CUY-90-14.90

PID 77332/85531

APPENDIX EX-25

CUY-090-1341 PID 20800
(Reference Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

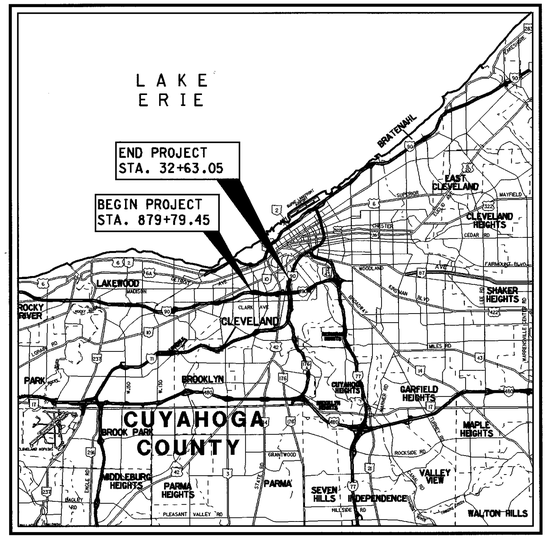
Revision Date: 2000

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-90/490-13.41/0.00

CITY OF CLEVELAND

CUYAHOGA COUNTY



LOCATION MAP

LATITUDE: N 41°28'26"± LONGITUDE: W 81°42'08"±

SCALE IN MILES

0 1 2 4 6 8 10

N

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

DESIGN DESIGNATION	IR-90	IR-490
CURRENT ADT (2001)	102200	50400
DESIGN YEAR ADT (2021)	107180	59500
DESIGN HOURLY VOLUME (2009)	10718	5950
DIRECTIONAL DISTRIBUTION	55 %	55 %
TRUCKS (24 HOUR B&C)	7.5 %	9.0 %
DESIGN SPEED	65 MPH	65 MPH
LEGAL SPEED	60 MPH	60 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN INTERSTATE

DESIGN EXCEPTIONS : NONE

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:
OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT TWELVE
PRODUCTION

STATE OF OHIO — BERNARD J. KRUSE E-58300 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — BRIAN M. BLAYNEY E-62177 — REGISTERED PROFESSIONAL ENGINEER

STATE OF OHIO — ERIC M. KALLIO E-59990 — REGISTERED PROFESSIONAL ENGINEER

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT PROVIDES FOR THE RESURFACING OF MAINLINE IR-90 FROM JUST WEST OF W 44TH ST TO BRIDGE NO. CUY-90-1490 AND THE PAVEMENT REPAIR OF IR-490 FROM THE IR-90 & IR-490 SPLIT TO BRIDGE NO. CUY-490-0100. MAJOR WORK ITEMS INCLUDE RESURFACING, CONCRETE PAVEMENT REPAIR, LIGHTING, PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS.

LIMITED ACCESS

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

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

APPROVED _____
DATE 20NOV2000 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

										SUPPLEMENTAL SPECIFICATIONS	
		GR-1.1M	10/21/97	HL-10.11M	05/01/95	TC-7.65M	02/01/94	TC-71.10M	09/01/93		
BP-2.1	07/28/00	GR-1.2M	01/03/96	HL-10.12M	05/01/95	TC-21.10M	12/10/96	TC-72.20M	09/01/93	806	09/09/97
BP-2.2	07/28/00	GR-1.3M	11/30/94	HL-10.31M	03/31/95	TC-21.40M	02/01/94	MT-35.10M	01/30/95	814	06/02/98
BP-2.5	07/28/00	GR-2.1M	04/14/98	HL-20.11M	03/31/95	TC-22.20M	02/01/94	MT-35.11M	01/30/95	825	09/14/99
BP-3.1	07/28/00	GR-2.2M	10/21/97	HL-20.13M	01/31/97	TC-31.21M	03/31/94	MT-95.30M	04/25/94	828	07/28/98
BP-5.1	07/28/00			HL-20.21M	08/31/94	TC-32.10M	03/31/94	MT-95.40M	04/25/94	830	10/21/98
		GR-3.1M	10/21/97	HL-30.11M	03/31/95	TC-41.10M	03/31/94	MT-98.12M	06/24/93	870	08/10/99
BP-9.1	07/28/00	GR-3.2M	10/21/97	HL-30.21M	05/01/95	TC-41.20M	07/01/94	MT-98.13M	06/24/93	877	04/13/99
		GR-3.4M	10/21/97	HL-30.22M	03/31/95	TC-41.40M	03/31/94	MT-98.14M	06/24/93	880	06/15/99
F-1.1	07/28/00	GR-4.2M	10/21/97	HL-40.10M	03/31/95	TC-42.20M	03/31/94	MT-98.15M	06/24/93	889	09/14/99
F-3.1	07/28/00			HL-50.11M	03/31/95	TC-52.10M	07/29/94	MT-98.16M	06/24/93	908	03/28/00
F-3.2	07/28/00	RM-4.2M	10/21/97	HL-60.11M	05/01/95	TC-52.20M	07/29/94	MT-98.17M	04/25/94	925	09/14/99
F-3.3	07/28/00	RM-4.3M	10/21/97	HL-60.12M	03/31/95	TC-61.10M	03/31/94	MT-98.18M	04/25/94	932	10/02/96
		RM-4.4M	10/21/97	HL-60.21M	03/31/95	TC-65.10M	11/01/95	MT-105.10M	04/25/94		
F-3.4	07/28/00	RM-4.5M	10/21/97	HL-60.31M	03/31/95	TC-65.11M	11/01/95	MT-105.11M	04/25/94		

FEDERAL PROJECT NO. TE21 G000 (630)
PID NO. 20800
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CUYAHOGA COUNTY
CUY-90/490-13.41/0.00
1/110

CURVE DATA (℄ WB):
P.I. STA. = 864+68.46
Δ = 27° 49′ 22″ (RT)
DC = 1° 27′ 12″
R = 3,942.53′
T = 976.51′
L = 1,914.49′
E = 119.13′

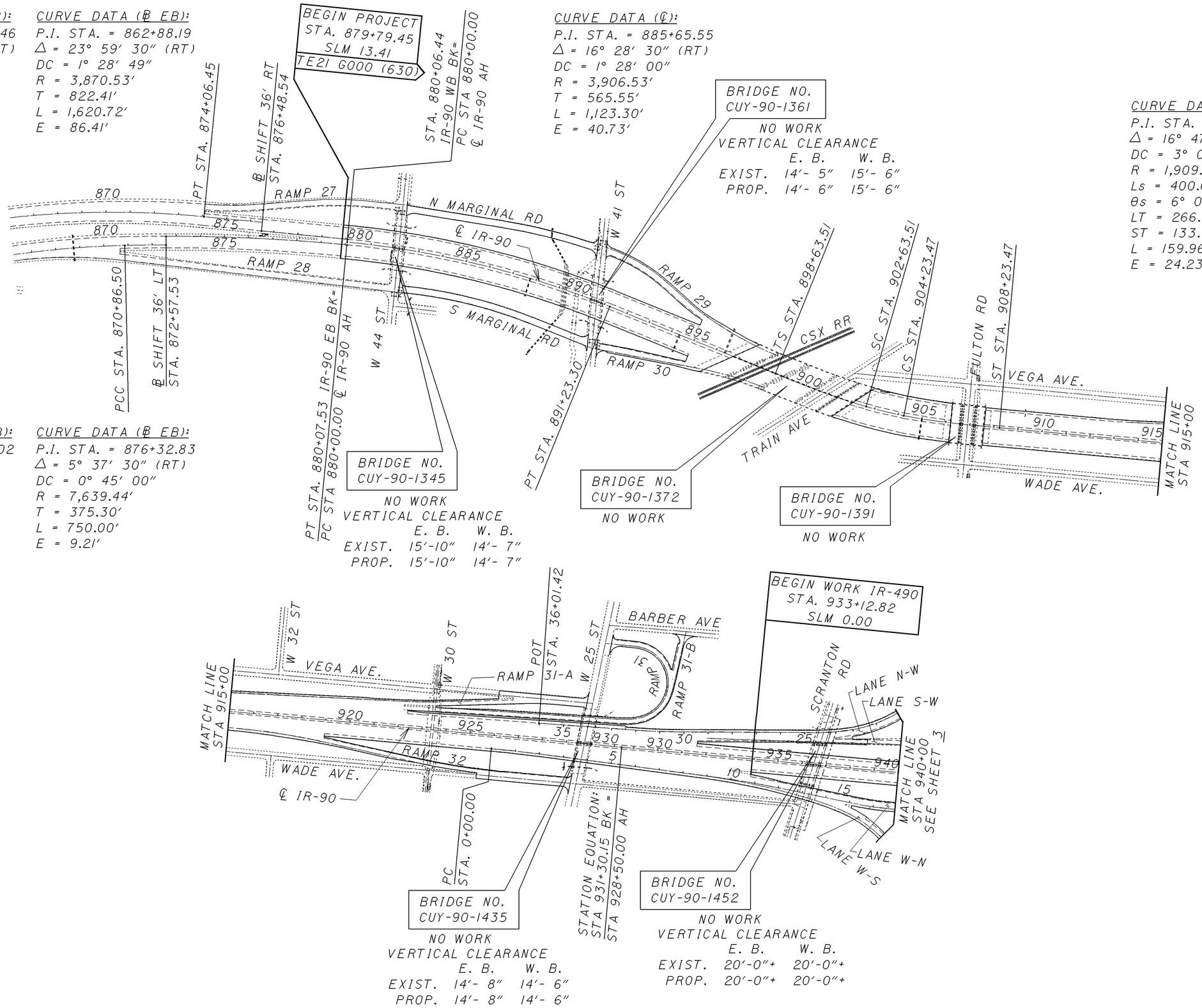
CURVE DATA (℄ EB):
P.I. STA. = 862+88.19
Δ = 23° 59′ 30″ (RT)
DC = 1° 28′ 49″
R = 3,870.53′
T = 822.41′
L = 1,620.72′
E = 86.41′

CURVE DATA (℄ EB):
P.I. STA. = 871+72.02
Δ = 1° 17′ 20″ (RT)
DC = 0° 45′ 13″
R = 7,603.44′
T = 85.52′
L = 171.02′
E = 0.48′

CURVE DATA (℄ EB):
P.I. STA. = 876+32.83
Δ = 5° 37′ 30″ (RT)
DC = 0° 45′ 00″
R = 7,639.44′
T = 375.30′
L = 750.00′
E = 9.21′

CURVE DATA (℄):
P.I. STA. = 885+65.55
Δ = 16° 28′ 30″ (RT)
DC = 1° 28′ 00″
R = 3,906.53′
T = 565.55′
L = 1,123.30′
E = 40.73′

CURVE DATA (℄):
P.I. STA. = 903+45.96
Δ = 16° 47′ 56″ (LT)
DC = 3° 00′ 00″
R = 1,909.86′
Ls = 400.00′
θs = 6° 00′ 00″
LT = 266.82′
ST = 133.47′
L = 159.96′
E = 24.23′



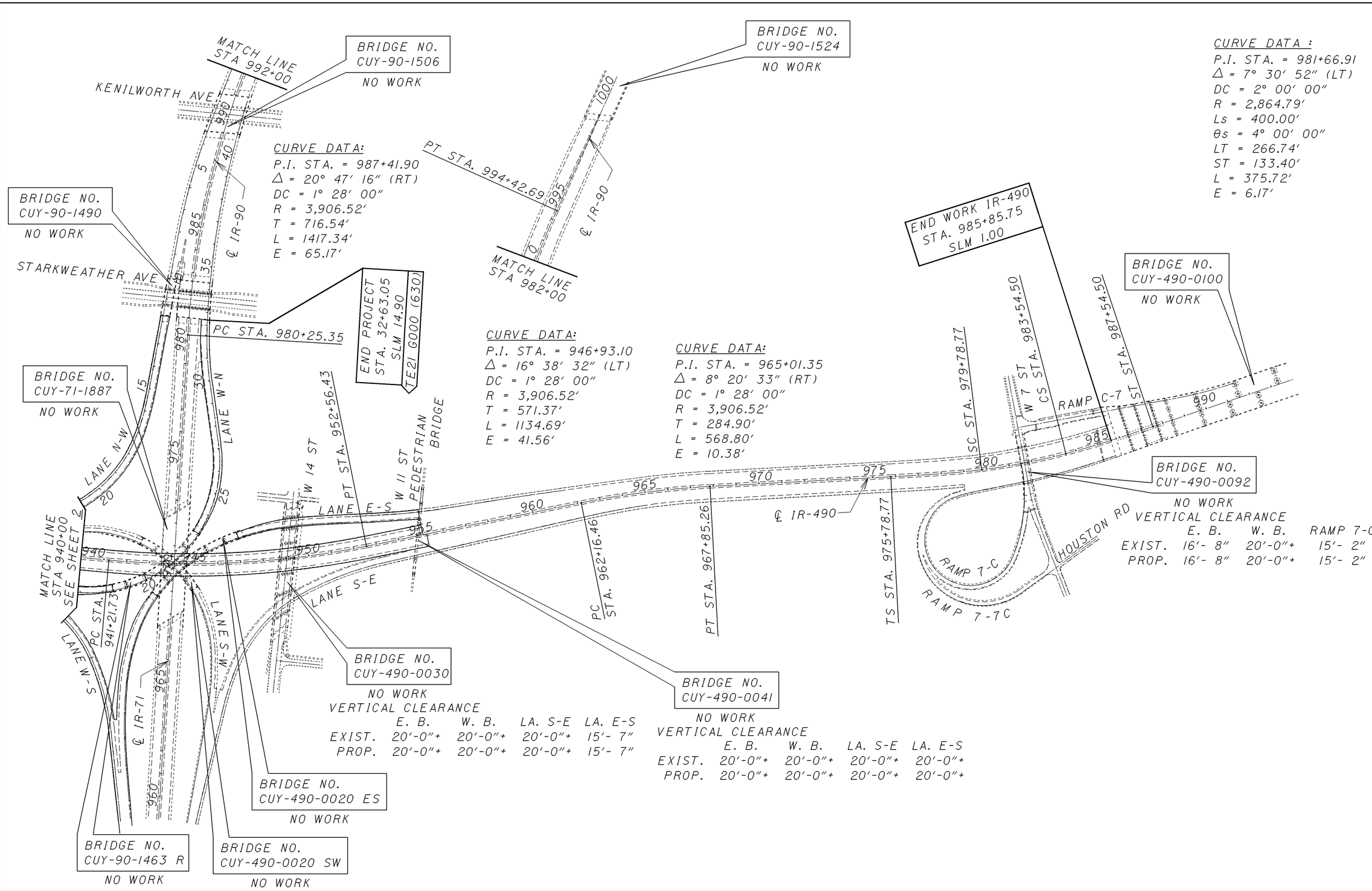
SCALE IN FEET 0 100 200 400

CALCULATED EMK CHECKED LDH

SCHEMATIC PLAN

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

2/110



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20800GBB.DGN

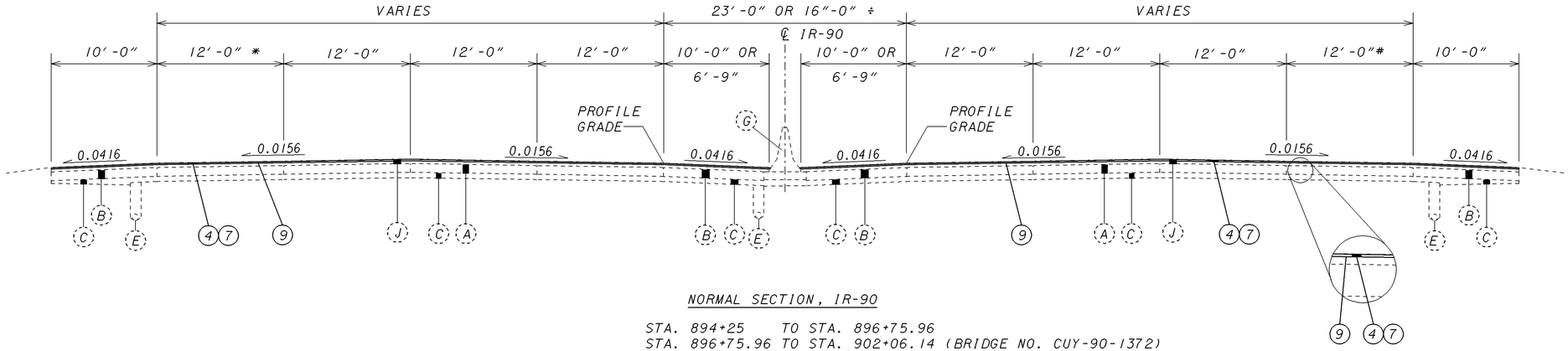
CALCULATED EMK CHECKED LDH

SCALE IN FEET 0 100 200 400

SCHEMATIC PLAN

CUYAHOGA COUNTY
CUY-90/490-13.41/ 0.00

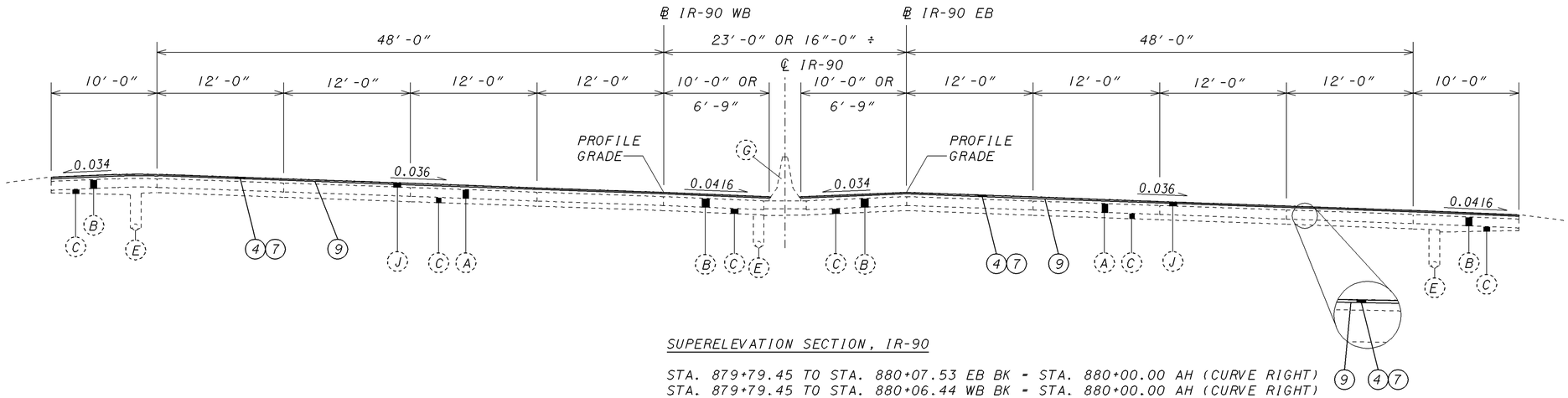
3
110



NORMAL SECTION, IR-90

STA. 894+25 TO STA. 896+75.96
STA. 896+75.96 TO STA. 902+06.14 (BRIDGE NO. CUY-90-1372)
STA. 910+23.47 TO STA. 925+93.25 EB
\# STA. 925+93.25 TO STA. 931+30.15 EB BK - STA. 928+50.00 AH
STA. 910+23.47 TO STA. 922+18.85 WB
* STA. 922+18.85 TO STA. 931+30.15 WB BK - STA. 928+50.00 AH

* - WB WIDTH VARIES FROM 12′ TO 30′
\# - EB WIDTH VARIES FROM 12′ TO 28′
÷ - 23′ FROM STA. 879+79.45 TO STA. 904+25.00
- 23′ TO 16′ FROM STA. 904+25.00 TO STA. 908+23.47
- 16′ FROM STA. 908+23.47 TO STA. 928+50.00



SUPERELEVATION SECTION, IR-90

STA. 879+79.45 TO STA. 880+07.53 EB BK - STA. 880+00.00 AH (CURVE RIGHT)
STA. 879+79.45 TO STA. 880+06.44 WB BK - STA. 880+00.00 AH (CURVE RIGHT)
STA. 880+00.00 TO STA. 894+25.00 (CURVE RIGHT)
STA. 902+06.14 TO STA. 906+20.01 (CURVE LEFT)
STA. 906+20.01 TO STA. 907+59.02 (BRIDGE NO. CUY-90-1391)
STA. 907+59.02 TO STA. 910+23.47

PROPOSED

(1) ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
(2) ITEM 203 - LINEAR GRADING, METHOD A
(3) ITEM 203 - SUBGRADE COMPACTION
(4) ITEM 254 - PAVEMENT PLANING, BITUMINOUS (1-1/2″)
(5) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE
(6) ITEM 304 - 6″ AGGREGATE BASE, AS PER PLAN
(7) ITEM 446 - 1-½″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY
(8) ITEM 448 - 3″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, (UNDER GUARDRAIL)
(9) ITEM 407 - TACK COAT
(10) NOT USED
(11) ITEM 606 - GUARDRAIL, TYPE 5
(12) ITEM 202 - PAVEMENT REMOVED
(13) ITEM 880 - 3-1/2″ ASPHALT CONCRETE (5 YEAR WARRANTY)
(14) ITEM 451 - 9″ RENFORCED CONCRETE PAVEMENT, AS PER PLAN
(15) ITEM 830 - CURB, TYPE 2-A
(16) ITEM 605 - 6″ SHALLOW PIPE UNDERDRAIN

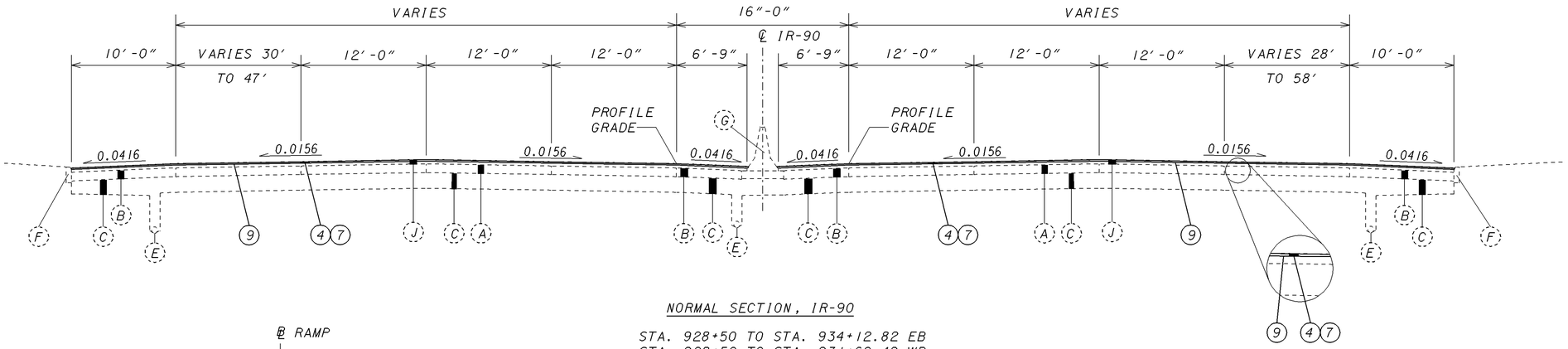
EXISTING

(A) 10″ REINFORCED CONCRETE PAVEMENT
(B) 10″ CONCRETE PAVEMENT
(C) AGGREGATE BASE (6″ OR 18″)
(D) BITUMINOUS AGGREGATE BASE
(E) UNDERDRAIN
(F) CONCRETE CURB
(G) CONCRETE BARRIER
(H) GUARDRAIL
(I) MEDIAN
(J) 5″ ASPHALT OVERLAY
(K) 3″ ASPHALT OVERLAY
(L) 9″ CONCRETE BASE
(M) 9″ REINFORCED CONCRETE PAVEMENT
(N) 5″ BRICK
(O) CONCRETE MEDIAN

CALCULATED EMK | DRAWN EMK | REVISED
CHECKED LDH

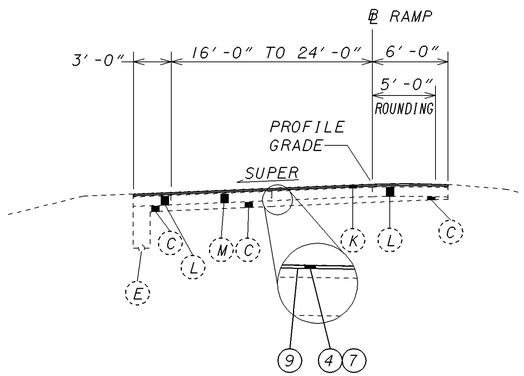
TYPICAL SECTIONS - I.R. 90

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

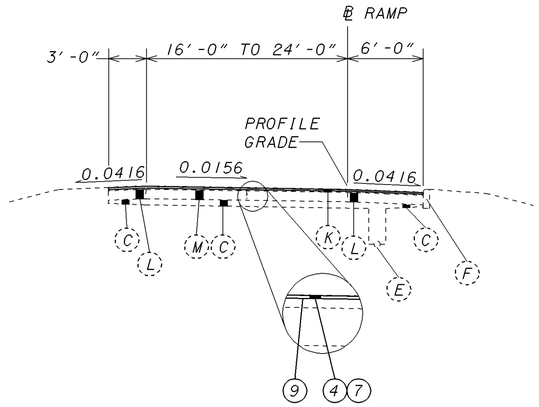


NORMAL SECTION, IR-90

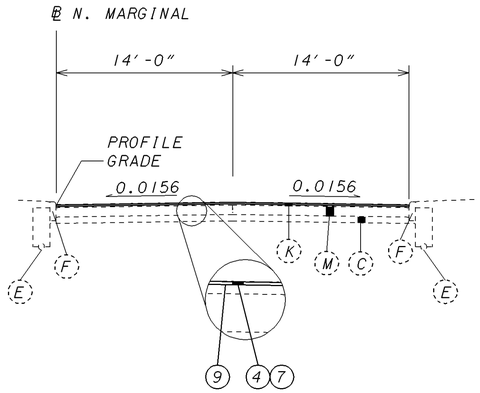
STA. 928+50 TO STA. 934+12.82 EB
STA. 928+50 TO STA. 931+60.49 WB



SUPERELEVATED RAMP SECTION (CURVE LEFT)

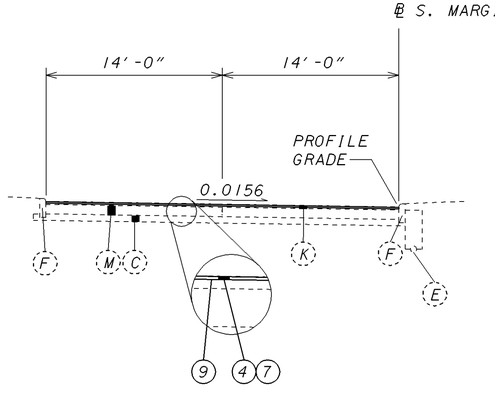


NORMAL RAMP SECTION



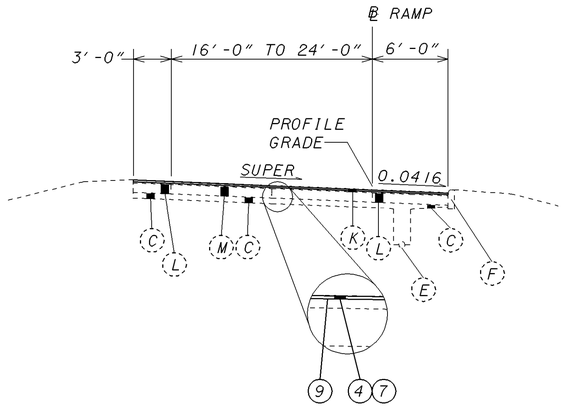
NORTH MARGINAL ROAD

STA. 0+18 TO STA. 8+20



SOUTH MARGINAL ROAD

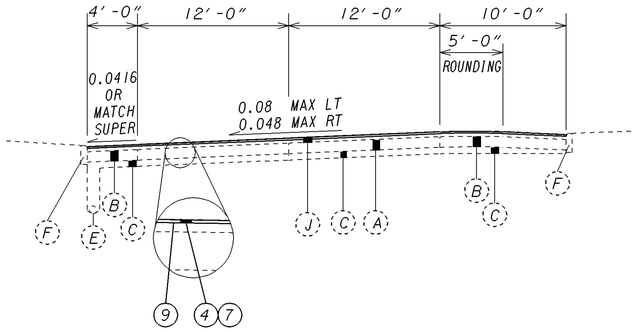
STA. 0+18 TO STA. 8+30



SUPERELEVATED RAMP SECTION (CURVE RIGHT)

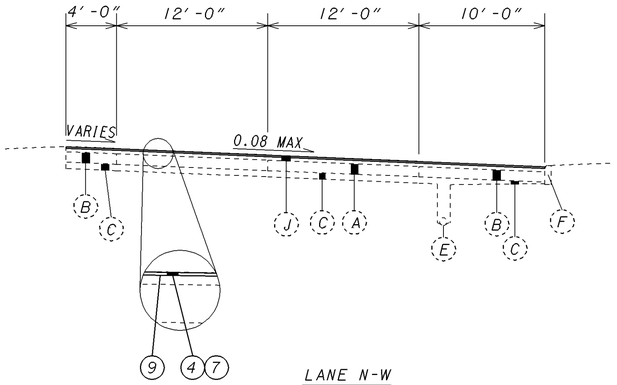
RAMP LIMITS

RAMP 29: STA. 90+03 TO STA. 95+95.01
RAMP 30: STA. 91+29.27 TO STA. 95+81.79
RAMP 31: STA. 22+18.85 TO STA. 37+35
RAMP 31A: STA. 22+19.64 TO STA. 26+71.82
RAMP 31B: STA. 4+58.11 TO STA 6+26
RAMP 32 : STA. 18+98.07 TO STA. 25+45.14



LANE W-N

STA. 14+87.62 TO STA. 18+20.25 (CURVE LEFT)
STA. 18+45.25 TO STA. 23+08.25 (BRIDGE NO. CUY-90-1463R)
STA. 23+08.25 TO STA. 29+03.00 (CURVE LEFT, NO CURB)
STA. 29+03.00 TO STA. 32+63.05 (CURVE RIGHT, NO CURB)



LANE N-W

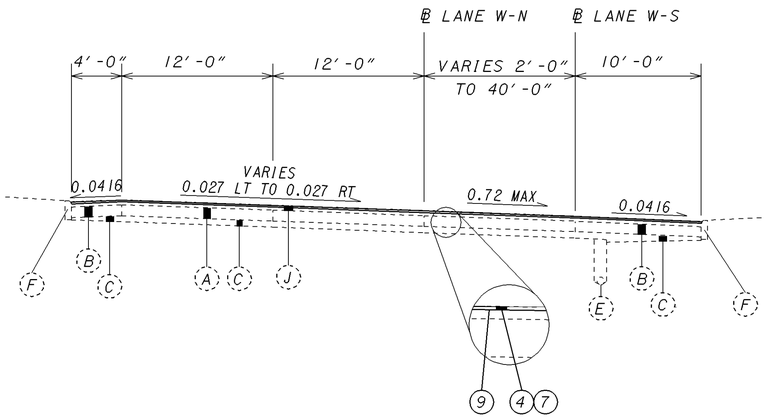
STA. 11+75.64 TO STA. 23+73.13

SEE SHEET 4 FOR LEGEND

TYPICAL SECTIONS - I.R. 90

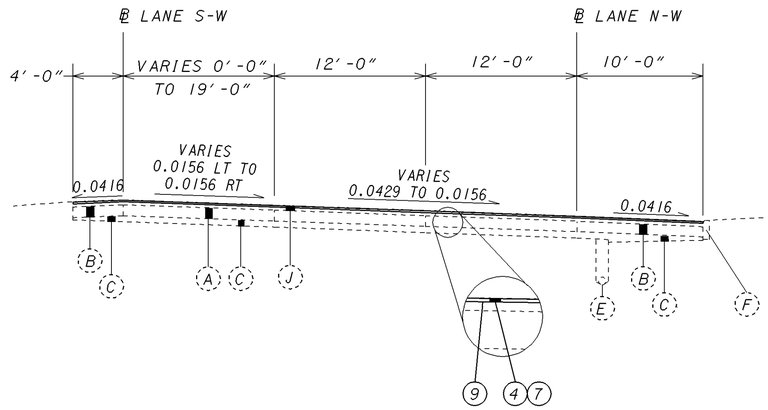
CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

DRAWN EMK REVISED
CALCULATED EMK CHECKED LDH



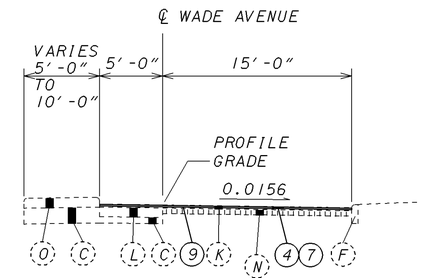
LANE W-N & LANE W-S

STA. 10+98.34 TO STA. 14+87.62 LANE W-N
STA. 2+25 TO STA. 6+08.33 LANE W-S



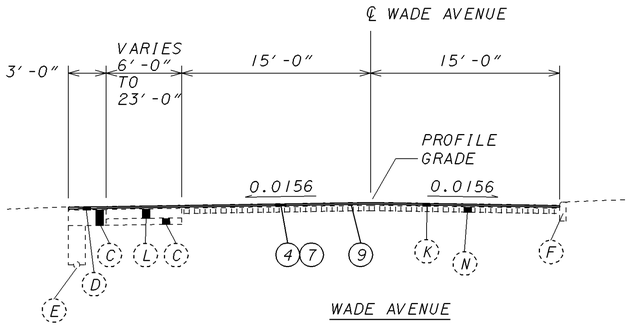
LANE N-W & LANE S-W

STA. 23+73.13 TO STA. 29+43.69 LANE N-W
STA. 19+80.60 TO STA. 25+13.36 LANE S-W



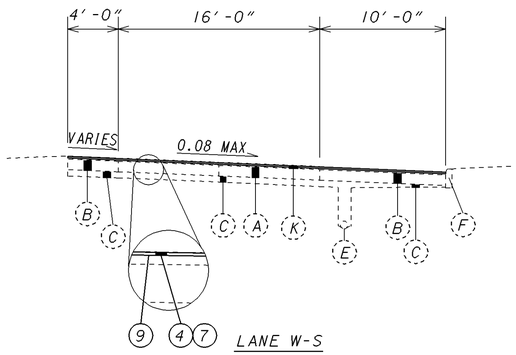
WADE AVENUE

STA. 50+73.57 TO STA. 52+05



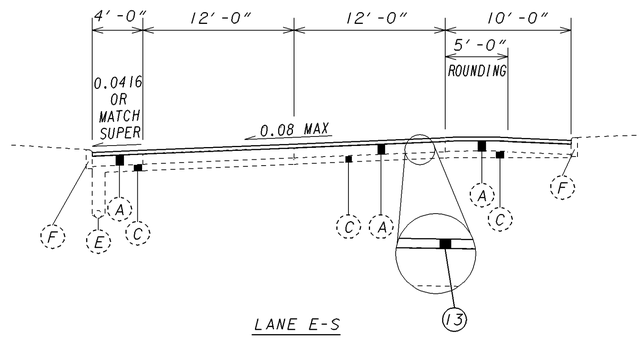
WADE AVENUE

STA. 52+05 TO STA. 55+92



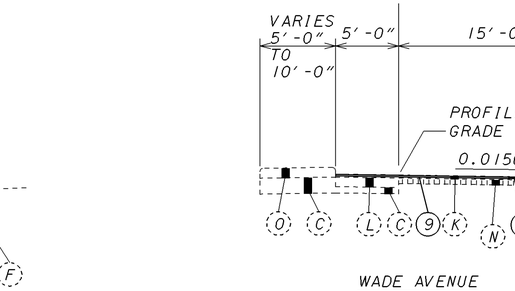
LANE W-S

STA. 6+08.33 TO STA. 13+00



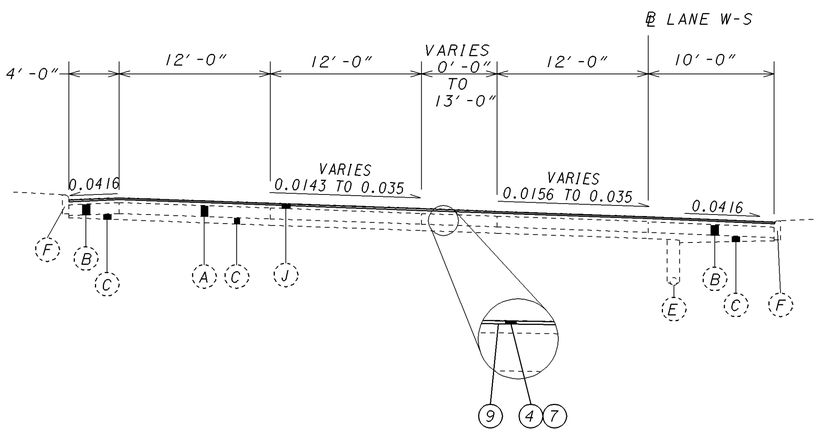
LANE E-S

STA. 9+65 TO STA. 17+67.25
STA. 17+67.25 TO STA. 22+13.25 (BRIDGE NO. CUY-490-0020ES)
STA. 22+13.25 TO STA. 27+87 (EX. OVERLAY FROM STA. 27+00 TO STA. 27+87)



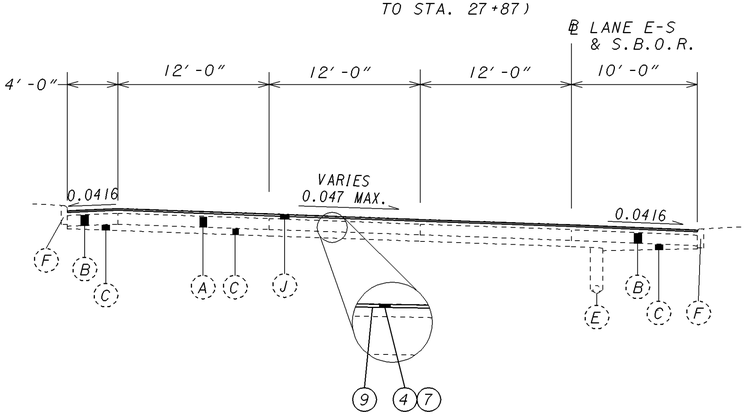
VEGA AVENUE

STA. 51+99.31 TO STA. 53+30



LANE W-S

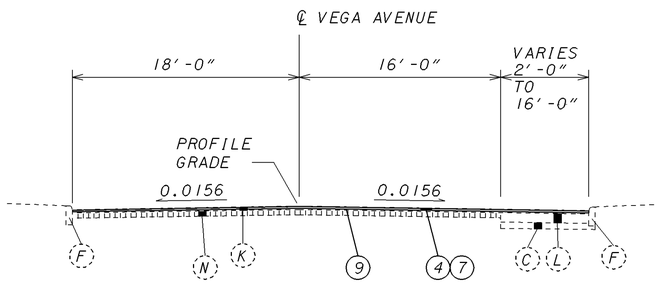
STA. 13+00 TO STA. 21+70.57 LANE W-S =
STA. 36+53.95 LANE E-S



LANE E-S & S.B.O.R.

STA. 36+53.95 TO STA. 38+50.56 LANE E-S = STA. 2+27.38 S.B.O.R.
STA. 2+27.38 TO STA. 3+61.27

SEE SHEET 4 FOR LEGEND



VEGA AVENUE

STA. 53+30 TO STA. 56+22

TYPICAL SECTIONS - I.R. 90

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

DRAWN EMK REVISED
CALCULATED EMK CHECKED LDH

6
110

PLOT SUBMITTED: 20-NOV-2000 13:45
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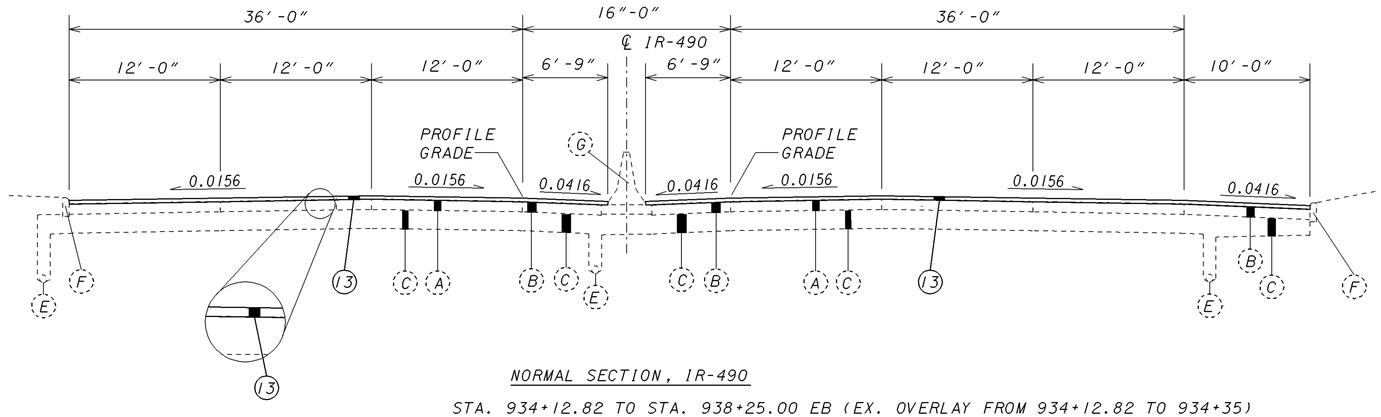
20800GYB.DGN



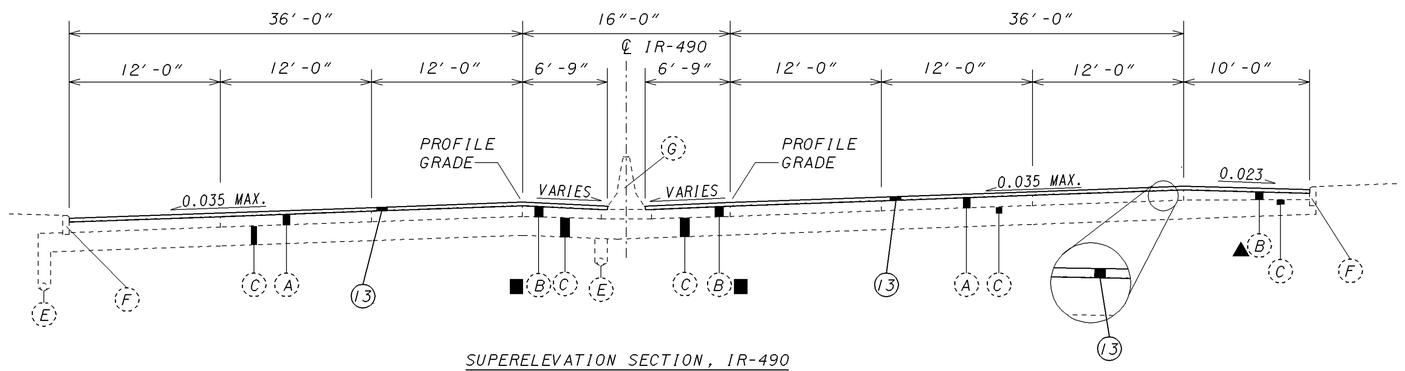
■ - THICKNESS VARIES FROM 10″ TO 9″
▲ - THICKNESS VARIES FROM 10″ TO 6″

NORMAL SECTION, IR-490

STA. 934+12.82 TO STA. 938+25.00 EB (EX. OVERLAY FROM 934+12.82 TO 934+35)
STA. 934+12.82 TO STA. 939+00.00 WB

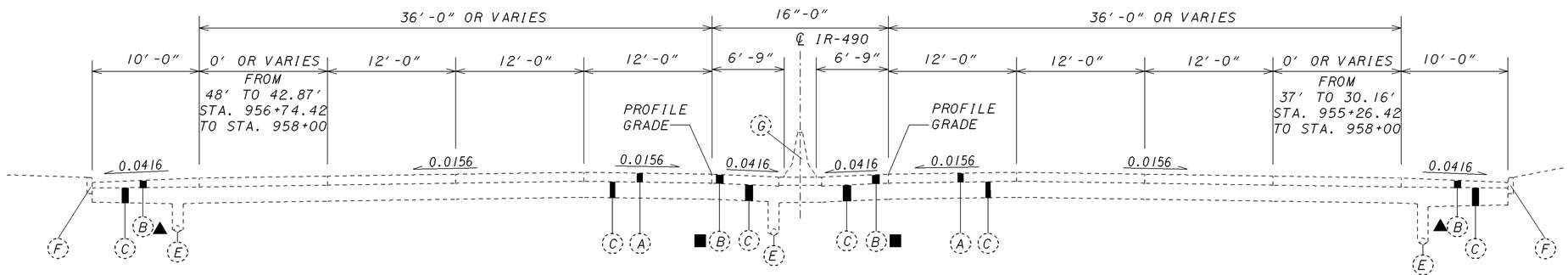
NORMAL SECTION, IR-90

STA. 931+60.49 TO STA. 934+12.82 WB (EX. OVERLAY FROM 931+60.49 TO 932+26)



SUPERELEVATION SECTION, IR-490

STA. 938+25.00 TO STA. 954+50.00 EB (CURVE LEFT) (PROP. OVERLAY FROM STA. 938+25 TO STA. 954+26.42)
STA. 939+00.00 TO STA. 956+25.00 WB (CURVE LEFT) (PROP. OVERLAY FROM STA. 938+25 TO STA. 955+06.10)



NORMAL SECTION, IR-490

STA. 954+50.00 TO STA. 955+26.42 EB
STA. 955+26.42 TO STA. 958+00.00 EB
STA. 956+25.00 TO STA. 956+74.42 WB
STA. 956+74.42 TO STA. 958+00.00 WB

SEE SHEET 4 FOR LEGEND

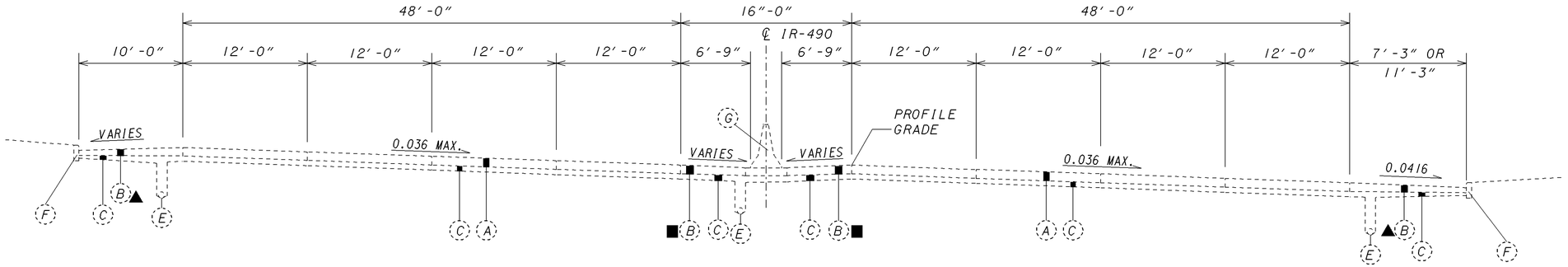
TYPICAL SECTIONS - I.R. 490

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

7
110

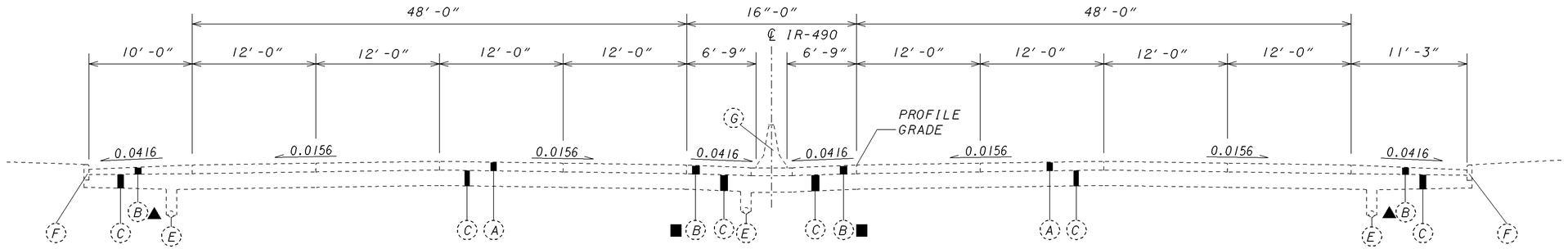
CALCULATED	DRAWN	REVISED
EMK	EMK	
CHECKED		
LDH		

PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\pid20800\dgn\20800gya.dgn
PLOT SUBMITTED: 20-NOV-2000 13:46
20800GYC.DGN



SUPERELEVATION SECTION, IR-490

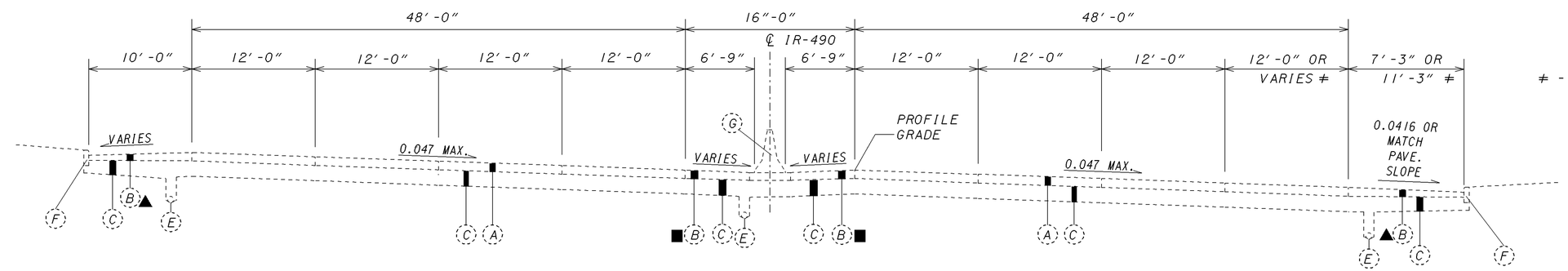
STA. 958+00.00 TO STA. 970+32.93 (CURVE RIGHT)



■ - THICKNESS VARIES FROM 10" TO 9"
▲ - THICKNESS VARIES FROM 10" TO 6"

NORMAL SECTION, IR-490

STA. 970+32.93 TO STA. 974+29.01



≠ - FROM STA. 981+28.77 TO STA. 985+60.75

SUPERELEVATION SECTION, IR-490

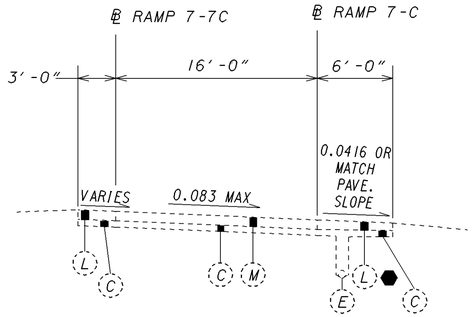
STA. 974+29.01 TO STA. 985+60.75 (CURVE LEFT)

SEE SHEET 4 FOR LEGEND

DRAWN EMK | REVISED
CALCULATED EMK | CHECKED LDH

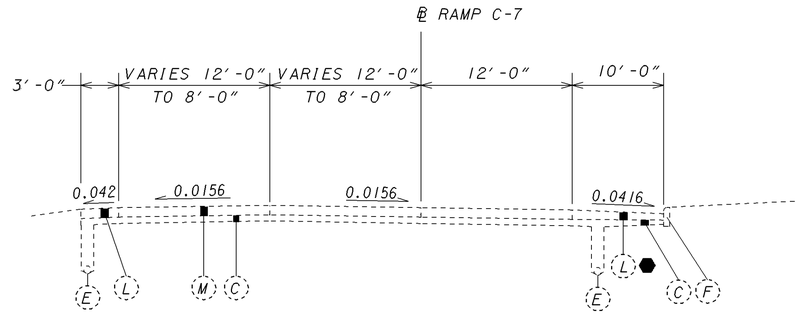
TYPICAL SECTIONS - I.R. 490

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



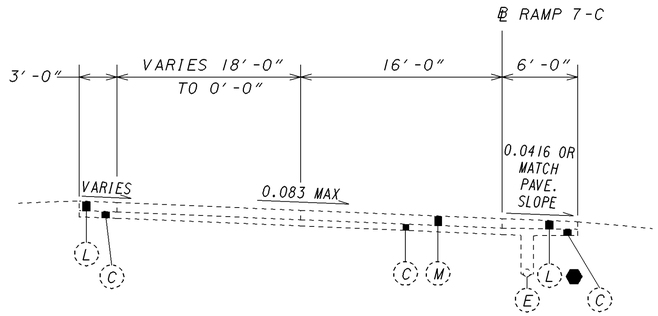
RAMP 7-C & RAMP 7-7C

STA. 68+00.00 TO STA. 75+34.62 RAMP 7-C
STA. 67+96.83 TO STA. 75+34.62 RAMP 7-7C
(SEE SHEET 46 FOR RAMP 7-7C WIDENING)



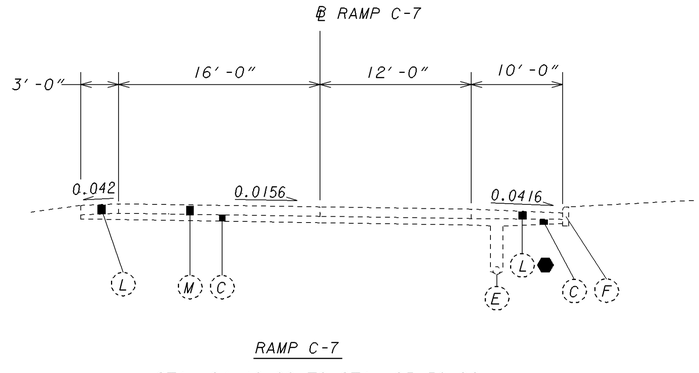
RAMP C-7

STA. 81+94.43 TO STA. 84+12.00



RAMP 7-C

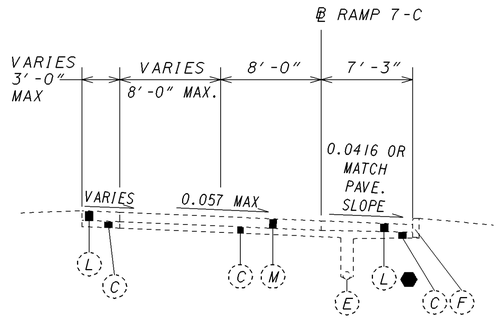
STA. 75+34.62 TO STA. 78+48.77



RAMP C-7

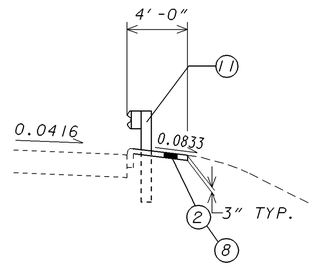
STA. 84+12.00 TO STA. 85+56.92

⬢ - THICKNESS VARIES FROM 9″ TO 6″

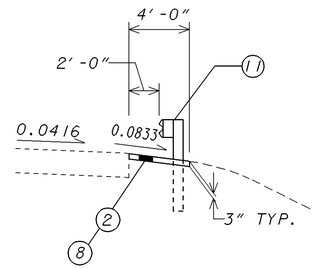


RAMP 7-C

STA. 78+48.77 TO STA. 81+28.77



TYPICAL SHOULDER TREATMENT
GUARDRAIL AND CURB



TYPICAL SHOULDER TREATMENT
GUARDRAIL AND NO CURB

SEE SHEET 4 FOR LEGEND

CALCULATED EMK | DRAWN EMK
CHECKED LDH | REVISED

TYPICAL SECTIONS - I.R. 490

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

GENERAL

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RESURFACING OF IR 90 AND IR 490 AT THE LOCATIONS DETAILED IN THE PLANS. PARTIAL AND FULL DEPTH PAVEMENT REPAIRS, LIGHTING, PAVEMENT MARKINGS, GUARDRAIL REPLACEMENT AND RAISED PAVEMENT MARKERS ARE ALSO INCLUDED.

RIGHT OF WAY

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN TAKEN FROM THE RECORDS AND ARE BELIEVED TO REPRESENT THE EXISTING PAVEMENT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THE SAME.

FOR FURTHER INFORMATION IN REGARD TO THE EXISTING TYPICAL SECTIONS, THE CONTRACTOR SHALL REFER TO THE PREVIOUS CONSTRUCTION PLANS.

THESE PLANS MAY BE REVIEWED AT THE

OHIO DEPARTMENT TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OHIO 44125

CONVERSION OF METRIC STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION THE FOLLOWING PROVISIONS SHALL APPLY:

1) ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY DAYS.

2) THE STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT OF WAY WILL BE PERMITTED. THE NUMBER OF AREAS AND EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.

3) ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ITEM 806 - FIELD OFFICE, TYPE B

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U. S. G. S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING, BY THE DIRECTOR.

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT. THE OHIO DEPARTMENT OF TRANSPORTATION HAS USED THE BEST AVAILABLE INFORMATION TO DETERMINE THE UTILITY COMPANIES SERVING THIS AREA, BUT CANNOT GUARANTEE THE UTILITY COMPANY LIST IS COMPLETE.

OHIO DEPARTMENT OF
TRANSPORTATION
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125
(216) 581-2100

AMERITECH
13630 LORAIN AVE. 4TH FLOOR
CLEVELAND, OH 44111
(216) 476-6142

CUYAHOGA COUNTY SANITARY
ENGINEER
6100 WEST CANAL RD.
VALLEY VIEW, OH 44125
(216) 443-8202

GREATER CLEVELAND REGIONAL
TRANSIT AUTHORITY
615 SUPERIOR AVENUE NW
CLEVELAND, OH 44115
(216) 566-5100

THE ILLUMINATING CO.
4141 ROCKSIDE RD
SEVEN HILLS, OH 44131
(440) 520-9579

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVE.
CLEVELAND, OH 44114
(216) 664-2444

EAST OHIO GAS CO.
1201 E. 55TH ST
CLEVELAND, OH 44103
(216) 736-6675

CITY OF CLEVELAND
CLEVELAND PUBLIC POWER
(MELP)
1300 LAKESIDE AVE.
CLEVELAND, OH 44114
(216) 664-4245, EXT. 115

CITY OF CLEVELAND
WATER AND POLLUTION
CONTROL
12302 KIRBY RD.
CLEVELAND, OH 44108
(216) 664-2786

ITEM SPECIAL - CELLULAR PHONE

THE CONTRACTOR SHALL PROVIDE, FOR THE DURATION OF THE PROJECT, TWO (2) CELLULAR PHONES FOR USE BY ODOT ENGINEERS/SUPERVISORS/ INSPECTORS. PAYMENT FOR ALL MATERIAL, LABOR, EQUIPMENT, INSTALLATION, MAINTENANCE AND AIR TIME SHALL BE MADE AT THE CONTRACT BID PRICE FOR ITEM SPECIAL - CELLULAR PHONE.

ITEM 623 - CONSTRUCTION LAYOUT STAKES, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 623, THIS ITEM SHALL BE USED TO PROVIDE THE SURVEY OF THE ASPHALT BRIDGE TRANSITIONS AS REQUIRED BY THE NOTES ON SHEET 42.

CALCULATED EMK
CHECKED LDH

GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

10
110

ROADWAY

ITEM 201 - CLEARING AND GRUBBING

THIS ITEM IS SPECIFICALLY INTENDED TO PROVIDE FOR THE REMOVAL OF TREES AND OTHER VEGETATION WHICH RESTRICTS SIGHT DISTANCE OR BLOCKS THE VIEW OF THE EXISTING OR PROPOSED SIGNS THROUGH-OUT THIS PROJECT. THIS ITEM SHALL ALSO BE USED TO CLEAR TREES AND VEGITATION WHEN REPLACING FENCE. THIS ITEM OF WORK SHALL BE PERFORMED AT THE BEGINNING OF THE CONTRACT WORK.

NO TREE REMOVAL SHALL OCCUR BETWEEN APRIL 15 AND SEPTEMBER 15.

THE FOLLOWING QUANTITIES ARE FOR TREES SPECIFICALLY DETAILED ON THE PLAN SHEETS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
6"	8		8
12"	9		9
15"	4		4
24"	1		1

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

GUARDRAIL PROTECTION

NO SIGN SUPPORTS SHALL BE ERECTED BEFORE THE NECESSARY GUARDRAIL PROTECTION IS IN PLACE. SIMILARILY EXISTING GUARDRAIL WHICH PROTECTS AN OBSTRUCTION OR SLOPE WHICH IS TO BE UPGRADED TO ELIMINATE GUARDRAIL, SHALL NOT BE REMOVED UNTIL THAT WORK HAS BEEN COMPLETED. EXISTING GUARDRAIL WHICH IS SCHEDULED TO BE REPLACED WITH TYPE 5 GUARDRAIL, SHALL NOT BE REMOVED UNTIL THE NEW GUARDRAIL IS READY TO BE INSTALLED, UNDER NO CIRCUMSTANCES SHALL ANY HAZARD BE WITHOUT GUARDRAIL PROTECTION FOR MORE THAN 24 HOURS. (SEE PUBLIC SAFETY NOTE SHEET NO. 16)

TYPE 5 GUARDRAIL POST SPACING

WHEN THE OFFSET BETWEEN THE FACE OF THE GUARDRAIL AND BRIDGE PIERS, MAJOR SIGNS, SIGN SUPPORTS, OR OTHER FIXED OBSTACLES IS LESS THAN 5 FEET 6 INCHES THE GUARDRAIL SHALL BE STIFFENED BY PROVIDING 3 FEET 1.5 INCH POST SPACING FROM 12.5 FEET IN ADVANCE OF THE OBSTRUCTION TO ITS END, AS PER STANDARD DRAWING GR-2.1M COST SHALL BE INCLUDED IN THE TYPE 5A UNIT PRICE BID.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED, AS DIRECTED BY THE ENGINEER, IN PLACE OF TYPE 5 GUARDRAIL AS OUTLINED ABOVE:

ITEM 606-GUARDRAIL, TYPE 5A . . . . . 100 LIN.FT.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 203-LINEAR GRADING, AS PER PLAN A AND PAVING UNDER THE GUARDRAIL USING ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, UNDER GUARDRAIL.

ITEM 203 - LINEAR GRADING, METHOD A SHALL CONSIST OF EXCAVATING TOPSOIL AND PLACING MATERIAL AS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING:

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 203.05.

THE REMOVED MATERIAL SHALL BE REPLACED WITH MATERIAL AS DETAILED ON THE TYPICAL SECTIONS OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203 - LINEAR GRADING, METHOD A.

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

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

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

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

ITEM 203 - LINEAR GRADING, METHOD A

THIS ITEM OF WORK SHALL CONSIST OF EXCAVATING ALONG THE OUTSIDE EDGE OF THE PAVED SHOULDER, AS DETAILED ON THE TYPICAL SECTIONS, TO PREPARE THE GROUND SURFACE FOR PAVING UNDER GUARDRAIL. THIS ITEM SHALL BE USED TO PREPARE PROPOSED GUARDRAIL AND EXISTING GUARDRAIL RUNS.

ALL COLLECTED DEBRIS SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATION.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 203, STA., LINEAR GRADING, METHOD A AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THIS ITEM OF WORK.

ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN

RAISED PAVEMENT MARKERS SHALL BE REMOVED FROM THE ROADWAY IN A MANNER THAT PREVENTS DAMAGE TO THE CASTINGS. REMOVED MARKERS SHALL BE COLLECTED, STORED IN 55 GALLON DRUMS (WITH AMOUNT CLEARLY MARKED) AND THEN DELIVERED TO THE ODOT WARRENSVILLE YARD, 25609 EMERY RD., WARRENSVILLE HTS., OHIO 44128 (SR 175 AT INTERSECTION OF I-271 AND EMERY RD.), BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE WARRENSVILLE TRAFFIC DEPARTMENT (292-5801) 48 HOUR NOTICE PRIOR TO ANY DELIVERIES. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY TRANSFER/ RECEIVING DOCUMENTATION TO THE YARD. ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE AND DELIVERY OF THESE MARKERS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED THROUGHOUT THIS PROJECT:

ITEM 202-RAISED PAVEMENTMARKERS REMOVED
FOR STORAGE, AS PER PLAN . . . . . 1,100 EACH

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

SEE NOTES AND DETAILS ON SHEET 59 FOR THIS ITEM.

ITEM 202 - GUARDRAIL REMOVED

THIS ITEM SHALL INCLUDE BOTH STANDARD AND BARRIER TYPE RAILS INCLUDING ANCHOR ASSEMBLIES AND TERMINAL ASSEMBLIES.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

EXISTING UNDERGROUND SPRINKLER SYSTEM AND COMMUNICATION DUCTS

THE CONTRACTOR IS ADVISED OF AN UNDERGROUND SPRINKLER SYSTEM IN THE VICINITY OF THE INTERCHANGES AT W 41ST AND W 44TH ST. THIS SYSTEM HAS BEEN ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ANY SPRINKLER FACILITIES THAT CONFLICT WITH PROPOSED ITEMS WITHOUT REGARD FOR DAMAGE TO THE EXISTING FACILITIES.

THE CONTRACTOR IS ADVISED OF UNDERGROUND COMMUNICATION DUCTS FOR POLICE CALL BOXES THROUGHOUT THE LENGTH OF THE PROJECT. THIS SYSTEM ALSO HAS BEEN ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ANY COMMUNICATION FACILITIES THAT CONFLICT WITH PROPOSED ITEMS WITHOUT REGARD FOR DAMAGE TO THE EXISTING FACILITIES.

CALCULATED EMK
CHECKED LDH

GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

ROADWAY

ITEM 202 - FENCE REMOVED, AS PER PLAN
ITEM 607 - FENCE, TYPE CLT

THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED TO REMOVE THE EXISTING FENCE AND SUBSEQUENTLY REPLACE IT WITH TYPE CLT FENCE IN ITS CURRENT LOCATION. THE LIMITS FOR THE REMOVAL AND REPLACEMENT FOR BOTH EASTBOUND AND WESTBOUND IR-90 ARE FROM THE W 44 ST/MARGINAL RD INTERSECTIONS TO THE STARKWEATHER AVE OVERPASS ON LANE N-W AND STA. 3+61.27 ON THE SBOR INCLUDING ALL INTERCHANGES AND OVERPASSES.

THE EXISTING FENCE LOCATIONS ARE NOT SHOWN THE PLANS, THEREFORE THE CONTRACTOR SHALL STAKE ALL HORIZONTAL DEFLECTION POINTS OF THE EXISTING FENCE DURING REMOVAL TO USE FOR LAYING OUT THE PROPOSED FENCE. STAKING OF DEFLECTION POINTS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202 - FENCE REMOVED, AS PER PLAN. ANY TREES OR OTHER VEGETATION GROWING THROUGH OR NEAR THE PROPOSED FENCE SHALL BE REMOVED AND DISPOSED OF AS PER ITEM 201 - CLEARING AND GRUBBING.

AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL EITHER HAVE THE PROPOSED FENCE PLACED AFTER THE REMOVAL OF THE EXISTING FENCE OR PLACE TEMPORARY FENCE AT NO ADDITIONAL COST TO THE STATE.

IN ADDITION TO THE FENCE REMOVAL AND REPLACEMENT QUANTITIES, QUANTITIES FOR 4' WALK GATE AND 10' SWING GATE HAVE BEEN ADDED, TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE AND EXISTING GATE IF NECESSARY. REMOVAL OF THE EXISTING GATE SHALL BE PAID FOR UNDER ITEM 202 - GATE REMOVED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 - FENCE REMOVED, AS PER PLAN.	15600	LIN.FT.
ITEM 607 - FENCE, TYPE CLT.	15600	LIN.FT.
ITEM 202 - GATE REMOVED.	2	EACH
ITEM 607 - GATE, TYPE CL (4' WALK).	1	EACH
ITEM 607 - GATE, TYPE CL (10' SWING).	1	EACH

ITEM 606 - IMPACT ATTENUATOR, TYPE 2-98 QUADGUARD #QS6907, UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A QUADGUARD IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG. REV. DATE	ODOT APPROVAL DATE
QSTSCVR-U	QUADGUARD SYSTEM WITH TENSION STRUT BACKUP	7/10/96 Rev. A	3/6/98
QSCBCVR-U	QUADGUARD SYSTEM WITH CONCRETE BACKUP	4/28/97 Rev. E	3/6/98
QFTSCVR-U	QUADGUARD SYSTEM W/ 69" & 90" TENSION STRUT BACKUPS	9/5/97 Rev. C	3/6/98
QFCBCVR-U	QUADGUARD SYSTEM W/ 69" & 90" CONCRETE BACKUPS	9/4/97 Rev. D	3/6/98
35-40-20	DEFLECTOR ASSEMBLY, CONCRETE BACKUP RETROFIT, QC	11/14/97 Rev. B	7/31/98
35-40-03	QUADGUARD SYSTEM BACKUP ASSEMBLY, TS, QG	3/19/99 Rev. F	8/27/99
35-40-08 2 SHEETS	QUADGUARD SYSTEM CONCRETE BACKUP, QG	10/14/97 Rev. F	8/27/99
	ON GRADE & ON EXISTING CONCRETE STRUCTURE	10/14/97 Rev. F	8/27/99
35-40-21 2 SHEETS	TRANSITION ASSEMBLY QUAD-BEAM TO W-BEAM	11/6/97 Rev. B	8/27/99
		7/14/97 Rev. A	8/27/99
35-40-22 2 SHEETS	TRANSITION ASSEMBLY QUAD-BEAM TO THRIE-BEAM	7/15/97 Rev. A	8/27/99
		7/11/97 Rev. A	8/27/99
35-40-15	QUADGUARD SYSTEM END SHOE ASSSEMBLY, QG	9/11/98 Rev. F	8/27/99
3540211 2 SHEETS	QG TRANSITION ASSEMBLY QUAD-BEAM TO W-BEAM-WIDE	8/29/97 Rev. A	8/27/99
		8/29/97 Rev. A	8/27/99
3540221 2 SHEETS	QG TRANSITION ASSEMBLY QUAD-BEAM TO THRIE-BEAM-WIDE	8/29/97 Rev. A	8/27/99
		8/29/97 Rev. A	8/27/99
3540498	QG SYSTEM NOSE ASSEMBLY, QG, 24, 30, 36, W/BELTING	12/30/98	8/27/99
3540150	QUADGUARD TRANSITION TO VERTICAL CONCRETE BARRIER	9/96	8/27/99

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2-98 QUADGUARD #QS6907, UNIDIRECTIONAL, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622 BARRIER, MISC.: REPAIR CONCRETE GLARE SHIELD

THIS ITEM SHALL BE USED TO REPAIR EXISTING SECTIONS OF CONCRETE GLARE SHIELD THAT HAVE BEEN DAMAGED FROM STA 915+00 TO STA 925+00 (APPROXIMATELY.) REPLACEMENT SECTIONS SHALL BE DOWELLED AS PER RM-4.3M WITH THE COLD JOINT CONSIDERED A PCJ. THE WIDTH OF THE GLARE SHIELD SHALL MATCH THE EXISTING WALL WIDTH. TWO 20' LONG SECTIONS ARE ESTIMATED TO NEED REPAIR.

THIS ITEM SHALL INCLUDE ANY ADDITIONAL REMOVAL NECESSARY TO REACH SOUND CONCRETE IN HORIZONTALLY ABUTTING SECTIONS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 622 - BARRIER, MISC.: REPAIR CONCRETE GLARE SHIELD	40	LIN.FT.

BARRIER TREATMENT AT LIGHT TOWER SMA-2

THE PROPOSED LIGHT TOWER INSTALLED AT STA 872+05 I-90 WB WILL BE INSTALLED IN EXISTING CONCRETE MEDIAN AND BEHIND EXISTING GUARDRAIL. GUARDRAIL SHALL BE REMOVED AND REPLACED WITH TYPE 5A RAIL. EXISTING MEDIAN SHALL BE REMOVED AS NECESSARY TO INSTALL THE TOWER FOUNDATION AND GUARDRAIL.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 202 - WALK REMOVED	400	SQ.FT.
ITEM 202 - GUARDRAIL REMOVED	50	LIN.FT.
ITEM 606 - GUARDRAIL, TYPE 5A	50	LIN.FT.
ITEM 608 - 4" CONCRETE WALK	400	SQ.FT.

ITEM 623 CONSTRUCTION LAYOUT STAKES, AS PER PLAN

STAMPED STATIONING IN THE EXISTING CONCRETE BARRIER MAY BE INCORRECT AND SHALL NOT BE USED TO LAY OUT PROPOSED TOWER LIGHTING. THE CONTRACTOR SHALL RE-ESTABLISH THE CENTERLINE OF CONSTRUCTION FROM RECORD INFORMATION. THE CONTRACTOR SHALL PERFORM ALL RESEARCH AND FIELD WORK NECESSARY TO COMPLETE THIS ITEM. THE STATE WILL NOT PROVIDE CENTERLINE REFERERENCE TIES.

TOWER LIGHTING FOUNDATIONS SHALL BE LAID OUT UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL SURVEYOR CURRENTLY REGISTERED IN THE STATE OF OHIO. A COPY OF THE ACTUAL FIELD NOTES USED TO LAY OUT THE CENTERLINE AND TOWER FOUNDATIONS SHALL PRESENTED TO THE PROJECT ENGINEER. THE NOTES SHALL BEAR THE SEAL OF THE PROFESSIONAL SURVEYOR(S) WHO PERFORMED THE WORK. THE ENGINEER SHALL WITHHOLD THE LAST HALF OF PAYMENT FOR THIS ITEM UNTIL THE NOTES ARE RECEIVED. THE NOTES SHALL BE FORWARDED TO THE DISTRICT SURVEY DEPARTMENT FOR INCORPORATION INTO THE DEPARTMENTS RECORDS.

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

CALCULATED EMK
CHECKED LDH

GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

DRAINAGE AND EROSION CONTROL

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 932 AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM SPECIAL - MISCELLANEOUS METAL . . . . . 10,000 LBS.

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL,STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

REVIEW OF DRAINAGE FACILITIES

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM 604 - INLET ADJUSTED TO GRADE, AS PER PLAN

THIS WORK SHALL CONSIST OF ADJUSTING EXISTING MEDIAN INLET CASTINGS TO GRADE AS OUTLINED ON SHEET 44.

PAYMENT FOR ALL OPERATIONS ON THE DETAIL SHEET SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 604 - INLET ADJUSTED TO GRADE, AS PER PLAN, AND SHALL INCLUDE ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTALS.

