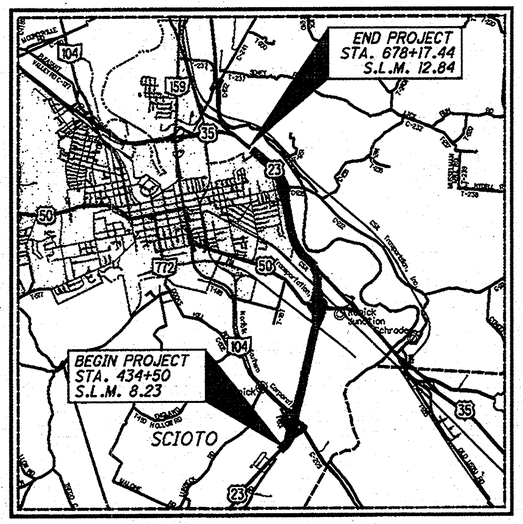
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ROS-23-8.23

SCIOTO TOWNSHIP
ROSS COUNTY



LOCATION MAP

LATITUDE: N39°19'03" LONGITUDE: W82°56'22"

SCALE IN MILES
0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION (S.L.M. 8.23 - S.L.M. 10.00)

CURRENT ADT (2010) 17,840
TRUCKS (24 HOUR B&C) 9%
DESIGN SPEED ..... 60 MPH
LEGAL SPEED ..... 60 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
RURAL PRINCIPAL ARTERIAL
NHS PROJECT ..... YES

DESIGN DESIGNATION (S.L.M. 10.00 - S.L.M. 12.84)

CURRENT ADT (2010) 38,170
TRUCKS (24 HOUR B&C) 15%
DESIGN SPEED ..... 60 MPH
LEGAL SPEED ..... 60 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
URBAN FREEWAY AND EXPRESSWAY
NHS PROJECT ..... YES

DESIGN EXCEPTIONS

3R PROJECT

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
STATE OF OHIO
DEPT. OF TRANSPORTATION
DISTRICT 9 PLANNING
AND ENGINEERING

ENGINEERS SEAL:
FOR ENTIRE PLAN

STATE OF OHIO
GARY E. COCHENOUR
E-61267
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Gary E. Cochenour
DATE: 11/23/11

INDEX OF SHEETS:

PROJECT DESCRIPTION

IMPROVEMENT OF 4.61 MILES OF U.S.R. 23 IN ROSS COUNTY BY REMOVING THE ASHPALT SURFACE COURSE AND REPLACING IT WITH AN ASPHALT INTERMEDIATE COURSE AND AN ASPHALT SURFACE COURSE INCLUDING NECESSARY JOINT WORK. THE STRUCTURES ROS-23-0867 L&R, ROS-23-0926 L&R, ROS-23-1000 L&R, ROS-23-1026 L&R, ROS-23-1052 L&R, AND ROS-23-1074 WILL BE IMPROVED BY UPGRADING THE EXISTING PARAPETS AND TRANSITIONS AND SEALING THE DECK WITH SRS SEALER. THE STRUCTURES ROS-23-1202 L&R AND ROS-23-1257 L&R WILL BE IMPROVED BY JOINT REPAIR. THE GUARDRAIL WILL ALSO BE REMOVED AND REPLACED BY THIS PROJECT.

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

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2010 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 Vaughn E Wilson
DATE 11/23/11 DISTRICT DEPUTY DIRECTOR

APPROVED
DATE 12-5-11 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-2.1	7-18-08	GR-1.1	7-16-04	TC-41.20	1-19-01	MT-35.10	4-20-01	800	10-21-11	NONE
BP-2.5	7-18-08	GR-2.1	1-16-04	TC-42.20	1-21-11	MT-95.30	7-17-09	823	7-15-11	
BP-3.1	10-19-07	GR-3.1	10-16-09	TC-61.10	10-21-11	MT-95.50	4-17-09	832	5-5-09	
BP-5.1	7-28-00	GR-3.2	10-16-09	TC-61.30	7-15-11	MT-98.10	7-17-09	843	4-18-03	
BP-9.1	4-15-05	GR-4.2	1-19-07	TC-65.10	1-21-05	MT-98.11	7-17-09			
		GR-5.1	4-16-10	TC-65.11	1-21-05	MT-98.20	7-17-09			
		GR-5.2	4-16-10	TC-71.10	1-21-11	MT-98.22	7-17-09			
DM-4.3	4-17-09	GR-5.3	4-16-10	TC-72.20	10-16-09	MT-98.28	7-17-09			
DM-4.4	4-17-09	GR-6.1	4-16-10	TC-73.10	10-21-11	MT-98.29	7-17-09			
		GR-6.2	4-16-10	TC-82.10	1-21-11	MT-99.20	1-16-09			
RM-4.3	10-21-11					MT-99.50	1-16-09			
RM-4.5	10-16-09					MT-101.60	4-17-09			
RM-4.6	4-16-10			EXJ-4-87	7-19-02	MT-101.70	4-15-11			
						MT-101.90	10-21-11			
						MT-105.10	1-16-09			

FEDERAL PROJECT NO. E036 (478)
PID NO. 76477
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NORFOLK SOUTHERN CSXT CORPORATION
ROS-23-8.23
1/104

ROS - US-23-8.23
120151 PID - 76477
Dist 9 3/8/2012

Contract Proposal available @ www.contracts.dot.state.oh.us/home

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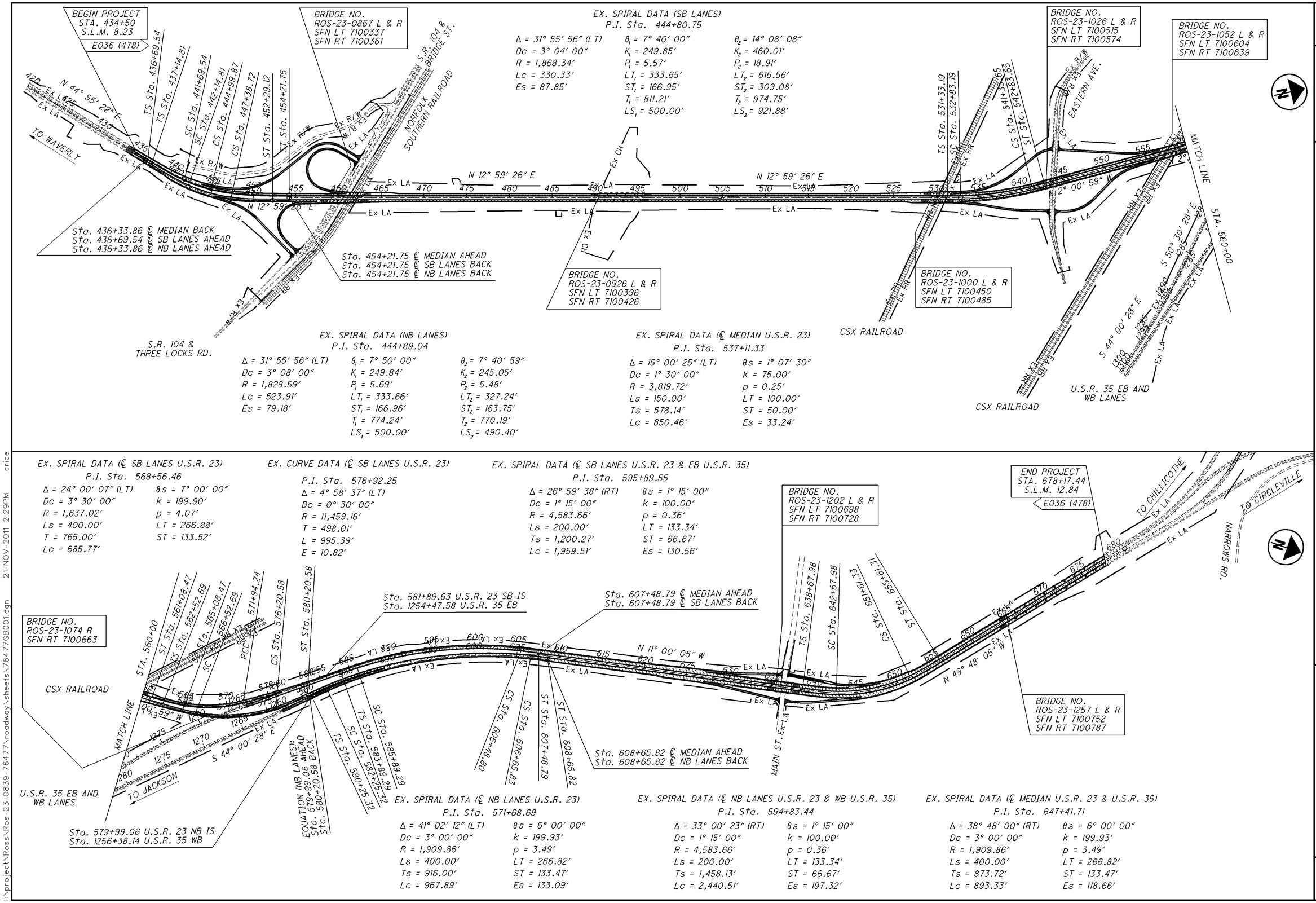

SCHEMATIC PLAN

ROS-23-8.23

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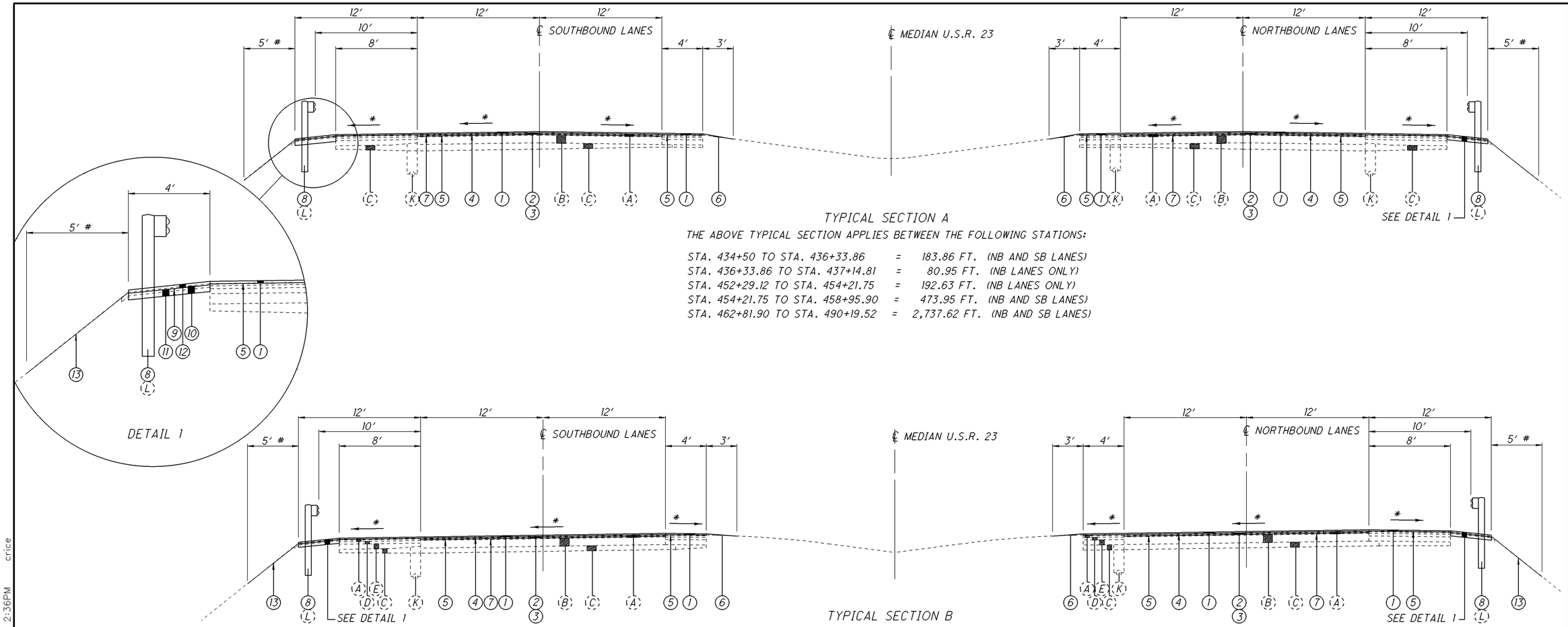


TYPICAL SECTION A

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 434+50	TO STA. 436+33.86	=	183.86 FT. (NB AND SB LANES)
STA. 436+33.86	TO STA. 437+14.81	=	80.95 FT. (NB LANES ONLY)
STA. 452+29.12	TO STA. 454+21.75	=	192.63 FT. (NB LANES ONLY)
STA. 454+21.75	TO STA. 458+95.90	=	473.95 FT. (NB AND SB LANES)
STA. 462+81.90	TO STA. 490+19.52	=	2,737.62 FT. (NB AND SB LANES)

TYPICAL SECTION B

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 436+69.54	TO STA. 454+21.75	=	1,752.21 FT. (SB LANES ONLY)
STA. 437+14.81	TO STA. 452+29.12	=	1,514.31 FT. (NB LANES ONLY)

PROPOSED PAVEMENT LEGEND

(1)	442	1.50″	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1.75″	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	254	1.75″	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (SEE GENERAL NOTE)
(4)	407		TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL. PER SQ.YD.
(5)	407		TACK COAT @ 0.075 GAL. PER SQ.YD.
(6)	617		SHOULDER RECONDITIONING MISC.: 1.50″ COMPACTED ASPHALT CONCRETE GRINDINGS (SEE GENERAL NOTE)
(7)	409		SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS
(8)	606		GUARDRAIL, TYPE 5
(9)	408		PRIME COAT @ 0.40 GAL. PER SQ. YD.
(10)	209	4.50″ DEEP-	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN
(11)	617		SHOULDER RECONDITIONING MISC.: 4″ COMPACTED ASPHALT CONCRETE GRINDINGS (SEE GENERAL NOTE)
(12)	448	2″	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN
(13)	659		SEEDING AND MULCHING
(14)	609		ASPHALT CONCRETE CURB, TYPE 1
(15)	448	1.50″	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN
(16)	209	4″ DEEP-	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

NOTES:

* MATCH EXISTING PAVEMENT SLOPE

\# THE 5′ WIDTH BEHIND THE GUARDRAIL IS USED TO ESTABLISH A WORK LIMIT TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS PROJECT.

EXISTING PAVEMENT LEGEND

(A)	3″	ASPHALT: (1.25″ SURFACE; 1.75″ INTERMEDIATE)
(B)	9″	REINFORCED CONCRETE PAVEMENT
(C)		SUBBASE
(D)	3″	ASPHALT BASE
(E)	6″	AGGREGATE BASE
(F)	9″	NON-REINFORCED CONCRETE PAVEMENT
(G)	9″	ASPHALT BASE
(H)	9″	REINFORCED CONCRETE PAVEMENT (RUBBLIZED AND ROLLED)
(I)	3″	ASPHALT: (1.50″ SURFACE; 1.50″ INTERMEDIATE)
(J)	3.25″	ASPHALT: (1.50″ SURFACE; 1.75″ INTERMEDIATE)
(K)	4″	PIPE UNDERDRAIN
(L)		GUARDRAIL
(M)		ASPHALT SURFACE (VARIABLE THICKNESS: 3.25″ MAX.; 1.50″ MIN.)
(N)	6″±	ASPHALT SURFACE (ESTIMATED THICKNESS)
(O)		GRANULAR FREE-DRAINING BASE
(P)	2″±	ASPHALT UNDER GUARDRAIL (ESTIMATED THICKNESS)

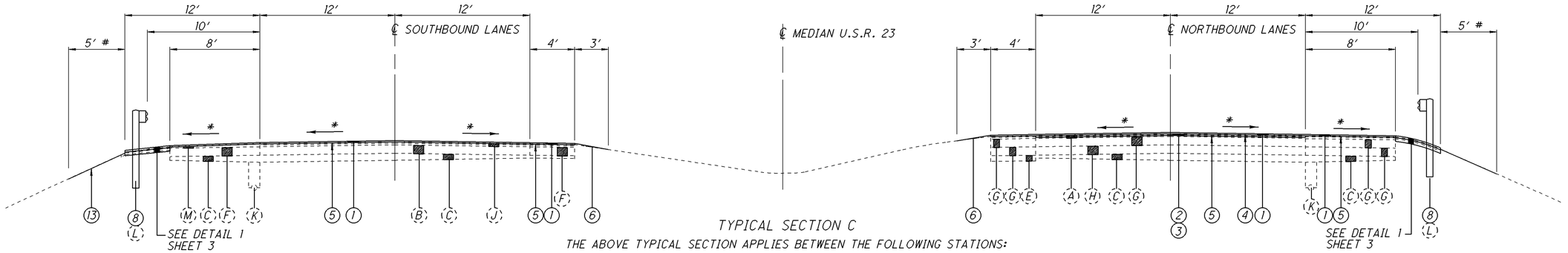
EXISTING BRIDGES INCLUDING APPROACH SLABS

ROS-23-0867 L&R BRIDGES
STA. 458+95.90 TO STA. 462+81.90 = 386.00 FT.
ROS-23-0926 L&R BRIDGES
STA. 490+19.52 TO STA. 495+71.48 = 551.96 FT.
ROS-23-1000 L&R BRIDGES
STA. 529+18.80 TO STA. 531+43 = 224.20 FT.
ROS-23-1026 L&R BRIDGES
STA. 542+71.68 TO STA. 545+09.66 = 237.98 FT.
ROS-23-1052 L&R BRIDGES
STA. 556+47.69 TO STA. 559+46.73 = 299.04 FT.
ROS-23-1074 BRIDGE (NB LANES ONLY)
STA. 567+82.91 TO STA. 571+10.86 = 327.95 FT.
ROS-23-1202 L&R BRIDGES
STA. 635+34.69 TO STA. 637+58.69 = 224.00 FT.
ROS-23-1257 L&R BRIDGES
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46 FT.

TOTAL = 3,611.59 FT.

TYPICAL SECTIONS

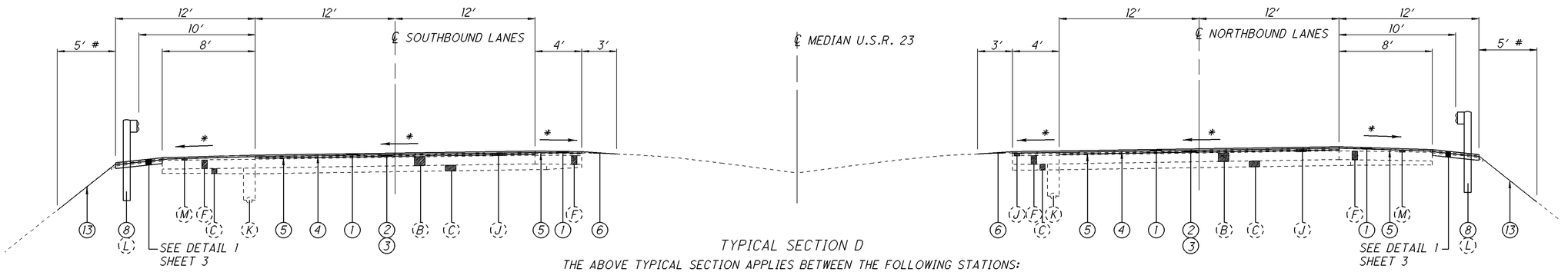
ROS-23-8.23



TYPICAL SECTION C

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 495+71.48 TO STA. 529+18.80 = 3,347.32 FT. (NB AND SB LANES)



TYPICAL SECTION D

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 531+43 TO STA. 542+71.68 = 1,128.68 FT. (NB AND SB LANES)

NOTES:

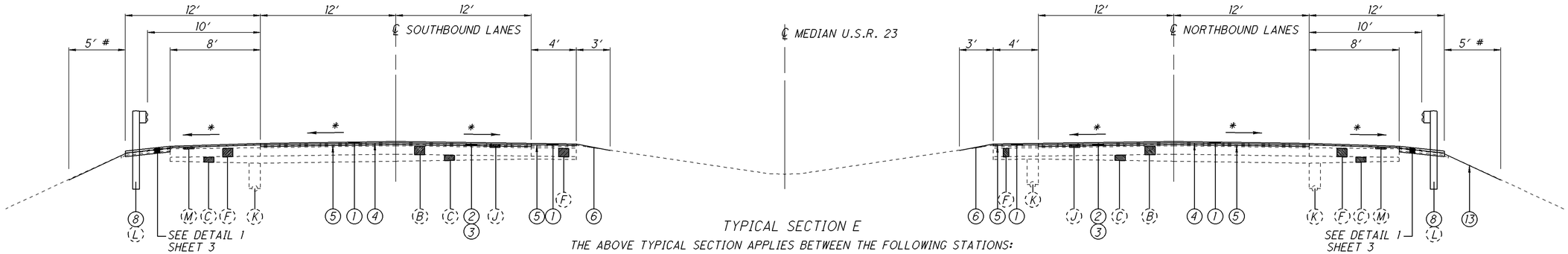
FOR LEGEND SEE SHEET 3

* MATCH EXISTING PAVEMENT SLOPE

THE 5′ WIDTH BEHIND THE GUARDRAIL IS USED TO ESTABLISH A WORK LIMIT TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS PROJECT.

TYPICAL SECTIONS

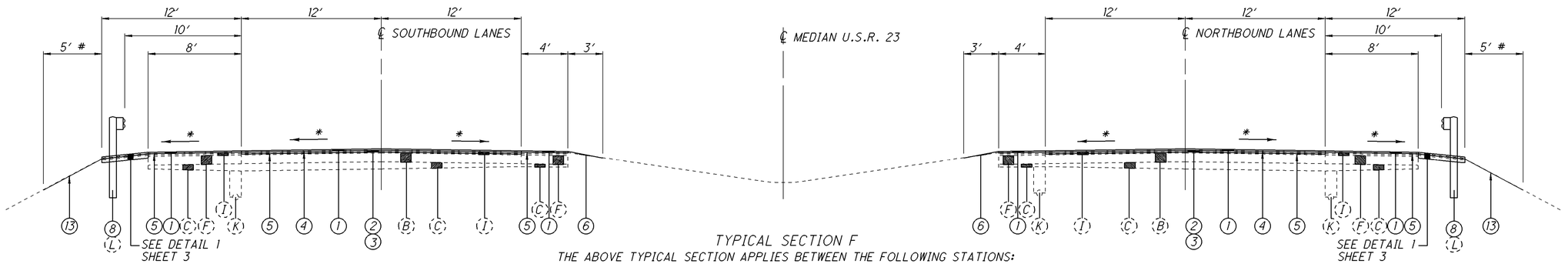
ROS-23-8.23



TYPICAL SECTION E

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 545+09.66 TO STA. 556+47.69 = 1,138.03 FT. (NB AND SB LANES)

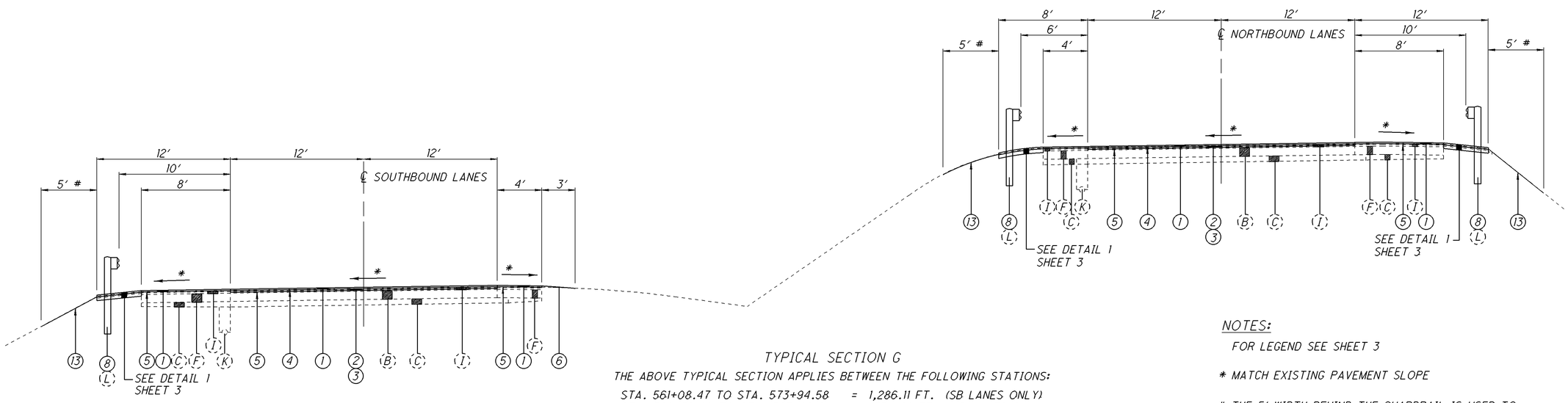


TYPICAL SECTION F

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 559+46.73 TO STA. 561+08.47 = 161.74 FT. (NB AND SB LANES)

STA. 561+08.47 TO STA. 562+52.69 = 144.22 FT. (NB LANES ONLY)



TYPICAL SECTION G

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 561+08.47 TO STA. 573+94.58 = 1,286.11 FT. (SB LANES ONLY)

STA. 562+52.69 TO STA. 567+82.91 = 530.22 FT. (NB LANES ONLY)

STA. 571+10.86 TO STA. 577+49.46 = 638.60 FT. (NB LANES ONLY)

NOTES:

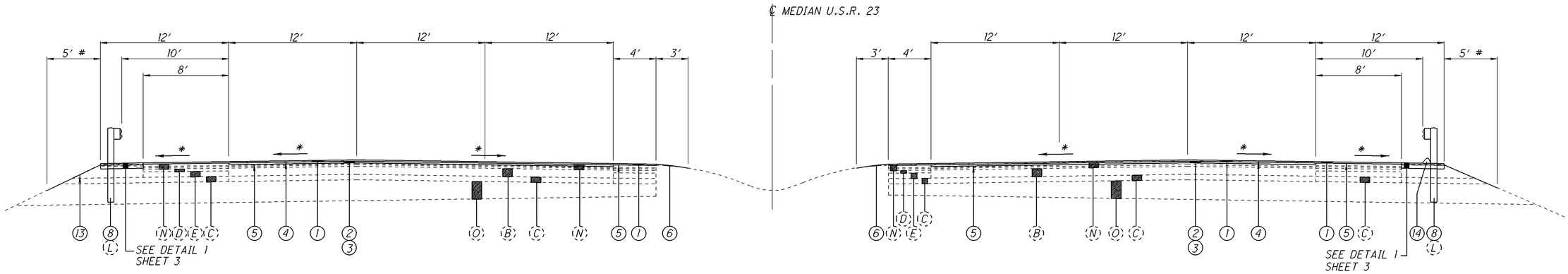
FOR LEGEND SEE SHEET 3

* MATCH EXISTING PAVEMENT SLOPE

THE 5′ WIDTH BEHIND THE GUARDRAIL IS USED TO ESTABLISH A WORK LIMIT TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS PROJECT.

TYPICAL SECTIONS

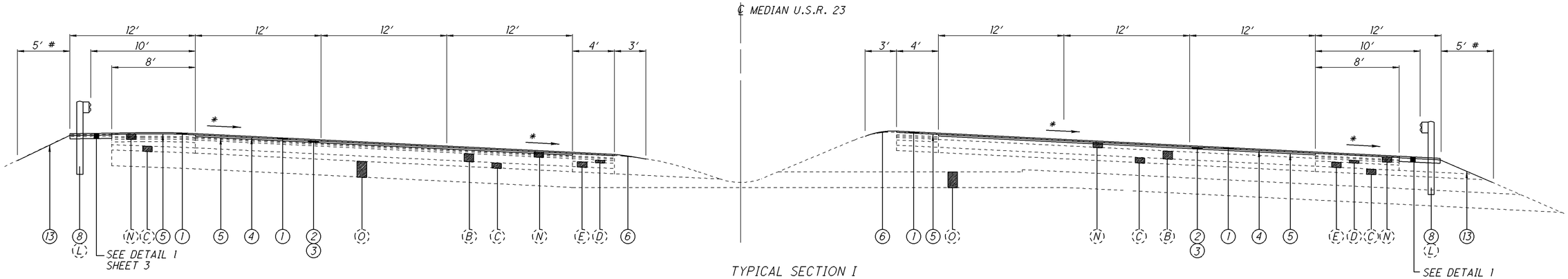
ROS-23-8.23



TYPICAL SECTION H

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 579+99.06 (EQ.) TO STA. 580+25.32	=	26.26 FT. (NB LANES ONLY)
STA. 581+89.63 TO STA. 583+89.29	=	199.66 FT. (SB LANES ONLY)
STA. 607+48.79 TO STA. 608+65.82	=	117.03 FT. (SB LANES ONLY)
STA. 608+65.82 TO STA. 635+34.69	=	2,668.87 FT. (NB AND SB LANES)
STA. 637+58.69 TO STA. 638+67.98	=	109.29 FT. (NB AND SB LANES)
STA. 655+61.31 TO STA. 664+56.98	=	895.67 FT. (NB AND SB LANES)



TYPICAL SECTION I

THE ABOVE TYPICAL SECTION APPLIES BETWEEN THE FOLLOWING STATIONS:

STA. 577+49.46 TO STA. 580+20.58 (EQ.)	=	271.12 FT. (NB LANES ONLY)
STA. 580+25.32 TO STA. 608+65.82	=	2,840.50 FT. (NB LANES ONLY)
STA. 573+94.58 TO STA. 581+89.63	=	795.05 FT. (SB LANES ONLY)
STA. 583+89.29 TO STA. 607+48.79	=	2,359.50 FT. (SB LANES ONLY)
STA. 638+67.98 TO STA. 655+61.31	=	1,693.33 FT. (NB AND SB LANES)

NOTES:

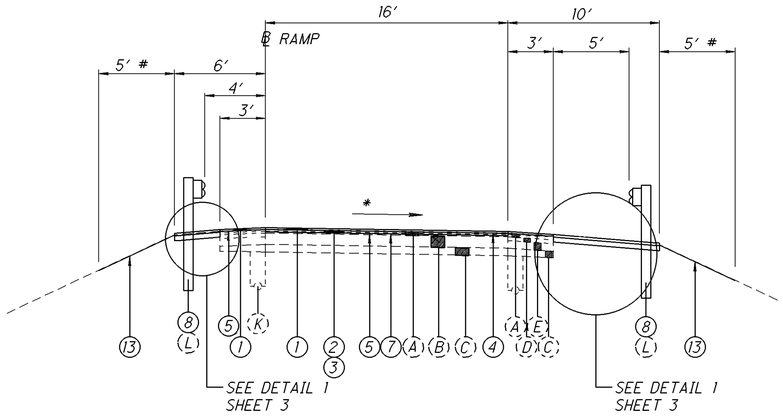
FOR LEGEND SEE SHEET 3

* MATCH EXISTING PAVEMENT SLOPE

THE 5′ WIDTH BEHIND THE GUARDRAIL IS USED TO ESTABLISH A WORK LIMIT TO ESTIMATE THE SEEDING AND MULCHING QUANTITY REQUIRED FOR THIS PROJECT.

TYPICAL SECTIONS

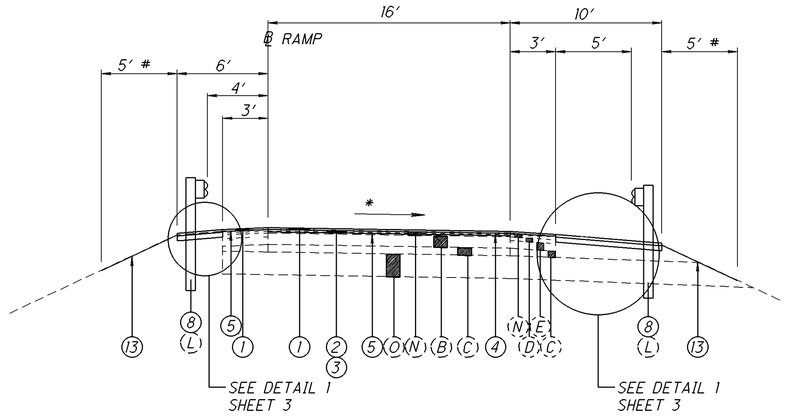
ROS-23-8.23



TYPICAL SECTION OF RAMPS A,B,C,D

LOCATED AT:

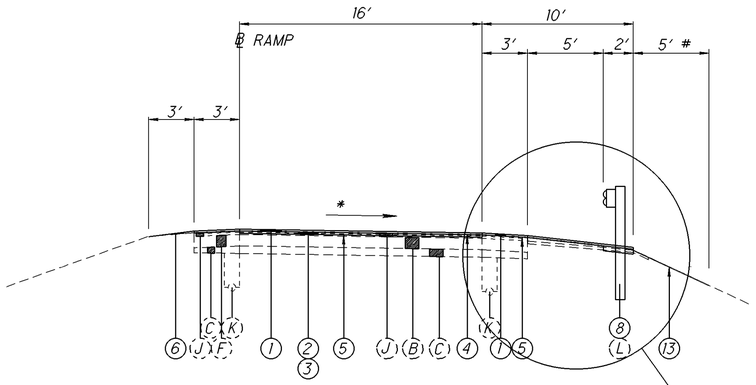
U.S. ROUTE 23; STATE ROUTE 104;
COUNTY ROAD 205 (THREE LOCKS ROAD) INTERCHANGE



TYPICAL SECTION OF RAMPS A,B,C,D

LOCATED AT:

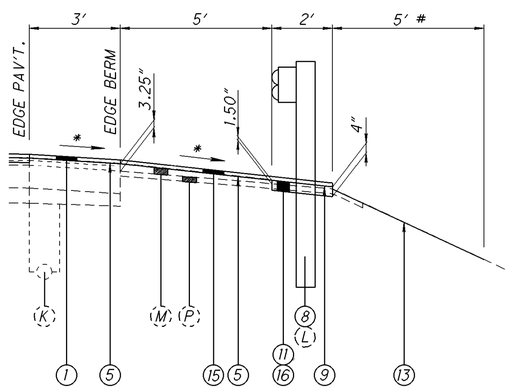
U.S. ROUTE 23; U.S. ROUTE 35;
COUNTY ROAD 238 (CHARLESTON PIKE) INTERCHANGE



TYPICAL SECTION OF RAMPS R,S,T,U

LOCATED AT:

U.S. ROUTE 23; U.S. ROUTE 50 (EASTERN AVENUE) INTERCHANGE



DETAIL 2

TYPICAL SECTIONS

ROS-23-8.23

7
104

EXISTING PLANS

EXISTING PLANS ENTITLED ROS-23-8.37 (1970), ROS-23-8.39 (1993), ROS-23/50-9.36-19.77 (2004), ROS-23-10.59 (1998), ROS-35-21.23, AND ROS-35-22.82_CR238 (1962) MAY BE INSPECTED IN THE ODOT DISTRICT 9 OFFICE IN CHILLICOTHE.

ELEVATION DATUM

THE ELEVATIONS SHOWN ON THIS PLAN WERE DERIVED FROM OR TAKEN DIRECTLY FROM THE ORIGINAL CONSTRUCTION PLANS MENTIONED ABOVE.

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.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING ESTIMATED QUANTITY OF 5% OF THE PLANED SURFACE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PATCHING PLANED SURFACE AS DESIGNATED BY THE ENGINEER.

254	PATCHING PLANED SURFACE	8755 SO. YD.

ITEM 617 - SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS

WORK SHALL CONFORM TO SECTION 617 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS WITH THE EXCEPTION OF 617.02 (MATERIALS) AND 617.06 (METHOD OF MEASUREMENT).

THE MATERIAL FOR THIS ITEM SHALL BE THE ASPHALT CONCRETE GRINDINGS FROM ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN. 100% OF THE ASPHALT CONCRETE GRINDINGS SHALL PASS A 1-1/4 INCH SIEVE AS DETERMINED BY THE ENGINEER.

PAYMENT FOR THE ABOVE IS INCLUDED IN THE PRICE PER SQUARE YARD OF 617 SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS.

UTILITIES

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

ELECTRIC:

AMERICAN ELECTRIC POWER
(TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OH 43230
614-552-1801

AMERICAN ELECTRIC POWER
(DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OH 43230
614-883-6831

WATER:

ROSS COUNTY WATER COMPANY
P.O. BOX 1690
CHILLICOTHE, OHIO 45601
740-774-4117

TELEPHONE:

HORIZON
P.O. BOX 480
CHILLICOTHE, OHIO 45601
740-772-8396

CABLE

TIME WARNER CABLE
3760 INTERCHANGE DRIVE
COLUMBUS, OHIO 43204-4131
614-255-6349

GAS:

COLUMBIA GAS OF OHIO
843 PIATT AVENUE
CHILLICOTHE, OHIO 45601
740-772-9131

COLUMBIA GAS TRANSMISSION
CORPORATION
589 N. STATE ROAD
MEDINA, OHIO 44256
330-721-4163

CITY OF CHILLICOTHE
35 SOUTH PAINT STREET
CHILLICOTHE, OHIO 45601
740-773-8980

CHILLICOTHE UTILITY DEPARTMENT
151 PARK STREET
CHILLICOTHE, OHIO 45601
740-774-1418

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.

RAILROAD NOTES

THE LIMITS OF THIS PROJECT CONTAIN TWO LOCATIONS WHERE U.S.R. 23 CROSSES CSX RAILROAD FACILITIES. THE STRUCTURE DESIGNATIONS AT THESE FACILITIES ARE ROS-23-1000 L&R AND ROS-23-1052 L&R. THE CONTRACTOR IS ADVISED OF THE FOLLOWING REQUIREMENTS BY CSX TRANSPORTATION AT THESE STRUCTURES:

1. CSXT WILL REQUIRE THAT THE CONTRACTOR SUBMIT AND RECEIVE ACCEPTANCE ON A COMPREHENSIVE MEANS AND METHODS SUBMITTAL FOR THE REMOVAL OF THE EXISTING COATINGS FROM CONCRETE PARAPET SURFACES PRIOR TO UNDERTAKING THIS WORK IN THE SPAN BETWEEN PIER 1 AND PIER 2 AT THE STRUCTURES NOTED ABOVE AS SHOWN ON SHEETS 56 AND 70 IN BOTH THE NORTHBOUND AND SOUTHBOUND LANES.

2. CSXT WILL REQUIRE FULL TIME RAILROAD FLAGGING FOR ALL EXISTING PARAPET UPGRADE TASKS IN THE SPAN BETWEEN PIER 1 AND PIER 2 AT THE STRUCTURES NOTED ABOVE AS SHOWN ON SHEETS 56 AND 70 IN BOTH THE NORTHBOUND AND SOUTHBOUND LANES.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659,	SEEDING AND MULCHING	23,500 SQ. YD.
	(ESTIMATED QUANTITY TO RESTORE SLOPES AFTER GUARDRAIL INSTALLATION AS DIRECTED BY THE ENGINEER).	
659,	COMMERCIAL FERTILIZER	3.17 TON
	(FIRST APPLICATION @ 20 POUNDS PER 1000 SQ. FT. AND SECOND APPLICATION @ 10 POUNDS PER 1000 SQ. FT.).	
659,	LIME	4.86 ACRE
659,	REPAIR SEEDING AND MULCHING	1175 SQ. YD.
	(5% OF PERMANENT SEEDING AND MULCHING).	
659,	WATER	127 M. GAL.
	(TWO APPLICATIONS @ 300 GALLONS PER 1000 SQ. FT.).	

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

THIS WORK SHALL CONSIST OF EXCAVATING (4.5" DEEP) THE AREA WHERE THE PROPOSED GUARDRAIL IS TO BE PLACED, COMPACTING THE SUBGRADE, PLACING ITEM 617 TO THE DEPTH SHOWN ON THE PLANS, AND APPLYING ITEM 408 PRIME COAT.

ALL EXCAVATED MATERIAL (ASPHALT CONCRETE, TOPSOIL, GRANULAR MATERIAL, ETC.) SHALL BE DISPOSED OF IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

ALL OF THE REQUIREMENTS OF 209.06 SHALL APPLY EXCEPT THAT THE 617 BACKFILL MATERIAL (4" THICK) SHALL BE COMPRISED OF THE ASPHALT GRINDINGS RESULTING FROM THE PAVEMENT PLANING PROCESS. THIS MATERIAL SHALL BE IN ACCORDANCE WITH THE GENERAL NOTE: ITEM 617 - SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS.

CALCULATED MCM
CHECKED CER

GENERAL NOTES

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ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN

WORK SHALL CONFORM TO SECTION 254 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK:

(1.75") - PLANING OF BOTH LANES OF MAIN LINE AND RAMP LANES:

PLAN INTENT IS TO REMOVE 1.75" OF THE EXISTING PAVEMENT AND LEVEL THE SURFACE FOR THE INLAYED PLACEMENT OF A UNIFORM 1.75" COURSE OF ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446).

PLANING SHALL BE THE WIDTH OF THE EXISTING LANES AS SHOWN ON THE TYPICAL SECTIONS.

THE INTENT OF THE PLANING IS TO MILL 1.75" (MAX.) DEPTH AT THE EDGE LINES AND LANE LINES OF THE LANES AND ¼" (MIN.) DEPTH AT THE BOTTOM OF THE WHEEL RUTS. THE MILLING CROSS SLOPE SHALL BE CONTINUOUS FROM THE LANE LINE TO THE EDGE LINE (EDGE LINE TO EDGE LINE ON THE RAMPS). THE MILLING DEPTH SHALL BE CONTROLLED FROM THE LANE LINE OR EDGE LINE TO LEVEL THE IRREGULARITIES IN THE EXISTING PAVEMENT PROFILE AND CROSS SLOPES.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING THE EQUIVALENT OF USING A 30 FOOT SKI-ARM SHALL BE USED DURING THE MILLING OPERATION.

THE ENGINEER MAY DESIGNATE AREAS THAT REQUIRE ADDITIONAL MILLING TO ELIMINATE ADVERSE SURFACE DISTORTION, OR TO PROVIDE A SATISFACTORY GRADE. THESE AREAS INCLUDE AREAS WITH MATERIAL DISPLACED BY RUTTING OR SHOVING ASPHALT CONCRETE, SURFACE PATCHED AREAS, AREAS PATCHED WITH CONCRETE, AREAS WITH TRANSVERSE BUMPS, AND AREAS AROUND CASTINGS FOR MANHOLES, CATCH BASINS, ETC.

(1.75" MIN. TO 3.25" MAX.) - TRANSITION PLANING ON APPROACHES TO BRIDGES

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION IN THE BRIDGE APPROACH PAVEMENT FROM THE PROPOSED PAVEMENT TYPICAL SECTION TO MEET THE EXISTING APPROACH SLAB ELEVATIONS, AN APPROXIMATE 1.50" ELEVATION TRANSITION IN THE PAVEMENT PROFILE AS DETAILED ON SHEET 37.

PLANING SHALL BE THE WIDTH OF THE PAVEMENT INCLUDING PAVED SHOULDERS AT LOCATIONS SHOWN IN THE PLAN.

PROVIDE ELEVATION CONTROL FOR THIS WORK AS REQUIRED TO MEET THE PLAN INTENT UNDER ITEM 623, CONSTRUCTION LAYOUT STAKES.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING THE EQUIVALENT OF USING A 30 FOOT SKI-ARM SHALL BE USED DURING THE MILLING OPERATION.

(1.75" MIN. TO 3.25" MAX.) - TRANSITION PLANING FOR BUTT JOINTS:

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION FROM THE PROPOSED PAVEMENT TYPICAL SECTION TO MEET THE EXISTING PAVEMENT, AN APPROXIMATE 1.50" ELEVATION TRANSITION IN THE PAVEMENT PROFILE AS DETAILED ON SHEET 37.

PLANING SHALL BE THE WIDTH OF THE PAVEMENT INCLUDING PAVED SHOULDERS AT LOCATIONS SHOWN IN THE PLAN.

PROVIDE ELEVATION CONTROL FOR THIS WORK AS REQUIRED TO MEET THE PLAN INTENT UNDER ITEM 623, CONSTRUCTION LAYOUT STAKES.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING THE EQUIVALENT OF USING A 30 FOOT SKI-ARM SHALL BE USED DURING THE MILLING OPERATION.

ITEM 254 - PAVEMENT PLANING (CONTINUED)

(0" MIN. TO 1.50" MAX.) - TRANSITION PLANING ON APPROACHES TO BRIDGES

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION IN THE BRIDGE APPROACH PAVEMENT FROM THE PROPOSED PAVEMENT TYPICAL SECTION TO MEET THE EXISTING APPROACH SLAB ELEVATIONS, AN APPROXIMATE 1.50" ELEVATION TRANSITION IN THE PAVEMENT PROFILE AS DETAILED ON SHEET 38.

PLANING SHALL BE THE WIDTH OF THE PAVEMENT INCLUDING PAVED SHOULDERS AT LOCATIONS SHOWN IN THE PLAN.

PROVIDE ELEVATION CONTROL FOR THIS WORK AS REQUIRED TO MEET THE PLAN INTENT UNDER ITEM 623, CONSTRUCTION LAYOUT STAKES.

AN AUTOMATIC MILLING HEAD PROFILE CONTROL HAVING THE EQUIVALENT OF USING A 30 FOOT SKI-ARM SHALL BE USED DURING THE MILLING OPERATION.

INTERIM COMPLETION DATES FOR PAVEMENT PLANING

TRAFFIC SHALL NOT BE REQUIRED TO USE ANY PLANED ROADWAY SURFACE FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS. THE 21 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE. SHOULD THE CONTRACTOR FAIL TO MEET ANY INTERIM COMPLETION DATE FOR THIS REQUIREMENT, DISINCENTIVES SHALL BE ASSESSED IN ACCORDANCE WITH CMS 108.07 FOR EACH CALENDAR DAY OR PORTION THEREOF BEYOND THE 21 CALENDAR DAYS.

THE INTERIM COMPLETION DATE IS APPLICABLE FOR THE PLACEMENT OF THE ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) ONLY AND IS NOT APPLICABLE TO AREAS WHERE ONLY ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) IS TO BE PLACED.

DISPOSAL OF ASPHALT GRINDINGS:

A PORTION OF THE GRINDINGS IS TO BE USED FOR ITEM 617 SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS.

THE REMAINDER OF THE GRINDINGS FROM THIS PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR.

632 DETECTOR LOOP, AS PER PLAN

ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHOWN IN THE PLANS SHALL BE THE POWERHEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS CURRENTLY CALLED FOR IN THE PLANS. THE STOP LINE DETECTOR LOOPS SHALL NOT BE WIRED TO ANY OTHER LOOPS AND SHALL HAVE ITS OWN DETECTOR CHANNEL. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT.

ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10.

ALL STOP LINE DETECTION SHALL BE TESTED FOR A BICYCLE TARGET AND ALL DILEMMA DETECTION ZONES SHALL BE TESTED FOR A MOTORCYCLE TARGET.

RPM (RAISED PAVEMENT MARKER)

IN ADDITION TO CMS 621.03, RPMS SHALL NOT BE INSTALLED ON BRIDGES OR APPROACH SLABS THAT HAVE A CONCRETE SURFACE. INSTALL RPMS IN ASPHALT CONCRETE BEFORE AND AFTER THE SUPERSTRUCTURE. RPMS LOCATED IN EXISTING CONCRETE BRIDGE DECKS OR APPROACH SLABS SHALL BE LEFT IN PLACE.

ITEM 645, PREFORMED PAVEMENT MARKINGS

THE PROPOSED PAVEMENT MARKINGS (LANE LINES, EDGE LINES, AND AUXILIARY MARKINGS) THAT ARE TO BE PLACED ON THE CONCRETE BRIDGE DECKS AND THE CONCRETE APPROACH SLABS SHALL BE IN ACCORDANCE WITH ITEM 645, PREFORMED PAVEMENT MARKING OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS. QUANTITIES FOR THIS ITEM HAVE BEEN PROVIDED IN THE PLANS.

CALCULATED MCM
CHECKED CER

GENERAL NOTES

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PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN SHALL CONSIST OF EXCAVATING THE EXISTING MATERIAL (ASPHALT PAVEMENT, TOPSOIL, GRANULAR MATERIAL, ETC.), TO A DEPTH OF 4.5". THE DEBRIS COLLECTED FROM THE EXCAVATION SHALL BE DISPOSED OF AS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE REMOVED MATERIAL SHALL BE REPLACED WITH 617, COMPACTED ASPHALT CONCRETE GRINDINGS, (4" DEEP), PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION SHEETS OR APPROVED BY THE ENGINEER.

ITEM 408 PRIME COAT SHALL BE APPLIED TO THE PREPARED AREA AFTER FINAL LEVELING AND GRADING HAVE BEEN COMPLETED. THE APPLICATION OF THE PRIME COAT SHALL BE JUST PRIOR TO THE PLACEMENT OF THE 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1) SET GUARDRAIL POSTS
2) PLACE ITEM 448

METHOD B:
1) PLACE ITEM 448
2) BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3) SET GUARDRAIL POSTS
4) PATCH AROUND POSTS. THE MATERIALS USED FOR THE PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, UNDER GUARDRAIL, AS PER PLAN.

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 IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B

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.

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 27.75 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 DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

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

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

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1, (BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING, EXCAVATION, EMBANKMENT AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

CALCULATED MCM
CHECKED CER

GENERAL NOTES

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ITEM 255 - FULL DEPTH PAVEMENT PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN

ALL OF THE CONSTRUCTION REQUIREMENTS OF THE CMS FOR ITEM 255 SHALL APPLY.

FULL DEPTH PAVEMENT REPAIRS WILL BE CONSTRUCTED USING THE UNDERCUT DETAILS SHOWN HERE AND ON SCD BP-2.5.

THIS WORK SHALL BE IN ACCORDANCE WITH SECTION 250 OF THE CMS AND STANDARD CONSTRUCTION DRAWINGS BP-2.5 AND BP-2.1.

ONE TU TYPE JOINT AND ONE YU TYPE JOINT WILL BE REQUIRED AT EACH REPAIR LOCATION.

NECESSARY PAVEMENT REPAIRS THAT ARE DISCOVERED AT MID-SLAB LOCATIONS SHALL BE TREATED WITH A TU TYPE JOINT AT EACH END.

[1] REINFORCEMENT WILL BE REQUIRED FOR REPAIRS 10 FEET OR GREATER IN LENGTH OR FOR REPAIRS THAT WILL BE OPENED TO TRAFFIC WITHIN 24 HOURS OF PLACEMENT.

AN ESTIMATED QUANTITY OF 6,700 SQ. YD. OF ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN, HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

CLASS C OR CLASS MS CONCRETE CAN BE SUBSTITUTED FOR CLASS FS IF THE REPAIRED AREA CAN BE PROPERLY CURED UNDER THE REQUIREMENTS OF THE 2010 EDITION OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS BEFORE THE REPAIR IS OPENED TO TRAFFIC.

COMPLETED REPAIRS SHALL BE THE FULL WIDTH OF THE EXISTING CONCRETE PAVEMENT WITH REPAIR LENGTH AND LOCATION DETERMINED BY THE ENGINEER.

EACH CONCRETE REPAIR SHALL BE COVERED WITH A MINIMUM OF 3.25" OF ASPHALT CONCRETE CONSISTING OF 1.75" OF ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) AND 1.50" OF ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446). THE CONCRETE REPAIR SHALL RECEIVE AN APPLICATION OF ITEM 407 TACK COAT (702.13) PRIOR TO THE APPLICATION OF THE ASPHALT COURSE. ITEM 407 TACK COAT OR TACK COAT FOR INTERMEDIATE COURSE SHALL BE APPLIED TO ALL SUBSEQUENT ASPHALT COURSES.

THE CONTRACTOR MAY ELECT TO FILL THE ENTIRE VOID WITH CONCRETE AS A TEMPORARY MEASURE PROVIDED THE FINAL REPAIRED AREA IS COVERED WITH 1.75" OF THE ASPHALT INTERMEDIATE COURSE AND 1.50" OF THE ASPHALT SURFACE COURSE AS SHOWN ON THE TYPICAL SECTIONS. FOR ESTIMATING PURPOSES, 4.50" OF ITEM 301, ASPHALT CONCRETE BASE, PG 64-22 WAS USED.

IN ADDITION TO THE QUANTITIES PROVIDED FOR IN 255.10, THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED AND CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

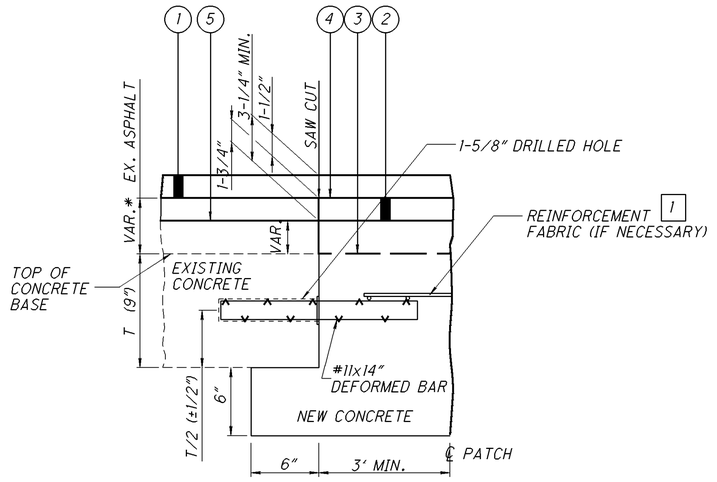
ITEM 255		FULL DEPTH PAVEMENT SAWING	27,408 FT.
ITEM 301	4.50"	ASPHALT CONCRETE BASE, PG 64-22	838 CU. YD.
ITEM 407		TACK COAT, 702.13	503 GAL.

THE ESTIMATED QUANTITIES FOR THIS ITEM ARE BASED ON THE FOLLOWING INFORMATION:

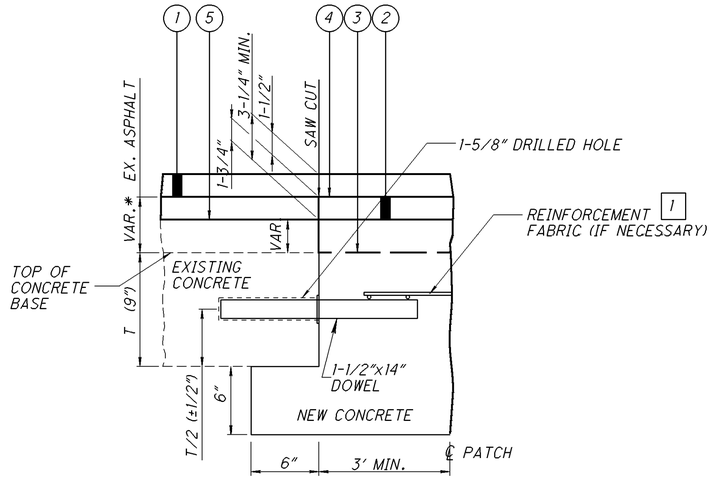
215 REPAIRS IN THE SIX LANE SECTION (36' WIDTH)
48 REPAIRS IN THE FOUR LANE SECTION (24' WIDTH)
72 REPAIRS ON THE INTERCHANGE RAMPS (16' WIDTH)

FULL DEPTH REPAIR DETAILS

TYPE TU (UNDERCUT : TIED) JOINT SHOWN



TYPE YU (UNDERCUT : CONTRACTION) JOINT SHOWN



LEGEND FOR REPAIR

(1)	442	1.50"	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1.75"	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	407		TACK COAT, 702.13 (0.075 GAL. / SQ.YD.)
(4)	407		TACK COAT FOR INTERMEDIATE COURSE (0.040 GAL. / SQ.YD.)
(5)	407		TACK COAT (0.075 GAL. / SQ.YD.)

* EXISTING ASPHALT THICKNESS:
3.00" MINIMUM; 6.00" MAXIMUM

CALCULATED MCM CHECKED CER

GENERAL NOTES

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ITEM 614 - MAINTAINING TRAFFIC

BY UTILIZING THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND TEMPORARY SURFACES USING ITEMS 410 AND 614, A MINIMUM OF ONE 12 FOOT LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON U.S.R. 23 AND U.S.R. 35 AT ALL TIMES FOR THE DURATION OF THIS PROJECT.

