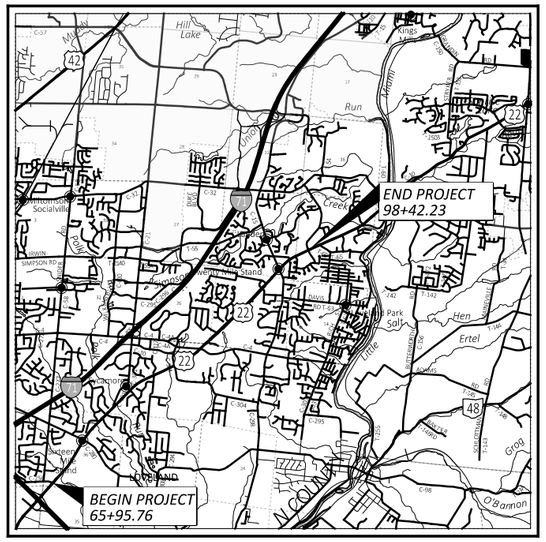
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM/WAR US 22
16.04/0.00 PED

HAMILTON COUNTY
WARREN COUNTY



LOCATION MAP

LATITUDE: 39°17'07" LONGITUDE: -84°18'35"

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

INDEX OF SHEETS:

DESIGN DESIGNATION

	CORNELL-KEMPER	KEMPER-FIELDS ERTEL	FIELDS ERTEL-COLUMBIA
CURRENT ADT (2021)	25125	19155	25221
DESIGN YEAR ADT (20)	N/A	N/A	N/A
DESIGN HOURLY VOLUME (20)	-	-	-
DIRECTIONAL DISTRIBUTION	-	-	-
TRUCKS (24 HOUR B&C)	541	367	203
DESIGN SPEED	45	45	50
LEGAL SPEED	40	40	45

DESIGN FUNCTIONAL CLASSIFICATION:
03 PRINCIPAL ARTERIAL (URBAN)
NHS PROJECT — NO

DESIGN EXCEPTIONS

ADA DESIGN WAIVERS

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:
CMT
CRAWFORD, MURPHY & TILLY, INC.

ENGINEER'S SEAL
Project Engineer
STATE OF OHIO · JOSHUA W. LOCKHART · PE-74012 · REGISTERED PROFESSIONAL ENGINEER
2025.02.06 09:41:16-05'00'

STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
		TC-52.20	1/15/21				800-2023	7/19/24	
		TC-71.10	4/26/23				832	7/19/24	
		TC-74.10	1/20/23						
BP-5.1	7/15/22	TC-83.20	7/15/22						
BP-7.1	1/20/23	TC-85.10	10/21/22						
HL-30.11	1/15/21	DM-4.3	1/15/16						
HL-30.22	1/15/21	DM-4.4	1/15/16						
MT-95.30	7/19/19								
MT-95.31	7/19/19								
MT-101.90	7/17/20								
MT-110.10	7/19/13								

FEDERAL PROJECT NUMBER

E220595

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RELOCATING EXISTING PED HEADS AND PUSH BUTTONS ONTO PEDESTALS FOR BETTER ACCESSIBILITY, ADDING SIDEWALK AND CURB RAMPS TO MAKE CROSSINGS ADA COMPLIANT. INCLUDES PEDESTALS AND ASSOCIATED CONDUIT, WIRING AND PULLBOXES ALONG US-22 IN HAMILTON AND WARREN COUNTIES

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.609 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.000 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

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

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.

APPROVED _____
Douglas A. Gruver, P.E.
08
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
Pamela Boratyn
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 HOSBROOK ROAD, SUITE 270, CINCINNATI, OH 45236
PH (937)743-2193
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.1 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

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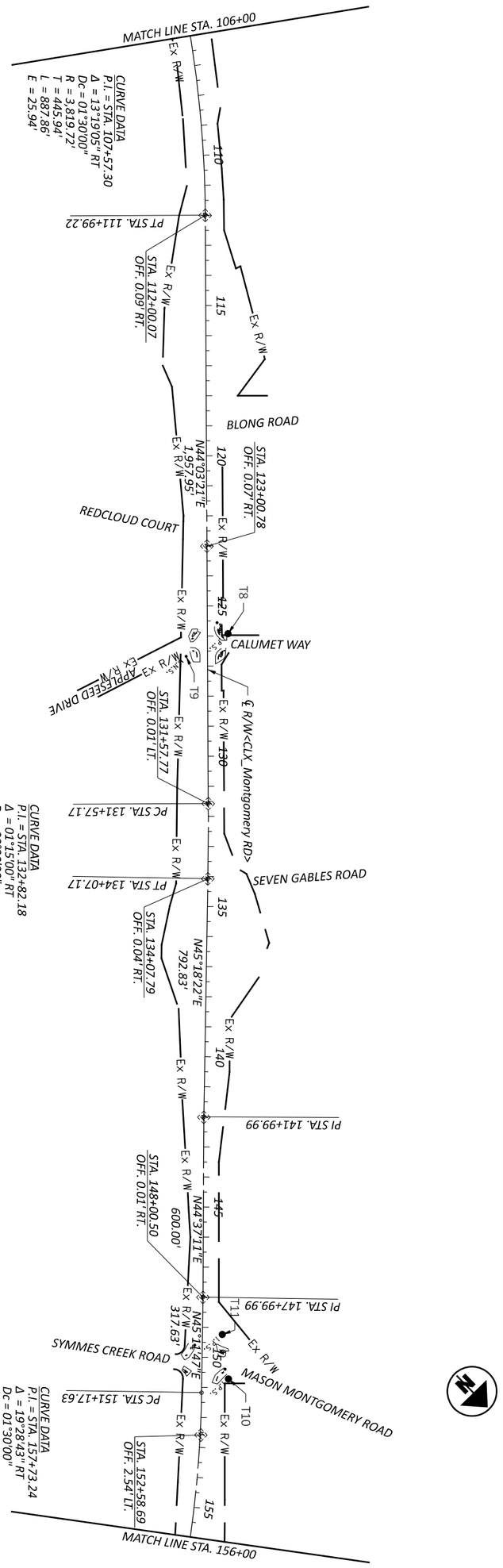

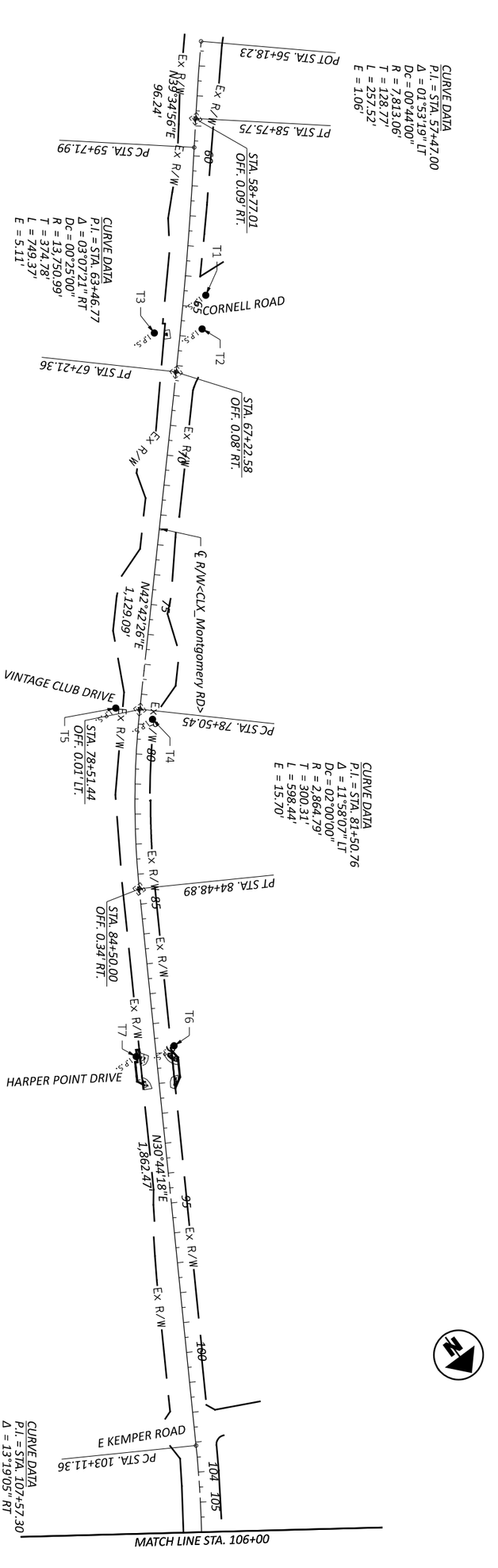

SCHEMATIC PLAN

HORIZONTAL SCALE IN FEET
0 200
100 400

SHEET	TOTAL
P.2	67

PROJECT ID: 117237

REVIEWER: JWL 01/24/25

DESIGNER: LDW

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CRAWFORD, MURPHY & TILLY, INC.
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DAYTON, OHIO 45459
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www.cmtengr.com

DESIGN AGENCY

HAM/WAR US 22 16.04/0.00 PED

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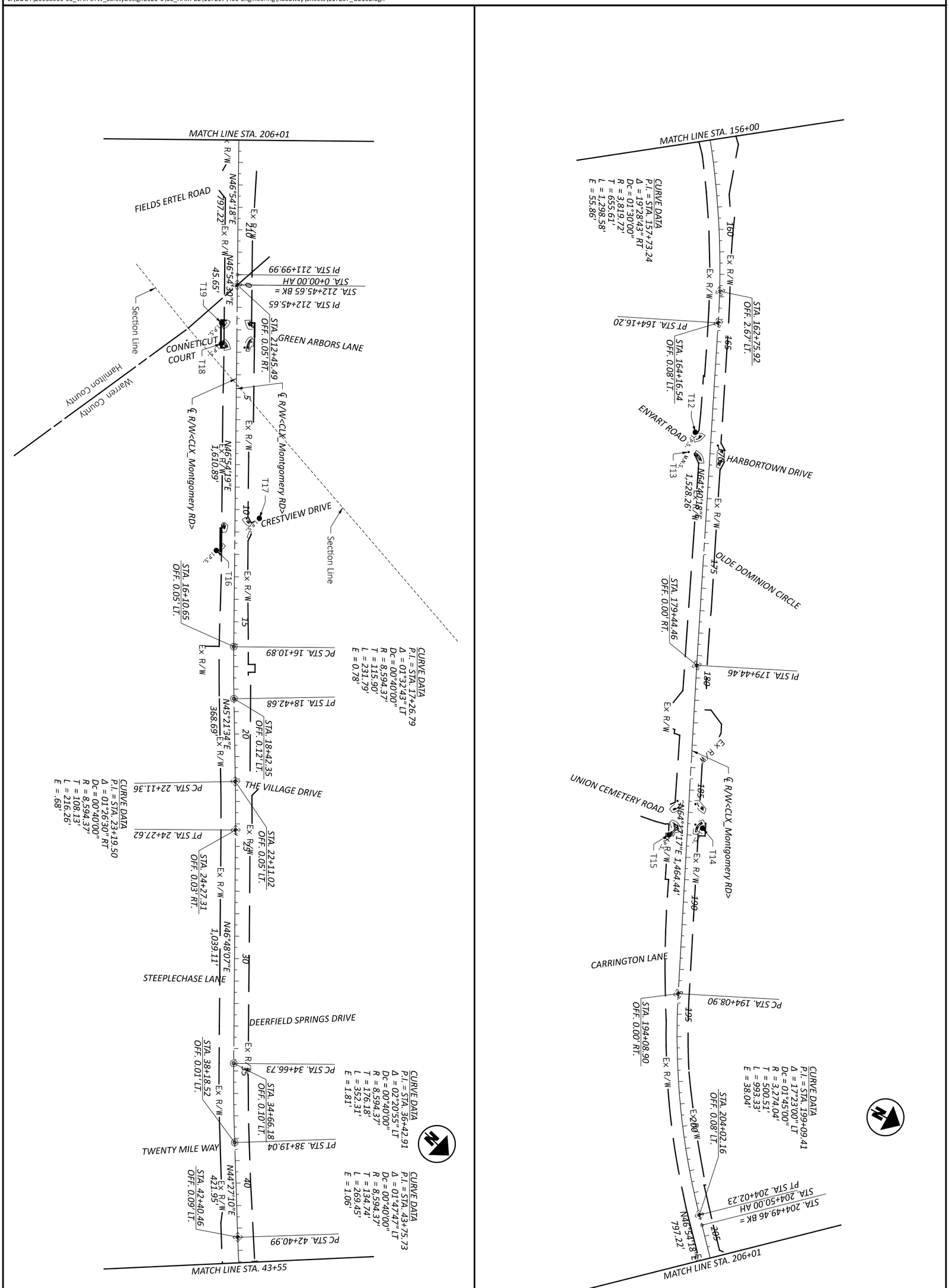

SCHEMATIC PLAN

HORIZONTAL SCALE IN FEET
0 200
100 400

SHEET	TOTAL
P.3	67

PROJECT ID: 117237

REVIEWER: JWL 01/24/25

DESIGNER: LDW

DESIGN AGENCY
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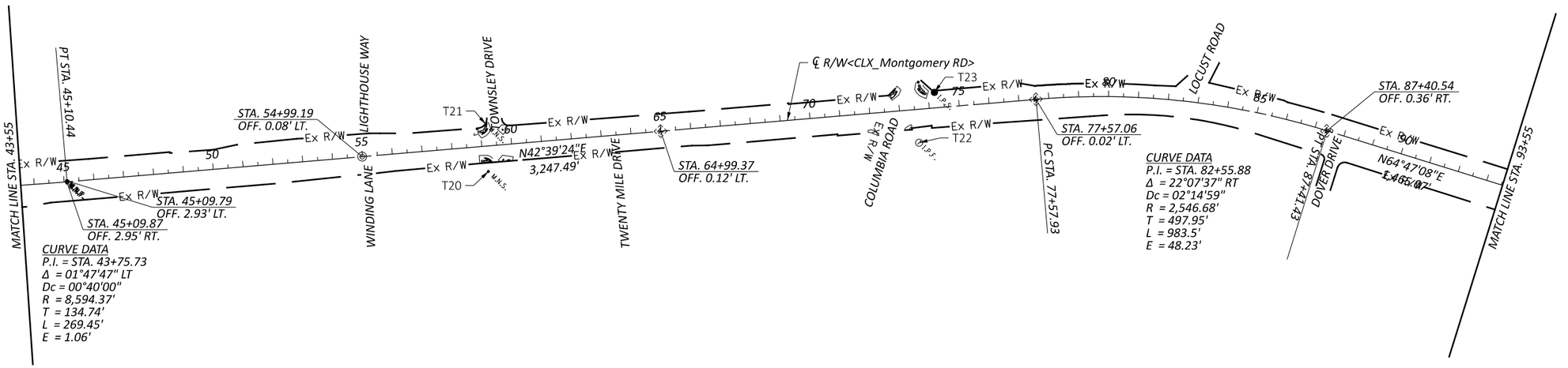

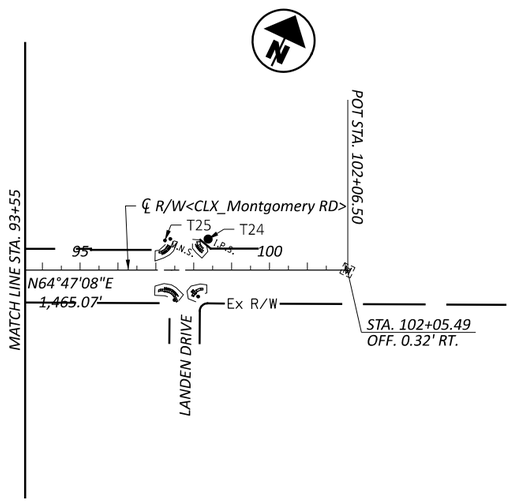

Point	Station	Offset	Northing	Easting	Elevation
T1	64+58.65 R1	-73.04	465832.48	1449003.65	798.79
T2	65+70.94 R1	-71.28	465915.39	1449080.26	798.45
T3	65+99.88 R1	85.67	465831.54	1449216.05	797.57
T5	78+55.21 R1	80.22	466757.58	1450062.66	784.79
T4	78+79.89 R1	-45.41	466860.58	1449986.57	785.28
T6	89+80.45 R1	-62.21	467775.88	1450575.80	809.37
T7	90+03.39 R1	67.12	467729.49	1450698.69	806.93
T8	125+92.31 R1	-68.68	470640.70	1452766.88	800.03
T9	126+67.11 R1	70.95	470597.36	1452919.24	800.65
T11	149+22.99 R1	-66.16	472294.93	1454410.49	815.41
T10	150+70.85 R1	-88.80	472415.19	1454499.44	817.99
T12	169+09.19 R1	71.34	473274.04	1456129.09	816.28
T13	169+98.68 R1	95.39	473290.59	1456220.27	816.01
T14	186+66.89 R1	-66.70	474154.93	1457656.28	818.80
T15	187+05.13 R1	80.92	474038.53	1457754.78	817.30
T19	1+70.50 R3	68.01	475618.54	1459956.66	837.56
T18	2+62.67 R3	68.75	475680.97	1460024.47	836.73
T17	10+38.46 R3	-108.40	476340.35	1460469.94	830.54
T16	11+83.18 R3	81.76	476300.37	1460705.54	827.13
T20	59+14.68 R3	85.15	479651.09	1464051.83	849.35
T21	59+20.09 R3	-72.53	479761.92	1463939.53	848.80
T22	73+56.28 R3	111.42	480693.49	1465047.99	838.58
T23	74+21.40 R3	-52.01	480852.12	1464971.92	834.53
T25	97+23.86 R3	-78.39	482132.15	1466881.56	795.61
T24	98+37.77 R3	-82.14	482184.07	1466983.02	796.73

HORIZONTAL SCALE IN FEET
0 100 200 400

SCHEMATIC PLAN

HAM/WAR US 22 16.04/0.00 PED

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DESIGN AGENCY
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DAYTON, OHIO 45459
PH (937)312-5193
www.cmtengr.com

DESIGNER
LDW

REVIEWER
JWL 01/24/25

PROJECT ID
117237

SHEET P.4 TOTAL 67

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

TRAFFIC
ODOT DISTRICT 8 TRAFFIC OPERATIONS
ATTN: JIM JUDD
505 SOUTH SR741
LEBANON, OHIO 45036
513-933-6692

ELECTRIC
DUKE ELECTRIC (DISTRIBUTION)
2010 DANA AVE
CINCINNATI, OHIO 45207
PHONE 513-514-8209 (CHRIS TEPE)
CHRIS.TEPE@DUKE-ENERGY.COM

DUKE ELECTRIC (TRANSMISSION)
139 EAST 4TH STREET, ROOM 491-03
CINCINNATI, OHIO 45202
513-287-1266 (TIM MEYER)
TIM.MEYER@DUKE-ENERGY.COM

GAS
DUKE ENERGY GAS
139 EAST 4TH STREET
CINCINNATI, OHIO 45202
513.384.4731 (ANDREW MCNICHOLS)
OH/KYHOUSEBILL@DUKE-ENERGY.COM
ANDREW.MCNICHOLS@DUKEENERGY.COM

TELECOM
AT&T-LONG LINES (MCG)
450 W WILSON BRIDGE RD, SUITE 180
WORTHINGTON, OH 43085
484-983-5827 (AUSTIN STANSEL)
AUSTIN.STANSEL@MCGFIBER.COM

ALTAFIBER - UNDERGROUND
221 E. FOURTH STREET, 121-900
CINCINNATI, OHIO 45202
513-565-7187 BRECK COWAN
BRECK.COWAN@ALTAFIBER.COM

ALTAFIBER - AERIAL
221 E. FOURTH ST
CINCINNATI, OHIO 45202
513-566-5120 (JOHN STRAUSS)
JOHN.STRAUSS@ALTAFIBER.COM

MCI (VERIZON)
5400 DUFF DR.
CINCINNATI, OH 45246
757.799.8038 (CYNTHIA MARTINEZ)
CYNTHIA.MARTINEZ@VERIZON.COM

CROWN CASTLE
10188 INTERNATIONAL BOULEVARD
CINCINNATI, OH 41913
216-810-7165
513-898-1595 (CRAIG SNELL)
CRAIG.SNELL@CROWNCASTLE.COM

WATER
CINCINNATI WATER
4747 SPRING GROVE AVE
CINCINNATI, OH 45232
513-3652-3723 (DAN LOUIS)
DANIEL.LOUIS@GCWW.CINCINNATI-OH.GOV

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATION ACCORDING TO THE BEST AVAILABLE DATA. THE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THEM IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THEM.

SURVEYING PARAMETERS
PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 4 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL
POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE B (5/8" IRON PIN w/ PLASTIC CAP)

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID 12B (CONUS)

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC (2-PARALLEL)
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.00 (AT GRID)
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CONSTRUCTION LIMITS
THE CONTRACTOR SHALL RESTRICT ALL ACTIVITIES, EQUIPMENT STORAGE AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE ACTUAL CONSTRUCTION LIMITS ARE SHOWN ON THE PLANS OR THE EXISTING OR TEMPORARY RIGHT OF WAY, WHICHEVER IS NEAREST. SHOULD THE CONTRACTOR WISH TO USE ANY AREA OUTSIDE THESE LIMITS, THE CONTRACTOR MUST SUBMIT THE REQUEST IN WRITING TO THE ENGINEER. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA THAT THE CONTRACTOR PLANS TO USE AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE ENGINEER SHALL APPROVE THE REQUEST IN WRITING BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL REVIEW AND RECORD ALL ADJACENT SITES WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). CONTRACTOR SHALL SUBMIT DOCUMENTATION OF EXISTING CONDITIONS TO THE ENGINEER AND THE MAINTAINING AGENCY FOR APPROVAL. A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF THE ADJACENT SITES WILL BE MADE. ANY AREAS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. COST FOR DOCUMENTING EXISTING CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

CONSTRUCTION NOISE
ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS THE CONTRACTOR SHALL COMPLY WITH ALL NOISE ORDINANCES.

ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF ITEM 623-ODOT CMS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REESTABLISH AND VERIFY ALL HORIZONTAL SURVEY CONTROL POINTS, BENCHMARKS, AND RIGHT-OF-WAY ON ALL SECTIONS OF THE PROJECT.

CLEARING AND GRUBBING
ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

NO CLEARING OR GRUBBING SHALL OCCUR OUTSIDE THE PROPOSED CONSTRUCTION LIMITS.

RESTORATION OF DISTURBED AREAS
THE CONTRACTOR SHALL RESTORE ALL DISTURBED LANDSCAPED AREAS AND PAVEMENT SURFACES TO A CONDITION EQUAL TO, OR BETTER THAN THAT WHICH EXISTED PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL PERFORM ALL RESTORATION WITH MATERIALS IDENTICAL TO THE EXISTING SURFACE. THE CONTRACTOR SHALL PERFORM ALL RESTORATION WORK IN ACCORDANCE WITH THE PERTINENT SPECIFICATION ITEMS AS DIRECTED BY THE ENGINEER. ALL RESTORATION WORK, INCLUDING MATERIALS, EQUIPMENT, LABOR, INCIDENTALS, AND DISPOSAL OF ALL SURPLUS MATERIALS ARE CONSIDERED AS INCIDENTAL TO THE VARIOUS ITEMS OF UNDERGROUND WORK UNLESS SPECIFICALLY MARKED IN THE PLANS.

ITEM 202 CONCRETE WALK REMOVED, AS PER PLAN
THE REMOVAL FOR THE CONCRETE WALK/CURB RAMP SHALL INCLUDE THE CONCRETE WALK/CURB RAMP AND ANY MATERIALS BELOW THE WALK NEEDED TO BE REMOVED IN ORDER TO OBTAIN THE PROPER SUBGRADE ELEVATION FOR THE NEW CONCRETE WALK/CURB RAMP TO BE PLACED.

ITEM 202 CURB REMOVED, AS PER PLAN
THE REMOVAL FOR THE CURB SHALL INCLUDE THE CURB AND ANY MATERIALS BELOW THE CURB NEEDED TO BE REMOVED IN ORDER TO OBTAIN THE PROPER ELEVATION FOR THE NEW CURB TO BE PLACED.

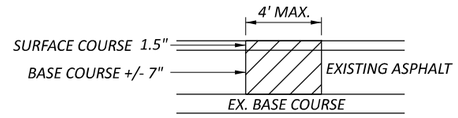
ITEM 253 PAVEMENT REPAIR, AS PER PLAN
IT IS THE INTENT THAT THE EXISTING PAVEMENT SHALL NOT BE REMOVED OR DISTURBED FOR CONSTRUCTION OF THE PROPOSED CURB AND CURB RAMPS. CURB RADII SHOWN SHALL GENERALLY MATCH THE EXISTING LAYOUTS.

AREAS REQUIRING REPAIR NOT DUE TO CONTRACTOR MEANS AND METHODS AND APPROVED BY THE ENGINEER SHALL BE PAID FOR UNDER ITEM 253 PAVEMENT REPAIR, AS PER PLAN. THIS WORK SHALL MEET THE REQUIREMENTS OF ITEM 253 AND INCLUDE THE FOLLOWING: SAWCUTTING, PAVEMENT REMOVAL, BASE COMPACTION AND PLACEMENT OF PAVEMENT TO MATCH THE EXISTING DEPTH.
THE BUILDUP OF THE REPAIRED PAVEMENT SHALL BE ITEM 301, ASPHALT CONCRETE BASE, PG64-22 (449) UP TO 1.5" BELOW EXISTING PAVEMENT ELEVATION, COMPACTED AS PER 401.15 AND IN APPROXIMATELY EQUAL LAYERS, AND 1.5" ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (449). TO MATCH EXISTING ASPHALT ELEVATION.

REPAIR DUE TO CONTRACTOR MEANS AND METHODS, IT SHALL BE REPAIRED AS NOTED ABOVE AT THE COST OF THE CONTRACTOR.

A CONTINGENCY QUANTITY FOR USE AS DIRECTED BY THE ENGINEER HAS BEEN PROVIDED:

ITEM 253 PAVEMENT REPAIR, APP – 225 SY



PROPOSED CONCRETE WALK AND CURB RAMPS
IT IS THE INTENT THAT WHERE SHOWN FOR CONSTRUCTION OF NEW PROPOSED OR REPLACEMENT OF EXISTING CONCRETE WALK CURB RAMPS ON THE PLANS, THE WALK AND CURB RAMPS BE REPLACED STARTING AND ENDING AT AN EXISTING EXPANSION OR CONTRACTION JOINT. THE CONTRACTOR SHALL SAW-CUT THE WALK OR CURB RAMP ONLY AT THESE LOCATIONS OR WHERE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION, ADDING OR REMOVING ANY STONE BASE OR GRADING NECESSARY TO OBTAIN THE PROPER SUBBASE ELEVATION PRIOR TO PLACEMENT OF THE PROPOSED CONCRETE WALK OR CURB RAMP. PAYMENT FOR THE ABOVE MATERIALS, LABOR OR EQUIPMENT REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FOLLOWING ITEMS:

ITEM 608 4" CONCRETE WALK, AS PER PLAN
ITEM 608 CURB RAMP, AS PER PLAN

CONCRETE WALK OR CURB RAMPS REQUIRING REPLACEMENT DUE TO WORK OUTSIDE OF THE NOTED REMOVALS AND REPLACEMENTS SHOWN ON THE PLANS SHALL BE CONSIDERED TO BE INCLUDED IN THE COST OF THE ITEM THE REMOVAL WAS REQUIRED FOR. NO ADDITIONAL PAYMENT WILL BE MADE. THE CONCRETE WALK AND CURB RAMP REQUIRING REPLACEMENT SHALL BE REMOVED AND REPLACED TO THE NEAREST JOINT LINE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

ITEM 608 DETECTABLE WARNING, AS PER PLAN
EXISTING CURB RAMPS REQUIRING REMOVAL AND REPLACEMENT OF THE DETECTABLE WARNINGS ARE NOTED WITHIN THE PLANS.

THE EXISTING DETECTABLE WARNINGS SHALL BE REMOVED IN A MANNER THE DOES NOT ADVERSELY IMPACT THE SURFACE OF THE SURROUNDING CONCRETE WITHIN THE CURB RAMP. THE CONTRACTOR SHALL REPLACE THE DETECTABLE WARNING PER ODOT CMS 608. ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO REMOVE AND REPLACE THE DETECTABLE WARNING SHALL BE INCLUDED IN THE COST OF ITEM 608 DETECTABLE WARNING, AS PER PLAN.

ITEM 609 CURB, TYPE 6, AS PER PLAN
ALL PROPOSED TYPE 6 CURB SHALL BE CONSTRUCTED AS PER ODOT CMS ITEM 609 AND STANDARD CONSTRUCTION DRAWING BP-5.1 EXCEPT TO MATCH EXISTING CURB HEIGHT AND GENERAL SHAPE. CURB HEIGHT AND SHAPE SHALL BE CONSISTENT WITH THE ADJACENT CURB UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PROPOSED CURB SHALL BE CONSTRUCTED IN A MANNER THAT PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE EXISTING PAVEMENT.

SEEDING AND MULCHING
THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, TOPSOIL	83	CU. YD.
ITEM 659, SEEDING AND MULCHING	747	SQ. YD.
ITEM 659, REPAIR SEEDING AND MULCHING	37	SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	0.11	TONS
ITEM 659, LIME	0.15	ACRES
ITEM 659, WATER	4	M. GAL.

APPLY SEEDING AND MULCHING TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT, TEMPORARY EASEMENT, SIDEWALK EFFECTIVE AUTHORITY OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

PROPERTY POINTS AND SURVEY MONUMENTS
CARE SHALL BE TAKEN BY THE CONTRACTOR TO SAFEGUARD ANY PROPERTY POINTS OR OTHER SURVEY REFERENCE MARKS ENCOUNTERED DURING CONSTRUCTION OF THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESET ANY PROPERTY POINT OR SURVEY MONUMENT WHICH IS DISTURBED AS A RESULT OF CONSTRUCTION OF THIS PROJECT. THE PROPERTY POINTS AND SURVEY MONUMENTS SHALL BE RESET UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL SURVEYOR.

PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO THE OTHER ITEMS PAID FOR IN THIS PROJECT.

ITEM SPECIAL - TESTING, CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION
ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN ODOT CMS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTIONS TAKEN. TEST SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATIONS AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTIALLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR. THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION THE ITEM SHALL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT	20%
PROGRESSIVE EQUIVALENT PAYMENTS	50%
UPON SUBMISSION OF FINAL REPORT	30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

MANHOLES AND VALVES ADJUSTED TO GRADE
ALL MANHOLES AND VALVES ENCOUNTERED IN AREAS THAT REQUIRE GRADE ADJUSTMENT WILL BE PERFORMED PRIOR TO THE PLACEMENT OF CONCRETE BY THE UTILITY OWNER. CONTACT THE UTILITY OWNER 2 WEEKS PRIOR TO WHEN THE ADJUSTMENTS ARE TO BE COMPLETED.

MEIJER ENTRANCE COORDINATION
CONTRACTOR SHALL COORDINATE WITH MEIJER TO KEEP ACCESS OPEN TO MEIJER, INCLUDING, BUT NOT LIMITED TO KEEPING AT LEAST ONE FULL MOVEMENT DRIVE TO U.S. 22 OPEN TO MEIJERS PROPERTY AT ALL TIME DURING CONSTRUCTION.

GENERAL NOTES

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REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.5 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:34 AM USER: nbrickner
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ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

A MINIMUM OF 1 LANE(S) OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE LANE VALUE CONTRACT TABLE, BY USE OF THE EXISTING PAVEMENT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES AND AT LEAST ONE SIDEWALK ON EITHER SIDE OF THE ROAD SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED)
GENERAL/REGULAR ELECTION DAY ((NOV)
THANKSGIVING
MEMORIAL DAY
CHRISTMAS (OBSERVED)
FOURTH OF JULY (OBSERVED)
(OTHER HOLIDAY OR SPECIAL EVENT)
LABOR DAY

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

DAY OF HOLIDAY OR SPECIAL EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
TUESDAY	(GEN./REG. ELECTION) 5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

DURING THE SAME PERIODS, MAINTAIN PEDESTRAIN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

LANE VALUE CONTRACT TABLE:

DESCRIPTION OF CRITICAL LANE/ RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE $ PER LANE
1 LANE OF US-22 AND ALL SIDE STREETS FROM CORNELL ROAD TO MASON MONTGOMERY ROAD	7 AM TO 9 AM AND 3 PM TO 7 PM	1 MIN	$120

NOTIFICATION OF TRAFFIC RESTRICTIONS

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

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

NOTIFICATION TIME TABLE

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

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

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

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

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

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

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 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 CONST-RUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 24 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 AM 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 USE OF LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE.

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.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (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) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 94 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

MAINTENANCE OF TRAFFIC NOTES

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PROJECT ID 117237
SHEET P.6 TOTAL 67

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:36 AM USER: nbrtckner
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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5		9		10		33							01/SAF/21						
																		ROADWAY	
													LS	201	11000	LS		CLEARING AND GRUBBING	
		21											21	202	23000	21	SY	PAVEMENT REMOVED	
		6,054											6,054	202	30001	6,054	SF	WALK REMOVED, AS PER PLAN	5
		977											977	202	32001	977	FT	CURB REMOVED, AS PER PLAN	5
		935											935	608	10001	935	SF	4" CONCRETE WALK, AS PER PLAN	5
		4,792											4,792	608	52000	4,792	SF	CURB RAMP	
		550											550	608	53021	550	SF	DETECTABLE WARNING, AS PER PLAN	5
		997											997	609	26001	997	FT	CURB, TYPE 6, AS PER PLAN	5
													LS	SPECIAL	69012160	LS		TESTING, CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	5
																		EROSION CONTROL	
83													83	659	00300	83	CY	TOPSOIL	
747													747	659	10000	747	SY	SEEDING AND MULCHING	
37													37	659	14000	37	SY	REPAIR SEEDING AND MULCHING	
0.11													0.11	659	20000	0.11	TON	COMMERCIAL FERTILIZER	
0.15													0.15	659	31000	0.15	ACRE	LIME	
4													4	659	35000	4	MGAL	WATER	
													13,000	832	30000	13,000	EACH	EROSION CONTROL	
																		PAVEMENT	
225													225	253	01001	225	SY	PAVEMENT REPAIR, AS PER PLAN	5
																		TRAFFIC CONTROL	
				0.01									0.01	644	00104	0.01	MILE	EDGE LINE, 6", WHITE	
				355									355	644	00500	355	FT	STOP LINE	
				1,095									1,095	644	00620	1,095	FT	CROSSWALK LINE, 12"	
				820									820	644	00630	820	FT	CROSSWALK LINE, 24"	
				1									1	644	01300	1	EACH	LANE ARROW	
				2,320									2,320	644	30000	2,320	FT	REMOVAL OF PAVEMENT MARKING	
				1									1	644	30020	1	EACH	REMOVAL OF PAVEMENT MARKING	
																		WATER WORK	
		1											1	638	10800	1	EACH	VALVE BOX ADJUSTED TO GRADE	
																		TRAFFIC SIGNALS	
				823									823	625	25408	823	FT	CONDUIT, 2", 725.051	
				115									115	625	25400	115	FT	CONDUIT, 2", 725.04	
				235									235	625	25910	235	FT	CONDUIT CLEANED AND CABLES REMOVED	33
				938									938	625	29000	938	FT	TRENCH	
				12									12	625	30700	12	EACH	PULL BOX, 725.08, 18"	
				11									11	625	31510	11	EACH	PULL BOX REMOVED	
				49									49	625	32000	49	EACH	GROUND ROD	
				938									938	625	36010	938	FT	UNDERGROUND WARNING/MARKING TAPE	
				63.92									63.92	630	80100	63.92	SF	SIGN, FLAT SHEET	
				36									36	630	87500	36	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
				16									16	632	20731	16	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN, INSTALLATION ONLY	33
				3									3	632	20750	3	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON	
				37									37	632	20751	37	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, INSTALLATION ONLY	33
				68									68	632	25010	68	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
				2,130		1,500							3,630	632	40500	3,630	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
				1,240		1,500							2,740	632	65300	2,740	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
				49									49	632	64020	49	EACH	PEDESTAL FOUNDATION	
				24									24	632	89802	24	EACH	PEDESTAL, 5', TRANSFORMER BASE	
				26									26	632	89904	26	EACH	PEDESTAL, 10', TRANSFORMER BASE	
				1									1	632	90020	1	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PEDESTAL	33
				30									30	632	90104	30	EACH	REUSE OF TRAFFIC CONTROL ITEM: PULLBOX	33
				24									24	632	90202	24	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD	33
				28									28	632	90210	28	EACH	REUSE OF PEDESTRIAN PUSHBUTTON	33
				11									11	633	99000	11	EACH	CONTROLLER ITEM, MISC.: REPROGRAMMING OF EXISTING CONTROLLERS	33
				33									33	632	90400	33	EACH	SIGNALIZATION, MISC.: FILLING AND PLUGGING OF HOLES ON SUPPORT	33
				1,360		600							1,960	632	90400	1,960	EACH	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	33

GENERAL SUMMARY

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:38:37 AM USER: nbrickner
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REVIEWER JWL 01/24/25

PROJECT ID 117237

SHEET P.7 TOTAL 67

SHEET NUM.	PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	01/SAF/21						
						MAINTENANCE OF TRAFFIC	
94	94	614	11110	94	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						INCIDENTALS	
	LS	614	11000	LS		MAINTAINING TRAFFIC	
	LS	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	5
	LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

HAM/WAR US 22 16.04/0.00 PED

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 E. WISCONSIN VILLAGE DR
SUITE 270
SPRINGBORO, OHIO 45459
PH (937)701-2193
www.cmtengr.com

DESIGNER
NCB

REVIEWER
JWL 01/24/25

PROJECT ID
117237

SHEET P.8 | TOTAL 67

ROADWAY SUBSUMMARY

REF NO.	SHEET BEGIN	SHEET END	STATION TO STATION BEGIN	STATION TO STATION END	SIDE	CAD MEASURED AREA (SF)	202 PAVEMENT REMOVED (SY)	202 WALK REMOVED, AS PER PLAN (SF)	202 CURB REMOVED, AS PER PLAN (SF)	608 4" CONCRETE WALK, AS PER PLAN (SF)	608 CURB RAMP (SF)	608 DETECTABLE WARNING, AS PER PLAN (SF)	609 CURB, TYPE 6, AS PER PLAN (FT)	638 VALVE BOX ADJUSTED TO GRADE (EACH)
R1	11		65+96.21	66+04.45	RT				9	4	49	10	9	
R2	12		90+06.07	90+27.50	RT					32		20		
R3	12		90+06.01	90+33.77	LT			267	41	75	240	20	41	
R4	12		90+85.08	91+05.62	RT			52	10	21	44	20	10	
R5	12		90+86.58	91+10.61	LT				8	78	54	10	8	
R6	13		125+59.94	126+05.22	LT			192	18	75	116	20	18	
R7	13		125+86.57	126+09.64	RT					76		20		
R8	13		126+48.12	126+76.36	LT			171	32		89	10	32	1
R9	13		126+48.45	126+68.37	RT			78	16			10	16	
R10	14		149+67.52	149+96.27	RT							20		
R11	14		149+74.63	149+87.35	LT									
R12	14		150+41.92	150+53.23	RT				16		36	10	16	
R13	14		150+48.12	150+76.72	LT			44	14			10	14	
R14	15		169+22.25	169+40.00	RT			175	30		57	10	30	
R15	15		169+59.68	169+93.20	LT			123	28		75	10	28	
R16	15		169+99.37	170+34.97	RT			248	48		258	20	48	
R17	15		170+21.76	170+51.64	LT			223	36		167	20	36	
R18	16		185+56.06	185+86.72	LT			155	32		87	10	32	
R19	16		185+60.40	185+93.55	RT			336	47		56	10	47	
R20	16		186+40.44	186+85.00	LT			397	55		341	20	55	
R21	16		186+49.43	187+02.27	RT			442	42	122	290	20	42	
R22	17		1+63.00	1+90.45	LT			255	16		269	10	16	
R23	17		1+66.87	1+87.04	RT			104	15	24	95	20	15	
R24	17		2+39.10	2+92.88	LT			239	62	51	193	20	62	
R25	17		2+48.08	2+80.81	RT			287	38		211	10	38	
R26	18		10+37.49	10+61.14	LT			114	14	26	91	10	14	
R27	18		10+68.00	11+01.75	RT			141	14		167	20	14	
R28	18		11+60.08	11+64.87	RT							10		
R29	19		58+99.97	59+27.18	LT		8	275	26		248	20	26	
R30	19		59+04.10	59+27.15	RT			215	25	13	219	20	25	
R31	19		59+71.36	59+76.22	LT							10		
R32	19		59+65.97	59+70.88	RT					13		10		
R33	20		72+72.62	72+97.29	LT			224	29		236	10	29	
R34	20		73+66.65	73+94.21	LT			279	30	26	250	20	30	
R35	21		97+07.00	97+57.65	RT			435	44	139	339	20	44	
R36	21		97+08.00	97+39.78	LT			271	32	32	241	20	32	
R37	21		97+94.55	98+24.33	RT			285	8	101	108	10	8	
R38	21		98+04.98	98+24.76	LT		13	27	142	27	166	10	142	
TOTALS CARRIED TO GENERAL SUMMARY							21	6054	977	935	4792	550	977	1

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:38 AM USER: rbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign\2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GS101.dgn

DESIGN AGENCY
CMT CRAWFORD, MURPHY & TILLY, INC.
7777 WASHINGTON VILLAGE DR SUITE 270
DAYTON, OHIO 45459
PH (937) 270-2180
www.cmtengr.com

DESIGNER NCB
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.9 TOTAL 67

ITEM	DESCRIPTION	UNIT	SHEET NO. 35	38	41	44	47	50	53	56	59	62	65		TOTAL CARRIED TO GENERAL SUMMARY
			US-22 INTERSECTION SIDE STREETS												
			CORNELL RD	HARPER STATION	CALUMET WAY	MASON RD	ENYART RD	UNION CEMETERY RD	GREEN ARBORS LN	CRESTVIEW DR	TOWNSLEY DR	COLUMBIA RD	LANDEN DR		
625	CONDUIT, 2", 725.051	FT		50	65	110	53	107	125	31	50	91	141		823
625	CONDUIT, 2", 725.04	FT		15			19	14	16	28	6	17			115
625	CONDUIT CLEANED AND CABLES REMOVED	FT		90	55	55	35								235
625	TRENCH	FT		65	65	110	72	121	141	59	56	108	141		938
625	PULL BOX, 725.08, 18"	EACH		2			2	1	2	1	1	3			12
625	PULL BOX REMOVED	EACH		3	2	4	2								11
625	GROUND ROD	EACH		5	3	6	6	5	6	4	4	5	5		49
625	UNDERGROUND WARNING/MARKING TAPE	FT		65	65	110	72	121	141	59	56	108	141		938
630	SIGN, FLAT SHEET	SF	3.76	7.52	5.64	5.64	5.64	5.64	7.52	5.64	5.64	5.64	5.64		63.92
630	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	EACH	8	8	2	2	2	2	4	2	2	2	2		36
632	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN, INSTALLATION ONLY	EACH			2	2	2		2	2	2		4		16
632	ACCESSIBLE PEDESTRIAN PUSHBUTTON	EACH		2		1									3
632	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, INSTALLATION ONLY	EACH		2	4	3	4	4	4	4	4	4	4		37
632	COVERING OF PEDESTRIAN SIGNAL HEAD	EACH	4	8	6	6	6	6	8	6	6	6	6		68
632	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	FT		110	45	70	510	250	145	300	340	320	40		2130
632	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	FT		320	55	380	100	50	130	35	50	70	50		1240
632	PEDESTAL FOUNDATION	EACH		5	3	6	6	5	6	4	4	5	5		49
632	PEDESTAL, 5', TRANSFORMER BASE	EACH		2	2	5	3	3	3	3	1		2		24
632	PEDESTAL, 10', TRANSFORMER BASE	EACH		4	1	1	3	2	3	1	3	5	3		26
632	REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PEDESTAL	EACH		1											1
632	REUSE OF TRAFFIC CONTROL ITEM: PULLBOX	EACH		2	4	5	3	3	3	3	2	2	3		30
632	REUSE OF PEDESTRIAN SIGNAL HEAD	EACH	3	4		1	2	2	2	1	2	5	2		24
632	REUSE OF PEDESTRIAN PUSHBUTTON	EACH	4	4	2	2	2	2	4	2	2	2	2		28
633	CONTROLLER ITEM, MISC.: REPROGRAMMING OF EXISTING CONTROLLERS	EACH	1	1	1	1	1	1	1	1	1	1	1		11
632	SIGNALIZATION, MISC.: FILLING AND PLUGGING OF HOLES ON SUPPORT	EACH	4	4	3	2	3	2	4	3	2	4	2		33
632	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	FT	240	110		110	220	150		160	210	160			1360
644	EDGE LINE, 6", WHITE	MILE					0.01								0.01
644	STOP LINE	FT	56		75		12		42	30		90	50		355
644	CROSSWALK LINE, 12"	FT	210	285			220		180	200					1095
644	CROSSWALK LINE, 24"	FT			330							200	290		820
644	LANE ARROW	EACH							1						1
644	REMOVAL OF PAVEMENT MARKING	FT	160	200	420		230		330	220		370	390		2320
644	REMOVAL OF PAVEMENT MARKING	EACH							1						1

TRAFFIC SIGNAL SUBSUMMARY

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2703
www.crawfordmurphy.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.10 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:38 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020+6\08_HAM-22\117237\400-Engineering\Signals\Sheets\117237_CS101.dgn

CURB RAMP TYPE LEGEND

- A TYPE A1
- B TYPE A1 MODIFIED
- C TYPE A1/A2 MODIFIED
- D TYPE A2
- E TYPE A2 MODIFIED
- F TYPE B1
- G TYPE B1 MODIFIED
- H TYPE B2
- I TYPE C1
- J TYPE C1 MODIFIED
- K TYPE C2
- L TYPE C2 MODIFIED
- M TYPE D MODIFIED

CORNELL RD

STA. 64+58.65
OFF. 73.04' LT.
ELEV. 798.79
I.P.S.

