

USER: SPATES DATE: 02/15/2022 TIME: 12:20:10 PM bschneider
 D:\FILES\NAVAOIP\WINTO\par sons.com:ohio State\Documents\DB-Akron Beltway Rehab\10 - Design\102329\Lighting\Sheets\BU-37.dgn Sheet 2/15/2022 12:20:10 PM bschneider

Released for Construction
 Thomas J Powell, PE
 02/16/2022

PROJECT DESCRIPTION

THE AKRON CENTRAL INTERCHANGE PROJECT (PID 102329) INCLUDES RECONSTRUCTION OF IR-76 EB/WB PAVEMENT FROM SLM 11.05 (IR-76) TO SLM (IR-76) FOR APPROX. 1.16 MILES OF MAINLINE WORK. THIS PROJECT ALSO INCLUDES REPLACEMENT OF TWO FREEWAY STRUCTURES (RAMP N AND RAMP Q) ON NEW ALIGNMENTS, WIDENING OF TWO EXISTING BRIDGES (IR-76 EB OVER BROWN STREET AND IR-76 WB OVER INMAN STREET), CONSTRUCTION OF A NEW PEDESTRIAN/MULTI-USE OVERPASS SPANNING SR-8, AND CONSTRUCTION OF NOISE BARRIERS AT THE PERIMETER OF THE INTERCHANGE. PORTIONS OF SR-9, LANE O AND LANE S ARE TO BE RESURFACED. THE EXISTING IR-76 WB TO INMAN STREET AND IR-77 SB TO LOVERS LANE WILL BE REMOVED PERMANENTLY, AS WELL AS THE EXISTING LAFOLLETTE STREET BRIDGE OVER SR-8 (SUM-77-1184).

BUILDABLE UNIT 37 DESCRIPTION

THIS BUILDABLE UNIT SHOW CONSTRUCTION OF PROPOSED LIGHTING AND ITS ALONG IR-77 FROM WATERLOO TO LAFOLLETTE. PROPOSED ITS CONSISTS OF NEW EMPTY CONDUIT WITHIN PROPOSED MEDIAN BARRIER AND NEW CONDUIT CROSSINGS.

LIMITED ACCESS

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

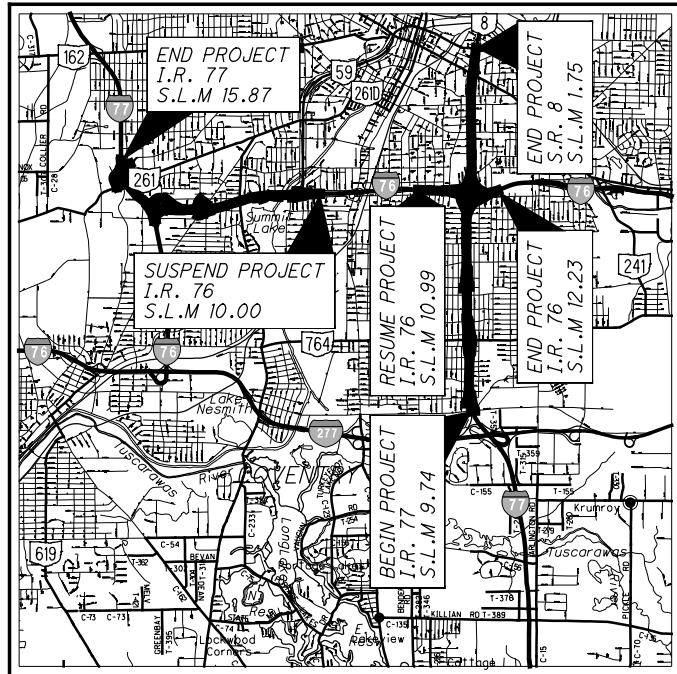
2019 SPECIFICATIONS

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

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

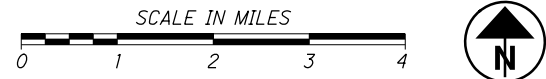
SUM-76-8.24
 SUM-77-9.74
 SUM-8-0.00

CITY OF AKRON
 SUMMIT COUNTY



LOCATION MAP

LATITUDE: 41° 03' 43" LONGITUDE: 81° 30' 17"



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

DESIGN DESIGNATION

ROADWAY PLANS: SEE BU-19

NHS PROJECT: ----- YES

DESIGN EXCEPTIONS

N/A

INDEX OF SHEETS:

TITLE SHEET	1
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ATR DETAIL	11
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FOR MOT, SEE BU-07
 FOR STRUCTURES WORK, SEE BU-12 & BU-15
 FOR SCHEMATIC PLAN & SURVEY CONTROL, SEE BU-19
 FOR REMOVALS, SEE BU-27
 FOR ROADWAY, SEE BU-34
 FOR TRAFFIC CONTROL, SEE BU-41
 FOR FENCING PLANS, SEE BU-42

UNDERGROUND UTILITIES
 Contact Two Working Days
 Before You Dig

OHIO811.org

Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
 (Non-members must be called directly)

ENGINEERS SEAL:

SIGNED: *Elizabeth M. Schneider*
 DATE: 02/15/2022

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
HL-10.11	4/17/20	ITS-14.10	7/17/15	800-2020	10/16/20
HL-10.12	1/20/17	ITS-14.11	1/18/19	809	10/16/20
HL-10.13	4/17/20	ITS-14.50	7/20/18	813	10/19/18
HL-10.31	4/17/20			821	4/20/12
HL-20.11	7/17/20			825	1/17/20
HL-20.13	4/17/20			829	1/20/17
HL-20.21	1/19/18			831	10/21/16
HL-30.11	7/17/20			839	1/17/20
HL-30.21	4/17/20			913	4/21/17
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HL-40.20	7/17/20				
HL-60.11	7/21/17				
HL-60.12	4/17/20				
HL-60.21	7/20/18				
HL-60.31	1/17/20				

BU-37

LIGHTING & ITS

IR-77 at Waterloo St to
IR-77 at Lovers Ln

RFC PLANS
February 10, 2022

ISSUE RECORD:		
NO.	DATE	DESCRIPTION

2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

RAILROAD INVOLVEMENT

CONSTRUCTION PROJECT NO.

PID NO.

FEDERAL PROJECT NO.

SUM-76/77/8-
 8.24/9.74/0.00

102329

21-3000

NONE

E180(428)

ITEMS 625 - CONDUIT 4" MULTI-CELL SCHEDULE 40 & SCHEDULE 80, 725.20

DESCRIPTION

THIS CONDUIT IS INTENDED FOR THE USE IN UNDERGROUND SITUATIONS REQUIRING MORE THAN ONE SINGLE CONDUIT. THIS INCLUDES THE MAIN CONDUIT RACEWAY ALONG THE FREEWAY, CONNECTION FROM PULL BOXES TO THE ROAD SIDE CABINETS AND FOR RUNS OF CONDUIT FOR MULTIPLE PURPOSES, E.G., AT RAMP METER INSTALLATIONS, FOR LOOP LEAD-IN CABLE, SIGNALS CABLE FOR RAMP METER DISPLAYS, SIGNAL CABLE FOR RAMP METER SIGNING FLASHERS & ILLUMINATION AND POWER. THE CONTRACTOR SHALL PLUG ALL UNUSED CELLS WITH CONDUIT CAPS TO ASSURE AIR AND WATER INTEGRITY OF EACH INDIVIDUAL INNERDUCT.

MATERIALS

THE TRAFFIC SURVEILLANCE RACEWAY SHALL CONSIST OF A FACTORY-ASSEMBLED SYSTEM OF FOUR (4) INNERDUCTS ASSEMBLED WITHIN A PROTECTIVE OUTER DUCT. THE INNERDUCTS SHALL BE NOMINAL 1.25 INCH INSIDE DIAMETER, TYPE DB PVC PER NEMA TC-8 WITH A BELL INSERTION DEPTH OF 1.75 INCHES MINIMUM. THE OUTER DUCT SHALL BE NOMINAL 4 INCH (INSIDE DIAMETER), SCHEDULE 40 PVC. CARLON TYPE SCHEDULE 40 AND 80 OR APPROVED EQUIVALENT.

THE COUPLING SHALL BE DESIGNED IN A MANNER TO PERMIT EASY FIELD ASSEMBLY. THE COUPLING SHALL BE MARKED OR KEYED IN A MANNER TO ENSURE THE INNERDUCTS ARE PROPERLY ALIGNED, ANY COLOR CODES ARE CONTINUED AND THE ADJOINING SECTION IS INSERTED TO THE PROPER DEPTH IN THE BELL. ALL KEYS AND/OR MARKINGS SHALL BE VISIBLE AFTER ASSEMBLY TO ALLOW THE INSPECTION OF EACH JOINT FOR PROPER ASSEMBLY BEFORE BURIAL. THE SEALING SYSTEM SHALL BE DESIGNED TO ASSURE AIR INTEGRITY OF EACH INDIVIDUAL INNERDUCT AND WATER INTEGRITY OF THE ENTIRE SYSTEM. WHERE INNERDUCT(S) WITHIN A MULTI-CELL DUCT ARE TO REMAIN EMPTY, ONE 1/4-INCH NYLON ROPE SHALL BE INSTALLED IN EACH OF THE OPEN INNERDUCTS, THE ROPE WILL REMAIN TO BE USED FOR A FUTURE CABLE INSTALLATION. ALSO, EACH INNERDUCT SHALL BE PLUGGED TO MAINTAIN THE AIR AND WATER INTEGRITY. IN ADDITION, THE OUTER DUCT SHALL BE CAPPED TO MAINTAIN THE AIR AND WATER INTEGRITY OF THE ENTIRE SYSTEM. FOR MULTI-CELL DUCT INSTALLED IN MEDIAN WALLS, ALL ROPES AND PLUGS SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT.

INSTALLED IN TRENCH

INSTALLATION WILL BE IN 24-INCH DEEP TRENCH, EXCEPT AS NOTED ON THE PLANS. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL MULTI-CELL CONDUIT INSTALLED OUTSIDE OF THE ROADWAY IN TRENCH SHALL BE SCHEDULE 40 UNLESS DIRECTED BY THE ODOT ENGINEER TO USE SCHEDULE 80 FOR USE IN WELL-TRAVELED VEHICULAR AREAS.

INSTALLED UNDER ROADWAY

INSTALLATION WILL BE AT LEAST 24 INCHES DEEP JACKED OR DRILLED UNDER PAVEMENT, EXCEPT AS NOTED ON THE PLANS. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL MULTI-CELL CONDUIT INSTALLED UNDER THE ROADWAY SHALL BE SCHEDULE 80.

INSTALLED WITHIN 6 FEET OF GUARDRAIL

INSTALLATION WILL BE AT LEAST 24 INCHES DEEP TRENCH AND ENCASED IN CONCRETE. ALL JOINTS WILL BE JOINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, IN ORDER TO PROVIDE AN AIR-TIGHT ENCLOSURE OF THE INTERIOR DUCTS AND A WATER-TIGHT ENCLOSURE OF THE OUTER DUCT. ALL MULTI-CELL CONDUIT INSTALLED UNDER THE ROADWAY SHALL BE SCHEDULE 80.

METHOD OF MEASUREMENT

THE CONDUIT WILL BE MEASURED BY THE AMOUNT OF CONDUIT IN FEET FURNISHED AND INSTALLED OF EACH TYPE SCHEDULE 40 OR 80 MEASURED FROM CENTER-TO-CENTER OF PULL BOXES, FOUNDATION, ETC., AND WILL INCLUDE ALL FITTINGS AND APPURTENANCES, JOINTS, BENDS, GROUNDS AND CONCRETE ENCASEMENT WHERE SPECIFIED. THE TRENCH WILL BE MEASURED BY THE NUMBER OF FEET OF TRENCH COMPLETED AS PER C&MS 625.21.

