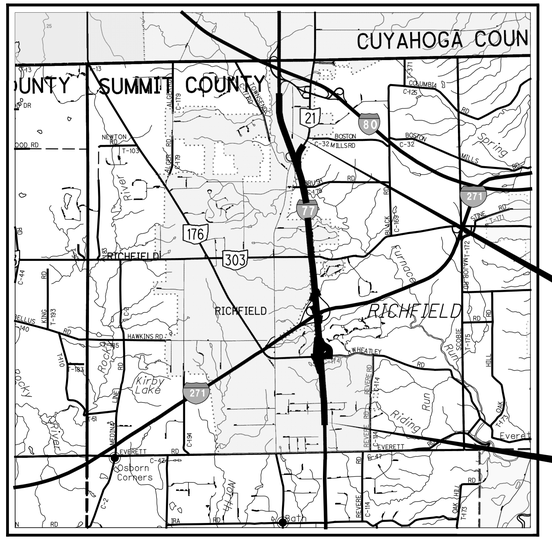
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUM-77-28.75

VILLAGE OF RICHFIELD
RICHFIELD TOWNSHIP
SUMMIT COUNTY



LOCATION MAP

LATITUDE: 41°14'9" N LONGITUDE: 81°37'41" W

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

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
SUPERELEVATION RATE	12/8/22	4, 6 , 214 - 217
SHOULDER WIDTH	12/8/22	12 - 15

ADA DESIGN WAIVERS

N/A

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

E200136

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE FULL REMOVAL AND REPLACEMENT OF THE ORIGINAL PAVEMENT ON IR-77 AND WIDENING TO SIX LANES FROM SLM 28.75 TO SLM 33.06 IN SUMMIT COUNTY, OHIO. COMPLETE REMOVAL AND REPLACEMENT OF ALL FOUR INTERCHANGE RAMPS AT SR-176 (WHEATLEY ROAD), THE FOUR RAMP TERMINALS AT IR-271, AND NORTHBOUND OFF RAMP WITH SR -21 (BRECKSVILLE ROAD). THE PROJECT ALSO INCLUDES THE WIDENING OF SIX MAINLINE BRIDGES (SUM-77-3069 L/R, SUM-77-3187 L/R, AND SUM-77-3197 L/R). IN ADDITION, GENERAL GRADING, MEDIAN DRAINAGE, GUARDRAIL, MEDIAN CABLE BARRIER AND TRAFFIC CONTROL IMPROVEMENTS ARE BEING MADE. CULVERT REHABILITATION UNDER IR-77 WILL BE COMPLETED BY THE PROJECT.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 99.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 100.9 ACRES

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.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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 EXCEPT FOR SR-21 AND ENTRANCE RAMP AS DESCRIBED ON SHEET 25 AND AS SHOWN ON SHEETS 46 & 50 , AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

ROADWAY ENGINEER'S SEAL	DRAINAGE ENGINEER'S SEAL	LIGHTING ENGINEER'S SEAL	BRIDGE ENGINEER'S SEAL	BRIDGE ENGINEER'S SEAL
SHEETS: 1-193, 202-534, 574-649, 837-850	SHEETS: 194-201, 535-573	SHEETS: 650-672	SUM-77-3096 & 3197 (L/R) SUM-271-0345L SHEETS: 673-765, 834-836	SUM-77-3197 L/R SHEETS: 766-833
STATE OF OHIO DANIEL R. JOZITY E-69898 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO MATTHEW ALEXANDER HEBEBRAND E-87327 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO MATTHEW JOSEPH BURGER E-72010 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO ERIC F DUES E-75309 REGISTERED PROFESSIONAL ENGINEER	STATE OF OHIO RYAN JACOB BRINKMAN E-81226 REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Daniel Jozity Date: 2023.03.02 16:39:06-05'00' Contact Info: djozity@gfnet.com	Digitally signed by Matthew Hebebrand Date: 2023.03.03 08:55:24-05'00' Contact Info: matthew.hebebrand@arcadis.com	Digitally signed by Matthew J Burger Date: 2023.03.03 09:32:36 -05'00'	Digitally signed by Eric Dues, PE, SE Date: 2023.03.02 16:42:17-05'00' Contact Info: (513) 304-8435 edues@gfnet.com	Digitally signed by Ryan Brinkman Date: 2023.03.03 08:51:15 -05'00'

* - SEE PROPOSAL FOR REVISION DATE

												SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-2.1	1/21/22	F-1.1	7/19/13	RM-4.1	1/17/20	HL-20.21	1/15/21	TC-21.11	7/16/21	MT-95.30	7/19/19	MT-101.70	1/17/20	800-2019 *		ASBESTOS REPORT
BP-2.2	1/15/21	F-2.1	7/20/18	RM-4.2	4/17/20	HL-30.11	1/15/21	TC-21.21	1/20/23	MT-95.31	7/19/19	MT-101.75	1/17/20	807	1/21/22	SUM-77-30.96
BP-3.1	1/21/22	F-3.1	7/19/13	RM-4.5	7/21/17	HL-30.21	4/17/20	TC-22.20	1/17/14	MT-95.40	1/17/20	MT-101.80	1/17/20	808	1/18/19	DATED: MAY 30, 2008
BP-5.1	7/15/22	F-3.2	7/18/14	RM-4.6	7/19/13	HL-30.22	1/15/21	TC-41.10	7/19/13	MT-95.41	1/17/20	MT-101.90	7/17/20	809	1/20/23	SUM-77-31.87
BP-6.1	7/19/13	F-3.3	7/19/13			HL-30.32	4/17/20	TC-41.20	10/18/13	MT-95.70	1/17/20	MT-102.10	1/17/20	813	10/19/18	DATED: MAY 30, 2008
BP-9.1	1/18/19	F-3.4	7/19/13	AS-1-15	1/20/23	HL-40.10	7/17/20	TC-42.10	10/18/13	MT-95.73	1/17/20	MT-102.30	10/16/15	821	4/20/12	SUM-77-31.98
CB-2-2A	1/20/23	MGS-1.1	7/16/21	AS-2-15	1/20/23	HL-60.11	7/21/17	TC-42.20	10/18/13	MT-96.11	4/16/21	MT-103.10	1/21/22	825	1/20/23	DATED: MAY 30, 2008
CB-2-3	1/20/23	MGS-2.1	1/19/18	GSD-1-19	1/15/21	HL-60.21	7/20/18	TC-51.11	1/15/16	MT-96.20	7/15/16	MT-104.10	10/16/15	832	7/15/22	
CB-3	7/16/21	MGS-3.1	1/19/18	PCB-91	7/17/20	HL-60.31	1/17/20	TC-52.10	10/18/13	MT-97.10	4/19/19	MT-105.10	1/17/20	833	1/20/23	WATERWAY PERMIT
CB-4	7/16/21	MGS-3.2	1/18/13	SBR-1-20	1/20/23			TC-52.20	1/15/21	MT-98.10	1/17/20			850	4/15/22	DATED: MAY 5, 2023
CB-4A,5A,8A	7/16/21	MGS-4.2	7/19/13			ITS-14.10	1/20/23	TC-61.10	1/17/20	MT-98.21	1/17/20			875	1/18/19	
DM-1.1	7/17/20	MGS-5.3	7/15/16	HL-10.11	7/15/22	ITS -14.11	1/20/23	TC-65.10	1/17/14	MT-98.29	1/17/20			899	1/20/23	
DM-1.2	7/16/21	MGS-6.1	1/19/18	HL-10.12	1/20/23	ITS -14.50	1/20/23	TC-65.11	7/15/22	MT-99.20	4/19/19			905	4/17/20	
DM-4.1	7/17/20	I-3D	7/15/22	HL-10.13	1/20/23			TC-71.10	7/15/22	MT-99.30	1/17/20			908	10/20/17	
DM-4.3	1/15/16	MH-3	7/16/21	HL-10.31	7/15/22	TC-12.31	4/15/22	TC-72.20	7/20/18	MT-100.00	7/16/21			909	10/21/22	
DM-4.4	1/15/16	RM-1.1	1/20/23	HL-20.11	10/21/22	TC-15.116	7/16/21	TC-73.20	1/17/20	MT-101.60	1/17/20			921	4/20/12	

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
GANNETT FLEMING
2500 CORPORATE EXCHANGE DR, SUITE 230
COLUMBUS, OHIO 43231

DISTRICT DEPUTY DIRECTOR

APPROVED
DIRECTOR, DEPARTMENT OF TRANSPORTATION

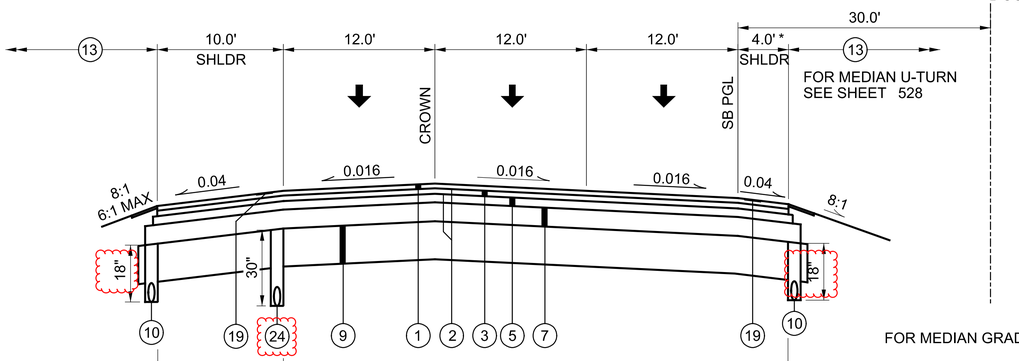
DESIGN AGENCY:
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 230
Columbus, OH 43231

DESIGNER: TQD
REVIEWER: DRJ 10/5/2022
PROJECT ID: 111405
SHEET 1 TOTAL 927

TITLE SHEET

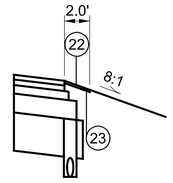
SUM-77-28.75
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/2/2023 TIME: 3:11:42 PM USER: edues
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\401-Engineering-GF\Roadway\Sheets\111405_GT001.dgn

℄ CONSTRUCTION IR-77

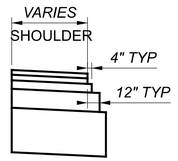


PROPOSED NORMAL SECTION - IR-77 SOUTHBOUND
STA 842+00.00 TO STA 956+56.67
STA 958+47.31 TO STA 1005+52.73
STA 1007+37.54 TO STA 1011+01.49
STA 1013+12.51 TO STA 1023+50.00

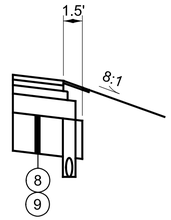
*(NDC = 10')



COMPACTED AGGREGATE
ADJACENT TO PAVED SHOULDER
WITHOUT GUARDRAIL

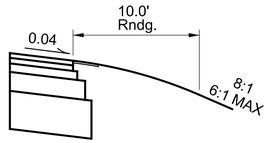


BASE AND SUBBASE STEP DETAIL

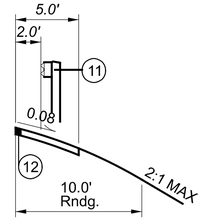


CEMENT STABILIZATION
DETAIL

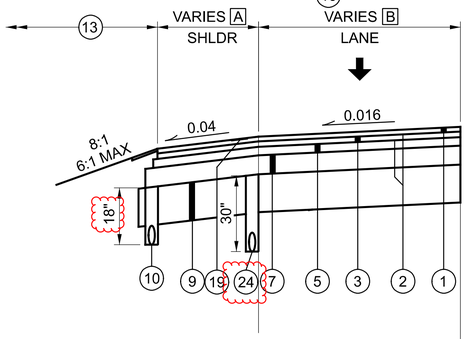
FOR MEDIAN GRADING SEE SHEET 17 TO 18 .



ROUNDING DETAIL

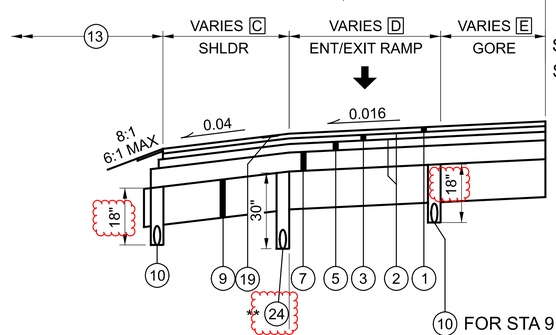


GUARDRAIL ROUNDING DETAIL



AUX LANE - STA 905+26.51 TO STA 911+48.89
IR-271 RAMP A - STA 934+46.61 TO STA 940+24.09

	SHOULDER	WIDTH
A	STA 905+26.51 TO STA 911+48.89	8.0'
	STA 934+46.61 TO STA 939+24.09	8.0'
	STA 939+24.09 TO STA 940+24.09	8.0' TO 10.0'
	AUX LANE	WIDTH
	STA 905+26.51 TO STA 911+48.89	16.0'
B	IR-271 RAMP A	WIDTH
	STA 934+46.61 TO STA 936+17.09	16.0' to 12.0'
	STA 936+17.09 TO STA 939+24.09	12.0'
	STA 939+24.09 TO STA 940+24.09	12.0' to 0.0'

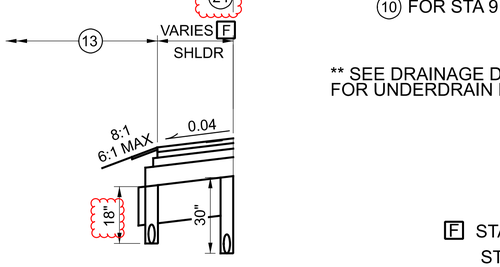


SR-176 RAMP A - STA 860+95.13 TO STA 876+51.88
SR-176 RAMP B - STA 901+18.26 TO STA 905+26.51
IR-271 RAMP D - STA 911+74.88 TO STA 920+25.60
IR-271 RAMP A - STA 931+74.88 TO STA 934+46.61

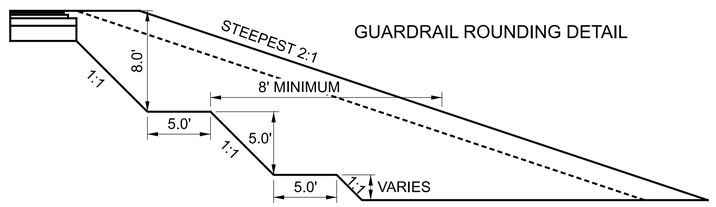
10 FOR STA 914+15.00 TO STA 920+25.00

	SHOULDERS	WIDTH
	STA 860+95.13 TO STA 861+95.13	10.0' TO 8.0'
	STA 861+95.13 TO STA 873+45.13	8.0'
	STA 873+45.13 TO STA 873+95.13	8.0' TO 6.0'
	STA 873+95.13 TO STA 876+51.88	6.0'
C	STA 901+18.26 TO STA 905+26.51	8.0'
	STA 911+48.89 TO STA 918+43.66	8.0'
	STA 918+43.66 TO STA 918+93.55	8.0' TO 6.0'
	STA 918+93.55 TO STA 920+25.60	6.0'
	STA 931+74.88 TO STA 934+46.61	8.0'
	SR-176 RAMP A	WIDTH
	STA 860+95.13 TO STA 868+95.29	0.0' TO 16.0'
	STA 868+95.29 TO STA 876+51.88	16.0'
	SR-176 RAMP B	WIDTH
D	STA 901+18.26 TO STA 905+26.51	16.0'
	IR-271 RAMP D	WIDTH
	STA 911+48.89 TO STA 920+25.60	16.0'
	IR-271 RAMP A	WIDTH
	STA 931+74.88 TO STA 934+46.61	16.0'
	SR-176 RAMP A GORE	WIDTH
	STA 868+95.29 TO STA 876+51.88	0.0' TO 23.0'
	SR-176 RAMP B	WIDTH
	STA 901+18.26 TO STA 905+26.51	23.0' TO 0.0'
E	IR-271 RAMP D	WIDTH
	STA 911+48.89 TO STA 915+98.80	0.0' TO 9.0'
	STA 915+98.80 TO STA 918+43.66	9.0'
	STA 918+43.66 TO STA 920+25.60	9.0' TO 23.0'
	IR-271 RAMP A	WIDTH
	STA 931+74.88 TO STA 934+46.61	23.0' TO 0.0'

** SEE DRAINAGE DETAILS SHEET 562
FOR UNDERDRAIN LOCATION



F STA 918+43.66 TO STA 918+93.55 (8.0' TO 6.0' SHLDR)
STA 918+93.55 TO STA 920+25.60 (6.0' SHLDR)



BENCHING OF FOUNDATION SLOPES

PROPOSED PAVEMENT LEGEND

1. ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (447), PG70-22, AS PER PLAN
2. ITEM 407 - NON-TRACKING TACK COAT (0.055 GAL/SY)
3. ITEM 442 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5mm, TYPE A (446)
4. ITEM 526 - REINFORCED CONCRETE APPROACH SLAB WITH QC/QA (T=15"), AS PER PLAN
5. ITEM 302 - 7.5" ASPHALT CONCRETE BASE, PG 64-22, (449), AS PER PLAN
6. ITEM 452 - 11.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P, AS PER PLAN
7. ITEM 304 - 6" AGGREGATE BASE
8. ITEM 206 - CEMENT STABILIZATION (14" DEEP) (5% SPREAD RATE AT 115 LBS/CUBIC FOOT DRY UNIT WEIGHT)
9. ITEM 206 - CEMENT STABILIZATION (12" DEEP) (5% SPREAD RATE AT 115 LBS/CUBIC FOOT DRY UNIT WEIGHT)
10. ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
11. ITEM 606 - GUARDRAIL, TYPE MGS
12. ITEM 441 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN
13. ITEM 659 - SEEDING AND MULCHING
14. ITEM 622 - CONCRETE BARRIER, TYPE D
15. ITEM 606 - CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION
16. ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22, AS PER PLAN
17. ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
18. ITEM 302 - 6" ASPHALT CONCRETE BASE, PG 64-22 (449)
19. ITEM 618 - RUMBLE STRIPS (ASPHALT CONCRETE)
20. ITEM 609 - CURB, TYPE 4-C
21. ITEM 609 - 6" CONCRETE TRAFFIC ISLAND
22. ITEM 408 - PRIME COAT, AS PER PLAN
23. ITEM 617 - 2" COMPACTED AGGREGATE, AS PER PLAN
24. ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN WITH GEOTEXTILE FABRIC

PGL = PROFILE GRADE LINE

FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

MODEL: Sheet 3 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 7:02:18 AM USER: cmann
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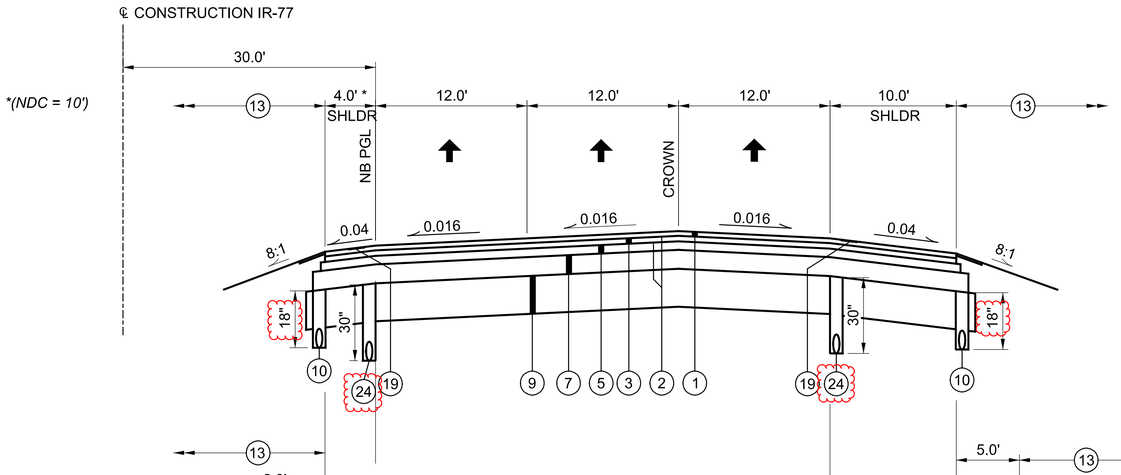
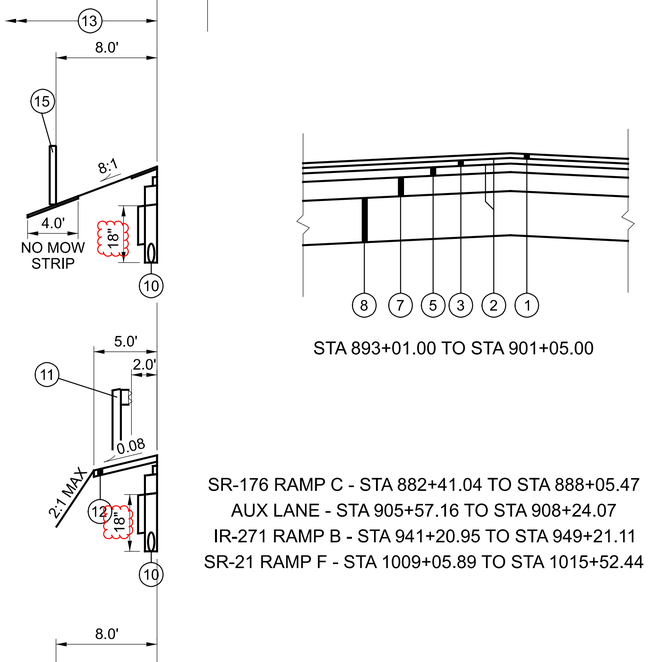
DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER WWM
REVIEWER PRS 04/22/22
PROJECT ID 111405
SHEET 12 TOTAL 927



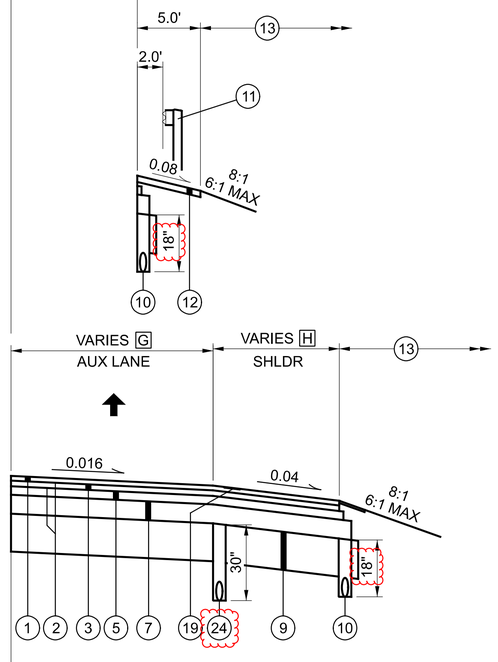
PROPOSED NORMAL SECTION - IR-77 NORTHBOUND

STA 842+00.00 TO STA 956+52.54
STA 958+43.18 TO STA 1005+38.93
STA 1007+22.84 TO STA 1010+63.25
STA 1012+85.99 TO STA 1023+99.96



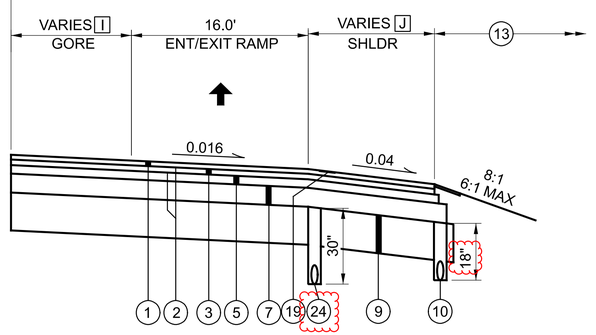
STA 893+01.00 TO STA 901+05.00

SR-176 RAMP C - STA 882+41.04 TO STA 888+05.47
AUX LANE - STA 905+57.16 TO STA 908+24.07
IR-271 RAMP B - STA 941+20.95 TO STA 949+21.11
SR-21 RAMP F - STA 1009+05.89 TO STA 1015+52.44



STA 905+57.16 TO STA 908+24.07

SR-176 RAMP C - STA 888+05.47 TO STA 890+76.35
SR-176 RAMP D - STA 898+85.53 TO STA 905+57.16
IR-271 RAMP C - STA 908+24.07 TO STA 912+31.61
IR-271 RAMP B - STA 933+95.96 TO STA 941+20.95
SR-21 RAMP F - STA 1015+52.44 TO STA 1019+06.39



	SR-176 RAMP C	WIDTH
	STA 882+41.04 TO STA 883+41.04	0.0' TO 12.0'
	STA 883+41.04 TO STA 886+35.00	12.0'
	STA 886+35.00 TO STA 888+05.47	12.0' TO 16.0'
	AUX LANE	WIDTH
	STA 905+57.16 TO STA 908+24.07	16.0'
G	IR-271 RAMP B	WIDTH
	STA 941+20.95 TO STA 949+21.11	16.0' to 0.0'
	SR-21 RAMP F	WIDTH
	STA 1009+05.89 TO STA 1010+06.39	0.0' TO 12.0'
	STA 1010+06.39 TO STA 1013+32.51	12.0'
	STA 1013+32.51 TO STA 1015+49.96	12.0' TO 16.0'
	SHOULDER	WIDTH
	STA 882+41.04 TO STA 883+41.04	10.0' to 8.0'
	STA 883+41.04 TO STA 888+05.47	8.0'
	STA 905+57.16 TO STA 908+24.07	8.0'
H	STA 941+20.95 TO STA 948+21.11	8.0'
	STA 948+21.11 TO STA 949+21.11	8.0' TO 10.0'
	STA 1009+06.39 TO STA 1010+06.39	10.0' TO 8.0'
	STA 1010+06.39 TO STA 1015+52.44	8.0'

	SR-176 RAMP C	WIDTH
	STA 888+05.47 TO STA 890+76.35	0.0' TO 23.0'
	SR-176 RAMP D	WIDTH
	STA 898+85.53 TO STA 905+57.16	23.0' TO 0.0'
I	IR-271 RAMP C	WIDTH
	STA 908+24.07 TO STA 912+31.61	0.0' TO 23.0'
	IR-271 RAMP B	WIDTH
	STA 933+95.96 TO STA 941+20.95	23.0' TO 0.0'
	SR-21 RAMP F	WIDTH
	STA 1015+52.44 TO STA 1019+06.39	0.0' TO 23.0'
	SHOULDERS	WIDTH
	STA 888+05.47 TO STA 890+76.35	8.0'
	STA 898+85.53 TO STA 900+56.98	6.0'
	STA 900+56.98 TO STA 901+06.82	6.0' TO 8.0'
J	STA 908+24.07 TO STA 912+31.61	8.0'
	STA 933+95.96 TO STA 936+21.11	6.0'
	STA 936+21.11 TO STA 936+71.11	6.0' TO 8.0'
	STA 936+71.11 TO STA 941+20.95	8.0'
	STA 1015+52.44 TO STA 1019+06.39	8.0'
	STA 1019+06.39 TO STA 1019+62.02	8.0' TO 6.0'

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563
FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232
FOR MEDIAN GRADING SEE SHEET 17 - 18.

