

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

CLE-28-1.76

MIAMI TOWNSHIP
CLERMONT COUNTY

FEDERAL PROJECT NUMBER

E190(371)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

WIDENING OF INTERCHANGE RAMP FROM WB SR-28 TO IR-275 NB. THE PROJECT INCLUDES PAVEMENT WORK, STORM SEWER WORK, TRAFFIC CONTROL, LIGHTING, SIGNAL, AND BRIDGE WORK.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 2.88 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 3.13 ACRES

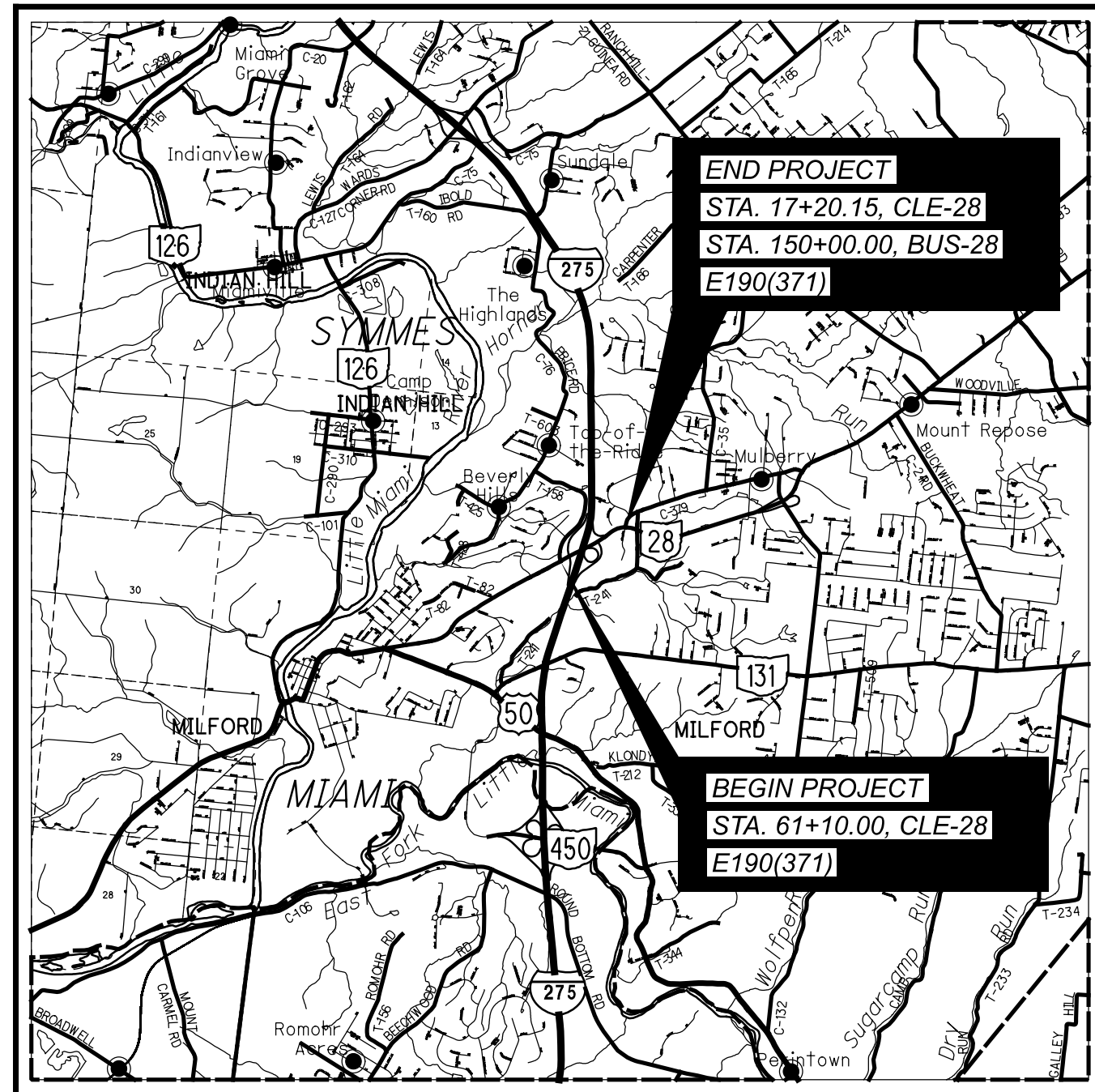
LIMITED ACCESS

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 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES



LOCATION MAP

LATITUDE: 39°11'19" LONGITUDE: -84°15'31"



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

DESIGN DESIGNATION

CURRENT ADT (2022)	48,000
DESIGN YEAR ADT (2034)	48,500
DESIGN HOURLY VOLUME (2034)	4,800
DIRECTIONAL DISTRIBUTION	0.51
TRUCKS (24 HOUR B&C)	12%
DESIGN SPEED	40
LEGAL SPEED	35
DESIGN FUNCTIONAL CLASSIFICATION:	
04 Urban Minor Arterial	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
BARGE
DESIGN SOLUTIONS

ENGINEER'S SEAL:

ROADWAY

SIGNED: _____
DATE: 9/27/2021
SHEETS: 1-128

ENGINEER'S SEAL:

LIGHTING AND SIGNAL

SIGNED: _____
DATE: 9/27/2021
SHEETS: 129-142

ENGINEER'S SEAL:

STRUCTURES 20' & OVER

SIGNED: _____
DATE: 9/27/2021
SHEETS: 143-160

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RIGHT OF WAY	
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STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-2.1	7/17/15	RM-4.4	7/19/19	HL-10.12	1/20/17	MT-95.40	1/17/20	TC-41.20	10/18/13	300-2019	7/16/21	
BP-2.2	1/15/21	RM-4.5	7/21/17	HL-10.13	4/17/20	MT-95.41	1/17/20	TC-41.41	7/19/19	309	7/16/21	
BP-3.1	1/17/20	RM-4.6	7/19/13	HL-20.11	1/15/21	MT-95.45	1/17/20	TC-42.10	10/18/13	314	7/15/16	
BP-5.1	7/16/21			HL-20.14	4/17/20	MT-98.10	1/17/20	TC-42.20	10/18/13	321	4/20/12	
BP-6.1	7/19/13	CB-2-2ABC	7/16/21	HL-30.11	1/15/21	MT-98.11	1/17/20	TC-51.11	1/15/16	332	10/19/18	
		CB-3	7/16/21	HL-30.21	4/17/20	MT-98.20	4/19/19	TC-52.10	10/18/13	336	1/19/18	
F-1.1	7/19/13	CB-3A	7/16/21	HL-30.22	1/15/21	MT-98.28	1/17/20	TC-52.20	1/15/21	374	4/17/20	
		CB-8	7/16/21	HL-30.31	4/17/20	MT-98.30	7/16/21	TC-61.30	7/19/19	378	4/16/21	
MGS-1.1	7/16/21			HL-30.32	4/17/20	MT-101.70	1/17/20	TC-65.10	1/17/14	302	7/19/19	
MGS-2.1	1/19/18	I-3BB1	7/16/21	HL-30.33	4/17/20	MT-101.75	1/17/20	TC-65.11	7/21/17	309	7/16/21	
MGS-3.1	1/19/18			HL-50.11	1/16/15	MT-101.90	1/17/20	TC-71.10	7/16/21	316	10/16/20	
MGS-3.2	1/18/13	MH-3	7/16/21	HL-50.21	1/15/21	MT-103.10	1/19/18	TC-72.20	7/20/18	321	4/20/12	
MGS-4.2	7/19/13			HL-60.11	7/21/17	MT-105.10	1/17/20	TC-81.11	7/16/21			
MGS-5.3	7/15/16	DM-1.1	7/17/20	HL-60.12	7/16/21			TC-84.20	10/18/13			
MGS-6.1	1/19/18	DM-1.2	7/16/21			TC-12.31	7/16/21	TC-84.21	10/18/13			
				ITS-12.50	7/16/21	TC-16.22	7/16/21	TC-85.21	7/16/21			
RM-1.1	7/16/21	HW 2.1	7/20/18			TC-17.11	7/16/21					
RM-3.1	7/20/18	HW 2.2	7/20/18	MT-95.30	7/19/19	TC-21.21	7/16/21	TVPF-1-18	7/20/18			
RM-4.1	1/17/20			MT-95.31	7/19/19	TC-21.50	4/17/20					
RM-4.2	4/17/20	HL-10.11	1/15/21	MT-95.32	4/19/19	TC-22.20	1/17/14			PIS 202020	7/18/2014	

PLAN INSERT SHEETS

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

109357

SHEET

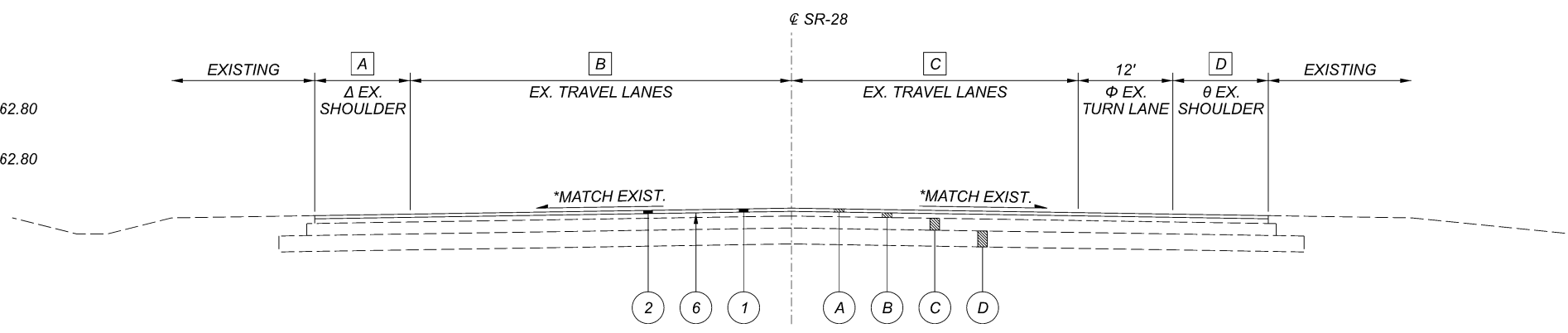
TOTAL

1 | 160

CLE-28-1.76

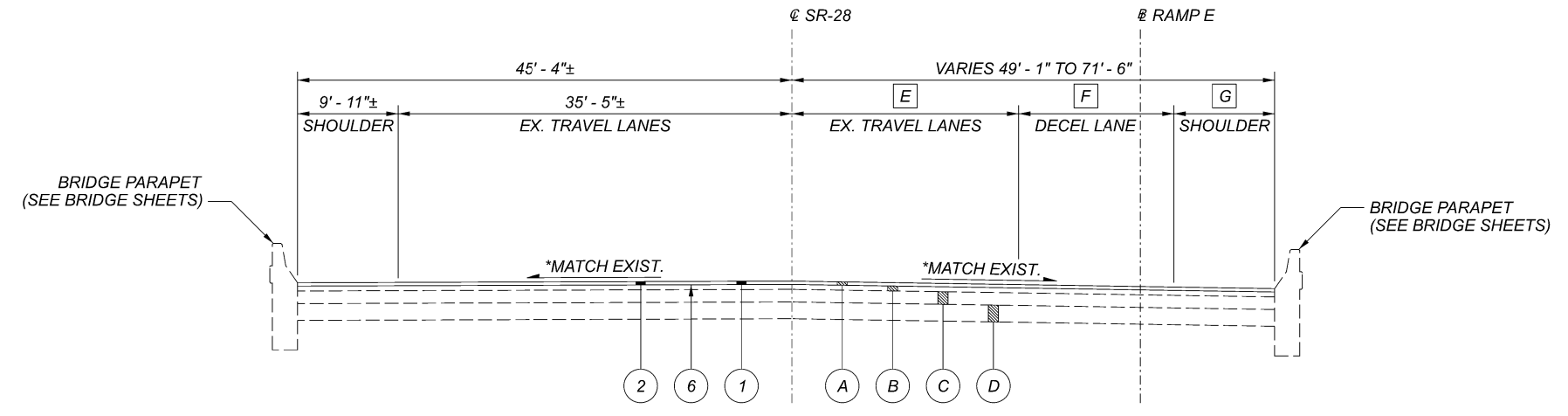
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Δ LEFT SHOULDER SHALL BE MILLED AND RESURFACED FROM STA. 65+39.49 TO STA. 67+62.80
 θ RIGHT SHOULDER SHALL BE MILLED AND RESURFACED FROM STA. 64+25.00 TO STA. 67+62.80



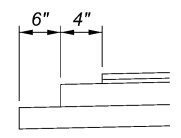
NORMAL SECTION - SR-28
 STA. 61+10.00 TO STA. 67+62.80
 STA. 71+25.10 TO STA. 74+58.22

- A** VARIES: 10'-0" FROM STA. 61+10.00 TO 36'-0" STA. 65+39.49
 VARIES: 12'-0" FROM STA. 65+39.49 TO STA. 66+80.99
 VARIES: 12'-0" FROM STA. 66+80.99 TO 10'-0" AT STA. 67+62.80
 VARIES: 10'-6"± AT STA. 71+25.10 TO STA. 74+58.22
- B** VARIES: 34'-6"± AT STA. 61+10.00 TO 36'-0" STA. 65+39.49
 VARIES: 50'-0"± AT STA. 65+39.49 TO 36'-0" STA. 67+62.80
 VARIES: 37'-6"± AT STA. 71+25.10 TO 32'-8"± STA. 74+58.22
- C** VARIES: 26'-0" FROM STA 61+10.00 TO STA. 64+25.00
 VARIES: 44'-1" AT STA 61+25.00 TO 33'-1" AT STA. 67+62.80
 VARIES: 22'-9"± AT STA. 71+25.10 TO 28'-0"± STA. 74+58.22
- D** VARIES: 12'-0"± AT STA. 64+25.00 TO 10'-0"± AT STA. 67+62.80



SR-28
 STA. 70+78.87 TO STA. 71+25.10

- E** VARIES: 30' - 4" TO 50' - 9"
- F** VARIES 13' - 0" TO 16' - 11"±
- G** VARIES 3' - 9"± TO 5' - 10"

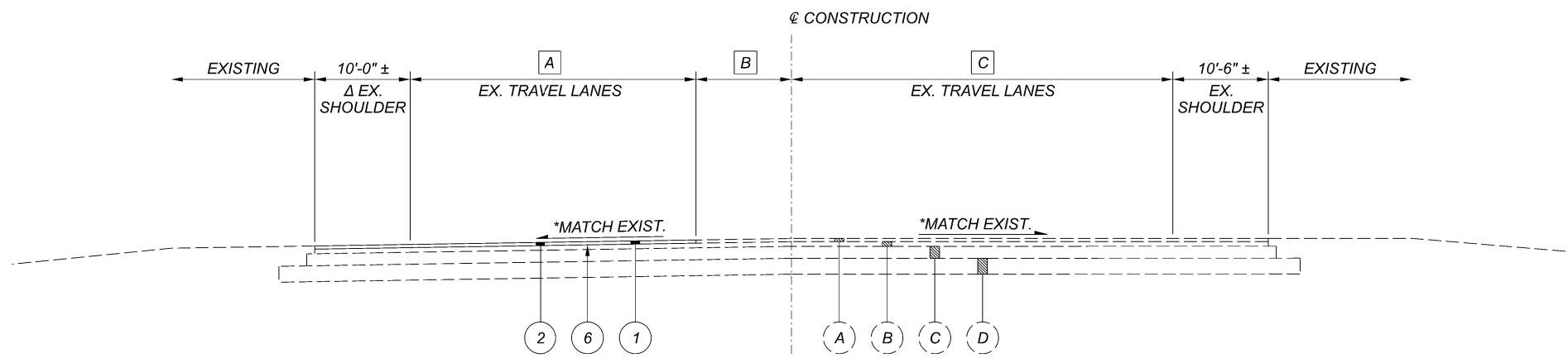


BASE AND SUBBASE STEP DETAIL

NOTE
 THE CLE-28 BRIDGE AND APPROACH SLAB EXISTS BETWEEN STA. 67+62.80 TO STA. 70+78.87 (RETAIN).
 * MATCH EXISTING CROSS SLOPE IN AREAS OF RESURFACING
 ** THE CLE-28 BRIDGE IS ON A SKEW. THEREFORE, RESURFACING WILL BE PERFORMED UP TO THE EXPANSION JOINT AT CL STA. 67+57.00 AND WILL FOLLOW THE BRIDGE SKEW. (WIDTHS FOR THIS SECTION ARE MEASURED PERPENDICULAR TO CL OF CL-28 AND DO NOT TAKE INTO ACCOUNT THE BRIDGE SKEW)

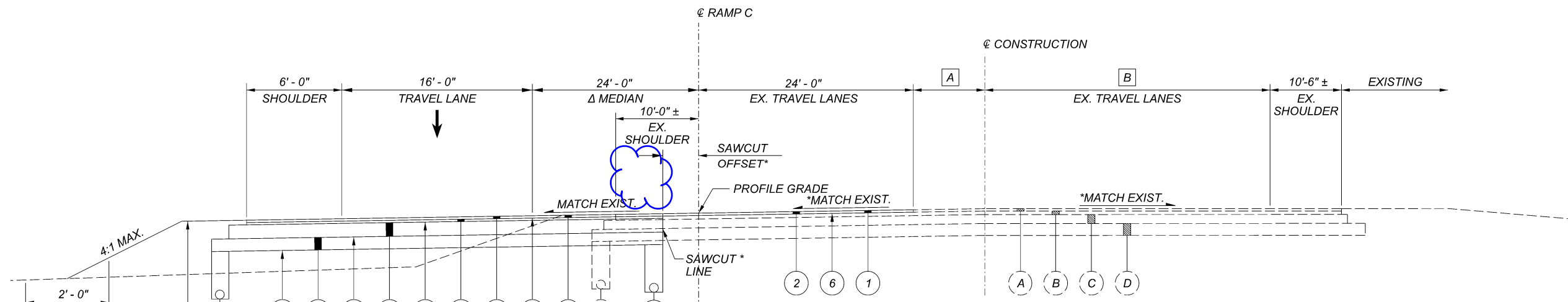
LEGEND

- | | | |
|---|---|---|
| (A) EXISTING ASPHALT CONCRETE CONCRETE SURFACE COURSE | (1) ITEM 254 - PAVEMENT PLANING, 1 1/2" THICK | (8) ITEM 605 - 6" BASE PIPE UNDERDRAINS |
| (B) EXISTING ASPHALT CONCRETE INTERMEDIATE COURSE | (2) ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) | (9) ITEM 609 - CURB, TYPE 6 |
| (C) ASPHALT CONCRETE BASE COURSE | (3) ITEM 448 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22 | (10) ITEM 606 - GUARDRAIL, TYPE MGS |
| (D) EXISTING SUBBASE | (4) ITEM 302 - 6" ASPHALT CONCRETE BASE, PG64-22 | (11) ITEM 659 - SEEDING AND MULCHING |
| (E) EXISTING GUARDRAIL | (5) ITEM 304 - 6" AGGREGATE BASE | (12) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 |
| (F) EXISTING MONOLITHIC CURB | (6) ITEM 407 - TACK COAT | (13) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS |
| (G) EXISTING 6" UNDERDRAIN (TO BE REMOVED) | (7) ITEM 204 - SUBGRADE COMPACTION | |



SUPERELEVATED SECTION - SR-28
 STA. 74+58.22 TO STA. 77+86.84
 STA. 16+82.45 TO STA. 17+20.15

- A** 24'-0"± STA. 74+58.22 TO STA. 77+86.84
 42'-8"± FROM STA. 16+82.45 TO STA. 17+20.15
- B** VARIES: 8.75' ± AT STA. 74+58.22 TO 1.38' ± STA. 77+86.84
- C** VARIES: 28'-0"± AT STA. 74+58.22 TO 34'-10"± STA. 77+86.84
 VARIES: 41'-5"± AT STA. 16+82.45 TO 60'-0"± STA. 17+20.15



SUPERELEVATED SECTION - SR-28
 STA. 77+86.84 TO STA. 78+58.83

- A** VARIES: 1.38' ± STA. 77+86.84 TO 0'-6" STA. 78+58.83
- B** VARIES: 34'-10"± STA. 77+86.84 TO 37'-0"± STA. 78+58.83

RAMP C
 STA. 224+49.85 TO STA. 225+98.80

#BASE PIPE UNDERDRAIN (SAWCUT)

STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (EDGE OF TRAVEL LANE)

STA. 225+01.53 TO STA. 226+70.54	25'-6" TO 33'-0", LT
STA. 226+70.54 TO STA. 231+47.93	33'-0", LT
STA. 231+47.93 TO STA. 232+48.94	33'-0" TO 22'-3", LT

*SAWCUT OFFSET

STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

NOTE

THE SR-28 BRIDGE AND APPROACH SLAB EXIST BETWEEN @ STA. 67+62.80 TO STA. 70+78.87.

* MATCH EXISTING CROSS SLOPE IN AREAS OF RESURFACING

** THE SR-28 BRIDGE IS ON A SKEW. THEREFORE, RESURFACING WILL BE PERFORMED UP TO THE EXPANSION JOINT AT @ STA. 67+57.00 AND WILL FOLLOW THE BRIDGE SKEW. (WIDTHS FOR THIS SECTION ARE MEASURED PERPENDICULAR TO @ OF SR-28 AND DO NOT TAKE INTO ACCOUNT THE BRIDGE SKEW)

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

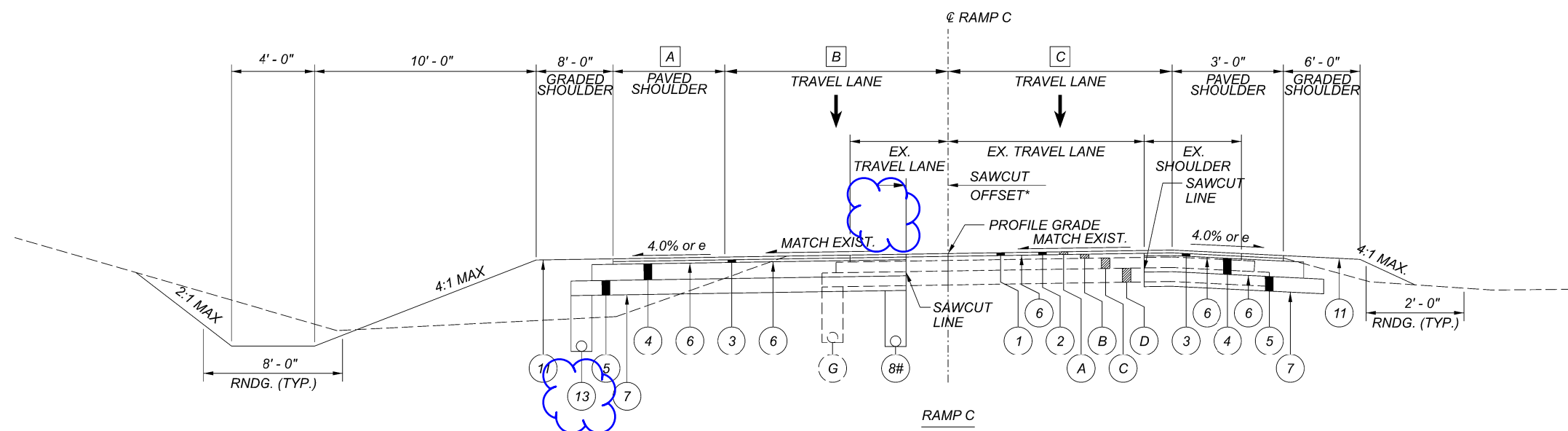
109357

SHEET

5

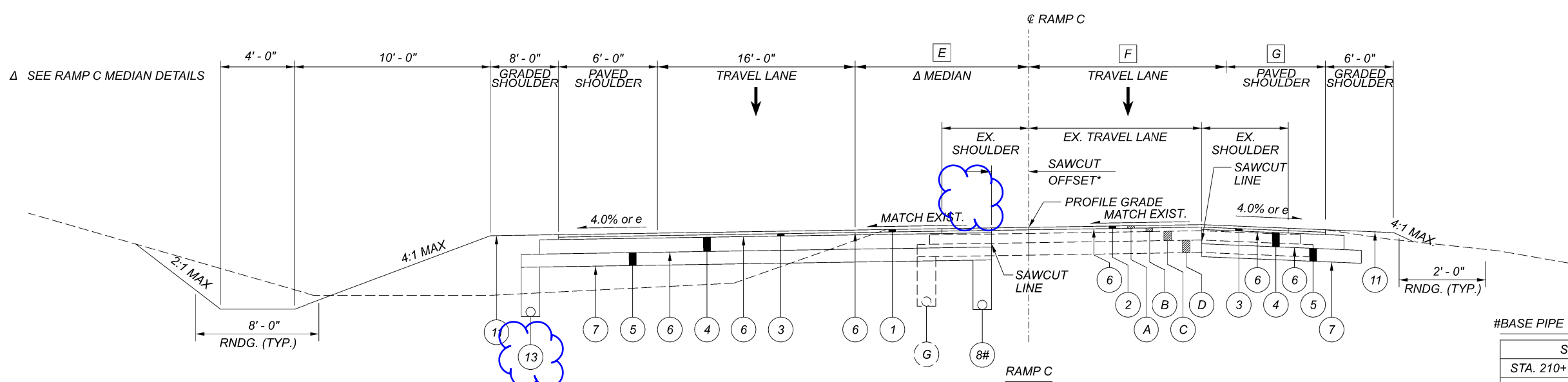
TOTAL

160



RAMP C
 STA. 210+73.78 TO STA. 222+99.85

- A** VARIES: 10'-0" FROM STA. 210+73.78 TO STA. 211+88.27
 VARIES: 10'-0" AT STA. 211+88.27 TO 6'-0" AT STA. 212+49.14
 VARIES: 6'-0" FROM STA. 212+49.14 TO STA. 222+99.85
- B** VARIES: 0'-0" AT STA. 210+73.78 TO 16'-0" AT STA. 218+73.78
 VARIES: 16'-0" FROM STA. 218+73.78 TO STA. 220+73.78
 VARIES: 16'-0" AT STA. 220+73.78 TO 17'-9" AT STA. 222+99.85
- C** VARIES: 16'-0" FROM STA. 210+73.78 TO STA. 220+73.78
 VARIES: 16'-0" AT STA. 218+69.99 TO 17'-0" AT STA. 222+99.85



RAMP C
 STA. 222+99.95 STA. 224+49.85

- E** VARIES: 0'-0" AT STA. 222+99.95 TO 4'-9" AT STA. 224+49.85
- F** VARIES: 17'-0" FROM STA. 222+99.95 TO STA. 224+49.85
- G** VARIES: 3'-0" FROM 222+99.95 STA. 224+49.85

