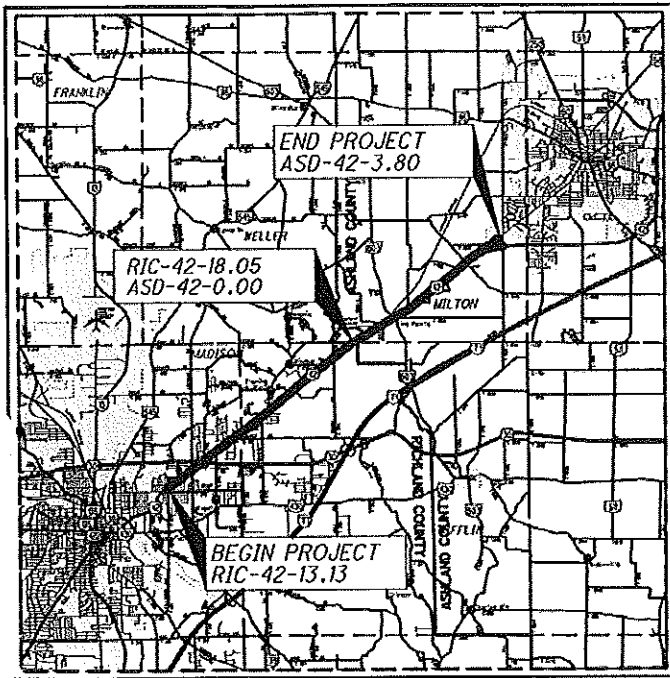


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

RIC-42-13.13

MADISON TOWNSHIP
MIFFLIN TOWNSHIP
MILTON TOWNSHIP

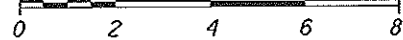
ASHLAND COUNTY
RICHLAND COUNTY



LOCATION MAP

LATITUDE: N 40° 49' 57" LONGITUDE: W 82° 22' 26"

SCALE IN MILES



PORTION TO BE IMPROVED -----
INTERSTATE & DIVIDED HIGHWAY -----
UNDIVIDED STATE & FEDERAL ROUTES -----
OTHER ROADS -----

DESIGN DESIGNATIONS
SEE SHEET 2 & 3

DESIGN EXCEPTIONS
NONE

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PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE PAVEMENT REPAIRS, PAVEMENT PLANING, RESURFACING WITH ASPHALT CONCRETE, GUARDRAIL REPAIR, STRUCTURE MAINTENANCE AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)

2016 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: 12/6/18 DISTRICT DEPUTY DIRECTOR

APPROVED:
DATE: 1/31/19 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E170849

PID NO.
102957

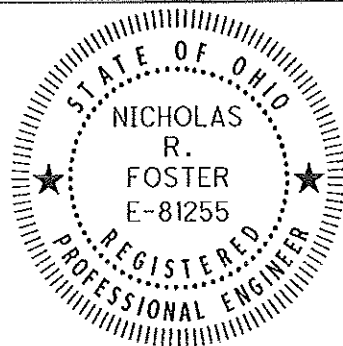
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

RIC-42-13.13

1
36

ROADWAY ENGINEERS SEAL:



SIGNED: Nicholas R. Foster
DATE: 12/6/18

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	MT-95.30	7/21/17	TC-41.20	10/18/13	800	1/18/19
BP-4.1	7/19/13	MT-96.11	1/20/17	TC-42.20	10/18/13	830	1/17/14
		MT-96.20	7/15/16	TC-52.10	10/18/13	832	10/19/18
CB-2.3	1/15/16	MT-96.26	7/19/13	TC-52.20	1/19/18	856	10/20/17
		MT-97.10	7/18/14	TC-61.30	1/20/17	961	7/15/16
DM-4.3	1/15/16	MT-97.12	1/20/17	TC-65.10	1/17/14		
DM-4.4	1/15/16	MT-99.20	7/21/17	TC-65.11	7/21/17		
		MT-101.90	7/21/17	TC-71.10	1/19/18		
MGS-1.1	1/19/18	MT-105.10	7/19/13				
MGS-2.1	1/19/18						
MGS-4.2	7/19/13						SPECIAL PROVISIONS
RM-1.1	7/18/14						

PLANS PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT THREE ENGINEERING

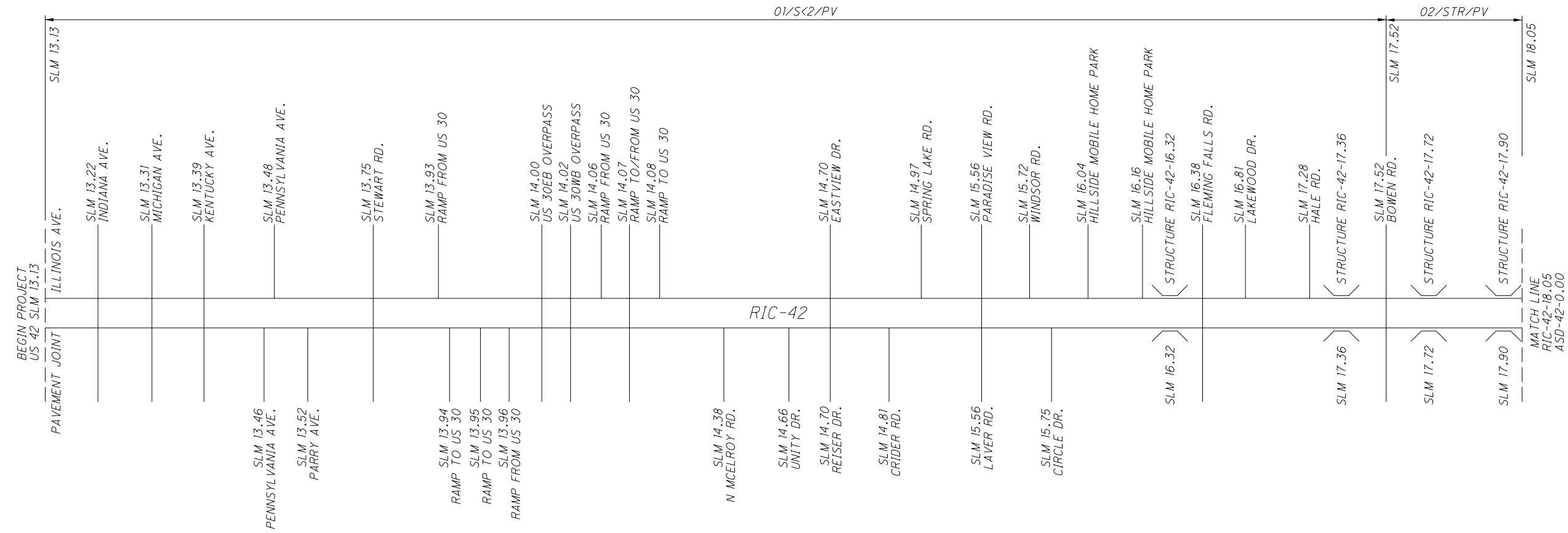
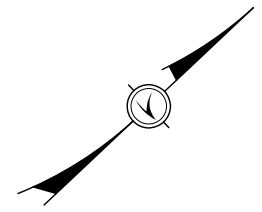


UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Call Before You Dig
1-800-362-2764

OHIO Utilities Protection SERVICE
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
1-800-925-0988



**DESIGN DESIGNATION
RIC-42, 13.13-13.96**

CURRENT ADT (2019)	11,500
DESIGN YEAR ADT (2031)	12,000
DESIGN HOURLY VOLUME (2031)	1,100
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	4%
LEGAL SPEED	35 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

**DESIGN DESIGNATION
RIC-42, 13.96-14.81**

CURRENT ADT (2019)	16,000
DESIGN YEAR ADT (2031)	17,000
DESIGN HOURLY VOLUME (2031)	1,700
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	6%
LEGAL SPEED	35 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

**DESIGN DESIGNATION
RIC-42, 14.81-16.39**

CURRENT ADT (2019)	8,800
DESIGN YEAR ADT (2031)	8,900
DESIGN HOURLY VOLUME (2031)	800
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	6%
LEGAL SPEED	50 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

**DESIGN DESIGNATION
RIC-42, 16.39-17.29**

CURRENT ADT (2019)	8,800
DESIGN YEAR ADT (2031)	8,900
DESIGN HOURLY VOLUME (2031)	800
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	6%
LEGAL SPEED	55 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

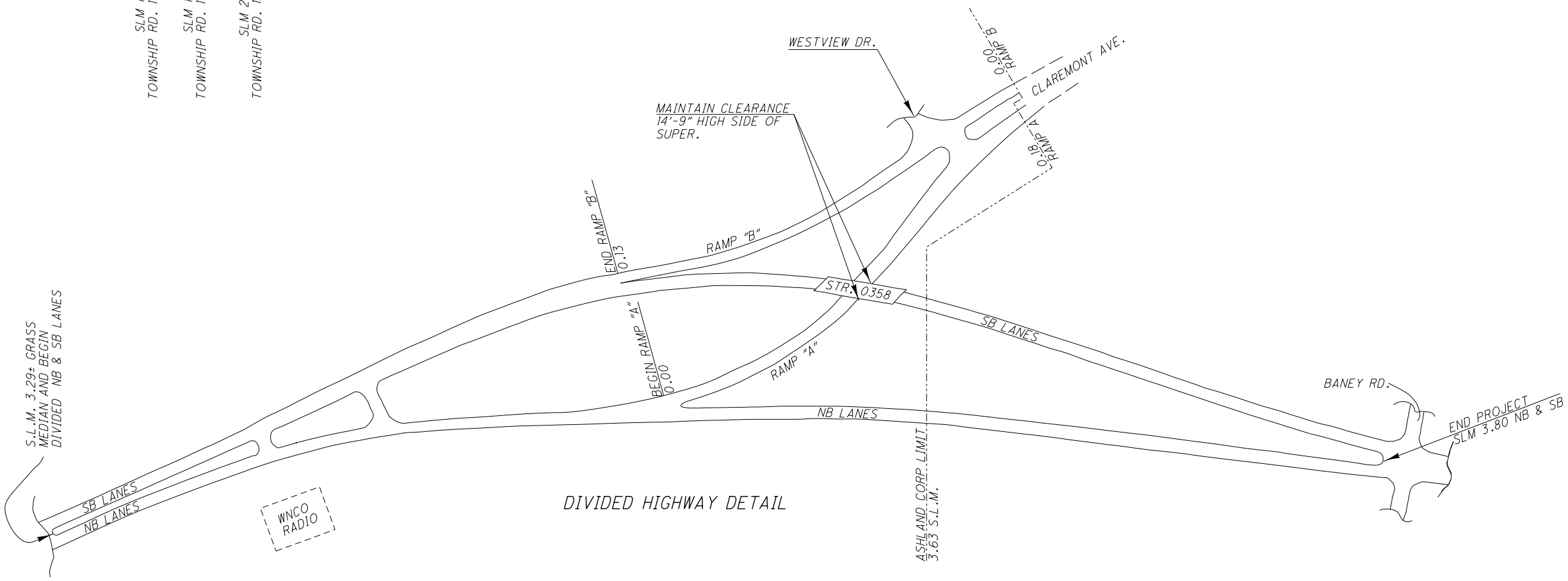
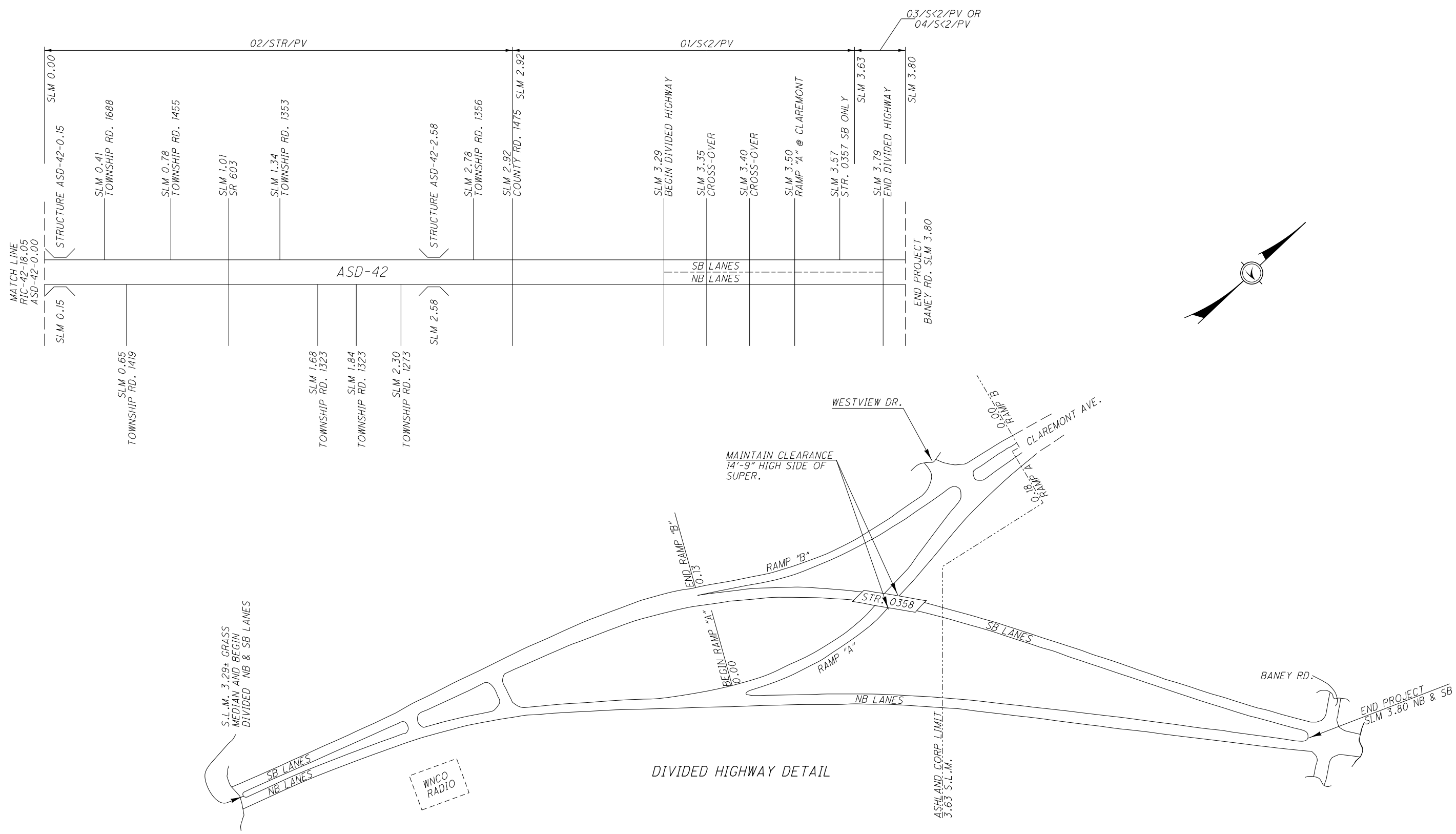
**DESIGN DESIGNATION
RIC-42, 17.29-18.05**

CURRENT ADT (2019)	8,800
DESIGN YEAR ADT (2031)	8,900
DESIGN HOURLY VOLUME (2031)	800
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	6%
LEGAL SPEED	55 MPH
FUNCTIONAL CLASS	MINOR ARTERIAL

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STRAIGHT LINE DIAGRAM & DESIGN DESIGNATIONS

RIC-42-13.13



DIVIDED HIGHWAY DETAIL

DESIGN DESIGNATION
ASD-42, 0.00-0.79

CURRENT ADT (2019)	8,800
DESIGN YEAR ADT (2031)	8,900
DESIGN HOURLY VOLUME (2031)	800
DIRECTIONAL DISTRIBUTION	53%
TRUCKS (24 HOUR B&C)	6%
LEGAL SPEED	55 MPH
FUNCTIONAL CLASS	MINOR ARTERIAL

DESIGN DESIGNATION
ASD-42, 0.79-3.17

CURRENT ADT (2019)	11,500
DESIGN YEAR ADT (2031)	13,000
DESIGN HOURLY VOLUME (2031)	1,200
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	5%
LEGAL SPEED	55 MPH
FUNCTIONAL CLASS	MINOR ARTERIAL

DESIGN DESIGNATION
ASD-42, 3.17-3.35

CURRENT ADT (2019)	11,500
DESIGN YEAR ADT (2031)	13,000
DESIGN HOURLY VOLUME (2031)	1,200
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	5%
LEGAL SPEED	50 MPH
FUNCTIONAL CLASS	MINOR ARTERIAL

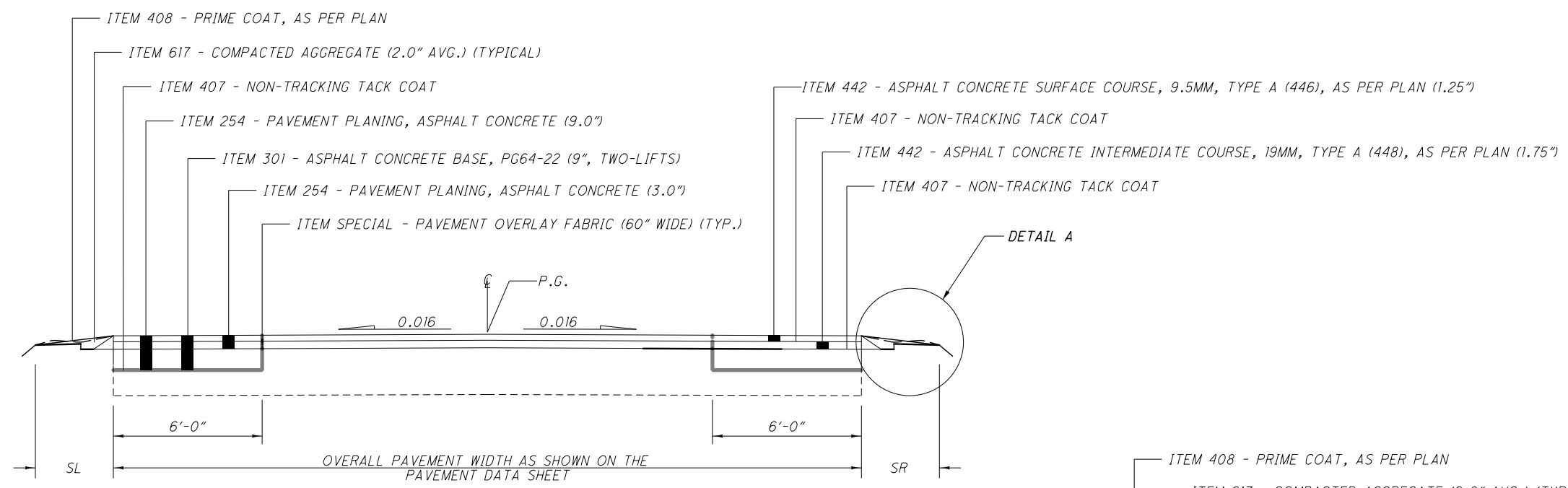
DESIGN DESIGNATION
ASD-42, 3.35-3.47

CURRENT ADT (2019)	11,500
DESIGN YEAR ADT (2031)	13,000
DESIGN HOURLY VOLUME (2031)	1,200
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	5%
LEGAL SPEED	50 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

DESIGN DESIGNATION
ASD-42, 3.47-3.80

CURRENT ADT (2019)	6,500
DESIGN YEAR ADT (2031)	6,700
DESIGN HOURLY VOLUME (2031)	800
DIRECTIONAL DISTRIBUTION	56%
TRUCKS (24 HOUR B&C)	12%
LEGAL SPEED	50 MPH
FUNCTIONAL CLASS	NHS NON-INTERSTATE

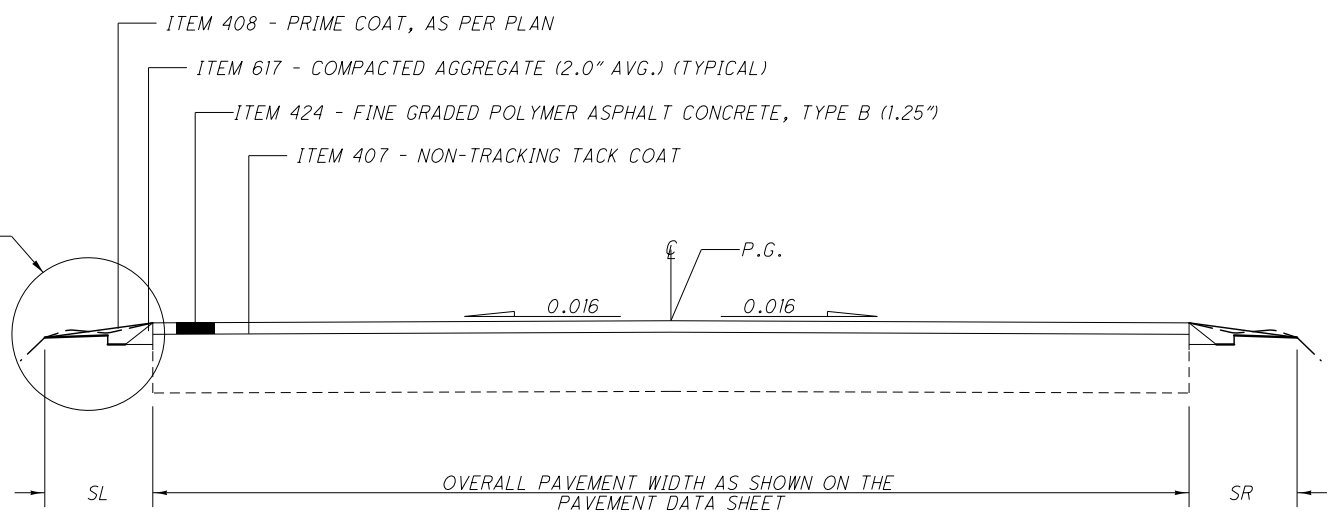
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TYPICAL 1
RIC-42-13.13 TO 13.74

DETAIL A

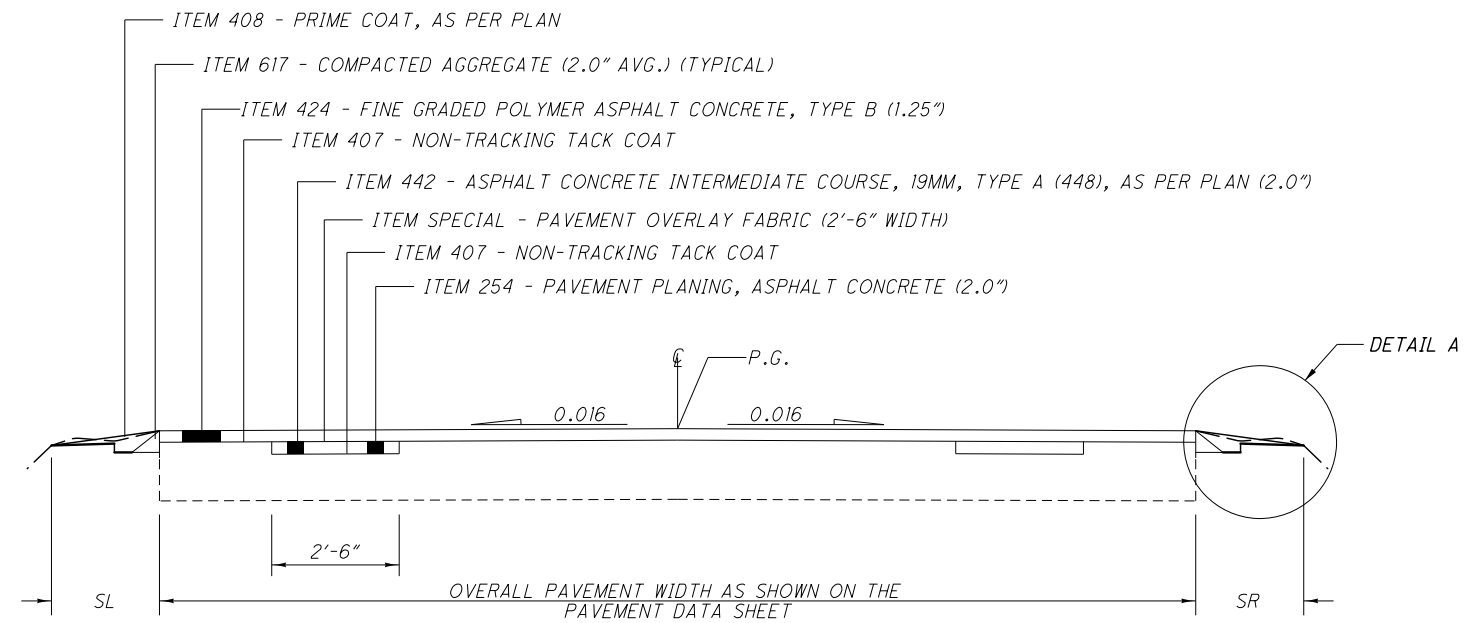
DETAIL A



TYPICAL 2 AND 2*

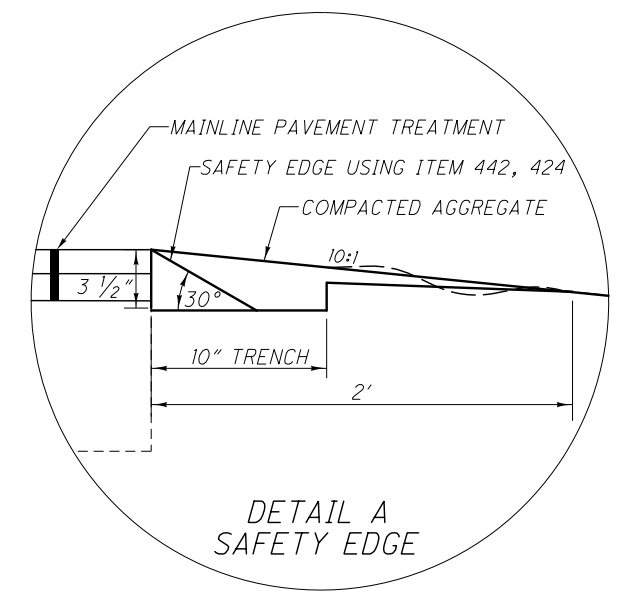
RIC-42-13.74 TO 14.37
RIC-42-16.37 TO 18.05
ASD-42-0.00 TO 2.25

*: FOR THE SECTION BETWEEN 13.98 AND 14.04, PLANE 1.25" TO MAINTAIN VERTICAL CLEARANCE UNDER THE TWO USR 30 OVERPASS BRIDGES. TAPER THE PLANING FROM 0-1.25" IN 75 FEET TO THE APPROACHES.