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

MODEL: Sheet 4 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 7:02:24 AM USER: cmann
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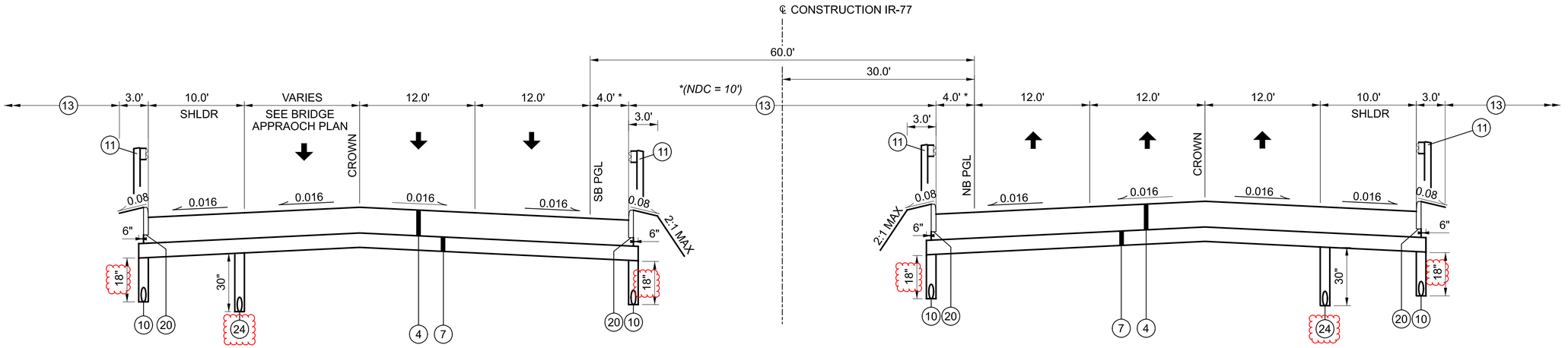
WWM
REVIEWER
PRS 04/22/22
PROJECT ID
111405
SHEET 13 TOTAL 927

SHEET 5

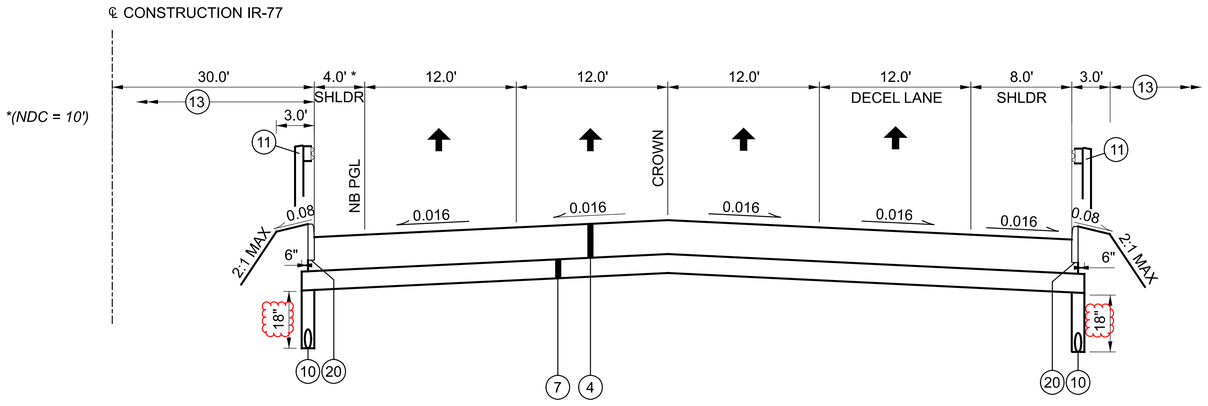


FOR MEDIAN GRADING SEE SHEET 17 TO 18 .

STA 956+56.67 TO STA 956+81.67
BRIDGE LIMITS: STA 956+81.67 TO STA 958+22.31
STA 958+22.31 TO STA 958+47.31
STA 1005+52.73 TO STA 1005+77.75
BRIDGE LIMITS: STA 1005+77.75 TO STA 1007+12.44
STA 1007+12.44 TO STA 1007+37.54
STA 1011+01.55 TO STA 1011+26.55
BRIDGE LIMITS: STA 1011+26.55 TO STA 1012+87.46
STA 1012+87.46 TO STA 1013+12.46

STA 956+52.54 TO STA 956+77.54
BRIDGE LIMITS: STA 956+77.54 TO STA 958+18.18
STA 958+18.18 TO STA 958+43.18
STA 1005+38.93 TO STA 1005+63.83
BRIDGE LIMITS: STA 1005+63.83 TO STA 1006+97.84
STA 1006+97.84 TO STA 1007+22.84

PROPOSED APPROACH SLAB - IR-77



FOR MEDIAN GRADING SEE SHEET 17 TO 18 .

STA 1010+63.20 TO STA 1010+88.20
BRIDGE: STA 1010+88.20 TO STA 1012+61.04
STA 1012+61.04 TO STA 1012+86.04

PROPOSED APPROACH SLAB - IR-77

FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

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2500 Corporate Exchange Dr.
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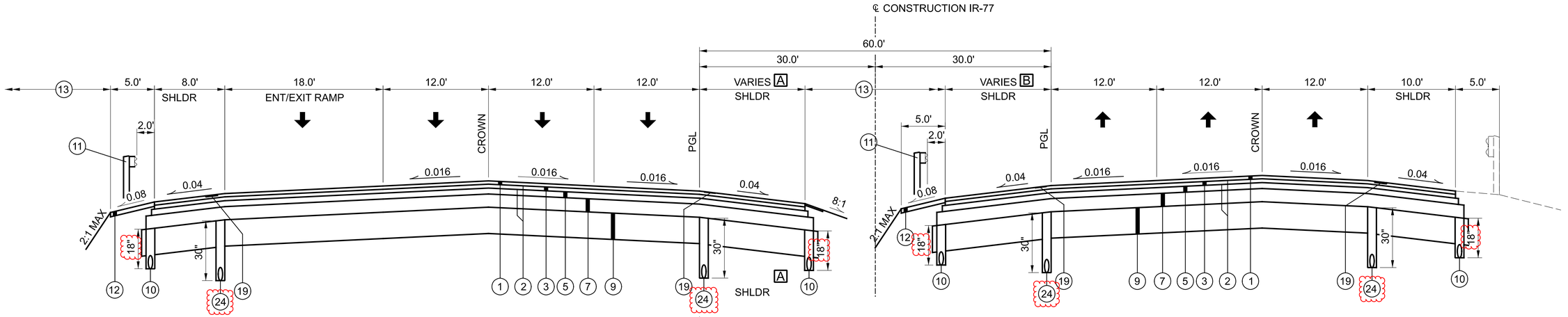
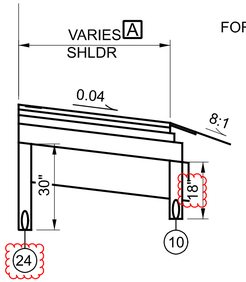
DESIGNER WWM
REVIEWER PRS 04/22/22
PROJECT ID 111405
SHEET 14 TOTAL 927



STA 1023+50.00 TO STA 1025+18.00

FOR MEDIAN GRADING SEE SHEET 17 TO 18 .

STA 1023+99.96 TO STA 1026+40.00



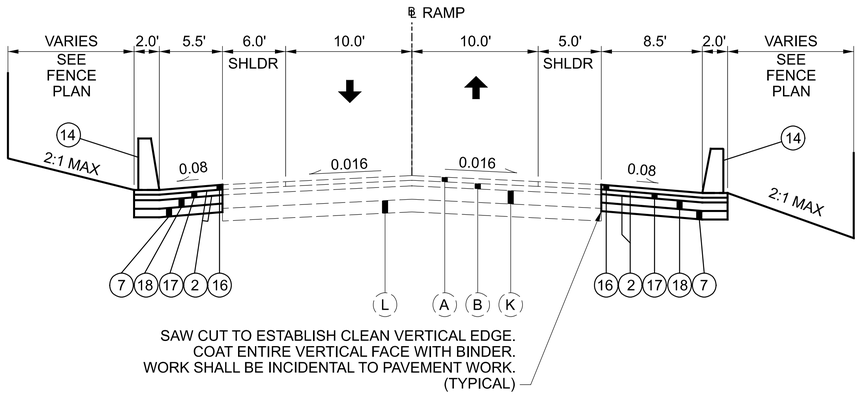
STA 1025+18.00 TO STA 1025+50.00

PROPOSED NORMAL SECTION - IR-77

*(NDC = 10')

A 4.0' TO 10.7' STA 1023+50.00 TO STA 1025+18.00
10.7' TO 12.0' STA 1025+18.00 TO STA 1025+50.00

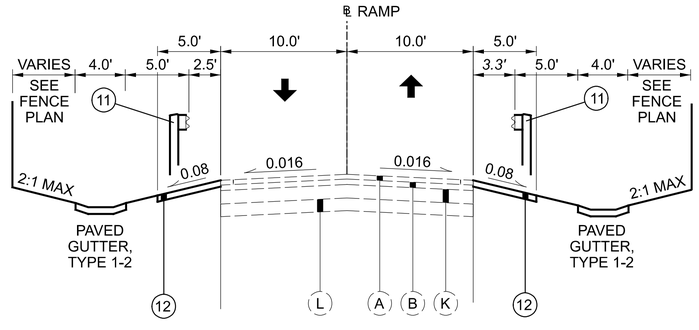
B 4.0' TO 12.0' STA 1023+99.96 TO STA 1026+00.00
12.0' STA 1026+00.00 TO STA 1026+40.00



SAW CUT TO ESTABLISH CLEAN VERTICAL EDGE.
COAT ENTIRE VERTICAL FACE WITH BINDER.
WORK SHALL BE INCIDENTAL TO PAVEMENT WORK.
(TYPICAL)

PROPOSED NORMAL SECTION - SR-303

STA 155+88.00 TO 156+82.50



PROPOSED NORMAL SECTION - CH-178

STA 10+98.00 TO 11+98.00

STA 11+06.00 TO 12+06.00

FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

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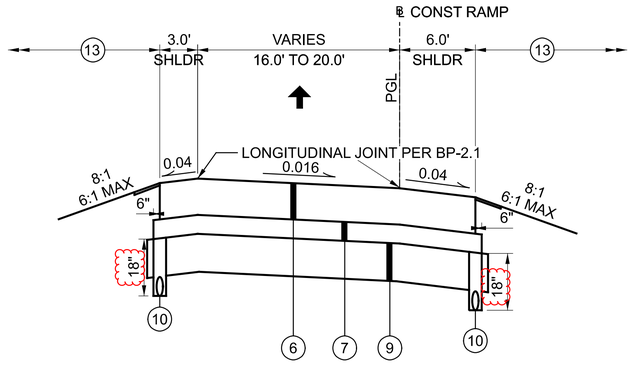
WWM

REVIEWER
PRS 04/22/22

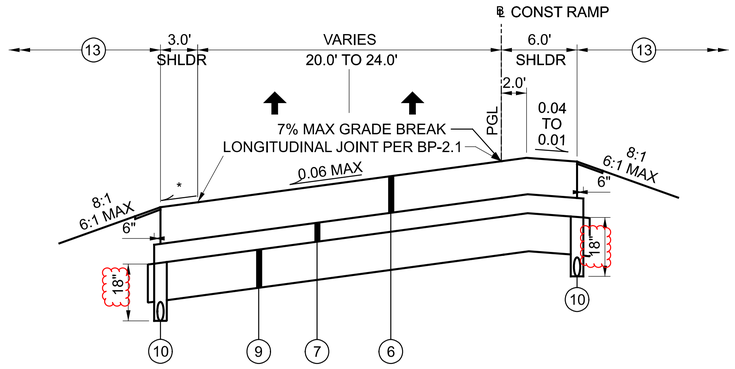
PROJECT ID
111405

SHEET 15 TOTAL 927



PROPOSED NORMAL SECTION - RAMP

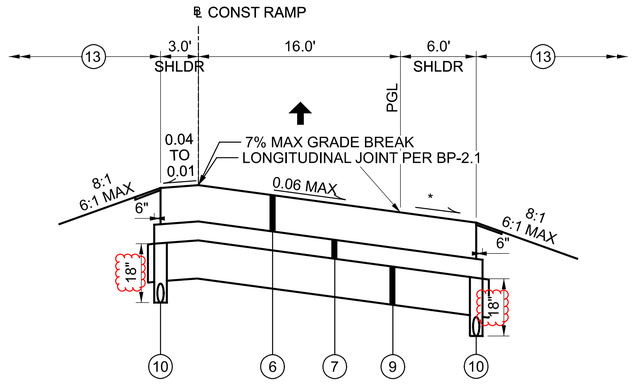
SR-176 RAMP A: STA 1862+64.19 TO STA 1867+38.08 (16.0')
SR-176 RAMP B: STA 4912+32.45 TO STA 4917+71.84 (VARIES, SEE NOTE 1)
SR-176 RAMP D: STA 3893+16.88 TO STA 3894+05.29 (16.0')
SR-21 RAMP F: STA 9019+09.90 TO STA 9022+64.89 (16.0')
STA 9034+68.16 TO STA 9036+40.16 (16.0')



PROPOSED SUPERELEVATED SECTION - RAMP

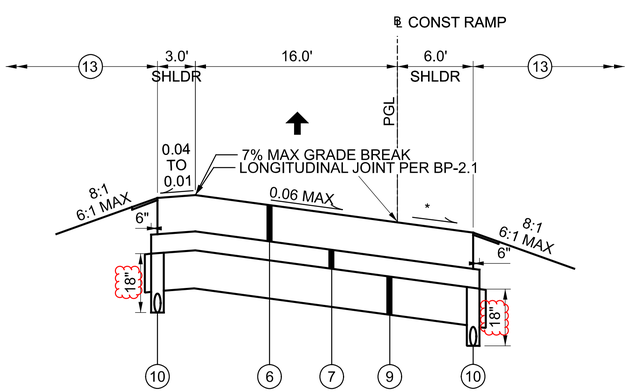
SR-176 RAMP B: STA 4917+71.84 TO STA 4922+74.21 (VARIES, SEE NOTE 1)

NOTE 1: RAMP WIDTH VARIES FROM 16.0' AT STA 4917+25 TO 24.0' AT STA 4917+75



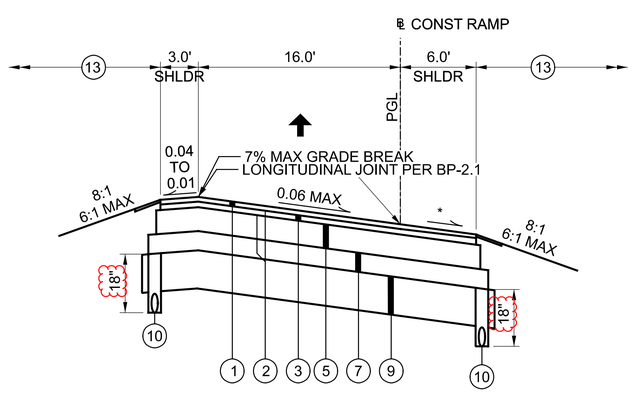
PROPOSED SUPERELEVATED SECTION - RAMP

SR-176 RAMP A: STA 1859+17.13 TO STA 1861+01.82



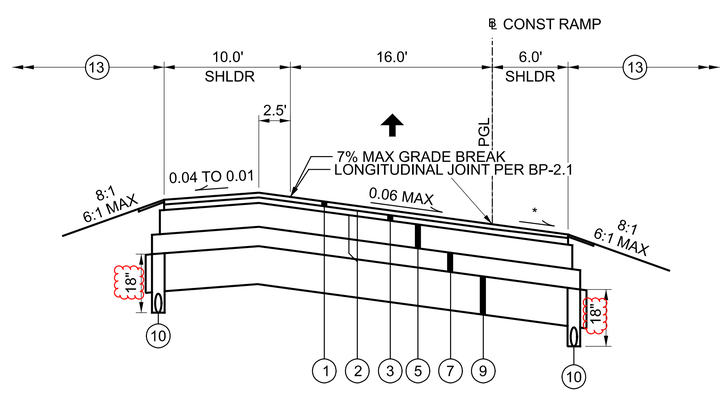
PROPOSED SUPERELEVATED SECTION - RAMP

SR-176 RAMP A: STA 1867+38.08 TO STA 1870+39.83
SR-176 RAMP B: STA 4909+33.82 TO STA 4912+32.45
SR-176 RAMP C: STA 2890+75.35 TO STA 2896+69.15 **
STA 2898+96.40 TO STA 2903+21.92
SR-176 RAMP D: STA 3891+56.88 TO STA 3893+16.88
STA 3894+05.29 TO STA 3898+87.74
SR-176 RAMP E: STA 26+29.62 TO STA 29+29.78
SR-21 RAMP F: STA 9022+14.84 TO STA 9034+18.11



PROPOSED SUPERELEVATED SECTION - RAMP

SR-176 RAMP A: STA 1870+39.83 TO STA 1873+45.13
SR-176 RAMP C: STA 2903+21.92 TO STA 2905+21.92
IR-271 RAMP B: STA 8933+10.00 TO STA 8936+71.11
IR-271 RAMP C: STA 5908+24.07 TO STA 5914+18.08



PROPOSED SUPERELEVATED SECTION - RAMP

IR-271 RAMP D: STA 6915+00.00 TO STA 6917+99.95

* CROSS SLOPE SHALL BE 0.04 OR MATCH SUPERELEVATION RATE IF GREATER THAN 0.04.

** FOR SR-176 RAMP C: STA 2896+69.15 TO STA 2898+96.40, SEE SR-176 RAMP D: STA 3888+19.25 TO STA 3891+56.88

*** FOR SR-176 RAMP A: STA 1861+01.82 TO STA 1862+64.19, SEE SR-176 RAMP E: STA 30+73.68 TO STA 29+29.78

****SEE MAINLINE TYPICAL SECTIONS AND INTERCHNAGE DETAILS FOR STATIONS BELOW:
FOR SR-176 RAMP B: STA 4905+26.51 TO STA 4909+33.82
FOR SR-176 RAMP C: STA 2886+35.00 TO STA 2890+43.21
FOR SR-176 RAMP D: STA 3898+87.74 TO STA 3901+06.82
FOR SR-176 RAMP E: STA 29+29.78 TO STA 30+33.59, STA 30+33.59 TO STA 30+87.85
FOR SR-271 RAMP D: STA 6916+64.47 TO STA 6918+43.66
FOR SR-21 RAMP F: STA 9013+31.85 TO STA 9019+09.90

NOTE A: TYPICAL SECTIONS ARE SHOWN FOR REPRESENTATIVE OF RAMP SECTIONS.

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563
FOR SUPERELEVATION TABLES, SEE SHEET 488 - 495
FOR INTERCHANGE DETAILS, SEE SHEET 496 - 517

FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75
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2500 Corporate Exchange Dr.
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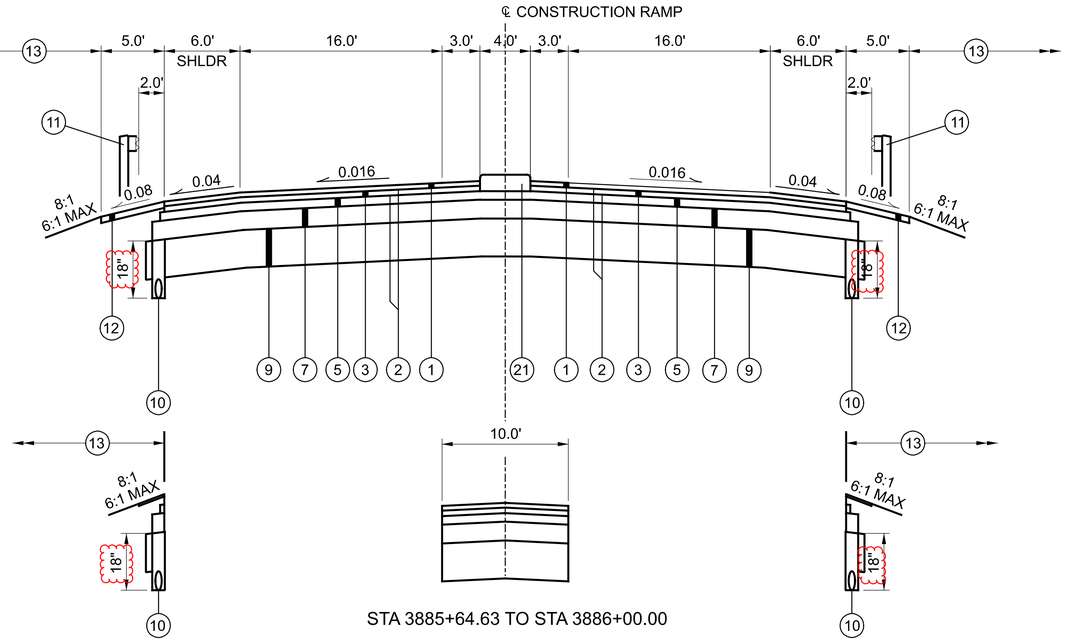
DESIGNER
WWM

REVIEWER
PRS 04/22/22

PROJECT ID
111405

SHEET 16 TOTAL 927

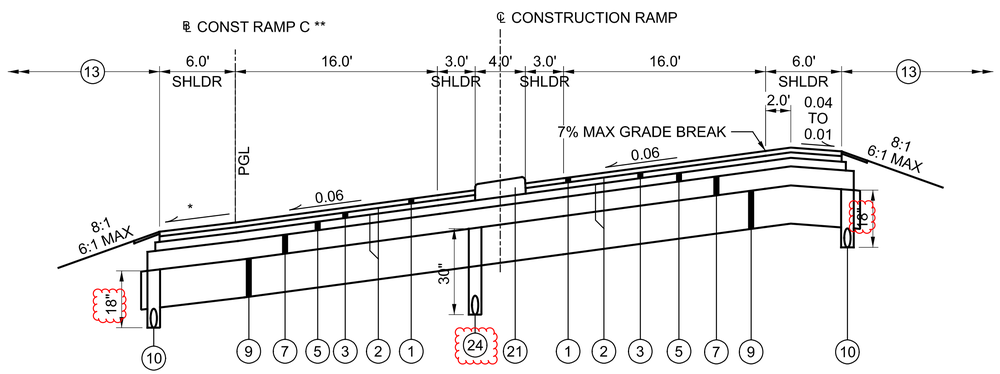


STA 3885+64.63 TO STA 3886+00.00

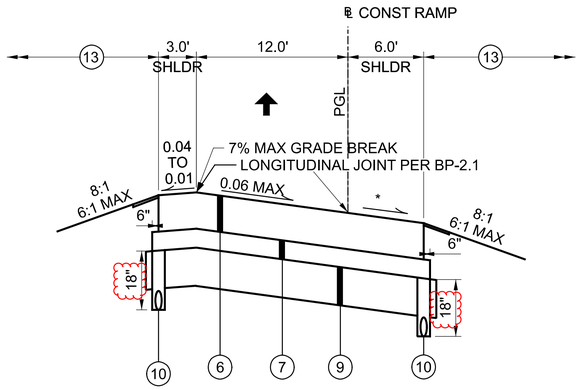
STA 3885+64.63 TO STA 3886+93.03

STA 3885+64.63 TO STA 3887+07.09

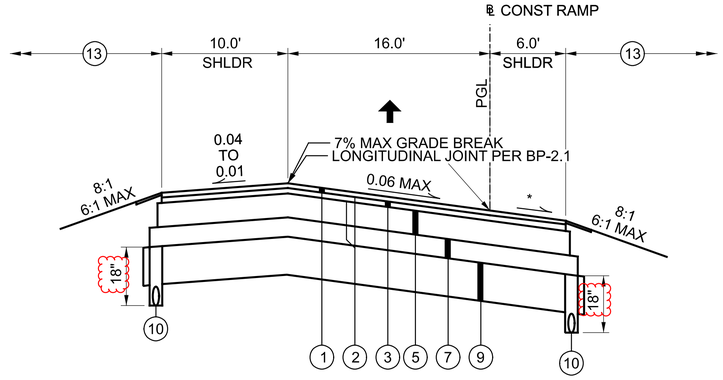
PROPOSED NORMAL SECTION - RAMP
SR-176 RAMP D: STA 3885+64.63 TO STA 3888+19.25



PROPOSED SUPERELEVATED SECTION - RAMP
SR-176 RAMP D: STA 3888+19.25 TO STA 3891+56.88



PROPOSED SUPERELEVATED SECTION - RAMP
SR-176 RAMP E: STA 25+28.45 TO STA 26+29.62



PROPOSED SUPERELEVATED SECTION - RAMP
IR-271 RAMP A: STA 7940+58.44 TO STA 7941+09.76

* CROSS SLOPE SHALL BE 0.04 OR MATCH SUPERELEVATION RATE IF GREATER THAN 0.04.

** FOR SR-176 RAMP C: STA 2896+69.15 TO STA 2899+84.22, SEE SR-176 RAMP D: STA 3888+19.25 TO STA 3891+56.88

NOTE A: TYPICAL SECTIONS ARE SHOWN FOR REPRESENTATIVE OF RAMP SECTIONS.