ITEM 603 15" CONDUIT, TYPE B, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVAL AND RESTORATION OF ALL PAVEMENT AND CURB SURFACES, INCLUDING THE RE-USE OF EXISTING GUARDRAIL IF NECESSARY. REMOVAL LIMITS SHALL BE SAWCUT FULL-DEPTH. THE APPROPRIATE PROVISIONS OF ITEM 255, CLASS C SHALL APPLY. CONCRETE THICKNESS SHALL BE 10" AND SHALL MEET THE TOP AND BOTTOM OF ADJACENT CONCRETE BASE.

THE TRENCH SHALL BE FINISHED FLUSH WITH ADJACENT PAVEMENT USING ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22.

REPLACEMENT CURB SHALL MEET THE APPROPRIATE REQUIREMENTS OF ITEM 830 FOR CURB, TYPE 6.

A T-TYPE CONNECTION FITTING WILL BE REQUIRED AT THE CONDUIT OUTLETTING D-76A TO PERPETUATE A POSITIVE OUTLET FOR AN EXISTING 6" UNDERDRAIN. THE FITTING SHALL BE FABRICATED BY THE PIPE MANUFACTURER. THE EXACT LOCATION OF THE FITTING WILL BE DETERMINED IN THE FIELD.

THIS ITEM SHALL ALSO CONSIST OF A SHORT SECTION OF ITEM 603 6" CONDUIT, TYPE F, TO RECONNECT THE UNDERDRAIN TO THE 15" SEWER AS SHOWN ON SHEET 51.

ITEM 604 CATCH BASIN, TYPE 3A
ITEM 604 MANHOLE, NO. 1

ELEVATIONS SHOWN ON PIPE PROFILES ARE BASED ON DATUM FROM ORIGINAL CONSTRUCTION, AND, AS SUCH, SHALL BE CONSIDERED ASSUMED ELEVATIONS. NO BENCHMARK IS PROVIDED IN THESE PLANS. WHERE THE CONTRACTOR ELECTS TO USE PRECAST UNITS, THE CONTRACTOR SHALL FIELD CHECK THE DEPTH OF THE STRUCTURES AS WELL AS THE ELEVATION AND ORIENTATION OF ALL CONNECTIONS PRIOR TO ORDERING THE STRUCTURES.

CASTINGS ADJUSTED TO GRADE

ALL CASTINGS SHALL BE ADJUSTED TO THE FINISHED ROADWAY ELEVATION BY THE CONTRACTOR. THE DEPTH OF AN ADJUST TO GRADE SHALL BE 1 FT OR LESS AND THE WORK SHALL BE AS OUTLINED IN 604.03. ANY WORK BEYOND 1 FT DEPTH SHALL BE PAID UNDER THE ITEM 604 - CATCH BASIN, MONUMENT BOX OR MANHOLE RECONSTRUCTED TO GRADE. THE TIME BETWEEN ADJUSTING THE CASTINGS AND RESURFACING SHALL BE KEPT TO AN ABSOLUTE MINIMUM. NO ADJUSTING RINGS SHALL BE PERMITTED. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 604 - MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN . 1 EACH
ITEM 604 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN . . 2 EACH
ITEM 604 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN . . . . 2 EACH

ITEM 604 - CATCH BASIN, MONUMENT BOX OR MANHOLE RECONSTRUCTED TO GRADE

THE CONTRACTOR AND FIELD ENGINEER SHALL FIELD CHECK ALL EXISTING CATCH BASINS, MONUMENT BOXES OR MANHOLES LOCATED WITHIN THE LIMITS OF THE THE PROJECT. ANY CATCH BASIN, MONUMENT BOX OR MANHOLE FOUND THAT EXHIBITS SUBTANTIAL DETERIORATION AND REQUIRES MORE WORK THAN IS SPECIFIED UNDER CASTINGS ADJUSTED TO GRADE, SHALL BE RECONSTRUCTED TO GRADE AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 604 - CATCH BASIN, RECONSTRUCTED TO GRADE . . . . . 2 EACH
ITEM 604 - MONUMENT BOX, RECONSTRUCTED TO GRADE . . . . . 1 EACH
ITEM 604 - MANHOLE, RECONSTRUCTED TO GRADE. . . . . 3 EACH

ITEM 604 - CATCH BASIN, NO. 3A, AS PER PLAN

PRIOR TO REMOVING THE EXISTING CATCH BASINS, THE CONTRACTOR SHALL FIELD VERIFY THE FLOW LINE ELEVATIONS BEFORE ORDERING THE THE PRECAST BASINS.

ALL COSTS INCLUDING EQUIPMENT, LABOR AND MATERIALS TO PLACE AND SURVEY THE CATCH BASINS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 604 - CATCH BASIN, NO. 3A, AS PER PLAN.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITY IS TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEERS CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AT THE W. 7 ST/RAMP 7-7C INTERSECTION:

ITEM 877 - TEMPORARY PERIMETER FILTER FABRIC FENCE . .400 L. F.

CALCULATED EMK
CHECKED LDH

GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

13
110

PAVEMENT

ALIGNMENT AND PROFILE

THE WORK PROPOSED BY THIS PROJECT IS FOR THE RE-SURFACING OF THE EXISTING PAVEMENT. THE PROFILE OF THE PROPOSED SURFACE WILL BE THE SAME AS THAT OF THE EXISTING IR-90 AND RAMP PAVEMENT, EXCEPT WHERE OTHERWISE SHOWN IN THE PLANS.

ITEM 407 - TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 254 - PATCHING PLANED SURFACE

THIS ITEM OF WORK SHALL INCLUDE PATCHING PLANED SURFACES AFTER THE ASPHALT PAVEMENT HAS BEEN PLANED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 254 - PATCHING PLANED SURFACE . . . . . 13200 SQ YD

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN

THIS WORK SHALL BE PERFORMED PRIOR TO RESURFACING. THE QUANTITIES PROVIDED ARE TO REPAIR UNSOUND OR COLD-PATCH AREAS OR POP-OUTS. THICKNESS WILL VARY FROM 2" TO 3".

PARTIAL DEPTH REPAIRS SHALL ONLY BE PERFORMED ON PAVEMENTS THAT WILL RECEIVE AN ASPHALT OVERLAY.

FOR ADDITIONAL NOTES, DETAILS AND QUANTITIES, SEE SHEET 41.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY

THE GRADATION FOR THIS ITEM SHALL BE AS PER 441.02, TABLE A, TYPE 1 SURFACE, MEDIUM. ALL OTHER SPECIFICATIONS SHALL BE AS PER TYPE 1H. COARSE AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG OR LIMESTONE.

ITEM 618 - RUMBLE STRIPS, TYPE 2 (ASPHALT)

THE FOLLOWING ESTIMATED QUANTITY SHALL BE USED TO CONSTRUCT ITEM 618, RUMBLE STRIPS, TYPE 2 (ASPHALT) AS PER STANDARD DRAWING BP-9.1:

ITEM 618 - RUMBLE STRIPS, TYPE 2 (ASPHALT) . . 8.5 MILE

ITEM 830 - CURB, TYPE 6, AS PER PLAN

THE CURB REVEAL SHALL BE 4" AS PER DETAILS ON SHEET 50. ALL OTHER DIMENSIONS SHALL BE AS PER STANDARD DRAWING BP-5.1.

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

THIS ITEM SHALL CONSIST OF REPLACING EXISTING PAVEMENT IN ACCORDANCE WITH ITEM 255 AND THE NOTES BELOW. PAYMENT SHALL BE MADE FOR "CLASS C","CLASS MS" OR "CLASS FS" ALTHOUGH THE CONTRACTOR MAY USE EITHER, "CLASS MS", "CLASS FS", OR "CLASS C".

EXISTING CONCRETE PAVEMENT THICKNESS MAY VARY FROM THAT SHOWN ON THE TYPICAL SECTIONS BY PLUS OR MINUS TWO INCHES. NO ADJUSTMENT IN PAYMENT FOR THIS ITEM SHALL BE MADE PROVIDING THAT THE AVERAGE PAVEMENT THICKNESS IS WITHIN ON HALF INCH OF THE THICKNESS SHOWN ON THE TYPICAL SECTIONS. ADDITIONAL COMPENSATION SHALL BE MADE BY CHANGE ORDER FOR THE MATERIAL COST OF CONCRETE ONLY WHEN THE AVERAGE THICKNESS EXCEEDS THE ONE HALF INCH MAXIMUM TOLERANCE ABOVE. THE VOLUME OF ADDITIONAL CONCRETE PAID FOR SHALL BE BASED UPON THE AMOUNT OF CONCRETE ABOVE THE ONE HALF INCH TOLERANCE LIMIT.

IF, AFTER REMOVAL OF THE RIGID PAVEMENT THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING. HE SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH COMPACTED 304 AGGREGATE. QUANTITIES OF ITEM 203, EXCAVATION AND ITEM 304, AGGREGATE BASE HAVE BEEN PROVIDED TO REPAIR SAID FAILED SUBBASE OR SUBGRADE AREAS.

PAVEMENT REPAIR LESS THAN OR EQUAL TO TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, CLASS C, MS OR FS, AS PER PLAN, A". PAVEMENT REPAIRS GREATER THAN TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, CLASS C, MS OR FS, AS PER PLAN, B". PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
203	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
304	CU. YD.	AGGREGATE BASE, AS PER PLAN
255	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A
255	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B
255	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN A
255	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN B
255	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN A
255	SQ. FT.	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN B
255	LIN. FT.	FULL DEPTH PAVEMENT SAWING

FOR ESTIMATED QUANTITIES, SEE SHEET 41.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

THE ONLY SLAG MATERIALS PERMITTED FOR THIS ITEM SHALL BE CRUSHED AIR-COOLED BLAST FURNACE SLAG, A MIXTURE OF CRUSHED AND GRANULATED SLAGS, OR OPEN HEARTH SLAG FROM APPROVED SOURCES ON FILE AT THE LABORATORY.

ALL MATERIALS OR BLENDED MATERIALS SHALL MEET THE GRADATION REQUIREMENTS OF 304.02.

ANY GRANULATED SLAG MATERIAL USED SHALL MEET THESE GRADATION REQUIREMENTS IN LIEU OF 703.08

LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LONGITUDINAL JOINTS BETWEEN A PAVEMENT LANE AND ADJOINING BERM OR SPEED CHANGE LANE, AND BETWEEN A SPEED CHANGE LANE AND THE ADJOINING BERM SHALL BE MADE THE SAME DAY. ALL LONGITUDINAL JOINTS SHALL BE HOT WITH THE EXCEPTION OF ONE COLD JOINT PER ROADWAY. LONGITUDINAL JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER. EACH RAMP SHALL HAVE ONLY ONE LONGITUDINAL COLD JOINT LOCATED APPROXIMATELY HALFWAY ACROSS THE RAMP.

SPREADING EQUIPMENT

AN AUTOMATIC SCREED CONTROL HAVING A 40 FOOT SKI ARM SHALL BE USED FOR PLACING THE INTERMEDIATE COURSE (SEE PROPOSAL NOTE). FOR FULL WIDTH PAVING, THE WIDTH LAID SHALL NOT EXCEED THE PAVER'S RATED WIDTH AS RECOMMENDED BY THE PAVER MANUFACTURER.

ITEM 451 - REINFORCED CONCRETE PAVEMENT, AS PER PLAN

WHERE PROPOSED 451 PAVEMENT IS TIED LONGITUDINALLY TO EXISTING PAVEMENT, TRANSVERSE JOINT SPACING AS REQUIRED IN BP-2.2 SHALL BE WAIVED. TRANSVERSE JOINTS SHALL BE LOCATED IN THE PROPOSED 451 PAVEMENT AT ALL EXISTING TRANSVERSE JOINTS TO REMAIN AND ALL PROPOSED TYPE Y OR TYPE T JOINTS. JOINTS SHALL BE CONSTRUCTED TO FORM A CONTINUOUS LINE IN THE SAME ALIGNMENT AS THE TRANSVERSE JOINT IN THE ADJACENT EXISTING PAVEMENT.

ALL COST FOR THE WORK OUTLINED ABOVE, EQUIPMENT, LABOR AND MATERIAL INCLUDING THE # 5 DEFORMED BAR (709.00) AND EPOXY GROUT (705.20) SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 451 - REINFORCED CONCRETE PAVEMENT, AS PER PLAN.

ITEM 889 - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS WITH WARRANTY

THE FOLLOWING ESTIMATED QUANTITY SHALL BE USED TO PLACE ITEM 889, SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS WITH WARRANTY AS PER SUPPLEMENTAL SPECIFICATION 889. THIS ITEM SHALL BE USED ON IR-490 AND LANE E-S, FULL DEPTH ASPHALT OVERLAY.

ITEM 889 - SAWING AND SEALING ASPHALT CONCRETE JOINTS WITH WARRANTY . . 8,800 L. F.

CALCULATED EMK
CHECKED LDH

GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

MAINTAINING VEHICULAR TRAFFIC

GENERAL PROVISIONS

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" DESCRIBED ON SHEET NO. 20. THE CONTRACTOR SHALL SET UP AND OPERATE HIS EQUIPMENT IN SUCH A MANNER AS TO MINIMIZE ENCROACHMENT UPON THE TRAVELED WIDTH OF PAVEMENT.

2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE RESPONSIBLE LAW ENFORCEMENT AGENCY AND THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12 PUBLIC INFORMATION OFFICER ((216) 581-2333, EXT. 244) NOT LESS THAN TWENTY-FOUR (24) HOURS PRIOR TO A SCHEDULED DISRUPTION OF TRAFFIC.

3. NIGHTTIME WORK SHALL BE PERMITTED IN ACCORDANCE WITH THESE PLANS AND NOTES. THE CONTRACTOR SHALL PROVIDE FLOOD LIGHTING OF THE WORK AREA IN ORDER TO ASSURE THE SAFEST CONDITIONS DURING NIGHTTIME WORK. A LIGHTING PLAN FOR NIGHTTIME OPERATIONS SHALL BE PRESENTED TO AND APPROVED BY THE ENGINEER.

4. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL NEW WARNING AND INFORMATION SIGNS NECESSARY FOR MAINTAINING TRAFFIC. THE CONTRACTOR SHALL DETERMINE WHAT SIGNS ARE NEEDED AND ADVISE THE ENGINEER TWO (2) WEEKS IN ADVANCE OF HIS DETAILED PLANS.

   SEE THE OMUTCD AND STANDARD DRAWINGS FOR THE MINIMUM SIGNAGE REQUIRED.

5. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION, AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER. WHERE OPERATIONS ARE PERFORMED IN STAGES, THERE SHALL BE IN PLACE ONLY THOSE DEVICES THAT APPLY TO THE CONDITION PRESENT DURING STAGE IN PROGRESS. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COVERED OR SET ASIDE OUT OF THE VIEW OF TRAFFIC.

6. PLACEMENT OF FINAL ROADWAY PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" DESCRIBED ON SHEET NO. 20.

   THE CONTRACTOR SHALL PROVIDE TWO (2) TRAILING VEHICLES AS PER MT-99.20M FOLLOWING THE PAVEMENT MARKING EQUIPMENT. THE TWO (2) TRAILING VEHICLES SHALL TRAVEL 500 FEET APART WITH THE REMOTE VEHICLE TRAVELING ON THE SHOULDER (LEFT OR RIGHT AS APPLICABLE) WHERE USABLE SHOULDER IS AVAILABLE. THE FIRST TRAIL VEHICLE IN A TRAFFIC LANE SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR MEETING NCHRP 350 REQUIREMENTS. THE INTERMEDIATE TRAILING VEHICLE SHALL TRAVEL IN THE CLOSED LANE 500 FEET BEHIND THE PAVEMENT MARKING EQUIPMENT. THE POLICE CRUISER SHALL TRAVEL 500 TO 1000 FEET BEHIND THE REMOTE TRAILING VEHICLE. EACH TRAILING VEHICLE SHALL HAVE A YELLOW FLASHING BEACON PLUS 48" MIN. ORANGE AND BLACK CONSTUCTION WARNING SIGNS MOUNTED ON THE BACK FACING TRAFFIC WITH STANDARD TYPE MESSAGES ADVISING MOTORISTS OF THE WORK AHEAD, ADVISORY WARNING SPEED AND WHICH LANE IS CLOSED.

7. DURING NON-WORKING PERIODS, OPEN EXCAVATIONS SHALL BE DELINEATED WITH WARNING FLASHERS AND/OR OTHER APPROVED DEVICES AS DEEMED APPROPRIATE BY THE ENGINEER.

MAINTAINING VEHICULAR TRAFFIC (CONT.)

8. EXISTING SIGNS LOCATED WITHIN THE ROAD WORK AREAS WHICH ARE NECESSARY FOR INTERIM OR PERMANENT TRAFFIC CONTROL SHALL BE REMOVED AND REERECTED IN LOCATIONS AS APPROVED BY THE ENGINEER.

9. NO STOPPAGE OF TRAFFIC SHALL OCCUR WITHOUT LAW ENFORCEMENT PERSONNEL AT EACH LOCATION TO DIRECT TRAFFIC.

10. WHENEVER A TOTAL CLOSURE IS IMPLEMENTED, THE CONTRACTOR SHALL PROVIDE A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE FROM ODOT'S PRE-APPROVED LIST. IT SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.

11. ANY TIME TRAFFIC MUST BE COMPLETELY STOPPED ON A FREEWAY, OR INTERSTATE IT SHALL BE DONE IN THE FOLLOWING MANNER: (THIS INCLUDES THE ERECTION OF OVER HEAD SUPPORTS.) THE COMPLETE TRAFFIC STOPPAGE ON ALL LANES OF ANY DIRECTIONAL ROADWAY SHALL BE NO MORE THAN 10 MINUTES IN ANY ONE CONSECUTIVE 30 MINUTE PERIOD.

    A MINIMUM OF TWO (2) LAW ENFORCEMENT OFFICERS (L.E.O.) WITH PATROL VEHICLES SHALL BE USED TO PACE MOTORISTS TO A STOP. THERE SHALL BE ONE L.E.O. FOR EACH LANE ON THE FREEWAY.

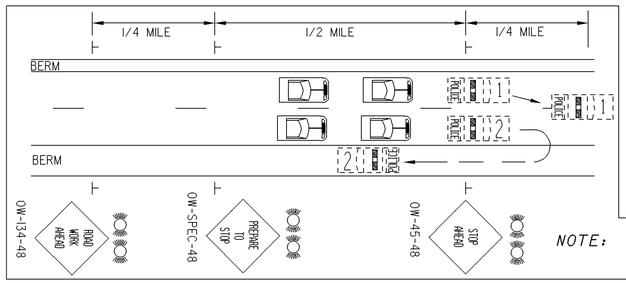
    AFTER TRAFFIC HAS BEEN SLOWED, ONE (1) PATROL VEHICLE SHALL TRAVEL ALONG THE ROADWAY SHOULDER 500 FEET BEHIND THE BACK UP OF STOPPED VEHICLES. WHERE STOPPAGE OCCURS IN THE VICINITY OF FREEWAY ENTRANCES, THE CONTRACTOR SHALL PLACE FLAGMEN ON THE RAMPS TO STOP TRAFFIC. PATROL VEHICLES SHALL HAVE FLASHING BEACONS.

    TO PROVIDED ADEQUATE VISIBILITY TO APPROACHING MOTORIST THE CONTRACTOR SHALL ERECT AND MAINTAIN "ROADWORK AHEAD", "PREPARE TO STOP", AND "STOP AHEAD" SIGNS WITH TWO FLASHING TWELVE INCH (12) TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH 632.05. THESE SIGNS SHALL BE ILLUMINATED DURING NIGHT OPERATIONS ANDSHALL BE 48 INCH BY 48 INCH SIGNS. PATROL VEHICLES AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE SKETCH BELOW.

    FLARES MAY BE SUBSTITUTED FOR THE FLASHING 12 INCH SIGNAL HEADS. THERE SHALL BE 2 FLARES AT EACH SIGN ON BOTH SIDES ON THE ROADWAY. THE FLARES SHALL BE REPLACED IF THEY BURN OUT. THE SIGNS DO NOT HAVE TO BE ILLUMINATED DURING NIGHT OPERATIONS IF FLARES ARE USED.

    STOPPING TRAFFIC SHALL BE DONE WHEN THE GREATEST NUMBER OF LANES IS PERMITTED TO BE CLOSED BY THE PLANS OR BY DISTRICT 12'S PERMITTED LANE CLOSURES REFERENCE MAP.

    A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE TO BE ON ODOTS PRE-APPROVED LIST, SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.



NOTE: DETAIL IS SHOWN FOR 2 LANES. FOR 3 OR 4 LANES 3 PATROL VEHICLES ARE REQUIRED.

MAINTAINING VEHICULAR TRAFFIC (CONT.)

12. FOR ANY OPERATION NOT SPECIFICALLY MENTIONED IN THESE PLANS, THE TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

13. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTALS REQUIRED TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

TRAFFIC CONTROL MATERIALS

A. SIGNS

   SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES, SHALL BE AS PROVIDED IN THE "MANUAL", OR IN SIGN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

   ALL SIGNS SHALL HAVE A REFLECTORIZED BACKGROUND OF REFLECTIVE MATERIALS AS DESCRIBED IN THE "MANUAL".

B. SIGN SUPPORTS

   TEMPORARY SIGN SUPPORTS SHALL BE AS SHOWN ON MT-105.10M AND MT-105.11M.

C. DRUMS

   DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL PERMANENT LANE CLOSURES SHALL BE DELINEATED WITH DRUMS SPACED AT 50 FEET CENTER TO CENTER. ALL COSTS FOR INSTALLING, MAINTAINING AND SUBSEQUENT REMOVAL OF SAID DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

D. LIGHTING DEVICES

   FLASHERS SHALL BE 12 VOLT BATTERY OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHES OF SHORT DURATION AND SHALL BE PLACED ON ALL SIGNS AT ALL TIMES.

   CONTINUOUS BURN LIGHTS SHALL BE 12 VOLT BATTERY OPERATED MODELS WITH MINIMUM 7 INCH DIAMETER YELLOW LENSES.

E. FLASHING ARROW BARRICADE

   WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED. THE MOTORIST SHALL BE WARNED AND DIVERTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW BARRICADE FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO STANDARD DRAWING MT-35.10M & MT-35.11M AND THE PROVISION SET FORTH IN OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING. AND USE OF FLASHING ARROW BARRICADES. IF THE FLASHING ARROW BARRICADE IS WITHIN 300 FT OF A RESIDENCE OR ON A SURFACE STREET, A SOLAR POWERED FLASHING ARROW BARRICADE SHALL BE USED. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED EMK | CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

15
110

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PUBLIC SAFETY

THE FOLLOWING PROVISIONS "A", "B",AND "C" SHALL APPLY WHEN THE LANE ADJACENT TO THE GUARDRAIL IS OPEN TO TRAFFIC:

THE PERIOD OF TIME THAT A HAZARD IS LEFT UNPROTECTED BY THE REMOVAL OF GUARDRAIL SHALL BE HELD TO AN ABSOLUTE MINIMUM AND IN NO CASE SHALL SUCH A PERIOD BE LONGER THAN ONE WORKING DAY. IF, AFTER ONE DAY, THE ENTIRE RUN OF GUARDRAIL CONSTRUCTION IS NOT COMPLETE THE FOLLOWING SHALL APPLY:

A. IN AREAS WHERE EXISTING GUARDRAIL HAS BEEN REMOVED OR THE GUARDRAIL IS IN A PARTIAL STAGE OF COMPLETION. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TYPE II BARRICADES WITH TYPE C (STEADY BURNING) WARNING LIGHTS WITHIN THE LIMITS OF THE UNPROTECTED AREA. THE BARRICADES SHALL BE PLACED AT 50' INTERVALS AND OFFSET AT LEAST TWO FEET FROM THE EDGE OF THE TRAVELED ROADWAY AND IN CLOSE PROXIMITY TO THE CONSTRUCTION. THE APPROACH END OF A PARTIALLY COMPLETED RUN OF GUARDRAIL SHALL BE FASTENED AT GROUND LEVEL TO A STEEL DRUM.

B. IF THE EXISTING GUARDRAIL IS FOR THE PROTECTION OF AN OBSTACLE (I.E. SIGN SUPPORT, BRIDGE PAREPET, ETC.) THE CONTRACTOR SHALL ERECT PORTABLE CONCRETE BARRIER IN THE DIRECTION OF TRAFFIC. THE REQUIREMENTS OF PARAGRAPH "A" SHALL APPLY TO THE REMAINING GUARDRAIL WITHIN THE RUN. TEMPORARY BARRIER SHALL BE FLARED AT A 20:1 (MINIMUM) TAPER RATE AND SHALL INCLUDE A TEMPORARY END TERMINAL AS PER RM-4.2M.

C. THE REQUIREMENTS STATED IN "A" SHALL APPLY FOR A PERIOD NOT TO EXCEED ONE WEEK. WHERE THE REBUILDING OR CONSTRUCTION OF ANY RUN OF GUARDRAIL CANNOT BE ACCOMPLISHED WITHIN ONE WEEK, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY CONCRETE BARRIER IN THE INTERIM TIME IT TAKES TO COMPLETE THE WORK (SEE DETAIL ON SHEET 19). THE APPROACH END OF THE PORTABLE CONCRETE BARRIER SHALL BE FLARED TO THE OUTER EDGE OF THE PAVED SHOULDER AND SHALL INCLUDE A TEMPORARY END TERMINAL AS PER RM-4.2M. IN ADDITION, A TYPE II BARRICADE WITH TYPE B (HIGH INTENSITY FLASHER) WARNING LIGHT SHALL BE PLACED IN FRONT OF THIS INITIAL SECTION OF TEMPORARY BARRIERS TO PROVIDE FOREWARNING TO THE APPROACHING TRAFFIC.

D. TEMPORARY CONCRETE BARRIER IS NOT REQUIRED TO SEPARATE OPPOSING TRAFFIC WHEN THE MEDIAN BARRIER IS REMOVED PROVIDED THAT BOTH MEDIAN LANES REMAIN CLOSED UNTIL THE NEW MEDIAN BARRIER IS IN PLACE. FOR HAZARDS WITHIN THESE ZONE, PARAGRAPHS A, B AND C ABOVE STILL APPLY.

WHEN THE LANE ADJACENT TO THE GUARDRAIL IS CLOSED TO TRAFFIC THE PROVISIONS OF PARAGRAPH "A" ABOVE SHALL APPLY AFTER 1 DAY. THE PROVISIONS OF PARAGRAPH "B" ABOVE SHALL APPLY AFTER 10 DAYS, AND THE PROVISIONS OF PARAGRAPH "C" ABOVE SHALL APPLY

THE TERM "GUARDRAIL" AS USED HEREIN SHALL BE UNDERSTOOD TO COVER ALL TYPES OF GUARDRAIL, EXISTING OR PROPOSED FOR THE PROJECT INCLUDING BARRIER DESIGN GUARDRAIL, BRIDGE WINGWALL PARAPETS, AND CONCRETE BARRIER.

THE COST OF COMPLYING WITH THESE SAFETY PROCEDURES SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

MAJOR WORK ITEMS

THE FOLLOWING MAJOR WORK ITEMS WILL REQUIRE TRAFFIC MAINTENANCE WHICH SHALL BE INCORPORATED INTO THE CONTRACTORS SEQUENCE OF OPERATIONS.

A. INSTALLATION OF TOWER LIGHTING
B. PLANE AND PAVE IR-90
C. REPAIR OF CONCRETE PAVEMENT JOINTS AND PANELS, IR-490
D. OVERLAY A PORTION OF IR-490, SAW AND SEAL JOINTS
E. PAVEMENT MARKINGS
F. INSTALLATION OF GUARDRAIL

PROGRESS SCHEDULE (CRITICAL PATH METHOD)

THE PRE-CONSTRUCTION MEETING SHALL BE HELD NO LATER THAN 30 CALENDAR DAYS AFTER THE CONTRACT IS SIGNED. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED CPM SCHEDULE AT THE PRE-CONSTRUCTION MEETING FOR REVIEW BY THE CONSTRUCTION ENGINEER WITHIN 14 CALENDAR DAYS AFTER THE PRE-CONSTRUCTION MEETING.

A FINAL CPM SCHEDULE SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER WITHIN 30 CALENDAR DAYS FROM THE DATE OF THE PRE-CONSTRUCTION MEETING BUT AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO THE DATE DESIGNATED AS THE STARTING DATE IN THE CPM SCHEDULE. THE SCHEDULE SHALL BE SIGNED AND DATED BY THE PRIME CONTRACTOR AND NAMED SUBCONTRACTORS.

PROJECT PROGRESS MEETINGS

PROGRESS MEETINGS WILL BE HELD EVERY FOUR (4) WEEKS AT THE PROJECT OFFICE, OR OTHER LOCATION DESIGNATED BY THE CONSTRUCTION ENGINEER AND ATTENDED BY O.D.O.T. AND CONTRACTOR DECISION-MAKING PERSONNEL.

THE PURPOSE OF THESE MEETINGS WILL BE TO DISCUSS CRITICAL OPERATIONS AND POTENTIAL PROBLEMS. THE CONTRACTOR WILL CONFIRM THE NUMBER AND DURATION OF WORK SHIFTS, NUMBER OF WORK CREWS, AND SPECIFIC PORTIONS OF THE WORK TO BE PERFORMED DURING THE FOLLOWING WEEKS.

THESE MEETINGS CAN ONLY BE WAIVED BY THE CONSTRUCTION ENGINEER.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

VEHICLES AND EQUIPMENT SHALL ALWAYS MOVE WITH, AND NOT ACROSS OR AGAINST THE FLOW OF TRAFFIC. VEHICLES AND OTHER EQUIPMENT SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS; AND SHALL NOT ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL BE HAZARDOUS TO, OR INTERFERE WITH THE NORMAL TRAFFIC FLOW. PERSONAL VEHICLES WILL NOT BE PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE ENGINEER.

EQUIPMENT, VEHICLES AND MATERIALS SHALL NOT BE STORED OR PARKED WITHIN 30 FEET OF THE TRAVELED WAY UNLESS 6 FEET BEHIND PCB OR GUARDRAIL.

ALL WORK VEHICLES AND EQUIPMENT THAT ENTERS THE WORK ZONE MORE THAN ONCE A DAY MUST BE EQUIPPED WITH AT LEAST ONE FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT THAT IS VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR AT LEAST ONE QUARTER OF A MILE, DAY OR NIGHT.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE WHEN NO LONGER NEEDED A PORTABLE CHANGEABLE MESSAGE SIGN (S). THE PCMS SHALL BE OF THE TYPE SHOWN ON THE LIST OF APPROVED PCMS MAINTAINED BY THE DIRECTOR. THE PCMS SHALL BE A CLASS I OR II TYPE UNIT.

THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE MOUNTED ON A TRAILER. THE LOCATION OF THE PCMS SHALL BE AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE LINK WHICH WILL ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE SOFTWARE NECESSARY TO CONTROL THE PCMS REMOTELY.

THE PCMS SHALL BE EQUIPPED WITH A MYRIAD SAFETY BEAM OR AN APPROVED EQUAL AS DETERMINED BY THE ENGINEER. THE MYRIAD SAFETY BEAM SENDS OUT A SIGNAL THAT ACTIVATES RADAR DETECTORS. THE BEAM IS APPROVED BY THE F.C.C. THE MYRIAD SAFETY BEAM SHALL USE THE SAME POWER SUPPLY AS THE PCMS. THE MYRIAD SAFETY BEAM SHALL BE ABLE TO BE ACTIVATED WITH THE PCMS RUNNING OR NOT. THE MYRIAD SAFETY BEAM IS DISTRIBUTED BY THE TRIPLEX GROUP, INC., P.O. BOX 428. NEW HOPE, PA. 18938. PHONE (215) 862-5077.

NO FLIP DISK UNITS ARE ALLOWED.

AT THE DIRECTION OF THE ENGINEER THE PCMS MAY BE REMOVED FOR PERIODS OR TIMES WHEN NOT IN USE. NO PAYMENT WILL BE MADE FOR THESE TIMES (EX. WINTER MONTHS).

THERE SHALL BE TWO CLASS I OR II CHANGEABLE MESSAGE SIGN AT 8 MONTHS EACH.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN . . . . . 16 SIGN-MONTHS

SIGNAGE

ADVANCE WARNING SIGN GROUPS AS PER STANDARD DRAWINGS MT-95.30M, MT-98.12M, MT-98.13M, MT-98.14M, MT-98.15M, MT-98.16M, MT-98.17M, AND MT-98.18M SHALL BE INSTALLED, PAYMENT FOR THESE SIGNS SHALL BE UNDER ITEM 614 - MAINTAINING TRAFFIC.

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERRABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS. IF ANY NOTED DEFICIENCIES ARE NOT CORRECTED WITHIN 24 HOURS THE ENGINEER SHALL DEDUCT ONE DAY PAY FOR ITEM 614 - MAINTAINING TRAFFIC, NOT AS A PENALTY BUT AS LIQUIDATED DAMAGES. THE CONTRACTOR SHALL BE SUBJECT TO THESE LIQUIDATED DAMAGES FOR EACH AND EVERY DAY THAT THESE PROVISIONS ARE NOT MET. ALL COSTS FOR MAINTAINING THE WORK ZONES AS DESCRIBED ABOVE SHALL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - TEMPORARY PAVEMENT MARKINGS (RESURFACING)

TEMPORARY MARKINGS SHALL BE PLACED AT THE LOCATIONS OF THE PERMANENT MARKINGS AS SHOWN IN THE TRAFFIC CONTROL PLANS.

THIS ITEM SHALL BE USED AFTER THE OVERLAY IS PLACED. THE ESTIMATED QUANTITIES FOR THIS WORK ARE SHOWN ON THE GENERAL SUMMARY.

PERMANENT PAVEMENT MARKINGS

AFTER PLACING THE SURFACE COURSE, THE CONTRACTOR MAY PLACE PERMANENT PAVEMENT MARKINGS AT LOCATIONS SHOWN IN THE TYPICALS AND THE TRAFFIC CONTROL SHEETS INSTEAD OF PLACING TEMPORARY PAVEMENT MARKINGS, WHICH SHALL BE NON-PERFORMED AT THESE LOCATIONS.

TEMPORARY CONCRETE BARRIER (PUBLIC SAFETY)

TEMPORARY CONCRETE BARRIER SECTIONS (10 FT LONG) AS REQUIRED BY THE PUBLIC SAFETY NOTE SHALL BE SUPPLIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOADING, UNLOADING AND TRANSPORTATION OF THE BARRIER.

THE BARRIER SECTIONS SHALL BE BOLTED TOGETHER WITH STEEL CONNECTIONS AS PER STANDARD CONSTRUCTION DRAWING RM-4.2M.

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY.

ALL COSTS FOR FURNISHING, INSTALLING, REINSTALLING AND SUBSEQUENT REMOVING TEMPORARY CONCRETE BARRIER AS DESCRIBED UNDER PUBLIC SAFETY WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622 - PORTABLE CONCRETE BARRIER.

NIGHT VEST

ALL OF THE CONTRACTORS AND SUB-CONTRACTORS PERSONNEL WORKING DURING THE HOURS OF DARKNESS SHALL WEAR A 100% SILVER REFLECTIVE SAFETY VEST. THE SAFETY VEST SHALL BE PROVIDED BY THE CONTRACTOR. THE VEST MAY HAVE SEVERAL LIME OR ORANGE STRIPES ON IT.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF ITEM 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

- FOR TOTAL CLOSURES OF EXIT RAMPS.

- WHEN DIRECTED BY THE ENGINEER.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER W/PATROL CAR . .200 HOURS

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

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE.

RAMP CLOSURES FOR REPAIRS OR RESURFACING

THE CONTRACTOR MAY CLOSE ONE RAMP AT A TIME FOR REPAIRS OR RESURFACING. THE CLOSURES SHALL BE LIMITED TO THE HOURS SHOWN IN THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE. THE MOTORING PUBLIC SHALL BE GIVEN ADVANCE WARNING OF CLOSURES AT LEAST 72 HOURS IN ADVANCE THROUGH THE USE OF EITHER A GROUND MOUNTED FLAT SHEET SIGN OR A PORTABLE CHANGEABLE MESSAGE SIGN. A LEO WITH PATROL CAR (PAID FOR SEPARATELY) SHALL BE USED FOR EACH RAMP CLOSURE AND BE PRESENT FOR THE ENTIRE CLOSURE TIME.

FREEWAY ENTRANCE RAMPS SHALL BE CLOSED WITH A PCMS SUGGESTING A RECOMMENDED DETOUR.

FREEWAY EXIT RAMPS SHALL BE CLOSED WITH A PCMS ROUTING TRAFFIC TO THE NEXT EXIT AND A SECOND PCMS INDICATING A U-TURN AT THAT EXIT (UNLESS DIRECTED DIFFERENTLY BY THE ENGINEER).

FOR RAMP CLOSURES ONE OR TWO ADDITIONAL PCMS UNITS WILL BE NEEDED AS DESCRIBED ABOVE. THESE WILL BE IN ADDITION TO THE PCMS UNITS SPECIFIED IN THE PLANS AND SHALL BE PAID FOR BY THE CONTRACTOR.

HOLIDAY CLOSURES

AND ALL EXISTING LANES, EXCEPT FOR THE LONGTERM LANE CLOSURE SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	NEW YEARS	MOTHERS DAY
MEMORIAL DAY	FOURTH OF JULY	EASTER
LABOR DAY	THANKSGIVING	

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

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC	
SUNDAY	12:00N FRIDAY	THROUGH 12:00N MONDAY
MONDAY	12:00N FRIDAY	THROUGH 12:00N TUESDAY
TUESDAY	12:00N MONDAY	THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY	THROUGH 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY	THROUGH 12:00N MONDAY
FRIDAY	12:00N THURSDAY	THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY	THROUGH 12:00N MONDAY

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07.

SPECIAL EVENT LIMITATIONS

DURING THE NIGHT OF ALL CLEVELAND INDIAN GAMES, DURING ANY STADIUM, GUND ARENA OR DOWNTOWN EVENT WITH ATTENDANCE IN EXCESS OF 20,000, THE CONTRACTOR SHALL NOT CLOSE A LANE(S) IN THE INBOUND DIRECTION 2 HOURS BEFORE AN EVENT AND IN THE OUTBOUND DIRECTION 2 HOURS AFTER AN EVENT ENDS. ANTICIPATED EVENTS INCLUDE GAMES OF THE INDIANS, BROWNS, CAVALIERS, CONCERTS, FIREWORKS, ETC.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIONAL PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

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PLANED SURFACES

THE DURATION OF TIME BETWEEN PLANING THE EXISTING ASPHALT PAVEMENT SHALL BE KEPT TO A MINIMUM. IN NO INSTANCE SHALL THIS TIME EXCEED 14 CALENDAR DAYS. THIS IS TO ENSURE THAT THE POTENTIAL DEGRADATION OF THE EXISTING PAVEMENT DUE TO TRAFFIC IS KEPT TO A MINIMUM. IN THE EVENT THAT THE TIME BETWEEN PLANING THE PAVEMENT AND PLACING THE ASPHALT INTERMEDIATE COURSE EXCEEDS 14 CALENDAR DAYS, LIQUIDATED DAMAGES AS PER 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS MANUAL SHALL BE ASSESSED.

TRAFFIC CONTROL AND SEQUENCE OF ASPHALT CONCRETE WORK

ALL ASPHALT CONCRETE OPERATIONS SHALL BE CONDUCTED IN A MANNER THAT WILL ASSURE MINIMUM DANGER AND INCONVENIENCE TO THE HIGHWAY USERS. ALL ASPHALT WORK SHALL BE PERFORMED AT THE TIMES PROVIDED IN THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" NOTE ON SHEET 20. THE PROCEDURE FOR INSTALLATION OF ANY ASPHALT LAYER SHALL BE SUCH THAT NO GREATER THAN 1-1/2 INCH DISCONTINUITY IN THE ELEVATION OF THE TRAVELED SURFACE SHALL BE EXPOSED TO TRAFFIC.

THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT ALL HALF-WIDTH OVERLAYS ARE NOT EXPOSED TO TRAFFIC FOR MORE THAN 24 HOURS.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS ANY PART-WIDTH RESURFACING JOINT EXCEPT AS IS NECESSARY DURING THE ACTUAL RESURFACING OPERATION. ANY PART WIDTH RESURFACING JOINTS WHICH MUST BE EXPOSED TO TRAFFIC SHALL BE RAMPED USING ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC AT A RATE NOT TO EXCEED 2 INCHES IN 1 FOOT (LONGITUDINAL JOINTS).

TEMPORARY TRANSVERSE RESURFACING JOINTS WHICH MUST BE EXPOSED TO TRAFFIC SHALL BE RAMPED USING ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC AT A RATE NOT TO EXCEED 1 INCH IN 10 FEET.

WHENEVER TRAFFIC IS SUBJECTED TO HALF-WIDTH OVERLAYS PRIOR TO COMPLETING THE ASPHALT COURSE, THE CONTRACTOR SHALL PROVIDE OW-1.1-48 AND OW-P-1.1-24 SIGNS (DUAL SIGN INSTALLATION). PLACEMENT SHALL BE AS DIRECTED BY THE ENGINEER AND INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES IN BOTH DIRECTIONS IN ACCORDANCE WITH THE "SCHEDULE OF THRU LANES TO BE MAINTAINED".

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIVERTED BY THE CONTRACTOR THROUGH THE USE OF A FLASHING ARROW, IN ADDITION TO THOSE PROVISIONS SET FORTH IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

PRIOR TO OPENING THE ROADWAY TO NORMAL TRAFFIC DURING WINTER MONTHS, ALL ASPHALT WORK INCLUDING THE SURFACE COURSE MUST BE COMPLETED AN EQUAL FULL WIDTH DISTANCE. NO INTERMEDIATE LEVELING COURSE IS TO BE TRAVELED ON DURING WINTER MONTHS NOR SHALL ANY PART WIDTH RESURFACING REMAIN DURING THE WINTER. THE CONTRACTOR IS CAUTIONED TO SCHEDULE HIS OPERATIONS TO MEET THIS REQUIREMENT. IF THE CONTRACTOR DOES NOT MEET THIS REQUIREMENT OR HAS THIS REQUIREMENT WAIVED, THE CONTRACTOR SHALL INCREASE THE THICKNESS OF THE 446 SURFACE COURSE BY ½" ENTIRELY AT HIS EXPENSE FOR LABOR, MATERIALS, AND EQUIPMENT.

ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

THIS ITEM SHALL BE USED TO PROVIDED TEMPORARY ASPHALT RAMPS FOR TRANSVERSE DISCONTINUITIES. RAMPING SHALL BE PLACED AT THE RATE OF 1" PER 10 FT.

TEMPORARY ASPHALT RAMPS SHALL BE REMOVED AS PART OF THIS ITEM.

ITEM 614 - BITUMINOUS CONCRETE
FOR MAINTAINING TRAFFIC . . . . . 250 CU. YD.

ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN

THIS ITEM SHALL BE USED TO REPAIR HOLES IN BRIDGE DECKS, ROADWAY SURFACE AND BERMS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MONITOR THE ROADWAY TO DETERMINE WHEN THE HOLES SHALL BE PATCHED. THE CONTRACTOR MUST NOTIFY THE ENGINEER FOR HIS/HER APPROVAL.

THE CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGES TO MOTORIST VEHICLES IF THE HOLES ARE NOT FILLED IN A REASONABLE AMOUNT OF TIME.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE ROADWAY, BRIDGE DECKS AND BERMS (IN THE DIRECTION WORK IS BEING PERFORMED) FROM THE FIRST DAY OF WORK UNTIL CONSTRUCTION IS COMPLETE. THIS INCLUDES PERIODS WHEN WORK IS SUSPENDED.

THE CONTRACTOR HAS A MAXIMUM TIME OF 2 HOURS AFTER HE HAS BEEN INFORMED OF A POT HOLE, BY PROJECT PERSONNEL, TO TAKE CORRECTIVE ACTION. IF THE CONTRACTOR FAILS TO TAKE ACTION TO FIX THE POT HOLE WITHIN THE 2 HOUR LIMIT, THE CONTRACTOR SHALL BE CHARGED A LIQUIDATED DAMAGE OF $1000 PER OCCURENCE.

THE PROCEDURE FOR PATCHING A HOLE IS:

REMOVE ALL LOOSE AND DISINTEGRATED ASPHALT OR CONCRETE TO AN EXTENT TO EXPOSE SOUND CONCRETE OR ASPHALT. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE VERTICAL.

CARE SHALL BE TAKEN ON BRIDGE DECKS NOT TO PUNCTURE THE DECK OR DAMAGE THE REINFORCING STEEL. THE CONTRACTOR SHALL TAKE WHAT EVER STEPS NECESSARY TO MAKE THE BRIDGE DECK PASSABLE.

THE SURFACE TO BE PATCHED MUST BE CLEANED AND DRIED.

THE ENTIRE SURFACE SHALL BE TACK COATED, INCLUDING THE VERTICAL FACES.

ASPHALT CONCRETE SHALL BE IN ACCORDANCE TO ITEM 404 OR 402 AS DETERMINED BY THE ENGINEER. IT SHALL BE PLACED IN 2 INCH LIFTS AND COMPACTED TO THE LEVEL OF THE WEARING SURFACE.

DURING WINTER MONTHS ONLY WHEN ASPHALT IS NOT AVAILABLE OR AT THE DIRECTION OF THE ENGINEER COLD MIX MAY BE USED. COMPACTION EQUIPMENT MUST BE APPROVED BY THE ENGINEER.

ALL TRAFFIC CONTROL NEEDED FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THIS ITEM OF WORK.

ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING
TRAFFIC, AS PER PLAN . . . . . 150 CU. YD.

FLASHING ARROW PANEL

DURING ANY CONSTRUCTION PHASE WHEN FLASHING ARROW PANELS ARE SHOWN ON THE PLANS, ELECTRIC POWERED EQUIPMENT OR SOLAR POWERED EQUIPMENT APPROVED BY THE ENGINEER SHALL BE EXCLUSIVELY UTILIZED WHEN LOCATED WITHIN 300 FEET OF ANY RESIDENCE. DIESEL OR GASOLINE POWERED GENERATORS WILL NOT BE PERMITTED IN THESE AREAS.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

COVERING OF SIGNS

WHEN THE MESSAGE OF A PERMANENT SIGN CONFLICTS WITH A LONG TERM CLOSURE DURING BRIDGE OR ROAD REPAIRS, THE SIGN SHALL BE COVERED. THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

OVERHEAD SIGNS, COVERING OF DOWN ARROWS

OVERHEAD SIGNS ON THE FREEWAY WHICH CONTAIN DOWN ARROW LANE CONTROLS SHALL BE MODIFIED AS FOLLOWS:

DOWN ARROWS OVER CLOSED LANE:

SHORT TERM LANE CLOSURE: NO WORK

LONG TERM LANE CLOSURE: COVER ARROW WITH 3 FT HIGH BY 3 FT WIDE ORANGE PANEL

THE BLANK PANELS SHALL BE INSTALLED WITHIN FOUR (4) HOURS AFTER IMPLEMENTATION OF THE LANE CLOSURE. THEY SHALL BE REMOVED NO EARLIER THAN 24 HOURS IN ADVANCE OF THE REOPENING OF THE LANE.

THERE ARE APPROXIMATELY 4 DOWN ARROWS WHICH WILL HAVE TO BE COVERED AS PART OF THIS PROJECT. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

TEMPORARY PAVEMENT MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER, TO PLACE TEMPORARY PAVEMENT MARKINGS AFTER THE CONTRACTOR HAS PLANED THE EXISTING ASPHALT AND AFTER THE PROPOSED OVERLAY HAS BEEN PLACED.

ITEM 614 - TEMPORARY EDGE LINE, CLASS I,
642 PAINT . . . . . 28.10 MILE
ITEM 614 - TEMPORARY LANE LINE, CLASS I,
642 PAINT . . . . . 24.60 MILE
ITEM 614 - TEMPORARY CHANNELIZING LINE, CLASS I,
642 PAINT . . . . . 18,500 L. F.
ITEM 614 - TEMPORARY STOP LINE, CLASS I,
642 PAINT . . . . . 450 L. F.
ITEM 614 - TEMPORARY CROSSWALK LINE, CLASS I,
642 PAINT . . . . . 2,200 L. F.
ITEM 614 - TEMPORARY LANE ARROW, CLASS I,
642 PAINT . . . . . 25 EACH

SEQUENCE OF OPERATIONS

PHASE I
- CLOSE THE EASTBOUND MEDIAN LANE AND PLACE PORTABLE CONCRETE BARRIER AS DETAILED ON SHEET 21.
- REMOVE MEDIAN BARRIER, CONSTRUCT LIGHT TOWER FOUNDATIONS AND CONSTRUCT MEDIAN BARRIER.
- OPEN LANE TO TRAFFIC.

ALL PHASE I WORK SHALL BE COMPLETED IN 45 DAYS (SEE THE "LIQUIDATED DAMAGES/INTERIM COMPLETION REQUIREMENTS" ON SHEET 20)

PHASE II
- PERFORM CONCRETE REPAIRS TO IR-490 FROM STA. 934+12.82 TO STA. 985+85.75 IN ALL LANES AS PERMITED AS SHOWN ON THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE.
- PERFORM THE WIDENING OF RAMP 7-7C AS DETAILED ON SHEETS 45-48.

PHASE III
- PLACE THE ASPHALT CONCRETE OVERLAY ON IR-490 FROM STA. 934+12.82 TO STA. 955+00±.

PHASE IV
- PLANE IR-90 FROM STA 879+79.45 TO IR-490 IN ONE DIRECTION (REFER TO "PLANED SURFACES" NOTE ON SHEET 18.)AND PLACE ASPHALT CONCRETE SURFACE COURSE ON IR-90 AND IR-490 WHERE REQUIRED AS PER THE TYPICALS.

PHASE V
- PERFORM THE SAME WORK AS IN PHASE IV, BUT IN OPPOSITE DIRECTION.

IF AFTER RECEIVING THE PROJECT ENGINEERS APPROVAL, THE CONTRACTOR MAY ELECT TO PERFORM WORK SCHEDULED FOR LATER PHASES, WHILE WORKING IN EARLIER PHASES. THE CONTRACTOR SHALL PERFORM THIS WORK WITHIN THE TIMES SHOWN ON THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" NOTE ON SHEET 20 AND THE "PLANED SURFACES" NOTE ON SHEET 18.

PLACING PORTABLE CONCRETE BARRIER

WHEN PLACING OR REMOVING PCB THE ADJACENT LANE SHALL BE CLOSED WHEN POSSIBLE.

ITEM 630 - SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER

WHEN ADDITIONAL SIGNING IS NEEDED TO MAINTAIN TRAFFIC, THE CONTRACTOR SHALL FURNISH THE SIGN OR SIGNS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE GROUND MOUNTED AND MEET ALL THE SPECIFICATIONS OF THE PLAN, PROPOSAL AND CURRENT YEAR CMS.

PAYMENT FOR THIS ITEM SHALL INCLUDE BUT NOT BE LIMITED TO THE COST TO FURNISH AND ERECT THE SIGN, INCLUDING DRIVE POSTS OR OTHER APPROVED METHODS OF SUPPORT, MAINTAINING THE SIGN AND REMOVAL OF THE SIGN.

THE FOLLOWING QUANTITY SHALL BE CARRIED TO THE GENERAL SUMMARY:

ITEM 630 - SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER...400 SQ. FT.

ITEM 615 - TEMPORARY PAVEMENT, CLASS A, AS PER PLAN

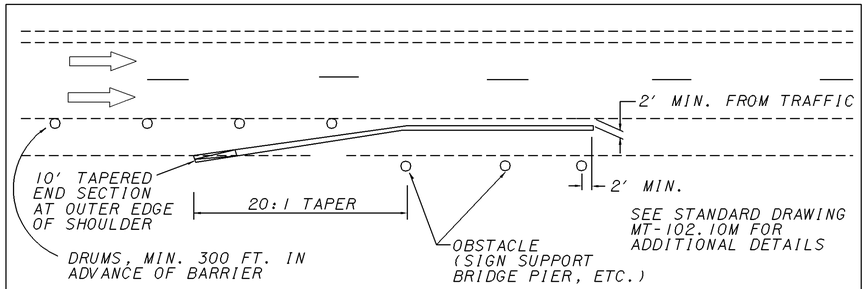
TO EXPEDIATE CONSTRUCTION OF THE TEMPORARY PAVEMENT, THIS ITEM SHALL BE CONSTRUCTED USING THE FLEXIBLE PAVEMENT OPTION AS PER SECTION 615.05 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

WORKSITE TRAFFIC SUPERVISOR

The contractor shall employ , subject to the approval of the engineer/supervisor, a CERTIFIED Wporksite Traffic Supervisor, (WTS). The WTS shall be certified from one of the following organizations:

1. American Traffic Safety Service Association(A.T.S.S.A). PHONE NO. (540) 368-1711 Certified Traffic Control Supervisor, 2 day course.

2. Or take the following course by the The National Highway Institute, Design and Operation of Work Zone Traffic Control, 3 day course, phone no. 1-877-558-6873.



PORTABLE CONCRETE BARRIER AT HAZARDS
SEE PUBLIC SAFETY NOTE FOR REQUIRED USE

WORKSITE TRAFFIC SUPERVISOR (cont.)

The WTS position is established for the purpose of supervising the installation of the work zone, monitoring it and correcting any deficiencies in the work zone. The WTS shall oversee all operations that affect the movement of vehicular and pedestrian traffic through the work zone.

The WTS shall be present when the contractor or subcontractor installs a traffic restriction, lane closure etc. In lieu of the WTS being present when a subcontractor has a traffic control zone in place the subcontractor may use is own personnel that is a Certified WTS. The contractor and subcontractor must present a copy of his WTS certificate to the Project Engineer. A WTS must be present for any closure or traffic restriction that takes place on the project.

The WTS may be a part of the working crew and must be in charge of setting up the work zone. After the work zone is in place the WTS may resume other duties not related to work zone traffic control. If the restrictions are short term, the WTS shall monitor the zone for compliance. Traffic control will be the WTS's main duty during implementation of the work zones. The WTS shall have the authority to have the deficiencies corrected as soon as possible. The WTS shall provide the Project Engineer a sketch of the (TCP) traffic control plan every day there is to be a short term traffic restriction, lane closure etc. This TCP shall show how the WORK ZONES are to be implemented.

Daily, including weekends and holidays the WTS shall spend a minimum of one hour reviewing and maintaining the work zone. These hours may be adjusted by the engineer but must be performed once a day during the construction seasons. The hours may be reduced during the winter construction season if directed by the engineer. The WTS shall inspect the work zone at the beginning and end of each work day and one time per week during the hours of darkness.

A record of each day's review shall be given to the project engineer the following workday, in writing and shall include: Traffic control device condition, placement, visibility, traffic flow conditions, incidents, accidents, congestion points, adequacy of advanced warning signs beyond the project limits, interaction of work vehicles with traffic, proper storage of materials and equipment, any deficiencies and resolutions of the deficiencies etc.

A 24-hour phone number shall be made available to the project engineer/supervisor in order to contact the WTS. The WTS shall have a pager and the phone number provided to the project engineer.

Failure of the contractor to comply with any of the above, shall constitute cause for the project engineer / supervisor to deduct $500.00 per day from money due the contractor not as a penalty but as a liquidated damage.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE LUMP SUM ITEM 614 - MAINTAINING TRAFFIC.

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

SCHEDULE OF THRU LANES TO BE MAINTAINED

N.A. = NOT APPLICABLE ⊕ - SEE "RAMP CLOSURE FOR RESURFACING" GENERAL NOTE

ROAD	LANE REDUCTIONS			PERMITTED RAMP CLOSURES			HALF WIDTH RAMP PAVING
	1 LANE CLOSURE	2 LANE CLOSURE	3 LANE CLOSURE	YES/NO	SHORT TERM CLOSURE ⊕ WEEKDAYS	SHORT TERM CLOSURE ⊕ WEEKENDS	
IR 90 STA 879+79.45 TO STA 933+12 (4 LANES, EB)	*	*	WEEKDAY 12:01 AM-5:00 AM				
	*	*	WEEKEND 12:01 AM-5:00 AM				
IR 90 STA 879+79.45 TO STA 933+12 (4 LANES, WB)	*	*	WEEKDAY 12:01 AM-5:00 AM				
	*	*	WEEKEND 12:01 AM-5:00 AM				
IR 490 SR-176 RAMPS TO IR-77 (4 LANES, EB & WB)	*	*	WEEKDAY 12:01 AM-5:00 AM				
	*	*	WEEKEND 12:01 AM-5:00 AM				
IR 490 IR-90 TO SR-176 RAMPS (3 LANES, EB)	*	*	NA				
	*	*	NA				
IR 490 IR-90 TO SR-176 RAMPS (2 LANES, WB)	*	*	NA				
	*	*	NA				
MARGINAL RDS (2 LANES)	ANYTIME	NA	NA				
LANE E-S (2 LANES)	ANYTIME	NA	NA	NO			
LANE N-W LANE W-N SBOR (2 LANES)	WEEKDAY 10:00 AM-1:00 PM	NA	NA	NO			
	WEEKEND ANYTIME	NA	NA				
ALL OTHER RAMPS (1 LANE) ⊕	NA	NA	NA	YES	10:00 PM-5:30 AM	2:00 AM SAT&SUN-6:00 AM SAT&SUN	7:00 PM-6:00 AM

GENERAL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THRU VEHICULAR ACCESS IN BOTH DIRECTIONS AT ALL TIMES THROUGHOUT THE PROJECT AREA. THE PROJECT SHALL BE CONSTRUCTED IN PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS AND MANPOWER NEEDED TO ADEQUATELY MAINTAIN TRAFFIC AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR IS REMINDED THAT, IN THE CONDUCT OF THIS PROJECT, HIS SEQUENCE OF OPERATIONS SHALL BE PLANNED IN SUCH A WAY AS TO MINIMIZE THE NUMBER OF LANE REDUCTIONS AND/OR LANE WIDTH REDUCTIONS REQUIRED TO MAINTAIN TRAFFIC THROUGH THE PROJECT.

PERMITTED LANE CLOSURES SHALL BE AS SHOWN ON THE "SCHEDULE OF THRU LANES TO BE MAINTAINED TABLE." THE TIME LIMITS SHOWN IN THIS TABLE SHALL BE ADHERED TO OR LIQUIDATED DAMAGES WILL BE ASSESED.

OCTOBER 15TH SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY UNTIL THE RE-SURFACING IS COMPLETED.

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

SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

LIQUIDATED DAMAGES/SHORT TERM LANE CLOSURES

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE.

THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 12 WORK ZONE TRAFFIC CONTROL ENGINEER.

SHORT TERM LIQUIDATED DAMAGES SHALL ALSO BE ASSESSED WHEN A RAMP CLOSURE IS VIOLATED.

IF SHORT TERM LANE CLOSURES ARE IN PLACE OUTSIDE THE SPECIFIED TIMES, LIQUIDATED DAMAGES IN THE AMOUNT OF $ 85.00 PER MINUTE SHALL BE ACCESSED THE CONTRACTOR FOR EACH MINUTE THE LANE REMAINS CLOSED.

SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED.

LIQUIDATED DAMAGES/INTERIM COMPLETION REQUIREMENTS

THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS AND INCREASE HIS WORK FORCE AS NECESSARY SO AS TO COMPLETE ALL WORK ITEMS REQUIRING PERMANENT LANE CLOSURES FOR THE IDENTIFIED WORK ZONES (SEE "SEQUENCE OF OPERATIONS" NOTE), WITHIN THE TIME LIMITS ALLOCATED.

NON-RUSH HOUR CLOSURES, AS PERMITTED BY THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" TABLE ON THIS SHEET, ARE NOT CONSIDERED WITHIN TIME LIMITS ABOVE. (THOSE CLOSURES ARE DISCUSSED IN THE "LIQUIDATED DAMAGES/SHORT TERM LANE CLOSURES" NOTE).

LIQUIDATED DAMAGES/INTERIM COMPLETION REQUIREMENTS (CONT.)

THE PHASE IS COMPLETED WHEN THE CLOSED LANE IS OPENED TO TRAFFIC.

THE TIME LIMIT SHOWN SHALL BEGIN ON THE FIRST DAY THAT THE PERMANENT CLOSURE IS IMPLEMENTED AND SHALL CONTINUE BASED UPON CALENDAR DAYS UNTIL COMPLETION OF WORK.

LIQUIDATED DAMAGES AS DETERMINED FROM THE TABLE IN SECTION 108.07 OF THE SPECIFICATIONS SHALL BE ASSESSED FOR EACH DAY (OR PORTION THEREOF) FOR WHICH THE TIME LIMIT IS NOT MET.

* - ALL LANE CLOSURES LISTED ABOVE MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BT THE "DISTRICT 12, PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEB SITE:

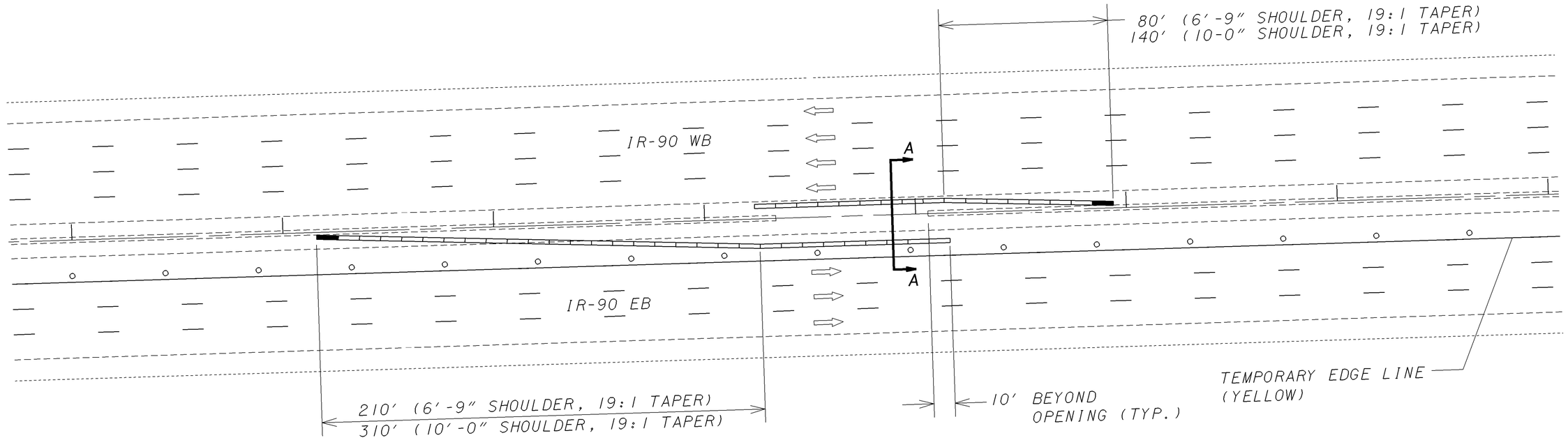
www.dot.state.oh.us/dist12/workzone/laneclo.htm

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT. NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



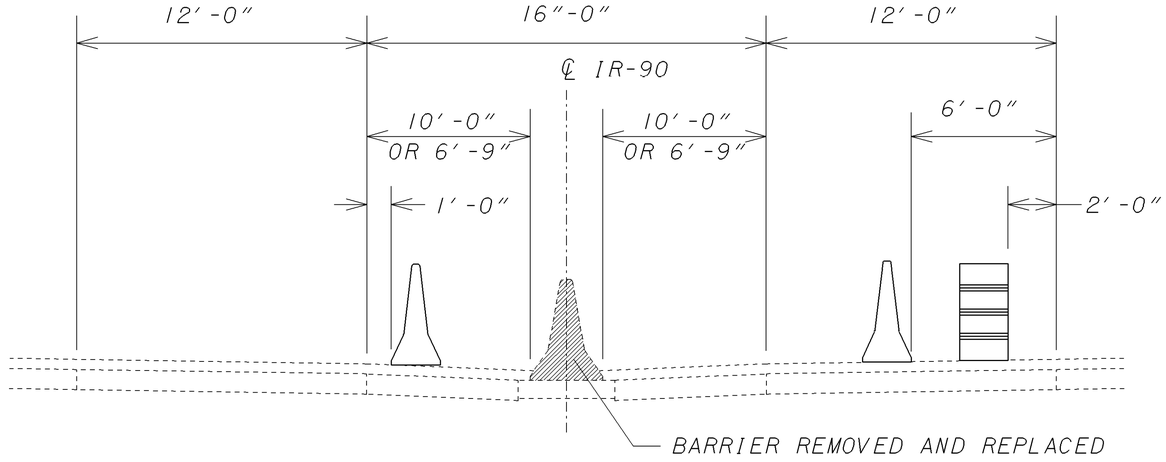
℄ LIGHTTOWER FOUNDATION	DIRECTION	PROPOSED PORTABLE CONCRETE BARRIER STATION		DIRECTION	PROPOSED PORTABLE CONCRETE BARRIER STATION		622	614	614	614
							PORTABLE CONCRETE BARRIER, 32″	BARRIER REFLECTOR, TYPE B	OBJECT MARKER	TEMPORARY EDGE LINE, CLASS 1, 642 PAINT
STATION		FROM	TO		FROM	TO	L. F.	EACH	EACH	
876+60.0	EB	873+30	876+80	WB	NA	NA	350	15	15	
881+31.5	EB	*878+11±	881+63	WB	881+00	882+90	550	23	23	
886+66.5	EB	883+08	887+08	WB	886+05	888+35	630	26	26	
891+30.5	EB	887+92	891+72	WB	890+92	893+02	590	25	25	
896+03.5	EB	892+65	896+45	WB	895+62	897+72	590	25	25	
902+76.5	EB	899+38	903+18	WB	902+35	904+45	590	25	25	
908+05.5	EB	904+67	908+47	WB	907+64	909+14	530	22	22	
913+35.5	EB	910+97	913+77	WB	912+94	914+44	430	18	18	
919+01.5	EB	916+63	919+43	WB	918+60	920+10	430	18	18	
924+00.5	EB	921+60	925+60	WB	923+59	926+29	670	28	28	
929+26.5	EB	926+81	#931+91	WB	928+85	930+25	930	38	38	
929+25.0	EB	INCLUDED	ABOVE	WB	929+02	930+12	110	5	5	
931+69.5	EB	INCLUDED	ABOVE	WB	931+38	932+58	120	6	6	
937+09.5	EB	934+91	937+41	WB	936+88	938+08	370	16	16	
940+57.5	EB	938+18	940+98	WB	940+15	941+65	430	18	18	
949+79.5	EB	947+51	950+11	WB	949+50	950+80	390	17	17	
953+94.5	EB	951+61	954+71	WB	953+63	955+43	490	21	21	
EDGE LINE	EB	*,#866+70	955+00							1.73
TOTALS TO GENERAL SUMMARY							7850	346	346	1.73

* - STA. 880+07.53 BK = STA. 880+00.00 AH
\# - STA. 931+30.15 BK = STA. 928+50.00 AH

PORTABLE CONCRETE BARRIER

PORTABLE CONCRETE BARRIER (TAPERED END SECTION)

DRUMS (50′ C/C)



SECTION A-A

CALCULATED EMK
CHECKED LDH

MAINTENANCE OF TRAFFIC DETAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

21
110

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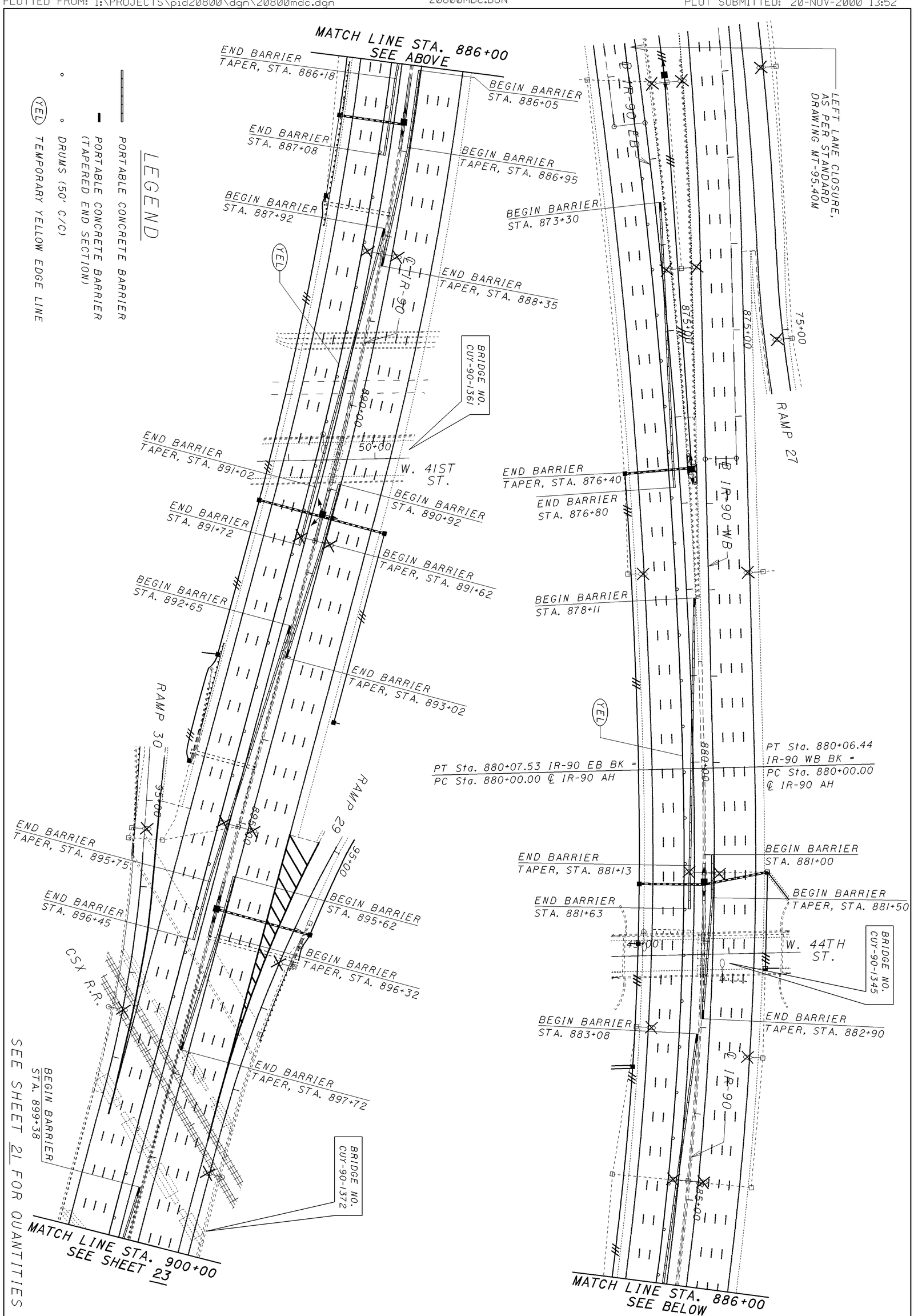

22 / 110	CUYAHOGA COUNTY CUY-90/490-13.41/0.00	MAINTENANCE OF TRAFFIC DETAIL	CALCULATED EMK / CHECKED LDH	0 50 100 SCALE IN FEET

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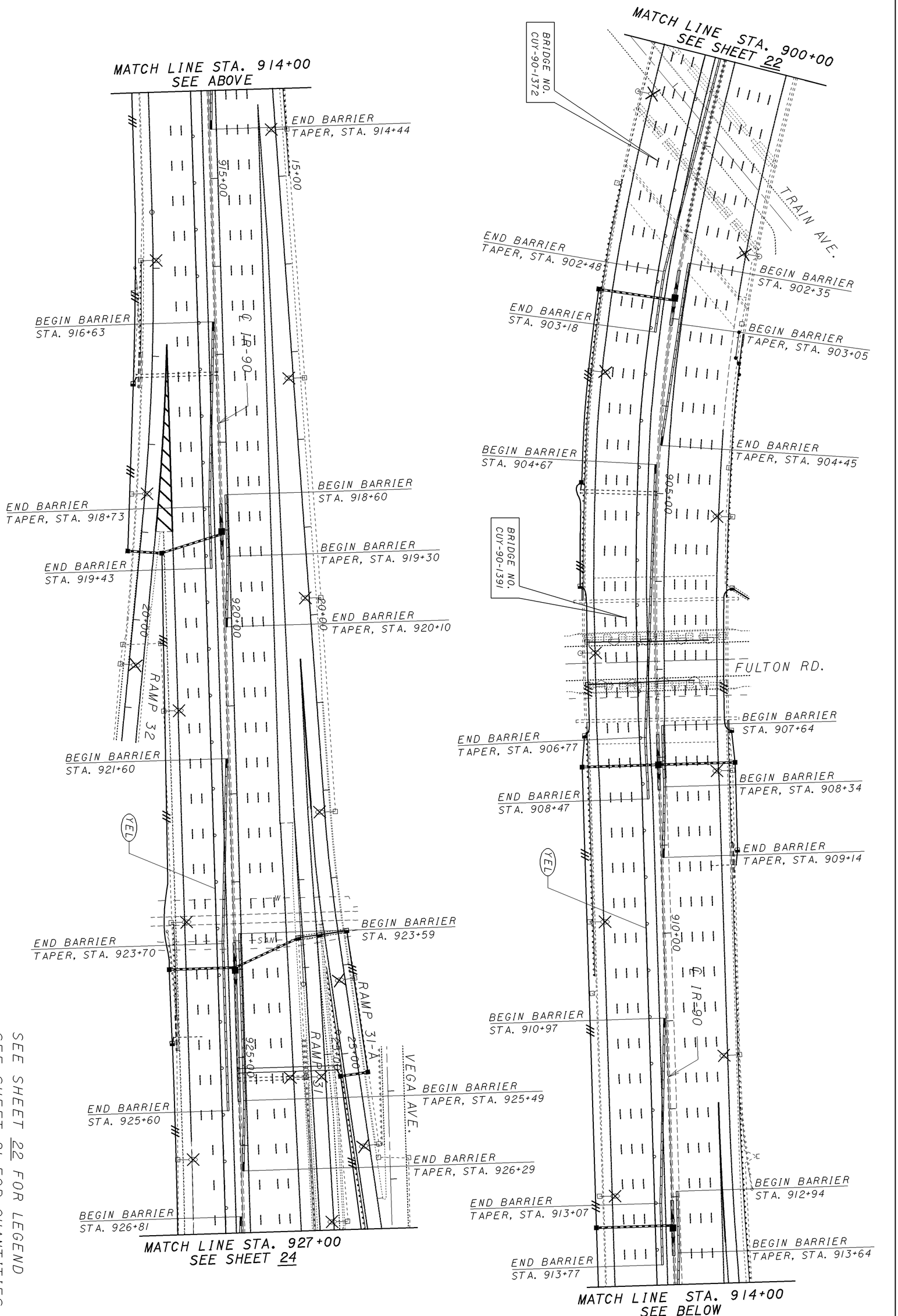

