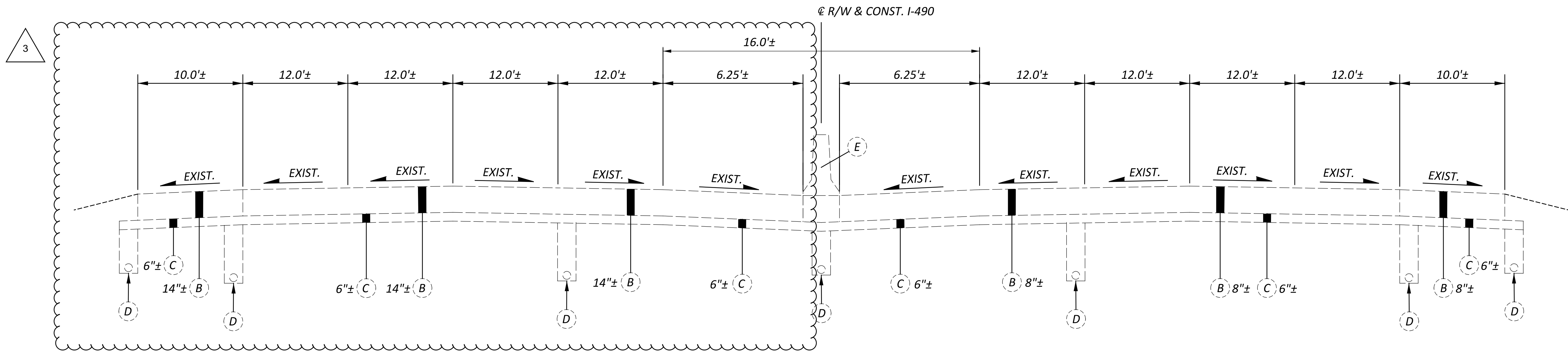


**EXISTING I-490 SECTION**

LIMITING STATIONS

WB LANES: STA. 933+23.03 TO STA. 955+12.65  
 EB LANES: STA. 933+23.03 TO STA. 954+26.19



**EXISTING I-490 SECTION**

LIMITING STATIONS

WB LANES: STA. 955+12.65 TO STA. 985+65.44  
 EB LANES: STA. 954+26.19 TO STA. 985+65.44

- (A) EXISTING ASPHALT
- (B) EXISTING REINFORCED CONCRETE
- (C) EXISTING AGGREGATE BASE
- (D) EXISTING UNDERDRAIN
- (E) EXISTING B-50 BARRIER

DESIGN AGENCY



DESIGNER

NRB

REVIEWER

PJF 11-21-23

PROJECT ID

107408

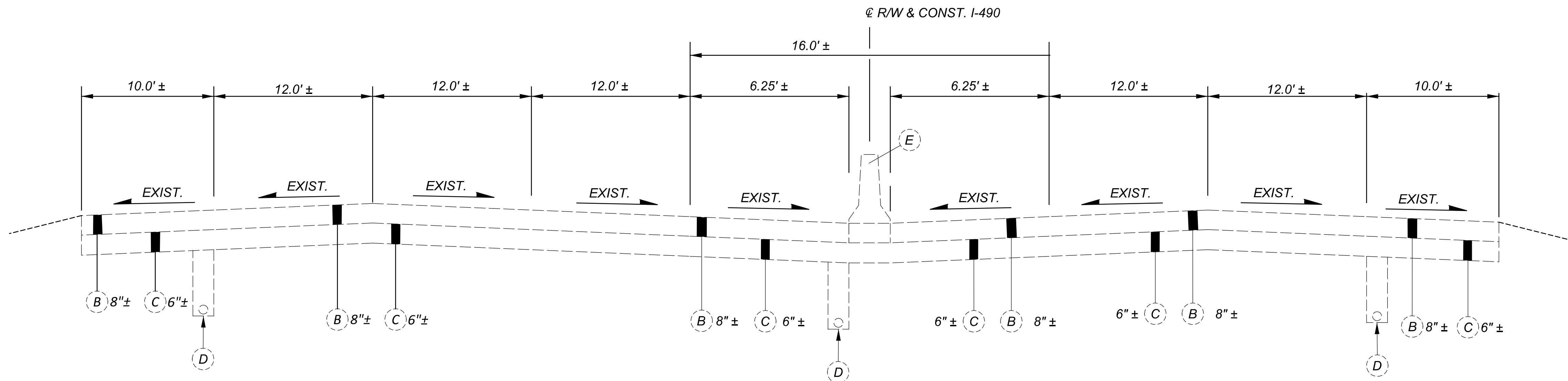
SHEET

21

TOTAL

1068

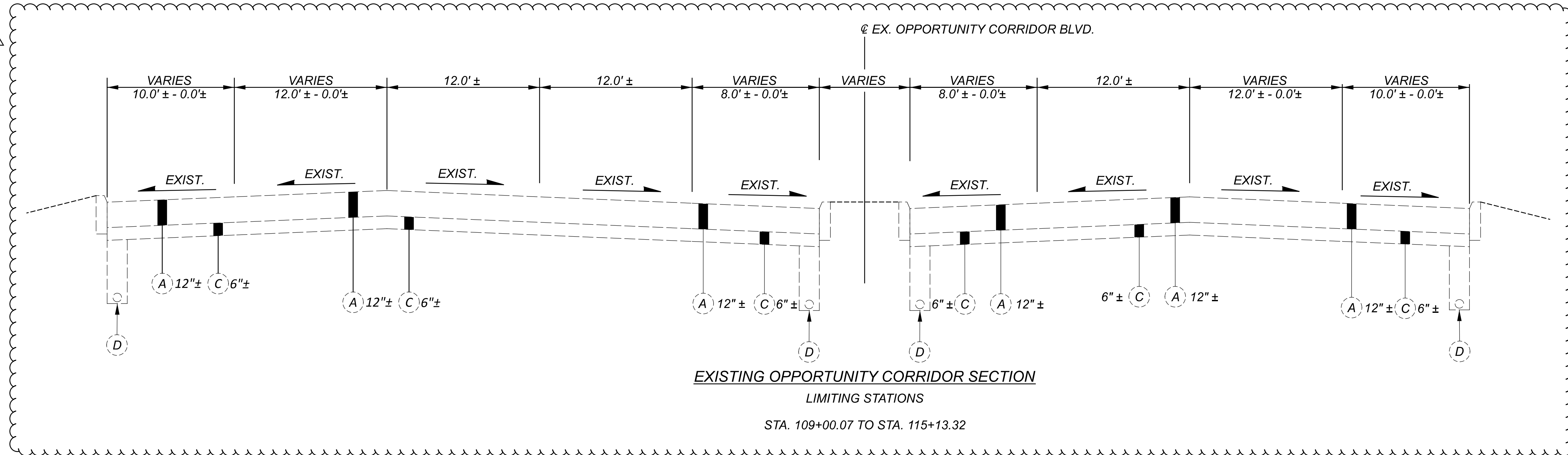
REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED EXISTING PAVEMENT COMPOSITION



**EXISTING I-490 SECTION**  
 LIMITING STATIONS

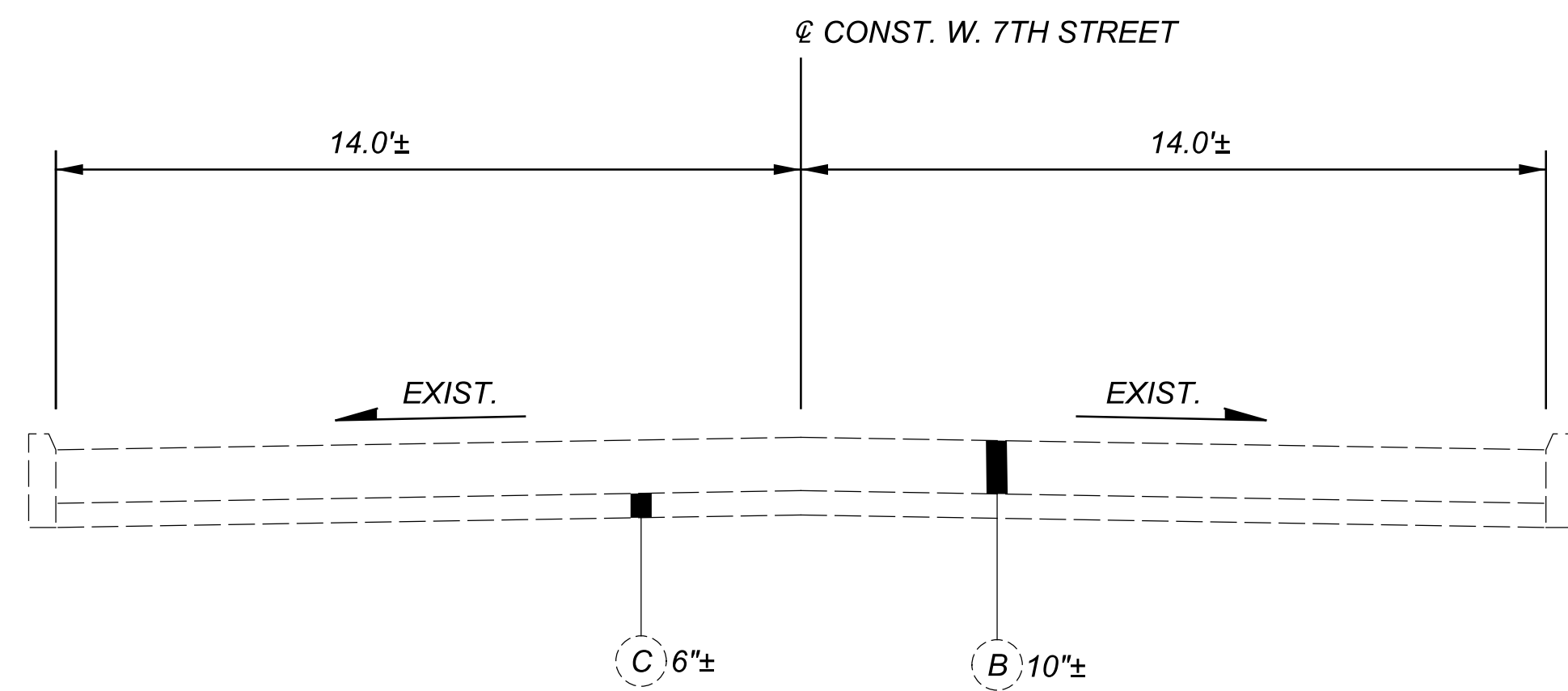
STA. 1020+67.19 TO STA. 1044+73.48

3



**EXISTING OPPORTUNITY CORRIDOR SECTION**  
 LIMITING STATIONS

STA. 109+00.07 TO STA. 115+13.32



**EXISTING W. 7TH STREET SECTION**  
 LIMITING STATIONS

STA. 10+00.00 TO STA. 19+00.00

- (A) EXISTING ASPHALT
- (B) EXISTING REINFORCED CONCRETE
- (C) EXISTING AGGREGATE BASE
- (D) EXISTING UNDERDRAIN
- (E) EXISTING B-50 BARRIER

DESIGN AGENCY



DESIGNER  
 NRB

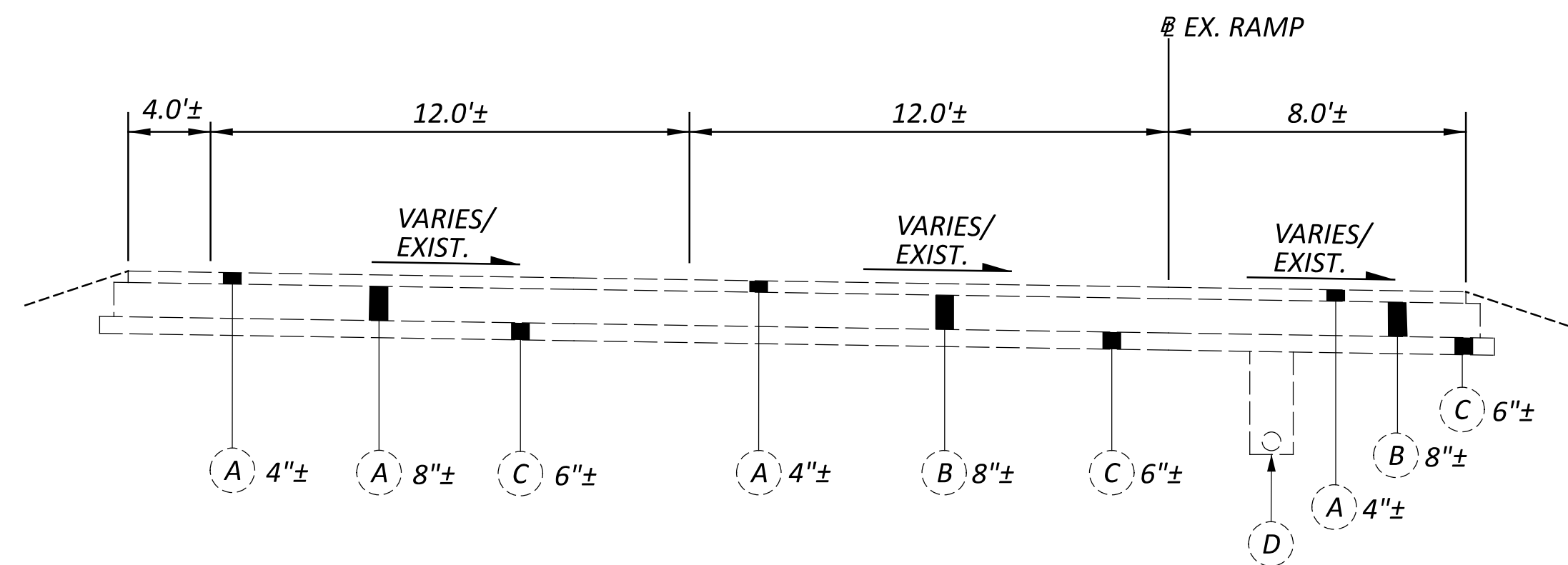
REVIEWER  
 PJF 11-21-23

PROJECT ID  
 107408

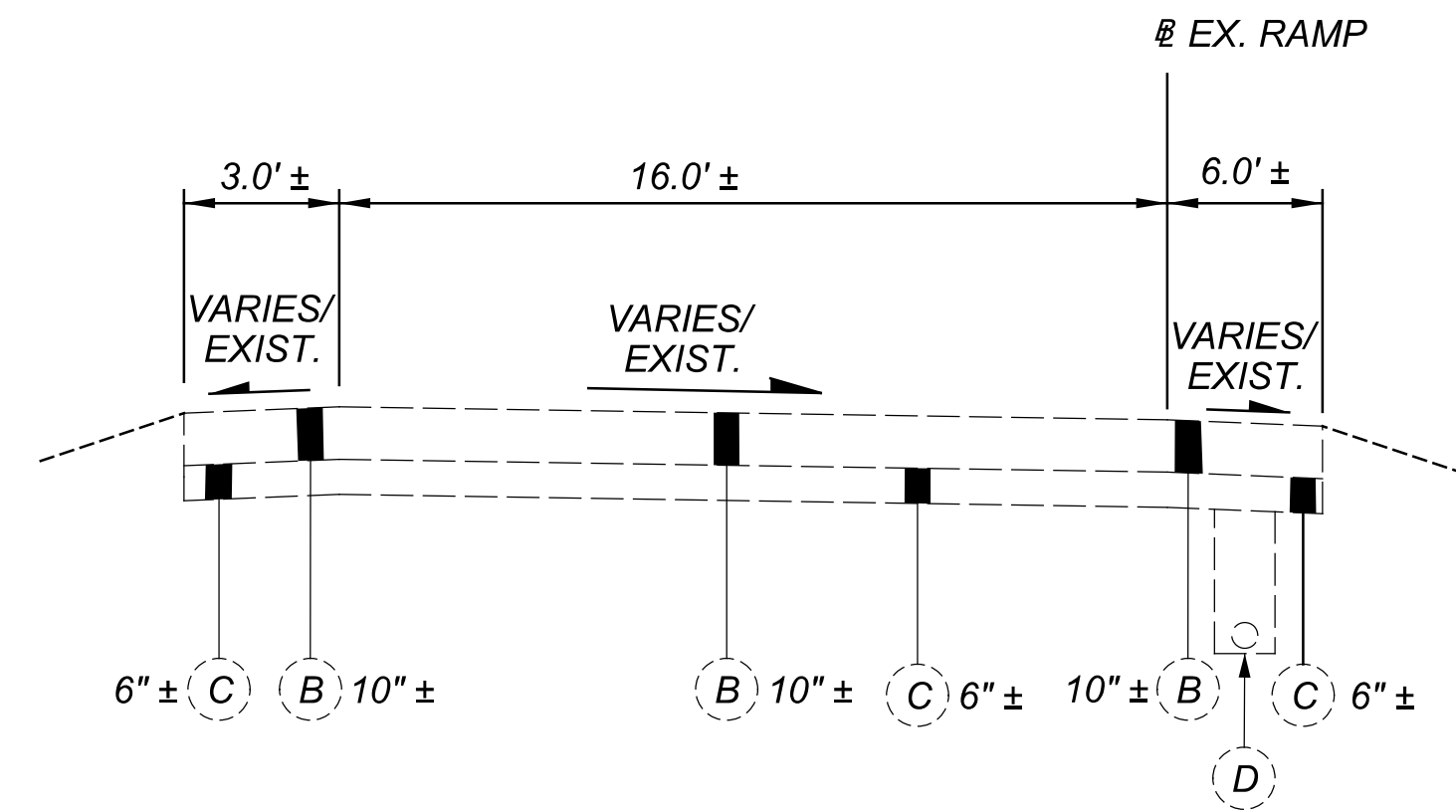
REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED EXISTING PAVEMENT COMPOSITION AND WIDTHS

SHEET TOTAL  
 22 1068

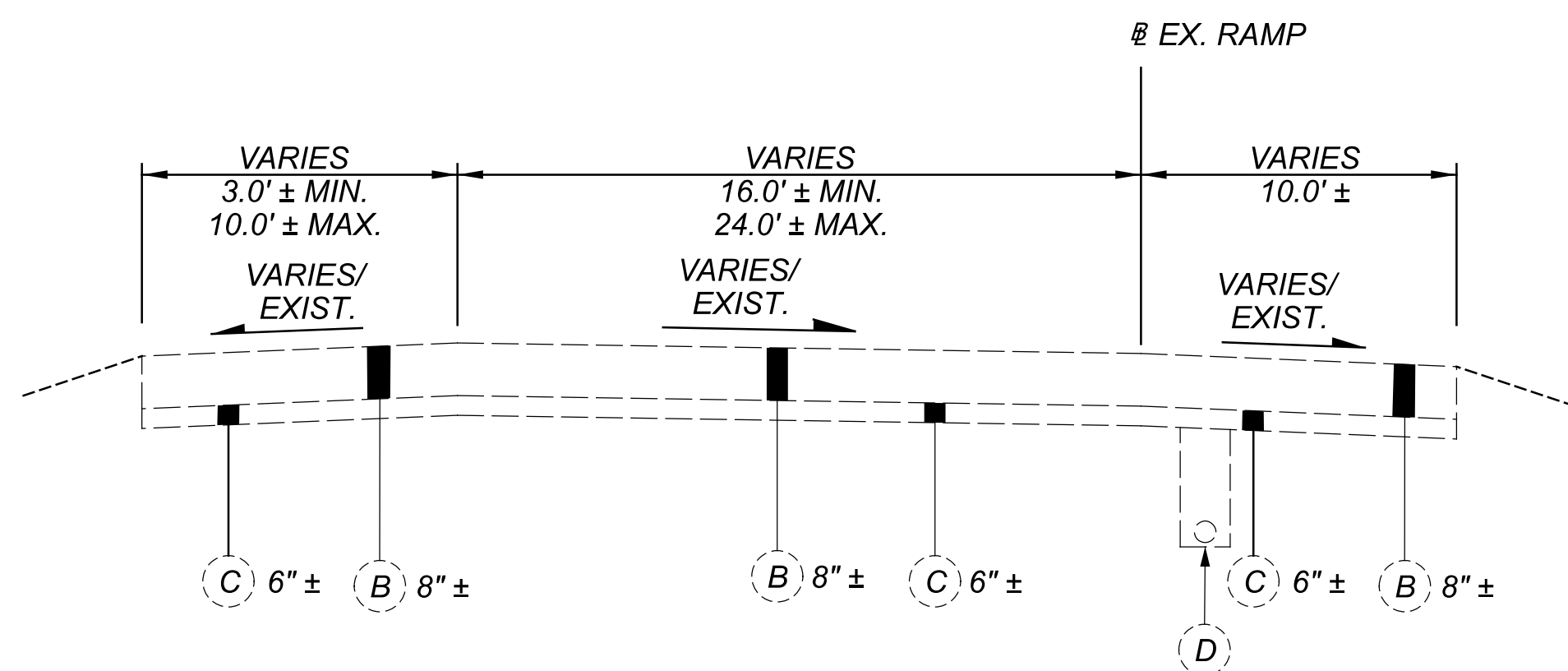
- (A) EXISTING ASPHALT
- (B) EXISTING REINFORCED CONCRETE
- (C) EXISTING AGGREGATE BASE
- (D) EXISTING UNDERDRAIN
- (E) EXISTING B-50 BARRIER



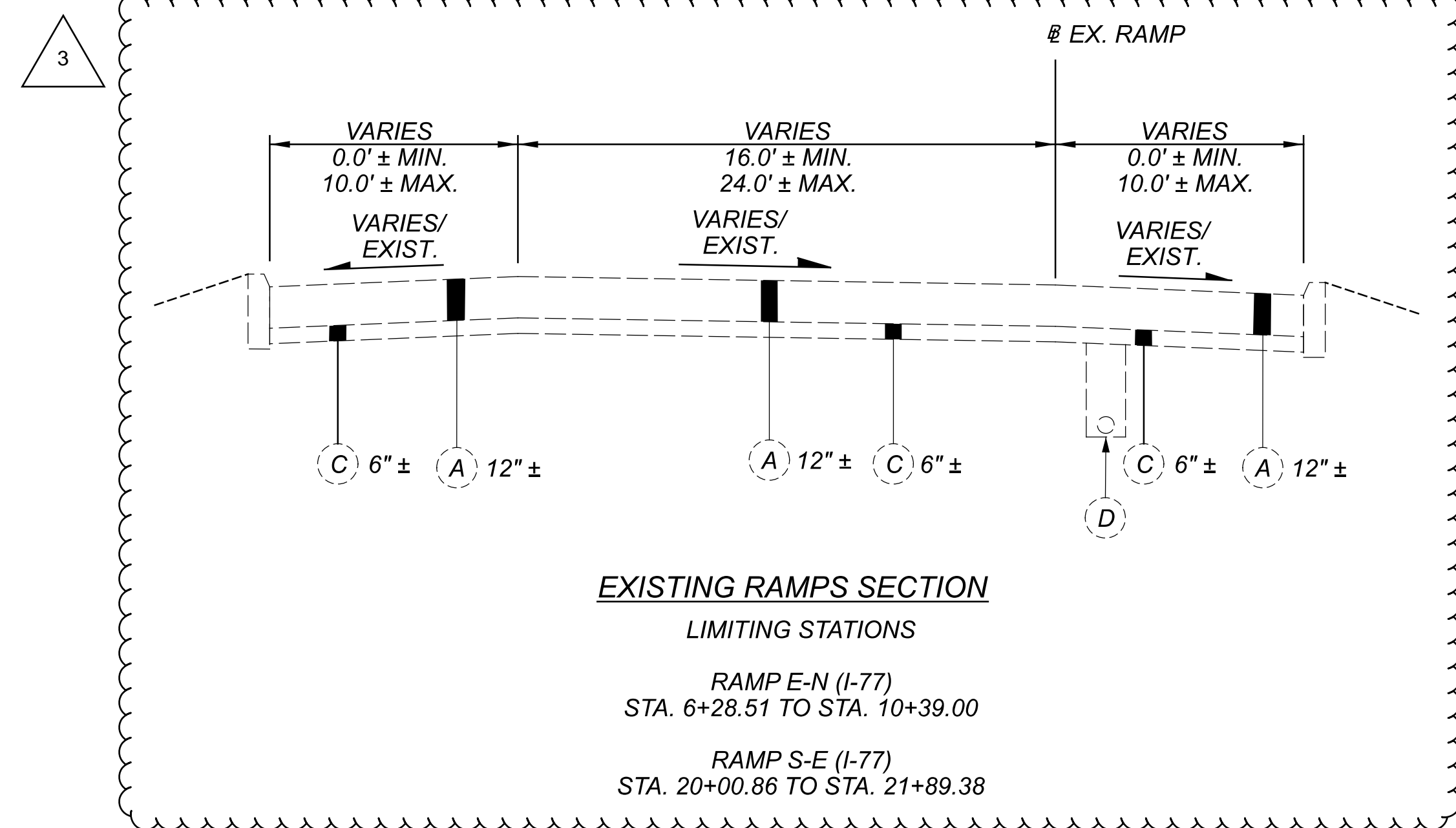
**EXISTING RAMPS SECTION**  
 LIMITING STATIONS  
 RAMP E-S (I-71)  
 STA. 9+56.08 TO STA. 17+43.85  
 STA. 22+36.59 TO STA. 27+69.36  
 RAMP S-E (I-71)  
 STA. 15+04.51 TO STA. 20+29.24



**EXISTING RAMPS SECTION**  
 LIMITING STATIONS  
 RAMP C-7  
 STA. 81+98.55 TO STA. 85+63.86  
 RAMP 7-C  
 STA. 67+92.59 TO STA. 78+99.92  
 RAMP 7-7C  
 STA. 67+99.06 TO STA. 75+36.45



**EXISTING RAMPS SECTION**  
 LIMITING STATIONS  
 RAMP B-C  
 STA. 14+98.42 TO STA. 18+18.79  
 RAMP C-B  
 STA. 14+78.03 TO STA. 17+34.86  
 RAMP E-N (I-77)  
 STA. 10+39.00 TO STA. 27+33.01  
 RAMP E-S (I-77)  
 STA. 5+22.38 TO STA. 7+87.34  
 STA. 11+38.95 TO STA. 13+42.95  
 RAMP N-E (I-77)  
 STA. 13+58.56 TO STA. 18+48.75  
 RAMP N-W (I-77)  
 STA. 9+06.96 TO STA. 20+32.24  
 RAMP S-E (I-77)  
 STA. 10+87.95 TO STA. 20+00.86  
 RAMP S-W (I-77)  
 STA. 17+89.78 TO STA. 18+48.65  
 RAMP W-N (I-77)  
 STA. 3+00.44 TO STA. 6+45.66  
 STA. 10+01.60 TO STA. 14+15.40  
 RAMP W-S (I-77)  
 STA. 3+45.70 TO STA. 11+07.30



**EXISTING RAMPS SECTION**  
 LIMITING STATIONS  
 RAMP E-N (I-77)  
 STA. 6+28.51 TO STA. 10+39.00  
 RAMP S-E (I-77)  
 STA. 20+00.86 TO STA. 21+89.38

DESIGN AGENCY



DESIGNER  
 NRB

REVIEWER  
 PJF 11-21-23

PROJECT ID  
 107408

SHEET TOTAL  
 23 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED EXISTING PAVEMENT COMPOSITION AND WIDTHS



**GENERAL (CONTINUED)**

**ITEM 619 FIELD OFFICE, TYPE C, AS PER PLAN**

ALL REQUIREMENTS OF C&MS 619 SHALL APPLY EXCEPT AS MODIFIED HEREIN:

THE FIELD OFFICE SHALL BE A SUITE TYPE OFFICE (NO TRAILER OR MODULAR OFFICE) WITH A MINIMUM OF 4,000 SQUARE FEET AND AT GROUND LEVEL WITH A MINIMUM CEILING HEIGHT OF EIGHT (8) FEET. PROVIDE TWO (2) OUTSIDE DOORS, LOCKABLE VANDAL PROOF CYLINDER TYPE DEAD BOLTS AND LOCKABLE WINDOWS. THE FLOOR SPACE WILL BE DIVIDED INTO TWO RESTROOMS, ONE GENERAL OFFICE AREA (MINIMUM 400 SQUARE FEET), NOT LESS THAN SEVEN INDIVIDUAL OFFICES (MINIMUM 300 SQUARE FEET EACH) AS SEPARATE ENCLOSED ROOMS (NO CUBICLE DIVIDERS WILL BE ACCEPTED), ONE KITCHEN SPACE INCLUDING SINK, REFRIGERATOR, AND MICROWAVE, AND ONE CONFERENCE ROOM (MINIMUM 1000 SQUARE FEET).

FURNISH NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS CONNECTED TO AN EXISTING SANITARY SEWER LINE FOR THE USE OF THE OCCUPANTS OF THE FIELD OFFICE, MEETING APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. FURNISH ASSOCIATED LAVATORY AND SANITARY SUPPLIES. POTABLE HOT AND COLD RUNNING WATER WILL BE PROVIDED IN THE RESTROOM FOR SANITARY PURPOSES.

FURNISH TRASH COLLECTION SERVICE/DUMPSTER.

FURNISH PROFESSIONAL, BONDED, AND INSURED JANITORIAL SERVICE WITH A WEEKLY CLEANING OF THE ENTIRE OFFICE TO INCLUDE THE RESTROOM FACILITIES FOR THE DURATION OF THE PROJECT,

FURNISH BOTTLED DRINKING WATER SERVICE WITH A HOT AND COLD DISPENSER AND ASSOCIATED SUPPLIES.

FURNISH A BOX FOR STORING A NUCLEAR DENSITY GAUGE WITH REQUIREMENTS AS SET FORTH IN C&MS 619.02.

FURNISH AND MAINTAIN A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS OF 1.0 GB/S. PROVIDE A WIRELESS ROUTER THAT SUPPORTS WI-FI STANDARD 802.11AX (WIFI 6) AND A MINIMUM WIRELESS DATA TRANSFER RATE OF 4000 MB/S. PROVIDE PRE-WIRED ETHERNET ACCESS FOR ALL INDIVIDUAL OFFICES AND THE CONFERENCE ROOM.

FURNISH TEN (10) DESK AND CHAIR SETS, THIRTY (30) STACKABLE CHAIRS, TWENTY (20) WORK TABLES (30" x72"), AND TWELVE (12) 24- QUART WASTE BASKETS WITH APPROPRIATE SIZED TRASH BAGS.

FURNISH AND INSTALL TWO (2) WALL-MOUNTED 8' x 4' GLASS, MAGNETIC DRY ERASE BOARDS.

FURNISH ONE NEW TELEVISION WITH THE FOLLOWING SPECIFICATIONS:

- a) DIAGONAL SCREEN SIZE - 70" MINIMUM"
- b) NATIVE RESOLUTION - 4K
- c) HDMI PORTS: 3
- d) ALL ACCESSORIES NECESSARY TO OPERATE
- f) ALL HARDWARE AND INSTALLATION NECESSARY TO HANG THE TELEVISION ON THE WALL IN THE CONFERENCE ROOM

THE FIELD OFFICE WILL BE APPROVED IN ADVANCE BY THE ENGINEER AND FULLY OPERATIONAL WITHIN 30 DAYS AFTER THE SIGNING AND EXECUTION OF THE PROJECT OR PRIOR TO THE START OF ANY CONSTRUCTION WORK, WHICHEVER COMES FIRST.

THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED. A PARTIAL MONTH AT THE END OF THE PROJECT WILL BE PAID AS A FULL MONTH.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
619	MONTH	FIELD OFFICE, TYPE C, AS PER PLAN

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 59

**ITEM SPECIAL - SURVEY CONTROL VERIFICATION**

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- 1) IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL:
  - a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
  - b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
  - c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
- 2) IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL:
  - a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
  - b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
  - c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

**PERMIT**

IN THE CITY OF CLEVELAND, ALL PERMITS MUST BE OBTAINED FROM THE DIVISION OF ASSESSMENTS AND LICENSES PRIOR TO BEGINNING ANY WORK WITHIN THE CITY OF CLEVELAND RIGHT OF WAY. PERMITS INCLUDE BUT ARE NOT LIMITED TO STREET OPENING PERMIT, OVERLOAD PERMIT, OBSTRUCTION PERMIT AND/OR SIDEWALK PERMIT AND MAY BE OBTAINED THROUGH THE FOLLOWING CONTACT:

TRAVIS EVANS  
DEPARTMENT OF FINANCE  
DIVISION OF ASSESSMENTS AND LICENSES  
601 LAKESIDE AVENUE, ROOM 122  
CLEVELAND, OHIO 44114  
PHONE: (216) 664-2174  
EMAIL: DALPERMITS@CITY.CLEVELAND.OH.US

ALL STREET OPENING REPAIRS, CURB REPAIRS, AND/OR SIDEWALK REPAIRS EITHER INCIDENTAL TO THE PROJECT OR PART OF THE PROJECT MUST BE PERFORMED IN ACCORDANCE TO CITY OF CLEVELAND STANDARDS. A COPY OF THE STANDARDS CAN BE OBTAINED ON-LINE UNDER THE "FORMS AND PUBLICATIONS" TAB OF THE CAPITAL PROJECTS WEBSITE OR FROM THE DIVISION OF ENGINEERING AND CONSTRUCTION BY CALLING (216) 664-2381.

ALL PERMITS, FEES AND CHARGES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THEIR ASSOCIATED COST SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THIS ITEM. THE COST BELOW MAY NOT BE FULLY INCLUSIVE OF ALL PERMIT FEES REQUIRED TO BE PAID. NOTE THAT CLEVELAND WATER DEPARTMENT CHARGES ARE PAID UNDER A SEPARATE ITEM.

FOR BIDDING PURPOSES, THE FOLLOWING FEES AND CHARGES HAVE BEEN ESTIMATED BY THE CITY OF CLEVELAND DIVISION OF ENGINEERING AND CONSTRUCTION ON BEHALF OF THE DIVISION OF ASSESSMENTS AND LICENSES (DAL): \$1,540

DAL HAS ASSIGNED RECORD NUMBER STP24-00196 TO THIS PROJECT. THE AWARDED CONTRACTOR SHALL CONTACT DAL AS DESCRIBED ABOVE, USING THE ASSIGNED STP NUMBER FOR REFERENCE. THE CONTRACTOR SHALL PROVIDE DAL WITH THEIR CERTIFICATE OF INSURANCE (COI) MEETING THE CITY OF CLEVELAND REQUIREMENTS. UPON SUBMITTAL OF THE COI AND RECEIPT OF PAYMENT, DAL WILL ISSUE THE PERMIT.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL NOTES SUBSUMMARY:

ITEM SPECIAL - PERMITS LUMP

REVISIONS		
NO.	DATE	DESCRIPTION
1	01/15/24	PERMITS NOTE ADDED
2	02/15/24	PERMITS NOTE UPDATED
3	03/05/24	EXCAVATION OF SUBGRADE QUANTITY ADDED

**ROADWAY**

**ITEM 202 - PAVEMENT REMOVED**

AS SHOWN ON THE PAVEMENT REMOVAL CALCULATIONS (SHEET 489 TO 492), THE CONTRACTOR SHALL REMOVE ALL PAVEMENTS WHETHER ASPHALT, CONCRETE, OR COMPOSITE UNDER THE PRICE BID FOR ITEM 202 - PAVEMENT REMOVAL (SY).

**ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING**

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).  
  
IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.  
  
PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

**ITEM 204 - PROOF ROLLING**

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE TYPICAL PLAN SHEETS 24 - 46 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 81 HOUR

PAVEMENT SUBGRADE IMPROVEMENT SCHEDULE						
ALIGNMENT	BEGIN STATION	END STATION	SUBGRADE METHOD	DEPTH OF TREATMENT	SIDE	TREATMENT REASON
C/L R/W & CONST. I-490	933+23.03	985+67.50	CEMENT	14"	L/R	SILT PRESENT
	1020+69.29	1035+00.00	CEMENT	14"	L/R	SILT PRESENT
B/L CONST. EB I-490	2035+00.00	2050+87.73	CEMENT	14"	L/R	SILT PRESENT
B/L CONST. WB I-490	3035+00.00	3049+75.86	CEMENT	14"	L/R	SILT PRESENT
C/L CONST. W. 7TH ST.	10+24.33	14+47.65	CEMENT	14"	L	SILT PRESENT
	3036+66.35	3042+13.54	CEMENT	14"	L/R	
B/L CONST. RAMP E-S (I-71)	3047+21.36	3058+59.21	CEMENT	14"	L/R	SILT PRESENT
	3058+59.21	3064+68.90	CEMENT	14"	L/R	SILT PRESENT
B/L CONST. RAMP S-E (I-71)	2049+00.00	2052+23.15	CEMENT	14"	L/R	
	2052+23.15	2058+00.00	CEMENT	14"	L/R	SILT PRESENT
B/L CONST. RAMP 7-7C	68+37.92	80+59.02	CEMENT	14"	L/R	SILT PRESENT
B/L CONST. RAMP C-7	81+96.55	85+63.86	CEMENT	14"	L/R	SILT PRESENT
B/L EX. & CONST. RAMP B-C	14+98.42	18+18.79	CEMENT	14"	L/R	
B/L EX. & CONST. RAMP C-B	14+78.03	17+33.88	CEMENT	14"	L/R	
B/L CONST. RAMP E-N (I-77)	734+00.31	746+47.57	CEMENT	14"	L/R	
B/L CONST. RAMP E-S (I-77)	836+08.78	842+23.67	CEMENT	14"	L/R	
B/L CONST. RAMP N-E (I-77)	437+48.58	445+70.00	CEMENT	14"	L/R	
B/L CONST. RAMP N-W (I-77)	120+15.54	131+37.52	CEMENT	14"	L/R	
B/L CONST. RAMP S-E (I-77)	336+00.00	347+00.00	CEMENT	14"	L/R	
B/L CONST. RAMP S-W (I-77)	224+14.63	227+50.07	CEMENT	14"	L/R	
B/L CONST. RAMP W-N (I-77)	625+00.00	631+44.12	CEMENT	14"	L/R	
B/L CONST. RAMP W-S (I-77)	521+21.52	528+83.00	CEMENT	14"	L/R	

**PAVING IN THE VICINITY OF EXISTING UTILITIES**

CONTRACTOR SHALL SUSPEND THE CEMENT STABILIZED SUBGRADE LAYER WITHIN 10' OF THE EXISTING UTILITIES TO REMAIN, INCLUDING BUT NOT LIMITED TO ODOT I.T.S. FACILITIES.

**PHASED CONSTRUCTION SUBGRADE TREATMENT**

CONTRACTOR SHALL SUSPEND THE CEMENT STABILIZED SUBGRADE LAYER IN THOSE AREAS WHERE PART-WIDTH CONSTRUCTION RESULTS IN LIMITS WHICH ARE LESS THAN THE MINIMUM WIDTH OF 12' REQUIRED FOR THE CEMENT STABILIZATION EQUIPMENT.

BASED ON THE MAINTENANCE OF TRAFFIC SCHEME INCLUDED IN THESE PLANS, THE FOLLOWING WORK AREAS HAVE BEEN IDENTIFIED, BUT ARE NOT LIMITED TO, AS HAVING WIDTH LESS THAN 12':

MOT PHASE 2A:  
RAMP E-N (I-77) STA. 740+61.33 TO STA. 742+23.67  
RAMP E-S (I-77) STA. 840+60.61 TO STA. 842+23.67

MOT PHASE 5A:  
RAMP W-S (I-77) STA. 525+00.00 TO STA. 526+23.93  
RAMP W-N (I-77) STA. 625+00.00 TO STA. 626+24.74

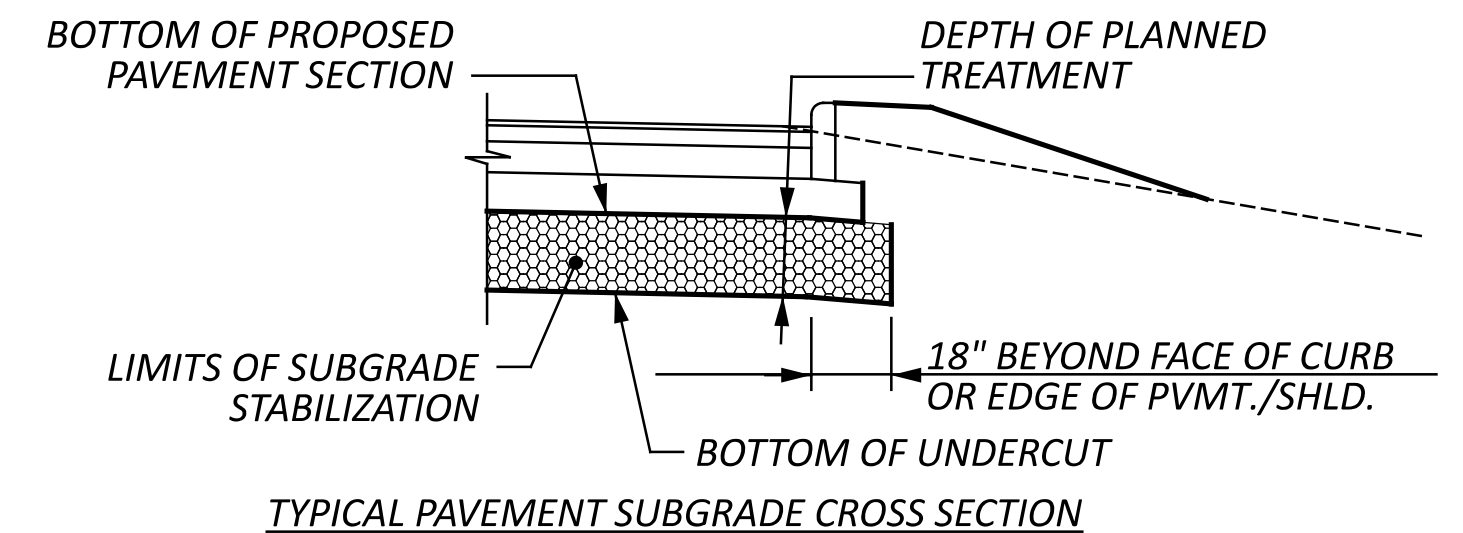
WHERE THE CEMENT STABILIZED SUBGRADE LAYER IS SUSPENDED DUE TO WIDTH, THE CONTRACTOR SHALL PROVIDE ITEM 204 - SUBGRADE COMPACTION AND ITEM 204 - GRANULAR EMBANKMENT FOR SUBGRADE TREATMENT IN THESE AREAS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 204 - SUBGRADE COMPACTION 322 SQ. YD.

