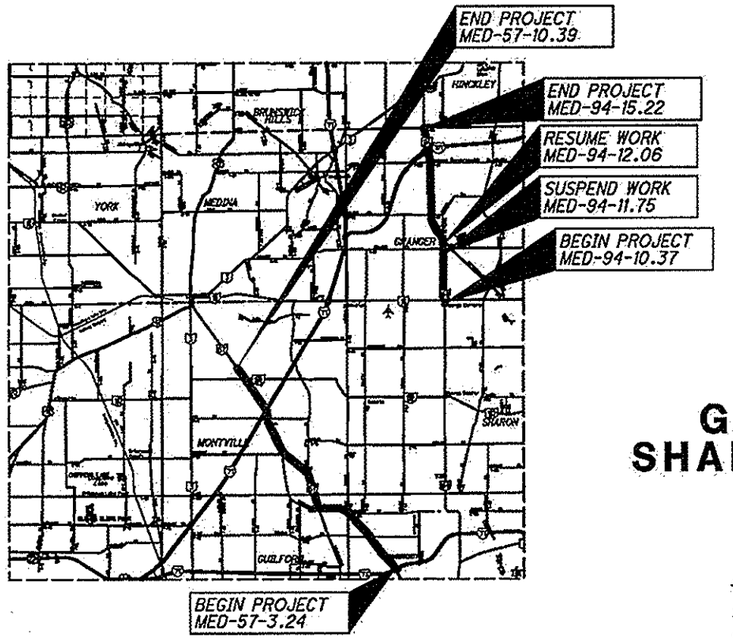


S.R. 57 LATITUDE: 41°2'00" N LONGITUDE: 81°45'42" W

S.R. 94 LATITUDE: 41°8'01" N LONGITUDE: 81°44'06" W

SCALE IN MILES

0 2 4 6 8

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

SEE SHEET 2

DESIGN EXCEPTIONS

NONE

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

MED-57-3.24
MED-94-10.37

CITY OF WADSWORTH

GUILFORD, GRANGER, MONTVILLE, SHARON, AND WADSWORTH TOWNSHIPS

MEDINA COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT IS 11.69 MILES IN LENGTH DIVIDED AMONGST TWO STATE ROUTES, 57 AND 94. IT WILL INCLUDE PAVEMENT REPAIRS, RESURFACING WITH ASPHALT CONCRETE, GUARDRAIL REPLACEMENT AND RECONSTRUCTION, PLACEMENT OF PAVEMENT MARKINGS, AND MISC. STRUCTURE MAINTENANCE WORK.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES

2013 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE 8-27-14 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 8-15-14 DIRECTOR, DEPARTMENT OF TRANSPORTATION

ROADWAY/STRUCTURE ENGINEERS SEAL:

STATE OF OHIO
CRAIG A. DEVORE
E-70370
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 8-27-2014

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	4/20/12	MT-95.30	7/18/14	DBR-3-11	7/15/11				
BP-4.1	7/19/13	MT-95.41	7/18/14	PCB-91	1/18/13				
		MT-95.50	7/19/13	TBR-1-11	1/18/13				
DM-1.1	1/18/13	MT-97.10	7/18/14	VPF-1-90	4/15/11				
DM-4.3	7/19/13	MT-97.12	7/18/14						
DM-4.4	7/20/12	MT-99.20	7/19/13	TC-41.20	10/18/13				
		MT-99.30	7/19/13	TC-42.20	10/18/13				
MGS-1.1	7/19/13	MT-99.50	7/19/13	TC-52.10	10/18/13				
MGS-2.1	7/19/13	MT-101.70	1/17/14	TC-52.20	7/18/14				
MGS-4.2	7/19/13	MT-101.90	7/18/14	TC-61.30	7/18/14				
		MT-105.10	7/19/13	TC-65.10	1/17/14				
RM-1.1	1/18/13			TC-65.11	7/18/14				
RM-4.2	4/18/14			TC-71.10	1/17/14				
				TC-82.10	10/18/13				

SUPPLEMENTAL SPECIFICATIONS

800	10/17/14
821	4/20/12
832	1/17/14
846	4/18/14
856	4/18/14

SPECIAL PROVISIONS

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

PLANS PREPARED BY:

ODOT DISTRICT THREE PLANNING & ENGINEERING DEPT.

FEDERAL PROJECT NO. E130598

PID NO. 93113

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT N/A

MED-57-3.24
MED-94-10.37

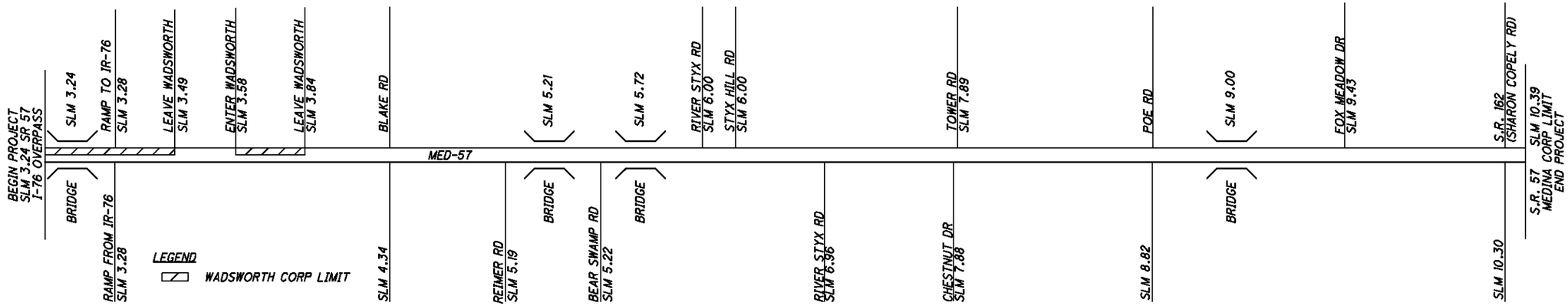
1 / 70

DESIGN FILE=I:\projects\93113\vc DAT
WORKSTATION=foster

MED - SR 57-03.24
140565 PID - 93113 Contract Proposal Available @ www.
Dist 3 11/26/2014 Contracts.dot.state.oh.us/home

STRAIGHT LINE DIAGRAM & DESIGN DESIGNATION

MED-57-3.24
MED-94-10.37



MED S.R. 57
DESIGN DESIGNATION

SLM	3.24-6.79
CURRENT ADT (2015)	8600
DESIGN YEAR ADT (2027)	9400
DESIGN HOURLY VOLUME (2027)	850
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED/LEGAL SPEED	50 MPH (3.24-3.83), (6.55-6.79) 55 MPH (3.83-5.58) 45 MPH (5.58-6.55)

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR
RURAL MINOR ARTERIAL

NHS PROJECT - NO

SLM	6.79-10.03
CURRENT ADT (2015)	8600
DESIGN YEAR ADT (2027)	9400
DESIGN HOURLY VOLUME (2027)	850
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED/LEGAL SPEED	55 MPH (6.79-8.50), (9.10-9.86) 45 MPH (8.50-9.10), (9.86-10.03)

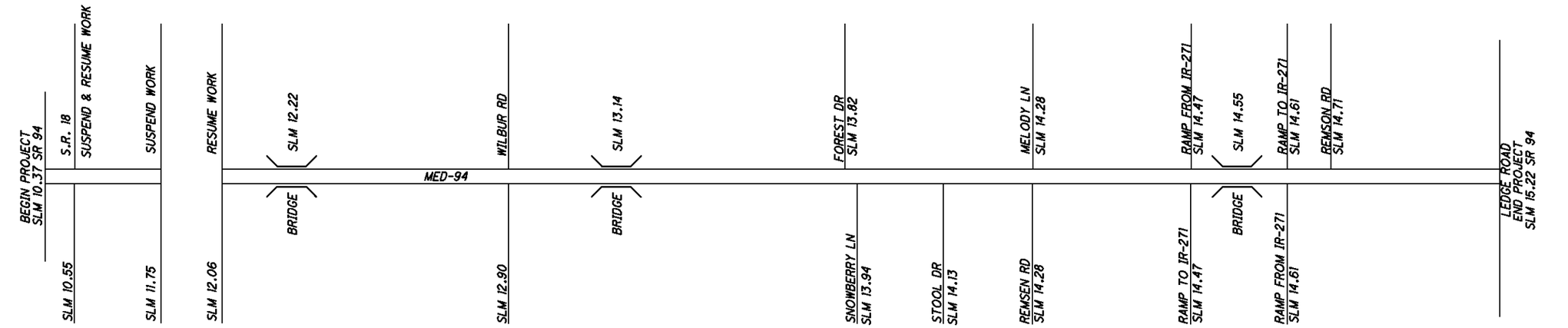
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR
RURAL MINOR ARTERIAL

NHS PROJECT - NO

SLM	10.03-10.39
CURRENT ADT (2015)	8400
DESIGN YEAR ADT (2027)	9400
DESIGN HOURLY VOLUME (2027)	850
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED/LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR
RURAL MINOR ARTERIAL

NHS PROJECT - NO



MED S.R. 94
DESIGN DESIGNATION

SLM	10.37-10.55
CURRENT ADT (2015)	6300
DESIGN YEAR ADT (2027)	7200
DESIGN HOURLY VOLUME (2027)	650
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED/LEGAL SPEED	55MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

NHS PROJECT - NO

SLM	10.55-11.91
CURRENT ADT (2015)	7200
DESIGN YEAR ADT (2027)	8600
DESIGN HOURLY VOLUME (2027)	770
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	7%
DESIGN SPEED/LEGAL SPEED	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

NHS PROJECT - NO

SLM	11.91-14.55
CURRENT ADT (2015)	7900
DESIGN YEAR ADT (2027)	9000
DESIGN HOURLY VOLUME (2027)	900
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED/LEGAL SPEED	55 MPH (11.91-12.11), (13.30-13.76) 45 MPH (12.11-13.30), (13.76-14.55)

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

NHS PROJECT - NO

SLM	14.55-14.71
CURRENT ADT (2015)	13000
DESIGN YEAR ADT (2027)	17000
DESIGN HOURLY VOLUME (2027)	1500
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	7%
DESIGN SPEED/LEGAL SPEED	45 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

NHS PROJECT - NO

SLM	14.71-15.22
CURRENT ADT (2015)	12000
DESIGN YEAR ADT (2027)	15000
DESIGN HOURLY VOLUME (2027)	1500
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	7%
DESIGN SPEED/LEGAL SPEED	45 MPH (14.71-14.81) 55 MPH (14.81-15.22)

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

NHS PROJECT - NO

CALCULATED CJC
CHECKED CAD

DESIGN FILE: I:\projects\93113\roadway\sheets\93113GB001.dgn
WORKSTATION: nfoster DATE: 9/16/2014 MODELNAME: Design

GENERAL

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ARMSTRONG CABLE
1141 LAFAYETTE RD.
MEDINA, OHIO 44256
330-722-3141 x224

GATHERCO INC.
300 TRACY BRIDGE RD.
ORRVILLE, OHIO 44667
330-682-7726

MEDINA CITY SANITARY ENGS
(WASTE AND SEWER)
791 WEST SMITH ROAD
MEDINA, OHIO 44256
330-764-8331

AT&T
13630 LORAIN AVENUE, ROOM 350
CLEVELAND, OHIO 44111-3436
216-476-6141

ONE COMMUNITY
800 W. SAINT CLAIR 2ND FLOOR
CLEVELAND, OHIO 44113
216-633-5591

ENERVEST RANGE RESOURCES
125 STATE ROUTE 43, SUITE 100
HARTVILLE, OHIO 44632
330-587-1208

SUNOCO PIPELINE LP
525 FRITZTOWN ROAD
SINKING SPRING, PENNSYLVANIA 19608
610-670-3279

ODOT DISTRICT 3 TRAFFIC
906 CLARK AVENUE
ASHLAND, OH 44805
419-281-0513 EXT. 207-2822

DOMINION EAST OHIO
320 SPRINGSIDE DR., SUITE 320
AKRON, OHIO 44333
PHONE: 330-664-2409

FRONTIER COMMUNICATION
6223 NORWALK ROAD
MEDINA, OHIO 44256
330-722-9586

OHIO EDISON
1910 WEST MARKET STREET, BLDG #1
AKRON, OHIO 44313
330-384-4828

TIME WARNER CABLE
1575 LEXINGTON AVENUE
MANSFIELD, OHIO 44901
419-756-6091 x. 419-555-5136

TIME WARNER CABLE
8150 DOW CIRCLE
STRONGSVILLE, OHIO 44136
216-575-8016 x. 5034

CITY OF WADSWORTH
(ELECTRIC, SANITARY,
STORM SEWER, TRAFFIC,
CABLE, WATER, AND WATER SEWER)
120 MAPLE STREET
WADSWORTH, OHIO 44281
330-335-2737

COLUMBIA GAS
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OHIO 44130
440-891-2428

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY SEPARATE CONTRACTS. MED-94-14.61 IS A SIGNAL SAFETY JOB WITH SIGNAL WORK TAKING PLACE ON S.R. 94 AT I-271 AT THE SB EXIT/ ENTRANCE RAMP. BOTH PROJECTS ARE SCHEDULED TO BEGIN WORK IN THE 2015 CONSTRUCTION SEASON. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

PROGRESSION OF WORK

GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4305 OR EMAIL AT D03.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4318 OR EMAIL AT LOUIS.TUMBLIN@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

ROADWAY

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05 OR AS DIRECTED BY THE ENGINEER. THE GRADED SHOULDER BEYOND THE 10 INCH WIDE AREA FOR THE SAFETY EDGE SHALL BE GRADED AT A 10:1 SLOPE, OR AS DIRECTED BY THE ENGINEER. THE INTENT IS TO PROVIDE AN UNOBSTRUCTED AND POSITIVE FLOW OF STORM WATER FROM THE PAVEMENT TO THE DITCH.

A QUANTITY OF 23.04 MILES HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN.

SAFETY EDGE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS, AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVENT-EDGER, THE TROXLER SAFETSLOPE, OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
www.transtechsys.com

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
www.advantageedgepaving.com

CARLSON SAFETY EDGE END GATE
18450 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONICS LABORATORIES INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 MM) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE

THE MONUMENT BOX TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING ADJUSTABLE FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING MONUMENT BOX TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT ADJUSTABLE FRAMES.

APPROXIMATE LOCATION OF KNOWN MONUMENTS

(01/STR/PV):
MED-57:
SLM: 5.14, 5.20, 5.30, 5.68, 5.76, 6.53, 6.45, 6.57, 6.72
9 MONUMENTS

(02/S<2/PV):
MED-57:
SLM: 9.88, 10.25
2 MONUMENTS

(01/STR/PV):
MED-94:
SLM: 10.39, 10.66, 10.70, 11.91, 12.06, 14.39, 14.70, 14.92, 15.13
9 MONUMENTS

DRAINAGE

ITEM 611 - CASTINGS ADJUSTED TO GRADE

THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

MANHOLES ADJUSTED TO GRADE:
(01/STR/PV):
MED-94 4 EACH

INLET ADJUSTED TO GRADE:
(01/STR/PV):
MED-94 3 EACH

(02/S<2/PV):
MED-57 1 EACH

(03/S<2/PV):
MED-57 1 EACH

APPROXIMATE LOCATIONS OF KNOWN CASTINGS

MED-57:3.24-10.39

INLETS
3.27
3.27

MED-94:10.37-15.22

MANHOLES	INLETS	WATER VALVE
10.54	10.56	10.56
10.56	10.60	
10.65	10.60	
10.59		

CALCULATED CJC
CHECKED CAD

GENERAL NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GN001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/16/2014

PAVEMENT

PAVEMENT CORING INFORMATION

CO.	ROUTE	SLM	ASPHALT DEPTH (IN.)	WHEEL TRACK / SHOULDER	DIRECTION	YEAR CORED
MED	57	4.95	8.50	SHOULDER	NB	2013
MED	57	4.95	8.50	OUTSIDE	NB	2013
MED	57	4.95	10.00	MIDDLE	NB	2013
MED	57	5.55	7.50	SHOULDER	NB	2013
MED	57	5.55	7.00	SHOULDER	NB	2013
MED	57	5.55	6.00	MIDDLE	NB	2013
MED	57	6.68	5.00	OUTSIDE	NB	2013
MED	57	6.68	12.00	MIDDLE	NB	2013
MED	57	6.68	8.00	INSIDE	NB	2013
MED	57	8.16	10.50	SHOULDER	NB	2013
MED	57	8.16	11.50	OUTSIDE	NB	2013
MED	57	8.16	8.00	INSIDE	NB	2013
MED	57	9.90	3.00	SHOULDER	NB	2013
MED	57	9.90	5.00	SHOULDER	NB	2013
MED	57	9.90	13.00	OUTSIDE	NB	2013

CO.	ROUTE	SLM	ASPHALT DEPTH (IN.)	WHEEL TRACK / SHOULDER	DIRECTION	YEAR CORED
MED	94	11.08	6.00	INSIDE	NB	2013
MED	94	11.08	8.00	MIDDLE	NB	2013
MED	94	11.08	7.00	OUTSIDE	NB	2013
MED	94	12.60	7.00	INSIDE	NB	2013
MED	94	12.60	7.00	MIDDLE	NB	2013
MED	94	12.60	3.00	SHOULDER	NB	2013
MED	94	13.48	4.50	INSIDE	NB	2013
MED	94	13.48	5.00	OUTSIDE	NB	2013
MED	94	13.48	9.00	SHOULDER	NB	2013
MED	94	15.09	10.00	INSIDE	NB	2013
MED	94	15.09	10.00	OUTSIDE	NB	2013
MED	94	15.09	11.50	SHOULDER	NB	2013

INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

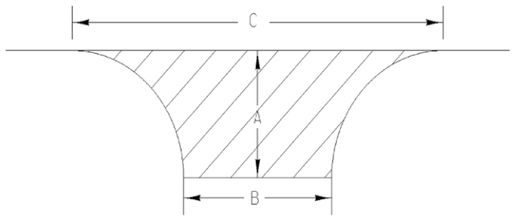
URBAN-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON AN AVERAGE WIDTH OF 4 FT. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ANY GRADING NEEDED TO PAVE THE APRON SHALL BE INCLUDED IN THE RELATED ASPHALT ITEM FOR PAYMENT. ITEM 617 COMPACTED AGGREGATE, AS PER PLAN SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY OF ITEM 617 HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN AS AN EXTRA AREA ON THE PAVEMENT & SHOULDER DATA SHEET.

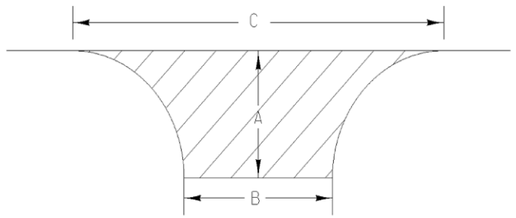
ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

S.R. 57 INTERSECTION AREA CALCULATIONS



Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
RAMP FROM I-76 (RT)	20	48	76	127
RAMP TO I-76 (LT)	15	44	74	90
BLAKE RD. (RT)	15	48	74	94
BLAKE RD. (LT)	15	28	52	60
REIMER RD. (RT)	20	35	66	101
BEAR SWAMP RD. (RT)	24	20	32	64
BEAR SWAMP RD. (RT)	15	18	27	35
RIVER STX RD. (LT)	11	28	32	36
STYX HILL RD. (LT)	10	26	34	32
RIVER STX RD. (RT)	60	22	84	284
CHESTNUT DR. (RT)	25	30	90	139
TOWER RD. (LT)	22	68	74	171
POE RD. (RT)	15	40	77	87
POE RD. (LT)	15	40	75	86
FOX MEADOW DR. (LT)	15	71	125	148
Total Intersection Areas				**1554**

S.R. 94 INTERSECTION AREA CALCULATIONS



Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
HIGHLAND HS DRIVE (LT)	6	87	100	61
HIGHLAND HS DRIVE (LT)	6	79	100	57
WILBUR RD. (RT)	26	24	64	108
WILBUR RD. (LT)	25	32	68	122
FOREST DR. (LT)	22	24	60	88
SNOWBERRY LN. (RT)	25	25	72	113
SABA LN. (RT)	22	28	85	115
MELODY LN. (LT)	17	21	44	54
REMSEN RD. (RT)	28	24	55	107
RAMP TO I-271 (RT)	15	49	76	97
RAMP FROM I-271 (LT)	15	45	72	90
RAMP FROM I-271 (RT)	15	42	74	88
RAMP TO I-271 (LT)	15	54	86	108
REMSEN RD. (LT)	15	52	88	107
Total Intersection Areas				**1315**

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR
ITEM 253 - PAVEMENT REPAIR

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK. THE PAVEMENT CORING INFORMATION IS SHOWN ON THIS SHEET.

PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE INTERMEDIATE AND/OR SURFACE COURSE. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH A MAXIMUM DEPTH OF 12", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 4" AND AN AVERAGE WIDTH OF 3 FT FOR ESTIMATING PURPOSES.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301, ITEM 448 TYPE 2, OR ITEM 442 19MM MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE, PG64-22 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 OR ITEM 442 19MM CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 1.5" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301, ITEM 448 TYPE 2, OR ITEM 442 19MM MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 OR ITEM 442 19MM MATERIAL SHALL BE PG64-22 FOR MEDIUM MIX DESIGN PAVEMENTS AND PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR IS TO BE A MAXIMUM OF 4" DEEP AND ITEM 253 PAVEMENT REPAIR IS FOR DEPTHS GREATER THAN 4". PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR OR ITEM 253 - PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

SR 57 & 94 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR 575 CU. YD.
(MAJORITY 90%± ARE LONGITUDINAL)

S.R. 57 - 01/STR/PV:
3.79 - 3.84 (R) 1 CU. YD. 3.84 - 9.00 220 CU. YD.

S.R. 57 - 02/S<2/PV:
3.24-3.49 (R) 5 CU. YD. 3.58 - 3.84 (R) 4 CU. YD.
3.49 - 3.58 4 CU. YD. 9.00 - 10.39 56 CU. YD.

S.R.57 - 04/S<2/PV/WADS:
3.24-3.49 (L) 5 CU. YD. 3.58-3.84 (L) 5 CU. YD.

S.R. 94 - 01/STR/PV:
10.37-15.22 275 CU. YD.

SR 57 & 94 ITEM 253 - PAVEMENT REPAIR 50 CU. YD.

S.R. 57 - 01/STR/PV:
3.79 - 3.84 (R) 0.5 CU. YD. 3.84 - 9.00 17 CU. YD.

S.R. 57 - 02/S<2/PV:
3.24-3.49 (R) 0.5 CU. YD. 3.58 - 3.84 (R) 0.5 CU. YD.
3.49 - 3.58 0.5 CU. YD. 9.00 - 10.39 5 CU. YD.

S.R.57 - 04/S<2/PV/WADS:
3.24-3.49 (L) 0.5 CU. YD. 3.58-3.84 (L) 0.5 CU. YD.

S.R. 94 - 01/STR/PV:
10.37-15.22 25 CU. YD.

CALCULATED CJC CHECKED CAD

GENERAL NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GN001.dgn MODEL NAME: Design
WORKSTATION: nfoster DATE: 9/16/2014

PAVEMENT

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (NON-CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH AT THE CENTER OF PAVEMENT AT NON-CURBED AREAS. THE PAVEMENT SLOPE SHALL BE 0.010 MINIMUM AND 0.016 PREFERRED, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO ALL CATCH BASINS AND INLETS.

ON THE STRUCTURES REQUIRING PAVEMENT PLANING OVER THE STRUCTURE, THE CONTRACTOR SHALL PLANE DECK FULL WIDTH FROM EDGE TO EDGE OF DECK.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FOURTEEN (14) CALENDAR DAYS. FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE of $1000 PER DAY.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE.

ITEM 254 - PATCHING PLANED SURFACE

AN ESTIMATED QUANTITY OF ITEM 254 - PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF THE PATCHING DEPTH IS 0 TO 3 IN.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.25", 1.50")

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ON THE STRUCTURES REQUIRING THE PLACEMENT OF ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN OVER THE STRUCTURE, THE CONTRACTOR SHALL PAVE DECK FULL WIDTH FROM EDGE TO EDGE OF DECK.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN (0.75")

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 30 PERCENT.
APPLY 703.05 FOR COARSE AND FINE AGGREGATE EXCEPT GRADATION FOR FINE AGGREGATE DOES NOT APPLY.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

PROFILE CORRECTION AT STRUCTURE MED-94-1314

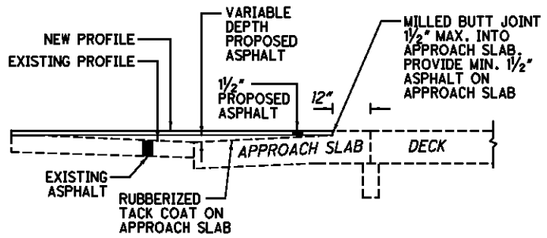
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE APPROACH SLAB (12" FROM BRIDGE DECK) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP. SEE DETAIL BELOW.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
100' WHERE THE POSTED SPEED IS 50 MPH OR GREATER
50' WHERE THE POSTED SPEED IS LESS THAN 50 MPH

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE A SMOOTH TRANSTION.

SPEED	TAPER RATE
55	250:1

THE ABOVE SURVEY WORK TO CORRECT THE PROFILE OF THE ROAD SHALL INCLUDE ALL LABOR AND EQUIPMENT NEEDED TO PERFORM THE WORK AND SHALL BE PAID FOR UNDER ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING.



WATER WORK

ITEM 638 - VALVE BOX ADJUSTED TO GRADE

THE CASTINGS TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING ADJUSTABLE FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING VALVE BOX TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT ADJUSTABLE FRAMES.

APPROXIMATE LOCATION OF KNOWN VALVE BOXES (SEE SHEET 3)

VALVE BOXES ADJUSTED TO GRADE: (01/STR/PV) 1 EACH

MAINTENANCE OF TRAFFIC

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

CONSTRUCTION "BUMP" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

446 DENSITY ACCEPTANCE WITH FLAGGER CLOSING OF A 2-LANE HIGHWAY FOR PAVING OPERATIONS

THIS PLAN NOTE APPLIES ONLY TO A FLAGGER CLOSURE OF ONE LANE OF A 2-LANE HIGHWAY DURING PAVING OPERATIONS WHEN USING STANDARD CONSTRUCTION DRAWING MT-97.11 OR MT-97.12, AND ALLOWS A PAVING OPERATION TO PROCEED CONCURRENTLY WITH THE MARKING AND CUTTING OF CORES REQUIRED FOR 446 DENSITY ACCEPTANCE.

IN ALL CASES THE CONTRACTOR SHOULD LENGTHEN THEIR LANE CLOSURES TO THE MAXIMUM PERMISSIBLE LENGTH DETAILED IN THE ABOVE REFERENCED STANDARD CONSTRUCTION DRAWINGS TO ALLOW THE ENGINEER ADEQUATE TIME TO MARK THE REQUIRED CORE LOCATIONS AND FOR CORE CUTTING OPERATIONS.

THE CONTRACTOR WILL PROVIDE TO THE ENGINEER THE PLANNED QUANTITY THAT WILL BE PLACED FOR THE DAY'S PRODUCTION. EACH DAY'S PRODUCTION WILL BE CONSIDERED ONE LOT AND INCLUDES SHOULDERS. TEN CORES WILL BE OBTAINED BY THE CONTRACTOR FOR EACH LOT AT RANDOM LOCATIONS DETERMINED BY THE ENGINEER. THE ENGINEER WILL DIVIDE A LOT INTO FIVE EQUAL SUBLOTS AND CALCULATE TWO RANDOM CORE LOCATIONS IN EACH SUBLOT AS DESCRIBED IN C&MS 446.05.

THE ENGINEER WILL MARK THE CORE LOCATIONS AFTER THE PAVING OPERATION (INCLUDING THE FINISH ROLLER) HAS COMPLETELY PASSED THE RANDOMLY SELECTED CORE LOCATION. THE CONTRACTOR SHOULD DETERMINE WHEN IT IS APPROPIATE TO START THE CORE DRILL OPERATION AND BEGIN CUTTING CORES WHEN THE NEWLY PLACED PAVEMENT SURFACE TEMPERATURE IS LESS THAN 140°F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LANE CLOSURE DURING ALL PAVING, CORE MARKING, AND CORING OPERATIONS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWING USED FOR THE PAVING OPERATION.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1.5 INCHES. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS. BEFORE RESURFACING OF THE PAVEMENT, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

67 CU. YD.	(01/STR/PV)
11 CU. YD.	(02/S<2/PV)
2 CU. YD.	(03/S<2/PV/WADS)

ITEM 614 - WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

SR 57
01/STR/PV:

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE	= 15 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 7 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 7 EACH
	TOTAL = 29 EACH

02/S<2/PV:

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE	= 8 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 2 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 1 EACH
	TOTAL = 11 EACH

03/S<2/PV:

WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 2 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 1 EACH
	TOTAL = 3 EACH

SR 94
01/STR/PV:

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE	= 25 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 10 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 8 EACH
	TOTAL = 43 EACH

CALCULATED CJC CHECKED CAD

GENERAL NOTES

MED-57-3.24
MED-94-10.37

5
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GN001.dgn MODEL NAME: Design
WORKSTATION: nfoster DATE: 9/17/2014

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (SIGNAL WORK)

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEO'S SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL
3149 FRANTZ ROAD
MEDINA, OH 44212
(330) 725-4921

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS

50 HOURS (01/STR/PV), 25 HOURS (02/S<2/PV), 25 HOURS (04/S<2/PV/WADS)

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

CALCULATED CJC
CHECKED CAD

GENERAL NOTES

MED-57-3.24
MED-94-10.37

6
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GN001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/17/2014

ITEM SPECIAL. MAILBOX SUPPORT SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4½ IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE (01/STR/PV):

S.R. 57	8 EACH
S.R. 94	3 EACH

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE (01/STR/PV):

S.R. 57	3 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED BASED ON THE CORRESPONDING MAIN LINE PAVEMENT TREATMENT. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 COMPACTED AGGREGATE HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

ITEM 209 - GRADING MAILBOX APPROACHES:

S.R. 57 (01/STR/PV):	4 EACH
S.R. 57 (02/SR2/PV):	3 EACH
S.R. 94 (01/STR/PV):	12 EACH

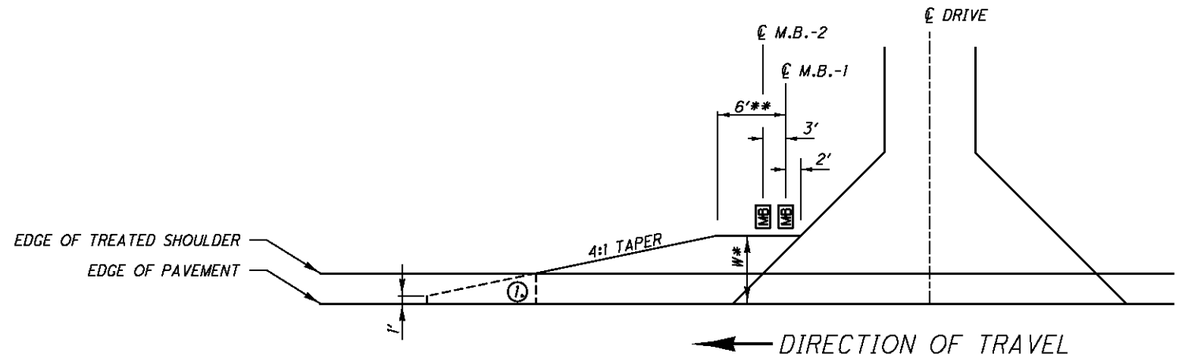
ITEM 617 - COMPACTED AGGREGATE

S.R. 57 (01/STR/PV):	8 CU YD
S.R. 57 (02/SR2/PV):	6 CU YD
S.R. 94 (01/STR/PV):	24 CU YD

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

ADDRESSES AND/OR LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED:

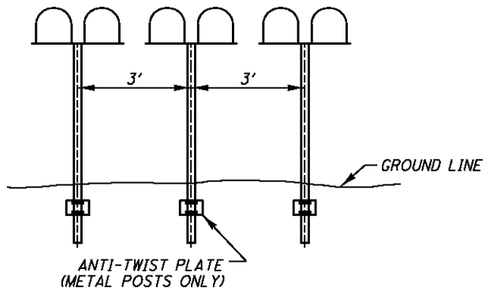
MED-57:	MED-94:
7095	2772
7191	4499
7603	4783
7924/7926	
7939	
7944/7947	
7980	
7999	
8002	
8243	
8572/8557	



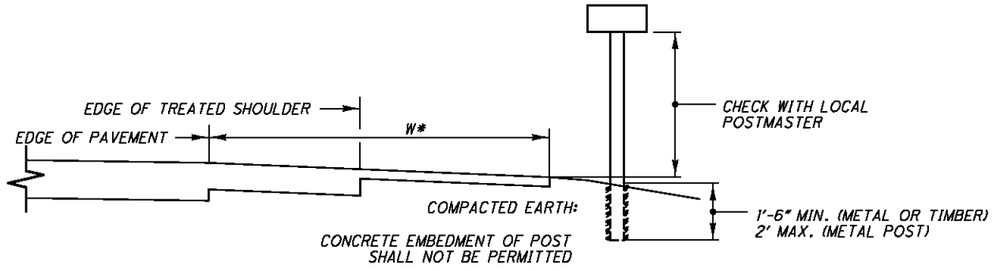
(1) END MAILBOX TURNOUT AT EDGE OF ASPHALT CONCRETE SHOULDER OR 1' FROM EDGE OF PAVEMENT IF TREATED SHOULDER IS AGGREGATE.

W* NOTES
1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT MAXIMUM OR TO FACE OF EXISTING STANDARD MAILBOX IF IT IS LESS THAN 6 FT.
3) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL AND MAILBOX SHALL BE INSTALLED BEHIND THE GUARDRAIL.
4) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MAXIMUM.

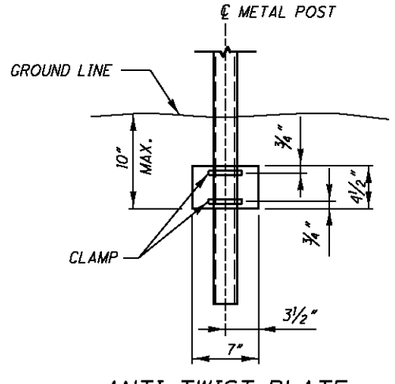
** NOTE
1) 6 FT FOR ONE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX SUPPORT.



GROUP MAILBOX INSTALLATION



CROSS SECTION / ELEVATION VIEW



ANTI-TWIST PLATE

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1

CALCULATED CJC CHECKED CAD

MAILBOX FACILITIES

MED-57-3.24
MED-94-10.37

7
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GM001.dgn MODEL NAME: Sheet
WORKSTATION nfoster DATE: 9/16/2014

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	6	7	11	12	15	01/STR/ PV	02/S<2/ PV	03/S<2/PV /WADS	04/S<2/PV /WADS	05/STR/ BR	06/IMS/ BR						
																		ROADWAY	
							562.5	562.5						202	38000	562.5	FT	GUARDRAIL REMOVED	
							1312.5	837.5	475					202	38200	1312.5	FT	GUARDRAIL REMOVED FOR REUSE	
							18.75	18.75						202	38201	18.75	FT	GUARDRAIL REMOVED FOR REUSE, AS PER PLAN	14
							6	6						202	42000	6	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
							4	4						202	42040	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
							7	5	2					202	42810	7	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	
							6	6						202	47200	6	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	
							230	93	137					203	20001	230	CY	EMBANKMENT, AS PER PLAN	14
							25.99	20.22	5.77					209	15000	25.99	STA	RESHAPING UNDER GUARDRAIL	
				19				16	3					209	80000	19	EACH	GRADING MAILBOX APPROACHES	
							100	100						606	13000	100	FT	GUARDRAIL, TYPE 5	
							18.75	18.75						606	13040	18.75	FT	GUARDRAIL, NESTED TYPE 5 WITH TUBULAR BACKUP	
							462.5	462.5						606	15050	462.5	FT	GUARDRAIL, TYPE MGS	
							1312.5	837.5	475					606	16500	1312.5	FT	GUARDRAIL REBUILT, TYPE 5	
							312.5		87.5	225				606	17000	312.5	FT	RAISING TYPE 5 GUARDRAIL	
							4	4						606	26100	4	EACH	ANCHOR ASSEMBLY, TYPE E	
							2	2						606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
							2	2						606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
							2	2						606	27820	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							7	5	2					606	27850	7	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E	
							2	2						606	35140	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
							6	6						606	35150	6	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	
20								18	2					623	39500	20	EACH	MONUMENT BOX ADJUSTED TO GRADE	
				11				11						SPECIAL	69050100	11	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	7
				3				3						SPECIAL	69050200	3	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	7
																		DRAINAGE	
5								3	1	1				611	99150	5	EACH	INLET ADJUSTED TO GRADE	
4								4						611	99654	4	EACH	MANHOLE ADJUSTED TO GRADE	
																		PAVEMENT	
					14.08	8.96		19.31	3.26	0.47				209	72051	23.04	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	3
	575							496	69		10			251	01010	575	CY	PARTIAL DEPTH PAVEMENT REPAIR	
	50							42.5	6.5		1			253	02000	50	CY	PAVEMENT REPAIR	
					122989			88136	30477	4376				254	01000	122989	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
					2333			2333						254	01000	2333	SY	PAVEMENT PLANING, ASPHALT CONCRETE (0"-1.50")	
						74152		74152						254	01000	74152	SY	PAVEMENT PLANING, ASPHALT CONCRETE (2.00")	
					78			78						254	01000	78	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3.00")	
					1231	742		1623	305	45				254	01600	1973	SY	PATCHING PLANED SURFACE	
					9925	5949		13071	2449	354				407	10000	15874	GAL	TACK COAT	
						2973		2973						407	14000	2973	GAL	TACK COAT FOR INTERMEDIATE COURSE	
					5171			3711	1275	185				442	00201	5171	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.50")	5
						2584		2584						442	00201	2584	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.25")	5
					201	128		276	46	7				442	00201	329	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (SAFETY EDGE)	3
						1548		1548						442	20101	1548	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN	5
				38	732	447		1021	171	25				617	10100	1217	CY	COMPACTED AGGREGATE	
																		WATER WORK	
		1						1						638	10800	1	EACH	VALVE BOX ADJUSTED TO GRADE	
																		TRAFFIC CONTROL	
							62	44	14	4				626	00100	62	EACH	BARRIER REFLECTOR	
																		MAINTENANCE OF TRAFFIC	
			100					50	25		25			614	11110	100	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		86						72	11	3				614	12460	86	EACH	WORK ZONE MARKING SIGN	
		80						67	11	2				614	13000	80	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	

CALCULATED CJC CHECKED CAD

GENERAL SUMMARY

MED-57-3.24
MED-94-10.37

DESIGN FILE: ii\projects\93113\roadway\sheets\93113GG001.dgn
MODEL NAME: Design
DATE: 9/17/2014
WORKSTATION: nfoster

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
36	37	41	42	47	48	49		01/STR/ PV	02/S<2/ PV	03/S<2/PV /WADS	04/S<2/PV /WADS	05/STR/ BR	06/IMS/ BR						
																		TRAFFIC SIGNALS	
	16							10	4	2				632	26501	16	EACH	DETECTOR LOOP, AS PER PLAN	37
																		TRAFFIC CONTROL	
932								812	120					621	00100	932	EACH	RPM	
932								812	120					621	54000	932	EACH	RAISED PAVEMENT MARKER REMOVED	
23.25								19.43	3.23		0.46		0.13	644	00100	23.25	MILE	EDGE LINE, 4" (740.04) (WHITE)	
0.02								0.02						644	00100	0.02	MILE	EDGE LINE, 4" (740.04) (YELLOW)	
11.63								9.72	1.62		0.22		0.07	644	00300	11.63	MILE	CENTER LINE	
2810								2267	443				100	644	00400	2810	FT	CHANNELIZING LINE, 8"	
835								699	100		12		24	644	00500	835	FT	STOP LINE	
1076								861	215					644	00700	1076	FT	TRANSVERSE/DIAGONAL LINE	
114								114						644	00900	114	SF	ISLAND MARKING	
2								2						644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
27								19	6				2	644	01300	27	EACH	LANE ARROW (LEFT)	
7								7						644	01300	7	EACH	LANE ARROW (RIGHT)	
0.26								0.02	0.19		0.05			646	10000	0.26	MILE	EDGE LINE, 4" (WHITE)	
0.14								0.01	0.1		0.03			646	10200	0.14	MILE	CENTER LINE	
12									12					646	10400	12	FT	STOP LINE	
																		STRUCTURE UNDER 20 FOOT SPAN (MED-94-1138)	
			40									40		512	10100	40	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
																		STRUCTURE 20 FOOT SPAN AND OVER (MED-57-0324)	
		1											1	202	11301	1	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	44
		88											88	202	98200	88	FT	REMOVAL MISC.:STRIP SEAL	44
		1											1	511	34410	1	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, (REPAIR)	
		1											1	511	53010	1	CY	CLASS QC1 CONCRETE, MISC.:APPROACH SLAB REPAIR	45
		671											671	512	10100	671	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		1012											1012	512	10300	1012	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
		671											671	512	74000	671	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
		88											88	516	31000	88	FT	JOINT SEALER	
																		STRUCTURE 20 FOOT SPAN AND OVER (MED-57-0572)	
		84										84		202	98200	84	FT	REMOVAL MISC.:POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	44
		214										214		254	01000	214	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
		17										17		407	10000	17	GAL	TACK COAT	
		84										84		409	30001	84	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN	45
		9										9		442	00201	9	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.50")	5
		44										44		512	10100	44	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		44										44		512	74000	44	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
		112.5										112.5		517	75601	112.5	FT	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN	45
																		STRUCTURE 20 FOOT SPAN AND OVER (MED-57-0900)	
		45											45	512	10100	45	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
		25											25	512	10300	25	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
		225											225	519	11101	225	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	45
																		STRUCTURE 20 FOOT SPAN AND OVER (MED-94-1314)	
			86									86		202	98200	86	FT	REMOVAL MISC.:STRIP SEAL	44
			23									23		512	73500	23	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
			86									86		516	31000	86	FT	JOINT SEALER	
																		STRUCTURE 20 FOOT SPAN AND OVER (MED-94-1455)	
			4										4	202	11301	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	44
			625										625	202	38603	625	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN	44
			62										62	202	98200	62	FT	REMOVAL MISC.:POLYMER MODIFIED ASPHALT EXPANSION JOINT	44
			957										957	254	01000	957	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25")	
			4										4	511	34410	4	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, (CURB REPAIR)	
			777										777	512	10100	777	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
			625										625	517	75501	625	FT	BRIDGE RAILING REBUILT, AS PER PLAN	45
			62										62	846	00100	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
			34										34	856	10000	34	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE (1.25")	

CALCULATED CJC CHECKED CAD

GENERAL SUMMARY

MED-57-3.24
MED-94-10.37

DESIGN FILE:i:\projects\93113\roadway\sheets\93113GG001.dgn MODELNAME: Design
WORKSTATIONnfoster DATE:8/27/2014

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
36	37	41	42	47	48	49		01/STR/ PV	02/S<2/ PV	03/S<2/PV /WADS	04/S<2/PV /WADS	05/STR/ BR	06/IMS/ BR						
																		MAINTENANCE OF TRAFFIC	
				48									48	614	11110	48	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
27.65								23.96	3.23	0.46				614	21100	27.65	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
						0.2							0.2	614	21200	0.2	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	
					0.28								0.28	614	22200	0.28	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I (YELLOW)	
					0.32	0.39							0.71	614	22200	0.71	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I(WHITE)	
7687								6801	886					614	23200	7687	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
					245	142							387	614	24400	387	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I(YELLOW)	
						245							245	614	24400	245	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I(WHITE)	
510								282	228					614	26200	510	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
					22	22							44	614	26400	44	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	
					LUMP	LUMP							LUMP	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
					60	32							92	615	20001	92	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	47
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	
														619	16010	4	MNTH	FIELD OFFICE, TYPE B	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

