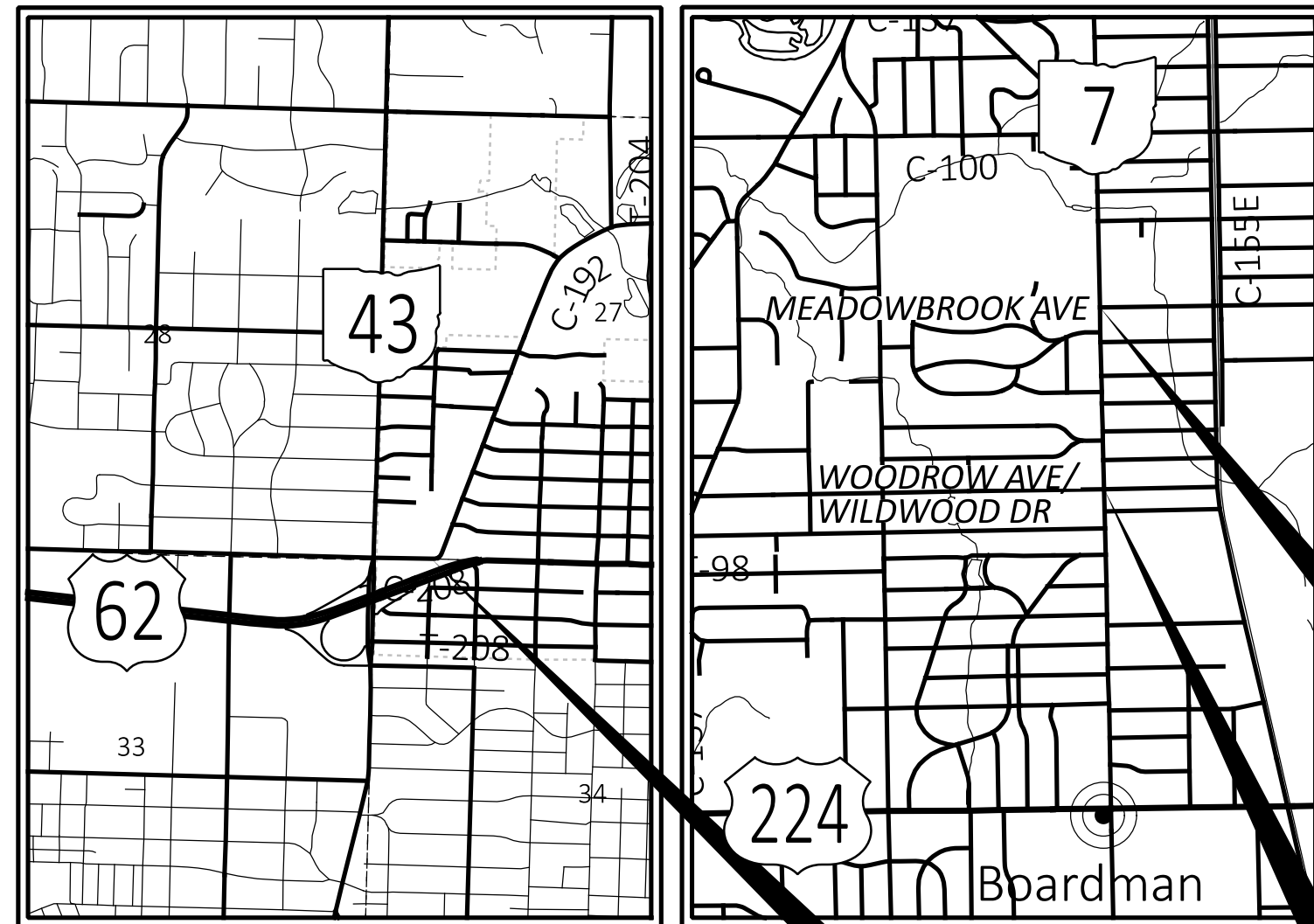


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## D04-TSG-FY2026

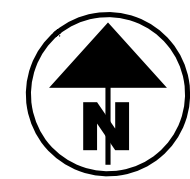
### BOARDMAN TOWNSHIP, PLAIN TOWNSHIP MAHONING & STARK COUNTIES



MAH S.R. 7 AT MEADOWBROOK AVE  
SIGNAL REPLACEMENT

STA U.S. 62 WB OFF RAMP  
AT MARTINDALE RD  
SIGNAL REPLACEMENT

MAH S.R. 7 AT WILDWOOD DR  
SIGNAL REPLACEMENT



**LOCATION MAP**

LATITUDE: 40°54'10" LONGITUDE: 81°00'45"