STA. 65+70.94
OFF. 71.28' LT.
ELEV. 798.45
I.P.S.

QL-D (Cincinnati Water)-8"

CURVE DATA
P.I. = STA. 63+46.77
Δ = 03°07'21" RT
Dc = 00°25'00"
R = 13,750.99'
T = 374.78'
L = 749.37'
E = 5.11'

℄ R/W<CLX_Montgomery RD>

65
U.S. 22
MONTGOMERY RD
66

QL-D (Cincinnati Water)-42"

Abandonded COAX Cable
QL-D (AT&T)

QL-D (Cincinnati Water)-42"

QL-D (Cincinnati Water)-16"

QL-D (AT&T)

QL-D (Crown Castle)

QL-B (Verizon)

Ex R/W

R1

CONSTR. LIMITS

D

QL-B (Verizon)

STA. 65+99.88
OFF. 85.67' RT.
ELEV. 797.57
I.P.S.

GATE OF HEAVEN CATHOLIC CEMETERY ENTRANCE

EX CURB/WALK TO BE REMOVED

PR WALK/RAMP

FOR SIGNAL REMOVAL SEE SHEETS P.35 - P.65
FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT CORNELL RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CORPORATION VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordgc.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.11 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI101 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:42 AM USER: nbrickner
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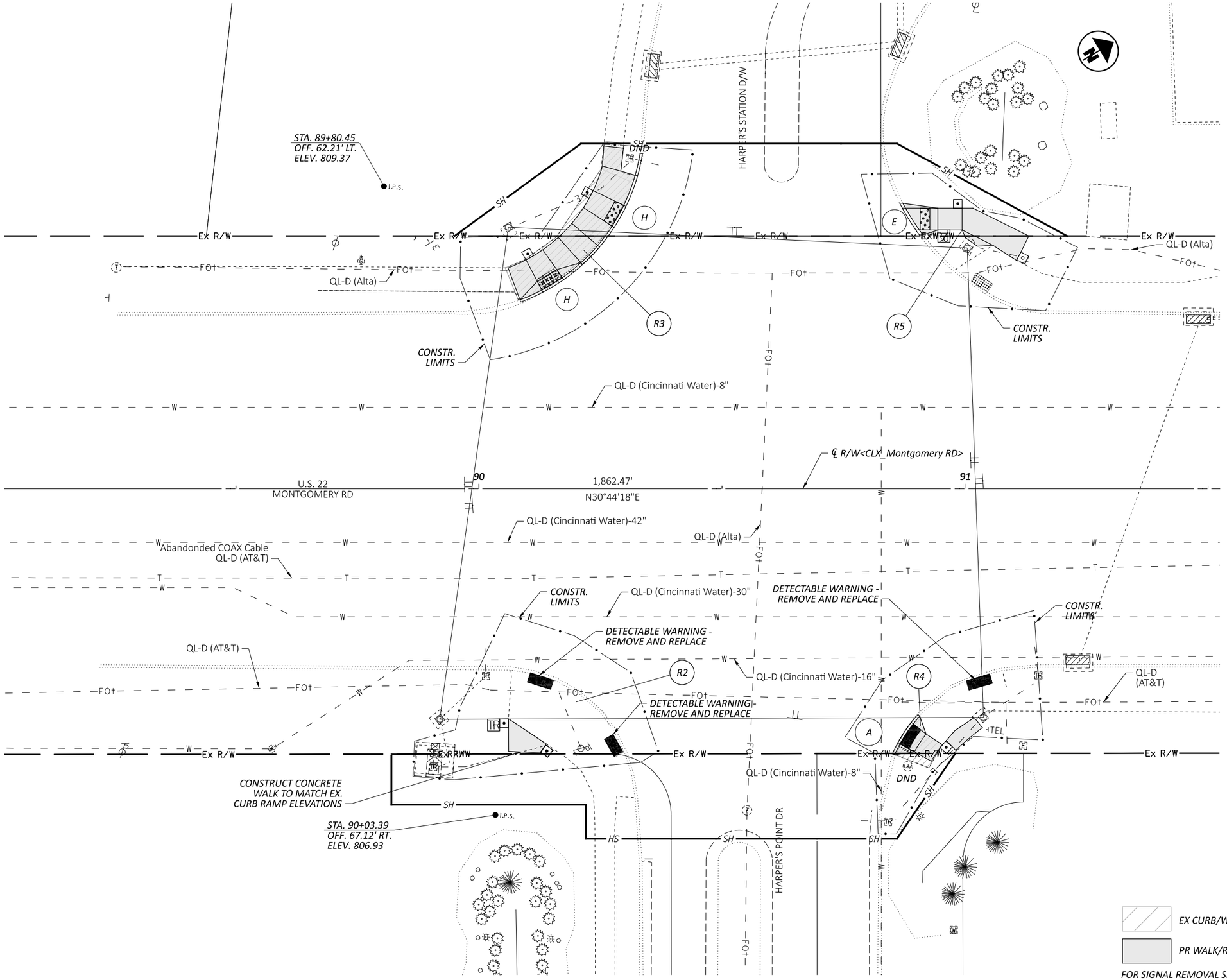


HORIZONTAL SCALE IN FEET
0 5 10 20

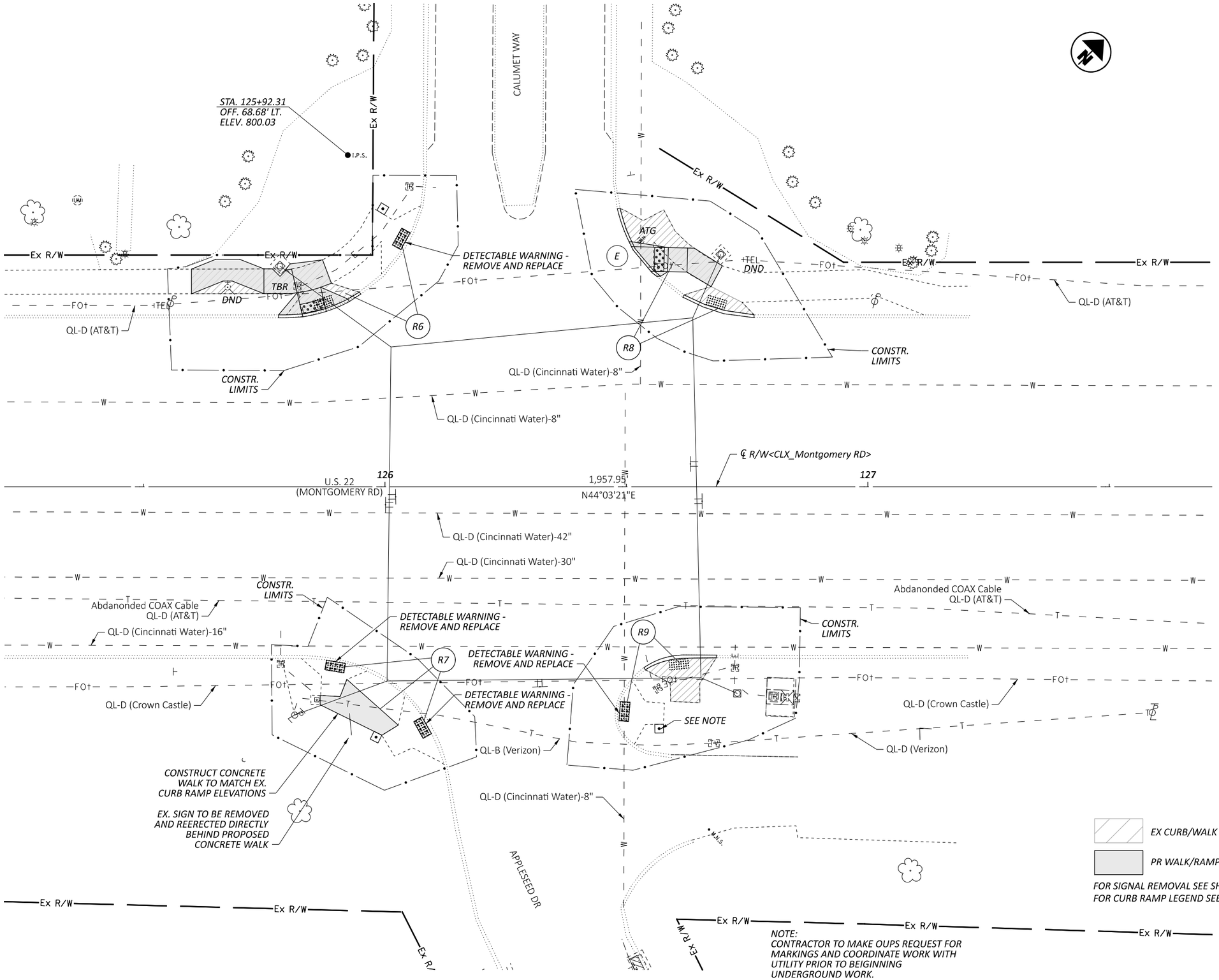
INTERSECTION DETAIL
US 22 AT HARPERS POINT DR

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI103 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:43 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\V400-Engineering\Roadway\Sheets\117237_GI103.dgn

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
17633 NORTHCROSS VILLAGE DR
SUITE 270
HUNTSVILLE, TX 77340
PH (936)755-4740
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.12 TOTAL 67



HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT APPLESEED DR/CALUMET WAY

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI104 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:44 AM USER: nbrickner
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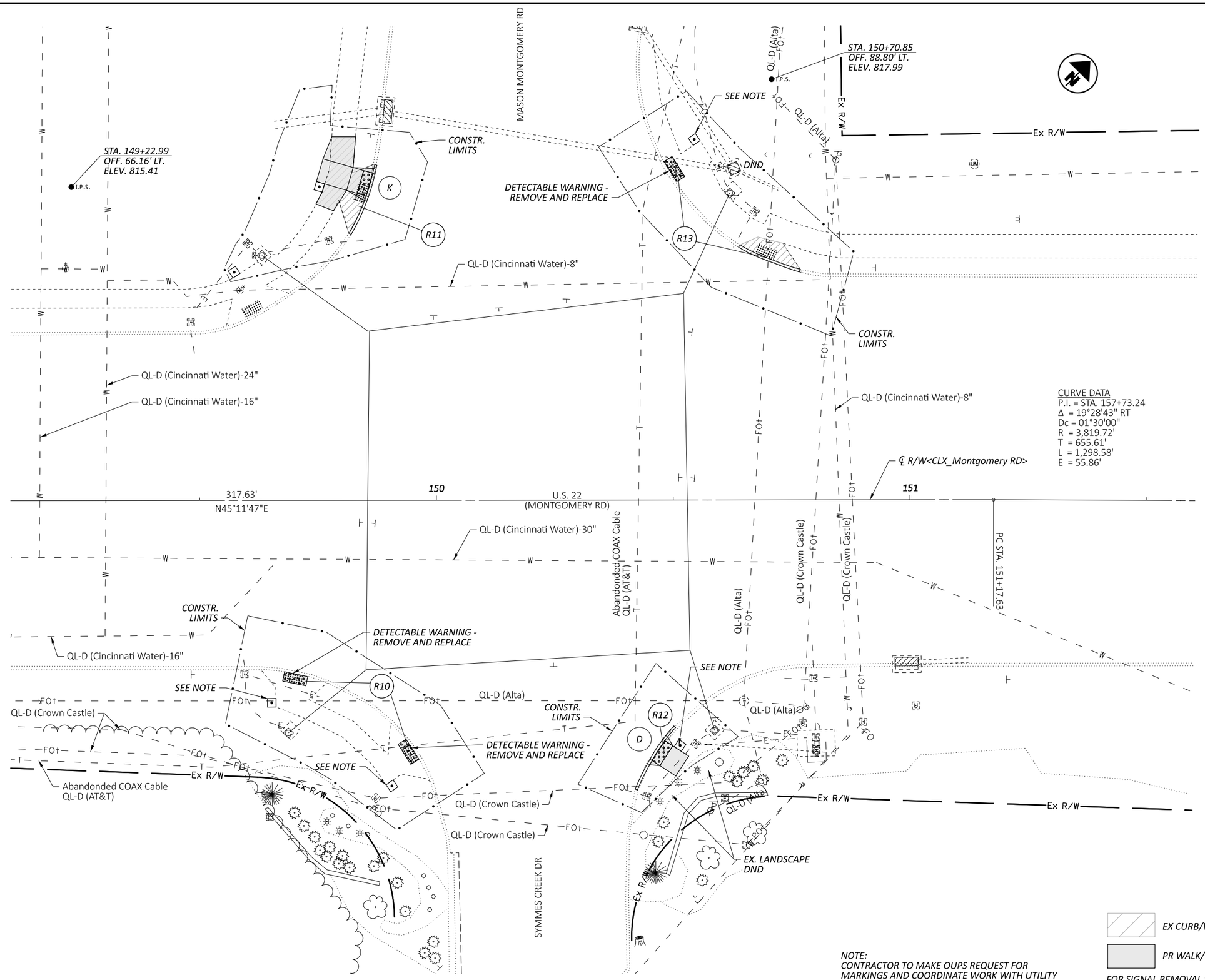
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
1770 INDIANOLA VILLAGE DR
SUITE 270
COLUMBUS, OHIO 43229
PH (937)701-2193
www.cmtinc.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.13 TOTAL 67



INTERSECTION DETAIL
US 22 AT MASON MONTGOMERY RD/SYMMES CREEK DR

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI105 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:46 AM USER: nbrickner
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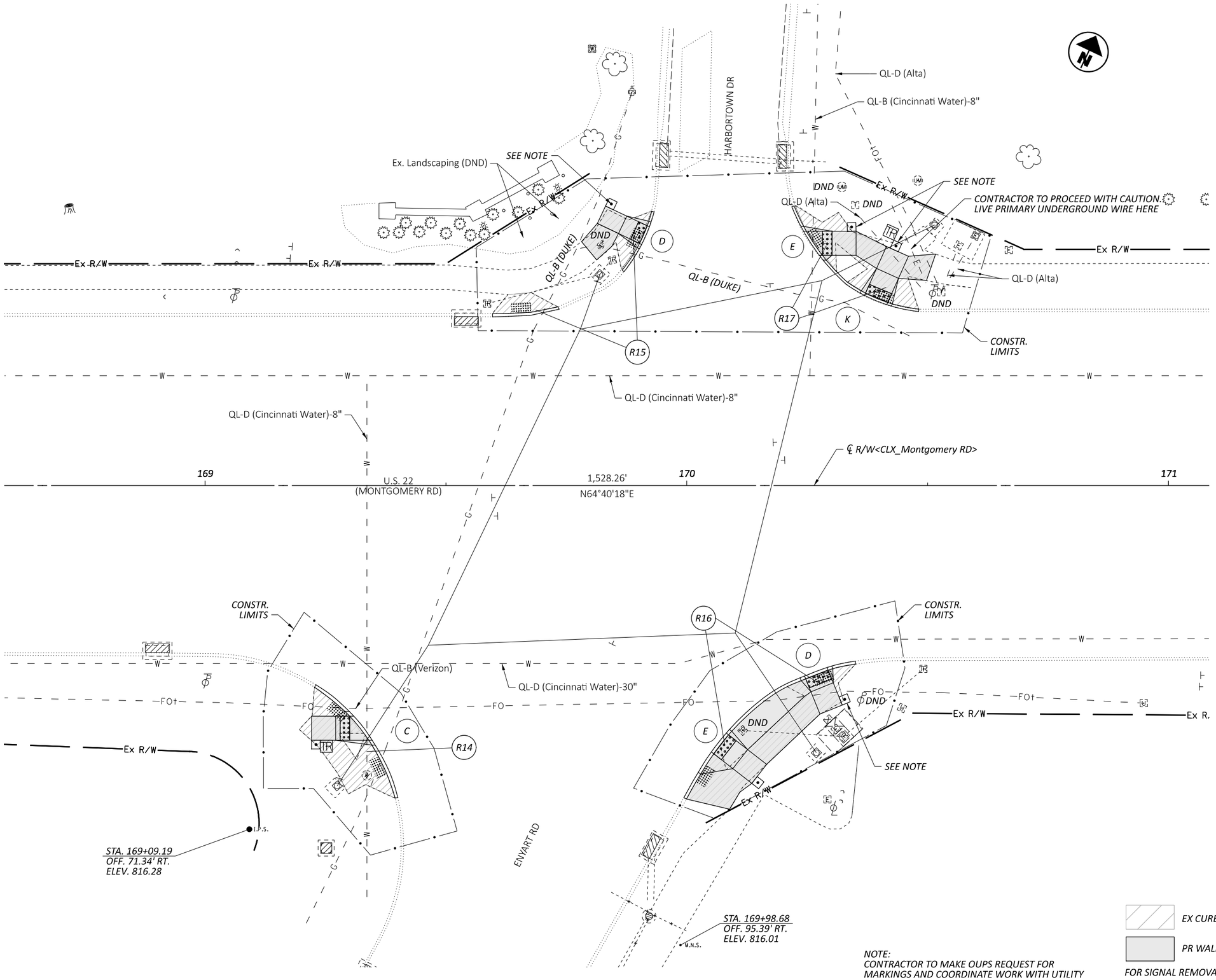
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)707-2793
www.cmtengr.com

DESIGNER	LDW
REVIEWER	JWL 01/24/25
PROJECT ID	117237
SHEET	P.14
TOTAL	67



NOTE:
CONTRACTOR TO MAKE OUPS REQUEST FOR MARKINGS AND COORDINATE WORK WITH UTILITY PRIOR TO BEGINNING UNDERGROUND WORK.

FOR SIGNAL REMOVAL SEE SHEETS P.35 - P.65
FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT ENYART RD/HARBORTOWN DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)707-2793
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.15 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI106 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:47 AM USER: nbrickner
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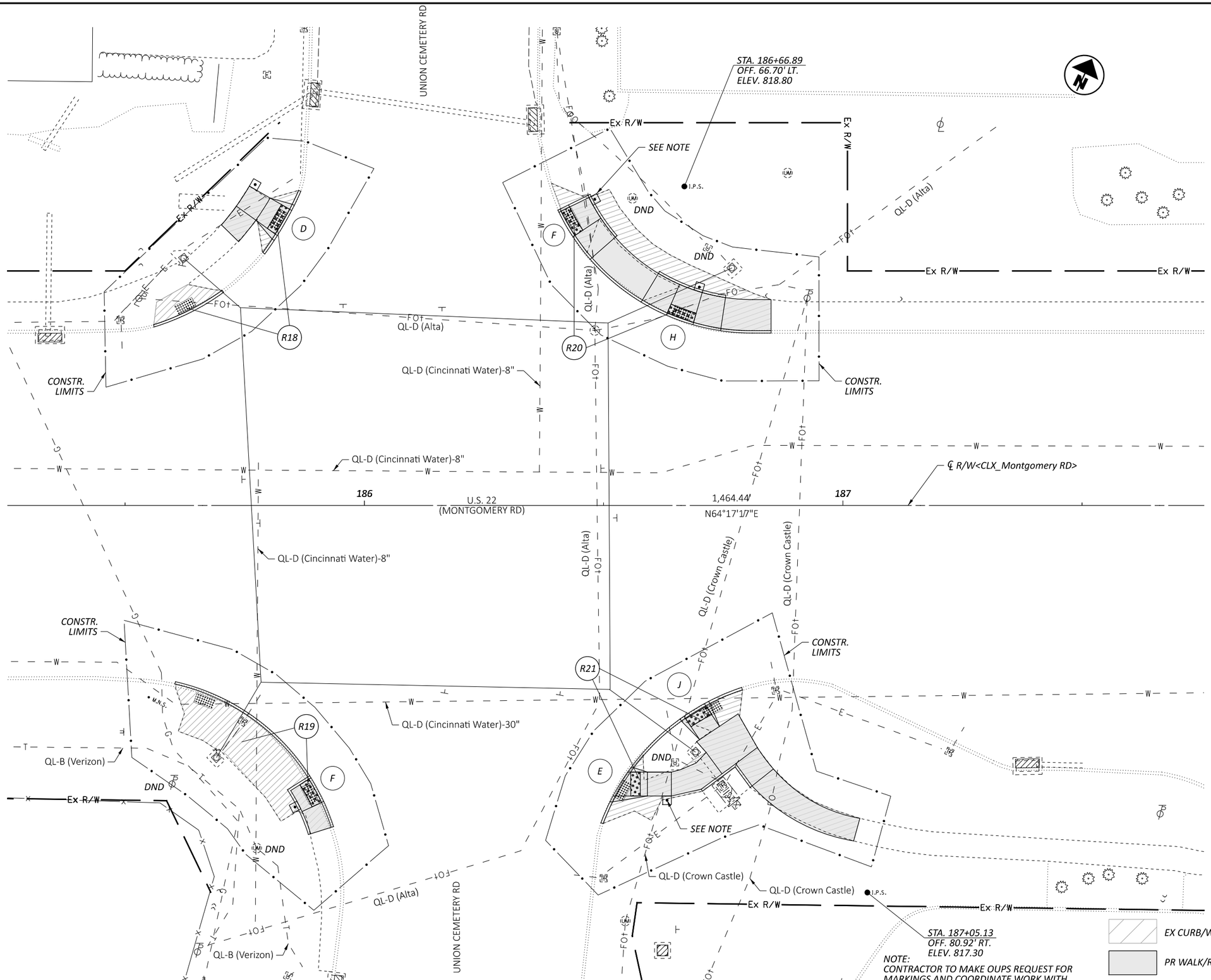

HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT UNION CEMETERY RD

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI107 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:49 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI107.dgn

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 ASSUNTA WOODS VILLAGE DR
SUITE 270
WOODBURY, OHIO 45459
PH (937)701-2303
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.16 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI108 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:50 AM USER: nbrickner
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HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT GREEN ARBORS LN/CONNECTICUT CT

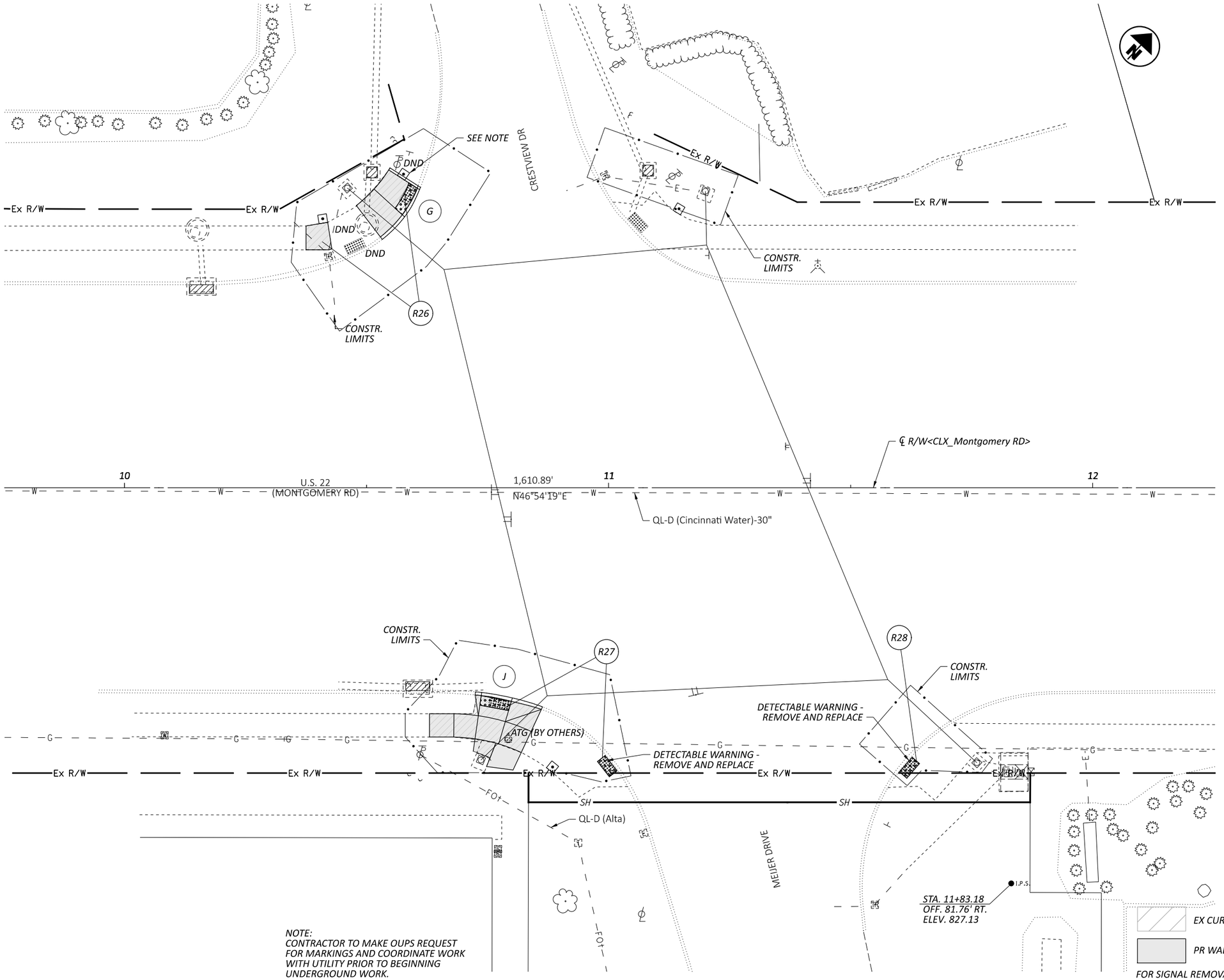
GREEN ARBOR LN
SH
Ex R/W
Retaining Wall (DND)
DND
SEE NOTE
CONSTR. LIMITS
R22
R24
R25
R23
B
L
E
D
U.S. 22 (MONTGOMERY RD)
2
3
1,610.89'
N46°54'19"E
℄ R/W<CLX_Montgomery RD>
QL-B (Verizon)
QL-D (Cincinnati Water)-30"
QL-D (Alta)
QL-B (Duke)
DETECTABLE WARNING - REMOVE AND REPLACE
I.P.S.
STA. 1+70.50
OFF. 68.01' RT.
ELEV. 837.56
STA. 2+62.67
OFF. 68.75' RT.
ELEV. 836.73
CONNECTICUT CT

EX CURB/WALK TO BE REMOVED
PR WALK/RAMP

FOR SIGNAL REMOVAL SEE SHEETS P.35 - P.65
FOR CURB RAMP LEGEND SEE SHEET P.11

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)743-2769
www.crawfordcmt.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.17 TOTAL 67



HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT CRESTVIEW DR

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI109 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:51 AM USER: nbrickner
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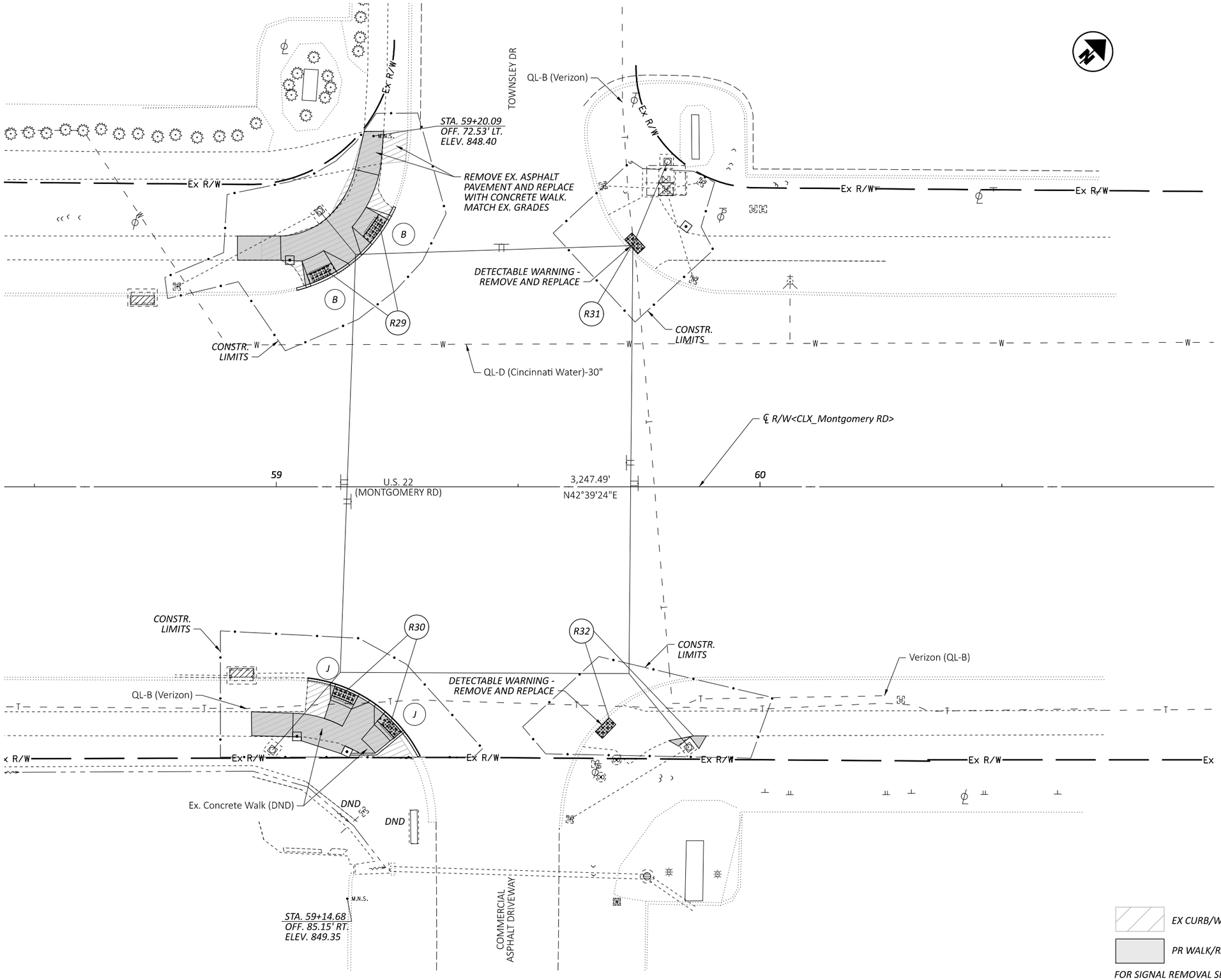
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 ASSOCIATION VILLAGE DR
SUITE 270
CLEVELAND, OHIO 45459
PH (937)701-2103
www.cmtinc.com

DESIGNER	LDW
REVIEWER	JWL 01/24/25
PROJECT ID	117237
SHEET	P.18
TOTAL	67



HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT TOWNSLEY DR

HAM/WAR US 22 16.04/0.00 PED

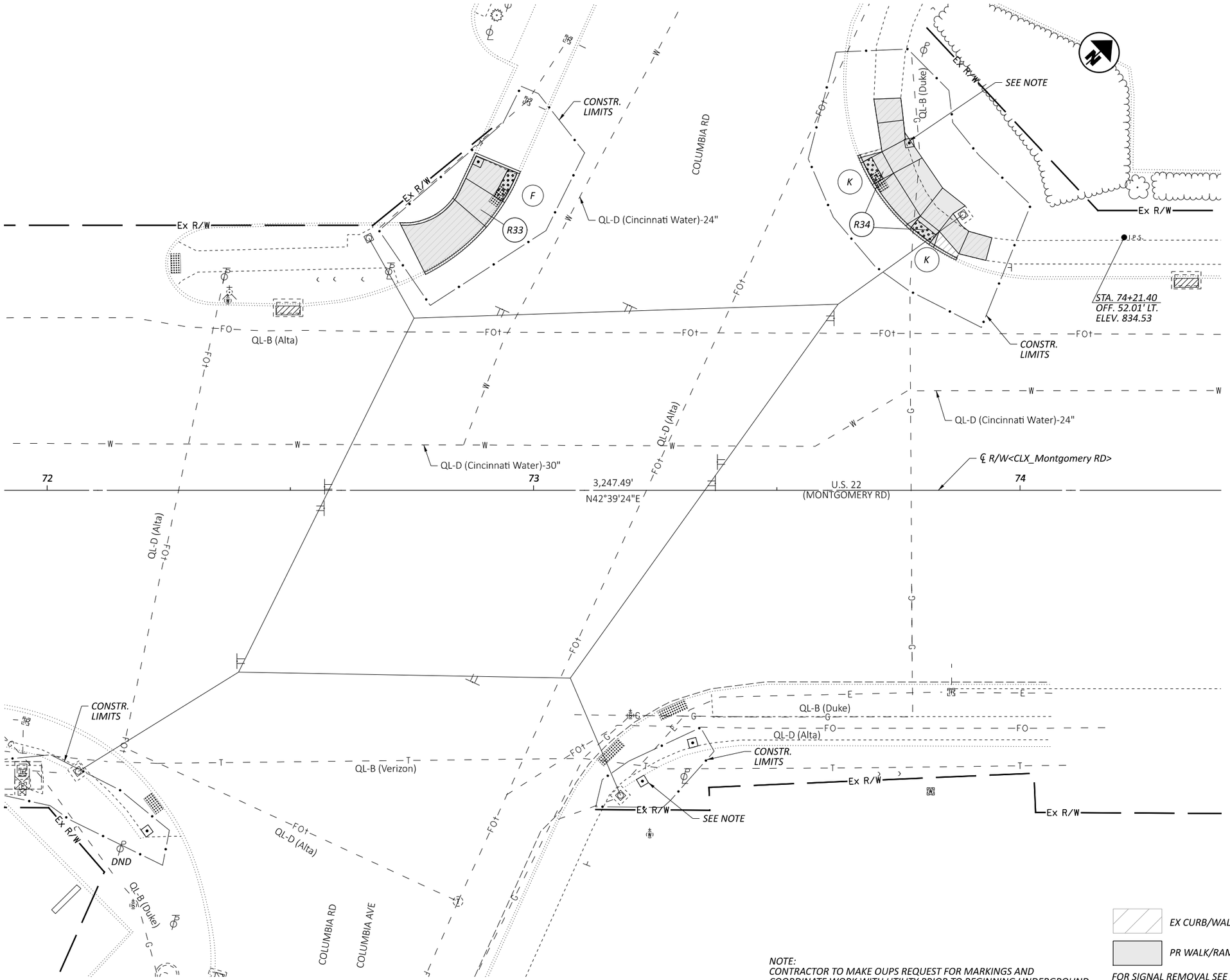
MODEL: 117237_GI110 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:52 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI110.dgn

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
1771 WEST DOROTHY LANE VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.19 TOTAL 67

INTERSECTION DETAIL
US 22 AT COLUMBIA RD

HORIZONTAL SCALE IN FEET
0 5 10 20



EX CURB/WALK TO BE REMOVED

PR WALK/RAMP

NOTE:
CONTRACTOR TO MAKE OUPS REQUEST FOR MARKINGS AND COORDINATE WORK WITH UTILITY PRIOR TO BEGINNING UNDERGROUND WORK.