*SAWCUT OFFSET

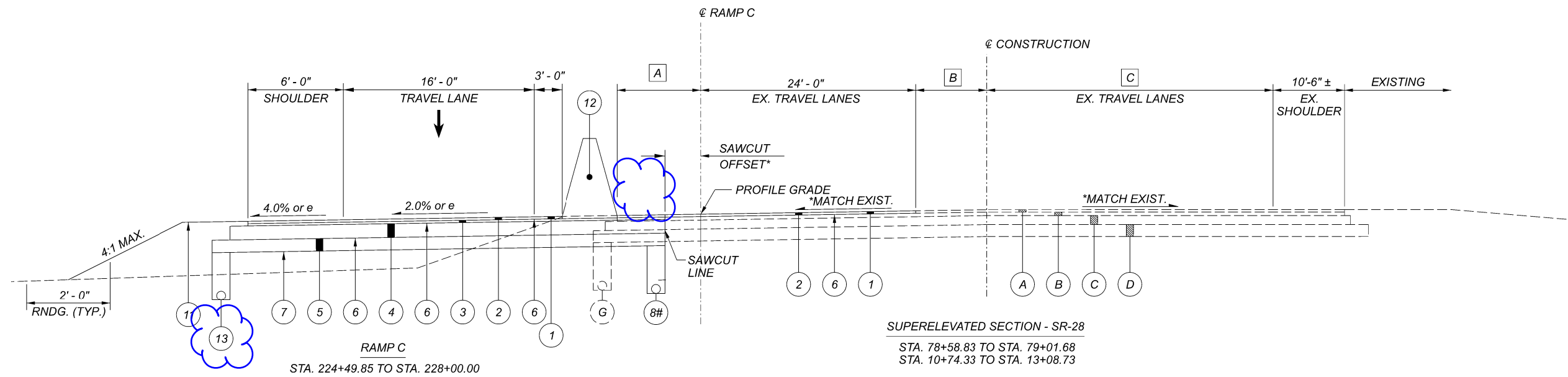
STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (SAWCUT)

STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (EDGE OF TRAVEL LANE)

STATION RANGE	OFFSET
STA. 225+01.53 TO STA. 226+70.54	25'-6" TO 33'-0", LT
STA. 226+70.54 TO STA. 231+47.93	33'-0", LT
STA. 231+47.93 TO STA. 232+48.94	33'-0" TO 22'-3", LT



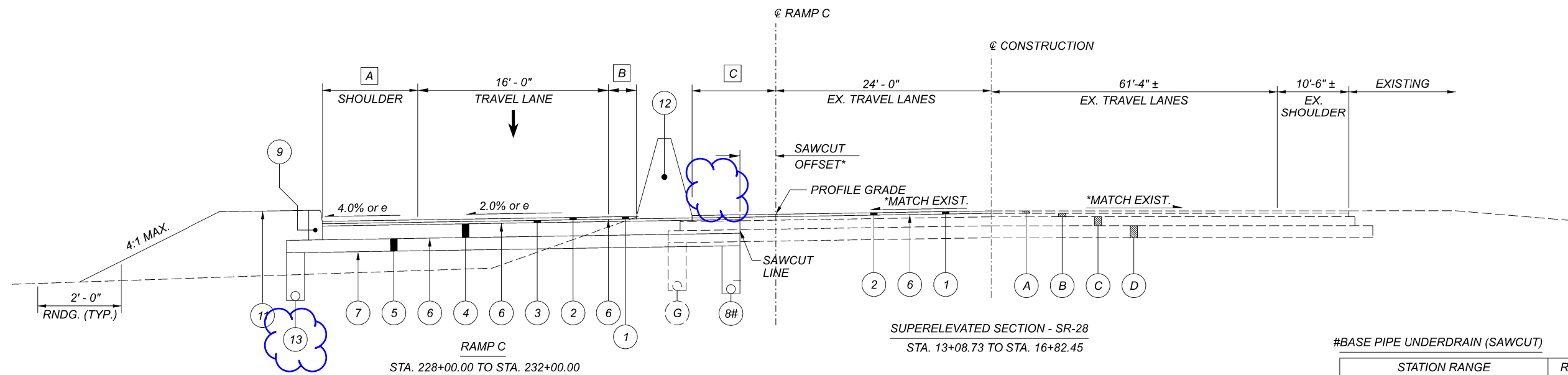
RAMP C
 STA. 224+49.85 TO STA. 228+00.00

SUPERELEVATED SECTION - SR-28
 STA. 78+58.83 TO STA. 79+01.68
 STA. 10+74.33 TO STA. 13+08.73

A VARIES: 5'-3" AT STA. 224+49.85 TO 11'-0" AT STA. 225+98.80
 11'-0" FROM STA. 225+98.80 TO STA. 228+00.00

B VARIES: 0'-6" ± STA. 78+58.83 TO 0' STA. 79+01.68
 0' STA. 10+74.33 TO STA. 13+08.73

C VARIES: 37'-0" ± STA. 78+58.83 TO 39'-3" ± STA. 79+01.68
 VARIES: 39'-3" ± STA. 10+74.33 TO 57'-0" ± STA. 11+81.28
 VARIES: 57'-0" ± STA. 11+81.28 TO 61'-4" ± STA. 12+80.21
 61'-4" ± STA. 12+80.21 TO STA. 13+08.73



RAMP C
 STA. 228+00.00 TO STA. 232+00.00

SUPERELEVATED SECTION - SR-28
 STA. 13+08.73 TO STA. 16+82.45

A 6'-0" AT STA. 228+00.00 TO STA. 230+97.22
 VARIES: 6'-0" AT STA. 230+97.22 TO 11'-0" AT STA. 232+00.00

B 3'-0" AT STA. 228+00.00 TO STA. 231+48.80
 VARIES: 3'-0" AT STA. 231+48.80 TO 2'-0" AT STA. 232+00.00

C 11'-0" FROM STA. 228+00.00 TO STA. 231+39.19
 VARIES: 11'-0" AT STA. 231+39.19 TO 1'-6" AT STA. 232+00.00

***SAWCUT OFFSET**

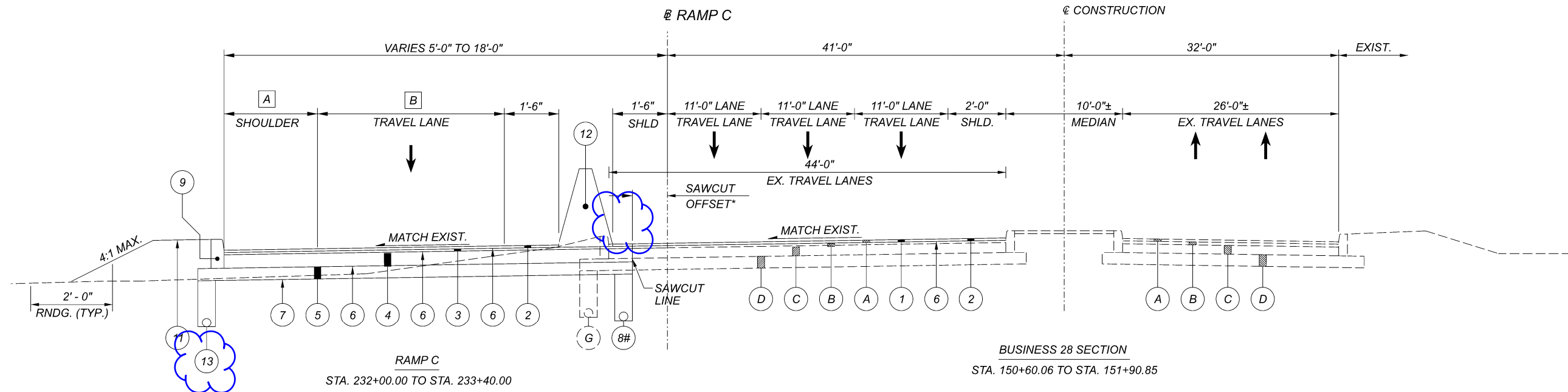
STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (SAWCUT)

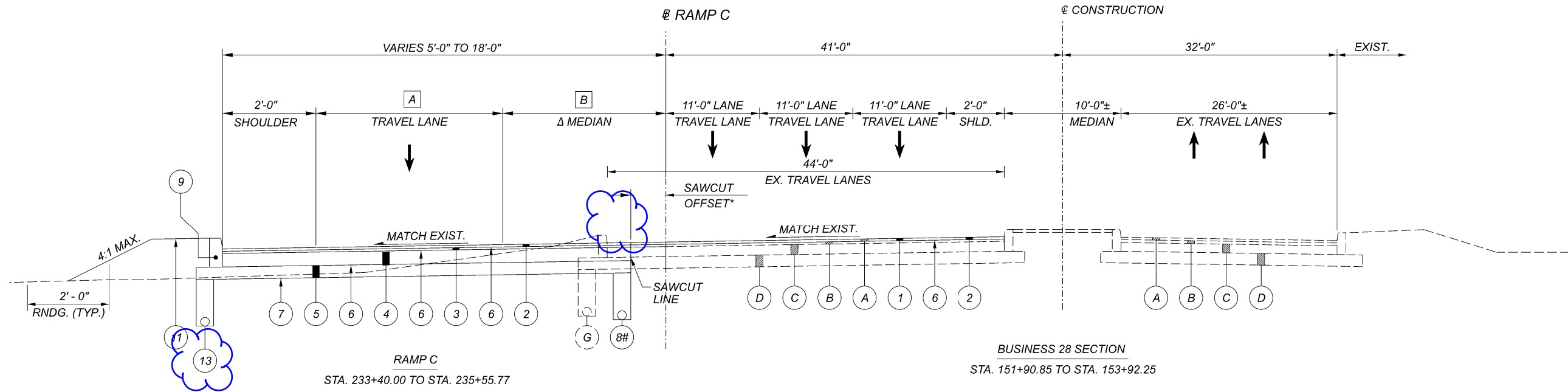
STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (EDGE OF TRAVEL LANE)

STATION RANGE	OFFSET
STA. 225+01.53 TO STA. 226+70.54	25'-6" TO 33'-0", LT
STA. 226+70.54 TO STA. 231+47.93	33'-0", LT
STA. 231+47.93 TO STA. 232+48.94	33'-0" TO 22'-3", LT



- A** VARIES: 11'-0"± AT STA. 232+00.00 TO 2'-0" AT STA. 233+22.29
2'-0" FROM STA. 233+22.29 TO STA. 233+40.00
- B** VARIES: 16'-0" AT STA. 232+00.00 TO 11'-0" AT STA. 233+15.22
11'-0" FROM STA. 233+15.22 TO STA. 233+40.00



- A** VARIES: 11'-0" AT STA. 233+40.00 TO 0' AT STA. 235+55.77
- B** 6'-0" AT STA. 233+40.00 TO STA. 233+75.00
VARIES: 6'-0" FROM STA. 233+75.00 TO 0' AT STA. 233+40.00

*SAWCUT OFFSET

STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (SAWCUT)

STATION RANGE	RAMP C OFFSET
STA. 210+73.75 TO STA. 225+02.86	1'-0", LT
STA. 225+02.86 TO STA. 225+98.80	1'-0" TO 9'-0", LT
STA. 225+98.80 TO STA. 231+39.19	9'-0", LT
STA. 231+39.19 TO STA. 232+48.88	9'-0" TO 1'-0", LT
STA. 232+48.88 TO STA. 235+55.77	1'-0", LT

#BASE PIPE UNDERDRAIN (EDGE OF TRAVEL LANE)

STATION RANGE	EDGE OF TRAVEL LANE OFFSET
STA. 225+01.53 TO STA. 226+70.54	25'-6" TO 33'-0", LT
STA. 226+70.54 TO STA. 231+47.93	33'-0", LT
STA. 231+47.93 TO STA. 232+48.94	33'-0" TO 22'-3", LT

ROUNDING

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

UTILITIES

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

CINCINNATI BELL - AERIAL & PLACING
221 EAST 4TH STREET (BUILDING 121-900)
CINCINNATI, OHIO 45202
513-565-6104 (ROB STROCHINSKY)

CINCINNATI BELL TELEPHONE - UNDERGROUND STRUCTURES
221 EAST 4TH STREET (BUILDING 121-900)
CINCINNATI, OHIO 45202
513-565-7187 (BRECK COWAN)

CLERMONT COUNTY WATER RESOURCES
4400 HASKELL LANE
BATAVIA, OHIO 45103
513-479-4031 (TIM CHERRY)

DUKE ENERGY - ELECTRIC
2010 DANA AVENUE
CINCINNATI, OHIO 45207
513-458-3855 (CHRIS TEPE)

DUKE ENERGY - GAS
139 EAST 4TH STREET ROOM 460A
CINCINNATI, OHIO 45202
513-479-4031 (TIM CHERRY)

MCI/VERIZON
120 RAVINE STREET
AKRON, OH 44303
330-253-8267 (AL GUEST)

CHARTER COMMUNICATIONS
10920 KENWOOD ROAD
BLUE ASH, OH 45242
DL-SOUTHERN-OHIO-OUTSIDE-PLANT@CHARTER.COM
513-386-5499 (KENT RIEGER)
KENT.RIEGER@CHARTER.COM

ODOT D8 TRAFFIC
505 SOUTH SR741
LEBANON, OHIO 45036
513-933-6692 (JIM JUDD)
JIM.JUDD@DOT.ODOT.GOV

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

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. DO NOT OPERATE ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. THE CONSTRUCTION SHALL COMPLY WITH ALL LOCAL NOISE ORDINANCES.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR: 0.99992923
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

PROFILE AND ALIGNMENT

THE WORK PROPOSED BY THIS PROJECT CONSISTS OF RESURFACING OF THE EXISTING PAVEMENT. THE ALIGNMENT OF THE EXISTING PAVEMENT WILL NOT BE CHANGED AND THE PROFILE OF THE PROPOSED SURFACE WILL BE SIMILAR TO THAT OF THE EXISTING PAVEMENT.

WORK LIMITS

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

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	4	0	4

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

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

REVIEW OF DRAINAGE FACILITIES

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

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

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

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

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. REPLACE UNDERDRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.2 IN AREAS OF STORM SEWER PIPE REPLACEMENT AND CONNECT TO PROPOSED INLETS.

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:

- 601, TIED CONCRETE BLOCK MAT, TYPE 1 5 SQ. YD.
- 605, AGGREGATE DRAINS 250 FT.
- 611, 6" CONDUIT, TYPE F 100 FT.
- 611, PRECAST REINFORCED CONCRETE OUTLET 3 EACH
- 605, 6" UNCLASSIFIED PIPE UNDERDRAINS 50 FT.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO AND TIED TO EXISTING CONCRETE, THE CONTRACTION JOINT SPACING REQUIRED IN STANDARD CONSTRUCTION DRAWING BP-2.2 WILL BE WAIVED. CONSTRUCT CONTRACTION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL CONTRACTION JOINTS IN THE EXISTING CONCRETE PAVEMENT. INSTALL EXPANSION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

MANHOLES AND VALVES ADJUSTED TO GRADE (PRIVATELY OWNED)

ALL MANHOLES AND VALVES ENCOUNTERED IN AREAS THAT REQUIRE GRADE ADJUSTMENT WILL BE PERFORMED PRIOR TO THE APPLICATION OF THE SURFACE COURSE BY THE UTILITY OWNER. CONTACT THE UTILITY OWNER 2 WEEKS PRIOR TO WHEN THE ADJUSTMENTS ARE TO BE COMPLETED.

PROTECTION OF THE INDIANA BAT AND NORTHERN LONG EARED BAT

ENSURE IMPACTS TO THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT ARE AVOIDED AND MINIMIZED. DO NOT REMOVE TREES FROM APRIL 1 THROUGH SEPTEMBER 30. PERFORM ALL NECESSARY TREE REMOVAL FROM OCTOBER 1 THROUGH MARCH 31. DEMARCATÉ CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM 614, MAINTAINING TRAFFIC

THE SAME NUMBER OF LANES THAT EXISTED PRIOR TO CONSTRUCTION IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON CLE-28 BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT AND PAVEMENT FOR MAINTAINING TRAFFIC, EXCLUDING THE FOLLOWING:

- LANES MAY BE CLOSED IN ACCORDANCE WITH THE CLE-28 UNAUTHORIZED LANE USE TABLE PROVIDED ON THIS SHEET.
- SR -28 MAY BE REDUCED TO FIVE LANES FOR PHASES 1 AND 2 AND FOUR LANES FOR PHASES 3 THROUGH 5 OF THE MOT PLAN, AS FURTHER DETAILED IN THIS NOTE AND PLAN SHEETS 17 TO 48.

THE SAME NUMBER OF LANES THAT EXISTED PRIOR TO CONSTRUCTION IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON BUS-28 AND RAMP C BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT AND PAVEMENT FOR MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN IN SCD MT-95.41 AND MT-95.45

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

CHRISTMAS	FOURTH OF JULY
NEW 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:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	6:00 AM FRIDAY THROUGH 7:00 PM MONDAY
MONDAY	6:00 AM FRIDAY THROUGH 7:00 PM TUESDAY
TUESDAY	6:00 AM MONDAY THROUGH 7:00 PM WEDNESDAY
WEDNESDAY	6:00 AM TUESDAY THROUGH 7:00 PM THURSDAY
THURSDAY	6:00 AM WEDNESDAY THROUGH 7:00 PM MONDAY
FRIDAY	6:00 AM THURSDAY THROUGH 7:00 PM MONDAY
SATURDAY	6:00 AM FRIDAY THROUGH 7:00 PM 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).

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.

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
RAMP AND 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.

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.

UNAUTHORIZED LANE USE

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE UNAUTHORIZED LANE USE TABLE LOCATED ON THIS SHEET FOR EACH UNIT OF TIME A CRITICAL LANE IS CLOSED BY THE CONTRACTOR WHILE NOT OTHERWISE PERMITTED BY THIS CONTRACT. THE DISINCENTIVE WILL BE FOR ANY LANE CLOSURES CAUSED BY THE CONTRACTOR DURING TIMES AND LOCATIONS NOT SPECIFICALLY PERMITTED BY THIS CONTRACT.

I-275, SR-28, BUS-28, OR RAMP C SHALL NOT BE CLOSED TO THROUGH TRAFFIC AT ANY TIME BY THE CONTRACTOR, UNLESS OTHERWISE SPECIFICALLY PERMITTED BY THIS CONTRACT OR AT THE DIRECTION OF THE ENGINEER.

LANE/RAMP TO BE CLOSED	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT
I-275	EACH DAY	\$1000
SR-28	EACH DAY	\$1000
BUS-28	EACH DAY	\$1000
RAMP C	EACH DAY	\$1000

NO SINGLE LANE CLOSURES SHALL BE ALLOWED ON I-275 FROM 7 AM TO 9 AM AND FROM 1 PM TO 7 PM MONDAY THROUGH FRIDAY.

NO LANE CLOSURES ON SOUTHBOUND I-275 SHALL BE ALLOWED 2 HOURS PRIOR TO 1 HOUR AFTER THE START OF EVENTS AT RIVERBEND. NO LANE CLOSURES ON NORTHBOUND I-275 SHALL BE ALLOWED 1 HOUR PRIOR TO THE SCHEDULED END OF EVENTS TO 2 HOURS AFTER THE END OF EVENTS.

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 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
RAMP AND ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	21 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES AND RESTRICTIONS	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	21 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION AND TRAFFIC PATTERN CHANGES		21 CALENDAR DAYS PRIOR TO IMPLEMENTATION

DUST CONTROL

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

ITEM 616, WATER 125 M. GAL.

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.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.]

[THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

- ITEM 614, BARRIER REFLECTOR, TYPE 1, ONE-WAY 110 EACH
- ITEM 614, OBJECT MARKER, ONE-WAY 16 EACH
- ITEM 614, INCREASED BARRIER DELINEATION 800 FEET

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

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 C&MS 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).

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

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

THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

- ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
- AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
- AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC. WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
- THE ACTIVE WORK AREA Laterally CLOSEST TO THE OPEN TRAVELED LANE; OR
- OTHER LOCATION AS APPROVED BY THE ENGINEER.

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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 ZONES.

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

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

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

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. 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 THAT 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 ASSISTANCE460 HOURS

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS, WORK LIMITS FOR THOSE LOCATIONS, PLACEMENT, OPERATION, MAINTENANCE, AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER.

THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 8 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN

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

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

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN. 42 SIGN MONTH ASSUMING 6 PCMS SIGN(S) FOR 7 MONTH(S)

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION. IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR MIAMI TOWNSHIP FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00 AM

TO 9:00 AM AND 3:00 PM TO 7:00 PM/ ANY SIGNALIZED INTERSECTION WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY MIAMI TOWNSHIP POLICE, HIRED BY THE CONTRACTOR:

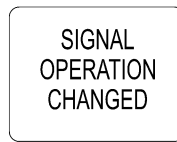
- 1. SR-28 & BUS-28 & ROMAR DRIVE

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

- 1. TIME OF NOTIFICATION OF MALFUNCTION;
- 2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
- 3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
- 4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
- 5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.



W3-H10-30

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

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

WHERE SIGNIFICANT EARTHWORK IS REQUIRED, CROSS SECTIONS ARE SHOWN IN THE PLANS AND PAY ITEM FOR "ROADS FOR MAINTAINING TRAFFIC" HAS BEEN INCLUDED. FOR SHORTER ROADWAY SECTIONS OR WHERE ONLY MINOR GRADING IS REQUIRED ALL EXCAVATION, EMBANKMENT, TEMPORARY SEEDING, AND ALL OTHER INCIDENTAL ITEMS SHALL BE INCLUDED UNDER THE "PAVEMENT FOR MAINTAINING TRAFFIC" PAY ITEM. PAYMENT FOR EARTHWORK SHALL NOT BE MADE SEPARATELY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADING, EMBANKMENT, EXCAVATION, MATERIALS, AND OTHER INCIDENTALS WHICH ARE REQUIRED TO PROVIDE AND MAINTAIN A SAFE DRIVING SURFACE, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING TEMPORARY GRADING, DRAINAGE FACILITIES, AND PAVEMENT RESURFACING (OVERLAYS) NECESSARY TO MAINTAIN ADEQUATE AND POSITIVE DRAINAGE THROUGHOUT THE WORK ZONE, AS SPECIFIED IN THE PLAN OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL MAINTAIN, TEMPORARILY RELOCATE, OR ADJUST TO TEMPORARY GRADE ALL TOPOGRAPHIC ELEMENTS WITHIN THE WORK LIMITS INCLUDING BUT NOT LIMITED TO: CATCH BASINS, INLETS, SIGNS, LIGHTING FEATURES, AND OTHER UTILITY APPURTENANCES AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING TEMPORARY DRAINAGE FACILITIES INCLUDING SIZE, TYPE, AND LOCATION OF TEMPORARY DRAINAGE ITEMS, TEMPORARY SHEETING AND SHORING, WHERE NEEDED TO KEEP SIDE SLOPES FROM INTERFERING WITH OTHER CONSTRUCTION ACTIVITIES AND/OR THE TRAVELING PUBLIC, SHALL ALSO BE INCLUDED WITH THIS ITEM.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND OTHER INCIDENTALS REQUIRED TO CONSTRUCT TEMPORARY ROADWAY WIDENING SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN, SHALL CONSIST OF:

- 1-1/2" - 441 ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 1 (448)
- 5" - 302 ASPHALT CONCRETE BASE
- 4" - 304 AGGREGATE BASE

AND SHALL CONFORM TO THE SPECIFICATION REQUIREMENTS FOR ITEM 615.

TEMPORARY PAVEMENT RESTORATION

ONCE CONSTRUCTION ENDS, ALL AREAS WHERE TEMPORARY PAVEMENT WAS PLACED MUST BE RESTORED TO PRE-EXISTING CONDITIONS AND IS SUBJECT TO APPROVAL BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUSIVE IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAINTENANCE OF MAJOR GUIDE SIGNS

THE CONTRACTOR SHALL MAINTAIN THE SAME NUMBER OF GUIDE SIGNS AS CURRENTLY EXISTS FOR EACH FREEWAY EXIT AND ENTRANCE TO ALLOW MOTORISTS TO FIND THEIR DESTINATIONS SAFELY. NO MORE THAN ONE (1) SIGN FOR ANY EXIT MAY BE REMOVED AT ANY TIME, IN INSTANCES WHERE THE COPY ON THE REPLACEMENT SIGN SUBSTANTIALLY DIFFERENT FROM THE

COPY ON THE EXISTING SIGNS IN THE SEQUENCE FOR THAT RAMP SHALL BE CHANGED WITHIN ONE CALENDAR DAY.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND OTHER INCIDENTALS REQUIRED TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

TEMPORARY OVERHEAD GUIDE SIGN LOCATIONS

THE CONTRACTOR SHALL ADJUST THE OVERHEAD LOCATION OF GUIDE SIGNS ON THE EXISTING OR FINAL PERMANENT OVERHEAD SUPPORTS TO CORRESPOND WITH THE REVISED LANE LOCATION. PAYMENT FOR ALL ITEMS ASSOCIATED WITH THE TEMPORARY RELOCATION OF SIGNS ON THE EXISTING OR FINAL PERMANENT SUPPORTS SHALL BE INCLUDED UNDER THE LUMP SUM PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAYMENT 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 DRAWINGS BP-3.1.

ITEM 625, SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN. BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE

MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.



ITEM 625, SPECIAL - MAINTAIN EXISTING LIGHTING (CONT.)

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

A LUMP SUM QUANTITY OF ITEM 625, SPECIAL - MAINTAIN EXISTING LIGHTING HAS BEEN PROVIDED IN THE LIGHTING SUBSUMMARY

WORK ZONE MARKINGS AND SIGNS

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

ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT
2.63 MILE

ITEM 614 - WORK ZONE LANE LINE, CLASS I, 807 PAINT
0.24 MILE

ITEM 614 - WORK ZONE CENTER LINE, CLASS I, 807 PAINT
0.79 MILE

ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT
1014 FEET

ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT
9487.94

ITEM 614 - WORK ZONE STOP LINE, CLASS I, 807 PAINT
175.75 FEET

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE PER THE REQUIREMENTS OF MOT PHASE 8:

ITEM 614 - WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT
1.28 MILE

ITEM 614 - WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT
1.15 MILE

ITEM 614 - WORK ZONE CENTER LINE, CLASS III, 6", 642 PAINT
0.46 MILE

ITEM 614 - WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT
272 FEET

ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT
2104 FEET

ITEM 614 - WORK ZONE STOP LINE, CLASS III, 642 PAINT
301 FEET

ITEM 614 - WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT
73 FEET

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-95.30, MT-95.31, MT-95.32, MT-97.10 AND MT-97.12.

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

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC.