ITEM 204 - GRANULAR EMBANKMENT 125 CU. YD.  
ITEM 204 - EXCAVATION OF SUBGRADE 125 CU. YD.

**SUBGRADE STABILIZATION**

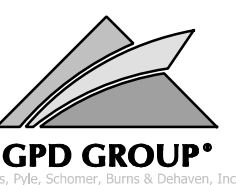


CUY-490-0.00 PART 1

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GENERAL NOTES

DESIGN AGENCY



DESIGNER  
ATR

REVIEWER  
PJF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
51 1068



**ROADWAY (CONTINUED)**

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED TYPE C1**

THE FOLLOWING TABLES PROVIDE THE STEEL DIMENSIONS PER ODOT SCD RM-4.3 FOR TYPE C1 BARRIERS THAT VARY IN HEIGHT.

I-490 END ANCHORAGES, TYPE C1				
STATION	SIDE	LENGTH (FEET)	"h" (INCH)	"y" (INCH)
934+59.50			7.88	29.92
934+74.50	CL	15.00	7.88	29.92
934+94.50			7.88	29.92
935+09.50	CL	15.00	7.88	29.92
937+75.00			7.35	29.82
937+90.00	CL	15.00	7.24	29.80
938+10.00			7.06	29.76
938+25.00	CL	15.00	7.05	29.76
939+49.12			8.10	29.96
939+64.12	CL	15.00	8.29	29.99
939+84.12			8.49	30.03
939+99.12	CL	15.00	8.68	30.07
940+85.00			10.33	30.37
941+00.00	CL	15.00	10.71	30.45
941+20.00			11.28	30.55
941+35.00	CL	15.00	11.74	30.64
941+90.00			15.84	31.41
942+05.00	CL	15.00	16.70	31.57
945+16.81			20.78	32.33
945+31.81	CL	15.00	20.42	32.27
945+74.88			19.34	32.06
945+89.88	CL	15.00	18.97	31.99
946+09.88			18.47	31.90
946+24.88	CL	15.00	18.10	31.83
946+74.62			16.87	31.60
946+89.62	CL	15.00	16.50	31.53
947+09.62			16.00	31.44
947+24.62	CL	15.00	15.63	31.37
949+80.46			9.28	30.18
949+95.46	CL	15.00	8.91	30.11
950+09.00			8.58	30.05
950+24.00	CL	15.00	8.20	29.98
950+44.00			7.77	29.89
950+59.00	CL	15.00	7.52	29.85
951+24.49			7.26	29.80
951+39.49	CL	15.00	7.38	29.82
952+64.97			7.35	29.82
952+79.97	CL	15.00	7.14	29.78
953+95.00			8.40	30.01
954+10.00	CL	15.00	8.61	30.05
955+31.01			10.19	30.35
955+46.01	CL	15.00	10.37	30.38
956+44.79			11.22	30.54
956+59.79	CL	15.00	11.30	30.56
957+49.75			11.75	30.64
957+64.75	CL	15.00	11.82	30.65
957+84.75			11.93	30.67
957+99.75	CL	15.00	11.99	30.69
961+05.75			15.12	31.27
961+20.75	CL	15.00	15.29	31.30
961+40.75			15.49	31.34
961+55.75	CL	15.00	15.67	31.38
963+39.98			17.11	31.65
963+54.98	CL	15.00	17.07	31.64
964+45.04			18.56	31.92
964+60.04	CL	15.00	18.83	31.97
965+75.00			20.97	32.37
965+90.00	CL	15.00	21.25	32.42
966+10.00			21.62	32.49
966+25.00	CL	15.00	21.89	32.54
968+60.00			27.53	33.60
968+75.00	CL	15.00	27.62	33.62
968+95.00			27.77	33.64
969+10.00	CL	15.00	27.85	33.66
969+50.67			28.10	33.71
969+65.67	CL	15.00	28.15	33.72

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED TYPE C1 (CONTINUED)**

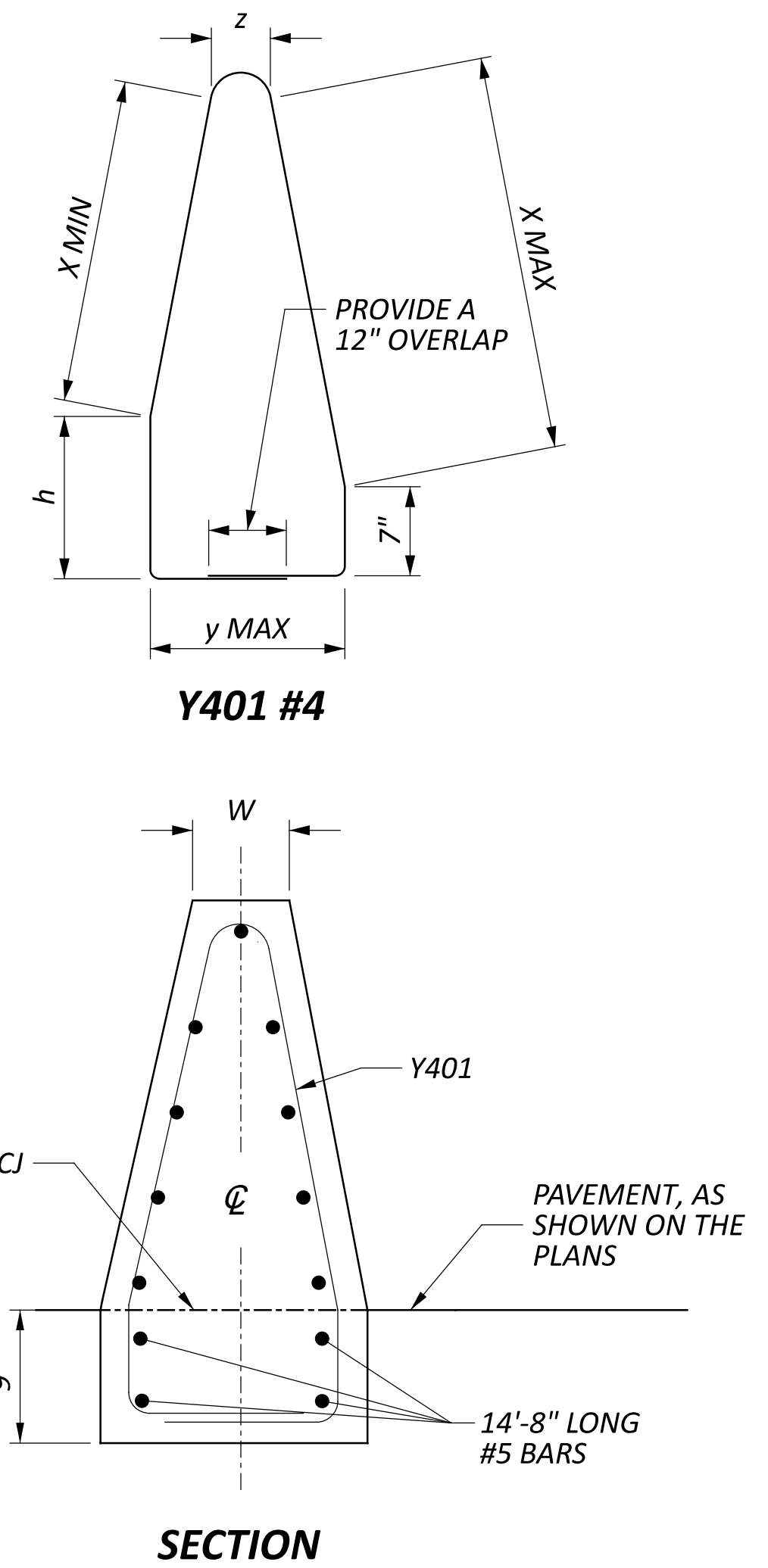
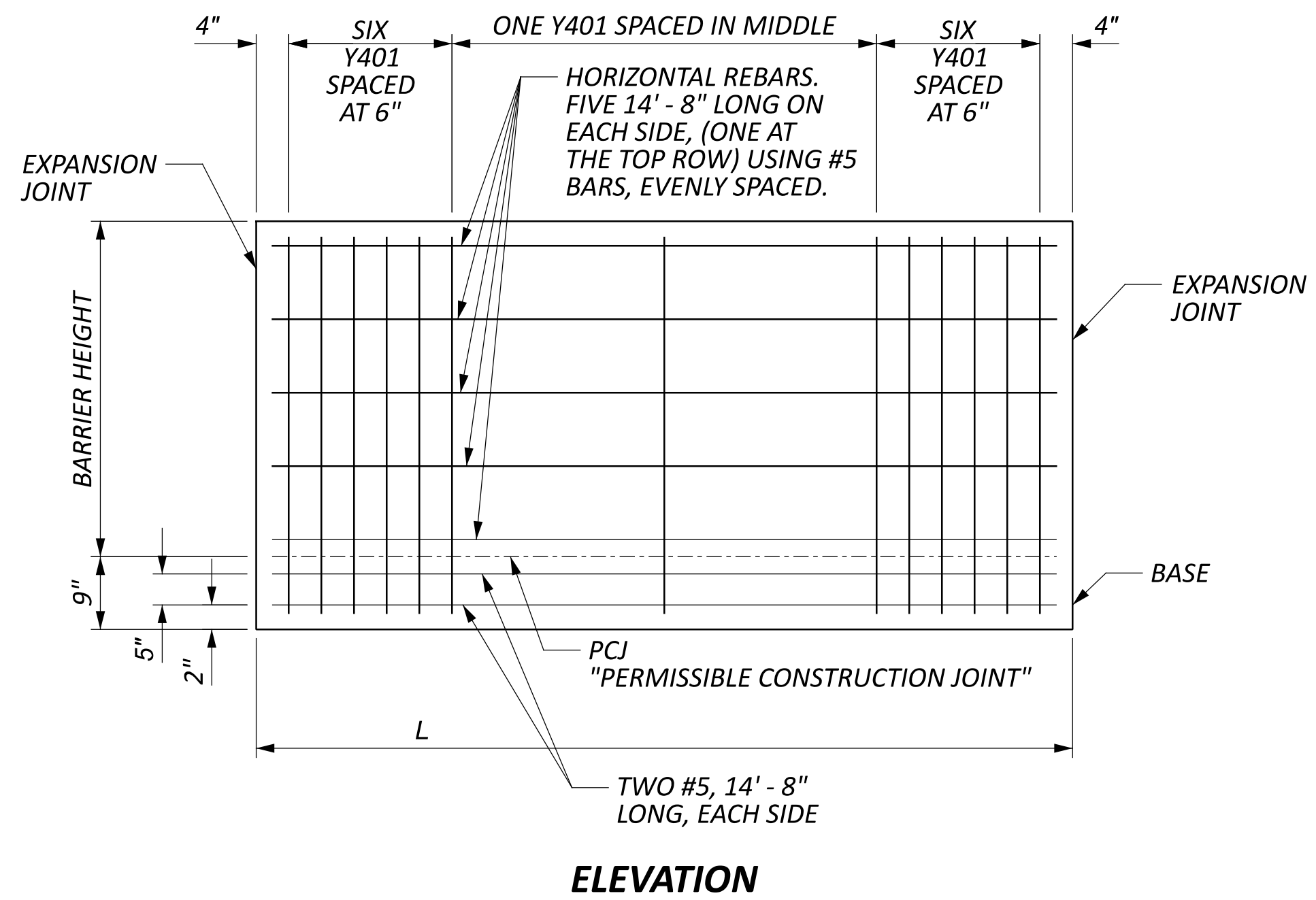
I-490 END ANCHORAGES, TYPE C1				
STATION	SIDE	LENGTH (FEET)	"h" (INCH)	"y" (INCH)
969+85.67			28.21	33.73
970+00.67	CL	15.00	28.27	33.74
970+30.00			28.33	33.75
970+45.00	CL	15.00	28.32	33.75
970+65.00			28.32	33.75
970+80.00	CL	15.00	28.33	33.75
972+90.00			27.13	33.52
973+05.00	CL	15.00	26.95	33.49
973+95.00			25.91	33.30
974+10.00	CL	15.00	25.73	33.26
974+30.00			25.50	33.22
974+45.00	CL	15.00	25.32	33.19
975+74.82			23.80	32.90
975+89.82	CL	15.00	23.63	32.87
977+19.97			22.10	32.58
977+34.97	CL	15.00	21.93	32.55
978+75.14			21.34	32.44
978+90.14	CL	15.00	21.49	32.47
979+10.14			21.69	32.50
979+25.14	CL	15.00	21.85	32.53
980+95.00			21.96	32.56
981+10.00	CL	15.00	22.03	32.57
982+31.54			19.60	32.11
982+46.54	CL	15.00	18.78	31.96
982+75.00			17.38	31.70
982+90.00	CL	15.00	16.43	31.52
983+10.00			14.96	31.24
983+25.00	CL	15.00	13.94	31.05
985+09.85			7.38	29.82
985+24.85	CL	15.00	7.09	29.77
1020+09.53			7.86	29.91
1020+24.53	CL	15.00	7.80	29.90
1021+50.04			7.73	29.89
1021+65.04	CL	15.00	7.67	29.88
1023+53.70			7.35	29.82
1023+68.70	CL	15.00	7.28	29.80
1024+29.70			7.07	29.76
1024+44.70	CL	15.00	7.02	29.75
1026+16.07			7.60	29.86
1026+31.07	CL	15.00	7.66	29.87
1026+75.13			7.80	29.90
1026+90.13	CL	15.00	7.86	29.91
1027+10.13			7.94	29.93
1027+25.13	CL	15.00	8.00	29.94
1030+75.12			9.22	30.17
1030+90.12	CL	15.00	9.27	30.18
1031+10.12			9.33	30.19
1031+25.12	CL	15.00	9.38	30.20
1033+06.83			9.77	30.27
1033+21.83	CL	15.00	9.80	30.28
1035+50.56			9.51	30.22
1035+65.56	CL	15.00	10.20	30.35
1035+74.94			10.26	30.36
1035+89.94	CL	15.00	10.37	30.38
1036+09.94			10.54	30.41
1036+24.94	CL	15.00	10.69	30.44

3

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED TYPE C, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED END ANCHORAGES AS PER ODOT SCD RM-4.3 AND THE BARRIER DETAIL BELOW. THE Y401 REINFORCEMENT BARS SHALL BE SPACED AS SHOWN IN THE DETAIL. ALL MATERIALS, LABOR, AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS ANCHOR SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR THE APPLICABLE ITEMS LISTED BELOW:

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN (EACH).  
ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN (EACH).



I-490 END ANCHORAGES, TYPE C, AS PER PLAN						
STATION	SIDE	LENGTH (FEET)	"W" (INCH)	"h" (INCH)	"y" (INCH)	"z" (INCH)
953+35.00			21.83	9.69	30.25	17.83
953+50.00	RT	15.00	12.00	7.67	29.88	8.00

I-490 END ANCHORAGES, TYPE C1, AS PER PLAN						
STATION	SIDE	LENGTH (FEET)	"W" (INCH)	"h" (INCH)	"y" (INCH)	"z" (INCH)
942+57.00			36.00	19.06	56.01	32.00
942+72.00	CL	15.00	36.00	20.50	56.28	32.00
942+92.00			36.00	20.81	56.34	32.00
943+07.00	CL	15.00	36.00	21.59	56.49	32.00
948+14.92			12.00	13.39	30.95	8.00
948+28.70	CL	13.78	12.00	13.08	30.89	8.00
951+59.49			12.00	7.59	29.86	8.00
951+75.00	CL	15.51	12.00	7.81	29.90	8.00
954+30.00			12.00	8.87	30.10	8.00
954+41.00	CL	11.00	12.00	9.02	30.13	8.00
976+09.82			12.00	23.38	32.82	8.00
976+30.00	CL	20.18	12.00	23.13	32.77	8.00
985+44.85			12.00	7.14	29.78	8.00
985+65.44	CL	20.59	12.00	7.20	29.79	8.00
1020+67.18			12.00	7.61	29.86	8.00
1020+89.53	CL	22.35	12.00	7.19	29.79	8.00

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REVISIONS		
NO.	DATE	DESCRIPTION
3	03/15/24	UPDATED END ANCHORAGES TABLES

**GENERAL NOTES**

SHEET NO.	201		203	203	204	204	204	503	204	601		605		611	611	611	611	611		SPECIAL		
	CLEARING AND GRUBBING		EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	GRANULAR EMBANKMENT	PROOF ROLLING	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	EXCAVATION OF SUBGRADE	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT		6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		6" CONDUIT, TYPE B	6" CONDUIT, TYPE C	6" CONDUIT, TYPE E	6" CONDUIT, TYPE F	PRECAST REINFORCED CONCRETE OUTLET		MISCELLANEOUS METAL		
	LS		CY	CY	SY	CY	hour	LS	CY	SY		FT		FT	FT	FT	FT	EACH		LB		
50	LS																					
51					322	125	81	△ 3	125													
52										8		40		200	200	200	240	4		1000		
53																						
54																						
55																						
56																						
57			70616	2931				LS														
58																						
TOTALS CARRIED TO GENERAL SUMMARY	LS		70616	2931	322	125	81	LS	125	8		40		200	200	200	240	4		1000		
SHEET NO.	618			623		638	638		659	659	659	659	659	659	659	659	659			SPECIAL	SPECIAL	
	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN			MONUMENT ASSEMBLY, TYPE C		WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT FEES AND CHARGES	WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT AS-BUILT DRAWINGS		SOIL ANALYSIS TEST	TOPSOIL	SEEDING AND MULCHING, CLASS 3B	SEEDING AND MULCHING	REPAIR SEEDING AND MULCHING	INTER-SEEDING	COMMERCIAL FERTILIZER	LIME	WATER	MOWING		SURVEY CONTROL VERIFICATION	PERMITS	
	MILE		EACH		LS	LS		EACH	CY	SY	SY	SY	SY	TON	ACRE	MGAL	MSF			LS	LS	
50				30																		
51																					LS	LS
52																						
53																						
54	5.58																					
55																						
56						LS	LS		2	7419	3490	63346	3342	3342	9.33	13.81	370	150				
57																						
58																						
TOTALS CARRIED TO GENERAL SUMMARY	5.58			30		LS	LS		2	7419	3490	63346	3342	3342	9.33	13.81	370	150			LS	LS

GENERAL NOTES SUBSUMMARY

REVISIONS		
NO.	DATE	DESCRIPTION
1	01/15/24	PERMITS QUANTITY ADDED
2	02/29/24	UPDATED EARTHWORK QUANTITIES
3	03/05/24	EXCAVATION OF SUBGRADE QUANTITY ADDED

DESIGN AGENCY  
  
 GPD GROUP  
 Designer: JAN  
 Reviewer: PJF 11-21-23  
 Project ID: 107408  
 Sheet: 59 Total: 1068



3

**WINTER OVER PHASE WORK ZONE PAVEMENT MARKINGS AND CROSSOVER CLOSURE**

THE CONTRACTOR SHALL INSTALL THE WINTER OVER WORK ZONE PAVEMENT MARKINGS AND CLOSE THE CROSSOVER WITH PORTABLE BARRIER PER THE TYPICAL SECTIONS FOR THE LAYOUT OF THE WINTER OVER ZONES. TEMPORARY PAVEMENT MARKINGS SHALL BE PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11. THE PORTABLE BARRIER TO CLOSE THE CROSSOVER SHALL BE OVERLAPPED WITH THE MEDIAN BARRIER TO ELIMINATE THE BLUNT END OF THE MEDIAN BARRIER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY:

**1ST WINTER OVER PHASE QUANTITIES:**

ITEM 614 - LANE LINE, CLASS I, 6"	0.70 MILE
ITEM 614 - EDGE LINE, CLASS I, 6"	7.79 MILE
ITEM 614 - CHANNELIZING LINE, CLASS I, 12"	12648 FT
ITEM 614 - DOTTED LINE, CLASS I	720 FT

**2ND WINTER OVER PHASE QUANTITIES:**

ITEM 614 - LANE LINE, CLASS I, 6"	6.47 MILE
ITEM 614 - CENTER LINE, CLASS I	0.05 MILE
ITEM 614 - EDGE LINE, CLASS I, 4"	0.17 MILE
ITEM 614 - EDGE LINE, CLASS I, 6"	13.94 MILE
ITEM 614 - CHANNELIZING LINE, CLASS I, 12"	11247 FT
ITEM 614 - DOTTED LINE, CLASS I	4108 FT

ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	22 EACH
ITEM 614 - OBJECT MARKER, ONE-WAY	11 EACH
ITEM 622 - PORTABLE BARRIER, 50", AS PER PLAN	510 FT

**NOTIFICATION OF TRAFFIC RESTRICTIONS**

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

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

NOTIFICATION OF TRAFFIC RESTRICTION		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

**WORK ZONE SIGNING**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY FOR THE WORK ZONE SIGNING AS SHOWN ON THE MAINTENANCE OF TRAFFIC ELEVATION DETAILS.

ITEM 630 - SIGN ATTACHMENT ASSEMBLY	14 EACH
ITEM 630 - SIGN, OVERHEAD EXTRUSHEET	824.3 SF

ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO INSTALL AND SUBSEQUENTLY REMOVE SOLID WOOD POST SUPPORTS (OR APPROVED EQUAL) FOR WORK ZONE SIGNING SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ALL MATERIAL, LABOR AND EQUIPMENT TO REMOVE, ADJUST AND/OR RELOCATE EXISTING OVERHEAD MOUNTED SIGNS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ALL REMAINING WORK ZONE SIGNING AND TEMPORARY SUPPORTS NOT SPECIFICALLY ITEMIZED SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

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**CROSSOVER #1/3/4/6 - #2/5 CONSTRUCTION AND REMOVAL**

CROSSOVER CONSTRUCTION SHALL INCLUDE THE PLACEMENT OF A VARIABLE DEPTH ASPHALT PAVEMENT IN THE SHOULDER AREA. SLOTTED DRAINS AND TEMPORARY OUTLETS ARE INCLUDED IN ORDER TO PROMOTE DRAINAGE. THE FOLLOWING ITEMS ARE INCLUDED IN THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY FOR THE CROSSOVER CONSTRUCTION:

ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN	452 FT
ITEM 611 - SLOTTED DRAIN, TYPE 2, 12"	1150 FT

CROSSOVER REMOVAL SHALL INCLUDE REMOVING THE SLOTTED DRAINS, ALL ASSOCIATED PAVEMENT REPAIR, FILL AND PLUG SLOTTED DRAIN OUTLETS AND PAVEMENT PLANING TO RESTORE THE SURROUNDING PAVED SURFACES TO THEIR ORIGINAL CONDITION AND GRADE. THE FOLLOWING ITEMS ARE INCLUDED IN THE LUMP SUM ITEM 615 - ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN AND ARE PROVIDED FOR INFORMATIONAL PURPOSES:

ITEM 202 - PIPE REMOVED	452 FT
ITEM 253 - PAVEMENT REPAIR	1965 SY
ITEM 254 - PAVEMENT PLANING	1170 SY

PAVEMENT REPAIR SHALL INCLUDE THE REMOVAL OF THE TEMPORARY SLOTTED DRAINS IN THE CROSSOVER AREAS. THE CONTRACTOR SHALL SAW CUT A NEAT EDGE ONE (1) FOOT FROM THE EDGE OF THE TEMPORARY SLOTTED DRAINS, REMOVE THE SLOTTED DRAINS, AND REMOVE EXCESS EXISTING PAVEMENT PER C&MS 253.02. THIS TRENCHED AREA SHALL BE REPLACED WITH ASPHALT PAVEMENT TO MATCH THE EXISTING ASPHALT PAVEMENT COMPOSITION, AS DIRECTED BY THE ENGINEER. AFTER BACKFILLING OF THE CAVITY PER C&MS 202.02, THE CONTRACTOR SHALL PROVIDE AN ASPHALT CONCRETE PAVED SURFACE IN THIS AREA BY MATCHING THE EXISTING ASPHALT PAVEMENT COMPOSITION, AS DIRECTED BY THE ENGINEER.

ANY ADDITIONAL ITEMS OF WORK NOT SPECIFICALLY LISTED WHICH ARE REQUIRED TO CONSTRUCT OR REMOVE THE CROSSOVERS SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE LUMP SUM BID FOR ITEM 615 - ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN.

**NOTICE OF CLOSURE SIGN**

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 TIMETABLE 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 RAMP AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & 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 GENERAL SWITCHBOARD NUMBER.

**ITEM 615 - ROADS FOR MAINTAINING TRAFFIC**

ROADS FOR MAINTAINING TRAFFIC WILL BE REQUIRED AT VARIOUS LOCATIONS AS SHOWN IN THE PLANS, AND SHALL BE CONSTRUCTED ACCORDING TO C&MS 615 AND AS DETAILED IN THE PLANS.

FOLLOWING CONSTRUCTION OF PAVEMENTS AND ROADS FOR MAINTAINING TRAFFIC, TEMPORARY FACILITIES SHALL BE REMOVED AS PER C&MS 615.08, AND THE EXISTING TOPOGRAPHY SHALL BE RESTORED, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND OTHER INCIDENTALS FOR ROADS AND PAVEMENTS FOR MAINTAINING TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 615 - ROADS FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED IN THE PLANS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC GENERAL SUMMARY:

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC	LS
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**TEMPORARY DRAINAGE ITEMS**

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS AND CARRIED TO THE GENERAL SUMMARY.

ITEM 611 - CATCH BASIN, NO. 3A	11 EACH
ITEM 611 - CATH BASIN, NO. 2-2B	7 EACH
ITEM 611 - 12" CONDUIT, TYPE B	83 FT
ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN	3406 FT
ITEM 611 - 12" CONDUIT, TYPE C	416 FT
ITEM 611 - CATCH BASIN RECONSTRUCTED TO GRADE	1 EACH
ITEM 839 - TRENCH DRAIN, TYPE A WITH STANDARD GRATE	5439 FT

**TEMPORARY TROUGHS**

TEMPORARY TROUGHS WILL BE ADDED THROUGHOUT THE CORRIDOR TO CONTROL THE SPREAD FOR THE TWO-YEAR STORM DURING CONSTRUCTION. THE LOCATION AND SIZE OF THESE TROUGHS ARE SHOWN IN THE MOT PLANS. WHERE THE TROUGHS ARE PLACED WITHIN EXISTING/PROPOSED PAVEMENT LIMITS, THE PLAN SPECIFIED DEPTH WILL BE MILLED FROM THE TROUGH AREA SHOWN IN THE PLANS. IN LOCATIONS WHERE THE TROUGHS ARE TO BE PLACED WITHIN THE PROPOSED PAVEMENT LIMITS, THE INTERMEDIATE COURSE WILL NOT BE PLACED WITHIN THE TROUGH AREAS UNTIL THE MOT PHASES FOR WHICH THEY ARE REQUIRED ARE COMPLETED.

TEMPORARY TROUGHS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS AND CARRIED TO THE GENERAL SUMMARY.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH 1.5")	111 SY
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**ITEM 301 - STABILIZED CRUSHED AGGREGATE**

ITEM 301 - STABILIZED CRUSHED AGGREGATE SHALL BE 2' WIDE AND 6" DEEP AND PLACED ADJACENT TO THE OUTSIDE OF ALL ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A PAVEMENT, EXCEPT WHEN THE PAVEMENT FOR MAINTAINING TRAFFIC HAS A TEMPORARY CURB. THE MAINTENANCE OF TRAFFIC SUB SUMMARIES QUANTITY ITEM 301 - STABILIZED CRUSHED AGGREGATE AND ACCURATELY DISPLAYS THE STATION RANGES WHERE THE ITEM IS REQUIRED.

**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.
- 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.

**MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)**

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 CRASH 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 THE CITY OF CLEVELAND 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 6-8 AM TO 4-6 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL 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.

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:

- TIME OF NOTIFICATION OF MALFUNCTION;
- TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
- ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
- A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
- 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.

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

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	MODIFIED 615 NOTE AND ADDED NOTES
3	03/20/24	MODIFIED WINTER OVER PHASE NOTE

MAINTENANCE OF TRAFFIC NOTES

DESIGN AGENCY



DESIGNER  
KRM

REVIEWER  
AKF 11-21-23

PROJECT ID  
107408

SHEET  
65

TOTAL  
1068



**INCENTIVE/DISINCENTIVE CONTRACT (PN 121)**

THE CONTRACTOR SHALL COMPLETE ALL CRITICAL WORK AND SAFETY ITEMS ACCORDING TO THE INCENTIVE/DISINCENTIVE CONTRACT TABLE BELOW. IN THE EVENT THE CONTRACTOR IMPEDES THE FLOW OF TRAFFIC SUBSEQUENT TO THE OPENING TO UNRESTRICTED TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE ACCORDING TO THE INCENTIVE/DISINCENTIVE CONTRACT TABLE.

CRITICAL WORK IS SHOWN BELOW IN THE INCENTIVE/DISINCENTIVE CONTRACT TABLE.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTION OF WORK OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE AT THEIR FINAL DESIGN WIDTH WITH ALL MARKINGS, RPM'S, AND SAFETY FEATURES INSTALLED, ALONG WITH NO RESTRICTIONS WITHIN 2 FEET OF THE EDGE LINE ON THE SHOULDERS.

INCENTIVE/DISINCENTIVE AMOUNT: THE CONTRACTOR WILL BE PAID AN INCENTIVE OR WILL BE ASSESSED A DISINCENTIVE ACCORDING TO THE INCENTIVE/DISINCENTIVE CONTRACT TABLE BELOW.

EXTENSIONS OF TIME WILL BE FOR CALENDAR DAYS AND CALCULATED IN ACCORDANCE WITH C&MS 108.06 EXCEPT AS FOLLOWS: NO EXTENSIONS OF TIME WILL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES (UNLESS SUCH DELAYS ARE INDUSTRY WIDE), AND LABOR STRIKES (UNLESS SUCH STRIKES ARE AREA WIDE).

INCENTIVE/DISINCENTIVE TABLE			
DESCRIPTION OF CRITICAL WORK	COMPLETION DATE	DISINCENTIVE \$ PER DAY	INCENTIVE \$ PER DAY
COMPLETION OF PHASE 1 PRIOR TO WINTER SHUTDOWN	10-15-2024	ASSESSED PER CMS 108.07	\$ 0
COMPLETION OF PHASE 3A PRIOR TO WINTER SHUTDOWN	10-15-2025	ASSESSED PER CMS 108.07	\$ 0

**FLEXIBLE START WINDOW CONTRACT (PN 129)**

THE CONTRACTOR HAS THE NUMBER OF CALENDAR DAYS DESIGNATED IN THE WINDOW CONTRACT TABLE IN WHICH TO COMPLETE ALL ITEMS OF CRITICAL WORK. THE WINDOW CONTRACT TABLE IS LOCATED BELOW. THE CONTRACTOR MAY BEGIN ANY TIME AS IDENTIFIED IN THE WINDOW CONTRACT TABLE AND MUST COMPLETE THE CRITICAL WORK WITHIN THE CALENDAR DAYS DESIGNATED IN THE WINDOW CONTRACT TABLE OR BY THE COMPLETION DATE LISTED IN THE PROPOSAL, WHICHEVER COMES FIRST.

CRITICAL WORK IS SHOWN IN THE WINDOW CONTRACT TABLE.

COMPLETION OF CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTION OF WORK OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE AT THEIR FINAL DESIGN WIDTH WITH ALL MARKINGS, RPM'S, AND SAFETY FEATURES INSTALLED, ALONG WITH NO RESTRICTIONS WITHIN 2 FEET OF THE EDGE LINE ON THE SHOULDERS.

THE CONTRACTOR MUST SCHEDULE THE LATEST START DATE OF THE CRITICAL WORK PRIOR TO THE FOLLOWING CALCULATED DATE:

LATE CRITICAL WORK START DATE = [WORK WINDOW END DATE] - [(CALENDAR DAYS TO COMPLETE) X 1.25]

IF THE CRITICAL WORK IS NOT STARTED BY THE LATE CRITICAL WORK START DATE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE AS DEFINED IN THE WINDOW CONTRACT TABLE FOR EVERYDAY THE CONTRACTOR DOES NOT START THE CRITICAL WORK.

**FLEXIBLE START WINDOW CONTRACT (PN 129) (CONTINUED)**

IF THE WORK IS NOT COMPLETED WITHIN THE CALENDAR DAYS DESIGNATED IN THE WINDOW CONTRACT TABLE, THE CONTRACTOR WILL BE SUBJECT TO DISINCENTIVES AS IDENTIFIED IN THE CONTRACT CRITICAL WORK TABLE. IF THE WINDOW CONTRACT CRITICAL WORK TABLE DOES NOT DESIGNATE A DISINCENTIVE VALUE, THE CONTRACTOR WILL BE SUBJECT TO THE LIQUIDATED DAMAGES IN ACCORDANCE WITH THE SCHEDULE SET FORTH IN C&MS 108.07.

108.06 C SHALL BE MODIFIED TO THE FOLLOWING AND SHALL BE APPLICABLE ONLY TO THE CRITICAL WORK (AS DEFINED IN THE WINDOW CONTRACT TABLE):

108.06 C EXTENSION TO THE COMPLETION DATE FOR WEATHER OR SEASONAL CONDITIONS. A WEATHER DAY FOR CRITICAL WORK IS DEFINED AS A WORKDAY THAT WEATHER REDUCED PRODUCTION BY MORE THAN 50 PERCENT ON ITEMS OF WORK ON THE CRITICAL PATH FOR CRITICAL WORK. SUBMIT A REQUESTED FOR AN EXTENSION OF TIME FOR A LOST WORKDAY DUE TO WEATHER WITH 2 DAYS OF OCCURRENCE. THE ENGINEER WILL EXTEND THE CALENDAR DAYS TO COMPLETE BY CALENDAR DAYS. THE ENGINEER WILL CONVERT WORKDAYS TO CALENDAR DAYS FOR EACH LOST WORKDAY DUE TO WEATHER BY MULTIPLYING THE NUMBER OF LOST WORKDAYS BY 1.4 FOR A 5-DAY WORK WEEK OR LESS; 1.2 FOR A 6-DAY WORK WEEK; AND 1 FOR A 7-DAY WORK WEEK; AND EXTEND THE CALENDAR DAYS TO COMPLETE BY THE RESULTING NUMBER OF CALENDAR DAYS PLUS ANY HOLIDAYS THE CONTRACTOR DOES NOT NORMALLY WORK THAT OCCUR IN THE EXTENSION PERIOD. WHEN THE CONVERSION OF WORKDAYS TO CALENDAR DAYS RESULTS IN A DECIMAL OF 0.5 OR GREATER, THE ENGINEER WILL ROUND THE NUMBER OF CALENDAR DAYS TO THE NEXT HIGHEST WHOLE NUMBER. WHEN THE CONVERSION RESULTS IN A DECIMAL LESS THAN 0.5, THE ENGINEER WILL DELETE THE DECIMAL PORTION OF THE CALENDAR DAYS.

FLEXIBLE START WINDOW TABLE					
DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE	DISINCENTIVE \$ PER DAY	WORK WINDOW		
			START	END	
I-490 - SR-10 WB TO I-71 SB (PH 2 & 3)	210 DAYS (PH 2 & 3)	\$ 3,000	4-1-25	10-15-25	
RAMP C-7 (W. 7TH ST.)	105 DAYS (PH 3)	\$ 3,000	7-1-25	10-15-25	
RAMP B-C (ROCKEFELLER AVE.)	105 DAYS (PH 3)	\$ 8,000	7-1-25	10-15-25	
RAMP 7-7C (W. 7TH ST.)	60 DAYS (PH 5)	\$ 8,000	6-1-26	8-1-26	
RAMP C-B (BROADWAY AVE.)	60 DAYS (PH 5)	\$ 3,000	6-1-26	8-1-26	
RAMP N-E (I-77 SB)	60 DAYS (PH 5)	\$ 1,500	6-1-26	8-1-26	
RAMP S-W (I-77 NB)	45 DAYS (PH 2A)	\$ 8,000	4-1-25	7-1-25	

WORK NEEDED TO REPLACE THE PAVEMENT FOR ALL RAMPS LISTED EXCEPT I-490/SR-10 WB TO I-71 SB

DESIGN AGENCY



DESIGNER  
KRM

REVIEWER  
AKF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
65A | 1068

REVISIONS		
NO.	DATE	DESCRIPTION
1	01/15/24	CREATED SHEET, ADDED PN 121, ADDED PN 129, UPDATED DISINCENTIVE \$ AMOUNTS AND ADDED WORK WINDOWS BASED ON ODOT COMMENTS
3	03/15/24	MODIFIED CALENDAR DAYS TO COMPLETE RAMP WORK

61	62	63	64	65	94	95	PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
							01/IMS/04							
MAINTENANCE OF TRAFFIC														
	471							471	202	30700	471	FT	CONCRETE BARRIER REMOVED	
			3	111				111	254	01000	111	SY	PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH 1.5")	
						281		281	411	10000	281	CY	STABILIZED CRUSHED AGGREGATE	
						2823		2823	606	15050	2823	FT	GUARDRAIL, TYPE MGS	
						3		3	606	26150	3	EACH	ANCHOR ASSEMBLY, MSG TYPE E (MASH 2016)	
						3		3	606	26550	3	EACH	ANCHOR ASSEMBLY, MSG TYPE T	
						3369		3369	609	24510	3369	FT	CURB, TYPE 4-C	
			3	83				83	611	04400	83	FT	12" CONDUIT, TYPE B	
				3858				3858	611	04401	3858	FT	12" CONDUIT, TYPE B, AS PER PLAN	61
				416				416	611	04600	416	FT	12" CONDUIT, TYPE C	
				1150				1150	611	97010	1150	FT	SLOTTED DRAIN, TYPE 2, 12"	
			3	11				11	611	98180	11	EACH	CATCH BASIN, NO. 3A	
				7				7	611	98470	7	EACH	CATCH BASIN, NO. 2-2B	
				1				1	611	98634	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
				600				600	614	11110	600	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						3	1453	1453	614	11630	1453	FT	INCREASED BARRIER DELINEATION	
LS						52		52	614	12380	52	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
	14							14	614	12420	14	EACH	DETOUR SIGNING	
								14	614	12484	14	EACH	WORK ZONE INCREASED PENALTIES SIGN	
50								50	614	12500	50	EACH	REPLACEMENT SIGN	
	2							2	614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
					3372			3372	614	12800	3372	EACH	WORK ZONE RAISED PAVEMENT MARKER	
					2970			2970	614	12801	2970	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	63
250						196		446	614	13000	446	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
			3	22				3528	614	13310	3528	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
				11				161	614	13312	161	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	
								3678	614	13350	3678	EACH	OBJECT MARKER, ONE WAY	
	40							40	614	18601	40	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	63
				7.17				7.17	614	20010	7.17	MILE	WORK ZONE LANE LINE, CLASS I, 6"	
					15.53			15.53	614	20056	15.53	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
				0.05	0.18			0.23	614	21000	0.23	MILE	WORK ZONE CENTER LINE, CLASS I	
				0.17	0.33			0.50	614	22000	0.50	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
				21.75				21.75	614	22010	21.75	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
					64.13			64.13	614	22056	64.13	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
								23895	614	23010	23895	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"	
								60755	614	23110	60755	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
				4820				4820	614	24000	4820	FT	WORK ZONE DOTTED LINE, CLASS I	
					20794			20794	614	24102	20794	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
					69			69	614	26000	69	FT	WORK ZONE STOP LINE, CLASS I	
					318			318	614	27010	318	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12"	
					3255			3255	614	28000	3255	FT	WORK ZONE GORE MARKING, CLASS II	
					20			20	614	30000	20	EACH	WORK ZONE ARROW, CLASS I	
				LS				LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
						13468		13468	615	20000	13468	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
300								300	616	10000	300	MGAL	WATER	
			3	510				18300	622	41011	18300	FT	PORTABLE BARRIER, 50", AS PER PLAN	61
								16	622	41060	16	EACH	DUAL PORTABLE BARRIER TRANSITION/TERMINATION	
								95200	622	41101	95200	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	62
								11100	622	41111	11100	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	62
				14				14	630	75000	14	EACH	SIGN ATTACHMENT ASSEMBLY	
				824.3				824.3	630	80224	824.3	SF	SIGN, OVERHEAD EXTRUSHEET	
								42	808	18700	42	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
			3	5439				5439	839	29000	5439	FT	TRENCH DRAIN, TYPE A WITH STANDARD GRADE	

MAINTENANCE OF TRAFFIC - GENERAL SUMMARY

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY
3	03/14/24	ADDED TEMP. DRAINAGE ITEMS PREV. IN ITEM 615
3	03/20/24	MODIFIED PB ITEMS

