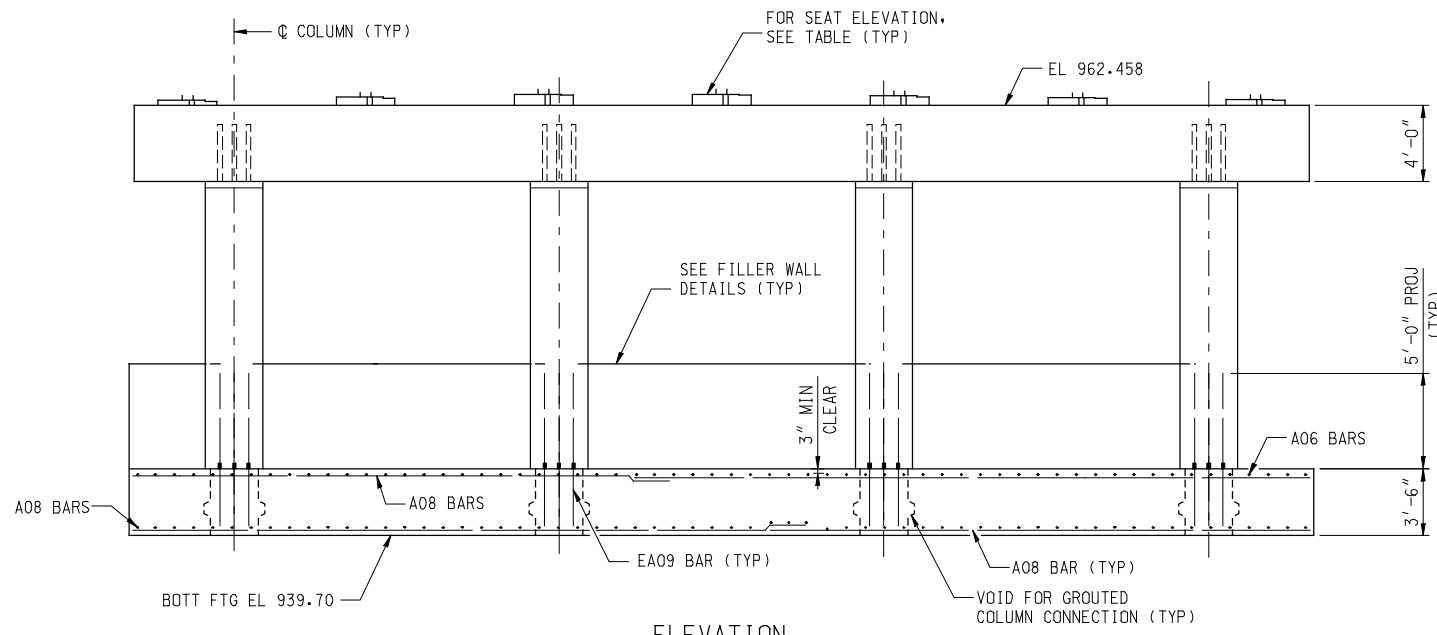
REVISIONS			
NO.	DESCRIPTION	DATE	BY



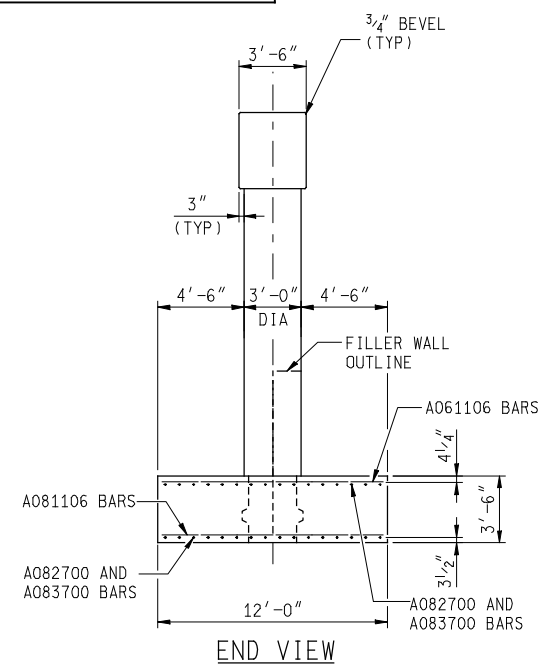
PLAN OF CAP

SUBSTRUCTURE CONCRETE QUANTITIES		
POUR	LOCATION	CUBIC YARDS
A	PIER 1	96.4
B	PIER 2	120.6
C	PIER 3	96.4
TOTAL CONC:		313 CYD

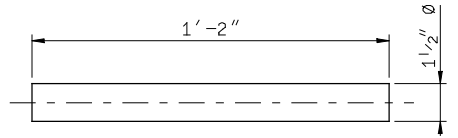
PIER	SPAN	SEAT ELEVATION							PROJECTION POSITION DOWEL
		A	B	C	D	E	F	G	
PIER 1	SPAN 1	962.78	962.93	963.09	963.07	962.96	962.86	962.74	2 1/2"
	SPAN 2	962.75	962.90	963.05	963.04	962.93	962.82	962.71	3"
PIER 2	SPAN 2	962.92	963.04	963.16	963.11	962.96	962.82	962.67	3"
	SPAN 3	962.92	963.04	963.15	963.10	962.96	962.81	962.66	3"
PIER 3	SPAN 3	962.29	962.37	962.45	962.36	962.18	962.00	961.82	3"
	SPAN 4	962.31	962.39	962.47	962.38	962.20	962.02	961.84	2 1/2"



ELEVATION



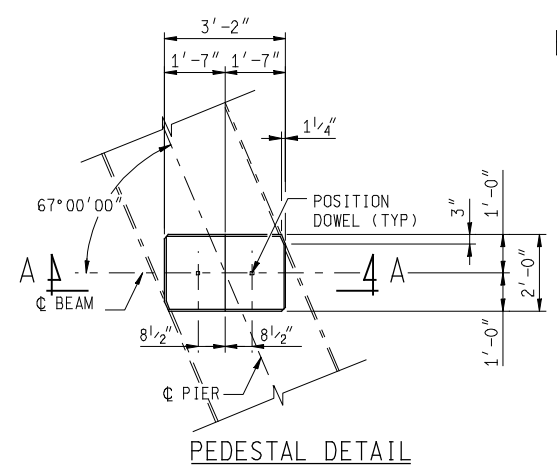
END VIEW



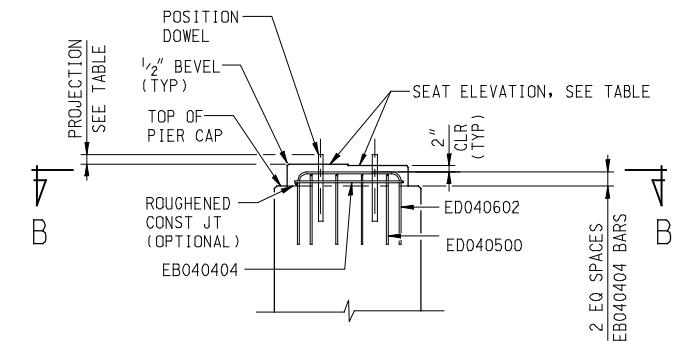
POSITION DOWEL DETAIL
(56 REQUIRED)

POSITION DOWELS SHALL BE HOT DIP GALVANIZED ACCORDING TO AASHTO M232. POSITION DOWELS WILL NOT BE PAID FOR SEPARATELY; PAYMENT FOR THIS WORK SHALL BE INCLUDED IN PAYMENT FOR THE PRESTRESSED CONCRETE BEAMS.

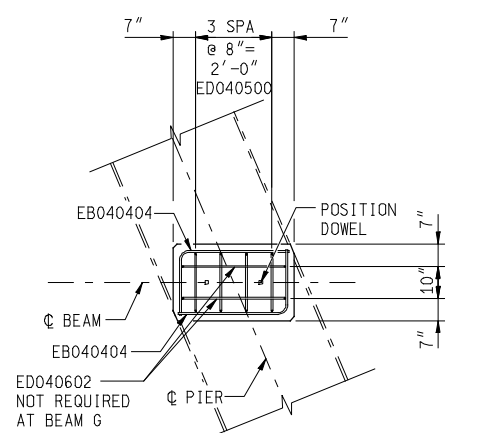
MISCELLANEOUS QUANTITIES		
144	Cyd	Precast Conc Substructure, Pier
313	Cyd	Substructure Conc



PEDESTAL DETAIL

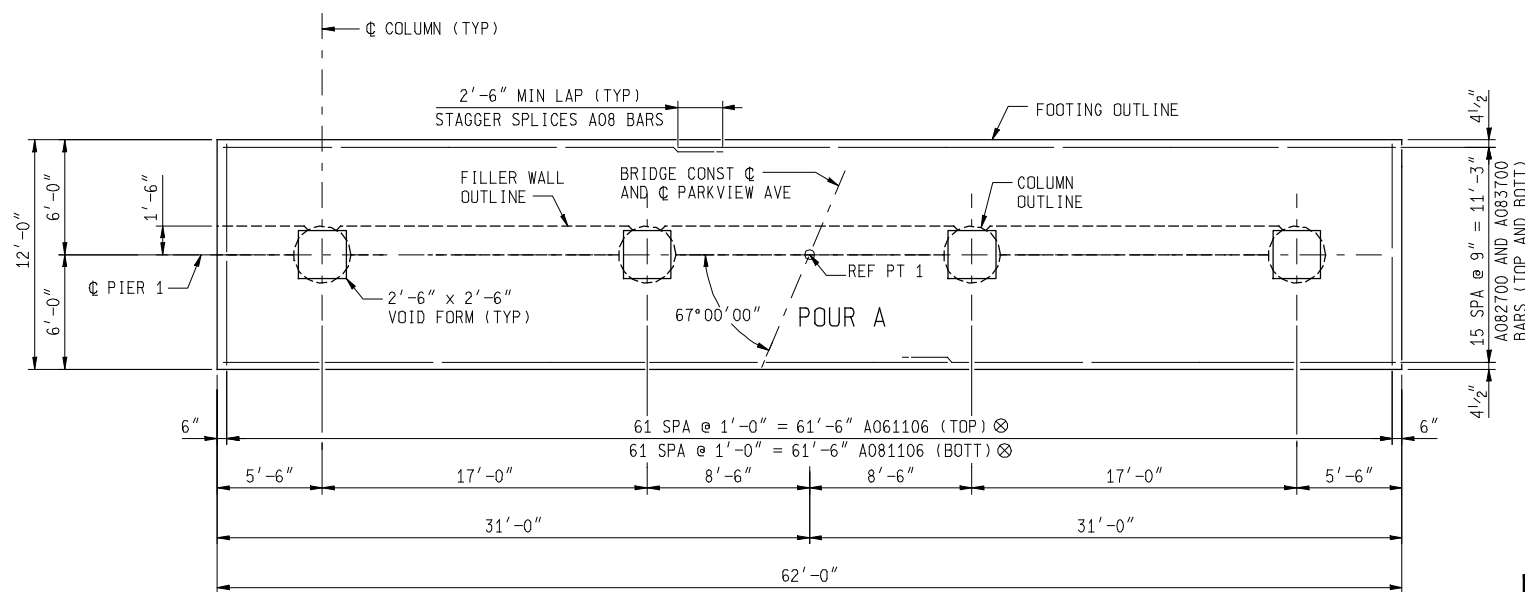


SECTION A-A



SECTION B-B

NOTES:
FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103-SERIES.
FOR PIER 1, 2, AND 3 DESIGN, THE MAXIMUM AVERAGE FOUNDATION PRESSURE IS CALCULATED TO BE 2644 PSF AVERAGE DEAD LOAD PLUS LIVE LOAD PRESSURE.
ALPHABETICAL DESIGNATION OF POURS IS NOT TO BE CONSTRUED AS A POUR SEQUENCE.



PLAN OF FOOTING

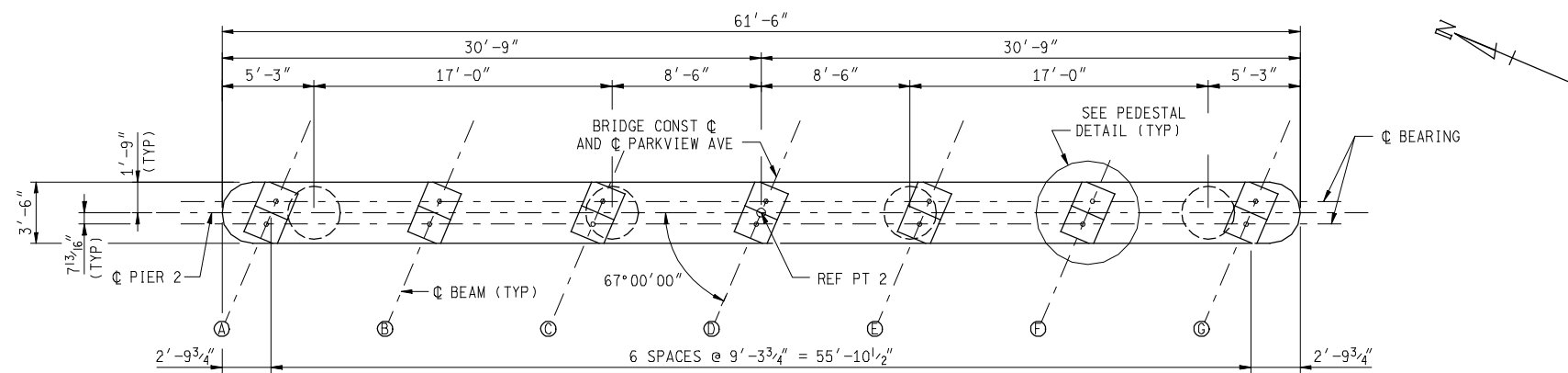
⊗ SHIFT REINFORCING 6" UNDER COLUMNS TO CLEAR EA09 BARS

	 Michigan Department of Transportation	PIER 1 DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
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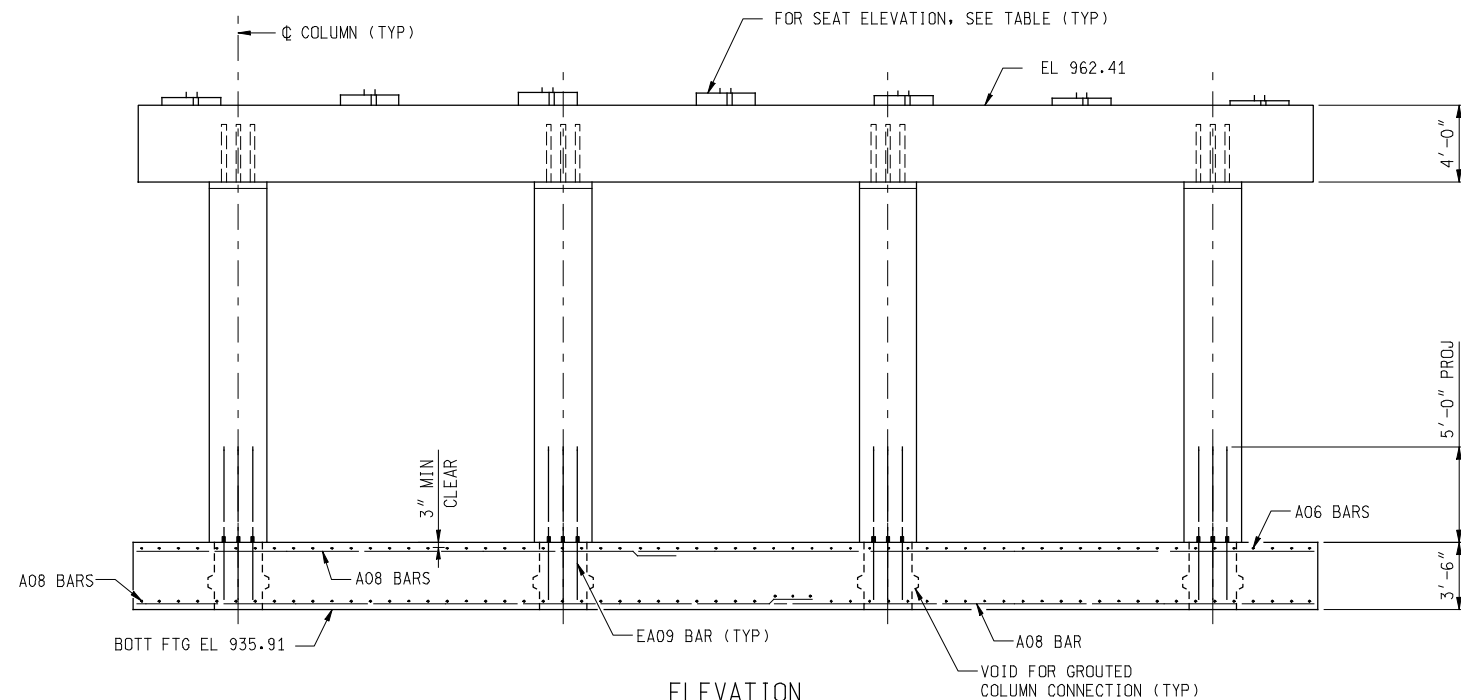
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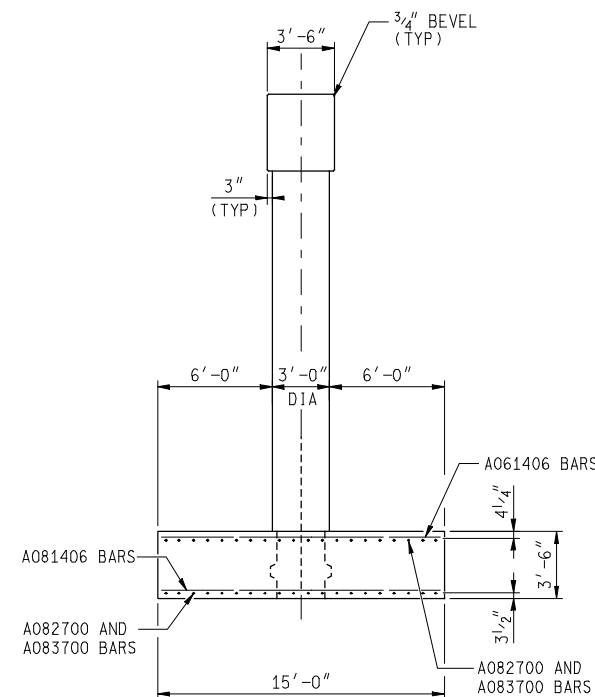
REVISIONS			
NO.	DESCRIPTION	DATE	BY



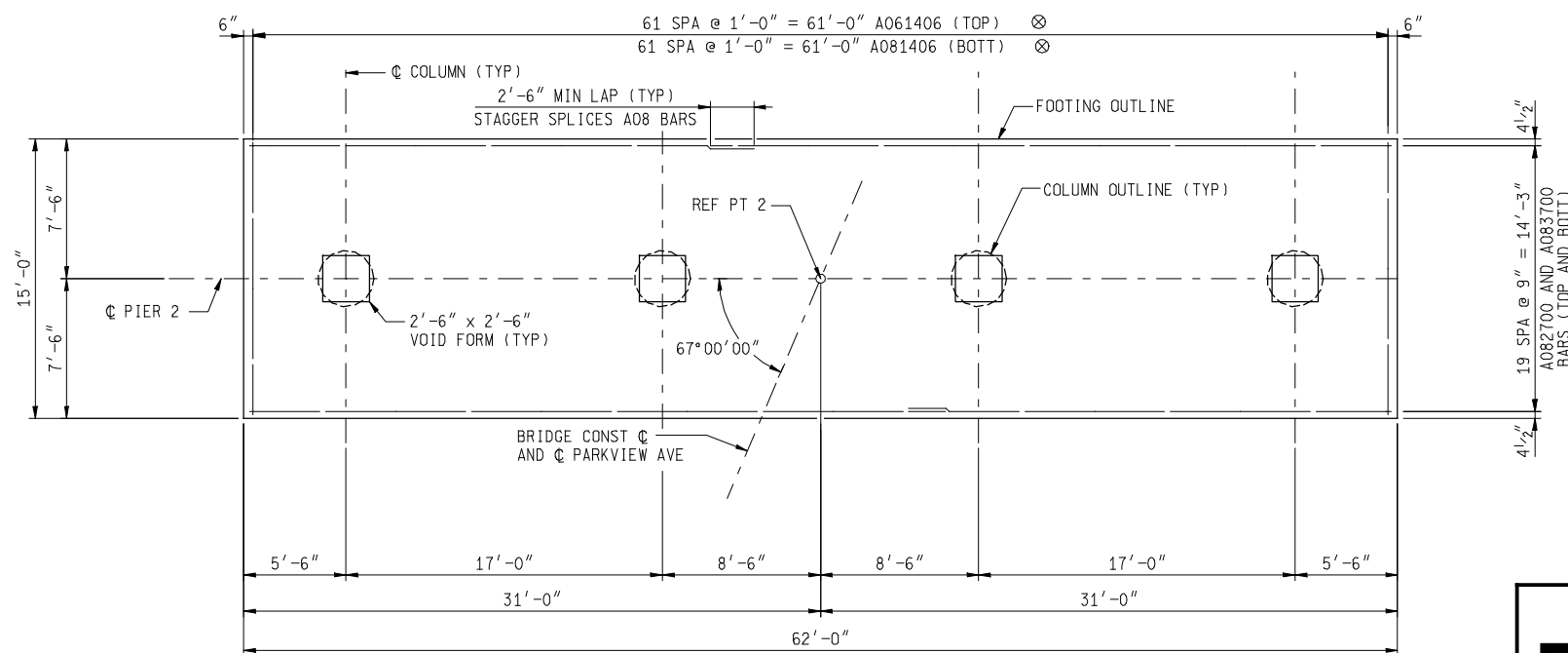
PLAN OF CAP



ELEVATION



END VIEW



PLAN OF FOOTING

⊗ SHIFT REINFORCING 6" UNDER COLUMNS TO CLEAR EA09 BARS

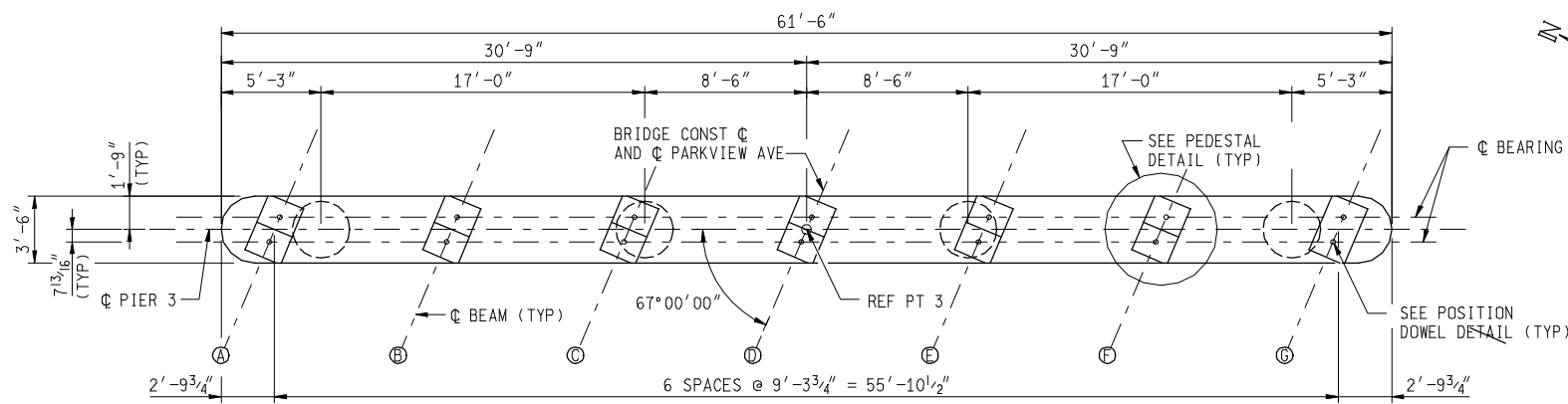
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		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

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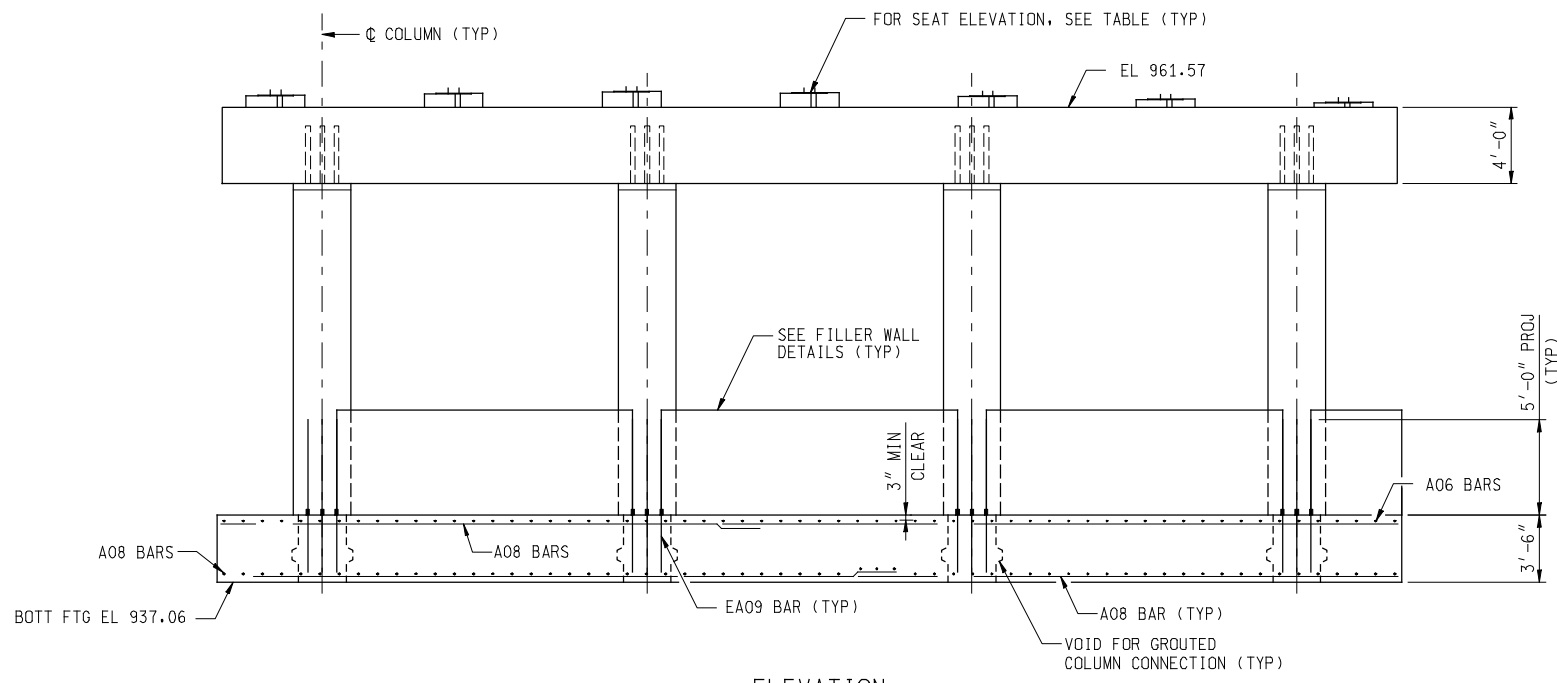
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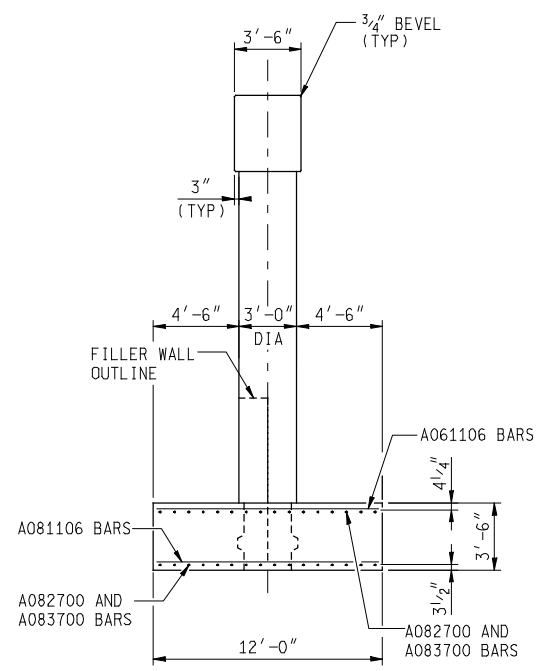
REVISIONS			
NO.	DESCRIPTION	DATE	BY



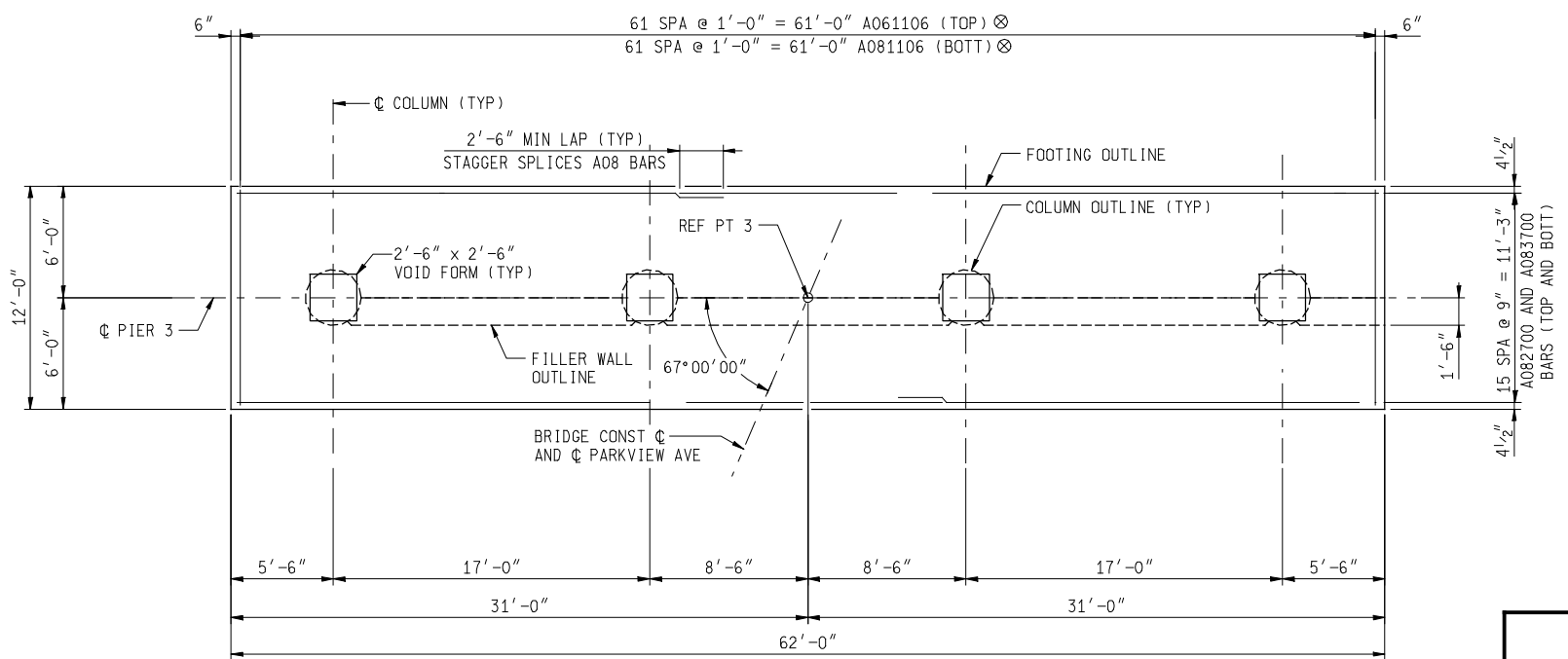
PLAN OF CAP



ELEVATION



END VIEW



PLAN OF FOOTING

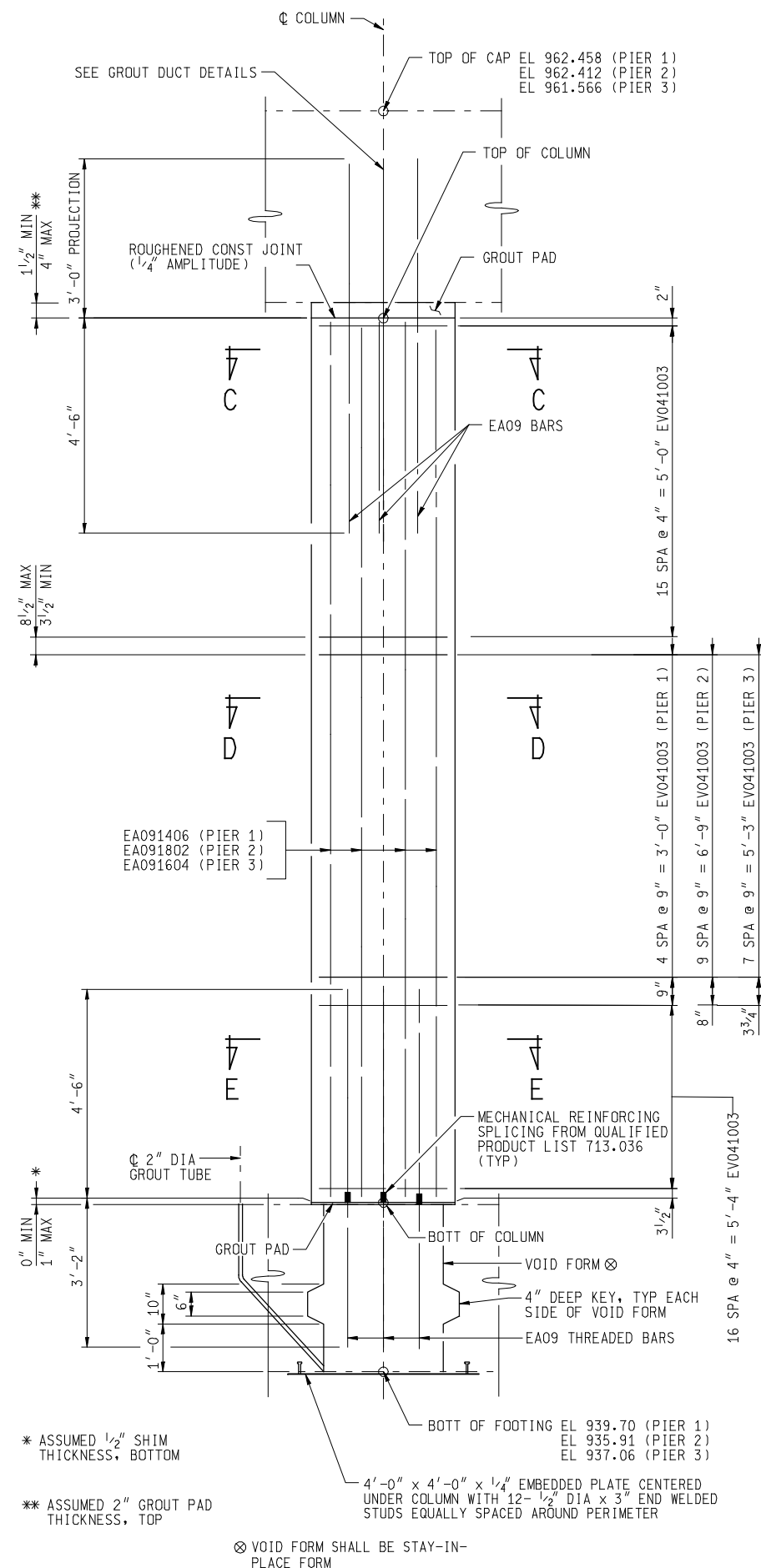
⊗ SHIFT REINFORCING 6" UNDER COLUMNS TO CLEAR EA09 BARS

	 Michigan Department of Transportation	PIER 3 DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
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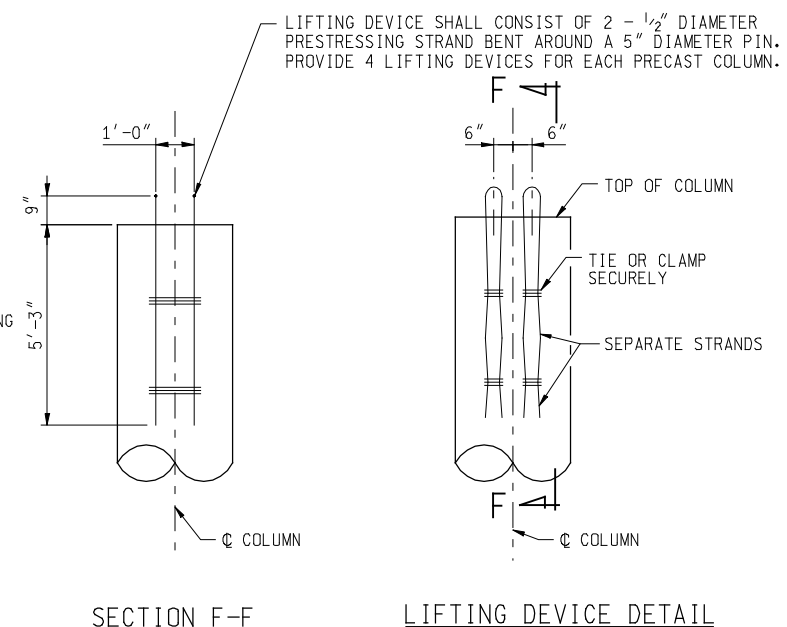
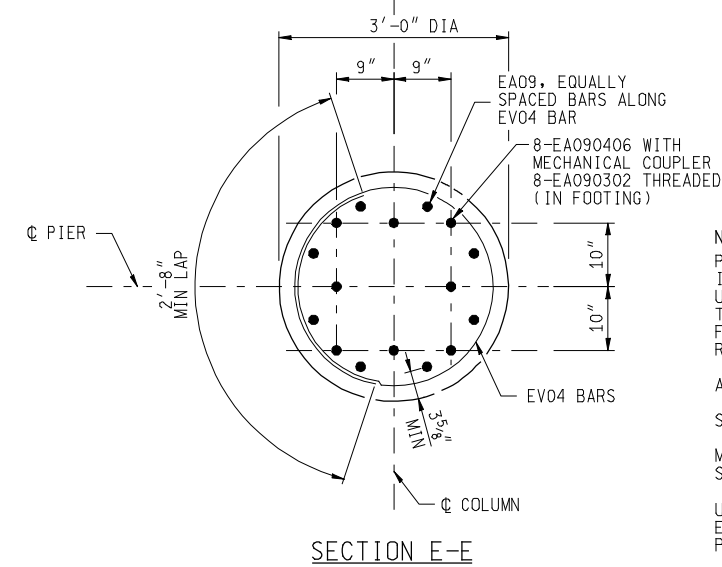
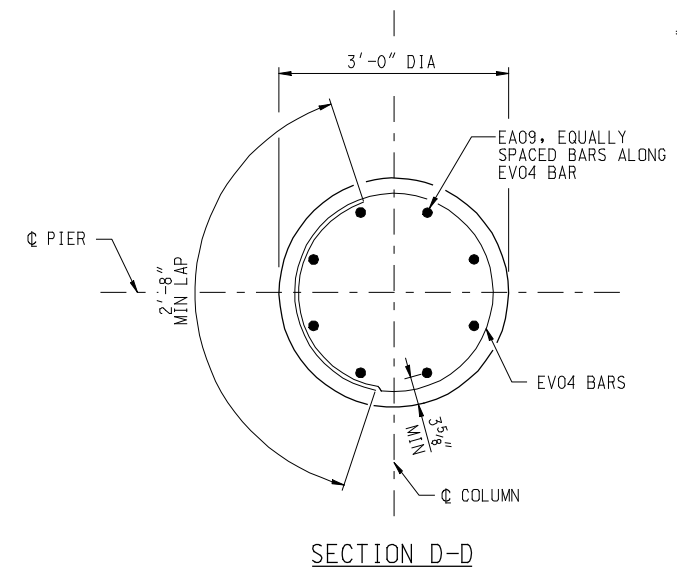
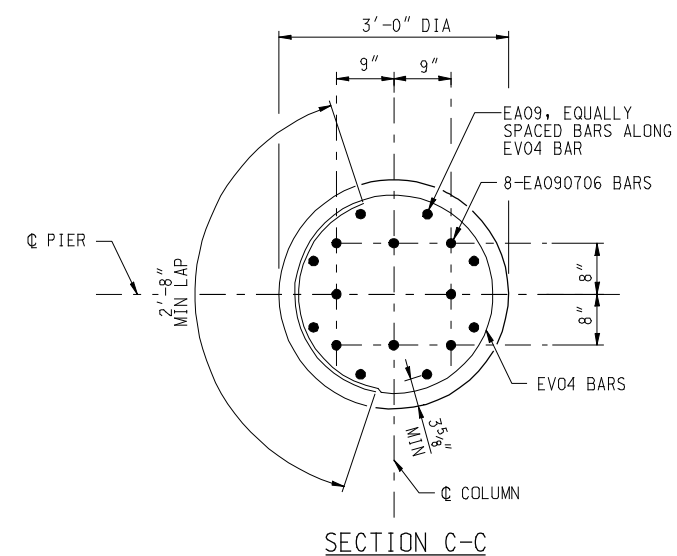
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



COLUMN ELEVATION



CONSTRUCTION SEQUENCE THIS SHEET (INFORMATION ONLY):

1. CONSTRUCT CAST IN PLACE FOOTING WITH VOID.
2. THREAD EA09 BARS INTO COLUMN.
3. SET COLUMN IN PLACE OVER VOID.
4. PLACE GROUT.
5. REMOVE LIFTING DEVICES.