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

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

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

[OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2
(ONE-WAY OR BIDIRECTIONAL) 20 EACH

ITEM 614, OBJECT MARKER, ONE-WAY
16 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

ORDER OF COMPLETION	TRAFFIC CONTROL OPERATION	WORK TO BE COMPLETED
PRE-CONSTR.	MAINTAIN NORMAL OPERATIONS, LANE CLOSURES AS PER STANDARD DRAWINGS MT-95.31 AND MT-95.32 AS NEEDED. AT NO TIME SHALL THE CONTRACTOR DETOUR TRAFFIC ON SR-28.	ALL PRE-CONSTRUCTION ACTIVITIES, INCLUDING MOBILIZATION, CLEARING AND GRUBBING, TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, AND STAKING SHALL BE COMPLETED.
PHASE 1	SHIFT ALL TRAFFIC TO THE SOUTH SIDE OF SR-28. MAINTAIN THREE 11' LANES OF TRAFFIC IN THE EAST DIRECTION ON SR-28 AND TWO 11' LANES OF TRAFFIC IN THE WEST DIRECTION AT ALL TIMES. SHOULDERS SHALL BE 2' WIDE AS ALLOWABLE. ACCESS TO ALL INTERSTATE RAMPS SHALL REMAIN OPEN FOR THE DURATION OF PHASE 1.	REPLACE NORTH SIDE EXISTING PARAPET AND VANDAL PROTECTION FENCE WITH A NEW SINGLE SLOPE CONCRETE BARRIER PER SBR-1-20 AND NEW 6" TALL FENCE PER VPF-1-90 ON THE BRIDGE. INCLUDE A 3" CONDUIT IN EACH PARAPET. REPLACE THE PARAPET TRANSITIONS, BRIDGE TERMINAL ASSEMBLIES, AND APPROACH GUARDRAIL TO MEET CURRENT STANDARDS. SEAL THE NEW PARAPETS WITH AN EPOXY URETHANE SEALER, FEDERAL COLOR 17778.
PHASE 2	SHIFT ALL TRAFFIC TO THE NORTH SIDE OF SR-28. MAINTAIN THREE 11' LANES OF TRAFFIC IN THE EAST DIRECTION ON SR-28 AND TWO 11' LANES OF TRAFFIC IN THE WEST DIRECTION AT ALL TIMES. SHOULDERS SHALL BE 2' WIDE AS ALLOWABLE. ACCESS TO ALL INTERSTATE RAMPS SHALL REMAIN OPEN FOR THE DURATION OF PHASE 2.	REPLACE SOUTH SIDE EXISTING PARAPET AND VANDAL PROTECTION FENCE WITH A NEW SINGLE SLOPE CONCRETE BARRIER PER SBR-1-20 AND NEW 6" TALL FENCE PER VPF-1-90 ON THE BRIDGE. INCLUDE A 3" CONDUIT IN EACH PARAPET. REPLACE THE PARAPET TRANSITIONS, BRIDGE TERMINAL ASSEMBLIES, AND APPROACH GUARDRAIL TO MEET CURRENT STANDARDS. SEAL THE NEW PARAPETS WITH AN EPOXY URETHANE SEALER, FEDERAL COLOR 17778.
PHASE 3	TRAFFIC SHALL BE KEPT SHIFTED TO THE NORTH SIDE OF SR-28. MAINTAIN TWO 10.5' LANES OF TRAFFIC IN EACH DIRECTION ON SR-28 AT ALL TIMES. SHOULDERS SHALL BE 2' WIDE AS ALLOWABLE. ACCESS TO ALL INTERSTATE RAMPS SHALL REMAIN OPEN FOR THE DURATION OF PHASE 3.	REPLACE THE EXISTING MSC OVERLAY AND PORTION OF THE ORIGINAL DECK USING HYDRODEMOLITION AND REPLACE WITH A NEW SUPERPLASTICIZED DENSE CONCRETE (SDC) IN AREA DESIGNATED AS WORK AREA.
PHASE 4	SHIFT EASTBOUND TRAFFIC TO THE SOUTH SIDE OF SR-28. MAINTAIN TWO 10.5' LANES OF TRAFFIC IN EACH DIRECTION ON SR-28 AT ALL TIMES. SHOULDERS SHALL BE 2' WIDE AS ALLOWABLE. ACCESS TO ALL INTERSTATE RAMPS SHALL REMAIN OPEN FOR THE DURATION OF PHASE 4.	REPLACE THE EXISTING MSC OVERLAY AND PORTION OF THE ORIGINAL DECK USING HYDRODEMOLITION AND REPLACE WITH A NEW SUPERPLASTICIZED DENSE CONCRETE (SDC) IN AREA DESIGNATED AS WORK AREA.
PHASE 5	SHIFT ALL TRAFFIC TO THE SOUTH SIDE OF SR-28. MAINTAIN TWO 10.5' LANES OF TRAFFIC IN EACH DIRECTION ON SR-28 AT ALL TIMES. SHOULDERS SHALL BE 2' WIDE AS ALLOWABLE. ACCESS TO ALL INTERSTATE RAMPS SHALL REMAIN OPEN FOR THE DURATION OF PHASE 3.	REPLACE THE EXISTING MSC OVERLAY AND PORTION OF THE ORIGINAL DECK USING HYDRODEMOLITION AND REPLACE WITH A NEW SUPERPLASTICIZED DENSE CONCRETE (SDC) IN AREA DESIGNATED AS WORK AREA.
PHASE 6	SHOULDER CLOSURE AS PER STANDARD DRAWING MT-95.45 ON RAMP C LEFT EDGE OF TRAVEL WAY. - PHASE 6 SHALL BE PERFORMED IN CONJUNCTION WITH PHASES 1 THROUGH 5 AND PRIOR TO COMMENCEMENT OF PHASE 7.	SAWCUT LEFT EDGE OF TRAVEL LANE AND CONSTRUCT NEW LANE AND SHOULDER OF RAMP C AS PER TYPICAL SECTIONS UP TO AND INCLUDING THE 442 INTERMEDIATE COURSE. FOUNDATIONS AND NEW LIGHTING SHALL BE INSTALLED PRIOR TO REMOVAL OF EXISTING RAMP LIGHTING. ALL STORM SEWER, CURBS, MEDIANS, OVERHEAD SIGN STRUCTURES AND SPAN WIRE OVERHEAD SIGN SUPPORTS SHALL BE CONSTRUCTED.
PHASE 7	SHOULDER CLOSURE AS PER STANDARD DRAWING MT-95.45 ON RAMP C RIGHT EDGE OF TRAVEL WAY. - PHASE 7 SHALL BE PERFORMED IN CONJUNCTION WITH PHASES 1 THROUGH 5 UPON COMPLETION OF PHASE 6.	SAWCUT AND RECONSTRUCT LEFT EDGE OF TRAVEL LANE AND SHOULDER OF RAMP C AS PER TYPICAL SECTIONS UP TO AND INCLUDING WEARING SURFACE.
PHASE 8	LANE CLOSURE AS PER STANDARD DRAWING MT-95.31, MT-95.32, AND MT-98.28	PREP SR-28, BUS-28 AND RAMP C FOR PAVING OPERATIONS. PAVE SR-28, BUS-28 AND RAMP C WITH FINAL 442 SURFACE COURSE, APPLY CLASS III PAVEMENT MARKINGS UNTIL APPLICATION OF FINAL 644/646 PAVEMENT MARKINGS. LANE CLOSURES SHALL BE LIMITED TO WORKING HOURS ONLY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

DESIGN AGENCY



DESIGNER
RJN

REVIEWER
JDH 09/27/21

PROJECT ID
109357


SHEET TOTAL
14 160

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	MAINTAINING TRAFFIC	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	OBJECT MARKER, ONE WAY	BARRIER REFLECTOR, TYPE 1, ONE-WAY	INCREASED BARRIER DELINEATION	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	614		WORK ZONE CENTER LINE, CLASS III, 6", 642 PAINT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	BARRIER REFLECTOR, TYPE 2, ONE-WAY	616	WATER	
			FROM	TO								LUMP	HOUR									EACH
		MOT - FROM GENERAL NOTES																				
		11		N/A		1																
		11		N/A			460															125
		11		N/A				16														
		11		N/A					110													
		11		N/A					800													
		12		N/A							42											
		13		PHASE 8								1.28	1.15	0.46	272	2104	301	73				
		14																	20			
TOTALS CARRIED TO GENERAL SUMMARY						1	460	32	110	800	42	1.28	1.15	0.46	272	2104	301	73	20	125		

MAINTENANCE OF TRAFFIC SUBSUMMARY


SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	607				614				615	622		642					
			FROM	TO		TEMPORARY VANDAL FENCE, TYPE B	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 2, ONE-WAY	WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT	WORK ZONE LANE LINE, CLASS 1, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS 1, 807 PAINT	WORK ZONE DOTTED LINE, CLASS 1, 6", 807 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 PAINT	WORK ZONE STOP LINE, CLASS 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	REMOVAL OF PAVEMENT MARKING				
PHASE 1 - SR-28						FT	EACH	EACH	MILE	MILE	MILE	FT	FT	FT	SQ YD	FT	FT	MILE				
18-21	RPM-1	SR-28	64+79.22	74+05.90														0.79				
19/20	TVF-1	SR-28	67+82.88	70+76.31	LT	294																
20	WIA-1	SR-28	72+84.59		LT		1															
19	PCB-1	SR-28	66+65.53	67+82.88	LT											119						
19/20	PCB-2	SR-28	67+82.88	70+76.31	LT												294					
20	PCB-3	SR-29	70+76.31	72+84.59	LT																	
20	TP-1	SR-28	70+28.36	72+37.31	RT											210						
19-21	WEL-1	SR-28	64+64.41	65+98.46	LT												417					
19-21	WEL-2	SR-28	66+05.97	74+32.96	LT																	
19/20	WEL-3	SR-28	66+40.42	71+94.93	RT																	
20/21	WEL-4	SR-28	70+64.64	73+93.22	RT																	
19-21	WCL-1	SR-28	64+79.22	74+06.14	LT/RT					0.18												
19-21	WCH-1	SR-28	64+79.22	74+05.64	LT											928						
19-21	WCH-2	SR-28	64+79.22	74+03.69	RT											928						
19-21	WCH-3	SR-28	64+79.22	74+03.22	RT											929						
19	WSL-1	SR-28	64+77.22		LT												25					
21	WDL-1	SR-28	74+03.73		LT/RT												37					
21	WDL-1	SR-28	74+06.17	75+70.53	LT/RT																206	
PHASE 2 - SR-28																						
22-25	RPM-2	SR-28	63+48.02	75+70.53	LT/RT																1.22	
23/24	TVF-2	SR-28	67+42.62	70+22.56	RT	281																
23	WIA-2	SR-28	65+51.11		RT		1															
23	PCB-4	SR-28	65+61.73	67+42.62	RT												183					
23/24	PCB-5	SR-28	67+42.62	70+22.56	RT																	
24	PCB-6	SR-28	70+22.56	70+77.50	RT																	
23-25	WEL-5	SR-28	66+04.89	75+22.98	LT					0.18												
23-25	WEL-6	SR-28	63+48.02	72+28.59	RT					0.18												
24/25	WEL-7	SR-28	70+37.72	74+09.82	RT					0.12												
23-25	WCL-2	SR-28	64+79.22	74+04.14	LT						0.19											
23-25	WCH-4	SR-28	64+79.22	74+04.46	LT											923						
23-25	WCH-5	SR-28	64+79.22	74+03.55	LT/RT											923						
23-25	WCH-6	SR-28	64+79.22	74+03.09	RT											922						
25	WSL-3	SR-28	74+02.62		LT/RT												37					
23	WDL-2	SR-28	63+48.02	64+77.22	LT/RT												99					
25	WDL-3	SR-28	74+06.61	75+70.53	LT/RT												72					
PHASE 3 - SR-28																						
26-29	RPM-3	SR-28	61+10.00	75+28.73	LT/RT																1.21	
27/28	TVF-3	SR-28	67+55.18	70+48.85	RT																	
27	WIA-3	SR-28	65+01.00		RT		1															
27	PCB-7	SR-28	65+11.77	67+55.18	RT												246					
27/28	PCB-8	SR-28	67+55.18	70+48.85	RT																	
28	PCB-9	SR-28	70+48.85	71+09.81	RT																	
26	WEL-8	SR-28	61+15.38	63+45.56	LT/RT					0.05												
26	WEL-9	SR-28	61+15.38	63+45.56	RT					0.23												
28/29	WEL-10	SR-28	71+22.35	74+48.22	RT					0.1												
27-29	WCL-3	SR-28	64+79.22	74+04.06	LT						0.18											
26	WCH-7	SR-28	61+15.38	63+45.56	LT																	
27-29	WCH-9	SR-28	64+79.22	74+06.47	LT/RT												230					
27-29	WCH-10	SR-28	64+79.22	74+03.62	LT/RT												930					
27	WSL-4	SR-28	63+45.56		LT/RT																	
27	WSL-5	SR-28	64+77.22		LT																	
29	WSL-6	SR-28	74+06.04		LT/RT																	
27	WDL-4	SR-28	63+47.56	64+77.22	LT/RT																	
29	WDL-5	SR-28	74+06.04	75+28.43	LT/RT																	
TOTALS CARRIED TO GENERAL SUMMARY						575	3		1.29	0.55	622	7638	178	417	891	869	3.22					

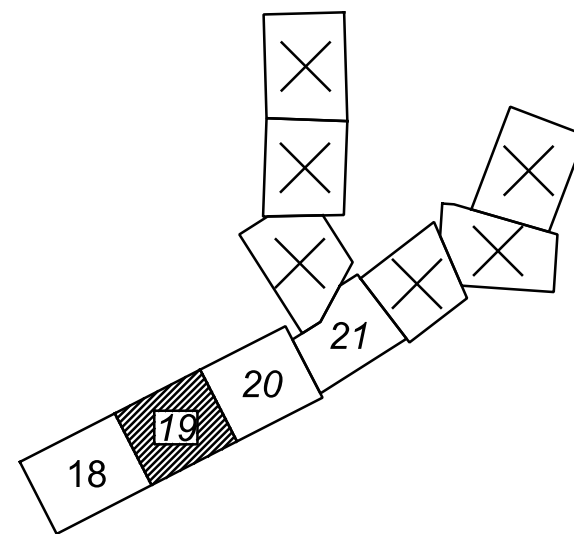
MAINTENANCE OF TRAFFIC SUBSUMMARY

DESIGN AGENCY

 DESIGNER
 RJN
 REVIEWER
 JDH 09/27/21
 PROJECT ID
 109357
 SHEET TOTAL
 16 160

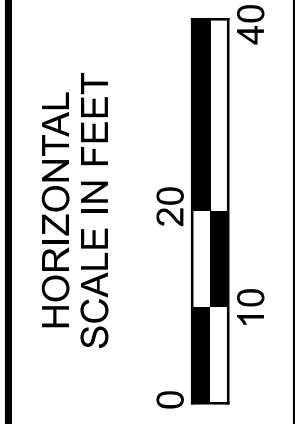
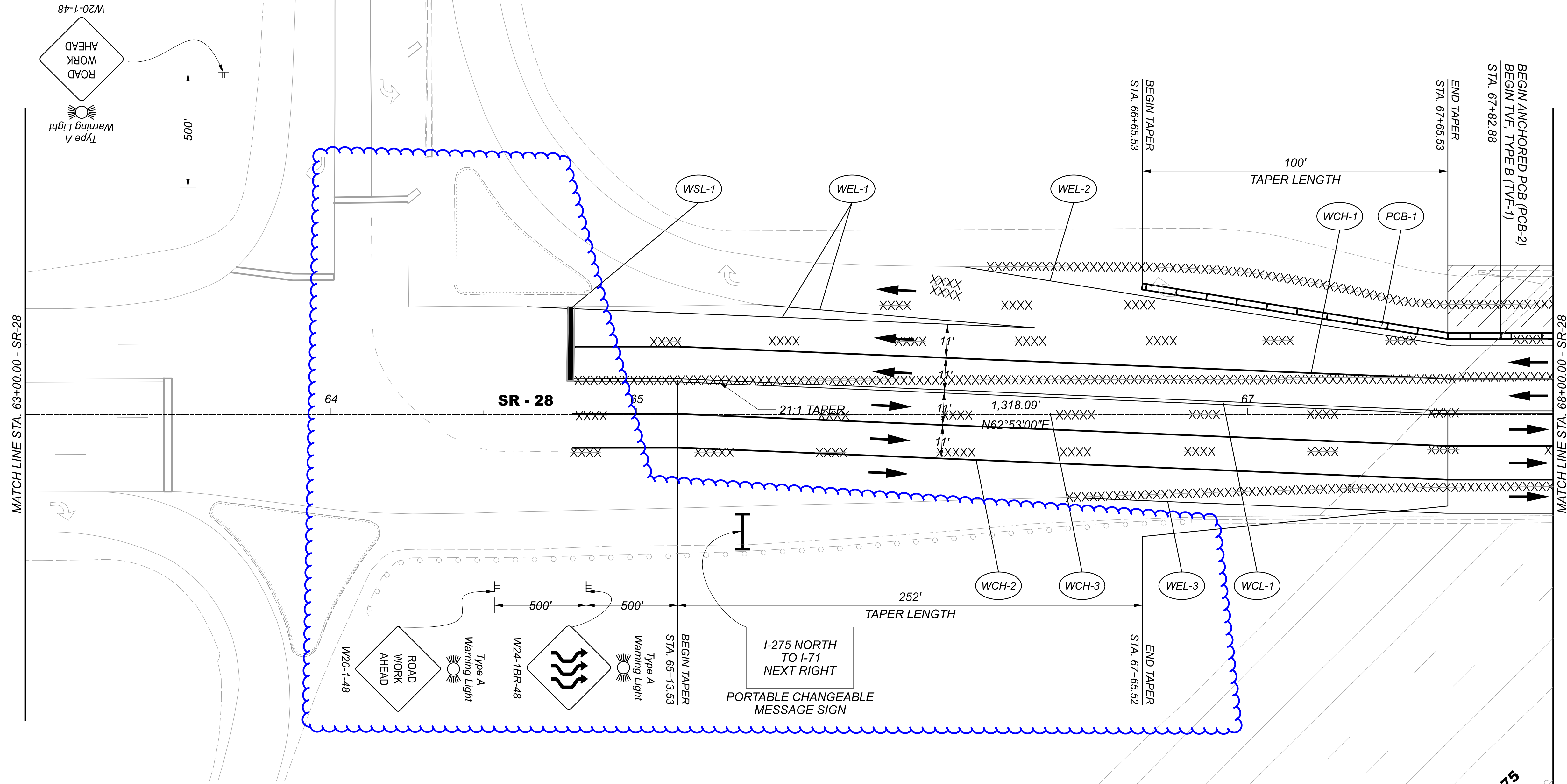
SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE																		
			FROM	TO		607		614					615		622		642						
						TEMPORARY VANDAL FENCE, TYPE B	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 2, ONE-WAY	WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT	WORK ZONE LANE LINE, CLASS 1, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS 1, 807 PAINT	WORK ZONE DOTTED LINE, CLASS 1, 6", 807 PAINT	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 PAINT	WORK ZONE STOP LINE, CLASS 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE CONCRETE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	REMOVAL OF PAVEMENT MARKING					
FT	EACH	EACH	MILE	MILE	MILE	FT	FT	FT	SQ YD	FT	FT	MILE											
PHASE 4 - SR-28																							
30-33	RPM-4	SR-28	61+10.00	76+67.17	LT/RT																		
31/32	TVF-4	SR-28	67+48.88	70+42.29	RT																		
31/32	TVF-5	SR-28	67+76.73	70+69.86	LT																		
31	WIA-4	SR-28	65+11..00		LT		1																
33	WIA-5	SR-28	73+07.71		LT		1																
31	PCB-10	SR-28	66+31.79	67+76.73	LT			5									239						
31	PCB-11	SR-28	65+21.73	67+48.88	RT			5									228						
31/32	PCB-12	SR-28	67+48.88	70+42.29	RT			6									294						
31/32	PCB-13	SR-28	67+76.73	70+69.86	LT			6									270						
32	PCB-14	SR-28	70+69.86	73.07.71	LT			5									239						
32	PCB-15	SR-28	70+42.29	72+12.97	RT			4									171						
30	WEL-11	SR-28	61+15.38	63+45.45	RT				0.05														
31-33	WEL-12	SR-28	63+48.02	71+94.93	RT				0.17														
32/33	WEL-13	SR-28	70+64.64	74+48.22	RT				0.11														
30	WLL-1	SR-28	61+15.38	63+45.45	RT					0.05													
31-33	WCL-4	SR-28	64+79.22	74+03.50	RT					0.18													
33	5-LCW	SR-28	19.02+57	71.76+67	TR/TL					30.0													
31-33	WCH-1	SR-28	64+79.22	74+03.50	RT								927										
31	WDL-6	SR-28	63+48.02	64+77.22	LT/RT						160												
33	WDL-7	SR-28	74+00.11	75+70.53	LT/RT						71												
PHASE 5 - SR-28																							
34-37	RPM-5	SR-28	61+10.00	77+22.41	LT/RT													0.63					
35/36	TVF-6	SR-28	67+69.50	70+63.15	LT																		
37	WIA-6	SR-28	73+07.71		LT		1																
34	PCB-16	SR-28	66+45.91	67+69.50	LT			3									128						
34/35	PCB-17	SR-28	67+69.50	70+63.15	LT			5									294						
36/37	PCB-18	SR-28	70+63.15	73+07.71	LT			5									246						
34	WEL-14	SR-28	61+57.18	63+45.45	LT				0.04														
35	WEL-15	SR-28	64+79.22	66+82.25	LT				0.07														
35-37	WEL-16	SR-28	66+05.89	77+22.41	LT				0.22														
34	WLL-2	SR-28	62+17.57	63+45.45	LT					0.03													
37	WLL-3	SR-28	75+24.02	77+07.75	LT					0.04													
34	WCL-6	SR-28	62+17.57	63+45.45	LT					0.03													
35-37	WCH-12	SR-28	64+79.22	77+22.41	LT/RT								923										
35	WDL-8	SR-28	63+48.02	64+77.22	LT/RT						188												
37	WDL-9	SR-28	71+01.14	75+70.53	LT/RT						60												
PHASE 6 - RAMP C																							
38-43	RPM-6	RAMP C	210+73.76	235+55.77	LT/RT													0.56					
43	WIA-7	RAMP C	235+48.05		LT/RT		1																
38-43	PCB-19	RAMP C	219+73.75	235+48.05	LT			50									2467						
38-43	WEL-17	RAMP C	210+73.76	235+55.77	RT				0.47														
38-43	WLL-4	RAMP C	232+37.87	235+55.77	RT					0.06													
38-43	WLL-5	RAMP C	232+37.87	235+55.77	RT					0.06													
38-43	WSL-7	RAMP C	232+34.81		LT/RT								35										
PHASE 7 - RAMP C																							
44/47/48	RPM-7	RAMP C	215+54.69	224+91.34	RT													0.19					
44/47/48	WEL-17	RAMP C	215+04.86	225+56.80	RT				0.21														
TOTALS CARRIED TO GENERAL SUMMARY							4	94	1.34	0.24	0.24	392	1850	35		4576		2.07					

MAINTENANCE OF TRAFFIC SUBSUMMARY

DESIGN AGENCY

 DESIGNER
 RJN
 REVIEWER
 JDH 09/27/21
 PROJECT ID
 109357
 SHEET TOTAL
 17 160

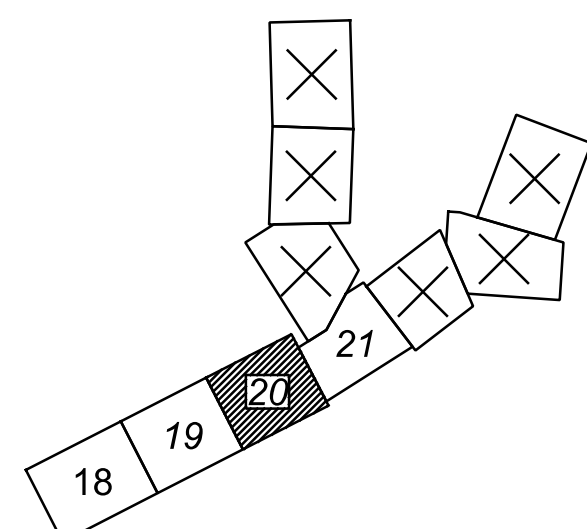


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 1

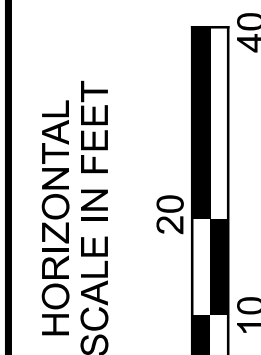
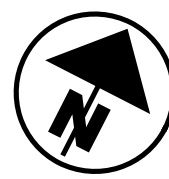
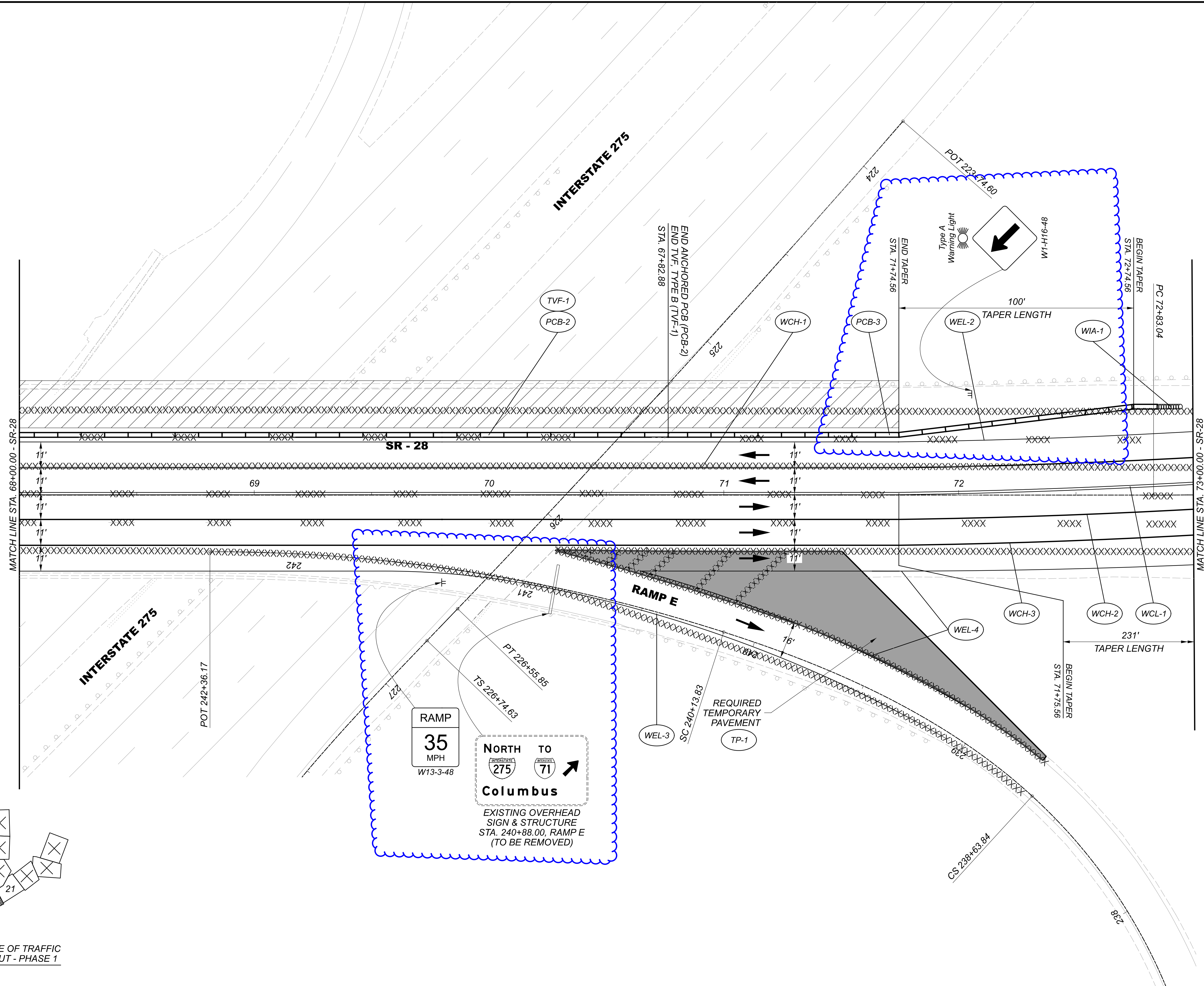