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

**DESIGN DESIGNATION**

NHS PROJECT ----- NO

**DESIGN EXCEPTIONS**

NONE REQUIRED

**ADA WAIVERS**

NONE REQUIRED

**INDEX OF SHEETS:**

TITLE SHEET	P.1
GENERAL NOTES	P.2-P.4
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SIGNAL SUBSUMMARIES	P.8-P.10
MAH SR 7/WILDWOOD SIGNAL PLAN AND DETAILS	P.11-P.14
MAH SR 7/MEADOWBROOK SIGNAL PLAN AND DETAILS	P.15-P.18
STA US 62 WB OFF RAMP SIGNAL PLAN AND DETAILS	P.19-P.22

FEDERAL PROJECT NUMBER

E250887

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

SIGNAL UPGRADES ON MAH SR 7 AT WILDWOOD DR  
AND MEADOWBROOK AVE AND STA US 62 WB OFF  
RAMP/30TH ST AT MARTINDALE RD.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.06 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)* *ROUTINE MAINTENANCE PROJECT

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.

2023 SPECIFICATIONS

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

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

*Arthur G. Noiro Jr.*  
Arthur G. Noiro Jr., P.E.  
District 04 Deputy Director

*Pamela Boratyn*  
Pamela Boratyn  
Director, Department of Transportation

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

**OHIO811.org**  
Before You Dig

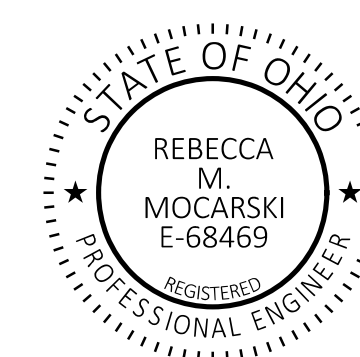
**OHIO811, 8-1-1, or 1-800-362-2764**  
(Non members must be called directly)

PLAN PREPARED BY:  
ODOT - DISTRICT 4  
2088 SOUTH ARLINGTON ROAD  
AKRON, OHIO 44306

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-7.1	7/18/25	TC-83.10	1/17/20	800-2023 7/18/25	
		TC-83.20	7/18/25	809 7/18/25	
DM-4.3	1/15/16	TC-84.20	1/19/24	813 7/21/23	
DM-4.4	1/15/16	TC-84.21	10/18/13	821 4/20/12	
		TC-85.10	1/19/24	825 7/19/24	
MT-95.31	7/19/19	TC-85.20	4/21/23	832 7/18/25	
MT-95.32	7/18/25	TC-85.21	1/19/24	909 7/18/25	
MT-97.10	4/19/19	TC-85.22	4/21/23	913 4/16/21	
MT-101.90	7/17/20			921 7/19/24	
MT-105.10	1/17/20	HL-30.11	1/16/26		
MT-110.10	7/19/13	HL-30.21	4/17/20		
		HL-30.22	1/17/25		
TC-21.21	1/20/23				
TC-81.11	1/19/24				
TC-81.22	1/17/25				
TC-82.10	1/17/25				

ENGINEER'S SEAL

TRAFFIC CONTROL



TITLE SHEET

DESIGN AGENCY



DESIGNER  
**JMW**

REVIEWER  
**RMM 12-03-25**

PROJECT ID  
**116444**

SHEET TOTAL  
P.1 | 22

D04-TSG-FY2026

MODEL: Sheet PAPER/SCALE: 34x22 (in.) DATE: 4/3/2026 TIME: 10:32:46 AM PLTDRV: OHDOT\_PDF.plt PENTBL: OHDOT\_Pen.tbl USER: Joseph.Wilczak@dot.ohio.gov WORKSPACE: OHDOTCV02 WORKSET: 116444 PRODUCT: OpenRoadsDesigner 24.00.00.205  
pvc:\ohdot\pwr\benley.com\ohdot\pwr-02\Documents\01 Active Projects\District 04\Mahoning\116444\400-Engineering\Roadway\Sheets\116444\_GT001.dgn