23 / 110	CUYAHOGA COUNTY CUY-90/ 490-13.41/ 0.00	MAINTENANCE OF TRAFFIC DETAIL	CALCULATED EMK CHECKED LDH	0 50 100 SCALE IN FEET

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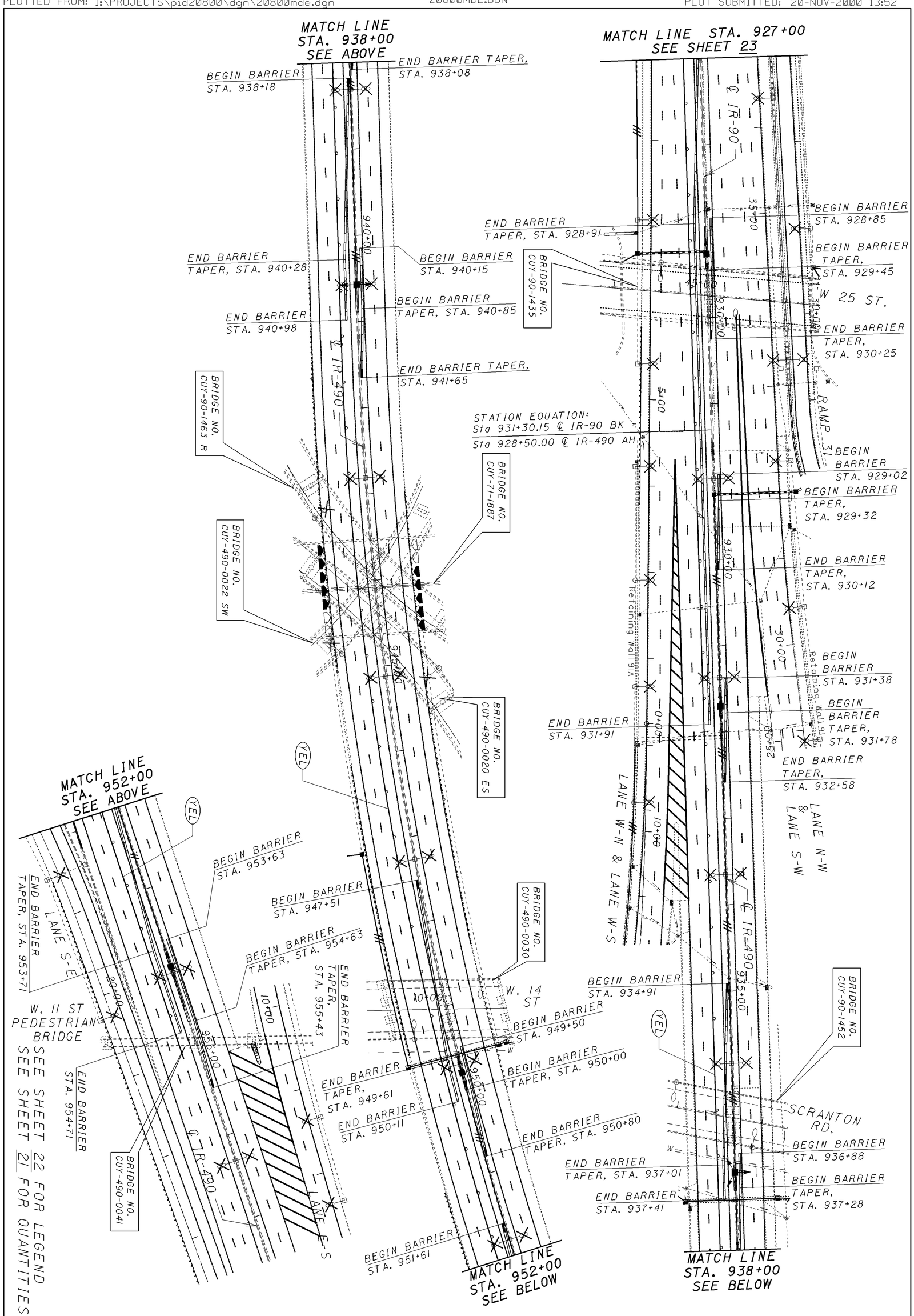

24
110

CUYAHOGA COUNTY
CUY-90/ 490-13.41/ 0.00

MAINTENANCE OF TRAFFIC DETAIL

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

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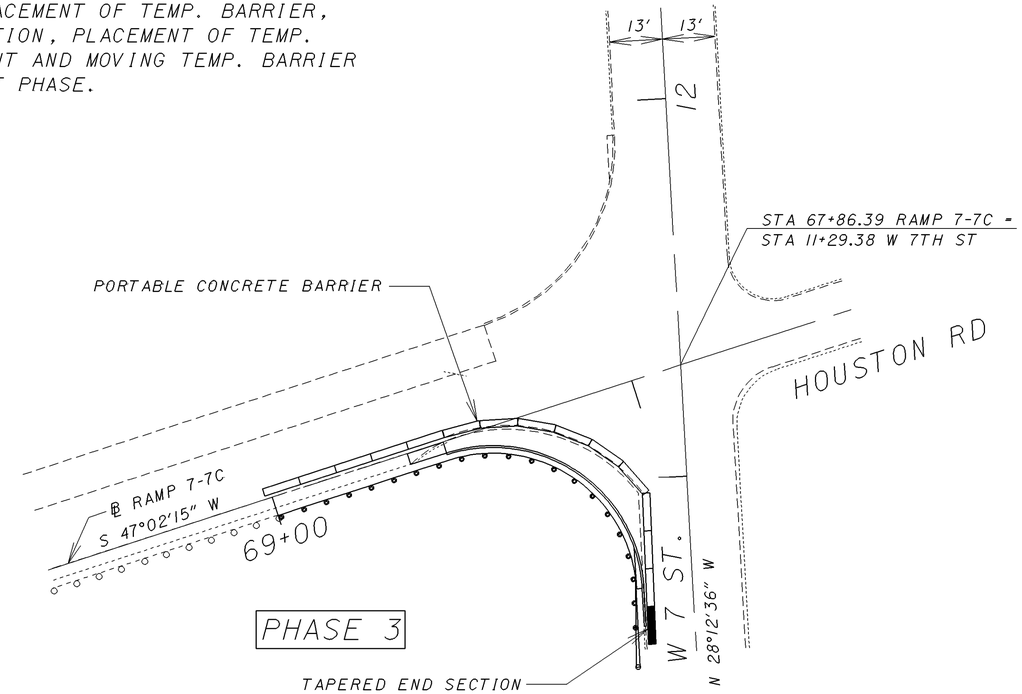
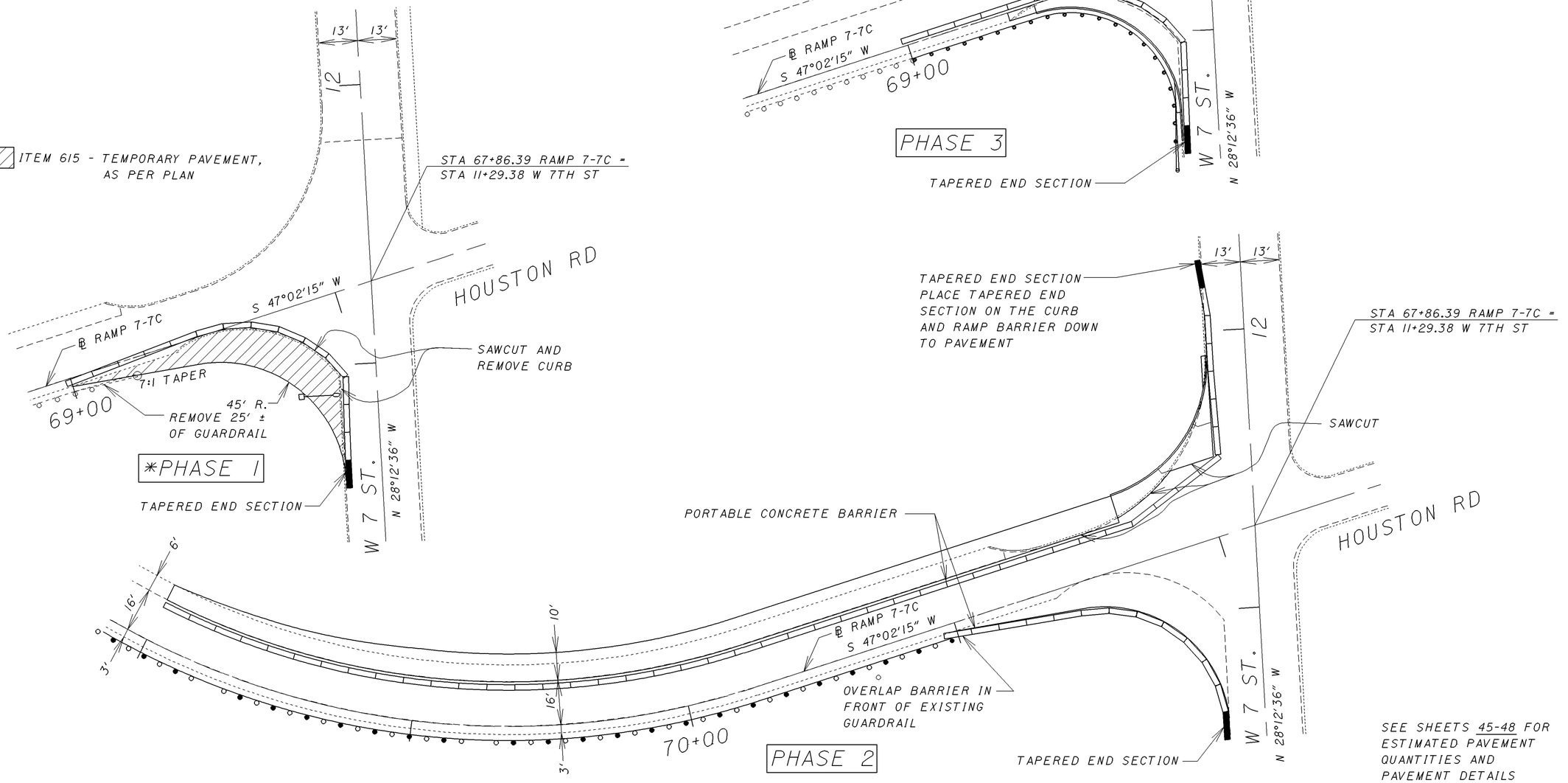
ESTIMATED QUANTITIES

	PROPOSED LOCATIONS		614 BARRIER REFLECTOR, TYPE B EACH	614 OBJECT MARKER EACH	615 TEMPORARY PAVEMENT, CLASS A, AS PER PLAN S.Y.	622 PORTABLE CONCRETE BARRIER, 32" L.F.
	FROM	TO				
PHASE 1	68+07, R 7-7C	69+00, R 7-7C			110	
	10+56, W 7 ST	69+03, R 7-7C	6	6		150
PHASE 2	12+25, W 7 ST	72+00, R 7-7C	19	19		470
	10+53, W 7 ST	69+05, R 7-7C	5	5		130
PHASE 3	10+56, W 7 ST	69+03, R 7-7C	6	6		150
	TOTALS TO GENERAL SUMMARY		36	36	110	900

* NOTE: LIMIT PHASE 1 WORK TO 7 CALENDAR DAYS. INCLUDED IN THIS WORK SHALL BE THE PLACEMENT OF TEMP. BARRIER, EXCAVATION, PLACEMENT OF TEMP. PAVEMENT AND MOVING TEMP. BARRIER TO NEXT PHASE.



ITEM 615 - TEMPORARY PAVEMENT, AS PER PLAN



SEE SHEETS 45-48 FOR ESTIMATED PAVEMENT QUANTITIES AND PAVEMENT DETAILS

CALCULATED EMK
CHECKED LDH

SCALE IN FEET 0 20 40

RAMP 7-7C WIDENING
MAINTENANCE OF TRAFFIC

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

25
110

PAVEMENT PLANING AND RESURFACING QUANTITIES

STATION FROM	STATION TO	LENGTH	PLANED END WIDTHS (AVG.)	RESURFACING END WIDTHS (AVG.)	RESURFACING SURFACE AREA	254 PAVEMENT PLANING, BITUMINOUS (1-1/2")	407 TACK COAT (0.10 GAL/SQ. YD.)	446 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY
		LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	GAL.	CU. YD.
EASTBOUND IR-90								
879+79.45	880+07.53	28.08	68.0	68.0	212	212	21	9
880+07.53 BK = 880+00 AH								
880+00.00	895+00.00	1500.00	68.0	68.0	11333	11333	1133	472
*890+00.00	891+50.00	150.00	68.0	68.0	1133	1133		
895+00.00	896+75.96	175.96	CADD	CADD	1514	1514	151	63
BRIDGE NO. CUY-90-1372 (OVER CSX RR)								
902+06.14	904+23.47	217.33	80.0	80.0	1932	1932	193	80
904+23.47	906+20.00	196.53	79.1	79.1	1727	1727	173	72
BRIDGE NO. CUY-90-1391 (OVER FULTON RD)								
907+59.00	908+23.47	64.47	76.8	76.8	550	550	55	23
908+23.47	915+36.26	712.79	76.5	76.5	6059	6059	606	252
915+36.26	919+00.00	363.74	97.5	97.5	3940	3940	394	164
919+00.00	925+93.25	693.25	64.8	64.8	4991	4991	499	208
925+93.25	931+30.15	536.90	72.5	72.5	4325	4325	433	180
931+30.15 BK = 928+50 AH								
928+50.00	934+12.82	562.82	95.5	95.5	5972	5972	597	249
WESTBOUND IR-90								
879+79.45	880+06.44	26.99	68.0	68.0	204	204	20	8
880+06.44 BK = 880+00 AH								
880+00.00	894+92.28	1492.28	68.0	68.0	11275	11275	1128	470
894+92.28	896+75.96	183.68	CADD	CADD	2472	2472	247	103
BRIDGE NO. CUY-90-1372 (OVER CSX RR)								
902+06.14	904+23.47	217.33	81.3	81.3	1963	1963	196	82
904+23.47	906+20.00	196.53	80.4	80.4	1756	1756	176	73
BRIDGE NO. CUY-90-1391 (OVER FULTON RD)								
907+59.00	908+23.47	64.47	76.8	76.8	550	550	55	23
908+23.47	911+95.07	371.60	76.5	76.5	3159	3159	316	132
911+95.07	915+88.85	393.78	82.0	82.0	3588	3588	359	150
915+88.85	922+18.85	630.00	100.0	100.0	7000	7000	700	292
922+18.85	923+00.00	81.15	67.8	67.8	611	611	61	25
923+00.00	931+30.15	830.15	73.6	73.6	6789	6789	679	283
931+30.15 BK = 928+50 AH								
928+50.00	931+60.49	310.49	88.3	88.3	3046	3046	305	127
931+60.49	932+26.00	65.51	42.8	42.8	312	312	31	13
EASTBOUND IR-490								
934+12.82	934+35.00	22.18	52.8	52.8	130	130	13	5
SOUTH MARGINAL ROAD 7								
0+18.00	0+43.00	25.00	CADD	CADD	112	112	11	5
0+43.00	7+80.00	737.00	28.0	28.0	2293	2293	229	96
7+80.00	8+30.00	50.00	CADD	CADD	188	188	19	8
NORTH MARGINAL ROAD 6								
0+18.00	0+55.73	37.73	CADD	CADD	147	147	15	6
0+55.73	7+89.50	733.77	28.0	28.0	2283	2283	228	95
7+89.50	8+20.00	30.50	CADD	CADD	151	151	15	6
TOTAL (LEFT SIDE)						91717	9058	3774

* - VARIABLE PAVEMENT PANING UNDER W. 41 ST BRIDGE

PAVEMENT PLANING AND RESURFACING QUANTITIES

STATION FROM	STATION TO	LENGTH	PLANED END WIDTHS (AVG.)	RESURFACING END WIDTHS (AVG.)	RESURFACING SURFACE AREA	254 PAVEMENT PLANING, BITUMINOUS (1-1/2")	407 TACK COAT (0.10 GAL/SQ. YD.)	446 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY
		LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	GAL.	CU. YD.
RAMP 29								
90+03.00	90+28.32	25.32	CADD	CADD	112	112	11	5
90+28.32	93+95.01	366.69	33.0	33.0	1345	1345	135	56
93+95.01	94+95.01	100.00	31.0	31.0	344	344	34	14
RAMP 30								
91+29.27	91+81.97	52.70	CADD	CADD	166	166	17	7
91+81.97	92+51.30	69.33	33.0	33.0	254	254	25	11
92+51.30	95+00.00	248.70	29.5	29.5	815	815	82	34
RAMP 31								
22+18.85	25+68.85	350.00	20.5	20.5	797	797	80	33
25+68.85	30+80.00	511.15	25.0	25.0	1420	1420	142	59
30+80.00	32+30.00	150.00	26.0	26.0	433	433	43	18
32+30.00	33+21.77	91.77	27.0	27.0	275	275	28	11
33+21.77	34+35.12	113.35	37.0	37.0	466	466	47	19
34+35.12	36+78.14	243.02	27.0	27.0	729	729	73	30
36+78.14	37+35.00	76.86	CADD	CADD	159	159	16	7
RAMP 31B								
4+58.11	5+87.94	129.83	25.0	25.0	361	361	36	15
5+87.94	6+26.00	38.06	CADD	CADD	173	173	17	7
RAMP 31A								
22+19.64	23+19.64	100.00	21.5	21.5	239	239	24	10
23+19.64	26+71.82	352.18	22.0	22.0	861	861	86	36
VEGA AVE								
51+99.31	53+24.31	125.00	22.0	22.0	306	306	31	13
53+24.31	54+98.63	174.32	43.0	43.0	833	833	83	35
54+98.63	55+98.64	100.01	36.0	36.0	400	400	40	17
55+98.64	56+22.00	23.36	CADD	CADD	109	109	11	5
RAMP 32								
18+98.07	20+00.00	101.93	27.0	27.0	306	306	31	13
20+00.00	22+00.00	200.00	25.0	25.0	556	556	56	23
22+00.00	23+00.00	100.00	22.0	22.0	244	244	24	10
23+00.00	23+45.14	45.14	19.0	19.0	95	95	10	4
23+45.14	25+45.14	200.00	18.0	18.0	400	400	40	17
TOTAL (THIS SIDE)						12198	1222	509
TOTAL (LEFT SIDE)						91717	9058	3774
TOTALS TO GENERAL SUMMARY						103915	10280	4283

RESURFACING QUANTITIES

CALCULATED EMK
CHECKED LDH

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PAVEMENT PLANING AND RESURFACING QUANTITIES

STATION FROM	STATION TO	LENGTH	PLANED END WIDTHS (AVG.)	RESURFACING END WIDTHS (AVG.)	RESURFACING SURFACE AREA	254 PAVEMENT PLANING, BITUMINOUS (1-1/2")	407 TACK COAT (0.10 GAL/SQ. YD.)	446 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY	254 PAVEMENT PLANING, PORTLAND CEMENT CONCRETE	880 3-1/2" ASPHALT CONCRETE (5 YEAR WARRANTY)		
		LIN. FT.	LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.	GAL.	CU. YD.	SQ. YD.	CU. YD.		
WADE AVE												
50+73.57	51+98.57	125.00	20.0	20.0	278	278	28	12				
51+98.57	53+05.89	107.32	41.0	41.0	489	489	49	20				
53+05.89	55+56.87	250.98	40.0	40.0	1115	1115	112	46				
55+56.87	55+92.00	35.13	CADD	CADD	155	155	16	6				
LANE W-N												
10+98.34	12+48.34	150.00	49.0	49.0	817	817	82	34				
12+48.34	14+87.62	239.28	63.0	63.0	1675	1675	168	70				
14+87.62	16+45.25	157.63	38.0	38.0	666	666	67	28				
16+45.25	18+20.25	175.00	34.0	34.0	661	661	66	28				
18+20.25	18+45.25	25.00	30.0	30.0	83	83	8	3				
BRIDGE NO. CUY-90-1463R (LANE W-N OVER IR-490)												
23+08.25	23+33.25	25.00	30.0	30.0	83	83	8	3				
23+33.25	24+83.25	150.00	34.0	34.0	567	567	57	24				
24+83.25	30+95.00	611.75	38.0	38.0	2583	2583	258	108				
30+95.00	32+63.05	168.05	37.0	37.0	691	691	69	29				
LANE N-W												
11+75.64	23+00.00	1124.36	38.0	38.0	4747	4747	475	198				
23+00.00	25+03.92	203.92	60.0	60.0	1359	1359	136	57				
25+03.92	29+43.69	439.77	50.0	50.0	2443	2443	244	102				
LANE W-S												
6+08.33	7+08.33	100.00	36.0	36.0	400	400	40	17				
7+08.33	8+58.33	150.00	33.0	33.0	550	550	55	23				
8+58.33	13+00.00	441.67	30.0	30.0	1472	1472	147	61				
13+00.00	21+70.57	870.57	64.0	64.0	6191	6191	619	258				
LANE E-S												
36+53.95	38+50.56	196.61	50.0	50.0	1092	1092	109	46				
S.B.O.R.												
2+27.38	3+61.27	133.89	50.0	50.0	744	744	74	31				
WESTBOUND IR-90												
932+26.00	934+12.82	186.82		42.8	888					86		
WESTBOUND IR-490												
934+12.82	955+06.10	2093.28	42.8	42.8	9955				157	968		
EASTBOUND IR-490												
934+35.00	954+26.42	1991.42	52.8	52.8	11683				194	1136		
LANE E-S												
9+65.00	15+67.25	602.25	38.0	38.0	2543				140	247		
15+67.25	17+67.25	200.00	34.0	34.0	756				125	74		
BRIDGE NO. CUY-490-0200ES (LANE E-S OVER IR-490)												
22+13.25	23+63.25	150.00	34.0	34.0	567				125	55		
27+00.00	27+87.00	87.00	38.0	38.0	367	367				36		
TOTAL (LEFT SIDE)						29228	2887	1204	741	2602		

CALCULATED EMK
CHECKED LDH

RESURFACING QUANTITIES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

27
110

PLOT SUBMITTED: 20-NOV-2000 13:54
PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\pid20800\dgn\20800gqa.dgn
20800GQA.DGN

Ref. No.	Sheet No.	Existing Locations From	Existing Locations To	Proposed Locations From	Proposed Locations To	Roadway	Side (in Direction of Travel)	Length of Need (for Fixed Objects)	202 Guardrail Removed	606 Guardrail, Type 5	606 Guardrail, Type 5A	606 Guardrail, Type 5, Barrier Design	606 Anchor Assembly, Type A	606 Anchor Assembly, Type T	606 Anchor Assembly, Type E-98	606 Bridge Terminal Assembly, Type 1	606 Bridge Terminal Assembly, Type 2	606 Bridge Terminal Assembly, Type 4, As Per Plan	606 Bridge Terminal Assembly, Type 4	203 Linear Grading, Method A	448 Asphalt Concrete Intermediate Course, Type 1, PG64-22 (Under Guardrail)	620 Delineator, Type C, Post Mounted	626 Barrier Reflector, Type A
									Lin Ft	Lin Ft	Lin Ft	Lin Ft	Each	Each	Each	Each	Each	Each	Each	Station	Cu Yd	Each	Each
		I-90 and I-490 Eastbound																					
G-1	32,33	0+06	8+16	No Change	No Change	SM Rd 7	Lt	NA	850	825				2		2				8.50	31.5		10
G-2	33	886+51	888+01	886+26	"	I-90	Rt	140.5	150	87.5	25			1	1					2.00	7.4	1	3
G-3	33	91+35	91+88	No Change	"	Ramp 30	Lt	NA	87.5	81.25				1		1				0.95	3.5		2
G-4	33	893+33	894+08	893+08	"	I-90	Rt	109.0	75	50					1			1		1.00	3.7	1	2
G-5	33	93+96	95+33	93+83	"	Ramp 30	Rt	127.5	137.5	106.25					1	1				1.58	5.8	1	3
G-6	34	901+61	906+21	No Change	No Change	I-90	Rt	NA	482	482						1	1			4.82	17.8		6
G-7	34	907+59	910+97	"	"	I-90	Rt	NA	287.5	275				1			1			2.88	10.7		4
G-8	34	915+95	916+95	"	"	I-90	Rt	109.0	100	50					1			1		1.06	3.9	1	2
G-9	34	923+50	924+50	"	"	I-90	Rt	109.0	100	50					1			1		1.06	3.9	1	2
G-10	35	27+53	29+30	"	"	Ramp 32	Lt	NA	212.5	181.25			1	1		1				2.12	7.8		3
G-11	35	New Installation		4+47	6+72	Lane W-N	Rt	103.7		50					1				1	1.00	3.7	1	2
G-12	36	12+14	17+30	11+39	No Change	Lane W-N	Lt	136.0	550	581.25					1	1				6.31	23.4	1	7
G-13	36	17+05	18+30	16+51	"	Lane W-N	Rt	272.0	125	143.75					1	1				1.94	7.2	1	3
G-14	36,38	23+52	32+50	No Change	"	Lane W-N	Rt	NA	900	900						1	1			9.00	33.3		10
G-15	36	941+60	944+98	939+34	"	I-90	Rt	226.0	337.5	387.5				1	1							1	
G-16	36,39	947+35	949+45	946+13	No Change	I-490	Rt	232.6	212.5	275				1	1					3.38	12.5	1	4
G-17	39			951+10	952+31	I-490	Rt	NA		43.75					1	1				0.94	3.5	1	2
G-18	39,40	953+54	976+20	18+74, Lane S-E	No Change	I-490	Rt	179.0	2250	2300				1	1					23.62	87.5	1	25
G-19	39	17+00	17+20	16+00	"	Lane S-E	Lt	NA		56.25					1	1				1.06	3.9	1	2
G-20	40	68+75	77+00	10+50, W 7 ST	"	Ramp 7-7C	Lt	NA	862.5	950			1	1						9.88	36.6		11
G-21	40	980+11	985+61	79+74, Ramp 7C	No Change	I-490	Rt	163.8	562.5	500					1	2	1			5.50	20.4	1	7
		I-90 and I-490 Westbound																					
G-22	40	82+24	85+43	No Change	No Change	Ramp C-7	Lt	NA	325	281.25					1	1				3.31	12.2	1	4
G-23	40	981+00	983+25	981+51	983+48	I-490	Rt	138.0	225	93.75					1	1				1.44	5.3	1	2
G-24	40	969+75	971+25	"	971+50	I-490	Rt	140.5	200	125	25			1	1					2.12	7.8	1	3
G-25	39	960+75	962+75	"	962+50	I-490	Rt	140.5	200	125	25			1	1					2.12	7.8	1	3
G-26	39	955+21		955+21		I-490	Rt	NA															
G-27	39	11+80	16+68	11+55	No Change	Lane E-S	Lt	NA	475	456.25	125				1	1				6.31	23.4	1	7
G-28	39	13+70	17+62	13+45	"	Lane E-S	Rt	NA	387.5	368.75	125				1	1				5.44	20.1	1	6
G-29	39	948+60	950+70	Outside Clear Zone		I-490	Rt	0	212.5											2.12			3
G-30	36,39	943+00	946+63	"	948+17	I-490	Rt	267.0	362.5	487.5				1	1					5.50	20.4	1	7
G-31	38	11+95	14+75	11+95	14+75	I-90	Rt	NA	287.5	287.5				1			1			3.00	11.1		4
G-32	36	23+94	22+83	No Change	22+94	Lane N-W	Rt	80.0	112.5	50					1			1		0.62	2.3	1	2
G-33	35,36	16+25	22+94	16+25	22+94	Lane S-W	Lt	NA	675	525				1		1	2			5.38	19.9		6
G-34	34,35	24+72	33+00	30+68	33+00	Ramp 31	Lt	NA	825	87.5		100			1					2.38	8.8	1	3
G-35	34,35	24+00	29+62	No Change	No Change	Ramp 31A	Lt	NA	575	581.25				2		1				6.06	22.4		7
G-36	34	907+60	912+94	"	14+96 Ramp 31A	I-90	Rt	288.0	495	645					1	1	1	1		6.95	25.7	1	8
G-37	34	903+07	906+17	No Change	No Change	I-90	Rt	NA	300	300						1	1			3.00	11.1		4
G-38	33	95+96	97+36	96+07	97+36	Ramp 29	Rt	NA	100	87.5							1	1		0.88	3.2		2
G-39	33	50+50	51+00	No Change	No Change	W 41st	Rt	NA	50	43.75				1		1				0.68	2.5		2
G-40	32,33	0+28	8+17	"	"	NM Rd 6	Lt	NA	900	875				2		2				9.00	33.3		10
G-41	32	1+25	3+38	"	"	NM Rd 6	Rt	NA	250	212.5			1	1						2.50	9.2		4
TOTALS CARRIED TO GENERAL SUMMARY									15,240	13,921	325	100	3	21	24	24	10	6	1	157.41	574	24	197

CALCULATED BMB CHECKED

Guardrail Quantities (1of 2)

CUY-90/490-13.41/0.00

Ref. No.	Sheet No.	Existing Locations From	Existing Locations To	Proposed Locations From	Proposed Locations To	Roadway	Side (in Direction of Travel)	Length of Need (for Fixed Objects)	202 Barrier Wall Removed	606 Guardrail, Type 5 w/ Steel Tubular Backup	830 Concrete Median, As Per Plan	622 Concrete Barrier, Type D	622 Barrier Misc.: Concrete Barrier	606 Impact Attenuator, Type 2-98, Quadguard #QS6907, Unidirectional	202 Removal, Misc.: Sand Barrel Installation
									Lin Ft	Lin Ft	Cu Yd	Lin Ft	Lin Ft	Each	Each
		I-90 and I-490 Eastbound													
G-5	33												14		
G-6	34												14		
G-11	35									125	7				
G-12	36												14		
G-13	36												14		
G-15	36												14		
G-17	39								20			34			
G-19	39								20			20			
G-21	40											56	14		
		I-90 and I-490 Westbound													
G-23	40											54			
G-26	39													1	1
G-27	39												14		
G-28	39												14		
G-33	35,36											125			
TOTALS CARRIED TO GENERAL SUMMARY									40	125	7	289	112	1	1

CALCULATED BMB CHECKED

Guardrail Quantities (2 of 2)

CUY-90/490-13.41/0.00

29
110

SHEET NUMBER																			100% STATE	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	11	12	13					28	29	41	47	48	50	51	52	53									
																								ROADWAY	
																				201	11000	LUMP		CLEARING AND GRUBBING	11
												248	36							202	23000	284	SQ YD	PAVEMENT REMOVED	
													648							202	23500	648	SQ YD	WEARING COURSE REMOVED	
		400											783							202	30000	1183	SQ FT	WALK REMOVED	
									40							260				202	30700	300	LIN FT	CONCRETE BARRIER REMOVED	
																732.5				202	30701	732.5	LIN FT	CONCRETE BARRIER REMOVED, AS PER PLAN	53
												13	583							202	32000	596	LIN FT	CURB REMOVED	
		50						15240												202	38000	15290	LIN FT	GUARDRAIL REMOVED	
	1100																			202	54101	1100	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE, AS PER PLAN	11
														1						202	58100	1	EACH	CATCH BASIN REMOVED	
															2					202	58200	2	EACH	INLET REMOVED	
												60								202	75000	60	LIN FT	FENCE REMOVED	
		15600																		202	75001	15600	LIN FT	FENCE REMOVED, AS PER PLAN	12
		2																		202	75250	2	EACH	GATE REMOVED	
									1											202	98100	1	EACH	REMOVAL, MISC.: SAND BARREL INSTALLATION	
										30	31	79	24							203	12000	164	CU YD	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
											47	9								203	20000	56	CU YD	EMBANKMENT	
												386								203	50000	386	SQ YD	SUBGRADE COMPACTION	
								157												203	60200	157	STATION	LINEAR GRADING, METHOD A	11
								13921												606	13000	13921	LIN FT	GUARDRAIL, TYPE 5	
									125											606	13010	125	LIN FT	GUARDRAIL, TYPE 5 WITH TUBULAR BACKUP	
	100	50						325												606	13050	475	LIN FT	GUARDRAIL, TYPE 5A	
								100												606	15500	100	LIN FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
								24												606	22010	24	EACH	ANCHOR ASSEMBLY, TYPE E-98	
								3												606	25000	3	EACH	ANCHOR ASSEMBLY, TYPE A	
								21												606	26500	21	EACH	ANCHOR ASSEMBLY, TYPE T	
								24												606	35000	24	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								10												606	35100	10	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
								1												606	35140	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
								6												606	35141	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	62
									1											606	60020	1	EACH	IMPACT ATTENUATOR, TYPE 2-98 (UNIDIRECTIONAL) QUADGUARD #QS6907	12
		15600																		607	23000	15600	LIN FT	FENCE, TYPE CLT	
		1																		607	50900	1	EACH	GATE, TYPE CL (4' WALK)	
		1																		607	50900	1	EACH	GATE, TYPE CL (10' SWING)	
		400											783							608	10000	1183	SQ FT	4" CONCRETE WALK	
																690				622	23401	690	LIN FT	CONCRETE BARRIER, TYPE B-50, AS PER PLAN A	53
																220				622	23401	220	LIN FT	CONCRETE BARRIER, TYPE B-50, AS PER PLAN B	53
									289											622	24000	289	LIN FT	CONCRETE BARRIER, TYPE D	
									112											622	90000	112	LIN FT	BARRIER, MISC.: CONCRETE BARRIER	57
		40																		622	90000	40	LIN FT	BARRIER, MISC.: REPAIR CONCRETE GLARE SHIELD	12
																								EROSION CONTROL AND DRAINAGE	
											284	201								870	10000	485	SQ YD	SEEDING AND MULCHING	
			400																	877	30100	400	LIN FT	TEMPORARY PERIMETER FILTER FABRIC FENCE	
												50								603	01500	50	LIN FT	6" CONDUIT, TYPE F, 707.41 NON-PERFORATED, ASTM 3034 SDR 35, 707.42 OR 707.33	
													16		12					603	05900	28	LIN FT	15" CONDUIT, TYPE B	
														50						603	05901	50	LIN FT	15" CONDUIT, TYPE B, AS PER PLAN	13
													160							603	97001	160	LIN FT	SLOTTED DRAIN, AS PER PLAN, 12" DIAMETER	50
													274						274	603	98300	274	LIN FT	CONDUIT, MISC.: PIPE CLEANOUT, 8" TO 15"	
														1						604	00800	1	EACH	CATCH BASIN, NO. 3A	
													4							604	00801	4	EACH	CATCH BASIN, NO. 3A, AS PER PLAN	13
			2																	604	09001	2	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	13
			2																	604	09500	2	EACH	CATCH BASIN RECONSTRUCTED TO GRADE	
															2					604	14603	2	EACH	INLET NO. 3B50, AS PER PLAN	52
												12								604	20601	12	EACH	INLET ADJUSTED TO GRADE, AS PER PLAN	13
														3						604	30100	3	EACH	MANHOLE, NO. 1	
			2																	604	34501	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	13
			3																	604	35500	3	EACH	MANHOLE RECONSTRUCTED TO GRADE	
			1																	604	39501	1	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	13
			1																	604	39600	1	EACH	MONUMENT BOX RECONSTRUCTED TO GRADE	
			10000																	SPECIAL	60450000	10000	POUND	MISCELLANEOUS METAL	13
												412								605	11100	412	LIN FT	6" SHALLOW PIPE UNDERDRAIN	

CALCULATED EMK
CHECKED LDH

GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

30
110

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SHEET NUMBER																				ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10		14	16	17	18	19	21	25	26	27	28	29	41	43	48	50									
																								PAVEMENT	
													1000							251	01001	1000	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN	14
									103915	29228										254	01000	133143	SQ YD	PAVEMENT PLANING, BITUMINOUS	
										741					224					254	01010	965	SQ YD	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE	
		13200																		254	01600	13200	SQ YD	PATCHING PLANED SURFACE	
													800							255	10001	800	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A	14
													430							255	10001	430	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B	14
													400							255	10101	400	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN A	14
													375							255	10101	375	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN B	14
													400							255	10151	400	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN A	14
													375							255	10151	375	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN B	14
													11000		516	160				255	20000	11676	LIN FT	FULL DEPTH PAVEMENT SAWING	
													30		80					304	20001	110	CU YD	AGGREGATE BASE, AS PER PLAN	14
									10280	2887										407	10000	13167	GALLON	TACK COAT	
																32				407	14000	32	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
									4283	1204										446	50002	5487	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE IH, AS PER PLAN WITH SUPPLEMENT 1059 WARRANTY	14
																62				448	46010	62	CU YD	ASPHALT CONCRETE INTEREMEDIATE COURSE, TYPE I, PG64-28	
											574									448	46060	574	CU YD	ASPHALT CONCRETE INTEREMEDIATE COURSE, TYPE I, PG64-22 (UNDER GUARDRAIL)	
															475					451	14001	475	SQ YD	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN	14
														275						SPECIAL	45134000	275	LIN FT	PRESSURE RELIEF JOINT	43
		8.5																		618	40600	8.5	MILE	RUMBLE STRIPS, TYPE 2 (ASPHALT)	
															141					830	14000	141	LIN FT	CURB, TYPE 2-A	
															13					830	26000	13	LIN FT	CURB, TYPE 6	
																583				830	26001	583	LIN FT	CURB, TYPE 6, AS PER PLAN	14
												7								830	72101	7	CU YD	CONCRETE MEDIAN, AS PER PLAN	58
										2602										880	10000	2602	CU YD	ASPHALT CONCRETE (5 YEAR WARRANTY)	
		8800																		889	10000	8800	LIN FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS WITH WARRANTY)	
																								MAINTENANCE OF TRAFFIC	
				200																614	11100	200	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
					250															614	13000	250	CU YD	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
					150															614	13001	150	CU YD	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	18
							346	36												614	13300	382	EACH	BARRIER REFLECTOR, TYPE B	
							346	36												614	13350	382	EACH	OBJECT MARKER	
			16																	614	18601	16	SIGN MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	16
						24.60														614	20100	24.60	MILE	TEMPORARY LANE LINE, CLASS I, 642 PAINT	
						28.10	1.73													614	22100	29.83	MILE	TEMPORARY EDGE LINE, CLASS I, 642 PAINT	
						18500														614	23200	18500	LIN FT	TEMPORARY CHANNELIZING LINE, CLASS I, 642 PAINT	
						450														614	26200	450	LIN FT	TEMPORARY STOP LINE, CLASS I, 642 PAINT	
						2200														614	27200	2200	LIN FT	TEMPORARY CROSSWALK LINE, CLASS I, 642 PAINT	
						25														614	30200	25	EACH	TEMPORARY LANE ARROW, CLASS I, 642 PAINT	
																				615	10000	LUMP		TEMPORARY ROAD	
								110												615	20001	110	SQ YD	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN	19
							7850	900												622	40020	8750	LIN FT	PORTABLE CONCRETE BARRIER, 32"	
						400														630	97800	400	SQ FT	SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	19
																								TRAFFIC CONTROL	
																								(SEE SHEET 70)	
																								LIGHTING	
																								(SEE SHEET XX)	
																				614	11000	LUMP		MAINTAINING TRAFFIC	
																				623	10001	LUMP		CONSTRUCTION LAYOUT STAKES, AS PER PLAN	12
																				624	10000	LUMP		MOBILIZATION	
2																				SPEC.	69086000	2	EACH	CELLULAR PHONE	10
																				806	16010	12	MONTH	FIELD OFFICE, TYPE B	

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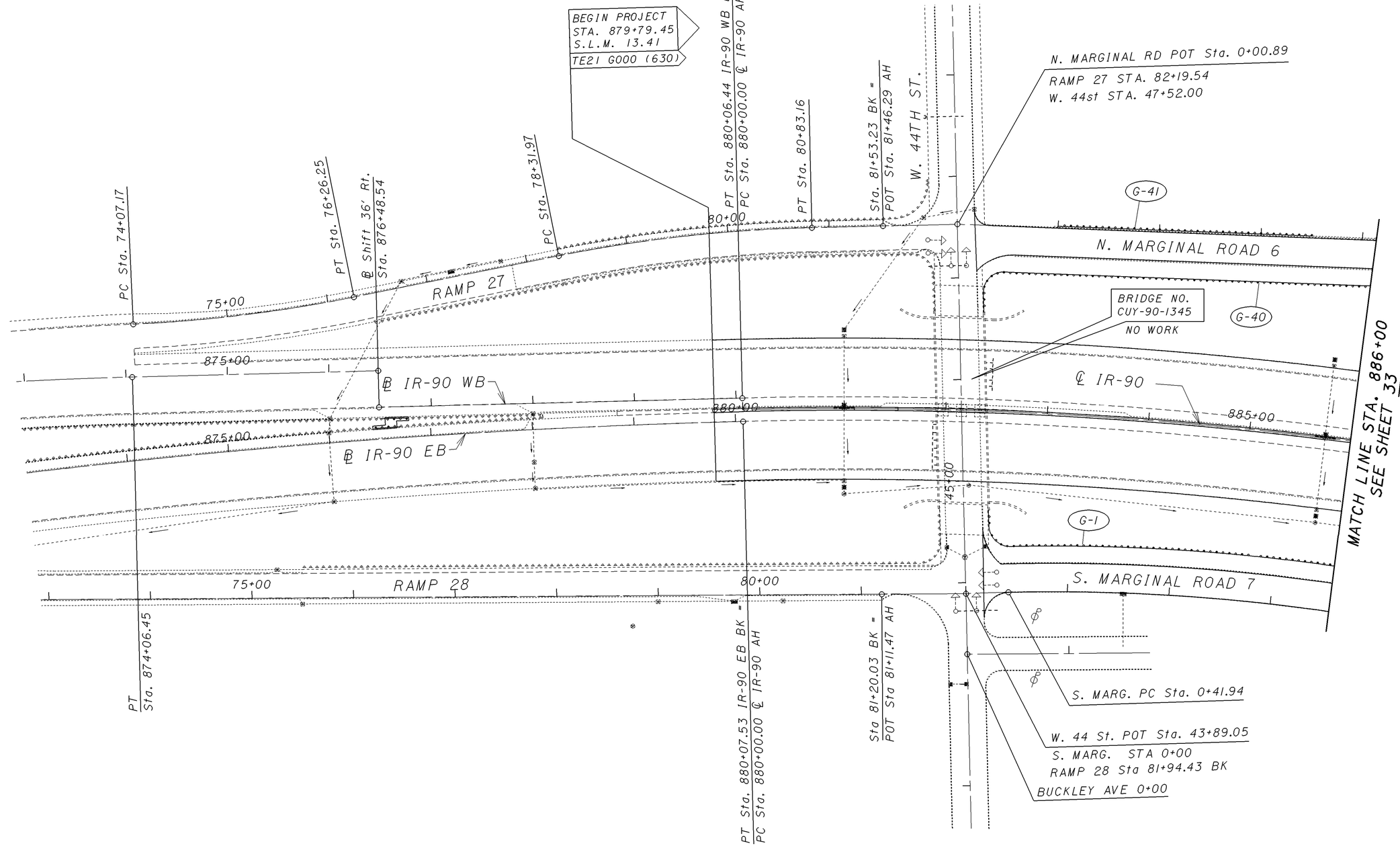
CALCULATED EMK
CHECKED LDH

GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

31
110



CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26,27
GUARDRAIL	28,29
TRAFFIC CONTROL PLANS	72
LIGHTING PLANS	92-93

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

PLAN SHEET - I.R. 90
STA. 873+00 TO STA. 886+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

32
110

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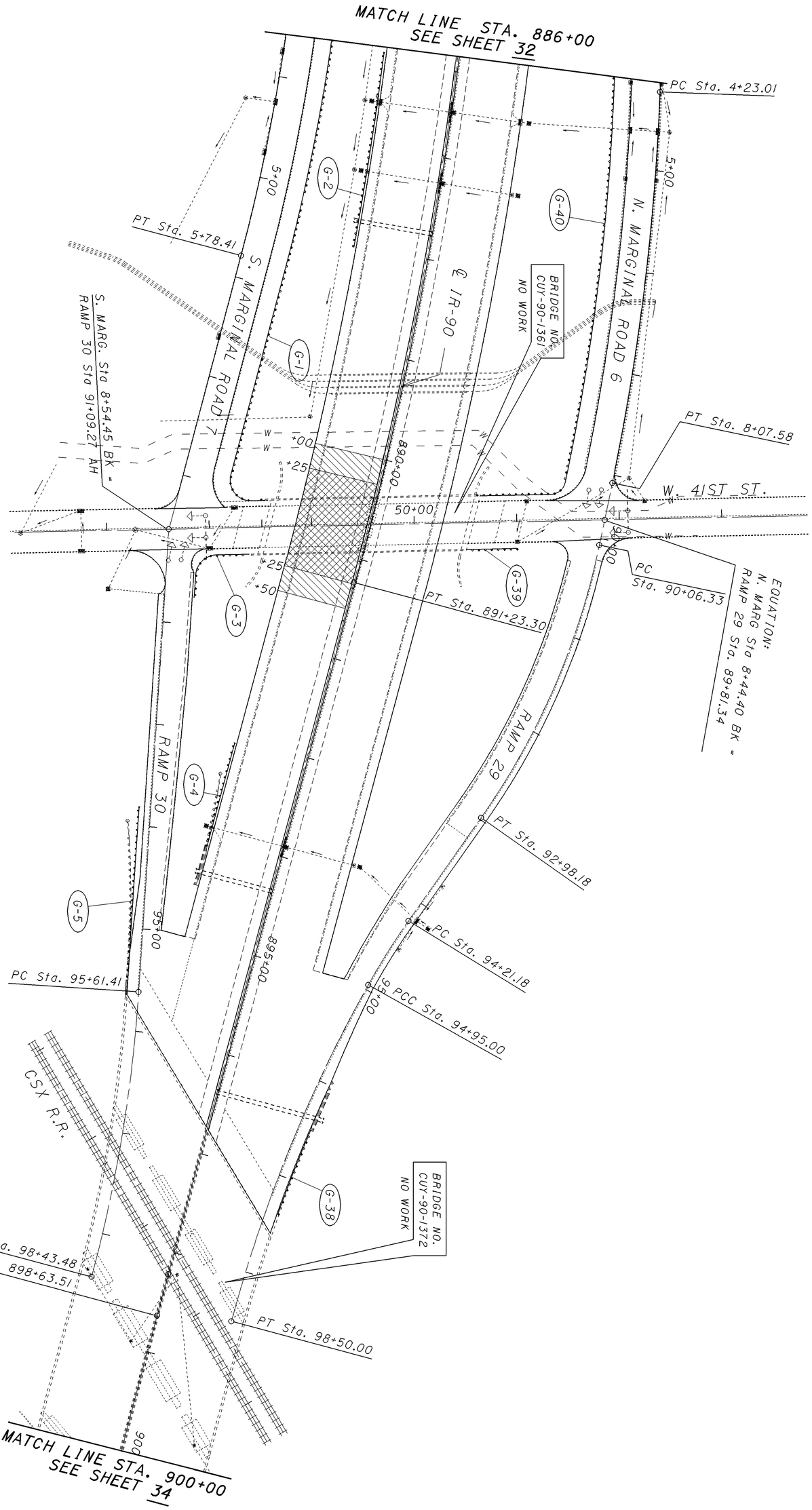


CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26,27
GUARDRAIL	28,29
TRAFFIC CONTROL PLANS	73
LIGHTING PLANS	93-94

33 / 110

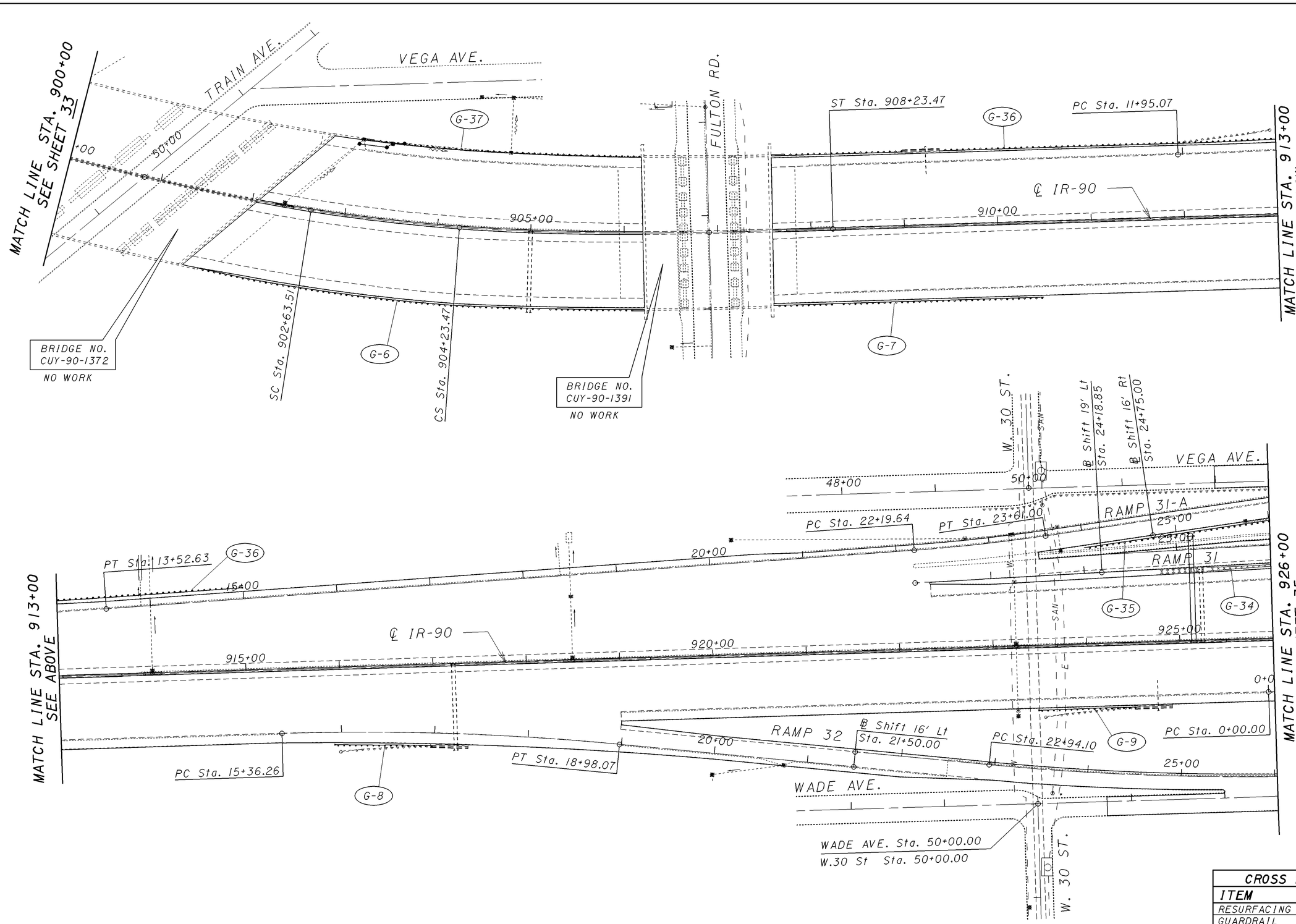
CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PLAN SHEET - I.R. 90
STA. 886+00 TO STA. 900+00

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N



CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26,27
GUARDRAIL	28,29
TRAFFIC CONTROL PLANS	74
LIGHTING PLANS	94-96

CALCULATED EMK
CHECKED LDH

SCALE IN FEET 0 50 100

PLAN SHEET - I.R. 90
STA. 900+00 TO STA. 926+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

34
110

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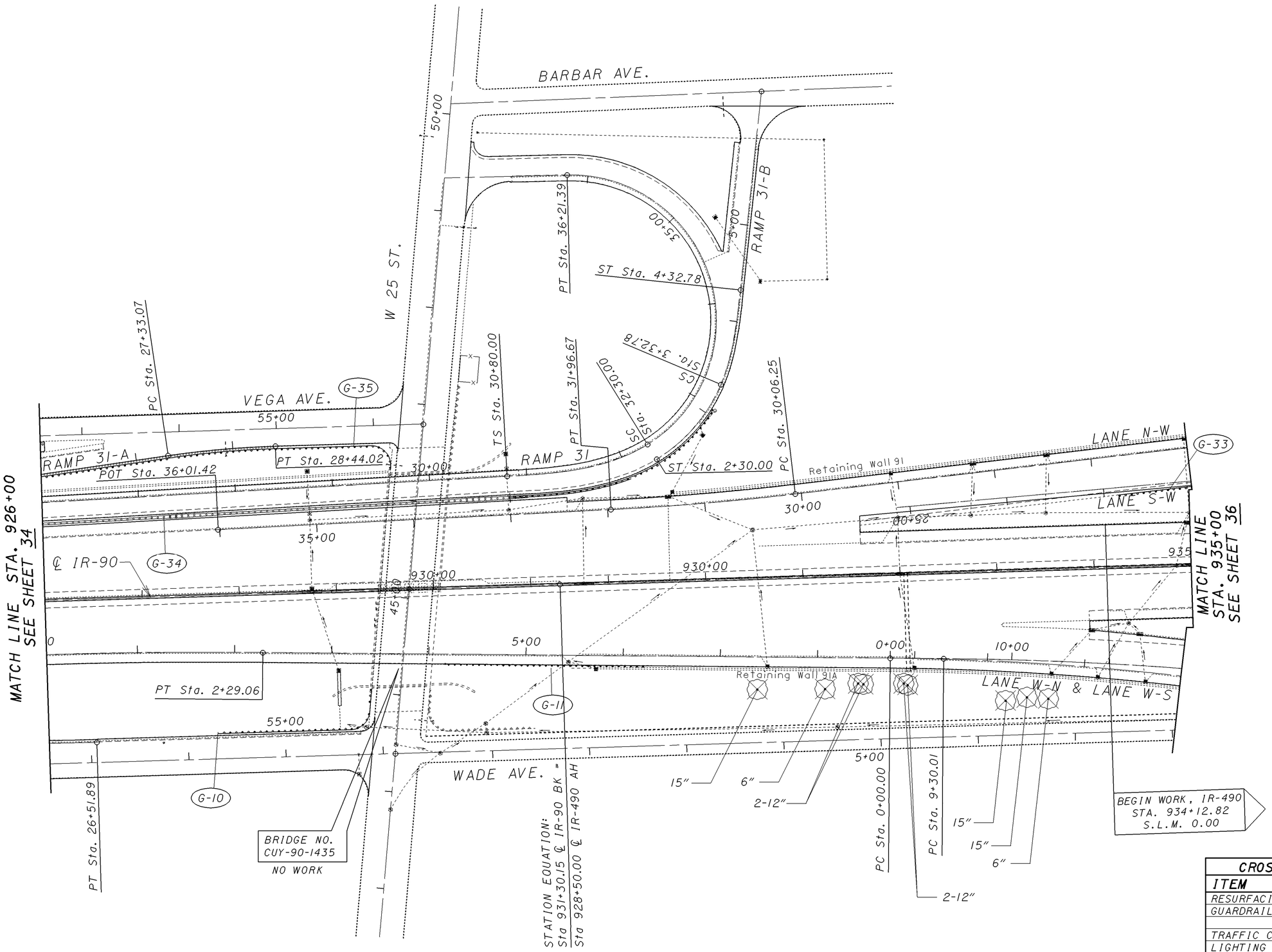


CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26,27
GUARDRAIL	28,29
TRAFFIC CONTROL PLANS	75
LIGHTING PLANS	96-97

CALCULATED EMK
CHECKED LDH

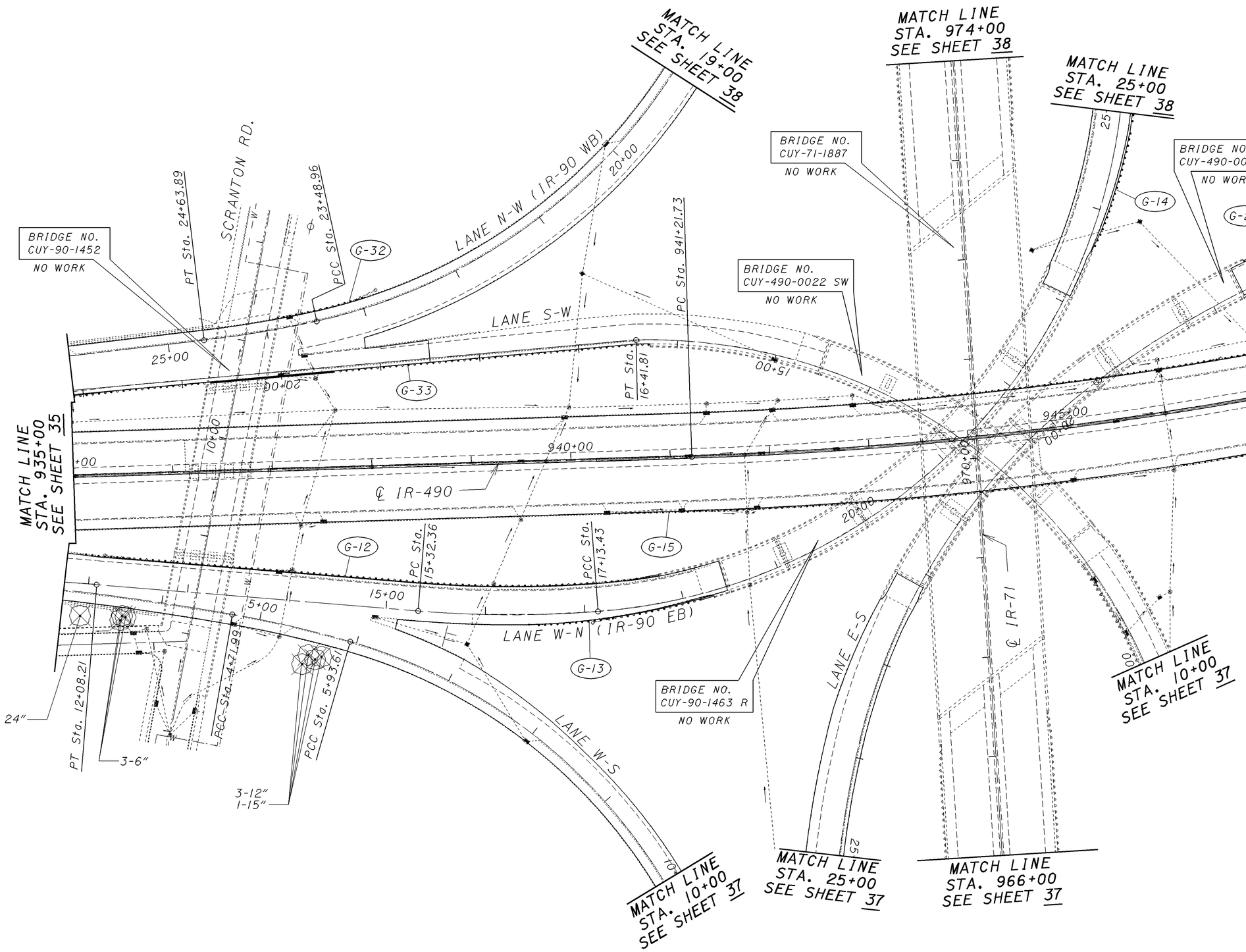
0 50 100
SCALE IN FEET

PLAN SHEET - I.R. 90

STA. 926+00 TO I.R. 490 STA. 935+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

35
110



CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26,27
GUARDRAIL	28,29
TRAFFIC CONTROL PLANS	76
LIGHTING PLANS	97-99

CALCULATED EMK
CHECKED LDH

0 50 100 SCALE IN FEET

PLAN SHEET - IR-490
STA. 935+00 TO STA. 948+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

36
110

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MATCH LINE STA. 10+00 SEE SHEET 36

PCC Sta. 10+09.03

LANE W-S

12"

PT Sta. 13+54.50

MATCH LINE STA. 25+00 SEE SHEET 36

LANE E-S

PCC Sta. 26+41.74

15+00

PT Sta. 29+64.44

30+00

POT Sta. 31+16.00

MATCH LINE STA. 17+00 SEE THIS SHEET

MATCH LINE STA. 966+00 SEE SHEET 36

965+00

℄ IR-71

960+00

MATCH LINE STA. 959+00 SEE THIS SHEET

MATCH LINE STA. 10+00 SEE SHEET 36

10+00

PCC Sta. 8+72.97

LANE S-W

PC Sta. 5+97.68

5+00

PT Sta. 5+00.24

MATCH LINE STA. 4+00 SEE THIS SHEET

MATCH LINE STA. 13+00 SEE SHEET 39

LANE S-E

10+00

PCC Sta. 10+80.07

PC Sta. 8+91.24

MATCH LINE STA. 17+00 SEE THIS SHEET

PC Sta. 32+47.19

PC Sta. 17+93.91

1-12"
3- 6"

35+00

20+00

℄ IR-71

CLARK AVE.

955+00

PT Sta. 21+70.58
LANE W-S =
Sta. 36+53.95
LANE E-S

PT Sta. 38+50.56 =
Sta. 2+27.38 SBOR

Sta. 3+61.27 SBOR =
Sta. 0+00.00 SBOR-M

S.B.O.R.

5+00

950+00

950+00

MATCH LINE STA. 959+00 SEE THIS SHEET

0+00

℄ IR-71

END SHEET

END SHEET

CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26 ,27
GUARDRAIL	28 ,29
TRAFFIC CONTROL PLANS	77
LIGHTING PLANS	98-99

N

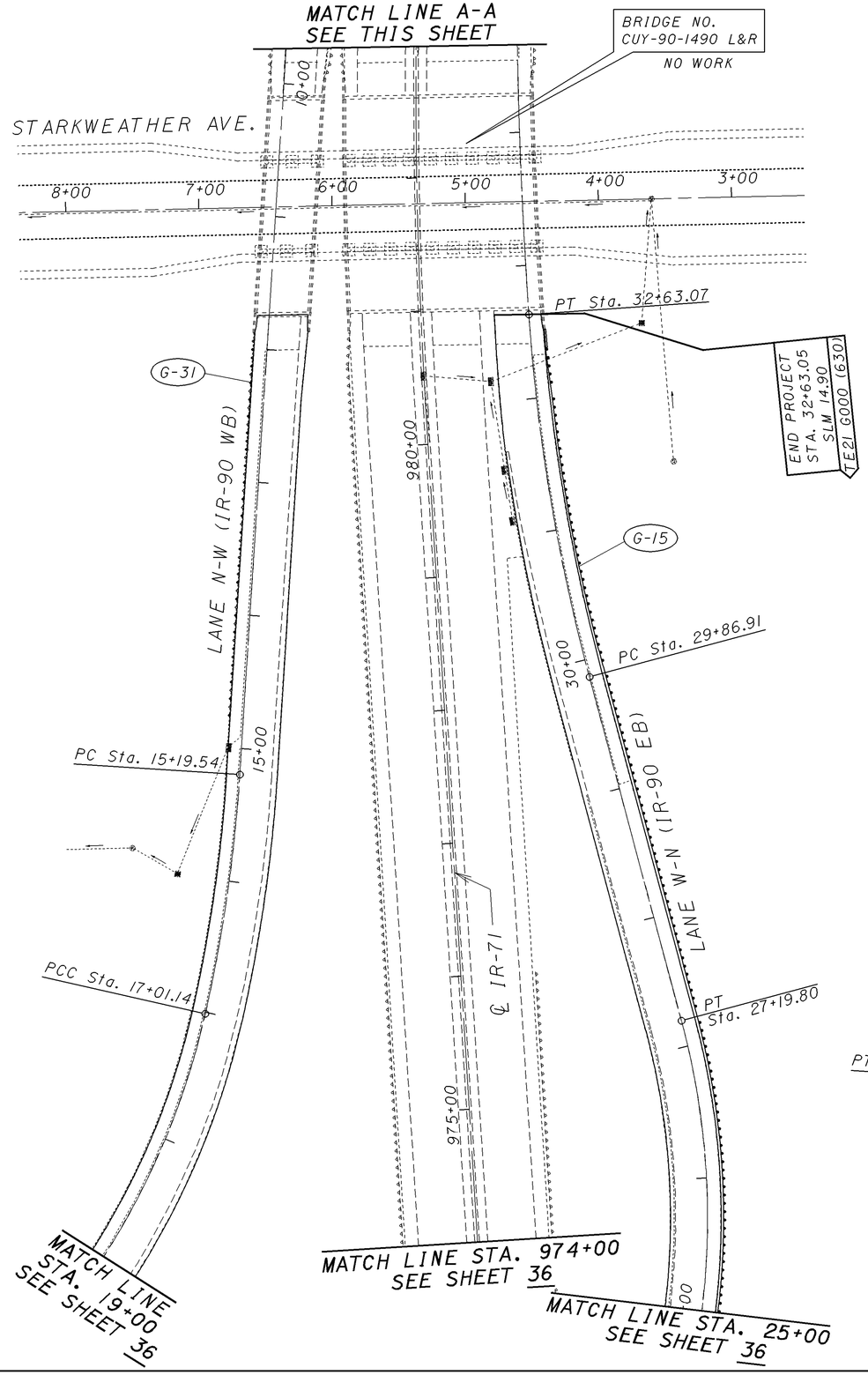
0 50 100 SCALE IN FEET

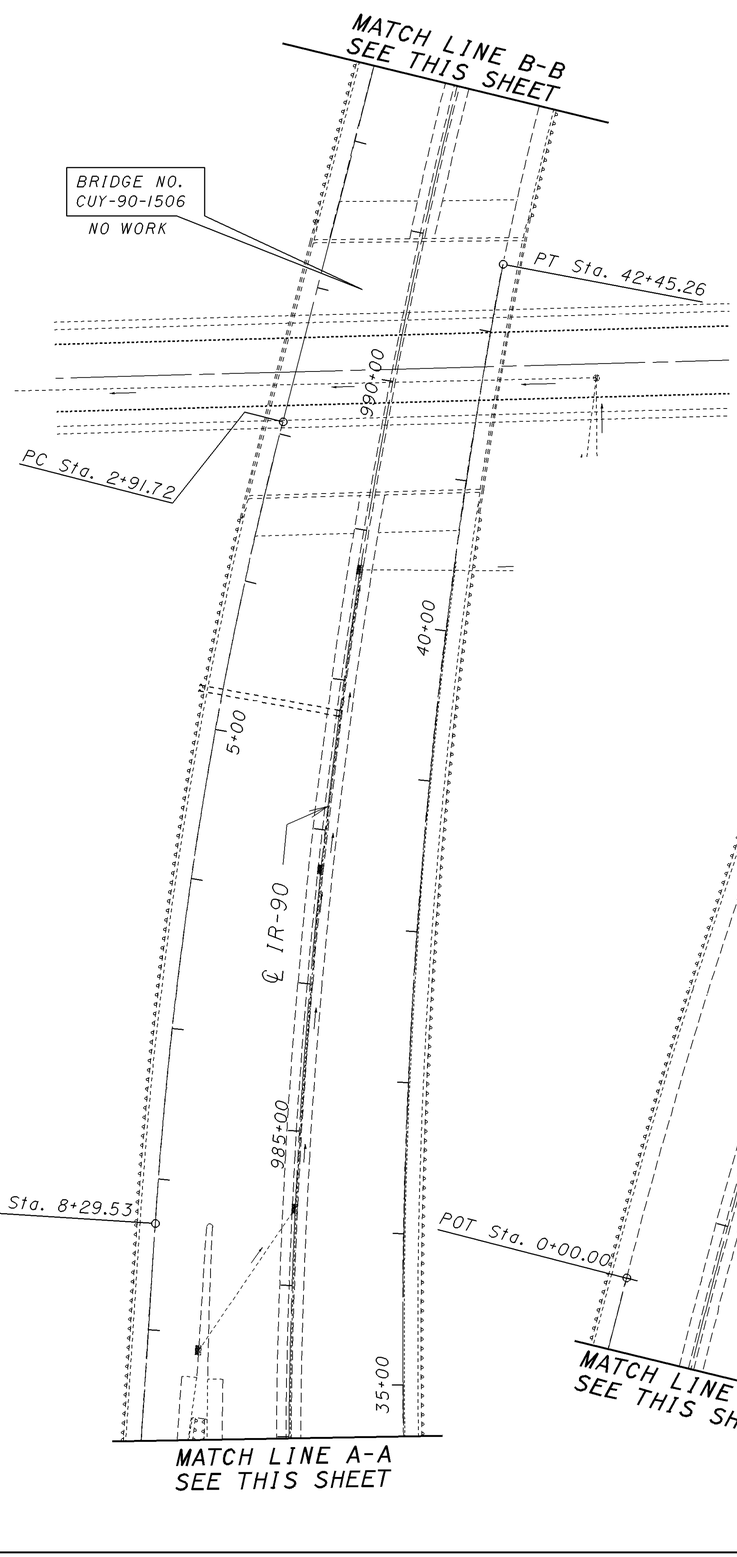
CALCULATED EMK
CHECKED LDH

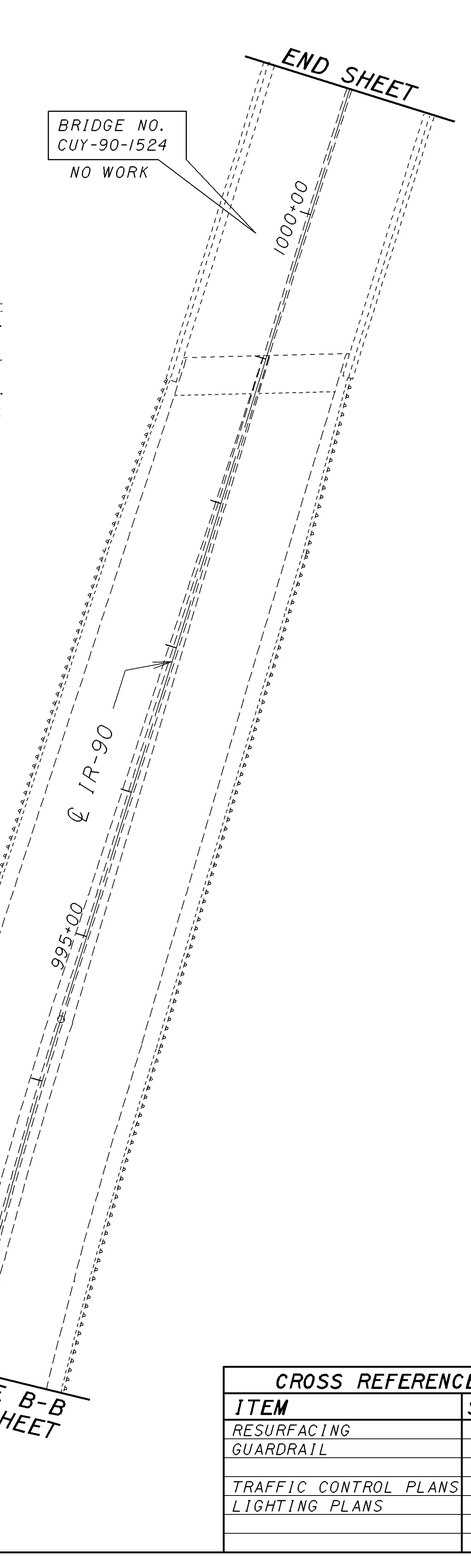
PLAN SHEET - I.R. 71
STA. 959+00 TO STA. 966+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

37
110







CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26 ,27
GUARDRAIL	28 ,29
TRAFFIC CONTROL PLANS	78
LIGHTING PLANS	99

CALCULATED EMK
CHECKED LDH

SCALE IN FEET 0 50 100

PLAN SHEET - I.R. 71
STA. 974+00 TO I.R. 90 STA. 1001+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

38
110

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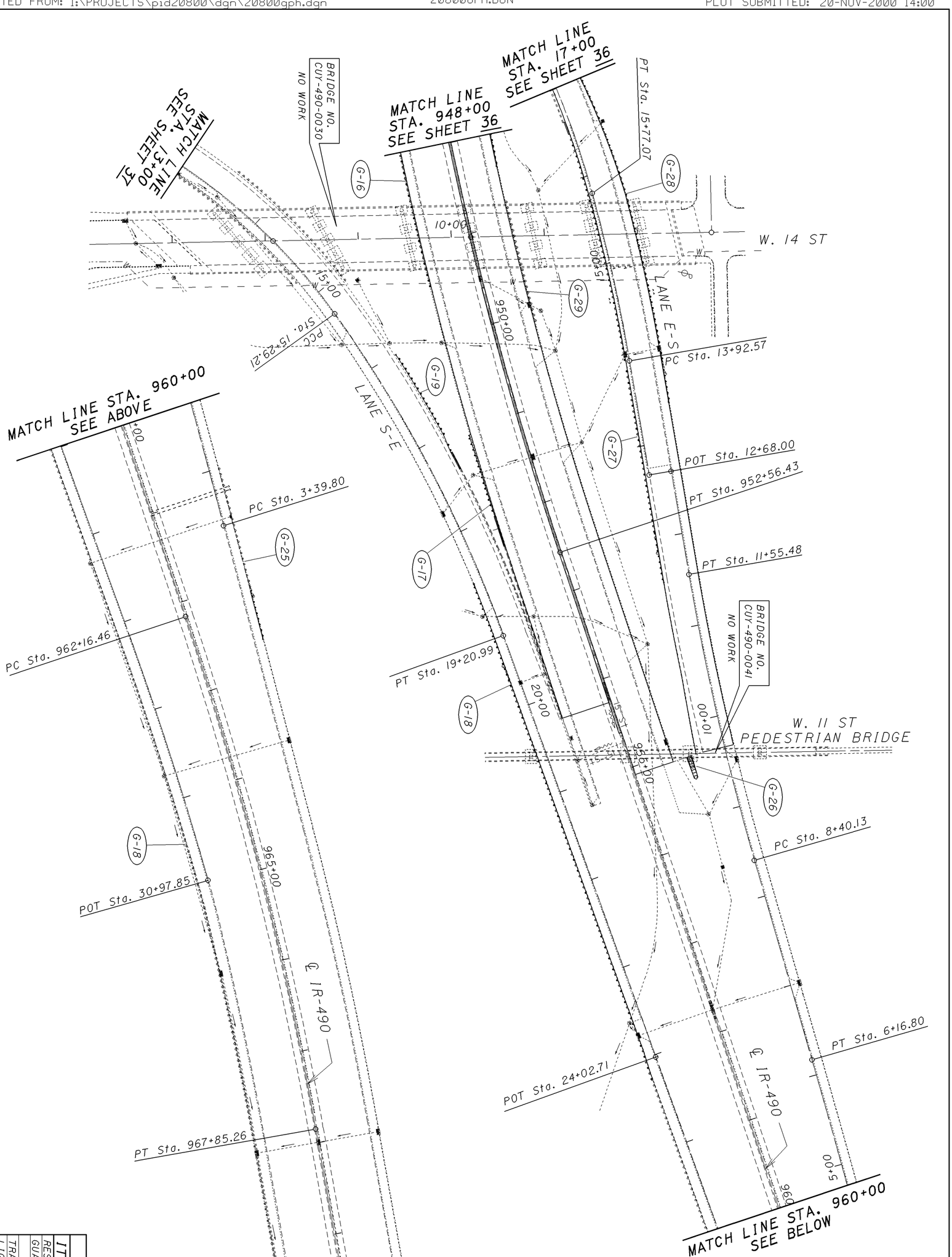

CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26, 27
GUARDRAIL	28, 29
TRAFFIC CONTROL PLANS	79
LIGHTING PLANS	100

(39/110)

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PLAN SHEET - I.R. 490
STA. 948+00 TO STA. 970+00

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N

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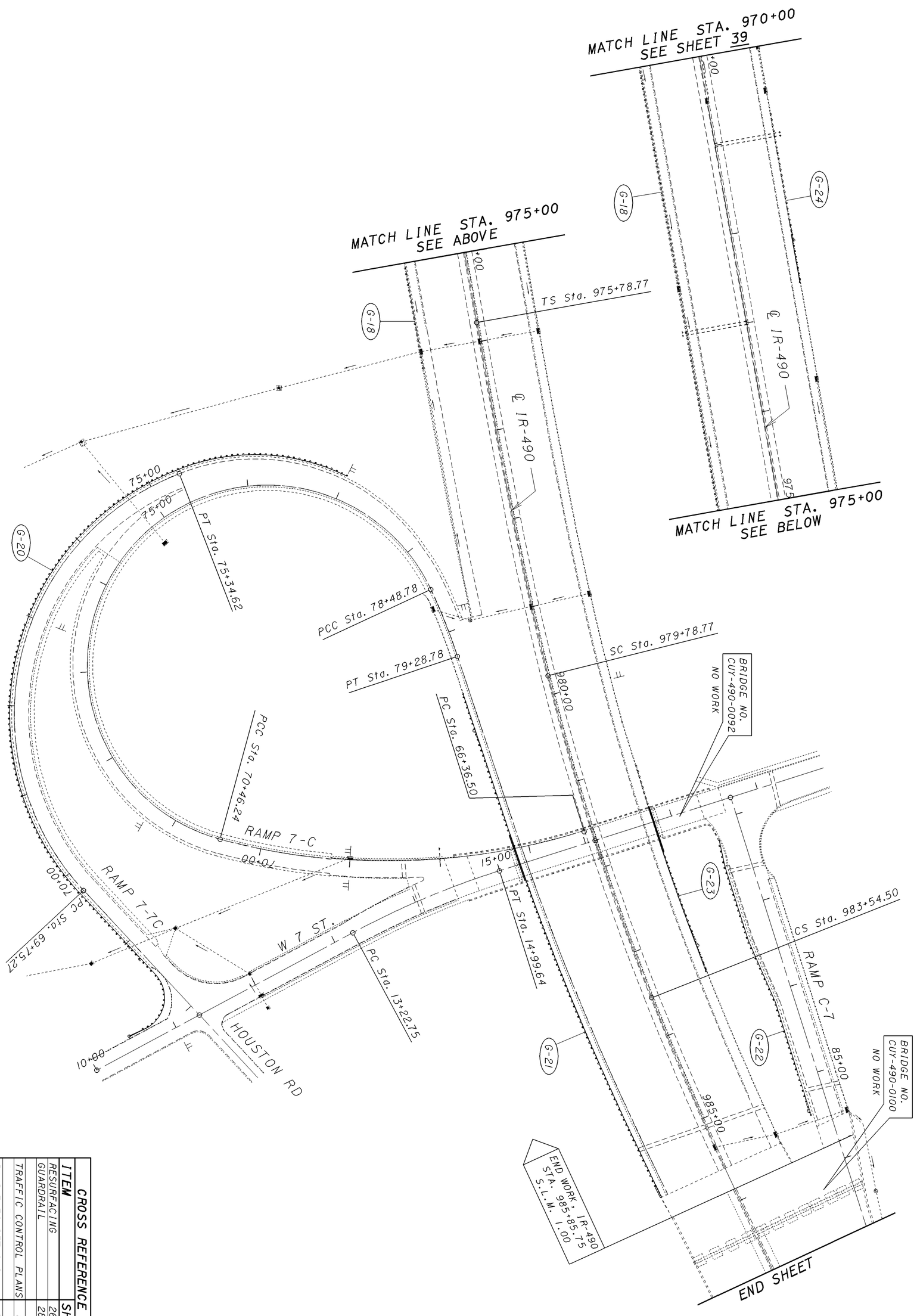


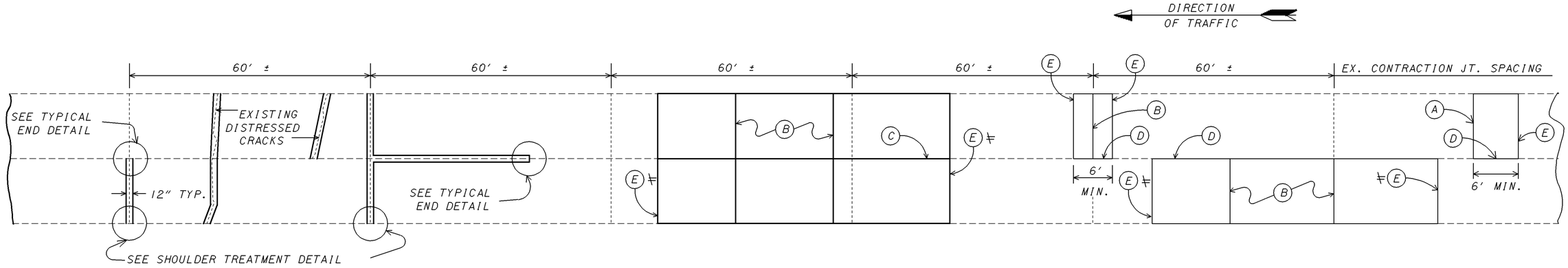
CROSS REFERENCE	
ITEM	SHEET
RESURFACING	26, 27
GUARDRAIL	28, 29
TRAFFIC CONTROL PLANS	80
RAMP 7-7C DETAILS	45-48

40 / 110	CUYAHOGA COUNTY CUY-90/490-13.41/0.00	PLAN SHEET - IR-490 STA. 970+00 TO 986+85	CALCULATED EMK CHECKED LDH 0 50 100 SCALE IN FEET

CALCULATED EMK
CHECKED LDH

PAVEMENT REPAIR DETAILS & ESTIMATED QUANTITIES

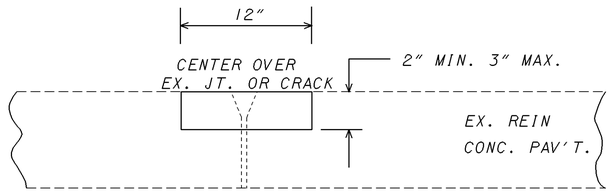
CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



PARTIAL DEPTH JOINT OR CRACK REPAIR

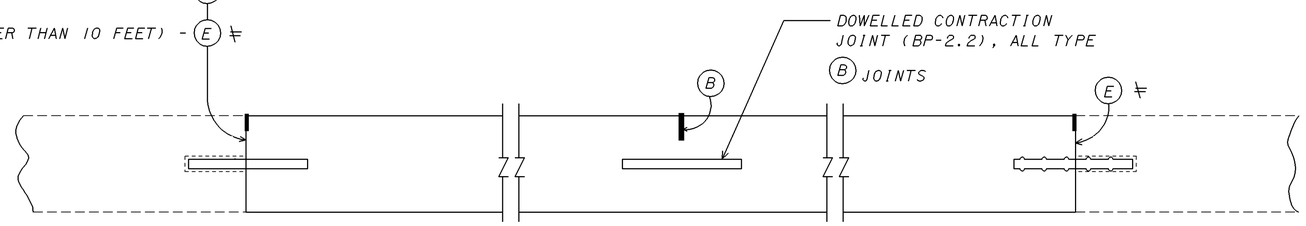
TYPICAL TWO LANE REPLACEMENT

TYPICAL ONE LANE REPLACEMENT



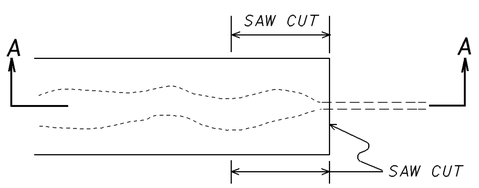
CRACK REPAIRS (NO JOINT WITHIN REPAIR) - (A)
JOINT REPAIRS (LESS THAN 10 FEET) - (E)
PANEL REPAIRS (GREATER THAN 10 FEET) - (E) ⊭

⊭ USE (A) JOINT IF EITHER ADJACENT (EXISTING OR PROPOSED) CONTRACTION JOINT IS FARTHER THAN 20 FEET.