ITEM 625 - MEDIAN JUNCTION BOX, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY THE MEDIAN BARRIER JUNCTION PULL BOXES THAT MEET THE FOLLOWING

SPECIFICATIONS:

SHALL BE OF TYPE POLYMER-CONCRETE
 SIZE: 17 INCHES (HEIGHT) X 30 INCHES (LENGTH)
 MINIMUM WALL THICKNESS: 0.5 INCH
 MINIMUM LID THICKNESS: 2 INCHES
 ANSI TIER 22 RATING WITH A MINIMUM DESIGN LOAD OF 22,000 POUNDS
 LID SHALL BE MARKED "TRAFFIC."
 THE MEDIAN JUNCTION BOX SHALL BE SECURED IN THE MEDIAN BARRIER WALL USING DOWELS. (NON-SHRINK GROUT MAY BE USED WHEN NECESSARY).

MAINTAINING TRAFFIC DURING CONSTRUCTION

THE CONTRACTOR SHALL MAINTAIN ALL PREEXISTING OR NEWLY INSTALLED PERMANENT ITS/TRAFFIC DEVICES AND INFRASTRUCTURE DURING CONSTRUCTION ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809.

1342-14 PROTECTION OF TRAFFIC MONITORING EQUIPMENT

PRIOR TO BEGINNING ANY PAVEMENT ACTIVITIES OR ANY EXCAVATION ACTIVITIES BETWEEN STA. 4293+00 AND 4296+00 THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE FROM THE OWNER WILL COORDINATE A TIME FOR THE OWNER/MAINTAINING AGENCY TO DISCONNECT THE EQUIPMENT. FOLLOWING THE DISCONNECTION BY THE OWNER, THE CONTRACTOR WILL BE ALLOWED TO PERFORM THEIR PAVEMENT ACTIVITIES, INCLUDING PAVEMENT REMOVAL. THE REMOVE LOOPS AND SENSORS BECOME THE PROPERTY OF THE CONTRACTOR.

2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

ITS GENERAL NOTES

SUM-76/77/8-
 8.24/9.74/0.00

2
 27

ISSUE RECORD:		
NO.	DATE	DESCRIPTION

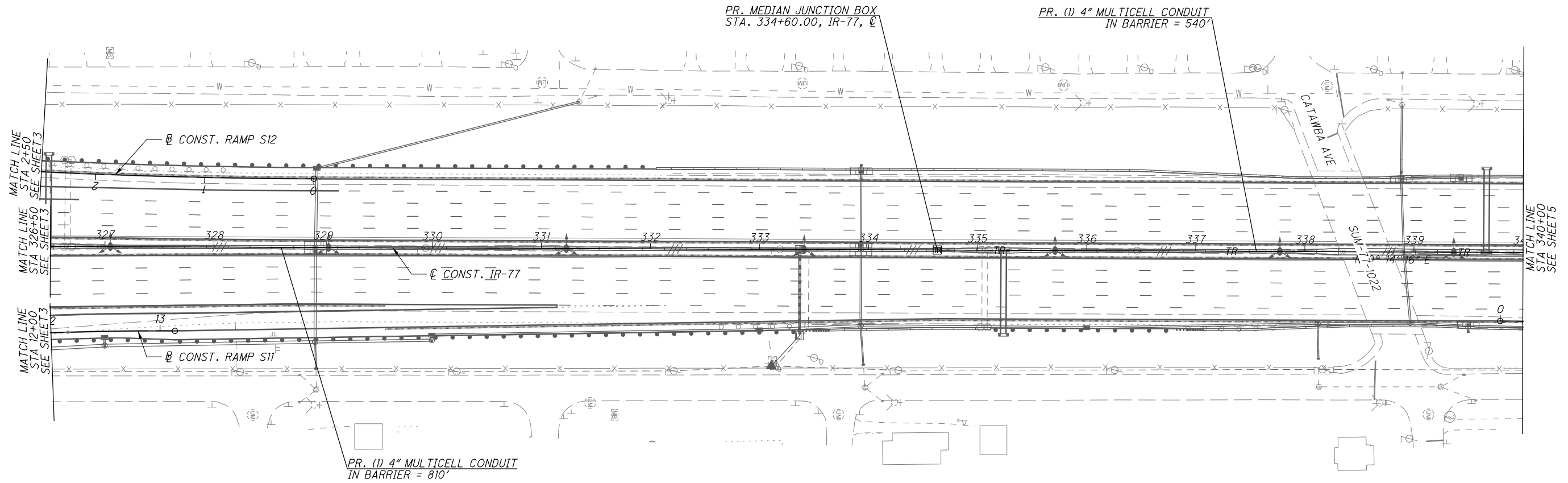
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CALCULATED
 CDP
 CHECKED
 EMS

ITS PLAN - IR-77
 STA 326+50 TO STA 340+00

SUM-76/77/8-
 8.24/9.74/0.00



NOTES:
 1) FOR PLAN LEGEND SEE SHEET 3

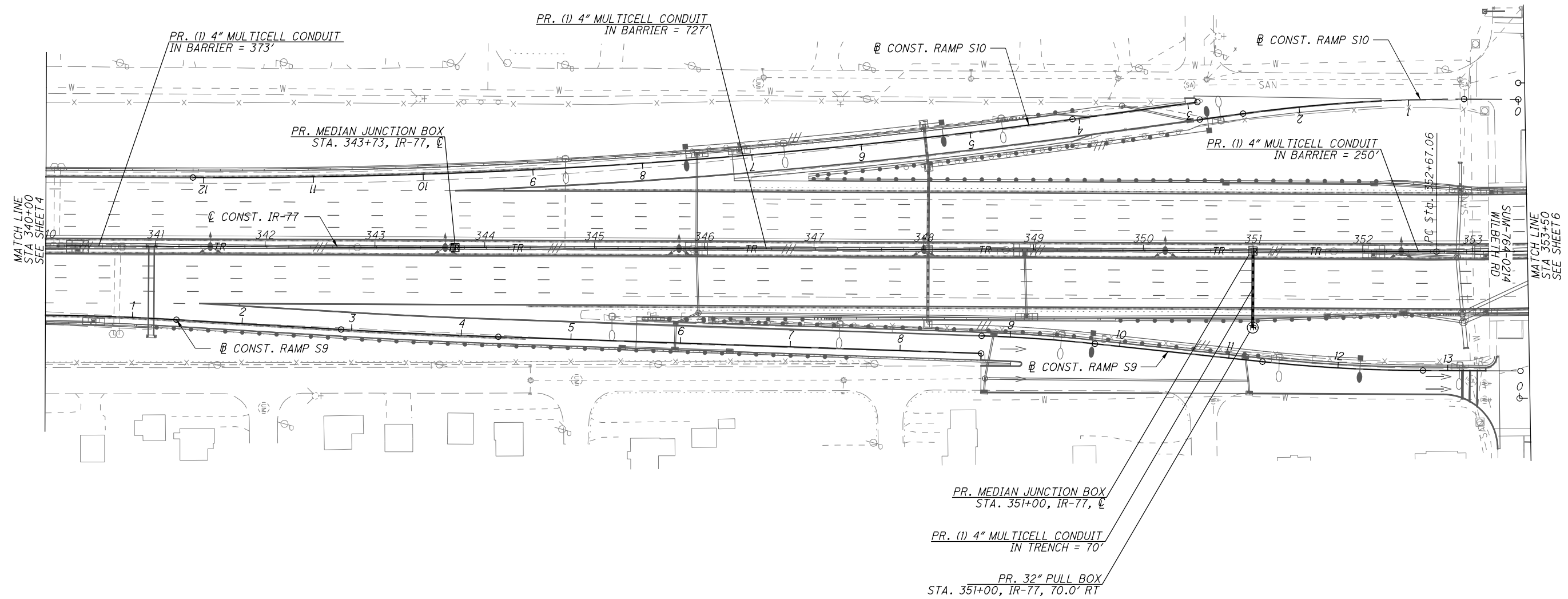
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Released for Construction
 Thomas J Powell, PE
 02/16/2022



CALCULATED CDP
 CHECKED EMS



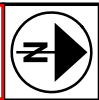
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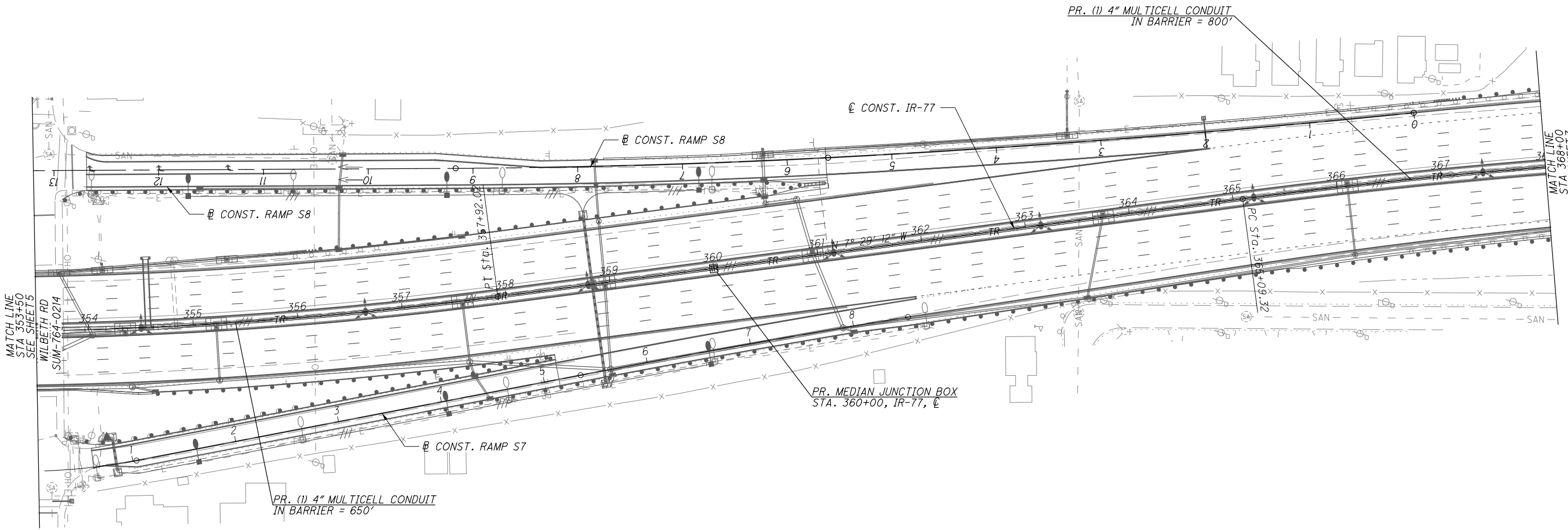
2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

ITS PLAN - IR-77
 STA 340+00 TO 353+50

SUM-76/77/8-
 8.24/9.74/0.00



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MATCH LINE
 STA 353+50
 SEE SHEET 5