NOTES:
PIER COLUMN LIFTING DEVICES SHOWN SHALL BE USED TO LIFT THE COLUMN IN THE VERTICAL POSITION ONLY. SLINGS OR OTHER LIFTING DEVICES SHALL BE USED TO LIFT THE COLUMN FROM THE HORIZONTAL TO VERTICAL POSITION. THE CONTRACTOR SHALL SUBMIT PIER COLUMN LIFTING DEVICES TO THE ENGINEER FOR REVIEW. AFTER PIER COLUMNS ARE IN PLACE, LIFTING DEVICES SHALL BE REMOVED AND POCKETS SHALL BE PATCHED WITH CEMENT GROUT.

ALL LIFTING LOOPS MUST BE UNIFORMLY ENGAGED DURING HANDLING.

SHIFT LIFTING DEVICES SLIGHTLY WHERE NECESSARY TO CLEAR REINFORCING.

MECHANICAL COUPLER AND THREADED BAR SHALL BE INCLUDED IN "Precast Conc Substructure, Pier" PAY ITEM.

USE PLASTIC SHIMS TO SUPPORT COLUMNS AND PIER CAPS AT THE PROPER ELEVATION PRIOR TO GROUTING. PIER CAPS SHALL BE CONSTRUCTED LEVEL. PIER COLUMNS SHALL BE CONSTRUCTED PLUMB.

PARSONS

MDOT
Michigan Department of Transportation

PIER DETAILS
PARKVIEW AVENUE OVER US 131

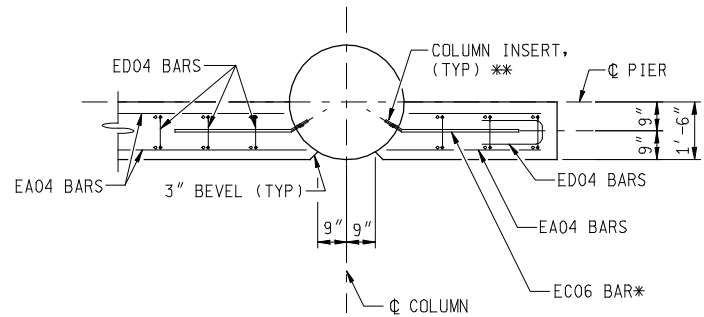
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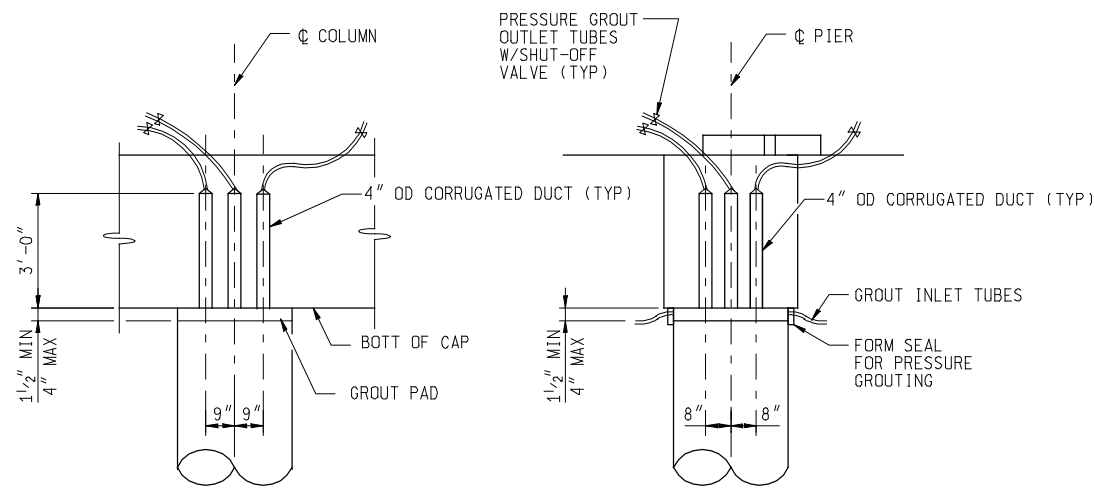
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** COLUMN INSERT SHALL BE 3/4" X 6 1/8" STAINLESS STEEL F-64 FERRULE LOOP INSERT AS MANUFACTURED BY DAYTON SUPERIOR COMPANY, MIAMISBURG, OH OR AN APPROVED EQUIVALENT.

SECTION H-H

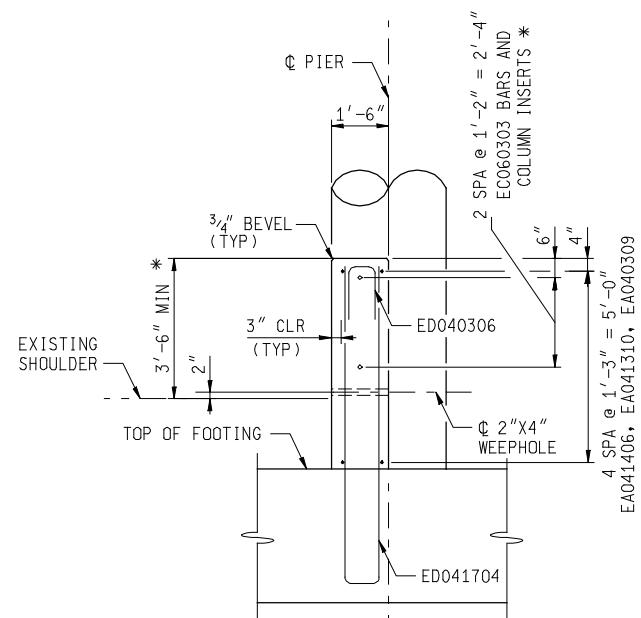


ELEVATION

SECTION

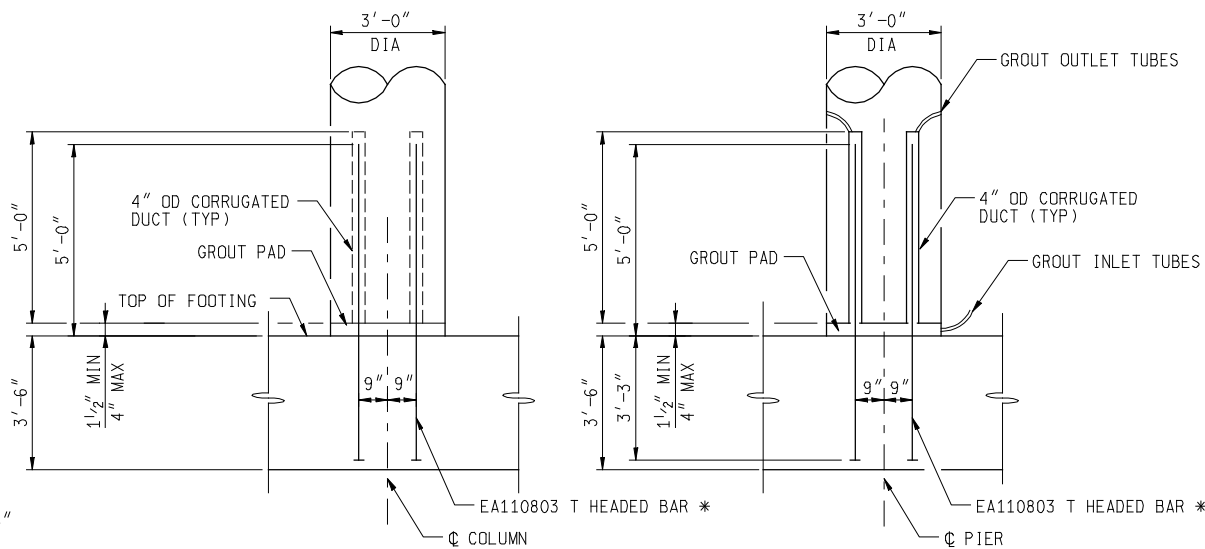
GROUT DUCT DETAILS

GROUT TUBES (INLET AND OUTLET TUBE TYPE AND LOCATION) SHALL BE APPROVED PRIOR TO GROUTING. GROUT SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE GROUT PLACEMENT PROCEDURES SHALL BE APPROVED BY THE ENGINEER. GROUT SAMPLES WILL BE COLLECTED AND TESTED AT EACH PIER CAP. GROUT TUBES SHALL BE CUT OFF AFTER GROUT HAS SET UP.



* HEIGHT IS ASSUMED. TOP OF FILLER WALL SHALL BE AT LEAST 42" ABOVE FINISHED SHOULDER ELEVATION. TOP OF FILLER WALL SHALL BE PARALLEL WITH EXISTING SHOULDER GRADE.

SECTION G-G



ELEVATION

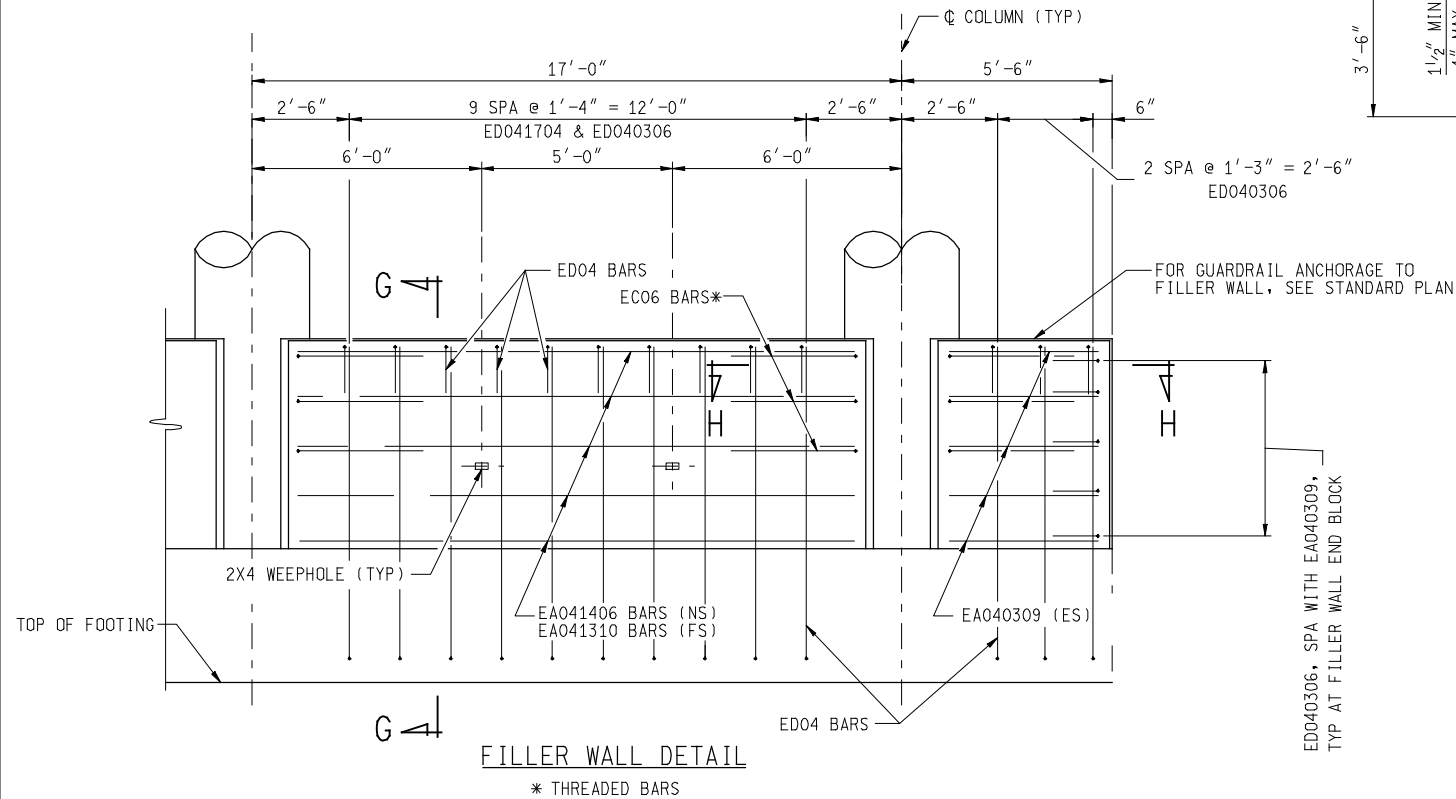
SECTION

* T HEADED BAR SHALL BE HRC TYPE 150 T HEAD AS MANUFACTURED BY HRC CORP. FOUNTAIN VALLEY CA OR AN APPROVED EQUIVALENT.

ALTERNATE COLUMN-TO-FOOTING CONNECTION

THE FABRICATOR IS REQUIRED TO USE STEEL TEMPLATES FOR PLACEMENT OF CORRUGATED DUCTS. TEMPLATES SHALL BE FURNISHED TO SITE AND USED FOR PLACEMENT OF THE 4-EA110803 T HEADED BARS. INSTALLATION TOLERANCE SHALL BE ± 1/2" (PLAN & ELEVATION).

ALTERNATE CONNECTION INCLUDED IN PAY ITEM "Precast Conc Substructure, Pier."



FILLER WALL DETAIL

* THREADED BARS

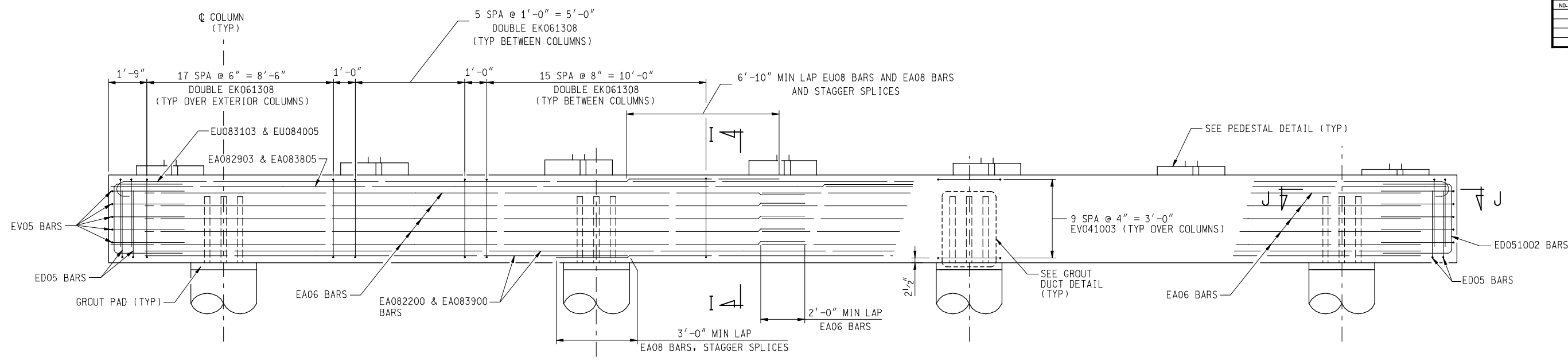
ED040306, SPA WITH EA040309, TYP AT FILLER WALL END BLOCK

	 Michigan Department of Transportation	PIER DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
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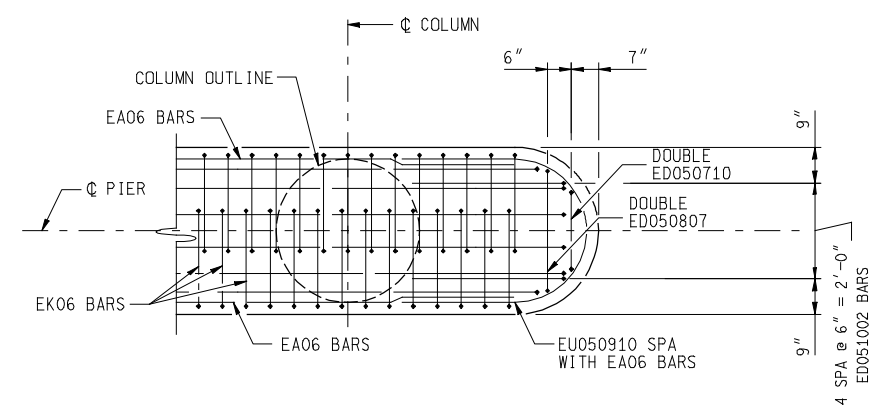
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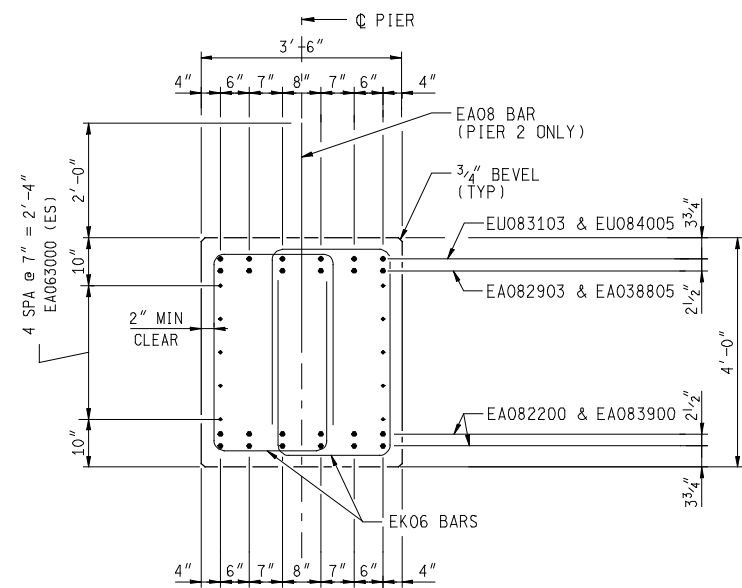
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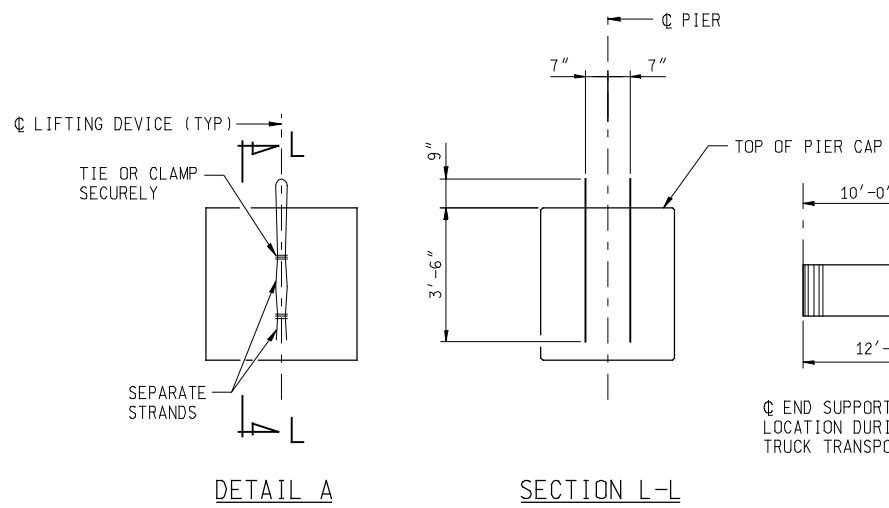


SECTION J-J



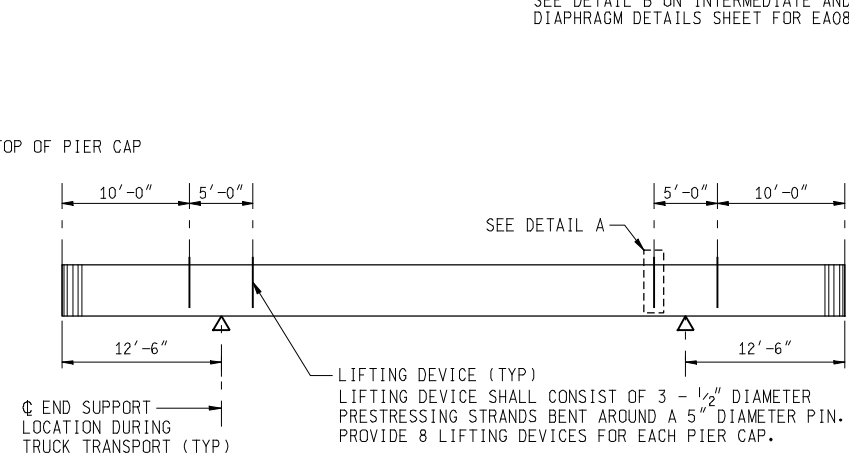
SECTION I-I

SEE DETAIL B ON INTERMEDIATE AND PIER DIAPHRAGM DETAILS SHEET FOR EA080400 BAR

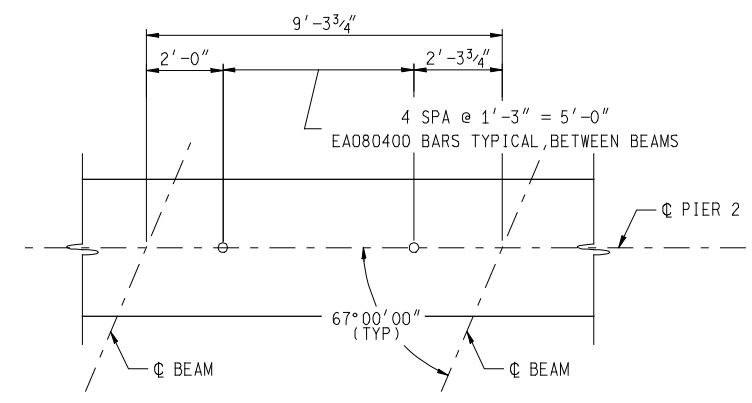


DETAIL A

SECTION L-L



PIER CAP LIFTING DEVICE DETAILS



EA080400 BAR DETAIL (PIER 2 ONLY)

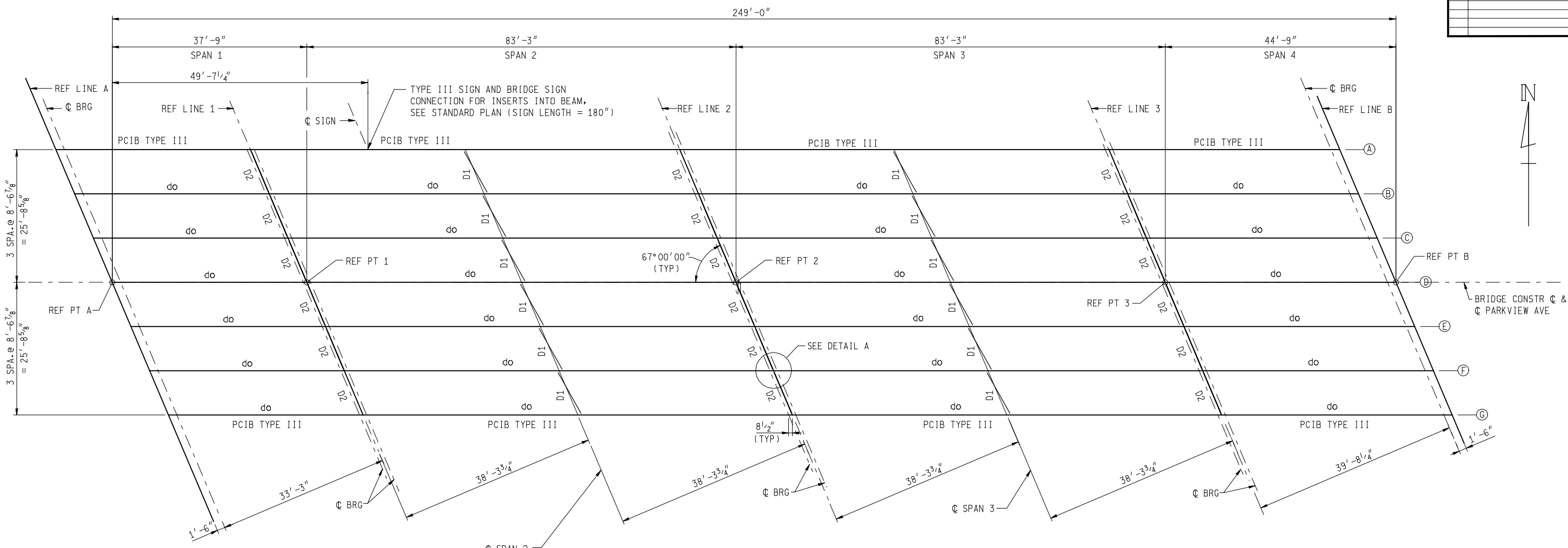
NOTES:
 CAP LIFTING DEVICES SHALL BE REMOVED AND POCKETS SHALL BE PATCHED WITH CEMENT GROUT AFTER CAP IS ERECTED. REMOVAL IS INCLUDED IN THE PAY ITEM "Precast Conc Substructure, Pier."
 FOR PEDESTAL AND POSITION DWEL DETAILS SEE SHEET 16.

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FRAMING PLAN

MISCELLANEOUS QUANTITIES		
1711	Ft	Prest Conc I Beam, Furn, 45 inch
1711	Ft	Prest Conc I Beam, Erect, 45 inch
30	Sft	Bearing, Elastomeric, 2 inch
140	Sft	Bearing, Elastomeric 2 1/2 inch

NOTES:

THE BEAM TOP FLANGE TOP SURFACE SHALL BE INTENTIONALLY ROUGHENED.

END BLOCKS ARE OPTIONAL.

TACK WELDING OF STEEL REINFORCEMENT IS PROHIBITED.

CONCRETE INSERTS IN THE BEAM WEB AT THE ABUTMENT SHALL BE 3/4" DIAMETER; RICHMOND, TYPE T2 OR TYPE TL2F; DAYTON SUPERIOR, TYPE B-1 HEAVY OR TYPE B-18; WILLIAMS, TYPE C-12 OR TYPE C-19; MEADOW STEEL, TYPE CT-2 OR TYPE CX-4; OR EQUAL.

THREADING OF REINFORCING AND INSTALLATION INTO CONCRETE INSERTS IN BEAM WEB IS INCLUDED IN THE BID ITEM "Prest Conc I Beam, Furn, 45 inch."

THREADING OF SHEAR CONNECTORS AND INSTALLATION INTO BEAM TOP FLANGE INSERTS IS INCLUDED IN THE PAY ITEM "Prest Conc I Beam, Furn, 45 inch."

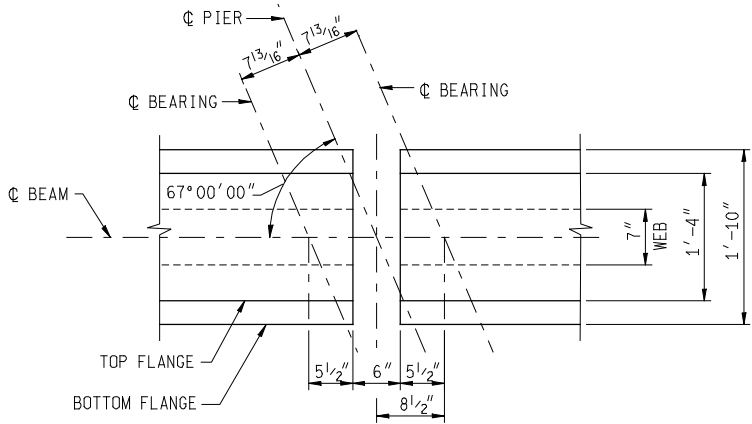
CONCRETE INSERTS INTO BEAM WEBS SHALL BE STAGGERED.

CONTINUOUS HOLES IN THE BEAM WEBS MAY BE USED IN LIEU OF CONCRETE INSERTS EXCEPT FOR THE FASCIA BEAM.

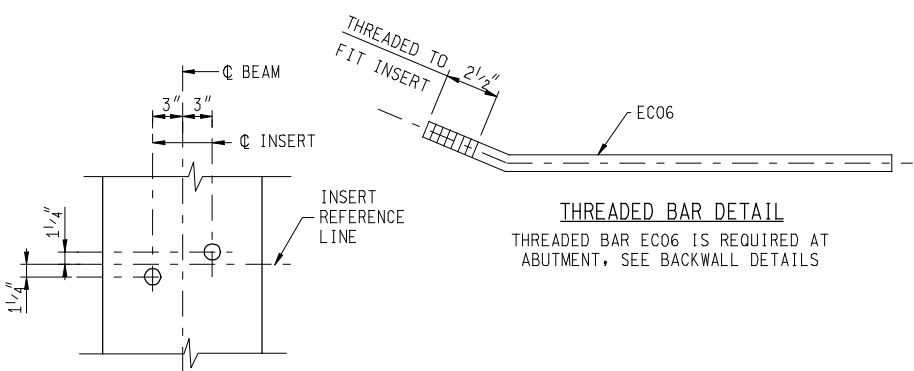
THREADED REINFORCEMENT FOR CONCRETE INSERTS INTO BEAM WEBS SHALL BE BENT TO THE REQUIRED ANGLE PRIOR TO INSTALLATION. BENT REINFORCEMENT MAY REQUIRE INSTALLATION BEFORE BEAM IS ERECTED.

BEAM LIFTING DEVICES SHALL BE REMOVED AFTER BEAMS ARE ERECTED. REMOVAL IS INCLUDED IN THE PAY ITEM "Prest Conc I Beam, Erect, 45 inch."

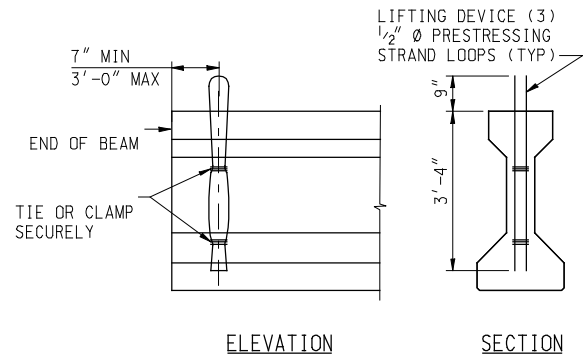
SHIFT BEAM REINFORCING SLIGHTLY WHERE NECESSARY TO CLEAR 1 1/4" IN. DIAMETER PIPE SLEEVES IN BEAM WEB.



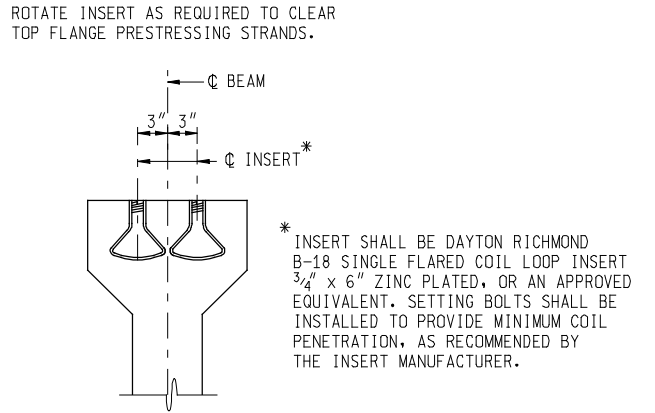
DETAIL A
DIAPHRAGMS ARE NOT SHOWN



THREADED BAR DETAIL
THREADED BAR EC06 IS REQUIRED AT ABUTMENT, SEE BACKWALL DETAILS



LIFTING DEVICE DETAILS



BEAM TOP FLANGE INSERTS

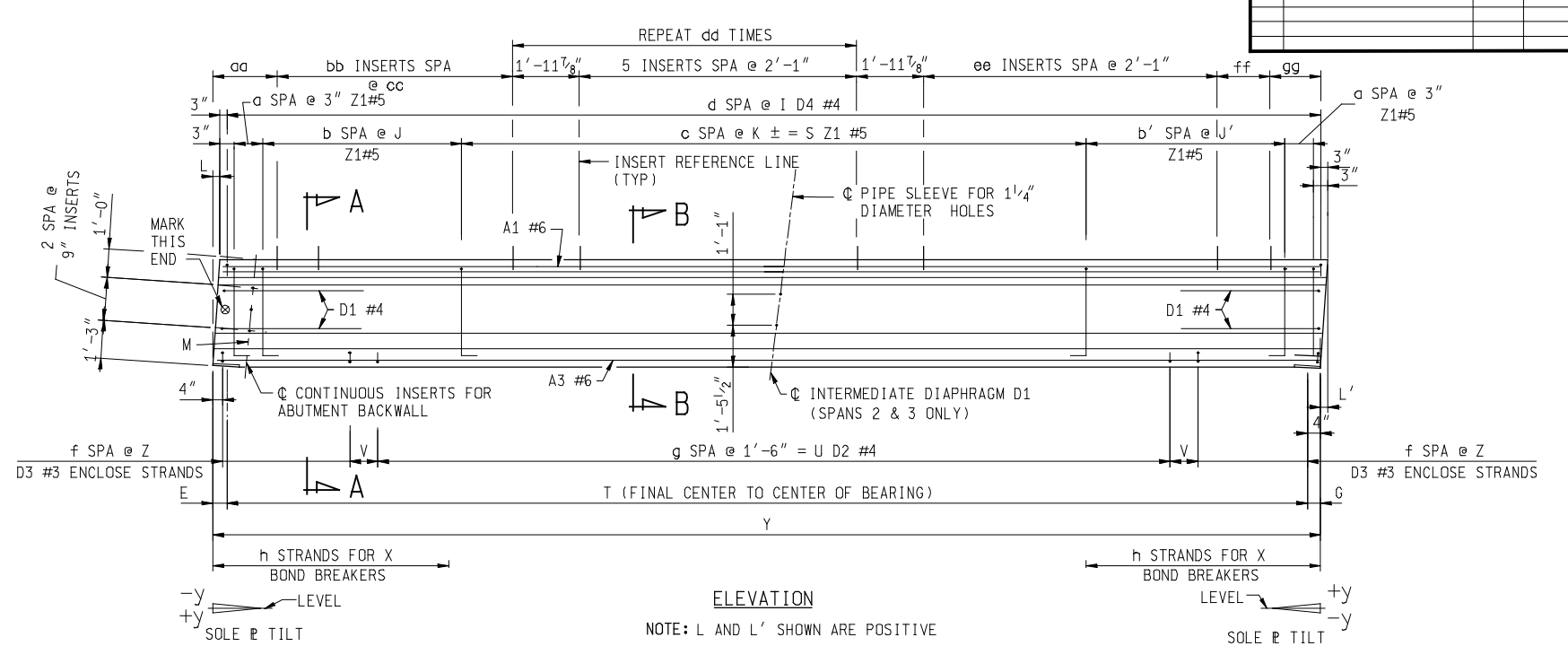
	 Michigan Department of Transportation	PRESTRESSED CONCRETE I-BEAM FRAMING PLAN PARKVIEW AVENUE OVER US 131			
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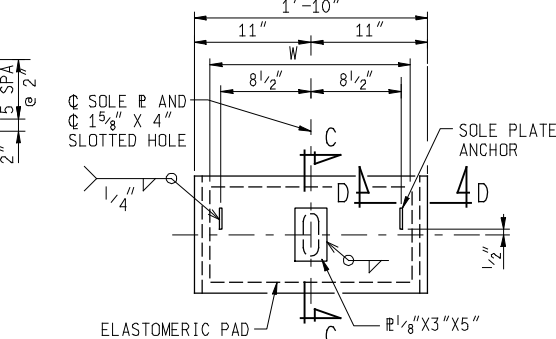
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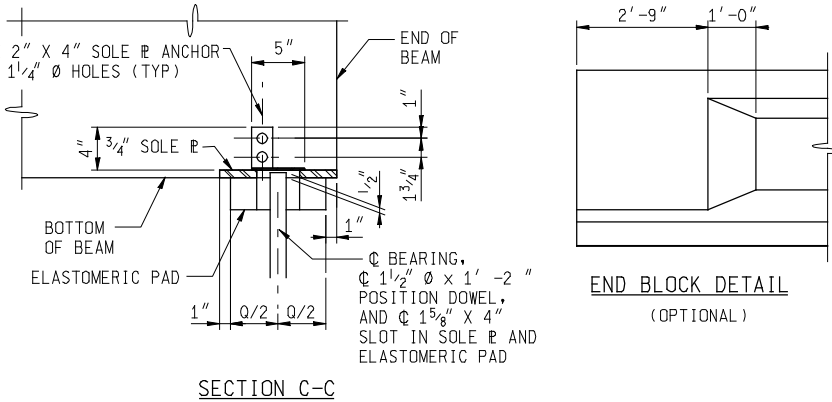
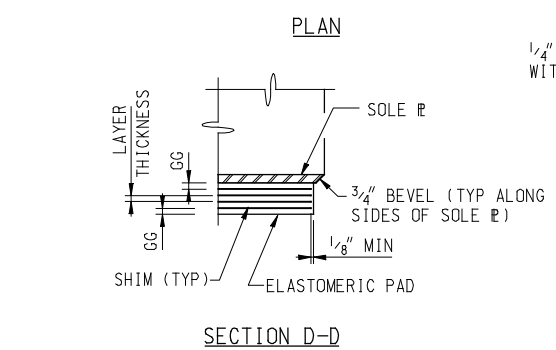
BEAM DATA				
SPAN TYPE	1	2	3	4
NO. REQ.	1	1	1	1
a	2	4	4	2
b	11	25	25	13
c	10	24	24	13
d	24	55	55	29
e	5 1/2	5 1/2	5 1/2	5 1/2
f	4	4	4	4
g	17	48	48	22
h	5 1/2	5 1/2	5 1/2	5 1/2
i	1'-6"	1'-6"	1'-6"	1'-6"
j	9	9	9	9
k	1'-10 1/2 ±	1'-9 3/8 ±	1'-9 3/8 ±	1'-8 3/8 ±
l	0	0	0	0
m	0	0	0	0
n	10 1/2	-	-	10 1/2
o	18'-4"	42'-9"	42'-9"	22'-4"
p	35'-5"	81'-10"	81'-10"	42'-5"
q	25'-6"	72'-0"	72'-0"	33'-0"
r	1'-1"	1'-0 1/2"	1'-0 1/2"	10"
s	36'-4"	82'-9"	82'-9"	43'-4"
t	1'-0"	1'-0"	1'-0"	1'-0"
u	2'-6 3/4	10 3/16	7 1/2	1'-6 3/4
v	4	2	2	0
w	2'-1"	2'-1"	1'-7 3/16	0
x	2	7	3	3
y	3	3	3	4
z	0	0	1'-6 3/16	0
aa	8 1/16	1'-4 3/16	6 1/16	2'-6 3/4



† MEASURED ALONG BEAM C. SEE INSERT DETAIL IF INSERTS STAGGERED.
 * FORMING DIMENSION IF L OR L' IS COMPUTED TO BE BETWEEN -1/2" & +1/2" USE L=0 OR L'=0



BEAM LINE	SOLE PLATE TILT TABLE							
	ABUT A	PIER 1	PIER 2	PIER 3	PIER 3	PIER 3	ABUT B	ABUT B
A	y	y'	y	y'	y	y'	y	y'
B	-	-	-	-	-	-	3/16"	3/16"
C	-	-	-	-	-	-	3/16"	3/16"
D	-	-	-	-	-	-	3/16"	3/16"
E	-	-	-	-	-	-	3/16"	3/16"
F	-	-	-	-	-	-	3/16"	3/16"
G	-	-	-	1/8"	1/8"	3/16"	3/16"	3/16"



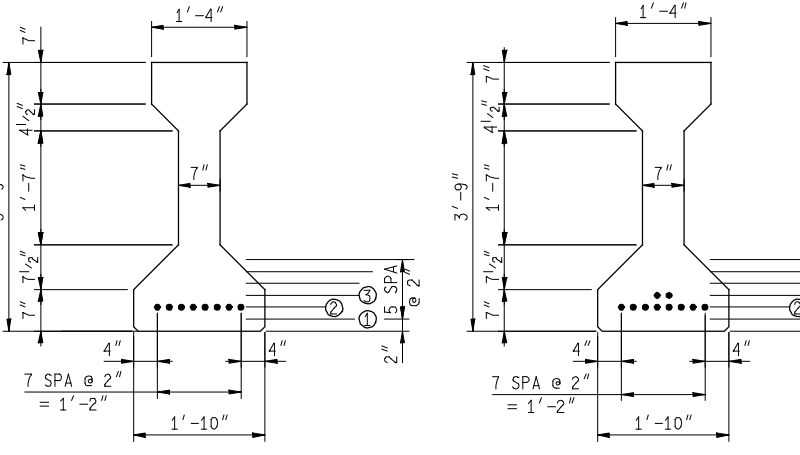
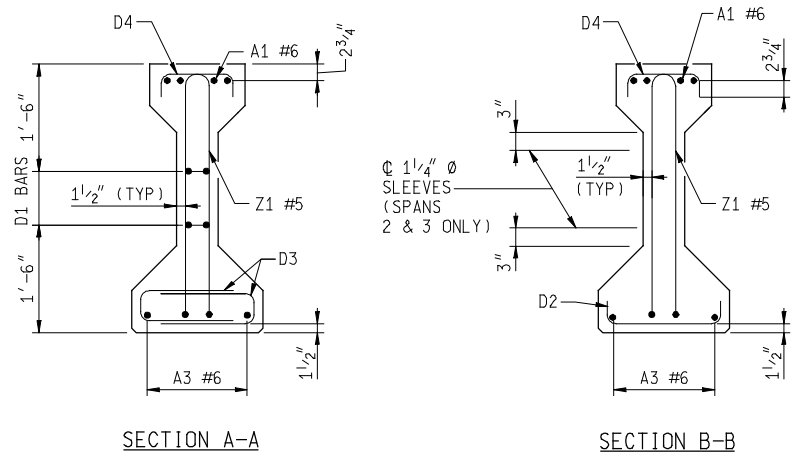
BOND BREAKERS			
SPAN	ROW	h	X
2.3	1	2	20'-0"
2.3	2	2	10'-0"
2.3	2	2	5'-0"
2.3	3	2	5'-0"

BAR DIMENSIONS			
BAR	DIM.	BEAM TYPE	
A1#6	A+	Y-3"	11"
A3#6	A+	Y-3"	11"
D1#4	A	5'-0"	3 1/2"
D2#4	A	5	5 1/2"
D3#3	A	1'-4"	5 1/2"
D4#4	A	5	5 1/2"
Z1#5	A	1'-0"	3'-5"
	B	5	5

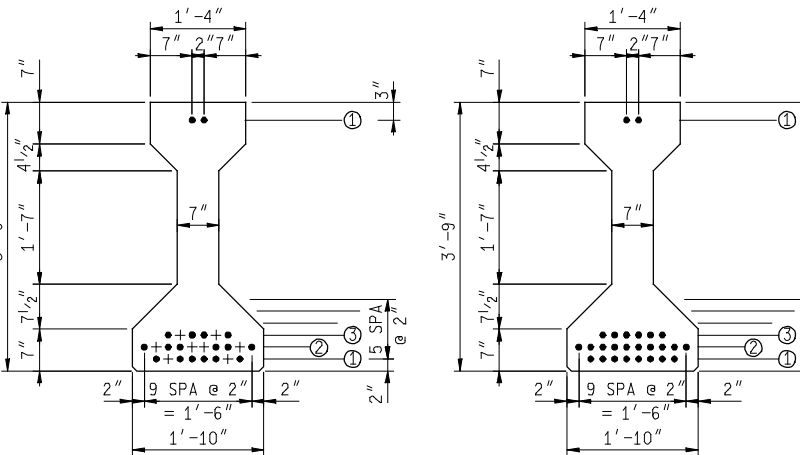
+ PROVIDE 2'-7" MIN LAP (SPANS 2 & 3)

NOTES:
 PRESTRESSING STRAND SHALL BE 0.6 IN. NOMINAL DIAMETER MEETING THE REQUIREMENTS OF AASHTO M203 (ASTM A416), GRADE 270, LOW RELAXATION STRAND. THE NUMBER AND LOCATION OF STRANDS SHALL BE AS SHOWN IN THE TABLE, SECTION A-A AND SECTION B-B.
 PRESTRESSING STRANDS SHALL BE GIVEN AN INITIAL PRESTRESS OF 44,000 LBS EACH.
 THE NUMBER, LENGTH, AND LOCATION OF BOND BREAKERS SHALL BE AS SHOWN IN THE TABLE AND IN SECTION A-A. LENGTH IS SHOWN FROM THE END OF THE BEAM TO THE END OF THE BOND BREAKER.
 TOTAL ESTIMATED CHANGE OF LENGTH OF THE BOTTOM FLANGE AT TRANSFER OF PRESTRESS FORCE IS 0 IN. FOR BEAMS IN SPANS 1 AND 4 AND 1/2 IN. FOR BEAMS IN SPANS 2 AND 3.
 THE ESTIMATED MIDSPAN BEAM CAMBER AT RELEASE IS 0.19 IN. FOR BEAMS IN SPAN 1, 0.31 IN. FOR BEAMS IN SPAN 4 AND 1.84 IN. FOR BEAMS IN SPANS 2 AND 3. THIS CAMBER IS CAUSED BY PRESTRESS AND BEAM DEAD LOAD ONLY AND IS MEASURED IN THE ERECTED POSITION.
 STEEL IN THE BEARINGS SHALL MEET THE REQUIREMENTS OF ASTM A36 AND SHALL BE HOT DIP GALVANIZED AFTER FABRICATION ACCORDING TO AASHTO M232. STEEL IN THE BEARINGS SHALL BE INCLUDED THE PAY ITEM "Prest Conc I Beam, Furn, 45 Inch."