CALCULATED CJC CHECKED CAD

GENERAL SUMMARY

MED-57-3.24
MED-94-10.37

10
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GG001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/17/2014

* - FOR TYPICALS, SEE SHEET 13

COUNTY	ROUTE	LOG POINT TO LOG POINT	STRAIGHT LINE MILEAGE	LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	*TYPICAL	FUNDING	PAVEMENT AREA SQ YD	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.50") SQ.YD	254 PAVEMENT PLANING ASPHALT CONCRETE (0-1.50") SQ. YD.	254 PAVEMENT PLANING ASPHALT CONCRETE (3.00") SQ. YD.	254 PATCHING PLANED SURFACE SQ.YD	407 TACK COAT @ 0.08 GAL/SY GALLON	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN INCH	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN CU.YD.	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (SAFETY EDGE) CU. YD.	AGGREGATE SHOULDER PROPOSED WIDTH SL FT	AGGREGATE SHOULDER PROPOSED WIDTH SR FT	AGGREGATE SHOULDER AREA SQ YD	209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN MILE	617 COMPACTED AGGREGATE 1.5 INCHES AVG. THICKNESS CU YD
STRUCTURE MED-57-0324																						
MED	57	3.28	3.49	0.21	1109	17.0	1	02/S<2/PV	2,095	2,095			21	168	1.50	87	2.99		2.0	246	0.21	10
MED	57	3.28	3.49	0.21	1109	17.0	1	03/S<2/PV/WADS	2095	2095			21	168	1.50	87	2.99	2.0		246	0.21	10
MED	57	3.49	3.58	0.09	475	28.0	1	02/S<2/PV	1478	1478			15	118	1.50	62	2.57	2.0	2.0	211	0.18	9
MED	57	3.58	3.79	0.21	1109	14.0	1	02/S<2/PV	1725	1725			17	138	1.50	72	2.99		2.0	246	0.21	10
MED	57	3.58	3.84	0.26	1373	14.0	1	03/S<2/PV/WADS	2,136	2,136			21	171	1.50	89	3.71	2.0		305	0.26	13
MED	57	3.79	3.84	0.05	264	14.0	1	01/STR/PV	411	411			4	33	1.50	17	0.71		2.0	59	0.05	2
MED	57	3.84	4.00	0.16	845	28.0	1	01/STR/PV	2,629	2,629			26	210	1.50	110	4.56	2.0	2.0	376	0.32	16
MED	57	4.00	4.50	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	4.50	5.00	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	5.00	5.14	0.14	739	28.0	1	01/STR/PV	2,299	2,299			23	184	1.50	96	3.99	2.0	2.0	328	0.28	14
TAPER PLANING TO STR MED-57-0521					375	28.0	3	01/STR/PV	1,167	1,167	1,167		12	93	1.50	49	2.03	2.0	2.0	167	0.14	7
STRUCTURE MED-57-0521					25	28.0	4	01/STR/PV				78	1	6	1.50	3						
TAPER PLANING FROM STR MED-57-0521					375	28.0	3	01/STR/PV	1,167	1,167	1,167		12	93	1.50	49	2.03	2.0	2.0	167	0.14	7
MED	57	5.28	5.72	0.44	2323	28.0	1	01/STR/PV	7,227	7,227			72	578	1.50	301	12.55	2.0	2.0	1,032	0.88	43
STRUCTURE MED-57-0572						SEE STRUCTURE DETAIL SHEET FOR PAVEMENT TREATMENT OVER STRUCTURE																
MED	57	5.73	6.50	0.77	4066	28.0	1	01/STR/PV	12,650	12,650			126	1,012	1.50	527	21.96	2.0	2.0	1,807	1.54	75
MED	57	6.50	7.00	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	7.00	7.50	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	7.50	8.00	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	8.00	8.50	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
MED	57	8.50	9.00	0.50	2640	28.0	1	01/STR/PV	8,213	8,213			82	657	1.50	342	14.26	2.0	2.0	1,173	1.00	49
STRUCTURE MED-57-9.00						SUSPEND AND RESUME MAIN LINE PAVEMENT TREATMENT FOR STRUCTURE																
MED	57	9.06	9.50	0.44	2323	28.0	1	02/S<2/PV	7227	7227			72	578	1.50	301	12.55	2.0	2.0	1032	0.88	43
MED	57	9.50	10.00	0.50	2640	28.0	1	02/S<2/PV	8213	8213			82	657	1.50	342	14.26	2.0	2.0	1173	1.00	49
MED	57	10.00	10.39	0.39	2059	40.0	1	02/S<2/PV	9151	9151			92	732	1.50	381	11.12	2.0	2.0	915	0.78	38
01/STR/PV																						
EXTRA AREA FOR INTERSECTIONS									1189	1189			12	95	1.50	50						
EXTRA AREA FOR PAVED DRIVES									781	781			8	62	1.50	33						
EXTRA AREA FOR AGGREGATE DRIVES									835					67	1.50	35				835		35
EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES									1125	1125			11	90	1.50	47						
02/S<2/PV																						
EXTRA AREA FOR INTERSECTIONS									275	275			3	22	1.50	11						
EXTRA AREA FOR PAVED DRIVES									128	128			1	10	1.50	5						
EXTRA AREA FOR AGGREGATE DRIVES									137					11	1.50	6				137		6
EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES									185	185			2	15	1.50	8						
03/S<2/PV/WADS																						
EXTRA AREA FOR INTERSECTIONS									90	90			1	7	1.50	4						
EXTRA AREA FOR PAVED DRIVES									45	45			1	4	1.50	2						
EXTRA AREA FOR AGGREGATE DRIVES									36					3	1.50	2				36		2
EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES									10	10			1	1	1.50	1						
TOTAL: (01/STR/PV)										88,136	2,333	78	881	7,122		3,711	148			12,982	10.35	542
TOTAL: (02/S<2/PV)										30,477			305	2,449		1,275	46			3,960	3.26	165
TOTAL: (03/S<2/PV/WADS)										4,376			45	354		185	7			587	0.47	25
GRAND TOTAL										122,989	2,333	78	1,231	9,925		5,171	201			17,529	14.08	732

CALCULATED CJC CHECKED CAD

PAVEMENT AND SHOULDER DATA

PAVEMENT

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GQ001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/16/2014

* - FOR TYPICALS, SEE SHEET 13

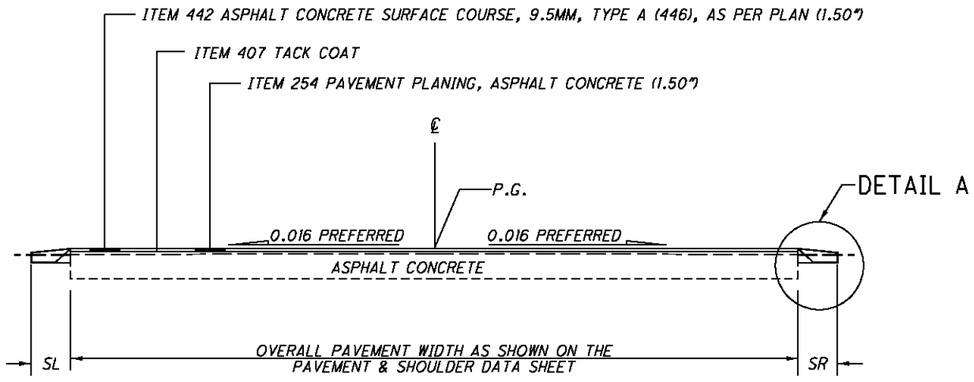
COUNTY	ROUTE	LOG POINT TO LOG POINT		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	*TYPICAL	FUNDING	PAVEMENT AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE (2.00")			254 PATCHING PLANED SURFACE	407 TACK COAT @ 0.08 GAL/SY	407 TACK COAT FOR INTERM. COURSE @ 0.04 GAL/SY	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN		442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN (SAFETY EDGE)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN				AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA	209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	617 COMPACTED AGGREGATE	
																												1.5 INCHES
		STRAIGHT LINE MILEAGE							SQ YD	SQ.YD			SQ.YD	GALLON	GALLON	INCH	CU.YD.	CU. YD.	INCH (AVG)	CU.YD.			SL FT	SR FT	SQ YD	MILE	AVG. THICKNESS CU YD	
MED	94	10.37	10.58	0.21	1109	24.0	2	01/STR/PV	2,957	2,957			30	237	118	1.25	103	5.99	0.75	62			2.0	2.0	493	0.42	21	
MED	94	10.58	11.00	0.42	2218	25.0	2	01/STR/PV	6,161	6,161			62	493	246	1.25	214	11.98	0.75	128			2.0	2.0	986	0.84	41	
MED	94	11.00	11.50	0.50	2640	25.0	2	01/STR/PV	7333	7333			73	587	293	1.25	255	14.26	0.75	153			2.0	2.0	1173	1	49	
MED	94	11.50	11.75	0.25	1320	25.0	2	01/STR/PV	3667	3667			37	293	147	1.25	127	7.13	0.75	78			2.0	2.0	587	0.5	24	
SUSPEND WORK AT 11.75 AND RESUME WORK AT 12.06																												
MED	94	12.06	12.25	0.19	1003	25.0	2	01/STR/PV	2786	2786			28	223	111	1.25	97	5.42	0.75	58			2.0	2.0	446	0.38	19	
MED	94	12.25	12.75	0.50	2640	46.0	2	01/STR/PV	13493	13493			135	1079	540	1.25	469	14.26	0.75	281			2.0	2.0	1173	1	49	
MED	94	12.75	13.14	0.39	2059	25.0	2	01/STR/PV	5719	5719			57	458	229	1.25	199	11.12	0.75	119			2.0	2.0	915	0.78	38	
STRUCTURE MED-94-1314						SUSPEND AND RESUME MAIN LINE PAVEMENT TREATMENT FOR STRUCTURE																								
MED	94	13.15	13.50	0.35	1848	25.0	2	01/STR/PV	5133	5133			51	411	205	1.25	178	9.98	0.75	107			2.0	2.0	821	0.7	34	
MED	94	13.50	14.00	0.50	2640	25.0	2	01/STR/PV	7333	7333			73	587	293	1.25	255	14.26	0.75	153			2.0	2.0	1173	1	49	
MED	94	14.00	14.55	0.55	2904	25.0	2	01/STR/PV	8067	8067			81	645	323	1.25	280	15.69	0.75	168			2.0	2.0	1291	1.1	54	
STRUCTURE MED-94-1455						SEE STRUCTURE DETAIL SHEET FOR PAVEMENT TREATMENT OVER STRUCTURE																								
MED	94	14.60	15.00	0.40	2112	25.0	2	01/STR/PV	5,867	5,867			59	469	235	1.25	204	11.41	0.75	122			2.0	2.0	939	0.80	39	
MED	94	15.00	15.22	0.22	1162	25.0	2	01/STR/PV	3,228	3,228			32	258	129	1.25	112	6.28	0.75	67			2.0	2.0	516	0.44	22	
EXTRA AREA FOR INTERSECTIONS									1315	1315			13	105	53	1.25	46		0.75	27								
EXTRA AREA FOR PAVED DRIVES									333	333			3	27	13	1.25	12		0.75	7								
EXTRA AREA FOR AGGREGATE DRIVES									198					16	8	1.25	7		0.75	4					198		8	
EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES									760	760			8	61	30	1.25	26		0.75	16								
TOTAL: (01/STR/PV)										74,152			742	5,949	2,973		2,584	128		1,548					10,711	8.96	447	
GRAND TOTAL										74,152			742	5,949	2,973		2,584	128		1,548					10,711	8.96	447	

CALCULATED CJC CHECKED CAD

PAVEMENT AND SHOULDER DATA

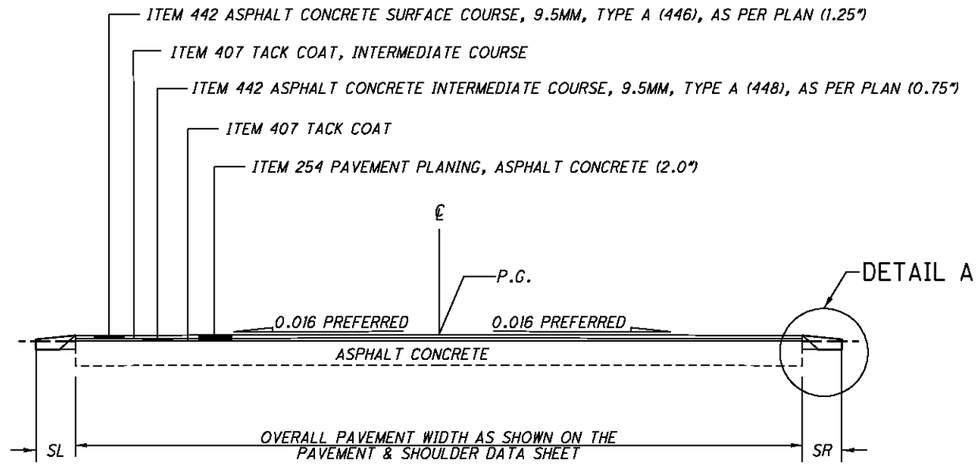
MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GQ001.dgn
WORKSTATION: nfoster
MODELNAME: Design
DATE: 9/16/2014



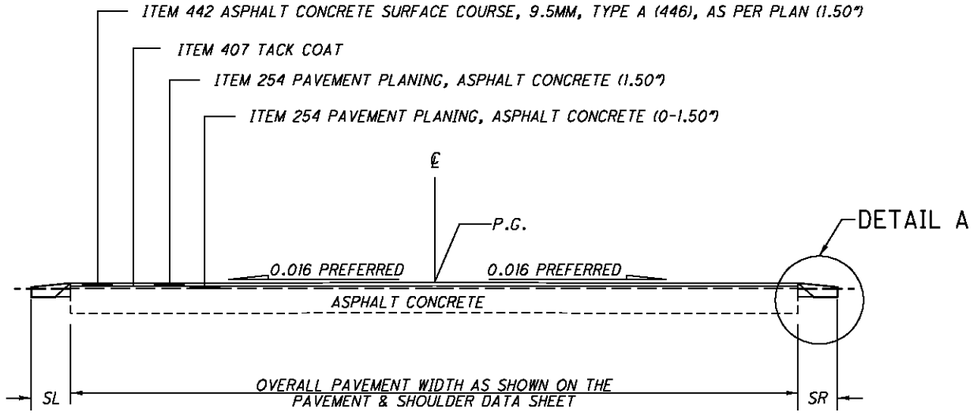
TYPICAL 1

SR 57
SLM 3.28 TO 5.14
SLM 5.28 TO 10.39



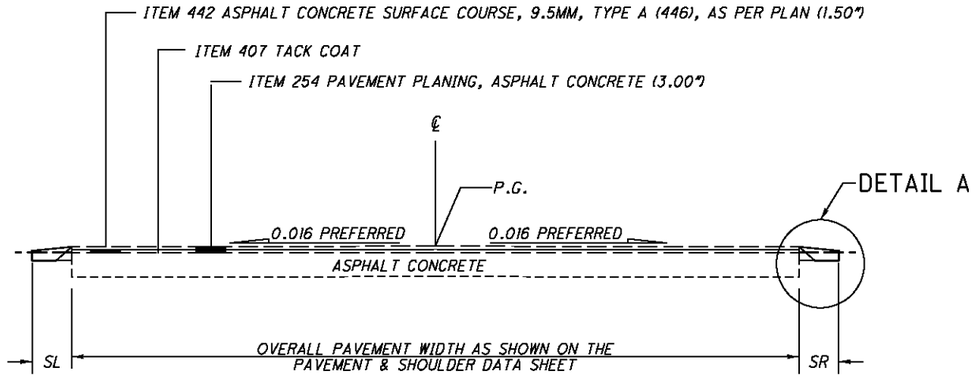
TYPICAL 2

SR 94
SLM 10.37 TO 11.75
SLM 12.06 TO 15.22



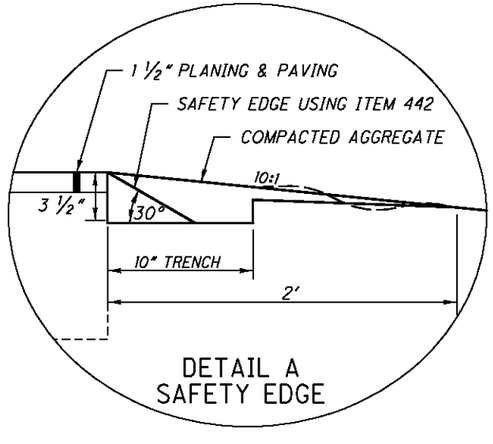
TYPICAL 3

SR 57
APPROACHES TO/ FROM MED-57-0521
APP. SLM 5.14 TO 5.21 & 5.21 TO 5.28

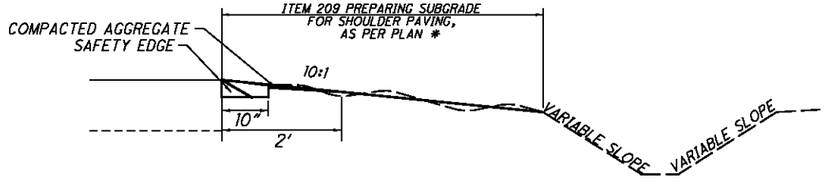


TYPICAL 4

SR 57
SLM 5.21 OVER MED-57-0521 (25' TOTAL LENGTH)



DETAIL A
SAFETY EDGE



ITEM 209 PREPARING SUBGRADE
FOR SHOULDER PAVING, AS PER PLAN

* SEE ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN NOTE FOR ADDITIONAL DETAILS

SEE NOTE 1 ON SHEET 36 FOR THRU LANE WIDTH STRIPING.

CALCULATED CJC
CHECKED CAD

TYPICAL SECTIONS

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93133GY001.dgn MODELNAME: Design
WORKSTATION nfoster DATE: 8/27/2014

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

SUGGESTED SEQUENCE OF GUARDRAIL WORK

1. GUARDRAIL WORK IS TO BEGIN AFTER THE SAFETY EDGE CONSTRUCTION IS COMPLETED AND THE 617 MATERIAL IS PLACED.
2. REMOVE THE GUARDRAIL.
3. PERFORM THE RESHAPING UNDER GUARDRAIL INCLUDING COMPLETING THE EMBANKMENT, AS PER PLAN.
4. REBUILD/CONSTRUCT THE GUARDRAIL RUN.
5. INSTALL BARRIER REFLECTORS.

ITEM 202 - ANCHOR ASSEMBLY REMOVED, TYPE A

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALLBE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A.

ITEM 202 - GUARDRAIL REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING GUARDRAIL, NESTED TYPE 5 WITH TUBULAR BACKUP INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE AT POSTS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALLBE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202 - GUARDRAIL REMOVED, AS PER PLAN.

ITEM 203 - EMBANKMENT, AS PER PLAN

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 60 PERCENT OF RELATIVE COMPACTION.

AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDED, MULCHED, AND WATERED AS PER ITEM 659. THE COST SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 209 - RESHAPING UNDER GUARDRAIL

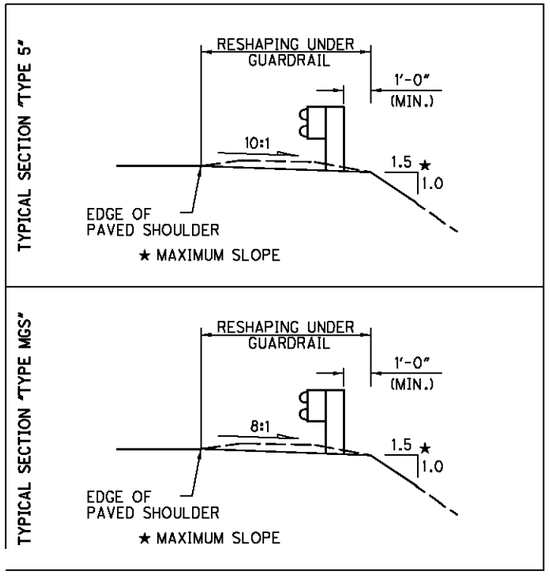
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM FOR TYPE 5 AND 8:1 MAXIMUM FOR MGS (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.



ITEM 606 - GUARDRAIL REBUILT, TYPE 5

THIS ITEM SHALL BE USED WHEN GUARDRAIL REQUIRES REPAIRS IN WHICH THE RAIL ELEMENT IS REUSABLE. ALSO, THIS ITEM WILL BE USED TO RE-ALIGN GUARDRAIL RUNS, AS DIRECTED BY THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT, AS DESCRIBED IN 606.05 FOR ITEM 606 GUARDRAIL REBUILT, TYPE 5.

ITEM 606 - RAISING TYPE 5 GUARDRAIL

WHERE DESIGNATED ON THE PLAN, THE EXISTING TYPE 5 GUARDRAIL SHALL BE RAISED ON THE EXISTING WOOD POSTS AS PER PLAN INSERT SHEET GR-2.1 SO AS TO OBTAIN THE STANDARD 29 IN. HEIGHT. THE RAIL SHALL BE RE-ATTACHED TO THE POSTS USING NEW POST BOLTS.

THE RAIL SHALL BE DISMANTLED ONLY TO THE EXTENT NECESSARY TO FIELD BORE NEW BOLT HOLES IN THE WOOD POSTS, AND TO RECONNECT THE RAIL AND BLOCK TO THE EXISTING POSTS.

THE EXISTING TYPE "A" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL NOT BE ADJUSTED. THE LAST RAIL ELEMENT SHALL BE TRANSITIONED TO MEET THESE ASSEMBLIES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT OF ITEM 606 - RAISING TYPE 5 GUARDRAIL, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED CJC CHECKED CAD

GUARDRAIL GENERAL NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE:i:\projects\93113\roadway\sheets\93113GR_GN.dgn MODELNAME: Design
WORKSTATION:nfoster DATE:8/27/2014

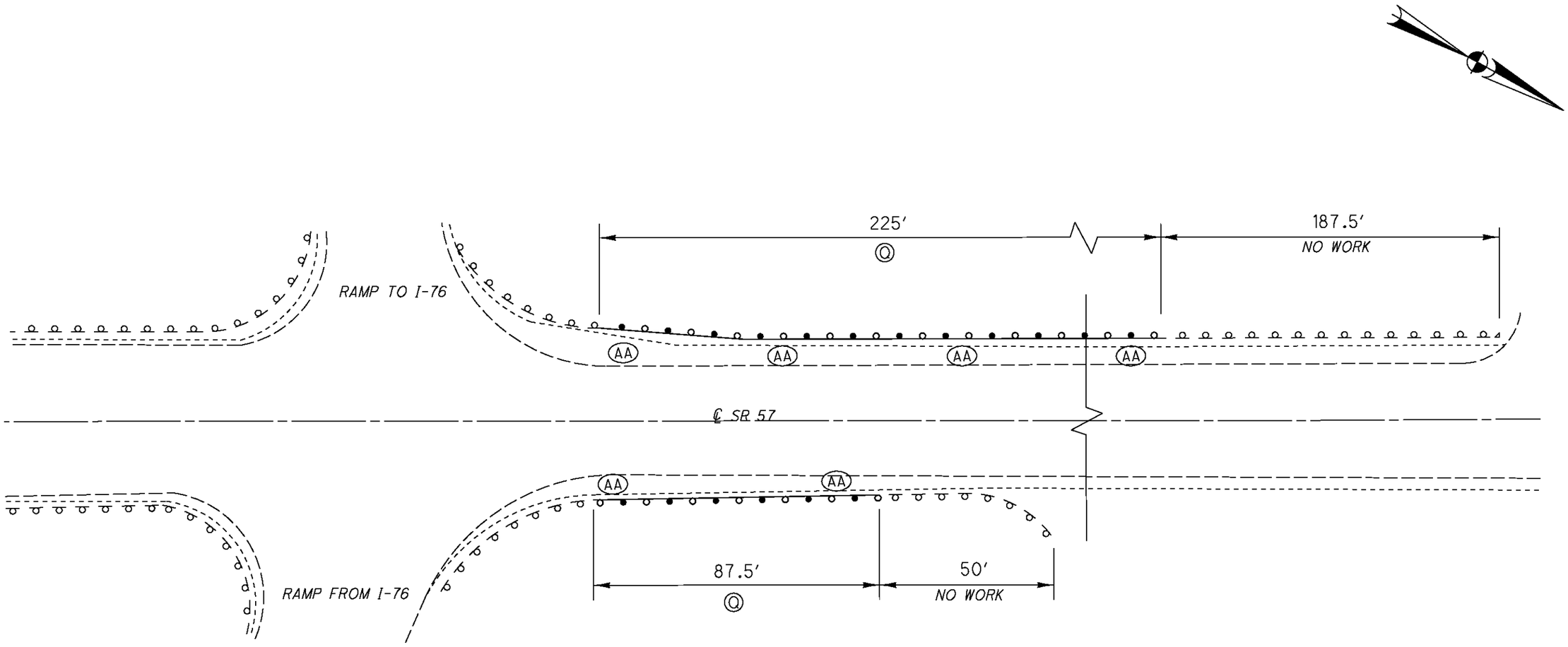
SHEET	LOCATION	202 GUARDRAIL REMOVED FT	202 GUARDRAIL REMOVED FOR REUSE FT	202 GUARDRAIL REMOVED, AS PER PLAN FT	202 ANCHOR ASSEMBLY REMOVED, TYPE A EACH	202 ANCHOR ASSEMBLY REMOVED, TYPE T EACH		202 ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E EACH	202 BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE EACH	203 EMBANKMENT, AS PER PLAN CU YD	209 RESHAPING UNDER GUARDRAIL STATION	606 GUARDRAIL, TYPE 5 FT		606 GUARDRAIL, TYPE MGS FT	606 GUARDRAIL, NESTED TYPE 5 WITH TUBULAR BACKUP FT		606 GUARDRAIL REBUILT, TYPE 5 FT	606 BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4 EACH	606 RAISING TYPE 5 GUARDRAIL FT	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4 EACH		606 ANCHOR ASSEMBLY, TYPE E EACH	606 ANCHOR ASSEMBLY, TYPE T EACH	606 ANCHOR ASSEMBLY, MGS TYPE E EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH		606 ANCHOR ASSEMBLY REBUILT, TYPE E EACH	626 BARRIER REFLECTOR EACH
01/STR/PV																													
17	MED-57-5.21		62.5					1	1		1.13						62.5	1										1	2
18	MED-57-5.72		100						4		1.00						100	4											4
19	MED-57-7.00		75	18.75	3			1			2.94				18.75		75			2		3						1	6
20	MED-57-8.35		62.5							21	0.63						62.5												1
23	MED-94-12.22		37.5							11.5	0.38						37.5												1
24	MED-94-12.36	50			2					30	1.50			50											2				3
25	MED-94-12.68		100		1			1			2.00						100					1						1	3
26	MED-94-13.14		112.5							8.5	1.13						112.5												2
27, 28	MED-94-14.55	512.5	262.5			4					8.26	100		412.5			262.5						2		2				19
29	MED-94-14.80		25					2	1	22	1.25						25	1										2	3
02/S<2/PV																													
16	MED-57-3.27 RIGHT SIDE																		87.5										2
21	MED-57-9.51		87.5					2		24	1.88						87.5											2	4
21	MED-57-9.79		87.5							63	0.88						87.5												2
22	MED-57-9.95		300							50	3.01						300												6
03/S<2/PV/WADS																													
16	MED-57-3.27 LEFT SIDE																		225										4
TOTAL (01/STR/PV):		562.5	837.5	18.75	6	4		5	6	93	20.22	100		462.5	18.75		837.5	6		2		4	2	2	2		5	44
TOTAL (02/S<2/PV):			475					2		137	5.77						475		87.5								2	14
TOTAL (03/S<2/PV/WADS):																			225									4
TOTALS CARRIED TO GENERAL SUMMARY		562.5	1312.5	18.75	6	4		7	6	230	25.99	100		462.5	18.75		1312.5	6	312.5	2		4	2	2	2		7	62

CALCULATED CJC
CHECKED CAD

GUARDRAIL SUB-SUMMARY

MED-57-3.24
MED-94-10.37

DESIGN FILE:il:\projects\93113\roadway\sheets\93113GS001.dgn
WORKSTATION:nfoster
DATE:9/17/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓠ	606	RASING TYPE 5 GUARDRAIL	FT.	225	87.5	312.5
AA	626	BARRIER REFLECTOR	EACH	4	2	6

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

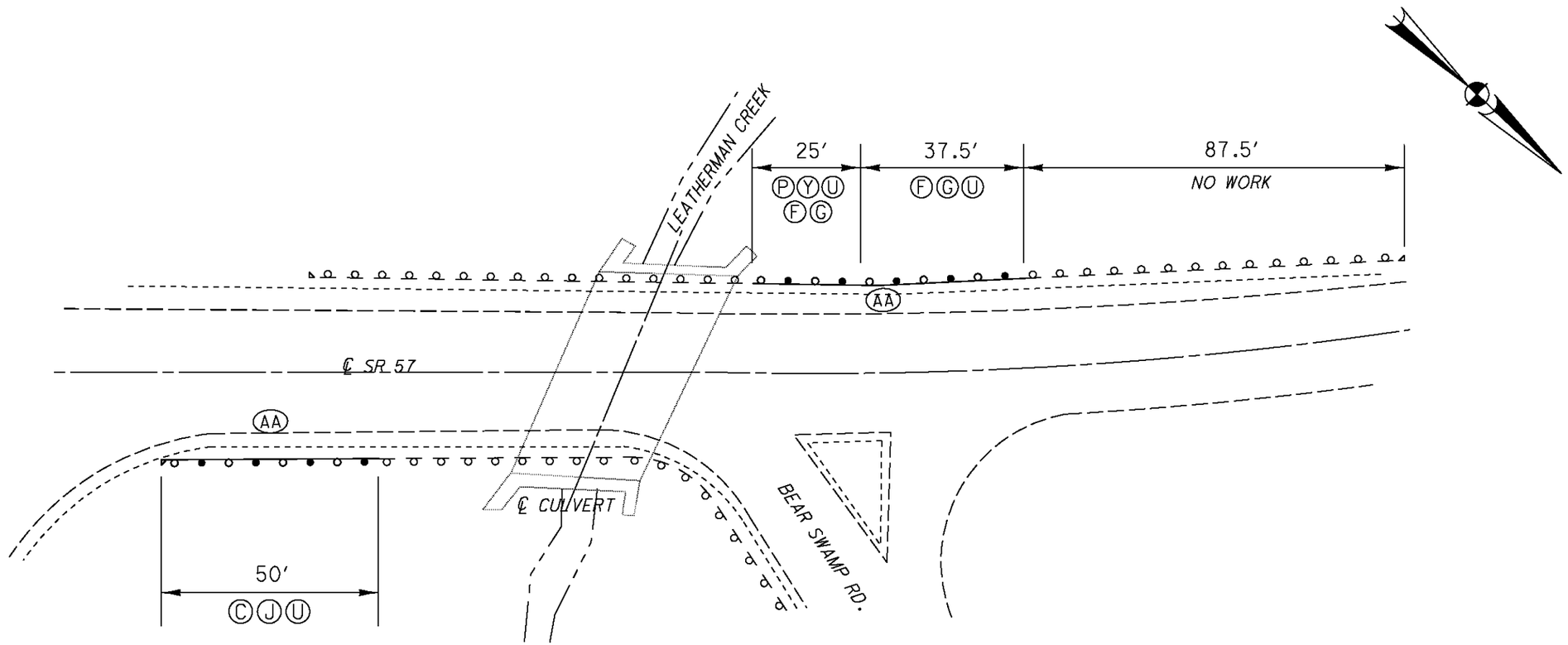
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-57-3.27

MED-57-3.24
MED-94-10.37

16
70

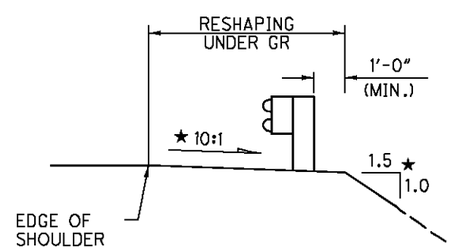
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODEL NAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	EACH		1	1
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	62.5		62.5
Ⓟ	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1		1
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.63	0.50	1.13
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	62.5		62.5
Ⓙ	606	ANCHOR ASSEMBLY REBUILT, TYPE E	EACH		1	1
Ⓨ	606	BRIDGE TERMINAL ASSEMBLY REBULIT, TYPE 4	EACH	1		1
Ⓐⓐ	626	BARRIER REFLECTOR	EACH	1	1	2

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

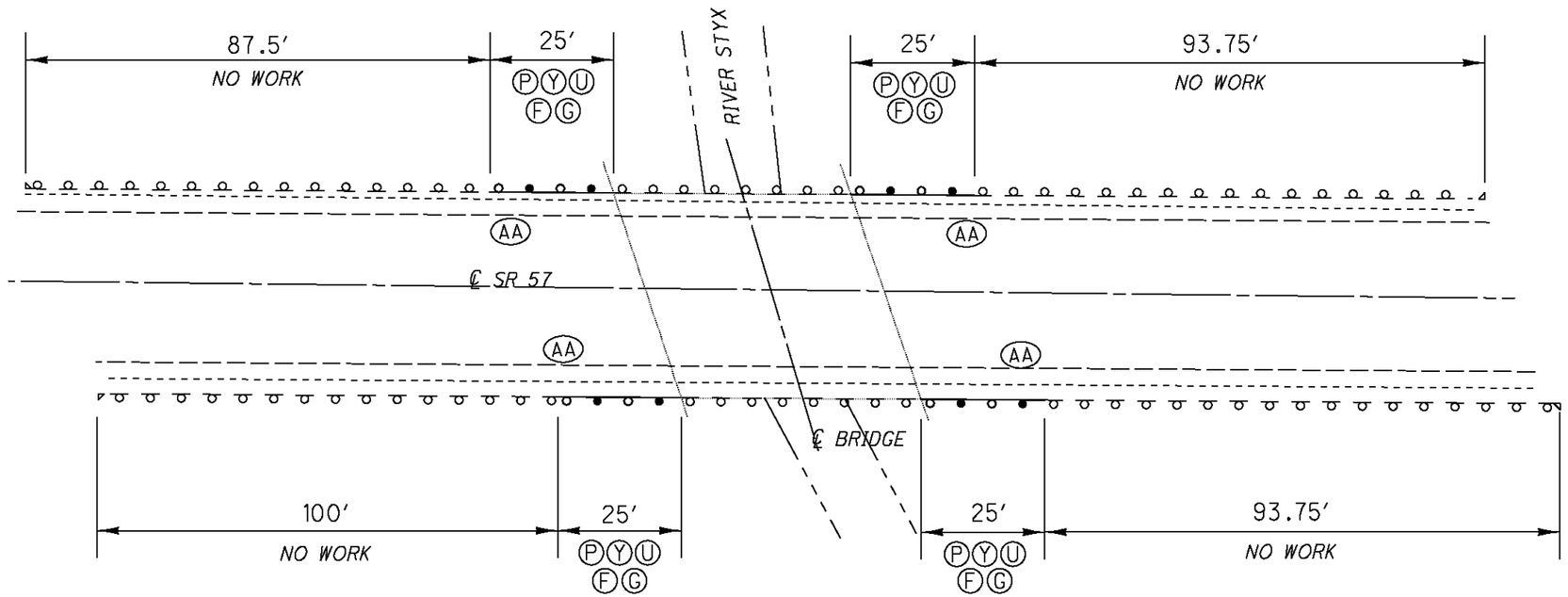
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-57-5.21

MED-57-3.24
MED-94-10.37

17
70

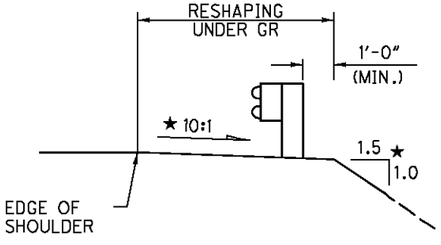
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODEL NAME: Design
WORKSTATION: nfoster DATE: 9/16/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT	50	50	100
Ⓟ	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	2	2	4
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.50	0.50	1.00
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT	50	50	100
Ⓨ	606	BRIDGE TERMINAL ASSEMBLY REBULIT, TYPE 4	EACH	2	2	4
ⒶⒶ	626	BARRIER REFLECTOR	EACH	2	2	4

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

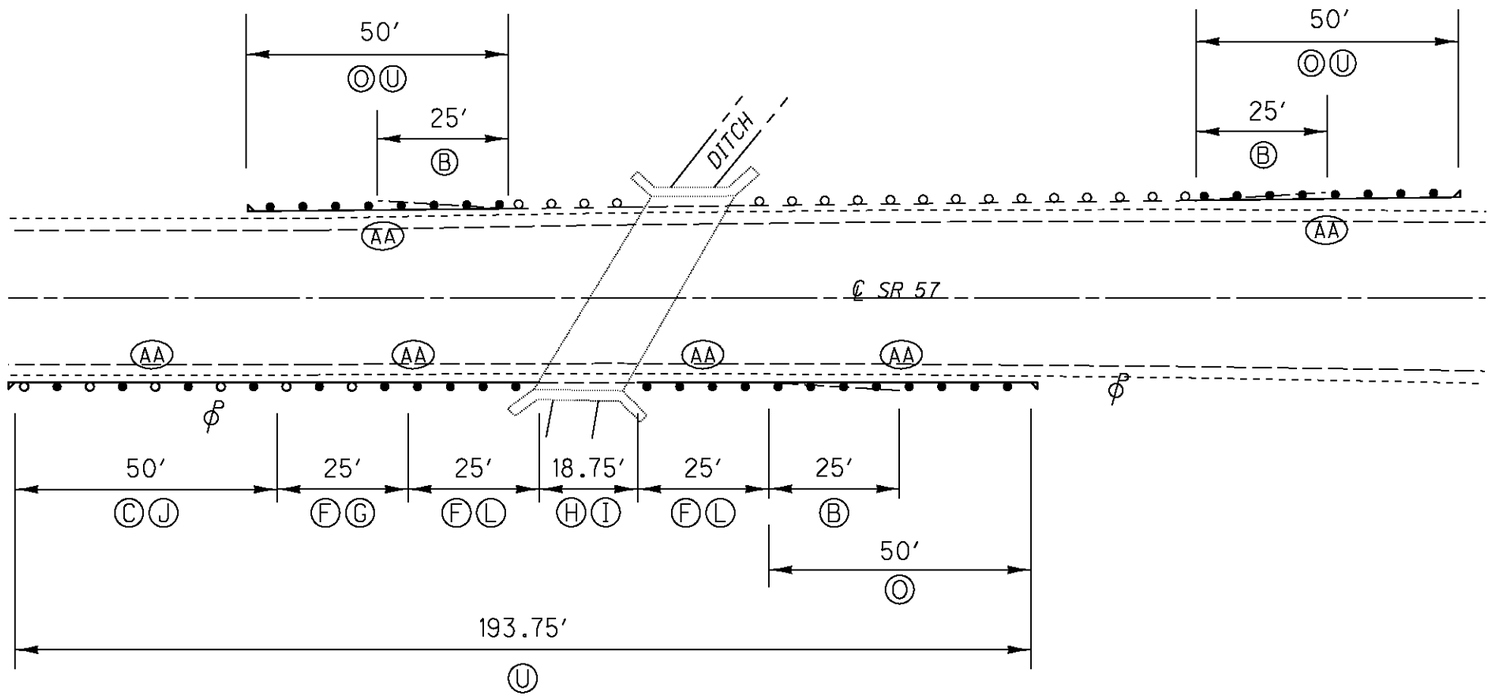
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-57-5.72

MED-57-3.24
MED-94-10.37

18
70

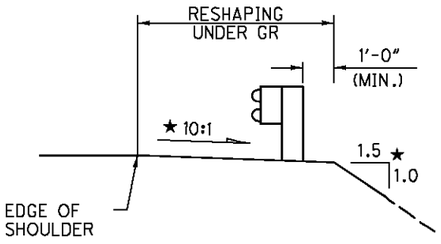
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 9/16/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
B	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	1	3
H	202	GUARDRAIL REMOVED, AS PER PLAN	FT		18.75	18.75
F	202	GUARDRAIL REMOVED FOR REUSE	FT		75	75
C	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	EACH		1	1
U	209	RESHAPING UNDER GUARDRAIL	STA.	1.00	1.94	2.94
G	606	GUARDRAIL REBUILT, TYPE 5	FT		75	75
I	606	GUARDRAIL, NESTED TYPE 5 WITH TUBULAR BACKUP	FT		18.75	18.75
O	606	ANCHOR ASSEMBLY, TYPE E	EACH	2	1	3
J	606	ANCHOR ASSEMBLY REBUILT, TYPE E	EACH		1	1
L	606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH		2	2
AA	626	BARRIER REFLECTOR	EACH	2	4	6

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

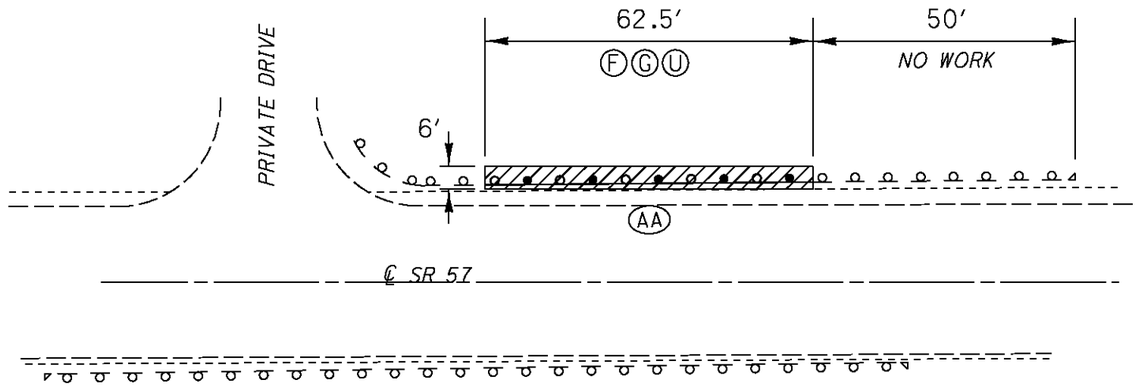
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-57-7.00

MED-57-3.24
MED-94-10.37

19
70

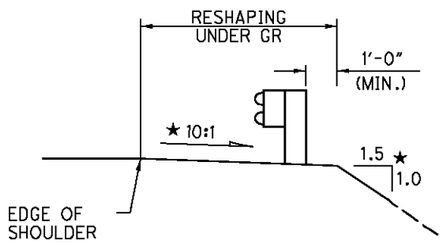
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 9/16/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	62.5		62.5
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.	21		21
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.63		0.63
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	62.5		62.5
Ⓐ Ⓐ	626	BARRIER REFLECTOR	EACH	1		1

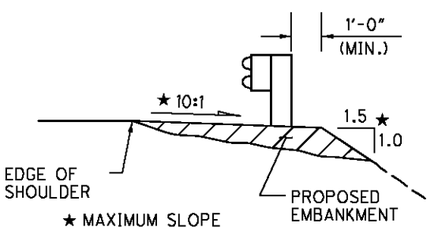
ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

