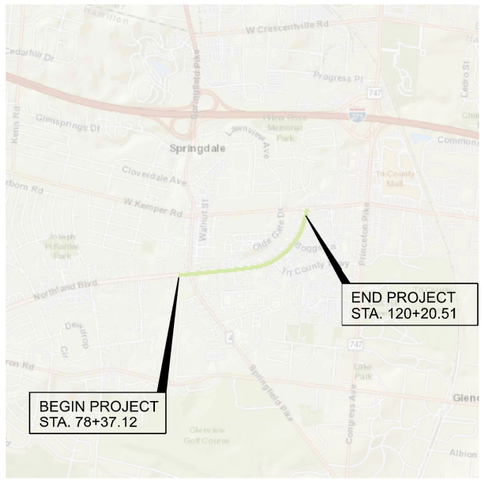
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM-CR614-1.39
NORTHLAND BLVD

CITY OF SPRINGDALE

HAMILTON COUNTY



LOCATION MAP

LATITUDE: 39°16'59.1" N LONGITUDE: 84°28'40.0" W

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

DESIGN DESIGNATION

CURRENT ADT (2024)	15,056
DESIGN YEAR ADT (2044)	21,078
DESIGN HOURLY VOLUME (2044)	2,108
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
URBAN MAJOR COLLECTOR
NHS PROJECT ---------- NO

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

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:

your trusted advisor
consultants → engineers architects planners

CT CONSULTANTS, INC.
4420 Cooper Rd Suite 200
Cincinnati, OH 45242

ENGINEER'S SEAL
TRAFFIC SIGNALS
STATE OF OHIO
ANDREA HARTH
E-74335
REGISTERED
PROFESSIONAL ENGINEER

ENGINEER'S SEAL
ROADWAY
STATE OF OHIO
SHAWN RIGGS
E-84714
REGISTERED
PROFESSIONAL ENGINEER

INDEX OF SHEETS:

STANDARD CONSTRUCTION DRAWINGS

								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
BP-3.1	1/19/24	RM-1.1	1/20/23	TC-42.20	10/18/13			800-2023	1/19/24	
BP-4.1	7/19/13			TC-52.10	10/18/13			809	1/19/24	
BP-5.1	7/15/22	MT-95.30	7/19/19	TC-52.20	1/15/21			813	7/21/23	
BP-7.1	7/21/23	MT-95.31	7/19/19	TC-65.10	1/17/14			832	7/21/23	
		MT-95.32	4/19/19	TC-65.11	1/19/24			839	7/16/21	
CB-3	7/16/21	MT-95.70	1/17/20	TC-71.10	4/21/23					
CB-3A	7/16/21	MT-99.20	4/19/19	TC-74.10	7/21/23			904	7/15/22	
CB-6	1/21/22	MT-101.60	1/17/20	TC-81.22	7/21/23			909	1/19/24	
		MT-105.10	1/17/20	TC-83.10	1/17/20			913	4/16/21	
DM-1.1	7/17/20	MT-110.10	7/19/13	TC-83.20	1/19/24					
DM-1.2	7/16/21			TC-85.10	1/19/24			1120	7/15/22	
DM-4.4	1/15/16	TC-21.21	1/20/23	TC-85.20	4/21/23					
		TC-41.20	10/18/13							
LA-1.2	1/16/09	TC-41.30	4/21/23	WQ-1.2	1/15/16					
		TC-41.40	10/18/13							
MH-3	1/19/24	TC-41.50	10/18/13							

FEDERAL PROJECT NUMBER

E220(117)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REPLACE DETERIORATED CONCRETE PAVEMENT, REPLACE MAST ARM SIGNAL AT TRI-COUNTY PARKWAY, ADD SIDEWALKS TO FILL IN EXISTING GAPS, IMPROVE ROADWAY DRAINAGE, AND ACCESS MANAGEMENT IMPROVEMENTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	11.62 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	11.87 ACRES

