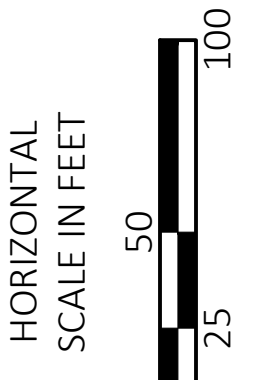
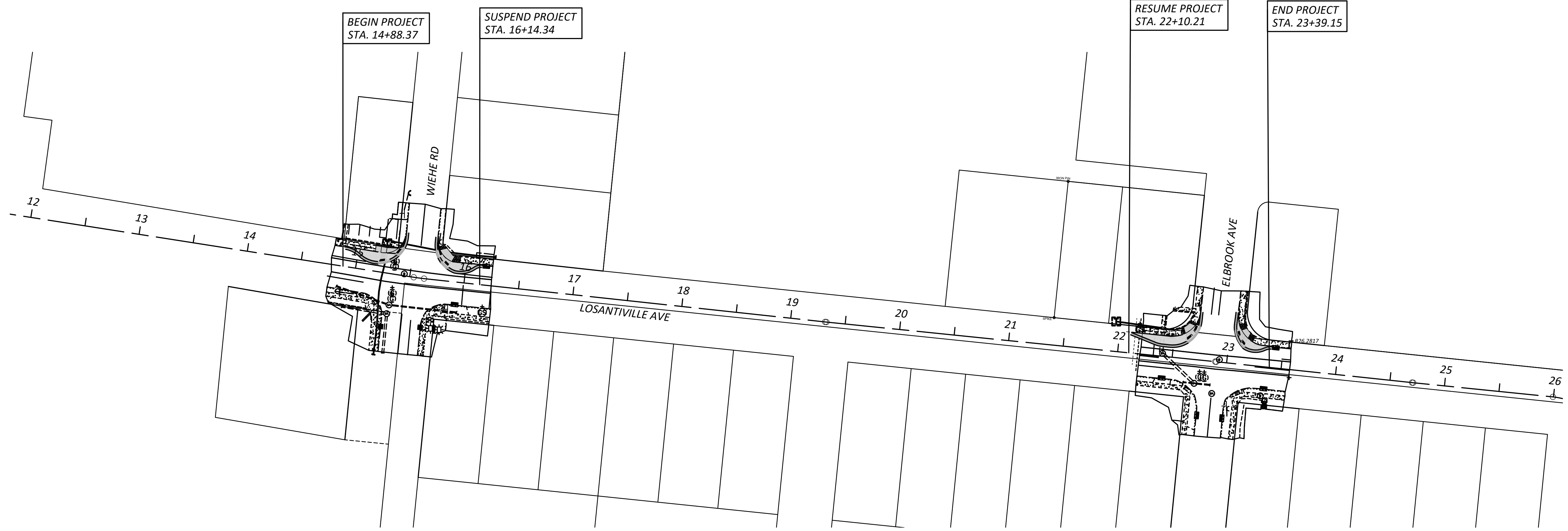


SIGNAL DESIGN - LOSANTIVILLE AVE

MODEL:Sheet PAPER:SIZE:34x42 (in.) DATE:2/2/2024 TIME:1:17:40 PM USER:Dylan Osborn
\\10.1.1.4\Projects\2023\Projects\23039 JMA\003 Signal Design - Losantiville Ave\Drawings\23039003_GB.dwg



SCHEMATIC PLAN

DESIGN AGENCY

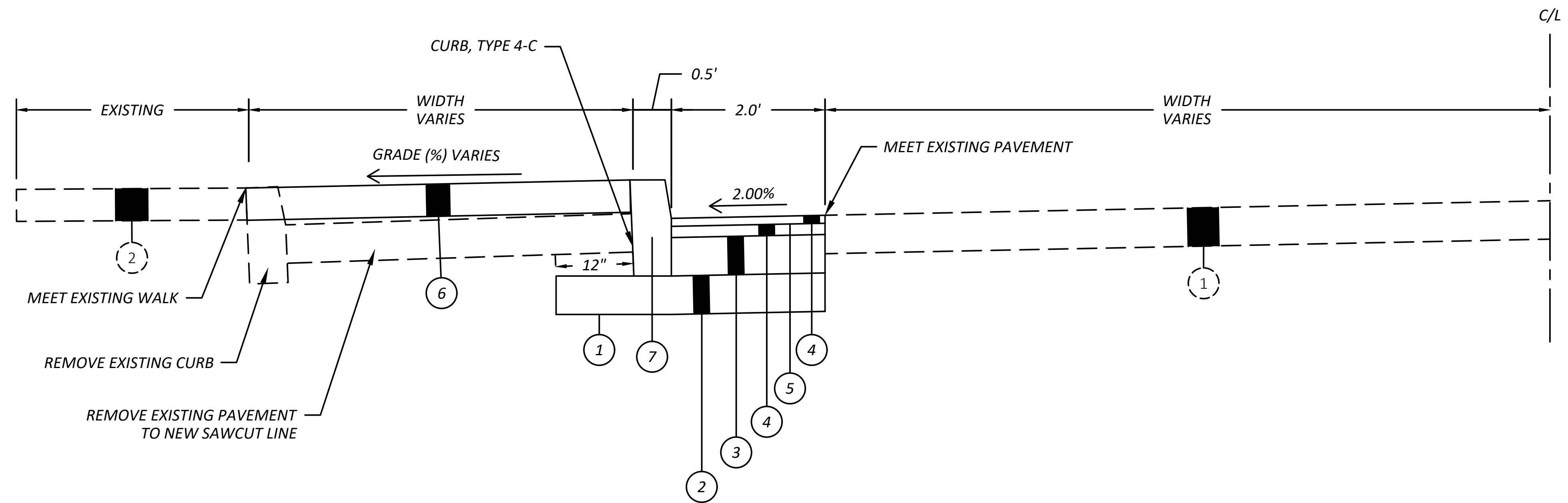


DESIGNER
NB

REVIEWER
DGO 2/2/24

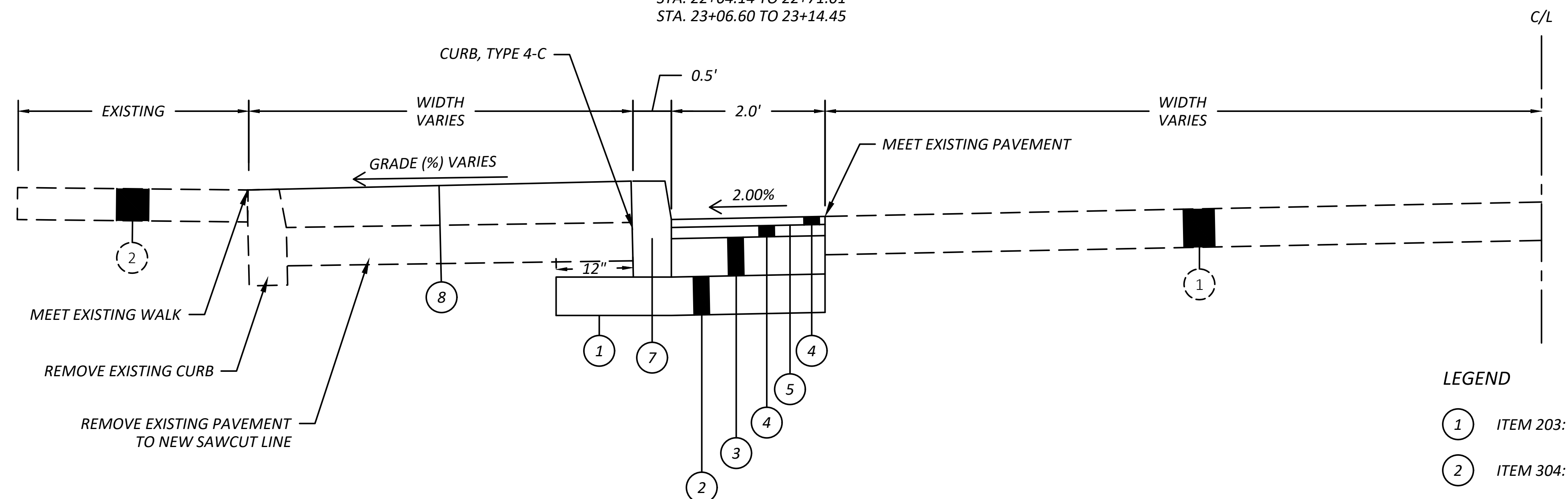
PROJECT ID
23039-003

SHEET	TOTAL
2	21



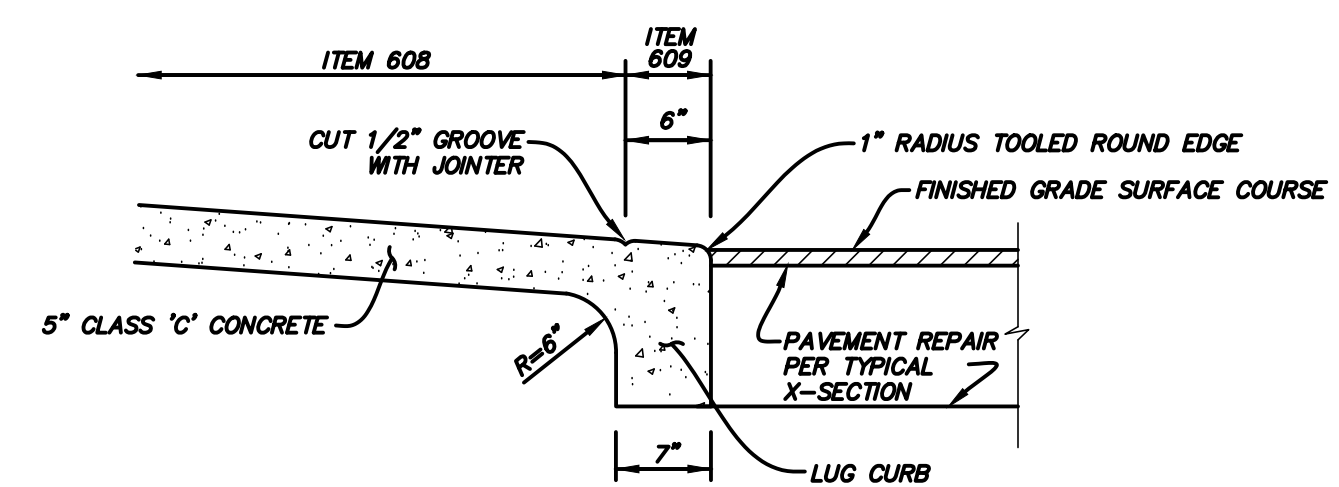
CONCRETE SECTION

STA. 15+20.50 TO 15+26.62
 STA. 15+37.31 TO 15+41.12
 STA. 15+71.86 TO 15+75.89
 STA. 15+79.02 TO 15+83.72
 STA. 22+64.14 TO 22+71.01
 STA. 23+06.60 TO 23+14.45



GRASS SECTION

STA. 14+88.42 TO 15+20.50
 STA. 15+26.62 TO 15+37.31
 STA. 15+75.89 TO 15+79.02
 STA. 15+83.72 TO 16+14.30
 STA. 22+10.77 TO 22+64.14
 STA. 22+71.01 TO 22+71.90
 STA. 23+05.67 TO 23+06.60
 STA. 23+14.45 TO 23+38.36



TYPE L-1 STANDARD LUG CONC. CURB INTEGRAL
 WITH CONC. WALK (ACC No. 21430) AT CURB RAMPS
 N.T.S

LEGEND

- ① ITEM 203: SUBGRADE COMPACTION
- ② ITEM 304: 6" AGGREGATE BASE
- ③ ITEM 305: 8" PORTLAND CEMENT CONCRETE BASE
- ④ ITEM 442: ASPHALT CONCRETE, 1.5"
- ⑤ ITEM 407: TACK COAT (0.1 GAL/SY)
- ⑥ ITEM 608: CONCRETE WALK, 5"
- ⑦ ITEM 609: CURB, 4"
- ⑧ ITEM 653 - TOPSOIL FURNISHED AND PLACED AND ITEM 659 SEEDING AND MULCHING (HYDRAULIC METHOD); WATER (PRIMARY & SECONDARY - 659.17) - INCIDENTAL TO TOPSOIL
- ① EXISTING PAVEMENT, UNKNOWN THICKNESS (TO REMAIN)
- ② EXISTING SIDEWALK, UNKNOWN THICKNESS (TO REMAIN)

TYPICAL SECTION

DESIGN AGENCY	TEC Engineering, Inc. 2440 Westwood Pk. Tuscarawas, Ohio 7288 Central Park Blvd. Mason, OH 45040
DESIGNER	NB
REVIEWER	DGO 2/2/24
PROJECT ID	23039-003
SHEET	TOTAL
3	21

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.

WORK INSPECTION

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

GUARANTEE

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

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

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

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE 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.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9PM AND 7AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

GAS FACILITY NOTES:

- FOR GAS ENGINEERING NOTIFICATION, AGREEMENTS AND OFFICIAL CORRESPONDENCE, ADDRESS TO:
DUKE ENERGY
GAS ENGINEERING DEPARTMENT
P.O. BOX 960, ROOM 460 ANNEX
CINCINNATI, OH 45201-0960
- THE GAS MAIN INFORMATION PROVIDED SHOWS THE APPROXIMATE LOCATIONS AND DEPTHS OF COVER AND IS PROVIDED TO COMPLY WITH STATUTORY REGULATIONS. THIS INFORMATION SHOULD BE USED ONLY FOR PLANNING, NOT CONSTRUCTION.
- ALL GAS MAIN DEPTHS OF COVER NOTED ARE APPROXIMATE DEPTHS OF COVER RECORDED AT THE TIME OF INSTALLATION. ANY RESULTING GRADE CHANGES SINCE THE TIME OF THE MAIN INSTALLATION WILL CAUSE THE EXISTING DEPTHS OF COVER TO BE DIFFERENT. EXTREME CARE MUST BE TAKEN TO ENSURE SAFE EXCAVATION WHEN APPROACHING KNOWN OR SUSPECTED GAS FACILITIES.
- ALL GAS SERVICES WERE INSTALLED AT A MINIMUM OF 1'-6" OF COVER. SEE III ABOVE.
- FOR ADDITIONAL GAS FACILITY RECORD INFORMATION, CALL (513) 287-3636.
- TO COMPLY WITH FEDERAL AND STATE REGULATIONS CONCERNING DAMAGE PREVENTION PROGRAMS, THE UTILITY COMPANIES MUST BE CONTACTED AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO EXCAVATION BY THE OHIO UTILITIES PROTECTION SERVICE (OUPS), TOLL FREE AT 1-800-362-2764 OR 811 FOR OHIO.

CONSTRUCTION NOTES:

- GAS FACILITIES ARE TO BE KEPT IN SERVICE AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO GAS FACILITIES DURING OR AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION. ALL DAMAGE TO GAS FACILITIES REQUIRING REPAIRS, RELOCATIONS AND/OR ADJUSTMENTS, WILL BE MADE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL SHEET AND SHORE ALL EXCAVATIONS AS REQUIRED TO CONTINUOUSLY SUPPORT GAS FACILITIES WITHIN THE ZONE OF INFLUENCE (AS DETERMINED BY THE NATURAL ANGLE OF REPOSE OF THE SOIL).
- CROSSING BURIED GAS FACILITIES WITH HEAVY CONSTRUCTION EQUIPMENT MAY CAUSE DAMAGE TO THE GAS FACILITIES. CONTACT THE DUKE ENERGY'S GAS ENGINEERING DEPARTMENT FOR DETAILS ON HOW TO PROTECT THE GAS FACILITIES FROM DAMAGE.
- THE CONTRACTOR SHALL NOT BACKFILL EXPOSED GAS FACILITIES UNTIL THE UTILITY HAS INSPECTED ITS FACILITIES AND PERFORMED ANY MAINTENANCE AND/OR ADJUSTMENTS THAT MAY BE REQUIRED.
- THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING ANY DAMAGE TO OUR GAS FACILITIES. THIS INCLUDES PROTECTION OF COATINGS AND WRAPPINGS ON STEEL GAS MAINS. IT ALSO INCLUDES ANY DAMAGE WHICH MAY HAVE OCCURRED TO PLASTIC GAS MAINS, SUCH AS CRIMPS OR GOUGES.
- WHEN CAST IRON OR SIMILAR GAS FACILITIES ARE EXPOSED OR INTERFERED WITH BY THE CONTRACTOR, REPLACEMENT OR REINFORCEMENT BY DUKE ENERGY MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE. BACKFILL WITH CONTROL LOW STRENGTH MATERIAL WILL BE REQUIRED.
- BLASTING OR OTHER CONSTRUCTION PROCEDURES WHICH MAY TRANSMIT LOADS OR VIBRATIONS IN THE VICINITY OF GAS FACILITIES MUST BE APPROVED BY DUKE ENERGY'S GAS ENGINEERING DEPARTMENT. A BLASTING PLAN, IDENTIFYING ALL PERTINENT INFORMATION, MUST BE SUBMITTED IN WRITING BY A BLASTING EXPERT PRIOR TO ANY WORK.