DESIGN AGENCY



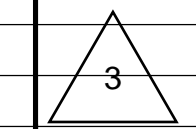
DESIGNER  
KRM

REVIEWER  
AKF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
66 1068

SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	411 STABILIZED CRUSHED AGGREGATE CY	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, TYPE MGS FT	609 CURB, TYPE 4-C FT	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTOR, TYPE 2 (ONE-WAY) EACH	614 OBJECT MARKER, ONE WAY EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 DUAL PORTABLE BARRIER TRANSITION/TERMINATION EACH	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT
			FROM	TO																	
PHASE 1																					
179	PB-1	C/L R/W & CONST. I-490	928+80	935+50	RT						130	1	15							440	230
179	PB-2	C/L R/W & CONST. I-490	933+00	935+50	LT								6							20	230
179	PB-3	B/L EX. RAMP W-S (I-71 SB)	32+90	35+50	LT								7						1	260	
179	PB-4	NOT USED																			
179	PB-5	C/L R/W & CONST. I-490	932+84	933+64	RT							1	3							80	
179		C/L R/W & CONST. I-490	933+00	935+27	RT											297					
179		C/L R/W & CONST. I-490	931+57	935+50	LT				393							176					
180	PB-6	NOT USED																			
180	PB-7	C/L R/W & CONST. I-490	935+50	948+00	LT								25								1250
180	PB-8	C/L R/W & CONST. I-490	935+50	948+00	RT								25								1250
180	PB-9	NOT USED	939+22	948+00	RT																
180	TGR-1	C/L R/W & CONST. I-490	943+50	948+00	LT				450				10								
180	TGR-2	C/L R/W & CONST. I-490	939+00	948+00	RT		1		900				19								
180		C/L R/W & CONST. I-490	939+00	948+00	RT											303					
180		C/L R/W & CONST. I-490	935+50	948+00	LT											598					
181	PB-10	NOT USED																			
181	PB-11	NOT USED																			
181	PB-12	B/L EX. RAMP S-E (I-71 NB)	16+50	20+38	LT								8							388	
181	PB-13	C/L R/W & CONST. I-490	948+00	960+50	LT								25								1250
181	PB-14	C/L R/W & CONST. I-490	948+00	960+50	RT								25								1250
181	TGR-3	C/L R/W & CONST. I-490	948+00	951+00	LT																
181	TGR-4	C/L R/W & CONST. I-490	948+00	954+27	RT		1		300				6								
181		C/L R/W & CONST. I-490	948+00	955+17	LT			1	627				13								
181		C/L R/W & CONST. I-490	948+00	954+27	RT											362					
181		C/L R/W & CONST. I-490	948+00	954+27	RT											295					
181		C/L R/W & CONST. I-490	955+73	960+44	RT/LT											1193					
181		C/L R/W & CONST. I-490	955+33	960+44	RT												178				
182	PB-15	C/L R/W & CONST. I-490	960+50	973+00	LT								25								1250
182	PB-16	C/L R/W & CONST. I-490	960+50	973+00	RT								25								1250
183	PB-17	C/L R/W & CONST. I-490	973+00	985+50	RT								25								1250
183	PB-18	C/L R/W & CONST. I-490	973+00	985+50	LT								25								1250
184	PB-19	C/L R/W & CONST. I-490	985+50	989+80	LT						60	1	10								430
184	PB-19A	C/L R/W & CONST. I-490	991+00	997+60	LT								15								660
184	PB-19B	C/L R/W & CONST. I-490	997+50	998+00	LT								2								50
184	PB-20	C/L R/W & CONST. I-490	985+50	987+00	RT								3								150
184	PB-20A	C/L R/W & CONST. I-490	986+90	993+50	RT								15								660
184	PB-20B	C/L R/W & CONST. I-490	994+70	998+00	RT						60	1	8								330
185	PB-21	C/L R/W & CONST. I-490	998+00	1010+50	LT								25								1250
185	PB-22	C/L R/W & CONST. I-490	998+00	1010+50	RT								25								1250
186	PB-23	C/L R/W & CONST. I-490	1010+50	1022+00	LT								23								1150
186	PB-24	C/L R/W & CONST. I-490	1010+50	1022+00	RT								23								1150
187	PB-25	C/L R/W & CONST. I-490	1022+00	1033+00	LT								20								1000
187	PB-26	C/L R/W & CONST. I-490	1022+00	1033+00	RT								20								1000
188	PB-27	C/L R/W & CONST. I-490	1033+00	1047+30	LT								29								1430
188	PB-28	C/L R/W & CONST. I-490	1033+00	1047+30	RT						233		29								1430
188		OPPORTUNITY CORRIDOR	109+94	111+50	RT/LT											276					
189	PB-29	C/L R/W & CONST. I-490	111+50	117+90	LT								13								640
189	PB-30	C/L R/W & CONST. I-490	111+50	119+20	RT								16								770
189		C/L R/W & CONST. I-490	111+50	118+41	RT/LT											1336					
191	PB-31	B/L EX. RAMP S-E	14+18	16+50	LT								100	1	6						232
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUBSUMMARY - TOTALS 2							2	2	2277	2670	583	5	521	48	569	4836	178	1	20380	4850	



REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY
3	03/20/24	UPDATED PB-9, PB-27 & 28

MAINTENANCE OF TRAFFIC SUBSUMMARY 2 - PHASE 1

DESIGN AGENCY  
  
 GPD GROUP  
 10000 Old York Road, Suite 200, York, PA 17403

DESIGNER  
 KRM

REVIEWER  
 AKF 11-21-23

PROJECT ID  
 107408

SHEET TOTAL  
 69 1068



SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	411 STABILIZED CRUSHED AGGREGATE CY	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, TYPE MGS FT	609 CURB, TYPE 4-C FT	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTOR, TYPE 2 (ONE-WAY) EACH	614 OBJECT MARKER, ONE WAY EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 DUAL PORTABLE BARRIER TRANSITION/TERMINATION EACH	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT	
			FROM	TO																		
PHASE 2																						
192	PB-32	C/L R/W & CONST. I-490	931+50	935+50	LT								9		9							
192	PB-33	C/L R/W & CONST. I-490	931+50	934+50	LT						1	7		7						400		
192		C/L R/W & CONST. I-490	931+00	935+50	LT							10		10						300		
193	PB-34	C/L R/W & CONST. I-490	935+50	948+00	LT								25		25					1250		
193		C/L R/W & CONST. I-490	935+50	948+00	LT								25		25							
194	PB-35	B/L CONST. RAMP E-S	3047+50	3060+46	RT								26		26					1016	280	
194	PB-36	C/L R/W & CONST. I-490	948+00	960+50	LT								25		25					1250		
194	PB-37	C/L R/W & CONST. I-490	958+90	960+50	LT								5		5					160		
194	PB-38	C/L R/W & CONST. I-490	955+70	960+50	RT								11		11					480		
194	PB-39	C/L R/W & CONST. I-490	955+10	960+20	RT								11		11					510		
194	PB-40	C/L R/W & CONST. I-490	960+40	960+50	RT								1		1					10		
194		C/L R/W & CONST. I-490	948+00	955+70	LT								16		16							
194		B/L CONST. RAMP E-S	3051+80	3052+60	LT									3	3							
194		B/L CONST. RAMP E-S	3060+46	3060+70	LT									2	2							
195	PB-41	B/L CONST. RAMP E-S	3060+46	3062+60	RT								5		5			1		214		
195	PB-42	C/L R/W & CONST. I-490	960+50	962+70	LT						1	5		5						220		
195	PB-43	C/L R/W & CONST. I-490	960+50	973+00	LT								25		25					1250		
195	PB-44	C/L R/W & CONST. I-490	960+50	973+00	RT								50		50					1250		
195	PB-45	C/L R/W & CONST. I-490	960+50	973+00	RT								25		25					1250		
195		B/L CONST. RAMP E-S	3060+46	3062+90	LT									5	5							
195		C/L R/W & CONST. I-490	970+80	972+90	LT									6	6							
196	PB-46	C/L R/W & CONST. I-490	973+00	985+50	LT								25		25					1250		
196	PB-47	C/L R/W & CONST. I-490	973+00	985+50	RT								25		25					1250		
196	PB-48	C/L R/W & CONST. I-490	973+00	985+50	RT								50		50					1250		
196		C/L R/W & CONST. I-490	981+50	983+60	LT								3	3	6							
197	PB-49	C/L R/W & CONST. I-490	985+50	989+80	LT															430		
197	PB-49A	C/L R/W & CONST. I-490	991+00	997+60	LT						1	15		15						660		
197	PB-49B	C/L R/W & CONST. I-490	997+50	998+00	LT								2		2					50		
197	PB-50	C/L R/W & CONST. I-490	985+50	986+60	RT						1	3		3						110		
197	PB-51	C/L R/W & CONST. I-490	985+50	998+00	RT								50		50					1250		
197		C/L R/W & CONST. I-490	990+50	994+00	LT								8		8							
197		C/L R/W & CONST. I-490	996+00	998+00	LT								5		5							
198	PB-52	C/L R/W & CONST. I-490	998+00	1010+50	LT								25		25					1250		
198	PB-53	C/L R/W & CONST. I-490	998+00	1010+50	RT								50		50					1250		
198		C/L R/W & CONST. I-490	998+00	1009+60	LT								24		24							
199	PB-54	C/L R/W & CONST. I-490	1010+50	1022+00	LT								23		23					1150		
199	PB-55	B/L CONST. RAMP N-W	121+30	122+11	LT								3		3					81		
199	PB-56	C/L R/W & CONST. I-490	1010+50	1022+00	RT								46		46					1150		
199		C/L R/W & CONST. I-490	1020+28	1022+00	LT	3										390						
199		C/L R/W & CONST. I-490	1021+20	1022+00	LT	3										45						
199		I-490 / RAMP W-S	1012+00	5+50	RT/RT								8		8							
199		B/L CONST. RAMP N-W	120+00	121+30	LT								4		4							
200	PB-57	B/L CONST. RAMP N-W	122+11	122+90	LT								2		2					79		
200	PB-58	B/L CONST. RAMP N-W	126+00	128+00	LT								5		5					200		
200	PB-59	B/L CONST. RAMP S-W	225+98	228+18	LT								1		1					220		
200	PB-60	RAMP N-W / RAMP S-W	122+10	229+80	RT/LT							1	16		16					700	70	
200	PB-61	C/L R/W & CONST. I-490	1022+00	1033+00	RT								40		40			1000				
200	PB-62	C/L R/W & CONST. I-490	1022+30	1033+00	RT								21		21					970		
200	TGR-5	B/L CONST. RAMP N-W	122+90	128+00	LT			1	510	510												
200		C/L R/W & CONST. I-490	1022+00	1024+55	LT	10																
200		B/L CONST. RAMP N-W	122+11	128+00	LT																	
200		C/L R/W & CONST. I-490	1023+66	1033+00	RT	35																
200		B/L CONST. RAMP S-W	226+90	229+38	LT	10																
200		B/L CONST. RAMP S-W	226+90	228+10	LT																	
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUBSUMMARY - TOTALS 2						61		1	510	510		7	749	31	780	3086	18	7150	1	16710	350	


REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY

MAINTENANCE OF TRAFFIC SUBSUMMARY 2 - PHASE 2

DESIGN AGENCY  
  
 GPD GROUP  
 DESIGNER  
 KRM  
 REVIEWER  
 AKF 11-21-23  
 PROJECT ID  
 107408  
 SHEET TOTAL  
 74 1068

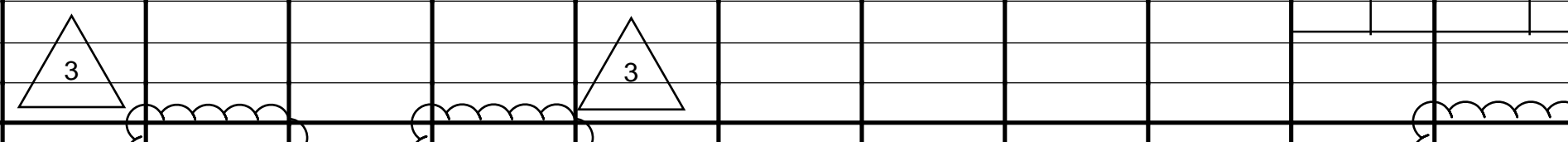
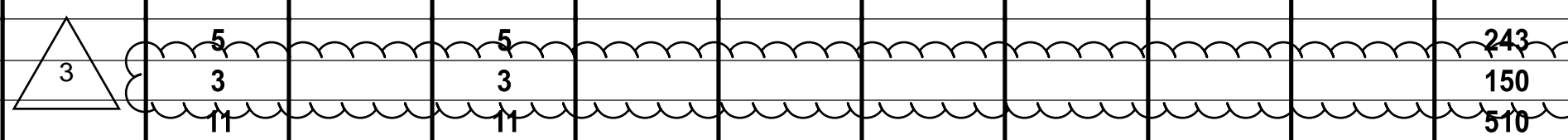
SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	411 STABILIZED CRUSHED AGGREGATE CY	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, TYPE MGS FT	609 CURB, TYPE 4-C FT	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTOR, TYPE 2 (ONE-WAY) EACH	614 OBJECT MARKER, ONE WAY EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 DUAL PORTABLE BARRIER TRANSITION/TERMINATION EACH	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT	
			FROM	TO																		
PHASE 4																						
234	PB-107	C/L R/W & CONST. I-490	955+00	960+50	RT/LT																	
234	PB-108	C/L R/W & CONST. I-490	958+70	960+40	RT																	
234	PB-109	C/L R/W & CONST. I-490	958+60	960+50	RT																	
234		C/L R/W & CONST. I-490	961+00	973+00	RT																	
235	PB-110	C/L R/W & CONST. I-490	960+50	973+00	LT																	
235	PB-111	C/L R/W & CONST. I-490	960+50	973+00	RT																	
235		C/L R/W & CONST. I-490	973+00	976+20	RT																	
236	PB-112	C/L R/W & CONST. I-490	973+00	985+50	RT																	
236	PB-113	C/L R/W & CONST. I-490	973+00	985+50	LT																	
236		C/L R/W & CONST. I-490	985+00	985+60	RT																	
237	PB-114	C/L R/W & CONST. I-490	985+50	987+00	RT																	
237	PB-114A	C/L R/W & CONST. I-490	986+90	993+50	RT																	
237	PB-114B	C/L R/W & CONST. I-490	994+70	998+00	RT																	
237	PB-115	C/L R/W & CONST. I-490	985+50	998+00	LT																	
237		C/L R/W & CONST. I-490	985+60	998+00	RT																	
238	PB-116	C/L R/W & CONST. I-490	998+00	1010+50	LT																	
238	PB-117	C/L R/W & CONST. I-490	998+00	1010+50	RT																	
238		C/L R/W & CONST. I-490	998+00	1010+50	RT																	
239	PB-118	C/L R/W & CONST. I-490	1010+50	1022+00	LT																	
239	PB-119	C/L R/W & CONST. I-490	1010+50	1022+00	RT																	
239	PB-120	C/L R/W & CONST. I-490	1021+70	1022+00	RT																	
239	PB-121	B/L CONST. RAMP W-S	1021+80	1022+00	RT																	
239		C/L R/W & CONST. I-490	1010+50	1017+50	RT																	
239		B/L CONST. RAMP W-S	518+20	520+30	RT																	
239		B/L CONST. RAMP W-S	520+30	522+20	RT																	
240	PB-122	C/L R/W & CONST. I-490	1022+00	1033+00	LT																	
240	PB-123	C/L R/W & CONST. I-490	1022+00	1033+00	RT																	
240	PB-124	C/L R/W & CONST. I-490	1022+00	1033+00	RT																	
240	PB-125	B/L CONST. RAMP W-N	629+10	630+00	RT																	
240		B/L CONST. RAMP W-S	522+20	527+66	RT																	
240		B/L CONST. RAMP W-N	627+97	630+00	RT																	
241	PB-126	C/L R/W & CONST. I-490	1033+00	1038+00	RT																	
241	PB-127	C/L R/W & CONST. I-490	1033+00	1035+70	LT																	
241	PB-127A	C/L R/W & CONST. I-490	100+00	111+50	LT																	
241	PB-128	B/L CONST. RAMP S-E	339+50	347+00	LT																	
242	PB-129	OPPORTUNITY CORRIDOR	111+50	117+10	LT/RT																	
244	PB-130	B/L CONST. RAMP W-N	630+00	630+90	RT																	
244	PB-131	B/L CONST. RAMP W-N	630+00	631+80	RT																	
244		B/L CONST. RAMP W-N	630+00	630+94	RT																	
246	PB-132	B/L CONST. RAMP S-E	331+60	339+50	RT/LT																	
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUBSUMMARY - TOTALS 2						33					820	5	680	38	718	798		9230	2	10570	830	

MAINTENANCE OF TRAFFIC SUBSUMMARY 2 - PHASE 4

DESIGN AGENCY  
  
 GPD GROUP  
 DESIGNER  
 KRM  
 REVIEWER  
 AKF 11-21-23  
 PROJECT ID  
 107408  
 SHEET TOTAL  
 83 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY

SHEET NO.	REF. NO.	LOCATION	STATION		SIDE	411 STABILIZED CRUSHED AGGREGATE CY	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, TYPE MGS FT	609 CURB, TYPE 4-C FT	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTOR, TYPE 2 (ONE-WAY) EACH	614 OBJECT MARKER, ONE WAY EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 DUAL PORTABLE BARRIER TRANSITION/TERMINATION EACH	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT	
			FROM	TO																		
PHASE 5A																						
263	PB-161	RAMP S-E / I-490	2050+50	960+50	LT/RT																	
263		B/L CONST. RAMP S-E	2050+50	2053+50	LT																	
264	PB-162	C/L R/W & CONST. I-490	960+50	973+00	RT																	
265	PB-163	C/L R/W & CONST. I-490	973+00	980+40	RT																	
268	PB-164	B/L CONST. RAMP W-S	519+30	521+97	LT																	
268	PB-165	C/L R/W & CONST. I-490	1019+20	1022+00	RT																	
269	PB-166	B/L CONST. RAMP W-S	521+97	524+40	LT																	
269	PB-167	C/L R/W & CONST. I-490	1022+00	1024+50	RT																	
269	PB-168	B/L CONST. RAMP W-S	523+90	529+00	RT																	
269	PB-169	RAMP W-S / RAMP W-N	523+90	630+70	LT/RT																	
269		B/L CONST. RAMP W-S	525+00	526+50	RT																	
270	PB-170	B/L CONST. RAMP S-E	2045+10	2050+50	RT/LT																	
270		B/L CONST. RAMP S-E	2049+20	2050+20	LT																	
272	PB-171	B/L CONST. RAMP W-S	529+00	532+00	LT																	
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC SUBSUMMARY - TOTALS 2																						



REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY

DESIGN AGENCY

DESIGNER  
KRM

REVIEWER  
AKF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
89 | 1068

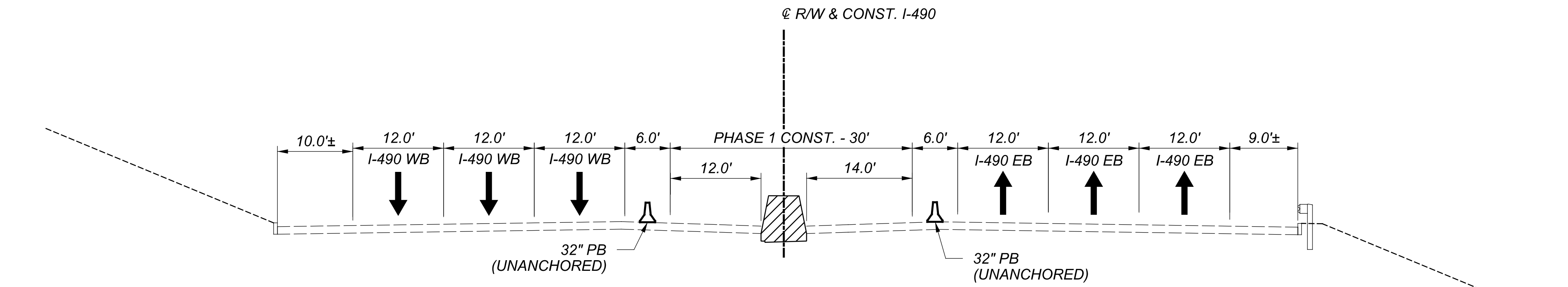


SHEET NO.	REF. NO.	LOCATION	SIDE		411 STABILIZED CRUSHED AGGREGATE CY	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016) EACH	606 ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, TYPE MGS FT	609 CURB, TYPE 4-C FT	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTOR, TYPE 2 (ONE-WAY) EACH	614 OBJECT MARKER, ONE WAY EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC CY	622 PORTABLE BARRIER, 50", AS PER PLAN FT	622 DUAL PORTABLE BARRIER TRANSITION/TERMINATION EACH	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN FT	622 PORTABLE BARRIER, ANCHORED, AS PER PLAN FT
			SHEET	TOTAL																
		PHASE 1 TOTALS CARRIED FROM SHEET	69	OF 1068		2	2	2277	2670	583	5	521	48	569	4836	178		1	20380	4850
		PHASE 2 TOTALS CARRIED FROM SHEET	74	OF 1068	61		1	510	510		7	749	31	780	3086	18		1	16740	350
		PHASE 2 & 2A TOTALS CARRIED FROM SHEET	75	OF 1068	128	1		36	189	50	7	257	7	264	3532		3	4	6840	2010
		PHASE 3 & 3A TOTALS CARRIED FROM SHEET	78	OF 1068	8						9	441	25	466	68			2	13570	1590
		PHASE 4 TOTALS CARRIED FROM SHEET	83	OF 1068	33					820	5	680	38	718	798			2	10570	830
		PHASE 5 TOTALS CARRIED FROM SHEET	88	OF 1068	51						12	612	7	619	1148			4	16390	870
		PHASE 5A TOTALS CARRIED FROM SHEET	89	OF 1068							3	132	5	137				2	5360	600
		PHASE 6 TOTALS CARRIED FROM SHEET	93	OF 1068							4	114		114				3	5380	
TOTALS CARRIED TO MAINTENANCE OF TRAFFIC GENERAL SUMMARY					281	3	3	2823	3369	1453	52	3506	161	3667	13468	196	3	16	95200	11100

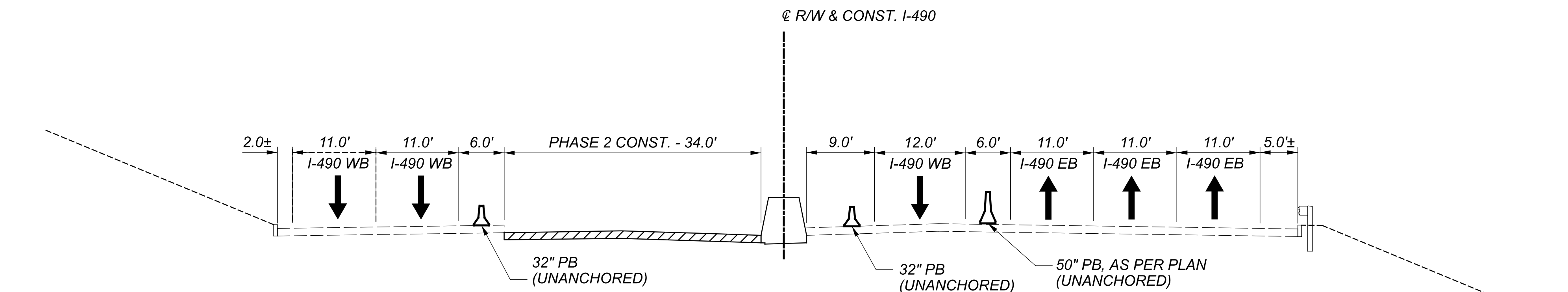
MAINTENANCE OF TRAFFIC SUBSUMMARY - TOTALS 2

DESIGN AGENCY  
  
 GPD GROUP  
 DESIGNER: KRM  
 REVIEWER: AKF 11-21-23  
 PROJECT ID: 107408  
 SHEET: 95 TOTAL: 1068

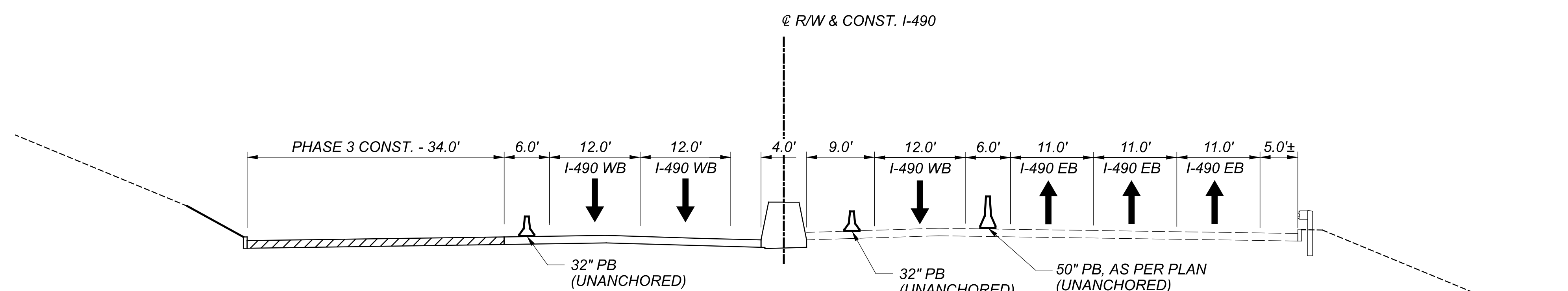
REVISIONS		
NO.	DATE	DESCRIPTION
3	03/05/24	MODIFIED QUANTITY
3	03/20/24	MODIFIED PB ITEMS



**MAINTENANCE OF TRAFFIC TYPICAL SECTION - PHASE 1**  
 STA. 955+00 (PEDESTRIAN BRIDGE/W. 11TH ST.) TO STA. 985+88 (CUYAHOGA RIVER BRIDGE)



**MAINTENANCE OF TRAFFIC TYPICAL SECTION - PHASE 2**  
 STA. 955+00 (PEDESTRIAN BRIDGE/W. 11TH ST.) TO STA. 985+88 (CUYAHOGA RIVER BRIDGE)



**MAINTENANCE OF TRAFFIC TYPICAL SECTION - PHASE 3**  
 STA. 955+00 (PEDESTRIAN BRIDGE/W. 11TH ST.) TO STA. 985+88 (CUYAHOGA RIVER BRIDGE)

DESIGN AGENCY



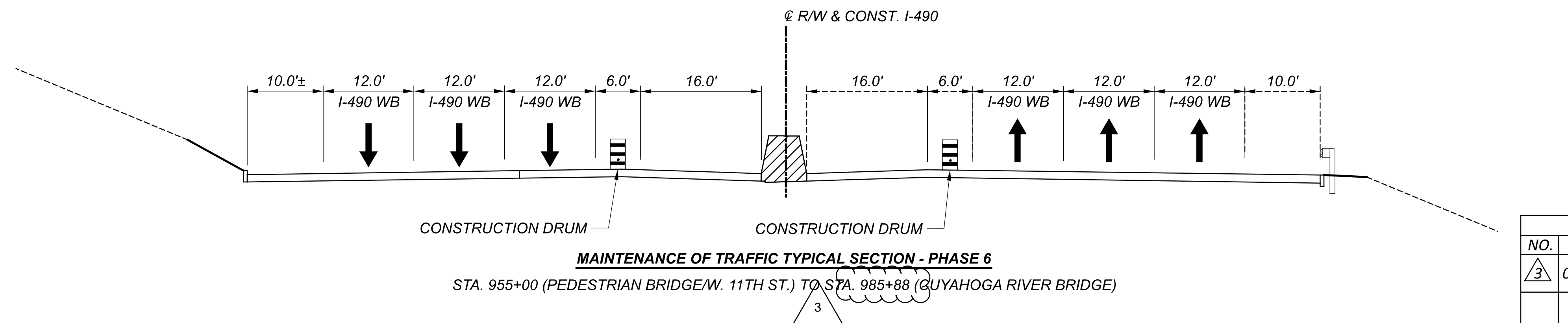
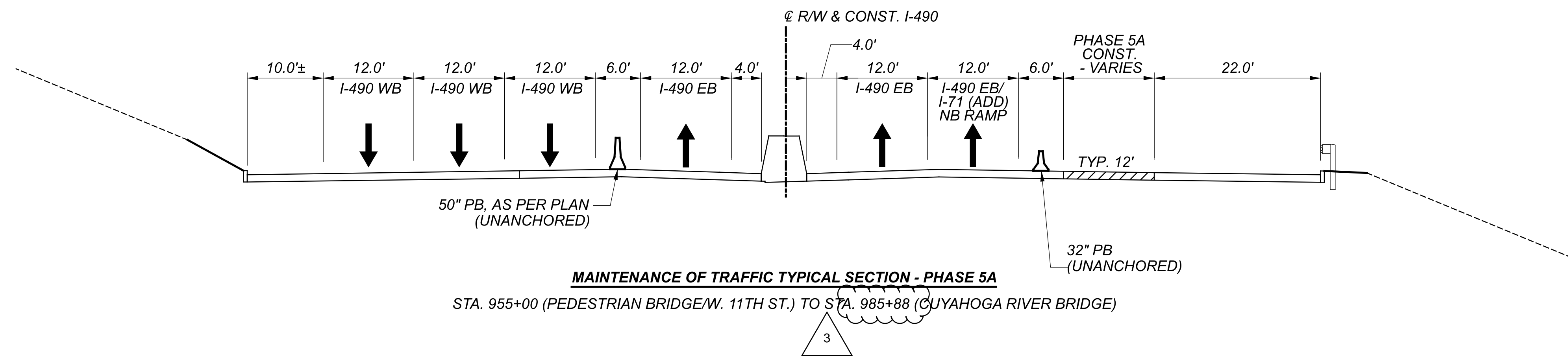
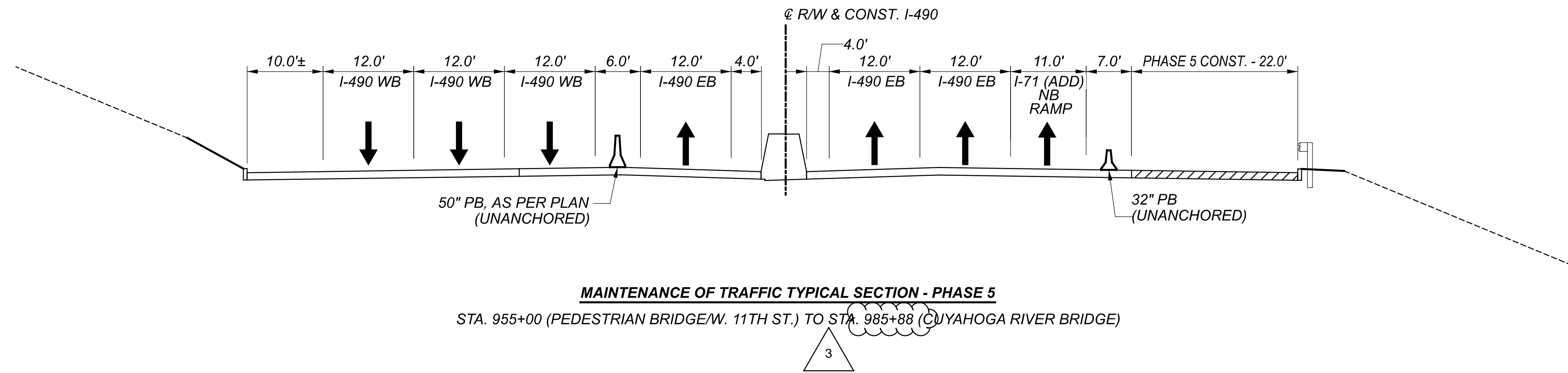
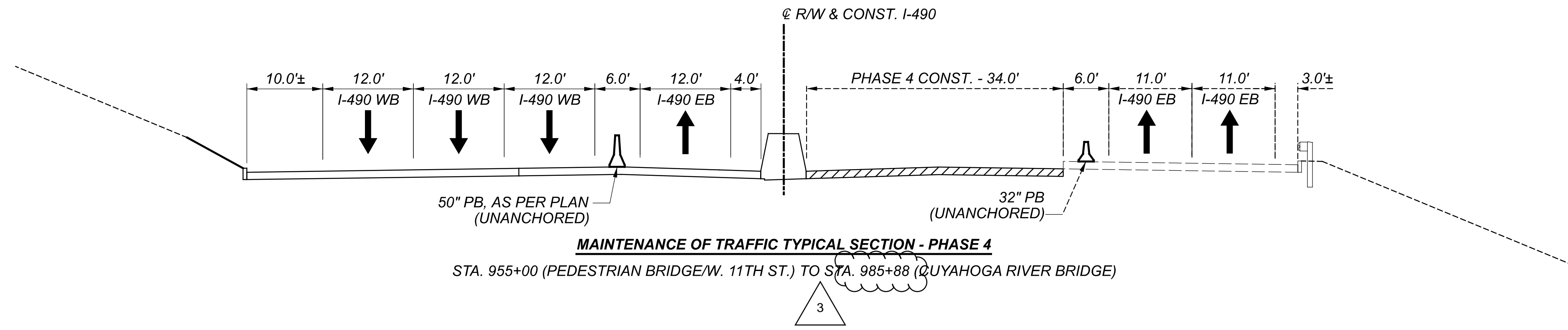
DESIGNER  
 KRM

REVIEWER  
 AKF 11-21-23

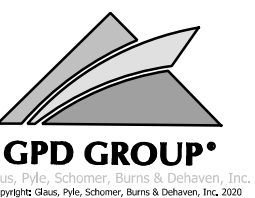
PROJECT ID  
 107408

SHEET TOTAL  
 100 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	MODIFIED END STATION RANGE



DESIGN AGENCY



DESIGNER  
 KRM

REVIEWER  
 AKF 11-21-23

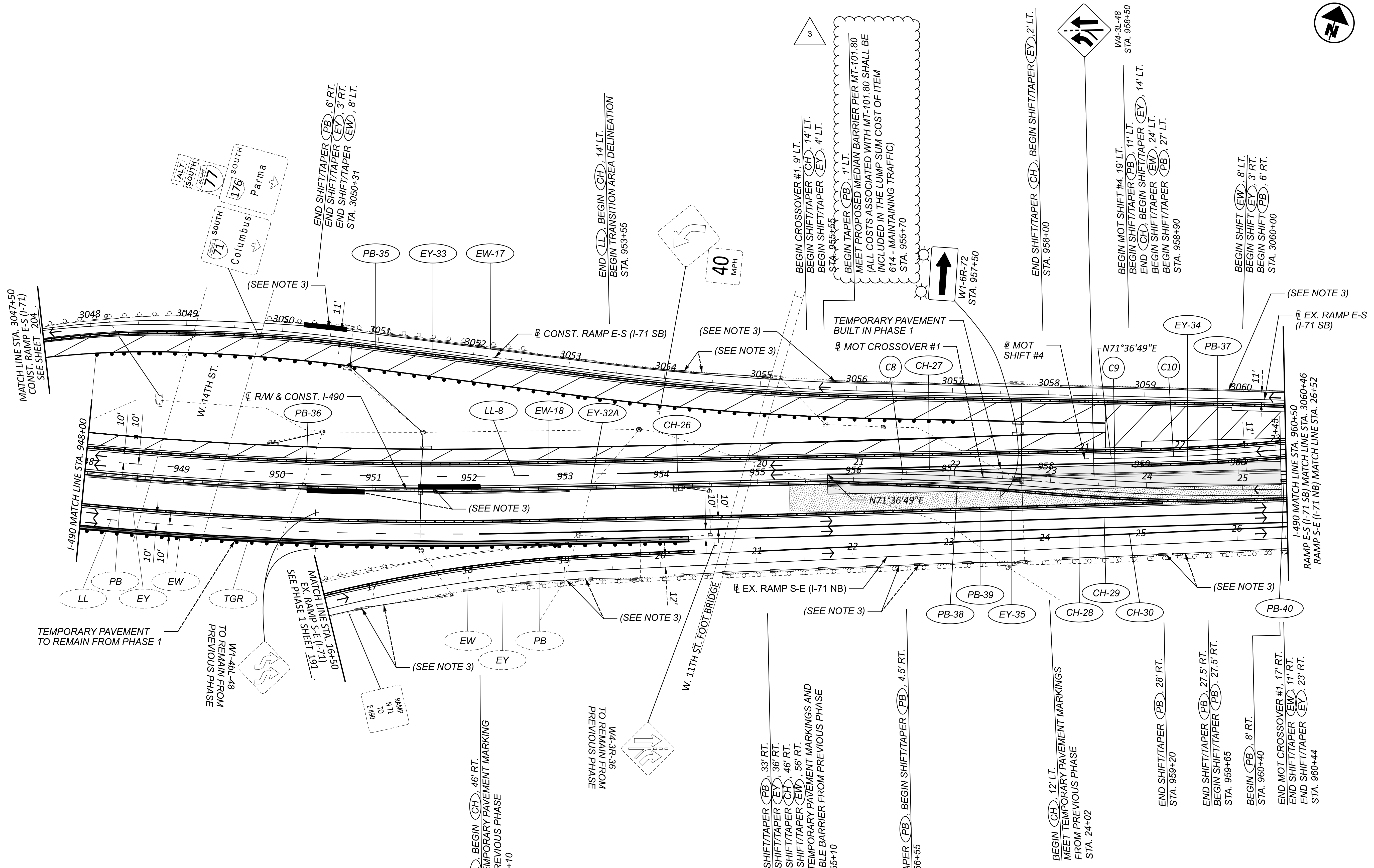
PROJECT ID  
 107408

SHEET TOTAL  
 101 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	MODIFIED END STATION RANGE AND ADDED APPROACH SLAB

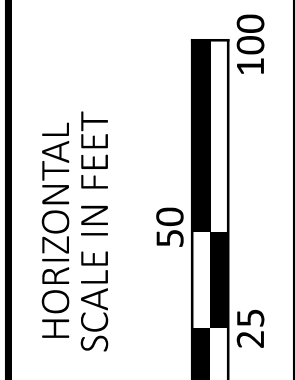


<b>C8</b>	<b>CURVE DATA (MOT CROSSOVER #1)</b> P.I. = STA. 21+72.71 $\Delta = 06^{\circ}04'53''$ RT $D_c = 02^{\circ}28'49''$ $R = 2,310.00'$ $T = 122.71'$ $L = 245.19'$ $E = 3.26'$ P.C. STA. 20+50.00 P.R.C. STA. 22+95.19	<b>C9</b>	<b>CURVE DATA (MOT CROSSOVER #1)</b> P.I. = STA. 24+17.89 $\Delta = 06^{\circ}04'53''$ LT $D_c = 02^{\circ}28'49''$ $R = 2,310.00'$ $T = 122.71'$ $L = 245.19'$ $E = 3.26'$ P.R.C. STA. 22+95.19 P.T. STA. 25+40.37	<b>C10</b>	<b>CURVE DATA (MOT SHIFT #4)</b> P.I. = STA. 22+65.55 $\Delta = 05^{\circ}43'39''$ LT $D_c = 02^{\circ}28'49''$ $R = 2,310.00'$ $T = 115.55'$ $L = 230.92'$ $E = 2.89'$ P.C. STA. 21+50.00 P.R.C. STA. 23+80.92
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REVISIONS		
NO.	DATE	DESCRIPTION
3	03/20/24	MODIFIED CALL OUT ABOUT MT-101.80

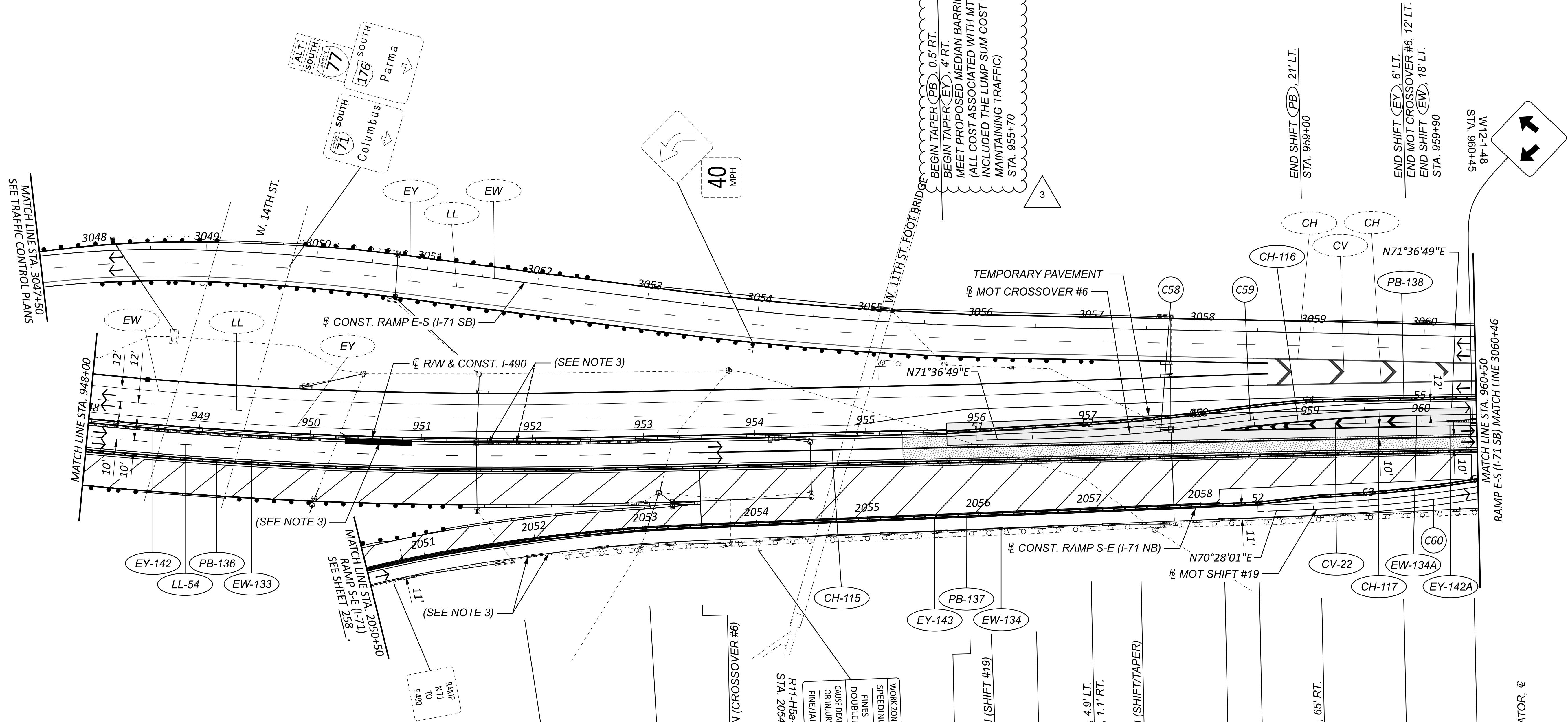
- MAINTENANCE OF TRAFFIC NOTES:**
- THE CONTRACTOR SHALL COVER OR REMOVE EXISTING CONFLICTING SIGNING AND COVER OR REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
  - FOR MAINTENANCE OF TRAFFIC PLAN LEGEND, SEE SHEET 176
  - FOR PRE-PHASE 2 AND PHASE 2 TEMPORARY DRAINAGE DETAILS, SEE SHEETS 303-311.