FOR SIGNAL REMOVAL SEE SHEETS P.35 - P.65
FOR CURB RAMP LEGEND SEE SHEET P.11

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
77 N. WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)707-2793
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.20 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI111 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:53 AM USER: nbrickner
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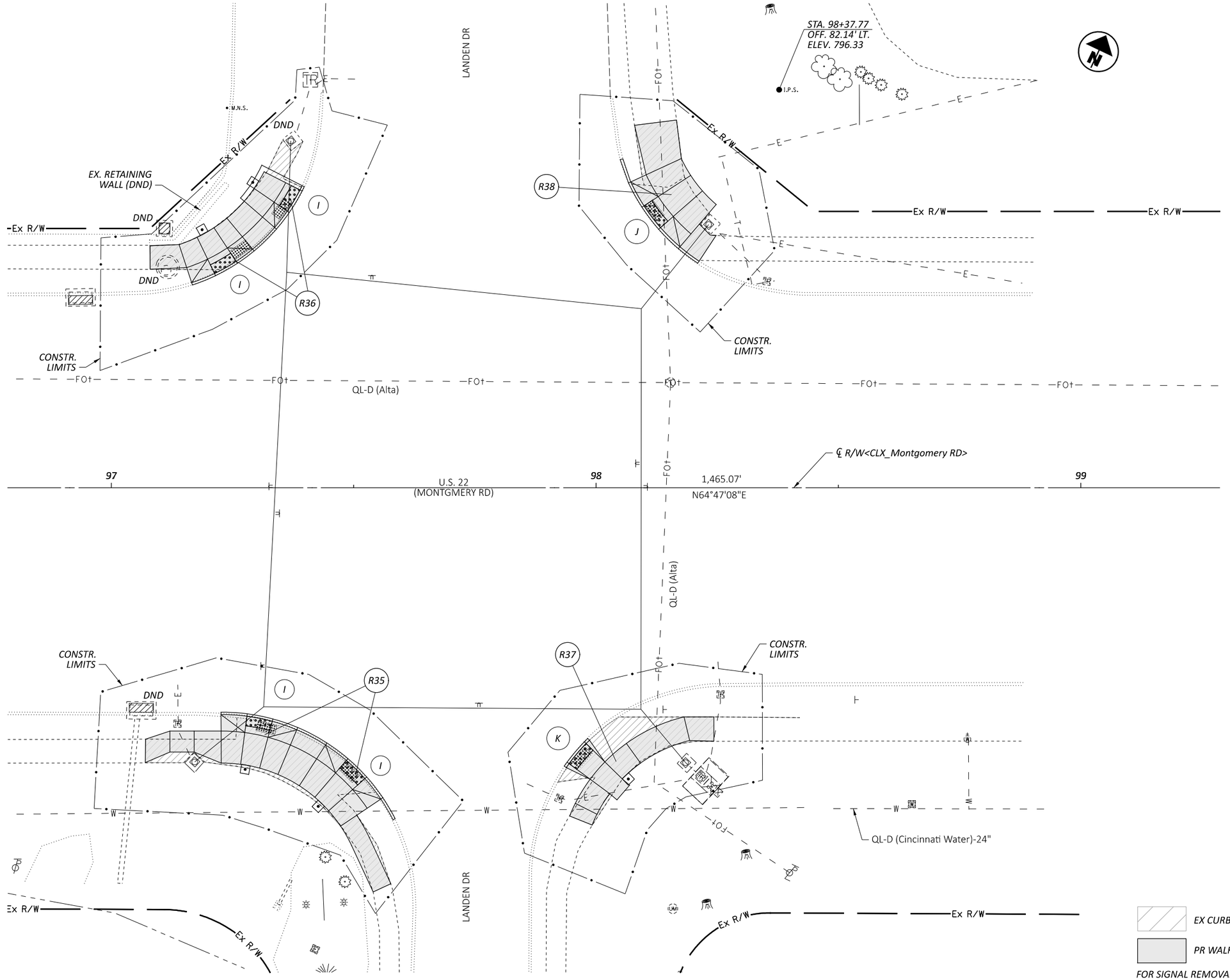

FOR SIGNAL REMOVAL SEE SHEETS P.35 - P.65
FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 5 10 20

INTERSECTION DETAIL
US 22 AT LANDEN DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7227 VISION DRIVE, VISION VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordcmt.com

DESIGNER: LDW
REVIEWER: JWL 01/24/25
PROJECT ID: 117237
SHEET: P.21 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI112 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:55 AM USER: nbrickner
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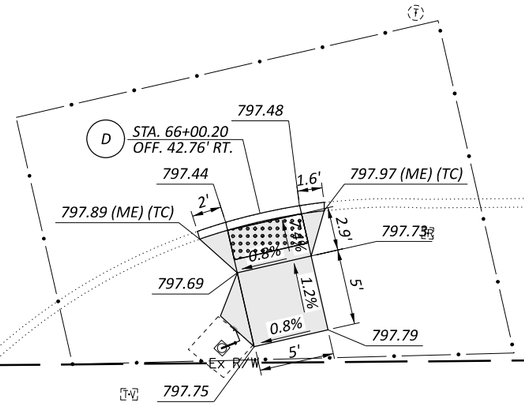
66



FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT CORNELL RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 GOLDEN RING ROAD, VILLAGE DR
SUITE 270
BALTIMORE, OHIO 45569
PH (937)974-2100
www.cmtengr.com

DESIGNER
LDW

REVIEWER
JWL 01/24/25

PROJECT ID
117237

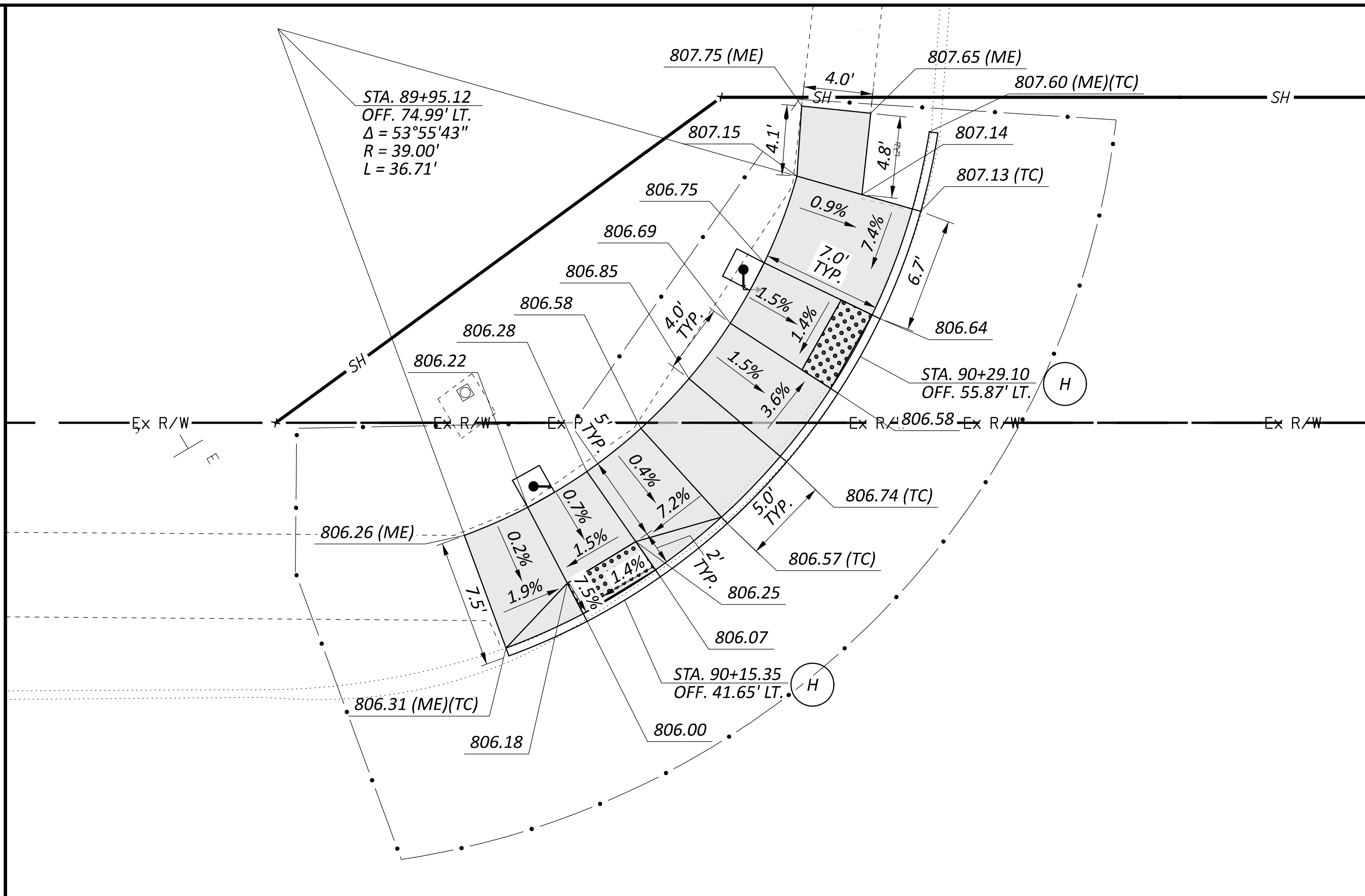
SHEET P.22 | TOTAL 67

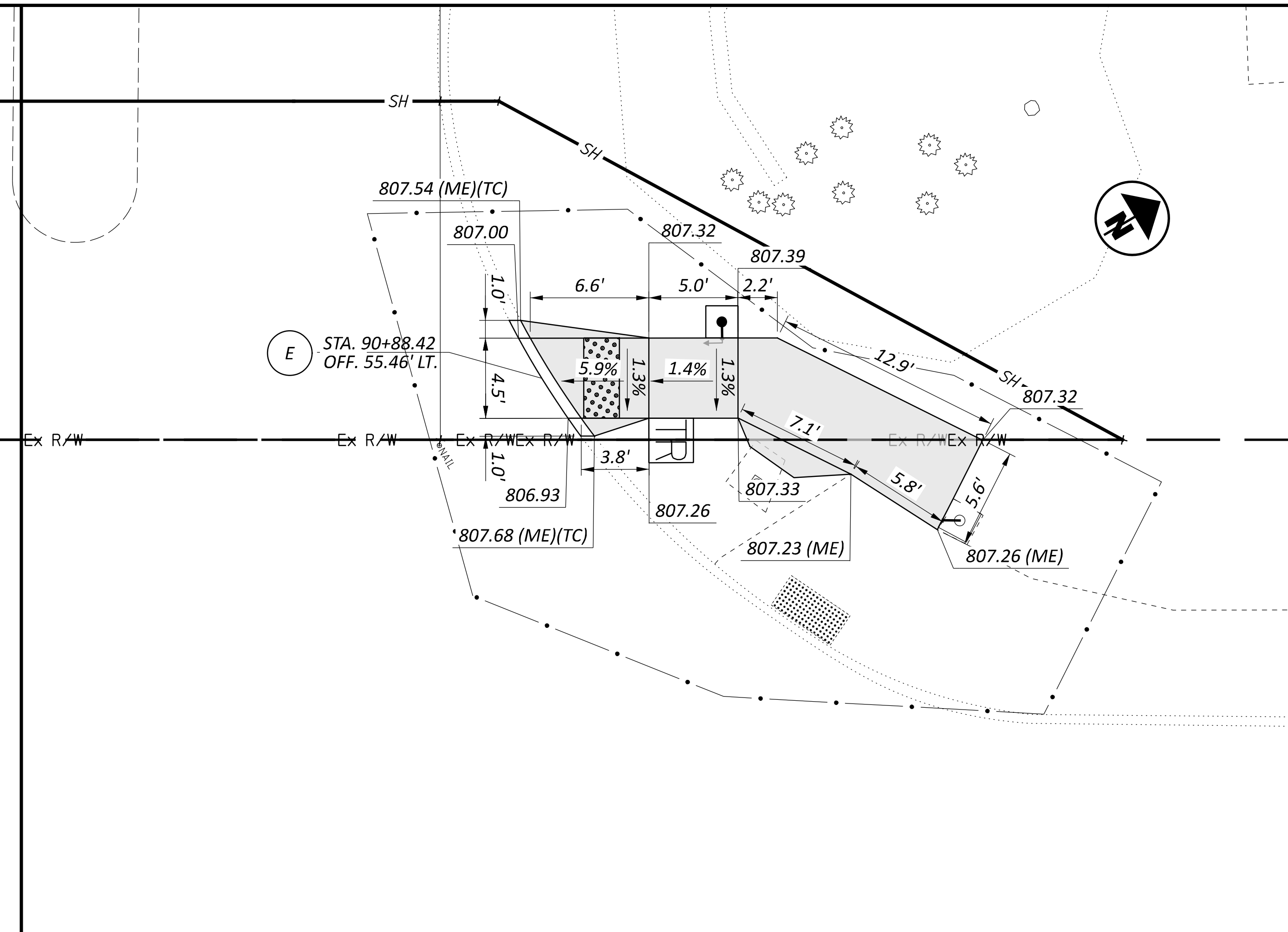
HAM/WAR US 22 16.04/0.00 PED

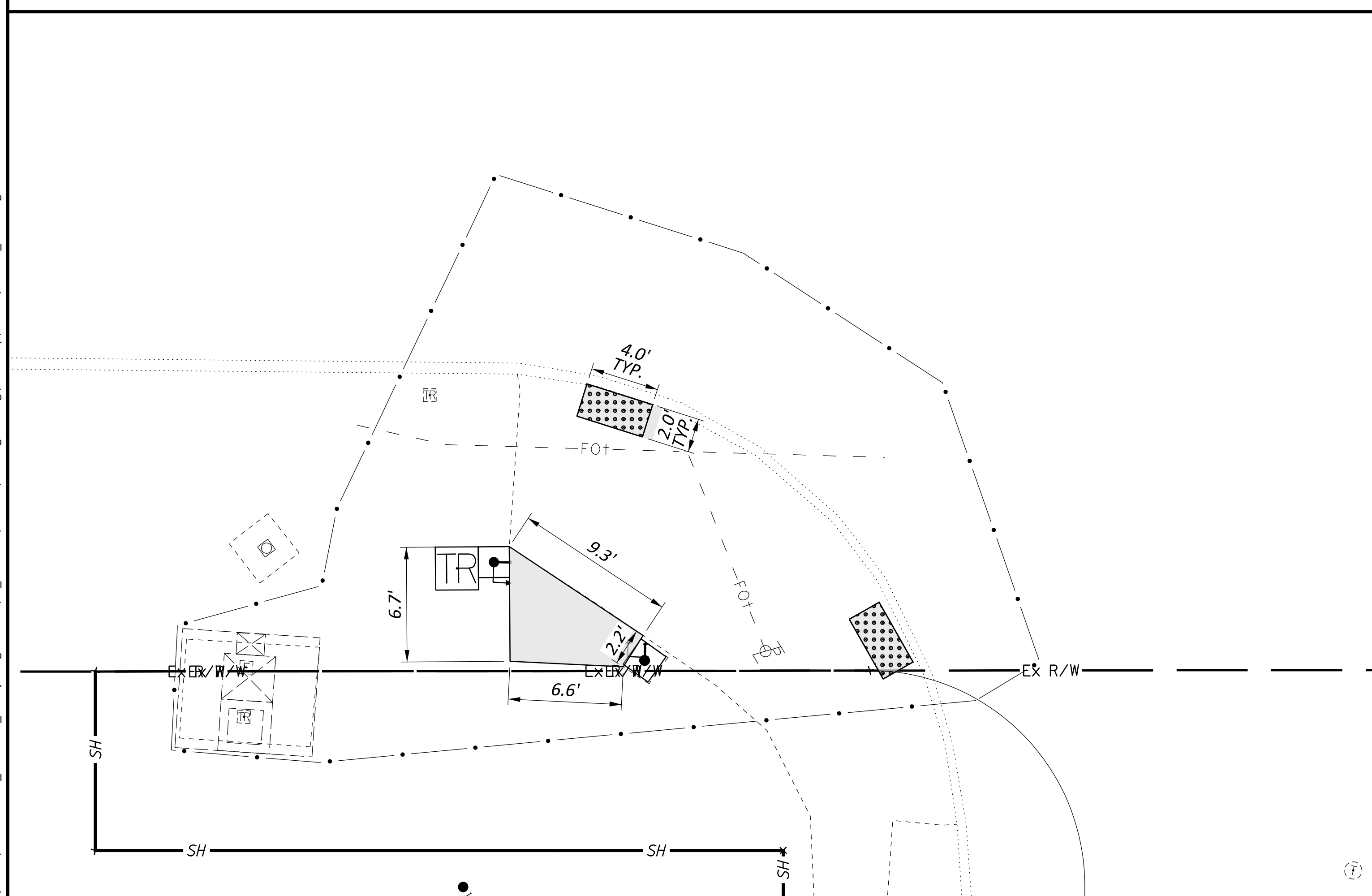
MODEL: 117237_GI201 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:56 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI201.dgn

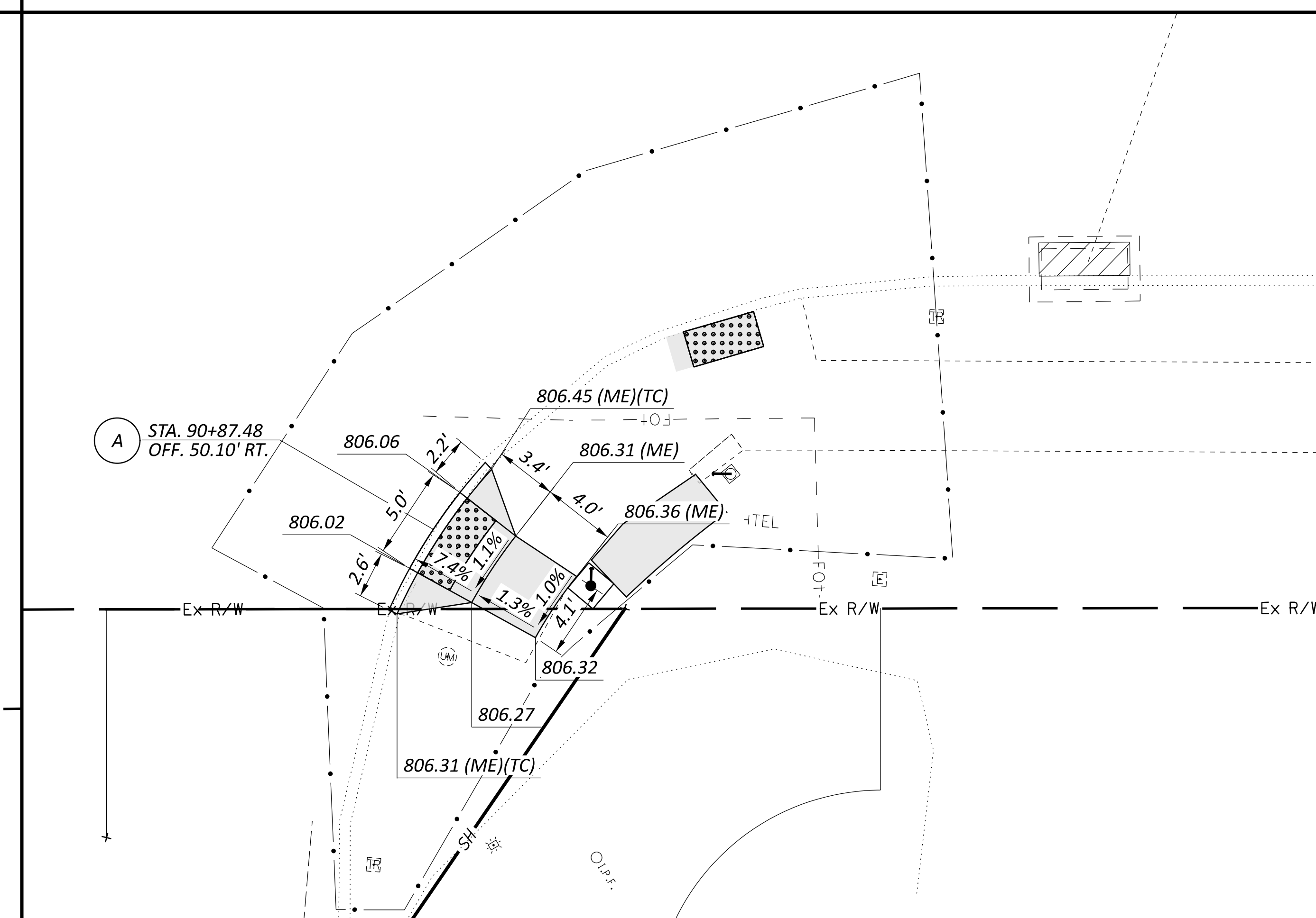
CURB DETAILS
US 22 AT HARPERS POINT DR

HORIZONTAL SCALE IN FEET
0 2.5 5 10









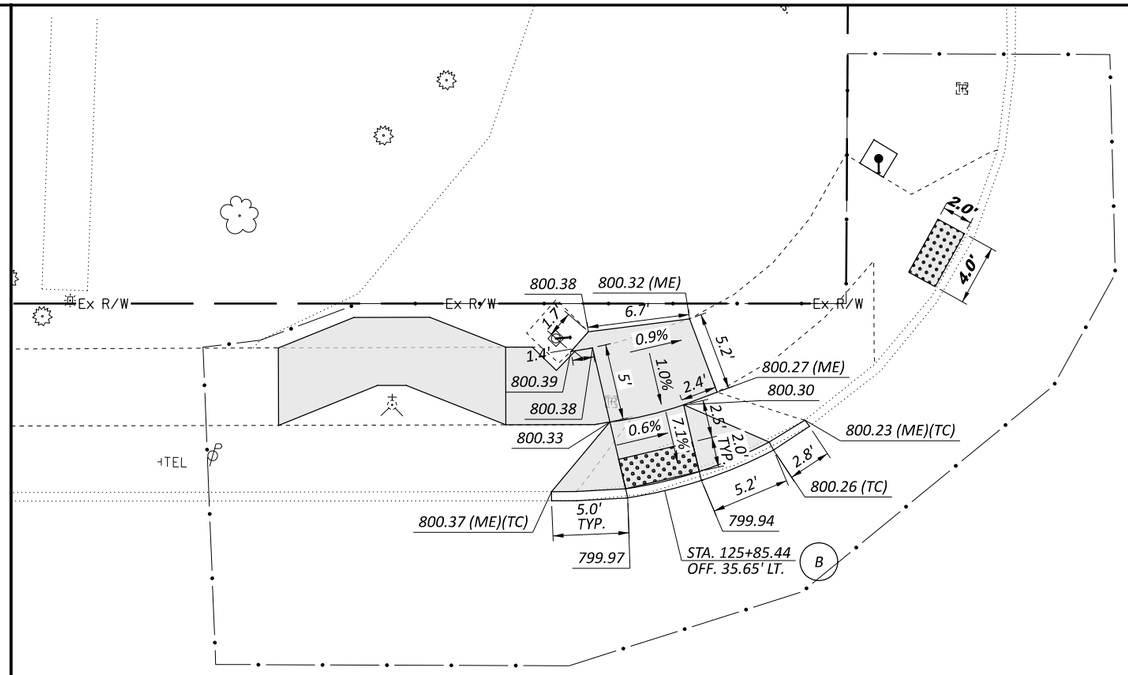
FOR CURB RAMP LEGEND SEE SHEET P.11

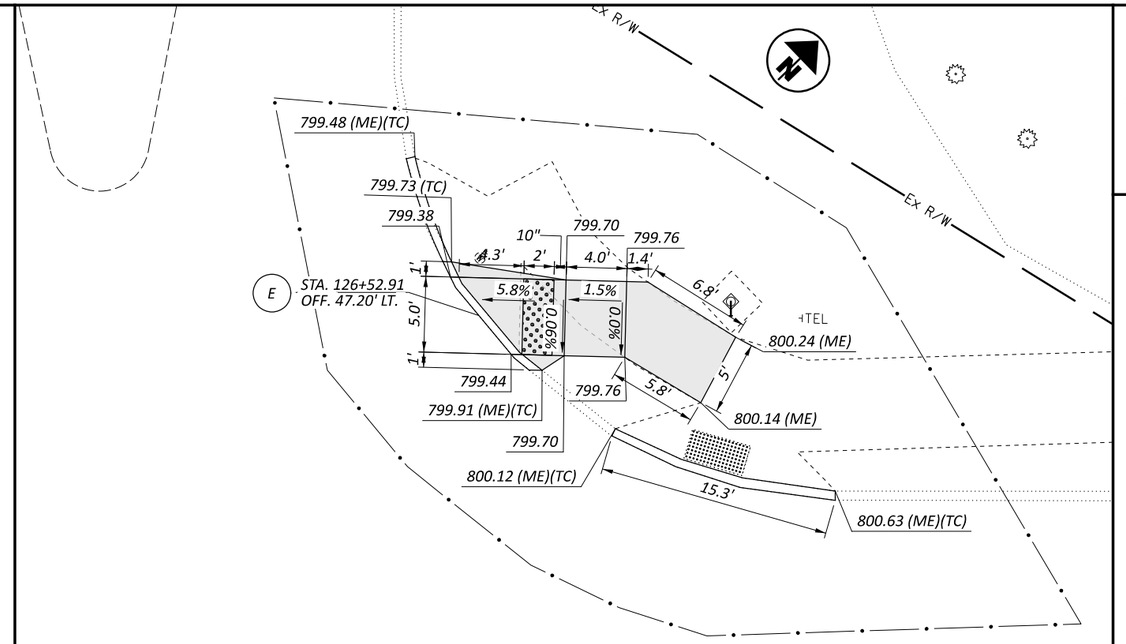
HAM/WAR US 22 16.04/0.00 PED

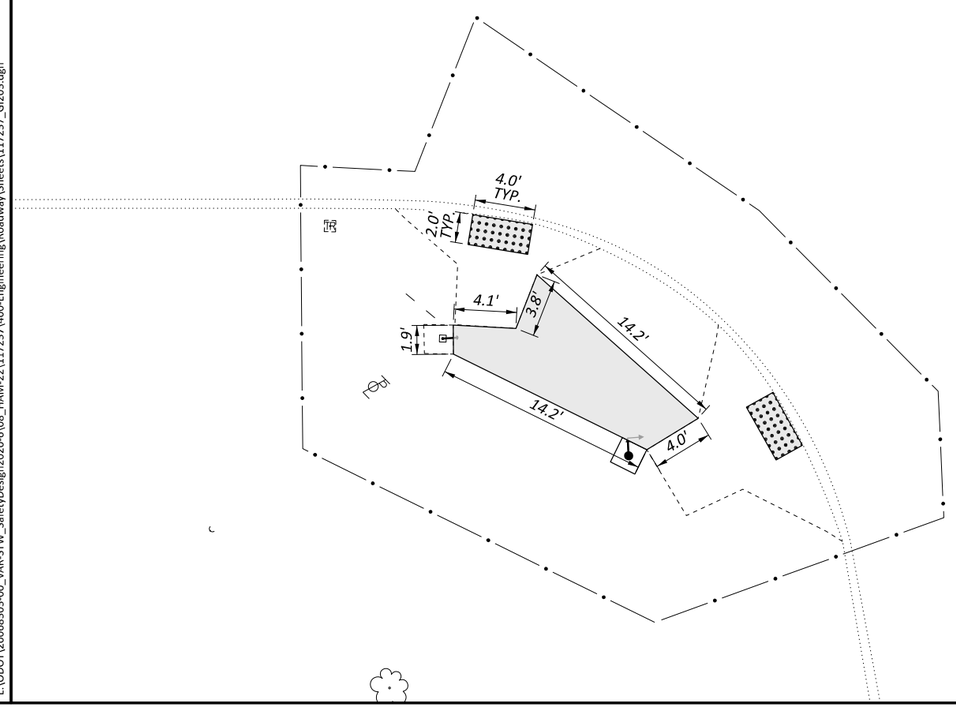
MODEL: 117237_GI202 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:35:57 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI202.dgn

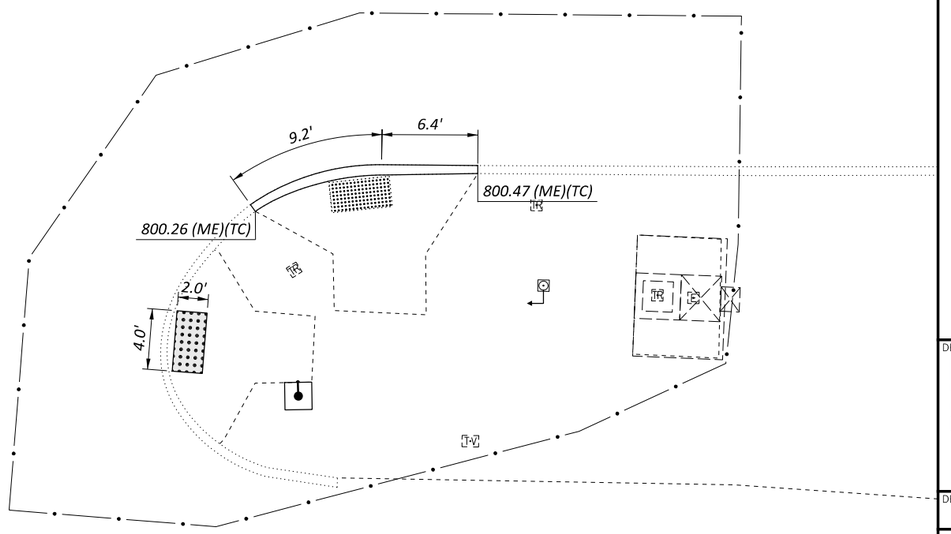
DESIGN AGENCY
CMT CRAWFORD, MURPHY & TILLY, INC.
7777 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
www.cmtengr.com

DESIGNER	LDW
REVIEWER	JWL 01/24/25
PROJECT ID	117237
SHEET / TOTAL	P.23 / 67









FOR CURB RAMP LEGEND SHEET P.11

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT APPLESEED DR/CALUMET WAY

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 WORTHINGTON VILLAGE DR
SUITE 270
COLUMBUS, OHIO 43459
PH (937)707-2703
www.cmtengr.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.24 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI203 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:00 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\V00-Engineering\Roadway\Sheets\117237_GI203.dgn

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI204 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:01 AM USER: nbrickner
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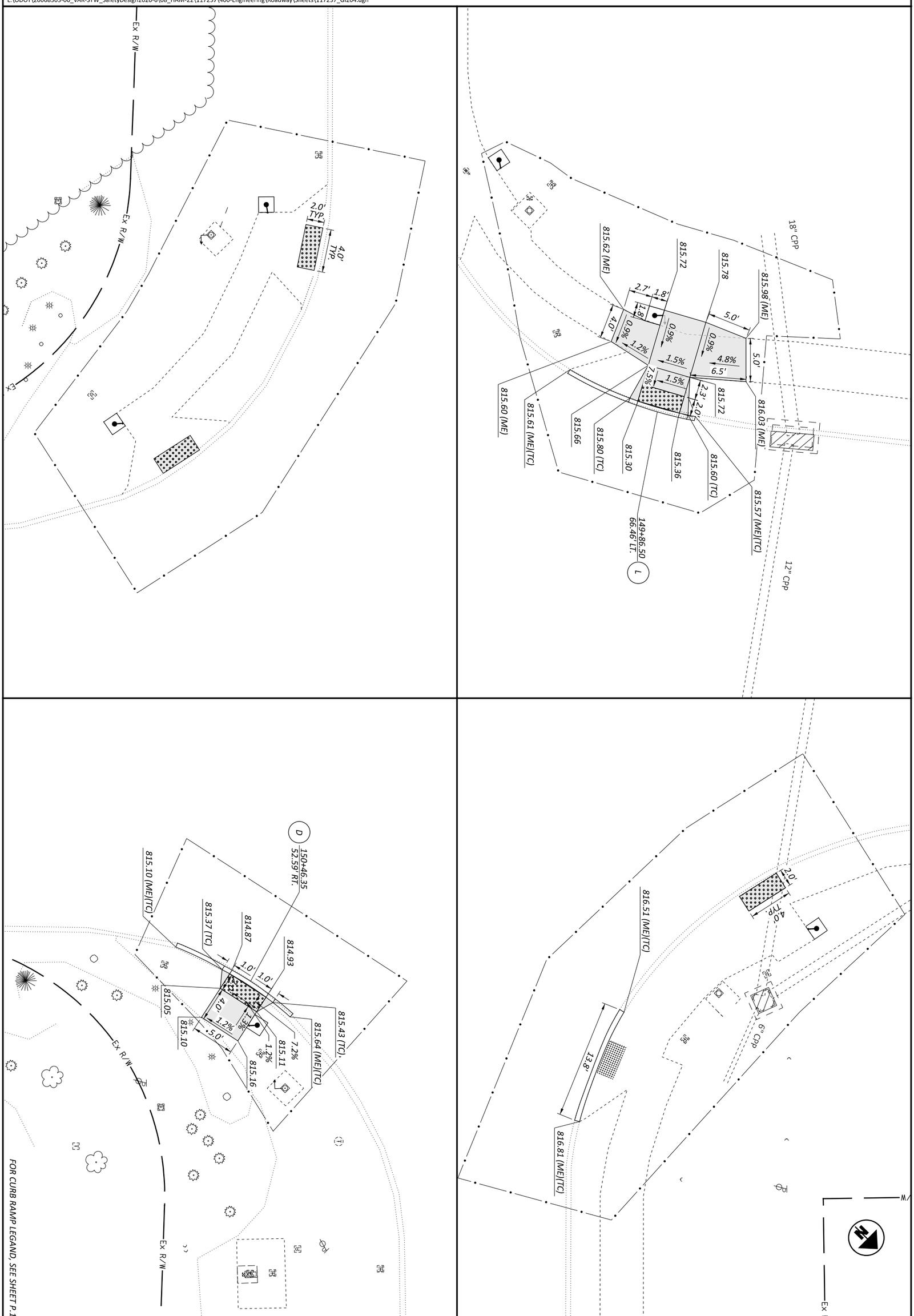


FOR CURB RAMP LEGAND, SEE SHEET P.11

SHEET	TOTAL
P.25	67

PROJECT ID: 117237

REVIEWER: JWL 01/24/25

DESIGNER: LDW

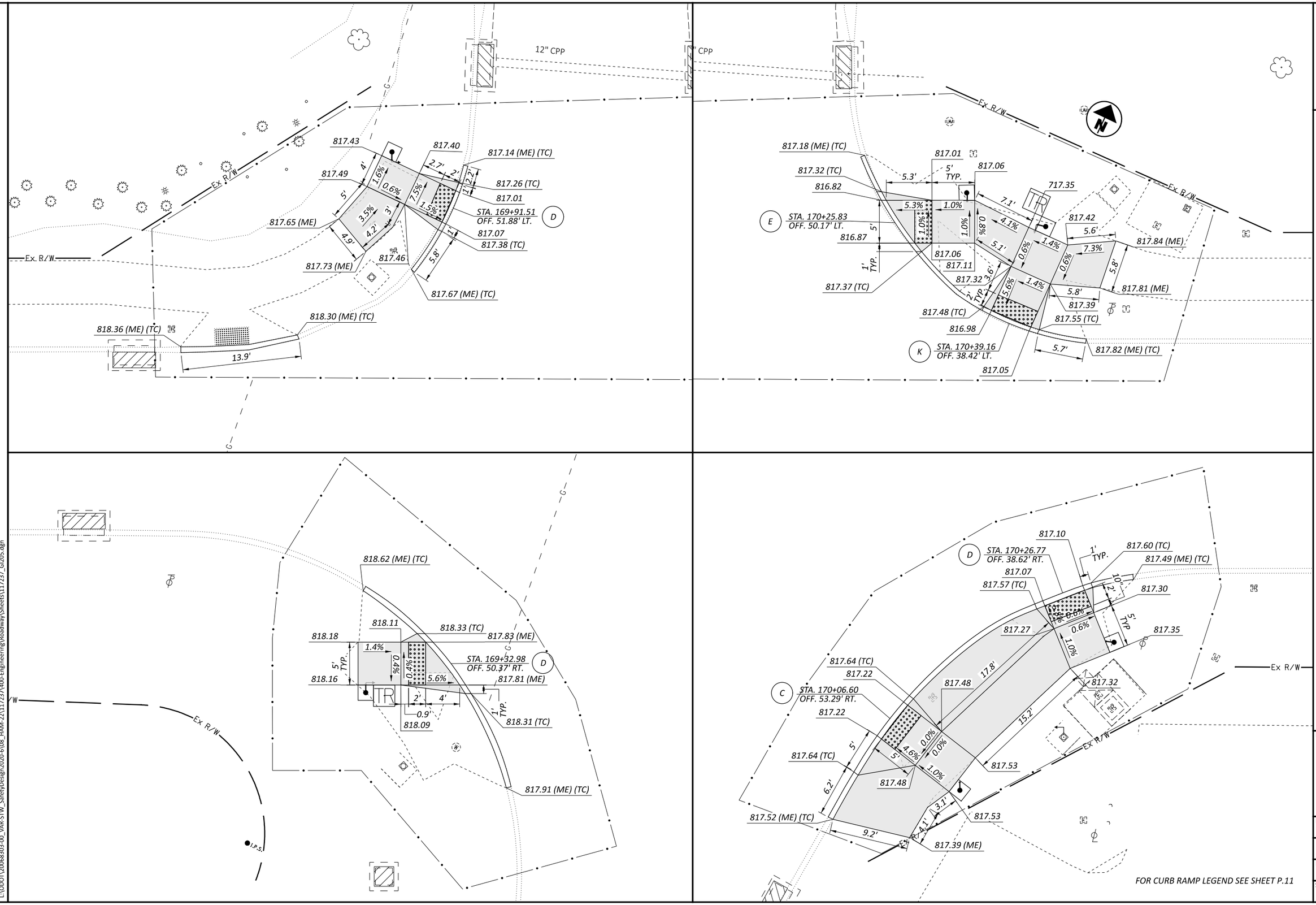
CMT
CRAWFORD, MURPHY & TILLY, INC.
7777 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.cmtengr.com

DESIGN AGENCY

CURB DETAILS
US 22 AT MASON MONTGOMERY RD/SYMMES CREEK DR

HORIZONTAL SCALE IN FEET

0 5
2.5 10



HORIZONTAL SCALE IN FEET
0 2.5 5 10

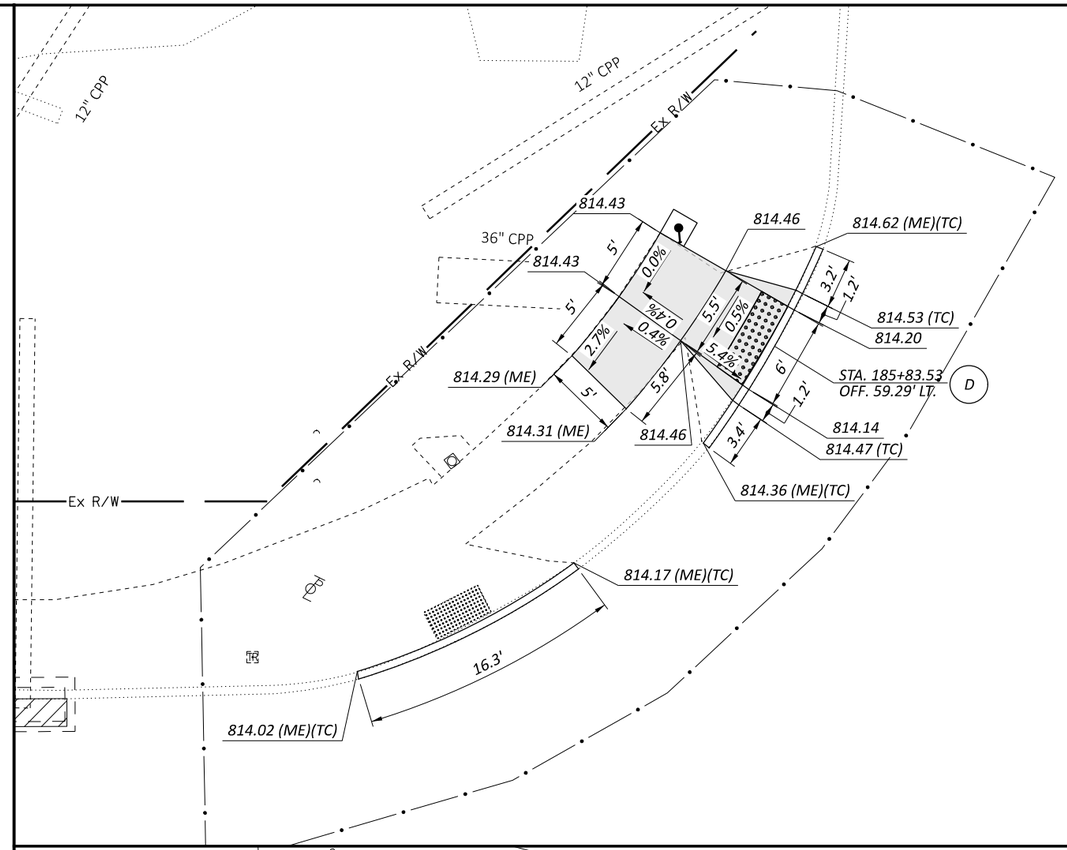
CURB DETAILS
US 22 AT ENYART RD/HARBORTOWN DR