MATCH LINE
 STA 368+00
 SEE SHEET 7

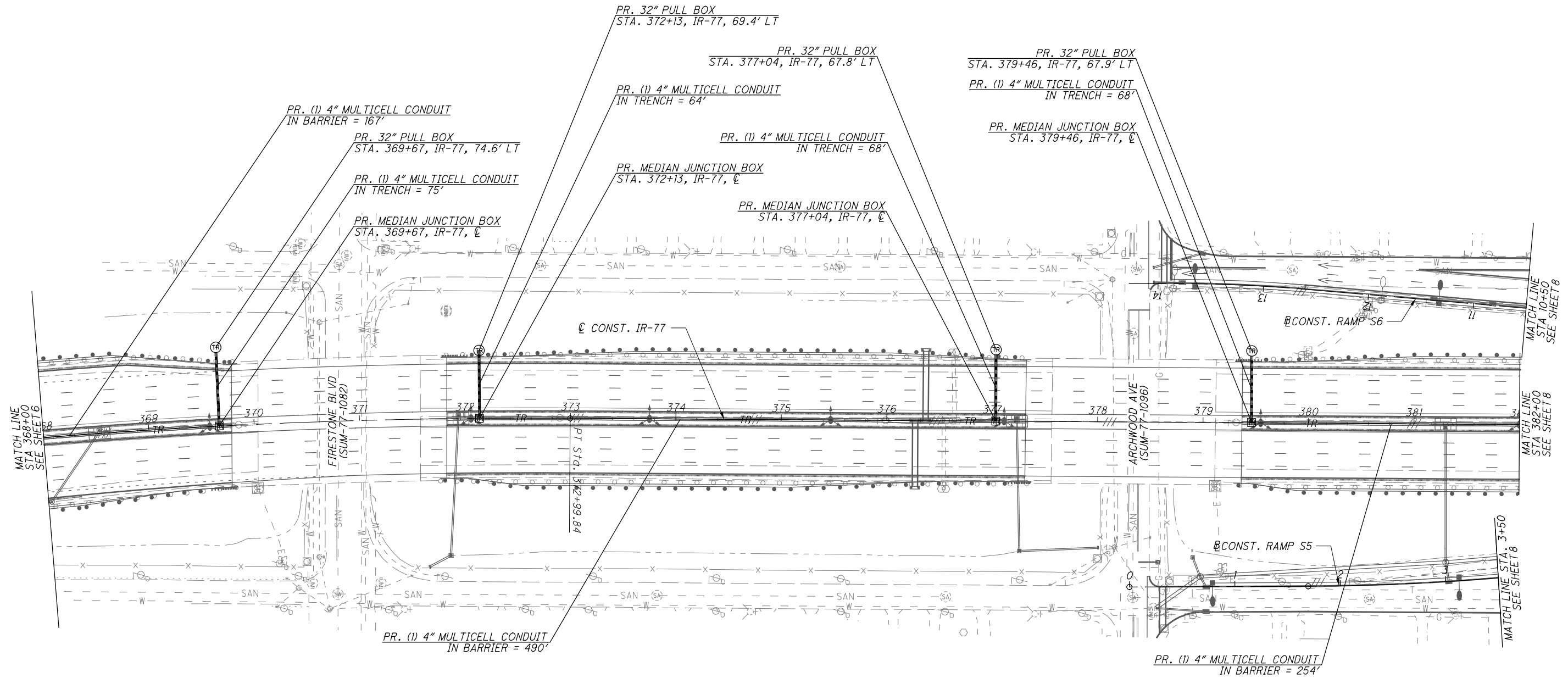
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ITS PLAN - IR-77
 STA 353+50 TO STA 368+00

SUM-76/77/8-
 8.24/9.74/0.00

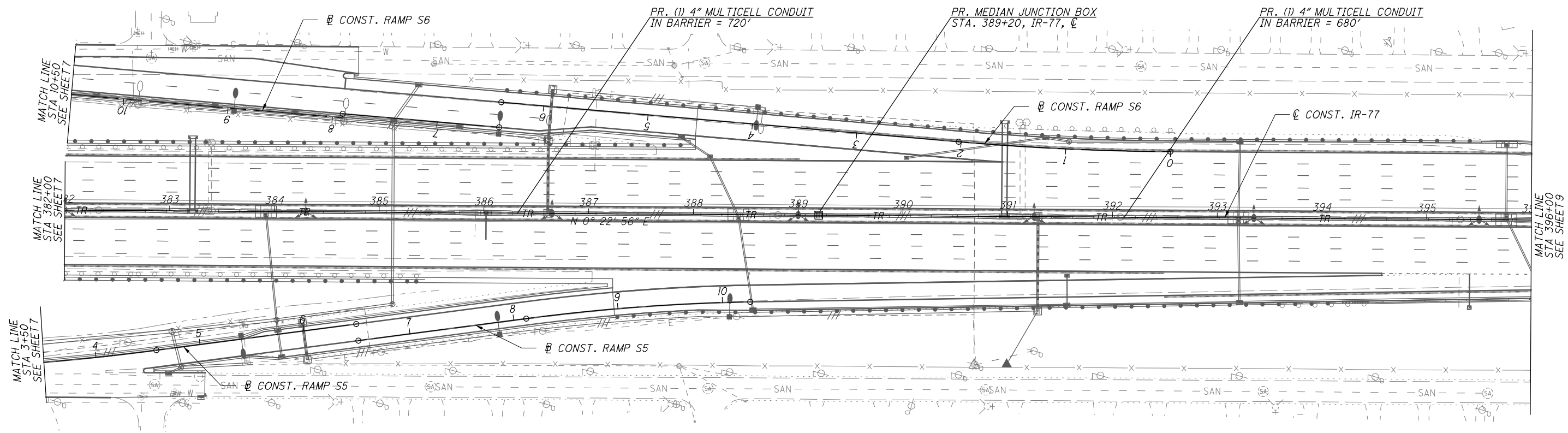


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NOTES:
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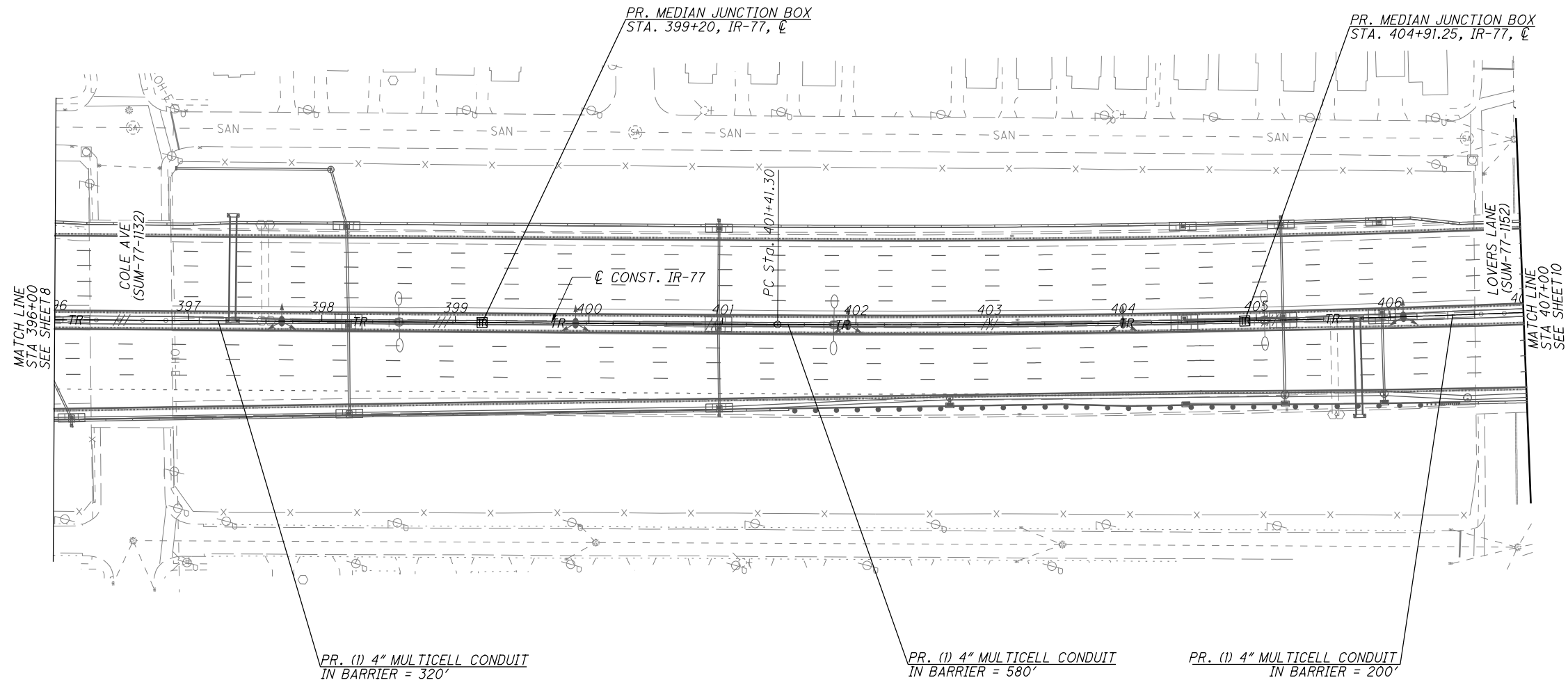
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ITS PLAN - IR-77
 STA 382+00 TO STA 396+00

SUM-76/77/8-
 8.24/9.74/0.00



CALCULATED
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NOTES:
 1) FOR PLAN LEGEND SEE SHEET 3

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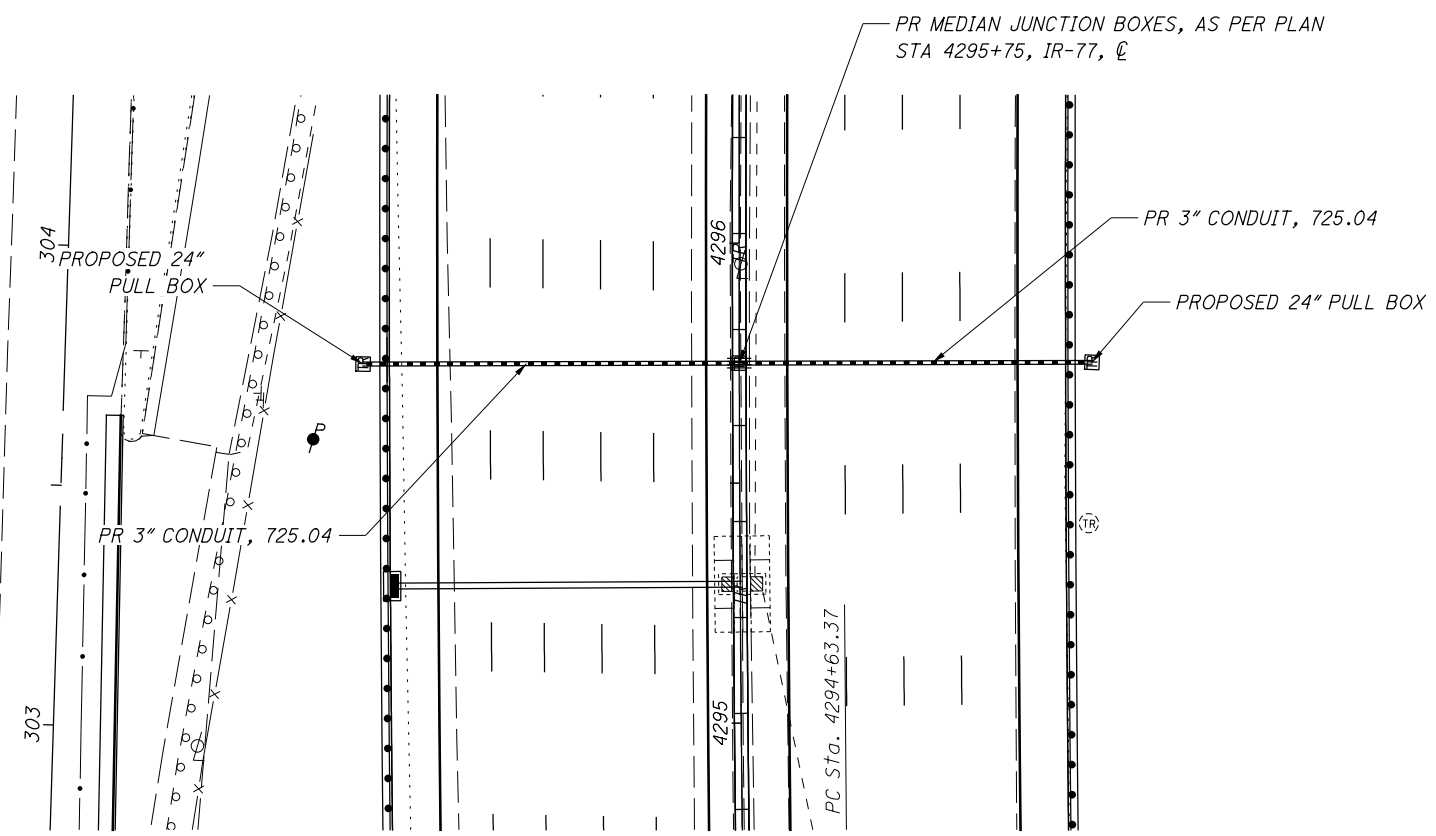
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ITS PLAN - IR-77
 STA 396+00 TO STA 407+00