**UTILITIES**

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

- ARMSTRONG CABLE ATTN: ROB WOLTERS 9328 WOODWORTH RD, NORTH LIMA, OH 44452 330-953-0705 EXT 224 RWOLTERS@AGOC.COM
- AT&T (MAHONING COUNTY) ATTN: TORRICE ROBINSON 50 W BOWERY ST, FLR 6 AKRON, OH 44308 330-384-9851 330-734-5117 CELL TR3463@ATT.COM
- ENBRIDGE GAS OHIO 320 SPRINGSIDE DRIVE AKRON, OH 44333 330-807-2285 CELL RYAN.BOND@ENBRIDGE.COM CC: RELOCATION@ENBRIDGE.COM
- MAHONING COUNTY SANITARY ATTN: PHIL TATE 761 INDUSTRIAL ROAD YOUNGSTOWN, OH 44509 330-793-5514 EXT. 8212 PHILIP.TATE@MAHONINGCOUNTYOH.GOV CC: BERNARD.PETRO@MAHONINGCOUNTYOH.GOV
- YOUNGSTOWN WATER DEPARTM'T ATTN: VINNY NATAL 26 S. PHELPS STREET YOUNGSTOWN, OH 44503 330-742-8765 VNATAL@YOUNGSTOWNOHIO.GOV
- ZAYO FIBER ATTN: JEREMIAH NEAL 724-859-1565 CELL JEREMIAH.NEAL@ZAYO.COM CC: ZAYO.RELO.OHIO@ZAYO.COM
- AEP TRANSMISSION LINES ATTN: MICHAEL CARR 8600 SMITHS MILL ROAD NEW ALBANY, OHIO 43054 380-205-5072 MDCARR@AEP.COM
- STARK COUNTY METRO SEWER DISTRICT ATTN: TOM DAVIS P.O. BOX 9972 CANTON, OH 44711-0972 330-451-2335 tbdavis@starkcountyohio.gov
- AT&T (STARK COUNTY) ATTN: STEVEN HYLTON 50 W. BOWERY ST., 6TH FLOOR AKRON, OH 44308 330-384-3055 330-631-7485 CELL SH1513@ATT.COM
- CHARTER COMMUNICATIONS ATTN: JAMES WHITE, SR. 4352 YOUNGSTOWN RD SE, WARREN, OH 44484 330-369-7121 440-653-6478 CELL JAMES.WHITE4@CHARTER.COM
- ENBRIDGE GAS OHIO ATTN: JOSH MIS 320 SPRINGSIDE DR. AKRON, OH 44333 330-571-9135 JOSHUA.MIS@ENBRIDGE.COM
- OHIO EDISON ATTN: JOHN ZASSICK 6896 MILLER ROAD BRECKSVILLE, OHIO 44141 440-546-8706 216-538-1580 CELL JMZASSICK@FIRSTENERGYCORP.COM
- ZAYO FIBER ELLIS ENGINEERING GROUP CONSULTANT ATTN: JEFF LACER 317-281-1392 JLACER@EEGOSP.COM
- AEP TRANSMISSION LINES ATTN: COURTNE BUZZARD 700 MORRISON ROAD GAHANNA, OHIO 43230 614-552-1893 TL\_PUBLICPROJECTS@AEP.COM
- CITY OF CANTON WATER DEPARTMENT ATTN: LEWIS MILLER 2664 HARRISBURG AVE. N.E. CANTON, OH 44705 330-489-3310 LEWIS.MILLER@CANTONOHIO.GOV

**632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION**

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, SIGNAL SUPPORTS, CABINET(S), CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 & AS INDICATED ON THE PLANS. UNLESS NOTED, POWER SERVICES SHALL BE REMOVED IN ACCORDANCE WITH C&MS 625.21.F. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

ITEMS TO BE STORED AND RETURNED SHALL INCLUDE SIGNAL CABINET AND COMPONENTS, UPS CABINET AND COMPONENTS, METERBASE, AND DISCONNECT, AS WELL AS EXISTING WAVETRONIX, SIGNAL MODEM WITH ANTENNA.