PLAIN ELASTOMERIC BEARINGS SHALL HAVE A SHEAR MODULUS, G, OF 200 PSI (+/-30 PSI) AND LAMINATED ELASTOMERIC BEARINGS SHALL HAVE A SHEAR MODULUS OF 100 PSI (+/-15 PSI).
 ELASTOMERIC PADS AT ABUTMENT A AND ABUTMENT B ARE INCLUDED IN THE PAY ITEM "Prest Conc I Beam, Furn, 45 Inch."
 THE DESIGN OF THE ELASTOMERIC BEARINGS IS BASED ON A MAXIMUM PRESSURE OF 500 PSI DL AND 800 PSI DL + LL.



SPAN 1 (SECTIONS A-A & B-B) SHOWING STRAND ARRANGEMENT
 • DENOTES STRAND LOCATION



SPAN 2&3 (SECTION A-A) (@ END FACE)
 SPAN 2&3 (SECTION B-B) (@ MIDSPAN)

• DENOTES STRAND LOCATION
 + DENOTES DEBONDED STRAND LOCATION (BOND BREAKER)

STRAND LOCATION TABLE												
SPAN	TYPE	MIDSPAN (SECTION B-B)				END FACE (SECTION A-A)				TOTAL NUMBER	REQUIRED CONCRETE COMPRESSIVE STRENGTH	
		①	②	③	④	①	②	③	④		28 DAY	AT RELEASE
1	III	0	8	0	0	0	8	0	0	8	7000 psi	5700 psi
2	III	8	10	6	2	0	8	10	6	2	0	26
3	III	8	10	6	2	0	8	10	6	2	0	26
4	III	0	8	2	0	0	8	2	0	0	7000 psi	5700 psi

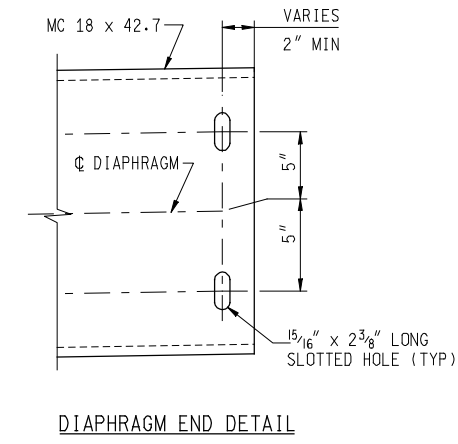
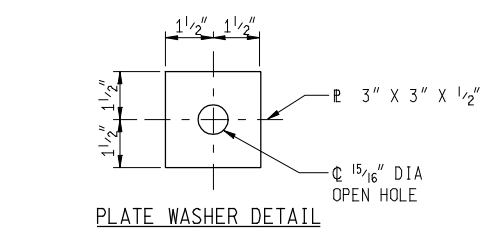
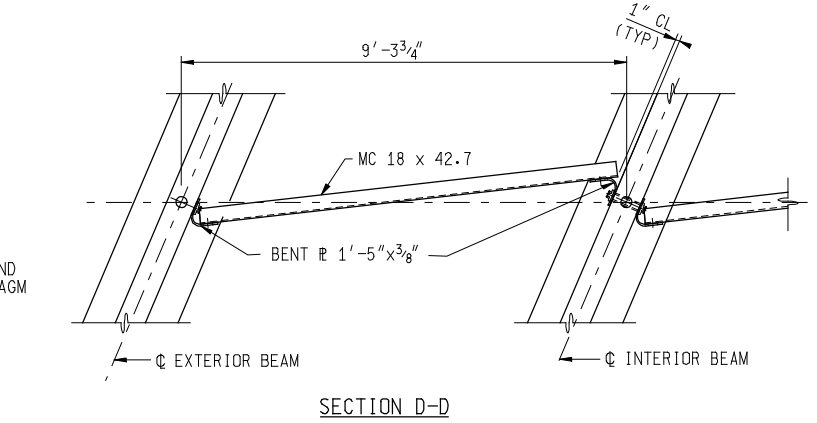
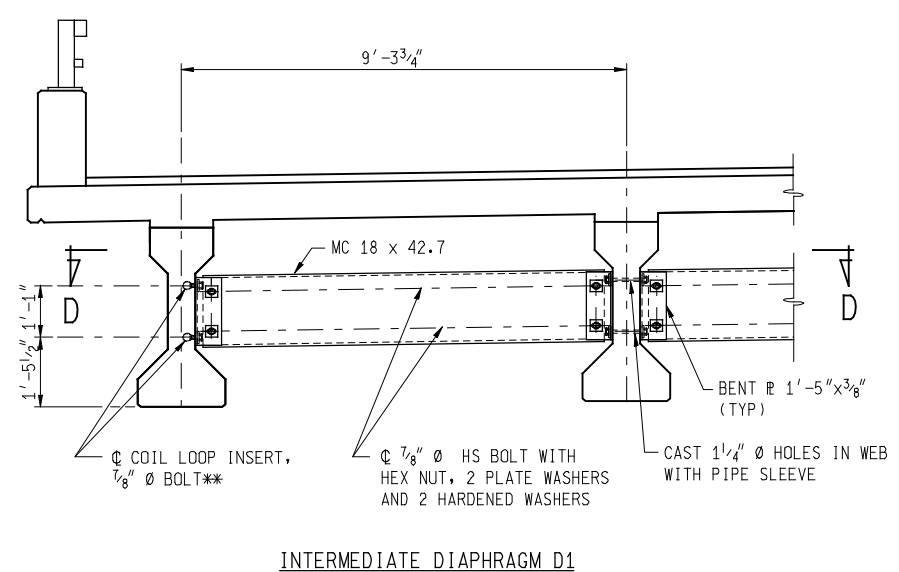
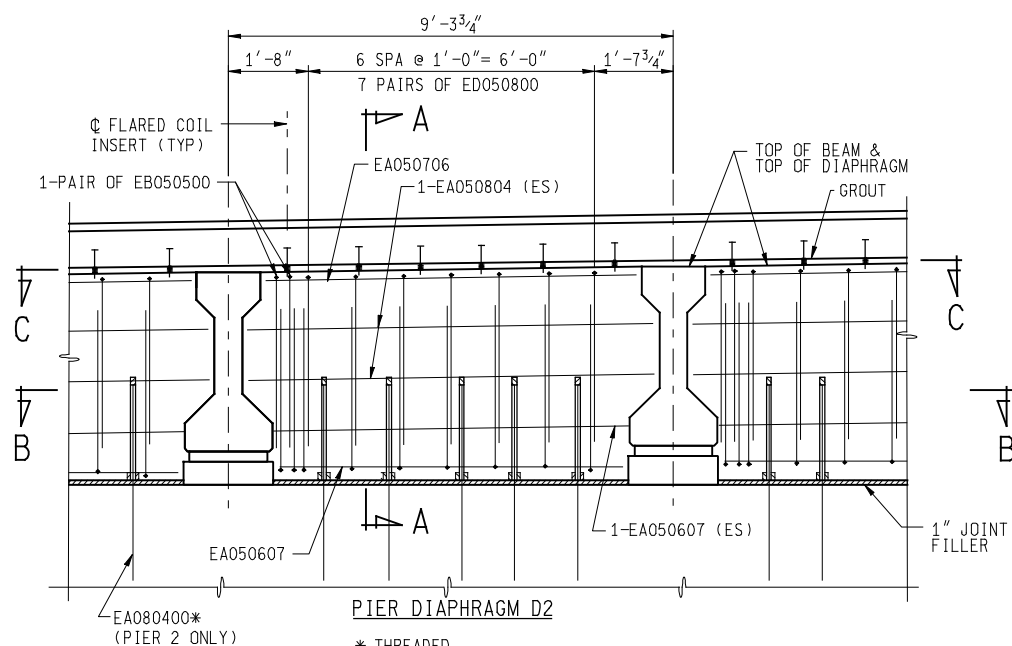
PRESTRESSED CONCRETE I-BEAM DETAILS
 PARKVIEW AVENUE OVER US 131

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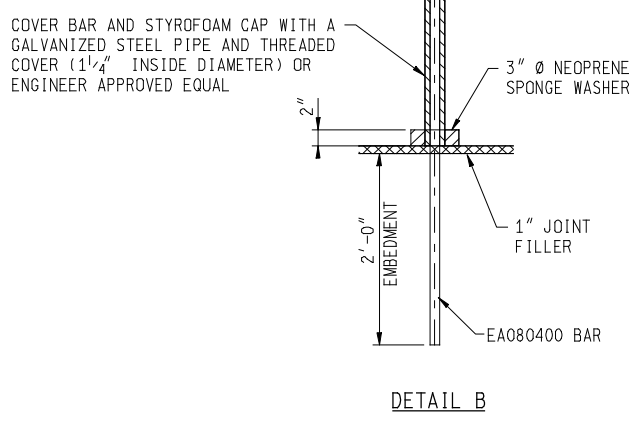
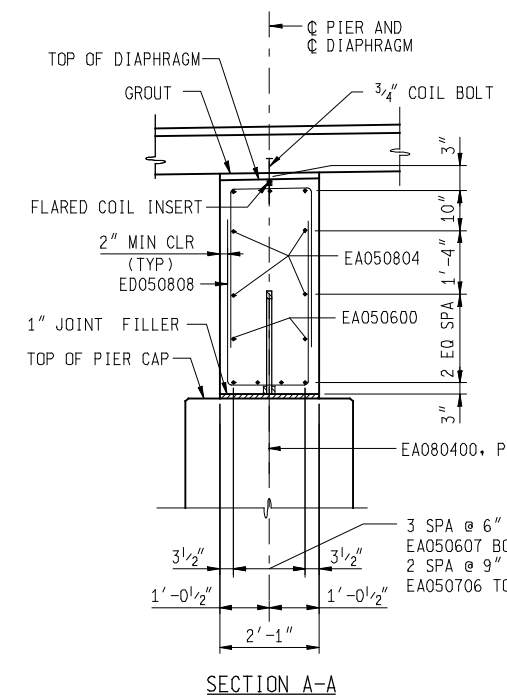
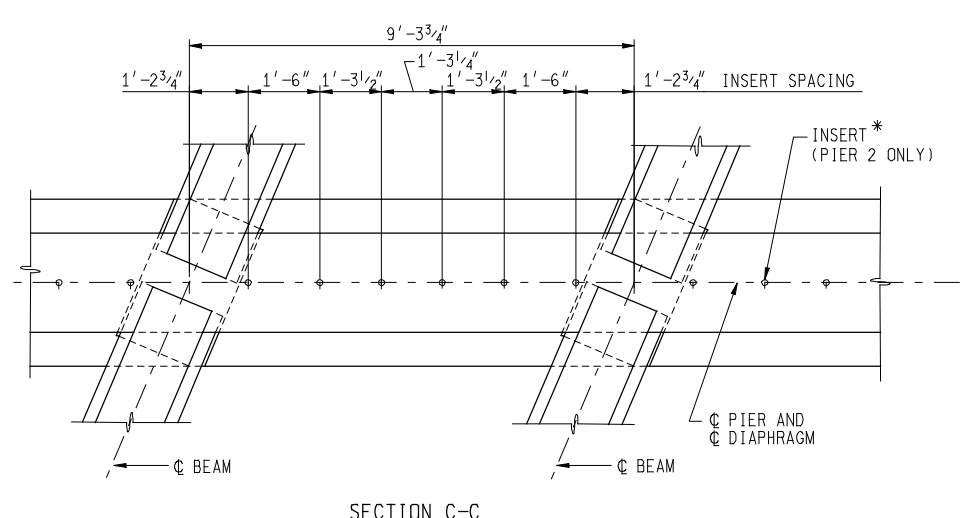
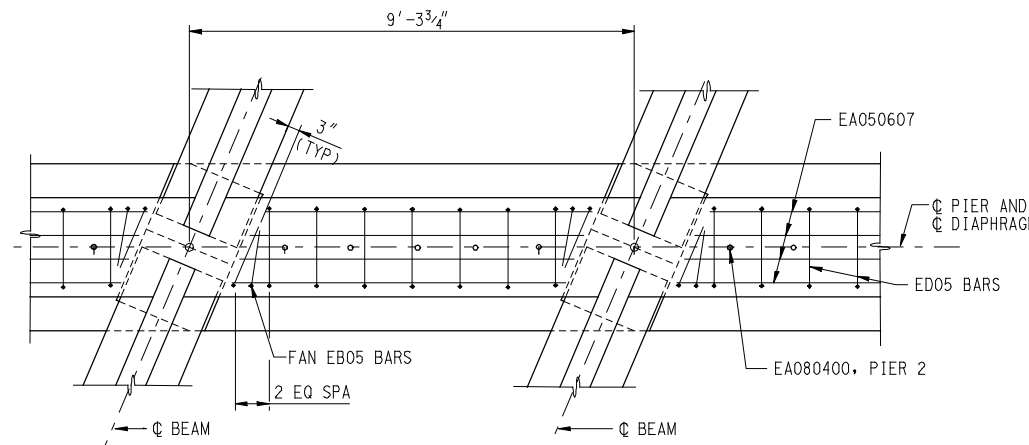
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SUPERSTRUCTURE CONCRETE QUANTITIES	
POUR	CUBIC YARDS
DIAPHRAGMS	43.6
BACKWALLS	50.7
RAILING END BLOCKS	2.9
APPROACH SLABS	58.9
SLEEPER SLABS	16.0
TOTAL CONC: 172 CYD	

MISCELLANEOUS QUANTITIES		
4898	Lb	Struct Steel, Rolled Shape, Furn and Fab
4898	Lb	Structural Steel, Rolled Shape, Erect
1	LS	Field Repr of Damaged Coating (S01-39014)
172	Cyd	Superstructure Conc
1	LS	Superstructure Conc, Form, Finish, and Cure (S01-39014)



BLOCK OUT CONCRETE AT ELASTOMERIC BEARINGS. ATTACH NO. 30 ASPHALT FELT WITH ROOFING TAR/ASPHALT TO SIDES OF BEAMS FROM BEAM END TO 1" PAST EDGE OF PIER DIAPHRAGM. REMOVE 1" EXCESS ON OUTSIDE OF FASCIA BEAMS AFTER DIAPHRAGM FORM REMOVAL. ALL LABOR, MATERIALS AND CLEANUP/REMOVAL ARE INCLUDED IN THE BID ITEM "SUPERSTRUCTURE CONC."

JOINT BETWEEN BEAM ENDS SHALL BE FILLED WITH CONCRETE.

* INSERT SHALL BE DAYTON-RICHMOND B-18 SINGLE FLARED COIL LOOP INSERT 3/4" x 6" ZINC PLATED, OR AN APPROVED EQUIVALENT. SETTING BOLTS SHALL BE INSTALLED TO PROVIDE MINIMUM COIL PENETRATION AS RECOMMENDED BY THE MANUFACTURER.

** INSERT SHALL BE DAYTON-RICHMOND F-44 7/8" Ø THIN SLAB FERRULE INSERT ZINC PLATED, OR AN APPROVED EQUIVALENT. SETTING BOLTS SHALL BE INSTALLED TO PROVIDE MINIMUM COIL PENETRATION AS RECOMMENDED BY THE MANUFACTURER. BOLT SHALL BE NC 7/8" Ø ZINC PLATED.

NOTES:
 STRUCTURAL STEEL FOR INTERMEDIATE DIAPHRAGMS SHALL BE ASTM A709 GRADE 36 AND SHALL BE HOT DIP GALVANIZED AFTER FABRICATION ACCORDING TO AASHTO M232. BOLTS SHALL BE 1/8 IN. DIAMETER ASTM A325 TYPE I. ALL BOLTS, NUTS, HARDENED WASHERS, PLATE WASHERS, PIPE SLEEVES AND INCIDENTAL HARDWARE SHALL BE HOT DIP GALVANIZED. HOT DIP GALVANIZING OF STRUCTURAL STEEL SHALL BE INCLUDED IN THE PAY ITEM "Structural Steel, Rolled Shape, Furn and Fab."
 DIMENSIONS FOR DIAPHRAGM D1 AND BENT PLATES VARY BASED ON DIAPHRAGM LOCATION.
 THE QUANTITY STRUCTURAL STEEL INCLUDES:
 STEEL 4898 LB
 BRONZE 0 LB
 LEAD 0 LB
 TOTAL 4898 LB

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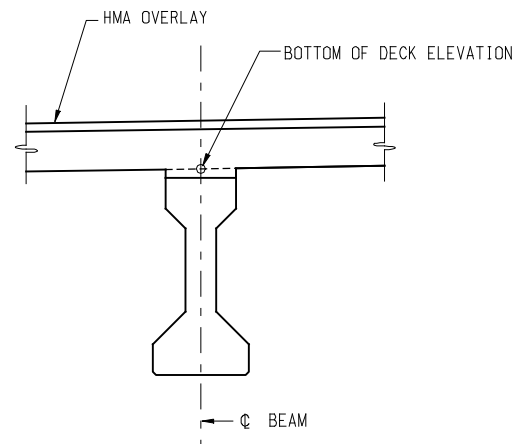
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NO.	DESCRIPTION	DATE	BY

BOTTOM OF DECK ELEVATIONS

GIRDER	REFERENCE LINE A	SPAN1			REFERENCE LINE 1	SPAN 2							REFERENCE LINE 2	SPAN 3							REFERENCE LINE 3	SPAN4			REFERENCE LINE B			
	☉ BRG	1	2	3	☉ BRG	☉ BRG	1	2	3	4	5	6	7	☉ BRG	☉ BRG	1	2	3	4	5	6	7	☉ BRG	☉ BRG	1	2	3	☉ BRG
A	966.536	966.636	966.724	966.800	966.864	966.874	966.994	967.093	967.163	967.201	967.206	967.180	967.124	967.048	967.044	967.063	967.060	967.030	966.967	966.871	966.743	966.587	966.410	966.392	966.257	966.104	965.933	965.743
B	966.705	966.801	966.885	966.957	967.018	967.027	967.143	967.237	967.303	967.337	967.338	967.306	967.247	967.166	967.161	967.176	967.169	967.134	967.067	966.967	966.834	966.674	966.492	966.473	966.334	966.177	966.000	965.806
C	966.873	966.965	967.045	967.113	967.170	967.179	967.290	967.380	967.441	967.471	967.467	967.431	967.367	967.282	967.277	967.287	967.276	967.236	967.165	967.060	966.923	966.758	966.572	966.553	966.409	966.247	966.066	965.868
D	966.874	966.962	967.038	967.103	967.156	967.164	967.271	967.356	967.413	967.438	967.430	967.390	967.322	967.232	967.226	967.232	967.216	967.172	967.096	966.987	966.846	966.677	966.486	966.466	966.317	966.151	965.966	965.763
E	966.781	966.865	966.938	966.999	967.048	967.055	967.157	967.238	967.291	967.312	967.299	967.255	967.182	967.088	967.081	967.083	967.063	967.014	966.934	966.820	966.675	966.501	966.306	966.285	966.132	965.962	965.771	965.564
F	966.687	966.767	966.836	966.893	966.938	966.945	967.043	967.119	967.168	967.184	967.167	967.118	967.041	966.942	966.935	966.932	966.908	966.855	966.770	966.652	966.502	966.324	966.124	966.103	965.946	965.770	965.576	965.363
G	966.591	966.667	966.732	966.785	966.827	966.833	966.926	966.999	967.043	967.054	967.033	966.980	966.898	966.795	966.787	966.780	966.751	966.694	966.605	966.482	966.328	966.145	965.941	965.920	965.757	965.577	965.378	965.161



TYPICAL SECTION

NOTES:

BOTTOM OF DECK ELEVATIONS ARE BASED ON THE CONDITION THAT THE BEAMS AND DIAPHRAGMS ARE ERECTED WITH NO OTHER LOADS APPLIED. THESE ELEVATIONS INCLUDE ALLOWANCE FOR DEFLECTION DUE TO PRECAST DECK, BARRIER AND OVERLAY.

SECTIONS FOR BOTTOM OF DECK ELEVATIONS ARE GIVEN ALONG BEAM CENTERLINES FROM CENTERLINE OF BEARING, TO CENTERLINE OF BEARING AT EQUAL SPACING.

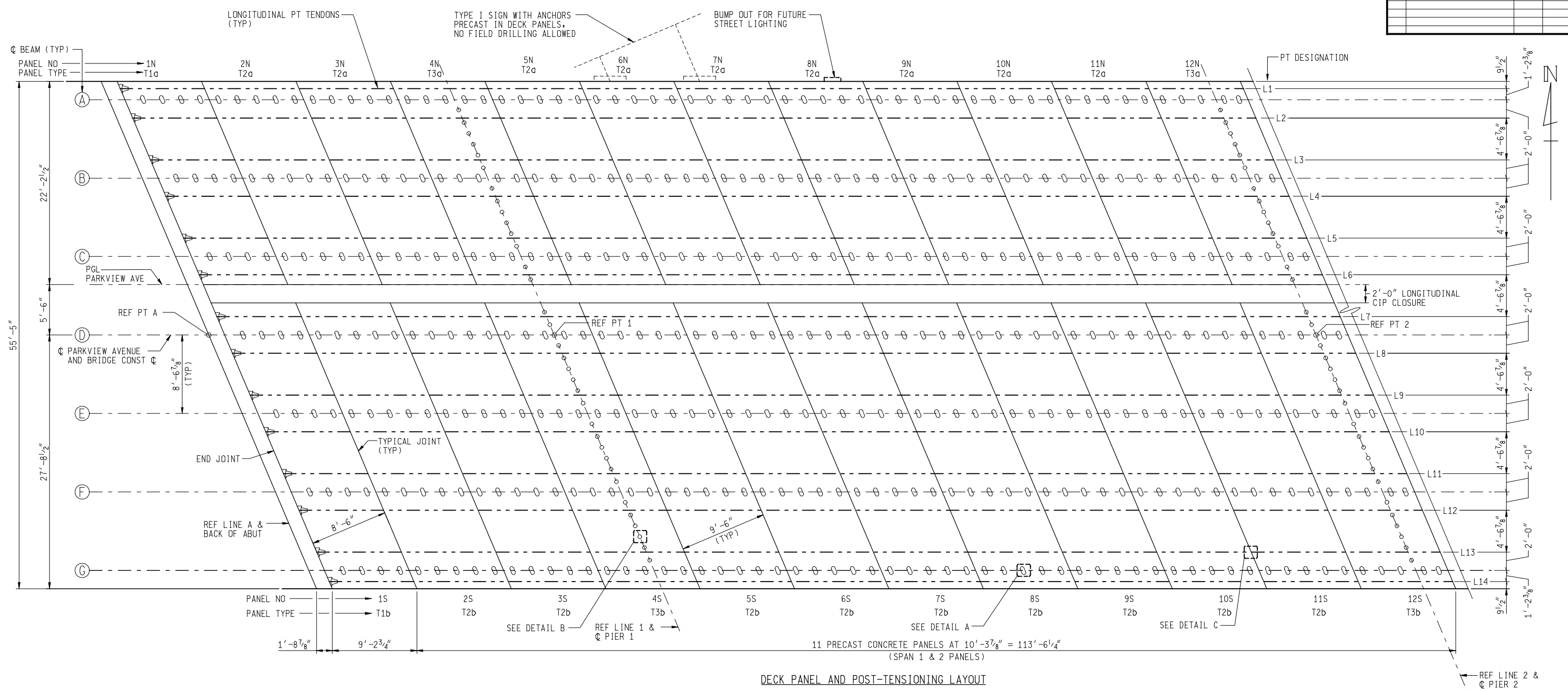
		DECK ELEVATIONS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

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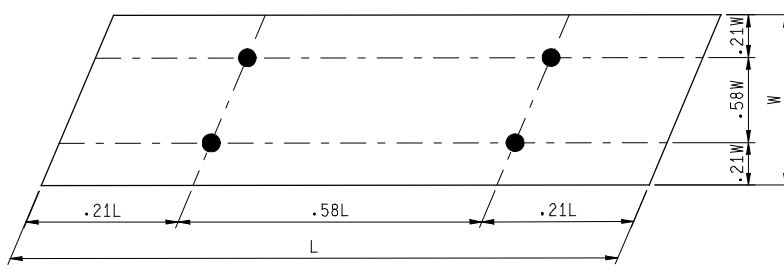
DRAWN BY: _____ CHECKED BY: _____ DATE: _____ CORRECTED BY: _____ DATE: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY

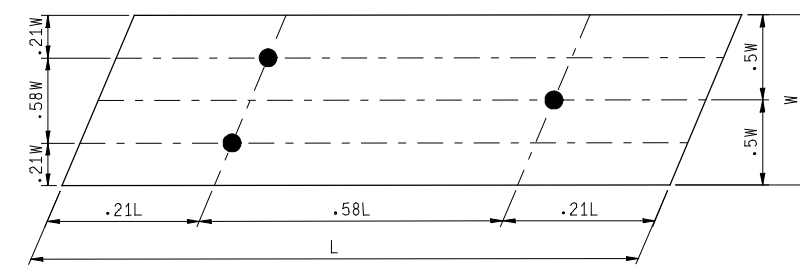


DECK PANEL AND POST-TENSIONING LAYOUT

PT DESIGNATION	TENDON SIZE	TENDON LENGTH	STRESSING FORCE	STRESSING END	STRESSING SEQUENCE
L1	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	6
L2	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	14
L3	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	1
L4	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	8
L5	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	5
L6	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	11
L7	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	3
L8	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	10
L9	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	12
L10	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	4
L11	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	9
L12	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	2
L13	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. B	13
L14	4x0.6"	245'-6 1/4"	182.8 kips	ABUT. A	7



DECK PANEL LIFTING POINTS (4 POINTS)



DECK PANEL TRANSPORT SUPPORTS (3 POINTS)

NOTES:
 DESIGN OF LIFTING LOOPS AND FRAME IS THE RESPONSIBILITY OF THE CONTRACTOR.
 USE MINIMUM 6" X 6" HARDWOOD SUPPORT BLOCKS FOR 3 POINT SUPPORT.
 3 POINT SUPPORT ARRANGEMENT ELIMINATES DECK PANEL TWISTING DURING TRANSPORTATION.
 FOR INFORMATION ONLY: THE ESTIMATED QUANTITY OF POST-TENSIONING STEEL IS 10175 POUNDS.

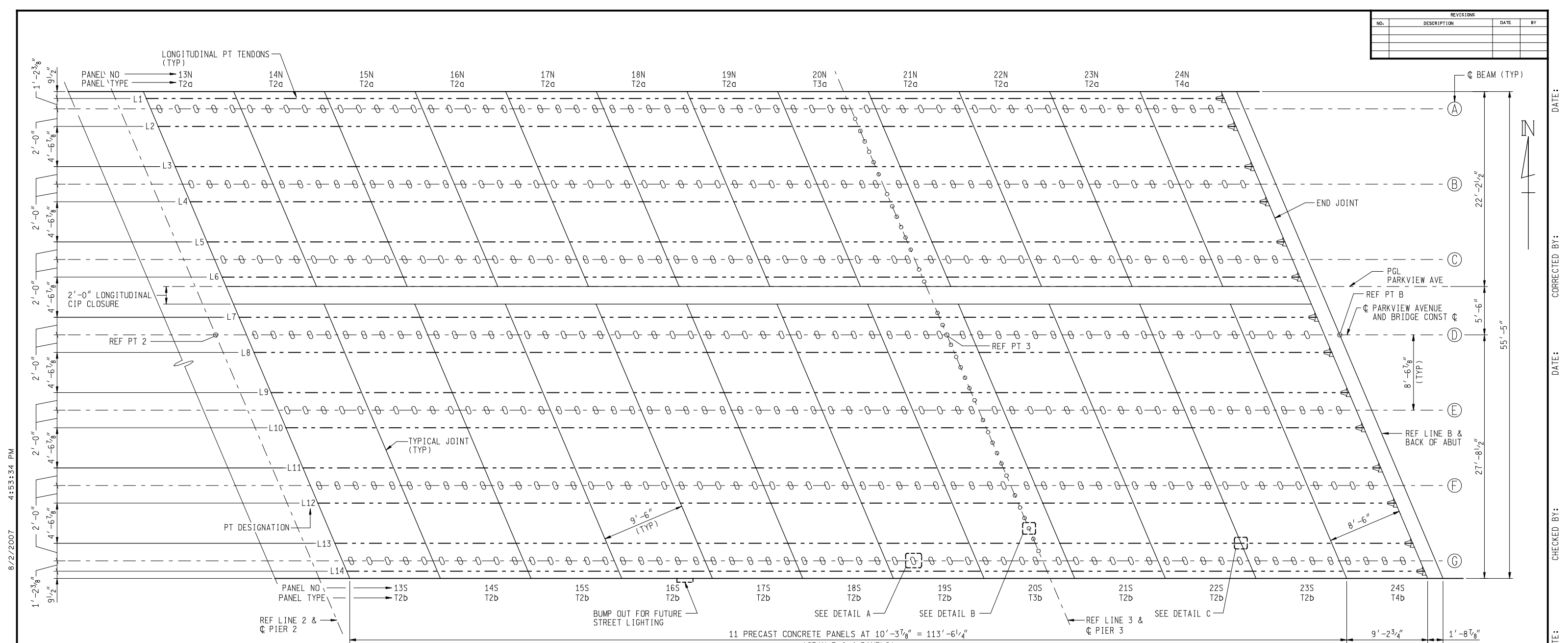
MISCELLANEOUS QUANTITIES		
13115	Sft	Precast Concrete Deck Panel
1	LS	Deck Post-Tensioning

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		DECK PANEL LAYOUT PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/7/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 26 OF 61

DATE: _____ CORRECTED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY



DECK PANEL AND POST-TENSIONING LAYOUT

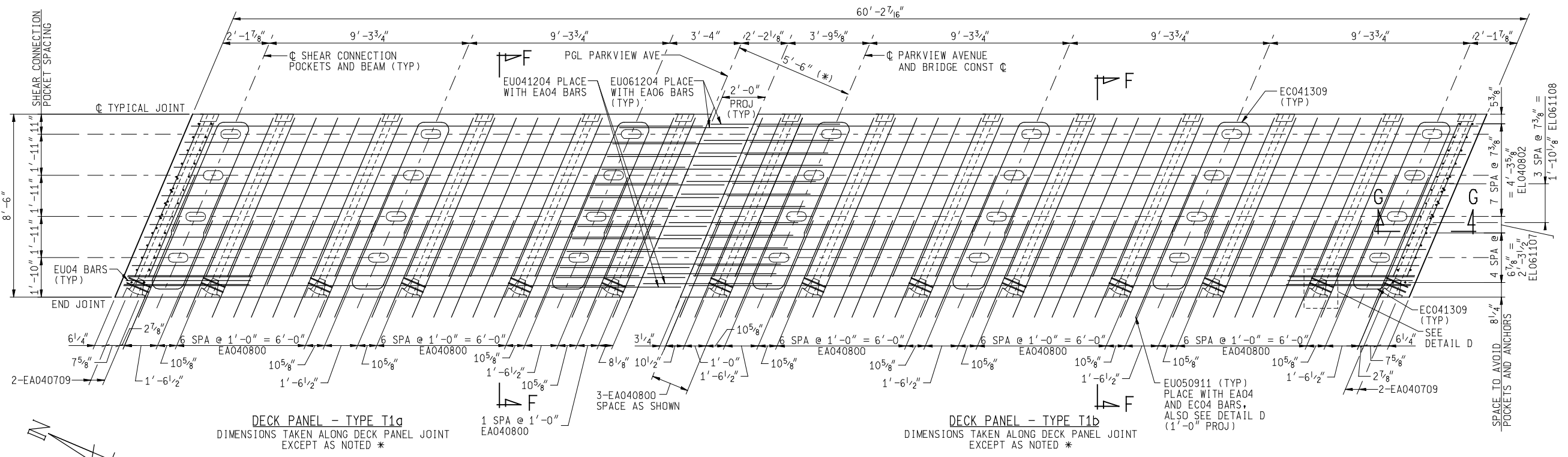
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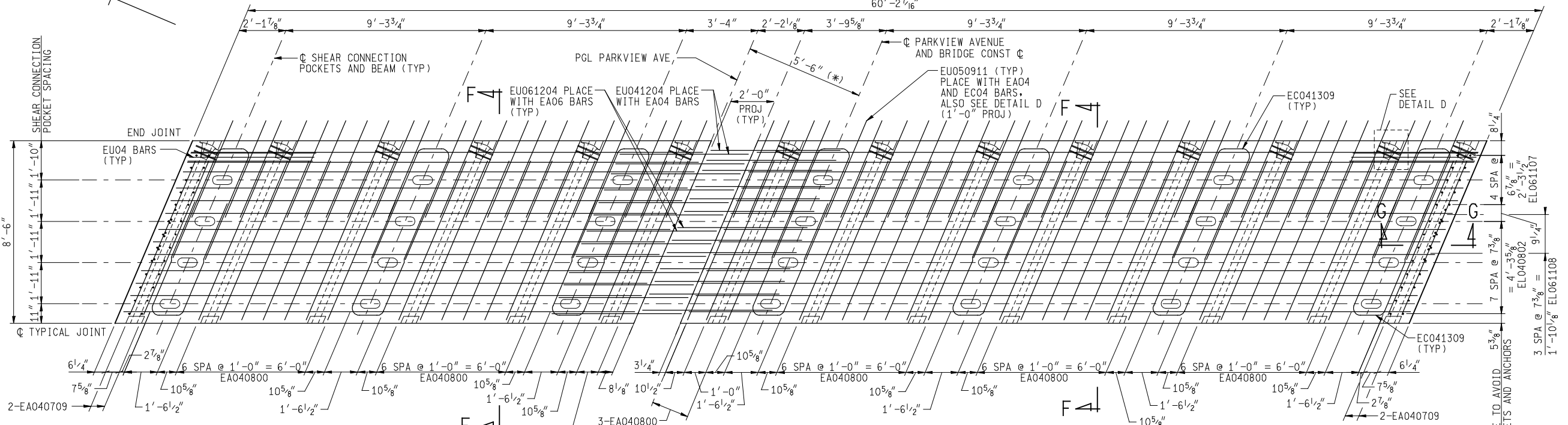
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		DECK PANEL LAYOUT PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
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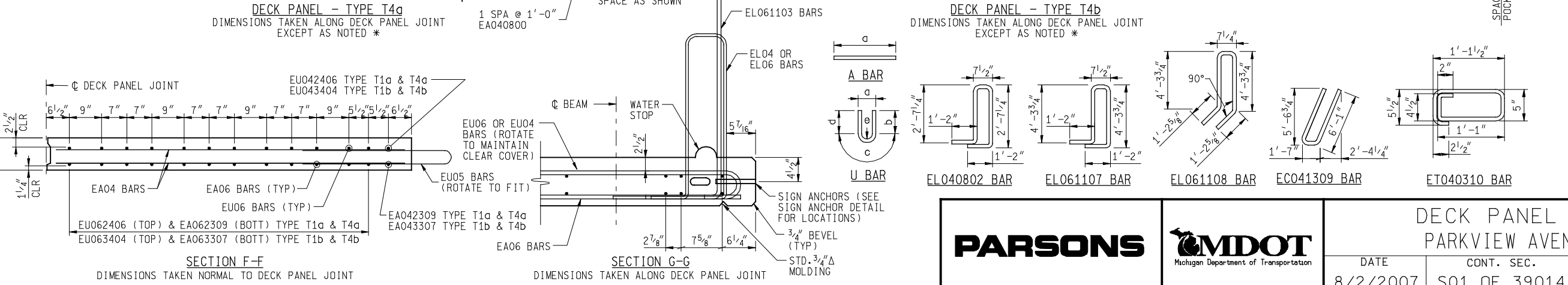
REVISIONS			
NO.	DESCRIPTION	DATE	BY