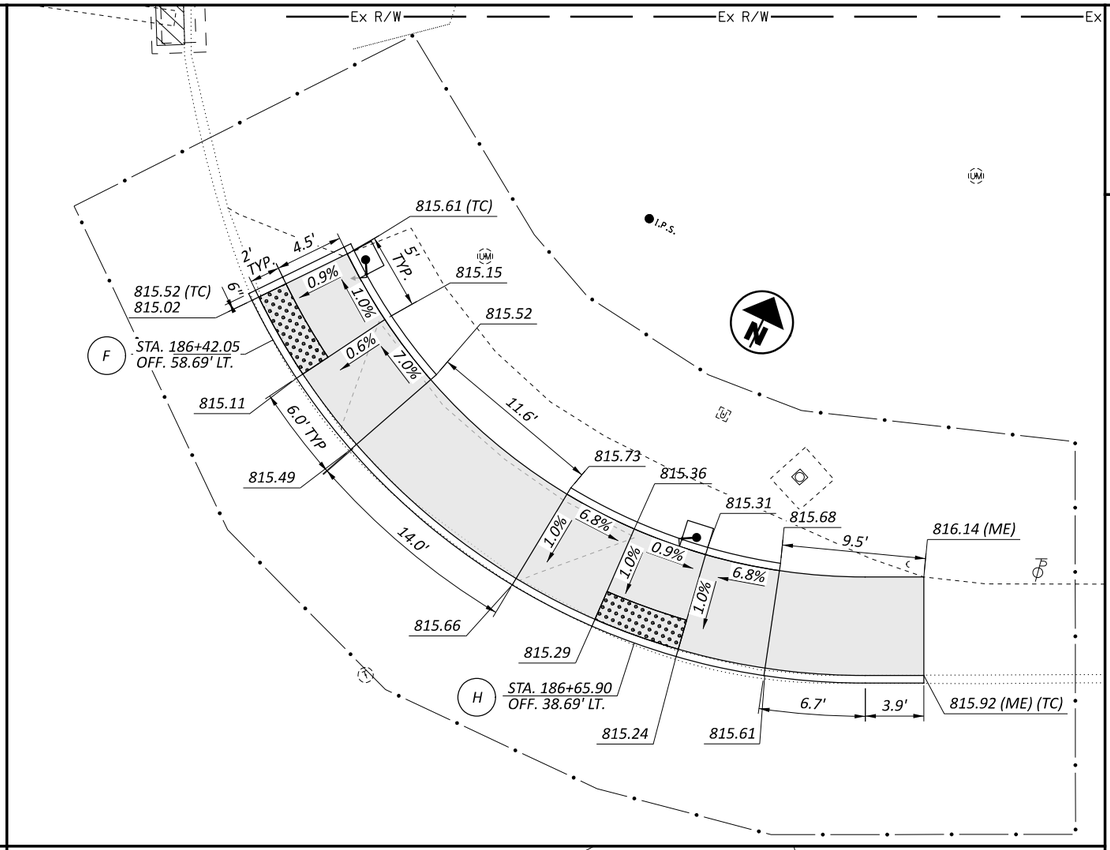
HAM/WAR US 22 16.04/0.00 PED

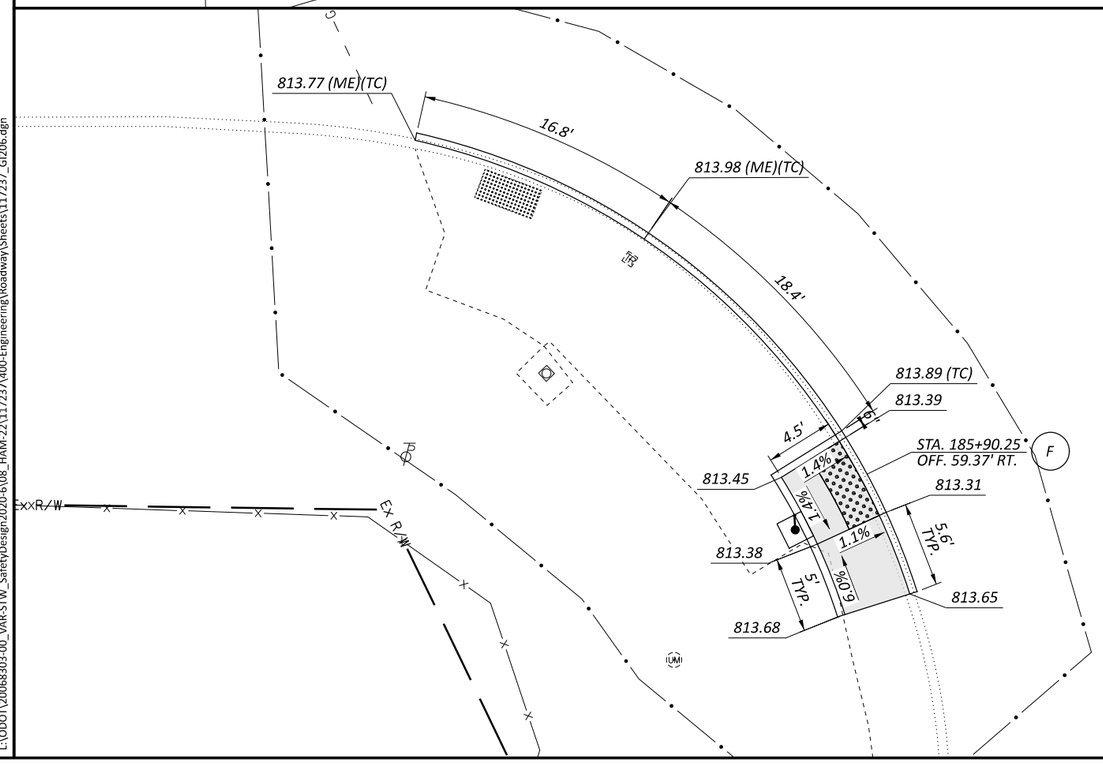
MODEL: 117237_GI205 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:03 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI205.dgn

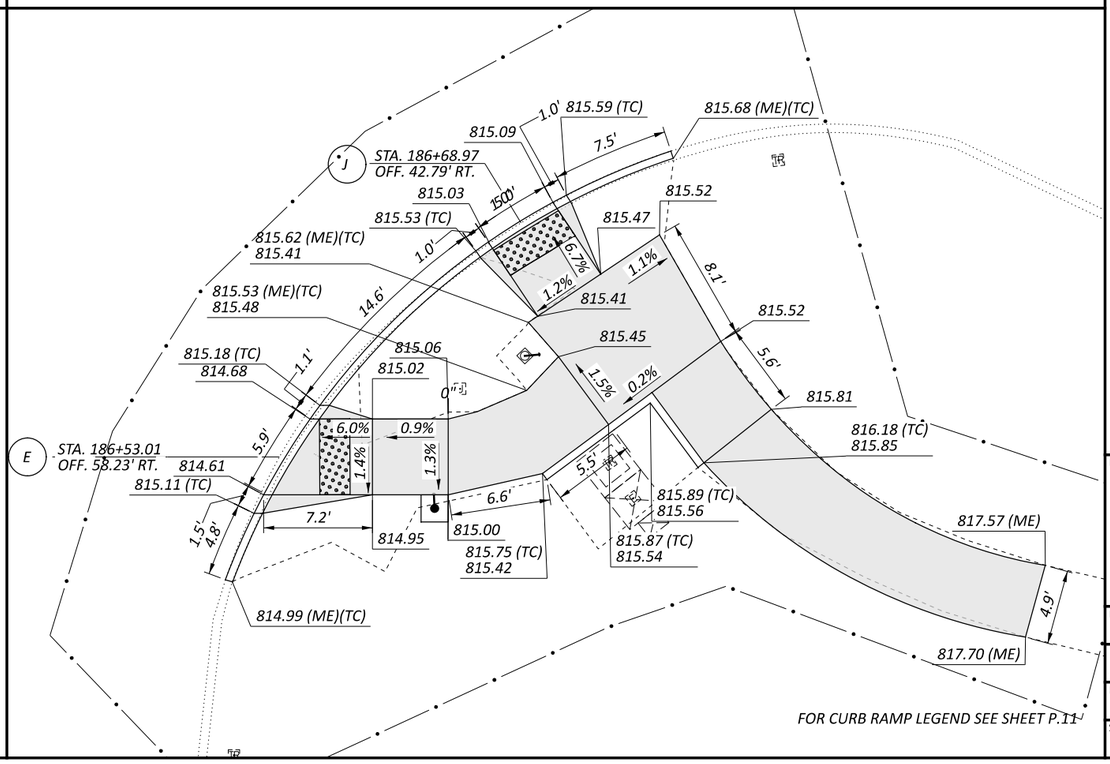
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
17777 CENTER OAK DRIVE
SUITE 270
CLEVELAND, OHIO 44569
PH (937)701-2193
www.crawfordmurphy.com

DESIGNER LDW
REVIEWER JWL 01/24/25
PROJECT ID 117237
SHEET P.26 TOTAL 67









FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT UNION CEMETERY RD

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI206 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:05 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI206.dgn

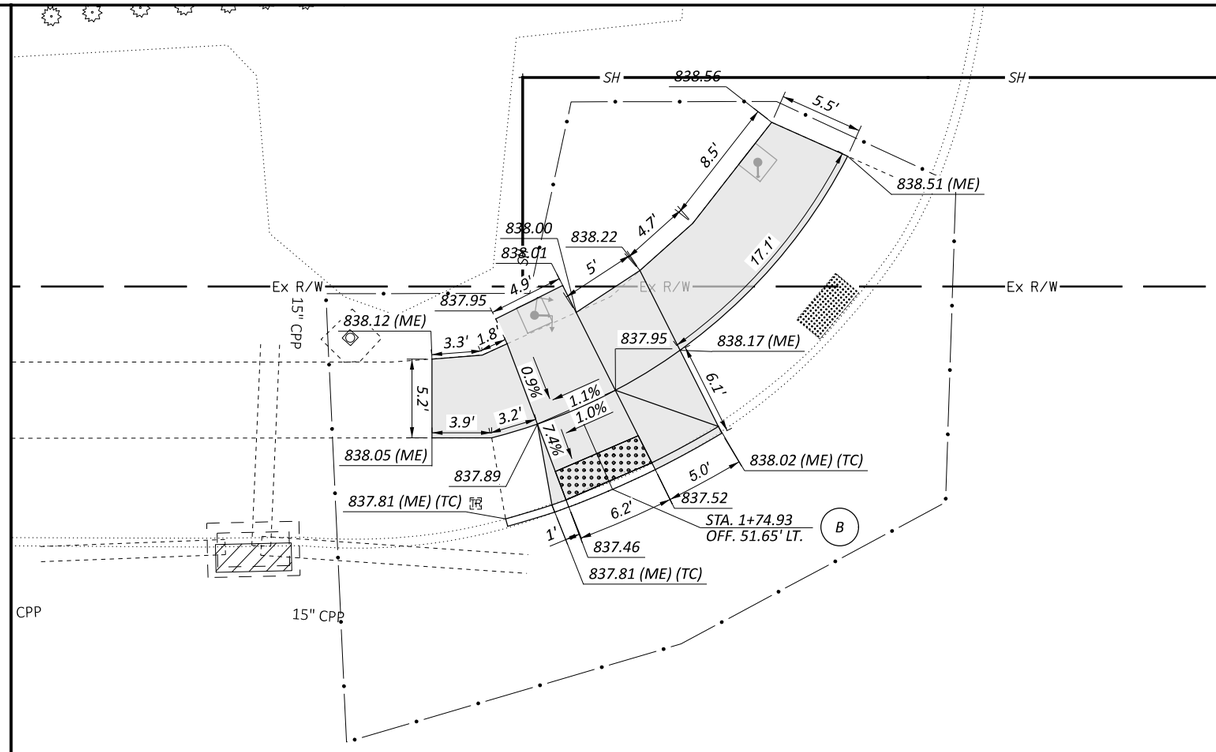
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2703
www.cmtengr.com

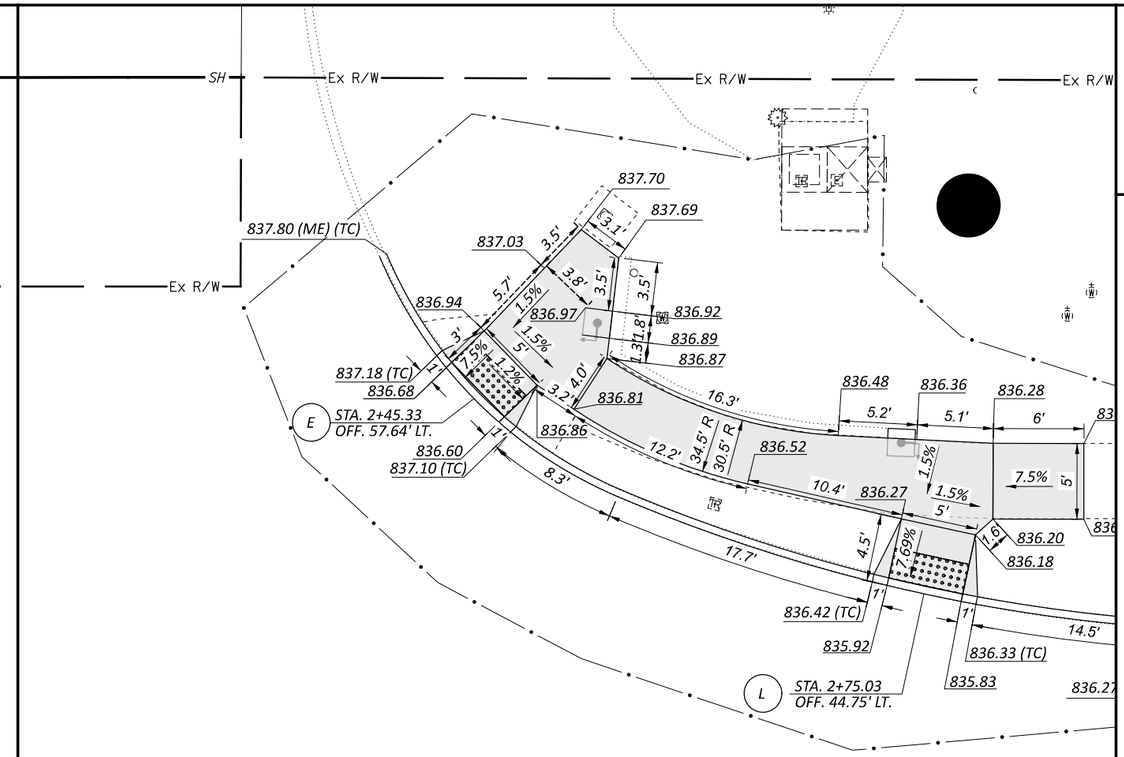
DESIGNER
LDW

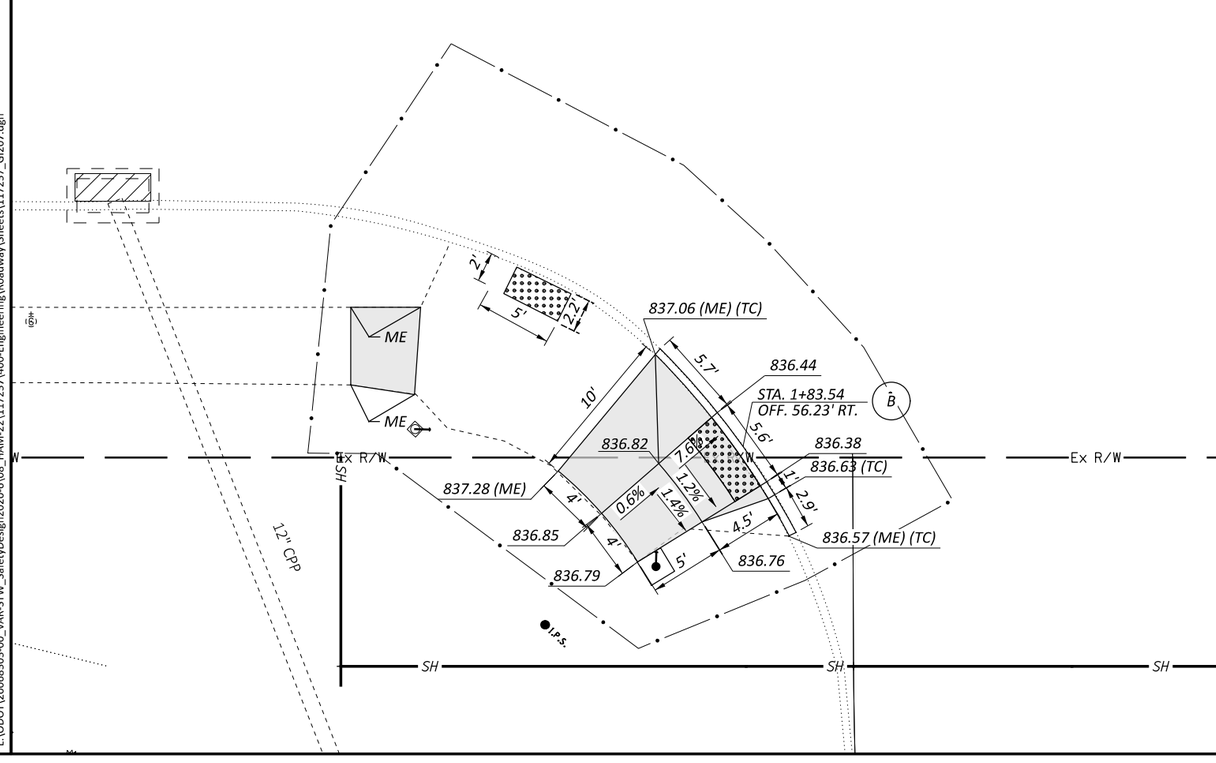
REVIEWER
JWL 01/24/25

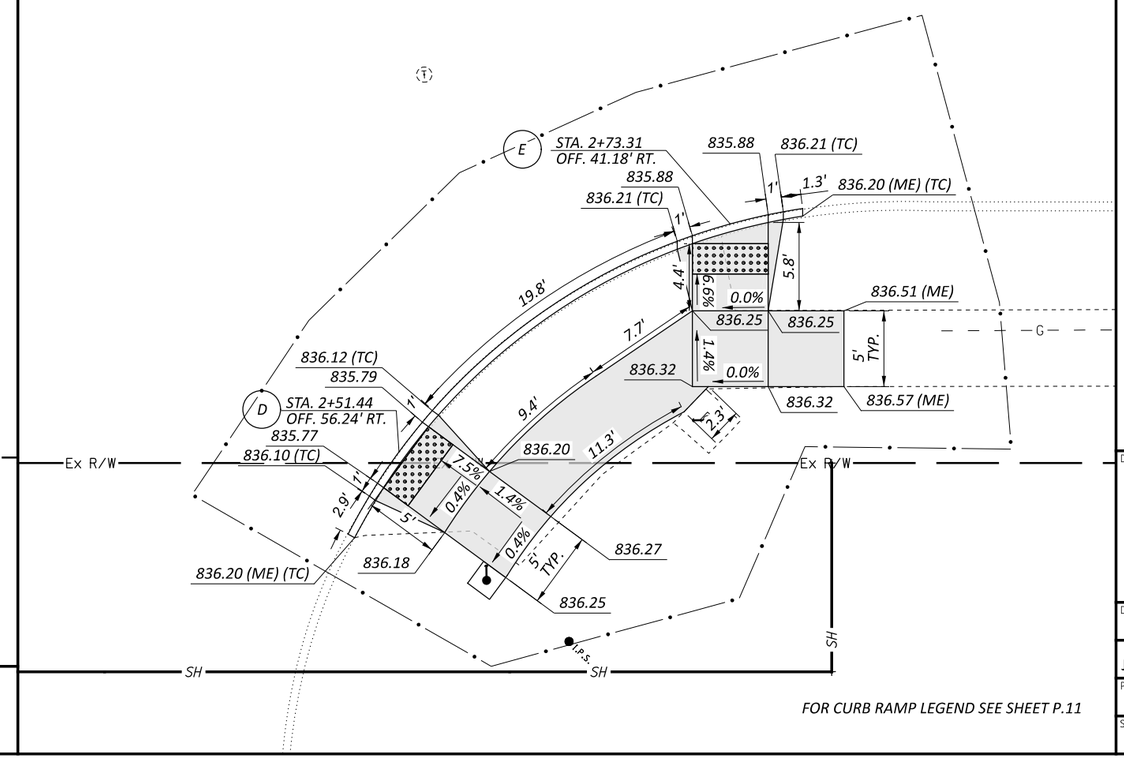
PROJECT ID
117237

SHEET P.27 | TOTAL 67









FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT GREEN ARBORS LN/CONNECTICUT CR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
77 N. MAIN STREET
SUITE 270
DAYTON, OHIO 45459
PH (937)743-4763
www.cmtengr.com

DESIGNER: LDW
REVIEWER: JWL 01/24/25
PROJECT ID: 117237
SHEET: P.28 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI207 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:06 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\Y400-Engineering\Roadway\Sheets\117237_GI207.dgn

FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 2.5 5 10

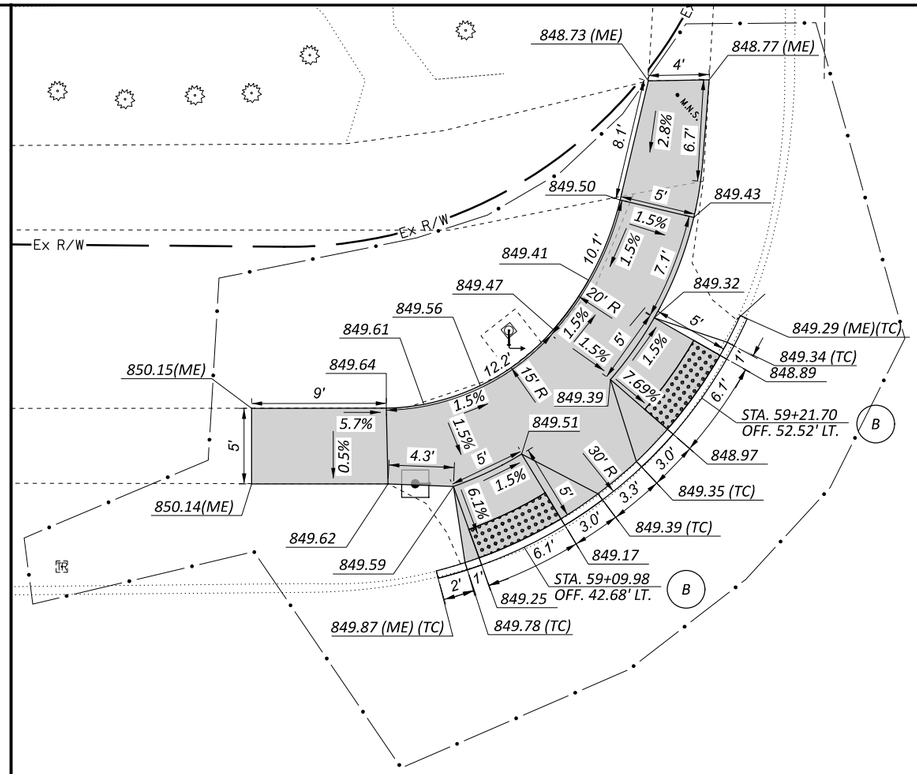
CURB DETAILS
US 22 AT CRESTVIEW DR

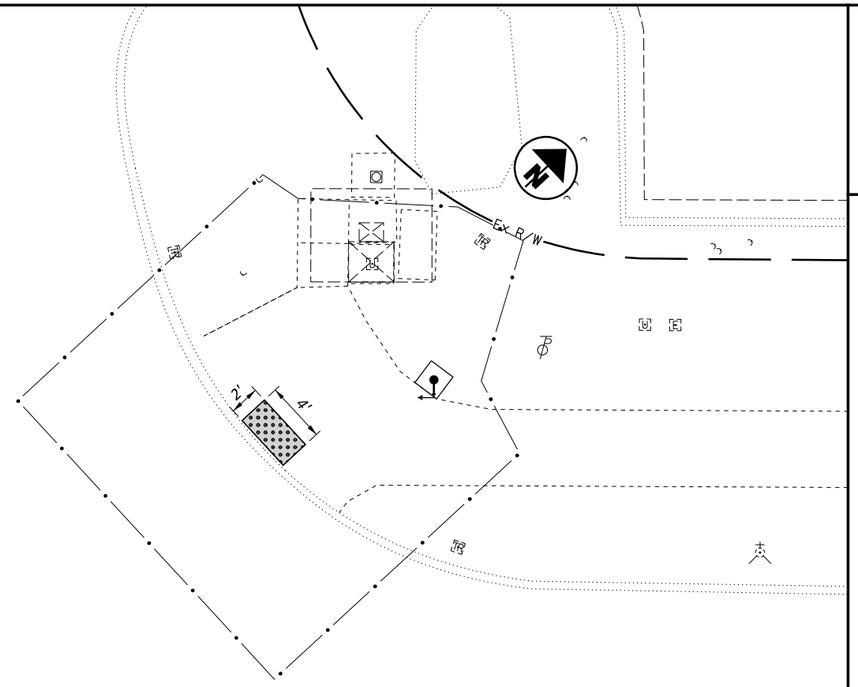
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7172 REGIONAL TOWN VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2183
www.cmtengr.com

DESIGNER: LDW
REVIEWER: JWL 01/24/25
PROJECT ID: 117237
SHEET: P.29 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

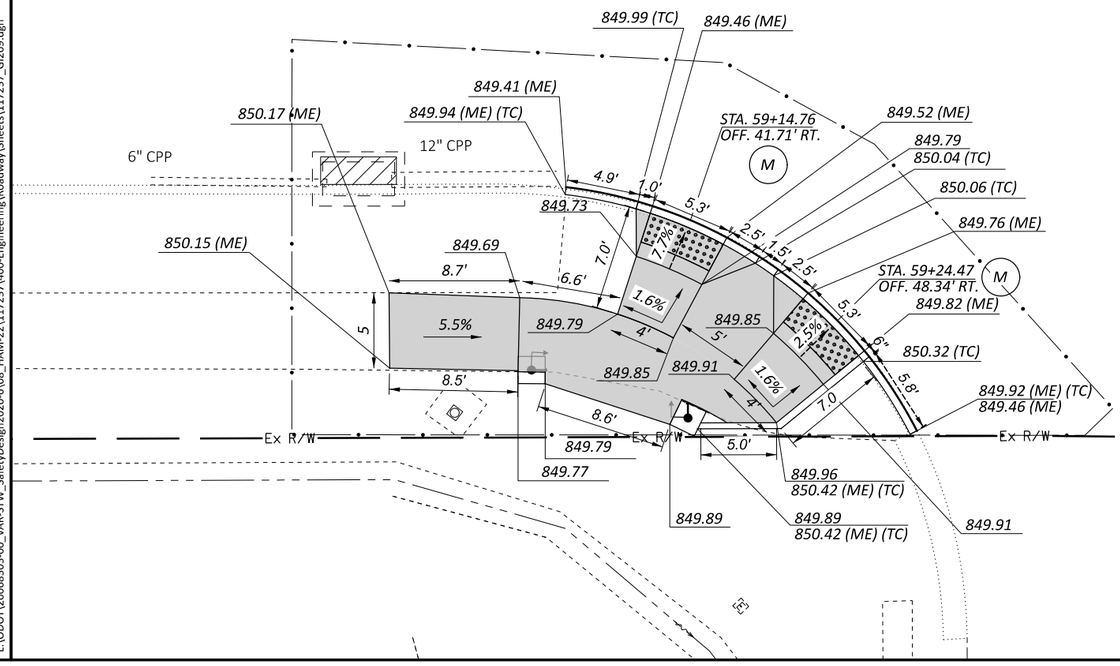
MODEL: 117237_GI208 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:08 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI208.dgn

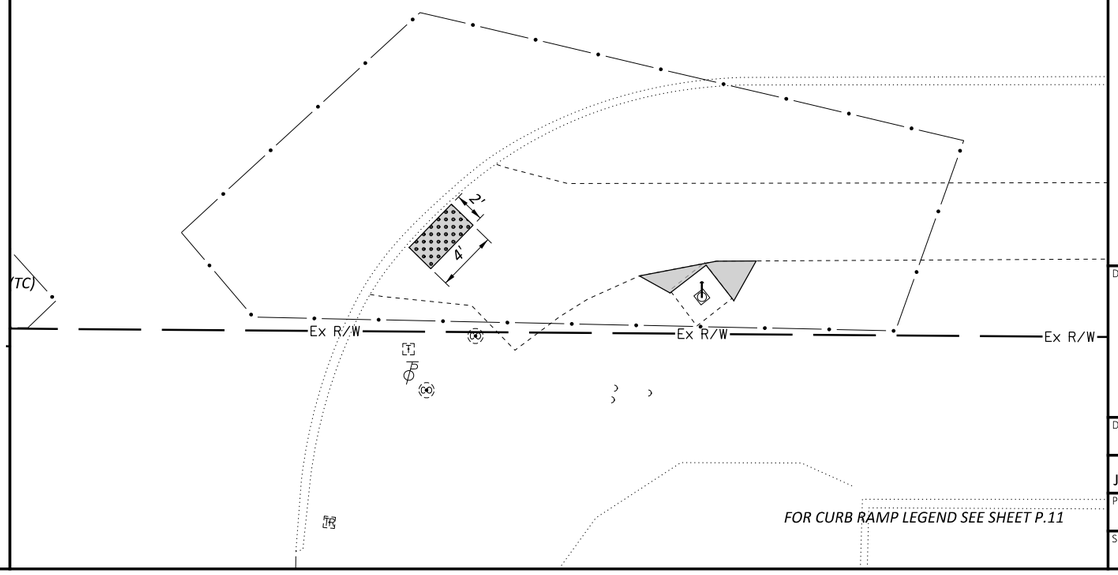




HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT TOWNSLEY DR





FOR CURB RAMP LEGEND SEE SHEET P.11

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
77 E. TOWNSHIP LINE ROAD
SUITE 270
BOARDMAN, OHIO 44512
PH (937)707-2703
www.cmtengr.com

DESIGNER
LDW

REVIEWER
JWL 01/24/25

PROJECT ID
117237

SHEET P.30 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI209 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:10 AM USER: nbrickner
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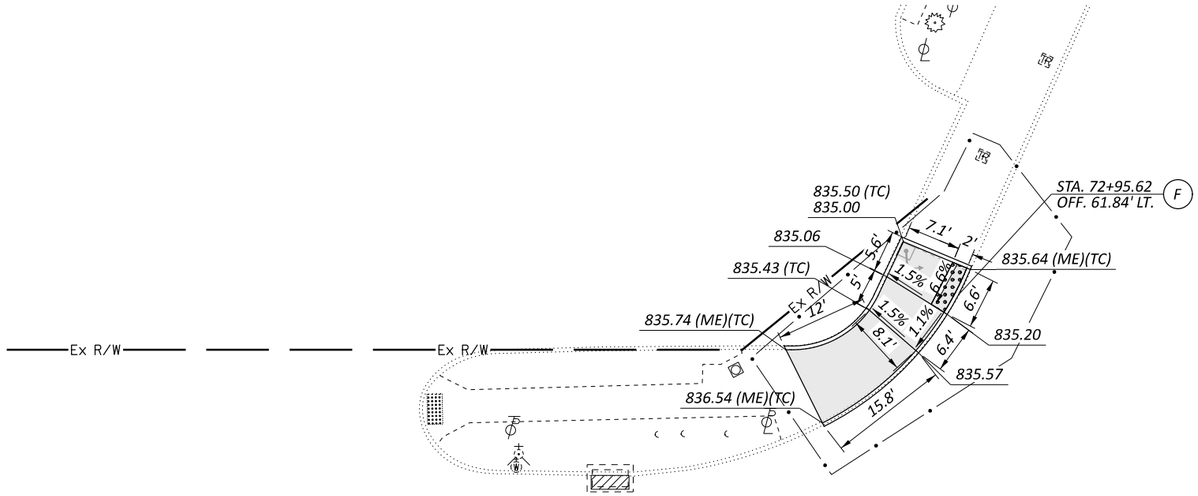
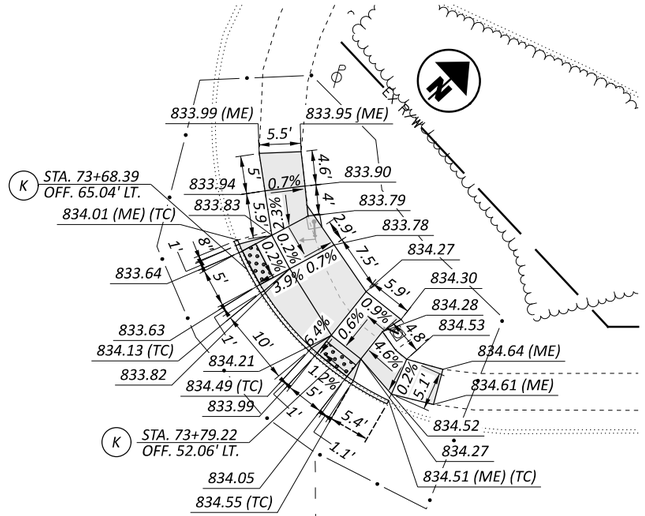
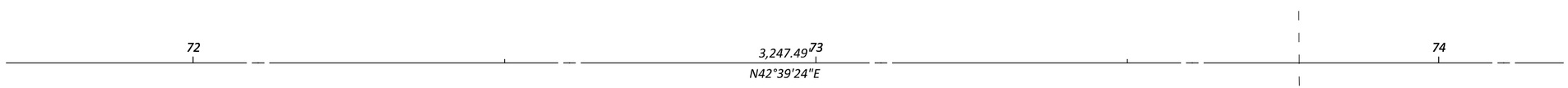
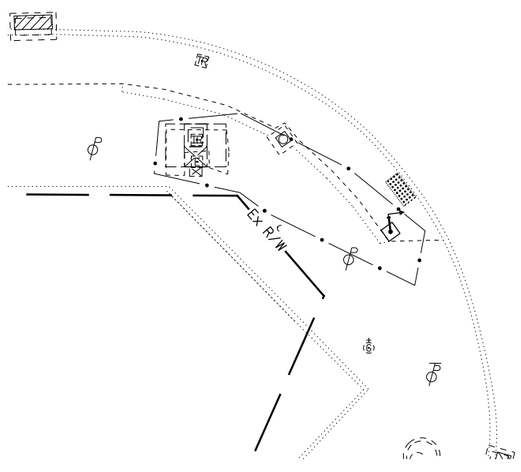
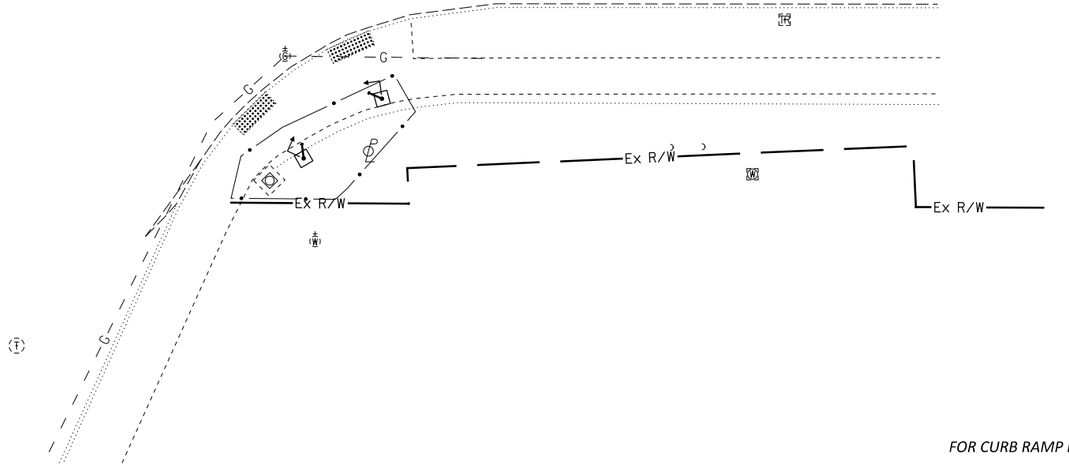










FOR CURB RAMP LEGEND SEE SHEET P.11

HORIZONTAL SCALE IN FEET
0 5 10 20

CURB DETAILS
US 22 AT COLUMBIA RD

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI210 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:11 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI210.dgn

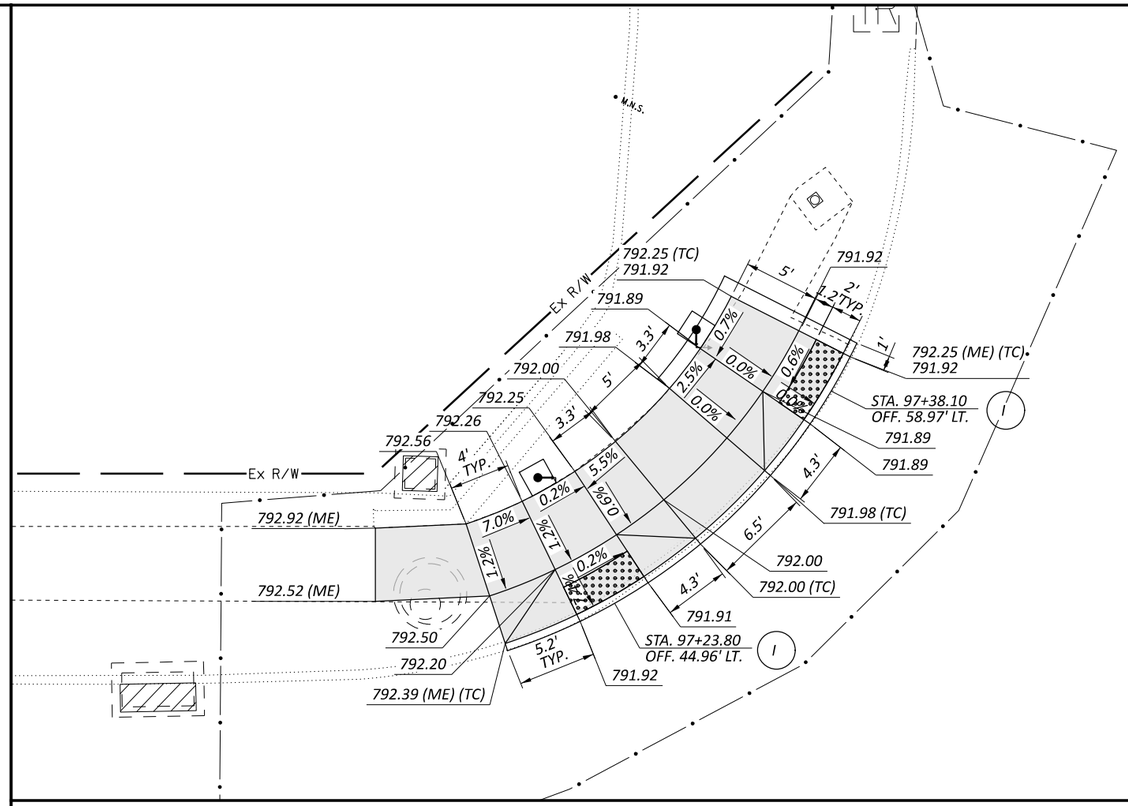
DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)743-2150
www.crawfordmurphy.com