PROPOSED DEVELOPMENTS AT GAS R/W & EASEMENTS (IF APPLICABLE):

- PROPOSED DEVELOPMENT PLANS AROUND AND NEAR GAS FACILITIES WITHIN PRIVATE EASEMENTS MUST BE SUBMITTED TO DUKE ENERGY'S GAS ENGINEERING DEPARTMENT FOR REVIEW. THESE PLANS MUST BE APPROVED BEFORE ANY WORK MAY BEGIN WITHIN OUR EASEMENTS.
- SPECIFIED EASEMENT WIDTHS MUST BE MAINTAINED IN ORDER FOR DUKE ENERGY TO PROTECT ITS FACILITIES.
- NO PERMANENT STRUCTURES MAY BE BUILT WITHIN THE EASEMENTS.
- CUTS AND FILLS ARE GENERALLY NOT PERMITTED WITHIN THE EASEMENTS. SOME FILLS MAY BE ALLOWED, AND WILL BE REVIEWED ON AN INDIVIDUAL BASIS. ANY PERMITTED FILLS WILL BE LIMITED TO AN AMOUNT WHICH WILL ALLOW DUKE ENERGY TO PROPERLY MAINTAIN ITS FACILITIES.
- PERPENDICULAR UTILITY CROSSINGS OF GAS EASEMENTS ARE ACCEPTABLE, PROVIDED PROPER CLEARANCES ARE MAINTAINED. PARALLEL INSTALLATIONS ARE NORMALLY NOT ALLOWED.

UTILITY ADJUSTMENTS:

THE CONTRACTOR SHALL NOTIFY, AT LEAST 48 HOURS (2 WORKING DAYS) BEFORE BREAKING GROUND, ALL PUBLIC AND/OR PRIVATE SERVICE CORPORATIONS HAVING WIRE, POLES, CONDUIT, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS CONSTRUCTION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATELY OWNED UTILITY WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS UNLESS OTHERWISE NOTED ON THESE PLANS.

ELECTRIC UTILITY NOTES:
DUKE ENERGY

- DANGER - CONTRACTOR SHALL CONTACT THE COMPANY PRIOR TO EXCAVATION IN VICINITY OF ELECTRIC UNDERGROUND FACILITIES (APPROXIMATE PLAN LOCATION SHOWN) OR WHEN WORKING NEAR OVERHEAD ELECTRIC FACILITIES.
 - FOR FIELD INSPECTOR TO LOCATE UNDERGROUND ELECTRIC LINE, IN OHIO CALL "OHIO UTILITIES PROTECTION SERVICE" 1-800-362-2764, IN KENTUCKY CALL "KENTUCKY UNDERGROUND PROTECTION INC." 1-800-752-6007 (AT LEAST 48 HOURS IN ADVANCE), EXCLUDING HOURS, SAT., SUN., & STATE LEGAL HOLIDAYS.
 - FOR NOTIFICATION OF CONSTRUCTION ACTIVITY NEAR ENERGIZED FACILITIES, CALL 287-3426.
 - FOR ADDITIONAL UNDERGROUND ELECTRIC RECORD INFORMATION, CALL 287-2454.
 - FOR ELECTRIC ENGINEERING NOTIFICATION, AGREEMENTS AND CORRESPONDENCE, ADDRESS TO CENTRAL ACCOUNTING MARKETING SECTION, P.O. BOX 960, CINCINNATI, OHIO 45202-0960.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO ELECTRIC FACILITIES DURING CONSTRUCTION.
- ELECTRIC FACILITIES TO BE KEPT IN SERVICE AT ALL TIMES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING EXISTING ELECTRIC FACILITIES AFFECTED BY THE PROPOSED CONSTRUCTION.
 - WHERE HIGH PRESSURE OIL FILLED PIPE TYPE CABLE INSTALLATION ARE EXPOSED OR OTHERWISE INTERFERED WITH BY THE CONTRACTOR, PROTECTION BY THE CONTRACTOR WILL BE REQUIRED AGAINST DAMAGE TO THE COATING OR SURROUNDING THERMAL SAND ENVELOPE.
 - WHERE CONCRETE ENCASED CONDUIT SYSTEMS OR DIRECT BURIED CABLE SYSTEMS ARE EXPOSED OR OTHERWISE INTERFERED WITH, THE CONTRACTOR SHALL PROTECT THE SYSTEM AS NECESSARY AGAINST DAMAGE. AS SOON AS FEASIBLE, THE CONTRACTOR SHALL TAKE ADDITIONAL APPROPRIATE STEPS TO PROVIDE PERMANENT MEASURES TO RESTORE SUPPORT. THE METHODS USED SHALL BE BASED ON CONDITIONS TO BE DETERMINED BY THE UTILITY.
 - WHERE POLES OR ANCHORS THAT SUPPORT OVERHEAD ELECTRIC FACILITIES ARE EXPOSED OR OTHERWISE INTERFERED WITH, THE CONTRACTOR SHALL PROTECT THEM FROM DAMAGE AND PROVIDE TEMPORARY SUPPORT TO INSURE THE INTEGRITY OF THE SYSTEM. AS SOON AS FEASIBLE, THE CONTRACTOR SHALL TAKE ADDITIONAL APPROPRIATE STEPS TO PROVIDE PERMANENT MEASURES TO RESTORE SUPPORT. THE METHODS USED SHALL BE BASED ON CONDITIONS TO BE DETERMINED BY THE UTILITY.
 - WHERE THE DEPTH OF EXCAVATION FOR THE PROPOSED WORK IS GREATER THAN FIVE (5) FEET, THE CONTRACTOR SHALL SHEET AND SHORE THE TRENCH TO CONTINUOUSLY MAINTAIN THE SUPPORT OF ELECTRIC FACILITIES AT LOCATION WHERE THE ELECTRIC FACILITIES ARE WITHIN THE ZONE OF INFLUENCE ADJACENT TO THE EXCAVATION AS DETERMINED BY THE NATURAL ANGLE OF REPOSE OF THE SOIL.
 - ALL DAMAGE TO ELECTRIC FACILITIES AND SERVICES REQUIRING ADJUSTMENTS, RELOCATIONS AND/OR REPAIRS WILL BE MADE AT THE CONTRACTOR'S COST.
- CONTRACTOR SHALL NOT BACKFILL EXPOSED ELECTRIC FACILITIES UNTIL THE COMPANY HAS INSPECTED ITS FACILITY OR PERFORMED ANY ADJUSTMENTS AND/OR MAINTENANCE THAT MAY BE REQUIRED.

NOTE: SHOULD CONTRACTOR DAMAGE ELECTRIC FACILITIES, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ELECTRIC SERVICE DESK THROUGH THE COMPANY OPERATOR (381-2000). CONTRACTOR SHALL KEEP EVERYONE CLEAR OF DAMAGED ELECTRIC FACILITIES UNTIL COMPANY PERSONNEL ARRIVE AT THE WORK SITE.

UTILITY WARNING

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND UTILITY COMPANY RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE SIZE AND TYPE OF UTILITIES SHOWN HEREON WERE TAKEN FROM UTILITY COMPANY PLANS AND VERIFIED IN THE FIELD WHEREVER POSSIBLE.

UTILITY OWNERSHIP:
THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

GAS & ELECTRIC: DUKE ENERGY
139 E. FOURTH STREET
CINCINNATI, OHIO 45202
TELEPHONE: (E) (513) 287-3523
(G) (513) 287-2517

SANITARY & COMBINED SEWER:
METROPOLITAN SEWER DISTRICT
GREATER CINCINNATI (M.S.D.G.C.)
1600 GEST STREET
CINCINNATI, OHIO 45204
TELEPHONE: (513) 557-7188

STORM SEWER VILLAGE OF GOLF MANOR
6450 WEHE ROAD
GOLF MANOR, OHIO 45237
TELEPHONE: (513) 531-7491

TELEPHONE: CINCINNATI BELL INC.
201 E. FOURTH STREET
CINCINNATI, OHIO 45202
TELEPHONE: (513) 566-7043

WATERLINES: GREATER CINCINNATI WATERWORKS (G.C.W.W.)
4747 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
TELEPHONE: (513) 591-5056

CABLE: SPECTRUM CABLE
11252 CORNELL PARK DR.
CINCINNATI, OHIO 45242
TELEPHONE: (513) 386-5499

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC ON LOSANTIVILLE AVE. THROUGHOUT THE ENTIRETY OF THE PROJECT. THE CONTRACTOR WILL ADVISE THE VILLAGE ADMINISTRATOR TWENTY-ONE (21) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE CITY ADMINISTRATOR THE NAMES AND TELEPHONE NUMBERS OF PERSONS THAT CAN BE REACHED 24 HOURS A DAY.

TRAFFIC IS TO BE MAINTAINED IN A UNIFORM PATTERN THROUGHOUT ALL LANE SHIFTS. ACCESS TO ALL PROPERTIES AND SIDE STREETS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS PROJECT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIAL SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE STRUCTURES WITHIN THE WORK AREA TO PROMOTE POSITIVE FLOW THROUGHOUT THE CONSTRUCTION PROJECT.

ALL EFFECTED UTILITIES SHALL BE PROTECTED OR RELOCATED PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THIS PROJECT.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN DURING THE FOLLOWING HOLIDAYS OR EVENTS:

CHRISTMAS	LABOR DAY	NEW YEARS
MEMORIAL DAY	THANKSGIVING	4TH OF JULY

DESIGN AGENCY



DESIGNER

AFS

REVIEWER

DGO 2/2/24

PROJECT ID

23039-003

SHEET TOTAL

4 | 21

GROUNDING AND BONDING

THIS NOTE SHALL APPLY TO NEW EQUIPMENT ONLY. THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

- a. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM
- b. AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
- c. 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.
- d. 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.
- e. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
- f. 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.
- g. 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.
- 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.

GROUNDING AND BONDING (CONT.)

- 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 #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	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE 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.

632 - SIGNAL SUPPORT FOUNDATION

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

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

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

632 - SIGNAL SUPPORT FOUNDATION (CONT.)

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

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

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

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 4 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 4-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON AS POSSIBLE THEREAFTER

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.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)

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 VILLAGE OF GULF MANOR FOR POLICE SERVICES AND MAINTENANCE SERVICES BY VILLAGE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15. VILLAGE FORCES ARE NOT RESPONSIBLE FOR ANY PREVIOUS WORK DONE AT THE INTERSECTION.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 8 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6AM TO 8PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

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.

REMOVAL OF TRAFFIC SIGNAL INSTALLATION
TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, SIGNAL SUPPORTS, CABINET(S), CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. UNLESS NOTED, POWER SERVICES SHALL BE REMOVED IN ACCORDANCE WITH C&MS 625.21.F.

THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

ITEM 632 - SIGNAL SUPPORT (BY TYPE), AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF C&MS 632, THE SIGNAL SUPPORT SHALL BE GALVANIZED POWDER COAT BLACK IN COLOR.

ITEM 632 - PEDESTAL SUPPORT 8', TRANSFORMER BASE, AS PER PLAN
IN ADDITION TO THE REQUIREMENTS OF C&MS 632, THE SIGNAL SUPPORT SHALL BE GALVANIZED POWDER COAT BLACK IN COLOR.

ITEM 809 - ATC CONTROLLER, AS PER PLAN
THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER SS 809 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST. THIS CONTROLLER SHALL ALSO BE COMPATIBLE WITH THE CABINET BEING INSTALLED.

633 - CABINET, TYPE TS-2, AS PER PLAN
THE CABINET SHALL BE FURNISHED AND INSTALLED ACCORDING TO CMS 633 AND 733 AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS LIST (TAP).

CABINETS SHALL ALSO BE POLE MOUNTED AND ALL EQUIPMENT NEEDED TO MOUNT THE CABINET SHALL BE INCIDENTAL TO THE COST OF THIS ITEM.

DESIGN AGENCY



DESIGNER
AFS

REVIEWER
DGO 2/2/24

PROJECT ID
23039-003

SHEET TOTAL
5 | 21

SIGNAL DESIGN - LOSANTIVILLE AVE

MODEL:Sheet PAPER:SIZE:34x22 (in.) DATE:2/2/2024 TIME:1:18:11 PM USER:Dylan Osborn
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TEC Engineering, Inc.
7288 Central Parke Blvd.
Mason, OH 45040

TEC Engineering, Inc.
7288 Central Parke Blvd.
Mason, OH 45040

DESIGN AGENCY



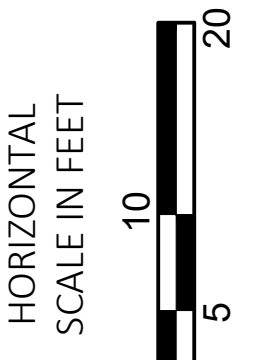
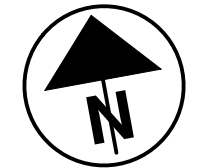
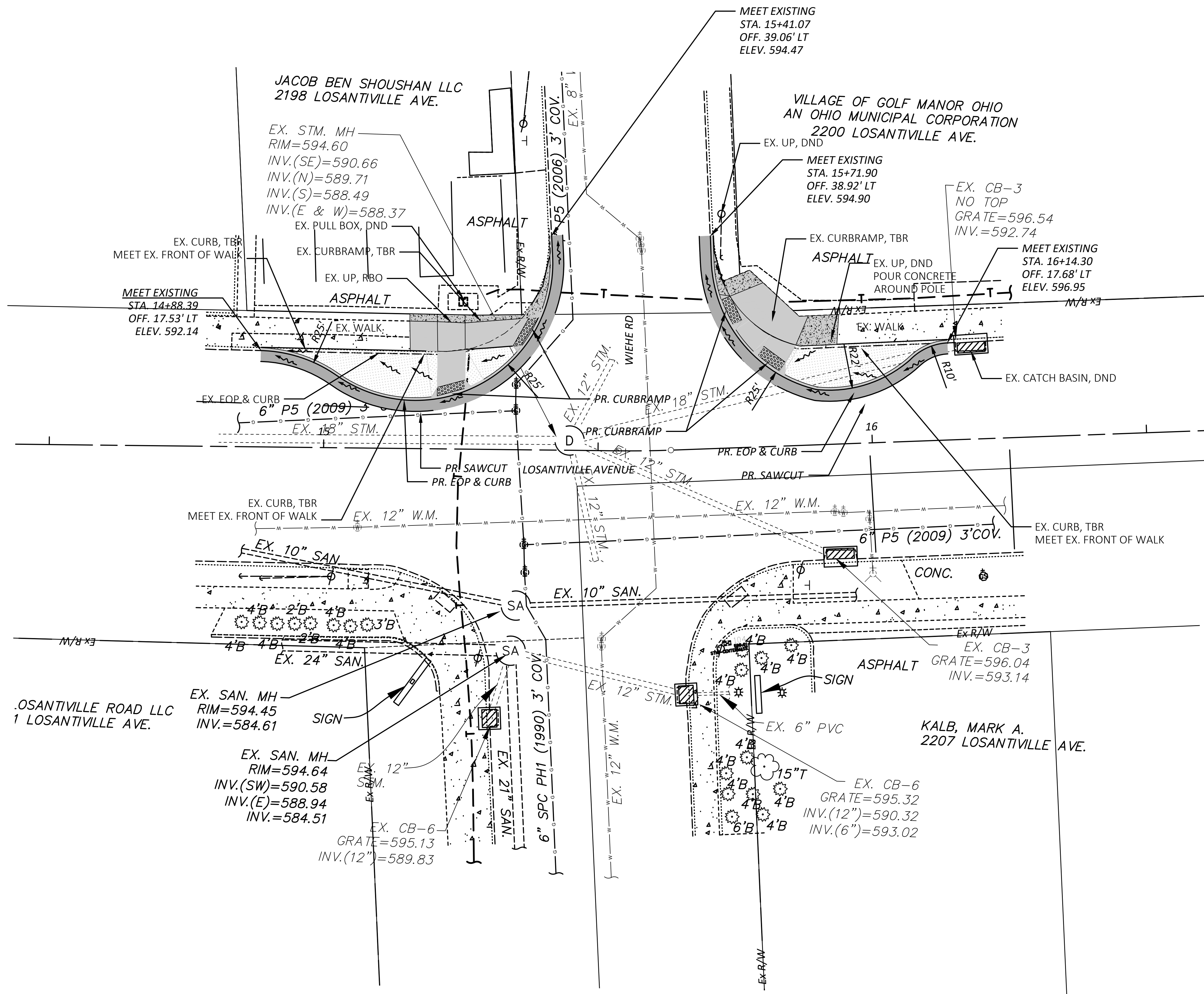
DESIGNER
AFS