DECK PANEL TYPE T1a & T4a			
BAR	DIMENSIONS	NO. REQ'D PER PANEL	
EA040800	a	8'-0"	32
EA040709	a	7'-9"	4
EA042309	a	23'-9"	1
EA062309	a	23'-9"	12
EC041309	L	13'-9"	12
EL040802	L	8'-2"	8
EL061107	L	11'-7"	5
EL061108	L	11'-8"	4
ET040310	L	3'-10"	24
EU041110	a	5 1/4"	3
	b	5'-7 1/4"	
	c	7 1/2"	
	d	5'-7 1/4"	
	e	2 1/8"	
EU050911	a	5"	22
	b	4'-8"	
	c	7"	
	d	4'-8"	
	e	1 7/8"	
EU062406	a	6"	12
EU042406	b	23'-6"	1
	c	9"	
	d	3"	
	e	2 1/4"	
EU061204	a	6"	12
EU041204	b	5'-9 1/2"	1
	c	9"	
	d	5'-9 1/2"	
	e	2 1/4"	



DECK PANEL TYPE T1b & T4b			
BAR	DIMENSIONS	NO. REQ'D PER PANEL	
EA040800	a	8'-0"	48
EA040709	a	7'-9"	4
EA043307	a	33'-7"	1
EA063307	a	33'-7"	12
EC041309	L	13'-9"	16
EL040802	L	8'-2"	8
EL061107	L	11'-7"	5
EL061108	L	11'-8"	4
ET040310	L	3'-10"	32
EU041110	a	5 1/4"	3
	b	5'-7 1/4"	
	c	7 1/2"	
	d	5'-7 1/4"	
	e	2 1/8"	
EU050911	a	5"	32
	b	4'-8"	
	c	7"	
	d	4'-8"	
	e	1 7/8"	
EU063404	a	6"	12
EU043404	b	33'-4"	1
	c	9"	
	d	3"	
	e	2 1/4"	
EU061204	a	6"	12
EU041204	b	5'-9 1/2"	1
	c	9"	
	d	5'-9 1/2"	
	e	2 1/4"	



DECK PANEL REINFORCING

PARKVIEW AVENUE OVER US 131

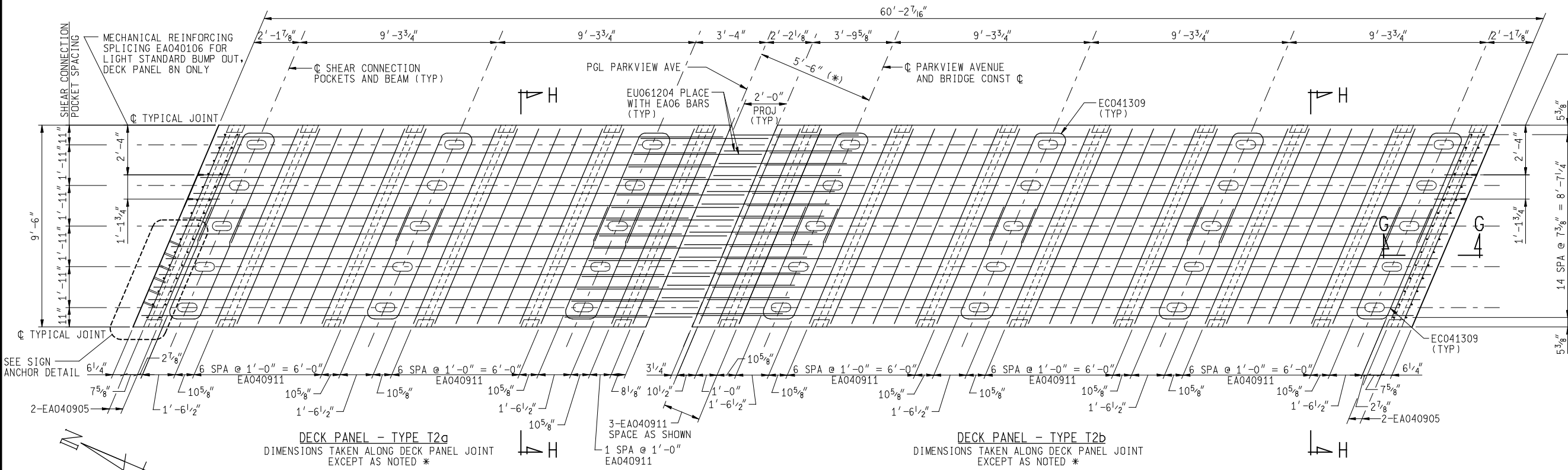
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
8/2/2007	S01 OF 39014	81325A	GROTHENHUIS

SHEET	28	OF	61
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NO.	DESCRIPTION	DATE	BY

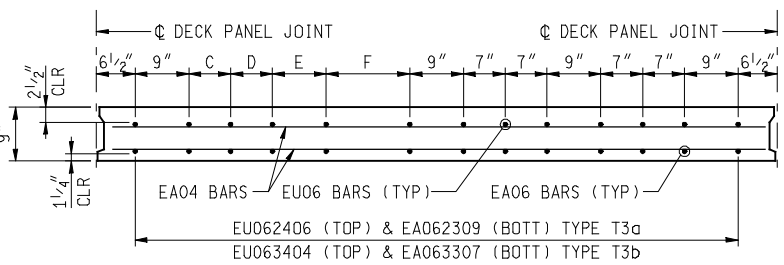
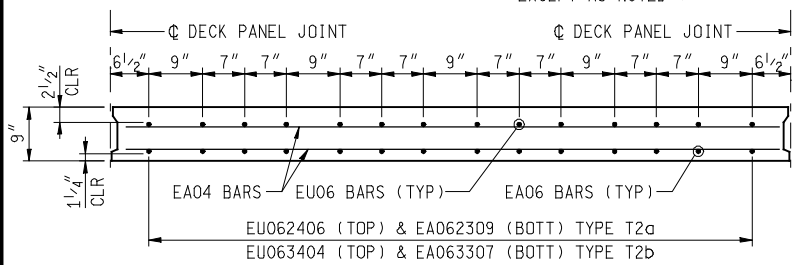
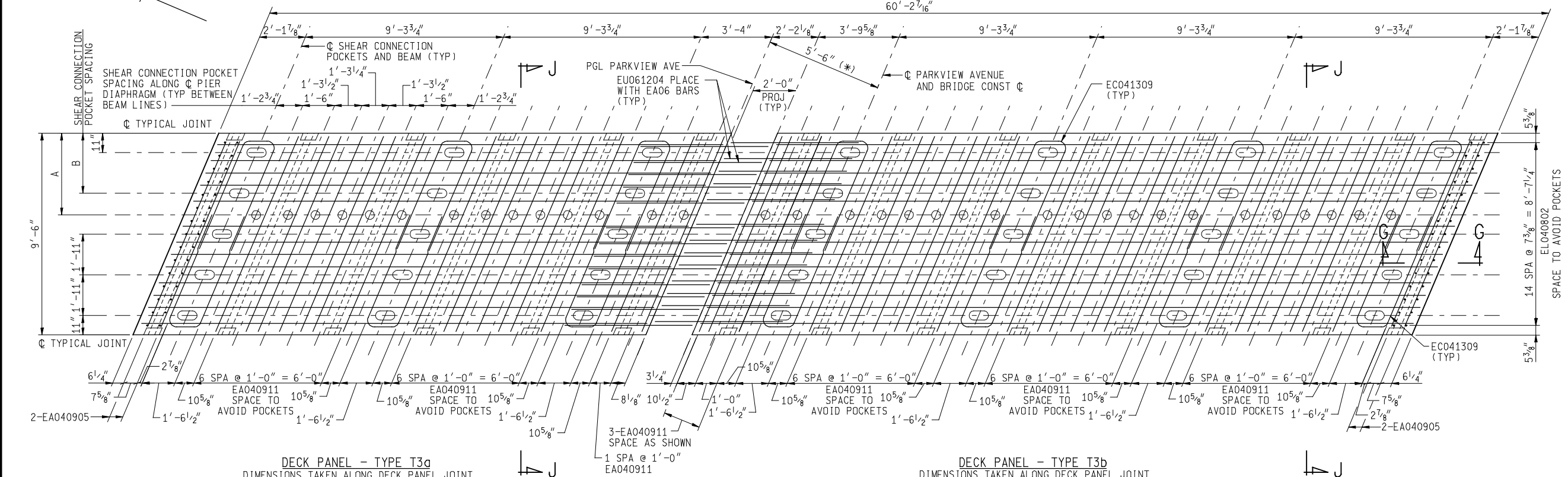


DECK PANEL TYPE T2a & T3a

BAR	DIMENSIONS	NO. REQ'D PER PANEL
EA040911	a 9'-11"	32
EA040905	a 9'-5"	4
EA062309	a 23'-9"	T2a - 14 T3a - 13
EC041309	L 13'-9"	12
EL040802	L 8'-2"	15
EU062406	a 6"	T2a - 14
	b 23'-6"	T3a - 13
	c 9"	
	d 3"	
	e 2 1/4"	
EU061204	a 6"	T2a - 14
	b 5'-9 1/2"	T3a - 13
	c 9"	
	d 5'-9 1/2"	
	e 2 1/4"	
EA040106 W/ MECH. REINF. SPLICING	a 1'-6"	2 (PANEL 8N ONLY)

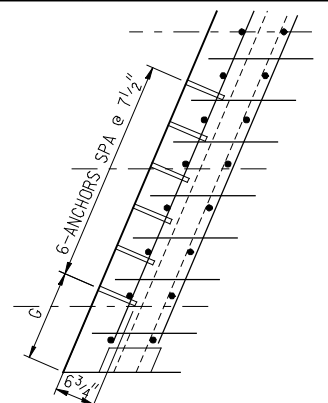
DECK PANEL TYPE T2b & T3b

BAR	DIMENSIONS	NO. REQ'D PER PANEL
EA040911	a 9'-11"	48
EA040905	a 9'-5"	4
EA063307	a 33'-7"	T2b - 14 T3b - 13
EC041309	L 13'-9"	16
EL040802	L 8'-2"	15
EU063404	a 6"	T2b - 14
	b 33'-4"	T3b - 13
	c 9"	
	d 3"	
	e 2 1/4"	
EU061204	a 6"	T2b - 14
	b 5'-9 1/2"	T3b - 13
	c 9"	
	d 5'-9 1/2"	
	e 2 1/4"	
EA040106 W/ MECH. REINF. SPLICING	a 1'-6"	2 (PANEL 16S ONLY)



DECK PANEL	DIMENSIONS					
	A	B	C	D	E	F
4N, 4S	3'-10 1/4"	2'-10"	7"	7"	9"	1'-2"
12N, 12S	3'-2 1/16"	2'-5"	9"	9"	10"	9"
20N, 20S	2'-7 1/16"	3'-4"	10"	10"	9"	8"

NOTE:
FOR LIGHT STANDARD BUMP OUT DETAILS, SEE SUPERSTRUCTURE DETAILS SHEET 32.



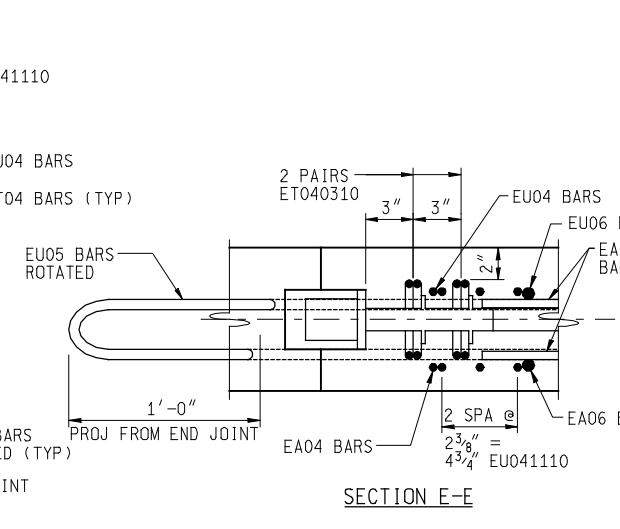
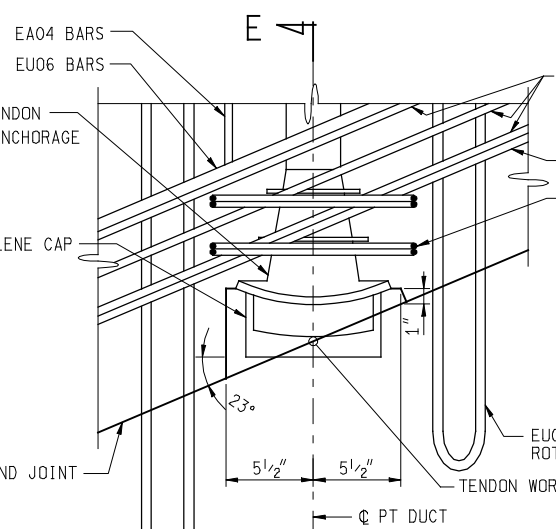
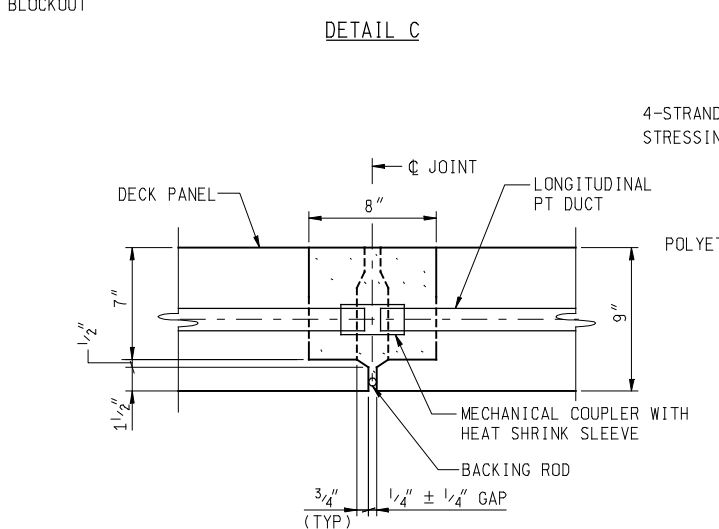
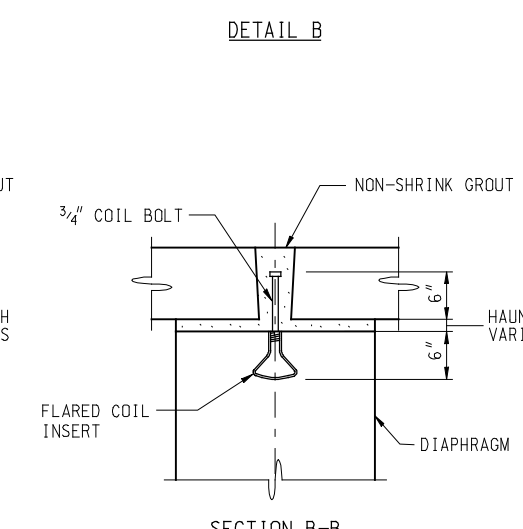
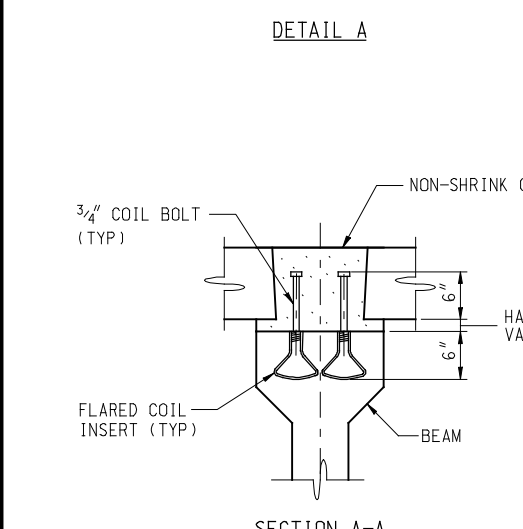
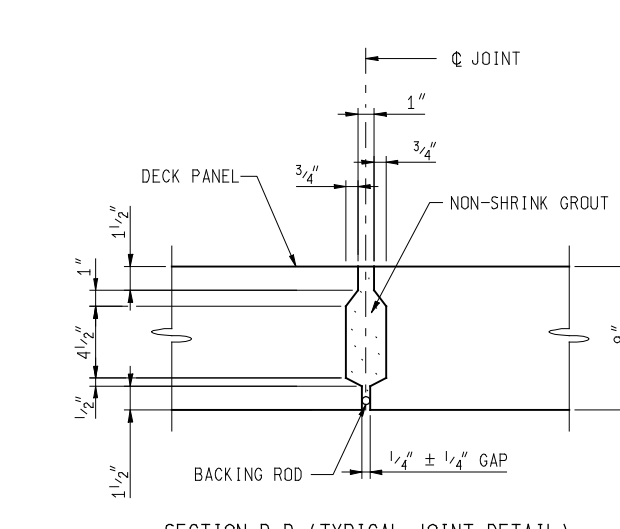
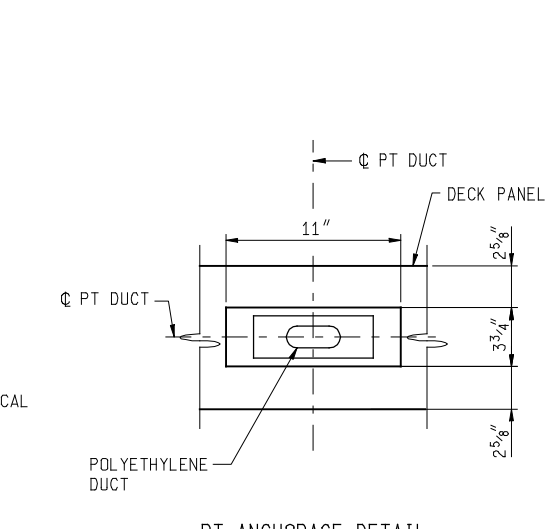
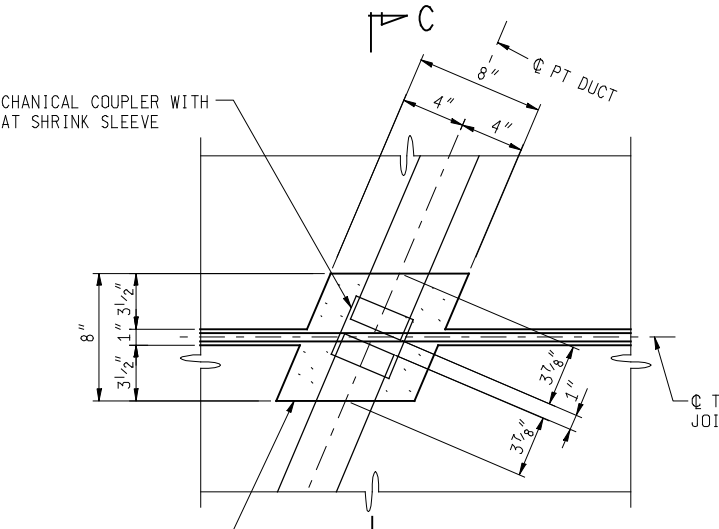
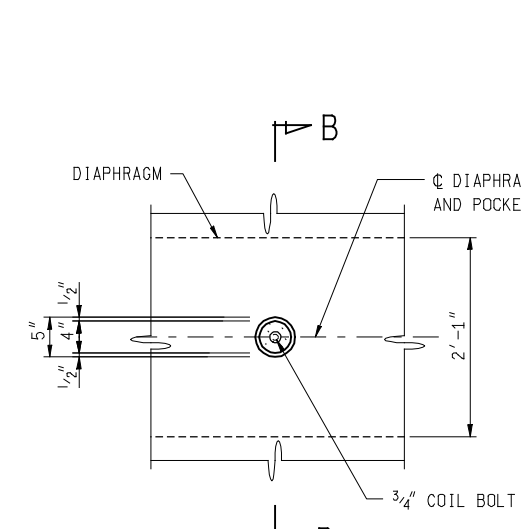
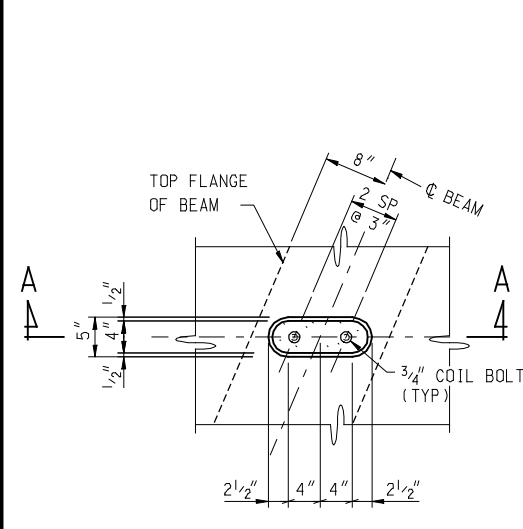
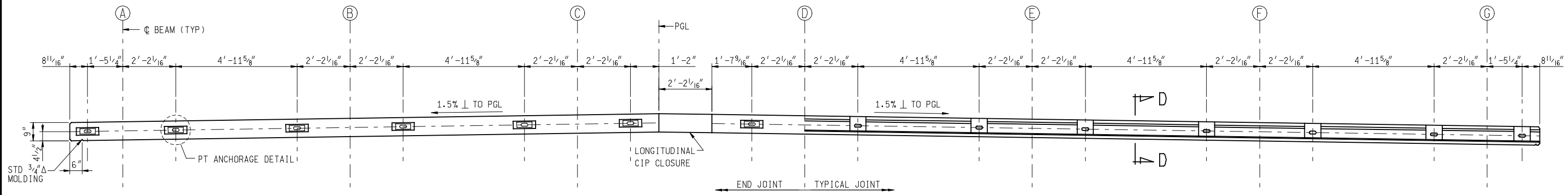
DECK PANEL REINFORCING
PARKVIEW AVENUE OVER US 131

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NO.	DESCRIPTION	DATE	BY



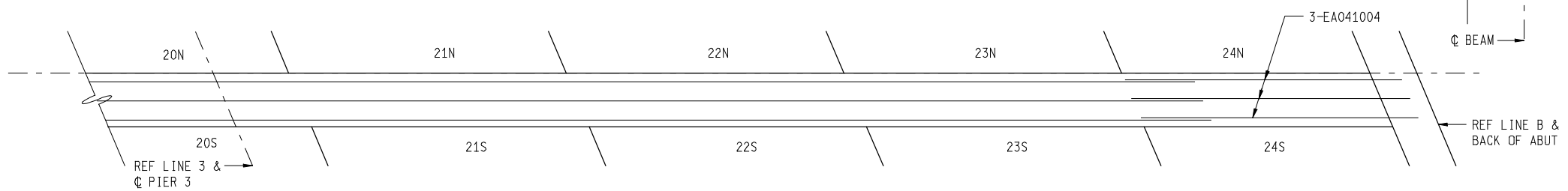
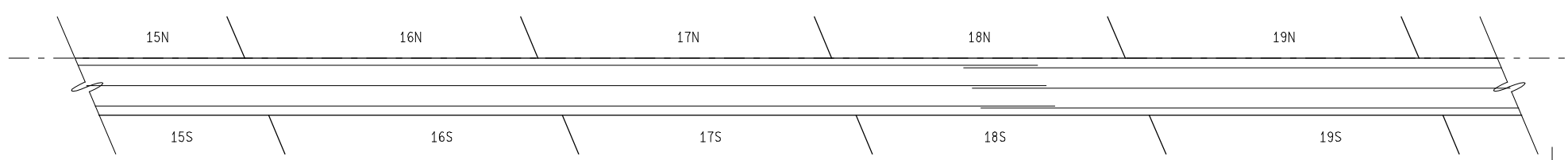
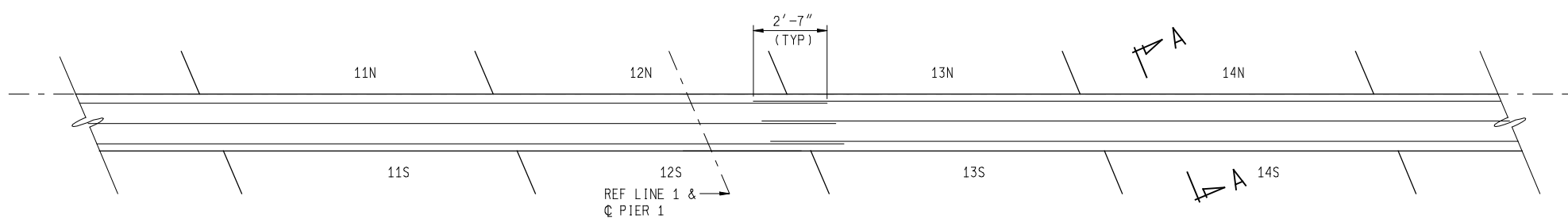
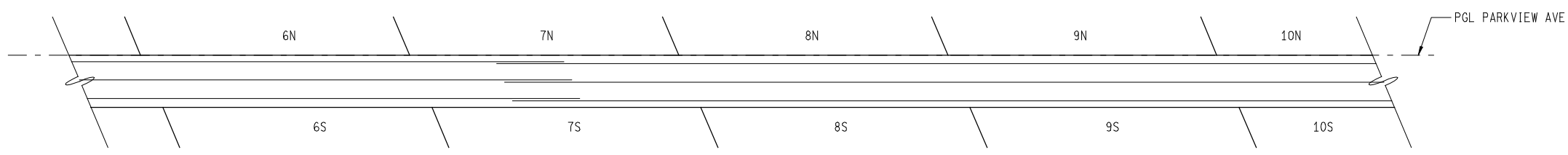
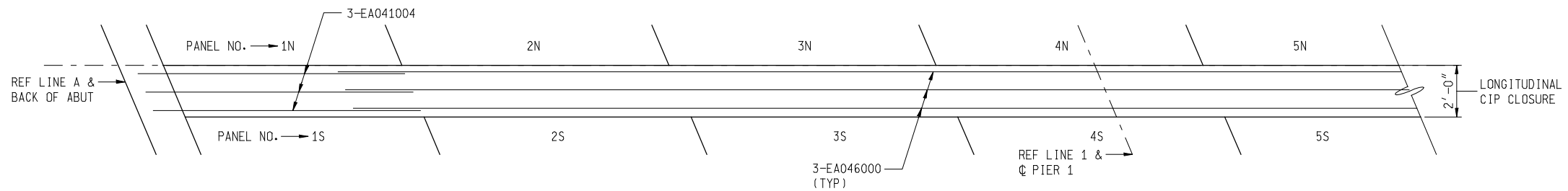
NOTE:
GROUT FOR PANEL JOINTS SHALL BE RODDED OR VIBRATED TO ENSURE THAT ALL VOIDS IN THE PANEL JOINTS ARE FILLED.

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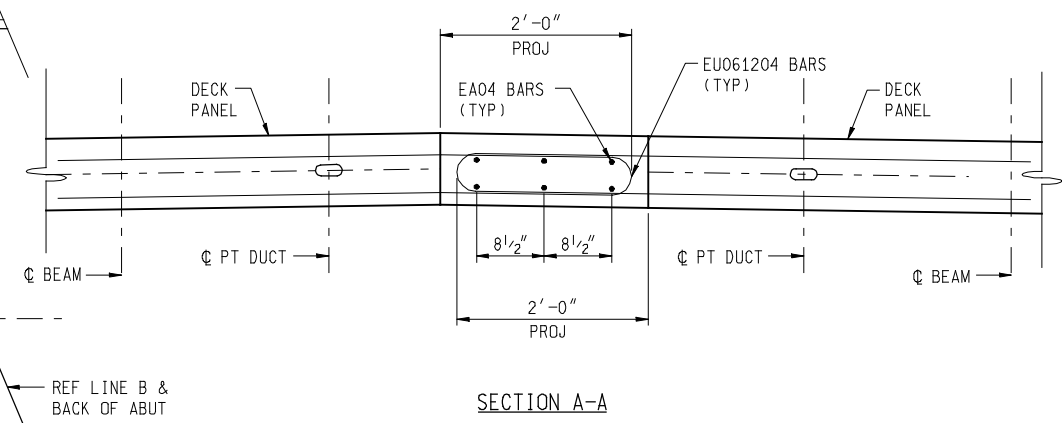
DATE: _____ CORRECTED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____

		DECK PANEL DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
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MISCELLANEOUS QUANTITIES	
14	Cyd Superstructure Conc - Special
1	LS Superstructure Conc - Special, Form, Finish, and Cure



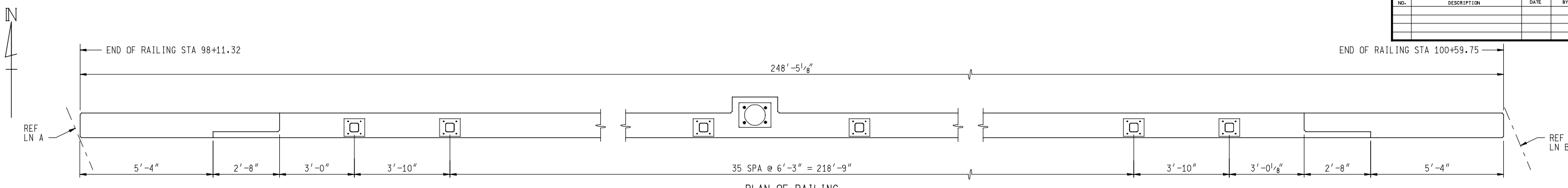
LONGITUDINAL CIP CLOSURE DETAIL

		CIP CLOSURE DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
					SHEET 31 OF 61

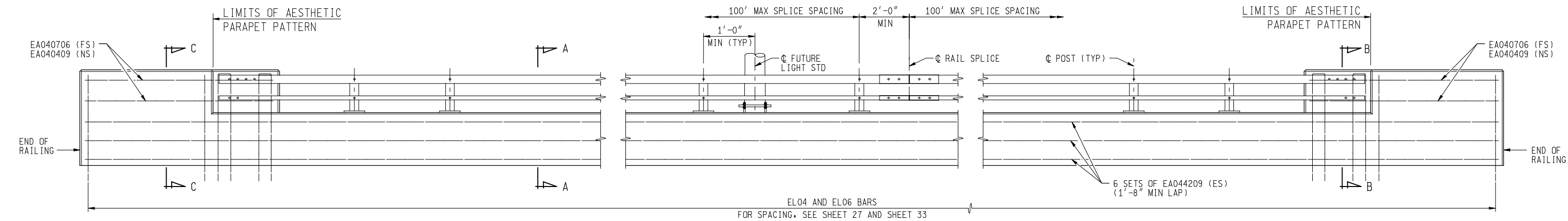
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DATE: _____ CORRECTED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____

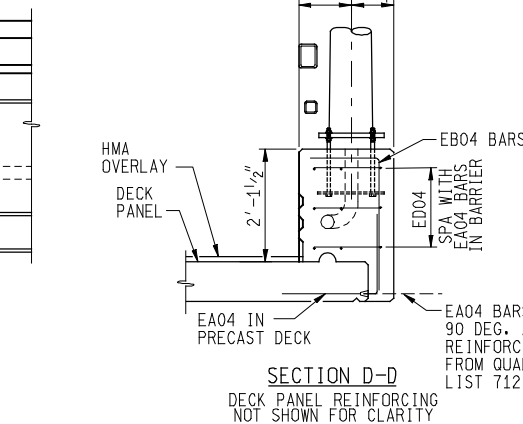
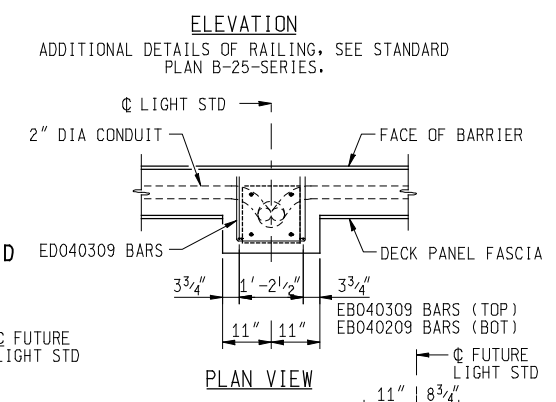
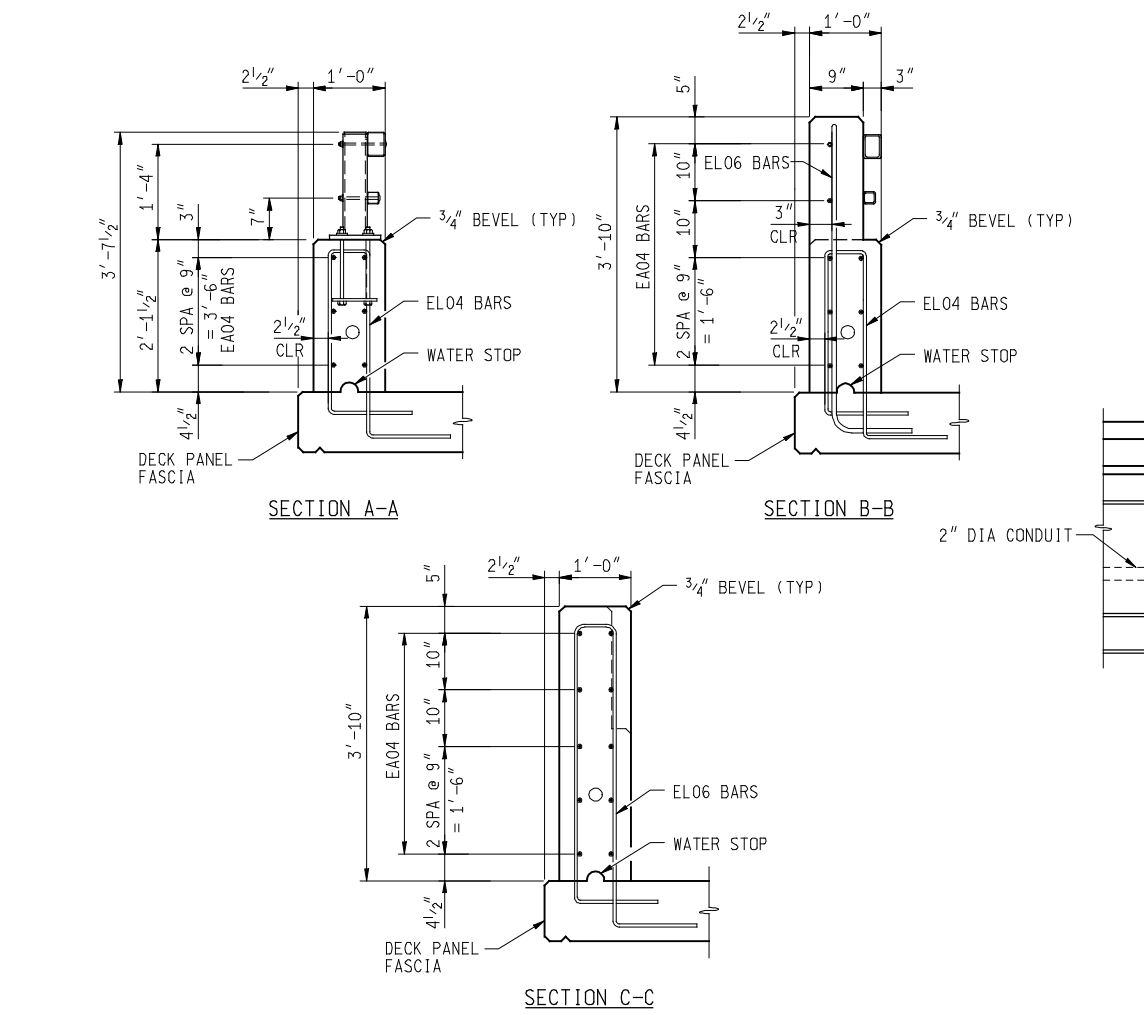
REVISIONS			
NO.	DESCRIPTION	DATE	BY



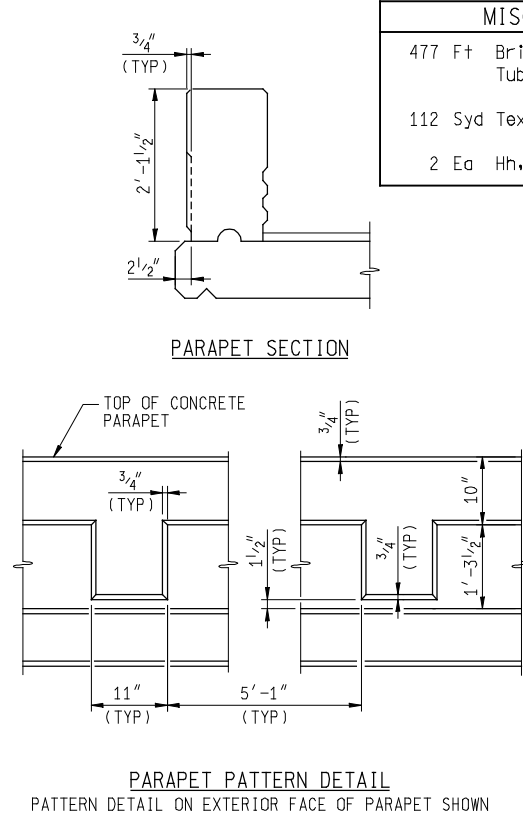
PLAN OF RAILING
 BRIDGE RAILING AESTHETIC PARAPET POST SPACING TUBES NOT SHOWN FOR CLARITY.
 SOUTH RAILING SIMILAR BY 180° ROTATION.
 SOUTH RAILING, REF LN A, END OF RAILING STA 98+34.33
 SOUTH RAILING, REF LN B, END OF RAILING STA 100+82.76



ELO4 AND ELO6 BARS
 FOR SPACING, SEE SHEET 27 AND SHEET 33



LIGHT STANDARD DETAILS



MISCELLANEOUS QUANTITIES	
477 Ft	Bridge Railing, Aesthetic Parapet Tube
112 Syd	Texturing Conc
2 Ea	Hh, Heavy Duty Cover

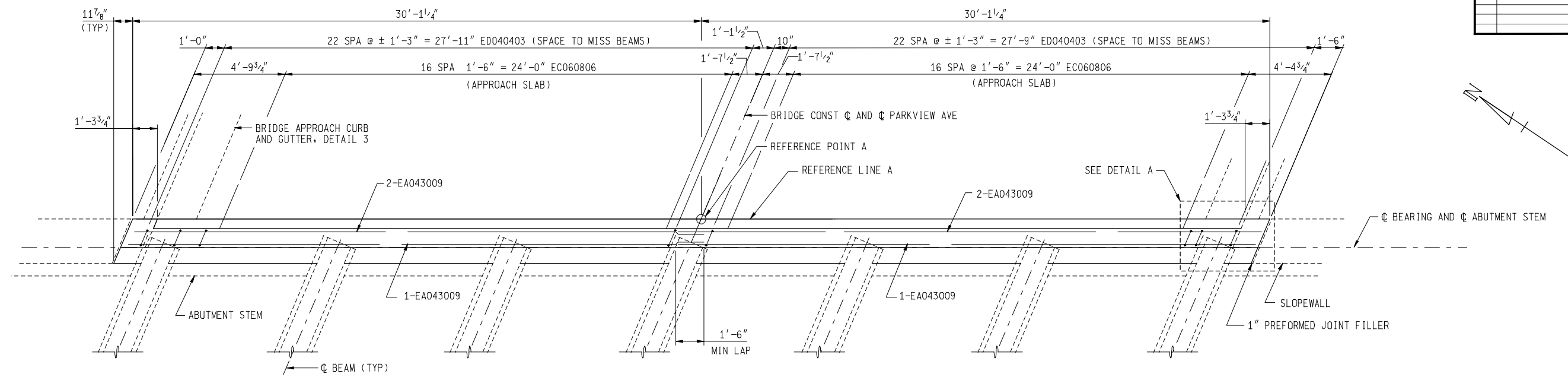
NOTES:
 CONCRETE END BLOCK FOR BRIDGE RAILING, AESTHETIC PARAPET TUBE PAID FOR AS "Superstructure Conc".
 FOR BRIDGE RAILING, ANCHORAGE FOR GUARDRAIL AND NAME PLATE MOUNTING DETAILS, SEE STANDARD PLAN B-103-SERIES.
 THE LIGHT STANDARD ANCHOR BOLT ASSEMBLIES ARE INCLUDED IN THE PAYMENT FOR "Bridge Railing, Aesthetic Parapet Tube".
 FOR NAME PLATE LOCATION, SEE GENERAL PLAN OF STRUCTURE SHEET 4.
 HOT DIP GALVANIZED STEEL TUBING AND POSTS SHALL BE BLACK PVC COATED. INCLUDED IN PAY ITEM "Bridge Railing, Aesthetic Parapet Tube."
 AESTHETIC PARAPET PATTERN ON BRIDGE RAILING INCLUDED IN PAY ITEM "Texturing Conc".
 PLACE HAND HOLE ON WEST SIDE OF STRUCTURE.