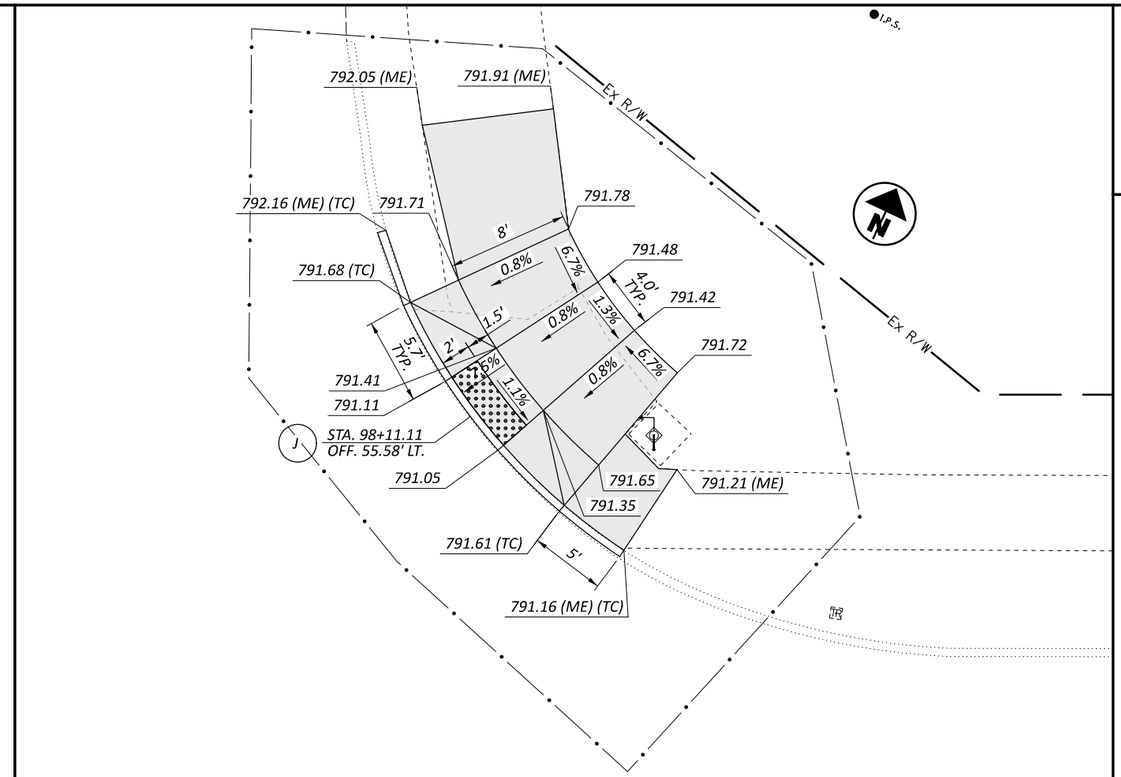
DESIGNER
LDW

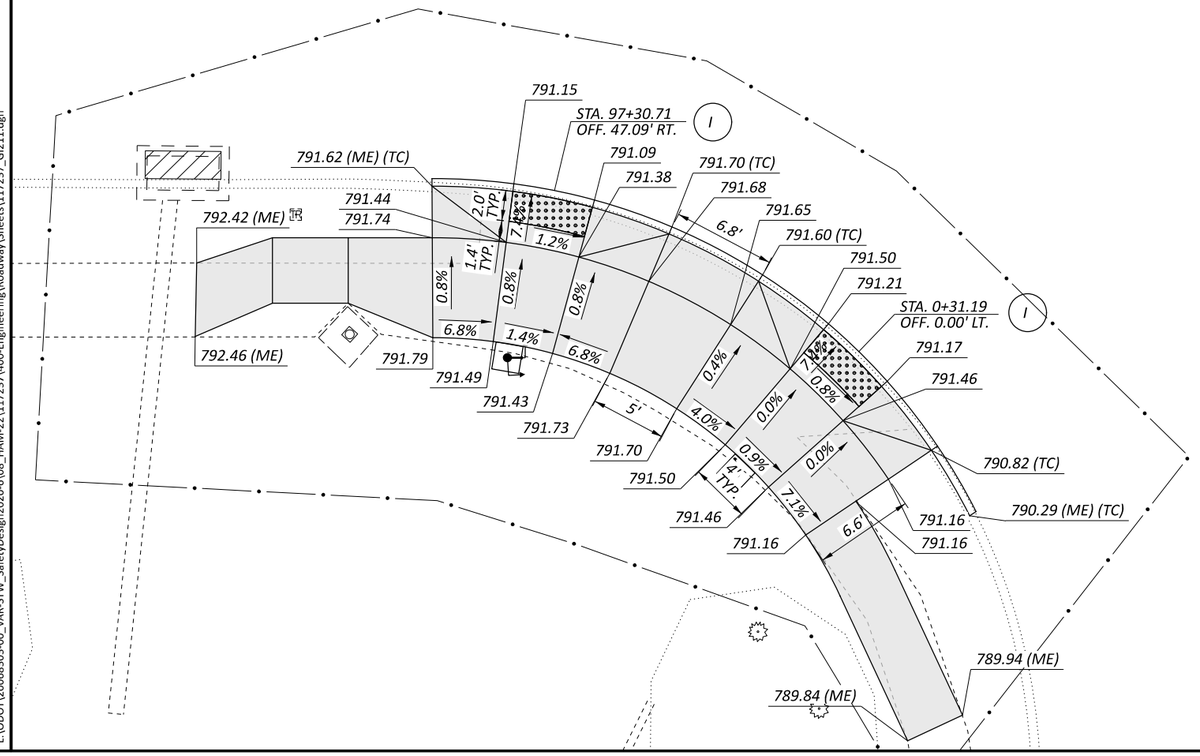
REVIEWER
JWL 01/24/25

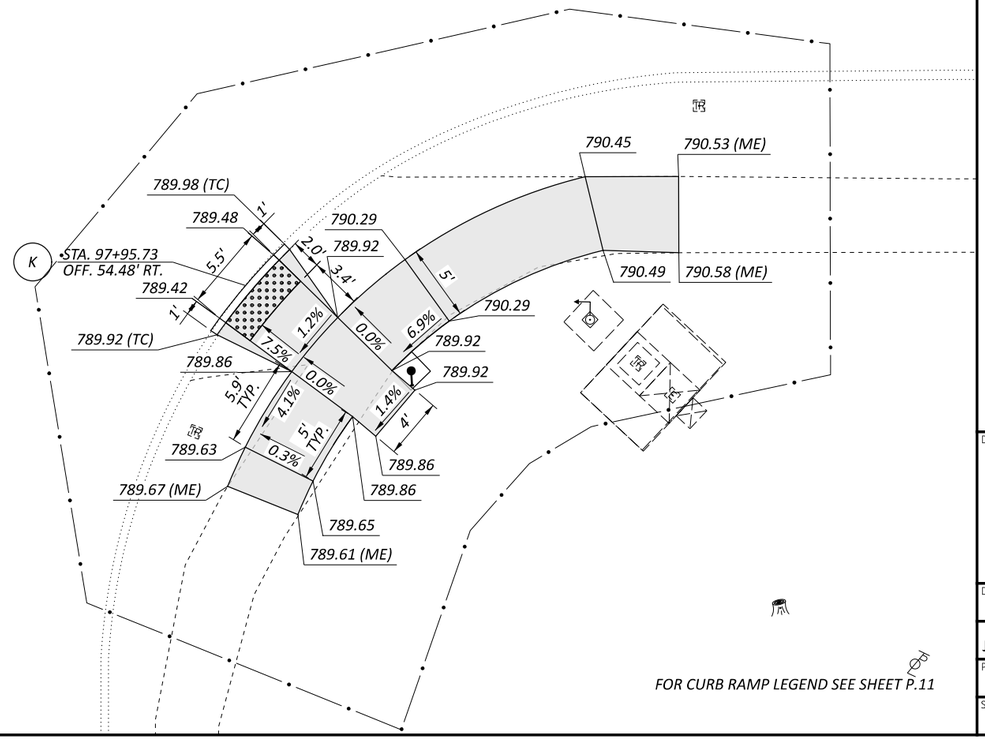
PROJECT ID
117237

SHEET P.31 TOTAL 67









HORIZONTAL SCALE IN FEET
0 2.5 5 10

CURB DETAILS
US 22 AT LANDEN DR

HAM/WAR US 22 16.04/0.00 PED

MODEL: 117237_GI211 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:12 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Roadway\Sheets\117237_GI211.dgn

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
1771 N. HAMILTON VILLAGE DR.
SUITE 270
DAYTON, OHIO 45459
PH (937)312-7139
www.crawfordmurphy.com

DESIGNER
LDW

REVIEWER
JWL 01/24/25

PROJECT ID
117237

SHEET P.32 TOTAL 67

GENERAL REQUIREMENTS

THE PURPOSE OF THIS SPECIFICATION AND THE ASSOCIATED PLANS IS TO ERECT PEDESTALS AND RELOCATE EXISTING PEDESTRIAN SIGNAL FACILITIES AT ELEVEN INTERSECTIONS ON MONTGOMERY ROAD (US-22) CORRIDOR IN HAMILTON COUNTY AND WARREN COUNTY, OHIO. THESE PLANS AND SPECIFICATIONS ARE TO RESULT IN THE COMPLETE INSTALLATION OF FULLY FUNCTIONAL TRAFFIC SIGNALS AND SHALL OPERATE ACCORDING TO THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

THE 2023 OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATION, LATEST REVISION, SHALL GOVERN THIS PROJECT EXCEPT WHEN OTHERWISE NOTED. ITEMS LISTED SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATION MANUAL, TO THE ODOT OFFICE OF ROADWAY ENGINEERING STANDARD CONSTRUCTION DRAWINGS, AND TO ANY SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIFIC REQUIREMENTS NOTED.

BIDDERS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE OHIO REVISED CODE AND ADMINISTRATIVE CODE.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDON, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE DISTRICT TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

ITEM 625 CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625 CONDUIT CLEANED AND CABLES REMOVED PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN, INSTALLATION ONLY

THE CONTRACTOR SHALL PICK UP THE PEDESTRIAN SIGNAL HEADS AND ASSOCIATED ACCESSORIES FROM 505 STATE ROUTE 741, LEBANON, OHIO 45036 (ODOT DISTRICT 8). THE CONTRACTOR IS TO CONTACT TERI SCANLON, DISTRICT TRAFFIC ENGINEER, AT 513-933-6620 OR AT TERI.SCANLON@DOT.OHIO.GOV TO COORDINATE PICKUP TIME OF EQUIPMENT. PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED FOLLOWING THE REQUIREMENTS OF C&MS 632.08 AND USING NEW OR COILED 5/C No.14 AWG SIGNAL CABLE AS NOTED IN THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUPMENT AND OTHER INCIDENTALS NECESSARY FOR INSTALLATION OF ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN, INSTALLATION ONLY.

ITEM 632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN, INSTALLATION ONLY

THE CONTRACTOR SHALL PICK UP THE PUSHBUTTONS AND ASSOCIATED ACCESSORIES FROM 505 STATE ROUTE 741, LEBANON, OHIO 45036 (ODOT DISTRICT 8). THE CONTRACTOR IS TO CONTACT TERI SCANLON, DISTRICT TRAFFIC ENGINEER, AT 513-933-6620 OR AT TERI.SCANLON@DOT.OHIO.GOV TO COORDINATE PICKUP TIME OF EQUIPMENT. PUSHBUTTONS SHALL BE INSTALLED FOLLOWING THE REQUIREMENTS OF C&MS 632.09 AND USING NEW OR COILED 2/C No.14 AWG SIGNAL CABLE AS NOTED IN THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUPMENT, PEDESTRIAN PUSHBUTTON SIGN INSTALLATION, AND OTHER INCIDENTALS NECESSARY FOR INSTALLATION OF ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN, INSTALLATION ONLY.

ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: PEDESTAL

THIS ITEM OF WORK SHALL FOLLOW THE REQUIREMENTS OF ODOT C&MS 632.26 EXCEPT THAT THE PEDESTAL FOUNDATION SHALL BE REUSED.

ITEM 632 REUSE OF TRAFFIC CONTROL ITEM: PULLBOX

EXISTING PULLBOXES THAT ARE NOTED AS BEING REUSED IN THE PLANS ARE EXPECTED TO BE DISTURBED DUE TO NEW CABLE OR CONDUIT INSTALLATION, OR READJUSTED DUE TO PROPOSED SIDEWALK. IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.27 THE FOLLOWING SHALL APPLY:

1. REUSED PULLBOXES SHALL BE CLEAR OF DEBRIS AND UNUSED EQUIPMENT PRIOR TO OPERATING THE SIGNAL.
2. AT LOCATIONS WHERE THE PULLBOX NEEDS TO BE READJUSTED AS NOTED IN THE PLANS, THE CONTRACTOR SHALL REUSE THE EXISTING PULLBOX BY REGRADING AND/OR ROTATING THE PULL BOX WHEN NECESSARY, SUCH THAT THE TOP OF PULL BOX ELEVATION EQUALS THE ELEVATION OF THE SURROUNDING SIDEWALK.

COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN UNIT PRICE BEAD OF EACH ITEM 632 REUSE TRAFFIC CONTROL ITEM: PULLBOX.

ITEM 632 REUSE OF PEDESTRIAN SIGNAL HEAD

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.08 AND 632.27, THIS LINE ITEM SHALL CONSISTS OF RELOCATING AN EXISTING PEDESTRIAN SIGNAL HEAD TO THE PROPOSED LOCATION OR REORIENTING THE PEDESTRIAN SIGNAL HEAD AT ITS EXISTING LOCATION TO THE POSITION NOTED IN THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH REUSED PEDESTRIAN SIGNAL HEAD AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY FOR INSTALLING REUSED PEDESTRIAN SIGNAL HEAD.

ITEM 632 REUSE OF PEDESTRIAN PUSHBUTTON

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 632.09 AND 632.27, THIS LINE ITEM SHALL CONSISTS OF RELOCATING AN EXISTING PUSHBUTTON TO THE PROPOSED LOCATION OR REORIENTING THE PUSHBUTTON AT ITS EXISTING LOCATION TO THE POSITION NOTED IN THE PLANS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH REUSED PUSHBUTTON AND WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT, PEDESTRIAN PUSHBUTTON SIGN INSTALLATION, AND OTHER INCIDENTALS NECESSARY FOR INSTALLING REUSED PUSHBUTTON.

ITEM 633 CONTROLLER ITEM, MISC.: REPROGRAMMING OF EXISTING CONTROLLERS

THIS ITEM WILL COVER ANY REPROGRAMMING OR PHASING MODIFICATIONS REQUIRED FOR EXISTING CONTROLLERS WHICH ARE TO REMAIN IN SERVICE. THE REPROGRAMMING EFFORT SHALL INCLUDE PROGRAMMING OF PEDESTRIAN PHASES AND UPLOADING PROPOSED SIGNAL TIMING CHANGES AS SHOWN IN THE PLANS.

CONTROLLER REPROGRAMMING WILL BE MEASURED PER EXISTING CONTROLLER PROGRAMMED OR MODIFIED. PAYMENT WILL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO COMPLETE THE WORK TO HAVE THE INTERSECTION OPERATE AS INTENDED.

ITEM 632 SIGNALIZATION, MISC.: FILLING AND PLUGGING OF HOLES ON SUPPORT

THE CONTRACTOR SHALL FILL OR PLUG HOLES LEFT BEHIND ON STRAIN POLE AND PEDESTAL SUPPORT, WHICH ARE ANTICIPATED DUE TO THE RELOCATION OR REORIENTATION OF EXISTING PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID, PER EACH ITEM 632 SIGNALIZATION, MISC.: FILLING AND PLUGGING OF HOLES ON SUPPORT, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM FOR EACH STRAIN POLE OR PEDESTAL SUPPORT.

ITEM 632 SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE

UNLESS NOTED OTHERWISE IN THE PLANS, SIGNAL CABLES REQUIRED TO INSTALL PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS HAVE BEEN PROVIDED WITH SUFFICIENT LENGTH SUCH THAT UNLASHING AND RELASHING OF MESSENGER WIRE IS NOT ANTICIPATED. AT LOCATIONS WHERE NEW SIGNAL CABLE RUN IS REQUIRED BETWEEN TWO SEPARATE QUADRANTS DUE TO THE LACK OF PROVIDED SIGNAL CABLE LENGTH OR IF NONE IS PROVIDED, UNLASHING AND RELASHING OF MESSENGER WIRE SHALL BE PERFORMED ACCORDING TO THE NOTES BELOW. NEW SIGNAL CABLES REQUIRED DUE TO THE CONDITIONS ABOVE SHALL BE BID BY SEPARATE BID ITEMS.

THE CONTRACTOR SHALL REMOVE EXISTING MESSENGER WIRE LASHING RODS AND REINSTALL THEM AS NECESSARY FOR THE INSTALLATION OF ANY NEW CABLES ON THE EXISTING INTERSECTION SIGNAL SPANS. THE CABLES SHALL ENTER THE EXISTING STRAIN POLE THROUGH THE POLE CABLE ENTRANCE FITTING AND USE THE EXISTING AND PROPOSED CONDUIT SYSTEM TO GET TO THE CONTROLLER CABINET. THE NEW CABLES SHALL BE SUPPORTED BY A NEW CABLE SUPPORT ASSEMBLY AT THE TOP OF THE STRAIN POLE.

IN ADDITION TO THE QUANTITY PROVIDED AT EACH INTERSECTION, THE FOLLOWING ADDITIONAL ESTIMATED CONTINGENCY QUANTITIES HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

632E90500 – ITEM 632 SIGNALIZATION, MISC.:
UNLASH AND RELASH MESSENGER WIRE 600 FT

PAYMENT FOR ITEM 632 SIGNALIZATION MISC.: UNLASH AND RELASH MESSENGER WIRE SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER FOOT AND SHALL INCLUDE ALL LABOR, MATERIALS, CABLE SUPPORT ASSEMBLIES AND EQUIPMENT TO INSTALL NEW CABLES ON EXISTING SIGNAL SPAN WIRE INSTALLATIONS. THE CONTRACTOR WILL BE COMPENSATED FOR THE ACTUAL LENGTHS OF MESSENGER WIRE UNLASHED AND RELASHED, WHETHER ABOVE OR BELOW THE ESTIMATE.

SIGNAL CABLE

UNLESS NOTED OTHERWISE IN THE PLANS, SIGNAL CABLES REQUIRED TO INSTALL PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS HAVE BEEN PROVIDED WITH SUFFICIENT LENGTH. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR LOCATIONS WHERE NEW SIGNAL CABLE RUN IS REQUIRED BETWEEN TWO SEPARATE QUADRANTS DUE TO THE LACK OF PROVIDED SIGNAL CABLE LENGTH OR IF NONE IS PROVIDED.

632E65300 – ITEM 632 LOOP DETECTOR LEAD-IN
CABLE, 2 CONDUCTOR, NO. 14 AWG 1500 FT
632E40500 – ITEM 632 SIGNAL CABLE,
5 CONDUCTOR, NO. 14 AWG 1500 FT

THE CONTRACTOR WILL BE COMPENSATED FOR THE ACTUAL LENGTHS OF SIGNAL CABLE INSTALLED, WHETHER ABOVE OR BELOW THESE ESTIMATES.

SIGNAL SUPPORT AND PEDESTAL FOUNDATION ELEVATIONS

ELEVATIONS SHOWN IN THE PLANS FOR PEDESTAL FOUNDATIONS ARE FOR COMPUTATIONAL PURPOSES ONLY. THE ACTUAL ELEVATION OF THE FOUNDATION SHALL BE IN ACCORDANCE WITH TRAFFIC SCD TC-21.21 PROVIDED THE EXISTING SLOPE IS LESS THAN 6:1.
AT LOCATIONS WHERE THE EXISTING SLOPE IS 6:1 OR GREATER, THE BURIED DEPTH OF FOUNDATION, AS SHOWN IN SCD TC-21.21 SHALL APPLY TO THE LOW SIDE OF THE SLOPE.
THE TOP OF THE FOUNDATION SHALL BE SET 2 INCHES ABOVE THE EXISTING SURFACE ON THE HIGH SIDE OF THE SLOPE.
THE ADDITIONAL DEPTH OF FOUNDATION NECESSARY TO MEET THESE REQUIREMENTS SHALL BE ADDED TO THE FORMED TOP.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 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.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

TRAFFIC SIGNAL NOTES

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DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.33 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED
MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:14 AM USER: nbrickner
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C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING
A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
III. USE A MINIMUM 8 AWG BETWEEN THE “PREPARE TO STOP WHEN FLASHING” INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
A. A 3/4-INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR No.4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO./	COLOR/	VEHICLE SIGNAL/	PED SIGNAL
1/	BLACK/	GREEN BALL/	NO.1 WALK
2/	WHITE/	AC NEUTRAL/	AC NEUTRAL
3/	RED/	RED BALL/	NO.1 DW/FDW
4/	GREEN/	EQUIPMENT GROUND/	EQUIPMENT GROUND
5/	ORANGE/	YELLOW BALL/	NO.2 DW FDW
6/	BLUE/GRN	ARROW/	NO.2 WALK
7/	WHITE W/ BLK STRIPE	YELLOW ARROW/	NOT USED

6. POWER AND DISCONNECT SWITCH.
A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT – ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

TRAFFIC SIGNAL NOTES

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REVIEWER
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PROJECT ID
117237

SHEET P.34 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:15 AM USER: nbrtekner
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SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 4B, 6A, 6B, 8A

EX. SIGNAL HEAD
3A

EX. PEDESTRIAN SIGNAL HEAD
P1, P2, P3, P4

EX. BI-MODAL SIGNAL HEAD
5A

EX. SIGNAL HEAD
1A

SIGNS

PROPOSED R10-3E-9
Sn1, Sn2 Sn4

PROPOSED R10-3E-9
Sn3

Ex. Pedestal, PS-2
Ex. Pedestrian Head (Cornell Rd), P3
REORIENT EX. PUSHBUTTON (CORNELL RD), B3, ON EX. PEDESTAL, PS-2, USING EX. CABLE AND NEW SIGN Sn4

Ex. Pedestal, PS-1
REORIENT EX. PEDESTRIAN HEAD (US-22), P2, ON EX. PEDESTAL, PS-1, USING EX. CABLE
REORIENT EX. PUSHBUTTON (CORNELL RD), B2, ON EX. PEDESTAL, PS-1, USING EX. CABLE AND NEW SIGN Sn3

Ex. NW Strain Pole, SP-1
REORIENT EX. PUSHBUTTON (US-22), B1, ON EX. NW STRAIN POLE, USING EX. CABLE AND NEW SIGN Sn1
REORIENT EX. PEDESTRIAN SIGNAL HEAD (CORNELL RD), P1, ON EX. NW STRAIN POLE, USING EX. CABLE

Ex. SW Strain Pole, SP-2

Ex. Controller and Cabinet

Ex. SE Strain Pole, SP-3

Ex. NE Strain Pole, SP-4
REORIENT EX. PUSHBUTTON (US-22), B4, ON EX. NE STRAIN POLE, USING EX. CABLE AND NEW SIGN Sn2
REORIENT EX. PEDESTRIAN HEAD (US-22), P4, ON EX. NE STRAIN POLE, USING EX. CABLE

CORNELL RD

U.S. ROUTE 22

Ex R/W

63 64 65 66 67

3A 8A 6B 6A 1A 5A 2A 4B 4A 2B

65+54.60
58.72' LT

65+94.98
44.36' RT

+81.60 ST NOTE 3
+91.85 ST NOTE 3
X NOTE 3
+98.75 ST NOTE 3

10'

PT STA. 67+21.36

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" AND PUSH BUTTON SIGNS - 8 EACH

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●→	○→
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●↓	○↓
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●↓→	○↓→
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON	⊣	⊣
PEDESTAL SUPPORT	⊡	⊡
CONTROLLER AND CABINET		
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS		X
ITEM 644 STOP LINE		ST
REMOVAL OF PAVEMENT MARKING		XXXX

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT CORNELL RD

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP101 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:21 AM USER: nbrickner
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REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.35 TOTAL 67

SIGNAL TIMING CHART (TEM FORM 496-3)

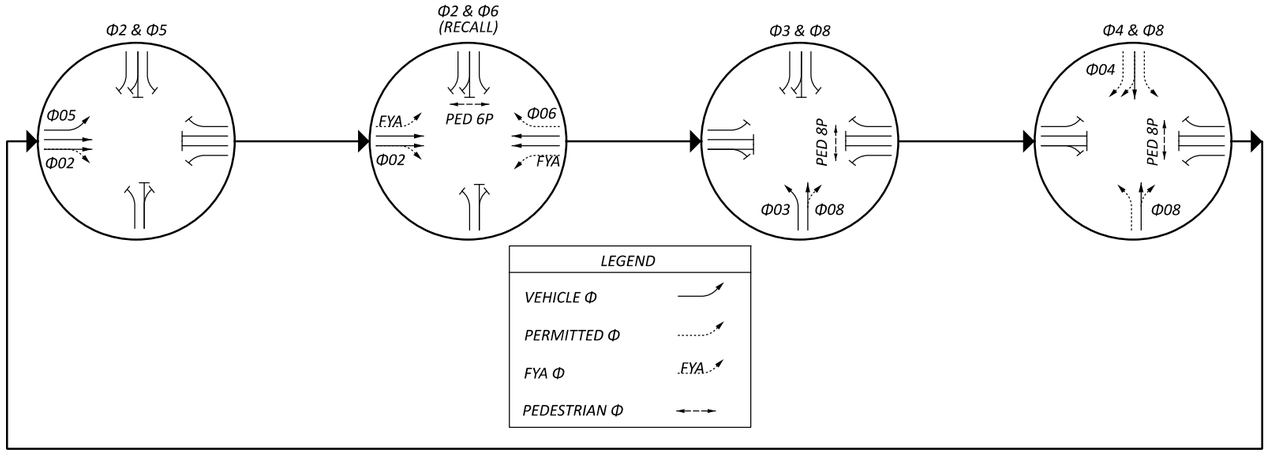
INTERSECTION: US-22 AT CORNELL RD										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY:	EX	PHASES:			EX		
			REST IN RED:		RING 1	-		RING 2	-	
START IN:	EX		OVERLAP			A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):		EX								
FIRST PHASE(S):	EX		PHASES			-	-	-	-	
COLOR DISPLAYED:	EX									
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	WBL	EB	NBL	SB	-	WB
MINIMUM GREEN (INITIAL)		(SEC.)	-	EX	EX	EX	EX	EX	-	EX
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	-	EX	EX	EX	EX	EX	-	EX
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	-	EX	EX	EX	EX	EX	-	EX
MAXIMUM GREEN II		(SEC.)	-	EX	EX	EX	EX	EX	-	EX
YELLOW CHANGE		(SEC.)	4.5	4.5	EX	EX	EX	4.5	-	EX
ALL RED CLEARANCE		(SEC.)	2.0	2.0	EX	EX	EX	2.0	-	EX
DELAYED GREEN (LPI) '		(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-
WALK		(SEC.)	-	-	-	-	-	7	-	8
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	-	-	16	-	26
RECALL	MAXIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	-	EX
	MINIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	-	EX
	PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	-	OFF
MEMORY		(ON/OFF)	EX	EX	EX	EX	EX	EX	-	EX

*** VOLUME DENSITY CONTROLS**

 # FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

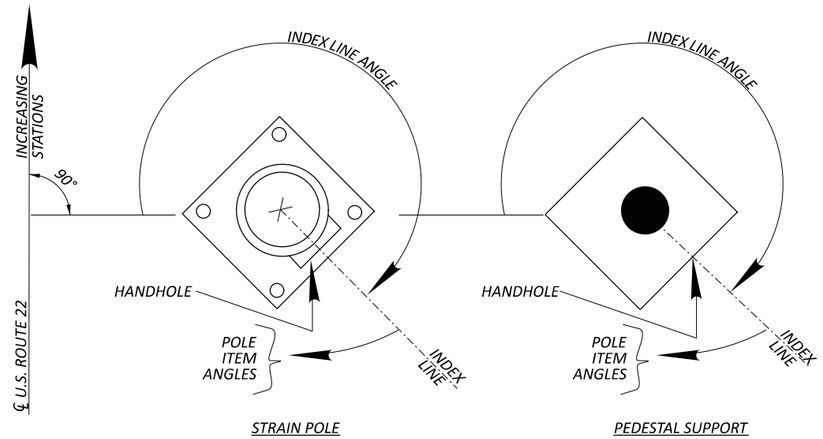
5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		CORNELL RD EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	40	140	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	115	115	-	-
PS-1	EXISTING		PEDESTAL		EX	DOES NOT APPLY			30* (EX)	230	-	-	330
PS-2	EXISTING		PEDESTAL		EX	DOES NOT APPLY			30* (EX)	-	-	EX	330

** INDEX LINE OF EXISTING PEDESTALS ASSUMED TO BE LOCATED AT THE FACE MOST PARALLEL TO US-22*



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT CORNELL RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
370 EAST TOWN STREET, SUITE 270, COLUMBUS, OHIO 43215
PH (937)753-2159
www.crawfordmurphy&tilly.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.36 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:22 AM USER: nbrickner
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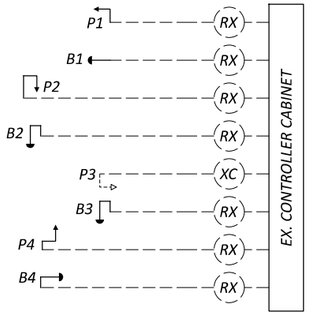
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
-	-	-	-
-	-	-	
-	-	-	-
-	-	-	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

WIRING DETAILS
US 22 AT CORNELL RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 WORTHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)767-2793
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DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.37 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

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SIGNAL HEADS

EX. SIGNAL HEAD

2A, 2B, 4A, 4B, 6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P3, P4, P5, P6, P7, P8

EX. BI-MODAL SIGNAL HEAD

1A, 5A

SIGNS

PROPOSED R10-3E-9

Sn2, Sn4, Sn6, Sn8

PROPOSED R10-3E-9

Sn1, Sn3, Sn5, Sn7

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	90+95.67	LT	51.97'	18
PB2	90+03.03	RT	48.6'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" AND PUSH BUTTON SIGNS - 8 EACH
2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.
4. PROPOSED SIGNAL EQUIPMENT SHALL INTERCEPT AND CONNECT TO THE EXISTING CONDUIT.
5. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.

REMOVE EX. PULLBOX

PROP. 10' PEDESTAL, PS-3, SEE NOTE 4
RELOCATE EX. PEDESTRIAN HEAD (HARPER STATION), P3,
FROM EX. SW STRAIN POLE USING EX. CABLE
PROP. PUSHBUTTON (HARPER STATION), B3,
INSTALL USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn3

CLEAN AND REMOVE CABLES IN EX. CONDUIT

PROP. 2" GALV. CONDUIT (9 FT), SEE NOTE 5

Ex. SW Strain Pole, SP-2
Ex. Pedestrian Head (US-22), P4

PROP. 5' PEDESTAL, PS-4
RELOCATE EX. PUSHBUTTON (US-22), B4,
FROM EX. SW STRAIN POLE
USING NEW 2/C #14 AWG, AND SIGN Sn4

HARPER STATION DR

PROP. 18" CONC. PULLBOX, PB1

PROP. 10' PEDESTAL, PS-2
RELOCATE EX. PEDESTRIAN HEAD (HARPER STATION), P2,
FROM EX. NW STRAIN POLE USING EX. CABLE
PROP. PUSHBUTTON (HARPER STATION), B2,
INSTALL USING 2/C #14 AWG COILED ON EX. NW STRAIN POLE, AND SIGN Sn2

PROP. 2" PVC CONDUIT (9 FT)

PROP. 2" GALV. CONDUIT (6 FT), SEE NOTE 5

Ex. NW Strain Pole, SP-1
Ex. Pedestrian Head (US-22), P1

Ex. Pedestal, PS-1
REORIENT EX. PUSHBUTTON (US-22), B1,
ON EX. NW PEDESTAL,
USING EX. CABLE AND NEW SIGN Sn1

NOTE 3

90+25.68
50.76' LT

90+18.82
44.02' LT

90+91.96
50.45' LT

U.S. ROUTE 22

REMOVE EX. PULLBOX

Ex. SE Strain Pole, SP-3

NOTE 3

90+17.96
40.03' RT

REMOVE EX. PULLBOX

Ex. Controller and Cabinet

REUSE EX. PULLBOX

PROP. 2" PVC CONDUIT (16 FT)

PROP. 18" CONC. PULLBOX, PB2

HARPER POINT DR

Ex. NE Strain Pole, SP-4
Ex. Pedestrian Head (Harper Point), P7
Ex. Pedestrian Head (US-22), P8
REORIENT EX. PUSHBUTTON (US-22), B8,
ON EX. NE STRAIN POLE,
USING EX. CABLE AND NEW SIGN Sn8

PROP. 5' PEDESTAL, PS-7
PROP. PUSHBUTTON (HARPER POINT), B7, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. NE STRAIN POLE, AND NEW SIGN Sn7

PROP. 2" PVC CONDUIT (21 FT)

CLEAN AND REMOVE CABLES IN EX. CONDUIT

REUSE EX. PULLBOX

PROP. 10' PEDESTAL, PS-5
RELOCATE EX. PUSHBUTTON (US-22), B5,
FROM EX. SE PEDESTAL USING NEW 2/C #14 AWG, AND SIGN Sn5
RELOCATE EX. PEDESTRIAN HEAD (HARPER POINT), P6,
FROM EX. SE PEDESTAL USING NEW 5/C #14 AWG
PROP. 2" PVC CONDUIT (4 FT),
BETWEEN PS-4 AND PB2

CLEAN AND REMOVE CABLES IN EX. CONDUIT

REMOVE AND REPLACE EX. PEDESTAL
WITH PROP. 10' PEDESTAL, PS-6, ON EX. FOUNDATION
PROP. PUSHBUTTON (HARPER POINT), B6, AS PER PLAN
FROM EX. SE PEDESTAL USING NEW 2/C #14 AWG, AND SIGN Sn6
RELOCATE EX. PEDESTRIAN HEAD (US-22), P5,
FROM EX. SE PEDESTAL USING NEW 5/C #14 AWG

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●→	○→
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●↑	○↑
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●→	○→
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD	●↓→	○↓→
PEDESTRIAN PUSH BUTTON	⊸	⊸
PEDESTAL SUPPORT	⊡	⊡
CONTROLLER AND CABINET	⊠	⊠
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT HARPERS POINT DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
17177 LAURENTIAN VILLAGE DR
SUITE 270
CASTALIA, OHIO 44565
PH (937)763-3193
www.crawfordmurphy.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.38 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED
MODEL: 99999_CP103 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:25 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

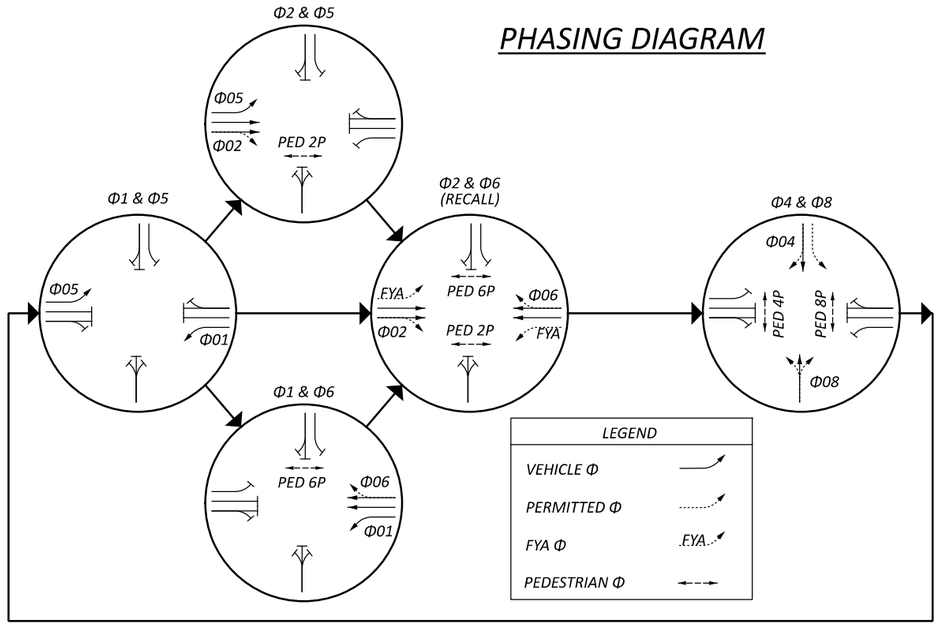
INTERSECTION: US-22 AT HARPERS POINT DR										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY:	EX	PHASES:			EX		
			REST IN RED:		RING 1	-		RING 2	-	
START IN:	EX		OVERLAP			A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):		EX								
FIRST PHASE(S):	EX		PHASES			-	-	-	-	
COLOR DISPLAYED:	EX									
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	-	EB	NBL	SB	-	WB
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
MAXIMUM GREEN II		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
YELLOW CHANGE		(SEC.)	3.0	EX	-	EX	3.0	EX	-	EX
ALL RED CLEARANCE		(SEC.)	2.0	EX	-	EX	2.0	EX	-	EX
DELAYED GREEN (LPI) '		(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-
WALK		(SEC.)	-	8	-	9	-	8	-	9
PEDESTRIAN CLEARANCE		(SEC.)	-	14	-	20	-	14	-	20
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

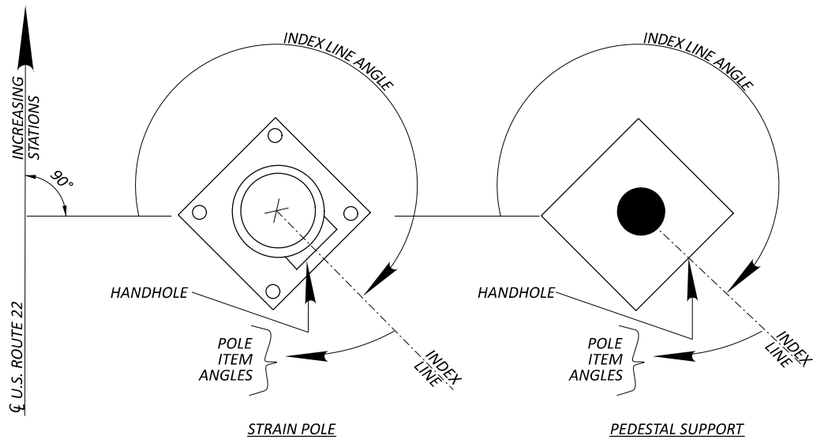
5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		HARPERS PT DR EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	EX	-	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	EX	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	EX	270	EX	-
PS-1	EXISTING		PEDESTAL		EX	DOES NOT APPLY			30* (EX)	-	60	-	-
PS-2	90+98.52	58.62' LT	PEDESTAL		10	DOES NOT APPLY			0	-	-	0	0
PS-3	90+22.29	60.95' LT	PEDESTAL		10	DOES NOT APPLY			30	-	-	330	330
PS-4	90+10.04	48.29' LT	PEDESTAL		5	DOES NOT APPLY			330	-	300	-	-
PS-5	90+05.17	48.24' RT	PEDESTAL		10	DOES NOT APPLY			0	-	90	180	-
PS-6	90+13.94	53.96' RT	PEDESTAL		10	DOES NOT APPLY			40	240	-	-	330
PS-7	90+96.13	53.20' RT	PEDESTAL		5	DOES NOT APPLY			40	-	-	-	320

* INDEX LINE OF EXISTING PEDESTALS ASSUMED TO BE LOCATED AT THE FACE MOST PARALLEL TO US-22



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT HARPERS POINT DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 210
DAYTON, OHIO 45459
PH (937)-910-2100
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DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.39 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvPt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:27 AM USER: nbrickner
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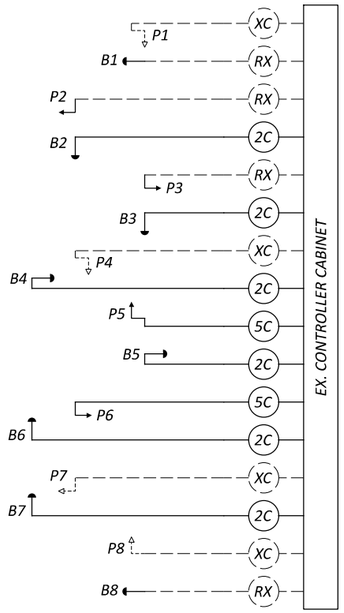
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
LS = LOAD SWITCH			

LEGEND

P	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

WIRING DETAILS
US 22 AT HARPERS POINT DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
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DAYTON, OHIO 45459
PH (937)701-7150
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DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.40 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:27 AM USER: nbrickner
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SIGNAL HEADS

EX. SIGNAL HEAD

2A, 2B, 4A, 4B, 6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P3, P4,

EX. BI-MODAL SIGNAL HEAD

1A, 5A

PROP. PEDESTRIAN SIGNAL HEAD

P5, P6

SIGNS

PROPOSED R10-3E-9

Sn1, Sn3, Sn5

PROPOSED R10-3E-9

Sn2, Sn4, Sn6

REUSE EX. PULLBOX

PROP. 2" PVC CONDUIT (9 FT)

PROP. 5' PEDESTAL, PS-1
PROP. PUSHBUTTON (CALUMET WAY), B2, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn2

CLEAN AND REMOVE CABLES IN EX. CONDUIT

Ex. SW Strain Pole, SP-2
Ex. Pedestrian Head (Calumet Way), P2
Ex. Pedestrian Head (US-22), P3
REORIENT EX. PUSHBUTTON (US-22), B3,
ON EX. SW STRAIN POLE,
USING EX. CABLE AND NEW SIGN Sn3

REUSE EX. PULLBOX, SEE NOTE 5

CALUMET WAY

Ex. NW Strain Pole, SP-1
Ex. Pedestrian Head (Calumet Way), P1
PROP. PUSHBUTTON (CALUMET WAY), B1, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. NW STRAIN POLE,
AND SIGN Sn1

NOTE 4

NOTE 3

126+09.24
46.17' LT

125+80.45
33.50' LT

+76.65

126+47.26
43.86' LT

U.S. ROUTE 22

125+84.67
33.50' RT

126+44.93
41.70' RT

REMOVE EX. PULLBOX

Ex. Controller and Cabinet

REUSE EX. PULLBOX

CLEAN AND REMOVE CABLES IN EX. CONDUIT

Ex. SE Wood Pole, SP-3

126+13.04
52.54' RT

Ex. Pedestal, PS-2
Ex. Pedestrian Head (US-22), P4
REORIENT EX. PUSHBUTTON (US-22), B4,
ON EX. SE PEDESTAL,
USING EX. CABLE AND NEW SIGN Sn4

PROP. 2" PVC CONDUIT (30 FT)

PROP. 10' PEDESTAL, PS-3
PROP. PEDESTRIAN HEAD (APPLESEED DR), P5, AS PER PLAN,
INSTALL USING 5/C #14 AWG COILED ON EX. SE PEDESTAL
PROP. PUSHBUTTON (APPLESEED DR), B5, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SE PEDESTAL, AND SIGN Sn5

APPLESEED DR

Ex. NE Wood Pole, SP-4
PROP. PEDESTRIAN HEAD (APPLESEED DR), P6, AS PER PLAN,
INSTALL USING NEW 5/C #14 AWG

PROP. 2" PVC CONDUIT (26 FT)

PROP. 5' PEDESTAL, PS-4
PROP. PUSHBUTTON (APPLESEED DR), B6, AS PER PLAN,
INSTALL USING NEW 2/C #14 AWG, AND SIGN Sn6

Ex R/W

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER AND CABINET		
TRAFFIC PULL BOX		
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.