REVIEWER
DGO 2/2/24

PROJECT ID
23039-003

SHEET	TOTAL
6	21

GENERAL SUMMARY



PLAN SHEET

LEGEND

- PR. CURB/CURBRAMP
- PR. GRASS
- PR. PAVEMENT
- PR. WALK

- DND - DO NOT DISTURB
- ATG - ADJUST TO GRADE
- TBR - TO BE REMOVED
- RBO - REMOVED BY OTHERS

DESIGN AGENCY

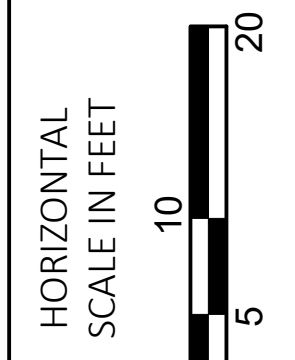
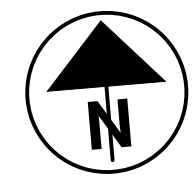
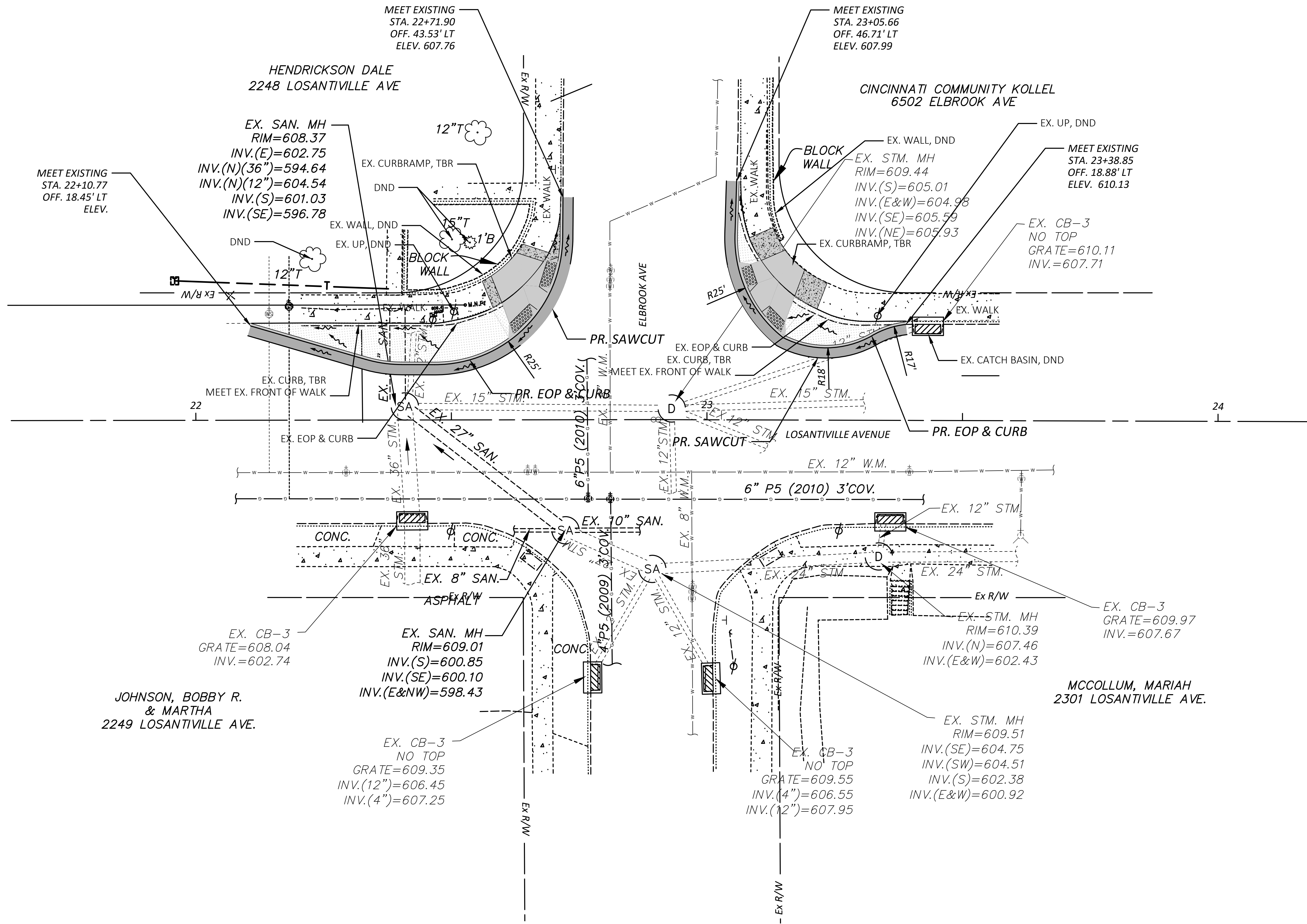


DESIGNER
NB

REVIEWER
DGO 2/2/24

PROJECT ID
23039-003

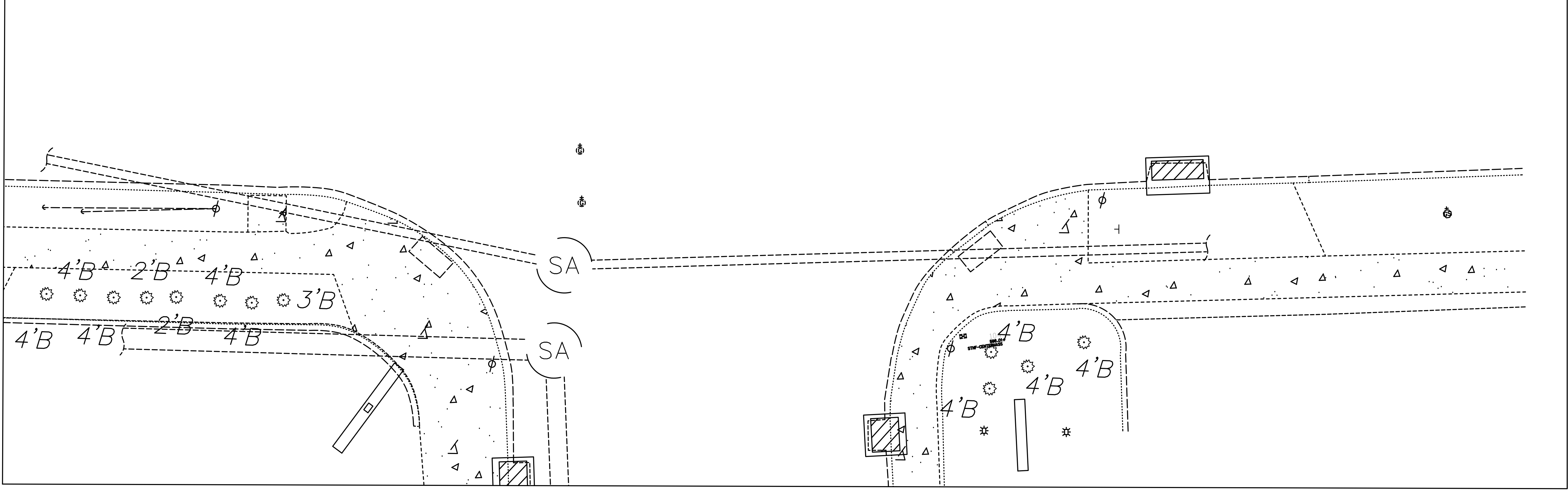
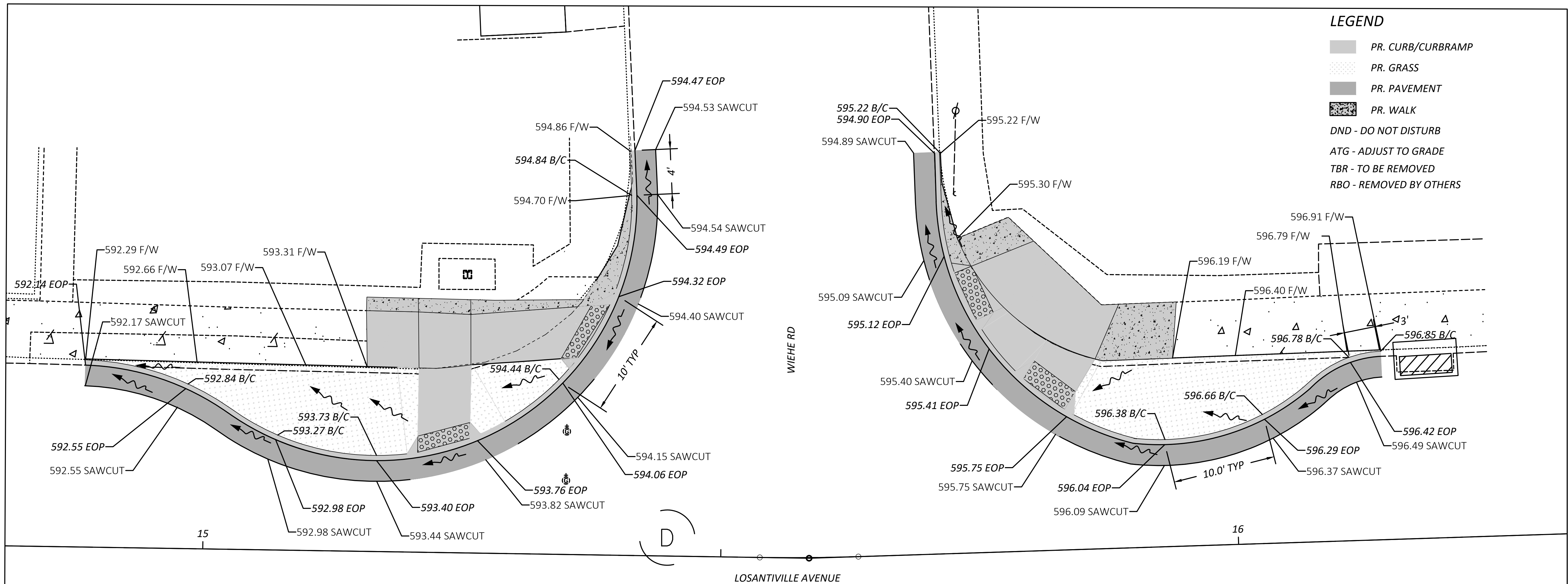
SHEET	TOTAL
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PLAN SHEET

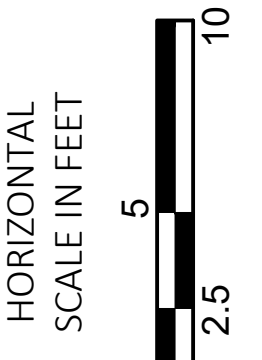
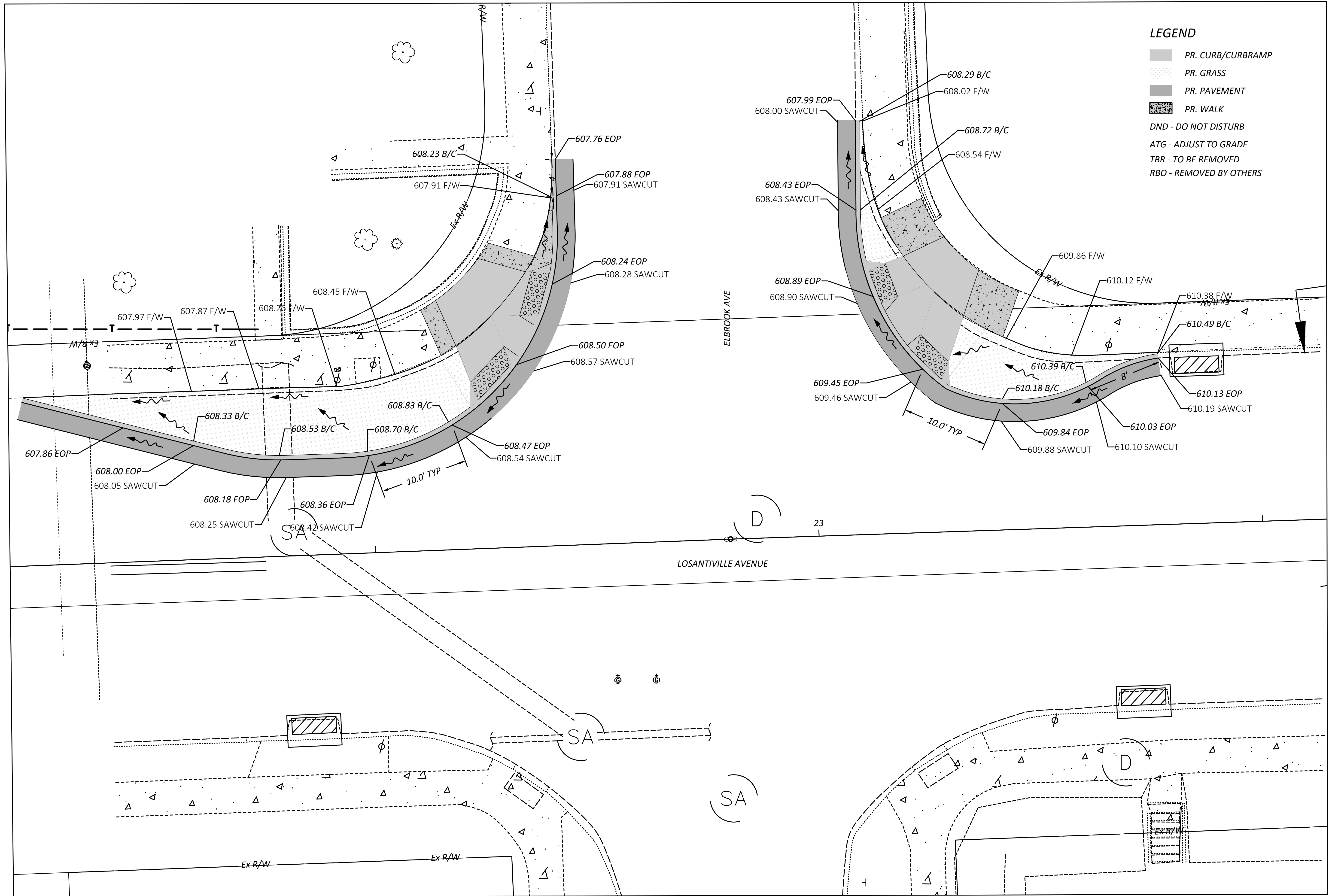
- LEGEND**
- PR. CURB/CURBRAMP
 - PR. GRASS
 - PR. PAVEMENT
 - PR. WALK
 - DND - DO NOT DISTURB
 - ATG - ADJUST TO GRADE
 - TBR - TO BE REMOVED
 - RBO - REMOVED BY OTHERS

DESIGN AGENCY	
TEC	
TEC Engineering, Inc. 2440 Republic Rd. TEC Engineering, Inc. 7288 Central Park Blvd. Mason, OH 45040	
DESIGNER	NB
REVIEWER	DGO 2/2/24
PROJECT ID	23039-003
SHEET	TOTAL
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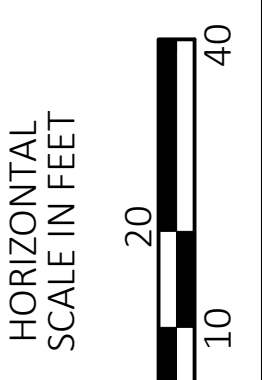
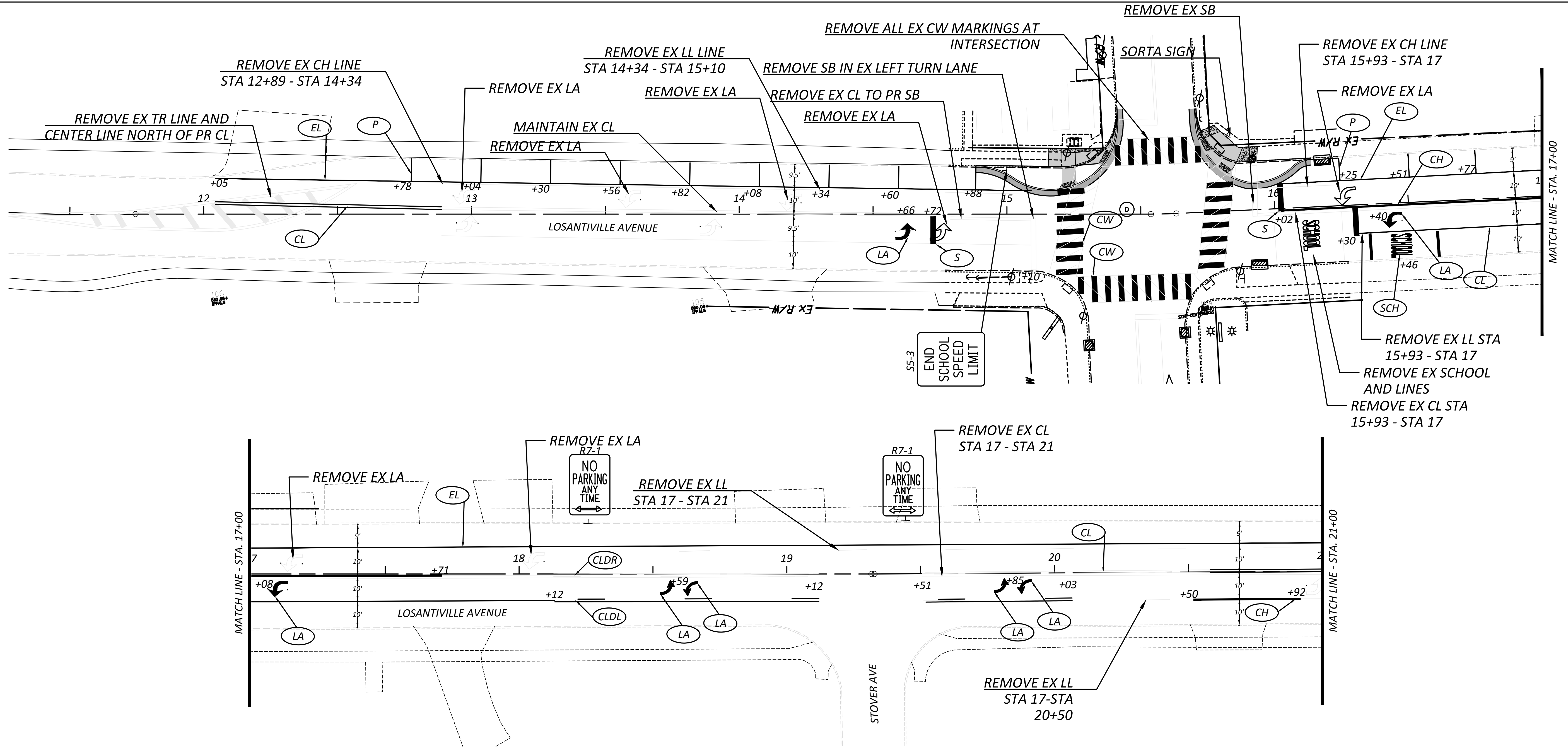
BUMPOUT ELEVATION DETAILS