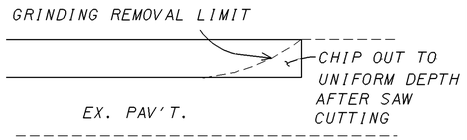


ITEM 255 - FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT

ITEM 251 - PARTIAL DEPTH PAV′T REPAIR



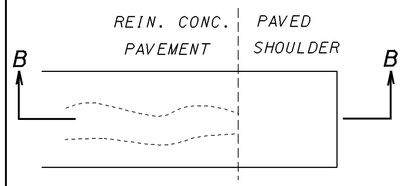
DISTRESSED JOINT-PLAN VIEW



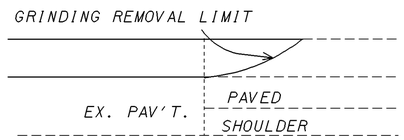
SECTION A-A

TYPICAL END DETAIL

NO SEPARATE PAYMENT WILL BE MADE FOR THESE SAW CUTS



DISTRESSED JOINT-PLAN VIEW



SECTION B-B

SHOULDER TREATMENT DETAIL

MEASURED QUANTITY SHALL NOT INCLUDE THE PAVED SHOULDER AREA

SEE GENERAL NOTES ON SHEET NO. 14 FOR ADDITIONAL INFORMATION.

SEE GENERAL NOTES ON SHEET 14 FOR ADDITIONAL INFORMATION.

LEGEND

(A) TYPE Y DOWELLED REPAIR JOINTS, AS PER BP-2.5

(B) SAWED CONTRACTION JOINT AS PER BP-2.2, WITH DOWELS, MAX. SPACING 20′ C/C FOR ONE LANE REPLACEMENTS ALIGN JOINT WITH EXISTING CRACKS IN THE ADJACENT LANE WHENEVER POSSIBLE. (EX. CRACKS OCCUR APPROX. 15′ C/C)

(C) LONGITUDINAL BUTT JOINT AS PER BP-2.1 (USING HOOK BOLTS)

(D) TYPE D JOINT AS PER BP-2.1 FOR PATCHES 10′ OR GREATER IN LENGTH

(E) TYPE T TIED REPAIR JOINT, AS PER BP-2.5

ESTIMATED QUANTITIES ✳		
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN A	800 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN B	430 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN A	400 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS MS, AS PER PLAN B	375 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN A	400 SQ.YD.
ITEM 255	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS, AS PER PLAN B	375 SQ.YD.
ITEM 255	FULL DEPTH PAVEMENT SAWING	11,000 LIN. FT.
ITEM 203	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	30 CU. YD.
ITEM 304	AGGREGATE BASE, AS PER PLAN	30 CU. YD.

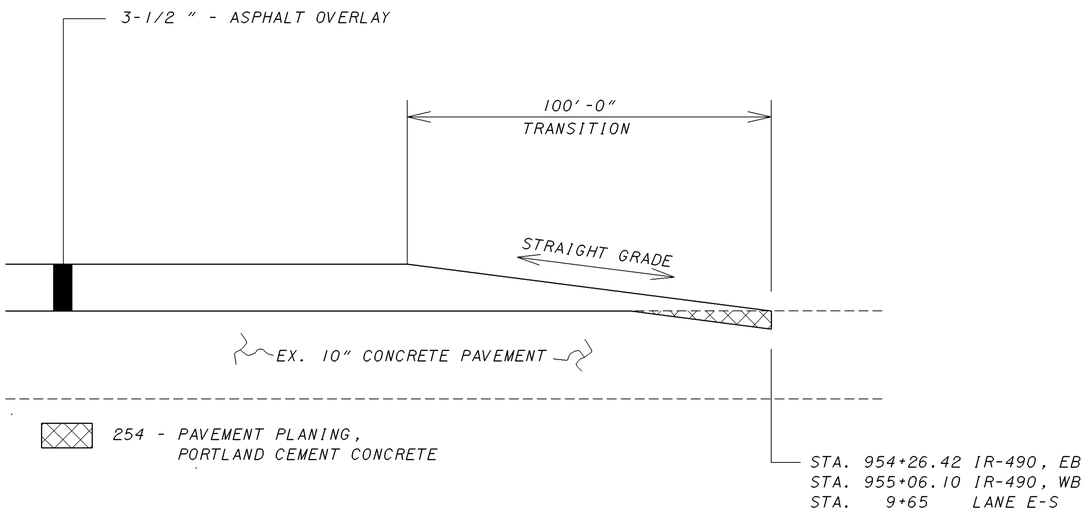
ESTIMATED QUANTITY ✳
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN 1,000 SQ. YD.

NOTE: PARTIAL DEPTH REPAIR ONLY TO BE USED WHERE PAVEMENT IS TO BE OVERLAYED

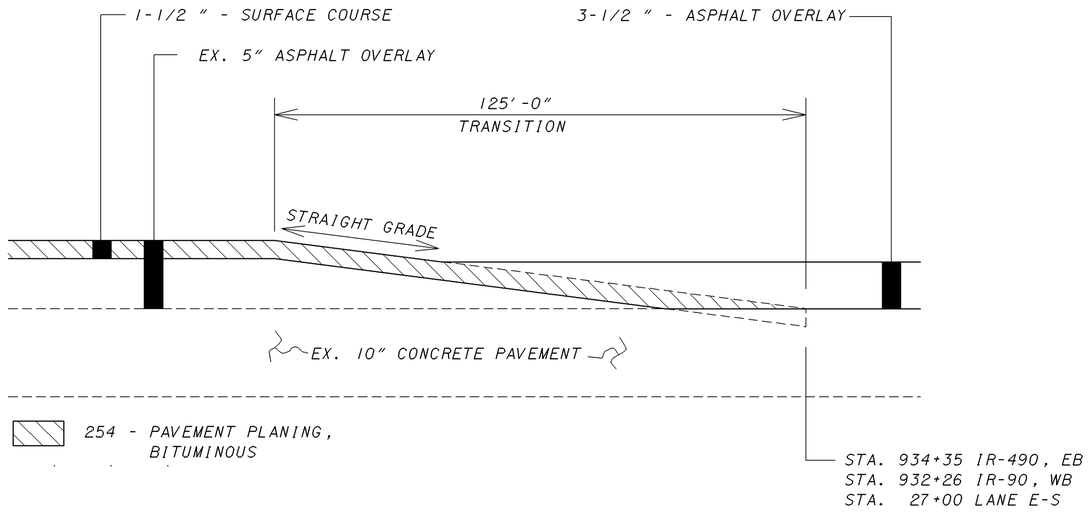
✳ QUANTITY ESTIMATES ARE BASED ON VISUAL INSPECTION. AN ADDITIONAL 5% WAS ADDED TO THE REPAIR AREA TO COMPENSATE FOR ANY ROADWAY DETERIORATION THAT MAY OCCUR BETWEEN THE TIME OF PLAN PREPARATION AND ACTUAL CONSTRUCTION.

VISUAL SURVEY DATE - 4/27/00

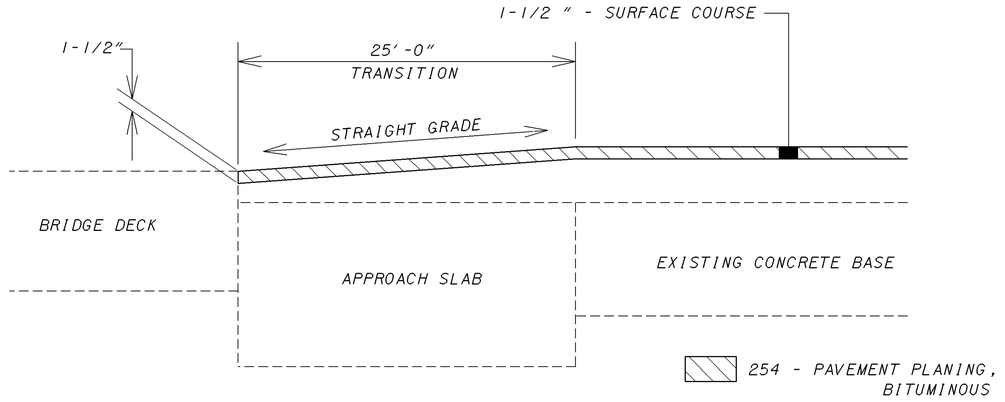
EXISTING 10″ PORTLAND CEMENT CONCRETE SURFACE AREA - 55,000 S. Y.
EXISTING 9″ PORTLAND CEMENT CONCRETE SURFACE AREA (RAMPS) - 8,400 S. Y.



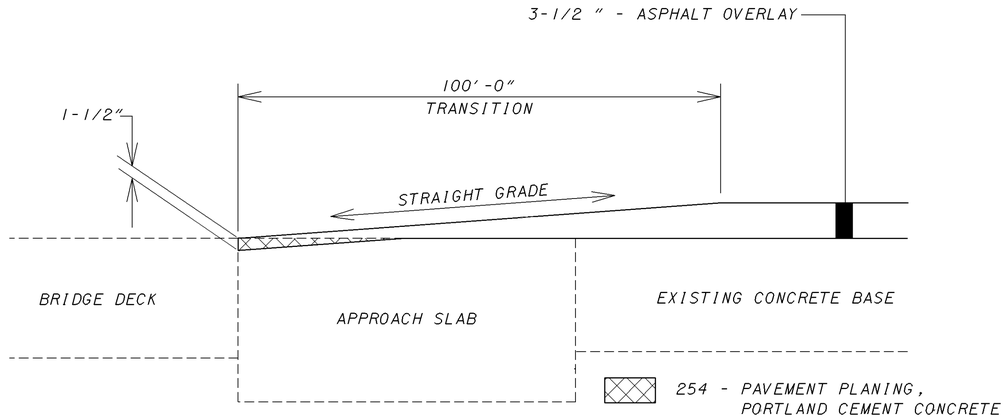
3-1/2 " OVERLAY BUTT JOINT MEETING EXISTING CONCRETE PAVEMENT



3-1/2 " OVERLAY BUTT JOINT MEETING EXISTING PAVEMENT
WITH 1-1/2" OVERLAY



1-1/2" OVERLAY BUTT JOINT MEETING EXISTING BRIDGE DECK



3-1/2" OVERLAY BUTT JOINT MEETING EXISTING BRIDGE DECK

* - STRAIGHT GRADE - THE ASPHALT TRANSITIONS SHALL BE CONSIDERED UNACCEPTABLE IF THE FINAL GRADE VARIES FROM THE DESIRED STRAIGHT GRADE BY GREATER THAN ⅜ INCHES ANYWHERE THROUGHOUT THE LENGTH OF THE TRANSITION. THIS TOLERANCE IS REDUCED TO ¼ INCH FOR THE FIRST 5 FEET ADJACENT TO AN EXPANSION JOINT.

PAYMENT WILL BE HELD FOR 1 C.Y. OF ASPHALT PER FOOT OF PAVING WIDTH AT EACH TRANSITION LOCATION UNTIL THE TRANSITION IS SHOWN TO BE ACCEPTABLE. THE CONTRACTOR IS TO PROVIDE THE NECESSARY SURVEY WORK TO SHOW THAT THESE STRAIGHT GRADES ARE MET ALONG EACH EDGE LINE AND LANE LINE.

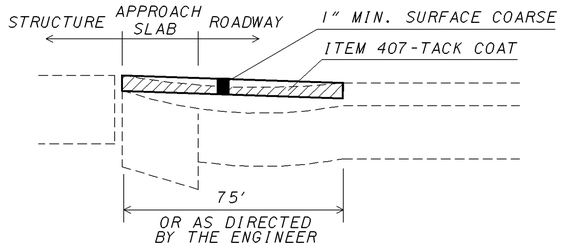
ALL UNACCEPTABLE ASPHALT TRANSITIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. THE REPAIR METHOD SHALL BE AS FOLLOWS:

A. DETERMINE FINAL GRADE LINE BY EXTENDING A STRAIGHT LINE FROM THE TOP OF THE BRIDGE END DAM JOINT TO A POINT 75' AWAY ON THE TOP OF RESURFACING.

B. REMOVE ASPHALT CONCRETE EXACTLY 1" BELOW THE FINAL GRADE.

C. PLACE ITEM 407 - TACK COAT AND ITEM 446 - ASPHALT CONCRETE, TO DESIRED GRADE.

D. SURVEY TRANSITION TO VERIFY THAT THE REPAIR IS WITHIN THE ALLOWABLE TOLERANCE.

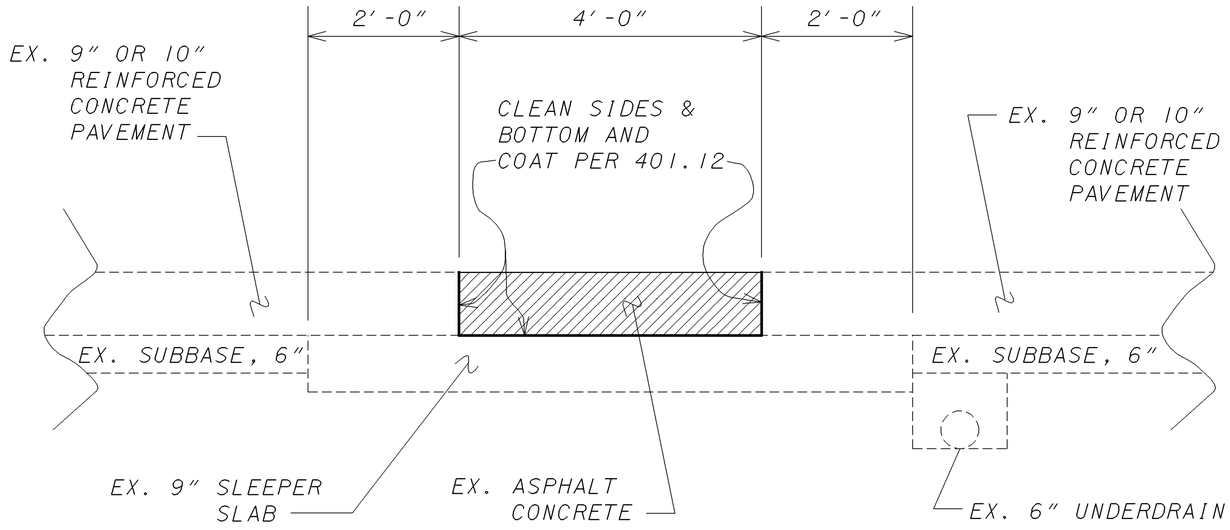


CORRECTION OF UNACCEPTABLE
ASPHALT TRANSITIONS

CALCULATED EMK
CHECKED LDH

PAVEMENT TRANSITION DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



SECTION A-A

NOT TO SCALE

ASPHALT CONCRETE REMOVAL AND REPLACEMENT

ITEM SPECIAL - PRESSURE RELIEF JOINT

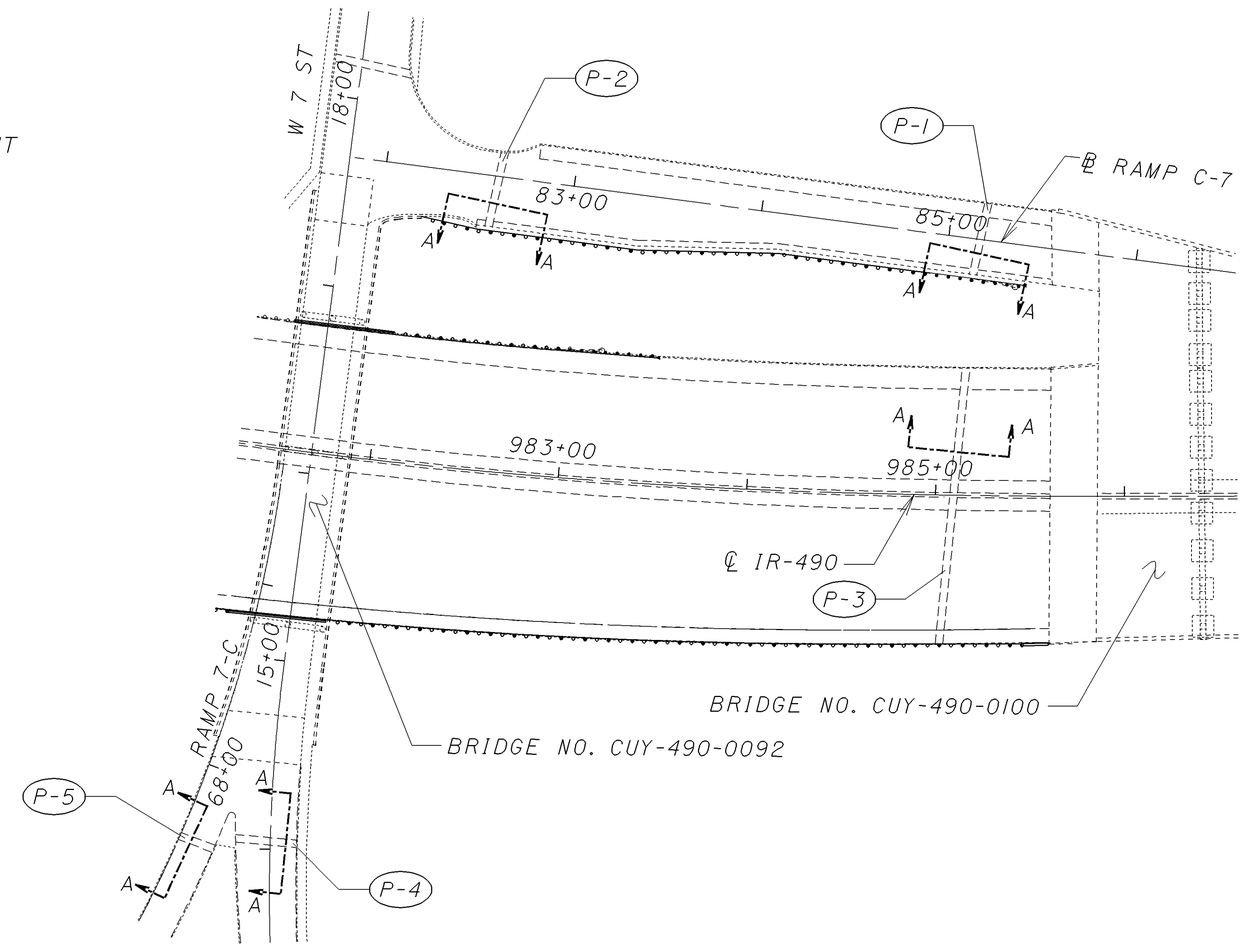
THE FOLLOWING ESTIMATED QUANTITY SHALL BE USED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER, TO REPAIR THE EXISTING PRESSURE RELIEF JOINT (PRJ) PER THE LOCATIONS AND DETAILS ON THIS SHEET.

THE CONTRACTOR SHALL REMOVE ALL ASPHALT AND CLEAN THE SIDES AND BOTTOM OF THE EXCAVATED PRJ, COAT THE EXPOSED SURFACES PER 401.12 AND PLACE ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 IN EQUAL LIFTS NOT TO EXCEED 3" OR AS APPROVED BY THE ENGINEER.

THE REPAIR OF THE PRJ ON IR-490 SHALL BE PERFORMED AT THE TIMES OUTLINED IN THE "SCHEDULE OF THRU LANES TO BE MAINTAINED" ON SHEET 20. THE PRJ'S ON W 7 ST AND RAMP C-7 SHALL BE REPAIRED UTILIZING PART WIDTH CONSTUCTION AND FLAGGERS. THE PRJ ON RAMP 7-C MAY BE REPAIRED USING PART WIDTH CONSTUCTION OR THE RAMP MAY BE CLOSED AND THE TRAFFIC DIVERTED TO RAMP 7-7C.

ALL COST FOR THE ABOVE WORK INCLUDING ALL REMOVAL, MATERIALS, EQUIPMENT AND LABOR SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL - PRESSURE RELIEF JOINT

ESTIMATED QUANTITY			
REFERENCE NO.	LOCATIONS	SPECIAL PRESSURE RELIEF JOINT LIN FT	
P-1	85+07, RAMP C-7	39	
P-2	82+60, RAMP C-7	40	
P-3	985+10, IR-490	144	
P-4	14+04, W 7 ST	33	
P-5	68+41, RAMP 7-C	19	
TOTALS TO GENERAL SUMMARY		275	



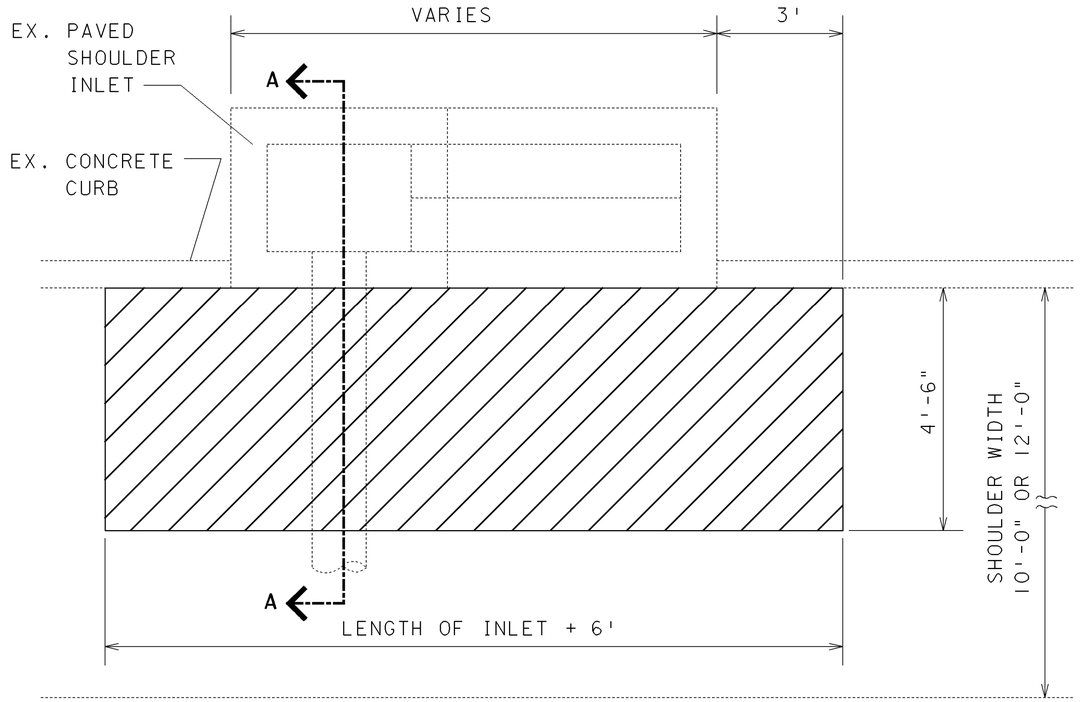
SCALE IN FEET 0 20 40

CALCULATED EMK CHECKED LDH

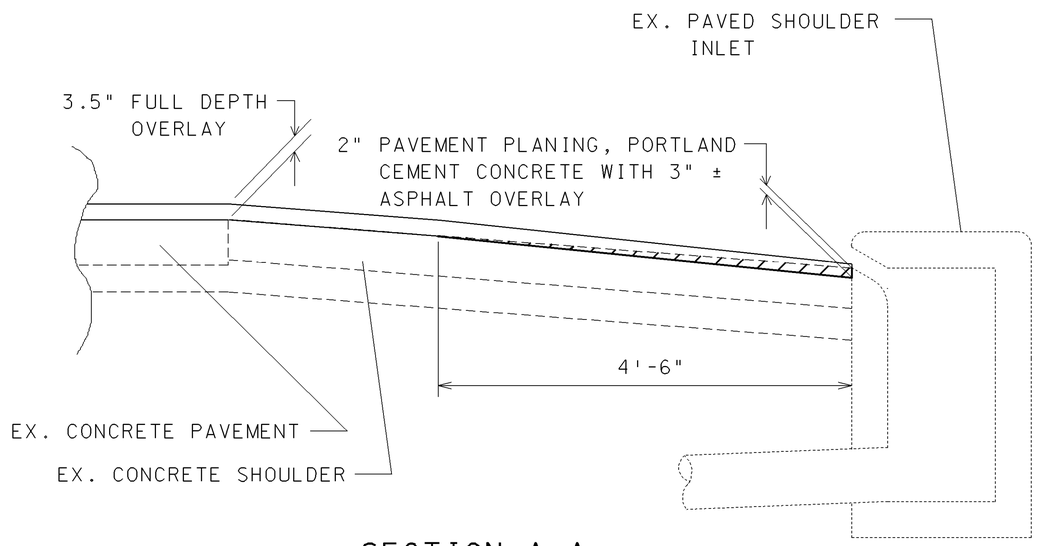
PRESSURE RELIEF JOINT REPAIR DETAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

43
110



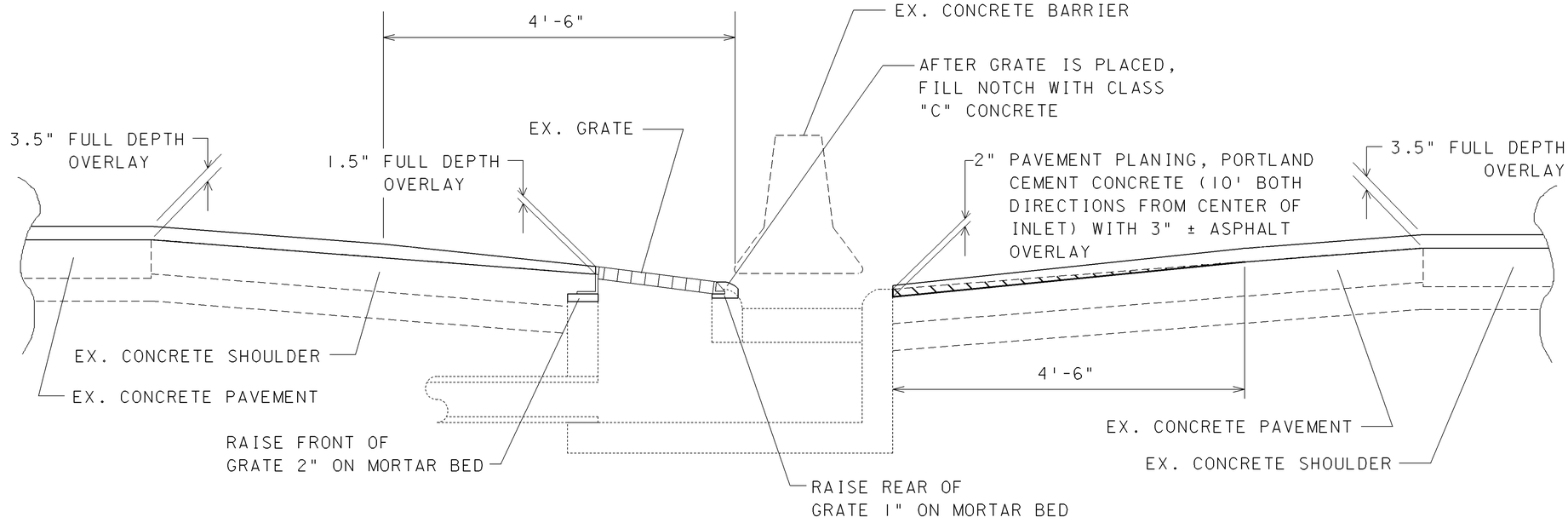
PLAN VIEW



SECTION A-A

▨ — ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE

SEE SHEET 48 FOR QUANTITIES.



MEDIAN INLET ADJUSTED TO GRADE

(NOT TO SCALE)

▨ — ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE

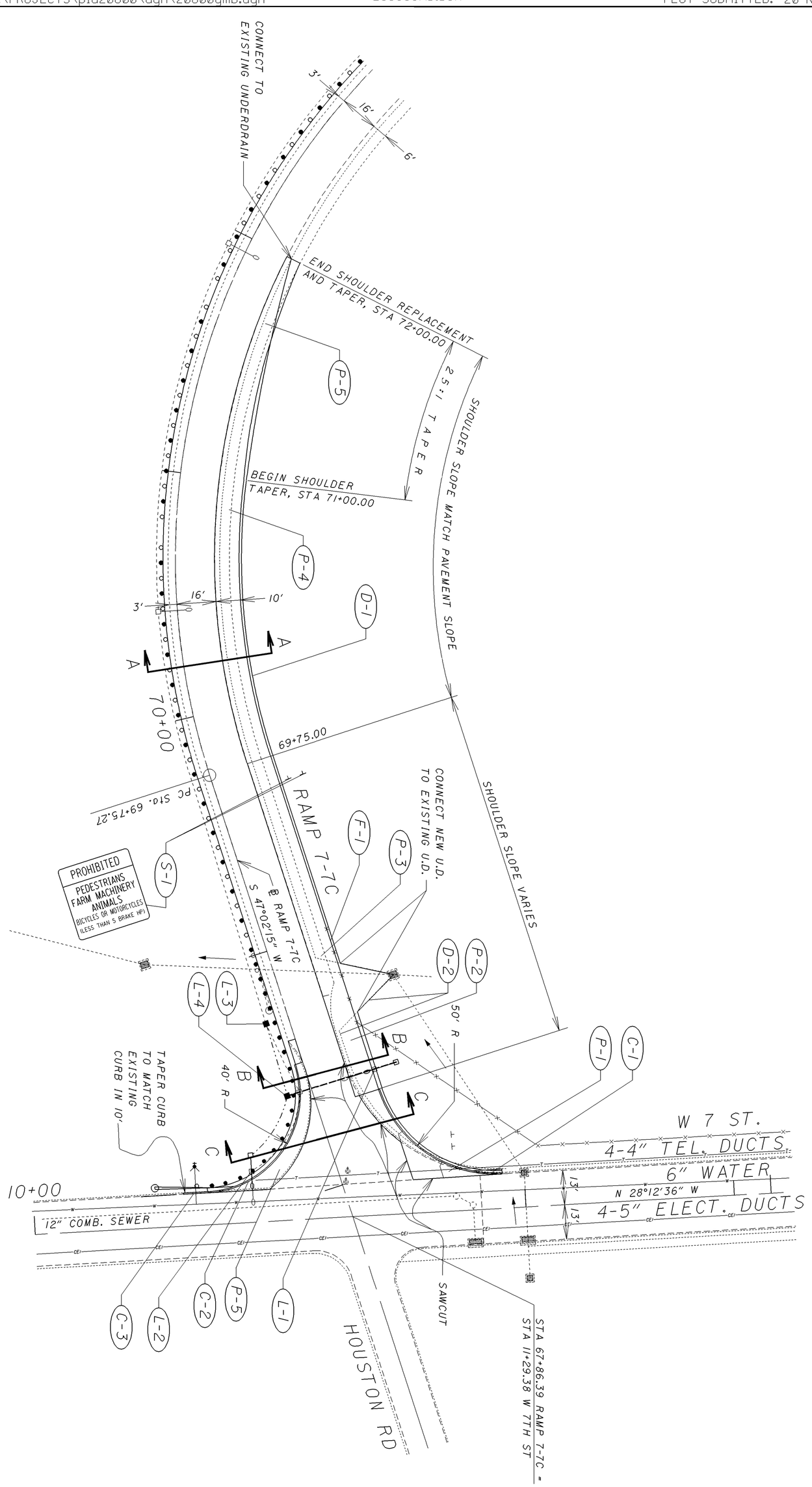
SEE SHEET 48 FOR QUANTITIES.

CALCULATED EMK
CHECKED LDH

PLANING DETAIL AT INLETS

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\p1d20800\dgn\20800gmb.dgn
20800GMB.DGN
PLOT SUBMITTED: 20-NOV-2000 14:02



SEE SHEET 46 ADDITIONAL DETAILS
SEE SHEET 48 FOR QUANTITIES
SEE SHEET 25 FOR MAINT. OF TRAFFIC DETAILS
SEE SHEET 47 FOR CROSS SECTIONS

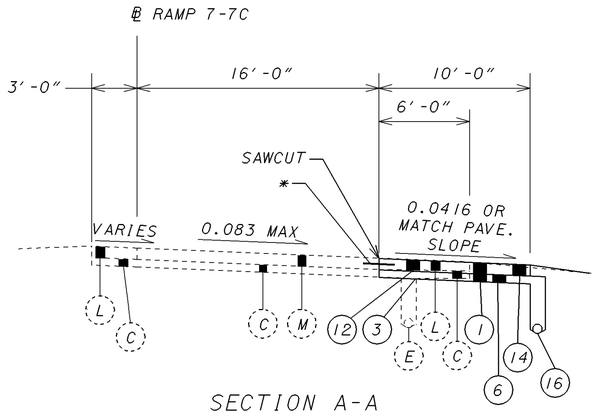
45
110

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

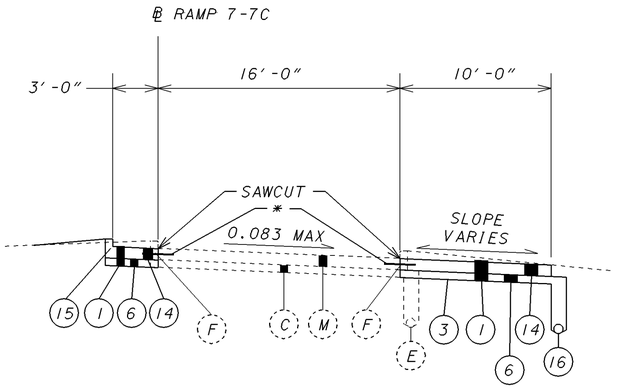
RAMP 7-7C WIDENING DETAIL

CALCULATED EMK
CHECKED LDH

0 20 40
SCALE IN FEET

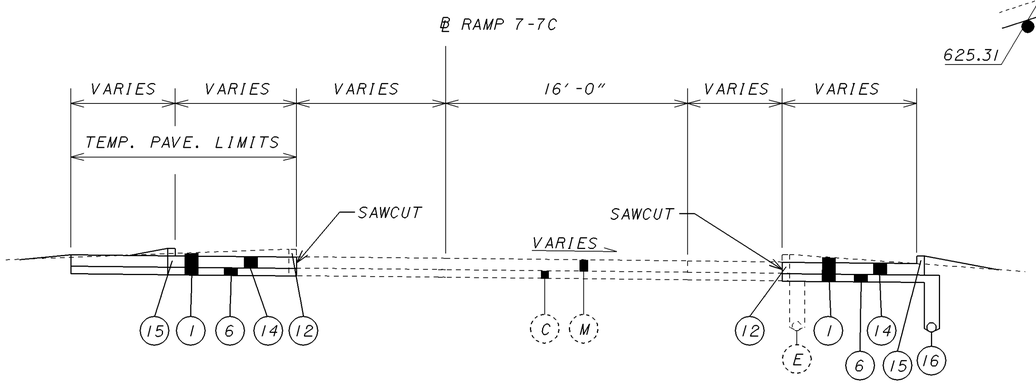


SECTION A-A



SECTION B-B

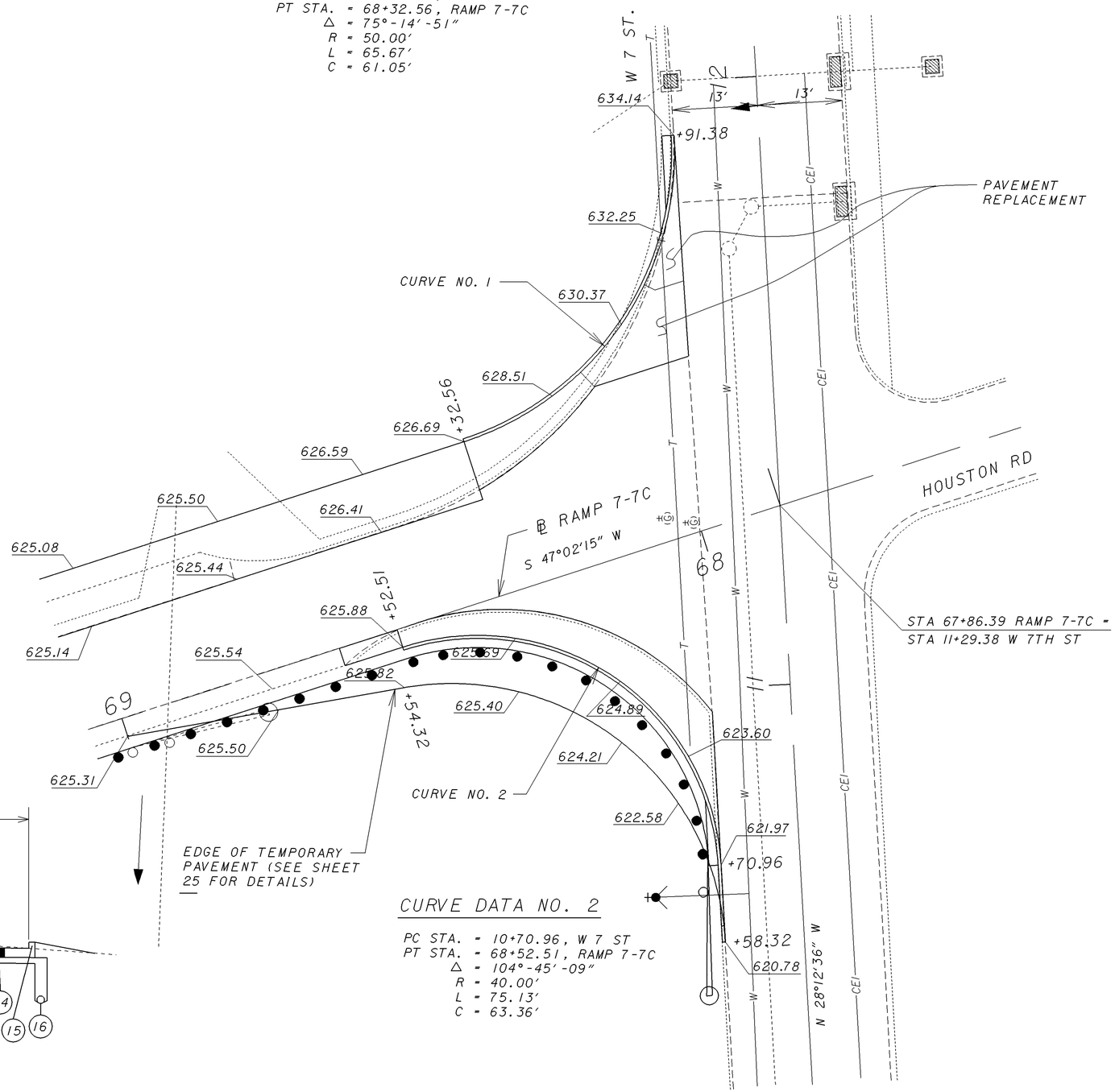
* - TYPE D LONGITUDINAL JOINT, AS PER STANDARD DRAWING BP-2.1



SECTION C-C

CURVE DATA NO. 1

PC STA. = 11+91.38, W 7 ST
PT STA. = 68+32.56, RAMP 7-7C
△ = 75°-14′-51″
R = 50.00′
L = 65.67′
C = 61.05′



EDGE OF TEMPORARY PAVEMENT (SEE SHEET 25 FOR DETAILS)

CURVE DATA NO. 2

PC STA. = 10+70.96, W 7 ST
PT STA. = 68+52.51, RAMP 7-7C
△ = 104°-45′-09″
R = 40.00′
L = 75.13′
C = 63.36′

NOTE: ELEVATIONS ON CURVES AT QUARTER POINTS.

NOTE: P.K. SET ON S.E. CORNER OF CONCRETE BASE AT S.E. CORNER OF W 7 ST. AND QUIGLEY AVE. ELEVATION = 594.48

SEE SHEET 4 FOR LEGEND
SEE SHEET 45 ADDITIONAL DETAILS
SEE SHEET 25 FOR MAINT. OF TRAFFIC DETAILS

SCALE IN FEET 0 10 20

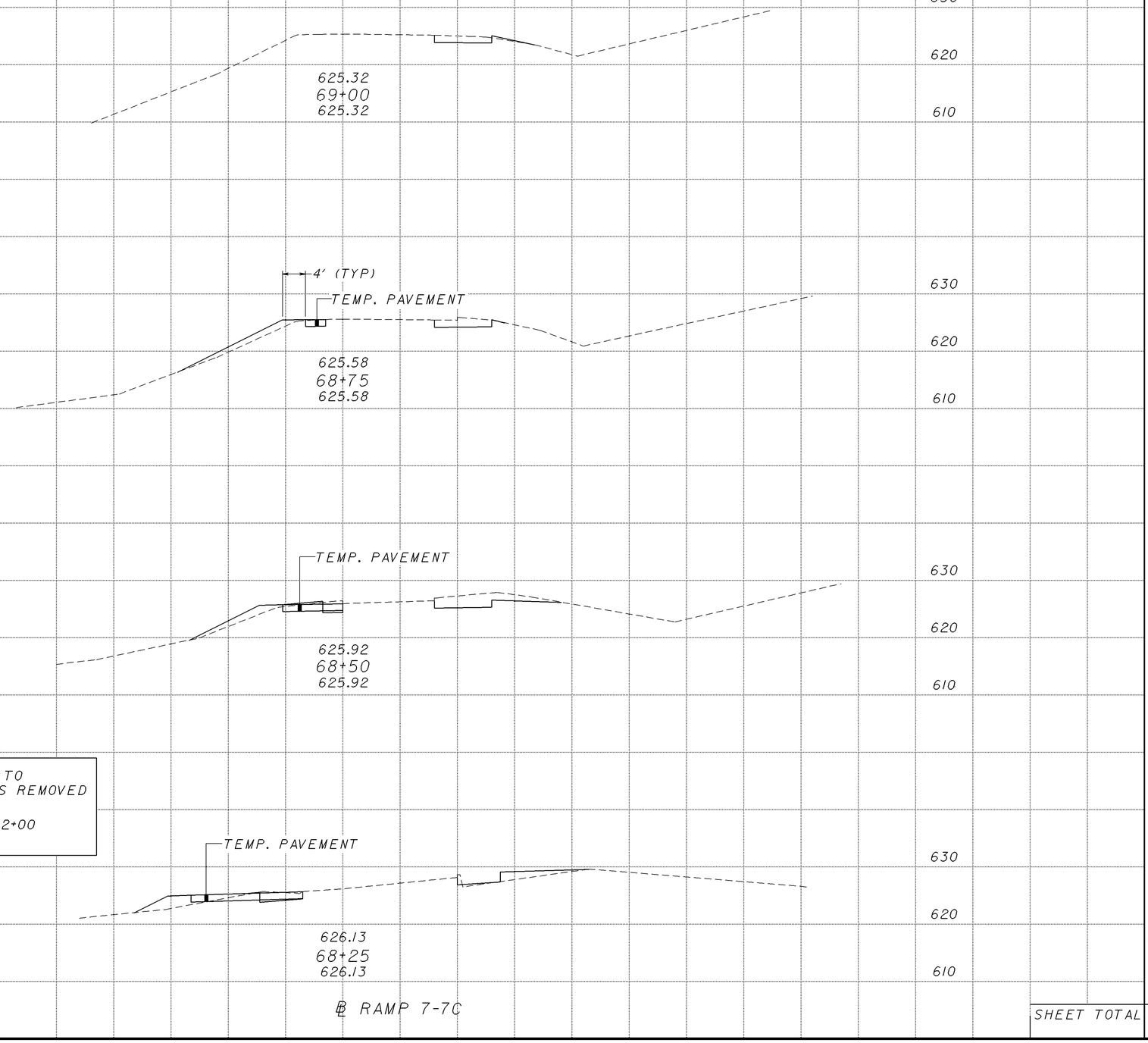
CALCULATED EMK CHECKED LDH

RAMP 7-7C WIDENING DETAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

PLOT SUBMITTED: 20-NOV-2000 14:03
PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\pid20800\dgn\20800gmg.dgn
20800GMG.DGN

SEEDING	
END WIDTH	SQ. YDS.
8	50
28	162
30	57
11	15
0	
	284



NOTE: EARTHWORK FOR TEMPORARY PAVEMENT TO REMAIN AFTER TEMPORARY PAVEMENT IS REMOVED

NOTE: EARTHWORK FROM STA. 69+00 TO STA. 72+00 CALCULATED ON SHEET 48

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7 (0)	2	8 (2)	9
10 (4)	18	13 (8)	9
17 (13)	1	9 (13)	15
2 (15)	31	1 (7)	14
0 (0)	0		
SHEET TOTAL		31 (30)	47

CALCULATED EMK
CHECKED LDH

RAMP 7-7C CROSS SECTIONS

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

ESTIMATED QUANTITIES

REFERENCE NO.	PROPOSED LOCATIONS		202					203			255	304	451	603	605	830		870	625														630	
	FROM	TO	PAVEMENT REMOVED	CURB REMOVED	FENCE REMOVED	LIGHT POLE FOUNDATION REMOVED		EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION	EMBANKMENT	SUBGRADE COMPACTION	FULL DEPTH PAVEMENT SAWING	AGGREGATE BASE, AS PER PLAN	9" REINFORCED CONCRETE PAVEMENT	6" CONDUIT, TYPE F, 707.41 #	6" SHALLOW PIPE UNDERDRAIN	CURB, TYPE 2-A	CURB, TYPE 6	SEEDING AND MULCHING	TRENCH, 24" DEEP	PULL BOX, 7.13.08, 18"	PULL BOX REMOVED	GROUND ROD	LIGHT POLE REMOVED FOR REERECTION	REERECT EXISTING LIGHT POLE	LIGHT POLE FOUNDATION, 24" x 6' DEEP	CABLE SPLICING KIT	CONNECTOR KIT, TYPE II	CONNECTOR KIT, TYPE III	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"	1-1/2" DUCT CABLE WITH NO. 6 AWG 600 VOLT CABLE		REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN	GROUND MOUNTED SUPPORT, NO. 3 POST
			S.Y.	L.F.	L.F.	EACH		C.Y.	C.Y.	S.Y.	L.F.	C.Y.	S.Y.	L.F.	L.F.	L.F.	L.F.	S.Y.	L.F.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	L.F.	L.F.		EACH	L.F.
P-1	67+85.00 RT	68+32.56 RT	23							78	7	43																				
P-2	68+32.56 RT	68+80.17 RT	7							53	48	9	53																			
P-3	68+80.17 RT	69+00.00 RT	13							22	20	4	22																			
P-4	69+00.00 RT	71+00.00 RT	133					59	6	222	200	37	222					134														
P-5	71+00.00 RT	72+00.00 RT	67					20	3	89	100	15	89					67														
C-1	67+85.00 RT	68+32.56 RT														66																
P-5	68+07.41 LT	68+60.27 LT	5								70	8	46																			
C-2	68+07.41 LT	68+52.51 LT														75																
C-3	* 10+58.32 LT	* 10+70.96 LT		13													13																
F-1	68+45 ± RT	69+01 ± RT			60																												
D-1	68+75.00 RT	72+00.00 RT												25	315																	
D-2	67+85.00 RT	68+75.00 RT												25	97																	
S-1	69+64.00 RT																														1	14
L-1	68+49.00 27' RT TO 37' RT					1																1	1	1	1		1	1				
L-2	* 10+93.00 20' LT TO 26' LT					1																1	1	1	1		1	1				
L-3	68+72.00 RT																			1						2						
L-4	68+27.00 RT																			1	1					2						
L-3/L-4																			30										40			
L-4/L-1																													45	55		
L-4/L-3																			30										40			
TOTALS TO GEN. SUMMARY			248	13	60	2		79	9	386	516	80	475	50	412	141	13	201	60	2	1	2	2	2	2	4	2	2	45	135		1	14

NON-PERFORATED, ASTM 3034 SDR 35, 707.42 OR 707.33
* W 7TH ST STATIONING

ESTIMATED QUANTITIES

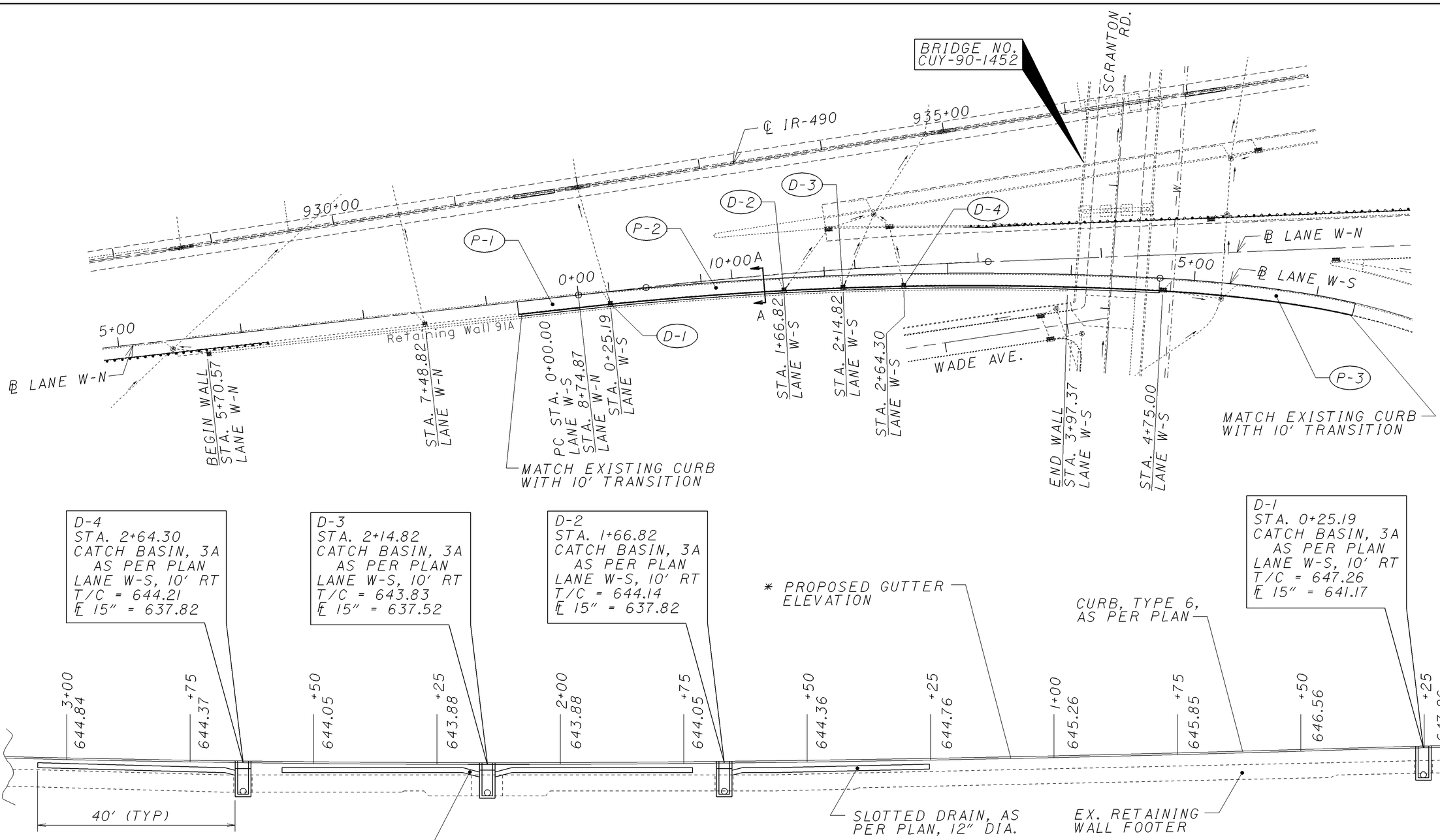
LOCATIONS	SIDE	254 PAVEMENT PLANING, PORTLAND CEMENT CONCRETE SQ.YD.	604 INLET ADJUSTED TO GRADE, AS PER PLAN EACH	
934+85	℄	10	1	
938+00	℄	10	1	
939+75	℄	10	1	
941+18	℄	10	1	
941+92	℄	10	1	
942+67	℄	10	1	
945+50	℄	10	1	
946+00	℄	10	1	
947+00	℄	10	1	
950+21	℄	10	1	
951+50	℄	10	1	
954+14	℄	10	1	
934+97	LT	8		
937+50	RT	8		
939+95	LT	10		
940+35	RT	6		
941+10	RT	6		
941+38	LT	6		
941+85	RT	8		
942+05	LT	6		
942+87	LT	10		
945+00	RT	6		
946+00	LT	10		
947+00	RT	8		
949+92	LT	6		
954+86	LT	6		
TOTAL		224	12	

CALCULATED EMK
CHECKED LDH

SCALE IN FEET 0 20 40

WIDENING DETAIL AND RAMP 7-7C W INLET ADJUSTMENT QUANTITIES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



USE BENDS AS NECESSARY TO OUTLET SLOTTED DRAIN INTO CATCH BASIN BELOW PERMISSABLE CONSTRUCTION JOINT

GUTTER SECTION ALONG LANE W-S

* - PROPOSED GUTTER AND T/C ELEVATIONS CALCULATED BY ADDING 5" ASPHALT OVERLAY TO ORIGINAL CONSTRUCTION PLAN ELEVATIONS WITH A 0.042 SHOULDER CROSS SLOPE.

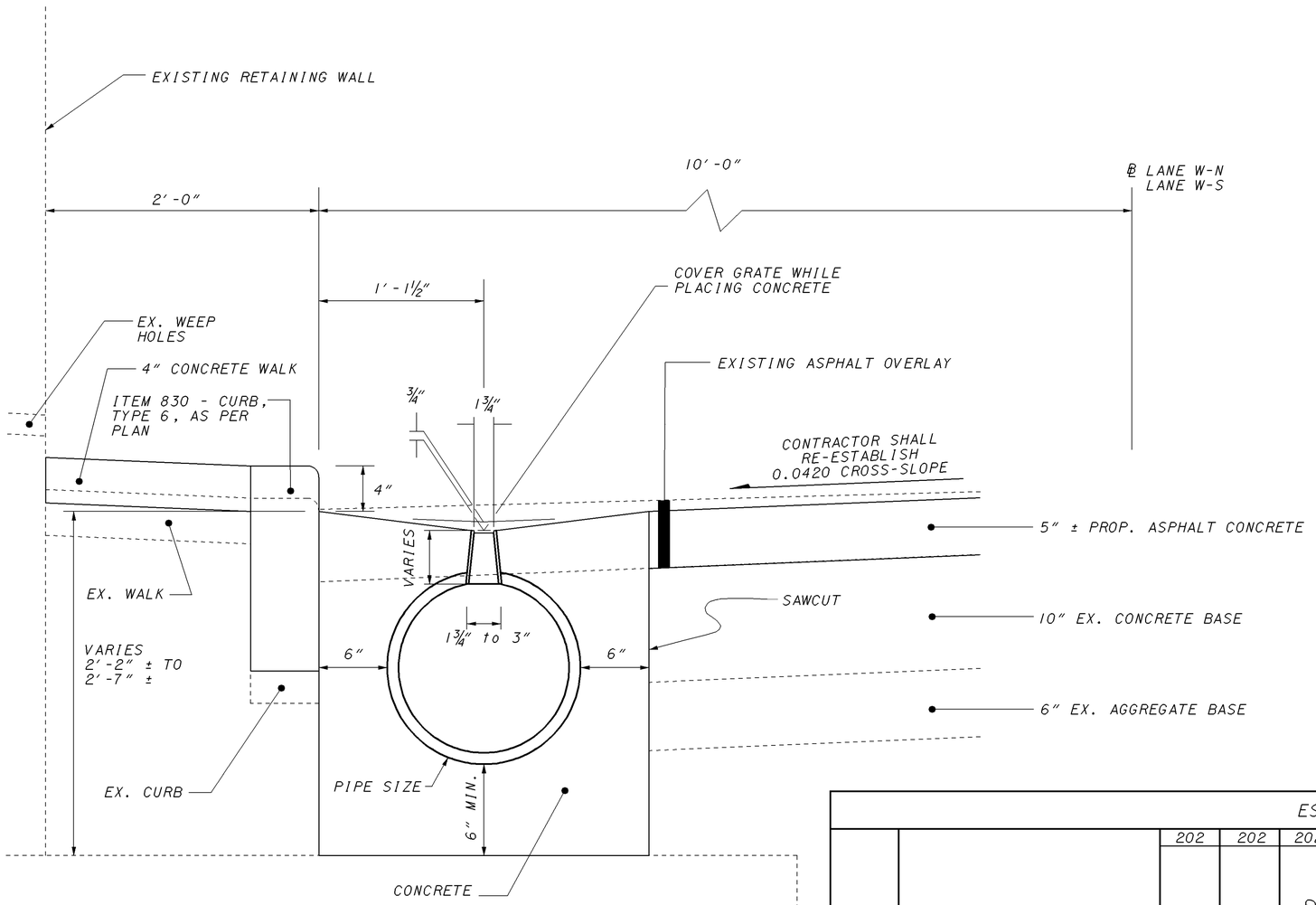
SEE SHEET 50 FOR SECTION A-A.
SEE SHEET 50 FOR QUANTITIES.

CALCULATED EMK CHECKED LDH

SCALE IN FEET 0 20 40

RETAINING WALL DRAINAGE DETAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



SECTION A-A

NOT TO SCALE

ITEM 603 - SLOTTED DRAIN, AS PER PLAN, 12" DIAMETER

THIS ITEM SHALL CONSIST OF 12" DIAMETER SLOTTED DRAIN BITUMINOUS-COATED STEEL CONDUIT 707.05 (14 GAGE) WITH A VARIABLE HEIGHT BY 3/16" GALVANIZED SOLID BAR GRATE AS APPROVED BY THE ENGINEER.

THE MINIMUM PIPE SLOPE FOR THE 12" SLOTTED DRAINS SHALL BE 0.5%. THE ACTUAL SLOPE SHALL BE DETERMINED BY THE CONTRACTOR, WITH APPROVAL FROM THE ENGINEER, BASED ON THE VARIABLE GRATE HEIGHTS RECOMMENDED BY THE MANUFACTURER. THE DOWNSTREAM ℄ FOR THE SLOTTED DRAIN SHALL BE ADJUSTED TO ENTER THE CB AT AN ACCEPTABLE ELEVATION. THE DRAIN SHALL BE FURNISHED AND INSTALLED WITH THE SPECIAL BENDS AND CONNECTIONS REQUIRED TO CONNECT THE SLOTTED DRAIN TO THE HIGHWAY DRAINAGE SYSTEM AS PART OF THIS PAY ITEM.

SECTIONS SHALL BE FURNISHED WITH A MODIFIED HUGGER BAND TO BOLT THROUGH THE SLOTTED OPENING.

THE GRATE SHALL BE FILLET WELDED AT EVERY OTHER CORRUGATION ON THE TANGENT.

BEDDING AND BACKFILL SHALL BE ITEM 499 CONCRETE (ANY CLASS).

THE CONCRETE SHALL BE FINISHED AND CURED AS PER 451.09 AND 451.10. CONTRACTION JOINTS SHALL BE TOOLED AT THE SPACING OF THE ADJACENT PAVEMENT OR 10' WHERE THE EXISTING SPACING IS NOT OBVIOUS.

AT THE CONTRACTOR'S REQUEST, THE DEPARTMENT WILL CONSIDER ALTERNATE PROPOSALS AS APPROVED BY THE DISTRICT PRODUCTION ADMINISTRATOR. ALTERNATE PROPOSALS SHALL BE STRUCTURALLY AND HYDRAULICALLY EQUIVALENT.

ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE NOTED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 603- SLOTTED DRAIN, AS PER PLAN, 12" DIAMETER.

ESTIMATED QUANTITIES

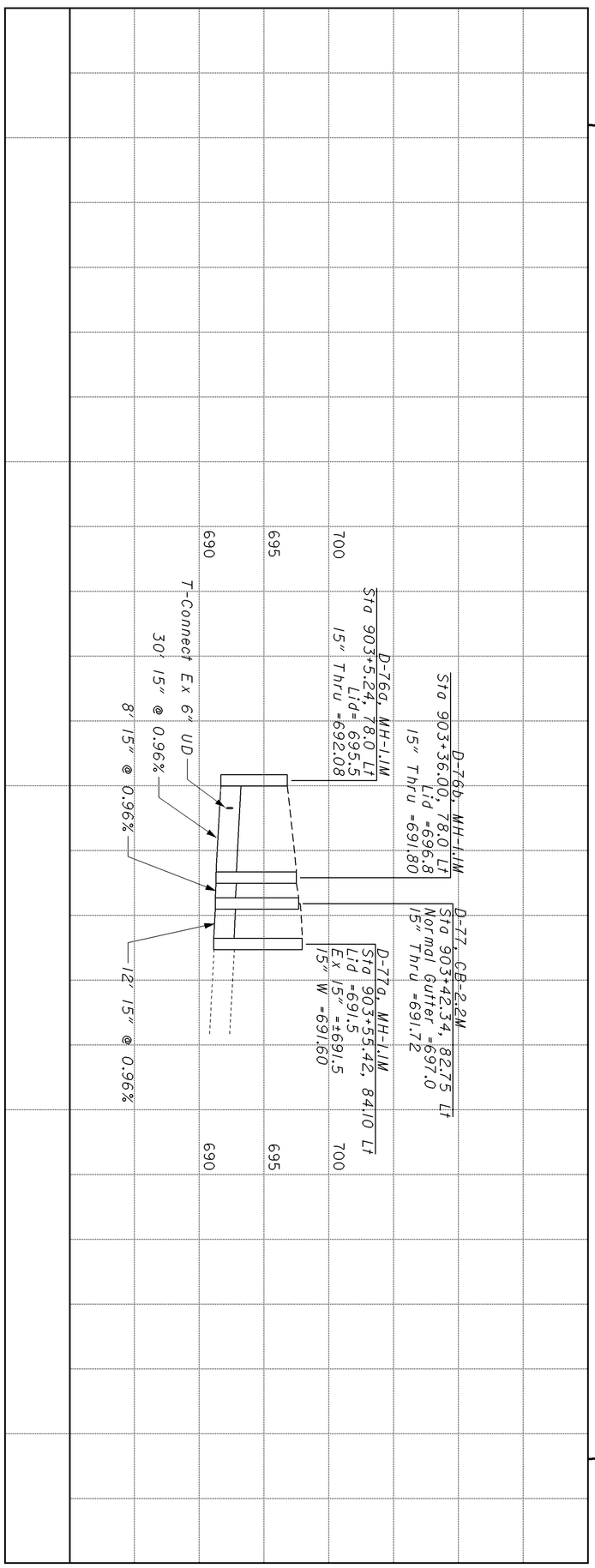
REFERENCE NO.	STATIONING	202 WEARING COURSE REMOVED (SQ YD)	202 WALK REMOVED (SQ FT)	202 PAVEMENT REMOVED (SQ YD)	202 CURB REMOVED (SQ YD)	203 EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION (CU YD)	255 FULL DEPTH PAVEMENT SAWING (LIN FT)	*	407 TACK COAT FOR INTER. COURSE (0.05 GAL/SY) (GAL)	448 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PG64-28 (CU YD)	603 CONDUIT, MISC.: PIPE CLEANOUT, 8" TO 15" (LIN FT)	603 15" CONDUIT, TYPE B (LIN FT)	603 SLOTTED DRAIN, AS PER PLAN, 12" DIAMETER (LIN FT)	604 CATCH BASIN, NO. 3A, AS PER PLAN (EACH)	608 4" CONCRETE WALK (SQ FT)	830 CURB, TYPE 6, AS PER PLAN (LIN FT)
D-1	0+25.19, LANE W-S										97	4		1		
D-2	1+66.82, LANE W-S			9		6	40				62	4	40	1		
D-3	2+14.82, LANE W-S			18		12	80				65	4	80	1		
D-4	2+64.30, LANE W-S			9		6	40				50	4	40	1		
P-1	8+25 TO 8+74.87, LANE W-N	56	75		50				3	5.4					75	50
P-2	0+00 TO 4+72, LANE W-S	524	708		472				26	51.0					708	472
P-3	4+72 TO 5+33, LANE W-S	68			61				3	6.6						61
TOTALS TO GENERAL SUMMARY		648	783	36	583	24	160		32	62	274	16	160	4	783	583

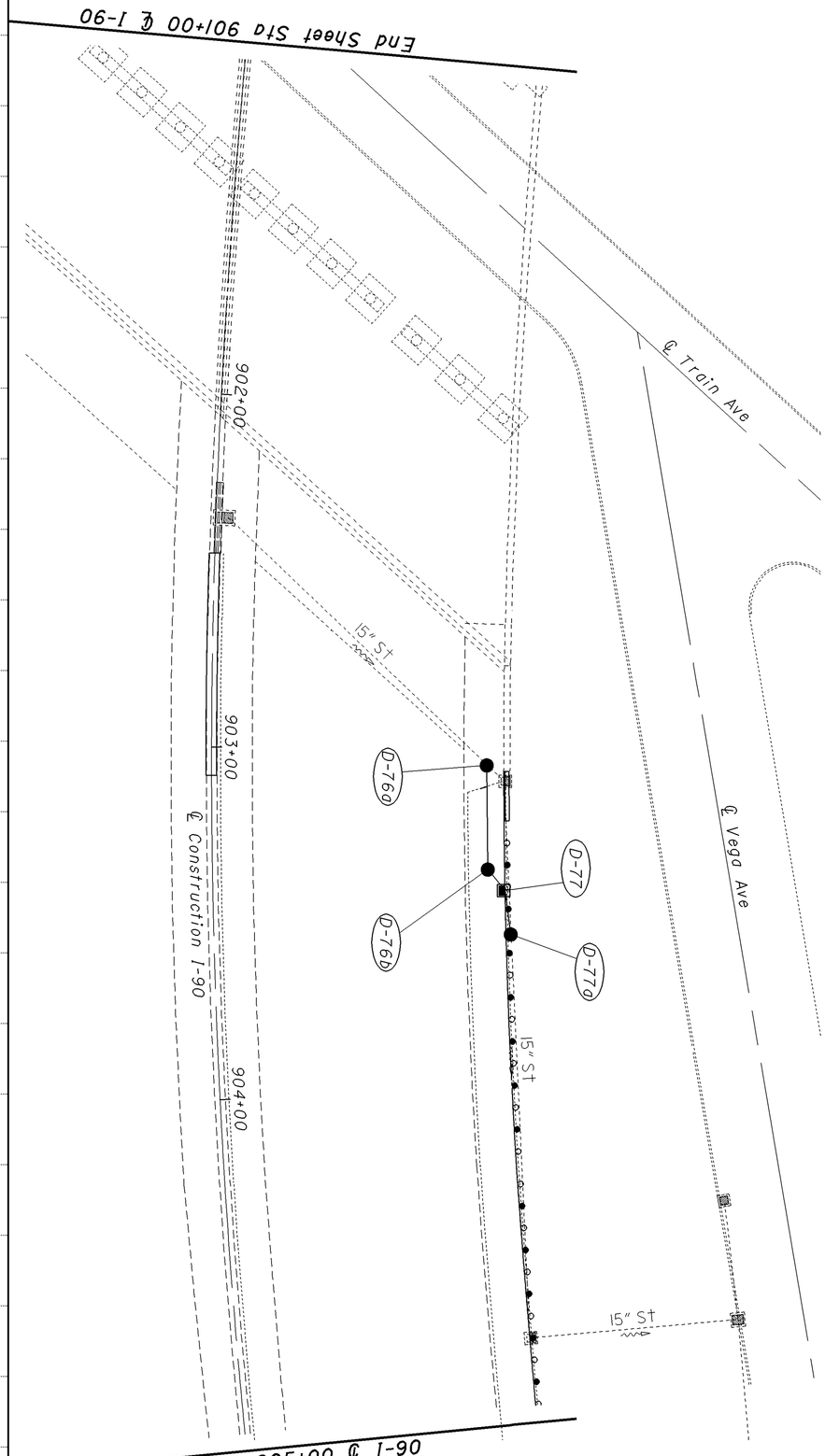
* - ASPHALT CONCRETE SURFACE COURSE CALCULATED ON SHEET 26.