REMOVED ITEMS SHALL BE DELIVERED TO THE NEAREST ODOT FACILITY WHOSE ADDRESS IS LISTED BELOW:

ODOT DISTRICT 4, ATTN: GLEN HILLEGAS - (330) 217-0670  
ODOT KELLY AVE OUTPOST  
1240 STARLIGHT DR, AKRON,

THE CONTRACTOR SHALL CONTACT GLEN HILLEGAS 3 BUSINESS DAYS IN ADVANCE TO SET UP DELIVERY TIME.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE LOCAL AGENCY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT. THE FOLLOWING HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION 3 EACH

**625 PULL BOX REMOVED**

THE FOLLOWING HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ALL 3 INTERSECTIONS:

ITEM 625 PULL BOX REMOVED 4 EACH

**GUARANTEE**

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/ INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

**632 SIGNAL SUPPORT FOUNDATION**

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD. THEN THE CONTRACTOR SHALL MEET THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO INSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE ISSUES, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SUPPORTS.

DUE TO THE FURTHER POSSIBILITY OF CONFLICT WITH EXISTING OR PROPOSED UNDERGROUND OBSTRUCTIONS (INCLUDING THE POSSIBILITY OF UNRECORDED OBSTRUCTIONS) WHICH COULD AFFECT THE LOCATION OF THE FOUNDATION FOR THIS ITEM, AND CONSEQUENTLY, THE DESIGN OF THE SUPPORT AND/OR ARMS, THE CONTRACTOR SHALL NOT PLACE FINAL ORDERS FOR THE ITEM UNTIL THE FOUNDATIONS HAVE BEEN INSTALLED, AT FINAL GRADE, AND THE CONTRACTOR HAS RECEIVED, FROM ENGINEER, WRITTEN NOTICE TO PROCEED WITH THE ORDERS FOR THE ITEM.

IF ANY FOUNDATION LOCATIONS MUST BE ADJUSTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND MAINTAINING AGENCY, WHO WILL DETERMINE THE REVISED LOCATION AND IF NEEDED, THE SUPPORT DESIGN. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DETERMINING THE REVISED DESIGN. THE ENGINEER WILL INFORM THE CONTRACTOR OF ANY CHANGES NECESSARY AND AUTHORIZE THE CONTRACTOR TO ORDER THE SUPPORT.

THE CONTRACTOR SHALL, WHEN DEVELOPING THE PROGRESS SCHEDULE, AND THOSE OF SUBCONTRACTORS, ENSURE THAT THE FOUNDATIONS ARE INSTALLED AT THE EARLIEST TIME AS IS FEASIBLE AND PRACTICAL, AND SHALL INCLUDE SUFFICIENT TIME IN THE PROGRESS SCHEDULE FOR ORDERING, MANUFACTURING, DELIVERY, AND INSTALLATION OF THE SUPPORT ITEMS AFTER THE FOUNDATIONS ARE IN PLACE.

NO PAYMENTS FOR DELIVERED MATERIALS FOR THE FOUNDATION OR SUPPORT ITEMS SHALL BE MADE UNTIL THE FOUNDATIONS ARE IN PLACE, AND IF CHANGES IN THE DESIGN OF THIS ITEM ARE REQUIRED, NO PAYMENT SHALL BE MADE FOR THE ITEMS MANUFACTURED TO THE ORIGINAL DESIGN.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

**632 SIGNAL SUPPORT, (BY TYPE), AS PER PLAN**

IN ADDITION TO PROVISIONS OF THE ODOT C&MS, FURNISH AND INSTALL SIGNAL POLES AS SPECIFIED IN THE PLANS.