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 HEARBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF TRAFFIC OF THE HIGHWAY, EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 12-14 AND THAT PROVISIONS FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Tammy K. Campbell
Tammy K. Campbell, P.E.
08

Jack Marchbanks, PhD
Director, Department of Transportation

TITLE SHEET

DESIGN AGENCY

DESIGNER EJT
REVIEWER BF 12/08/23
PROJECT ID 114475
SHEET 1 TOTAL 249

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 5/2/2024 TIME: 4:03:30 PM USER: troyer
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ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON NORTHLAND BLVD. AND LANDAN LN. BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON OLDE GATE DR, TRI-COUNTY PKWY AND BOGGS LN EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS PER ROADWAY, WHEN THROUGH TRAFFIC MAY BE DETOURED ON SHEETS 12-14. DETOURS SHALL NOT BE CONCURRENT. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $1000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 611,	MANHOLE ADJUSTED TO GRADE	6 EACH
ITEM 614,	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	100 CU. YD.
ITEM 616,	WATER	10 M. GAL.

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

DUST CONTROL

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

ITEM 616, WATER 150 M. GAL.

WORK ZONE MARKINGS AND SIGNS

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

WORKSITE TRAFFIC SUPERVISOR (WTS)

A WORKSITE TRAFFIC SUPERVISOR IS REQUIRED FOR THIS PROJECT AND SHALL PERFORM HIS/HER DUTIES THROUGHOUT ALL PHASES OF THE CONTRACT INCLUDING DAY AND NIGHT OPERATIONS. ALL COSTS FOR THE WORKSITE TRAFFIC SUPERVISOR ARE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

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

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS AS FOLLOWS:
- STA. 60+00, RT NORTHLAND BLVD
- STA. 193+00, RT W. KEMPER RD.
- STA. 206+00, LT W. KEMPER RD.

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

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

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

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN 24 SIGN MONTH
(ASSUMING 3 PCMS SIGNS FOR 8 MONTHS)

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

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

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

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

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

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

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

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

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

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7AM TO 9 AM OR 4 PM TO 6 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY CITY OF SPRINGDALE POLICE, HIRED BY THE CONTRACTOR:

1. NORTHLAND BLVD / SPRINGFIELD PIKE

2. NORTHLAND BLVD / KEMPER ROAD

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

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;

2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;

3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;

4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;

5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

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

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

PAVEMENT DROP-OFFS

THE CONTRACTOR SHALL USE THE PROVISIONS SET FORTH IN SCD MT-101.90 WHEN PAVEMENT DROP-OFFS OCCUR.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY

DESIGNER EJT

REVIEWER BF 12/08/23

PROJECT ID 114475

SHEET 10 TOTAL 249

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 5/2/2024 TIME: 2:17:00 PM USER: troyer
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MAINTENANCE OF TRAFFIC GENERAL NOTES

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

IN ADDITION TO THE REQUIREMENTS OF 615, THIS ITEM SHALL INCLUDE THE REMOVAL OF EXISTING MEDIAN CURB ADJACENT TO THE TEMPORARY PAVEMENT AND ALL ITEMS WITHIN THE MEDIAN BETWEEN THE CURBS AND THE RESTORATION OF THE NORTHLAND BLVD MEDIAN BETWEEN STA. 76+87 TO STA. 78+40 TO ITS ORIGINAL CONDITION AND RESTRIPING THE EXISTING PAVEMENT BETWEEN STA. 73+00 TO STA. 78+40 TO ITS ORIGINAL STRIPING PATTERN. THE FOLLOWING ESTIMATED QUANTITIES FOR THIS ADDITIONAL WORK ARE TO BE USED FOR INFORMATIONAL PURPOSES ONLY:

ITEM 201 CLEARING AND GRUBBING	*LUMP*
ITEM 202 CURB REMOVED	*320 FT*
ITEM 202 PULL BOX REMOVED, AS PER PLAN	*1 EACH*
ITEM 202 REMOVAL MISC.: DECORATIVE BRICK	*140 SY*
ITEM 202 REMOVAL MISC.: METER ASSEMBLY	*1 EACH*
ITEM 202 REMOVAL MISC.: SIGN ON METAL POLE	*1 EACH*
ITEM 202 REMOVAL MISC.: SIGN FOUNDATION REMOVED	*1 EACH*
ITEM 203 EXCAVATION	*250 CY*
ITEM 203 EMBANKMENT	*250 CY*
ITEM 609 CURB, TYPE 6	*320 FT*
ITEM 638 WATER WORK MISC.: MANHOLE ADJUST TO GRADE	*4 EACH*
ITEM 642 REMOVAL OF PAVEMENT MARKING	*1 EACH*
ITEM 642 REMOVAL OF PAVEMENT MARKING	*320 FT*
ITEM 644 LANE LINE, 4"	*0.21 MILE*
ITEM 661 DECIDUOUS SHRUB, 2' HEIGHT	*12 EACH*
ITEM 662 LANDSCAPE WATERING	*50 GAL*

CLEARING AND GRUBBING SHALL INCLUDE ALL EXISTING SHRUBS.

THE PULL BOX SHALL BE REMOVED AND ANY ELECTRICAL WIRES LEADING INTO THE PULL BOX SHALL BE CAPPED PRIOR TO CONSTRUCTION OF THE TEMPORARY PAVEMENT. DURING RESTORATION, A NEW PULL BOX SHALL BE INSTALLED AND ALL ELECTRICAL WIRES SHALL BE RECONNECTED.

THE DECORATIVE BRICK SHALL BE CAREFULLY REMOVED AND STORED PRIOR TO CONSTRUCTION OF THE TEMPORARY PAVEMENT. DURING RESTORATION, THE DECORATIVE BRICK SHALL BE PLACED IN THE PRE-CONSTRUCTION ARRANGEMENT.

THE METER ASSEMBLY SHALL BE DISCONNECTED AND STORED PRIOR TO CONSTRUCTION OF THE TEMPORARY PAVEMENT. DURING RESTORATION, THE METER ASSEMBLY SHALL BE PLACED AND ALL CONNECTIONS RESTORED.

THE FOREST PARK SIGN ON THE METAL POLE SHALL BE CAREFULLY REMOVED AND STORED PRIOR TO CONSTRUCTION OF THE TEMPORARY PAVEMENT. AFTERWARDS, THE CONCRETE FOUNDATION SHALL BE REMOVED. DURING RESTORATION, A NEW CONCRETE FOUNDATION SHALL BE PLACED AND THE EXISTING METAL POLE SHALL BE REATTACHED TO THE NEW FOUNDATION.

THE TWO WATER MANHOLES SHALL BE ADJUSTED TO GRADE (LOWERED) PRIOR TO CONSTRUCTION OF THE TEMPORARY PAVEMENT. DURING RESTORATION, THE TWO WATER MANHOLES SHALL AGAIN BE ADJUSTED TO GRADE (RAISED).

ALL OF THE ELECTRICAL AND WATER WORK ITEMS SHALL BE RESTORED TO GOOD WORKING CONDITIONS AND MUST MEET THE APPROVAL OF THE ENGINEER.