DUE TO INCREASED TRAFFIC VOLUMES, A MINIMUM OF TWO 12 FOOT LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON U.S.R. 23 AND U.S.R. 35 BETWEEN STA. 573+00 AND STA. 689+50 (THE SIX-LANE SECTION) OF THIS PROJECT DURING THE FOLLOWING TIME PERIODS:

MONDAY THROUGH THURSDAY, 2 PM TO 6 PM (4 HOURS)
FRIDAY THROUGH SUNDAY 10 AM TO 7 PM (9 HOURS).

THE LANE WIDTH ON BRIDGE ROS-23-1257 LEFT AND RIGHT (SPANNING THE SCIOTO RIVER) MAY BE REDUCED TO 11 FOOT, SUBJECT TO THE TIME RESTRICTIONS LISTED ABOVE.

THESE RESTRICTIONS ARE IN ADDITION TO THE HOLIDAY RESTRICTIONS LISTED BELOW.

TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS MT-95.30 AND MT-95.50 AS WELL AS ANY OTHER APPLICAPABLE STANDARD CONSTRUCTION DRAWINGS ALONG WITH THE DETAILS AND QUANTITIES PROVIDED IN THESE PLANS.

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

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR WILL ADVISE THE DISTRICT PUBLIC INFORMATION OFFICER AT (740) 774-8834, OR FAX (740) 773-2710 SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/ CLARIFICATION FOR ANY QUESTIONS.

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

CHRISTMAS	NEW YEARS
MEMORIAL DAY	FOURTH OF JULY
LABOR DAY	THANKSGIVING
SPECIAL LOCAL EVENTS	

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 HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY
MONDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (6:00 AM OR 12:00N) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (6:00 AM OR 12:00N) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (6:00 AM OR 12:00N) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $75/MIN. FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

THE CONTRACTOR SHALL ARRANGE FOR ALL MAINTENANCE OF TRAFFIC OPERATIONS SUCH THAT THERE WILL BE NO OBSTRUCTIONS TO THE CONTINUOUS FLOW OF TRAFFIC. A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON ALL COUNTY AND TOWNSHIP ROADS AND ALL RAMPS, INTERSECTIONS AND CROSS-OVERS SHALL BE OPEN TO TRAFFIC AT ALL TIMES UNLESS NOTED ELSEWHERE IN THE PLANS.

TRAFFIC SHALL NOT BE REQUIRED TO USE ANY PAVED BERMS FOR MAINTENANCE OF TRAFFIC OPERATIONS UNTIL THE EXISTING SHOULDER RUMBLE STRIPS HAVE BEEN REMOVED AND REPLACED WITH ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 (1" THICK). QUANTITIES HAVE BEEN PROVIDED BELOW TO PLANE THE EXISTING SHOULDERS 4 FEET WIDE AND 1 INCH DEEP IN THE AREAS WHERE THE EXISTING RUMBLE STRIPS OCCUR. THIS AREA SHALL RECEIVE AN APPLICATION OF ITEM 407 TACK COAT PRIOR TO THE PLACEMENT OF THE ASPHALT CONCRETE INTERMEDIATE COURSE.

ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (1" DEEP)	37,424 SQ. YD.
ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22 (1" THICK)	1040 CU. YD.
ITEM 407, TACK COAT (@ 0.075 GAL. PER SQ. YD.)	2807 GAL.

TRAFFIC SHALL NOT BE PERMITTED TO USE ANY ROADWAY THAT HAS BEEN INLAID WITH ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) FOR MORE THAN FORTY-FIVE (45) CALENDAR DAYS BEFORE THE ASPHALT SURFACE COURSE IS APPLIED. IT IS THE INTENT OF THIS PLAN THAT ONCE THE CONTRACTOR BEGINS THE PAVING PROCESS WITH THE INTERMEDIATE COURSE, THE ASPHALT SURFACE COURSE WILL FOLLOW IN A TIMELY MANNER SUBJECT TO THE 45 DAY LIMIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC:

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B	50 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	200 CU. YD.

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

ADDITIONAL INFORMATION ON THE MAINTENANCE OF TRAFFIC CAN BE FOUND ON THE BRIDGE CONSTRUCTION SHEETS IN THIS PLAN.

CALCULATED CER CHECKED DMB

MAINTENANCE OF TRAFFIC NOTES

ROS-23-8.23

WORK ZONE INCREASED PENALTIES SIGN (R11-H5a)

R11-H5a-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5a-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5a-24. R11-H5a-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5a-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5a-48 SIGNS IN THE MEDIAN.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN 34 EACH

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 PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616 WATER 50 M GAL.

ITEM 614 - REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 150 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614 - REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD CONDITION SUBJECT TO THE APPROVAL OF THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

PLACEMENT OF ASPHALT CONCRETE

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

DROP-OFFS

THERE SHALL BE NO OVERNIGHT DROP-OFFS OF GREATER THAN 5". REFER TO STANDARD CONSTRUCTION DRAWING MT-101.90 FOR DETAILED INFORMATION ON MAINTENANCE AND PROTECTION OF TRAFFIC FOR DROP-OFFS.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

ITEM 614,	WORK ZONE LANE LINE, CLASS II	13.14	MILE
ITEM 614,	WORK ZONE LANE LINE, CLASS III, 642 PAINT	13.14	MILE
ITEM 614,	WORK ZONE MARKING SIGN	34	EACH
ITEM 614,	WORK ZONE DOTTED LINE, CLASS I (FOR TAPERS) (WHITE)	3,520	FT
ITEM 614,	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE 1 (FOR TAPERS) (WHITE)	7,040	FT
ITEM 614,	WORK ZONE EDGE LINE, CLASS I (FOR TAPERS) (1,440 FT. WHITE; 1,440 FT. YELLOW)	0.55	MILE
ITEM 614,	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE 1 (FOR TAPERS) (2,880 FT. WHITE; 2,880 FT. YELLOW)	1.09	MILE
ITEM 614,	WORK ZONE STOP LINE, CLASS I	180	FT
ITEM 614,	WORK ZONE STOP LINE, CLASS III, 642 PAINT	180	FT
ITEM 614,	WORK ZONE CHANNELIZING LINE, CLASS I	300	FT
ITEM 614,	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	300	FT

CALCULATED CER CHECKED DMB

MAINTENANCE OF TRAFFIC NOTES

ROS-23-8.23

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT. RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET XX OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 4 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN CONTINUED

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 3600 DAY

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

USE OF LAW ENFORCEMENT OFFICERS (LEOSs) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOs SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (e.g., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- 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 FOR LONG-TERM LANE CLOSURE/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOs SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

- WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOs 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 LEOs WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOs WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOs. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOs' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

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

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. 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.

LEOs (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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
200 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

BARRIER DELINEATION

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTOR AND OBJECT MARKER SPACING SHALL BE AS PER MT-101.70

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING BARRIER REFLECTORS AND OBJECT MARKERS.

AN ESTIMATED QUANTITY OF 14,300 FEET OF ITEM 614 LINEAR DELINEATION AND 286 EACH OF ITEM 614 OBJECT MARKER, ONE-WAY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

GUARDRAIL DELINEATION

OBJECT MARKERS SHALL BE INSTALLED ON ALL GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKER SPACING SHALL BE APPROXIMATELY 50 FEET.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING OBJECT MARKERS.

AN ESTIMATED QUANTITY OF 600 EACH OF ITEM 614 OBJECT MARKERS, ONE-WAY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

CALCULATED CER CHECKED DMB

MAINTENANCE OF TRAFFIC NOTES

ROS-23-8.23

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
	8	11	12		20		23			28									
																		ROADWAY	
														SPECIAL	10810000	LUMP		CPM PROGRESS SCHEDULE	
	LUMP													201	11000	LUMP		CLEARING AND GRUBBING	
							4897							202	32000	4897	FT	CURB REMOVED	
							39,503.13							202	38000	39,503.13	FT	GUARDRAIL REMOVED	
							2191.00							202	38300	2191.00	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
							420							209	72001	420	STATION	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	8
							593							512	10100	593	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
							465							512	74000	465	SQ YD	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
							38,479.59							606	13000	38,479.59	FT	GUARDRAIL, TYPE 5	
							1862.50							606	15500	1862.50	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
							17							606	26000	17	EACH	ANCHOR ASSEMBLY, TYPE B	10
							14							606	26500	14	EACH	ANCHOR ASSEMBLY, TYPE T	
							42							606	35000	42	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							24							606	35100	24	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							14							606	60012	14	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	10
							45							622	10160	45	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
							5							622	25000	5	EACH	CONCRETE BARRIER END SECTION, TYPE D	
							1							622	25050	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
																		EROSION CONTROL	
	23,500													659	10000	23,500	SQ YD	SEEDING AND MULCHING	
	1175													659	14000	1175	SQ YD	REPAIR SEEDING AND MULCHING	
	3.17													659	20000	3.17	TON	COMMERCIAL FERTILIZER	
	4.86													659	31000	4.86	ACRE	LIME	
	127													659	35000	127	M GAL	WATER	
														832	30000	10,000	EACH	EROSION CONTROL	
																		PAVEMENT	
			37,424		175,092									254	01001	212,516	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	9
	8755													254	01600	8755	SQ YD	PATCHING PLANED SURFACE	
		6700												255	10101	6700	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN	11
		27,408												255	20000	27,408	FT	FULL DEPTH PAVEMENT SAWING	
		838												301	46000	838	CU YD	ASPHALT CONCRETE BASE, PG64-22	
			2807		18,249									407	10000	21,056	GALLON	TACK COAT	
		503												407	13900	503	GALLON	TACK COAT, 702.13	
					6974									407	14000	6974	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
							7402							408	10000	7402	GALLON	PRIME COAT	
										26,832				409	30000	26,832	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	
					10,139									442	10000	10,139	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	
					8476									442	10100	8476	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
			1040											448	46020	1040	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
							1106							448	46061	1106	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	10
							187							452	10000	187	SQ YD	6" NON-REINFORCED CONCRETE PAVEMENT	
							4837							609	10000	4837	FT	ASPHALT CONCRETE CURB, TYPE 1	
							840							609	24510	840	FT	CURB, TYPE 4-C	
							39,834							617	98000	39,834	SQ YD	SHOULDER RECONDITIONING, MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS	8
										15.95				618	40600	15.95	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	

CALCULATED CER
CHECKED DMB

GENERAL SUMMARY

ROS-23-8.23

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
			12	13	14		23		27		29								
																		TRAFFIC CONTROL	
											173			620	00500	173	EACH	DELINEATOR, POST MOUNTED	
											7			620	11000	7	EACH	DELINEATOR, BRACKET MOUNTED	
									1254					621	00100	1254	EACH	RPM	
									1380					621	54000	1380	EACH	RAISED PAVEMENT MARKER REMOVED	
							630							626	00100	630	EACH	BARRIER REFLECTOR	
									4					632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN	9
									20.84					644	00100	20.84	MILE	EDGE LINE	
									12.73					644	00200	12.73	MILE	LANE LINE	
									6227					644	00400	6227	FT	CHANNELIZING LINE	
									241					644	00500	241	FT	STOP LINE	
									15					644	01300	15	EACH	LANE ARROW	
									2.56					645	00110	2.56	MILE	EDGE LINE, TYPE A3	
									2.14					645	00210	2.14	MILE	LANE LINE, TYPE A3	
									342					645	00410	342	FT	CHANNELIZING LINE, TYPE A3	
																		STRUCTURES (20' AND OVER)	
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-0867 LEFT AND RIGHT	43
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-0926 LEFT AND RIGHT	51
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1000 LEFT AND RIGHT	58
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1026 LEFT AND RIGHT	65
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1052 LEFT AND RIGHT	72
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1074	79
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1202 LEFT AND RIGHT	88
																		FOR ESTIMATED QUANTITIES FOR BRIDGE NO. ROS-23-1257 LEFT AND RIGHT	97
			50											410	12000	50	CU YD	MAINTENANCE OF TRAFFIC TRAFFIC COMPACTED SURFACE, TYPE A OR B	
					200									614	11110	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	14
					14,300									614	11620	14,300	FT	LINEAR DELINEATION	14
				34										614	12460	34	EACH	WORK ZONE MARKING SIGN	
				34										614	12484	34	EACH	WORK ZONE INCREASED PENALTIES SIGN	13
				5										614	12500	5	EACH	REPLACEMENT SIGN	13
				150										614	12600	150	EACH	REPLACEMENT DRUM	13
			200											614	13000	200	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
					886									614	13350	886	EACH	OBJECT MARKER, ONE WAY	
					3600									614	18401	3600	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	14
				13.14										614	20400	13.14	MILE	WORK ZONE LANE LINE, CLASS II	
				13.14										614	20550	13.14	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
				0.55										614	22000	0.55	MILE	WORK ZONE EDGE LINE, CLASS I	
				1.09										614	22200	1.09	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	
				300										614	23000	300	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
				300										614	23680	300	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
				3520										614	24000	3520	FT	WORK ZONE DOTTED LINE, CLASS I	
				7040										614	24400	7040	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I	
				180										614	26000	180	FT	WORK ZONE STOP LINE, CLASS I	
				180										614	26610	180	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
				50										616	10000	50	M GAL	WATER	
														614	11000		LUMP	MAINTAINING TRAFFIC	
														619	16010	10	MONTH	FIELD OFFICE, TYPE B	
														623	10000		LUMP	CONSTRUCTION LAYOUT STAKES	
														624	10000		LUMP	MOBILIZATION	

CALCULATED CER
CHECKED DMB

GENERAL SUMMARY

ROS-23-8.23

STATION TO STATION	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75"	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75" MIN. 3.25" MAX.	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 0" MIN. 1.50" MAX.	442 ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446) 1.75"	442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) 1.50"	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	407 TACK COAT @ 0.075 GAL./SQ.YD.
	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.
NORTHBOUND U.S.R. 23 (MAINLINE PAVEMENT)							
STA. 434+50 TO STA. 436+33.86 = 183.86'							
STA. 436+33.86 TO STA. 458+01.63 = 2,167.77'							
STA. 463+37.63 TO STA. 489+29.60 = 2,591.97'							
STA. 496+36.56 TO STA. 528+33.31 = 3,196.75'							
STA. 532+03.01 TO STA. 541+86.16 = 983.15'							
STA. 545+74.12 TO STA. 555+39.01 = 964.89'							
STA. 559+88.05 TO STA. 567+08.52 = 720.47'							
STA. 571+87.23 TO STA. 580+20.58 = 833.35'							
STA. 1259+09.04 (USR 35) TO STA. 1256+38.14 = 270.90'							
11,913.11' x 24' ÷ 9 = 31,768.29 S.Y.	31,768.29			31,768.29		31,768.29	
11,913.11' x 36' ÷ 9 = 47,652.44 S.Y.					47,652.44		47,652.44
STA. 596+61.72 TO STA. 634+61.03 = 3,799.31'							
STA. 638+35.01 TO STA. 663+68.15 = 2,533.14'							
6,332.45' x 36' ÷ 9 = 25,329.80 S.Y.	25,329.80			25,329.80		25,329.80	
6,332.45' x 48' ÷ 9 = 33,773.07 S.Y.					33,773.07		33,773.07
EXTRA AREA AT U.S.R. 23 N.B. & U.S.R. 35 W.B. MERGE							
STA. 1259+09.04 TO STA. 1256+38.14 (CADD MEASURED)							
5,202.98 S.F. ÷ 9 = 578.11 S.Y. (GORE AREA)	578.11			578.11		578.11	
1,909.78 S.F. ÷ 9 = 212.20 S.Y. (GORE AREA)					212.20		212.20
STA. 579+99.06 TO STA. 596+61.72 (CADD MEASURED)							
83,074.87 S.F. ÷ 9 = 9,230.54 S.Y.	9,230.54			9,230.54		9,230.54	
103,035.41 S.F. ÷ 9 = 11,448.33 S.Y.					11,448.33		11,448.33
SOUTHBOUND U.S.R. 23 (MAINLINE PAVEMENT)							
STA. 434+50 TO STA. 436+33.86 = 183.86'							
STA. 436+69.54 TO STA. 458+40.17 = 2,170.63'							
STA. 463+76.17 TO STA. 489+59.44 = 2,583.27'							
STA. 532+33.01 TO STA. 542+07.22 = 974.21'							
STA. 545+95.20 TO STA. 556+06.38 = 1,011.18'							
STA. 560+55.42 TO STA. 572+94.58 = 1,239.16'							
8,162.31' x 24' ÷ 9 = 21,766.16 S.Y.	21,766.16			21,766.16		21,766.16	
8,162.31' x 36' ÷ 9 = 32,649.24 S.Y.					32,649.24		32,649.24
STA. 496+61.40 TO STA. 528+58.79 = 3,197.39'							
3,197.39' x 36' ÷ 9 = 12,789.56 S.Y.					12,789.56		12,789.56
STA. 581+89.63 TO STA. 634+58.35 = 5,268.72'							
STA. 638+32.36 TO STA. 663+95.81 = 2,563.45'							
7,832.17' x 36' ÷ 9 = 31,328.68 S.Y.	31,328.68			31,328.68		31,328.68	
7,832.17' x 48' ÷ 9 = 41,771.57 S.Y.					41,771.57		41,771.57
EXTRA AREA AT U.S.R. 23 S.B. & U.S.R. 35 E.B. SPLIT							
STA. 572+94.58 TO STA. 581+89.63 (CADD MEASURED) =							
STA. 1259+44.57 TO STA. 1254+47.58 (CADD MEASURED)							
42,736.62 S.F. ÷ 9 = 4,748.51 S.Y.	4,748.51			4,748.51		4,748.51	
53,477.81 S.F. ÷ 9 = 5,941.98 S.Y.					5,941.98		5,941.98
SUB-TOTAL THIS COLUMN	124,750.09	0	0	124,750.09	186,238.39	124,750.09	186,238.39

STATION TO STATION	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75"	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75" MIN. 3.25" MAX.	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 0" MIN. 1.50" MAX.	442 ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446) 1.75"	442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) 1.50"	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	407 TACK COAT @ 0.075 GAL./SQ.YD.
	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.	SQ.YD.
EXTRA AREAS FOR TURN LANES AND CROSSOVERS							
MEDIAN CROSSOVER U.S.R. 23							
STA. 502+74.84 TO STA. 507+25.16 (CADD MEASURED)							
2,489.36 S. F. ÷ 9 = 276.60 S.Y.					276.60		276.60
MEDIAN CROSSOVER U.S.R. 23 & 35							
STA. 605+25.34 TO STA. 609+73.95 (CADD MEASURED)							
2,410.86 S. F. ÷ 9 = 267.87 S.Y.					267.87		267.87
EXTRA AREAS FOR ACCELERATION AND DECELERATION LANES							
LANES AT INTERCHANGE RAMPS							
S.R. 104/BRIDGE ST./THREE LOCKS ROAD INTERCHANGE							
RAMP A							
STA. 434+63.46 TO STA. 447+74 (CADD MEASURED)							
20,817.60 S. F. ÷ 9 = 2,313.07 S.Y.	2,313.07			2,313.07		2,313.07	
20,123.40 S. F. ÷ 9 = 2,235.93 S.Y.					2,235.93		2,235.93
RAMP B							
STA. 459+05 TO STA. 467+05 (CADD MEASURED)							
4,460.24 S. F. ÷ 9 = 495.58 S.Y.	495.58			495.58	495.58	495.58	495.58
RAMP C							
STA. 439+06.52 TO STA. 447+05.41 (CADD MEASURED)							
11,597.26 S. F. ÷ 9 = 1,288.58 S.Y.	1,288.58			1,288.58		1,288.58	
11,090.79 S. F. ÷ 9 = 1,232.31 S.Y.					1,232.31		1,232.31
RAMP D							
STA. 455+01 TO STA. 466+29.11 (CADD MEASURED)							
8,787.75 S. F. ÷ 9 = 976.42 S.Y.	976.42			976.42		976.42	
8,584.04 S. F. ÷ 9 = 953.78 S.Y.					953.78		953.78
EASTERN AVE. INTERCHANGE							
RAMP R							
STA. 523+25 TO STA. 534+90.81 (CADD MEASURED)							
10,611.87 S. F. ÷ 9 = 1,179.10 S.Y.	1,179.10			1,179.10		1,179.10	
10,290.34 S. F. ÷ 9 = 1,143.37 S.Y.					1,143.37		1,143.37
RAMP S							
STA. 526+25 TO STA. 534+24.66 (CADD MEASURED)							
7,089.48 S. F. ÷ 9 = 787.72 S.Y.	787.72			787.72	787.72	787.72	787.72
RAMP T							
STA. 554+31.59 TO STA. 562+32.62 (CADD MEASURED)							
5,834.39 S. F. ÷ 9 = 648.27 S.Y.	648.27			648.27	648.27	648.27	648.27
RAMP U							
STA. 553+26 TO STA. 564+74.70 (CADD MEASURED)							
8,720.59 S. F. ÷ 9 = 968.96 S.Y.	968.96			968.96		968.96	
8,451.76 S. F. ÷ 9 = 939.08 S.Y.					939.08		939.08
FROM PREVIOUS COLUMNS	124,750.09	0	0	124,750.09	186,238.39	124,750.09	186,238.39
FROM THIS COLUMN	8,657.70	0	0	8,657.70	8,980.51	8,657.70	8,980.51
CARRIED TO SHEET 20	133,407.79	0	0	133,407.79	195,218.90	133,407.79	195,218.90

CALCULATED MCM
CHECKED CER

PAVEMENT CALCULATIONS

ROS-23-8.23

STATION TO STATION	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75"	254 1.75" MIN. 3.25" MAX.	254 0" MIN. 1.50" MAX.	442 ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446) 1.75"	442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) 1.50"	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	407 TACK COAT @ 0.075 GAL./SQ.YD.
	SQ.YD.			SQ.YD.		SQ.YD.	
EXTRA AREAS FOR ACCELERATION AND DECELERATION LANES (CONT.)							
MAIN ST. INTERCHANGE							
RAMP A							
STA. 642+77.21 TO STA. 654+37 (CADD MEASURED)							
17,774.82 S. F. ÷ 9 = 1,974.98 S.Y.	1,974.98			1,974.98		1,974.98	
17,434.78 S. F. ÷ 9 = 1,937.20 S.Y.					1,937.20		1,937.20
RAMP B							
STA. 621+37.19 TO STA. 630+52.21 (CADD MEASURED)							
16,457.61 S. F. ÷ 9 = 1,828.62 S.Y.	1,828.62			1,828.62		1,828.62	
14,887.95 S. F. ÷ 9 = 1,654.22 S.Y.					1,654.22		1,654.22
RAMP C							
STA. 644+14 TO STA. 652+37.21 (CADD MEASURED)							
14,520.35 S. F. ÷ 9 = 1,613.37 S.Y.	1,613.37			1,613.37		1,613.37	
13,150.25 S. F. ÷ 9 = 1,461.14 S.Y.					1,461.14		1,461.14
RAMP D							
STA. 617+37.29 TO STA. 630+61 (CADD MEASURED)							
19,196.33 S. F. ÷ 9 = 2132.93 S.Y.	2,132.93			2,132.93		2,132.93	
18,845.24 S. F. ÷ 9 = 2,093.92 S.Y.					2,093.92		2,093.92
RAMP PAVEMENT							
S.R. 104/BRIDGE ST./THREE LOCKS ROAD INTERCHANGE							
RAMP A							
STA. 447+67.22 TO STA. 463+72.41 = 1,605.19'							
1,605.19' x 16' ÷ 9 = 2,853.67 S.Y.	2,853.67			2,853.67		2,853.67	
1,605.19' x 22' ÷ 9 = 3,923.80 S.Y.					3,923.80		3,923.80
RAMP B							
STA. 448+31.82 TO STA. 458+07.93 = 976.11'							
976.11' x 16' ÷ 9 = 1,735.31 S.Y.	1,735.31			1,735.31		1,735.31	
976.11' x 22' ÷ 9 = 2,386.05 S.Y.					2,386.05		2,386.05
STA. 458+07.93 TO STA. 458+58.21 = 50.28'							
50.28' x 16' ÷ 9 = 89.39 S.Y.	89.39			89.39		89.39	
50.28' x 23.5' (AVG.) ÷ 9 = 131.29 S.Y.					131.29		131.29
RAMP C							
STA. 447+06.41 TO STA. 448+04.42 = 98.01'							
98.01' x 16' ÷ 9 = 174.24 S.Y.	174.24			174.24		174.24	
98.01' x 23' (AVG.) ÷ 9 = 250.47 S.Y.					250.47		250.47
STA. 448+04.42 TO STA. 456+45.25 = 840.83'							
840.83' x 16' ÷ 9 = 1,494.81 S.Y.	1,494.81			1,494.81		1,494.81	
840.83' x 22' ÷ 9 = 2,055.36 S.Y.					2,055.36		2,055.36
RAMP D							
STA. 448+43.59 TO STA. 454+29.19 = 585.60'							
585.60' x 16' ÷ 9 = 1,041.07 S.Y.	1,041.07			1,041.07		1,041.07	
585.60' x 22' ÷ 9 = 1,431.47 S.Y.					1,431.47		1,431.47
STA. 454+29.19 TO STA. 455+4.10 = 74.91'							
74.91' x 16' ÷ 9 = 133.17 S.Y.	133.17			133.17		133.17	
74.91' x 23' (AVG.) ÷ 9 = 191.44 S.Y.					191.44		191.44
SUB-TOTAL THIS COLUMN	15,071.56	0	0	15,071.56	17,516.36	15,071.56	17,516.36

STATION TO STATION	254 PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN 1.75"	254 1.75" MIN. 3.25" MAX.	254 0" MIN. 1.50" MAX.	442 ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446) 1.75"	442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) 1.50"	407 TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	407 TACK COAT @ 0.075 GAL./SQ.YD.
	SQ.YD.			SQ.YD.		SQ.YD.	
RAMP PAVEMENT (CONT.)							
EASTERN AVE. INTERCHANGE							
RAMP R							
STA. 534+85.63 TO STA. 544+40.06 = 954.43'							
954.43' x 16' ÷ 9 = 1,696.76 S.Y.	1,696.76			1,696.76		1,696.76	
954.43' x 22' ÷ 9 = 2,333.05 S.Y.					2,333.05		2,333.05
RAMP S							
STA. 534+26.55 TO STA. 535+27.47 = 100.92'	179.41			179.41		179.41	
100.92' x 16' ÷ 9 = 179.41 S.Y.							
100.92' x 24.5' (AVG.) ÷ 9 = 274.73 S.Y.					274.73		274.73
STA. 535+27.47 TO STA. 542+60.70 = 733.23'							
733.23' x 16' ÷ 9 = 1,303.52 S.Y.	1,303.52			1,303.52		1,303.52	
733.23' x 22' ÷ 9 = 1,792.34 S.Y.					1,792.34		1,792.34
RAMP T							
STA. 545+67.75 TO STA. 553+32.52 = 764.77'							
764.77' x 16' ÷ 9 = 1,359.59 S.Y.	1,359.59			1,359.59		1,359.59	
764.77' x 22' ÷ 9 = 1,869.44 S.Y.					1,869.44		1,869.44
STA. 553+32.52 TO STA. 554+33.52 = 101.00'							
101.00' x 16' ÷ 9 = 179.56 S.Y.	179.56			179.56		179.56	
101.00' x 24' (AVG.) ÷ 9 = 269.33 S.Y.					269.33		269.33
RAMP U							
STA. 543+07.85 TO STA. 553+27.93 = 1,020.08'							
1,020.08' x 16' ÷ 9 = 1,813.48 S.Y.	1,813.48			1,813.48		1,813.48	
1,020.08' x 22' ÷ 9 = 2,493.53 S.Y.					2,493.53		2,493.53
MAIN ST. INTERCHANGE							
RAMP A							
STA. 637+31.10 TO STA. 642+71.70 = 540.60'							
540.60' x 16' ÷ 9 = 961.07 S.Y.	961.07			961.07		961.07	
540.60' x 22' ÷ 9 = 1,321.47 S.Y.					1,321.47		1,321.47
RAMP B							
STA. 630+51.58 TO STA. 635+53.11 = 501.53'							
501.53' x 16' ÷ 9 = 891.61 S.Y.	891.61			891.61		891.61	
501.53' x 22' ÷ 9 = 1,225.96 S.Y.					1,225.96		1,225.96
RAMP C							
STA. 637+89.86 TO STA. 642+50 = 460.14'							
460.14' x 24' ÷ 9 = 1,227.04 S.Y.	1,227.04			1,227.04		1,227.04	
460.14' x 30' ÷ 9 = 1,533.80 S.Y.					1,533.80		1,533.80
STA. 642+50 TO STA. 643+00 = 50'							
50.00' x (24' + 16' ÷ 2) ÷ 9 = 111.11 S.Y.	111.11			111.11		111.11	
50.00' x (30' + 22' ÷ 2) ÷ 9 = 144.44 S.Y.					144.44		144.44
STA. 643+00 TO STA. 644+41 = 141.00'							
141.00' x 16' ÷ 9 = 250.67 S.Y.	250.67			250.67		250.67	
141.00' x 22' ÷ 9 = 344.67 S.Y.					344.67		344.67
RAMP D							
STA. 630+59.77 TO STA. 631+91.07 = 131.30'							
131.30' x 16' ÷ 9 = 233.42 S.Y.	233.42			233.42		233.42	
131.30' x 23' (AVG.) ÷ 9 = 335.54 S.Y.					335.54		335.54
STA. 631+91.07 TO STA. 635+43.49 = 352.42'							
352.42' x 16' ÷ 9 = 626.52 S.Y.	626.52			626.52		626.52	
352.42' x 22' ÷ 9 = 861.47 S.Y.					861.47		861.47
FROM PREVIOUS COLUMNS	15,071.56	0	0	15,071.56	17,516.36	15,071.56	17,516.36
FROM THIS COLUMN	10,833.76	0	0	10,833.76	14,799.77	10,833.76	14,799.77
CARRIED TO SHEET 20	25,905.32	0	0	25,905.32	32,316.13	25,905.32	32,316.13

CALCULATED MCM
CHECKED CER

PAVEMENT CALCULATIONS

ROS-23-8.23

STATION TO STATION	254			442		407	
	PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN			ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446)	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	TACK COAT @ 0.075 GAL./SQ.YD.
	1.75"	1.75" MIN. 3.25" MAX.	0" MIN. 1.50" MAX.	1.75"	1.50"		
	SQ.YD.			SQ.YD.		SQ.YD.	
PAVEMENT TRANSITIONS AT BUTT JOINTS							
NORTHBOUND & SOUTHBOUND U.S.R. 23							
STA. 433+75 TO STA. 434+50							
75.00 x 36' ÷ 9 x 2 = 600.00 S.Y.		600.00		600.00	600.00	600.00	600.00
EASTBOUND U.S.R. 35							
STA. 1263+44.57 TO STA. 1264+19.57							
75.00 x 36' ÷ 9 = 300.00 S.Y.		300.00		300.00	300.00	300.00	300.00
WESTBOUND U.S.R. 35							
STA. 1259+09.04 TO STA. 1259+84.04							
75.00 x 36' ÷ 9 = 300.00 S.Y.		300.00		300.00	300.00	300.00	300.00
S.R. 104/BRIDGE ST./THREE LOCKS ROAD INTERCHANGE							
RAMP A (CADD MEASURED)							
STA. 463+72.41 TO STA. 464+47.41 = 75.00'							
3,554.53 S.F. ÷ 9 = 394.95 S.Y.		394.95		394.95	394.95	394.95	394.95
RAMP B (CADD MEASURED)							
STA. 447+56.82 TO STA. 448+31.82 = 75.00'							
3,118.23 S.F. ÷ 9 = 346.47 S.Y.		346.47		346.47	346.47	346.47	346.47
RAMP C (CADD MEASURED)							
STA. 456+45.25 TO STA. 457+20.25 = 75.00'							
3,104.24 S.F. ÷ 9 = 344.92 S.Y.		344.92		344.92	344.92	344.92	344.92
RAMP D (CADD MEASURED)							
STA. 448+43.59 TO STA. 447+68.59 = 75.00'							
3,615.72 S.F. ÷ 9 = 401.75 S.Y.		401.75		401.75	401.75	401.75	401.75
EASTERN AVE. INTERCHANGE							
RAMP R (CADD MEASURED)							
STA. 544+40.06 TO STA. 545+15.06 = 75.00'							
3,246.95 S.F. ÷ 9 = 360.77 S.Y.		360.77		360.77	360.77	360.77	360.77
RAMP S (CADD MEASURED)							
STA. 542+60.70 TO STA. 543+35.70 = 75.00'							
2,987.18 S.F. ÷ 9 = 331.91 S.Y.		331.91		331.91	331.91	331.91	331.91
RAMP T (CADD MEASURED)							
STA. 544+92.75 TO STA. 545+67.75 = 75.00'							
3,040.52 S.F. ÷ 9 = 337.84 S.Y.		337.84		337.84	337.84	337.84	337.84
RAMP U (CADD MEASURED)							
STA. 542+32.85 TO STA. 543+07.85 = 75.00'							
3,403.72 S.F. ÷ 9 = 378.19 S.Y.		378.19		378.19	378.19	378.19	378.19
MAIN ST. INTERCHANGE							
RAMP A (CADD MEASURED)							
STA. 636+56.10 TO STA. 637+31.10 = 75.00'							
2782.36 S.F. ÷ 9 = 309.15 S.Y.		309.15		309.15	309.15	309.15	309.15
RAMP B (CADD MEASURED)							
STA. 635+53.11 TO STA. 636+28.11 = 75.00'							
2,448.44 S.F. ÷ 9 = 272.05 S.Y.		272.05		272.05	272.05	272.05	272.05
RAMP C (CADD MEASURED)							
STA. 637+14.86 TO STA. 637+89.86 = 75.00'							
2,671.28 S.F. ÷ 9 = 296.81 S.Y.		296.81		296.81	296.81	296.81	296.81
RAMP D (CADD MEASURED)							
STA. 635+43.49 TO STA. 636+18.49 = 75.00'							
2,474.03 S.F. ÷ 9 = 274.89 S.Y.		274.89		274.89	274.89	274.89	274.89
SUB-TOTAL THIS COLUMN	0	5,249.70	0	5,249.70	5,249.70	5,249.70	5,249.70

STATION TO STATION	254			442		407	
	PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN			ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446)	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	TACK COAT @ 0.075 GAL./SQ.YD.
	1.75"	1.75" MIN. 3.25" MAX.	0" MIN. 1.50" MAX.	1.75"	1.50"		
	SQ.YD.			SQ.YD.		SQ.YD.	
PAVEMENT TRANSITIONS AT BRIDGE APPROACHES							
MEASURED ALONG LANE LINE							
BRIDGE NO. ROS-23-0867 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 458+01.63 TO STA. 458+76.63							
3,797.95 S.F. ÷ 9 = 421.99 S.Y.		421.99		421.99	421.99	421.99	421.99
STA. 462+62.63 TO STA. 463+37.63							
3,500.09 S.F. ÷ 9 = 388.90 S.Y.		388.90		388.90	388.90	388.90	388.90
LEFT STRUCTURE (CADD MEASURED)							
STA. 458+40.17 TO STA. 459+15.17							
2858.35 S.F. ÷ 9 = 317.59 S.Y.		317.59		317.59	317.59	317.59	317.59
STA. 458+58.21 TO STA. 459+40.81 (RAMP B)							
2,205.63 S.F. ÷ 9 = 245.07 S.Y.		245.07		245.07	245.07	245.07	245.07
STA. 463+01.17 TO STA. 463+76.17							
3,368.72 S.F. ÷ 9 = 374.30 S.Y.		374.30		374.30	374.30	374.30	374.30
BRIDGE NO. ROS-23-0926 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 489+29.60 TO STA. 490+04.60							
2,666.43 S.F. ÷ 9 = 296.27 S.Y.		296.27		296.27	296.27	296.27	296.27
STA. 495+61.56 TO STA. 496+36.56							
2,733.57 S.F. ÷ 9 = 303.73 S.Y.		303.73		303.73	303.73	303.73	303.73
LEFT STRUCTURE (CADD MEASURED)							
STA. 489+59.44 TO STA. 490+34.44							
2,733.57 S.F. ÷ 9 = 303.73 S.Y.		303.73		303.73	303.73	303.73	303.73
STA. 495+86.40 TO STA. 496+61.40							
2,666.43 S.F. ÷ 9 = 296.27 S.Y.			296.27		296.27		296.27
BRIDGE NO. ROS-23-1000 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 528+33.31 TO STA. 529+08.31							
3,420.08 S.F. ÷ 9 = 380.01 S.Y.		380.01		380.01	380.01	380.01	380.01
STA. 531+28.01 TO STA. 532+03.01							
3,829.44 S.F. ÷ 9 = 425.49 S.Y.		425.49		425.49	425.49	425.49	425.49
LEFT STRUCTURE (CADD MEASURED)							
STA. 528+58.79 TO STA. 529+33.79							
4,011.93 S.F. ÷ 9 = 445.77 S.Y.			445.77		445.77		445.77
STA. 531+58.01 TO STA. 532+33.01							
4,000.14 S.F. ÷ 9 = 444.46 S.Y.		444.46		444.46	444.46	444.46	444.46
BRIDGE NO. ROS-23-1026 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 541+86.16 TO STA. 542+61.16							
2,676.61 S.F. ÷ 9 = 297.40 S.Y.		297.40		297.40	297.40	297.40	297.40
STA. 544+99.12 TO STA. 545+74.12							
2,725.22 S.F. ÷ 9 = 302.80 S.Y.		302.80		302.80	302.80	302.80	302.80
LEFT STRUCTURE (CADD MEASURED)							
STA. 542+07.22 TO STA. 542+82.22							
2,724.07 S.F. ÷ 9 = 302.67 S.Y.		302.67		302.67	302.67	302.67	302.67
STA. 545+20.20 TO STA. 545+95.20							
2,682.19 S.F. ÷ 9 = 298.02 S.Y.		298.02		298.02	298.02	298.02	298.02
FROM PREVIOUS COLUMNS	0	5,249.70	0	5,249.70	5,249.70	5,249.70	5,249.70
FROM THIS COLUMN	0	5,102.43	742.04	5,102.43	5,844.47	5,102.43	5,844.47
CARRIED TO SHEET 20	0	10,352.13	742.04	10,352.13	11,094.17	10,352.13	11,094.17

CALCULATED MCM
CHECKED CER

PAVEMENT CALCULATIONS

ROS-23-8.23

STATION TO STATION	254			442		407	
	PAVEMENT PLANING ASPHALT CONCRETE, AS PER PLAN			ASPHALT CONCRETE, INTERMEDIATE COURSE, 19MM, TYPE A (446)	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL./SQ.YD.	TACK COAT @ 0.075 GAL./SQ.YD.
		1.75" MIN.	0" MIN.				
	1.75"	3.25" MAX.	1.50" MAX.	1.75"	1.50"		
	SQ.YD.			SQ.YD.		SQ.YD.	
PAVEMENT TRANSITIONS AT BRIDGE APPROACHES (CONT.)							
BRIDGE NO. ROS-23-1052 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 555+39.01 TO STA. 556+14.01							
3,593.03 S.F. ÷ 9 = 399.23 S.Y.		399.23		399.23	399.23	399.23	399.23
STA. 559+13.05 TO STA. 559+88.05							
4,131.69 S.F. ÷ 9 = 459.08 S.Y.		459.08		459.08	459.08	459.08	459.08
LEFT STRUCTURE (CADD MEASURED)							
STA. 556+06.38 TO STA. 556+81.38							
4,146.74 S.F. ÷ 9 = 460.75 S.Y.		460.75		460.75	460.75	460.75	460.75
STA. 559+80.42 TO STA. 560+55.42							
3,202.23 S.F. ÷ 9 = 355.80 S.Y.		355.80		355.80	355.80	355.80	355.80
BRIDGE NO. ROS-23-1074 RIGHT							
STA. 567+08.52 TO STA. 567+83.52							
2,562.80 S.F. ÷ 9 = 284.76 S.Y.		284.76		284.76	284.76	284.76	284.76
STA. 571+12.23 TO STA. 571+87.23							
2,918.87 S.F. ÷ 9 = 324.32 S.Y.		324.32		324.32	324.32	324.32	324.32
BRIDGE NO. ROS-23-1202 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 634+61.03 TO STA. 635+36.03							
3,600 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
STA. 637+60.01 TO STA. 638+35.01							
3,600 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
LEFT STRUCTURE (CADD MEASURED)							
STA. 634+58.35 TO STA. 635+33.35							
3,600 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
STA. 637+57.36 TO STA. 638+32.36							
3,600 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
BRIDGE NO. ROS-23-1257 LEFT & RIGHT							
RIGHT STRUCTURE (CADD MEASURED)							
STA. 663+68.15 TO STA. 664+43.15							
3,600.00 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
LEFT STRUCTURE (CADD MEASURED)							
STA. 663+95.81 TO STA. 664+70.81							
3,600.00 S.F. ÷ 9 = 400.00 S.Y.		400.00		400.00	400.00	400.00	400.00
FROM THIS SHEET	0	4,683.94	0	4,683.94	4,683.94	4,683.94	4,683.94
FROM SHEET 17	133,407.79	0	0	133,407.79	195,218.90	133,407.79	195,218.90
FROM SHEET 18	25,905.32	0	0	25,905.32	32,316.13	25,905.32	32,316.13
FROM SHEET 19	0	10,352.13	742.04	10,352.13	11,094.17	10,352.13	11,094.17
SUB-TOTAL	159,313.11	15,036.07	742.04				
TOTAL	175,091.22			174,349.18	243,313.14	174,349.18	243,313.14
CONVERT TO CU. YD. OR GAL.				8,475.31	10,138.05	6,973.97	18,248.49
TOTAL	175,091.22			8,475.31	10,138.05	6,973.97	18,248.49
CARRIED TO THE GENERAL SUMMARY	175,092			8,476	10,139	6,974	18,249

CALCULATED MCM
CHECKED CER

PAVEMENT CALCULATIONS

ROS-23-8.23

REFERENCE NO.	SEE SHEET NO.	STATION TO STATION		SIDE	202			606						609		622			512		452	209	408	448	617		626	
					GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	CURB REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5 BARRIER DESIGN	ANCHOR ASSEMBLY, TYPE B	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 2	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	CURB, TYPE 4-C	ASPHALT CONCRETE CURB, TYPE 1	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	CONCRETE BARRIER END SECTION, TYPE D	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	* SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	6" NON-REINFORCED CONCRETE PAVEMENT	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	PRIME COAT @ 0.40 GAL/SY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, UNDER GUARDRAIL, PG64-22, AS PER PLAN	SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS		BARRIER REFLECTOR	
		FROM	TO																					2"	4"	1.50"	TYPE A	TYPE B
					FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	FT.	FT.	FT.	EACH	EACH	SQ. YD.	SQ. YD.	SQ. YD.	STA.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	EACH
GR-1	31	RAMP B 450+84.3	RAMP B 459+48.1	LT RAMP	850.00			825.00			1		1									8.5	283.3	283.3	283.3		9	4
GR-2	31	RAMP D 449+11.4	458+64.1	RT RAMP	918.75			893.75		1		1		20							4.44	9.4	731.1	731.1	731.1		10	4
GR-3	31	456+60.5	458+97.5	MED	43.75	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	4
GR-4	31,32	463+09.5	490+56.2	LT	2762.50			2762.50				1	1		20						4.44	27.6	1226.7	1226.7	1226.7		28	6
GR-5	31	462+80.3	465+17.5	MED	50.00	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	4
GR-6	31,32	462+34.4	490+06.6	RT	2781.25			2781.25				1	1		20						4.44	27.8	1235.6	1235.6	1235.6		28	6
GR-7	32	487+87.4	490+24.5	MED	43.75	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	6
GR-8	32	495+66.5	498+03.6	MED	62.50	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	6
GR-9	32,33	495+84.4	529+77.4	LT	3406.25			3406.25				1	1		20						4.44	34.1	1515.6	1515.6	1515.6		34	2
GR-10	32,33	495+34.8	529+16.2	RT	3400.00			3400.00				1	1		20						4.44	34.0	1511.1	1511.1	1511.1		34	2
GR-11	33	527+01.6	529+38.9	MED	50.00	181.50		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	2
GR-12	33	530+86.4	RAMP S 532+77	RT	212.50			189.69				1	1		20						4.44	1.9	84.4	84.4	84.4		2	
		RAMP S 532+75	RAMP S 533+23	RT												20	2			47.5								1
GR-13	33	RAMP S 533+21	RAMP S 540+20.2	RT RAMP	718.75			687.50			1		1									7.1	157.8	157.8	157.8		7	
																								394.4				
GR-14	33	531+09.1	532+71	MED	212.50			162.50				1	1		20						4.44	1.6	71.1	71.1	71.1		2	
		532+69	533+03	MED												5	1	1		33.6								1
GR-15	33	531+22.8	534+60.5	MED	200.00	44.00		181.25	125.00			1		1	20						4.44	3.5	155.6	155.6	155.6		8	
GR-16	33	531+49.6	RAMP R 539+40.1	LT RAMP	768.75			743.75		1		1			20						4.44	7.9	175.6	175.6	175.6		6	
																								438.9				
GR-17	33	537+73.4	543+04.6	LT	512.50			512.50			1		1									5.3	235.6	235.6	235.6		6	3
GR-18	33	537+93.1	542+69.1	RT	456.25			443.75		1		1			20						4.44	4.9	217.8	217.8	217.8		5	3
GR-19	33	539+70.2	542+82.2	MED	43.75	194.00		68.75	212.50			1		1	20						4.44	3.2	142.2	142.2	142.2		6	3
GR-20	33	544+76.7	550+01.8	RT	512.50			512.50			1		1									5.3	235.6	235.6	235.6		6	
GR-21	33	544+99.1	547+36.2	MED	56.25	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	3
GR-22	33	545+12.3	552+19.3	LT	681.25			668.75		1		1			20						4.44	7.2	320.0	320.0	320.0		7	
GR-23	33,34	545+82.1	555+78.5	RT RAMP	975.00			956.25		1		1			20						4.44	10.0	222.2	222.2	222.2		10	3
																								555.6				
			CARRIED TO SHEET 23		19,718.75	1389.50	0	19,608.44	1162.50	5	4	19	10	8	380	0	25	3	1	0	81.1	84.36	214.3	9187.9	10,576.8	9187.9	0	238	63

CALCULATED CER
CHECKED BCB

GUARDRAIL SUB-SUMMARY

ROS-23-8.23

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* LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

GUARDRAIL SUB-SUMMARY

CALCULATED CER | CHECKED BCB

REFERENCE NO.	SEE SHEET NO.	STATION TO STATION		SIDE	202			606						609		622			512		452	209	408	448	617		626	
					GUARDRAIL REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	CURB REMOVED	GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5 BARRIER DESIGN	ANCHOR ASSEMBLY, TYPE B	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 1	BRIDGE TERMINAL ASSEMBLY, TYPE 2	IMPACT ATTENUATOR, TYPE I (BIDIRECTIONAL)	CURB, TYPE 4-C	ASPHALT CONCRETE CURB, TYPE 1	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	CONCRETE BARRIER END SECTION, TYPE D	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	SEALING OF CONCRETE SURFACES * (EPOXY URETHANE)	6" NON-REINFORCED CONCRETE PAVEMENT	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	PRIME COAT @ 0.40 GAL/SY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, UNDER GUARDRAIL, PG64-22, AS PER PLAN	SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS		BARRIER REFLECTOR	
		FROM	TO																					2"	4"	1.50"	TYPE A	TYPE B
					FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	FT.	FT.	FT.	EACH	EACH	SQ. YD.	SQ. YD.	SQ. YD.	STA.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	EACH
GR-24	33	545+78.9	550+00	LT RAMP	400.00			362.50		1	1											4.2	140.0	140.0	140.0		5	
GR-25	33,34	RAMP T 447+72.4	RAMP T 555+36.5	LT RAMP	787.50			750.00			1		1									7.7	256.7	256.7	256.7		8	
		RAMP T 555+34.5	RAMP T 555+82.5	LT RAMP												20	2			47.5								1
GR-26	34	RAMP T 555+80.5	557+31.1	LT RAMP	168.75			150.00				1	1		20						4.44	1.5	66.7	66.7	66.7		2	3
GR-27	34	554+14.8	556+52.1	MED	50.00	194.00		68.75	137.50			1		1	20						4.44	2.5	111.1	111.1	111.1		5	3
GR-28	34	558+59.5	567+22.1	RT	862.50			862.50				1	1		20						4.44	8.6	382.2	382.2	382.2		9	3
GR-29	34	559+33.9	568+29.2	MED	900.00			900.00				1	1		20						4.44	9.0	400.0	400.0	400.0		10	3
GR-30	34	559+54.4	561+48.2	MED	243.75			156.25		1		1			20						4.44	2.0	88.9	88.9	88.9		3	3
GR-31	34	560+05.5	565+25.4	LT	518.75			518.75				1	1		20						4.44	5.2	231.1	231.1	231.1		6	
		565+23.4	565+76.7	LT															42.5	42.5								1
GR-32	34	565+74.7	568+33	LT	256.25			218.75		1		1			20						4.44	2.6	346.7	346.7	346.7		3	
GR-33	34	570+48.5	576+90.9	RT	650.00			637.50			1		1									6.6	293.3	293.3	293.3		7	
GR-34	34	571+66.2	574+18.6	MED	250.00			237.50			1		1									2.6	115.6	115.6	115.6		3	
		575+72.9	576+09.1	LT															29.1	29.1								1
GR-35	34	576+07.1	576+76.9	LT	231.25			31.25		1		1			20						4.44	0.8	35.6	35.6	35.6		2	
		575+76.7	576+12.5	MED															29.1	29.1								1
GR-36	34	576+10.5	576+79.9	MED	231.25			31.25		1		1			20						4.44	0.8	35.6	35.6	35.6		2	
GR-37	34,35	1259+84 (USR 35WB)	602+62.9	RT	2593.75		2593.75	2593.75				1			20	2573.75					4.44	25.8	1146.7	1146.7	1146.7		26	
		602+60.9	603+13.7	RT															42.5	42.5								1
		591+27.6	591+63.5	LT															29.1	29.1								1
GR-38	34,35	591+61.5	605+13.2	LT	1362.50			1362.50				1	1		20						4.44	13.6	604.4	604.4	604.4		14	
		591+27.4	591+63.8	MED															29.1	29.1								1
GR-39	34	591+61.8	592+31.7	MED	231.25			31.25		1		1			20						4.44	0.8	35.6	35.6	35.6		2	
		605+11.2	605+63.4	LT															42.5	42.5								1
GR-40	35	605+61.4	612+68	LT	681.25			668.75		1		1			20						4.44	7.1	315.6	315.6	315.6		8	
GR-41	35	603+11.7	616+39	RT	1300.00		631.25	1312.50			1		1			631.25						13.3	591.1	591.1	591.1		14	
GR-42	35	622+89.9	RAMP B 627+84.8	RT RAMP	468.75			456.25		1		1			20						4.44	5.0	222.2	222.2	222.2		5	
		RAMP B 627+82.8	RAMP B 628+35.4																42.5	42.5								1
GR-43	35	RAMP B 628+33.4	633+33.5	RT RAMP	487.50			487.50			1		1									5.1	396.7	396.7	396.7		6	
GR-44	35	626+33.9	627+83.9	MED	81.25	119.00		56.25	62.50			1		1	20						4.44	1.6	71.1	71.1	71.1		5	
		627+81.9	628+17.9																29.1	29.1								1
				CARRIED TO SHEET 23	12,756.25	313.00	3225.00	11,893.75	200.00	8	6	15	10	2	300	3205.00	20	2	0	315.5	363.0	66.60	126.4	5886.9	5886.9	5886.9	0	145	25

* LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

ROS-23-8.23

GUARDRAIL SUB-SUMMARY

CALCULATED CER | CHECKED BCB

REFERENCE NO.	SEE SHEET NO.	STATION TO STATION FROM	STATION TO STATION TO	SIDE	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED, BARRIER DESIGN	202 CURB REMOVED	606 GUARDRAIL, TYPE 5	606 GUARDRAIL, TYPE 5 BARRIER DESIGN	606 ANCHOR ASSEMBLY, TYPE B	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	609 CURB, TYPE 4-C	609 ASPHALT CONCRETE CURB, TYPE 1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	512 REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	512 * SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	452 6" NON-REINFORCED CONCRETE PAVEMENT	209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	408 PRIME COAT @ 0.40 GAL/SY	448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, UNDER GUARDRAIL, PG64-22, AS PER PLAN 2"	617 SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS 4"	617 SHOULDER RECONDITIONING MISC.: COMPACTED ASPHALT CONCRETE GRINDINGS 1.50"	626 BARRIER REFLECTOR TYPE A	626 BARRIER REFLECTOR TYPE B
					FT.	FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	FT.	FT.	FT.	EACH	EACH	SQ. YD.	SQ. YD.	SQ. YD.	STA.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EACH	EACH
GR-45	35	RAMP D 629+13.9	RAMP D 633+02.9	LT RAMP	325.00			337.50		1	1												3.9	130.0	130.0	130.0		4	
GR-46	35	631+33.5	635+46.1	LT	400.00			400.00			1		1										3.9	186.7	186.7	186.7		4	2
GR-47	35	630+68.7	635+50.7	RT	493.75			443.75		1		1			20							4.44	4.9	217.8	217.8	217.8		5	2
GR-48	35	632+99	635+47.9	MED	81.25	119.00		68.75	150.00			1		1	20							4.44	2.6	115.6	115.6	115.6		6	2
GR-49	35	637+44.4	639+56.8	MED	56.25	131.50		68.75	112.50			1		1	20							4.44	2.2	97.8	97.8	97.8		5	2
GR-50	35	637+47.3	641+92.7	RT	437.50			437.50			1		1										4.6	204.4	204.4	204.4		5	
GR-51	35	637+42.6	642+95.1	LT	518.75		518.75	506.25		1		1			20	498.75						4.44	5.5	244.4	244.4	244.4		6	
GR-52	35,36	RAMP A 638+69.9	664+61.8	RT	2606.25			2593.75		1		1			20							4.44	26.4	1173.3	1173.3	1173.3		27	13
GR-53	35,36	RAMP C 643+39.6	RAMP C 646+53.5	LT RAMP	312.50		312.50	300.00			1		1			312.50						3.2	106.7	106.7	106.7		4	
		RAMP C 646+51.5	RAMP C 647+04.3	LT RAMP																42.5	42.5								1
GR-54	36	RAMP C 647+02.3	664+11.1	LT	1659.38		840.63	1696.15				1	1		20	820.63						4.44	17.0	755.6	755.6	755.6		18	13
		664+09.1	665+03.5																	77.0	77.0								1
		646+54.7	646+91.1	MED																29.1	29.1								1
GR-55	36	646+89.1	648+39.5	MED	56.25	119.00		56.25	62.50			1		1	20							4.44	1.6	71.1	71.1	71.1		5	
GR-56	36	662+03.9	664+78.6	MED	81.25	119.00		68.75	175.00			1		1	20							4.44	2.8	124.4	124.4	124.4		7	13
		664+87	678+11	MED																									13
ITEM 617 ASPHALT CONCRETE GRINDINGS FOR AREAS WITHOUT GUARDRAIL																													
NORTHBOUND AND SOUTHBOUND U.S.R. 23																													
STA. 433+75 TO STA. 678+17.44 = 24,442.44 FT																													
24,442.44' x 3' x 2 (SIDES) x 2 (DIRECTIONS) ÷ 9 = 32,589.92 SY																										32,589.92			
ADD FOR INTERCHANGE RAMPS																													
11,157.99' x 3' x 2 (SIDES) ÷ 9 = 7438.66 SY																										7438.66			
SUBTRACT FOR GUARDRAIL AND BARRIER																													
42,301.59' x 3' WIDE ÷ 9 = 14,100.53 SY																										(14,100.53)			
SUBTRACT FOR BRIDGES																													
3283.64' x 3' WIDE x 4 (SIDES) ÷ 9 = 4378.19 SY																										(4378.19)			
SUBTRACT FOR BRIDGE ROS-23-1074																													
327.95' x 3' WIDE x 2 (SIDES) ÷ 9 = 218.63 SY																										(218.63)			
			FROM THIS SHEET		7028.13	488.50	1671.88	6977.40	500.00	4	4	8	4	4	160	1631.88	0	0	0	148.6	148.6	35.52	78.6	3427.8	3427.8	3427.8	21,331.23	96	63
			FROM SHEET 21		19,718.75	1389.50	0	19,608.44	1162.50	5	4	19	10	8	380	0	25	3	1	0	81.1	84.36	214.3	9187.9	10,576.8	9187.9	0	238	63
			FROM SHEET 22		12,756.25	313.00	3225.00	11,893.75	200.00	8	6	15	10	2	300	3205.00	20	2	0	315.5	363.0	66.60	126.4	5886.9	5886.9	5886.9	0	145	25
																										18,502.6	21,331.23	479	151
			TOTAL		39,503.13	2191.00	4896.88	38,479.59	1862.50	17	14	42	24	14	840	4836.88	45	5	1	464.1	592.7	186.48	419.3	18,502.6	19,891.5	39,833.83		630	
			CONVERT TO GAL OR CY																					7401.04	1105.08				
			TO GENERAL SUMMARY		39,503.13	2191.00	4897	38,479.59	1862.50	17	14	42	24	14	840	4837	45	5	1	465	593	187	420	7402	1106	39,834		630	

* LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

ROS-23-8.23

STATION	644 LANE LINE	644 EDGE LINE WHITE	644 EDGE LINE YELLOW	644 CHANNELIZING LINE	644 LANE ARROW	644 STOP LINE	645 LANE LINE, TYPE A3	645 EDGE LINE, TYPE A3 WHITE	645 EDGE LINE, TYPE A3 YELLOW	645 CHANNELIZING LINE, TYPE A3	621 RAISED PAVEMENT MARKER REMOVED	621 RAISED PAVEMENT MARKER TWO-WAY WHITE/RED	621 RAISED PAVEMENT MARKER TWO-WAY YELLOW/RED	621 RAISED PAVEMENT MARKER ONE-WAY WHITE	632 DETECTOR LOOP, AS PER PLAN
	FEET	FEET		FEET	EACH	FEET	FEET	FEET		FEET	EACH	EACH			EACH
LANE LINE															
NORTHBOUND U.S.R. 23															
STA. 419+25 TO STA. 436+33.86 = 1,708.86′	1,708.86										23	23			
STA. 436+33.86 TO STA. 454+21.75 = 1,787.89′	1,787.89										24	24			
STA. 454+21.75 TO STA. 580+20.58 = 12,598.83′	12,598.83										159	159			
STA. 579+99.06 TO STA. 608+65.82 = 2,866.76′	2,866.76										37	37			
STA. 1274+34.04 (USR 35 WB) TO STA. 608+65.82 = 4,662.66′	4,662.66										60	60			
STA. 608+65.82 TO STA. 678+17.44 = 6,951.62′ x 2 = 13,903.24′	13,903.24										176	176			
STA. 442+69 TO STA. 445+38 = 269.00′	269.00														
STA. 457+49 TO STA. 458+67 = 118.00′	118.00														
STA. 531+29 TO STA. 532+49 = 127.00′	127.00														
STA. 624+72 TO STA. 627+07 = 235.00′	235.00														
STA. 645+57 TO STA. 647+97 = 240.00′	240.00														
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)															
STA. 458+95.90 TO STA. 462+81.90 = 386.00′	(-386.00)						386.00					(-6)			
STA. 490+19.52 TO STA. 495+71.48 = 551.96′	(-551.96)						551.96					(-8)			
STA. 529+18.80 TO STA. 531+43 = 224.20′	(-224.20)						224.20					(-4)			
STA. 542+71.68 TO STA. 545+09.66 = 237.98′	(-237.98)						237.98					(-4)			
STA. 556+47.69 TO STA. 559+46.73 = 299.04′	(-299.04)						229.04					(-5)			
STA. 567+82.91 TO STA. 571+10.86 = 327.95′	(-327.95)						327.95					(-6)			
STA. 635+34.69 TO STA. 637+58.69 = 224.00′ x 2 = 448.00′	(-448.00)						448.00					(-8)			
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46′ x 2 = 2,720.92′	(-2,720.92)						2,720.92					(-36)			
STA. 458+67 TO STA. 461+69 = 302.00′							302.00								
STA. 529+85 TO STA. 531+22 = 137.00′							137.00								
STA. 555+90 TO STA. 558+21 = 231.00′							231.00								
SOUTHBOUND U.S.R. 23															
STA. 433+75 TO STA. 436+33.86 = 258.86′	258.86										5	5			
STA. 436+69.54 TO STA. 454+21.75 = 1,752.21′	1,752.21										23	23			
STA. 454+21.75 TO STA. 607+48.79 = 15,327.04′	15,327.04										193	193			
STA. 1264+19.57 (USR35 EB) TO STA. 607+48.79 = 3,525.49′	3,525.49										45	45			
STA. 607+48.79 TO STA. 678+17.44 = 7,068.65 x 2 = 14,137.30′	14,137.30										180	180			
STA. 678+17.44 TO STA. 692+67.44 (USR 23) = 1,450.00′	1,450.00										20	20			
STA. 678+17.44 TO STA. 1143+69.77 (USR 35) = 1,450.00′	1,450.00										20	20			
STA. 441+36 TO STA. 443+79 = 243.00′	243.00														
STA. 528+09 TO STA. 529+40 = 131.00′	131.00														
STA. 556+02 TO STA. 556+94 = 92.00′	92.00														
STA. 624+77 TO STA. 627+17 = 240.00′	240.00														
STA. 648+02 TO STA. 649+82 = 180.00′	180.00														
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)															
STA. 458+95.90 TO STA. 462+81.90 = 386.00′	(-386.00)						386.00								
STA. 490+19.52 TO STA. 495+71.48 = 551.96′	(-551.96)						551.96					(-6)			
STA. 529+18.80 TO STA. 531+43 = 224.20′	(-224.20)						224.20					(-8)			
STA. 542+71.68 TO STA. 545+09.66 = 237.98′	(-237.98)						237.98					(-4)			
STA. 556+47.69 TO STA. 559+46.73 = 299.04′	(-299.04)						229.04					(-4)			
STA. 635+34.69 TO STA. 637+58.69 = 224.00′ x 2 = 448.00′	(-448.00)						448.00					(-5)			
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46′ x 2 = 2,720.92′	(-2,720.92)						2,720.92					(-8)			
												(-36)			
STA. 460+76 TO STA. 463+41 = 265.00′							265.00								
STA. 529+40 TO STA. 532+03 = 263.00′							263.00								
STA. 556+94 TO STA. 558+57 = 163.00′							163.00								
CARRIED TO SHEET 27	67,239.99	0	0	0	0	0	11,285.15	0	0	0	965	817	0	0	0

CALCULATED MCM
CHECKED CER

PAVEMENT MARKING SUBSUMMARY

ROS-23-8.23

STATION	644							645					621					632						
	LANE LINE	EDGE LINE		CHANNELIZING LINE	LANE ARROW	STOP LINE		LANE LINE, TYPE A3	EDGE LINE, TYPE A3		CHANNELIZING LINE, TYPE A3		RAISED PAVEMENT MARKER REMOVED	RAISED PAVEMENT MARKER				DETECTOR LOOP, AS PER PLAN						
		WHITE	YELLOW						WHITE	YELLOW				TWO-WAY WHITE/RED	TWO-WAY YELLOW/RED	ONE-WAY WHITE							
	FEET	FEET		FEET	EACH	FEET		FEET	FEET		FEET		EACH	EACH				EACH						
EDGE LINE (WHITE)																								
NORTHBOUND U.S.R. 23																								
STA. 433+75 TO STA. 580+20.58 = 14,645.58'		14,645.58																						
STA. 579+99.06 TO STA. 589+41 = 941.94'		941.94																						
STA. 1259+84.04 (USR 35 EB) TO STA. 678+17.44 = 10,164.27'		10,164.27																						
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)																								
STA. 458+95.90 TO STA. 462+81.90 = 386.00'		(-386.00)							386.00															
STA. 490+19.52 TO STA. 495+71.48 = 551.96'		(-551.96)							551.96															
STA. 529+18.80 TO STA. 531+43 = 224.20'		(-224.20)							224.20															
STA. 542+71.68 TO STA. 545+09.66 = 237.98'		(-237.98)							237.98															
STA. 556+47.69 TO STA. 559+46.73 = 299.04'		(-299.04)							229.04															
STA. 567+82.91 TO STA. 571+10.86 = 327.95'		(-327.95)							327.95															
STA. 635+34.69 TO STA. 637+58.69 = 224.00'		(-224.00)							224.00															
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46'		(-1,360.46)							1,360.46															
SOUTHBOUND U.S.R. 23																								
STA. 433+75 TO STA. 436+33.86 = 258.86'		258.86																						
STA. 436+69.54 TO STA. 678+17.44 = 24,147.90'		24,147.90																						
STA. 1264+19.57 (USR 35 EB) TO STA. 1263+44.57 = 75.00'		75.00																						
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)																								
STA. 458+95.90 TO STA. 462+81.90 = 386.00'		(-386.00)							386.00															
STA. 490+19.52 TO STA. 495+71.48 = 551.96'		(-551.96)							551.96															
STA. 529+18.80 TO STA. 531+43 = 224.20'		(-224.20)							224.20															
STA. 542+71.68 TO STA. 545+09.66 = 237.98'		(-237.98)							237.98															
STA. 556+47.69 TO STA. 559+46.73 = 299.04'		(-299.04)							229.04															
STA. 635+34.69 TO STA. 637+58.69 = 224.00'		(-224.00)							224.00															
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46'		(-1,360.46)							1,360.46															
S.R. 104/BRIDGE STREET/THREE LOCKS ROAD INTERCHANGE																								
STA. 443+79.67 TO STA. 464+48.39 = 2,068.72' (RAMP A)		2,068.72																						
STA. 447+56.82 TO STA. 459+06.35 = 1,149.53' (RAMP B)		1,149.53											18			16								
STA. 447+06.41 TO STA. 457+11.62 = 1,005.21' (RAMP C)		1,005.21											18			16								
STA. 447+04.59 TO STA. 457+49.67 = 1,045.08' (RAMP D)		1,045.08																						
EASTERN AVENUE INTERCHANGE																								
STA. 532+03.17 TO STA. 545+16.19 = 1,313.02' (RAMP R)		1,313.02																						
STA. 534+26.55 TO STA. 543+29.70 = 903.15' (RAMP S)		903.15														16								
STA. 545+00.00 TO STA. 554+31.00 = 931.00' (RAMP T)		931.00														16								
STA. 542+33.75 TO STA. 556+42.63 = 1,408.88' (RAMP U)		1,408.88																						
MAIN STREET INTERCHANGE																								
STA. 636+56.10 TO STA. 645+57 = 900.90' (RAMP A)		900.90																						
STA. 630+51.38 TO STA. 636+34.61 = 583.23' (RAMP B)		583.23											13			16		2						
STA. 637+12.47 TO STA. 644+41.40 = 728.93' (RAMP C)		728.93											15			16		2						
STA. 627+17 TO STA. 636+25.41 = 908.41' (RAMP D)		908.41																						
CARRIED TO SHEET 27	0	56,284.38	0	0	0	0		0	6,755.23	0	0		64	0	0	96		4						

CALCULATED MCM
CHECKED CER

PAVEMENT MARKING SUBSUMMARY

ROS-23-8.23

25
104

STATION	644							645					621					632						
	LANE LINE	EDGE LINE		CHANNELIZING LINE	LANE ARROW	STOP LINE		LANE LINE, TYPE A3	EDGE LINE, TYPE A3		CHANNELIZING LINE, TYPE A3		RAISED PAVEMENT MARKER REMOVED	RAISED PAVEMENT MARKER				DETECTOR LOOP, AS PER PLAN						
		WHITE	YELLOW						WHITE	YELLOW				TWO-WAY WHITE/RED	TWO-WAY YELLOW/RED	ONE-WAY WHITE								
	FEET	FEET		FEET	EACH	FEET		FEET	FEET		FEET		EACH	EACH				EACH						
EDGE LINE (YELLOW)																								
NORTHBOUND U.S.R. 23																								
STA. 433+75 TO STA. 580+20.58 = 14,645.58'			14,645.58																					
STA. 1259+84.04 (USR 35 EB) TO STA. 582+00 = 525.54'			525.54										8		8									
STA. 579+99.06 TO STA. 678+17.44 = 9,818.38'			9,818.38																					
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)																								
STA. 458+95.90 TO STA. 462+81.90 = 386.00'			(-386.00)							386.00														
STA. 490+19.52 TO STA. 495+71.48 = 551.96'			(-551.96)							551.96														
STA. 529+18.80 TO STA. 531+43 = 224.20'			(-224.20)							224.20														
STA. 542+71.68 TO STA. 545+09.66 = 237.98'			(-237.98)							237.98														
STA. 556+47.69 TO STA. 559+46.73 = 299.04'			(-299.04)							229.04														
STA. 567+82.91 TO STA. 571+10.86 = 327.95'			(-327.95)							327.95														
STA. 635+34.69 TO STA. 637+58.69 = 224.00'			(-224.00)							224.00														
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46'			(-1,360.46)							1,360.46														
SOUTHBOUND U.S.R. 23																								
STA. 433+75 TO STA. 436+33.86 = 258.86'			258.86																					
STA. 436+69.54 TO STA. 678+17.44 = 24,147.90'			24,147.90																					
STA. 1264+19.57 (USR 35 EB) TO STA. 1263+44.57 = 75.00'			75.00																					
BRIDGE DECKS AND APPROACH SLABS (FROM SHEET 3)																								
STA. 458+95.90 TO STA. 462+81.90 = 386.00'			(-386.00)							386.00														
STA. 490+19.52 TO STA. 495+71.48 = 551.96'			(-551.96)							551.96														
STA. 529+18.80 TO STA. 531+43 = 224.20'			(-224.20)							224.20														
STA. 542+71.68 TO STA. 545+09.66 = 237.98'			(-237.98)							237.98														
STA. 556+47.69 TO STA. 559+46.73 = 299.04'			(-299.04)							229.04														
STA. 635+34.69 TO STA. 637+58.69 = 224.00'			(-224.00)							224.00														
STA. 664+56.98 TO STA. 678+17.44 = 1,360.46'			(-1,360.46)							1,360.46														
S.R. 104/BRIDGE STREET/THREE LOCKS ROAD INTERCHANGE																								
STA. 447+68.00 TO STA. 464+48.39 = 1,680.39' (RAMP A)			1,680.39										26		22									
STA. 446+83.77 TO STA. 459+06.35 = 1,222.58' (RAMP B)			1,222.58										19		17									
STA. 447+06.41 TO STA. 457+11.62 = 1,005.21' (RAMP C)			1,005.21										18		14									
STA. 447+04.59 TO STA. 455+04.01 = 799.42' (RAMP D)			799.42										14		11									
EASTERN AVENUE INTERCHANGE																								
STA. 534+87.55 TO STA. 545+16.19 = 1,028.64' (RAMP R)			1,028.64										15		14									
STA. 534+26.55 TO STA. 543+29.70 = 903.15' (RAMP S)			903.15										11		13									
STA. 545+00.00 TO STA. 554+31.00 = 931.00' (RAMP T)			931.00										11		13									
STA. 542+33.75 TO STA. 553+26.88 = 1,093.13' (RAMP U)			1,093.13										17		15									
MAIN STREET INTERCHANGE																								
STA. 636+56.10 TO STA. 642+72.77 = 616.67' (RAMP A)			616.67										9		9									
STA. 630+51.38 TO STA. 636+34.61 = 583.23' (RAMP B)			583.23										13		9									
STA. 637+12.47 TO STA. 644+41.40 = 728.93' (RAMP C)			728.93										14		11									
STA. 630+59.77 TO STA. 636+25.41 = 565.64' (RAMP D)			565.64										8		9									
CARRIED TO SHEET 27	0	0	53,734.02	0	0	0		0	0	6,755.23	0		183	0	165	0		0						

CALCULATED MCM
CHECKED CER

PAVEMENT MARKING SUBSUMMARY

ROS-23-8.23

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STATION	644 LANE LINE	644 EDGE LINE WHITE	644 EDGE LINE YELLOW	644 CHANNELIZING LINE	644 LANE ARROW	644 STOP LINE	645 LANE LINE, TYPE A3	645 EDGE LINE, TYPE A3 WHITE	645 EDGE LINE, TYPE A3 YELLOW	645 CHANNELIZING LINE, TYPE A3	621 RAISED PAVEMENT MARKER REMOVED	621 RAISED PAVEMENT MARKER TWO-WAY WHITE/RED	621 RAISED PAVEMENT MARKER TWO-WAY YELLOW/RED	621 RAISED PAVEMENT MARKER ONE-WAY WHITE	632 DETECTOR LOOP, AS PER PLAN
	FEET	FEET		FEET	EACH	FEET	FEET	FEET		FEET	EACH	EACH			EACH
CHANNELIZING LINE															
NORTHBOUND U.S.R. 23															
STA. 445+37 TO STA. 447+06 = 169' x 2 = 338.00'				338.00							20	10			
STA. 455+00 TO STA. 457+49 = 249.00'				249.00							11	8			
STA. 532+49 TO STA. 534+25 = 176.00' x 2 = 352.00'				352.00							9	10			
STA. 553+26 TO STA. 555+90 = 264.00'				264.00							4	8			
STA. 582+00 TO STA. 589+41 = 741.00'				741.00							15	20			
STA. 627+07 TO STA. 630+52 = 345.00' x 2 = 690.00'				690.00							10	19			
STA. 642+79 TO STA. 645+57 = 278.00'				278.00							3	8			
SOUTHBOUND U.S.R. 23															
STA. 443+79 TO STA. 447+74 = 395.00'				395.00							12	11			
STA. 459+05 TO STA. 460+76 = 171.00' x 2 = 342.00'										342.00	21				
STA. 532+03 TO STA. 534+90 = 287.00'				287.00							5	9			
STA. 554+31 TO STA. 556+03 = 172.00' x 2 = 344.00'				344.00							11	10			
STA. 572+93 TO STA. 576+65 = 372.00' x 2 = 744.00'				744.00							19	20			
STA. 627+17 TO STA. 630+61 = 344.00'				344.00							3	10			
STA. 644+14 TO STA. 648+02 = 388.00' x 2 = 776.00'				776.00							16	21			
MAIN STREET INTERCHANGE															
STA. 637+25 TO STA. 641+50 = 425.00' (RAMP C)				425.00							9	12			
LANE ARROW															
MAIN STREET INTERCHANGE (RAMP C)															
STA. 637+55 = 3 EACH					3										
STA. 638+43 = 3 EACH					3										
STA. 639+31 = 3 EACH					3										
STA. 640+19 = 3 EACH					3										
STA. 641+07 = 3 EACH					3										
STOP LINE															
S.R. 104/BRIDGE STREET/THREE LOCKS ROAD INTERCHANGE															
STA. 457+00 = 33.00' (RAMP C)						33.00									
STA. 447+65 = 45.00' (RAMP B)						45.00									
EASTERN AVENUE INTERCHANGE															
STA. 543+20 = 38.00' (RAMP S)						38.00									
STA. 545+10 = 40.00' (RAMP T)						40.00									
MAIN STREET INTERCHANGE															
STA. 636+18 = 45.00' (RAMP B)						45.00									
STA. 637+25 = 40.00' (RAMP C)						40.00									
FROM THIS SHEET	0	0	0	6,227.00	15	241.00	0	0	0	342.00	168	176	0	0	0
FROM SHEET 24	67,239.99	0	0	0	0	0	11,285.15	0	0	0	965	817	0	0	0
FROM SHEET 25	0	56,284.38	0	0	0	0	0	6,755.23	0	0	64	0	0	96	4
FROM SHEET 26	0	0	53,734.02	0	0	0	0	0	6,755.23	0	183	0	165	0	0
SUB-TOTAL		56,284.38	53,734.02					6,755.23	6,755.23			993	165	96	
TOTAL	67,239.99	110,018.40		6,227.00	15	241.00	11,285.15	13,510.46		342.00	1,380	1,254			4
CONVERT TO MILE	12.73	20.84					2.14	2.56							
TOTAL	12.73	20.84		6,227.00	15	241.00	2.14	2.56		342.00	1,380	1,254			4
CARRIED TO GENERAL SUMMARY SHEET	12.73	20.84		6,227.00	15	241.00	2.14	2.56		342.00	1,380	1,254			4

CALCULATED MCM
CHECKED CER

PAVEMENT MARKING SUBSUMMARY

ROS-23-8.23

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STATION TO STATION	618 RUMBLE STRIPS (ASPHALT CONCRETE) FT.
RUMBLE STRIPS	
NORTHBOUND U.S.R. 23 (OUTSIDE LANE)	
STA. 433+75 TO STA. 446+05 =	1,230.00
STA. 446+05 TO STA. 456+49 =	1,044.00
STA. 456+49 TO STA. 458+52 =	203.00
STA. 462+45 TO STA. 489+95 =	2,750.00
STA. 495+48 TO STA. 528+88 =	3,340.00
STA. 531+13 TO STA. 533+25 =	212.00
STA. 533+25 TO STA. 542+54 =	929.00
STA. 544+93 TO STA. 554+90 =	997.00
STA. 554+90 TO STA. 555+69 =	79.00
STA. 558+77 TO STA. 567+48 =	871.00
STA. 570+59 TO STA. 578+50 =	791.00
STA. 576+75 TO STA. 580+21 =	346.00
STA. 579+99 TO STA. 629+52 =	4,953.00
STA. 629+52 TO STA. 635+36 =	584.00
STA. 637+61 TO STA. 644+57 =	696.00
STA. 644+57 TO STA. 664+33 =	1,976.00
NORTHBOUND U.S.R. 23 (MEDIAN LANE)	
STA. 433+75 TO STA. 458+86 =	2,511.00
STA. 462+73 TO STA. 490+12 =	2,739.00
STA. 495+64 TO STA. 529+11 =	3,347.00
STA. 531+36 TO STA. 542+66 =	1,130.00
STA. 545+05 TO STA. 556+30 =	1,125.00
STA. 559+30 TO STA. 568+11 =	881.00
STA. 576+75 TO STA. 578+50 =	175.00
STA. 571+59 TO STA. 580+21 =	862.00
STA. 579+99 TO STA. 605+26 =	2,527.00
STA. 607+65 TO STA. 635+35 =	2,770.00
STA. 637+60 TO STA. 664+51 =	2,691.00
TOTAL	41,759.00
CARRIED TO NEXT COLUMN	41,759.00

STATION TO STATION	618 RUMBLE STRIPS (ASPHALT CONCRETE) FT.
RUMBLE STRIPS	
SOUTHBOUND U.S.R. 23 (OUTSIDE LANE)	
STA. 433+75 TO STA. 444+79 =	1,104.00
STA. 444+79 TO STA. 459+22 =	1,443.00
STA. 463+21 TO STA. 490+40 =	2,719.00
STA. 495+96 TO STA. 529+46 =	3,350.00
STA. 531+78 TO STA. 533+03 =	125.00
STA. 533+03 TO STA. 542+86 =	983.00
STA. 545+27 TO STA. 555+31 =	1,004.00
STA. 555+31 TO STA. 557+06 =	175.00
STA. 560+14 TO STA. 580+21 =	2,007.00
STA. 572+20 TO STA. 573+95 =	175.00
STA. 579+99 TO STA. 628+17 =	4,818.00
STA. 628+17 TO STA. 635+32 =	715.00
STA. 637+57 TO STA. 645+15 =	758.00
STA. 645+15 TO STA. 664+77 =	1,962.00
SOUTHBOUND U.S.R. 23 (MEDIAN LANE)	
STA. 433+75 TO STA. 459+05 =	2,530.00
STA. 462+94 TO STA. 490+27 =	2,733.00
STA. 495+81 TO STA. 529+26 =	3,345.00
STA. 531+53 TO STA. 542+78 =	1,125.00
STA. 545+16 TO STA. 556+64 =	1,148.00
STA. 559+68 TO STA. 573+95 =	1,427.00
STA. 572+20 TO STA. 580+21 =	801.00
STA. 579+99 TO STA. 607+33 =	2,734.00
STA. 609+74 TO STA. 635+33 =	2,559.00
STA. 637+58 TO STA. 664+63 =	2,705.00
TOTAL THIS COLUMN	42,445.00
FROM PREVIOUS COLUMN	41,759.00
TOTAL	84,204.00
CONVERT TO MILE	15.95
TO GENERAL SUMMARY	15.95

STATION TO STATION	409 SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS FT.
SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	
NORTHBOUND U.S.R. 23	
STA. 433+75 TO STA. 458+95.90 = 2,520.90′	
STA. 462+81.90 TO STA. 490+19.52 = 2,737.62′	
5,258.52′ ÷ 20′(AVERAGE JOINT SPACING) = 264 JOINTS	
264 JOINTS x 36′ = 9,504.00′	9,504.00
ADDITIONAL FOR RAMPS, RAMP TAPERS, AND GORE AREAS	
STA. 439+02.90 TO STA. 444+32 = 529.10′	
529.10′ ÷ 20′(AVERAGE JOINT SPACING) = 27 JOINTS	
27 JOINTS x 12′ = 324.00′	324.00
STA. 444+32 TO STA. 447+05 = 273′.00′	
273.00′ ÷ 20′(AVERAGE JOINT SPACING) = 14 JOINTS	
14 JOINTS x 24′(AVERAGE JOINT WIDTH) = 336.00′	336.00
STA. 455+01 TO STA. 458+95.90 = 394.90′	
394.90′ ÷ 20′(AVERAGE JOINT SPACING) = 20 JOINTS	
20 JOINTS x 26′(AVERAGE JOINT WIDTH) = 520.00′	520.00
STA. 462+81.90 TO STA. 466+29 = 347.10′	
347.10′ ÷ 20′(AVERAGE JOINT SPACING) = 18 JOINTS	
18 JOINTS x 4′(AVERAGE JOINT WIDTH) = 72.00′	72.00
RAMP C	
STA. 447+05 TO STA. 457+11.52 = 1,006.52′	
1,006.52′ ÷ 20′(AVERAGE JOINT SPACING) = 51 JOINTS	
51 JOINTS x 22′ = 1,122.00′	1,122.00
RAMP D	
STA. 447+04.59 TO STA. 455+01 = 796.41′	
796.41′ ÷ 20′(AVERAGE JOINT SPACING) = 40 JOINTS	
40 JOINTS x 22′ = 880.00′	880.00
SOUTHBOUND U.S.R. 23	
STA. 433+75 TO STA. 436+33.86 = 258.86′	
STA. 436+69.54 TO STA. 458+95.90 = 2,226.36′	
STA. 462+81.90 TO STA. 490+19.52 = 2,737.62′	
5,222.84′ ÷ 20′(AVERAGE JOINT SPACING) = 262 JOINTS	
262 JOINTS x 36′ = 9,432.00′	9,432.00
ADDITIONAL FOR RAMPS, RAMP TAPERS, AND GORE AREAS	
STA. 434+64.19 TO STA. 447+74 = 1,309.81′	
1,309.81′ ÷ 20′(AVERAGE JOINT SPACING) = 66 JOINTS	
66 JOINTS x 18′(AVERAGE JOINT WIDTH) = 1,188.00′	1,188.00
STA. 462+81.90 TO STA. 467+05 = 423.10′	
423.10′ ÷ 20′(AVERAGE JOINT SPACING) = 22 JOINTS	
22 JOINTS x 12′ = 264.00′	264.00
RAMP A	
STA. 447+74 TO STA. 464+48.39 = 1,674.39′	
1,674.39′ ÷ 20′(AVERAGE JOINT SPACING) = 84 JOINTS	
84 JOINTS x 22′ = 1,848.00′	1,848.00
RAMP B	
STA. 446+83.77 TO STA. 459+05 = 1,221.23′	
1,221.23′ ÷ 20′(AVERAGE JOINT SPACING) = 61 JOINTS	
61 JOINTS x 22′ = 1,342.00′	1,342.00
TOTAL	26,832.00
TO GENERAL SUMMARY	26,832

CALCULATED MCM
CHECKED CER

MISCELLANEOUS QUANTITIES

ROS-23-8.23

STATION TO STATION	SIDE (DIRECTION OF STATIONING)	DISTANCE BETWEEN	620 DELINEATOR, POST MOUNTED YELLOW	620 DELINEATOR, POST MOUNTED WHITE	620 DELINEATOR, BRACKET MOUNTED (WHITE)
			EACH	EACH	EACH
DELINEATORS					
S.R. 104/BRIDGE ST./THREE LOCKS RD. INTERCHANGE					
RAMP A					
USR 23 STA 434+65 TO RAMP A STA 445+00	LT.	200		6	
RAMP A STA 445+00 TO RAMP A STA 447+30	LT.	200-->90		2	
RAMP A STA 447+70 TO RAMP A STA 453+10	RT.	90	7		
RAMP A STA 453+10 TO RAMP A STA 454+30	RT.	120	1		
RAMP A STA 454+30 TO RAMP A STA 456+30	LT.	200		2	
RAMP A STA 456+30 TO RAMP A STA 458+30	LT.	200-->60		2	
RAMP A STA 458+30 TO RAMP A STA 461+90	LT.	60		6	
RAMP A STA. 463+10	LT.	120		1	
RAMP A STA. 464+10	LT.	100		1	
RAMP B					
USR 23 STA 467+05 TO RAMP B STA. 459+05	LT.	200		3	2
RAMP B STA 459+00 TO RAMP B STA 457+60	RT.	140	2		
RAMP B STA 457+60 TO RAMP B STA 450+10	RT.	50	15		
RAMP B STA 448+90 TO RAMP B STA 447+70	RT.	120	2		
RAMP C					
USR 23 NB STA 439+00 TO USR 23 NB STA 447+00	RT.	200		5	
RAMP C STA 447+10 TO RAMP C STA 449+30	LT.	140-->80	3		
RAMP C STA 449+30 TO RAMP C STA 450+90	LT.	80	2		
RAMP C STA 450+90 TO RAMP C STA 452+10	LT.	120	1		
RAMP C STA 452+10 TO RAMP C STA 456+10	RT.	120		3	
RAMP D					
RAMP D STA 448+00 TO RAMP D STA 450+00	LT.	200	2		
RAMP D STA 450+00 TO RAMP D STA 451+90	LT.	200-->50	2		
RAMP D STA 451+90 TO RAMP D STA 444+90	LT.	50	6		
RAMP D STA 444+90 TO USR 23 STA 458+10	RT.	50-->200		3	
USR 23 STA 458+10 TO USR 23 STA 466+10	RT.	200		2	2
EASTERN AVE. INTERCHANGE					
RAMP R					
USR 23 STA 523+25 TO RAMP R STA 535+25	LT.	200		6	1
RAMP R STA 535+00 TO RAMP R STA 540+00	RT.	100	6		
RAMP R STA 540+00 TO RAMP R STA 541+50	RT.	150	1		
RAMP R STA 541+50 TO RAMP R STA 543+40	LT.	150-->60		3	
RAMP R STA 543+40 TO RAMP R STA 545+00	LT.	60		3	
RAMP S					
USR 23 STA 526+25 TO RAMP S STA 542+25	RT.	200		9	1
RAMP T					
RAMP T STA 546+40 TO USR 23 SB STA 562+40	LT.	200		8	1
RAMP U					
RAMP T STA 542+75 TO RAMP T STA 547+55	RT.	60		9	
RAMP T STA 547+55 TO RAMP T STA 549+95	RT.	120		2	
RAMP T STA 549+95 TO RAMP T STA 553+15	LT.	80	5		
USR 23 STA 553+15 TO USR 23 STA 556+35	RT.	80-->200		3	
USR 23 STA 556+35 TO USR 23 NB STA 564+35	RT.	200		4	
SUB-TOTAL THIS COLUMN			55	83	7

STATION TO STATION	SIDE (DIRECTION OF STATIONING)	DISTANCE BETWEEN	620 DELINEATOR, POST MOUNTED YELLOW	620 DELINEATOR, POST MOUNTED WHITE	620 DELINEATOR, BRACKET MOUNTED (WHITE)
			EACH	EACH	EACH
DELINEATORS (CONT.)					
MAIN STREET INTERCHANGE					
RAMP A					
RAMP A STA 637+00 TO USR 23 STA 653+00	RT.	200		9	
RAMP B					
USR 23 STA 621+35 TO RAMP B STA 635+35	RT.	200		8	
RAMP C					
RAMP C STA 638+50 TO USR 23 STA 652+50	LT.	200		8	
RAMP D					
USR 23 STA 618+35 TO RAMP D STA 634+35	LT.	200		9	
RAMP D STA 634+35 TO RAMP D STA 635+35	LT.	100		1	
FROM PREVIOUS COLUMNS			55	83	7
FROM THIS COLUMN			0	35	0
			55	118	
TOTALS			173		7
TOTAL CARRIED TO GENERAL SUMMARY			173		7

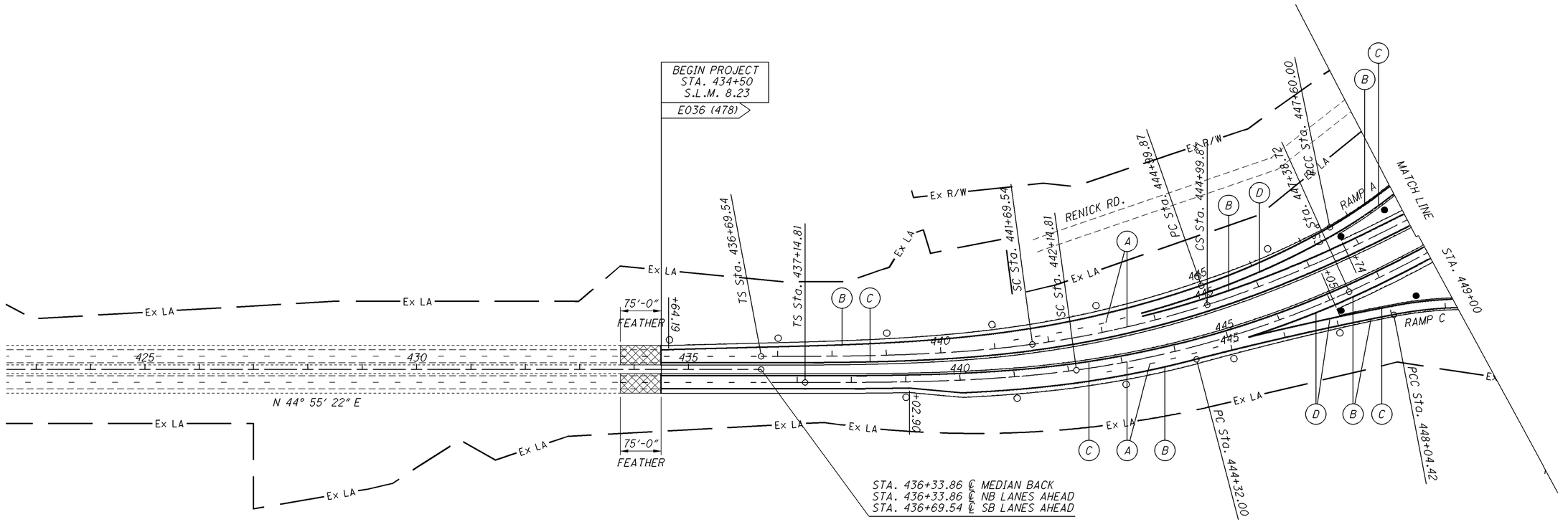
CALCULATED MCM
CHECKED CER

MISCELLANEOUS QUANTITIES

ROS-23-8.23

EX. SPIRAL DATA (SB LANES)
P.I. Sta. 444+80.75

Δ = 31° 55′ 56″ (LT)	θ_1 = 7° 40′ 00″	θ_2 = 14° 08′ 08″
Dc = 3° 04′ 00″	K_1 = 249.85′	K_2 = 460.01′
R = 1,868.34′	P_1 = 5.57′	P_2 = 18.91′
Lc = 330.33′	LT_1 = 333.65′	LT_2 = 616.56′
Es = 87.85′	ST_1 = 166.95′	ST_2 = 309.08′
	T_1 = 811.21′	T_2 = 974.75′
	LS_1 = 500.00′	LS_2 = 921.88′



PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) LANE ARROW

EX. SPIRAL DATA (NB LANES)
P.I. Sta. 444+89.04

Δ = 31° 55′ 56″ (LT)	θ_1 = 7° 50′ 00″	θ_2 = 7° 40′ 59″
Dc = 3° 08′ 00″	K_1 = 249.84′	K_2 = 245.05′
R = 1,828.59′	P_1 = 5.69′	P_2 = 5.48′
Lc = 523.91′	LT_1 = 333.66′	LT_2 = 327.24′
Es = 79.18′	ST_1 = 166.96′	ST_2 = 163.75′
	T_1 = 774.24′	T_2 = 770.19′
	LS_1 = 500.00′	LS_2 = 490.40′

○ TYPE C DELINEATORS, WHITE

● TYPE D DELINEATORS, YELLOW

TRANSITION PLANING

FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 421+00 TO STA. 449+00

ROS-23-8.23

EX. SPIRAL DATA (SB LANES)
P.I. Sta. 444+80.75

Δ = 31° 55′ 56″ (LT)	θ_1 = 7° 40′ 00″	θ_2 = 14° 08′ 08″
Dc = 3° 04′ 00″	K_1 = 249.85′	K_2 = 460.01′
R = 1,868.34′	P_1 = 5.57′	P_2 = 18.91′
Lc = 330.33′	LT_1 = 333.65′	LT_2 = 616.56′
Es = 87.85′	ST_1 = 166.95′	ST_2 = 309.08′
	T_1 = 811.21′	T_2 = 974.75′
	LS_1 = 500.00′	LS_2 = 921.88′

○ TYPE C DELINEATORS, WHITE
● TYPE D DELINEATORS, YELLOW
TRANSITION PLANING

FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING
STA. 449+00 TO STA. 475+00

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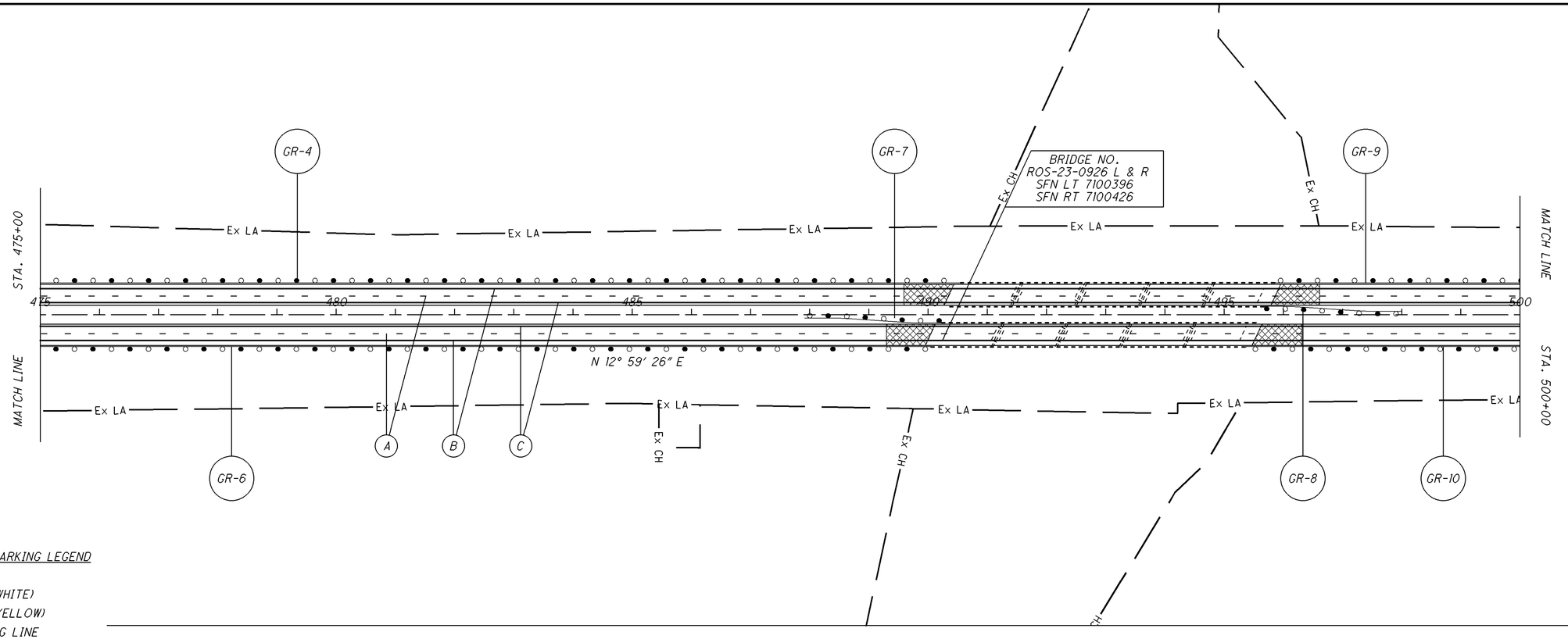
EX. SPIRAL DATA (NB LANES)
P.I. Sta. 444+89.04

Δ = 31° 55′ 56″ (LT)	θ_1 = 7° 50′ 00″	θ_2 = 7° 40′ 59″
Dc = 3° 08′ 00″	K_1 = 249.84′	K_2 = 245.05′
R = 1,828.59′	P_1 = 5.69′	P_2 = 5.48′
Lc = 523.91′	LT_1 = 333.66′	LT_2 = 327.24′
Es = 79.18′	ST_1 = 166.96′	ST_2 = 163.75′
	T_1 = 774.24′	T_2 = 770.19′
	LS_1 = 500.00′	LS_2 = 490.40′

PAVEMENT MARKING LEGEND
(A) LANE LINE
(B) EDGE LINE (WHITE)
(C) EDGE LINE (YELLOW)
(D) CHANNELIZING LINE
(E) STOP LINE
(F) LANE ARROW

BRIDGE NO.
ROS-23-0867 L & R
SFN LT 7100337
SFN RT 7100361

STA. 454+21.75 ℄ NB LANES BACK
STA. 454+21.75 ℄ SB LANES BACK
STA. 454+21.75 ℄ MEDIAN AHEAD



PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) LANE ARROW

- ○ TYPE C DELINEATORS, WHITE
- ● TYPE D DELINEATORS, YELLOW
- TRANSITION PLANING

FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 475+00 TO STA. 525+00

ROS-23-8.23

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EX. SPIRAL DATA (℄ MEDIAN U.S.R. 23)
P.I. Sta. 537+11.33

Δ = 15° 00′ 25″ (LT)	θs = 1° 07′ 30″
Dc = 1° 30′ 00″	k = 75.00′
R = 3,819.72′	p = 0.25′
Ls = 150.00′	LT = 100.00′
Ts = 578.14′	ST = 50.00′
Lc = 850.46′	Es = 33.24′

BRIDGE NO.
ROS-23-1000 L & R
SFN LT 7100450
SFN RT 7100485

BRIDGE NO.
ROS-23-1026 L & R
SFN LT 7100515
SFN RT 7100574

CSX RAILROAD

EASTERN AVE.

RAMP R

RAMP T

RAMP S

RAMP U

MATCH LINE STA. 525+00

MATCH LINE STA. 552+00

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) LANE ARROW

TYPE C DELINEATORS, WHITE

TYPE D DELINEATORS, YELLOW

TRANSITION PLANING

FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 525+00 TO STA. 552+00

ROS-23-8.23

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EX. SPIRAL DATA (℄ SB LANES U.S.R. 23)
P.I. Sta. 568+56.46
Δ = 24° 00′ 07″ (LT)
Dc = 3° 30′ 00″
R = 1,637.02′
Ls = 400.00′
T = 765.00′
Lc = 685.77′
θs = 7° 00′ 00″
k = 199.90′
p = 4.07′
LT = 266.88′
ST = 133.52′

BRIDGE NO.
ROS-23-1052 L & R
SFN LT 7100604
SFN RT 7100639

EX. CURVE DATA (℄ SB LANES U.S.R. 23)
P.I. Sta. 576+92.25
Δ = 4° 58′ 37″ (LT)
Dc = 0° 30′ 00″
R = 11,459.16′
T = 498.01′
L = 995.39′
E = 10.82′

EX. SPIRAL DATA (℄ NB LANES U.S.R. 23)
P.I. Sta. 571+68.69
Δ = 41° 02′ 12″ (LT)
Dc = 3° 00′ 00″
R = 1,909.86′
Ls = 400.00′
Ts = 916.00′
Lc = 967.89′
θs = 6° 00′ 00″
k = 199.93′
p = 3.49′
LT = 266.82′
ST = 133.47′
Es = 133.09′

BRIDGE NO.
ROS-23-1074 R
SFN RT 7100663

PAVEMENT MARKING LEGEND
(A) LANE LINE
(B) EDGE LINE (WHITE)
(C) EDGE LINE (YELLOW)
(D) CHANNELIZING LINE
(E) STOP LINE
(F) LANE ARROW

EX. CURVE DATA (℄ SB LANES U.S.R. 23)
P.I. Sta. 576+92.25
Δ = 4° 58′ 37″ (LT)
Dc = 0° 30′ 00″
R = 11,459.16′
T = 498.01′
L = 995.39′
E = 10.82′

EX. SPIRAL DATA (℄ SB LANES U.S.R. 23 & EB U.S.R. 35)
P.I. Sta. 595+89.55
Δ = 26° 59′ 38″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
Ls = 200.00′
Ts = 1,200.27′
Lc = 1,959.51′
θs = 1° 15′ 00″
k = 100.00′
p = 0.36′
LT = 133.34′
ST = 66.67′
Es = 130.56′

STA. 581+89.63 U.S.R. 23 SB IS
STA. 1254+47.58 U.S.R. 35 EB

STA. 579+99.06 U.S.R. 23 NB IS
STA. 1256+38.14 U.S.R. 35 WB

EQUATION (NB LANES):
Sta. 579+99.06 AHEAD
Sta. 580+20.58 BACK

EX. SPIRAL DATA (℄ NB LANES U.S.R. 23 & WB U.S.R. 35)
P.I. Sta. 594+83.44
Δ = 33° 00′ 23″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
Ls = 200.00′
Ts = 1,458.13′
Lc = 2,440.51′
θs = 1° 15′ 00″
k = 100.00′
p = 0.36′
LT = 133.34′
ST = 66.67′
Es = 197.32′

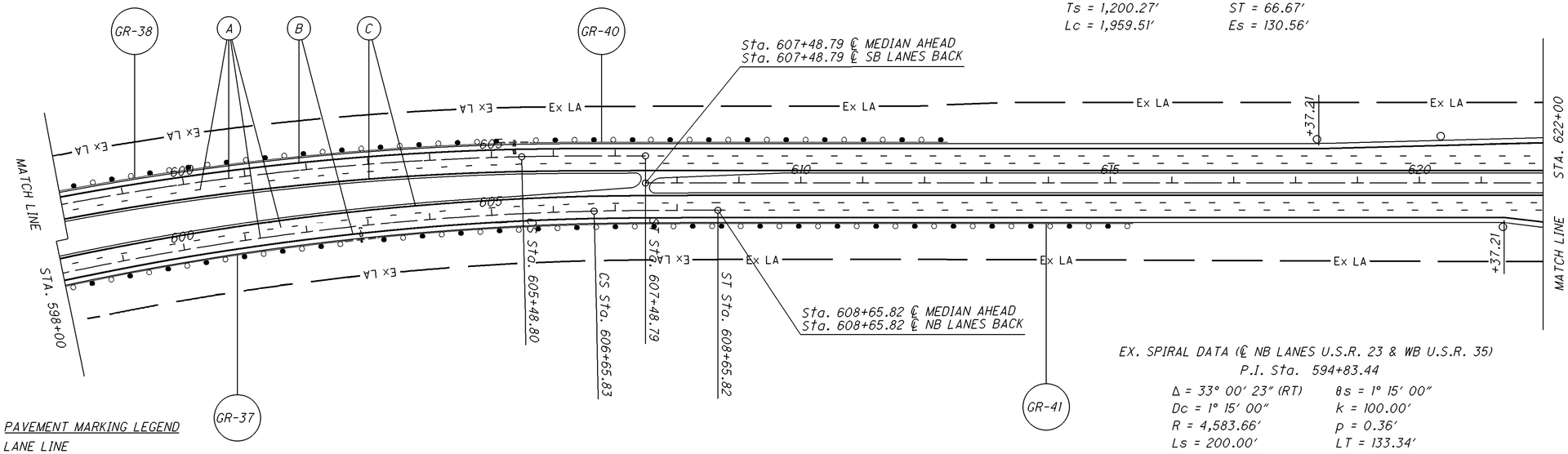
○ TYPE C DELINEATORS, WHITE
● TYPE D DELINEATORS, YELLOW
▨ TRANSITION PLANING

FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 552+00 TO STA. 598+00

ROS-23-8.23



EX. SPIRAL DATA (℄ SB LANES U.S.R. 23 & EB U.S.R. 35)
P.I. Sta. 595+89.55

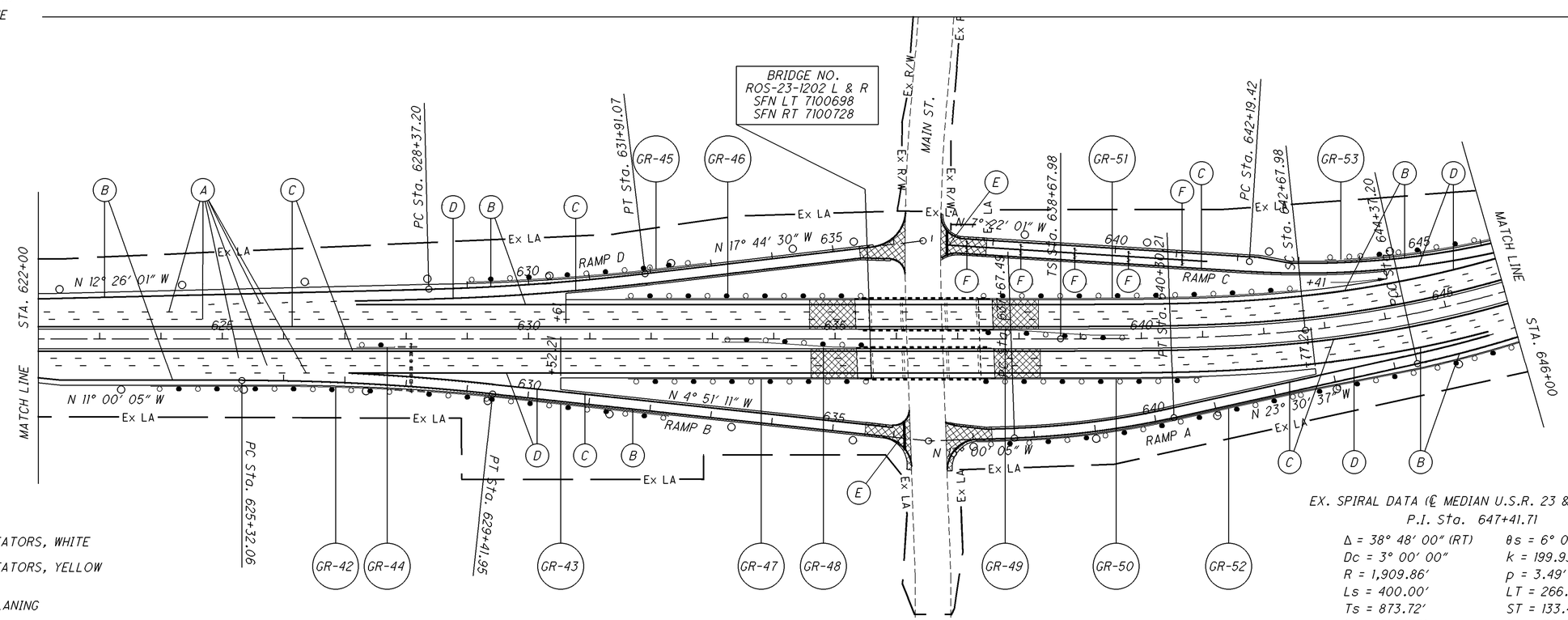
Δ = 26° 59′ 38″ (RT)	θs = 1° 15′ 00″
Dc = 1° 15′ 00″	k = 100.00′
R = 4,583.66′	p = 0.36′
Ls = 200.00′	LT = 133.34′
Ts = 1,200.27′	ST = 66.67′
Lc = 1,959.51′	Es = 130.56′

EX. SPIRAL DATA (℄ NB LANES U.S.R. 23 & WB U.S.R. 35)
P.I. Sta. 594+83.44

Δ = 33° 00′ 23″ (RT)	θs = 1° 15′ 00″
Dc = 1° 15′ 00″	k = 100.00′
R = 4,583.66′	p = 0.36′
Ls = 200.00′	LT = 133.34′
Ts = 1,458.13′	ST = 66.67′
Lc = 2,440.51′	Es = 197.32′

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) LANE ARROW



- ○ TYPE C DELINEATORS, WHITE
- ● TYPE D DELINEATORS, YELLOW
- ▨ TRANSITION PLANING

EX. SPIRAL DATA (℄ MEDIAN U.S.R. 23 & U.S.R. 35)
P.I. Sta. 647+41.71

Δ = 38° 48′ 00″ (RT)	θs = 6° 00′ 00″
Dc = 3° 00′ 00″	k = 199.93′
R = 1,909.86′	p = 3.49′
Ls = 400.00′	LT = 266.82′
Ts = 873.72′	ST = 133.47′
Lc = 893.33′	Es = 118.66′

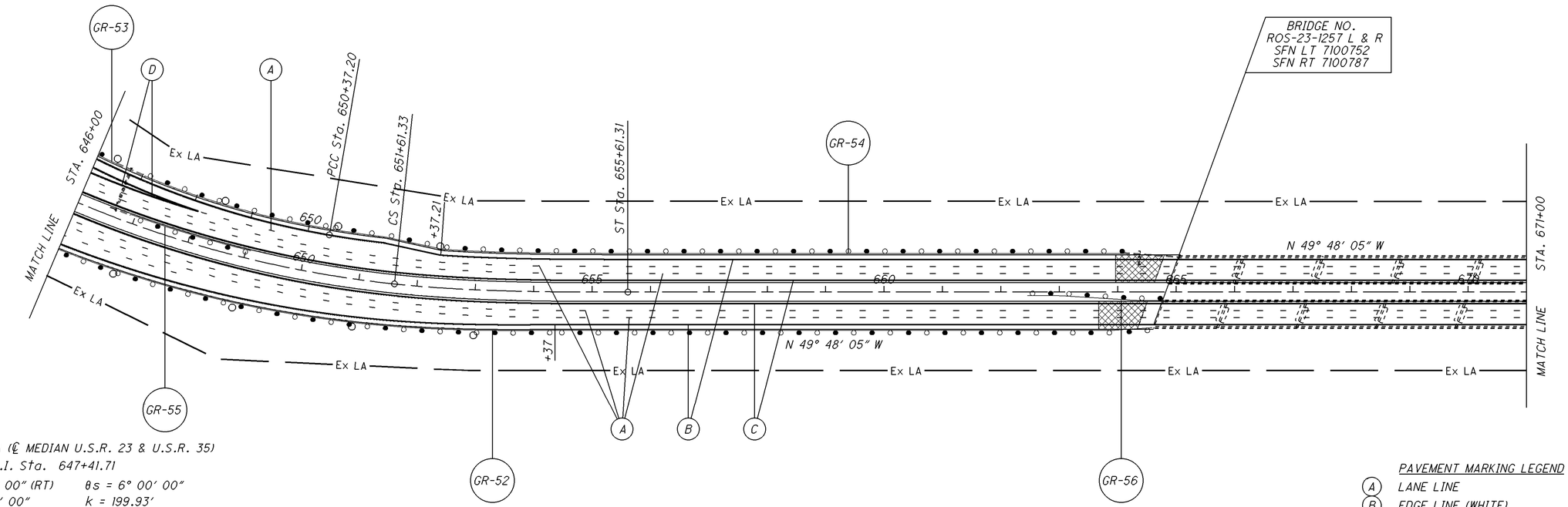
FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 598+00 TO STA. 646+00

ROS-23-8.23

35
104

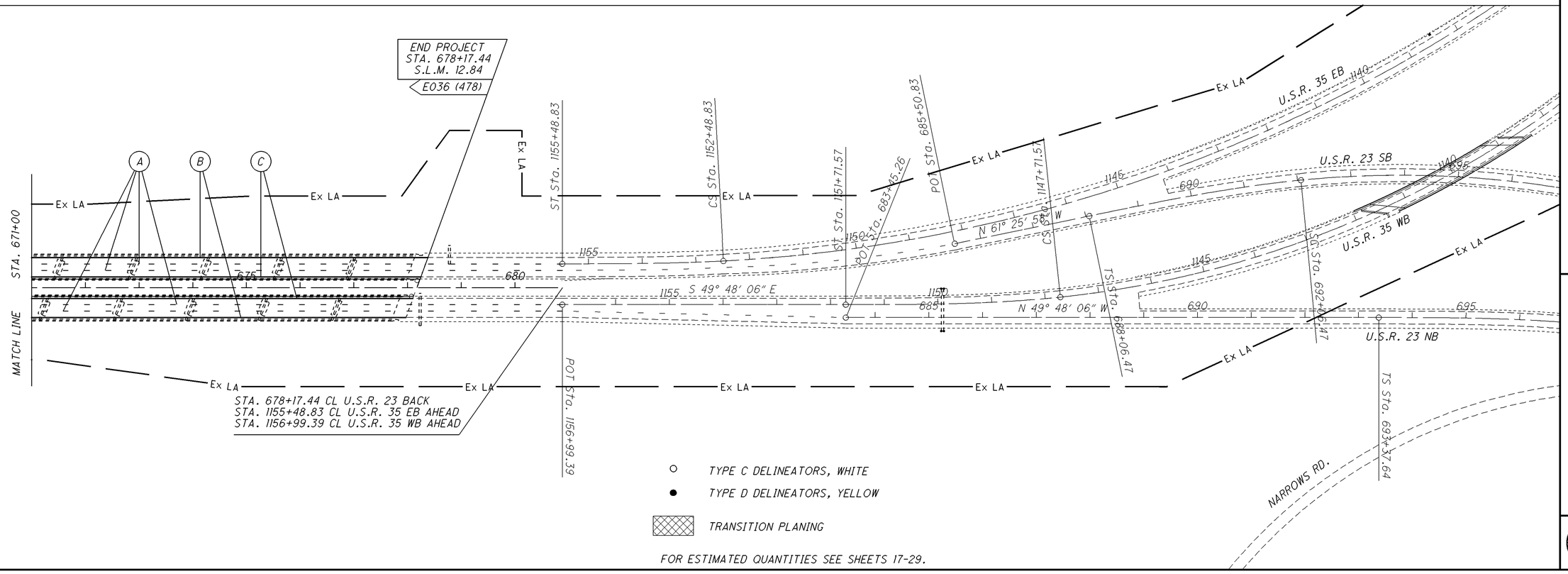


EX. SPIRAL DATA (℄ MEDIAN U.S.R. 23 & U.S.R. 35)
P.I. Sta. 647+41.71

Δ = 38° 48′ 00″ (RT)	θs = 6° 00′ 00″
Dc = 3° 00′ 00″	k = 199.93′
R = 1,909.86′	p = 3.49′
Ls = 400.00′	LT = 266.82′
Ts = 873.72′	ST = 133.47′
Lc = 893.33′	Es = 118.66′

PAVEMENT MARKING LEGEND

- (A) LANE LINE
- (B) EDGE LINE (WHITE)
- (C) EDGE LINE (YELLOW)
- (D) CHANNELIZING LINE
- (E) STOP LINE
- (F) LANE ARROW



FOR ESTIMATED QUANTITIES SEE SHEETS 17-29.