THE SIGNAL SUPPORT DESIGNER SHALL PROVIDE DRAWINGS OF A SIGNAL SUPPORT WITH STRUCTURAL ASPECTS OF THE DESIGN AND MATERIALS IN COMPLIANCE WITH THE AASHTO LRFDLTS-1. SUBMIT, TO THE ENGINEER PRIOR TO INCORPORATION: TWO COPIES OF THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS, WHICH IDENTIFY AND DESCRIBE EACH MANUFACTURED SIGNAL SUPPORT AND SIGNAL SUPPORT ITEM WHICH IS BEING INCORPORATED INTO THE CONSTRUCTION. THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS SHALL EACH BE REVIEWED, STAMPED, AND DATED BY A REGISTERED PROFESSIONAL ENGINEER.

PAYMENT FOR ITEM 632 "SIGNAL SUPPORT, (BY TYPE), AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL SIGNAL SUPPORT DESIGN, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

**UNDERDRAINS FOR PULLBOXES**

REFERENCE TRAFFIC SCD HL-30.11 FOR DETAILS ABOUT DRAINING PULLBOXES. ALL PULLBOXES SHALL HAVE AN UNDERDRAIN OR AGGREGATE FRENCH DRAIN. COORDINATE THE LOCATION OF THE OUTLET OF THE UNDERDRAIN WITH THE PROJECT ENGINEER PRIOR TO INSTALLATION AND INSTALL PER HIS/HER DIRECTION.

IF THE SITE DOES NOT PERMIT A PROPOSED UNDERDRAIN TO DRAIN, AN AGGREGATE FRENCH DRAIN SHALL BE INSTALLED. THE AGGREGATE FRENCH DRAIN SHALL EITHER BE: 12" DIAMETER AUGERED HOLE TO A DEPTH OF 5 FEET BELOW THE BOTTOM OF THE PULL BOX OR A 3' WIDE X 3' LONG X 3' DEEP HOLE BELOW THE BOTTOM OF THE PULL BOX. THE HOLES SHALL HAVE FILTER FABIC AROUND THE PERIMETER AND THE TOP TO PREVENT FINES FROM ENTERING THE BACKFILL AND BACKFILLED WITH #57 GRAVEL.

THE FOLLOWING ESTIMATED QUANTITY, ASSUMING AN AVERAGE OF 20 FEET OF UNDERDRAIN MATERIAL PER PULL BOX, UNLESS SEPARATELY ITEMIZED AND DETAILED, IS CARRIED TO THE GENERAL SUMMARY AND IS TO INCLUDE ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NEEDED TO COMPLETE THIS WORK:

- ITEM 611 4" CONDUIT, TYPE E, AS PER PLAN 30 FEET
- ITEM 605 AGGREGATE DRAINS 27 FT

**SIGNAL ACTIVATION**

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.) IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER & DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT AFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

**633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8-INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY-DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSSES OVER THE POWER CORD.

THE CABINET SHALL INCLUDE A PULL-OUT DRAWER TO AID IN BATTERY MAINTENANCE THAT IS INTEGRAL TO EACH SHELF.

THE CABINET SHALL HAVE A DOOR STOP MECHANISM AND THERMOSTATICALLY CONTROLLED FAN. ADDITIONALLY, THE CABINET SHALL BE BUILT WITH ALL BATTERIES ALWAYS BELOW THE INVERTER TO AVOID POTENTIAL FURTHER BATTERY LEAKAGE ISSUES.

THE CABINET SHALL INCLUDE A BATTERY BALANCING DEVICE THAT REGULATES THE BATTERIES AND OPTIMIZES PERFORMANCE.

AFTER FOUR (4) HOURS OF BATTERY RUNTIME, THE SYSTEM SHALL BE PROGRAMMED TO SWITCH THE INTERSECTION FROM FULL OPERATION TO CONTROLLER AUTOMATIC FLASH OPERATION THROUGH THE MONITOR. THE CONTROLLER SHALL BE PROGRAMMED SO THAT FLASH OPERATION SHALL BEGIN ONCE THE INTERSECTION RUNS MINOR STREET GREEN (TYP. PH. 4 & 8), ALL-RED CLEARANCE, AND THEN FLASH OPERATION.