DESIGN AGENCY	TEC Engineering, Inc. 2441 Republic Rd. TEC Engineering, Inc. 7288 Central Park Blvd. Mason, OH 45040
DESIGNER	NB
REVIEWER	DGO 2/2/24
PROJECT ID	23039-003
SHEET	TOTAL 9 21



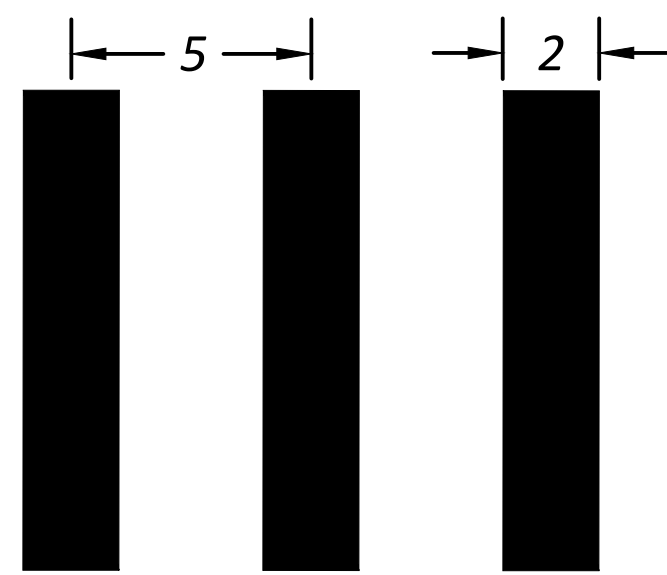
BUMPOUT ELEVATION DETAILS

DESIGN AGENCY	TEC Engineering, Inc. 2440 Republic Rd. TEC Engineering, Inc. 7288 Central Park Blvd. Mason, OH 45040
DESIGNER	NB
REVIEWER	DGO 2/2/24
PROJECT ID	23039-003
SHEET	TOTAL
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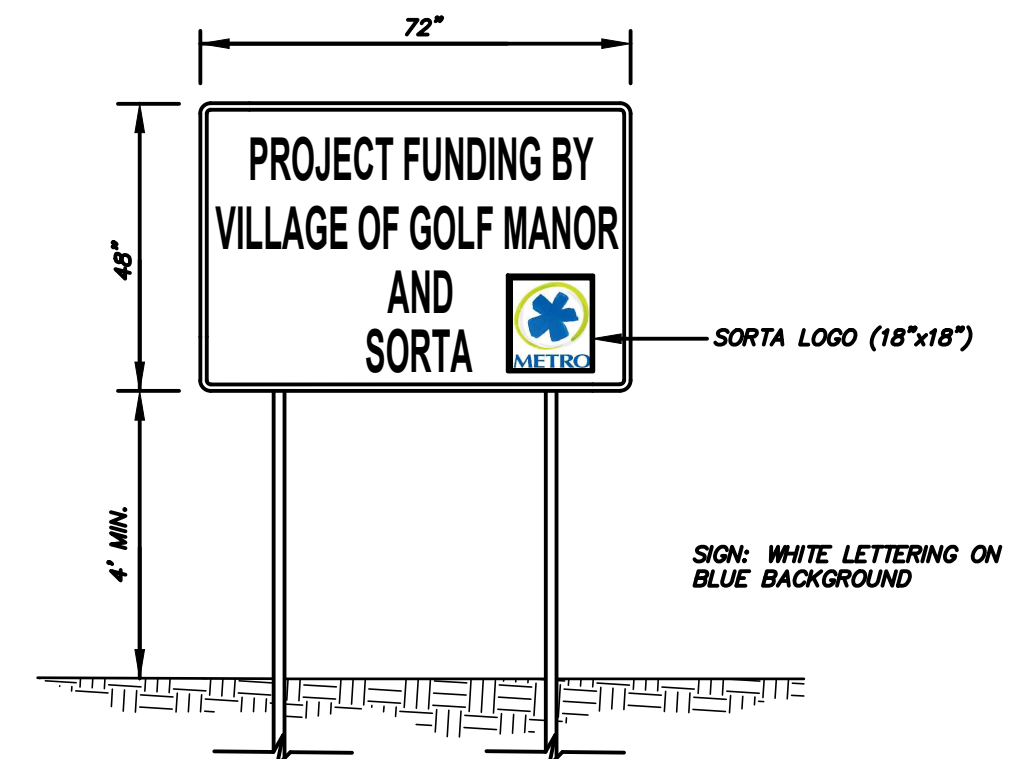
PAVEMENT MARKING PLAN

CROSSWALK MARKING
DETAIL, NTS



LEGEND

- CL CENTERLINE, 4" DOUBLE SOLID
- CLDR CENTER LINE, 4" DASHED RIGHT
- CLDL CENTER LINE, 4" DASHED LEFT
- EL EDGE LINE, 4"
- CH CHANNELIZING LINE, 8" WHITE
- LA LANE ARROW, 72"
- CW CROSSWALK LINE, 24"
- S STOP LINE, 24"
- TR (Y/W) TRANSVERSE LINE, 24" (YELLOW/WHITE)
- P PARKING STALL LINE, 4"
- SCH SCHOOL SYMBOL, 96" LETTERS



SIGNING, MISC.: SORTA SIGN
N.T.S.

DESIGN AGENCY

TEC
 TEC Engineering, Inc.
 7288 Central Park Blvd.
 Mason, OH 45040

DESIGNER

AFS

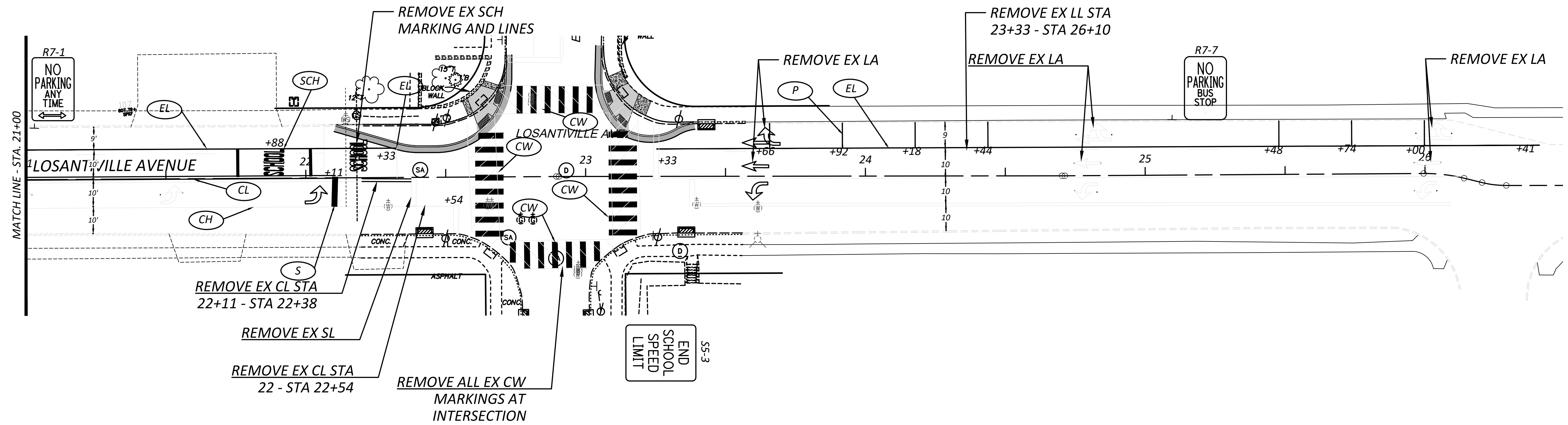
REVIEWER
 DGO 2/2/24

PROJECT ID
 23039-003

SHEET TOTAL
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SIGNAL DESIGN - LOSANTIVILLE AVE

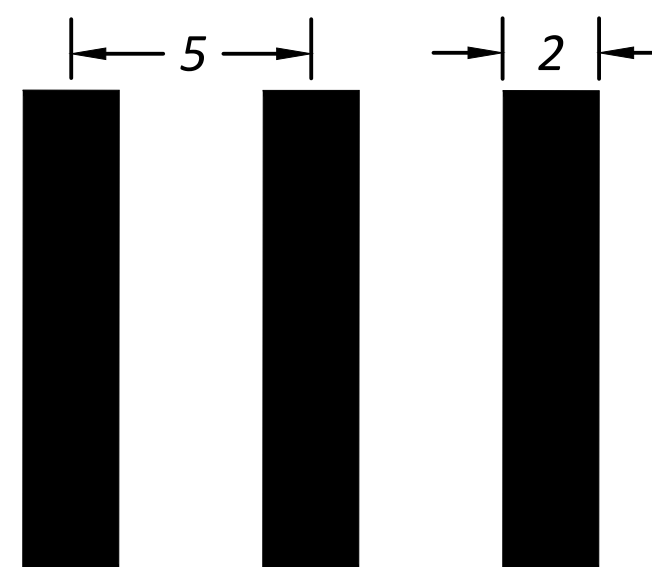
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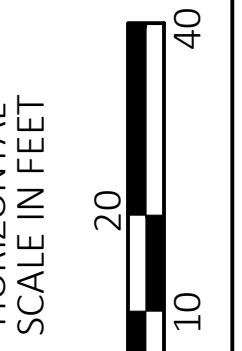
LEGEND

- CL CENTERLINE, 4" DOUBLE SOLID
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**CROSSWALK MARKING
DETAIL, NTS**



PAVEMENT MARKING PLAN



DESIGN AGENCY



DESIGNER

AFS

REVIEWER

DGO 2/2/24

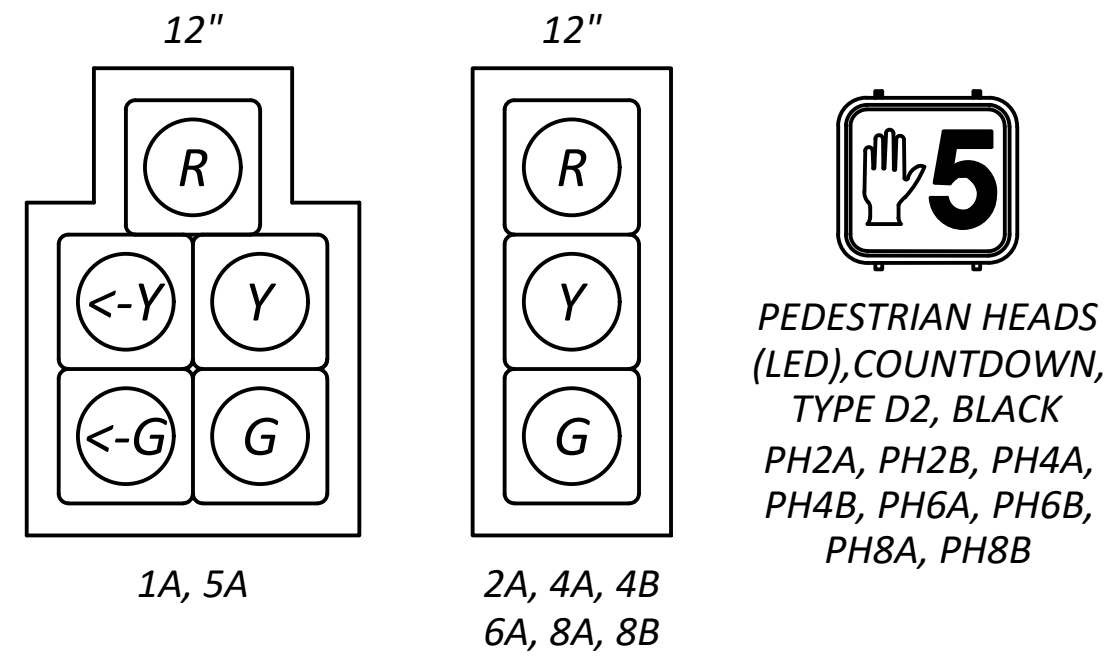
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23039-003