HORIZONTAL SCALE IN FEET
0 50 100 200

PLAN AND PAVEMENT MARKING STA. 646+00 TO STA. 690+00

ROS-23-8.23

36
104

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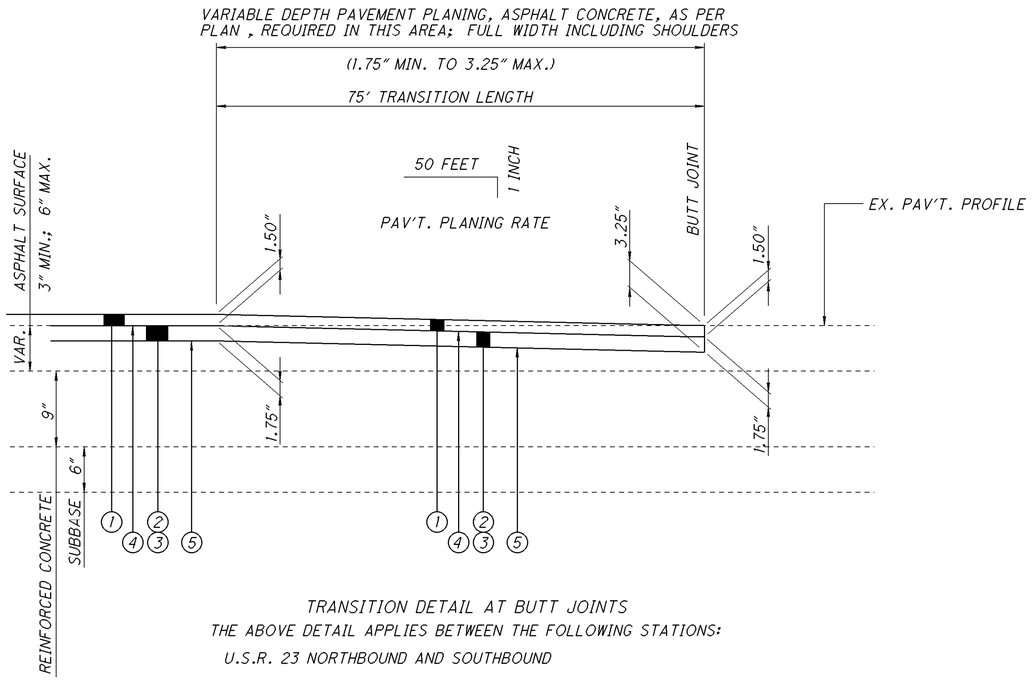


TRANSITION DETAIL AT BUTT JOINTS

THE ABOVE DETAIL APPLIES BETWEEN THE FOLLOWING STATIONS:

U.S.R. 23 NORTHBOUND AND SOUTHBOUND

STA. 433+75 TO STA. 434+50

U.S.R. 35 EASTBOUND

STA. 1263+44.57 TO STA. 1264+19.57

U.S.R. 35 WESTBOUND

STA. 1259+09.04 TO STA. 1259+84.04

S.R. 104 / BRIDGE STREET / C.R. ROAD 205 (THREE LOCKS ROAD) INTERCHANGE

RAMP A STA. 463+72.41 TO RAMP A STA. 464+47.41
RAMP B STA. 447+56.82 TO RAMP B STA. 448+31.82
RAMP C STA. 456+45.25 TO RAMP C STA. 457+20.25
RAMP D STA. 448+43.59 TO RAMP D STA. 447+68.59

U.S.R. 50 (EASTERN AVENUE) INTERCHANGE

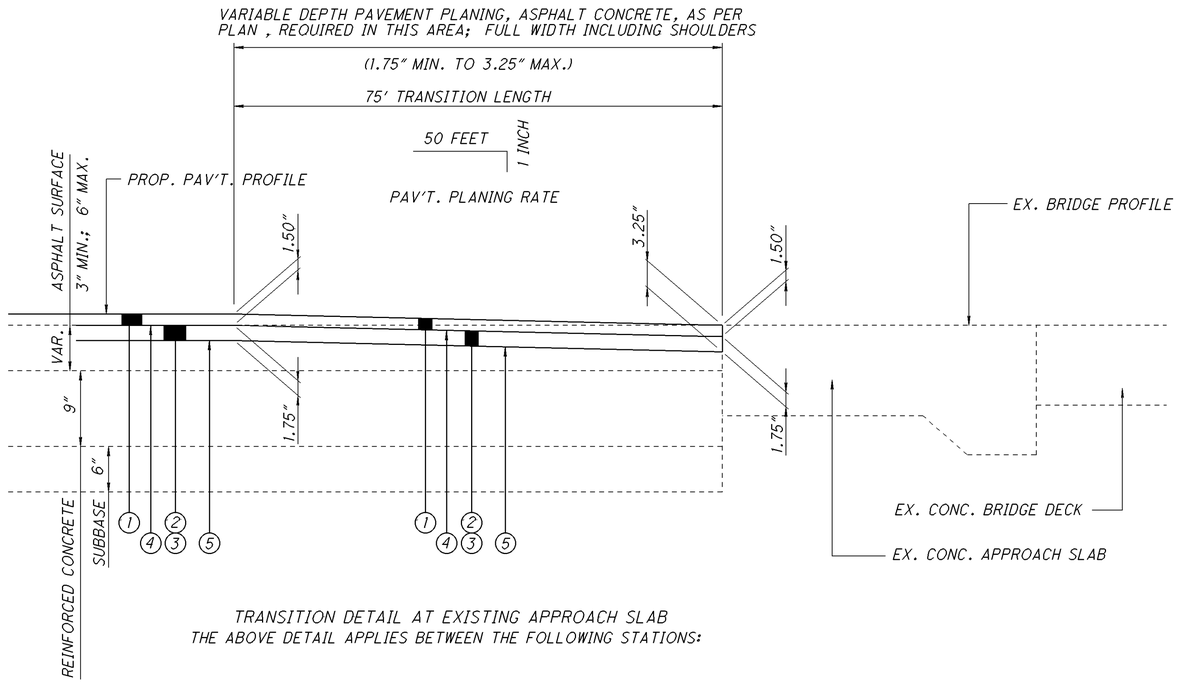
RAMP R STA. 544+40.06 TO RAMP R STA. 545+15.06
RAMP S STA. 542+60.70 TO RAMP S STA. 543+35.70
RAMP T STA. 544+92.75 TO RAMP T STA. 545+67.75
RAMP U STA. 542+32.85 TO RAMP U STA. 543+07.85

MAIN STREET / C.R. 238 (CHARLESTON PIKE) INTERCHANGE

RAMP A STA. 636+56.10 TO RAMP A STA. 637+31.10
RAMP B STA. 635+53.11 TO RAMP B STA. 636+28.11
RAMP C STA. 637+14.86 TO RAMP C STA. 637+89.86
RAMP D STA. 635+43.49 TO RAMP D STA. 636+18.49

PROPOSED PAVEMENT LEGEND

(1)	442	1.50"	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1.75"	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	254	1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (SEE GENERAL NOTE)
(4)	407		TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL. PER SQ.YD.
(5)	407		TACK COAT @ 0.075 GAL. PER SQ.YD.



TRANSITION DETAIL AT EXISTING APPROACH SLAB

THE ABOVE DETAIL APPLIES BETWEEN THE FOLLOWING STATIONS:

BRIDGE NO. ROS-23-0867
U.S.R. 23 NORTHBOUND
STA. 458+01.63 TO STA. 458+76.63
STA. 462+62.63 TO STA. 463+37.63
U.S.R. 23 SOUTHBOUND
STA. 458+40.17 TO STA. 459+15.17
STA. 463+01.17 TO STA. 463+76.17
RAMP B
STA. 458+58.21 TO STA. 459+40.81

BRIDGE NO. ROS-23-0926
U.S.R. 23 NORTHBOUND
STA. 489+29.60 TO STA. 490+04.60
STA. 495+61.56 TO STA. 496+36.56
U.S.R. 23 SOUTHBOUND
STA. 489+59.44 TO STA. 490+34.44

BRIDGE NO. ROS-23-1000
U.S.R. 23 NORTHBOUND
STA. 528+33.31 TO STA. 529+08.31
STA. 531+28.01 TO STA. 532+03.01
U.S.R. 23 SOUTHBOUND
STA. 531+58.01 TO STA. 532+33.01

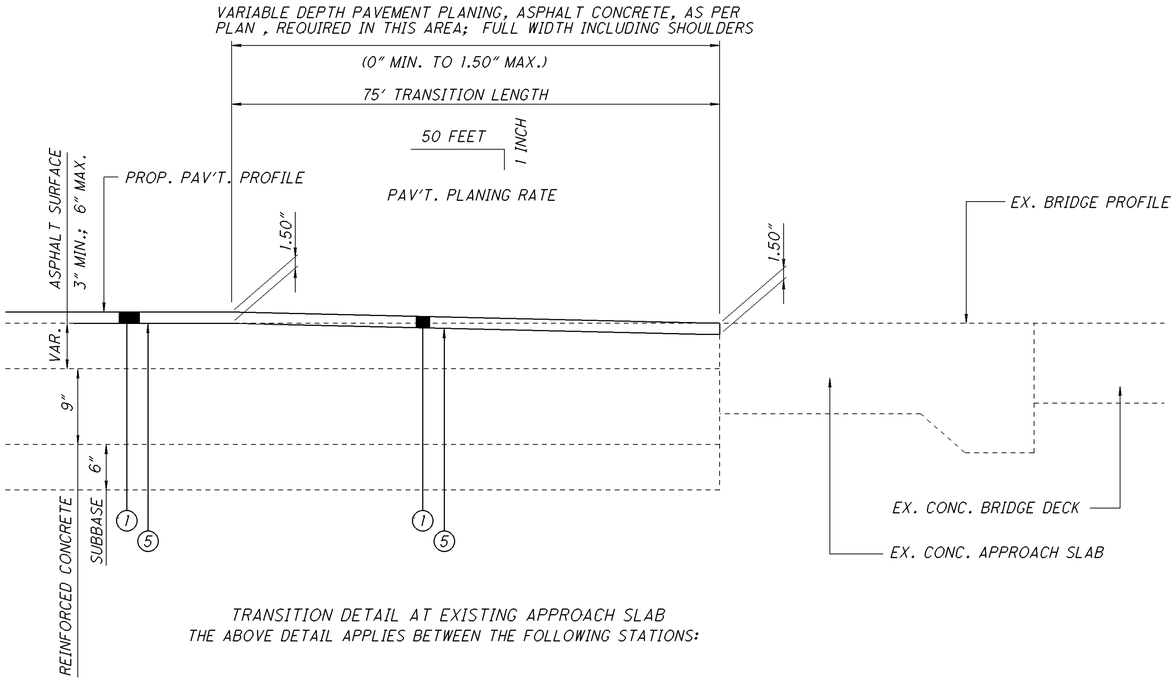
BRIDGE NO. ROS-23-1026
U.S.R. 23 NORTHBOUND
STA. 541+86.16 TO STA. 542+61.16
STA. 544+99.12 TO STA. 545+74.12
U.S.R. 23 SOUTHBOUND
STA. 542+07.22 TO STA. 542+82.22
STA. 545+20.20 TO STA. 545+95.20

BRIDGE NO. ROS-23-1052
U.S.R. 23 NORTHBOUND
STA. 555+39.01 TO STA. 556+14.01
STA. 559+13.05 TO STA. 559+88.05
U.S.R. 23 SOUTHBOUND
STA. 556+06.38 TO STA. 556+81.38
STA. 559+80.42 TO STA. 560+55.42

BRIDGE NO. ROS-23-1074
U.S.R. 23 NORTHBOUND ONLY
STA. 567+08.52 TO STA. 567+83.52
STA. 571+12.23 TO STA. 571+87.23

BRIDGE NO. ROS-23-1202
U.S.R. 23 NORTHBOUND
STA. 634+61.03 TO STA. 635+36.03
STA. 637+60.01 TO STA. 638+35.01
U.S.R. 23 SOUTHBOUND
STA. 634+58.35 TO STA. 635+33.35
STA. 637+57.36 TO STA. 638+32.36

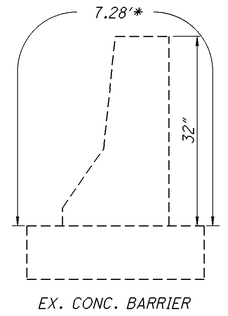
BRIDGE NO. ROS-23-1257
U.S.R. 23 NORTHBOUND
STA. 663+68.15 TO STA. 664+43.15
U.S.R. 23 SOUTHBOUND
STA. 663+95.81 TO STA. 664+70.81



TRANSITION DETAIL AT EXISTING APPROACH SLAB
THE ABOVE DETAIL APPLIES BETWEEN THE FOLLOWING STATIONS:

BRIDGE NO. ROS-23-0926
U.S.R. 23 SOUTHBOUND
STA. 495+86.40 TO STA. 496+61.40

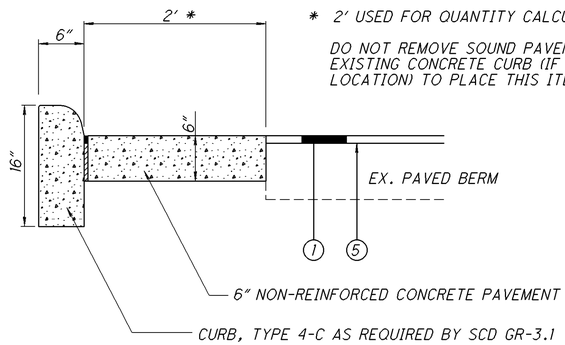
BRIDGE NO. ROS-23-1000
U.S.R. 23 SOUTHBOUND
STA. 528+58.79 TO STA. 529+33.79



EX. CONC. BARRIER

* LIMITS OF SEALING EXISTING CONCRETE BARRIER

CONCRETE PAVEMENT DETAIL



* 2' USED FOR QUANTITY CALCULATIONS.

DO NOT REMOVE SOUND PAVEMENT OR EXISTING CONCRETE CURB (IF IN PROPER LOCATION) TO PLACE THIS ITEM.

ITEM 452, 6" NON-REINFORCED CONCRETE PAVEMENT SHALL BE USED TO EXTEND THE EXISTING PAVED BERM TO MEET THE PROPOSED TYPE 4-C CURB REQUIRED BY STANDARD CONSTRUCTION DRAWING GR-3.1. (BRIDGE TERMINAL ASSEMBLY TYPE 1)

QUANTITY CALCULATIONS ARE AS FOLLOWS:

20' (LENGTH OF CURB) x 2' (WIDTH) ÷ 9 = 4.44 SQ. YD. (PER EACH TYPE 1 B.T.A.)

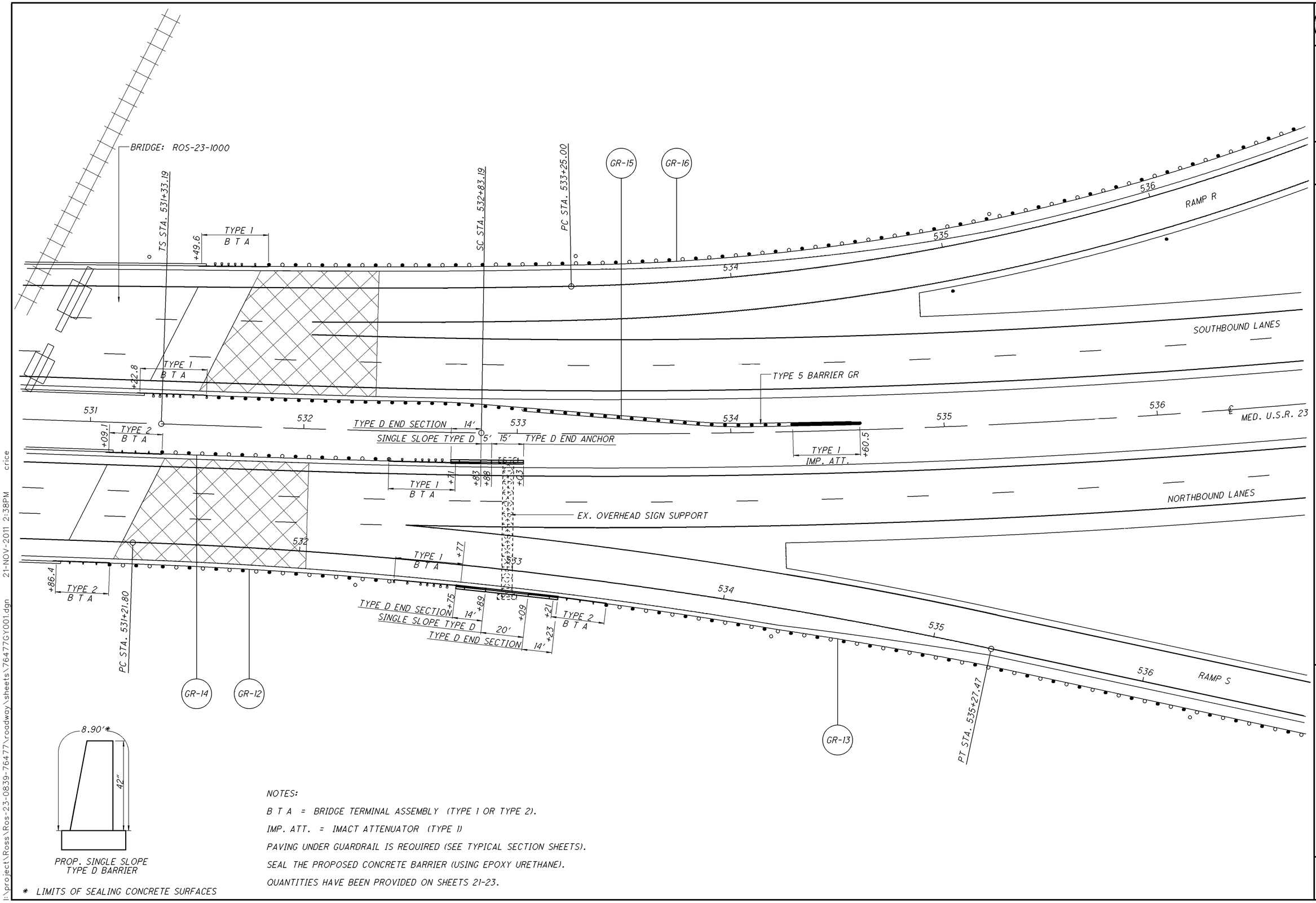
QUANTITIES HAVE BEEN PROVIDED ON SHEETS 21-23.

PROPOSED PAVEMENT LEGEND

(1)	442	1.50"	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
(2)	442	1.75"	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
(3)	254	1.75"	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (SEE GENERAL NOTE)
(4)	407		TACK COAT FOR INTERMEDIATE COURSE @ 0.040 GAL. PER SQ.YD.
(5)	407		TACK COAT @ 0.075 GAL. PER SQ.YD.

PAVEMENT DETAILS

ROS-23-8.23



PROP. SINGLE SLOPE
TYPE D BARRIER

* LIMITS OF SEALING CONCRETE SURFACES

NOTES:

B T A = BRIDGE TERMINAL ASSEMBLY (TYPE 1 OR TYPE 2).

IMP. ATT. = IMACT ATTENUATOR (TYPE 1)

PAVING UNDER GUARDRAIL IS REQUIRED (SEE TYPICAL SECTION SHEETS).

SEAL THE PROPOSED CONCRETE BARRIER (USING EPOXY URETHANE).

QUANTITIES HAVE BEEN PROVIDED ON SHEETS 21-23.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED | CHECKED

GUARDRAIL DETAILS

ROS-23-8.23

PC STA. 552+54.22

GR-25

RAMP T

553

554

555

TYPE D END SECTION 14'
SINGLE SLOPE TYPE D 20'
TYPE D END SECTION 14'

+34.5 +48.5 +68.5 +80.5 +82.5

B T A TYPE 1

B T A TYPE 2 +36.5

GR-26

PT STA. 557+09.95

B T A TYPE 2 +31.1

556

557

SOUTHBOUND LANES

℄ MED. U.S.R. 23

553 554 555 556 557 558

IMP. ATT. TYPE 1 +14.8

B T A TYPE 1 +52.1

NORTHBOUND LANES

RAMP U

553 554

B T A TYPE 1 +78.5

PCC Sta. 552+75

8.90'*

42"

PROP. SINGLE SLOPE TYPE D BARRIER

GR-23

GR-27

PT Sta. 554+75

BRIDGE: ROS-23-1052

NOTES:

B T A = BRIDGE TERMINAL ASSEMBLY (TYPE 1 OR TYPE 2).

IMP. ATT. = IMACT ATTENUATOR (TYPE 1)

PAVING UNDER GUARDRAIL IS REQUIRED (SEE TYPICAL SECTION SHEETS).

SEAL THE PROPOSED CONCRETE BARRIER (USING EPOXY URETHANE).

QUANTITIES HAVE BEEN PROVIDED ON SHEETS 21-23.

* LIMITS OF SEALING CONCRETE SURFACES

N

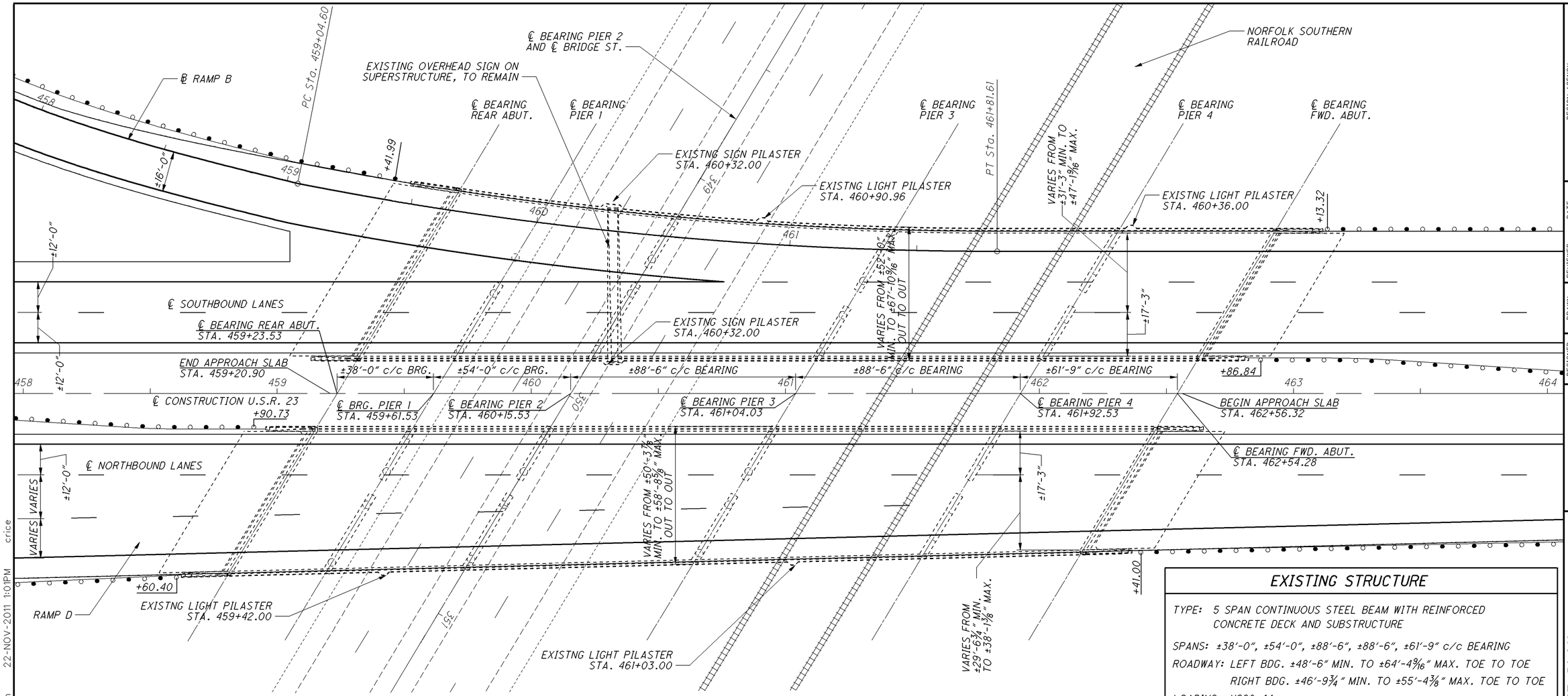
0 10 20 40 HORIZONTAL SCALE IN FEET

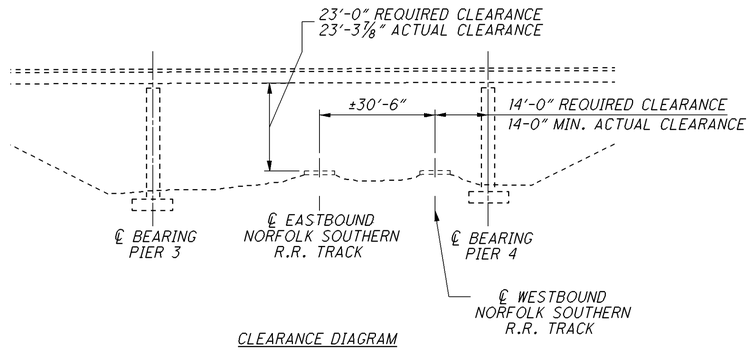
CALCULATED

CHECKED

GUARDRAIL DETAILS

ROS-23-8.23





CLEARANCE DIAGRAM

EXISTING STRUCTURE

TYPE: 5 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±38'-0", ±54'-0", ±88'-6", ±88'-6", ±61'-9" c/c BEARING

ROADWAY: LEFT BDG. ±48'-6" MIN. TO ±64'-4⁹⁄₁₆" MAX. TOE TO TOE
RIGHT BDG. ±46'-9¾" MIN. TO ±55'-4⅜" MAX. TOE TO TOE

LOADING: HS20-44

SKEW: 31°03'40" LEFT FORWARD

APPROACH SLABS: AS-1-67 (25'-0" LONG MODIFIED)

ALIGNMENT: TANGENT AND 4°0'' LEFT CURVE (RAMP B)

CROWN: LEFT BGD. VARIES ±0.0156 FT/FT MIN. TO ±0.0416 FT/FT MAX
RIGHT BGD. ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100361 R
7100337 L

DATE BUILT: 1972

COORDINATES: LATITUDE 39°17'32" N
LONGITUDE 82°56'42" W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1'-0" CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100361 R 7100337 L	

ROSS COUNTY
STA. 459+20.90
STA. 462+56.32

SITE PLAN
BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

1 / 8

41
104

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REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 625 - POWER SERVICE, AS PER PLAN

THE EXISTING POWER SUPPLY FOR THE EXISTING CONDUIT THAT RUNS THROUGH THE EXISTING PARAPETS SHALL BE LOCATED AND DISCONNECTED BEFORE PERFORMING ITEM 517, RAILING (UPGRADE EXISTING), AS PER PLAN. ONCE THE POWER IS DISCONNECTED, THE CONTRACTOR SHOULD VERIFY THAT THE WIRE IS CARRYING NO VOLTAGE AND THEN, WITH THE APPROVAL OF THE ENGINEER ITEM 517 MAY BE PERFORMED. ONCE ALL WORK IS COMPLETED THE POWER SHALL BE RECONNECTED AT THE POWER SUPPLY.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/8.

2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-0867 R AND BRIDGE NO. ROS-23-0867 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/8.

2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-0867 R AND BRIDGE NO. ROS-23-0867 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100367 L 7100361 R	

GENERAL NOTES
BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/11

ESTIMATED QUANTITIES FOR ROS-23-0867 (LEFT BRIDGE) S.F.N. 7100337

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	789	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	71		718	
512	10400	2,265	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	320	1,945		
512	74000	528	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	53		475	
517	75401	713	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	56	657		2/8
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/8
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/8

ESTIMATED QUANTITIES FOR ROS-23-0867 (RIGHT BRIDGE) S.F.N. 7100361

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	804	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	71		733	
512	10400	2,189	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	284	1,905		
512	74000	538	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	53		485	
517	75401	727	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	56	671		2/8
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/8
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/8

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11
CHECKED MCM | REVISED | STRUCTURE FILE NUMBER 7100337 & 7100361 R

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

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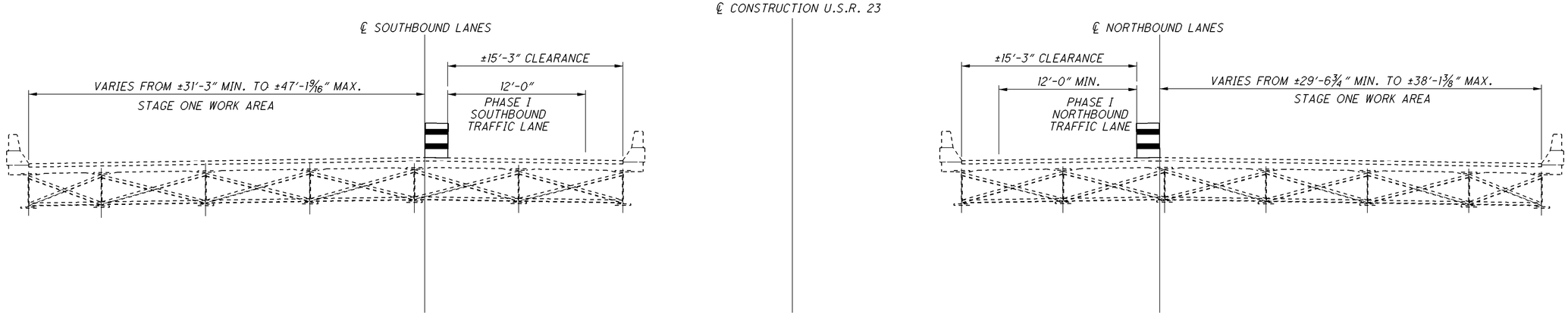
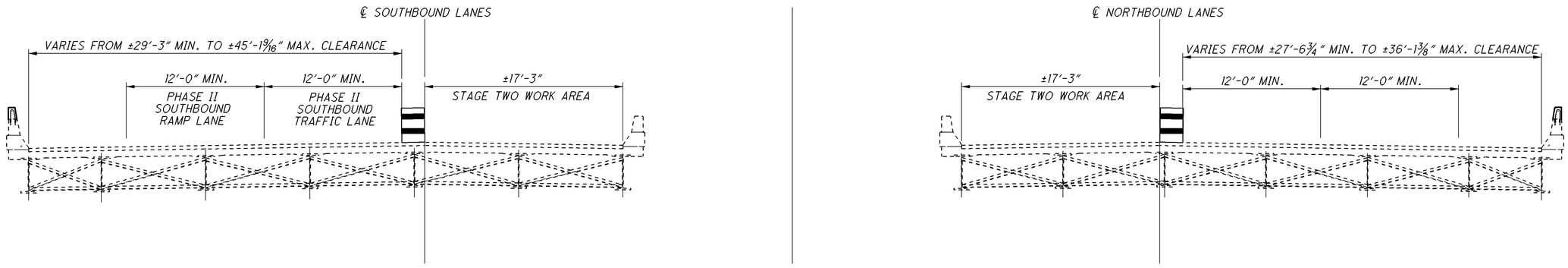


PROPOSED PHASE I MAINTENANCE OF TRAFFIC



PROPOSED PHASE II MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700361 L 7700361 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

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104

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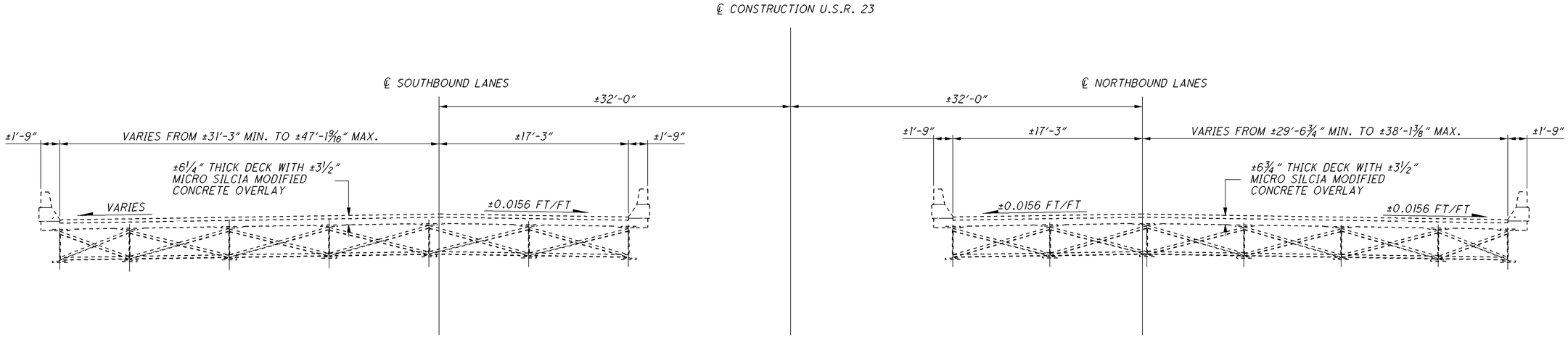
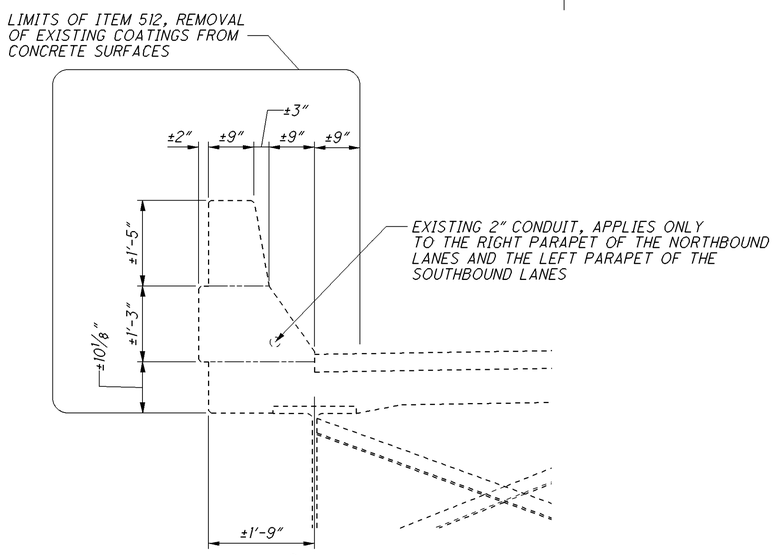
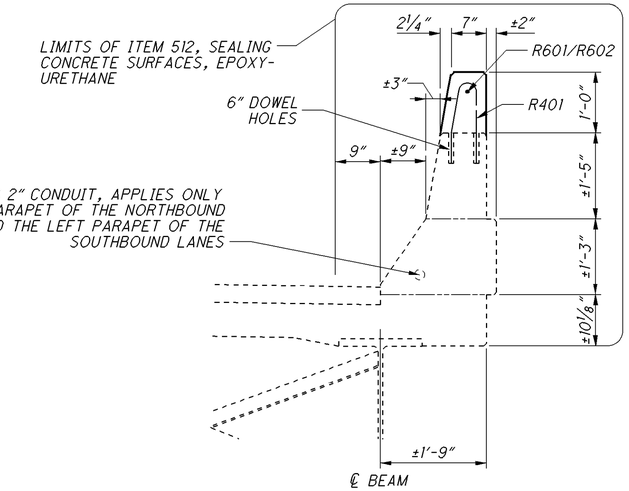


EXISTING TRANSVERSE SECTION



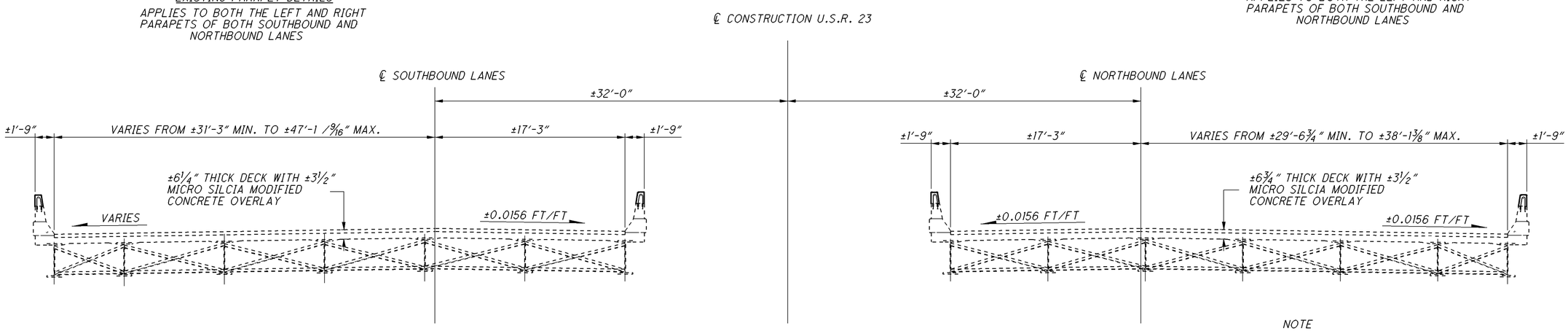
EXISTING PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH SOUTHBOUND AND NORTHBOUND LANES



PROPOSED TRANSVERSE SECTION

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH SOUTHBOUND AND NORTHBOUND LANES



PROPOSED TRANSVERSE SECTION

NOTE

DOWEL HOLES LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
MRH	MRH	GEC	11/21/11	7100361 R
CHECKED	REVISED			
MCM				

TRANSVERSE SECTIONS
BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

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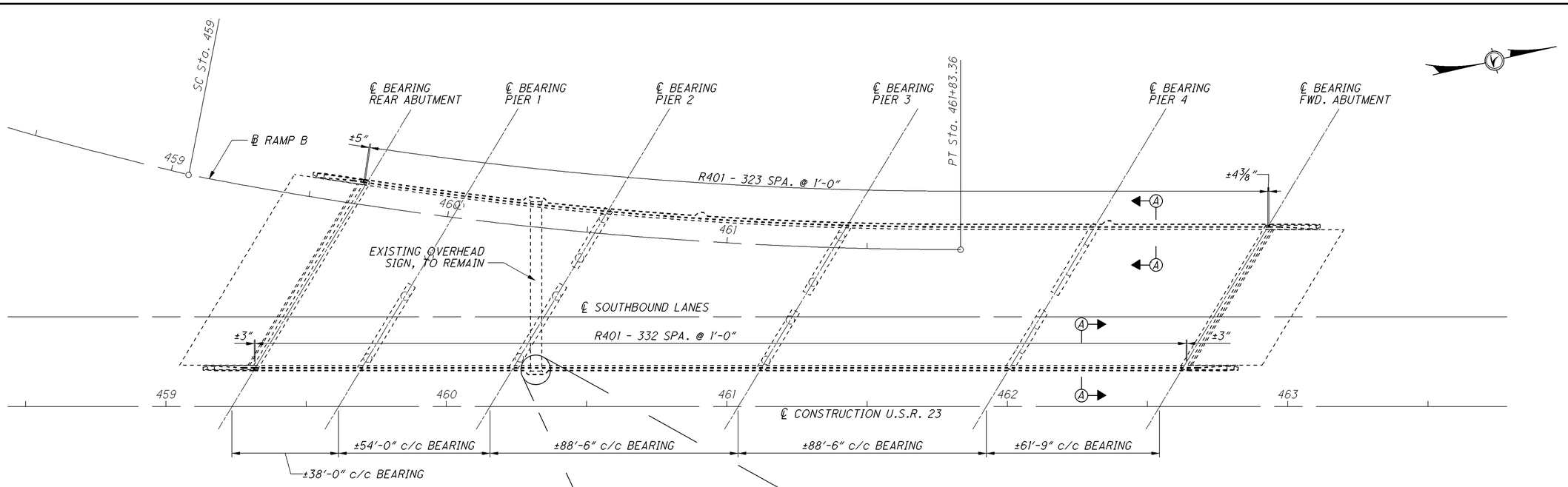
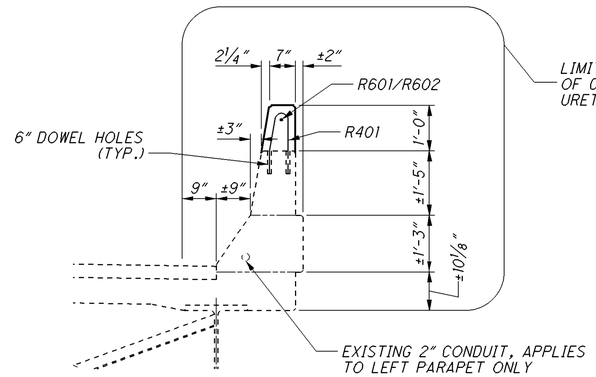
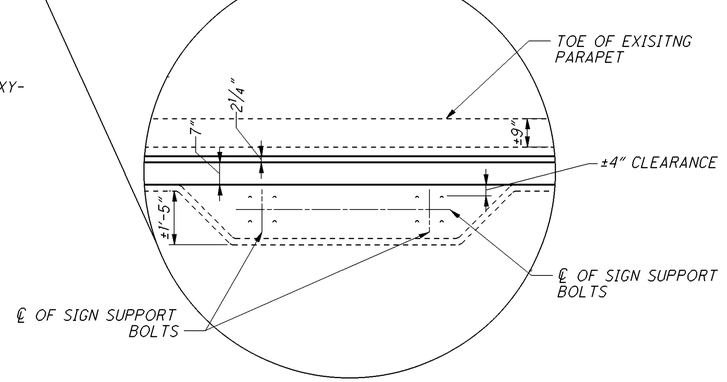


PROPOSED PLAN VIEW
APPLIES TO SOUTHBOUND LANES

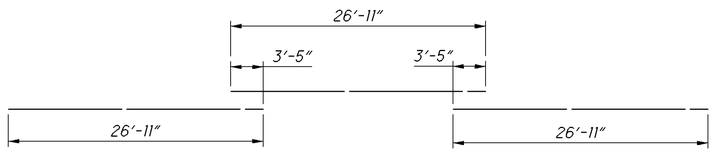


SECTION A-A

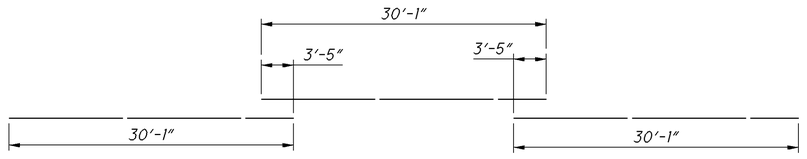


SIGN SUPPORT PEDESTAL
APPLIES TO BOTH THE LEFT AND RIGHT PARAPET

NOTE
THE DOWEL HOLE LENGTH INDICATES THE MINIMUM DEPTH OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL



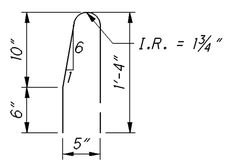
LAPPING DIAGRAM FOR R601 BAR
APPLIES TO RIGHT PARAPET ONLY



LAPPING DIAGRAM FOR R602 BAR
APPLIES TO LEFT PARAPET ONLY

REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE
R401	657	3′-4″	24
R601	14	26′-11″	STR.
R602	12	30′-1″	STR.



TYPE 24

APPLIES TO SOUTHBOUND LANES ONLY

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100361 L 7100361 R	

SUPERSTRUCTURE DETAILS - SOUTHBOUND

BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

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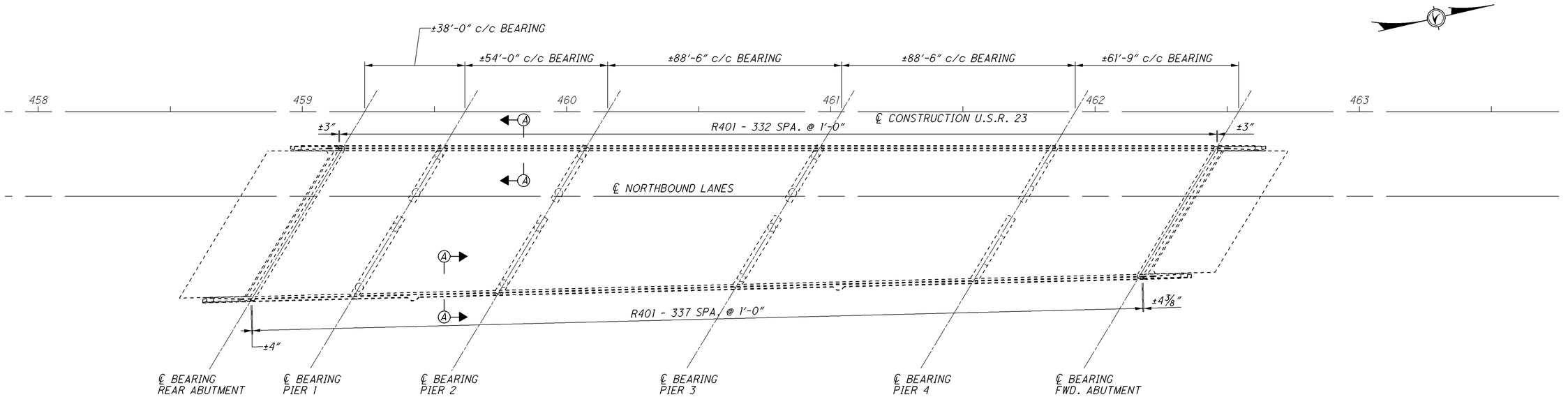
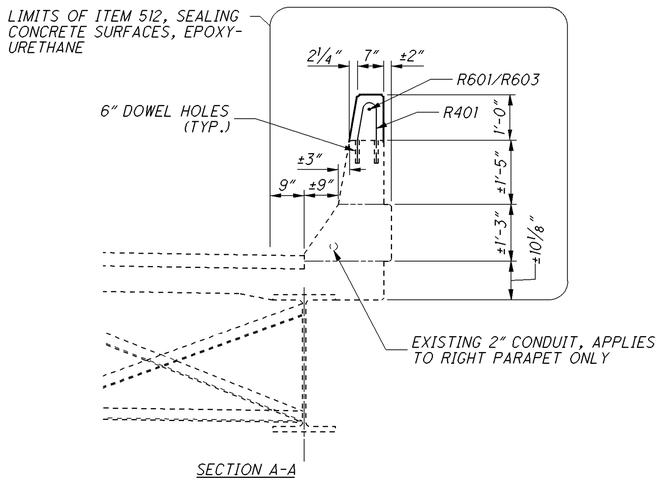


PROPOSED PLAN VIEW

APPLIES TO NORTHBOUND LANES



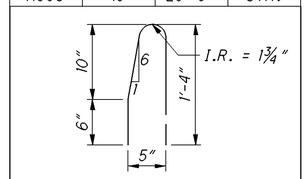
SECTION A-A

NOTE

THE DOWEL HOLE LENGTH INDICATES THE MINIMUM DEPTH OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL

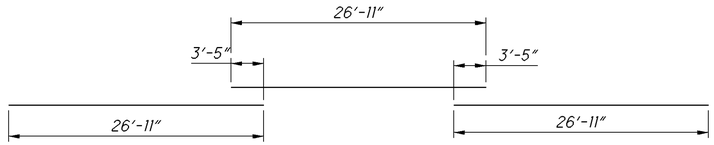
REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE
R401	671	3'-4"	24
R601	14	26'-11"	STR.
R603	15	25'-8"	STR.



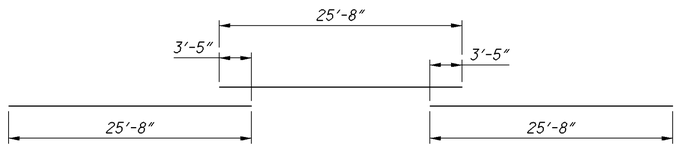
TYPE 24

APPLIES TO NORTHBOUND LANES ONLY



LAPPING DIAGRAM FOR R601 BAR

APPLIES TO LEFT PARAPET ONLY



LAPPING DIAGRAM FOR R603 BAR

APPLIES TO RIGHT PARAPET ONLY

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100361 R	

SUPERSTRUCTURE DETAILS - NORTHBOUND LANES

BRIDGE NO. ROS-23-0867 L & R

OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23

PID No. 76477

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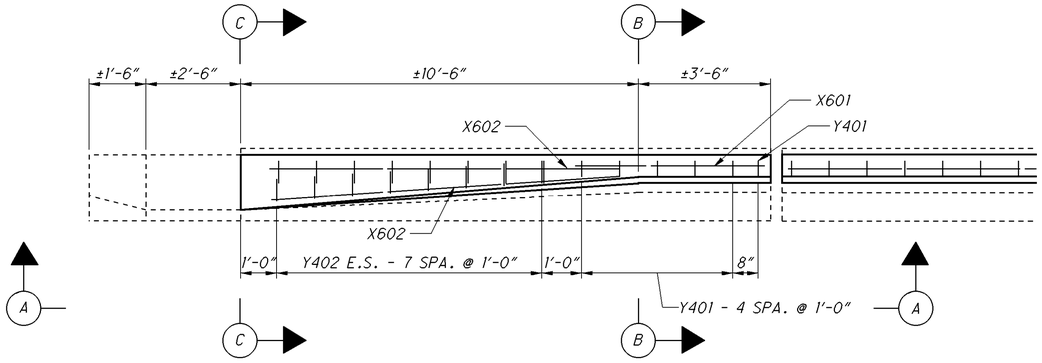
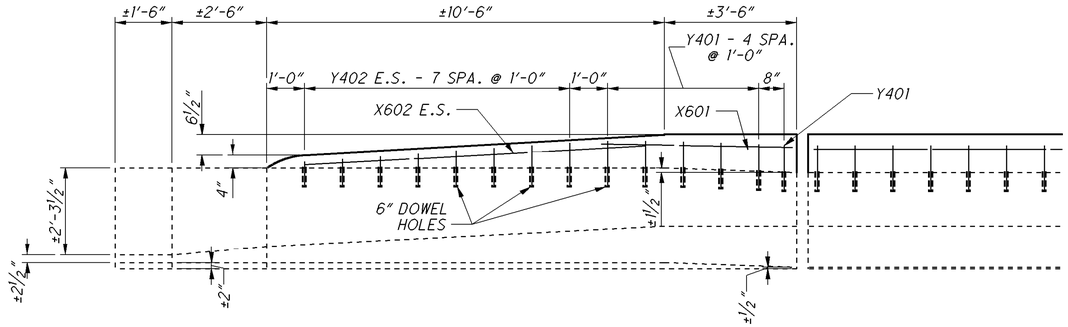


PROPOSED PLAN VIEW

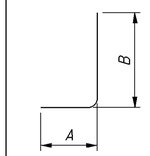
APPLIES TO PARAPET TRANSITIONS OF BOTH THE LEFT AND RIGHT LANES



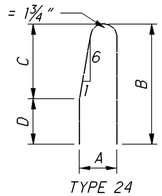
SECTION A-A

REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
Y401	6	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X601	1	5'-0"	STR.					
X602	2	9'-3"	STR.					