CALCULATED CJC
CHECKED CAD

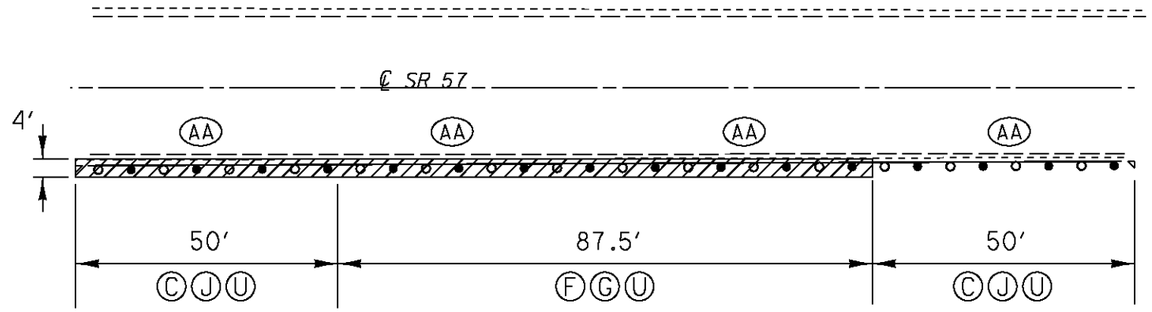
GUARDRAIL DETAIL
MED-57-8.35

MED-57-3.24
MED-94-10.37

20
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014

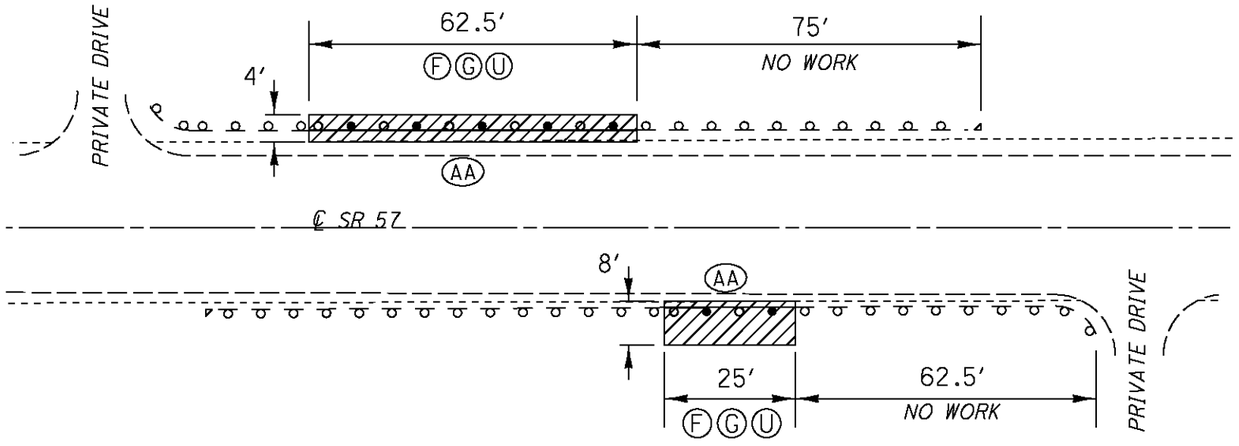
MED-57-9.51



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	EACH		2	2
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.		87.5	87.5
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.		24	24
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.		1.88	1.88
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.		87.5	87.5
Ⓙ	606	ANCHOR ASSEMBLY REBUILT, TYPE E	EACH		2	2
Ⓐⓐ	626	BARRIER REFLECTOR	EACH		4	4

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

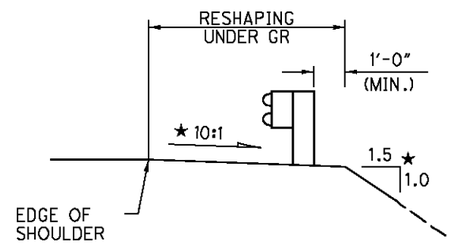
MED-57-9.79



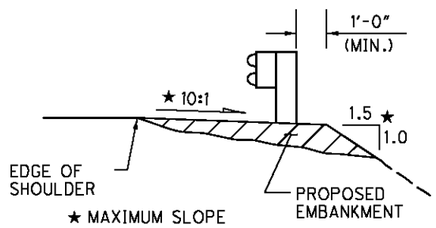
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	62.5	25	87.5
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.	18.5	44.5	63
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.63	0.25	0.88
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	62.5	25	87.5
Ⓐⓐ	626	BARRIER REFLECTOR	EACH	1	1	2

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "TYPE 5"

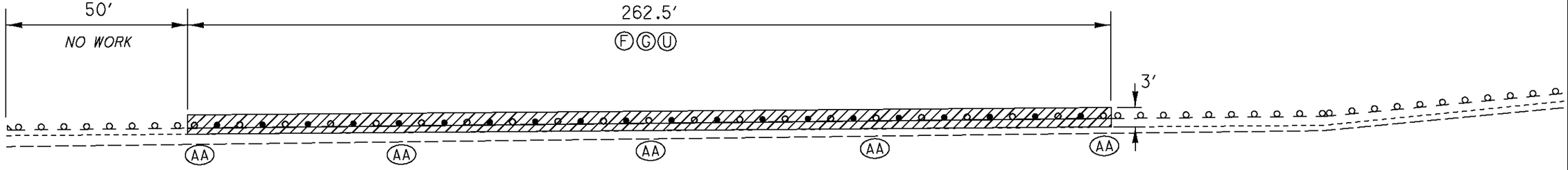


GUARDRAIL DETAIL
MED-57-9.51 & MED-57-9.79

MED-57-3.24
MED-94-10.37

CALCULATED CJC
CHECKED CAD

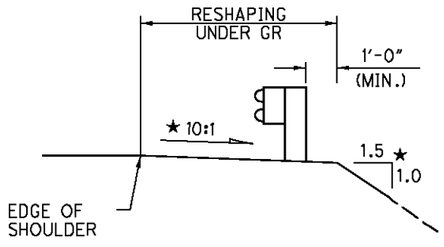
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 9/16/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	262.5	37.5	300
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.	43.75	6.25	50
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	2.63	0.38	3.01
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	262.5	37.5	300
AA	626	BARRIER REFLECTOR	EACH	5	1	6

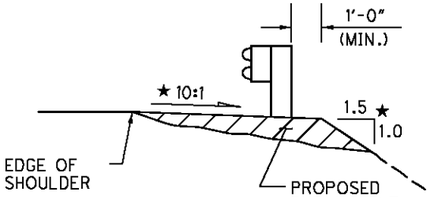
ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

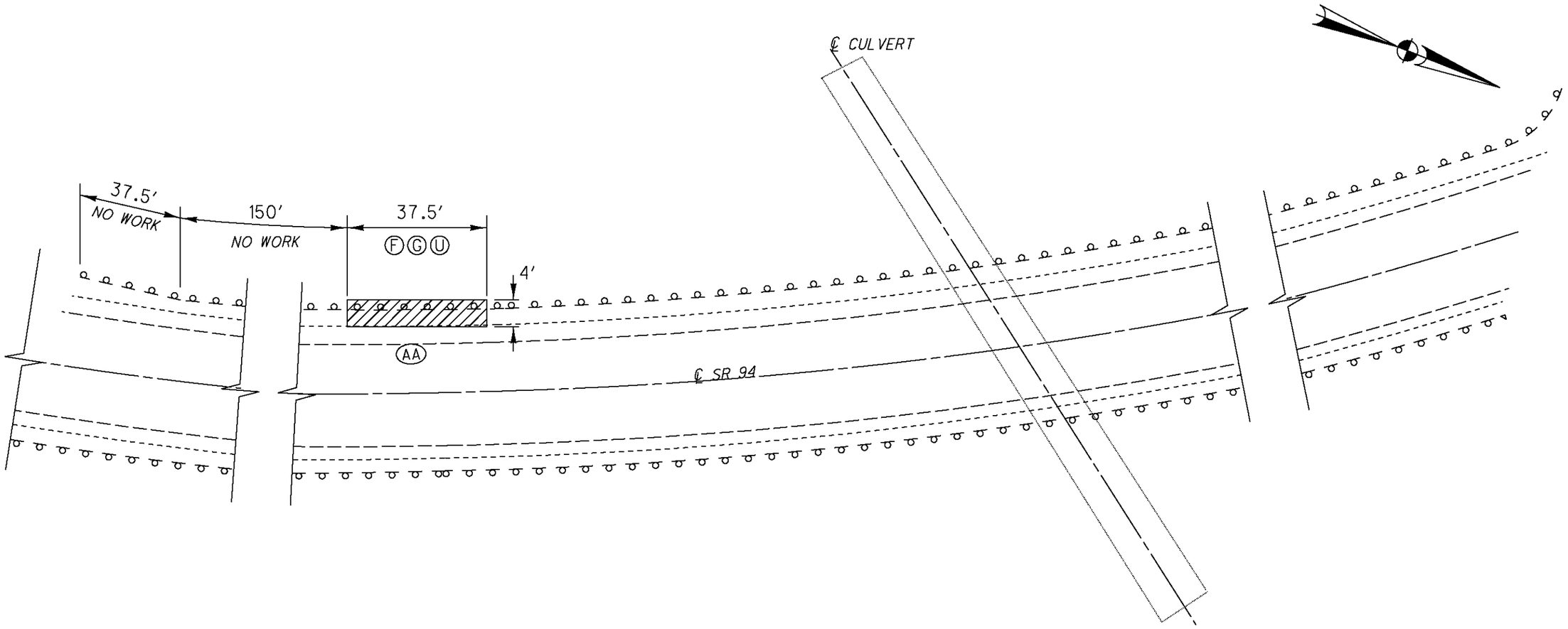
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-57-9.95

MED-57-3.24
MED-94-10.37

22
70

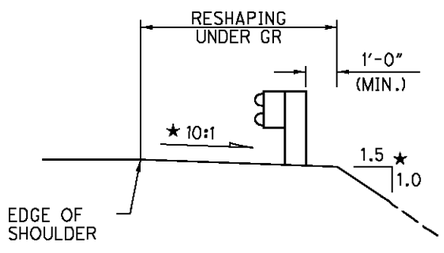
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT	37.5		37.5
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.	11.5		11.5
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.38		0.38
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT	37.5		37.5
Ⓐⓐ	626	BARRIER REFLECTOR	EACH	1		1

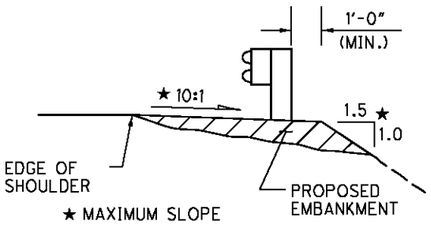
ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

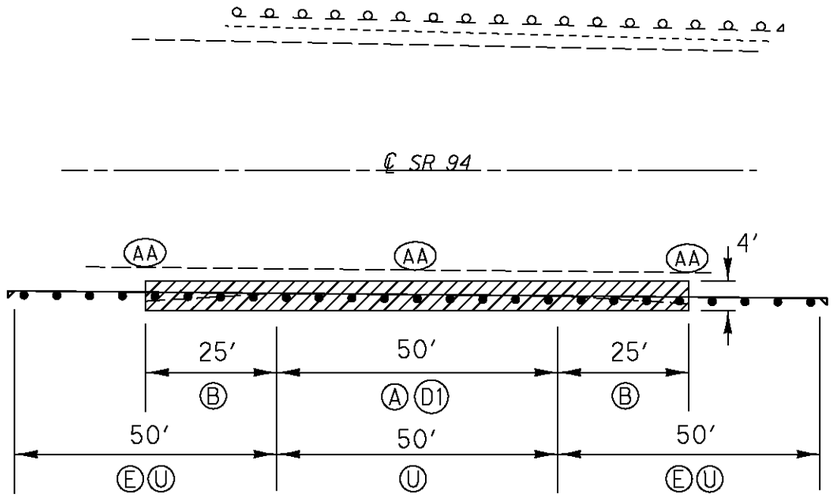
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-12.22

MED-57-3.24
MED-94-10.37

23
70

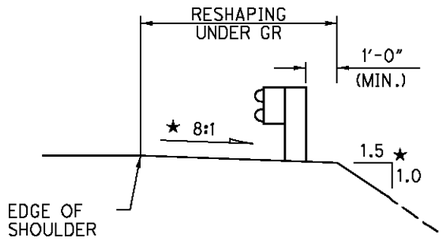
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014



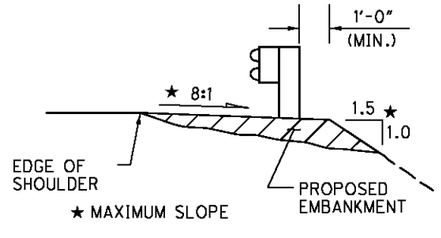
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT.		50	50
Ⓑ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		2	2
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.		30	30
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.		1.50	1.50
Ⓓ1	606	GUARDRAIL, TYPE MGS	FT.		50	50
Ⓔ	606	ANCHOR ASSEMBLY, MGS TYPE E	EACH		2	2
ⒶⒶ	626	BARRIER REFLECTOR	EACH		3	3

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE MGS"



TYPICAL SECTION "TYPE MGS"



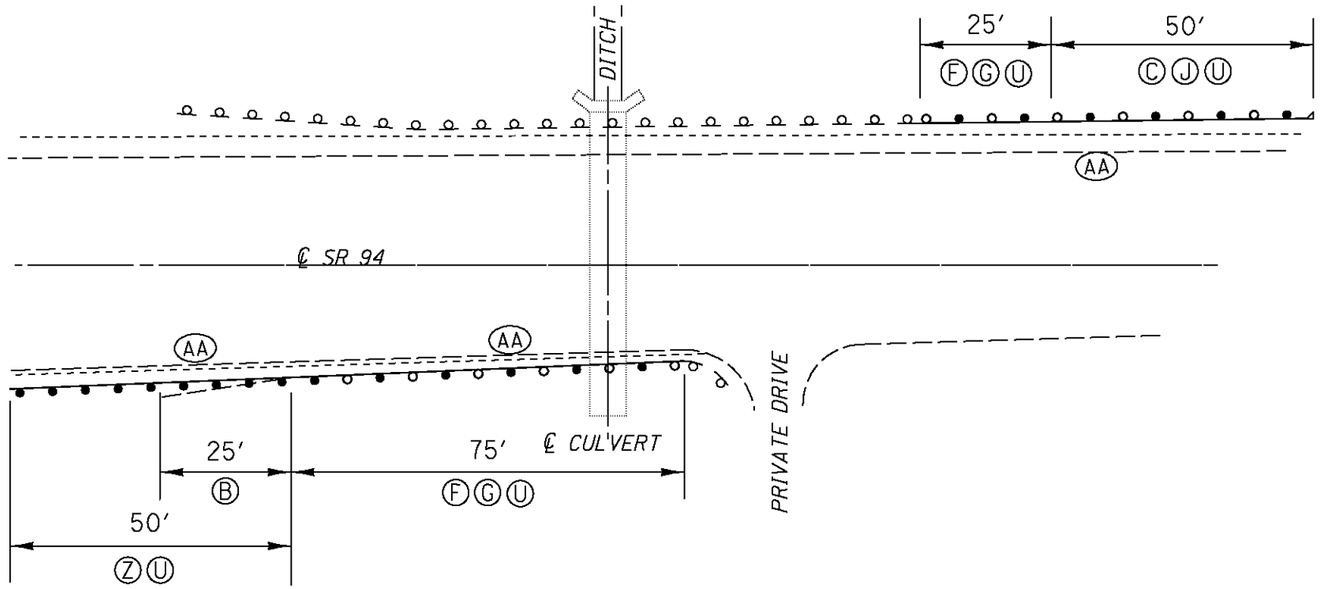
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-12.36

MED-57-3.24
MED-94-10.37

24
70

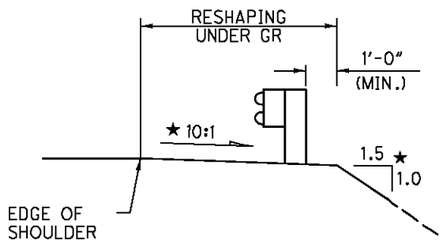
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓑ	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		1	1
Ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	EACH	1		1
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	25	75	100
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.75	1.25	2.00
Ⓩ	606	ANCHOR ASSEMBLY, TYPE E	EACH		1	1
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	25	75	100
Ⓙ	606	ANCHOR ASSEMBLY REBUILT, TYPE E	EACH	1		1
ⒶⒶ	626	BARRIER REFLECTOR	EACH	1	2	3

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

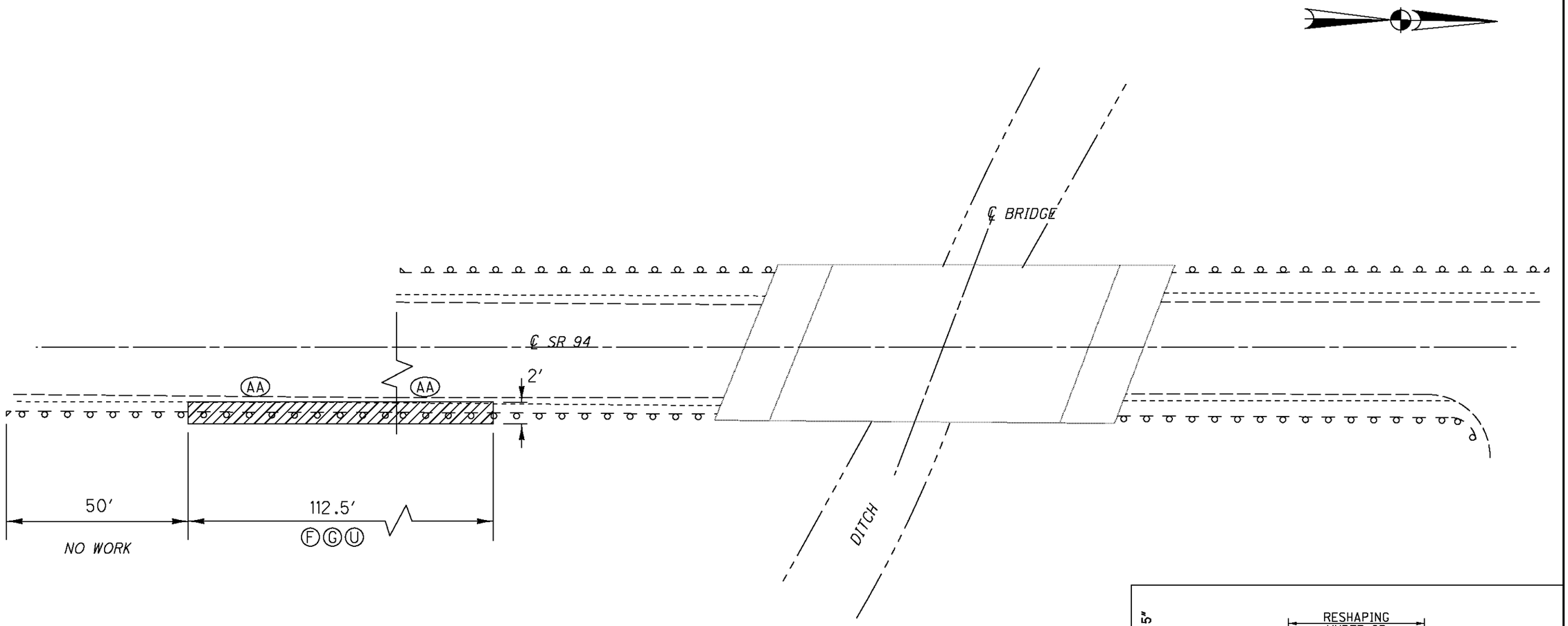
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-12.68

MED-57-3.24
MED-94-10.37

25
70

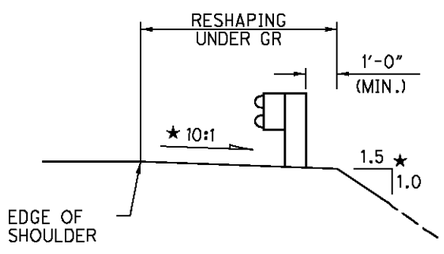
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODEL NAME: Design
WORKSTATION: nfoster DATE: 8/27/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.		112.5	112.5
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.		8.5	8.5
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.		1.13	1.13
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.		112.5	112.5
ⒶⒶ	626	BARRIER REFLECTOR	EACH		2	2

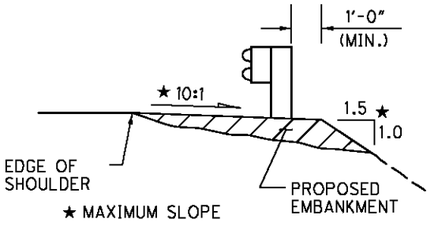
ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

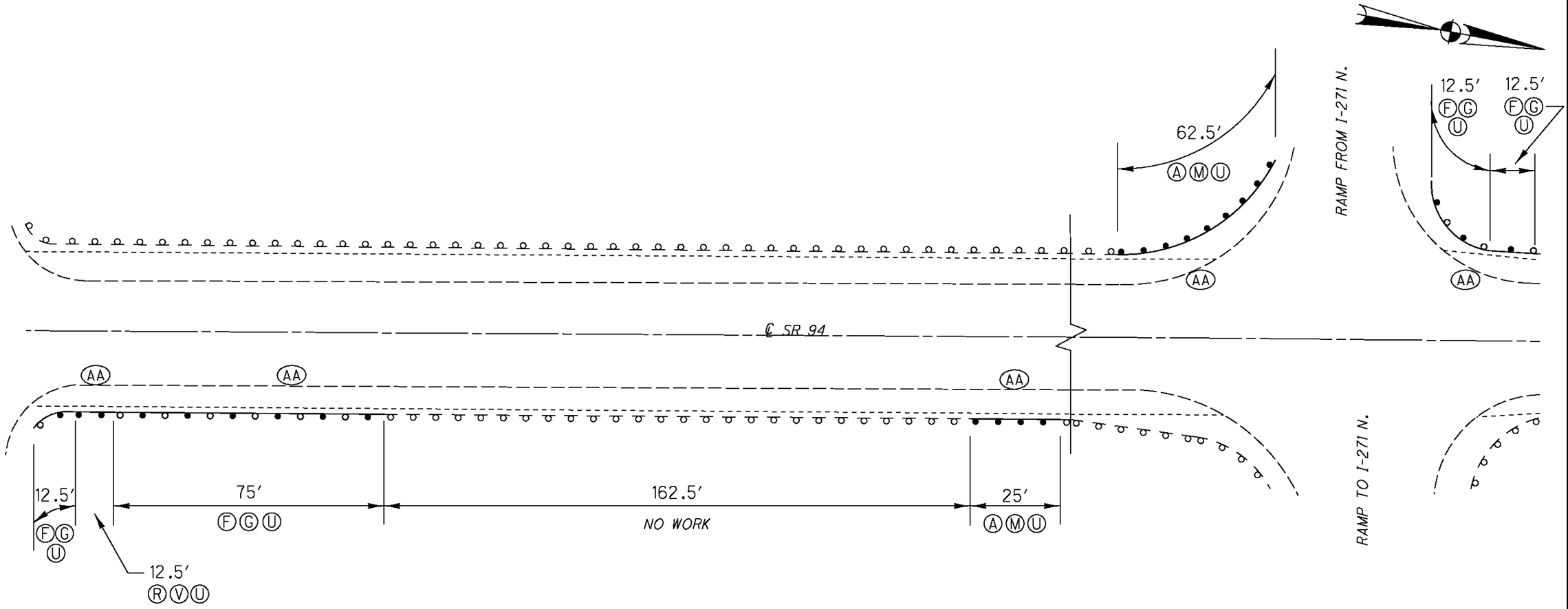
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-13.14

MED-57-3.24
MED-94-10.37

26
70

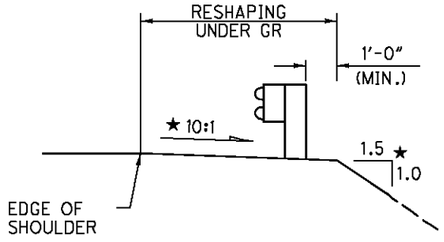
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT.	62.5	25	87.5
(F)	202	GUARDRAIL REMOVED FOR REUSE	FT.	25	87.5	112.5
(R)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(U)	209	RESHAPING UNDER GUARDRAIL	STA.	0.88	1.25	2.13
(M)	606	GUARDRAIL, TYPE 5	FT.	62.5	25	87.5
(G)	606	GUARDRAIL REBUILT, TYPE 5	FT.	25	87.5	112.5
(V)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(AA)	626	BARRIER REFLECTOR	EACH	2	3	5

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



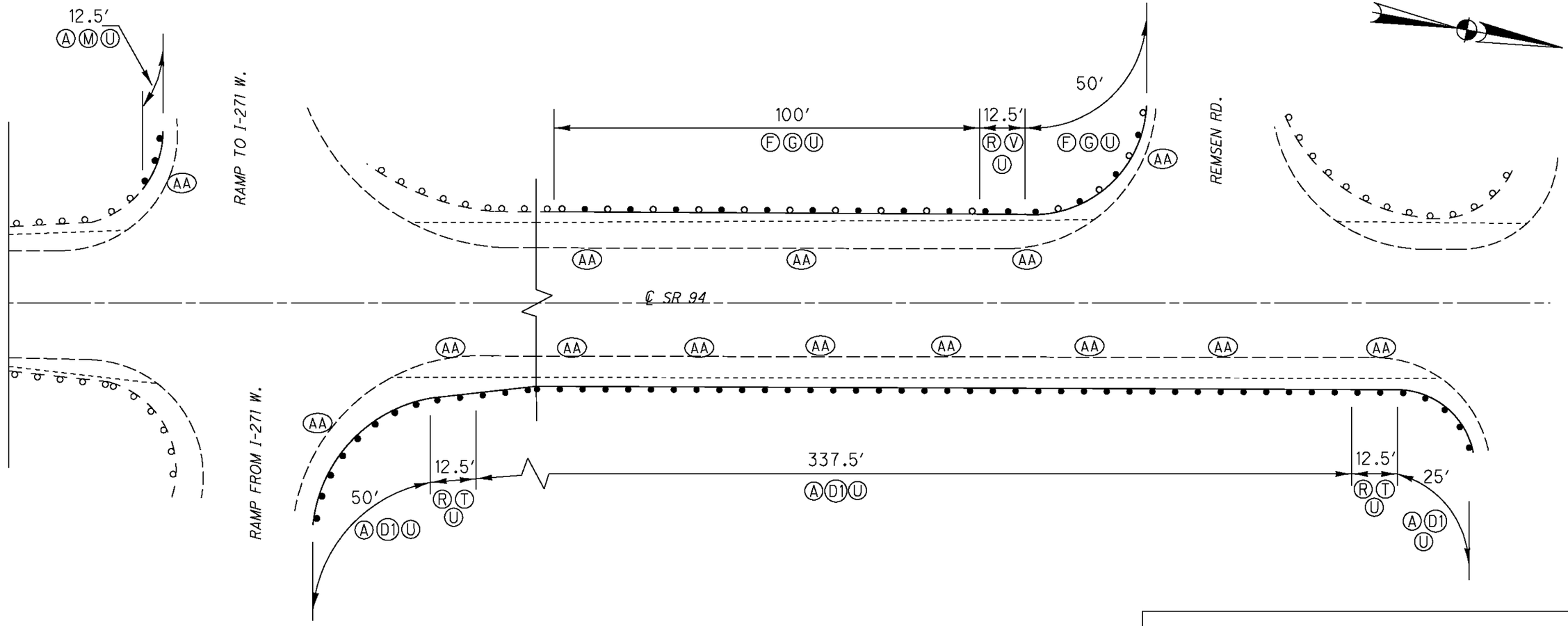
★ MAXIMUM SLOPE

CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-14.55

MED-57-3.24
MED-94-10.37

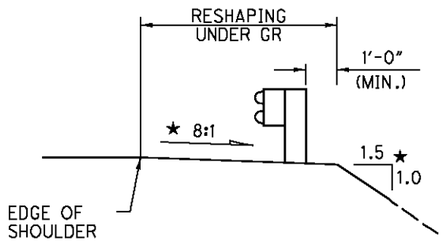
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓐ	202	GUARDRAIL REMOVED	FT.	12.5	412.5	425
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT.	150		150
Ⓡ	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1	2	3
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	1.75	4.38	6.13
Ⓜ	606	GUARDRAIL, TYPE 5	FT.	12.5		12.5
Ⓓ1	606	GUARDRAIL, TYPE MGS	FT.		412.5	412.5
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT.	150		150
Ⓥ	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
Ⓣ	606	ANCHOR ASSEMBLY, MGS TYPE T	EACH		2	2
AA	626	BARRIER REFLECTOR	EACH	5	9	14

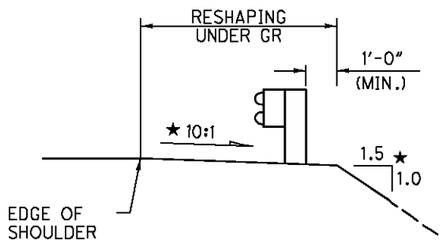
ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE MGS"



★ MAXIMUM SLOPE

TYPICAL SECTION "TYPE 5"



★ MAXIMUM SLOPE

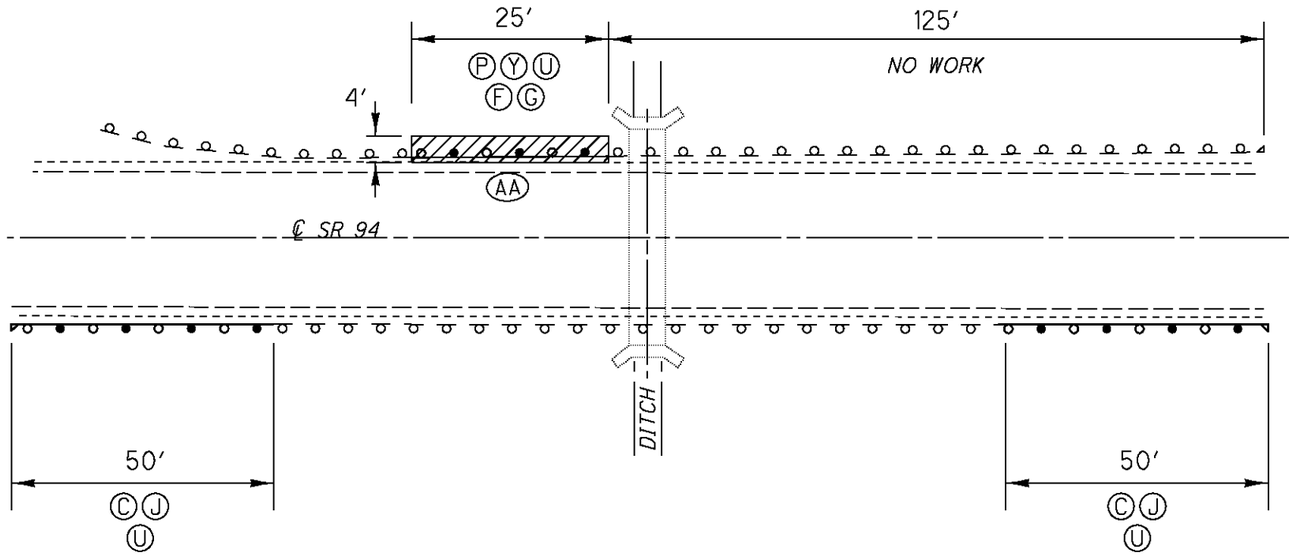
CALCULATED CJC
CHECKED CAD

GUARDRAIL DETAIL
MED-94-14.55 (CONTINUED)

MED-57-3.24
MED-94-10.37

28
70

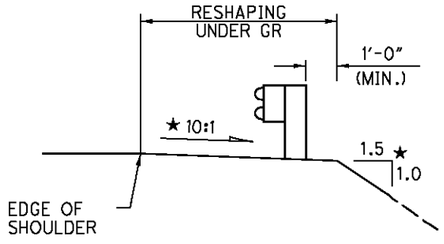
DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014



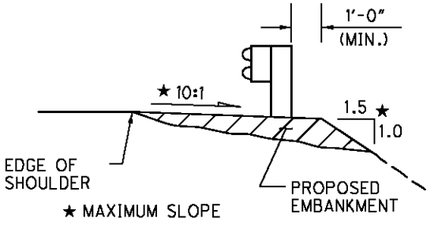
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL QUANTITY
				Left	RIGHT	
Ⓕ	202	GUARDRAIL REMOVED FOR REUSE	FT	25		25
Ⓒ	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	EACH		2	2
Ⓟ	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1		1
▨	203	EMBANKMENT, AS PER PLAN	CU. YD.	22		22
Ⓤ	209	RESHAPING UNDER GUARDRAIL	STA.	0.25	1	1.25
Ⓖ	606	GUARDRAIL REBUILT, TYPE 5	FT	25		25
Ⓙ	606	ANCHOR ASSEMBLY REBUILT, TYPE E	EACH		2	2
Ⓨ	606	BRIDGE TERMINAL ASSEMBLY REBULIT, TYPE 4	EACH	1		1
Ⓐ Ⓐ	626	BARRIER REFLECTOR	EACH	1	2	3

ALL QUANTITIES CARRIED TO THE GUARDRAIL SUB-SUMMARY SHEET.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "TYPE 5"

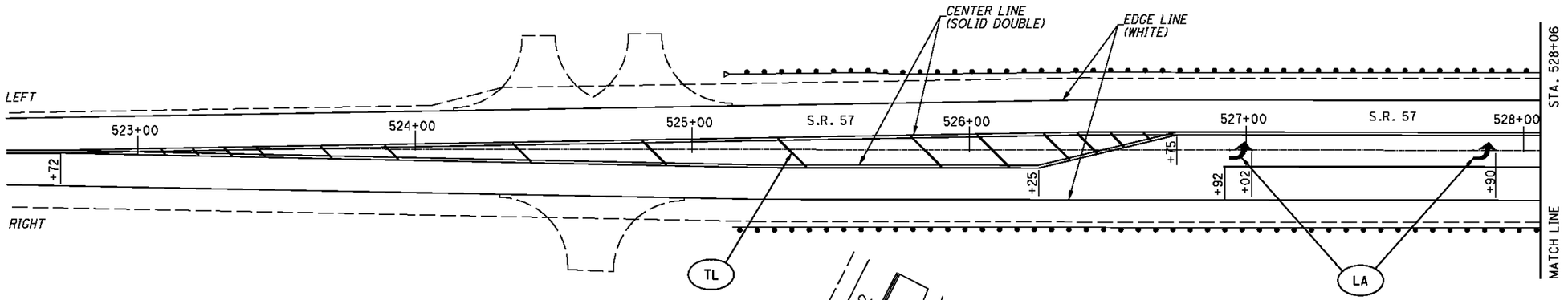


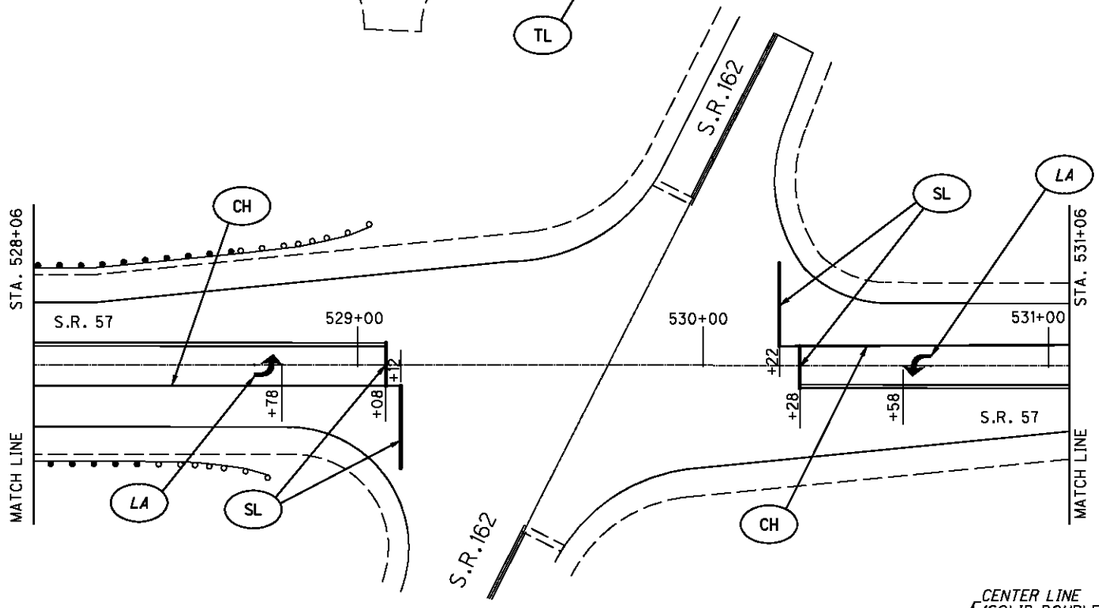
CALCULATED CJC
CHECKED CAD

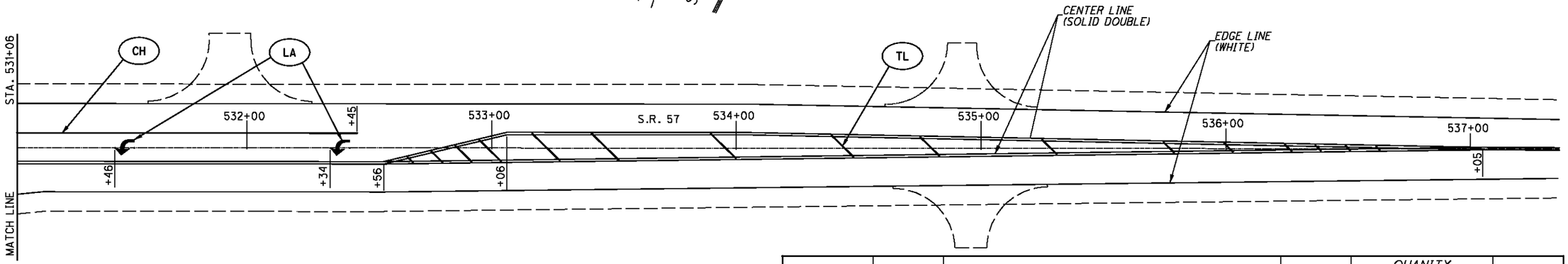
GUARDRAIL DETAIL
MED-94-14.80

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\roadway\sheets\93113GR001.dgn
WORKSTATION: nfoster
MODELNAME: Design
DATE: 9/16/2014







LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY		TOTAL
				LEFT	RIGHT	
SR 57						
(CH)	644	CHANNELIZING LINE	FT	223	220	443
(LA)	644	LANE ARROW (LEFT)	EACH	3	3	6
(SL)	644	STOP LINE	FT	36	36	72
(TL)	644	TRANSVERSE LINE (YELLOW)	FT	215		215

ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

CALCULATED CJC CHECKED CAD

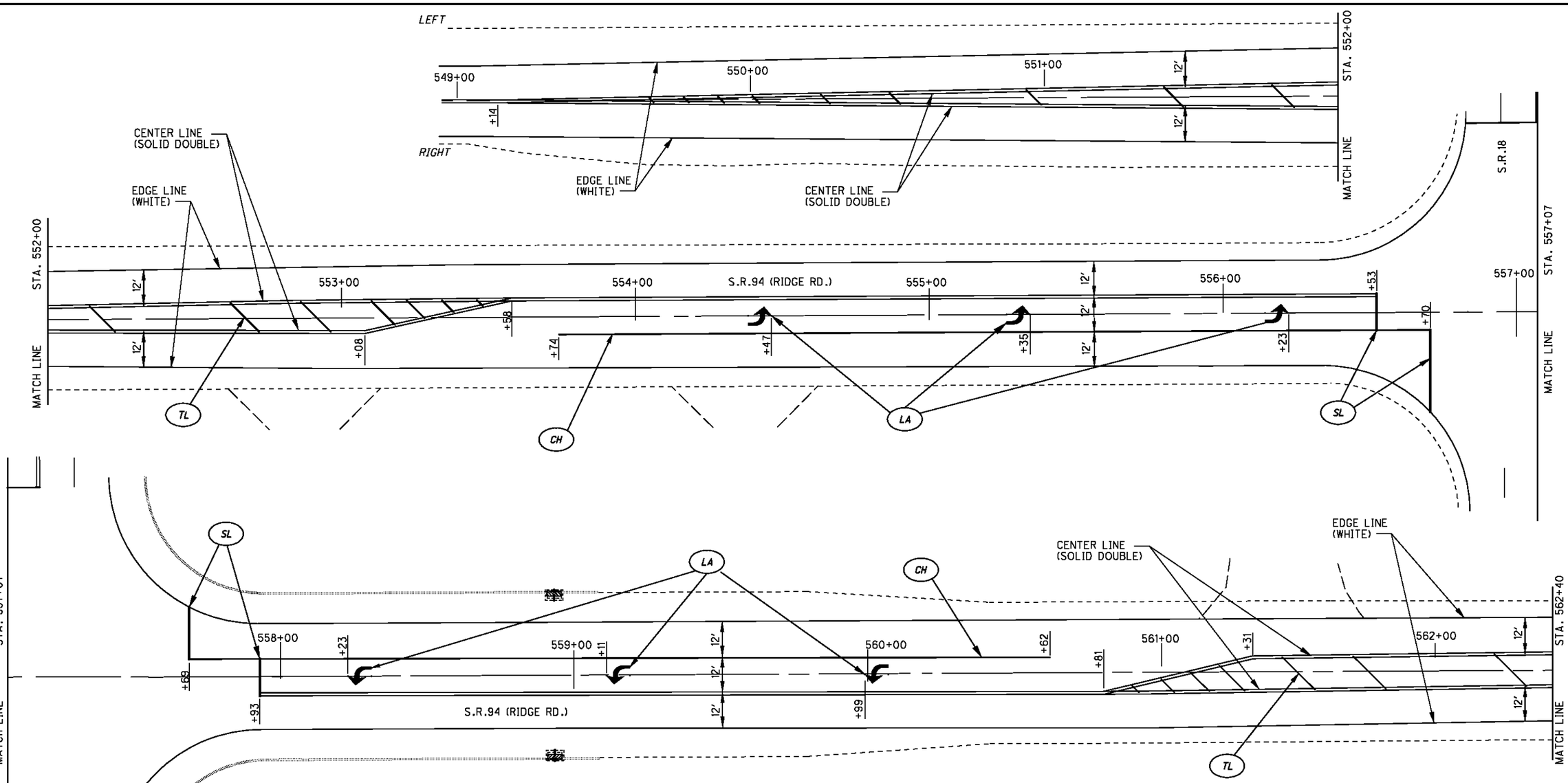
0 10 20 40 HORIZONTAL SCALE IN FEET

PAVEMENT MARKING DETAIL AT S.R.57 S.R. 162

MED-57-3.24
MED-94-10.37

30
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113TS002.dgn MODELNAME: Design
WORKSTATION nfoster DATE: 8/27/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY		TOTAL
				LEFT	RIGHT	
SR 94						
(CH)	644	CHANNELIZING LINE	FT	293	296	589
(LA)	644	LANE ARROW (LEFT)	EACH	3	3	6
(SL)	644	STOP LINE	FT	30	40	70
(TL)	644	TRANSVERSE LINE (YELLOW)	FT	220		220

ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

CALCULATED CJC CHECKED CAD

0 10 20 40 HORIZONTAL SCALE IN FEET

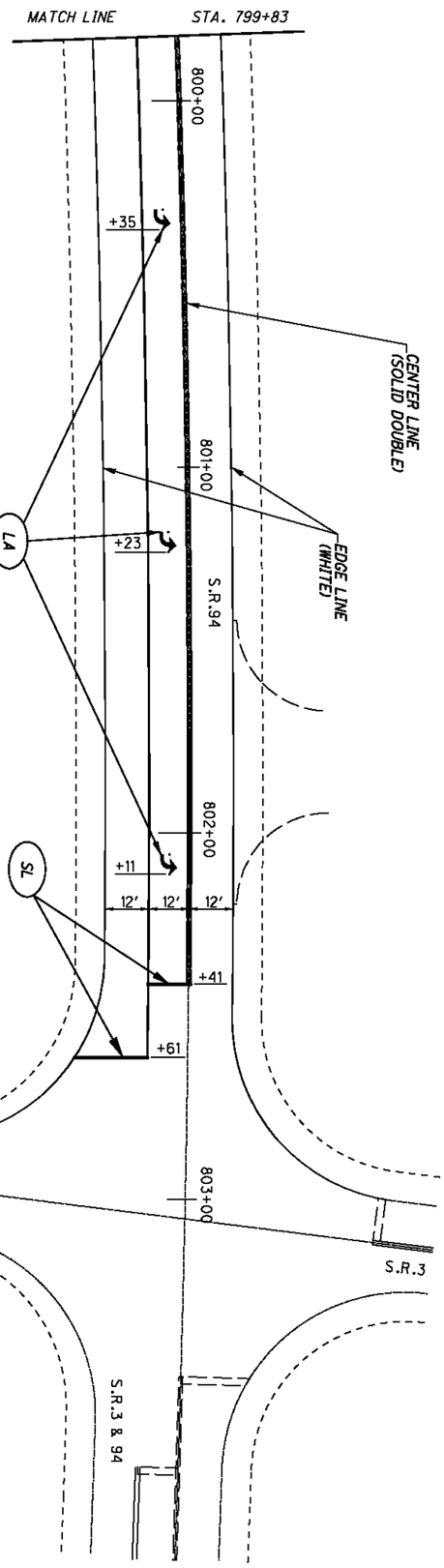
PAVEMENT MARKING DETAIL
S.R. 94 AT S.R. 18