CALCULATED EMK
CHECKED LDH

SLOTTED DRAIN DETAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00





Ref No.	Station From	Station To	Side	202 Catch Basin Removed	603 15" Conduit, Type B As Per Plan	604 Manhole No. 1	604 Catch Basin, 3A								
				Each	Lin Ft	Each	Each								
D-76a	903+5.24		78.0 L	1	30	1									
D-76b	903+36.00		78.0 L		8	1									
D-77	903+42.34		82.8 L		12		1								
D-76b	903+55.42		84.1 L			1									
Totals Carried to General Summary				1	50	3	1								

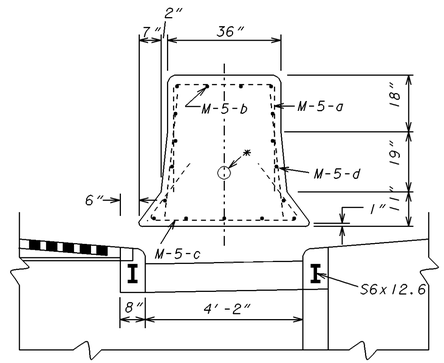
CUY-90/490-
13.41/0.00

Drainage Plan, I-90 WB
Sta 901+00 to Sta 905+00

Calculated BMB
Checked

0 20
25 10
Horizontal
Scale in Feet

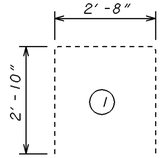
N



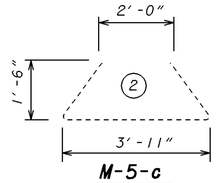
INLET, NO. 3B50, AS PER PLAN

STA. 886+55, I-90
STA. 954+14, I-490

* 4" PVC RACEWAY



M-5-a



M-5-c

STEEL LIST #5 BARS				
MARK	NO.	LENGTH	SHAPE	WEIGHT
M-5-a	10	8'-4"	1	87
M-5-b	17	19'-8"	STR.	349
M-5-c	10	7'-6"	2	79
M-5-d	20	3'-6"	STR.	73
S6x12.5	2	11'-0"		275
TOTAL				863 LBS.

NOTE: THE STEEL LIST TABLE QUANTITY IS INCLUDED FOR ESTIMATING PURPOSES ONLY.

FOR NOTES, DIMENSIONS, AND DETAILS NOT SHOWN SEE STANDARD DRAWING I-2.1M.

SEE SHEET 53 FOR CONCRETE BARRIER QUANTITIES.

∓ DRAINAGE DATA															
BARRIER MEDIAN INLET ℄ STATION	BARRIER MEDIAN INLET FLOW LINE ELEVATION	GRATE LOCATION	STORM SEWER				STORM SEWER				UNDERDRAIN			
			SIZE	BASIN WALL LOCATION	FLOW DIRECTION	FLOW LINE ELEVATION	SIZE	BASIN WALL LOCATION	FLOW DIRECTION	FLOW LINE ELEVATION	SIZE	BASIN WALL LOCATION	FLOW DIRECTION	FLOW LINE ELEVATION
886+55, I-90	658.23	LT.	15"	NORTH	SOUTH	652.63	15"	SOUTH	SOUTH	652.53	6"	EAST	WEST	653.83
954+14 , I-490	638.86	RT.	15"	EAST	EAST	632.28	-	-	-	-		WEST	EAST	
											6"	EAST	WEST	632.1

ITEM 603 - 15" CONDUIT, TYPE B

THIS ITEM SHALL BE USED TO RECONNECT EXISTING STORM SEWER PIPES INTO THE PROPOSED BARRIER MEDIAN INLET.

DRAINAGE QUANTITIES			
BARRIER MEDIAN INLET ℄ STATION	202	604	603
	INLET REMOVED	INLET, NO. 3B50, AS PER PLAN	15" CONDUIT, TYPE B
	EACH	EACH	LIN. FT.
886+55, I-90	1	1	8
954+14 , I-490	1	1	4
TOTAL	2	2	12

∓ NOTE: ALL FLOW LINE ELEVATIONS WERE TAKEN OR DEVELOPED FROM EXISTING DRAINAGE PLANS. THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL FLOW LINE ELEVATIONS PRIOR TO ORDERING PRECAST UNITS AND MATERIALS.

CALCULATED BJK | CHECKED LDH | DRAWN | REVISED

MEDIAN INLET DRAINAGE DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

NOTES:

A. THIS TABLE WAS DEVELOPED USING EXISTING PLANS OF THE MEDIAN BARRIER WALL. THE CONTRACTOR SHALL LAYOUT THE WORK AS DESCRIBED BY THIS TABLE AND NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES BEFORE CONSTRUCTING THE NEW BARRIER WALL.

* SEE SHEETS 54-55 FOR CONCRETE BARRIER TRANSITION DETAILS.

\# PROPOSED SIGN SUPPORT FOUNDATION

NOTES:

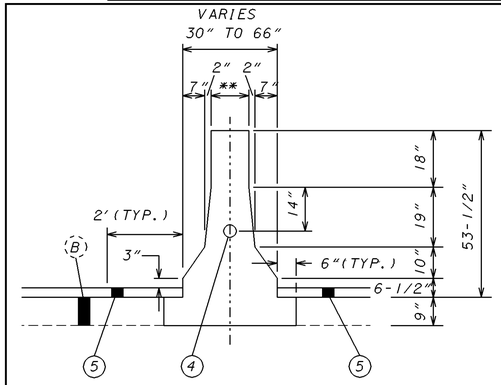
1. 3′ DEDUCTION FOR TOWER FOUNDATION
2. 20′ DEDUCTION FOR I-3 MEDIAN INLET
3. 2.5′ DEDUCTION FOR MEDIAN PULLBOX
4. THE COST FOR ALL CONCRETE BARRIER TRANSITIONS AS DETAILED ON SHEETS 54-55, SHALL BE INCLUDED IN THE UNIT BID COST FOR ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN A OR B, RESPECTIVELY

PROPOSED CONCRETE BARRIER DATA

℄ LIGHTTOWER FOUNDATION	CONCRETE BARRIER TAPER RATE	PROPOSED CONCRETE BARRIER STATION		TOTAL LENGTH	STATION & TOP WIDTH ALONG PROPOSED CONCRETE BARRIER							* TRANSITION TYPE	LOCATION STATION		* TRANSITION TYPE	LOCATION STATION		LOCATION OF I-3 MEDIAN INLET 36″ WIDTH	
STATION		FROM	TO										FROM	TO		FROM	TO	FROM	TO
881+31.5	20:1	881+10	881+53	43	+10	+20	+30	+33	+43	+53		A	+10	+20	A	+43	+53		
℄ I-90					12″	24″	36″	36″	24″	12″									
886+66.5	20:1	886+15	886+98	83	+15	+25	+45	+65	+68	+88	+98	C	+15	+25	C	+88	+98	+45	+65
℄ I-90					12″	12″	36″	36″	36″	12″	12″								
891+30.5	20:1	891+02	891+62	60	+02	+12	+29	+32	+52	+62		D	+02	+12	C	+52	+62		
℄ I-90					36″	36″	36″	36″	12″	12″									
896+03.5	20:1	895+72	896+35	63	+72	+82	+02	+05	+25	+35		C	+72	+82	E	+25	+35		
℄ I-90					12″	12″	36″	36″	36″	36″									
902+76.5	20:1	902+45	903+08	63	+45	+55	+75	+78	+98	+08		C	+45	+55	C	+98	+08		
℄ I-90					12″	12″	36″	36″	12″	12″									
908+05.5	20:1	907+74	908+37	63	+74	+84	+04	+07	+27	+37		B	+74	+84	B	+27	+37		
℄ I-90					6″	12″	36″	36″	12″	6″									
913+35.5	20:1	913+04	913+67	63	+04	+14	+34	+37	+57	+67		B	+04	+14	B	+57	+67		
℄ I-90					6″	12″	36″	36″	12″	6″									
919+01.5	20:1	918+70	919+33	63	+70	+80	+00	+03	+23	+33		B	+50	+60	B	+23	+33		
℄ I-90					6″	12″	36″	36″	12″	6″									
924+00.5	20:1	923+69	924+90	121	+69	+79	+99	+02	+22	+90		B	+69	+79					
℄ I-90					6″	12″	36″	36″	12″	12″									
925+15.0	20:1	924+90	925+50	60	+90	+10	+20	+40	+50						B	+40	+50		
# ℄ I-90					12″	36″	36″	12″	6″										
929+26.5	20:1	928+95	929+43	48	+95	+05	+25	+28	+33	+43		B	+95	+05	F	+33	+43		
℄ I-90					6″	12″	36″	36″	40″	48″									
929+25.0	NA	929+12	929+34.5	23	+12	+34													
℄ I-490					12″	12″													
931+69.5	20:1	931+48	931+81	33	+48	+68	+71	+81											
℄ I-490					12″	36″	36″	36″											
937+09.5	20:1	936+98	937+31	33	+98	+08	+11	+31				G	+98	+08					
℄ I-490					36″	36″	36″	12″											
940+57.5	20:1	940+25	940+88	63	+25	+35	+55	+58	+78	+88									
℄ I-490					12″	12″	36″	36″	12″	12″									
949+79.5	20:1	949+60	950+01	41	+60	+70	+78	+81	+01			G	+60	+70					
℄ I-490					36″	36″	36″	36″	12″										
953+94.5	20:1	953+73	954+61	88	+73	+93	+96	+51	+61						G	+51	+61	+04	+24
℄ I-490					12″	36″	36″	36″	36″										

CONCRETE BARRIER QUANTITIES

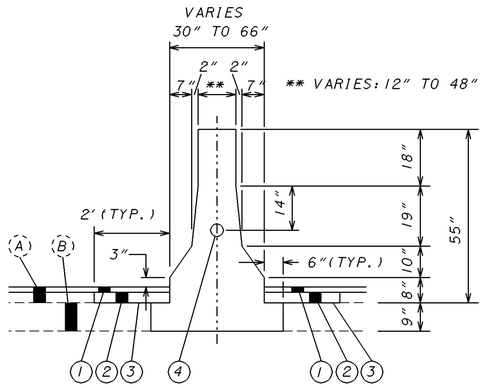
STATION		202		622		626	NOTES
		CONCRETE BARRIER REMOVED, AS PER PLAN	CONCRETE BARRIER REMOVED	CONCRETE BARRIER TYPE B-50, AS PER PLAN A	CONCRETE BARRIER TYPE B-50, AS PER PLAN B	BARRIER REFLECTOR, TYPE B	
FROM	TO	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	
881+10	881+53	43		40		2	1,4
886+15	886+98	63		60		2	1,2,4
891+02	891+62	60		57		2	1,4
895+72	896+35	63		60		2	1,4
902+45	903+08	63		60		2	1,4
907+74	908+37	63		60		2	1,4
913+04	913+67	63		60		2	1,4
918+70	919+33	63		60		2	1,4
923+69	925+50	181		168		4	1,4
928+95	929+43	48		45		2	1,4
929+12	929+34.5	22.5		20		2	1,3,4
931+48	931+81		33		30	2	1,4
936+98	937+31		33		27.5	2	1,4
940+25	940+88		63		60	2	1,4
949+60	950+01		43		37.5	2	1,4
953+73	954+61		88		65	4	1,2,4
TOTAL		732.5	260	690	220	36	



ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN B

CONCRETE BARRIER REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE COST OF REMOVING THE EXISTING 5″ ASPHALT OVERLAY 2 FEET BEYOND THE LIMITS OF THE PROPOSED BARRIER WALL. BEFORE REMOVING THE ASPHALT, A NEAT JOINT SHALL BE SAWED.



ITEM 622 - CONCRETE BARRIER, TYPE B-50, AS PER PLAN A

THIS ITEM SHALL INCLUDE ALL COSTS OF REPLACING THE ASPHALT INTERMEDIATE COURSE AS DETAILED ABOVE.

LEGEND

- (A) EXISTING 5″ ASPHALT OVERLAY
- (B) EXISTING CONCRETE PAVEMENT
- (1) ITEM 254 - 1½″ PAVEMENT PLANING, BITUMINOUS & ITEM 446 - 1½″ ASHPALT CONCRETE SURFACE COURSE, TYPE 1H, APP W/ S.S. 1059 WARRANTY
- (2) ITEM 448 - ASPHALT INTERMEDIATE COURSE
- (3) ITEM 407 - TACK COAT
- (4) 4″ PVC RACEWAY
- (5) ITEM 880 - 3-1/2″ ASPHALT CONCRETE (5 YEAR WARRANTY)

DRAWN BJK | REVISED EMK
CALCULATED BMB | CHECKED LDH

MEDIAN CONCRETE BARRIER DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00

PLOT SUBMITTED: 20-NOV-2000 14:07

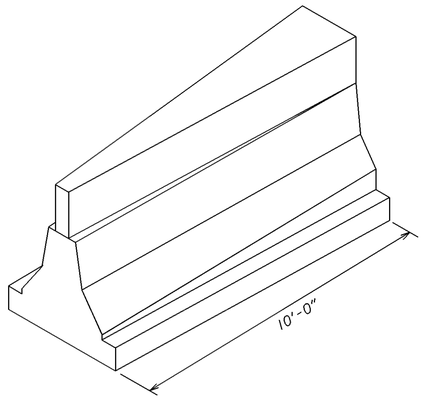
PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\p1d20800\dgn\20800grh.dgn
20800GRH.DGN

LEGEND

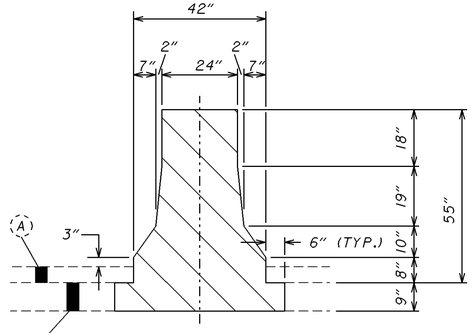
(A) EXISTING 5" ASPHALT OVERLAY

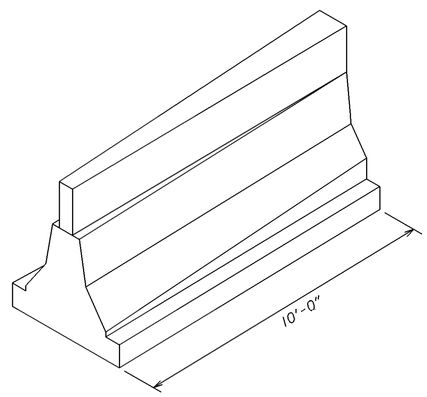
(B) EXISTING CONCRETE PAVEMENT

- ¾" PREFORMED EXPANSION JOINT, 705.03 SHALL BE USED ON ALL BARRIER TRANSITION FACES.



TRANSITION TYPE A





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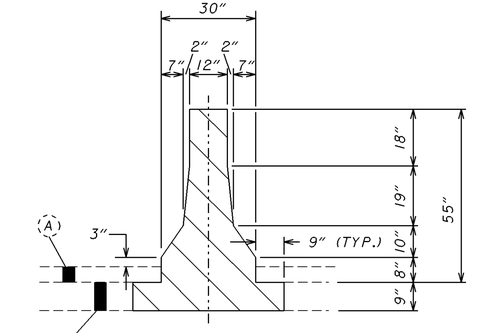
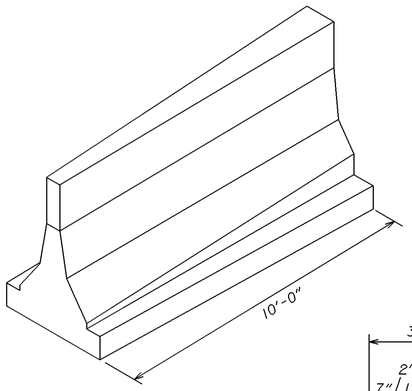
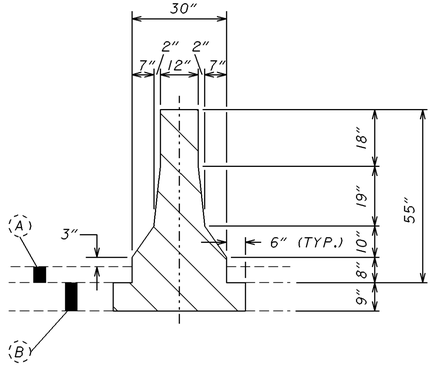
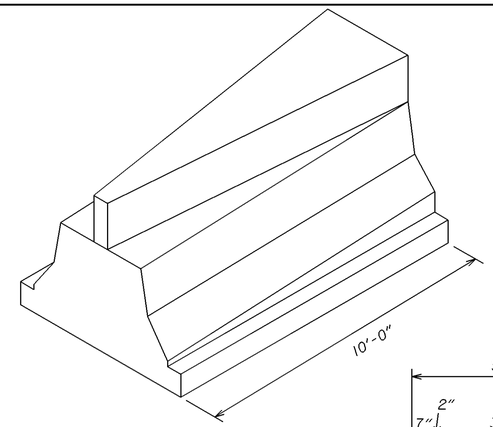


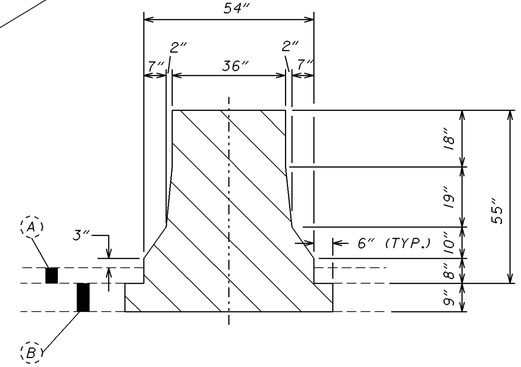


TRANSITION TYPE B





TRANSITION TYPE D



DRAWN BJK
REVISED EMK
CALCULATED BJK
CHECKED LDH

MEDIAN CONCRETE BARRIER TRANSITION DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00

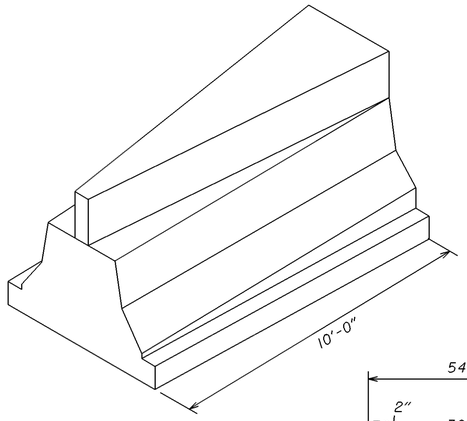
54
110

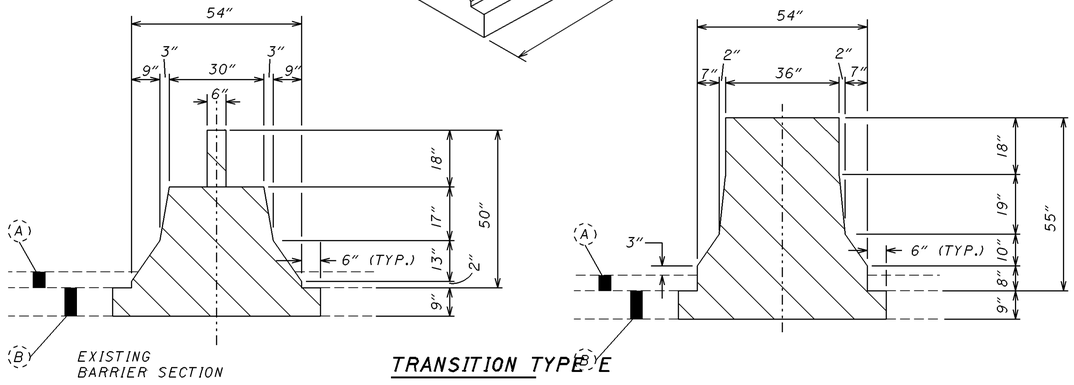
LEGEND

(A) EXISTING 5" ASPHALT OVERLAY

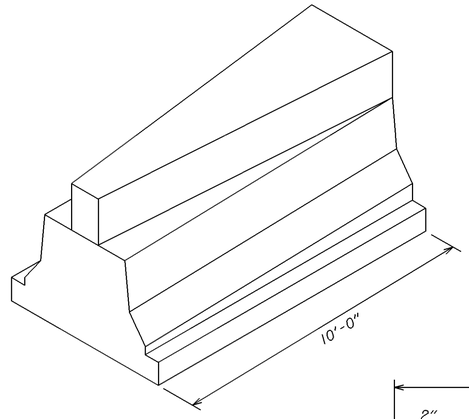
(B) EXISTING CONCRETE PAVEMENT

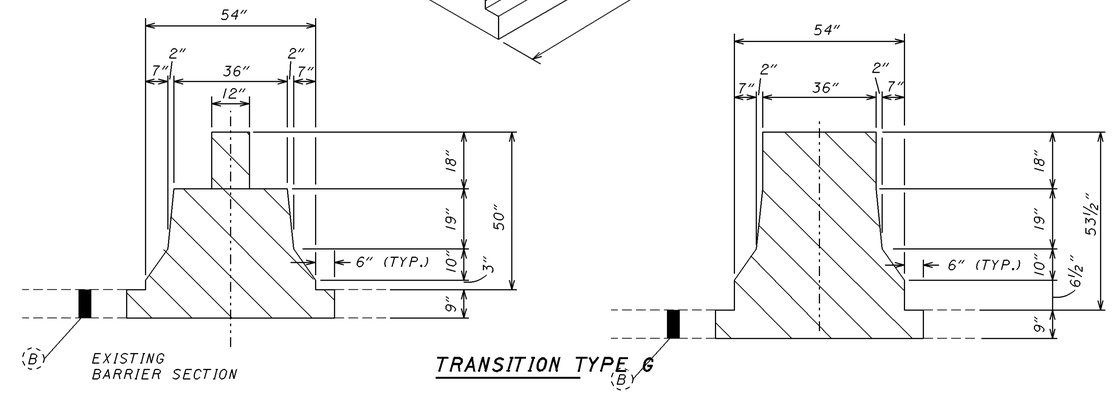
- 3/4" PREFORMED EXPANSION JOINT. 705.03 SHALL BE USED ON ALL BARRIER TRANSITION FACES.



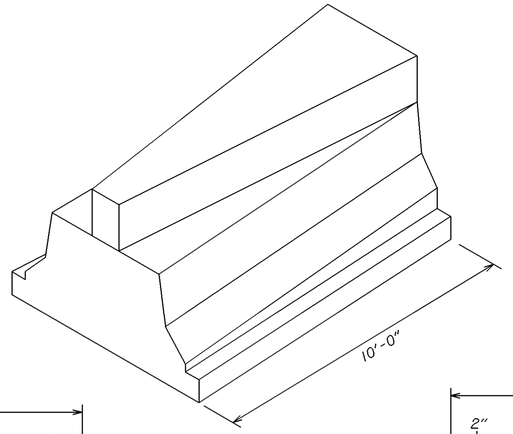


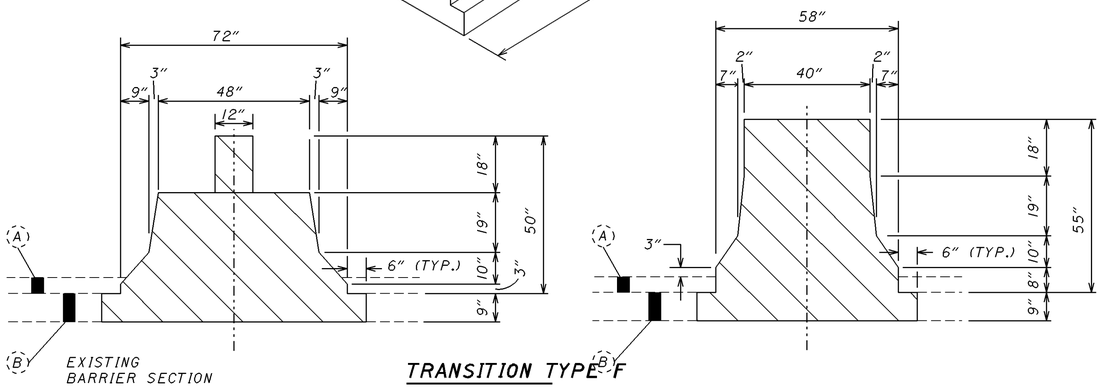
TRANSITION TYPE E





TRANSITION TYPE G



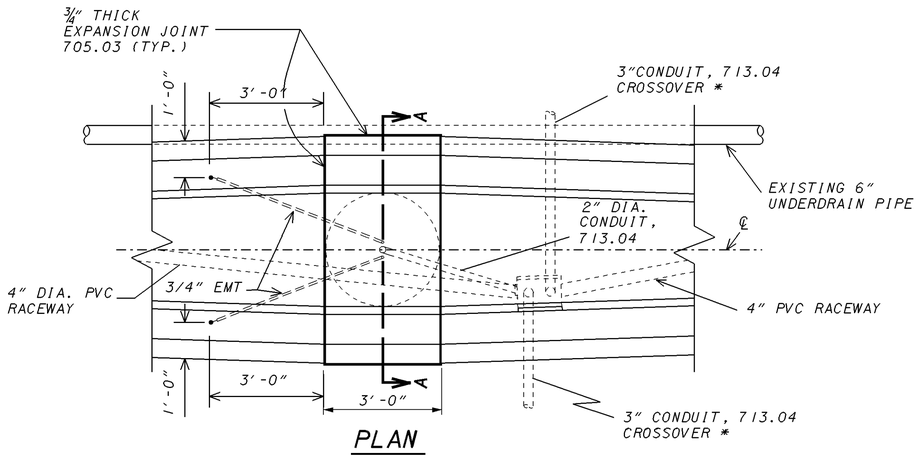


TRANSITION TYPE F

CALCULATED	DRAWN
BJK	BJK
CHECKED	REVISED
LDH	EMK

MEDIAN CONCRETE BARRIER DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00

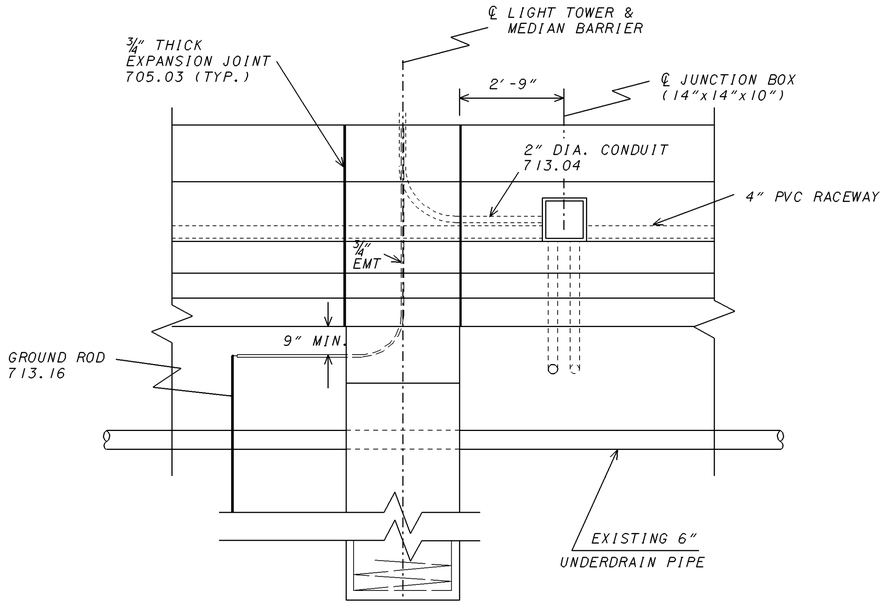


PLAN

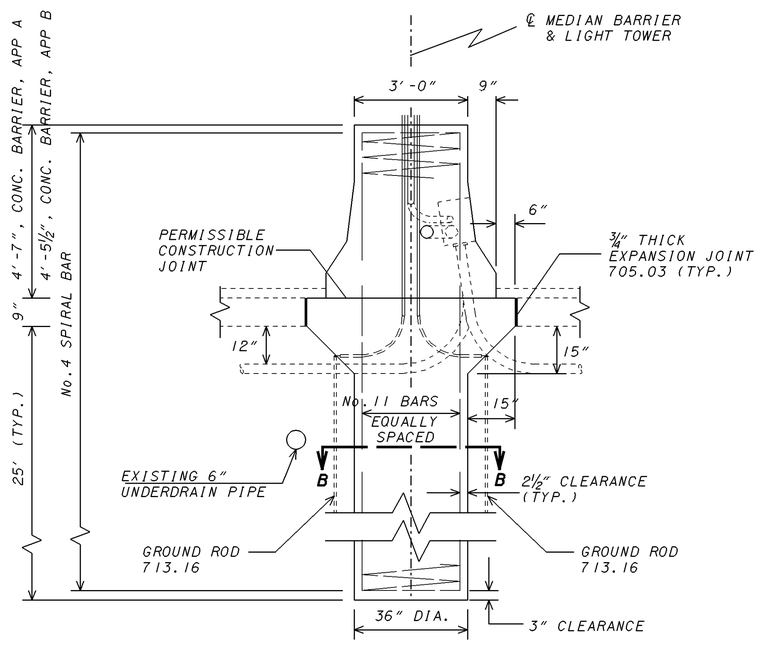
NOTES

1. NOTE 1,3,4,5,6,9 OF STANDARD CONSTRUCTION DRAWING HL-20.21M (8-31-94) SHALL APPLY TO THE WORK EXCEPT IN NOTE 5 THE LENGTH "L" OF THE NO.4 SPIRAL BAR SHALL INCLUDE THE BARRIER WALL AND BASE HEIGHT OF 5'-4" FOR CONCRETE BARRIER TYPE B-50, AS PER PLAN A AND 5'-2½" FOR CONCRETE BARRIER TYPE B-50, AS PER PLAN B.
2. REFER TO STANDARD CONSTRUCTION DRAWING HL-20.21M (8-31-94) FOR THE NO.4 SPIRAL BAR BENDING DIAGRAM.
3. CAISSONS SHALL BE PLACED IN WELL COMPACTED, UNDISTURBED SOIL.
4. THE 3" CONDUIT CROSSOVER AND GROUND RODS WILL BE PAID FOR SEPARATELY.
5. FOR MEDIAN BARRIER WALL DETAILS SEE SHEETS 53-55.
6. THE COST OF FURNISHING AND PLACING THE JUNCTION BOX AND ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 625 - MEDIAN LIGHT TOWER FOUNDATION, MISC.: MEDIAN MOUNTED, 36" X 25' DEEP.

* INSTALL ONLY WHEN SHOWN ON LIGHTING PLAN SHEETS.

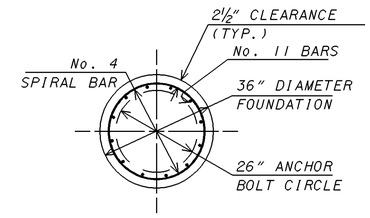


ELEVATION



SECTION A-A

A MINIMUM OF 12 No. 11 BARS EQUALLY SPACED SHALL BE USED



SECTION B-B

DRAWN BJK
REVISED EMK
CALCULATED BJK
CHECKED LDH

MEDIAN LIGHT TOWER FOUNDATION DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00

56
110

PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\pid20800\dgn\20800grj.dgn
PLOT SUBMITTED: 20-NOV-2000 14:08
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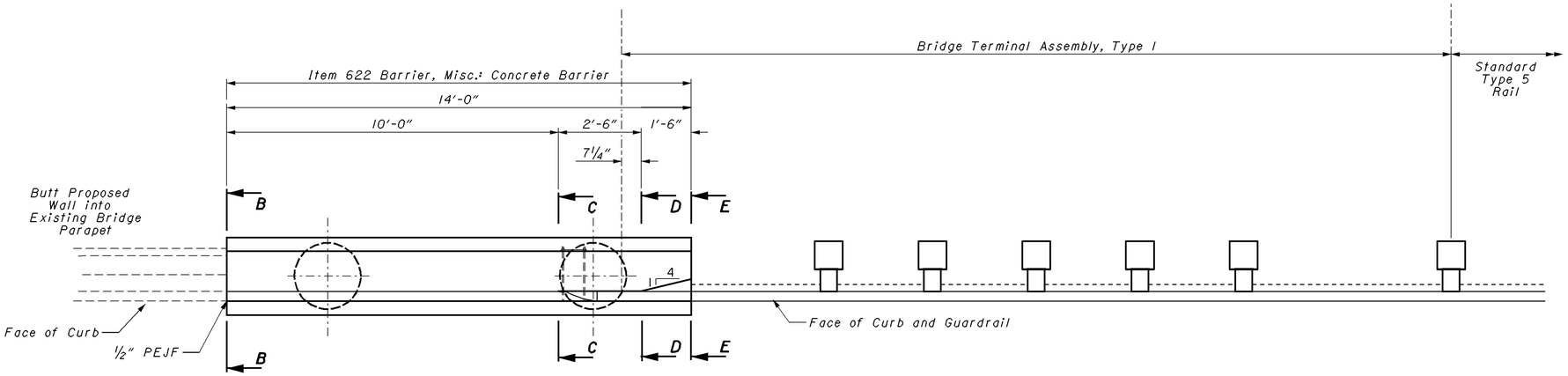
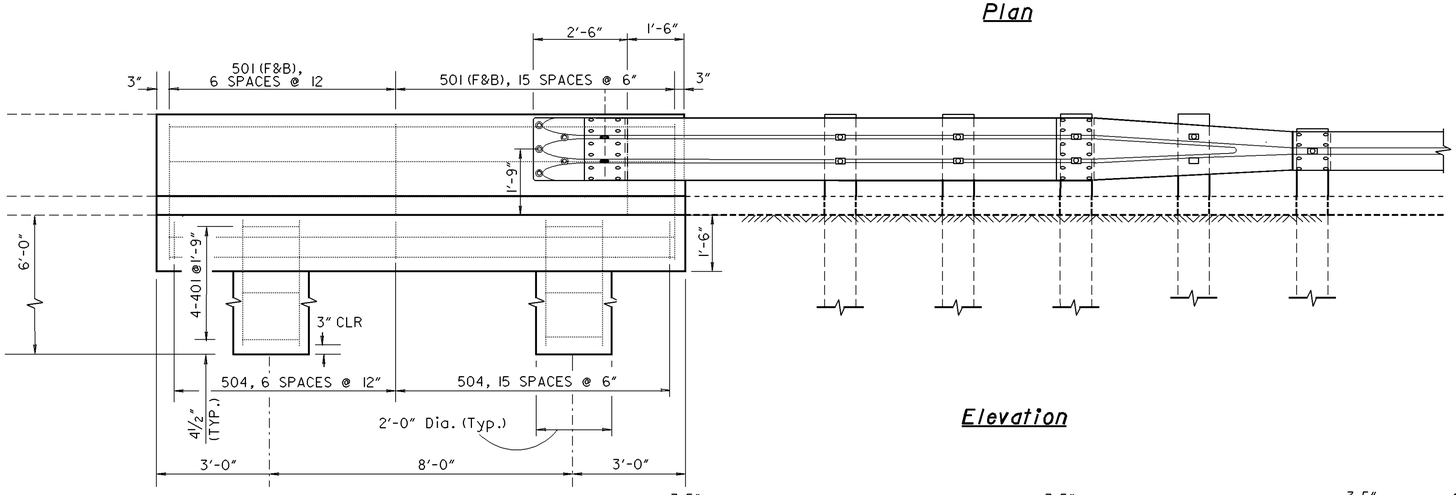
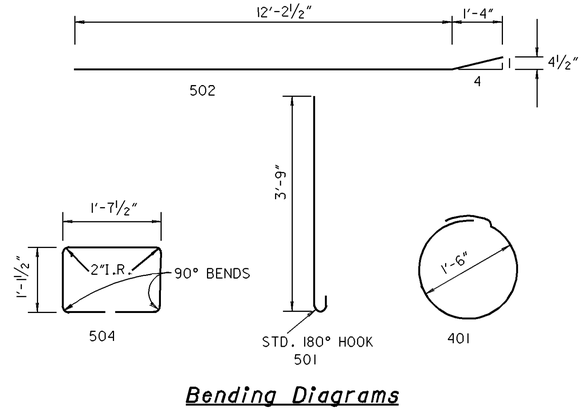


Plan



Elevation

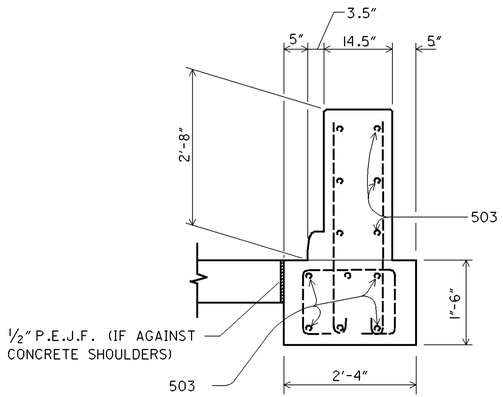


Bending Diagrams

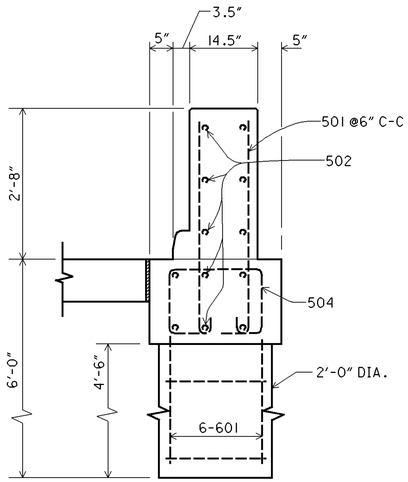
Item 622 Barrier, Misc.:
Concrete Barrier

This item shall consist of constructing a 14' barrier transition as detailed. This item shall include all removals and excavation not itemized separately.

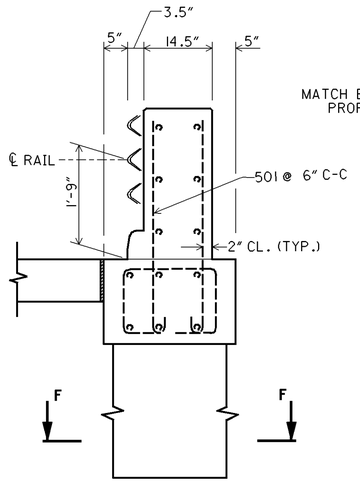
The intent of this item is to butt into existing 32" high parapet end terminals to accomodate a standard Type I Bridge Terminal Assembly.



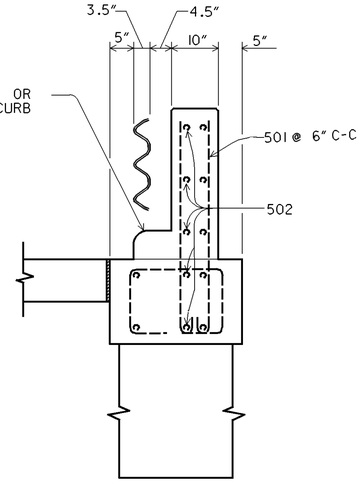
Section B-B



Section C-C



Section D-D

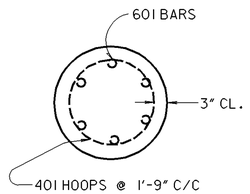


Section E-E

Reinforcing Schedule (Info Only)

MARK	NO.	LENGTH	TYPE
401	8	6'-0"	BT.
501	44	4'-4"	BT.
502	5	13'-7"	BT.
503	7	13'-7"	STR.
504	22	5'-0½"	BT.
601	12	5'-6"	STR.

ALL REINFORCING BARS SHALL BE EPOXY COATED.



Section F-F

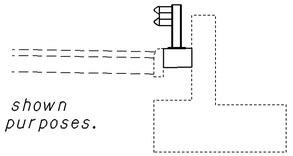
32" Guardrail-Barrier Transition, Vertical Face, with Curb

CUY-90/490-13.41/0.00

Item 830 Concrete Median, As Per Plan

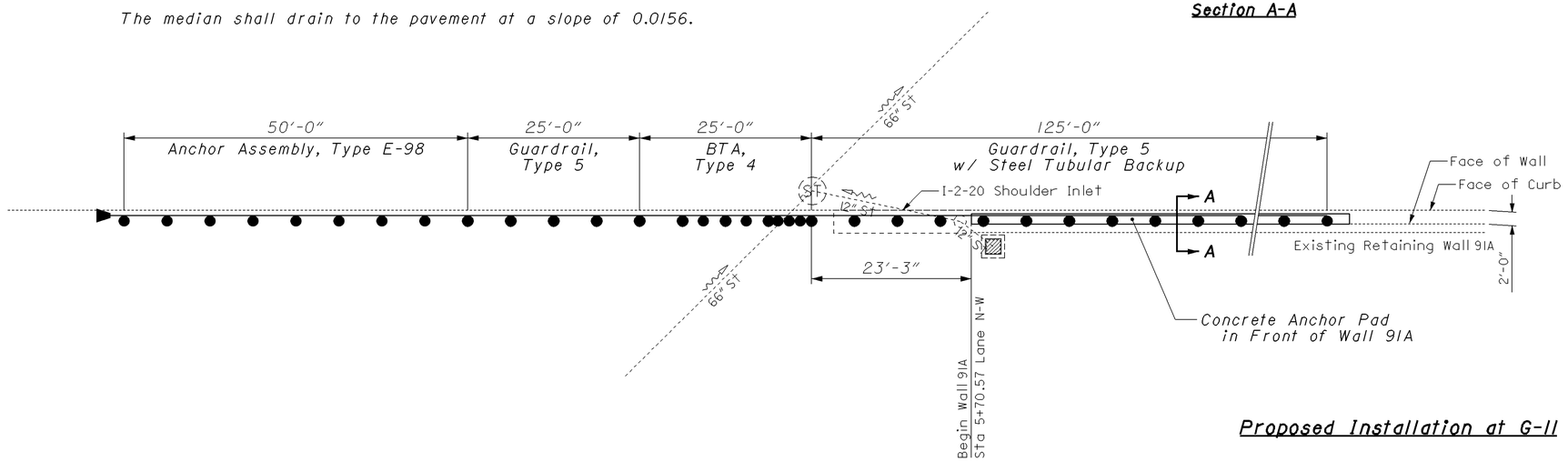
This item shall include excavation of a 1.5′ wide by 12″ deep trench behind existing curb and in front of the retaining wall to place a 12″ thick concrete footing to partial-depth anchor proposed Type 5 steel guardrail posts.

The median shall drain to the pavement at a slope of 0.0156.



No scale; detail shown for illustrative purposes.

Section A-A



Proposed Installation at G-11

CALCULATED

CHECKED

Guardrail Details

CUY-90/490-13.41/0.00

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY
SYRO, INC.
1170 N. STATE STREET
GIRARD, OHIO 44420
TELEPHONE: (330) 545-4373.

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 15.24 m (50 FT), INCLUSIVE OF TWO 7.62 m (25 FT) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWING:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

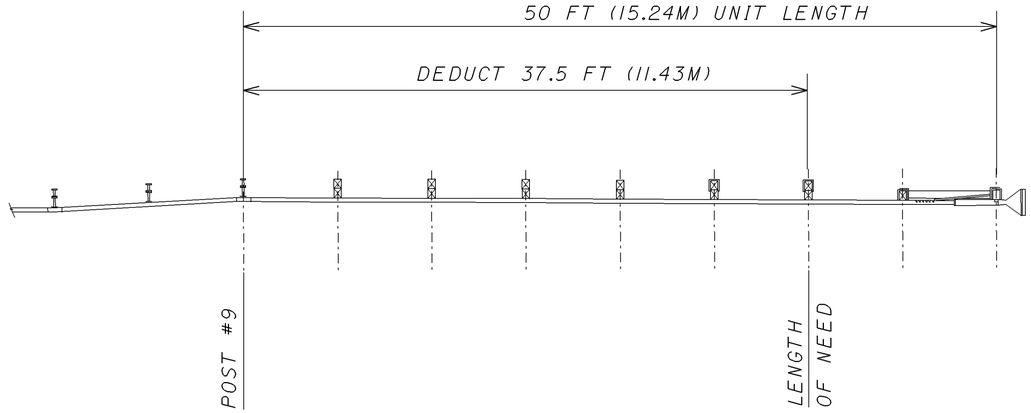
2) THE SKT-350 MANUFACTURED BY
ROAD SYSTEMS, INC.
NEW CASTLE DRIVE
FRANKFORT, IL 60423
TELEPHONE: (815) 464-5917.

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 15.24 m (50 FT), INCLUSIVE OF FOUR 3.81 m (12.5 FT) LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

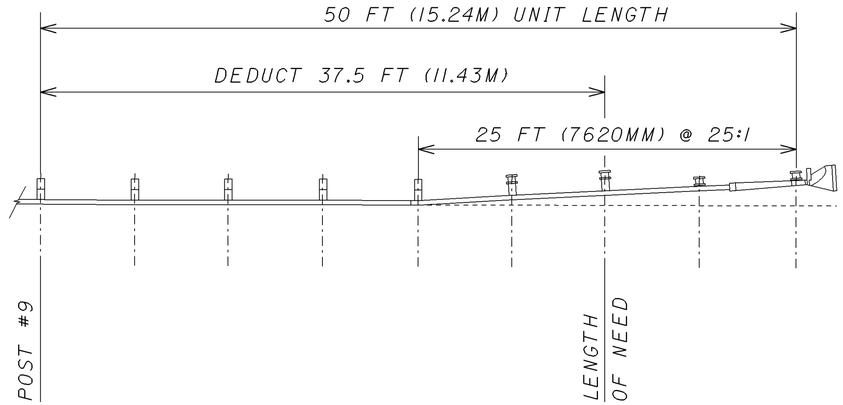
DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

A TYPE C DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE RIGHT SIDE OF THE THROUGH ROADWAY. A TYPE D DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE LEFT SIDE OF THE THROUGH ROADWAY. DELINEATORS SHALL COMPLY WITH STANDARD TRAFFIC DRAWING TC-61.10M.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM; INCLUDING ALL RELATED TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.



ET-2000



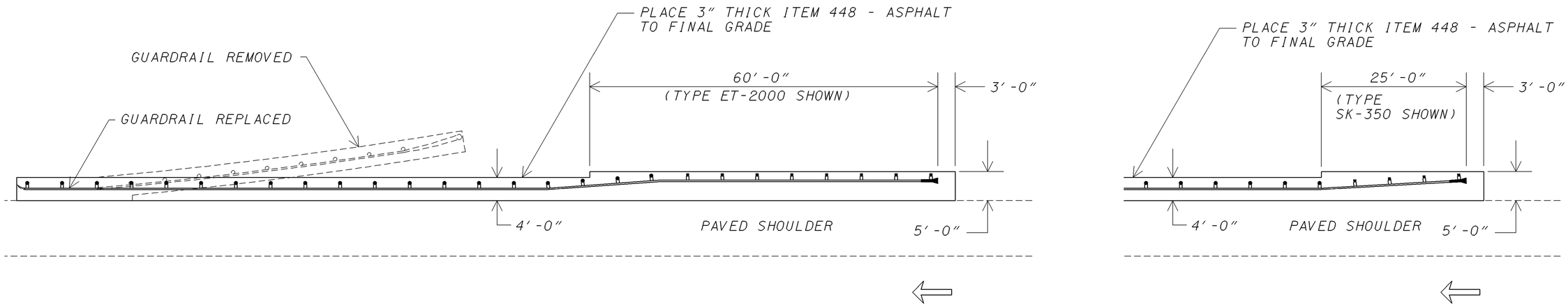
SKT-350

NCHRP REPORT 350 COMPLIANCE

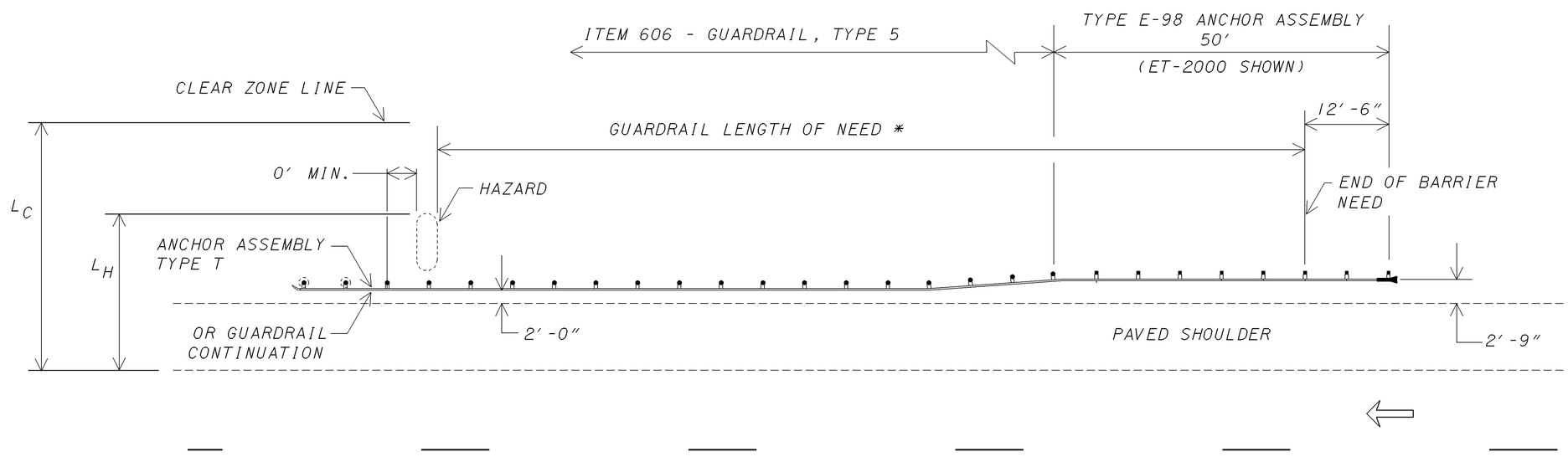
CALCULATED EMK
CHECKED LDH

TYPE E-98 ANCHOR ASSEMBLY DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



ITEM 448 FOR EROSION CONTROL WITH TYPE E-98 ANCHOR ASSEMBLY



TYPICAL GUARDRAIL PROTECTION OF HAZARDS

CALCULATED EMK
CHECKED LDH

GUARDRAIL

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

60
110

PLOTTED BY: fkonopka
PLOTTED FROM: PROJECTS\pid120800\dgn\120800gra.dgn
PLOT SUBMITTED: 20-NOV-2000 14:09
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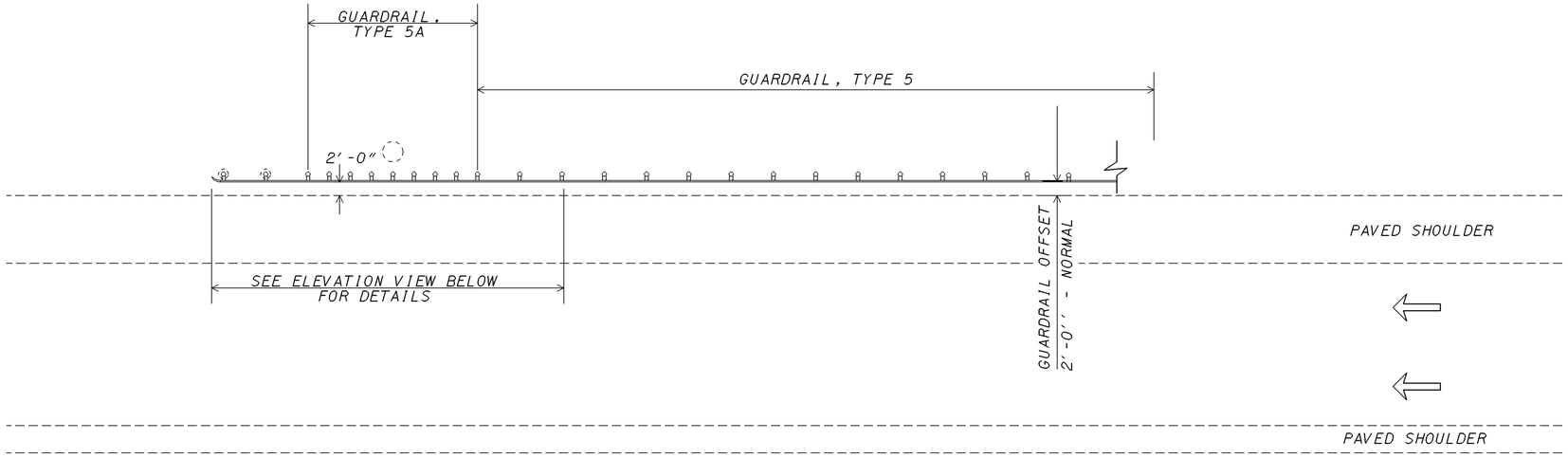
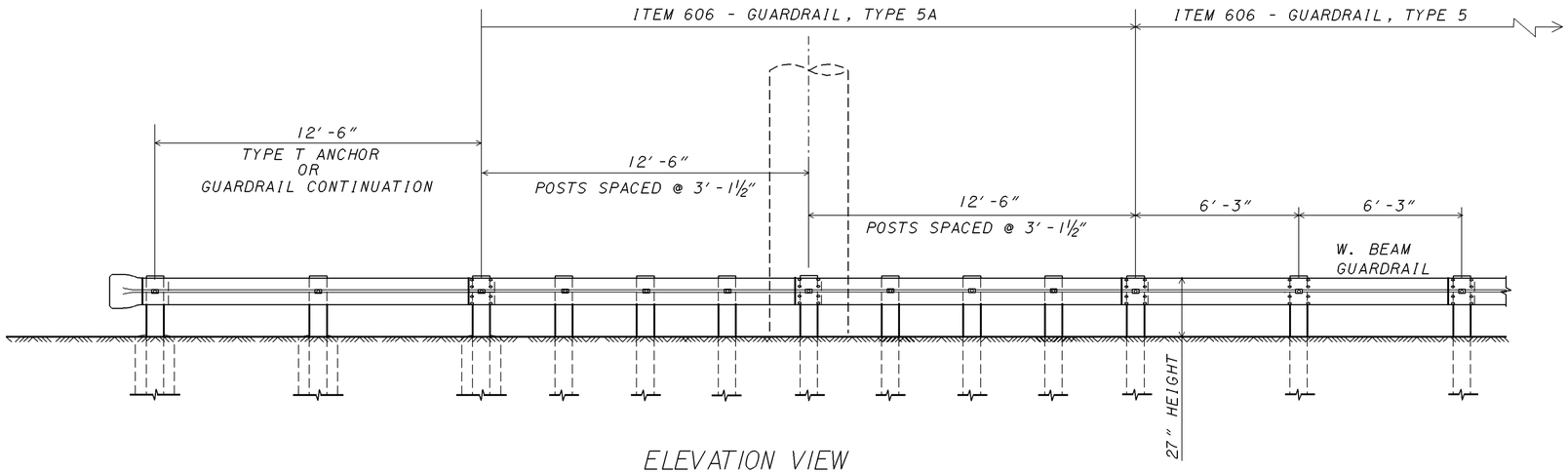


TYPE 5A GUARDRAIL PROTECTION FOR OVERHEAD SIGN SUPPORTS

REQUIRED WHEN FACE OF HAZARD IS BETWEEN 5'-6" AND 3'-6" OF FACE OF GUARDRAIL



ELEVATION VIEW

GUARDRAIL DETAILS TYPE 5A
PROTECTION AT OVERHEAD SIGN SUPPORTS

CALCULATED EMK | DRAWN LGM
CHECKED LDH | REVISED XXX

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

61
110

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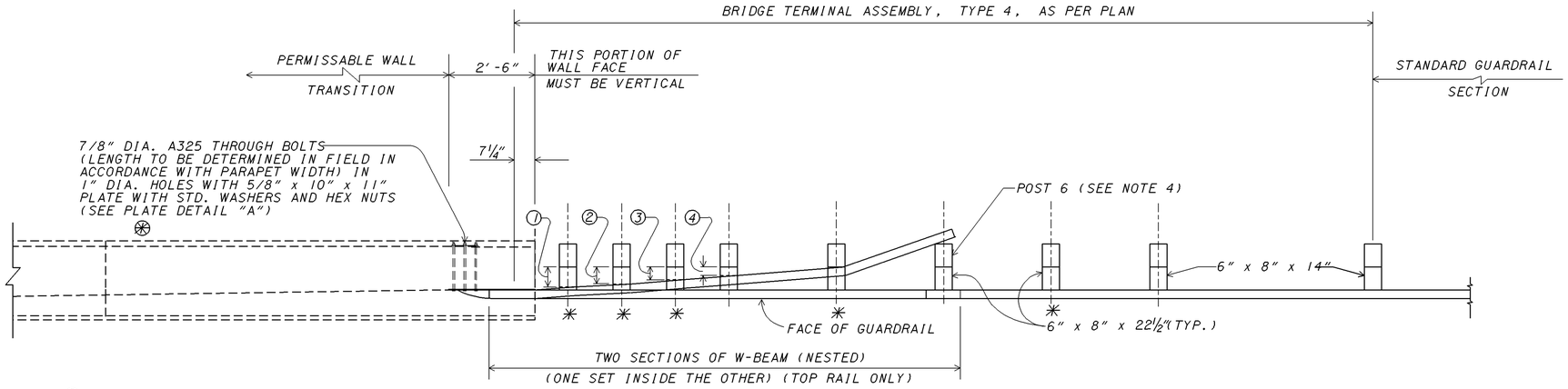


PLAN

⊛—FOR ATTACHMENT TO ABUTMENT WALLS, THIS ITEM REQUIRES THE USE OF POLYESTER RESIN ANCHORS WITH FEMALE THREADED INSERTS (10" LONG) TO ACCEPT 7/8" DIAMETER BOLTS. (PLATE DETAIL NOT REQUIRED)

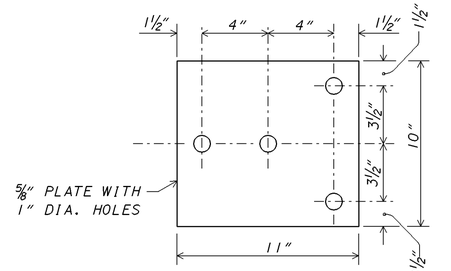
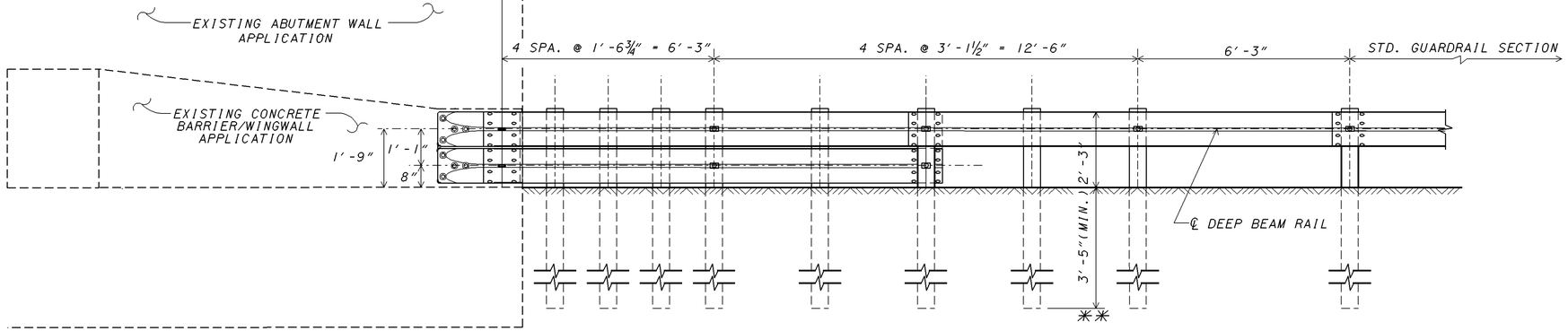


PLATE DETAIL "A"

✳ GUARDRAIL NOT ATTACHED TO POSTS. BLOCKOUT FASTENED TO POST WITH STD. POST BOLT.



ELEVATION

✳✳SEE STD. CONSTRUCTION DRAWING GR-1.2 FOR ADDITIONAL POST EMBEDMENT DETAILS.

GENERAL NOTES

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO A VERTICAL CONCRETE SHAPE AND AND SHOULD NOT BE CONNECTED DIRECTLY TO A CONCRETE SAFETY SHAPE. CONCRETE SAFETY SHAPE BARRIERS SHOULD BE TRANSITIONED TO A VERTICAL SHAPE AT THE GUARDRAIL CONNECTION.
2. THE RUBRAIL MAY BE SHOP BENT IN THE LAST 3 FEET TO FACILITATE INSTALLATION.
3. BOTTOM WOOD BLOCKS, LOCATED ON POSTS 1,2,3, AND 4 ARE CENTER DRILLED AND SECURED WITH 5/8" CARRIAGE BOLTS.
4. POSTS 1,2,3,4, AND 6 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKS AND/OR LOWER BEAM.
5. SEE STANDARD CONSTRUCTION DRAWINGS GR-1.2M AND GR-3.4M FOR ADDITIONAL DETAILS.

BLOCKOUT CHART BOTTOM BEAM WOOD BLOCKS 1'-2" X 6"	
POST	THICKNESS
①	7"
②	6"
③	4.5"
④	3"

THIS DETAIL MODIFIES A BRIDGE TERMINAL ASSEMBLY, TYPE 4 FOR CONNECTION TO A VERTICAL WALL.
ALL DIMENSIONS AND DETAILS SHOWN ARE IN AGREEMENT WITH THE APPROVED CRASHWORTHY GUARDRAIL TRANSITION FOUND IN "FHWA TECHNICAL ADVISORY T 5040.26" AND THE "ROADSIDE DESIGN GUIDE"

CALCULATED | CHECKED

BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN

CUY-90/490-13.41/0.00

TRAFFIC CONTROL

RAISED PAVEMENT MARKERS

MATERIALS SUPPLIED BY THE DEPARTMENT

FOR THIS PROJECT, THE RPM CASTINGS SUPPLIED BY O.D.O.T. WILL COME WITH REFLECTORS ATTACHED.

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE TYPE OF DEPARTMENT SUPPLIED MATERIAL SHALL BE RAISED PAVEMENT MARKER CASTINGS.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE OPI WAREHOUSE IN COLUMBUS, OHIO.

THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND / OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE

TRUCKS SHALL HAVE A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK.

SEMI TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET = 21 BOXES = 2100 LBS).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS THAN 4 PALLETS, PROVIDED THE TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON COMMERCIAL MOVING VANS WILL NOT BE LOADED BY THE RECYCLERS WAREHOUSE.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE CONTRACTOR SHALL INSTALL RECYCLED RAISED PAVEMENT MARKERS WITH PRISMATIC REFLECTORS:

ITEM 621-RAISED PAVEMENT MARKER, INSTALLATION ONLY.....979 EACH

RAISED PAVEMENT MARKER SPACING

THE RAISED PAVEMENT MARKER SPACING SHALL BE 120 FEET (36 m) AS PER STANDARD DRAWING TC-65.10M.

ENTRANCE AND EXIT MARKINGS

THE ENTRANCE AND EXIT PAVEMENT MARKINGS SHALL BE LOCATED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-72.20M. PLAN DETAILS SHOWING GORE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM AS MANY MEASUREMENTS AS NEEDED TO DETERMINE THE CORRECT LOCATION OF THE MARKINGS.

AUXILIARY MARKINGS

THE AUXILIARY PAVEMENT MARKINGS SHALL BE LOCATED AND INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-71.10M.

ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING SIGN, STORAGE OF THE SIGN AND REERECTION OF THE SIGN. IT SHALL ALSO INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING SIGN SUPPORT.

ALL COSTS ASSOCIATED WITH THE WORK AS OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN.

ITEM 631 - SIGN WIRED, AS PER PLAN
ITEM 631 - SIGN WIRED, OVERPASS STRUCTURE MOUNTED, AS PER PLAN

ADDITIONALLY, THIS ITEM SHALL INCLUDE THE REPLACEMENT OF THE EXISTING LAMPS. THE REPLACEMENT LAMPS SHALL BE 7I3.14 MERCURY VAPOR LAMPS AND SHALL MATCH THE WATTAGE OF THE EXISTING LAMPS. LAMP WATTAGES ARE SHOWN ON THE LIGHTING PLAN SHEETS.

ADDITIONALLY, THE CONTRACTOR SHALL CLEAN THE LENSES OF THE LUMINAIRES AS WELL.

PROTECTIVE COATING OF OVERHEAD SIGN SUPPORT SECTIONS

GENERAL

OVERHEAD SIGN SUPPORTS CAN BE SEPARATED INTO MAJOR SECTIONS SUCH AS END FRAMES, TRUSSES, VERTICAL POLES AND CANTILEVER ARMS. DURING THE IMPLEMENTATION OF THIS WORK ITEM IT WILL BE BENEFICIAL TO REFER TO THE MAJOR SECTIONS OF THE OVERHEAD SIGN SUPPORTS RATHER THAN THE WHOLE SUPPORT. MORE SPECIFIC INSTRUCTIONS AND FLEXIBILITY CAN BE GIVEN BASED UPON THE UNIT OF MEASURE AND PAYMENT PER MAJOR SUPPORT SECTION.

THE PROTECTIVE COATING OF OVERHEAD SIGN SUPPORT SECTIONS SHALL BE A FOUR PART PROCESS TO INCLUDE SURFACE PREPARATION FOLLOWED BY A THREE STEP COATING SYSTEM. THIS THREE STEP COATING SYSTEM SHALL CONSIST OF AN EPOXY PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A URETHANE TOP COAT, WITH EACH COAT A DIFFERENT COLOR. FOR AN EXPLANATION OF THE MATERIALS TO BE USED SEE NOTE ENTITLED "COATING SYSTEM". THE PURPOSE OF THIS COATING IS TO PROVIDE PROTECTION FOR NEW (UNWEATHERED) AND OLDER (WEATHERED) GALVANIZED STEEL SUPPORT SECTIONS FROM CORROSIVE ELEMENTS IN THE ATMOSPHERE. COATING AND SURFACE PREPARATION OF THE NEW GALVANIZED SUPPORT SECTIONS SHALL BE DONE BY THE MANUFACTURER AS PER THE COATING SUPPLIER'S SPECIFICATIONS LISTED IN THIS NOTE.

FIELD COATING OF SIGN SUPPORTS

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION LAWS. RULES OR REGULATIONS OF FEDERAL, STATE, OR LOCAL AGENCIES. THE COATING MATERIALS SPECIFIED FOR THE WORK CAN BE HAZARDOUS TO THE HEALTH OF THE APPLICATOR IF NOT APPLIED AS PER THE MANUFACTURER'S INSTRUCTIONS. THE CONTRACTOR SHALL FOLLOW THE DATA SHEET AND THE LABEL ON THE PAINT CONTAINERS. THESE PRECAUTIONS SHALL INCLUDE THE USE OF RESPIRATORS AND EYE AND SKIN PROTECTION AS SPECIFIED. THE CONTRACTOR SHALL ALSO INSURE THAT HIS PAINTING OPERATIONS AND LOCATION WILL NOT ENDANGER OR ADVERSELY AFFECT THE PUBLIC IN GENERAL.

THE PROPOSED CLEANING AND COATING OPERATIONS SHALL BE PERFORMED ONLY WHEN THE AMBIENT TEMPERATURE IS 50 DEGREES F OR ABOVE FOR A PERIOD OF 24 CONTINUOUS HOURS. PAINT SHALL NOT BE APPLIED DURING RAIN, FOG, OR MIST, OR WHEN THE STEEL SURFACE TEMPERATURE IS LESS THAN 5 DEGREES F ABOVE THE DEW POINT. PAINT SHALL NOT BE APPLIED TO WET OR DAMP SURFACES OR ON FROSTED OR ICE COATED SURFACES. PAINT SHALL NOT BE APPLIED WHEN THE RELATIVE HUMIDITY IS GREATER THAN 85%. ALL STEEL SURFACES OF TRUSS AND END FRAMES INCLUDING THE WELDED AREAS, BALLAST ENCLOSURE MOUNTING BRACKET AND THE BASE PLATES ARE TO BE CLEANED AND COATED. BEFORE EACH COATING IS APPLIED, IT SHALL BE MIXED WITH AN APPROVED POWER MECHANICAL MIXER TO A UNIFORM CONSISTENCY WHICH SHALL BE MAINTAINED DURING ITS APPLICATION. EACH COAT SHALL BE APPLIED IN A WORKMANLIKE MANNER AS A CONTINUOUS FILM OF UNIFORM THICKNESS WHICH IS FREE OF HOLIDAYS, PORES, RUNS, OR SAGS. ALL COATS SHALL BE APPLIED BY BRUSH. THINNING OF PAINT IS STRICTLY PROHIBITED. PAINT NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED. THE COATING SHALL PENETRATE ALL JOINTS AND CONNECTIONS. THE ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CLEANING OR COATING OPERATIONS SO THAT INSPECTION SERVICES CAN BE PROVIDED.

TO PROVIDE ASSURANCES THAT NO THINNING OF THE PROTECTIVE COATING MATERIAL IS BEING DONE, PERIODIC CHECKS BY A STATE INSPECTOR WILL BE MADE OF THE MATERIAL. THESE CHECKS WILL BE MADE UTILIZING A VISCOSITY TEST CUP PROCEDURE AS PROVIDED BY THE MANUFACTURER OF THE MATERIAL. THE FREQUENCY OF THESE CHECKS WILL BE DETERMINED BY THE ENGINEER BASED UPON FIELD EVALUATION AND JOB PERFORMANCE.

IF THE VISCOSITY CHECK REVEALS THAT THE MATERIAL HAS BEEN THINNED, IMMEDIATE REJECTION OF THE MATERIAL SHALL BE MADE. THIS REJECTION SHALL REQUIRE THE CONTRACTOR TO IMMEDIATELY STOP USING THE MATERIAL AND PROVIDE NEW MATERIAL OF THE PROPER SPECIFICATION PER PLAN. IN ADDITION, THE COATING OF THE SIGN

CALCULATED FLK
CHECKED EMK

TRAFFIC CONTROL GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

SUPPORT WITH THE NON-APPROVED MATERIAL BE COSIDERED UNACCEPTABLE. THEREFORE THE SUPPORT SHALL BE STRIPPED AND RE-COATED WITH APPROVED MATERIAL (UNTHINNED MATERIAL).

3 TO 4 VISCOSITY CHECKS INDICATING A PERPETUAL QUALITY CONTROL PROBLEM (THINNED MATERIAL) SHALL BE CONSIDERED SUFFICIENT JUSTIFICATION TO TERMINATE THE CONTRACT.

THE COST FOR THE VISCOSITY TEST KIT SHALL BE BORN BY THE CONTRACTOR AND CONSIDERED INCIDENTAL TO THE ITEM SPECIALS PER COAT.THE TEST KIT SHALL CONTAIN ITEMS SUCH AS INSTRUCTIONS, VISCOSITY CUP, STANDARD COMPARISON RATES, CARRYING CASE, CLEANING EQUIPMENT, STOPWATCH, ETC. THE KIT SHALL BE GIVEN TO THE STATE INSPECTOR FOR USE DURING THE PERFORMANCE OF THE WORK. AFTER THE PROJECT IS COMPLETE, THE TEST KIT SHALL REVERT TO THE STATE AS STATE PROPERTY.