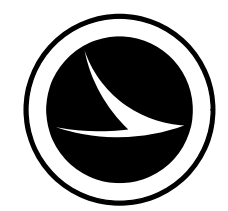
THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL OR THROUGH THE CONTROLLER WITH A C11 TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED MODULE SHOULD BE PLACED ON THE SIDE OF THE UPS CABINET FACING TOWARDS THE MAINLINE ROADWAY AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED "BACKUP POWER STATUS DISPLAY," WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE "BACKUP" OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

DESIGN AGENCY
DESIGNER
JMW
REVIEWER
RMM 12-03-25
PROJECT ID
116444
SHEET
P.2
TOTAL
22

SHEET NUMBER							PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.2	P.4	P.6	P.8	P.9	P.10		01/S>2	EXT	TOTAL				
												<b>ROADWAY</b>	
							120	202	30000	120	SF	WALK REMOVED	
							105	608	52001	105	SF	CURB RAMP, AS PER PLAN	P.3
	LS						LS	SPECIAL	69091000	LS		AS-BUILT CONSTRUCTION PLANS	P.4
							1,000	832	30000	1,000	EACH	<b>EROSION CONTROL</b>	
												<b>DRAINAGE</b>	
27							27	605	31100	27	FT	AGGREGATE DRAINS	
30							30	611	00400	30	FT	4" CONDUIT, TYPE E	
												<b>TRAFFIC CONTROL</b>	
							24	643	00500	24	FT	STOP LINE	
							234	646	10520	234	FT	CROSSWALK LINE, 24", HIGH VISIBILITY	
							191	646	50100	191	FT	REMOVAL OF PAVEMENT MARKING	
												<b>TRAFFIC SIGNALS</b>	
				1	1		2	625	18400	2	EACH	BRACKET ARM, 20'	
				81	99		180	625	25500	180	FT	CONDUIT, 3", 725.04	
				206	211		417	625	25902	417	FT	CONDUIT, JACKED OR DRILLED, 725.04, 4"	
				1	1		2	625	26253	2	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III-M, LED, 9,000-12,000 LUMENS	P.3
					16		16	625	29000	16	FT	TRENCH	
				81	83		164	625	29400	164	FT	TRENCH IN PAVED AREA	
				4	5		9	625	30706	9	EACH	PULL BOX, 725.08, 24"	
4							4	625	31510	4	EACH	PULL BOX REMOVED	
				3	7		10	625	32000	10	EACH	GROUND ROD	
				81	99		180	625	36011	180	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	P.3
				1	2		3	625	76000	3	EACH	ARC FLASH CALCULATIONS AND LABEL (MEADOWBROOK, WILDWOOD & SR 62)	
				10	16		26	632	05006	26	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
				6	4		10	632	20731	10	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	P.4
				10	16		26	632	25000	26	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
				6	4		10	632	25010	10	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
				6	4		10	632	26000	10	EACH	PEDESTRIAN PUSHBUTTON	
				941	626		1,567	632	40300	1,567	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	
				941	626		1,567	632	40500	1,567	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
				1,158	1,286		2,444	632	40700	2,444	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
				2	5		7	632	64010	7	EACH	SIGNAL SUPPORT FOUNDATION	
				5	3		8	632	64020	8	EACH	PEDESTAL FOUNDATION	
				30	60		90	632	69300	90	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
				1	2		3	632	70001	3	EACH	POWER SERVICE, AS PER PLAN	P.3
				1			1	632	71245	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 6 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 4, AS PER PLAN	P.2
					4		4	632	72111	4	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN	P.2
				1			1	632	78349	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 12, AS PER PLAN	P.2
					1		1	632	79131	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	P.2
				5	3		8	632	89900	8	EACH	PEDESTAL, 8', TRANSFORMER BASE	
3							3	632	90100	3	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
				1	2		3	633	65511	3	EACH	CABINET, TYPE TS-2, AS PER PLAN	P.3
				1	2		3	633	67101	3	EACH	CABINET FOUNDATION, AS PER PLAN	P.3
				1	2		3	633	67201	3	EACH	CONTROLLER WORK PAD, AS PER PLAN	P.3
				1	2		3	633	75001	3	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	P.2
				2	4		6	809	69001	6	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	P.3
				2	3		5	809	69101	5	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	P.3
				1	2		3	809	69123	3	EACH	ATC CONTROLLER, AS PER PLAN, (PROGRAM AND INSTALL ONLY)	P.4
												<b>MAINTENANCE OF TRAFFIC</b>	
							100	614	11110	100	HOURLY	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
												<b>INCIDENTALS</b>	
							LS	614	11000	LS		MAINTAINING TRAFFIC	
							12	619	16010	12	MNTH	FIELD OFFICE, TYPE B	
							LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
							LS	624	10000	LS		MOBILIZATION	