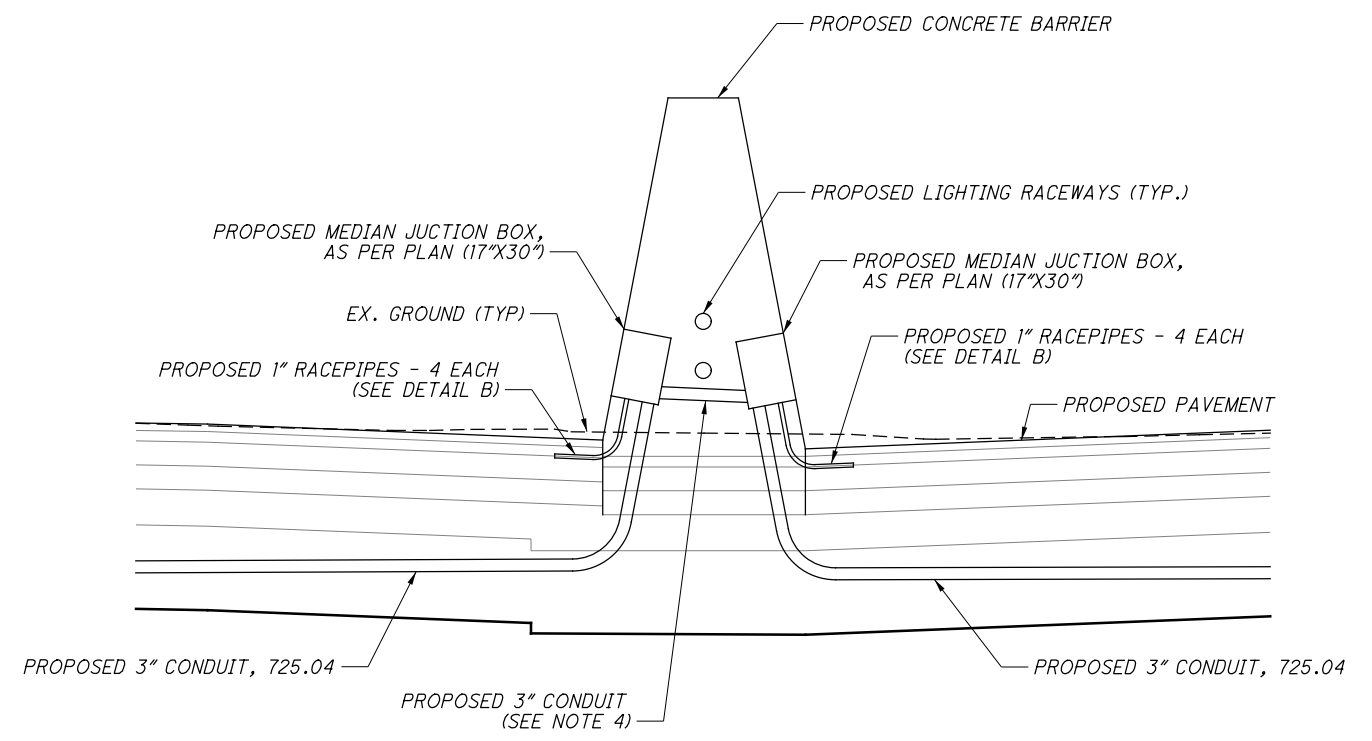
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 8.24/9.74/0.00



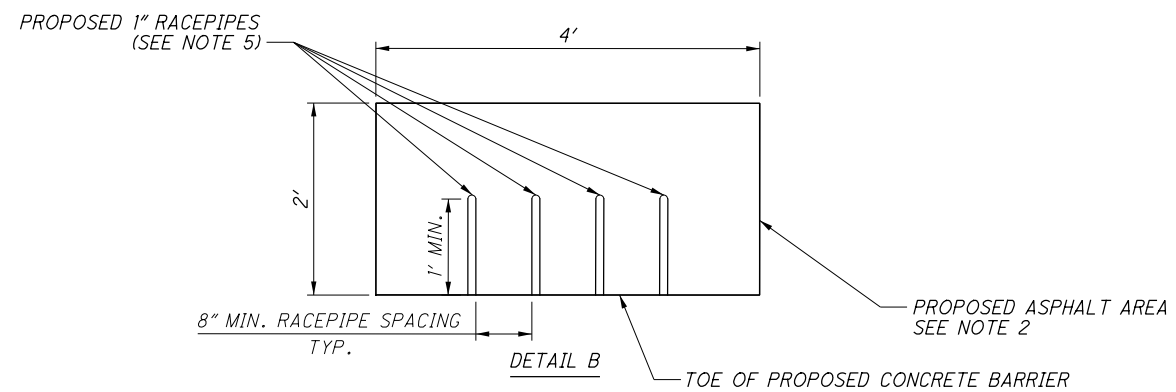
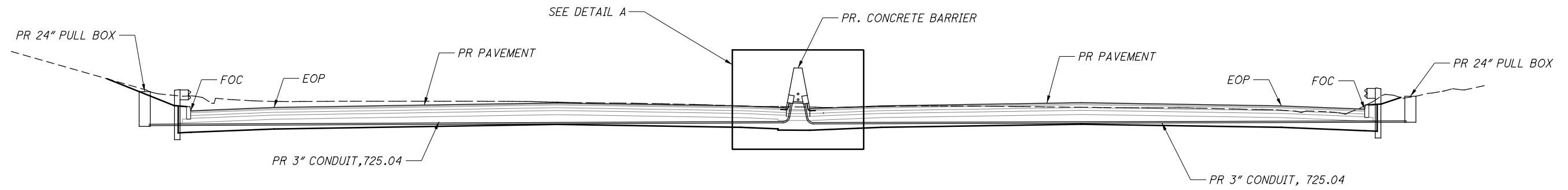
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PLAN VIEW



DETAIL A



- NOTES:
1. THE ATR INSTALLATION SHALL BE AS DESCRIBED ON SHEET 10 PER THE SOS.
 2. PROPOSED RACEPIPES SHALL BE INSTALLED IN ASPHALT AND PLACED 4" ±1/2" BELOW FINAL SURFACE COURSE.
 3. PROPOSED RACEPIPE LOCATIONS SHALL BE MARKED ON PROPOSED MEDIAN BARRIER.
 4. THE PROPOSED 3" CONDUIT SHALL CONNECT THE TWO PROPOSED MEDIAN JUNCTION BOXES.
 5. RACEPIPES ENDS SHALL BE SECURED WITH PLUMBERS DUCT SEAL (ONE POUND BLOCK PER RACEPIPE.)

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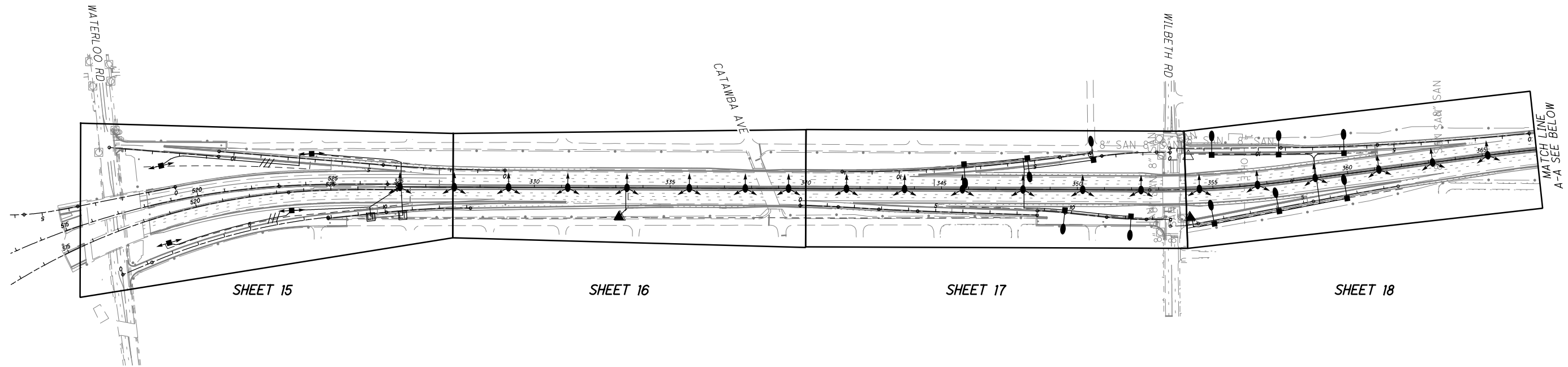
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ATR DETAIL
IR-77

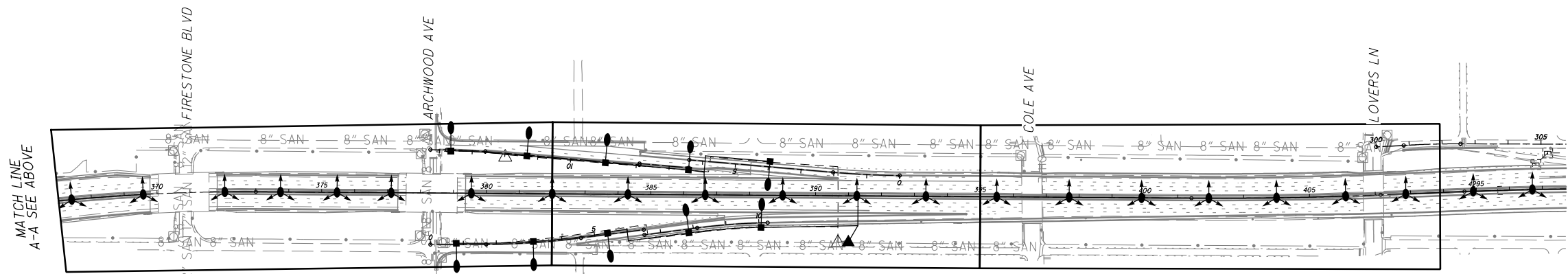
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8.24/9.74/0.00



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SHEET 15 SHEET 16 SHEET 17 SHEET 18



SHEET 19 SHEET 20 SHEET 21

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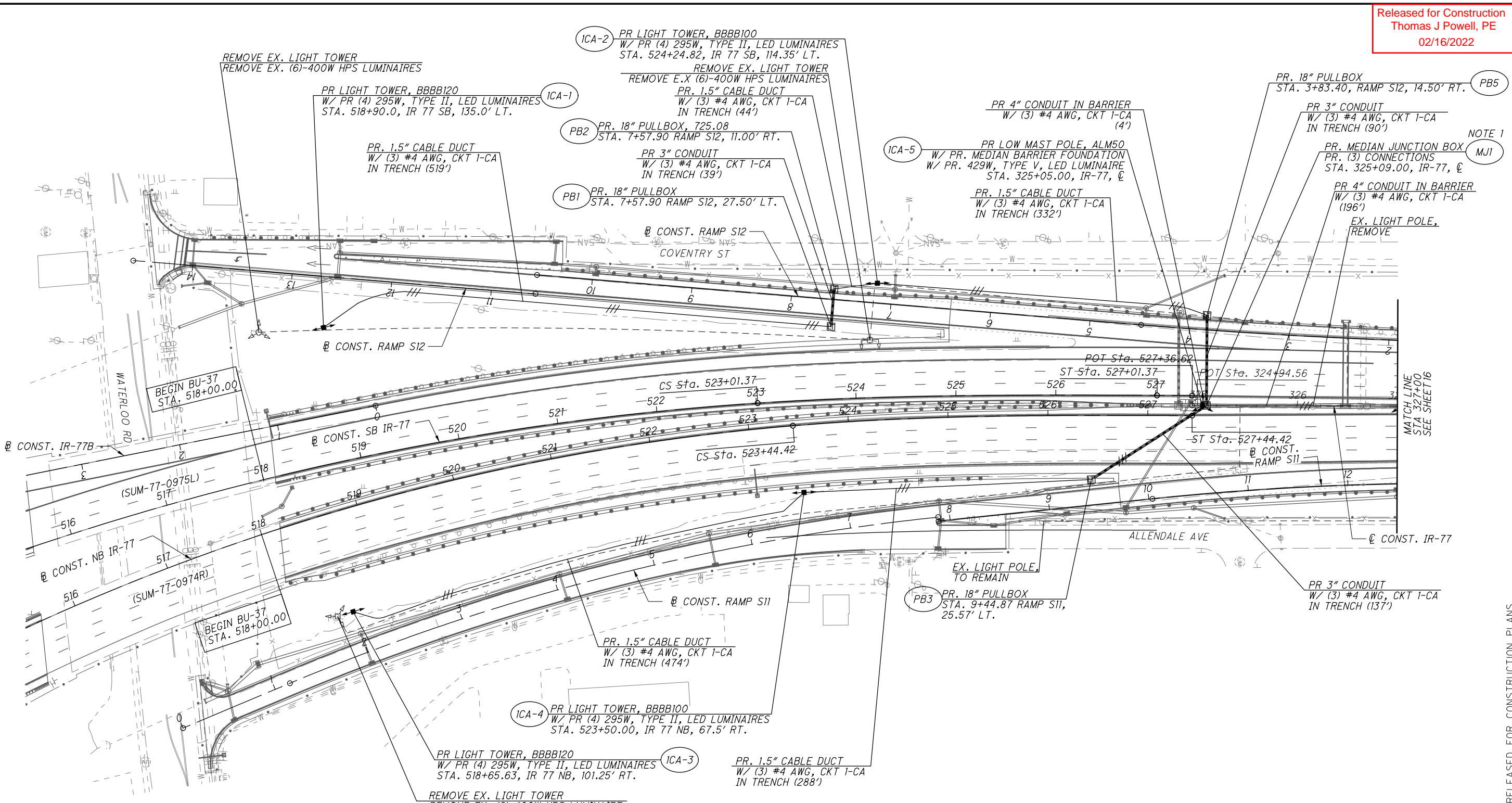