MAINTENANCE OF TRAFFIC PHASE 1
SR-28 - STA. 63+00.00 TO STA. 68+00.00

DESIGN AGENCY	
BARGE ENGINEERING	
DESIGNER	RJN
REVIEWER	JDH
PROJECT ID	109357
SHEET	TOTAL
19	160



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 1



MAINTENANCE OF TRAFFIC PHASE 1
SR-28 - STA. 68+00.00 TO STA. 73+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

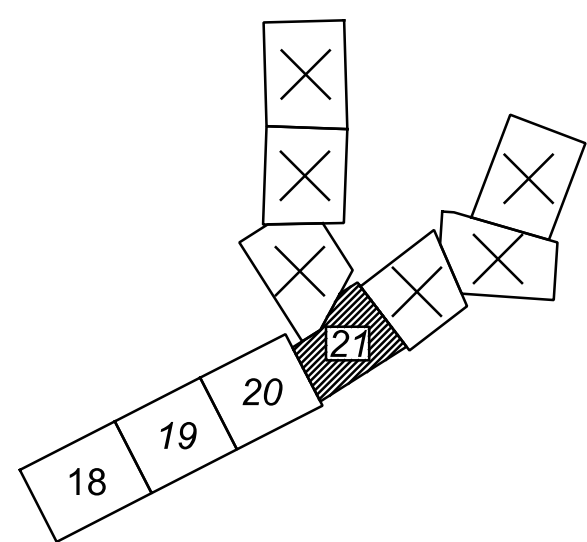
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SHEET

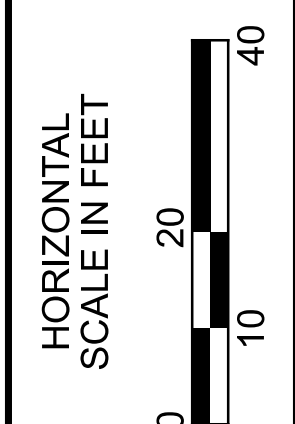
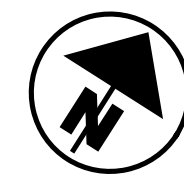
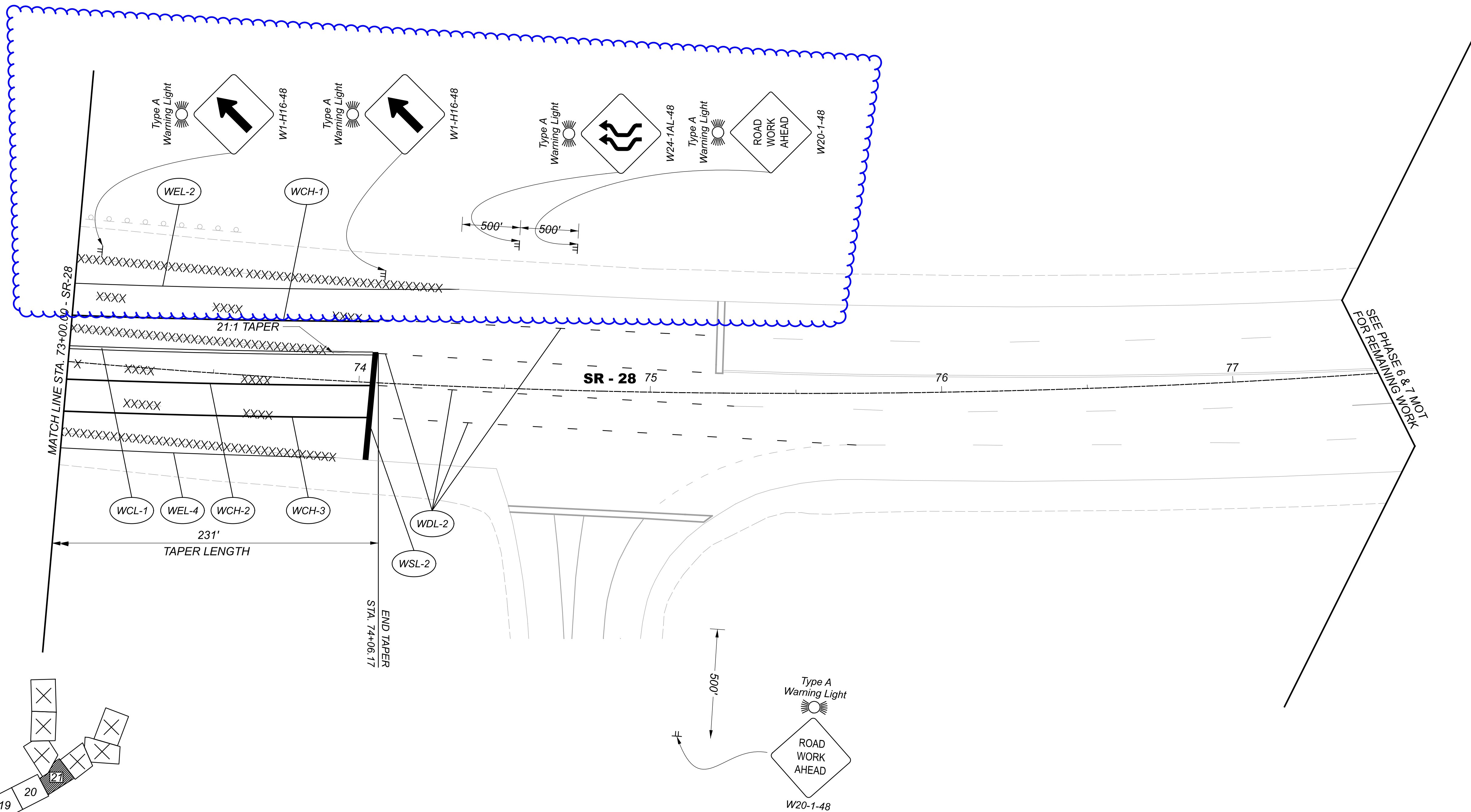
TOTAL

20

160



MAINTENANCE OF TRAFFIC
 SHEET LAYOUT - PHASE 1



MAINTENANCE OF TRAFFIC PHASE 1
 SR-28 - STA. 73+00.00 TO STA. 78+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

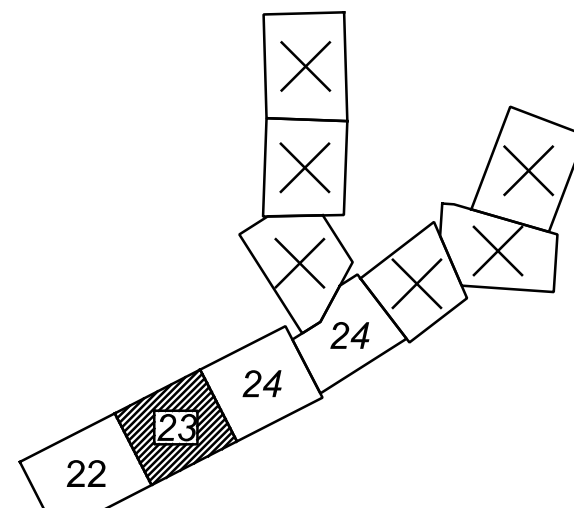
109357

SHEET

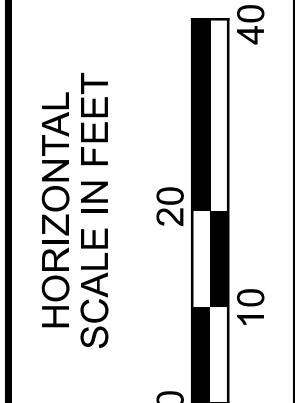
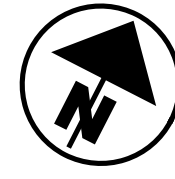
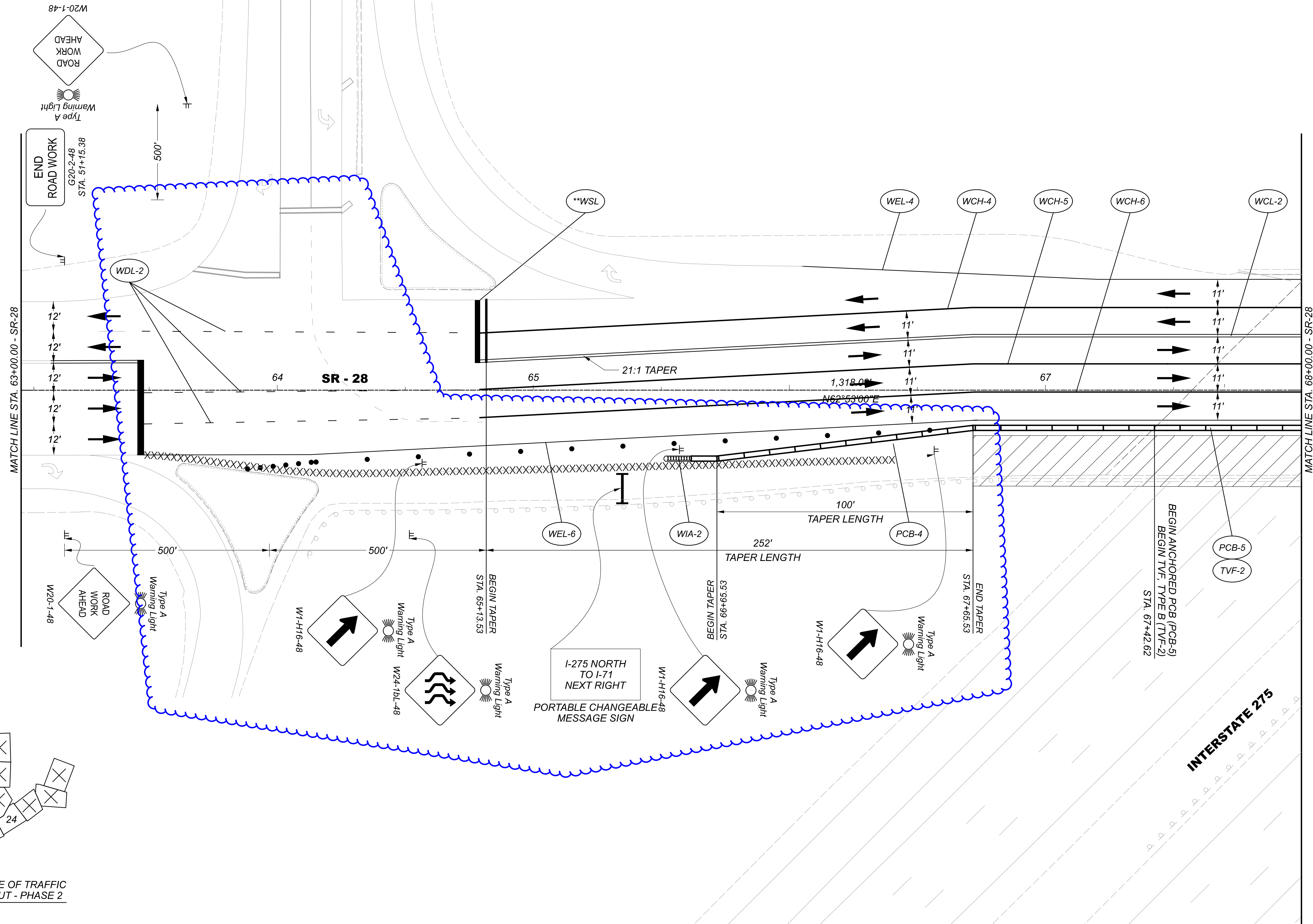
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TOTAL

160



MAINTENANCE OF TRAFFIC
SHEET LAYOUT - PHASE 2



MAINTENANCE OF TRAFFIC PHASE 2
SR-28 - STA. 63+00.00 TO STA. 68+00.00

DESIGN AGENCY

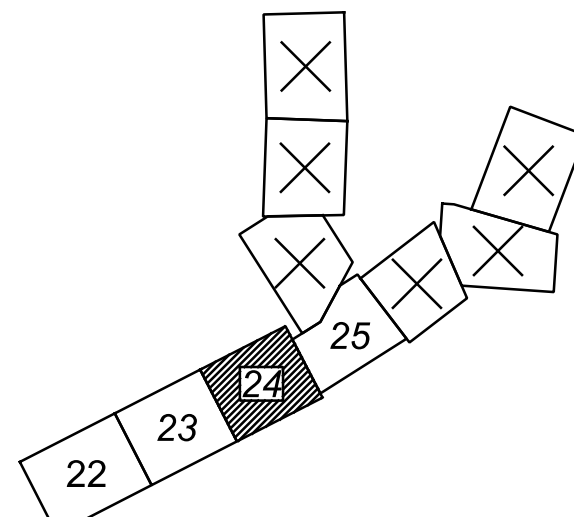


DESIGNER
R.J.N.

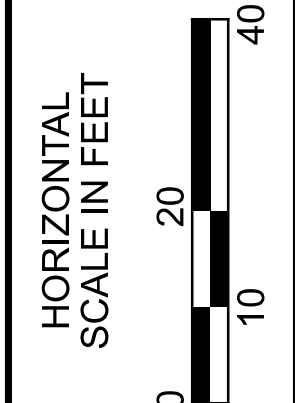
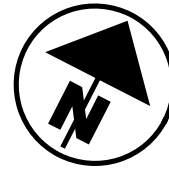
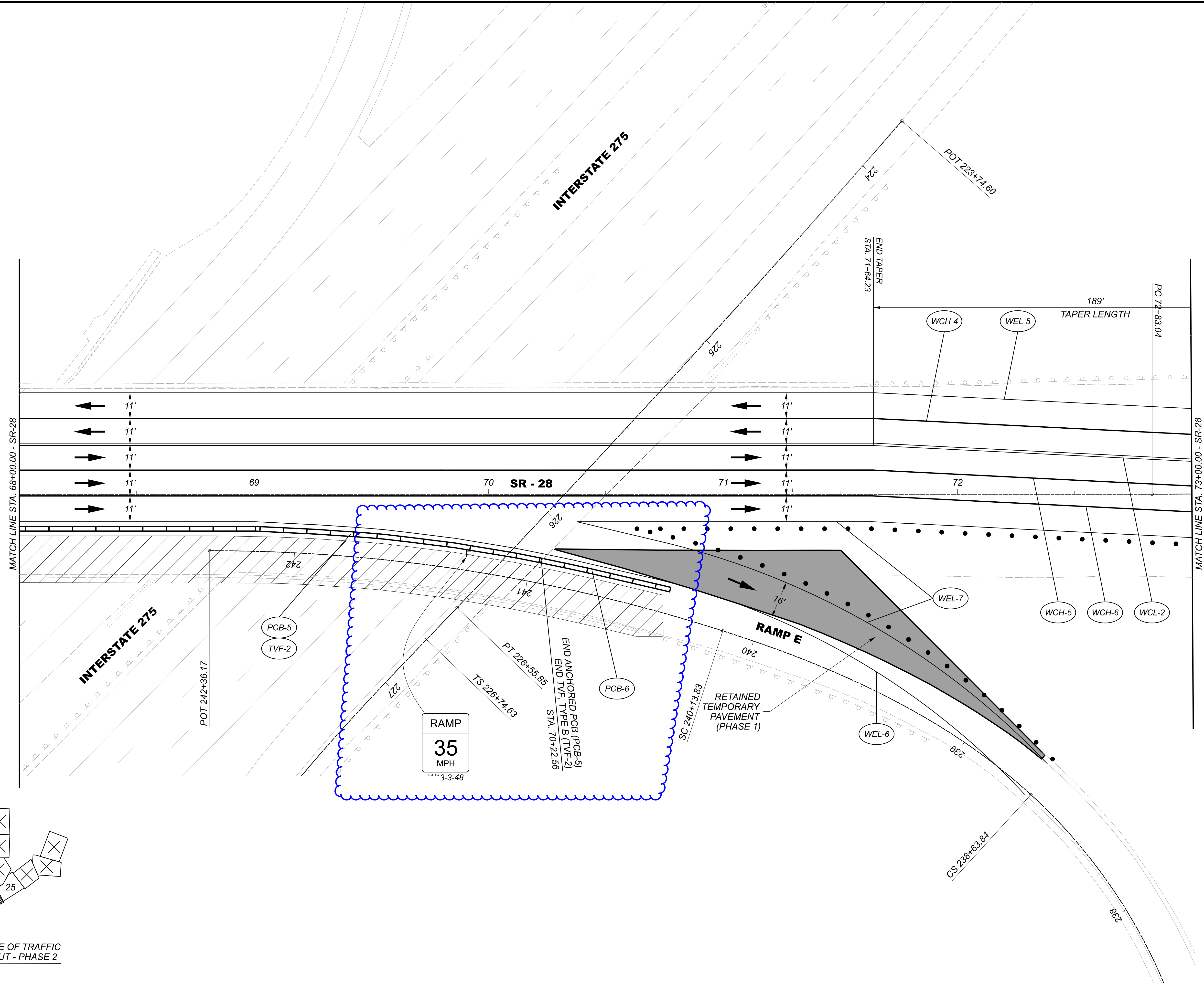
REVIEWER
JDH 09/27/21

PROJECT ID
109357

SHEET TOTAL
23 160



MAINTENANCE OF TRAFFIC
SHEET LAYOUT - PHASE 2



MAINTENANCE OF TRAFFIC PHASE 2
SR-28 - STA. 68+00.00 TO STA. 73+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

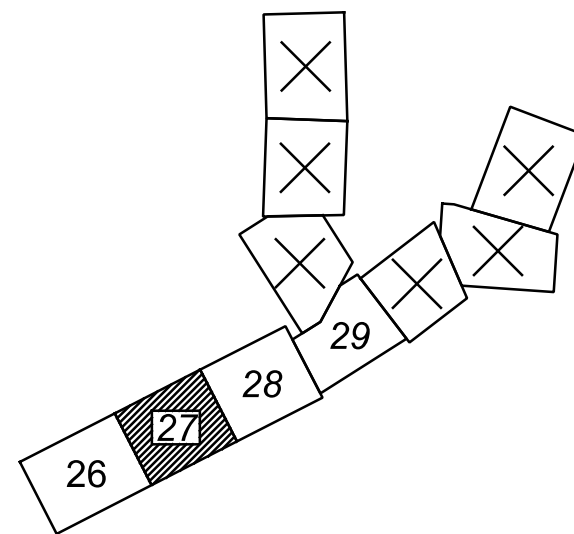
109357

SHEET

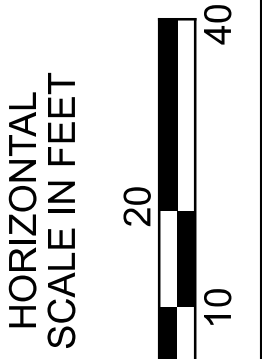
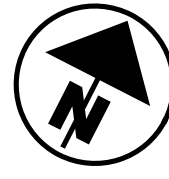
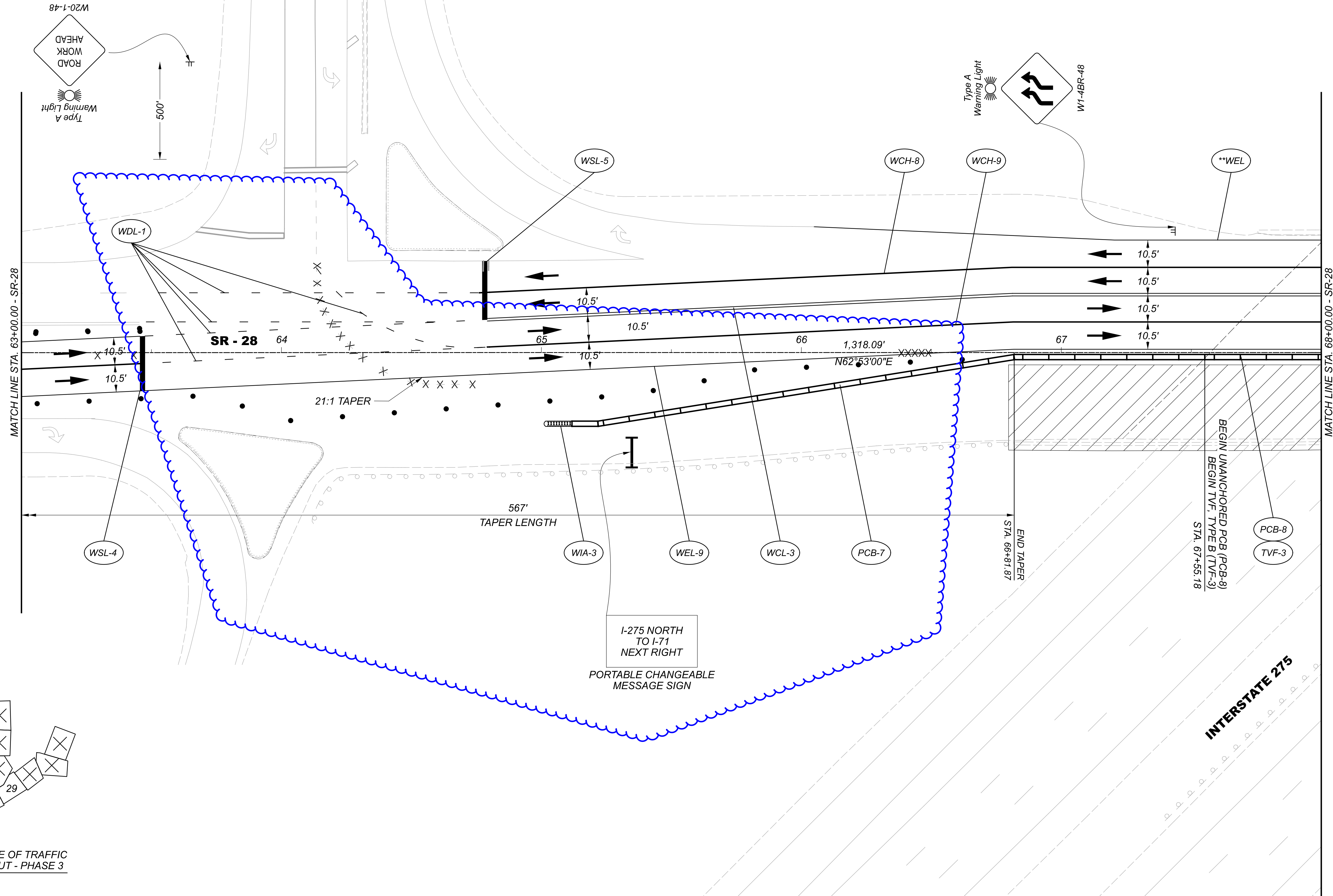
24

TOTAL

160



MAINTENANCE OF TRAFFIC
SHEET LAYOUT - PHASE 3



MAINTENANCE OF TRAFFIC PHASE 3
SR-28 - STA. 63+00.00 TO STA. 68+00.00

DESIGN AGENCY

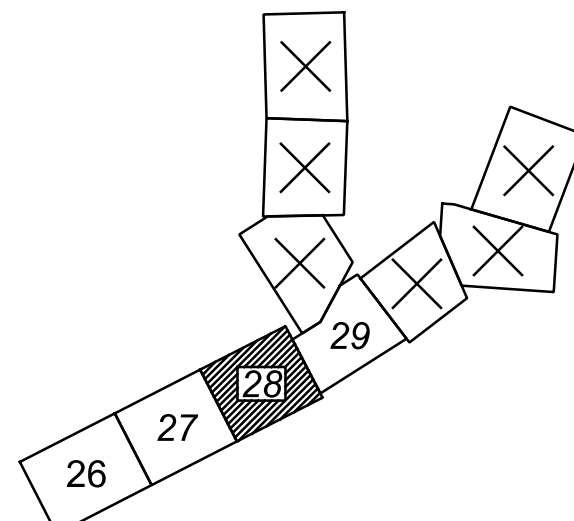


DESIGNER
R.J.N.