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563
FOR SUPERELEVATION TABLES, SEE SHEET 488 - 495
FOR INTERCHANGE DETAILS, SEE SHEET 496 - 517

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

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DESIGNER
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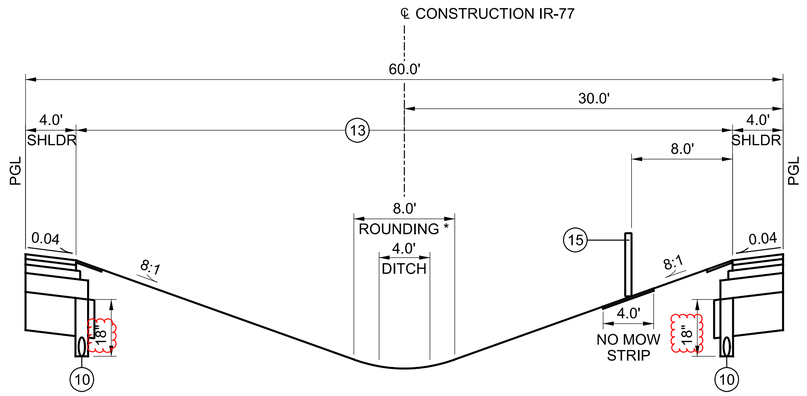
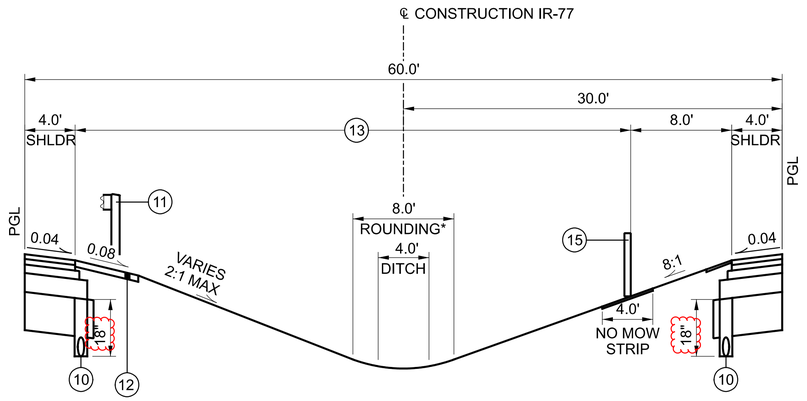
PRS 04/22/22

PROJECT ID
111405

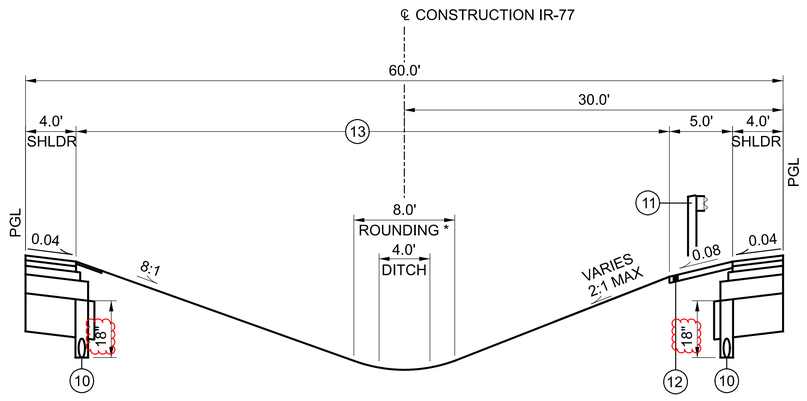
SHEET 17 TOTAL 927



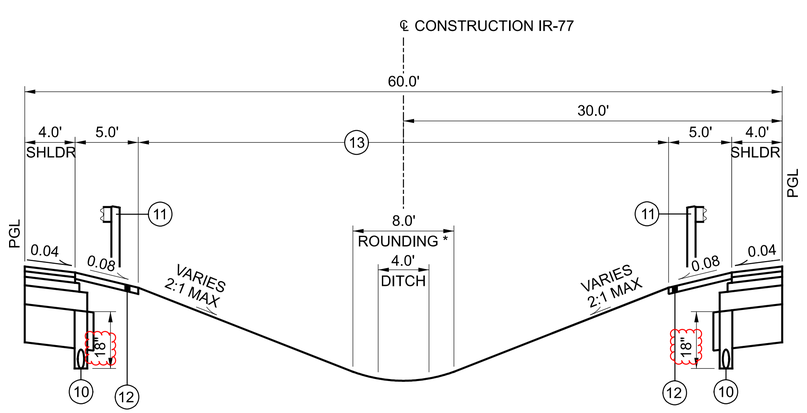
PROPOSED MEDIAN GRADING - IR-77
STA 842+00.00 TO STA 851+83.25
STA 858+64.64 TO STA 884+28.15
STA 891+15.58 TO STA 898+00.45
STA 951+02.43 TO STA 953+41.40
STA 961+58.45 TO STA 1002+29.03



PROPOSED MEDIAN GRADING - IR-77
STA 855+06.82 TO STA 858+64.64
STA 887+28.08 TO STA 891+15.58
STA 946+02.43 TO STA 951+02.43
STA 959+00.00 TO STA 961+58.45



PROPOSED MEDIAN GRADING - IR-77
STA 851+83.25 TO STA 855+06.82
STA 884+28.15 TO STA 887+28.08
STA 898+00.45 TO STA 911+52.42
STA 953+41.40 TO STA 956+52.54
STA 1002+29.03 TO STA 1005+38.89



PROPOSED MEDIAN GRADING - IR-77
STA 911+52.42 TO STA 918+12.95

* WHERE VEGETATED BIOFILTERS ARE PROPOSED, NO ROUNDING IS REQUIRED.
FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

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DESIGNER
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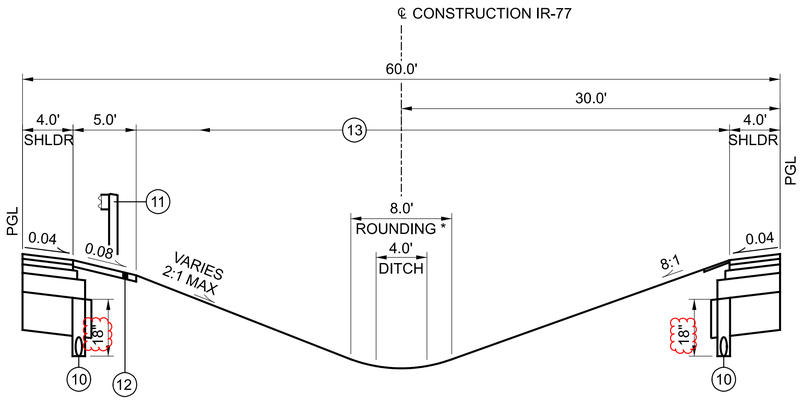
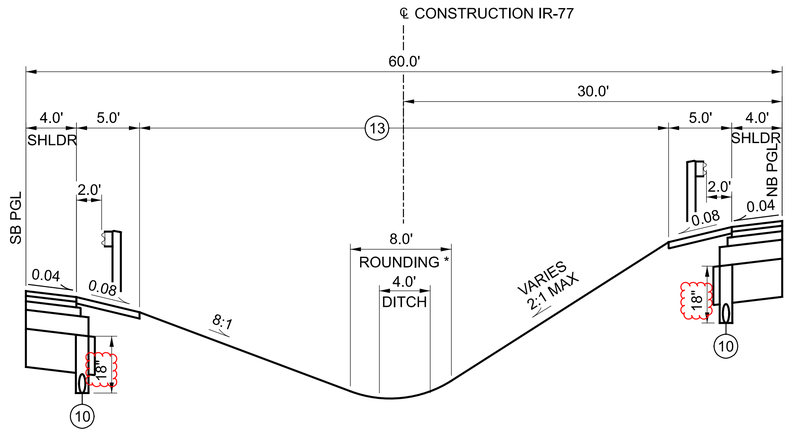
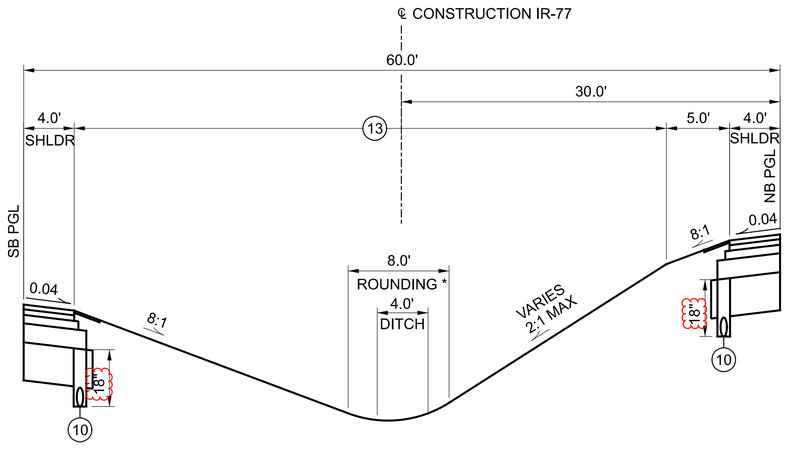
REVIEWER
PRS 04/22/22
PROJECT ID
111405
SHEET 18 TOTAL 927



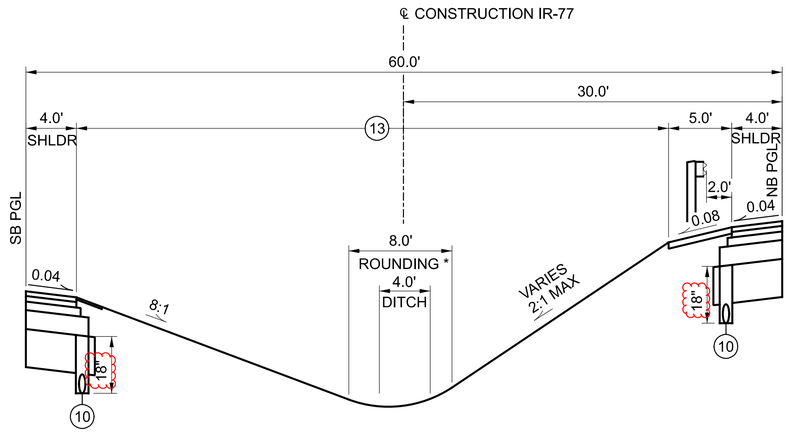
PROPOSED MEDIAN GRADING - IR-77
STA 918+12.95 TO STA 946+02.43
STA 958+47.31 TO STA 959+00.00



PROPOSED BIFURCATED MEDIAN GRADING - IR-77
STA 1012+85.99 TO STA 1016+23.34



PROPOSED BIFURCATED MEDIAN GRADING - IR-77
STA 1007+22.84 TO STA 1011+01.49



PROPOSED BIFURCATED MEDIAN GRADING - IR-77
STA 1016+23.34 TO STA 1023+50.00

* WHERE VEGETATED BIOFILTERS ARE PROPOSED, NO ROUNDING IS REQUIRED.
FOR GUARDRAIL LOCATIONS, SEE SHEETS 202 - 232

FOR COMPACTED AGGREGATE DETAIL, SEE SHEET 12
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 12
FOR ROUNDING DETAIL, SEE SHEET 12
FOR BENCHING DETAIL, SEE SHEET 12
FOR PROPOSED PAVEMENT LEGEND, SEE SHEET 12
FOR UNDERDRAIN DETAILS, SEE SHEETS 562 - 563

TYPICAL SECTIONS - PROPOSED

SUM-77-28.75

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111405

SHEET 19 | TOTAL 927

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

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

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 601, TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT 25 SQ. YD.
ITEM 611, 6 " CONDUIT TYPE F FOR UNDERDRAIN OUTLETS 100 FT.
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH
ITEM 605, 6 " UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC 200 FT.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

SEEDING AND MULCHING

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

ITEM 659, SOIL ANALYSIS TEST 2 EACH
ITEM 659, TOPSOIL 21145 CU. YD.
ITEM 659, SEEDING AND MULCHING 190487 SQ. YD.
ITEM 659, REPAIR SEEDING AND MULCHING 9525 SQ. YD.
ITEM 659, INTER-SEEDING 9525 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER 51.5 TON
ITEM 659, LIME 39.4 ACRES
ITEM 659, WATER 1543 M. GAL.
ITEM 659, MOWING 429 M. 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 LIMITS IDENTIFIED AS NECESSARY IN THE CROSS-SECTIONS. ANY ADDITIONAL AREAS OUTSIDE OF THE AREAS IDENTIFIED IN THE CROSS-SECTIONS THAT ARE DISTURBED BY THE CONTRACTOR TO FACILITATE CONSTRUCTION MUST BE RESTORED IN ACCORDANCE WITH C&MS 107.10 AND CONSIDERED INCIDENTAL TO THE WORK. NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE AREAS

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E MASH 2016

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

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

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

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

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E MASH 2016 EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE REINFORCED TYPE D

PROVIDE REINFORCED END ANCHORAGES AT THE ENDS OF CONCRETE BARRIER RUNS AND AT INTERRUPTIONS IN BARRIER CAUSED BY EXPANSION JOINTS. WHEN BARRIER DOES NOT ABUT ANOTHER BARRIER RUN, CONSTRUCT THE LAST 15' USING THE END ANCHORAGE PER STD DWG RM-4.5.

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE REINFORCED TYPE D, 4 EA.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM CONSISTS OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING LESS THAN 24" IN DIAMETER CONDUIT AND FILLING THE AREA SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

LOCATE THE BULKHEADS AT THE LIMITS OF THE AREA TO BE FILLED, AS INDICATED ON THE PLANS. THE BULKHEADS CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES. PUMP THE FILL MATERIAL INTO PLACE OR BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSSSECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH IS FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR IS THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED PER 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTIBLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
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 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 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1 (448), UNDER GUARDRAIL, AS PER PLAN.

GENERAL NOTES

SUM-77-28.75
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GENERAL NOTES

EARTHWORK FOR MAINLINE PAVEMENT

ITEM 203, EMBANKMENT INCLUDES CONSTRUCTION EMBANKMENTS TO PLAN LINES AND INCLUDES FURNISHING AND PLACING SUITABLE BORROW MATERIAL AS SPECIFIED IN 203. BENCHING PER SECTION 800 OF THE GEOTECHNICAL DESIGN MANUAL SHALL BE FOLLOWED AND ANY TEMPORARY FILL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

EXCAVATED SOILS ON THE PROJECT SITE MAY NOT BE SUITABLE FOR EMBANKMENT USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ANY ON-SITE SOIL USED AS EMBANKMENT MEETS THE REQUIREMENTS OF 203.

EXCAVATION SHALL INCLUDE THE FULL DEPTH ASPHALT PAVEMENT SHOULDERS AND/OR PAVEMENT LIMITS AND IS INCLUDED IN THE VOLUMES PROVIDED BELOW.

THE FOLLOWING IS A SUMMARY OF ALL EARTHWORK QUANTITIES GENERATED BY THE CROSS SECTIONS.

IR-77

203, EXCAVATION	*125565 CU. YD.*
203, EMBANKMENT	*50788 CU. YD.*

SR-176

RAMP A	*203, EXCAVATION*	*1624 CU. YD.*
	203, EMBANKMENT	*337 CU. YD.*
RAMP E	*203, EXCAVATION*	*487 CU. YD.*
	203, EMBANKMENT	*264 CU. YD.*
RAMP B	*203, EXCAVATION*	*1489 CU. YD.*
	203, EMBANKMENT	*1516 CU. YD.*
RAMP C	*203, EXCAVATION*	*1805 CU. YD.*
	203, EMBANKMENT	*1658 CU. YD.*
RAMP D	*203, EXCAVATION*	*1766 CU. YD.*
	203, EMBANKMENT	*1112 CU. YD.*

IR-271

RAMP A	*203, EXCAVATION*	*446 CU. YD.*
	203, EMBANKMENT	*0 CU. YD.*
RAMP B	*203, EXCAVATION*	*499 CU. YD.*
	203, EMBANKMENT	*58 CU. YD.*
RAMP C	*203, EXCAVATION*	*431 CU. YD.*
	203, EMBANKMENT	*5 CU. YD.*
RAMP D	*203, EXCAVATION*	*227 CU. YD.*
	203, EMBANKMENT	*49 CU. YD.*

SR-21

RAMP F	*203, EXCAVATION*	*2245 CU. YD.*
	203, EMBANKMENT	*813 CU. YD.*

THE FOLLOWING GRAND TOTAL HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION	*136584 CU. YD.*
203, EMBANKMENT	*56600 CU. YD.*

RUMBLE STRIPES (ASPHALT CONCRETE)

THE FOLLOWING ITEMS AND QUANTITIES HAVE BEEN PROVIDED TO INSTALL RUMBLE STRIPES ALONG THE FOLLOWING ROUTES:

EDGE LINE:
IR 77 NORTHBOUND: SLM 28.75 TO SLM 32.27
IR 77 SOUTHBOUND: SLM 28.75 TO SLM 32.27

THE LONGITUDINAL JOINT PREPARATION PAY ITEM IS ONLY PROVIDED FOR THE LOCATIONS OF THE INSTALLATION OF THE CENTERLINE RUMBLE STRIPES. IN ALL OTHER AREAS WHERE JOINTS ARE REQUIRED THE CONTRACTOR SHALL FOLLOW CMS 401.

OBJECT MARKERS AND CONDUIT IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5' IN LENGTH.

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND. INSTALL SIGNS FOR THE FOLLOWING CONDUITS (CFN#):

CFN #	ENDS	CFN #	ENDS	CFN #	ENDS	CFN #	ENDS
1809158	*1*	*1830176*	*2*	*1989936*	*1*	*1989970*	*1*
1820914	*2*	*1830178*	*2*	*1989937*	*1*	*1989971*	*1*
1820915	*2*	*1830179*	*2*	*1989938*	*1*	*1989972*	*1*
1820920	*2*	*1847706*	*2*	*1989950*	*1*	*1989973*	*1*
1820921	*2*	*1847707*	*2*	*1989960*	*1*	*1989974*	*1*
1822009	*2*	*1847709*	*2*	*1989961*	*1*	*1989975*	*1*
1822010	*1*	*1847711*	*2*	*1989962*	*1*	*1989976*	*1*
1830170	*2*	*1989922*	*1*	*1989963*	*1*	*1989977*	*1*
1830171	*1*	*1989923*	*1*	*1989964*	*1*	*1990047*	*1*
1830172	*2*	*1989924*	*2*	*1989965*	*1*	*1990048*	*1*
1830174	*2*	*1989925*	*1*	*1989969*	*1*		

THE FOLLOWING QUANTITIES ARE FOR EACH APPROACH END:

ITEM 630 – SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 – SIGN, FLAT SHEET, 6 SQ FT
ITEM 630 – GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
ITEM 630 – REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
ITEM 630 – REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 630 – SIGN, FLAT SHEET, 730.20	*59 SQ FT*
ITEM 630 – SIGN, FLAT SHEET	*354 SQ FT*
ITEM 630 – GROUND MOUNTED SUPPORT, NO. 2 POST	*1239 FT*
ITEM 630 – REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	*177 EACH*
ITEM 630 – REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	*118 EACH*

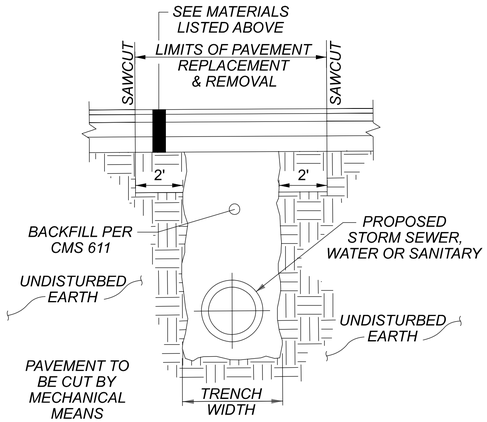
PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVAL OF PIPES

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING THE INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 202 - PAVEMENT REMOVED	*32 SY*
ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), PG64-22, AS PER PLAN	*2 CY*
ITEM 407 - NON-TRACKING TACK COAT (0.055 GAL/SY)	*2 GAL*
ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (449)	*2 CY*
ITEM 301 - 4" ASPHALT CONCRETE BASE, (449), PG64-22	*4 CY*
ITEM 304 - 4" AGGREGATE BASE	*4 CY*

THE ABOVE QUANTITIES ARE BASED ON A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.



PAVEMENT REPLACEMENT DETAIL
N.T.S.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE PAVED SHOULDERS WITHOUT GUARDRAIL, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:
SIEVE TOTAL PERCENT PASSING
1- 1/2 " 100
3/4 " 50-100
NO. 4 35-70
NO. 30 9-33
NO. 200 0-13

AN ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS WORK.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

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PROJECT ID
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SHEET 24 TOTAL 927

SHEET 1

ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. RAMPS AND LOCAL ROADS: A MINIMUM OF ONE 11 FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK, EXCEPT AS NOTED IN THE PLANS.

2. A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ALONG THE MAINLINE OF IR-77 AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, AND ITEM 615 ROADS FOR MAINTAINING TRAFFIC UNLESS APPROVED BY THE ENGINEER.

3. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. FOR ROUTES NOT ON THE PERMITTED LANE CLOSURE CHART, ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-9AM AND 3-7PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE. THIS REQUIREMENT SHALL ALSO APPLY TO THOSE ROUTES INCLUDED ON THE PERMITTED LANE CLOSURE CHART WHICH ARE NOT DETAILED IN THE PLAN SET.

6. A QUANTITY OF 250 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

7. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

8. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28; W8-11 [UNEVEN LANES] PER OMUCTD 6F.45; AND W6-3 [TWO-WAY TRAFFIC] PER OMUTCD 6F.32. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614-MAINTAINING TRAFFIC.

9. ALL EXISTING LANES, INCLUDING RAMPS, SHALL BE OPEN AND AVAILABLE TO TRAFFIC IN THE ORIGINAL OR PROPOSED FINAL ALIGNMENT BETWEEN OCTOBER 01 AND APRIL 01. REFER TO THE "MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) NOTE SHOULD THE CONTRACTOR FAIL TO MEET THESE REQUIREMENTS.

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

CHRISTMAS	FOURTH OF JULY
NEW YEAR'S	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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

ITEM 614 - MAINTAINING TRAFFIC (CONTINUED)

DAY OF HOLIDAY	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING)	5:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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

12. NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMPS & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

13. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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.

MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC ALONG PROJECT RAMPS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR PERIODS NOT TO EXCEED LISTED DURATION (CONSECUTIVE CALENDAR DAYS), WHEN AFFECTED RAMP TRAFFIC MAY BE DETOURED AS SHOWN ON THE FOLLOWING DETOUR SHEETS:

IR-77 NB TO SR-176 (WHEATLEY ROAD) (90 DAYS) - SHEET 47
SR-176 (WHEATLEY ROAD) TO IR-77 NB (90 DAYS) - SHEET 48
SR-176 (WHEATLEY ROAD) TO IR-77 SB (90 DAYS) - SHEET 49
IR-77 SB TO SR-176 (WHEATLEY ROAD) (90 DAYS) - SHEET 53
BRUSH ROAD (14 DAYS) - SHEET 52
IR-77 NB TO SR-21 NB (60 DAYS) - SHEET 50
SR-303 DIRECTIONAL CLOSURE (90 DAYS) - SHEET 51

SR-21 (BRECKSVILLE ROAD) TO IR-77 SB (CLOSURE DURATION TIED TO MAINLINE CONSTRUCTION ACTIVITIES) - SHEET 46

CLOSURES SHALL NOT BE CONCURRENT WITH THE EXCEPTION OF RAMPS E/A AND RAMP G CLOSURE DETOURS DURING PHASE 5/5A. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $ 3000.00 PER DAY FOR EACH DAY A RAMP REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $ 305.00 PER MINUTE FOR EACH MINUTE A ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ASPHALT PAVING LIMITATION

THE CONTRACTOR SHALL NOT ANTICIPATE OR SCHEDULE PLACING ASPHALT (ASPHALT SURFACE COURSE, ASPHALT INTERMEDIATE COURSE, ASPHALT CONCRETE BASE COURSE, ETC.) BETWEEN NOVEMBER 01 AND APRIL 01 WHEN SUBMITTING THEIR INITIAL BAR CHART PROGRESS SCHEDULE TO THE DISTRICT CONSTRUCTION ENGINEER (DCE) AS SPECIFIED IN CMS SECTION 108.02A. THIS LIMITATION SHALL ALSO INCLUDE INITIAL BASE LINE SCHEDULES AND ALL UPDATES IN A CPM SCHEDULE IS REQUIRED.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECTS CUY-77-00.42 MILLER ROAD INTERCHANGE (PID 104983) AND SUM-77-24.12 (PID 111404) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS. IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECEIVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148), SUMMIT COUNTY AND THE VILLAGE OF RICHFIELD TWENTY-ONE (21) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING. (REFER TO DETOUR SIGNING NOTE ON SHEET 28)

TRENCH FOR WIDENING [SPEED LIMIT > 45MPH]

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. AS SHOWN ON MT-101.90. PLACEMENT OF PROPOSED BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE BASE WIDENING ON THIS PROJECT WILL BE COMPLETED TO A DEPTH OF 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF THE WORK DAY. NO TRENCH WILL BE LEFT OPEN OVERNIGHT. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING WILL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMPS & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONST-RUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENT-ATION

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

MOT NOTES

SUM-77-28.75

MODEL: MN001 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 3:00:49 PM USER: awilsbacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER ACW
REVIEWER DRJ 08-26-22
PROJECT ID 111405
SHEET 25 TOTAL 927

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) 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 THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- 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).
- 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 CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

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.

IN GENERAL LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. 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.

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. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END 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 DURING CONSTRUCTION OPERATIONS (CONTINUED)

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 2400 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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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

IN ADDITION TO THE REQUIREMENTS OF 615

ON THIS PROJECT THE CLASS A PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE 18 FEET WIDE AND THE ROADWAY WIDTH SHALL NOT BE LESS THAN 22 FEET OUT TO OUT OF SHOULDERS. THE ALIGNMENT AND PAVEMENT TYPICAL SECTION SHALL BE AS DETAILED ON SHEETS 160 THROUGH 180 . THE EXISTING PAVEMENT/SHOULDER SHALL BE SAWCUT AS PER 203.04(E).

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED IN CONSTRUCTING THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

615, ROADS FOR MAINTAINING TRAFFIC, LUMP SUM
615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN, (QUANTIFIED IN SUBSUMMARY)
616, WATER, 9 M GAL
411, STABILIZED CRUSHED AGGREGATE, 158 CU. YD.

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE PAVEMENT FOR MAINTAINING TRAFFIC INCLUDING ANY TEMPORARY DRAINAGE FACILITIES. THE AFFECTED EXISTING EARTH MEDIAN AND PAVED SHOULDERS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS DIRECTED BY THE ENGINEER AND AS PER 615.08.

PAVEMENT FOR MAINTAINING TRAFFIC SHALL NOT BE OPENED TO TRAFFIC UNTIL ALL WORK ZONE TRAFFIC CONTROL DEVICES, SIGNS, PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIERS HAVE BEEN ERECTED AND APPROVED BY THE ENGINEER.

ALTHOUGH ESTIMATES FOR TEMPORARY EXCAVATION, EMBANKMENT AND TEMPORARY DRAINAGE FACILITIES MAY BE SHOWN ON THE PLAN DETAILS, THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH PAYMENT FOR ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT www.OhioTIM.com.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
   A. COLLABORATE WITH ODOT AND SAFETY FORCES;
   B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
   C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
   A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
      I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
      II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
      III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
      IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
      V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
      VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
   B. FOLLOWING AN INCIDENT/CRASH:
      I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      II. RECOMMEND ROADWAY REPAIR NEEDS.
      III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
      IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT (CONTINUED)

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC

THIS WORK CONSISTS OF PROVIDING, MAINTAINING, AND SUBSEQUENTLY REMOVING ROADS AND APPURTENANCES AND PAVEMENTS FOR MAINTAINING TRAFFIC.

ADDITIONAL EXCAVATION AND EMBANKMENT IS REQUIRED BEYOND THE PHYSICAL LIMITS OF PROPOSED SHOULDER WIDTHS AT RAMP GORES, AT TAPERS AND CROSS OVER LOCATIONS. REQUIRED ADDITIONAL EARTHWORK IN THESE AREAS WILL BE PAID FOR UNDER THE LUMP SUM AMOUNT FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

REMOVE ALL PAVEMENT FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH THE PROVISIONS OF ITEM 615 UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PAYMENT FOR ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

FULL DEPTH SAW CUTTING

DURING SOME OR ALL PHASES OF CONSTRUCTION, IT WILL BE NECESSARY TO PROTECT THE ADJACENT EXISTING, TEMPORARY OR PROPOSED PAVEMENT THAT WILL BE UTILIZED TO MAINTAIN TRAFFIC DURING PART-WIDTH CONSTRUCTION FOR PAVEMENT REPLACEMENT OPERATIONS. THE CONTRACTOR SHALL PERFORM FULL DEPTH SAW CUTTING AS A MEANS TO PROTECT THE PAVEMENT ADJACENT TO THE ACTIVE WORK ZONE. ANY DAMAGE TO THE ADJACENT PAVEMENT THAT WILL BE USED TO MAINTAIN TRAFFIC SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. FULL DEPTH SAW CUTTING IS ANNOTATED ON MOT TYPICAL SECTION SHEETS.