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LIGHTING PLAN - IR-77
STA 324+94 TO STA 327+00

2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS
SUM-76/77/8-
8.24/9.74/0.00

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LIGHTING SYMBOL LEGEND

	EXISTING	PROPOSED
LIGHTING CONTROL CABINET		
PULL BOX/JUNCTION BOX		
LIGHT POLE, HIGH MAST W/ SYMMETRICAL LUMINAIRES		
LIGHT POLE, LOW MAST W/ SYMMETRICAL LUMINAIRES		
LIGHT POLE, HIGH MAST W/ ASYMMETRICAL LUMINAIRES		
CONVENTIONAL LIGHT POLE, W/ BRACKET ARM & LUMINAIRE		
UNDERPASS LUMINAIRE		

PLAN LINE STYLE LEGEND

	PROPOSED DUCT CABLE, THREE NO.4 AWG CABLES (UNLESS OTHERWISE SHOWN)
	PROPOSED CONDUIT, 3" STEEL WHEN UNDERGROUND AND 4" PVC WHEN IN BARRIER (UNLESS OTHERWISE SPECIFIED)
	EXISTING LIGHTING CIRCUIT

NOTES:
 1) MEDIAN JUNCTION BOX IS PAID FOR AS PART OF MEDIAN LIGHT POLE PER STANDARD CONSTRUCTION DRAWING HL-20.13. JUNCTION BOX IS LABELED FOR REFERENCE TO CIRCUIT BRANCH CONNECTIONS.

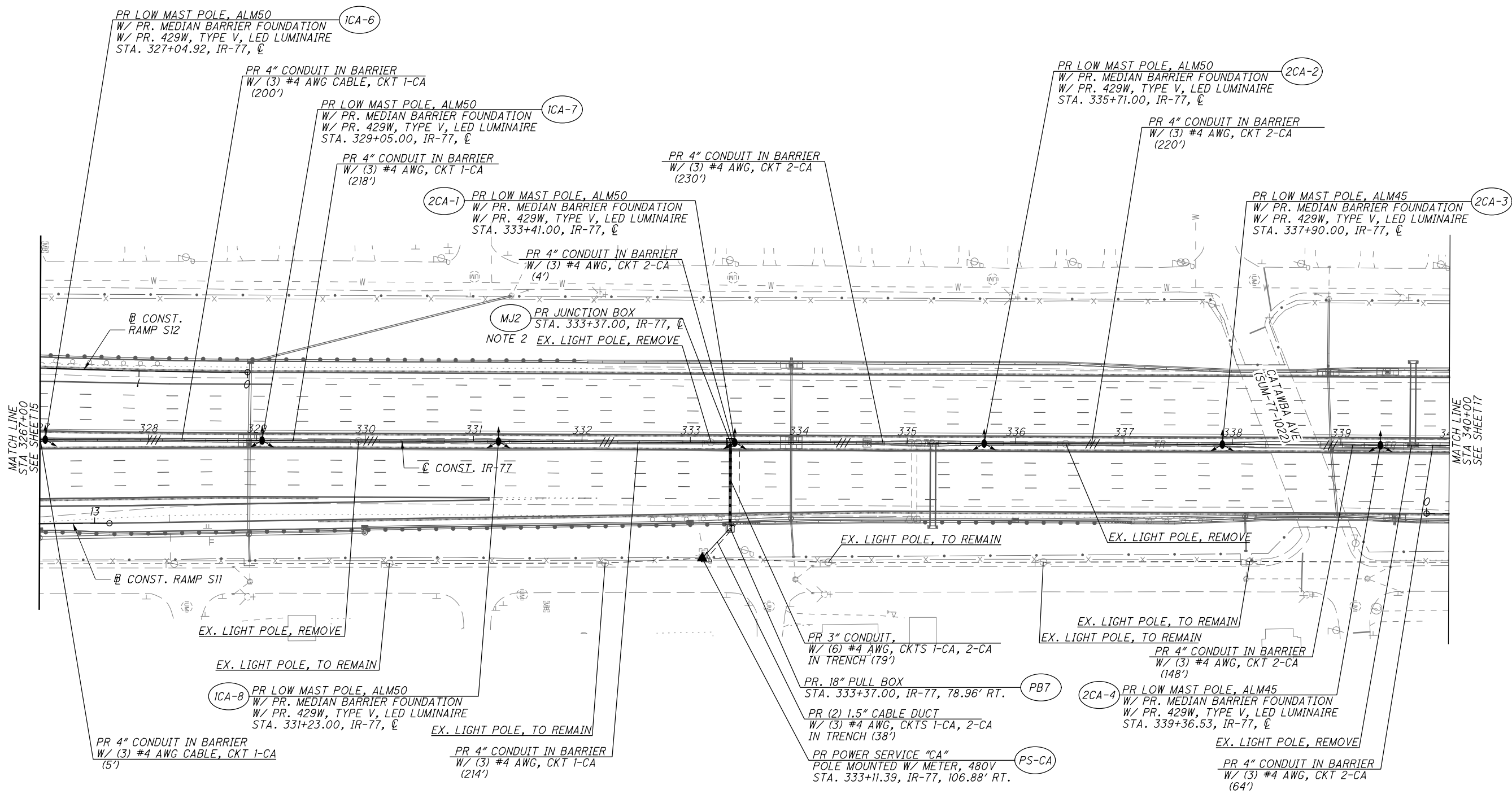
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LIGHTING PLAN - IR-77
 STA 327+00 TO STA 340+00

SUM-76/77/8-
 8.24/9.74/0.00



- NOTES:
 1) FOR PLAN LEGEND SEE SHEET 15
 2) MEDIAN JUNCTION BOX IS PAID FOR AS PART OF MEDIAN LIGHT POLE PER STANDARD CONSTRUCTION DRAWING HL-20.13. JUNCTION BOX IS LABELED FOR REFERENCE TO CIRCUIT BRANCH CONNECTIONS.

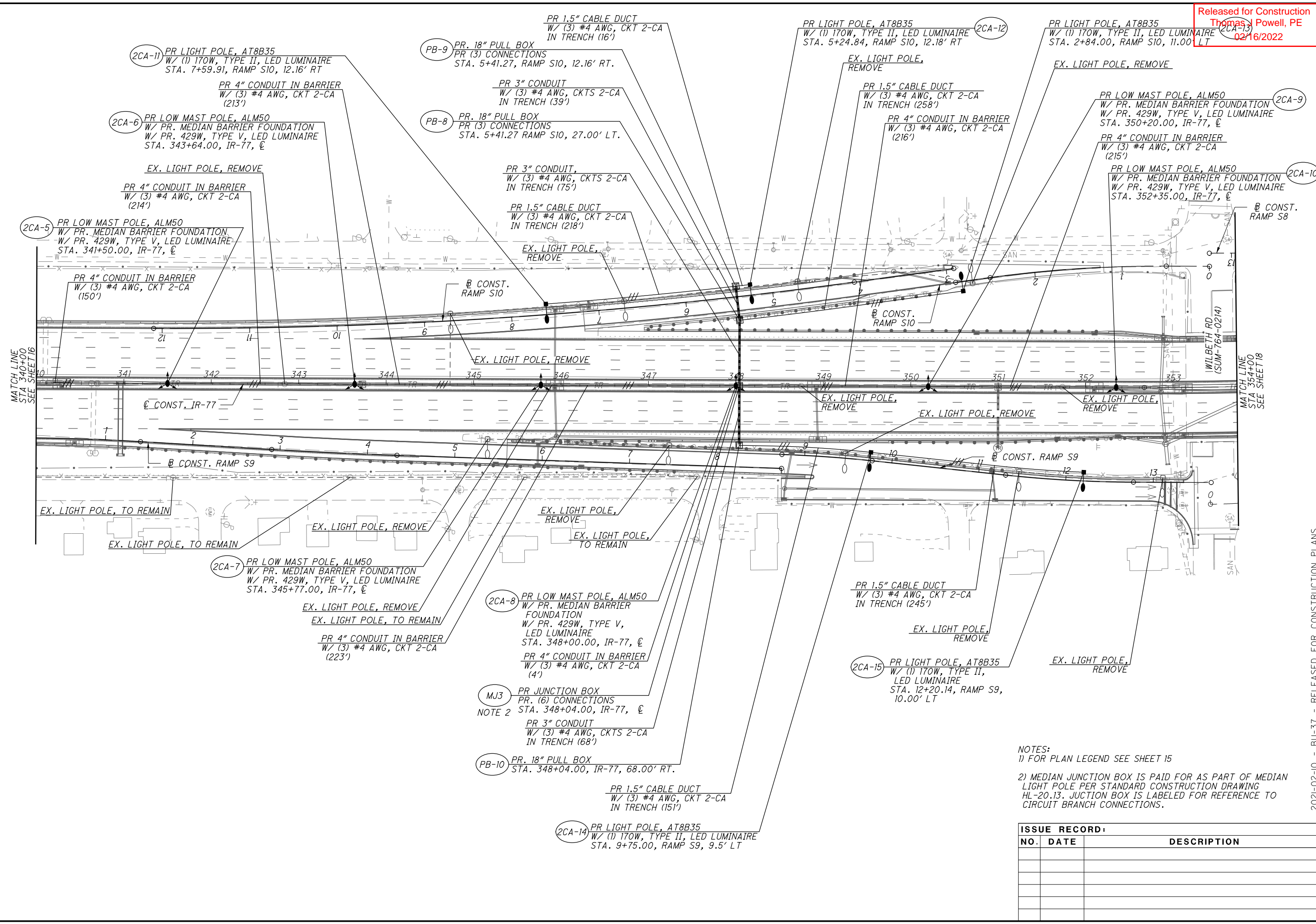
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NOTES:
 1) FOR PLAN LEGEND SEE SHEET 15
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LIGHTING PLAN - IR-77
 STA 340+00 TO 354+00