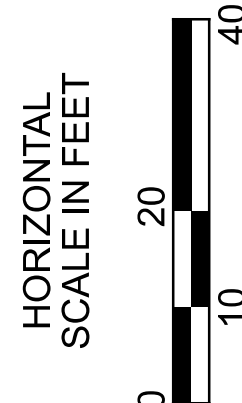
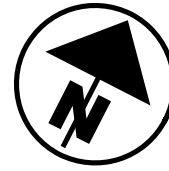
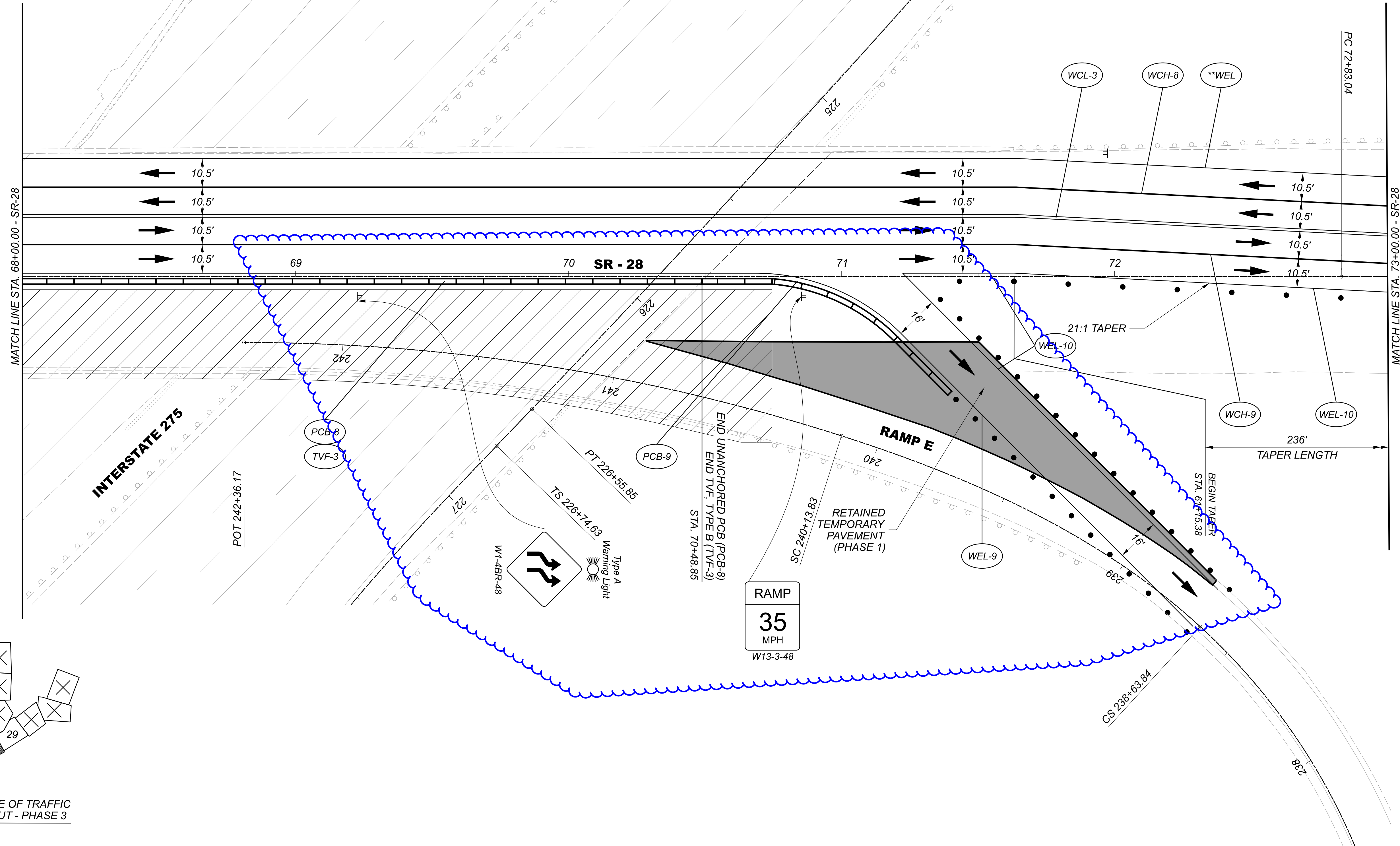
REVIEWER
JDH 09/27/21

PROJECT ID
109357

SHEET TOTAL
27 160



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 3



MAINTENANCE OF TRAFFIC PHASE 3
SR-28 - STA. 68+00.00 TO STA. 73+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

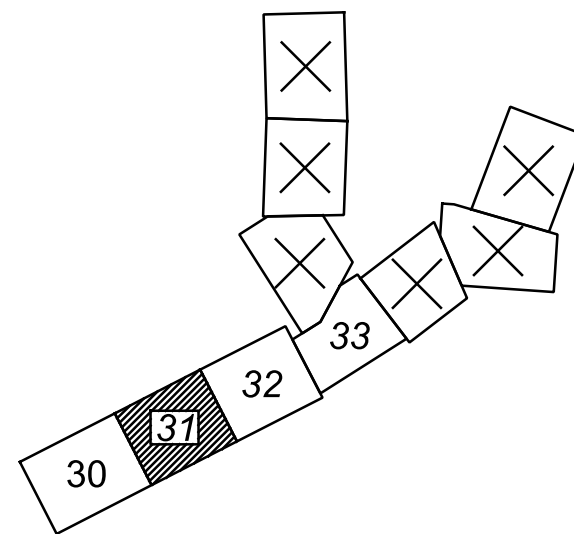
109357

SHEET

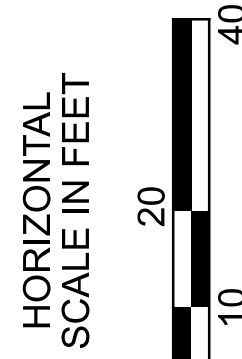
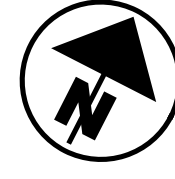
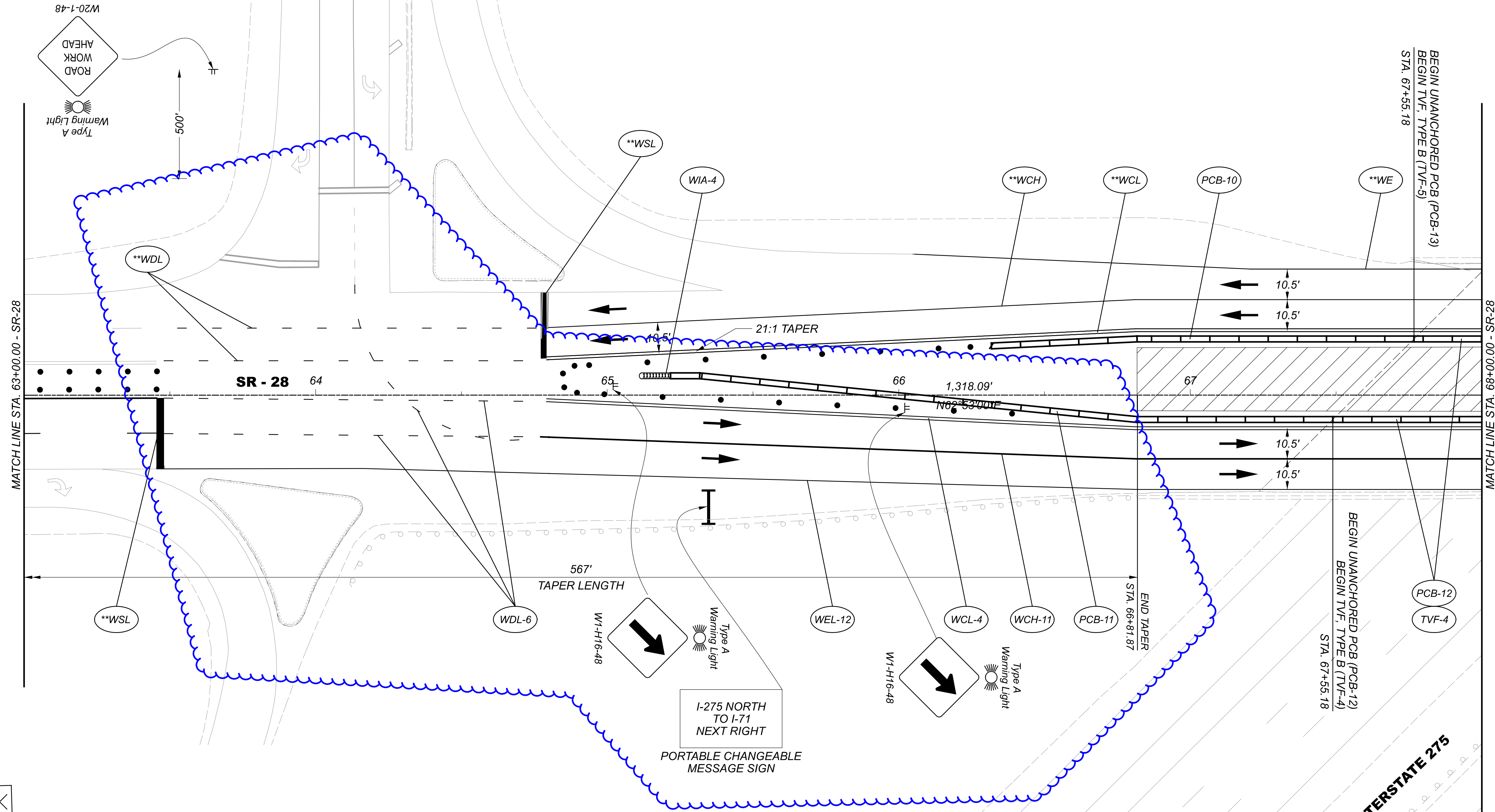
28

TOTAL

160



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 4



MAINTENANCE OF TRAFFIC PHASE 4
SR-28 - STA. 63+00.00 TO STA. 68+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

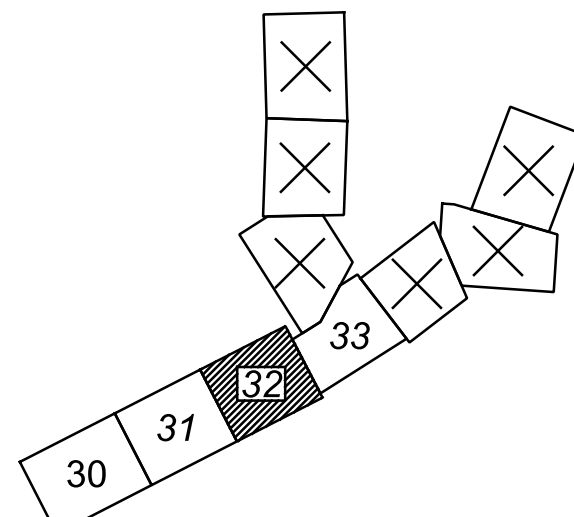
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SHEET

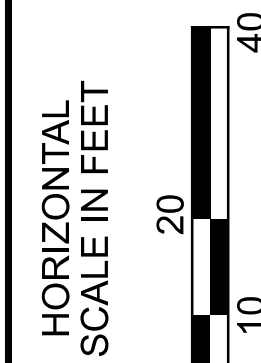
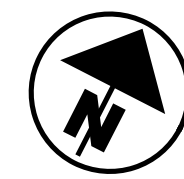
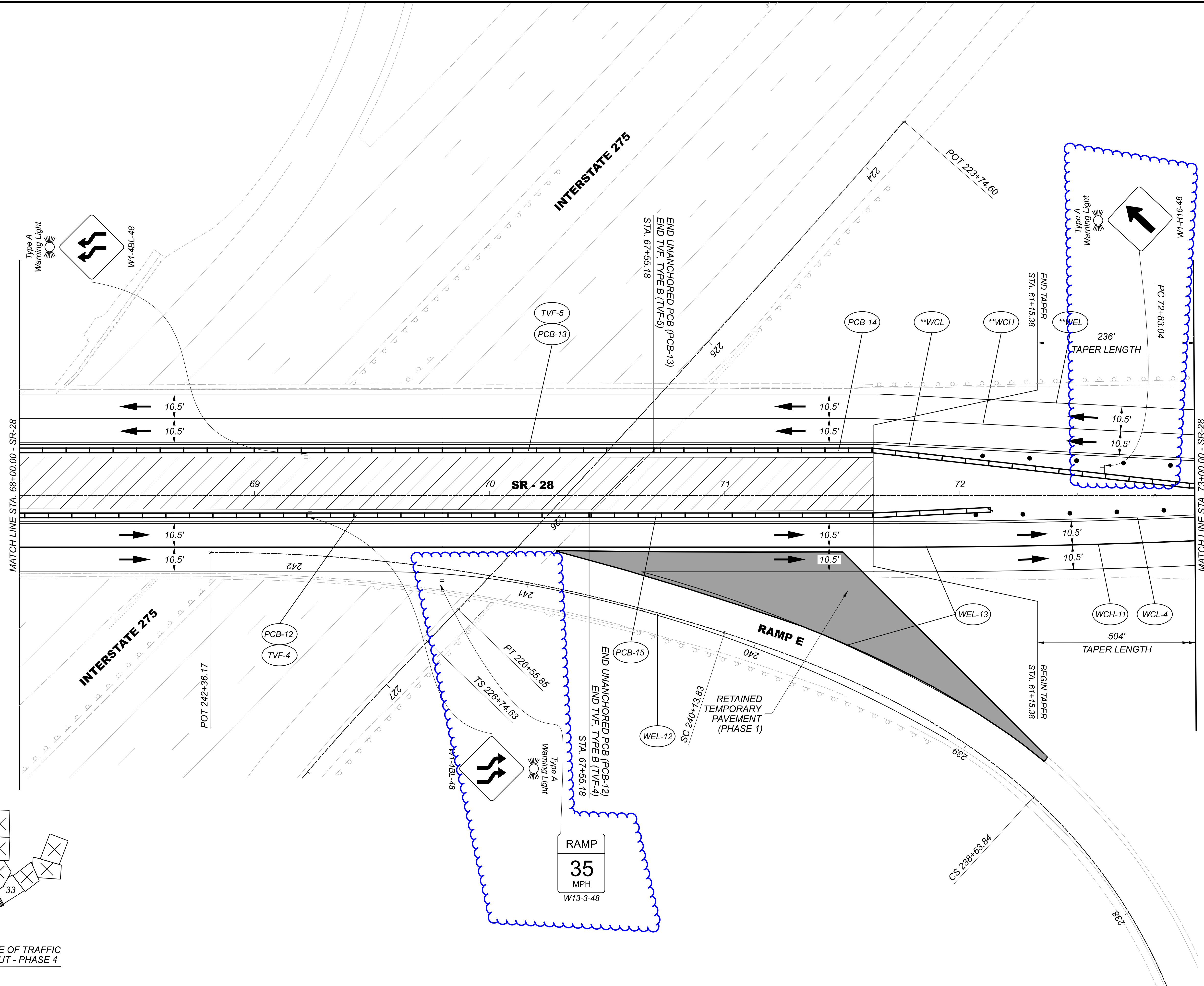
31

TOTAL

160



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 4



MAINTENANCE OF TRAFFIC PHASE 4
SR-28 - STA. 68+00.00 TO STA. 73+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

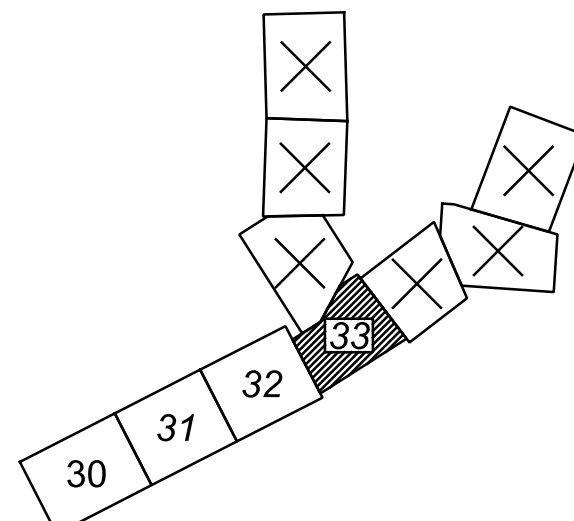
JDH 09/27/21

PROJECT ID

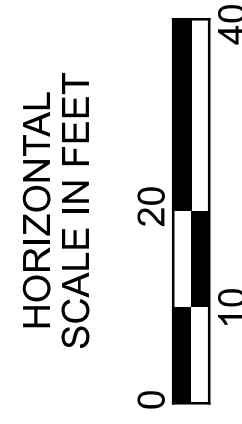
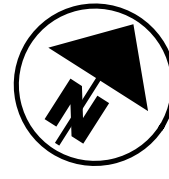
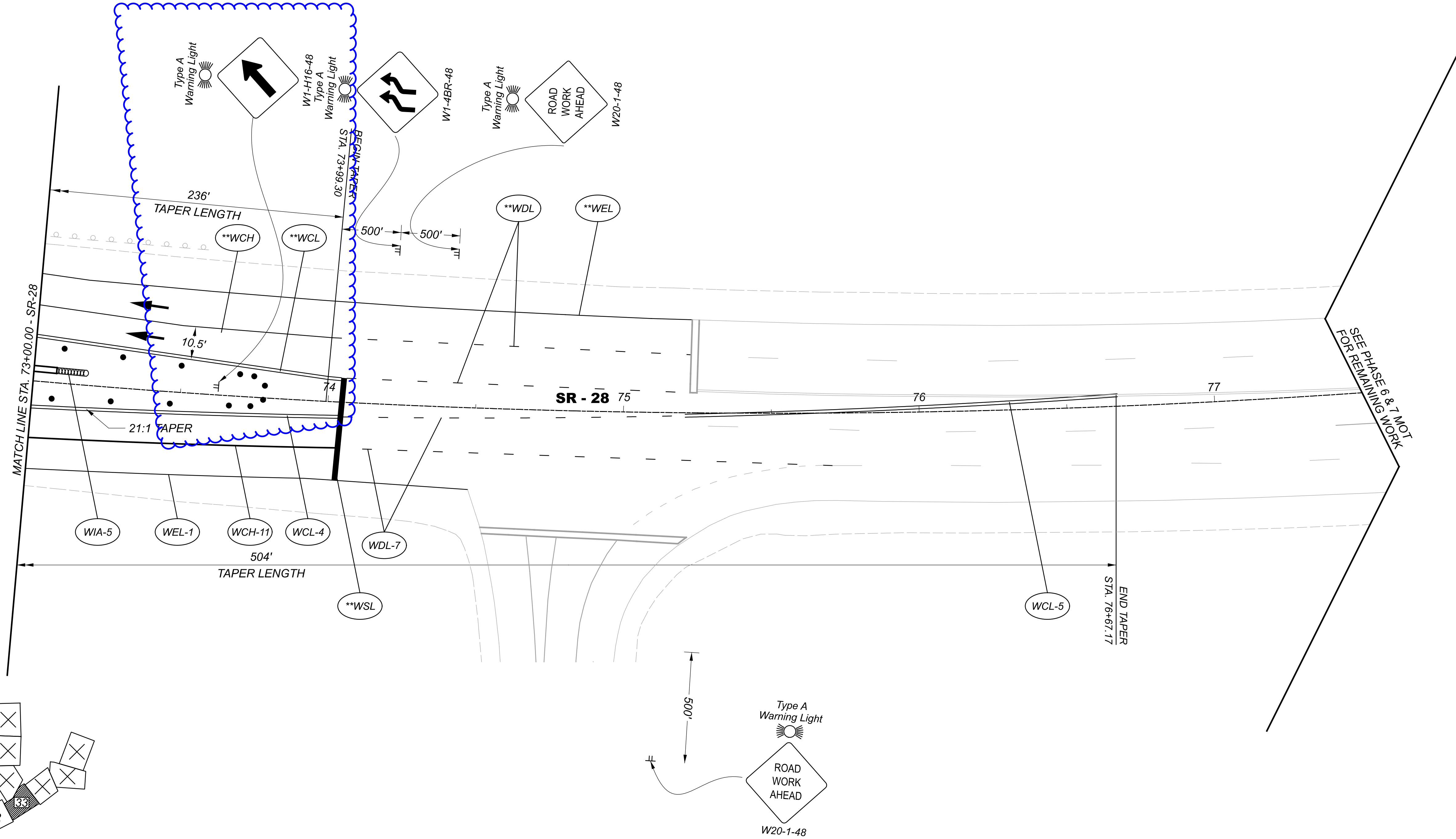
109357

SHEET TOTAL

32 160



MAINTENANCE OF TRAFFIC
SHEET LAYOUT - PHASE 4



MAINTENANCE OF TRAFFIC PHASE 4
SR-28 - STA. 73+00.00 TO STA. 78+00.00

DESIGN AGENCY



DESIGNER

RJN

REVIEWER

JDH 09/27/21

PROJECT ID

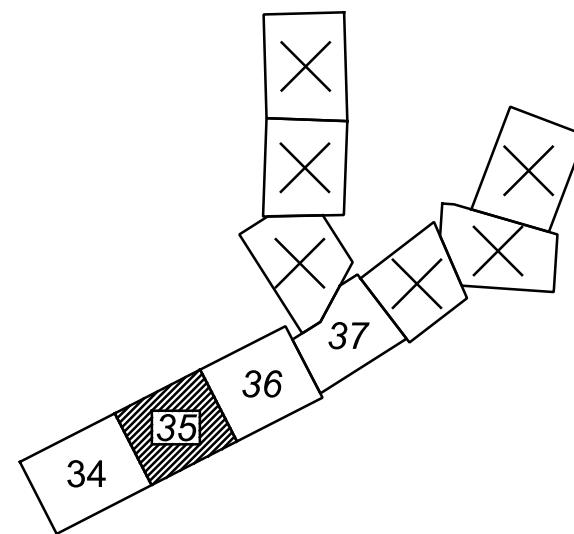
109357

SHEET

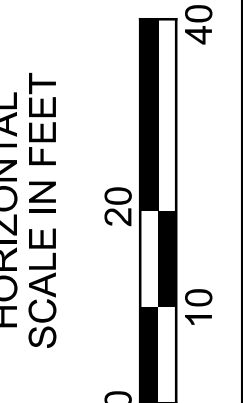
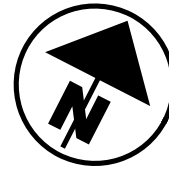
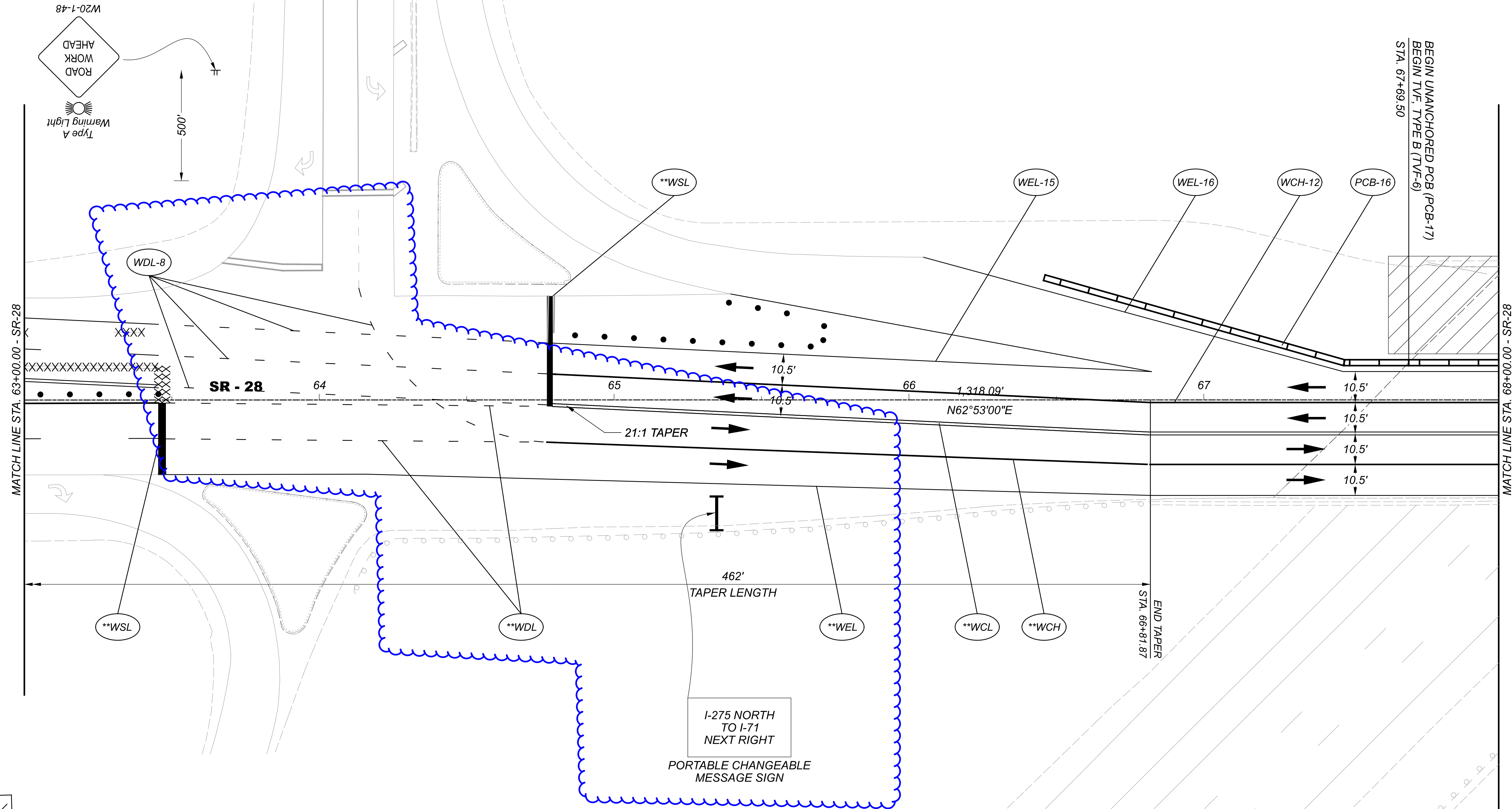
33