PAYMENT FOR ALL WORK ASSOCIATED WITH FULL DEPTH SAW CUTTING SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

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.

MOT NOTES

SUM-77-28.75
MODEL: MN005 PAPERSIZE: 34x22 (in.) DATE: 7/21/2023 TIME: 9:48:18 AM USER: awilsbacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231
DESIGNER ACW
REVIEWER DRJ 08-26-22
PROJECT ID 111405

SHEET NUMBER																		ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
34	35	36	37	38	39	40	41	42	43	44				45								
1641																		254	01000	1641	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)
132																		407	20000	132	GAL	NON-TRACKING TACK COAT
158																		411	10000	158	CY	STABILIZED CRUSHED AGGREGATE
69																		442	20001	69	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M
2400																		614	11110	2400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
	210	429	210	1350	450			600										614	11630	3249	FT	INCREASED BARRIER DELINEATION
	3	13	2	3	3	5	3	3	5	1								614	12380	41	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)
LUMP																		614	12420	LUMP		DETOUR SIGNING
34																		614	12484	34	EACH	WORK ZONE INCREASED PENALTIES SIGN
2																		614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM
52	1308	800	1090	441	471	946	129	678	246	19								614	12801	6180	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN
250																		614	13000	250	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
	86	114	874	438	386	619	121	296	312	31								614	13310	3277	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY
					291	43												614	13310	334	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL
					87	8	59	39	79									614	13312	272	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL
	86	114	382	58	95	466	13	190	391	31								614	13350	1826	EACH	OBJECT MARKER, ONE WAY
			246	174	378	106	113	88										614	13360	1105	EACH	OBJECT MARKER, TWO WAY
300000																		614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: SAFETY REPAIRS
300000																		614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING
144																		614	18601	144	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
6.2	8.47	2.25	19.78	5.11	8.46	22.07	5.97	7.25	2.03	0.6								614	98000	88.19	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC
1.21			4.33	0.16		3.82	0.08	0.31	0.17									614	98000	10.08	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", SPRAY THERMOPLASTIC
		0.1																614	98000	0.1	MILE	WORK ZONE PAVEMENT MARKING, MISC.: CENTER LINE, 6", SPRAY THERMOPLASTIC
5505	10765	6210	5629	5789	1363	3158	3734	4851	3018	204								614	98100	50226	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC
	373	1311	3390	3576	1485	2370	4697	2671	2655	420								614	98100	22948	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 6", SPRAY THERMOPLASTIC
			102					95										614	98100	197	FT	WORK ZONE PAVEMENT MARKING, MISC.: GORE MARKING, SPRAY THERMOPLASTIC
								16										614	98100	16	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, SPRAY THERMOPLASTIC
				2														614	98200	2	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ARROW, SPRAY THERMOPLASTIC
LUMP																		615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC
28280	32821	1043	500	512														615	20000	63156	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
	3250	1372																615	20001	4622	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN
895																		616	10000	895	MGAL	WATER
1.12																		618	40600	1.12	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
			12290	8700	14520	4900	2700	2870										622	41011	45980	FT	PORTABLE BARRIER, 50", AS PER PLAN
					1	1			1	1								622	41050	4	EACH	PORTABLE BARRIER, "Y" CONNECTOR
	4270	5720	19080	2880	4760	23200	590	9060	15600	1540								622	41100	86700	FT	PORTABLE BARRIER, UNANCHORED
				1610														622	80000	1610	FT	GLARE SCREEN
														1116				630	80200	1116	SF	SIGN, GROUND MOUNTED EXTRUSHEET
														18				630	87101	18	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, AS PER PLAN
														21				630	97700	21	EACH	SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT
648																		808	18700	648	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY

MOT SUBSUMMARY

SUM-77-28.75

MODEL: MS001 PAPERSIZE: 34x22 (in.) DATE: 7/21/2023 TIME: 11:07:53 AM USER: awiltsbacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
ACW

REVIEWER
DRJ 08-26-22

PROJECT ID
111405

SHEET 33 | TOTAL 927

MQ001

REF NO.	SHEET NO.	LOCATION	STATION FROM	STATION TO	SIDE	614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE HOUR	614 DETOUR SIGNING LS	614 WORK ZONE INCREASED PENALTIES SIGN EACH	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN SNMT	615 ROADS FOR MAINTAINING TRAFFIC LS	616 WATER MGAL	808 DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY SNMT	411 STABILIZED CRUSHED AGGREGATE CY	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (1-WAY WHITE) EACH	614 WORK ZONE CROSSOVER LIGHTING SYSTEM EACH	614 MAINTAINING TRAFFIC, MISC.: SAFETY REPAIRS EACH	614 WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", SPRAY THERMOPLASTIC MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC (WHITE) MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC (YELLOW) MILE	614 WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC FT	614 MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH) SY	407 NON-TRACKING TACK COAT GAL	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M CY	618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE) MILE
	25	NOTES							250																				
	26	NOTES													52			1.21	1.21										
	27	NOTES								144		886																	
	28	NOTES					LUMP																						
	29	NOTES				2400					LUMP	9		158															
	30	NOTES						34					648				2											1641	132	69	1.12
	31	NOTES	NONE																												
	32	NOTES																300000						300000						
		PRE-PHASE																													
PMT-1	60	IR-77	826+71	868+64	LT																				4278					
ELW-1	60	IR-77	826+71	868+64	LT															0.79										
PMT-2	60	IR-77	831+25	888+66	RT																				4667					
ELW-2	60	IR-77	831+25	888+66	RT															1.09										
	61	NO NEW																													
PMT-3	62	IR-77	868+26	903+88	LT																				4196					
CH-1	62	IR-77	868+26	871+00	LT																		273							
CH-2	62	IR-77	868+26	871+00	LT																		273							
ELY-1	62	IR-77	871+00	876+00	LT																0.1									
ELW-3	62	IR-77	871+00	900+30	LT															0.55										
PMT-4	63	IR-77	888+20	901+26	RT																				1116					
CH-3	63	IR-77	888+20	890+50	RT																		231							
CH-4	63	IR-77	888+20	891+11	RT																		290							
ELW-4	63	IR-77	891+11	899+00	RT															0.15										
CH-5	63	IR-77	899+00	901+24	RT																		224							
CH-6	63	IR-77	899+00	901+26	RT																		227							
CH-7	64	IR-77	900+30	903+88	LT																		358							
CH-8	64	IR-77	900+34	903+88	LT																		356							
PMT-5	64	IR-77	900+71	910+22	RT																				496					
ELW-5	64	IR-77	900+71	910+22	RT															0.18										
PMT-6	64	IR-77	901+73	913+85	LT																				599					
ELW-6	64	IR-77	901+73	913+85	LT															0.23										
PMT-7	64	IR-77	909+76	938+82	RT																				4630					
CH-9	64	IR-77	909+76	913+00	RT																		324							
CH-10	64	IR-77	909+76	912+77	RT																		303							
ELY-2	64	IR-77/271 RAMP C	912+77	5919+00	RT/LT																0.12									
ELW-7	64	IR-77	913+00	934+00	RT															0.4										
PMT-8	64	IR-77	914+15	934+16	LT																				3530					
CH-11	64	IR-77	914+15	919+87	LT																		573							
CH-12	64	IR-77	914+15	919+87	LT																		572							
ELW-8	64	IR-77	919+87	931+51	LT															0.22										
ELY-3	64	IR-77/271 RAMP D	919+87	6911+98	LT																0.1									
CH-13	65	IR-77	931+45	934+16	LT																		272							
CH-14	65	IR-77	931+51	934+16	LT																		265							
ELY-4	65	IR-77/271 RAMP A	931+45	7944+60	LT																0.07									
PMT-9	65	IR-77	933+61	956+60	LT																				2600					
ELW-9	65	IR-77	933+61	956+60	LT															0.44										
PMT-10	65	IR-77	934+00	956+50	RT																				2168					
ELW-10	65	IR-77	934+00	956+50	RT															0.43										
CH-15	65	IR-77	934+00	938+82	RT																		482							
CH-16	65	IR-77	934+00	938+82	RT																		482							
ELY-5	65	IR-77/271 RAMP A	937+20	8928+00	RT/LT																0.12									
SUBTOTAL						2400	LUMP	34	250	144	LUMP	895	648	158	52	2	300000	1.21	1.21	4.48	0.51	5505	300000	28280	1641	132	69	1.12
TOTALS CARRIED TO SUBSUMMARY SHEET						2400	LUMP	34	250	144	LUMP	895	648	158	52	2	300000	1.21		6.2		5505	300000	28280	1641	132	69	1.12

MOT ESTIMATED QUANTITIES

SUM-77-28.75

MODEL: MQ001 PAPERSIZE: 34x22 (in.) DATE: 7/21/2023 TIME: 10:11:36 AM USER: awilsbacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER ACW

REVIEWER DRJ 08-26-22

PROJECT ID 111405

SHEET 34 TOTAL 927

MODEL: III405_MP203 PAPERSIZE: 34x22 (In.) DATE: 7/21/2023 TIME: 9:40:56 AM USER: awlsbacher
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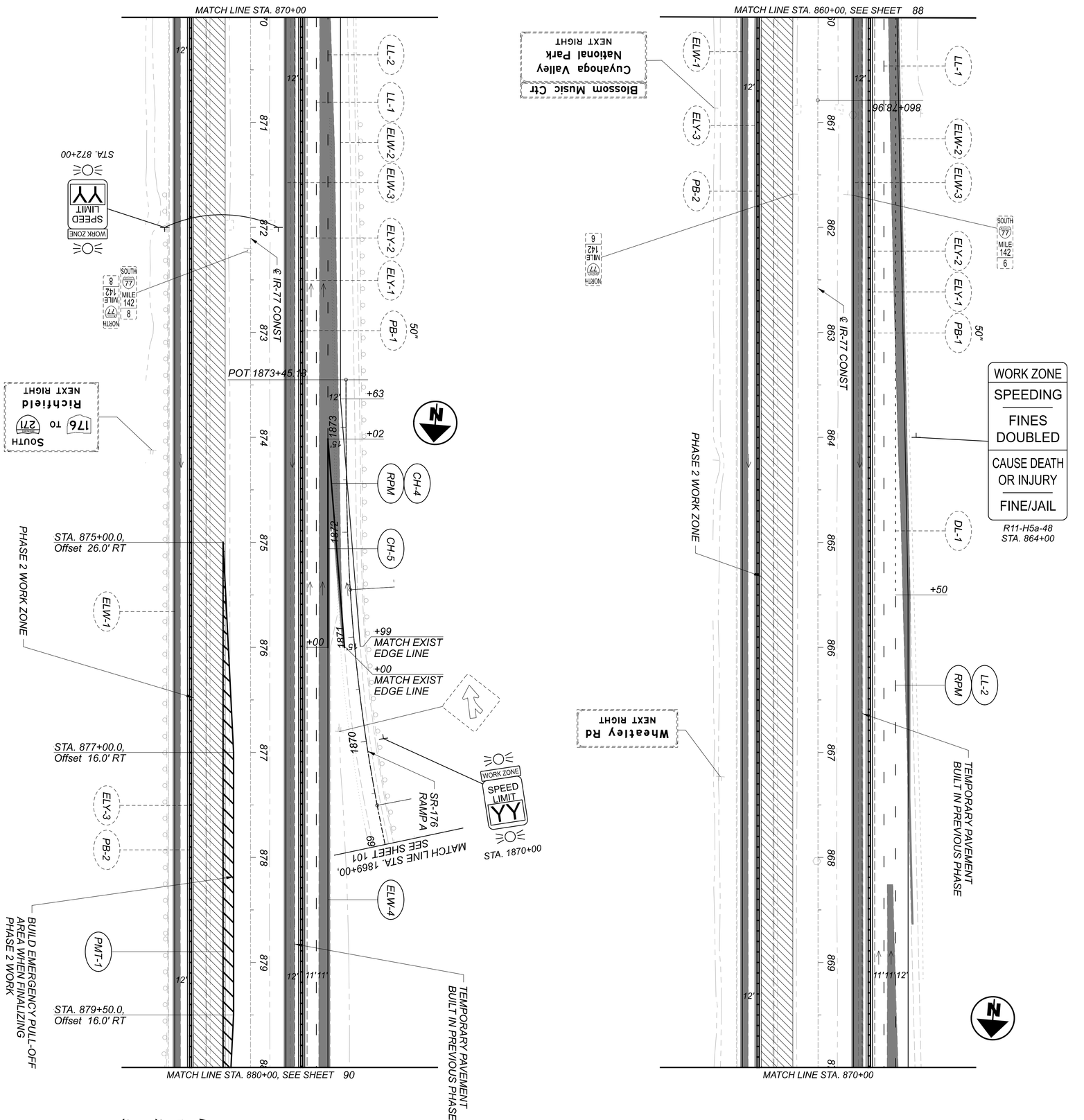


NOTES:

1. FOR MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 31
2. MAINTAIN EXISTING STRIPING UNLESS OTHERWISE NOTED. REMOVE CONFLICTING PAVEMENT MARKINGS.
3. INSTALL TEMPORARY PAVEMENT FOR EMERGENCY PULL-OFF AS SHOWN FOR USE IN MOT PHASE 3. EMERGENCY PULL-OFF IS BUILT ABUTTING FINAL SHOULDER PAVEMENT.

DESIGNER ACW
REVIEWER DRJ 08-26-22
PROJECT ID 111405
SHEET 89 TOTAL 927

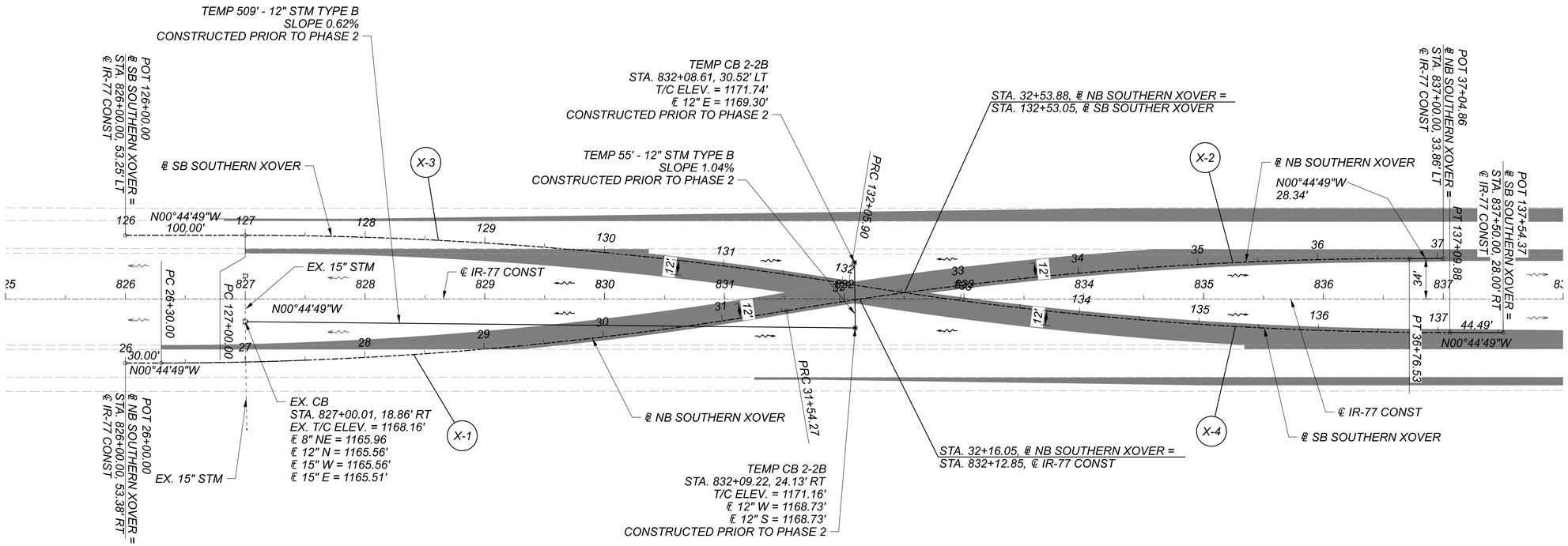
DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 230
Columbus, OH 43231

MAINTENANCE OF TRAFFIC - PHASE 2
IR-77 - STA 860+00 TO STA 880+00

HORIZONTAL SCALE IN FEET
0 50
25 100

X-3 **CURVE DATA**
P.I. = Sta. 129+53.50
Δ = 09°14'22" RT
Dc = 01°49'35"
R = 3,137.22'
T = 253.5'
L = 505.9'
E = 10.23'

X-4 **CURVE DATA**
P.I. = Sta. 134+58.44
Δ = 09°14'22" LT
Dc = 01°50'00"
R = 3,125.22'
T = 252.53'
L = 503.97'
E = 10.19'

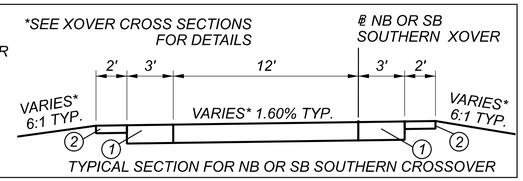


X-1 **CURVE DATA**
P.I. = Sta. 28+92.74
Δ = 09°34'29" LT
Dc = 01°49'35"
R = 3,137.22'
T = 262.74'
L = 524.27'
E = 10.98'

X-2 **CURVE DATA**
P.I. = Sta. 34+16.01
Δ = 09°34'29" RT
Dc = 01°50'00"
R = 3,125.22'
T = 261.74'
L = 522.26'
E = 10.94'

LEGEND

1. ITEM 615 - 14.5" PAVEMENT FOR MAINTAINING OF TRAFFIC, CLASS A
2. ITEM 411 - 6" STABILIZED CRUSHED AGGREGATE



TYPICAL SECTION FOR NB OR SB SOUTHERN CROSSOVER

NOTES:

FOR LEGEND SHEET, SEE SHEET 31
FOR NB & SB SOUTHERN XOVER PROFILES, SEE SHEET 161

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - CROSSOVER DETAIL SOUTHERN CROSSOVER PLAN

SUM-77-28.75

MODEL: I77-E-C-1- Plan [Sheet] PAPERSIZE: 34x22 (in.) DATE: 7/21/2023 TIME: 9:58:05 AM USER: awlisbacher
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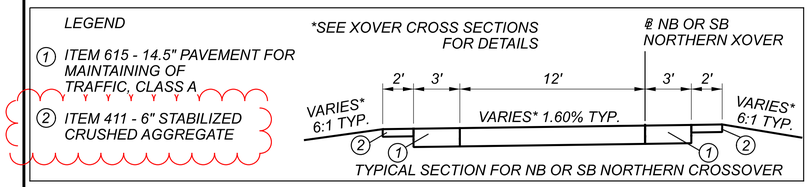
DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

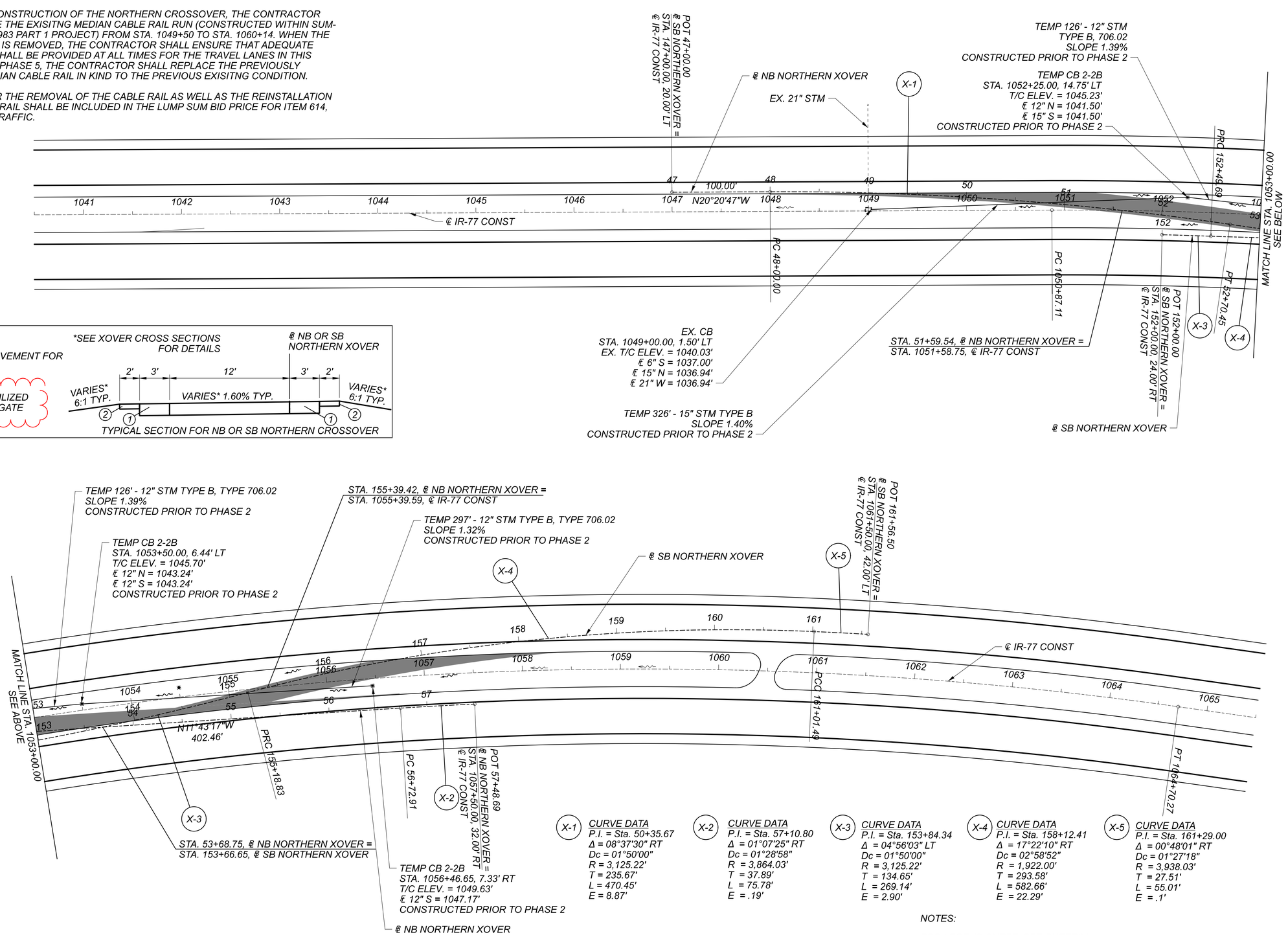
DESIGNER BRO
REVIEWER DRJ 06-15-22
PROJECT ID 111405
SHEET 160 TOTAL 927

NORTHERN CROSSOVER WORK

DURING THE CONSTRUCTION OF THE NORTHERN CROSSOVER, THE CONTRACTOR SHALL REMOVE THE EXISITNG MEDIAN CABLE RAIL RUN (CONSTRUCTED WITHIN SUM-77-32.27 PID 14983 PART 1 PROJECT) FROM STA. 1049+50 TO STA. 1060+14. WHEN THE MEDIAN CABLE IS REMOVED, THE CONTRACTOR SHALL ENSURE THAT ADEQUATE PROTECTION SHALL BE PROVIDED AT ALL TIMES FOR THE TRAVEL LANES IN THIS AREA. DURING PHASE 5, THE CONTRACTOR SHALL REPLACE THE PREVIOUSLY REMOVED MEDIAN CABLE RAIL IN KIND TO THE PREVIOUS EXISITNG CONDITION.

THE WORK FOR THE REMOVAL OF THE CABLE RAIL AS WELL AS THE REINSTALLATION OF THE CABLE RAIL SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.