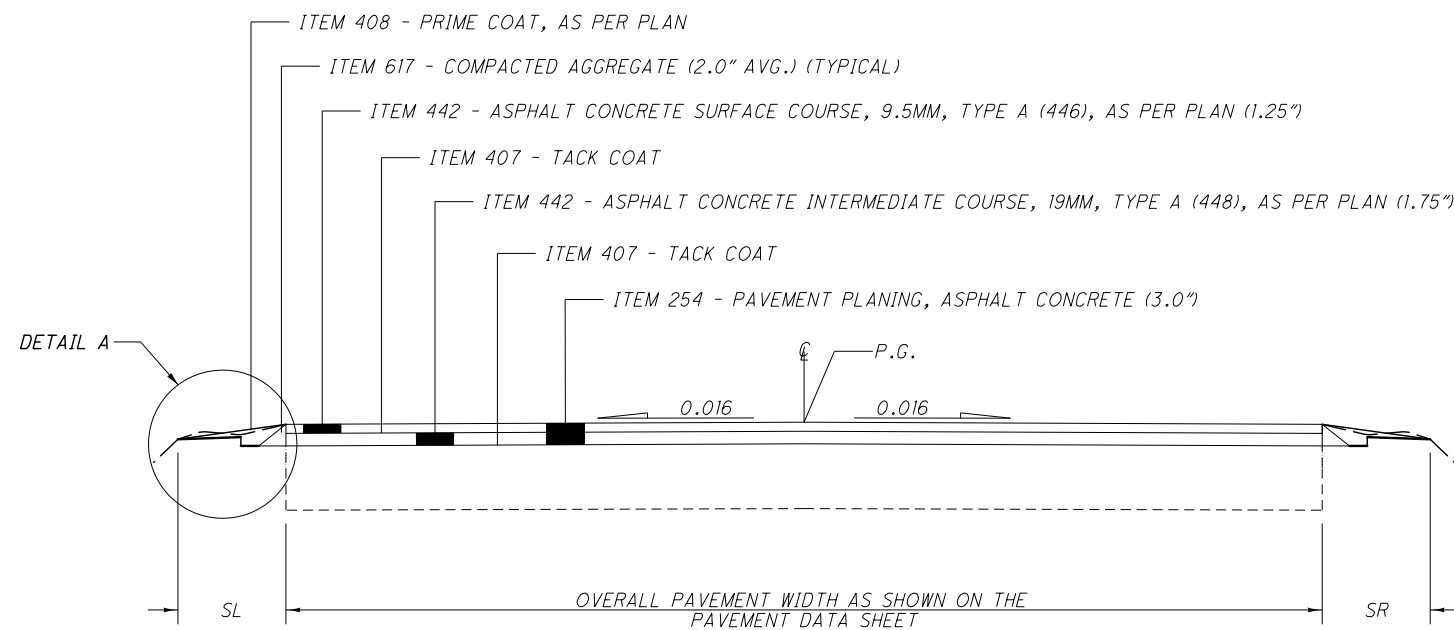
TYPICAL 3
RIC-42-14.37 TO 16.37

DETAIL A

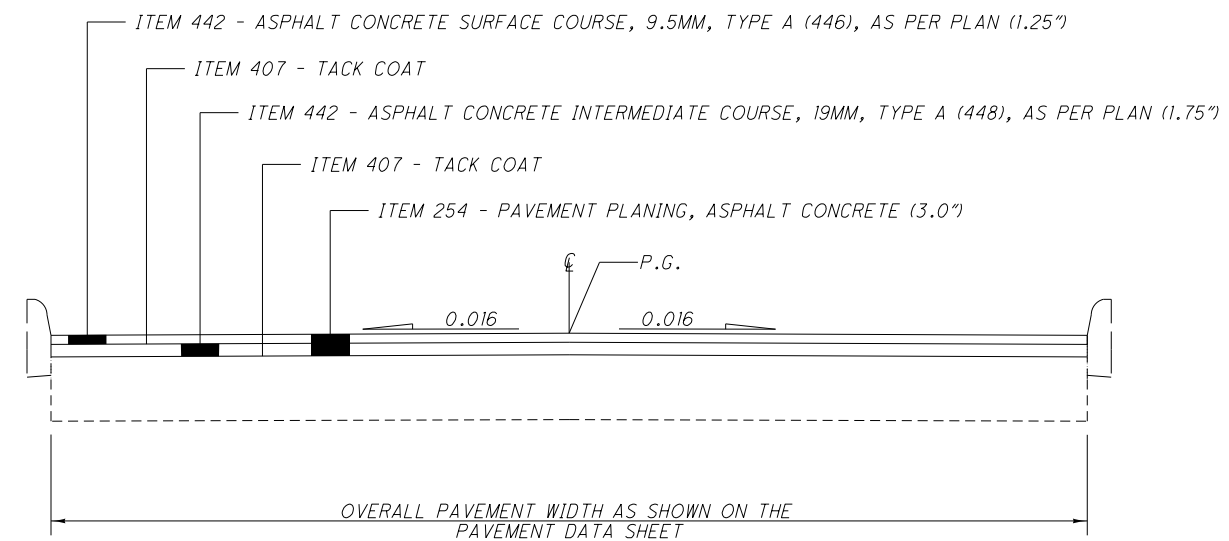


DETAIL A
SAFETY EDGE

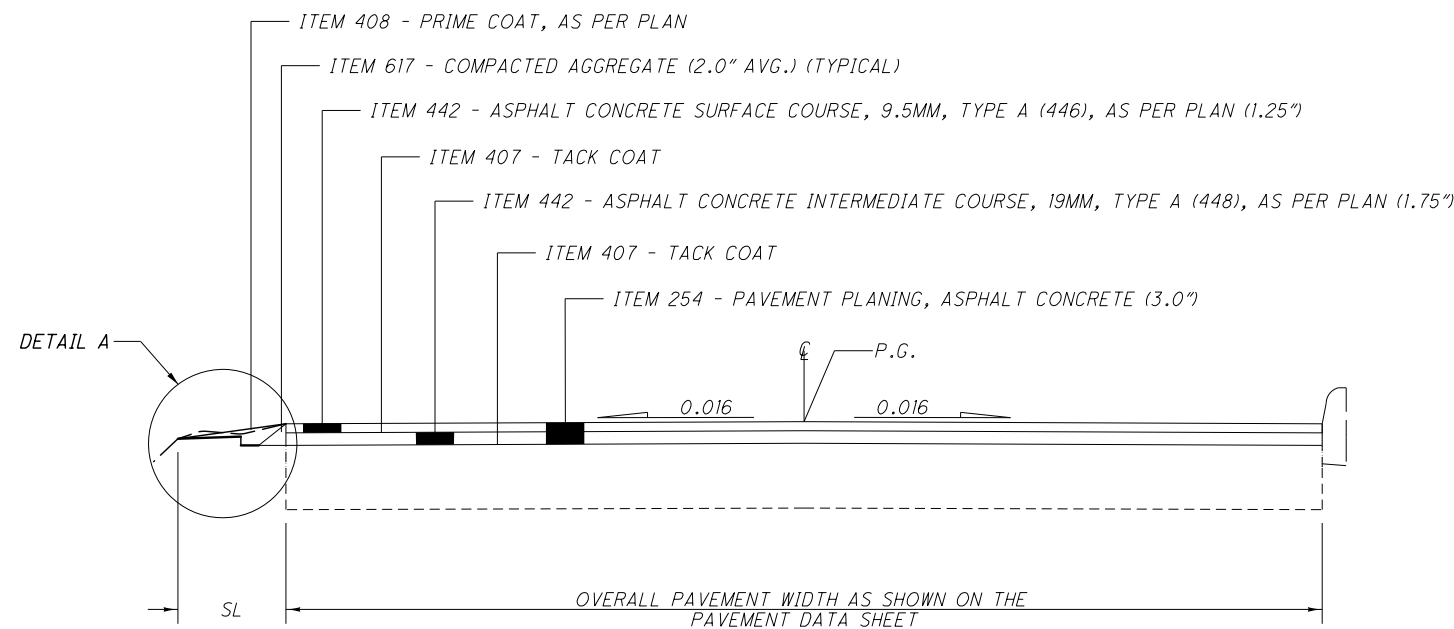
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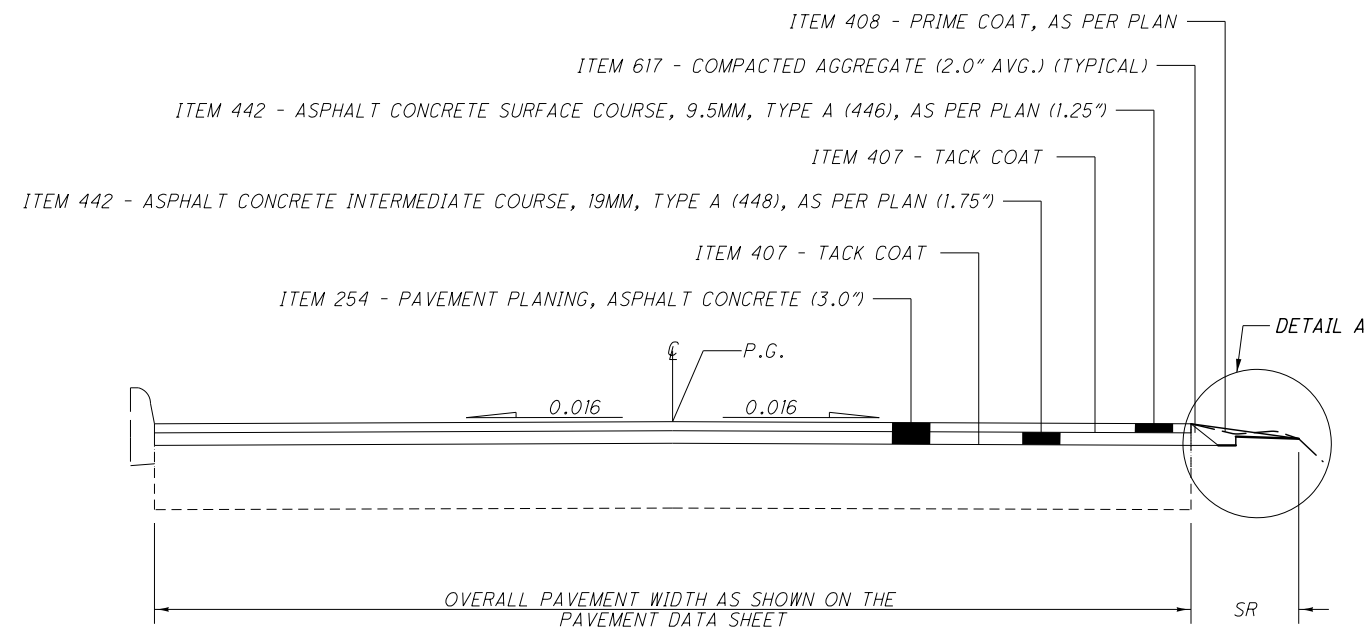
TYPICAL 4
 ASD-42-2.25 TO 2.62
 ASD-42-2.85 TO 3.12
 ASD-42-3.35 TO 3.80 NB
 ASD-42-3.35 TO 3.80 SB
 CROSSOVERS, RAMP A & B



TYPICAL 5
 ASD-42-2.62 TO 2.80



TYPICAL 6
 ASD-42-2.80 TO 2.85
 ASD-42-3.12 TO 3.19
 ASD-42-3.29 TO 3.35 NB



TYPICAL 7
 ASD-42-3.19 TO 3.29
 ASD-42-3.29 TO 3.35 SB

NOTE: NO SAFETY EDGE IN 4-LANE DIVIDED SECTION.

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.

CABLE
ARMSTRONG UTILITIES
100 EAST 2ND. STREET
ASHLAND, OH 44805
419.289.0161

CITY
CITY OF ASHLAND
206 CLAREMONT AVENUE
ASHLAND, OH 44805
419.289.8331

COMMUNICATION
AT&T TRANSMISSION
175 ASHLAND ROAD
P.O. BOX 3555
MANSFIELD, OH 44907
419.755.7956

COUNTY
RICHLAND COUNTY ENGINEER
77 NORTH MULBERRY STREET
MANSFIELD, OH 44903
419.774.5591

ELECTRIC
OHIO EDISON
1717 ASHLAND ROAD
MANSFIELD, OH 44905
419.521.6177

GAS
COLUMBIA GAS TRANSMISSION
589 NORTH STATE ROAD
MEDINA, OH 44256
330.721.4163

SANITARY
RICHLAND COUNTY SANITARY
50 PARK AVENUE EAST
MANSFIELD, OH 44902
419.774.3548

WATER
MADISON WATER DISTRICT
489 INDIANA AVENUE
MANSFIELD, OH 44905
419.589.2135

WATER
RICHLAND SOIL & WATER CONSERVATION
1495 W. LONGVIEW AVENUE
MANSFIELD, OH 44905
419.747.8684

CABLE
SPECTRUM CABLE
1575 LEXINGTON AVENUE
MANSFIELD, OH 44901
419.756.6091

COMMUNICATION
VERIZON
11534 S.R 511 SOUTH
ASHLAND, OH 44805
419.282.6551

COUNTY
ASHLAND COUNTY ENGINEER
1511 CLEVELAND AVENUE
ASHLAND, OH 44805
419.282.4281

ELECTRIC
FIRELANDS ELECTRIC CO-OP
ONE ENERGY PLACE
NEW LONDON, OH 44851
419.929.1571

GAS
COLUMBIA GAS OF OHIO
1021 N. MAIN ST.
MANSFIELD, OH 44903
419.528.1137

GAS
MARATHON ASHLAND PIPELINE
539 SOUTH MAIN STREET
FINDLAY, OH 45840
419.421.2211

TRAFFIC
ODOT DISTRICT THREE
906 CLARK AVENUE
ASHLAND, OH 44805
419.207.7045

WATER
RICHLAND CITY WASTEWATER
1740 FLEMING FALLS RD
MANSFIELD, OH 44903
419.774.4002

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.

EXISTING PLANS

EXISTING PLANS ENTITLED RIC/ASD-42-16.37/0.00 (2009) AND RIC-42-14.37 (2012) MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND.

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.

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 OFFICE (PIO) BY EMAIL AT D03.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4318 OR EMAIL AT LOUIS.TUMBLIN@DOT.OHIO.GOV

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

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.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. (PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 3 OFFICE). PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

PROGRESSION OF WORK

RIC-42-13.13 TO 13.74:

PERFORM SHOULDER RECONSTRUCTION, PLANE 6 FEET WIDE BY 9 INCHES DEEP AND REPAVE 301 IN TWO LIFTS IN THE SAME DAY. THEN MILL OFF 3" INCHES, PLACE OVERLAY FABRIC (60 INCHES WIDE) CENTERED OVER THE JOINT FORMED BY THE SHOULDER RECONSTRUCTION AND PAVE WITH INTERMEDIATE COURSE ON THE SAME DAY. SWITCH SIDES AND PERFORM THE SAME WORK IN THE SAME ORDER. LASTLY PLACE THE SURFACE COURSE AFTER BOTH SIDES OF THE INTERMEDIATE COURSE ARE DONE.

RIC-42-13.74 TO 16.37

PERFORM PLANING (30 INCHES WIDE BY 2 INCHES DEEP) ON TOP OF BAD WIDENING CRACK LOCATED AT/ NEAR THE RIGHT WHEEL PATH. PLACE OVERLAY FABRIC (30 INCHES WIDE) AND REPAVE THE INTERMEDIATE COURSE ALL IN THE SAME DAY. SWITCH SIDES AND PERFORM THE SAME WORK IN THE SAME ORDER. LASTLY PLACE THE 424 SURFACE COURSE AFTER ALL REPAIRS ARE PERFORMED.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY A SEPARATE CONTRACT. ASD-42-0.15 IS A BRIDGE REPLACEMENT PROJECT AND IS SCHEDULED TO BEGIN WORK IN THE 2019 CONSTRUCTION SEASON. THIS PROJECT INCLUDES A 60 DAY DETOUR. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

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 ADVANT-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

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

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

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 AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

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CALCULATED
JLL
CHECKED
NRF

GENERAL NOTES

RIC-42-13.13

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PAVEMENT CORING INFORMATION

COUNTY	ROUTE	SLM	ASPHALT	CONCRETE	BRICK	LOCATION	DIRECTION	YEAR
RIC	42	13.43	11.0	0.0	0.0	LWP	SB	2017
RIC	42	13.43	6.0	0.0	0.0	RWP	SB	2017
RIC	42	13.43	6.0	0.0	0.0	SH	SB	2017
RIC	42	14.50	14.0	0.0	0.0	LWP	SB	2017
RIC	42	14.50	12.0	0.0	0.0	RWP	SB	2017
RIC	42	14.50	6.5	0.0	0.0	SH	SB	2017
RIC	42	15.40	8.0	0.0	3.0	LWP	SB	2017
RIC	42	15.40	11.0	0.0	0.0	RWP	SB	2017
RIC	42	15.40	12.0	0.0	0.0	SH	SB	2017
RIC	42	16.70	9.0	0.0	3.0	LWP	SB	2017
RIC	42	16.70	9.0	0.0	3.0	RWP	SB	2017
RIC	42	16.70	6.0	0.0	3.0	SH	SB	2017
RIC	42	17.50	8.0	0.0	0.0	LWP	SB	2017
RIC	42	17.50	8.0	0.0	0.0	RWP	SB	2017
RIC	42	17.50	6.0	0.0	0.0	SH	SB	2017
ASD	42	0.00	13.0		4.0	LWP	NB	2017
ASD	42	0.00	13.0	7.5	4.0	RWP	NB	2017
ASD	42	0.00	7.0	0.0	0.0	SH	NB	2017
ASD	42	0.80	9.0	0.0	4.0	LWP	NB	2017
ASD	42	0.80	10.5	6.0	4.0	RWP	NB	2017
ASD	42	0.80	5.0	0.0	0.0	SH	NB	2017
ASD	42	1.70	11.5		4.0	LWP	NB	2017
ASD	42	1.70	13.0	5.0	4.0	RWP	NB	2017
ASD	42	1.70	12.0		4.0	SH	NB	2017
ASD	42	3.66	14.0	0.0	0.0	Shoulder	SB	2018
ASD	42	3.66	5.5	0.0	0.0	transverse jt	SB	2018
ASD	42	3.66	5.5	4.0	0.0	transverse jt + 2'	SB	2018
ASD	42	3.66	5.5	5.0	0.0	transverse jt + 4'	SB	2018
ASD	42	3.67	5.5	5.0	0.0	midslab	SB	2018

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).

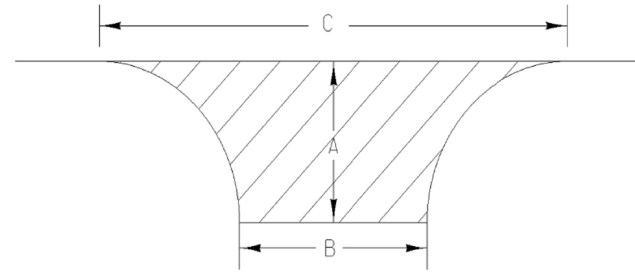
URBAN-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

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 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.

THE PAVING DIMENSIONS FOR THE INTERSECTIONS ARE SHOWN IN THE CHART BELOW.



Intersection Name	SLM	FUNDING	A (ft.)	B (ft.)	C (ft.)	Area (sy)
ILLINOIS AVE	13.13	01/S<2/PV	6	26	52	23
INDIANA AVE.	13.22	01/S<2/PV	6	48	52	33
MICHIGAN AVE.	13.31	01/S<2/PV	6	40	56	30
MICHIGAN AVE.	13.31	01/S<2/PV	6	50	60	36
KENTUCKY AVE.	13.39	01/S<2/PV	6	38	46	27
KENTUCKY AVE.	13.39	01/S<2/PV	6	38	52	28
PENNSYLVANIA AVE.	13.46	01/S<2/PV	6	56	62	39
PENNSYLVANIA AVE.	13.48	01/S<2/PV	6	46	64	35
PARRY AVE.	13.52	01/S<2/PV	6	68	86	49
STEWART RD.	13.75	01/S<2/PV	36	38	84	213
STEWART RD.	13.75	01/S<2/PV	14	90	120	156
N. MCELROY RD.	14.38	01/S<2/PV	64	40	100	427
UNITY DR.	14.66	01/S<2/PV	15	76	104	142
REISER DR.	14.7	01/S<2/PV	58	22	98	305
EASTVIEW DR.	14.7	01/S<2/PV	20	40	72	113
CRIDER RD.	14.81	01/S<2/PV	12	54	88	87
SPRINGLAKE RD.	14.97	01/S<2/PV	24	48	84	160
LAER RD.	15.56	01/S<2/PV	34	30	74	169
PARADISE VIEW RD.	15.56	01/S<2/PV	30	31	93	172
WINDSOR RD.	15.72	01/S<2/PV	60	60	127	549
CIRCLE DR.	15.75	01/S<2/PV	32	56	249	428
HILLSIDE MOBILE HOME PARK	16.04	01/S<2/PV	26	21	50	89
HILLSIDE MOBILE HOME PARK	16.16	01/S<2/PV	27	30	80	140
FLEMING FALLS RD.	16.38	01/S<2/PV	16	48	68	97
FLEMING FALLS RD.	16.38	01/S<2/PV	34	20	80	151
LAKEWOOD DR.	16.81	01/S<2/PV	16	26	54	63
HALE RD.	17.28	01/S<2/PV	28	20	64	108
BOWEN RD.	17.52	02/STR/PV	40	26	68	178
BOWEN RD.	17.52	02/STR/PV	40	26	72	184
TWP. RD. 1688	0.41	02/STR/PV	20	24	215	195
TWP. RD. 1419	0.65	02/STR/PV	16	24	60	64
TWP. RD. 1455	0.78	02/STR/PV	24	32	88	135
SR. 603	1.01	02/STR/PV	16	56	106	129
SR. 604	1.01	02/STR/PV	16	38	88	97
TWP. RD. 1353	1.34	02/STR/PV	24	26	70	108
TWP. RD. 1323	1.68	02/STR/PV	24	26	70	108
TWP. RD. 1323	1.84	02/STR/PV	20	22	46	67
TWP. RD. 1273	2.3	02/STR/PV	20	24	60	80
TWP. RD. 1356	2.78	02/STR/PV	20	24	72	89
COUNTY RD. 1475	2.92	02/STR/PV	20	28	48	77
COUNTY RD. 1476	2.92	02/STR/PV	32	32	62	149
Total Intersection Areas						5529

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.

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)
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 PLAN 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 14", BASED ON THE PAVEMENT DESIGN.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 4 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301, OR ITEM 442 19MM MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 442 19MM CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 1.5" AND 3". ITEM 301 SHALL USE PG64-22 ASPHALT BINDER AND ITEM 442 19MM SHALL USE PG64-28 BINDER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442) 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 (442) OR ITEM 253 - PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

01/S<2/PV:		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)		
SLM 13.13 TO 17.52		501 CY
SLM 2.92 TO 3.63		120 CY
ITEM 253 - PAVEMENT REPAIR		
SLM 13.13 TO 17.52		162 CY
SLM 2.92 TO 3.63		40 CY
02/STR/PV:		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)		
SLM 17.52 TO 18.05		56 CY
SLM 0.00 TO 2.92		310 CY
ITEM 253 - PAVEMENT REPAIR		
SLM 17.52 TO 18.05		18 CY
SLM 0.00 TO 2.92		105 CY
04/S<2/PV:		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)		
SLM 3.63 TO 3.80		34 CY
ITEM 253 - PAVEMENT REPAIR		
SLM 3.63 TO 3.80		12 CY

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

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.

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 \$1,000 PER DAY.

DRAINAGE SLOTS SHALL BE CUT INTO THE SHOULDER(S) AT THE LOW POINT OF EACH PLANED SECTION TO PREVENT TRAPPED WATER PUDDLES, AND REFILLED DURING RESURFACING. CUTTING AND FILLING DRAINAGE SLOTS SHALL BE INCLUDED IN PAYMENT WITH ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE.

THE AMOUNT OF GRINDINGS RESULTING FROM THIS WORK MAY PRODUCE UNEXPECTED VOLUMES OF GRINDINGS DUE TO THE EXISTING TRANSVERSE SLOPE OF THE PAVEMENT.

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 - PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING: THE MAXIMUM CROSS SLOPE SHALL BE 0.02 WHILE THE MINIMUM CROSS SLOPE SHALL BE 0.01. THE PREFERRED CROSS SLOPE IS 0.016. THE CROWN OF THE PAVEMENT SHALL BE LOCATED BETWEEN THE TRAVELED LANES, OR AS DIRECTED BY THE ENGINEER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE A CROSS SLOPE 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.

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 \$1,000.

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 2 IN.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (9.0") (TWO-LIFTS)

ON THIS PROJECT ITEM 301 COARSE AGGREGATE SHALL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT SHALL BE 30%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE ITEM 301 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG. THE IN-PLACE BINDER SHALL BE PG64-22.

ALL COSTS TO BE INCLUDED IN ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (9.0") (TWO-LIFTS).

ITEM 408 - PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GAL/SY TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

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

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERRECTED 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 N_{des} USE 50 GYRATIONS, FOR N_{max} USE 75 GYRATIONS. CHOOSE OPTIMUM BINDER CONTENT AT DESIGN AIR Voids OF 3.5%.
MINIMUM TOTAL PG BINDER CONTENT IS 6.3 PERCENT.
MINIMUM VIRGIN PG BINDER CONTENT IS 5.2 PERCENT.
USE A PG 64-22 BINDER.
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 N_{max} IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN

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 ERRECTED 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 N_{des} USE 50 GYRATIONS, FOR N_{max} USE 75 GYRATIONS. CHOOSE OPTIMUM BINDER CONTENT AT DESIGN AIR Voids OF 3.5%.
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 N_{max} IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

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.

01/S<2/PV: RIC-42
ITEM 611 - CATCH BASIN ADJUSTED TO GRADE 32 EA

SLM	DIRECTION	SLM	DIRECTION	SLM	DIRECTION
13.23	NB	14.39	NB	14.5	SB
13.28	NB	14.41	NB	14.42	SB
13.28	NB	14.43	NB	14.4	SB
13.31	NB	14.47	NB	14.33	SB
13.51	NB	14.67	NB	14.18	SB
13.71	NB	14.71	NB	14.09	SB
13.98	NB	14.86	SB	14.06	SB
14.2	NB	14.69	SB	13.79	SB
14.31	NB	14.58	SB	13.62	SB
14.32	NB	14.54	SB	13.24	SB
14.36	NB	14.51	SB		

01/S<2/PV: RIC-42
ITEM 611 - MANHOLE ADJUSTED TO GRADE 12 EA

SLM: 13.16, 13.21, 13.23, 13.27, 13.38, 13.42, 13.46, 13.49, 13.54, 13.76, 13.82, 14.38

ITEM 611 - CATCH BASIN NO. 6, AS PER PLAN

ALL PORTION OF CMS 611 AND STANDARD CONSTRUCTION DRAWING CB-2.3 APPLY EXCEPT AS MODIFIED HERIN.

THE LOCATIONS OF THIS WORK IS AT THE APPROXIMATE SLM GIVEN IN THE BELOW TABLE. THERE ARE CATCH BASINS AT ALL OF THESE LOCATIONS THAT ARE IN POOR CONDITION. REMOVAL AND DISPOSAL OF THE EXISTING CATCH BASIN, FRAME AND GRATE INCLUDING A PORTION OF THE EXISTING PIPE CONNECTION (8", 10", 12" OR 15") AND SAW CUTTING OF THE PAVEMENT TO PROVIDE A NEAT JOINT IS INCLUDED IN THE COST OF THIS ITEM. IF ADDITIONAL FULL DEPTH CONCRETE ASPHALT PAVEMENT IS REQUIRED TO FILL AROUND THE NEW CATCH BASIN, THE COSTS TO REPLACE THIS PAVEMENT IS ALSO TO BE INCLUDED IN THIS ITEM OF WORK. THE PAVEMENT IS TO CONSIST OF ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN EXCEPT THE TOP PORTION SHALL CONSIST OF THE SAME CORRESPONDING SURFACE TREATMENT. COMPACTION REQUIREMENTS ARE WAIVED AND ARE TO BE TAMPED TO THE SATISFACTION OF THE ENGINEER.

THE CONCRETE APRON IS TO BE 8 INCHES THICK AND PLACED 24 INCHES ALL AROUND THE CASTING INSTEAD OF THE 18 INCHES AS SHOWN ON STANDARD CONSTRUCTION DRAWING CB-2.3. THE MEASUREMENTS PROVIDED ARE THE INSIDE MEASUREMENTS AS GATHERED FROM THE FIELD. THE CONTRACTOR SHALL PERFORM THE NECESSARY FILED MEASUREMENTS PRIOR TO ORDER THE UNITS.

AN ESTIMATED QUANTITY OF 40 FEET OF ITEM 611 - 8" CONDUIT, TYPE B; 40 FEET OF ITEM 611 - 10" CONDUIT, TYPE B; 60 FEET OF ITEM 611 - 12" CONDUIT, TYPE B; 12 FEET OF ITEM 611 - 15" CONDUIT, TYPE B IS PROVIDED TO RECONNECT TO THE EXISTING PIPE. A CONCRETE MASONRY COLLAR IS TO BE PROVIDED AT THIS CONNECTION AND IS CONSIDERED INCIDENTAL IN THE COST OF THE CORRESPONDING CONDUIT ITEM 611.

01/S<2/PV: RIC-42, ASD-42
ITEM 611 - CATCH BASIN NO. 6, AS PER PLAN
ITEM 611 - 8" CONDUIT, TYPE B
ITEM 611 - 10" CONDUIT, TYPE B
ITEM 611 - 12" CONDUIT, TYPE B
ITEM 611 - 15" CONDUIT, TYPE B

31 EA.
40 FT
40 FT
60 FT
12 FT

SLM	DIRECTION	WIDTH	LENGTH	DEPTH	SLM	DIRECTION	WIDTH	LENGTH	DEPTH
13.12	NB	3'	3'	6'	14.58	NB	7'	3'	3'
13.15	NB	3'	3'	6'	14.60	NB	7'	3'	3'
13.17	NB	3'	3'	6'	14.64	NB	4'	3'	3'
13.19	NB	3'	3'	6'	15.54	NB	3'	3'	4'
13.22	NB	5'	3'	4'	15.61	NB	3'	3'	3'
13.34	NB	3'	3'	6'	15.63	NB	3'	3'	3'
13.38	NB	3'	3'	6'	15.24	SB	3'	4'	5'
13.42	NB	3'	3'	3'	14.93	SB	3'	3'	4'
13.43	NB	3'	3'	3'	14.41	SB	3'	4'	2'
13.44	NB	3'	3'	3'	14.25	SB	3'	3'	2'
13.46	NB	3'	3'	3'	13.41	SB	3'	3'	3'
13.48	NB	4'	3'	3'	13.37	SB	3'	3'	3'
13.95	NB	3'	3'	4'	13.29	SB	3'	3'	3'
14.24	NB	3'	3'	3'	13.20	SB	3'	3'	4'
14.26	NB	3'	3'	3'	13.15	SB	3'	3'	4'
					3.54	NB	4'	4'	3'

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING

PRIOR TO THE PLANING OF PAVEMENT BENEATH ALL OVERHEAD STRUCTURES, A REGISTERED SURVEYOR SHALL MEASURE THE VERTICAL CLEARANCES AND DOCUMENT THE MEASUREMENTS ON AN APPROVED OHIO DEPARTMENT OF TRANSPORTATION FORM AVAILABLE FROM THE DISTRICT BRIDGE OFFICE. THE MEASUREMENTS SHALL BE TAKEN AT THE LOCATIONS INDICATED ON THE APPROVED ODOT FORM AND SUBMITTED TO THE PROJECT ENGINEER. AFTER THE NEW PAVING HAS BEEN COMPLETED, A REGISTERED SURVEYOR AGAIN SHALL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM. THESE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT BRIDGE ENGINEER. THE RECORD SHALL BEAR THE STAMP OR SEAL OF THE REGISTERED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS AND WILL VERIFY THAT PRE-CONSTRUCTION VERTICAL CLEARANCES HAVE BEEN PRESERVED.

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE

ALL WORK RELATED TO ADJUSTING MONUMENT BOXES TO GRADE WILL BE IN ACCORDANCE TO SECTIONS 623.04 AND 623.05 OF THE 2016 ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.

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.

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GENERAL NOTES

RIC-42-13.13

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ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE

DESCRIPTION. THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PAVEMENT OVERLAY FABRIC COMPOSITE AS SHOWN ON THE PLANS AND AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS FABRIC COMPOSITE MAY BE PLACED ON A MILLED SURFACE.

MATERIALS. PAVEMENT OVERLAY FABRIC COMPOSITE SHALL BE CONSTRUCTED OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85 PERCENT OF POLYOLEPHINES, POLYESTERS, AND POLYAMIDES BY WEIGHT, SHALL BE RESISTANT TO CHEMICAL ATTACK, MILDEW, ROT, AND ATTACHED TO A FIBERGLASS GRID. COMPOSITE SHALL MEET THE FOLLOWING PHYSICAL REQUIREMENTS:

PROPERTY	SPECIFICATION	TEST METHOD
PAVING FABRIC: GLASGRID CG200 OR APPROVED EQUAL		
GRAB TENSILE STRENGTH, LBS.	90 MIN.	ASTM D 1682
GRAB ELONGATION, PERCENT	50 MIN.	ASTM D 1682
ASPHALT RETENTION GAL./SY.	0.20 MIN.	AASHTO M-288
COMPOSITE ULTIMATE TENSILE STRENGTH (LBS/FT)	MD 6720 MIN XD 13440 MIN	ASTM D 6637
MAXIMUM ELONGATION	LESS THAN 3%	ASTM D 6637
PERCENT OPEN AREA	>50	TEX-621-J "TESTING GEOGRIDS"
MELTING POINT MIN (DEGREES F)	1000	ASTM C338
LOSS ON IGNITION %	>15	TEX-621-J "TESTING GEOGRIDS"
MASS/UNIT AREA	16.0 OZ. /SY MIN	ASTM D 5261-92

THE COMPOSITE FABRIC SHALL NOT BE EXPOSED TO ULTRAVIOLET RADIATION FOR MORE THAN 7 DAYS. THE FABRIC SHALL BE AT LEAST 60 INCHES BUT NO MORE THAN 150 INCHES IN WIDTH AND FURNISHED IN ROLLS OF APPROXIMATELY 104 YARDS IN LENGTH. THE FABRIC CAN BE CUT TO A 30 INCH WIDTH IF A 30 INCH WIDTH IS SPECIFIED IN THE PLAN.

THE ASPHALT SEALANT SHALL BE PG64-22 MEETING THE REQUIREMENTS OF 702.01.