DESIGN AGENCY

DESIGNER EJT

REVIEWER BF 12/08/23

PROJECT ID 114475

SHEET 10A TOTAL 249

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 5/2/2024 TIME: 3:27:42 PM USER: troyer
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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
8	92	93	94	97	98	100	101	102	103	104	105		01/MPO/ 04/SPR		EXT	TOTAL			SHEET NO.
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
	12,801	12,218	695	30	3,311								29,055	202	23000	29,055	SY	PAVEMENT REMOVED	
				10,825									10,825	202	30000	10,825	SF	WALK REMOVED	
	7,807	7,624	369										15,800	202	32000	15,800	FT	CURB REMOVED	
				3,334									3,334	202	35100	3,334	FT	PIPE REMOVED, 24" AND UNDER	
				13									13	202	58000	13	EACH	MANHOLE REMOVED	
				44									44	202	58300	44	EACH	CATCH BASIN OR INLET REMOVED	
				1									1	202	98100	1	EACH	REMOVAL MISC.:CONCRETE FOUNDATION	106
				13									13	202	98100	13	EACH	REMOVAL MISC.:BOULDER	118
				142									142	202	98200	142	FT	REMOVAL MISC.:TRENCH DRAIN	118, 120
750													750	202	98200	750	FT	REMOVAL MISC.:ROCK EXCAVATION FOR CONDUIT INSTALLATION	8
				91									91	202	98400	91	SF	REMOVAL MISC.:REMOVE BRICK PAVERS	106
				476									476	202	98400	476	SF	REMOVAL MISC.:REMOVE AND REINSTALL BRICK PAVERS	106
													21,652	203	10000	21,652	CY	EXCAVATION	
													253	203	20000	253	CY	EMBANKMENT	
				13,743	3,271								17,014	204	10000	17,014	SY	SUBGRADE COMPACTION	
16													16	204	45000	16	HOUR	PROOF ROLLING	
	14,322	13,930	261										28,513	206	15010	28,513	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
													738	206	10500	738	TON	CEMENT	
													28,513	206	11000	28,513	SY	CURING COAT	
													LS	206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
				24,859									24,859	608	12000	24,859	SF	5" CONCRETE WALK	
				82									82	608	15000	82	SF	8" CONCRETE WALK	
				1,342									1,342	608	52000	1,342	SF	CURB RAMP	
				121									121	608	53020	121	SF	DETECTABLE WARNING	
				30									30	609	96000	30	SY	MEDIAN, MISC.:DECORATIVE COLORED CONCRETE (5")	9
													105	SPECIAL	69065016	105	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	9
																		EROSION CONTROL	
2													2	659	00100	2	EACH	SOIL ANALYSIS TEST	
14,890													14,890	659	00500	14,890	SY	SEEDING AND MULCHING, CLASS 1	
1.34													1.34	659	20000	1.34	TON	COMMERCIAL FERTILIZER	
3.08													3.08	659	31000	3.08	ACRE	LIME	
0.08													0.08	659	35000	0.08	MGAL	WATER	
											LS		LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
											LS		LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
											LS		LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
											135,000		135,000	832	30000	135,000	EACH	EROSION CONTROL	
																		DRAINAGE	
										9,064			9,064	605	14020	9,064	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
										500			500	611	00510	500	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
						847	503	757					2,107	611	04400	2,107	FT	12" CONDUIT, TYPE B	
						224	469	245	84				1,022	611	04600	1,022	FT	12" CONDUIT, TYPE C	
						42	120	71					233	611	05900	233	FT	15" CONDUIT, TYPE B	
						449	50	221					720	611	06100	720	FT	15" CONDUIT, TYPE C	
						36	106	218	50				410	611	07400	410	FT	18" CONDUIT, TYPE B	
							121	169	232				522	611	07600	522	FT	18" CONDUIT, TYPE C	
								45					45	611	08900	45	FT	21" CONDUIT, TYPE B	
						217	236	317					770	611	97010	770	FT	SLOTTED DRAIN, TYPE 2 (12")	
						7	4	4					15	611	98150	15	EACH	CATCH BASIN, NO. 3	
						3	3	2	1				9	611	98151	9	EACH	CATCH BASIN, NO. 3, AS PER PLAN	202
						12	12	8	3				35	611	98180	35	EACH	CATCH BASIN, NO. 3A	
						6	7	6					19	611	98181	19	EACH	CATCH BASIN, NO. 3A, AS PER PLAN	203
						2	5						7	611	98370	7	EACH	CATCH BASIN, NO. 6	
						2	2	2	1				7	611	98470	7	EACH	CATCH BASIN, NO. 2-2B	

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER BAG

REVIEWER BF 12/08/23

PROJECT ID 114475

SHEET 88 TOTAL 249

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 5/2/2024 TIME: 2:51:42 PM USER: troyer
H:\2020\2006779\114475\400-Engineering\Roadway\Sheets\114475_GG001.dgn