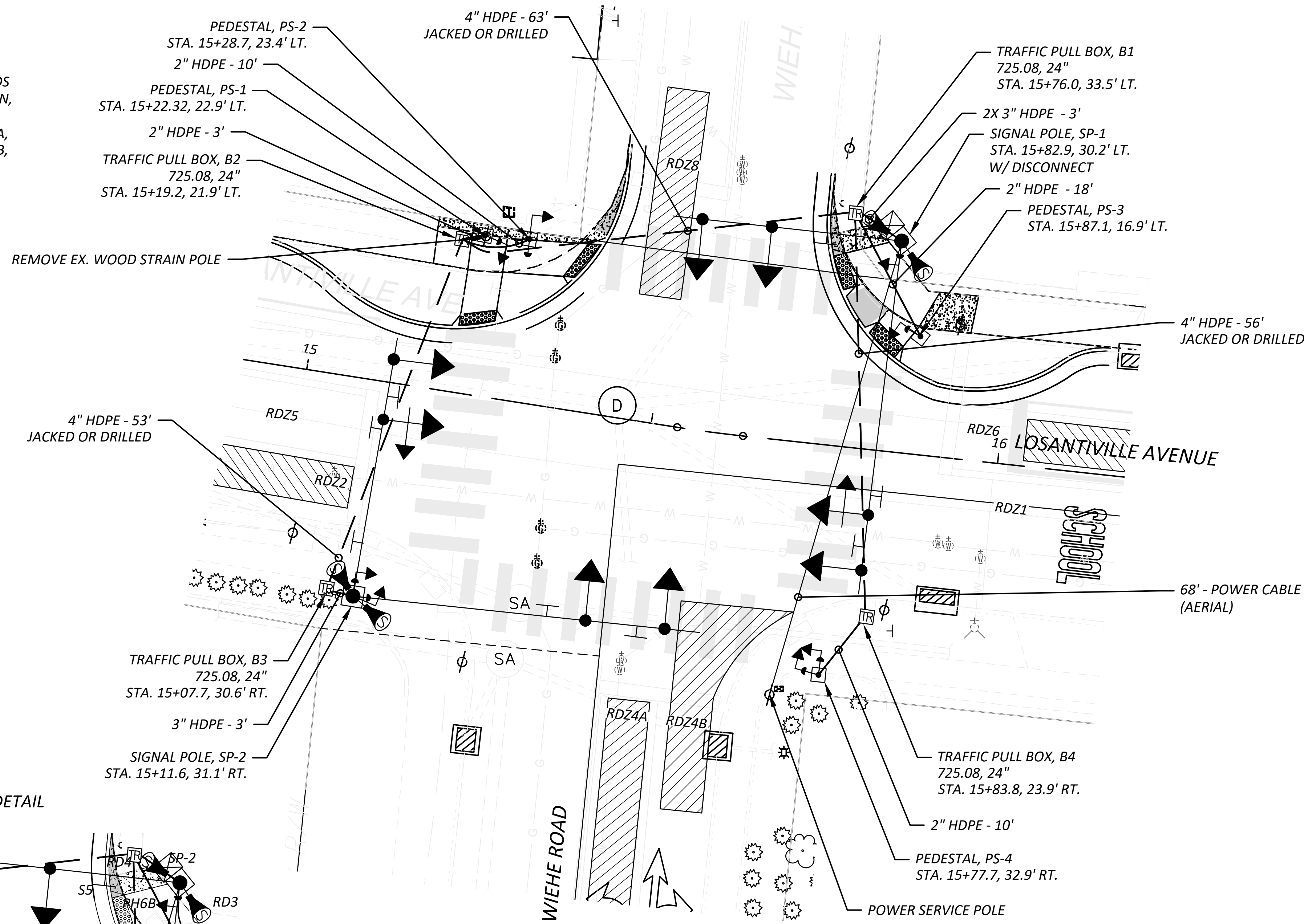
SHEET TOTAL

13 21

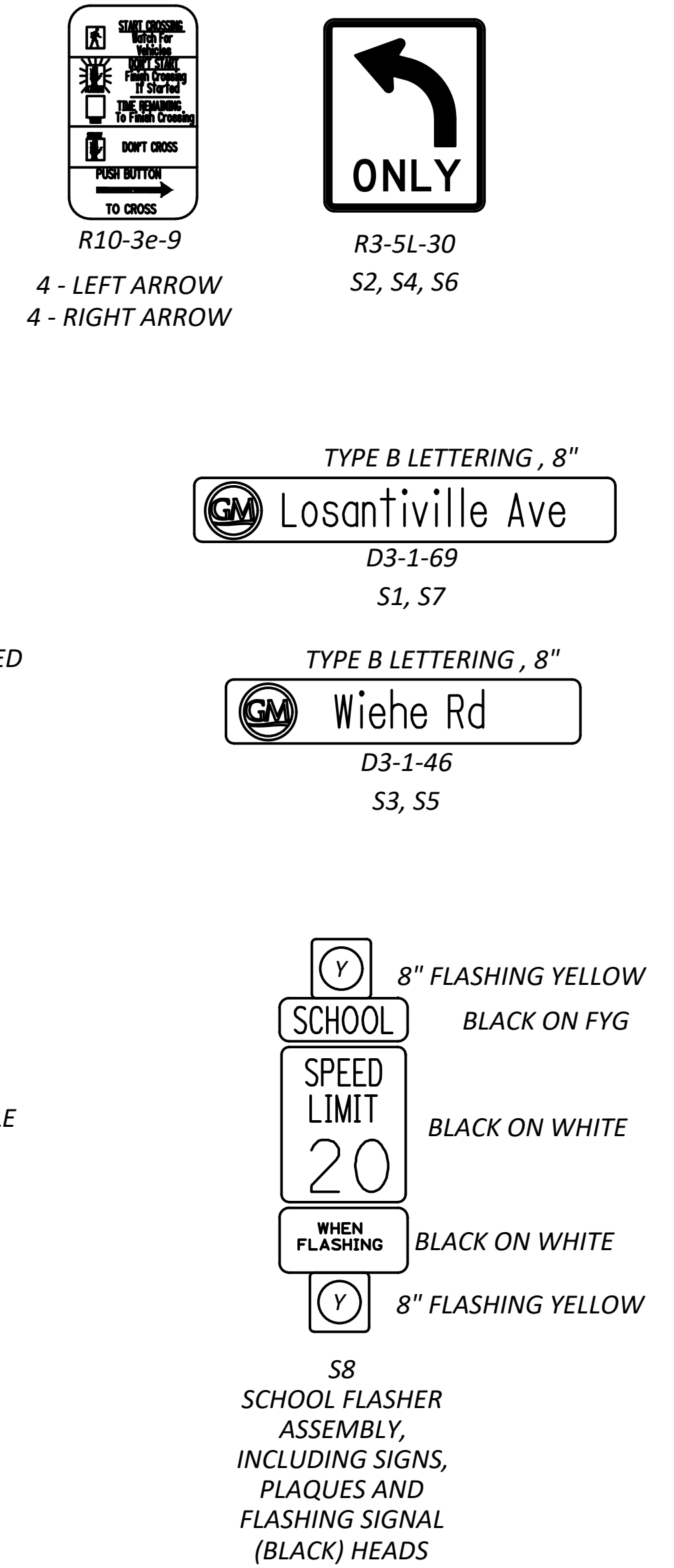
PROPOSED SIGNAL HEADS



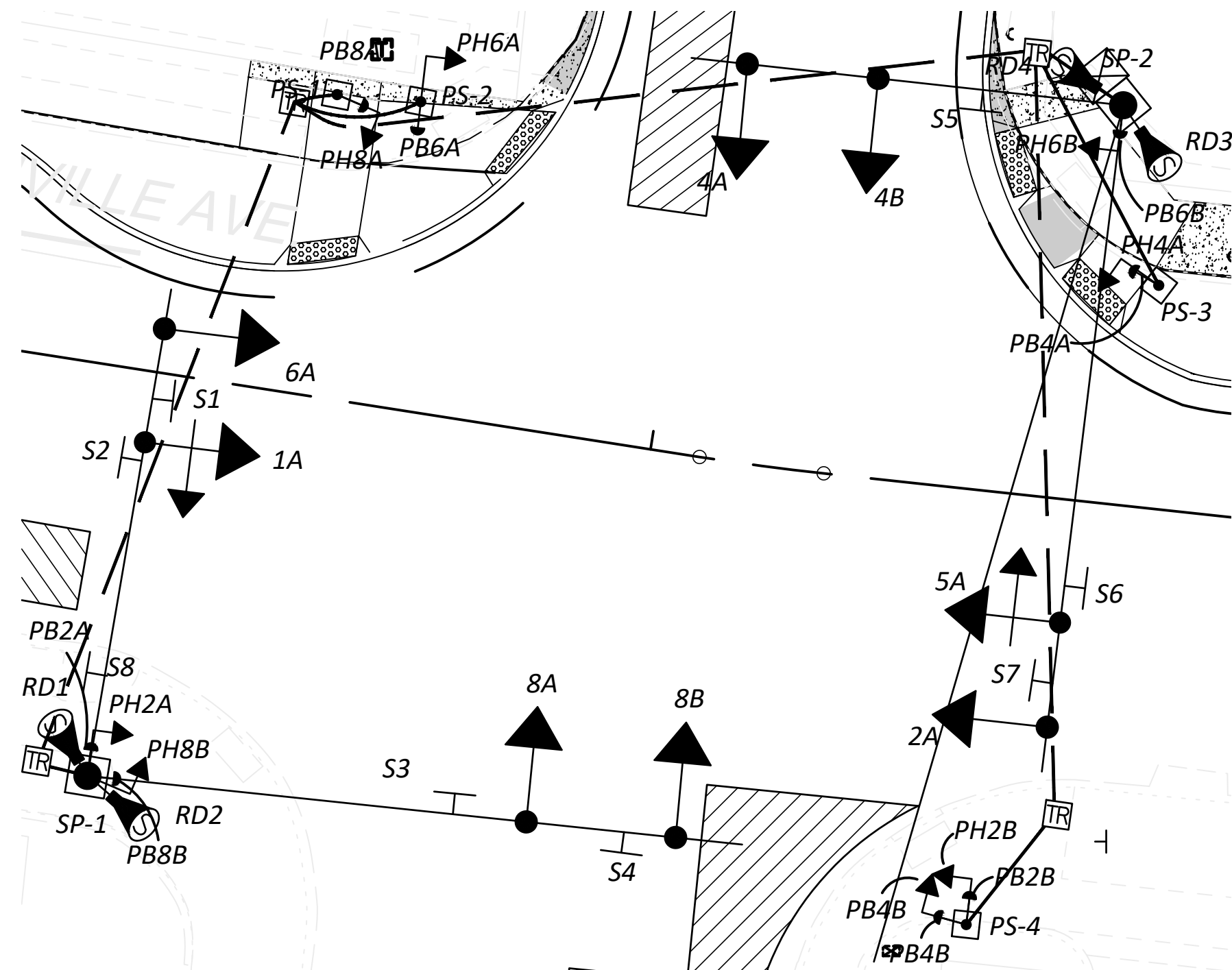
PLAN VIEW



PROPOSED SIGNS



SIGNAL & SIGN PLACEMENT DETAIL

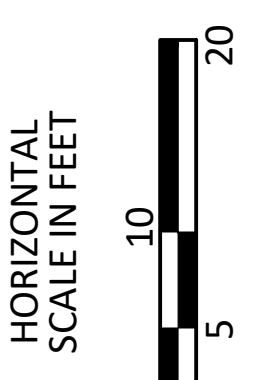


NOTES:

- 120/240V ELECTRIC POWER WILL BE OBTAINED FROM DUKE. THE CONTRACTOR SHALL COORDINATE WITH DUKE ON POWER SOURCE LOCATION. ROUTE OVERHEAD SERVICE TO PROPOSED METER AND DISCONNECT MOUNTED ON SIGNAL SUPPORT, SP-1.
- ALL CONDUIT SHALL BE SIZED AS NOTED.
- POLE LOCATIONS HAVE BEEN INDICATED AS ACCURATELY AS POSSIBLE. TOP OF POLE FOUNDATIONS SHALL BE FLUSH WITH ADJACENT WALK WAYS, IF APPLICABLE.
- LOCATION OF CONDUIT RUNS SHOWN ON THE DRAWING ARE APPROXIMATE. MAINTAIN 36" HORIZONTAL CLEARANCE FROM WATER AND GAS LINES. FIELD ADJUST AS NEEDED.

SIGNAL LEGEND

TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"	
SIGNAL POLE	
CONTROLLER CABINET	
TRAFFIC PULL BOX	
STOP-LINE RADAR UNIT	
DETECTION ZONE	
PEDESTRIAN PUSH BUTTON	
PEDESTRIAN SIGNAL HEAD	
FLAT SHEET SIGN	
CONDUIT, HDPE, TRENCHED	
CONDUIT, HDPE, JACKED OR DRILLED	



TRAFFIC SIGNAL PLAN
 LOSANTIVILLE AVENUE & WIEHE ROAD

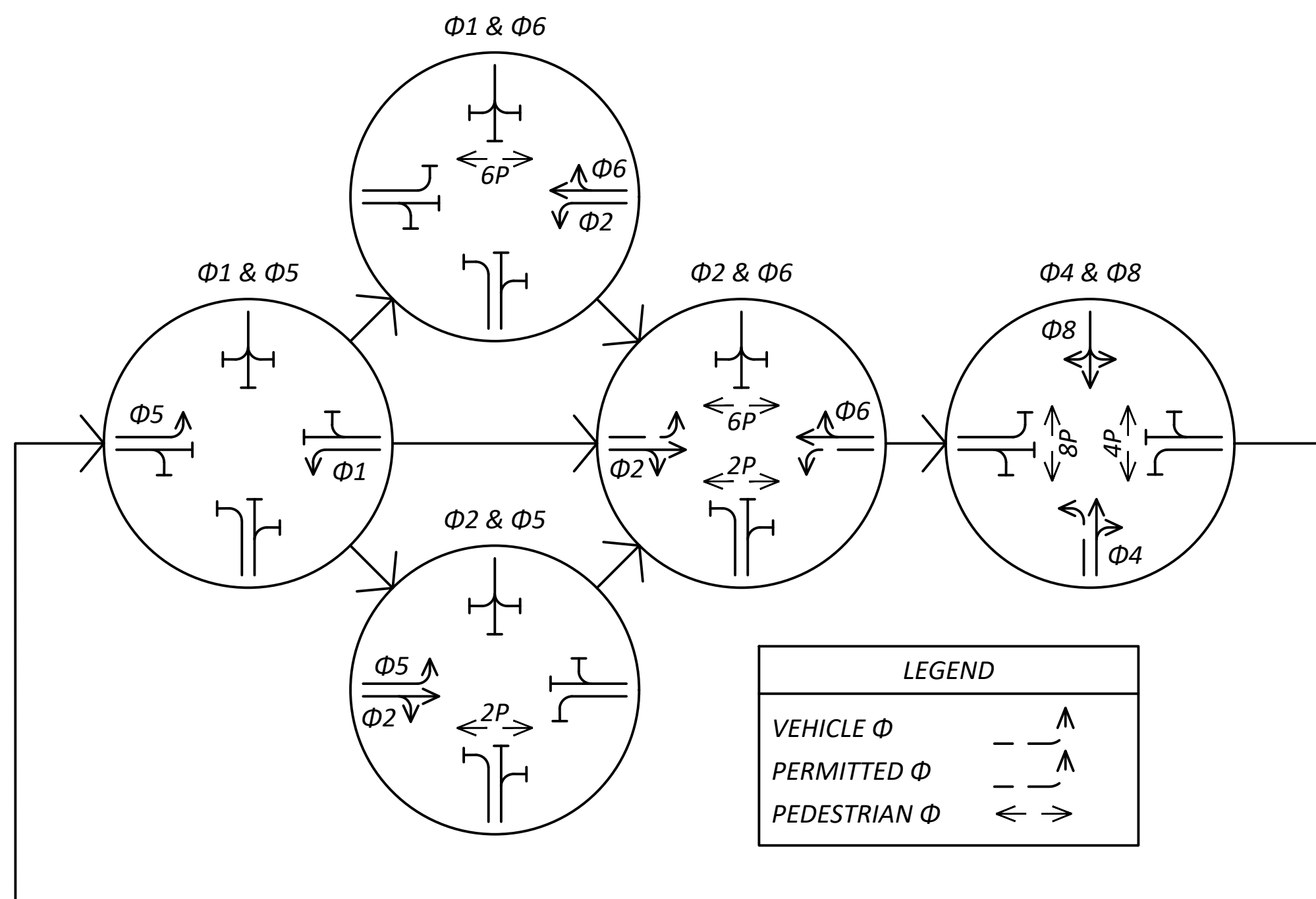
DESIGN AGENCY	TEC Engineering, Inc. 2440 W. Main Street, P.O. Box 100 7288 Central Park Blvd. Mason, OH 45040
DESIGNER	AFS
REVIEWER	DGO
DATE	2/2/24
PROJECT ID	23039-003
SHEET	14
TOTAL	21

TRAFFIC SIGNAL CONTROLLER TIMING CHART

INTERSECTION: LOSANTIVILLE AVENUE & WIEHE ROAD									
MAINTAINING AGENCY: VILLAGE OF GOLF MANOR									
START UP		DUAL ENTRY: ON		PHASES: $\Phi 2$ & $\Phi 6$					
START IN: Y/R FLASH \emptyset ; ALL RED \emptyset		REST IN RED: RING 1 O RING 2 O							
TIME FOR FLASH OR ALL RED: 5 SEC.		OVERLAP		A	B	C	D		
FIRST PHASE(S): 2+6		PHASES		-	-	-	-		
COLOR DISPLAYED: GREEN \emptyset ; YELLOW \emptyset									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WBLT	EB	-	NB	EBLT	WB	-	SB
MINIMUM GREEN (INITIAL) (SEC.)		6	20	-	8	6	20	-	8
MAXIMUM INITIAL (SEC.)		-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)		3	3	-	3	3	3	-	3
MAXIMUM GREEN I (SEC.)		15	45	-	30	15	45	-	30
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)		3	3.5	-	3.5	3	3.5	-	3.5
ALL RED CLEARANCE (SEC.)		2	1.5	-	1	2	1.5	-	1
WALK (SEC.)		-	7	-	5	-	5	-	6
PEDESTRIAN CLEARANCE (SEC.)		-	12	-	9	-	7	-	7
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	OFF*	-	-	-	OFF*
MEMORY (ON/OFF)	-	-	-	-	-	-	-	-	-

NOTES: * PHASE 4 & 8 PEDESTRIAN RECALL SHALL BE ON ON SATURDAYS

SIGNAL PHASING DIAGRAM



DETECTOR TABLE

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ1	WB LT	PRESENCE	1	NON-LOCK	0	0	-	STOP LINE	30
RDZ2	EB	PRESENCE	2	NON-LOCK	0	0	-	STOP LINE	30
RDZ4A	NB LT	PRESENCE	4	NON-LOCK	0	0	-	STOP LINE	30
RDZ4B	NB	PRESENCE	4	NON-LOCK	0	3	-	STOP LINE	30
RDZ5	EB LT	PRESENCE	5	NON-LOCK	0	0	-	STOP LINE	30
RDZ6	WB	PRESENCE	6	NON-LOCK	0	0	-	STOP LINE	30
RDZ8	SB	PRESENCE	8	NON-LOCK	0	0	-	STOP LINE	30