TYPE 1



TYPE 24

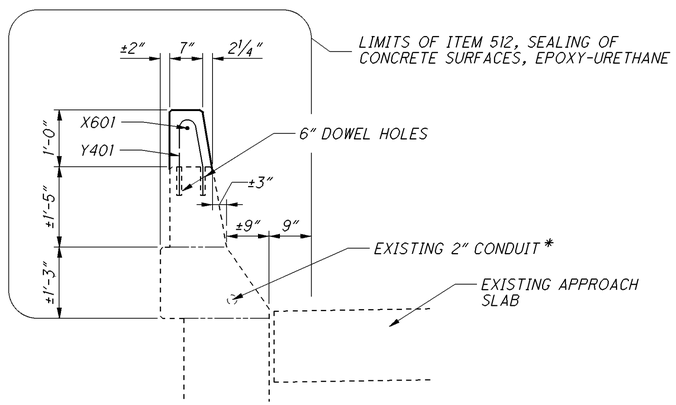
REINFORCING STEEL LIST ONLY APPLIES TO ONE PARAPET TRANSITION

NOTES

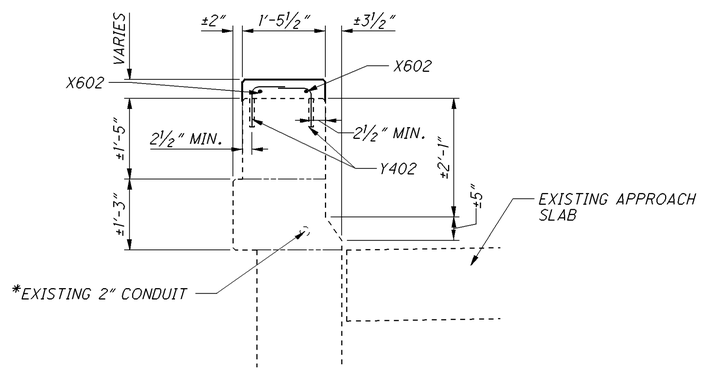
DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

* EXISTING 2" CONDUIT SHALL NOT BE DISTURBED AND ONLY APPLIES TO THE LEFT SIDE OF THE SOUTHBOUND LANES AND THE RIGHT SIDE OF THE NORTHBOUND LANES

E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE



SECTION B-B



SECTION C-C

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100351 R	

PROPOSED PARAPET TRANSITIONS

BRIDGE NO. ROS-23-0867 L & R
OVER BRIDGE STREET AND NORFOLK SOUTHERN RAILROAD

ROS-23-8.23
PID No. 76477

8 / 8

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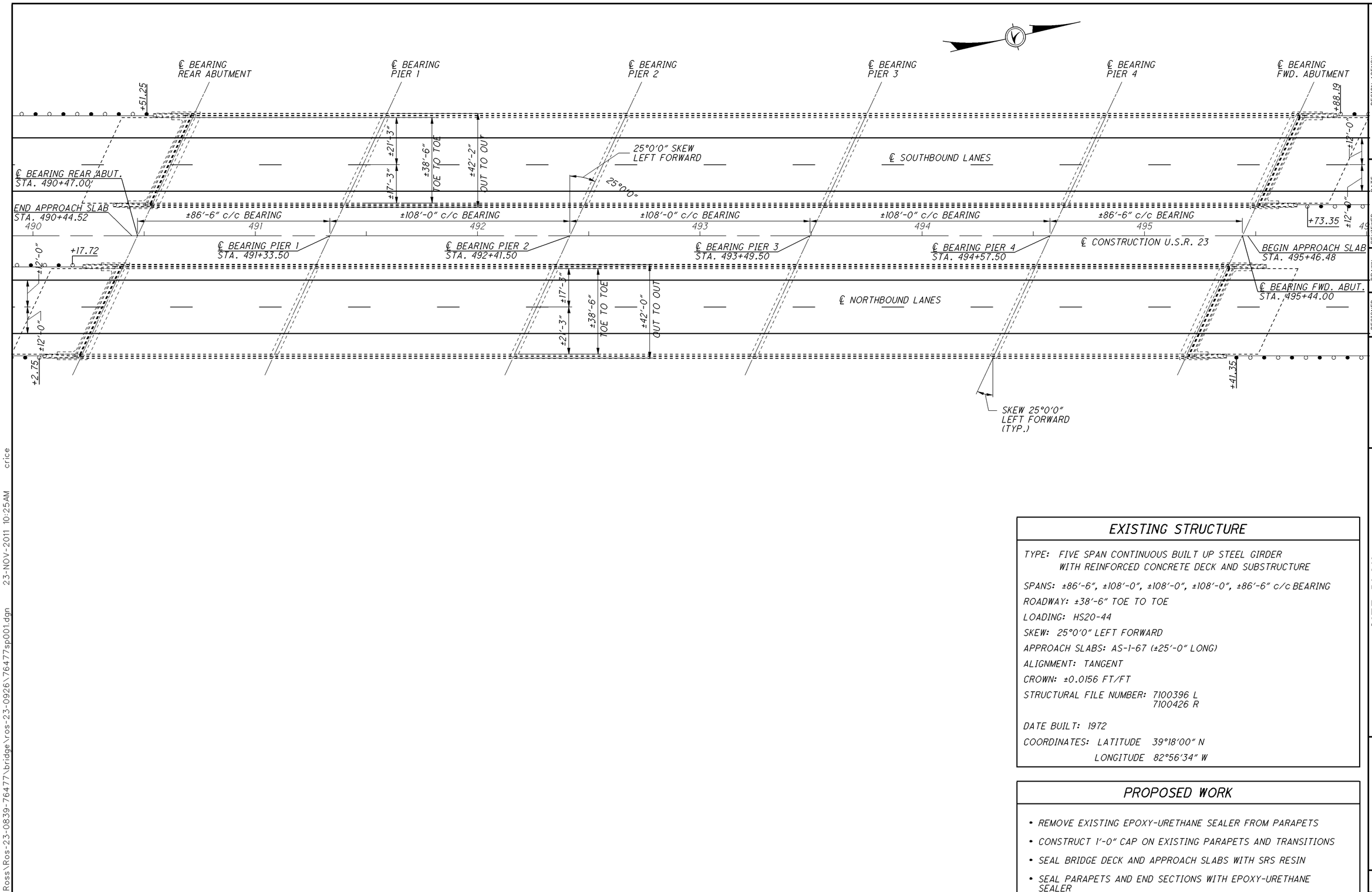

EXISTING STRUCTURE

TYPE: FIVE SPAN CONTINUOUS BUILT UP STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±86'-6", ±108'-0", ±108'-0", ±108'-0", ±86'-6" c/c BEARING

ROADWAY: ±38'-6" TOE TO TOE

LOADING: HS20-44

SKEW: 25°0'0" LEFT FORWARD

APPROACH SLABS: AS-1-67 (±25'-0" LONG)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100396 L
7100426 R

DATE BUILT: 1972

COORDINATES: LATITUDE 39°18'00" N
LONGITUDE 82°56'34" W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1'-0" CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE	STRUCTURE FILE NUMBER
MRH	MRH	GEC	11/21/11	7100396 L 7100426 R

CHECKED	REVISED
MCM	

ROSS COUNTY
STA. 490+44.52
STA. 495+46.48

SITE PLAN
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

1 / 7

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REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7
2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-0926 R AND BRIDGE NO. ROS-23-0926 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7
2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-0926 R AND BRIDGE NO. ROS-23-0926 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100326 L 7100326 R	

GENERAL NOTES
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

2 / 7

50
104

CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-0926 (LEFT BRIDGE) S.F.N. 7100396

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	1,109	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	62		1,047	
512	10400	2,362	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	214	2,148		
512	74000	901	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	53		848	
517	75401	1,047	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	50	997		2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

ESTIMATED QUANTITIES FOR ROS-23-0926 (RIGHT BRIDGE) S.F.N. 7100426

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	1,109	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	62		1,047	
512	10400	2,362	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	214	2,148		
512	74000	901	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	53		848	
517	75401	1,047	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	50	997		2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100396 7100426 R	

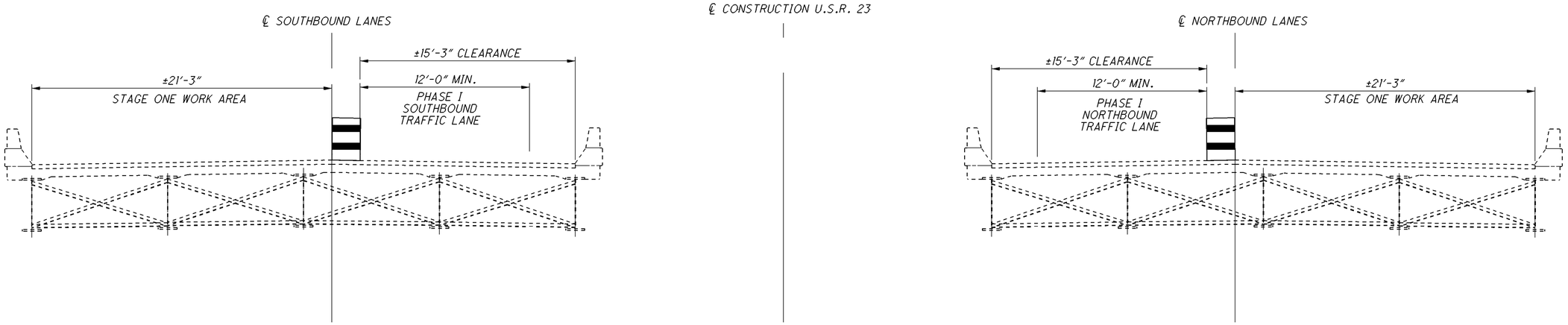
ESTIMATED QUANTITIES

BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

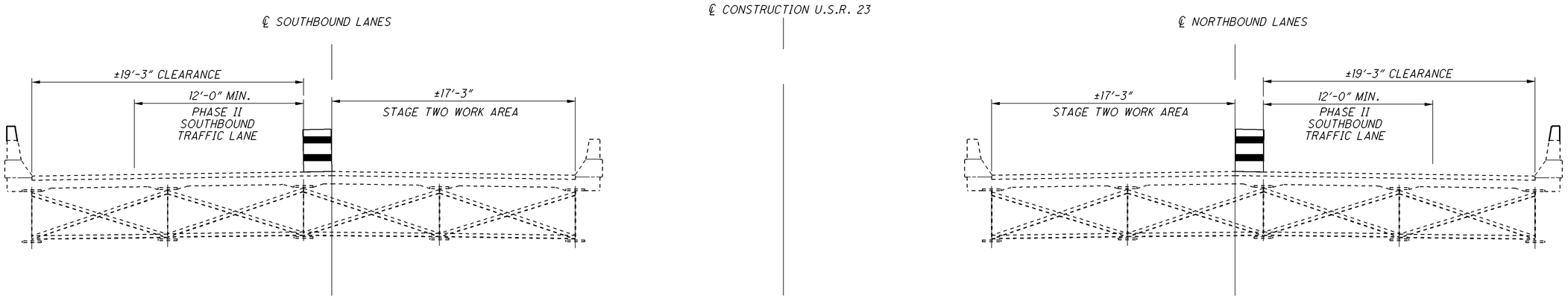
ROS-23-8.23
PID No. 76477

3 / 7

51
104



PROPOSED PHASE I MAINTENANCE OF TRAFFIC



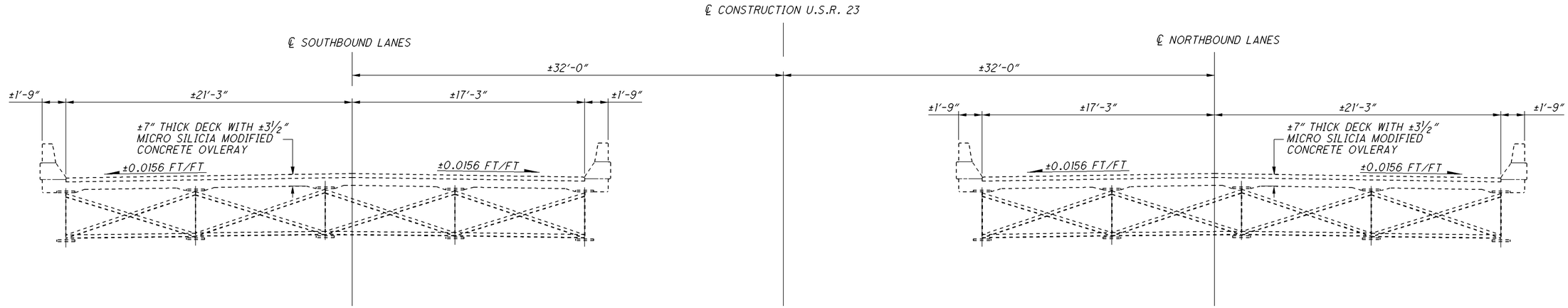
PROPOSED PHASE II MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

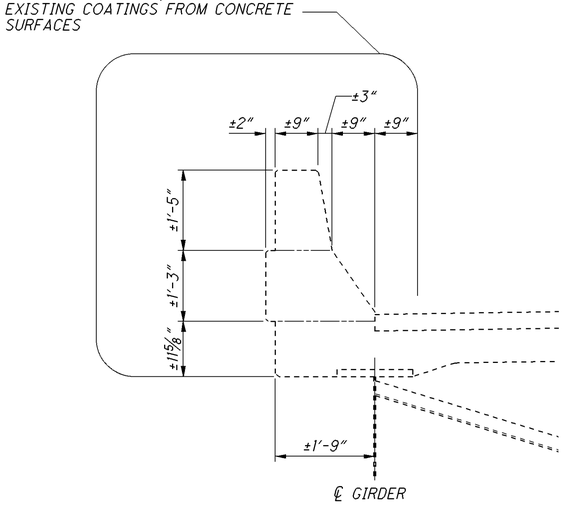
DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700326 L 7700326 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

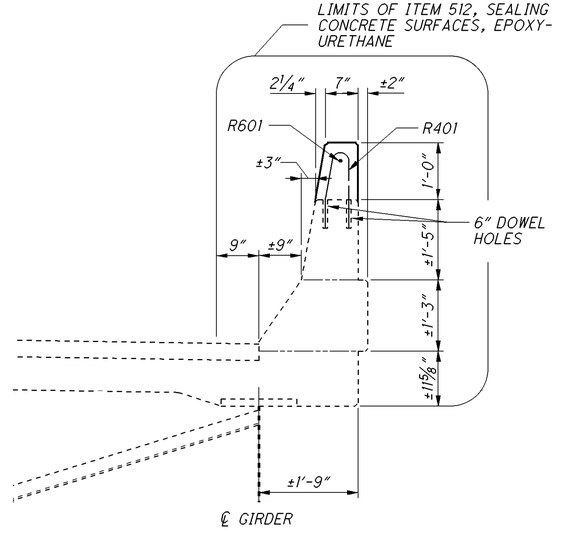


EXISTING TRANSVERSE SECTION



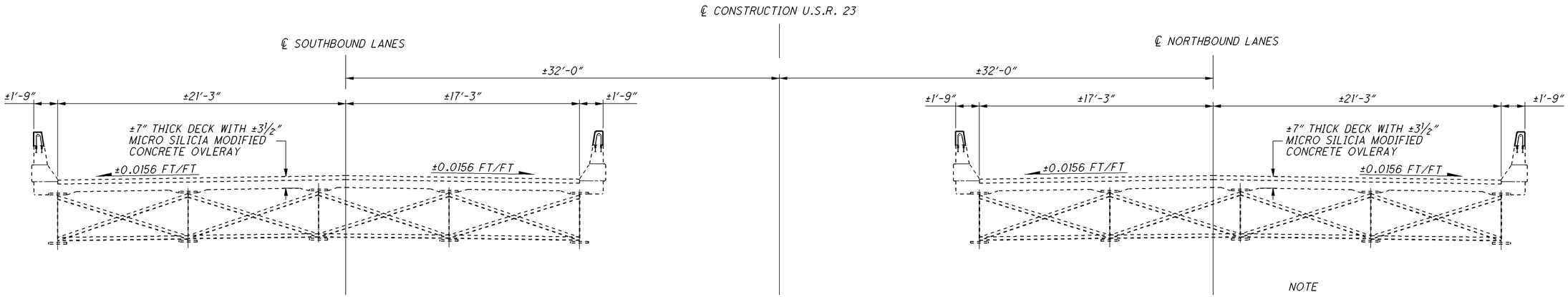
EXISTING PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH THE SOUTHBOUND AND NORTHBOUND LANES



PROPOSED PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH THE SOUTHBOUND AND NORTHBOUND LANES



PROPOSED TRANSVERSE SECTION

NOTE

DOWEL HOLES LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700326 L 7700326 R	

TRANSVERSE SECTION
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

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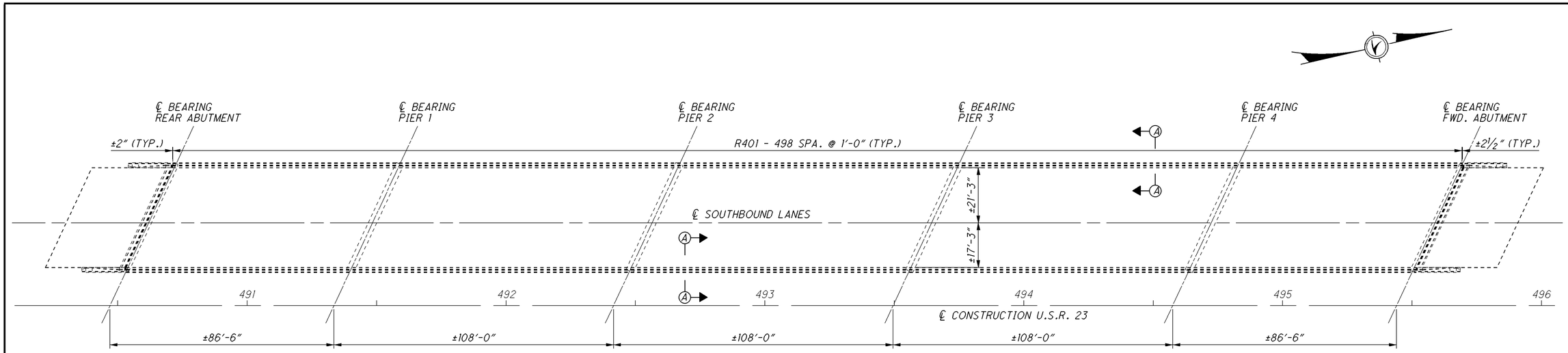
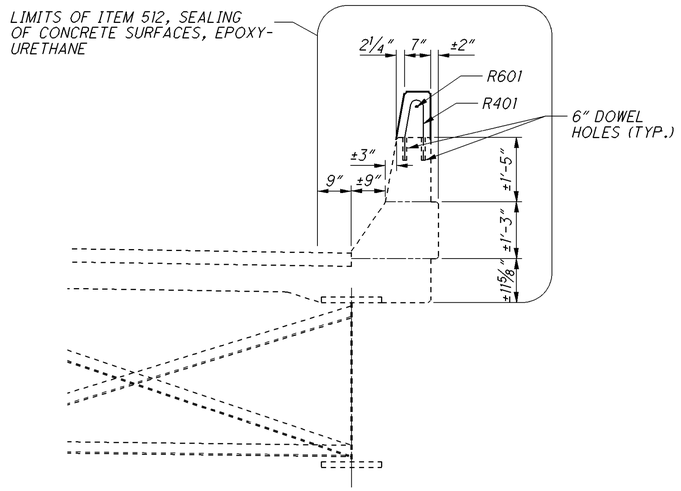
53
104

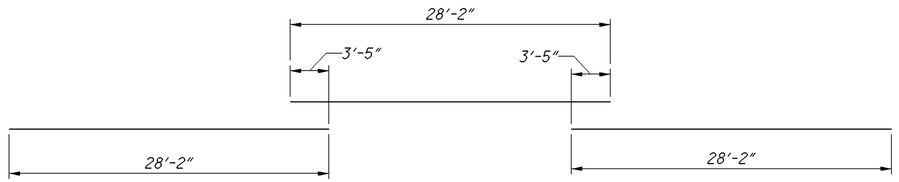


PROPOSED PLAN VIEW

APPLIES TO SOUTHBOUND LANES, NORTHBOUND LANES OPPOSITE HAND



SECTION A-A



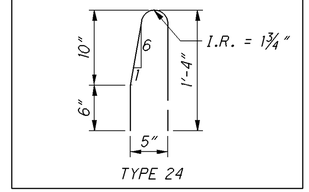
LAPPING DIAGRAM FOR R601 BAR

NOTE

THE DOWEL HOLE LENGTH INDICATES THE MINIMUM DEPTH OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL

REINFORCING STEEL LIST
BRIDGE NO. ROS-23-0926 L (SFN 7100396)

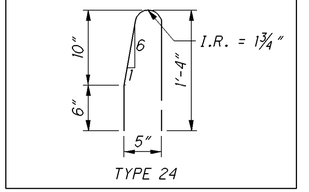
MARK	NO.	LENGTH	TYPE
R401	998	3'-4"	24
R601	40	28'-2"	STR.



TYPE 24

REINFORCING STEEL LIST
BRIDGE NO. ROS-23-0926 R (SFN 7100426)

MARK	NO.	LENGTH	TYPE
R401	998	3'-4"	24
R601	40	28'-2"	STR.



TYPE 24

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11

CHECKED MCM | REVISED | STRUCTURE FILE NUMBER 7100396 L, 7100426 R

SUPERSTRUCTURE DETAILS
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

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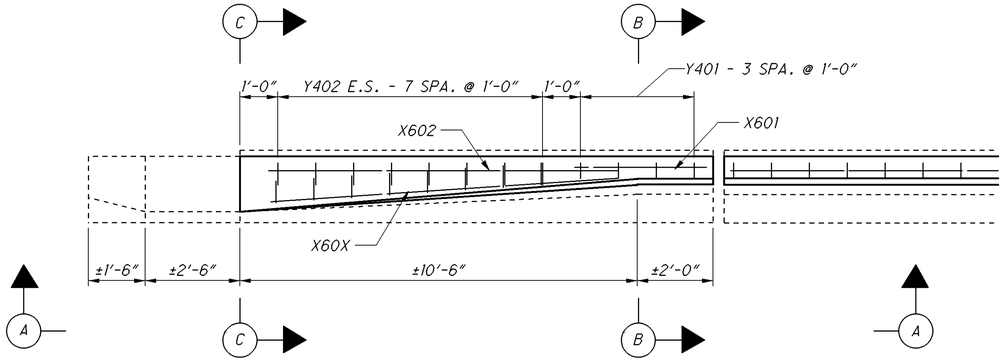
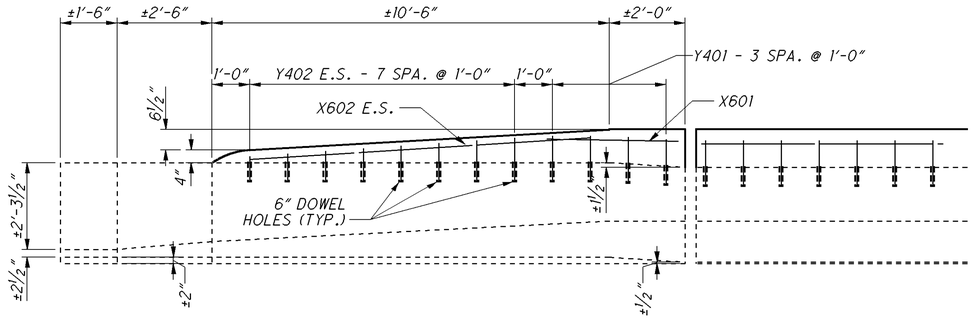
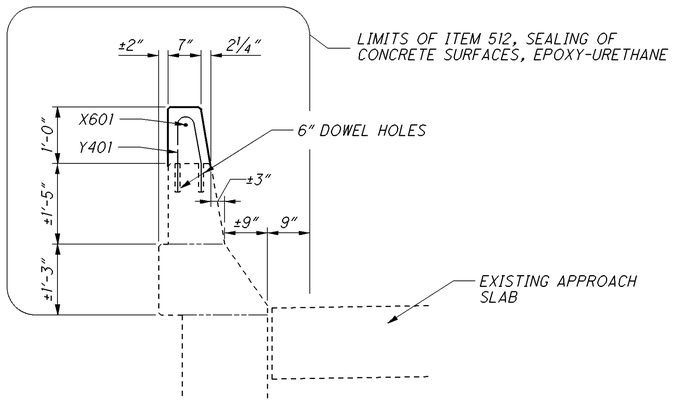


PROPOSED PLAN VIEW

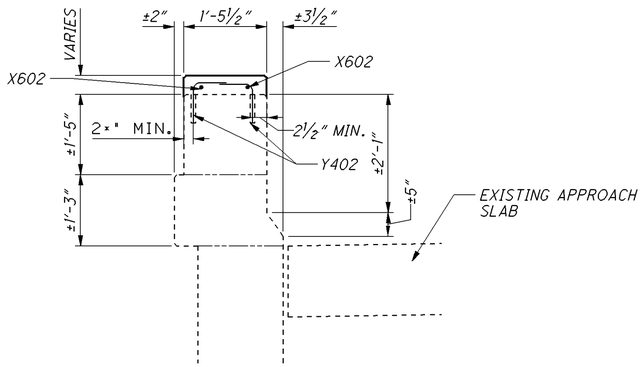
APPLIES TO PARAPET TRANSITIONS OF BOTH THE LEFT AND RIGHT LANES



SECTION A-A



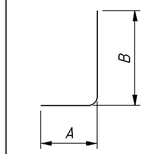
SECTION B-B



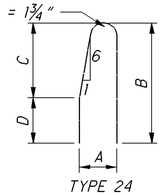
SECTION C-C

REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
Y401	4	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X601	1	3'-6"	STR.					
X602	2	9'-3"	STR.					



TYPE 1



TYPE 24

REINFORCING STEEL LIST ONLY APPLIES TO ONE PARAPET TRANSITION

NOTES

DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11

STRUCTURE FILE NUMBER 7600326 & 7600327

CHECKED MCM | REVISED

PROPOSED PARAPET TRANSITIONS
BRIDGE NO. ROS-23-0926 L & R
OVER PAINT CREEK

ROS-23-8.23
PID No. 76477

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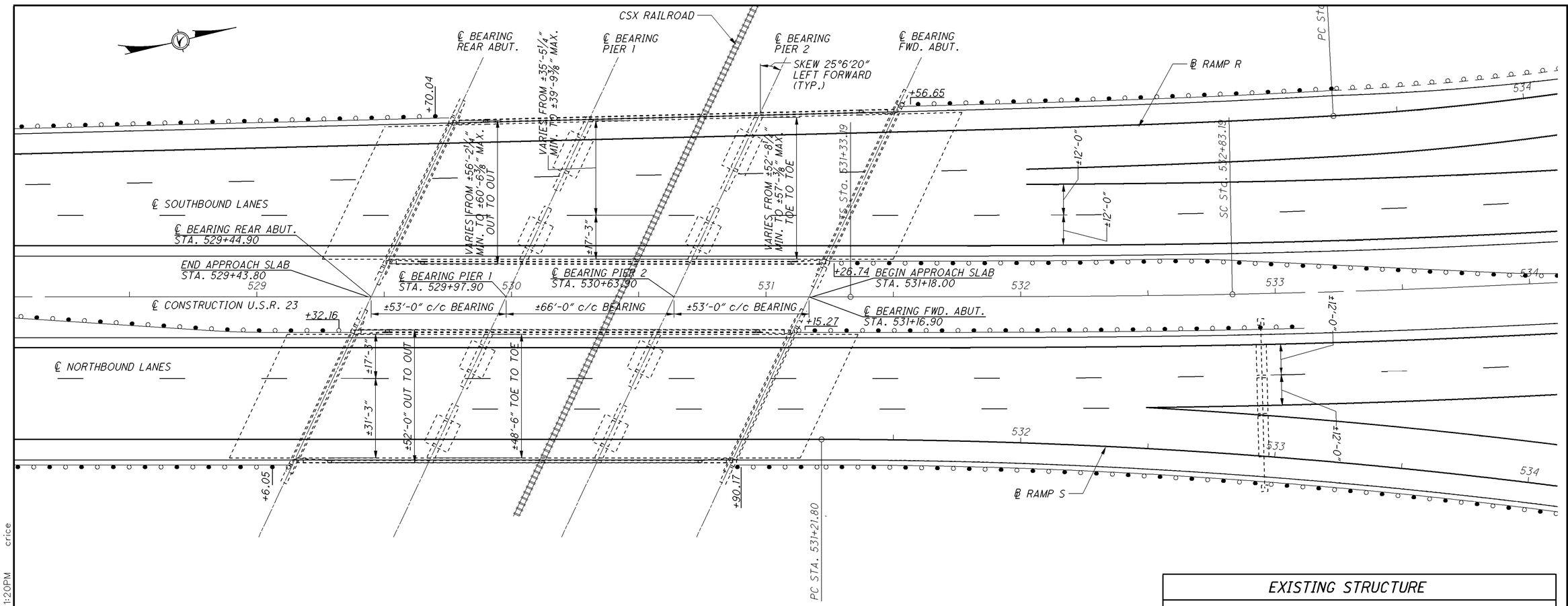

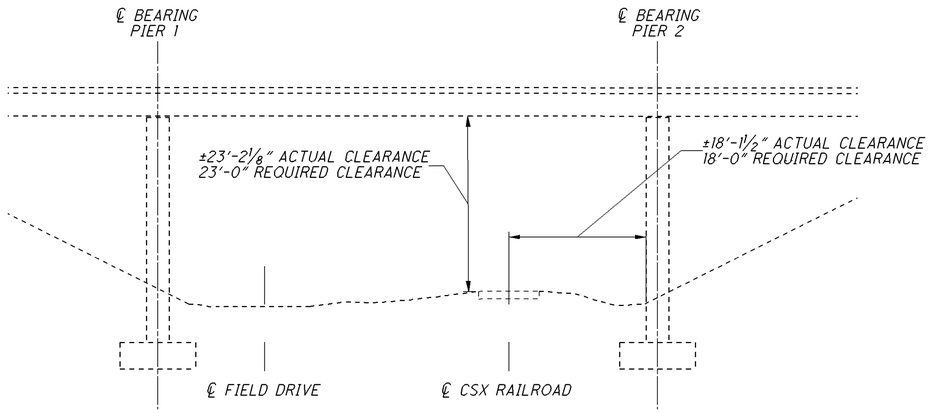

CLEARANCE DIAGRAM

EXISTING STRUCTURE

TYPE: 3 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±53'-0", ±66'-0", ±53'-0" c/c BEARING

ROADWAY: LEFT BDG. ±52'-8¼" MIN. TO ±57'-⅜" MAX. TOE TO TOE
RIGHT BDG. ±48'-6" TOE TO TOE

LOADING: HS20-44

SKEW: 25°06'20" LEFT FORWARD

APPROACH SLABS: AS-1-67 (25'-0" LONG MODIFIED)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100485 R
7100450 L

DATE BUILT: 1972

COORDINATES: LATITUDE 39°18'39" N
LONGITUDE 82°56'23" W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1'-0" CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100485 R 7100450 L	

ROSS COUNTY
STA. 529+43.80
STA. 531+18.00

SITE PLAN
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 526 - APPROACH SLABS MISC.: PREFORMED JOINT SEAL

A PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL CONFORMING TO 705.11 OF THE CMS SHALL BE PLACED AS SHOWN ON SHEETS 7 7 7. THE JOINT SHALL BE PLACED THE FULL WIDTH OF THE DECK AT EACH END OF THE APPROACH SLAB.

THE EXISTING PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL SHALL BE REMOVED AND THE EXISTING GROOVE SHALL BE CLEANED IN A MANNER TO ALLOW FOR THE PLACEMENT OF THE PROPOSED PREFORMED ELASTOMERIC COMPRESSION SEAL.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 526, APPROACH SLAB MISC.; PREFORMED JOINT SEAL, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4 7 7
2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1000 R AND BRIDGE NO. ROS-23-1000 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4 7 7
2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1000 R AND BRIDGE NO. ROS-23-1000 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100455 R 7100485 R	

GENERAL NOTES
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

2 / 7

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CALCULATED	DATE	CHECKED	DATE
MRH	08/09/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1000 (LEFT BRIDGE) S.F.N. 7100450

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	351	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*			351	
512	10400	1,368	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	305	1,063		
512	74000	273	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			273	
517	75401	336	FT	RAILING (UPGRADING EXISTING), AS PER PLAN		336		2/7
526	98200	122	FT	APPROACH SLAB MISC.; PREFORMED JOINT SEAL	122			2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

ESTIMATED QUANTITIES FOR ROS-23-1000 (RIGHT BRIDGE) S.F.N. 7100485

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	349	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*			349	
512	10400	1,209	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	270	939		
512	74000	272	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			272	
517	75401	334	FT	RAILING (UPGRADING EXISTING), AS PER PLAN		334		2/7
526	98200	108	FT	APPROACH SLAB MISC.; PREFORMED JOINT SEAL	108			2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11
CHECKED MCM | REVISED

STRUCTURE FILE NUMBER
7100450 L
7100485 R

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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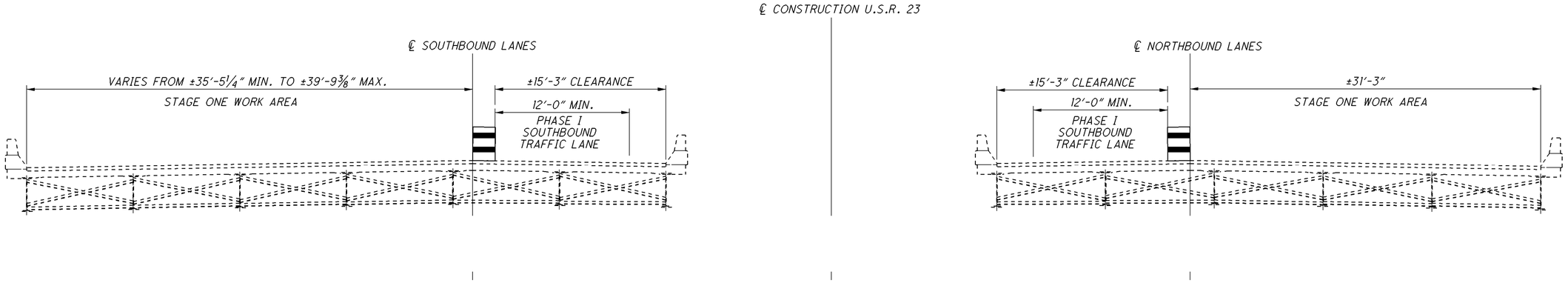
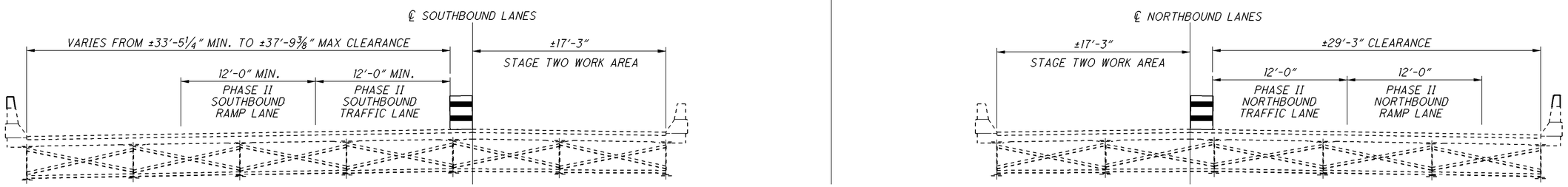
104



PROPOSED MAINTENANCE OF TRAFFIC PHASE I



PROPOSED MAINTENANCE OF TRAFFIC PHASE II

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700485 L 7700485 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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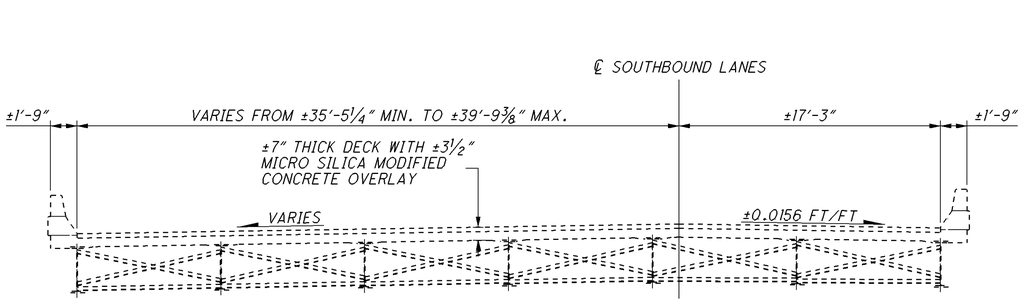
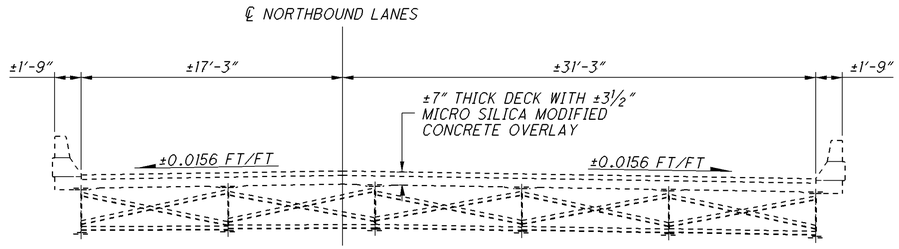
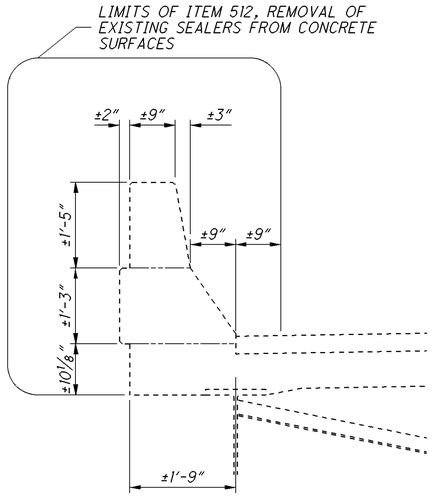


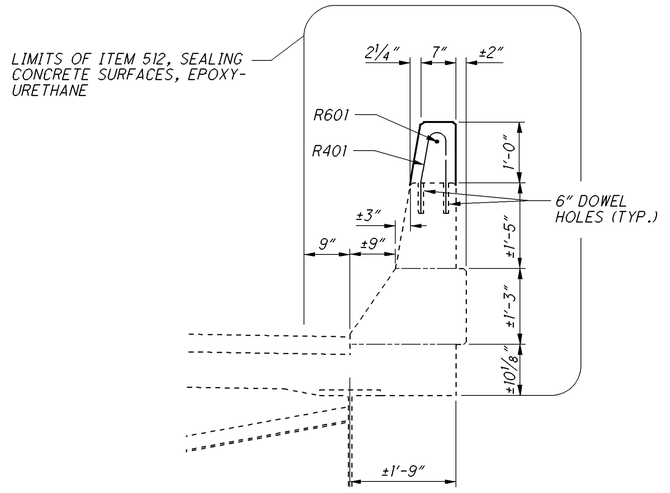


EXISTING TRANSVERSE SECTION



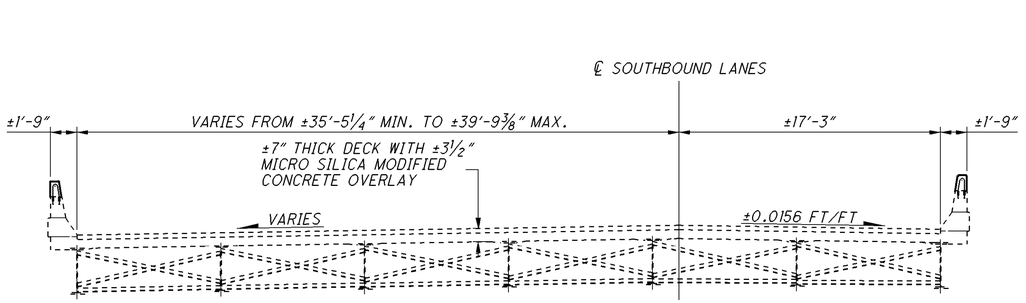
EXISTING PARAPET DETAILS

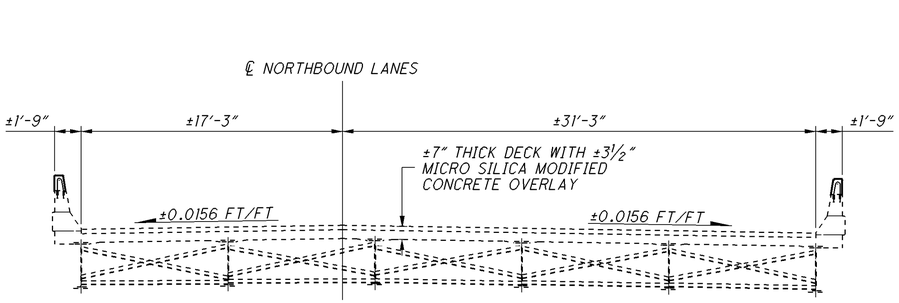
APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES



PROPOSED PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES





PROPOSED TRANSVERSE SECTION

NOTE
DOWEL HOLES LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700485 R	

TRANSVERSE SECTION
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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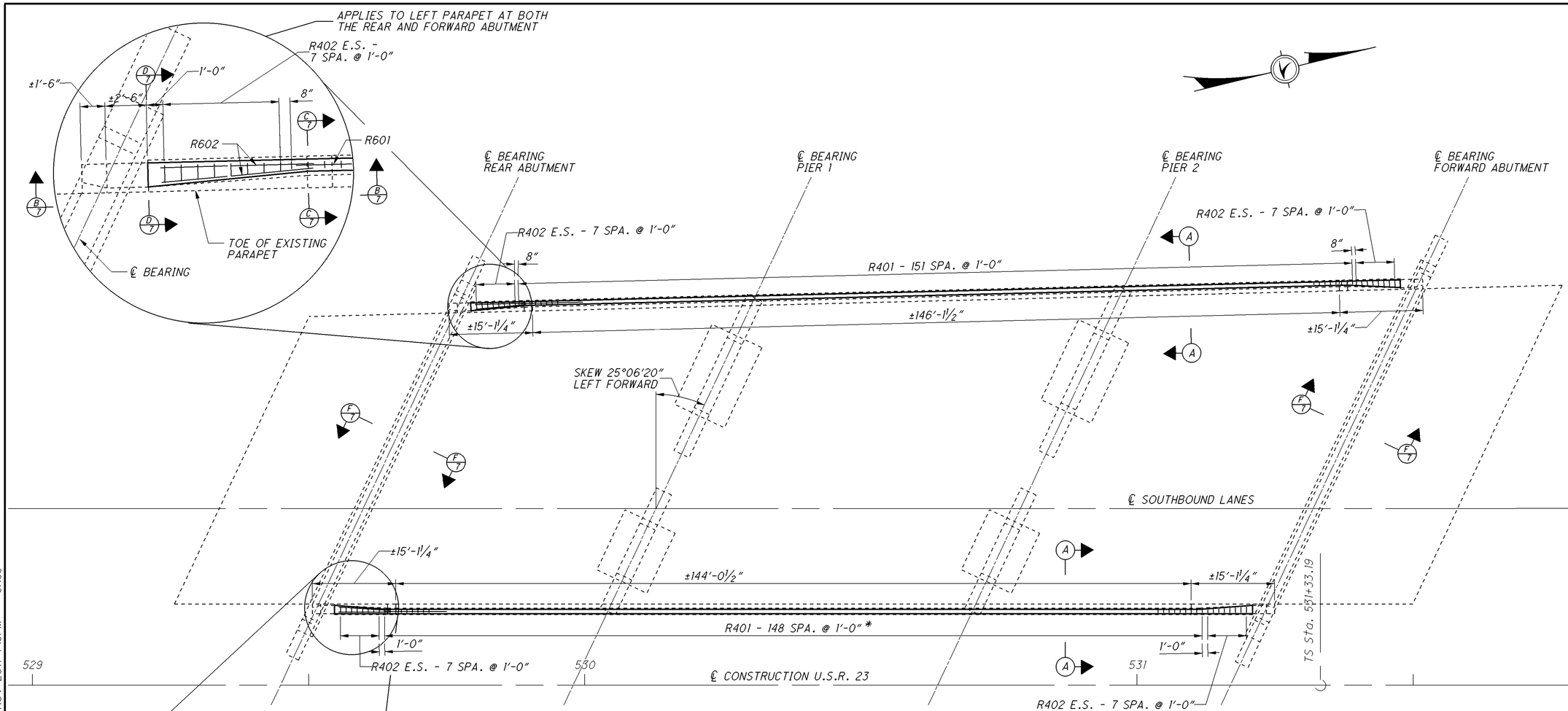
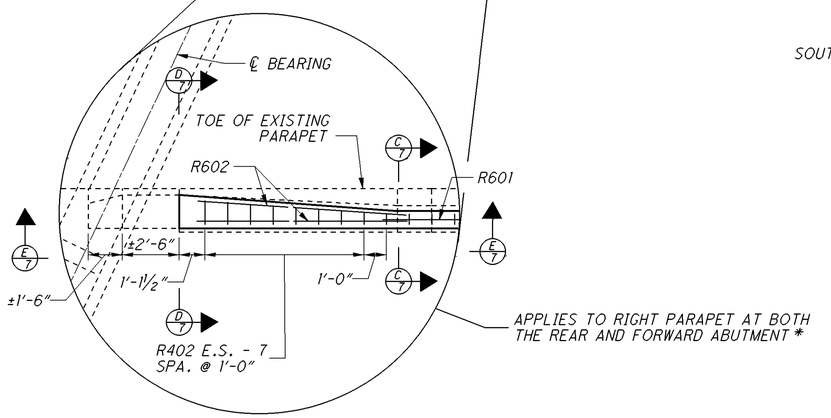
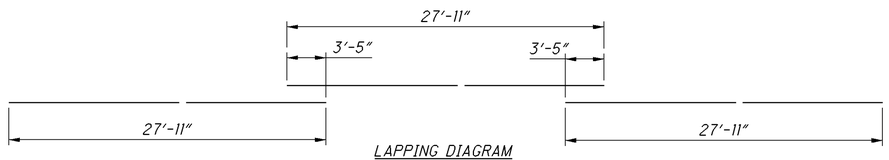
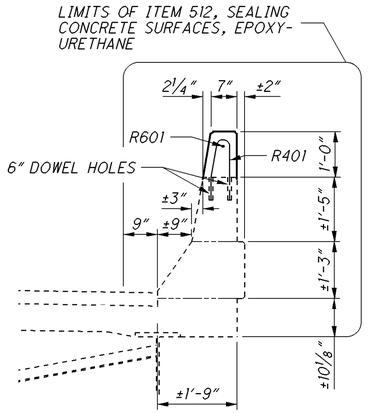


PROPOSED PLAN VIEW
SOUTHBOUND LANES SHOWN, NORTHBOUND LANES SIMILAR





LAPPING DIAGRAM
APPLIES TO R601 BAR



SECTION A-A

NOTES

THE DOWEL HOLE LENGTH INDICATES THE MINIMUM DEPTH OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL

FOR SECTIONS B-B, C-C, D-D, E-E AND F-F, REFER TO SHEET 7/7

* = APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF THE NORTHBOUND LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED MRH
DRAWN MRH
CHECKED MCM
REVIEWED GEC
DATE 11/21/11
STRUCTURE FILE NUMBER 7700485 L 7700485 R
REVISED

SUPERSTRUCTURE DETAILS
BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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NOTES

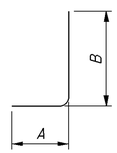
DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

FOR THE LOCATIONS OF SECTIONS B-B, C-C, D-D, E-E AND F-F, REFER TO SHEET 6/7

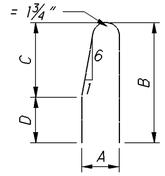
E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE

REINFORCING STEEL LIST FOR BRIDGE NO. ROS-23-1000 L (SFN 7100450)

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
R401	301	3'-4"	24	5"	1'-4"	10"	6"	
R402	8 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
R601	12	27'-11"	STR.					
R602	8	9'-3"	STR.					



TYPE 1



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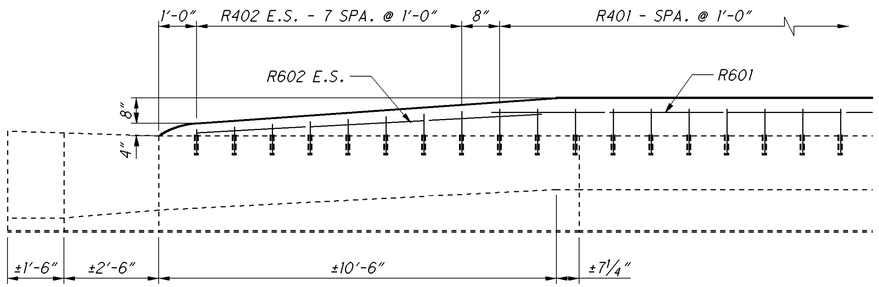
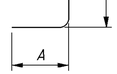


SECTION B-B

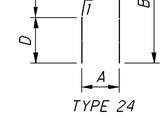
APPLIES TO LEFT PARAPET OF SOUTHBOUND LANES AT BOTH THE REAR AND FORWARD ABUTMENT

REINFORCING STEEL LIST FOR BRIDGE NO. ROS-23-1000 R (SFN 7100485)

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
R401	298	3'-4"	24	5"	1'-4"	10"	6"	
R402	8 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
R601	12	27'-11"	STR.					
R602	8	9'-3"	STR.					



TYPE 1



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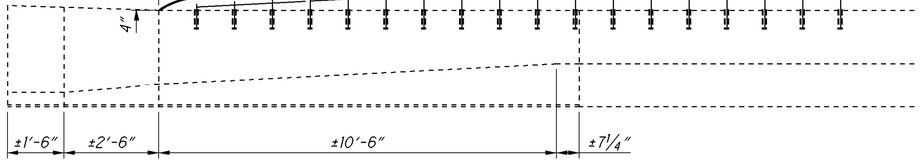
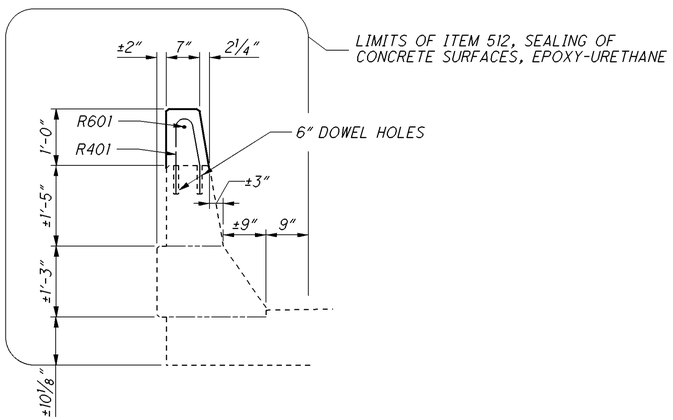
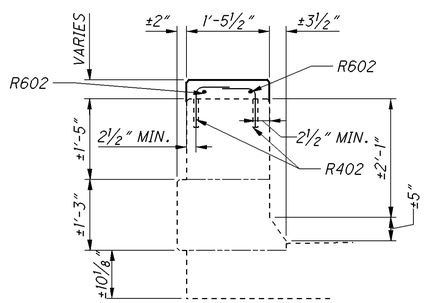


SECTION E-E

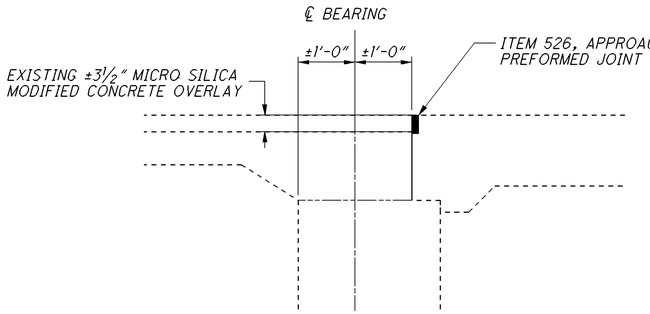
APPLIES TO RIGHT PARAPET OF SOUTHBOUND LANES AND BOTH THE LEFT AND RIGHT PARAPET OF THE NORTHBOUND LANES AT BOTH THE REAR AND FORWARD ABUTMENTS



SECTION C-C



SECTION D-D



SECTION D-D

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DATE 11/21/11
REVIEWED GEC
STRUCTURE FILE NUMBER 7100450 L 7100485 R
DRAWN MRH
REVISED
DESIGNED MRH
CHECKED MCM

PROPOSED SUPERSTRUCTURE SECTIONS AND REINFORCING STEEL LIST

BRIDGE NO. ROS-23-1000 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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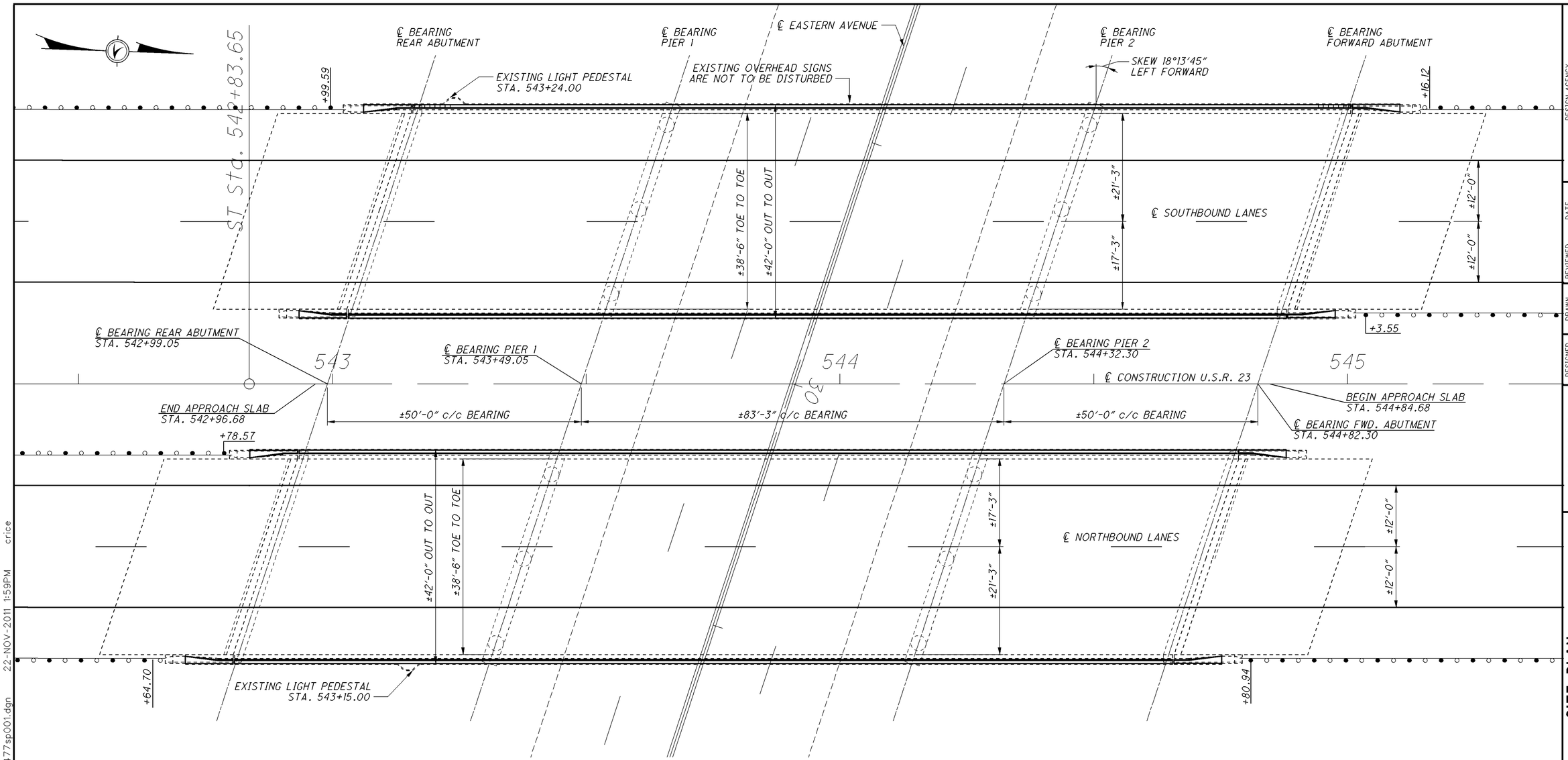

EXISTING STRUCTURE

TYPE: THREE SPAN CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±50'-0", ±83'-3", ±50'-0" c/c BEARING

ROADWAY: ±38'-6" TOE TO TOE

LOADING: HS20-44

SKEW: 18°13'45" LEFT FORWARD

APPROACH SLABS: AS-1-67 (±25'-0" LONG)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100515 L
7100574 R

DATE BUILT: 1972

COORDINATES: LATITUDE 39°18'53" N
LONGITUDE 82°56'21" W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1'-0" CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

REVIEWED GEC DATE 11/21/11
STRUCTURE FILE NUMBER 7100515 L 7100574 R
DRAWN MRH
REVISED
DESIGNED MRH
CHECKED MCM

ROSS COUNTY
STA. 542+96.68
STA. 495+46.48

SITE PLAN
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

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REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 625 - POWER SERVICE, AS PER PLAN

THE EXISTING POWER SUPPLY FOR THE EXISTING CONDUIT THAT RUNS THROUGH THE EXISTING PARAPETS SHALL BE LOCATED AND DISCONNECTED BEFORE PERFORMING ITEM 517, RAILING (UPGRADE EXISTING), AS PER PLAN. ONCE THE POWER IS DISCONNECTED, THE CONTRACTOR SHOULD VERIFY THAT THE WIRE IS CARRYING NO VOLTAGE AND THEN, WITH THE APPROVAL OF THE ENGINEER ITEM 517 MAY BE PERFORMED. ONCE ALL WORK IS COMPLETED THE POWER SHALL BE RECONNECTED AT THE POWER SUPPLY.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7.

2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1026 R AND BRIDGE NO. ROS-23-1026 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7.