4. PROP. STOP LINE MARKING SHALL BE PAINTED 5 FT OFFSET OF THE PROP. CROSSWALK MARKING.

5. CONTRACTOR TO RESET AND REGRADE PULLBOX AND RETAIN CONNECTION TO EXISTING CONDUITS.

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT APPLESEED DR/CALUMET WAY

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2100
www.crawfordmurphy.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.41 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED
MODEL: 99999_CP104 PAPERSIZE: 17X11 (in.) DATE: 2/5/2025 TIME: 10:36:30 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Signals\Sheets\117237_CP104.dgn

SIGNAL TIMING CHART (TEM FORM 496-3)

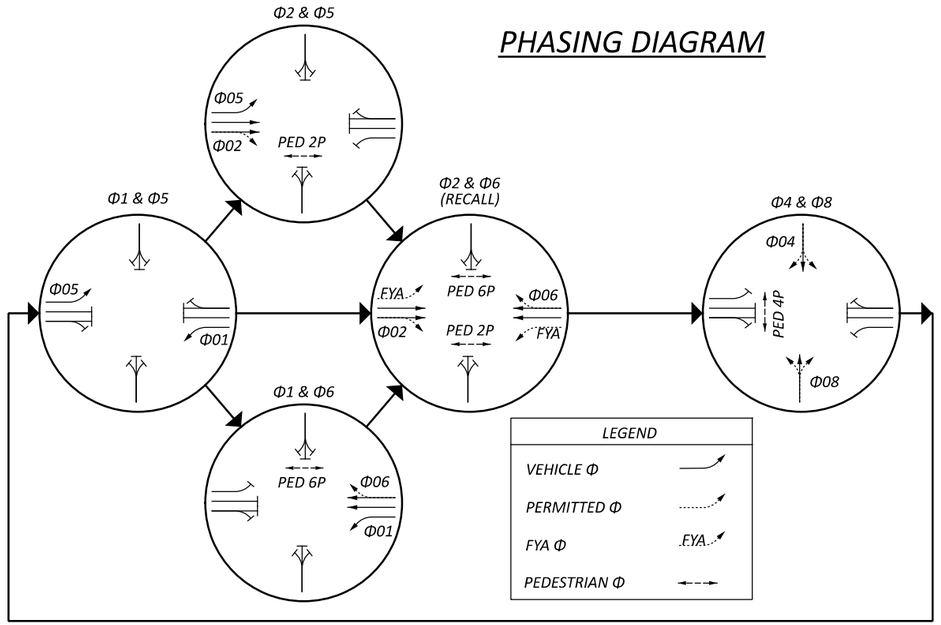
INTERSECTION: US-22 AT CALUMET WAY										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY:	EX	PHASES:			EX		
			REST IN RED:		RING 1	-		RING 2	-	
START IN:	EX		OVERLAP			A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):		EX								
FIRST PHASE(S):	EX		PHASES			-	-	-	-	
COLOR DISPLAYED:	EX									
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	-	EB	NBL	SB	-	WB
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
MAXIMUM GREEN II		(SEC.)	EX	EX	-	EX	EX	EX	-	EX
YELLOW CHANGE		(SEC.)	3.0	4.5	-	3.5	3.0	4.5	-	3.5
ALL RED CLEARANCE		(SEC.)	2.0	2.0	-	2.0	2.0	2.0	-	2.0
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-
WALK		(SEC.)	-	8	-	8	-	8	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	10	-	18	-	10	-	-
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

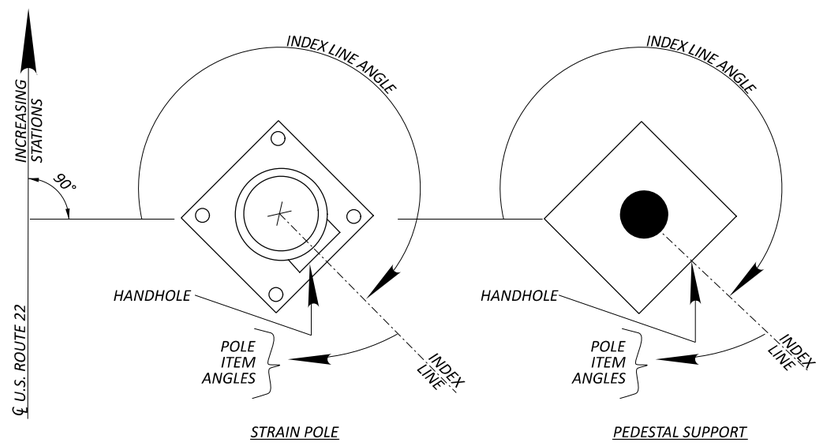
5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		CALUMET WAY EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	EX	340
SP-2	EXISTING		SIGNAL	EXISTING					N/A	EX	320	EX	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	250	-
PS-1	125+99.56	57.57' LT	PEDESTAL		5	DOES NOT APPLY			30	-	-	-	330
PS-2	EXISTING		PEDESTAL		EX	DOES NOT APPLY			0* (EX)	EX	90	-	-
PS-3	125+97.75	50.62' RT	PEDESTAL		10	DOES NOT APPLY			30	-	-	330	330
PS-4	126+56.78	50.08' RT	PEDESTAL		5	DOES NOT APPLY			0	-	-	-	0

** INDEX LINE OF EXISTING PEDESTALS ASSUMED TO BE LOCATED AT THE FACE MOST PARALLEL TO US-22*



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT APPLESEED DR/CALUMET WAY

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
17177 NORTHCHASE DRIVE, SUITE 270, CHAGRIN FALLS, OHIO 44023
PH (937)701-2783
www.crawfordmurphy.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.42 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvPt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:31 AM USER: nbrickner
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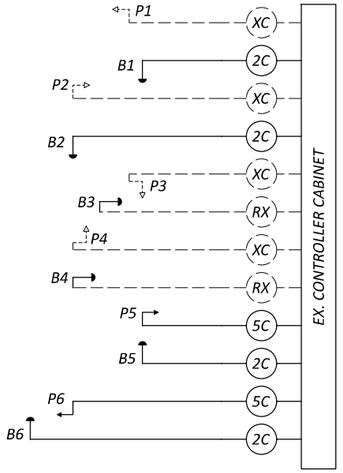
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	*EX. PEDESTRIAN SIGNAL CABLE (DND)*
D	*EX. PEDESTRIAN PUSH BUTTON (DND)*	RX	*REUSED EX. PEDESTRIAN SIGNAL CABLE*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	*NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	*NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG*

WIRING DETAILS
US 22 AT APPLESEED DR/CALUMET WAY

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)743-2193
www.crawfordcmt.com

DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.43 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_Survft PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:32 AM USER: nbrickner
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SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD
P1, P2, P3, P4,

PROP. PEDESTRIAN SIGNAL HEAD
P5, P6

EX. BI-MODAL SIGNAL HEAD
1A, 5A

EX. SIGNAL HEAD
4B

SIGNS

PROPOSED R10-3E-9
Sn1, Sn2, Sn3, Sn5, Sn6

PROPOSED R10-3E-9
Sn4

PROP. 10' PEDESTAL, PS-2
RELOCATE EX. PEDESTRIAN HEAD (MASON RD), P2,
FROM EX. SW STRAIN POLE,
USING 5/C #14 AWG COILED ON EX. SW STRAIN POLE
PROP. PUSHBUTTON (MASON RD), B2, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE,
AND SIGN Sn2

PROP. 2" PVC CONDUIT (21 FT)

Ex. SW Strain Pole, SP-2
Ex. Pole Mtd Controller and Cabinet
Ex. Pedestrian Head (US-22), P3

CLEAN AND REMOVE CABLES
IN EX. CONDUIT,
BETWEEN REUSED PULLBOX AND SW STRAIN POLE

REUSE EX. PULLBOX

PROP. 2" PVC CONDUIT (8 FT)

PROP. 5' PEDESTAL, PS-3
RELOCATE EX. PUSHBUTTON (US-22), B3,
FROM EX. SW STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn3

REMOVE EX. PULLBOX

REMOVE EX. PULLBOX

PROP. 5' PEDESTAL, PS-1
PROP. PUSHBUTTON (MASON RD), B1, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. NW STRAIN POLE, AND SIGN Sn1

PROP. 2" PVC CONDUIT (24 FT)

Ex. NW Strain Pole, SP-1
Ex. Pedestrian Head (Mason Rd), P1

CLEAN AND REMOVE CABLES
IN EX. CONDUIT

REUSE EX. PULLBOX

REMOVE EX. PULLBOX

REUSE EX. PULLBOX

CLEAN AND REMOVE CABLES
IN EX. CONDUIT

REUSE EX. PULLBOX

CLEAN AND REMOVE CABLES
IN EX. CONDUIT

PROP. 2" PVC CONDUIT (10 FT)

PROP. 5' PEDESTAL, PS-4
RELOCATE EX. PUSHBUTTON (US-22), B4,
FROM EX. SE STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SE STRAIN POLE, AND SIGN Sn4

Ex. SE Strain Pole, SP-3
Ex. Pedestrian Head (US-22), P4
PROP. PEDESTRIAN HEAD (SYMMES CREEK DR), P5, AS PER PLAN,
INSTALL USING 5/C #14 AWG COILED ON EX. SE STRAIN POLE

PROP. 2" PVC CONDUIT (43 FT)

PROP. 5' PEDESTAL, PS-5
PROP. PUSHBUTTON (SYMMES CREEK DR), B5,
INSTALL USING NEW 2/C #14 AWG, AND SIGN Sn5

Ex. NE Strain Pole, SP-4
PROP. PEDESTRIAN HEAD (SYMMES CREEK DR), P6, AS PER PLAN,
INSTALL USING NEW 5/C #14 AWG

PROP. 5' PEDESTAL, PS-6
PROP. PUSHBUTTON (SYMMES CREEK DR), B6, AS PER PLAN,
INSTALL USING NEW 2/C #14 AWG, AND SIGN Sn6
PROP. 2" PVC CONDUIT (4 FT),
BETWEEN PS-6 AND REUSED PULLBOX

REMOVE EX. PULLBOX

MASON RD
SYMMES CREEK DR
U.S. ROUTE 22
Ex R/W
PI STA. 147+99.99
PC STA. 151+47.63
317.63'
N45°11'47"E
148
149
150
151
152
1A
2A
2B
4A
4B
5A
6A
6B
8A
8B

HORIZONTAL SCALE IN FEET
0 10 20 40

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER AND CABINET		
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

TRAFFIC SIGNAL PLAN
US 22 AT MASON RD/SYMMES CREEK DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CLAYTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.cmtengr.com

DESIGNER: GSH
REVIEWER: SAK 01/24/25
PROJECT ID: 117237
SHEET: P.44 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP105 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:35 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

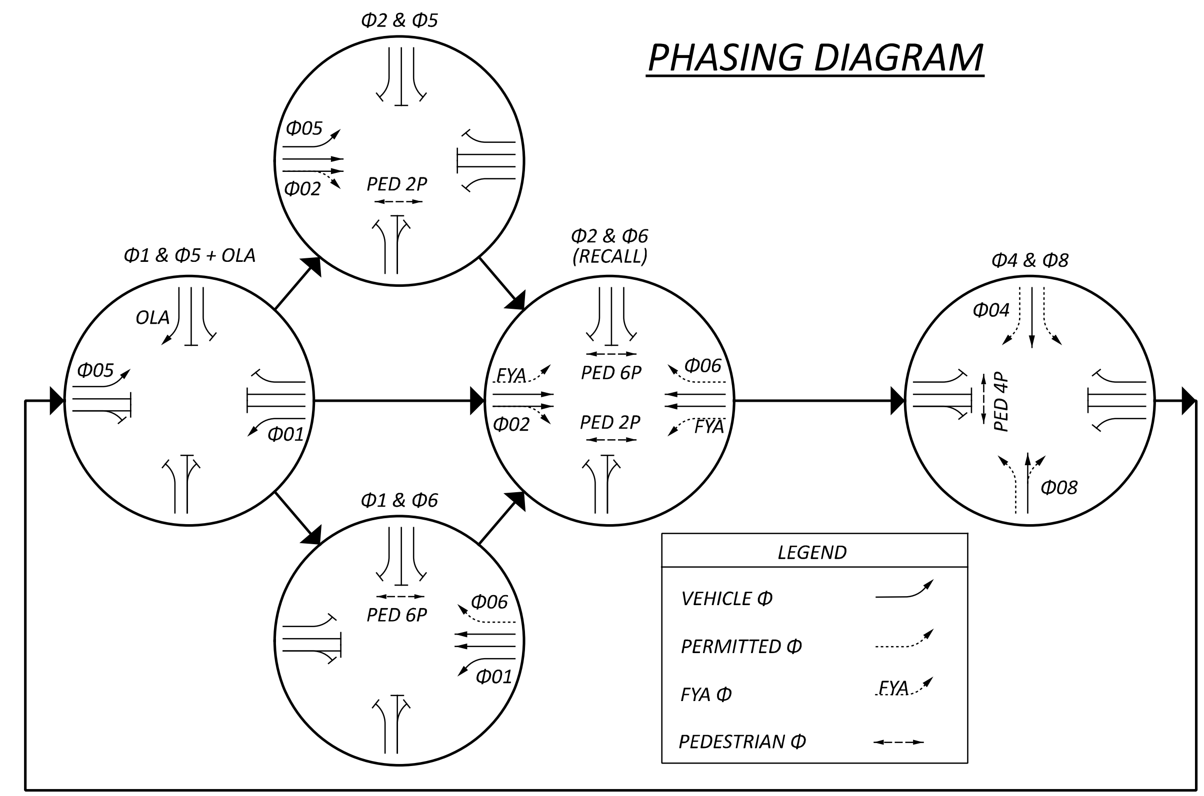
INTERSECTION:	US-22 AT MASON RD								
MAINTAINING AGENCY:	ODOT								
START UP	DUAL ENTRY:	EX	PHASES:		EX				
	REST IN RED:		RING 1	-		RING 2	-		
START IN: EX	OVERLAP			A	B	C	D		
TIME FOR: FLASH , ALL RED (SEC.): EX									
FIRST PHASE(S): EX	PHASES			EX	-	-	-		
COLOR DISPLAYED: EX									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SBL	NB	-	EB	NBL	SB	-	WB
MINIMUM GREEN (INITIAL)	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
MAXIMUM GREEN II	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
YELLOW CHANGE	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
ALL RED CLEARANCE	(SEC.)	EX	EX	-	EX	EX	EX	-	EX
DELAYED GREEN (LPI) #	(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^	(SEC.)	EX	-	-	-	EX	-	-	-
WALK	(SEC.)	-	7	-	7	-	7	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	14	-	18	-	14	-	-
RECALL — MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
RECALL — MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX
RECALL — PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF
MEMORY	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

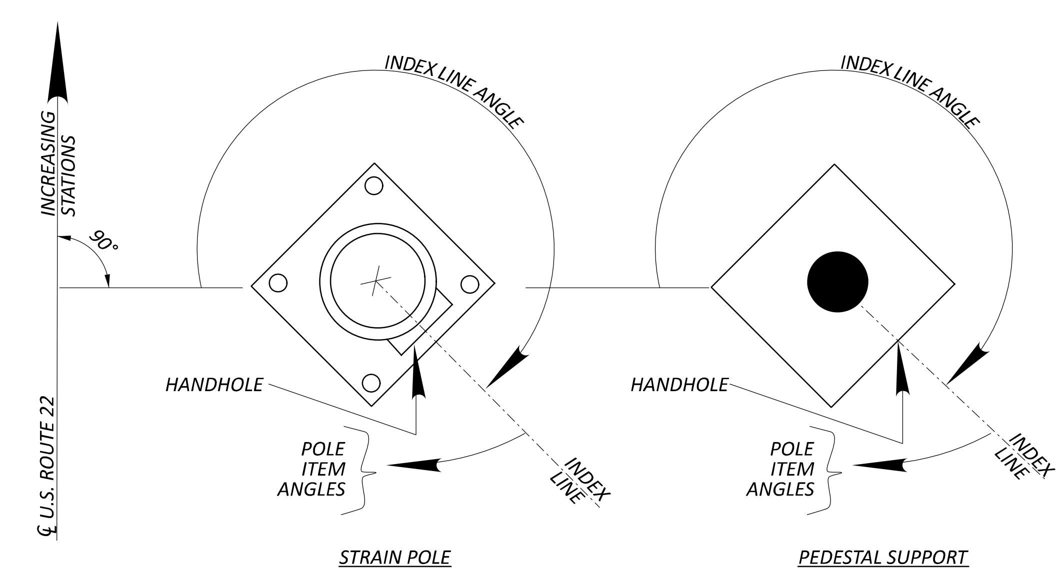
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE: CONTROLLER AND CABINET	US-22 EQUIPMENT: PEDESTRIAN SIGNAL	US-22 EQUIPMENT: PEDESTRIAN PUSH BUTTON	MASON RD EQUIPMENT: PEDESTRIAN SIGNAL	MASON RD EQUIPMENT: PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	EX	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	EX	EX	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	EX	-	130	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	200	-
PS-1	150+54.52	76.10' LT	PEDESTAL		5	DOES NOT APPLY			330	-	-	-	-	30
PS-2	149+75.35	66.17' LT	PEDESTAL		10	DOES NOT APPLY			20	-	-	-	160	160
PS-3	149+57.35	48.18' LT	PEDESTAL		5	DOES NOT APPLY			330	-	-	290	-	-
PS-4	149+65.21	42.73' RT	PEDESTAL		5	DOES NOT APPLY			0	-	-	80	-	-
PS-5	149+90.56	60.29' RT	PEDESTAL		5	DOES NOT APPLY			330	-	-	-	-	30
PS-6	150+51.42	51.82' RT	PEDESTAL		5	DOES NOT APPLY			30	-		-	-	150



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT MASON RD/SYMMES CREEK DR

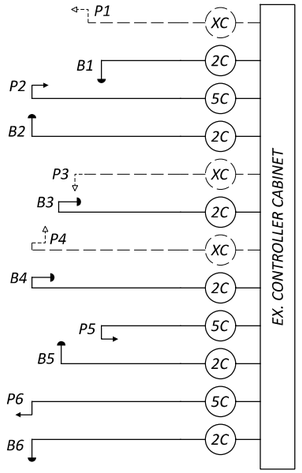
DESIGN AGENCY: CMT CRAWFORD, MURPHY & TILLY, INC. 7777 WASHINGTON VILLAGE DR SUITE 270 DAYTON, OHIO 45459 PH (937) 770-3160 www.cmtengr.com

DESIGNER	GSH
REVIEWER	SAK 01/24/25
PROJECT ID	117237
SHEET	P.45
TOTAL	67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:36 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Signals\Sheets\117237_CD105.dgn

WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

WIRING DETAILS
US 22 AT MASON RD/SYMMES CREEK DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordmurphy.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.46 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:37 AM USER: nbrickner
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SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 4B
6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD
P1, P2, P3, P6

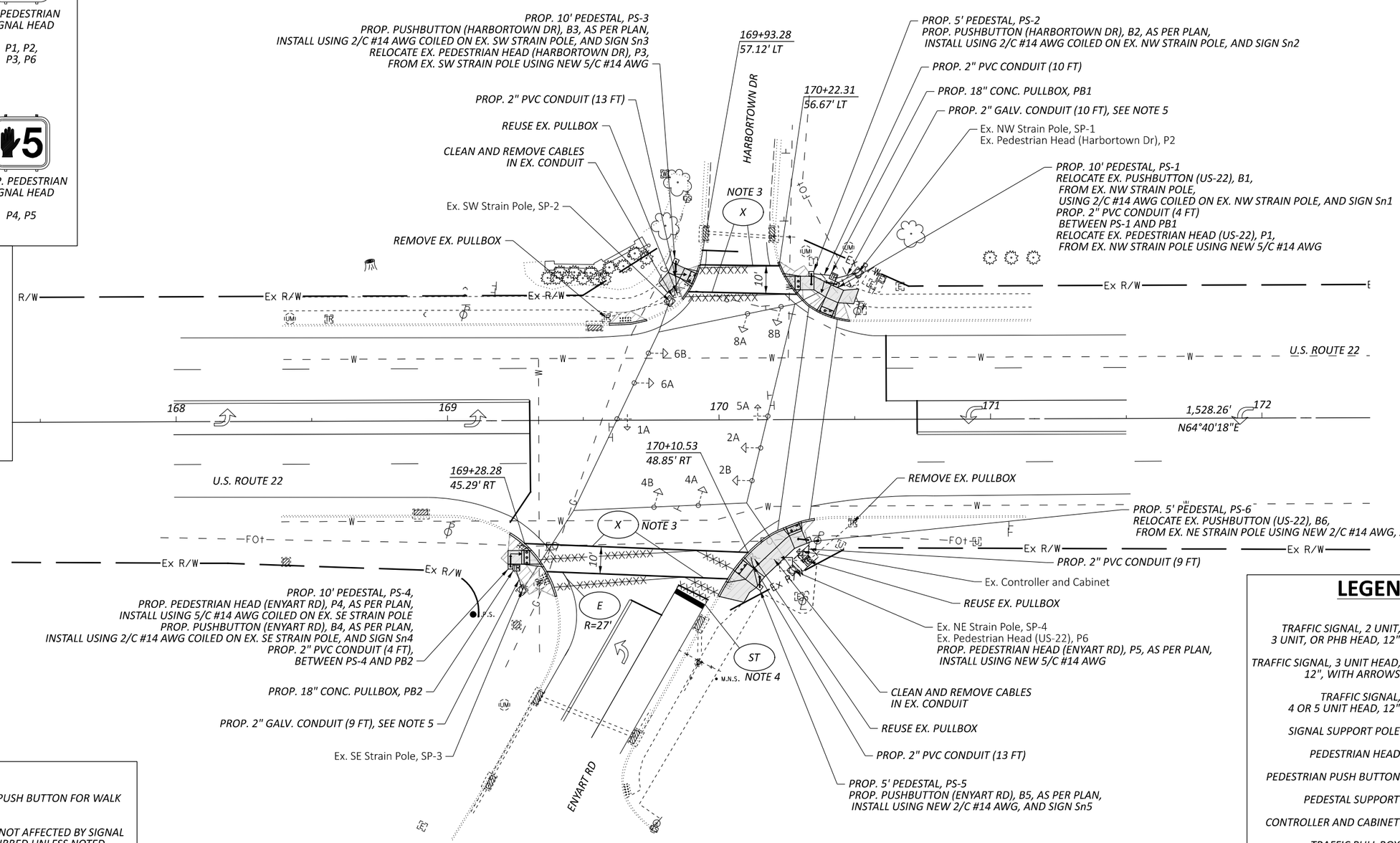
EX. BI-MODAL SIGNAL HEAD
1A, 5A

PROP. PEDESTRIAN SIGNAL HEAD
P4, P5

SIGNS

PROPOSED R10-3E-9
Sn2, Sn4, Sn6

PROPOSED R10-3E-9
Sn1, Sn3, Sn5



LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●	○
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●	○
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●	○
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD	●	○
PEDESTRIAN PUSH BUTTON	—	—
PEDESTAL SUPPORT	⊡	⊡
CONTROLLER AND CABINET	⊠	⊠
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
ITEM 644 EDGE LINE MARKINGS, 6", WHITE	E	
REMOVAL OF PAVEMENT MARKING	XXXX	

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	170+42.35	LT	52.58'	18
PB2	169+28.28	RT	45.29'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.
2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.
4. PROP. STOP LINE MARKINGS SHALL BE PAINTED 4 FT OFFSET OF THE PROP. CROSSWALK MARKING.
5. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.

TRAFFIC SIGNAL PLAN
US 22 AT ENYART RD/HARBORTOWN DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2100
www.cmtengr.com

DESIGNER: GSH
REVIEWER: SAK 01/24/25
PROJECT ID: 117237
SHEET: P.47 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

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SIGNAL TIMING CHART (TEM FORM 496-3)

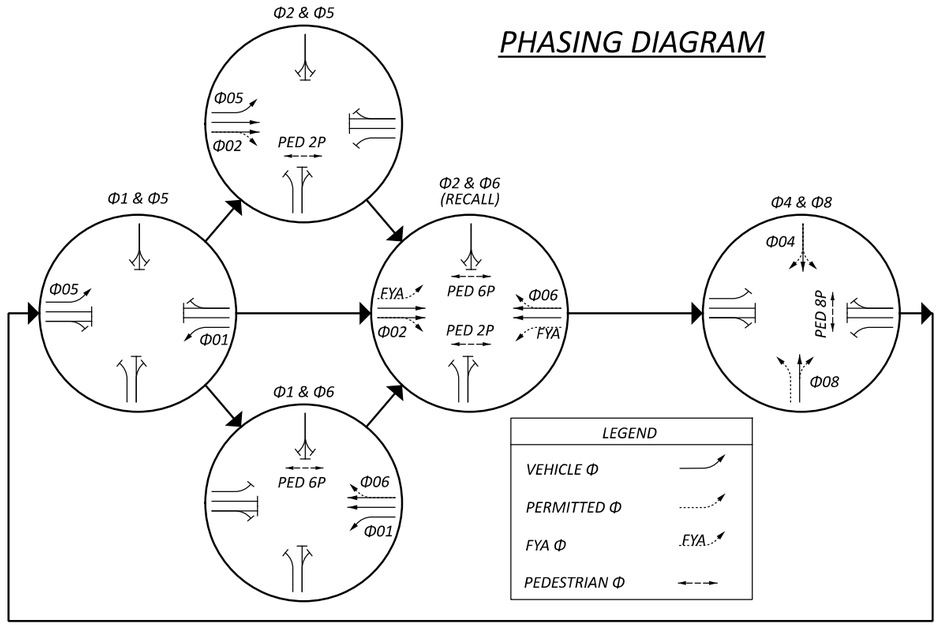
INTERSECTION: US-22 AT ENYART RD											
MAINTAINING AGENCY: ODOT											
START UP			DUAL ENTRY:	EX	PHASES:			EX			
			REST IN RED:		RING 1	-		RING 2	-		
START IN:	EX		OVERLAP				A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):		EX									
FIRST PHASE(S):	EX		PHASES				-	-	-	-	
COLOR DISPLAYED:	EX										
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.								
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8	
DIRECTION			SBL	NB	-	EB	NBL	SB	-	WB	
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-	
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-	
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-	
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-	
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-	
MAXIMUM GREEN I		(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
MAXIMUM GREEN II		(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
YELLOW CHANGE		(SEC.)	EX	EX	-	4.0	EX	EX	-	4.0	
ALL RED CLEARANCE		(SEC.)	EX	EX	-	2.0	EX	EX	-	2.0	
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-	
FLASHING YELLOW ARROW DELAY^		(SEC.)	-	-	-	-	-	-	-	-	
WALK		(SEC.)	-	8	-	-	-	8	-	8	
PEDESTRIAN CLEARANCE		(SEC.)	-	18	-	-	-	18	-	19	
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF	
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

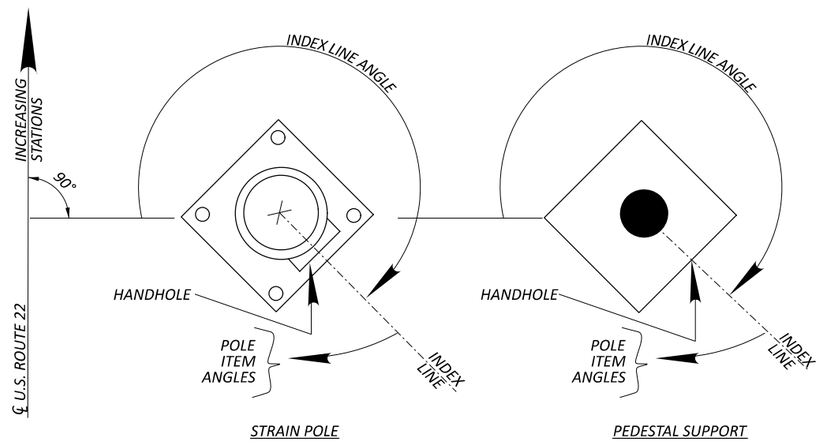
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		ENYART RD EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	EX	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	EX	-	30	-
PS-1	170+43.43	49.73' LT	PEDESTAL	10	DOES NOT APPLY				20	80	80	-	-
PS-2	170+34.20	53.68' LT	PEDESTAL	5	DOES NOT APPLY				0	-	-	-	0
PS-3	169+84.34	58.45' LT	PEDESTAL	10	DOES NOT APPLY				30	-	-	330	330
PS-4	169+23.02	53.77' RT	PEDESTAL	10	DOES NOT APPLY				0	-	-	0	0
PS-5	170+14.76	61.67' RT	PEDESTAL	5	DOES NOT APPLY				40	-	-	-	320
PS-6	170+32.78	44.39' RT	PEDESTAL	5	DOES NOT APPLY				340	-	300	-	-



POLE ORIENTATION

HAM/WAR US 22 16.04/0.00 PED

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SIGNAL TIMING AND POLE DETAILS
US 22 AT ENYART RD/HARBORTOWN DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CLAYTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordmurphy.com

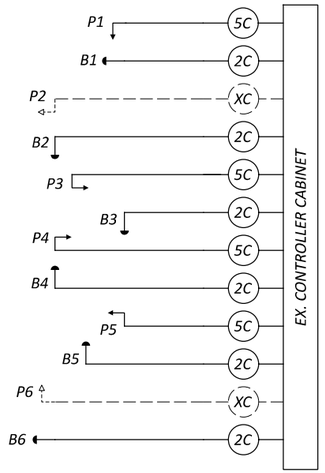
DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.48 TOTAL 67

WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	*EX. PEDESTRIAN SIGNAL CABLE (DND)*
D	*EX. PEDESTRIAN PUSH BUTTON (DND)*	RX	*REUSED EX. PEDESTRIAN SIGNAL CABLE*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	*NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	*NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG*

WIRING DETAILS
US 22 AT ENYART RD/HARBORTOWN DR

US 22

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 BOSTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2303
www.crawfordcmt.com

DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.49 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

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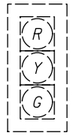
SIGNAL HEADS



EX. SIGNAL HEAD

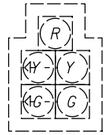
2A, 2B, 4A, 6A, 6B, 8A

EX. PEDESTRIAN SIGNAL HEAD

P1, P2, P3, P4, P5, P6

EX. BI-MODAL SIGNAL HEAD

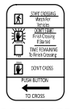
1A, 5A



EX. SIGNAL HEAD

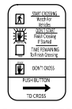
3A, 7A

SIGNS



PROPOSED R10-3E-9

Sn2, Sn4



PROPOSED R10-3E-9

Sn1, Sn3, Sn5, Sn6

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	186+63.42	LT	49.42'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

3. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●	○
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●	○
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●	○
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT	■	□
CONTROLLER AND CABINET		
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT UNION CEMETERY RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7172 REGIONAL VILLAGE DR
SUITE 270
FREDERICK, MD 21703
PH (301)701-2783
www.cmtengr.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.50 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP107 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:45 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

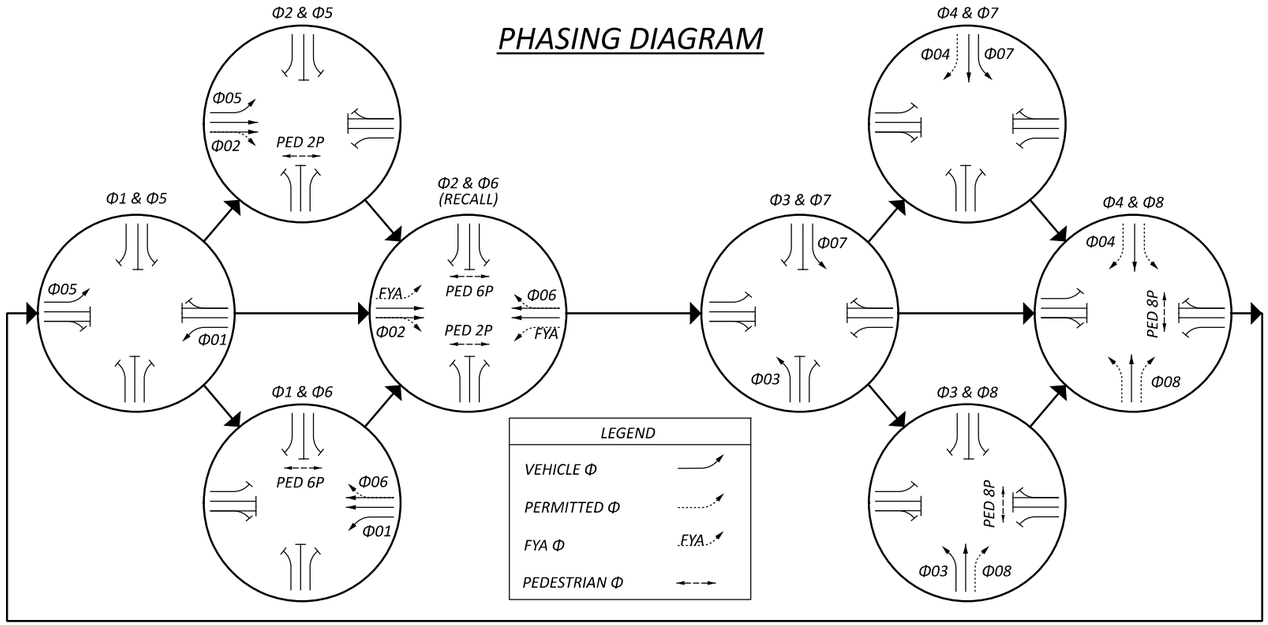
INTERSECTION: US-22 AT UNION CEMETERY RD										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY:	EX	PHASES:			EX		
			REST IN RED:		RING 1	-		RING 2	-	
START IN:	EX		OVERLAP				A	B	C	D
TIME FOR: FLASH , ALL RED (SEC.):		EX								
FIRST PHASE(S):	EX									
COLOR DISPLAYED:	EX		PHASES				-	-	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	WBL	EB	NBL	SB	EBL	WB
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
MAXIMUM GREEN II		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
YELLOW CHANGE		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
ALL RED CLEARANCE		(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-
WALK		(SEC.)	-	7	-	-	-	7	-	7
PEDESTRIAN CLEARANCE		(SEC.)	-	14	-	-	-	14	-	20
RECALL	MAXIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX
	MINIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX
	PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY		(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX

*** VOLUME DENSITY CONTROLS**

 # FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

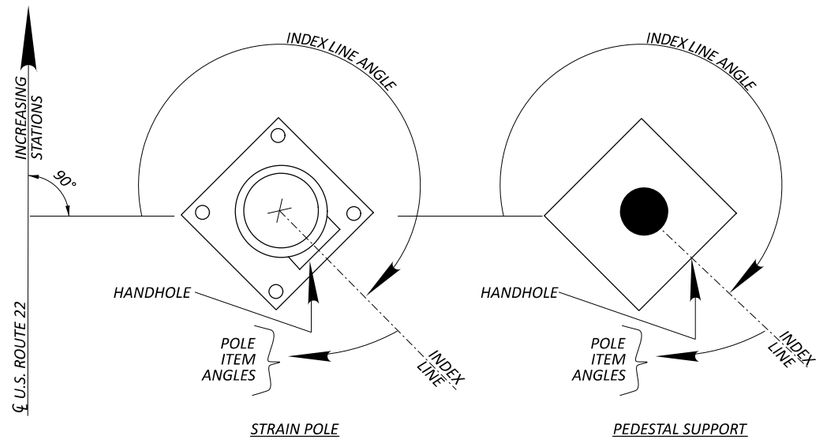
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		UNION CEMETARY RD EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	EX	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	EX	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	EX	140	EX	-
PS-1	186+70.01	45.65' LT	PEDESTAL		10	DOES NOT APPLY			20	70	70	-	-
PS-2	186+48.16	63.99' LT	PEDESTAL		10	DOES NOT APPLY			340	-	-	20	20
PS-3	185+77.19	67.10' LT	PEDESTAL		5	DOES NOT APPLY			30	-	-	-	350
PS-4	185+85.51	63.05' RT	PEDESTAL		5	DOES NOT APPLY			340	-	-	-	20
PS-5	186+63.26	61.63' RT	PEDESTAL		5	DOES NOT APPLY			0	-	-	-	0



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT UNION CEMETERY RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
77 E. MILL STREET, UNION VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)971-2193
www.crawfordgi.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.51 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:46 AM USER: nbrickner
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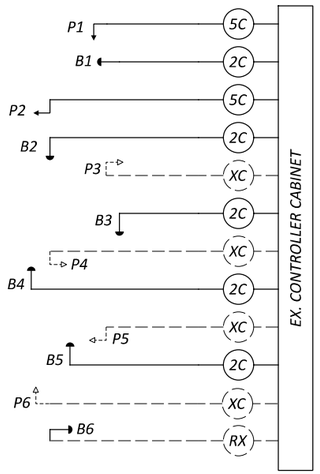
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:47 AM USER: nbrickner
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WIRING DETAILS
US 22 AT UNION CEMETERY RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CASSINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)312-7139
www.cmtengr.com

DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.52 | TOTAL 67

SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 4B
6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD
P1, P4, P5, P6, P7, P8

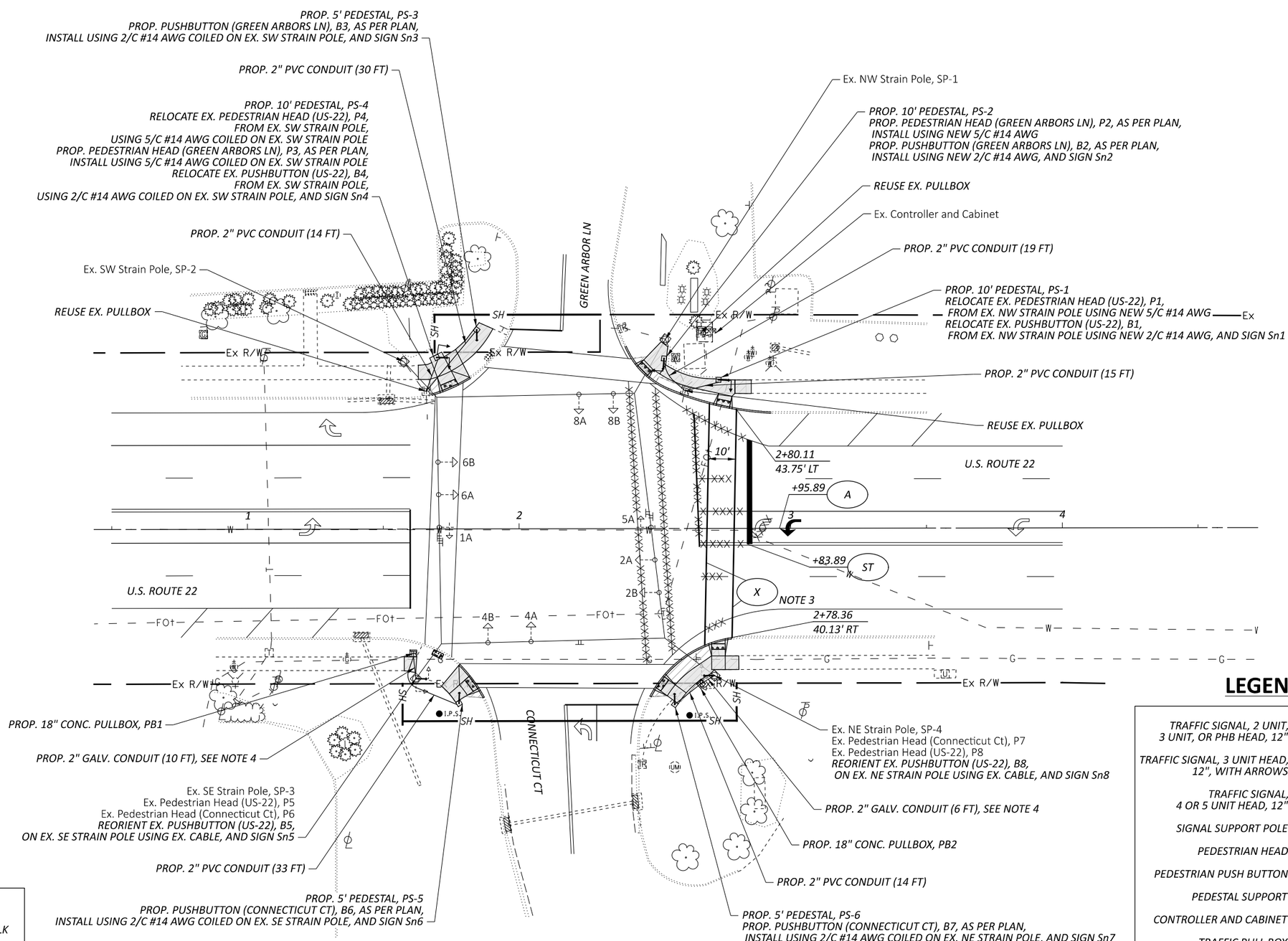
EX. BI-MODAL SIGNAL HEAD
1A, 5A

PROP. PEDESTRIAN SIGNAL HEAD
P2, P3

SIGNS

PROPOSED R10-3E-9
Sn2, Sn4, Sn6, Sn8

PROPOSED R10-3E-9
Sn1, Sn3, Sn5, Sn7



NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 4 EACH.
2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.
4. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	1+61.01	RT	45.80'	18
PB2	2+62.12	RT	58.91'	18
-	-	-	-	-