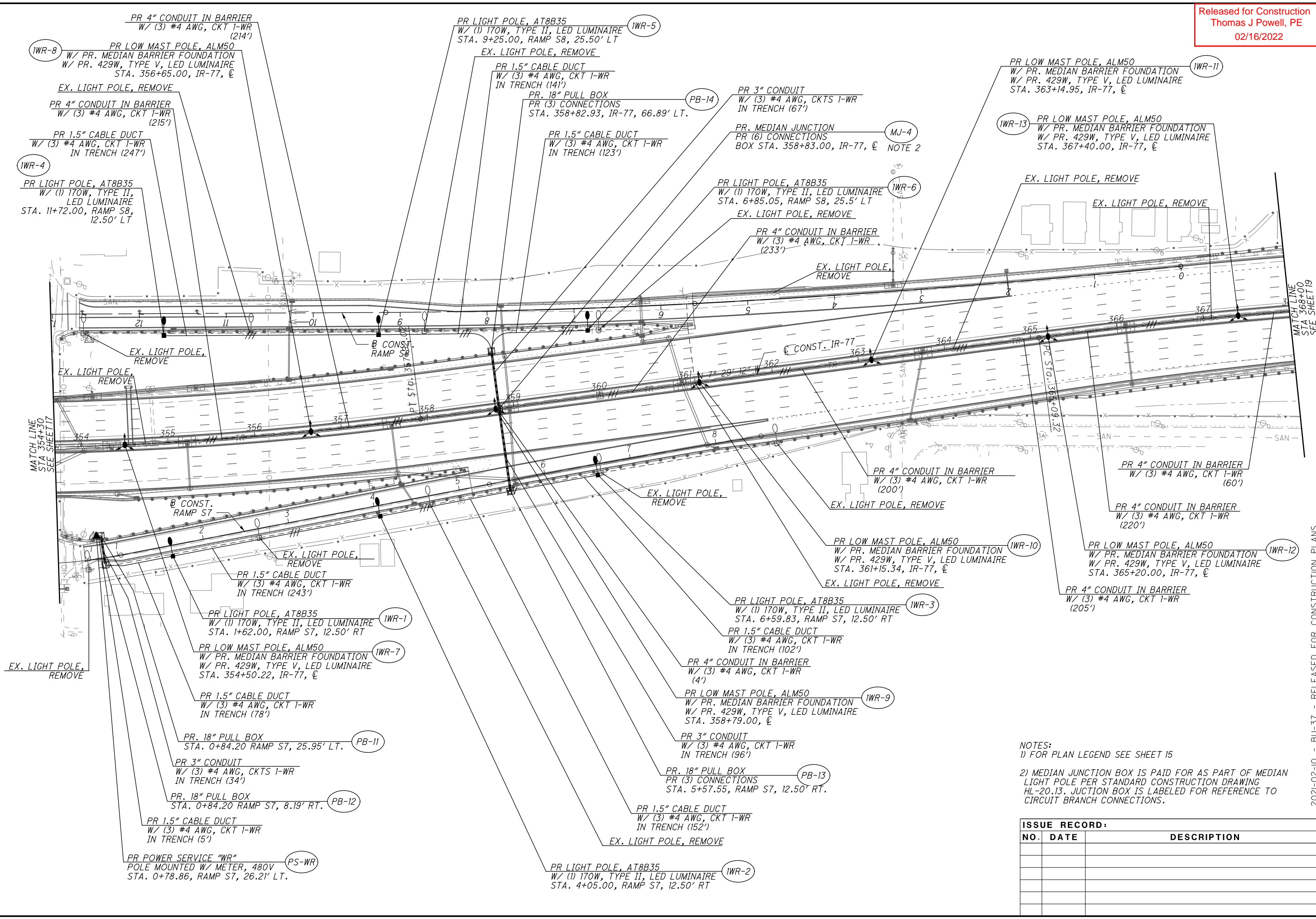
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2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

LIGHTING PLAN - IR-77
STA 354+00 TO STA 368+00

SUM-76/77/8-
8.24/9.74/0.00

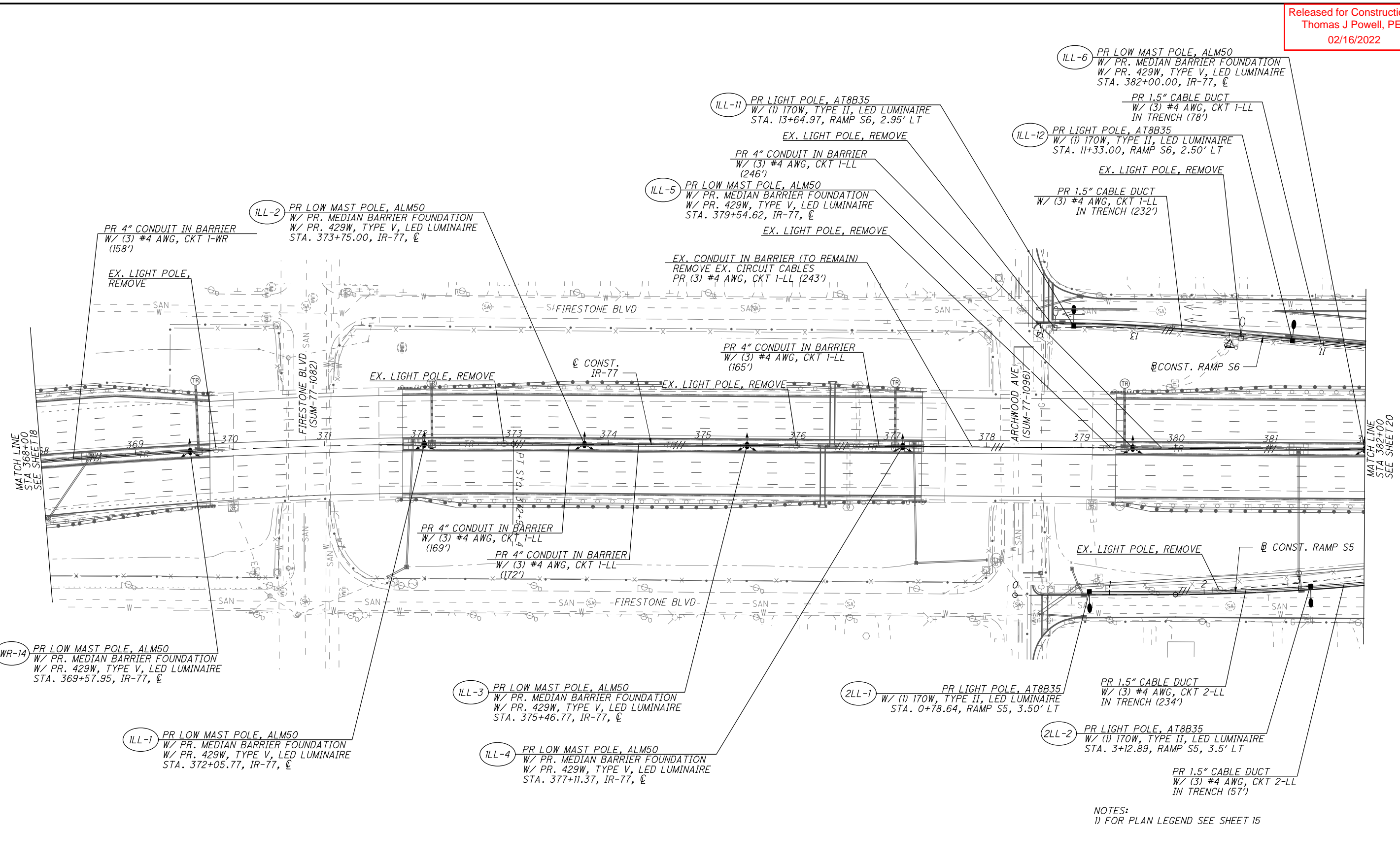


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LIGHTING PLAN - IR-77
STA 368+00 TO STA 382+00

SUM-76/77/8-
8.24/9.74/0.00

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NOTES:
 1) FOR PLAN LEGEND SEE SHEET 15

ISSUE RECORD:		
NO.	DATE	DESCRIPTION

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 02/16/2022



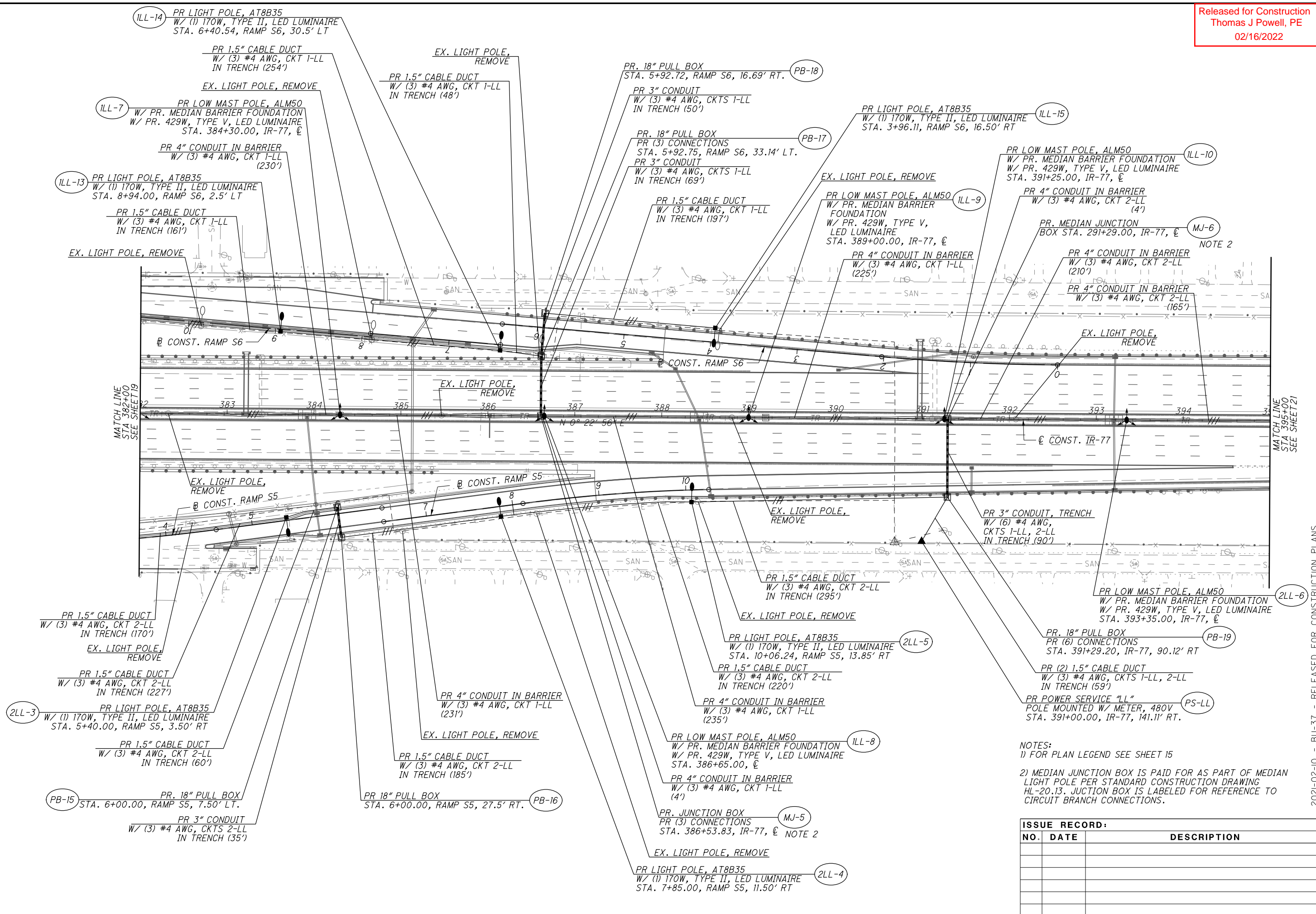
CALCULATED
 CDP
 CHECKED
 EMS

LIGHTING PLAN - IR-77
STA 382+00 TO STA 395+00

2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

SUM-76/77/8-
8.24/9.74/0.00

20
 27



NOTES:
 1) FOR PLAN LEGEND SEE SHEET 15
 2) MEDIAN JUNCTION BOX IS PAID FOR AS PART OF MEDIAN LIGHT POLE PER STANDARD CONSTRUCTION DRAWING HL-20.13. JUNCTION BOX IS LABELED FOR REFERENCE TO CIRCUIT BRANCH CONNECTIONS.