CERTIFICATION SHALL BE FURNISHED IN ACCORDANCE WITH 101.061 BEFORE THE FABRIC IS PLACED. THE ENGINEER MAY REQUIRE SAMPLING FOR TESTING PURPOSES AS DIRECTED BY THE LABORATORY.

EQUIPMENT. THE CONTRACTOR SHALL PROVIDE EQUIPMENT FOR HEATING AND APPLYING BITUMINOUS MATERIAL. HEATING EQUIPMENT AND DISTRIBUTORS SHALL MEET THE REQUIREMENTS OF 407.

THE MECHANICAL LAYDOWN EQUIPMENT SHALL BE MOUNTED ON A FOUR-WHEELED VEHICLE THAT IS CAPABLE OF DRIVING OVER THE FABRIC WHILE IT IS BEING INSTALLED TO CONTROL THE TENSION ON THE MATERIAL. THE LAYDOWN MACHINE SHALL BE EQUIPPED WITH CLUTCHES TO ADJUST THE ROLL TENSION AND BROOMS TO SMOOTH OUT WRINKLES DURING INSTALLATION. MANUAL LAYDOWN MAY ONLY BE USED IN AREAS INACCESSIBLE TO THE LAYDOWN MACHINE.

CONSTRUCTION DETAILS

1 SURFACE PREPARATION: THE CRACKS AND ENTIRE ROAD SURFACE TO BE TREATED, AND AT LEAST ONE ADDITIONAL FOOT ON EACH SIDE, SHALL BE CLEANED BY SWEEPING, BLOWING, OR OTHER METHODS UNTIL ALL DUST, MUD, CLAY LUMPS, VEGETATION, AND FOREIGN MATERIAL ARE REMOVED ENTIRELY FROM THE PAVEMENT BEFORE THE BITUMINOUS MATERIAL IS APPLIED. CARE SHALL BE EXERCISED TO PREVENT MATERIAL SO REMOVED FROM BECOMING MIXED WITH THE NEW SURFACE. LARGE CRACKS AND POTHOLES SHOULD BE FILLED.

2 APPLICATION OF ASPHALT SEALANT: THE APPLICATION OF THE ASPHALT SEALANT SHALL CONFORM TO THE APPLICABLE PORTIONS OF 407. THE ASPHALT SEALANT SHALL BE UNIFORMLY SPRAYED OVER THE AREA TO BE COVERED BY FABRIC AT A RATE OF 0.25 TO 0.30 GALLON PER SQUARE YARD.

THE QUANTITY APPLIED WILL VARY WITH THE SURFACE CONDITION OF THE EXISTING PAVEMENT (DEGREE OF POROSITY, FOR EXAMPLE). THE FABRIC ALONE, UNDER HEAT OF THE OVERLAY, WILL ABSORB AT LEAST 0.20 GALLON PER SQUARE YARD. WITHIN INTERSECTIONS OR OTHER ZONES WHERE VEHICLE BRAKING IS COMMON PLACE, THE APPLICATION SHALL BE REDUCED 20 PERCENT. THE SEALANT SHALL BE APPLIED TO AN AREA TWO TO SIX INCHES WIDER THAN THE WIDTHS OF THE FABRIC BEING PLACED, BUT RESTRICTED TO THE AREA OF IMMEDIATE FABRIC LAYDOWN. APPLICATION SHALL BE BY DISTRIBUTOR WITH HAND SPRAYING ALLOWED ONLY WHERE THE DISTRIBUTOR CANNOT BE USED. ASPHALT SPILLS SHALL BE CLEANED FROM THE ROAD SURFACE TO AVOID FLUSHING AND POSSIBLE MOVEMENT AT THESE ASPHALT RICH AREAS.

THE ASPHALT CEMENT USED AS A SEALANT SHALL HAVE DISTRIBUTOR TANK TEMPERATURE BETWEEN 300 DEGREES AND 350 DEGREES F. APPLICATION TEMPERATURE IS NOT CRITICAL AFTER THE ASPHALT IS SPRAYED ON THE PAVEMENT. IF THE FABRIC IS TO BE OVER-SPRAYED, DISTRIBUTOR TANK TEMPERATURES SHOULD NOT EXCEED 350 DEGREES F TO AVOID DAMAGE TO THE FABRIC.

3 COMPOSITE FABRIC PLACEMENT: THE COMPOSITE FABRIC SHALL BE PLACED ON THE ASPHALT SEALANT AS SOON AS PRACTICAL AND BEFORE THE TACKINESS OF THE SEALANT IS LOST. THE COMPOSITE SHALL BE PLACED AS SMOOTHLY AS POSSIBLE TO AVOID WRINKLES. IT SHALL BE UNROLLED SO THAT THE SOFT SIDE IS UNWOUND INTO THE SEALANT AND THE GRID SIDE UP, THUS PROVIDING OPTIMUM BOND BETWEEN FABRIC AND PAVEMENT DURING THE CONSTRUCTION PROCESS. WRINKLES SEVERE ENOUGH TO CAUSE "FOLDS" SHALL BE SLIT AND LAID FLAT. SMALL WRINKLES, WHICH FLATTEN UNDER COMPACTION ARE NOT DETRIMENTAL TO PERFORMANCE. THE COMPOSITE SHALL BE BROOMED OR SQUEEGEED TO REMOVE AIR BUBBLES AND MAKE COMPLETE CONTACT WITH THE ROAD SURFACE AS RECOMMENDED BY THE FABRIC MANUFACTURER. THE FABRIC SHALL BE LAID STRAIGHT, WITHIN THE SEALANT AREA. MODERATE CURVES CAN BE NEGOTIATED BY STRETCHING THE FABRIC ON THE OUTSIDE OF THE CURVE BY ADJUSTING THE DRAG ON THE BRAKES OF THE LAYDOWN EQUIPMENT. TRANSVERSE JOINTS SHALL BE "SHINGLED" IN THE DIRECTION OF PAVING.

LONGITUDINAL JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC ONE TO TWO INCHES. TRANSVERSE JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC MINIMUM OF FOUR INCHES. ADDITIONAL SEALANT (ABOUT 0.20 GAL. PER SQ. YD.) SHALL BE ADDED TO THE JOINTS AS REQUIRED. THE ADDITIONAL SEALANT FOR TRANSVERSE JOINTS MAY BE APPLIED BY HAND SPRAYING OR WITH MOP AND BUCKET IF EXTREME CARE IS TAKEN TO NOT EXCEED THE SPECIFIED RATE.

TO ENHANCE THE BOND OF THE FABRIC WITH THE EXISTING PAVEMENT AND TO SMOOTH OUT ANY WRINKLES OR FOLDS IN THE FABRIC, THE CONTRACTOR MAY BE REQUIRED TO PNEUMATICALLY ROLL THE FABRIC AFTER IT IS PLACED.

4 TREATMENT OF THE APPLIED COMPOSITE PRIOR TO PLACEMENT OF ASPHALT CONCRETE: TACK COAT THE FABRIC PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY. TACK COAT SHALL BE APPLIED AT A RATE OF 0.02 TO 0.05 GALLON PER SQUARE YARD. PLACEMENT OF THE ASPHALT CONCRETE OVERLAY SHALL CLOSELY FOLLOW FABRIC LAYDOWN. IN THE EVENT THAT THE SEALANT BLEEDS THROUGH THE FABRIC BEFORE THE ASPHALT CONCRETE IS PLACED, IT MAY BE NECESSARY TO BLOT THE SEALANT BY SPREADING SAND OR ASPHALT CONCRETE OVER THE AFFECTED AREAS. THIS WILL PREVENT ANY TENDENCY FOR CONSTRUCTION EQUIPMENT TO PICK UP THE FABRIC WHEN DRIVING OVER IT.

TURNING OF THE PAVER AND OTHER VEHICLES SHALL BE GRADUAL TO AVOID MOVEMENT OR DAMAGE TO THE COMPOSITE. UNESSENTIAL TRAFFIC ON COMPOSITE SHOULD BE ELIMINATED. IF IT IS NECESSARY TO OPEN THE ROAD TO TRAFFIC AFTER FABRIC PLACEMENT, BUT PRIOR TO PAVING, IT IS ADVISABLE TO SPREAD A SMALL AMOUNT OF SAND OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE COMPOSITE. THIS PRACTICE IS TO BE AVOIDED IF POSSIBLE TO PREVENT DAMAGE TO THE MEMBRANE. QUICK STOPS AND SHARP TURNS MAY DAMAGE THE MATERIAL. IF RAIN PRIOR TO THE OVERLAY SHOULD CAUSE A BLISTERED APPEARANCE AND SOME BOND LOSS THROUGHOUT THE MEMBRANE, IT SHOULD BE CORRECTED BY PNEUMATIC ROLLING UNTIL ADHESION IS RESTORED.

5 ASPHALT CONCRETE: THE ASPHALT CONCRETE OVERLAY SHALL CONFORM TO 401 SPECIFICATION WITH A MINIMUM THICKNESS OF 1.5". A TWO COURSE OVERLAY IS PREFERRED.

METHOD OF MEASUREMENT. THE ACCEPTED FABRIC COMPOSITE PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AND AS DIRECTED WILL BE MEASURED BY THE SQUARE YARD OF ROADWAY, RAMPS, AND TURNOUTS COVERED BY THE COMPOSITE FABRIC. LAPS IN COMPOSITE FABRIC WILL NOT BE MEASURED.

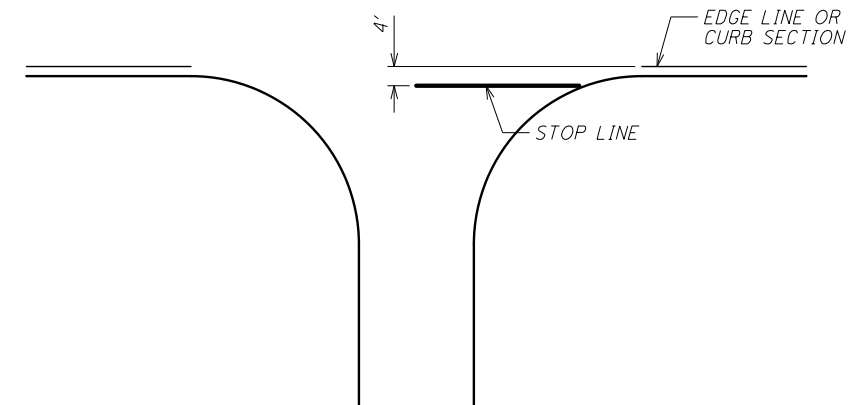
BLOTTING THE SEALANT, SPREADING SAND OR ASPHALT CONCRETE OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE FABRIC, ROLLING TO RESTORE BOND, OR APPLICATION OF A TACK COAT WILL NOT BE MEASURED FOR DIRECT PAYMENT BUT SHALL BE CONSIDERED A NECESSARY PART OF THE CONSTRUCTION INVOLVED AND THE COST THEREFORE SHALL BE INCLUDED IN OTHER APPROPRIATE CONTRACT UNIT PRICES.

BASIS OF PAYMENT. THE ACCEPTED QUANTITIES OF PAVEMENT OVERLAY FABRIC COMPOSITE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS (INCLUDING ASPHALT SEALANT AND OVERLAP), TOOLS, EQUIPMENT AND INCIDENTALS FOR DOING ALL THE WORK INVOLVED IN FURNISHING AND PLACING THE COMPOSITE COMPLETE IN PLACE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	PAVEMENT OVERLAY FABRIC COMPOSITE

STOP LINE PLACEMENT FOR NORMAL INTERSECTIONS

AT NORMAL STOP CONTROLLED INTERSECTIONS, THE STOP BAR SHOULD BE PLACED 4 FEET FROM THE EDGE LINE OF THE INTERSECTING ROADWAY IN ORDER TO ACHIEVE MAXIMUM INTERSECTION SIGHT DISTANCE.



PAVEMENT MARKINGS LOG

PRIOR TO MILLING OR OTHERWISE DESTROYING EXISTING PAVEMENT MARKINGS, CREATE, TO THE SATISFACTION AND APPROVAL OF THE ENGINEER, A LOG OF THE QUANTITIES AND LOCATIONS OF ALL EXISTING PAVEMENT MARKINGS WITHIN THE PROJECT. THE INTENT OF THIS LOG IS TO ENSURE THERE IS NO CONFUSION ON THE LOCATIONS OF THE REPLACEMENT AND/ OR ANY PROPOSED PAVEMENT MARKINGS. PROVIDE THIS LOG TO ANY CONTRACTOR OR SUBCONTRACTOR THAT IS RESPONSIBLE FOR THE PLACEMENT OF FINAL PAVEMENT MARKINGS.

ALL LABOR, EQUIPMENT, INCIDENTALS, AND MATERIALS NEEDED TO COMPLETE THIS WORK IS TO BE PAID FOR UNDER THE CONTRACT BID PRICE FOR THE APPROPRIATE PAVEMENT MARKING ITEM.

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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.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

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 SHOULDER GRADING 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.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STRAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND REERECT THE SIGNS IN KIND. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS, INCLUDING THE SIGN REMOVAL, SIGN REERECTION, POST REMOVAL, AND POST INSTALLATION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 606 - GUARDRAIL REBUILT, TYPE 5.

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 SHALL BE 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.

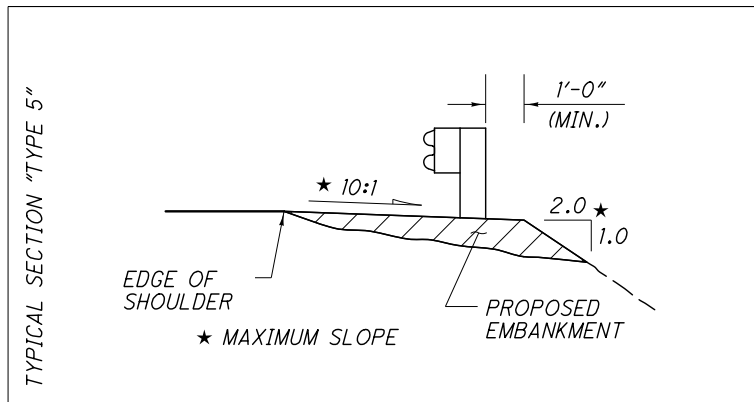
ITEM 203 - EMBANKMENT, AS PER PLAN

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

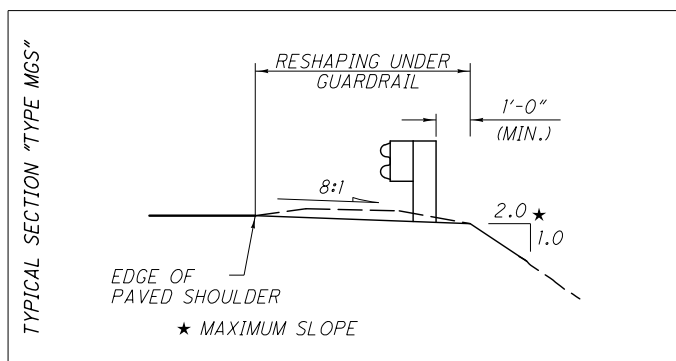
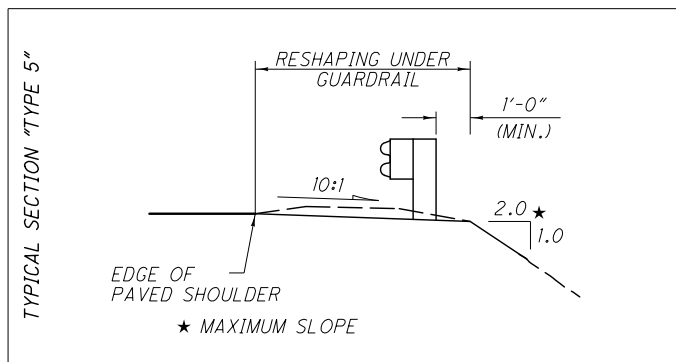
THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLANS.

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 (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. SECTIONS TO BE REBUILT MAY OR MAY NOT HAVE BURIED W-SECTIONS THAT MIGHT NEED REBUILT ALSO.

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 "B" OR "E" 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 614 - MAINTAINING TRAFFIC: GENERAL

FROM SLM 13.13 (MANSFIELD CORP LIMIT) TO SLM 14.81 (CRIDER ROAD) ALL THREE LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT FROM 9:00PM TO 7:00AM WHERE ONLY 1 LANE OF TRAFFIC SHALL BE MAINTAINED VIA FLAGGERS. ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL ALSO BE MAINTAINED IN ALL 2 LANE DIVIDED SECTIONS. FOR OTHER SECTIONS OF THE PROJECT, TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WITH THE USE OF FLAGGERS WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, PLAN DETAILS, STANDARD DRAWINGS, AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION WITH THE LATEST REVISIONS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED ON THIS PLAN.

THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:
 THE CONTRACTOR SHALL SUBMIT, IN WRITING, A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COORDINATE THE MAINTENANCE OF TRAFFIC OPERATIONS WITH THE LOCAL STATE HIGHWAY PATROL.

NIGHT WORK IS PERMITTED FOR THE SECTION FROM SLM 13.13 TO 14.81 ONLY.

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PAVEMENT THROUGHOUT THE PROJECT UNDER ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC DURING THE PERIOD FROM THE START OF WORK TO THE COMPLETION OF ALL WORK.

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.

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 APPROPRIATE 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.

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 (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 IN THE AMOUNT OF \$50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

NOTIFICATIONS OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. NOTIFICATIONS SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS. UPON RECEIPT OF NOTIFICATION BY THE CONTRACTOR, THE PROJECT ENGINEER WILL ARRANGE NOTIFICATION OF THE FOLLOWING ORGANIZATIONS, IN WRITING, IN ACCORDANCE WITH THE BELOW TABLE:

- ASHLAND COUNTY ENGINEER'S OFFICE
- RICHLAND COUNTY ENGINEER'S OFFICE
- THE CITY OF ASHLAND
- TOWNSHIP TRUSTEES (TOWNSHIP ROADS ONLY)
- LOCAL POLICE, FIRE, AND EMERGENCY MEDICAL SERVICES
- LOCAL SCHOOL DISTRICTS
- ASHLAND COUNTY SHERIFF'S OFFICE
- ODOT DISTRICT THREE OFFICE OF ROADWAY SERVICES
- ODOT DISTRICT THREE PUBLIC INFORMATION OFFICE
- SPECIAL HAULING PERMITS SECTION (Hauling.Permits@dot.ohio.gov)

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE LEAD TIME REQUIRED*
RAMP AND/OR ROAD CLOSURES	TWO WEEKS OR GREATER	21 CALENDAR DAYS
	12 HOURS TO TWO WEEKS	14 CALENDAR DAYS
	12 HOURS OR LESS	4 BUSINESS DAYS
LANE CLOSURES AND RESTRICTIONS	TWO WEEKS OR GREATER	14 CALENDAR DAYS
	LESS THAN TWO WEEKS	5 BUSINESS DAYS
START OF CONSTRUCTION AND TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

* - PRIOR TO CLOSURE DATE, UNLESS NOTED OTHERWISE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

ITEM 614 - MAINTAINING TRAFFIC

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, WITH THE APPROVAL OF THE ENGINEER.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL MAINTENANCE OF TRAFFIC SIGNS ARE PAID UNDER ITEM 614 - MAINTAINING TRAFFIC.

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. 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	
(01/S<2/PV):	25 CY
(02/STR/PV):	5 CY
(03/S<2/PV):	2 CY

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.

01/S<2/PV:	
WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE	= 25 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 18 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 5 EACH
02/STR/PV:	
WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE	= 8 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS	= 8 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE	= 5 EACH

TOTAL (01/S<2/PV)	= 48 EACH
TOTAL (02/STR/PV)	= 21 EACH

TOTAL = 69 EACH

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CALCULATED
JLL
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MAINTENANCE OF TRAFFIC NOTES

RIC-42-13.13

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

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 CONSTRUCTION OPERATIONS AT SIGNALIZED INTERSECTIONS WHERE TRAFFIC NEEDS TO BE DIRECTED THROUGH THE INTERSECTION.

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
221 S. MAIN STREET
MANSFIELD, OH 44907
419.759.2222

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 (01/S<2/PV): 32 HOURS

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.

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MAINTENANCE OF TRAFFIC NOTES

RIC-42-13.13

12
36

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 4 1/2 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
02/STR/PV: 2 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED WITH THE CORRESPONDING MAINLINE PAVEMENT TREATMENTS. 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:
01/S<2/PV: 2 EACH

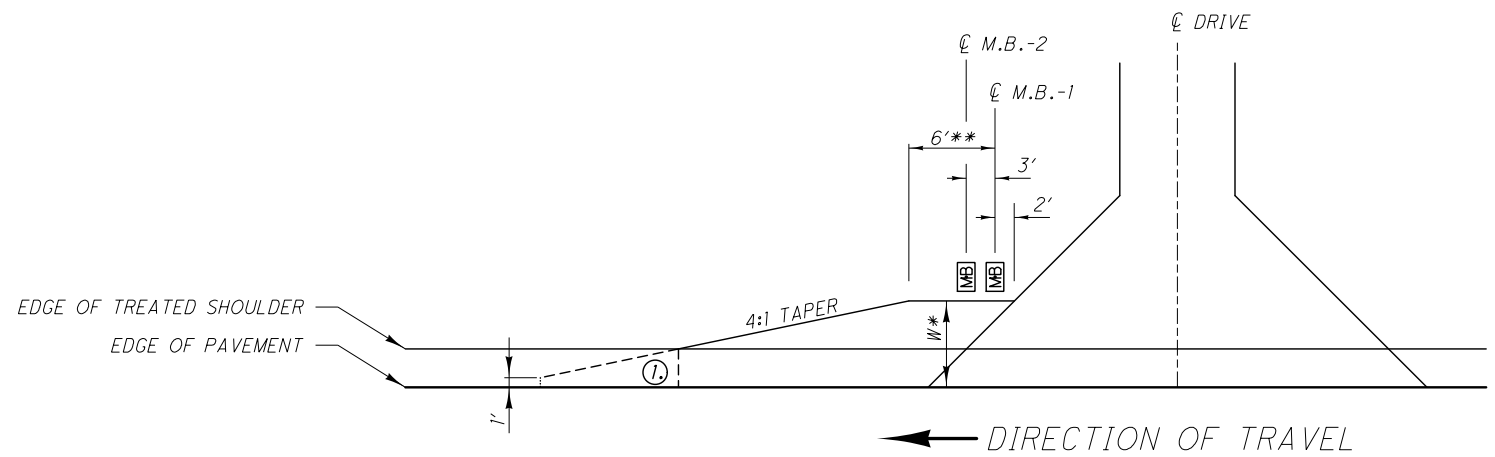
ITEM 617 - COMPACTED AGGREGATE
01/S<2/PV: 2 CY

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

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

1329: ASD-42
1311: ASD-42

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



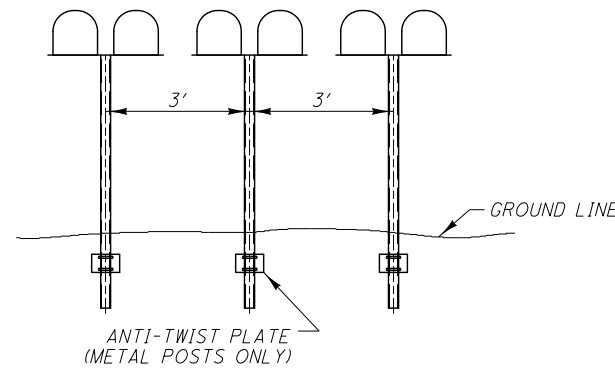
① END MAILBOX TURNOUT AT EDGE OF ASPHALT CONCRETE SHOULDER OR 1' FROM EDGE OF PAVEMENT IF TREATED SHOULDER IS AGGREGATE.

W* NOTES

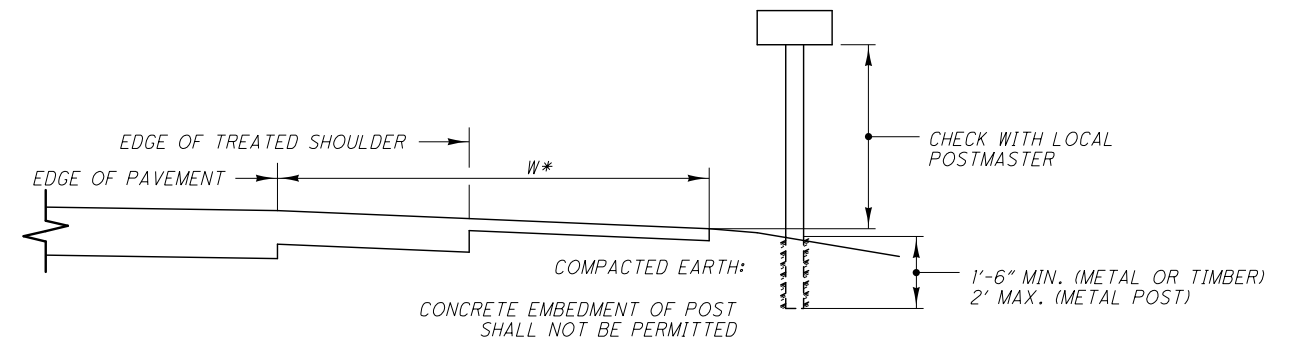
- 1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
- 2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT MAXIMUM OR TO FACE OF EXISTING STANDARD MAILBOX IF IT IS LESS THAN 6 FT.
- 3) IF THE MAILBOX SUPPORT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

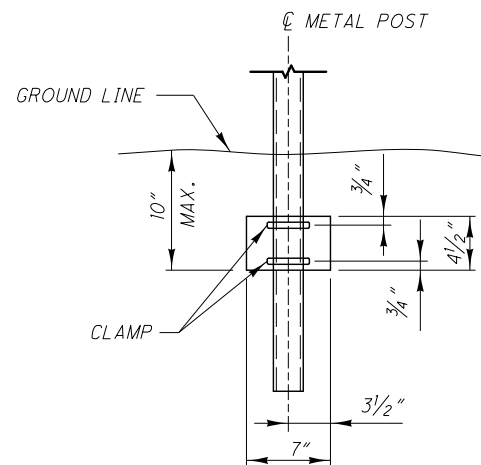
- 1) 6 FT FOR ONE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX SUPPORT.