X-1 CURVE DATA
P.I. = Sta. 50+35.67
Δ = 08°37'30" RT
Dc = 01°50'00"
R = 3,125.22'
T = 235.67'
L = 470.45'
E = 8.87'

X-2 CURVE DATA
P.I. = Sta. 57+10.80
Δ = 01°07'25" RT
Dc = 01°28'58"
R = 3,864.03'
T = 37.89'
L = 75.78'
E = .19'

X-3 CURVE DATA
P.I. = Sta. 153+84.34
Δ = 04°56'03" LT
Dc = 01°50'00"
R = 3,125.22'
T = 134.65'
L = 269.14'
E = 2.90'

X-4 CURVE DATA
P.I. = Sta. 158+12.41
Δ = 17°22'10" RT
Dc = 02°58'52"
R = 1,922.00'
T = 293.58'
L = 582.66'
E = 22.29'

X-5 CURVE DATA
P.I. = Sta. 161+29.00
Δ = 00°48'01" RT
Dc = 01°27'18"
R = 3,938.03'
T = 27.51'
L = 55.01'
E = .1'

NOTES:

FOR LEGEND SHEET, SEE SHEET 31
FOR NB & SB NORTHERN XOVER PROFILES, SEE SHEET 172

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - CROSSOVER DETAIL
NORTHERN CROSSOVER PLAN

SUM-77-28.75

MODEL: I77-E-C-000 - Plan [Sheet] PAPERSIZE: 34x22 (In.) DATE: 7/21/2023 TIME: 10:03:22 AM USER: awilsbacher
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER	BRO
REVIEWER	DRJ 06-15-22
PROJECT ID	111405
SHEET	171
TOTAL	927

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					ROADWAY	
	LS													LUMP			201	11000	LS		CLEARING AND GRUBBING	
								36						35		1	202	20010	36	EACH	HEADWALL REMOVED	
108540					32									108572			202	23000	108572	SY	PAVEMENT REMOVED	
							1135							1135			202	30700	1135	FT	CONCRETE BARRIER REMOVED	
							85							85			202	32000	85	FT	CURB REMOVED	
								3389						3190		199	202	35100	3389	FT	PIPE REMOVED, 24" AND UNDER	
								539						539			202	35200	539	FT	PIPE REMOVED, OVER 24"	
							16391							16391			202	38000	16391	FT	GUARDRAIL REMOVED	
								3						3			202	58000	3	EACH	MANHOLE REMOVED	
							30	37						66		1	202	58100	67	EACH	CATCH BASIN REMOVED	
									1681					1681			SPECIAL	20270000	1681	FT	FILL AND PLUG EXISTING CONDUIT	22
							40824							40824			202	75000	40824	FT	FENCE REMOVED	
		2												2			202	98100	2	EACH	REMOVAL MISC.: INSPECTION WELL	21
		200												200			202	98200	200	FT	REMOVAL MISC.: CONDUIT	21
					136584			631						91523	45692		203	10000	137215	CY	EXCAVATION	
					56600									37736	18864		203	20000	56600	CY	EMBANKMENT	
		25												17	8		203	20001	25	CY	EMBANKMENT, AS PER PLAN	21
		3990												2662	1328		204	13000	3990	CY	EXCAVATION OF SUBGRADE	
		3990												2662	1328		204	30010	3990	CY	GRANULAR MATERIAL, TYPE B	
		11970												7984	3986		204	50000	11970	SY	GEOTEXTILE FABRIC	
6607														4405	2202		206	10500	6607	TON	CEMENT	
253902														169269	84633		206	11000	253902	SY	CURING COAT	
249497														166331	83166		206	15010	249497	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
4407														2939	1468		206	15020	4407	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
148														99	49		206	20000	148	HOUR	TEST ROLLING	
														LUMP			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
							292							292			209	60201	292	STA	LINEAR GRADING, AS PER PLAN	22
							25924							25924			606	15050	25924	FT	GUARDRAIL, TYPE MGS	
							300							300			606	15550	300	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
							37							37			606	26150	37	EACH	ANCHOR ASSEMBLY, MGS TYPE E MASH 2016	
							27							27			606	26550	27	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							21							21			606	35002	21	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							9							9			606	35102	9	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							10214							10214			SPECIAL	60655010	10214	FT	CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION	23
							12							12			SPECIAL	60655150	12	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	23
							116							116			SPECIAL	60655190	116	EACH	CABLE BARRIER, POST REFLECTOR	23
							41678							41678			607	15000	41678	FT	FENCE, TYPE 47	
							63							63			607	40500	63	EACH	GATE, TYPE 47	
							713							713			622	24000	713	FT	CONCRETE BARRIER, TYPE D	
							20							20			622	25000	20	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			4				20							24			622	25050	24	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
	LS													LUMP			623	11000	LS		PROVIDING ELECTRONIC INSTRUMENTATION	
	4													4			623	40520	4	EACH	RIGHT-OF-WAY MONUMENT, TYPE B	
	6													6			SPECIAL	69098000	6	EACH	VERTICAL CLEARANCE	20
				LS										LUMP			SPECIAL	69098400	LS		AS-BUILT CONSTRUCTION RECORD DRAWINGS	23
	LS													LUMP			SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	20
								93						87		6	601	11000	93	SY	**EROSION CONTROL** RIPRAP, TYPE D	
			25					68						93			601	21050	93	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
							301							301			601	21060	301	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
								778						778			601	32004	778	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	
								74						74			601	32104	74	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
								46						40		6	601	32204	46	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
			2											2			659	00100	2	EACH	SOIL ANALYSIS TEST	
			21145					5790						26935			659	00300	26935	CY	TOPSOIL	
			190487											190487			659	10000	190487	SY	SEEDING AND MULCHING	
			9525											9525			659	14000	9525	SY	REPAIR SEEDING AND MULCHING	
			9525											9525			659	15000	9525	SY	INTER-SEEDING	

GENERAL SUMMARY

SHEET 1

SUM-77-28.75

MODEL: 111405_GG001_1 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 7:29:15 AM USER: cmann
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\401-Engineering-GFI\Roadway\Sheets\111405_GG001.dgn

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 181 TOTAL 927

SHEET 2

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					EROSION CONTROL - CONTINUED FROM PREVIOUS PAGE	
			51.5											51.5			659	20000	51.5	TON	COMMERCIAL FERTILIZER	
			39.4											39.4			659	31000	39.4	ACRE	LIME	
			1543											1543			659	35000	1543	MGAL	WATER	
			429											429			659	40000	429	MSF	MOWING	
								52110						52110			670	00500	52110	SY	SLOPE EROSION PROTECTION	
								2500						2500			670	00700	2500	SY	DITCH EROSION PROTECTION	
								2614						2614			670	00720	2614	SY	DITCH EROSION PROTECTION MAT, TYPE B	
									LS					LUMP			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
									LS					LUMP			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
									LS					LUMP			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
									935000					935000			832	30000	935000	EACH	EROSION CONTROL	
									115					115			836	10000	115	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
																					DRAINAGE	
								LS								LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 900+15.34	21
								LS								LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 918+12.35	21
								LS								LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 3890+91.22	21
								10								10	503	21100	10	CY	UNCLASSIFIED EXCAVATION	
								23.2						21.2		2	602	20000	23.2	CY	CONCRETE MASONRY	
								38514						38514			605	11110	38514	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								1711						1711			605	13300	1711	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
			200											200			605	13410	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								86521						86521			605	14020	86521	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
			100					3753						3853			611	00510	3853	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
								303						102		201	611	05900	303	FT	15" CONDUIT, TYPE B	
								2025						2025			611	06100	2025	FT	15" CONDUIT, TYPE C	
								586						544		42	611	06700	586	FT	15" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	
								16						16			611	07200	16	FT	18" CONDUIT, TYPE A, 706.02	
								164						62		102	611	07400	164	FT	18" CONDUIT, TYPE B	
								212						212			611	07600	212	FT	18" CONDUIT, TYPE C	
								785						785			611	07600	785	FT	18" CONDUIT, TYPE C, 706.02	
								65						65			611	08200	65	FT	18" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	
								12						12			611	10200	12	FT	24" CONDUIT, TYPE A, 706.02	
								75						75			611	10400	75	FT	24" CONDUIT, TYPE B	
								50						50			611	11200	50	FT	24" CONDUIT, TYPE F 707.05, OR 707.21	
								288						288			611	13600	288	FT	30" CONDUIT, TYPE C	
								40						40			611	16200	40	FT	36" CONDUIT, TYPE A, 706.02	
								93						93			611	16200	93	FT	36" CONDUIT, TYPE A, 707.01	
								38						38			611	16400	38	FT	36" CONDUIT, TYPE B, 707.01	
								24						24			611	19200	24	FT	42" CONDUIT, TYPE A, 706.02	
								12						12			611	19200	12	FT	42" CONDUIT, TYPE A, 707.01	
								24						24			611	20700	24	FT	48" CONDUIT, TYPE A, 706.02	
								24						24			611	23600	24	FT	60" CONDUIT, TYPE A, 707.02	
								750						750			611	96600	750	FT	6" CONDUIT, BORED OR JACKED, 748.06	
								986						986			611	96600	986	FT	15" CONDUIT, BORED OR JACKED, 748.06	
								312						312			611	96600	312	FT	18" CONDUIT, BORED OR JACKED, 748.06	
								349						198		151	611	96600	349	FT	24" CONDUIT, BORED OR JACKED, 748.06	
								406						406			611	96600	406	FT	30" CONDUIT, BORED OR JACKED, 748.06	
		100												100			611	97400	100	FT	CONDUIT, MISC.: TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE	21
		100												100			611	97400	100	FT	CONDUIT, MISC.: TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE	21
		100												100			611	97400	100	FT	CONDUIT, MISC.: TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE	21
		100												100			611	97400	100	FT	CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	21
								1								1	611	98150	1	EACH	CATCH BASIN, NO. 3	
								21						21			611	98230	21	EACH	CATCH BASIN, NO. 4	
								5						3		2	611	98300	5	EACH	CATCH BASIN, NO. 5	
								2						2			611	98341	2	EACH	CATCH BASIN, NO. 5A	
								2						2			611	98434	2	EACH	CATCH BASIN, NO. 8A	
								1						1			611	98510	1	EACH	CATCH BASIN, NO. 2-3	
								1						1			611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	

GENERAL SUMMARY

SUM-77-28.75

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 182 | TOTAL 927

SHEET 3

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					DRAINAGE - CONTINUED FROM PREVIOUS PAGE	
								1						1			611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
								5						5			611	99574	5	EACH	MANHOLE, NO. 3	
			2					34						36			611	99710	36	EACH	PRECAST REINFORCED CONCRETE OUTLET	
		2												2			611	99720	2	EACH	INSPECTION WELL	
																					CULVERT (STA. 874+70.70) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									520					520			833	10000	520	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 60" DIAMETER	
																					CULVERT (STA. 874+70.70) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									520					520			899	10000	520	FT	CURED-IN-PLACE PIPE LINER, 60" DIAMETER	
																					CULVERT (STA. 880+81.58) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									400					400			833	10000	400	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 36" DIAMETER	
																					CULVERT (STA. 880+81.58) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									400					400			899	10000	400	FT	CURED-IN-PLACE PIPE LINER, 36" DIAMETER	
																					CULVERT (STA. 900+15.34) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									378					378			833	10000	378	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 36" DIAMETER	
																					CULVERT (STA. 900+15.34) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									378					378			899	10000	378	FT	CURED-IN-PLACE PIPE LINER, 36" DIAMETER	
																					CULVERT (STA. 905+30.72) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									280					280			833	10000	280	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 48" DIAMETER	
																					CULVERT (STA. 905+30.72) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									280					280			899	10000	280	FT	CURED-IN-PLACE PIPE LINER, 48" DIAMETER	
																					CULVERT (STA. 927+31.88) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									248					248			833	10000	248	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 54" DIAMETER	
																					CULVERT (STA. 927+31.88) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									248					248			899	10000	248	FT	CURED-IN-PLACE PIPE LINER, 54" DIAMETER	
																					CULVERT (STA. 941+57.97) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									284					284			833	10000	284	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 60" DIAMETER	
																					CULVERT (STA. 941+57.97) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									284					284			899	10000	284	FT	CURED-IN-PLACE PIPE LINER, 60" DIAMETER	
																					CULVERT (STA. 948+86.86) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									216					216			833	10000	216	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 42" DIAMETER	
																					CULVERT (STA. 948+86.86) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									216					216			899	10000	216	FT	CURED-IN-PLACE PIPE LINER, 42" DIAMETER	
																					CULVERT (STA. 958+67.83) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									374					374			833	10000	374	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 54" DIAMETER	
																					CULVERT (STA. 958+67.83) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									374					374			899	10000	374	FT	CURED-IN-PLACE PIPE LINER, 54" DIAMETER	
																					CULVERT (STA. 1019+32.03) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									348					348			833	10000	348	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 36" DIAMETER	
																					CULVERT (STA. 1019+32.03) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									348					348			899	10000	348	FT	CURED-IN-PLACE PIPE LINER, 36" DIAMETER	
																					CULVERT (STA. 1025+21.03) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									477					477			833	10000	477	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 36" DIAMETER	
																					CULVERT (STA. 1025+21.03) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									477					477			899	10000	477	FT	CURED-IN-PLACE PIPE LINER, 36" DIAMETER	
																					CULVERT (STA. 1054+09.98) - OPTION A: (SPRAY APPLIED STRUCTURAL LINER)	
									232					232			833	10000	232	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT, 36" DIAMETER	
																					CULVERT (STA. 1054+09.98) - OPTION B: (CURED-IN-PLACE PIPE LINER)	
									232					232			899	10000	232	FT	CURED-IN-PLACE PIPE LINER, 36" DIAMETER	
																					PAVEMENT	
		42917												42917			254	01000	42917	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)	
					4									3	1		301	56000	4	CY	ASPHALT CONCRETE BASE, (449), PG64-22	24
46629														31086	15543		302	56000	46629	CY	ASPHALT CONCRETE BASE, (449), PG64-22	22
41773					4									27851	13926		304	20000	41777	CY	AGGREGATE BASE	22
24305					2									16205	8102		407	20000	24307	GAL	NON-TRACKING TACK COAT (0.055 GAL/SY)	
5031														3355	1676		408	10001	5031	GAL	PRIME COAT, AS PER PLAN	24
14890														9928	4962		441	00100	14890	CY	ANTI-SEGREGATION EQUIPMENT	
8					2									7	3		441	70101	10	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 AS PER PLAN	21
10					2									9	3		441	70300	12	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)	

GENERAL SUMMARY

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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 183 | TOTAL 927

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					PAVEMENT - CONTINUED FROM PREVIOUS PAGE	
							885							591	294		441	70801	885	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	22
10737														7158	3579		442	10080	10737	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
9206		1789												7330	3665		442	10301	10995	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	21
18771														12515	6256		452	14122	18771	SY	11.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA	
							200							200			601	37500	200	FT	PAVED GUTTER, TYPE 1-2	
							360							241	119		609	24510	360	FT	CURB, TYPE 4-C	
42														29	13		609	56000	42	CY	6" CONCRETE TRAFFIC ISLAND	
703														469	234		617	10101	703	CY	COMPACTED AGGREGATE, AS PER PLAN	24
							14							10	4		618	41000	14	MILE	RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE)	
																					LIGHTING	
													34		34		625	00450	34	EACH	CONNECTION, FUSED PULL APART	
													17		17		625	00460	17	EACH	CONNECTION, UNFUSED PULL APART	
													45		45		625	00480	45	EACH	CONNECTION, UNFUSED PERMANENT	
													17		17		625	10490	17	EACH	LIGHT POLE, CONVENTIONAL, AT15B40	
													9		9		625	11200	9	EACH	LIGHT TOWER, BB100	
													17		17		625	14100	17	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP	
													9		9		625	15200	9	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
													14		14		625	15201	14	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP, AS PER PLAN	651
													4815		4815		625	23300	4815	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
													2805		2805		625	23400	2805	FT	NO. 10 AWG POLE AND BRACKET CABLE	
													19361		19361		625	24330	19361	FT	1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 2400 VOLT CABLES	
													10		10		625	25500	10	FT	CONDUIT, 3", 725.04	
													112		112		625	25501	112	FT	CONDUIT, 3", 725.04, AS PER PLAN	651
												60			60		625	25601	60	FT	CONDUIT, 4", 725.04, AS PER PLAN	650
													475		475		625	25902	475	FT	CONDUIT, 3", JACKED OR DRILLED, 725.04	
												110			110		625	25911	110	FT	CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN	650
													17		17		625	26253	17	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, TYPE II	651
													46		46		625	26263	46	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, TYPE V	651
													5		5		625	27503	5	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, WALL MOUNT	651
													13724		13724		625	29002	13724	FT	TRENCH, 24" DEEP	
																				FT		
													8		8		625	30700	8	EACH	PULL BOX, 725.08, 18"	
													3		3		625	30706	3	EACH	PULL BOX, 725.08, 24"	
												7	1		8		625	31507	8	EACH	PULL BOX REMOVED AND REPLACED, AS PER PLAN	650
													62		62		625	32000	62	EACH	GROUND ROD	
													1		1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	650
													13724		13724		625	36011	13724	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	651
												LS			LUMP		625	37001	LS		SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	650
												2			2		SPECIAL	62540010	2	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	650
													14		14		625	75361	14	EACH	LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN	651
													14		14		625	75505	14	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	651
													1		1		625	75510	1	EACH	POWER SERVICE REMOVED	
													14		14		625	75540	14	EACH	LIGHT TOWER FOUNDATION REMOVED	
												1			1		625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (EX. LCC "B")	650
												1			1		625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (LCC "A")	650
													14		14		625	98000	14	EACH	LIGHTING MISC.: LIGHT TOWER, INSTALLATION ONLY	651
												1			1		625	98000	1	EACH	LIGHTING, MISC.: PULL BOX CLEANED	650
												LS			LUMP		625	98200	LS		LIGHTING, MISC.: CIRCUIT REPAIR	650
												LS			LUMP		625	98200	LS		LIGHTING, MISC.: REMOVAL OF TEMPORARY LIGHTING	650
																					TRAFFIC CONTROL	
								34						34			620	00501	34	EACH	DELINEATOR, POST GROUND MOUNTED, AS PER PLAN	21
							21							21			620	31200	21	EACH	REMOVAL OF DELINEATOR	
										7				7			620	60000	7	EACH	DELINEATOR, POST SURFACE MOUNTED	
										1021				1021			621	00100	1021	EACH	RPM	
										571				571			621	54000	571	EACH	RAISED PAVEMENT MARKER REMOVED	
										20				20			625	32000	20	EACH	GROUND ROD	
										26				26			626	00102	26	EACH	BARRIER REFLECTOR, TYPE 1, 1WAY	
										320				320			626	00110	320	EACH	BARRIER REFLECTOR, TYPE 2, 1WAY	
					1239					432.5				1671.5			630	02100	1671.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
										929.8				929.8			630	03100	929.8	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	

GENERAL SUMMARY

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MODEL: 111405_GG001_4 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 7:42:13 AM USER: cmann
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER TQD

REVIEWER DRJ 10/04/22

PROJECT ID 111405

SHEET 184 TOTAL 927

SHEET NUMBER														FUNDING			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	20	21	22	23	24	33	187	194	195	575	648	650	654	01/IMS/04	02/IMS/03	05/S>2/04						
																					MAINTENANCE OF TRAFFIC - CONTINUED FROM PREVIOUS PAGE	
						158								158			411	10000	158	CY	STABILIZED CRUSHED AGGREGATE	
						69								69			442	20001	69	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN, PG70-22M	30
						2400								2400			614	11110	2400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						3249								3249			614	11630	3249	FT	INCREASED BARRIER DELINEATION	
						41								41			614	12380	41	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	28
						LS								LUMP			614	12420	LS		DETOUR SIGNING	28
						34								34			614	12484	34	EACH	WORK ZONE INCREASED PENALTIES SIGN	
						2								2			614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
						6180								6180			614	12801	6180	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	27
						250								250			614	13000	250	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
						3277								3277			614	13310	3277	EACH	BARRIER REFLECTOR, TYPE 1, 1 WAY	
						334								334			614	13310	334	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
						272								272			614	13312	272	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
						1826								1826			614	13350	1826	EACH	OBJECT MARKER, ONE WAY	
						1105								1105			614	13360	1105	EACH	OBJECT MARKER, TWO WAY	
						300000								300000			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: SAFETY REPAIRS	32
						300000								300000			614	18000	300000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	32
						144								144			614	18601	144	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	27
						88.19								88.19			614	98000	88.19	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, 6", SPRAY THERMOPLASTIC	31
						10.08								10.08			614	98000	10.08	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, 6", SPRAY THERMOPLASTIC	31
						0.1								0.1			614	98000	0.1	MILE	WORK ZONE PAVEMENT MARKING, MISC.: CENTER LINE, 6", SPRAY THERMOPLASTIC	31
						50226								50226			614	98100	50226	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 12", SPRAY THERMOPLASTIC	31
						22948								22948			614	98100	22948	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 6", SPRAY THERMOPLASTIC	31
						197								197			614	98100	197	FT	WORK ZONE PAVEMENT MARKING, MISC.: GORE MARKING, SPRAY THERMOPLASTIC	31
						16								16			614	98100	16	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, SPRAY THERMOPLASTIC	31
						2								2			614	98200	2	EACH	WORK ZONE PAVEMENT MARKING, MISC.: ARROW, SPRAY THERMOPLASTIC	31
						LS								LUMP			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
						63156								63156			615	20000	63156	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
						4622								4622			615	20001	4622	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	29
						895								895			616	10000	895	MGAL	WATER	
						1.12								1.12			618	40600	1.12	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
						45980								45980			622	41011	45980	FT	PORTABLE BARRIER, 50", AS PER PLAN	26
						4								4			622	41050	4	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
						86700								86700			622	41100	86700	FT	PORTABLE BARRIER, UNANCHORED	
						1610								1610			622	80000	1610	FT	GLARE SCREEN	
						1116								1116			630	80200	1116	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
						18								18			630	87101	18	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION, AS PER PLAN	31
						21								21			630	97700	21	EACH	SIGNING, MISC.: TEMPORARY GROUND MOUNTED SIGN SUPPORT	31
						648								648			808	18700	648	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																					INCIDENTALS	
														LUMP			108	10000	LS		CPM PROGRESS SCHEDULE	
														LUMP			614	11000	LS		MAINTAINING TRAFFIC	
														42			619	16021	42	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	23
														LUMP			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														LUMP			624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

SUM-77-28.75

MODEL: 111405_GG001_6 PAPERSIZE: 34x22 (in.) DATE: 7/25/2023 TIME: 7:27:24 AM USER: cmann
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\401-Engineering-GF\Roadway\Sheets\111405_GG001.dgn

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 186 | TOTAL 927

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	202 CONCRETE BARRIER REMOVED FT		202 GUARDRAIL REMOVED FT				620 REMOVAL OF DELINEATOR EACH							618 RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE) MILE										
R206	227	271C	5908+48.29	271C		RT							1																
R207	227	271C	5909+68.29	271C	5911+13.56	RT			145.3																				
R208	227	271C	5911+13.56	271C	5912+14.72	RT	101.2																						
R209	227	271C	5912+54.88	271C	5913+92.99	RT							3																
R210	227	271C	5912+82.44	271C	5913+96.07	RT							3																
R211	228	271D	6915+20.78	271D	6915+67.31	LT							2																
R212	228	271D	6915+22.71	271D	6916+78.31	RT							3																
R213	228	271D	6916+99.57	271D	6918+43.66	RT			144.1																				
R301	231	21F	9013+31.85	21F	9028+20.31	RT			1488.5																				
R302	231	21F	9022+96.51	21F	9026+92.93	LT			396.5																				
R303	231	21F	9030+48.29	21F	9034+06.48	LT			358.2																				
R401	233	178	10+98.00	178	11+98.00	LT			100																				
R402	233	178	11+06.00	178	12+06.00	RT			100																				
R501	234	303	155+88.00	303	156+82.50	LT	94.5																						
R502	234	303	155+88.00	303	156+82.50	RT	94.5																						
P1	202	IR77	842+00.00	IR77	873+45.13	LT															0.6								
P2	202	IR77	842+00.00	IR77	956+56.67	LT															2.2								
P3	202	IR77	842+00.00	IR77	956+52.54	RT															2.2								
P4	202	IR77	842+00.00	IR77	886+35.00	RT															0.9								
P5	205	IR77	876+51.88	IR77	901+18.26	LT															0.5								
P6	206	IR77	890+76.35	IR77	898+85.53	RT															0.2								
P7	207	IR77	901+06.82	IR77	908+24.07	RT															0.2								
P8	207	IR77	905+26.51	IR77	918+43.66	LT															0.3								
P9	208	IR77	912+31.61	IR77	933+95.96	RT															0.5								
P10	208	IR77	920+25.60	IR77	931+74.88	LT															0.3								
P11	210	IR77	936+17.09	IR77	956+56.67	LT															0.4								
P12	210	IR77	936+71.11	IR77	956+52.54	RT															0.4								
P13	211	IR77	958+43.18	IR77	1005+38.93	RT															0.9								
P14	211	IR77	958+43.18	IR77	986+85.32	RT															0.6								
P15	211	IR77	958+47.31	IR77	989+02.70	LT															0.6								
P16	211	IR77	958+43.18	IR77	1005+61.07	LT															0.9								
P17	214	IR77	989+47.29	IR77	1005+38.93	RT															0.4								
P18	214	IR77	991+64.63	IR77	1005+52.73	LT															0.3								
P19	215	IR77	1007+22.84	IR77	1010+63.25	RT															0.1								
P20	215	IR77	1007+22.84	IR77	1010+63.25	RT															0.1								
P21	215	IR77	1007+37.54	IR77	1011+01.49	LT															0.1								
P22	215	IR77	1007+37.54	IR77	1011+01.49	LT															0.1								
P23	216	IR77	1012+85.99	IR77	1013+31.85	RT															0.1								
P24	216	IR77	1012+85.99	IR77	1026+57.27	RT															0.3								
P25	216	IR77	1013+12.51	IR77	1025+93.57	LT															0.3								
P26	216	IR77	1013+12.51	IR77	1025+32.76	LT															0.3								
P27	216	IR77	1019+06.39	IR77	1026+92.32	RT															0.2								
SUBTOTAL							290.2		2732.6				12								14								
TOTALS CARRIED TO SUBSUMMARY ON SHEET 187							291		2733				12								14								

ESTIMATED QUANTITIES

SUM-77-28.75

MODEL: 111405_GQ001_3 PAPERSIZE: 34x22 (in.) DATE: 7/28/2023 TIME: 10:50:25 AM USER: cmann
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DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
TQD

REVIEWER
DRJ 10/04/22

PROJECT ID
111405

SHEET 190 TOTAL 927

SHEET NUMBER																							ITEM	ITEM. EXT.	TOTAL	UNIT	DESCRIPTION
198	199	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	568	573					
16		2	2					1		2	2	1	2	2	2	2		1	1				202	20010	36	EACH	HEADWALL REMOVED
3,221														8		12		90	58				202	35100	3,389	FT	PIPE REMOVED, 24" AND UNDER
309		24	40	38				12		24	24	4	24		40								202	35200	539	FT	PIPE REMOVED, OVER 24"
2				1																			202	58000	3	EACH	MANHOLE REMOVED
37																							202	58100	37	EACH	CATCH BASIN REMOVED
																						631	203	10000	631	CY	EXCAVATION
				LS																			503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 900+15.34
LS																							503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 918+12.35
																		LS					503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 3890+91.22
																				10			503	21100	10	CY	UNCLASSIFIED EXCAVATION
		7	4			6	7	9		5	4	8	8	5	8	5	8	3	3	3			601	11000	93	SY	RIPRAP, TYPE D
																					68		601	21050	68	SY	TIED CONCRETE BLOCK MAT, TYPE 1 WITH UNDERLAYMENT
		33				20	68						16		10							631	601	32004	778	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC
6			7					10		10	8	22		4			7						601	32104	74	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
42																2				2			601	32204	46	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC
6.65		3.56	1.52					0.92		2.18	1.68	0.76	1.52	0.86	1.38	0.62		0.33	0.33	0.92			602	20000	23.2	CY	CONCRETE MASONRY
																					38,514		605	11110	38,514	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
																					1,711		605	13300	1,711	FT	6" UNCLASSIFIED PIPE UNDERDRAINS
																					86,521		605	14020	86,521	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
																					3,753		611	00510	3,753	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
303																							611	05900	303	FT	15" CONDUIT, TYPE B
2,025																							611	06100	2,025	FT	15" CONDUIT, TYPE C
586																							611	06700	586	FT	15" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21
																16							611	07200	16	FT	18" CONDUIT, TYPE A, 706.02
																		102	62				611	07400	164	FT	18" CONDUIT, TYPE B
212																							611	07600	212	FT	18" CONDUIT, TYPE C
785																							611	07600	785	FT	18" CONDUIT, TYPE C, 706.02
65																							611	08200	65	FT	18" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21
														12									611	10200	12	FT	24" CONDUIT, TYPE A, 706.02
75																							611	10400	75	FT	24" CONDUIT, TYPE B
50																							611	11200	50	FT	24" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21
288																							611	13600	288	FT	30" CONDUIT, TYPE C
															40								611	16200	40	FT	36" CONDUIT, TYPE A, 706.02
			40									28	25										611	16200	93	FT	36" CONDUIT, TYPE A, 707.01
				38																			611	16400	38	FT	36" CONDUIT, TYPE B, 707.01
											24												611	19200	24	FT	42" CONDUIT, TYPE A, 706.02
								12															611	19200	12	FT	42" CONDUIT, TYPE A, 707.01
										24													611	20700	24	FT	48" CONDUIT, TYPE A, 706.02
		24																					611	23600	24	FT	60" CONDUIT, TYPE A, 707.02
																					750		611	96600	750	FT	6" CONDUIT, BORED OR JACKED, 748.06
986																							611	96600	986	FT	15" CONDUIT, BORED OR JACKED, 748.06
312																							611	96600	312	FT	18" CONDUIT, BORED OR JACKED, 748.06
198																				151			611	96600	349	FT	24" CONDUIT, BORED OR JACKED, 748.06
406																							611	96600	406	FT	30" CONDUIT, BORED OR JACKED, 748.06
1																							611	98150	1	EACH	CATCH BASIN, NO. 3
21																							611	98230	21	EACH	CATCH BASIN, NO. 4
5																							611	98300	5	EACH	CATCH BASIN, NO. 5
2																							611	98341	2	EACH	CATCH BASIN, NO. 5A
2																							611	98434	2	EACH	CATCH BASIN, NO. 8A
1																							611	98510	1	EACH	CATCH BASIN, NO. 2-3
1																							611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE
1																							611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE
3				1														1					611	99574	5	EACH	MANHOLE, NO. 3
																					34		611	99710	34	EACH	PRECAST REINFORCED CONCRETE OUTLET
																					34		620	00501	34	EACH	DELINEATOR, POST GROUND MOUNTED, AS PER PLAN
	5,790																						659	00300	5,790	CY	TOPSOIL
	52,110																						670	00500	52,110	SY	SLOPE EROSION PROTECTION
2,500																							670	00700	2,500	SY	DITCH EROSION PROTECTION
2,614																							670	00720	2,614	SY	DITCH EROSION PROTECTION MAT, TYPE B