COATING SYSTEM

THE COATING SYSTEM SHALL CONSIST OF A POLYAMIDE-CURED EPOXY PRIME COAT, A POLYAMIDE-CURED EPOXY INTERMEDIATE COAT AND AN ALIPHATIC POLYURETHANE TOP COAT. THE COATING MATERIALS USED SHALL BE THOSE AS LISTED FROM ONE OF THE FOLLOWING MANUFACTURERS OR AN APPROVED EQUAL:

1. AMERON
   210 NORTH BERRY STREET
   BREA, CALIFORNIA 92622
   LOCAL TELEPHONE CONTACT : (419) 885-5336
   PRIME COAT : AMERCOAT 385
   INTERMEDIATE COAT : AMERLOCK 400
   TOP COAT : AMERCOAT 450 HS

2. ICI/DEVOE COATINGS
   5480 CLOVERLEAF PKWY. #5
   VALLEY VIEW, OHIO 44125
   LOCAL TELEPHONE CONTACT : (216) 328-1581
   PRIME COAT : DEVRAN 4170 CORROSION RESISTANT EPOXY
   INTERMEDIATE COAT : DEVRAN 4170 CORROSION RESISTANT EPOXY
   TOP COAT : DEVTHANE 4708 ALIPHATIC URETHANE ENAMEL

3. PORTER PAINT CO.
   400 SOUTH 13TH STREET
   LOUISVILLE, KY 40201
   LOCAL TELEPHONE CONTACT : (419) 666-0026
   PRIME COAT : PORTER PAINTS MCR 4300
   INTERMEDIATE COAT : PORTER PAINTS MCR 4300
   TOP COAT : PORTER PAINTS HYTHANE

4. POLYCARB
   33095 BAINBRIDGE ROAD
   P.O. BOX 39278
   SOLON, OHIO 44139
   LOCAL TELEPHONE CONTACT : (440) 248-1223
   PRIME COAT : MARK-60 (ULTRAPOX)
   INTERMEDIATE COAT : MARK-60 (ULTRAPOX)
   TOP COAT : MARK-73 (ULTRA-KOTE)

5. SHERWIN-WILLIAMS COMPANY
   671 BETA DRIVE
   MAYFIELD VILLAGE, OHIO 44143
   LOCAL TELEPHONE CONTACT : (440) 461-3310
   PRIME COAT : TILE-CLAD II HI-BILD PRIMER
   INTERMEDIATE COAT : HI-SOLIDS CATALYZED EPOXY
   TOP COAT : HI-BILD ALIPHATIC POLYURETHANE ENAMEL

ALL THREE COATS OF THE SYSTEM SHALL BE MANUFACTURED BY THE SAME COMPANY TO INSURE COMPATIBILITY AMONG COATS.

SURFACE PREPARATIONS, NEW SUPPORT SECTIONS

NEW UNWEATHERED GALVANIZED SUPPORT SECTIONS SHALL HAVE THEIR SURFACE PREPARATION AS WELL AS THEIR PROTECTIVE COATING DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS.

THE SUPPORT SECTIONS SHALL BE PREPARED FOR COATING BY SSPC - SP1 FOLLOWED BY SSPC - SP7 (SOLVENT CLEANING) FOLLOWED BY A BRUSH-OFF BLAST. BLASTING ABRASIVES CONTAINING MORE THAN 1% FREE SILICA SHALL NOT BE ALLOWED. BEFORE THE PREPARED SURFACE DEGRADES FROM THE PRESCRIBED STANDARDS, THE PRIME COAT SHALL BE APPLIED. IN EVERY CASE, THE SURFACE SHALL BE COATED WITH THE EPOXY PRIME COAT ON THE SAME DAY OF SURFACE PREPARATION. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT AND SCRAPING, MARRING, OR OTHER SURFACE DAMAGE TO THE PREPARED SURFACE.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING, TRANSPORTATION COSTS AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK PER MAJOR SUPPORT SECTION.

BASIS OF PAYMENT WILL BE AS FOLLOWS:
ITEM 630-SURFACE PREPARATION, NEW SUPPORT SECTIONS AT THE CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

SURFACE PREPARATION, EXISTING SUPPORT SECTIONS

EXISTING, WEATHERED GALVANIZED SUPPORT SECTIONS SHALL HAVE THEIR SURFACE PREPRATION AS WELL AS THEIR PROTECTIVE COATING UNDER CONDITIONS OF TEMPERATURE AND HUMIDITY WITHIN THE SAME RANGE AS SPECIFIED BY THE MANUFACTURER OF THE EPOXY - PRIME COAT MATERIAL TO BE USED IMMEDIATELY AFTER THIS CLEANING OPERATION. THE SUPPORT SECTIONS SHALL BE PREPARED FOR COATING BY SSPC - SP1 FOLLOWED BY SSPC - SP6 (SOLVENT CLEANING FOLLOWED BY A COMMERCIAL BLAST CLEANING). BEFORE THE PREPARED SURFACE DEGRADES FROM THE PRESCRIBED STANDARDS, THE PRIME COAT SHALL BE APPLIED. IN EVERY CASE, THE SURFACE SHALL BE COATED WITH THE EPOXY PRIME COAT ON THE SAME DAY AS THE SURFACE PREPARATION. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING, OR OTHER SURFACE DAMAGE TO THE PREPARED SURFACE.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING, TRANSPORTATION COSTS AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK PER MAJOR SUPPORT SECTION.

BASIS OF PAYMENT WILL BE AS FOLLOWS:
ITEM 630-SURFACE PREPARATION, EXISTING SUPPORT SECTIONS AT THE CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

COATING, EPOXY PRIME COAT, SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF ONE (1) COAT OF AN EPOXY PRIMER TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL BE BETWEEN 1.5 AND 2.0 MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COAT SHALL BE BORNE BY THE CONTRACTOR.

FIELD COATING: THIS COAT SHALL IN ALL CASES BE APPLIED BY BRUSH OVER SURFACES THAT WERE PREPARED EARLIER THAT SAME DAY. THE THINNING OF THE EPOXY MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED.

WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED 1.5 BUT IS AT LEAST 1.25 MILS, THE CONTRACT BID PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 16-2/3%. IF THE DEFICIENCY OF COATING IS MORE THAN 16-2/3% (I.E. THE AVERAGE DRY FILM THICKNESS IS LESS THAN 1.25 MILS) THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL.

THE EPOXY PRIME COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING TWO-COMPONENT COMPOSITIONS CONFORMING TO ITS LISTED PROPERTIES:

AMERCOAT 385
% SOLIDS BY VOLUME : 47% +/- 3 %
POT LIFE : 8 HRS. @ 77 DEGREES F (25 DEGREES C)
DRYING TIME : 4 HRS. @ 77 DEGREES F

DEVRAN 4170 CORROSION RESISTANT EPOXY PRIMER 5465 SERIES
% SOLIDS BY VOLUME : 54% +/- 1%
% SOLIDS BY WEIGHT : 71 % +/- 1%
POT LIFE : 4 HRS. @ 77 DEGREES F
DRYING TIME : TOUCH 1-2 HRS., RECOAT 7 HRS.
VISCOSITY : 95-100 KU

MCR-4301 EPOXY PRIMER
% SOLIDS BY VOLUME : 48.0% +/- 2%
POT LIFE : 30 HRS. @ 50-60 DEGREES F
16 HRS. @ 80-100 DEGREES F
DRYING TIME : 4-6 HRS. @ 50-60 DEGREES F

MARK-60 ULTRAPOX
% SOLIDS BY WEIGHT : 70-75% +/- 2%
POT LIFE : 6 HRS. @ 75 DEGREES F
DRYING TIME : 2-3 HRS. INITIAL SET @ 75 DEGREES F
VISCOSITY : 300-500 CPS @ 75 DEGREES F

TILE-CLAD II HI-BILD PRIMER
% SOLIDS BY VOLUME : 48% +/- 2%
% SOLIDS BY WEIGHT : 63% +/- 2%
POT LIFE : 8 HRS. @ 77 DEGREES F
@ 77 DEGREES F
DRYING TIME : 1 HR. TO TOUCH, 6 HRS. TO RECOAT

FOR NEW SUPPORT SECTIONS THIS PRIME COAT SHALL BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER OF THE COATING MATERIAL FOR THE PRIME COAT PROCEDURES WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE PRIME COAT.

THE PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COSTS, AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS PRIME COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE INTERMEDIATE AND TOP COATS. A PROPERLY CALIBRATED DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING.

BASIS OF PAYMENT WILL BE AS FOLLOWS:
ITEM 630-COATING, EPOXY PRIME COAT, SUPPORT SECTIONS, AT THE CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

COATING EPOXY INTERMEDIATE COAT, SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF THE APPLICATION OF ONE (1) COAT OF EPOXY TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL NOT BE LESS THAN SIX (6.0) MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COAT SHALL BE BORNE BY THE CONTRACTOR.

FIELD COATING: THIS COAT SHALL BE APPLIED BY BRUSH. THINNING OF THE EPOXY MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED.

WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED SIX (6.0) MILS, BUT IS AT LEAST FIVE (5.0) MILS, THE CONTRACT PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 16-2/3%. IF THE DEFICIENCY OF COATING IS MORE THAN 16-2/3 %, (I.E. THE AVERAGE FILM THICKNESS IS LESS THAN 5.0 MILS), THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE

CALCULATED FLK
CHECKED EMK

CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT, AND MATERIAL. THE EPOXY INTERMEDIATE COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING TWO-COMPONENT COMPOSITIONS CONFORMING TO ITS LISTED PROPERTIES:

AMERLOCK 400
% SOLIDS BY VOLUME : 83% +/- 2%
POT LIFE : 2-1/2 HRS. @ 70 DEGREES F
DRYING TIME : 20 HRS. @ 70 DEGREES F

DEVRAN 4170 CORROSION RESISTANT EPOXY PRIMER 5465 SERIES
% SOLIDS BY VOLUME : 54% +/- 1%
% SOLIDS BY WEIGHT : 71 % +/- 1%
POT LIFE : 4 HRS. @ 77 DEGREES F
DRYING TIME : TOUCH 1-2 HRS., RECOAT 7 HRS.
VISCOSITY : 95-100 KU
70 DEGREES F, 50% R.H.

MCR-4301 EPOXY PRIMER
% SOLIDS BY VOLUME : 48.0% +/- 2%
POT LIFE : 30 HRS. @ 50-0 DEGREES F, 16 HRS. @ 80 DEGREES F
DRYING TIME : 1-2 HRS. @ 60-80 DEGREES F

MARK-60 ULTRAPOX
% SOLIDS BY WEIGHT : 70-75% +/- 2%
POT LIFE : 6 HRS. @ 75 DEGREES F
DRYING TIME : 2-3 HRS. INITIAL SET @ 75 DEGREES F

HI-SOLIDS CATALYZED EPOXY
% SOLIDS BY VOLUME : 61% +/- 2% (SLATE GRAY)
% SOLIDS BY WEIGHT : 77% +/- 2%
POT LIFE : 5 HRS. @ 77 DEGREES F
DRYING TIME : 1 HR. TO TOUCH, 4 HRS. TACK FREE
6 HRS. TO RECOAT @ 77 DEGREES F, 50% R.H.

AT LEAST 24 HOURS BUT NO MORE THAN THREE (3) DAYS SHALL ELAPSE AFTER THE APPLICATION OF THE EPOXY PRIME COAT AND BEFORE THE APPLICATION OF THE EPOXY INTERMEDIATE COAT. SURFACES SHALL IN ALL CASES BE CLEAN BEFORE THE INTERMEDIATE COAT IS APPLIED.

FOR NEW SUPPORT SECTIONS, THE INTERMEDIATE COAT SHALL BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER FOR THE INTERMEDIATE COAT PROCEDURE WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE INTERMEDIATE COAT.

THE PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COSTS AND MATERIAL NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS INTERMEDIATE COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE PRIME AND TOP COATS. A PROPERLY CALIBRATED DRY FILM THICKNESS INSTRUMENT WILL BE USED TO CHECK THE COATING.

BASIS OF PAYMENT WILL BE AS FOLLOWS:
ITEM 630-COATING, EPOXY, INTERMEDIATE COAT, SUPPORT SECTIONS AT THE CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

COATING, URETHANE TOP COAT, SUPPORT SECTIONS

THIS ITEM SHALL CONSIST OF THE APPLICATION OF ONE (1) COAT OF URETHANE TO SUPPORT SECTIONS. THE TOTAL DRY FILM THICKNESS OF THIS COAT SHALL NOT BE LESS THAN ONE AND ONE-HALF (1.5) MILS. IF MORE THAN ONE PASS IS NECESSARY TO OBTAIN THE REQUIRED THICKNESS, THAT COAT SHALL BE BORNE BY THE CONTRACTOR.

FIELD COATING: THIS COAT SHALL BE APPLIED BY BRUSH. THINNING OF THE URETHANE MATERIAL IS STRICTLY PROHIBITED. MATERIAL NOT CAPABLE OF BEING APPLIED AS SPECIFIED SHALL NOT BE USED.

WHEN THE AVERAGE DRY FILM THICKNESS OF THIS COAT OVER THE ENTIRE SUPPORT SECTION IS LESS THAN THE SPECIFIED ONE AND ONE-HALF (1.5) MILS BUT IS AT LEAST ONE (1.0) MIL, THE CONTRACT PRICE FOR THIS ITEM SHALL BE REDUCED IN DIRECT PROPORTION TO THE PERCENT DEFICIENCY OF COATING UP TO 33 1/3%. IF THE DEFICIENCY OF THE COATING IS MORE THAN 33 1/3% , (I.E. THE AVERAGE DRY FILM THICKNESS IS LESS THAN 1.0 MIL), THE WORK FOR THIS ITEM SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR, INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL.

THE URETHANE TOP COAT CHOSEN BY THE CONTRACTOR SHALL BE ONE OF THE FOLLOWING MATERIALS CONFORMING TO ITS LISTED PROPERTIES:

AMERCOAT 450 HS
% SOLIDS BY VOLUME : 45% +/- 2%
POT LIFE : 20 HRS. @ 77 DEGREES F
DRYING TIME : 8 HRS. @ 77 DEGREES F DRY THROUGH

DEVTHANE 4708 ALIPHATIC URETHANE ENAMEL (6200/6252)
% SOLIDS BY VOLUME : 48 +/- 1%
% SOLIDS BY WEIGHT : 59 +/- 1%
POT LIFE : 6 HRS. @ 70 DEGREES F
DRYING TIME: 4 HRS. @ 77 DEGREES F RECOAT

HYTHANE
% SOLIDS BY VOLUME : 42 +/- 2%
POT LIFE : 16 HRS. @ 50 DEGREES F
12 HRS. @ 75 DEGREES F

MARK-73 (ULTRA-KOTE)
% SOLIDS BY VOLUME : 52.5% +/- 2%
% SOLIDS BY WEIGHT : 55% +/- 2%
POT LIFE : 8 HRS. @ 75 DEGREE F
DRYING TIME : 4-5 HRS. @ 75 DEGREES F TACK FREE
VISCOSITY : 70-75 KU @ 75 DEGREES F

HI-BILD ALIPHATIC POLYURETHANE ENAMEL
% SOLIDS BY VOLUME : 40% +/- 2% (CATALYZED)
% SOLIDS BY WEIGHT : 48 % +/- 2%
POT LIFE : 6 HRS. @ 77 DEGREES F
DRYING TIME : 30 MIN. TO TOUCH, 4 HRS. TAK FREE
18 HRS. MIN. 72 HRS. MAX TO RECOAT

AT LEAST 24 HOURS BUT NO MORE THAN THREE (3) DAYS SHALL ELAPSE AFTER THE APPLICATION OF THE EPOXY INTERMEDIATE COAT AND BEFORE THE APPLICATION OF THE URETHANE TOP COAT. SURFACES SHALL IN ALL CASES BE CLEAN BEFORE THE TOP COAT IS APPLIED.

FOR NEW SUPPORT SECTIONS, THIS TOP COAT SHALL BE DONE AT THE MANUFACTURER OF THE SUPPORT SECTIONS. VERIFICATION BY THE MANUFACTURER FOR THE TOP COAT PROCEDURE WILL BE REQUIRED. CAREFUL HANDLING AND STORAGE WILL BE REQUIRED TO PREVENT ANY SCRAPING, MARRING OR OTHER SURFACE DAMAGE TO THE TOP COAT.

THE PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, HANDLING COST AND MATERIALS NECESSARY TO ACCOMPLISH THIS ITEM OF WORK. THIS TOP COAT SHALL BE MANUFACTURED BY THE SAME COMPANY SUPPLYING THE PRIME AND INTERMEDIATE COATS. A PROPERLY CALIBRATED DRY FILM INSTRUMENT WILL BE USED TO CHECK THE COATING.

BASIS OF PAYMENT WILL BE AS FOLLOWS:
ITEM 630-COATING, URETHANE TOP COAT, SUPPORT SECTIONS AT THE CONTRACT BID PRICE PER EACH MAJOR SUPPORT SECTION.

PREQUALIFICATION

PRIOR TO USE, THE CONTRACTOR SHALL SUBMIT TO THE DIRECTOR COPIES OF THE MANUFACTURER'S CERTIFIED TEST DATA SHOWING THAT THE MATERIAL COMPLIES WITH THE REQUIREMENTS OF THIS SPECIFICATION. THE TEST DATA SHALL INCLUDE THE BRAND NAME OF THE PAINT, NAME OF MANUFACTURER, NUMBER OF THE LOT TESTED AND DATE OF MANUFACTURE. WHEN THE PAINT HAS BEEN APPROVED BY THE DIRECTOR, FURTHER PERFORMANCE TESTING BY THE MANUFACTURER WILL NOT BE REQUIRED UNLESS THE FORMULATION OR MANUFACTURING PROCESS HAS BEEN CHANGED, IN WHICH CASE NEW CERTIFIED TEST RESULTS WILL BE REQUIRED.

ACCEPTANCE

THE MANUFACTURER SHALL SUBMIT CERTIFIED TEST DATA IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION. THE STATE RESERVES THE RIGHT TO SAMPLE AND TEST DELIVERED LOTS FOR COMPLIANCE.

LOCATIONS

THE FOLLOWING SUMMARY OF MAJOR SUPPORT SECTIONS TO HAVE A PROTECTIVE COATING APPLIED IS NOTED BELOW:

SUPPORT NO.	MAJOR SECTIONS
1	2 END FRAMES
2	2 END FRAMES
3	2 END FRAMES
4	2 END FRAMES
5	2 END FRAMES
6	1 POLE, 1 ARM
7	2 END FRAMES
9*	2 END FRAMES
10	1 POLE, 1 ARM
11	2 END FRAMES
11A	2 END FRAMES
12	2 END FRAMES
13	2 END FRAMES
14	2 END FRAMES

*-NEW SUPPORT

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO PERFORM THIS WORK:

ITEM SPECIAL-SURFACE PREPARATION, EXISTING SUPPORT SECTIONS.....26 EACH
ITEM SPECIAL-SURFACE PREPARATION, NEW SUPPORT SECTIONS.....2 EACH
ITEM SPECIAL-COATING, EPOXY PRIME COAT, SUPPORT SECTIONS..28 EACH
ITEM SPECIAL-COATING, EPOXY INTERMEDIATE COAT, SUPPORT SECTIONS.....28 EACH
ITEM SPECIAL-COATING, URETHANE TOP COAT, SUPPORT SECTIONS.....28 EACH

<u>RELOCATION OF POLE-MOUNTED SIGNS</u>

THE REMOVAL OF EXISTING MAST ARM LIGHTING WILL REQUIRE THE RELOCATION OF NUMEROUS FLATSHEET SIGNS. THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY TO ACCOMPLISH THESE ITEMS OF WORK.

ITEM 630 GROUND-MOUNTED SUPPORT, #3 POST 200 LIN.FT.
ITEM 630 GROUND-MOUNTED SUPPORT, #4 POST 200 LIN.FT.
ITEM 630 REMOVAL OF GROUND-MOUNTED SIGN AND RE-ERECTION 12 EACH
ITEM 630 SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED 6 EACH

CALCULATED FLK
CHECKED EMK

TRAFFIC CONTROL GENERAL NOTES

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

* - IN PLACE OF LANE LINE

LOCATION AND STATION		828													621		
		EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)		LANE ARROWS	WORD ON PAVEMENT 96"	PAVEMENT MARKING, MISC.: 8" DASHED LINE, 3' LONG WITH 12' GAPS	RAISED PAVEMENT MARKER, INSTALLATION ONLY		
		WHITE	YELLOW		GORE	*								W	W/R	Y/R
FROM	TO	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.		EACH	EACH	LIN.FT.	EACH	EACH	EACH
IR-90 EASTBOUND																
879+79.45	880+07.53	28	28	84										3		
880+00.00	895+00.00	1500	1500	4500										39		
895+00.00	898+65.00	730	365	1095	365									9	19	
898+65.00	913+88.00	1520	1520	4569									1520	52		
913+88.00	916+88.00	300	300	900		300								17		
916+88.00	919+00.00	122	122	366	244				143					3	7	
919+00.00	931+30.15	1230	1230	3690										30		
928+50.00	928+88.00	33	33	99										3		
928+88.00	934+00.00	512	512	1536	1024				555					12	27	
934+00.00	934+12.82	13	13	24										3		
IR-90 WESTBOUND																
879+79.45	880+07.53	28	28	84										3		
880+00.00	895+00.00	1500	1500	4500										39		
895+00.00	898+65.00	365	365	1095	730				285					9	19	
898+65.00	901+65.00	300	300	900		300								17		
901+65.00	912+00.00	1035	1035	3105									1035	36		
912+00.00	915+75.00	750	375	1125	375									9	9	
915+75.00	920+50.00	950	950	1425										112		6
920+50.00	922+19.00	507	338	507	169									3	4	2
922+19.00	930+00.00	781	781	2343										21		
930+00.00	931+30.15	130	130	390	260									3	6	
928+50.00	931+60.00	310	310	930	620									9	16	
931+60.00	934+12.82	253	253	253										2		
IR-490 EASTBOUND																
934+12.82	955+26.00	2113	2113	4226										36		
955+26.00	955+67.00	82	82	82										3		
955+67.00	960+47.00	960	480	960	480				102					8	12	
960+47.00	965+00.00	453	453	1359					45					12		
965+00.00	979+00.00	1400	1400	4200										36		
979+00.00	980+97.00	394	394	591										6		3
980+97.00	982+47.00	300	150	450	150									3	4	
982+47.00	985+85.75	339	339	1356										12		
IR-490 WESTBOUND																
934+12.82	955+10.00	2097	2097	2097										17		
955+10.00	964+70.00	960	960	1920	1920				1611					16	48	
964+70.00	967+70.00	300	300	600		300								14		
967+70.00	982+00.00	1430	1430	2860									1430	36		
982+00.00	985+85.75	386	386	1158										9		
NORTH MARGINAL RD																
0+22.00								94								
0+29.00							37									
0+29.00	1+40.00					111					4	2				
1+40.00	8+14.00			674												
8+17.00								105								
SHEET TOTAL		24111	22572	56053	6337	1011	37	199	2741		4	2	3985	642	171	11
		= 8.84 MILE		=10.62 MILE	7348									**	824	

** QUANTITY CARRIED TO SHEET 69

CALCULATED EMK
CHECKED LDH

PAVEMENT MARKING/RAISED PAVEMENT MARKER SUB-SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

* - IN PLACE OF LANE LINE

LOCATION AND STATION		828												621		
		EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)		LANE ARROWS	WORD ON PAVEMENT 96"	PAVEMENT MARKING, MISC.: 8" DASHED LINE, 3' LONG WITH 12' GAPS	RAISED PAVEMENT MARKER, INSTALLATION ONLY		
		WHITE	YELLOW		GORE	*								W	W/R	Y/R
FROM	TO	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.		EACH	EACH	LIN.FT.	EACH	EACH	EACH
SOUTH MARGINAL RD																
0+22.00								114								
0+25.00	7+17.00			692												
7+17.00	8+19.00					102					4	2				
8+19.00							40									
8+26.00								102								
RAMP 29																
90+05.00								106								
90+12.00							40									
90+12.00	91+22.00					110					4	2		3		
91+22.00	92+71.00	149	149	149										2		2
92+71.00	95+00.00	229	229													3
RAMP 30																
91+35.00								91								
91+38.00	95+00.00	362	362													5
RAMP 32																
19+00.00	25+47.00	647	647													
WADE AVE																
52+00.00	52+55.00	55	55		55											
52+55.00	53+77.00		122													
53+77.00	55+77.00		200			400					9	3				
55+77.00							45									
55+86.00								111								
RAMP 31																
22+19.00	34+30.00	1211	1211					91								15
34+30.00	37+21.00	291	291													4
37+24.00								111								
4+49.00	6+08.00	159	159													2
RAMP 31-A																
22+19.00	26+69.00	450	450													
VEGA AVE																
53+22.00	54+51.00		129		258				48							
54+51.00	56+19.00			168												
56+22.00								97								
LANE N-W																
24+78.00	29+44.00	466	466	932										8		
23+72.00	24+78.00	106	106	106	212									1	3	
11+75.00	23+72.00	1197	1197	1197										10		
SHEET TOTAL		5322	5773	3224	525	612	125	823	48		17	7		24	3	31
		= 2.10 MILE		= 0.61 MILE	1137									**	58	

** QUANTITY CARRIED TO SHEET 69

CALCULATED EMK
CHECKED LDH

PAVEMENT MARKING/RAISED PAVEMENT MARKER SUB-SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

* - IN PLACE OF LANE LINE

LOCATION AND STATION		828													621		
		EDGE LINES		LANE LINES	CHANNELIZING LINES		STOP LINES	CROSSWALK LINES	TRANSVERSE LINES (WHITE)	TRANSVERSE LINES (YELLOW)	LANE ARROWS	WORD ON PAVEMENT 96"	PAVEMENT MARKING, MISC.: 8" DASHED LINE, 3' LONG WITH 12' GAPS	RAISED PAVEMENT MARKER, INSTALLATION ONLY		
		WHITE	YELLOW		GORE	*								W	W/R	Y/R
FROM	TO	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	LIN.FT.	EACH	EACH	EACH
LANE S-W																
19+13.00	19+81.00	68	68													
LANE W-N																
10+79.00	13+17.00	238	238	238										2		
13+17.00	15+00.00	183	183	183	366				150					2	11	
15+00.00	32+65.00	1765	1765	1765										15		
LANE W-S																
6+25.00	12+95.00	670	670													
LANE E-S																
9+66.00	27+87.00	1821	1821	1821										15		
27+87.00	30+14.00	454	227	227	227									2	4	
30+14.00	32+60.00	246	246	492										4		
32+60.00	38+51.00	591	591	591										5		
SBOR																
2+27.00	3+61.00	134	134	134										2		
RAMP C-7																
82+03.00								161								
82+10.00							62									
82+10.00	83+17.00	107	107			107				80	4	2		3		1
83+17.00	84+00.00	83	83	83						36				1		1
84+00.00	85+85.75	186	186	186										2		2
RAMP 7-C																
68+21.00	74+27.00	606	606													8
74+27.00	75+37.00	220	220													3
75+37.00	75+71.00	34	34		68										2	1
75+71.00	78+92.00	321	321													4
RAMP 7-7C																
68+15.00	74+06.00	591	591													7
SHEET TOTAL		8318	8091	5720	661	107	62	161	150	116	4	2		53	17	27
		= 3.11 MILE		= 1.08 MILE	768				266					**	97	

** QUANTITY CARRIED TO SHEET 69

CALCULATED EMK
CHECKED LDH

PAVEMENT MARKING/RAISED PAVEMENT MARKER SUB-SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

Material Furnished by the Department
Installation Only

Description	One-Way White		One-Way Yellow		Two-Way White		Two-Way Yellow		Two-Way White-Red		Two-Way Yellow-Red	
	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.	Cols.	Dist.
Raised Pavement Marker, Installation Only	719								191			69
Total By Color	719								191			69

	Total	Number of Conventional High Profile	Number of Tapered Low Profile	District Stored	Columbus Stored
Raised Pavement Marker, Installation Only	979		979		979
Raised Pavement Marker Casting, Installation Only					
Prismatic Retro-Reflectors					
Raised Pavement Marker Misc.: Replacement of Raised Pavement Marker					

PLOT SUBMITTED: 20-NOV-2000 14:12
20800TDA.DGN
PLOTTED BY: fkonopka
PLOTTED FROM: I:\PROJECTS\pid20800\dgn\20800tda.dgn

CALCULATED FLK
CHECKED EMK

MATERIALS SUPPLIED BY THE DEPARTMENT

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

SHEET NUMBER																			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						28		48		53		63		65	66	67	68	71						
																							TRAFFIC CONTROL	
						24													620	10300	24	EACH	DELINEATOR, TYPE C, POST MOUNTED	
												979							621	00200	979	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY	
																		1	625	32000	1	EACH	GROUND ROD	
						197													626	00100	197	EACH	BARRIER REFLECTOR, TYPE A	
										36									626	00200	36	EACH	BARRIER REFLECTOR, TYPE B	
								14						200					630	03100	214	LIN FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
														200					630	04100	200	LIN FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
														26					630	09100	26	EACH	SURFACE PREPARATION, EXISTING SUPPORT SECTION	
														2					630	09102	2	EACH	SURFACE PREPARATION, NEW SUPPORT SECTION	
														28					630	09104	28	EACH	COATING, EPOXY PRIME COAT, SUPPORT SECTION	
														28					630	09106	28	EACH	COATING, EPOXY INTERMEDIATE COAT, SUPPORT SECTION	
														28					630	09108	28	EACH	COATING, URETHANE TOP COAT, SUPPORT SECTION	
																		1	630	45500	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 113'-0" SPAN	
														6					630	79600	6	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED	
																		2	630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
														12					630	85100	12	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
								1											630	85101	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN	
																		3	630	87100	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
																		1	630	89702	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
																		21	631	84000	21	EACH	SIGN SERVICE	
																		2	631	84300	2	EACH	SIGN WIRED	
																		27	631	84301	27	EACH	SIGN WIRED, AS PER PLAN	63
																		8	631	84401	8	EACH	SIGN WIRED, OVERPASS STRUCTURE MOUNTED, AS PER PLAN	63
																		21	631	85100	21	EACH	DISCONNECT SWITCH WITH ENCLOSURE, TYPE X	
																		4	631	94100	4	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
																		21	631	94304	21	EACH	REMOVAL OF DISCONNECT SWITCH AND DISPOSAL	
															8.84	2.10	3.11		828	10000	14.05	MILE	EDGE LINE	
															10.62	0.61	1.08		828	10100	12.31	MILE	LANE LINE	
															7348	1137	768		828	10300	9253	LIN FT	CHANNELIZING LINE	
															37	125	62		828	10400	224	LIN FT	STOP LINE	
															199	823	161		828	10500	1183	LIN FT	CROSSWALK LINE	
															2741	48	266		828	10600	3055	LIN FT	TRANSVERSE LINE	
															4	17	4		828	20300	25	EACH	LANE ARROW	
															2	7	2		828	20410	11	EACH	WORD ON PAVEMENT, 96"	
															3985				828	90000	3985	LIN FT	PAVEMENT MARKING, MISC.: 8" DASHED LINE, 3' LONG WITH 12' GAPS	

CALCULATED EMK
CHECKED LDH

TRAFFIC CONTROL GENERAL SUMMARY

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

70
110

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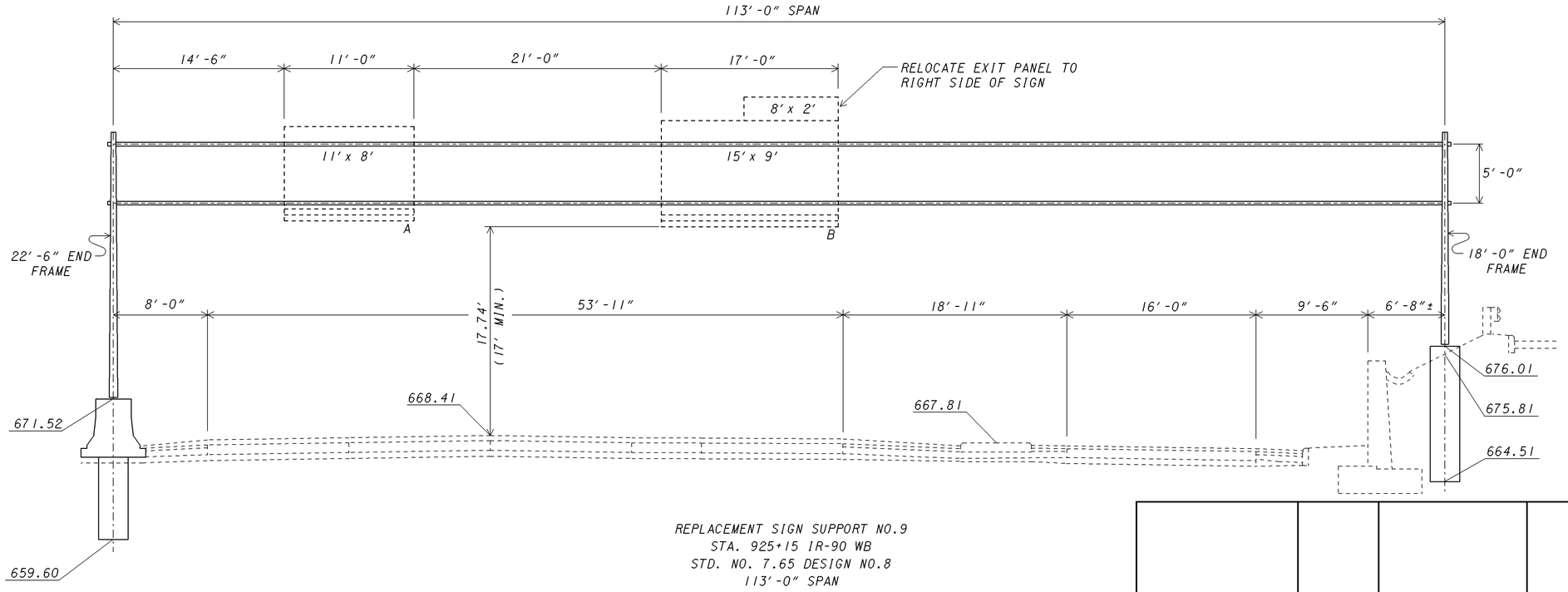


NOTE:

THE ELEVATIONS SHOWN ARE FROM THE ORIGINAL CONSTRUCTION PLANS. THE CONTRACTOR SHALL FIELD VERIFY TO INSURE PROPER ERECTION.

REPLACEMENT SIGN SUPPORT NO.9
STA. 925+15 IR-90 WB
STD. NO. 7.65 DESIGN NO.8
113'-0" SPAN

SIGN NO.	SIGN SIZE	630						625	631				
		REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8, 113'-0" SPAN	RIGID OVERHEAD SIGN SUPPORT FOUNDATION			GROUND ROD	REMOVAL OF LUMINAIRE AND REERECTION	REMOVAL OF DISCONNECT SWITCH AND DISPOSAL	DISCONNECT SWITCH WITH ENCL., TYPE X	SIGN SERVICE	SIGN WIRED
	FT x FT	EACH	EACH	EACH	EACH			EACH	EACH	EACH	EACH	EACH	EACH
8A	11'X 7.5'	1	1							1			
8B	15'X 8.5'	1											
	8'X 2'	1											
9A	11'X 7.5'			1	2			1	2		1	1	1
9B	15'X 8.5'								2				1
	8' X 2'												
TOTAL		3	1	1	2			1	4	1	1	1	2

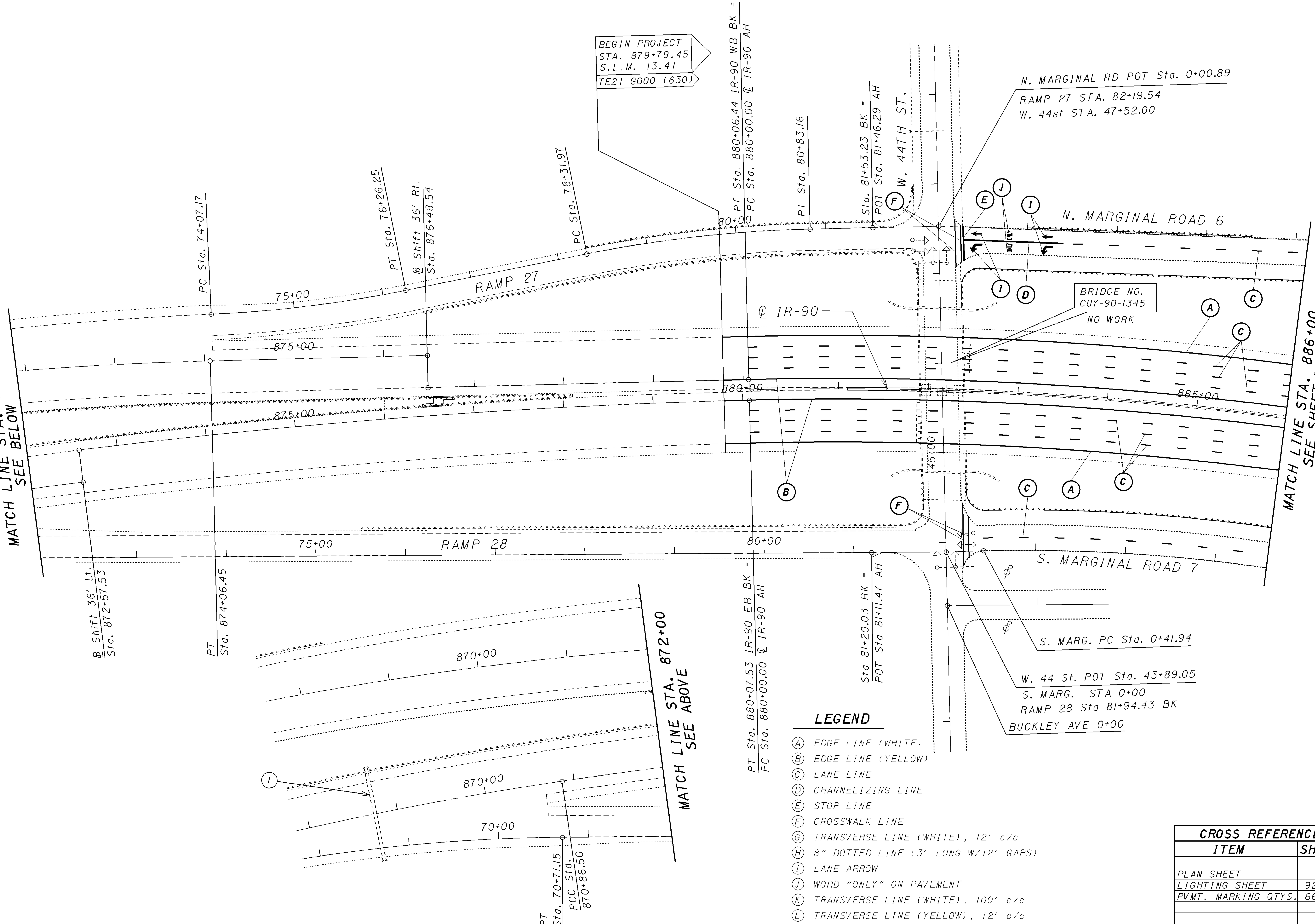
FROM	STATION	TO	STATION	631 SIGN SERVICE	631 SIGN WIRED*	631 SIGN WIRED**	631 DISCONNECT SWITCH WITH ENCLOSURE, TYPE X	631 REMOVAL OF DISCONNECT SWITCH AND DISPOSAL
				EACH	EACH		EACH	EACH
OH sign	868+75				3		1	1
OH sign	868+75	PB SMA-8	868+85	1				
OH A50-4	47+13				1		1	1
OH A50-4	47+13	PB SMA-4	47+08	1				
OH BRIDGE sign	882+29					2	1	1
OH BRIDGE sign	882+29	PB SMA-5	882+29	1				
PB SMA-1	882+05	OH BRIDGE sign	881+85	1				
OH BRIDGE sign	881+85					3	1	1
PB SM4	0+54	OH A50-2	43+72	1				
OH A50-2	43+72				1		1	1
PB SMB-2	887+55	OH sign	887+65	1				
OH sign	887+65				2		1	1
PB SMB-5	894+55	OH sign	894+45	1				
OH sign	894+45				2		1	1
PB SMB-4	893+18	OH A52-7	47+95	1				
OH A52-7	47+95				1		1	1
PB SMB-12	96+18	OH sign	896+38	1				
OH sign	896+38				2		1	1
PB SMB-13	90+29	OH A51-7	52+07	1				
OH A51-7	52+07				1		1	1
PB -FR-10	904+91	OH sign	905+00	1				
OH sign	905+00				2		1	1
PB -FR-4	909+08	OH sign	909+25	1				
OH sign	909+25				1		1	1
PB -FR-13	917+30	OH sign	917+22	1				
OH sign	917+22				3		1	1
PB -FR-23	27+90	OH sign	27+95	1				
OH sign	27+95				1		1	1
OH sign	925+15	Oth. table						
PB -FR-25	46+30	OH A59-4	46+30	1				
OH A59-4	46+30				1		1	1
PB -FR-17	924+81	OH sign	924+75	1				
OH sign	924+75					1	1	1
PB -FR-26	929+24	OH BRIDGE sign	929+31	1				
OH BRIDGE sign	929+31					2	1	1
OH A58-3	48+85				1		1	1
OH A58-3	48+85	PB -SC-14	48+80	1				
OH A58-11/12	53+00				2		1	1
OH A58-11/12	53+00	PB -SC-12	5+90	1				
PB -SC-16	932+16	OH sign	932+06	1				
OH sign	932+06				3		1	1
TABLE TOTALS				20	27	8	20	20

CALCULATED FLK
CHECKED EMK

ELEVATION VIEW

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

71
110


BEGIN PROJECT
STA. 879+79.45
S.L.M. 13.41
TE21 G000 (630)
N. MARGINAL RD POT Sta. 0+00.89
RAMP 27 STA. 82+19.54
W. 44st STA. 47+52.00
PT Sta. 880+06.44 IR-90 WB BK =
PC Sta. 880+00.00 ℄ IR-90 AH
PT Sta. 80+83.16
Sta. 81+53.23 BK =
POT Sta. 81+46.29 AH
W. 44TH ST.
PC Sta. 78+31.97
℗ Shift 36' Rt.
Sta. 876+48.54
PT Sta. 76+26.25
PC Sta. 74+07.17
RAMP 27
75+00
875+00
80+00
N. MARGINAL ROAD 6
BRIDGE NO.
CUY-90-1345
NO WORK
℄ IR-90
880+00
885+00
45+00
MATCH LINE STA. 872+00
SEE BELOW
MATCH LINE STA. 886+00
SEE SHEET 73
RAMP 28
S. MARGINAL ROAD 7
℗ Shift 36' Lt.
Sta. 872+57.53
PT
Sta. 874+06.45
PT Sta. 880+07.53 IR-90 EB BK =
PC Sta. 880+00.00 ℄ IR-90 AH
Sta 81+20.03 BK =
POT Sta 81+11.47 AH
S. MARG. PC Sta. 0+41.94
W. 44 St. POT Sta. 43+89.05
S. MARG. STA 0+00
RAMP 28 Sta 81+94.43 BK
BUCKLEY AVE 0+00
870+00
70+00
MATCH LINE STA. 872+00
SEE ABOVE
PT
Sta. 70+71.15
PCC Sta.
870+86.50
ONLY

LEGEND

- Ⓐ EDGE LINE (WHITE)
- Ⓑ EDGE LINE (YELLOW)
- Ⓒ LANE LINE
- Ⓓ CHANNELIZING LINE
- Ⓔ STOP LINE
- Ⓕ CROSSWALK LINE
- Ⓖ TRANSVERSE LINE (WHITE), 12' c/c
- Ⓗ 8" DOTTED LINE (3' LONG W/12' GAPS)
- Ⓘ LANE ARROW
- Ⓙ WORD "ONLY" ON PAVEMENT
- Ⓚ TRANSVERSE LINE (WHITE), 100' c/c
- Ⓛ TRANSVERSE LINE (YELLOW), 12' c/c

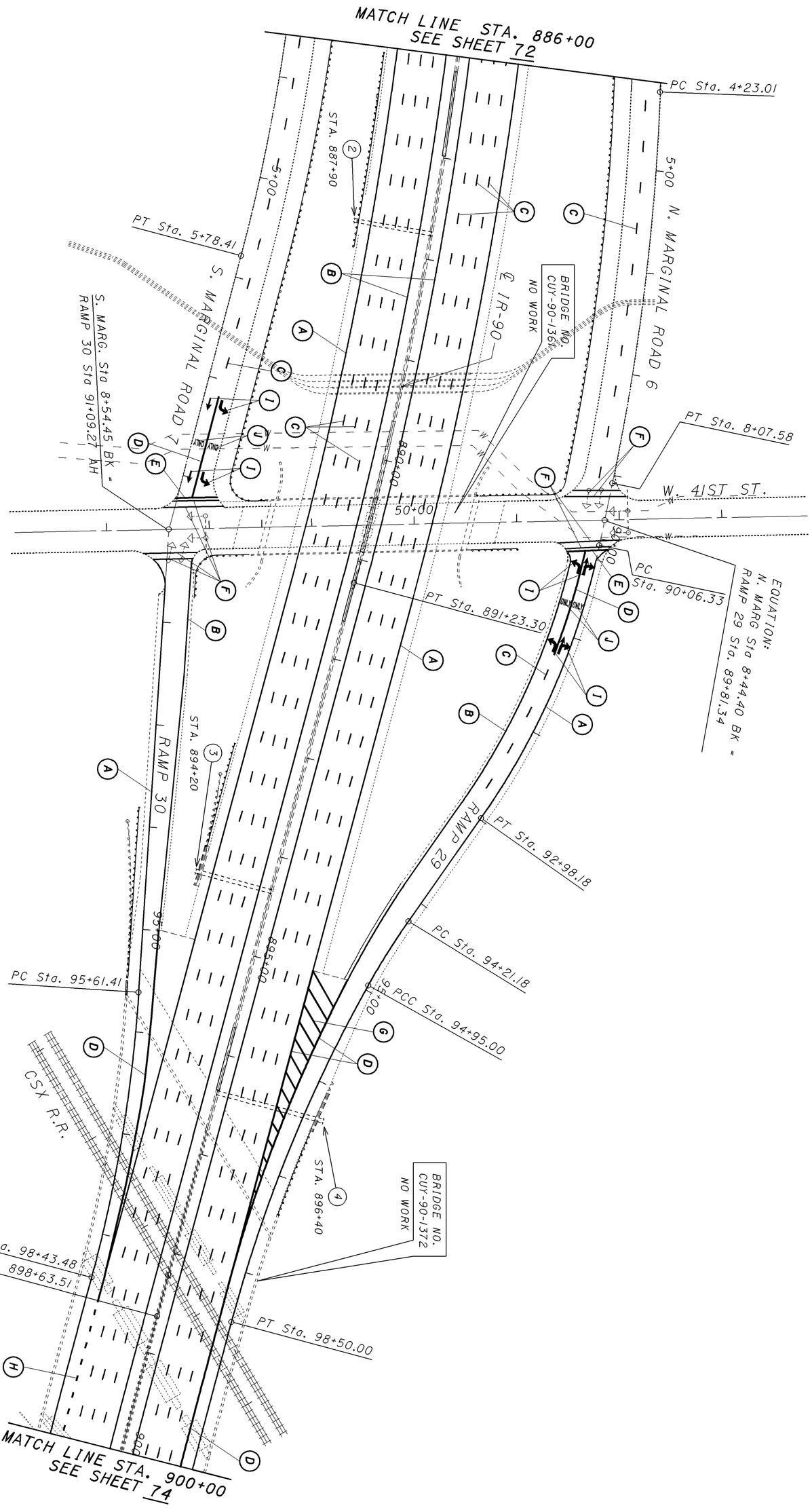
CROSS REFERENCE	
ITEM	SHEET
PLAN SHEET	32
LIGHTING SHEET	92-93
PVMT. MARKING QTYS.	66-68

SCALE IN FEET 0 50 100

CALCULATED EMK
CHECKED LDH

TRAFFIC CONTROL PLAN SHEET - I.R. 90
STA. 873+00 TO STA. 886+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00



CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	33
LIGHTING SHEET	93-94
PVMT. MARKING QTYS.	66-68

73
110

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

TRAFFIC CONTROL PLAN SHEET - I.R. 90
STA. 886+00 TO STA. 900+00

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N

MATCH LINE STA. 900+00
SEE SHEET 73

TRAIN AVE.

VEGA AVE.

FULTON RD.

ST Sta. 908+23.47

6 STA. 909+25

PC Sta. 11+95.07

℄ IR-90

MATCH LINE STA. 913+00
SEE BELOW

BRIDGE NO.
CUY-90-1372
NO WORK

SC Sta. 902+63.5

CS Sta. 904+23.47

5 STA. 905+00

BRIDGE NO.
CUY-90-1391
NO WORK

9'X 2'
EXIT 246
W 41st St
W 44th St
½ MILE
B 15'X 8' I

9 STA. 925+15

WEST Toledo 90
A 11'X 7' I

W. 30 ST.

℄ Shift 19' Lt
Sta. 24+18.85

℄ Shift 16' Rt
Sta. 24+75.00

VEGA AVE.

8 STA. 925+25

PC Sta. 22+19.64

PT Sta. 23+61.00

RAMP 31-A

RAMP 31

MATCH LINE STA. 926+00
SEE SHEET 75

PT Sta. 13+52.63

℄ IR-90

MATCH LINE STA. 913+00
SEE ABOVE

PC Sta. 15+36.26

PT Sta. 18+98.07

7 STA. 917+20

RAMP 32

℄ Shift 16' Lt
Sta. 21+50.00

PC Sta. 22+94.10

PC Sta. 0+00.00

WADE AVE.

WADE AVE. Sta. 50+00.00
W.30 St Sta. 50+00.00

10 STA. 924+75

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	34
LIGHTING SHEET	94-96
PVMT. MARKING QTYS.	66-68
ELEVATION VIEW	71

CALCULATED EMK
CHECKED LDH

0 50 100 SCALE IN FEET

TRAFFIC CONTROL PLAN SHEET - I.R. 90
STA. 900+00 TO STA. 926+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

74
110

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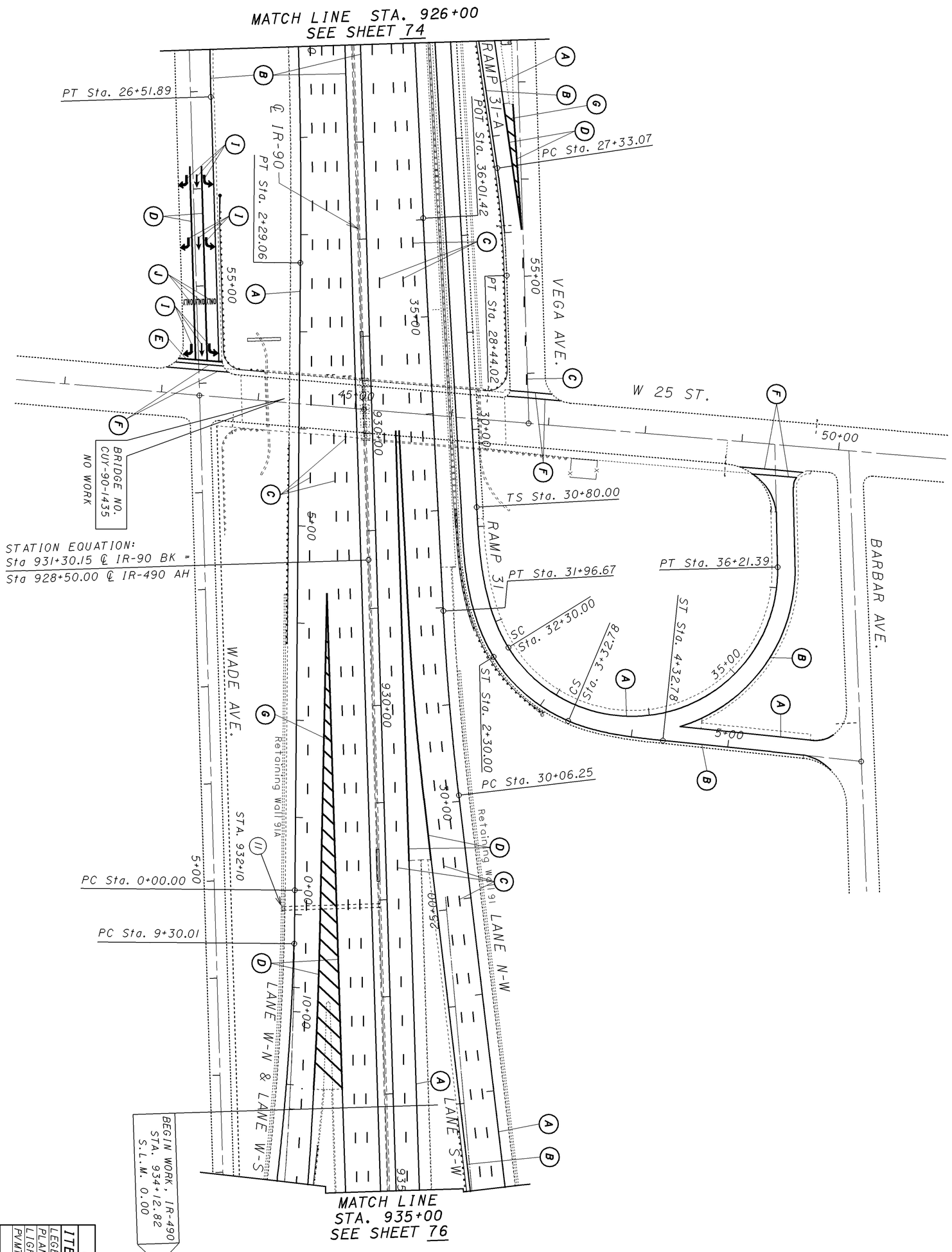

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	35
LIGHTING SHEET	96-97
PVMT. MARKING QTYS.	66-68

75
110

CUYAHOGA COUNTY
CUY-90/ 490-13.41/ 0.00

TRAFFIC CONTROL PLAN SHEET - I.R. 90
STA. 926+00 TO I.R. 490 STA. 935+00

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N

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MATCH LINE STA. 935+00 SEE SHEET 75

MATCH LINE STA. 19+00 SEE SHEET 78

MATCH LINE STA. 974+00 SEE SHEET 78

MATCH LINE STA. 25+00 SEE SHEET 78

MATCH LINE STA. 17+00 STA. SHEET 79 SEE SHEET 79

MATCH LINE STA. 948+00 SEE SHEET 79

BRIDGE NO. CUY-90-1452 NO WORK

BRIDGE NO. CUY-71-1887 NO WORK

BRIDGE NO. CUY-490-0020 ES NO WORK

BRIDGE NO. CUY-490-0022 SW NO WORK

BRIDGE NO. CUY-90-1463 R NO WORK

SCRANTON RD.

PT Sta. 24+63.89

PCC Sta. 23+48.96

PC Sta. 941+21.73

PT Sta. 16+41.81

PC Sta. 15+32.36

PCC Sta. 17+13.43

PT Sta. 12+08.21

PCC Sta. 5+93.61

LPCC Sta. 4+71.99

LANE N-W (IR-90 WB)

LANE S-W

LANE W-N (IR-90 EB)

LANE W-S

LANE E-S

℄ IR-490

℄ IR-71

MATCH LINE STA. 10+00 SEE SHEET 77

MATCH LINE STA. 25+00 SEE SHEET 77

MATCH LINE STA. 966+00 SEE SHEET 77

MATCH LINE STA. 10+00 SEE SHEET 77

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	36
LIGHTING SHEET	97-99
PVMT. MARKING QTYS.	66-68

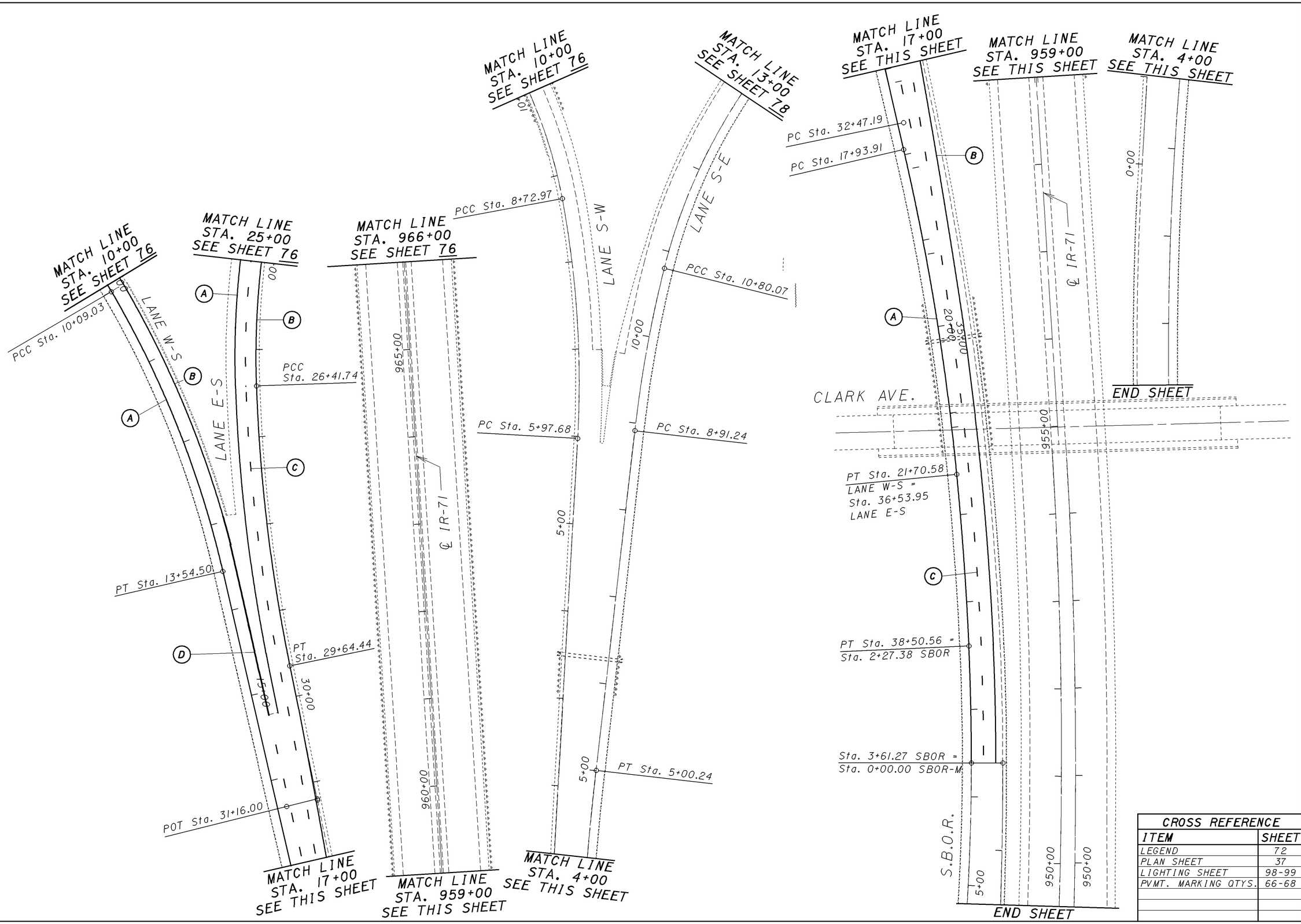
SCALE IN FEET 0 50 100

CALCULATED EMK CHECKED LDH

TRAFFIC CONTROL PLAN SHEET - IR-490 STA. 935+00 TO STA. 948+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

76
110



CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	37
LIGHTING SHEET	98-99
PVMT. MARKING QTYS.	66-68

CALCULATED EMK
CHECKED LDH

SCALE IN FEET 0 50 100

TRAFFIC CONTROL PLAN SHEET - I.R. 71
STA. 959+00 TO STA. 966+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

77
110

MATCH LINE A-A
SEE THIS SHEET

BRIDGE NO.
CUY-90-1490 L&R
NO WORK

STARKWEATHER AVE.

10+00 8+00 7+00 6+00 5+00 4+00 3+00

PT Sta. 32+63.07

END PROJECT
STA. 32+63.05
SLM 14.90
TE21 G000 (6301)

980+00

LANE N-W (IR-90 WB)

D

PC Sta. 29+86.91

30+00

LANE W-N (IR-90 EB)

PC Sta. 15+19.54

15+00

A

B

PCC Sta. 17+01.14

C

℄ IR-71

975+00

MATCH LINE STA. 974+00
SEE SHEET 76

MATCH LINE STA. 25+00
SEE SHEET 76

MATCH LINE STA.
19+00
SEE SHEET 76

MATCH LINE B-B
SEE THIS SHEET

BRIDGE NO.
CUY-90-1506
NO WORK

PT Sta. 42+45.26

990+00

PC Sta. 2+91.72

40+00

11A

STA. 987+75

5+00

℄ IR-90

985+00

PT Sta. 8+29.53

35+00

MATCH LINE A-A
SEE THIS SHEET

END SHEET

BRIDGE NO.
CUY-90-1524
NO WORK

1000+00

℄ IR-90

995+00

POT Sta. 0+00.00

MATCH LINE B-B
SEE THIS SHEET

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	38
LIGHTING SHEET	99
PVMT. MARKING QTYS.	66-68

N

0 50 100 SCALE IN FEET

CALCULATED EMK
CHECKED LDH

TRAFFIC CONTROL PLAN SHEET - I.R. 71 STA. 974+00 TO I.R. 90 STA. 1001+00

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

78
110

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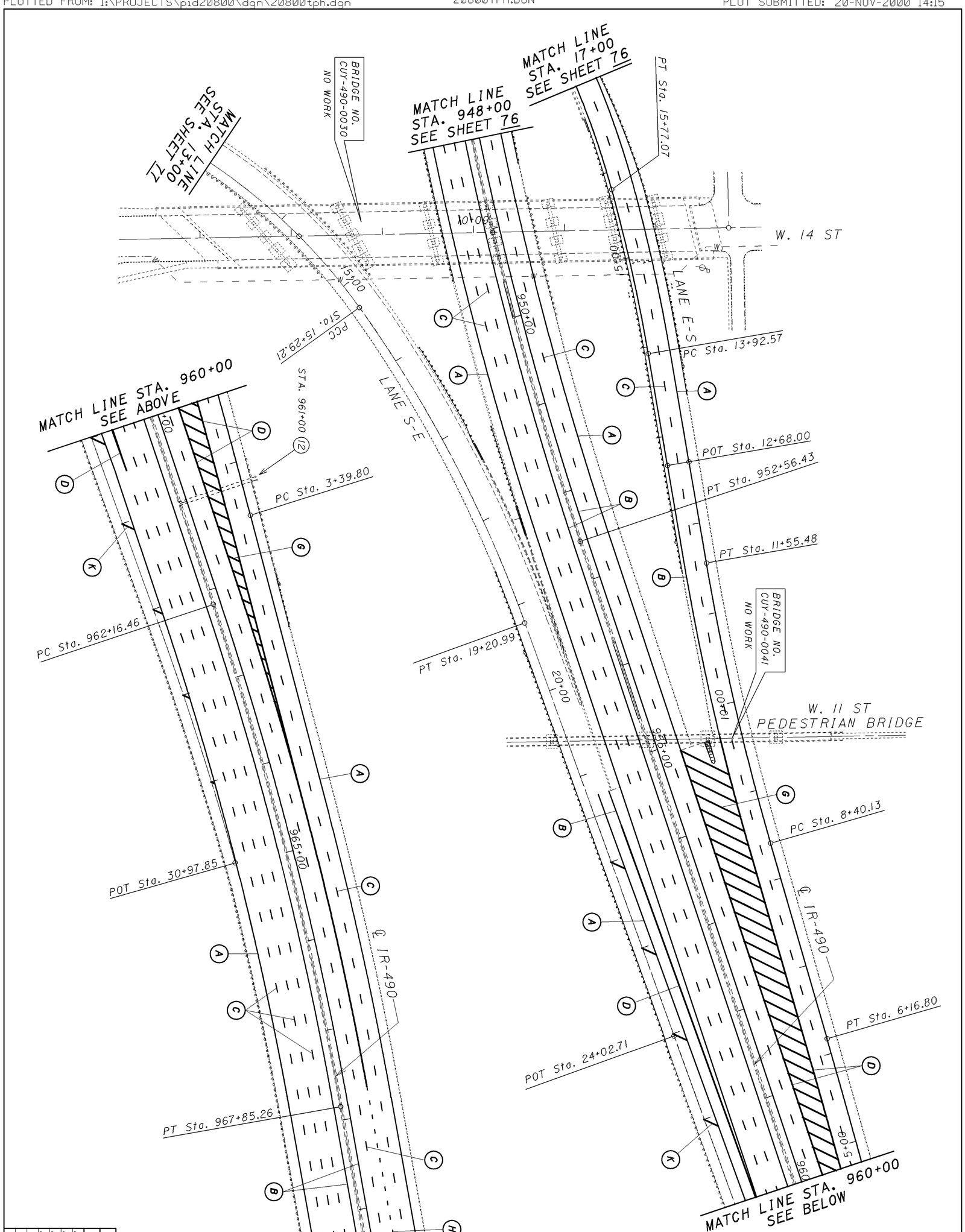

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	39
LIGHTING SHEET	100
PVMT. MARKING QTYS.	66-68

79
110

CUYAHOGA COUNTY
CUY-90/490-13.41/0.00

TRAFFIC CONTROL PLAN SHEET - I.R. 490
STA. 948+00 TO STA. 970+00

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N

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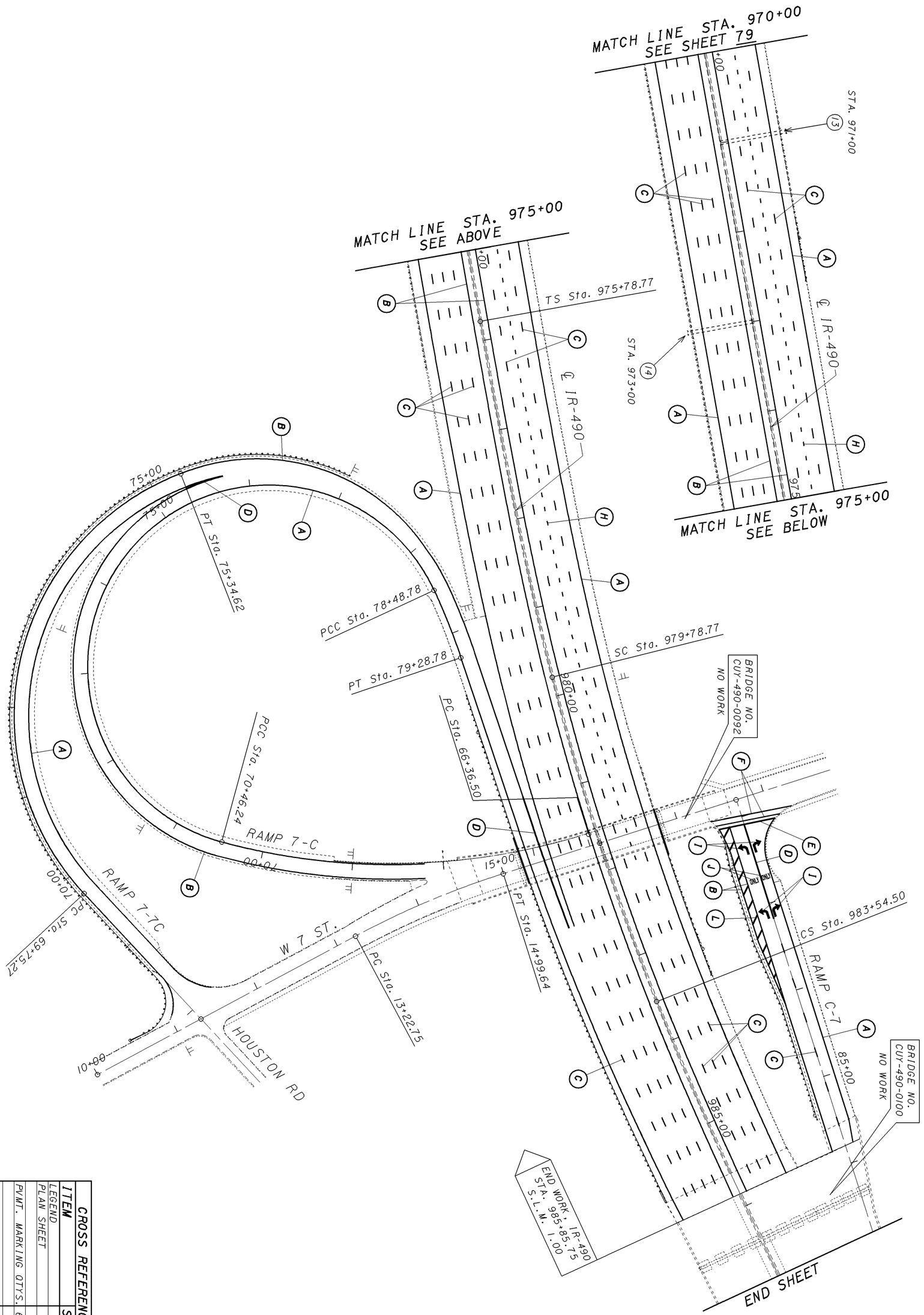

CROSS REFERENCE	
ITEM	SHEET
LEGEND	72
PLAN SHEET	40
PVMT. MARKING QTYS.	66-68

(80) 110

CUYAHOGA COUNTY
CUY-90/ 490-13.41/ 0.00

TRAFFIC CONTROL PLAN SHEET - I.R. 490
STA. 970+00 TO 986+85

CALCULATED EMK
CHECKED LDH

0 50 100
SCALE IN FEET

N

LIGHTING GENERAL NOTES

PROPOSED WORK

IT IS THE INTENT OF THESE PLANS TO REPLACE THE EXISTING LIGHTING WITH A COMPLETE NEW TOWER LIGHTING SYSTEM.

SEQUENCE OF OPERATIONS

THE EXISTING LIGHTS SHALL REMAIN OPERATIVE UNTIL ALL OF THE PROPOSED TOWERS AND THE PROPOSED CIRCUITS HAVE BEEN INSTALLED. THE CONTRACTOR SHALL ESTABLISH A FUNCTIONING NEW LIGHTING SYSTEM PRIOR TO DISCONNECTING THE EXISTING SYSTEM. ALL COSTS FOR SEQUENCING THIS WORK AND PROVIDING A TEMPORARY CIRCUIT CONNECTION SHALL BE CONSIDERED AS INCIDENTAL TO THE LIGHTING PAY ITEMS.

LIGHT POLES SHALL BE REMOVED, AT THE PROJECT ENGINEER'S DISCRETION, IF THE MAINTENANCE OF TRAFFIC OR OTHER NECESSARY OPERATIONS REQUIRE THEIR REMOVAL PRIOR TO THE NEW LIGHTING SYSTEM IS IN PLACE.

POWER AGENCY

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

CITY OF CLEVELAND
CLEVELAND PUBLIC POWER (MELP)
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: DALE TURKOVICH
PHONE: (216) 664-3922

ITEM 202 - LIGHT POLE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE CAREFUL REMOVAL OF THE EXISTING LIGHT POLE, BRACKET ARM, BASE AND THE DISCONNECTION OF THE CIRCUIT AT THE ADJACENT LIGHT POLE, PULL BOX ETC. ALL SALVAGEABLE BREAKAWAY BASES SHALL BE REMOVED AND STORED ON THE PROJECT FOR PICK UP BY STATE FORCES. ALL OTHER BASES AND REMAINING LIGHT POLES AND BRACKET ARMS SHALL BE DISPOSED OF BY THE CONTRACTOR.

ITEM 202 - LIGHT POLE REMOVED FOR STORAGE, LUMINAIRE REMOVED FOR STORAGE

THIS ITEM OF WORK SHALL INCLUDE THE CAREFUL REMOVAL OF THE EXISTING LIGHT POLE, BRACKET ARM, BASE AND THE DISCONNECTION OF THE CIRCUIT AT THE ADJACENT LIGHT POLE, PULL BOX ETC. ALL ITEMS SHALL BE REMOVED AND STORED ON THE PROJECT FOR PICK UP BY STATE FORCES.

EXISTING CABLE AND LIGHTING ITEMS

CIRCUIT CABLE IN TRENCHES MAY BE ABANDONED IN PLACE OR REMOVED. THE REMOVAL OR ABANDONMENT OF ANY ITEMS WHICH ARE NOT ITEMIZED SEPARATELY SHALL BE CONSIDERED INCIDENTAL TO THE ADJACENT WORK ITEM.

ITEM 202 - LIGHT POLE FOUNDATION REMOVED, AS PER PLAN

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING LIGHT POLE FOUNDATION TO A MINIMUM OF ONE FOOT BELOW FINISHED GRADE, BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

ITEM 202 - PULL BOX REMOVED

THIS ITEM OF WORK WILL CONSIST OF REMOVING AN EXISTING PULL BOX WHICH SHALL THEN BE PROPERLY DISPOSED OF OFF THE PROJECT SITE. THE RESULTANT OPENING SHALL THEN BE BACKFILLED TO GRADE WITH SUITABLE COMPACTED SOIL AND RESTORED TO MATCH THE SURROUNDING AREA.

WHERE A PROPOSED PULL BOX WILL BE PLACED IN THE SAME AREA AS AN EXISTING PULL BOX, THE REMOVAL COST OF AN EXISTING PULL BOX WILL BE INCIDENTAL TO THE 625- PULL BOX ITEM.

ITEM 202 - POWER SERVICE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL OF ALL SWITCHES, BOXES, CONDUIT, CABLES AND ANY INCIDENTALS ATTACHED TO THE EXISTING POWER SERVICE. ALSO REMOVE FENCE AND CONCRETE PAD.

ITEM 202 - DISCONNECT EXISTING CIRCUIT, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR A LIGHT POLE OR JUNCTION BOX.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT REMAINING IN THE PULL BOX.

DISCONNECTION AT A LIGHT SHALL INVOLVE THE REMOVAL OF THE PART OF CABLE THAT IS TO BE ABANDONED FROM THE POLE. THOSE ENDS OF THE CONNECTOR KITS FROM WHICH THE ABANDONED CABLE IS REMOVED SHALL BE PLUGGED AND TAPED.

DISCONNECTION AT A MEDIAN JUNCTION BOX OR AT A MEDIAN MOUNTED LIGHT POLE SHALL INVOLVE THE CUTTING OF THE EXISTING CIRCUIT(S) AND THE REMOVING OF ALL CONNECTOR KITS.

ANY CABLE THAT IS TO BE REUSED IN A PULL BOX OR LIGHT POLE OR JUNCTION BOX SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION. CABLE SPLICE KITS AND CONNECTOR KITS WILL BE PAID FOR RESPECTIVELY UNDER EACH ITEM 625.