**MAINTENANCE OF TRAFFIC - PHASE 2**  
**I-490 - STA. 948+00 TO STA. 960+50**

DESIGN AGENCY  
  
 DESIGNER  
 KRM  
 REVIEWER  
 AKF 11-21-23  
 PROJECT ID  
 107408  
 SHEET TOTAL  
 194 1068

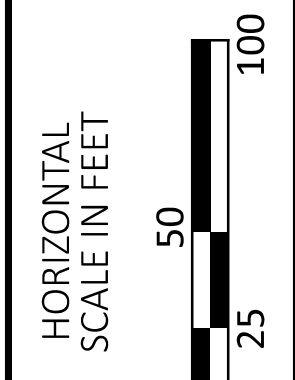
<b>C58</b>	<b>CURVE DATA (MOT CROSSOVER #6)</b> P.I. = STA. 52+35.29 $\Delta = 06^{\circ}43'59''$ LT $Dc = 03^{\circ}57'05''$ $R = 1,450.00'$ $T = 85.29'$ $L = 170.39'$ $E = 2.51'$ P.C. STA. 51+50.00 P.R.C. STA. 53+20.39	<b>C59</b>	<b>CURVE DATA (MOT CROSSOVER #6)</b> P.I. = STA. 54+05.69 $\Delta = 06^{\circ}43'59''$ RT $Dc = 03^{\circ}57'05''$ $R = 1,450.00'$ $T = 85.29'$ $L = 170.39'$ $E = 2.51'$ P.R.C. STA. 53+20.39 P.T. STA. 54+90.78	<b>C60</b>	<b>CURVE DATA (MOT SHIFT #19)</b> P.I. = STA. 53+51.68 $\Delta = 09^{\circ}26'23''$ LT $Dc = 04^{\circ}56'21''$ $R = 1,160.00'$ $T = 95.78'$ $L = 191.12'$ $E = 3.95'$ P.C. STA. 52+55.90 P.R.C. STA. 54+47.02
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REVISIONS		
NO.	DATE	DESCRIPTION
3	03/20/24	MODIFIED CALL OUT ABOUT MT-101.80

- MAINTENANCE OF TRAFFIC NOTES:**
1. THE CONTRACTOR SHALL COVER OR REMOVE EXISTING CONFLICTING SIGNING AND COVER OR REMOVE EXISTING CONFLICTING PAVEMENT MARKINGS PRIOR TO CONSTRUCTION.
  2. FOR MAINTENANCE OF TRAFFIC PLAN LEGEND, SEE SHEET 176
  3. FOR PRE-PHASE 1 AND PHASE 1 TEMPORARY DRAINAGE DETAILS, SEE SHEETS 291-302.

- BEGIN SHIFT (PB) 0' CEN.  
 BEGIN SHIFT (EY) 3' RT.  
 BEGIN SHIFT (EW) 14' RT.  
 STA. 2051+80
- END SHIFT (PB) 2' LT.  
 END SHIFT (EY) 0' CEN.  
 END SHIFT (EW) 11' RT.  
 STA. 2053+00
- END (LL) BEGIN (CH) 14' RT.  
 BEGIN TRANSITION AREA DELINEATION (CROSSOVER #6)  
 STA. 963+50
- BEGIN TAPER (PB) 0.5' RT.  
 BEGIN TAPER (EY) 4' RT.  
 STA. 955+70  
 BEGIN TRANSITION AREA DELINEATION (SHIFT #19)  
 STA. 2056+07
- BEGIN MOT CROSSOVER #6, 8' RT.  
 STA. 956+50
- END TAPER (PB) 2' BEGIN SHIFT (PB) 4.9' LT.  
 END TAPER (EY) BEGIN SHIFT (EY) 1.1' RT.  
 STA. 957+00  
 BEGIN TRANSITION AREA DELINEATION (SHIFT/TAPER)  
 STA. 957+45
- BEGIN SHIFT (CH) 4' RT.  
 STA. 958+20
- BEGIN TAPER (PB) 70' RT.  
 STA. 958+50
- END TAPER (PB) BEGIN SHIFT (PB) 65' RT.  
 BEGIN SHIFT (EY) 70.8' RT.  
 BEGIN MOT SHIFT #19, 76.4' RT.  
 BEGIN SHIFT (EW) 81.8' RT.  
 STA. 959+08
- END (CH) BEGIN (EY) 4' RT.  
 STA. 959+90
- BEGIN SHIFT/TAPER (EY) 4' RT.  
 BEGIN SHIFT/TAPER (CH) 14' RT.  
 BEGIN SHIFT/TAPER (EW) 24' RT.  
 BEGIN SHIFT/TAPER (PB) 27' RT.  
 INSTALL TEMPORARY IMPACT ATTENUATOR, @  
 STA. 960+45



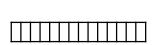



**MAINTENANCE OF TRAFFIC - PHASE 5**  
**I-490 - STA. 948+00 TO STA. 960+50**

DESIGN AGENCY	
DESIGNER	KRM
REVIEWER	AKF 11-21-23
PROJECT ID	107408
SHEET	249
TOTAL	1068

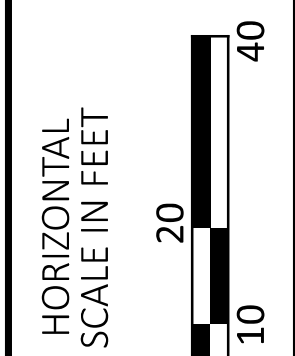
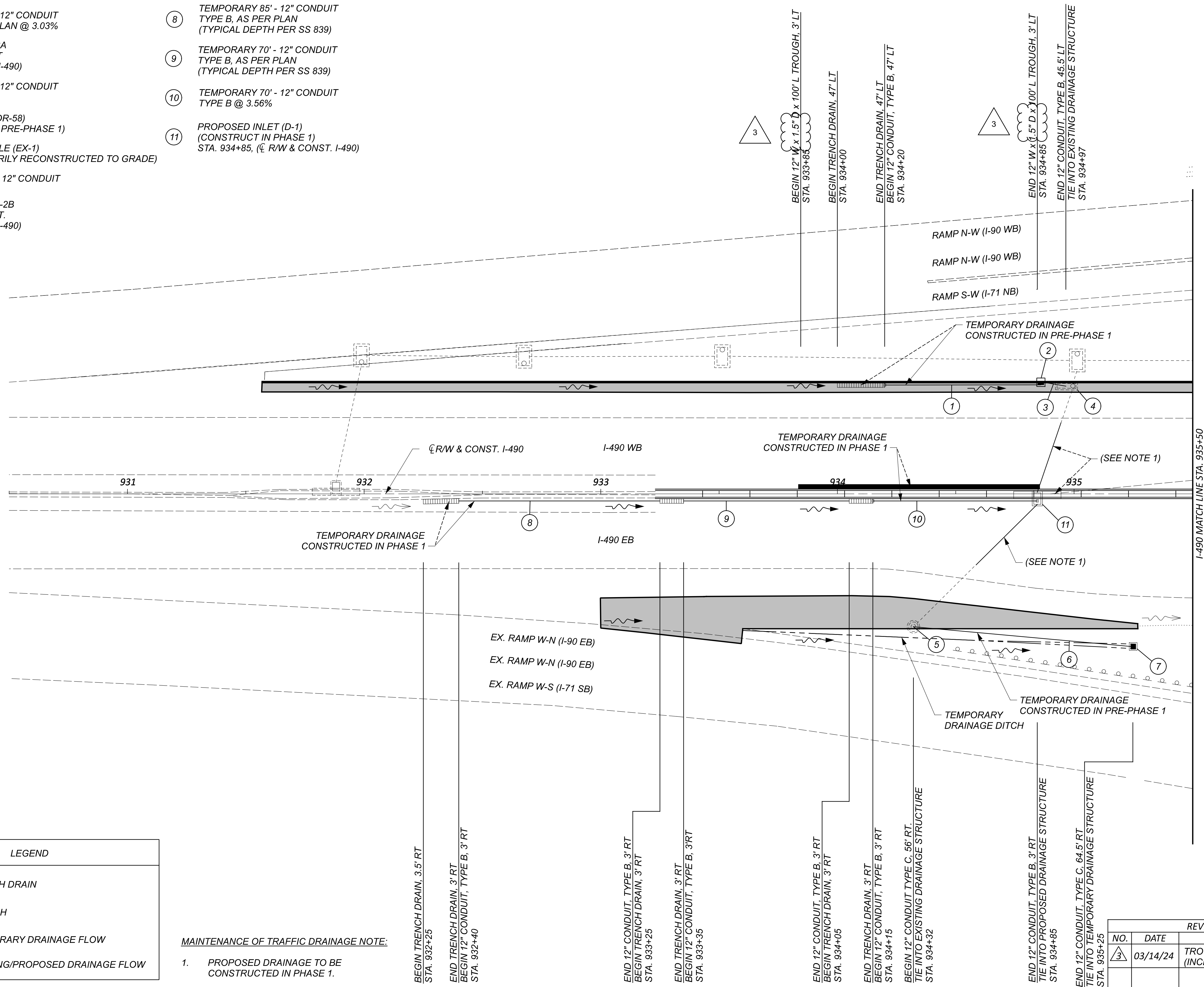


- ① TEMPORARY 66' - 12" CONDUIT  
TYPE B, AS PER PLAN @ 3.03%
- ② TEMPORARY CB-3A  
STA. 934+86, 48' LT  
(@ R/W & CONST. I-490)
- ③ TEMPORARY 10' - 12" CONDUIT  
TYPE B @ 7.20%
- ④ EXISTING INLET (DR-58)  
(TO BE PLATED IN PRE-PHASE 1)
- ⑤ EXISTING MANHOLE (EX-1)  
(TO BE TEMPORARILY RECONSTRUCTED TO GRADE)
- ⑥ TEMPORARY 93' - 12" CONDUIT  
TYPE C @ 0.50%
- ⑦ TEMPORARY CB-2-2B  
STA. 935+25, 67' RT.  
(@ R/W & CONST. I-490)

- ⑧ TEMPORARY 85' - 12" CONDUIT  
TYPE B, AS PER PLAN  
(TYPICAL DEPTH PER SS 839)
- ⑨ TEMPORARY 70' - 12" CONDUIT  
TYPE B, AS PER PLAN  
(TYPICAL DEPTH PER SS 839)
- ⑩ TEMPORARY 70' - 12" CONDUIT  
TYPE B @ 3.56%
- ⑪ PROPOSED INLET (D-1)  
(CONSTRUCT IN PHASE 1)  
STA. 934+85, (@ R/W & CONST. I-490)

LEGEND	
	TRENCH DRAIN
	TROUGH
	TEMPORARY DRAINAGE FLOW
	EXISTING/PROPOSED DRAINAGE FLOW

**MAINTENANCE OF TRAFFIC DRAINAGE NOTE:**  
 1. PROPOSED DRAINAGE TO BE  
 CONSTRUCTED IN PHASE 1.



**MAINTENANCE OF TRAFFIC - TEMPORARY DRAINAGE - PRE-PHASE 1 & PHASE 1**  
 I-490 STA. 930+50 TO STA. 935+50

DESIGN AGENCY



DESIGNER  
**KRM**

REVIEWER  
 AKF 11-21-23

PROJECT ID  
 107408

SHEET TOTAL  
 291 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	TROUGH DEPTH UNITS (INCHES) ADDED

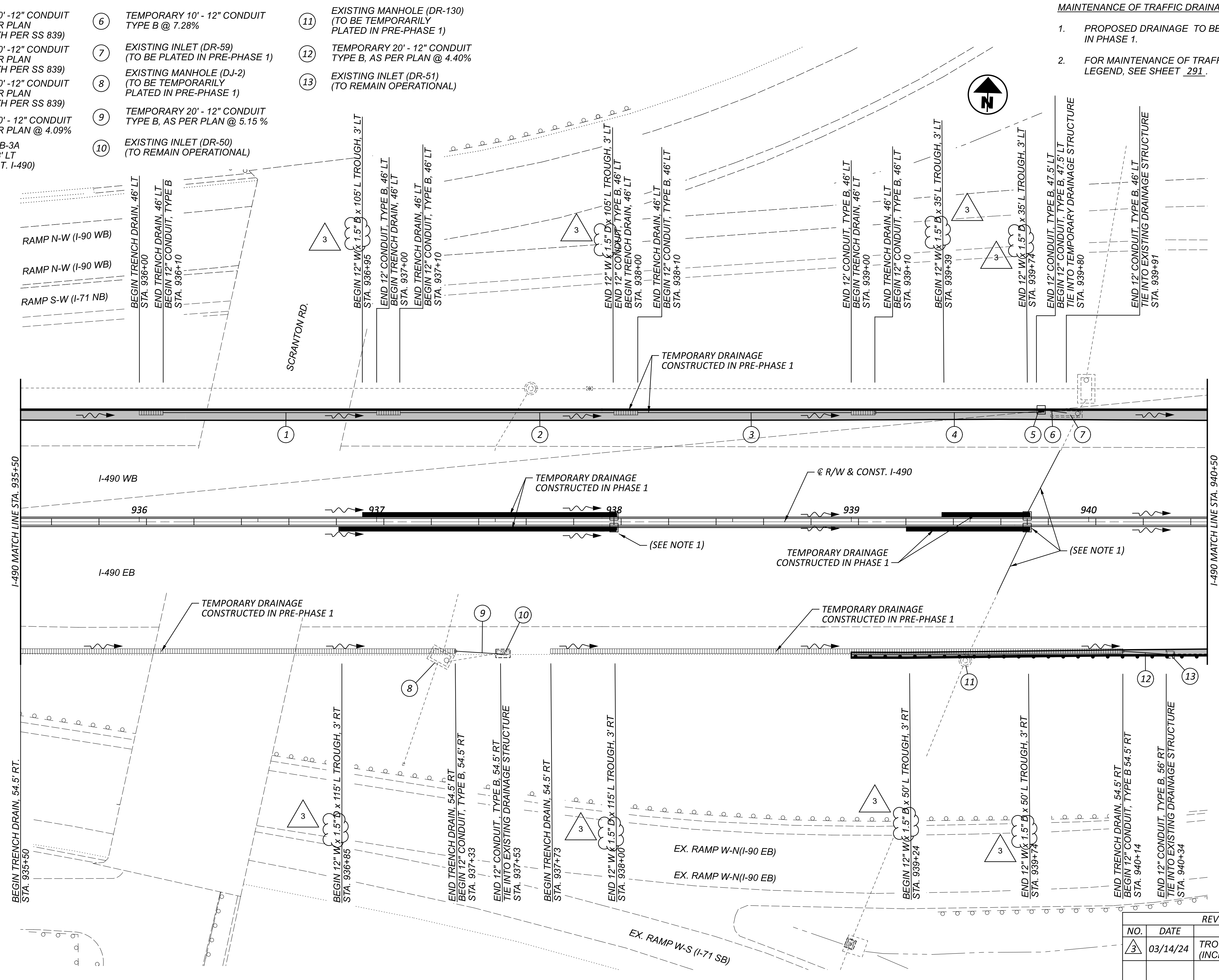
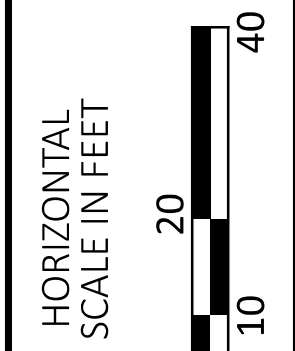
**CUY-490-0.00 PART 1**

MODEL: 107408\_MP104D\_PAPER SIZE: 34x42 (in.) DATE: 3/14/2024 TIME: 10:11:28 AM USER: kmonas  
 O:\Clients\ORD\2021\20210891\107408\400-Engineering\WOT\Sheets\107408\_MM1103.dgn

- ① TEMPORARY 90' - 12" CONDUIT TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ② TEMPORARY 90' - 12" CONDUIT TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ③ TEMPORARY 90' - 12" CONDUIT TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ④ TEMPORARY 70' - 12" CONDUIT TYPE B, AS PER PLAN @ 4.09%
- ⑤ TEMPORARY CB-3A STA. 939+80, 48' LT (℄ R/W & CONST. I-490)
- ⑥ TEMPORARY 10' - 12" CONDUIT TYPE B @ 7.28%
- ⑦ EXISTING INLET (DR-59) (TO BE PLATED IN PRE-PHASE 1)
- ⑧ EXISTING MANHOLE (DJ-2) (TO BE TEMPORARILY PLATED IN PRE-PHASE 1)
- ⑨ TEMPORARY 20' - 12" CONDUIT TYPE B, AS PER PLAN @ 5.15 %
- ⑩ EXISTING INLET (DR-50) (TO REMAIN OPERATIONAL)
- ⑪ EXISTING MANHOLE (DR-130) (TO BE TEMPORARILY PLATED IN PRE-PHASE 1)
- ⑫ TEMPORARY 20' - 12" CONDUIT TYPE B, AS PER PLAN @ 4.40%
- ⑬ EXISTING INLET (DR-51) (TO REMAIN OPERATIONAL)

**MAINTENANCE OF TRAFFIC DRAINAGE NOTES:**

- 1. PROPOSED DRAINAGE TO BE CONSTRUCTED IN PHASE 1.
- 2. FOR MAINTENANCE OF TRAFFIC DRAINAGE LEGEND, SEE SHEET 291.



**MAINTENANCE OF TRAFFIC - TEMPORARY DRAINAGE - PRE-PHASE 1 & PHASE 1**  
 I-490 - STA. 935+50 TO STA. 940+50

DESIGN AGENCY



DESIGNER  
**KRM**

REVIEWER  
 AKF 11-21-23

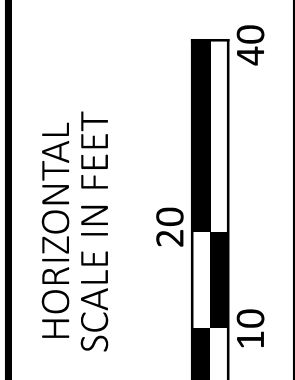
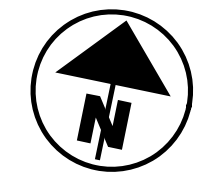
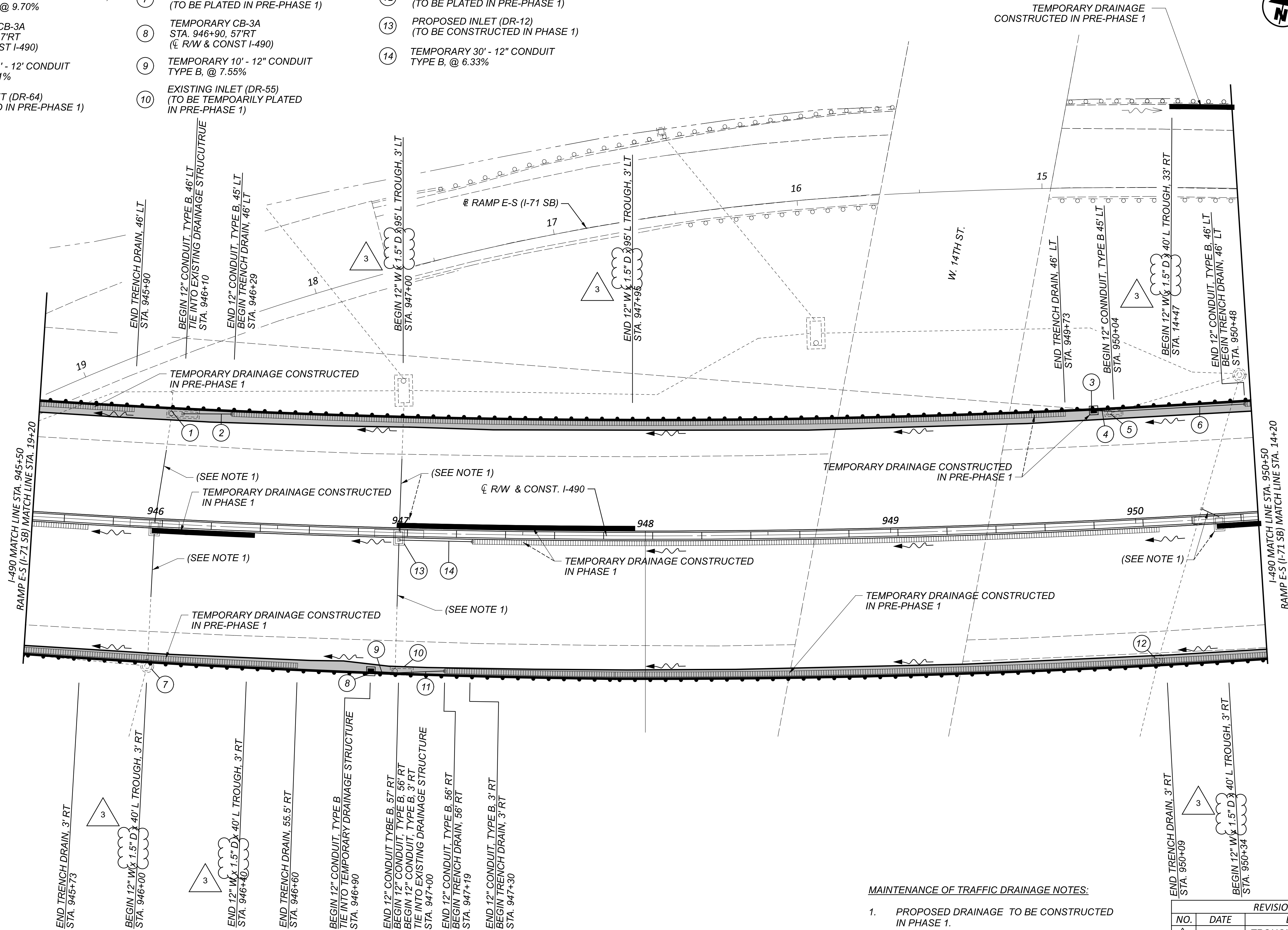
PROJECT ID  
 107408

SHEET TOTAL  
 292 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	TROUGH DEPTH UNITS (INCHES) ADDED



- ① EXISTING INLET (DR-63)  
(TO BE PLATED IN PRE-PHASE 1)
- ② TEMPORARY 20'-12 CONDUIT TYPE B,  
AS PER PLAN @ 9.70%
- ③ TEMPORARY CB-3A  
STA. 949+85, 47'RT  
( $\bar{C}$  R/W & CONST I-490)
- ④ TEMPORARY 8' - 12' CONDUIT  
TYPE B, @ 4.21%
- ⑤ EXISTING INLET (DR-64)  
(TO BE PLATED IN PRE-PHASE 1)
- ⑥ TEMPORARY 53' - 12" CONDUIT TYPE B,  
AS PER PLAN @ 4.37%
- ⑦ EXISTING MANHOLE (DR-133)  
(TO BE PLATED IN PRE-PHASE 1)
- ⑧ TEMPORARY CB-3A  
STA. 946+90, 57'RT  
( $\bar{C}$  R/W & CONST I-490)
- ⑨ TEMPORARY 10' - 12" CONDUIT  
TYPE B, @ 7.55%
- ⑩ EXISTING INLET (DR-55)  
(TO BE TEMPORARILY PLATED  
IN PRE-PHASE 1)
- ⑪ TEMPORARY 19' - 12" CONDUIT TYPE B,  
AS PER PLAN @ 10.84%
- ⑫ EXISTING MANHOLE (DR-136)  
(TO BE PLATED IN PRE-PHASE 1)
- ⑬ PROPOSED INLET (DR-12)  
(TO BE CONSTRUCTED IN PHASE 1)
- ⑭ TEMPORARY 30' - 12" CONDUIT  
TYPE B, @ 6.33%



MAINTENANCE OF TRAFFIC - TEMPORARY DRAINAGE - PRE-PHASE 1 & PHASE 1  
 I-490 - STA. 945+50 TO STA. 950+50

**MAINTENANCE OF TRAFFIC DRAINAGE NOTES:**

1. PROPOSED DRAINAGE TO BE CONSTRUCTED IN PHASE 1.
2. FOR MAINTENANCE OF TRAFFIC DRAINAGE LEGEND, SEE SHEET 291.

REVISIONS		DESIGNER	REVIEWER
NO.	DATE	DESCRIPTION	
3	03/14/24	TROUGH DEPTH UNITS (INCHES) ADDED	AKF 11-21-23
		PROJECT ID	107408
		SHEET TOTAL	294 1068

DESIGN AGENCY



DESIGNER

KRM

REVIEWER

AKF 11-21-23

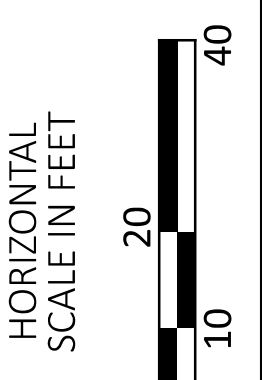
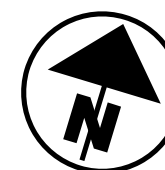
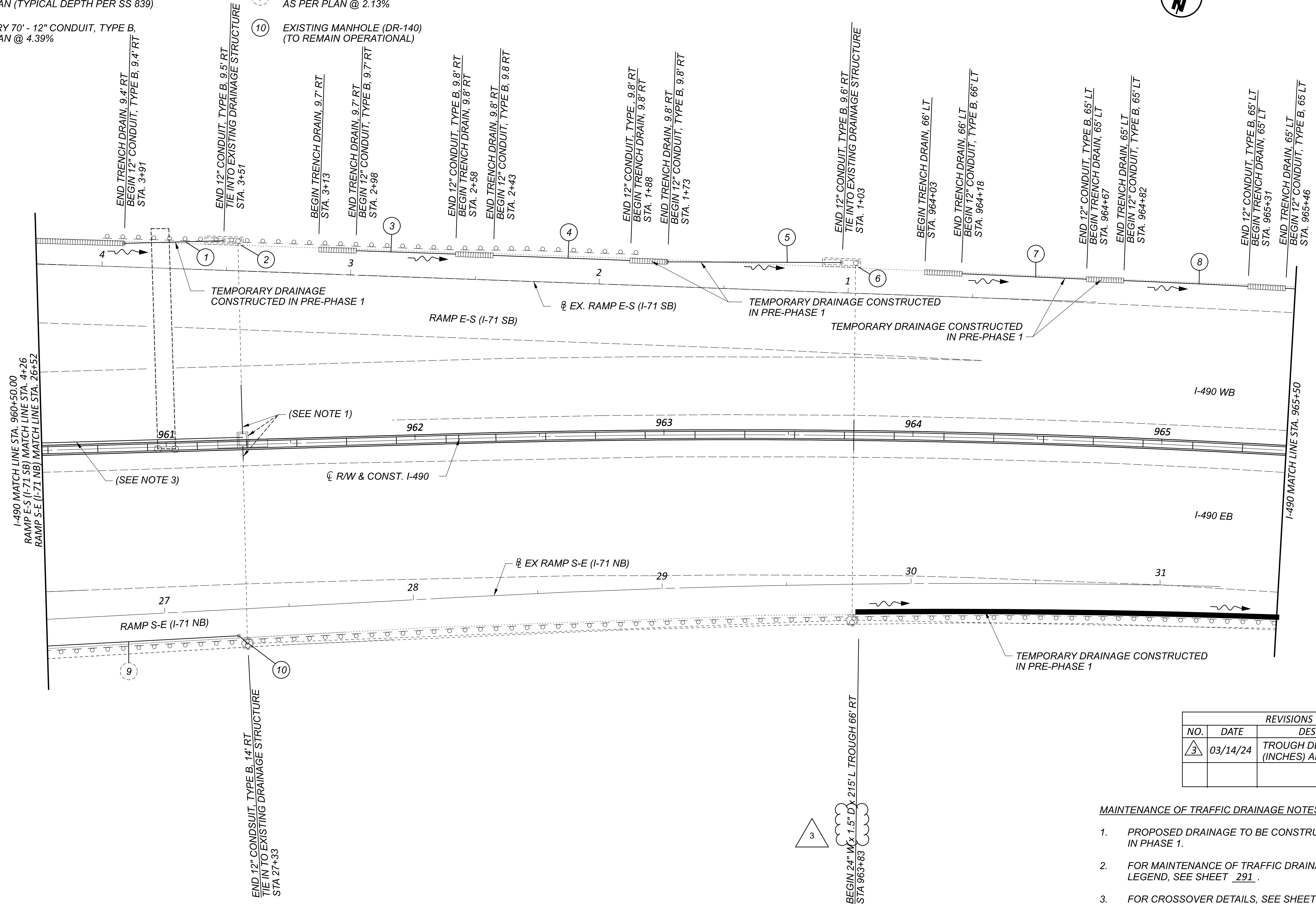
PROJECT ID

107408

SHEET TOTAL

294 1068

- ① TEMPORARY 40' - 12" CONDUIT, TYPE B, AS PER PLAN @ 5.85%
- ② EXISTING INLET (DR-73) (TO REMAIN OPERATIONAL)
- ③ TEMPORARY 40' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ④ TEMPORARY 55' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ⑤ TEMPORARY 70' - 12" CONDUIT, TYPE B, AS PER PLAN @ 4.39%
- ⑥ EXISTING INLET (DR-74) (TO REMAIN OPERATIONAL)
- ⑦ TEMPORARY 50' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ⑧ TEMPORARY 50' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)
- ⑨ TEMPORARY 201' - 12" CONDUIT, TYPE B, AS PER PLAN @ 2.13%
- ⑩ EXISTING MANHOLE (DR-140) (TO REMAIN OPERATIONAL)



**MAINTENANCE OF TRAFFIC - TEMPORARY DRAINAGE - PRE-PHASE 1 & PHASE 1**  
 I-490 - STA. 960+50 TO STA. 965+50

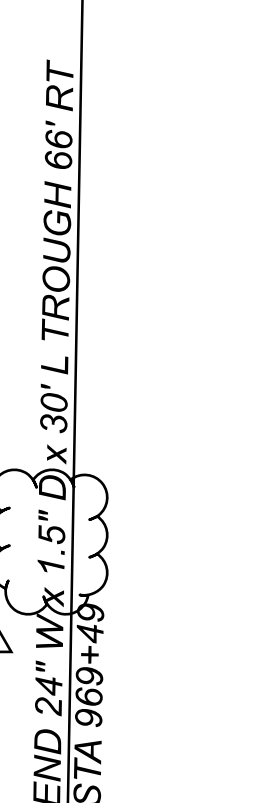
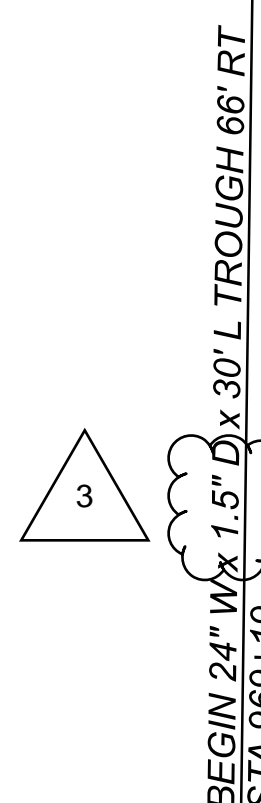
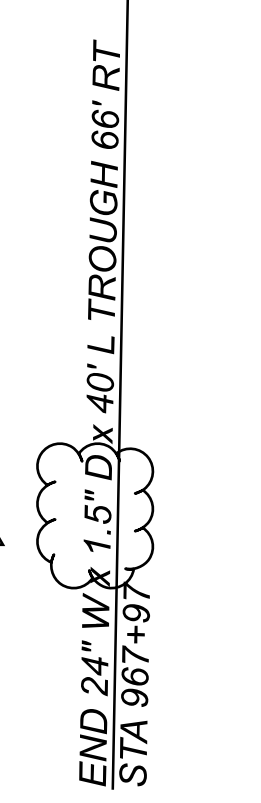
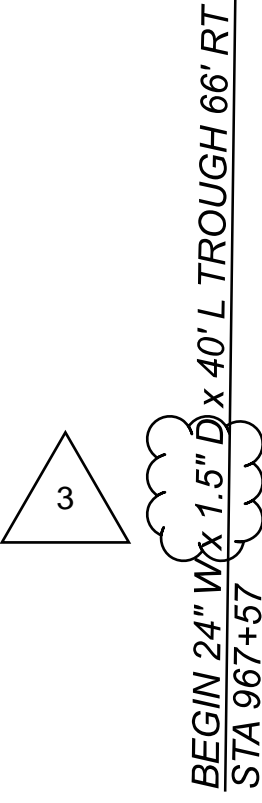
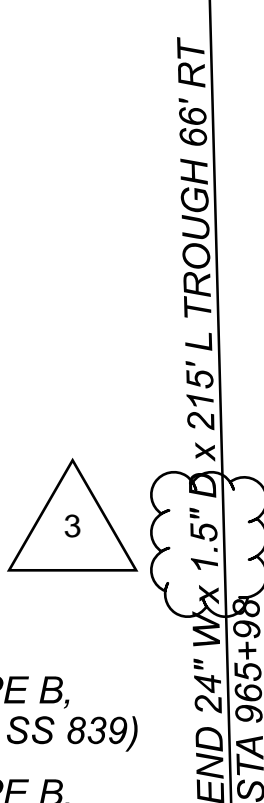
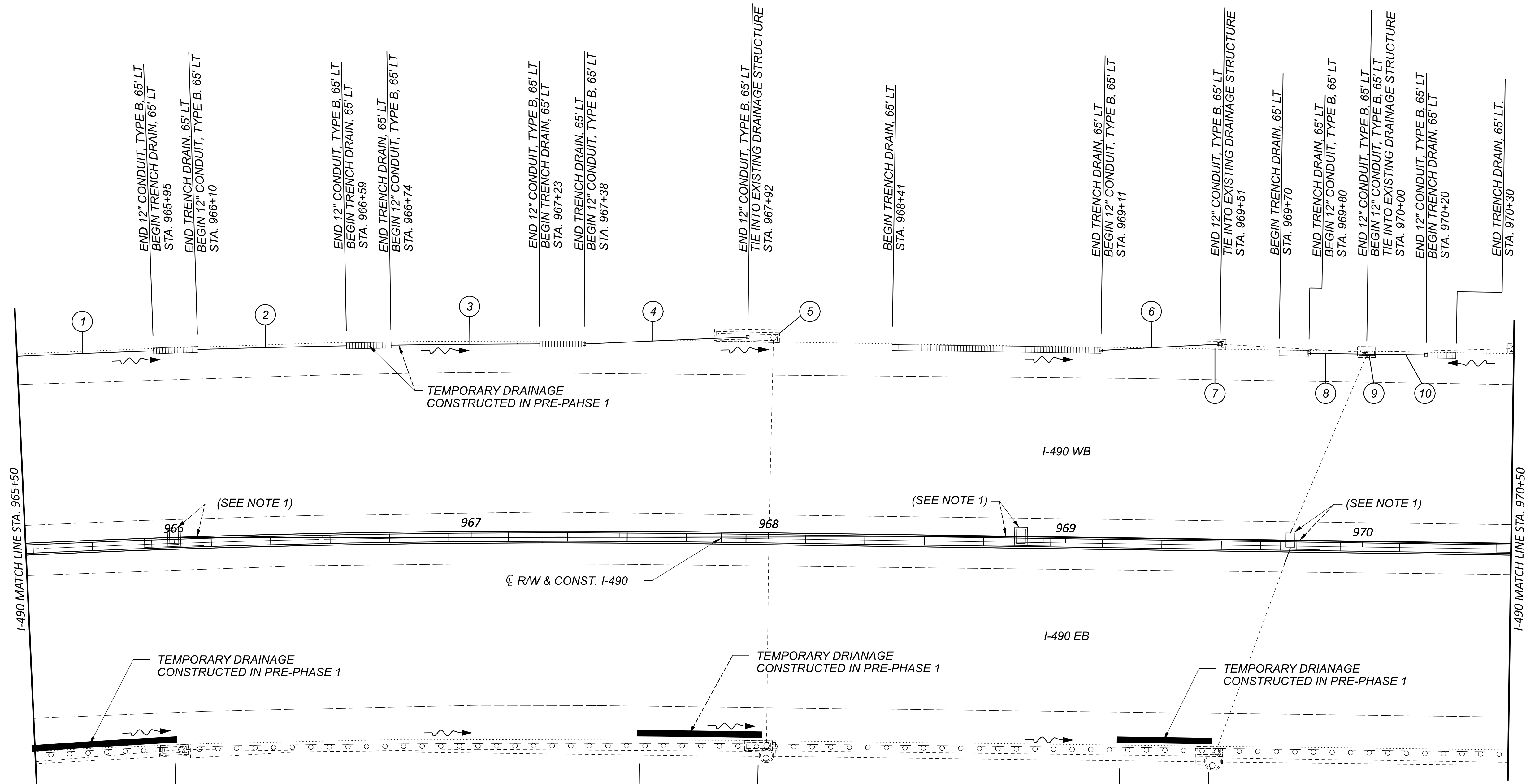
REVISIONS		
NO.	DATE	DESCRIPTION
③	03/14/24	TROUGH DEPTH UNITS (INCHES) ADDED

- MAINTENANCE OF TRAFFIC DRAINAGE NOTES:**
- PROPOSED DRAINAGE TO BE CONSTRUCTED IN PHASE 1.
  - FOR MAINTENANCE OF TRAFFIC DRAINAGE LEGEND, SEE SHEET 291.
  - FOR CROSSOVER DETAILS, SEE SHEETS 287 - 288.

DESIGN AGENCY	
DESIGNER	KRM
REVIEWER	AKF 11-21-23
PROJECT ID	107408
SHEET	297
TOTAL	1068

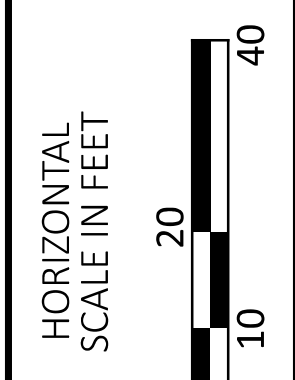
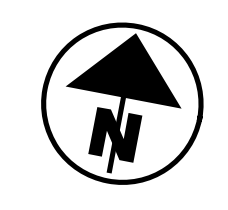


- |   |  |
|---|--|
| <p>① TEMPORARY 50' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)</p> <p>② TEMPORARY 50' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)</p> <p>③ TEMPORARY 50' - 12" CONDUIT, TYPE B, AS PER PLAN (TYPICAL DEPTH PER SS 839)</p> <p>④ TEMPORARY 55' - 12" CONDUIT, TYPE B, AS PER PLAN @ 6.43%</p> <p>⑤ EXISTING INLET (DR-200) (TO REMAIN OPERATIONAL)</p> | <p>⑥ TEMPORARY 40' - 12" CONDUIT, TYPE B, AS PER PLAN @ 5.48%</p> <p>⑦ EXISTING INLET (DR-83) (TO REMAIN OPERATIONAL)</p> <p>⑧ TEMPORARY 20' - 12" CONDUIT, TYPE B, AS PER PLAN @ 12.08%</p> <p>⑨ EXISTING INLET (DR-143) (TO REMAIN OPERATIONAL)</p> <p>⑩ TEMPORARY 20' - 12" CONDUIT, TYPE B, AS PER PLAN @ 12.22%</p> |
|---|--|



REVISIONS		
NO.	DATE	DESCRIPTION
3	03/14/24	TROUGH DEPTH UNITS (INCHES) ADDED

- MAINTENANCE OF TRAFFIC DRAINAGE NOTES:**
- PROPOSED DRAINAGE TO BE CONSTRUCTED IN PHASE 1.
  - FOR MAINTENANCE OF TRAFFIC DRAINAGE LEGEND, SEE SHEET 291.



**MAINTENANCE OF TRAFFIC - TEMPORARY DRAINAGE - PRE-PHASE 1 & PHASE 1**  
**I-490 - STA. 965+50 TO STA. 970+50**


DESIGN AGENCY	
DESIGNER	KRM
REVIEWER	AKF 11-21-23
PROJECT ID	107408
SHEET	TOTAL
298	1068



SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	59	457	459							01/IMS/04	EXT	TOTAL				
	LS									LS	201	11000	LS		CLEARING AND GRUBBING	50
		146,031								146,031	202	23000	146,031	SY	PAVEMENT REMOVED	51
		1,225								1,225	202	30000	1,225	SF	WALK REMOVED	
		8,796								8,796	202	30600	8,796	SY	CONCRETE MEDIAN REMOVED	
		140								140	202	30700	140	FT	CONCRETE BARRIER REMOVED	
		17,483								17,483	202	30800	17,483	3 SY	TRAFFIC ISLAND REMOVED	
		7,908								7,908	202	32000	7,908	FT	CURB REMOVED	
		257								257	202	35100	257	3 FT	PIPE REMOVED, 24" AND UNDER	
		13,152								13,152	202	35200	13,152	FT	PIPE REMOVED, OVER 24"	
		2								2	202	38000	2	FT	GUARDRAIL REMOVED	
										2	202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
		13								13	202	58000	13	EACH	MANHOLE REMOVED	
		28								28	202	58100	28	EACH	CATCH BASIN REMOVED	
		61								61	202	58200	61	EACH	INLET REMOVED	
					163					163	SPECIAL	20270110	163	FT	PIPE CLEANOUT, 24" AND UNDER	55
					798					798	SPECIAL	20270120	798	FT	PIPE CLEANOUT, 27" TO 48"	55
		10,034								10,034	202	75000	10,034	FT	FENCE REMOVED	
		70,616								70,616	203	10000	70,616	CY	EXCAVATION	
		2,931								2,931	203	20000	2,931	CY	EMBANKMENT	
			750							750	203	35120	750	CY	GRANULAR MATERIAL, TYPE C	
		322	205							527	204	10000	527	SY	SUBGRADE COMPACTION	51
		125								125	204	21000	125	CY	GRANULAR EMBANKMENT	51
		81								81	204	45000	81	HOUR	PROOF ROLLING	51
4,411		125								125	204	13000	125	CY	EXCAVATION OF SUBGRADE	51
145,861										4,411	206	10500	4,411	TON	CEMENT	
145,861										145,861	206	11000	145,861	SY	CURING COAT	
										145,861	206	15020	145,861	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
145										145	209	15001	145	STA	RESHAPING UNDER GUARDRAIL, AS PER PLAN	52
		12,078								12,078	606	15050	12,078	FT	GUARDRAIL, TYPE MGS	
		125								125	606	15150	125	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
		2								2	606	26050	2	EACH	ANCHOR ASSEMBLY, MGS TYPE B	52
		23								23	606	26150	23	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	52
		16								16	606	26550	16	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
		26								26	606	35002	26	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
		11								11	606	35102	11	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
		1								1	606	60050	1	EACH	IMPACT ATTENUATOR, TYPE 3 (BIDIRECTIONAL) (72" WIDTH)	52
		11,119								11,119	607	23000	11,119	FT	FENCE, TYPE CLT	
		11,119								11,119	607	70000	11,119	FT	FENCELINE SEEDING AND MULCHING	
		1,152								1,152	608	10000	1,152	SF	4" CONCRETE WALK	
		687								687	608	52000	687	SF	CURB RAMP	
720										720	622	10100	720	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
		640								640	622	10120	640	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
		31								31	622	10121	31	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	52
4,930										4,930	622	10140	4,930	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
										30	622	10141	30	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	52
		712								712	622	10160	712	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
		78								78	622	10161	78	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	52
		3								34	622	10200	34	EACH	BARRIER TRANSITION	
										3	622	24840	3	EACH	CONCRETE BARRIER END SECTION, TYPE B	
										1	622	24850	1	EACH	CONCRETE BARRIER END SECTION, TYPE B1	
		14								14	622	25000	14	EACH	CONCRETE BARRIER END SECTION, TYPE D	
		2								2	622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	52
										6	622	25006	6	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
										1	622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	53

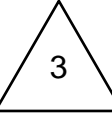
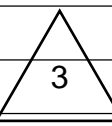
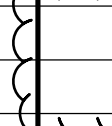
REVISIONS		
NO.	DATE	DESCRIPTION
2	02/29/24	UPDATED EARTHWORK QUANTITIES
3	03/18/24	EXCAVATION OF SUBGRADE QUANTITY ADDED. UPDATED QUANTITIES FOR PAVEMENT REMOVED; BARRIER REMOVED; CURB REMOVED; CONCRETE BARRIER, SINGLE SLOPE, TYPE C1; BARRIER TRANSITION; AND CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1.