TOTAL

160



MAINTENANCE OF TRAFFIC
SHEET LAYOUT - PHASE 5



MAINTENANCE OF TRAFFIC PHASE 5
SR-28 - STA. 63+00.00 TO STA. 68+00.00

DESIGN AGENCY

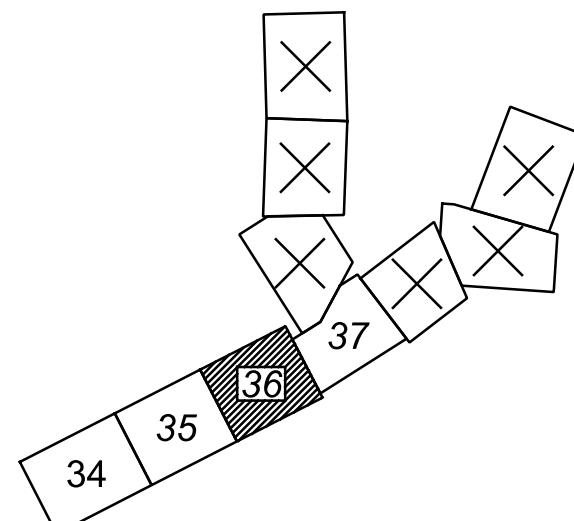


DESIGNER
RJN

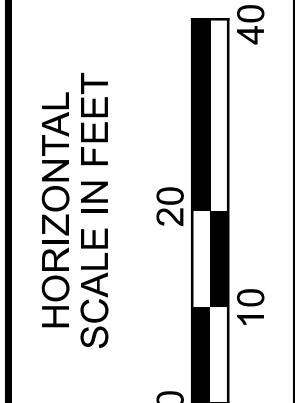
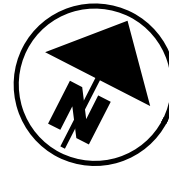
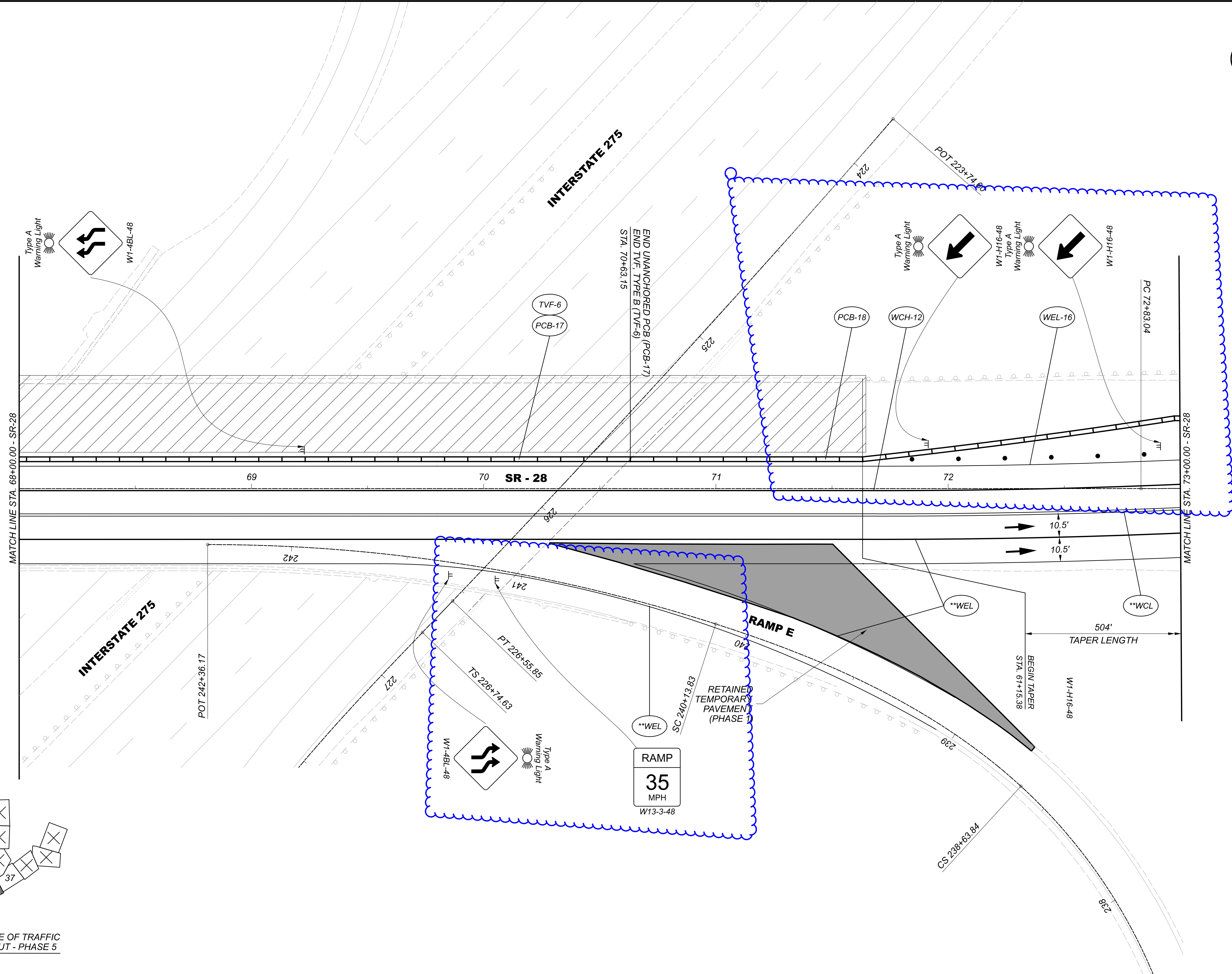
REVIEWER
JDH 09/27/21

PROJECT ID
109357

SHEET	TOTAL
35	160

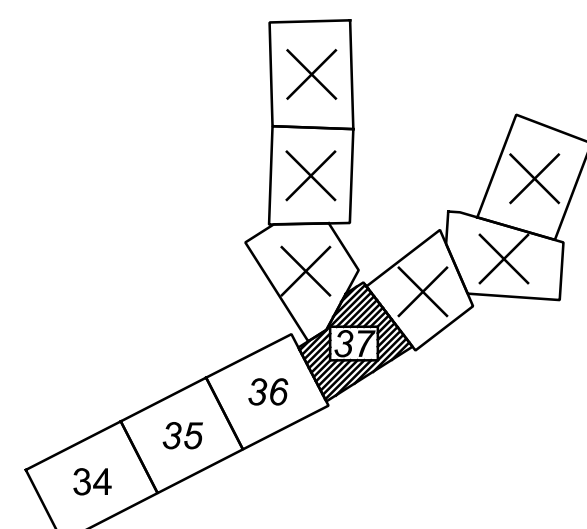


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 5

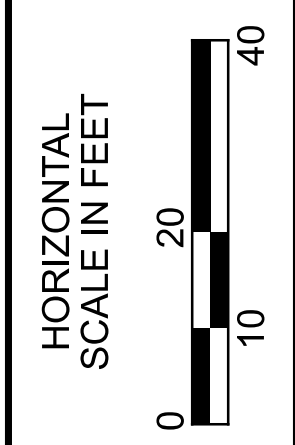
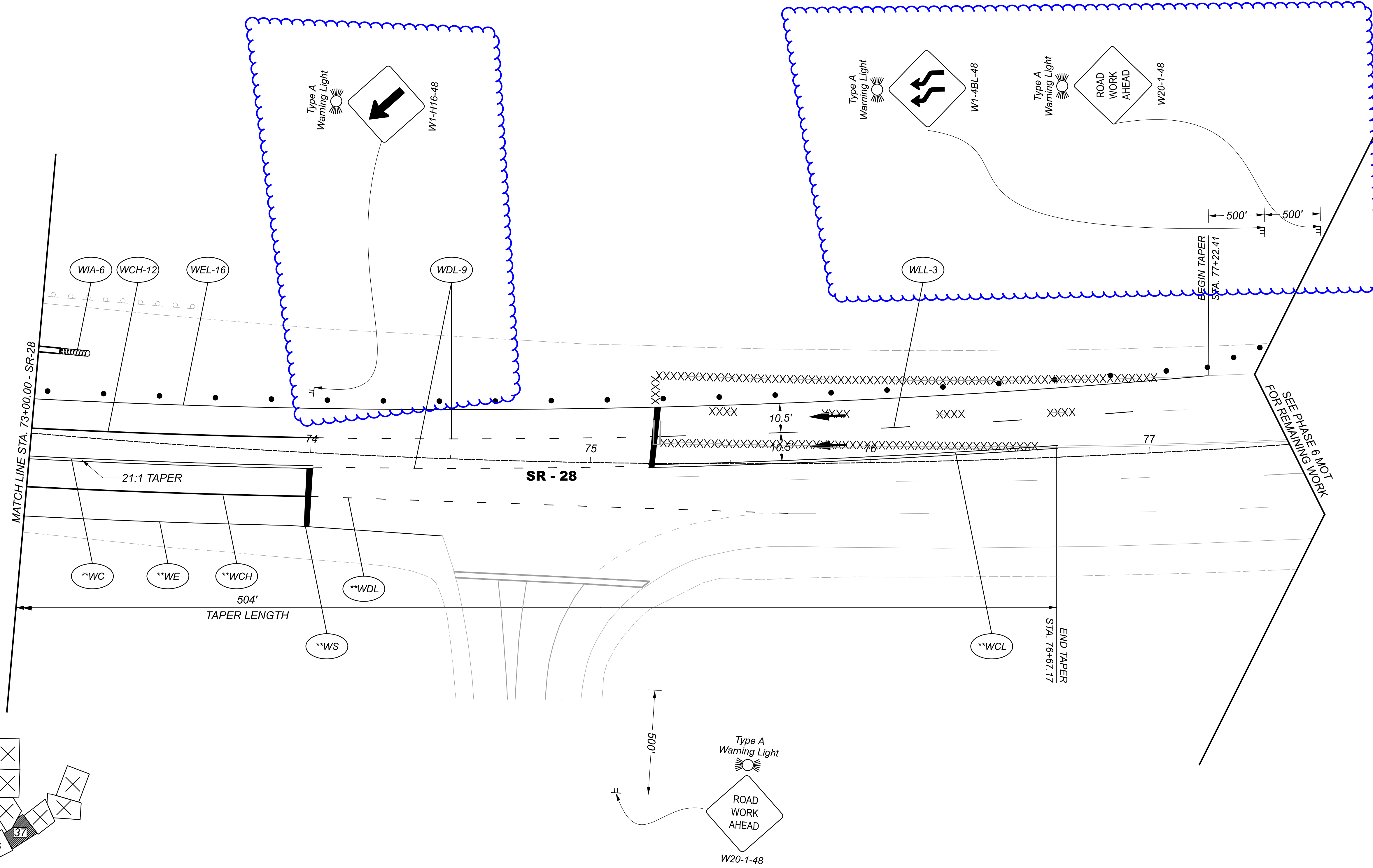


MAINTENANCE OF TRAFFIC PHASE 5
SR-28 - STA. 68+00.00 TO STA. 73+00.00

DESIGN AGENCY	
BARGE BARGE SOLUTIONS	
DESIGNER	RJN
REVIEWER	JDH 09/27/21
PROJECT ID	109357
SHEET	TOTAL
36	160

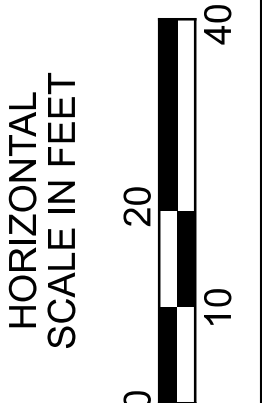
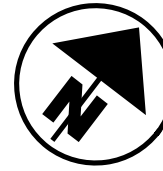
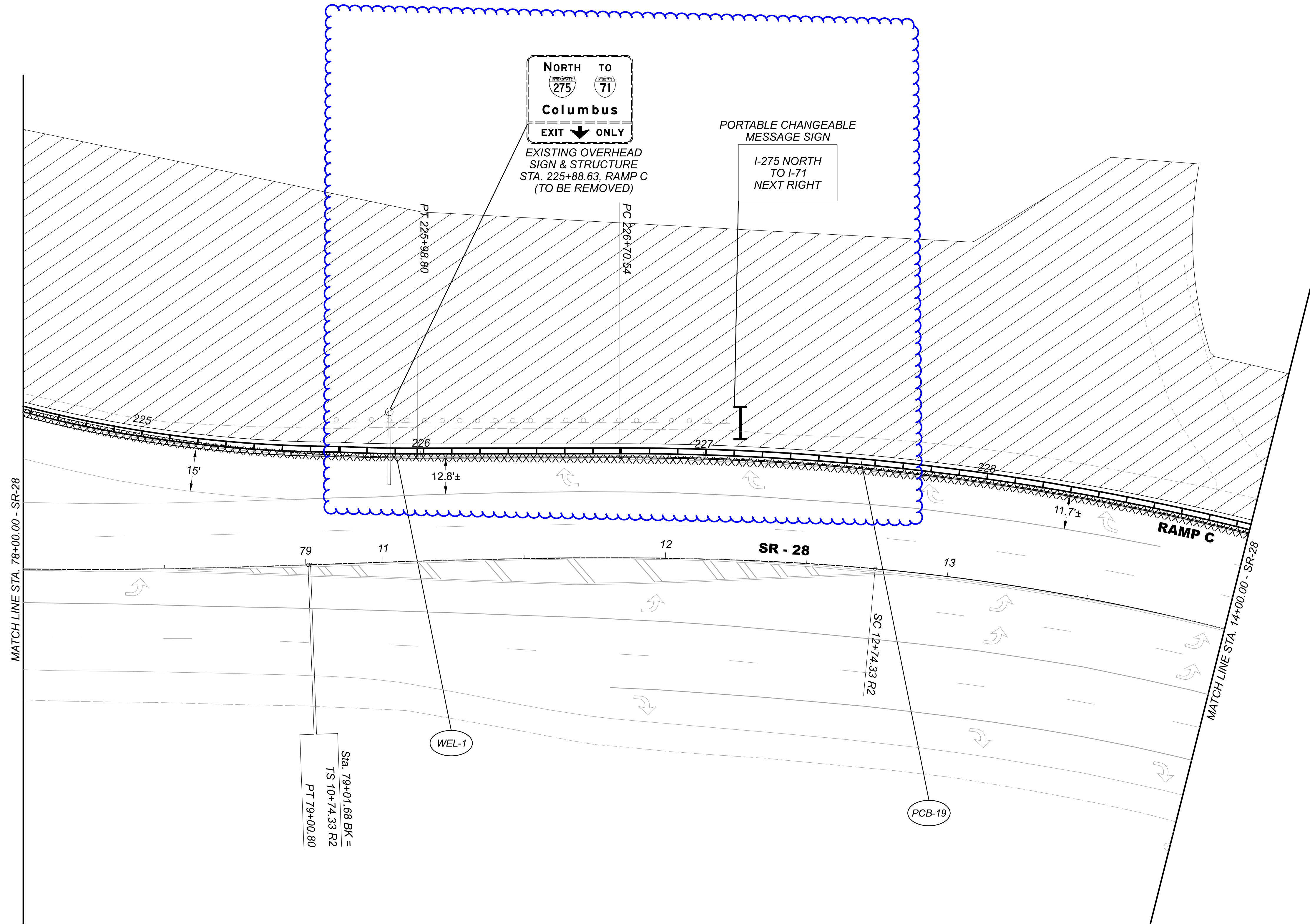


MAINTENANCE OF TRAFFIC
 SHEET LAYOUT - PHASE 5



MAINTENANCE OF TRAFFIC PHASE 5
 SR-28 - STA. 73+00.00 TO STA. 78+00.00

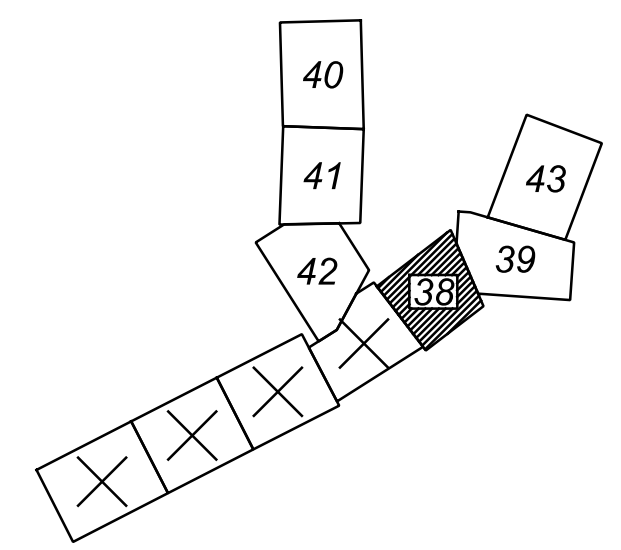
DESIGN AGENCY	
BARGE BARGE CONSULTANTS	
DESIGNER	
RJN	
REVIEWER	
JDH 09/27/21	
PROJECT ID	
109357	
SHEET	TOTAL
37	160



MAINTENANCE OF TRAFFIC PHASE 6
 SR-28 - STA. 78+00.00 TO STA. 14+00.00

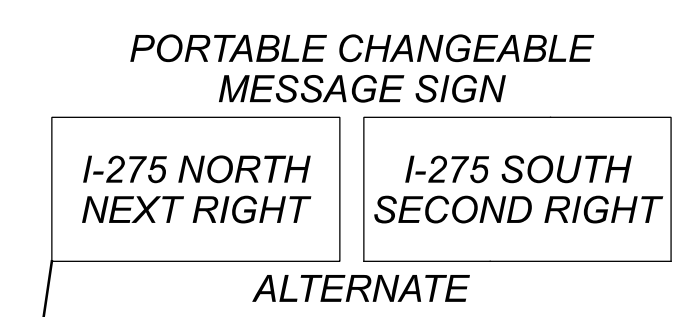
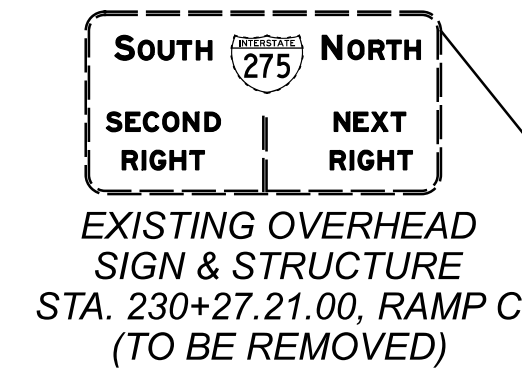
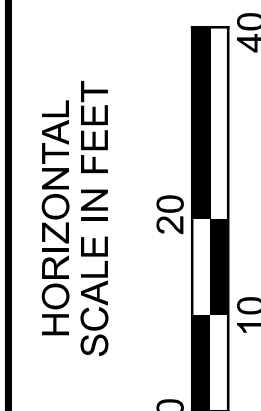
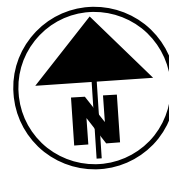
LEGEND

	WORK AREA		WORK ZONE EDGE LINE, CLASS I, 807 PAINT
	DRUMS		WORK ZONE LANE LINE, CLASS I, 807 PAINT
	EXISTING PAVEMENT MARKING REMOVAL		WORK ZONE CENTER LINE, CLASS I, 807 PAINT
	PORTABLE BARRIER		WORK ZONE DOTTED LINE, CLASS I, 807 PAINT
	IMPACT ATTENUATOR		WORK ZONE CHANNELIZING LINE, CLASS I, 807 PAINT
	TAPERED END SECTION		WORK ZONE STOP LINE, CLASS I, 807 PAINT
	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN		
	TYPE III BARRICADE		

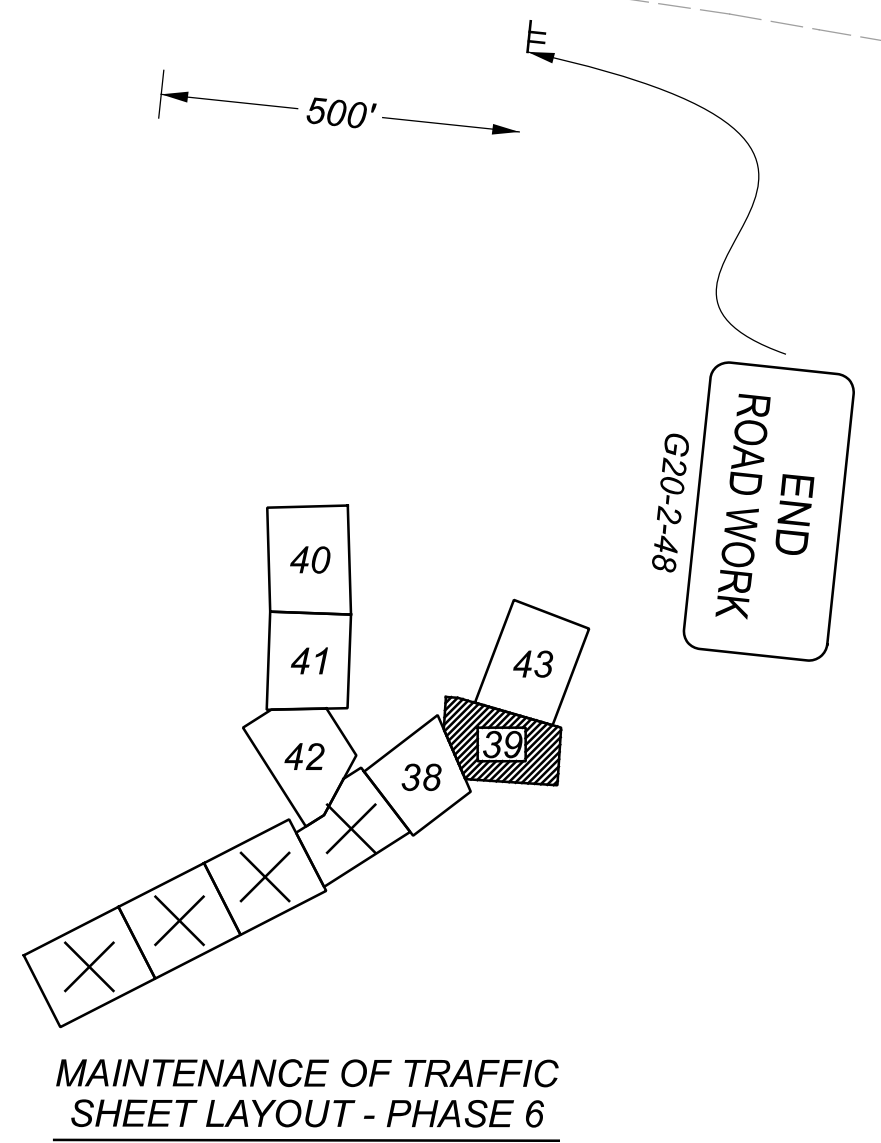


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 6

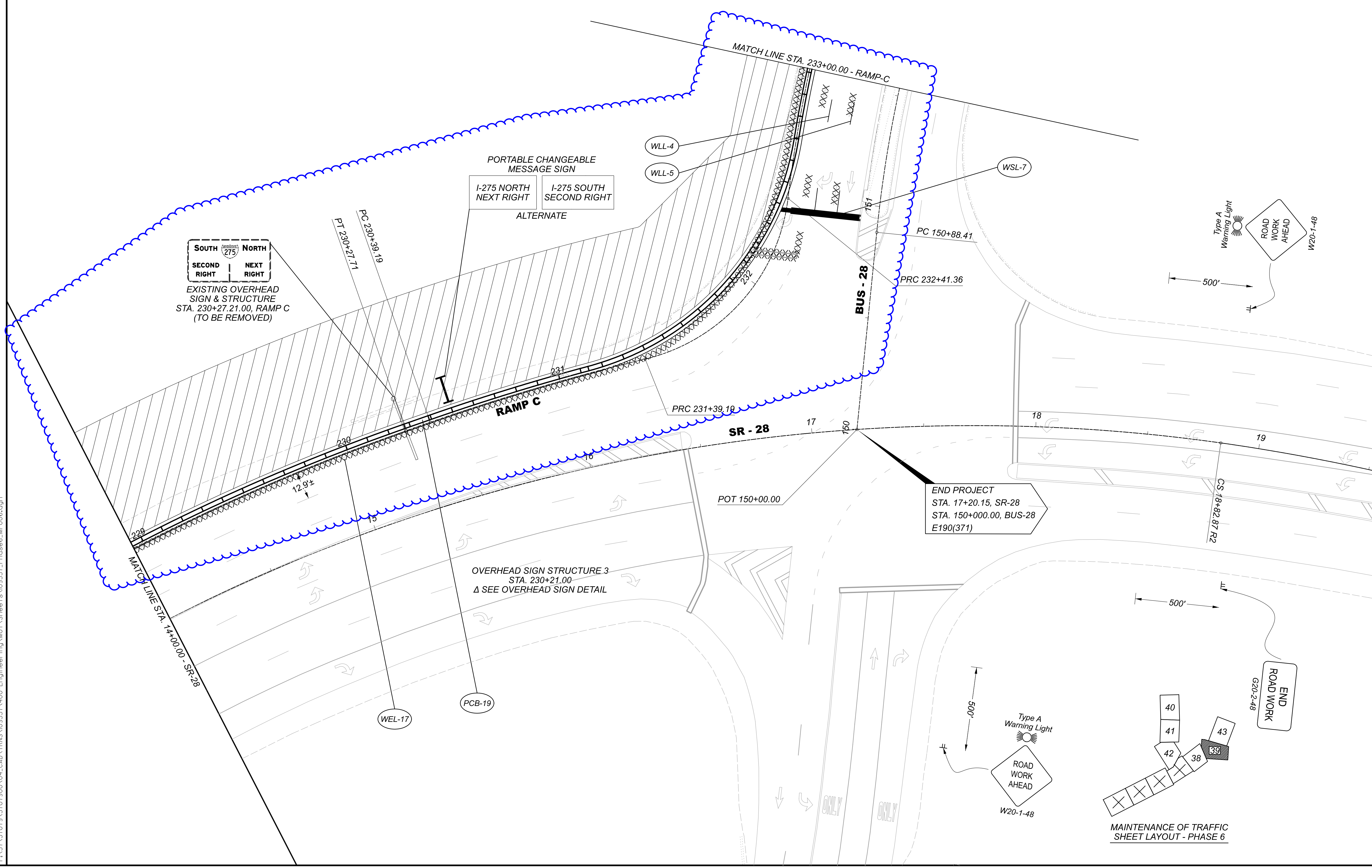
DESIGN AGENCY	
BARGE ENGINEERING SOLUTIONS	
DESIGNER	RJN
REVIEWER	JDH 09/27/21
PROJECT ID	109357
SHEET	TOTAL
38	160



END PROJECT
 STA. 17+20.15, SR-28
 STA. 150+000.00, BUS-28
 E190(371)