2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1026 R AND BRIDGE NO. ROS-23-1026 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100574 R	

GENERAL NOTES
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

2 / 8

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CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1026 (LEFT BRIDGE) S.F.N. 7100515

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	427	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	55		372	
512	10400	1,019	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	214	805		
512	74000	342	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	45		297	
517	75401	408	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	38	370		2/7
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

ESTIMATED QUANTITIES FOR ROS-23-1026 (RIGHT BRIDGE) S.F.N. 7100574

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	427	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	55		372	
512	10400	1,019	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	214	805		
512	74000	342	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	45		297	
517	75401	408	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	38	370		2/7
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/7
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/7

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100515 & 7100574 R	

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

3 / 7

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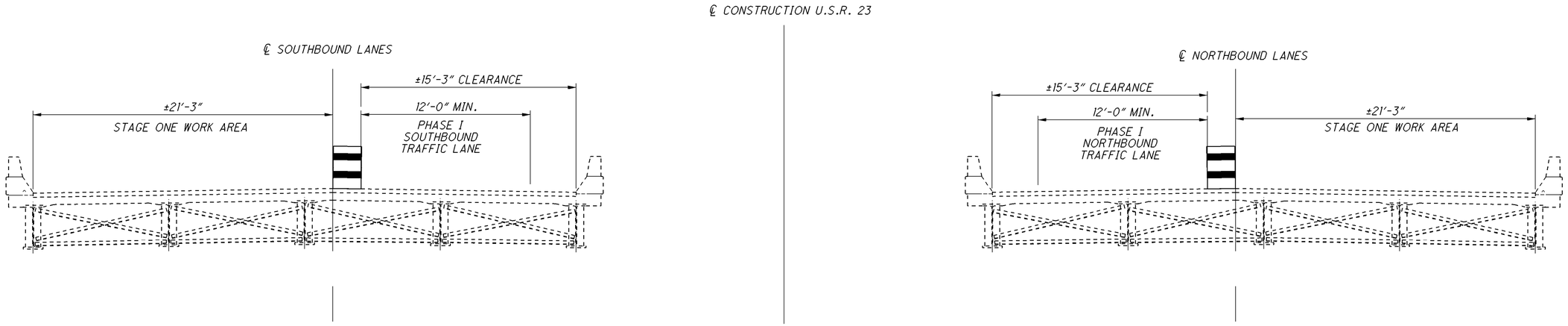

PROPOSED PHASE I MAINTENANCE OF TRAFFIC

PROPOSED PHASE II MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700574 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

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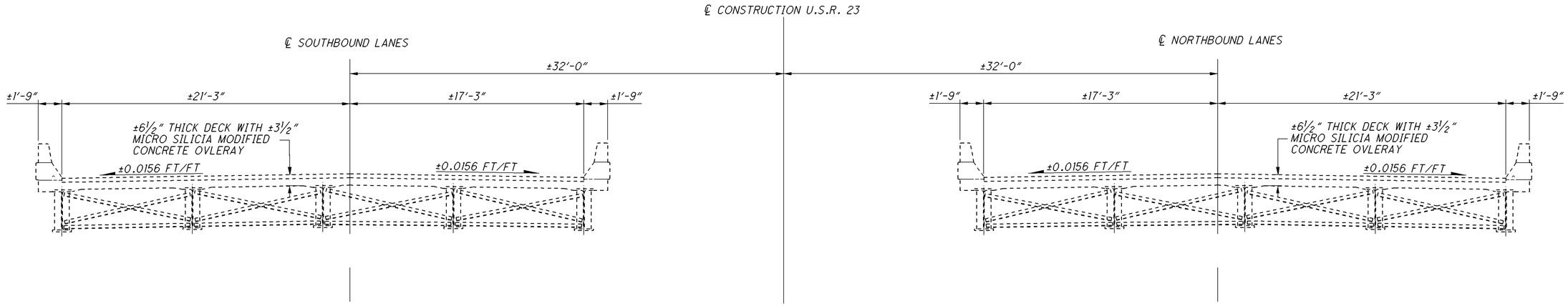
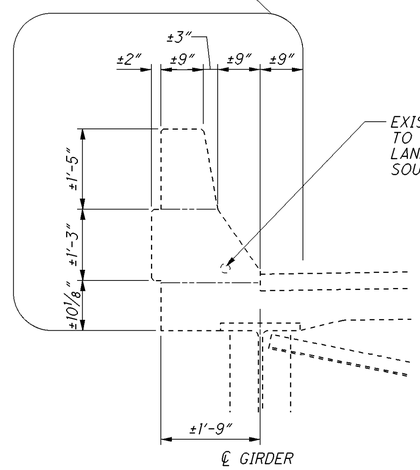
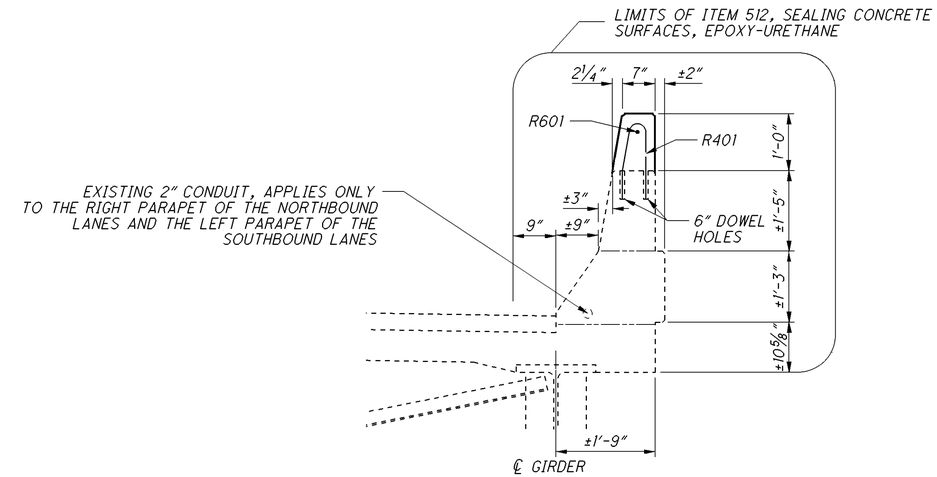


EXISTING TRANSVERSE SECTION



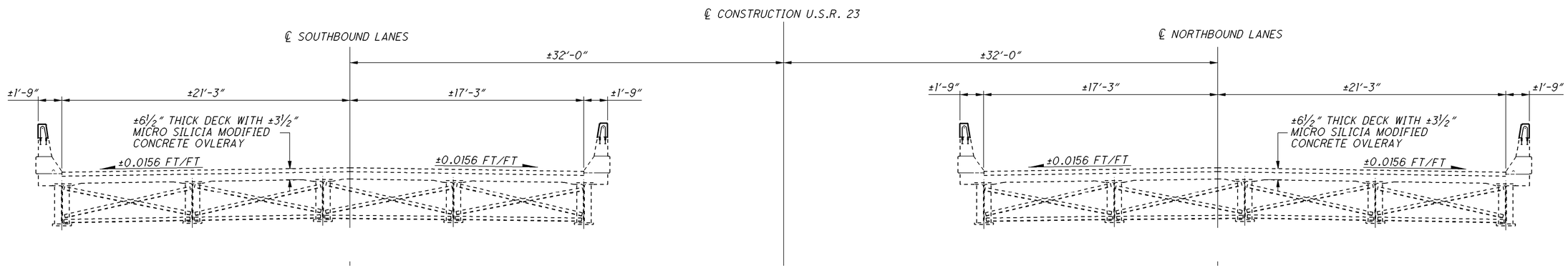
EXISTING PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH THE SOUTHBOUND AND NORTHBOUND LANES



PROPOSED PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF BOTH THE SOUTHBOUND AND NORTHBOUND LANES



PROPOSED TRANSVERSE SECTION

NOTE

DOWEL HOLES LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7600574 R	

TRANSVERSE SECTION
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

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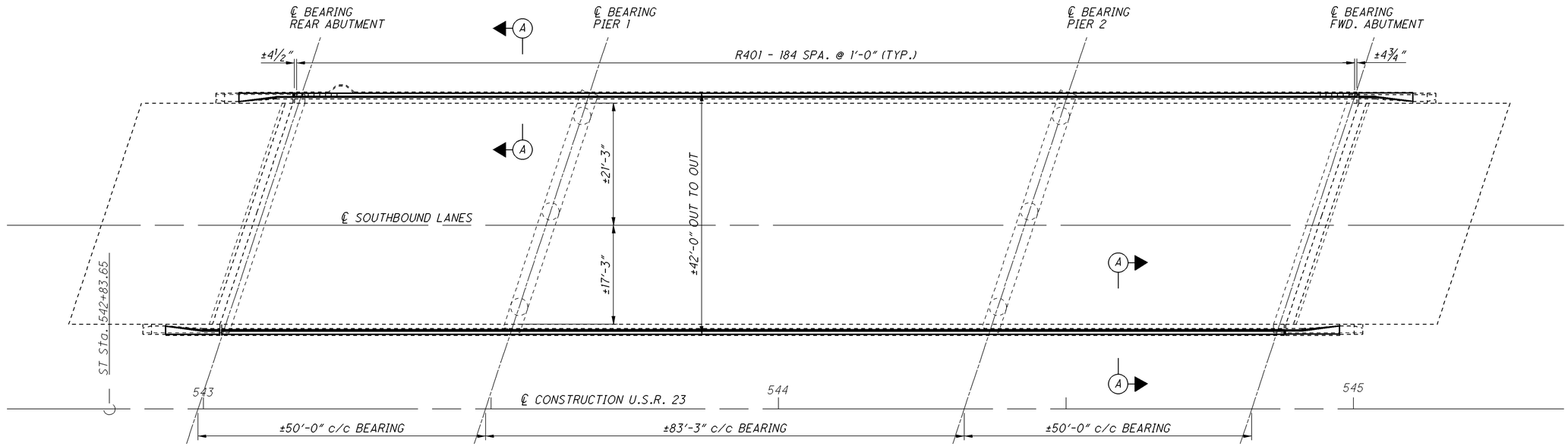
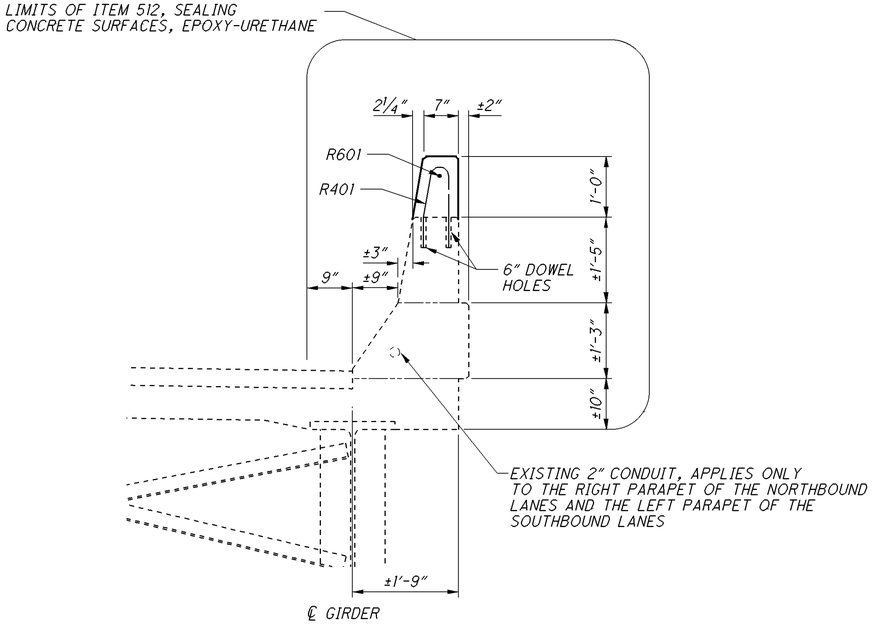


PROPOSED PLAN VIEW

SOUTHBOUND LANES SHOWN, NORTHBOUND LANES OPPOSITE HAND

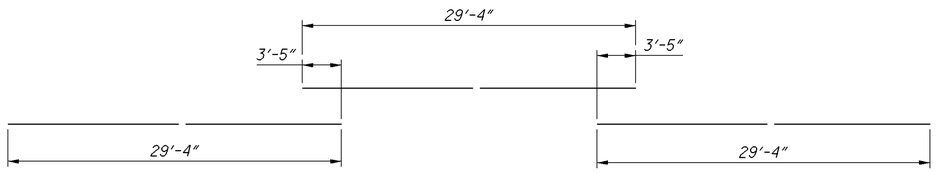


SECTION A-A

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET
OF BOTH NORTHBOUND AND SOUTHBOUND LANES

NOTE

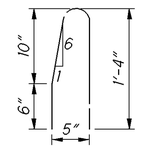
THE DOWEL HOLE LENGTH INDICATES THE MINIMUM DEPTH
OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL



LAPPING DIAGRAM FOR R601 BAR

REINFORCING STEEL LIST
BRIDGE NO. ROS-23-1026 R (SFN 7100574)

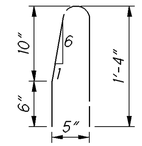
MARK	NO.	LENGTH	TYPE
R401	370	3′-4″	24
R601	14	29′-4″	STR.



TYPE 24

REINFORCING STEEL LIST
BRIDGE NO. ROS-23-1026 L (SFN 7100515)

MARK	NO.	LENGTH	TYPE
R401	370	3′-4″	24
R601	14	29′-4″	STR.



TYPE 24

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100515 L 7100574 R	

SUPERSTRUCTURE DETAILS
BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

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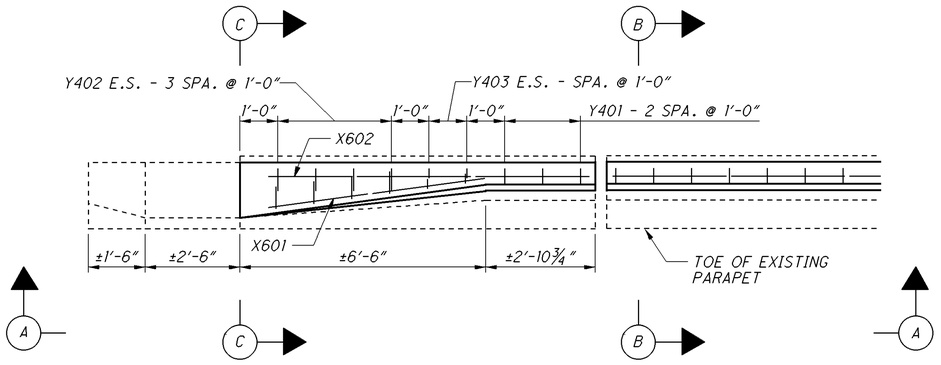
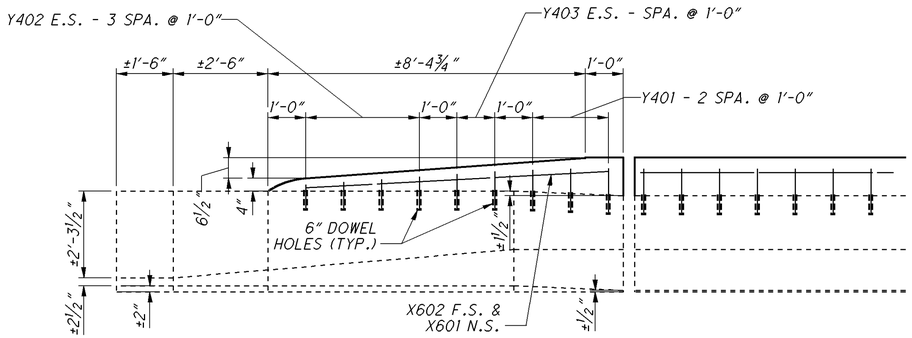
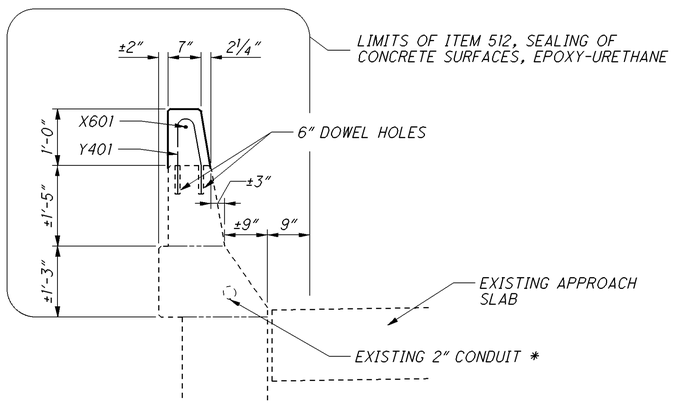


PROPOSED PLAN VIEW

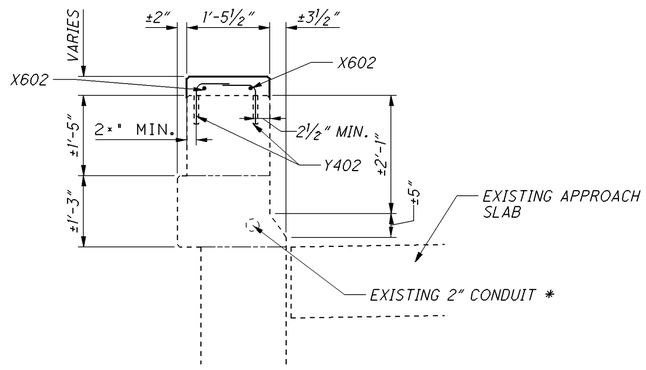
APPLIES TO PARAPET TRANSITIONS OF BOTH THE LEFT AND RIGHT LANES



SECTION A-A



SECTION B-B



SECTION C-C

REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
Y401	3	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 4 BARS	1'-2" MIN TO 1'-6" MAX.	1	7"	8" MIN. TO 11" MAX.			1"
Y403	2 SERIES OF 2 BARS	1'-2" MIN TO 1'-3" MAX.	1	3"	1'-0" MIN. TO 1'-1" MAX.			1"
X601	1	5'-9"	STR.					
X602	1	8'-5"	STR.					

REINFORCING STEEL LIST ONLY APPLIES TO ONE PARAPET TRANSITION

NOTES

DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

* EXISTING 2" CONDUIT SHALL NOT BE DISTURBED AND ONLY APPLIES TO THE LEFT SIDE OF THE SOUTHBOUND LANES AND THE RIGHT SIDE OF THE NORTHBOUND LANES

E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11

STRUCTURE FILE NUMBER 7600524 R

CHECKED MCM | REVISED

PROPOSED PARAPET TRANSITIONS

BRIDGE NO. ROS-23-1026 L & R
OVER EASTERN AVENUE

ROS-23-8.23
PID No. 76477

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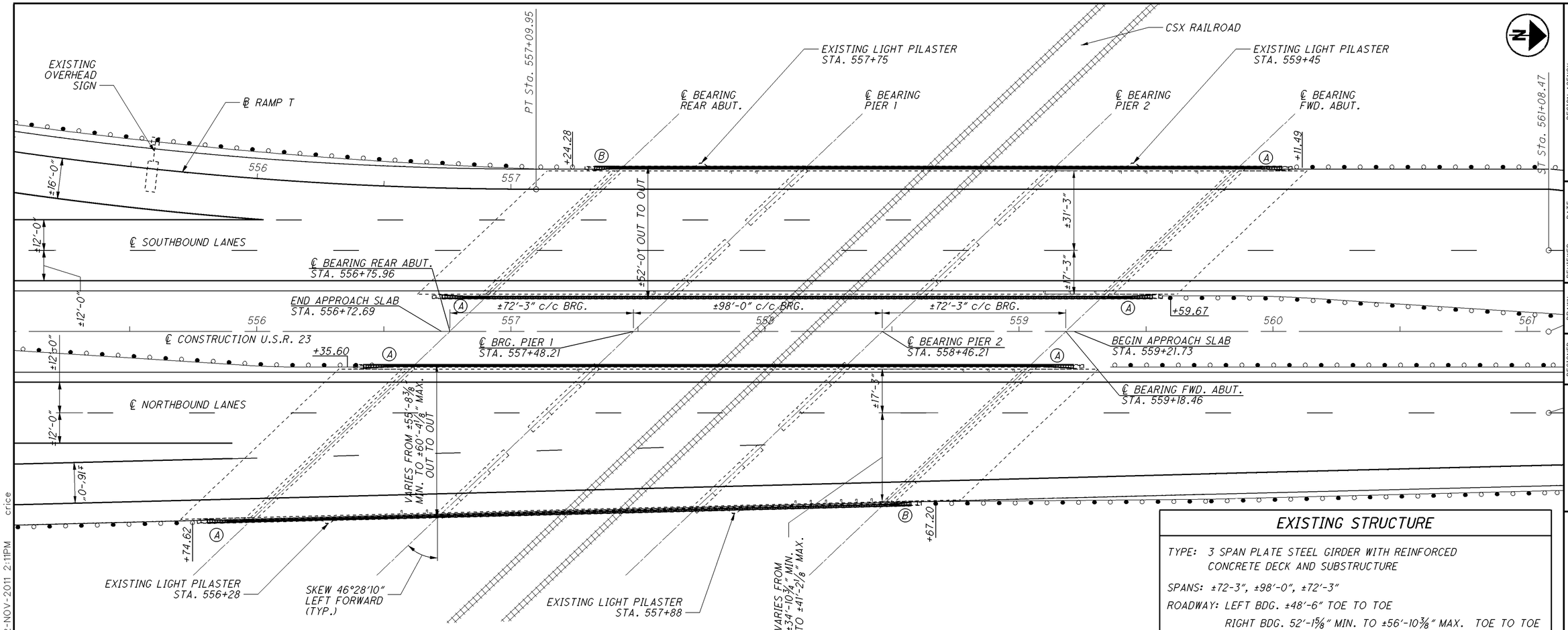
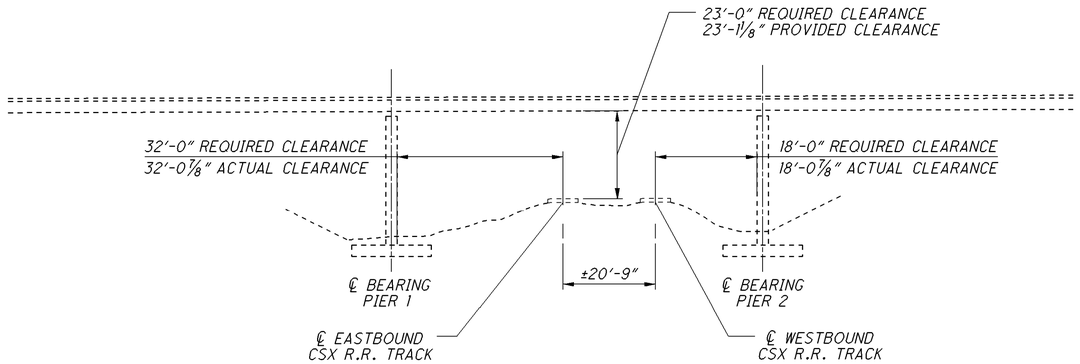


PROPOSED PLAN VIEW



CLEARANCE DIAGRAM

NOTE:
A AND B REFER TO DIFFERENT END SECTIONS, REFER TO SHEET 7/7 FOR MORE DETAILS

EXISTING STRUCTURE

TYPE: 3 SPAN PLATE STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±72-3", ±98'-0", ±72'-3"

ROADWAY: LEFT BDG. ±48'-6" TOE TO TOE
RIGHT BDG. 52'-1 5/8" MIN. TO ±56'-10 3/8" MAX. TOE TO TOE

LOADING: HS20-44

SKEW: 46°28'10" LEFT FORWARD

APPROACH SLABS: AS-1-67 (25'-0" LONG MODIFIED)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: L 7100604
R 7100639

DATE BUILT: 1972

COORDINATES: LATITUDE 39°19'06 N
LONGITUDE 82°56'22 W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1'-0" CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MCM | CHECKED MRH
DRAWN MCM | REVISED
REVIEWED GEC | DATE 11/21/11
STRUCTURE FILE NUMBER 7100604 L 7100639 R

ROSS COUNTY
STA. 556+72.69
STA. 559+21.73

SITE PLAN
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

1 / 7

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REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

ITEM 625 - POWER SERVICE, AS PER PLAN

THE EXISTING POWER SUPPLY FOR THE EXISTING CONDUIT THAT RUNS THROUGH THE EXISTING PARAPETS SHALL BE LOCATED AND DISCONNECTED BEFORE PERFORMING ITEM 517, RAILING (UPGRADE EXISTING), AS PER PLAN. ONCE THE POWER IS DISCONNECTED, THE CONTRACTOR SHOULD VERIFY THAT THE WIRE IS CARRYING NO VOLTAGE AND THEN, WITH THE APPROVAL OF THE ENGINEER ITEM 517 MAY BE PERFORMED. ONCE ALL WORK IS COMPLETED THE POWER SHALL BE RECONNECTED AT THE POWER SUPPLY.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7
2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1052 R AND BRIDGE NO. ROS-23-1052 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/7
2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1052 R AND BRIDGE NO. ROS-23-1052 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MCM | CHECKED MRH
DRAWN MCM | REVISED
REVIEWED GEC | DATE 11/21/11
STRUCTURE FILE NUMBER 7100634 L, 7100635 R

GENERAL NOTES
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

2 / 7

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CALCULATED	DATE	CHECKED	DATE
MCM	08/22/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1052 (LEFT BRIDGE) S.F.N. 7100604

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	628	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	70		558	
512	10400	1,654	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	270	1,384		
512	74000	521	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	62		459	
517	75401	549	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	59	490		2/7
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/7
843	50001	49	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	7		42	2/7

ESTIMATED QUANTITIES FOR ROS-23-1052 (RIGHT BRIDGE) S.F.N. 7100639

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	641	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	70		571	
512	10400	1,880	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	308	1,572		
512	74000	527	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	62		465	
517	75401	556	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	59	497		2/7
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/7
843	50001	49	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	7		42	2/7

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MCM	MCM	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRH		7100604 & 7100639 R	

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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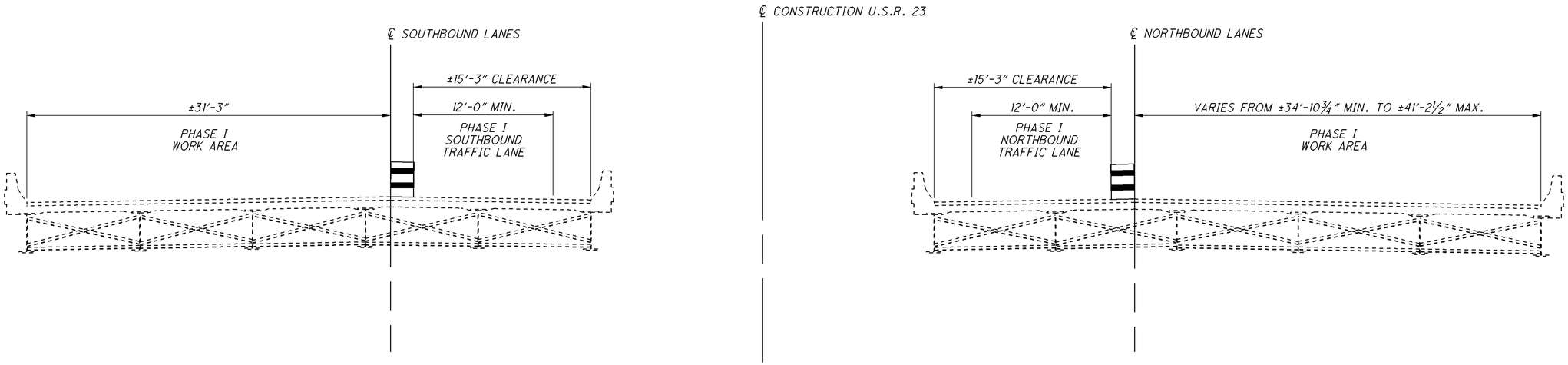
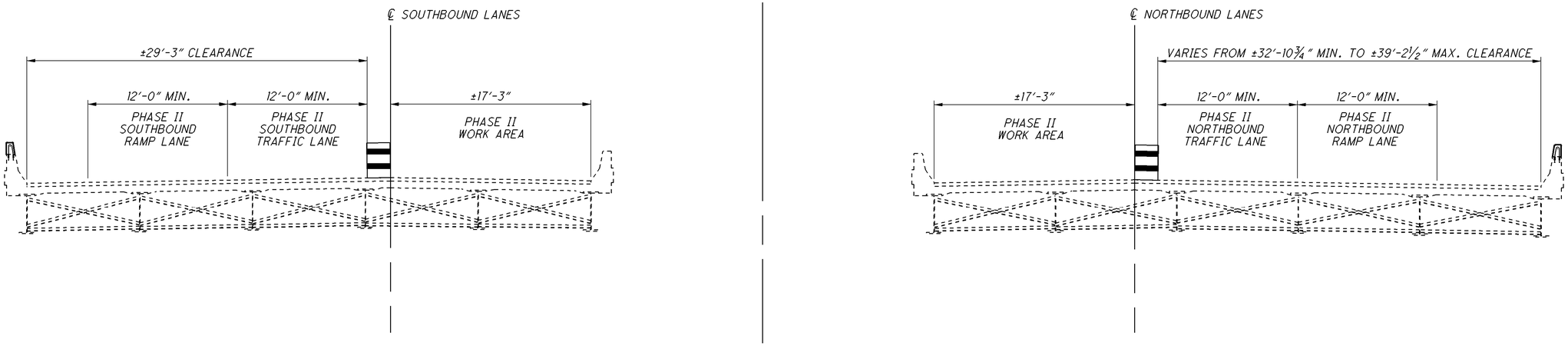


PROPOSED PHASE I MAINTENANCE OF TRAFFIC



PROPOSED PHASE II MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MCM	MCM	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRH		7100639 L 7100639 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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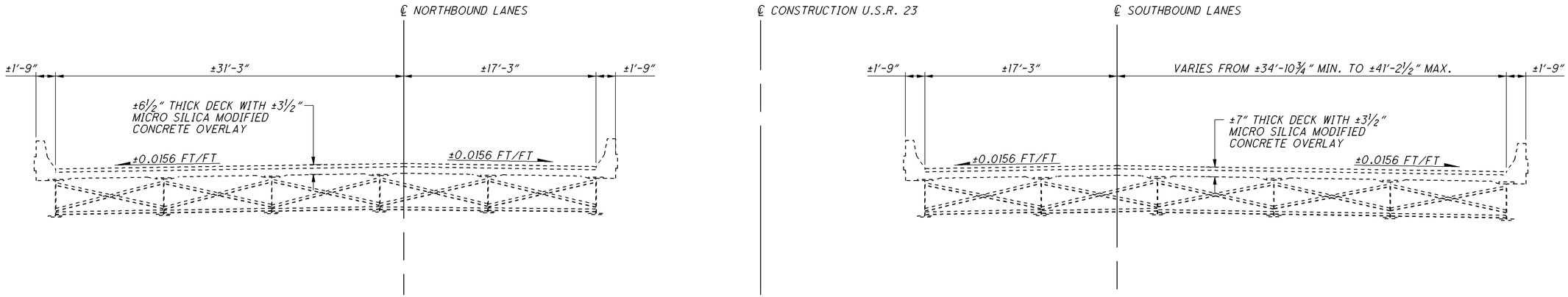
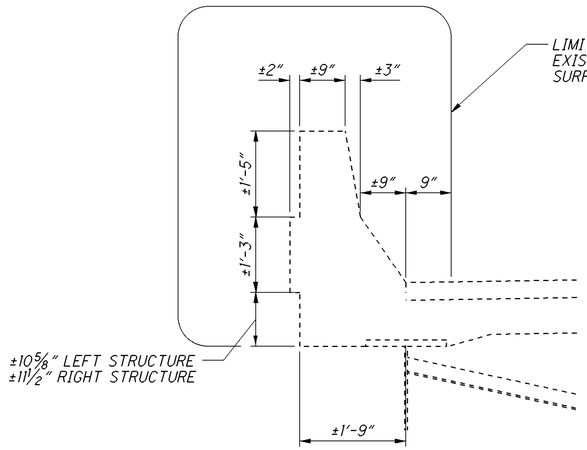
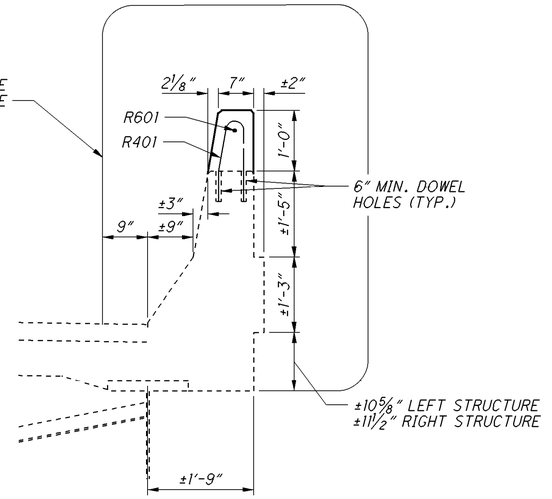


EXISTING TRANSVERSE SECTION



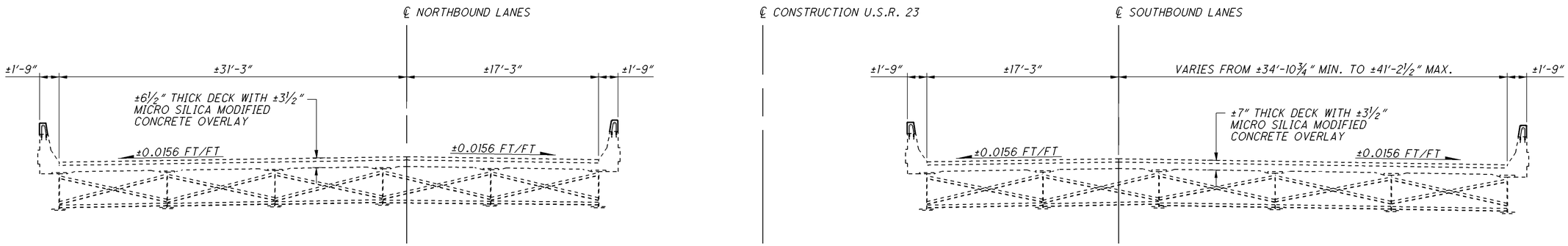
EXISTING PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES



PROPOSED PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF BOTH THE NORTHBOUND AND SOUTHBOUND LANES



PROPOSED TRANSVERSE SECTION

NOTE:
DOWEL HOLE LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MCM	MCM	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRH		7100604 7100639 R	

TRANSVERSE SECTION
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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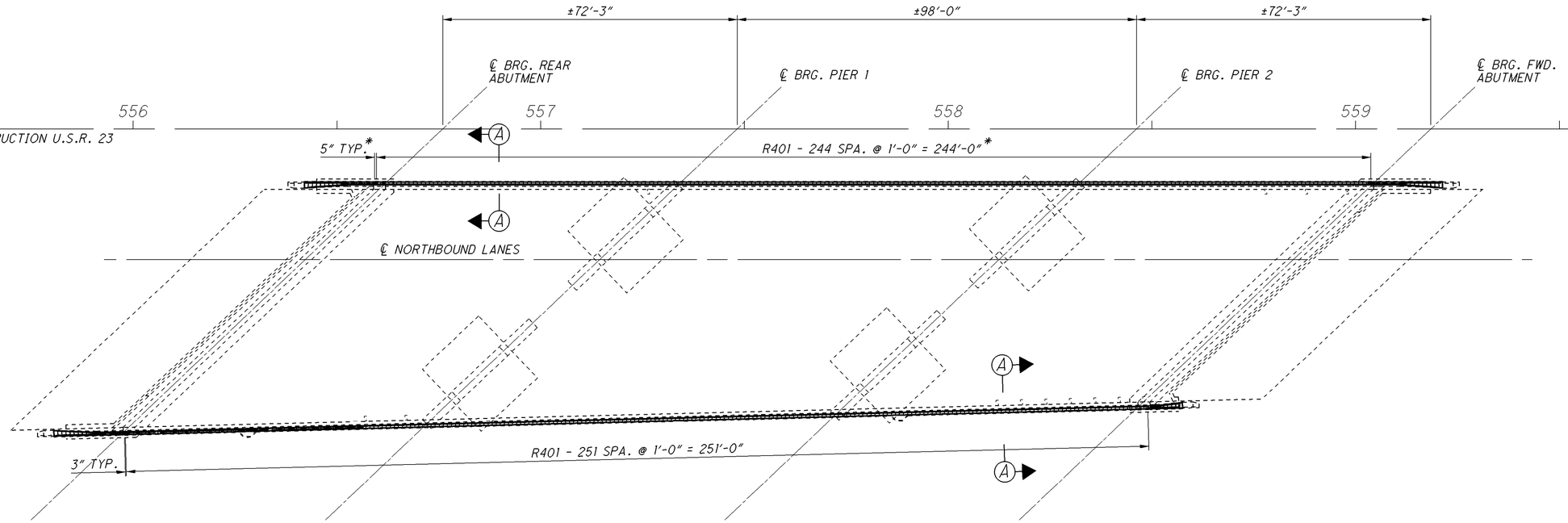
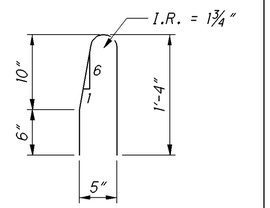


PROPOSED PLAN VIEW

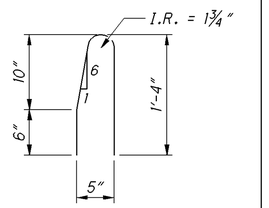
NORTHBOUND LANES SHOWN, SOUTHBOUND LANES SIMILAR

REINFORCING STEEL LIST (ROS-23-1052 L)			
MARK	NO.	LENGTH	TYPE
R401	490	3'-4"	24
R601	18	31'-0"	STR.

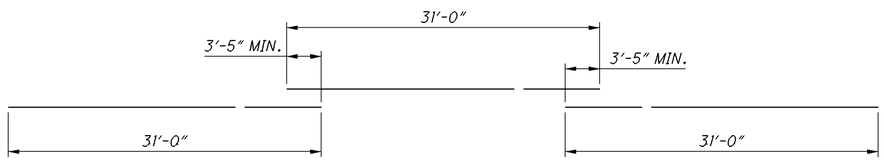


TYPE 24

REINFORCING STEEL LIST (ROS-23-1052 R)			
MARK	NO.	LENGTH	TYPE
R401	497	3'-4"	24
R601	18	31'-0"	STR.

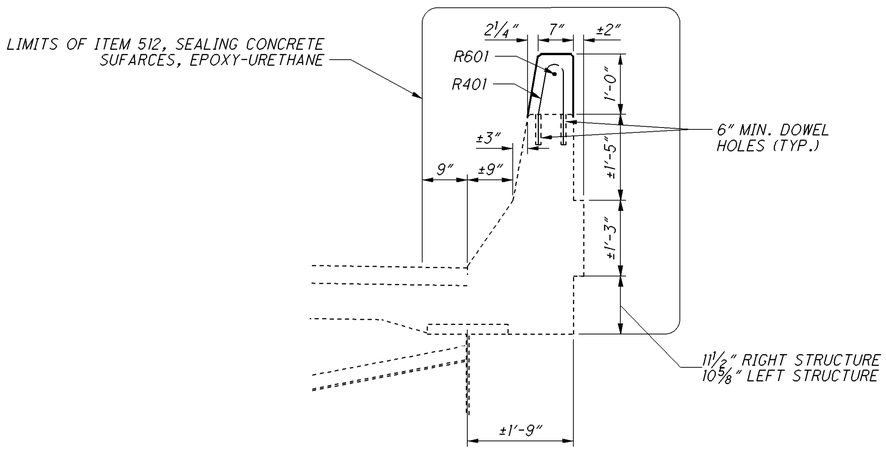


TYPE 24



LAPPING DIAGRAM

APPLIES TO THE R601 BAR



SECTION A-A

NOTES:

THE DOWEL LENGTH INDICATES THE MINUMUM DEPTH OF EMBEDMENT OF THE PROPOSED REINFORCING STEEL

* = APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF THE SOUTHBOUND LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MCM	MCM	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRH		7100639 L 7100639 R	

PROPOSED SUPERSTRUCTURE DETAILS

BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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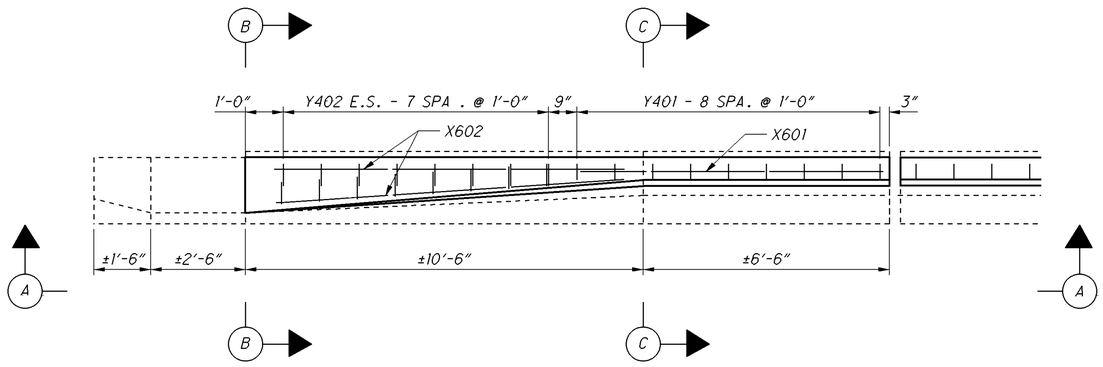
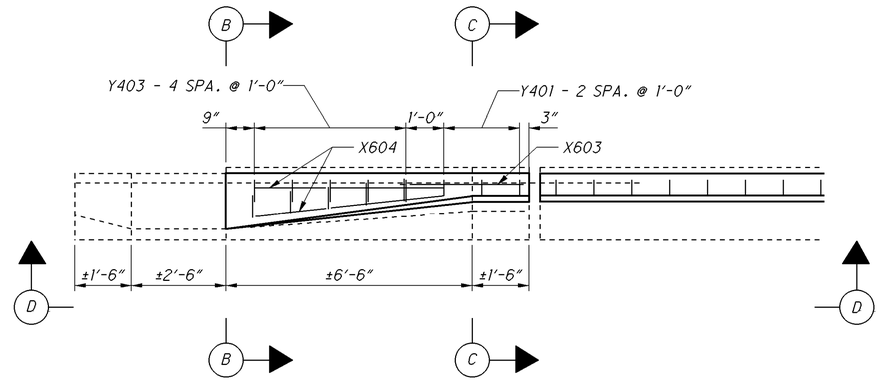
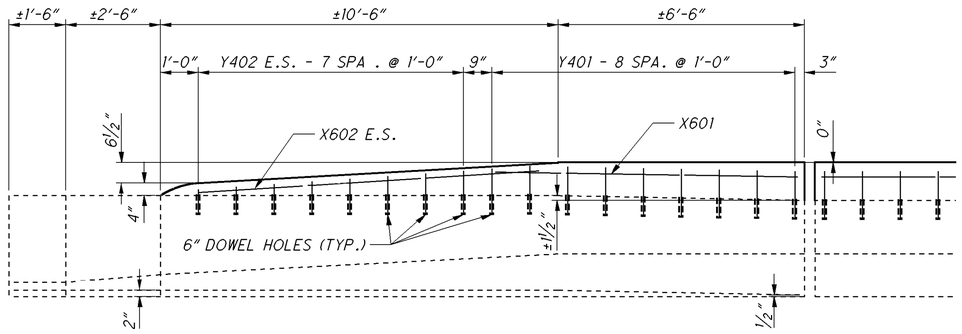


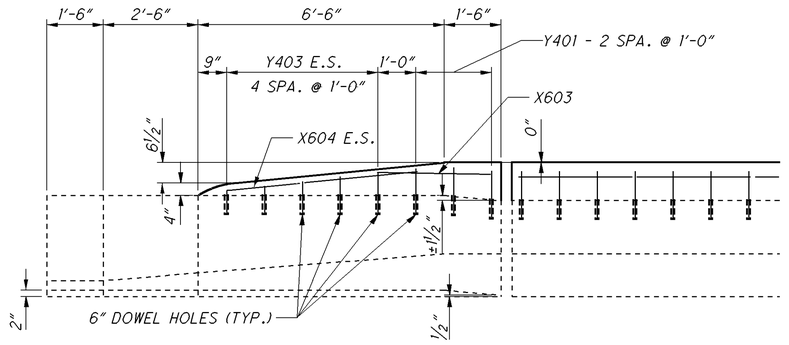
PROPOSED PLAN VIEW
APPLIES TO LOCATION A



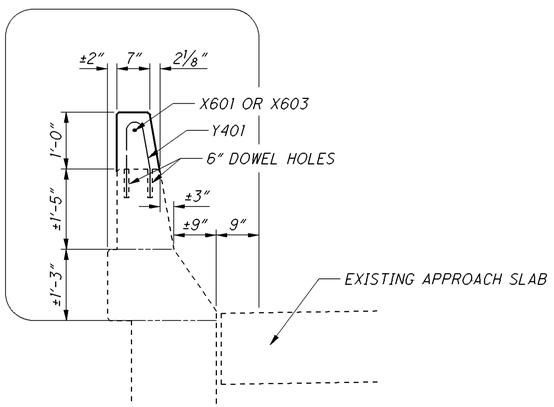
PROPOSED PLAN VIEW
APPLIES TO LOCATION B



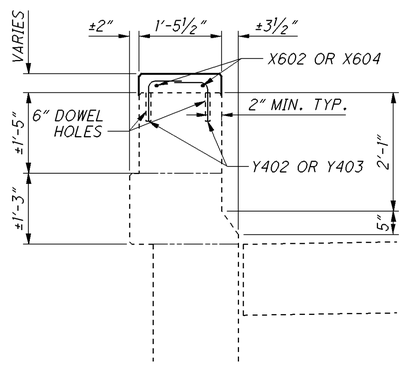
SECTION A-A



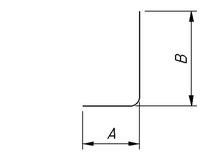
SECTION D-D



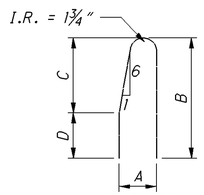
SECTION C-C



SECTION B-B



TYPE 1



TYPE 24

REINFORCING STEEL LIST FOR LOCATION A (6 TOTAL)

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
Y401	9	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X601	1	8'-0"	STR.					
X602	2	9'-3"	STR.					

REINFORCING STEEL LIST FOR LOCATION B (2 TOTAL)

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
Y401	3	3'-4"	24	5"	1'-4"	10"	6"	
Y403	2 SERIES OF 5 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	7½" MIN. TO 1'-2" MAX.			1½"
X603	1	3'-0"	STR.					
X604	2	5'-0"	STR.					

EACH REINFORCING STEEL LIST ONLY APPLIES TO ONE RESPECTIVE PARAPET TRANSITION

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MCM	MCM	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MRH		7100603 L 7100639 R	

PROPOSED PARAPET TRANSITIONS
BRIDGE NO. ROS-23-1052 L & R
OVER CSX RAILROAD

ROS-23-8.23
PID No. 76477

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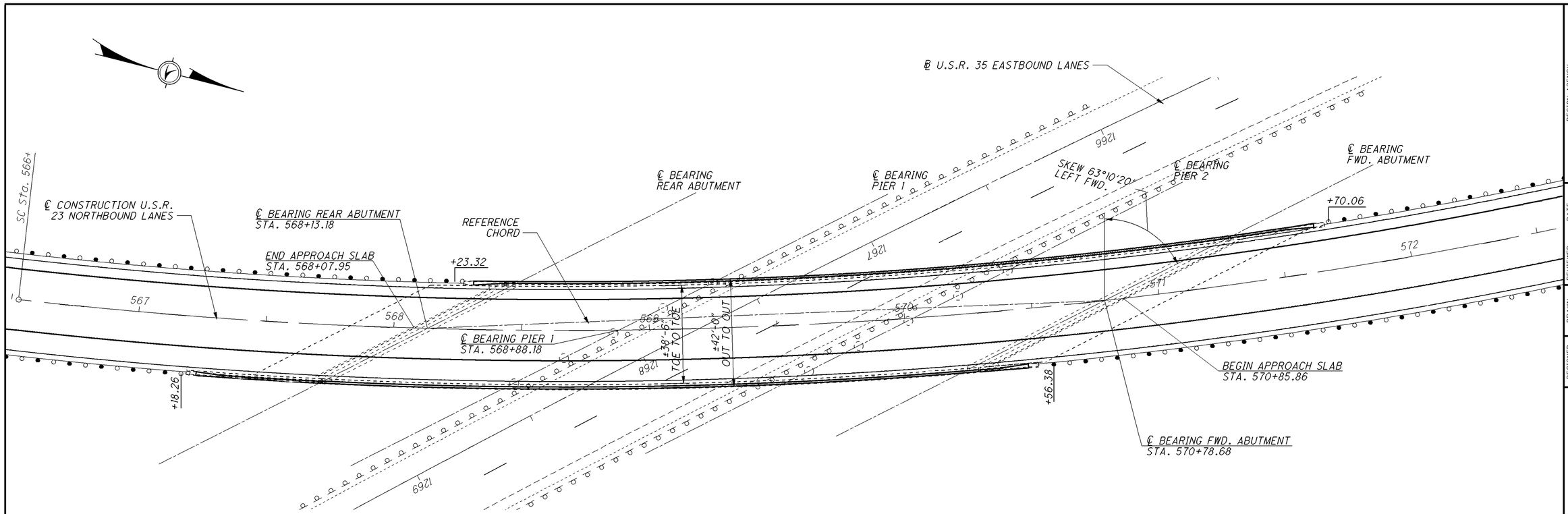

EXISTING CURVE DATA

P.I. Sta. 571+68.69	k = 199.93′
Δ = 41° 02′ 12″ (LT)	p = 3.49′
Dc = 3° 00′ 00″	c = 29° 02′ 12″ (LT)
R = 1,909.86′	Lc = 967.89′
Ls = 400.00′	Ts = 916.00′
θs = 6° 00′ 00″	Es = 133.09′
LT = 266.82′	C = 957.56′
ST = 133.47′	C1 = C2 = 399.81′
x = 399.56′	C.B.1 = N 4° 00′ 58″ W
y = 13.95′	C.B. = N 22° 32′ 05″ W
	C.B.2 = S 41° 03′ 12″ E

EXISTING STRUCTURE

TYPE: 5 SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±75′-0″, ±115′-6″, ±75′-0″ c/c BEARING ALONG ℄ LANE

ROADWAY: ±38′-6″ TOE TO TOE

LOADING: HS20-44

SKEW: 65°35′47″ LEFT FORWARD

APPROACH SLABS: AS-1-67 (25′-0″ LONG)

ALIGNMENT: 4°0′′ LEFT CURVE

CROWN: ±0.0156 FT/FT SUPERELEVATED

STRUCTURAL FILE NUMBER: 7100663

DATE BUILT: 1972

COORDINATES: LATITUDE 39°17′32″ N
LONGITUDE 82°56′42″ W

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- CONSTRUCT 1′-0″ CAP ON EXISTING PARAPETS AND TRANSITIONS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	1/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

ROSS COUNTY
STA. 568+07.95
STA. 570+85.86

SITE PLAN
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

843 DATED 04-18-03

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

DESIGN LOADING

HS20, CASE I AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE

DECK PROTECTION METHOD

SRS TREATMENT ON SUPERSTRUCTURE AND APPROACH SLABS

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 625 - POWER SERVICE, AS PER PLAN

THE EXISTING POWER SUPPLY FOR THE EXISTING CONDUIT THAT RUNS THROUGH THE EXISTING PARAPETS SHALL BE LOCATED AND DISCONNECTED BEFORE PERFORMING ITEM 517, RAILING (UPGRADE EXISTING), AS PER PLAN. ONCE THE POWER IS DISCONNECTED, THE CONTRACTOR SHOULD VERIFY THAT THE WIRE IS CARRYING NO VOLTAGE AND THEN, WITH THE APPROVAL OF THE ENGINEER ITEM 517 MAY BE PERFORMED. ONCE ALL WORK IS COMPLETED THE POWER SHALL BE RECONNECTED AT THE POWER SUPPLY.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:
THIS WORK CONSISTS OF ADDING A 1'-0" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPARATIONS:
THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH PROPOSAL NOTE 552 AND ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:
DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:
CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:
FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:
SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAWBLADE, A NOMINAL WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

METHOD OF MEASUREMENT:
THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET (INCLUDING THE PARAPET TRANSITIONS).