GROUP MAILBOX INSTALLATION



CROSS SECTION / ELEVATION VIEW



ANTI-TWIST PLATE

CALCULATED
NRF
CHECKED
KCK

MAILBOX FACILITIES

RIC-42-13.13

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SHEET NUM.							PART.						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	NRF	CHECKED	KCK
7	8	13	16	17	18		01/S<2/PV	02/STR/PV	03/S<2/PV	04/S<2/PV	05/STR/BR	06/S<2/BR										
																	ROADWAY					
				300			300						202	38000	300	FT	GUARDRAIL REMOVED					
				3,375				3,375					202	38200	3,375	FT	GUARDRAIL REMOVED FOR REUSE					
				3			3						202	42000	3	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A					
				9			1	8					202	42010	9	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E					
				4			2	2					202	42040	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T					
				1			1						202	42050	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B					
				27.5				27.5					203	20001	27.5	CY	EMBANKMENT, AS PER PLAN					10
				45.1				37.8					209	15000	45.1	STA	RESHAPING UNDER GUARDRAIL					
			1.23				0.93		0.3				209	60500	1.23	MILE	LINEAR GRADING					
			8.17				4.76	3.41					209	72051	8.17	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN					7
		2					2						209	80000	2	EACH	GRADING MAILBOX APPROACHES					
				150			150						606	15150	150	FT	GUARDRAIL, TYPE MGS HALF POST SPACING					
				3,375				3,375					606	16500	3,375	FT	GUARDRAIL REBUILT, TYPE 5					
				275			275						606	17000	275	FT	RAISING TYPE 5 GUARDRAIL					
				8				8					606	26100	8	EACH	ANCHOR ASSEMBLY, TYPE E					
				5			5						606	26150	5	EACH	ANCHOR ASSEMBLY, MGS TYPE E					
				2				2					606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T					
				2			2						606	26550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T					
	2								2				623	39500	2	EACH	MONUMENT BOX ADJUSTED TO GRADE					
		2											SPECIAL	69050100	2	EACH	MAILBOX SUPPORT SYSTEM, SINGLE					13
																	DRAINAGE					
	40						40						611	01800	40	FT	8" CONDUIT, TYPE B					
	40						40						611	03100	40	FT	10" CONDUIT, TYPE B					
	60						60						611	04400	60	FT	12" CONDUIT, TYPE B					
	12						12						611	05900	12	FT	15" CONDUIT, TYPE B					
	31						31						611	98371	31	EACH	CATCH BASIN, NO. 6, AS PER PLAN					8
	32						32						611	98630	32	EACH	CATCH BASIN ADJUSTED TO GRADE					
	12						12						611	99654	12	EACH	MANHOLE ADJUSTED TO GRADE					
																	PAVEMENT					
1,021							621	366		34			251	01042	1,021	CY	PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE)					
337							202	123		12			253	02000	337	CY	PAVEMENT REPAIR					
			2,606				2,606						254	01000	2,606	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25 INCH)					
			5,867				5,867						254	01000	5,867	SY	PAVEMENT PLANING, ASPHALT CONCRETE (2.00 INCH)					
			64,610				44,859	14,471	5,280				254	01000	64,610	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3.00 INCH)					
			4,294				4,294						254	01000	4,294	SY	PAVEMENT PLANING, ASPHALT CONCRETE (9.00 INCH)					
			8,569				5,383	2,960	226				254	01000	8,569	SY	PAVEMENT PLANING, ASPHALT CONCRETE (TAPER 0.0" TO 1.25")					
			335				224	83	28				254	01600	335	SY	PATCHING PLANED SURFACE					
			1,073				1,073						301	46000	1,073	CY	ASPHALT CONCRETE BASE, PG64-22 (9.0") (TWO-LIFTS)					
			6,398				3,842	1,870	686				407	10000	6,398	GAL	TACK COAT					
			15,571				10,926	4,627	18				407	20000	15,571	GAL	NON-TRACKING TACK COAT					
			8,930				5,391	3,203	336				408	10001	8,930	GAL	PRIME COAT, AS PER PLAN					8
			5,498				3,482	2,008	8				424	12000	5,498	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B (1.25")					
			361				208	153					424	12000	361	CY	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B (SAFETY EDGE)					
			2,244				1,558	503	183				442	00201	2,244	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (1.25")					8
			94				56	38					442	00201	94	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (SAFETY EDGE)					8
			3,137				2,179	701	257				442	20201	3,137	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN (1.75")					8
			326				326						442	20201	326	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), AS PER PLAN (2.00")					8
		2	1,238				749	444	47				617	10100	1,240	CY	COMPACTED AGGREGATE					
			3,972				2,647	486	839				617	20000	3,972	SY	SHOULDER PREPARATION					
			5,867				5,867						SPECIAL	69012060	5,867	SY	PAVEMENT OVERLAY FABRIC COMPOSITE (30" WIDE)					9
			3,579				3,579						SPECIAL	69012060	3,579	SY	PAVEMENT OVERLAY FABRIC COMPOSITE (60" WIDE)					9
																	TRAFFIC CONTROL					
							747	273	35				621	00100	1,055	EACH	RPM					
							747	273	35				621	54000	1,055	EACH	RAISED PAVEMENT MARKER REMOVED					
			86				16	70					626	00110	86	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)					
							10.92	6.9	0.68				642	00104	18.5	MILE	EDGE LINE, 6", TYPE 1					
							1.26		0.34				642	00204	1.6	MILE	LANE LINE, 6", TYPE 1					

GENERAL SUMMARY

RIC-42-13.13

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LOCATION	PLAN SPLIT/LOCATION	202	202	202	202	202	202		203		209		606	606		606	606	606	606	606	626
		GUARDRAIL REMOVED FT	GUARDRAIL REMOVED FOR REUSE FT	ANCHOR ASSEMBLY REMOVED, TYPE A EACH	ANCHOR ASSEMBLY REMOVED, TYPE E EACH	ANCHOR ASSEMBLY REMOVED, TYPE T EACH	ANCHOR ASSEMBLY REMOVED, TYPE B EACH		EMBANKMENT, AS PER PLAN CY		RESHAPING UNDER GUARDRAIL STATION		GUARDRAIL, TYPE MGS HALF POST SPACING FT	GUARDRAIL REBUILT, TYPE 5 FT		RAISING TYPE 5 GUARDRAIL FT	ANCHOR ASSEMBLY, TYPE E EACH	ANCHOR ASSEMBLY, TYPE T EACH	ANCHOR ASSEMBLY, MGS TYPE E EACH	ANCHOR ASSEMBLY MGS, TYPE T EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL) EACH
RIC-42-16.34 NB	01/S<2/PV			1							0.5								1		1
RIC-42-16.34 SB	01/S<2/PV			2							1.0								2		2
RIC-42-17.87 NB	02/STR/PV		1425		2						15.3		1425			2					28
RIC-42-17.87 SB	02/STR/PV		1425		2						15.3		1425			2					28
ASD-42-1.40 NB	02/STR/PV				1						0.5					1					1
ASD-42-1.40 SB	02/STR/PV							10.0													
ASD-42-1.60 NB	02/STR/PV							10.0													
ASD-42-1.60 SB	02/STR/PV							7.5													
ASD-42-1.77 NB	02/STR/PV		75		1						1.2		75			1					1
ASD-42-1.90 NB	02/STR/PV				1						0.5					1					1
ASD-42-1.90 SB	02/STR/PV		100		1						1.5		100			1					3
ASD-42-2.59 NB	02/STR/PV		350			2					3.5		350				2				8
ASD-42-3.50 NB	01/S<2/PV	300			1	2	1				3.0	150						2	2		6
ASD-42-3.63 SB	01/S<2/PV										1.3				125						3
ASD-42 RAMP "A"	01/S<2/PV										1.5				150						4
NOTE: QUANTITIES ARE BASED ON GATHERED FIELD DATA AND ARE TO BE USED AS DIRECTED BY THE PROJECT ENGINEER.																					
SUBTOTAL (01/S<2/PV)		300		3	1	2	1				7.3	150			275			5	2		16
SUBTOTAL (02/STR/PV)			3375		8	2		27.5			37.8		3375			8	2				70
TOTALS CARRIED TO THE GENERAL SUMMARY		300	3375	3	9	4	1	27.5			45.1	150	3375		275	8	2	5	2		86

CALCULATED	NRF	CHECKED	KCK
GUARDRAIL ESTIMATED QUANTITIES			
RIC - 42 - 13.13			
17 36			

AUXILIARY & LONG LINE MARKINGS

ROUTE	COUNTY	STATION / SLM		HIGHWAY MILES	614					642, TYPE 1					642							644										
					WORK ZONE CENTER LINE, CLASS III, 642 PAINT	WORK ZONE ARROW, CLASS III, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	WORK ZONE LANE LINE, CLASS III, 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	EDGE LINE, 6"		CENTER LINE			AUXILIARY MARKINGS (740.04)							AUXILIARY MARKINGS (740.04)										
										TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNELIZING LINE	STOP LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	SCHOOL SYMBOL MARKING		LANE ARROW			CHANNELIZING LINE	STOP LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	SCHOOL SYMBOL MARKING		LANE ARROW		
																			72 INCH	96 INCH	LEFT	RIGHT	LANE REDUCTION					8"	24"	24"	24"	72 INCH
FROM	TO	MILE	MILE	EACH	FT	MILE	FT	MILE	MILE	MILE	FT	FT	FT	FT	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH								
US 42	RIC	13.13	14.18	1.05	2.96	88	10136		608	2.10			2.121	1.48				5,068	304	1,783	468			34	10							
US 42	RIC	14.18	15.00	0.82	3.28	44	604		192	1.64			2,069	1.64				302	96		153		1	22								
US 42	RIC	15.00	16.00	1.00	4	64	734		0	2.00			2,378	2.00				367			344		1	30	2							
US 42	RIC	16.00	17.29	1.29	3.87	20	322		0	2.58			1,711	1.94				161			312			10								
US 41	RIC	17.29	17.52	0.23	0.46	0	0		0	0.46			0,098	0.23																		
US 42	RIC	17.52	18.05	0.53	1.06	0	0		0	1.06			0,204	0.53																		
US 42	ASD	0.00	1.00	1.00	2.00	4	126		0	2.00			0,956	1.00				63			191			2								
US 42	ASD	1.00	2.00	1.00	3.00	20	406		0	2.00			2,258	1.50				203			164			10								
US 42	ASD	2.00	2.92	0.92	2.76	16	168		0	1.84			2,000	1.38				84			426			8								
US 42	ASD	2.92	3.35	0.43	1.29	8	196	1.4	0	0.86	0.16	0.70	0,845	0.65				98		211	621		2	2	2							
US 42	ASD	3.35	3.63	0.28	0.00	0	0	1.12	0	0.56	0.56	0.56	0,534	0.00							319				2							
US 42	ASD	3.63	3.80	0.17	0.00	6	538	0.68	72	0.34	0.34	0.34	0,000	0.00	269	36																
ADDITIONAL QUANTITY FROM SIDE ROADS																			637													
SUBTOTAL: SPLIT (01/S<2/PV)					15.86	224	11,992	2.52	800	10.20	0.72	1.26	9.76	7.93				5,996	824	1,994	2,217		2	98	14	4						
SUBTOTAL: SPLIT (02/STR/PV)					8.82	40	700	0.00	0	6.90	0.00	0.00	5.42	4.41				350	213		781			20								
SUBTOTAL: SPLIT (03/S<2/PV)					0.00	6	538	0.68	72	0.34	0.34	0.34	0.00	0.00	269	36																
TOTALS TO GENERAL SUMMARY					8.72	24.68	270	13,230	3.20	872	17.44	1.06	1.60	15.17	12.35	269	36		6,346	1,037	1,994	2,998		2	118	14	4					

RAISED PAVEMENT MARKERS

ROUTE	COUNTY	STATION/SLM		DETAIL	621					621				REMARKS	DETAIL	DESCRIPTION		
					RAISED PAVEMENT MARKER REMOVED	RPM	PRISMATIC RETRO-REFLECTOR TYPES	ONE-WAY				TWO-WAY						
								WHITE	YELLOW / YELLOW	WHITE / RED	YELLOW / RED	BLUE / BLUE						
FROM	TO	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH								
US 42	ASD	0.00	0.86	GAP	58	58	0								1	MULTILANE UNDIVIDED TYPICAL SPACING		
US 42	ASD	0.86	1.36	7/13	66	66	0								2	TAPERED ACCEL. LANE		
US 42	ASD	1.36	2.65	GAP	83	83	0								3	DECELERATION LANE		
US 42	ASD	2.65	2.92	13	30	30	0								4	PARALLEL ACCEL LANE		
US 42	ASD	2.92	2.95	7	13	13	0								5	MULTILANE DIVIDED/EXPRESSWAY		
US 42	ASD	2.95	3.02	11	13	13	0								6	STOP APPROACH		
US 42	ASD	3.02	3.35	10/11	58	58	0								7	2 LANE APPR. WITH TURN LANE		
US 42	ASD	3.35	3.63	10/11	57	57	8								8	THROUGH APPROACH		
US 42	ASD	3.63	3.78	10/11	35	35	8								9	3 LANE APPR. WITH TURN LANE		
US 42	RIC	13.13	13.76	7/13	80	80	0								10	3 LANE DIVIDED TO 2 LANE TRANSITION		
US 42	RIC	13.76	14.19	GAP/7	157	157	0								11	3 LANE UNDIVIDED TO 2 LANE TRANSITION		
US 42	RIC	14.19	14.80	7/13	78	78	0								12	TWO LANE NARROW BRIDGE		
US 42	RIC	14.80	15.57	13	96	96	0								13	TWO WAY LEFT TURN LANE		
US 42	RIC	15.57	15.59	7	5	5	0								14	ONE LANE BRIDGE		
US 42	RIC	15.59	15.73	13	10	10	0								15	HORIZONTAL CURVE		
US 42	RIC	15.73	15.83	7	22	22	0								16	HORIZONTAL CURVE ALT.		
US 42	RIC	15.83	16.39	13	72	72	0								17	STOP APPROACH ALT.		
US 42	RIC	16.39	16.53	7	21	21	0								18	FIRE HYDRANT		
US 42	RIC	16.53	17.29	GAP	50	50	0									GAP	CENTER LINE AT 80 FT. TYP.	
US 42	RIC	17.29	17.52	GAP	15	15	0										NOTES	
US 42	RIC	17.52	18.05	GAP	36	36	0										1) THRU LANES SHALL BE STRIPED TO MATCH EXISTING WIDTHS ACCORDING TO CMS 641.08A.	
SUBTOTAL: SPLIT (01/S<2/PV)					747	747											2) FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.	
SUBTOTAL: SPLIT (02/STR/PV)					273	273											3) WORK ZONE STOP LINES SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: US 42, STEWART RD, MC ELROY RD, EASTVIEW DR, REISER DR, SR 603	
SUBTOTAL: SPLIT (03/S<2/PV)					35	35											4) INSTALL NEW SCHOOL SYMBOL MARKINGS AT SLM 14.87 AND SLM 15.34	
TOTALS TO GENERAL SUMMARY					1,055	1,055												

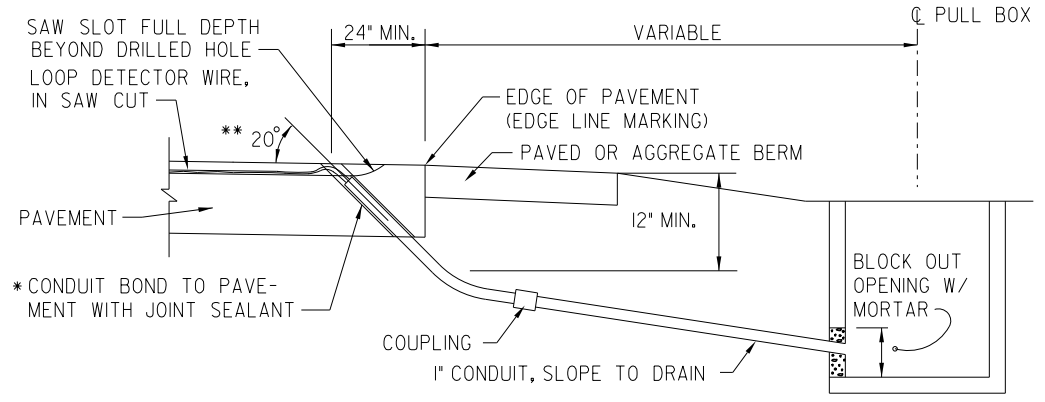
PAVEMENT MARKING / RPM SUB - SUMMARY

RIC - 42 - 13.13

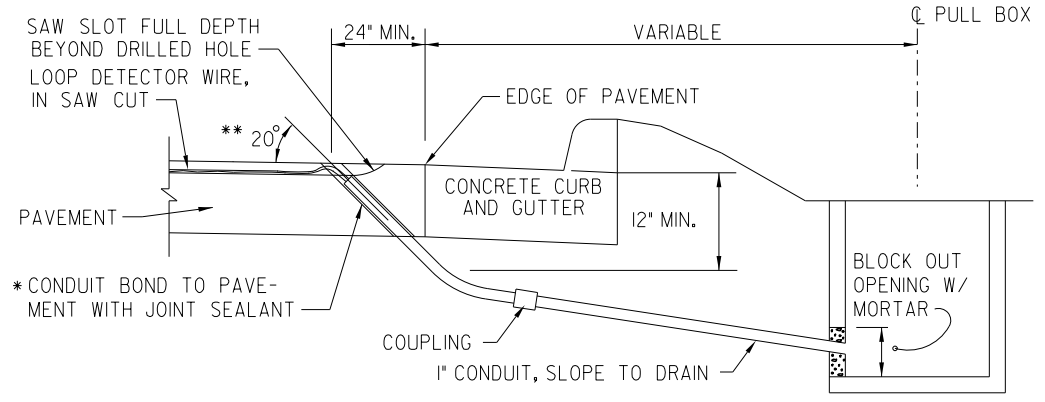
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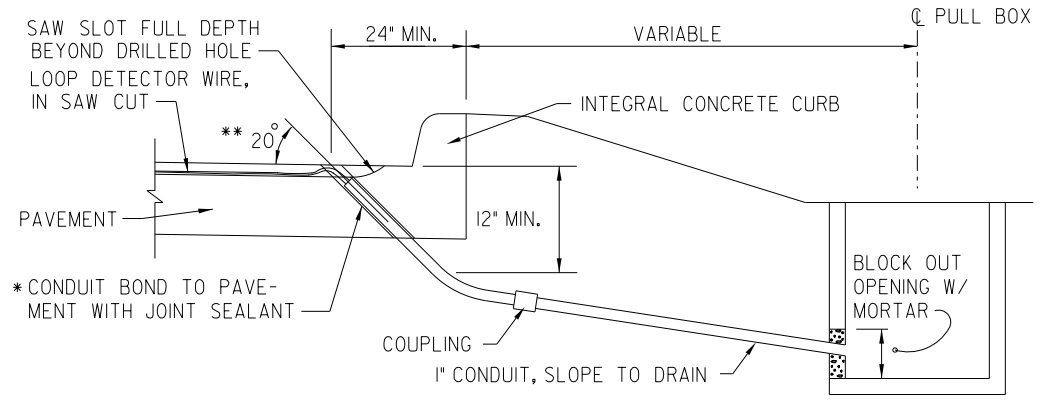
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 WORKSTATION: mfooster DATE: 3/17/2019



DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



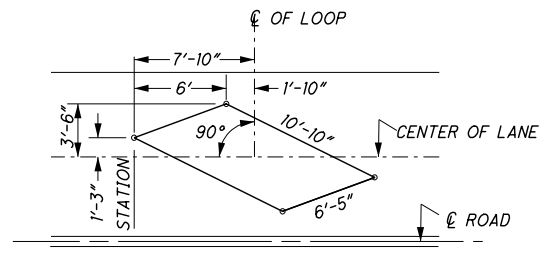
DRILLED HOLE LOCATION DETAIL WITH CONCRETE CURB AND GUTTER



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' & LARGER

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.

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/S<2/PV:	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	33 EACH
03/S<2/PV:	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	3 EACH

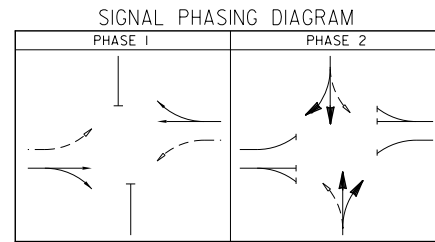
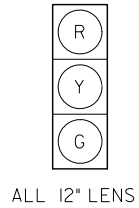
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 NRF
 CHECKED
 KCK

TRAFFIC SIGNAL NOTES

RIC-42-13.13

RIC-42-13.13 SUBSUMMARY

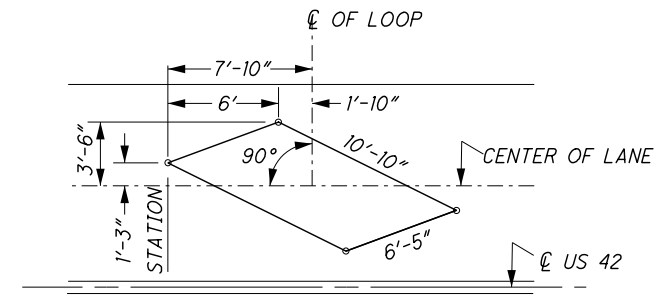
ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN



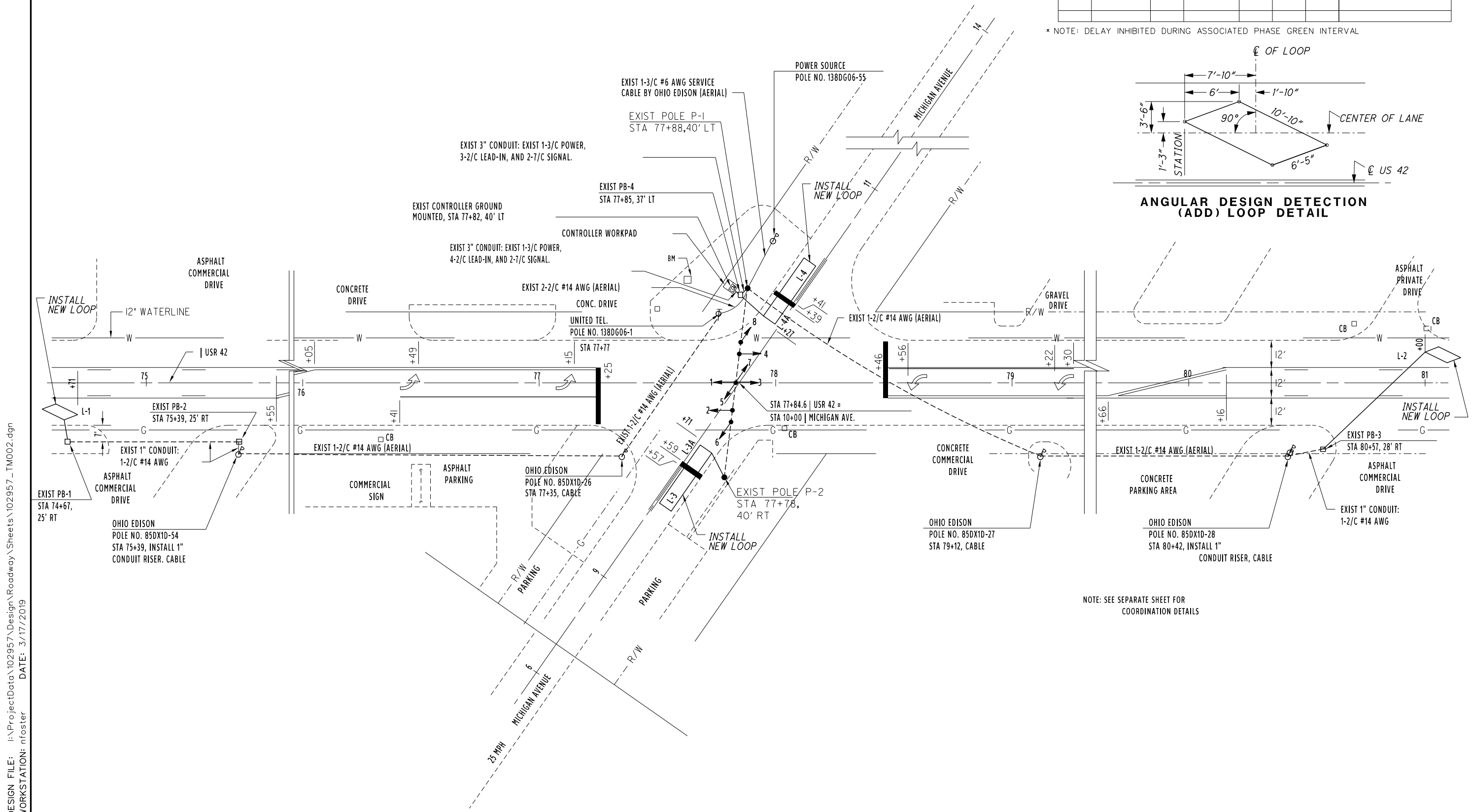
LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-1	6.4X10.8	4	PULSE		1	1	ADD LOOP
L-2	6.4X10.8	4	PULSE		1	1	ADD LOOP
L-3	6X30	2	PRESENCE	8 *	2	2	
L-4	6X30	2	PRESENCE	8 *	2	2	

* NOTE: DELAY INHIBITED DURING ASSOCIATED PHASE GREEN INTERVAL



ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL



NOTE: SEE SEPARATE SHEET FOR COORDINATION DETAILS

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 WORKSTATION: nfooster DATE: 3/17/2019

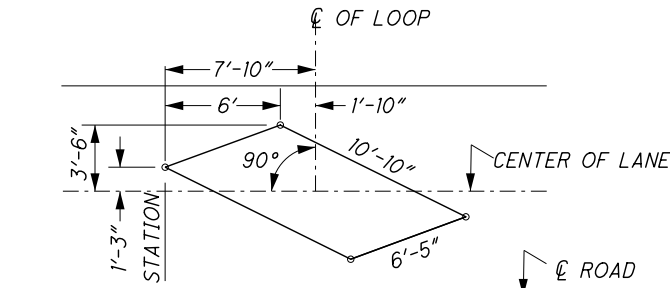
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**TRAFFIC SIGNAL DETAILS
 RIC-42-13.31 AT MICHIGAN AVE.**

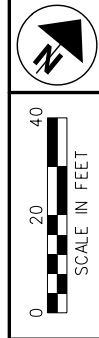
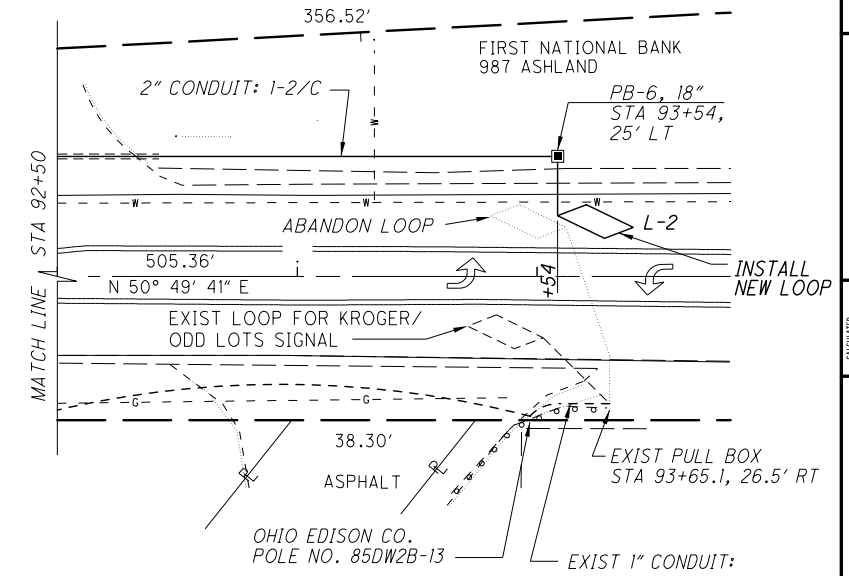
RIC-42-13.13

RIC-42-13.13 SUBSUMMARY

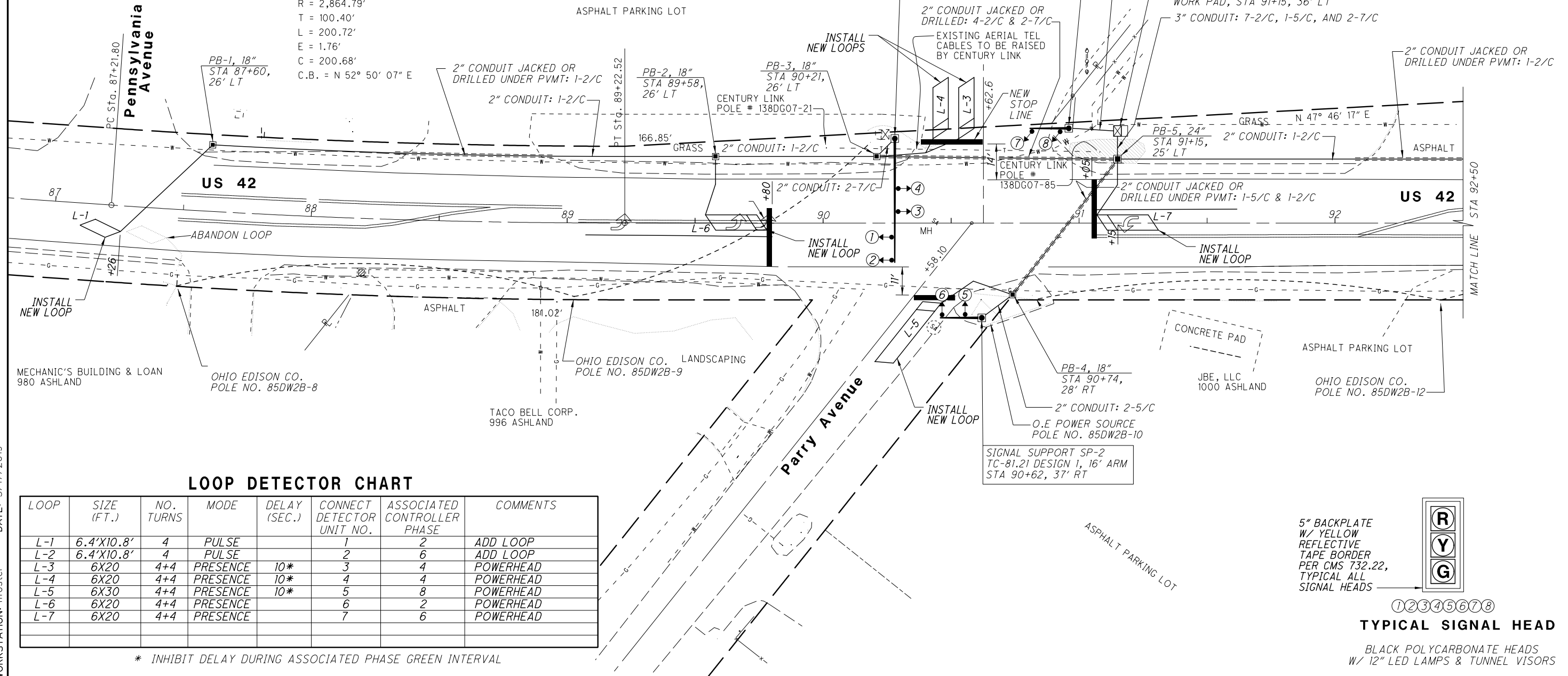
ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	7	EACH	DETECTOR LOOP, AS PER PLAN



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



P.I. Sta. 88+22.20
 $\Delta = 4^\circ 00' 52''$ (LT)
 $D_c = 2^\circ 00' 00''$
 $R = 2,864.79'$
 $T = 100.40'$
 $L = 200.72'$
 $E = 1.76'$
 $C = 200.68'$
 $C.B. = N 52^\circ 50' 07'' E$



LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. TURNS	MODE	DELAY (SEC.)	CONNECT DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-1	6.4'X10.8'	4	PULSE		1	2	ADD LOOP
L-2	6.4'X10.8'	4	PULSE		2	6	ADD LOOP
L-3	6X20	4+4	PRESENCE	10*	3	4	POWERHEAD
L-4	6X20	4+4	PRESENCE	10*	4	4	POWERHEAD
L-5	6X30	4+4	PRESENCE	10*	5	8	POWERHEAD
L-6	6X20	4+4	PRESENCE		6	2	POWERHEAD
L-7	6X20	4+4	PRESENCE		7	6	POWERHEAD

* INHIBIT DELAY DURING ASSOCIATED PHASE GREEN INTERVAL

5" BACKPLATE W/ YELLOW REFLECTIVE TAPE BORDER PER CMS 732.22. TYPICAL ALL SIGNAL HEADS



1 2 3 4 5 6 7 8
TYPICAL SIGNAL HEAD

BLACK POLYCARBONATE HEADS W/ 12" LED LAMPS & TUNNEL VISORS

TRAFFIC SIGNAL DETAILS
 RIC-42-13.52 AT PARRY AVE.