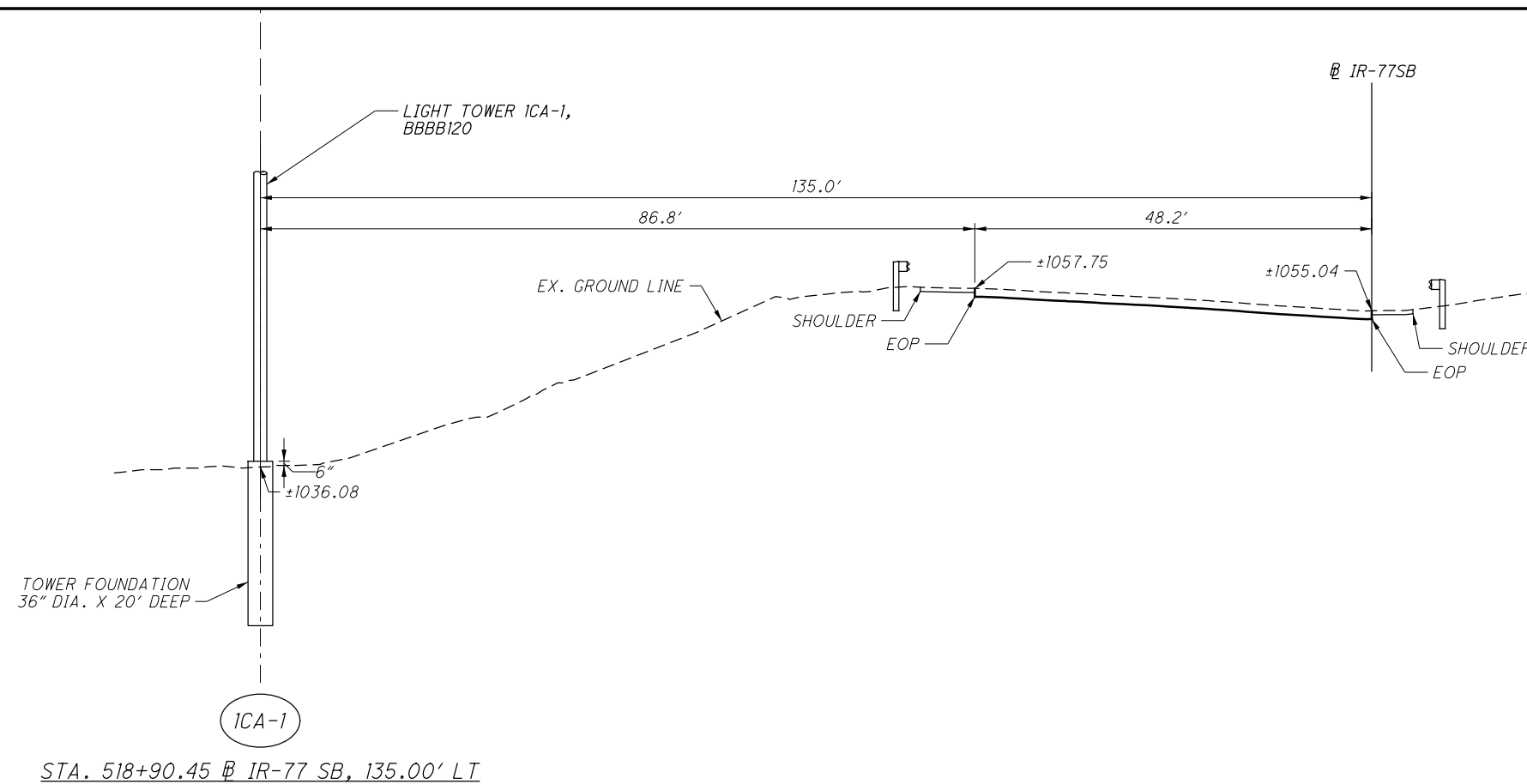
ISSUE RECORD:		
NO.	DATE	DESCRIPTION

LIGHTING TOWER SCHEDULE

NO.	TOWER HEIGHT (FT.)	NO. OF LUMINAIRES		LOCATION				ELEV (FT.) (NOTE 2)	DETAILS			REFERENCE BORING(S)	FOR DETAIL SEE SHEET:
		SYM	ASYM	ALIGNMENT	STATION	OFFSET	SIDE		DIA. (IN)	REINF. BARS (NOTE 3)	LENGTH (FT) (NOTE 1)		
ICA-1	120		4	IR-77 SB	518+90.0	135.0'	LT	1036.08	36	8#10	20	P-033-0-18	22
ICA-2	100		4	IR-77 SB	524+24.82	114.0'	LT	1069.16	36	8#10	20	B-021-4-21	23
ICA-3	120		4	IR-77 NB	518+65.63	101.25'	RT	1042.28	36	8#10	25	B-021-1-21	23
ICA-4	100		4	IR-77 NB	523+50.00	67.50'	RT	1063.54	36	8#10	20	B-021-5-21	24

NOTES:

1. LENGTH OF THE DRILLED SHAFT IS FROM TOP OF FOUNDATION PER HL-20.24
2. ELEVATION IS FINAL GROUND SURFACE (EXISTING OR PROPOSED) AT TOWER FOUNDATION CENTERLINE.
3. SEE STANDARD DRAWING HL-20.21 FOR ADDITIONAL REINFORCING STEEL DETAILS. REINFORCING STEEL SHALL BE ITEM 509, GRADE 60. CONCRETE SHALL BE QC 1 OR QC MISC.



ISSUE RECORD:		
NO.	DATE	DESCRIPTION

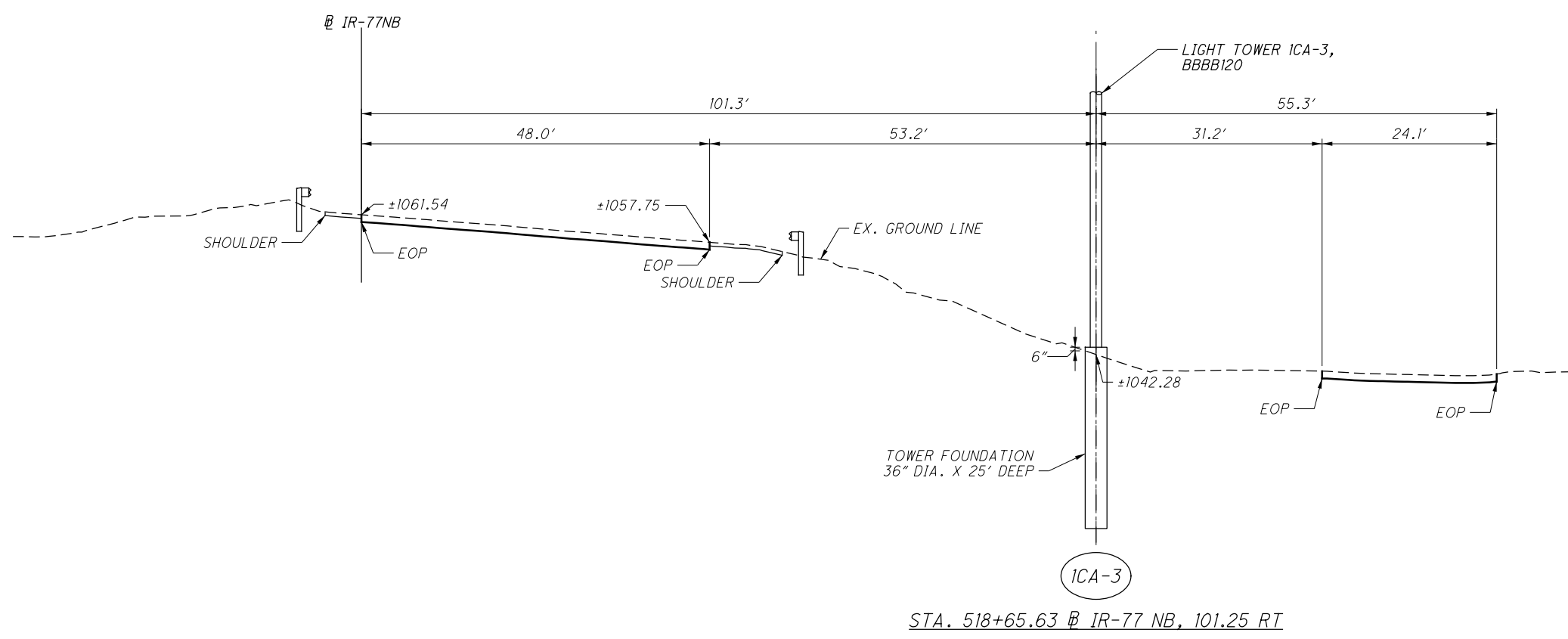
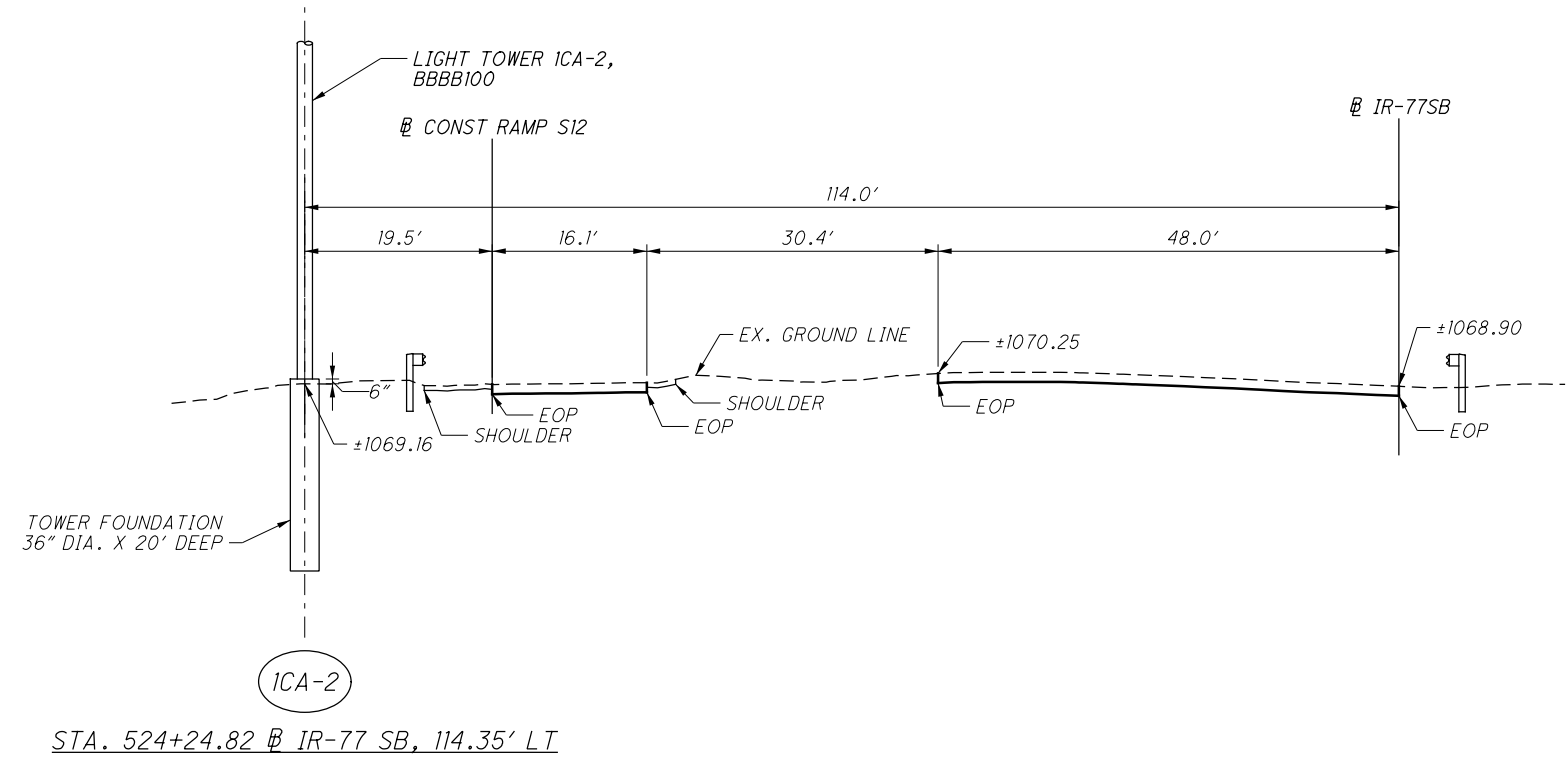
2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