GENERAL SUMMARY

DESIGN AGENCY  
  
 GPD GROUP  
 DESIGNER  
 JAN  
 REVIEWER  
 PJF 11-21-23  
 PROJECT ID  
 107408  
 SHEET TOTAL  
 452 1068



SHEET NUM.

OFFICE CALCS	59	457	458	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
 <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     61 8                 </div>				 <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     61 8 5                 </div>	622	25014	 <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">                     61 8 5                 </div>	EACH	<b>ROADWAY</b> CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	53
					622	25015		EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN	53
			5		622	25050		EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
			1		622	25051		EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	52
			5		622	90000		FT	BARRIER, MISC.: CONCRETE BARRIER, TYPE B50, AS PER PLAN	52
		30			623	38500		EACH	MONUMENT ASSEMBLY, TYPE C	
		LS			SPECIAL	69098400		LS	SURVEY CONTROL VERIFICATION	51
		LS			SPECIAL	69098400		LS	PERMITS	51
1,457				1,457	601	21000	1,457	SY	<b>EROSION CONTROL</b> CONCRETE SLOPE PROTECTION	
	8		18	26	601	21050	26	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
			20	20	601	21060	20	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
			169	169	601	37501	169	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	58
			562	562	601	38501	562	FT	PAVED GUTTER, TYPE 3, AS PER PLAN	58
	2			2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	7,419		1,476	8,895	659	00300	8,895	CY	TOPSOIL	
	3,490			3,490	659	00530	3,490	SY	SEEDING AND MULCHING, CLASS 3B	
	63,346			63,346	659	10000	63,346	SY	SEEDING AND MULCHING	
	3,342			3,342	659	14000	3,342	SY	REPAIR SEEDING AND MULCHING	
	3,342			3,342	659	15000	3,342	SY	INTER-SEEDING	
	9.33			9.33	659	20000	9.33	TON	COMMERCIAL FERTILIZER	
	13.81			13.81	659	31000	13.81	ACRE	LIME	
	370			370	659	35000	370	MGAL	WATER	
	150			150	659	40000	150	MSF	MOWING	
			10,282	10,282	670	00700	10,282	SY	DITCH EROSION PROTECTION	
			LS	LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
			LS	LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
			LS	LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
			375,000	375,000	832	30000	375,000	EACH	EROSION CONTROL	

GENERAL SUMMARY

REVISIONS		
NO.	DATE	DESCRIPTION
1	01/15/24	PERMITS QUANTITY ADDED
3	03/15/24	UPDATED CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1 AND CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN QUANTITIES

DESIGN AGENCY



DESIGNER  
JAN

REVIEWER  
PJF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
453 | 1068

SHEET NUMBER											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
											01/IMS/04		EXT.	TOTAL			SHEET
																<b>LIGHTING</b>	
																FOR LIGHTING GENERAL SUMMARY	1005
																<b>TRAFFIC SURVEILLANCE</b>	
																FOR TRAFFIC SURVEILLANCE GENERAL SUMMARY	948-949
																<b>TRAFFIC CONTROL</b>	
																FOR TRAFFIC CONTROL GENERAL SUMMARY	948-949
																<b>MAINTENANCE OF TRAFFIC</b>	
																FOR MAINTENANCE OF TRAFFIC GENERAL SUMMARY	66
																<b>INCIDENTALS</b>	
																DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION ADVISOR	
																CPM PROGRESS SCHEDULE	
																MAINTAINING TRAFFIC	
																FIELD OFFICE, TYPE C, AS PER PLAN	51
																CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	50
																MOBILIZATION	

GENERAL SUMMARY

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/13/24	UPDATED FIELD OFFICE QUANTITY

DESIGN AGENCY



DESIGNER: JAN  
 REVIEWER: PJF 11-21-23  
 PROJECT ID: 107408  
 SHEET TOTAL: 456 | 1068



MODEL: Plan 2 - Plan 2 [Sheet] PAPER SIZE: 34x22 (in.) DATE: 3/18/2024 TIME: 2:53:18 PM USER: NB/ve  
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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202	202	202	202								
						PAVEMENT REMOVED (ASPHALT) SY	PAVEMENT REMOVED (COMPOSITE) SY	PAVEMENT REMOVED (CONCRETE) SY	CONCRETE BARRIER REMOVED FT	CURB REMOVED FT								
I-490																		
933+23.03		934+21.48	RT	98.45	24.00	2362.80												
934+21.48		935+74.25	RT	152.77	30.00	4583.10		263										
935+74.25		954+26.19	RT	1851.94	36.00	66669.84		7408										
933+23.03		935+45.50	RT OUT	222.47	12.50	2780.88		309					222.47					
935+45.50		939+23.03	RT OUT	377.53	12.00	4530.36		504					377.53					
939+23.03		954+26.19	RT OUT	1503.16	10.00	15031.60		1671					1229.61					
933+23.03		936+18.00	RT IN	294.97	8.00	2359.76		263				294.97						
936+18.00		936+77.72	RT IN	59.72	8.00	477.76		54				59.72						
936+77.72		954+26.19	RT IN	1748.47	8.00	13987.76		1555				1748.47						
954+26.19		958+34.84	RT	408.65	36.00	14711.40				1635								
958+34.84		960+43.43	RT	208.59	51.00	10638.09				1183								
960+43.43		981+86.74	RT	2143.31	48.00	102878.88				11431								
981+86.74		985+65.60	RT	378.86	67.00	25383.62				2821								
954+26.19		958+34.84	RT OUT	408.65	10.50	4290.82				477								
958+34.84		965+37.71	RT OUT	702.87	17.50	12300.23				1367			702.87					
965+37.71		979+02.34	RT OUT	1364.63	12.00	16375.56				1820			1364.63					
981+86.28		985+65.60	RT OUT	379.32	7.50	2844.90				317			379.32					
954+26.19		985+65.60	RT IN	3139.41	8.00	25115.28				2791		3139.41						
1020+73.09		1022+51.23	RT	178.14	24.00	4275.36				476								
1022+51.23		1023+49.97	STATION EQUATION															
1023+49.97		1035+00.00	RT	1150.03	24.00	27600.72				3067								
1020+90.90		1023+67.61	RT OUT				4235.46			471								
1023+67.61		1035+00.00	RT OUT	1132.39	10.50	11890.10				1322								
1020+67.18		1022+51.23	RT IN	184.05	8.00	1472.40				164			184.05					
1022+51.23		1023+49.97	STATION EQUATION															
1023+49.97		1032+42.84	RT IN	892.87	8.00	7142.96				794			892.87					
1032+42.84		1035+00.00	RT IN	257.16	8.00	2057.28				229			257.16					
1035+00.00		1044+73.48	RT	973.48	24.00	23363.52				2596								
1035+00.00		1037+75.93	RT OUT	275.93	10.50	2897.26				322								
1037+75.93		1041+99.34	RT OUT	423.41	11.50	4869.22				542								
1041+99.34		1044+73.48	RT OUT	274.14	12.50	3426.75				381								
1035+00.00		1035+80.10	RT IN	80.10	8.50	680.85				76			80.10					
1035+80.10		1044+73.48	RT IN	893.38	8.50	7593.73				844			893.38					
933+23.03		955+12.65	LT	2189.62	24.00	52550.88				5839								
933+23.03		955+12.65	LT OUT	2189.62	11.50	25180.63				2798			2189.62					
933+23.03		936+85.11	LT IN	362.08	8.00	2896.64				322								
936+85.11		955+12.65	LT IN	1827.54	8.00	14620.32				1625								
955+12.65		964+26.71	LT	914.06	24.00	21937.44				2438								
964+26.71		985+65.28	LT	2138.57	47.50	101582.08				11287								
955+12.65		964+26.71	LT OUT				20773.28			2309								
964+26.71		985+65.28	LT OUT	2138.57	10.50	22454.98				2495			2095.01					
955+12.65		985+65.28	LT IN	3052.63	8.00	24421.04				2714								
1020+46.18		1022+51.23	LT	205.05	23.00	4716.06				525								
1022+51.23		1023+49.97	STATION EQUATION															
1023+49.97		1026+97.96	LT	347.99	23.00	8003.77				890								
1020+61.30		1022+51.23	LT IN	189.93	8.00	1519.45				169								
1022+51.23		1023+49.97	STATION EQUATION															
1023+49.97		1031+15.02	LT IN	765.05	8.00	6120.40				681								
MAINLINE MEDIAN/SHOULDER PAVEMENT VARIABILITY							727.45			81								
<b>TOTALS CARRIED TO SUBSUMMARY SHEET</b>							<b>457</b>			<b>81836</b>			<b>7551</b>	<b>8562</b>				

PAVEMENT REMOVAL CALCULATIONS

DESIGN AGENCY



DESIGNER  
JAN

REVIEWER  
PJF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
489 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED PAVEMENT REMOVED, BARRIER REMOVED, & CURB REMOVED QUANTITIES UPDATED STATION LIMITS.



MODEL: Plan 2 - Plan 2 (Sheet) PAPER SIZE: 34x22 (in.) DATE: 3/18/2024 TIME: 2:54:50 PM USER: NB/ve  
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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202	202	202	202	202	202
						PAVEMENT REMOVED (ASPHALT) SY	PAVEMENT REMOVED (COMPOSITE) SY	PAVEMENT REMOVED (CONCRETE) SY	CONCRETE BARRIER REMOVED FT	CURB REMOVED FT	CONCRETE MEDIAN REMOVED SY	
I-490 CONTD.												
1020+23.86		1020+99.67			2117.40			236				
1020+99.67		1022+51.23	151.56	22.00	3334.32			371				
1022+51.23		1023+49.97	STATION EQUATION									
1023+49.97	LT OUT	1028+05.28	455.31	22.00	10016.82			1113				
1026+97.96	LT	1035+00.00	802.04	29.00	23259.16			2585				
1028+05.28	LT OUT	1035+00.00	694.72	16.50	11462.88			1274				
1031+15.02	LT IN	1035+00.00	384.98	8.00	3079.84			343				
1035+00.00	LT	1044+73.48	973.48	35.00	34071.80			3786				
1035+00.00	LT OUT	1044+73.48	973.48	10.00	9734.80			1082	212.86			
1035+00.00	LT IN	1036+13.40	113.40	8.00	907.20			101				
1036+13.40	LT IN	1041+69.13	555.73	8.00	4445.84			494				
1041+69.13	LT IN	1044+73.48	304.35	8.00	2434.80			271				
EXISTING OC-3												
109+00.07	RT	115+13.32	613.25	24.00	14718.00		1636					
109+00.07	RT OUT	112+95.82	395.75	7.50	2968.13		330			534.27		
109+00.07	RT IN	110+87.52	187.45			1067.26	119		29.94	716.29	8.18	
109+00.07	LT	114+02.52	502.45	32.00	16078.40		1787			307.64		
109+00.07	LT IN	111+00.00	199.93			850.36	95			87.17		
109+00.07	LT OUT	112+48.68	348.61	10.00	3486.10		388			54.05		
112+48.68	LT OUT	113+09.64	60.96	5.00	304.80		34			61.75		
113+09.64	LT OUT	114+89.39	179.75			38.30	5			179.75		
EXISTING RAMP E-S (I-71)												
00+45.45	LT	09+68.78	923.33	24.00	22159.92			2463				
00+45.45	RT OUT	09+68.78	923.33	10.50	9694.97			1078		923.33		
09+68.78	LT RT	15+69.59	600.81	24.00	14419.44			1603				
09+68.78	LT IN	17+42.56	773.78	4.00	3095.12			344		683.69		
09+68.78	RT OUT	17+42.56	773.78	8.00	6190.24			688		773.78		
15+69.59	RT	17+42.56	172.97	24.00	4151.28			462				
22+35.83	LT RT	23+42.01	106.18	34.00	3610.12			402				
23+42.01	RT	27+69.36	427.35	24.00	10256.40			1140				
23+42.01	LT IN	27+69.36	427.35	4.50	1923.08			214				
23+42.01	RT OUT	27+69.36	427.35	10.00	4273.50			475				
EXISTING RAMP S-E (I-71)												
15+04.51	LT	19+86.78	482.27	12.00	5787.24			644				
15+04.51	LT OUT	20+29.24	524.73	5.00	2623.65			292				
15+04.51	LT RT	19+86.78	482.27	22.00	10609.94			1179		482.27		
19+86.78	LT RT	20+29.24	42.46	22.00	934.12			104		42.46		
19+86.78	LT	20+29.24	42.46	12.00	509.52			57				
20+29.24	LT	24+37.63	408.39	12.00	4900.68			545				
20+29.24	LT RT	24+37.63	408.39	22.00	8984.58			999		408.39		
EXISTING RAMP 7-C												
67+67.20	LT/RT	68+21.44			808.20			90		28.11		
68+21.44	LT/RT	69+20.78	99.34	18.50	1837.79			205		204.34		
69+20.78	LT	75+69.24	648.46	16.00	10375.36			1153				
75+35.43	LT	75+69.24			572.72			64				
69+20.79	LT IN	74+27.92	507.13	4.00	2028.52			226				
74+27.92	LT IN	75+69.46			1219.52			136				
69+21.32	RT OUT	75+69.46	648.14	6.00	3888.84			433				
75+69.46	LT	78+48.36	278.90	23.00	6414.70			713				
75+69.46	RT OUT	78+48.36	278.90	6.50	1812.85			202				
75+35.43	LT IN	77+03.52	168.09	4.00	672.36			75				
77+03.52	LT IN	78+99.92	196.40	2.50	491.00			55				
TOTALS CARRIED TO SUBSUMMARY SHEET						457	32091		30	5701		9

PAVEMENT REMOVAL CALCULATIONS

DESIGN AGENCY



DESIGNER  
JAN

REVIEWER  
PJF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
490 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED PAVEMENT REMOVED, BARRIER REMOVED, & CURB REMOVED QUANTITIES UPDATED STATION LIMITS.

STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202	202			202	202	202						
						PAVEMENT REMOVED (ASPHALT) SY	PAVEMENT REMOVED (COMPOSITE) SY	PAVEMENT REMOVED (CONCRETE) SY			CURB REMOVED FT	WALK REMOVED SF	TRAFFIC ISLAND REMOVED SY						
EXISTING RAMP 7-C																			
78+48.36		81+28.77	LT	280.41	15.50	4346.36							483						
78+48.36		81+86.31	RT OUT	337.95	7.50	2534.63							282	281.59					
78+99.92		81+28.77	LT IN				4116.24						458						
EXISTING RAMP 7-7C																			
67+99.06		68+72.62	LT RT				3414.26						380	158.97					
68+72.62		69+75.53	RT	102.91	15.75	1620.83							181						
68+72.62		69+36.45	RT OUT	63.83	4.00	255.32							29						
68+50.00		69+75.53	LT IN	125.53	3.00	376.59							42						
69+36.45		70+68.45	RT OUT	132.00	10.00	1320.00							147						
69+75.53		75+35.43	RT	559.90	15.00	8398.50							934						
69+75.53		75+69.46	LT IN	593.93	3.50	2078.76							231						
70+68.45		74+09.46	RT OUT	341.01	7.50	2557.58							285						
EXISTING RAMP C-7																			
81+96.55		83+06.17	LT RT				4982.82						554	201.26	145.48				
83+06.17		85+61.97	LT RT	255.80	25.50	6522.81							725						
83+06.17		85+64.23	RT IN	258.06	7.00	1806.43							201						
83+06.17		85+60.27	LT OUT	254.10	8.00	2032.78							226	254.10					
EXISTING RAMP B-C																			
14+94.44		17+21.94	RT	227.50	15.00	3412.48							380						
14+93.83		17+21.94	RT IN	228.11	5.00	1140.54							127						
14+96.54		16+83.52	LT OUT	186.98	7.50	1402.32							156	186.98					
16+83.52		17+21.94	LT OUT	38.42	4.00	153.68							18	38.42					
17+21.94		18+18.79	LT RT				4231.17						471	200.10	651.35				
EXISTING RAMP C-B																			
14+51.44		15+34.60	LT RT	83.16	31.00	2577.99							287	132.65					
15+34.60		17+97.46	LT RT				9191.88						882	371.21	427.34	139.55			
EXISTING RAMP E-N (I-77)																			
06+30.50		09+77.57	LT OUT				99.29	12						348.52					
09+77.57		10+39.00	LT OUT	61.43	4.01	246.08		28						22.00					
10+39.00		12+94.04	LT	255.04	24.00	6120.96							681						
10+39.00		22+93.00	RT IN	1254.00	10.00	12540.00							1394	25.00					
10+39.00		12+94.04	LT OUT	255.04	4.75	1211.44							135						
12+94.04		16+86.03	LT	391.99	14.00	5487.86							610						
16+86.03		18+18.83	LT OUT				1596.79						178						
16+86.03		22+93.00	LT	606.97	15.25	9256.29							1029						
18+18.83		22+92.52	LT OUT	473.69	4.00	1894.76							211						
EXISTING RAMP E-S (I-77)																			
0+00.00		01+83.71	RT	183.71	12.00	2204.52							245						
1+83.71		03+93.52	RT	209.81	14.00	2937.34							327						
5+22.41		07+59.30	RT OUT	236.89	14.00	3316.46							369						
7+59.30		08+43.42	RT OUT	84.12	12.00	1009.44							113	25.00					
3+93.52		08+11.73	RT	418.21	16.00	6691.36							744						
0+00.00		07+67.83	LT IN	767.83	6.50	4990.90							555	50.00					
EXISTING RAMP N-E (I-77)																			
13+58.51		21+21.96	RT	763.45	15.50	11833.48							1315						
13+58.49		13+97.76	RT OUT	39.27	7.25	284.71							32	91.16					
13+58.56		21+21.96	LT IN	763.40	5.25	4007.85							446	25.00					
13+97.76		18+48.75	RT OUT	450.99	10.00	4509.9							502						
21+21.96		23+09.58	RT	187.62	15.25	2861.21							318						
21+21.96		22+18.36	LT IN	96.40	2.00	192.80							22	93.61					
18+48.75		21+21.96	RT OUT				4106.55						457						
21+21.96		22+55.38	RT OUT				638.28	71											
TOTALS CARRIED TO SUBSUMMARY SHEET						457		17274						2506	1225	140			

PAVEMENT REMOVAL CALCULATIONS

DESIGN AGENCY



DESIGNER  
JAN

REVIEWER  
PJF 11-21-23

PROJECT ID  
107408

SHEET TOTAL  
491 1068

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED PAVEMENT REMOVED, & BARRIER REMOVED QUANTITIES. UPDATED STATION LIMITS.

MODEL: Plan 2 - Plan 2 (Sheet) PAPER SIZE: 34x22 (in.) DATE: 3/18/2024 TIME: 4:22:43 PM USER: pjt  
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STATION TO STATION	SIDE	LENGTH	AVERAGE WIDTH W	SURFACE AREA A A=LxW	CADD AREAS	202	202	202												
						PAVEMENT REMOVED (ASPHALT) SY	PAVEMENT REMOVED (COMPOSITE) SY	PAVEMENT REMOVED (CONCRETE) SY												
<b>EXISTING RAMP N-W (I-77)</b>																				
09+06.96		10+24.73	LT	117.77	16.00	1884.32														210
09+06.95		10+24.73	LT IN	117.78	4.00	471.12														53
09+06.95		10+24.73	RT OUT	117.78	10.50	1236.69														138
10+24.73		12+72.47	LT	247.74	16.00	3963.84														441
10+24.73		13+50.00	LT IN	325.27	4.00	1301.08														145
10+24.73		12+72.47	RT OUT	247.74	10.00	2477.4														276
12+72.47		14+62.33	LT	189.86	16.00	3037.76														338
12+72.47		14+62.33	RT OUT	189.86	12.00	2278.32														254
13+49.90		14+62.33	LT IN				999.59													112
14+62.33		15+16.33	LT	54.00	14.00	756.00														84
16+07.86		17+87.97	LT IN	180.11	4.00	720.44														81
17+87.97		17+88.00	STATION EQUATION																	
17+88.00		19+43.94	LT IN	155.94	4.50	701.73														
14+62.33		16+67.78	RT OUT	205.45	14.00	2876.30														320
15+16.33		16+07.91	LT	91.58	12.00	1098.96														123
16+07.91		17+87.91	LT	180.00	23.00	4140.00														460
17+87.91		17+88.00	STATION EQUATION																	
17+88.00		20+32.32	LT	244.32	23.00	5619.47														625
16+67.78		17+87.91	RT OUT	120.13	14.00	1681.82														187
17+87.91		17+88.00	STATION EQUATION																	
17+88.00		20+41.22	RT OUT	253.22	13.00	3291.86														366
<b>EXISTING RAMP S-E (I-77)</b>																				
10+88.20		17+91.16	LT	702.96	19.00	13356.24														1485
10+88.20		17+34.84	LT OUT	646.64	10.00	6466.40														719
10+88.20		20+00.86	RT IN	912.66	10.00	9126.60														1015
17+91.16		20+00.86	LT	209.70	18.00	3774.60														420
20+00.86		21+89.38	LT	188.52	16.50	3110.58														346
20+00.86		21+89.38	RT IN	188.52	6.50	1225.38														137
<b>EXISTING RAMP S-W (I-77)</b>																				
15+21.67		20+99.76	RT	578.09	14.25	8237.78														916
15+21.67		18+48.65	RT OUT	326.98	9.00	2942.82														327
15+21.67		20+99.76	LT IN	578.09	6.25	3613.06														402
<b>EXISTING RAMP W-N (I-77)</b>																				
00+24.23		04+10.53	RT	386.30	13.50	5215.05														580
00+24.23		04+10.53	LT IN	386.30	4.00	1545.20														172
01+10.65		03+00.60	RT OUT				1635.72													182
03+00.60		04+09.87	RT OUT	109.27	10.50	1147.34														128
04+10.53		06+45.66	LT RT	235.13	36.00	8464.68														941
<b>EXISTING RAMP W-S (I-77)</b>																				
03+22.34		07+45.50	LT	423.16	24.00	10155.89														1129
03+43.61		04+44.92	RT IN	101.31	11.00	1114.37														124
04+44.92		11+07.20	RT IN	662.28	10.00	6622.80														736
04+89.67		07+45.47	LT OUT	255.80	4.50	1151.10														128
07+45.50		11+07.20	LT	361.70	14.00	5063.80														563
10+19.05		11+07.30	LT OUT	88.25	12.00	1059.00														118
<b>W. 7TH STREET</b>																				
12+10.03		12+88.17	LT	78.14	4.00	312.56														35
12+88.17		14+10.60	LT	122.43	1.00	122.43														14
<b>TOTALS CARRIED TO SUBSUMMARY SHEET</b>						<b>457</b>	<b>14830</b>													<b>714</b>

PAVEMENT REMOVAL CALCULATIONS

REVISIONS		
NO.	DATE	DESCRIPTION
3	03/18/24	UPDATED PAVEMENT REMOVED, & BARRIER REMOVED QUANTITIES. UPDATED STATION LIMITS.

DESIGN AGENCY  
  
 GPD GROUP  
 Designer: JAN  
 Reviewer: PJF 11-21-23  
 Project ID: 107408  
 Sheet: 492 of 1068





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**ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:**

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING STRUCTURAL STEEL PLATES FOR MISCELLANEOUS GIRDER WEB, FLANGE, AND/OR STRINGER REPAIRS AS DIRECTED BY THE ENGINEER AND THE NEW END CROSSFRAMES.

MATERIALS: STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50. FURNISH MATERIALS IN CONFORMANCE WITH C&M 513.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE END CROSSFRAMES AND LOOSE OR MISSING BOLT REPLACEMENT. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

**ITEM 513 - STRUCTURAL STEEL, MISC.: INSPECTION SAFETY CABLE SYSTEM REPAIR:**

DESCRIPTION: THIS WORK CONSISTS OF REPAIRING THE EXISTING INSPECTION SAFETY CABLE SYSTEM IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS.

MATERIALS: SAFETY CABLE SHALL BE 5/8" DIAMETER, 6 X 19 ZINC COATED WIRE ROPE WITH AN INDEPENDENT WIRE ROPE CORE. THE CABLE SHALL MEET THE REQUIREMENTS OF ASTM A603 AND SHALL HAVE A MINIMUM BREAKING STRENGTH OF 40,000 LBS. FURNISH MATERIALS IN CONFORMANCE WITH C&M 513.

ANTICIPATED REPAIR QUANTITIES: BASED ON A VISUAL INSPECTION PERFORMED IN AUGUST 2018, THIS WORK INCLUDES THE INSTALLATION OF APPROXIMATELY 31 FEET OF NEW SAFETY CABLE TO REPLACE MISSING OR DAMAGED SAFETY CABLE AND REATTACHMENT OF THE EXISTING SAFETY CABLE TO THE ORIGINAL ATTACHMENT POINTS AT TWO (2) LOCATIONS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE REPAIR OF THE EXISTING INSPECTION SAFETY CABLE SYSTEM. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 513 - STRUCTURAL STEEL, MISC.: INSPECTION SAFETY CABLE SYSTEM REPAIR.

**ITEM 513 - STRUCTURAL STEEL, MISC.: FINGER JOINT EXPANSION PLATE REPAIR: & ITEM 513 - STRUCTURAL STEEL, MISC.: FINGER JOINT SINGLE FINGER REPAIR:**

DESCRIPTION: THIS WORK CONSISTS OF REPAIRING DAMAGED AREAS OF THE EXISTING STRUCTURAL STEEL FINGER JOINT ARMOR IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS.

MATERIALS: STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50. FURNISH MATERIALS IN CONFORMANCE WITH C&M 513.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF EACH ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE FINGER JOINT REPAIRS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICES BID FOR ITEM 513 - STRUCTURAL STEEL, MISC.: FINGER JOINT EXPANSION PLATE REPAIR AND ITEM 513 - STRUCTURAL STEEL, MISC.: FINGER JOINT SINGLE FINGER REPAIR.

**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACE LOOSE OR MISSING BOLT:**

DESCRIPTION: THIS WORK CONSISTS OF REPLACING LOOSE AND MISSING BOLTS WITH NEW 1" DIAMETER HIGH STRENGTH BOLTS AT THE LOCATIONS SHOWN IN THE PLANS.

MATERIALS: FURNISH MATERIALS IN CONFORMANCE WITH C&M 513.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF EACH ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE LOOSE OR MISSING BOLT REPLACEMENT. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACE LOOSE OR MISSING BOLT.

**ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT & ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT:**

FIELD PAINTING OF STRUCTURAL STEEL SHALL BE LIMITED TO THE PROPOSED STRUCTURAL STEEL INSTALLED AS PART OF THIS PROJECT AND TO THE FOLLOWING AREAS OF THE EXISTING BEAMS AND GIRDERS, AS SHOWN IN THE PLANS:

1. ABUTMENTS: ALL EXISTING STEEL SURFACES, INCLUDING EXISTING CROSSFRAMES AND BEARINGS, FOR A DISTANCE OF TEN (10) FEET FROM THE ENDS OF THE BEAMS OR GIRDERS, AS MEASURED ALONG THE BEAMS OR GIRDERS.
2. EXPANSION JOINTS 1 THRU 6: ALL EXISTING STEEL SURFACES, INCLUDING EXISTING CROSSFRAMES, FOR A DISTANCE OF TEN (10) FEET IN BOTH DIRECTIONS (E.G., TWENTY (20) FEET IN TOTAL) FROM THE CENTERLINE OF THE ROLLER, AS MEASURED ALONG THE BEAMS OR GIRDERS.

THE COLOR OF THE FINISH COAT SHALL MATCH THE EXISTING PAINT COLOR.

**ITEM 516 - RESET BEARING, AS PER PLAN:**

DESCRIPTION: THIS WORK CONSISTS OF REMOVING AND RESETTING THE FLOATING BEARINGS OF BEAMS D, M, AND N AT THE WEST ABUTMENT, INCLUDING INSTALLATION OF A NEW STRUCTURAL STEEL SHIM PLATE AND NEW SHEET LEAD, IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS.

MATERIALS: STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50. FURNISH MATERIALS IN CONFORMANCE WITH C&M 513 AND C&M 516.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF EACH ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE RESET OF THE BEARING. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 516 - RESET BEARING, AS PER PLAN.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:**

DESCRIPTION: THIS WORK CONSISTS OF RAISING AND TEMPORARILY SUPPORTING EXISTING STEEL BEAMS AT THE WEST ABUTMENT FOR THE PURPOSE OF RESETTING EXISTING BEARINGS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&M 501.05.

EXECUTION: IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL BEAMS OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&M 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 1 - 5:**

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING GALVANIZED STEEL DRAINAGE TROUGHS BELOW EXPANSION JOINTS 1 THRU 5 IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS.

MATERIALS: STRUCTURAL STEEL FOR DRAINAGE TROUGHS, TROUGH SUPPORTS, AND FLASHING BACKER PLATES SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH C&M 711.02. STEEL PIPE FOR DRAINAGE TROUGH OUTLETS SHALL BE ASTM A139 / A139M, GRADE B OR ASTM A53, GRADE B, 8" OR 10" DIAMETER STANDARD WEIGHT PIPE, GALVANIZED ON EXTERIOR AND INTERIOR SURFACES IN ACCORDANCE WITH C&M 711.02. NEOPRENE SHEETING FOR FLASHING SHALL BE 3/32" NOMINAL THICKNESS IN ACCORDANCE WITH C&M 705.13. FURNISH MATERIALS IN CONFORMANCE WITH C&M 518.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 1 - 5: (CON'T)**

EXECUTION: FABRICATE ALL COMPONENTS IN CONFORMANCE WITH C&M 518. PRIOR TO PREPARING SHOP DRAWINGS, OBTAIN FIELD MEASUREMENTS TO VERIFY AS-BUILT GIRDER AND STRINGER SPACINGS, CLEARANCE BETWEEN GIRDER ENDS, AND OTHER DIMENSIONS AS NEEDED TO ENSURE FIT-UP. ALL SHOP JOINTS AND FIELD JOINTS IN DRAINAGE TROUGHS SHALL BE WELDED AND WATERTIGHT.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF FEET ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 518 - STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 1-5.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: 10" GALVANIZED STEEL PIPE, INCLUDING SPECIALS:**

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING GALVANIZED STEEL COLLECTOR PIPES AND DOWNSPOUT PIPES FOR THE PROPOSED DRAINAGE TROUGHS AND THE EXISTING SCUPPERS. THIS WORK ALSO INCLUDES FURNISHING AND INSTALLING RETROFIT CLEANOUTS WHERE THE EXISTING DRAINAGE TROUGH COLLECTOR PIPES ARE CUT OFF AND REMOVED FROM EXISTING SCUPPER DOWNSPOUT PIPES TO REMAIN.

MATERIALS: STRUCTURAL STEEL FOR HOPPERS, CLEANOUTS, AND DOWNSPOUT SUPPORTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH C&M 711.02. STEEL PIPE FOR COLLECTORS AND DOWNSPOUTS SHALL BE ASTM A139 / A139M, GRADE B OR ASTM A53, GRADE B, 10" DIAMETER STANDARD WEIGHT PIPE, GALVANIZED ON EXTERIOR AND INTERIOR SURFACES IN ACCORDANCE WITH C&M 711.02. U-BOLTS, BEAM CLAMPS, THREADED EYE BOLTS, CLEVIS HANGERS, AND OTHER MISCELLANEOUS HARDWARE FURNISHED FOR PIPE SUPPORTS SHALL BE GALVANIZED BY THE MANUFACTURER. FURNISH MATERIALS IN CONFORMANCE WITH C&M 518.

EXECUTION: FABRICATE ALL COMPONENTS IN CONFORMANCE WITH C&M 518. PRIOR TO PREPARING SHOP DRAWINGS, OBTAIN FIELD MEASUREMENTS TO VERIFY AS-BUILT DIMENSIONS AS NEEDED TO ENSURE FIT-UP BETWEEN THE PROPOSED WORK AND PORTIONS OF EXISTING SCUPPER DOWNSPOUTS TO REMAIN. ALL SHOP JOINTS AND

FIELD JOINTS IN COLLECTORS AND DOWNSPOUTS SHALL BE WELDED AND WATERTIGHT. SUBMIT MANUFACTURER'S PRODUCT INFORMATION FOR BEAM CLAMPS AND CLEVIS HANGERS WITH SHOP DRAWINGS FOR REVIEW AND APPROVAL.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF FEET ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 518 - STRUCTURE DRAINAGE, MISC.: 10" GALVANIZED STEEL PIPE, INCLUDING SPECIALS.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER CLEANOUT:**

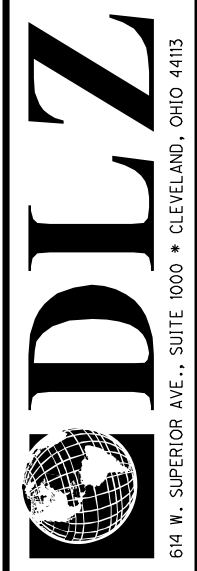
DESCRIPTION: THIS WORK CONSISTS OF REMOVING DIRT AND DEBRIS FROM THE EXISTING DECK SCUPPERS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER C&M 105.16 AND 105.17. ALL SCUPPERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

EXECUTION: REMOVE ACCUMULATED DIRT AND DEBRIS FROM SCUPPERS BY METHODS THAT DO NOT FLUSH THE MATERIALS INTO THE DOWNSPOUTS. REMOVE AND REINSTALL THE EXISTING BOLTED SCUPPER GRATES AS REQUIRED TO COMPLETE THE WORK. CLEANOUT OF THE SCUPPERS ADJACENT TO JOINTS 1 THRU 6 SHALL BE PERFORMED BEFORE STARTING WORK ON THE DRAINAGE TROUGHS. ALL SCUPPERS SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE COMPLETION OF THE PROJECT. INCLUDE THE COST OF ANY FOLLOW-UP CLEANING REQUIRED TO SATISFY THIS REQUIREMENT IN THE UNIT COST BID.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF EACH ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE SCUPPER CLEANOUT. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICES BID FOR ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER CLEANOUT.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER GRATE REPLACEMENT:**

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING A NEW GRATE FOR A "TYPE 1 SCUPPER" IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS ON SHEET 98/120.



DESIGNED	DRAWN	REVIEWED	DATE
PAT/VS	PAT/VS	MJL	08/05/20
CHECKED	REVISED	STRUCTURE FILE NUMBER	1811991
JAM/CJS			

STRUCTURE GENERAL NOTES - 2  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

CUY-490-01.00  
PID No. 107408

6/120  
17/131



**ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER GRATE REPLACEMENT (CONTINUED):**

MATERIALS: STRUCTURAL STEEL FOR SCUPPER GRATES SHALL BE ASTM A709 GRADE 36 OR 50, GALVANIZED IN ACCORDANCE WITH C&MS 711.02. FURNISH MATERIALS IN CONFORMANCE WITH C&MS 513 AND C&MS 518.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF EACH ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE SCUPPER GRATE REPLACEMENT. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 518 - STRUCTURE DRAINAGE, MISC.: SCUPPER GRATE REPLACEMENT.

**ITEM 518 - STRUCTURE DRAINAGE, MISC.: BRIDGE DRAINAGE SYSTEM CLEANING:**

DESCRIPTION: THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE BRIDGE DECK, THE BRIDGE SEATS AT ALL SUBSTRUCTURES, AND ALL PORTIONS OF THE EXISTING BRIDGE DRAINAGE SYSTEM TO BE REUSED, INCLUDING THE INLETS, CATCH BASINS, AND PIPES OF THE UNDERGROUND STORM SEWER SYSTEM AS SHOWN IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER C&MS 105.16 AND 105.17. ALL DOWNSPOUTS AND SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

EXECUTION: AFTER THE SEDIMENT AND DEBRIS ARE REMOVED, THE EXISTING BRIDGE DRAINAGE SYSTEM SHALL BE FLUSHED WITH CLEAN WATER MAKING CERTAIN THE WATER FLOWS SMOOTHLY. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT PRIOR TO BEGINNING WORK FOR THE PURPOSE OF EXAMINING THE PORTIONS OF THE EXISTING BRIDGE DRAINAGE SYSTEM TO REMAIN AFTER CLEANING TO VERIFY THE CONDITION OF ALL DOWNSPOUTS AND SEWERS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING THE DETAILED EXAMINATION OF THE DRAINAGE SYSTEM.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE BRIDGE DRAINAGE SYSTEM CLEANING. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 518 - STRUCTURE DRAINAGE, MISC.: BRIDGE DRAINAGE SYSTEM CLEANING.

**ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN:**

THIS ITEM CONSISTS OF CONSTRUCTING REINFORCED CONCRETE APPROACH SLABS WITH INTEGRAL CURBS AND/OR MEDIAN BARRIER IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, STANDARD DRAWINGS AS-1-15 AND AS-2-15, AND CMS 526.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF SQUARE YARDS ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL CONCRETE FOR THE APPROACH SLABS, INTEGRAL CURBS AND/OR MEDIAN BARRIER, JUNCTION BOX, CONDUIT, EPOXY COATED REINFORCING STEEL, PREFORMED EXPANSION JOINT FILLER, JOINT SEALER, AND ALL OTHER INCIDENTAL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN.

**ITEM 625 - SPECIAL - MAINTAIN EXISTING LIGHTING**

DESCRIPTION: THIS ITEM CONSISTS OF RESTORING THE LIGHTING THAT IS DISTURBED IN THE COURSE OF WORK.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE RESTORATION OF DISTURBED LIGHTING. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 625 - SPECIAL - MAINTAIN EXISTING LIGHTING.

**ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN:**

THIS WORK CONSISTS OF PATCHING EXISTING REINFORCED CONCRETE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 844, MODIFIED AS FOLLOWS:

WHERE THE AREA OF AN INDIVIDUAL REPAIR, AS DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION, TOTALS LESS THAN FIVE (5) SQUARE FEET, THE INSTALLATION OF GALVANIC ANODES IS NOT REQUIRED, AND THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH C&MS 519.

ANODE SPACING SHALL BE 30" FOR REPAIRS ON EXISTING ABUTMENTS, 28" FOR REPAIRS ON EXISTING PIERS, AND 24" FOR REPAIRS ON EXISTING SUPERSTRUCTURE PARAPETS.

**ASBESTOS NOTIFICATION:**

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM OR ASBESTOS PROGRAM  
OHIO EPA, DAPC OHIO EPA, DAPC  
P.O. BOX 1049 50 W. TOWN ST., SUITE 700  
COLUMBUS, OH 43216-1049 COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

**SUMMARY OF PROPOSED REHABILITATION WORK:**

THE FOLLOWING LIST CONTAINS THE MAJOR ITEMS OF WORK INCLUDED IN THESE PLANS FOR THE REHABILITATION OF THIS STRUCTURE:

- 1. REPLACEMENT OF THE EXISTING APPROACH SLABS.
- 2. REPLACEMENT OF PARAPET TRANSITIONS TO ACCEPT MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 OR TYPE 2, AND REPLACEMENT OF APPROACH GUARDRAIL.
- 3. REPLACEMENT OF THE EXISTING STRIP SEAL OR SLIDING PLATE EXPANSION JOINTS AT THE WEST ABUTMENT, EAST ABUTMENT, ABUTMENT B-C, AND ABUTMENT C-B, AND INTERMEDIATE JOINT 6 ON RAMP C-B WITH NEW STRIP SEAL EXPANSION JOINTS, INCLUDING REPLACEMENT OF THE EXISTING END CROSSFRAMES AND RECONSTRUCTION OF THE TOPS OF THE ABUTMENT BACKWALLS AND PORTIONS OF THE EXISTING DECK SLAB AND PARAPETS AT ALL LOCATIONS.
- 4. REPAIR OF THE EXISTING INTERMEDIATE FINGER EXPANSION JOINTS, JOINTS 1 THRU 5, INCLUDING REPLACEMENT OF MISSING/DAMAGED FINGERS AT JOINTS 2 AND 3.
- 5. REPLACEMENT OF THE EXISTING NEOPRENE DRAINAGE TROUGHS BELOW JOINTS 1 THRU 5 WITH NEW GALVANIZED STEEL DRAINAGE TROUGHS, INCLUDING THE INSTALLATION OF A NEW COLLECTOR PIPE SYSTEM SEPARATE FROM THAT OF THE DECK SCUPPERS, AND REMOVAL OF THE EXISTING NEOPRENE DRAINAGE TROUGH BELOW JOINT 6.
- 6. CLEANOUT OF THE EXISTING DECK SCUPPERS, REPLACEMENT OF ONE EXISTING DECK SCUPPER GRATE, REPLACEMENT OF THE EXISTING DOWNSPOUT PIPE SYSTEM, AND CLEANING OF EXISTING STORM SEWERS.
- 7. MISCELLANEOUS REPAIRS TO THE SUPERSTRUCTURE STEEL, INCLUDING REPLACEMENT OF LOOSE AND MISSING BOLTS, REPAIR OF THE EXISTING INSPECTION SAFETY CABLE SYSTEM, SHIMMING OF THE FLOATING BEARINGS OF THREE (3) BEAMS AT THE WEST ABUTMENT, AND REMOVAL OF EXISTING PIER ACCESS MANHOLES AND LADDERS.
- 8. PAINTING OF THE BEAM/GIRDER ENDS AT THE ABUTMENTS AND INTERMEDIATE EXPANSION JOINTS.
- 9. REPLACEMENT OF THE EXISTING BRIDGE DECK OVERLAY, INCLUDING FULL-DEPTH DECK SLAB REPAIRS.
- 10. SUBSTRUCTURE CONCRETE PATCHING AND CRACK REPAIR.
- 11. SUPERSTRUCTURE AND SUBSTRUCTURE CONCRETE SEALING.
- 12. REPLACEMENT OF THE EXISTING CONCRETE SLOPE PROTECTION AT THE SOUTH COLUMN OF PIER 14R.