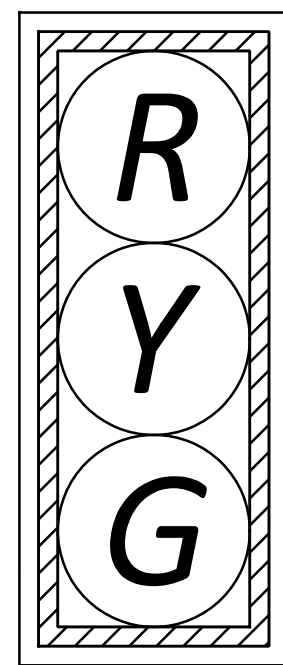
GENERAL SUMMARY

DESIGN AGENCY  
  
 DESIGNER  
**JMW**  
 REVIEWER  
**RMM 12-03-25**  
 PROJECT ID  
**116444**  
 SHEET TOTAL  
 P.7 | 22



D04-TSG-FY2026  
 MODEL: Sheet PAPER: 34x22 (in.) DATE: 4/3/2026 TIME: 10:44:41 AM PLTDRV: OHDOT\_PDF.plt PENTBL: OHDOT\_Pen.tbl USER: Joseph.Wilczak@dot.ohio.gov WORKSPACE: OHDOTCEV02 WORKSET: 116444 PRODUCT: OpenRoadsDesigner 24.00.00.205  
 pw:\ohdot-pw.bentley.com\ohdot-pw-02\Documents\01 Active Projects\District 04\Mahoning\116444\400-Engineering\Signals\116444\_CP062.dgn

### SIGNAL HEADS



2A, 2B, 4A, 4B,  
6A, 6B

### LEGEND

- TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"
- SIGNAL SUPPORT POLE
- TS-2 CONTROLLER AND UPS COMBINATION CABINET AND WORK PAD
- TRAFFIC PULL BOX
- DILEMMA ZONE RADAR DETECTION UNIT
- STOP LINE RADAR DETECTION UNIT
- DETECTION ZONE

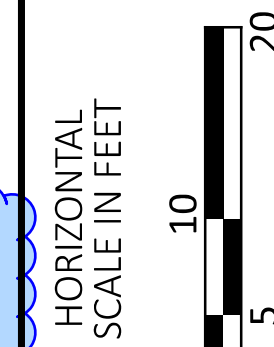
PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN)
PB1	24+87	RT	19'	24