SHEET NUM.															PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10	92	93	94	97	98	99	100	101	102	103	215	216	217	218	01/MPO/ 04/SPR						
																				DRAINAGE (CONT.)	
										65					65	611	99500	65	EACH	INLET, MISC.:CURB INLET	8
							4	4	7	2					17	611	99574	17	EACH	MANHOLE, NO. 3	
								1							1	611	99582	1	EACH	MANHOLE, NO. 3 WITH 90" BASE I.D. AND 8" WEIR	
										1					1	611	99586	1	EACH	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	
							3	2	1						6	611	99654	6	EACH	MANHOLE ADJUSTED TO GRADE	
								1	2						3	611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE	
							35		146						181	839	30100	181	FT	TRENCH DRAIN, TYPE B WITH PEDESTRIAN GRATE	
								1							1	895	10020	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 2	
										1					1	895	10040	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	
																				PAVEMENT	
	168	316	150		1,216										1,850	252	01500	1,850	FT	FULL DEPTH PAVEMENT SAWING	
	2,877	2,779	157												5,813	301	56000	5,813	CY	ASPHALT CONCRETE BASE, PG64-22, (449), PG64-22	
	2,387	2,322	168	301	301										5,479	304	20000	5,479	CY	AGGREGATE BASE	
	1,553	1,500	85	155	81										3,374	407	20000	3,374	GAL	NON-TRACKING TACK COAT	
	449	434		64	47										994	441	50000	994	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
	540	521		164	66										1,291	441	50300	1,291	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
			47												47	441	70500	47	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)	
			66												66	441	70700	66	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS)	
					1,921										1,921	452	13040	1,921	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
			261												261	452	19200	261	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 9" THICK, CLASS QC	4, 7
	401	888													1,289	452	19200	1,289	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: 11" THICK, CLASS QC	4, 7
	231	139													370	609	12000	370	FT	COMBINATION CURB AND GUTTER, TYPE 2	
	302	678													980	609	14001	980	FT	CURB, TYPE 2-A, AS PER PLAN	8
	7,068	6,676	386	436	44										14,610	609	26000	14,610	FT	CURB, TYPE 6	
	202	259	500												961	609	33000	961	FT	CURB, TYPE 10	
															LS	SPECIAL	90017000	LS		CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	9
																				SANITARY SEWER	
6						14									20	611	99654	20	EACH	MANHOLE ADJUSTED TO GRADE	
																				ELECTRICAL	
						50									50	625	25409	50	FT	CONDUIT, 2", 725.051, AS PER PLAN (PVC)	112
						2									2	625	31510	2	EACH	PULL BOX REMOVED	
						3									3	625	31600	3	EACH	PULL BOX, MISC.: PULLBOX ADJUSTED TO GRADE	8
																				OTHER UTILITIES	
						3									3	SPECIAL	61199700	3	EACH	GAS VALVE BOX ADJUSTED TO GRADE	8
																				TRAFFIC CONTROL	
											1.14	0.52			1.66	644	00200	1.66	MILE	LANE LINE, 4"	
											0.0	0.01			0.01	644	00300	0.01	MILE	CENTER LINE	
											1,019	846			1,865	644	00400	1,865	FT	CHANNELIZING LINE, 8"	
											205	156			361	644	00500	361	FT	STOP LINE	
											1,031	429			1,460	644	00620	1,460	FT	CROSSWALK LINE, 12"	
											17	14			31	644	01300	31	EACH	LANE ARROW	
												110			110	644	01500	110	FT	DOTTED LINE, 4"	
												257			257	644	01514	257	FT	DOTTED LINE, 8"	
													278	421	699	630	03100	699	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
														40	40	630	08520	40	FT	STREET NAME SIGN SUPPORT, NO. 3 POST	
														3	3	630	08600	3	EACH	SIGN POST REFLECTOR	
													89	111	200	630	80100	200	SF	SIGN, FLAT SHEET	
													5	6	11	630	80500	11	EACH	SIGN, DOUBLE FACED, STREET NAME	