**SUGGESTED CONSTRUCTION PROCEDURE:**

PRE-PHASE WORK, USING INSIDE SHOULDER CLOSURE:

- 1. PERFORM CLEAN-OUT OF ALL SCUPPERS ALONG THE MEDIAN PARAPETS.
- 2. CLEAN ALL DEBRIS FROM INSIDE SHOULDERS IN BOTH DIRECTIONS.

PHASE 1 CONSTRUCTION:

- 1. PHASE 1 CONSTRUCTION ACTIVITIES DO NOT OCCUR ON THE BRIDGE. PLEASE SEE SHEETS 74 AND 75 OF THE MOT PLANS FOR ADDITIONAL INFORMATION.

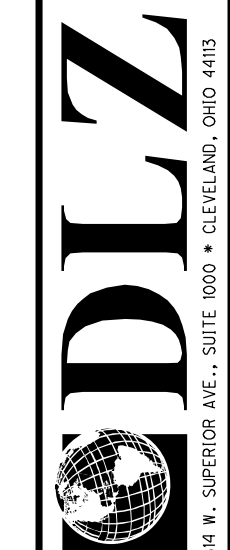
PHASE 2 CONSTRUCTION:

- 1. IMPLEMENT PHASE 2 MAINTENANCE OF TRAFFIC. SHIFT TRAFFIC AND MAINTAIN THREE LANES OF I-490 TRAFFIC IN EACH DIRECTION ON THE EXISTING EASTBOUND BRIDGE DECK AND APPROACH SLABS AND THE OUTER PORTION OF THE EXISTING WESTBOUND BRIDGE DECK AND APPROACH SLABS.
- 2. SAW CUT THE EXISTING BRIDGE DECK OVERLAY AND THE EXISTING EAST AND WEST ABUTMENT APPROACH SLABS AND TOP OF BACKWALL AT OFFSET OF 36'-7" LEFT OF CL I-490.
- 3. PERFORM WORK AT THE WEST ABUTMENT AND EAST ABUTMENT:
  - A. REMOVE INNER PORTIONS OF EXISTING APPROACH SLABS AND MEDIAN PARAPET.
  - B. REMOVE INNER PORTIONS OF EXISTING TOPS OF BACKWALL, EXPANSION JOINTS, AND ENDS OF BRIDGE DECK.
  - C. REMOVE AND REPLACE EXISTING END CROSSFRAMES WITHIN THE SAME LIMITS. RESET BEARINGS OF BEAMS M AND N AFTER EXISTING CROSSFRAME REMOVAL AND BEFORE PROPOSED CROSSFRAME INSTALLATION.
  - D. INSTALL INNER PORTION OF PROPOSED STRIP SEAL EXPANSION JOINTS.
  - E. CONSTRUCT INNER PORTIONS OF PROPOSED ENDS OF DECK, TOPS OF BACKWALL, APPROACH SLABS, AND MEDIAN PARAPETS. BUILD TO LONGITUDINAL CONSTRUCTION JOINT AT OFFSET OF 35'-7" LEFT OF CL I-490.
- 4. PERFORM REPAIRS TO INNER PORTIONS OF EXISTING MAINLINE BRIDGE DECK, FINGER JOINTS, AND MEDIAN PARAPETS.

PHASE 3 CONSTRUCTION:

- 1. IMPLEMENT PHASE 3 MAINTENANCE OF TRAFFIC. SHIFT TRAFFIC AND MAINTAIN THREE LANES OF I-490 TRAFFIC IN EACH DIRECTION ON THE EXISTING EASTBOUND BRIDGE DECK AND APPROACH SLABS AND THE INNER PORTION OF THE EXISTING WESTBOUND BRIDGE DECK AND APPROACH SLABS.
- 2. REFER TO PART 1 PLANS FOR CLOSURE DURATION AT RAMP C-7 TO W. 7TH ST. TO PERFORM WORK AT THE EXIT RAMP PORTION OF THE WEST ABUTMENT:
  - A. REMOVE OUTER PORTION OF EXISTING APPROACH SLAB AND EXISTING PARAPET ON ABUTMENT WINGWALL.
  - B. REMOVE OUTER PORTIONS OF EXISTING TOP OF BACKWALL, EXPANSION JOINT, AND END OF BRIDGE DECK.
  - C. REMOVE AND REPLACE EXISTING END CROSSFRAMES WITHIN THE SAME LIMITS. RESET BEARING OF BEAM D AFTER EXISTING CROSSFRAME REMOVAL AND BEFORE PROPOSED CROSSFRAME INSTALLATION.
  - D. INSTALL OUTER PORTION OF PROPOSED STRIP SEAL EXPANSION JOINT.
  - E. CONSTRUCT OUTER PORTION OF PROPOSED END OF DECK, TOP OF BACKWALL, AND APPROACH SLAB. BUILD TO LONGITUDINAL CONSTRUCTION JOINT AT EDGE OF GORE AREA.
- 3. REFER TO PART 1 PLANS FOR CLOSURE DURATION AT RAMP B-C FROM ROCKEFELLER AVENUE TO PERFORM WORK AT ABUTMENT B-C:
  - A. REMOVE EXISTING APPROACH SLAB AND EXISTING NORTH PARAPET ON ABUTMENT WINGWALL.
  - B. REMOVE EXISTING TOP OF BACKWALL, EXPANSION JOINT, AND END OF BRIDGE DECK.

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STRUCTURE FILE NUMBER	1811991

STRUCTURE GENERAL NOTES - 3  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

CUY-490-01.00  
PID No. 107408

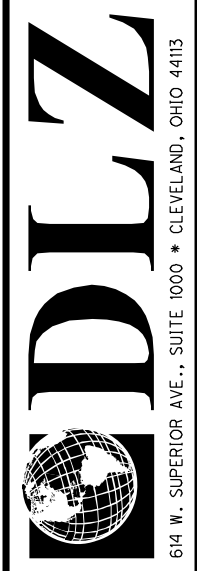
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FUNDING			ESTIMATED QUANTITIES										CALC. BY: PAT/VS DATE: 08/04/20		CHKD. BY: JAM/JDA DATE: 08/05/20	
02/IMS/13	ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	WEST ABUTMENT	EAST ABUTMENT	ABUTMENT B-C	ABUTMENT C-B	PIERS	SUPER-STRUCTURE	GENERAL	REF. SHEET NUMBER			
LS	201	11000	LS		CLEARING AND GRUBBING							LS	3			
LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN							LS	5/120			
1,341	202	22900	1,341	SY	APPROACH SLAB REMOVED							1,341				
50	202	32800	50	SY	CONCRETE SLOPE PROTECTION REMOVED							50				
90	202	75266	90	FT	VANDAL PROTECTION FENCE REMOVED AND RESET						90		3			
LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING							LS				
8	503	21100	8	CY	UNCLASSIFIED EXCAVATION	2	2	2	2							
15,342	509	10000	15,342	LB	EPOXY COATED REINFORCING STEEL	3,137	3,710	769	1,715		6,011					
2,000	509	20001	2,000	LB	CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING REINFORCEMENT, AS PER PLAN	250	250	125	125	250	1,000		120/120			
1,054	510	10000	1,054	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	458	444	52	100							
33	511	34444	33	CY	CLASS QC2 CONCRETE, BRIDGE DECK						33					
5	511	34448	5	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)						5		3			
55	511	45710	55	CY	CLASS QC1 CONCRETE, ABUTMENT	17	21	5	12							
21,722	512	10100	21,722	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	231	288	85	112	8,426	12,535	45				
2,723	512	10600	2,723	FT	CONCRETE REPAIR BY EPOXY INJECTION	2	70		36	2,615						
13,099	512	74000	13,099	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	212	247	67	67		12,506					
15,800	513	10201	15,800	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN						15,800		6/120			
LS	513	95020	LS		STRUCTURAL STEEL, MISC.: INSPECTION SAFETY CABLE SYSTEM REPAIR							LS	6/120			
1	513	95030	1	EACH	STRUCTURAL STEEL, MISC.: FINGER JOINT EXPANSION PLATE REPAIR						1		6/120			
3	513	95030	3	EACH	STRUCTURAL STEEL, MISC.: FINGER JOINT SINGLE FINGER REPAIR						3		6/120			
125	513	95030	125	EACH	STRUCTURAL STEEL, MISC.: REPLACE LOOSE OR MISSING BOLT						125		6/120			
41,800	514	00050	41,800	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL						41,800					
41,800	514	00056	41,800	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT						41,800		6/120			
43,800	514	00060	43,800	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT						43,800		6/120			
43,800	514	00066	43,800	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT						43,800		6/120			
40	514	00504	40	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL						40					
27	514	10000	27	EACH	FINAL INSPECTION REPAIR						27					
508	516	11210	508	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL						508					
34	516	11211	34	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN						34		81/120			
3	516	46701	3	EACH	RESET BEARING, AS PER PLAN						3		6/120			
LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN							LS	6/120			
173	518	62100	173	FT	STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 1						173		6/120			
135	518	62100	135	FT	STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 2						135		6/120			
135	518	62100	135	FT	STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 3						135		6/120			
143	518	62100	143	FT	STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 4						143		6/120			
144	518	62100	144	FT	STRUCTURE DRAINAGE, MISC.: DRAINAGE TROUGH SYSTEM, EXPANSION JOINT 5						144		6/120			
2,970	518	62100	2,970	FT	STRUCTURE DRAINAGE, MISC.: 10" GALVANIZED STEEL PIPE, INCLUDING SPECIALS						2,970		6/120			
35	518	62200	35	EACH	STRUCTURE DRAINAGE, MISC.: SCUPPER CLEANOUT						35		6/120			
1	518	62200	1	EACH	STRUCTURE DRAINAGE, MISC.: SCUPPER GRATE REPLACEMENT						1		7/120			
LS	518	63300	LS		STRUCTURE DRAINAGE, MISC.: BRIDGE DRAINAGE SYSTEM CLEANING							LS	7/120			
1,032	526	15001	1,032	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN							1,032	7/120			
481	526	90010	481	FT	TYPE A INSTALLATION							481	3			
ESTIMATED QUANTITIES CONTINUE ON SHEET 10/120																

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ESTIMATED QUANTITIES - 1  
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 I-490 OVER CUYAHOGA RIVER

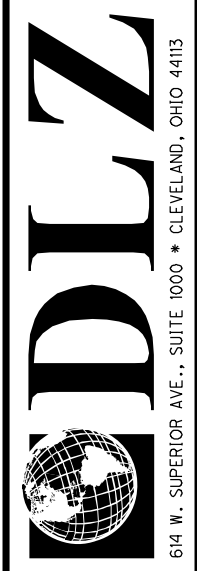
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50	601	21000	50	SY	CONCRETE SLOPE PROTECTION							50	
LS	SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING							LS	7/120
724	844	10001	724	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		15		54	655			
58,030	848	10000	58,030	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.50" THICK)						58,030		
58,030	848	20000	58,030	SY	SURFACE PREPARATION USING HYDRODEMOLITION						58,030		
403	848	30000	403	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY						403		
2,902	848	50000	2,902	SY	HAND CHIPPING						2,902		
LS	848	50100	LS		TEST SLAB							LS	
262	848	50200	262	CY	FULL DEPTH REPAIR						262		
58,030	848	50321	58,030	SY	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN						58,030		11 to 13/120

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ESTIMATED QUANTITIES - 2  
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I-490 OVER CUYAHOGA RIVER

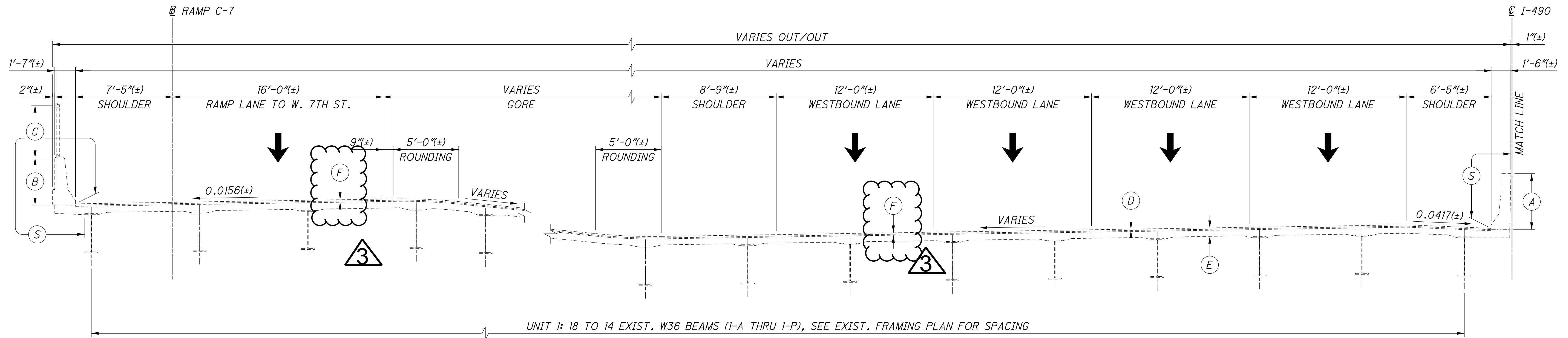
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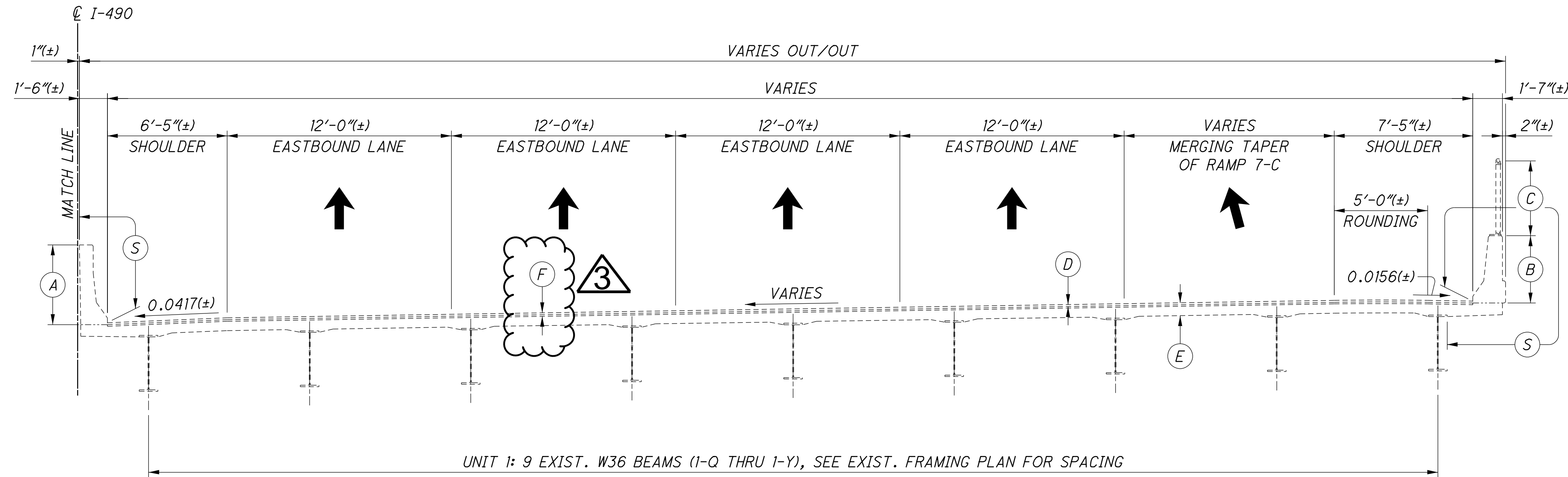
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**LEFT SIDE**



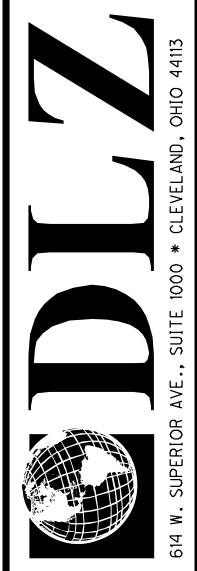
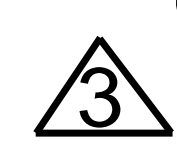
**RIGHT SIDE**

**EXISTING TRANSVERSE SECTION - UNIT 1**

SHOWN AT STA. 986+80(±) IN SPAN 2

**LEGEND**

- (A) EXIST. 4'-3<sup>1</sup>/<sub>4</sub>"(±) MEDIAN PARAPET
- (B) EXIST. 3'-7<sup>1</sup>/<sub>4</sub>"(±) EXTERIOR PARAPET
- (C) EXIST. 4'-0"(±) VANDAL PROTECTION FENCE
- (D) EXIST. 1<sup>1</sup>/<sub>4</sub>"(±) LATEX MODIFIED CONCRETE WEARING SURFACE (1986 ORIGINAL CONSTRUCTION) OR EXIST. 1<sup>1</sup>/<sub>2</sub>"(±) MICRO-SILICA MODIFIED CONCRETE OVERLAY (1998 AND 2021 WEARING SURFACE REPAIRS)
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7<sup>3</sup>/<sub>4</sub>"(±) MIN. TO 8<sup>1</sup>/<sub>4</sub>"(±) MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) 2<sup>1</sup>/<sub>2</sub>"(±) TOTAL THICKNESS OF EXIST. OVERLAY AND CONCRETE LAYER BELOW THE OVERLAY TO BE REMOVED PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN.
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



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**PHASE CONSTRUCTION DETAILS - 1**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

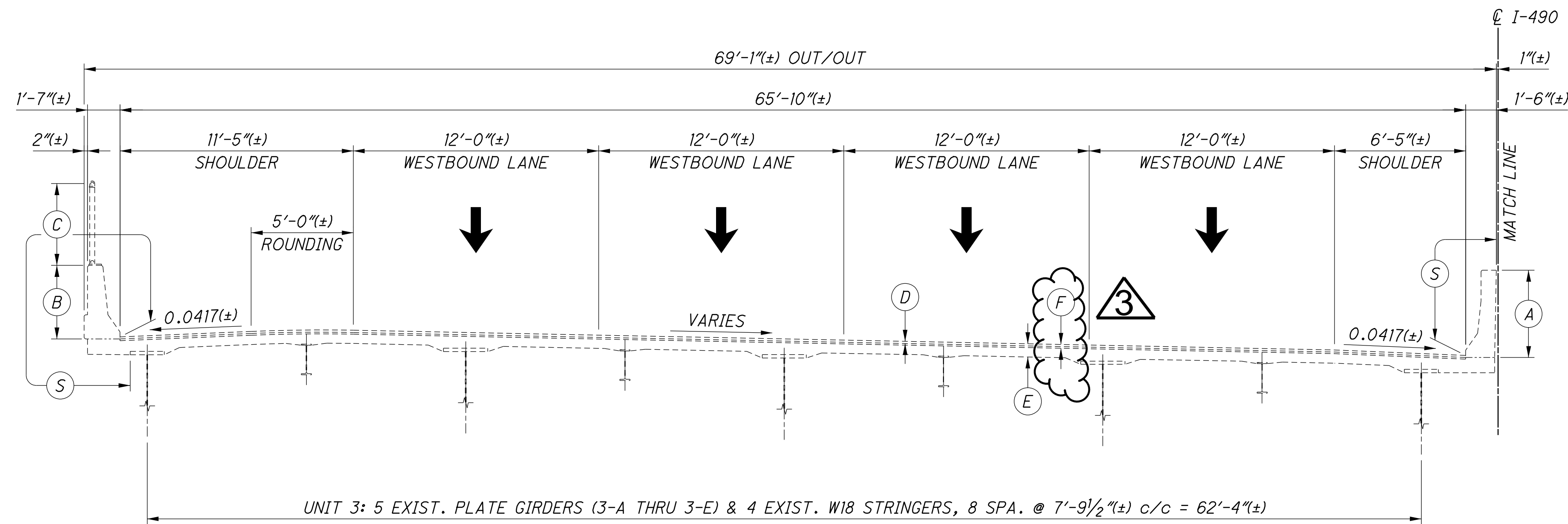
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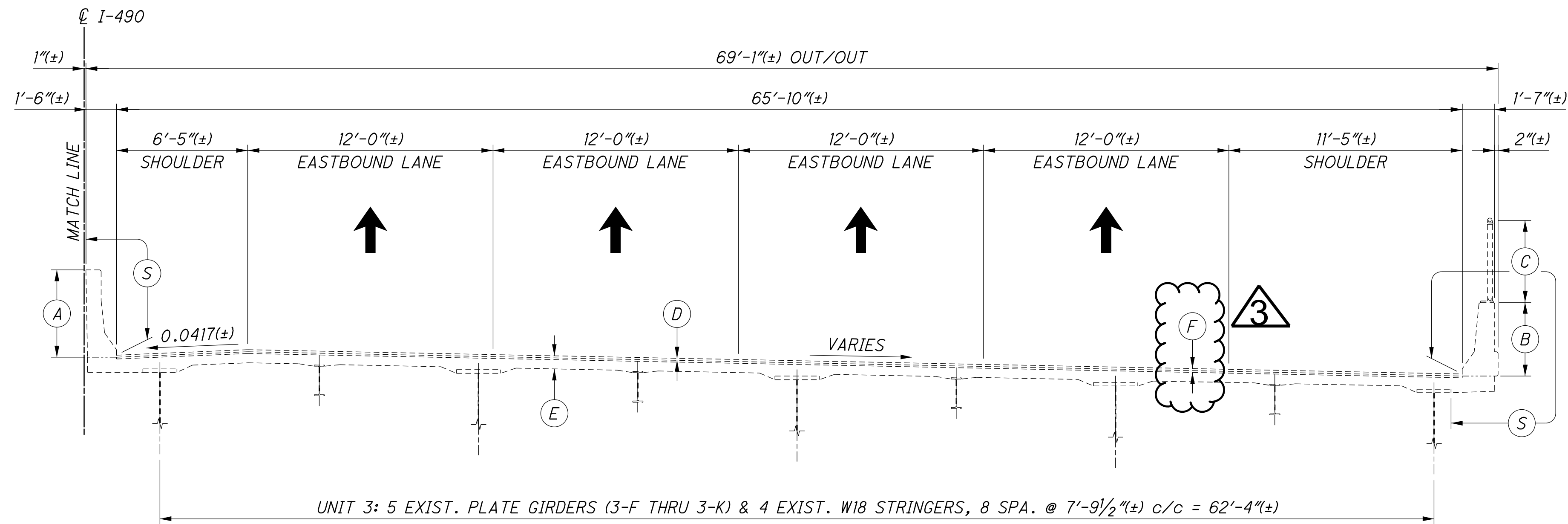
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**LEFT SIDE**



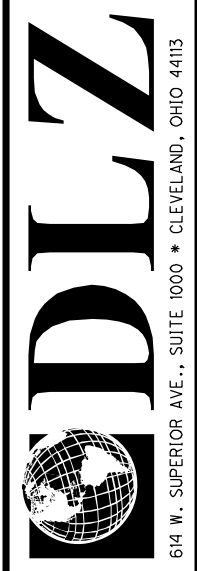
**RIGHT SIDE**

**EXISTING TRANSVERSE SECTION - UNIT 3**

SHOWN AT STA. 999+50( $\pm$ ) IN SPAN 11

**LEGEND**

- (A) EXIST. 4'-3 1/4"( $\pm$ ) MEDIAN PARAPET
- (B) EXIST. 3'-7 1/4"( $\pm$ ) EXTERIOR PARAPET
- (C) EXIST. 4'-0"( $\pm$ ) VANDAL PROTECTION FENCE
- (D) EXIST. 1/4"( $\pm$ ) LATEX MODIFIED CONCRETE WEARING SURFACE (1986 ORIGINAL CONSTRUCTION) OR EXIST. 1/2"( $\pm$ ) MICRO-SILICA MODIFIED CONCRETE OVERLAY (1998 AND 2021 WEARING SURFACE REPAIRS)
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7 3/4"( $\pm$ ) MIN. TO 8 1/4"( $\pm$ ) MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) 2 1/2"( $\pm$ ) TOTAL THICKNESS OF EXIST. OVERLAY AND CONCRETE LAYER BELOW THE OVERLAY TO BE REMOVED PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN.
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



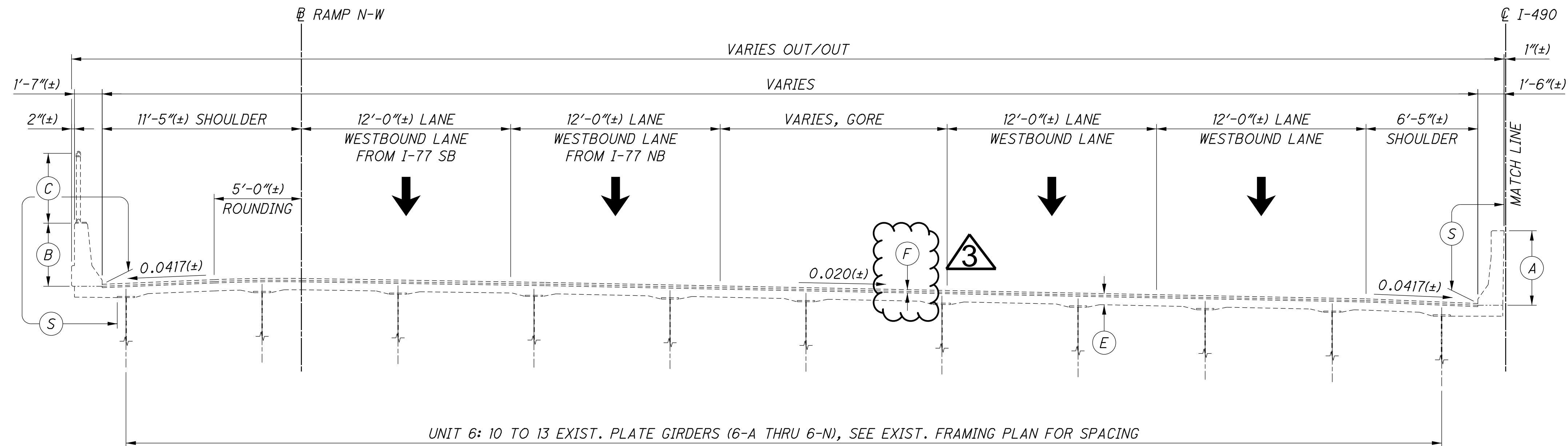
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**PHASE CONSTRUCTION DETAILS - 2**  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

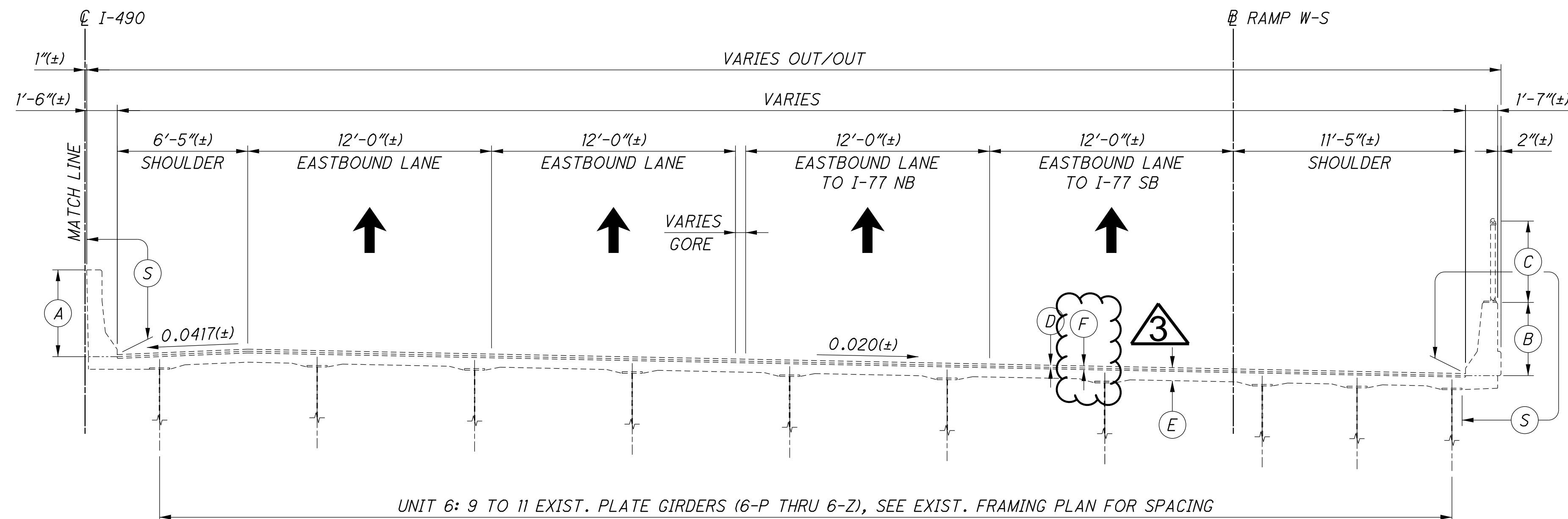
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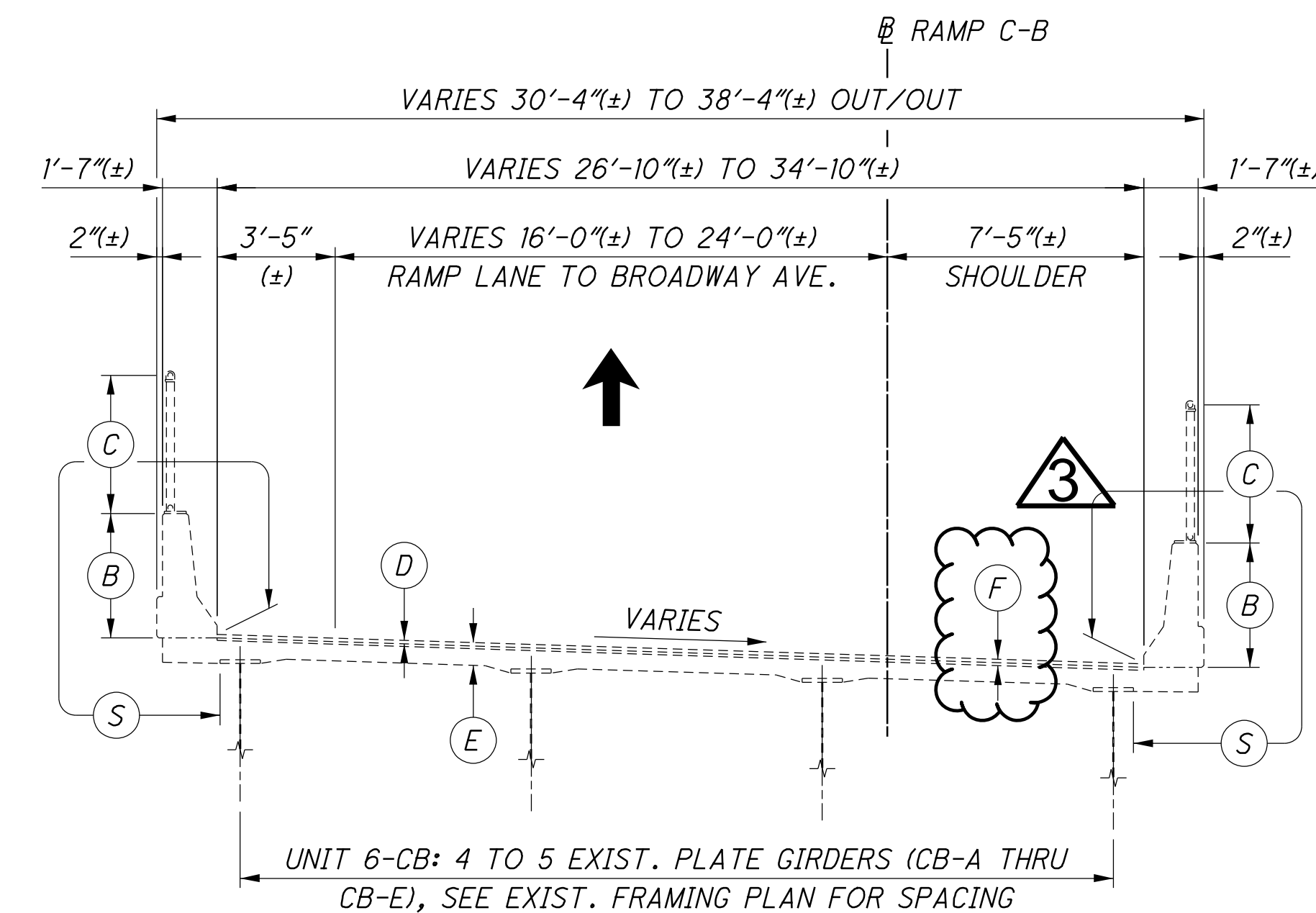
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**LEFT SIDE**



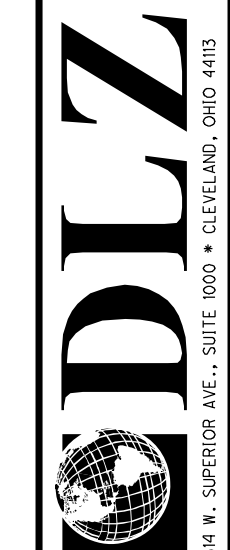
**RIGHT SIDE**



**EXISTING TRANSVERSE SECTION - UNIT 6**  
SHOWN AT STA. 1018+30(±) IN SPANS 23 & 24

**LEGEND**

- (A) EXIST. 4'-3/4"± MEDIAN PARAPET
- (B) EXIST. 3'-7/4"± EXTERIOR PARAPET
- (C) EXIST. 4'-0"± VANDAL PROTECTION FENCE
- (D) EXIST. 1/4"± LATEX MODIFIED CONCRETE WEARING SURFACE (1986 ORIGINAL CONSTRUCTION) OR EXIST. 1/2"± MICRO-SILICA MODIFIED CONCRETE OVERLAY (1998 AND 2021 WEARING SURFACE REPAIRS)
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7 3/4"± MIN. TO 8 1/4"± MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) 2 1/2"± TOTAL THICKNESS OF EXIST. OVERLAY AND CONCRETE LAYER BELOW THE OVERLAY TO BE REMOVED PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN.
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

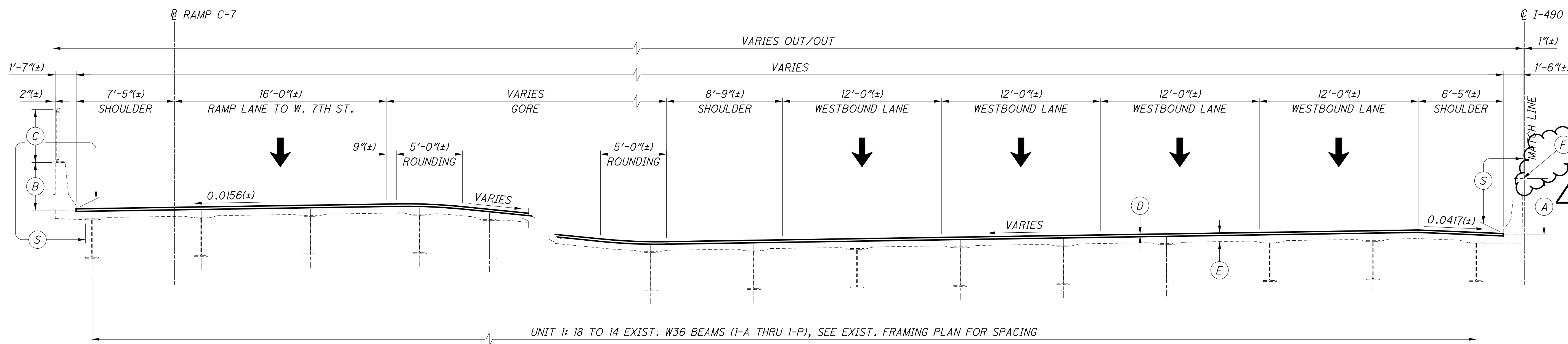


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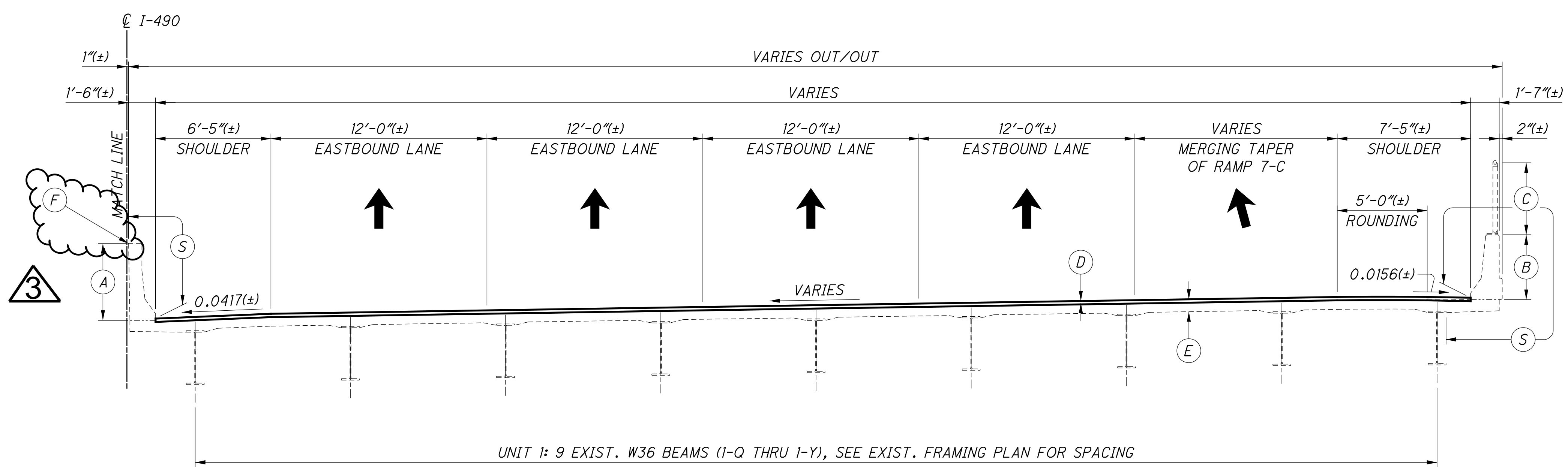
**PHASE CONSTRUCTION DETAILS - 3**  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
PID No. 107408

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**LEFT SIDE**



**RIGHT SIDE**

**PROPOSED TRANSVERSE SECTION - UNIT 1**  
SHOWN AT STA. 986+80(±) IN SPAN 2

**LEGEND**

- (A) EXIST. 4'-3/4" (±) MEDIAN PARAPET
- (B) EXIST. 3'-7/4" (±) EXTERIOR PARAPET
- (C) EXIST. 4'-0" (±) VANDAL PROTECTION FENCE
- (D) PROP. 2 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7 3/4" (±) MIN. TO 8 1/4" (±) MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) MEDIAN BARRIER NEOPRENE COVER TO BE TEMPORARILY REMOVED AND REINSTALLED AS NEEDED PER ITEM 202 - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

**DLZ**  
808 W. SUPERIOR AVE., SUITE 1000 • CLEVELAND, OHIO 44113

DESIGNED	PAT	CHECKED	JAM
DRAWN	PAT	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	1811991
DATE	08/05/20		

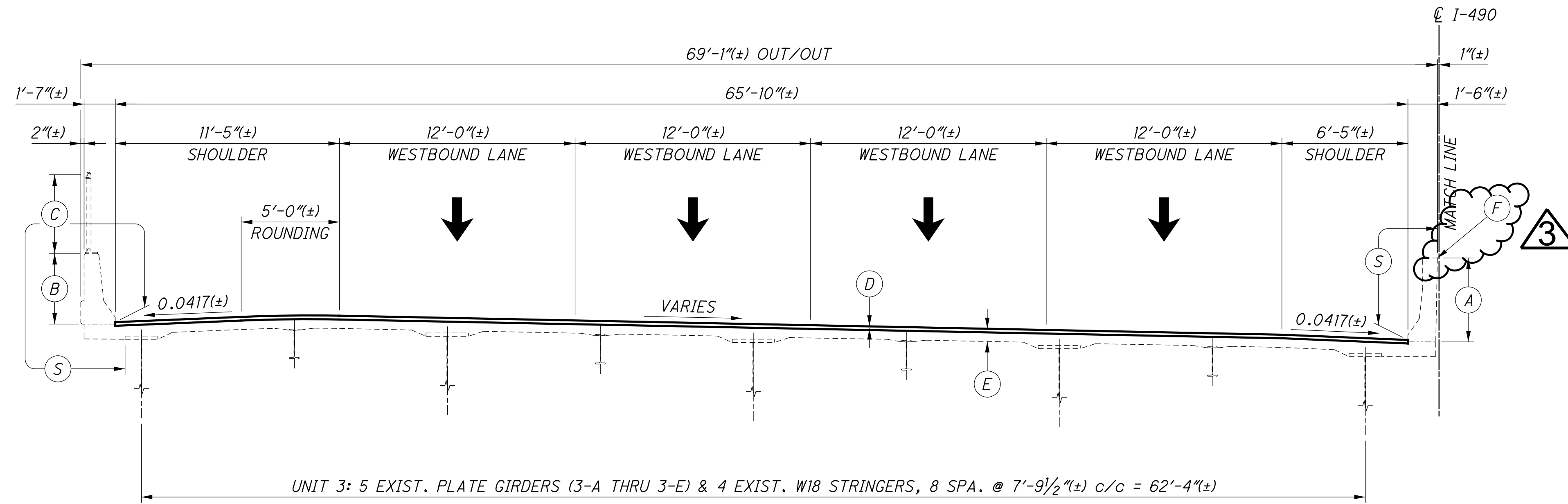
**PHASE CONSTRUCTION DETAILS - 16**  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
PID No. 107408