LIGHTING ELEVATION DETAIL & TOWER SCHEDULE
 IR-77

SUM-76 / 77 / 8 -
 8.24 / 9.74 / 0.00

SUSER
 SDATES
 DATE
 TIME
 STAMPS
 2/10/2022 1:45:19 PM
 bscneider

USER: bschneider
 DATE: 2/10/2022 4:45:24 PM
 FILE: \\P:\Projects\02329\Lighting\Rehab\0 - Design\02329\Lighting\Sheets\BU-37\BU-37.dgn
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2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

LIGHTING ELEVATION DETAIL
 IR-77

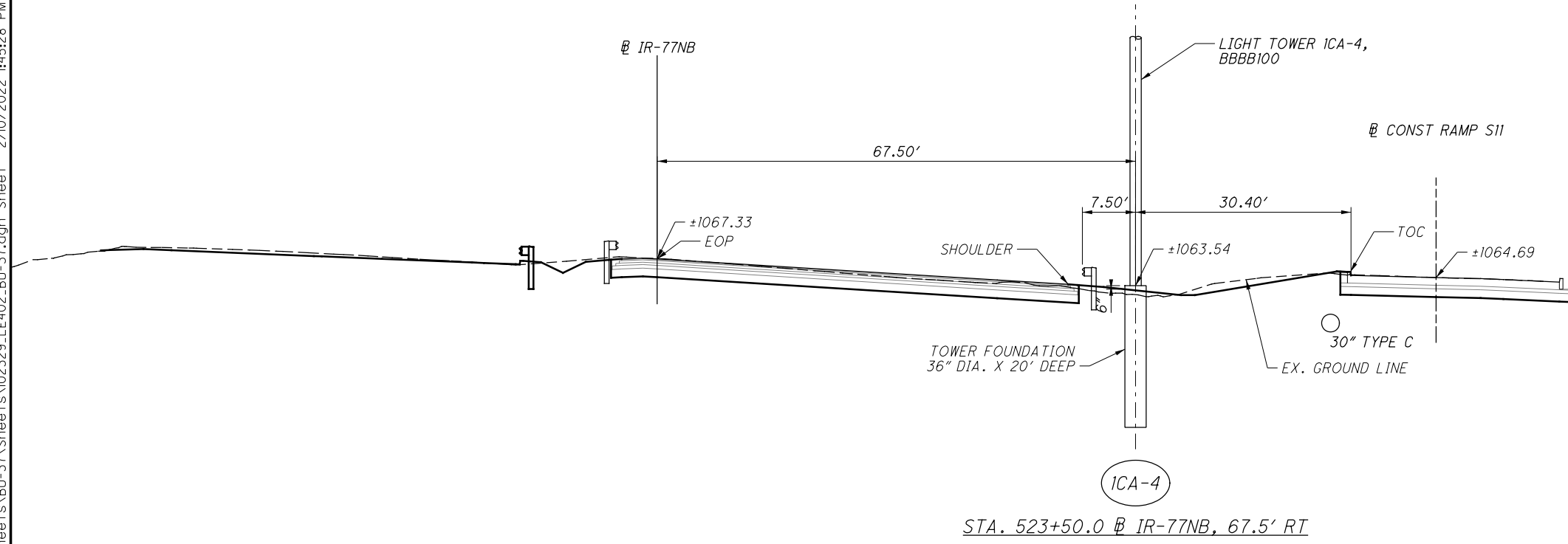
SUM-76/77/8-
 8.24/9.74/0.00

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Released for Construction
 Thomas J Powell, PE
 02/16/2022

CALCULATED
 CDP
 CHECKED
 EMS



2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS

LIGHTING ELEVATION DETAIL
 IR-77

SUM-76 / 77 / 8 -
 8.24 / 9.74 / 0.00

ISSUE RECORD:		
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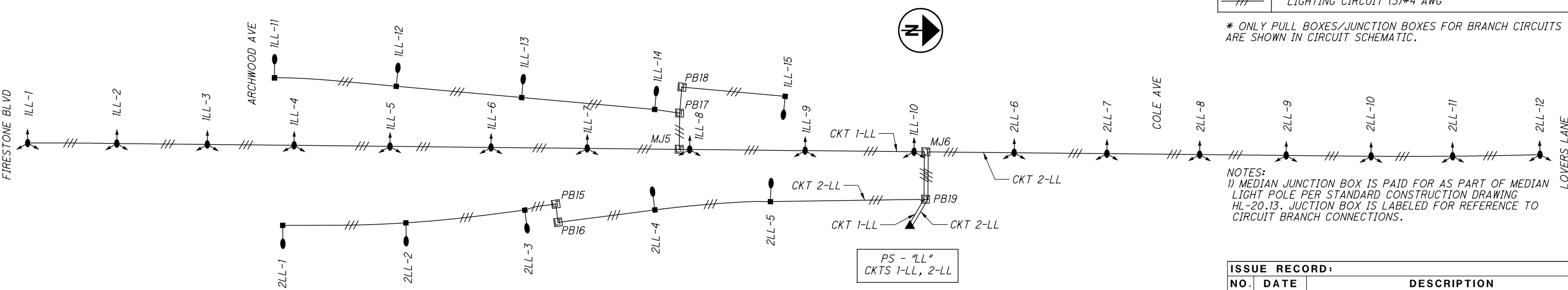
24
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USER: STIMESTAMPS DATE: 2/10/2022 1:45:42 PM FILE: \\VAO\PI\P\INTO\parsons.com\Ohio State\Documents\DB-Akron Beltway Rehab\0 - Design\02329\Lighting\Sheets\BU-37\Sheets\02329_LC402_BU-37.dgn Sheet 2/10/2022 1:45:42 PM bschneider

CONTROL CENTER DATA									
CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
PROPOSED PS-LL (COVENTRY & COLE)	480	9.0	1/0	60	1-LL	10.71	20	4	ODOT
					2-LL	8.03	20	4	
					-	-	-	-	

CIRCUIT 1-LL
 VOLTAGE : 480V
 WIRE FACOR USED (TWO - NO. 4 AWG WIRES): 0.62 OHMS/MFT/1000

Section		Amperes		Ampere-Feet	AWG	Voltage Drop		Σ Drop	At Point	
From	To	At Point	Accum.			In Section	Accum.			
ILL-11	ILL-12	242	0.35	0.35	86	4	0.05	4.54	0.95	ILL-11
ILL-12	ILL-13	249	0.35	0.71	176	4	0.11	4.49	0.94	ILL-12
ILL-13	ILL-14	264	0.35	1.06	281	4	0.17	4.38	0.91	ILL-13
ILL-14	PB17	58	0.35	1.42	82	4	0.05	4.21	0.88	ILL-14
ILL-15	PB18	207	0.35	0.35	73	4	0.05	4.22	0.88	ILL-15
PB18	PB17	60	0.00	0.35	21	4	0.01	4.17	0.87	PB18
PB17	MJ5	79	0.00	1.77	140	4	0.09	4.16	0.87	PB17
ILL-1	ILL-2	179	0.89	0.89	160	4	0.10	7.66	1.60	ILL-1
ILL-2	ILL-3	182	0.89	1.79	325	4	0.20	7.57	1.58	ILL-2
ILL-3	ILL-4	175	0.89	2.68	469	4	0.29	7.36	1.53	ILL-3
ILL-4	ILL-5	253	0.89	3.58	904	4	0.56	7.07	1.47	ILL-4
ILL-5	ILL-6	256	0.89	4.47	1,144	4	0.71	6.51	1.36	ILL-5
ILL-6	ILL-7	240	0.89	5.36	1,287	4	0.80	5.80	1.21	ILL-6
ILL-7	MJ5	241	0.89	6.26	1,508	4	0.93	5.00	1.04	ILL-7
MJ5	ILL-8	14	0.00	8.03	112	4	0.07	4.07	0.85	MJ5
ILL-8	ILL-9	245	0.89	8.92	2,186	4	1.36	4.00	0.83	ILL-8
ILL-9	ILL-10	235	0.89	9.81	2,306	4	1.43	2.64	0.55	ILL-9
ILL-10	MJ6	14	0.89	10.71	150	4	0.09	1.21	0.25	ILL-10
MJ6	PB19	100	0.00	10.71	1,071	4	0.66	1.12	0.23	MJ6
PB19	PS-LL	69	0.00	10.71	739	4	0.46	0.46	0.10	PB19
		SUM			10.71	AMPS PROPOSED LOAD			MAX %	1.60



LEGEND

	50' LOW MAST W/ 429W, TYPE V, LED
	35' CONVENTIONAL POLE W/(I) 170W, TYPE II, LED
	POWER SERVICE
	PULL BOX/ JUNCTION BOX WITH SPLICES *
	LIGHTING CIRCUIT (3)#4 AWG

* ONLY PULL BOXES/JUNCTION BOXES FOR BRANCH CIRCUITS ARE SHOWN IN CIRCUIT SCHEMATIC.

NOTES:
 1) MEDIAN JUNCTION BOX IS PAID FOR AS PART OF MEDIAN LIGHT POLE PER STANDARD CONSTRUCTION DRAWING HL-20.13. JUNCTION BOX IS LABELED FOR REFERENCE TO CIRCUIT BRANCH CONNECTIONS.

ISSUE RECORD:

NO.	DATE	DESCRIPTION

CIRCUIT 2-LL
 VOLTAGE : 480V
 WIRE FACOR USED (TWO - NO. 4 AWG WIRES): 0.62 OHMS/MFT/1000

Released for Construction
 Thomas J Powell, PE
 02/16/2022

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		Σ Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
2LL-12	2LL-11	220	0.89	0.89	197	4	0.12	4.20	0.87	2LL-12
2LL-11	2LL-10	216	0.89	1.79	386	4	0.24	4.07	0.85	2LL-11
2LL-10	2LL-9	214	0.89	2.68	574	4	0.36	3.84	0.80	2LL-10
2LL-9	2LL-8	230	0.89	3.58	822	4	0.51	3.48	0.72	2LL-9
2LL-8	2LL-7	230	0.89	4.47	1,028	4	0.64	2.97	0.62	2LL-8
2LL-7	2LL-6	225	0.89	5.36	1,207	4	0.75	2.33	0.49	2LL-7
2LL-6	MJ6	220	0.89	6.26	1,376	4	0.85	1.58	0.33	2LL-6
MJ6	PB19	100	0.00	6.26	626	4	0.39	0.73	0.15	MJ6
2LL-1	2LL-2	244	0.35	0.35	86	4	0.05	1.24	0.26	2LL-1
2LL-2	2LL-3	237	0.35	0.71	168	4	0.10	1.19	0.25	2LL-2
2LL-3	PB15	70	0.35	1.06	74	4	0.05	1.08	0.23	2LL-3
PB15	PB16	45	0.00	1.06	48	4	0.03	1.04	0.22	PB15
PB16	2LL-4	195	0.00	1.06	207	4	0.13	1.01	0.21	PB16
2LL-4	2LL-5	230	0.35	1.42	326	4	0.20	0.88	0.18	2LL-4
2LL-5	PB19	304	0.35	1.77	538	4	0.33	0.68	0.14	2LL-5
PB19	PS-LL	69	0.00	8.03	554	4	0.34	0.34	0.07	PB19
		SUM		8.03	AMPS PROPOSED LOAD			MAX %	0.87	

CALCULATED: JSW
 CHECKED: EMS
CIRCUIT SCHEMATIC & CONTROL CENTER DATA
IR-77 - POWER SERVICE 'LL'
 2021-02-10 - BU-37 - RELEASED FOR CONSTRUCTION PLANS
SUM-76/77/8-8.24/9.74/0.00
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