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●	○
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●	○
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●	○
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD	●	○
PEDESTRIAN PUSH BUTTON	●	○
PEDESTAL SUPPORT	■	□
CONTROLLER AND CABINET	■	□
TRAFFIC PULL BOX	TR	TR
ITEM 644 ARROW MARKINGS	A	
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT GREEN ARBORS LN/CONNECTICUT CR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2303
www.cmtinc.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.53 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP108 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:51 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

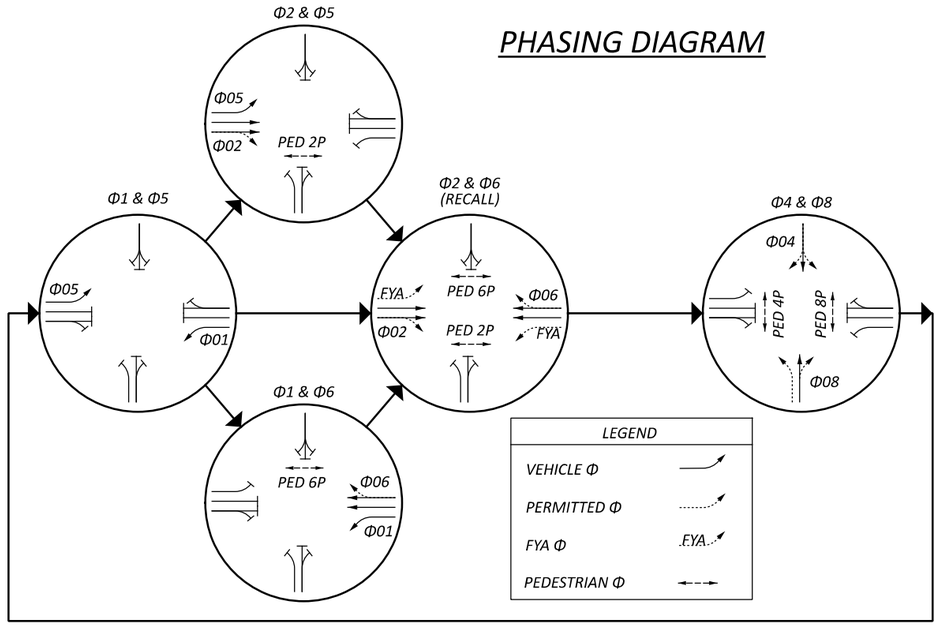
INTERSECTION: US-22 AT GREEN ARBORS LN										
MAINTAINING AGENCY: ODOT										
START UP		DUAL ENTRY:	EX	PHASES:			EX			
		REST IN RED:		RING 1	-		RING 2	-		
START IN:	EX	OVERLAP				A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):	EX									
FIRST PHASE(S):	EX	PHASES				-	-	-	-	
COLOR DISPLAYED:	EX									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.								
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8	
DIRECTION		SBL	NB	-	EB	NBL	SB	-	WB	
MINIMUM GREEN (INITIAL)	(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-	
MAXIMUM INITIAL	*(SEC.)	-	-	-	-	-	-	-	-	
PASSAGE TIME (PRESET GAP)	(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-	
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-	
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-	
MAXIMUM GREEN I	(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
MAXIMUM GREEN II	(SEC.)	EX	EX	-	EX	EX	EX	-	EX	
YELLOW CHANGE	(SEC.)	3.0	5.0	-	EX	3.0	5.0	-	EX	
ALL RED CLEARANCE	(SEC.)	2.5	2.0	-	EX	2.5	2.0	-	EX	
DELAYED GREEN (LPI) #	(SEC.)	-	-	-	-	-	-	-	-	
FLASHING YELLOW ARROW DELAY^	(SEC.)	EX	-	-	-	EX	-	-	-	
WALK	(SEC.)	-	7	-	9	-	7	-	9	
PEDESTRIAN CLEARANCE	(SEC.)	-	15	-	25	-	15	-	25	
RECALL	MAXIMUM (ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	
	MINIMUM (ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	
	PEDESTRIAN (ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF	
MEMORY	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX	

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

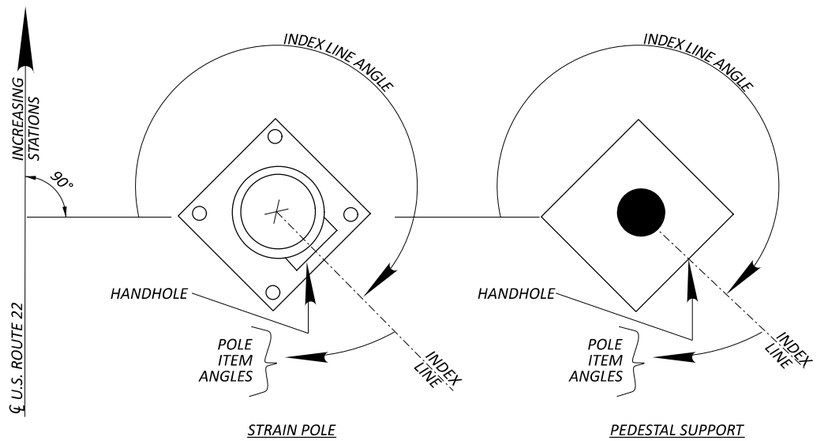
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		GREEN ARBORS LN EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	EX	45	EX	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	EX	320	EX	-
PS-1	2+73.53	54.75' LT	PEDESTAL		10	DOES NOT APPLY			0	270	270	-	-
PS-2	2+53.48	62.63' LT	PEDESTAL		10	DOES NOT APPLY			10	-	-	0	0
PS-3	1+84.52	73.24' LT	PEDESTAL		5	DOES NOT APPLY			40	-	-	-	320
PS-4	1+69.78	63.14' LT	PEDESTAL		10	DOES NOT APPLY			340	300	300	210	-
PS-5	1+77.80	64.17' RT	PEDESTAL		5	DOES NOT APPLY			330	-	-	-	30
PS-6	2+57.22	64.71' RT	PEDESTAL		5	DOES NOT APPLY			40	-	-	-	320



POLE ORIENTATION

HAM/WAR US 22 16.04/0.00 PED

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SIGNAL TIMING AND POLE DETAILS
US 22 AT GREEN ARBORS LN/CONNECTICUT CR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CHAMPION VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordmurphy.com

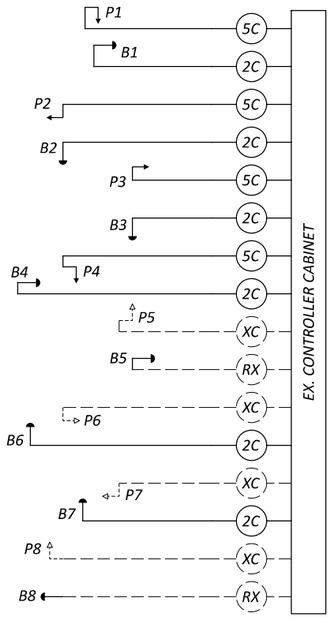
DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.54 | TOTAL 67

WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	*EX. PEDESTRIAN SIGNAL CABLE (DND)*
D	*EX. PEDESTRIAN PUSH BUTTON (DND)*	RX	*REUSED EX. PEDESTRIAN SIGNAL CABLE*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	*NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	*NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG*

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:53 AM USER: nbrickner
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WIRING DETAILS
US 22 AT GREEN ARBORS LN/CONNECTICUT CR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)743-2193
www.cmtengr.com

DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.55 | TOTAL 67

SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 4B, 6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD
P1, P2, P3, P4,

EX. SIGNAL HEAD
1A, 5A

PROP. PEDESTRIAN SIGNAL HEAD
P5, P6

SIGNS

PROPOSED R10-3E-9
Sn1, Sn3, Sn5

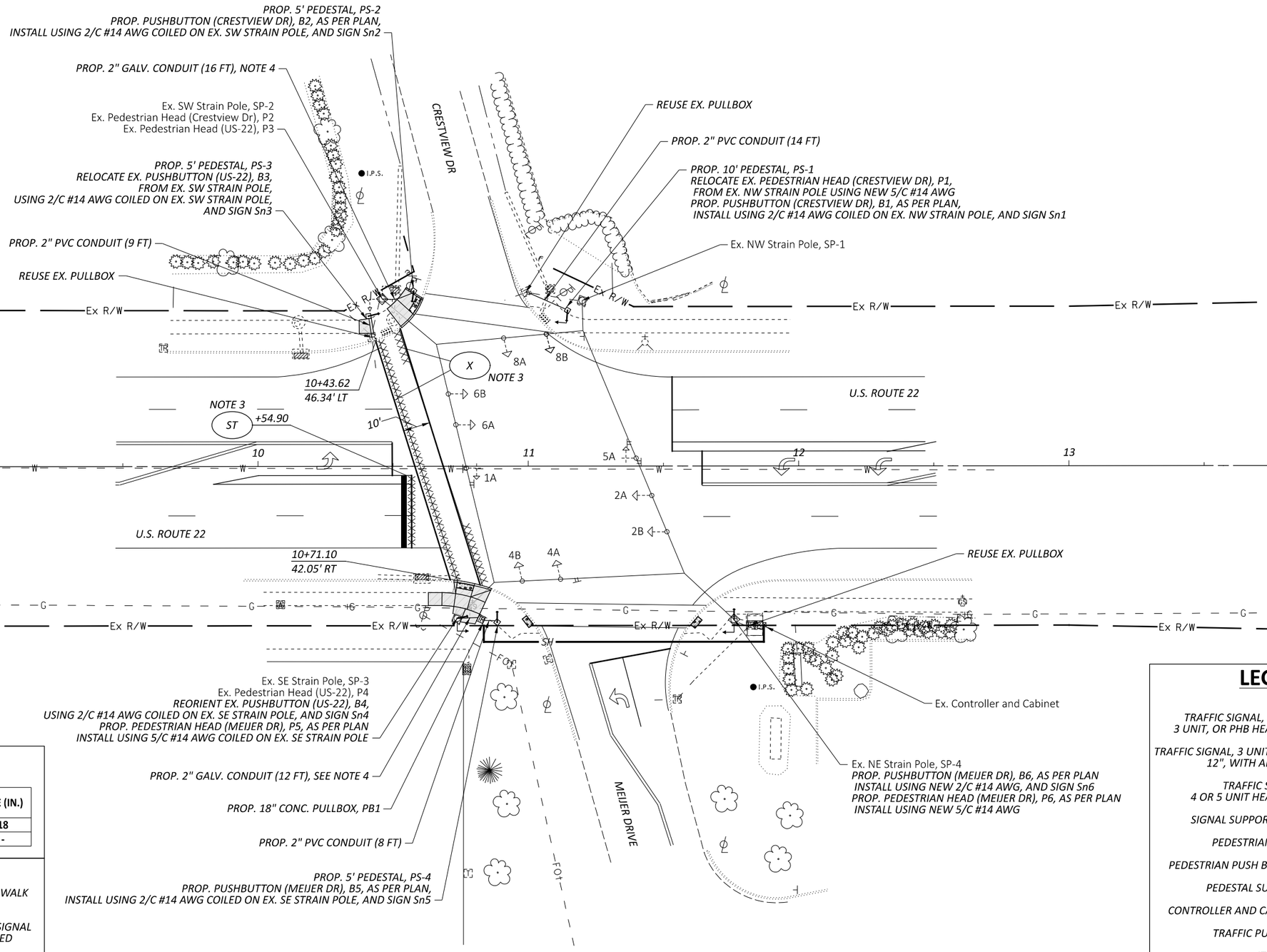
PROPOSED R10-3E-9
Sn2, Sn4, Sn6

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	10+82.50	RT	56.52'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.
2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICTS WITH PROP. PAVEMENT MARKINGS.
4. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.



LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●	○
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●	○
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●	○
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT	■	□
CONTROLLER AND CABINET		
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT CRESTVIEW DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
1770 INDIANOLA AVENUE
SUITE 270
COLUMBUS, OHIO 43459
PH (937)743-2700
www.cmtengr.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.56 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP109 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:57 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

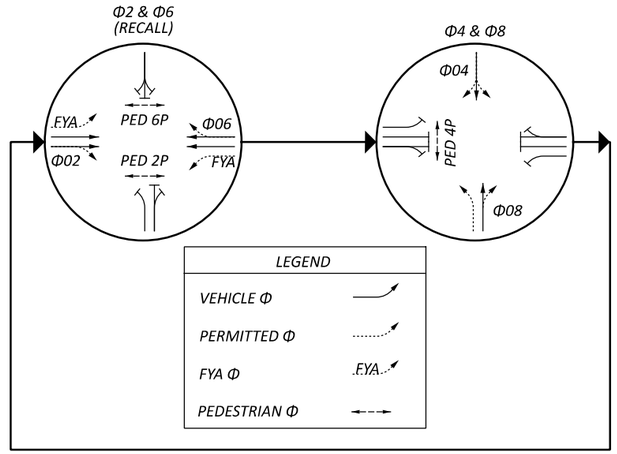
INTERSECTION: US-22 AT CRESTVIEW DR													
MAINTAINING AGENCY: ODOT													
START UP			DUAL ENTRY:	EX	PHASES:			EX					
			REST IN RED:		RING 1		-			RING 2		-	
START IN:	EX		OVERLAP					A	B	C	D		
TIME FOR: FLASH , ALL RED (SEC.):		EX											
FIRST PHASE(S):	EX		PHASES					-	-	-	-		
COLOR DISPLAYED:	EX												
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.										
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8			
DIRECTION			SBL	NB	-	EB	NBL	SB	-	WB			
MINIMUM GREEN (INITIAL)		(SEC.)	-	EX	-	EX	-	EX	-	EX			
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-			
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-			
PASSAGE TIME (PRESET GAP)		(SEC.)	-	EX	-	EX	-	EX	-	EX			
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-			
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-			
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-			
MAXIMUM GREEN I		(SEC.)	-	EX	-	EX	-	EX	-	EX			
MAXIMUM GREEN II		(SEC.)	-	EX	-	EX	-	EX	-	EX			
YELLOW CHANGE		(SEC.)	EX	5.0	-	EX	EX	5.0	-	EX			
ALL RED CLEARANCE		(SEC.)	EX	2.0	-	EX	EX	2.0	-	EX			
DELAYED GREEN (LPI) '		(SEC.)	-	-	-	-	-	-	-	-			
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-			
WALK		(SEC.)	-	8	-	10	-	8	-	-			
PEDESTRIAN CLEARANCE		(SEC.)	-	13	-	25	-	13	-	-			
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX			
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX			
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF			
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX			

*** VOLUME DENSITY CONTROLS**

 # FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

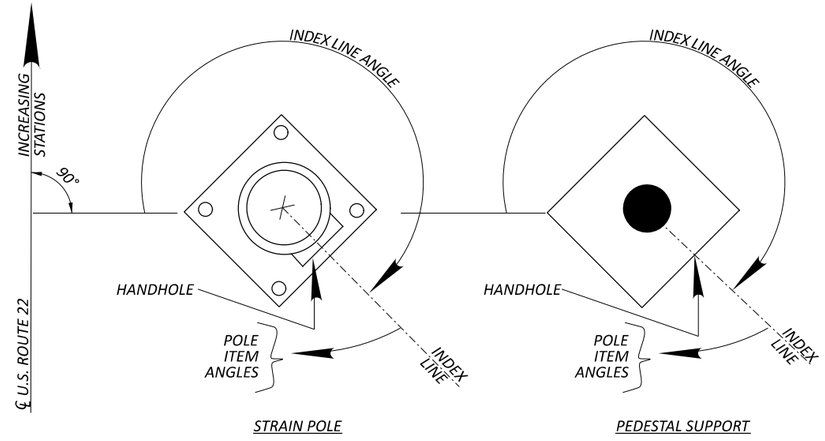
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		CRESTVIEW DR EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	EX	-	EX	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	EX	30	130	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	45	230
PS-1	11+14.55	54.65' LT	PEDESTAL		10	DOES NOT APPLY			30	-	-	340	340
PS-2	10+57.65	64.81' LT	PEDESTAL		5	DOES NOT APPLY			30	-	-	-	340
PS-3	10+40.95	55.58' LT	PEDESTAL		5	DOES NOT APPLY			350	-	260	-	-
PS-4	10+88.43	57.71' RT	PEDESTAL		5	DOES NOT APPLY			40	-	-	-	320



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT CRESTVIEW DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
1771 W. MOUNTAIN VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.cmtengr.com

DESIGNER: GSH
REVIEWER: SAK 01/24/25
PROJECT ID: 117237
SHEET: P.57 TOTAL: 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:58 AM USER: nbrickner
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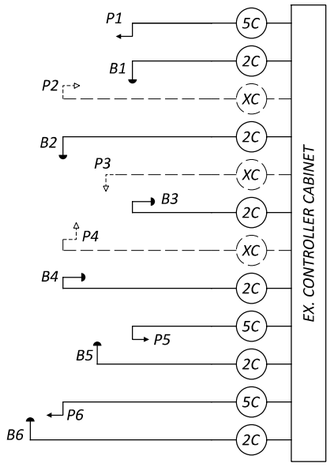
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	*EX. PEDESTRIAN SIGNAL CABLE (DND)*
D	*EX. PEDESTRIAN PUSH BUTTON (DND)*	RX	*REUSED EX. PEDESTRIAN SIGNAL CABLE*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	*NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	*NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG*

WIRING DETAILS
US 22 AT CRESTVIEW DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7777 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
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DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.58 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:36:59 AM USER: nbrickner
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SIGNAL HEADS

EX. SIGNAL HEAD

2A, 2B, 4A, 4B
6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD

P3, P4,
P5, P6

EX. BI-MODAL SIGNAL HEAD

1A, 5A

PROP. PEDESTRIAN SIGNAL HEAD

P1, P2,

SIGNS

PROPOSED R10-3E-9

Sn1, Sn3, Sn5

PROPOSED R10-3E-9

Sn2, Sn4, Sn6

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	59+03.92	RT	53.75'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

3. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.

Ex. SW Strain Pole, SP-2
Ex. Pedestrian Head (US-22), P3
PROP. PUSHBUTTON (TOWNSLEY DR), B2, AS PER PLAN
INSTALL USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn2
PROP. PEDESTRIAN HEAD (TOWNSLEY DR), P2, AS PER PLAN
INSTALL USING 5/C #14 AWG COILED ON EX. SW STRAIN POLE

PROP. 5' PEDESTAL, PS-2
RELOCATE EX. PUSHBUTTON (US-22), B3,
FROM EX. SW STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn3

PROP. 2" PVC CONDUIT (24 FT)

REUSE EX. PULLBOX

TOWNSLEY DR

Ex. NW Strain Pole, SP-1

Ex. Controller and Cabinet

REUSE EX. PULLBOX

PROP. 2" PVC CONDUIT (11 FT)

PROP. 10' PEDESTAL, PS-1
PROP. PEDESTRIAN HEAD (TOWNSLEY DR), P1, AS PER PLAN,
INSTALL USING NEW 5/C #14 AWG
PROP. PUSHBUTTON (TOWNSLEY DR), B1, AS PER PLAN,
INSTALL USING NEW 2/C #14 AWG, AND SIGN Sn1

Ex R/W

8A 8B

6B 6A 1A

5A 2A 2B

4B 4A

U.S. ROUTE 22

57 58 59 60 61

3,247.49'
N42°39'24"E

PROP. 10' PEDESTAL, PS-3
RELOCATE EX. PUSHBUTTON (US-22), B4,
FROM EX. SE STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SE STRAIN POLE, AND SIGN Sn4
PROP. 2" PVC CONDUIT (4 FT),
BETWEEN PS-3 AND PB1
RELOCATE EX. PEDESTRIAN HEAD (TOWNSLEY DR), P5,
FROM EX. SE STRAIN POLE USING NEW 5/C #14 AWG

Ex. SE Strain Pole, SP-3

PROP. 2" GALV. CONDUIT (6 FT), SEE NOTE 3

PROP. 18" CONC. PULLBOX, PB1

PROP. 2" PVC CONDUIT (11 FT)

PROP. 10' PEDESTAL, PS-4
PROP. PUSHBUTTON (TOWNSLEY DR), B5, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SE STRAIN POLE, AND SIGN Sn5
RELOCATE EX. PEDESTRIAN HEAD (US-22), P4,
FROM EX. SE STRAIN POLE,
USING 5/C #14 AWG COILED ON EX. STRAIN POLE

Ex. NE Strain Pole, SP-4
Ex. Pedestrian Head (Townsley Dr), P6
PROP. PUSHBUTTON (TOWNSLEY DR), B6, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. NE STRAIN POLE, AND SIGN Sn6

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
CONTROLLER AND CABINET		
TRAFFIC PULL BOX		
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT TOWNSLEY DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 DEARBORN VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2193
www.crawfordcmt.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.59 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED
MODEL: 99999_CP110 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:03 AM USER: nbrickner
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SIGNAL TIMING CHART (TEM FORM 496-3)

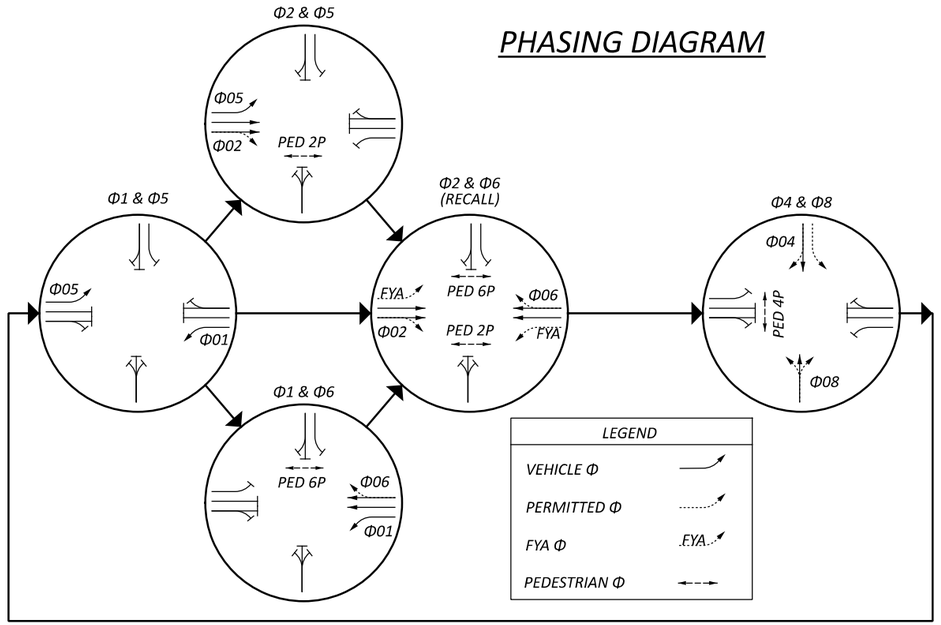
INTERSECTION: US-22 AT TOWNSLEY DR															
MAINTAINING AGENCY: ODOT															
START UP			DUAL ENTRY:	EX	PHASES:			EX							
			REST IN RED:		RING 1	-			RING 2	-					
START IN:	EX		OVERLAP					A	B	C	D				
TIME FOR: FLASH , ALL RED (SEC.):		EX													
FIRST PHASE(S):	EX		PHASES					-	-	-	-				
COLOR DISPLAYED:	EX														
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.												
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8					
DIRECTION			SBL	NB	-	EB	NBL	SB	-	WB					
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-					
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-					
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-					
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-					
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-					
MAXIMUM GREEN I		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
MAXIMUM GREEN II		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
YELLOW CHANGE		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
ALL RED CLEARANCE		(SEC.)	EX	EX	-	EX	EX	EX	-	EX					
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-					
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-					
WALK		(SEC.)	-	8	-	9	-	8	-	-					
PEDESTRIAN CLEARANCE		(SEC.)	-	10	-	21	-	10	-	-					
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX					
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX					
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	-	OFF					
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	-	EX					

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

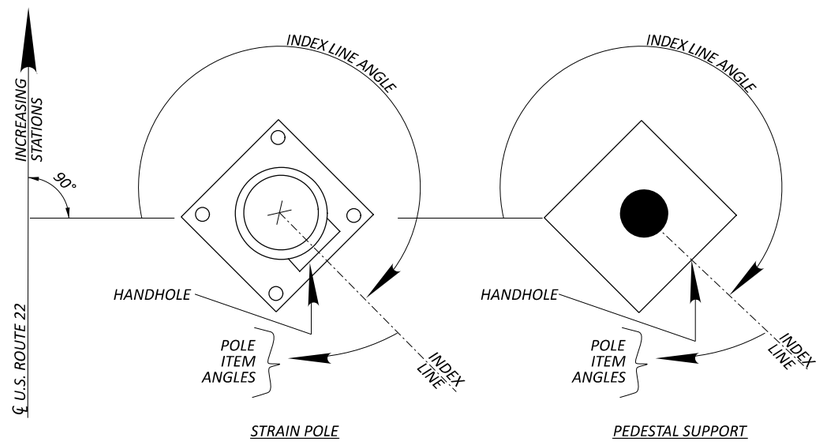
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		TOWNSLEY DR EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	EX	-	40	40
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	EX	40
PS-1	59+84.71	53.82' LT	PEDESTAL		10	DOES NOT APPLY			40	-	-	320	320
PS-2	59+02.78	46.87' LT	PEDESTAL		5	DOES NOT APPLY			0	-	270	-	-
PS-3	59+04.27	51.60' RT	PEDESTAL		10	DOES NOT APPLY			0	-	90	0	-
PS-4	59+14.60	54.77' RT	PEDESTAL		10	DOES NOT APPLY			30	240	-	-	330



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT TOWNSLEY DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 CLUB HOUSE ROAD, SUITE 270
DAYTON, OHIO 45459
PH (937)701-2705
www.crawfordmurphy.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.60 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:05 AM USER: nbrickner
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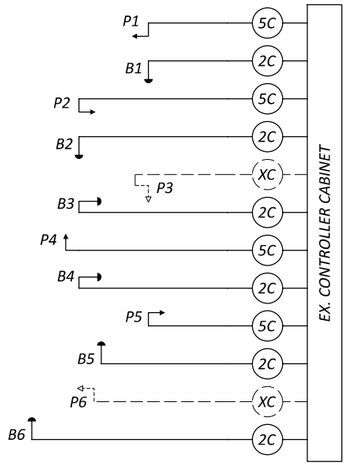
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

WIRING DETAILS
US 22 AT TOWNSLEY DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7171 WALTON VILLAGE DR
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DAYTON, OHIO 45459
PH (937)701-2193
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DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.61 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:05 AM USER: nbrickner
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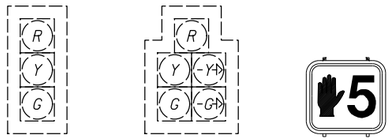
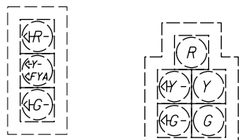
SIGNAL HEADS



EX. SIGNAL HEAD
2A, 2B, 6A, 6B, 8A

EX. SIGNAL HEAD
4A, 8B

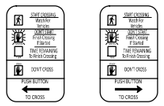
EX. PEDESTRIAN SIGNAL HEAD
P1, P2, P3, P4, P5, P6



EX. BI-MODAL SIGNAL HEAD
1A, 5A

EX. SIGNAL HEAD
3A, 7A

SIGNS



PROPOSED R10-3E-9
Sn2, Sn4, Sn6

PROPOSED R10-3E-9
Sn1, Sn3, Sn5

PULLBOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	73+82.86	LT	64.01'	18
PB2	72+22.21	RT	73.73'	18
PB3	73+23.75	RT	61.46'	18
-	-	-	-	-

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.
2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.
3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.
4. CONTRACTOR TO ACCESS POLE BASE TO ESTABLISH CONDUIT CONNECTIONS.
5. PUSHBUTTON SHALL BE INSTALLED 3.5' TO 4.0' ABOVE THE ADJACENT CURB RAMP ELEVATION.

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●	○
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●	○
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●	○
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD		
PEDESTRIAN PUSH BUTTON	—	→
PEDESTAL SUPPORT	▫	▫
CONTROLLER AND CABINET		
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT COLUMBIA RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR.
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2100
www.cmtengr.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.62 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP111 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:09 AM USER: nbrickner
L:\ODOT\20068303-00_VAR-STW_SafetyDesign2020-6\08_HAM-22\117237\400-Engineering\Signals\Sheets\117237_CP111.dgn

SIGNAL TIMING CHART (TEM FORM 496-3)

INTERSECTION: US-22 AT COLUMBIA RD										
MAINTAINING AGENCY: ODOT										
START UP		DUAL ENTRY:	EX	PHASES:			EX			
		REST IN RED:		RING 1	-		RING 2	-		
START IN:	EX	OVERLAP				A	B	C	D	
TIME FOR: FLASH , ALL RED (SEC.):	EX									
FIRST PHASE(S):	EX	PHASES				EX	EX	-	-	
COLOR DISPLAYED:	EX									

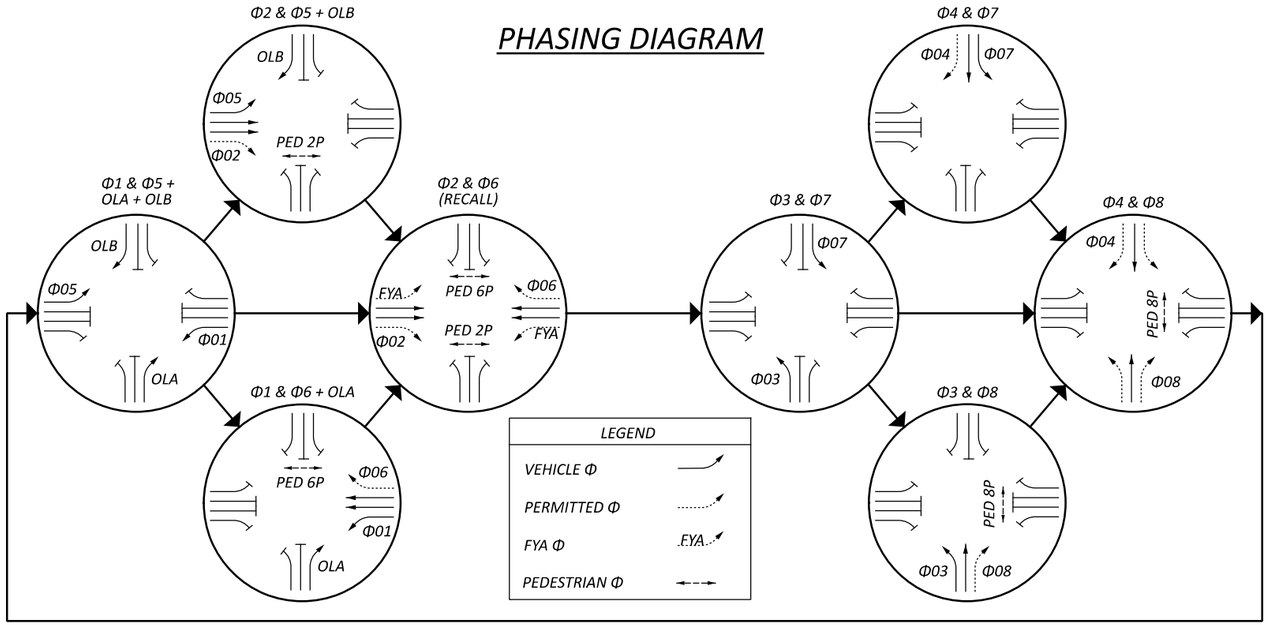
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SBL	NB	WBL	EB	NBL	SB	EBL	WB
MINIMUM GREEN (INITIAL)	(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
MAXIMUM GREEN II	(SEC.)	EX	EX	EX	EX	EX	EX	EX	EX
YELLOW CHANGE	(SEC.)	3.0	5.0	EX	EX	3.0	5.0	EX	EX
ALL RED CLEARANCE	(SEC.)	3.5	2.0	EX	EX	3.5	2.0	EX	EX
DELAYED GREEN (LPI) '	(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^	(SEC.)	EX	-	-	-	EX	-	-	-
WALK	(SEC.)	-	8	-	-	-	8	-	9
PEDESTRIAN CLEARANCE	(SEC.)	-	22	-	-	-	16	-	27
RECALL — MAXIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX
RECALL — MINIMUM	(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX
RECALL — PEDESTRIAN	(ON/OFF)	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY	(ON/OFF)	EX	EX	EX	EX	EX	EX	EX	EX

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

2. EXISTING VEHICLE DETECTION CONFIGURATION AND SETTINGS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION SHALL BE RETAINED.

3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

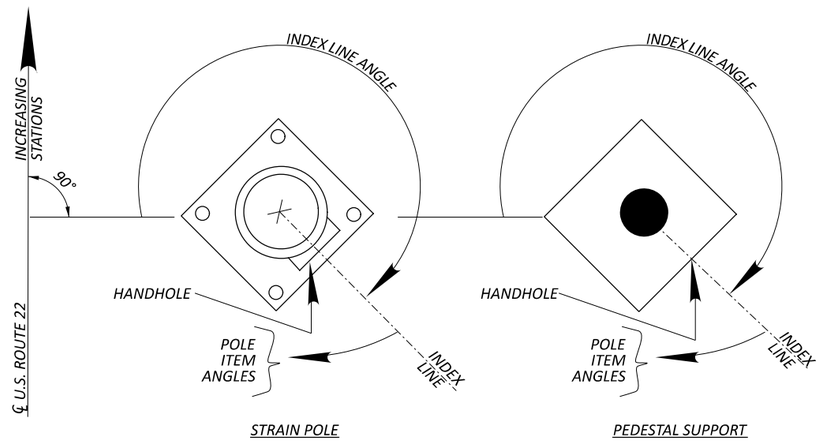
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		COLUMBIA RD EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	EX	60	-	-
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
PS-1	73+77.22	71.41' LT	PEDESTAL		10	DOES NOT APPLY			350	-	-	0	0
PS-2	72+88.63	67.53' LT	PEDESTAL		10	DOES NOT APPLY			20	-	-	340	340
PS-3	72+20.55	70.01' RT	PEDESTAL		10	DOES NOT APPLY			320	-	-	30	30
PS-4	73+22.36	59.79' RT	PEDESTAL		10	DOES NOT APPLY			330	330	-	-	20
PS-5	73+32.70	51.91' RT	PEDESTAL		10	DOES NOT APPLY			350	-	310	0	



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT COLUMBIA RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
377 GLENN HIGHWAY, SUITE 270
CINCINNATI, OHIO 45246
PH (937)912-7199
www.crawfordmurphy.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.63 TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:10 AM USER: nbrickner
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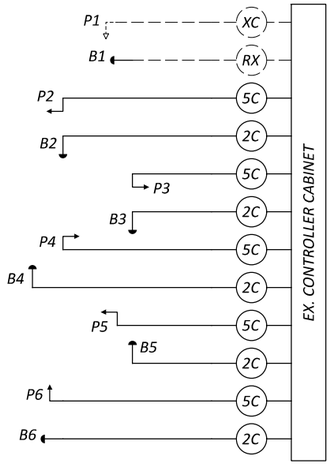
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
PED	W	Φ8 PED/ LS 8P G	OUT
Φ8 PED	DW	Φ8 PED/ LS 8P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	EX. PEDESTRIAN SIGNAL CABLE (DND)
D	EX. PEDESTRIAN PUSH BUTTON (DND)	RX	REUSED EX. PEDESTRIAN SIGNAL CABLE
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

WIRING DETAILS
US 22 AT COLUMBIA RD

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7171 CLEVELAND AVENUE, SUITE 270
COLUMBUS, OHIO 43235
PH (937)767-2193
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DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.64 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:11 AM USER: nbrickner
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SIGNAL HEADS

EX. SIGNAL HEAD
2A, 2B, 4A, 6A, 6B, 8A, 8B

EX. PEDESTRIAN SIGNAL HEAD
P3, P4,

PROP. PEDESTRIAN SIGNAL HEAD
P1, P2, P5, P6

EX. BI-MODAL SIGNAL HEAD
1A, 5A

EX. SIGNAL HEAD
7A

SIGNS

PROPOSED R10-3E-9
Sn1, Sn3, Sn5

PROPOSED R10-3E-9
Sn2, Sn4, Sn6

REUSE EX. PULLBOX

PROP. 2" PVC CONDUIT (28 FT)

Ex. SW Strain Pole, SP-2

PROP. 10' PEDESTAL, PS-1
PROP. PEDESTRIAN HEAD (LANDEN DR), P2, AS PER PLAN,
INSTALL USING 5/C #14 AWG COILED ON EX. SW STRAIN POLE
PROP. PUSHBUTTON (LANDEN DR), B2, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn2

PROP. 2" PVC CONDUIT (41 FT)

PROP. 10' PEDESTAL, PS-2
RELOCATE EX. PEDESTRIAN HEAD (US-22), P3,
FROM EX. SW STRAIN POLE,
USING 5/C #14 AWG COILED ON EX. SW STRAIN POLE
RELOCATE EX. PUSHBUTTON (US-22), B3,
FROM EX. SW STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SW STRAIN POLE, AND SIGN Sn3

Ex. NW Strain Pole, SP-1
PROP. PEDESTRIAN HEAD (LANDEN DR), P1, AS PER PLAN,
INSTALL USING 5/C #14 AWG COILED ON EX. NW STRAIN POLE
PROP. PUSHBUTTON (LANDEN DR), B1, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. NW STRAIN POLE, AND SIGN Sn1

LANDEN DR

M.N.S.

I.P.S.