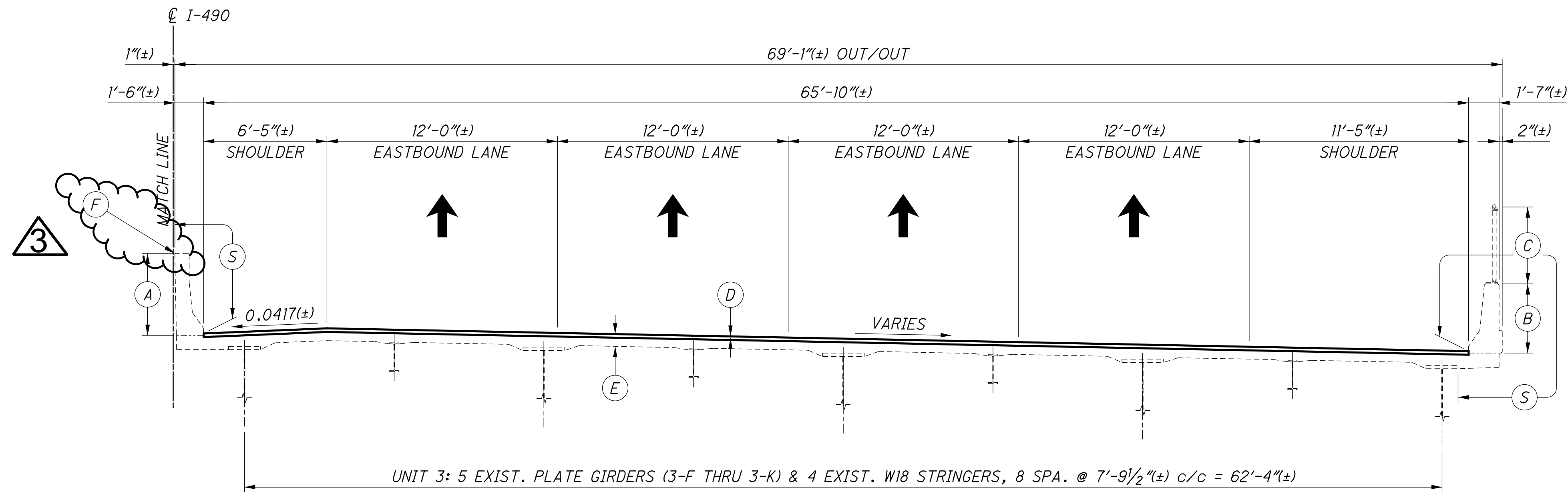
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37 / 131

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**LEFT SIDE**



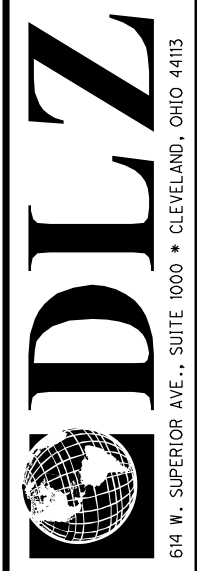
**RIGHT SIDE**

**PROPOSED TRANSVERSE SECTION - UNIT 3**

SHOWN AT STA. 999+50(±) IN SPAN 11

**LEGEND**

- (A) EXIST. 4'-3/4" (±) MEDIAN PARAPET
- (B) EXIST. 3'-7/4" (±) EXTERIOR PARAPET
- (C) EXIST. 4'-0" (±) VANDAL PROTECTION FENCE
- (D) PROP. 2 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7 3/4" (±) MIN. TO 8 1/4" (±) MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) MEDIAN BARRIER NEOPRENE COVER TO BE TEMPORARILY REMOVED AND REINSTALLED AS NEEDED PER ITEM 202 - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



DESIGNED	PAT	CHECKED	JAM
DRAWN	PAT	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

PHASE CONSTRUCTION DETAILS - 17  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

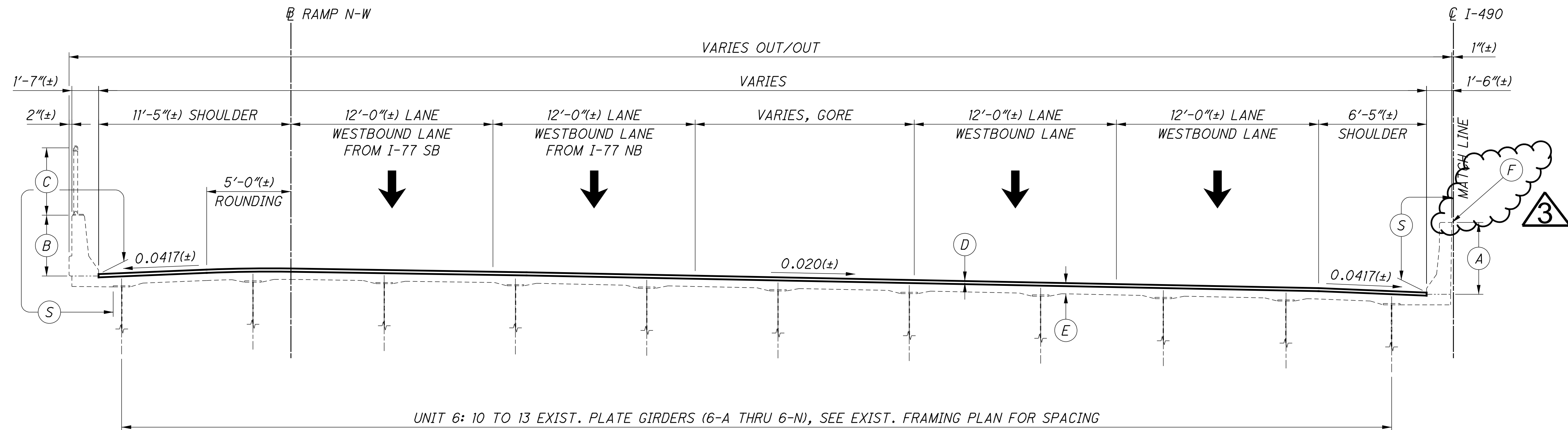
CUY-490-01.00  
 PID No. 107408

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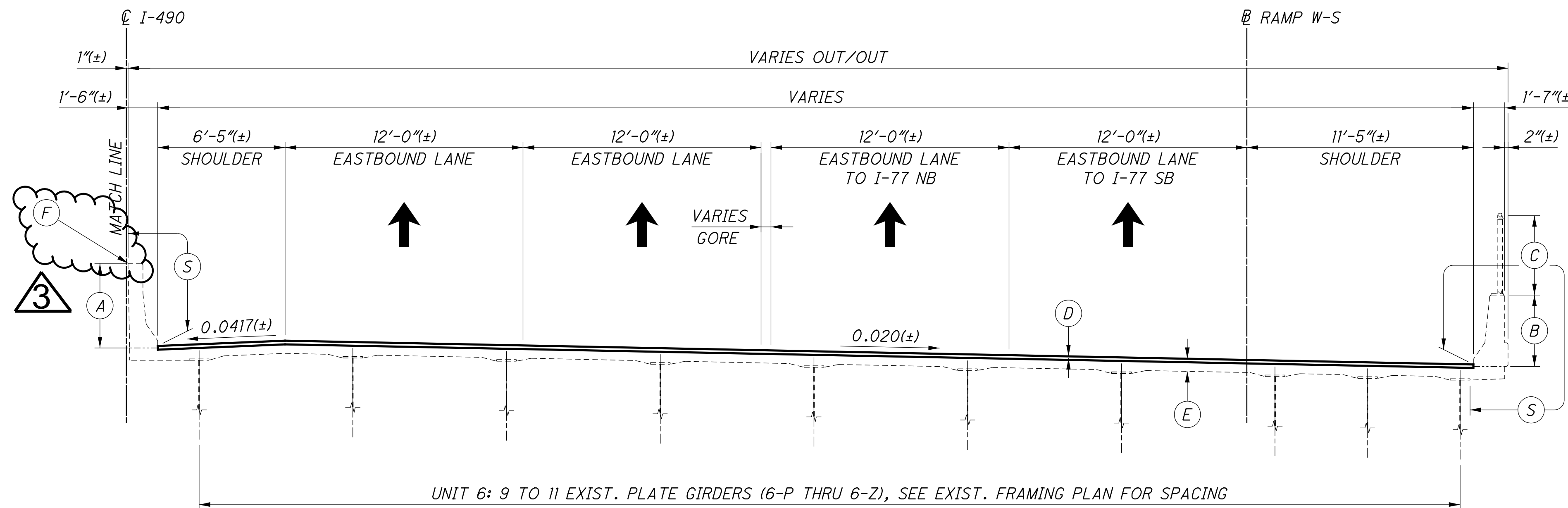
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**LEFT SIDE**



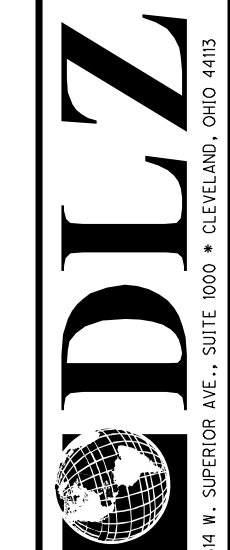
**RIGHT SIDE**

**PROPOSED TRANSVERSE SECTION - UNIT 6**

SHOWN AT STA. 1018+30(±) IN SPANS 23 & 24

**LEGEND**

- (A) EXIST. 4'-3/4" (±) MEDIAN PARAPET
- (B) EXIST. 3'-7/4" (±) EXTERIOR PARAPET
- (C) EXIST. 4'-0" (±) VANDAL PROTECTION FENCE
- (D) PROP. 2 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY
- (E) EXIST. REINFORCED CONCRETE DECK SLAB, 7 3/4" (±) MIN. TO 8 1/4" (±) MAX. TOTAL THICKNESS INCLUDING WEARING SURFACE, SEE EXIST. BRIDGE PLANS FOR MORE INFORMATION
- (F) MEDIAN BARRIER NEOPRENE COVER TO BE TEMPORARILY REMOVED AND REINSTALLED AS NEEDED PER ITEM 202 - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- (S) REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES AND SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



DESIGNED	PAT	CHECKED	JAM
DRAWN	PAT	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

PHASE CONSTRUCTION DETAILS - 18  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

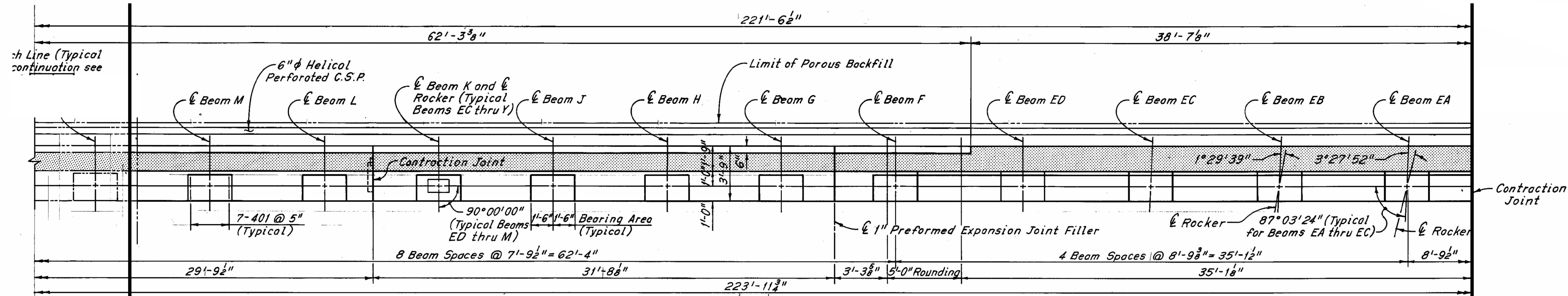
CUY-490-01.00  
 PID No. 107408

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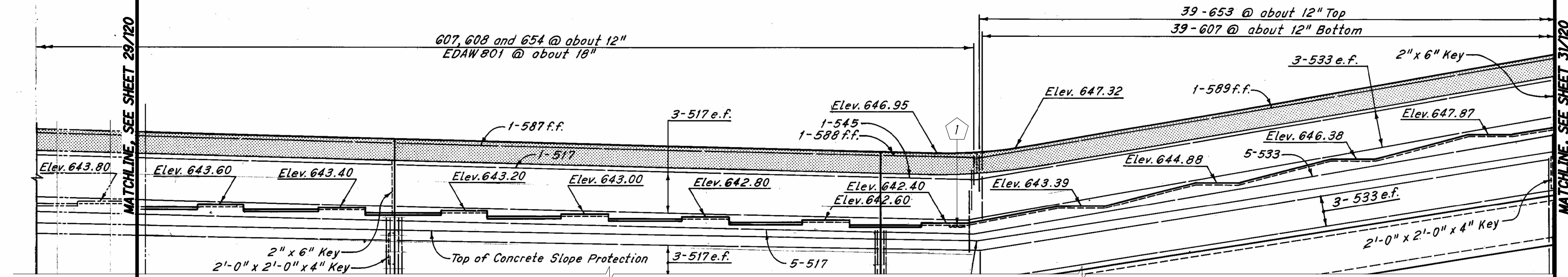
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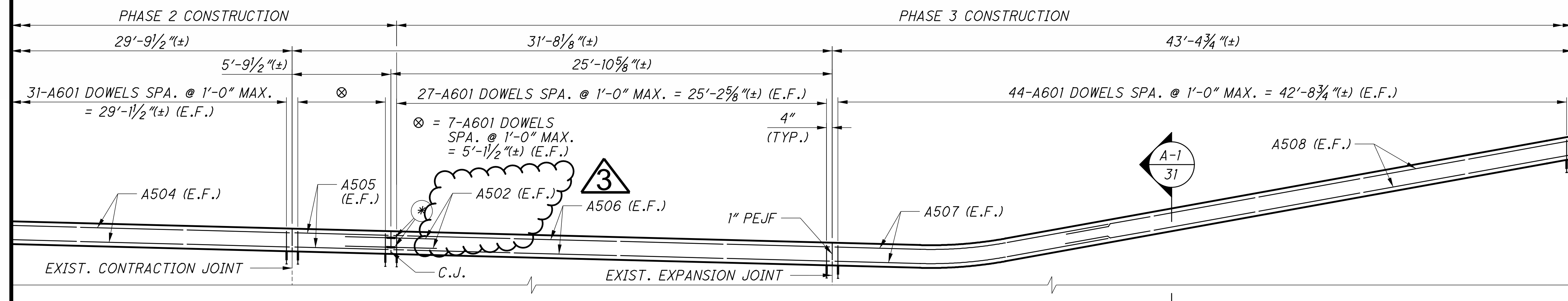
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EXISTING PLAN



EXISTING PARTIAL ELEVATION



PROPOSED PARTIAL ELEVATION

LEGEND

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN
- AREA OF DELAMINATION TO BE REPAIRED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- AREA OF CONCRETE DELAMINATION LOCATION NUMBER
- EXISTING CRACK TO BE REPAIRED LOCATION NUMBER
- THREADED MECHANICAL CONNECTOR, PROVIDING 3'-1" MIN. LAP, SHALL BE RICHMOND SCREW ANCHOR THREADED DOWEL BAR ASSEMBLY, LENTON REBAR SPLICING MECHANISM, OR APPROVED EQUAL AND THE COST SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT

ESTIMATED PATCHING QUANTITIES		
LOCATION	WIDTH X HEIGHT	AREA (SF)
	NO	
	DETERIORATION NOTED	
TOTAL AREA MEASURED		-
TOTAL AREA ESTIMATED *		-

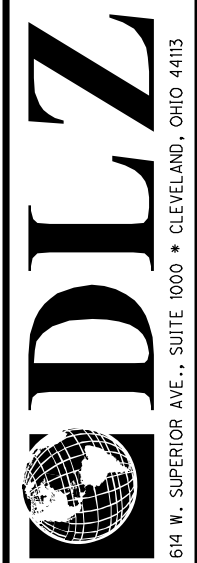
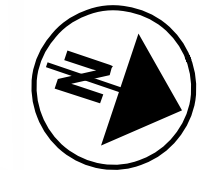
\* SEE NOTE 3

ESTIMATED CRACK REPAIR QUANTITIES		
LOCATION	DESCRIPTION	LENGTH
1	STEM	1.00'
TOTAL LENGTH MEASURED		1.00'
TOTAL LENGTH ESTIMATED *		1.50'

\* SEE NOTE 3

NOTES

1. EXISTING PLAN AND ELEVATION VIEW LINE WORK ON THIS SHEET COMES FROM SCANS OF THE 1986 RECORD PLANS. REFERENCES TO I-290 SHOULD BE REPLACED WITH I-490.
2. PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN AUGUST 2018. THE EXACT DIMENSIONS AND LOCATIONS OF PATCHES AND CRACK REPAIRS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.
3. ESTIMATED PATCHING AND CRACK REPAIR QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.
4. FOR PARAPET REPLACEMENT DETAILS, SEE SHEET 61/120.
5. THE MINIMUM LAP LENGTH FOR ABUTMENT REINFORCING STEEL SHALL BE 2'-5" FOR #5 BARS.



DATE: 08/05/20  
 REVIEWED: MJL  
 DRAWN: JAM/JG  
 DESIGNED: JAM/JG  
 CHECKED: JAM/JG  
 STRUCTURE FILE NUMBER: 181991  
 REVISED: JAM/JG  
 CJS/JDA

WEST ABUTMENT REPAIR DETAILS - 2  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

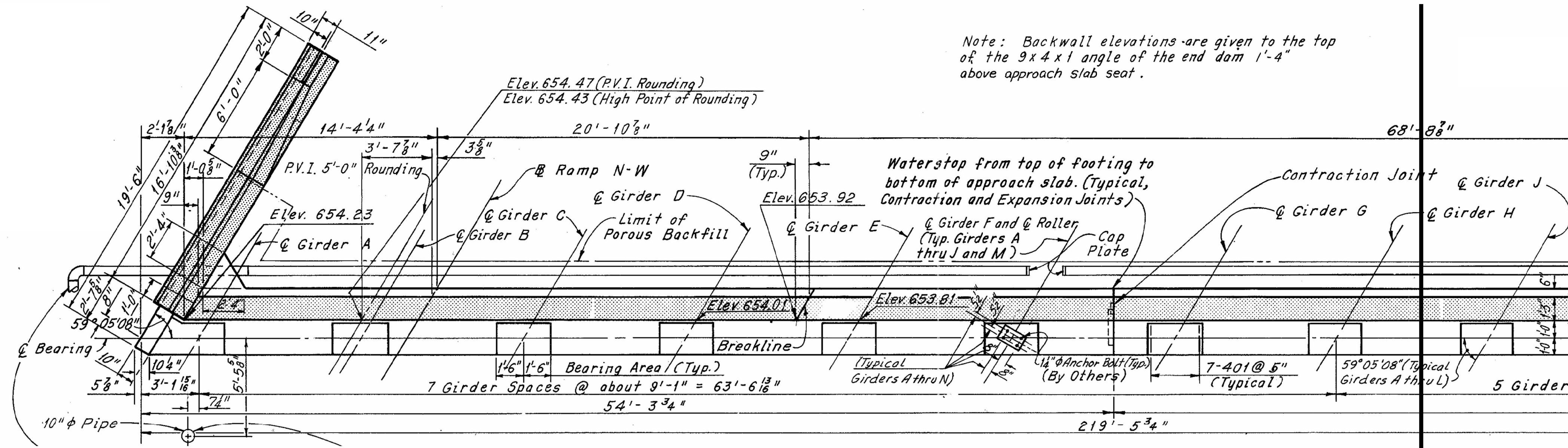
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 PID No. 107408

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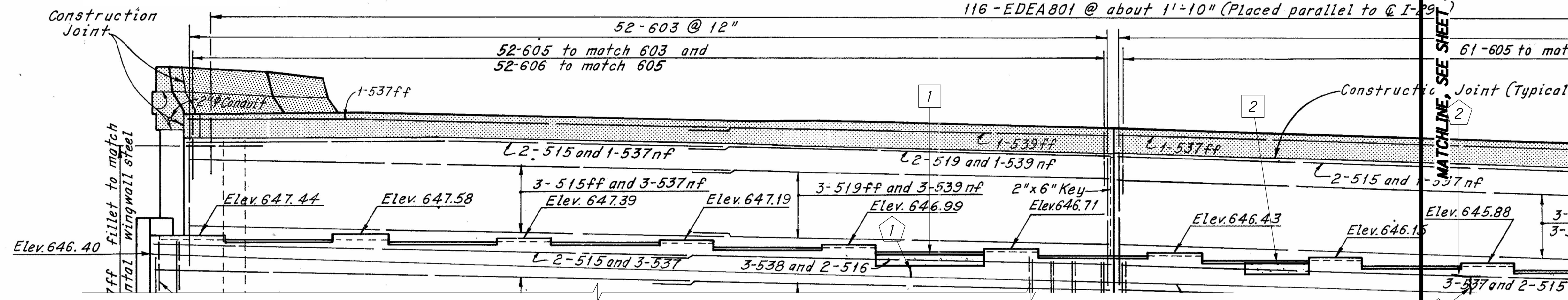
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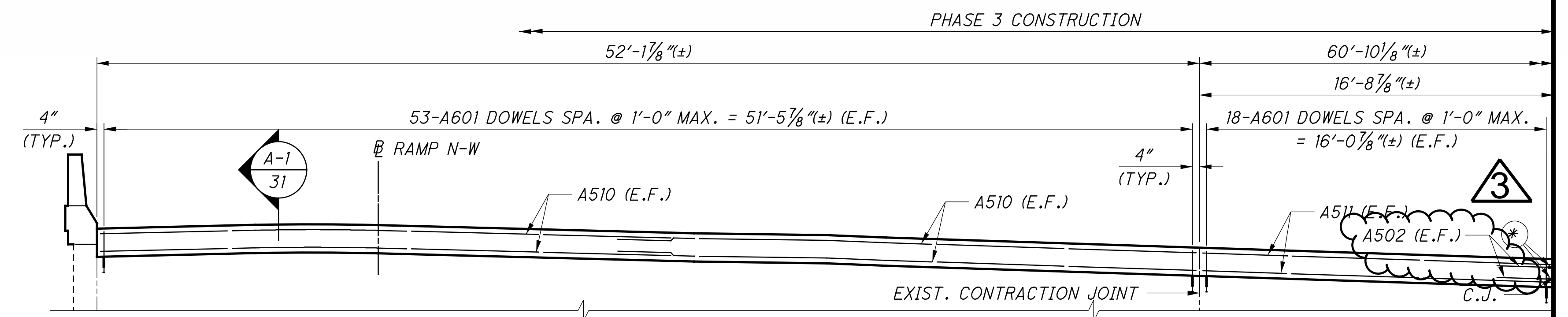
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EXISTING PLAN



EXISTING PARTIAL ELEVATION



PROPOSED PARTIAL ELEVATION

NOTES

- EXISTING PLAN AND ELEVATION VIEW LINE WORK ON THIS SHEET COMES FROM SCANS OF THE 1986 RECORD PLANS. REFERENCES TO I-290 SHOULD BE REPLACED WITH I-490.
- PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN AUGUST 2018. THE EXACT DIMENSIONS AND LOCATIONS OF PATCHES AND CRACK REPAIRS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.
- ESTIMATED PATCHING AND CRACK REPAIR QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.
- FOR PARAPET REPLACEMENT DETAILS, SEE SHEET 61/120.
- THE MINIMUM LAP LENGTH FOR ABUTMENT REINFORCING STEEL SHALL BE 2'-5" FOR #5 BARS.

LEGEND

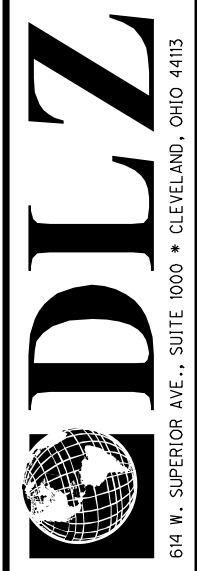
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN
- AREA OF DELAMINATION TO BE REPAIRED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- AREA OF CONCRETE DELAMINATION LOCATION NUMBER
- EXISTING CRACK TO BE REPAIRED LOCATION NUMBER
- THREADED MECHANICAL CONNECTOR, PROVIDING 3'-1" MIN. LAP, SHALL BE RICHMOND SCREW ANCHOR THREADED DOWEL BAR ASSEMBLY, LENTON REBAR SPLICING MECHANISM, OR APPROVED EQUAL AND THE COST SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT

ESTIMATED PATCHING QUANTITIES		
LOCATION	WIDTH X HEIGHT	AREA (SF)
1	6'-0" x 1'-0"	6.00
2	3'-6" x 1'-0"	3.50
TOTAL AREA MEASURED		9.50
TOTAL AREA ESTIMATED *		14.25

\* SEE NOTE 3

ESTIMATED CRACK REPAIR QUANTITIES		
LOCATION	DESCRIPTION	LENGTH
1	STEM	1.00'
2	STEM	1.50'
3	STEM	1.50'
TOTAL LENGTH MEASURED		4.00'
TOTAL LENGTH ESTIMATED *		6.00'

\* SEE NOTE 3



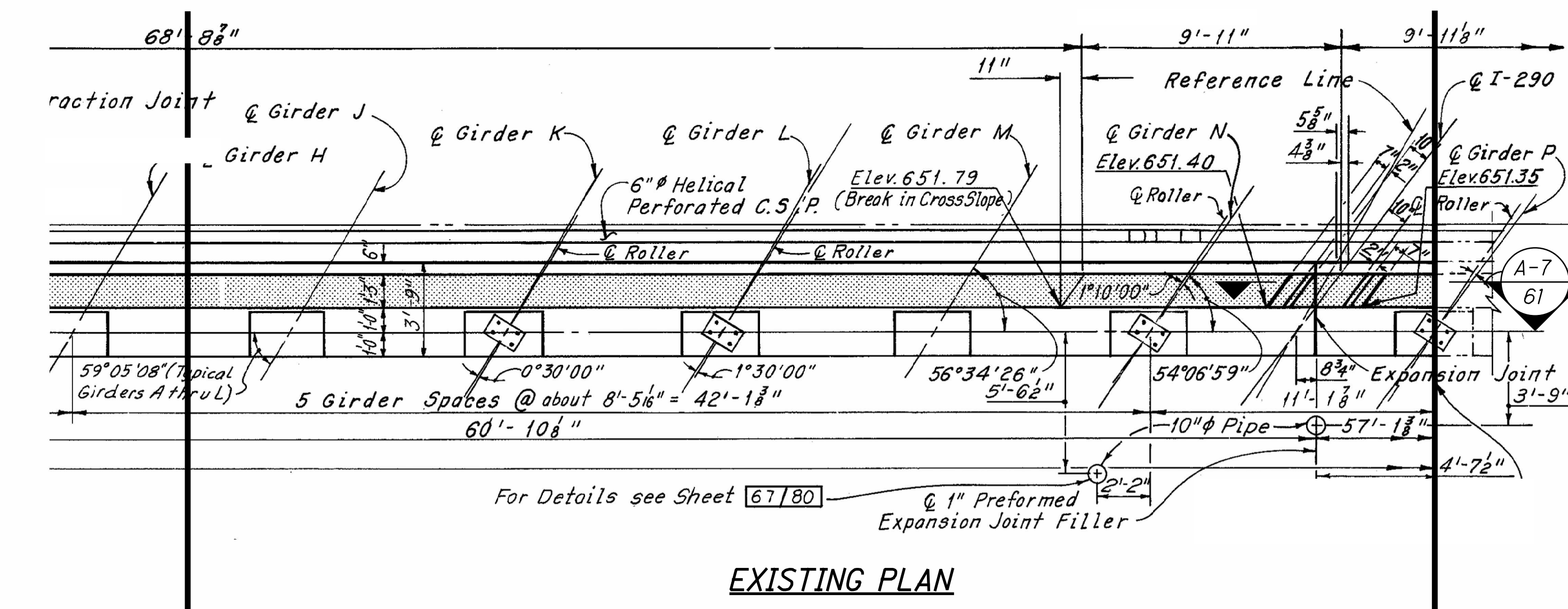
DATE 08/05/20  
 REVIEWED MJL  
 DRAWN JAM/AMHK  
 DESIGNED JAM/JG

BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

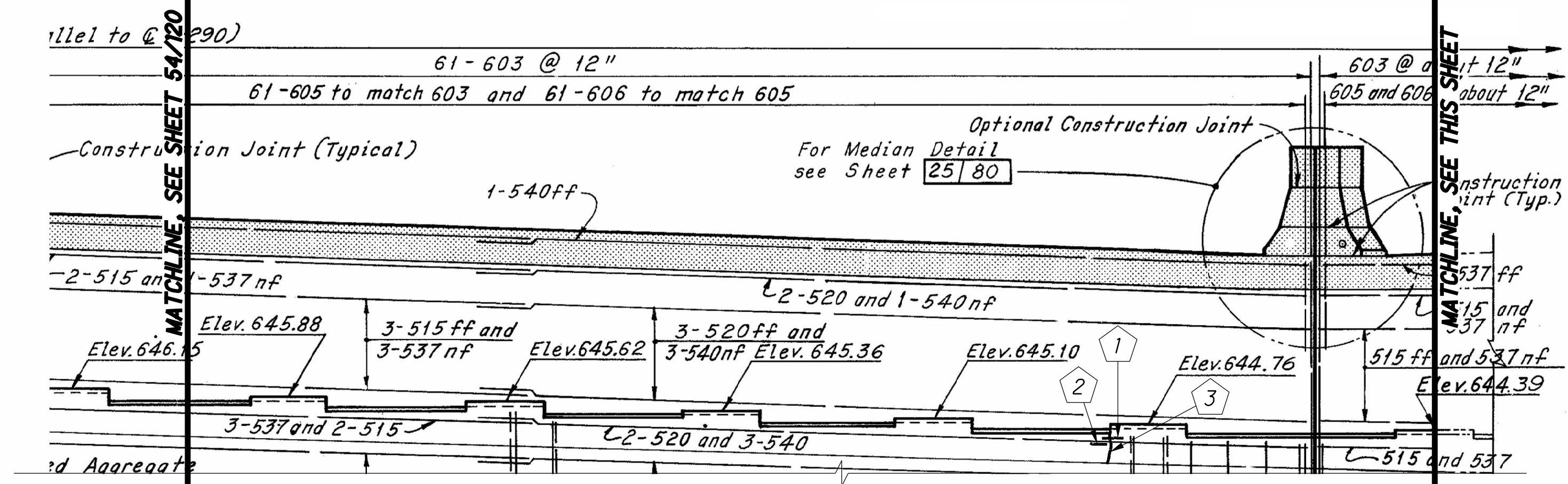
PROJECT NO. 107408  
 SHEET 54/120  
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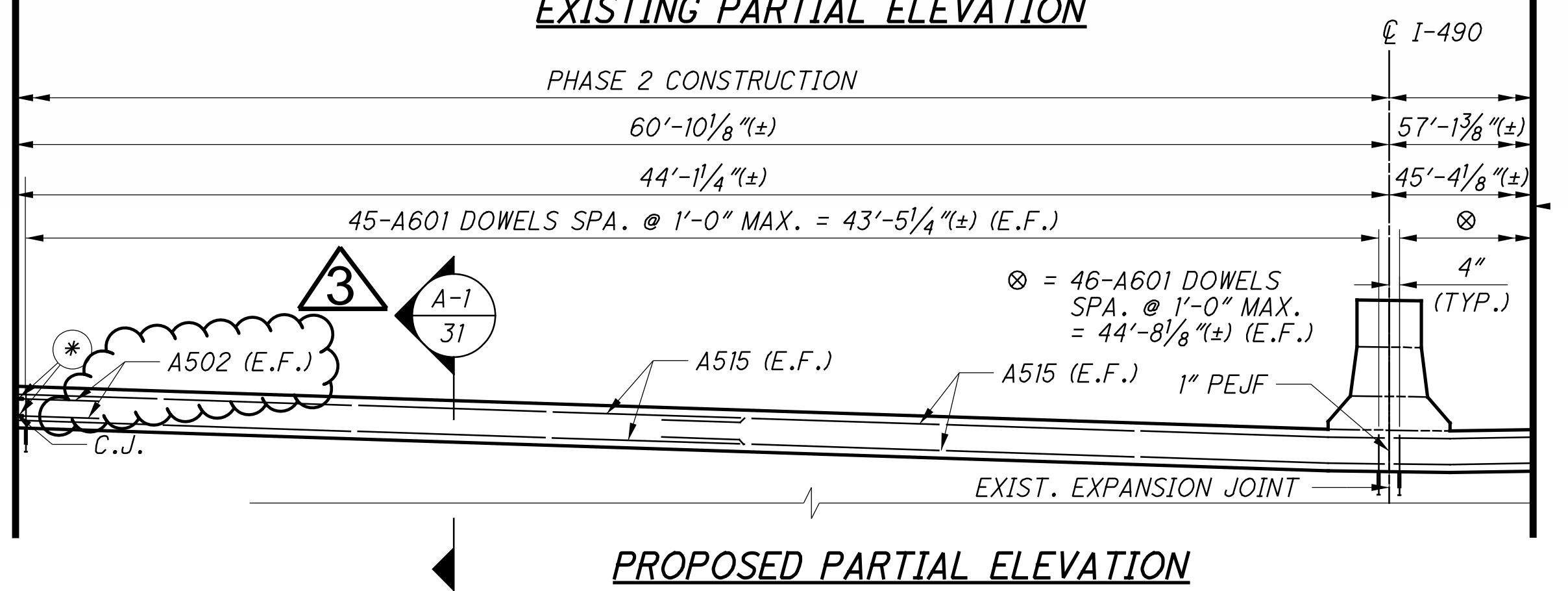
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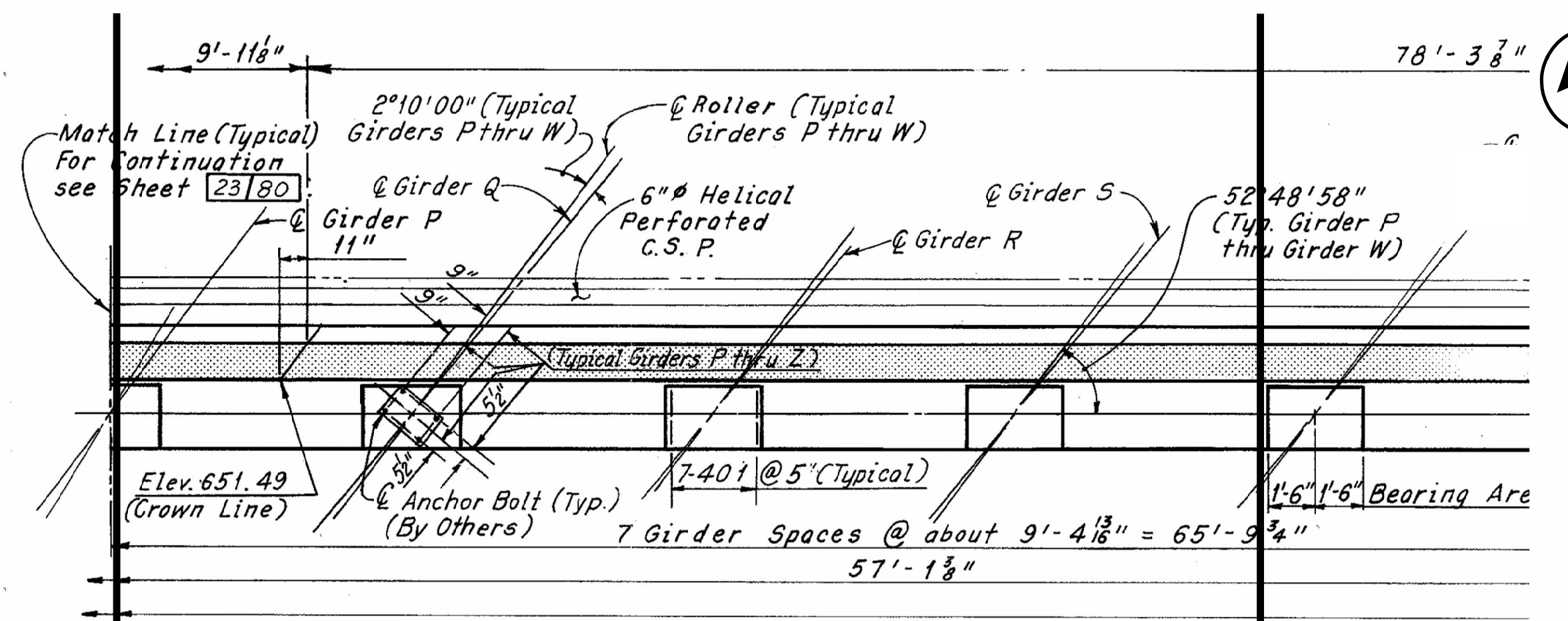
**EXISTING PLAN**



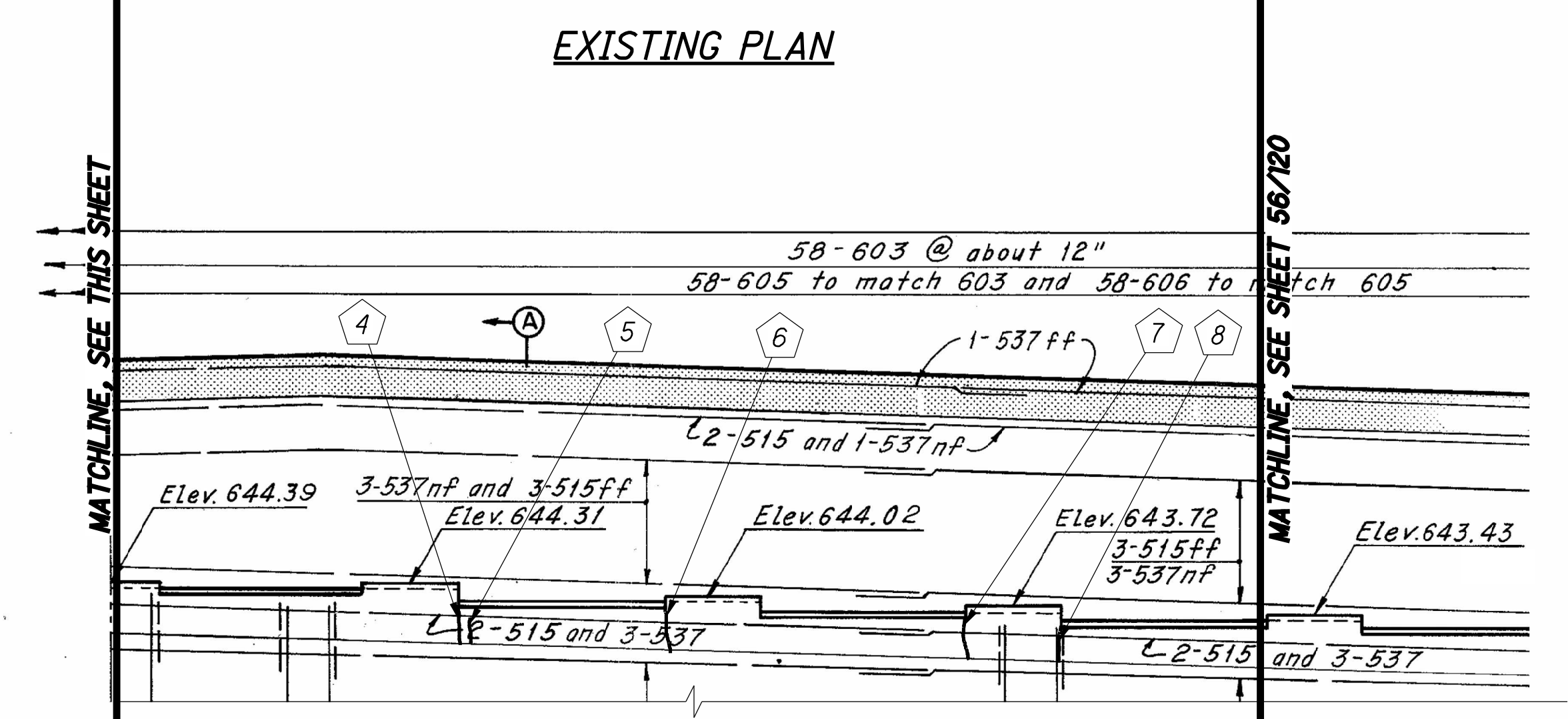
**EXISTING PARTIAL ELEVATION**



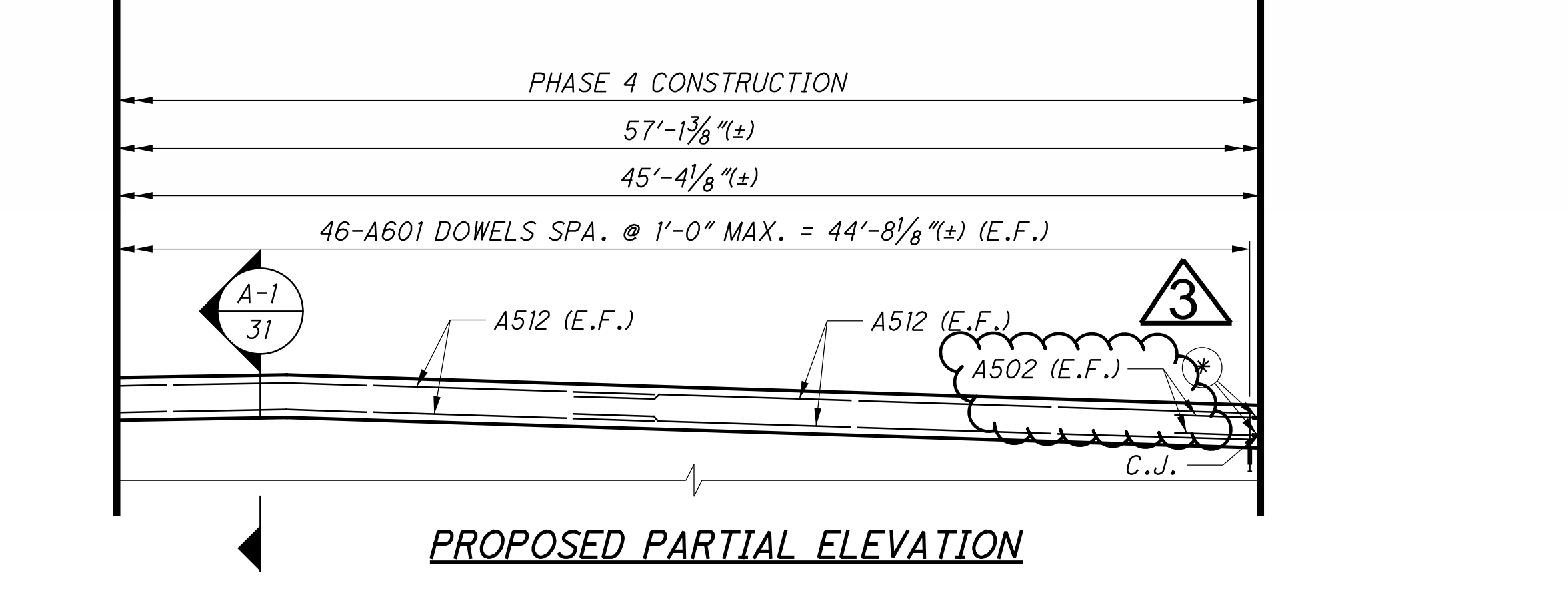
**PROPOSED PARTIAL ELEVATION**



**EXISTING PLAN**



**EXISTING PARTIAL ELEVATION**



**PROPOSED PARTIAL ELEVATION**

**LEGEND**

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN
- AREA OF DELAMINATION TO BE REPAIRED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- AREA OF CONCRETE DELAMINATION LOCATION NUMBER
- EXISTING CRACK TO BE REPAIRED LOCATION NUMBER
- THREADED MECHANICAL CONNECTOR, PROVIDING 3'-1" MIN. LAP, SHALL BE RICHMOND SCREW ANCHOR THREADED DOWEL BAR ASSEMBLY, LENTON REBAR SPLICING MECHANISM, OR APPROVED EQUAL AND THE COST SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL FOR PAYMENT

ESTIMATED PATCHING QUANTITIES		
LOCATION	WIDTH X HEIGHT	AREA (SF)
	NO	
	DETERIORATION NOTED	
TOTAL AREA MEASURED		-
TOTAL AREA ESTIMATED *		-

\* SEE NOTE 3

ESTIMATED CRACK REPAIR QUANTITIES		
LOCATION	DESCRIPTION	LENGTH
1	STEM	1.50'
2	STEM	1.00'
3	STEM	2.50'
4	STEM	3.50'
5	STEM	2.50'
6	STEM	3.50'
7	STEM	3.00'
8	STEM	3.00'
TOTAL LENGTH MEASURED		20.50'
TOTAL LENGTH ESTIMATED *		30.75'

\* SEE NOTE 3

**NOTES**

1. EXISTING PLAN AND ELEVATION VIEW LINE WORK ON THIS SHEET COMES FROM SCANS OF THE 1986 RECORD PLANS. REFERENCES TO I-290 SHOULD BE REPLACED WITH I-490.
2. PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN AUGUST 2018. THE EXACT DIMENSIONS AND LOCATIONS OF PATCHES AND CRACK REPAIRS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.
3. ESTIMATED PATCHING AND CRACK REPAIR QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.
4. FOR PARAPET REPLACEMENT DETAILS, SEE SHEET 61/120.
5. THE MINIMUM LAP LENGTH FOR ABUTMENT REINFORCING STEEL SHALL BE 2'-5" FOR #5 BARS.