RIC-42-13.13

21
 36

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 WORKSTATION: nfofster DATE: 3/17/2019

RIC-42-13.13 SUBSUMMARY

ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	8	EACH	DETECTOR LOOP, AS PER PLAN

LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-1	6.4X10.8	4	PULSE	0	1	1	ADD LOOP
L-2	6.4X10.8	4	PULSE	0	2	1	ADD LOOP
L-3	6.4X10.8	4	PULSE	0	2	1	ADD LOOP
L-4	6X20	3+3	PRESENCE	5*	3	3+3	POWERHEAD
L-5	6X20	3+3	PRESENCE	5*	3	3+3	POWERHEAD
L-6	18X15	2	PRESENCE	10*	4	3	
L-7	5x20	3+3	PRESENCE	10*	4	3	POWERHEAD
L-7A	5x20	3+3	PRESENCE	10*	4	3	POWERHEAD

NOTE: *DELAY INHIBITED DURING ASSOC. PHASE GREEN INTERVAL

BIG-LOTS STORE

RITE-AID PHARMACY

KROGER SHOPPING CENTER

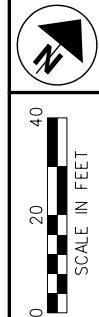
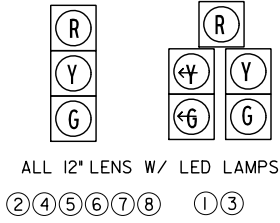
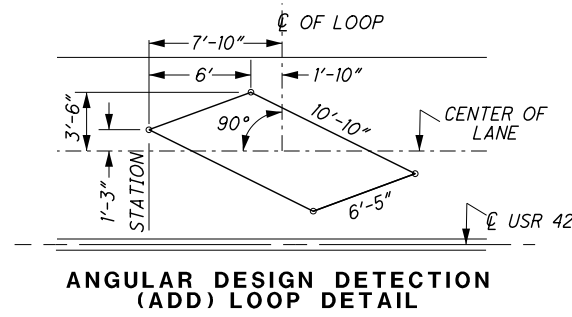
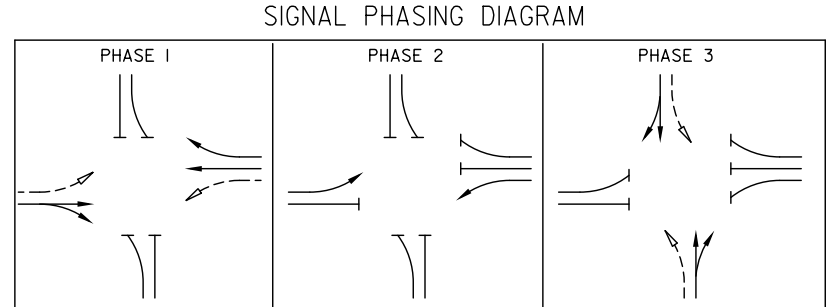
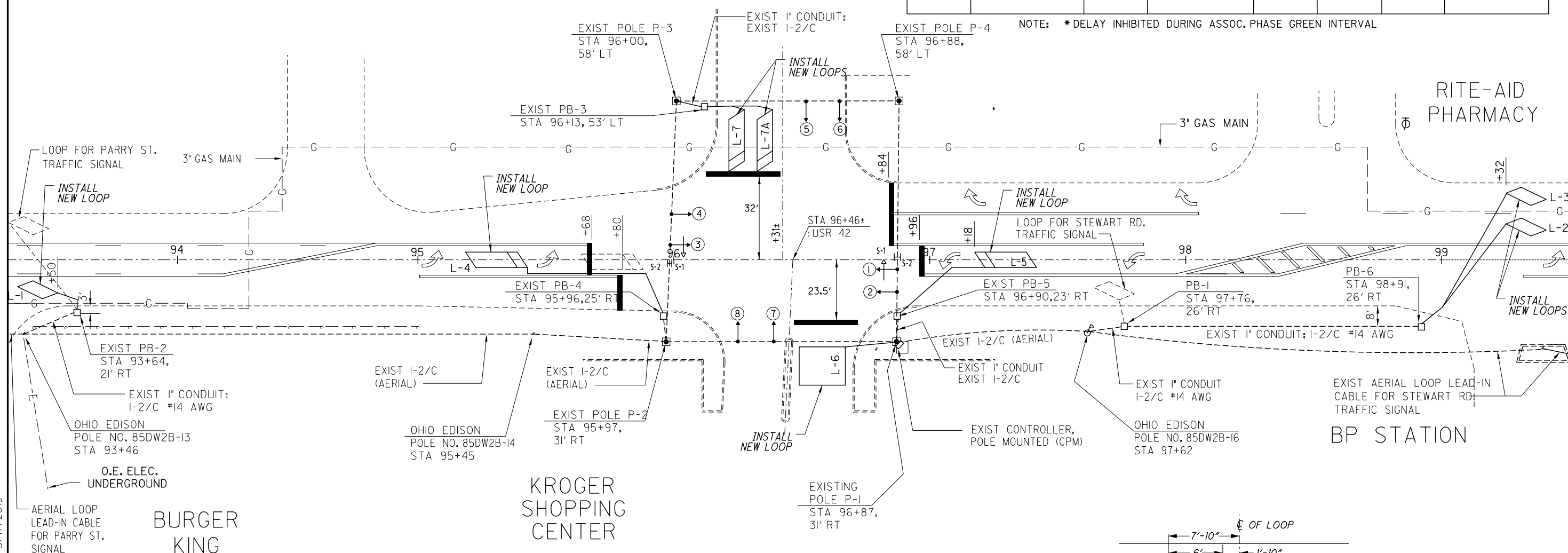
BURGER KING

TRAFFIC SIGNAL DETAILS
RIC-42-13.62 AT KROGER DR.

RIC-42-13.13

22
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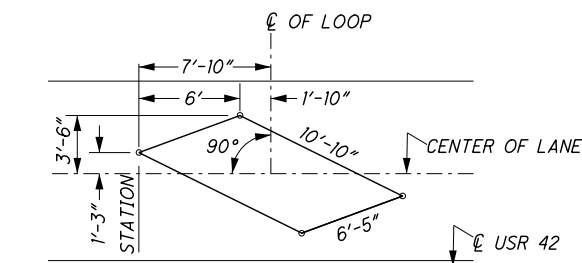
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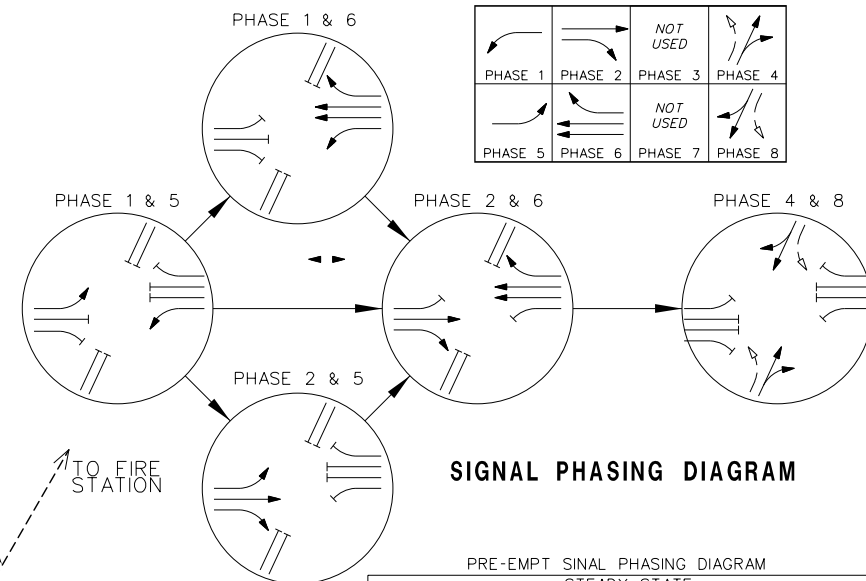
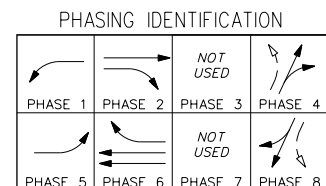
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RIC-42-13.13 SUBSUMMARY

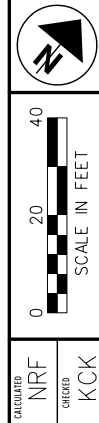
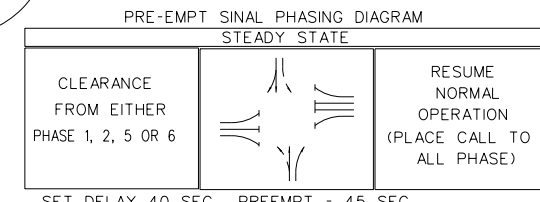
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ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL



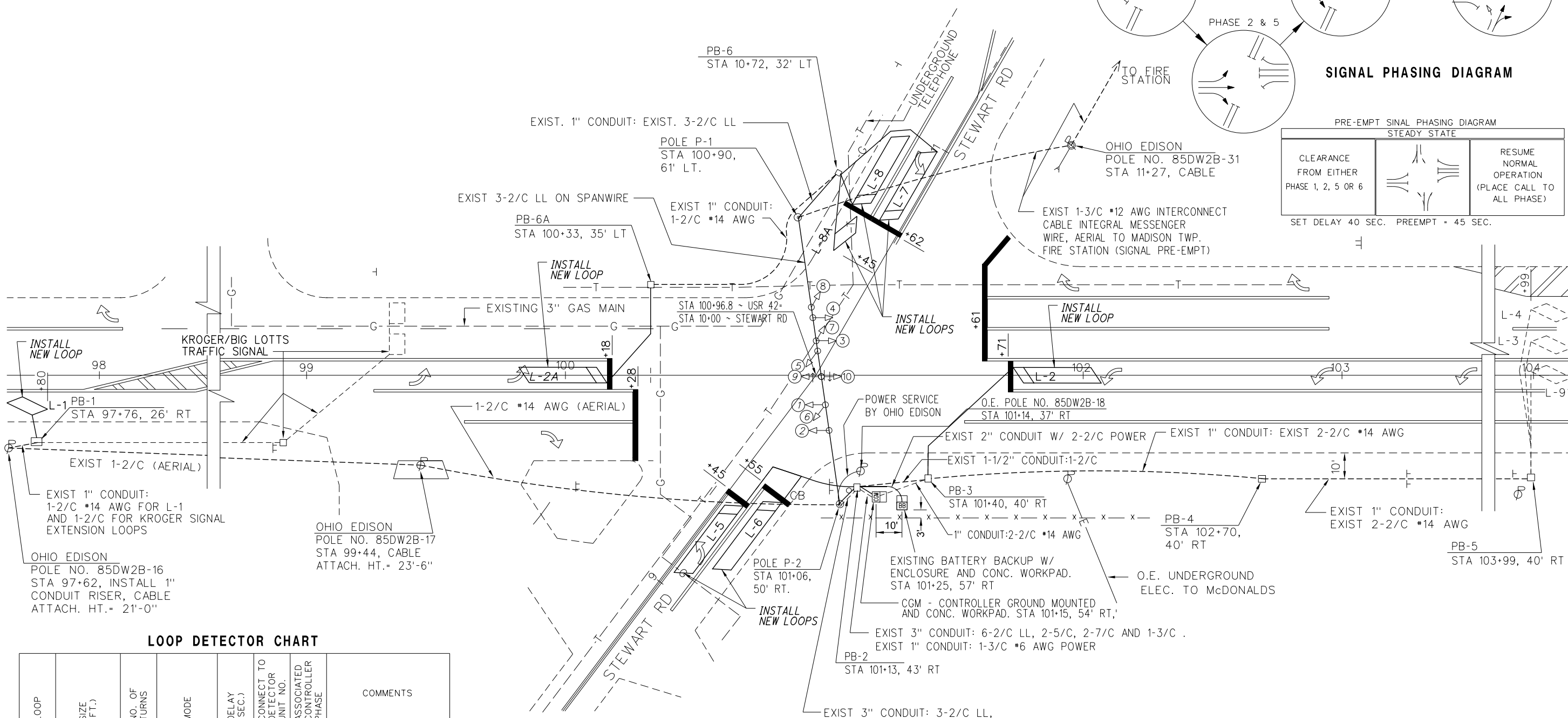
SIGNAL PHASING DIAGRAM



**TRAFFIC SIGNAL DETAILS
RIC-42-13.75 AT STEWART RD.**

RIC-42-13.13

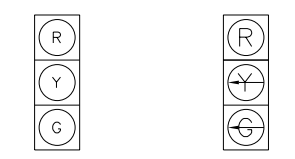
23
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LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L-1	6.4 X 10.8	3	PULSE	0	1	2	ADD LOOP
L-2	6 X 30	3+3	PRESENCE	2 *	2	1	POWERHEAD LOOP
L-2A	6 X 30	3+3	PRESENCE	2 *	3	5	POWERHEAD LOOP
L-3	6.4 X 10.8	4	PULSE	0	4	6	ADD LOOP
L-4	6.4 X 10.8	4	PULSE	0	4	6	ADD LOOP
L-5	6 X 30	3+3	PRESENCE	10 *	8	4	POWERHEAD LOOP
L-6	6 X 30	3+3	PRESENCE	10 *	5	4	POWERHEAD LOOP
L-7	6 X 30	3+3	PRESENCE	10 *	9	8	POWERHEAD LOOP
L-8	6 X 30	3+3	PRESENCE	10 *	6	8	POWERHEAD LOOP
L-8A	6.4 X 10.8	4	PRESENCE	10 *	6	8	ADD LOOP
L-9	6.4 X 10.8	4	PULSE	2 *	7	1	ADD LOOP

* NOTE: DELAY INHIBITED DURING ASSOCIATED PHASE GREEN INTERVAL



TYPICAL SIGNAL HEAD

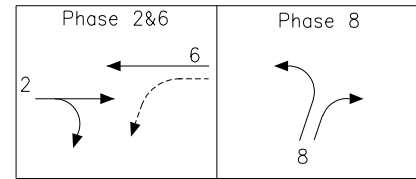


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WORKSTATION: nfofster DATE: 3/17/2019

RIC-42-13.13 SUBSUMMARY

ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	2	EACH	DETECTOR LOOP, AS PER PLAN

PHASING DIAGRAM

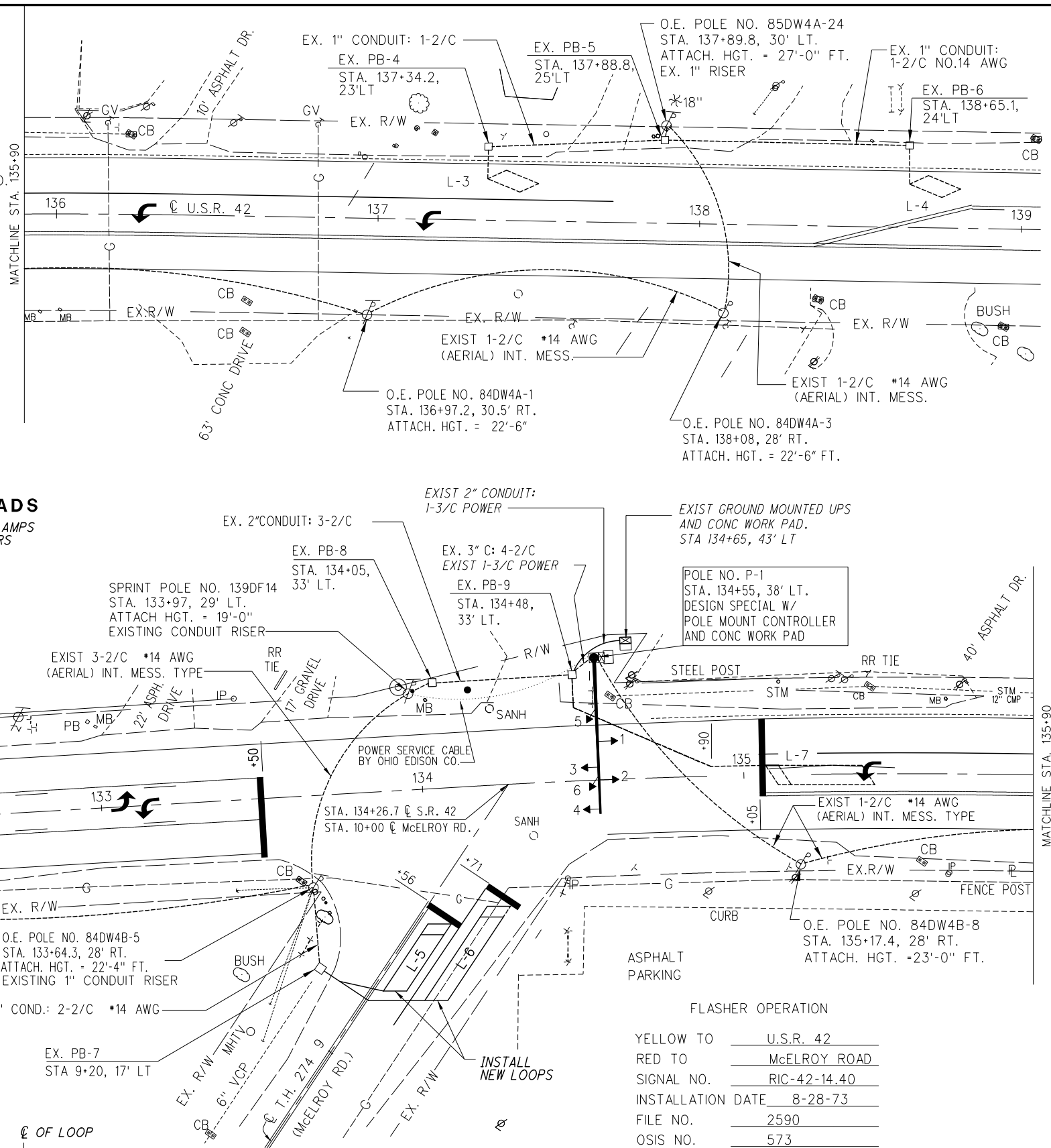


NOTE: PHASES 1, 3, 4, 5 AND 7 NOT USED.



TYPICAL SIGNAL HEADS

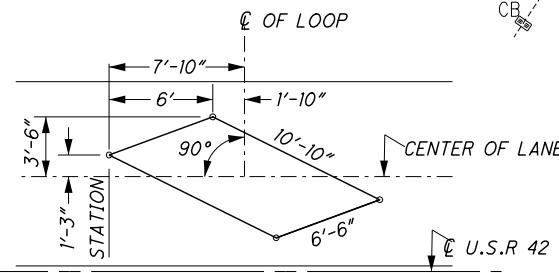
BLACK POLYCARBONATE W/ 12" LED LAMPS AND OPEN BOTTOM TUNNEL VISORS



LOOP DETECTOR CHART

LOOP	SIZE (F.T.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	COMMENTS
L - 1	6.4 X 10.8	4	PULSE		1	2	ADD LOOP
L - 2	6.4 X 10.8	4	PULSE		1	2	ADD LOOP
L - 3	6.5 X 10.8	3	PULSE		2	6	ADD LOOP
L - 4	6.5 X 10.8	3	PULSE		2	6	ADD LOOP
L - 5	6 X 25	3+3	PRESENCE	2 *	3	4	POWERHEAD LOOP
L - 6	6 X 35	3+3	PRESENCE	10 *	4	4	POWERHEAD LOOP
L - 7	6 X 30	3+3	PRESENCE		5	6	POWERHEAD LOOP

* DELAY INHIBIT DURING ASSOCIATED GREEN.



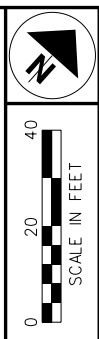
ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL

FLASHER OPERATION

YELLOW TO U.S.R. 42
 RED TO McELROY ROAD
 SIGNAL NO. RIC-42-14.40
 INSTALLATION DATE 8-28-73
 FILE NO. 2590
 OSIS NO. 573

DATE	REVISIONS	DATE INSTALLED
11-2-01	PLAN REDRAWN PER UPGRADE PROJ 43-01	3-4-02
6-9-10	PLAN REDRAWN PER LOOP UPGRADES PROJ 514-10	6-27-11
5-10-12	PROJ 332(10)-INSTALLED UPS AND NEW SIGNAL HEADS	?
3-1-13	RIC-42-14.37 - UPGRADE EXISTING DETECTOR LOOPS	?

OHIO DEPARTMENT OF TRANSPORTATION	
ELECTRICAL INSTALLATION LOCATED AT	
US 42 & McELROY RD	
DISTRICT 3	COUNTY RICHLAND
DRAWN RJR 6/10	REVIEWED



SCALE IN FEET

TRAFFIC SIGNAL DETAILS
RIC-42-14.38 AT McELROY RD.

RIC-42-13.13

DESIGN FILE: I:\ProjectData\102957\Design\Roadway\Sheets\102957_TM002.dgn
 WORKSTATION: nfoster DATE: 3/17/2019

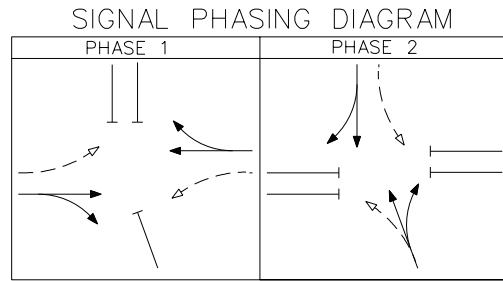
RIC-42-13.13 SUBSUMMARY

ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN

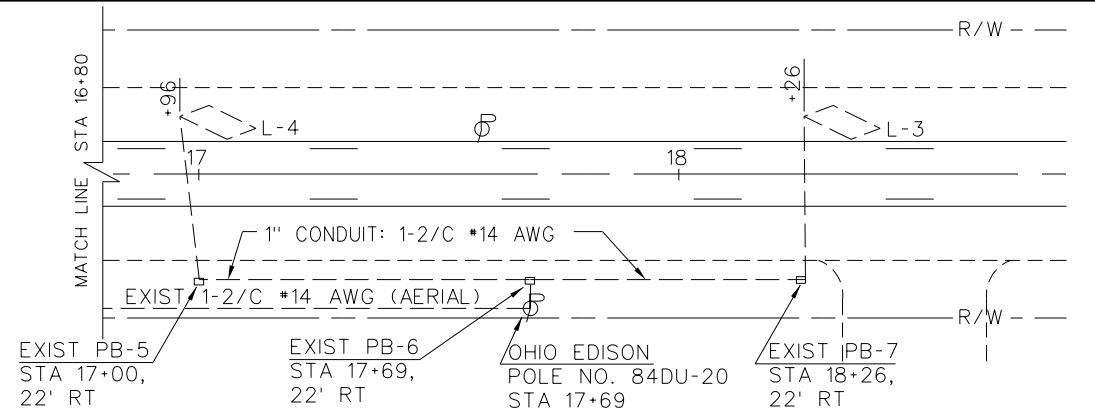
LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT	ASSOCIATED CONTROLLER PHASE
L-1	6.5'X10.8'	3	PULSE		1	1
L-2	6.5'X10.8'	3	PULSE		1	1
L-3	6.5'X10.8'	3	PULSE		2	1
L-4	6.5'X10.8'	3	PULSE		2	1
L-5	6X8X25	2	PRESENCE	10 *	3	2
L-6	6.5'X10.8'	3	PRESENCE	10 *	3	2
L-7	6X8X30	2	PRESENCE	10 *	4	2
L-8	6X30	2	PRESENCE	10 *	4	2

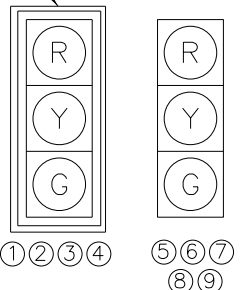
* DELAY INHIBITED DURING PHASE 2 GRN.



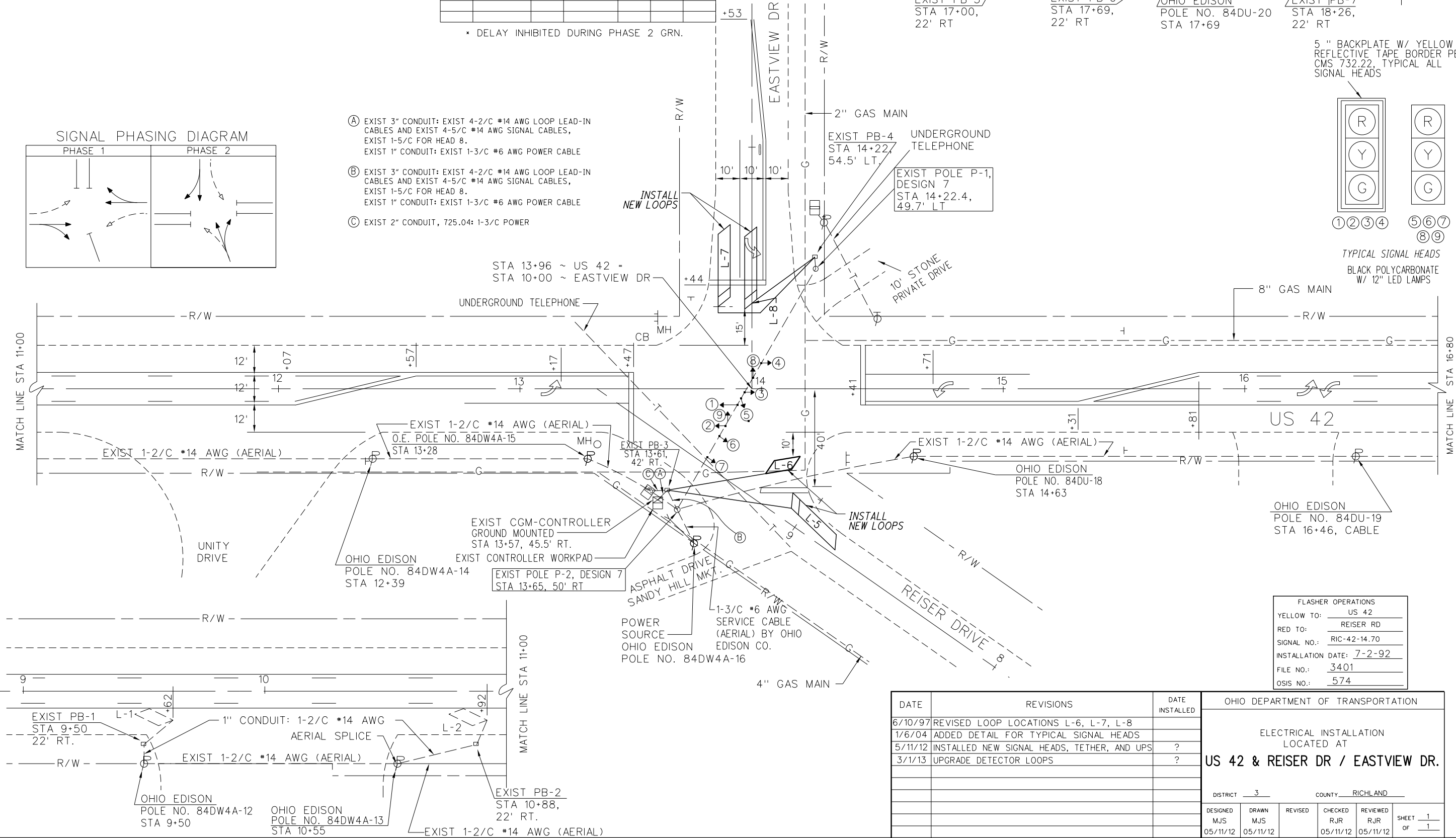
- (A) EXIST 3" CONDUIT: EXIST 4-2/C #14 AWG LOOP LEAD-IN CABLES AND EXIST 4-5/C #14 AWG SIGNAL CABLES, EXIST 1-5/C FOR HEAD 8.
EXIST 1" CONDUIT: EXIST 1-3/C #6 AWG POWER CABLE
- (B) EXIST 3" CONDUIT: EXIST 4-2/C #14 AWG LOOP LEAD-IN CABLES AND EXIST 4-5/C #14 AWG SIGNAL CABLES, EXIST 1-5/C FOR HEAD 8.
EXIST 1" CONDUIT: EXIST 1-3/C #6 AWG POWER CABLE
- (C) EXIST 2" CONDUIT, 725.04: 1-3/C POWER



5" BACKPLATE W/ YELLOW REFLECTIVE TAPE BORDER PER CMS 732.22, TYPICAL ALL SIGNAL HEADS



TYPICAL SIGNAL HEADS
BLACK POLYCARBONATE W/ 12" LED LAMPS



FLASHER OPERATIONS	
YELLOW TO:	US 42
RED TO:	REISER RD
SIGNAL NO.:	RIC-42-14.70
INSTALLATION DATE:	7-2-92
FILE NO.:	3401
OSIS NO.:	574

DATE	REVISIONS	DATE INSTALLED
6/10/97	REVISED LOOP LOCATIONS L-6, L-7, L-8	
1/6/04	ADDED DETAIL FOR TYPICAL SIGNAL HEADS	
5/11/12	INSTALLED NEW SIGNAL HEADS, TETHER, AND UPS	?
3/1/13	UPGRADE DETECTOR LOOPS	?

OHIO DEPARTMENT OF TRANSPORTATION					
ELECTRICAL INSTALLATION LOCATED AT					
US 42 & REISER DR / EASTVIEW DR.					
DISTRICT 3			COUNTY RICHLAND		
DESIGNED MJS 05/11/12	DRAWN MJS 05/11/12	REVIEWED RJR 05/11/12	CHECKED RJR 05/11/12	REVIEWED RJR 05/11/12	SHEET 1 OF 1

DESIGN FILE: I:\ProjectData\102957\Design\Roadway\Sheets\102957_TM002.dgn
WORKSTATION: nfooster DATE: 3/17/2019



CALCULATED
NIRF
CHECKED
KCK

TRAFFIC SIGNAL SIGNAL DETAILS EASTVIEW DR.

RIC-42-13.13

25
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RIC-42-13.13 SUBSUMMARY

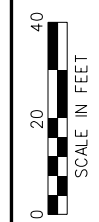
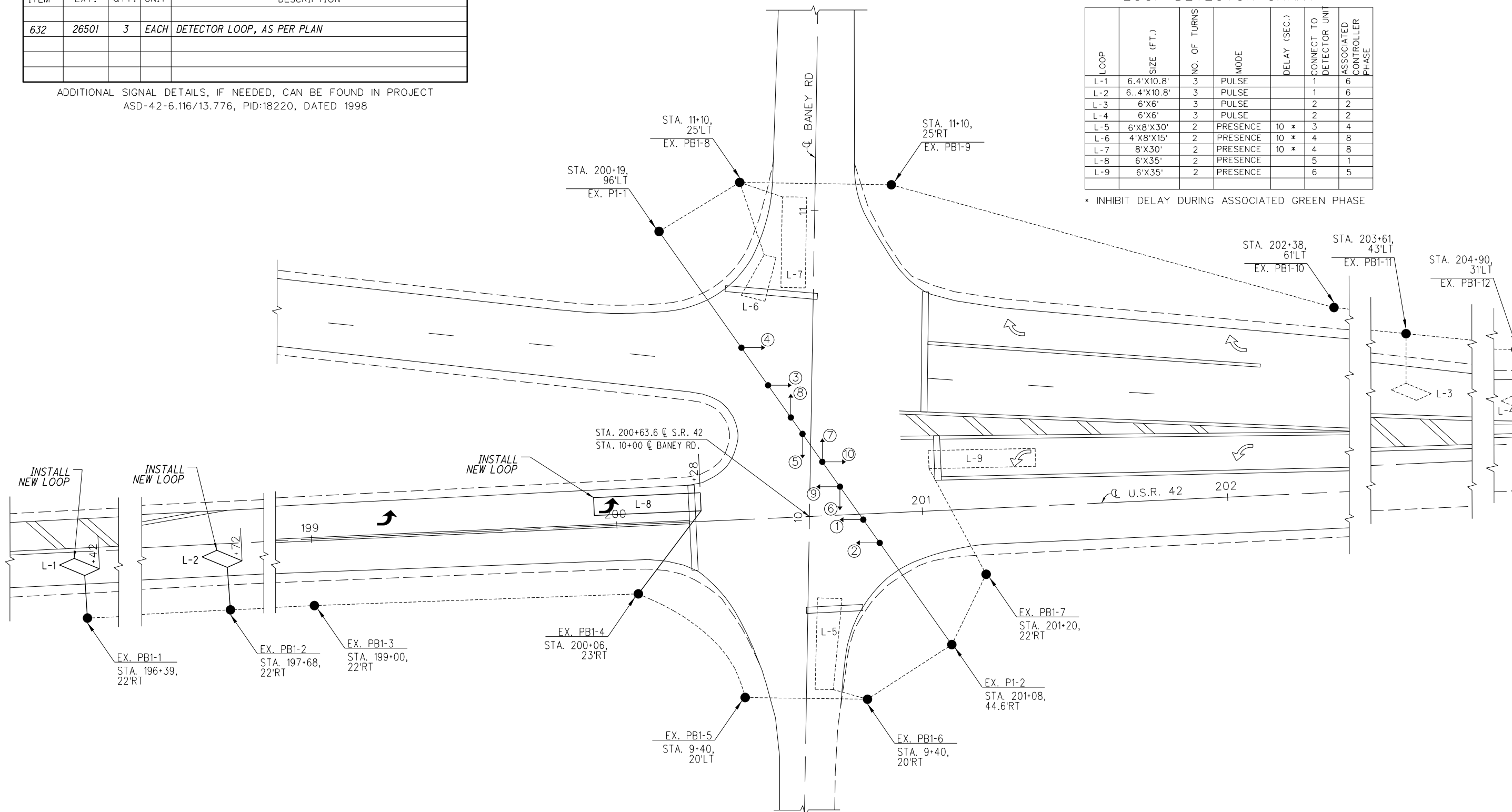
ITEM	EXT.	QTY.	UNIT	DESCRIPTION
632	26501	3	EACH	DETECTOR LOOP, AS PER PLAN

ADDITIONAL SIGNAL DETAILS, IF NEEDED, CAN BE FOUND IN PROJECT ASD-42-6.116/13.776, PID:18220, DATED 1998

LOOP DETECTOR CHART

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT	ASSOCIATED CONTROLLER PHASE
L-1	6.4'X10.8'	3	PULSE		1	6
L-2	6.4'X10.8'	3	PULSE		1	6
L-3	6'X6'	3	PULSE		2	2
L-4	6'X6'	3	PULSE		2	2
L-5	6'X8'X30'	2	PRESENCE	10 *	3	4
L-6	4'X8'X15'	2	PRESENCE	10 *	4	8
L-7	8'X30'	2	PRESENCE	10 *	4	8
L-8	6'X35'	2	PRESENCE		5	1
L-9	6'X35'	2	PRESENCE		6	5

* INHIBIT DELAY DURING ASSOCIATED GREEN PHASE



NRF
checked
KCK

**TRAFFIC SIGNAL DETAILS
ASD-42-3.80 AT BANEY RD.**

RIC-42-13.13

DESIGN FILE: I:\ProjectData\102957\Design\Roadway\Sheets\102957_TM002.dgn
WORKSTATION: nfoster DATE: 3/17/2019

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.