		SUPERSTRUCTURE DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
				SHEET	32 OF 61

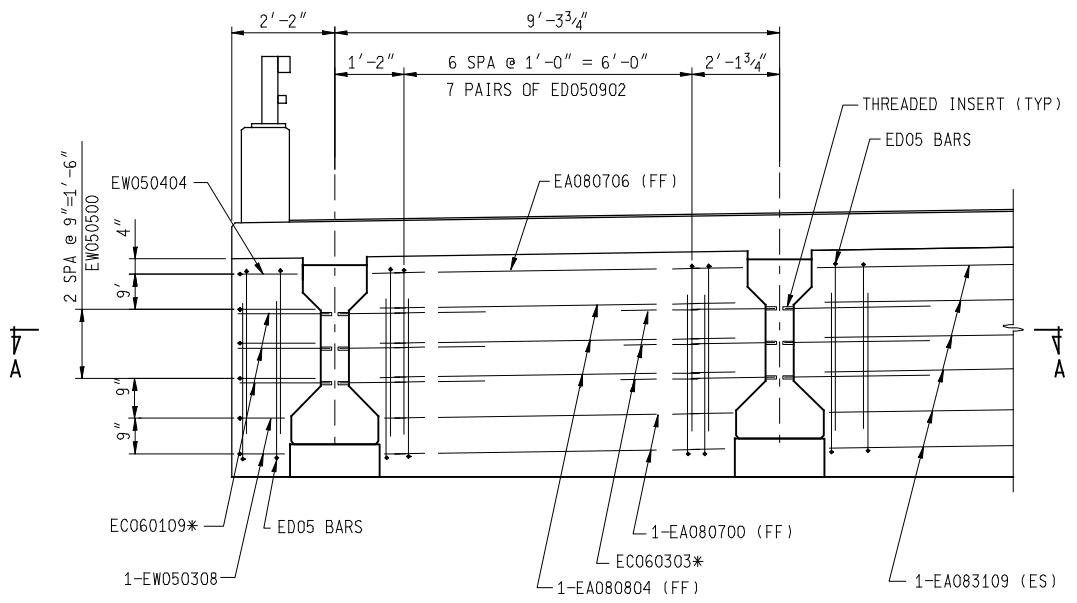
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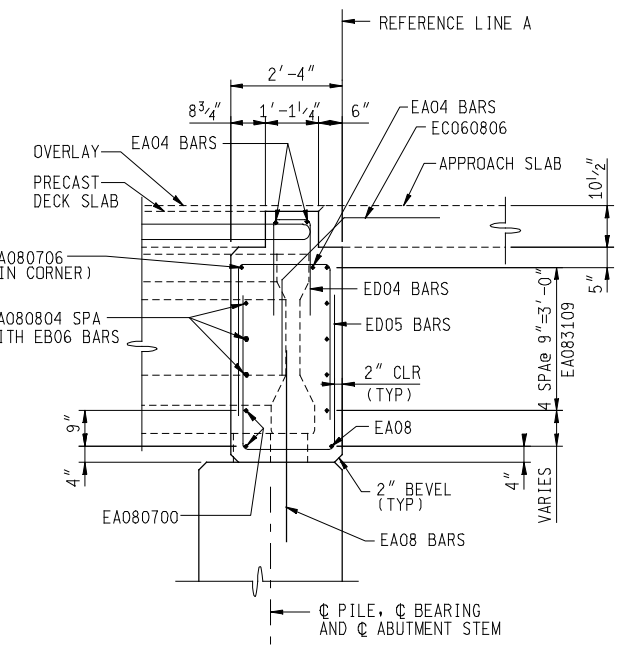
REVISIONS			
NO.	DESCRIPTION	DATE	BY



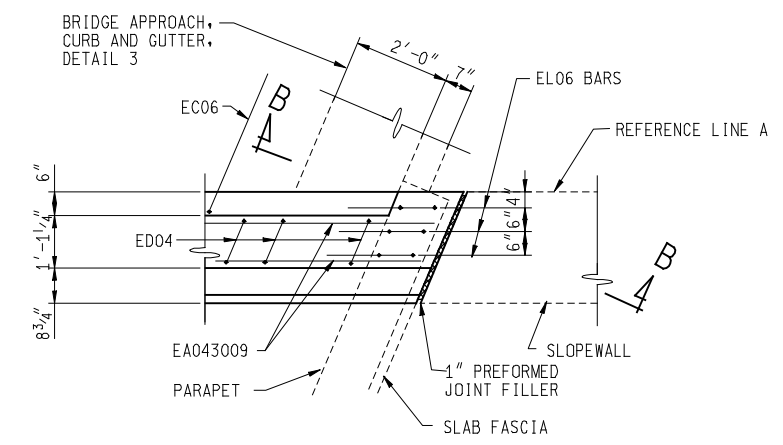
BACKWALL PLAN
(DECK NOT SHOWN)



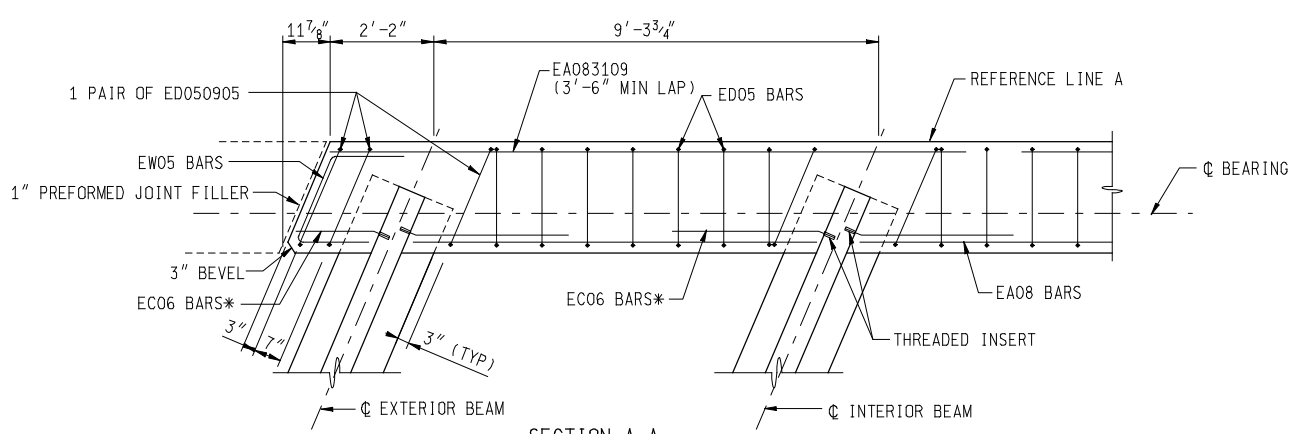
BACKWALL ELEVATION
(EA08 BARS NOT SHOWN)



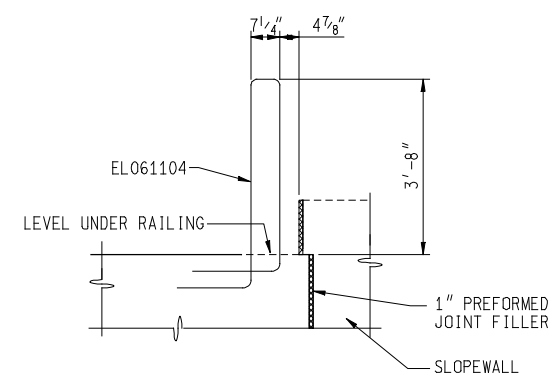
BACKWALL SECTION



DETAIL A



SECTION A-A
* THREADED BARS



SECTION B-B

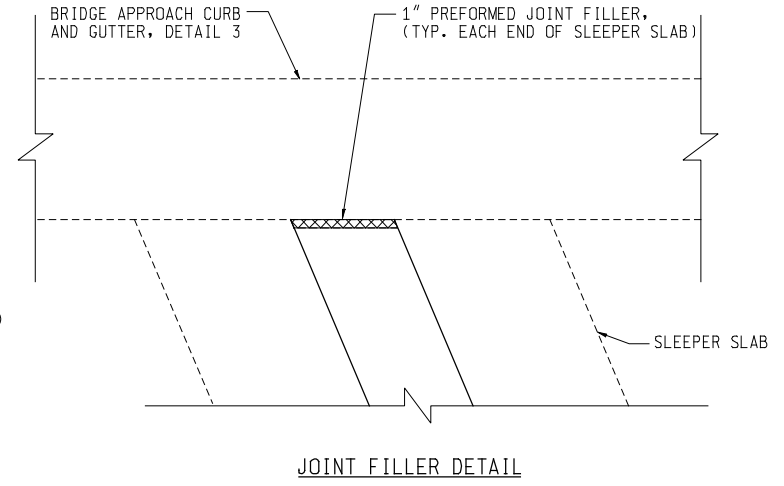
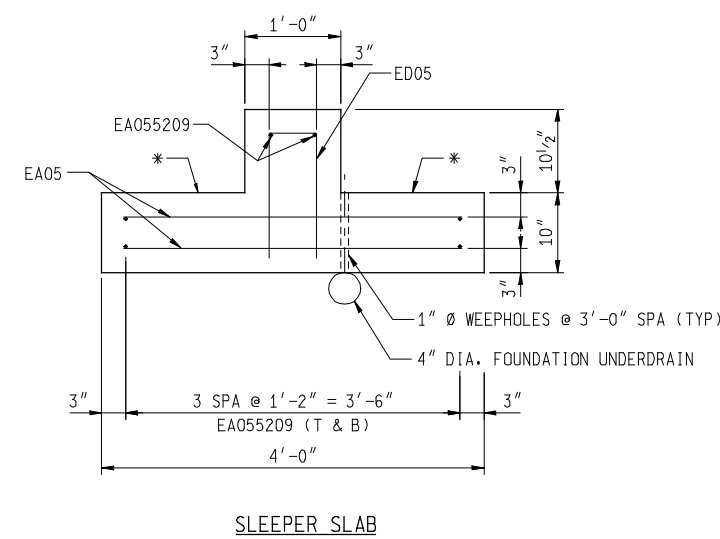
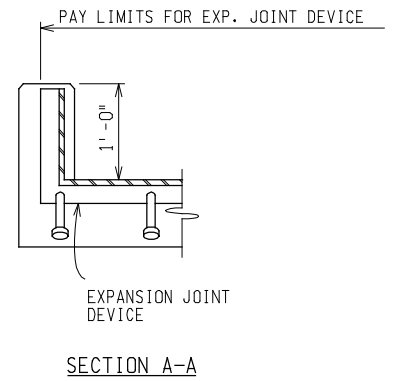
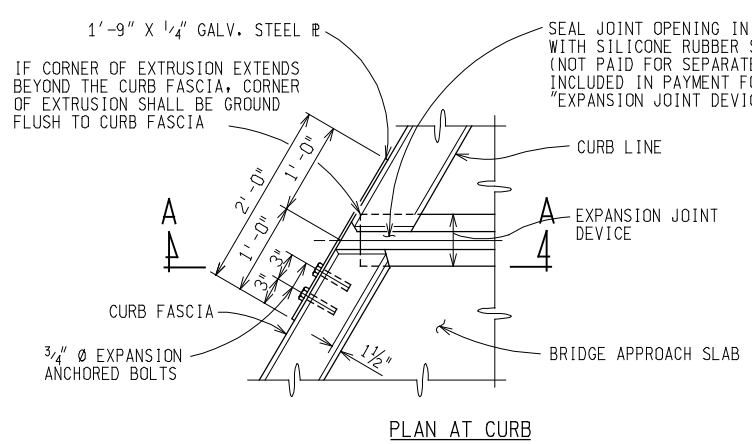
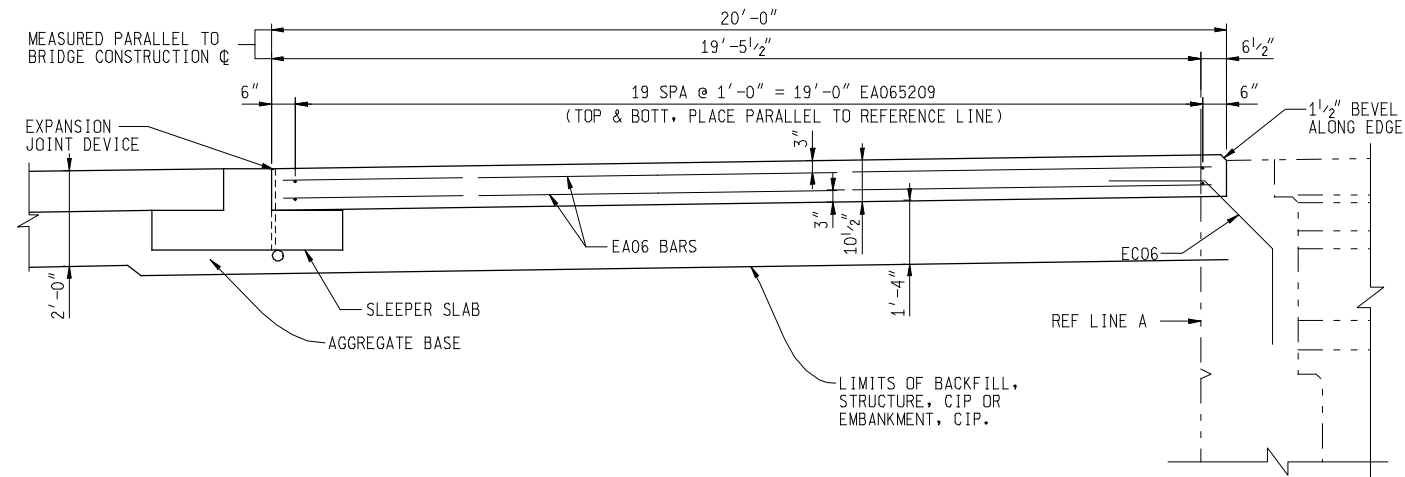
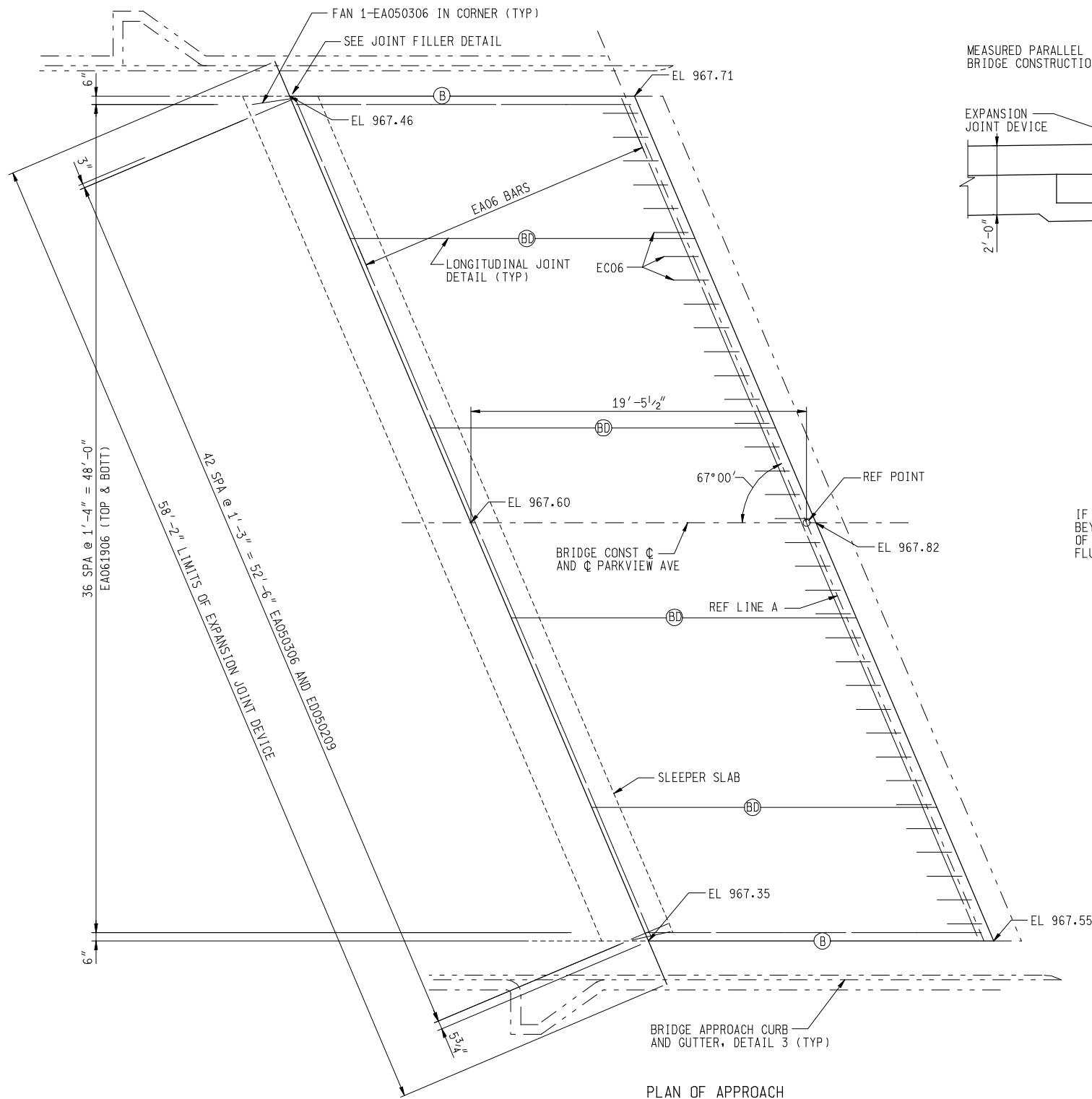
NOTE:
DETAILS FOR ABUTMENT A ARE SHOWN.
ABUTMENT B IS SIMILAR.
(FF) DENOTES FRONT FACE
(ES) DENOTES EACH SIDE

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DATE: CORRECTED BY: DATE: CHECKED BY: DATE: DRAWN BY: FILE NAME:

		BACKWALL DETAILS PARKVIEW AVENUE OVER US 131			
		DATE	CONT. SEC.	JOB NO.	DESIGN UNIT
		8/2/2007	S01 OF 39014	81325A	GROTHENHUIS
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- LONGITUDINAL JOINT LEGEND
- (B) - LONGITUDINAL BULKHEAD JOINT, SEALED ACCORDING TO STANDARD PLAN II-41 SERIES, SYMBOL (B)
 - (D) - LONGITUDINAL LANE TIE JOINT WITH TIE BARS, SEALED ACCORDING TO STANDARD PLAN II-41 SERIES, SYMBOL (D).
 - (BD) - OPTIONAL B OR D JOINT.

* 0.025" POLYETHYLENE BOND BREAKER ON STEEL TROWEL FINISH (INCLUDED IN THE PAY ITEM "SUPERSTRUCTURE CONC") (TYP.)

USE ASTM F 593 (TYPE 304) STAINLESS STEEL 3/4" DIAMETER FLATHEAD COUNTERSUNK SCREWS WITH 3/4" DIAMETER INSERTS.

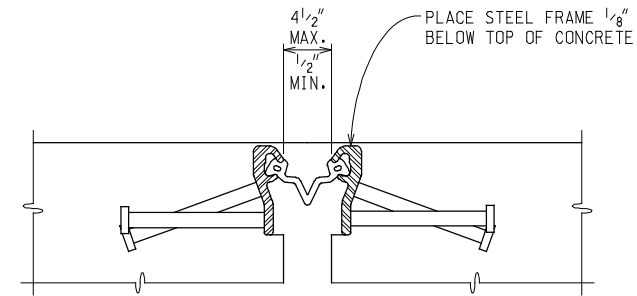
THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE COVER PLATE IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE COVER PLATE.

		APPROACH SLAB DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS

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DATE: _____ CORRECTED BY: _____ CHECKED BY: _____ DATE: _____ DRAWN BY: _____

REVISIONS			
NO.	DESCRIPTION	DATE	BY



SECTION THROUGH EXPANSION JOINT

NOTES:

JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL - TYPE M	WATSON-BOWMAN & ACME, INC.
WABO STRIP SEAL - TYPE A	WATSON-BOWMAN & ACME, INC.
STEELEX-SSA2	D.S. BROWN
STEELEX-SSCM	D.S. BROWN
ONFLEX 40 SS	STRUCTURAL RUBBER PRODUCTS CO.

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.

COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 104.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN SUPPORT AREA.

FABRICATION AND INSTALLATION

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE TOP OF THE EXPANSION JOINT DEVICE SHALL BE SET 1/8" - 1/4" BELOW THE CONCRETE SLAB (PAVEMENT) WITH A TOLERANCE OF ± 1/8".

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 707.03C.16 OF THE STANDARD SPECIFICATIONS.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT, OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

WHERE THE SEALING GLAND IS LOCKED INTO A STEEL ANCHORAGE, A LUBRICANT-ADHESIVE CONFORMING TO STANDARD SPECIFICATION 914.04D SHALL BE REQUIRED BETWEEN THE SEAL AND STEEL ANCHORAGE.

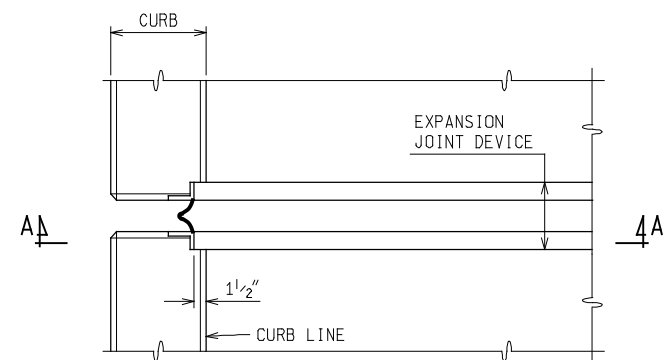
IN THE EVENT THAT SPLICING IS REQUIRED OF THE SEALING GLAND, IT SHALL BE SPLICED BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

DETAILS AT CURBS OR BARRIERS

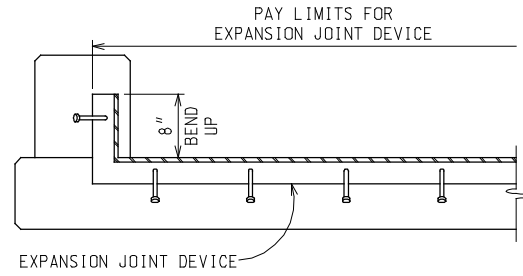
THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

MATERIALS

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.



PLAN AT FLUSH CURB



SECTION A - A

THE STEEL PLATE ON THE BACK OF THE CURB IS NOT SHOWN. REFER TO SHEET 34 FOR THE DETAILS.

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
S01-39014	67°	SLEEPER	1 3/4"	58'-0"
S01-39014	67°	SLEEPER	1 3/4"	58'-0"

QUANTITY		
ITEM	UNIT	AMOUNT
Expansion Joint Device	Ft	116

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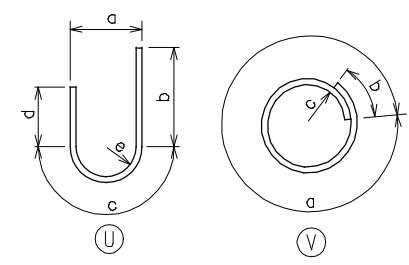
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		EXPANSION JOINT DETAILS (EJ3Z)			
		PARKVIEW AVENUE OVER US 131			
DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET	
8/2/2007	S01 OF 39014	81325A	GROTHENHUIS	35 OF 61	

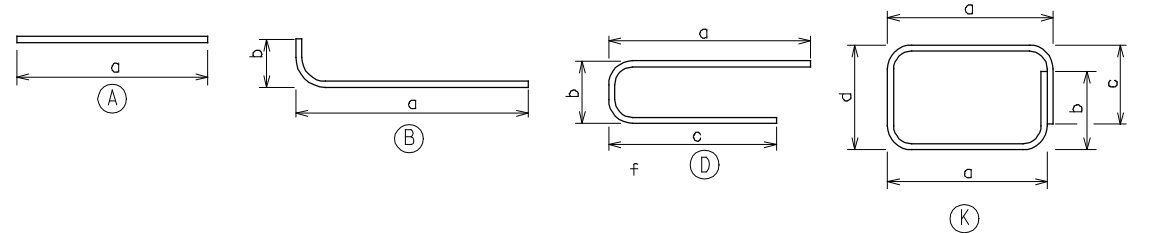
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

	DIMENSIONS											NO.	TOTAL																																									
	BAR	a	b	c	d	e	f	g	h	j	REQ'D			WT.																																								
ABUTMENT A														EA040100	1'-0"										28	19																												
														EA040106	1'-6"										28	29																												
														EA064005	40'-5"										17	1032																												
														EA065105	51'-5"										17	1313																												
														EA080400	4'-0"										64	684																												
														EA114005	40'-5"										4	859																												
														EA115105	51'-5"										4	1093																												
														EB050308	3'-0"	8"									32	123																												
														ED040505	2'-3"	11"	2'-3"								28	102																												
														ED040511	2'-3"	1'-5"	2'-3"								14	56																												
														ED051104	4'-8 1/2"	1'-11"	4'-8 1/2"								30	360																												
														ED050800	1'-6"	5'-0"	1'-6"								4	34																												
														ED061002	3'-10"	2'-6"	3'-10"								48	733																												
														EK061200	2'-6"	2'-3"	2'-3"	2'-6"							48	866																												
EK061608	2'-6"	3'-4"	3'-4"	5'-0"							86	2153																																										
TOTAL ABUTMENT A =											9456																																											
ABUTMENT B														EA040100	1'-0"										28	19																												
														EA040106	1'-6"										28	29																												
														EA064005	40'-5"										17	1032																												
														EA065202	52'-2"										17	1332																												
														EA080400	4'-0"										64	684																												
														EA114005	40'-5"										4	859																												
														EA115202	51'-2"										4	1109																												
														EB050308	3'-0"	8"									32	123																												
														ED040505	2'-3"	11"	2'-3"								28	102																												
														ED040511	2'-3"	1'-5"	2'-3"								14	56																												
														ED050506	1'-6"	2'-6"	1'-6"								6	35																												
														ED051104	4'-8 1/2"	1'-11"	4'-8 1/2"								30	360																												
														ED050800	1'-6"	5'-0"	1'-6"								4	34																												
														ED061002	3'-10"	2'-6"	3'-10"								48	733																												
EK061200	2'-6"	2'-3"	2'-3"	2'-6"							48	866																																										
EK061608	2'-6"	3'-4"	3'-4"	5'-0"							86	2153																																										
TOTAL ABUTMENT B =											9526																																											
PIER 1 & 3 CAPS														EA063000	30'-0"										40	1803																												
														EA082200	22'-0"										24	1410																												
														EA082903	29'-3"										12	938																												
														EA083805	38'-5"										12	1231																												
														EA083900	39'-0"										24	2500																												
														EB040404	2'-9"	1'-7"									28	82																												
														ED040500	1'-9"	1'-6"	1'-9"								56	188																												
														ED040602	1'-9"	2'-8"	1'-9"								24	99																												
														ED050710	3'-0"	1'-10"	3'-0"								4	33																												
														ED050807	3'-0"	2'-7"	3'-0"								4	36																												
														ED051002	3'-3"	3'-6"	3'-3"								20	213																												
														EV041003	7'-6"	2'-9"	1'-2 3/8"								80	548																												
														EK061308	2'-6"	2'-9"	2'-10"	3'-7"							344	7062																												
														EU050910	3'-1"	2'-6"	4'-10"	2'-6"	2'-11 3/4"						20	206																												
EU083103	8"	2'-1"	28'-8"	6"	6"						12	1002																																										
EU084005	8"	2'-1"	37'-10"	6"	6"						12	1295																																										
TOTAL PIER 1 & 3 =											18646																																											
PIER 2 CAP														EA080400	4'-0" **										30	321																												
														EA063000	30'-0"										20	902																												
														EA082200	22'-0"										12	705																												
														EA082903	29'-3"										6	469																												
														EA083805	38'-5"										6	616																												
														EA083900	39'-0"										12	1250																												
														EB040404	2'-9"	1'-7"									14	41																												
														ED040500	1'-9"	1'-6"	1'-9"								28	94																												
														ED040602	1'-9"	2'-8"	1'-9"								12	50																												
														ED050710	3'-0"	1'-10"	3'-0"								2	17																												
														ED050807	3'-0"	2'-7"	3'-0"								2	18																												
														ED051002	3'-3"	3'-6"	3'-3"								10	107																												
														EV041003	7'-6"	2'-9"	1'-2 3/8"								40	274																												
														EK061308	2'-3"	2'-9"	2'-10"	3'-7"							172	3531																												
EU050910	3'-1"	2'-6"	4'-10"	2'-6"	2'-11 3/4"						10	103																																										
EU083103	8"	2'-1"	28'-8"	6"	6"						6	501																																										
EU084005	8"	2'-1"	37'-10"	6"	6"						6	648																																										
TOTAL PIER 2 CAP =											9647																																											
PIER 1 COLS														EA090706	7'-6"										32	816																												
														EA090406	4'-6" *										32	816																												
														EA090302	3'-2" **										32	1605																												
														EA091406	14'-6"										152	1041																												
														EV041003	7'-6"	2'-9"	1'-2 3/8"																																					
														TOTAL PIER 1 COL'S =											4278																													
														PIER 2 COLS														EA090706	7'-6"										32	816														
																												EA090406	4'-6" *										32	816														
																												EA090302	3'-2" **										32	1977														
																												EA091802	18'-2"										172	1178														
																												EV041003	7'-6"	2'-9"	1'-2 3/8"																							
																												TOTAL PIER 2 COL'S =											4787															
																												PIER 3 COLS														EA090706	7'-6"										32	816
																																										EA090406	4'-6" *										32	816
EA090302	3'-2" **										32	1778																																										
EA091604	16'-4"										164	1123																																										
EV041003	7'-6"	2'-9"	1'-2 3/8"																																																			
TOTAL PIER 3 COL'S =											4533																																											
TOTAL PIER 1 & 3 =											18646																																											



NOTES:
 REINFORCEMENT, MECHANICAL COUPLERS, AND THREADED BARS SHOWN ON THIS SHEET ARE INCLUDED IN PRECAST CONCRETE ELEMENTS. PAYMENT IS INCLUDED IN THOSE PAY ITEMS.
 REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.



* MECHANICAL COUPLER
 **THREADED
 EPOXY COATED
 BAR SIZE
 BAR LENGTH (FT.)
 BAR LENGTH (IN.)
 BAR SHAPE
 BAR LEGEND
 EA064700

PARSONS	MDOT Michigan Department of Transportation	REINFORCEMENT DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS
				SHEET 36 OF 61	

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NO.	DESCRIPTION	DATE	BY

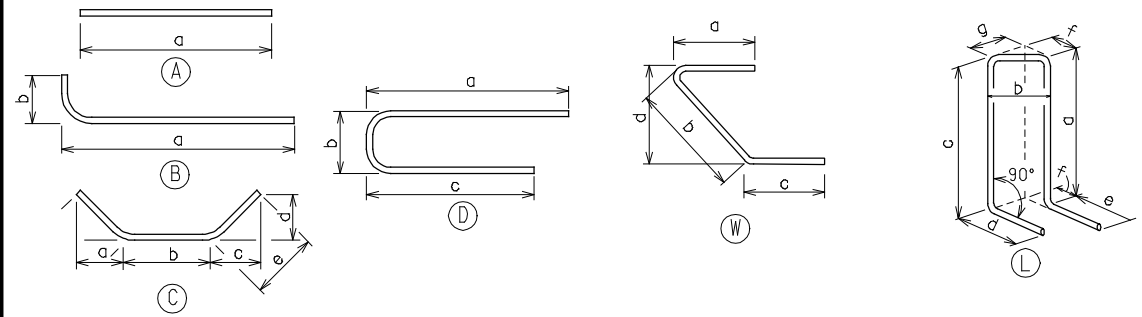
	BAR	DIMENSIONS										NO.	TOTAL			
		a	b	c	d	e	f	g	h	j	REQ'D			WT.		
FTG 1 & 3	A061106	11'-6"										124	2142			
	A081106	11'-6"									124	3808				
	A082700	27'-0"									64	4614				
	A083700	37'-0"									64	6323				
													TOTAL FOOTING 1 & 3 =	16887		
FTG 2	A061406	14'-6"									62	1351				
	A081406	14'-6"									62	2401				
	A082700	27'-0"									32	2307				
	A083700	37'-0"									32	3162				
													TOTAL FOOTING 2 =	9221		
FILLER WALLS	EA040309	3'-9"										20	52			
	EA041406	14'-6"										30	291			
	EA041310	13'-10"										30	278			
	EC060303*	0"	3'-0"	2 ³ / ₄ "	1 ¹ / ₄ "	3"	0"	0"				42	206			
	ED040306	1'-3 ¹ / ₂ "	11"	1'-3 ¹ / ₂ "								76	178			
	ED041704	8'-2 ¹ / ₂ "	11"	8'-2 ¹ / ₂ "								66	765			
														TOTAL FILLER WALL =	1770	
BACK WALLS	EA043009	30'-9"										12	246			
	EA080700	7'-0"										24	673			
	EA080706	7'-6"										12	240			
	EA080804	8'-4"										36	801			
	EA083109	31'-9"										24	2035			
	ED040403	1'-8 ¹ / ₂ "	10"	1'-8 ¹ / ₂ "								98	279			
	ED050902	3'-7"	2'-0"	3'-7"								168	1606			
	ED050905	3'-7"	2'-3"	3'-7"								64	629			
	EW050308	10"	2'-0"	10"	9 ¹ / ₂ "	1'-0"						8	31			
	EW050404	1'-2"	2'-0"	1'-2"	9 ¹ / ₂ "	1'-0"						4	18			
	EW050500	1'-6"	2'-0"	1'-6"	9 ¹ / ₂ "	1'-0"						12	63			
	EC060109*	0"	1'-6"	2 ³ / ₄ "	1 ¹ / ₄ "	3"	0"	0"				12	32			
	EC060303*	0"	3'-0"	2 ³ / ₄ "	1 ¹ / ₄ "	3"	0"	0"				72	351			
EC060806	2'-3"	2'-0"	2'-3"	2'-3"	3'-3"	2'-3"	3'-3"				70	894				
EL061104	4'-4"	7 ¹ / ₄ "	4'-0"	1'-2 ³ / ₈ "	1'-2 ³ / ₈ "	7 ¹ / ₄ "	0"				12	205				
													TOTAL BACK WALLS =	8103		
ABUT SPLC	ED050905	3'-5"	2'-7"	3'-5"								8	79			
														TOTAL ABUT STEM SPLICE =	79	
DIAPHRAGMS																
ABUT B NORTH SLOPE WALL	EA050309	3'-9"											3	12		
	EA050607	6'-7"											3	21		
	EA050608	6'-8"											3	21		
	EA050907	9'-7"											3	30		
	EA051206	12'-6"											3	40		
	EA051504	15'-4"											3	48		
	ED050604	2'-2 ¹ / ₂ "	1'-11"	2'-2 ¹ / ₂ "									3	20		
	ED050810	3'-5 ¹ / ₂ "	1'-11"	3'-5 ¹ / ₂ "									3	28		
	ED051104	4'-8 ¹ / ₂ "	1'-11"	4'-8 ¹ / ₂ "									3	36		
	ED051310	5'-11 ¹ / ₂ "	1'-11"	5'-11 ¹ / ₂ "									4	58		
	EW050800	3'-10"	2'-0"	3'-0"	9 ¹ / ₂ "	1'-10"							5	42		
															TOTAL ABUT B NORTH SLOPE WALL =	356
	DIAPHRAGMS	EA050600	6'-0"											72	451	
EA050706		7'-6"											54	423		
EA050804		8'-4"											72	626		
EB050500		3'-6"	1'-6"										72	376		
ED050808		3'-6"	1'-9"	3'-6"									252	2278		
															TOTAL DIAPHRAGMS =	4154

ALL OTHER SLOPE WALLS

ABUT B NORTH SLOPE WALL

DIAPHRAGMS

*THREADED



EPOXY COATED
BAR SIZE
BAR LENGTH (FT)
BAR LENGTH (IN)
EA064700
BAR SHAPE
BAR LEGEND

MISCELLANEOUS QUANTITIES	
26,108	Lb Reinforcement, Steel
30,443	Lb Reinforcement, Steel, Epoxy Coated

NOTES:
REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.
THREADING OF REINFORCEMENT SHALL BE INCLUDED IN THE PAY ITEM.

		REINFORCEMENT DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTHENHUIS
		SHEET 37 OF 61			

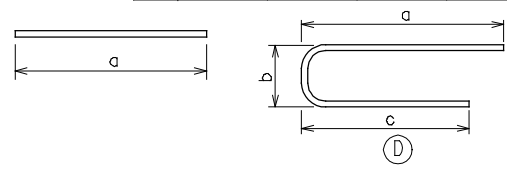
8/2/2007 4:53:54 PM f:\646403\cadd\bridge\final plan sheets\Park_Bar_Sheet2.dgn

DRAWN BY: DATE: CHECKED BY: DATE: CORRECTED BY: DATE:

REVISIONS			
NO.	DESCRIPTION	DATE	BY

	BAR	DIMENSIONS										NO. REQ'D	TOTAL WT.		BAR	DIMENSIONS										NO. REQ'D	TOTAL WT.		
		a	b	c	d	e	f	g	h	j						a	b	c	d	e	f	g	h	j					
APPROACH SLABS	EA061906	19'-6"											148	4335		EA040409	4'-9"											8	26
	EA065209	52'-9"											80	6339		EA040706	7'-6"											8	41
	TOTAL APPR SLABS =											10674		EA044209	42'-9"													36	1029
TOTAL APPR SLABS =											10674		TOTAL PARAPET RAILINGS =											1096					
SLEEPER SLABS	EA050306	3'-6"											180	658															
	EA055209	52'-9"											20	1101															
	ED050209	1'-1 1/2"	6"-9"	1'-1 1/2"									86	247															
	TOTAL SLEEPER SLABS =											2006																	
CIP CLOSURE	EA044210	42'-10"											36	1031															
	EA043600	36'-0"											6	145															
	TOTAL CIP CLOSURE =											1176																	

PARAPET RLGs



EPOXY COATED
 BAR SIZE
 BAR LENGTH (FT)
 BAR LENGTH (IN)
 EA064700
 BAR SHAPE
BAR LEGEND

REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.