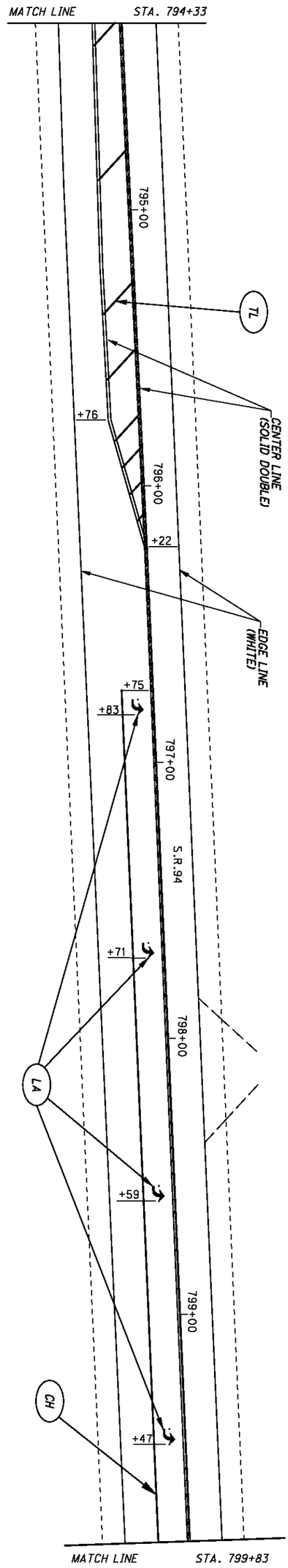
MED-57-3.24
MED-94-10.37

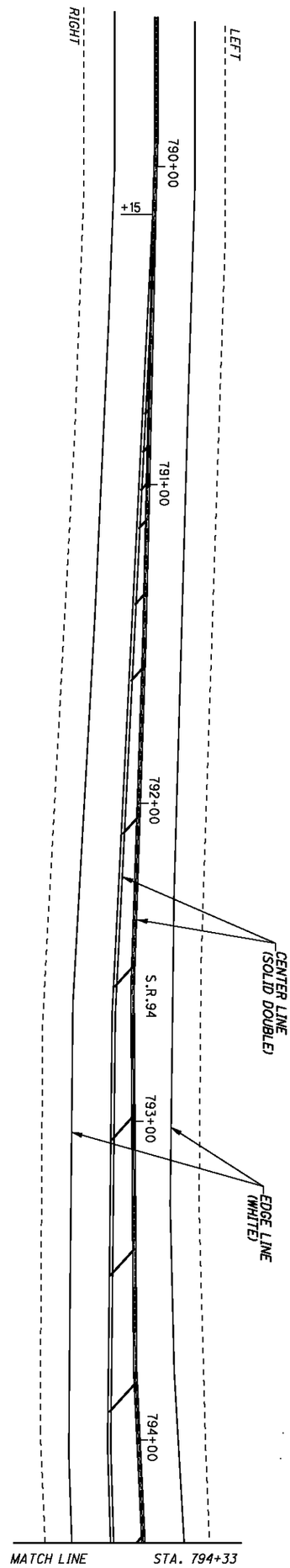
31
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113TS003.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design

DESIGN FILE: I:\projects\93113\roadway\sheets\93113TS004.dgn
WORKSTATION nfoster DATE: 8/27/2014 MODELNAME: Design







LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY LEFT	QUANITY RIGHT	TOTAL
SR 94	644	CHANNELIZING LINE	FT		586	586
(CH)	644	LANE ARROW (LEFT)	EACH		7	7
(LA)	644	STOP LINE	FT		32	32
(SL)	644	TRANSVERSE LINE (YELLOW)	FT	140		140
(TL)	644					

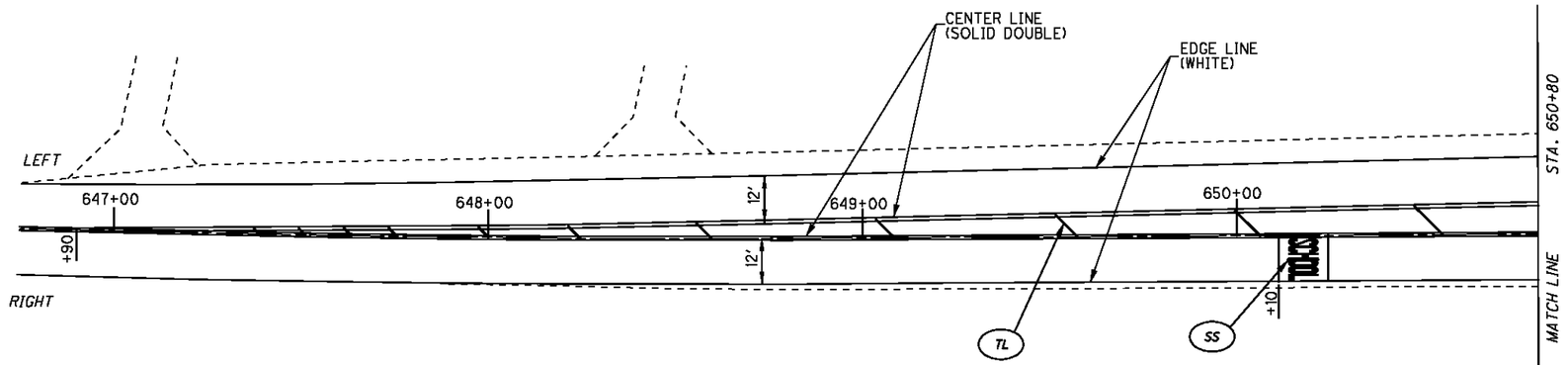
ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

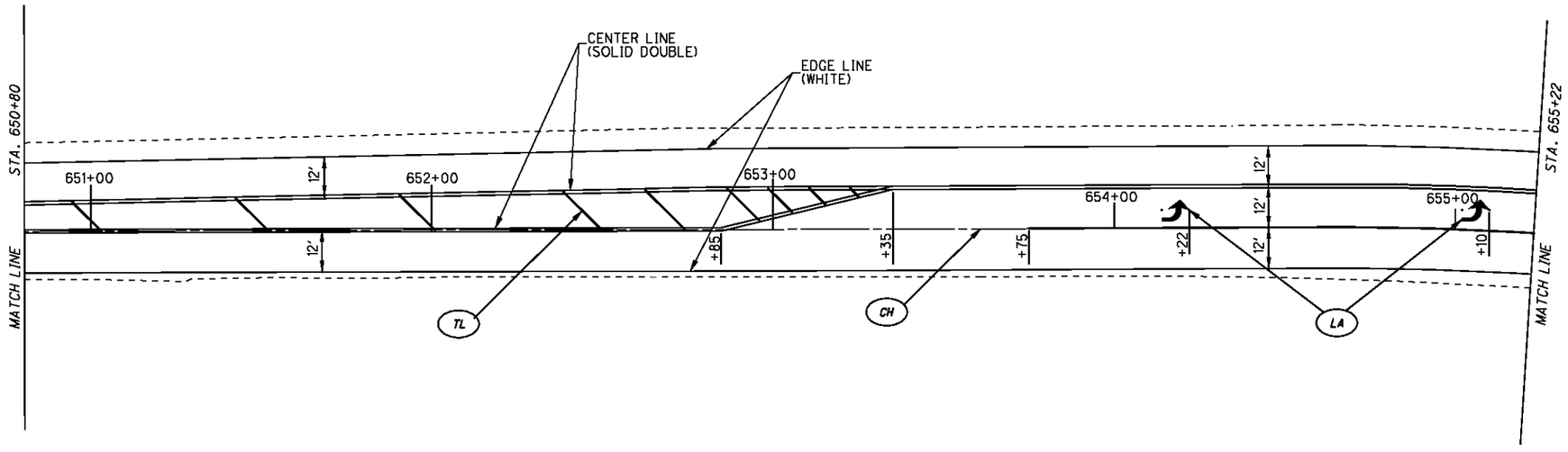
MED-57-3.24
MED-94-10.37

PAVEMENT MARKING DETAIL
S.R. 94 AT S.R. 3

0 20
10 40
HORIZONTAL SCALE IN FEET

CALCULATED CJC
CHECKED CAD





LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY		TOTAL
				LEFT	RIGHT	
SR 94						
(CH)	644	CHANNELIZING LINE	FT		147	147
(LA)	644	LANE ARROW (LEFT)	EACH		2	2
(SS)	644	SCHOOL SYMBOL	EACH		1	1
(TL)	644	TRANSVERSE LINE (YELLOW)	FT	137		137

ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CJC
CHECKED CAD

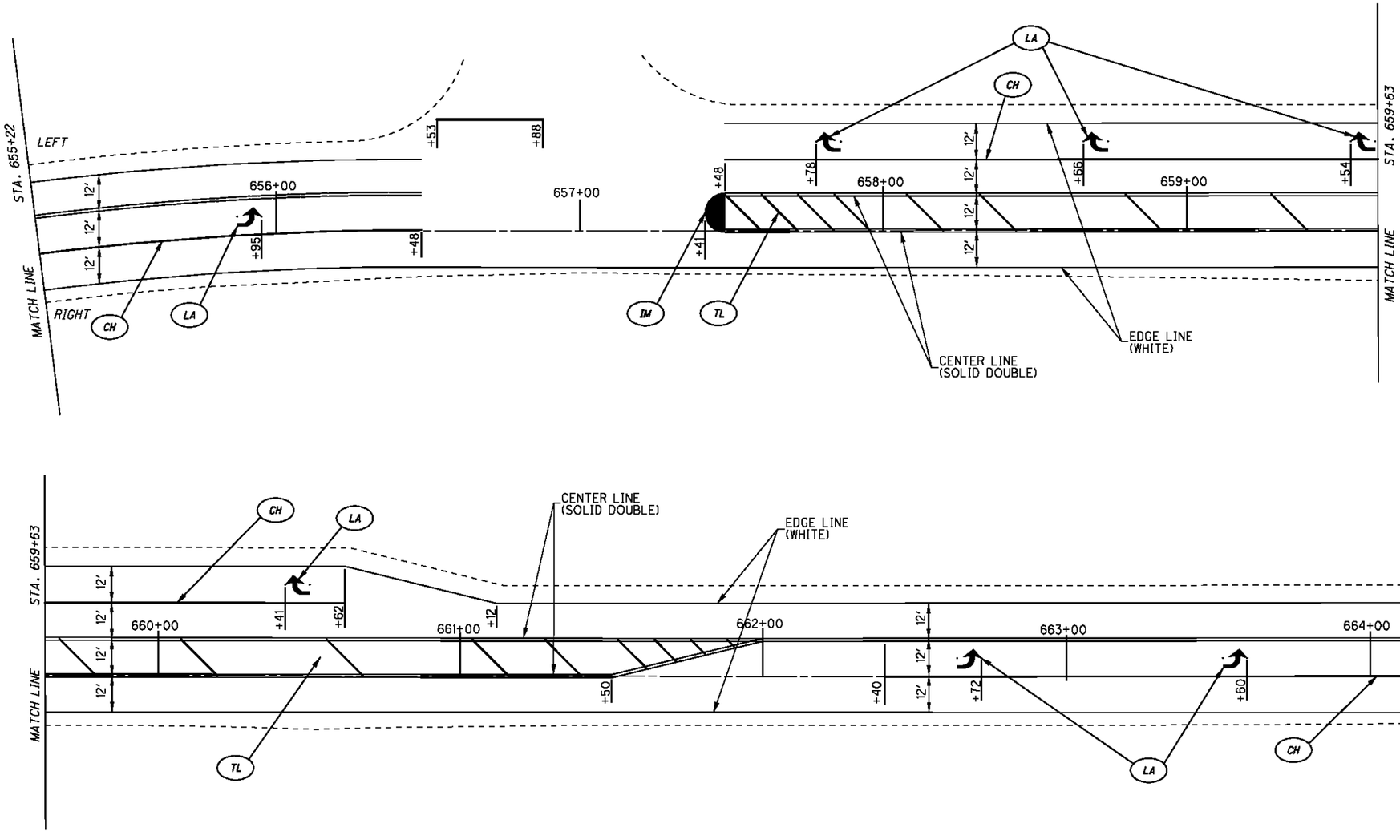
PAVEMENT MARKING DETAIL
S.R. 94 AT HIGHLAND HIGH SCHOOL

MED-57-3.24
MED-94-10.37

1 / 3

33 / 70

DESIGN FILE: ii:\projects\93113\roadway\sheets\93113TS005.dgn MODELNAME: Design
WORKSTATION nfoster DATE: 8/27/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY		TOTAL
				LEFT	RIGHT	
SR 94						
(CH)	644	CHANNELIZING LINE	FT	313	311	624
(LA)	644	LANE ARROW (LEFT)	EACH		3	3
(LA)	644	LANE ARROW (RIGHT)	FT	4		4
(SL)	644	STOP LINE	FT	35		35
(TL)	644	TRANSVERSE LINE (YELLOW)	FT	213		213
(IM)	644	ISLAND MARKER (YELLOW)	SQ FT	57		57

ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CJC
CHECKED CAD

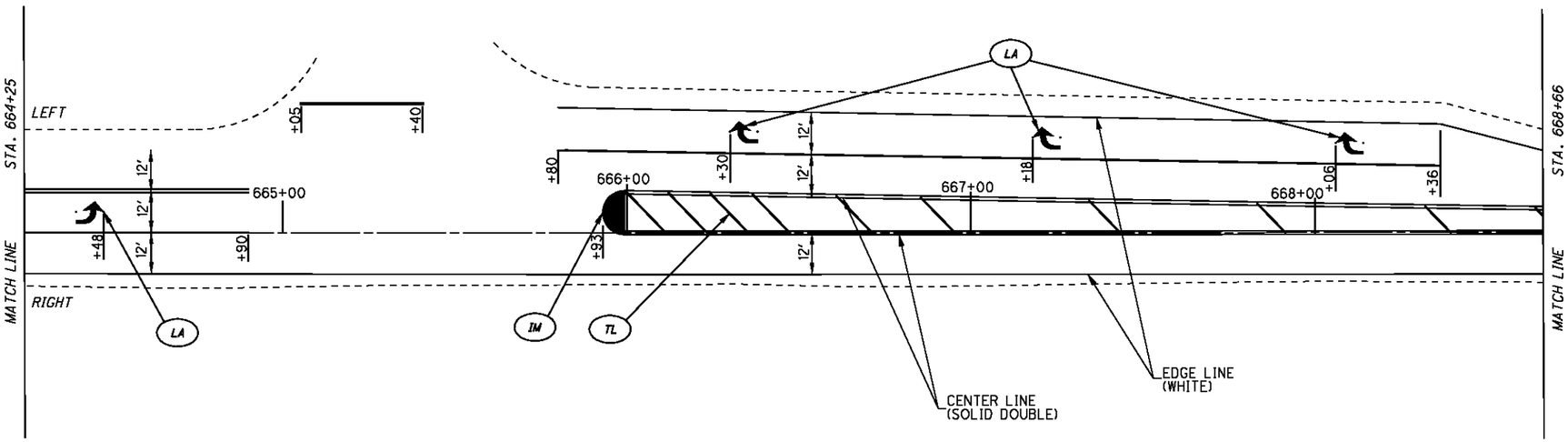
PAVEMENT MARKING DETAIL
S.R. 94 AT HIGHLAND HIGH SCHOOL

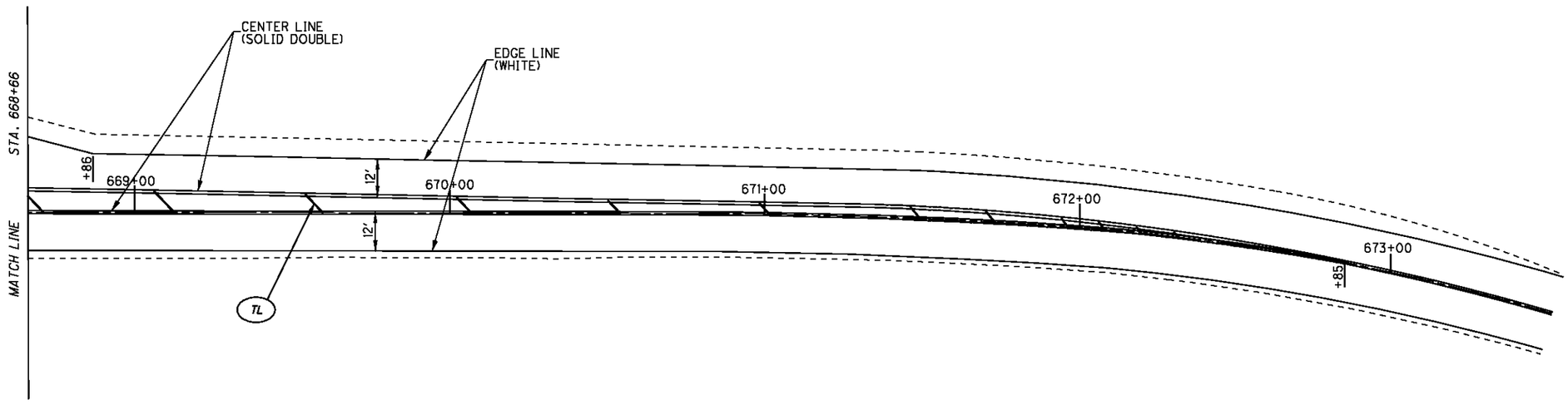
MED-57-3.24
MED-94-10.37

2 / 3

34
70

DESIGN FILE: ii:\projects\93113\roadway\sheets\93113TS005.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014





LOCATION	ITEM	DESCRIPTION	UNIT	QUANITY		TOTAL
				LEFT	RIGHT	
SR 94						
(CH)	644	CHANNELIZING LINE	FT	256	65	321
(LA)	644	LANE ARROW (LEFT)	EACH		1	1
(LA)	644	LANE ARROW (RIGHT)	EACH	3		3
(SL)	644	STOP LINE	FT	35		35
(TL)	644	TRANSVERSE LINE (YELLOW)	FT	151		151
(IM)	644	ISLAND MARKER (YELLOW)	SQ FT	57		57

ALL QUANTITIES CARRIED TO THE PAVEMENT MARKING/RPM SUB-SUMMARY SHEET.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CJC
CHECKED CAD

PAVEMENT MARKING DETAIL
S.R. 94 AT HIGHLAND HIGH SCHOOL

MED-57-3.24
MED-94-10.37

3 / 3

35
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113TS005.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design

AUXILIARY & LONG LINE MARKINGS

ROUTE	COUNTY	STATION / SLM FROM	STATION / SLM TO	HIGHWAY MILES	614 WORK ZONE LANE LINE, CLASS I, 642 PAINT	614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	644, (740.04) EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	644, (740.04) EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	644, (740.04) LANE LINE	644, (740.04) CENTER LINE SOLID LINE EQUIVALENT	644, (740.04) CENTER LINE TOTAL (PAY QUANTITY)	646 EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	646 EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	646 CENTER LINE SOLID LINE EQUIVALENT	646 CENTER LINE TOTAL (PAY QUANTITY)	644 AUXILIARY MARKINGS (740.04) CHANNELIZING LINE 6"	STOP LINE 24"	TRANSVERSE/ DIAGONAL LINE (YELLOW) 24"	ISLAND MARKING	SCHOOL SYMBOL MARKING 72 INCH	SCHOOL SYMBOL MARKING 96 INCH	PARKING LOT STALL MARKING	LANE ARROW LEFT	LANE ARROW RIGHT	LANE ARROW THROUGH	LANE ARROW COMBINATION	WORD ON PAVEMENT "ONLY" 72 INCH	WORD ON PAVEMENT "ONLY" 96 INCH	646 AUXILIARY MARKINGS STOP LINE 24"
		FROM	TO	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	MILE	MILE					FT	FT	FT	SQ FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT
01/STR/PV																														
SR 57	MED	3.79(R)	3.84(R)	0.025		0.05			0.05			0.03	0.03						246											
SR 57	MED	3.84	9.00	5.160		10.32			10.32			8.55	5.16																	
SR 94	MED	10.37	11.75	1.380		4.14	1,767	186	2.76			2.08	1.38					589	70	220					6					
SR 94	MED	12.06	13.14	1.080		3.24	3,276		2.16			2.28	1.08					1,092	44	501	114		2							
STRUCTURE MED-94-1314		13.14	13.15	0.010										0.02		0.01	0.01													
SR 94	MED	13.15	15.22	2.070		6.21	1,758	96	4.14	0.02		3.76	2.07					586	339	140					13	7				
02/S<2/PV																														
STRUCTURE MED-57-0324		3.24(R)	3.29(R)	0.025										0.05		0.03	0.03													12
SR 57	MED	3.29(R)	3.49(R)	0.100		0.20		72	0.20			0.10	0.10																	
SR 57	MED	3.49	3.58	0.090		0.18			0.18			0.14	0.09																	
SR 57	MED	3.58(R)	3.79(R)	0.105		0.21			0.21			0.21	0.11																	
STRUCTURE MED-57-0900		9.00	9.07	0.070										0.14		0.07	0.07													
SR 57	MED	9.07	10.39	1.320		2.64	886	156	2.64			4.99	1.32					443	100	215					6					
03/S<2/PV/WADS																														
SR 57	MED	3.29(L)	3.49(L)	0.100		0.20																								
SR 57	MED	3.58(L)	3.84(L)	0.130		0.26																								
04/S<2/PV/WADS																														
STRUCTURE MED-57-0324		3.24(L)	3.29(L)	0.025										0.05		0.03	0.03													
SR 57	MED	3.29(L)	3.49(L)	0.100					0.20			0.10	0.10						12											
SR 57	MED	3.58(L)	3.84(L)	0.130					0.26			0.20	0.13																	
06/IMS/BR																														
ADD. QUAN. FOR MED-57-0324 STR. WORK				0.066					0.13			0.07	0.07					100	24						2					
TOTALS TO GENERAL SUMMARY				**11.690**		**27.65**	**7,687**	**510**	**23.25**	**0.02**		**22.50**	**11.63**	**0.26**		**0.14**	**0.14**	**2,810**	**835**	**1,076**	**114**		**2**		**27**	**7**				**12**

RAISED PAVEMENT MARKERS

ROUTE	COUNTY	STATION/SLM FROM	STATION/SLM TO	DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR TYPES ONE-WAY WHITE	TWO-WAY YELLOW / YELLOW	TWO-WAY WHITE / RED	TWO-WAY YELLOW / RED	TWO-WAY BLUE / BLUE	REMARKS
		FROM	TO		EACH	EACH	EACH					
01/STR/PV												
SR 057	MED	3.79	4.56	GAP	50	50		50				CONTINUOUS ROUTE TREATMENT
SR 057	MED	4.56	5.17	15	28	28		28				CURVE
SR 057	MED	5.17	5.84	GAP	44	44		44				CONTINUOUS ROUTE TREATMENT
SR 057	MED	5.84	6.16	6	54	54	32	22				STOP APPROACHES @ RIVER STYX ROAD
SR 057	MED	6.16	6.54	15	58	58		58				CURVE
SR 057	MED	6.54	9.00	GAP	163	163		163				CONTINUOUS ROUTE TREATMENT
SR 094	MED	10.37	10.55	6	34	34	16	11	7			STOP APPROACH @ SR 18 (SOUTH APPR)
SR 094	MED	10.55	10.75	6	27	27	16	11				STOP APPROACH @ SR 18 (NORTH APPR)
SR 094	MED	10.75	11.75	GAP	74	74		74				CONTINUOUS ROUTE TREATMENT
SR 094	MED	12.06	12.86	16	124	124		124				SERIES OF CURVES @ 20 FT. SPACINGS
SR 094	MED	12.86	15.22	GAP	156	156		156				CONTINUOUS ROUTE TREATMENT
02/S<2/PV												
SR 057	MED	3.24	3.79	GAP	25	25		25				CONTINUOUS ROUTE TREATMENT
SR 057	MED	9.00	9.87	GAP	57	57		57				CONTINUOUS ROUTE TREATMENT
SR 057	MED	9.87	10.19	8	22	22		22				THRU APPROACHES @ SR 162
SR 057	MED	10.19	10.39	GAP	16	16		16				CONTINUOUS ROUTE TREATMENT
TOTAL (01/STR/PV):					812	812						
TOTAL (02/S<2/PV):					120	120						
TOTALS TO GENERAL SUMMARY					**932**	**932**						

DETAIL	DESCRIPTION
1	MULTILANE UNDIVIDED TYPICAL SPACING
2	TAPERED ACCEL. LANE
3	DECELERATION LANE
4	PARALLEL ACCEL LANE
5	MULTILANE DIVIDED/EXPRESSWAY
6	STOP APPROACH
7	2 LANE APPR. WITH TURN LANE
8	THROUGH APPROACH
9	3 LANE APPR. WITH TURN LANE
10	3 LANE DIVIDED TO 2 LANE TRANSITION
11	3 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LNAE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
18	FIRE HYDRANT
GAP	CENTER LINE AT 80 FT. TYP.

NOTES

1) THRU LANES SHALL BE 12 FT WIDE AND STRIPED ACCORDING TO CMS 641.08A.

2) FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.

3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:

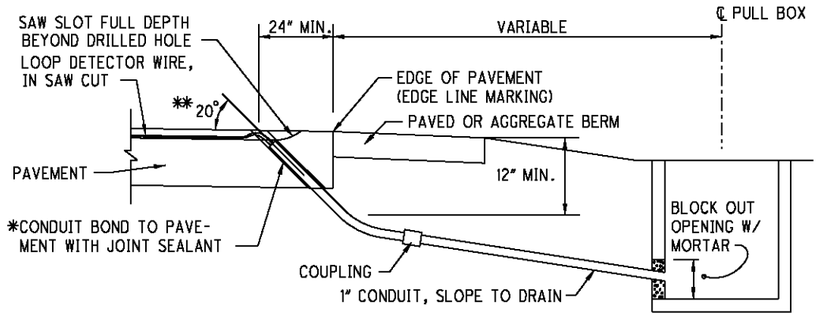
SR 57 AND IR-76 INTERCHANGE
SR 57 AND SR 162
SR 94 AND SR 18
SR 94 AND SR 3

CALCULATED CJC CHECKED CAD

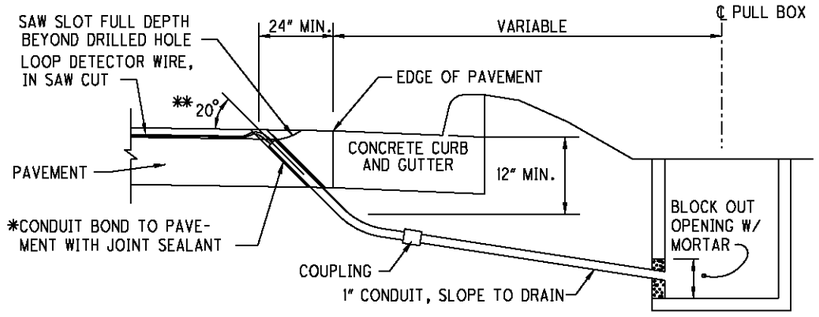
PAVEMENT MARKING / RPM SUB-SUMMARY

MED-57-3.24
MED-94-10.37

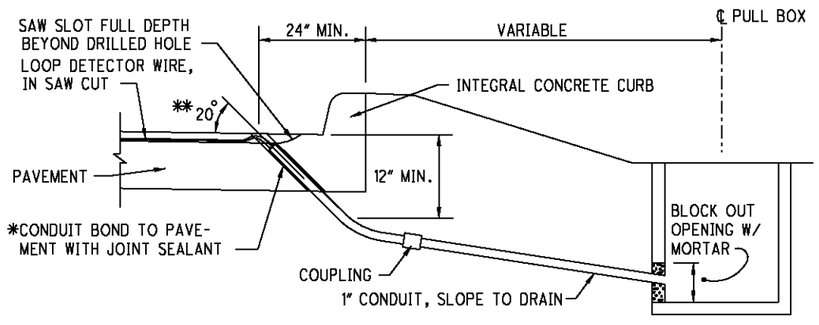
DESIGN FILE: i:\projects\93113\roadway\sheets\93113TS001.dgn
WORKSTATION: nfoster
MODEL NAME: Design
DATE: 8/27/2014



DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



DRILLED HOLE LOCATION DETAIL WITH CONCRETE CURB AND GUTTER

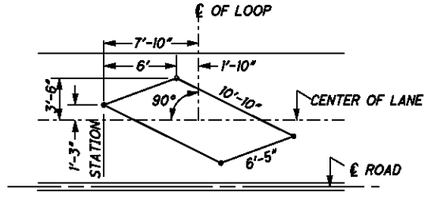


DRILLED HOLE LOCATION DETAIL WITH INTEGRAL CONCRETE CURB

*CONDUIT SHALL BE 1" DIAMETER 725.04.

** THE RANGE OF THIS ANGLE SHALL BE FROM 15 TO 30 DEGREES.

NOTE: SEE STANDARD DRAWING TC-82.10 FOR ADDITIONAL NOTES AND DETAILS



ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL FOR LANE WIDTH 11' & LARGE

ITEM 632- DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF ITEM 632, DETECTOR LOOP, AS PER PLAN, HAS BEEN PROVIDED FOR THE PURPOSE OF REPLACING DAMAGED DETECTOR LOOPS AND/OR UPGRADING DETECTOR LOOPS TO IMPROVE MOTORCYCLE DETECTION. IT IS IMPERATIVE THAT REPLACEMENT OF DETECTOR LOOPS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT DETECTOR LOOPS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE EXISTING DETECTOR LOOPS.

THE CONTRACTOR SHALL NOTIFY MATT BLANKENSHIP, ODOT DISTRICT 3 ROADWAY SERVICES MANAGER, (PHONE 419-207-7045) 5 WORKING DAYS IN ADVANCE OF ANY PLANING OPERATIONS OR PAVEMENT REPAIR WORK. THIS NOTIFICATION IS NEEDED FOR DISTRICT 3 TO SCHEDULE TEMPORARY SIGNAL TIMING MODIFICATIONS FOR THE TIME PERIOD WHEN THE DETECTOR LOOPS ARE OUT OF OPERATION. THE CONTRACTOR SHALL THEN RENOTIFY MR. BLANKENSHIP WITHIN 2 WORKING DAYS AFTER THE NEW DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS.

IN ADDITION, THE CONTRACTOR SHALL ALSO NOTIFY CRAIG DEVORE, ODOT DISTRICT 3 PLANNING AND ENGINEERING DEPT. (PHONE 419-207-7169) WHEN THE NEW LOOPS ARE INSTALLED.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF A DISINCENTIVE FEE OF $500.00 PER DAY TO THE CONTRACTOR FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW DETECTOR LOOPS SHALL BE PLACED PER THE PLAN DETAILS AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE AFFECTED AREAS. THE DETECTOR LOOPS SHALL NOT BE CUT INTO THE SURFACE COURSE.

IN ADDITION TO THE REQUIREMENTS OF CMS 632.11, THE CONTRACTOR SHALL PROVIDE A POSITIVE AND EFFECTIVE MEANS FOR REMOVAL OF SOLID RESIDUE RESULTING FROM THE DRY SAW BLADE CUTTING OF LOOP DETECTOR SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER EFFECTIVE MEANS, BEFORE IT IS BLOWN BY TRAFFIC ACTION OR WIND. RESIDUE FROM DRY CUTTING SHALL NOT BE REMOVED BY COMPRESSED AIR. AS AN ALTERNATE, THE CONTRACTOR MAY USE WET CUTTING.

LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN EPOXY ENCAPSULATED SPLICE ENCLOSURES SHALL BE JOINED BY AN APPROVED CONNECTOR AND SOLDERED PER CMS 632.23 & 725.15. ALL COSTS ASSOCIATED WITH THE SOLDERED SPLICE CONNECTION AND EPOXY SPLICE KIT SHALL BE INCLUDED WITH THE DETECTOR LOOP.

IF THE PULL BOX IS NOT SPECIFIED IN THE PLANS, THE SPLICE SHALL BE MADE IN THE FIRST ENTERED POLE OR PEDESTAL, EXCEPT WHERE THE CONTROLLER CABINET IS MOUNTED ON THE POLE OR PEDESTAL, IN WHICH CASE THE LOOP WIRES SHALL BE ROUTED DIRECTLY INTO THE CABINET UNLESS SPECIFIED DIFFERENTLY IN THE PLANS. LOOP DETECTOR WIRE ROUTED THROUGH CONDUIT, PULL BOXES, POLES, AND PEDESTALS SHALL BE TWISTED PER CMS 632.23.

FURNISH ALL MATERIALS ACCORDING TO THE DEPARTMENT'S QUALIFIED PRODUCTS LIST (QPL).

SEE DETAILS ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

(01/STR/PV):	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	*10 EACH*
(02/S<2/PV)	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	*4 EACH*
(03/S<2/PV/WADS)	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	*2 EACH*

CALCULATED CJC
CHECKED CAD

DETECTOR LOOP INSTALLATION DETAILS

MED-57-3.24
MED-94-10.37

DESIGN FILE:i:\projects\93113\roadway\sheets\93113TM001.dgn MODELNAME: Sheet
WORKSTATION:nfoster DATE:8/27/2014

SPAN WIRE MOUNTED SIGNS

(A) LEFT TURN YIELD ON GREEN

R10-12-24

MED-57-3.24/ MED-94-10.37 SUBSUMMARY			
ITEM	QTY.	UNIT	DESCRIPTION
632	10	EACH	DETECTOR LOOP, AS PER PLAN

ALL QUANTITIES CARRIED TO THE DETECTOR LOOP INSTALLATION DETAILS SHEET.

5" BACKPLATE W/ YELLOW REFLECTIVE TAPE BORDER PER CMS 732.22

(1)(4) (2)(5) (8)(9) (7)(10)

TYPICAL SIGNAL HEADS

BLACK POLYCARBONATE W/ 12" LED LAMPS

NOTE: VEH. SIGNAL HEAD NO.'S 3 & 6 ARE DESIGNATED FOR FUTURE USE.

LOOP DETECTOR CHART

LOOP	SIZE (FT)	NO. OF TURNS	MODE	DELAY (SEC.)	DETECTOR UNIT NO.	ASSOC. PHASE	COMMENTS
L-11	8X30	3	PRESENCE	2*	7	3	
L-12	8X30	3	PRESENCE	10*	8	8	
L-12A	8X20	3	PRESENCE	10*	8	8	
L-13	8X30	3	PRESENCE	2*	9	7	
L-14	8X30	3	PRESENCE	10*	10	4	
L-14A	8X20	3	PRESENCE	10*	10	4	
L-15	6X8	4	PULSE	2*	11	8	
L-16	6X8	4	PULSE	2*	12	8	
L-17	6X8	4	PULSE	2*	13	4	
L-18	6X8	4	PULSE	2*	14	4	

*INHIBIT DELAY DURING ASSOCIATED PHASE GREEN INTERVAL

(A) EX. 3" CONDUIT: 14-2/C
EX. 3" CONDUIT: 4-7/C

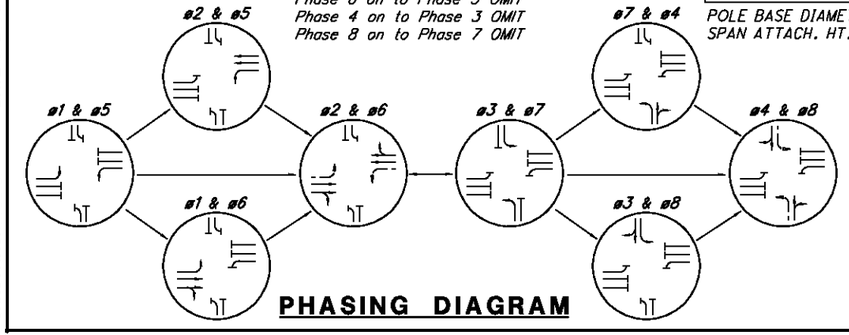
(B) EX. 1-1/2" CONDUIT: 4-2/c

(C) EX. 1-1/2" CONDUIT: 2-2/C
POWER CABLE.

(D) EX. 3" CONDUIT: 14-2/C LEAD-IN, 4-7/C SIGNAL CABLE, 2-3/C SIGNAL CABLE

EX. P.B. #8 18"x18" STA. 24+55, 26' LT.
EX. 1½" COND: 1-2/C
EX. P.B. #9 18"x18" STA. 23+03, 31' LT.
EX. 1½" COND: 2-2/C
EX. P.B. #10 18"x18" STA. 1982+16.5, 73' LT.
EX. CONTROLLER GROUND MOUNTED STA 1982+9.5, 69' LT
RIDGE RD.
L-17 L-18 L-13 L-14 L-14A L-11 L-12 L-15 L-16
S.R.94
POLE BASE DIAMETER = 13"
SPAN ATTACH. HT. = 29.0'
S.P. #1, DESIGN 10 W/ 30' LUMINAIRE BRACKET ARM STA. 1982+03, 66' LT.
EX. P.B. #11 24" STA. 1982+04, 57' LT.
EXISTING AERIAL POWER CABLE
EX. P.B. #1 18"x18" STA. 1977+95, 40' RT.
EX. P.B. #2 18"x18" STA. 1979+43, 40' RT.
EX. P.B. #3 16"x25" STA. 1982+14, 44' RT.
S.P. #2, DESIGN 10 STA. 1982+12.5, 66' RT.
POLE BASE DIAMETER = 13"
SPAN ATTACH. HT. = 29.3'
S.P. #3, DESIGN 10 STA. 1983+11.5, 74' LT.
POLE BASE DIAMETER = 13"
SPAN ATTACH. HT. = 29.8'
EX. P.B. #12 16"x25" STA. 1983+05, 60' LT.
EX. P.B. #13 18"x18" STA. 1983+58, 50' LT. 4"HP
EX. P.B. #14 18"x18" STA. 1985+75, 50' LT.
EX. P.B. #15 18"x18" STA. 1987+05, 50' LT.
EX. P.B. #16 18"x18" STA. 1989+93, 50' LT.
S.R. 18 MEDINA RD.
EX. 2" CONDUIT: 1-3/C & 5-2/C
EX. 2" COND.: 1-3/C & 4-2/C
EX. 3" CONDUIT: 1-3/C & 8-2/C
EX. 2" CONDUIT: 1-3/C & 2-2/C
EX. 2" COND. 1-3/C & 4-2/C
EX. 2" COND. 1-3/C & 2-2/C
EX. 1½" COND. 1-3/C
EX. SIGN FLASHER #2 STA. 1989+98, 56' LT.
EX. 3" C: 4-2/C
EX. 1½" COND 2-2/C
EX. 1½" COND. 1-2/C
EX. P.B. #4 16"x25" STA. 1983+03, 44' RT.
EX. P.B. #5 18"x18" STA. 19+07, 26' RT.
EX. P.B. #6 18"x18" STA. 16+98, 26' RT.
EX. P.B. #7 18"x18" STA. 15+50, 26' RT.
S.P. #4, DESIGN 10 W/ 20' LUMINAIRE BRACKET ARM STA. 1983+12.5, 64' RT.
POLE BASE DIAMETER = 13"
SPAN ATTACH. HT. = 30.0'
POWER SERVICE FOR STREET LIGHT ON SP#3
STA. 1982+60.76 ℄ SURVEY S.R. 18 = STA. 20+00.00 ℄ S.R. 94
1978+00 1980+00 1982+00 1983+00 1984+00 1986+00 1987+00 1990+00

NOTE:
Jumpers Installed on Front of Backpanel as Follows:
Phase 2 on to Phase 1 OMIT
Phase 6 on to Phase 5 OMIT
Phase 4 on to Phase 3 OMIT
Phase 8 on to Phase 7 OMIT



PHASING DIAGRAM

FLASHER OPERATION
YELLOW TO SR 18
RED TO SR 94
SIGNAL NO. MED-18-1861
INSTALLATION DATE 7/30/41
FILE NO. 0067
OSIS NO. 550

DATE	REVISIONS	DATE INSTALLED
11/27/07	REDRAWN PER REBUILD PROJ 312(05)	11/20/07
2/17/09	ADD UPS, NEW CONTROLLER, & MODIFIED SIGNAL HEAD LOCATIONS ON SR 18, PROJ 410(06)	3/23/09
9/13/10	PROJ 358(09)-INSTALLED BREAKAWAT TETHER CONNECTIONS	4/2/10
3/3/11	PROJ 332(10)-INSTALLED NEW SIGNAL HEADS & BACKPLATES	9/28/11
9/1/14	PID 93113 REPLACE EX. DETECTOR LOOPS	

OHIO DEPARTMENT OF TRANSPORTATION
ELECTRICAL INSTALLATION LOCATED AT
SR 18 and SR 94
SIGNAL NO. MED-18-1861
DISTRICT 3 COUNTY MEDINA
DRAWN KRB 11/07
1/1

HORIZONTAL SCALE IN FEET 0 10 20 40

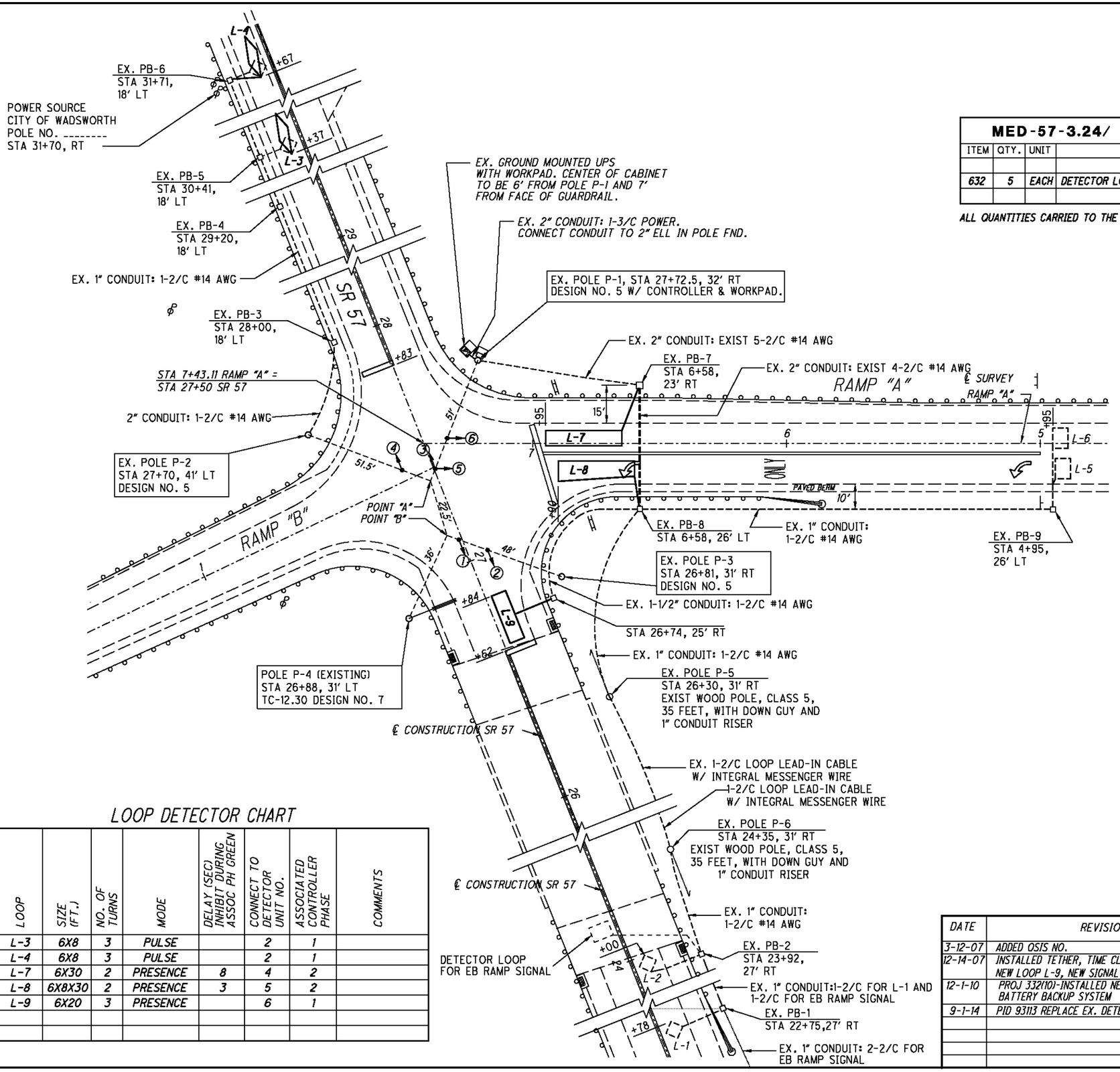
CALCULATED NRF CHECKED CAD

S.R. 94 AT S.R. 18
LOOP DETECTOR DETAILS

MED-57-3.24
MED-94-10.37

38
70

DESIGN FILE: i:\projects\93113\roadway\sheets\93113TM002.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014

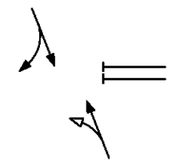
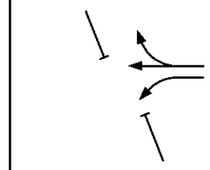


MED-57-3.24/ MED-94-10.37 SUBSUMMARY

ITEM	QTY.	UNIT	DESCRIPTION
632	5	EACH	DETECTOR LOOP, AS PER PLAN

ALL QUANTITIES CARRIED TO THE DETECTOR LOOP INSTALLATION DETAILS SHEET.