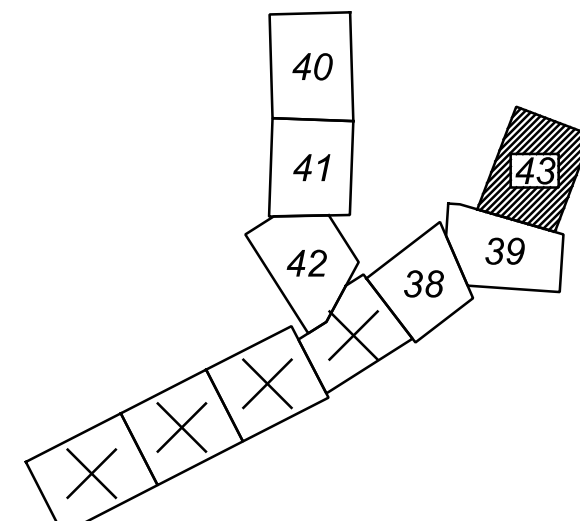


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 6

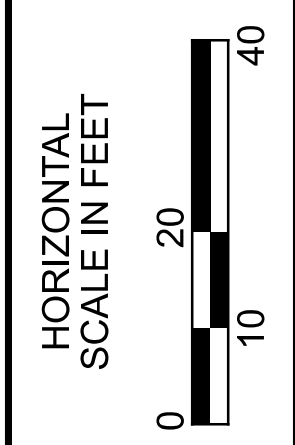
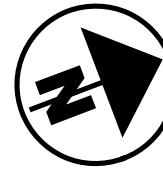
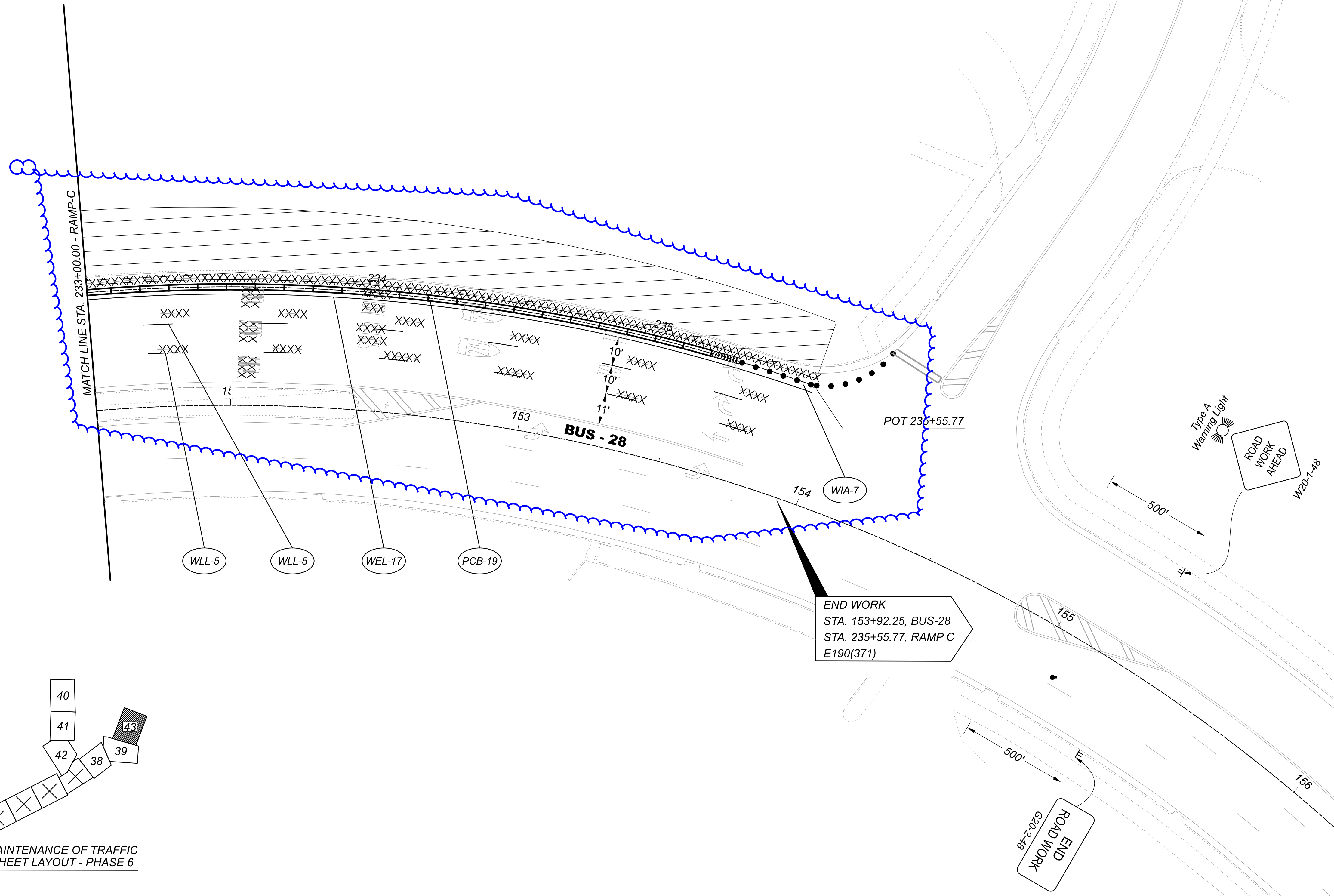


MAINTENANCE OF TRAFFIC PHASE 6
 SR-28 - STA. 14+00.00 TO STA. 17+20.15

DESIGN AGENCY	
BARGE ENGINEERING SOLUTIONS	
DESIGNER	RJN
REVIEWER	JDH
DATE	09/27/21
PROJECT ID	109357
SHEET	TOTAL
39	160

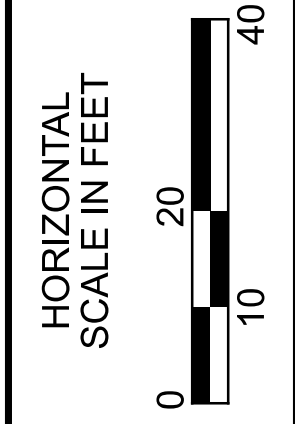
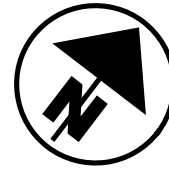


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 6



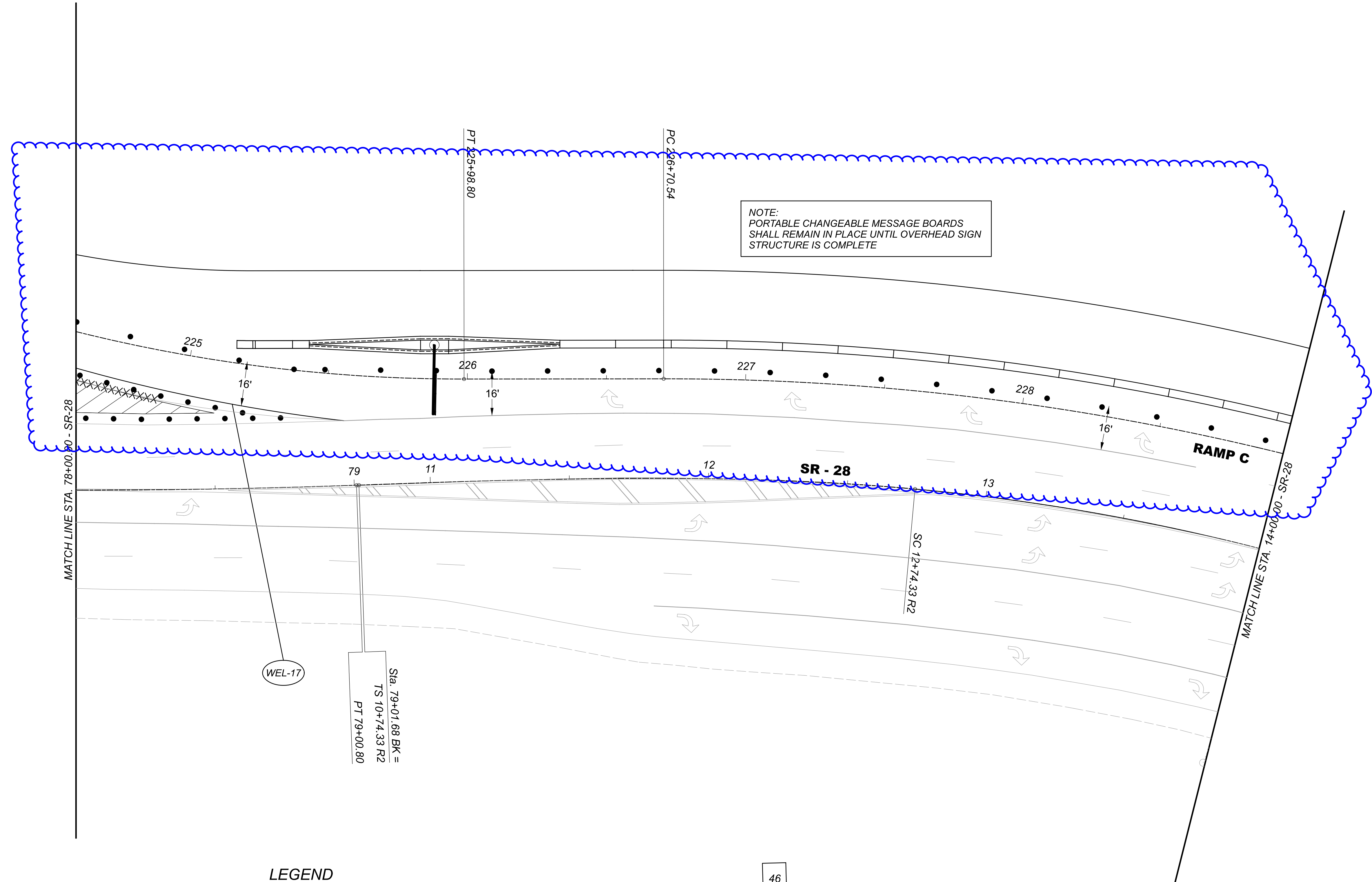
MAINTENANCE OF TRAFFIC PHASE 6
 RAMP C - STA. 233+00.00 TO STA. 235+55.77

DESIGN AGENCY	
BARGE ENGINEERING SOLUTIONS	
DESIGNER	
RJN	
REVIEWER	
JDH 09/27/21	
PROJECT ID	
109357	
SHEET	TOTAL
43	160



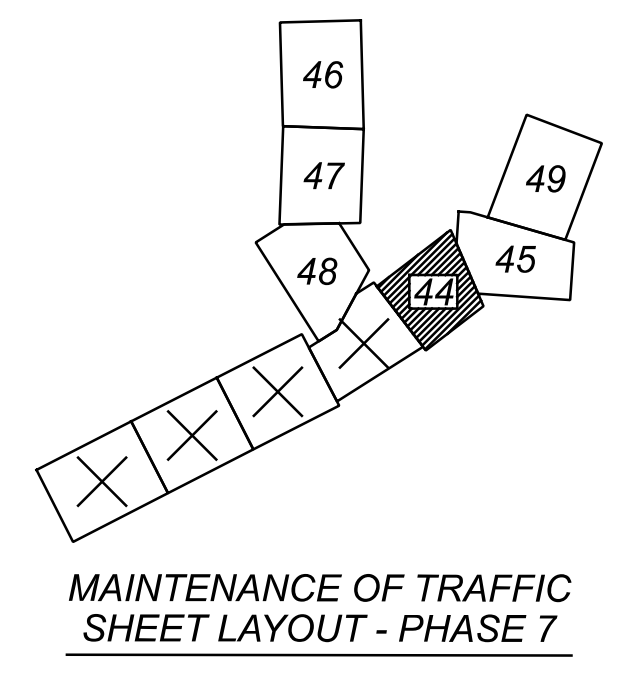
MAINTENANCE OF TRAFFIC PHASE 7
 SR-28 - STA. 78+00.00 TO STA. 14+00.00

DESIGN AGENCY	
BARGE <small>ENGINEERING SOLUTIONS</small>	
DESIGNER	RJN
REVIEWER	JDH 09/27/21
PROJECT ID	109357
SHEET	TOTAL
44	160

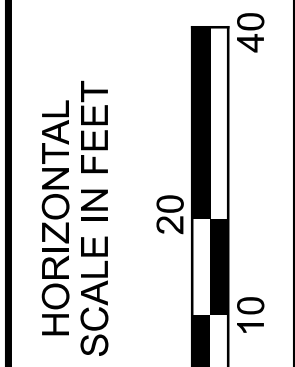
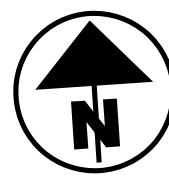
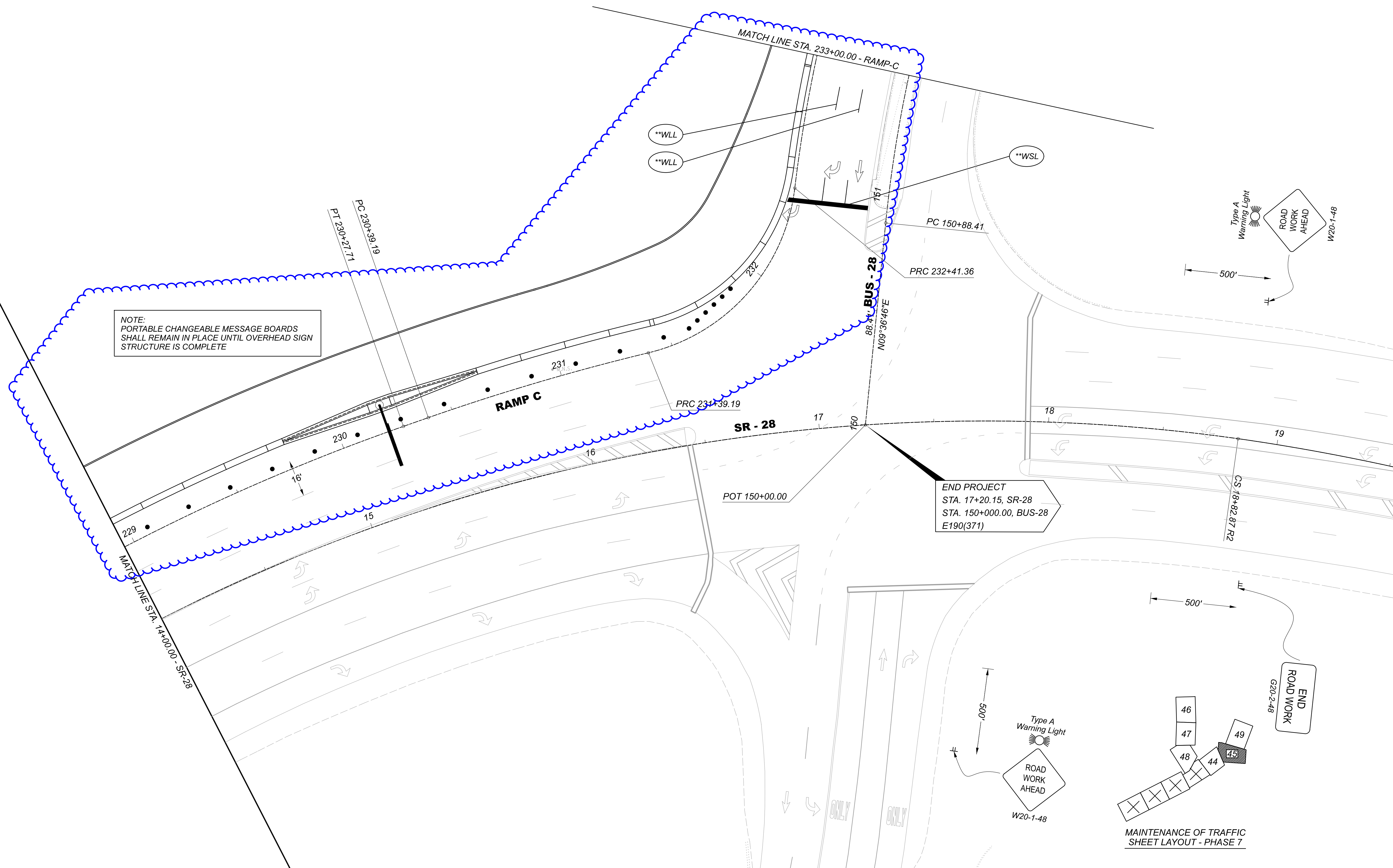


LEGEND

WORK AREA	WEL-x WORK ZONE EDGE LINE, CLASS I, 807 PAINT
DRUMS	WLL-x WORK ZONE LANE LINE, CLASS I, 807 PAINT
RPM-7 EXISTING PAVEMENT MARKING REMOVAL	WCL-x WORK ZONE CENTER LINE, CLASS I, 807 PAINT
PORTABLE BARRIER	WDL-x WORK ZONE DOTTED LINE, CLASS I, 807 PAINT
IMPACT ATTENUATOR	WCH-x WORK ZONE CHANNELIZING LINE, CLASS I, 807 PAINT
TAPERED END SECTION	WSL-x WORK ZONE STOP LINE, CLASS I, 807 PAINT
PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	
TYPE III BARRICADE	



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 7



MAINTENANCE OF TRAFFIC PHASE 7
SR-28 - STA. 14+00.00 TO STA. 17+20.15

DESIGN AGENCY

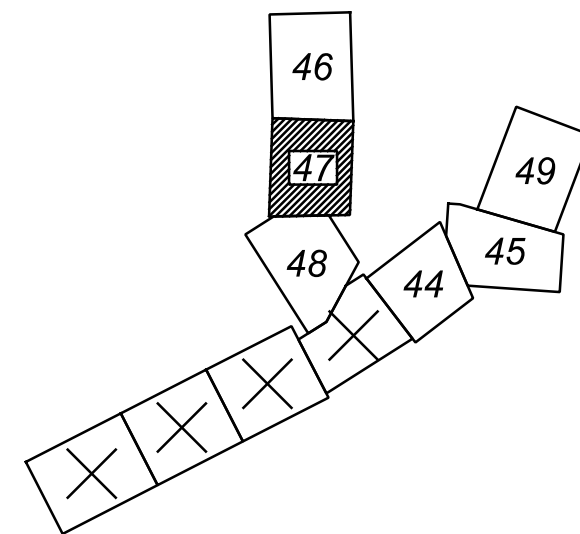


DESIGNER
R.J.N.

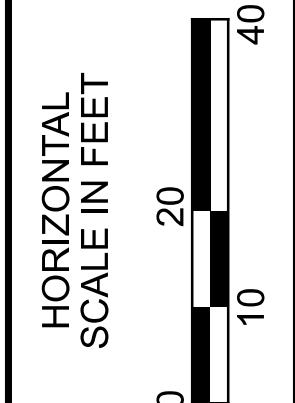
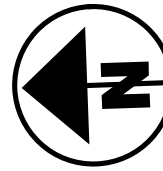
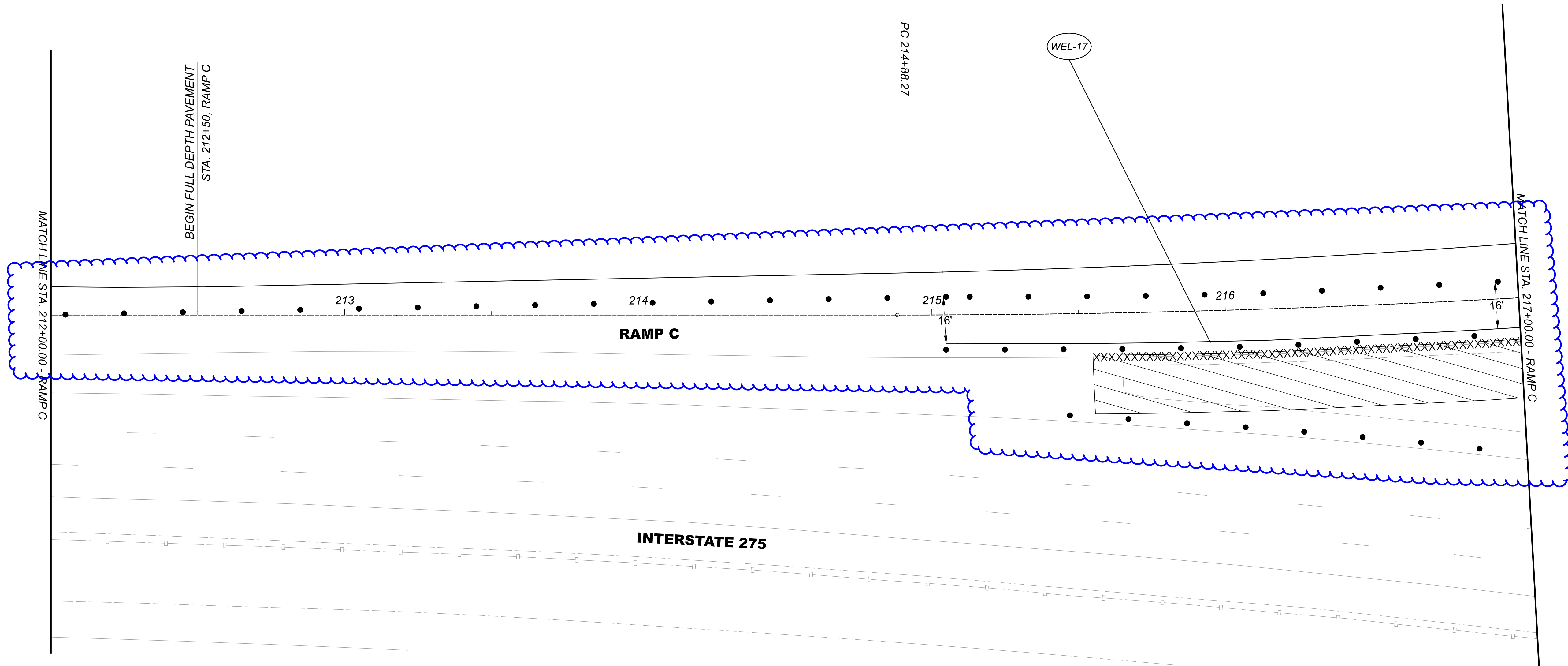
REVIEWER
JDH 09/27/21

PROJECT ID
109357

SHEET	TOTAL
45	160

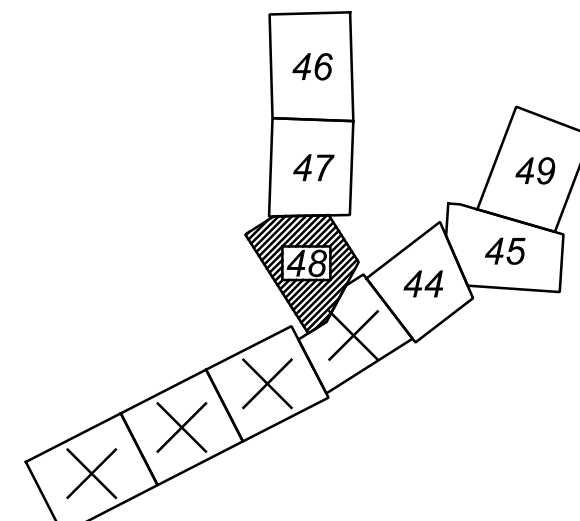


MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 7



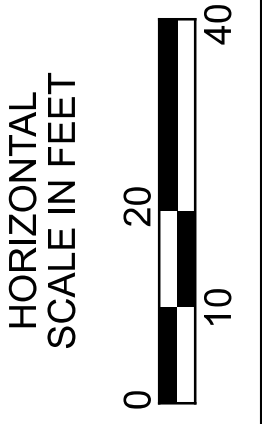
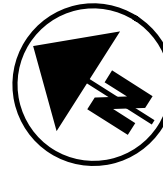
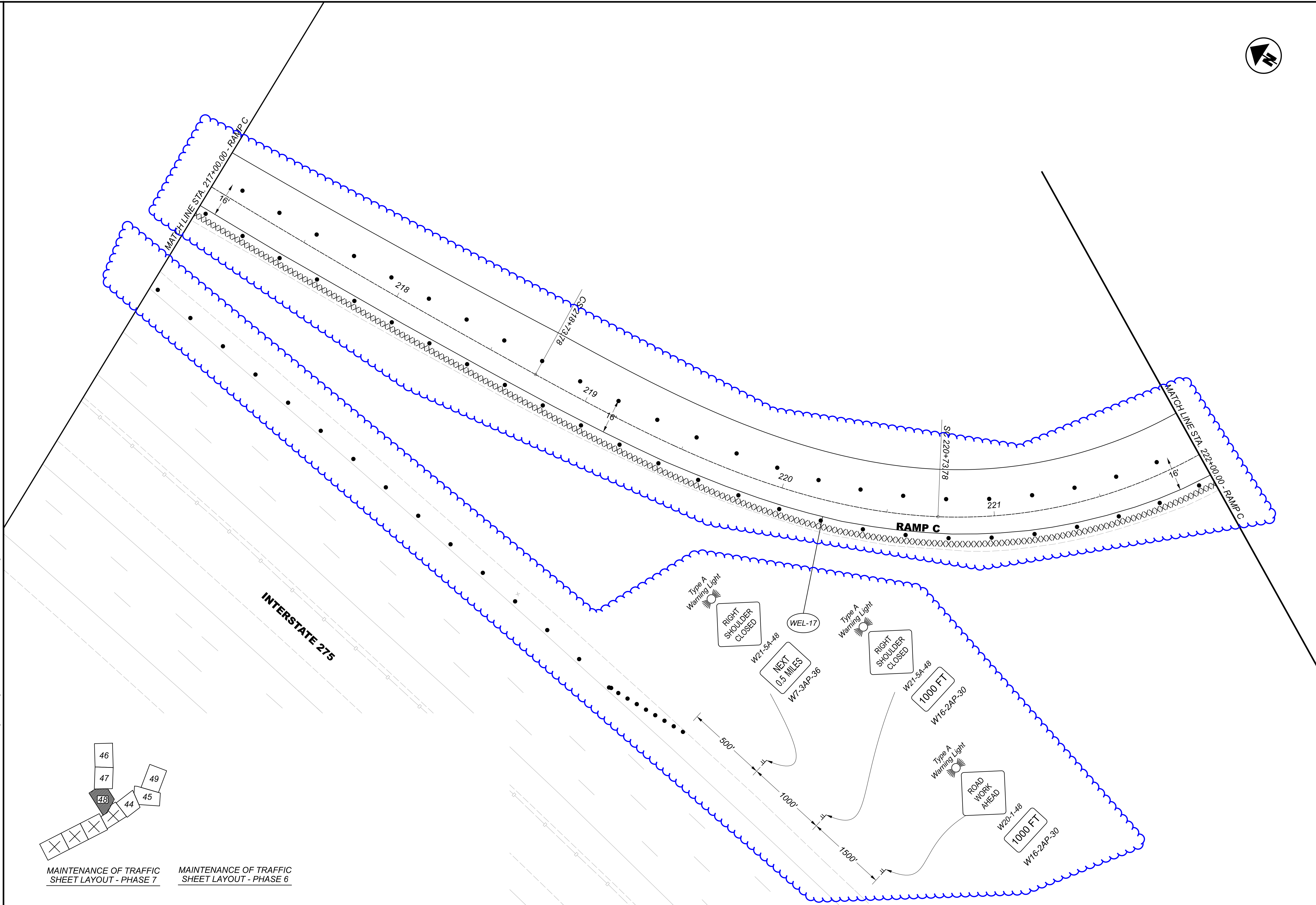
MAINTENANCE OF TRAFFIC PHASE 7
RAMP C - STA. 212+00.00 TO STA. 217+00.00

DESIGN AGENCY	
BARGE ENGINEERING SOLUTIONS	
DESIGNER	
RJN	
REVIEWER	
JDH 09/27/21	
PROJECT ID	
109357	
SHEET	TOTAL
47	160