TRAFFIC SIGNAL SUB-SUMMARY

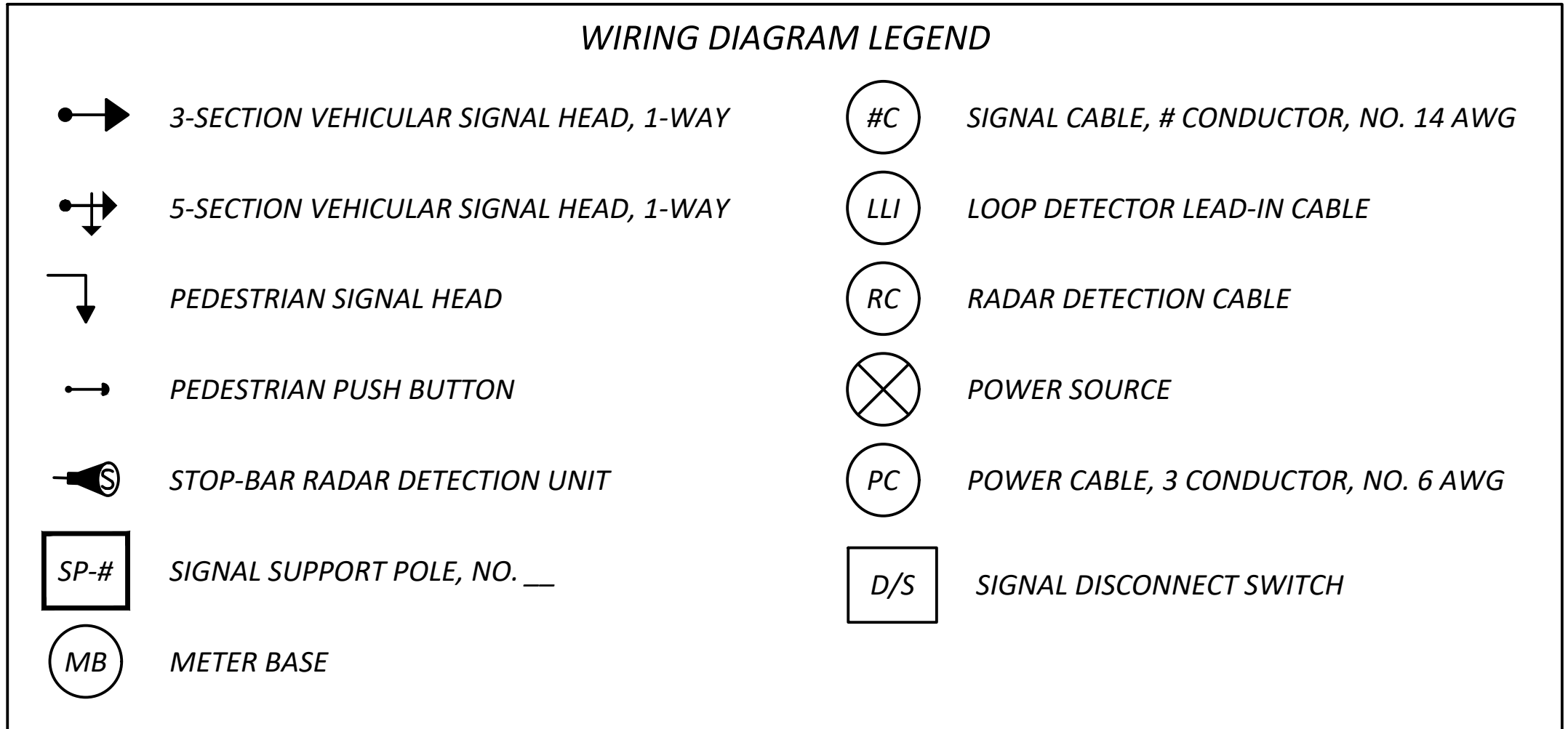
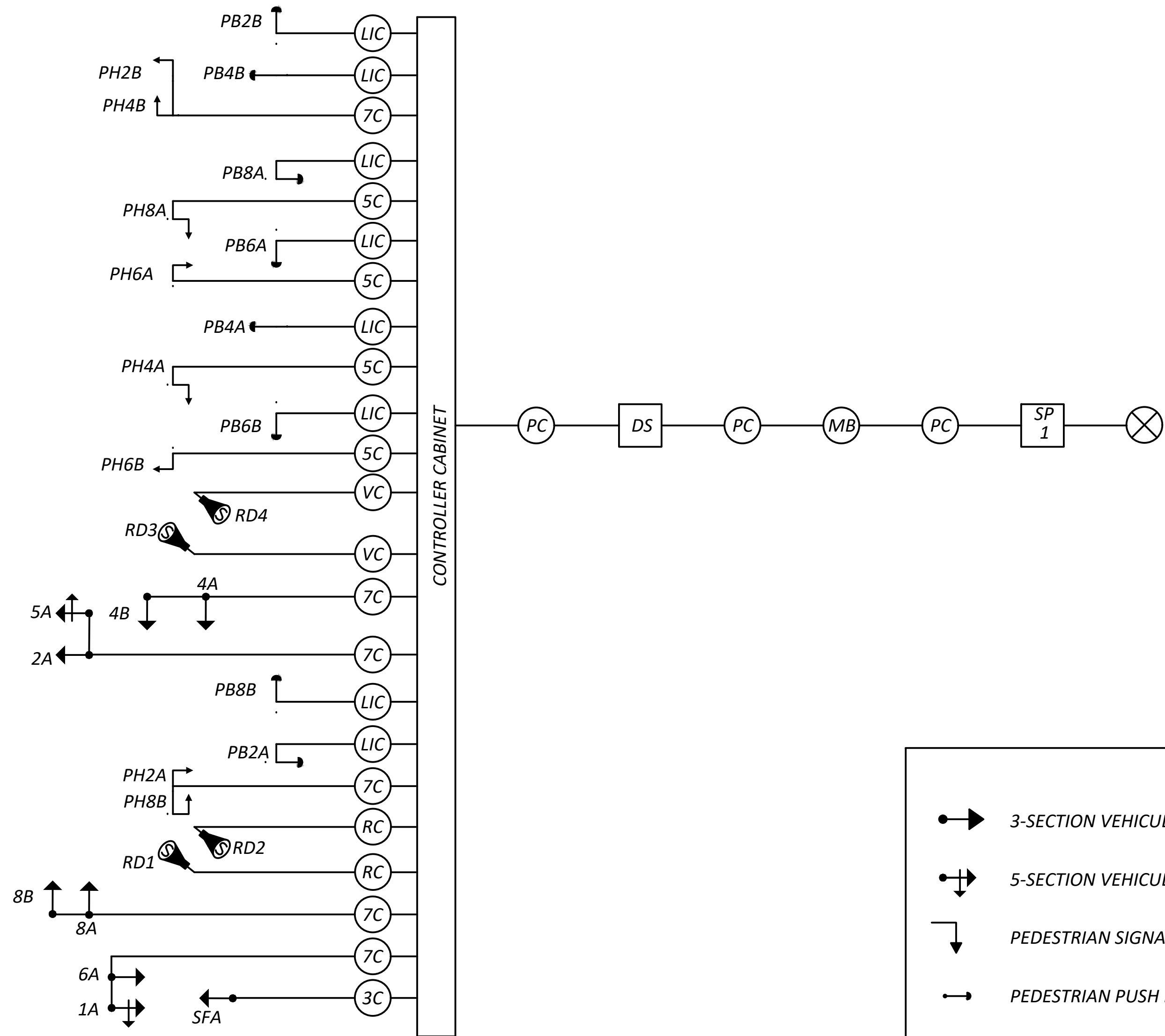
ITEM	EXT	TOTAL	UNIT	DESCRIPTION
625	25410	31	FT	CONDUIT, 2", 725.052
625	25504	9	FT	CONDUIT, 3", 725.052
625	25908	172	FT	CONDUIT, JACKED OR DRILLED, 725.052, 4"
625	29002	37	FT	TRENCH, 24" DEEP
625	30706	4	EACH	PULL BOX, 725.08, 24"
625	32000	6	EACH	GROUND ROD
630	79200	7	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM
630	80100	49	SF	SIGN, FLAT SHEET
632	04802	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK
632	04904	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK
632	20730	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN
632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	25010	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD
632	26000	8	EACH	PEDESTRIAN PUSHBUTTON
632	40500	298	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632	40700	882	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION
632	64020	4	EACH	PEDESTAL FOUNDATION
632	65200	804	FT	LOOP DETECTOR LEAD-IN CABLE
632	68300	88	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
632	70000	1	EACH	POWER SERVICE
632	71245	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 6 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 4, AS PER PLAN
632	71361	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 13 AND DESIGN 2, AS PER PLAN
632	89600	4	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN
632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN
809	69123	1	EACH	ATC V6.24 CONTROLLER, AS PER PLAN
809	69100	4	EACH	STOP LINE RADAR DETECTION

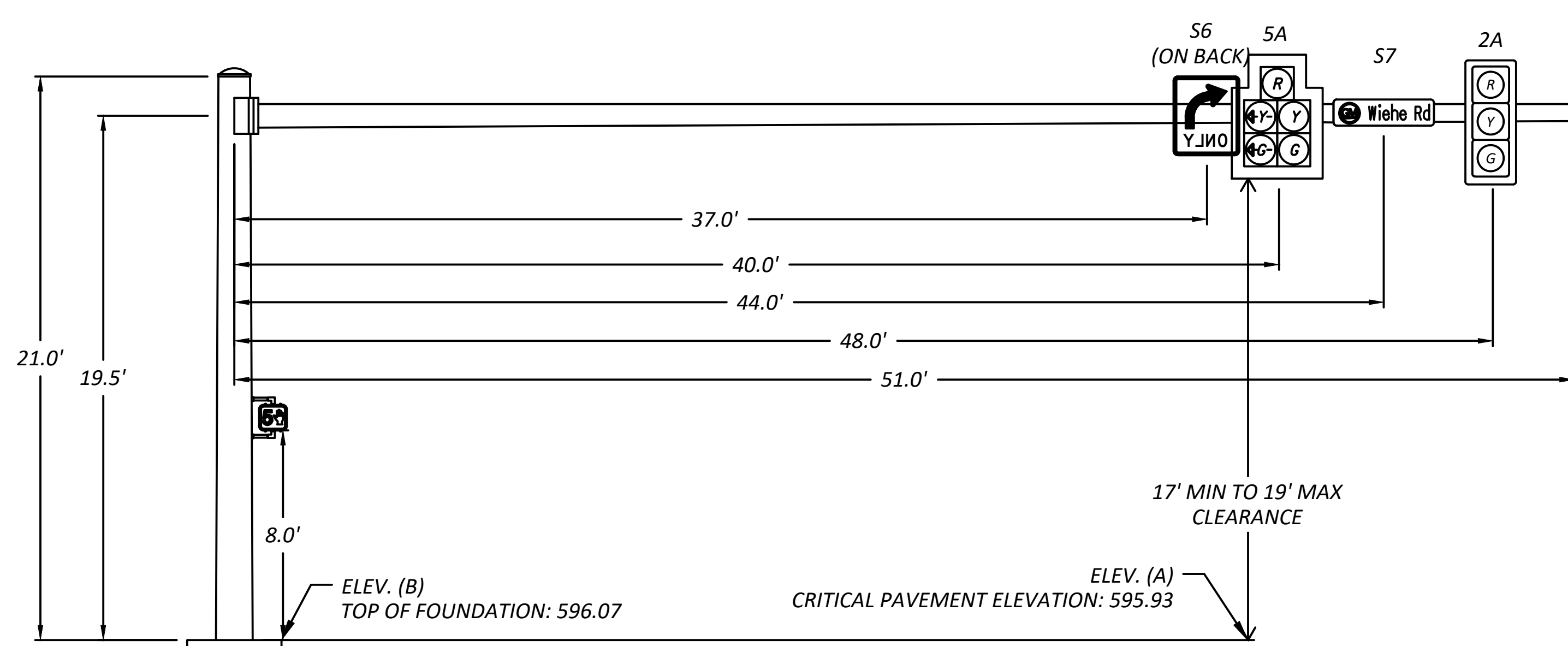
FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A (WB LT)	R	$\Phi 6R$	Y	6A (WB)	R	$\Phi 6R$	Y
	Y	$\Phi 6Y$			Y	$\Phi 6Y$	
	G	$\Phi 6G$		8A,8B (SB)	R	$\Phi 8R$	R
	<-Y-->	$\Phi 1Y$			Y	$\Phi 8Y$	
2A (EB)	R	$\Phi 2R$	Y	PEDESTRIAN MOVEMENTS			
	Y	$\Phi 2Y$		2P (PH2A, PH2B)	W	$\Phi 2P/LS 13 G$	OUT
	G	$\Phi 2G$		DW	$\Phi 2P/LS 13 R$		
4A,4B (NB)	R	$\Phi 4R$	R	4P (PH4A, PH4B)	W	$\Phi 4P/LS 14 G$	OUT
	Y	$\Phi 4Y$			DW	$\Phi 4P/LS 14 R$	
	G	$\Phi 4G$		6P (PH6A, PH6B)	W	$\Phi 6P/LS 15 G$	OUT
5A (EB LT)	R	$\Phi 2R$	Y		8P (PH6A, PH6B)	DW	
	Y	$\Phi 2Y$		W		$\Phi 8P/LS 16 G$	OUT
	G	$\Phi 2R$		DW	$\Phi 8P/LS 16 R$		
	<-Y-->	$\Phi 5Y$					
	<-G-->	$\Phi 5G$					