GENERAL SUMMARY

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 5/2/2024 TIME: 2:41:13 PM USER: troyer
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DESIGN AGENCY

DESIGNER BAG

REVIEWER BF 12/08/23

PROJECT ID 114475

SHEET 89 TOTAL 249

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
215	216	217	218	233									01/MPO/ 04/SPR						
																		TRAFFIC CONTROL (CONT.)	
		8	13										21	630	84900	21	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
		6	9										15	630	85100	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
		11	17										28	630	86002	28	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		7											7	630	87400	7	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
		13	1										14	630	87500	14	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
		1	3										4	630	87520	4	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
		2											2	630	89704	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-16.21	
																		TRAFFIC SIGNALS	
				2									2	625	18201	2	EACH	BRACKET ARM, 15', AS PER PLAN	230
				803									803	625	23304	803	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	
				360									360	625	23400	360	FT	NO. 10 AWG POLE AND BRACKET CABLE	
				79									79	625	25408	79	FT	CONDUIT, 2", 725.051	
				86									86	625	25604	86	FT	CONDUIT, 4", 725.051	
				212									212	625	25908	212	FT	CONDUIT, JACKED OR DRILLED, 725.052, 4"	
				2									2	625	26252	2	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED)	
				159									159	625	29002	159	FT	TRENCH, 24" DEEP	
				7									7	625	30706	7	EACH	PULL BOX, 725.08, 24"	
				6									6	625	32000	6	EACH	GROUND ROD	
				8									8	630	79200	8	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM	
				2									2	630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
				77									77	630	80100	77	SF	SIGN, FLAT SHEET	
				8									8	632	05007	8	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	230
				2									2	632	05065	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	230
				4									4	632	20730	4	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN	
				10									10	632	25000	10	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
				4									4	632	25010	4	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
				4									4	632	26000	4	EACH	PEDESTRIAN PUSHBUTTON	
				511									511	632	30980	511	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 10 AWG	
				531									531	632	40500	531	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
				1,896									1,896	632	40700	1,896	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
				3									3	632	64011	3	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	230
				2									2	632	64021	2	EACH	PEDESTAL FOUNDATION, AS PER PLAN	230
				152									152	632	66102	152	FT	POWER CABLE, 2 CONDUCTOR, NO. 10 AWG	
				1									1	632	70000	1	EACH	POWER SERVICE	
				1									1	632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
				1									1	632	78493	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 12 POLE, WITH MAST ARMS	230
																		TC-81.22 DESIGN 14 AND DESIGN 13, AS PER PLAN	
				1									1	632	72141	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	230
				1									1	632	79151	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	230
				2									2	632	89901	2	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	229
				1									1	632	90020	1	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM, SIGNAL SUPPORT FOUNDATION	230, 231
				1									1	632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
				1									1	633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN	229
				1									1	633	67100	1	EACH	CABINET FOUNDATION	
				1									1	633	67200	1	EACH	CONTROLLER WORK PAD	
				1									1	633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	230
				211									211	804	32011	211	EACH	DROP CABLE, 12 FIBER, AS PER PLAN	230
				1									1	804	34012	1	EACH	FIBER TERMINATION PANEL, 12 FIBER	
				1									1	809	65990	1	EACH	ITS DEVICE, MISC.:MANAGED ETHERNET SWITCH WITH GIGABIT UPLINK PORT	230
				1									1	809	65990	1	EACH	ITS DEVICE, MISC.:INTERGRATION INTO EXISTING CENTRALLY CONTROLLED SYSTEM	230
				4									4	809	69101	4	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	230
				1									1	809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN	230
																		LANDSCAPING	
													LS	661	99940	LS		PLANTING, MISC.:MEDIAN LANDSCAPING	8

GENERAL SUMMARY

DESIGN AGENCY

DESIGNER BAG

REVIEWER BF 12/08/23

PROJECT ID 114475

SHEET 90 TOTAL 249

HAM-CR614-1.39

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 5/2/2024 TIME: 2:32:28 PM USER: troyer
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ITEM 625 BRACKET ARM, 15', AS PER PLAN

IN ADDITION TO THE REQUIREMENTS C&MS 625, ALL BRACKET ARMS SHALL BE GALVANIZED WITH A POWDER COAT BLACK FINISH AND HAVE A 3.5' RISE.