Ex R/W

FO†

97+28.67
41.00' LT

NOTE 3 X

ST +17.21

NOTE 3

10'

8A 8B 6B 6A 1A 5A 2B 2A 4A 7A

96 97 98 99 100

U.S. ROUTE 22

2'

97+35.54
45.00' RT

97+91.22
50.17' RT

NOTE 3 X

10'

REUSE EX. PULLBOX

Ex. SE Strain Pole, SP-3

PROP. 2" PVC CONDUIT (18 FT)

PROP. 10' PEDESTAL, PS-3
RELOCATE EX. PEDESTRIAN HEAD (US-22), P4,
FROM EX. SE STRAIN POLE,
USING 5/C #14 AWG COILED ON EX. SE STRAIN POLE
PROP. PEDESTRIAN HEAD (LANDEN DR), P5, AS PER PLAN,
INSTALL USING 5/C #14 AWG COILED ON EX. SE STRAIN POLE
RELOCATE EX. PUSHBUTTON (US-22), B4,
FROM EX. SE STRAIN POLE,
USING 2/C #14 AWG COILED ON EX. SE STRAIN POLE, AND SIGN Sn4

PROP. 2" PVC CONDUIT (37 FT)

PROP. 5' PEDESTAL, PS-4
PROP. PUSHBUTTON (LANDEN DR), B5, AS PER PLAN,
INSTALL USING 2/C #14 AWG COILED ON EX. SE STRAIN POLE, AND SIGN Sn5

97+53.19
52.83' RT

Ex. Controller and Cabinet

REUSE EX. PULLBOX

Ex. NE Strain Pole, SP-4
PROP. PEDESTRIAN HEAD (LANDEN DR), P6, AS PER PLAN
INSTALL USING NEW 5/C #14 AWG

PROP. 2" PVC CONDUIT (17 FT)

PROP. 5' PEDESTAL, PS-5
PROP. PUSHBUTTON (LANDEN DR), B6, AS PER PLAN,
INSTALL USING NEW 2/C #14 AWG, AND SIGN Sn6

LEGEND

	PR.	EX.
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"	●→	○→
TRAFFIC SIGNAL, 3 UNIT HEAD, 12", WITH ARROWS	●┼	○┼
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	●┼→	○┼→
SIGNAL SUPPORT POLE	■	□
PEDESTRIAN HEAD	┐●	┐○
PEDESTRIAN PUSH BUTTON	─	─
PEDESTAL SUPPORT	⊡	⊡
CONTROLLER AND CABINET	⊠	⊠
TRAFFIC PULL BOX	TR	TR
ITEM 644 CROSSWALK MARKINGS	X	
ITEM 644 STOP LINE	ST	
REMOVAL OF PAVEMENT MARKING	XXXX	

NOTES:

1. REMOVE ALL EXISTING "PUSH BUTTON FOR WALK SIGNAL" SIGNS - 2 EACH.

2. EX. SIGNAL EQUIPMENT NOT AFFECTED BY SIGNAL WORK SHALL NOT BE DISTURBED UNLESS NOTED OTHERWISE.

3. CONTRACTOR SHALL REMOVE EX. PAVEMENT MARKINGS THAT CONFLICT WITH PROP. PAVEMENT MARKINGS.

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC SIGNAL PLAN
US 22 AT LANDEN DR

HAM/WAR US 22 16.04/0.00 PED

MODEL: 99999_CP112 PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:16 AM USER: nbrickner
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DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
7775 WASHINGTON VILLAGE DR
SUITE 270
DAYTON, OHIO 45459
PH (937)701-2703
www.cmtengr.com

DESIGNER GSH
REVIEWER SAK 01/24/25
PROJECT ID 117237
SHEET P.65 TOTAL 67

SIGNAL TIMING CHART (TEM FORM 496-3)

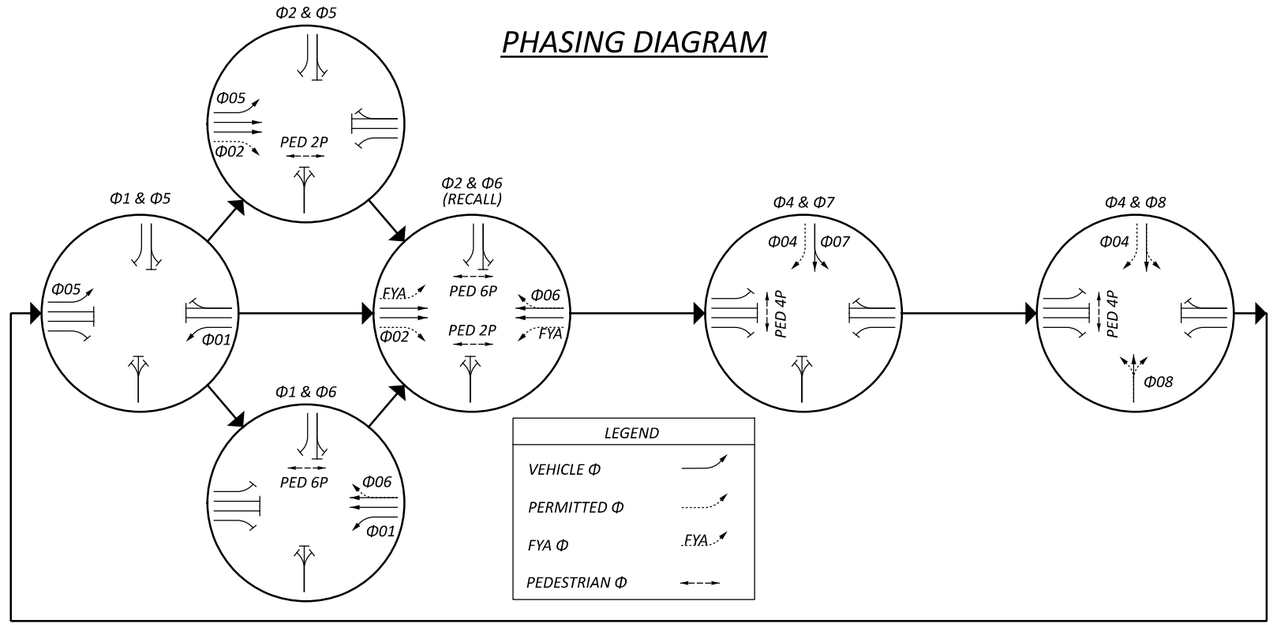
INTERSECTION: US-22 AT LANDEN DR										
MAINTAINING AGENCY: ODOT										
START UP			DUAL ENTRY:	EX	PHASES:			EX		
			REST IN RED:		RING 1	-		RING 2	-	
START IN:	EX		OVERLAP				A	B	C	D
TIME FOR: FLASH , ALL RED (SEC.):		EX								
FIRST PHASE(S):	EX		PHASES				-	-	-	-
COLOR DISPLAYED:	EX									
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SBL	NB	-	EB	NBL	SB	EBL	WB
MINIMUM GREEN (INITIAL)		(SEC.)	EX	EX	-	EX	EX	EX	EX	EX
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		*(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	EX	EX	-	EX	EX	EX	EX	EX
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	EX	EX	-	EX	EX	EX	EX	EX
MAXIMUM GREEN II		(SEC.)	EX	EX	-	EX	EX	EX	EX	EX
YELLOW CHANGE		(SEC.)	3.0	5.0	-	EX	3.0	5.0	-	EX
ALL RED CLEARANCE		(SEC.)	2.5	2.0	-	EX	2.5	2.0	-	EX
DELAYED GREEN (LPI) #		(SEC.)	-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^		(SEC.)	EX	-	-	-	EX	-	-	-
WALK		(SEC.)	-	8	-	9	-	8	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	17	-	23	-	17	-	-
RECALL	MAXIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	EX	EX
	MINIMUM	(ON/OFF)	EX	EX	-	EX	EX	EX	EX	EX
	PEDESTRIAN	(ON/OFF)	OFF	OFF	-	OFF	OFF	OFF	OFF	OFF
MEMORY		(ON/OFF)	EX	EX	-	EX	EX	EX	EX	EX

* VOLUME DENSITY CONTROLS

FOR CROSSINGS WITH PEDESTRIAN PUSHBUTTONS, LPI'S (LEADING PEDESTRIAN INTERVALS) MAY BE IMPLEMENTED (3-6 SEC.) IN ACCORDANCE WITH LPI DURATION TIME PER THE ODOT SIGNAL CALCULATIONS - CLEARANCE INTERVALS SPREADSHEET

^ WHEN IMPLEMENTING FYA, A MINIMUM 3 SEC. DELAY SHALL BE PROGRAMMED PER FYA PHASE.

PHASING DIAGRAM



NOTES:

1. PHASING DIAGRAM SHOWN ARE BASED ON AVAILABLE RECORD PLANS OR CONTROLLER TIMING OUTPUTS. THE CONTRACTOR SHALL RETAIN ALL EXISTING TIMING AND PHASING PARAMETERS CODED IN THE CONTROLLER AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE AFFECTED BY PROPOSED TIMING.

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3. COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.

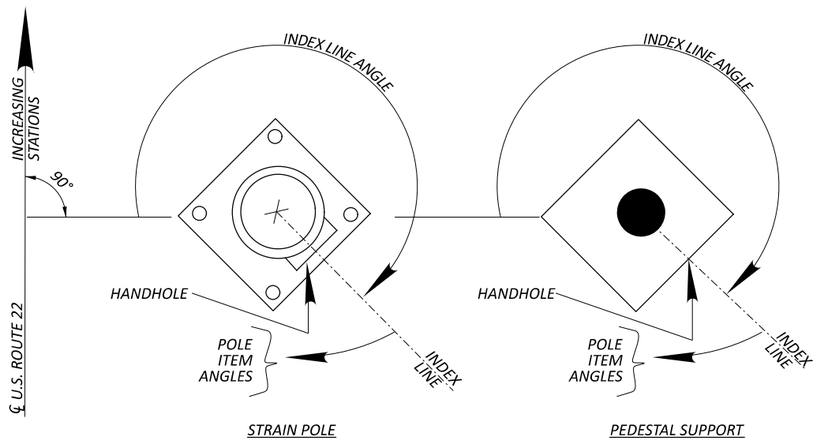
4. ANGLES SHOWN IN THE STRAIN POLE TABLE ARE FOR REFERENCE ONLY. PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS SHALL BE INSTALLED PERPENDICULAR TO THE CORRESPONDING CROSSWALK AS SHOWN IN THE PLANS.

5. INDEX LINE PASSES THROUGH THE CENTER OF THE HANDHOLE.

6. TOP OF PEDESTAL FOUNDATION SHALL BE FLUSH WITH ADJACENT CURB OR SIDEWALK.

STRAIN POLE TABLE (TEM FIGURE 498-36)

POLE NO.	STATION	OFFSET	TYPE	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION ELEV. (SEE NOTE 6)	SPAN WIRE ATTACHED HEIGHT	INDEX LINE ANGLE (DEG.)	PEDESTAL ANGLE (DEG.)	ANGLES (DEG.) FROM US-22 INDEX LINE			
										US-22 EQUIPMENT		LANDEN DR EQUIPMENT	
										PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON	PEDESTRIAN SIGNAL	PEDESTRIAN PUSH BUTTON
SP-1	EXISTING		SIGNAL	EXISTING					N/A	-	-	140	320
SP-2	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-3	EXISTING		SIGNAL	EXISTING					N/A	-	-	-	-
SP-4	EXISTING		SIGNAL	EXISTING					N/A	-	-	40	-
PS-1	97+30.43	63.29' LT	PEDESTAL		10	DOES NOT APPLY			30	-	-	330	330
PS-2	97+18.73	53.25' LT	PEDESTAL		10	DOES NOT APPLY			330	300	300	-	-
PS-3	97+27.61	58.12' RT	PEDESTAL		10	DOES NOT APPLY			10	80	80	170	-
PS-4	97+42.69	65.75' RT	PEDESTAL		5	DOES NOT APPLY			40	-	-	-	320
PS-5	98+06.66	60.11' RT	PEDESTAL		5	DOES NOT APPLY			50	-	-	-	130



POLE ORIENTATION

SIGNAL TIMING AND POLE DETAILS
US 22 AT LANDEN DR

DESIGN AGENCY
CMT
CRAWFORD, MURPHY & TILLY, INC.
777 W. MAIN ST. LEBANON VILLAGE DR
SUITE 270
LEBANON, OHIO 45459
PH (937)701-2193
www.crawfordmurphy.com

DESIGNER GSH

REVIEWER SAK 01/24/25

PROJECT ID 117237

SHEET P.66 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED
MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:17 AM USER: nbrickner
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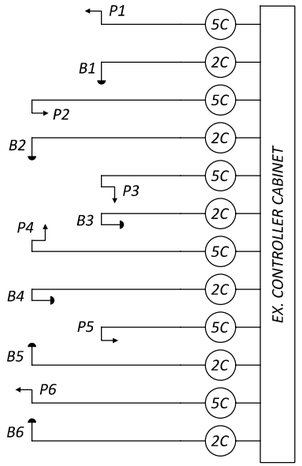
WIRING DIAGRAM



NOTES:

1. EXISTING VEHICULAR SIGNAL CABLES, POWER CABLES, AND COMMUNICATION CABLES NOT SHOWN IN THE WIRING DIAGRAM SHALL NOT BE DISTURBED.

2. FIELD WIRING HOOKUP CHART SHOWN IS FOR REFERENCE ONLY, CONTRACTOR SHALL MAINTAIN EXISTING FIELD WIRING CONNECTIONS.

3. ALL OTHER EXISTING FIELD WIRING CONNECTIONS NOT SHOWN IN THE FIELD WIRING HOOKUP CHART SHALL NOT BE DISTURBED.

FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
PEDESTRIAN MOVEMENTS			
PED	W	Φ2 PED/ LS 2P G	OUT
Φ2 PED	DW	Φ2 PED/ LS 2P R	
PED	W	Φ4 PED/ LS 4P G	OUT
Φ4 PED	DW	Φ4 PED/ LS 4P R	
PED	W	Φ6 PED/ LS 6P G	OUT
Φ6 PED	DW	Φ6 PED/ LS 6P R	
LS = LOAD SWITCH			

LEGEND

	EX. PEDESTRIAN SIGNAL (DND)	XC	*EX. PEDESTRIAN SIGNAL CABLE (DND)*
D	*EX. PEDESTRIAN PUSH BUTTON (DND)*	RX	*REUSED EX. PEDESTRIAN SIGNAL CABLE*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN SIGNAL	2C	*NEW OR COILED SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG*
	NEW, RELOCATED, OR REORIENTED PEDESTRIAN PUSH BUTTON	5C	*NEW OR COILED SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG*

WIRING DETAILS
US 22 AT LANDEN DR

DESIGN AGENCY
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DESIGNER
GSH

REVIEWER
SAK 01/24/25

PROJECT ID
117237

SHEET P.67 | TOTAL 67

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet_SurvFt PAPERSIZE: 17x11 (in.) DATE: 2/5/2025 TIME: 10:37:18 AM USER: nbrickner
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RIGHT OF WAY
LEGEND SHEET
HAM/WAR US 22 16.04/0.00 PED

PROJECT DESCRIPTION

RELOCATING EXISTING PED HEADS AND PUSH BUTTONS ONTO PEDESTALS FOR BETTER ACCESSIBILITY, ADDING SIDEWALK AND CURB RAMPS TO MAKE CROSSINGS ADA COMPLIANT. INCLUDES PEDESTALS AND ASSOCIATED CONDUIT, WIRING AND PULLBOXES ALONG US 22 IN HAMILTON AND WARREN COUNTIES

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

INDEX OF SHEETS:

AT&T Ohio
7201 Far Hills Avenue
Dayton, Ohio 45459
937-708-1026 (Alan Stutes)
AS1634@att.com

Altafiber
221 East 4th Street, Bldg. 121-900
Cincinnati, Ohio 45201
513-566-3154 (Derrick Brown)
derrick.brown@altafiber.com
513-565-7187 (Breck Cowan)
breck.cowan@altafiber.com

Cincinnati Metropolitan Sewer District
1600 Gest Street
Cincinnati, Ohio 45204
513-557-7188 (Rob Franklin)
Rob.Franklin@cincinnati-oh.gov

Duke Energy Electric
139 East 4th Street, Room 467A
Cincinnati, Ohio 45202
513-514-8209 (Chris Tepe)
Chris.Tepe@duke-energy.com

Duke Energy Gas
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Cincinnati, Ohio 45202
513-287-2532 (Denise Gross)
Denise.Gross@duke-energy.com

Lumen
9490 Meridian Way
West Chester, Ohio 45069
513-644-8933 (Terry Spaw)
terry.spaw@lumen.com

MCI/Verizon - Fiber Optic
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Cincinnati, Ohio 45249
254-721-8977 (Bruce Turkiewicz)
bruce.turkiewicz@verizonwireless.com

Charter Communications
10920 Kenwood Road
Blue Ash, Ohio 45242
DL-Southern-Ohio-Outside-Plant@charter.com
513-386-5499 (Kent Rieger)
kent.rieger@charter.com

ODOT D8 Traffic
505 South SR741
Lebanon, Ohio 45036
513-933-6692 (Jim Judd)
jim.judd@dot.ohio.gov

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Standard Highway Ease.(Pr) SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)

Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol, Example
Property Line Symbol ℄, Example
Break Line Symbol Example
Tree (Pr) Tree (Ex) Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) MB , Mailbox (Pr) MB
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex) WM
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

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)

I, Joseph M. Donahue Jr., P.S. have conducted a survey of the existing conditions for the Ohio Department of Transportation between March, 2023 and April, 2023. As a part of this project I have established the proposed boundary lines, calculated the Gross Take, present road occupied (PRO), Net Take and Net Residue herein. As a part of this work, right of way monuments will be set at the locations shown herein per the Memorandum of Understanding between the Board of Registration for Engineers and Surveyors and the Ohio Department of Transportation dated 9-22-2010. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words "I and my" as used herein are to mean that either myself or someone working under my direct supervision.

Joseph M. Donahue Jr., Professional Land Surveyor 8236 — Date 1/17/2024

I, William Cutshall, P.S. have conducted a survey of the existing conditions for the Ohio Department of Transportation between January, 2023 and March, 2023. The results of that survey are contained herein. See the Survey Parameters note affixed to these plans for the horizontal and vertical survey parameters used for this project. As a part of this project, I have reestablished the locations of the existing boundary lines, the existing center line of Right of Way and the existing Right of Way limits as necessary for the property takes contained herein. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words "I and my" as used herein are to mean that either myself or someone working under my direct supervision.

William P. Cutshall, Professional Land Surveyor 7904 — Date 1/17/24

SURVEYOR'S SEAL	SURVEYOR'S SEAL
ODOT	ODOT
STATE OF OHIO · JOSEPH M. DONAHUE JR S-8236 · REGISTERED PROFESSIONAL SURVEYOR	STATE OF OHIO · WILLIAM P. CUTSHALL S-7904 · REGISTERED PROFESSIONAL SURVEYOR

PLANS PREPARED BY:

FIRM NAME : ODOT DISTRICT 8
R/W DESIGNER: DONAHUE/HELMICK
R/W REVIEWER: THOMPSON
FIELD REVIEWER: THOMPSON
PRELIMINARY FIELD REVIEW DATE: 10/31/2023
OWNERSHIP UPDATED BY: DONAHUE
DATE COMPLETED: 10/31/2023
FIELD REVIEWER: THOMPSON
FINAL FIELD REVIEW DATE: 11/1/2023
FINAL R/W PLAN DATE: 11/1/2023

LEGEND SHEET

DESIGN AGENCY

DESIGNER J.M.D.
REVIEWER J.C.T. 11-1-23
PROJECT ID 117237
SHEET P.1 TOTAL 4

HAM/WAR US 22 16.04/0.00 PED

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 11/20/2023 TIME: 12:02:36 PM USER: jdonahue
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HAM/WAR-US-22-16.04/0.00

SECTION 36, TOWNSHIP 5, ENTIRE RANGE 1
SYMMES TOWNSHIP
HAMILTON COUNTY, OHIO

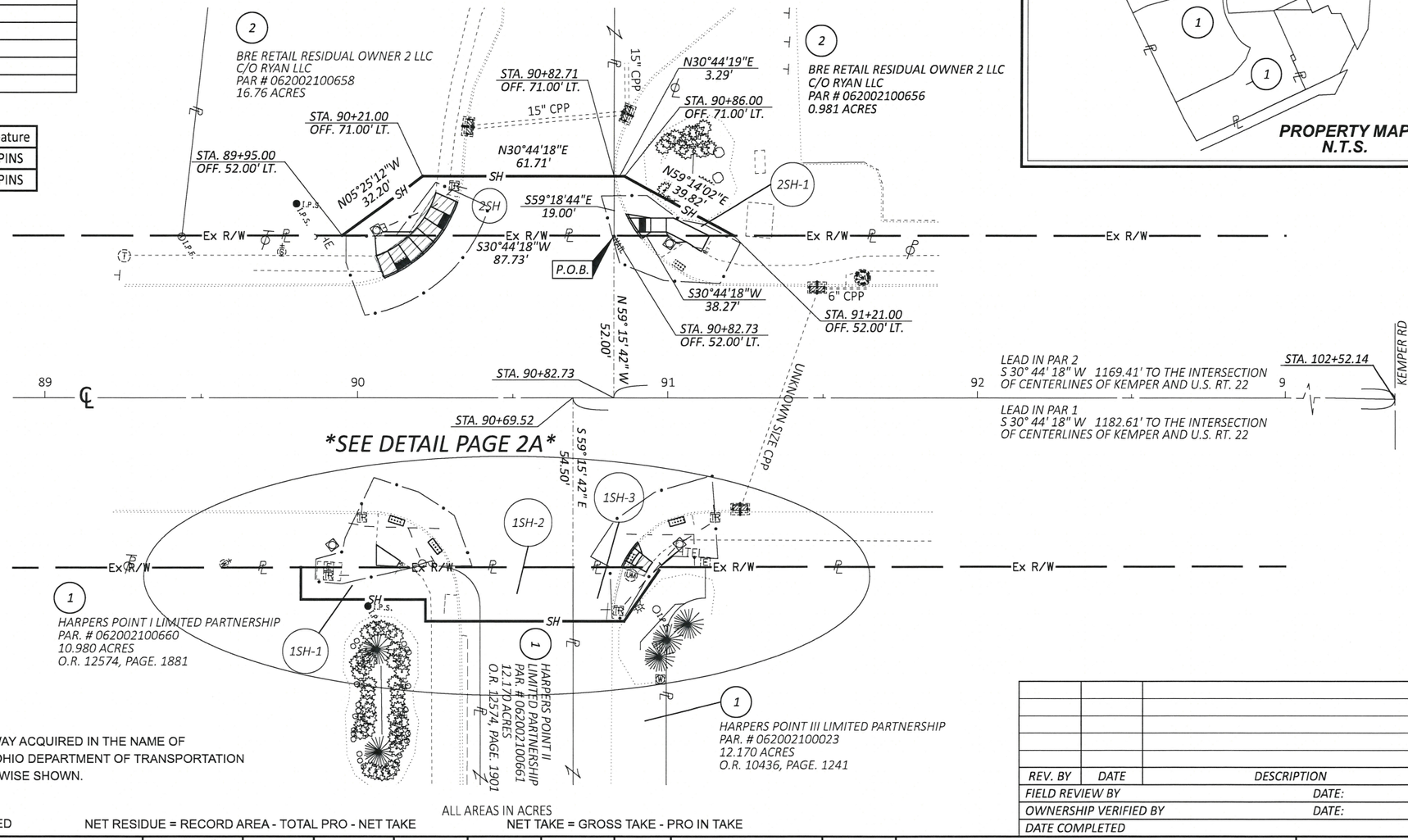
PROJECT CONTROL

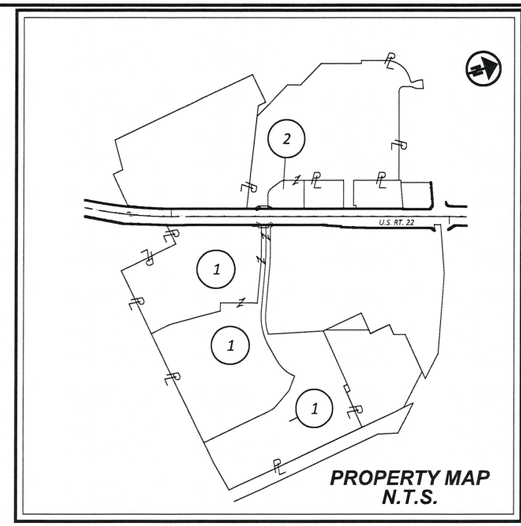
POSITIONING METHOD:	OHIO REAL TIME NETWORK (2011)
MONUMENT TYPE:	TYPE B
VERTICAL POSITIONING	
ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	18
HORIZONTAL POSITIONING	
REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC 2 STANDARD PARALLEL
COORDINATE SYSTEM:	OHIO STATE PLANE SOUTH (3702)
COMBINED SCALE FACTOR:	1.00000000
ORIGIN OF COORDINATE SYSTEM	
EASTING (X):	0
NORTHING (Y):	0
UNITS ARE IN U.S. SURVEY FEET	

PROJECT CONTROL

Point	Northing	Easting	Elevation	Station	Offset	Feature
T6	467775.88	1450575.80	809.37	89+80.45	62.21' LT	IPINS
T7	467729.49	1450698.69	806.93	90+03.39	67.12' RT	IPINS

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING HAM-22/3-16.45
REFERENCE SURVEYS:
620-210-660, 661, 023, 586
620-210-656, 658, 655, 722





HORIZONTAL SCALE IN FEET
0 10 20 40

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

TOTAL NUMBER OF :

2 OWNERSHIPS 0 TOTAL TAKES
5 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE
ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1SH	HARPERS POINT I, LIMITED PARTNERSHIP		12574	1881	062002100660	10.980	0	0.016	0	0.016	N		10.965	STATE			
1SH-1	HARPERS POINT II, LIMITED PARTNERSHIP		12574	1901	062002100661	12.244	0	0.013	0	0.013	N		12.231				
1SH-2	HARPERS POINT III, LIMITED PARTNERSHIP		10436	1241	062002100023	12.17	0	0.009	0	0.009	N		12.161				
2SH	BRE RETAIL RESIDUAL OWNER 2 LLC,		12038	1081	062002100658	16.761	0	0.033	0	0.033	N		16.728				
2SH-1	A DELAWARE LIMITED LIABILITY COMPANY				062002100656	0.981	0	0.009		0.009	N		0.972				

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY		DATE:
OWNERSHIP VERIFIED BY		DATE:
DATE COMPLETED		

RIGHT OF WAY DETAIL SHEET
US 22 AT HARPERS POINT DRIVE

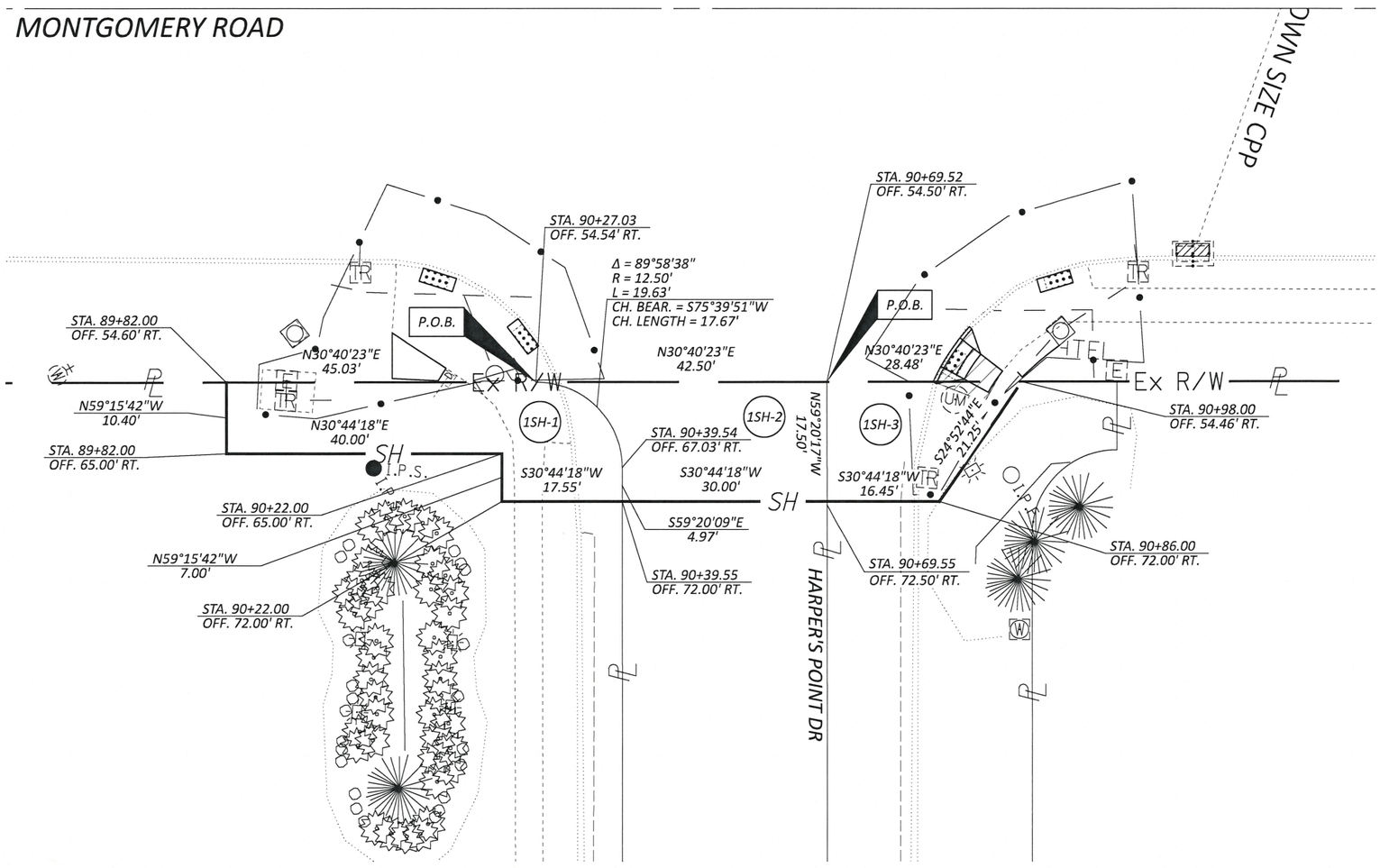
DESIGN AGENCY

DESIGNER W.H.H.
REVIEWER J.C.T. 11-1-23
PROJECT ID 117237
SHEET P.2 TOTAL 4

HAM/WAR US 22 16.04/0.00 PED

MODEL: CLX_RW_1 - Plan 1 (Sheet) PAPERSIZE: 34x22 (in.) DATE: 11/30/2023 TIME: 12:53:57 PM USER: jdonahue
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\117237\400-Engineering\RW\Sheets\117237_RD002.dgn

DETAIL OF PARCEL 1SH



HORIZONTAL SCALE IN FEET
0 5 10 20

DETAIL SHEET OF 1SH
PARCCELS 1SH-1, 1SH-2, 1SH-3

DESIGN AGENCY

DESIGNER
J.M.D.

REVIEWER
J.C.T 11-6-23

PROJECT ID
117237

SHEET P.2A TOTAL 4

HAM/WAR US 22 16.04/0.00 PED

MODEL: Unnamed Plan - 1SH DETAIL-1 [Sheet] PAPERSIZE: 34x22 (In.) DATE: 11/30/2023 TIME: 11:17:25 AM USER: jdonahue
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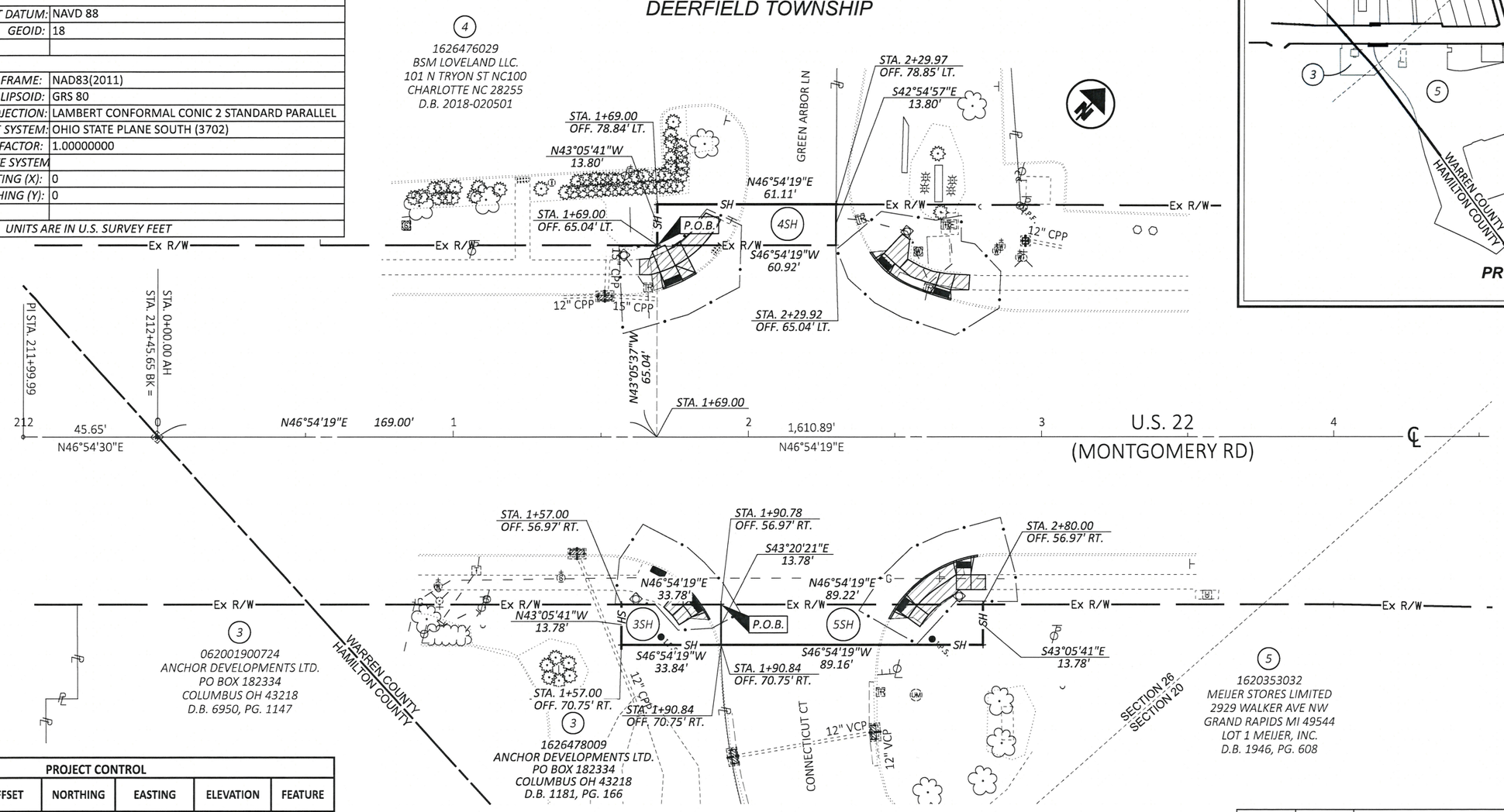
HAM/WAR US 22 16.04/0.00 PED

SECTION 26, TOWN 4, RANGE 2
DEERFIELD TOWNSHIP

PROJECT CONTROL	
POSITIONING METHOD:	OHIO REAL TIME NETWORK (2011)
MONUMENT TYPE:	TYPE B
VERTICAL POSITIONING	
ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	18
HORIZONTAL POSITIONING	
REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC 2 STANDARD PARALLEL
COORDINATE SYSTEM:	OHIO STATE PLANE SOUTH (3702)
COMBINED SCALE FACTOR:	1.00000000
ORIGIN OF COORDINATE SYSTEM	
EASTING (X):	0
NORTHING (Y):	0
UNITS ARE IN U.S. SURVEY FEET	



PROJECT CONTROL						
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	FEATURE
T190	1+70.46	68.01' RT.	475618.507	1459956.626	837.561	IPID
T18	2.62.67	68.75' RT.	475680.968	1460024.465	836.726	IPID

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING THE RIGHT-OF-WAY PLANS HAM-22/3-16.45

TOTAL NUMBER OF :

3 OWNERSHIPS 0 TOTAL TAKES
3 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

NET TAKE = GROSS TAKE - PRO IN TAKE

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
3SH	ANCHOR DEVELOPMENTS LTD.		1181	166	1626478009	0.383211	0	0.011	0	0.011	N		0.372211	STATE	WARREN COUNTY ALSO D. B. 1181, PAGES 160-165		
			6950	1147	062001900724	0.916168	0	0	0	0	N		0.916168	STATE	HAMILTON COUNTY		
					062000700552										HAMILTON COUNTY		
4SH	BSM LOVELAND LLC		2018	020501	1626476029	1.1822	0	0.019	0	0.019	N	1.1632		STATE	WARREN COUNTY		
5SH	MEIJER STORES LIMITED		1946	608	1620353032	24.2039	0	0.028	0	0.028	N		24.1759	STATE	WARREN COUNTY		
			6148	2287	062000700382	3.522	0	0	0	0	N		3.522	STATE	HAMILTON COUNTY		

RIGHT OF WAY DETAIL SHEET
US 22 AT GREEN ARBOR LANE/CONNECTICUT COURT

DESIGN AGENCY

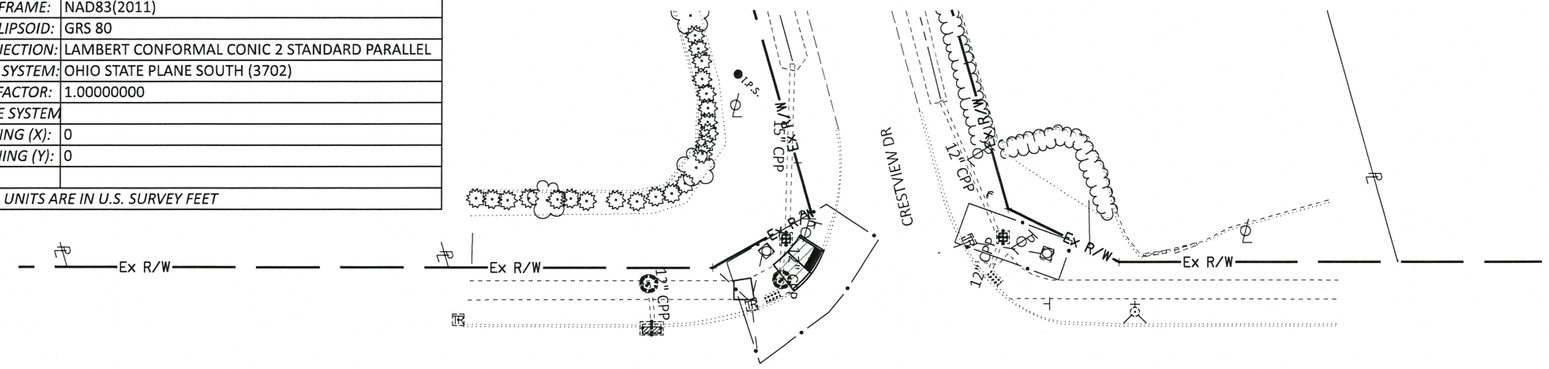
DESIGNER J.M.D.
REVIEWER J.C.T. 11-1-23
PROJECT ID 117237
SHEET P.3 TOTAL 4

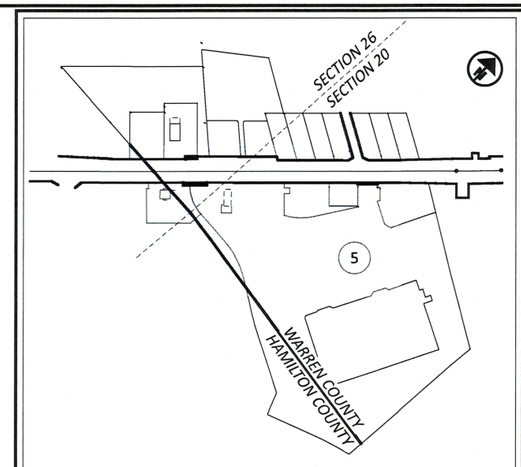
HAM/WAR US 22 16.04/0.00 PED

HAM/WAR US 22 16.04/0.00 PED

SECTION 20, TOWN 4, RANGE 2
DEERFIELD TOWNSHIP

PROJECT CONTROL	
POSITIONING METHOD:	OHIO REAL TIME NETWORK (2011)
MONUMENT TYPE:	TYPE B
VERTICAL POSITIONING	
ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	18
HORIZONTAL POSITIONING	
REFERENCE FRAME:	NAD83(2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC 2 STANDARD PARALLEL
COORDINATE SYSTEM:	OHIO STATE PLANE SOUTH (3702)
COMBINED SCALE FACTOR:	1.00000000
ORIGIN OF COORDINATE SYSTEM	
EASTING (X):	0
NORTHING (Y):	0
UNITS ARE IN U.S. SURVEY FEET	

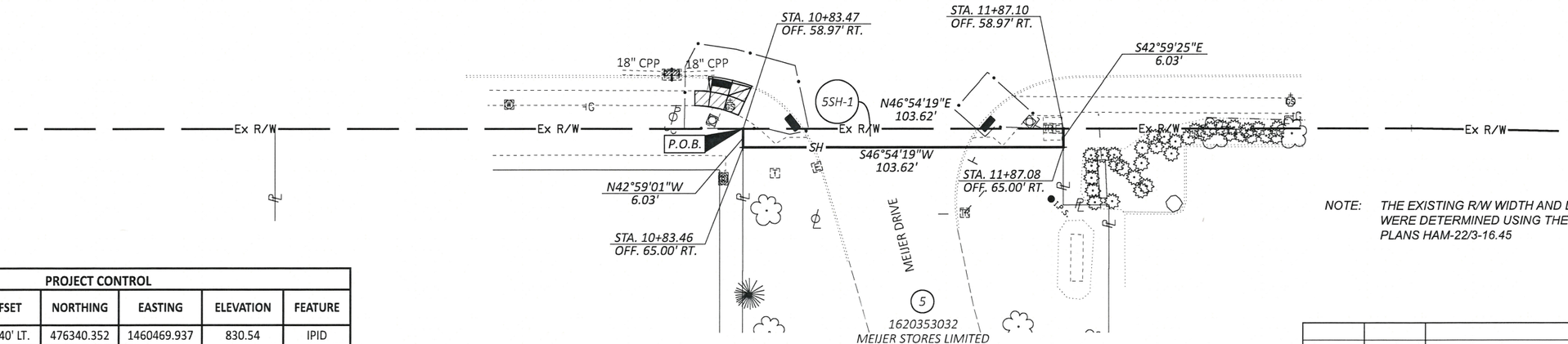




PROPERTY MAP
N.T.S.

HORIZONTAL SCALE IN FEET
0 10 20 40

9 — 1,610.89' N46°54'19"E — 10 — 11 — 12 — U.S. 22 (MONTGOMERY RD) — 13 — ℄



NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING THE RIGHT-OF-WAY PLANS HAM-22/3-16.45

PROJECT CONTROL						
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	FEATURE
T170	10+38.46	108.40' LT.	476340.352	1460469.937	830.54	IPID
T16	11+83.18	81.76' RT.	476300.367	1460705.536	827.13	IPID

TOTAL NUMBER OF :

1 OWNERSHIPS
1 PARCELS
0 TOTAL TAKES
0 OWNERSHIPS W/ STRUCTURES INVOLVED

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION UNLESS OTHERWISE SHOWN.

ALL AREAS IN ACRES

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

NET TAKE = GROSS TAKE - PRO IN TAKE

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
5SH-1	MEIJER STORES LIMITED		1946	608	1620353032	24.204	0	0.014	0	0.014	N		24.190	STATE	WARREN COUNTY		
			6148	2287	62000700382	3.522	0	0	0	0	0		3.522	STATE	HAMILTON COUNTY		

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

RIGHT OF WAY DETAIL SHEET
US 22 AT CRESTVIEW DRIVE

DESIGN AGENCY

DESIGNER J.M.D.
REVIEWER J.C.T. 11-1-23
PROJECT ID 117237
SHEET P.4 TOTAL 4

HAM/WAR US 22 16.04/0.00 PED

MODEL: CLX_RW_1 - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 11/27/2023 TIME: 6:47:59 AM USER: jdonahue
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\117237\400-Engineering\RW\Sheets\117237_RD005.dgn