DRAINAGE SUBSUMMARY

SUM-77-28.75

MODEL: DS507 PAPERSIZE: 34x22 (in.) DATE: 7/26/2023 TIME: 11:50:52 AM USER: edues
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\402-Engineering-ARCADIS\Drainage\Sheets\111405_DS507.dgn

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET, SUITE 200
AKRON, OHIO 44308
(330) 434-4955
www.arcadis.com

DESIGNER
MAH

REVIEWER
PSB 9-3-22

PROJECT ID
111405

SHEET 194 TOTAL 927

ESTIMATED QUANTITIES

SHEET NO.	REF. NO.	LOCATION				CFN	202	202	202	202	202	SPECIAL	503	601	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	670	670	836		
		STATION		ROAD	SIDE		HEADWALL REMOVED	PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	MANHOLE REMOVED	CATCH BASIN REMOVED	FILL AND PLUG EXISTING CONDUIT	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 918+12.35	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	CONCRETE MASONRY	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	18" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	18" CONDUIT, TYPE C	18" CONDUIT, TYPE C, 706.02	24" CONDUIT, TYPE B	24" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	30" CONDUIT, TYPE C	15" CONDUIT, BORED OR JACKED, 748.06	18" CONDUIT, BORED OR JACKED, 748.06	24" CONDUIT, BORED OR JACKED, 748.06	30" CONDUIT, BORED OR JACKED, 748.06	CATCH BASIN, NO. 3	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 2-3	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	MANHOLE, NO. 3	DITCH EROSION PROTECTION	DITCH EROSION PROTECTION MAT, TYPE B	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1		
		FROM	TO				EACH	FT	FT	EACH	EACH	FT	LS	CY	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SY	SY	SY		
208	D15	917+28.46		I-77	LT																				32									1						
208	D16	917+28.46		I-77	RT	1989977																												1						
208	D17	917+28.46	918+12.35	I-77	RT																			256				72									1			
208	D18	917+39.00	916+53.00	I-77	LT												86														1								
208	DR15	917+39.00	917+40.30	I-77	LT	1830908		33			1	65																											
208	DR16	917+40.03		I-77	LT				38		1																												
208	DR17	917+40.68		I-77	RT	1830907		47			1	39																											
208	DR18	917+39.63		I-77	RT				271	1																												
209	EC16	926+40.00	927+90.00	I-77	CL																																125		
209	D19	927+90.00		I-77	CL	1989963									2	0.27			39						85						1								
209	DR19	927+98.75		I-77	LT			35			1																											
209	DR20	927+98.73		I-77	RT	1830910	1	68			1	38																											
210	EC17	937+60.00	939+10.00	I-77	CL																																125		
210	DR21	938+99.03		I-77	LT			38			1																											
210	DR22	938+98.56		I-77	RT			34			1	57																											
210	D20	939+10.00		I-77	CL										2	0.33										119					1								
211	EC18	947+50.00	949+00.00	I-77	CL																																125		
211	D21	949+00.00		I-77	CL										2	0.27			42						72						1								
211	DR23	949+00.05		I-77	LT			38			1																											
211	DR24	949+01.22		I-77	RT						1	14																											
211	EC19	954+75.00	956+25.00	I-77	CL																																125		
211	D22	956+25.00		I-77	CL										2	0.27	35		57												1								
211	DR25	956+37.90		I-77	LT			79			1																											
212	EC20	968+50.00	970+00.00	I-77	CL																																	125	
212	DR26	969+99.39		I-77	LT			38			1																											
212	DR27	970+00.19	977+89.40	I-77	RT						1	789																											
212	D23	970+00.00	977+85.00	I-77	CL																			785						1								
213	EC21	976+35.00	977+85.00	I-77	CL																																125		
213	D24	977+85.00		I-77	LT	1989961									2	0.46											108				1								
213	DR28	977+89.49		I-77	LT			39			1																											
213	DR29	977+89.40		I-77	RT	1830913	1	58			1	38																											
214	EC22	987+40.00	988+90.00	I-77	CL																																125		
214	D25	988+90.00		I-77	CL	1989965									2	0.27									118						1								
214	DR30	988+99.56		I-77	LT	1830173	1	85			1	39																											
214	EC23	994+50.00	996+00.00	I-77	CL																																125		
214	D26	996+00.00	1002+00.00	I-77	CL													610														1								
215	EC24	1000+60.00	1002+10.00	I-77	CL																																125		
215	DR31	1001+98.82		I-77	LT			38			1																											
215	DR32	1001+98.67		I-77	RT	1831350	1	49			1	38																											
215	D27	1002+10.00		I-77	CL	1989962									2	0.33				65						70					1								
215	EC25	1003+50.00	1005+00.00	I-77	CL																																125		
215	D28	1005+00.00		I-77	CL	1989969									2	0.27			63						70						1								
215	DR33	1005+20.52		I-77	CL	1830914	1	82			1	48																											
215	DR34	1007+53.41		I-77	CL	1830175	1	71			1	46																											
215	D29	1007+65.00		I-77	LT	1989970									2	0.27			60						76						1								
215	EC26	1007+65.00	1009+15.00	I-77	CL																																125		
SUB-TOTALS CARRIED TO SHEET 198							6	832	309	1	19	1211			18	2.74	35	696	361	65		785			288	421	189	108	72		11		1	2			1	1250	125			

SUM-77-28.75

MODEL: DS506-2 PAPERSIZE: 34x22 (in.) DATE: 7/26/2023 TIME: 12:12:20 PM USER: gfurio
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DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET, SUITE 200
AKRON, OHIO 44308
(330) 434-9595
www.arcadis.com

DESIGNER MAH

REVIEWER PSB 9-3-22

PROJECT ID 111405

SHEET 197 TOTAL 927

ESTIMATED QUANTITIES

SHEET NO.	REF. NO.	LOCATION				CFN	202	202	202	202	202	SPECIAL	503	601	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	670	670	836		
		STATION		ROAD	SIDE		HEADWALL REMOVED	PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	MANHOLE REMOVED	CATCH BASIN REMOVED	FILL AND PLUG EXISTING CONDUIT	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN, STA. 918+12.35	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	CONCRETE MASONRY	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	18" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	18" CONDUIT, TYPE C	18" CONDUIT, TYPE C, 706.02	24" CONDUIT, TYPE B	24" CONDUIT, TYPE F, TYPE C 707.05, OR 707.21	30" CONDUIT, TYPE C	15" CONDUIT, BORED OR JACKED, 748.06	18" CONDUIT, BORED OR JACKED, 748.06	24" CONDUIT, BORED OR JACKED, 748.06	30" CONDUIT, BORED OR JACKED, 748.06	CATCH BASIN, NO. 3	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 2-3	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	MANHOLE, NO. 3	DITCH EROSION PROTECTION	DITCH EROSION PROTECTION MAT, TYPE B	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1		
		FROM	TO				EACH	FT	FT	EACH	EACH	FT	LS	CY	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SY	SY	SY		
216	DR35	1012+55.72	1012+97.14	I-77	RT		2	38				59																												
216	D30	1013+00.00		I-77	LT	1989971									2	0.27			50							108					1									
216	EC27	1013+00.00	1021+00.00	I-77	LT																																667			
217	D31	1023+10.00		I-77	LT																													1						
218	D32	1859+70.75	886+97.99	SR-176 Ramp A	LT	1809158									2	0.27	67		135																					
218	DR36	1859+70.75	886+97.06	SR-176 Ramp A	LT	1809158	1	242																																	
220	D33	3886+54.00		SR-176 Ramp D	LT	1989975											109															1								
220	D34	3886+54.00	3885+80.00	SR-176 Ramp D	RT										2	0.33					97											1								
220	DR37	3885+79.66		SR-176 Ramp D	RT		1	65																																
220	DR38	3886+53.47		SR-176 Ramp D	LT	1989975		109			1																													
220	DR39	3886+52.21		SR-176 Ramp D	RT			60			1																													
220	D35	3899+06.00		SR-176 Ramp D	RT	1989973									2	0.27	46															1								
227	D36	918+12.35	917+01.32	I-77/SR-271	RT	1990047							LS	6		0.66																						1			
227	DR40	918+26.02	917+06.93	I-77/SR-271	RT	1830912	1	224		1																														
231	D37	9019+51.00	9020+53.00	SR-21 RAMP F	LT													102																					
231	D38	9020+53.00		SR-21 RAMP F	LT	1990048									2	0.27	46		42																					
231	DR41	9019+51.37		SR-21 RAMP F	LT	1830915	1	100			1																													
231	DR42	9019+51.37	9020+53.27	SR-21 RAMP F	LT			150			1																													
SUB-TOTALS THIS SHEET							6	988		1	4	59	LS	6	10	2.07	268	102	227		97					108			211	1	1	4			1		1		667		
TOTALS CARRIED FROM SHEET 196							4	1401			14	411			14	1.84		1227	98		115		75	50		457	123	90	123		9	1	1		1		1	1250	1822	115		
TOTALS CARRIED FROM SHEET 197							6	832	309	1	19	1211			18	2.74	35	696	261	65		785			288	421	189	108	72		11		1	2			1	1250	125			
TOTALS CARRIED TO DRAINAGE SUBSUMMMARY							16	3221	309	2	37	1681	LS	6	42	6.65	303	2025	586	65	212	785	75	50	288	986	312	198	406	1	21	5	2	2	1	1	1	3	2500	2614	115		

SUM-77-28.75

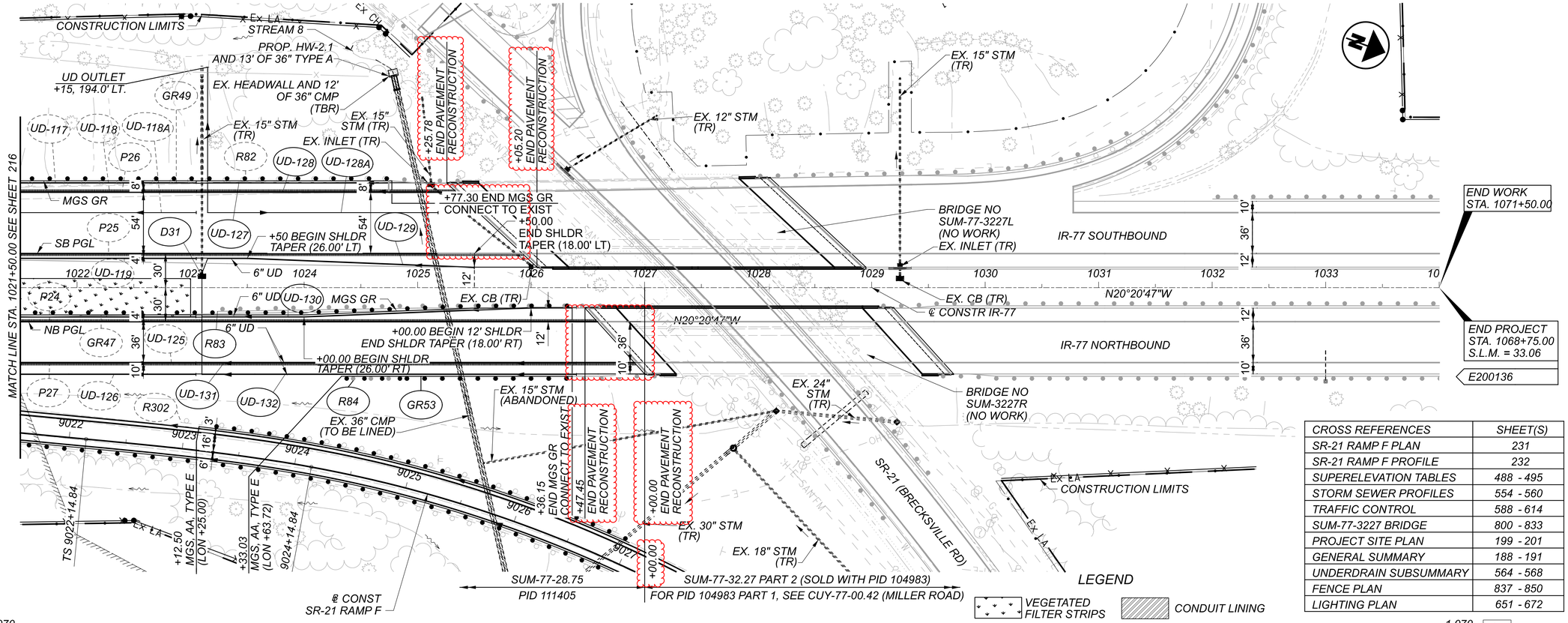
DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET, SUITE 200
AKRON, OHIO 44308
(330) 434-4955
www.arcadis.com

DESIGNER
MAH

REVIEWER
PSB 9-3-22

PROJECT ID
111405

SHEET 198 TOTAL 927



CROSS REFERENCES	SHEET(S)
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SUPERELEVATION TABLES	488 - 495
STORM SEWER PROFILES	554 - 560
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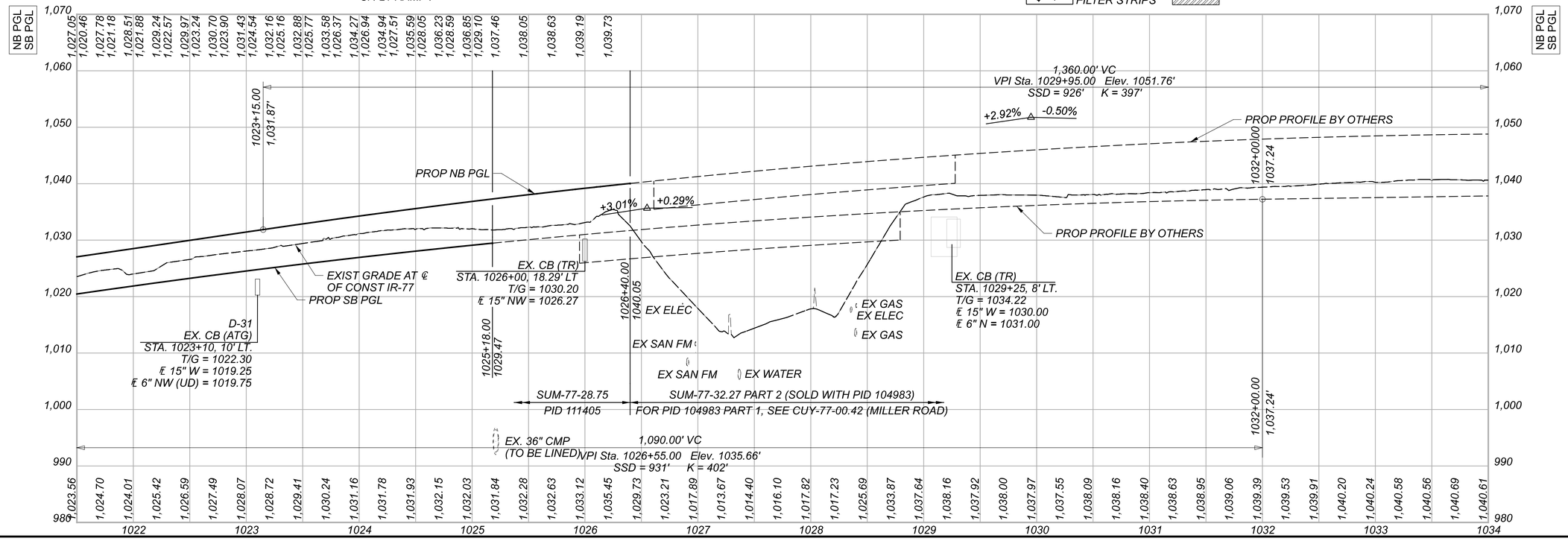

HORIZONTAL SCALE IN FEET
0 25 50 100

PLAN AND PROFILE
IR-77 - STA. 1021+50 TO STA. 1034+00

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER
WWM

REVIEWER
PRS 04/22/22

PROJECT ID
111405

SHEET 217 TOTAL 927

SUM-77-28.75

Mark	NUMBER LEFT REAR	NUMBER LEFT FWD	NUMBER RIGHT REAR	NUMBER RIGHT FWD	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS INC
ABUTMENT FOOTING														
F501	11	11	11	11	44	16'-7"	381	381	762	3	5'-5"	2'-7"		
F502	16	16	16	16	64	12'-1"	404	404	808	3	3'-2"	2'-7"		
F503	6				6	18'-3"	115		115	3	3'-5"	5'-5"		
F504	4				4	18'-5"	77		77	3	3'-5"	5'-6"		
F505	7	7			14	12'-1"	177		177	STR.				
F506	6	6			12	16'-9"	210		210	STR.				
F507	7	7	7	7	28	4'-4"	64	64	128	1	1'-0"	3'-5"		
F508	16				16	17'-7"	294		294	2	8'-3"	1'-2"	8'-3"	
F509		16	16		32	17'-0"	284	284	568	2	8'-0"	1'-2"	8'-0"	
F510		10			10	18'-1"	189		189	3	3'-5"	5'-4"		
F511			7	7	14	12'-6"		183	183	STR.				
F512			6	6	12	16'-7"		208	208	STR.				
F513			11		11	18'-1"		208	208	3	3'-5"	5'-4"		
F514				11	11	17'-11"		206	206	3	3'-5"	5'-3"		
F515			1		1	19'-1"		20	20	3	3'-5"	5'-10"		
F516				16	16	16'-7"		277	277	2	7'-10"	1'-2"	7'-10"	
F801	4	4			8	12'-1"	259		259	STR.				
F802	3	3			6	16'-9"	269		269	STR.				
F803	1	1	1	1	4	12'-0"	64	64	128	STR.				
F804	4	4	4	4	16	6'-8"	142	142	284	1	1'-7"	5'-3"		
F805			4	4	8	12'-5"		266	266	STR.				
F806			3	3	6	16'-9"		269	269	STR.				
						SUB-TOTAL	2,929	2,976	5,905					
ABUTMENT STEM														
A501	3	3	3	3	12	12'-5"	78	78	156	1	1'-0"	11'-6"		
A502	3			3	6	9'-5"	30	30	60	1	1'-0"	8'-6"		
A503	3	3	3	3	12	4'-1"	26	26	52	19	2'-6"	1'-6"	1"	
A504	3	3	3	3	12	5'-9"	36	36	72	19	2'-6"	3'-2"	3"	
A505	1	1			2	13'-1"	28		28	3	3'-5"	2'-10"		
A506		3	3		6	10'-11"	34	34	68	1	1'-0"	10'-0"		
A507			1		1	12'-11"		14	14	3	3'-5"	2'-9"		
A801	3	3	3	3	12	12'-11"	207	207	414	1	1'-7"	11'-6"		
A802	1			1	2	9'-11"	26	26	52	1	1'-7"	8'-6"		
A803	1	1	1	1	4	6'-3"	34	34	68	19	4'-9"	1'-6"	1"	
A804	1	1	1	1	4	8'-0"	43	43	86	19	4'-9"	3'-2"	3"	
A805		1	1		2	11'-7"	31	31	62	1	1'-7"	10'-2"		
W501	18	18	18	18	72	14'-8"	551	551	1,102	STR.				
W502	16	16	16	16	64	10'-0"	334	334	668	2	4'-6"	1'-2"	4'-6"	
						SUB-TOTAL	1,458	1,444	2,902					
SEMI INTEGRAL DIAPHRAGM														
D501	5	5	7		17	13'-1"	136	96	232	3	3'-5"	2'-10"		
D502	11	11	11	9	42	7'-7"	174	159	333	2	2'-5"	2'-11"	2'-5"	
D503	2				2	12'-11"	27		27	3	3'-3"	2'-10"		
	1				1	12'-9"					3'-5"	2'-8"		
D504	SER OF				SER OF	to	54		54	3	to	to		1¼"
	4				4	13'-1"					3'-5"	2'-10"		
		1	1		2	12'-9"						2'-8"		
D505		SER OF	SER OF		SER OF	to	40	40	80	3	3'-5"	to		2"
		3	3		3	13'-1"						2'-10"		
D506		2			2	12'-9"	27		27	3	3'-5"	2'-8"		
D507		1	1		2	12'-9"	14	14	28	3	3'-5"	2'-8"		
D508				5	5	12'-11"		68	68	3	3'-5"	2'-9"		
				1	1	12'-1"					3'-5"	2'-3"		
D509				SER OF	SER OF	to		53	53	3	to	to		4"
				4	4	13'-1"					3'-5"	2'-10"		
D510				2	2	12'-9"		27	27	3	3'-3"	2'-9"		
D511				2	2	7'-5"		16	16	2	2'-5"	2'-9"	2'-5"	
# D801	6	6	6	6	24	11'-0"	352	352	704	STR.				
# D802	3	3			6	11'-9"	189		189	STR.				
D803	4	4			8	10'-11"	234		234	19	8'-8"	2'-2"	4"	
# D804			3	3	6	12'-0"		193	193	STR.				
D805			4	4	8	11'-3"		241	241	19	9'-0"	2'-2"	4"	
D806	8	8	9	9	34	4'-10"	207	232	439	18	2'-6"	1'-0"	1'-0"	
# D807	4	4	4	4	16	11'-1"	237	237	474	19	9'-4"	1'-8"	2"	
# D808	1	1			2	11'-7"	62		62	19	10'-0"	1'-6"	2"	
# D809			1	1	2	11'-11"		64	64	19	10'-4"	1'-6"	2"	
						SUB-TOTAL	1,753	1,792	3,545					

Mark	NUMBER LEFT PIER 1	NUMBER LEFT PIER 2	NUMBER RIGHT PIER 1	NUMBER RIGHT PIER 2	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	DIMENSIONS E	DIMENSIONS R	DIMENSIONS INC
PIER FOOTING																	
F801	18	18	18	18	72	12'-2"	1,170	1,170	2,340	2	2'-7"	7'-5"	2'-7"				
F802	18	18	18	18	72	12'-6"	1,202	1,202	2,404	2	2'-7"	7'-8"	2'-7"				
F901	16	16	16	16	64	10'-3"	1,116	1,116	2,232	1	1'-9"	8'-9"					
						SUB-TOTAL	3,488	3,488	6,976								
PIER																	
P501	36	36	38	38	148	6'-11"	520	548	1,068	24	2'-8"	1'-4"				1'-4"	
P502	36	38	36	38	148	3'-11"	302	302	604	52	2'-8"	9"					
P503	6	6	6	6	24	8'-6"	106	106	212	2	3'-0"	2'-8"	3'-0"				
	8	8	8	8	32	5'-9"					2'-6"	1'-0"	2'-6"				
P504	SER OF	SER OF	SER OF	SER OF	SER OF	to	426	426	852	2	to	to	to				5"
	4	4	4	4	4	7'-0"					2'-8"	1'-10"	2'-8"				
P505	6	6	6	6	24	6'-0"	76	76	152	STR.							
P506	8	8	8	8	32	9'-1"	152	152	304	24	2'-8"	2'-5"				1'-4"	
	8	8	8	8	32	7'-1"					2'-9"		2'-9"				
P507	SER OF	SER OF	SER OF	SER OF	SER OF	to	240	240	480	2	to	1'-10"	to				2"
	2	2	2	2	2	7'-3"					2'-10"		2'-10"				
P801	2	2	2	2	8	6'-1"	65	65	130	20	3"	1'-0"	4'-0"	1'-0"	3"		
P802	2	2	2	2	8	8'-8"	93	93	186	20	6"	2'-3"	4'-0"	2'-3"	6"		
P803	2	2	2	2	8	10'-10"	116	116	232	2	2'-6"	6'-3"	2'-6"				
P804	2	2	2	2	8	13'-4"	142	142	284	2	2'-6"	8'-8"	2'-6"				
P901	16				16	21'-3"	1,156		1,156	16	20'-0"						
P902		16			16	20'-6"	1,116		1,116	16	19'-3"						
P903			16		16	22'-9"		1,238	1,238	16	21'-6"						
P904				16	16	22'-0"		1,197	1,197	16	20'-9"						
						SUB-TOTAL	4,510	4,701	9,211								

 # = ALL OR A PORTION OF BARS PROVIDED WITH MECHANICAL CONNECTOR

REINFORCING NOTES AND DETAILS

FOR REINFORCING GENERAL NOTES AND BEND DIAGRAMS, SEE SHEET 46/46

REINFORCING STEEL LIST 1 OF 2
BRIDGE NO. SUM-77-3096 L & R
IR-77 OVER STATE ROUTE 303

SFN 7704534 (L)
SFN 7704569 (R)

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER SAT | CHECKER RGC
REVIEWER MTO
PROJECT ID 111405
SUBSET 45 | TOTAL 46
SHEET 717 | TOTAL 927

SUM-77-28.75 PENTABLE SUBSET: 1 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/20/2023 TIME: 9:25:56 AM USER: stony
pw:\\gfnet-pw.bentley.com:gfnet-pw-01\Documents\Projects\67490\111405\401-Engineering-GFIStructures\3096L-SFN_7704534\Sheets\230 sl001