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PARSONS	MDOT Michigan Department of Transportation	REINFORCEMENT DETAILS PARKVIEW AVENUE OVER US 131			
		DATE 8/2/2007	CONT. SEC. S01 OF 39014	JOB NO. 81325A	DESIGN UNIT GROTENHUIS
		SHEET 38 OF 61			

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

PARKVIEW AVE CONST C
DEFLECTION DATA

PI=94+25.57
Δ=0°00'01"RT
NO CURVE

PARKVIEW AVE CONST C
DEFLECTION DATA

PI=98+25.54
Δ=0°00'01"LT
NO CURVE

PARKVIEW AVE CONST C
DEFLECTION DATA

PI=100+68.48
Δ=0°00'01"RT
NO CURVE

PARKVIEW AVE CONST C
DEFLECTION DATA

PI=104+68.45
Δ=0°00'01"LT
NO CURVE

CURVE SB US-131
Δ = 23°00'35" RT
D = 2°00'00"

T = 583.10'
L = 1150.49'
R = 2864.79'
E = 58.74'
PC = 540+07.95 N = 279010.75 E = 12775865.45
PI = 545+91.05 N = 279494.60 E = 12775540.04
PT = 551+58.44 N = 280067.16 E = 12775429.65

CURVE NB US-131
Δ = 24°40'40" RT
D = 2°00'00"

T = 626.66'
L = 1233.89'
R = 2864.79'
E = 67.74'
PC = 540+10.57 N = 279016.29 E = 12775995.74
PI = 546+37.23 N = 279525.89 E = 12775631.02
PT = 552+44.45 N = 280141.22 E = 12775512.39

CURVE 12TH ST CONST C
Δ = 27°32'55" RT
D = 21°36'32"

T = 65.00'
L = 127.49'
R = 265.15'
E = 7.85'
PC = 10+47.09 N = 279337.33 E = 12774863.37
PI = 11+12.10 N = 279395.30 E = 12774833.96
PT = 11+74.58 N = 279460.30 E = 12774834.70

12TH ST

DRAKE RD

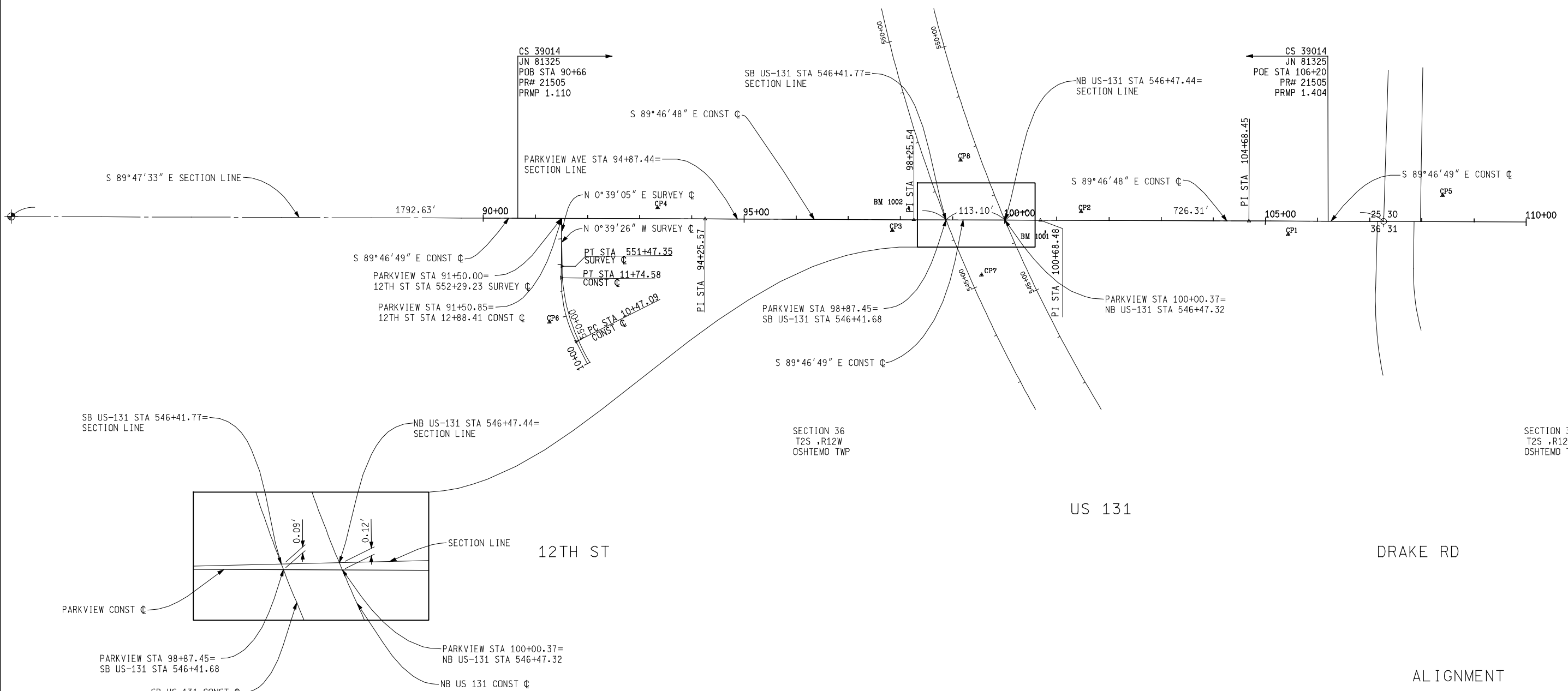
SECTION 25
T2S ,R12W
OSHTEMO TWP

SECTION 30
T2S ,R12W
OSHTEMO TWP

US 131

CURVE 12TH ST SURVEY C

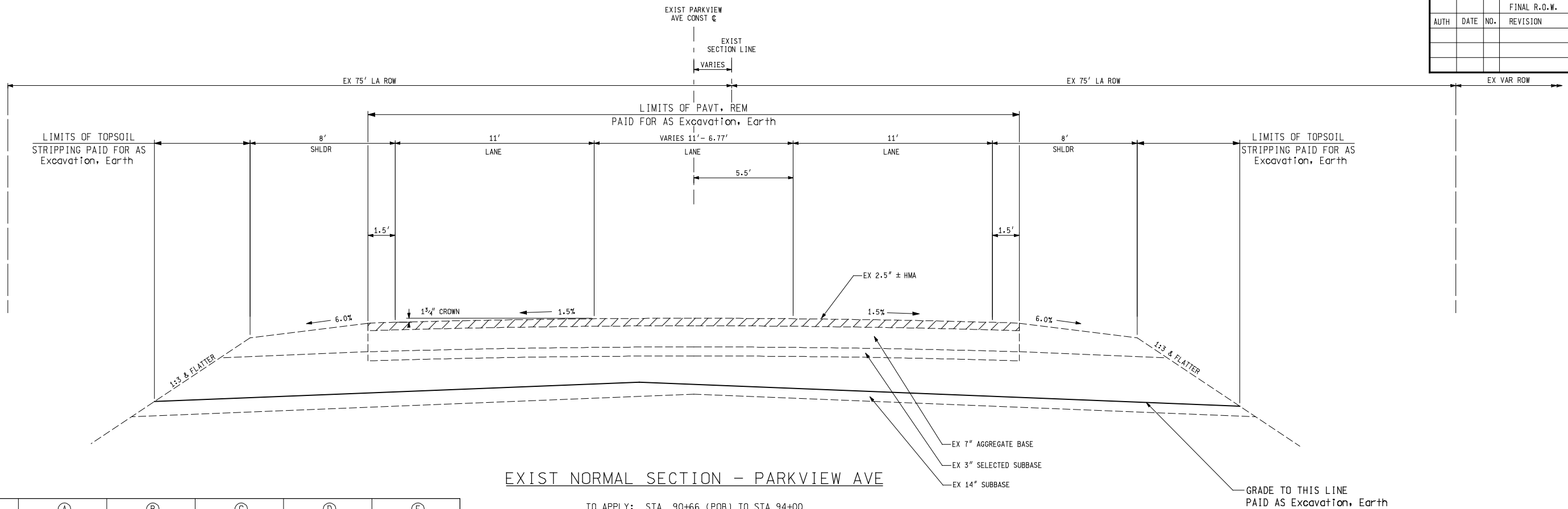
Δ = 90°00'00" RT
D = 16°00'00"
T = 358.10'
L = 562.50'
R = 358.10'
E = 148.33'
PC = 545+84.85 N = 279128.26 E = 12775198.389
PI = 549+42.95 N = 279124.15 E = 12774840.316
PT = 551+47.35 N = 279482.23 E = 12774836.20



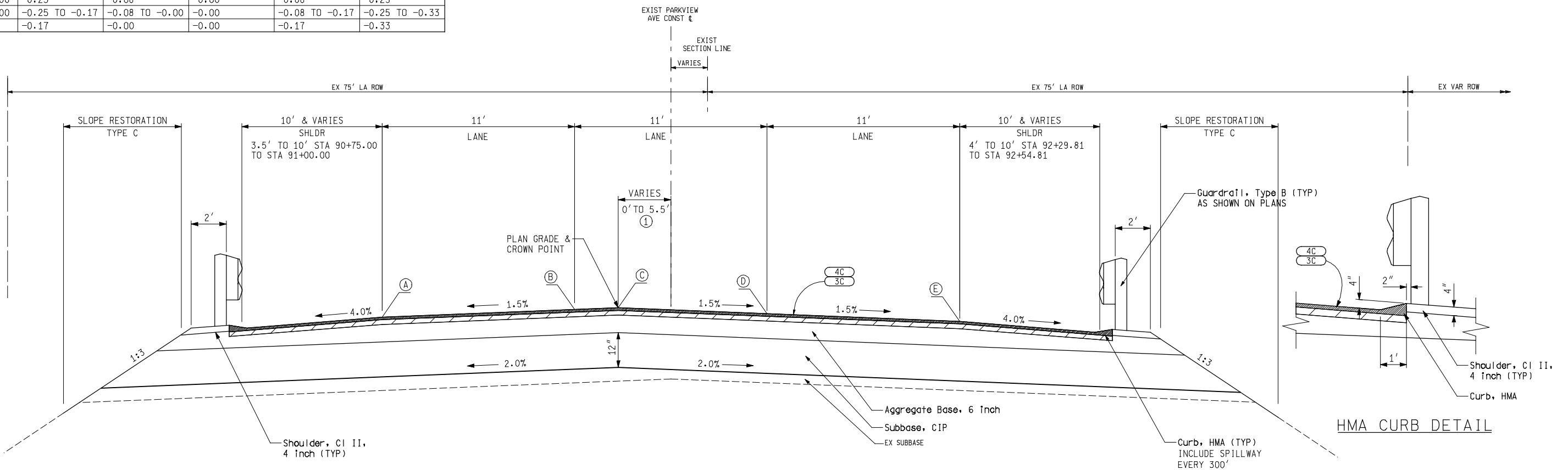
		PARKVIEW AVE OVER US 131				
		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT
8/2/2007	1"=100'	39014	81325A	GROTENHUIS	502 39	

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AUTH	DATE	NO.	REVISION



	(A)	(B)	(C)	(D)	(E)
STA 90+75 TO STA 93+00	-0.25	-0.08	-0.00	-0.08	-0.25
STA 93+00 TO STA 94+00	-0.25 TO -0.17	-0.08 TO -0.00	-0.00	-0.08 TO -0.17	-0.25 TO -0.33
STA 94+00	-0.17	-0.00	-0.00	-0.17	-0.33



HMA APPLICATION ESTIMATE				
ID. NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
4C	HMA, 4C	165 #	58-28	TOP(AWI = 260)
3C	HMA, 3C	330 #	58-28	LEVELING
HMA-A	HMA, APPROACH	165 #	58-22	PAID FOR AS HMA APPROACH
	BOND COAT	0.05-0.15 GAL		FOR INFORMATION ONLY

PROPOSED NORMAL SECTION - PARKVIEW AVE

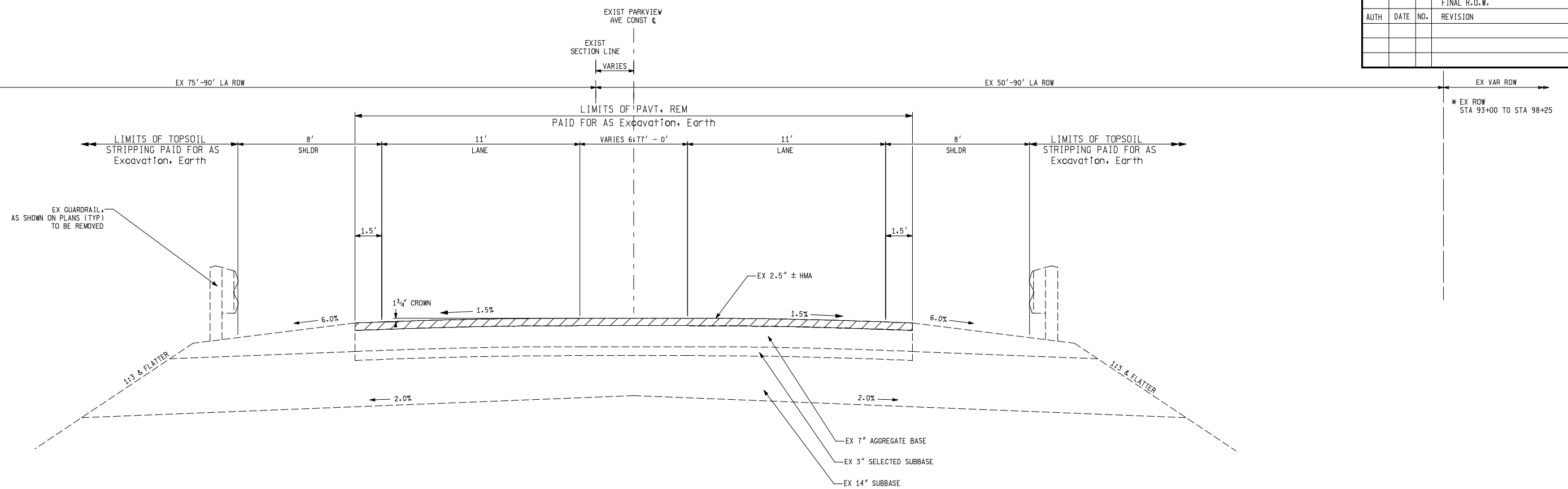
TO APPLY: STA 90+66 (POB) TO STA 94+00

① CROWN POINT TRANSITION 0' TO 5.5' LT STA 93+00 TO STA 94+00



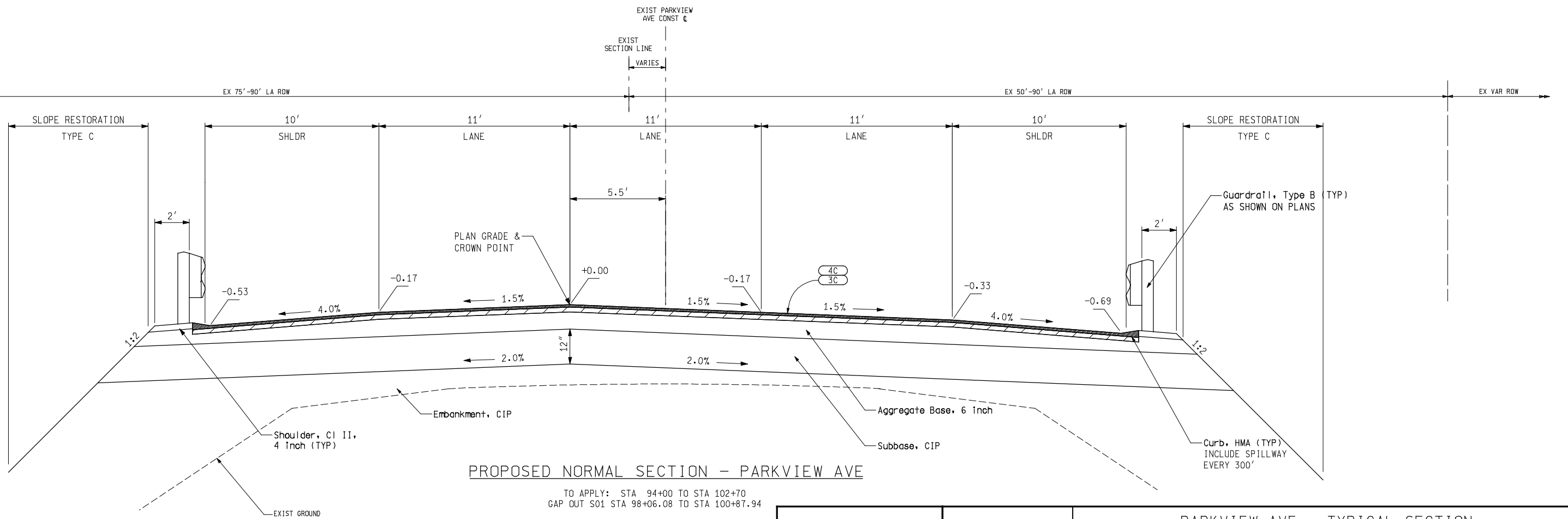
PARKVIEW AVE - TYPICAL SECTION					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
8/2/2007	HORZ 1"=3' VERT 1"=1.5'	39014	81325A	GROTENHUIS	503 40

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AUTH	DATE	NO.	REVISION



EXIST NORMAL SECTION - PARKVIEW AVE

TO APPLY: STA 94+00 TO STA 102+70
 GAP OUT S01 STA 98+06.08 TO STA 100+87.94



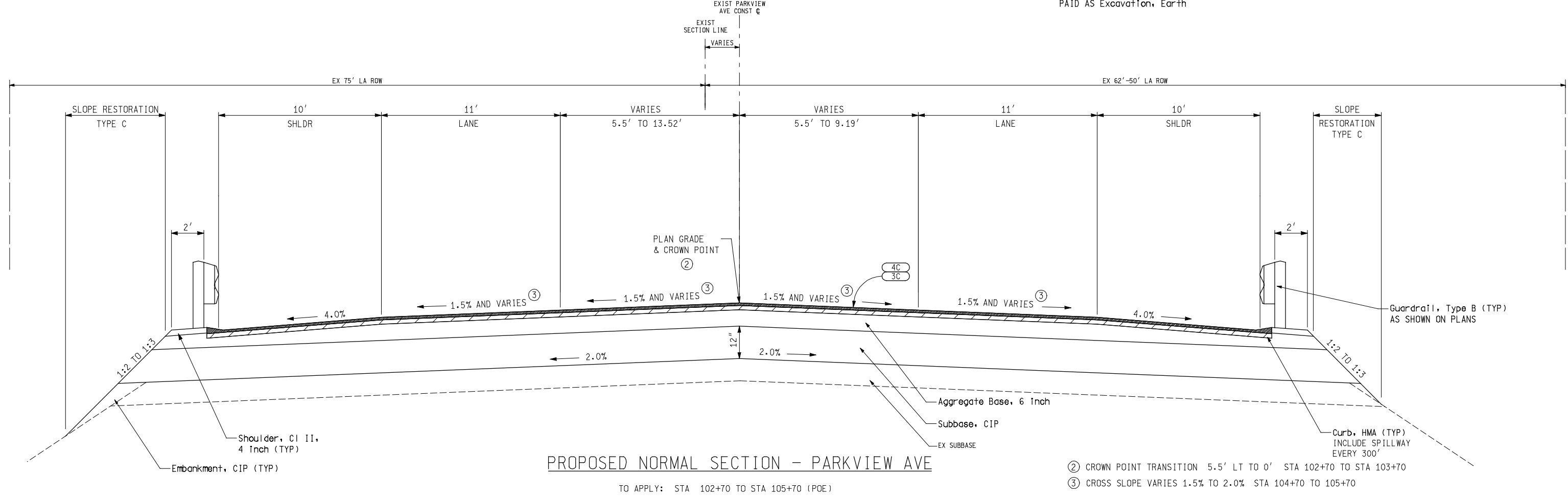
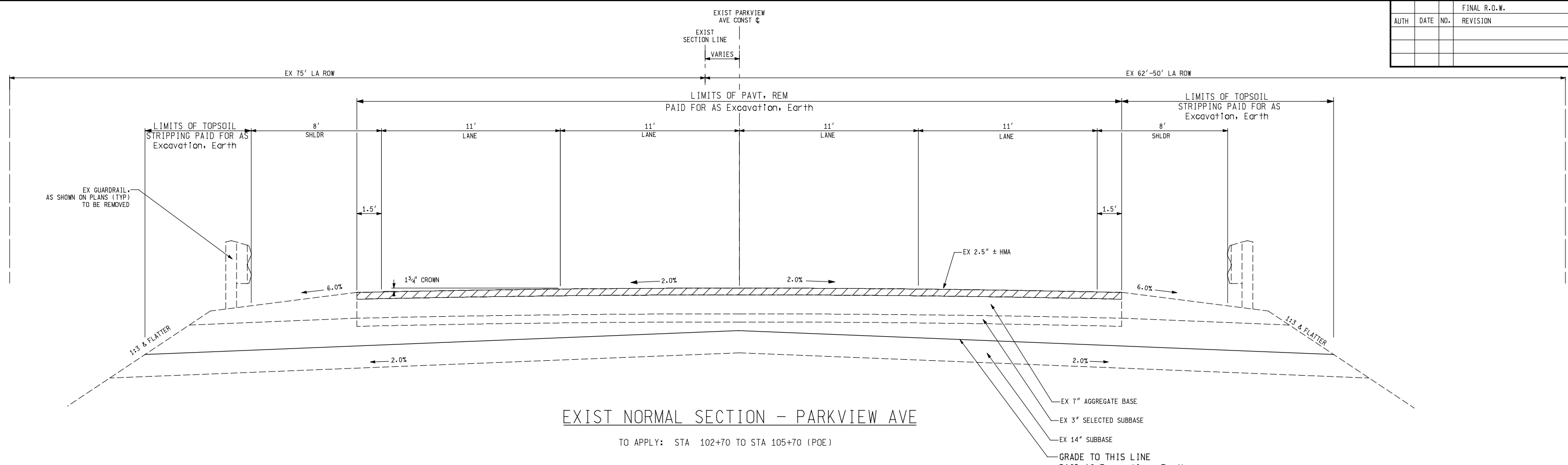
PROPOSED NORMAL SECTION - PARKVIEW AVE

TO APPLY: STA 94+00 TO STA 102+70
 GAP OUT S01 STA 98+06.08 TO STA 100+87.94

		PARKVIEW AVE - TYPICAL SECTION			
		DATE 8/2/2007	SCALE HORZ 1"=3' VERT 1"=1.5'	CONT. SEC. 39014	JOB NO. 81325A

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- ② CROWN POINT TRANSITION 5.5' LT TO 0' STA 102+70 TO STA 103+70
- ③ CROSS SLOPE VARIES 1.5% TO 2.0% STA 104+70 TO 105+70

		PARKVIEW AVE - TYPICAL SECTION			
		DATE 8/2/2007	SCALE HORZ 1"=3' VERT 1"=1.5'	CONT. SEC. 39014	JOB NO. 81325A

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ENGINEERING REPORT NO	NA	ENVIRON IMPACT STMT	NA
METHOD OF SURVEY	GPS RTK AND CONVENTIONAL	YEAR	
SURVEY ORDER		SURVEY CHIEF	WADE-TRIM
AERIAL SURVEY NO	NA	YEAR	2006
HORIZ DATUM	NAD83 (CORS)	VERT DATUM	NAVD88
ROAD DESIGN INITIATED	COMPLETED	2/13/07	
PRELIMINARY PLANS BY	PARSONS	FINAL PLANS BY	
FIELD INSPECTION (GI) BY	MDOT	DATE	1/10/06
FHWA AREA ENGINEER			

GENERAL PLAN NOTES

UNDERGROUND UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

MDOT'S FREEWAY LIGHTING SYSTEM AND OTHER MISCELLANEOUS ELECTRICAL SYSTEMS ARE NOT A PART OF MISS DIG.

THEREFORE, CONTRACTORS SHALL CONTACT THE MAINTENANCE REPRESENTATIVE AT THE MDOT REGION/TSC OFFICE TO HAVE MDOT ELECTRICAL SYSTEMS STAKED.

GRADES FOR INTERSECTIONS

ALL INTERSECTIONS ARE TO BE CONSIDERED AS COMPLETE UNITS AND THEIR GRADES DETERMINED BEFORE CONSTRUCTION IS STARTED. THE NORMAL EDGE OF PAVEMENT GRADE OF THE PROPOSED TRUNK LINE ADJACENT TO THE SIDE ROAD INTERSECTION SHALL BE CARRIED ACROSS THE INTERSECTION WHEREVER POSSIBLE. THE SIDE ROAD APPROACH GRADE AND CROWN SHALL BE ESTABLISHED TO PROVIDE FOR DRAINAGE AND TO ASSURE SUITABLE RIDE ABILITY OF THE SIDE ROAD.

ADJUSTING MONUMENT BOXES

ALL GOVERNMENT CORNERS ON THIS PROJECT SHALL BE PRESERVED, WHETHER SHOWN OR NOT. IT MAY BE NECESSARY TO PLACE OR ADJUST MONUMENT BOXES, AS REQUIRED.

TOPSOIL STRIPPING

STRIP EXISTING TOPSOIL TO THE SLOPE STAKE LINES PRIOR TO PLACING EMBANKMENT OR EXCAVATION OF EARTH. TOPSOIL STRIPPING IS INCLUDED IN THE GRADING PAY ITEMS.

PROPERTY OWNERS

PROPERTY OWNERS NAMES, WHERE SHOWN, ARE FOR INFORMATION ONLY, AND THEIR ACCURACY IS NOT GUARANTEED.

OLD PLANS

THE FOLLOWING OLD PLANS WERE REFERRED TO IN THE DESIGN OF THIS PROJECT.
 CS 39024B C15&C16
 CS 39014A C14&C15
 CS 39014A C12&C13
 CS 39014A C23&C24
 CS 39014 15057A (1979)
 CS 39014 15060A (1979)

IN ADDITION, OTHER OLD PLANS THAT PREDATE THIS PROJECT MAY BE AVAILABLE. THESE PLANS MAY BE REVIEWED IN THE TRANSPORTATION SERVICE CENTER DURING NORMAL WORKING HOURS.

STATIONING

STATIONING ON THIS PROJECT WAS TAKEN FROM OLD PLANS AND PAVEMENT STENCILED STATIONING AND IS NOT NECESSARILY ACCURATE.

8' GUARDRAIL POST

GUARDRAIL SHALL BE CONSTRUCTED USING 8 FOOT POSTS AT ALL GUARDRRAIL LOCATIONS AS SHOWN ON PLANS EXCEPT IN APPROACH AND DEPARTING TERMINALS. THE ADDITIONAL POST LENGTH WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE APPROPRIATE GUARDRAIL PAY ITEM.

GUARDRAIL

GUARDRAIL SHALL BE EXTENDED PARALLEL TO EXISTING BRIDGE RAILING UNTIL PAST DOWNSPOUTS BEFORE FLARING TO SHOULDER.

STATE PLANE COORDINATES AND DISTANCES

ALL DISTANCES AND COORDINATES ON THIS PROJECT ARE ON THE STATE PLANE COORDINATE SYSTEM, SOUTH ZONE. THE COMBINED SCALE FACTOR IS 0.999920809. STATE PLANE DISTANCE / 0.999920809 = GROUND DISTANCE.

SOIL EROSION MEASURES

APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODABLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

SOIL BORINGS AND/OR PAVEMENT CORES

THE SOIL BORING LOGS AND/OR PAVEMENT CORES REPRESENT POINT INFORMATION. NO INFERENCE SHOULD BE MADE THAT SUBSURFACE OR PAVEMENT CONDITIONS ARE THE SAME AT OTHER LOCATIONS.

EARTHWORK

EARTHWORK QUANTITIES ARE COMPUTED BY THE AVERAGE END AREA METHOD BASED UPON AERIAL SURVEY INFORMATION.

PAVEMENT MARKINGS

ALL PERMANENT PAVEMENT MARKINGS, SHAPES, AND DIMENSIONS SHALL CONFORM WITH MDOT PAVEMENT MARKING TYPICALS VIII-900 THRU 990 SERIES UNLESS SPECIFIED BY SPECIAL PROVISION. ALL EDGE LINES SHALL BE 6 INCHES AND ALL CORE MARKINGS SHALL BE 12 INCHES. OFFSETS FROM CONSTRUCTION JOINTS SHALL REMAIN AS NOTED IN THE PAVEMENT MARKING TYPICALS.

PERMANENT SIGNS

ANY PERMANENT SIGNS REQUIRING RELOCATION DUE TO CONTRACTOR OPERATIONS SHALL BE SALVAGED AND RESET BY THE CONTRACTOR AT LOCATIONS DESIGNATED BY THE ENGINEER. SIGNS AND POSTS DAMAGED DURING THE REMOVAL AND STORAGE OPERATIONS SHALL BE REPLACED WITH NEW SIGNS AND POSTS. THE COST OF THIS WORK SHALL BE BORNE BY THE CONTRACTOR.

RECREATIONAL PROPERTIES

THE CONTRACTOR SHALL NOT PARK ANY VEHICLES OR STORE ANY EQUIPMENT ON ANY PUBLIC RECREATIONAL PROPERTY. ACCESS TO THE RECREATIONAL SITE MUST BE MAINTAINED AT ALL TIMES.

AGGREGATE BASE UNDER HMA

AGGREGATE BASES TO BE SURFACED WITH HMA SHALL USE AGGREGATE 22A, UNLESS OTHERWISE SPECIFIED.

SEED MIXTURE

THE SYMBOL FOR THE PERMANENT TURF SEED MIXTURE ON THIS PROJECT IS SYMBOL THV.

SALVAGE GUARDRAIL

SALVAGE REMOVED GUARDRAIL BEAM. RETAIN FOR MDOT. PAID FOR AS "Guardrail, Rem".

UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENTS THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS DATED 20 . THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

NAME OF OWNER	KIND OF UTILITY
CITY OF KALAMAZOO 415 STOCKBRIDGE AVE KALAMAZOO, MI 49001-2898 JOHN SEELMAN (269)337-8149	WATER, WASTE WATER
CONSUMERS ENERGY 2500 EAST CORK STREET CALAMAZOO, MI 49001 MARK KLECZYNSKI (269)377-2314	ELECTRIC, GAS
CHARTER COMMUNICATIONS 4176 COMMERCIAL AVE PORTAGE, MI 49002 MARK BURKE (269) 217-8152	CABLE TV
KALAMAZOO COUNTY DRAIN COMMISSION 201 W KALAMAZOO AVE, RM 107 KALAMAZOO, MI 49007 WILLIAM FRENCH	STORM WATER
LIGHTCORE, A CENTURYTEL COMPANY 14567 NORTH OUTER FORTY RD, SUITE 500 CHESTERFIELD, MO 63017 ART GAUTHIER (810) 793-1493	FIBER COMMUNICATION
OSHEMO TOWNSHIP 7275 W MAIN ST KALAMAZOO, MI 49009 JOHN VANDYKE, SUPERVISOR (269)375-4260	WATER, WASTE WATER
AT&T KALAMAZOO ENGINEERING OFFICE 2919 MILLCORK KALAMAZOO, MI 49001 STAN JANCO (269)384-4476	TELEPHONE
WITTEL COMMUNICATIONS, LLC NETWORK RELATIONS ONE TECHNOLOGY CENTER MAIL DROP TC-9S TULSA, OKLAHOMA 74103 JUDITH S LAKE (918)547-9919	FIBER COMMUNICATIONS

NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

CONC CURB AND CONCRETE CURB AND GUTTER	R-30-E
APPROACH CURB & GUTTER, DOWNSPOUTS (FOR BRIDGE APPROACH CURB AND GUTTER)	R-32-E
CONCRETE SHOULDER GUTTER AND SPILLWAY	R-35-C
TEMPORARY CONCRETE BARRIER	R-52-E
GUARDRAIL AT BRIDGES AND EMBANKMENTS	R-59-E
GUARDRAIL TYPES A, B, BD, T & TD	R-60-G
GUARDRAIL APPROACH TERMINAL TYPES 2B & 2T (ET & SKT)	R-62-F
GUARDRAIL DEPARTING TERMINAL TYPES B & T	R-66-D
GUARDRAIL ANCHORAGE, BRIDGE, DETAILS	R-67-F
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-D
PLACEMENT OF TEMPORARY CONCRETE BARRIER	R-126-F
BRIDGE RAILING, AESTHETIC PARAPET TUBE	B-25-E*
APPROACH CURB & GUTTER, DOWNSPOUTS	R-32-E
GUARDRAIL ANCHORAGE, BRIDGE, DETAILS	R-67-F
MOLDING, BEVEL, LIGHT STD. ANCHOR BOLT ASSY., AND NAME PLATE DETAILS	B-103-D
STANDARD SLOPE PAVING DETAILS	B-102-C
OUTLET HEADWALLS	R-85-D
BRIDGE SIGN CONNECTION TYPE A1, A2 & B	VIII-800AE
BRIDGE SIGN CONNECTION TYPE C, D & E	VIII-810AE

NOTES APPLYING TO TRAFFIC & SAFETY STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

TEMPORARY TRAFFICE CONTROL DEVICES	WZD-125-D
------------------------------------	-----------

CATEGORY 0001	REG PART = FED, STATE
CATEGORY 0003	KAL PART = 100% KALAMAZOO COUNTY ROAD COMMISSION

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS:

JN 81325A CAT 0001 REG PART	JN 81325A CAT 0003 KAL PART		
0.88	0.12	LS	Mobilization, Max.
0.88	0.12	LS	Contractor Staking
22	3	Hr	Staking Plan Errors and Extras, One Person
13	2	Hr	Staking Plan Errors and Extras, Two Person
9	1	Hr	Staking Plan Errors and Extras, Three Person
351	0	Ft	Video Taping Sewer and Culv Pipe
15	0	Syd	Riprap, Plain
128	32	Dir	HMA Quality Initiative
1	0	LS	Ltg for Night Work
1	0	LS	Wrapping Culvert and Sewer Joints

MAINTAINING TRAFFIC

JN 81325A CAT 0001 REG PART	JN 81325A CAT 0003 KAL PART		
20	0	Ea	Barricade, Type III, High Intensity, Lighted, Furn
20	0	Ea	Barricade, Type III, High Intensity, Lighted, Oper
1	0	LS	Minor Traf Devices
1	0	LS	Flag Control
110	0	Ea	Plastic Drum, High Intensity, Lighted, Furn
110	0	Ea	Plastic Drum, High Intensity, Lighted, Oper
4	0	Ea	Sign, Portable, Changeable Message, Furn
4	0	Ea	Sign, Portable, Changeable Message, Oper
1676	0	Sft	Sign, Type B, Temp, Furn
1676	0	Sft	Sign, Type B, Temp, Oper
2	0	Ea	Truck Mounted Attenuator
4	0	Ea	High Intensity Light, Type B, Furn
4	0	Ea	High Intensity Light, Type B, Oper
4	0	Ea	Temp Attenuator, Furn
4	0	Ea	Temp Attenuator, Oper
1300	0	Ft	Conc Barrier, Temp, Furn
1300	0	Ft	Conc Barrier, Temp, Oper
5020	0	Ft	Pavt Mrkg, Longit, 6 inch or Less Width, Rem
4190	0	Ft	Pavt Mrkg, Type R, 4 inch, White, Temp
1120	0	Ft	Pavt Mrkg, Type R, 4 inch, Yellow, Temp
1740	0	Syd	HMA Surface, Rem
1754	0	Ft	Edge Trimming
120	0	Ton	HMA, 4C

EROSION CONTROL

JN 81325A CAT 0001 REG PART	JN 81325A CAT 0003 KAL PART		
25	0	Ft	Erosion Control, Check Dam, Stone
3008	0	Ft	Erosion Control, Silt Fence



NOTE SHEET

DATE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
7/02/07	39014	81325A	GROTENHUIS	R. O. W CONST. 44

DATE:

WORKED ON BY:

DATE:

FILE NAME: F:\646403\cadd\sheet\646403\m06d06b1k.dwg

			FINAL R.O.W.
AUTH	DATE	NO.	REVISION

WATER & DRAINAGE SYMBOLS

- EXISTING CATCH BASIN
- EXISTING CATCH BASIN LEFT
- PROPOSED CATCH BASIN
- PROPOSED CATCH BASIN LEFT
- SA SANITARY SEWER MANHOLE
- SA PROPOSED SANITARY SEWER MANHOLE
- ST STORM SEWER MANHOLE
- ST PROPOSED STORM SEWER MANHOLE
- U EXISTING MANHOLE - UNIVERSAL
- U PROPOSED MANHOLE - UNIVERSAL
- < EXISTING CULVERT END SECTION
- ▲ PROPOSED CULVERT END SECTION
- { EXISTING HEADWALL
- { PROPOSED HEADWALL
- ⊖ WATER SHUT OFF
- W WATER GATE VALVE
- WATER GATE WELL
- ⊙ WATER METER
- W WATER MANHOLE
- ⊗ WATER WELL
- F EXISTING FIRE HYDRANT
- F PROPOSED FIRE HYDRANT
- ⊖ RIVER BOTTOM

- ADJ-HYD ADJUST FIRE HYDRANT
- ADJ ADJUST DRAINAGE STRUCTURE
- ADJ-K ADJUST DRAINAGE STRUCTURE W/COVER
- ADJ-B/O ADJUST DRAINAGE STRUCTURE BY OTHERS
- REL-B/O RELOCATE - BY OTHERS
- SR- SIDEWALK RAMP TYPE
- ∧ CHECK DAM (PROFILES)
- DIKE (PROFILES)
- W.T. WATER TABLE (PROFILES)

REAL ESTATE SYMBOLS

- PROPERTY OWNERSHIP ARROW
- ↗ CONTIGUOUS PROPERTY SYMBOL
- 123456 PARCEL NUMBER BOX
- _____ PARCEL LINES

UTILITIES SYMBOLS

- POWER POLE
- GUY POLE
- ☀ LIGHT POLE
- ☀ LIGHT STANDARD
- POWER AND LIGHT POLE
- TELEPHONE POLE
- ⊙ TELEPHONE MANHOLE
- ⊙ TELEPHONE PEDESTAL
- ▷ WALK NO-WALK SIGN
- GAZ GAS LINE MARKER
- GV GAS VALVE
- GF GAS FILLER PIPE
- GW GAS WELL
- OW OIL WELL
- PM PETROLEUM MARKER
- FO FIBER OPTIC MARKER
- E ELECTRIC MANHOLE
- E ELECTRIC HANDHOLE
- ☒ PHONE OR CALL BOX
- MB MAIL BOX
- ⌚ DEADMAN FOR GUYWIRE
- RS RAILROAD SWITCH BOX
- R/R FLASHING RAILROAD SIGN
- PT POWER TOWER

MISCELLANEOUS SYMBOLS

- ☆ PINE TREE
- ☼ TREE
- ⊗ RIPRAP
- T SIGN
- π SIGN2
- STUMP
- SWAMP
- ⊗ VERTICAL CONTROL POINT
- ⊙ SECTION CORNER
- ⊙ 16TH CORNER
- ⊙ QUARTER CORNER
- ⊙ HALF QUARTER CORNER
- ROW MARKER
- PROPERTY CORNER
- REFERENCE POINT
- REFERENCE MARKER
- ⊗ T.H.# TEST HOLE NO.
- 123 BEAM G. R. RUN NUMBER (EXISTING)
- 123 BEAM G. R. RUN NUMBER (PROPOSED)
- HAZARDOUS OR FLAMMABLE MATERIAL USED WITH UNDERGROUND GAS & ELECTRICAL LINES
- CAUTION - CRITICAL UNDERGROUND UTILITY USED WITH UNDERGROUND TELEPHONE & FIBER OPTICS LINES
- PROP 36" PROPOSED CULVERT/SEWER
- EX 12" CMP EXISTING CULVERT/SEWER

UTILITY PATTERNS

- ELEC ELECTRICAL LINE
- 24" GAS GAS LINE
- 12" OIL OIL LINE
- TELE TELEPHONE LINE
- 36" WM WATER LINE
- CTV CABLE TV
- TELE FO FIBER OPTICS
- POWER TRANSMISSION LINE

R.O.W. PATTERNS

- xx EX. LIMITED ACCESS R.O.W.
- EXISTING R.O.W.
- xx PROP LIMITED ACCESS R.O.W.
- PROP FREE ACCESS R.O.W.
- SECTION LINE

TOPO PATTERNS

- HEDGE LINE
- TREE LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED GUARD RAIL
- DRAINAGE CRS/EDGE OF WATER
- WETLANDS AREA
- ABANDON ANY UTILITY
- CITY LIMITS
- RAILROAD
- SOUND ABATEMENT WALL
- CONCRETE MEDIAN BARRIER
- SLOPE STAKE LINE

DRIVE/APPROACH LEGEND

- CONCRETE
- HMA
- AGGREGATE

REMOVAL LEGEND

- REMOVING HMA
- REMOVING SIDEWALK
- REMOVING PAVEMENT
- COLD-MILLING HMA
- REMOVING CURB, GUTTER AND CURB & GUTTER
- REMOVING (R)
- ABANDONING (A)
- SAVE (S)
- BULKHEAD (B)
- CLEARING (C)

SPECIAL LEGEND THIS PROJECT

		LEGEND SHEET			
		DATE	SCALE	CONT. SEC.	JOB NO.
		8/2/2007	NTS	39014	81325A
		DESIGN UNIT	SHEET NO.	R.O.W CONST.	
		GROTENHUIS	507	45	

			FINAL R.O.W.
AUTH	DATE	NO.	REVISION

ALIGNMENT POINTS STATION-OFFSETS - WITNESSES

PARKVIEW AVENUE OVER
US-131
KALAMAZOO, MI

S01 OF 39014 JN 81325
AUGUST, 2005

HORIZ. DATUM - NAD83 (MICH SOUTH ZONE)
VERT. DATUM - NAVD88
UNITS - INT. FEET

CA1CE
STATION & OFFSET REPORT FROM CHAIN AL11

REFERENCE OFFSET POINT #: REOFF2003

DESCRIPTION: Set Mag. nail in ϵ of Parkview Avenue \pm 400' West of the West reference line of the Parkview Avenue bridge over US-131.
Station 94+25.570 Offset 0.000
COORDINATES: N - 279573.068 E - 12775110.713 Elev - 951.610

- WITNESSES:
1. NORTH 20.03' Set Mag. nail on top of guard rail post.
 2. S15°E 21.26' Set Mag. nail on top of guard rail post.
 3. S19°W 20.63' Set Mag. nail on top of guard rail post.
 4. N72°W 93.73' Set rerod w/a orange "Wade Trim Trav. Pt" cap (CP#4)

REFERENCE OFFSET POINT #: REFPTA2000

DESCRIPTION: Set Mag. nail in ϵ of Parkview Avenue at the west side of the bridge deck of Parkview Avenue bridge over US-131.
Station 98+25.540 Offset 0.000
COORDINATES: N - 279571.533 E - 12775510.680 Elev - 963.860

- WITNESSES:
1. N45°W 27.37' Set PK nail on top of guard rail post.
 2. N22°W 18.79' Set PK nail on top of guard rail post.
 3. S14°E 17.49' Set PK nail on top of guard rail post.
 4. S68°W 45.88' Set rerod w/a orange "Wade Trim Trav Pt" cap (CP#3)

REFERENCE OFFSET POINT #: REFPTB2001

DESCRIPTION: Set Mag. nail in ϵ of Parkview Avenue at the east side of the bridge deck of Parkview Avenue over US-131.
Station 100+68.482 Offset 0.000
COORDINATES: N - 279570.601 E - 12775753.621 Elev - 963.700

- WITNESSES:
1. N14°W 17.64' Set Mag. nail on top of guard rail post.
 2. S22°E 18.58' Set Mag. nail on top of guard rail post.
 3. S46°E 26.86' Set Mag. nail on top of guard rail post.
 4. N82°E 79.81' Set rerod w/a orange "Wade Trim Trav Pt" cap (CP#2)

REFERENCE OFFSET POINT #: REOFF2004

DESCRIPTION: Set Mag. nail in ϵ of Parkview Avenue \pm 400' East of the east reference line of the Parkview Avenue bridge over US-131.
Station 104+68.452 Offset 0.000
COORDINATES: N - 279569.066 E - 12776153.588 Elev - 951.600

- WITNESSES:
1. S14°W 25.52' Set PK nail on top of guard rail post.
 2. N19°W 30.50' Set Mag. nail on top of guard rail post.
 3. N17°E 28.91' Set Mag. nail on top of guard rail post.
 4. S66°E 79.33' Set rerod w/a orange "Wade Trim Trav Pt" cap (CP#1)

BENCHMARK STATION-OFFSETS - WITNESSES

BENCHMARK #: 387 (1001)

DESCRIPTION: Chisled square on the SE corner of the top tier of the SE abutment wall of the Parkview Avenue Bridge over US-131.
Station 98+16.249 Offset -22.583
COORDINATES: N - 279594.152 E - 12775501.476 Elev - 964.142

- WITNESSES:
1. N5°E 5.35' Set Mag. nail in guard rail post.
 2. N61°E 7.50' Set Mag. nail in guard rail post.
 3. N82°E 12.47' Set Mag. nail in guard rail post.
 4. S80°E 19.01' Center of "Traffic Light Ahead" sign post.