ITEM 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.

ALL SIGNAL SUPPORTS SHALL BE BLACK IN COLOR. THIS COLOR SHALL BE OBTAINED THROUGH POWDER COATING ONLY.

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 LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 632 PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN

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

ALL PEDESTALS SHALL BE BLACK IN COLOR. THIS COLOR SHALL BE OBTAINED THROUGH POWDER COATING ONLY.

PAYMENT FOR ITEM 632 "PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

ITEM 632 COMBINATION 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.

ALL SIGNAL SUPPORTS SHALL BE BLACK IN COLOR. THIS COLOR SHALL BE OBTAINED THROUGH POWDER COATING ONLY.

PAYMENT FOR ITEM 632 "COMBINATION 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 LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK

ITEM 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 EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD. THE UPS CABINET SHALL BE POWDER COATED BLACK.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOWER BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL OR THROUGH THE CONTROLLER WITH A CII 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 UP66, 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 A 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 FORM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF 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 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.

ITEM 804 DROP CABLE, 12 FIBER, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 804 "DROP CABLE, 12 FIBER" ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO SPLICE NEW DROP CABLE AT THE EXISTING SPLICE ENCLOSURE SHALL BE INCIDENTAL TO THIS ITEM.

ITEM 809 STOP LINE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.
2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.
3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURE CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.
4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.
5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ON SITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.
6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).
7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.
8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTOR PRIOR TO MILLING/DISABLING EXISTING LOOPS.
9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.
10. COUNT ZONES SHALL BE PROGRAMMED FOR EACH LANE

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 809 ATC V6.24 CONTROLLER, AS PER PLAN

THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER SS 809 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST. THE CONTROLLER SHALL BE AN ECONONLITE COBALT AND COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED. CONTROLLER SHALL INCLUDE THE LATEST FIRMWARE UPON INSTALLATION.

ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM, SIGNAL SUPPORT FOUNDATION

THIS ITEM OF WORK SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO REMOVE THE EXISTING SIGNAL SUPPORT FOUNDATION AT STATION 106+14.1, OFFSET 39.9' LT BEFORE THE INSTALLATION OF PEDESTAL PS-2 AND ITS ASSOCIATED FOUNDATION. THE FOUNDATION SHOULD BE REMOVED TO A MINIMUM OF 3' BELOW FINISH GRADE.THIS ITEM INCLUDES DISPOSAL OF ALL MATERIALS.

THE REMOVED FOUNDATION SHAFT SHALL BE BACKFILLED AND COMPACTED AS REQUIRED BY CMS 203.

ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THIS ITEM SHALL CONFORM TO ITEM 632 "SIGNAL SUPPORT FOUNDATION" WITH THE ADDITION THAT ALL FOUNDATIONS SHALL BE HYDRO VACUUMED.

ITEM 632 PEDESTAL SUPPORT FOUNDATION, AS PER PLAN

THIS ITEM SHALL CONFORM TO ITEM 632 "PEDESTAL SUPPORT FOUNDATION" WITH THE ADDITION THAT ALL FOUNDATIONS SHALL BE HYDRO VACUUMED.