SUM-77-3187 L/R BRIDGE SUMMARY

CALCULATED: RAZ 05/18/22 | **CHECKED**: SAT 05/19/22 | **UPDATED**: SAT 10/05/22 | **REVISED**: SAT/BAB 01/05/23

ITEM	ITEM EXT.	TOTAL PER SPLIT		TOTAL PER BRIDGE			GRAND TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE			RIGHT BRIDGE			GENERAL	SHEET REF.
		03/IMS/14	04/IMS/13	LEFT	RIGHT	GEN				ABUT.	PIER	SUPER	ABUT.	PIER	SUPER		
202	11203		LS			LS	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN							LS	3
202	22900	491		246	245		491	SY	APPROACH SLAB REMOVED			246			245		
503	21100		363	189	174		363	CY	UNCLASSIFIED EXCAVATION	140	49		123	51			
505	11100		LS			LS	LS		PILE DRIVING EQUIPMENT MOBILIZATION							LS	
507	00500		1,140	570	570		1,140	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	570			570				
507	00550		1,260	630	630		1,260	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	630			630				
507	00700		840	420	420		840	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		420			420			
507	00750		920	460	460		920	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		460			460			
509	10001		65,825	32,668	33,156		65,825	LB	EPOXY COATED STEEL REINFORCEMENT, AS PER PLAN	4,428	7,968	20,272	4,459	8,197	20,500		4
509	20001		600	300	300		600	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN			300			300		4
509	30020		5,642	2,821	2,821		5,642	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			2,821			2,821		
510	10001		44	22	22		44	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	22			22				4
511	34446		119	59	60		119	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			59			60		
511	34451		58	29	29		58	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			29			29		4
511	42012		39	19	20		39	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		19			20			
511	44112		42	21	21		42	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	21			21				
511	46512		82	41	41		82	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	26	15		26	15			
512	33000		30	15	15		30	SY	TYPE 2 WATERPROOFING	15			15				
SPECIAL	51275500		567	282	285		567	SY	SEALING , SEALING OF CONCRETE SURFACES	26	67	189	28	68	189		
513	10260		83,666	41,755	41,911		83,666	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			41,755			41,911		
513	20000		960	480	480		960	EACH	WELDED STUD SHEAR CONNECTORS			480			480		
514	00050		1,094	547	547		1,094	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			547			547		
514	00056		1,094	547	547		1,094	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			547			547		
514	00060		5,837	2,911	2,926		5,837	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			2,911			2,926		
514	00066		5,837	2,911	2,926		5,837	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			2,911			2,926		
514	00504		4	2	2		4	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			2			2		
514	10000		6	3	3		6	EACH	FINAL INSPECTION REPAIR			3			3		
516	10010	152	68	110	110		220	FT	ARMORLESS PREFORMED JOINT SEAL			110			110		
516	13600		34	17	17		34	SF	1" PREFORMED EXPANSION JOINT FILLER	17			17				
516	13900		192	96	96		192	SF	2" PREFORMED EXPANSION JOINT FILLER	96			96				
516	14020		60	30	30		60	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	30			30				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x13"x4.08" BEARING WITH 14"x14" LOAD PLATE AND BEVELED HP10x42 PEDESTAL)	4			4				
516	44300		8	4	4		8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15"x18"x4.08" BEARING WITH 16"x19" LOAD PLATE)		4			4			
518	12201		4	2	2		4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			2			2		4
518	21200		45	23	22		45	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	23			22				
518	40000		120	60	60		120	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	60			60				
518	40010		100	50	50		100	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	50			50				
523	20001		8	4	4		8	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	2		2	2			4
523	20501		8	4	4		8	EACH	RESTRIKE, AS PER PLAN	2	2		2	2			4
526	25011	423	182	303	302		605	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN			303			302		41
526	90030	152	68	110	110		220	FT	TYPE C INSTALLATION			110			110		
601	20000		210	103	107		210	SY	CRUSHED AGGREGATE SLOPE PROTECTION	103			107				
625	33000		2	1	1		2	EACH	STRUCTURE GROUNDING SYSTEM	1			1				

ESTIMATED QUANTITIES
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231

DESIGNER RAZ | CHECKER SAT
REVIEWER MTO
PROJECT ID 111405
SUBSET 5 | TOTAL 47
SHEET 723 | TOTAL 927

SUM-77-28.75

PENTABLE SUBSET: 2 | SUBMITTAL: Tracings | PLOT DRIVER: OHDOT_PDF.pltcfg | PENTABLE: 111405_OHDOT_Pen.tbl
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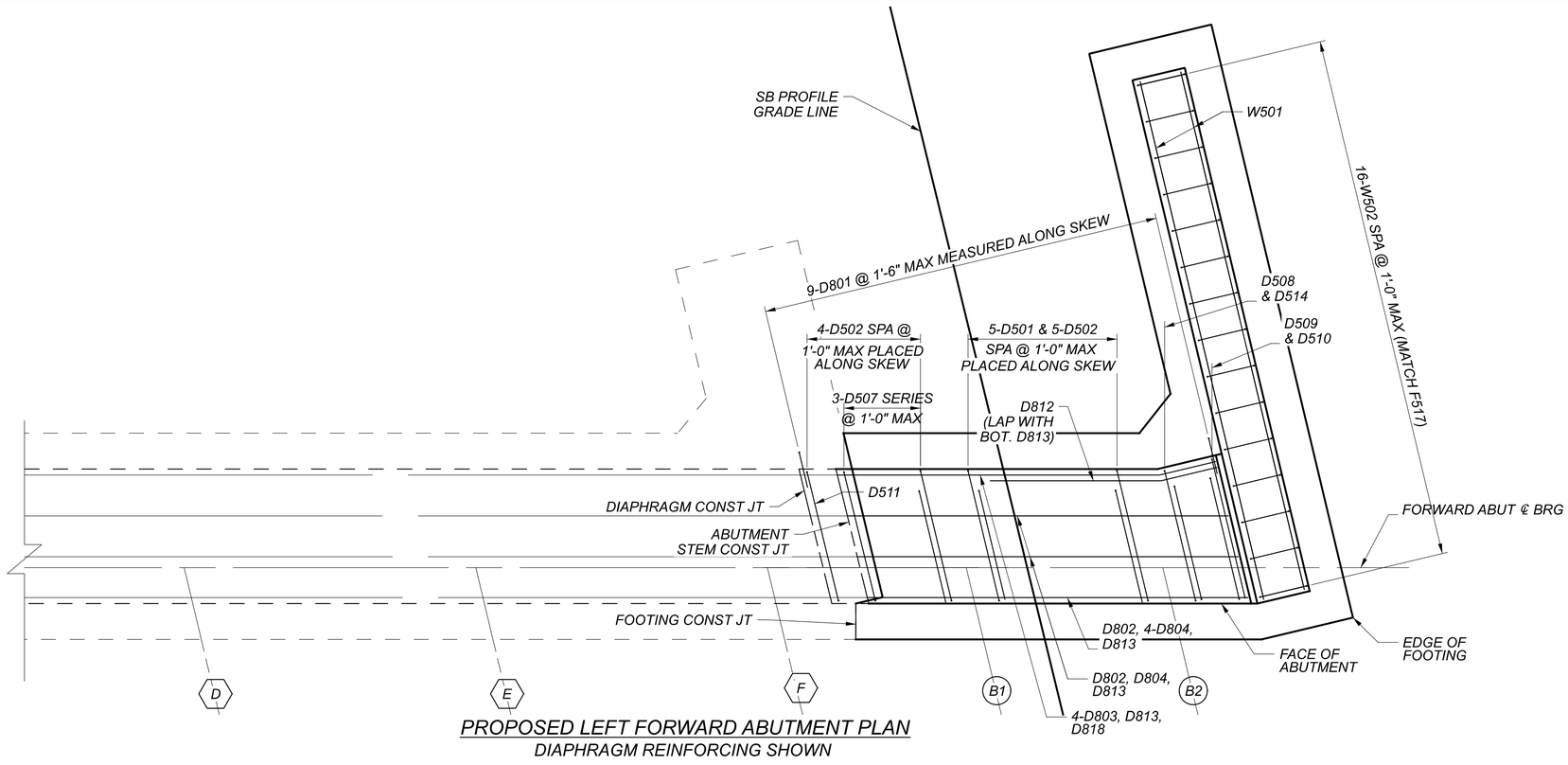
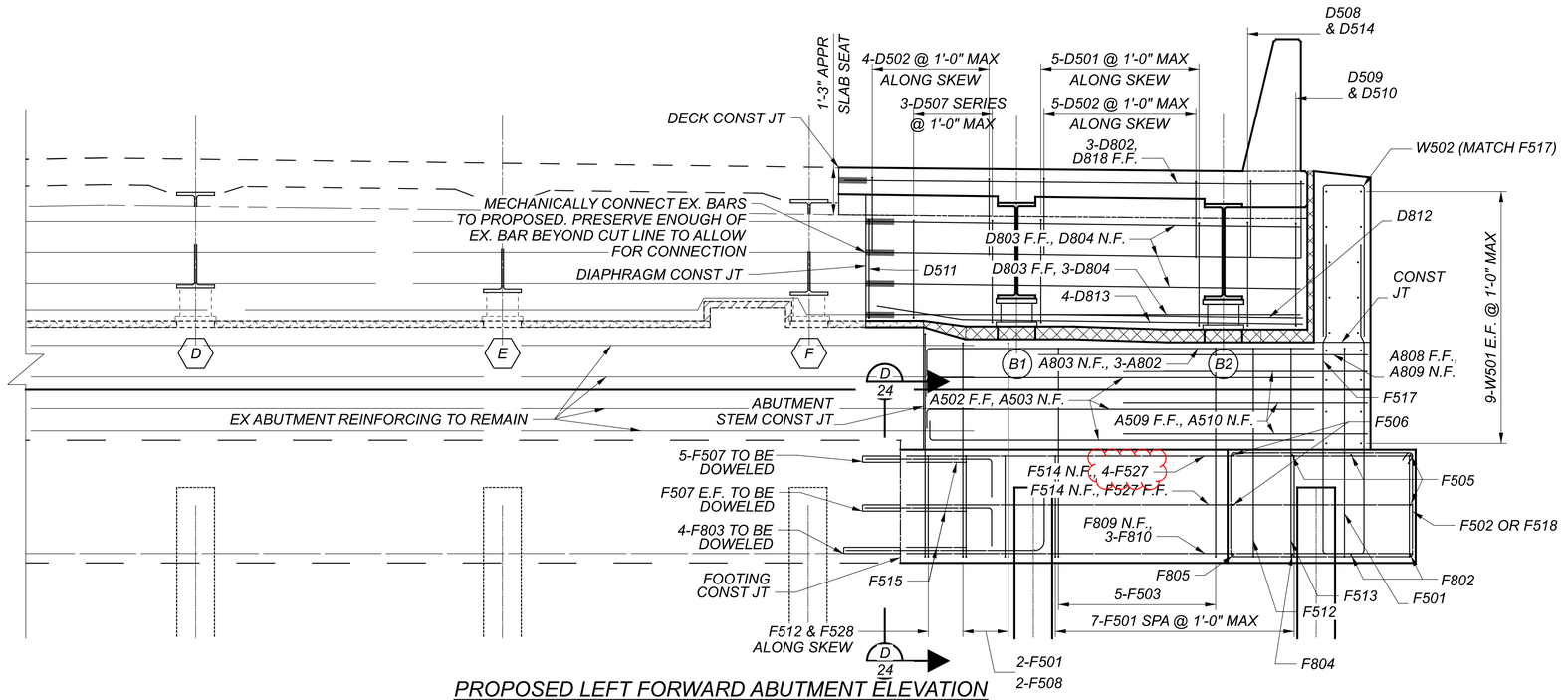


PROPOSED LEFT FORWARD ABUTMENT PLAN

DIAPHRAGM REINFORCING SHOWN



PROPOSED LEFT FORWARD ABUTMENT ELEVATION

NOTES

1. SEE SHEET 24/47 FOR ABUTMENT DETAILS AND SECTIONS.
2. SEE SHEET 9/47 FOR FOUNDATION PLAN.
3. SEE SHEET 33/47 FOR TRANSVERSE SECTION.
4. SEE SHEET 4/47 FOR DOWEL HOLE NOTES.
5. SEE SHEET 42/47 FOR APPROACH SLAB DETAILS.
6. SEE SHEET 16/47 FOR FOOTING REINFORCING DETAILS.
7. 2" CLEAR COVER UNLESS NOTED OTHERWISE.

LEFT FORWARD ABUTMENT REINFORCING
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)

DESIGN AGENCY
GANNETT FLEMING
2500 Corporate Exchange Dr.
Suite 300
Columbus, OH 43231

DESIGNER	CHECKER
RSN	SAT

REVIEWER: MTO

PROJECT ID: 111405

SUBSET	TOTAL
15	47

SHEET	TOTAL
733	927

SUM-77-28.75 PENTABLE SUBSET: 2 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl

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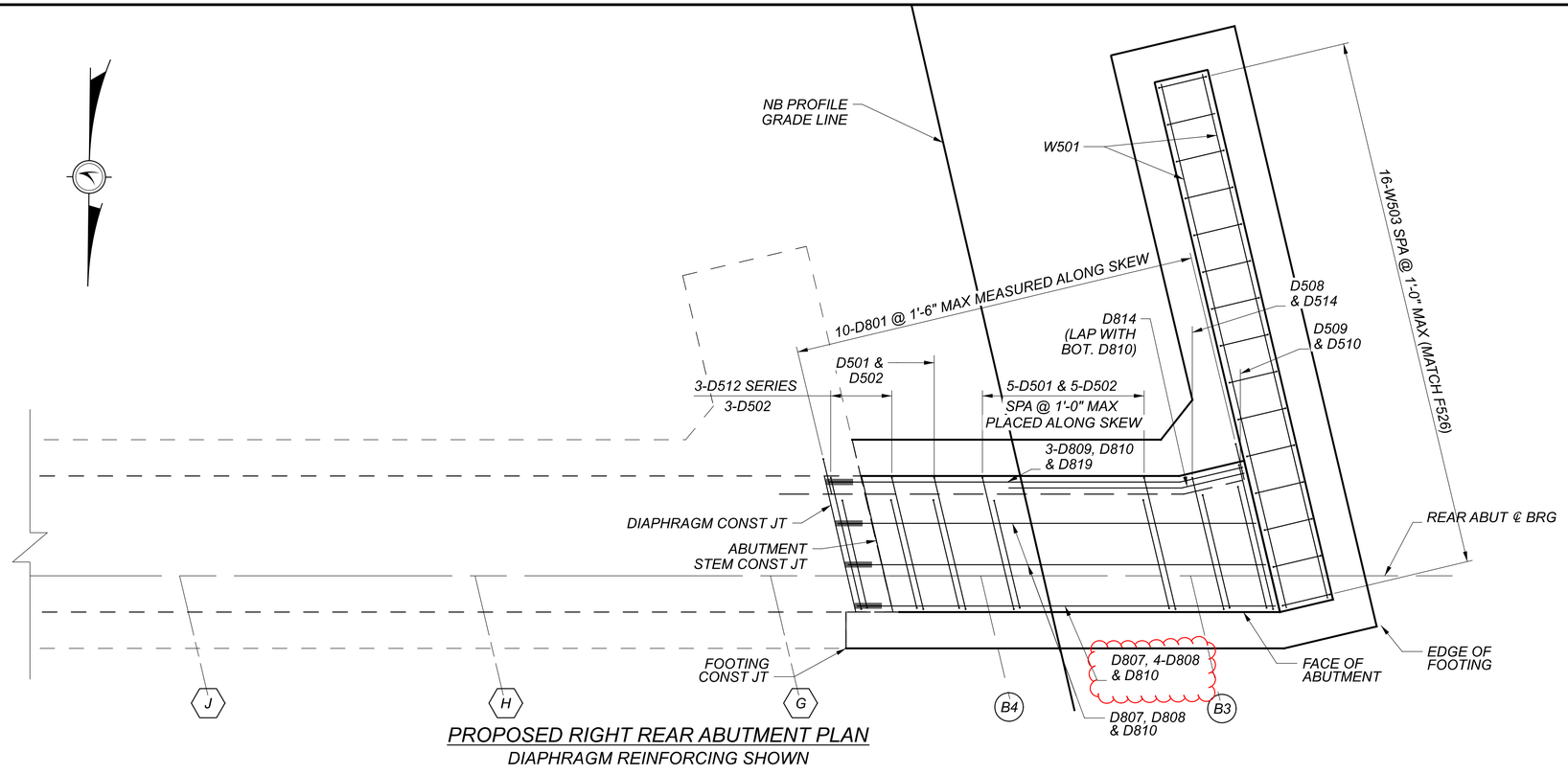
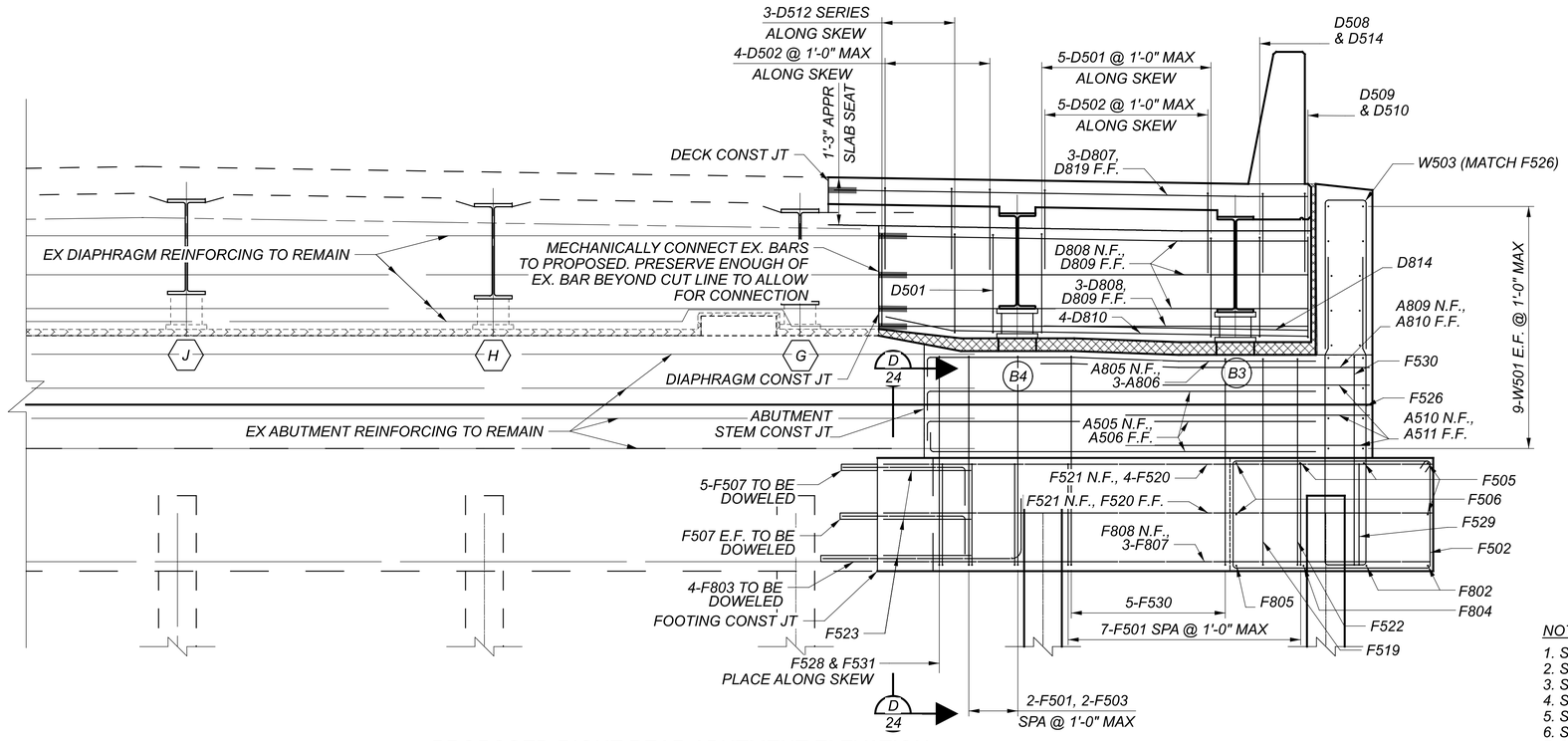


PROPOSED RIGHT REAR ABUTMENT PLAN

DIAPHRAGM REINFORCING SHOWN



PROPOSED RIGHT REAR ABUTMENT ELEVATION

NOTES

1. SEE SHEET 24/47 FOR ABUTMENT DETAILS AND SECTIONS.
2. SEE SHEET 9/47 FOR FOUNDATION PLAN.
3. SEE SHEET 33/47 FOR TRANSVERSE SECTION.
4. SEE SHEET 4/47 FOR DOWEL HOLE NOTES.
5. SEE SHEET 43/47 FOR APPROACH SLAB DETAILS.
6. SEE SHEET 23/47 FOR FOOTING REINFORCING DETAILS.
7. 2" CLEAR COVER UNLESS NOTED OTHERWISE.

RIGHT REAR ABUTMENT REINFORCING
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)

SFN 7704623 (R)

DESIGN AGENCY
GANNETT FLEMING
2300 Corporate Exchange Dr.
Suite 250
Columbus, OH 43231

DESIGNER	CHECKER
RSN	SAT

REVIEWER: MTO

PROJECT ID: 111405

SUBSET	TOTAL
19	47

SHEET	TOTAL
737	927

SUM-77-28.75 PENTABLE SUBSET: 2 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/18/2023 TIME: 11:32:55 AM USER: stony
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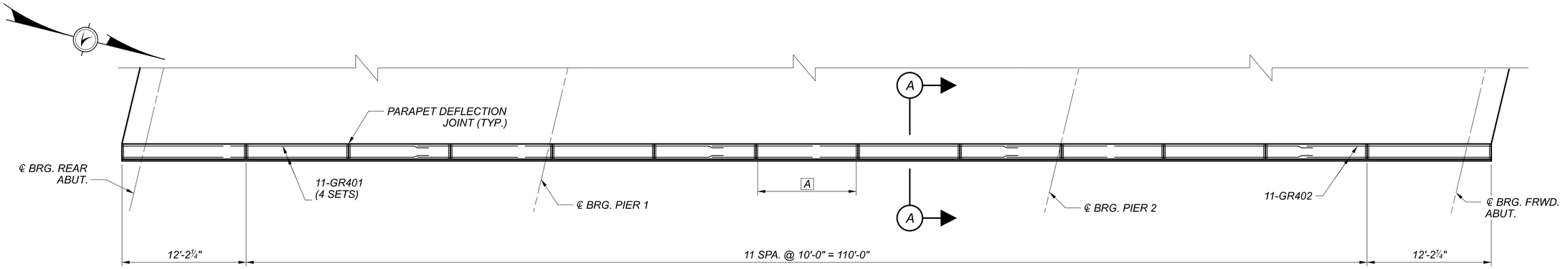
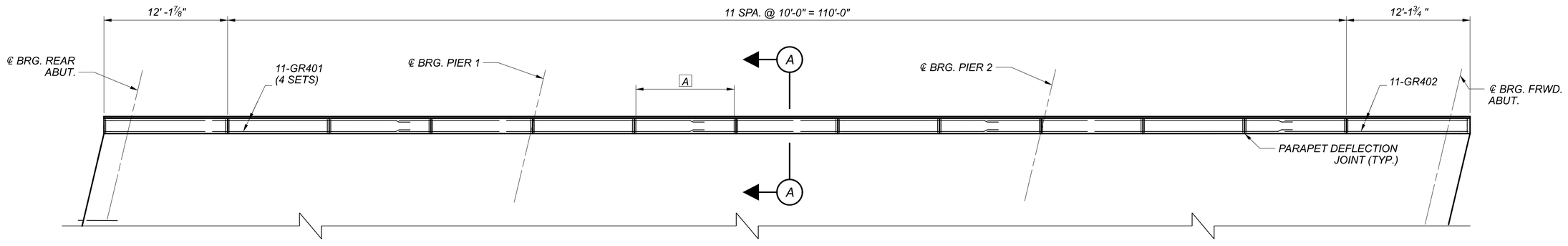
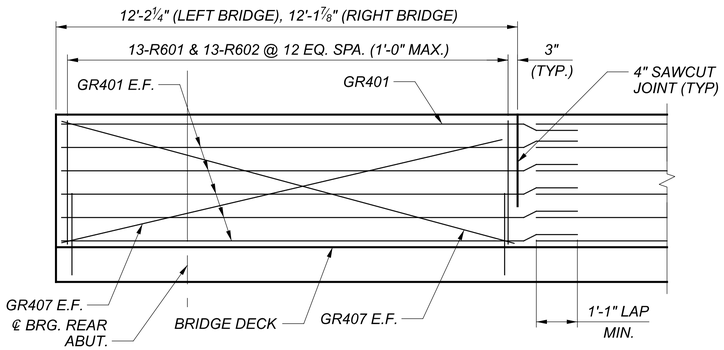


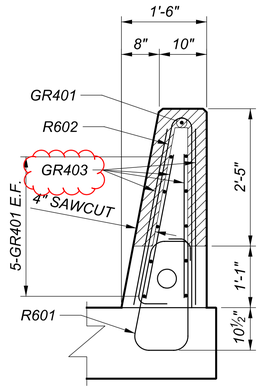
LEFT BRIDGE PARAPET PLAN



RIGHT BRIDGE PARAPET PLAN



END PARAPET ELEVATION
REAR END PANEL SHOWN, FORWARD PANEL SIMILAR



A SECTION
PARAPET REINFORCING

LEGEND

A - 11-R601, 11-R602 @ 10 EQ. SPA. (1'-0" MAX.) & 4-GR403 (TYP. FOR 10'-0" PANELS)

NOTES:

1. FOR ADDITIONAL PARAPET DETAILS, REFER TO STANDARD BRIDGE DRAWING SBR-1-20.

PARAPET DETAILS
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)
DESIGN AGENCY: GANNETT FLEMING, 2500 Corporate Exchange Dr. Suite 200, Columbus, OH 43231
DESIGNER SAT | CHECKER RSN
REVIEWER MTO
PROJECT ID 111405
SUBSET 39 | TOTAL 47
SHEET 757 | TOTAL 927