SIGNAL PHASING DIAGRAM

PHASE 1	PHASE 2
	

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TYPICAL SIGNAL HEAD

BLACK POLYCARBONATE W/ 12" LED LAMPS

LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC) INHIBIT DURING ASSOC PH GREEN	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-3	6X8	3	PULSE		2	1	
L-4	6X8	3	PULSE		2	1	
L-7	6X30	2	PRESENCE	8	4	2	
L-8	6X8X30	2	PRESENCE	3	5	2	
L-9	6X20	3	PRESENCE		6	1	

FLASHER OPERATION
YELLOW TO I-76
RED TO SR 57
SIGNAL NO. MED-76-7.72S
ROUTE TYPE 10
INSTALLATION DATE 4-3-95 PROJ. 284(93)
FILE NO. 3508
OSIS NO. 558

DATE	REVISION	DATE INSTALLED
3-12-07	ADDED OSIS NO.	
12-14-07	INSTALLED TETHER, TIME CLOCK SYNCHRONIZER, NEW LOOP L-9, NEW SIGNAL HEADS - PROJ. 410(06)	6-6-08
12-1-10	PROJ 332(10)-INSTALLED NEW SIGNAL HEADS AND BATTERY BACKUP SYSTEM	2-4-11
9-1-14	PID 93113 REPLACE EX. DETECTOR LOOPS	

OHIO DEPARTMENT OF TRANSPORTATION

ELECTRICAL INSTALLATION
LOCATED AT
I-76 WB RAMP @ S.R. 57
SIGNAL NO. MED-76-7.72S

DISTRICT 3 COUNTY MEDINA

APPROVED _____ DATE _____
ENGINEER OF TRAFFIC

DRAWING NO.

DESIGNED	DRAWN	REVISED	CHECKED	REVIEWED
RJR 6/94	RJR 6/94			

SHEET 1 OF 1

39
70

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED NRF
CHECKED CAD

S.R. 57 AT I-76 WB RAMP
LOOP DETECTOR DETAILS

MED-57-3.24
MED-94-10.37

DESIGN FILE:i:\projects\93113\roadway\sheets\93113TM003.dgn MODELNAME: Design
WORKSTATIONnfoster DATE:8/27/2014

MED-57-3.24/ MED-94-10.37 SUBSUMMARY

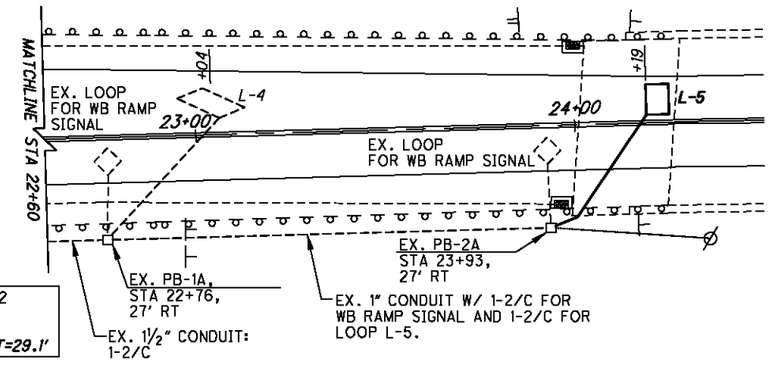
ITEM	QTY.	UNIT	DESCRIPTION
632	1	EACH	DETECTOR LOOP, AS PER PLAN

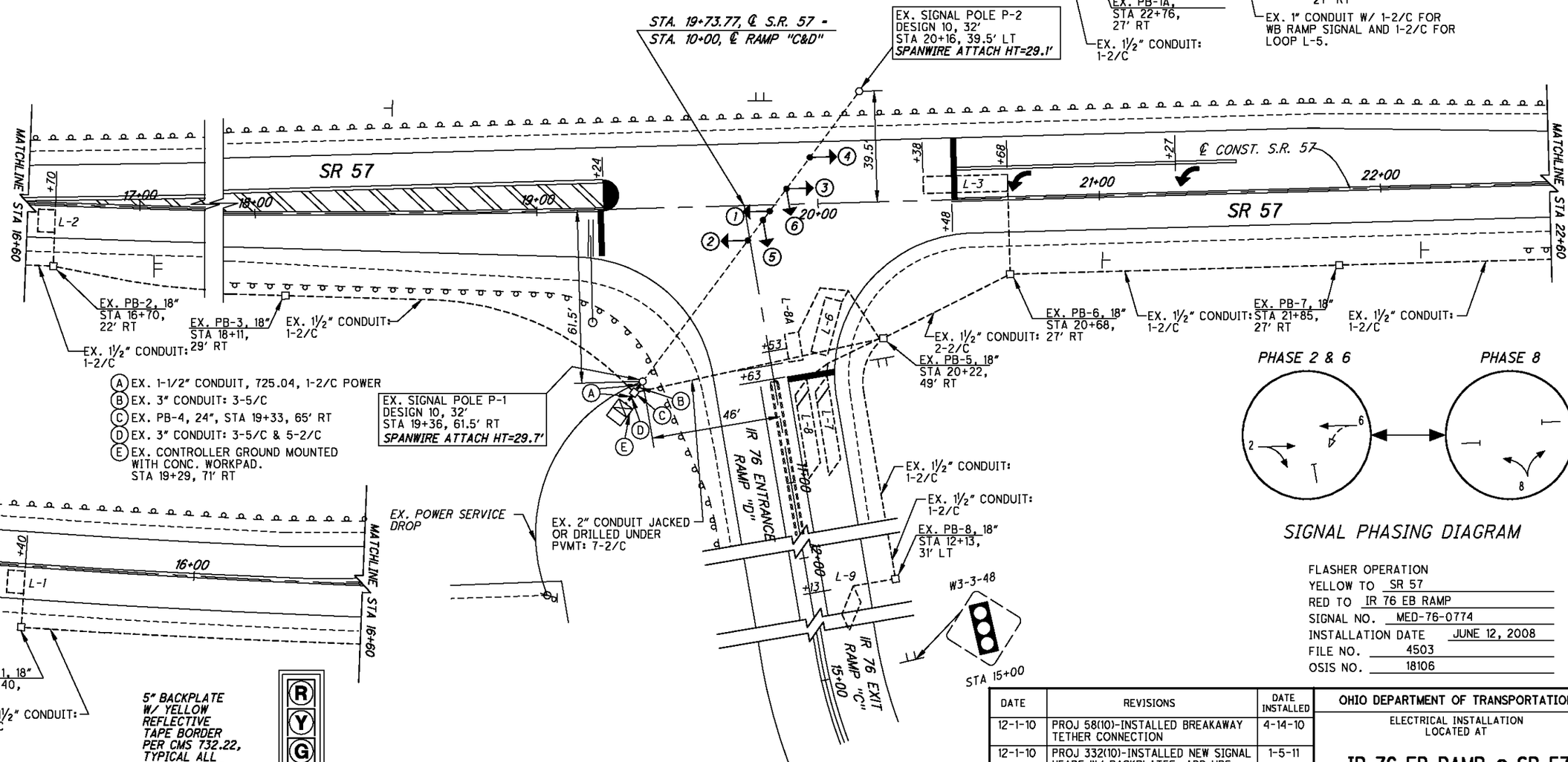
ALL QUANTITIES CARRIED TO THE DETECTOR LOOP INSTALLATION DETAILS SHEET.

DETECTOR LOOP CHART

LOOP	SIZE (FT)	MODE	DELAY (SEC.)	NUMBER OF TURNS	ASSOCIATED CONTROLLER PHASE	DETECTOR UNIT NO.	COMMENTS
L-5	6X8	PULSE		4	6	3	

* INHIBIT DELAY DURING ASSOCIATED PHASE GREEN INTERVAL





TYPICAL SIGNAL HEAD
BLACK POLYCARBONATE W/ 12" LED LAMPS

SIGNAL PHASING DIAGRAM

FLASHER OPERATION
YELLOW TO SR 57
RED TO IR 76 EB RAMP
SIGNAL NO. MED-76-0774
INSTALLATION DATE JUNE 12, 2008
FILE NO. 4503
OSIS NO. 18106

DATE	REVISIONS	DATE INSTALLED
12-1-10	PROJ 58(10)-INSTALLED BREAKAWAY TETHER CONNECTION	4-14-10
12-1-10	PROJ 332(10)-INSTALLED NEW SIGNAL HEADS W/ BACKPLATES. ADD UPS.	1-5-11
1-28-11	PROJ ?(???)-UPGRADE LOOPS ON RAMP FOR MOTORCYCLE DETECTION.	?
7-31-12	REPLACED DAMAGED LOOP L-4, A.D.D.	?
9-1-14	PID 93113 REPLACE EX. LOOP L-5	

OHIO DEPARTMENT OF TRANSPORTATION
ELECTRICAL INSTALLATION LOCATED AT

IR 76 EB RAMP @ SR 57

Signal No. MED-76-0774

DISTRICT 3 COUNTY MEDINA DRAWN KRB 12/07 1/1

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED NRF CHECKED CAD

S.R. 57 AT I-76 EB RAMP
LOOP DETECTOR DETAILS

MED-57-3.24
MED-94-10.37

40/70

DESIGN FILE: ii:\projects\93113\roadway\sheets\93113TM004.dgn MODELNAME: Model
WORKSTATION: nfoster DATE: 8/27/2014

MED-57-0324 SFN 5201950

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(06/IMS/BR)			
202	11301	1	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	44
202	98200	88	FT	REMOVAL MISC.: STRIP SEAL	44
511	34410	1	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, (REPAIR)	
511	53010	1	CY	CLASS QC1 CONCRETE, MISC.: APPROACH SLAB REPAIR	45
512	10100	671	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10300	1012	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
512	74000	671	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
516	31000	88	FT	JOINT SEALER	

MED-57-0572 SFN 5201934

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(05/STR/BR)			
202	98200	84	FT	REMOVAL MISC.: POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	44
254	01000	214	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
407	10000	17	GAL	TACK COAT	
409	30001	84	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN	45
442	00201	9	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.50")	5
512	10100	44	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	74000	44	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
517	75601	112.5	FT	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN	45

MED-57-0900 5202043

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(06/IMS/BR)			
512	10100	45	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10300	25	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
519	11101	225	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	45

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING AND ENGINEERING

DESIGNED NRF
DRAWN NRF
REVIEWED CAD
DATE 8/14
CHECKED DJV
REVISED

STRUCTURE SUMMARY

MED-57-3.24
MED-94-10.37

1 / 2

41
70

DESIGN FILE: ii:\projects\93113\structures\93113EQ001.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design

MED-94-1138 5205603

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(05/STR/BR)			
512	10100	40	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	

MED-94-1314 SFN 5205719

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(05/STR/BR)			
202	98200	86	FT	REMOVAL MISC.: STRIP SEAL	44
512	73500	23	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
516	31000	86	FT	JOINT SEALER	

MED-94-1455 SFN 5205735

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
		(06/IMS/BR)			
202	11301	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	44
202	38603	625	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN	44
202	98200	62	FT	REMOVAL MISC.: POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	44
254	01000	957	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25")	
511	34410	4	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, (CURB REPAIR)	
512	10100	777	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
517	75501	625	FT	BRIDGE RAILING REBUILT, AS PER PLAN	45
846	00100	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
856	10000	34	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE (1.25")	

DESIGN FILE: i:\projects\93113\structures\93113EQ001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE OF PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED		
DJV			

STRUCTURE SUMMARY

MED-57-3.24
MED-94-10.37

BRIDGE DECK DATA								ROADWAY DATA		
COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	LENGTH (BRIDGE DECK)	WIDTH (BRIDGE DECK)	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			FT.	FT.	SQ. YD.			FT.	FT.	FT.
* MED-57-0324	OVER IR-76	4-SPAN STEEL BEAM	207.0	44.0	1012.0	4° L.F.	CONCRETE	44.0	44.0	25.0
** MED-57-0521	OVER LEATHERMAN CREEK	24' x5' REINFORCED CONCRETE 3-SIDED CULVERT				25° L.F.	ASPHALT CONCRETE	28.0		
*** MED-57-0572	OVER RIVER STYX	SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM	47.8	40.0	212.4	18° R.F.	ASPHALT CONCRETE	28.0	40.0	20.0
++ MED-57-0651	OVER DITCH	12'x4' REINFORCED CONCRETE BOX CULVERT				25° L.F.	ASPHALT CONCRETE	28.0		
+ MED-57-0900	OVER IR-71	4-SPAN STEEL BEAM	344.5	30.0	1148.3	37° R.F.	CONCRETE	28.0	33.0	25.0
*** MED-94-1138	OVER TRIB OF GRANGER DITCH	10'x5' REINFORCED CONCRETE BOX CULVERT				0°	ASPHALT CONCRETE	25.0		
++ MED-94-1191	OVER BRANCH OF GRANGER DITCH	10'x7' REINFORCED CONCRETE BOX CULVERT				0°	ASPHALT CONCRETE	25.0		
++ MED-94-1222	OVER TRIB OF GRANGER DITCH	10' CONCRETE PIPE				66° R.F.	ASPHALT CONCRETE	25.0		
+++ MED-94-1314	OVER DITCH	3-SPAN CONCRETE SLAB	74.8	40.0	332.4	22° L.F.	CONCRETE	25.0	40.0	15.0
++++ MED-94-1455	OVER IR-271	4-SPAN STEEL BEAM	287.0	30.0	956.7	15° R.F.	ASPHALT CONCRETE	25.0	32.5	25.0

* BUTT JOINT AT THE FORWARD APPROACH SLAB TO THE STRUCTURE. OMIT RESURFACING OVER APPROACH SLAB AND BRIDGE DECK. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

** TAPER THE PLANING FROM 1½" DEEP TO 3" DEEP IN 375' AT THE APPROACH TO THE BOX CULVERT. PLANE 3" DEEP OVER THE BOX CULVERT. (PLANE FULL WIDTH) AND REPAVE BASED ON THE DEPTH (1.5") FOR MAIN LINE PAVEMENT TREATMENT. (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

*** PLANE AND PAVE OVER STRUCTURE BASED ON MAIN LINE PAVEMENT TREATMENT. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE STRUCTURE PLANS FOR PLANING AND PAVING QUANTITIES).

\+ PLANE OVER APPROACH SLABS AT A DEPTH BASED ON THE MAIN LINE PAVEMENT TREATMENT. BUTT JOINT AT THE BACKWALL, OMIT RESURFACING OVER BRIDGE DECK (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

++ PLANE AND PAVE OVER STRUCTURE BASED ON MAIN LINE PAVEMENT TREATMENT. NO STRUCTURE WORK. (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

+++ STRUCTURE REQUIRES PROFILE CORRECTION AT BOTH APPROACHES TO THE STRUCTURE. SEE THE PROFILE CORRECTION NOTE AT STRUCTURE MED-94-1314 IN THE ROADWAY GENERAL NOTES FOR DETAILS. OMIT RESURFACING OVER BRIDGE DECK (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR PLANING AND PAVING QUANTITIES).

++++ PLANE AND PAVE OVER THE APPROACH SLABS BASED ON THE MAIN LINE TREATMENT. PLANE AND PAVE OVER STRUCTURE WITH ITEM 856 AS DETAILED ON THE STRUCTURE SHEETS. (SEE DETAILS IN THE PLAN FOR STRUCTURE WORK). (SEE ROADWAY PLANS FOR APPROACH PLANING AND PAVING QUANTITIES AND STRUCTURE SHEETS FOR STRUCTURE QUANTITIES).

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE OF PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED		
DJV			

STRUCTURE TREATMENT

MED-57-3.24
MED-94-10.37

DESIGN FILE:i:\projects\93113\structures\93113MD001.dgn MODELNAME:Design
WORKSTATION:nfoster DATE:8/27/2014

REFERENCES SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SPECIFICATIONS: 846 DATED 4/18/2014
856 DATED 4/18/2014

REFERENCES SHALL BE MADE TO STANDARD BRIDGE DRAWINGS

STANDARD BRIDGE DRAWINGS:

DBR-3-11	DATED 7-15-11
TBR-1-11	DATED 1-18-13
VPF-1-90	DATED 4-15-11

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING THE 2003-2007 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4,000 PSI
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4,500 PSI

EXISTING PLANS

THE FOLLOWING EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND, OHIO.

STRUCTURE #:	PLAN NAME:	DATE:
MED-57-0324	MED/SUM-76-7.00/0.00	1993
MED-57-0572	MED-57-3.21	1989
MED-57-0900	MED-71-10.109	1957
MED-94-1138	MED-94-11.99	1990
MED-94-1314	MED-94-13.75	1986
MED-94-1455	MED-271-0.00	1965

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE BUTT JOINT TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK THE CONTRACTOR'S ATTENTION IS CALLED TO STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES.

DECK PROTECTION METHOD

BRIDGE DECK WATERPROOFING ASPHALT CONCRETE OVERLAY
SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

ITEM 202 - REMOVAL MISC.: STRIP SEAL

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING STRIP SEAL LOCATED BETWEEN THE APPROACH SLAB AND THE DECK OR BACKWALL.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202 - REMOVAL MISC.: POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING POLYMER MODIFIED JOINT SYSTEM BETWEEN THE BRIDGE DECK AND THE ABUTMENT. REMOVE ONLY THE TOP PORTION (1.5") OF THE POLYMER MODIFIED JOINT ON THE MED-57-0572 STRUCTURE. REMOVE THE ENTIRE DEPTH (±4.5") OF THE POLYMER MODIFIED JOINT ON THE MED-94-1455 STRUCTURE. SEE DETAILS IN THE PLANS FOR ADDITIONAL DETAILS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. THE WEIGHT OF THE HAMMERS SHALL NOT BE MORE THAN 35 POUNDS. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE ITEMS WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202 - BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING THRIE BEAM BRIDGE GUARDRAIL FOR SEALING OPERATIONS OVER THE STRUCTURE. AFTER THE SEALING OPERATIONS ARE COMPLETED OVER THE STRUCTURE, THE GUARDRAIL SHALL BE REINSTALLED. THE REMOVAL AND REPLACEMENT OF THE BRIDGE RAIL SHALL BE PERFORMED IN THE SAME DAY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 202 - BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CALCULATED NRF | CHECKED DJV

STRUCTURE GENERAL NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE: ii:\projects\93113\structures\93113GN001.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/17/2014

ITEM 409 - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN AND CONSISTS OF SAW CUTTING AND SEALING THE FINISHED SURFACE OF THE ASPHALT CONCRETE PAVEMENT.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS, NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ABOVE ITEM.

ITEM 511 - CLASS QC 1 CONCRETE, MISC.: APPROACH SLAB REPAIR

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 - CLASS QC 2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN (CURB REPAIR)
ITEM 511 - CLASS QC 2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN (REPAIR)

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE CONCRETE SHALL BE CLASS QC 2 WITH THE COARSE AGGREGATE BEING LIMESTONE.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, PAINT, RUST AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 517 - BRIDGE RAILING REBUILT, AS PER PLAN

THIS ITEM SHALL INCLUDE REBUILDING OF THE EXISTING THRIE BEAM BRIDGE GUARDRAIL AFTER SEALING OPERATIONS OVER THE STRUCTURE. THE REMOVAL AND REPLACEMENT OF THE BRIDGE RAIL SHALL BE PERFORMED IN THE SAME DAY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 517 - BRIDGE RAILING REBUILT, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 517 - DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN

AFTER THE PLANING & PAVING OPERATIONS ARE COMPLETED OVER THE STRUCTURE, THE GUARDRAIL SHALL BE REINSTALLED. THE REMOVAL AND REPLACEMENT OF THE BRIDGE RAIL SHALL BE PERFORMED IN THE SAME DAY. FOR ADDITIONAL RETROFIT DETAILS, SEE SBD DBR-3-11.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 517 - DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE CONCRETE PATCHING LOCATIONS WILL REQUIRE THE REMOVAL AND REBUILDING OF PART OF THE VANDAL PROTECTION FENCE AND MIGHT REQUIRE THE REMOVAL AND REBUILDING OF NUMEROUS THRIE BEAM BRIDGE GUARDRAIL MOUNTING BRACKETS AND/ OR RAIL ELEMENTS. REFER TO STANDARD BRIDGE DRAWINGS TBR-1-11 AND VPF-1-90 FOR DETAILS.

PAYMENT FOR ALL OF THE ABOVE WORK SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR EACH OF THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CALCULATED NRE CHECKED DJV

STRUCTURE GENERAL NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE:I:\projects\93113\structures\93113GN001.dgn MODELNAME:Design
WORKSTATIONnfoster DATE:9/17/2014

WORKING HOURS RESTRICTION

IR-71, IR-76, AND IR-271 ARE RESTRICTED LANE CLOSURE ROUTES DUE TO HIGH TRAFFIC VOLUMES. DURING THE PROJECT DURATION, LANE CLOSURES SHALL BE PERMITTED AS LISTED ON THE ODOT WEBSITE AT: http://plcm.dot.state.oh.us.

LANE CLOSURE DISINCENTIVE

A LANE CLOSURE IS DEFINED AS ANY RESTRICTION OF A LANE OF TRAFFIC INCLUDING, BUT IS NOT LIMITED TO, SET-UP AND TEARDOWN OF TRAFFIC CONTROL ZONES. THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE IN THE AMOUNT OF $75.00 PER MINUTE THAT LANES ARE CLOSED TO TRAFFIC DURING TIMES DESIGNATED AS "LANE CLOSURE NOT PERMITTED" AS STATED IN THESE PLANS AND ON THE ODOT WEBSITE AT: http://plcm.dot.state.oh.us.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT UNIT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC ON INTERSTATES (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $1,500 PER DAY.

ITEM 614 - MAINTAINING TRAFFIC LANE CLOSURE/REDUCTION REQUIRED

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURES MED-57-0521, MED-57-0572, MED-57-0651, MED-94-1138, MED-94-1191, MED-94-1222, AND MED-94-1314

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THESE STRUCTURES MAY HAVE A LANE CLOSURE DURING NORMAL WORKING HOURS USING FLAGGERS AS SHOWN ON STANDARD DRAWING MT-97.10.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE MED-57-0324

TWO WAY TRAFFIC ON THIS STRUCTURE SHALL BE MAINTAINED AT ALL TIMES AS DETAILED ON SHEETS 48 AND 49 DURING PHASE I AND PHASE II. A THIRD PHASE WILL BE REQUIRED IN ORDER TO COMPLETE THE SEALING OF THE BRIDGE DECK WITH HMWM RESIN. THIS PHASE (PHASE III) MAY BE COMPLETED USING FLAGGERS.

FOR THE MAINTENANCE OF TRAFFIC BELOW THIS STRUCTURE, TRAFFIC ON IR-76, SEE THE WORKING HOURS RESTRICTION NOTE ON THIS SHEET.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE MED-57-0900

TWO WAY TRAFFIC ON THE STRUCTURE SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THIS STRUCTURE MAY HAVE A LANE CLOSURE DURING NORMAL WORKING HOURS USING FLAGGERS AS SHOWN ON STANDARD DRAWING MT-97.10.

FOR THE MAINTENANCE OF TRAFFIC BELOW THIS STRUCTURE, TRAFFIC ON IR-71, SEE THE WORKING HOURS RESTRICTION NOTE ON THIS SHEET. PART OF THE PROPOSED CONCRETE REPAIR WORK TO THE OUTSIDE OF THE PARAPETS AND DECK UNDERSIDE WILL REQUIRE WORK OVERHEAD OF THE CENTER LANE. ALL WORK OVER THE CENTER LANE, AS REQUIRED BY THE PERMITTED LANE CLOSURE WEBSITE, WILL HAVE TO BE PERFOMED AT NIGHT SINCE THE LANES ARE BEING REDUCED FROM 3 TO 1.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE MED-94-1455

TWO WAY TRAFFIC ON THE STRUCTURE SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THIS STRUCTURE MAY HAVE A LANE CLOSURE DURING NORMAL WORKING HOURS USING FLAGGERS AS SHOWN ON STANDARD DRAWING MT-97.10.

FOR THE MAINTENANCE OF TRAFFIC BELOW THIS STRUCTURE, TRAFFIC ON IR-271, SEE THE WORKING HOURS RESTRICTION NOTE ON THIS SHEET.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

CALCULATED NRF CHECKED DJV

MAINTENANCE OF TRAFFIC NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE:I:\projects\93113\structures\93113GN001.dgn MODELNAME:Design
WORKSTATION:nfoster DATE:9/17/2014

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (STRUCTURE WORK)

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEO'S SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL (MEDINA COUNTY)
3149 FRANTZ ROAD
MEDINA, OH 44256
330-725-4921

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
TOTAL = 48 HOURS (06/IMS/BR)

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

ITEM 615- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE LEFT IN PLACE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD OF THE ABOVE ITEM WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

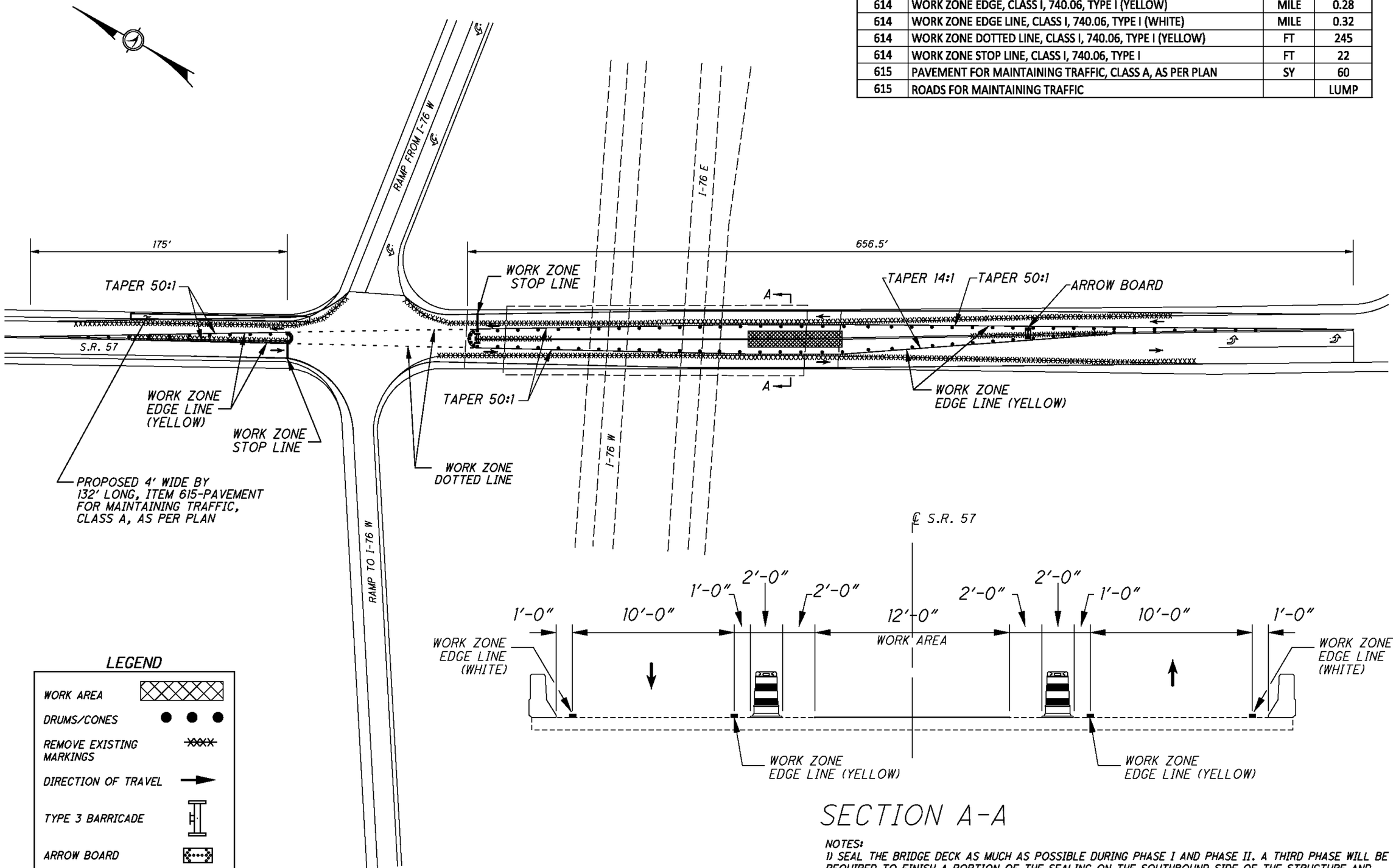
CALCULATED NRF
CHECKED DJV

MAINTENANCE OF TRAFFIC NOTES

MED-57-3.24
MED-94-10.37

DESIGN FILE: i:\projects\93113\structures\93113GN001.dgn
WORKSTATION: nfoster
DATE: 9/17/2014
MODEL NAME: Design

ITEM	DESCRIPTION	UNIT	QUANTITY
614	WORK ZONE EDGE, CLASS I, 740.06, TYPE I (YELLOW)	MILE	0.28
614	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I (WHITE)	MILE	0.32
614	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I (YELLOW)	FT	245
614	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	FT	22
615	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	SY	60
615	ROADS FOR MAINTAINING TRAFFIC		LUMP



SECTION A-A

LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- TYPE 3 BARRICADE
- ARROW BOARD

NOTES:
1) SEAL THE BRIDGE DECK AS MUCH AS POSSIBLE DURING PHASE I AND PHASE II. A THIRD PHASE WILL BE REQUIRED TO FINISH A PORTION OF THE SEALING ON THE SOUTHBOUND SIDE OF THE STRUCTURE AND SHALL BE PERFORMED WITH THE USE OF FLAGGERS.
2) STEEL PLATES SHALL BE PLACED OVER THE CONCRETE REPAIR AREAS ONCE THE EXISTING CONCRETE IS REMOVED UNTIL THE CONCRETE IS CURED.

DESIGNED CJC CHECKED DJV

HORIZONTAL SCALE IN FEET 0 15 30 60

MAINTENANCE OF TRAFFIC PLAN - PHASE 1

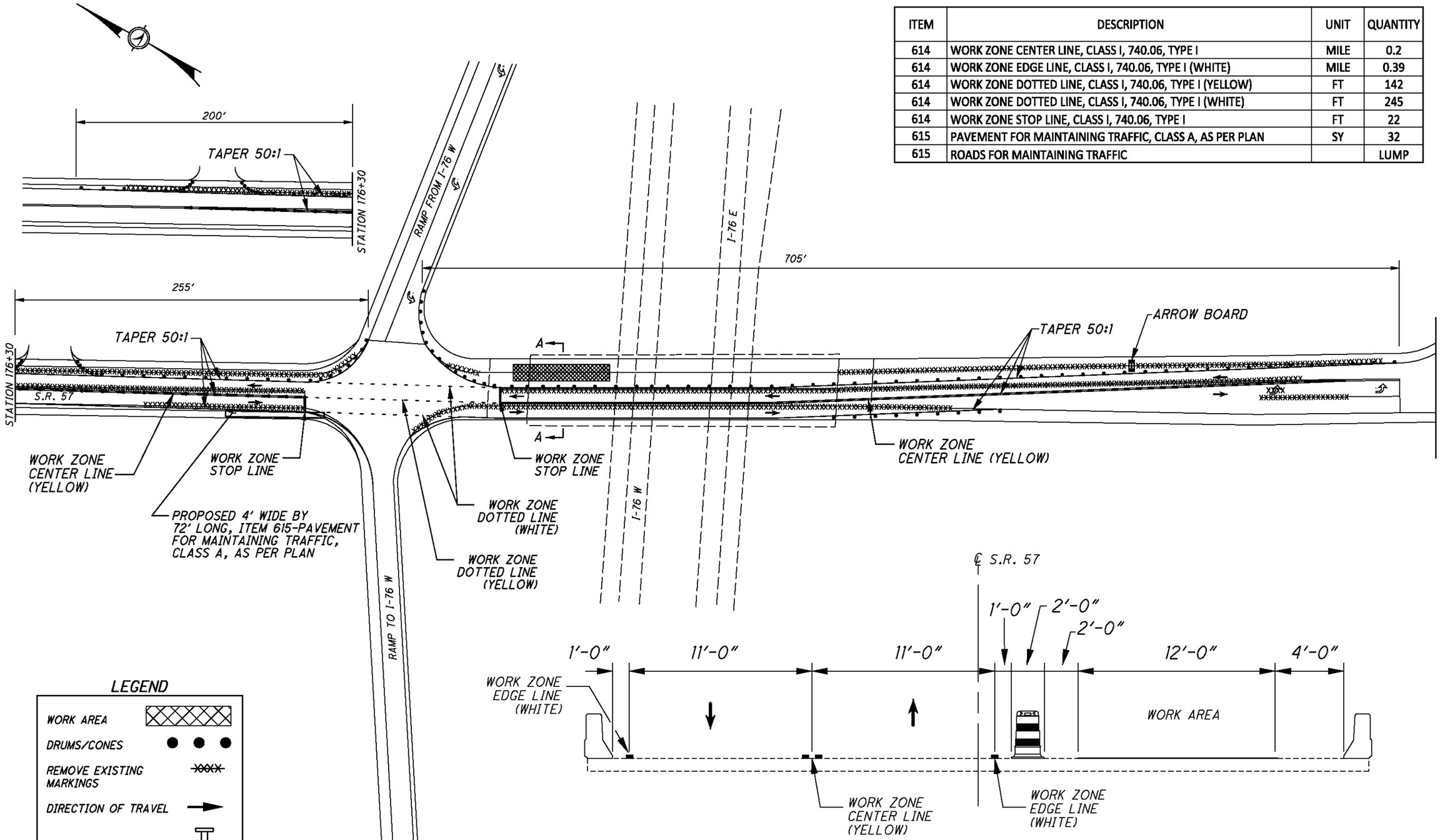
MED-57-3.24
MED-94-10.37

1 / 2

48 / 70

DESIGN FILE: i:\projects\93113\structures\MED-57-3.24_5201950_MOT.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/17/2014

ITEM	DESCRIPTION	UNIT	QUANTITY
614	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	MILE	0.2
614	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I (WHITE)	MILE	0.39
614	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I (YELLOW)	FT	142
614	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I (WHITE)	FT	245
614	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	FT	22
615	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	SY	32
615	ROADS FOR MAINTAINING TRAFFIC		LUMP



SECTION A-A

LEGEND

- WORK AREA
- DRUMS/CONES
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- TYPE 3 BARRICADE
- ARROW BOARD

NOTES:
1) SEAL THE BRIDGE DECK AS MUCH AS POSSIBLE DURING PHASE I AND PHASE II. A THIRD PHASE WILL BE REQUIRED TO FINISH A PORTION OF THE SEALING ON THE SOUTHBOUND SIDE OF THE STRUCTURE AND SHALL BE PERFORMED WITH THE USE OF FLAGGERS.
2) STEEL PLATES SHALL BE PLACED OVER THE CONCRETE REPAIR AREAS ONCE THE EXISTING CONCRETE IS REMOVED UNTIL THE CONCRETE IS CURED.

DESIGNED CJC CHECKED DJV

0 15 30 60 HORIZONTAL SCALE IN FEET

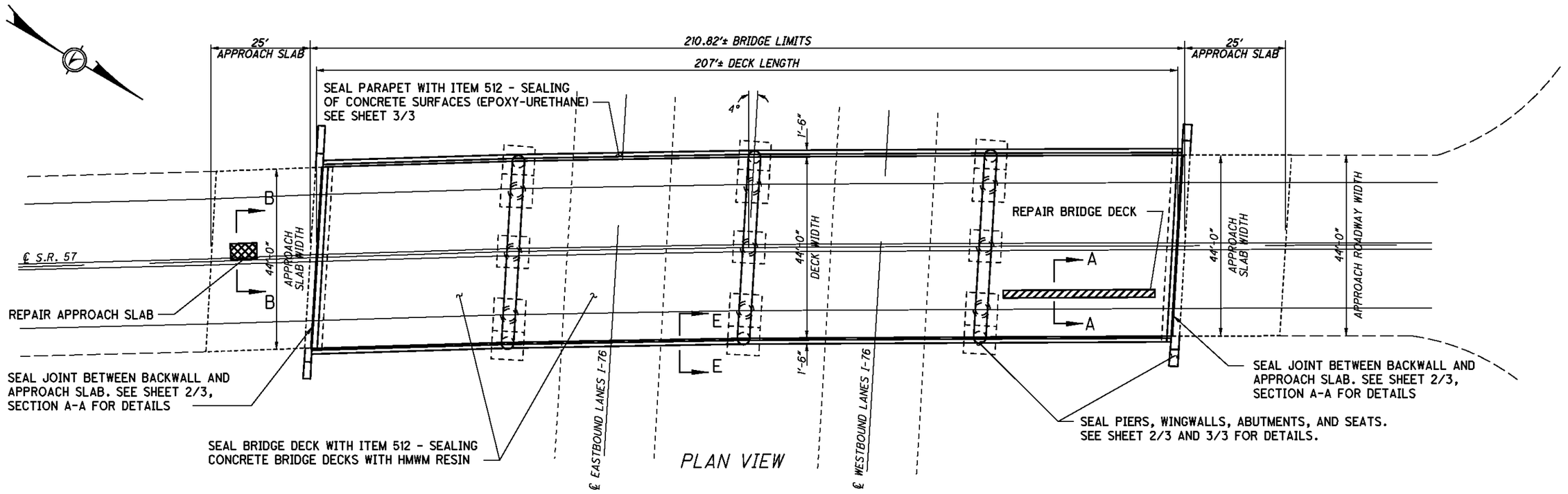
MAINTENANCE OF TRAFFIC PLAN - PHASE 2

MED-57-3.24
MED-94-10.37

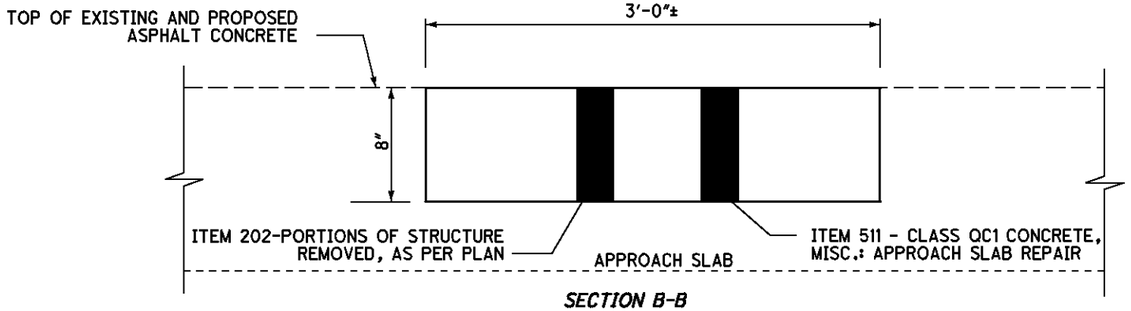
2 / 2

49 / 70

DESIGN FILE: ii:\projects\93113\structures\MED-57-3.24_5201950_MOT.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 9/17/2014



PLAN VIEW



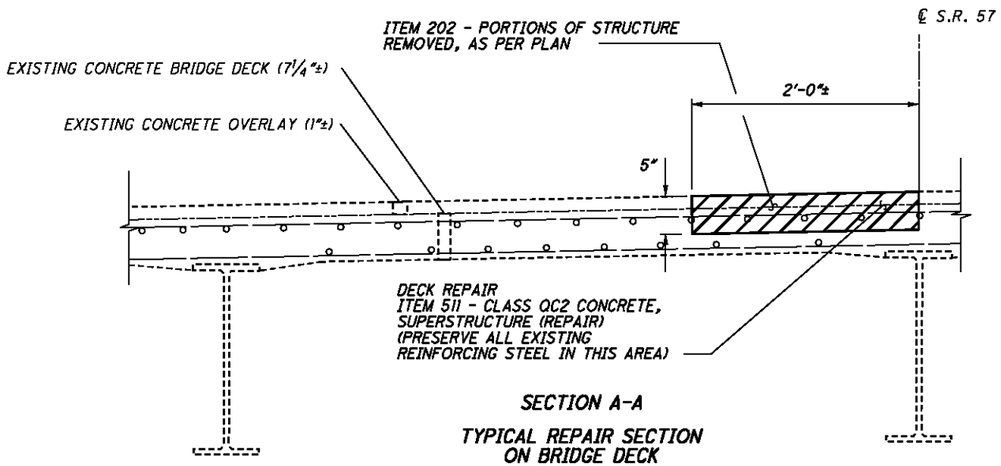
SECTION B-B

TYPICAL REPAIR SECTION ON APPROACH SLAB

(REPAIR LENGTH = 4'-0"±)

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	88	FT	REMOVAL MISC.: STRIP SEAL
511	1	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE (REPAIR)
511	1	CY	CLASS QC 1 CONCRETE, MISC.: APPROACH SLAB REPAIR
512	671	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	1012	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
512	671	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES
516	88	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY.



SECTION A-A

TYPICAL REPAIR SECTION ON BRIDGE DECK

(REPAIR LENGTH = 27'-0"±)

NOTES:

1) FOR SECTION E-E, SEE SHEET 3/3.