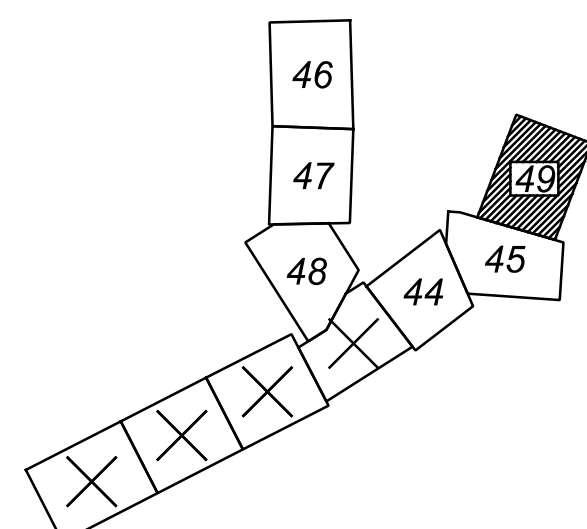
MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 7

MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 6

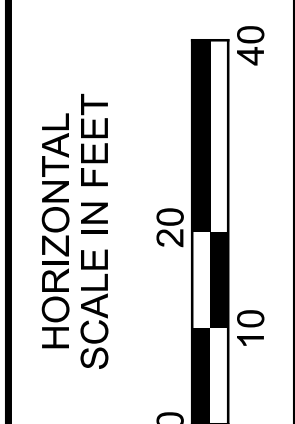
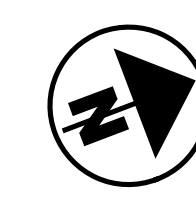
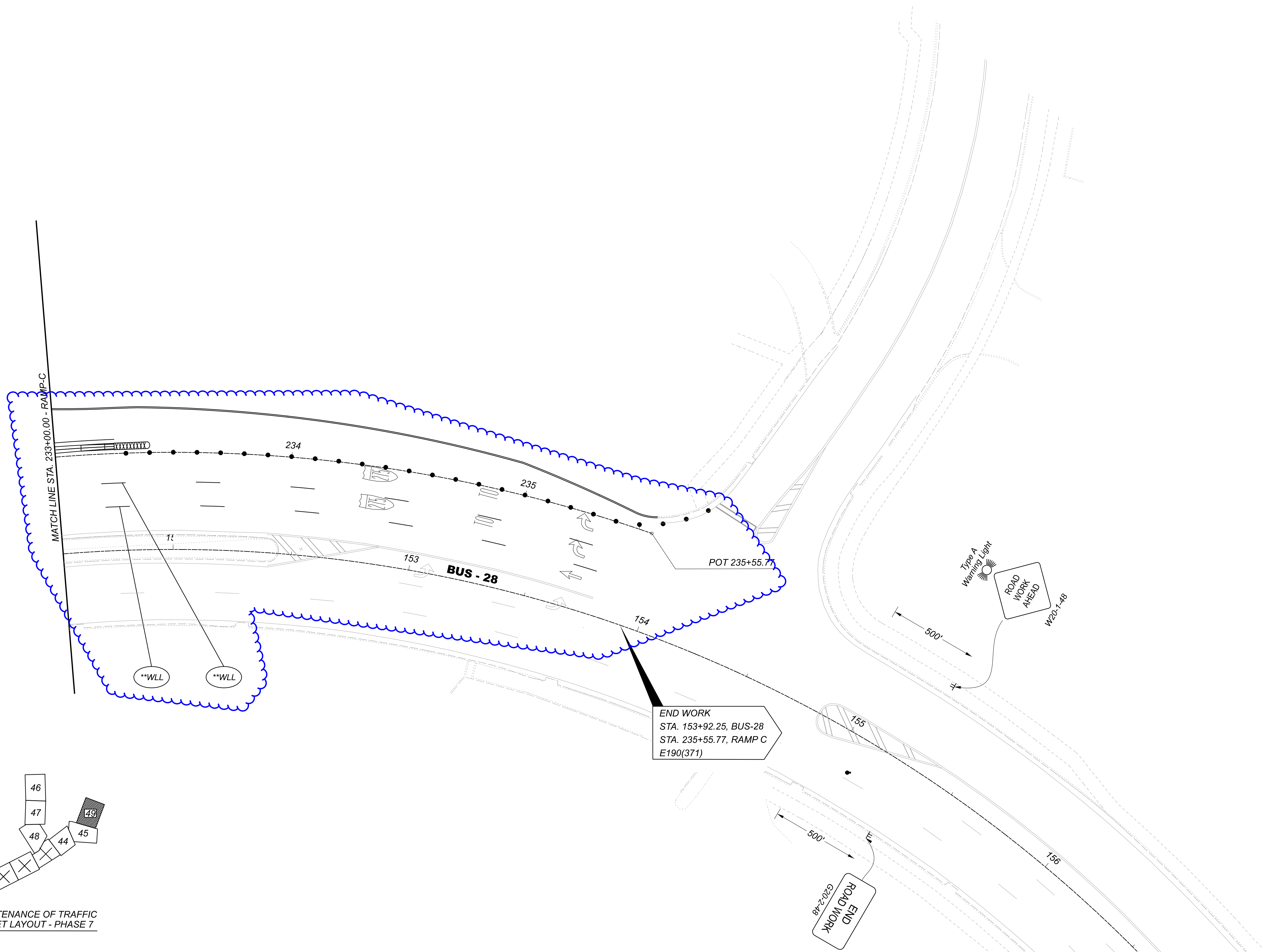


MAINTENANCE OF TRAFFIC PHASE 7
RAMP C - STA. 217+00.00 TO STA. 222+00.00

DESIGN AGENCY	
BARGE ENGINEERING	
DESIGNER	RJN
REVIEWER	JDH 09/27/21
PROJECT ID	109357
SHEET	TOTAL
48	160



MAINTENANCE OF TRAFFIC SHEET LAYOUT - PHASE 7



MAINTENANCE OF TRAFFIC PHASE 7
 RAMP C - STA. 233+00.00 TO STA. 235+55.77


DESIGN AGENCY	
BARGE BARGE SOLUTIONS	
DESIGNER	
RJN	
REVIEWER	
JDH 09/27/21	
PROJECT ID	
109357	
SHEET	TOTAL
49	160

CLE-28-1.76

MODEL: Sheet PAPER: 34x22 (in.) DATE: 1/17/2022 TIME: 2:08:21 PM USER: AEJolly
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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
114	129	146								01/SAF/OT	02/IMS/BR						
TRAFFIC CONTROL (CONT.)																	
0.18										0.18		646	10110	0.18	MILE	LANE LINE, 6"	
0.06										0.06		646	10200	0.06	MILE	CENTER LINE	
1										1		814	00010	1	EACH	INTERSTATE ELONGATED ROUTE SHIELD SYMBOL MARKING, TYPE B125	
1										1		814	00016	1	EACH	CARDINAL DIRECTION (NORTH, SOUTH, WEST & EAST) MARKING, TYPE B125	
TRAFFIC SIGNALS																	
	12									12		625	25602	12	FT	CONDUIT, 4", 725.05	
	1									1		625	32000	1	EACH	GROUND ROD	
	1									1		630	79000	1	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
	150									150		632	30400	150	FT	MESSENGER WIRE, 7 STRAND, 1/2" DIAMETER WITH ACCESSORIES	
	200									200		632	30500	200	FT	MESSENGER WIRE, MISC.; UNLASH AND RELASH MESSENGER WIRE	131
	150									150		632	30600	150	FT	TETHER WIRE, WITH ACCESSORIES	
	1									1		632	64000	1	EACH	STRAIN POLE FOUNDATION	
	1									1		632	86160	1	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 14	
	1									1		809	60040	1	EACH	CCTV IR CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ	
	2									2		809	69001	2	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	131
	4									4		809	69101	4	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	131
	1									1		809	69200	1	EACH	EMERGENCY VEHICLE PREEMPTION	
	400									400		809	69220	400	FT	PREEMPT DETECTOR CABLE	
STRUCTURE REPAIR (CLE-0028-01.42)																	
		LS									LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	144, 149
		8,190									8,190	509	10000	8,190	LB	EPOXY COATED REINFORCING STEEL	
		11,738									11,738	509	30020	11,738	FT	NO. 4 GFRP DEFORMED BARS	
		8,457									8,457	509	40000	8,457	LB	REINFORCING STEEL, MISC.: GALVANIZED	144
		1,678									1,678	510	09951	1,678	EACH	DOWEL HOLES WITH CEMENT GROUT, AS PER PLAN	144
		125									125	511	34461	125	CY	CLASS QC SCC CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	154
		2,640									2,640	848	10201	2,640	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN, 2-3/4"	144
		2,640									2,640	848	20000	2,640	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
		70									70	848	30201	70	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	144
		125									125	848	50000	125	SY	HAND CHIPPING	
		LS									LS	848	50100	LS		TEST SLAB	
		2,640									2,640	848	50320	2,640	SY	EXISTING CONCRETE OVERLAY REMOVED, 2-1/4"	
STRUCTURE REPAIR (CLE-0028-01.42) ALTERNATE 1																	
		700									700	512	10101	700	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	144
		2,700									2,700	SPECIAL	53013000	2,700	SF	FORM LINER	144
		560									560	607	39900	560	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
STRUCTURE REPAIR (CLE-0028-01.42) ALTERNATE 2																	
		700									700	512	10101	700	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	145
		2,700									2,700	SPECIAL	53013000	2,700	SF	FORM LINER	145
		573									573	SPECIAL	60740000	573	FT	VANDAL PROTECTION FENCE	145
		2									2	630	86321	2	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND REERECTION, AS PER PLAN	145
		2									2	630	97700	2	EACH	SIGNING, MISC.: LED LOGO SIGN	145

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER: **AJS**
 REVIEWER: **JDH** 09/27/21
 PROJECT ID: **109357**
 SHEET TOTAL: 52 | 160

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	17								01/SAF/OT	02/IMS/BR						
	575										575	607	39994	575	FT	MAINTENANCE OF TRAFFIC	
460										138	322	614	11110	460	HOUR	TEMPORARY VANDAL FENCE, TYPE B	
800										160	640	614	11630	800	FT	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	3	4								1	6	614	12380	7	EACH	INCREASED BARRIER DELINEATION	
110										22	88	614	13310	110	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
20		94								60	54	614	13312	114	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
32										8	24	614	13350	32	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
42										14	28	614	18601	42	SNMT	OBJECT MARKER, ONE WAY	
1.15		0.24								0.12	0.12	614	20056	0.24	MILE	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	
										0.35	0.8	614	20560	1.15	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
	0.79	0.24									1.03	614	21050	1.03	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
0.46										0.14	0.32	614	21550	0.46	MILE	WORK ZONE CENTER LINE, CLASS I, 807 PAINT	
	1.29	1.34								0.63	2	614	22056	2.63	MILE	WORK ZONE CENTER LINE, CLASS II, 642 PAINT	
1.28										0.38	0.9	614	22360	1.28	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
	9,488	1,850									11,338	614	23110	11,338	FT	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
2,104										631	1,473	614	23690	2,104	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
	622	392									1,014	614	24102	1,014	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
272										82	190	614	24612	272	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
73										22	51	614	24618	73	FT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	
	140	35								35	140	614	26000	175	FT	WORK ZONE DOTTED LINE, CLASS III, 12", 642 PAINT	
301										90	211	614	26610	301	FT	WORK ZONE STOP LINE, CLASS I	
	417										417	615	20001	417	SY	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
124										36	88	616	10000	124	MGAL	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	
	891	4,576								2,467	3,000	622	41100	5,467	FT	WATER	
	869										869	622	41110	869	FT	PORTABLE BARRIER, UNANCHORED	
	3.22	2.07								0.75	4.54	642	30030	5.29	MILE	PORTABLE BARRIER, ANCHORED	
																REMOVAL OF PAVEMENT MARKING	
																INCIDENTALS	
LS										LS		614	11000	LS		MAINTAINING TRAFFIC	
										LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER: AJS
 REVIEWER: JDH 09/27/21
 PROJECT ID: 109357
 SHEET: 53 TOTAL: 160

SHEET NO.	LOCATION	632	632	632	625	809	809	809	630	625	632	809	809	632	
		TETHER WIRE, WITH ACCESSORIES	STRAIN POLE, TYPE TC-81.11, DESIGN 14	MESSENGER WIRE, 7 STRAND, 1/2" DIAMETER WITH ACCESSORIES	GROUND ROD	CCTV IP-CAMERA SYSTEM, QUAD MULTI-VIEW FIXED WITH PTZ	STOP LINE RADAR DETECTION, AS PER PLAN	ADVANCE RADAR DETECTION, AS PER PLAN	SIGN HANGER ASSEMBLY, SPAN WIRE	CONDUIT, 4", 725.05	MESSENGER WIRE, MISC.: UNLASH AND RELASH MESSENGER WIRE	EMERGENCY VEHICLE PREEMPTION, REUSE EXISTING PRE-EMPTIVE DETECTOR	PREEMPT DETECTOR CABLE, FOR RELOCATED PRE-EMPTIVE DETECTOR	STRAIN POLE FOUNDATION	
		FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	FT	EACH	
132	STRAIN POLE AT 231+98.5 OFF 43.5' LT		1		1										1
132	TETHER WIRE FROM NEW STRAIN POLE TO EXISTING BOX SPAN FOR SIGNALS	150													
132	MESSENGER WIRE FROM NEW STRAIN POLE TO EXISTING BOX SPAN FOR SIGNALS			150											
132															
132	CCTV CAMERA AT NEW STRAIN POLE					1									
132	FOR EACH APPROACH OF S.R. 28 AND BUSINESS S.R. 28						4								
132	FOR EASTBOUND AND WESTBOUND THROUGH MOVEMENTS AT INTERSECTION OF S.R. 28 AND BUSINESS S.R. 28							2							
132	RELOCATE "NO TURN ON RED" EXISTING SIGN ALONG SPAN WIRE TO STA. 150+53.00 OFF 43.61 RT								1						
132	FROM EXIST. STRAIN POLE TO EXIST. CONTROL CABINET									12					
132	EXIST. SPAN WIRE										200				
132	REUSE EXISTING PREEMPTIVE DETECTOR											1			
132	CABLE FOR RELOCATED DETECTOR												400		
TOTALS CARRIED TO GENERAL SUMMARY		150	1	150	1	1	4	2	1	12	200	1	400	1	



GENERAL NOTES

STANDARD BRIDGE DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

EXJ-4-87 REVISED 7-19-02
SBR-1-20 REVISED 7-17-20
TVPF 1-18 DATED 7-20-18
VPF-1-90 REVISED 7-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 DATED 7-17-20
848 DATED 1-15-21

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

DESIGN LOADING INCLUDES:
VEHICULAR LIVE LOAD: HS20-44
FUTURE WEARING SURFACE (FWS) OF 0.0 KIPS/SQ FT

DESIGN DATA

CONCRETE CLASS SCC - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH OF 60 KSI

MAINTENANCE OF TRAFFIC

FOR MAINTENANCE OF TRAFFIC NOTES AND DETAILS, SEE ROADWAY PLANS.

PLANS OF EXISTING BRIDGE

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE AVAILABLE FOR REFERENCE BY CONTACTING THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE.

EXISTING STRUCTURE VERIFICATION

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

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

UTILITY LINES

THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

SEE ROADWAY PLANS FOR ADDITIONAL UTILITY COORDINATION NOTES.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE CONCRETE PARAPETS AND ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. PERFORM WORK CAREFULLY DURING PARAPET REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE EQUIPMENT IS PROHIBITED. THE METHOD OF REMOVAL AND WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCODING TO CMS 501.05.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 509 - REINFORCING STEEL, MISC.: GALVANIZED

PROVIDE GALVANIZED REINFORCING STEEL CONFORMING TO ASTM A767, CLASS 1. THE GALVANIZED COATED REINFORCING STEEL SHALL MEET ALL OTHER REQUIREMENTS OF CMS 509. THE GALVANIZED COATING SHALL BE APPLIED AFTER THE REINFORCING HAS BEEN FABRICATED. IF THE GALVANIZED SURFACE BECOMES DAMAGED DURING HANDLING IN THE FIELD, REPAIRS SHALL CONFORM TO ASTM A780. USE BAR SUPPORTS AND TIE WIRES WHICH ARE PLASTIC COATED OR EPOXY COATED.

ITEM 510 - DOWEL HOLES WITH CEMENT GROUT, AS PER PLAN

INSTALL GALVANIZED DOWEL BARS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR BLACK REBAR PUBLISHED IN THE ICC-ES REPORTS LISTED BELOW.

THE HOLES FOR THE DOWEL BARS SHALL BE DRILLED WITH A HAMMER DRILL AND CARBIDE BIT. PRIOR TO THE INSTALLATION OF THE ANCHORS, THE HOLES SHALL BE CLEANED AND DRIED IN A MANNER CONSISTENT WITH THE MANUFACTURER'S REQUIREMENTS FOR DRY CONCRETE.

THE EFFECTIVE EMBEDMENT DEPTH (HEF) FOR #6 DOWEL BARS INSTALLED IN THE TOP OF THE DECK AND WINGWALLS SHALL BE 10 INCHES.

SELECT FROM ONE OF THE FOLLOWING APPROVED PRODUCTS:

HILTI HIT-HY 200 ADHESIVE ANCHORS
(ICC-ES REPORT ESR-3187)

DEWALT PURE110+ EPOXY ADHESIVE ANCHOR SYSTEM
(ICC-ES REPORT ESR-3298)

SIMPSON STRONG-TIE SET-3G EPOXY ADHESIVE ANCHORS
(ICC-ES REPORT ESR-4057)

ATC ULTRABOND HS-1CC ADHESIVE ANCHOR SYSTEM
(ICC-ES REPORT ESR-4094)

THE MANUFACTURER'S INSTALLATION INSTRUCTION PUBLISHED IN THE ICC-ES REPORTS FOR ACCEPTABLE PRODUCTS ARE AVAILABLE AT:
WWW.ICC-ES.ORG/EVALUATION-REPORT-PROGRAM/REPORTS-DIRECTORY

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN (ALTERNATIVE 1)

ALL EXPOSED SURFACES OF THE BRIDGE RAILINGS SHALL BE SEALED WITH EPOXY-URETHANE SEALER AS SHOWN IN THE PLANS FOR ALTERNATIVE 1. THE COLOR SHALL BE FEDERAL COLOR NUMBER 17778 (LIGHT NEUTRAL). THE SURFACE TO BE SEALED SHALL HAVE SURFACE PREPARATION PER CMS 512.03(F).

ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN

THIS ITEM SHALL CONFORM TO SS 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS.

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA:

MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.25 IN. MAX) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AN ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.5 AND 2.25 INCHES IN LENGTH. FIBERS WITH AN ASPECT RATIO GREATER THAN 60 REQUIRES A BLOWER TO INHIBIT BALLING AND MATTING OF FIBERS (ACI 544.3R-08). STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. MACRO-SYNTHETIC FIBERS IS TO BE USED AS AN ADMIXTURE TO CONTROL CRACKING AND IS NOT TO BE USED TO SUPPLEMENT OR REPLACE REINFORCING STEEL IN THE DESIGN. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

ITEM SPECIAL - FORMLINER (ALTERNATIVE 1)

A FORMLINER IN ACCORDANCE WITH CMS 508.03 SHALL BE USED TO PRODUCE THE ARCHITECTURAL SURFACES ON ALL PROPOSED SBR-1-20 BRIDGE RAILING ACCORDING TO THE LIMITS SHOWN IN THE PLANS FOR ALTERNATIVE 1. THE FORMLINER USED TO PRODUCE THE ARCHITECTURAL SURFACE TEXTURE SHALL BE AS FOLLOWS, OR AN EQUAL FORMLINER MATERIAL APPROVED BY THE ENGINEER.

DRY STACK FORMLINER:

PATTERN NO.	DESCRIPTION	MANUFACTURER
1208	DRYSTACK	CUSTOM ROCK FORMLINER
17911	SAN DIEGO DRYSTACK	FITZGERALD FORMLINERS
1548	CHESTER DRY STACK	SPEC FORMLINERS

FORMLINER MANUFACTURER INFORMATION:

CUSTOM ROCK FORMLINER
2020 WEST 7TH STREET
ST. PAUL, MN 55116
PHONE: (561)699-1345

FITZGERALD FORMLINERS
1500 EAST CHESTNUT AVENUE
SANTA ANA, CA 92701
PHONE: (714)547-6710

SPEC FORMLINERS
1038 E. 4TH STREET
SANTA ANA, CA 92701
PHONE: (714)429-9500

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE FORMLINERS BY THE NUMBER OF SQUARE FEET. THE DEPARTMENT WILL DETERMINE THE AREA OF THE FORMLINER FROM NOMINAL PLAN DIMENSIONS.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR FALSEWORK, STRUCTURAL FORMWORK, FURNISHING, PLACING, CONSOLIDATING, FINISHING AND CURING CONCRETE FOR THE BRIDGE RAILING SEPARATELY. PAYMENT FOR ITEM SPECIAL, FORMLINER INCLUDES ALL MATERIALS AND LABOR REQUIRED TO PRODUCE THE TEXTURED CONCRETE SURFACES SHOWN ON THE PLANS AND DESCRIBED HEREIN.

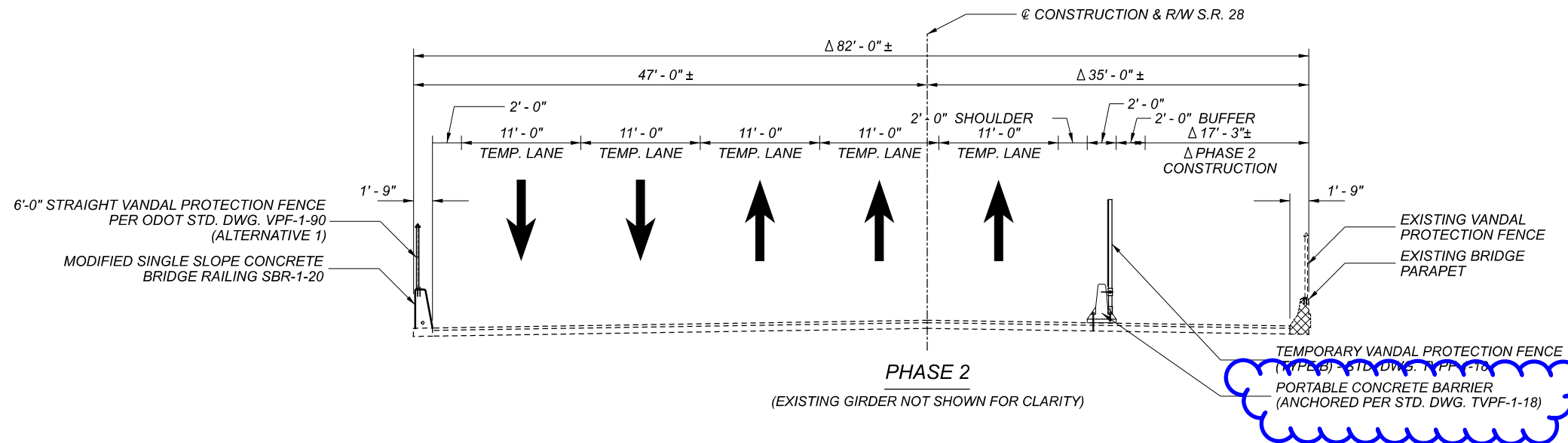
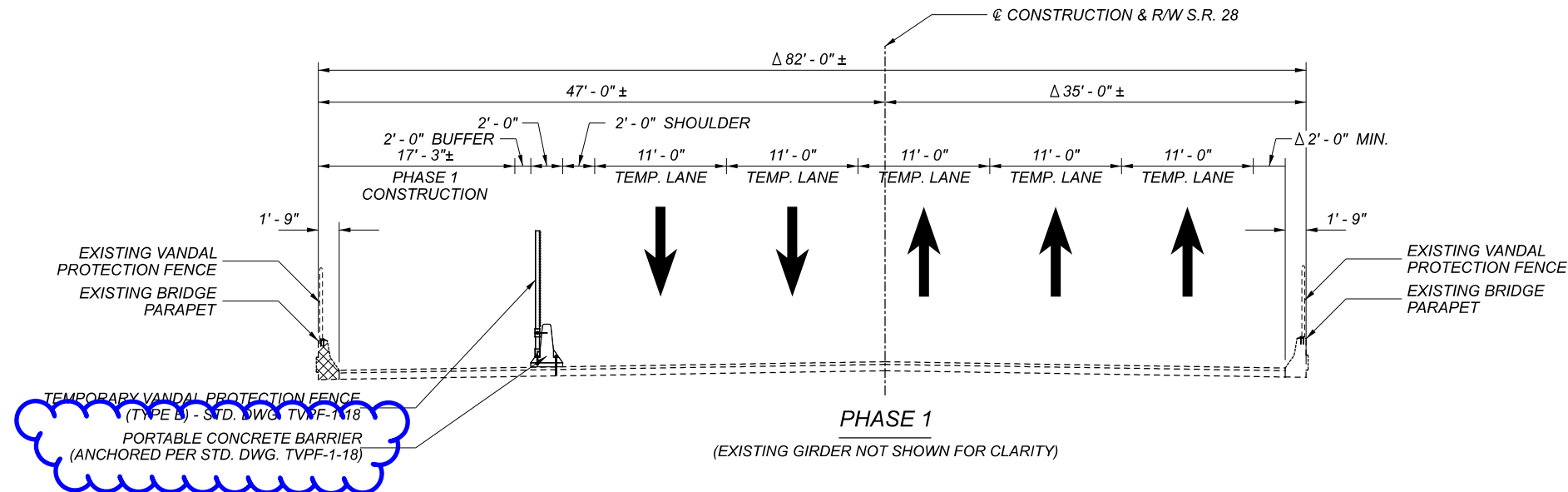
CLE-28-1.76

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GENERAL NOTES
BRIDGE NO. CLE-0028-01.42
SR-28 OVER I-275



SFN	1300016
DESIGNER	AMS
CHECKER	JRL
REVIEWER	KSM 09/27/21
PROJECT ID	109357
SUBSET	TOTAL
2	18
SHEET	TOTAL
144	160





Δ = DIMENSION VARIES AT FORWARD ABUTMENT

LEGEND

-  INDICATES AREA WHERE EXISTING 2 1/4" MSC OVERLAY AND 1/2" OF ORIGINAL DECK TO BE REMOVED AND REPLACED WITH NEW 2 3/4" SUPERPLASTICIZED DENSE CONCRETE (SDC).
-  INDICATES AREA WHERE EXISTING PARAPET AND VANDAL PROTECTION FENCE TO BE REMOVED AND REPLACED WITH A NEW SINGLE SLOPE CONCRETE BARRIER PER SBR-1-20* AND NEW 6' TALL FENCE PER VPF-1-90 ON THE BRIDGE.

NOTES:

1. THE PORTABLE BARRIER SHALL SATISFY NCHRP 350 AND MASH. ALTERNATIVE BARRIER, AS ON ODOT'S APPROVED PRODUCTS, LIST ARE ACCEPTABLE.
2. PORTABLE BARRIER SHALL BE PAID FOR WITH ROADWAY ITEM 622, PORTABLE BARRIER, ANCHORED.