BENCHMARK #: 538 (1002)

DESCRIPTION: Chisled square on the NW corner of the top tier of the NW abutment wall of the Parkview Avenue Bridge over US-131.
Station 100+77.798 Offset 22.310
COORDINATES: N - 279548.256 E - 12775762.851 Elev - 964.194

- WITNESSES:
1. S6°E 5.53' Set Mag. nail in guard rail post.
 2. S27°E 5.93' Set Mag. nail in guard rail post.
 3. S68°E 12.76' Set Mag. nail in guard rail post.
 4. S86°W 29.00' Center of "Pass With Care" sign post.

CONTROL POINT STATION-OFFSETS - WITNESSES

CONTROL POINT#: 1

DESCRIPTION: Set 5/8" rerod with a orange "Wade Trim Trav. Pt." \pm 27' South of the ϵ of Parkview Avenue and +/- 171' West of the ϵ of southbound Campus Drive.
COORDINATES: N - 279543.556 E - 12776228.690 Elev - 947.793
Station 105+43.652, Offset 25.222

- WITNESSES:
1. N10°E 2.73' Set Mag. nail in Bit. road surface.
 2. S84°E 67.30' SW corner of back of curb.
 3. S48°E 27.31' Set Mag. nail in West face 14" tree.
 4. WEST 35.67' Set Mag. nail in guard rail post.

CONTROL POINT#: 2

DESCRIPTION: Set 5/8" rerod with a orange "Wade Trim Trav. Pt." cap \pm 0.7' North of the north edge of bit. of Parkview Avenue and \pm 84' East of the east end of the Parkview Avenue bridge deck over US-131.
COORDINATES: N - 279587.066 E - 12775831.704 Elev - 962.482
Station 101+46.501, Offset -16.764

- WITNESSES:
1. WEST 21.76' Set Mag. nail in guard rail post.
 2. N75°W 9.65' Set Mag. nail in guard rail post.
 3. N50°E 4.65' Set Mag. nail in guard rail post.
 4. S10°E 1.03' Set Mag. nail in Bit. road surface.

CONTROL POINT#: 3

DESCRIPTION: Set 5/8" rerod with a orange "Wade Trim Trav. Pt." cap \pm 21' South of the ϵ of Parkview Avenue, and \pm 50' West of the west end of the Parkview Avenue Bridge deck over US-131.
COORDINATES: N - 279551.111 E - 12775469.607 Elev - 963.254
Station 97+84.545, Offset 20.579

- WITNESSES:
1. N4°E 7.43' Set Mag. nail in Bit. road surface.
 2. N85°E 9.71' Set Mag. nail in guard rail post.
 3. N81°W 15.50' Set Mag. nail in guard rail post.
 4. N63°W 3.30' Set Mag. nail in guard rail post.

CONTROL POINT#: 4

DESCRIPTION: Set 5/8" rerod with a orange "Wade Trim Trav. Pt." cap \pm 2.4' North of the north edge of bit. of Parkview Avenue and \pm 190' East of the ϵ of 12th Street.
COORDINATES: N - 279594.623 E - 12775019.512 Elev - 947.069
Station 93+34.286, Offset -21.205

- WITNESSES:
1. N87°E 8.47' Set Mag. nail in guard rail post.
 2. S85°E 20.74' Set Mag. nail in guard rail post.
 3. S3°E 2.89' Set Mag. nail in Bit. road surface.
 4. S84°W 15.54' Set Mag. nail in Bit. road surface.

SECTION CORNER STATION-OFFSETS - WITNESSES

SCOR413

DESCRIPTION: PD:BRASS DISC IN MON BOX
COORDINATES: N - 279568.345 E - 12776411.787 Elev - 943.634

- WITNESSES:
1. N53°W 85.09' Found nail with tab in power pole. (Fnd)
 2. N21°E 90.54' Found PK nail in west side of 45" Ash. (Fnd)
 3. S49°W 68.17 Set Mag. nail in NW face lightpole.
 4. S13°E 118.66 Found NE corner brick wall (WMU).

THE FOLLOWING QUARTER CORNER IS APPROXIMATELY 1730 FEET WEST OF THE WEST END OF THE BRIDGE.

QCOR254

DESCRIPTION: PD:BRASS DISC IN MON BOX
COORDINATES: N - 279577.871 E - 12773780.085 Elev - 949.232

- WITNESSES:
1. N40°E 48.18' Nail & Tab in utility pole. (Fnd)
 2. N55°W 76.91' Nail & Tab in 28" Maple. (Fnd)
 3. S45°W 59.10' Nail & tab in utility pole. (Fnd)
 4. NW corner concrete sign base-State of Michigan.
 5. S45°E 46.85' Historical marker "Harris Family". (Fnd)

The following MDOT Brass disk was rejected as the section corner by Kalamazoo County Peer Review - November 29, 2001.

PCC255 N - 279583.390 E - 12773777.668 Elev - 948.670
"MDOT BRASS DISC IN MON BOX"



WITNESSES & BENCHMARKS SHEET

DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
8/2/2007	NTS	39014	81325A	GROTENHUIS	508 46

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8/2/2007

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FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

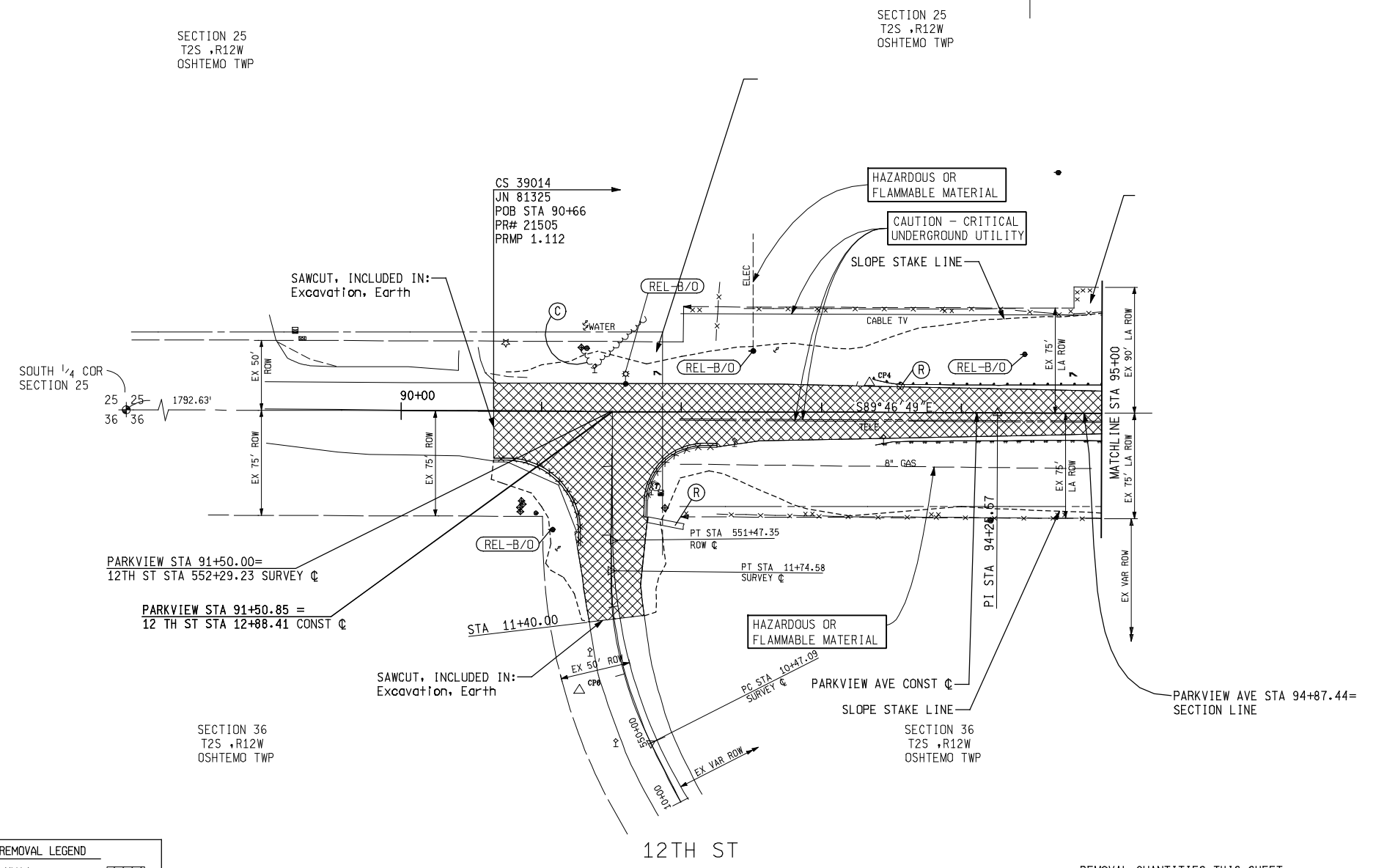
PARKVIEW AVE CONST C
DEFLECTION DATA
PI=94+25.57
Δ=0°00'01"RT
NO CURVE

CURVE 12TH ST SURVEY C
Δ = 27°32'55" RT
D = 21°36'32"
T = 65.00'
L = 127.49'
R = 265.15'
E = 7.85'
PC = 10+47.09 N = 279337.33 E = 12774863.37
PI = 11+12.10 N = 279395.30 E = 12774833.96
PT = 11+74.58 N = 279460.30 E = 12774834.70

CURVE 12TH ST ROW C
Δ = 90°00'00" RT
D = 16°00'00"
T = 358.10'
L = 562.50'
R = 358.10'
E = 148.33'
PC = 545+84.85 N = 279128.26 E = 12775198.389
PI = 549+42.95 N = 279124.15 E = 12774840.316
PT = 551+47.35 N = 279482.23 E = 12774836.20

NOTE:
FOR BRIDGE WORK SEE BRIDGE SHEETS.

LOCATION OF UTILITIES IN 12TH ST
INTERSECTION WITH PARKVIEW.
COST INCLUDED IN "Excavation, Earth".



REMOVAL LEGEND	
REMOVING HMA*	
COLD-MILLING HMA	
REMOVING SIDEWALK	
REMOVING PAVEMENT	
HMA BASE CRUSHING AND SHAPING	
REMOVING CURB, GUTTER AND CURB & GUTTER	
REMOVING	(R)
ABANDONING	(A)
SAVE	(S)
BULKHEAD	(B)
CLEARING	(C)

* INCLUDE IN Excavation, Earth UNLESS OTHERWISE NOTED

REMOVAL QUANTITIES THIS SHEET			
JN 81325A	JN 81325A		
CAT 0001	CAT 0003		
REG PART	KAL PART		
1	0	Ea Tree, Rem, 6 inch to 18 inch	
330	0	Ft Guardrail, Rem	
220	0	Ft Curb and Gutter, Rem	
2	0	Cyd Masonry and Conc Structure, Rem	
20	0	Ft Fence, Rem	

REMOVAL SHEET

		PARKVIEW AVE OVER US 131: POB TO STA 95+00			
		DATE	SCALE	CONT. SEC.	JOB NO.
		8/2/2007	1"=50'	39014	81325A
			DESIGN UNIT	SHEET NO.	
			GROTENHUIS	509 47	

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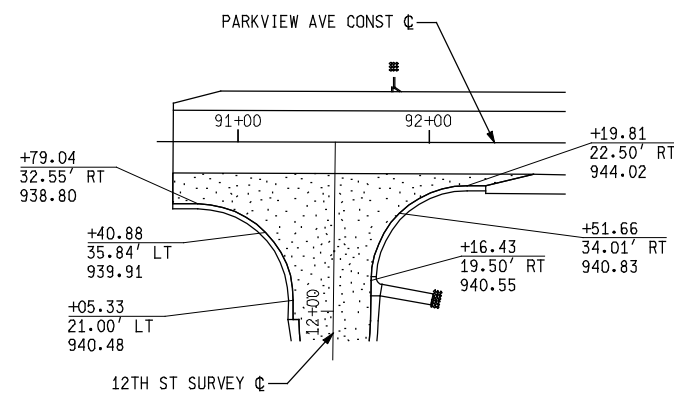
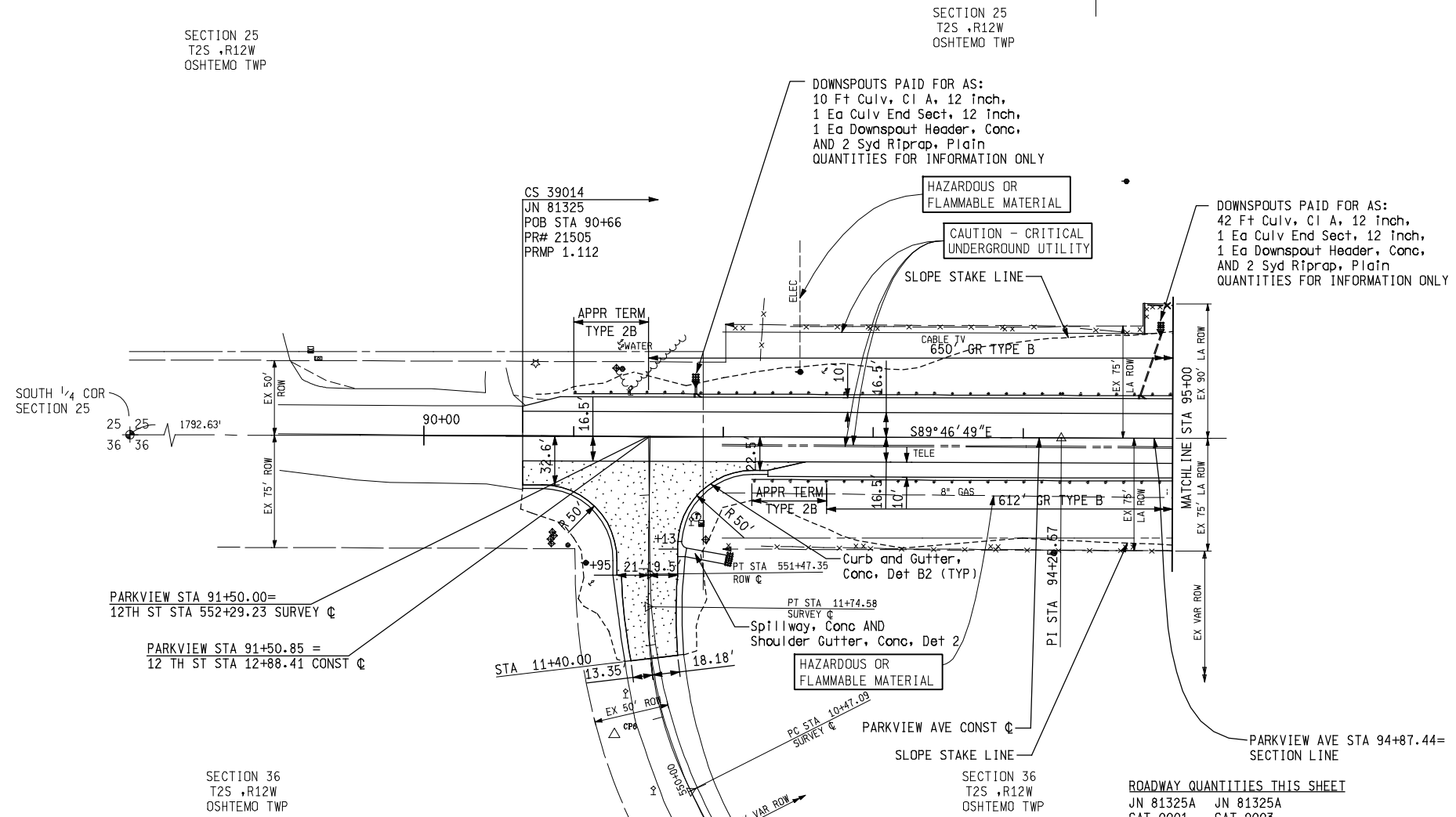
FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

PARKVIEW AVE CONST C
DEFLECTION DATA
PI=94+25.57
Δ=0°00'01"RT
NO CURVE

CURVE 12TH ST SURVEY C
Δ = 27°32'55" RT
D = 21°36'32"
T = 65.00'
L = 127.49'
R = 265.15'
E = 7.85'
PC = 10+47.09 N = 279337.33 E = 12774863.37
PI = 11+12.10 N = 279395.30 E = 12774833.96
PT = 11+74.58 N = 279460.30 E = 12774834.70

CURVE 12TH ST ROW C
Δ = 90°00'00" RT
D = 16°00'00"
T = 358.10'
L = 562.50'
R = 358.10'
E = 148.33'
PC = 545+84.85 N = 279128.26 E = 12775198.389
PI = 549+42.95 N = 279124.15 E = 12774840.316
PT = 551+47.35 N = 279482.23 E = 12774836.20

NOTE:
FOR BRIDGE WORK SEE BRIDGE SHEETS.
GUARDRAIL QUANTITIES SHOWN ON SECOND PLAN SHEET.
CONTRACTOR SHALL FIELD VERIFY LOCATION OF UTILITIES IN 12TH ST INTERSECTION WITH PARKVIEW.
COST INCLUDED IN "Excavation, Earth".



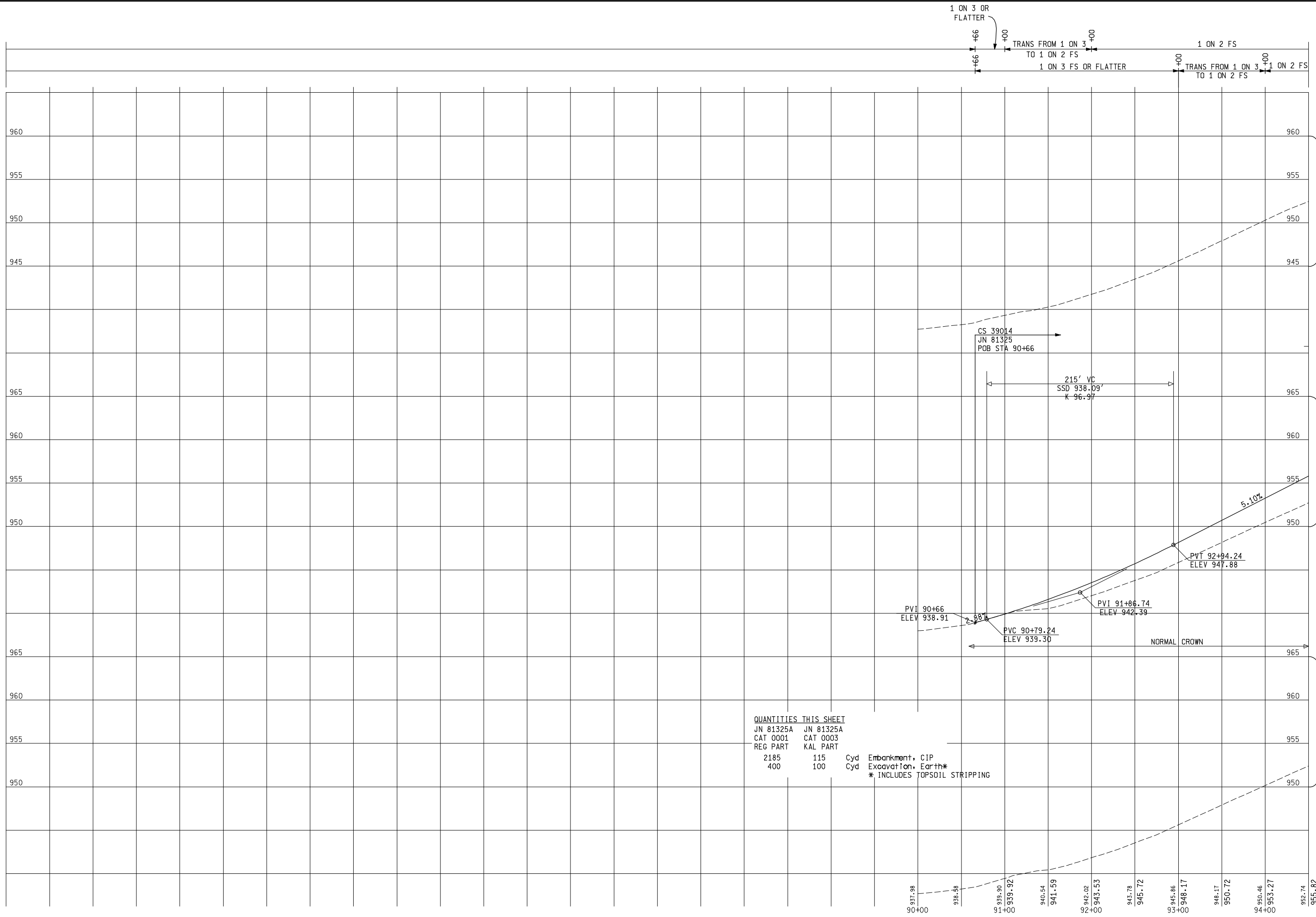
12TH ST DETAIL GRADES

ROADWAY QUANTITIES THIS SHEET

JN 81325A	JN 81325A		
CAT 0001	CAT 0003		
REG PART	KAL PART		
1040	260	Cyd	Subbase, CIP
2912	728	Syd	Aggregate Base, 6 inch
52	0	Ft	Culv, CI A, 12 inch
2	0	Ea	Culv End Sect, 12 inch
303	76	Ton	HMA, 3C
151	38	Ton	HMA, 4C
262	0	Syd	Shoulder, CI II, 6 inch
211	0	Ft	Curb and Gutter, Conc, Det B2
840	0	Ft	Curb, HMA
40	0	Ft	Fence, Chain Link, 48 inch
2840	0	Syd	Slope Restoration, Type C
1	0	Ea	Shoulder Gutter, Conc, Det 2
15	0	Ft	Spillway, Conc
138	0	Ton	HMA Approach
7	0	Syd	Riprap, Plain
2	0	Ea	Downspout Header, Conc

CONSTRUCTION SHEET

		PARKVIEW AVE OVER US 131: POB TO STA 95+00					
		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
		8/2/2007	1"=50'	39014	81325A	GROTEHUIS	510 48



1 ON 3 OR FLATTER
 +66 +00
 TRANS FROM 1 ON 3 TO 1 ON 2 FS
 1 ON 3 FS OR FLATTER
 +00
 TRANS FROM 1 ON 3 TO 1 ON 2 FS
 1 ON 2 FS
 +00

EX GROUND PROFILE (15' LT)
 EXISTING GROUND POINTS @ ROW

EX GRADE AT CONST C
 PROP PLAN GRADE

EX GROUND PROFILE (15' RT)
 EXISTING GROUND POINTS @ ROW

QUANTITIES THIS SHEET
 JN 81325A JN 81325A
 CAT 0001 CAT 0003
 REG PART KAL PART
 2185 115 Cyd Embankment, CIP
 400 100 Cyd Excavation, Earth*
 * INCLUDES TOPSOIL STRIPPING

FINAL R.O.W.	
REVISION	
AUTH	
DATE	



PARKVIEW AVE OVER US 131			
DATE	SCALE	JOB NO.	DESIGN UNIT
7/02/07	HORZ. 1" = 10' VERT. 1" = 40'	81325A	GROTENHUIS
CONT. SEC.	39014	81325A	

SHEET NO.	
R.O.W	CONST.
511	49

FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

PARKVIEW AVE CONST @ DEFLECTION DATA
 PI=98+25.54
 Δ=0°00'01"LT
 NO CURVE

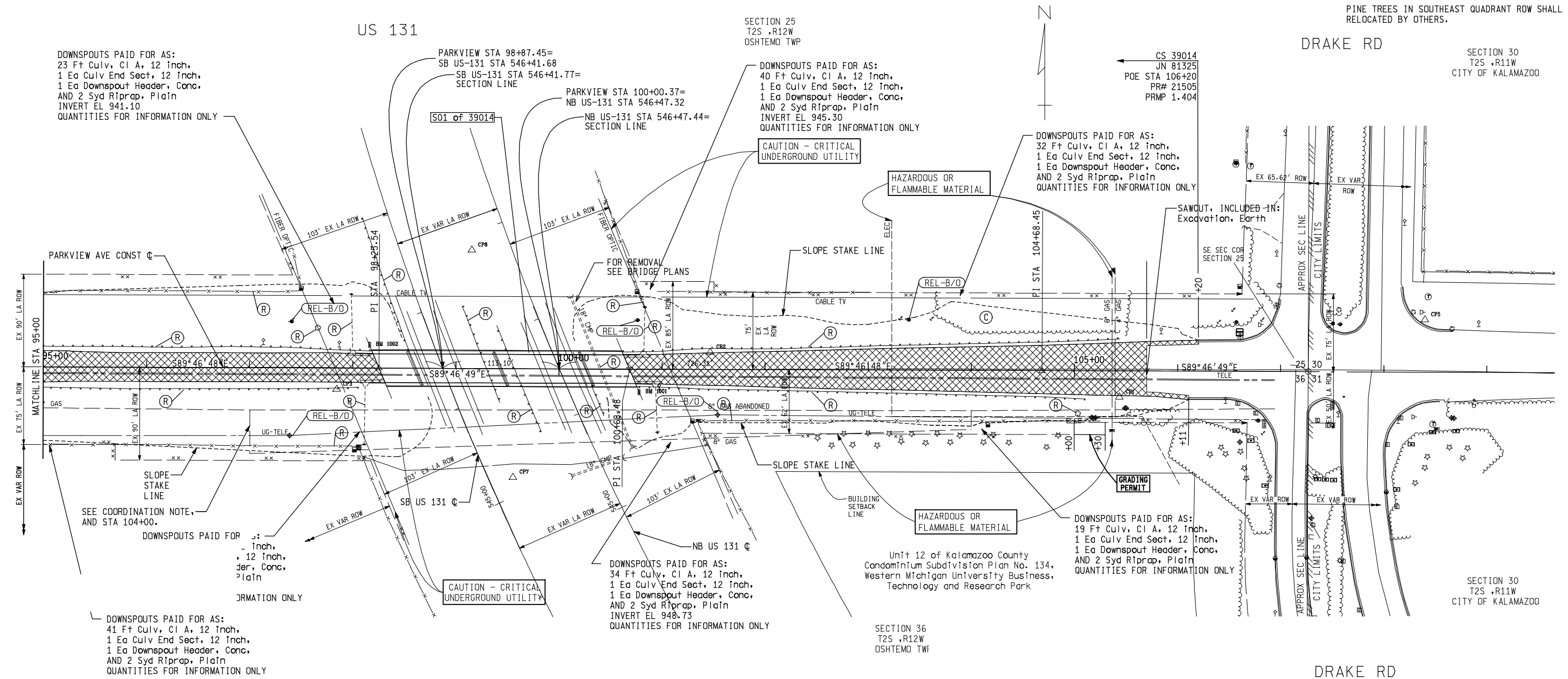
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 PI=100+68.48
 Δ=0°00'01"RT
 NO CURVE

PARKVIEW AVE CONST @ DEFLECTION DATA
 PI=104+68.45
 Δ=0°00'01"LT
 NO CURVE

CURVE SB US-131
 Δ = 23°00'35" RT
 D = 2°00'00"
 L = 583.10'
 T = 1150.49'
 R = 2864.79'
 E = 58.74'
 PC = 540+07.95 N = 279010.75 E = 12772865.45
 PI = 545+91.05 N = 279494.60 E = 12775540.04
 PT = 551+58.44 N = 280067.16 E = 12775429.65

CURVE NB US-131
 Δ = 24°40'40" RT
 D = 2°00'00"
 L = 626.66'
 T = 1233.89'
 R = 2864.79'
 E = 67.74'
 PC = 540+10.57 N = 279016.29 E = 12775995.74
 PI = 546+37.23 N = 279525.89 E = 12775631.02
 PT = 552+44.45 N = 280141.22 E = 12775512.39

NOTES:
 FOR BRIDGE WORK SEE BRIDGE SHEETS
 8" GAS MAIN TO BE BORED FROM STA 97+00 TO 104+00 BY OTHERS. CONTRACTOR SHALL EXCAVATE FROM EXISTING MAIN TO NEW MAIN. CONNECTION BETWEEN EXISTING AND NEW MAIN BY OTHERS. COORDINATION AND PAYMENT INCLUDED IN Excavation, Earth THIS SHEET.
 PINE TREES IN SOUTHEAST QUADRANT ROW SHALL BE RELOCATED BY OTHERS.



REMOVAL LEGEND

REMOVING HMA*	
COLD-MILLING HMA	
REMOVING SIDEWALK	
REMOVING PAVEMENT	
HMA BASE CRUSHING AND SHAPING	
REMOVING CURB, GUTTER AND CURB & GUTTER	
REMOVING	(R)
ABANDONING	(A)
SAVE	(S)
BULKHEAD	(B)
CLEARING	(C)

* INCLUDE IN Excavation, Earth UNLESS OTHERWISE NOTED

REMOVAL QUANTITIES THIS SHEET

JN 81325A	JN 81325A		
CAT 0001	CAT 0003		
REG PART	KAL PART		
0.07	0.02	Acre	Clearing
2	0	Ea	Tree, Rem, 6 inch to 18 inch
2075	0	Ft	Guardrail, Rem
1020	0	Ft	Fence, Rem
5	0	Ea	Culv, Rem, Less than 24 Inch
2	0	Ea	Culv End, Rem, Less than 24 Inch
3	0	Cyd	Masonry and Conc Structure, Rem

REMOVAL SHEET

PARSONS	MDOT Michigan Department of Transportation	PARKVIEW AVE OVER US 131: STA 95+00 TO POE				
		DATE 8/2/2007	SCALE 1"=50'	CONT. SEC. 39014	JOB NO. 81325A	DESIGN UNIT GROENHUIS

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FINAL R.O.W.			
AUTH	DATE	NO.	REVISION

PARKVIEW AVE CONST @
DEFLECTION DATA
PI=98+25.54
Δ=0°00'01"LT
NO CURVE

PARKVIEW AVE CONST @
DEFLECTION DATA
PI=100+68.48
Δ=0°00'01"RT
NO CURVE

PARKVIEW AVE CONST @
DEFLECTION DATA
PI=104+68.45
Δ=0°00'01"LT
NO CURVE

CURVE SB US-131
Δ = 23°00'35" RT
D = 2°00'00"
L = 583.10'
T = 1150.49'
R = 2864.79'
E = 58.74'
PC = 540+07.95 N = 279010.75 E = 12772865.45
PI = 545+91.05 N = 279494.60 E = 12775540.04
PT = 551+58.44 N = 280067.16 E = 12775429.65

CURVE NB US-131
Δ = 24°40'40" RT
D = 2°00'00"
L = 626.66'
T = 1233.89'
R = 2864.79'
E = 67.74'
PC = 540+10.57 N = 279016.29 E = 12775995.74
PI = 546+37.23 N = 279525.89 E = 12775631.02
PT = 552+44.45 N = 280141.22 E = 12775512.39

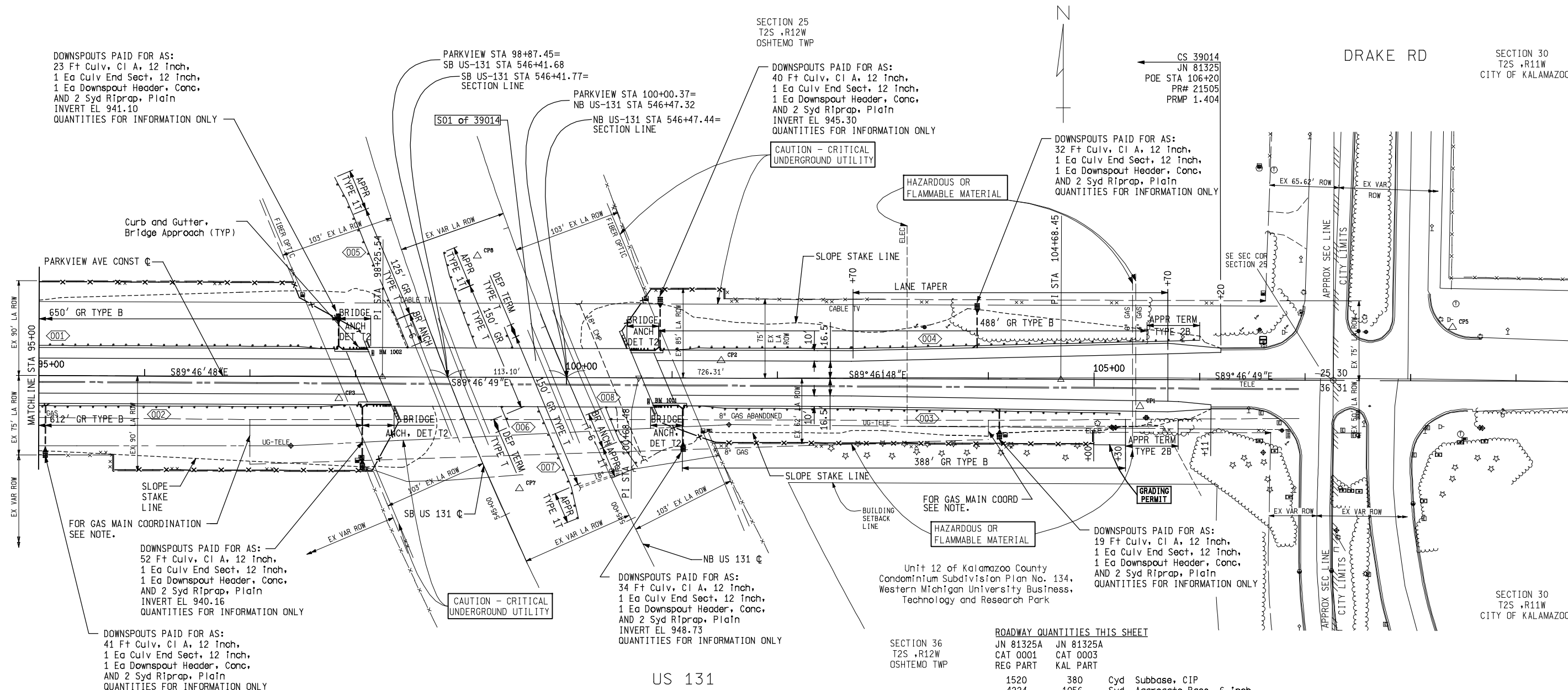
NOTES:

FOR BRIDGE WORK SEE BRIDGE SHEETS

8" GAS MAIN TO BE BORED FROM STA 97+00 TO 104+00 BY OTHERS. CONTRACTOR SHALL EXCAVATE FROM EXISTING MAIN TO NEW MAIN. CONNECTION BETWEEN EXISTING AND NEW MAIN BY OTHERS. SEE NOTICE TO BIDDERS. COORDINATION AND PAYMENT INCLUDED IN Excavation, Earth AND Embankment, CIP PAY ITEMS THIS SHEET.

PINE TREES IN SOUTHEAST QUADRANT ROW SHALL BE RELOCATED BY OTHERS.

US 131



GUARDRAIL QUANTITIES

001	650 Ft Guardrail, Type B 1 Ea Guardrail Anch, Bridge, Det T2 1 Ea Guardrail Approach Terminal, Type 2B 26 Ea Guardrail Reflector	005	125 Ft Guardrail, Type T 1 Ea Guardrail Approach Terminal, Type 1T 1 Ea Guardrail Anch, Bridge, Det T6 3 Ea Guardrail Reflector
002	612 Ft Guardrail, Type B 1 Ea Guardrail Anch, Bridge, Det T2 1 Ea Guardrail Approach Terminal, Type 2B 26 Ea Guardrail Reflector	006	150 Ft Guardrail, Type T 1 Ea Guardrail Approach Terminal, Type 1T 1 Ea Guardrail Departing Terminal, Type T 3 Ea Guardrail Reflector
003	388 Ft Guardrail, Type B 1 Ea Guardrail Anch, Bridge, Det T2 1 Ea Guardrail Approach Terminal, Type 2B 16 Ea Guardrail Reflector	007	150 Ft Guardrail, Type T 1 Ea Guardrail Approach Terminal, Type 1T 1 Ea Guardrail Departing Terminal, Type T 3 Ea Guardrail Reflector
004	488 Ft Guardrail, Type B 1 Ea Guardrail Anch, Bridge, Det T2 1 Ea Guardrail Approach Terminal, Type 2B 20 Ea Guardrail Reflector	008	1 Ft Guardrail Approach Terminal, Type 1T 1 Ea Guardrail Anch, Bridge, Det T6

ROADWAY QUANTITIES THIS SHEET

SECTION 36 T2S .R12W OSHTEMO TWP	JN 81325A CAT 0001 REG PART	JN 81325A CAT 0003 KAL PART	Quantity	Description
			1520	Cyd Subbase, CIP
			4224	Syd Aggregate Base, 6 inch
			241	Ft Culv, CI A, 12 inch
			7	Ea Culv End Sect, 12 inch
			639	Ton HMA, 3C
			320	Ton HMA, 4C
			540	Syd Shoulder, CI II, 6 inch
			1630	Ft Curb, HMA
			1183	Ft Fence, Chain Link, 48 inch
			7273	Syd Slope Restoration, Type C
			120	Ft Curb and Gutter, Bridge Approach
			7	Ea Downspout Header, Conc
			14	Syd Riprap, Plain
			2500	Cyd Excavation, Earth
			2500	Cyd Embankment, CIP



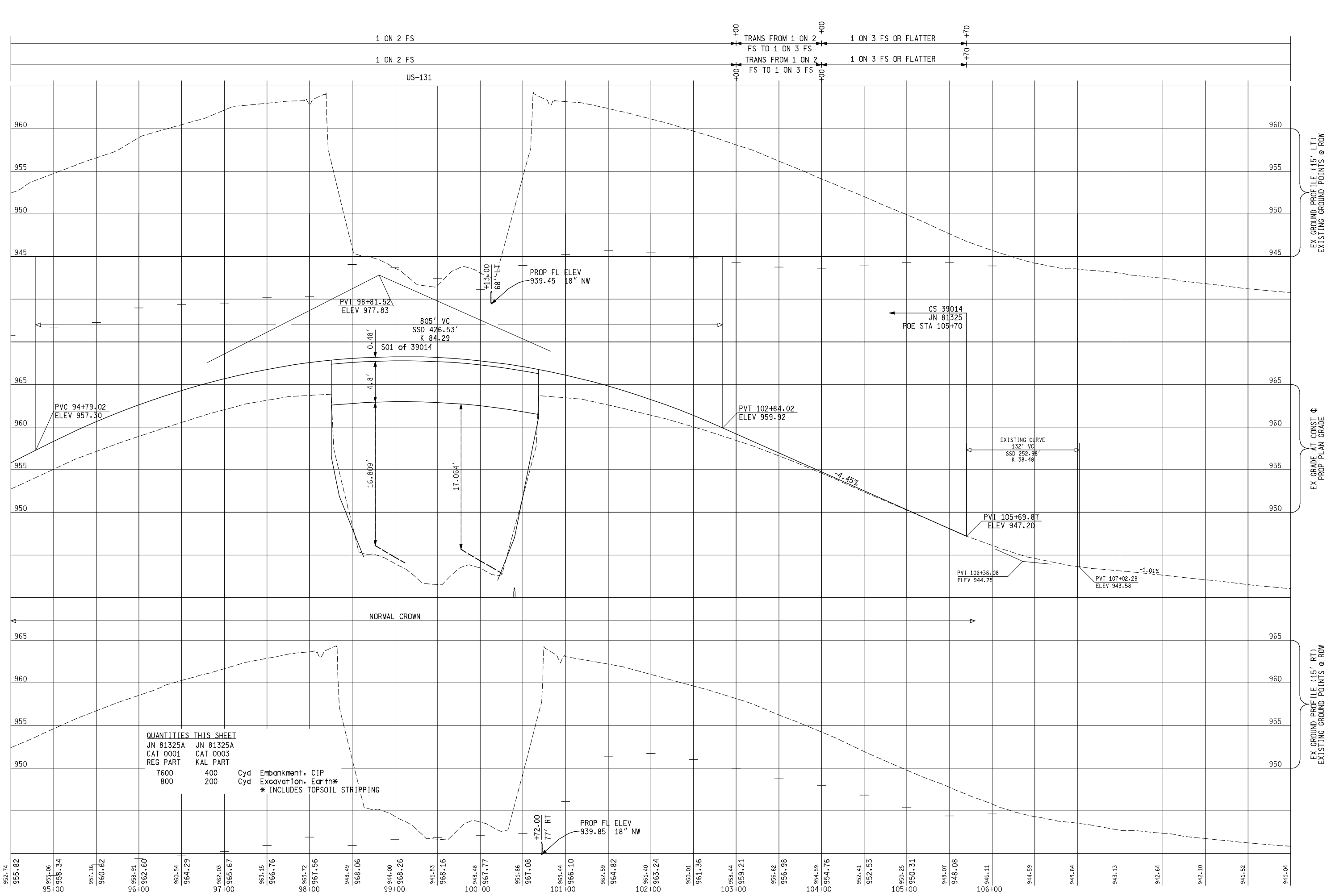
PARKVIEW AVE OVER US 131: STA 95+00 TO POE					
DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
8/8/2007	1"=50'	39014	81325A	GROTENHUIS	R.O.W CONST. 513 52

CONSTRUCTION SHEET

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8/8/2007

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FINAL R.O.W.		REVISION	
AUTH	DATE	NO.	