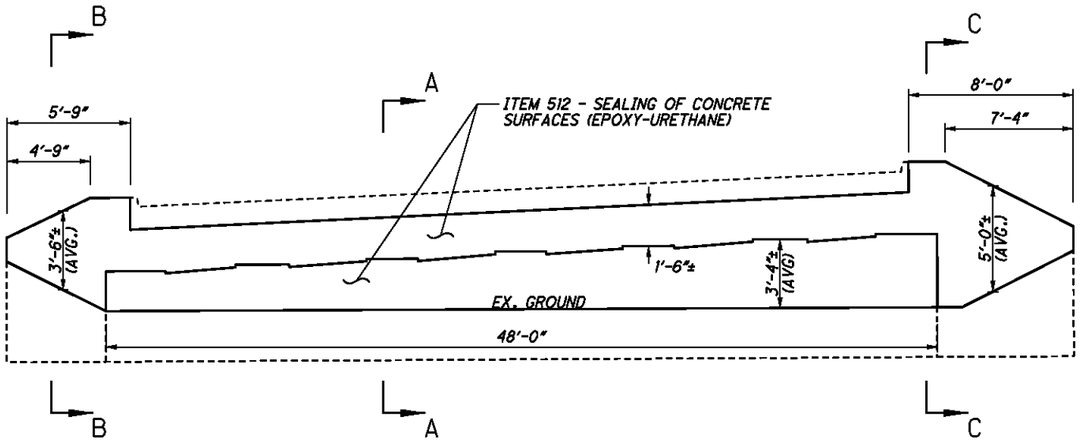
DESIGN FILE: i:\projects\93113\structures\MED-57-3.24_5201950.dgn MODEL NAME: Design
WORKSTATION nfoster DATE: 9/17/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

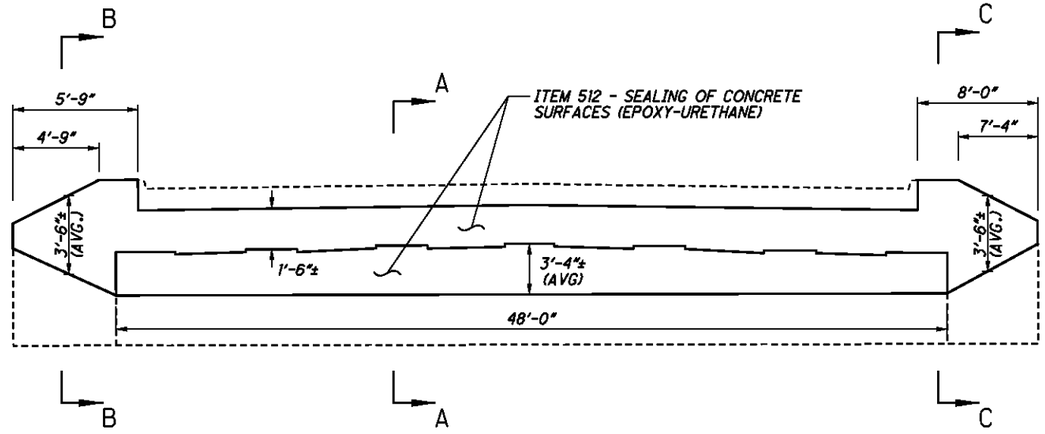
DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV	—	5201950	

PLAN VIEW
MED-57-0324
OVER IR-76

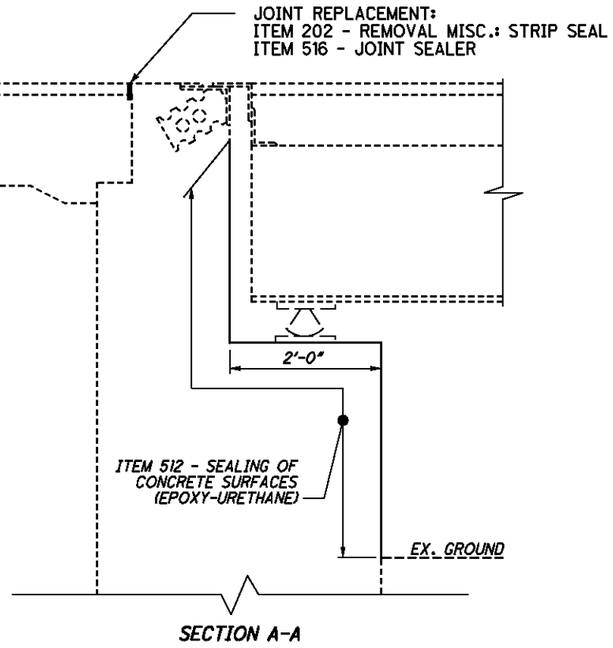
MED-57-3.24
MED-94-10.37



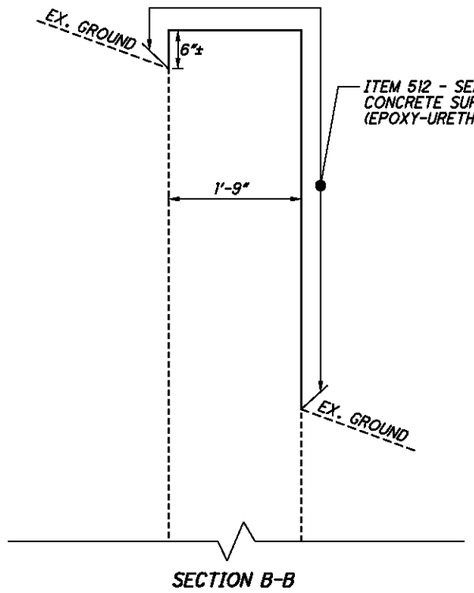
REAR ABUTMENT



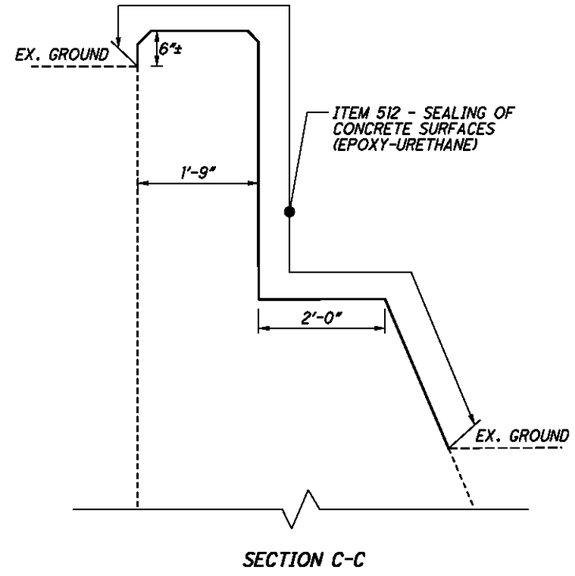
FORWARD ABUTMENT



SECTION A-A



SECTION B-B



SECTION C-C

ITEM	QUANTITY	UNIT	DESCRIPTION
202	88	FT	REMOVAL MISC.: STRIP SEAL
512	92	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	92	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES
516	88	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO SHEET 1/3.

NOTES:

1) FOR THE JOINT REPLACEMENT, A ½"x1½" GROOVE SHALL BE FORMED AND FILLED WITH ITEM 516 - JOINT SEALER.

DESIGN FILE: i:\projects\93113\structures\MED-57-3.24_5201950.dgn MODEL NAME: Design
WORKSTATION nfoster DATE: 8/27/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

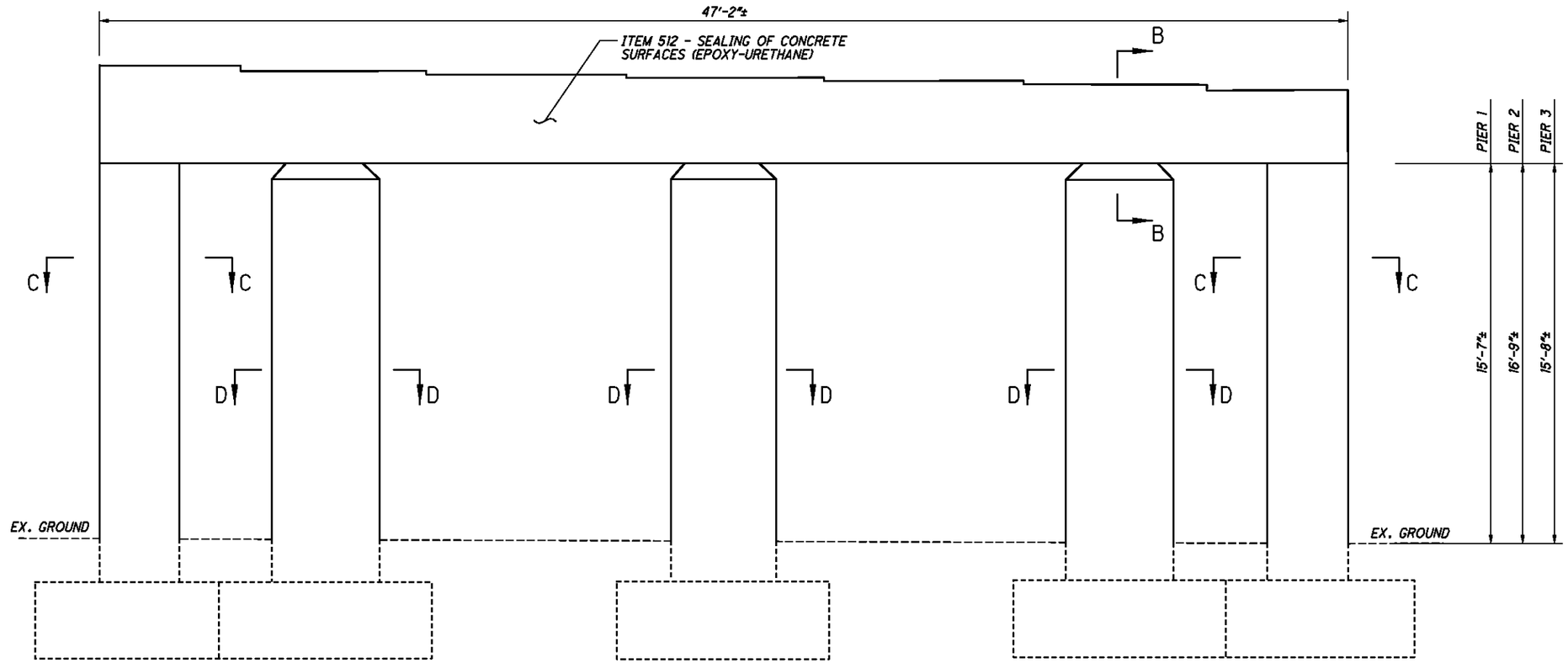
DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5201950	

ABUTMENT SEALING DETAILS
MED-57-0324
OVER IR-76

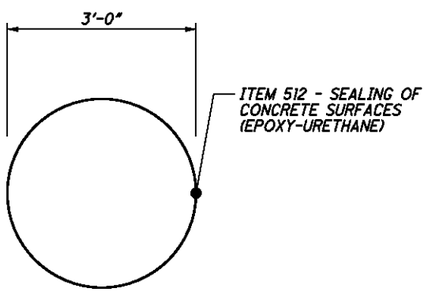
MED-57-3.24
MED-94-10.37

2 / 3

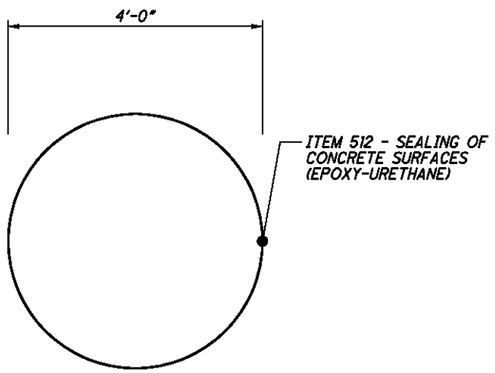
51
70



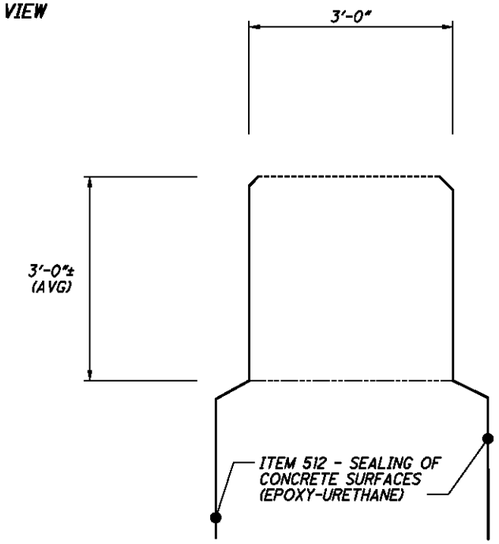
PIER ELEVATION VIEW



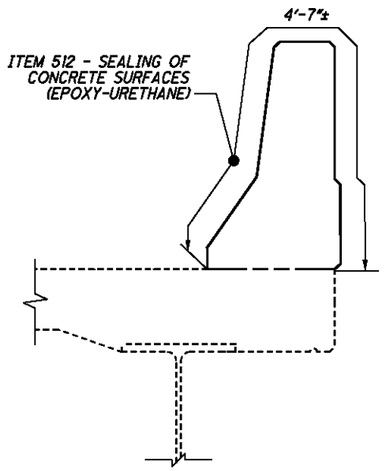
SECTION C-C



SECTION D-D
PIER 3 ONLY
SEE SECTION C-C FOR ALL OTHER PIERS



SECTION B-B



SECTION E-E

ITEM	QUANTITY	UNIT	DESCRIPTION
512	579	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	579	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

ALL QUANTITIES CARRIED TO SHEET 1/3.

DESIGN FILE:i:\projects\93113\structures\MED-57-3.24_5201950.dgn MODELNAME: Design
WORKSTATION:nfoster DATE:8/27/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

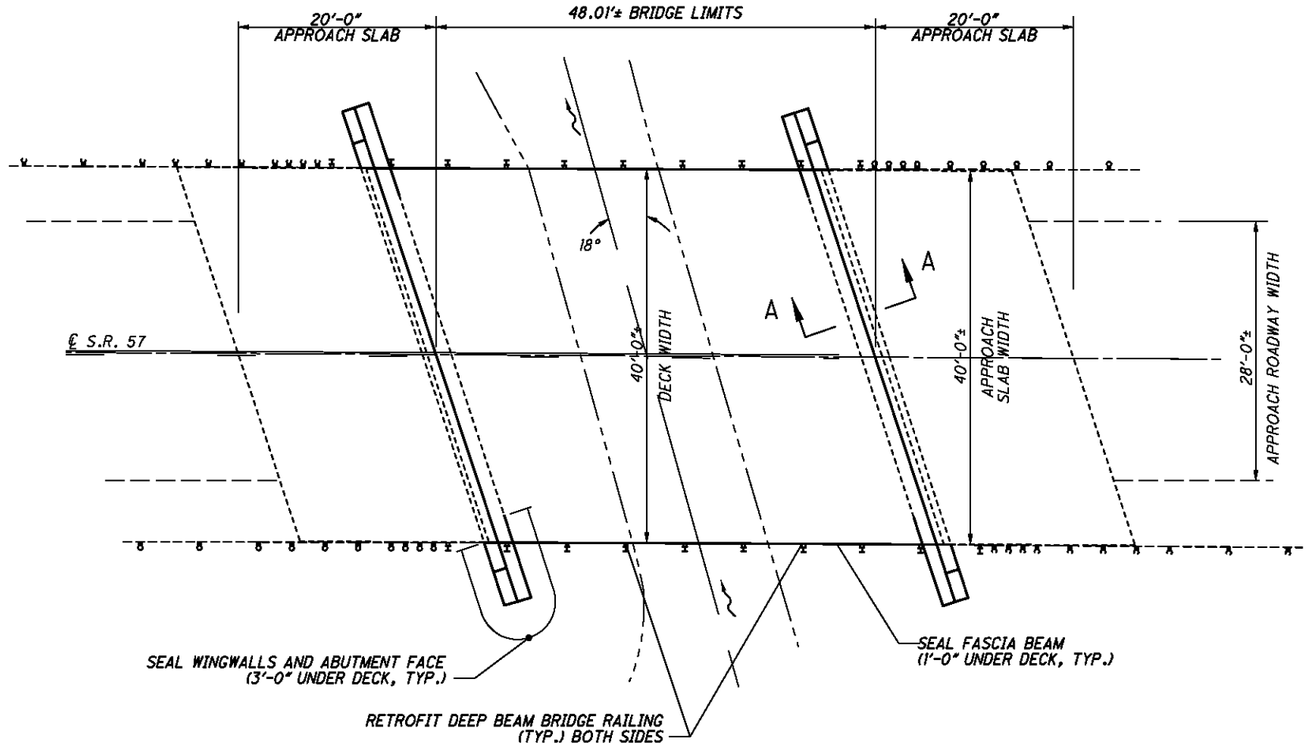
DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5201950	

PIER & PARAPET SEALING DETAILS
MED-57-0324
OVER IR-76

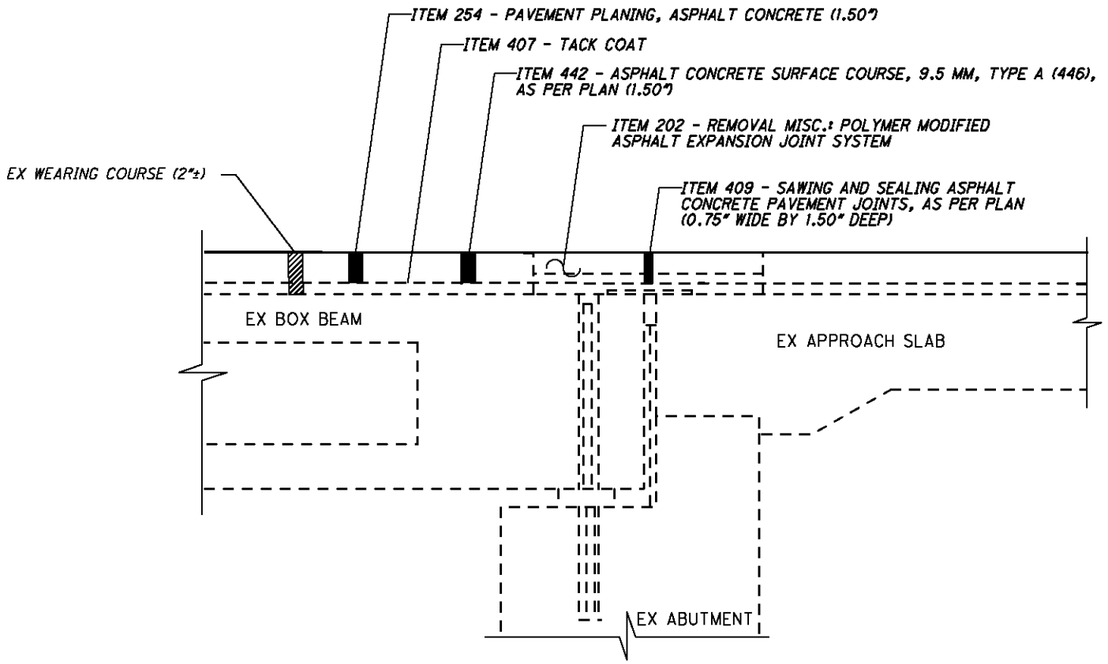
MED-57-3.24
MED-94-10.37

3 / 3

52
70



PLAN VIEW



SECTION A-A

NOTES:

1) FOR DEEP BEAM BRIDGE RETROFIT RAILING DETAILS, SEE DBR-3-11.
2) SEE SHEET 2/2 FOR ALL SEALING DETAILS.

ITEM	QUANTITY	UNIT	DESCRIPTION
202	84	FT	REMOVAL MISC.: POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
254	214	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")
407	17	GALLON	TACK COAT
409	84	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS, AS PER PLAN
442	9	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN
512	44	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	44	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES
517	112.5	FT	DEEP BEAM BRIDGE RETROFIT RAILING, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5201934	

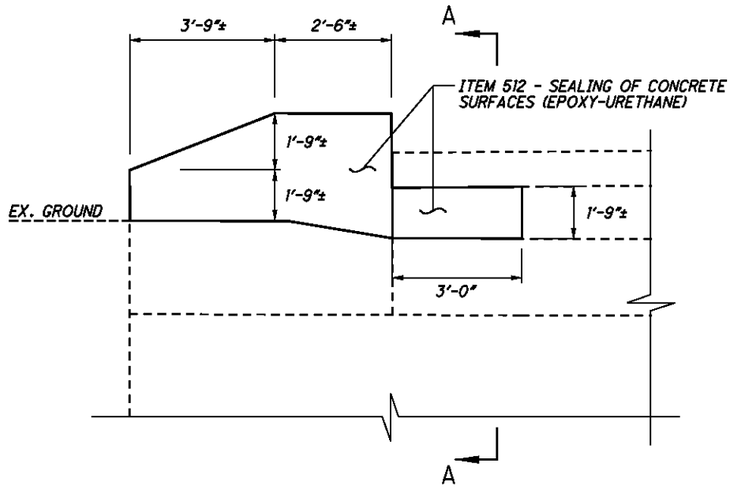
PLAN VIEW & PAVEMENT DETAILS
MED-57-0572
OVER RIVER STYX

MED-57-3.24
MED-94-10.37

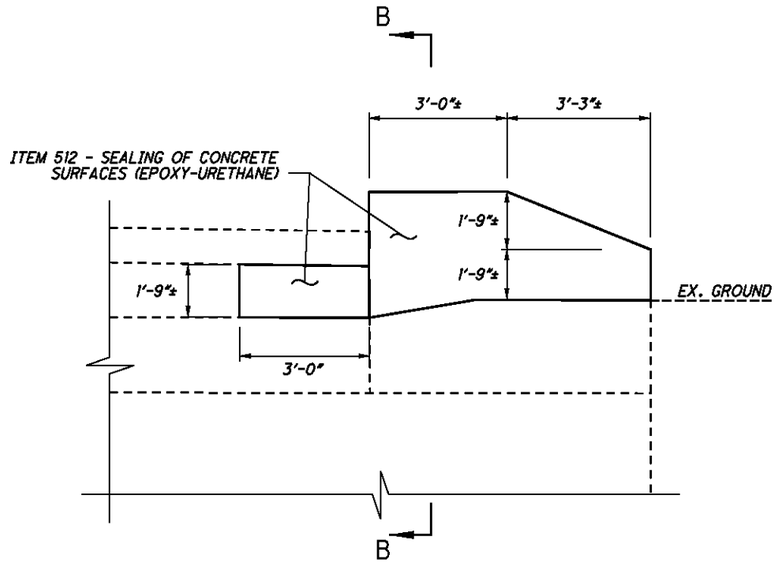
1 / 2

53
70

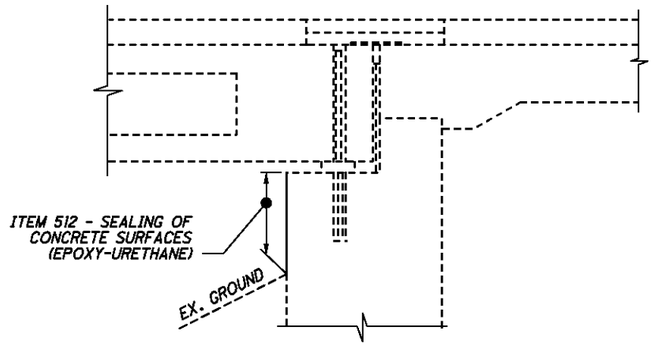
DESIGN FILE: ii:\projects\93113\structures\MED-57-5.72_5201934.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014



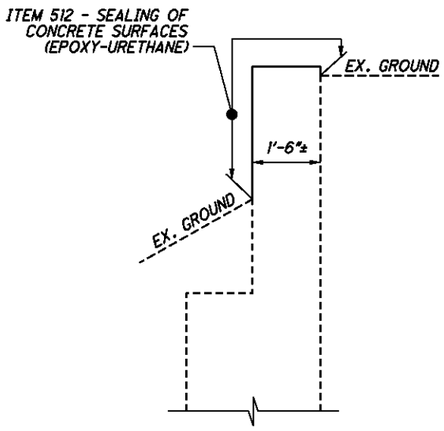
LEFT ABUTMENT ELEVATION VIEW
FORWARD & REAR



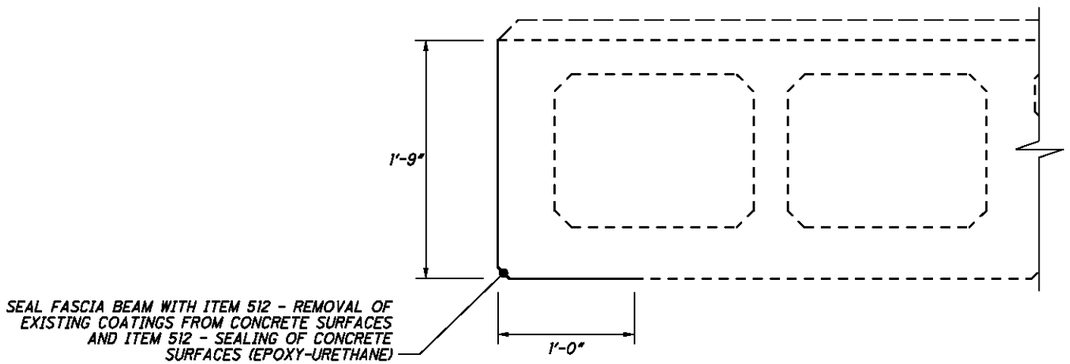
RIGHT ABUTMENT ELEVATION VIEW
FORWARD & REAR



SECTION A-A



SECTION B-B



FASCIA BEAM SEALING DETAIL
TYP. BOTH SIDES

ITEM	QUANTITY	UNIT	DESCRIPTION
512	44	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	44	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

ALL QUANTITIES CARRIED TO SHEET 1/2.

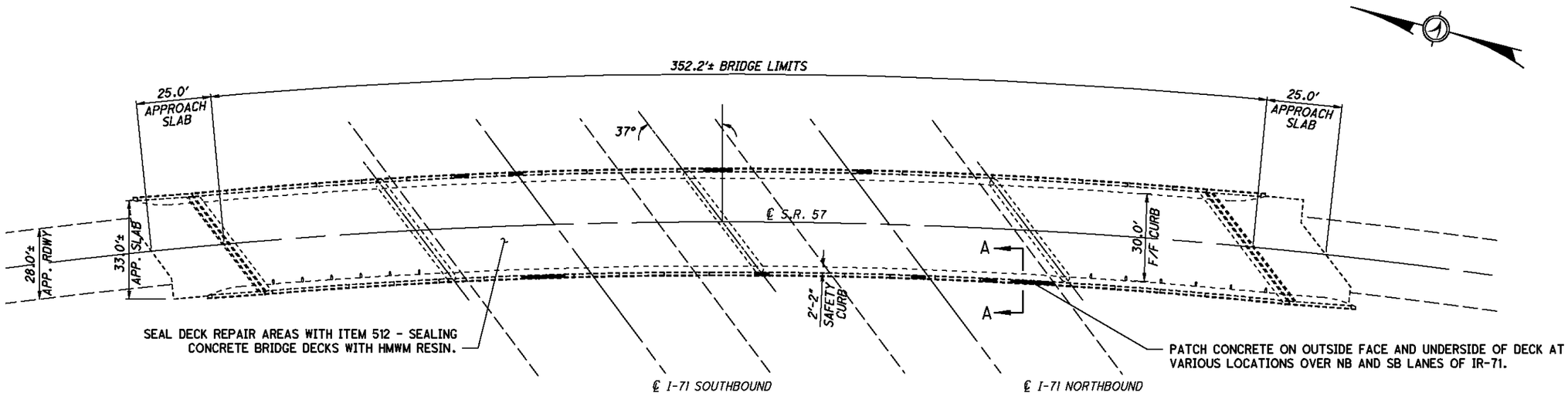
DESIGN FILE:i:\projects\93113\structures\MED-57-5.72_5201934.dgn MODELNAME: Design
WORKSTATIONnfoster DATE:8/27/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

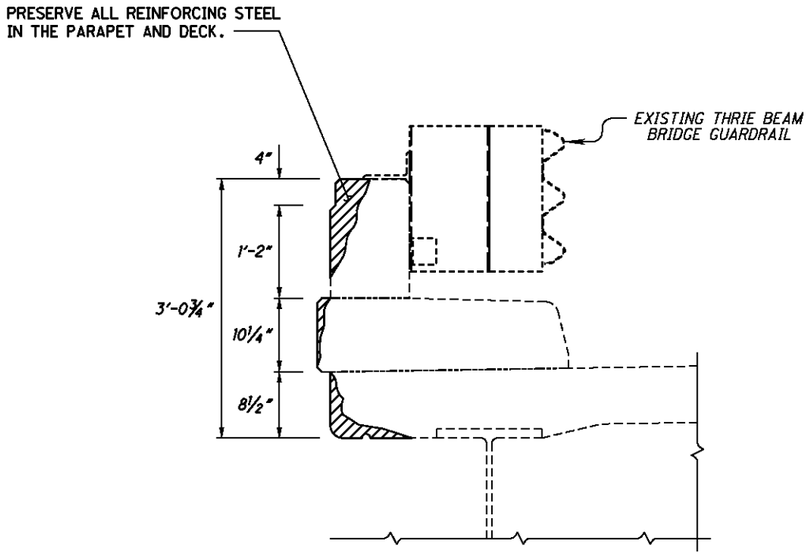
DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5201934	

SEALING DETAILS
MED-57-0572
OVER RIVER STYX

MED-57-3.24
MED-94-10.37



PLAN VIEW



SECTION A-A

LEGEND

ITEM 519 - PATCHING CONCRETE STRUCTURE
ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ITEM	QUANTITY	UNIT	DESCRIPTION
512	45	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
512	25	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
519	225	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN

ALL QUANTITIES CARRIED TO THE STRUCTURE SUMMARY.

NOTES

1) THE EXISTING VANDAL FENCE, THRIE-BEAM RAIL, APPROACH GUARDRAIL AND BRIDGE TERMINAL ASSEMBLIES ARE NOT SHOWN IN THE PLAN VIEW.

2) THE CONCRETE PATCHING WORK WILL REQUIRE THE REMOVAL OF PART OF THE VANDAL PROTECTION FENCE (NOT SHOWN) AND MIGHT REQUIRE THE REMOVAL OF SEVERAL THRIE BEAM BRIDGE GUARDRAIL MOUNTING BRACKETS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. ALL REMOVALS SHALL BE RE-ERECTED THE SAME DAY.

3) PATCH ALL LOCATIONS OF SPALLED AND DELAMINATED CONCRETE AT VARIOUS LOCATIONS OVER ALL LANES OF IR-71. THESE LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER.

4) SEAL OVER THE EXISTING DECK REPAIR AREAS WITH HMWM RESIN. THESE LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER.

5) FOR THE THRIE BEAM BRIDGE GUARDRAIL DETAILS NOT SHOWN, SEE STANDARD BRIDGE DRAWING TBR-1-11. FOR THE VANDAL PROTECTION FENCE DETAILS, SEE STANDARD BRIDGE DRAWING VPF-1-90.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV	—	5202043	

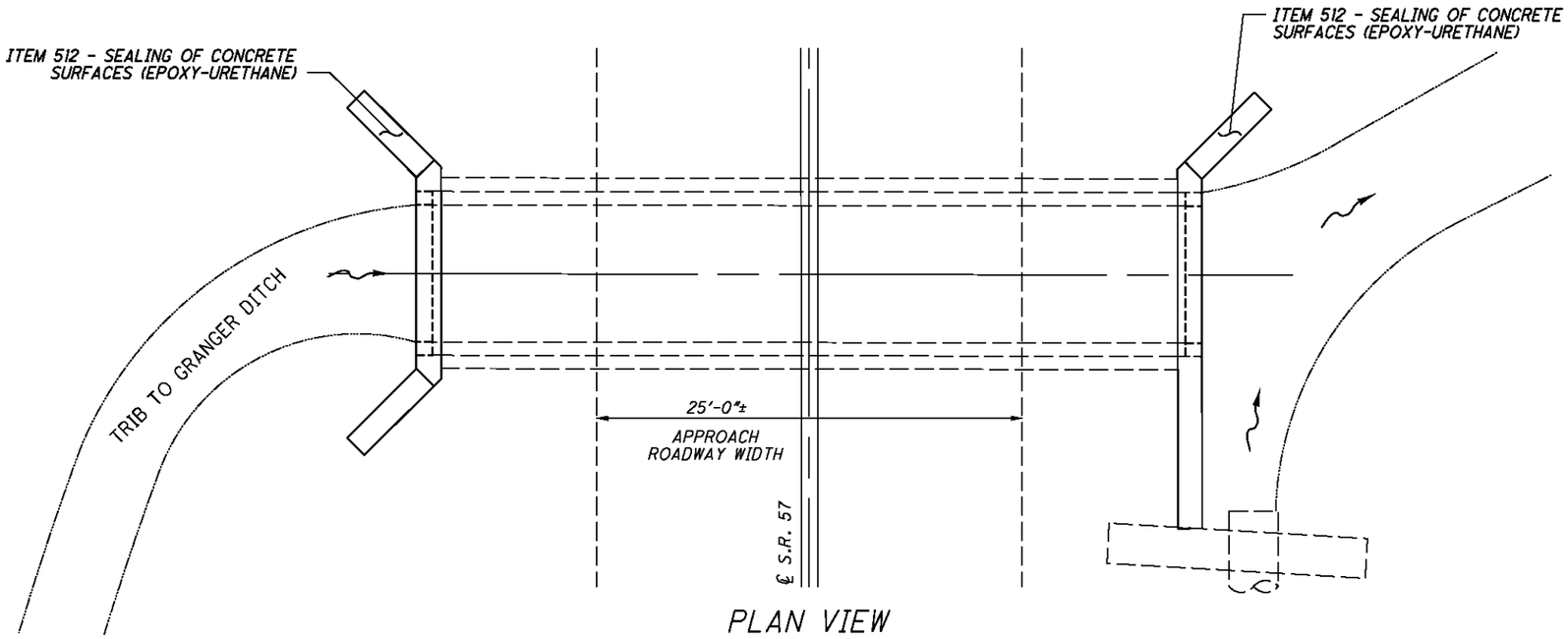
PLAN VIEW
MED-57-0900
OVER IR-71

MED-57-3.24
MED-94-10.37

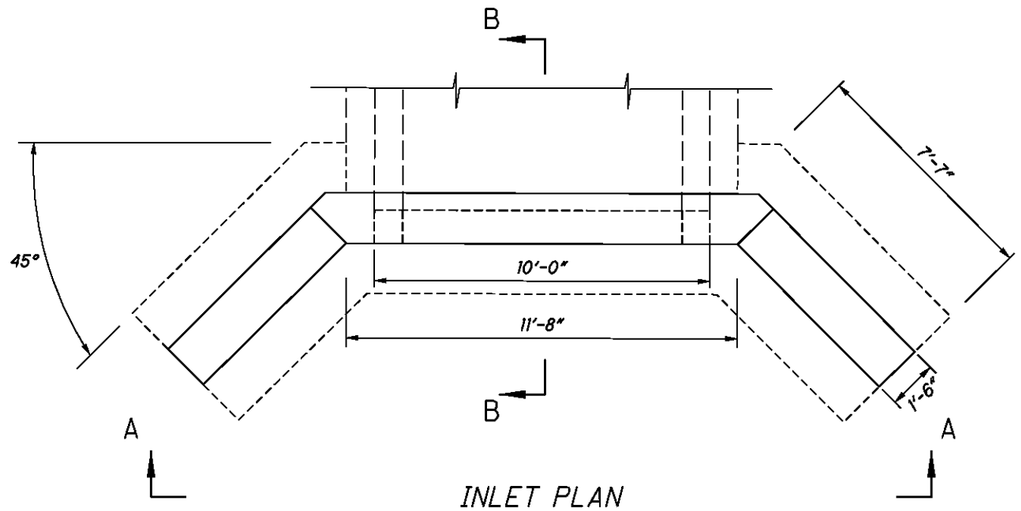
1 / 1

55
70

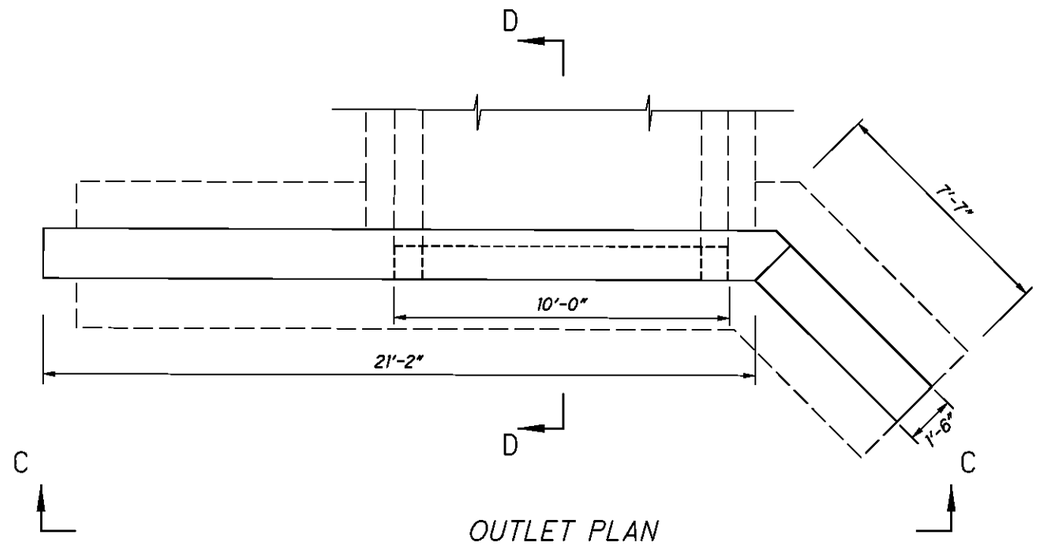
DESIGN FILE: i:\projects\93113\structures\MED-57-9.00_5202043 1.dgn
WORKSTATION: nfoster
DATE: 9/17/2014
MODELNAME: Sheet



PLAN VIEW



INLET PLAN VIEW



OUTLET PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
512	40	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO THE STRUCTURE SUMMARY.

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN IN THE PLAN VIEW.

2) SEAL ALL EXPOSED CONCRETE SURFACES WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) INCLUDING 1'-0" INSIDE THE BOX CULVERT.

3) SEE SHEET 2/2 FOR ALL SECTION VIEWS.

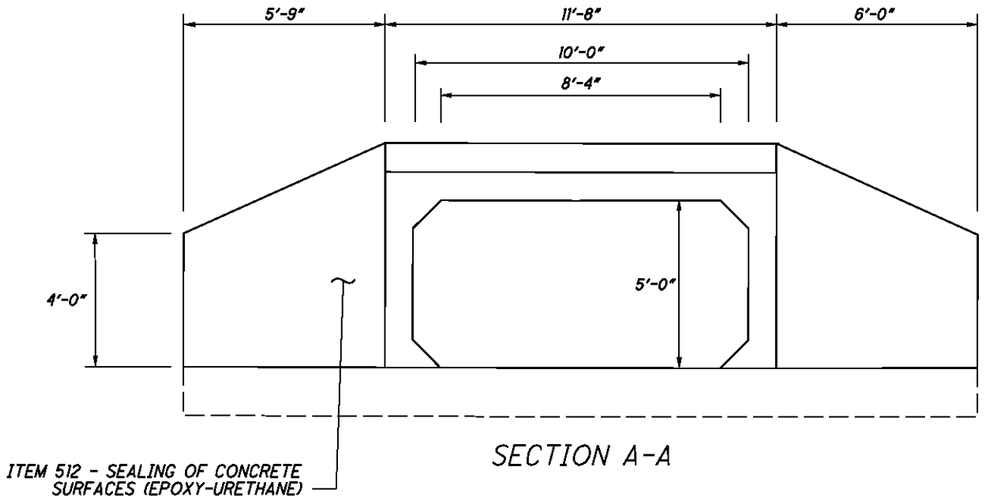
DESIGN FILE: i:\projects\93113\structures\MED-94-11.38_5205603.dgn MODELNAME: Design
WORKSTATION: nfoster DATE: 8/27/2014

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE OF PLANING AND ENGINEERING

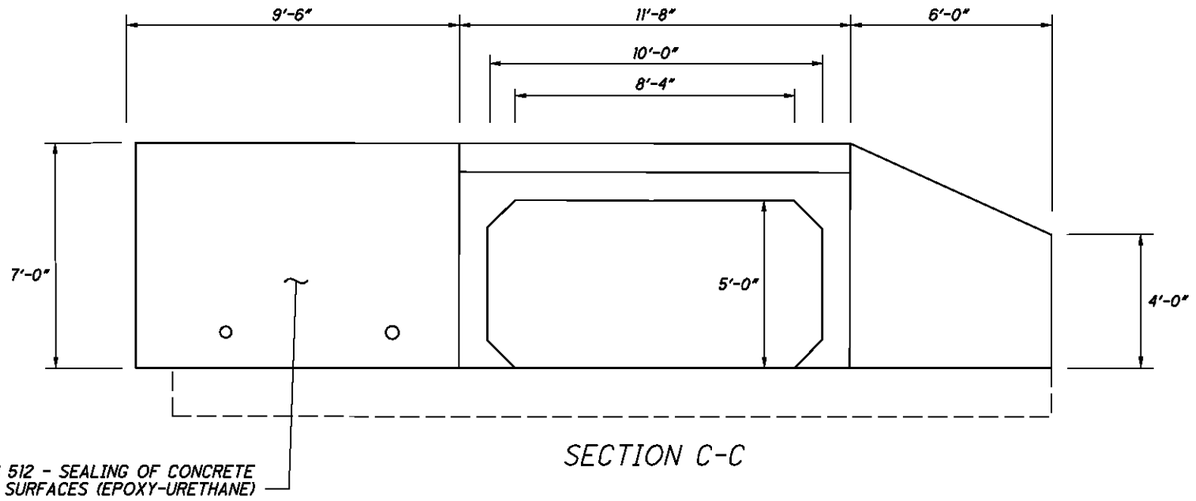
DESIGNED	DRAWN	REVIEWED	DATE
CJC	CJC	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5205603	

PLAN VIEWS
MED-94-1138
OVER TRIB OF GRANGER DITCH

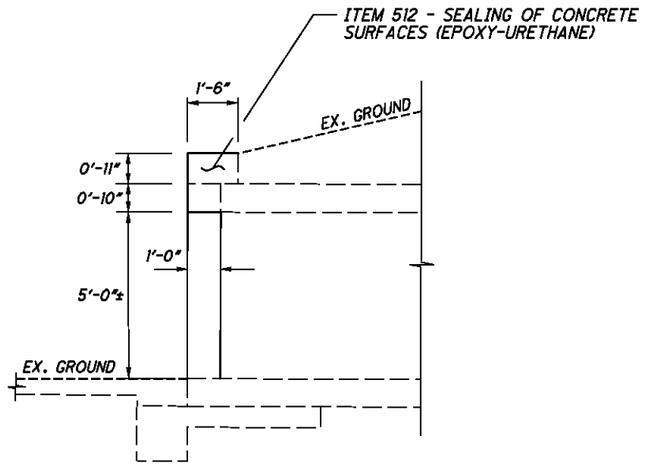
MED-57-3.24
MED-94-10.37



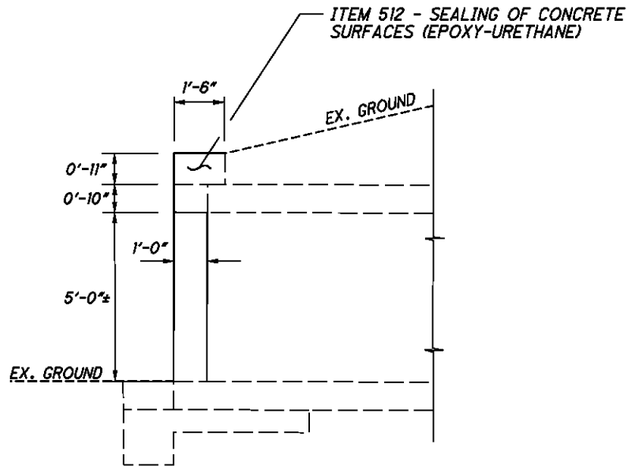
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

ITEM	QUANTITY	UNIT	DESCRIPTION
512	40	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO SHEET 1/2.