ITEM 809 ITS DEVICE, MISC.: MANAGED NETWORK SWITCH WITH GIGABIT UPLINK PORTS, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING AN INDUSTRY HARDENED, FULLY MANAGED ETHERNET SWITCH PROVIDING FOUR FIBER OPTIC GIGABIT ETHERNET (1000BASEX) PORTS USING INDUSTRY STANDARD LC FIBER OPTIC CONNECTORS AND SIX FAST ETHERNET (10/100BASE TX) RJ45 COPPER PORTS. ALL NECESSARY SFP MODULES SHALL BE INCIDENTAL TO THE SWITCH. THE TRANSCEIVER SHALL OPERATE ON 120VAC, 10 WATTS, AND SHALL MEET AND/OR NEMA TS2 ENVIRONMENTAL REQUIREMENTS.

THE FIBER OPTIC SWITCH SHALL INTERFACE TO SINGLE-MODE FIBER OPTIC CABLE WITH AN OPTICAL WAVELENGTH OF 1310 NM USING LC CONNECTORS. IT SHALL BE CAPABLE OF OPERATING OVER A DISTANCE OF AT LEAST 10KM WITH AN OPTICAL POWER BUDGE OF 17 DB. THE UNIT SHALL BE CAPABLE OF OPERATING IN A FAULT TOLERANT FIBER OPTIC LOOP.

PROVIDE A TRANSCEIVER THAT IS FULLY COMPLIANT WITH IEEE 802.3, 802.3U, & 802.3Z. THE TRANSCEIVER SHALL PROVIDE FULL-DUPLEX OPERATION AND FLOW CONTROL.

PROVIDE A SIMPLE INTUITIVE USER INTERFACE FOR CONFIGURATION AND MONITORING OF THE TRANSCEIVER VIA STANDARD HTML GRAPHICAL WEB BROWSER, INCLUDING DETAILED ON-LINE HELP. EVENT LOGGING AND RECORDING SHALL BE INCLUDED. ALL SIGNIFICANT EVENTS SHALL BE SORTED IN A NON-VOLATILE SYSTEM LOG.

THE OPTICAL ETHERNET SWITCH SHALL CONNECT TO ALL ETHERNET DEVICES IN THE CONTROLLER CABINET INCLUDING THE CONTROLLER, VIDEO DETECTION COMMUNICATIONS INTERFACE PANEL AND VIDEO SERVERS (IF APPLICABLE). AND ANY OTHER ETHERNET DEVICES USING PROPERLY RATED CAT5 CABLE CONNECTORS.

THE COST FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO ASSEMBLE A FUNCTIONAL, FIBER OPTIC ETHERNET SYSTEM INCLUDING CONNECTIONS, TESTED, AND ACCEPTED.

ITEM 809 ITS DEVICE, MISC.: INTEGRATION INTO EXISTING CENTRALLY CONTROLLED SYSTEM

THIS ITEM OF WORK SHALL INCLUDE ALL TIME, LABOR, AND MATERIAL TO BRING THE PROPOSED TRAFFIC SIGNAL CONTROLLER ONLINE IN THE CITY OF SPRINGDALE'S SIGNAL SYSTEM. THIS WORK MAY INCLUDE BUT IS NOT LIMITED TO, NETWORKING, ADDRESSING THE CONTROLLER, MODIFYING COMMUNICATION SETTINGS, AND WORK TO UPLOAD THE CONTROLLER TO AN ONLINE DATABASE FOR THE CENTRALIZED SIGNAL SYSTEM SOFTWARE.

PAYMENT WILL BE FOR EACH CONTROLLER COMPLETELY BROUGHT ONLINE WITH ESTABLISHED AND CONSISTENT COMMUNICATIONS TO THE SIGNAL SYSTEM.

ITEM 632 CABINET FOUNDATION, AS PER PLAN

THIS ITEM SHALL CONFORM TO ITEM 632 "CABINET FOUNDATION" WITH THE ADDITION THAT ALL FOUNDATIONS SHALL BE HYDRO VACUUMED.

SIGNAL PLAN NOTES

DESIGN AGENCY
TEC Engineering, Inc.
161 Northland Boulevard
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(513)-771-8828
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DESIGNER AFS
REVIEWER ALH 06-28-23
PROJECT ID 114475
SUBSET - TOTAL -
SHEET 230 TOTAL 249

HAM-CR614-1.39

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