A CIRCUIT MAY REQUIRE CUTTING AND/OR DISCONNECTING AT VARIOUS LOCATIONS ALONG THE CIRCUIT WHETHER AT A LIGHT POLE, JUNCTION BOX OR PULL BOX. WHEN A CIRCUIT IS INITIALLY DISCONNECTED, PAYMENT FOR DISCONNECTION OF THAT CIRCUIT SHALL INCLUDE ALL OTHER DISCONNECTIONS AT VARIOUS LOCATIONS WITHIN THAT PARTICULAR CIRCUIT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 "DISCONNECT EXISTING CIRCUIT, AS PER PLAN" AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK.

ITEM 603 - UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11M FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHEREVER POSSIBLE. THIS ITEM SHALL ALSO INCLUDE THE COST OF RESTORING PAVED SHOULDER AREAS WHEN NECESSARY TO DRAIN THE PULL BOX INTO EXISTING DRAINS.THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE TO DRAIN PROPOSED PULL BOXES:

ITEM 603 - 4" CONDUIT, TYPE E . . . . .1,180 LIN. FT.

ITEM 625 - PORTABLE POWER UNIT

THE CONTRACTOR SHALL SUPPLY A PORTABLE POWER UNIT AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS. A QUANTITY OF "1 EACH" OF ITEM 625 - PORTABLE POWER UNIT, IS INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN THE SPECIFICATIONS SHALL BE PERFORMED ON ALL DISTRIBUTION CABLE AND DUCT CABLE SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARD RAIL,FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE LOCATION OF THE CABLE RUN BEING TESTED, HAS BEEN COMPLETED. A LUMP SUM PAYMENT FOR THIS TEST HAS BEEN INCLUDED IN THE LIGHTING GENERAL SUMMARY.

ITEM 625 - LIGHT TOWER FOUNDATIONS, AS PER PLAN

LIGHT TOWER FOUNDATIONS NOT LOCATED ON A CONCRETE BARRIER SHALL CONFORM TO THE DESIGN SHOWN ON STANDARD CONSTRUCTION DRAWING HL-20.21M EXCEPT THEY SHALL PROJECT ABOVE GRADE 18" IN OR ADJACENT TO DITCHES AND 6" ELSEWHERE.

LIGHT TOWER FOUNDATIONS LOCATED ON A BARRIER MEDIAN SHALL CONFORM TO THE DESIGN SHOWN ON SHEET 56. THE CONTRACTOR SHALL ACCURATELY LOCATE UNDERGROUND CONDUITS PRIOR TO DRILLING FOR FOUNDATIONS. FOUNDATION LOCATIONS SHALL BE SHIFTED, AS DIRECTED BY THE ENGINEER, TO AVOID ANY UNDERGROUND UTILITIES OR CONDUITS BY AT LEAST 10 FEET, PROVIDED THE NEW LOCATION IS LOCATED IN A CLEAR ZONE OR PROTECTED WITH BARRIER. ALL FOUNDATION RELOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO DRILLING. ALL COSTS OF REMOVAL OF EXCAVATED MATERIAL, GRADING, AND RESTORATION OF ALL DISTURBED AREAS IN ACCORDANCE WITH ITEM 659 SHALL BE CONSIDERED AS INCIDENTAL TO THE LIGHT TOWER FOUNDATION ITEM.

TOWER LIGHTNING PROTECTION SYSTEM

AN APPROVED TOWER LIGHTNING PROTECTION SYSTEM AS DETAILED IN THE STANDARD DRAWINGS SHALL BE PROVIDED AND INSTALLED FOR EACH TOWER ERECTED. THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT NEEDED TO INSTALL THIS PROTECTION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EACH ITEM 625 - LIGHT TOWER.

HIGH MAST LIGHT TOWERS

THE MANUFACTURER SHALL SUBMIT A REPORT FROM AN INDEPENDENT TESTING LABORATORY TO SHOW THAT THE LUMINAIRES DO NOT RECEIVE MORE THAN THE SPECIFIED ACCELERATION LOAD. THE TESTING LABORATORY'S REPORT SHALL SPECIFY IN DETAIL THE MOUNTING LOCATIONS OF THE ACCELEROMETERS AND THE TEST PROCEDURES USED. IN ADDITION TO THIS REPORT, ODOT RESERVES THE RIGHT TO CONDUCT FIELD MEASUREMENTS OF THOSE ACCELERATION LOADS AND TO ACCEPT ONLY THOSE DESIGNS IN WHICH THE TESTED INSTALLATIONS MEET THE SPECIFICATIONS.

THE TERMINAL BLOCK SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS SHALL BE INCLUDED IN THE PRICE OF THE TOWER.

Calculated BJK Checked

Lighting Notes

CUY-90/490-
13.41/0.00

81
110

LIGHTING GENERAL NOTES

Calculated BJK Checked

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRE WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR.

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

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

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

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

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. ****TEMPORARY LIGHTING TO MAINTAIN THE EXISTING LIGHTING IS NOT REQUIRED PROVIDED THAT SERVICE IS ONLY INTERRUPTED FOR A TOTAL OF 60 DAYS OR LESS.*****

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INTENSITY OF 1.2 FOOT CANDLES WITH AND AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THE GRADE "A" FOR STRENGTH REQUIREMENT AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

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

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING (CON'T)

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

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

ITEM 625 - CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF REMOVING EXISTING CABLES AND CLEANING DEBRIS FORM EXISTING CONDUIT TO BE REUSED FOR PROPOSED CIRCUIT CABLES. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE JOB SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

INCIDENTAL TO THIS ITEM IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. THE REMOVAL OF OBSTRUCTIONS FROM DRAIN OUTLETS SHALL BE INCIDENTAL TO THE CONDUITS CLEANED.

PAYMENT WILL BE MADE FOR EACH LINEAR FOOT OF ITEM 265 "CONDUIT CLEANED AND CABLES REMOVED" AND SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY MANNER.

SIGN SERVICE

THIS ITEM SHALL INCLUDE THE COST OF REMOVING EXISTING SIGN SERVICE CABLE FROM THE PULL BOX TO THE SIGN DISCONNECT SWITCH ENCLOSURE AND CLEANING DEBRIS FROM THE EXISTING UNDER GROUND CONDUIT AND CONDUIT FOUNDATION ELLS WHICH WILL BE REUSED TO ROUTE THE NEW SIGN SERVICE CABLE.

IF THE EXISTING UNDERGROUND CONDUIT IS FOUND TO BE DETERIORATED OR CAN NOT BE PROPERLY CLEANED FOR REUSE, NEW 2" (MINIMUM) CONDUIT AND FIT-TINGS SHALL BE INSTALLED FROM THE EXISTING FOUNDATION CONDUIT ELL TO THE PROPOSED PULL BOX AS DIRECTED BY THE ENGINEER. TRENCH, (24" DEEP) AND ANY INCIDENTAL MATERIALS AND LABOR WILL BE INCLUDED IN THIS ITEM OF WORK.

SEE TRAFFIC CONROL PLANS FOR QUANTITIES.

ELECTRICAL SERVICE FOR ILLUMINATED SIGNS

THE PAY ITEMS IN THE LIGHTING GENERAL SUMMARY INCLUDE THE PULL BOX ADJACENT TO EACH LIGHTED SIGN AND THE ELECTRICAL SERVICE CONNECTIONS LEADING INTO THE BOX, INCLUDING SPLICE KITS IN THE PULL BOX. QUANTITIES FOR ELECTRICAL SERVICE FROM THE CONNECTION IN THE PULL BOX TO THE SIGN ARE INCLUDED IN THE TRAFFIC CONTROL SUMMARY.

EXISTING LIGHTING ITEMS, SIGNS, DUCT CABLE AND CONDUIT

THE LOCATIONS OF EXISTING LIGHTING ITEMS, SIGNS, CONDUIT AND DUCT CABLE SHOWN ON THE PLANS HAVE BEEN OBTAINED BY SEARCHES OF AVAILABLE RECORDS AND FIELD CHECKS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, HOWEVER, THE STATE OF OHIO DOES NOT GUARATEE THEIR ACCURACY OR COMPLETENESS. SEVERAL LIGHT POLES AND SIGNS HAVE BEEN REWIRED OVERHEAD SINCE THE ORIGINAL CONSTRUCTION. FIELD VERIFY ALL CIRCUITS.

EXISTING PLANS AND CONSTRUCTION PROJECT NO. ARE:

CUY 71/90-18.54/13.81	183-65
CUY-71/90-18.65/14.90	828-78
CUY-90-13.33	516-71
CUY-90-11.64	429-75
CUY-90-9.74	180-99
CUY-90-13.41	269-90
CUY-490-0.27	247-93
CUY-490-0.99	928-86

SOIL INFORMATION

SUBSURFACE INVESTIGATIONS WERE MADE FOR THE ORIGINAL CONSTRUCTION OF I.R. 90. COPIES OF THIS DATA BE INSPECTED AT THE DISTRICT 12 DESIGN OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HTS. OHIO.

LAMPS-HIGH PRESSURE SODIUM (HPS)

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", CROUSE-HINDS "CERAMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED BY THE ENGINEER.

HIGH MAST LUMINARIES

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, THE LUMINARIES FOR TOWER LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

SYMMETRIC, TYPE V, LUMINARIES FOR TOWER LIGHTING SHALL BE HOLOPHANE "HMSC" TEST #43842, GE 6312, OR APPROVED EQUAL.

ASSYMMETRIC, TYPE II, LUMINARIES FOR TOWER LIGHTING SHALL BE HOLOPHANE "HMSC" TEST #43191, GE 7365(II), OR APPROVED EQUAL.

IN ADDITION, OTHER CUT OFF STYLE LUMINARIES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

Lighting Notes

CUY-90/490-
13.41/0.00

LIGHTING GENERAL NOTES

POWER SERVICE

SUPPLIED POWER SHALL BE 480 VOLT, 3 WIRE, ONE SIDE GROUNDED.

625 - POWER SERVICE, AS PER PLAN

ELECTRIC ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY, CLEVELAND PUBLIC POWER (CPP).

THIS ITEM OF WORK SHALL INCLUDE ALL COSTS OF EQUIPMENT, MATERIALS AND LABOR TO CONSTRUCT A POWER SERVICE AS DETAILED IN THE PLANS.

THE SERVICE WILL BE GROUND MOUNTED CONTROL CENTERS FOR ODOT CIRCUITS. CONTROL CENTERS "SM", "FR", "SC", AND "ES" WILL BE NEW ODOT CONTROL CENTERS.

THE SERVICE WILL BE POLE MOUNTED CABINET FOR EXISTING CPP CIRCUITS. CONTROL CENTERS "FF", "SV", AND "B" WILL REQUIRE NEW CABINETS MOUNTED ON EXISTING CPP POLES. REUSE THE EXISTING CABINET FOR CONTROL CENTER "VE". THE PLAN INTENT IS TO REUSE THE SERVICE POLES IN THE SAME LOCATION.

IN ADDITION TO THE REQUIREMENTS OF 625.18, THIS ITEM SHALL INCLUDE ALL COSTS OF PROVIDING POWER SERVICE FROM CPP POLE MOUNTED TRANSFORMER ON THE SERVICE POLE TO A GROUND MOUNTED POWER SERVICE INCLUDING TWO 20 AMP BY-PASS SWITCH COMPLETE WITH WIRE AND CONDUITS. CLEVELAND PUBLIC POWER WILL MAKE THE FINAL CONNECTION TO THE SWITCH FOR MANUAL BYPASS CONTROL OR THEIR LIGHTING CONTROLLER. ANY TRANSFORMATIONS COSTS THAT ARE INCURRED BY CPP WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING, UNDERGROUND WIRING, UNDERGROUND CONDUIT, AND ALL COSTS OF EXTENDING POWER FROM THE EXISTING SERVICE POLE TO THE ODOT CONTROL CENTER.

SERVICE CONDUIT LOCATIONS, CONDUIT TYPES AND TERMINATION HEIGHTS ON THE SERVICE POLE SHALL BE AS DIRECTED BY CPP. THE CONTRACTOR SHALL ARRANGE WITH UTILITY COMPANY FOR A FIELD INSPECTION OF SERVICE LOCATION PRIOR TO HIS INSTALLATION OF THE SERVICE EQUIPMENT.

THE CONTROL CENTERS SHALL CONTAIN THE CIRCUITS IN ONE CABINET. THE CABINET SHOULD BE SIZED ADEQUATELY TO HOUSE THE PROPER NUMBER (2 MIN.) OF - 3" CONDUITS. ODOT CABINETS SHALL BE STENCILED "ODOT"

THE EXISTING CPP CIRCUITS SHALL HAVE THEIR OWN CABINETS AND PLACED ON SERVICE POLES. THESE CABINET SHALL BE STENCILED "CPP". THE ODOT CABINET SHALL HAVE AN ODOT KEYED LOCK AND THE CPP CABINET SHALL HAVE A CPP KEYED LOCK.

ALL CONTROL CENTERS SHALL HAVE CONCRETE WORK PADS, AS DETAILED IN THE PLANS. ALL CONTROL CENTERS (EXCEPT CC "FR") SHALL HAVE A (3' X 3' X 6" DEEP) CONCRETE PADS WITHOUT FENCE. CONTROL CENTER "FR" SHALL HAVE A (10' X 10' X 6" DEEP) CONCRETE PAD WITH CHAIN LINK FENCE AND A GATE. ALL CONCRETE PADS, FENCE AND GATE SHALL BE INCLUDED IN THIS ITEM.

THIS ITEM OF WORK SHALL INCLUDE ALL COSTS OF EQUIPMENT, MATERIALS AND LABOR TO CONSTRUCT A POWER SERVICE AS DETAILED IN THE PLANS. PAYMENT SHALL BE INCLUDED IN 625 - POWER SERVICE, AS PER PLAN.

Calculated BJK Checked

Lighting Notes

CUY-90/490-13.41/0.00

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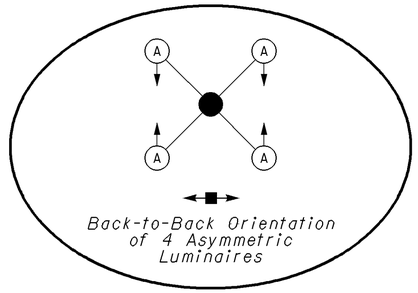
LEGEND--EXISTING

- BRIDGE MOUNTED SIGN SUPPORT
- CANTILEVER SIGN SUPPORT
- TRUSS SIGN SUPPORT
- PULL BOX
- CIRCUIT CABLE
- UNDERPASS LIGHT
- LIGHT POLE (NO WORK)
- COMBINATION SIGN & LIGHT SUPPORT
- COMBINATION OF SIGN, SIGNAL, & LIGHT SUPPORT
- LIGHT POLE & FOUNDATION REMOVED
- COMBINATION SIGN & LIGHT SUPPORT-- REMOVE LUMINAIRE & BRACKET ARM ONLY
- COMBINATION SIGN, SIGNAL, & LIGHT SUPPORT-- REMOVE LUMINAIRE & BRACKET ARM ONLY
- CONTROL CENTER
- UTILITY POLE

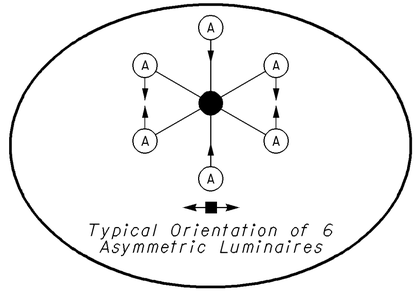
LEGEND--PROPOSED

- 1½" DUCT CABLE IN TRENCH, NO. 4 AWG (UNLESS NOTED)
- DISTRIBUTION CABLE EXISTING IN RACEWAY OR METAL CONDUIT, NO. 4 AWG (UNLESS NOTED)
- DISTRIBUTION CABLE IN 3" CONDUIT, 713.04 JACKED OR DRILLED UNDER PAVEMENT, NO. 4 AWG (UNLESS NOTED)
- PULL BOX, 713.08, 18" OR 24"
- PULLBOX, 713.08, 18" OR 24", REMOVED AND REPLACED
- CONTROL CENTER
- CONTROL CENTER REMOVED AND REPLACED
- LIGHT TOWER, ASYMMETRIC, 4 OR 6 LUMINAIRES, 400W HIGH PRESSURE SODIUM, 713.21, 480V
- LIGHT TOWER, SYMMETRIC, 6 LUMINAIRES, 400W HIGH PRESSURE SODIUM, 713.21, 480V
- LIGHT TOWER, ASYMMETRIC 4 LUMINAIRES, 400W HIGH PRESSURE SODIUM, 713.21, 480V

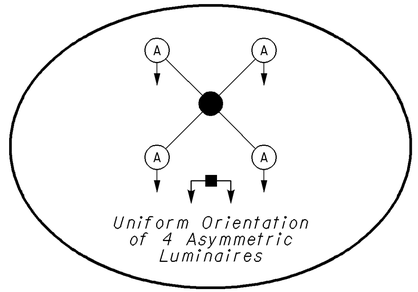
LUMINAIRE DETAILS



Back-to-Back Orientation of 4 Asymmetric Luminaires



Typical Orientation of 6 Asymmetric Luminaires



Uniform Orientation of 4 Asymmetric Luminaires

Indicates "street side" orientation of luminaire.

"A2/A2" indicates 2 asymmetrics in each direction.

"A3/A3" indicates 3 asymmetrics in each direction.

Calculated BMB Checked

Lighting Notes

CUY-90/490-13.41/0.00

From	Station	To	Station										625	625	625	625	625	625	625	625	625	625	625	625			625	625	625
													Cable Splicing Kit	Light Tower, BBBBBB90	Light Tower, BBBBBB100	Light Tower Foundation, 36"x25' Deep, As Per Plan	Light Tower Foundation, Misc:Median Mounted, 36"x25' Deep	No. 4 AWG 5000 Volt Distribution Cable	1½" Duct Cable with 3 No. 4 AWG 5000 Volt Cables	Conduit, 3", 713.04	Conduit, Jacked or Drilled Under Pavement, 3"	Conduit Cleaned and Cables Removed	Trench, 24" Deep	Pull Box, 713.08, 24"	Ground Rod			Power Service, As Per Plan	Luminaire, Symmetric, 400 Watt High Pressure Sodium, 713.21, 480 Volt	Luminaire, Asymmetric, 400 Watt High Pressure Sodium, 713.21, 480 Volt
													Each	Each	Each	Each	Each	LF	LF	LF	LF	LF	LF	Each	Each			Each	Each	Each
SMA-1	867+25													1		1														
SMA-1	867+25	PB SMA-7	868+85																170				160							6
PB SMA-7	868+85												3											1						
OH SIGN #1	868+75	PB SMA-8	868+85																SS				SS							
PB SMA-8	868+85												3											1						
PB SMA-8	868+85	PB SMA-7	868+85															420			130									
PB SMA-7	868+85	SMA-2	872+05																330				320							
SMA-2	872+05													1		1									2					6
SMA-2	872+05	SMA-3	876+60																465				455							
SMA-3	876+60													1		1									2					6
SMA-3	876+60	PB SMA-6	876+60															255			75									
PB SMA-6	876+60												3											1						
PB SMA-6	876+60	PB SMA-2	881+34.5																485				475							
PB SMA-2	881+34.5												3											1						
OH A50-4	47+13	EX. PB SMA-4	47+08																SS				SS							
EX. PB SMA-4	47+08												3											EX.						
EX. PB SMA-4	47+08	PB SMA-3	881+19																90			80								
PB SMA-3	881+19												3											1						
OH BRIDGE SIGN	882+29	PB SMA-5	882+29																SS				SS							
PB SMA-5	882+29												3											1						
PB SMA-5	882+29	PB SMA-3	881+19																120				110							
PB SMA-3	881+19	SMA-4	881+31.5															240			70									
SMA-4	881+31.5													1			1								2					6
SMA-4	881+31.5	PB SMA-2	881+34.5															255			75									
PB SMA-2	881+34.5	PB SMA-1	882+05																80				70							
PB SMA-1	882+05												3											1						
PB SMA-1	882+05	OH BRIDGE SIGN	881+85																SS				SS							
PB SMA-1	882+05	PB SM3	883+50																155				145							
PB SM3	883+50												6											1						
PB SM3	883+50	PB SM2	1+26																130				55							
PB SM2	1+26												6											1						
PB SM2	1+26	CC SM	1+36																50	40			15							
CC SM	1+36																										1			
PB SM2	1+26	PB SM1	1+28															180			50									
PB SM1	1+28												3											1						
PB SM1	1+28	EX. PB SM4	0+54																90				80							
EX. PB SM4	0+54												3											EX.						
EX. PB SM4	0+54	OH A50-2	43+72																SS				SS							
PB SM1	1+28	EX. SERVICE POLE #B																	70				60							
PB SM3	883+50	PB SMB-1	886+69.5																330				320							
PB SMB-1	886+69.5												3											1						
PB SMB-1	886+69.5	SMB-1	886+66.5															255			75									
SMB-1	886+66.5													1			1								2					6
PB SMB-1	886+69.5	PB SMB-2	887+55																95				85							
PB SMB-2	887+55												3											1						
PB SMB-2	887+55	OH SIGN #2	887+65																SS				SS							
PB SMB-2	887+55	PB SMB-3	891+33.5																390				380							
PB SMB-3	891+33.5												3											1						
PB SMB-3	891+33.5	PB SMB-4	893+18																195				185							
PB SMB-4	893+18												3											1						
PB SMB-4	893+18	PB SMB-5	894+55																140				130							
PB SMB-5	894+55												3											1						
PB SMB-5	894+55	OH SIGN #3	894+45																SS				SS							
PB SMB-4	893+18	EX PB SMB-6	47+90																240				230							
EX PB SMB-6	47+90												3											EX.						
EX PB SMB-6	47+90	OH A52-7	47+95																SS				SS							
PB SMB-3	891+33.5	SMB-2	891+30.5															270			80									
SMB-2	891+30.5														1		1								2				6	
SMB-2	891+30.5	PB SMB-7	891+33.5															255			75									
PB SMB-7	891+33.5												3											1						
SS-Denotes duct cable and trench included in Item 625 Sign Service.																														
Totals Carried to General Summary:													63	5	1	3	3	2130	3625	40	630	80	3275	16	12			1	6	30

Calculated BJK Checked BMB

Lighting Sub-Summary

CUY-90/490-13.41/0.00

From	Station	To	Station									625 Connector Kit, Type V11B Each	625 Cable Splicing Kit Each	625 Light Tower, BBBB90 Each	625 Light Tower, BBBBBB90 Each	625 Light Tower Foundation, Misc:Median Mounted, 36"x25' Deep Each	625 No. 4 AWG 5000 Volt Distribution Cable LF	625 No. 2 AWG 5000 Volt Distribution Cable LF	625 1½" Duct Cable with 3 No. 4 AWG 5000 Volt Cables LF	625 1½" Duct Cable with 3 No. 4 AWG 5000 Volt Cables LF	625 Conduit, Jacked or Drilled Under Pavement, 3" LF	625 Conduit Cleaned and Cables Removed LF	625 Trench, 24" Deep LF	625 Pull Box, 7/3.08, 24" Each	625 Ground Rod Each				625 Power Service, As Per Plan Each	625 Luminaire, Asymmetric, 400 Watt High Pressure Sodium, 7/3.21, 480 Volt Each
PB SMB-7	891+33.5	PB SMB-8	893+65																240				230							
PB SMB-8	893+65												3											1						
PB SMB-8	893+65	PB SMB-9	93+60																60				50							
PB SMB-9	93+60												3											1						
PB SMB-9	93+60	PB SMB-10	93+60														165				45									
PB SMB-10	93+60												3											1						
PB SMB-10	93+60	PB SMB-11	96+00																250				240							
PB SMB-11	96+00												3											1						
PB SMB-11	96+00	OH SIGN #4	896+38																SS				SS							
PB SMB-11	96+00	SMB-3	896+03.5														360				110									
SMB-3	896+03.5														1	1									2					6
PB SMB-10	93+60	PB SMB-13	90+29																340				330							
PB SMB-13	90+29												3											1						
PB SMB-13	90+29	EX PB SMB-14	52+02														300				90									
EX PB SMB-14	52+02	OH A51-7	52+07																SS				SS							
FR-1	902+76.5														1	1									2					6
FR-1	902+76.5	PB FR-11	902+79.5														300				90									
PB FR-11	902+79.5												3											1						
PB FR-11	902+79.5	PB FR-10	904+91																220				210							
PB FR-10	904+91												3											1						
PB FR-10	904+91	OH SIGN #5	905+00																SS				SS							
PB FR-10	904+91	PB FR-9	906+05																125				115							
PB FR-9	906+05												3											1						
PB FR-9	906+05	EX. PB FR-8	906+64														210					60								
EX. PB FR-8	906+64											3												EX.						
EX. PB FR-8	906+64	EX. PB FR-7	907+18														195					55								
EX. PB FR-7	907+18											3												EX.						
EX. PB FR-7	907+18	PB FR-6	907+73														195					55								
PB FR-6	907+73												3											1						
PB FR-6	907+73	PB FR-5	908+08.5																45				35							
PB FR-5	908+08.5												3											1						
PB FR-5	908+08.5	FR-2	908+05.5															300				90								
FR-2	908+05.5													1		1									2					4
FR-2	908+05.5	PB FR-3	908+08.5															300				90								
PB FR-3	908+08.5												3											1						
PB FR-3	908+08.5	PB FR-2	907+72																	50			40							
PB FR-2	907+72												3											1						
PB FR-2	907+72	PB FR-1	906+07															525				165								
PB FR-1	906+07												3											1						
PB FR-1	906+07	CC FR	54+25															300				90								
CC FR	54+25																												1	
PB FR-3	908+08.5	PB FR-4	909+08																110				100							
PB FR-4	909+08												3											1						
PB FR-4	909+08	OH SIGN #6	909+25																SS				SS							
PB FR-5	908+08.5	PB FR-12	913+32.5																	535			525							
PB FR-12	913+32.5												3											1						
PB FR-12	913+32.5	FR-3	913+35.5														300				90									
FR-3	913+35.5													1		1									2					4
PB FR-12	913+32.5	PB FR-13	917+30																	410			400							
PB FR-13	917+30												3											1						
PB FR-13	917+30	OH SIGN #7	917+22																SS				SS							
PB FR-13	917+30	PB FR-14	919+20																	200			190							
PB FR-14	919+20												3											1						
PB FR-14	919+20	PB FR-15	919+24															150			40									
PB FR-15	919+24												3											1						
PB FR-15	919+24	FR-4	919+01.5														270				80									
FR-4	919+01.5													1		1									2					4
PB FR-15	919+24	PB FR-16	923+97.5																485				475							
PB FR-16	923+97.5												3											1						
SS-Denotes duct cable and trench included in Item 625 Sign Service.																															
Totals Carried to General Summary:												6	57	3	2	5	2295	1575	1875	1195	725	425	2940	19	10				1	24

Calculated BJK Checked BMB

Lighting Sub-Summary

CUY-90/490-13.41/0.00

Lighting Sub-Summary

Calculated BJK Checked BMB

CUY-90/490-13.41/0.00

From	Station	To	Station							625 Connector Kit, Type II	625 Connector Kit, Type VIIB	625 Cable Splicing Kit	625 Light Tower, BBBB90	625 Light Tower, BBBBBB90	625 Light Tower, BBBBBB100	625 Light Tower Foundation, 36"x25' Deep, As Per Plan	625 Light Tower Foundation, Misc:Median Mounted, 36"x25' Deep	625 No. 4 AWG 5000 Volt Distribution Cable	625 1½" Duct Cable with 3 No. 4 AWG 5000 Volt Cables	625 Conduit, Jacked or Drilled Under Pavement, 3"	625 Conduit Cleaned and Cables Removed	625 Trench, 24" Deep	625 Pull Box, 713.08, 24"	625 Median Pull Box	625 Ground Rod				625 Luminaire, Symmetric, 400 Watt High Pressure Sodium, 713.21, 480 Volt	625 Luminaire, Asymmetric, 400 Watt High Pressure Sodium, 713.21, 480 Volt
										Each	Each	Each	Each	Each	Each	Each	Each	LF	LF	LF	LF	LF	Each	Each	Each				Each	Each
PB FR-16	923+97.5	FR-5	924+00.5															270		80										
FR-5	924+00.5													1			1								2					6
FR-5	924+00.5	PB FR-18	923+66															300		90										
PB FR-18	923+66											3												1						
PB FR-18	923+66	PB FR-19	923+63															120		30										
PB FR-19	923+63											3												1						
PB FR-19	923+63	PB FR-20	23+62															120		30										
PB FR-20	23+62											3												1						
PB FR-20	23+62	PB FR-21	25+25																175			165								
PB FR-21	25+25											3												1						
PB FR-21	25+25	PB FR-22	25+25															120		30										
PB FR-22	25+25											3												1						
PB FR-22	25+25	OH SIGN #9	925+15																SS			SS								
PB FR-22	25+25	PB FR-23	27+90																280			270								
PB FR-23	27+90											3												1						
PB FR-23	27+90	OH SIGN	27+95																SS			SS								
PB FR-23	27+90	EX. PB FR-25	49+70																180			170								
EX. PB FR-25	46+30											3											EX.							
EX. PB FR-25	46+30	OH A59-4	46+35																SS			SS								
PB FR-16	923+97.5	PB FR-17	924+81																95			85								
PB FR-17	924+81	OH SIGN #10	924+75																SS			SS								
PB FR-17	924+81	PB FR-26	929+23.5																455			445								
PB FR-26	929+23.5											3												1						
PB FR-26	929+23.5	FR-6	929+26.5															285		85										
FR-6	929+26.5													1			1								2					6
PB FR-26	929+23.5	OH BRIDGE SIGN	929+31																SS			SS								
OH A58-3	48+85	EX. PB SC-14	48+80																SS			SS								
EX. PB SC-14	48+80											3											EX.							
EX. PB SC-14	48+80	SC-1	928+30																105			95								
SC-1	928+30												1			1									2					4
SC-1	928+30	PB SC-10	34+50																130			120								
PB SC-10	34+50											3												1						
OH A58-11/12	53+00	PB SC-12	5+90																SS			SS								
PB SC-12	5+90											3												1						
PB SC-12	5+90	PB SC-11	34+50																120			110								
PB SC-11	34+50											3												1						
PB SC-11	34+50	PB SC-10	34+50															135			35									
PB SC-10	34+50	PB SC-9	31+89																250			240								
PB SC-9	31+89											3												1						
PB SC-9	31+89	PB SC-8	31+95															150		40										
PB SC-8	31+95											3												1						
PB SC-8	31+95	PB SC-7	929+25															300		90										
PB SC-7	929+25									3															1					
PB SC-7	929+25	SC-2	931+69.5															750			245									
SC-2	931+69.5													1			1								2					6
SC-2	931+69.5	SC-3	937+09.5															1,635			540									
SC-3	937+09.5														1		1								2				6	
SC-3	937+09.5	EX. PB SC-3	937+41															111			32									
EX. PB SC-3	937+41										3													EX						
EX. PB SC-3	937+41	SC-4	940+57.5															966			317									
SC-4	940+57.5														1		1								2				6	
EX. PB SC-3	937+41	PB SC-4	937+41															210			60									
PB SC-4	937+41											3												1						
PB SC-4	937+41	PB SC-5	13+96																60			50								
PB SC-5	13+96											3												1						
PB SC-5	13+96	EX. PB SC-6	13+92															240			70									
EX. PB SC-6	13+92										3													EX						
EX. PB SC-6	13+92	EX. PB SC-16	932+06															1,170			380									
EX. PB SC-16	932+06									3														EX						
EX. PB SC-16	932+06	OH SIGN #11	932+06															SS			SS									
SS-Denotes duct cable and trench included in Item 625 Sign Service.																														
Totals Carried to General Summary:										6	6	48	1	3	2	1	5	6882	1850	475	1679	1750	14	1	12				6	28

Lighting Sub-Summary

From	Station	To	Station	Connector Kit, Type V11B	Cable Splicing Kit	Light Tower, BBBB100	Light Tower, BBBBBB100	Light Tower Foundation, 36"x25' Deep, As Per Plan	Light Tower Foundation, Misc.:Median Mounted, 36"x25' Deep	No. 4 AWG 5000 Volt Distribution Cable	1½" Duct Cable with 3 No. 4 AWG 5000 Volt Cables	Conduit, Jacked or Drilled Under Pavement, 3"	Conduit Cleaned and Cables Removed	Trench, 24" Deep	Pull Box, 713.08, 24"	Median Pull Box	Ground Rod	Power Service, As Per Plan	Luminaire, Misc.: Underpass, Post Mounted	Luminaire, Asymmetric, 400 Watt High Pressure Sodium, 713.21, 480 Volt
				625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625
				Each	Each	Each	Each	Each	Each	LF	LF	LF	LF	LF	Each	Each	Each	Each	Each	Each
EX. PB SC-6	13+92	PB SC-14	9+33								390			380						
PB SC-14	9+33				3										1					
PB SC-14	9+33	PB SC-15	9+33							150		40								
PB SC-15	9+33				3										1					
PB SC-15	9+33	SC-5	9+33								50			40						
SC-5	9+33					1		1									2			4
EX. PB SC-3	937+41	PB SC-2	937+41							165			45							
PB SC-2	937+41				3										1					
PB SC-2	937+41	PB SC-1	23+50							375			115							
PB SC-1	23+50				3										1					
PB -SC-1	23+50	CC SC	23+60							105			25							
CC SC	23+60																	1		
IB-1	943+40																		1	
IB-2	943+64																		1	
IB-3	943+88																		1	
IB-4	944+12																		1	
IB-5	944+36																		1	
PB ES-7	947+10				3										1					
PB ES-7	947+10	ES-1	12+05								260			250						
ES-1	12+05					1		1									2			4
PB ES-7	947+10	PB ES-6	949+60								260			250						
PB ES-6	949+60				3										1					
PB ES-6	949+60	EX. PB ES-5	949+60							195		55								
EX. PB ES-5	949+60			3												EX				
EX. PB ES-5	949+60	ES-2	949+79.5							90			20							
ES-2	949+79.5						1		1								2			6
ES-2	949+79.5	ES-3	953+94.5							1,275			415							
ES-3	953+94.5						1		1								2			6
EX. PB ES-5	949+60	PB ES-4	949+58							165		45								
PB ES-4	949+58				3										1					
IB-18	943+88																		1	
IB-17	944+12																		1	
IB-16	944+36																		1	
IB-15	944+60																		1	
IB-14	944+84																		1	
PB ES-4	949+58	PB ES-3	949+57.5								20			10						
PB ES-3	949+57.5				3										1					
PB ES-3	949+57.5	PB ES-2	14+77								95			85						
PB ES-2	14+77				3										1					
PB ES-2	14+77	PB ES-1	14+74							165		45								
PB ES-1	14+74				3										1					
PB ES-1	14+74	CC ES	14+74								20			10						
OH Br Sign	14+86	PB ES-1	14+74								SS			SS						
CC ES	14+74																	1		
Proposed CPP Control Centers																				
CC FF	South Marg'l Rd 7																	1		
CC SV	12+28 Scranton																	1		
CC B	12+48 W 14th																	1		
SS-Denotes duct cable and trench included in Item 625 Sign Service.																				
Totals Carried to General Summary:				3	30	2	2	2	2	2685	1095	185	620	1025	10		8	5	10	20

Calculated BJK Checked BMB

CUY-90/490-13.41/0.00

*Denotes existing item to remain and become CPP maintenance.

**Denotes pilaster.

***Denotes wall-mounted pole.

Mark	Station	Location	Side	202 Light Pole Removed, As Per Plan Each	202 Light Pole Removed for Storage Each	202 Light Pole Foundation Removed, As Per Plan Each	202 Luminaire Removed for Storage Each	202 Luminaire Removed Each	202 Power Service Removed, As Per Plan Each	202 Disconnect Existing Circuit, As Per Plan Each
CC WH	863+50	IR 90	RT							1
IWH-1	865+40	IR 90EB	RT	1		1		1		
IWH-2	867+75	IR 90EB	RT	1		1		1		
IWH-3	869+75	IR 90EB	RT	1		1		1		
IWH-4	872+15	IR 90	CL	1		1		2		
IWH-5	874+30	IR 90	CL	1		1		2		
IWH-6	877+80	IR 90	RT	1		1		1		
IWH-7	71+95	RAMP 28	RT	1		1		1		
IWH-8	74+20	RAMP 28	RT	1		1		1		
IWH-9	76+50	RAMP 28	RT	1		1		1		
IWH-10	78+70	RAMP 28	RT	1		1		1		
IWH-11	80+95	RAMP 28	RT	1		1		1		
2WH-1*	41+81	W.53rd	RT							
2WH-2*	41+52	W.53rd	LT							1
2WH-3	865+55	IR 90WB	LT	1		1		1		
2WH-4	867+80	IR 90WB	LT	1		1		1		
2WH-5	869+95	IR 90WB	LT	1		1		1		
2WH-6	872+00	IR 90WB	LT	1		1		1		
2WH-7	75+00	RAMP 27	LT	1		1		1		
2WH-8	77+25	RAMP 27	LT	1		1		1		
2WH-9	877+80	IR 90WB	LT	1		1		1		
2WH-10	79+50	RAMP 27	LT	1		1		1		
CC SM	43+62	W. 44th	RT						1	
A50-1*	43+72	W. 44th	RT							
A50-2*	43+72	W. 44th	RT							
A50-3*	44+85	W. 44th	LT							
A50-4*	47+13	W. 44th	LT							1
A50-5	81+75	RAMP 27	LT	1		1		1		
A50-6, A50-7	881+21	IR 90	CL	1				2		
A50-8	883+13	IR 90	LT	1		1		1		
A50-9, A50-10	884+79	IR 90	CL	1				2		
A50-11, A50-12	888+22	IR 90	CL	1				2		
A50-13	883+10	IR 90	RT	1		1		1		
A51-1*	46+00	W. 44th	RT							
A51-2*	1+16	N. MARGINAL	LT							
A51-3*	2+90	N. MARGINAL	LT							
A51-4*	4+50	N. MARGINAL	LT							
A51-5*	6+10	N. MARGINAL	LT							
A51-6*	7+70	N. MARGINAL	LT							
A51-7*	52+07	W. 41st	LT							
A52-1*	2+07	S. MARGINAL	RT							
A52-2*	3+81	S. MARGINAL	RT							
A52-3*	5+55	S. MARGINAL	RT							
A52-4*	7+40	S. MARGINAL	RT							
PULLBOX	47+50	W. 41st	RT							1
A52-5	91+77	RAMP 30	RT	1		1		1		
A52-6	93+58	RAMP 30	RT	1		1		1		
A52-7*	47+95	W. 41st	RT							
A52-8*	49+41	W. 41st	LT							
A52-9*	50+87	W. 41st	RT							
A53-7	90+73	RAMP 29	LT	1		1		1		
A53-6	92+40	RAMP 29	LT	1		1		1		
A53-5	94+15	RAMP 29	LT	1		1		1		
A53-4	896+45	IR 90	LT	1		1		1		
A53-3**	899+01	IR 90	LT	1				1		
A53-2**	902+13	IR 90	LT	1				1		
A53-1	905+25	IR 90	LT	1		1		1		
CC FV	906+45	FULTON RD.	LT						1	1
Totals, This Column:				34		29		39	2	5

Mark	Station	Location	Side	202 Light Pole Removed, As Per Plan Each	202 Light Pole Removed for Storage Each	202 Light Pole Foundation Removed, As Per Plan Each	202 Luminaire Removed for Storage Each	202 Luminaire Removed Each	202 Power Service Removed, As Per Plan Each	202 Disconnect Existing Circuit, As Per Plan Each
A55-7, A55-8	891+62	IR 90	CL	1				2		
A55-5, A55-6	895+05	IR 90	CL	1				2		
A55-4	95+34	RAMP 30	RT	1		1		1		
A55-3**	897+45	IR 90	RT	1				1		
A55-2**	900+57	IR 90	RT	1				1		
A55-1	903+69	IR 90	RT	1		1		1		
CC FV	906+45	IR 90	LT							1
CC FV	906+45	IR 90	LT							1
A54-1	908+37	IR 90	LT	1		1		1		
A54-2	911+49	IR 90	LT	1		1		1		
A54-3	914+55	IR 90	LT	1		1		1		
A54-4	17+38	RAMP 31A	LT	1		1		1		
A54-5	19+88	RAMP 31A	LT	1		1		1		
A54-6	22+32	RAMP 31A	LT	1		1		1		
CC FV	906+45	IR 90	LT							1
A56-1**	906+81	IR 90	RT	1				1		
A56-2	909+93	IR 90	RT	1		1		1		
A56-3	913+05	IR 90	RT	1		1		1		
A56-4	916+00	IR 90	RT	1		1		1		
A56-5	918+64	IR 90	RT	1		1		1		
PULLBOX	920+35	RAMP 32	RT							1
A57-1	20+60	RAMP 32	RT	1		1		1		
A57-2	22+55	RAMP 32	RT	1		1		1		
A57-3*	50+98	WADE AVE.	RT							
A57-4*	52+30	WADE AVE.	RT							
A57-5*	54+05	WADE AVE.	RT							
A57-6	55+72	WADE AVE.	RT							
A57-7	921+12	IR 90	RT	1				1		
A57-8	923+52	IR 90	RT	1		1		1		
A57-9	926+22	IR 90	RT	1		1		1		
A57-10	928+92	IR 90	RT	1		1		1		
A57-11	930+60	IR 90	RT	1		1		1		
						1				
CC VE*		W. 25th								
A59-12	24+24	RAMP 31A	LT	1				1		
A59-13	26+15	RAMP 31A	LT	1		1		1		
A59-9,10	925+33	IR 90	LT	1		1		2		
A59-11	927+57	IR 90	LT	1		1		1		
A59-7	29+10	RAMP 31	LT	1		1		1		
A59-8	26+98	RAMP 31	LT	1		1		1		
A59-6*	55+57	VEGA AVE.	RT			1				
A59-14*	53+80	VEGA AVE.	RT							
A59-1*	27+20	W. 25th	RT							
A59-2*	45+45	W. 25th	RT							
A59-3*	43+75	W. 25th	RT							
A59-4*	46+35	W. 25th	LT							1
A59-5*	44+55	W. 25th	LT							
A58-1*	48+10	W. 25th	LT							
A58-2*	49+75	W. 25th	LT							
A58-3*	48+85	W. 25th	RT							1
A58-4*	50+87	W. 25th	RT					1		
A58-5	36+55	RAMP 31	LT	1				1		
A58-6	35+20	RAMP 31	LT	1		1		1		
A58-7	33+95	RAMP 31	LT	1		1		1		
A58-8	32+45	RAMP 31	LT	1		1		1		
A58-9,10	930+60	IR 90	LT	1		1		2		
A58-11,12*	53+00	BARBER AVE.	RT					1		
Totals, This Column:				35		29		41		6
Totals, Previous Column:				34		29		39	2	5
Totals Carried to General Summary:				69		58		80	2	11

Calculated BJK Checked BMB

Lighting Removal Sub-Summary

CUY-90/490-13.41/0.00

*Denotes existing item to remain and become CPP maintenance.

**Denotes pilaster.

***Denotes wall-mounted pole.

Mark	Station	Location	Side	202 Light Pole Removed, As Per Plan (Each)	202 Light Pole Removed for Storage (Each)	202 Light Pole Foundation Removed, As Per Plan (Each)	202 Luminaire Removed for Storage (Each)	202 Luminaire Removed (Each)	202 Power Service Removed, As Per Plan (Each)	202 Disconnect Existing Circuit, As Per Plan (Each)	
CC SV	12+28	Scranton	Rt						1	5	
3SV-4	929+15	IR 490	CL	1				2			
3SV-3	931+45	IR 490	CL	1				2			
3SV-2	933+73	IR 490	CL	1				2			
3SV-1	935+92	IR 490	CL	1				2			
3SV-5	938+40	IR 490	CL	1				2			
3SV-6	940+66	IR 490	CL	1				2			
3SV-7	942+90	IR 490	CL	1				2			
3SV-13***	928+97	IR 490	RT	1				1			
3SV-12***	930+29	IR 490	RT	1				1			
3SV-11***	931+55	IR 490	RT	1				1			
3SV-10***	932+87	IR 490	RT	1				1			
3SV-9	2+99	LANE W-S	RT	1		1		1			
2SV-1	13+77	LANE W-N	LT	1		1		1			
2SV-7	15+40	LANE W-N	LT	1		1		1			
2SV-8	17+03	LANE W-N	RT	1		1		1			
2SV-9**	18+60	LANE W-N	RT	1				1			
2SV-10**	20+26	LANE W-N	RT	1				1			
2SV-11**	22+93	LANE W-N	RT	1				1			
2SV-12	24+97	LANE W-N	RT	1		1		1			
2SV-13	26+84	LANE W-N	RT	1		1		1			
2SV-14	28+81	LANE W-N	RT	1		1		1			
2SV-15	30+78	LANE W-N	RT	1		1		1			
2SV-16	32+41	LANE W-N	RT	1		1		1			
2SV-2	5+78	LANE W-S	RT		1	1	1				
2SV-6	7+64	LANE W-S	RT		1	1	1				
2SV-5	9+54	LANE W-S	RT		1	1	1				
2SV-4	11+47	LANE W-S	RT	1		1		1			
2SV-3	13+34	LANE W-S	RT	1		1		1			
4SV-6	928+87	IR 490	LT	1		1		1			
4SV-5***	30+69	LANE N-W	RT	1				1			
4SV-4***	28+76	LANE N-W	RT	1				1			
4SV-3***	26+83	LANE N-W	RT	1				1			
4SV-2***	24+89	LANE N-W	RT	1				1			
4SV-1***	23+51	LANE N-W	RT	1				1			
1SV-1	21+89	LANE N-W	RT		1	1	1				
1SV-2	20+09	LANE N-W	RT		1	1	1				
1SV-3	18+29	LANE N-W	RT		1	1	1				
1SV-4	16+49	LANE N-W	RT		1	1	1				
1SV-5	14+73	LANE N-W	RT	1		1		1			
1SV-6	12+94	LANE N-W	RT	1		1		1			
1B-1	943+40	IR 490	RT				1				
1B-2	943+64	IR 490	RT				1				
1B-3	943+88	IR 490	RT				1				
1B-4	944+12	IR 490	RT				1				
1B-5	944+36	IR 490	RT				1				
1B-6	944+60	IR 490	RT								
1B-7	944+84	IR 490	RT								
1B-20	943+40	IR 490	LT								
1B-19	943+64	IR 490	LT								
1B-18	943+88	IR 490	LT				1				
1B-17	944+12	IR 490	LT				1				
1B-16	944+36	IR 490	LT				1				
1B-15	944+60	IR 490	LT				1				
1B-14	944+84	IR 490	LT				1				
1B-8	945+19	IR 490	CL	1				2			
1B-9	947+33	IR 490	CL	1				2			
1B-10	949+74	IR 490	CL	1				2			
1B-11	951+86	IR 490	CL	1				2			
1B-12	954+02	IR 490	CL	1				2			
Totals, This Column:				38	7	21	17	50	1	5	

Mark	Station	Location	Side	202 Light Pole Removed, As Per Plan (Each)	202 Light Pole Removed for Storage (Each)	202 Light Pole Foundation Removed, As Per Plan (Each)	202 Luminaire Removed for Storage (Each)	202 Luminaire Removed (Each)	202 Power Service Removed, As Per Plan (Each)	202 Disconnect Existing Circuit, As Per Plan (Each)	
1B-13	956+38	IR 490	CL	1				2			
1B-21	18+55	LANE S-E	RT	1		1		1			
1B-22	20+29	LANE S-E	RT	1		1		1			
CC- B	14+74	LANE E-S	RT						1	1	
2B-1	26+81	LANE E-S	RT	1		1		1			
2B-2	25+18	LANE E-S	RT	1		1		1			
2B-3	23+55	LANE E-S	RT	1		1		1			
2B-4**	21+98	LANE E-S	RT	1				1			
2B-5**	19+59	LANE E-S	RT	1				1			
2B-6**	17+82	LANE E-S	RT	1				1			
2B-7	15+92	LANE E-S	RT	1		1		1			
2B-8	14+19	LANE E-S	RT	1		1		1			
2B-9	12+40	LANE E-S	RT	1		1		1			
2B-10	10+61	LANE E-S	RT	1		1		1			
2B-11	8+80	LANE E-S	RT	1		1		1			
2B-12	957+11	IR 90	LT	1		1		1			
7C-1	0+46	LANE S-E	RT								
7C-2	2+47	LANE S-E	RT								
7C-3	4+18	LANE S-E	RT								
7C-4	5+80	LANE S-E	RT								
EX. PB	6+40	LANE S-E	RT							1	
7C-5	8+25	LANE S-E	RT	1		1		1			
7C-6	9+96	LANE S-E	RT	1		1		1			
7C-7	11+70	LANE S-E	RT	1		1		1			
7C-8	13+41	LANE S-E	RT	1		1		1			
7C-9	15+12	LANE S-E	RT	1		1		1			
7C-10	16+83	LANE S-E	RT	1		1		1			
7C-11	4+46	LANE S-W	LT	1		1		1			
7C-12	6+30	LANE S-W	LT		1	1	1				
7C-13	8+15	LANE S-W	LT	1		1		1			
7C-14	9+97	LANE S-W	LT	1		1		1			
7C-15**	11+86	LANE S-W	LT	1				1			
7C-16**	14+10	LANE S-W	LT		1		1				
7C-17	15+77	LANE S-W	LT	1		1		1			
7C-18	17+42	LANE S-W	LT	1		1		1			
7C-19	19+07	LANE S-W	LT	1		1		1			
5B-8	28+44	LANE E-S	LT	1		1					
5B-9	30+09	LANE E-S	LT	1		1		1			
Totals, This Column:				30	2	26	2	30	1	2	
Totals, Previous Column:				38	7	21	17	50	1	5	
Totals Carried to General Summary:				68	9	47	19	80	2	7	

Calculated BJK Checked BMB

Lighting Removal Sub-Summary

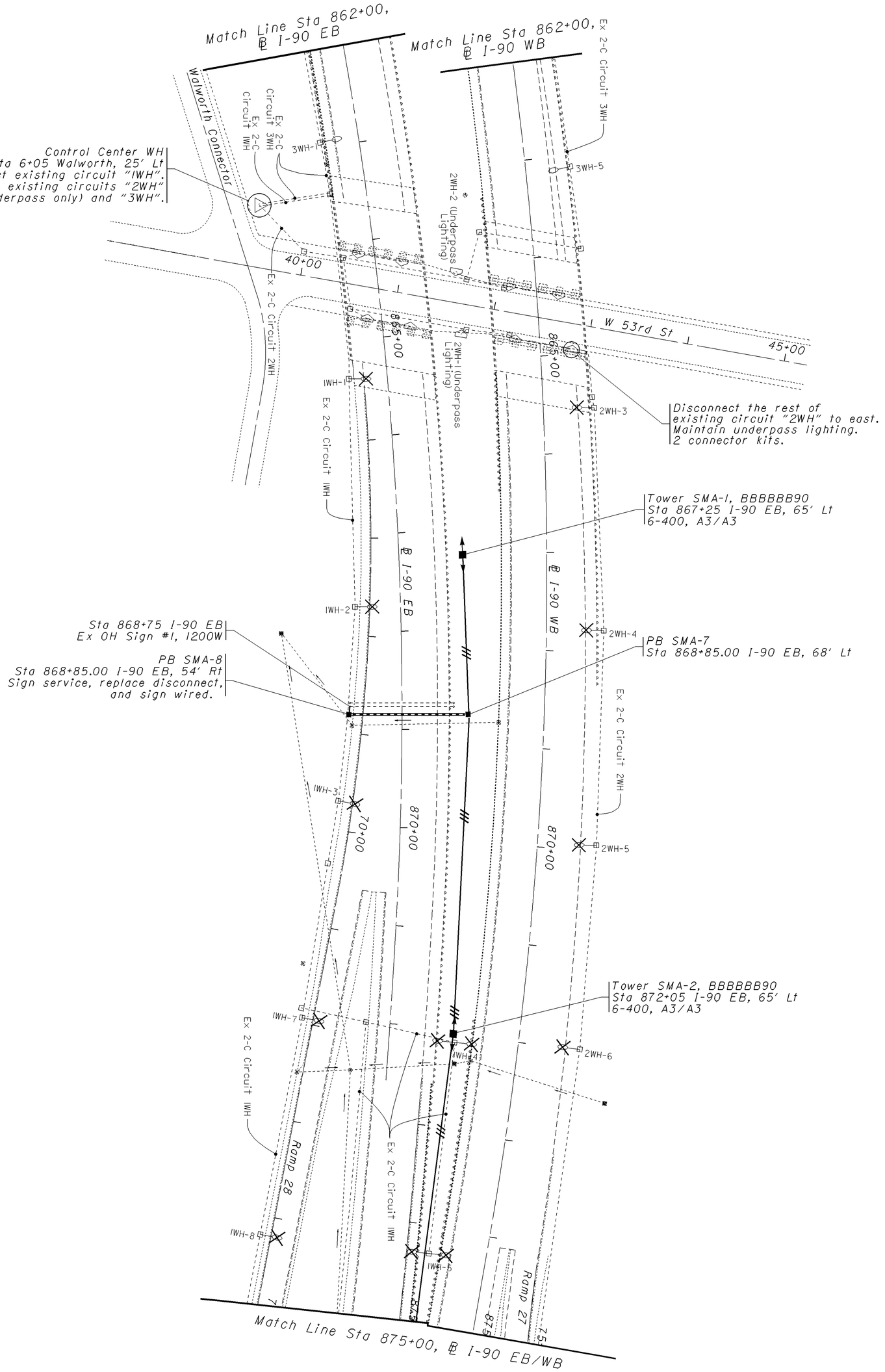
CUY-90/490-13.41/0.00

SHEET NUMBER								PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
81	82	85	86	87	88	89	90									
						69	68				202	75401	137	EACH	LIGHT POLE REMOVED, AS PER PLAN	81
							9				202	75402	9	EACH	LIGHT POLE REMOVED FOR STORAGE	
						58	47				202	75501	105	EACH	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN	81
							19				202	75504	19	EACH	LUMINAIRE REMOVED FOR STORAGE	
						80	80				202	75506	160	EACH	LUMINAIRE REMOVED	
						11	7				202	75800	18	EACH	DISCONNECT EXISTING CIRCUIT, AS PER PLAN	81
						2	2				202	75511	4	EACH	POWER SERVICE REMOVED, AS PER PLAN	83
1180											603	00400	1180	LIN FT	4" CONDUIT, TYPE E	
				6							625	00500	6	EACH	CONNECTOR KIT, TYPE II	
			6	6	3						625	01004	15	EACH	CONNECTOR KIT, TYPE VII B	
		63	57	48	30						625	01500	198	EACH	CABLE SPLICING KIT	
			3	1							625	13100	4	EACH	LIGHT TOWER, BBBB90	
					2						625	13200	2	EACH	LIGHT TOWER, BBBB100	
		5	2	3							625	13304	10	EACH	LIGHT TOWER, BBBBBB90	
		1		2	2						625	13400	5	EACH	LIGHT TOWER, BBBBBB100	
		3		1	2						625	15201	6	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP, AS PER PLAN	81
		3	5	5	2						625	15700	15	EACH	LIGHT TOWER FOUNDATION, MISC.: MEDIAN MOUNTED, 36" X 25' DEEP	56
1											625	20000	1	EACH	PORTABLE POWER UNIT	
		2130	2295	6882	2685						625	23200	13,992	LIN FT	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
			1575								625	23300	1574	LIN FT	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	
		3625	1875	1850	1095						625	24320	8445	LIN FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES	
			1195								625	24330	1195	LIN FT	1-1/2" DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES	
		40									625	25500	40	LIN FT	CONDUIT, 3", 713.04	
		630	725	475	185						625	25900	2015	LIN FT	CONDUIT, JACKED OR DRILLED, 3"	
		80	425	1679	620						625	25910	2804	LIN FT	CONDUIT CLEANED AND CABLES REMOVED	
		30	24	28	20						625	26260	102	EACH	LUMINAIRE, HIGH MAST, ASYMMETRIC, 400 WATT HIGH PRESSURE SODIUM, 713.21, 480 VOLT	
		6		6							625	26260	12	EACH	LUMINAIRE, HIGH MAST, SYMMETRIC, 400 WATT HIGH PRESSURE SODIUM, 713.21, 480 VOLT	
					10						625	27600	10	EACH	LUMINAIRE, MISC.: UNDERPASS, POLE-MOUNTED	
		3275	2940	1750	1025						625	29002	8990	LIN FT	TRENCH, 24" DEEP	
		16	19	14	10						625	30706	59	EACH	PULL BOX, 713.08, 24"	
				1							625	31500	1	EACH	MEDIAN PULL BOX	
		12	10	12	8						625	32000	42	EACH	GROUND ROD	
		1	1		2						625	34001	4	EACH	POWER SERVICE, AS PER PLAN	83
LUMP											625	38000	LUMP		HIGH VOLTAGE TEST	
	LUMP										SPECIAL	62540000	LUMP		MAINTAIN EXISTING LIGHTING	82

CALCULATED BJK
CHECKED BMB

Lighting General Summary

CUY-90/490-13.41/0.00



92 / 110	**CUY-90/490-13.41/0.00**	**Lighting Plan** **I-90, Sta 862+00 to 875+00**	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET

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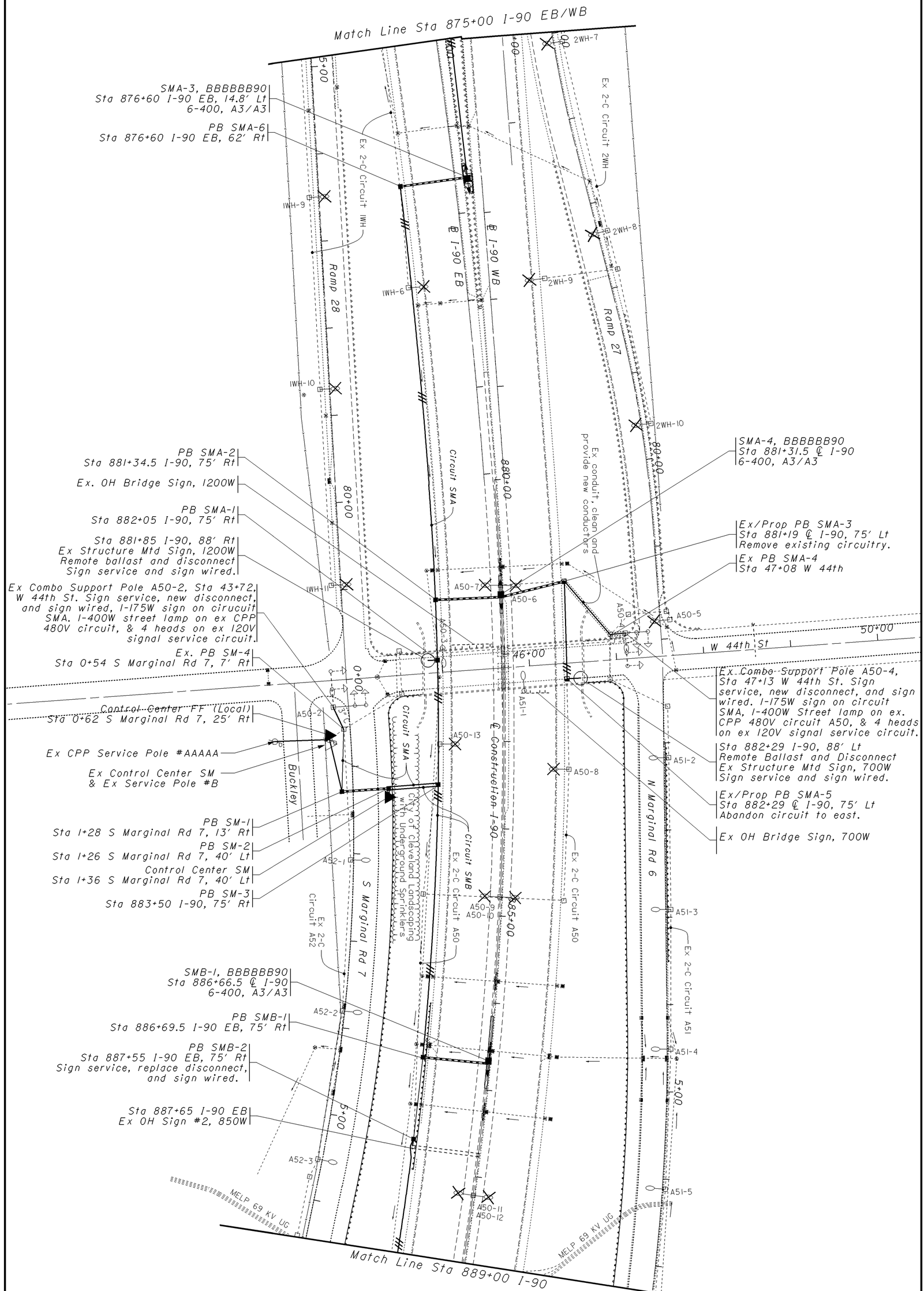
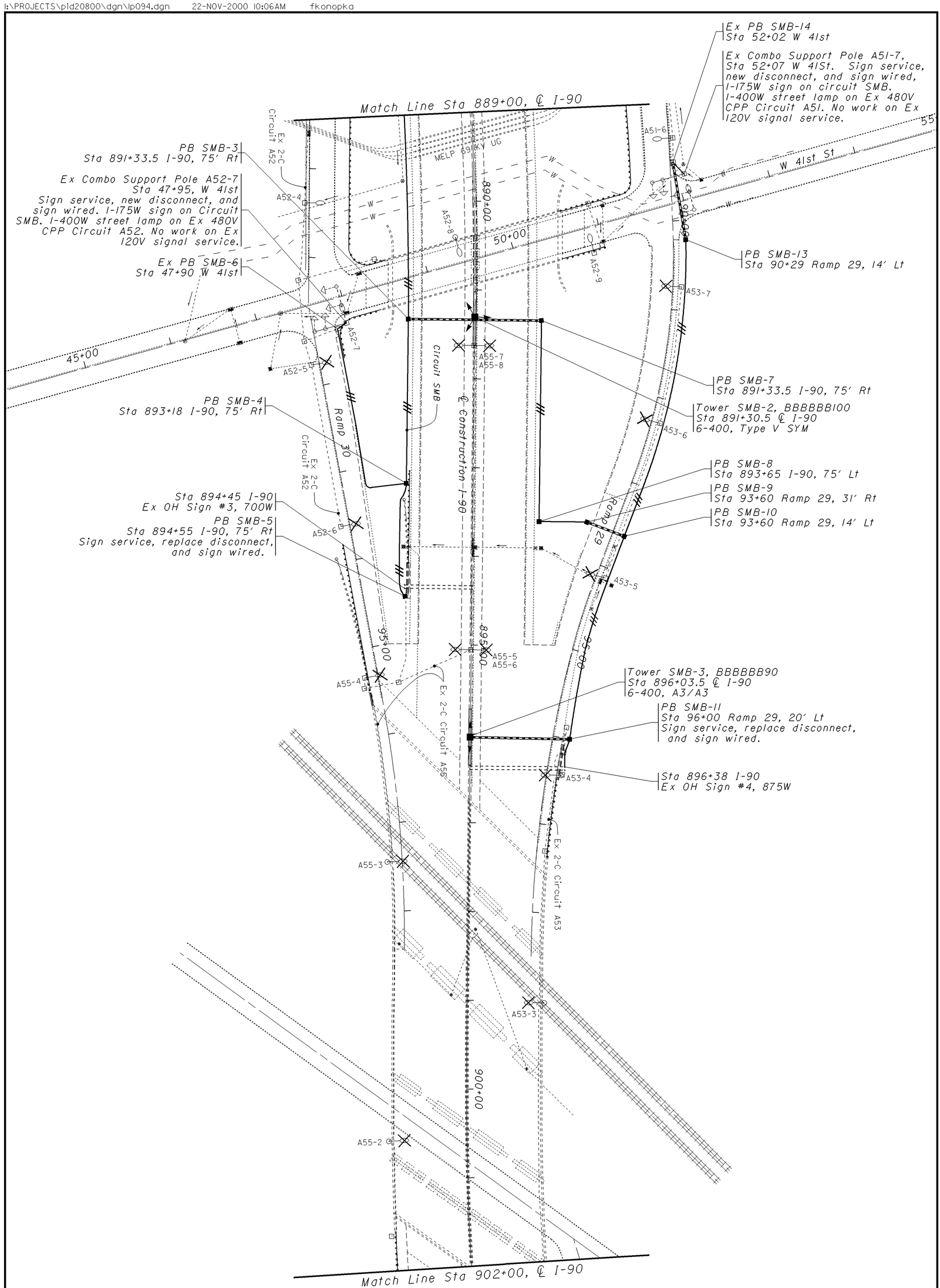
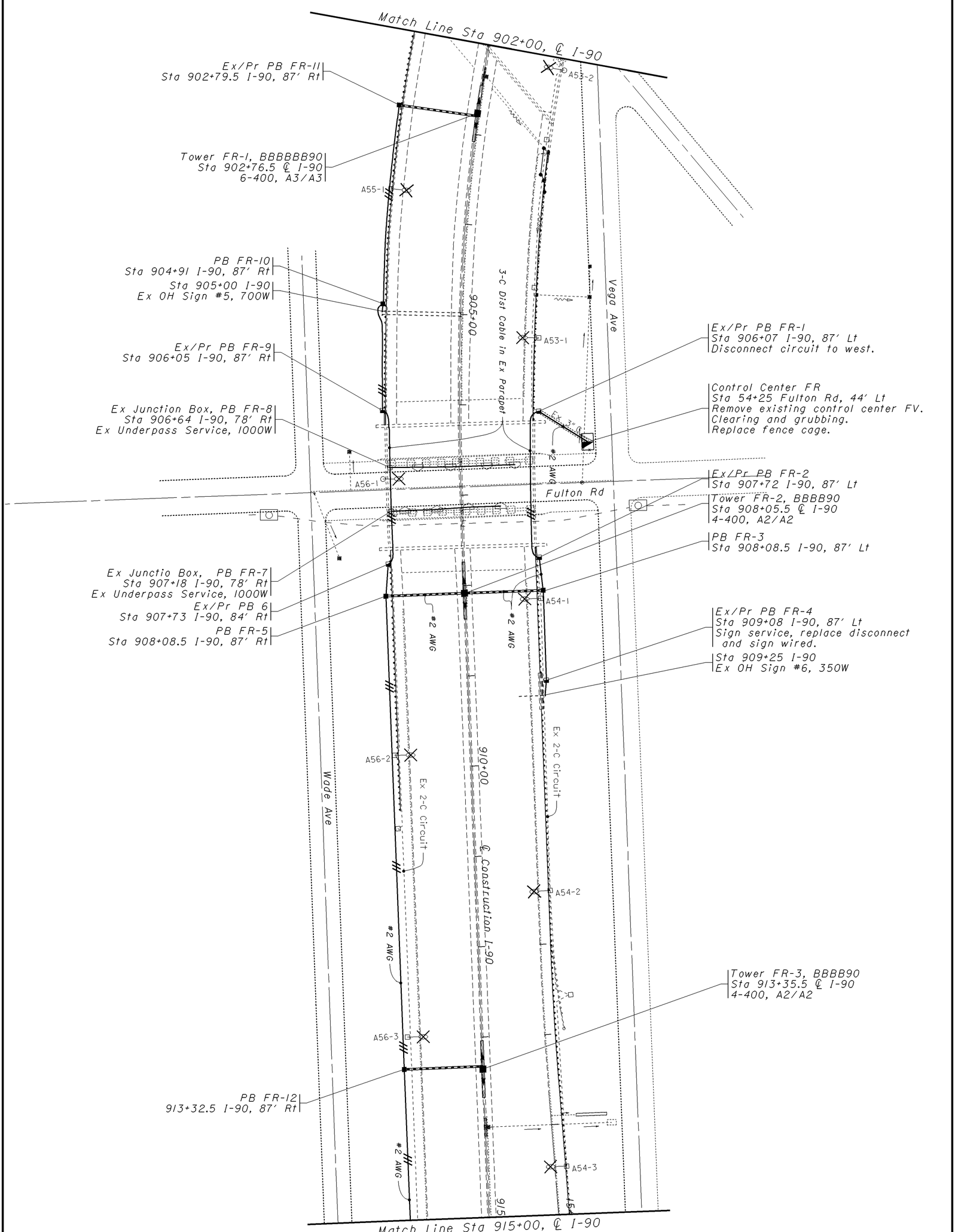


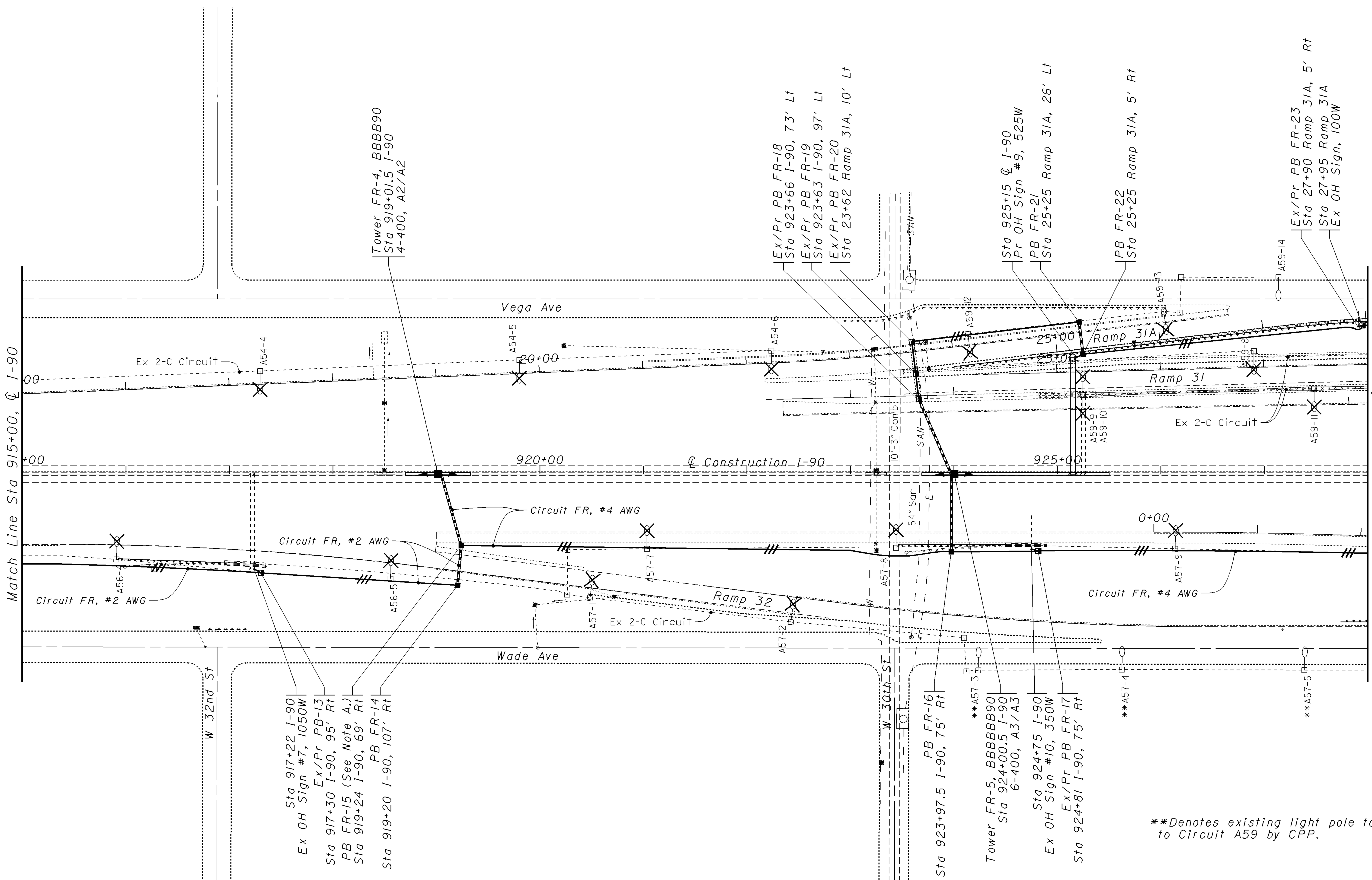
93 / 110	**CUY-90/490-13.41/0.00**	**Lighting Plan** **I-90, Sta 875+00 to 889+00**	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET



94 / 110	**CUY-90/490-13.41/0.00**	**Lighting Plan** **I-90, Sta 889+00 to 902+00**	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET



95 / 110	**CUY-90/490-13.41/0.00**	**Lighting Plan** **I-90, Sta 902+00 to 915+00**	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET



Vega Ave
Wade Ave
W 32nd St
W 30th St
Ramp 31A
Ramp 31
Ramp 32
© Construction I-90
920+00
925+00
20+00
25+00
0+00
Match Line Sta 915+00, © I-90
Match Line Sta 928+00, © I-90
Ex 2-C Circuit
Circuit FR, #4 AWG
Circuit FR, #2 AWG
Tower FR-4, BBBB90 Sta 919+01.5 I-90 4-400, A2/A2
Ex/Pr PB FR-18 Sta 923+66 I-90, 73' Lt
Ex/Pr PB FR-19 Sta 923+63 I-90, 97' Lt
Ex/Pr PB FR-20 Sta 23+62 Ramp 31A, 10' Lt
Sta 925+15 © I-90 Pr OH Sign #9, 525W
PB FR-21 Sta 25+25 Ramp 31A, 26' Lt
PB FR-22 Sta 25+25 Ramp 31A, 5' Rt
Ex/Pr PB FR-23 Sta 27+90 Ramp 31A, 5' Rt
Sta 27+95 Ramp 31A Ex OH Sign, 100W
Sta 917+22 I-90 Ex OH Sign #7, 1050W
Ex/Pr PB-13 Sta 917+30 I-90, 95' Rt
PB FR-15 (See Note A.) Sta 919+24 I-90, 69' Rt
PB FR-14 Sta 919+20 I-90, 107' Rt
PB FR-16 Sta 923+97.5 I-90, 75' Rt
Tower FR-5, BBBBB90 Sta 924+00.5 I-90 6-400, A3/A3
Sta 924+75 I-90 Ex OH Sign #10, 350W
Ex/Pr PB FR-17 Sta 924+81 I-90, 75' Rt
A54-4
A54-5
A54-6
A56-4
A56-5
A57-1
A57-2
A57-7
A57-8
A57-9
**A57-3
**A57-4
**A57-5
A59-9
A59-10
A59-11
A59-12
A59-13
A59-14
10"-3" Comb
54" San

**Denotes existing light pole to be connected to Circuit A59 by CPP.

Note A:
In paved area, payment shall include removal and replacement of asphalt and concrete pavement to install pullbox and jacking pit.