EXISTING PLANS

THE FOLLOWING EXISTING PLANS MAY BE INSPECTED AT THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT THREE OFFICE LOCATED AT 906 CLARK AVENUE, ASHLAND, OHIO 44805.

STRUCTURE NUMBER:	EXISTING PLAN NAME:	DATE:
ASD-42-0357	ASD-42-3.59	2009
RIC-42-1790	RIC/ASD-42-16.37/0.00	2009

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.

UTILITIES

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

IN-STREAM WORK RESTRICTION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID CONSTRUCTION IN AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING STREAMS OR WETLANDS. ANY MATERIAL THAT DOES FALL INTO STREAMS OR WETLANDS SHALL BE REMOVED AS SOON AS POSSIBLE.

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. IT IS ANTICIPATED THAT NO IN-STREAM WORK, OR WORK UNDER THE STREAM'S ORDINARY HIGH WATER MARK (OHWM) WILL BE NEEDED. THEREFORE NO WATERWAY PERMITS HAVE BEEN GRANTED AND NO IN-STREAM WORK IS ALLOWED.

SHOULD WORK (EITHER TEMPORARY OR PERMANENT) IN THE STREAM BE NEEDED; IT WILL REQUIRE A PERMIT AND AUTHORIZATION BY THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE). THE CONTRACTOR SHALL NOT UTILIZE FILLS BELOW OHWM UNTIL SUCH ACTIVITY IS AUTHORIZED BY THE USACE. DETAILS OF THIS REQUIREMENT ARE DESCRIBED IN ODOT'S SUPPLEMENTAL SPECIFICATION 832.09.

USACE DEFINITION OF OHWM - THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELVEING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS.

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES

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

PAVING AT STRUCTURES

STRUCTURE RIC-42-1632
PAVE SAME AS ROADWAY.

STRUCTURE RIC-42-1736
PAVE SAME AS ROADWAY.

STRUCTURE RIC-42-1772
PAVE SAME AS ROADWAY.

STRUCTURE RIC-42-1790
TAPER THE PLANING FROM 0.00" TO 1.25" IN 75' TO THE EXPANSION JOINT. PLANE 1.25" ON THE BRIDGE DECK. PAVE 1.25" SURFACE COURSE OF ITEM 856 - WATERPROOFING ASPHALT CONCRETE ON THE BRIDGE.

STRUCTURE ASD-42-0015
COORDINATE WORK WITH PID 94430. TAPER THE PLANING FROM 0.00" TO 1.25" IN 75' TO THE APPROACH SLABS. SUSPEND AND RESUME PLANING/PAVING WORK AT CONCRETE APPROACH SLABS.

STRUCTURE ASD-42-0258
PLANE AND PAVE SAME AS ROADWAY.

STRUCTURE ASD-42-0357
SUSPEND AND RESUME PAVEMENT TREATMENT AT CONCRETE BRIDGE DECK AND APPROACH SLABS.

ITEM 202 - REMOVAL MISC.: JOINT SEALER

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING JOINT SEALER 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 409 - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS

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 PER FOOT FOR THE ABOVE ITEM.

ITEM 517 - BRIDGE RAILING REBUILT

REMOVE THE EXISTING DEEP BEAM BRIDGE RAILING RAIL ELEMENTS FOR STORAGE TO ALLOW FOR FULL WIDTH PAVING OPERATIONS ON THE EFFECTED BRIDGE. DO NOT ALLOW TRAFFIC TO RUN ADJACENT TO THE REMOVED GUARDRAIL RUN. SHOULD THE ADJACENT LANE BE REOPENED PRIOR TO COMPLETING THE PLANING AND PAVING OPERATION, REINSTALL THE RAIL ELEMENTS PRIOR TO REOPENING THE LANE TO TRAFFIC.

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. DO NOT LEAVE THE REMOVED RAILING OFF THE STRUCTURE WHEN WORK ACTIVITIES ARE NOT ACTIVELY TAKING PLACE. 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 - BRIDGE RAILING REBUILT, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

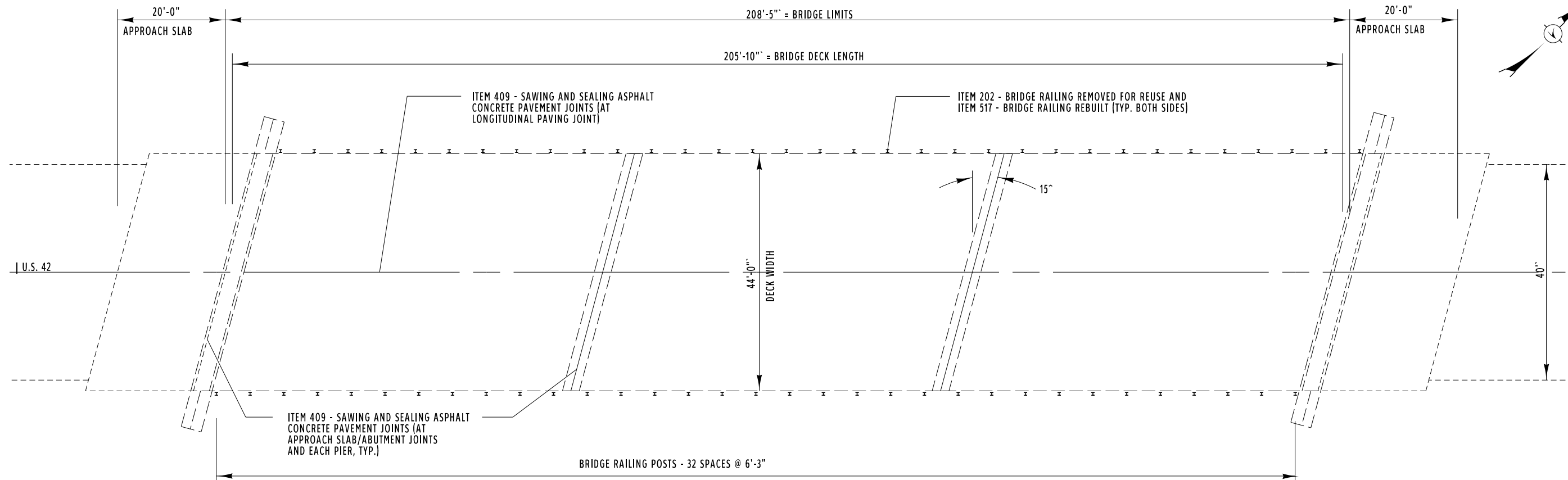
CALCULATED
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STRUCTURE NOTES

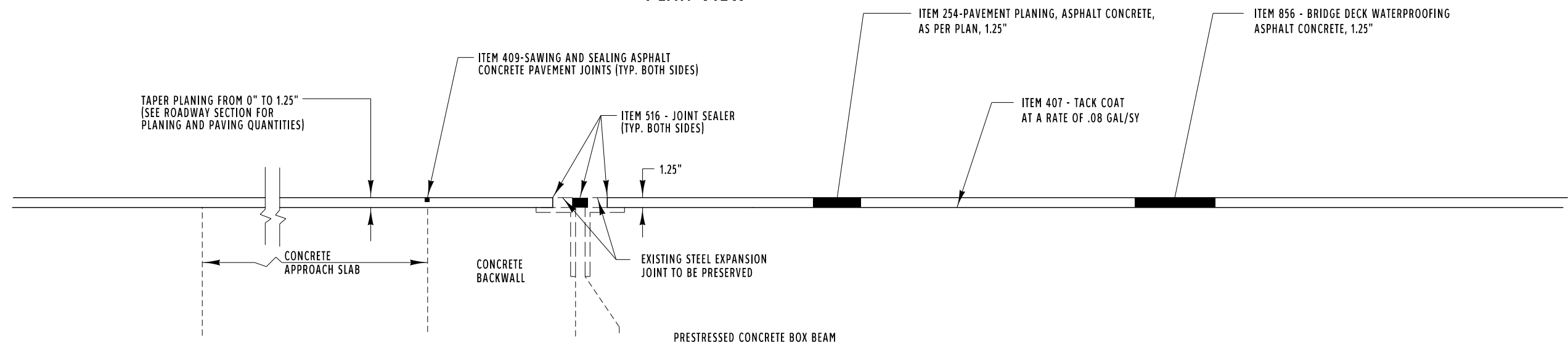
RIC - 42 - 13.13

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DESIGN FILE: \\ProjectData\102957\Design\Roadway\Sheets\102957_RIC-42-1790.dgn
 WORKSTATION: foster DATE: 3/17/2019



PLAN VIEW



ASPHALT DETAILS

ITEM	QUANTITY	UNIT	DESCRIPTION
202	400	FT	BRIDGE RAILING REMOVED FOR REUSE
254	1007	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN
407	81	GAL	TACK COAT
409	389	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS
516	274	FT	JOINT SEALER
517	400	FT	BRIDGE RAILING REBUILT
856	35	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE

05/STR/BR: ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY SHEET.

NOTES:

- 1) APPROACH GUARDRAIL NOT SHOWN.
- 2) SEE PAVEMENT AND SHOULDER DATA SHEET FOR APPROACH PLANING AND PAVEMENT.
- 3) REMOVE EXISTING TUBULAR BACKUP RAIL TO PAVE FULL WIDTH. REINSTALL EXISTING RAIL AND ADJUST HEIGHT TO 27 3/4". RAIL MUST BE REMOVED AND REPLACED ALL WITHIN THE SAME DAY.
- 4) PLANE (1.25") AND PAVE (1.25") WITH ITEM 856 OVER STRUCTURE.

DESIGN AGENCY
 DISTRICT 3
 CAPITAL PROGRAMS

DATE
 11/18
 REVIEWED
 KCK
 STRUCTURE FILE NUMBER
 7003072

DRAWN
 NRF
 DESIGNED
 NRF
 CHECKED

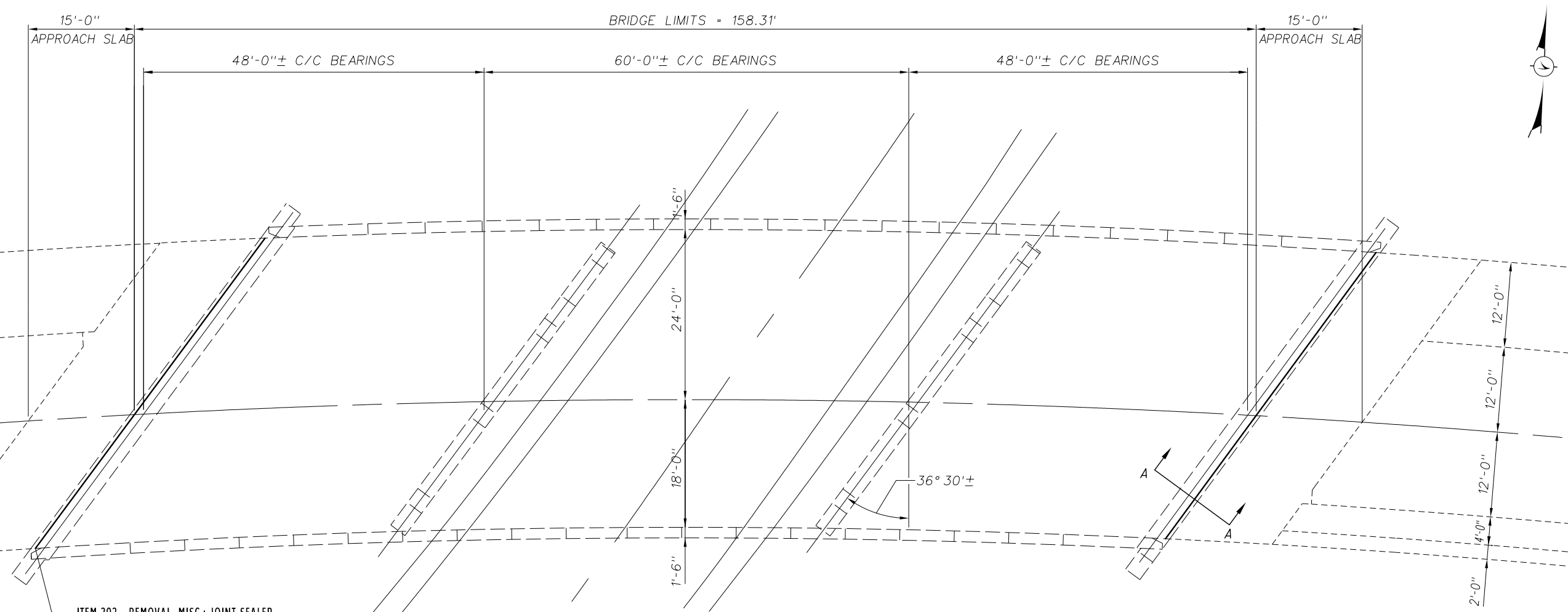
PLAN VIEW
 RIC-42-1790 OVER BLACK FORK OF MOHICAN RIVER

RIC-42-13.13

1 / 1

28
 36

DESIGN FILE: \\ProjectData\102957\Design\Roadway\Sheets\102957_ASD-42-0357.dgn
 WORKSTATION: fofster DATE: 3/17/2019



ITEM 202 - REMOVAL, MISC.: JOINT SEALER
 ITEM 516 - JOINT SEALER
 (TYP. BOTH SIDES)

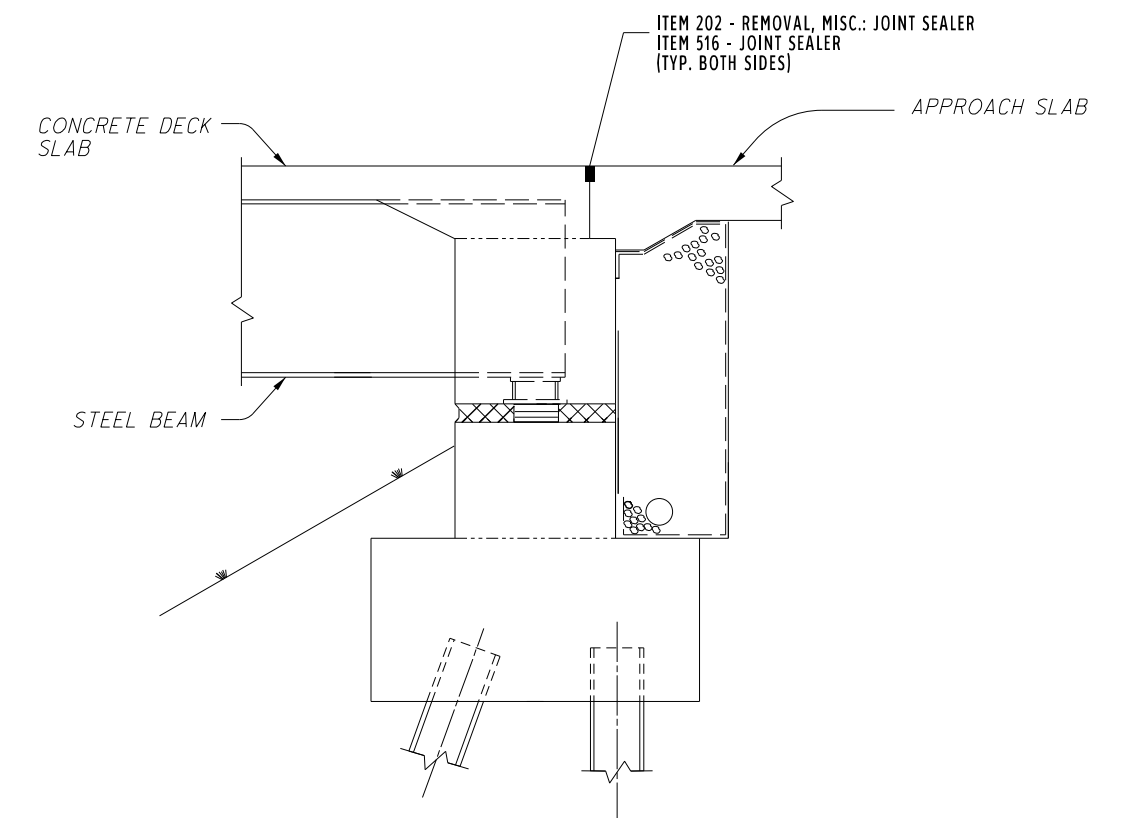
GENERAL PLAN

NOTES:

- 1) APPROACH GUARDRAIL NOT SHOWN.
- 2) REINFORCING STEEL NOT SHOWN IN SECTION A-A FOR CLARITY.
- 3) SEE PAVEMENT AND SHOULDER DATA SHEET FOR APPROACH PLANING AND PAVEMENT.
- 4) MAINTAIN VERTICAL CLEARANCE OF 14'-9" HIGH SIDE OF SUPER.

ITEM	QUANTITY	UNIT	DESCRIPTION
202	105	FT	REMOVAL MISC.: JOINT SEALER
516	105	FT	JOINT SEALER

06/S<2/BR: ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY SHEET.



SECTION A-A



DESIGN AGENCY DISTRICT 3 CAPITAL PROGRAMS	DATE 11/18
REVIEWED KCK	STRUCTURE FILE NUMBER 0301086
DRAWN NRF	REVISIONS
DESIGNED NRF	CHECKED
PLAN VIEW ASD-42-0357 OVER CLAREMONT AVE. RAMP "A"	
RIC-42-13.13	
1 / 1	
29 36	

NOTES

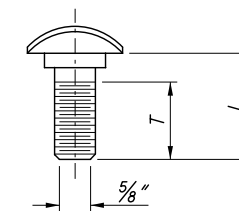
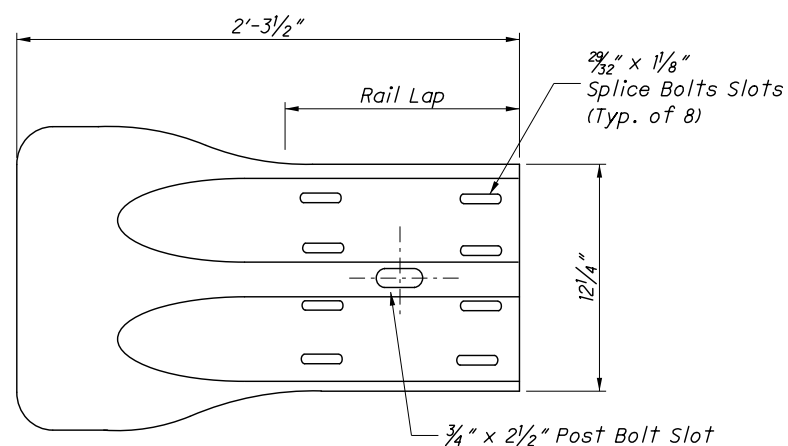
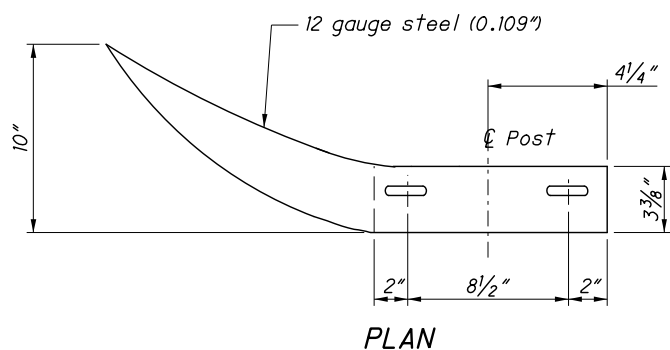
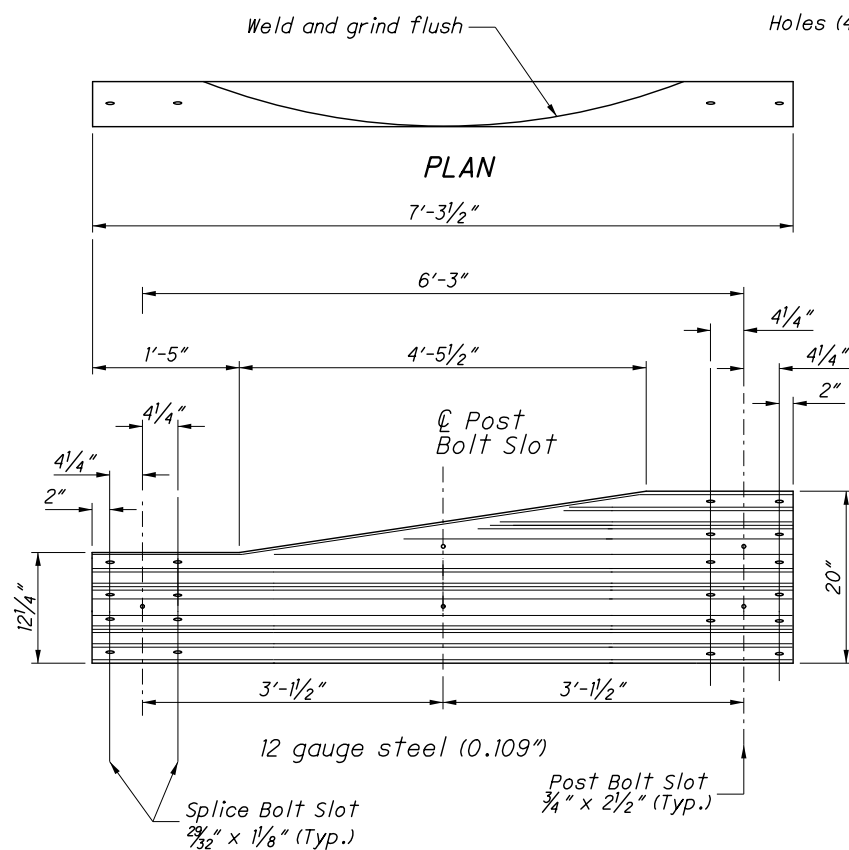
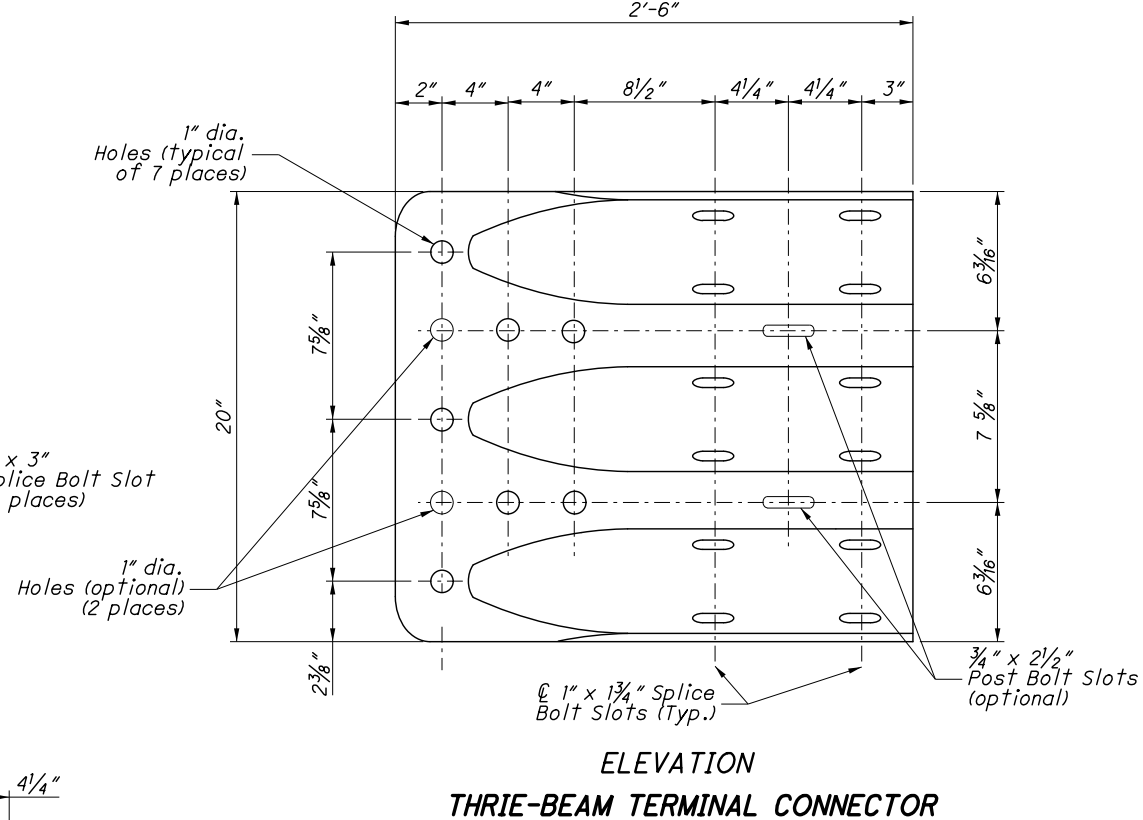
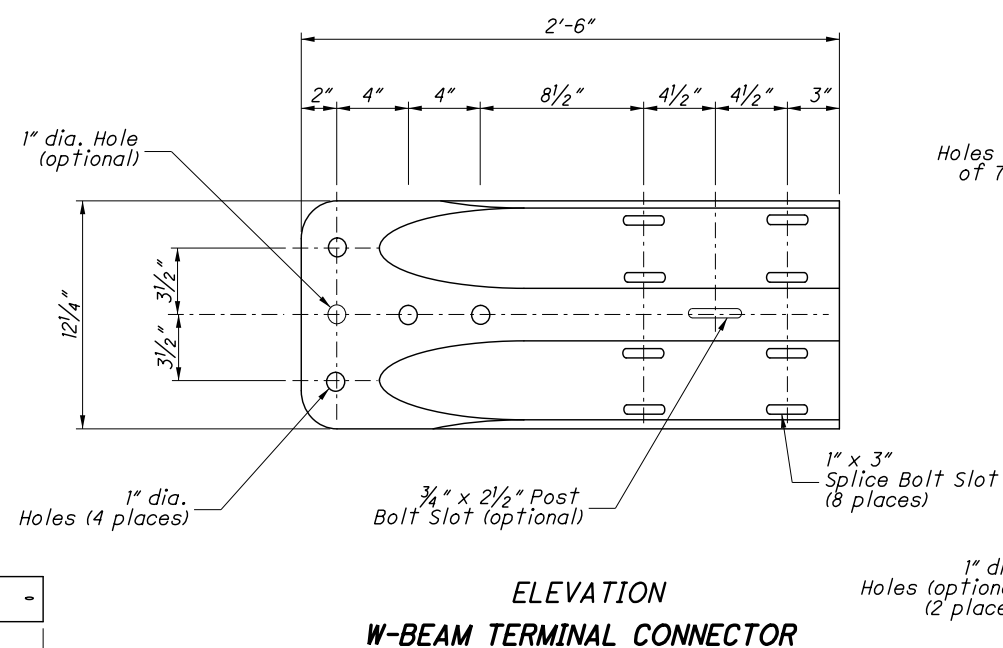
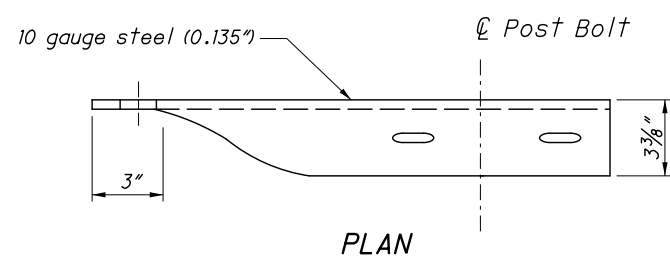
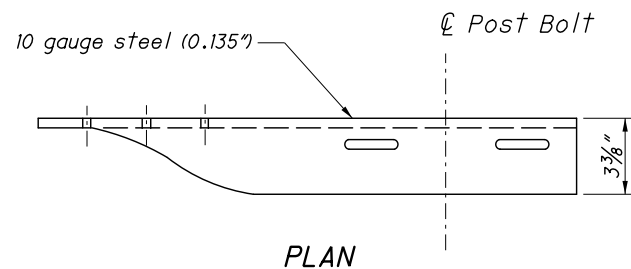
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

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 3/4" x 2 1/2" 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.