NOTES:

1) SEAL THE INSIDE 1'-0" OF THE BOX CULVERT TO THE EXISTING WATER LEVEL. NO IN-STREAM WORK SHALL BE PERFORMED.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE OF PLANING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
CJC	CJC	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5205603	

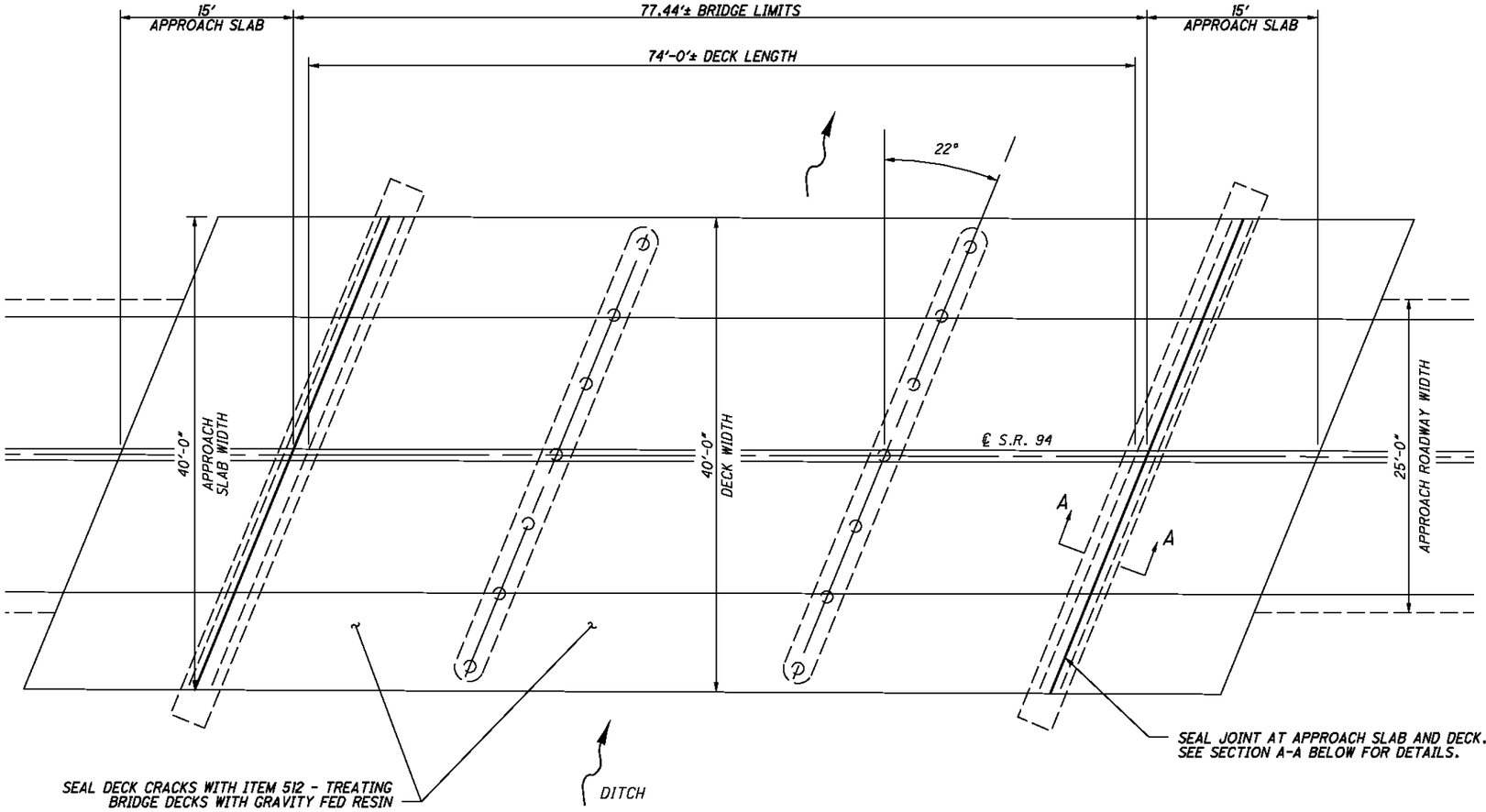
SEALING DETAILS
MED-94-1138
OVER TRIB OF GRANGER DITCH

MED-57-3.24
MED-94-10.37

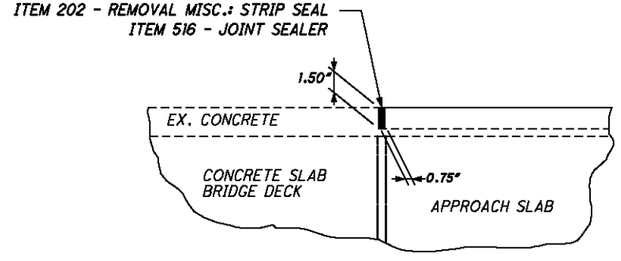
2 / 2

57
70

DESIGN FILE: ii:\projects\93113\structures\MED-94-11.38_5205603.dgn MODELNAME: Design
WORKSTATION nfoster DATE: 8/27/2014



PLAN VIEW



EXPANSION JOINT REPAIR AT
DECK AND APPROACH JUNCTURE

SECTION A-A

ITEM	QUANTITY	UNIT	DESCRIPTION
202	86	FT	REMOVAL MISC.: STRIP SEAL
512	23	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
516	86	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO THE STRUCTURE SUMMARY.

NOTES:

1) USE ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN AS DIRECTED BY THE ENGINEER TO SEAL ALL DECK CRACKS.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING AND ENGINNERING

DESIGNED	DRAWN	REVIEWED	DATE
CJC	CJC	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5205719	

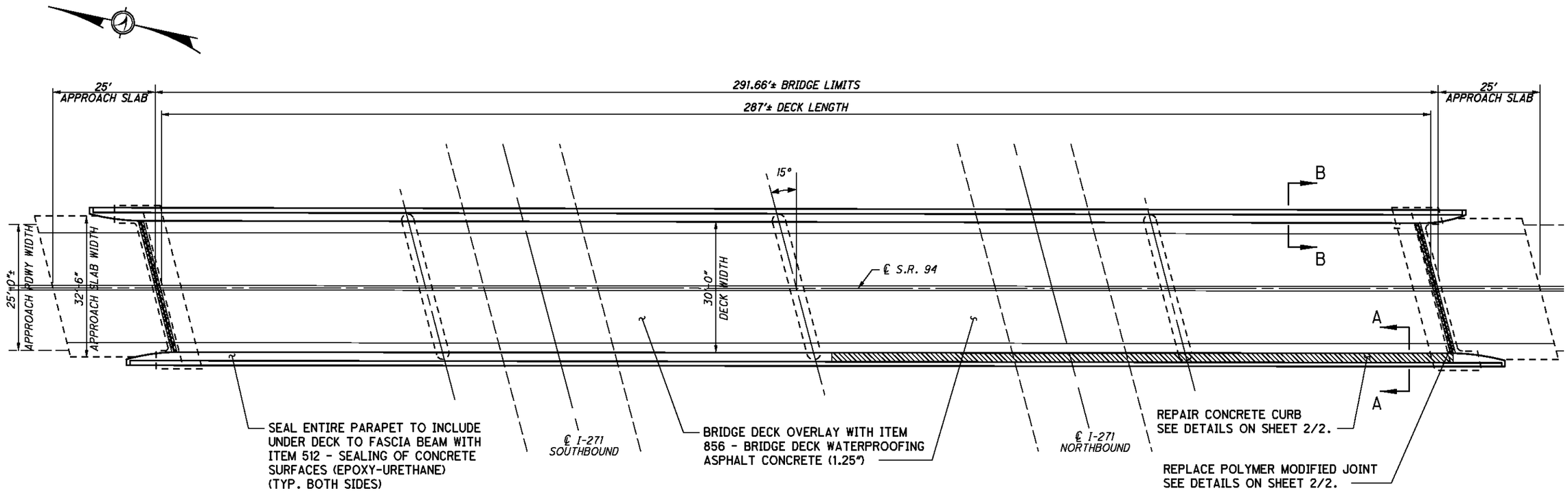
PLAN VIEW
MED-94-1314
OVER DITCH

MED-57-3.24
MED-94-10.37

1 / 1

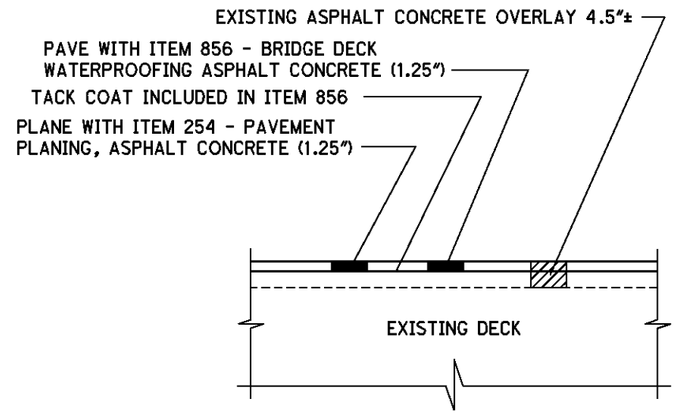
58
70

DESIGN FILE: i:\projects\93113\structures\MED-94-13.14_5205719.dgn MODELNAME: Design
WORKSTATION nfoster DATE: 8/27/2014



ITEM	QUANTITY	UNIT	DESCRIPTION
202	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	625	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN
202	62	FT	REMOVAL MISC.: POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
254	957	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25")
511	4	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE (CURB REPAIR)
512	777	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
517	625	FT	BRIDGE RAILING REBUILT, AS PER PLAN
846	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
856	34	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE

ALL QUANTITIES CARRIED TO THE STRUCTURE SUMMARY.



DECK OVERLAY DETAIL

NOTES:

1) SEE SHEET 2/2 FOR SECTION VIEWS.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE OF PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
NRF	NRF	CAD	8/14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DJV		5205735	

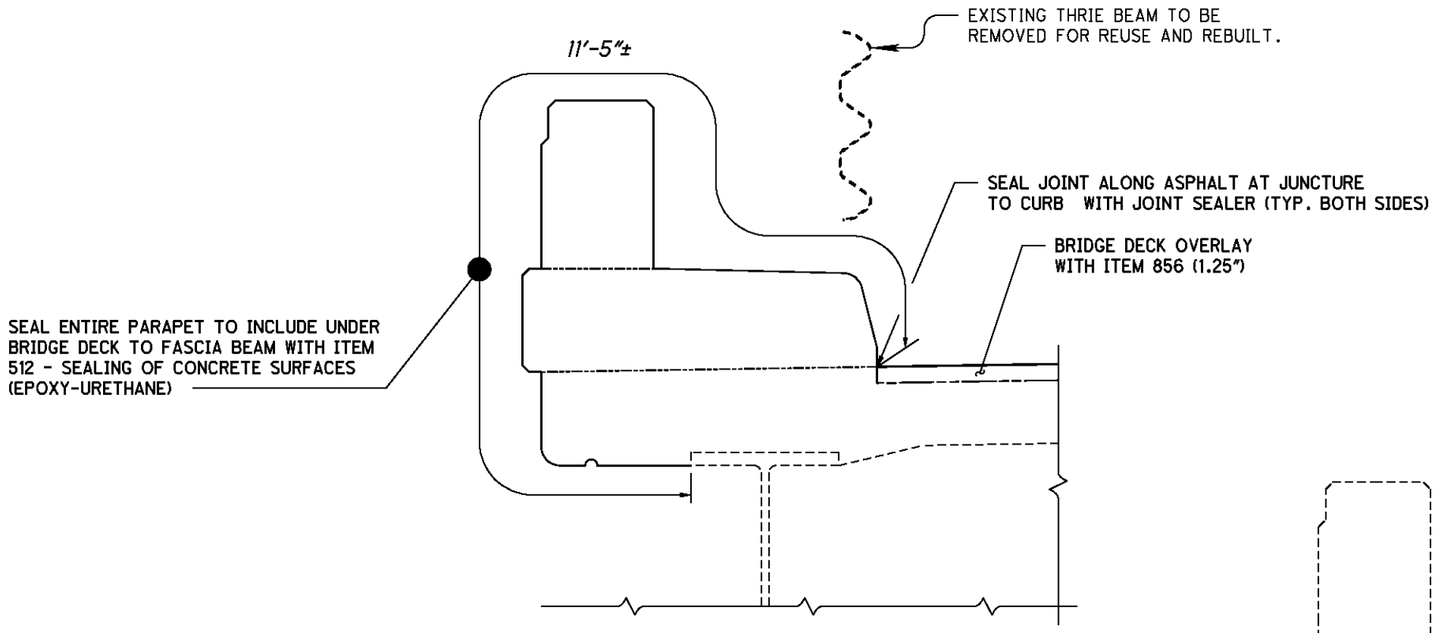
PLAN VIEW AND OVERLAY DETAIL
MED-94-1455
OVER I-271

MED-57-3.24
MED-94-10.37

1 / 2

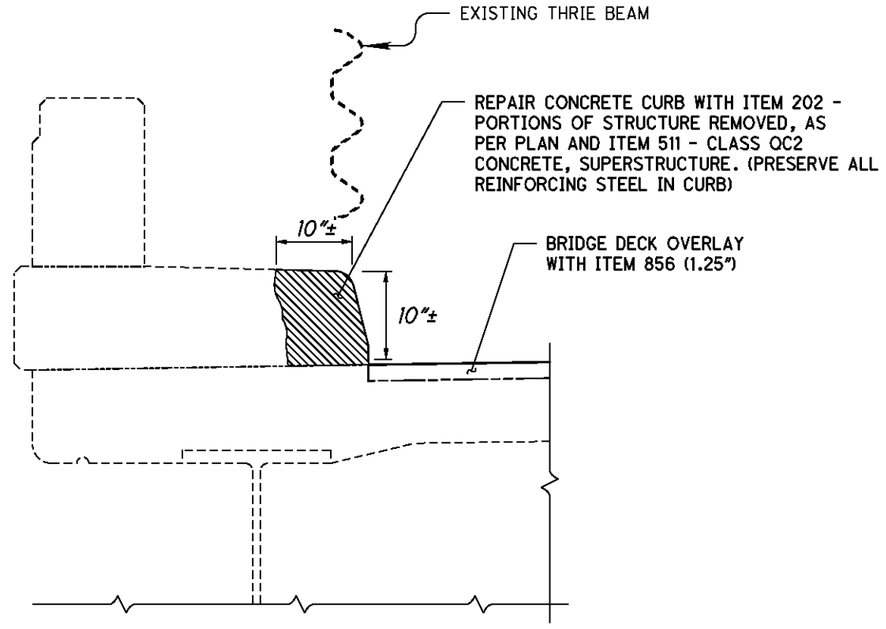
59
70

DESIGN FILE: ii:\projects\93113\structures\MED-94-14.55_5205735.dgn
WORKSTATION: nfoster
DATE: 8/27/2014
MODELNAME: Design



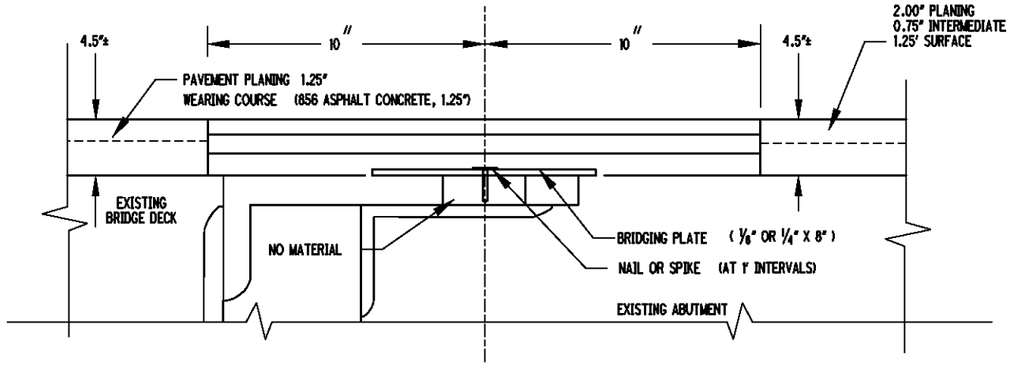
SECTION B-B

SEALING DETAIL
APPROXIMATE LENGTH: 312.5'



SECTION A-A

CURB REPAIR DETAIL
APPROXIMATE LENGTH: 150'



TYPICAL STEEL BEAM EXPANSION JOINT

ITEM	QUANTITY	UNIT	DESCRIPTION
202	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	625	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN
511	4	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE (CURB REPAIR)
512	777	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
517	625	FT	BRIDGE RAILING REBUILT, AS PER PLAN
846	62	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ALL QUANTITIES CARRIED TO SHEET 1/2.

NOTES:

1) FOR THRIE BEAM BRIDGE RAILING DETAILS NOT SHOWN HERE, REFER TO STANDARD BRIDGE DRAWING TBR-1-11.

2) THE PORTIONS OF THRIE BEAM BRIDGE RAILING REMOVED FOR THE SEALING AND/ OR CURB RERIAR OPERATION(S) SHALL BE REMOVED AND INSTALLED SAME DAY.

3) SEAL THE JOINT ALONG ASPHALT AT JUNCTURE TO CURB WITH HOT APPLIED JOINT SEALER CONFORMING TO CMS 705.04. JOINT SEALER IS PAID FOR INCIDENTAL TO ITEM 856 - BRIDGE DECK WATERPROOFING ASPHALT CONCRETE.

DESIGN AGENCY
ODOT DISTRICT THREE OFFICE
OF PLANNING AND ENGINEERING

REVIEWED CAD | DATE 8/14 | STRUCTURE FILE NUMBER 5205735
DRAWN NRF | REVISED —
DESIGNED NRF | CHECKED DJV

CONCRETE REPAIR AND JOINT DEATAILS
MED-94-1455
OVER I-271

MED-57-3.24
MED-94-10.37

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60
70

DESIGN FILE:i:\projects\93113\structures\MED-94-14.55_5205735.dgn MODELNAME: Design
WORKSTATIONnfoster DATE:9/17/2014

NOTES

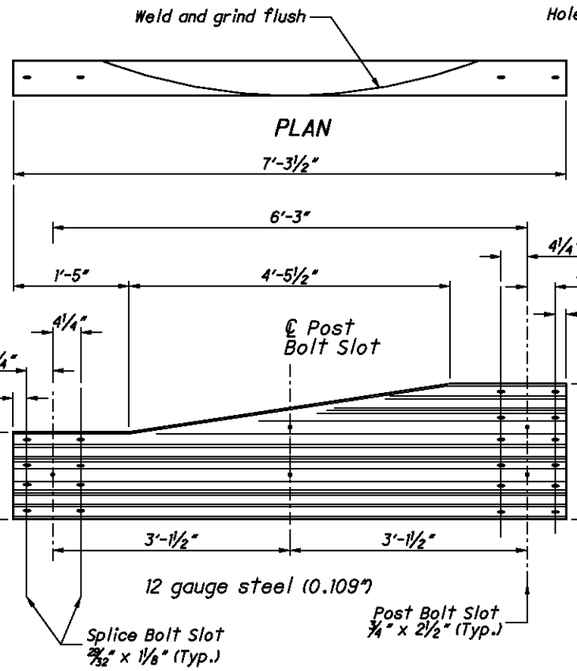
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

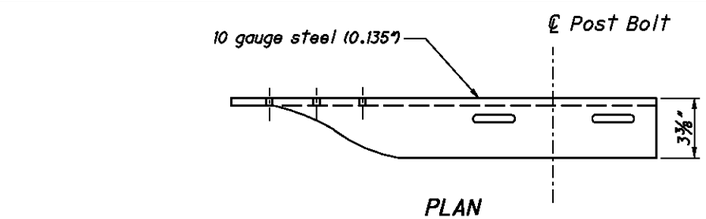
RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with ¾" x 2½" post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

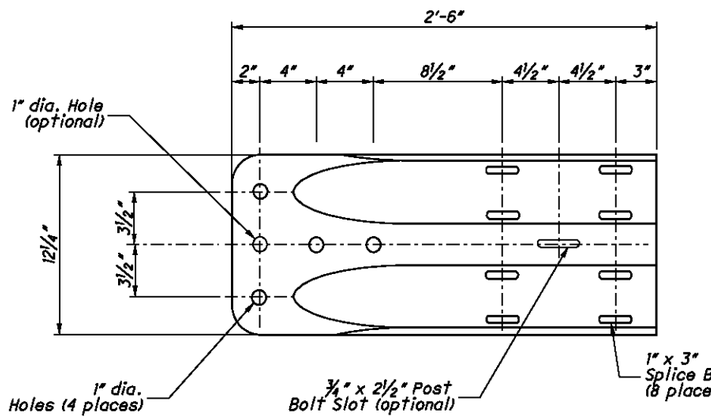
RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.



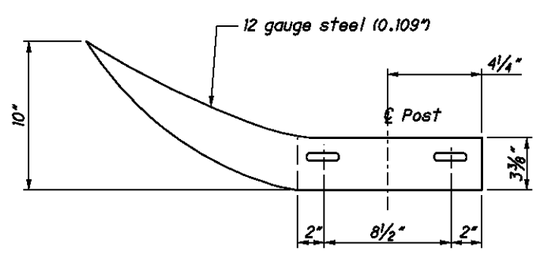
ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)

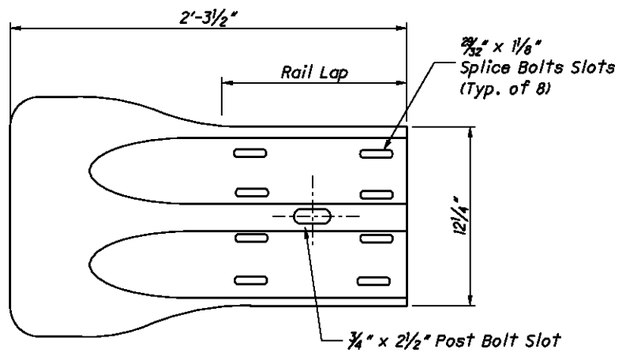
For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



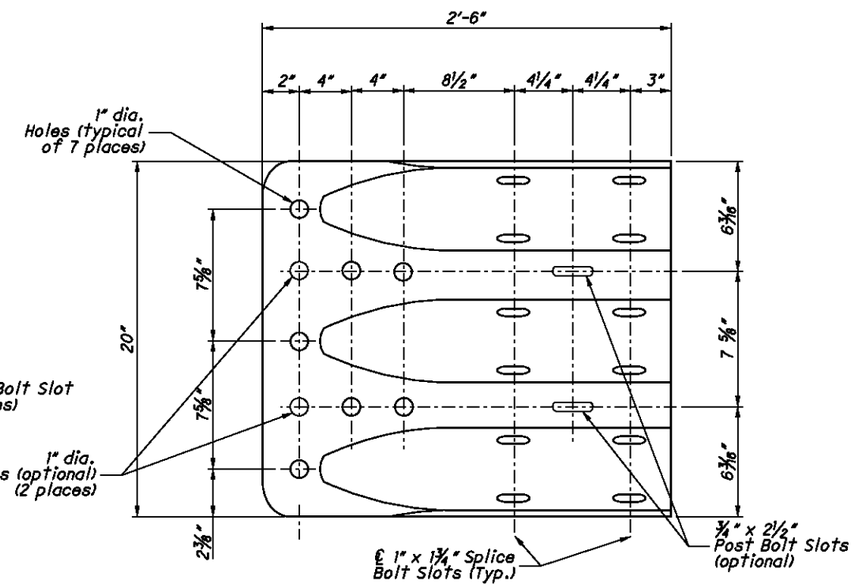


ELEVATION
W-BEAM TERMINAL CONNECTOR

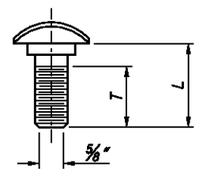




ELEVATION
W-BEAM FLARED END SECTION



ELEVATION
THRIE-BEAM TERMINAL CONNECTOR



GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1¼	1⅛	Splice Bolt

WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

Longer Bolt may be needed for round Wood Post larger than 8" dia.

OFFICE OF ROADWAY ENGINEERING

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REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

GUARDRAIL DETAILS (Rail Components)

PIS GR-1.1

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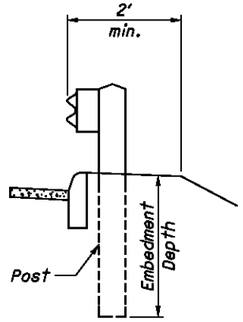
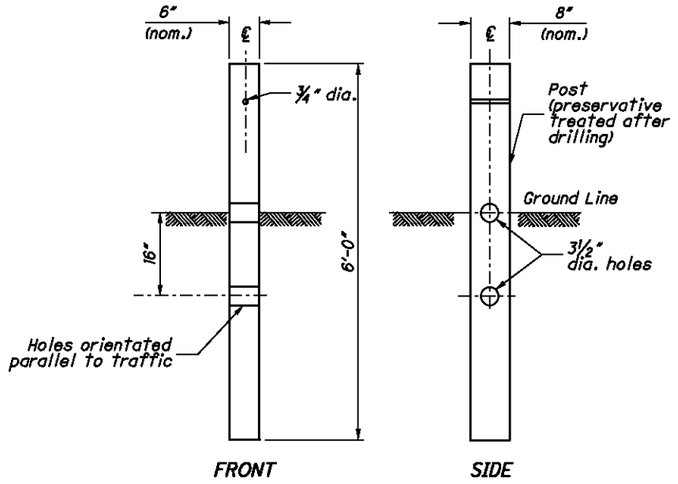
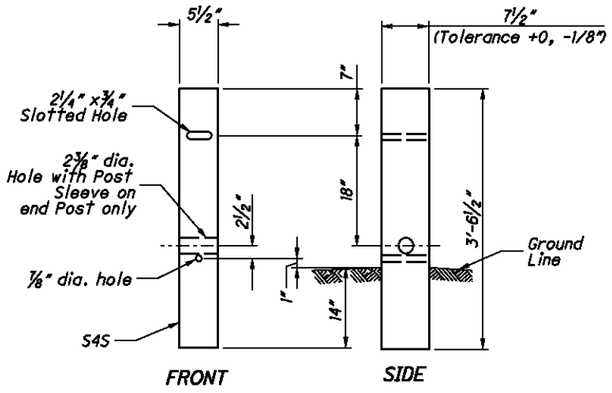


DETAIL A

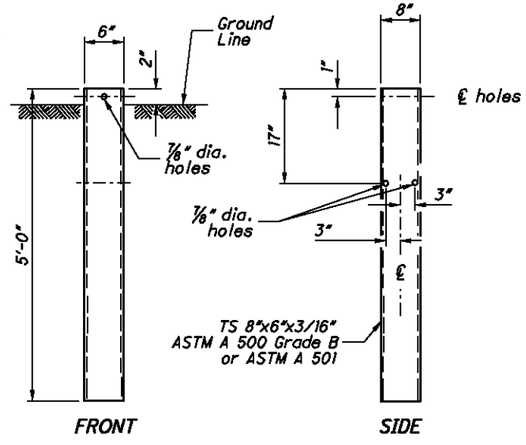
See POST EMBEDMENT DEPTH Note



TYPE 1 BREAKAWAY CRT POST



TYPE 2 BREAKAWAY CRT POST



STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within ± 1" of the standard height, h, or **29"** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)
When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within ±2.5" of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2**, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

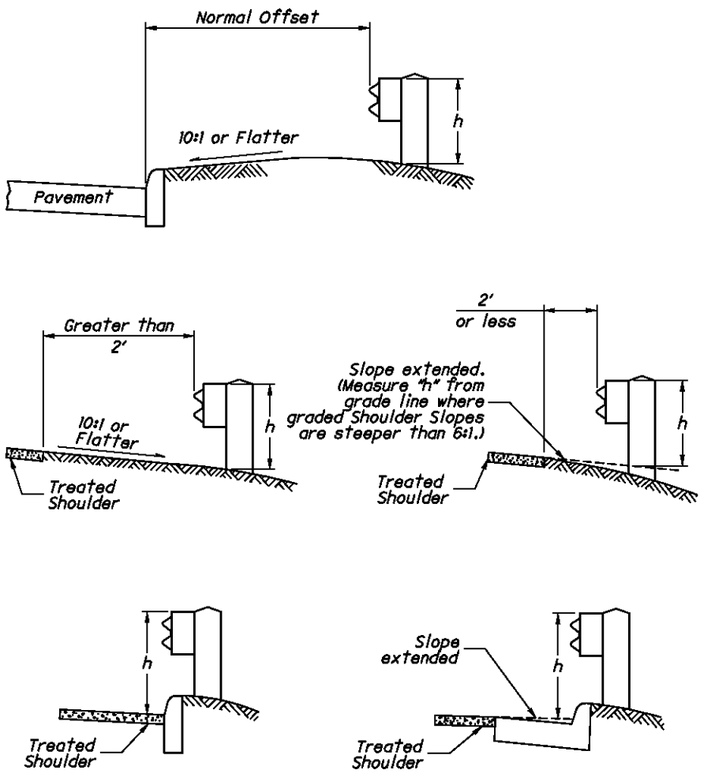
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

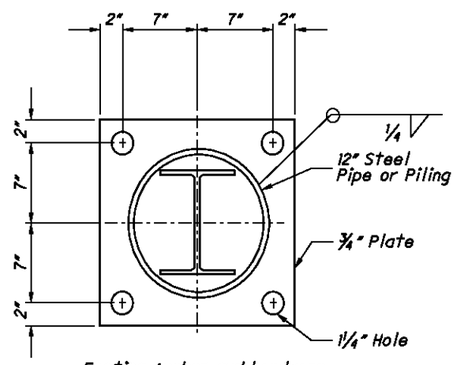
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)



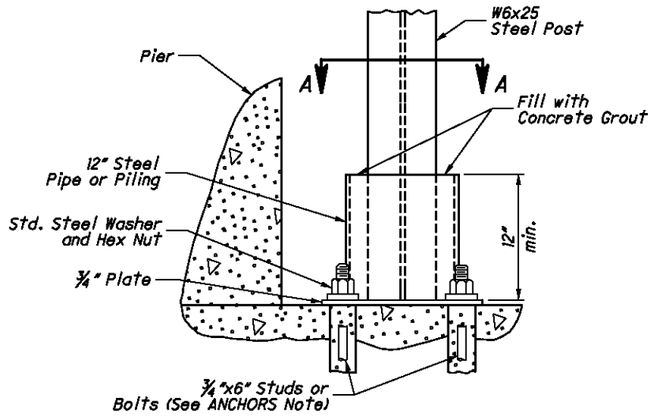
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

SECTION A-A



ELEVATION
FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE | CHECKED

PID NUMBER

PLAN INSERT SHEET

GUARDRAIL DETAILS (Rail Components)

PIS GR-1.1

2 / 3

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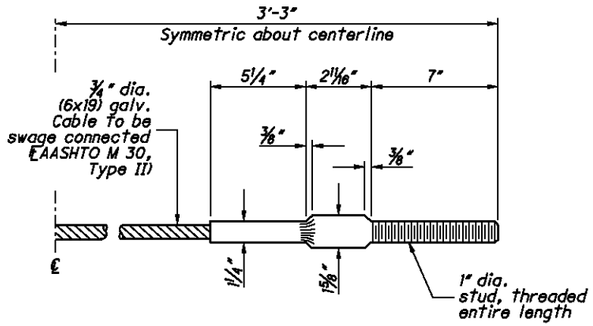
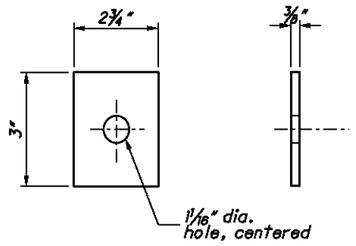
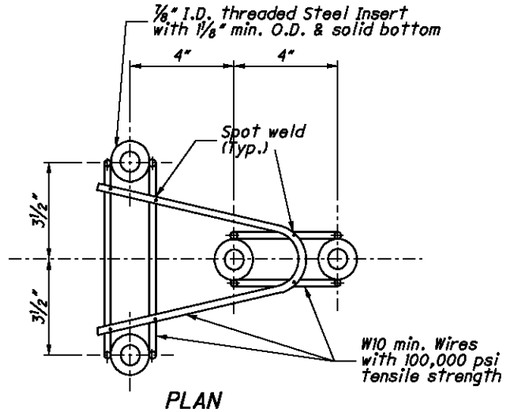


STANDARD SWAGED FITTING AND STUD

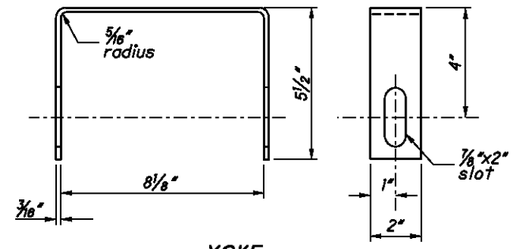
CABLE ANCHOR



END PLATE

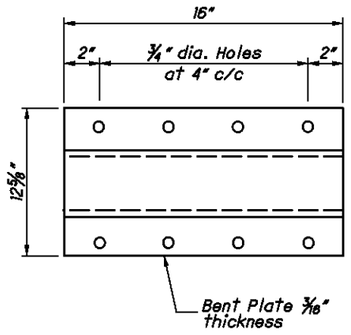


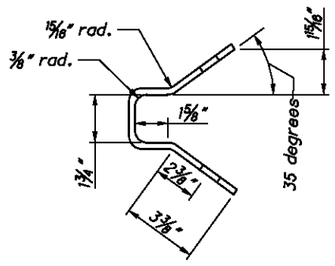
PLAN



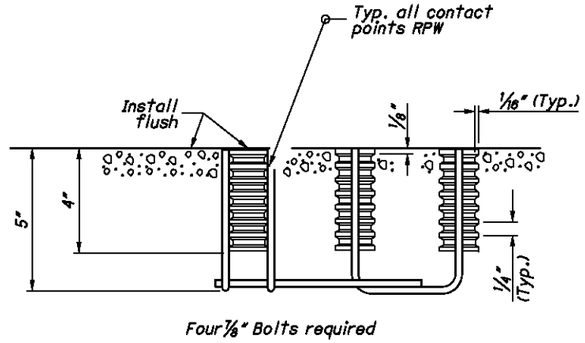
YOKE

Two required in Assembly





ANCHOR BRACKET

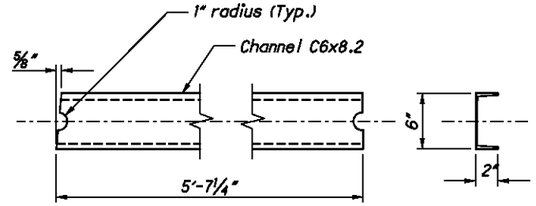


Four ⅞" Bolts required

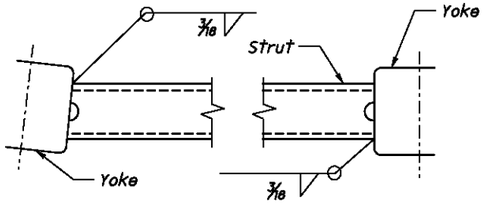
ELEVATION

CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)

See ANCHORS and PROTECTIVE COATINGS Notes on Sheet 2

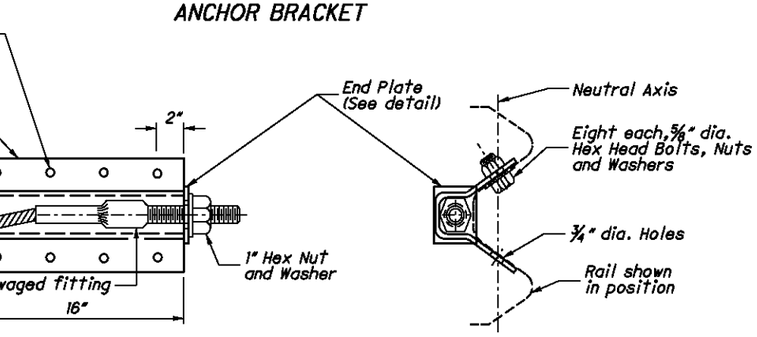


STRUT

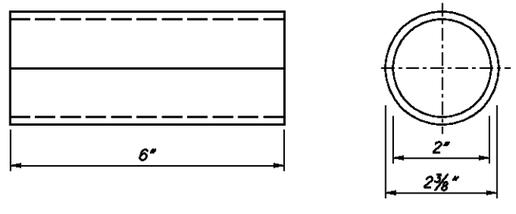


Channel legs shown down. For opposite hand, install Channel legs up.

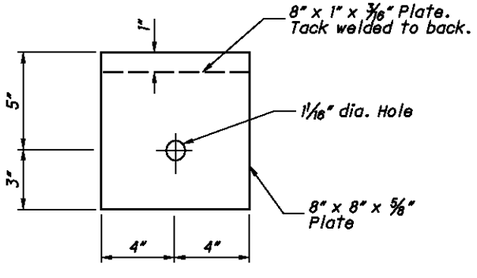
STRUT AND YOKE ASSEMBLY



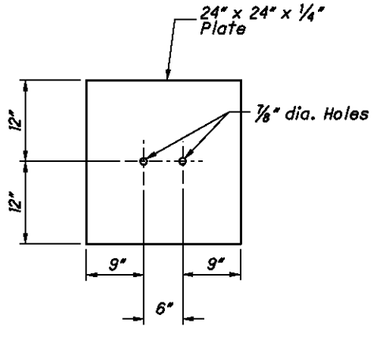
ANCHOR BRACKET ASSEMBLY DETAILS



POST SLEEVE



BEARING PLATE



SOIL PLATE

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

GUARDRAIL DETAILS (Rail Components)

PIS GR-1.1

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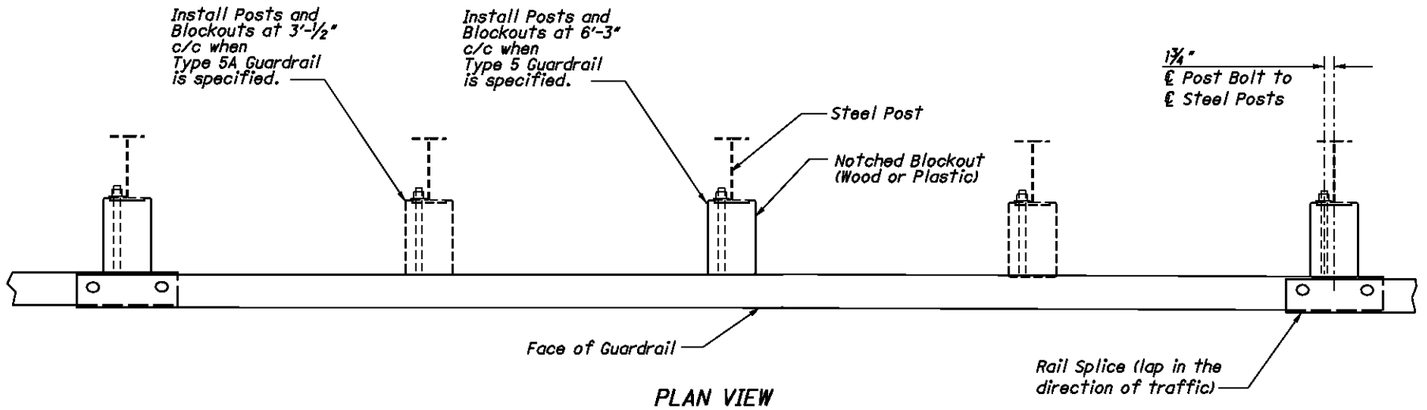
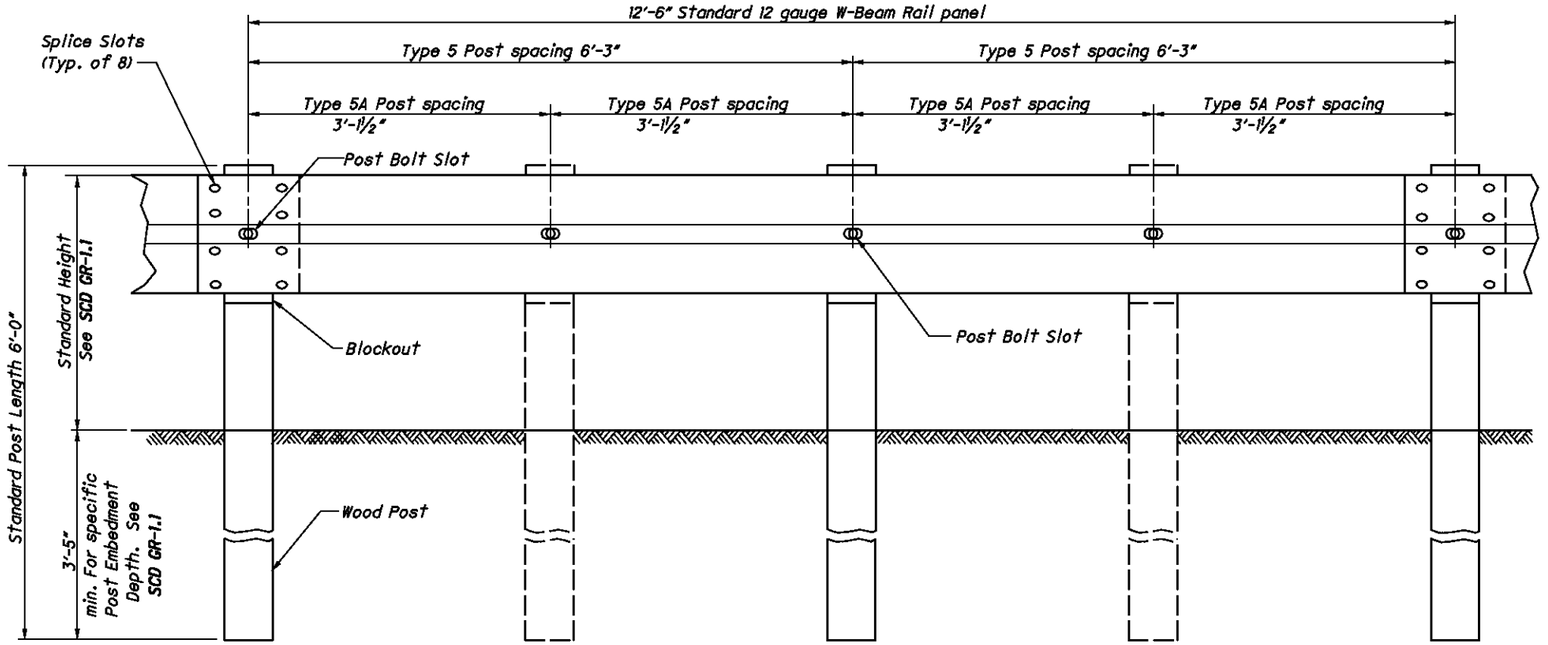


PLAN VIEW
(Steel Posts shown)



ELEVATION
(Wood Posts shown)

NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.

Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.

Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering.**

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see **SCD GR-1.1.**

STEEL BEAM POSTS (English)				
Size	**Beam depth**	**Flange width**	**Flange thickness**	**Web thickness**
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

OFFICE OF ROADWAY ENGINEERING

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REVISION DATE | CHECKED

PID NUMBER

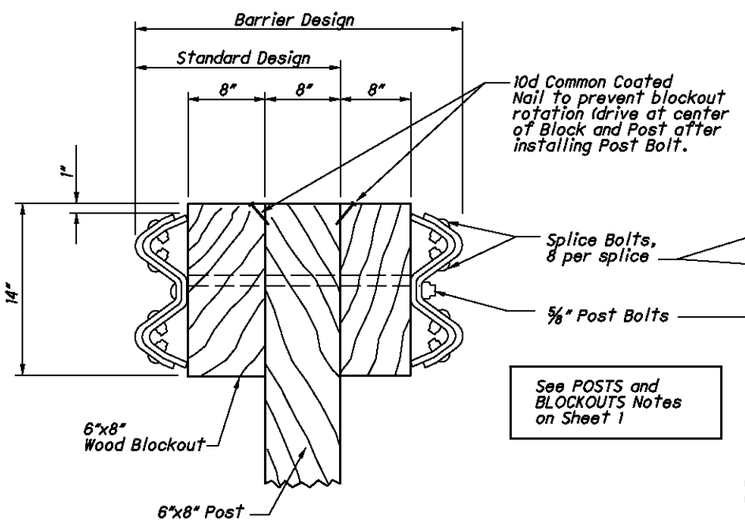
PLAN INSERT SHEET

TYPE 5 & 5A GUARDRAIL

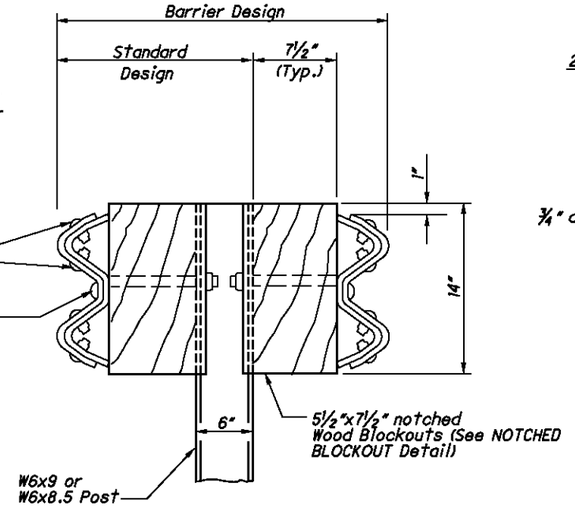
PIS GR-2.1

1 / 2

64
70

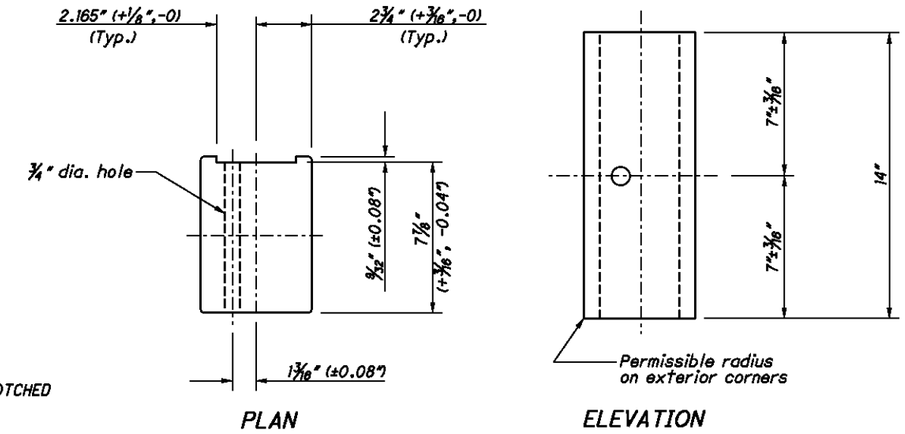


SQUARE WOOD POST



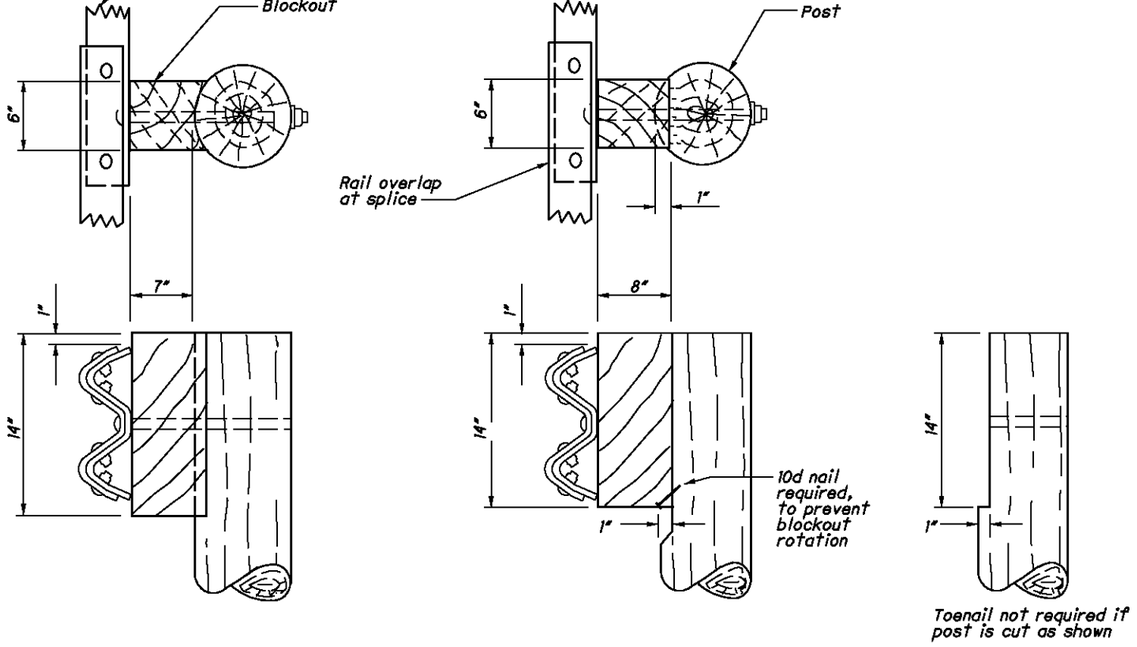
STEEL POST

See POSTS Note, Sheet 1



NOTCHED BLOCKOUTS FOR STEEL POSTS

See BLOCKOUTS Note on Sheet 1



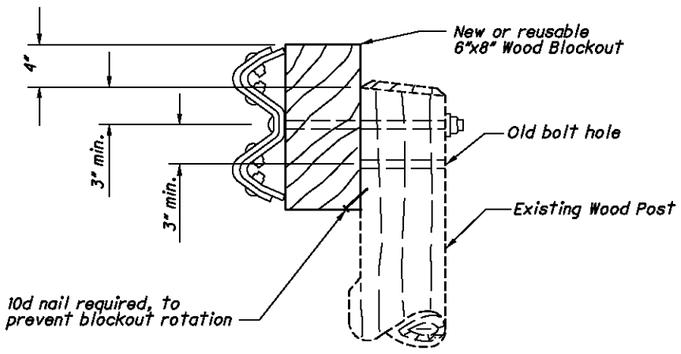
Method 1
Routed Blockout

Method 2
Notched Post

Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS

Single Sided runs only (Standard Design)



WOOD POSTS WITH WOOD BLOCK RAISING EXISTING GUARDRAIL HEIGHT

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PLAN INSERT SHEET

GUARDRAIL TYPE 5 & 5A

PIS GR-2.1

2 / 2

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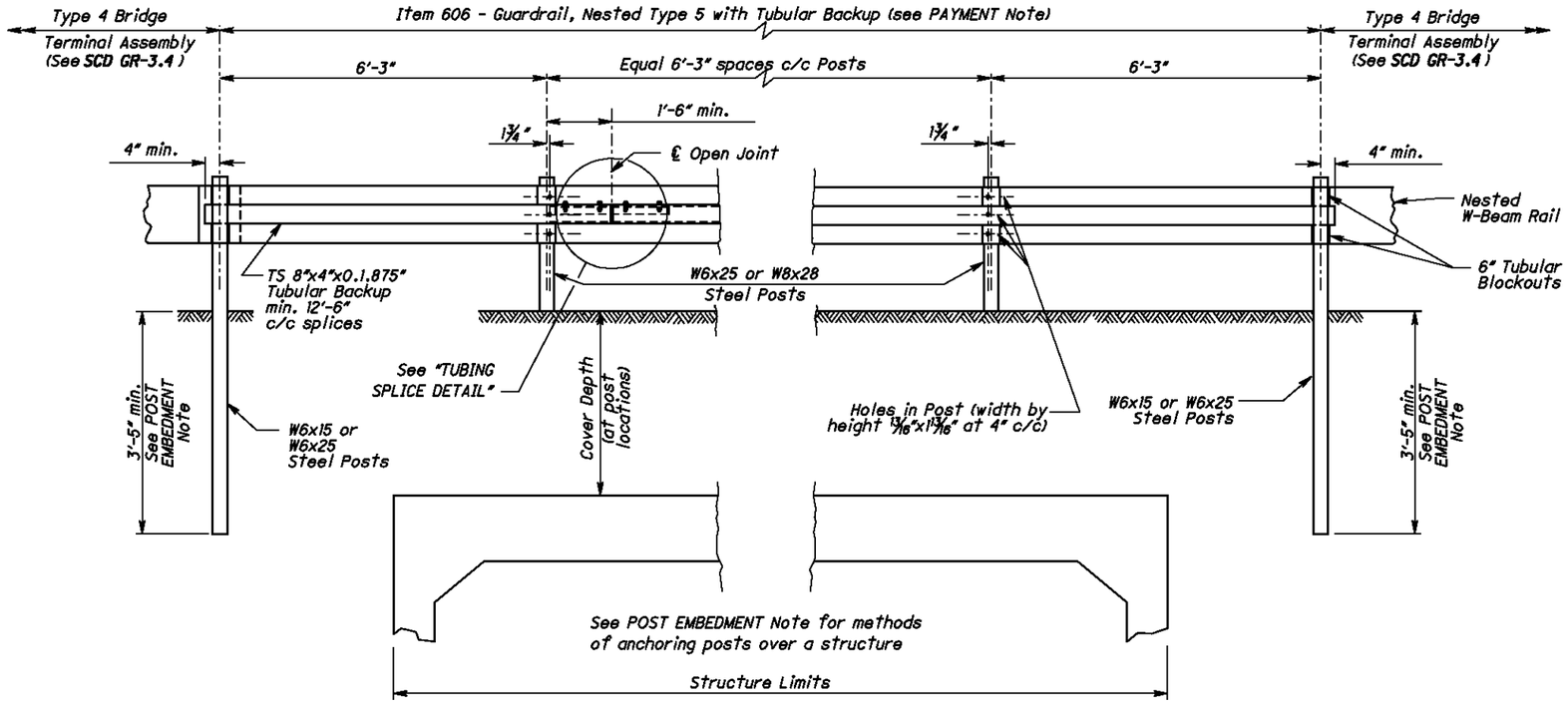


NOTES

APPLICATION: *Nested Type 5 Guardrail with Tubular Backup is accepted to NCHRP 350 Test Level 3. The only Bridge Terminal Assembly that is permitted to be used with this system is detailed on* ***SCD GR-3.4.***

GALVANIZING: *Rails, posts, base plates, bolts, nuts, washers and all tubular steel are to be galvanized as specified in CMS 711.02.*

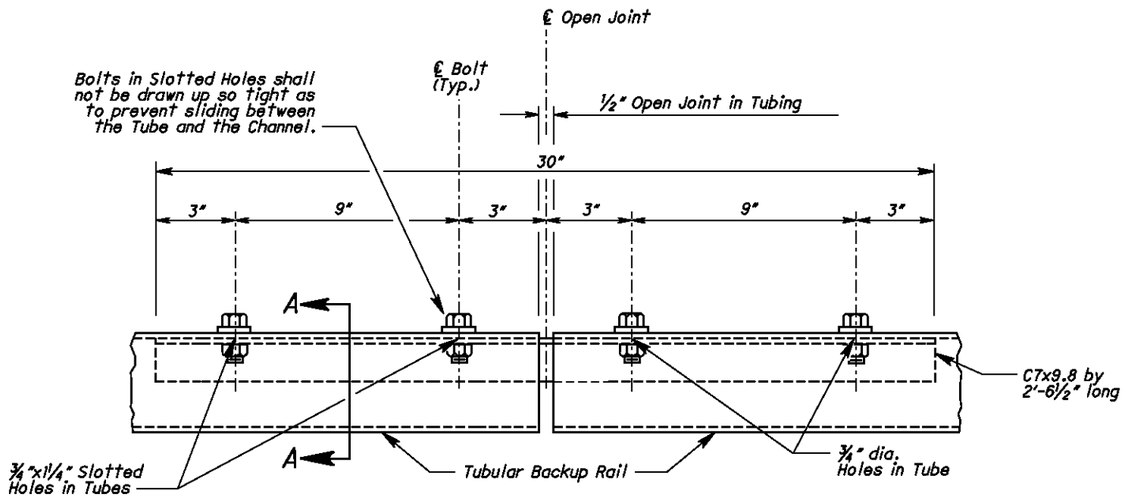
POST EMBEDMENT: *Normal embedment depth is 3'-5" (See* ***SCD GR-1.1****). For installation methods for posts of various cover over structures, see Sheet 2.*

ANCHORING: *Partial-depth anchoring is preferred to through-bolting. For partial depth anchoring use non-shrink, non-metallic grout as specified in CMS 705.20. Minimum embedment depths are 9" for ⅞" bolts and 10" for 1¼" bolts.*

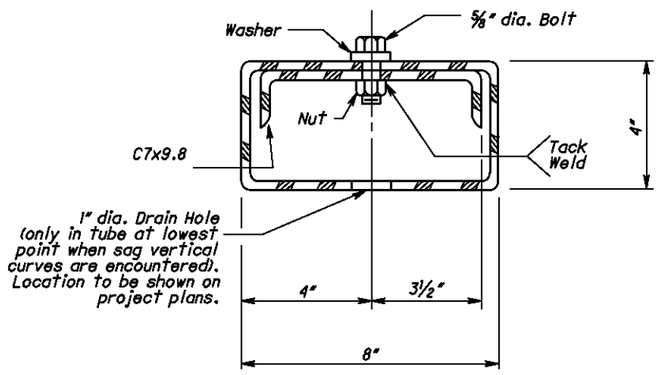
THROUGH-BOLTING: *Drilling methods that cause spalling of the concrete where the bit passes through the underside of the slab is not permitted. In haunches 6:1 or flatter, use beveled plate washers on the bottom surface to compensate for the slope. Through-bolting is not permitted in haunch areas with a slope greater than 6:1.*

SIDE-MOUNTED POST ANCHORAGES TO STRUCTURES: *Install anchorages according to* ***Structural Engineering's Standard Drawing DBR-2-73*** *and is paid under* ***Item 517 - Railing.***

PAYMENT: ***Item 606 - Guardrail, Nested Type 5 with Tubular Backup*** *is paid in Feet for the length specified in the plans and shall include tubular backup as per Item 707.10, rails, posts and all other hardware, material and labor required to construct the guardrail as shown. The specified lengths should be for full W-Beam panels (i.e. evenly divisible by 12'6".*



TUBING SPLICE DETAIL



SECTION A-A

OFFICE OF ROADWAY ENGINEERING

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REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

NESTED TYPE 5 GUARDRAIL WITH TUBULAR BACKUP

PIS GR-2.2

1 / 2

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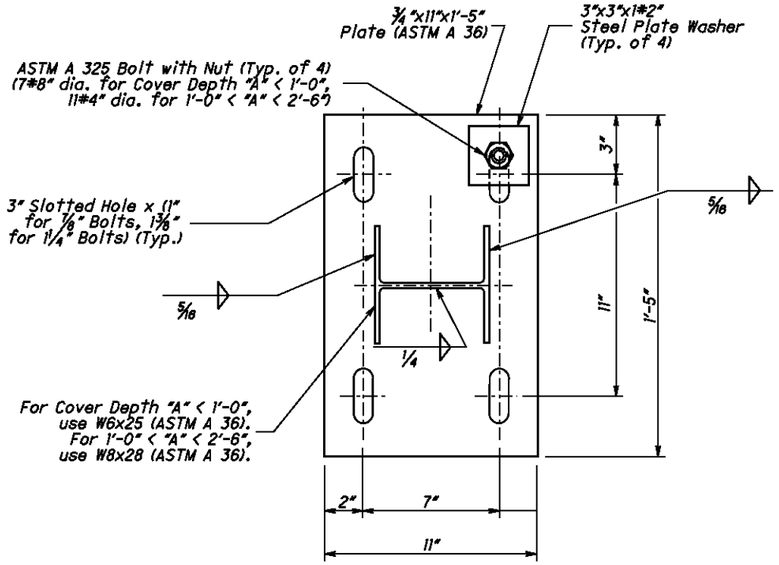
70

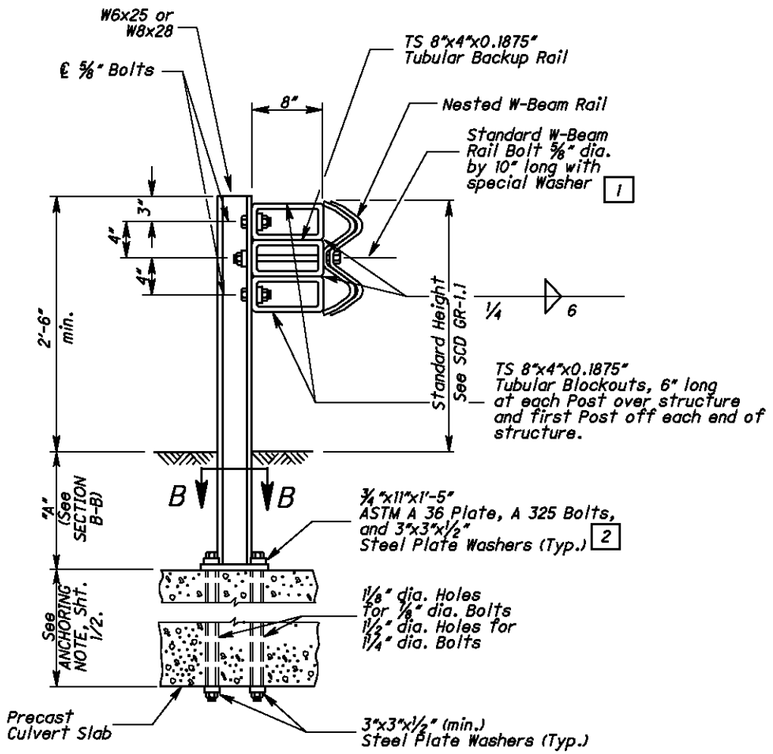


SECTION B-B

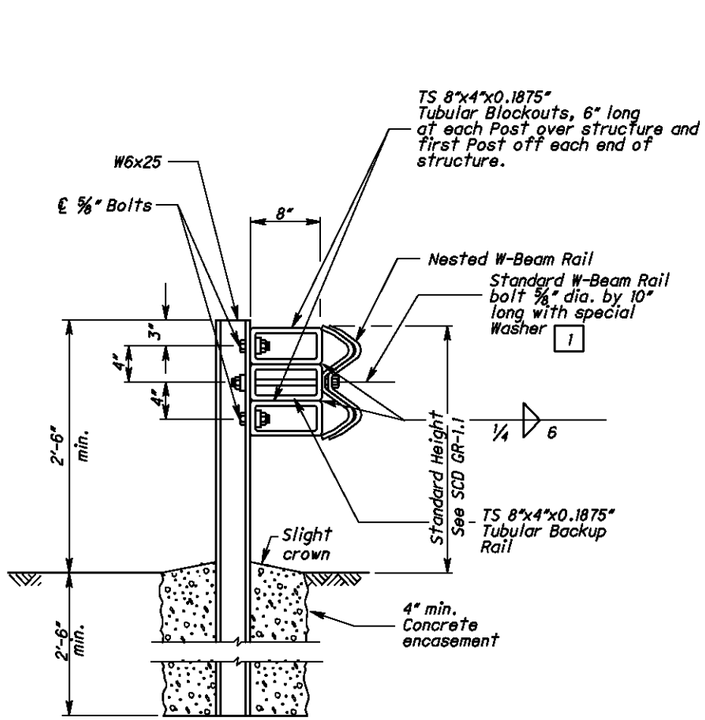
LEGEND

1 For details of special washer, see AASHTO M 180.

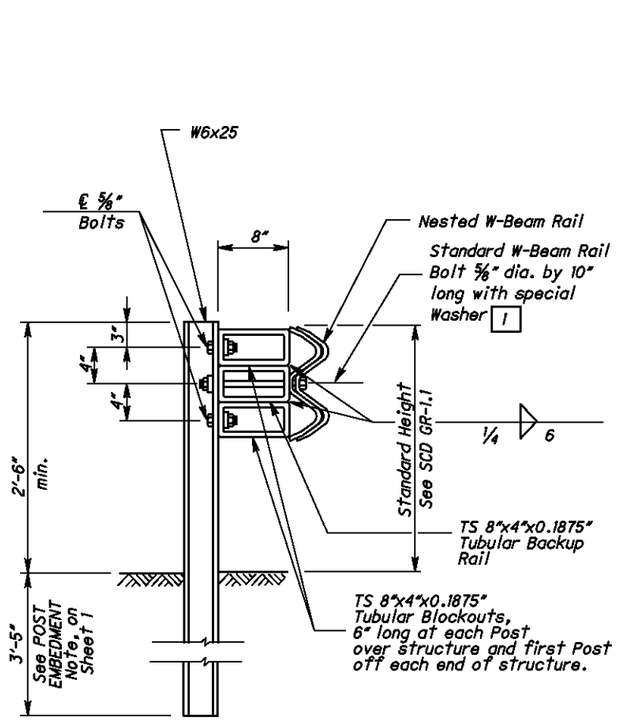
2 Embed plate in sealant as per Federal Specification TT-S-00230C, Type II.



COVER DEPTH LESS THAN 2'-6"



COVER DEPTH EQUAL TO OR GREATER THAN 2'-6", BUT LESS THAN 3'-5"



COVER DEPTH GREATER THAN OR EQUAL TO 3'-5"

METHODS FOR ANCHORING POSTS

OFFICE OF ROADWAY ENGINEERING

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REVISION DATE | CHECKED

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PLAN INSERT SHEET

NESTED TYPE 5 GUARDRAIL WITH TUBULAR BACKUP

PIS GR-2.2

2 / 2

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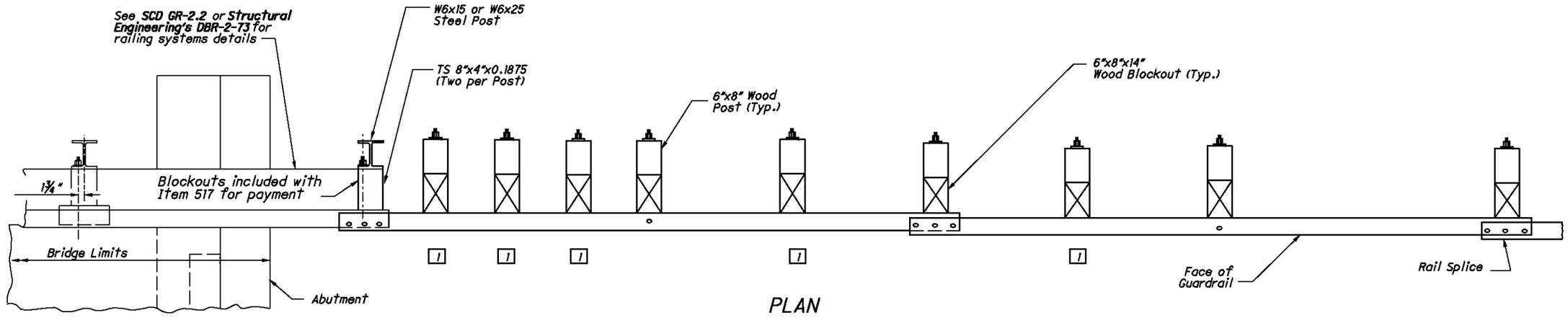
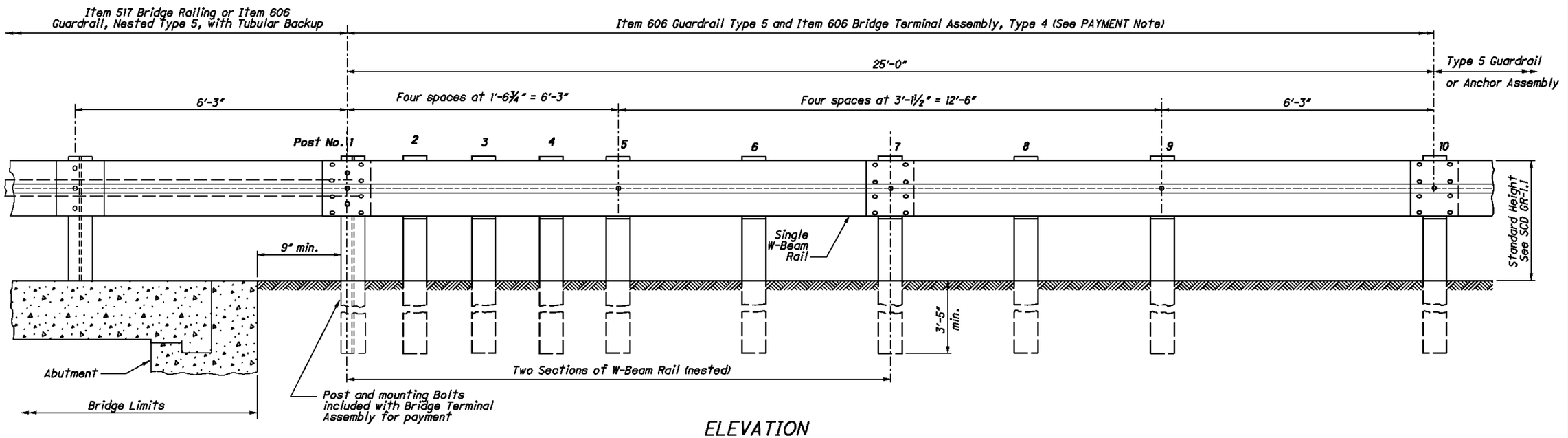


PLAN



ELEVATION

NOTES

GENERAL: For additional details, see **SCD GR-1.1.**

APPLICATION: The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or to Deep Beam Bridge Guardrail (as shown on **Structural Engineering SCD DBR-2-73**).

DETAIL INFORMATION: The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted ¾"x2½". Tighten the bolts as specified for expansion joints in Item 606.05.

POSTS: Posts may be set in drilled holes or driven to grade. See **SCD GR-1.1** for additional Post embedment details. Guardrail is not attached to certian posts (see LEGEND).

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: Use wood blockouts only. Steel or plastic blockouts are not permitted. Notched wood blockouts are used with steel posts.

FLARED GUARDRAIL: Start Standard Guardrail Flares as shown on **SCD GR-5.1** at or beyond Post No. 10; however, the flare may begin at Post No. 7.

PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with **Item 517 - Railing,** or **Item 606 - Guardrail, Nested Type 5 with Tubular Backup,** for payment.

LEGEND

1 Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.

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BRIDGE TERMINAL ASSEMBLY, TYPE 4

PIS GR-3.4

1 / 1

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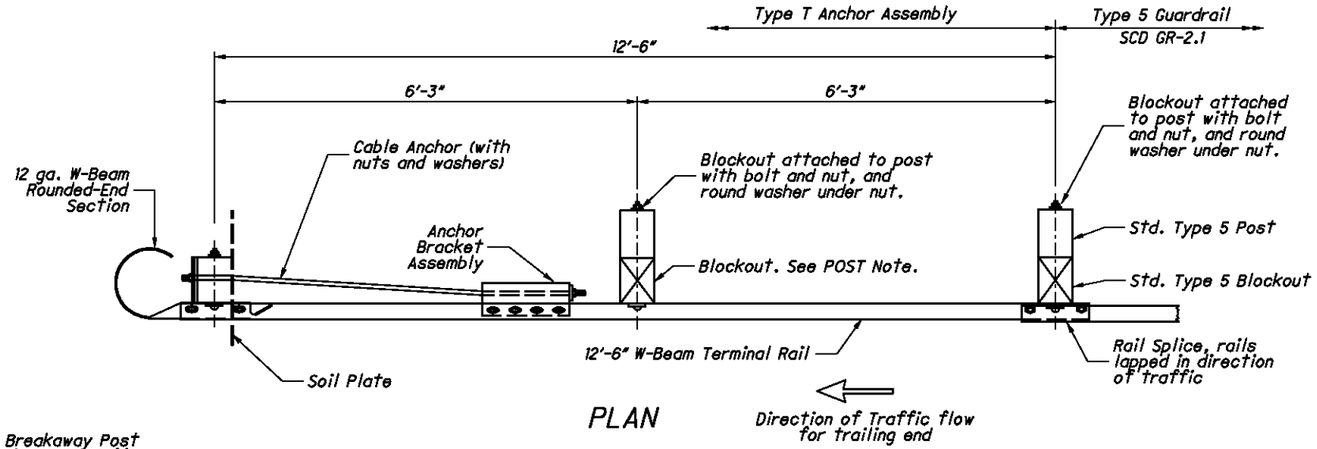
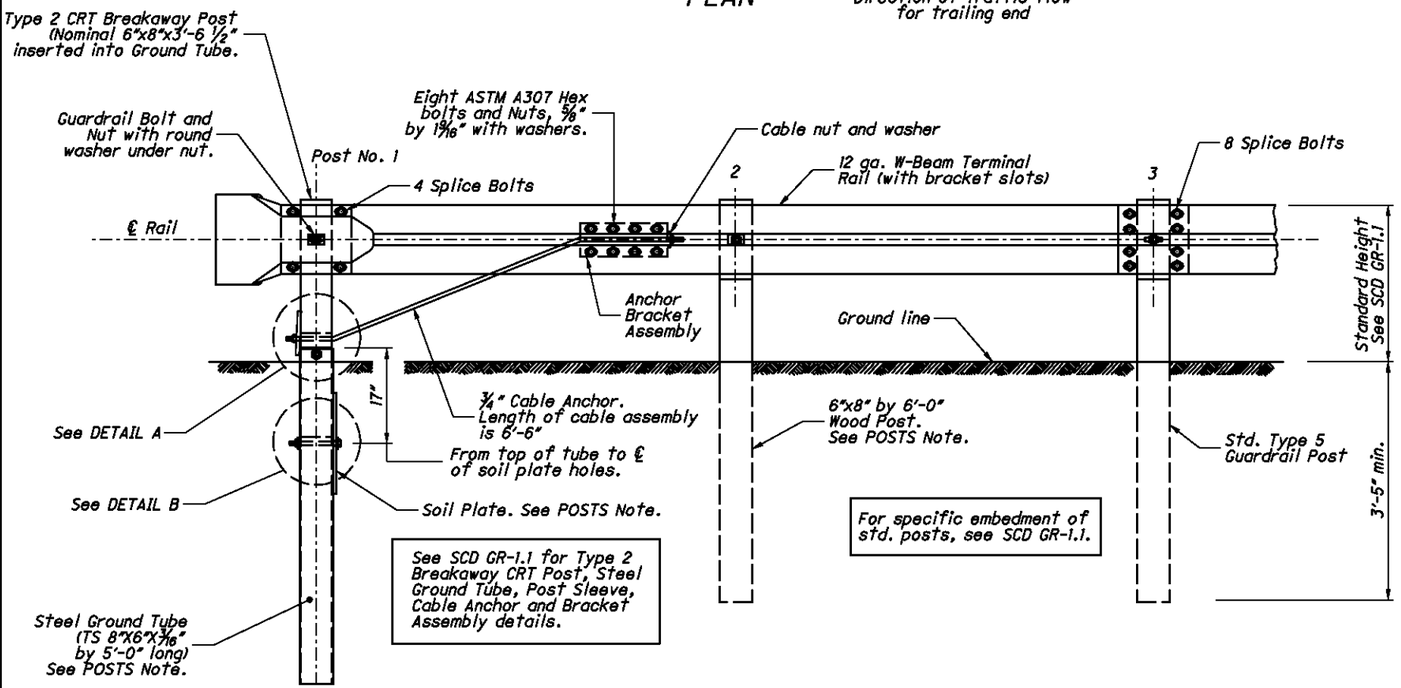
70





ELEVATION - FOUNDATION TUBE

NOTES

APPLICATION: Use Type T Anchor Assemblies on the trailing end of guardrail runs, located outside of the clear zone of opposing traffic. The assembly is 12'-6" long, none of which can be considered the Length of Need for the guardrail run.

For termination requirements at driveways, see DRIVEWAY OPENING Detail on Sheet 2. For side road approaches and Terminals at Structures, see Location & Design Manual, Volume 1, Figure 603-3.

ANCHORING OPTIONS: Contractor may choose either the foundation tube (shown on this Sheet) or the concrete footing option (Sheet 2) to construct this anchor assembly.

If the foundation tube option is chosen, the contractor will take proper care to insure that the Soil Plate fasteners are not broken during the driving process.

Concrete footings may be cast-in-place or precast. Compact fill after placing precast unit.

MATERIALS: See **SCD GR-1.1** for parts used on this anchor, including the CRT Breakaway Posts, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly.

Bearing Plate and Soil Plate is ASTM A709 Grade 36. Steel Ground Tube shall be ASTM A500, Grade B, and meet CMS 707.10. All angles, channels and plates shall meet CMS 711.01. All structural steel shall be galvanized as specified in CMS 711.02. All bolt washers indicated are standard galvanized steel of the appropriate size.

Concrete shall be class C.

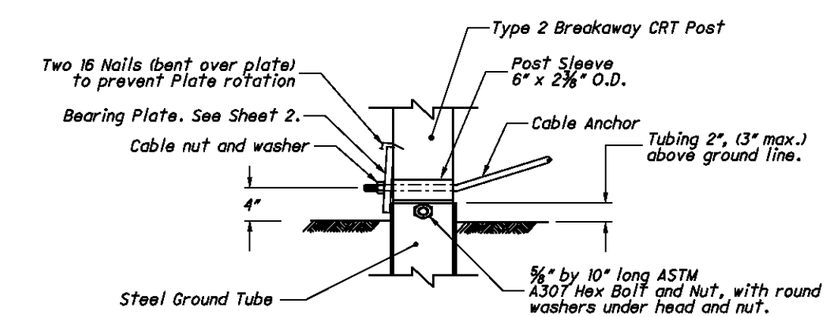
Components on this anchor that are not detailed on SCD GR-1.1 include: 1) 12'-6" W-Beam Terminal Rail (standard part RWM14a), and 2) W-Beam Rounded End Section (RWE03a). For complete details and specifications, see part descriptions in the **AASHTO/AGC/ARTBA Standardized Hardware Guide.**

POSTS: Post No. 1 may be an 8'-0" long Steel Ground Tube without a Soil Plate in lieu of the 5'-0" tube with Soil Plate.

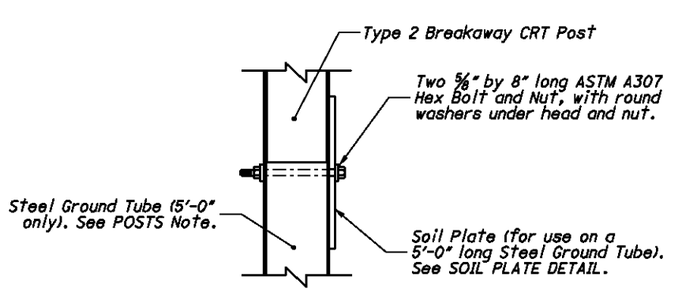
Post No. 2 can be W6x9 (or W6x8.5) with notched wood blockouts or a standard Type 5 post and blockout. Recycled plastic blockouts are permitted.

PAYMENT: All labor and materials, including the W-Beam Rounded End Section and the W-Beam Terminal Rail for the 12'-6" anchor assembly shall be included in the unit price bid for

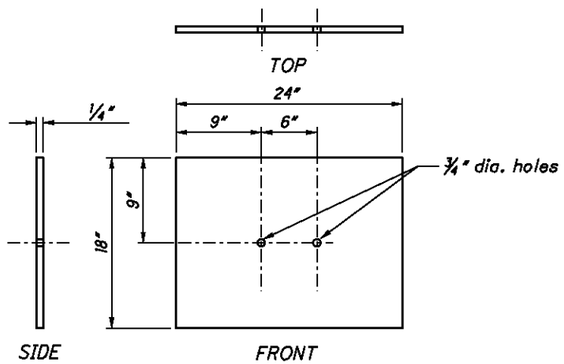
Item 606 - Anchor Assembly, Type T, Each.



DETAIL A



DETAIL B



SOIL PLATE DETAIL

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REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

TYPE T ANCHOR ASSEMBLY (Foundation Tube Option)

PIS GR-4.2

1 / 2

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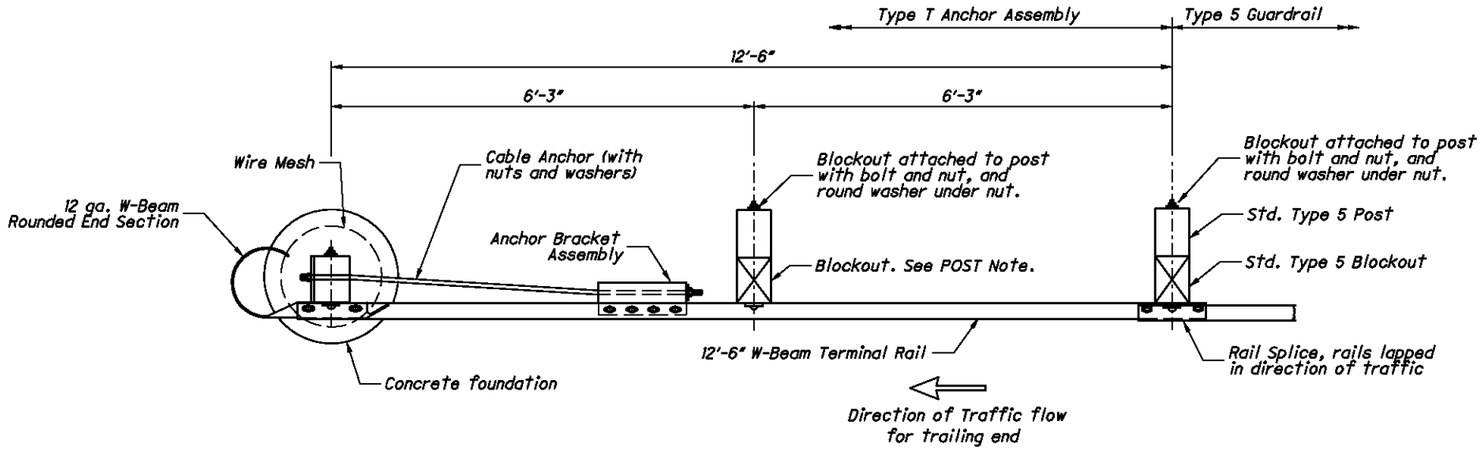
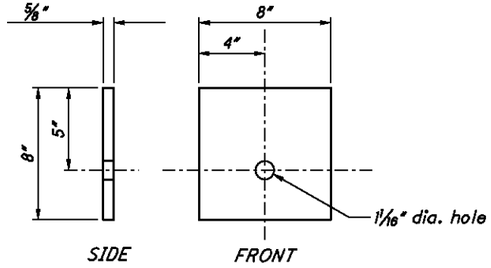
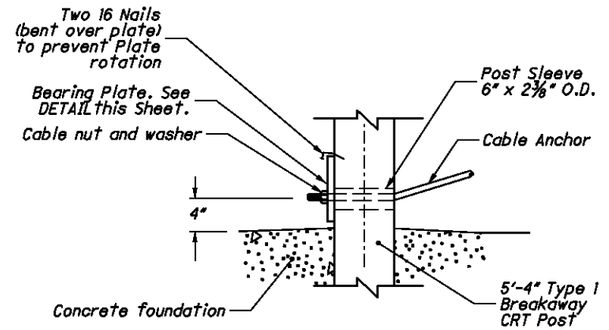


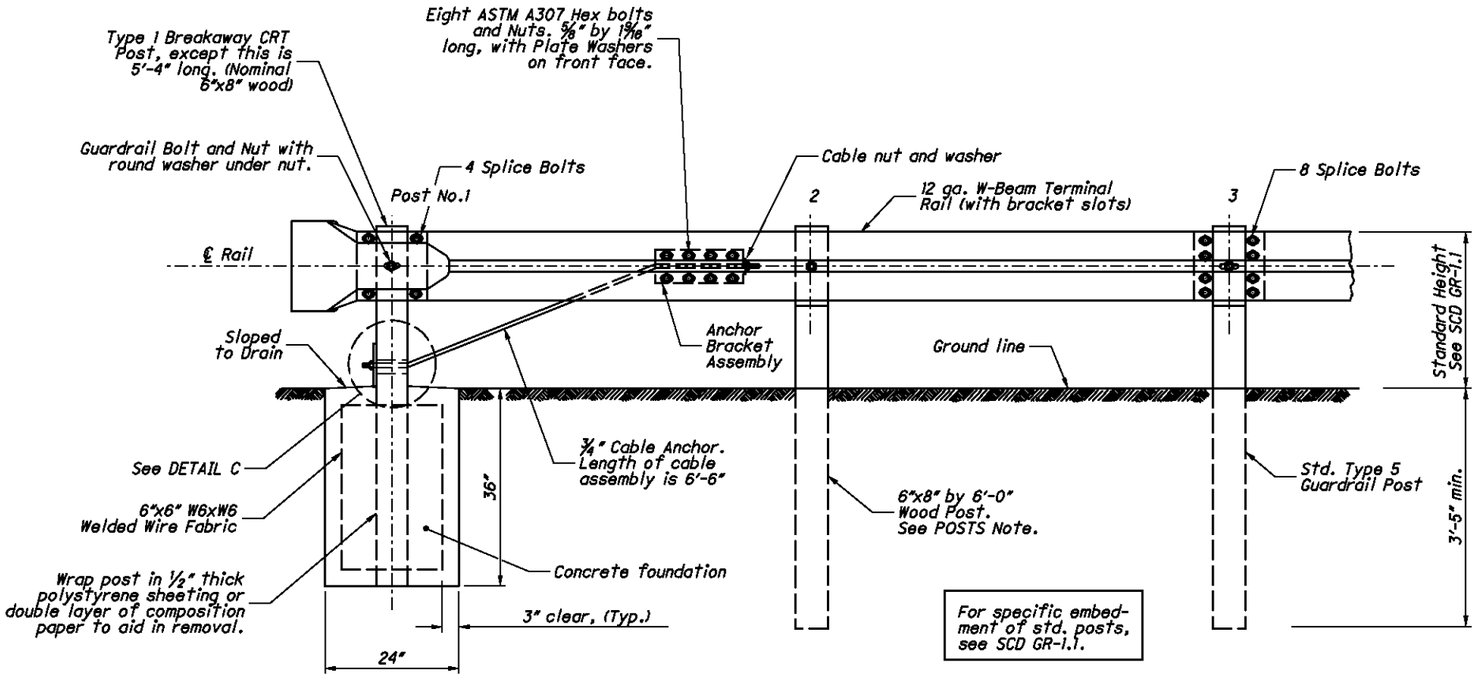
PLAN



BEARING PLATE DETAIL

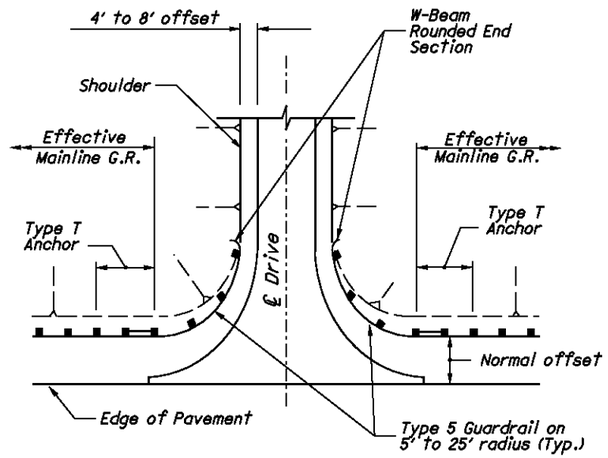


DETAIL C



See SCD GR-1.1 for Type 1 Breakaway CRT Post, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly details.

ELEVATION - CONCRETE FOOTER



DRIVEWAY OPENING

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PIS NUMBER

PLAN INSERT SHEET

TYPE T ANCHOR ASSEMBLY (Foundation Tube Option)

PIS GR-4.2

2 / 2

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