EX GROUND PROFILE (15' LT)
EXISTING GROUND POINTS @ ROW

EX GRADE AT CONST C
PROP PLAN GRADE

EX GROUND PROFILE (15' RT)
EXISTING GROUND POINTS @ ROW

PARKVIEW AVE OVER US 131

DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT
7/02/07	HORZ. 1" = 10' VERT. 1" = 40'	39014	81325A	GROTTENHUIS

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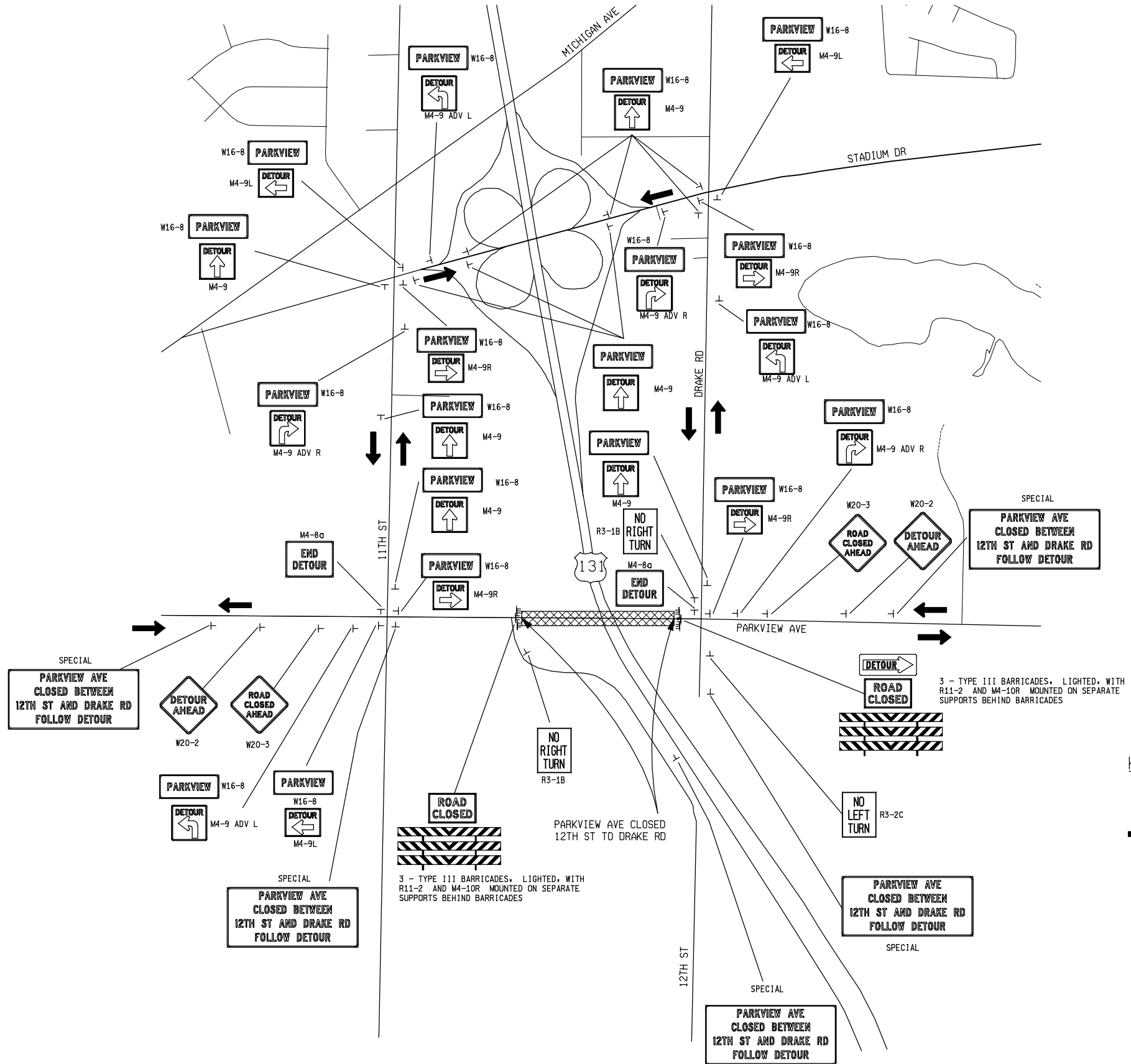
PARSONS

MDOT
Michigan Department of Transportation

SHEET NO.	R.O.W. CONST.
514	53

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AUTH	DATE	NO.	REVISION



KEY

- ⊥ TYPE III BARRICADE
- ⊥ SIGN
- ➔ TRAFFIC FLOW ARROW

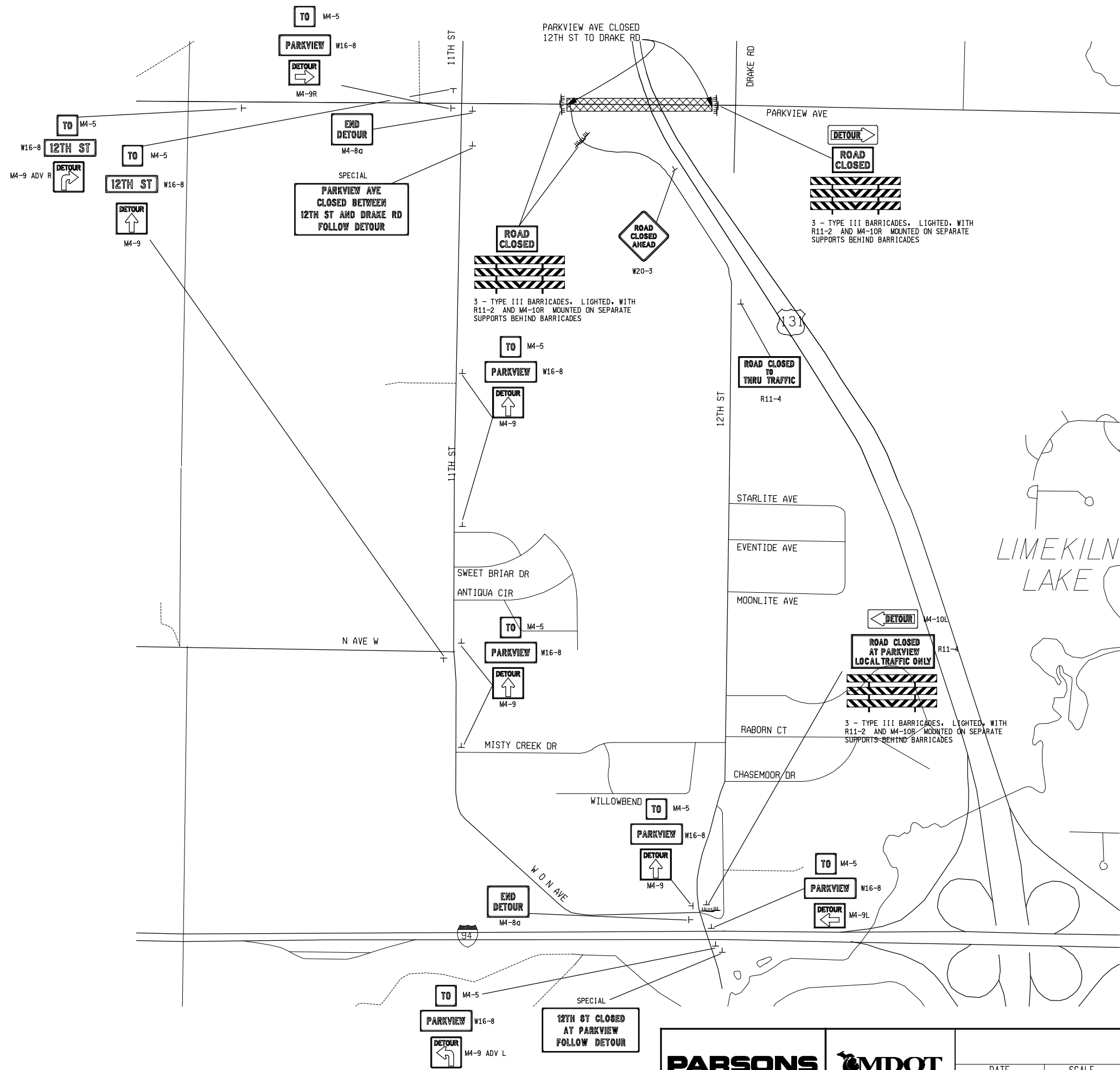
PARKVIEW AVE DETOUR:
 DETOUR EB PARKVIEW AVE NORTH ONTO 11TH ST, THEN EAST ON STADIUM DR, THEN SOUTH ON DRAKE RD TO PARKVIEW AVE
 DETOUR WB PARKVIEW AVE NORTH ONTO DRAKE RD, THEN WEST ON STADIUM DR, THEN SOUTH ON 11TH ST TO PARKVIEW AVE
 SIGN M4-9 A MAXIMUM OF 200' BEYOND INTERSECTION.

MAINTAINING TRAFFIC

		PARKVIEW AVE DETOUR					
		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
		8/2/2007	1"=50'	39014	81325A	GROTHENHUIS	R.O.W CONST. 54

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AUTH	DATE	NO.	REVISION



KEY

- ▬ TYPE III BARRICADE
- ⊥ SIGN
- ➔ TRAFFIC FLOW ARROW

NOTES:

NOTE: INSTITUTE THIS DETOUR PLAN WHEN CLOSING 12TH ST AT PARKVIEW AVE

SIGN M4-9 A MAXIMUM OF 200' BEYOND INTERSECTION.

MAINTAINING TRAFFIC

PARSONS	MDOT Michigan Department of Transportation	12TH ST DETOUR			
		DATE 8/2/2007	SCALE 1"=50'	CONT. SEC. 39014	JOB NO. 81325A
		DESIGN UNIT GROENHUIS	SHEET NO. R.O.W CONST. 55		

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			FINAL R.O.W.
AUTH	DATE	NO.	REVISION

TYPE B TEMPORARY SIGNING	MUTCD NO.	SIZE (IN X IN)	TEXT HT (IN)	REQ'D QUANT	AREA (SFT)
	W20-3	36 X 36	5	3	27
	W20-2	36 X 36	6	2	18
	R11-2	48 X 30	8	12	120
	SPECIAL	60 X 30	6	1	12.5
	M4-10L	48 X 18	6	1	6
	M4-10R	48 X 18	6	1	6
	M4-9	30 X 30	5	18	112.5
	M4-9L	30 X 24	5	4	20
	M4-9R	30 X 24	5	4	20
	M4-8a	24 X 18	4	4	12
	M4-9 ADV L	30 X 30	5	4	25
	M4-9 ADV R	30 X 30	5	4	25

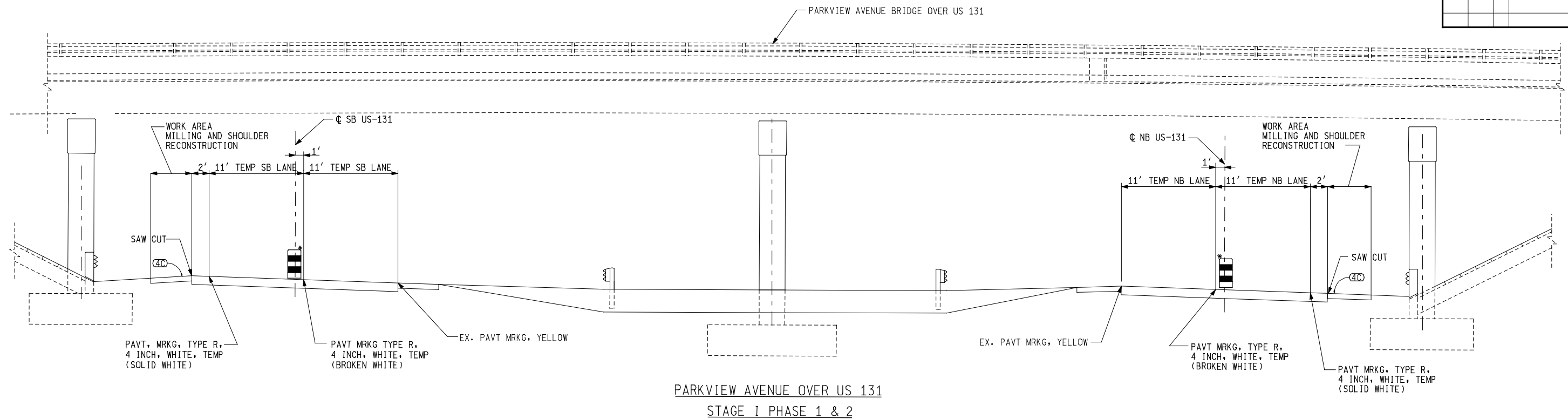
TYPE B TEMPORARY SIGNING	MUTCD NO.	SIZE (IN X IN)	TEXT HT (IN)	REQ'D QUANT	AREA (SFT)
	R3-1B	24 X 30	6	2	10
	R3-2C	24 X 30	6	1	5
	W16-8	26 X 8	6	32	46
	M4-5	12 X 24	6	7	14
	R11-4	60 X 30	6	1	13
	SPECIAL	60 X 30	6	1	13
	SPECIAL	48 X 72	6	6	144
	W16-8	24 X 8	6	3	4

MAINTAINING TRAFFIC

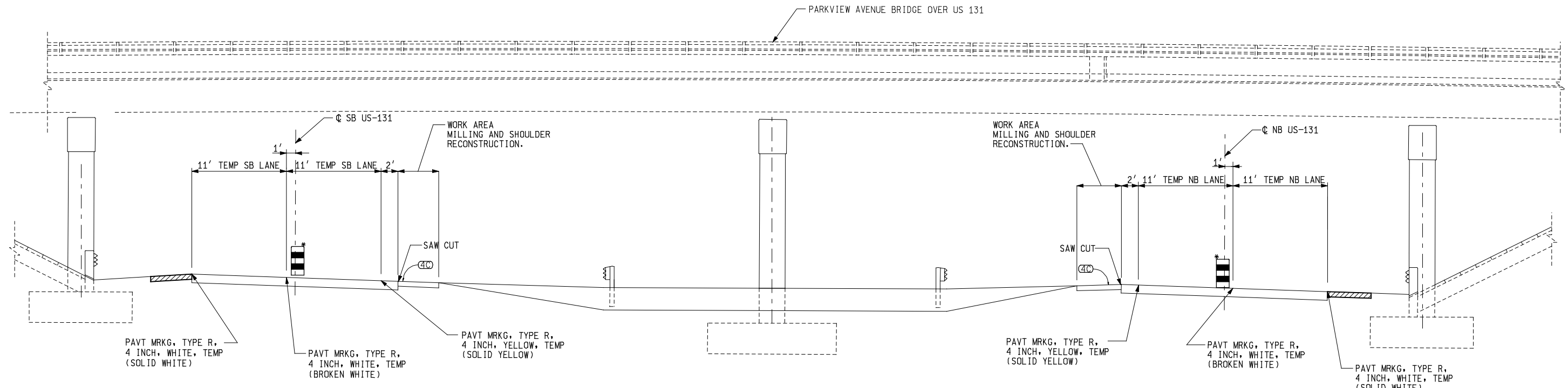
		DETOUR SIGN LEGEND			
		DATE 8/2/2007	SCALE NTS	CONT. SEC. 39014	JOB NO. 81325A

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AUTH	DATE	NO.	REVISION



PARKVIEW AVENUE OVER US 131
STAGE I PHASE 1 & 2
 STAGE I PHASE 1 = MILL EXISTING RIGHT SHOULDER
 STAGE I PHASE 2 = CONSTRUCTING RIGHT SHOULDER
 SB US-131 STA 546+69 TO 545+70
 NB US-131 STA 544+08 TO 548+84



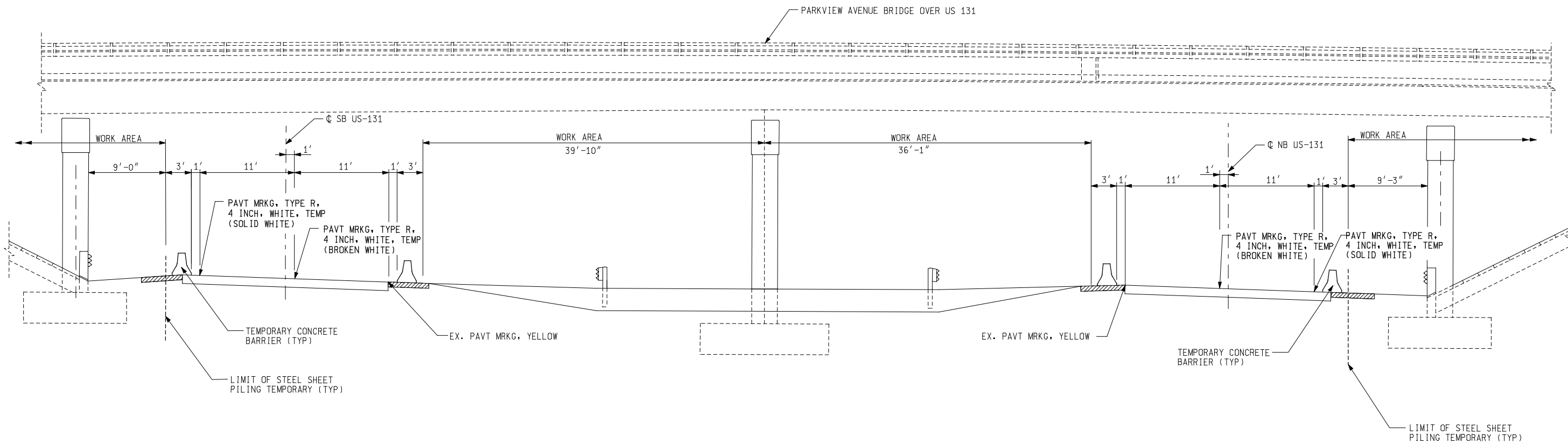
PARKVIEW AVENUE OVER US 131
STAGE II PHASE 1 & 2
 STAGE II PHASE 1 = MILL EXISTING LEFT SHOULDER
 STAGE II PHASE 2 = CONSTRUCT LEFT SHOULDER
 SB US-131 STA 544+69 TO 548+70
 NB US-131 STA 544+08 TO 548+84

NOTES:
 PROPOSED STRUCTURE SHOWN.
 FOR SHOULDER RECONSTRUCTION USE M0990q
 (TYPICAL TEMPORARY TRAFFIC CONTROL
 FOR A ONE-LANE CLOSURE ON A FREEWAY,
 USING A SINGLE STEP DOWN IN SPEED LIMIT WHERE
 WORKERS PRESENT).
 PLASTIC DRUMS, WITH HIGH INTENSITY SHEETING,
 LIGHTED @ 90' SPACING IN TANGENT,
 45' SPACING IN SHIFTS AND TAPERS.
 FOR HMA APPLICATION TABLE SEE SHEET 40.
 SAW CUT INCLUDED IN PAY ITEM "Edge Trimming"

		PARKVIEW AVE - TYPICAL MOT SECTION				
		DATE 8/2/2007	SCALE HORZ 1"=6' VERT 1"=1'	CONT. SEC. 39014	JOB NO. 81325A	DESIGN UNIT GROTENHUIS

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			FINAL R.O.W.
AUTH	DATE	NO.	REVISION



PARKVIEW AVENUE OVER US 131

STAGE III - PHASE 1 TO 7
BRIDGE REMOVAL AND CONSTRUCTION

NOTE:
PROPOSED STRUCTURE SHOWN.

		PARKVIEW AVE - TYPICAL MOT SECTION					
		DATE 8/2/2007	SCALE HORZ 1"=6' VERT 1"=1'	CONT. SEC. 39014	JOB NO. 81325A	DESIGN UNIT GROTENHUIS	SHEET NO. R.O.W 503 CONST. 58

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MAINTAINING TRAFFIC STAGING

STAGE I

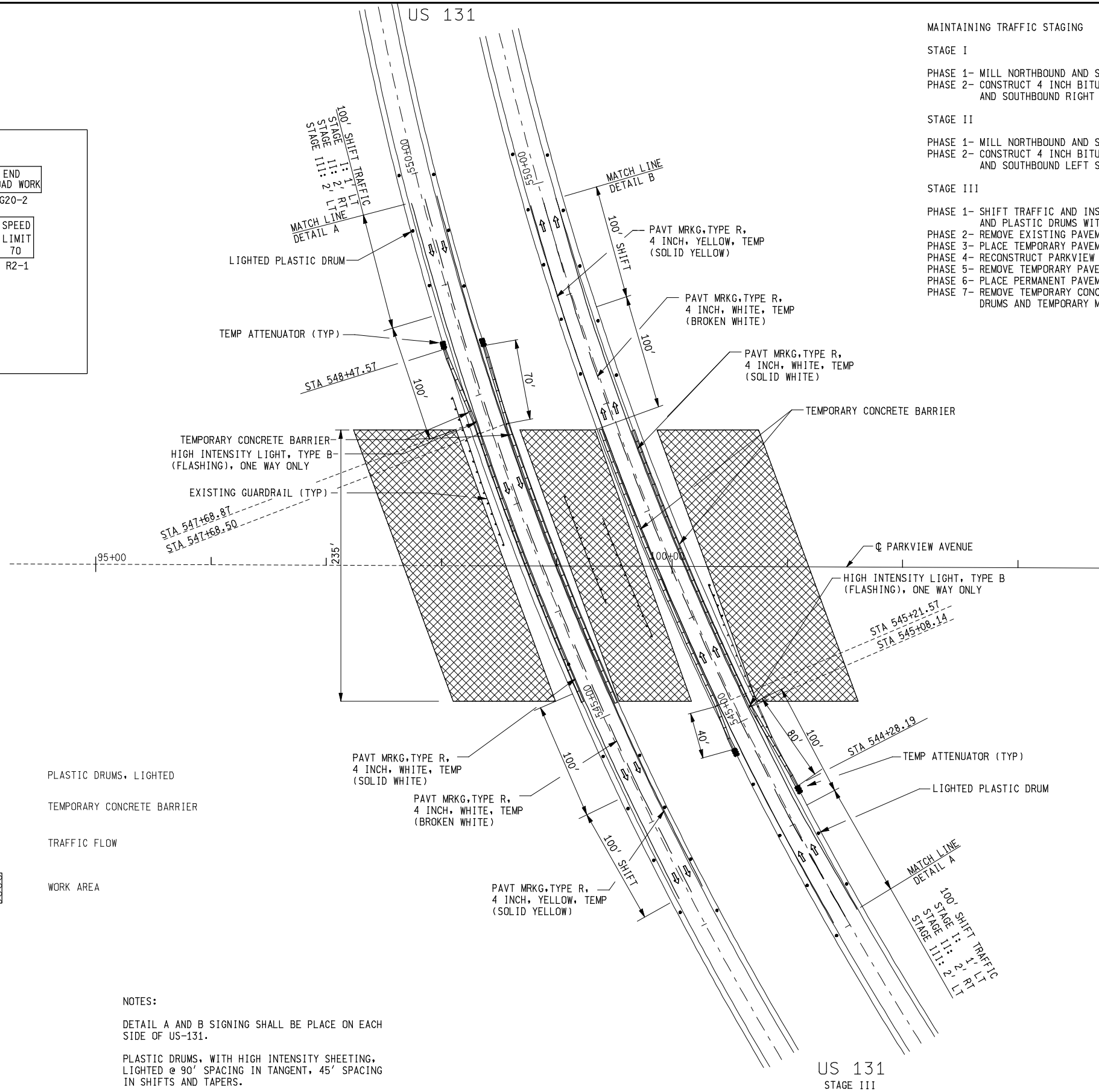
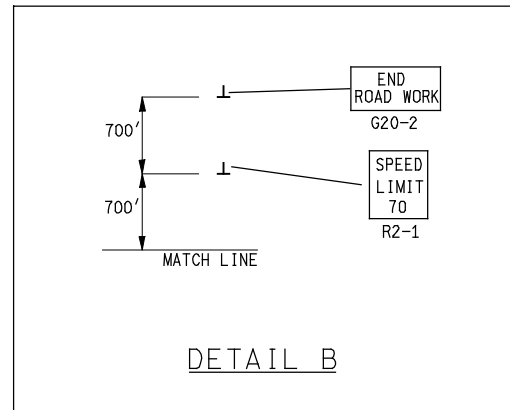
- PHASE 1- MILL NORTHBOUND AND SOUTHBOUND RIGHT SHOULDERS
- PHASE 2- CONSTRUCT 4 INCH BITUMINOUS SHOULDER ON NORTHBOUND AND SOUTHBOUND RIGHT SHOULDERS

STAGE II

- PHASE 1- MILL NORTHBOUND AND SOUTHBOUND LEFT SHOULDERS
- PHASE 2- CONSTRUCT 4 INCH BITUMINOUS SHOULDER ON NORTHBOUND AND SOUTHBOUND LEFT SHOULDERS

STAGE III

- PHASE 1- SHIFT TRAFFIC AND INSTALL TEMPORARY CONCRETE BARRIER AND PLASTIC DRUMS WITH HIGH INTENSITY SHEETING
- PHASE 2- REMOVE EXISTING PAVEMENT MARKINGS
- PHASE 3- PLACE TEMPORARY PAVEMENT MARKINGS
- PHASE 4- RECONSTRUCT PARKVIEW AVENUE BRIDGE OVER US-131.
- PHASE 5- REMOVE TEMPORARY PAVEMENT MARKINGS
- PHASE 6- PLACE PERMANENT PAVEMENT MARKINGS
- PHASE 7- REMOVE TEMPORARY CONCRETE BARRIER, TEMPORARY PLASTIC DRUMS AND TEMPORARY MAINTAINING TRAFFIC SIGNS.



LEGEND

- PLASTIC DRUMS, LIGHTED
- TEMPORARY CONCRETE BARRIER
- TRAFFIC FLOW
- WORK AREA

NOTES:

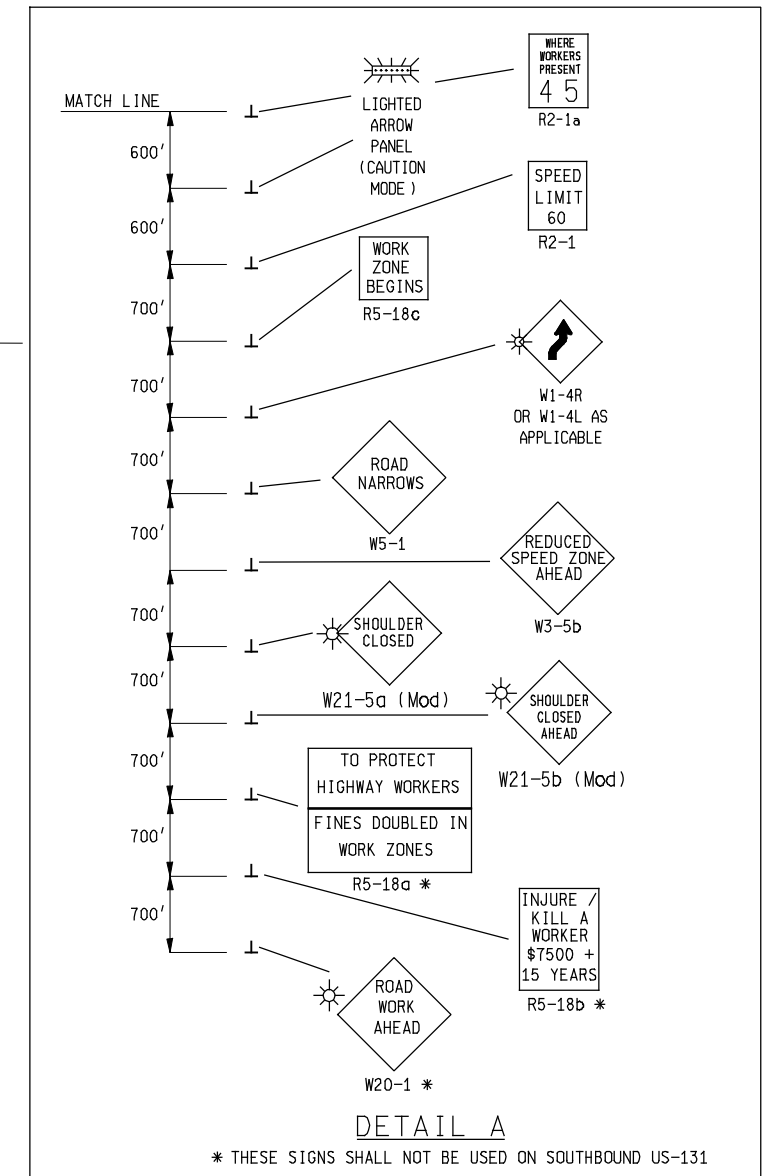
DETAIL A AND B SIGNING SHALL BE PLACE ON EACH SIDE OF US-131.

PLASTIC DRUMS, WITH HIGH INTENSITY SHEETING, LIGHTED @ 90' SPACING IN TANGENT, 45' SPACING IN SHIFTS AND TAPERS.

SIGN SEQUENCE TO BE USED FOR STAGE III. USE M0070a AND M0990a FOR STAGE I AND II. M0070a SHALL NOT BE USED FOR SOUTHBOUND US-131.

FOR MAINTENANCE OF TRAFFIC QUANTITIES SEE NOTE SHEET.

FOR SHOULDER QUANTITIES SEE NOTE SHEET.

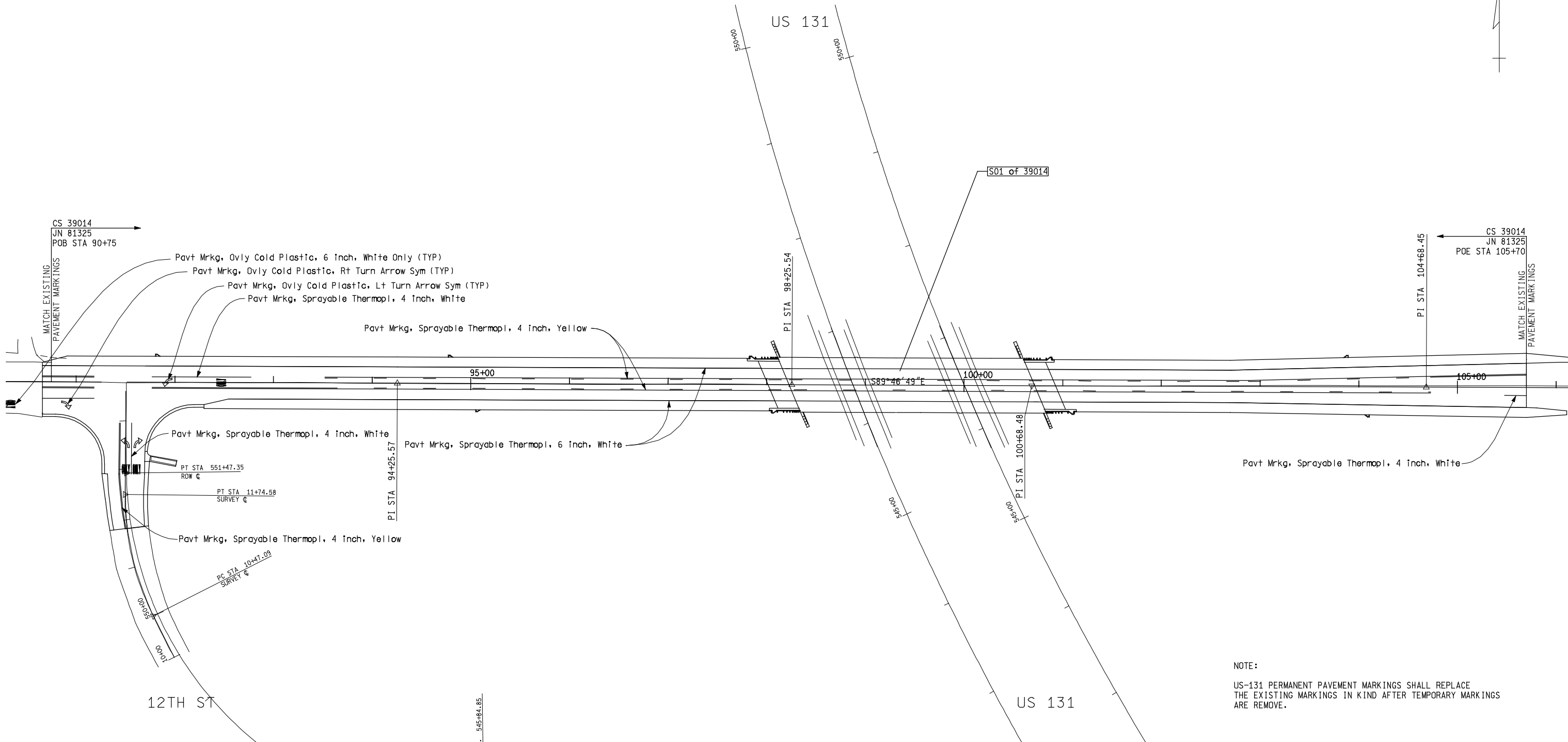


MAINTAINING TRAFFIC - US-131

PARKVIEW AVE OVER US 131

		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
		8/2/2007	1"=50'	39014	81325A	GROTENHUIS	R.O.W CONST. 59

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AUTH	DATE	REVISION



NOTE:
 US-131 PERMANENT PAVEMENT MARKINGS SHALL REPLACE THE EXISTING MARKINGS IN KIND AFTER TEMPORARY MARKINGS ARE REMOVE.

PARKVIEW PAVEMENT MARKING QUANTITIES THIS SHEET

JN 81325A	JN 81325A		
CAT 0001	CAT 0003		
REG PART	KAL PART		
2	0	Ea	Pavt Mrkg, Ovly Cold Plastic, Lt Turn Arrow Sym
4	0	Ea	Pavt Mrkg, Ovly Cold Plastic, Only
2	0	Ea	Pavt Mrkg, Ovly Cold Plastic, Rt Turn Arrow Sym
218	0	Ft	Pavt Mrkg, Sprayable Thermopl, 4 Inch, White
3500	0	Ft	Pavt Mrkg, Sprayable Thermopl, 4 Inch, Yellow
2820	0	Ft	Pavt Mrkg, Sprayable Thermopl, 6 Inch, White

US-131 PAVEMENT MARKING QUANTITIES THIS SHEET

JN 81325A	JN 81325A		
CAT 0001	CAT 0003		
REG PART	KAL PART		
2790	0	Ft	Pavt Mrkg, Epoxy, 4 Inch, White
2230	0	Ft	Pavt Mrkg, Epoxy, 4 Inch, Yellow

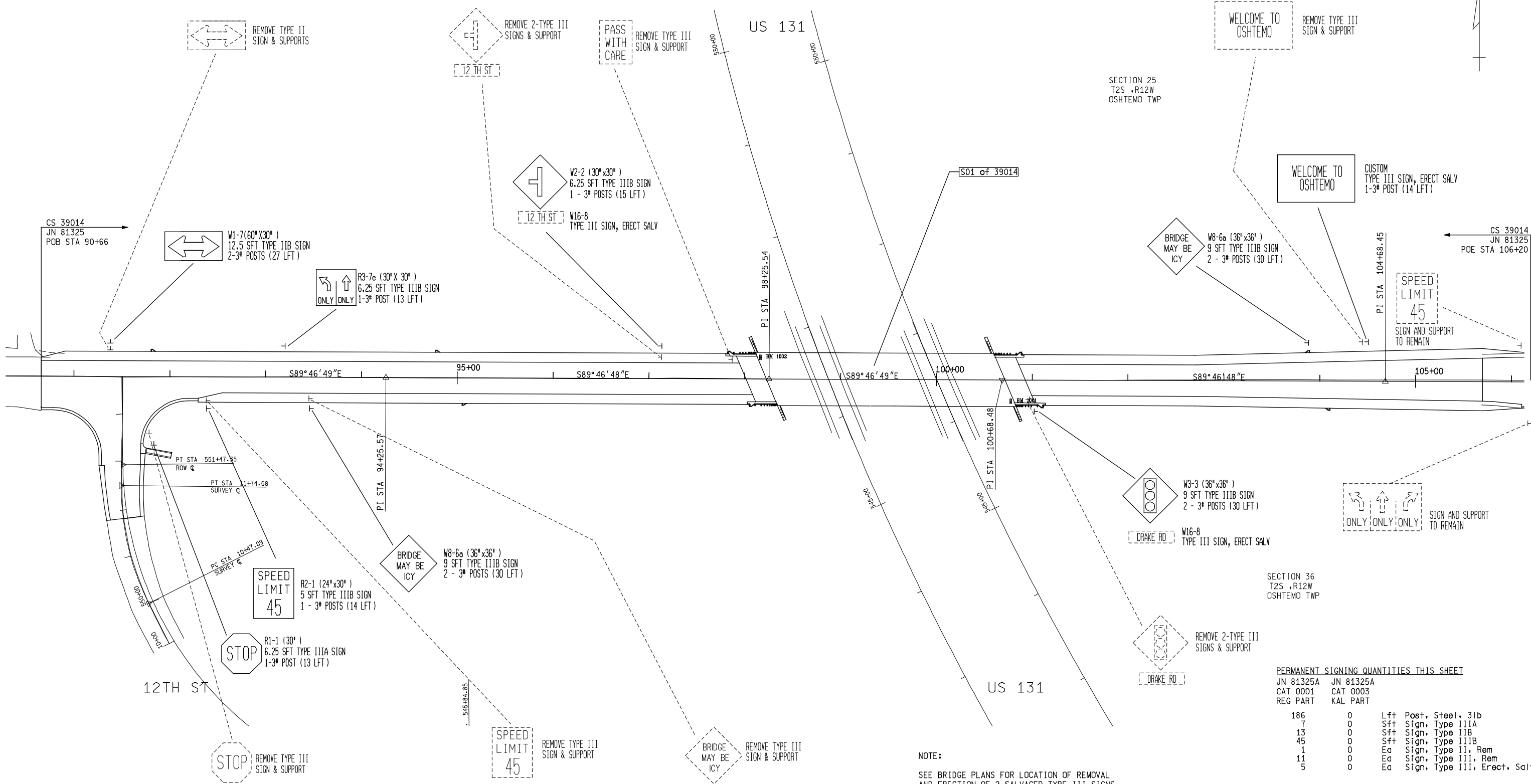
PERMANENT PAVEMENT MARKINGS

PARKVIEW AVE OVER US 131

		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
		8/2/2007	1"=50'	39014	81325A	GROTHENHUIS	60

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PERMANENT SIGNING QUANTITIES THIS SHEET

JN 81325A	JN 81325A				
CAT 0001	CAT 0003	REG PART	KAL PART		
186	0	Lft	Post.	Steel, 3lb	
7	0	Sft	Sign,	Type IIIA	
13	0	Sft	Sign,	Type IIIB	
45	0	Sft	Sign,	Type IIIIB	
1	0	Ea	Sign,	Type II, Rem	
11	0	Ea	Sign,	Type III, Rem	
5	0	Ea	Sign,	Type III, Erect, Salv	

NOTE:
SEE BRIDGE PLANS FOR LOCATION OF REMOVAL AND ERECTION OF 2 SALVAGED TYPE III SIGNS.

PERMANENT SIGNING SHEET

		PARKVIEW AVE OVER US 131					
		DATE	SCALE	CONT. SEC.	JOB NO.	DESIGN UNIT	SHEET NO.
		8/2/2007	1"=50'	39014	81325A	GROENHUIS	R.O.W CONST. 61

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