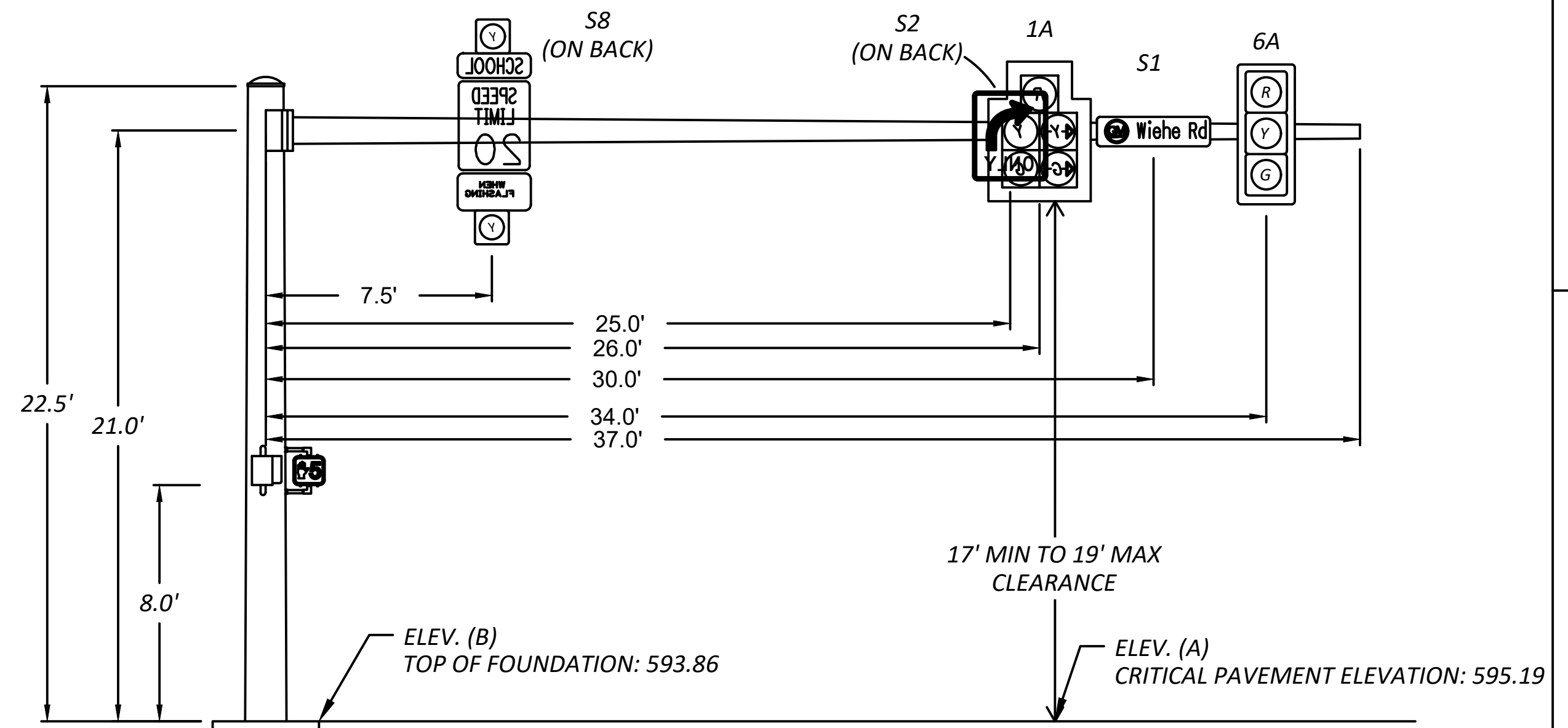
LS = LOAD SWITCH

WIRING DIAGRAM

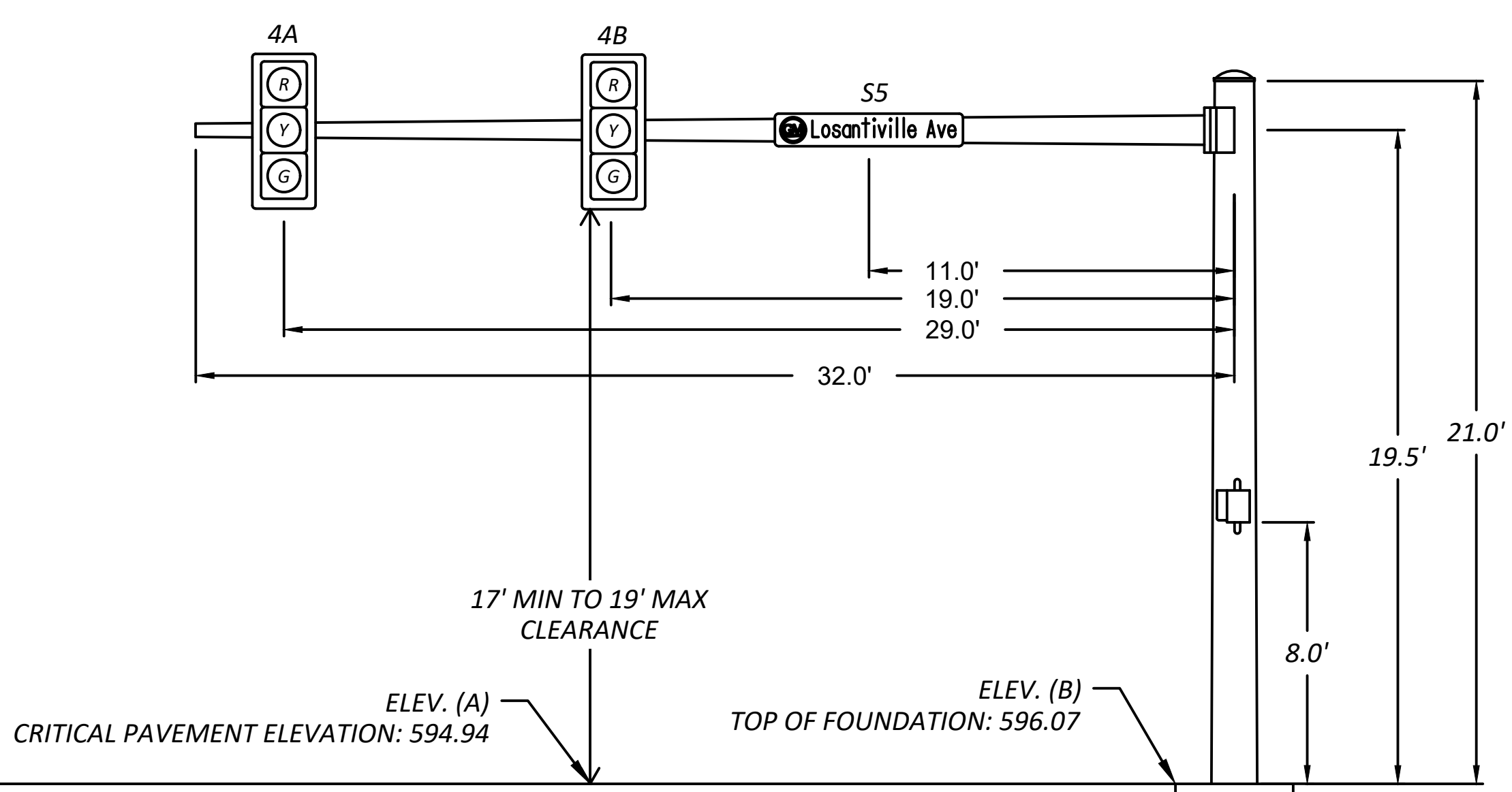




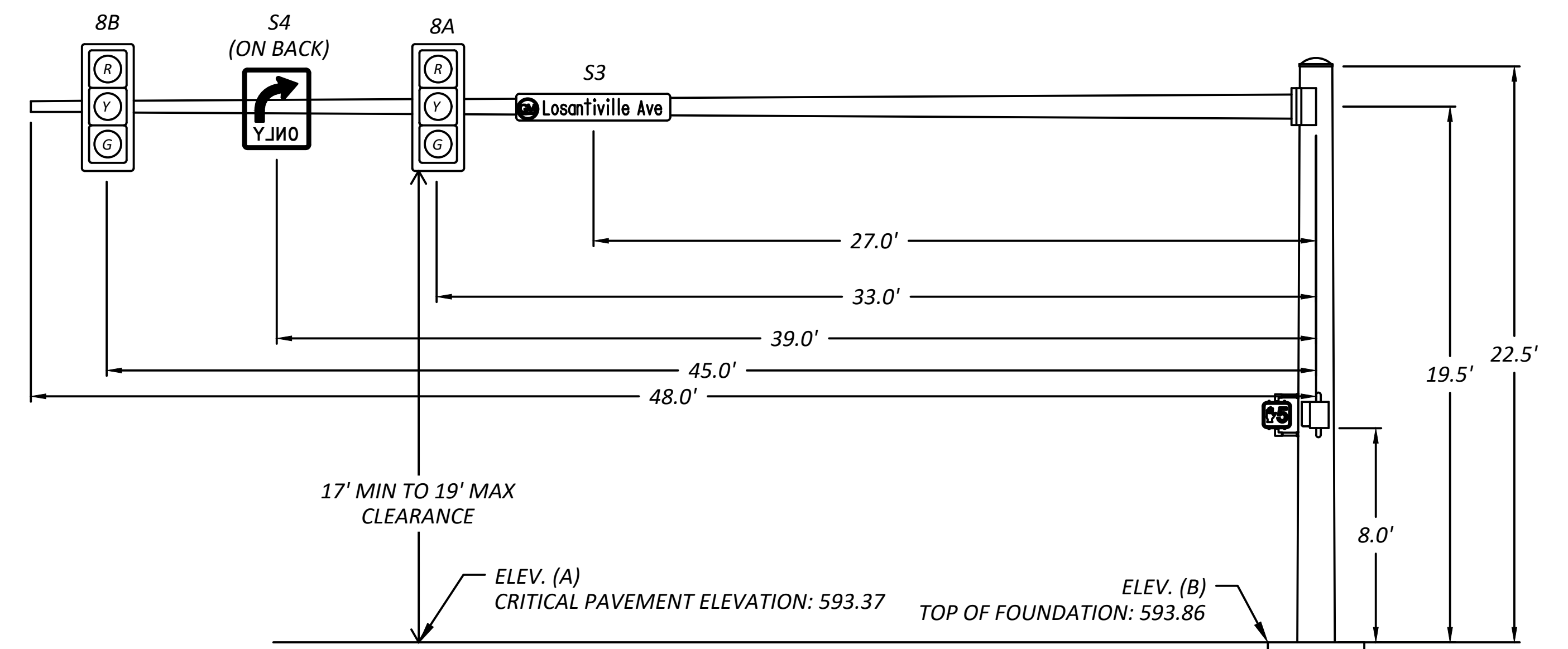
MAST ARM - SP-1A
LOOKING EAST



MAST ARM - SP-2B
LOOKING WEST



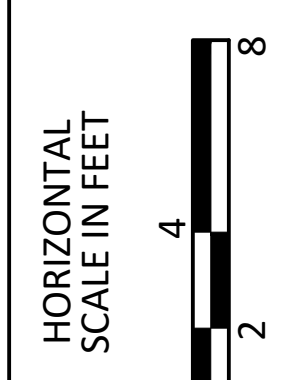
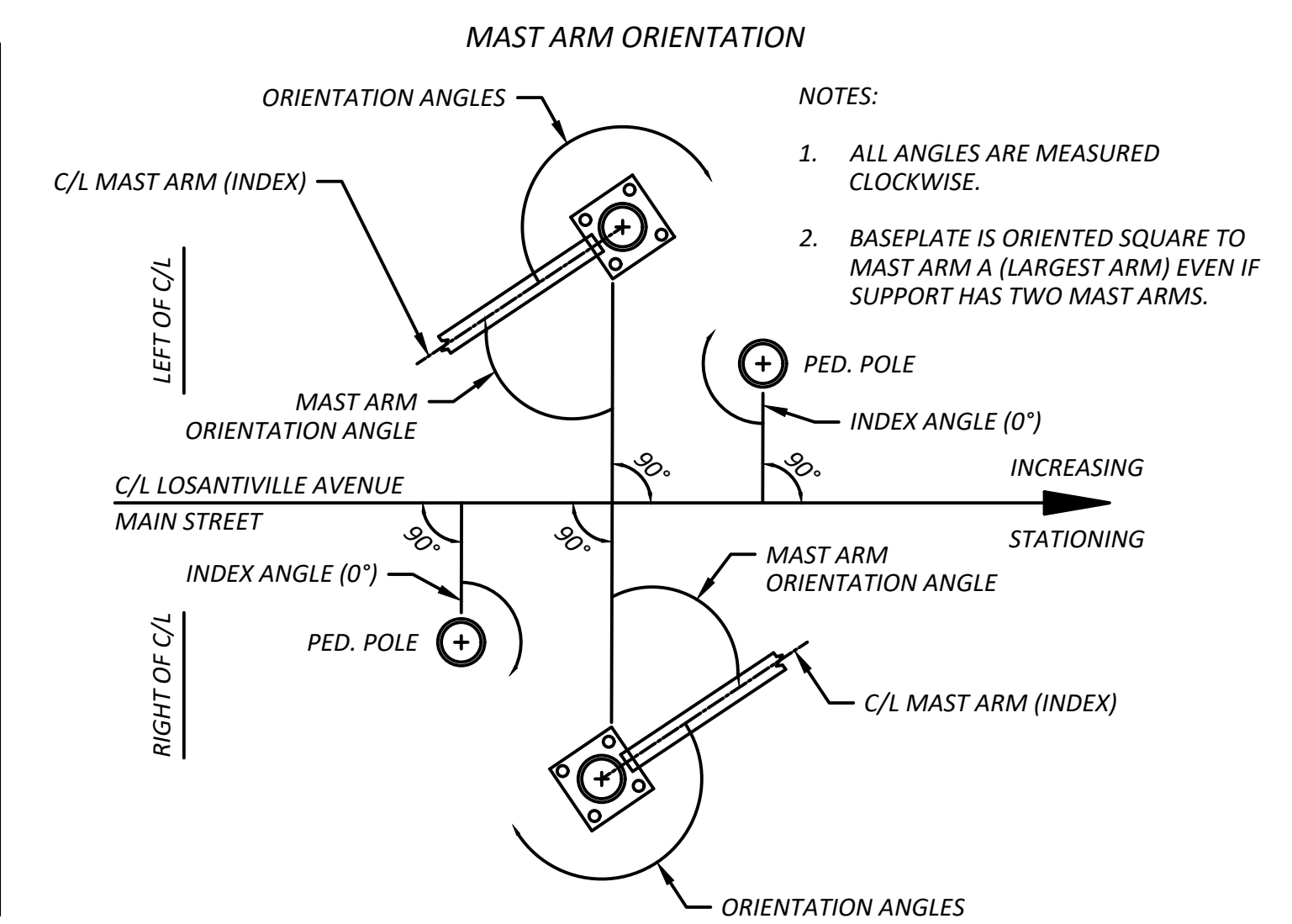
MAST ARM - SP-1B
LOOKING NORTH



MAST ARM - SP-2A
LOOKING SOUTH

MAST ARM TABLE

SUPPORT NO.	MAST ARM	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS													ORIENTATION ANGLES FROM MAST ARM A					
				A	B	POLE DESIGN TYPE	MAST ARM DESIGN NO.	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	R	MAST ARM INDEX ANGLE	SECOND MAST ARM B	PEDESTRIAN SIGNAL HEAD	PEDESTRIAN PUSHBUTTON	DISCONNECT	CABINET	HANDHOLE
				FT	FT																			
SP-1	A	15+82.9	30.2' LT	595.93	596.07	TC-12.31 DES. 10	TC-81.22	13	21	19.5	51	48	44	40	37	-	-	0	-	0	0	180	135	180
	B			594.94					21	19.5	32	29	19	11	-	-	-	-	90	-	-	-	-	-
SP-2	A	15+11.6	31.1' RT	595.19	593.86	TC-12.31 DES. 6	TC-81.22	12	22.5	21	48	45	39	33	24	-	-	90	-	0/270	0/270	-	-	180
	B			593.37					22.5	19.5	37	34	29	26	25	7.5	-	-	270	-	-	-	-	-
PS-1	-	15+22.3	22.9' LT	594.00	-	TC-83.20	-	4	8	-	-	-	-	-	-	-	-	-	0/270	0/270	-	-	-	
PS-2	-	15+28.7	23.4' RT	594.09	-	TC-83.20	-	4	8	-	-	-	-	-	-	-	-	-	270	270	-	-	-	
PS-3	-	15+87.1	16.9' RT	595.71	-	TC-83.20	-	4	8	-	-	-	-	-	-	-	-	-	90	90	-	-	-	
PS-4	-	15+77.7	32.9' RT	596.52	-	TC-83.20	-	4	8	-	-	-	-	-	-	-	-	-	0/270	0/270	-	-	-	



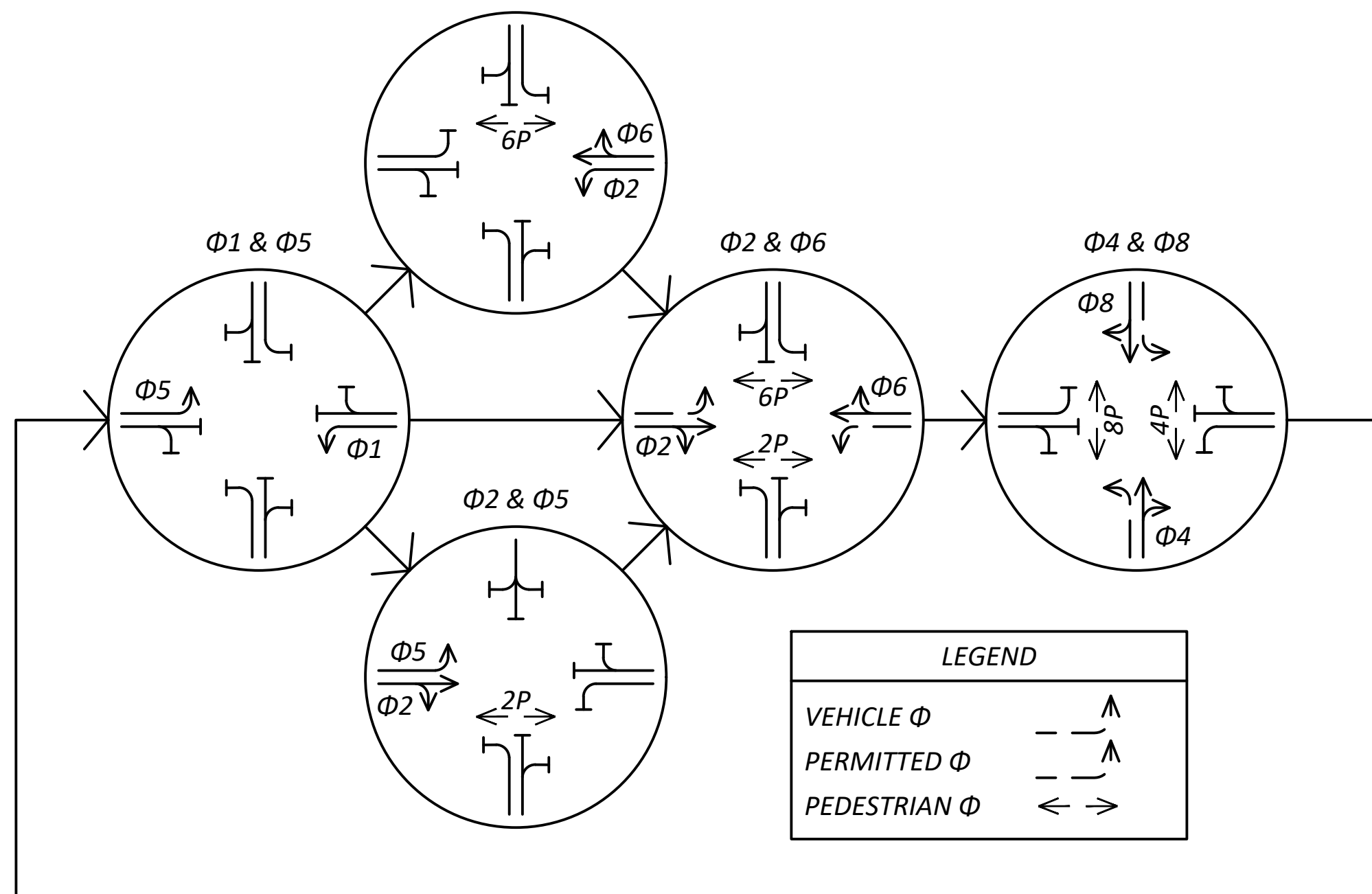
TRAFFIC SIGNAL DETAILS
LOSANTIVILLE AVENUE & WIEHE ROAD

TRAFFIC SIGNAL CONTROLLER TIMING CHART

INTERSECTION: LOSANTIVILLE AVENUE & ELBROOK AVENUE MAINTAINING AGENCY: VILLAGE OF GOLF MANOR									
START UP		DUAL ENTRY: ON		PHASES: $\Phi 2$ & $\Phi 6$					
START IN: Y/R FLASH \emptyset ; ALL RED \emptyset		REST IN RED: RING 1 O RING 2 O		OVERLAP		A	B	C	D
TIME FOR FLASH OR ALL RED: 5 SEC.				PHASES		-	-	-	-
FIRST PHASE(S): 2+6									
COLOR DISPLAYED: GREEN \emptyset ; YELLOW \emptyset									
INTERVAL OR FEATURE	CONTROLLER MOVEMENT NO.								
INTERSECTION MOVEMENT (PHASE)	1	2	3	4	5	6	7	8	
DIRECTION	WBLT	EB	-	NB	EBLT	WB	-	SB	
MINIMUM GREEN (INITIAL) (SEC.)	6	20	-	8	6	20	-	8	
MAXIMUM INITIAL (SEC.)	-	-	-	-	-	-	-	-	
PASSAGE TIME (PRESET GAP) (SEC.)	3	3	-	3	3	3	-	3	
MAXIMUM GREEN I (SEC.)	15	45	-	30	15	45	-	30	
MAXIMUM GREEN II (SEC.)	-	-	-	-	-	-	-	-	
YELLOW CHANGE (SEC.)	3	3.5	-	3.5	3	3.5	-	3.5	
ALL RED CLEARANCE (SEC.)	2	1	-	1	2	1	-	1	
WALK (SEC.)	-	6	-	7	-	6	-	6	
PEDESTRIAN CLEARANCE (SEC.)	-	10	-	9	-	7	-	9	
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	
	PEDESTRIAN (ON/OFF)	-	-	-	OFF*	-	-	OFF*	
MEMORY (ON/OFF)	-	-	-	-	-	-	-	-	