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DESIGNED	JAM/JG	CHECKED	CJS/PAT
DRAWN	JAM/JG	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

EAST ABUTMENT REPAIR DETAILS - 2

BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

CUY-490-01.00

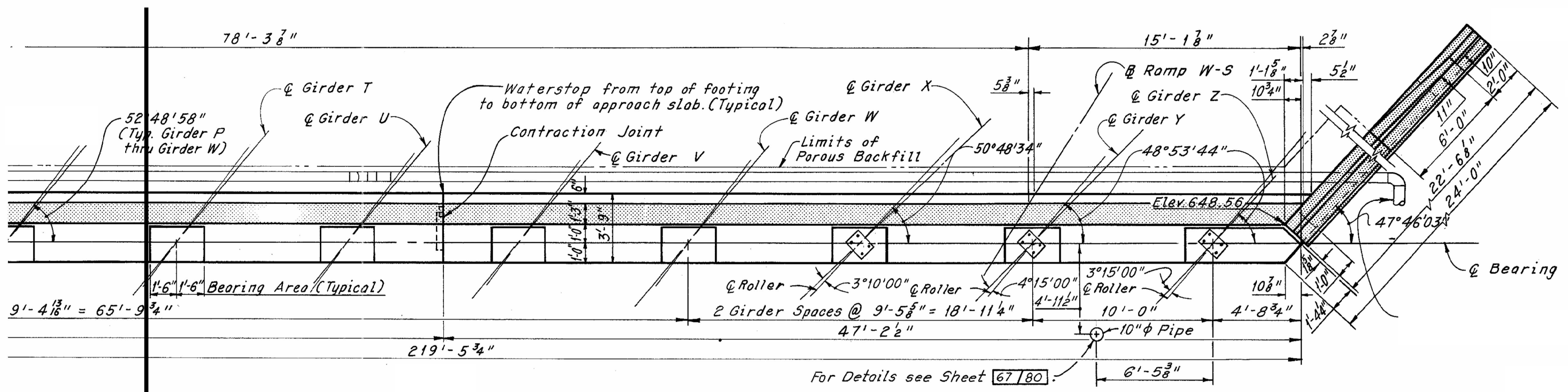
PID No. 107408

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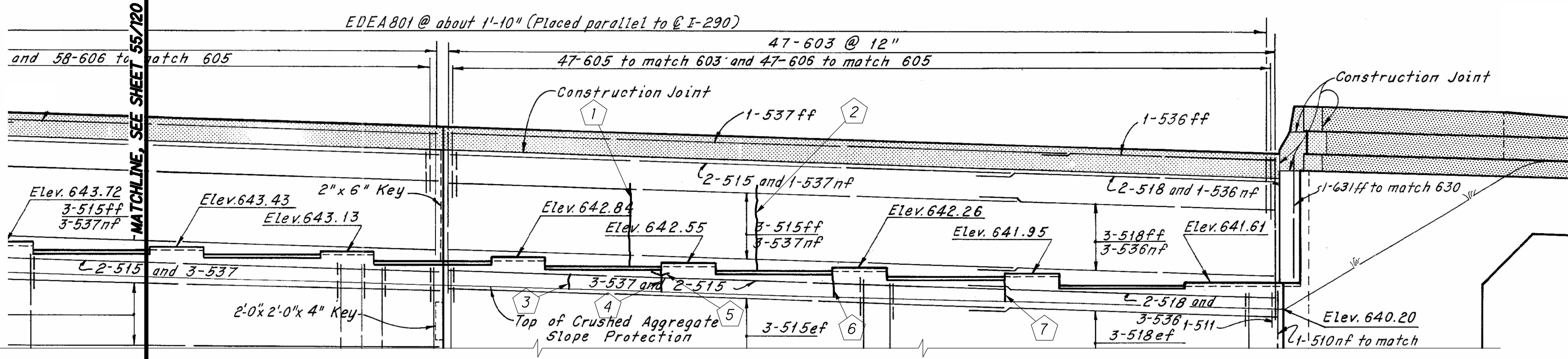
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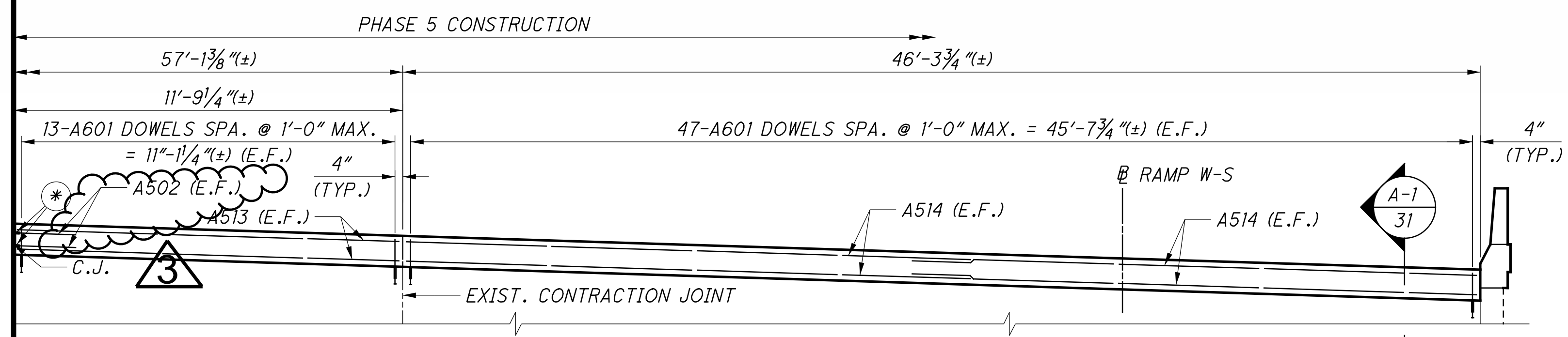
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**EXISTING PLAN**



**EXISTING PARTIAL ELEVATION**



**PROPOSED PARTIAL ELEVATION**

**LEGEND**

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN
- AREA OF DELAMINATION TO BE REPAIRED PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
- AREA OF CONCRETE DELAMINATION LOCATION NUMBER
- EXISTING CRACK TO BE REPAIRED LOCATION NUMBER
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ESTIMATED PATCHING QUANTITIES		
LOCATION	WIDTH X HEIGHT	AREA (SF)
	NO	
	DETERIORATION	
	NOTED	
TOTAL AREA MEASURED		-
TOTAL AREA ESTIMATED *		-

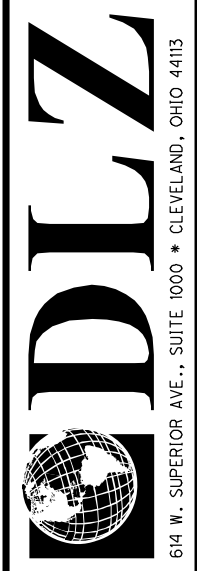
\* SEE NOTE 3

ESTIMATED CRACK REPAIR QUANTITIES		
LOCATION	DESCRIPTION	LENGTH
1	BACKWALL	4.50'
2	BACKWALL	4.50'
3	STEM	2.50'
4	STEM	3.00'
5	STEM	1.50'
6	STEM	3.00'
7	STEM	3.00'
TOTAL LENGTH MEASURED		22.00'
TOTAL LENGTH ESTIMATED *		33.00'

\* SEE NOTE 3

**NOTES**

- EXISTING PLAN AND ELEVATION VIEW LINE WORK ON THIS SHEET COMES FROM SCANS OF THE 1986 RECORD PLANS. REFERENCES TO I-290 SHOULD BE REPLACED WITH I-490.
- PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN AUGUST 2018. THE EXACT DIMENSIONS AND LOCATIONS OF PATCHES AND CRACK REPAIRS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.
- ESTIMATED PATCHING AND CRACK REPAIR QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.
- FOR PARAPET REPLACEMENT DETAILS, SEE SHEET 61/120.
- THE MINIMUM LAP LENGTH FOR ABUTMENT REINFORCING STEEL SHALL BE 2'-5" FOR #5 BARS.



DATE: 08/05/20  
 REVIEWED: MJL  
 STRUCTURE FILE NUMBER: 181991  
 DRAWN: JAM/JG  
 CHECKED: JAM/JG  
 DESIGNED: JAM/JG

**EAST ABUTMENT REPAIR DETAILS - 3**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

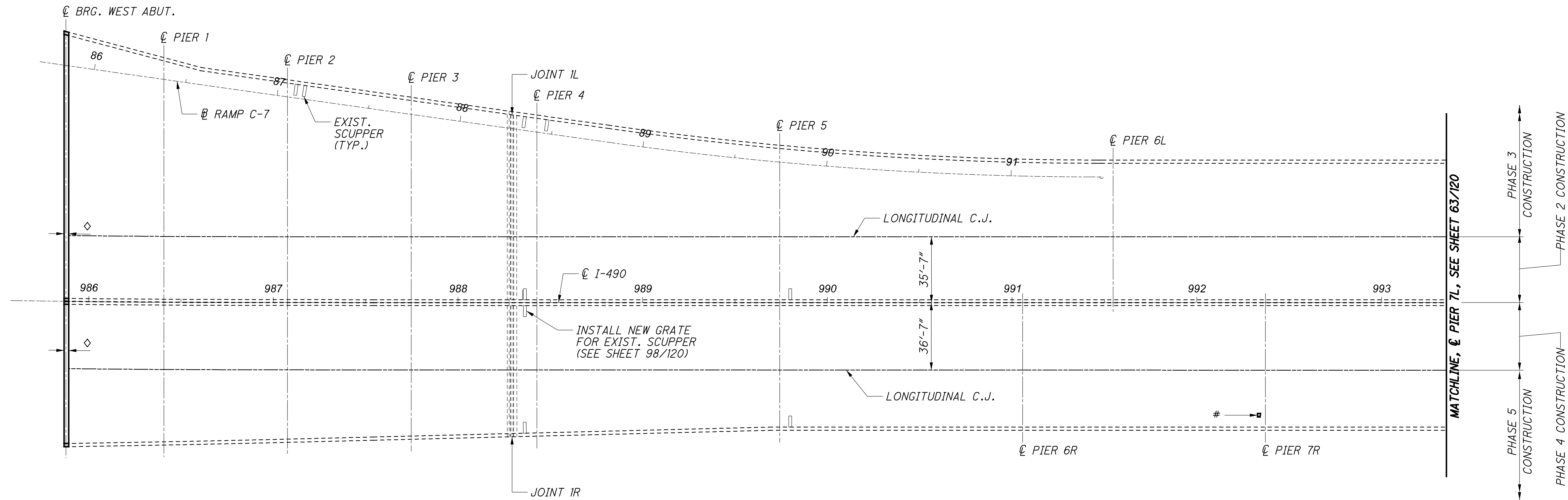
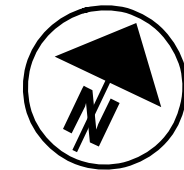
**CUY-490-01.00**  
 PID No. 107408

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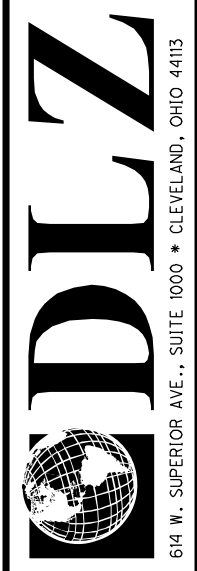
**DECK PLAN**

**LEGEND**

- # FULL DEPTH REPAIR OF PIER ACCESS MANHOLE LOCATION, SEE SHEET 69/120.
- ◇ PORTION OF EXISTING DECK SLAB TO BE REMOVED AND RECONSTRUCTED FOR EXPANSION JOINT REPLACEMENT

**NOTES**

1. REMOVE THE EXISTING CONCRETE OVERLAY BY HYDRODEMOLITION IN ACCORDANCE WITH ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED AS PER PLAN.
2. PLACE MICRO SILICA CONCRETE OVERLAY IN ACCORDANCE WITH ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION.



DESIGNED	JAM/JG	CHECKED	PAT/JDA
DRAWN	JAM/JG	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	1811991
DATE	08/05/20		

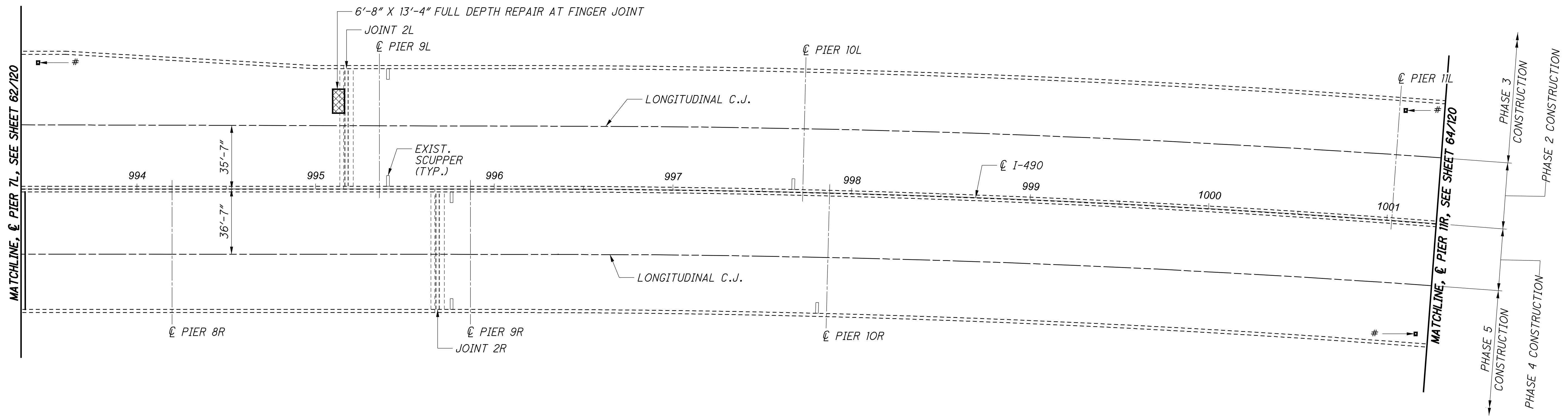
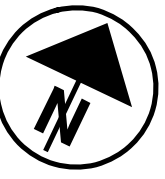
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 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
 PID No. 107408

62/120  
 73/131



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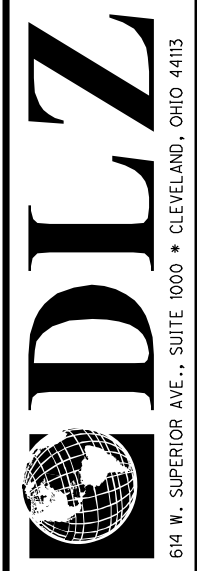
**DECK PLAN**

**LEGEND**

- # FULL DEPTH REPAIR OF PIER ACCESS MANHOLE LOCATION, SEE SHEET 69/120.
- ◇ PORTION OF EXISTING DECK SLAB TO BE REMOVED AND RECONSTRUCTED FOR EXPANSION JOINT REPLACEMENT

**NOTES**

1. REMOVE THE EXISTING CONCRETE OVERLAY BY HYDRODEMOLITION IN ACCORDANCE WITH ITEM 848. EXISTING CONCRETE OVERLAY REMOVED AS PER PLAN.
2. PLACE MICRO SILICA CONCRETE OVERLAY IN ACCORDANCE WITH ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION.



DESIGNED	JAM/JG	CHECKED	PAT/JDA
DRAWN	JAM/JG	REVISSED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

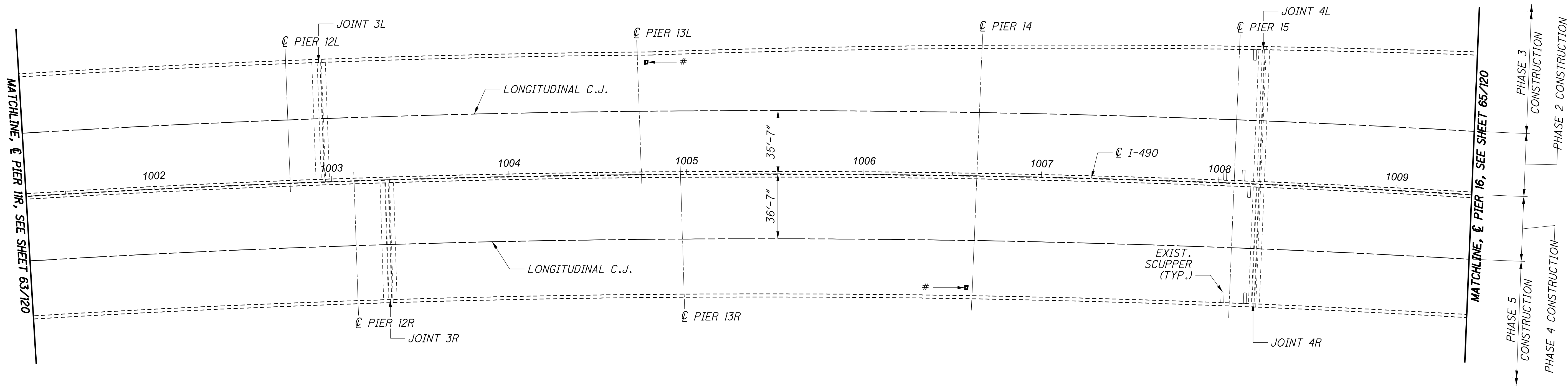
**WEARING SURFACE REPAIR DETAILS - 2**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
 PID No. 107408

63	120
74	131



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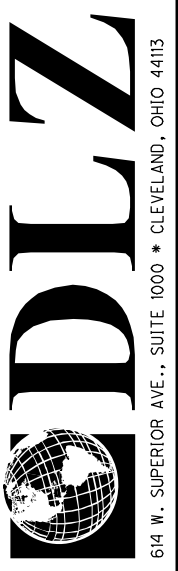
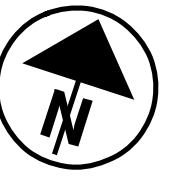
**DECK PLAN**

**LEGEND**

- # FULL DEPTH REPAIR OF PIER ACCESS MANHOLE LOCATION, SEE SHEET 69/120.
- ◇ PORTION OF EXISTING DECK SLAB TO BE REMOVED AND RECONSTRUCTED FOR EXPANSION JOINT REPLACEMENT

**NOTES**

1. REMOVE THE EXISTING CONCRETE OVERLAY BY HYDRODEMOLITION IN ACCORDANCE WITH ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED AS PER PLAN.
2. PLACE MICRO SILICA CONCRETE OVERLAY IN ACCORDANCE WITH ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION.



DESIGNED	JAM/JG	CHECKED	PAT/JDA
DRAWN	JAM/JG	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

**WEARING SURFACE REPAIR DETAILS - 3**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

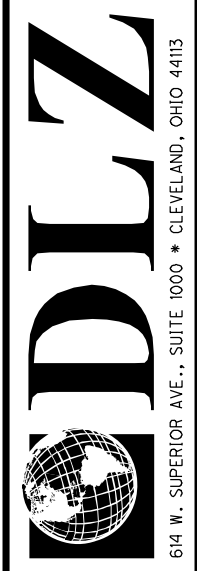
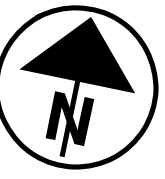
**CUY-490-01.00**  
 PID No. 107408

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 75/131





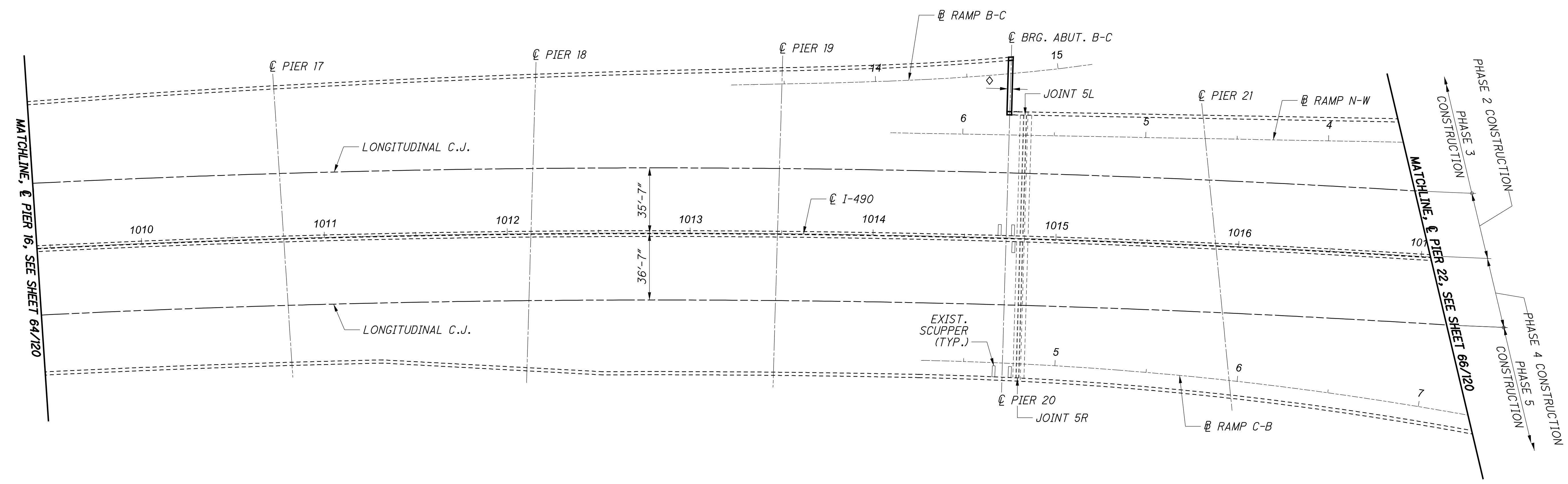
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DESIGNED	JAM/JG	CHECKED	PAT/JDA
DRAWN	JAM/JG	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

**WEARING SURFACE REPAIR DETAILS - 4**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
 PID No. 107408



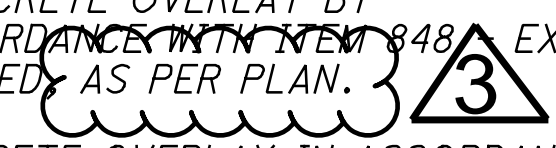
**DECK PLAN**

**LEGEND**

- # FULL DEPTH REPAIR OF PIER ACCESS MANHOLE LOCATION, SEE SHEET 69/120.
- ◇ PORTION OF EXISTING DECK SLAB TO BE REMOVED AND RECONSTRUCTED FOR EXPANSION JOINT REPLACEMENT

**NOTES**

1. REMOVE THE EXISTING CONCRETE OVERLAY BY HYDRODEMOLITION IN ACCORDANCE WITH ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED AS PER PLAN.
2. PLACE MICRO SILICA CONCRETE OVERLAY IN ACCORDANCE WITH ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION.

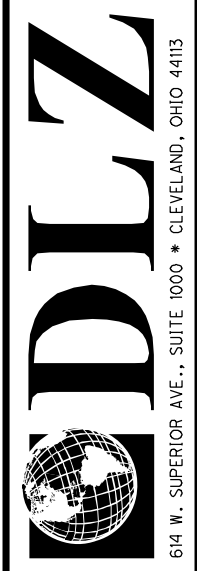
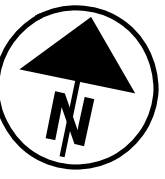


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76/131



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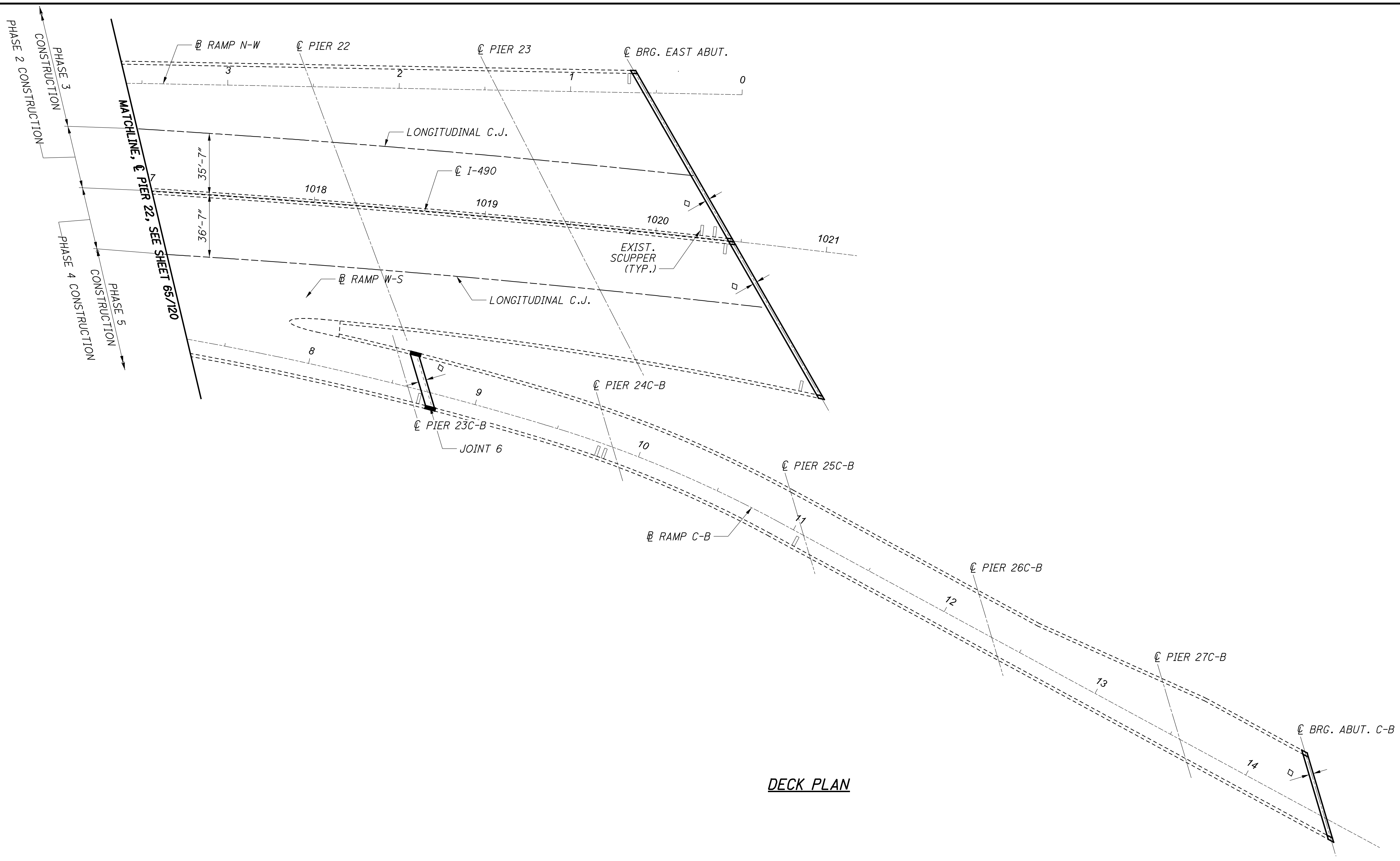


DESIGNED	JAM/JG	CHECKED	PAT/JDA
DRAWN	JAM/JG	REVISED	
REVIEWED	MJL	STRUCTURE FILE NUMBER	181991
DATE	08/05/20		

**WEARING SURFACE REPAIR DETAILS - 5**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

**CUY-490-01.00**  
 PID No. 107408

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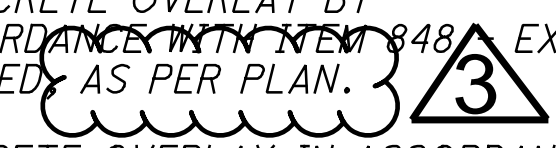
**DECK PLAN**

**LEGEND**

- # FULL DEPTH REPAIR OF PIER ACCESS MANHOLE LOCATION, SEE SHEET 69/120.
- ◇ PORTION OF EXISTING DECK SLAB TO BE REMOVED AND RECONSTRUCTED FOR EXPANSION JOINT REPLACEMENT

**NOTES**

1. REMOVE THE EXISTING CONCRETE OVERLAY BY HYDRODEMOLITION IN ACCORDANCE WITH ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED AS PER PLAN.
2. PLACE MICRO SILICA CONCRETE OVERLAY IN ACCORDANCE WITH ITEM 848 - MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION.



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**REINFORCING STEEL LIST**

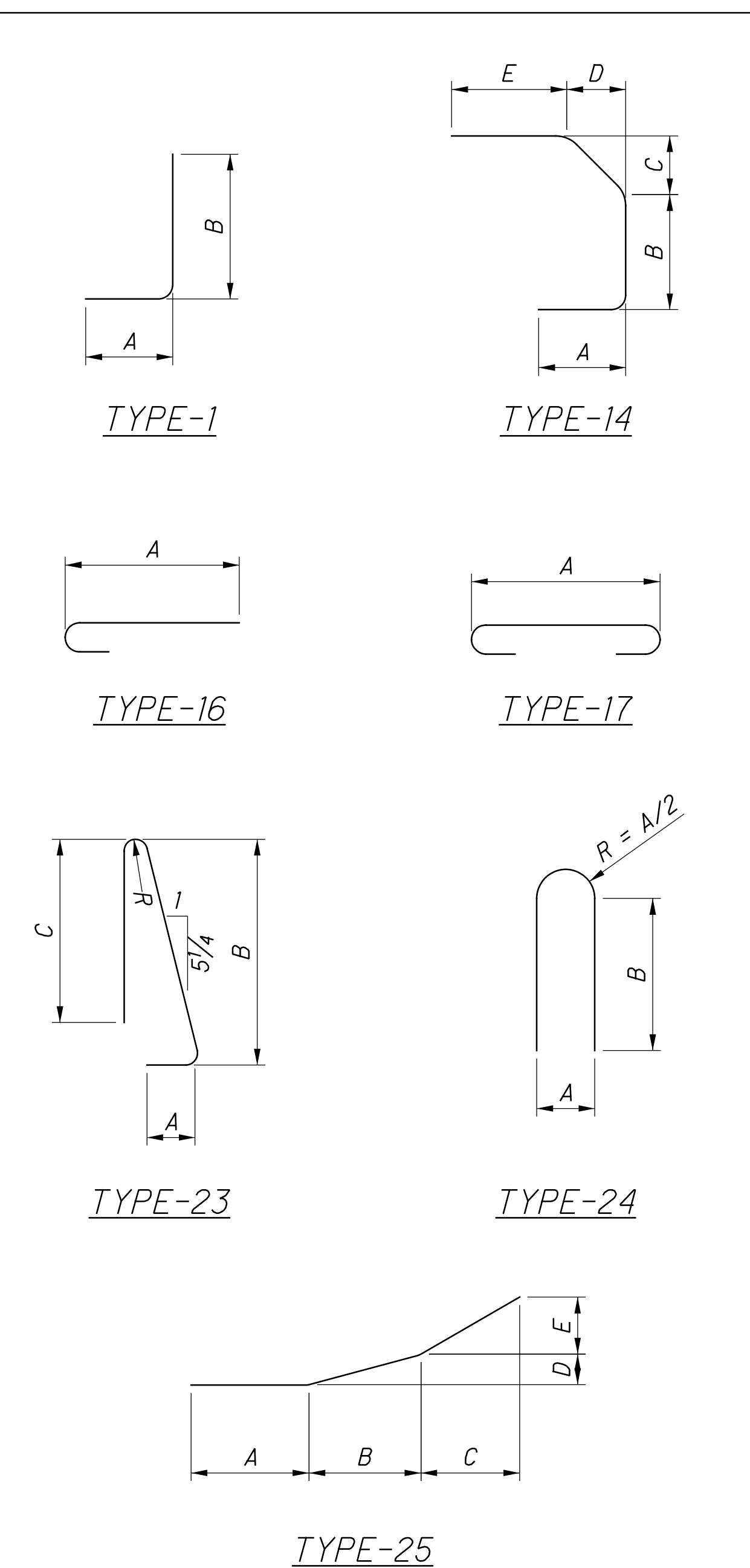
MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS					SERIES INC.
					A	B	C	D	E	
<b>ABUTMENTS</b>										
A501	4	3'-5"	131	STR						
A502	16	7'-8"	125	STR						
A503	4	36'-3"	151	STR						
A504	4	29'-5"	123	STR						
A505	4	5'-5"	23	STR						
A506	4	25'-6"	106	STR						
A507	4	16'-5"	68	STR						
A508	4	30'-4"	127	STR						
A509	4	38'-5"	160	STR						
A510	8	27'-1"	226	STR						
A511	4	16'-4"	68	STR						
A512	8	23'-9"	198	STR						
A513	4	11'-5"	48	STR						
A514	8	24'-3"	202	STR						
A515	8	23'-2"	193	STR						
A516	NOT USED									
A517	NOT USED									
A518	4	25'-2"	105	STR						
A519	8	26'-2"	218	STR						
A520	SER OF	TO	321	16	2'-5"					0.75"
	15	3'-10"			3'-3"					
A521	24	13'-10"	346	STR						
A522	12	5'-7"	70	25	1'-10"	2'-5"	1'-4"	0'-2"	0'-5"	
A523	12	5'-8"	71	STR						
A524	36	10'-0"	375	STR						
A525	39	7'-0"	285	23	0'-8"	3'-3"	3'-0"			
A526	2	13'-8"	29	STR						
A527	6	2'-6"	16	STR						
A528	4	4'-9"	20	STR						
A529	2	16'-6"	34	STR						
A530	6	6'-8"	42	STR						
A531	4	8'-11"	37	STR						
A532	2	20'-8"	43	STR						
A533	12	4'-8"	58	STR						
A534	8	6'-11"	58	STR						
A535	4	18'-9"	78	STR						
A536	6	14'-2"	89	STR						
A537	4	16'-5"	68	STR						
A538	2	28'-2"	59	STR						
A601	1,054	2'-6"	3,958	1	0'-9"	1'-11"				
A602	SER OF	TO	575	1	1'-0"	3'-0"				0.75"
	15	4'-8"			3'-10"					
A603	36	3'-10"	207	1	1'-0"	3'-0"				
A604	4	4'-11"	30	24	0'-5"	2'-2"				
A605	4	5'-4"	32	23	0'-8"	2'-5"	2'-2"			
A606	4	3'-5"	21	14	1'-0"	1'-3"	0'-8"	0'-6"	0'-7"	
A607	8	4'-4"	52	1	1'-0"	3'-6"				
A608	4	5'-2"	31	24	0'-7"	2'-2"				
A609	4	5'-4"	32	23	0'-8"	2'-5"	2'-2"			
A610	4	3'-7"	22	14	1'-0"	1'-3"	0'-8"	0'-7"	0'-9"	
		TOTAL	9,331	LBS						

**CONCRETE REINFORCEMENT LIST**

MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS					SERIES INC.
					A	B	C	D	E	
<b>SUPERSTRUCTURE</b>										
S501	36	7'-0"	263	23	0'-8"	3'-3"	3'-0"			
S502	48	3'-0"	150	14	1'-0"	0'-10"	0'-8"	0'-6"	0'-7"	
S503	48	2'-4"	117	1	1'-0"	1'-6"				
S504	12	4'-10"	60	24	0'-4"	2'-2"				
S505	12	5'-4"	67	23	0'-8"	2'-5"	2'-2"			
S601	156	5'-8"	1,328	17	4'-4"					
S602	76	30'-0"	3,425	STR						
S603	20	20'-0"	601	STR						
		TOTAL	6,011	LBS						
<b>APPROACH SLABS</b>										
AS501	86	5'-11"	531	23	0'-8"	2'-9"	2'-6"			
AS502	86	5'-0"	448	24	0'-4"	2'-3"				
AS503	48	19'-8"	985	STR						
AS504	SER OF	TO	72	STR						29.75"
	7	17'-3"								
AS505	SER OF	TO	97	STR						24"
	9	18'-4"								
AS506	SER OF	TO	232	STR						1.5"
	39	8'-2"								
AS507	SER OF	TO	185	STR						2"
	31	8'-2"								
AS508	114	5'-3"	624	STR						
AS509	4	20'-3"	84	STR						
AS510	4	18'-3"	76	STR						
AS601	86	2'-6"	323	1	1'-0"	1'-8"				
AS602	86	3'-1"	398	14	1'-0"	0'-10.5"	0'-8.5"	0'-6"	0'-7"	
		TOTAL	4,055	LBS						

CONCRETE REINFORCEMENT WEIGHTS AND TOTALS FOR THE APPROACH SLABS ARE PROVIDED FOR INFORMATION ONLY. THE CONCRETE REINFORCEMENT LISTED ABOVE IS REQUIRED IN ADDITION TO THE CONCRETE REINFORCEMENT SHOWN IN ODOT STANDARD DRAWING AS-1-15. INCLUDE ALL CONCRETE REINFORCEMENT FOR APPROACH SLABS FOR PAYMENT WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN.

**BENDING DIAGRAMS**



**CONCRETE REINFORCEMENT NOTES**

- SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNT.
- ALL DIMENSIONS ARE OUT TO OUT.
- TYPE 'STR' INDICATES A STRAIGHT BAR.
- THE BAR SIZE NUMBER IS INDICATED IN THE 'MARK' COLUMN. THE FIRST ONE OR TWO DIGITS OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A #5 BAR SIZE AND P1001 IS A #10 BAR SIZE.
- ALL CONCRETE REINFORCEMENT SHALL BE EPOXY COATED.

**DLZ**  
 601 W. SUPERIOR AVE., SUITE 1000 • CLEVELAND, OHIO 44113  
 DATE: 08/05/20  
 REVIEWED: MJL  
 DRAWN: JAM/VJS  
 DESIGNED: JAM/VJS  
 CHECKED: PAT/JDA  
 STRUCTURE FILE NUMBER: 1811991  
**CONCRETE REINFORCEMENT LIST**  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER  
**CUY-490-01.00**  
 PID No. 107408  
 120/120  
 131/131  
 03/21/2024