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HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED BJK CHECKED BMB

Lighting Plan
I-90, Sta 915+00 to 928+00

CUY-90/490-13.41/0.00

Ex Combo Sign Support Pole A58-3, Sta 48+85 W 25th, Sign service, new disconnect, and sign wired. 1-175W sign on circuit SC, 1-400W Street lamp on ex CPP 480V circuit, & 4 heads on ex. 120V signal service circuit.

Ex PB SC-14
Sta 48+80 W 25th

Tower FR-6, BBBBBB90
Sta 929+26.5 I-90
6-400, Type A3/A3

Ex PB FR-25
Sta 46+30 W 25th

Ex Combo Sign Pole A59-4, Sta 46+35 W 25th
Sign service, new disconnect, and sign wired, 1-175W sign on circuit SMA, 1-400W Street lamp on ex CPP 480V circuit, & 4 heads on ex. 120V signal service circuit.

Ex Combo Sign Support Pole A58-11/12, Sta 53+00 Barber Ave. Remove east luminaire. Sign service, new disconnect, and signs wired. 2-175W sign on circuit SC, 1-400W Street lamp on ex CPP 480V circuit.

Ex/Pr PB SC-12
Sta 5+90 Ramp 31B, 28' Lt

Ex/Pr PB SC-11
Sta 34+50 Ramp 31, 25' Rt

Ex/Pr PB SC-10
Sta 34+50 Ramp 31, 12' Lt

Tower SC-1, BBBB90
Sta 928+30 I-90, 330' Lt
4-400, A4

PB SC-9
Sta 31+89 Ramp 31, 12' Lt

PB SC-8
Sta 31+95 Ramp 31, 34' Rt

Control Center SC
Sta 23+60 Lane N-W, 36' Rt
Control Center SV
Sta 12+28 Scranton, 41' Rt
Service Pole #44522

Ex/Pr PB SC-1
Sta 23+50 Lane N-W, 18' Rt

Ex/Pr PB SC-2
Sta 937+41 I-490, 48' Lt

Ex Junction Box PB SC-3
Sta 937+41 ℄ I-490

Ex/Pr PB FR-26
Sta 929+23.5 I-90, 80' Rt
Sta 929+31 I-90, 96' Rt
Remote Ballast and Disconnect
Ex Structure Mtd Sign, 700W
Sign service and sign wired.

STATION EQUATION:
Sta 931+30.15 ℄ IR-90 BK =
Sta 928+50.00 ℄ IR-490 AH

Junction Box PB SC-7
Sta 929+25 ℄ I-490

Tower SC-2, BBBBBB90
Sta 931+69.5 I-90
6-400, Type A3/A3

Sta 932+06 I-490
Ex OH Sign #11, 1600W
Sign service, new disconnect, and sign wired.

Ex Junction Box PB SC-16
Sta 932+06 ℄ I-490

Sta 4+66 Lane W-S
End of Retaining Wall

Tower SC-3, BBBBBB100
Sta 937+09.5 ℄ I-490
6-400, Type V SYM

Ex Junction Box PB SC-6
Sta 13+92 Lane W-N, 35' Rt

Ex/Pr PB SC-5
Sta 13+96 Lane W-N, 34' Lt

Ex/Pr PB SC-4
Sta 937+41 I-490, 58' Rt

Aerial Connection by CPP

Trench

**Denotes existing light pole to be connected to Circuit A59 by CPP.

* Denotes pole to be removed for storage.

Control Center VE

Ex 2-C Circuit

Circuit FR

Circuit SC

3-C Dist Cable in Ex Raceway

Retaining Wall 91

Retaining Wall 91A

Ramp 31

Lane N-W

Lane W-N

Scranton Rd

Wade Ave

W 25th St

℄ Construction I-90

℄ Construction I-490

Match Line Sta 928+00, ℄ I-90

Match Line Sta 938+00, ℄ I-490

CALCULATED BJK
CHECKED BMB

HORIZONTAL SCALE IN FEET
0 25 50 100

Lighting Plan
Sta 928+00 I-90 to 938+00 I-490

CUY-90/490-13.41/0.00

97
110

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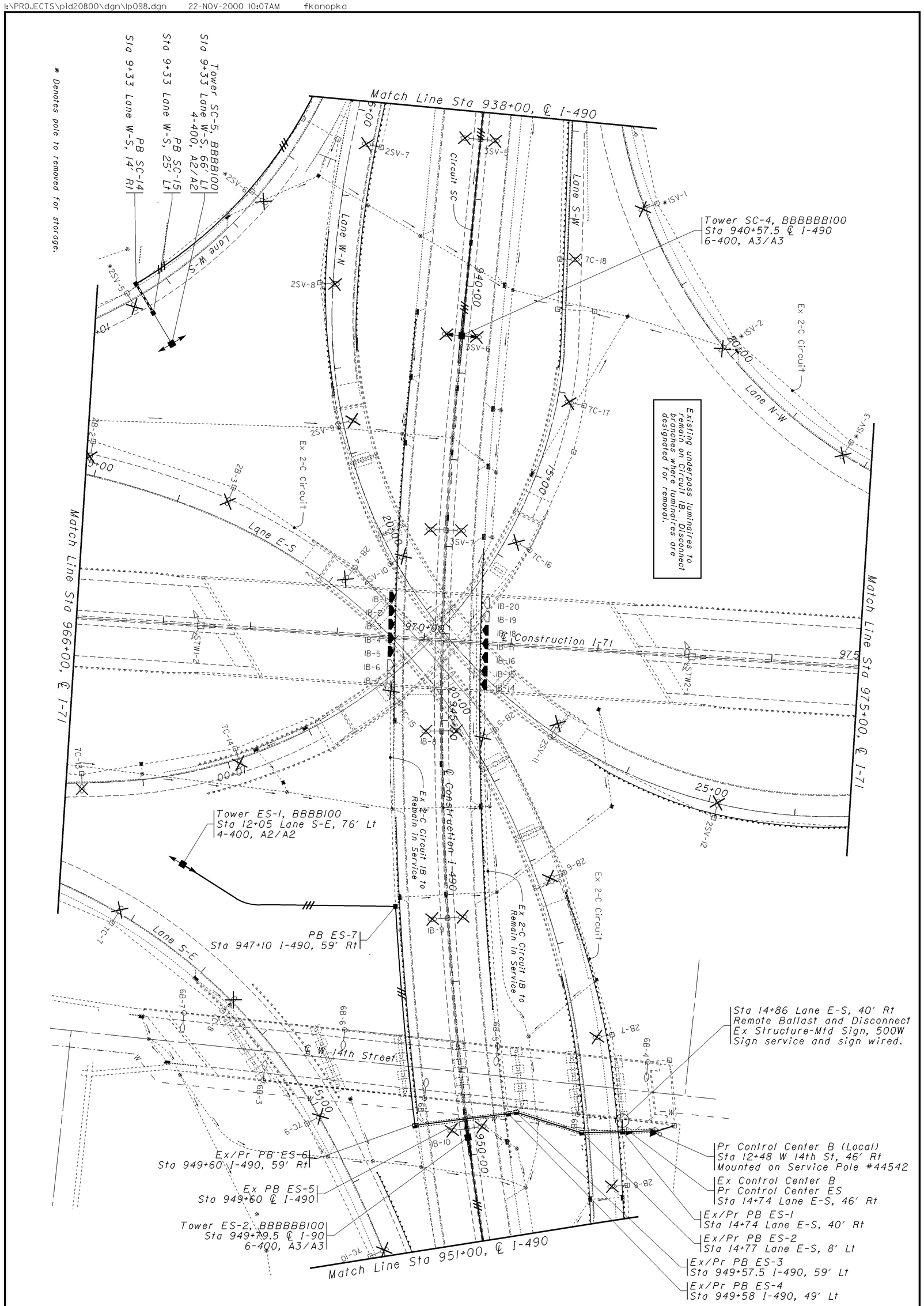

98 / 110	CUY-90/490-13.41/0.00	Lighting Plan I-490, Sta 938+00 to 951+00	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET

* Denotes pole to removed for storage.

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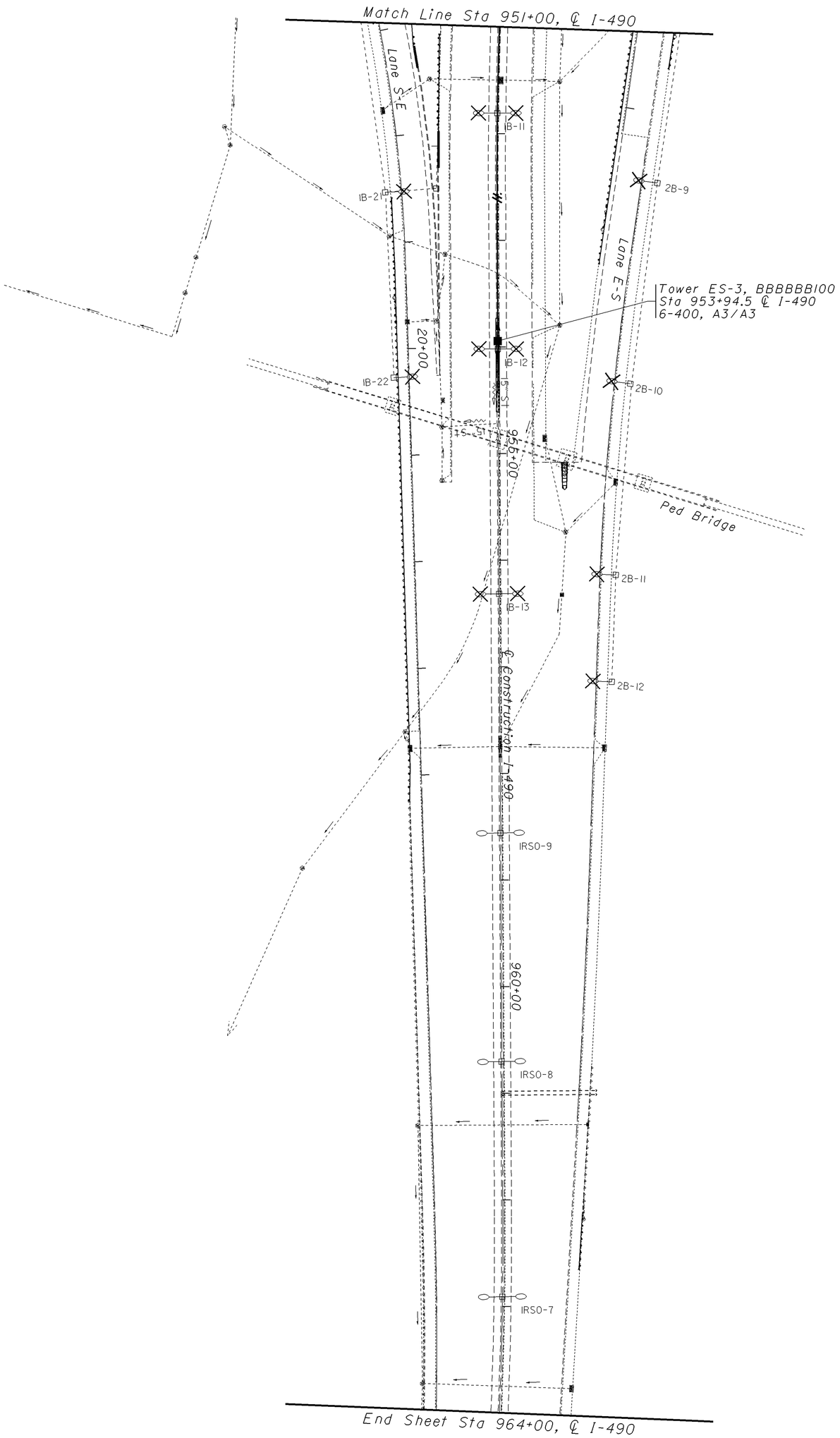
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED BJK
CHECKED BMB

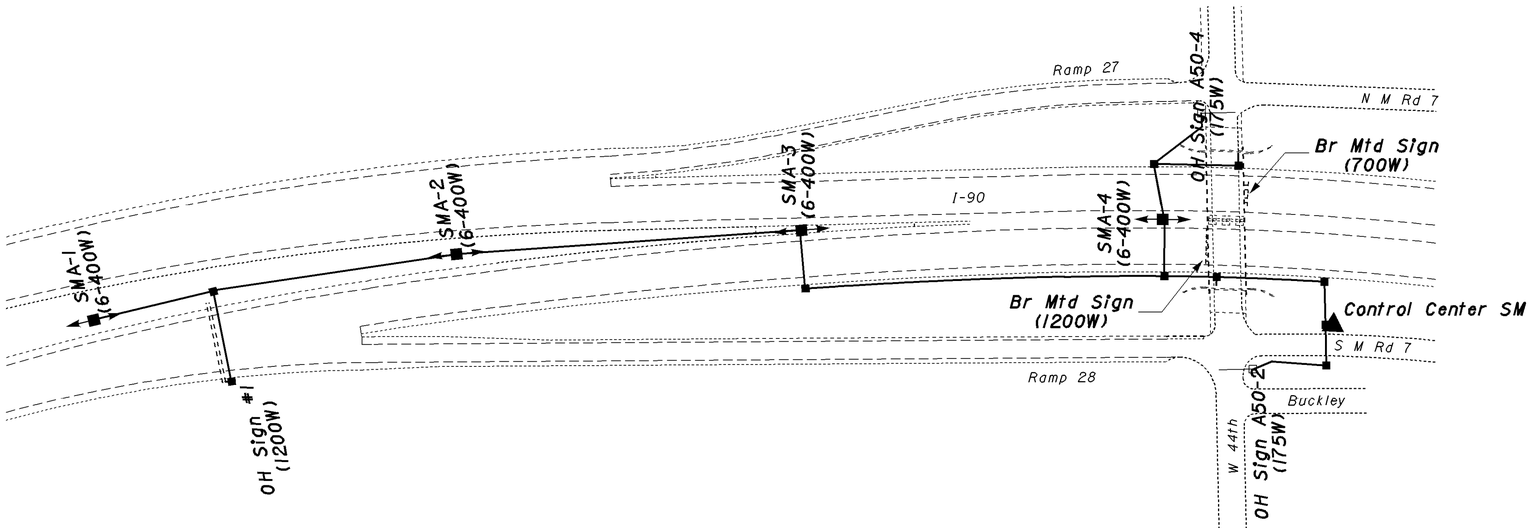
Lighting Plan: I-71, Sta 957+00 to 966+00 and 975+00 to 983+00

CUY-90/490-13.41/0.00

99
110



110/100	**CUY-90/490-13.41/0.00**	**Lighting Plan** **I-490, Sta 951+00 to 964+00**	CALCULATED BJK CHECKED BMB	0 50 25 100 HORIZONTAL SCALE IN FEET

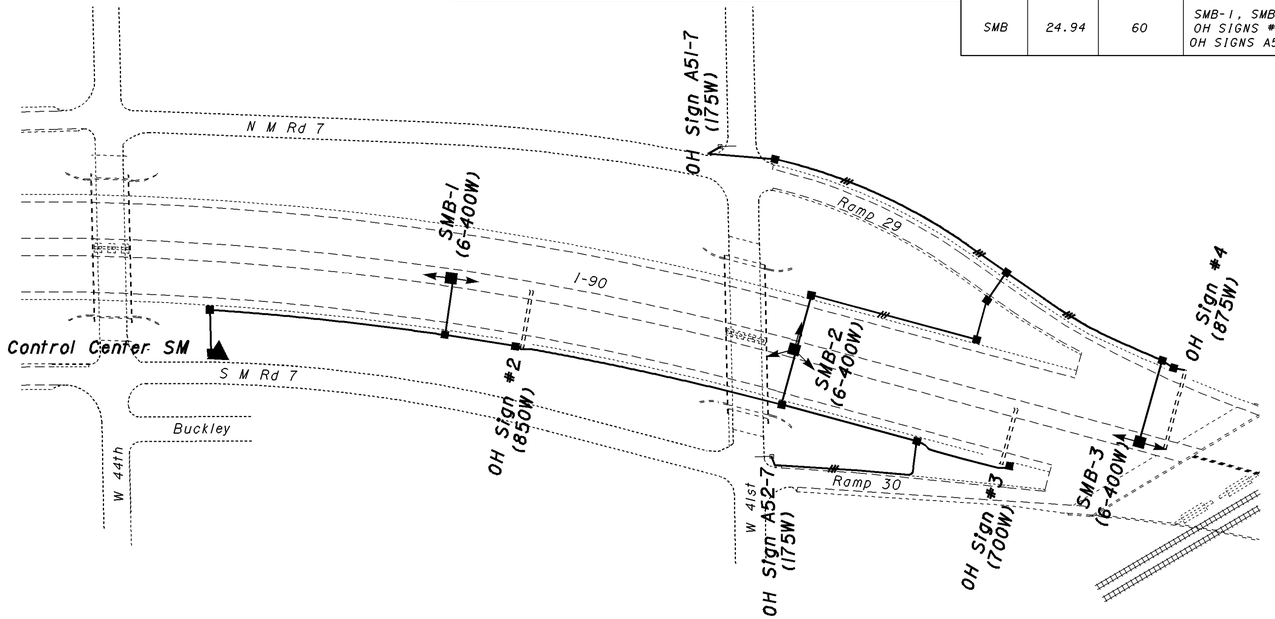


Circuit SMA

24 400W Tower Units
1 1200W OH Sign #1
1 1200W Br Mounted Sign
1 700W Br Mounted Sign
2 175W OH Signs(A50-2, A50-4)

Total 13,050W = 32.63Amps

CONTROL CENTER LOCATION	POWER SERVICE	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE AWG.	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	CIRCUIT LOADS (AMPS)	CIRCUIT FUSE SIZE (AMPS)	REMARKS	MAINTAINING AGENCY
CPP SERVICE POLE "FF"	480, 2W 1Ø GROUNDED NEUTRAL	EX	AS PER NEC CODE	100	A50 A51 A52	EXISTING	30 30 30	EXISTING	CITY OF CLEVELAND
SM STA. 1+36 40' LT.	480, 3W 1Ø GROUNDED NEUTRAL	27.63	AS PER NEC CODE	100	SMA	32.63	60	SMA-1, SMA-2, SMA-3 SMA-4, OH SIGN #1, OH SIGNS A50-2, A50-4, 2- OH BRIDGE SIGNS	ODOT
					SMB	24.94	60	SMB-1, SMB-2, SMB-3, OH SIGNS #2, #3, #4, OH SIGNS A51-7, A52-7	ODOT



Circuit SMB

18 400W Tower Units
1 850W OH Sign #2
1 700W OH Sign #3
1 875W OH Sign #4
2 175W OH Signs(A51-7, A52-7)

Total 9,975W = 24.94Amps

HORIZONTAL SCALE IN FEET
0 100 200 400

Circuit Maps

CUY-90/490-
13.41/0.00

101
110

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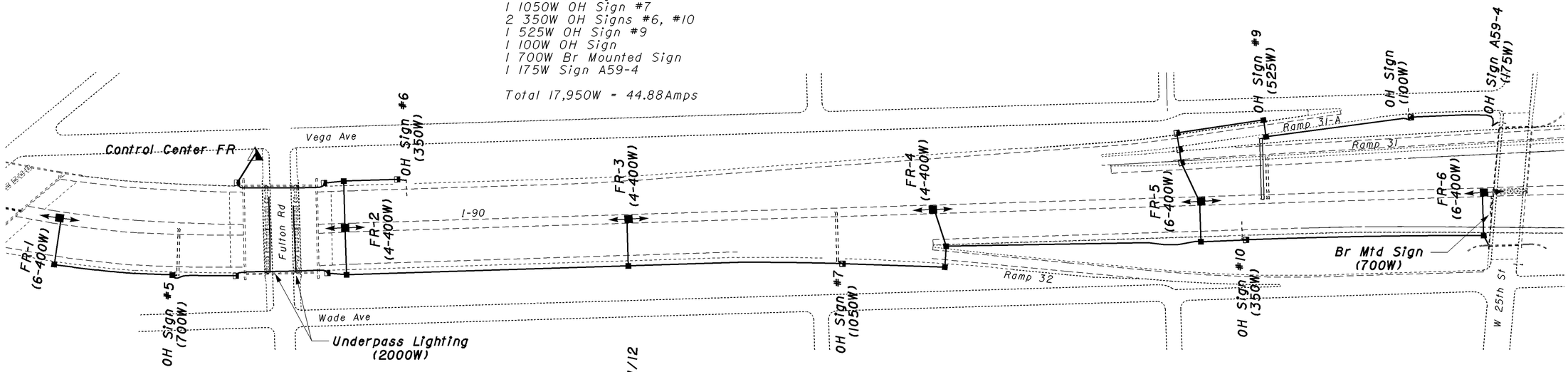
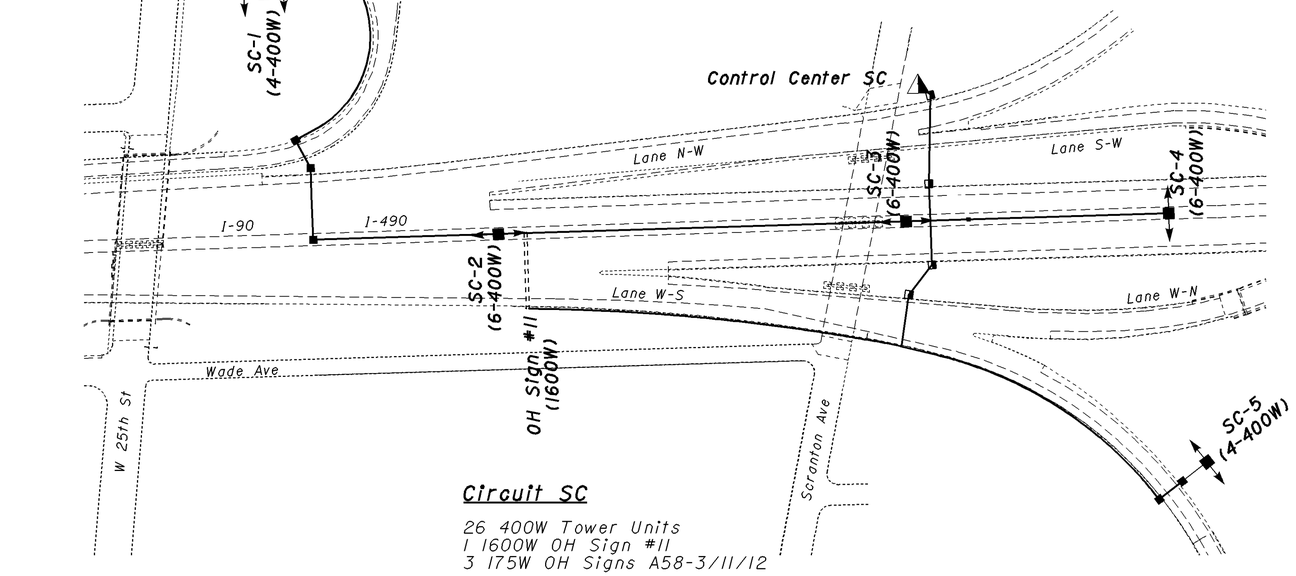
Circuit FR

30 400W Tower Units
8 250W Underpass Units
1 700W OH Sign #5
1 1050W OH Sign #7
2 350W OH Signs #6, #10
1 525W OH Sign #9
1 100W OH Sign
1 700W Br Mounted Sign
1 175W Sign A59-4

Total 17,950W = 44.88Amps



CONTROL CENTER LOCATION	POWER SERVICE	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE AWG.	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	CIRCUIT LOADS (AMPS)	CIRCUIT FUSE SIZE (AMPS)	REMARKS	MAINTAINING AGENCY
FR STA. 54+25 44' LT.	480, 3W 1Ø GROUNDED NEUTRAL	21.54	AS PER NEC CODE	100	FR	44.88	60	FR-1,FR-2,FR-3,FR-4, FR-5,FR-6,OH SIGNS #5, #6, #7, #9, #10, OH SIGN, OH SIGN A59-4	ODOT
SC STA. 23+60 36' RT.	480, 3W 1Ø GROUNDED NEUTRAL	15.03	AS PER NEC CODE	100	SC	31.31	60	SC-1,SC-2,SC-3,SC-4, SC-5, OH SIGN #11, OH SIGNS A58-3, A58-11/12	ODOT



Circuit SC

26 400W Tower Units
1 1600W OH Sign #11
3 175W OH Signs A58-3/11/12

Total 12,525W = 31.31Amps

HORIZONTAL SCALE IN FEET
0 100 200 400

Circuit Maps

CUY-90/490-13.41/0.00

102/110

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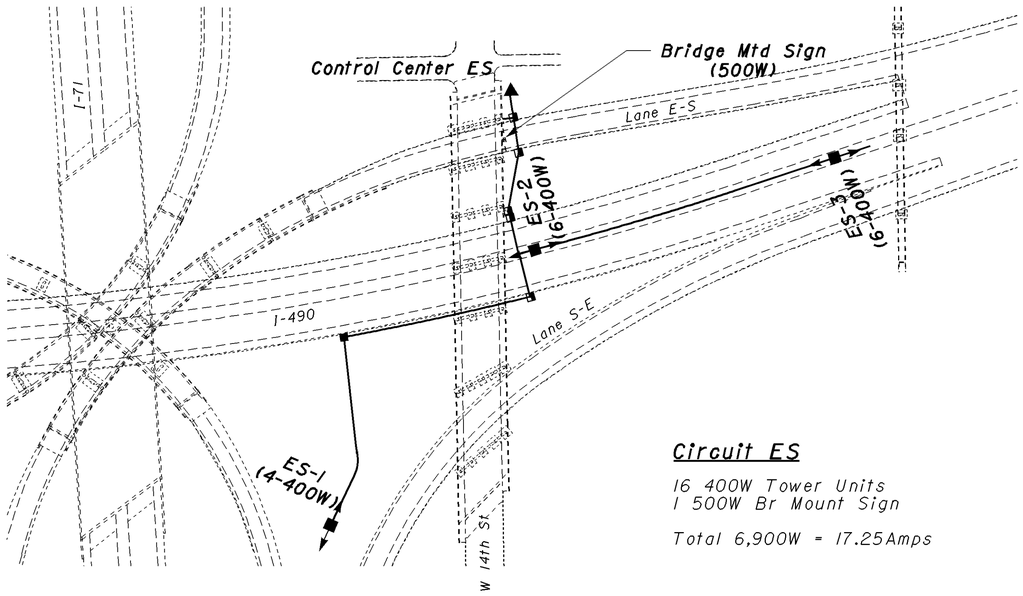
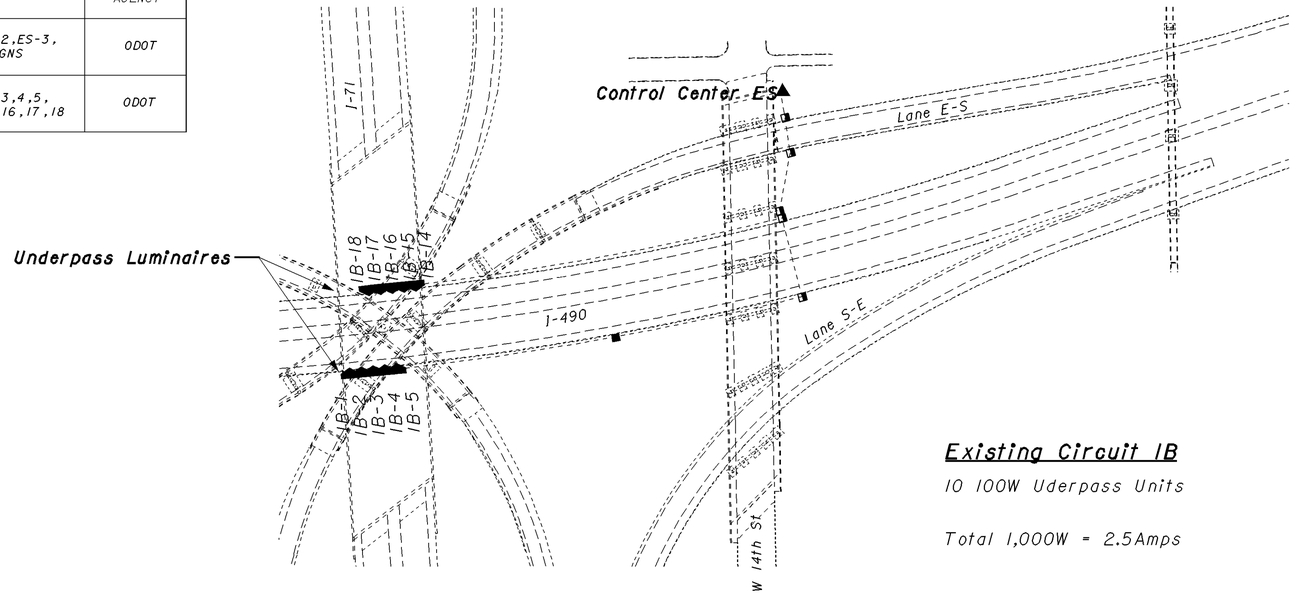


Circuit ES

16 400W Tower Units
1 500W Br Mount Sign

Total 6,900W = 17.25Amps

CONTROL CENTER LOCATION	POWER SERVICE	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE AWG.	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	CIRCUIT LOADS (AMPS)	CIRCUIT FUSE SIZE (AMPS)	REMARKS	MAINTAINING AGENCY
ES STA. 14+74 40' RT.	480, 3W 1Ø GROUNDED NEUTRAL	9.48	AS PER NEC CODE	100	ES	17.25	60	ES-1,ES-2,ES-3, OH SIGNS	ODOT
	480, 2W 1Ø GROUNDED NEUTRAL				1B	2.5	30	1B-1,2,3,4,5, 1B-14,15,16,17,18	ODOT



Existing Circuit 1B

10 100W Uderpass Units

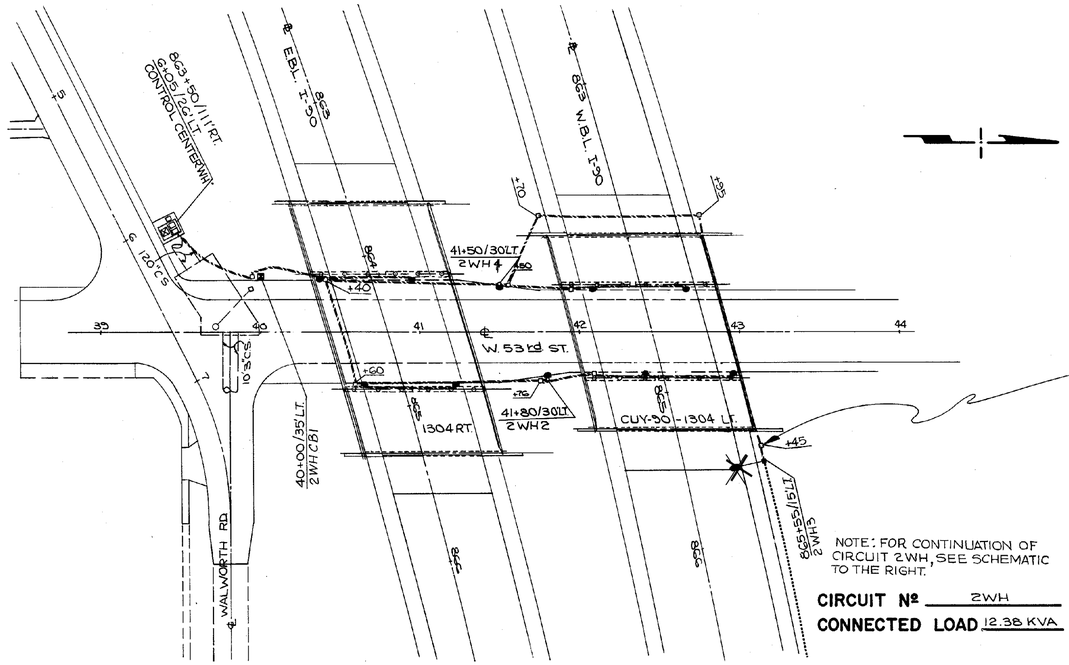
Total 1,000W = 2.5Amps

N

0 100 200 400
HORIZONTAL SCALE IN FEET

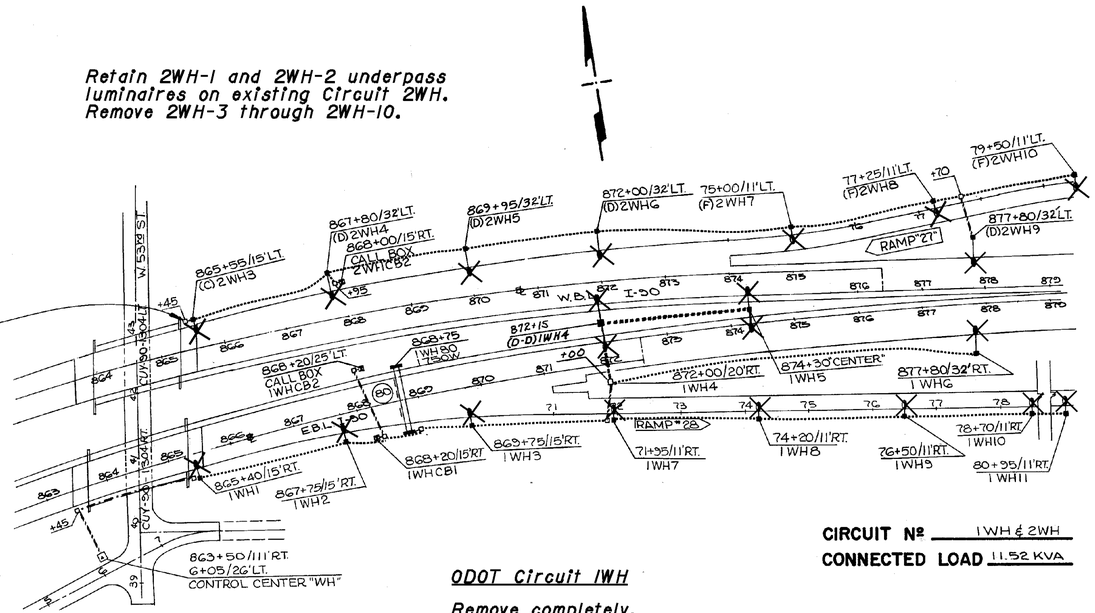
Circuit Maps

CUY-90/490-13.41/0.00



CIRCUIT Nº 2WH
CONNECTED LOAD 12.38 KVA

Retain 2WH-1 and 2WH-2 underpass luminaires on existing Circuit 2WH. Remove 2WH-3 through 2WH-10.



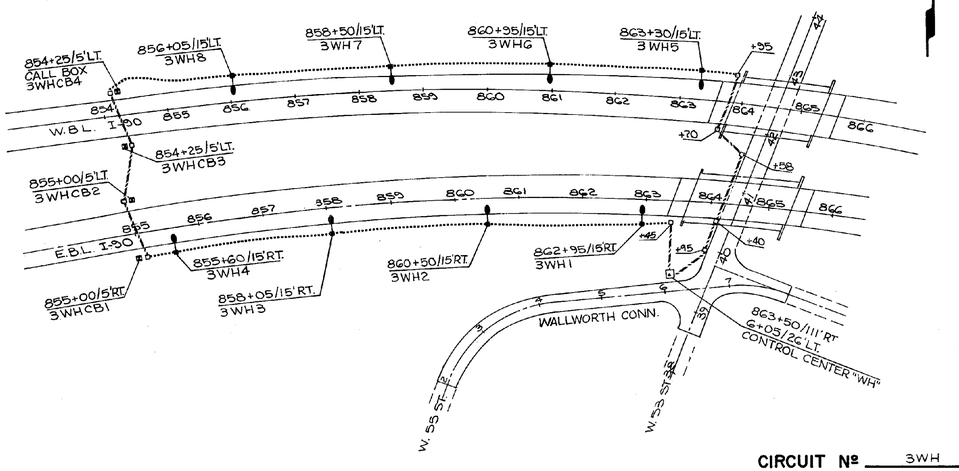
CIRCUIT Nº 1WH & 2WH
CONNECTED LOAD 11.52 KVA

ODOT Circuit 1WH

Remove completely.
Load = 0 KVA.

CPP Circuit 2WH

Partial removal.
Retain underpass luminaires.



CIRCUIT Nº 3WH
CONNECTED LOAD 11.42 KVA

ODOT Circuit 3WH

No change.
Load = 11.42 KVA.

Legend

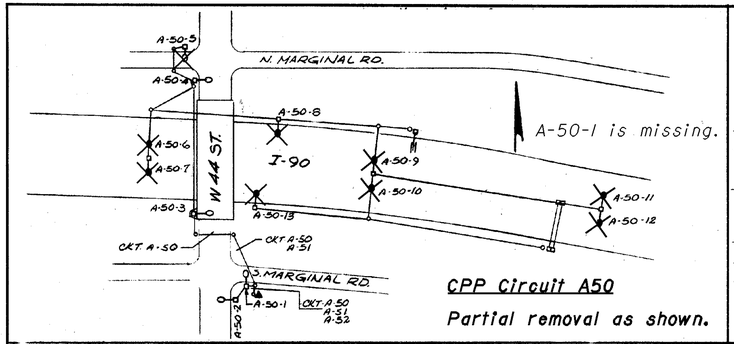
Light Pole/Luminaire Removed

CONTROL CENTER LOCATION	POWER SERVICE	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE AWG.	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	CIRCUIT LOADS (AMPS)	CIRCUIT FUSE SIZE (AMPS)	REMARKS	MAINTAINING AGENCY
WH STA. 6+05 26' LT.	480, 2W 1Ø GROUNDED NEUTRAL	5.48	EXISTING	EX	1WH	0.00	EX	REMOVED	ODOT
					2WH	2.5	EX	2WH1 2WH2	CITY OF CLEVELAND
					3WH	11.42	EX	REMAIN	ODOT

CALCULATED BJK CHECKED

Existing Circuit Maps 1WH, 2WH, & 3WH

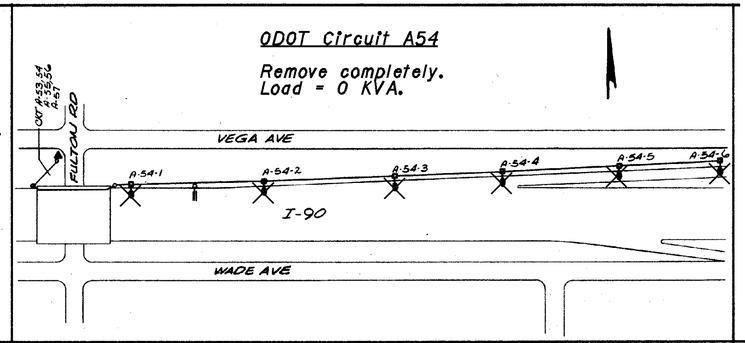
CUY-90/490-13.41/0.00



A-50-1 is missing.

CPP Circuit A50

Partial removal as shown.



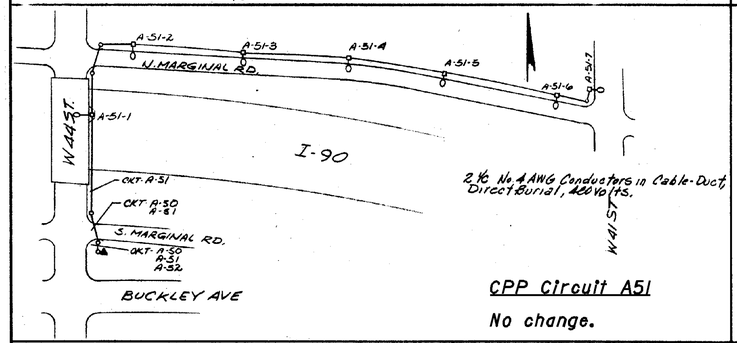
ODOT Circuit A54

Remove completely.
Load = 0 KVA.

Notes:

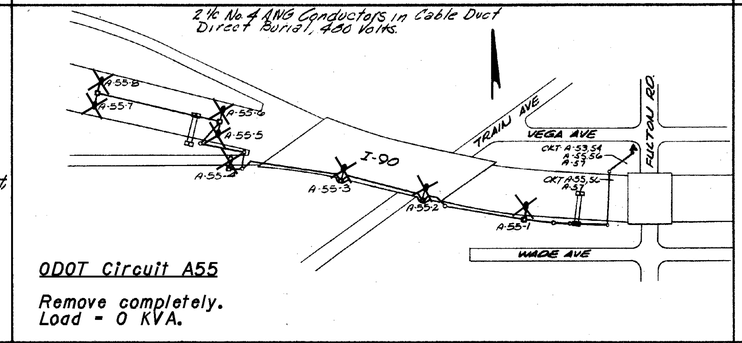
Existing MV units have probably been replaced with HPS units.

Circuits A50, A51, & A52 will be reconnected to new CPP control center at W 44th St. Circuits A58 & A59 will remain in existing CPP control center at W 25th St.



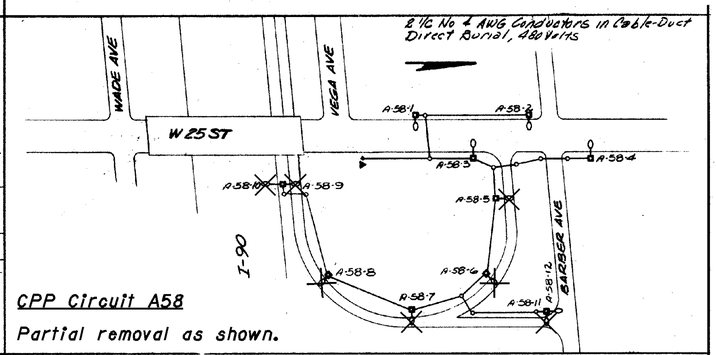
CPP Circuit A51

No change.



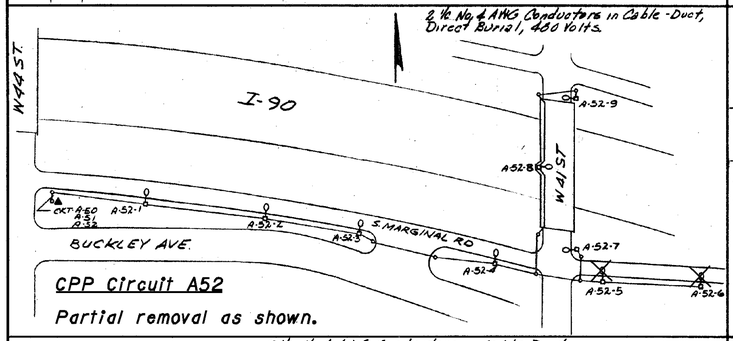
ODOT Circuit A55

Remove completely.
Load = 0 KVA.



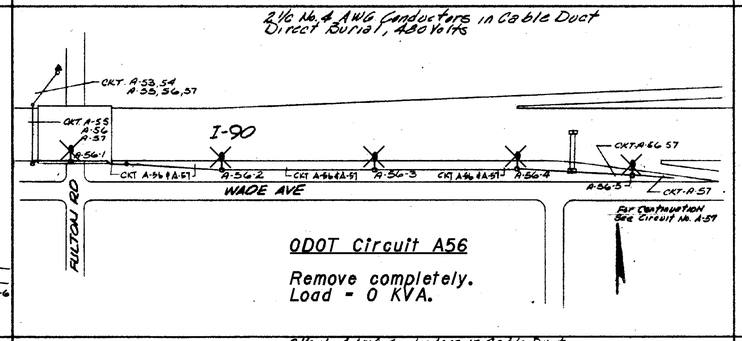
CPP Circuit A58

Partial removal as shown.



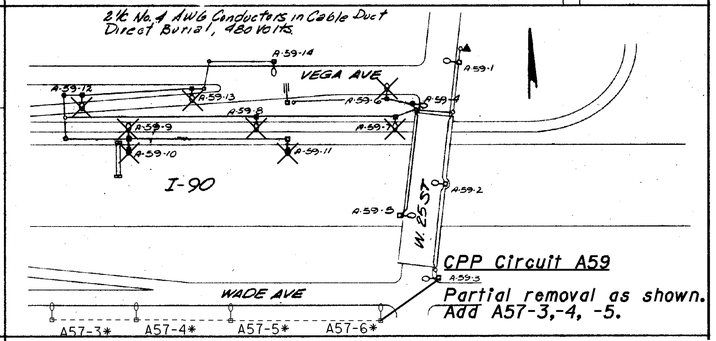
CPP Circuit A52

Partial removal as shown.



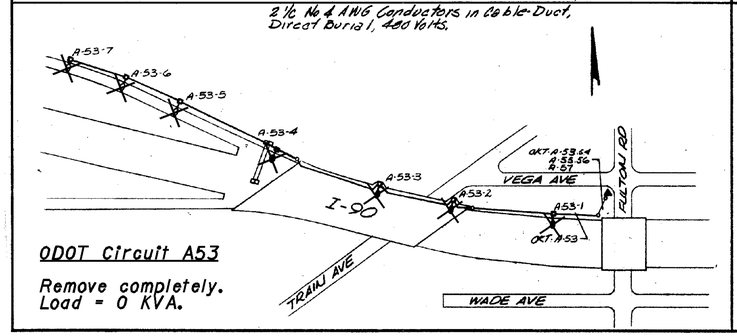
ODOT Circuit A56

Remove completely.
Load = 0 KVA.



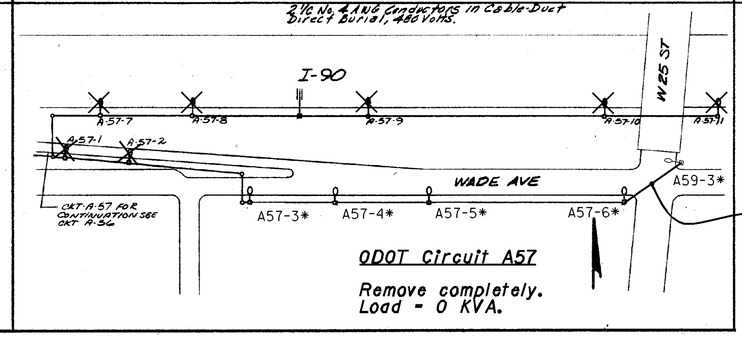
CPP Circuit A59

Partial removal as shown.
Add A57-3,-4, -5.



ODOT Circuit A53

Remove completely.
Load = 0 KVA.



ODOT Circuit A57

Remove completely.
Load = 0 KVA.

Reconnect A57-3, A57-4, A57-5, & A57-6 to Circuit A59 at A59-3.

Existing Circuit Maps A-50 thru A-59

CALCULATED BJK CHECKED

CUY-90/490-13.41/0.00

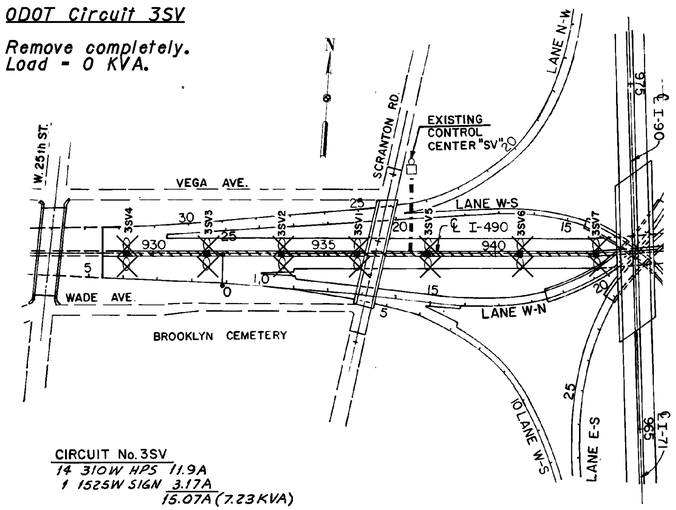
105/110

Legend

Light Pole/Luminaire Removed

ODOT Circuit 3SV

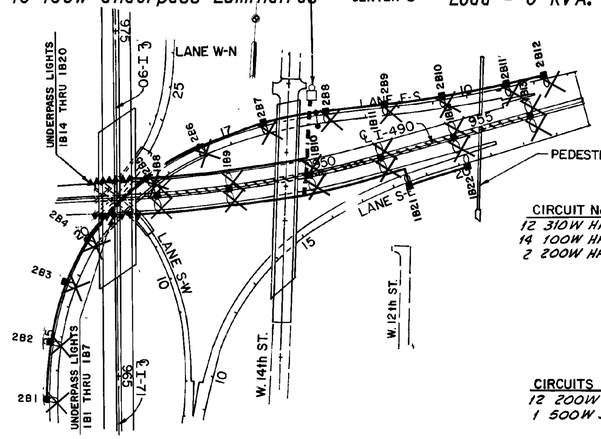
Remove completely.
Load = 0 KVA.



CIRCUIT No. 3SV
14 310W HPS 11.9A
1 1525W SIGN 3.17A
15.07A (7.23KVA)

ODOT Circuit 1B

Partial removal as shown.
10 100W Underpass Luminaires



CIRCUIT No. 1B
12 310W HPS 10.2A
14 100W HPS 3.8A
2 200W HPS 1.2A
15.2A
(7.3 KVA)

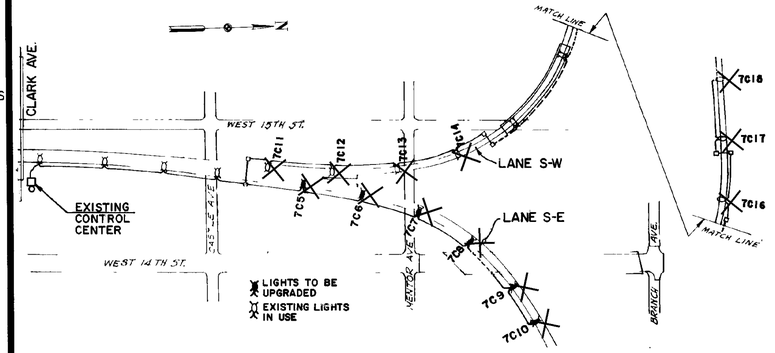
ODOT Circuit 2B

Remove completely.
Load = 0 KVA.

CIRCUITS No. 2B
12 200W HPS 7.2A
1 500W SIGN 1.1A
8.3A
(4.0KVA)

ODOT Circuit 7C

Partial removal
4 200W Conventional Luminaires



CIRCUIT No. 7C
6-NEW 200W HPS 3.6A
(1.73 KVA)

CALCULATED BJK CHECKED

Existing Circuit Maps

CUY-90/490-13.41/0.00

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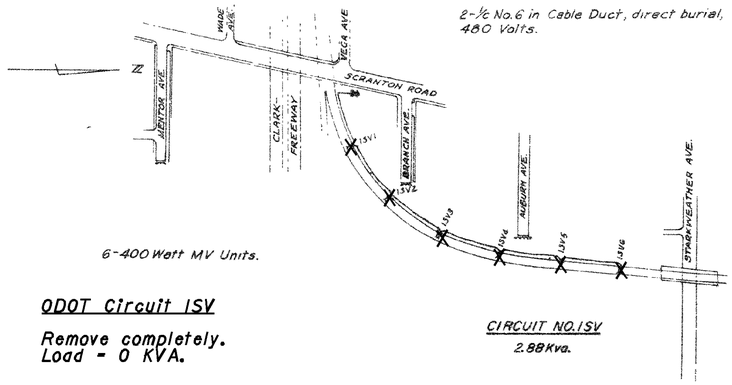
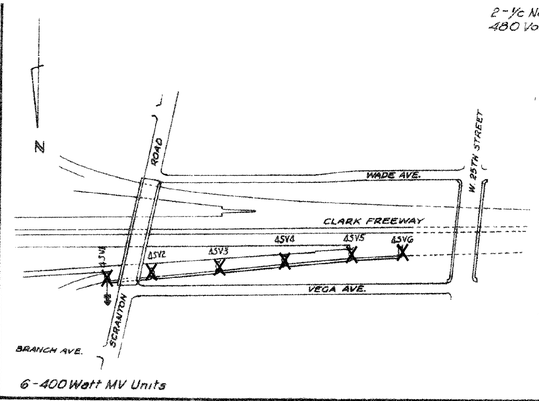


ODOT Circuit 1SV

Remove completely.
Load - 0 KVA.

CIRCUIT NO.1SV
2.88Kva.



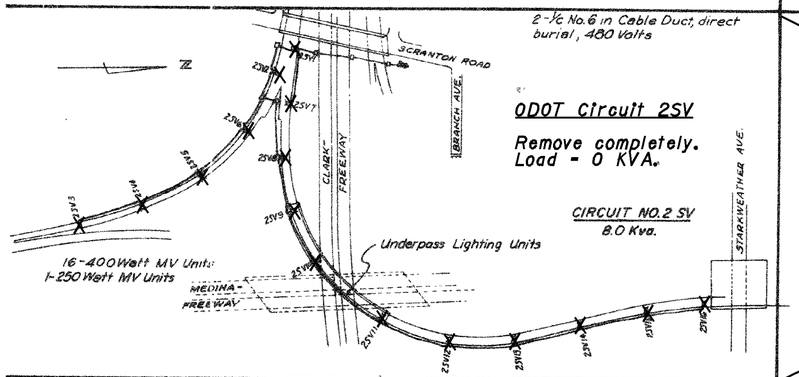
ODOT Circuit 4SV

Remove completely.
Load - 0 KVA.

CIRCUIT NO. 4 SV
2.88 Kva.

Legend

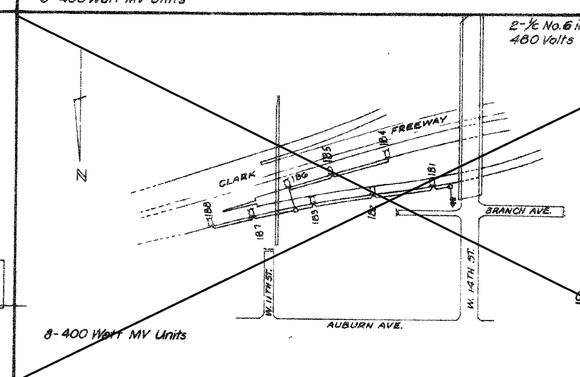
Light Pole/Luminaire Removed



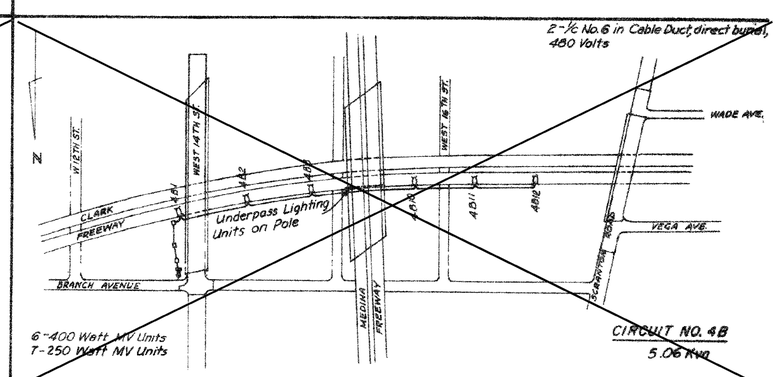
ODOT Circuit 2SV

Remove completely.
Load - 0 KVA.

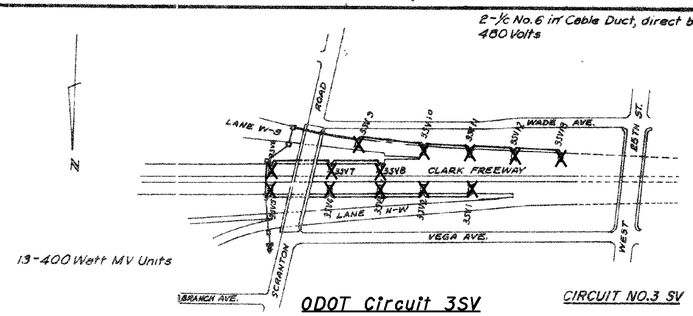
CIRCUIT NO.2 SV
8.0 Kva.



CIRCUIT NO. 1 B
3.84 Kva.



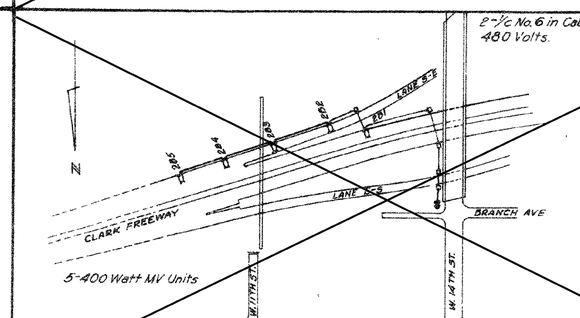
CIRCUIT NO. 4B
5.06 Kva.



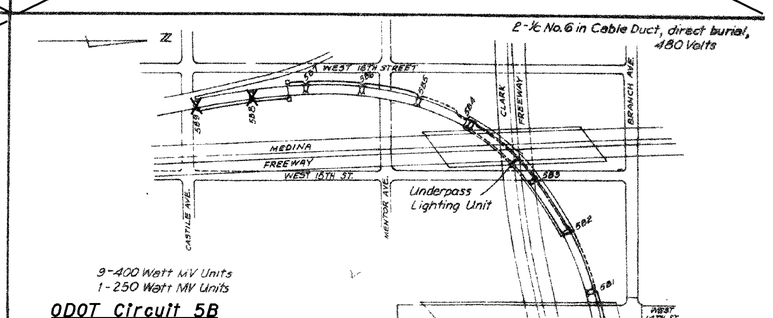
ODOT Circuit 3SV

Remove completely.
Load - 0 KVA.

CIRCUIT NO.3 SV
6.24 Kva



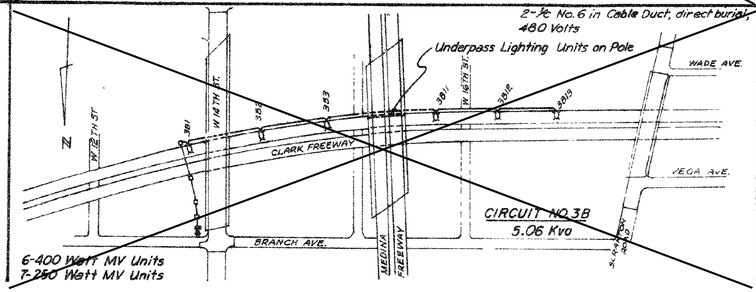
CIRCUIT NO. 2B
2.40 Kva.



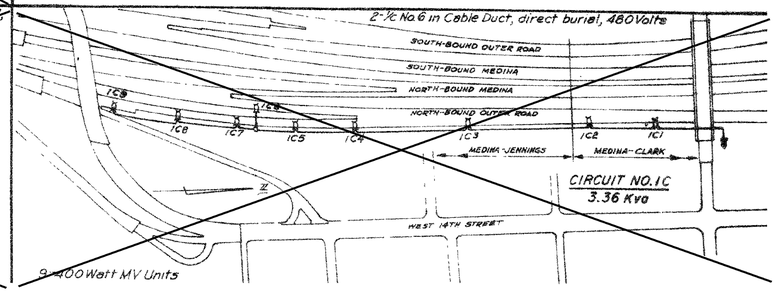
ODOT Circuit 5B

Partial removal as shown.
Load - 0 KVA.

CIRCUIT NO.5B
4.97 Kva.



CIRCUIT NO.3B
5.06 Kva



CIRCUIT NO.1C
3.36 Kva

CALCULATED BJK CHECKED

Existing Circuit Maps

CUY-90/490-13.41/0.00

107/110

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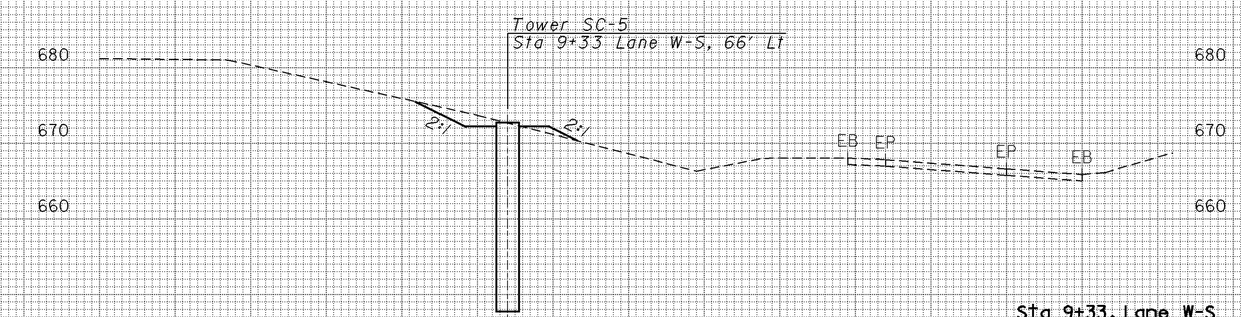
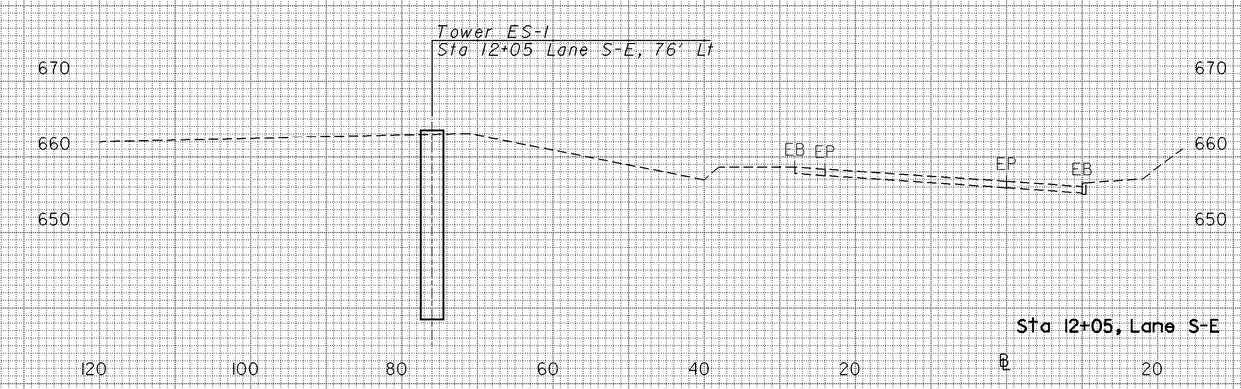
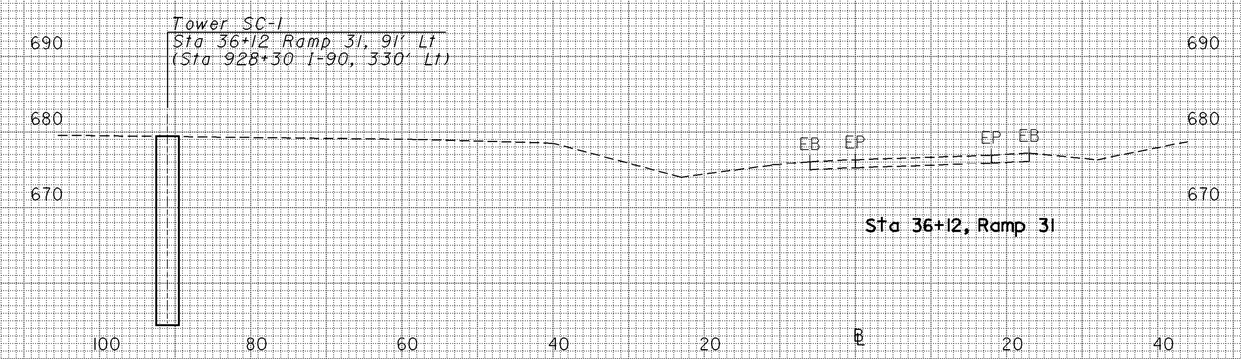
SEEDING	
END WIDTH	SQ. YDS.







END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

SHEET TOTAL

SHEET TOTAL

Lighting Details

CUY-90/490-
13.41/0.00

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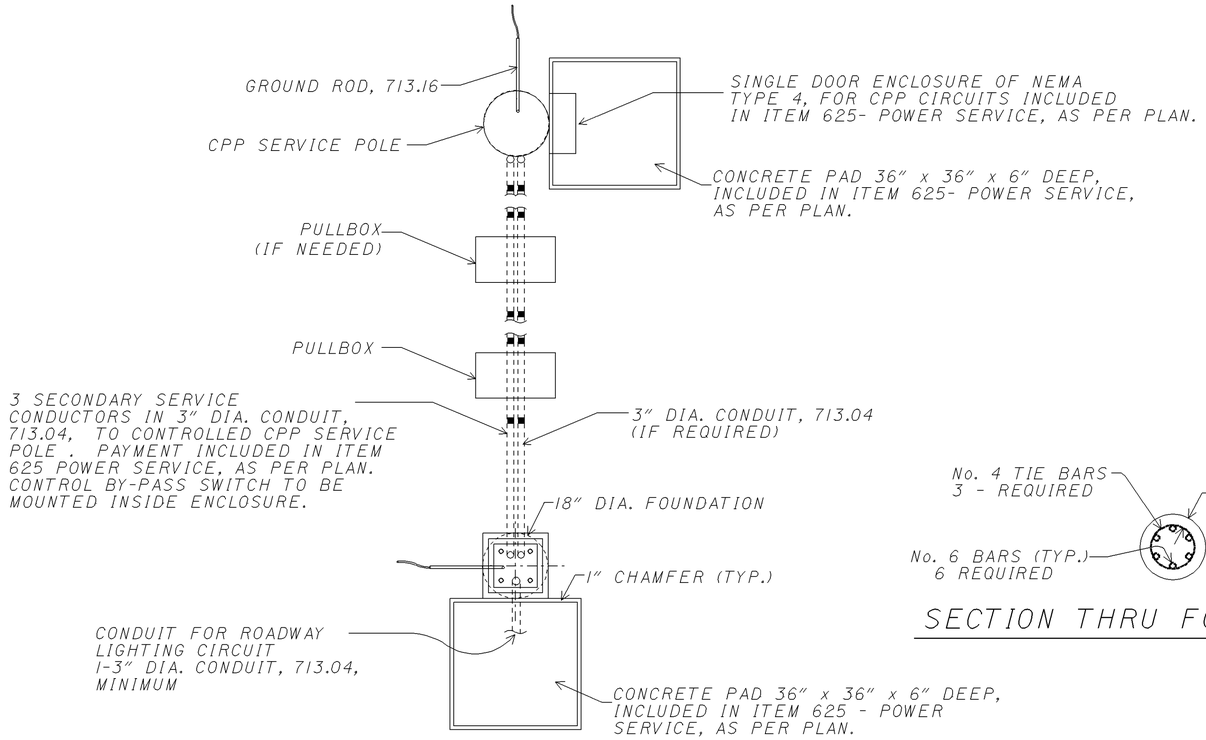
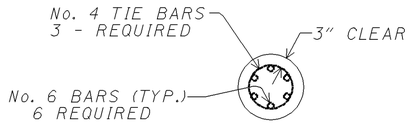
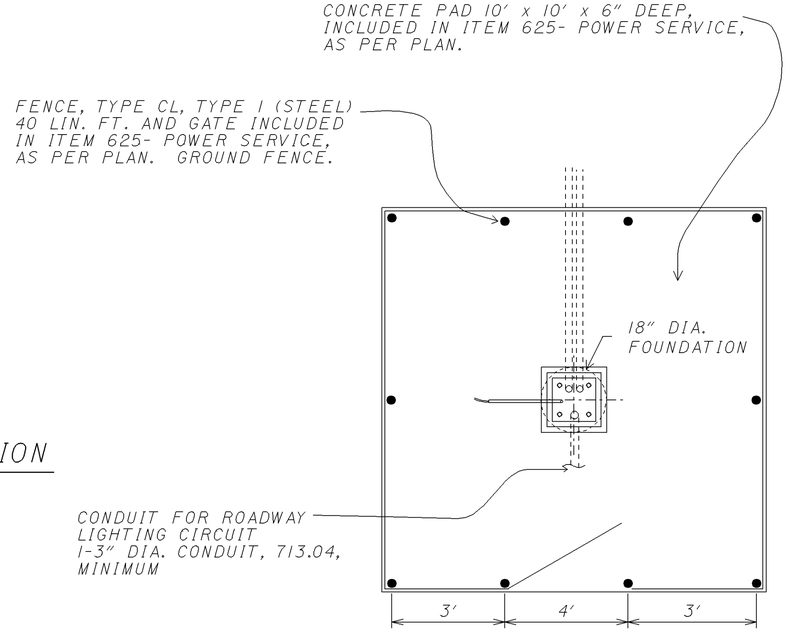


PLAN

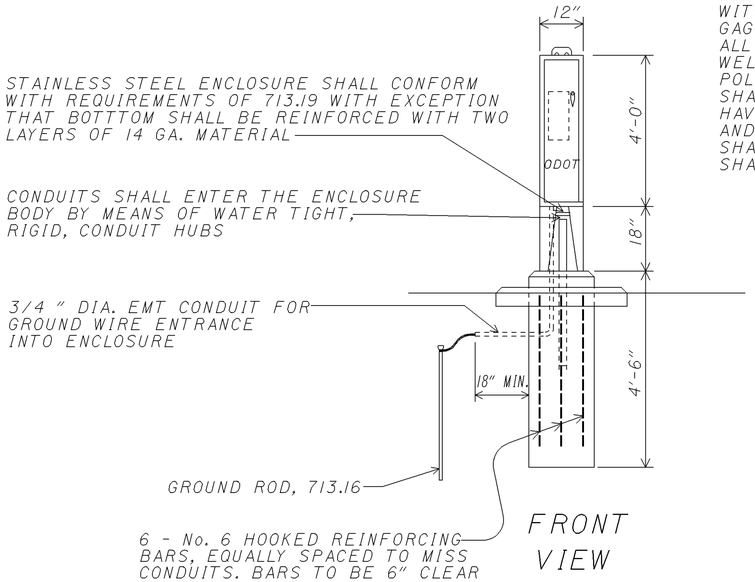


SECTION THRU FOUNDATION



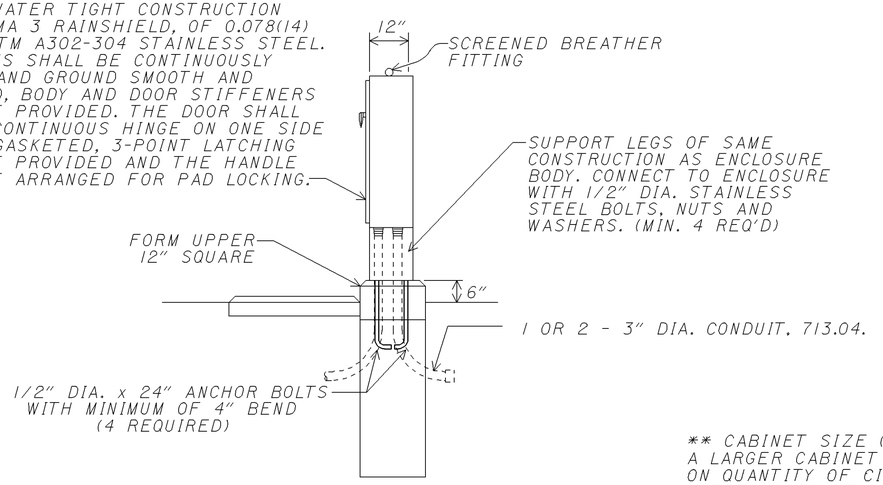
PLAN

FOR CONTROL CENTER FR



FRONT VIEW

**SINGLE DOOR ENCLOSURE OF NEMA TYPE 4 WATER TIGHT CONSTRUCTION WITH NEMA 3 RAINSHIELD, OF 0.078(14) GAGE, ASTM A302-304 STAINLESS STEEL. ALL SEAMS SHALL BE CONTINUOUSLY WELDED AND GROUND SMOOTH AND POLISHED, BODY AND DOOR STIFFENERS SHALL BE PROVIDED. THE DOOR SHALL HAVE A CONTINUOUS HINGE ON ONE SIDE AND BE GASKETED, 3-POINT LATCHING SHALL BE PROVIDED AND THE HANDLE SHALL BE ARRANGED FOR PAD LOCKING.



SIDE VIEW

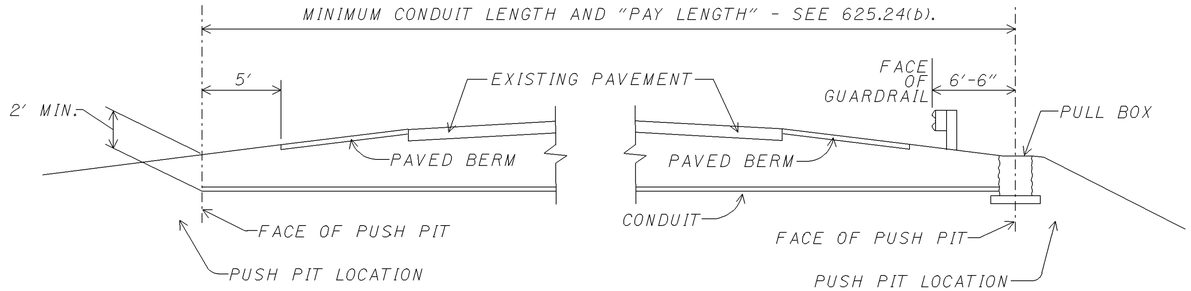
** CABINET SIZE (12" X 12" SHOWN) A LARGER CABINET MAY BE REQUIRED, DEPENDENT ON QUANTITY OF CIRCUITS AND CONDUITS. IF A LARGER CABINET IS NEEDED, IT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. THE FOUNDATION AND WORK PAD SIZE SHALL BE ADJUSTED ADEQUATELY. IF THE OVERALL CABINET WIDTH IS 24", THEN A 48"X36"X6" PAD SHALL BE PROVIDED AT NO ADDITIONAL COST.

GROUND MOUNTED POWER SERVICE DETAILS

CALCULATED BJK CHECKED

POWER SERVICE DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00



CONDUIT JACKED OR DRILLED UNDER PAVEMENT

CALCULATED BJK
CHECKED

LIGHTRING DETAILS

CUYAHOGA COUNTY
CUY-90/490-13.09/0.00

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110