BASIS OF PAYMENT:
PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN

THIS ITEM CONSISTS OF PATCHING THE EXISTING PARAPETS AND PARAPET TRANSITIONS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 843 AT LOCATIONS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF THE NORTHBOUND LANE IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. COMPLETE STAGE ONE CONSTRUCTION OF BRIDGE NO. ROS-23-1074 AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF THE NORTHBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. COMPLETE STAGE TWO CONSTRUCTION OF BRIDGE NO. ROS-23-1074 AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

GENERAL NOTES
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

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CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1074 S.F.N. 7100663

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
512	10100	701	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	142		559	
512	10400	1,403	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	214	1,189		
512	74000	601	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	116		485	
517	75401	655	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	113	542		2/9
625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1			2/9
843	50001	38	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, AS PER PLAN	5		33	2/9

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

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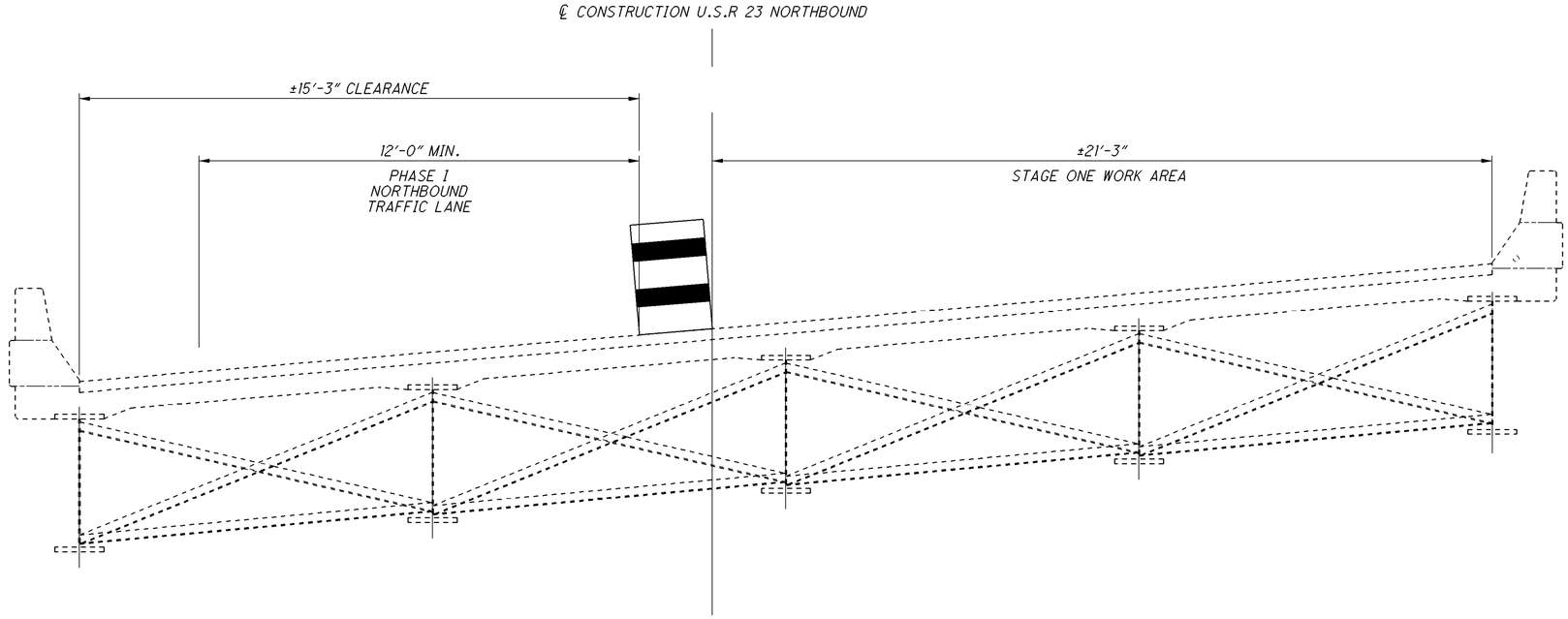
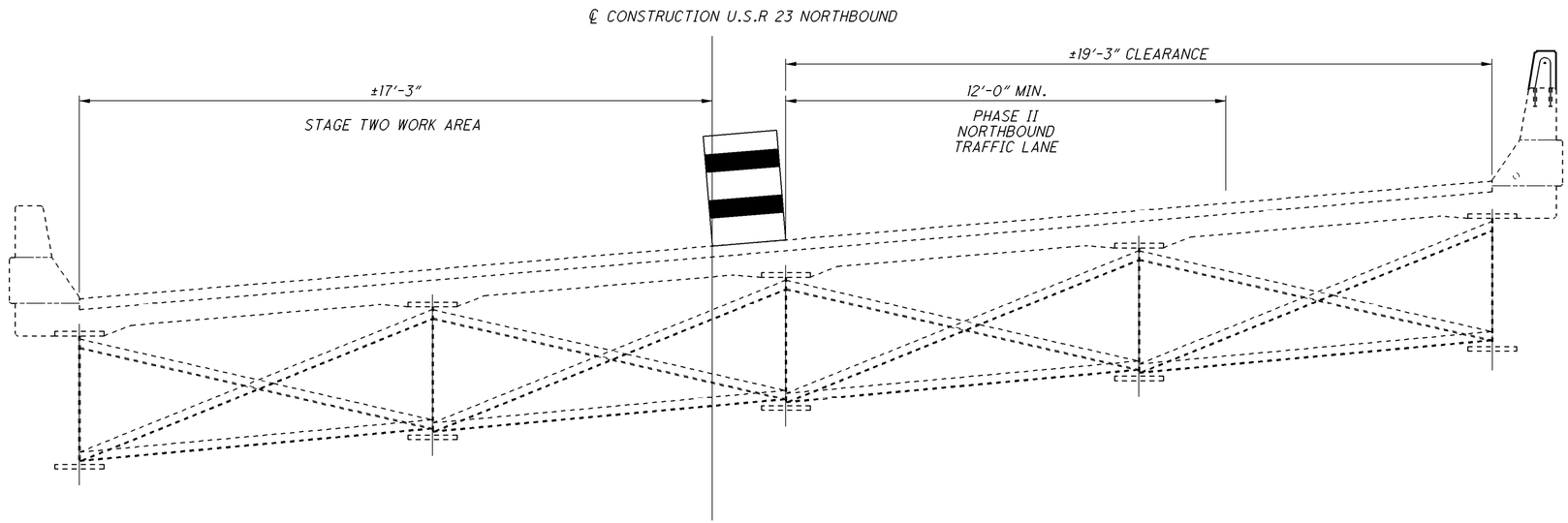
104



PROPOSED PHASE I MAINTENANCE OF TRAFFIC



PROPOSED PHASE II MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

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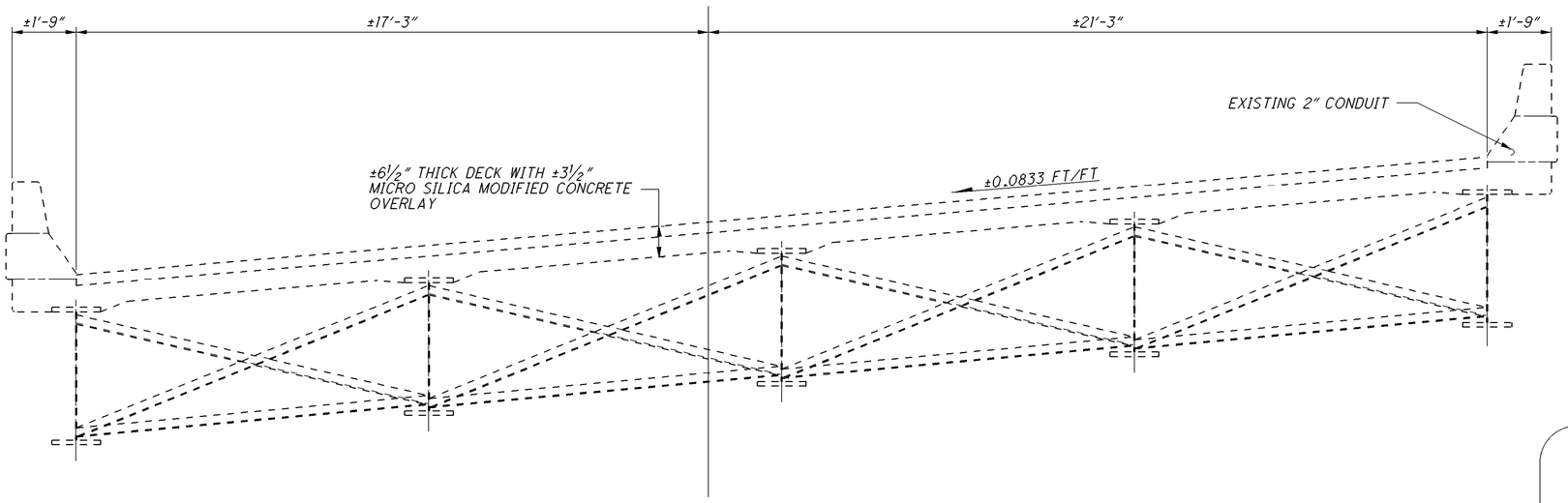
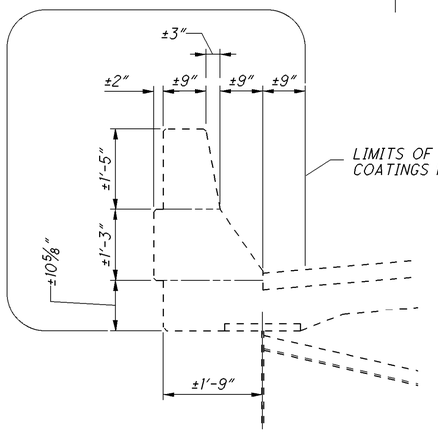
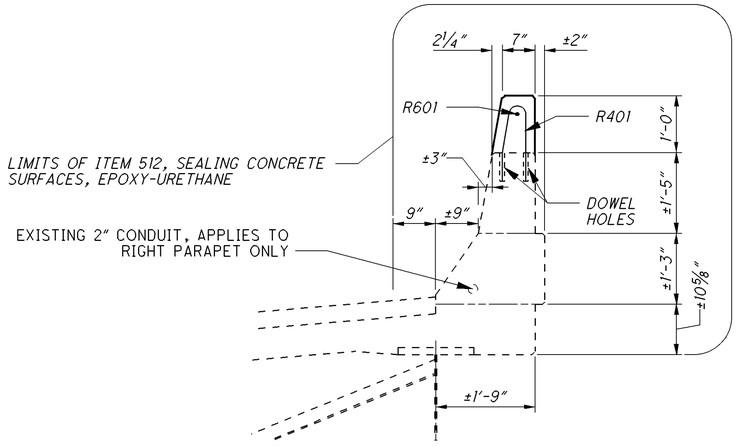


EXISTING TRANSVERSE SECTION



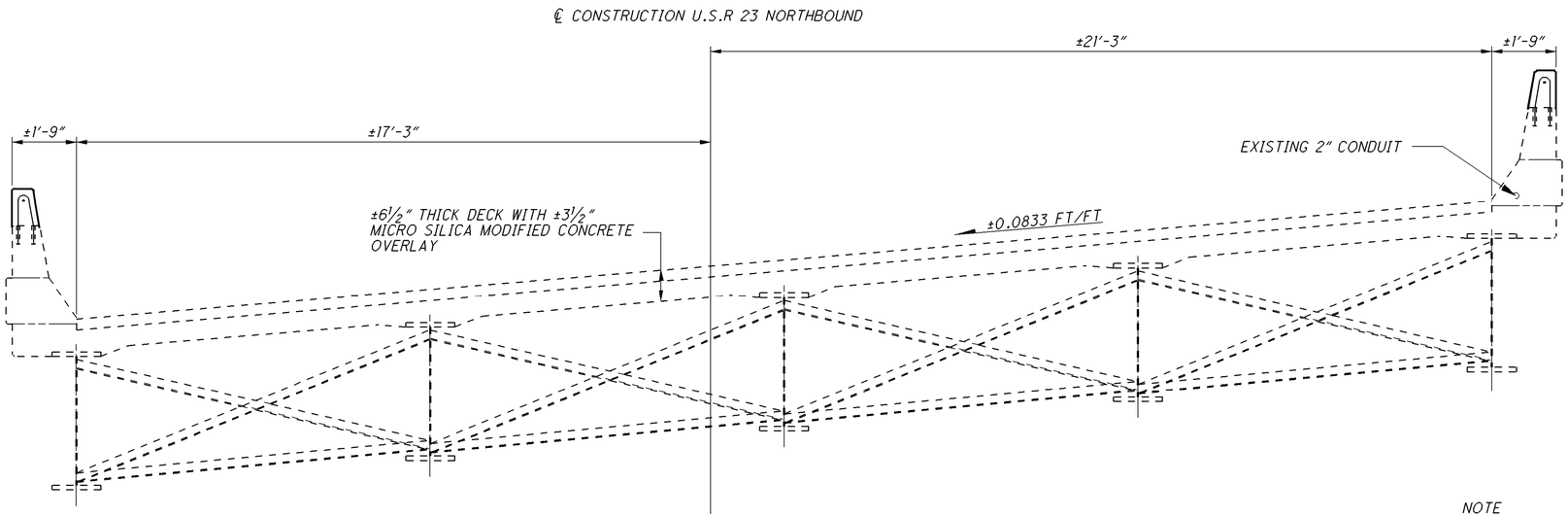
EXISTING PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT EDGE OF DECK



PROPOSED PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT EDGE OF DECK



PROPOSED TRANSVERSE SECTION

NOTE
DOWEL HOLES LENGTH INDICATES THE MINIMUM EMBEDMENT OF THE PROPOSED REINFORCING STEEL

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	NRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

TRANSVERSE SECTION
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND

ROS-23-8.23
PID No. 76477

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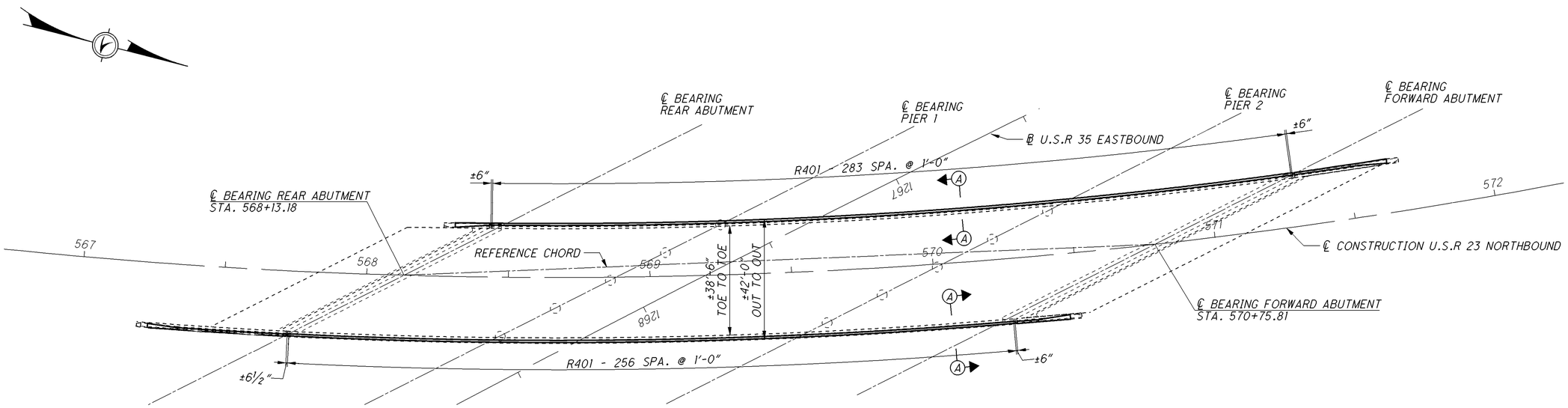
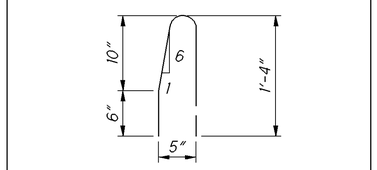


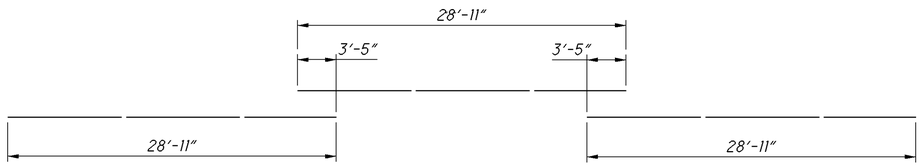
PROPOSED PLAN VIEW

REINFORCING STEEL LIST
BRIDGE NO. ROS-23-1026 R (SFN 7100574)

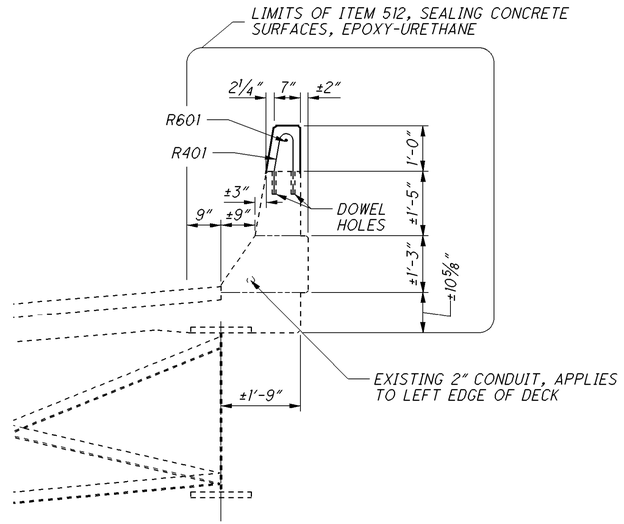
MARK	NO.	LENGTH	TYPE
R401	541	3′-4″	24
R601	21	28′-11″	STR.



TYPE 24



LAPPING DIAGRAM
APPLIES TO R601 BAR



SECTION A-A

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11
CHECKED MCM | REVISED | STRUCTURE FILE NUMBER 7100663

DECK DETAILS
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND

ROS-23-8.23
PID No. 76477

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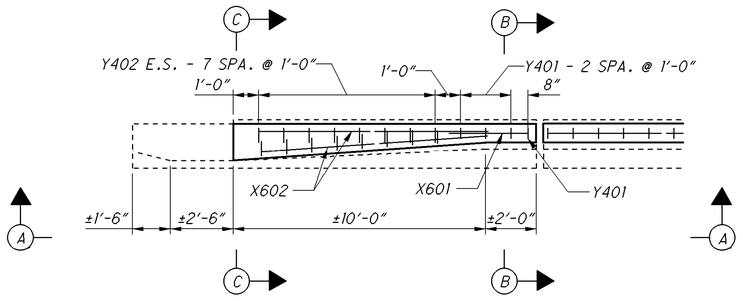
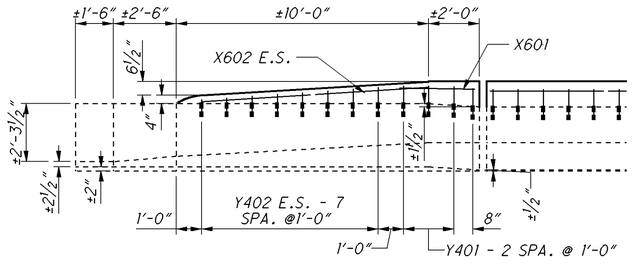
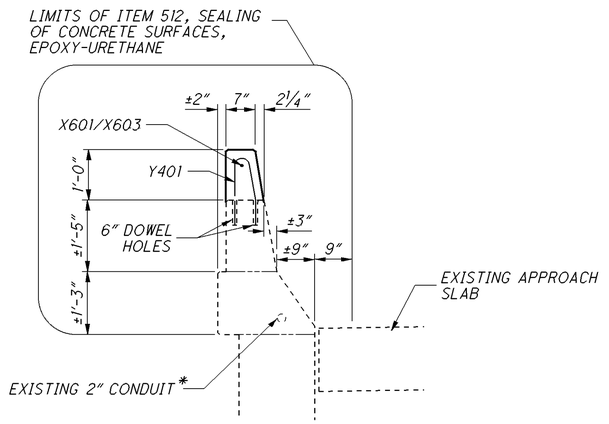


PROPOSED PLAN VIEW

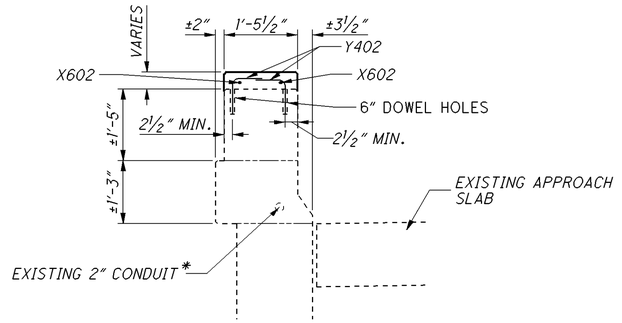
APPLIES TO THE LEFT SIDE OF THE REAR ABUTMENT



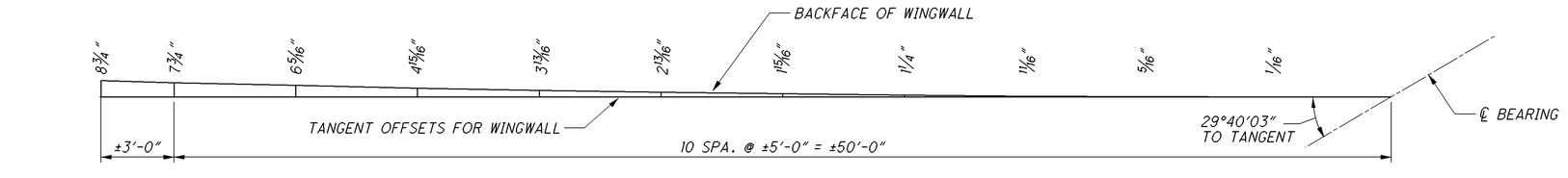
SECTION A-A

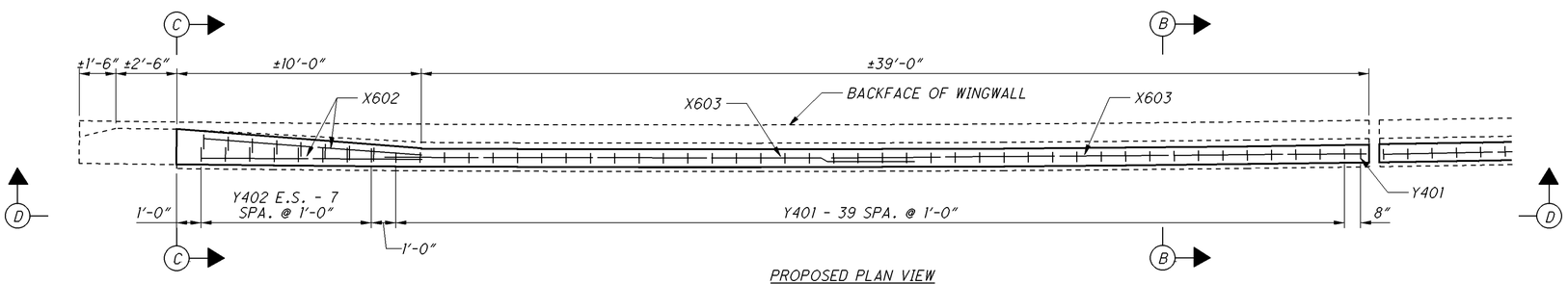


SECTION B-B



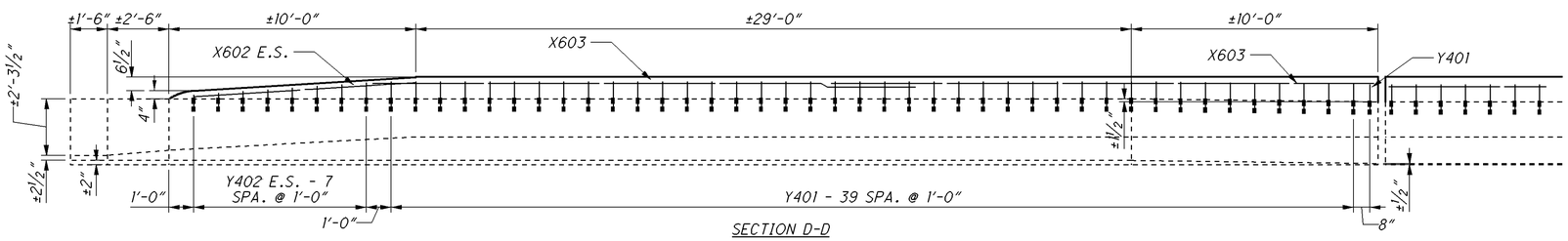
SECTION C-C





PROPOSED PLAN VIEW

APPLIES TO THE RIGHT SIDE OF THE REAR ABUTMENT



SECTION D-D

NOTES

DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

*EXISTING 2" CONDUIT SHALL NOT BE DISTURBED AND ONLY APPLIES TO THE RIGHT PARAPET

E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE

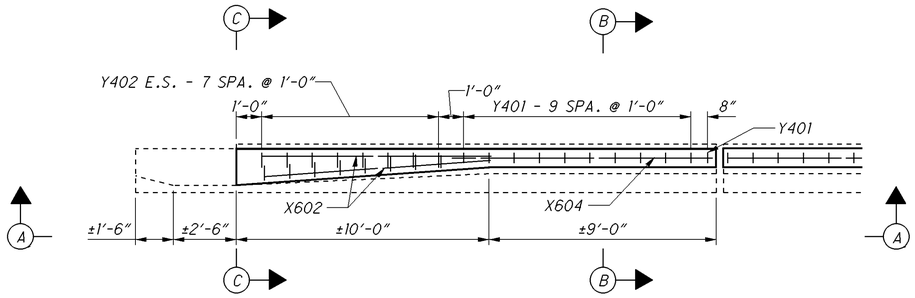
DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

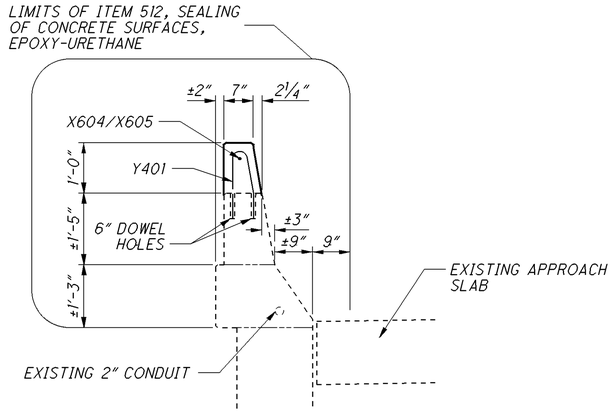
PROPOSED PARAPET TRANSITIONS - REAR ABUTMENT

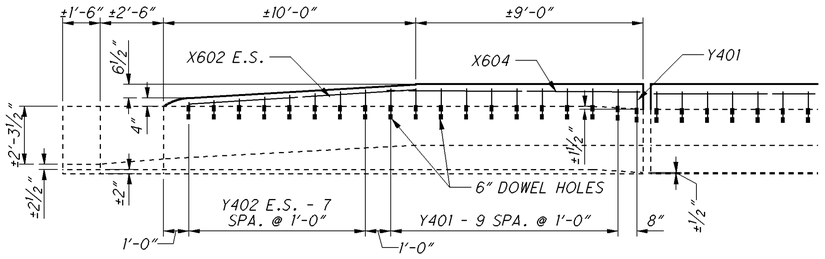
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

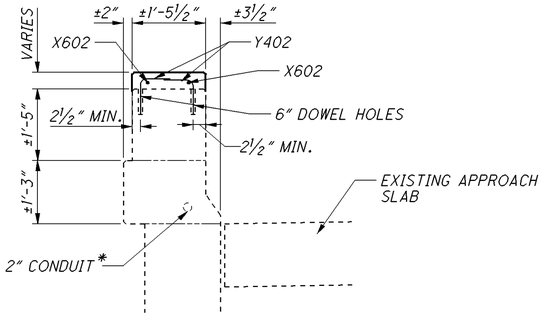


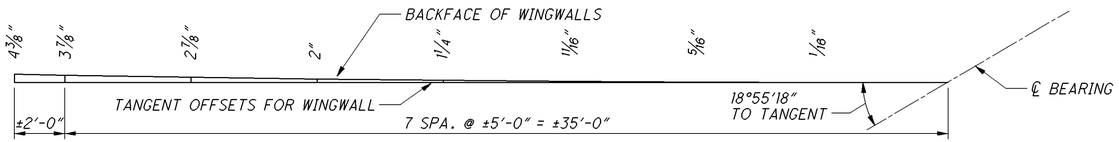
PROPOSED PLAN VIEW
APPLIES TO THE RIGHT SIDE OF THE FORWARD ABUTMENT

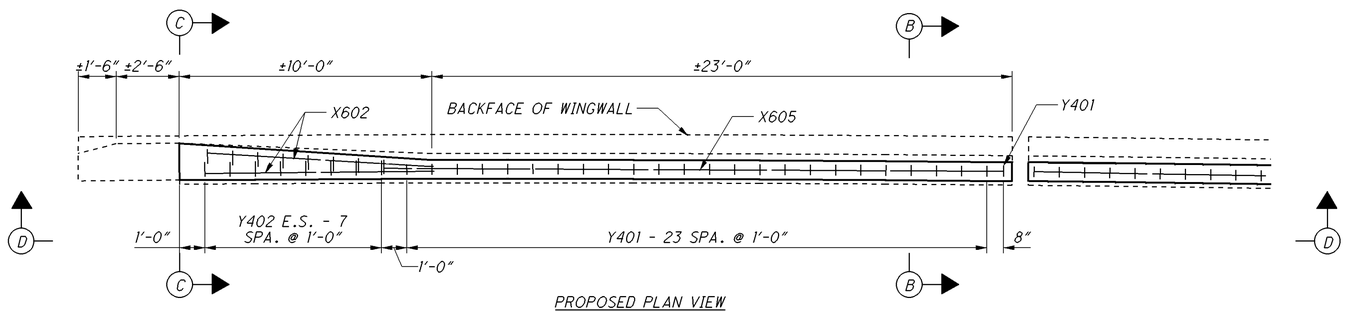




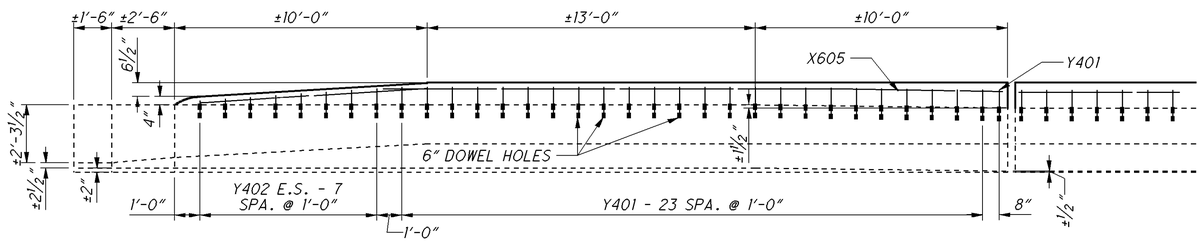
SECTION A-A







PROPOSED PLAN VIEW
APPLIES TO THE LEFT SIDE OF THE FORWARD ABUTMENT



SECTION D-D

NOTES

DOWEL HOLES SHALL ALLOW FOR AN EMBEDMENT DEPTH OF 0'-6" MINIMUM FOR THE PROPOSED REINFORCING STEEL

*EXISTING 2" CONDUIT SHALL NOT BE DISTURBED AND ONLY APPLIES TO THE RIGHT PARAPET

E.S. - EACH SIDE
F.S. - FAR SIDE
N.S. - NEAR SIDE

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

PROPOSED PARAPET TRANSITIONS - FORWARD ABUTMENT
BRIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

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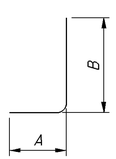
REINFORCING STEEL LIST

MARK	NO.	LENGTH	TYPE	A	B	C	D	INC.
		LEFT REAR ABUTMENT						
Y401	4	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X601	1	3'-2"	STR.					
X602	2	9'-3"	STR.					
		RIGHT REAR ABUTMENT						
Y401	41	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X602	2	9'-3"	STR.					
X603	2	22'-0"	STR.					
		RIGHT FORWARD ABUTMENT						
Y401	11	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X602	2	9'-3"	STR.					
X604	1	10'-2"	STR.					
		LEFT FORWARD ABUTMENT						
Y401	25	3'-4"	24	5"	1'-4"	10"	6"	
Y402	2 SERIES OF 8 BARS	1'-2" MIN TO 1'-9" MAX.	1	7"	8" MIN. TO 1'-3" MAX.			1"
X602	2	9'-3"	STR.					
X605	1	24'-2"	STR.					



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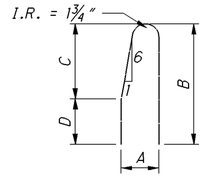

TYPE 24

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100663	

PROPOSED PARAPET TRANSITION REINFORCING STEEL LIST

RIDGE NO. ROS-23-1074
OVER U.S.R. 35 EASTBOUND LANES

ROS-23-8.23
PID No. 76477

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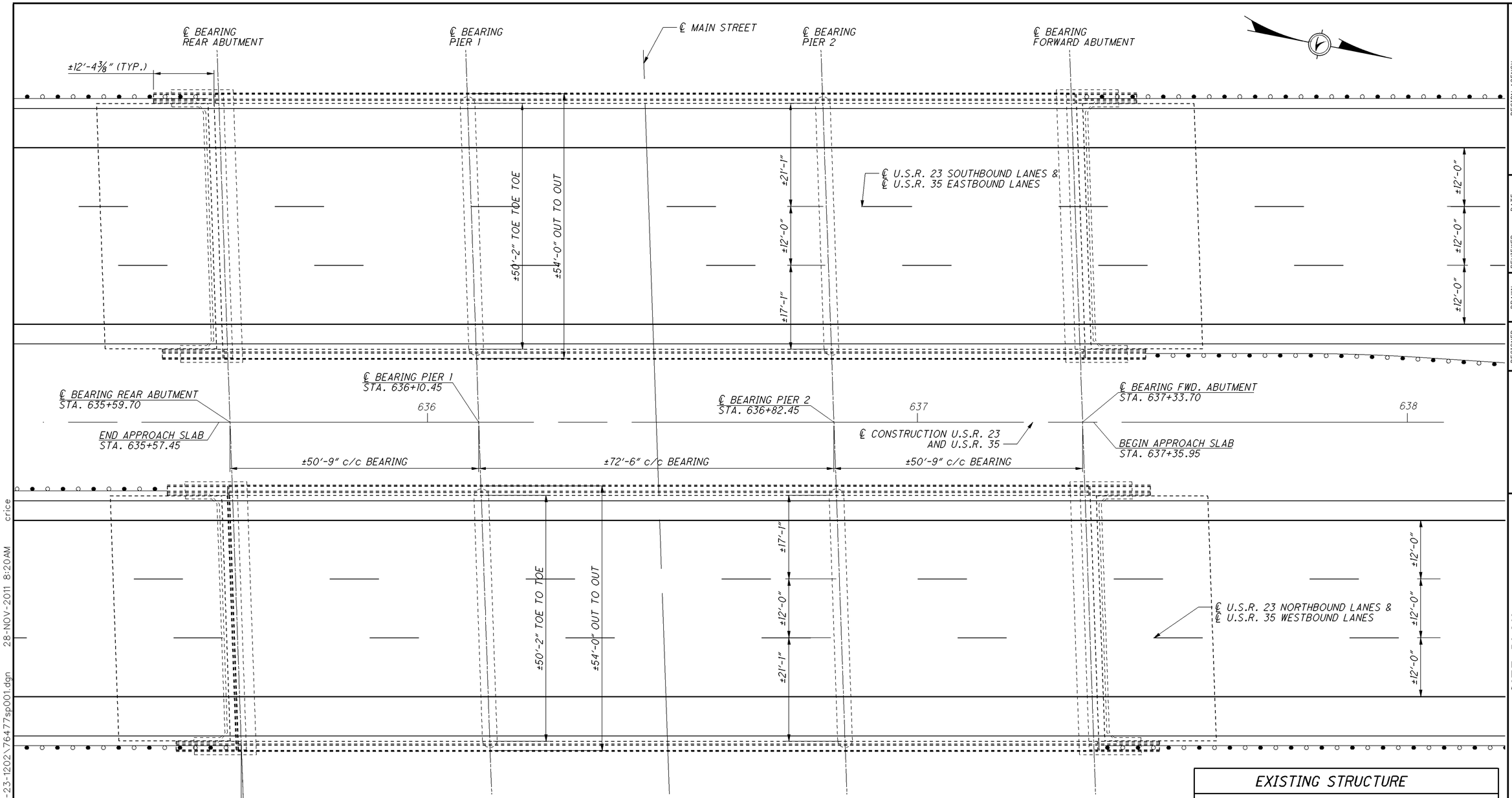

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- REPLACE EXISTING STRIP SEAL EXPANSION JOINTS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

EXISTING STRUCTURE

TYPE: THREE SPAN CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±50′-9″, ±72′-6″, ±50′-9″ c/c BEARING

ROADWAY: ±50′-2″ TOE TO TOE

LOADING: CF 2000

SKEW: 2°0′0″ RIGHT FORWARD

APPROACH SLABS: AS-1-81 (±25′-0″ LONG)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100698 L 7100728 R

DATE BUILT: 1964

COORDINATES: LATITUDE 39°18′00″ N

LONGITUDE 82°56′34″ W

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100698 L 7100728 R	

ROSS COUNTY
STA. 635+57.45
STA. 637+35.95

SITE PLAN

BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS

EXJ-4-87 REVISED 07-19-02

REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS FS - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996
GRADE 60 MINIMUM YIELD STRENGTH
60,000 P.S.I.

DESIGN LOADING

HS20 AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE.

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION:
THIS WORK CONSIST OF THE REMOVAL OF CONCRETE DECK ENDS INCLUDING PORTIONS OF THE PARAPETS AND DECK JOINTS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS:
THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUND UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

MEASUREMENT & PAYMENT:
THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY PLACE THE STRUCTURAL EXPANSION JOINT (I.E. STEEL RETAINERS, STEEL PLATES, CONCRETE, ANCHOR BARS AND WELDED SHEAR STUDS TO BE CAST INTO THE BRIDGE DECK AND PARAPETS) AND INSTALL THE ELASTOMERIC STRIP SEAL AS SHOWN ON SHEETS 8/9 THROUGH 9/9 AND STANDARD BRIDGE DRAWING EXJ-4-87.

ALL STRUCTURAL STEEL MEMBERS SHALL BE LEVEL UF AND ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THIS ITEM INCLUDES NEW STRUCTURAL STEEL BARS FOR RECONSTRUCTION OF THE EXISTING BRIDGE JOINT AS DETAILED ON SHEETS 8/9 THROUGH 9/9. NEW STRUCTURAL STEEL MAY BE EITHER ASTM A709 GRADE 50, YIELD STRENGTH 50,000 PSI OR ASTM A709 GRADE 36, YIELD STRENGTH 36,000 PSI.

PAYMENT FOR ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE FOOT CONTRACT PRICE FOR ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1202 R AND BRIDGE NO. ROS-23-1202 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1202 R AND BRIDGE NO. ROS-23-1202 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE THREE CONSTRUCTION

1. SET UP PHASE III TRAFFIC CONTROL TO CLOSE THE CENTER LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/9.
2. COMPLETE STAGE THREE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1202 R AND BRIDGE NO. ROS-23-1202 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100728 R	

GENERAL NOTES
BRIDGE NO. ROS-23-1202 L & R
OVER MAIN STREET

ROS-23-8.23
PID No. 76477

2 / 9

87
104

CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1202 (LEFT BRIDGE) S.F.N. 7100698

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				2/9
512	10100	459	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	56		403	
512	10400	1,274	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	279	995		
512	74000	459	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	56		403	
516	11211	101	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN		101		2/9

ESTIMATED QUANTITIES FOR ROS-23-1202 (RIGHT BRIDGE) S.F.N. 7100728

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				2/9
512	10100	459	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	56		403	
512	10400	1,274	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	279	995		
512	74000	459	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	56		403	
516	11211	101	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN		101		2/9

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | CHECKED MCM
DRAWN MRH | REVISED
REVIEWED GEC | DATE 11/21/11
STRUCTURE FILE NUMBER 7100698 & 7100728 R

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

3 / 9

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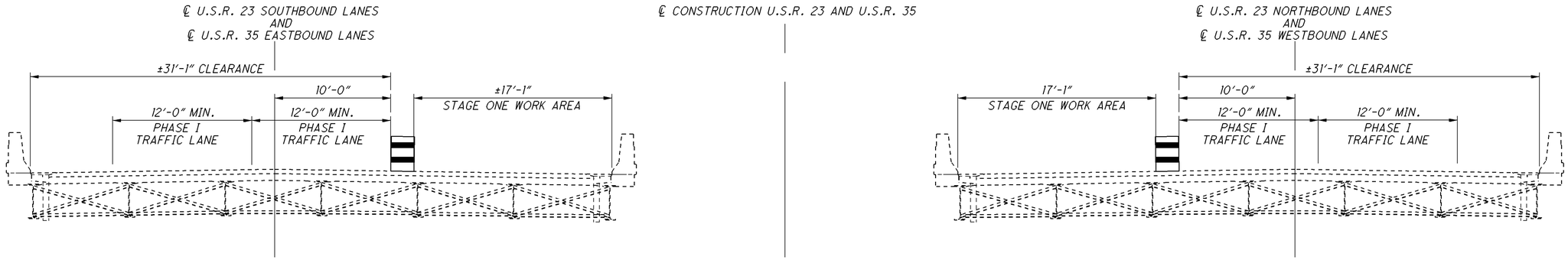
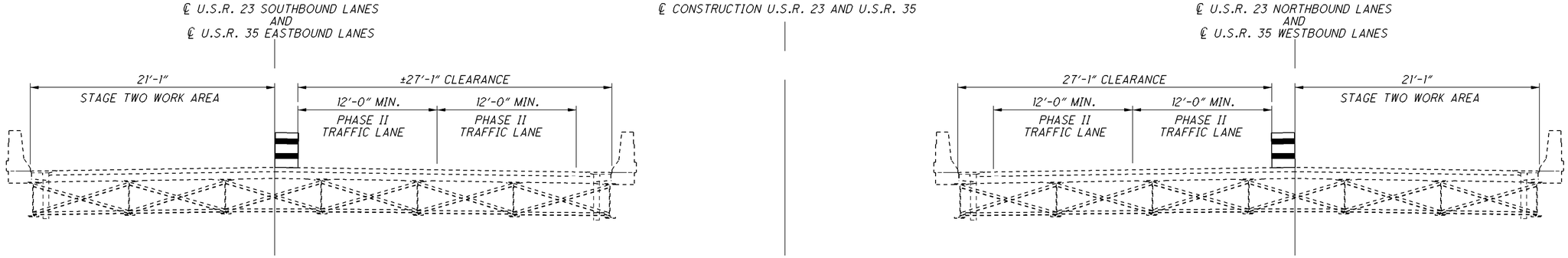
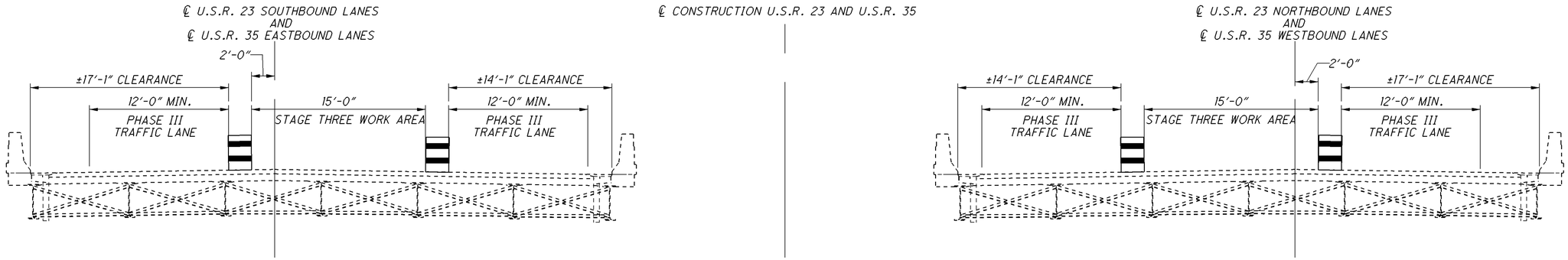


PROPOSED PHASE I MAINTENANCE OF TRAFFIC



PROPOSED PHASE II MAINTENANCE OF TRAFFIC



PROPOSED PHASE III MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700728 R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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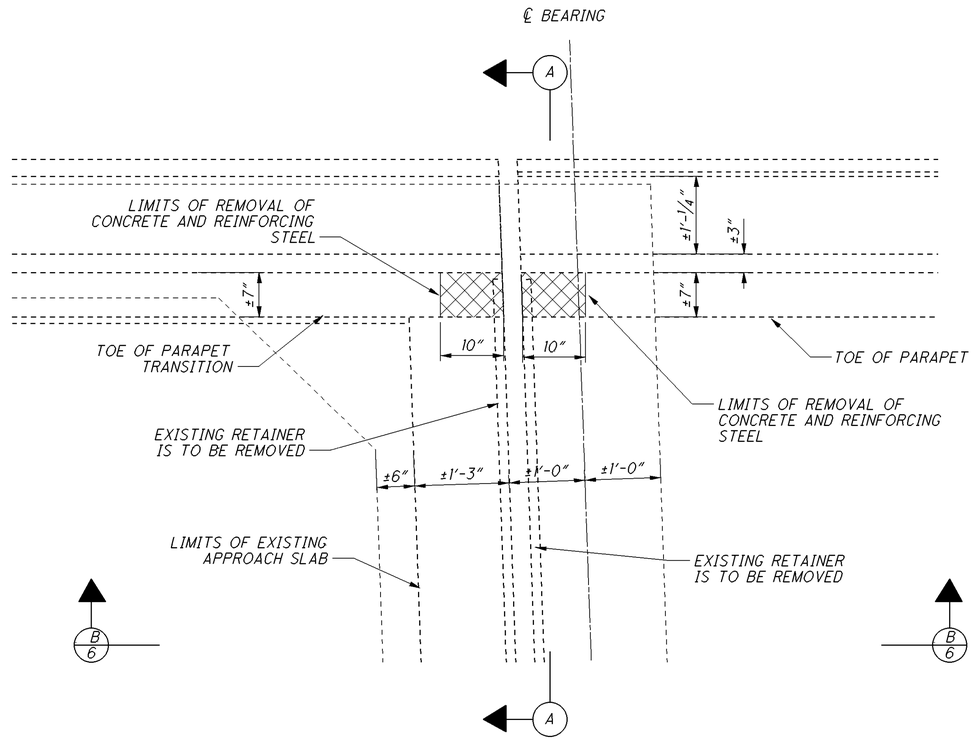
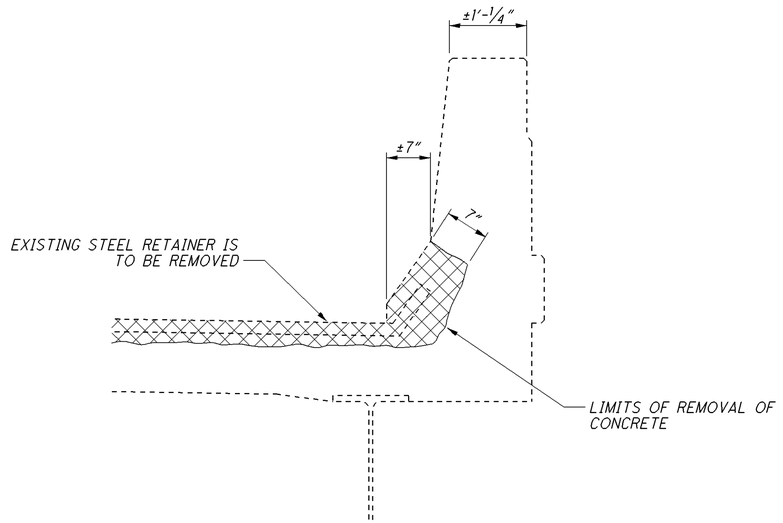


EXISTING PLAN VIEW

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET AT BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE NORTHBOUND/WESTBOUND LANES AND THE SOUTHBOUND/EASTBOUND LANES

NOTE

FOR SECTION B-B, REFER TO SHEET 6/9



SECTION A-A

APPLIES TO BOTH THE PARAPET AND PARAPET TRANSITION

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISRTICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100728 L 7100728 R	

REMOVAL DETAILS

BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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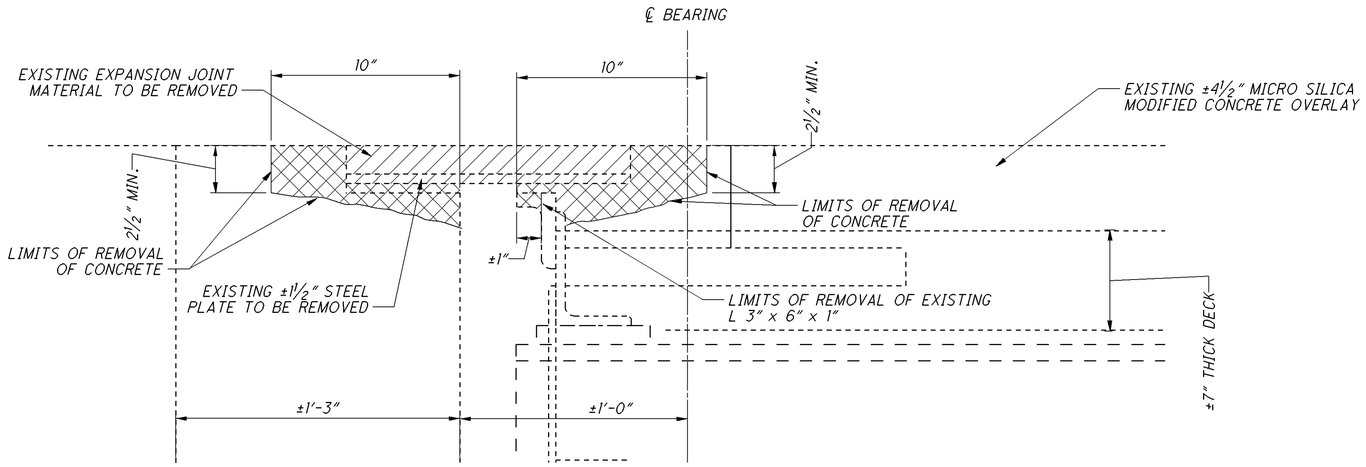
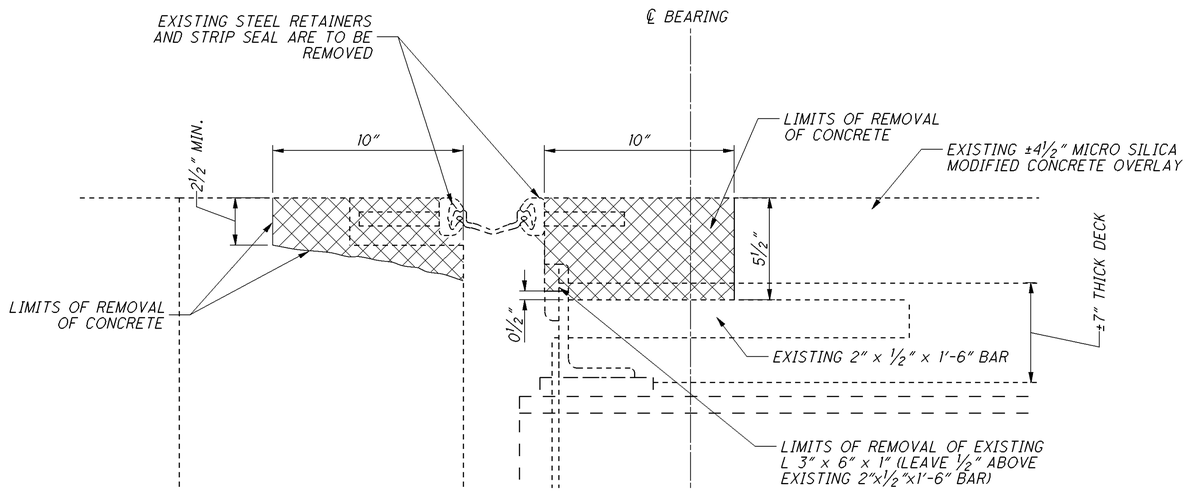


SECTION B-B

APPLIES TO BOTH THE REAR AND FORWARD ABUTMENTS OF THE SOUTHBOUND/EASTBOUND LANES

NOTE

FOR LOCATION OF SECTION B-B, REFER TO SHEET 5/9



SECTION B-B

APPLIES TO BOTH THE REAR AND FORWARD ABUTMENTS OF THE NORTHBOUND/WESTBOUND LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100728 L 7100728 R	

REMOVAL DETAILS - SECTIONS

BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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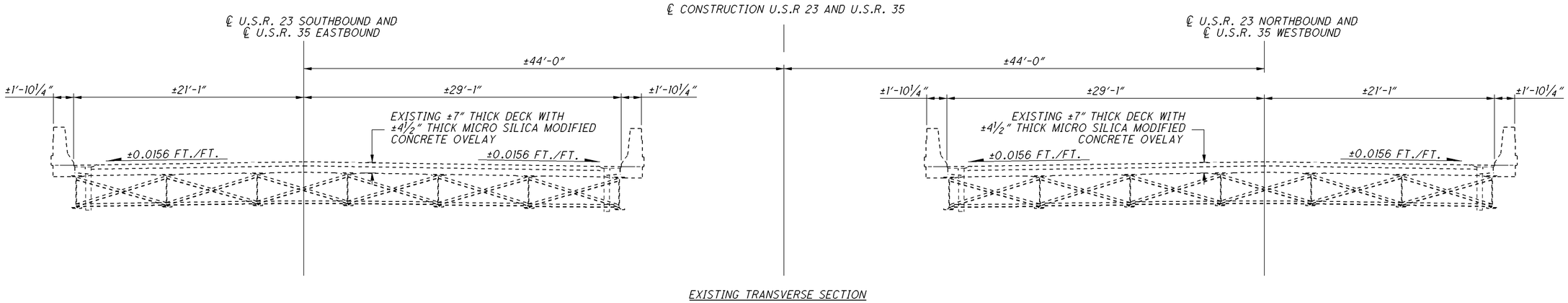
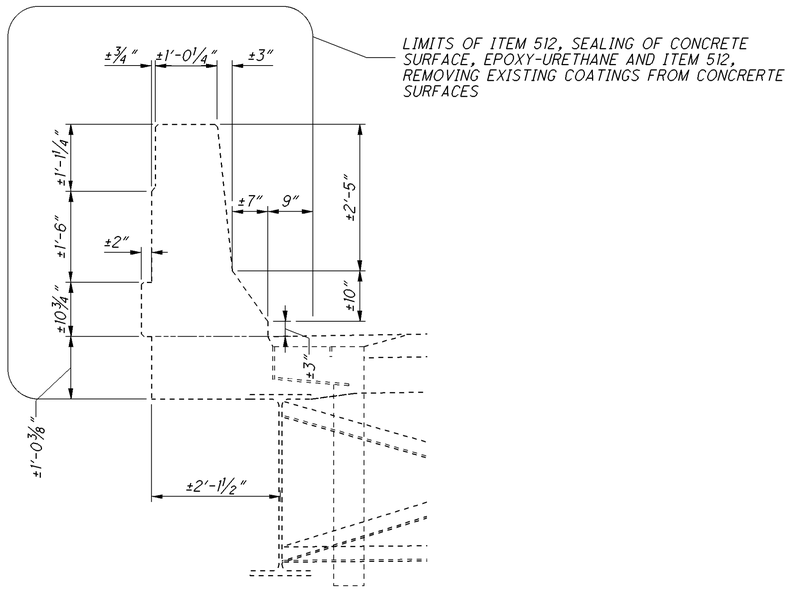


EXISTING TRANSVERSE SECTION



PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPETS OF
BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND
LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISRTICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700728 R	

EXISTING TRANSVERSE SECTIONS
BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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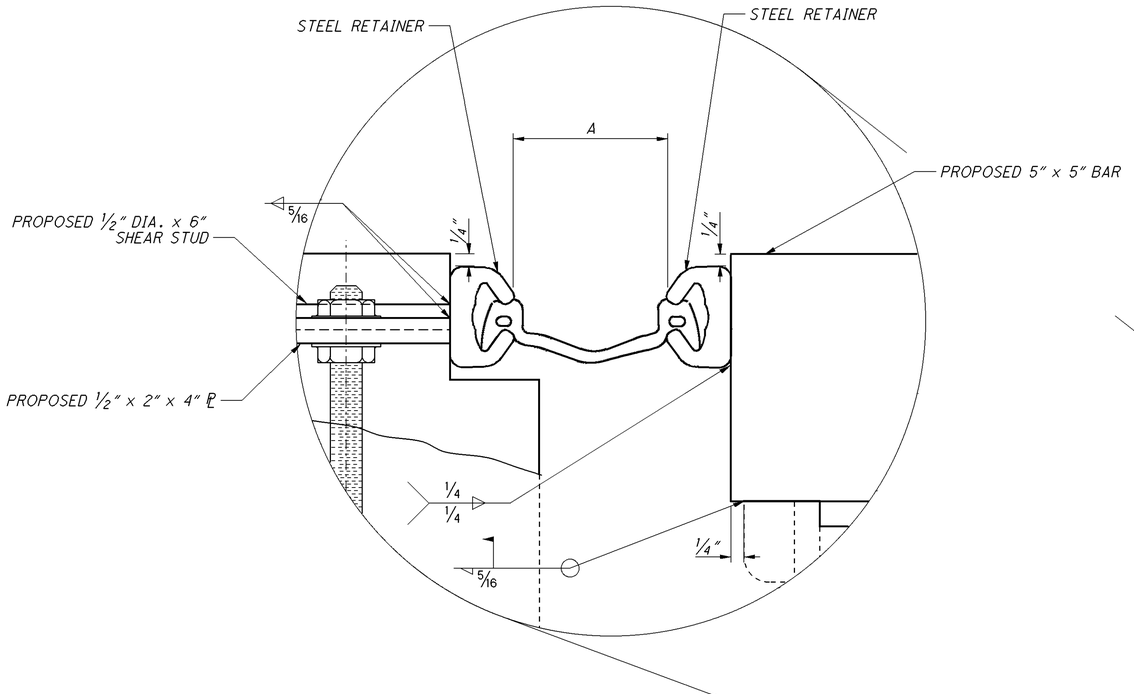


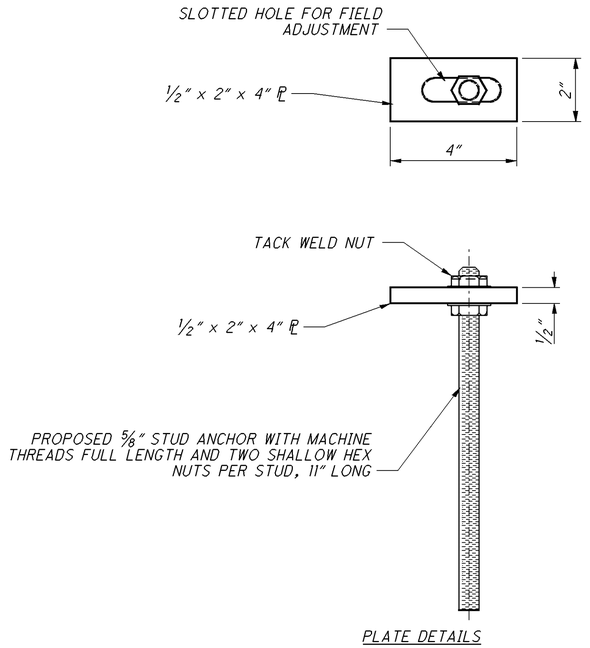
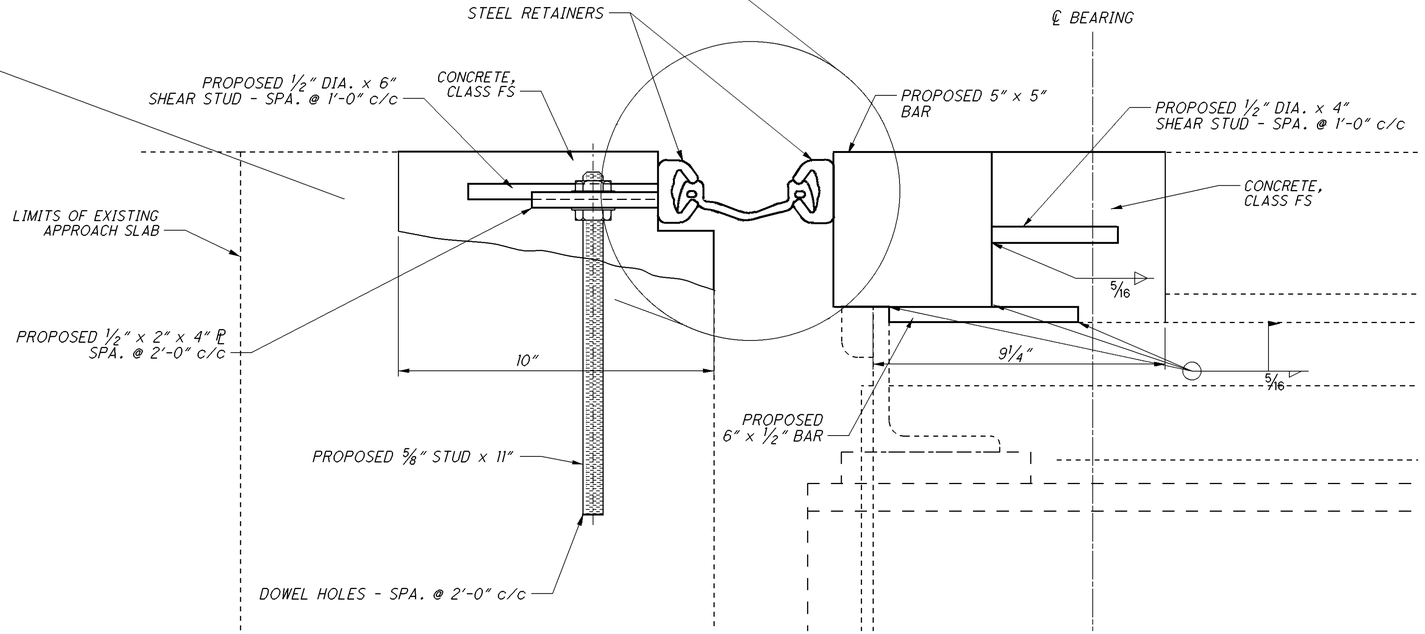


PLATE DETAILS



PROPOSED EXPANSION JOINT DETAILS

APPLIES TO BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE EASTBOUND/SOUTHBOUND AND NORTHBOUND/WESTBOUND LANES

NEOPRENE STRIP SEAL SPECIFICATIONS
A = 3" @ 60°

MAXIMUM MOVEMENT PERPENDICULAR	MAXIMUM MOVEMENT PARALLEL	JOINT OPENING
INCHES	INCHES	INCHES
4.0	±0.5	1.0-5.0

NOTE: THE PROPOSED JOINT IS DESIGNED FOR A JOINT OPENING OF 2½" @ 60° F AND WITH 1½" WIDE STEEL RETAINERS. THE CONTRACTOR MAY CHOOSE TO USE A DIFFERENT SIZE RETAINER, BUT MUST SUBMIT SHOP DRAWINGS OF PROVISIONS MADE TO MAINTAIN THE JOINT OPENING OF 3" @ 60° F. THESE MUST BE APPROVED BY THE ENGINEER BEFORE WORK CAN BEGIN ON THE JOINT AND SHALL BE NO ADDITIONAL COST TO THE STATE FOR CHANGES MADE BY THE CONTRACTOR.