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
1 1/4"	1 1/8"	Splice Bolt

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

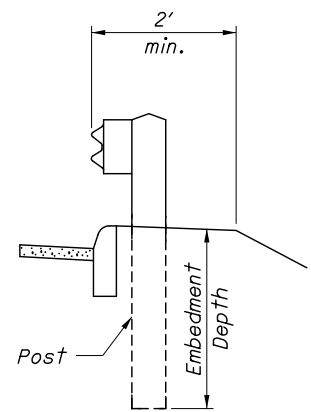
Longer Bolt may be needed for round Wood Post larger than 8" dia.

**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.

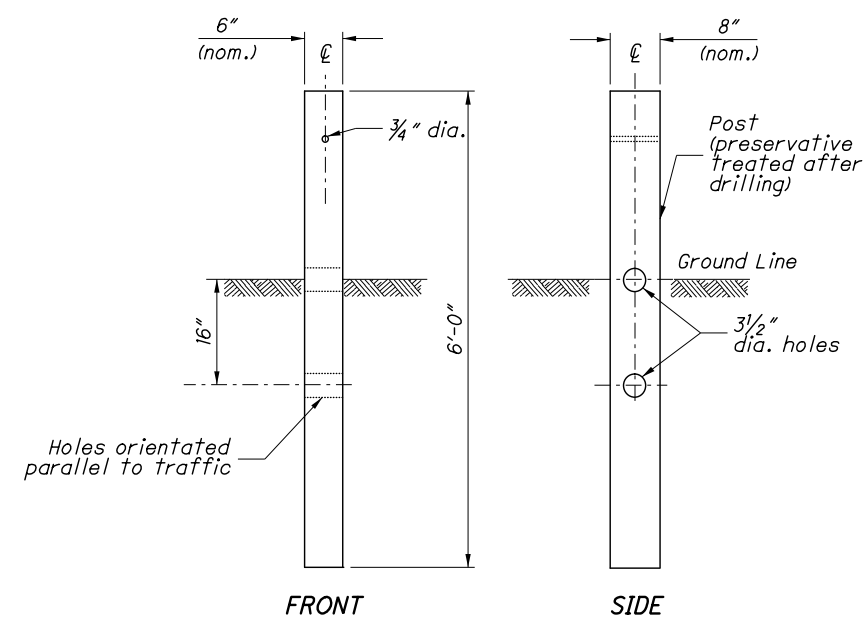
**ELEVATION
W-BEAM FLARED END SECTION**

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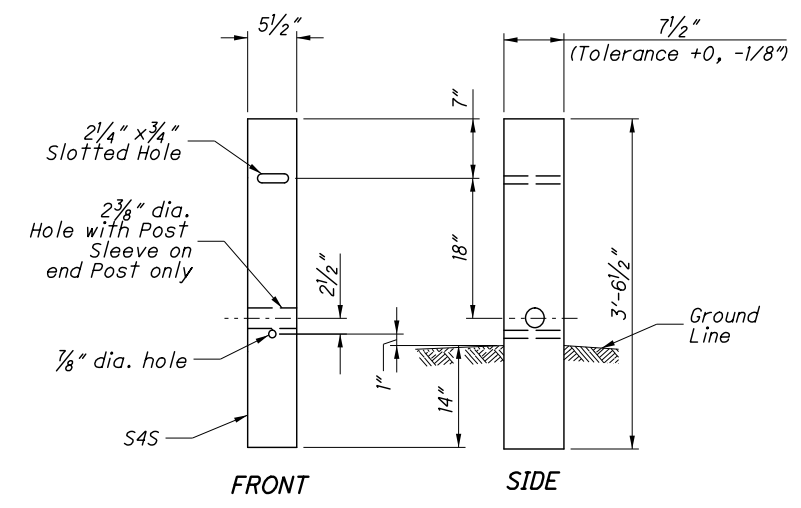


DETAIL A

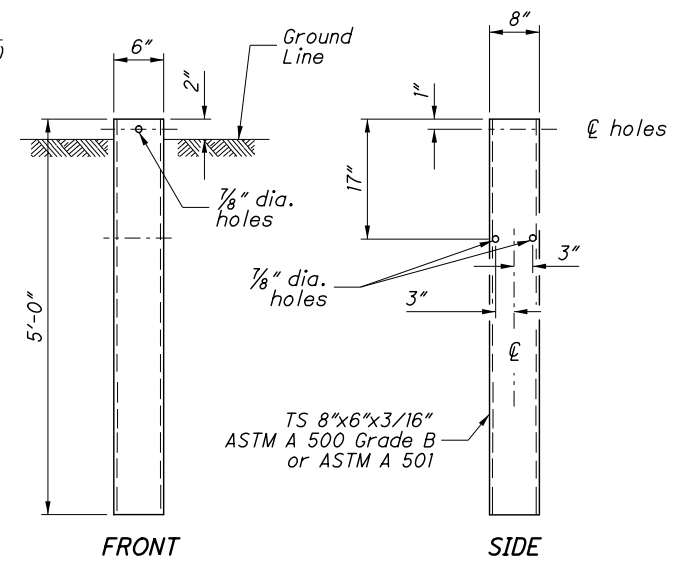
See POST EMBEDMENT DEPTH Note



TYPE 1 BREAKAWAY CRT POST



TYPE 2 BREAKAWAY CRT POST



STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within $\pm 1"$ 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 $\pm 2.5"$ 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.

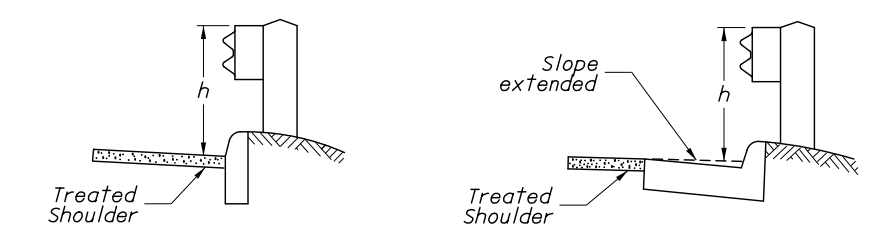
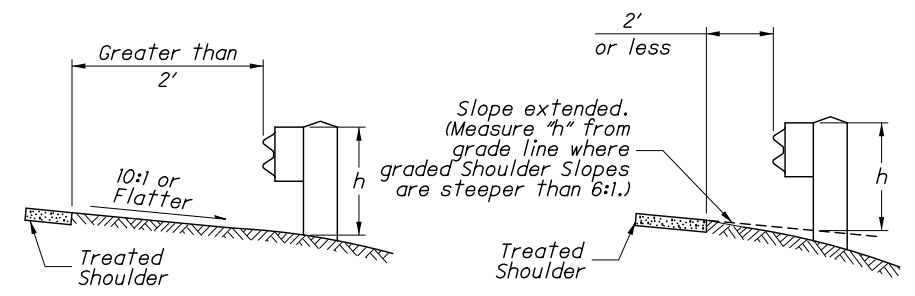
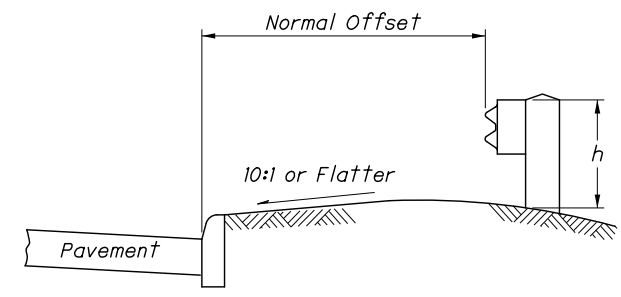
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

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.

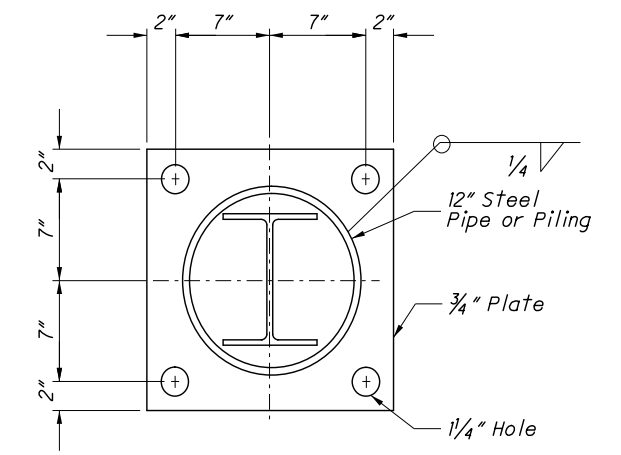
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

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.)



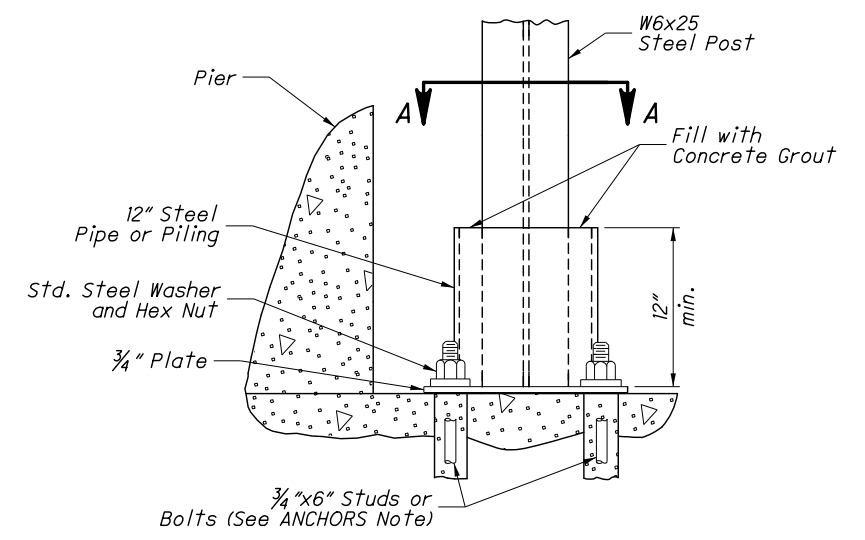
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

SECTION A-A

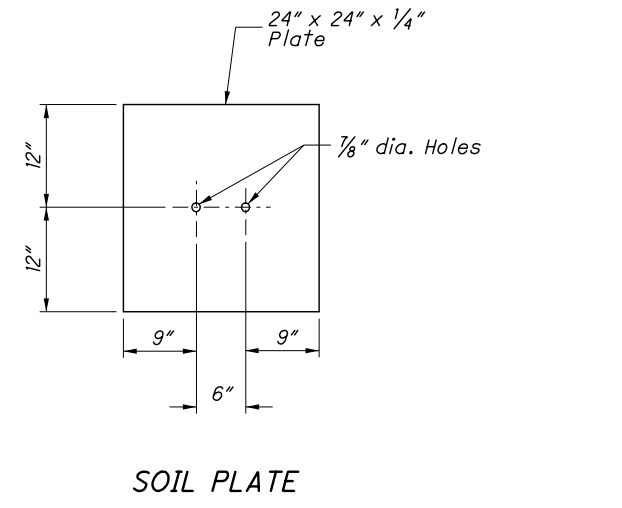
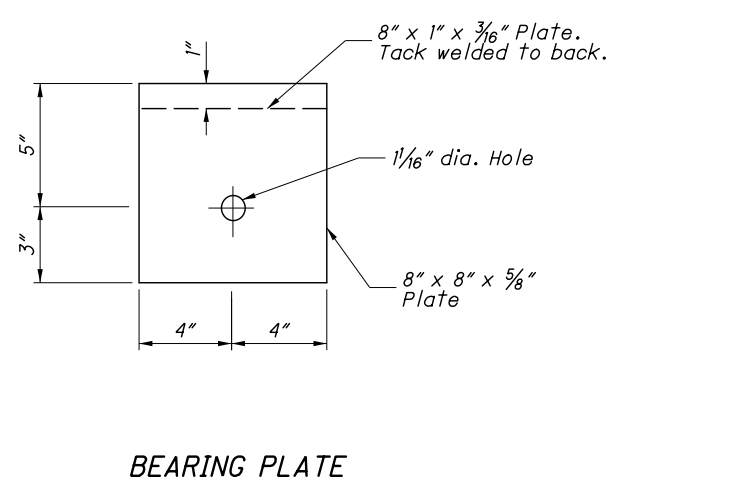
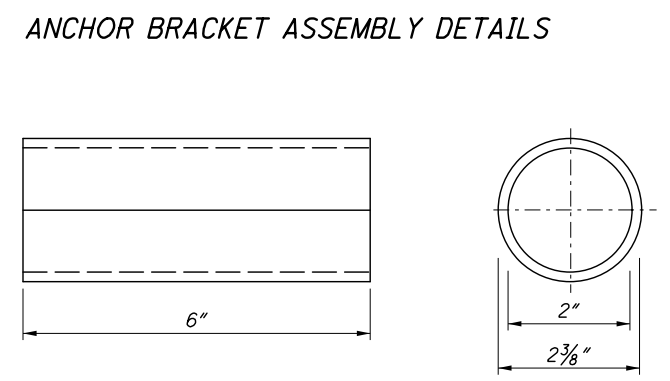
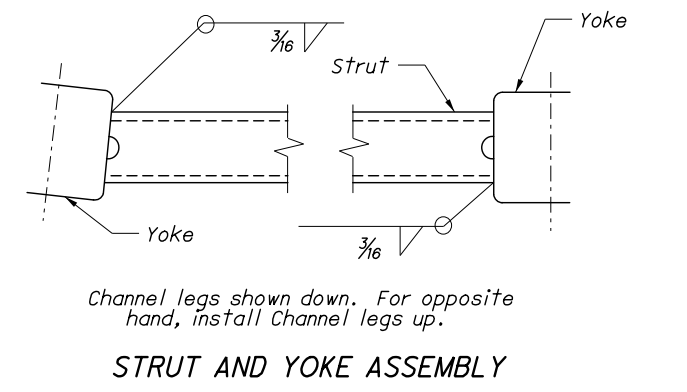
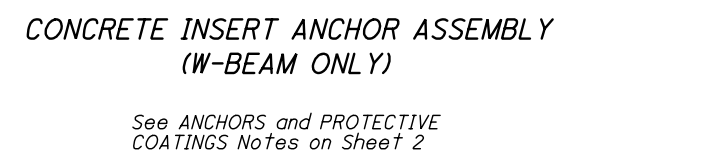
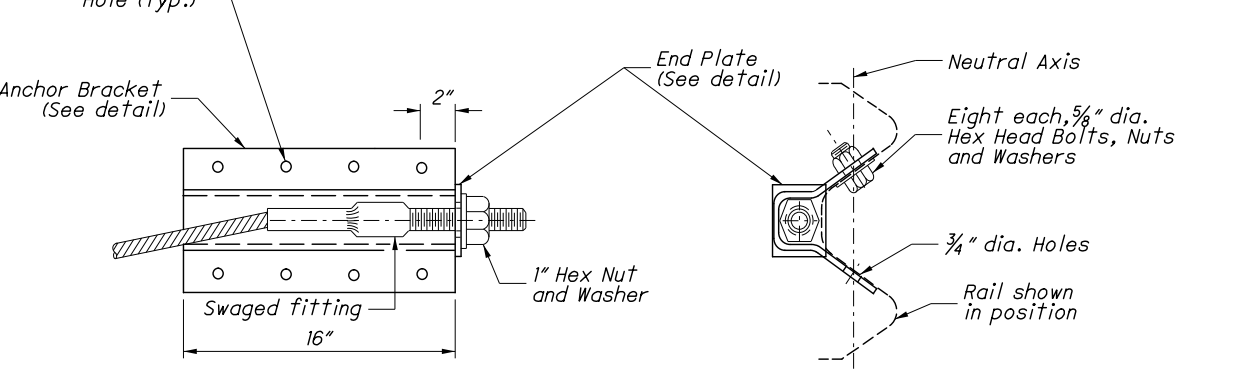
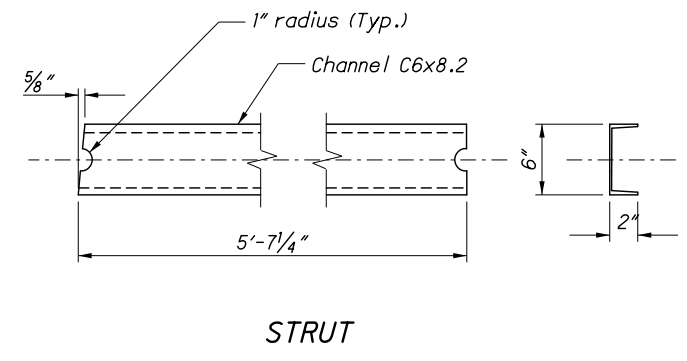
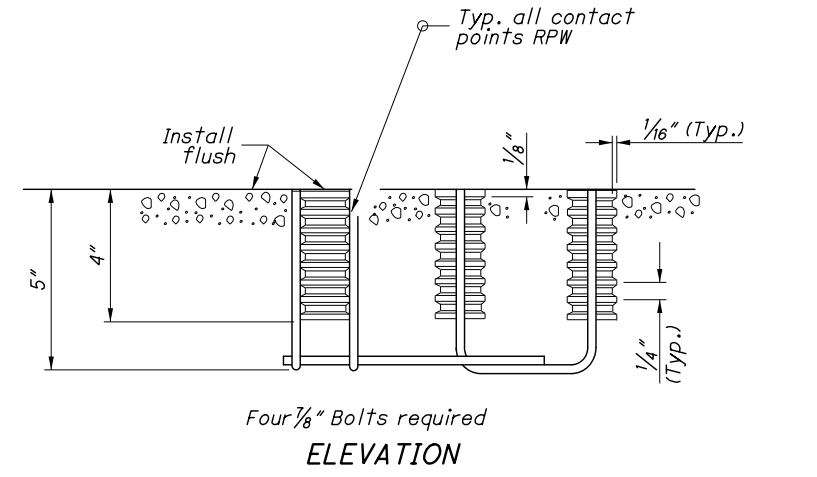
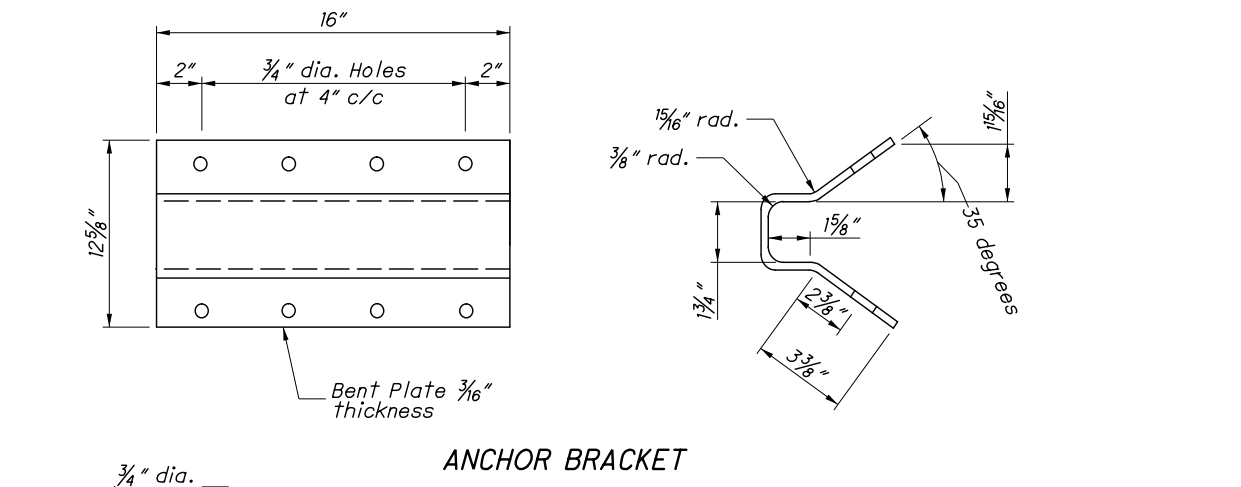
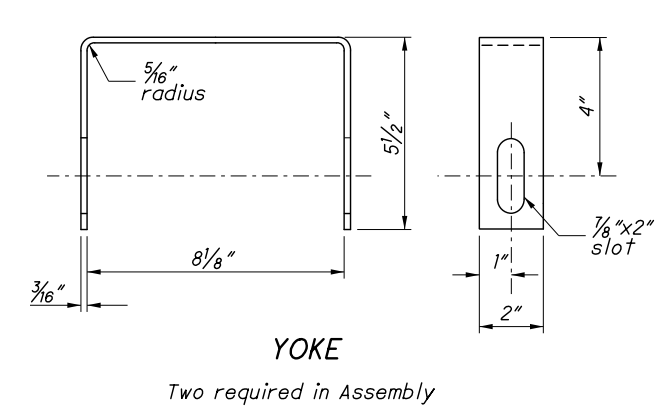
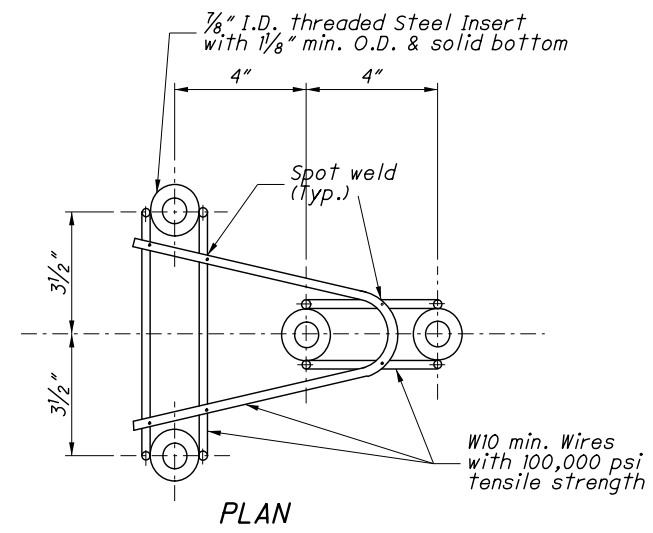
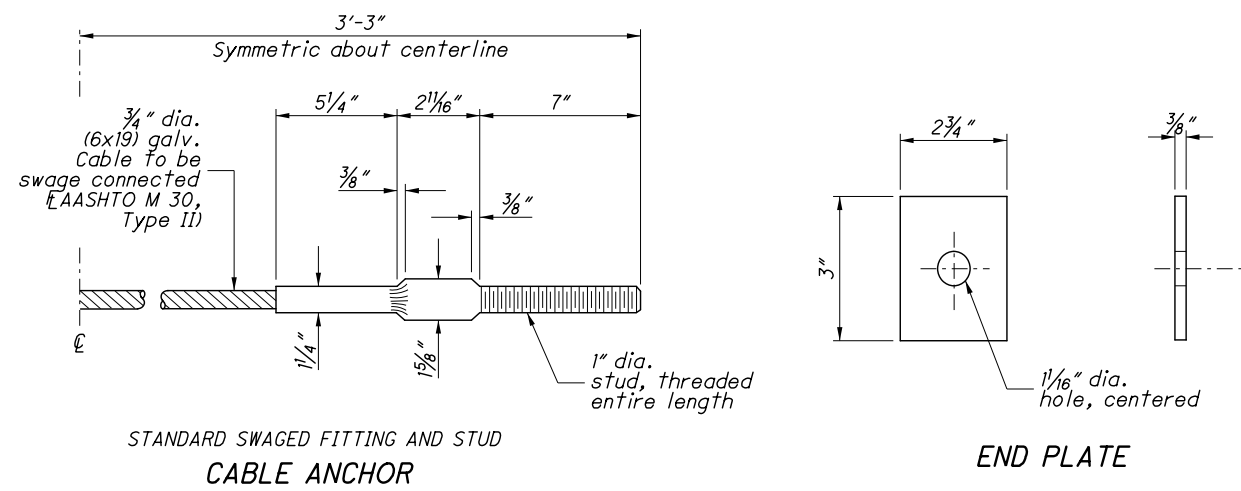


ELEVATION FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

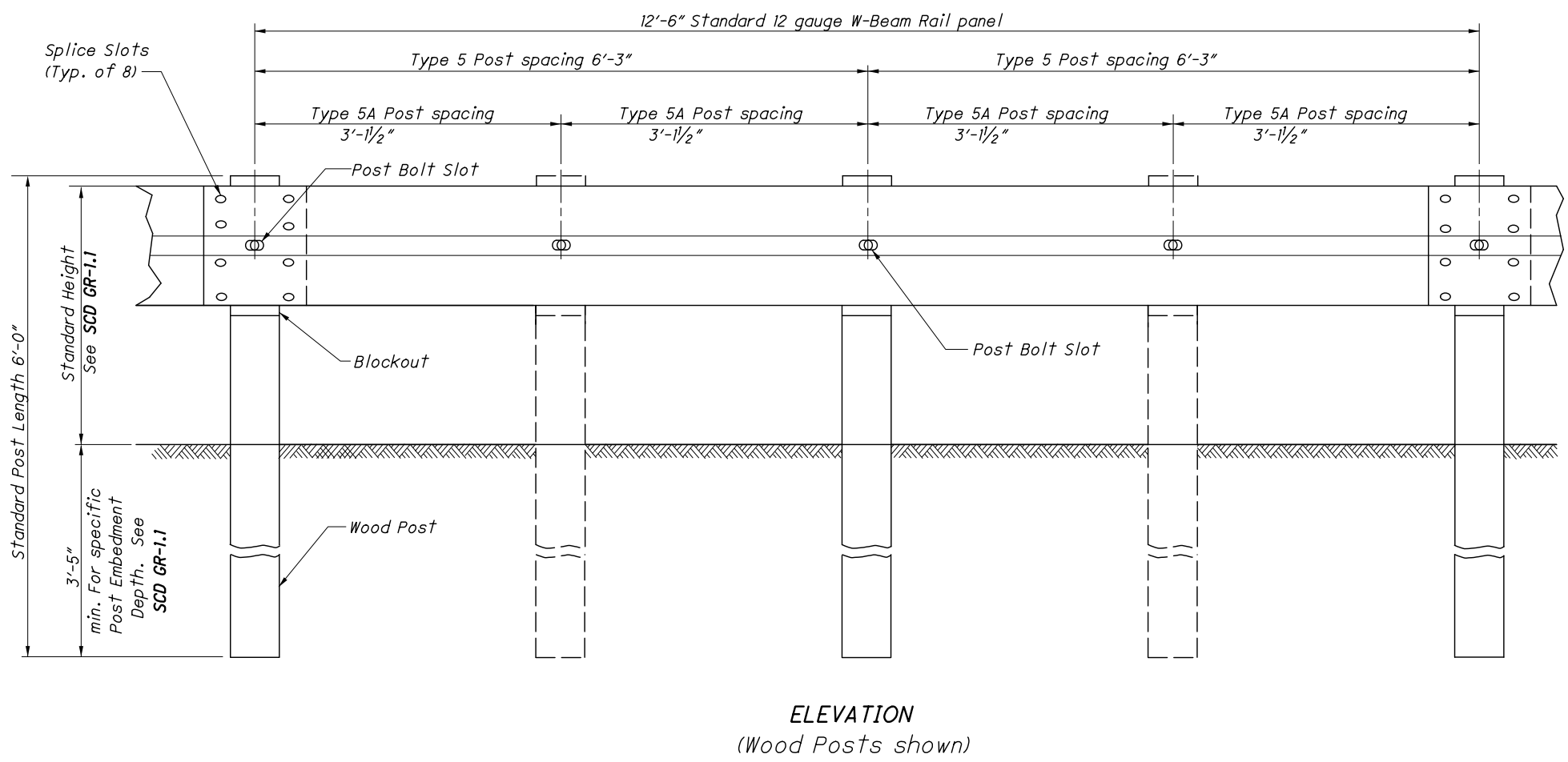
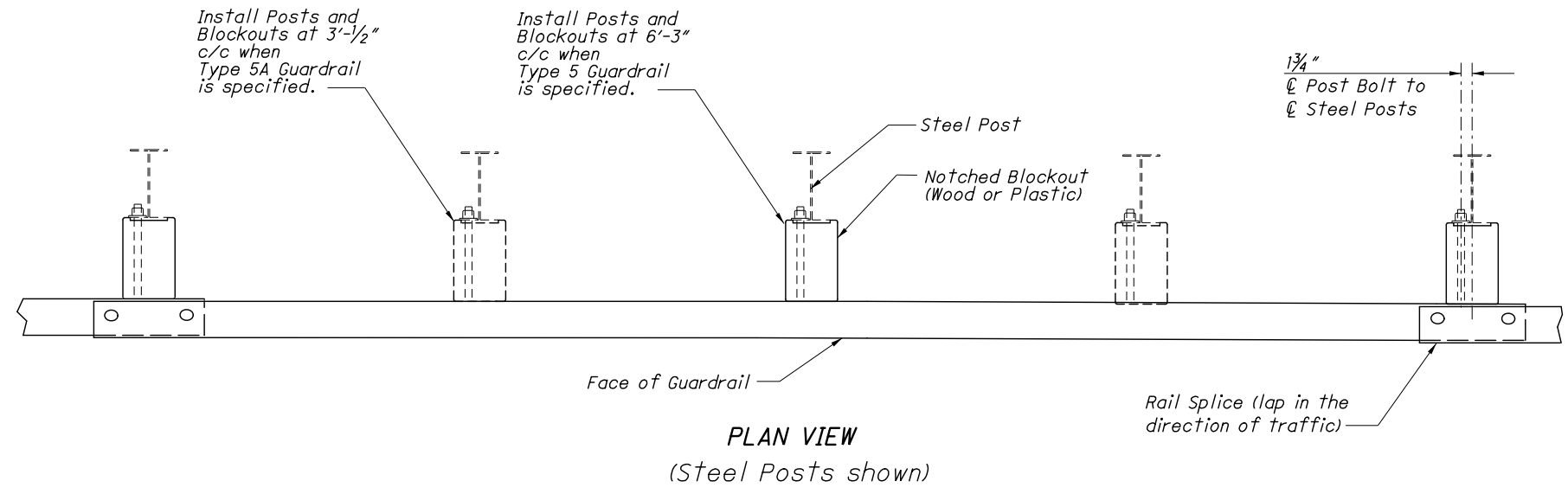
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REVISION DATE	1/18/2013
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NOTES

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**.