revised

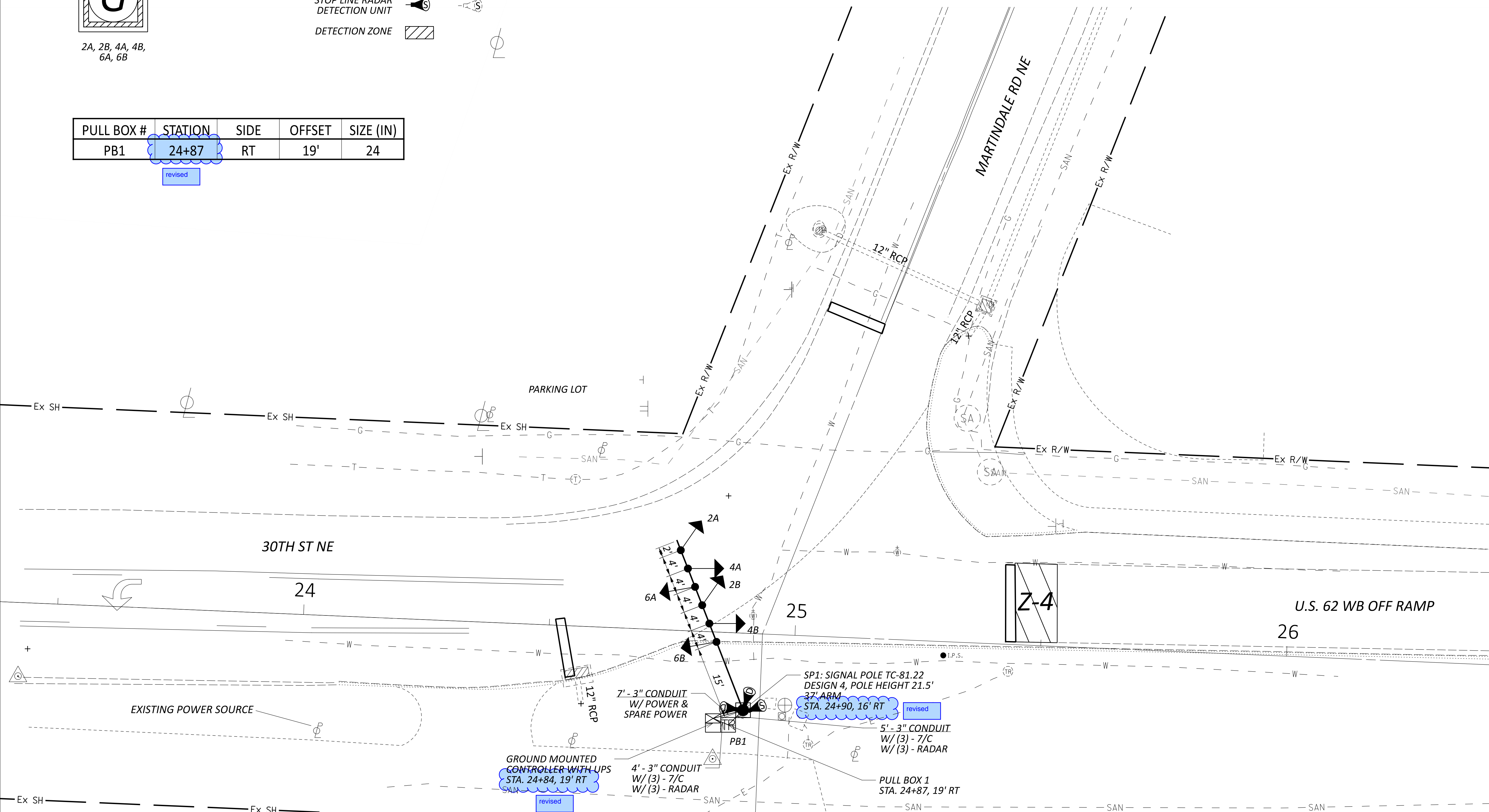
added

### SURVEY DATA

Alignment Name	STATION	OFFSET (sft)	RT/LT	NORTH (sft)	EAST (sft)	ELEVATION (sft)	FEATURE	POINT TYPE
CLxRW30th	24+98.53	14.26	RT	521278.427	160372.712	1138.81	BM	BENCHMARK
CLxRW30th	31+13.55	-121.54	LT	521388.055	160992.935	1138.65	IPINS	Project Control Points
CLxRW30th	25+29.55	3.03	RT	521288.334	160404.180	1137.84	IPINS	Project Control Points
CLxRW30th	26+69.01	-449.65	LT	521734.705	160562.685	1152.03	IPINS	Project Control Points



SIGNAL PLAN  
 STA US 62 WB OFF RAMP AT MARTINDALE RD



DESIGN AGENCY	
DESIGNER	JMW
REVIEWER	RMM
PROJECT ID	116444
SHEET TOTAL	P.19 / 22

SUPPORT NO.	ARM DESIGNATION	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											Plan Details for Signal Supports - Mast Arm Orientation										
				A (Pavement Elevation)	B (Top of Foundation)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	D1	D2	X	MAST ARM A INDEX LINE ANGLE	ORIENTATION ANGLES (DEG.) FROM INDEX LINE									
																		MAST ARM B	PEDESTRIAN SIGNAL	PEDESTRIAN PUSHBUTTON	POWER SERVICE	SIGNAL CABINET	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP OF POLE EXTENSION		
SP-1	A	24+90	16' RL	1069.91	1069.43	TC-81.22	4	21.5	20	37	22	10	-	-	-	-	340	-	-	-	250	-	-	180	-		

revised