FOR ADDITIONAL DETAILS REFER TO STD. BDG DWG. EXJ-4-87.

DOWEL HOLES SHALL ALLOW FOR A MINIMUM EMBEDMENT DEPTH OF 9" OF THE PROPOSED ⅝" STUD ANCHOR.

TEMPERATURE	*DIMENSION A*
90	*3.25*
80	*3.17*
70	*3.08*
60	*3.00*
50	*2.92*
40	*2.83*
30	*2.75*

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED MRH | CHECKED MCM
DRAWN MRH | REVISED
REVIEWED GEC | DATE 11/21/11
STRUCTURE FILE NUMBER 7100728 R

EXPANSION JOINT DETAILS
BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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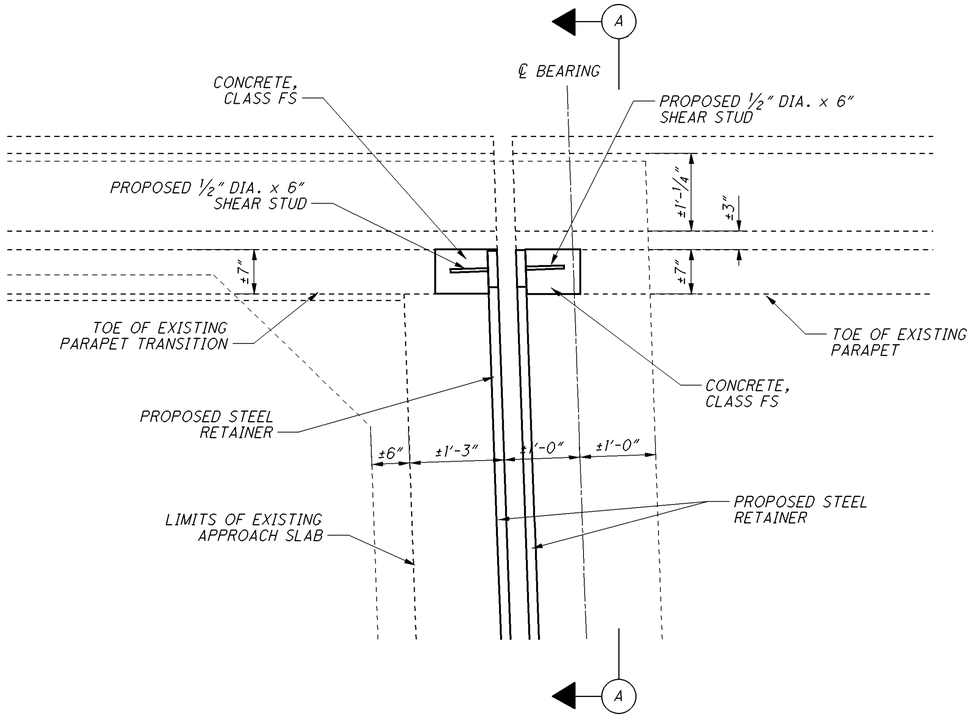
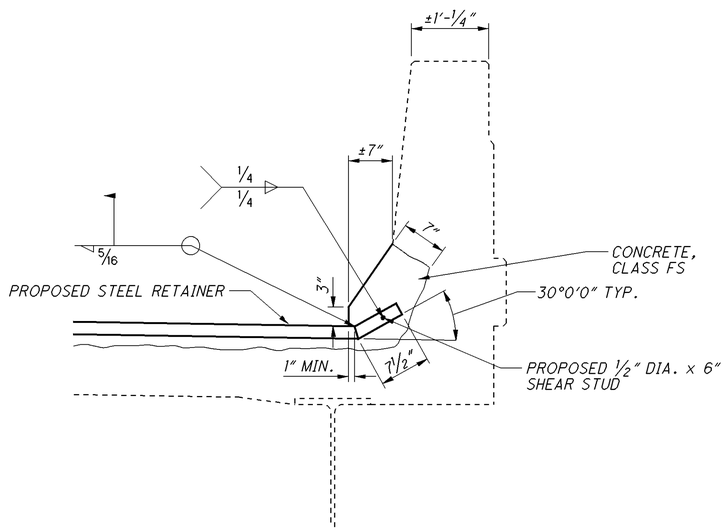


EXISTING PLAN VIEW

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET AT BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE NORTHBOUND/WESTBOUND LANES AND THE SOUTHBOUND/EASTBOUND LANES



SECTION A-A

APPLIES TO BOTH THE PARAPET AND PARAPET TRANSITION

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISRTICT 9 ENGINEERING

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11
CHECKED MCM | REVISED | STRUCTURE FILE NUMBER 7100728 L, 7100728 R

EXPANSION JOINT DETAILS
BRIDGE NO. ROS-23-1202 L & R
OVER EAST MAIN STREET

ROS-23-8.23
PID No. 76477

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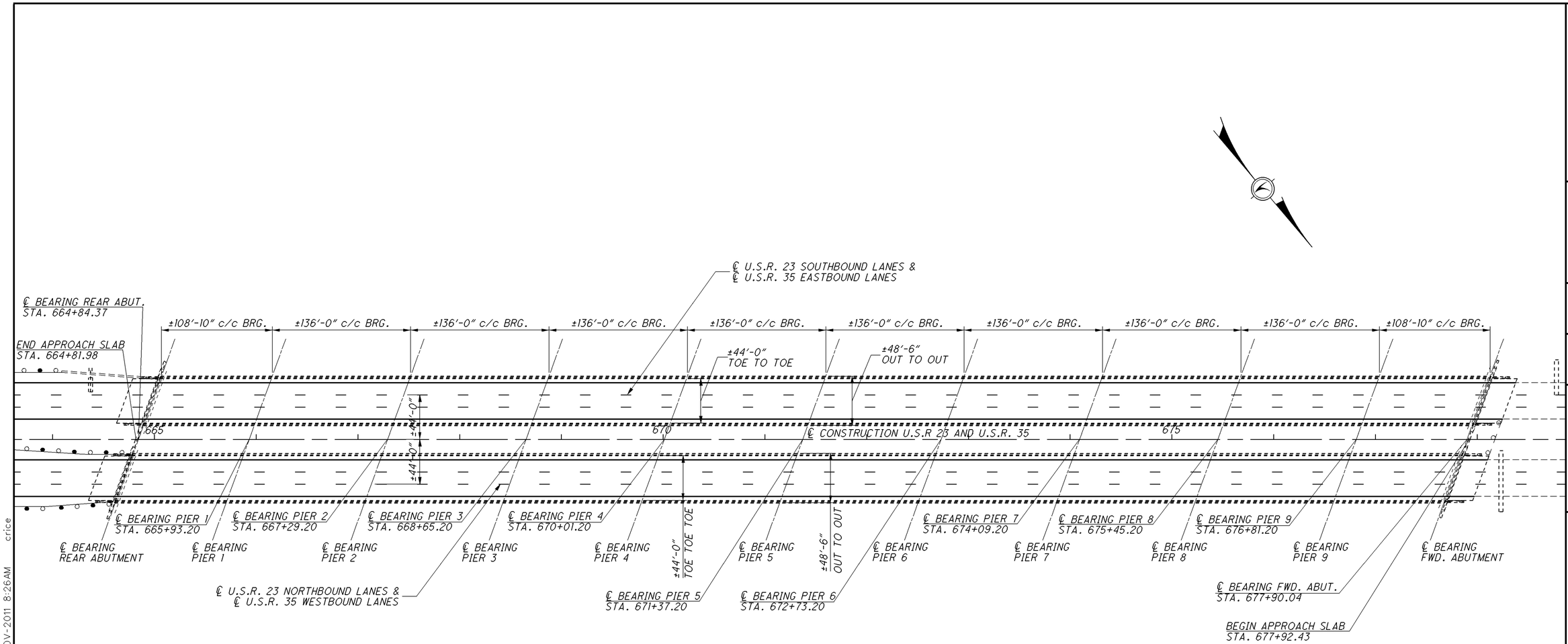

PROPOSED WORK

- REMOVE EXISTING EPOXY-URETHANE SEALER FROM PARAPETS
- REPLACE EXISTING STRIP SEAL EXPANSION JOINTS
- SEAL BRIDGE DECK AND APPROACH SLABS WITH SRS RESIN
- SEAL PARAPETS AND END SECTIONS WITH EPOXY-URETHANE SEALER

EXISTING STRUCTURE

TYPE: TEN SPAN CONTINUOUS WELDED HINGED GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: ±108′-10″, 8 @ ±136′-0″, ±108′-10″ c/c BEARING

ROADWAY: ±50′-2″ TOE TO TOE

LOADING: CF 2000

SKEW: 20°0′0″ LEFT FORWARD

APPROACH SLABS: AS-1-81 (±25′-0″ LONG)

ALIGNMENT: TANGENT

CROWN: ±0.0156 FT/FT

STRUCTURAL FILE NUMBER: 7100752 L 7100787 R

DATE BUILT: 1964

COORDINATES: LATITUDE 39°20′44″ N
LONGITUDE 82°57′22″ W

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100752 L 7100787 R	

ROSS COUNTY
STA. 664+81.98
STA. 677+92.43

SITE PLAN
BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS

EXJ-4-87 REVISED 07-19-02

REFER TO THE FOLLOWING PROPOSAL NOTES

552 DATED 01-21-11

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL

DESIGN DATA

CONCRETE CLASS FS - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996
GRADE 60 MINIMUM YIELD STRENGTH
60,000 P.S.I.

DESIGN LOADING

HS20 AND THE ALTERNATE MILITARY LOADING.
NO FUTURE WEARING SURFACE.

EXISTING BRIDGE PLANS

DETAIL DRAWINGS OF THE EXISTING BRIDGE MAY BE INSPECTED AT THE DISTRICT 9 OFFICE AT 650 EASTERN AVENUE IN CHILLICOTHE, OHIO.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM THE 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 PRICE UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION:
THIS WORK CONSIST OF THE REMOVAL OF CONCRETE DECK ENDS INCLUDING PORTIONS OF THE PARAPETS AND DECK JOINTS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS:
THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUND UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

MEASUREMENT & PAYMENT:
THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY PLACE THE STRUCTURAL EXPANSION JOINT (I.E. STEEL RETAINERS, STEEL PLATES, CONCRETE, ANCHOR BARS AND WELDED SHEAR STUDS TO BE CAST INTO THE BRIDGE DECK AND PARAPETS) AND INSTALL THE ELASTOMERIC STRIP SEAL AS SHOWN ON SHEETS 8/10 THROUGH 10/10 AND STANDARD BRIDGE DRAWING EXJ-4-87.

ALL STRUCTURAL STEEL MEMBERS SHALL BE LEVEL UF AND ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THIS ITEM INCLUDES NEW STRUCTURAL STEEL BARS FOR RECONSTRUCTION OF THE EXISTING BRIDGE JOINT AS DETAILED ON SHEETS 8/10 THROUGH 10/10. NEW STRUCTURAL STEEL MAY BE EITHER ASTM A709 GRADE 50, YIELD STRENGTH 50,000 PSI OR ASTM A709 GRADE 36, YIELD STRENGTH 36,000 PSI.

PAYMENT FOR ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE FOOT CONTRACT PRICE FOR ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

BRIDGE CONSTRUCTION SEQUENCE:

STAGE ONE CONSTRUCTION

1. SET UP PHASE I TRAFFIC CONTROL TO CLOSE THE RIGHT DRIVING LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/10.
2. COMPLETE STAGE ONE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1257 R AND BRIDGE NO. ROS-23-1257 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE TWO CONSTRUCTION

1. SET UP PHASE II TRAFFIC CONTROL TO CLOSE THE LEFT PASSING LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/10.
2. COMPLETE STAGE TWO CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1257 R AND BRIDGE NO. ROS-23-1257 L AND THE ROADWAY APPROACH WORK AS DETAILED.

STAGE THREE CONSTRUCTION

1. SET UP PHASE III TRAFFIC CONTROL TO CLOSE THE CENTER LANE OF BOTH THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC PLAN FOR THE BRIDGE WORK USING DRUMS TO PROTECT THE BRIDGE WORK AREA AS DETAILED ON SHEET 4/10.
2. COMPLETE STAGE THREE CONSTRUCTION OF BOTH BRIDGE NO. ROS-23-1257 R AND BRIDGE NO. ROS-23-1257 L AND THE ROADWAY APPROACH WORK AS DETAILED.

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100757 L 7100787 R	

GENERAL NOTES
BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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CALCULATED	DATE	CHECKED	DATE
MRH	07/20/2011	GEC	11/21/2011

ESTIMATED QUANTITIES FOR ROS-23-1257 (LEFT BRIDGE) S.F.N. 7100752

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				2/10
512	10100	3,163	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	83		3,080	
512	10400	6,652	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	245	6,407		
512	74000	3,163	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	83		3,080	
516	11211	192	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN		192		2/10

ESTIMATED QUANTITIES FOR ROS-23-1257 (RIGHT BRIDGE) S.F.N. 7100787

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	GENERAL	SUPERSTRUCTURE	PARAPETS	SEE SHEET NO.
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				2/10
512	10100	3,163	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)*	83		3,080	
512	10400	6,652	SQ. YD.	TREATING OF CONCRETE BRIDGE DECK WITH SRS (INCLUDING APPROACH SLABS)	245	6,407		
512	74000	3,163	SQ. YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	83		3,080	
516	11211	192	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN		192		2/10

*LIGHT NEUTRAL (FEDERAL COLOR NO. 17778)

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED MRH | CHECKED MCM
DRAWN MRH | REVISED
REVIEWED GEC | DATE 11/21/11
STRUCTURE FILE NUMBER 7100752 & 7100787 R

ESTIMATED QUANTITIES
BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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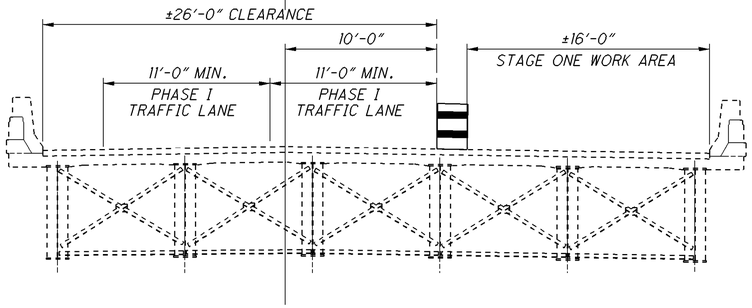
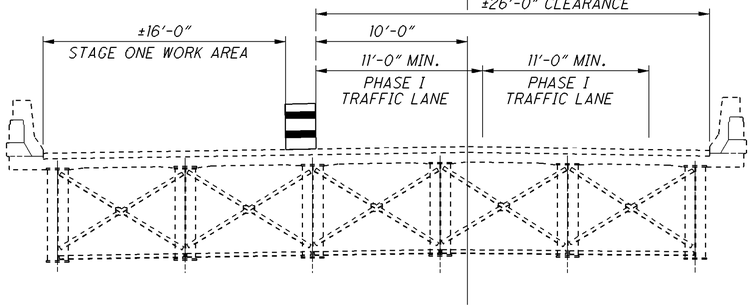
℄ U.S.R. 23 SOUTHBOUND LANES
AND
℄ U.S.R. 35 EASTBOUND LANES



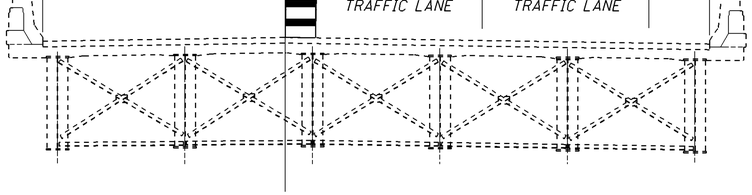
℄ CONSTRUCTION U.S.R. 23 AND U.S.R. 35

℄ U.S.R. 23 NORTHBOUND LANES
AND
℄ U.S.R. 35 WESTBOUND LANES



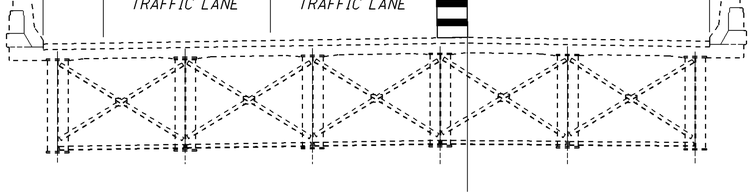
PROPOSED PHASE I MAINTENANCE OF TRAFFIC

℄ U.S.R. 23 SOUTHBOUND LANES
AND
℄ U.S.R. 35 EASTBOUND LANES



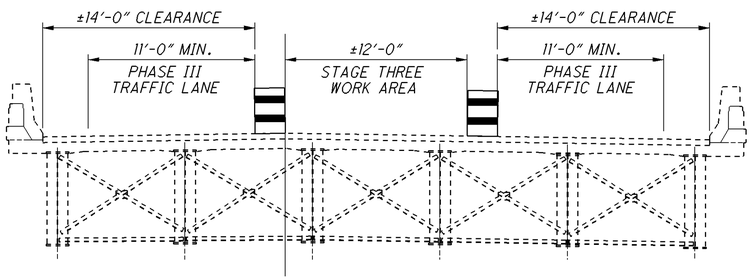
℄ CONSTRUCTION U.S.R. 23 AND U.S.R. 35

℄ U.S.R. 23 NORTHBOUND LANES
AND
℄ U.S.R. 35 WESTBOUND LANES



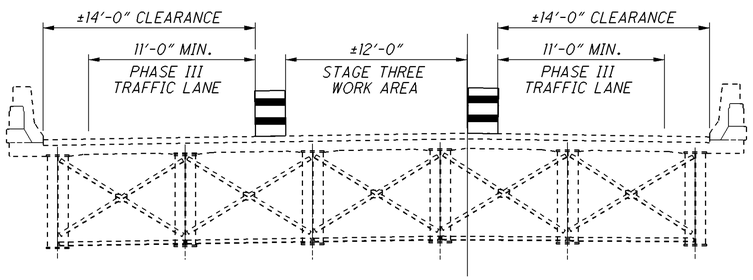
PROPOSED PHASE II MAINTENANCE OF TRAFFIC

℄ U.S.R. 23 SOUTHBOUND LANES
AND
℄ U.S.R. 35 EASTBOUND LANES



℄ CONSTRUCTION U.S.R. 23 AND U.S.R. 35

℄ U.S.R. 23 NORTHBOUND LANES
AND
℄ U.S.R. 35 WESTBOUND LANES



PROPOSED PHASE III MAINTENANCE OF TRAFFIC

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISRTICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700787 L & R	

MAINTENANCE OF TRAFFIC
BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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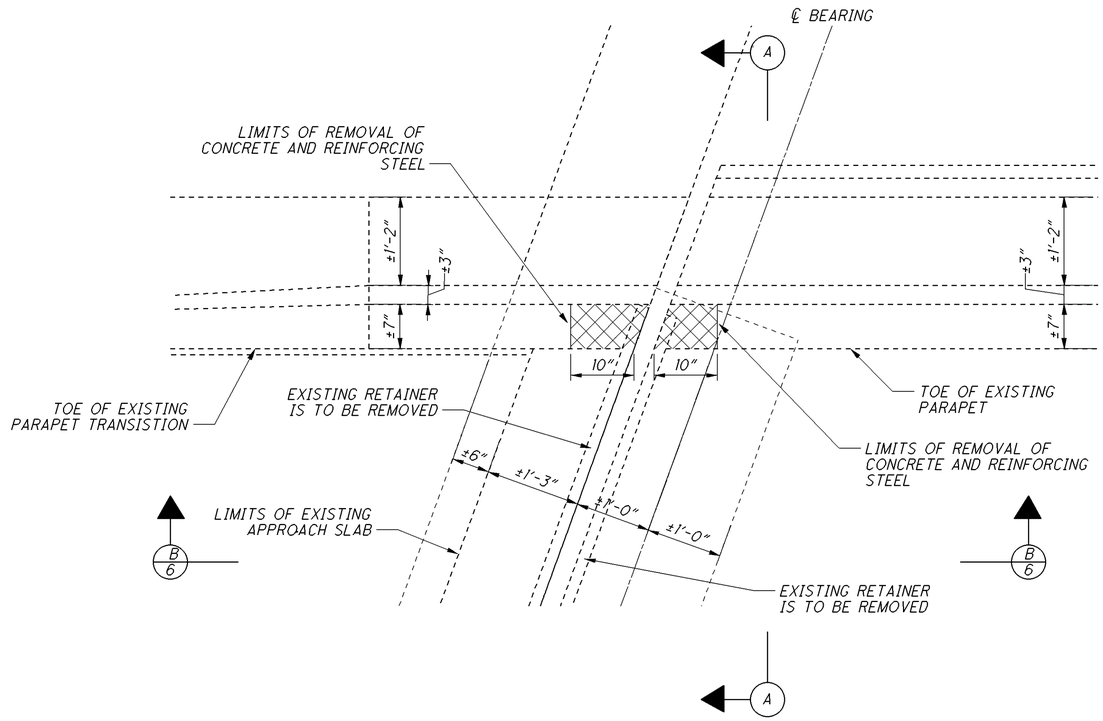
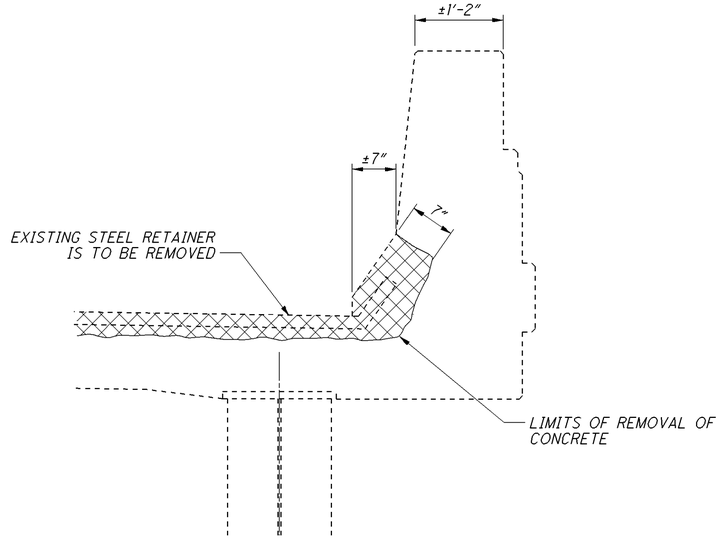


EXISTING PLAN VIEW

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET AT BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE NORTHBOUND/WESTBOUND LANES AND THE SOUTHBOUND/EASTBOUND LANES (INTERMEDIATE JOINTS ARE SIMILAR FOR BOTH STRUCTURES)

NOTE

FOR SECTION B-B, REFER TO SHEET 6/10



SECTION A-A

APPLIES TO BOTH THE PARAPET AND PARAPET TRANSITION

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700782 L 7700787 R	

REMOVAL DETAILS

BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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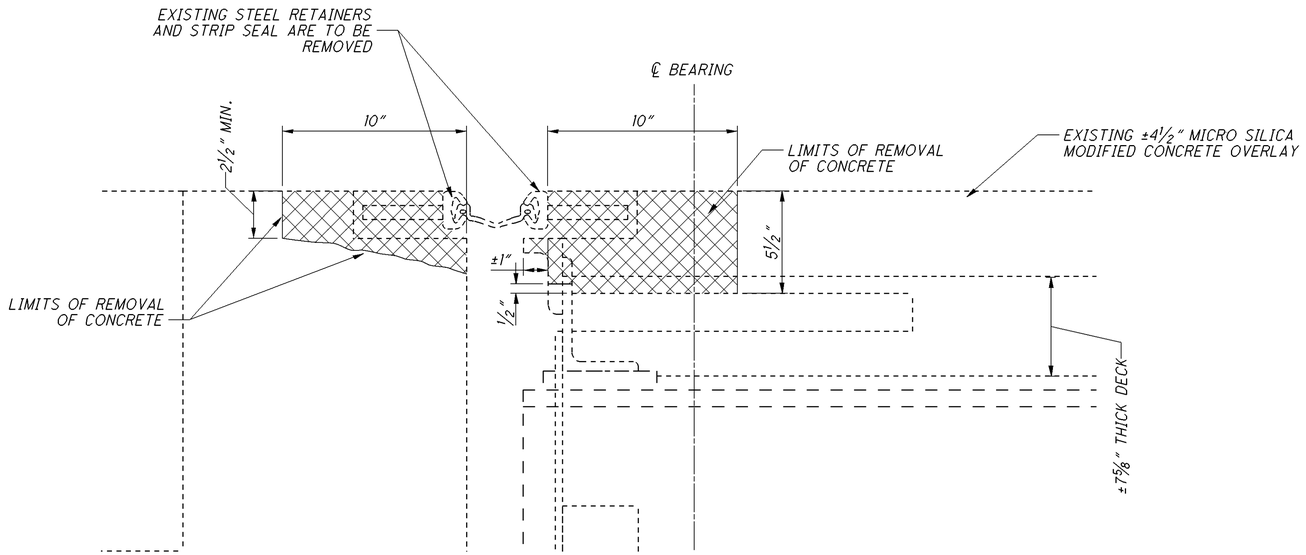
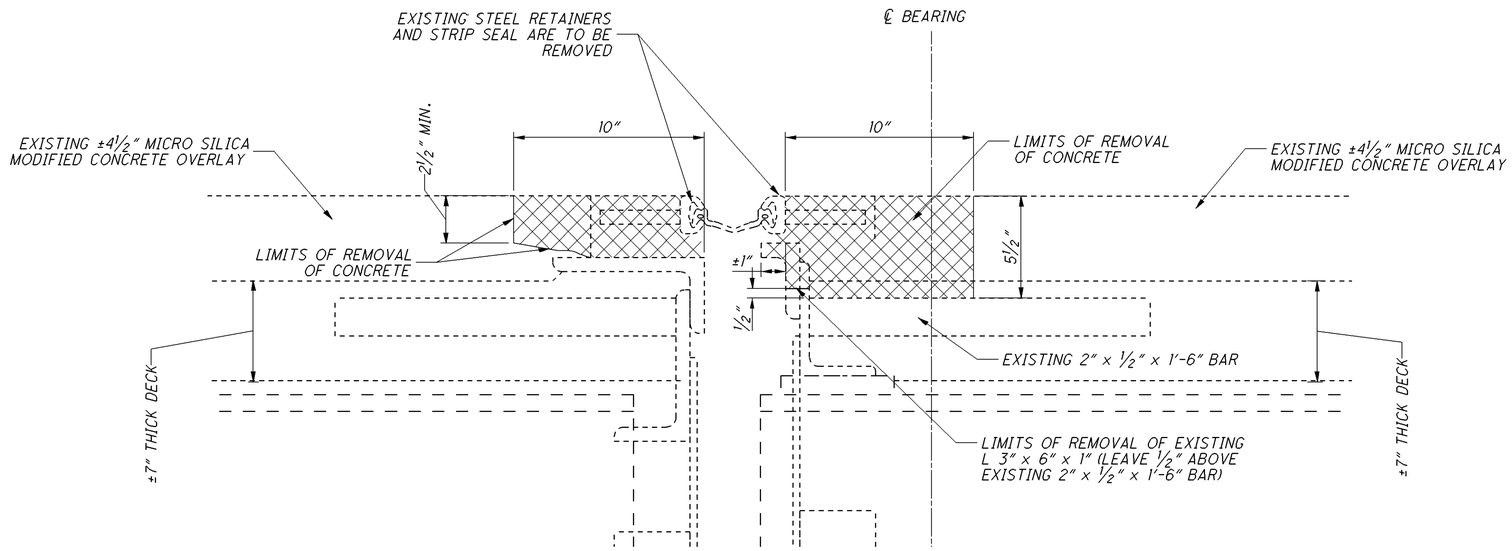


SECTION B-B

APPLIES TO BOTH THE REAR AND FORWARD ABUTMENTS OF THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES

NOTE

FOR LOCATION OF SECTION B-B, REFER TO SHEET 5/10



SECTION B-B

APPLIES TO INTERMEDIATE EXPANSION JOINTS OF THE NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100787 L 7100787 R	

REMOVAL SECTIONS
BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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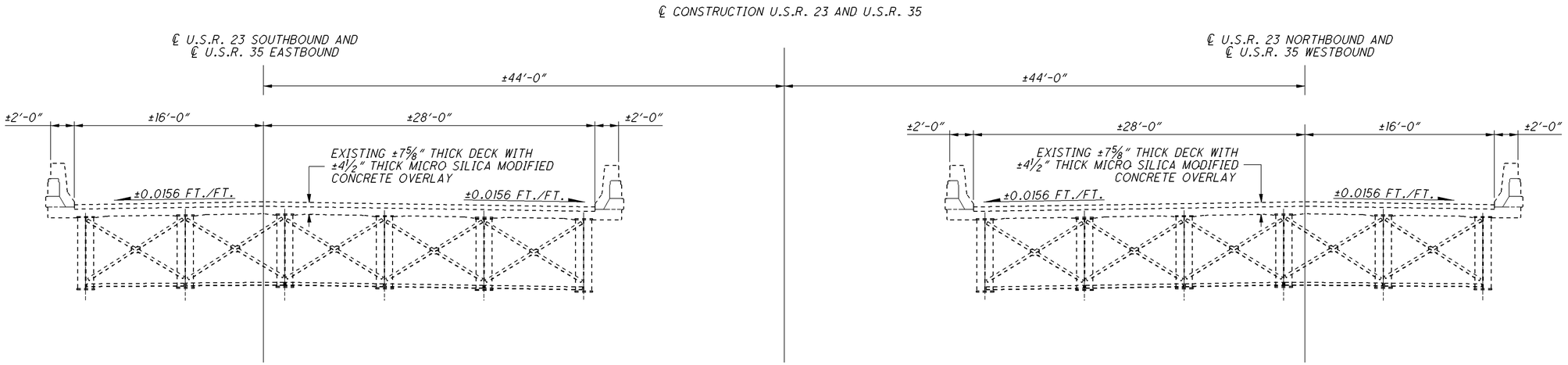
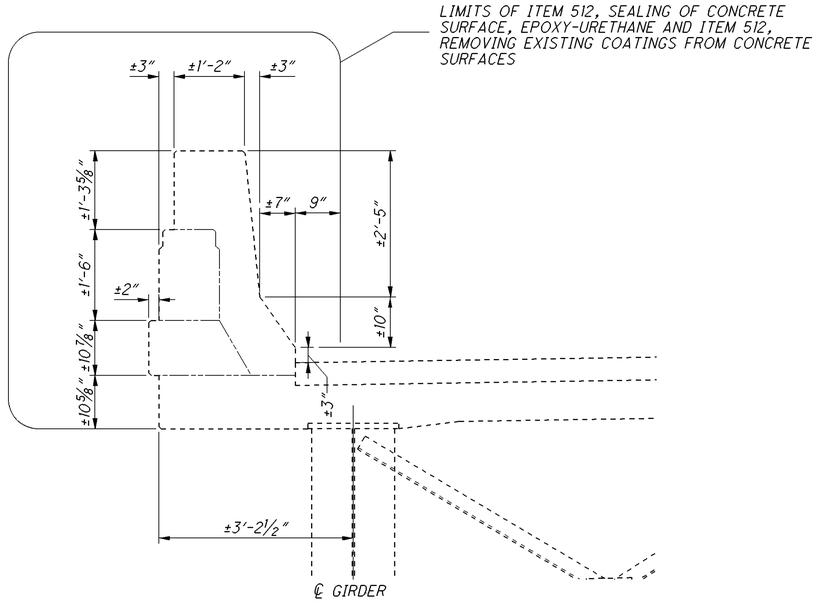


EXISTING TRANSVERSE SECTION



PARAPET DETAILS

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET OF BOTH NORTHBOUND/WESTBOUND AND SOUTHBOUND/EASTBOUND LANES

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7700787 R	

EXISTING TRANSVERSE SECTION

BRIDG NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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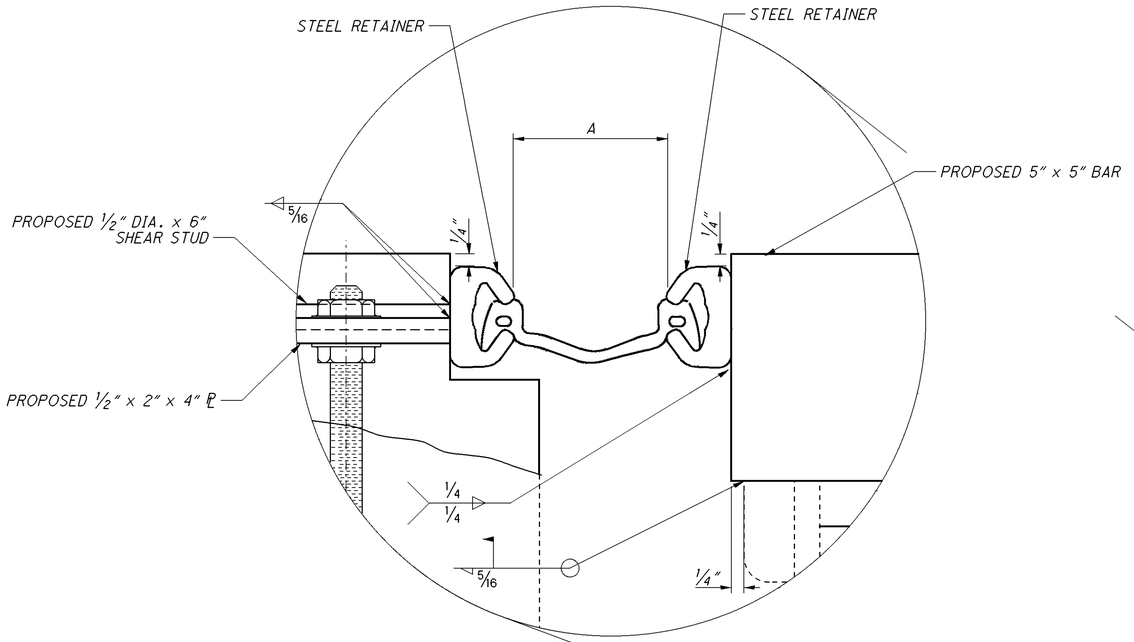


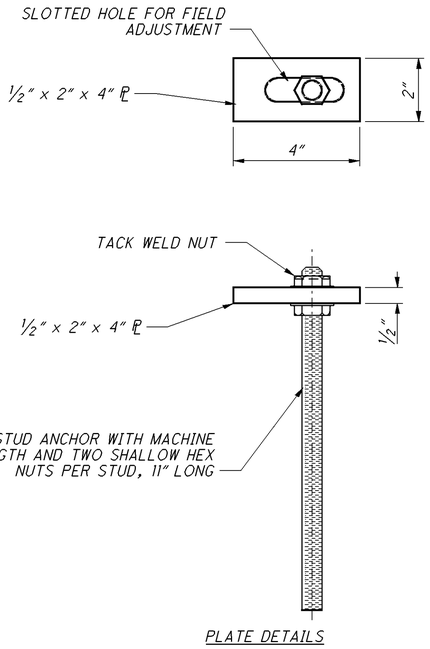
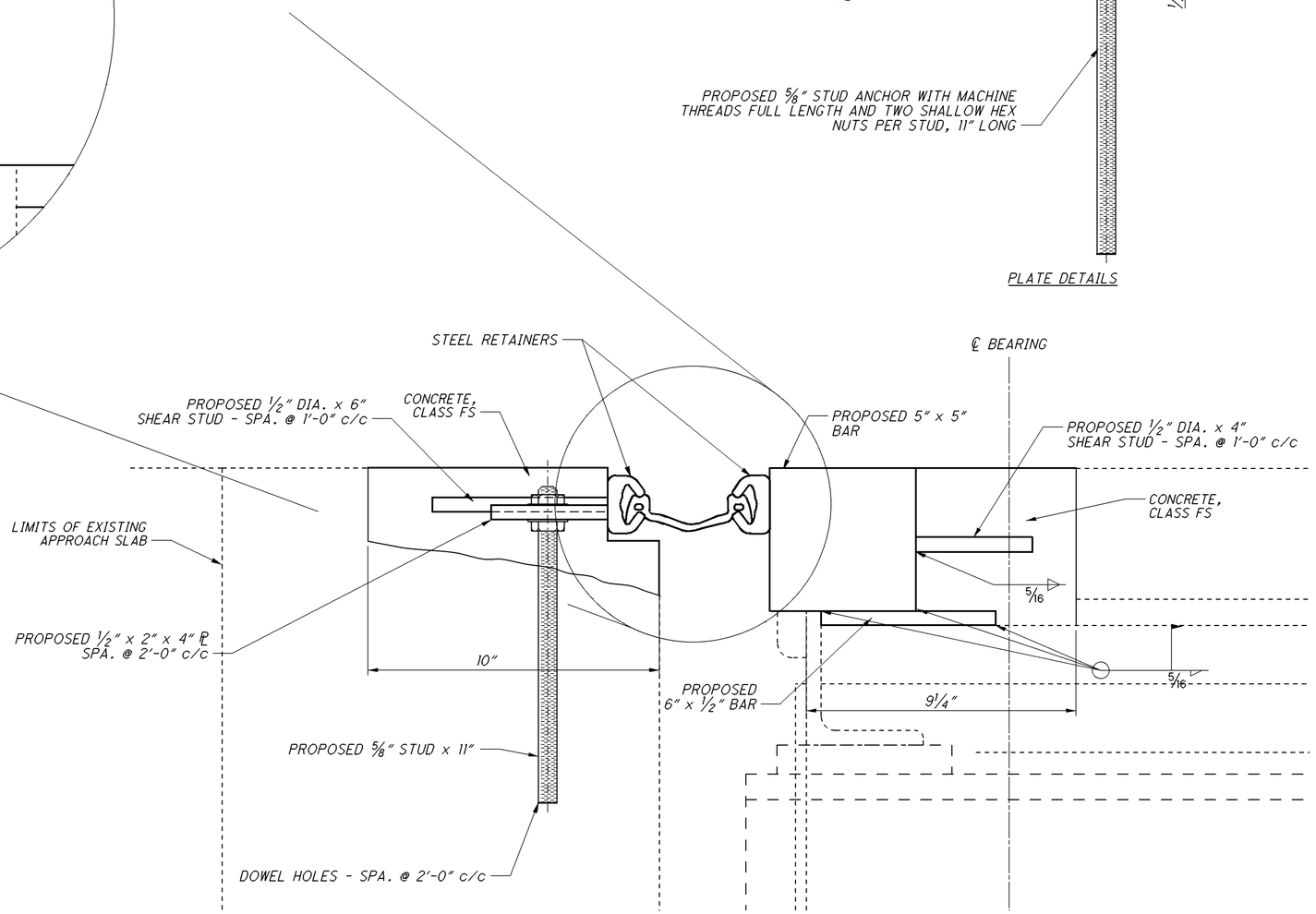


PLATE DETAILS



PROPOSED EXPANSION JOINT DETAILS

APPLIES TO BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE EASTBOUND/SOUTHBOUND AND NORTHBOUND/WESTBOUND LANES

NEOPRENE STRIP SEAL SPECIFICATIONS
A = 3" @ 60°

MAXIMUM MOVEMENT PERPENDICULAR	MAXIMUM MOVEMENT PARALLEL	JOINT OPENING
INCHES	INCHES	INCHES
4.0	±0.5	1.0-5.0

NOTE: THE PROPOSED JOINT IS DESIGNED FOR A JOINT OPENING OF 2½" @ 60° F AND WITH 1½" WIDE STEEL RETAINERS. THE CONTRACTOR MAY CHOOSE TO USE A DIFFERENT SIZE RETAINER, BUT MUST SUBMIT SHOP DRAWINGS OF PROVISIONS MADE TO MAINTAIN THE JOINT OPENING OF 3" @ 60° F. THESE MUST BE APPROVED BY THE ENGINEER BEFORE WORK CAN BEGIN ON THE JOINT AND SHALL BE NO ADDITIONAL COST TO THE STATE FOR CHANGES MADE BY THE CONTRACTOR.

FOR ADDITIONAL DETAILS REFER TO STD. BDG DWG. EXJ-4-87.

DOWEL HOLES SHALL ALLOW FOR A MINIMUM EMBEDMENT DEPTH OF 9" OF THE PROPOSED 5/16" STUD ANCHOR.

TEMPERATURE	DIMENSION A
90	3.25
80	3.17
70	3.08
60	3.00
50	2.92
40	2.83
30	2.75

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7100787 R	

EXPANSION JOINT DETAILS - ABUTMENTS

BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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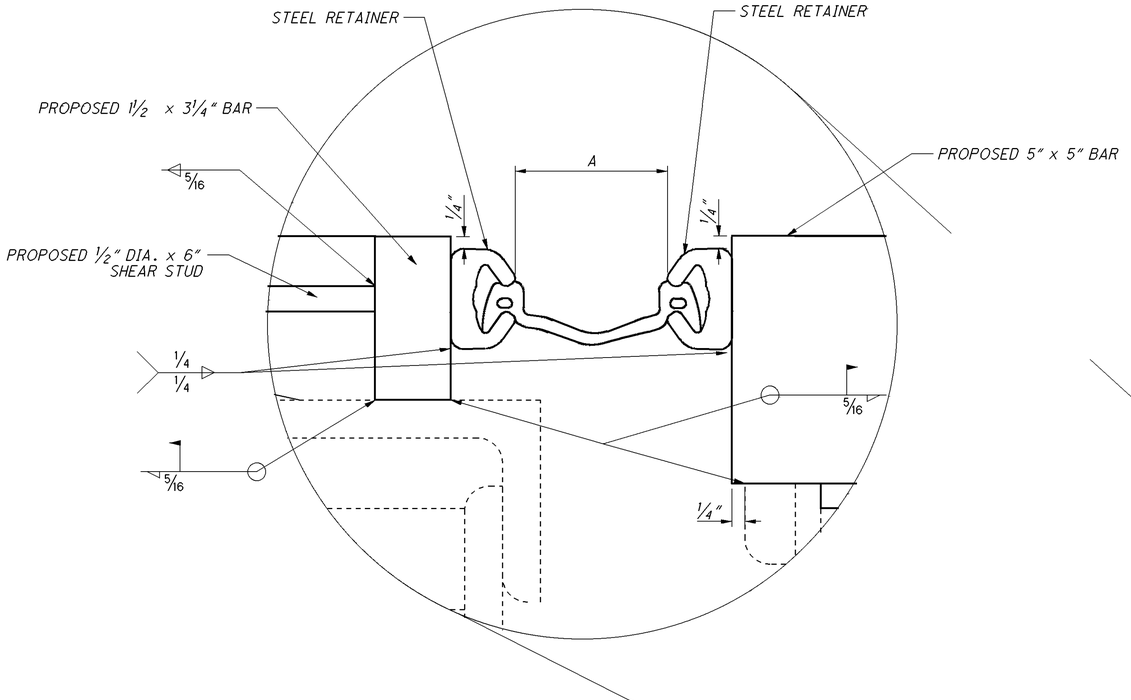

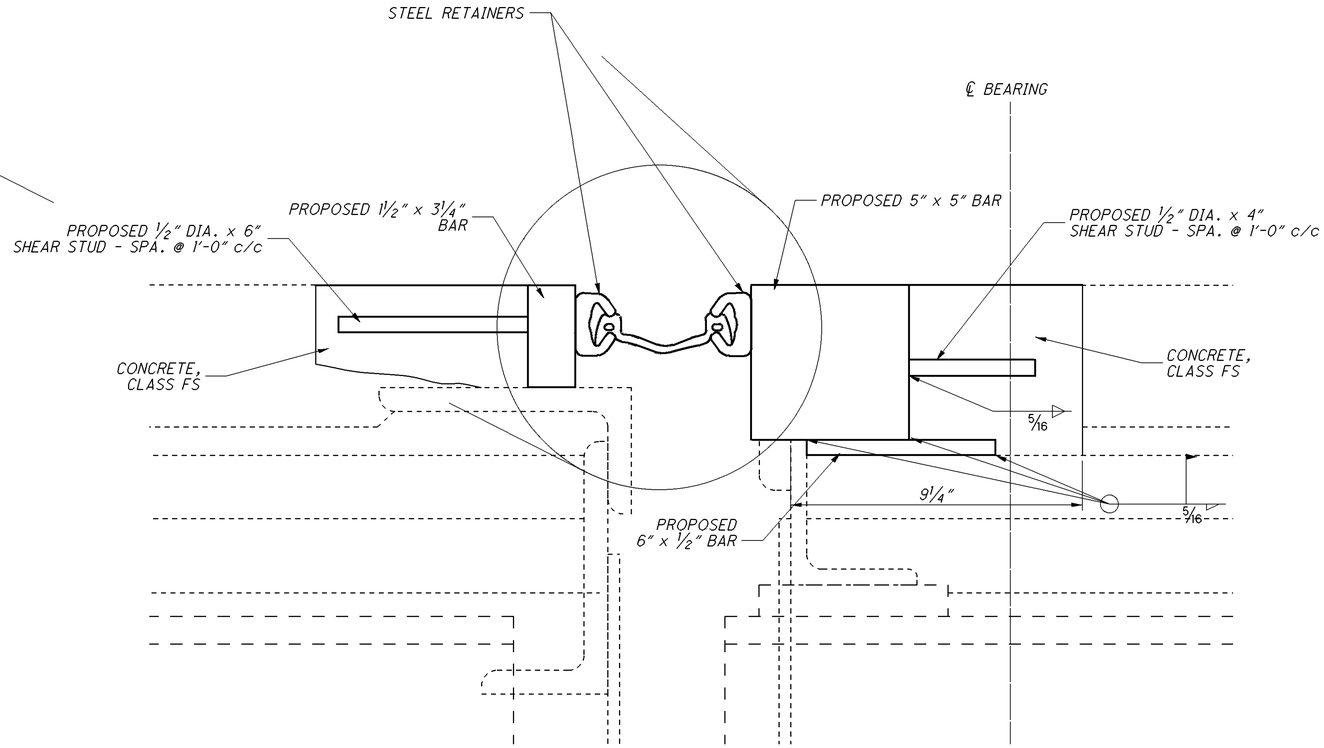

NEOPRENE STRIP SEAL SPECIFICATIONS
A = 3" @ 60°

MAXIMUM MOVEMENT PERPENDICULAR	MAXIMUM MOVEMENT PARALLEL	JOINT OPENING
INCHES	INCHES	INCHES
4.0	±0.5	1.0-5.0

NOTE: THE PROPOSED JOINT IS DESIGNED FOR A JOINT OPENING OF 2½" @ 60° F AND WITH 1½" WIDE STEEL RETAINERS. THE CONTRACTOR MAY CHOOSE TO USE A DIFFERENT SIZE RETAINER, BUT MUST SUBMIT SHOP DRAWINGS OF PROVISIONS MADE TO MAINTAIN THE JOINT OPENING OF 3" @ 60° F. THESE MUST BE APPROVED BY THE ENGINEER BEFORE WORK CAN BEGIN ON THE JOINT AND SHALL BE NO ADDITIONAL COST TO THE STATE FOR CHANGES MADE BY THE CONTRACTOR.

FOR ADDITIONAL DETAILS REFER TO STD. BDG DWG. EXJ-4-87.

DOWEL HOLES SHALL ALLOW FOR A MINIMUM EMBEDMENT DEPTH OF 9" OF THE PROPOSED 5/16" STUD ANCHOR.

TEMPERATURE	*DIMENSION A*
90	*3.25*
80	*3.17*
70	*3.08*
60	*3.00*
50	*2.92*
40	*2.83*
30	*2.75*

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 PRODUCTION

DESIGNED MRH | DRAWN MRH | REVIEWED GEC | DATE 11/21/11
CHECKED MCM | REVISED | STRUCTURE FILE NUMBER 7100787 R

EXPANSION JOINT DETAILS - INTERMEDIATE

BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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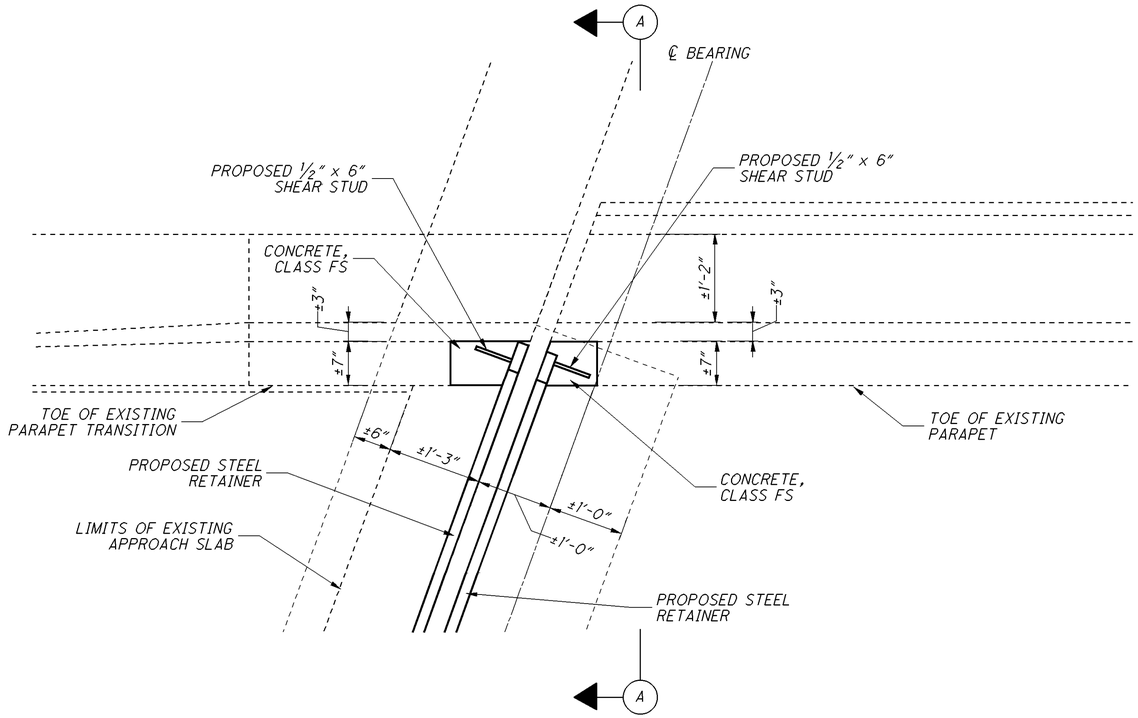
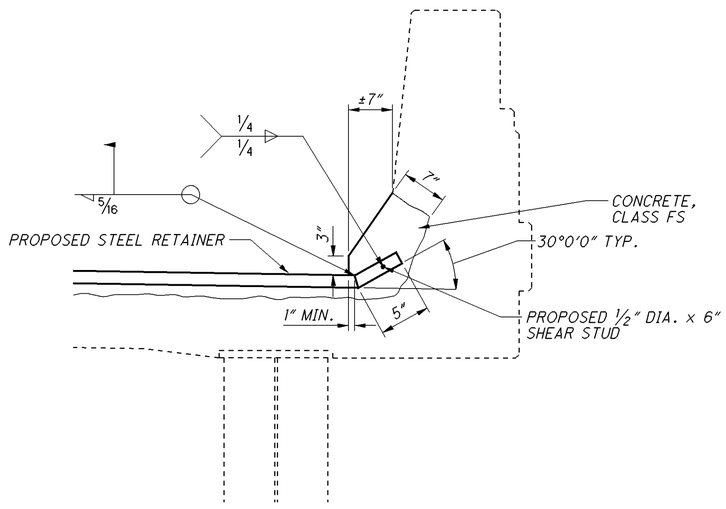


EXISTING PLAN VIEW

APPLIES TO BOTH THE LEFT AND RIGHT PARAPET AT BOTH THE REAR AND FORWARD ABUTMENTS OF BOTH THE NORTHBOUND/WESTBOUND LANES AND THE SOUTHBOUND/EASTBOUND LANES (INTERMEDIATE JOINTS ARE SIMILAR FOR BOTH STRUCTURES)



SECTION A-A

APPLIES TO BOTH THE PARAPET AND PARAPET TRANSITION

DESIGN AGENCY
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISRTICT 9 ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MRH	MRH	GEC	11/21/11
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MCM		7600757 L 7600787 R	

EXPANSION JOINT DETAILS

BRIDGE NO. ROS-23-1257 L & R
OVER SCIOTO RIVER

ROS-23-8.23
PID No. 76477

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