SUM-77-28.75 PENTABLE SUBSET: 2 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/18/2023 TIME: 11:59:35 AM USER: stony
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Mark	NUMBER LEFT REAR	NUMBER LEFT FWD	NUMBER RIGHT REAR	NUMBER RIGHT FWD	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	D	E
ABUTMENT FOOTING															
F501	10	10	9	10	39	16'-7"	346	329	675	3	5'-5"	2'-7"			
F502	17	15	15	17	64	12'-1"	404	404	808	3	3'-2"	2'-7"			
F503	5	5	2	2	14	18'-3"	191	76	267	3	3'-5"	5'-5"			
F504	7				7	12'-9"	94		94	STR.					
F505	6	4	4	6	20	16'-8"	174	174	348	STR.					
F506		2	2		4	16'-6"	34	34	68	STR.					
F507	7	7	7	7	28	4'-5"	64	64	128	1	1'-0"	3'-6"			
F508	2	2			4	18'-5"	77		77	3	3'-5"	5'-6"			
F510	1				1	18'-1"	19		19	3	3'-4"	5'-5"			
F511	1				1	16'-5"	18		18	3	2'-6"	5'-5"			
F512	1	1			2	18'-9"	40		40	3	3'-7"	5'-6"			
F513		1			1	18'-11"	20		20	3	3'-9"	5'-5"			
F514		2			2	10'-9"	23		23	STR.					
F515		3			3	5'-5"	17		17	10	5"	1'-9"	9"	3'-1"	
F516		3	3		6	6'-9"	22	22	44	20	2'-0"	1'-7"	1'-8"	1'-7"	2'-0"
F517	16	16			32	17'-8"	590		590	2	8'-4"	1'-2"	8'-4"		
F518		1	1		2	10'-9"	12	12	24	3	2'-6"	2'-7"			
F519			1		1	18'-3"		20	20	3	3'-7"	5'-3"			
F520			5	7	12	12'-11"		162	162	STR.					
F521			2		2	12'-0"		26	26	STR.					
F522			1		1	16'-11"		18	18	3	2'-11"	5'-3"			
F523			3		3	5'-6"		18	18	2	2'-6"	8"	2'-6"		
F524				1	1	17'-9"		19	19	3	3'-4"	5'-3"			
F525				1	1	16'-3"		17	17	3	2'-7"	5'-3"			
F526			16	16	32	17'-1"		571	571	2	8'-1"	1'-2"	8'-1"		
F527		5			5	12'-8"	67		67	STR.					
F528	1	1	1	1	4	16'-11"	36	36	72	3	5'-7"	2'-7"			
F529			1		1	16'-3"		17	17	3	5'-3"	2'-7"			
F530			6	6	12	18'-3"		229	229	3	3'-7"	5'-3"			
F531		1	1	1	3	18'-7"	20	39	59	3	3'-7"	5'-5"			
F801	4				4	12'-9"	137		137	STR.					
F802	3	2	2	3	10	16'-8"	222	222	444	STR.					
F803	4	4	4	4	16	6'-8"	142	142	284	1	1'-7"	5'-3"			
F804	1	1	1	1	4	12'-0"	64	64	128	STR.					
F805		1	1		2	16'-5"	44	44	88	STR.					
F807			3	4	7	12'-10"		240	240	STR.					
F808			1		1	12'-1"		33	33	STR.					
F809		1			1	10'-9"	29		29	STR.					
F810		3			3	12'-8"	102		102	STR.					
						SUB-TOTAL	3,008	3,032	6,040						
ABUTMENT STEM															
A501	3				3	9'-9"	31		31	1	1'-0"	8'-10"			
A502	3	3			6	12'-11"	81		81	1	1'-0"	12'-0"			
A503		3			3	11'-6"	36		36	1	1'-0"	10'-7"			
A505			3		3	11'-5"		36	36	1	1'-0"	10'-6"			
A506			3		3	12'-9"		40	40	1	1'-0"	11'-10"			
A508				3	3	9'-9"		31	31	1	1'-0"	8'-10"			
A509	3	3		3	9	5'-7"	35	18	53	19	2'-6"	3'-0"	9"		
A510	3	3	3	3	12	3'-10"	24	24	48	19	2'-6"	1'-3"	3"		
A511			3		3	5'-9"		18	18	19	2'-6"	3'-2"	9"		
A512				3	3	12'-11"		41	41	1	1'-0"	12'-0"			
A801	1				1	10'-3"	28		28	1	1'-7"	8'-10"			
A802	3	3		3	9	13'-5"	215	108	323	1	1'-7"	12'-0"			
A803		1			1	12'-1"	33		33	1	1'-7"	10'-8"			
A805			1		1	11'-11"		32	32	1	1'-7"	10'-6"			
A806			3		3	13'-3"		107	107	1	1'-7"	11'-10"			
A807				1	1	10'-3"		28	28	1	1'-7"	8'-10"			
A808	1	1		1	3	7'-10"	42	21	63	19	4'-9"	3'-0"	9"		
A809	1	1	1	1	4	6'-1"	32	32	64	19	4'-9"	1'-3"	3"		
A810			1		1	8'-0"		22	22	19	4'-9"	3'-2"	9"		
W501	18	18	18	18	72	14'-8"	551	551	1,102	STR.					
W502	16	16			32	9'-4"	312		312	2	4'-2"	1'-2"	4'-2"		
W503			16	16	32	9'-6"		318	318	2	4'-3"	1'-2"	4'-3"		
						SUB-TOTAL	1,420	1,427	2,847						

 # = ALL OR A PORTION OF BARS PROVIDED WITH MECHANICAL CONNECTOR

REINFORCING NOTES AND DETAILS

FOR REINFORCING GENERAL NOTES AND BEND DIAGRAMS, SEE SHEET 47/47

Mark	NUMBER LEFT REAR	NUMBER LEFT FWD	NUMBER RIGHT REAR	NUMBER RIGHT FWD	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	INC
SEMI INTEGRAL DIAPHRAGM														
D501	5	5	6	6	22	12'-9"	133	160	293	3	3'-6"	2'-7"		
D502	9	9	9	9	36	7'-8"	144	144	288	2	2'-5"	3'-0"	2'-5"	
	1				1	12'-3"						2'-4"		
D503	SER OF				SER OF	to	40		40	3	3'-6"	to		3"
	3				3	12'-9"						2'-7"		
D504	1			1	2	7'-7"	8	8	16	2	2'-5"	2'-11"	2'-5"	
D505	1			1	2	12'-1"	13	13	26	3	3'-2"	2'-7"		
D506	1			1	2	7'-4"	8	8	16	2	2'-5"	2'-8"	2'-5"	
		1			1	12'-3"						2'-4"		
D507		SER OF			SER OF	to	40		40	3	3'-6"	to		3"
		3			3	12'-9"						2'-7"		
D508		1	1		2	12'-11"	14	14	28	3	3'-7"	2'-7"		
D509		1	1		2	13'-5"	14	14	28	3	3'-10"	2'-7"		
D510		1	1		2	7'-11"	8	8	16	2	2'-5"	3'-4"	2'-5"	
D511		1			1	12'-3"	13		13	3	3'-6"	2'-4"		
			1	1	2	12'-3"						2'-4"		
D512			SER OF	SER OF	SER OF	to		79	79	3	3'-6"	to		3"
			3	3	3	12'-9"						2'-7"		
D513	1			1	2	12'-7"	14	14	28	3	3'-5"	2'-7"		
D514		1	1		2	7'-10"	8	8	16	2	2'-5"	3'-2"	2'-5"	
D801	9	9	10	10	38	5'-1"	244	272	516	18	2'-9"	1'-0"	1'-0"	
# D802	3	3			6	12'-2"	195		195	STR.				
# D803	4	4			8	11'-7"	248		248	19	10'-0"	1'-6"	4"	
# D804	6	6			12	11'-4"	364		364	STR.				
D805	1				1	9'-10"	27		27	19	7'-6"	2'-3"	4"	
D806	3				3	11'-4"	91		91	19	9'-0"	2'-3"	4"	
# D807			3	3	6	12'-7"		202	202	STR.				
# D808			6		6	11'-4"		182	182	STR.				
# D809			4		4	11'-6"		123	123	19	9'-9"	1'-8"	4"	
D810			4		4	11'-2"		120	120	19	9'-4"	1'-9"	4"	
D811				1	1	9'-5"		26	26	19	7'-1"	2'-3"	4"	
D812	1	1			2	6'-4"	34		34	19	4'-9"	1'-6"	4"	
D813		4			4	11'-4"	122		122	19	9'-0"	2'-3"	4"	
D814			1	1	2	6'-4"		34	34	19	4'-9"	1'-6"	4"	
D815				3	3	11'-2"		90	90	19	8'-10"	2'-3"	4"	
D816				6	6	11'-7"		186	186	STR.				
# D817				4	4	11'-6"		123	123	19	9'-10"	1'-7"	4"	
# D818	1	1			2	12'-1"	65		65	19	10'-6"	1'-6"	4"	
# D819			1	1	2	12'-7"		68	68	19	11'-0"	1'-6"	4"	
						SUB-TOTAL	1,847	1,896	3,743					

Mark	NUMBER LEFT PIER 1	NUMBER LEFT PIER 2	NUMBER RIGHT PIER 1	NUMBER RIGHT PIER 2	TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER FOOTING																	
F811	18	18	18	18	72	12'-6"	1,202	1,202	2,404	2	2'-7"	7'-9"	2'-7"				
F812	18	18	18	18	72	12'-9"	1,226	1,226	2,452	2	2'-7"	8'-0"	2'-7"				
F901	16	16	16	16	64	10'-4"	1,124	1,124	2,248	1	1'-9"	8'-10"					
						SUB-TOTAL	3,552	3,552	7,104								
PIER																	
P501	34	34	38	38	144	7'-1"	502	562	1,064	24	2'-8"	1'-5"				1'-4"	
P502	34	34	38	38	144	3'-11"	278	311	589	52	9"	2'-8"					
P503	6	6	6	6	24	8'-10"	111	111	222	2	3'-2"	2'-8"	3'-2"				
	8	8	8	8	32	5'-9"					2'-6"	1'-0"	2'-6"				
P504	SER OF	SER OF	SER OF	SER OF	SER OF	to	426	426	852	2	to	to	to				5"
	4	4	4	4	4	7'-0"					2'-8"	1'-10"	2'-8"				
P505	6	6	6	6	24	6'-3"	78	78	156	STR.							
P506	6	6	6	6	24	9'-3"	116	116	232	24	2'-8"	2'-6"				1'-4"	
	8	8	8	8	32	7'-1"					2'-9"		2'-9"				
P507	SER OF	SER OF	SER OF	SER OF	SER OF	to	240	240	480	2	to	1'-10"	to				2"
	2	2	2	2	2	7'-3"					2'-10"		2'-10"				
P801	2	2	2	2	8	6'-4"	68	68	136	20	3"	1'-2"	3'-11"	1'-2"	3"		
P802	2	2	2	2	8	8'-9"	94	94	188	20	6"	2'-4"	3'-11"	2'-4"	6"		
P803	2	2	2	2	8	10'-10"	116	116	232	2	2'-6"	6'-3"	2'-6"				
P804	2	2	2	2	8	13'-4"	142	142	284	2	2'-6"	8'-8"	2'-6"				
P901	16				16	20'-9"	1,129		1,129	16	19'-6"						
P902			16		16	22'-0"		1,197	1,197	16	20'-9"						
P903		16			16	20'-6"	1,116		1,116	16	19'-3"						
P904				16	16	21'-9"		1,184	1,184	16	20'-6"						
						SUB-TOTAL	4,416	4,645	9,061								

REINFORCING STEEL LIST 1 OF 2
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)
DESIGN AGENCY GANNETT FLEMING 2300 Corporate Exchange Dr. Suite 200 Columbus, OH 43231
DESIGNER SAT | CHECKER SLN
REVIEWER MTO
PROJECT ID 111405
SUBSET 46 | TOTAL 47
SHEET 764 | TOTAL 927

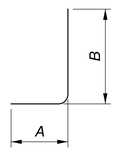
'SUM-77-28.75 PENTABLE SUBSET: 2 SUBMITTAL: Tracings PLOT DRIVER: OHDOT_PDF.pltcfg PENTABLE: 111405_OHDOT_Pen.tbl
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/18/2023 TIME: 12:33:11 PM USER: stony
pw:\\ghnet-pw.bentley.com:ghnet-pw-01\Documents\Projects\674901\111405\401-Engineering-GF\Structures\3187L-SFN_7704593\Sheets\230 sl001

Mark	NUMBER LEFT	NUMBER RIGHT	NUMBER TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	D	E
DECK													
S401	52	52	104	30'-0"	1,042	1,042	2,084	STR.					
S402	13	13	26	22'-0"	192	192	384	STR.					
S403	48	48	96	27'-0"	866	866	1,732	STR.					
S501	64	64	128	30'-0"	2,003	2,003	4,006	STR.					
S502	16	16	32	24'-0"	401	401	802	STR.					
# S503	294		294	12'-10"	3,936		3,936	16	12'-2"				
# S504	294		294	12'-2"	3,731		3,731	STR.					
S505	294	294	588	7'-1"	2,172	2,172	4,344	16	6'-6"				
# S506		294	294	13'-1"		4,012	4,012	16	12'-6"				
# S507		294	294	12'-6"		3,834	3,834	STR.					
S510	8	8	16	4'-6"	38	38	76	20	1'-0"	1'-0"	1'-8"	1'-0"	1'-0"
				SUB-TOTAL	14,381	14,560	28,941						

Mark	NUMBER LEFT REAR	NUMBER LEFT FWD	NUMBER RIGHT REAR	NUMBER RIGHT FWD	NUMBER TOTAL	LENGTH	WEIGHT LEFT	WEIGHT RIGHT	WEIGHT TOTAL	TYPE	DIMENSIONS A	B	C	D	E	F	R	INC
PARAPET																		
R601	147		147		294	7'-5"	1,638	1,638	3,276	39	9 ½"	1'-3"	2'-4"	2'-4"	7"	12"		
R602	147		147		294	7'-1"	1,564	1,564	3,128	23	6"	3'-3"	3'-3"				2"	
	4	4	4	4	16	4'-4"						3'-6"						
R603	SER OF	SER OF	SER OF	SER OF	SER OF	to	634	634	1,268	1	1'-0"	to						1"
	11	11	11	11	11	5'-3"						4'-4"						
R604	16	16	16	16	64	4'-4"	208	208	416	1	1'-0"	3'-6"						
						SUB-TOTAL	4,044	4,044	8,088									
						TOTAL ALL REINFORCING	32,668	33,156	65,825									

Mark	NUMBER LEFT REAR	NUMBER LEFT FWD	NUMBER RIGHT REAR	NUMBER RIGHT FWD	NUMBER TOTAL	LENGTH	TOTAL LENGTH (FEET) LEFT	TOTAL LENGTH (FEET) RIGHT	TOTAL LENGTH (FEET) TOTAL	TYPE	DIMENSIONS A	B	C	D	E
PARAPET GFRP															
GR401	44		44		88	30.00'	1,320	1,320	2,640	STR.					
GR402	11		11		22	19.00'	209	209	418	STR.					
GR403	44		44		88	10.00'	440	440	880	STR.					
GR404	24	24	24	24	96	10.00'	480	480	960	STR.					
GR405	12	12	12	12	48	5.08'	122	122	244	STR.					
GR406	12	12	12	12	48	6.42'	154	154	308	25	2'-6"	2'-5"	1'-5"	1 ½"	5"
GR407	8		8		16	12.00'	96	96	192	STR.					
						SUB-TOTAL	2,821	2,821	5,642						

= ALL OR A PORTION OF BARS PROVIDED WITH MECHANICAL CONNECTOR



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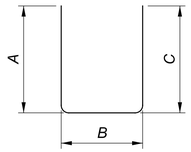

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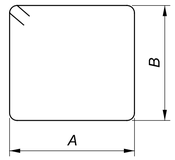

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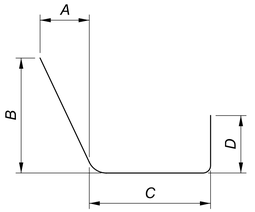

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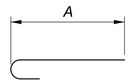

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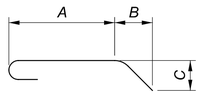

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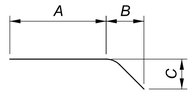

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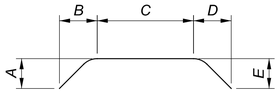

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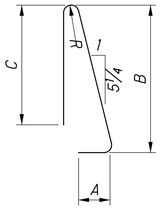

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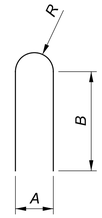

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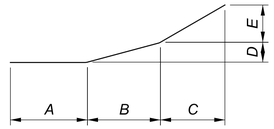

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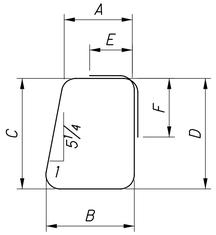

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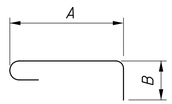


TYPE-52

REINFORCING BEND DIAGRAMS

MINIMUM LAP SPLICE LENGTHS

#4 BAR (STEEL) = 2'-0"
#4 BAR (GFRP) = 1'-1"
#5 BAR (ALL) = 2'-6"
#6 BAR (ALL) = 3'-0"
#8 BAR (ALL) = 4'-9"
#9 BAR (ALL) = 5'-10"

REINFORCING NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHEN FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. 'R' INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. PAYMENT FOR REINFORCING, INCLUDING MECHANICAL CONNECTORS, SHALL BE MADE WITH ITEM 509 - EPOXY COATED REINFORCING STEEL
3. "STR." IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "SER OF" DENOTES SERIES OF BARS, E.G "X" SER OF "Y" = "X" SERIES OF "Y" BARS/SERIES.
5. REFER TO C.M.S SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED IN ACCORDANCE WITH C.M.S. SECTION 509.07. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES.

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WITH MEETS THE SPECIFICATIONS. FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CENTER OF THE PLANNED MECHANICAL CONNECTION. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED AND THOSE COSTS SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

REINFORCING STEEL LIST 2 OF 2
BRIDGE NO. SUM-77-3187 L & R
IR-77 OVER BRUSH RD.

SFN 7704593 (L)
SFN 7704623 (R)
DESIGN AGENCY
GANNETT FLEMING
2300 Corporate Exchange Dr.
Suite 200
Columbus, OH 43231
DESIGNER SAT | CHECKER SLN
REVIEWER MTO
PROJECT ID 111405
SUBSET 47 | TOTAL 47
SHEET 765 | TOTAL 927

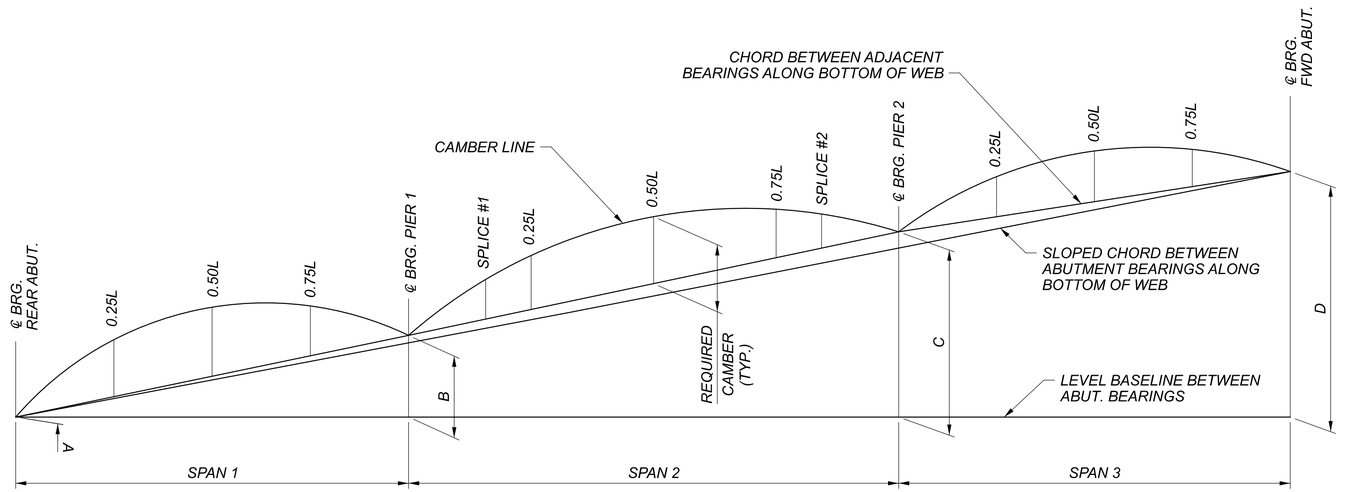
BEAM CAMBER AND DEFLECTIONS

POINT		BEAM NO. 1					BEAM NO. 2				
		DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER
REAR ABUTMENT		0.00''	0.00''	0.00''	0.00''	**0.00''**	0.00''	0.00''	0.00''	0.00''	**0.00''**
SPAN 1	0.25 L	0.02''	0.13''	0.02''	-0.10''	**0.07''**	0.02''	0.11''	0.02''	0.04''	**0.18''**
	0.50 L	0.03''	0.15''	0.02''	-0.14''	**0.06''**	0.03''	0.13''	0.02''	-0.14''	**0.03''**
	0.75 L	0.01''	0.07''	0.01''	-0.11''	**-0.01''**	0.01''	0.06''	0.01''	-0.10''	**-0.03''**
PIER NO. 1		0.00''	0.00''	0.00''	0.00''	**0.00''**	0.00''	0.00''	0.00''	0.00''	**0.00''**
SPAN 2	SPLICE #1	0.01''	0.03''	0.01''	-0.09''	**-0.05''**	0.01''	0.02''	0.01''	-0.09''	**-0.06''**
	0.25 L	0.02''	0.12''	0.02''	-0.16''	**-0.01''**	0.02''	0.09''	0.02''	-0.16''	**-0.03''**
	0.50 L	0.04''	0.20''	0.03''	-0.22''	**0.05''**	0.04''	0.17''	0.03''	-0.22''	**0.02''**
	0.75 L	0.02''	0.12''	0.02''	-0.17''	**-0.01''**	0.02''	0.09''	0.02''	-0.16''	**-0.03''**
	SPLICE #2	0.01''	0.03''	0.01''	-0.09''	**-0.05''**	0.01''	0.02''	0.01''	-0.09''	**-0.06''**
PIER NO. 2		0.00''	0.00''	0.00''	0.00''	**0.00''**	0.00''	0.00''	0.00''	0.00''	**0.00''**
SPAN 3	0.25 L	0.01''	0.07''	0.01''	-0.08''	**0.01''**	0.01''	0.06''	0.01''	-0.11''	**-0.03''**
	0.50 L	0.03''	0.15''	0.02''	-0.09''	**0.11''**	0.03''	0.13''	0.02''	-0.14''	**0.03''**
	0.75 L	0.03''	0.13''	0.02''	-0.03''	**0.14''**	0.02''	0.11''	0.02''	-0.11''	**0.04''**
FORWARD ABUTMENT		0.00''	0.00''	0.00''	0.00''	**0.00''**	0.00''	0.00''	0.00''	0.00''	**0.00''**

CAMBER BLOCKING DIAGRAM TABLE *

BEAM NUMBER	DIMENSION				CHORD SLOPE
	A	B	C	D	
BEAM NO. 1	0.00''	14.04''	24.60''	27.24''	1.458%
BEAM NO. 2	0.00''	14.04''	24.36''	26.64''	1.426%

* BLOCKING DIMENSIONS ARE FROM THE LEVEL BASELINE BETWEEN ABUTMENT BEARINGS TO THE BOTTOM OF THE BOTTOM FLANGE.



CAMBER AND BLOCKING DIAGRAM

ALONG CENTERLINE BEAM

NOTE:

1. CAMBER IS MEASURED ALONG BOTTOM OF THE BEAM WEB.

BEAM CAMBER AND BLOCKING
BRIDGE NO. SUM-77-3197L
I-77 OVER FURNACE RUN

SFN 7704658 (L)

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4555
www.arcadis.com

DESIGNER	CHECKER
RJB	CMD

REVIEWER RBB 01-13-23

PROJECT ID 111405

SUBSET	TOTAL
23	34

SHEET	TOTAL
788	927

BEAM CAMBER AND DEFLECTIONS

POINT		BEAM B3					BEAM B4				
		DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER	DEFLECTION DUE TO WEIGHT OF STEEL	DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	DEFLECTION DUE TO COMPOSITE DEAD LOAD	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	TOTAL CAMBER
REAR ABUTMENT		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"
SPAN 1	0.25 L	0.03"	0.17"	0.02"	-0.20"	0.02"	0.03"	0.18"	0.02"	-0.21"	0.03"
	0.50 L	0.04"	0.20"	0.02"	-0.27"	-0.01"	0.04"	0.21"	0.02"	-0.28"	0.00"
	0.75 L	0.02"	0.09"	0.01"	-0.21"	-0.09"	0.02"	0.10"	0.01"	-0.21"	-0.08"
PIER NO. 1		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"
SPAN 2	SPLICE #1	0.01"	0.07"	0.01"	-0.21"	-0.11"	0.01"	0.08"	0.01"	-0.21"	-0.11"
	0.25 L	0.03"	0.15"	0.02"	-0.31"	-0.11"	0.03"	0.16"	0.02"	-0.32"	-0.10"
	0.50 L	0.05"	0.26"	0.04"	-0.41"	-0.06"	0.05"	0.28"	0.04"	-0.42"	-0.05"
	0.75 L	0.03"	0.15"	0.02"	-0.30"	-0.09"	0.03"	0.16"	0.02"	-0.31"	-0.10"
	SPLICE #2	0.01"	0.07"	0.01"	-0.19"	-0.09"	0.02"	0.08"	0.01"	-0.21"	-0.10"
PIER NO. 2		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"
SPAN 3	0.25 L	0.02"	0.09"	0.01"	0.00"	0.12"	0.02"	0.09"	0.01"	0.00"	0.12"
	0.50 L	0.04"	0.20"	0.02"	0.00"	0.26"	0.04"	0.21"	0.02"	0.00"	0.27"
	0.75 L	0.03"	0.17"	0.02"	0.00"	0.22"	0.03"	0.18"	0.02"	0.00"	0.23"
FORWARD ABUTMENT		0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"	0.00"

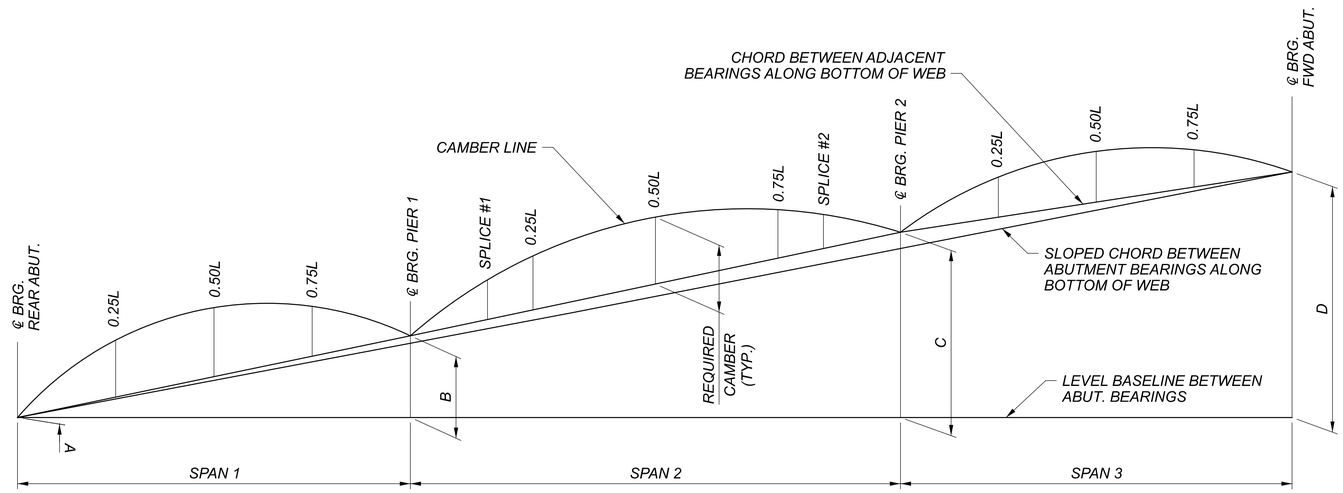
NOTES:

1. CAMBER IS MEASURED ALONG BOTTOM OF THE BEAM WEB.

CAMBER BLOCKING DIAGRAM TABLE *

BEAM NUMBER	DIMENSION				CHORD SLOPE
	A	B	C	D	
BEAM B3	0.00"	21.60"	42.96"	54.00"	2.891%
BEAM B4	0.00"	21.72"	42.84"	54.00"	2.891%

* BLOCKING DIMENSIONS ARE FROM THE LEVEL BASELINE BETWEEN ABUTMENT BEARINGS TO THE BOTTOM OF WEB.



CAMBER AND BLOCKING DIAGRAM
ALONG CENTERLINE BEAM

BEAM CAMBER AND BLOCKING
BRIDGE NO. SUM-77-3197R
I-77 OVER FURNACE RUN

SFN 7704682 (R)

DESIGN AGENCY
ARCADIS
222 SOUTH MAIN STREET SUITE 200
AKRON, OHIO 44308
(330) 434-4555
www.arcadis.com

DESIGNER	CHECKER
RJB	FJG

REVIEWER: RBB 01-13-23

PROJECT ID: 111405

SUBSET	TOTAL
23	34

SHEET	TOTAL
822	927