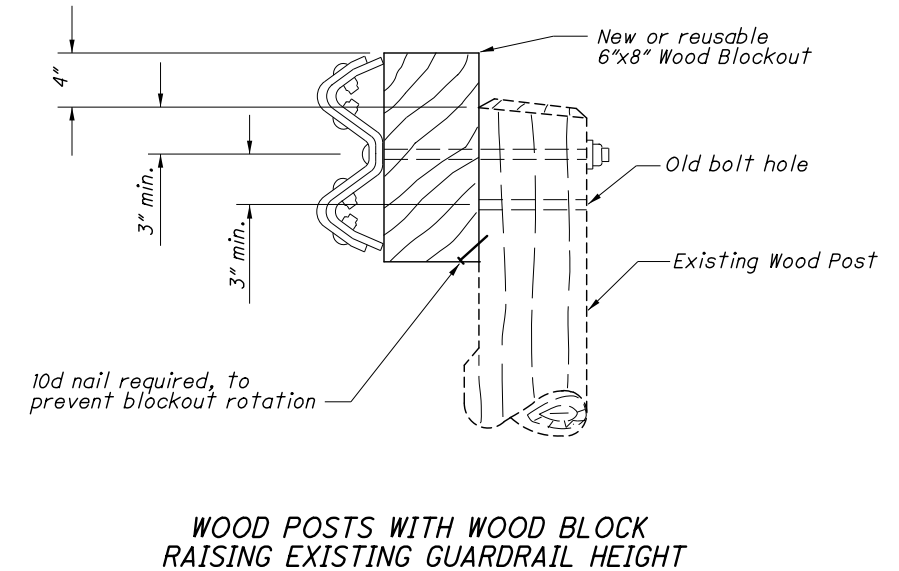
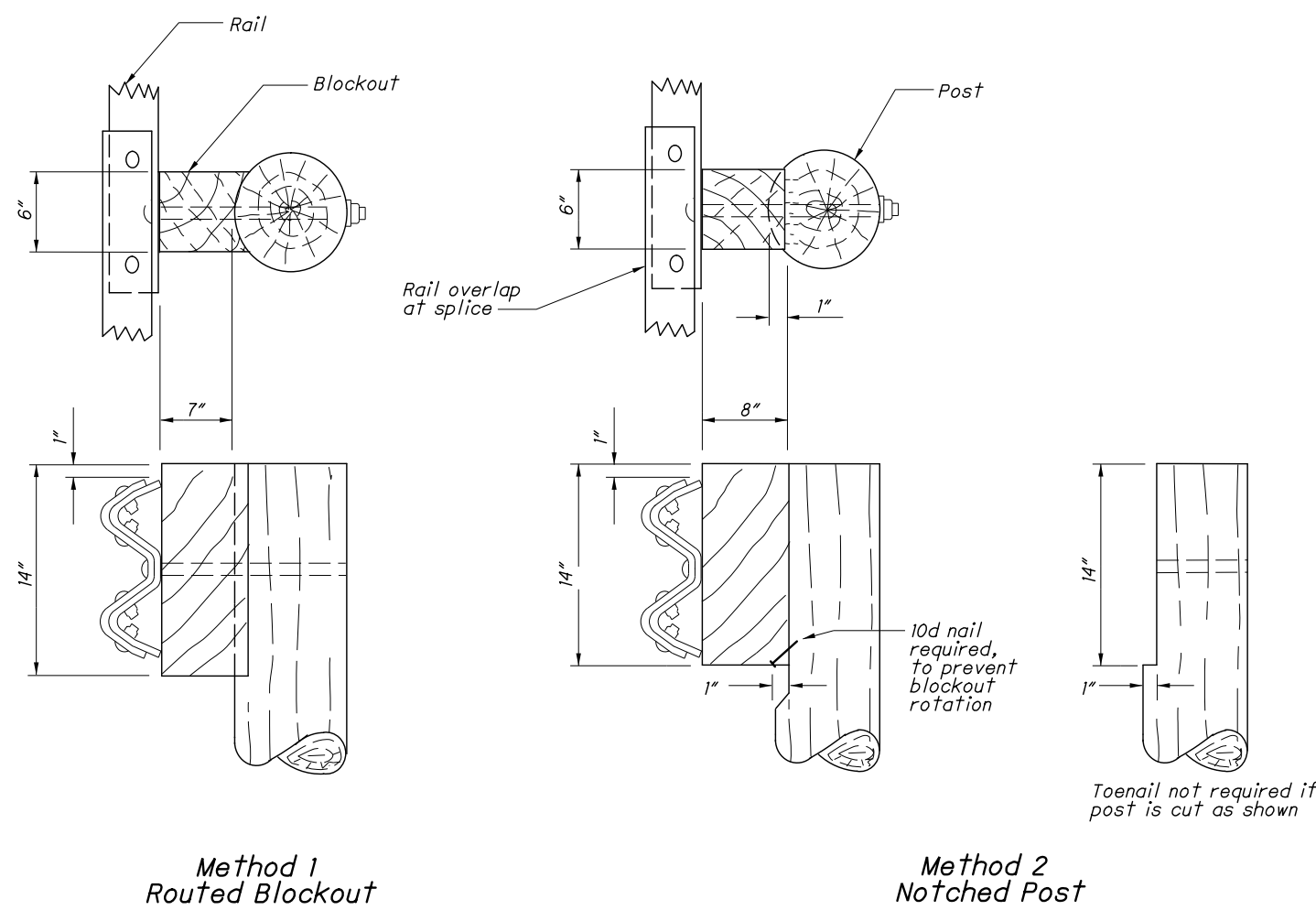
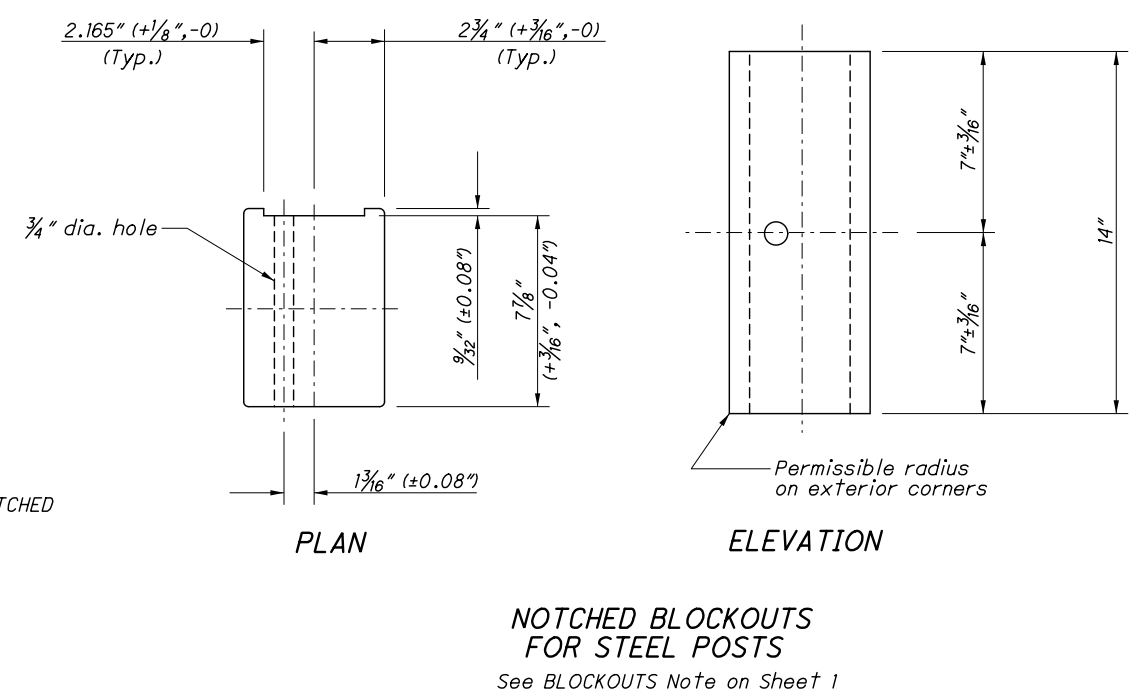
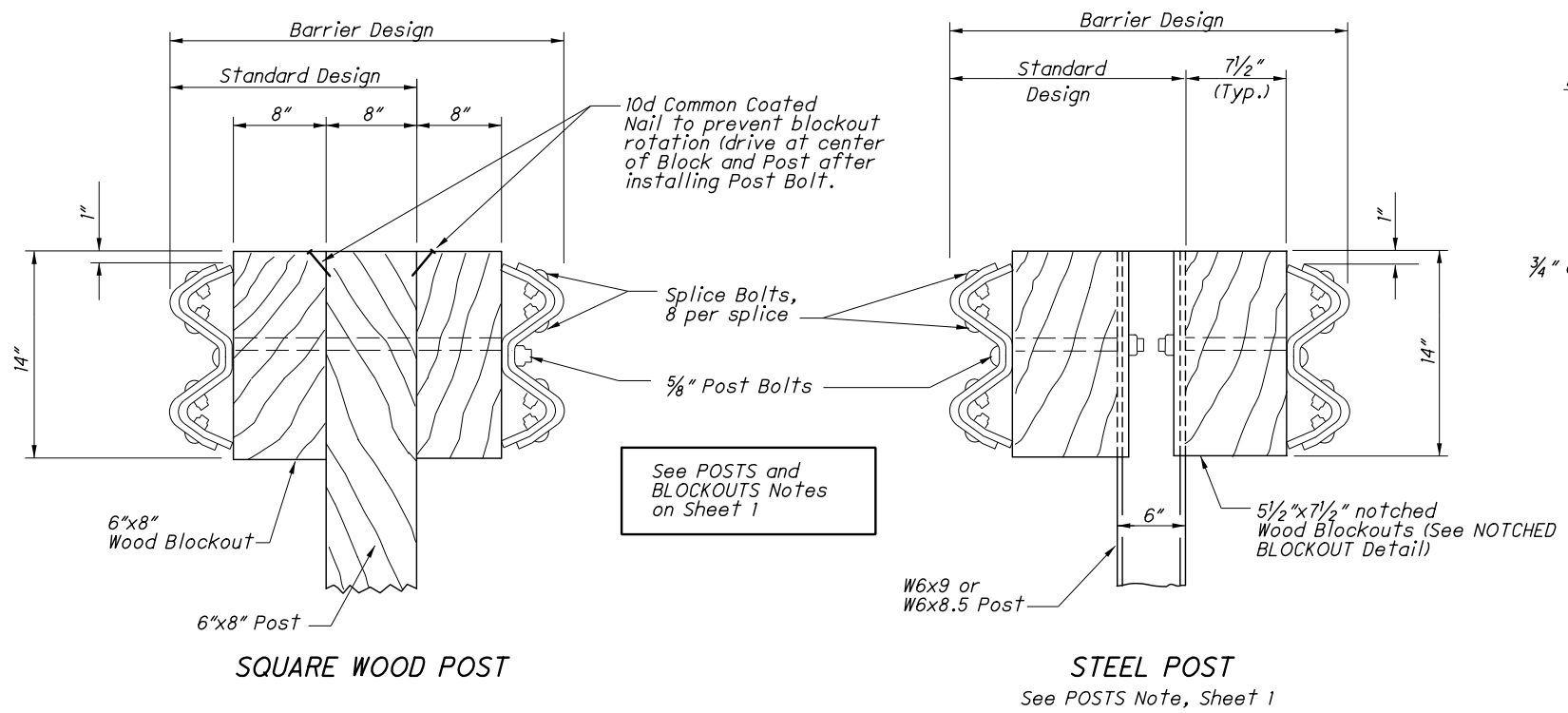
WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

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"

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REVISION DATE	1/18/2013
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REVIEWED	XXX



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)

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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.

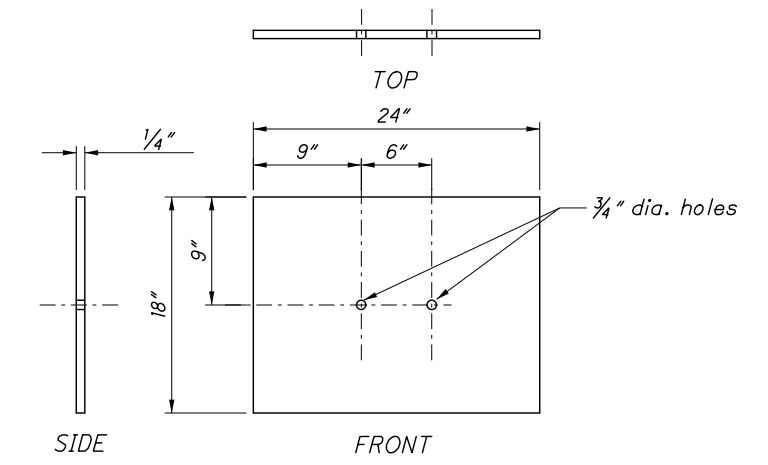
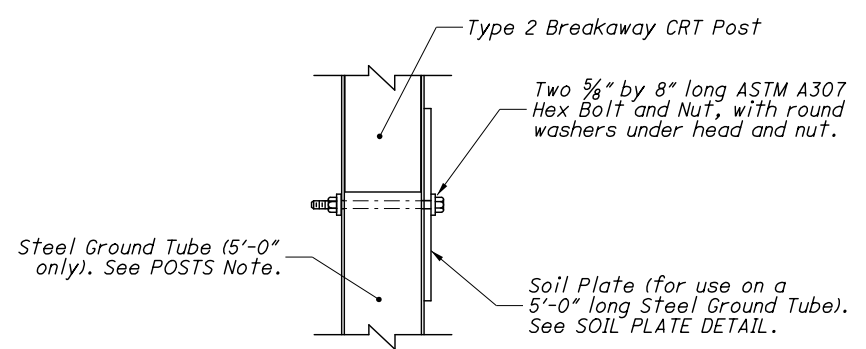
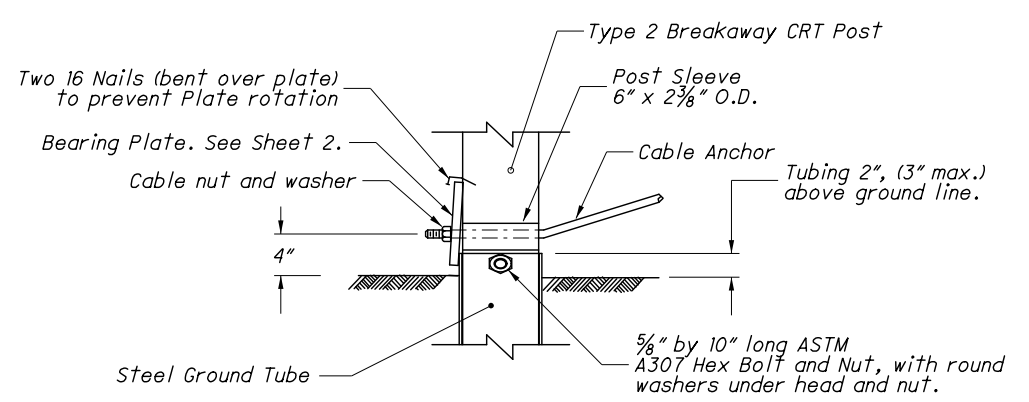
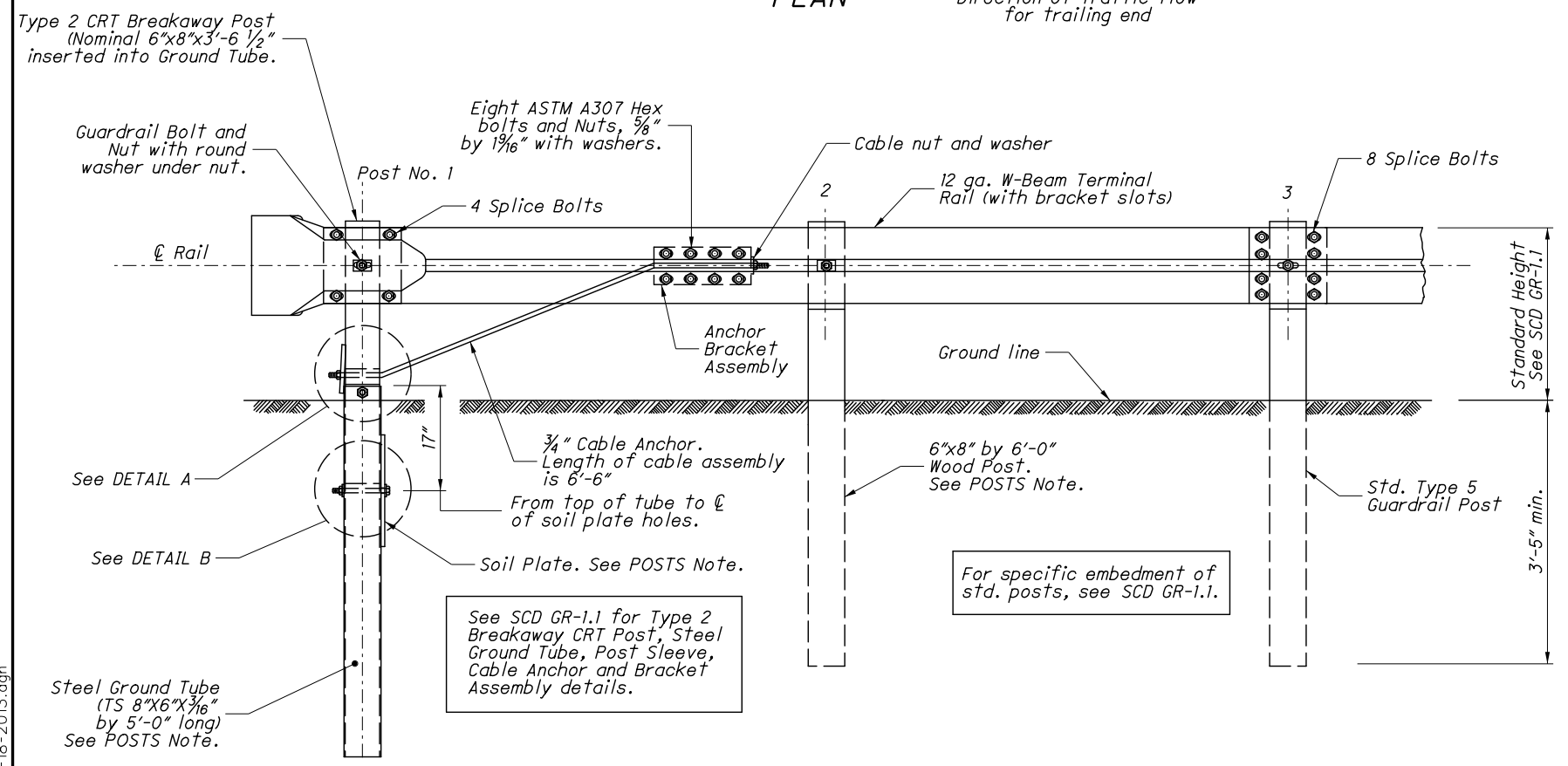
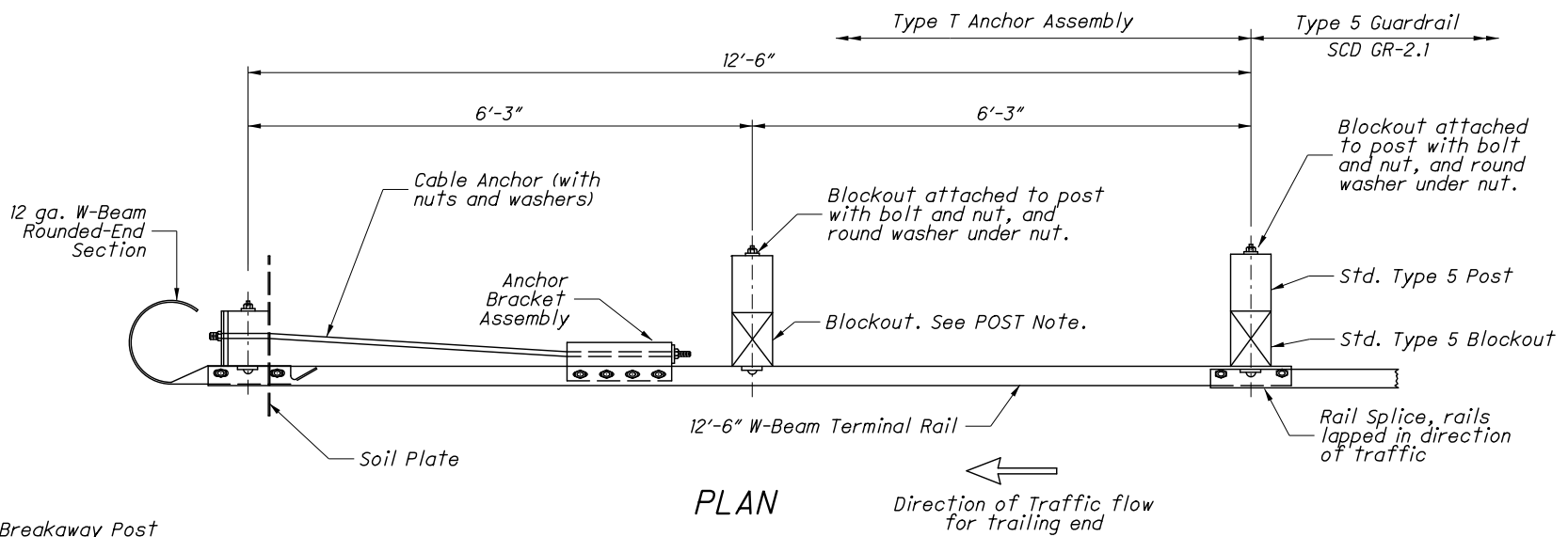
Concrete shall be class C.

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.

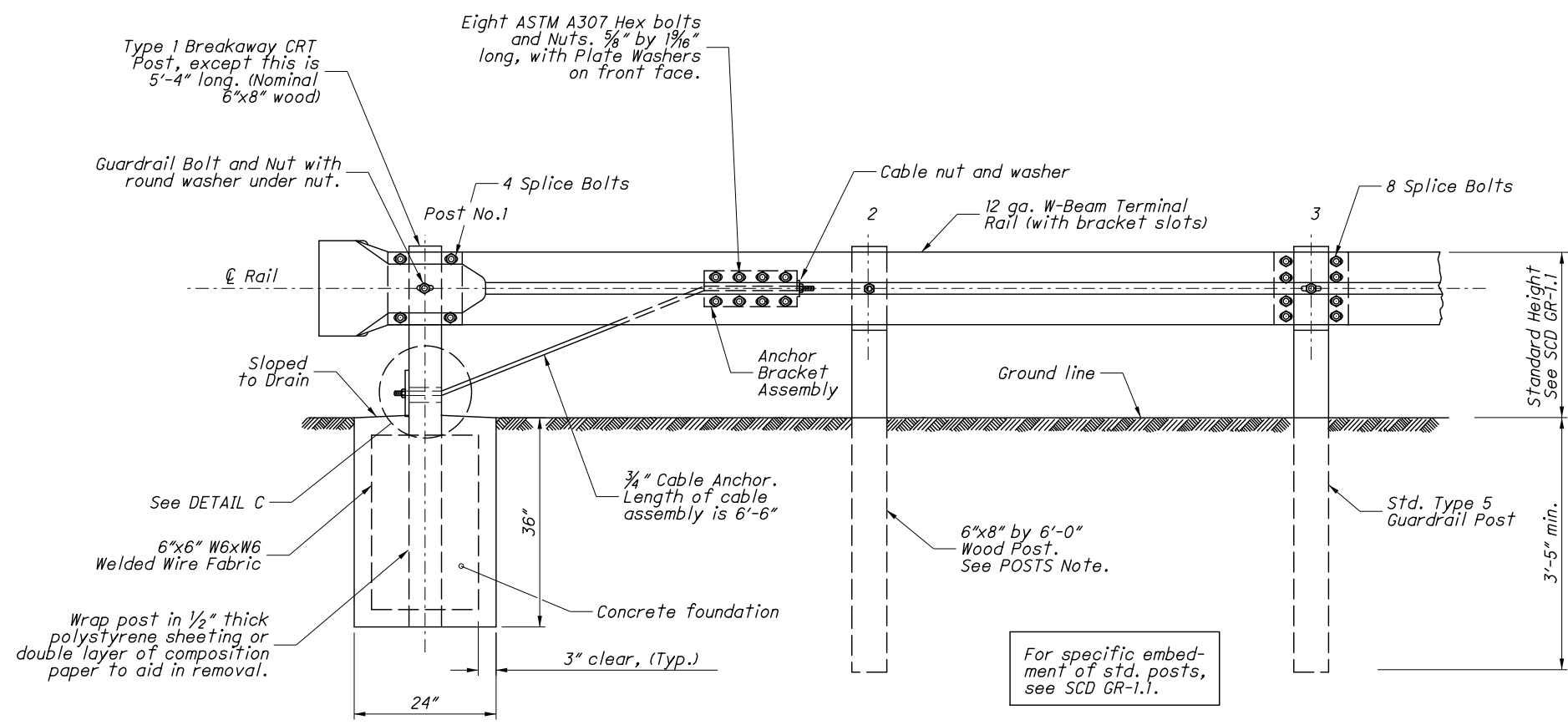
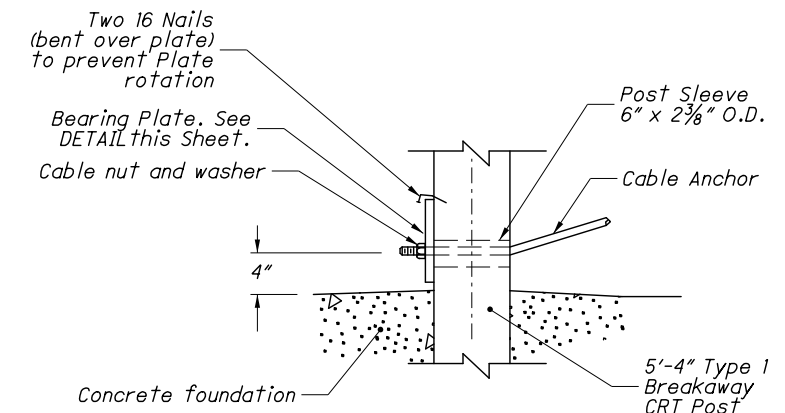
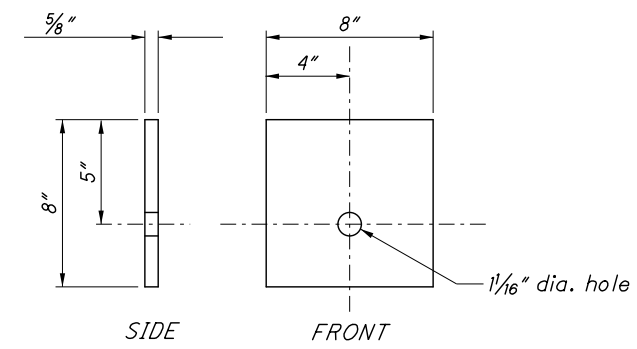
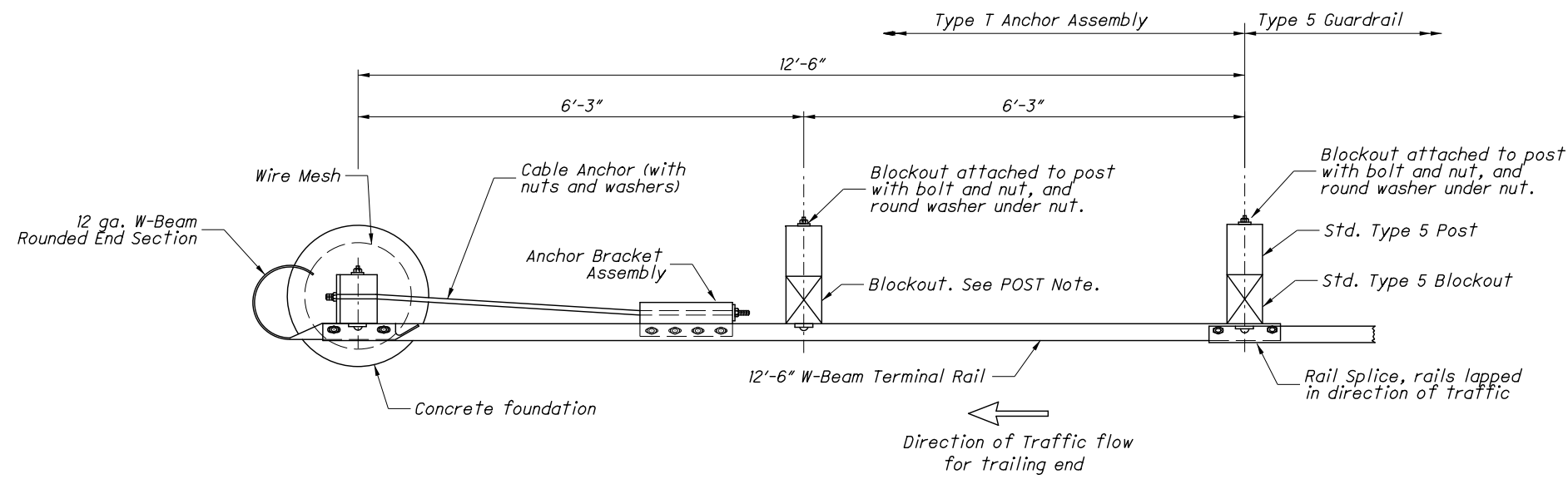
POSTS: Post No. 1 may be an 8'-0" long Steel Ground Tube without a Soil Plate in lieu of the 5'-0" tube with Soil Plate.

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.

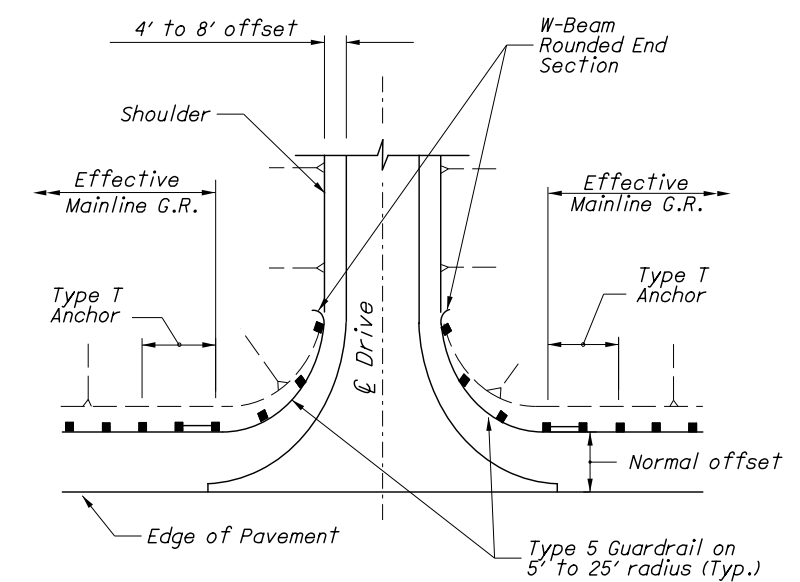


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See SCD GR-1.1 for Type 1 Breakaway CRT Post, Steel Ground Tube, Post Sleeve, Cable Anchor and Bracket Assembly details.

For specific embedment of std. posts, see SCD GR-1.1.



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