NOTES: * PHASE 4 & 8 PEDESTRIAN RECALL SHALL BE ON ON SATURDAYS

SIGNAL PHASING DIAGRAM
 $\Phi 1$ & $\Phi 6$



DETECTOR TABLE

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	LOCK/ NON-LOCK	EXTEND (SEC)	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
RDZ1	WB LT	PRESENCE	1	NON-LOCK	0	-	-	STOP LINE	30
RDZ2	EB	PRESENCE	2	NON-LOCK	0	-	-	STOP LINE	30
RDZ4	NB	PRESENCE	4	NON-LOCK	0	-	-	STOP LINE	30
RDZ5	EB LT	PRESENCE	5	NON-LOCK	0	-	-	STOP LINE	30
RDZ6	WB	PRESENCE	6	NON-LOCK	0	-	-	STOP LINE	30
RDZ8A	SB LT	PRESENCE	8	NON-LOCK	0	-	-	STOP LINE	30
RDZ8B	SB	PRESENCE	8	NON-LOCK	0	-	-	STOP LINE	30

TRAFFIC SIGNAL SUB-SUMMARY

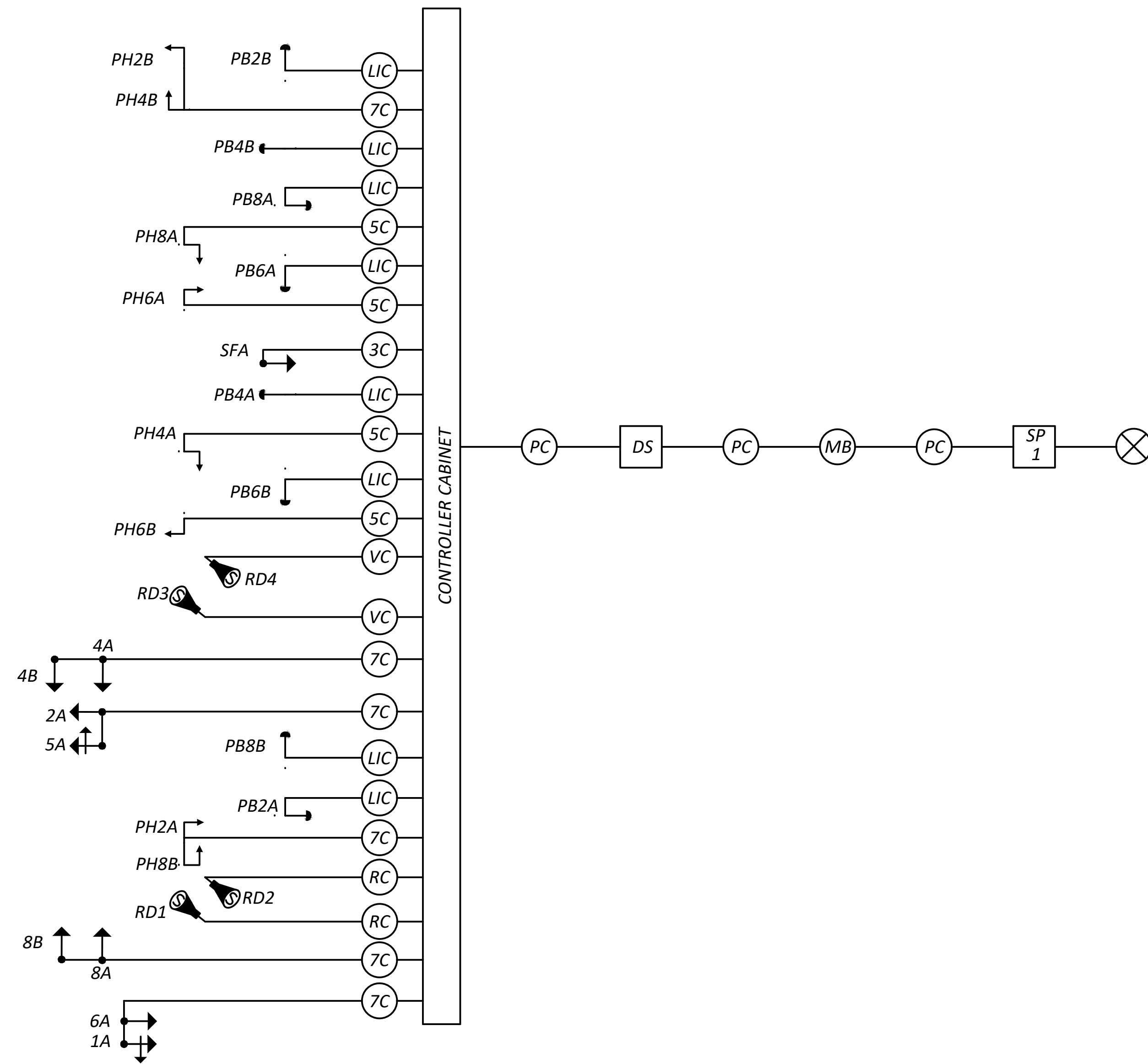
ITEM	EXT	TOTAL	UNIT	DESCRIPTION
625	25410	18	FT	CONDUIT, 2", 725.051
625	25504	18	FT	CONDUIT, 3", 725.051
625	25908	110	FT	CONDUIT, JACKED OR DRILLED, 725.052, 4"
625	29002	29	FT	TRENCH, 24" DEEP
625	30706	4	EACH	PULL BOX, 725.08, 24"
625	32000	6	EACH	GROUND ROD
630	79200	11	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM
630	80100	95	SF	SIGN, FLAT SHEET
632	04802	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK
632	04904	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK
632	20730	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN
632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	25010	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD
632	26001	8	EACH	PEDESTRIAN PUSHBUTTON
632	40500	283	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632	40700	925	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	64010	3	EACH	SIGNAL SUPPORT FOUNDATION
632	64020	3	EACH	PEDESTAL FOUNDATION
632	65200	780	FT	LOOP DETECTOR LEAD-IN CABLE
632	68300	84	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
632	70000	1	EACH	POWER SERVICE
632	71241	1	EACH	SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 6 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 2, AS PER PLAN
632	72111	2	EACH	SIGNAL SUPPORT, TYPE TC-81.22 DESIGN 4, AS PER PLAN
632	89600	3	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN
632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN
809	69123	1	EACH	ATC V6.24 CONTROLLER, AS PER PLAN
809	69100	4	EACH	STOP LINE RADAR DETECTION

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A (WB LT)	R	$\Phi 6R$	Y	6A (WB)	R	$\Phi 6R$	Y
	Y	$\Phi 6Y$			Y	$\Phi 6Y$	
	G	$\Phi 6G$			G	$\Phi 6G$	
	<-Y--	$\Phi 1Y$			R	$\Phi 8R$	
	<-G--	$\Phi 1G$		8A,8B (SB)	Y	$\Phi 8Y$	R
					G	$\Phi 8G$	
2A (EB)	R	$\Phi 2R$	Y	PEDESTRIAN MOVEMENTS			
	Y	$\Phi 2Y$		2P (PH2A, PH2B)	W	$\Phi 2P/LS 13 G$	OUT
	G	$\Phi 2G$		DW	$\Phi 2P/LS 13 R$		
4A,4B (NB)	R	$\Phi 4R$	R	4P (PH4A, PH4B)	W	$\Phi 4P/LS 14 G$	OUT
	Y	$\Phi 4Y$			DW	$\Phi 4P/LS 14 R$	
	G	$\Phi 4G$					
5A (EB LT)	R	$\Phi 2R$	Y	6P (PH6A, PH6B)	W	$\Phi 6P/LS 15 G$	OUT
	Y	$\Phi 2Y$			DW	$\Phi 6P/LS 15 R$	
	G	$\Phi 2R$			W	$\Phi 8P/LS 16 G$	OUT
	<-Y--	$\Phi 5Y$			DW	$\Phi 8P/LS 16 R$	
	<-G--	$\Phi 5G$					

LS = LOAD SWITCH

WIRING DIAGRAM



WIRING DIAGRAM LEGEND

- | | | | |
|--|--|--|---------------------------------------|
| | 3-SECTION VEHICULAR SIGNAL HEAD, 1-WAY | | SIGNAL CABLE, # CONDUCTOR, NO. 14 AWG |
| | 5-SECTION VEHICULAR SIGNAL HEAD, 1-WAY | | LOOP DETECTOR LEAD-IN CABLE |
| | PEDESTRIAN SIGNAL HEAD | | RADAR DETECTION CABLE |
| | PEDESTRIAN PUSH BUTTON | | POWER SOURCE |
| | STOP-BAR RADAR DETECTION UNIT | | POWER CABLE, 3 CONDUCTOR, NO. 6 AWG |
| | SIGNAL SUPPORT POLE, NO. ___ | | SIGNAL DISCONNECT SWITCH |
| | METER BASE | | |



TRAFFIC SIGNAL DETAILS
 LOSANTIVILLE AVENUE & ELBROOK AVENUE

DESIGN AGENCY



DESIGNER

AFS

REVIEWER

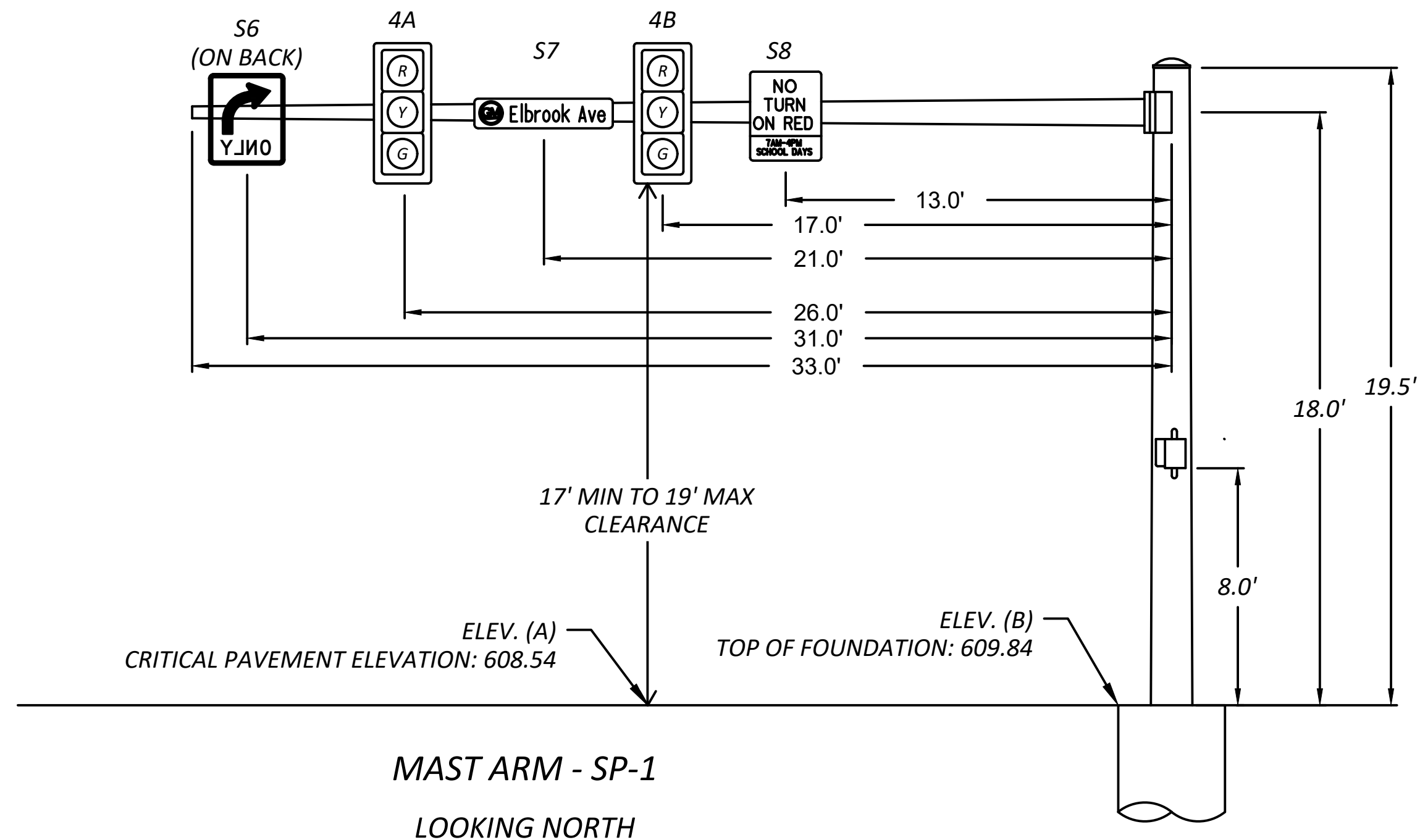
DGO 2/2/24

PROJECT ID

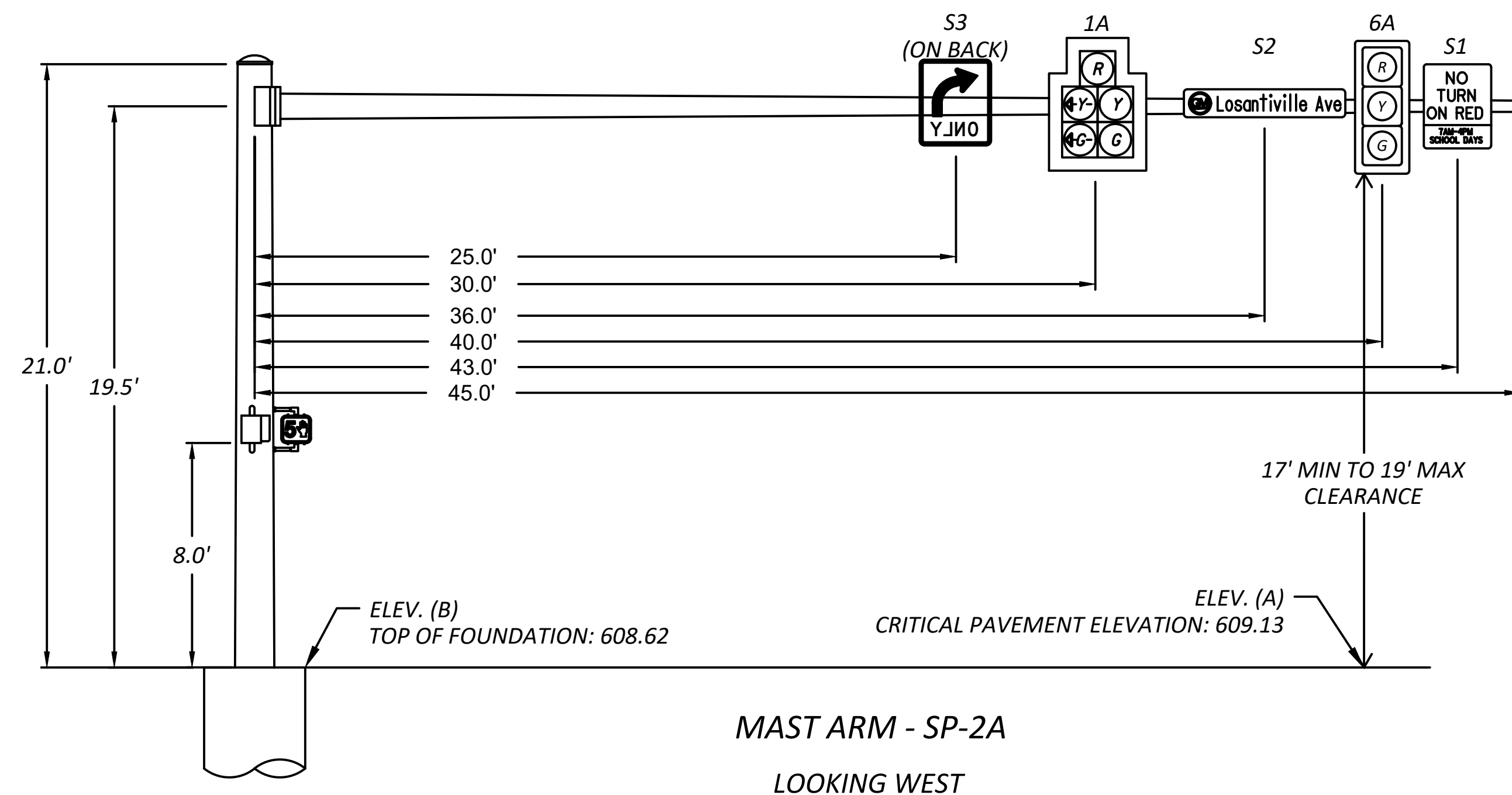
23039-003

SHEET TOTAL

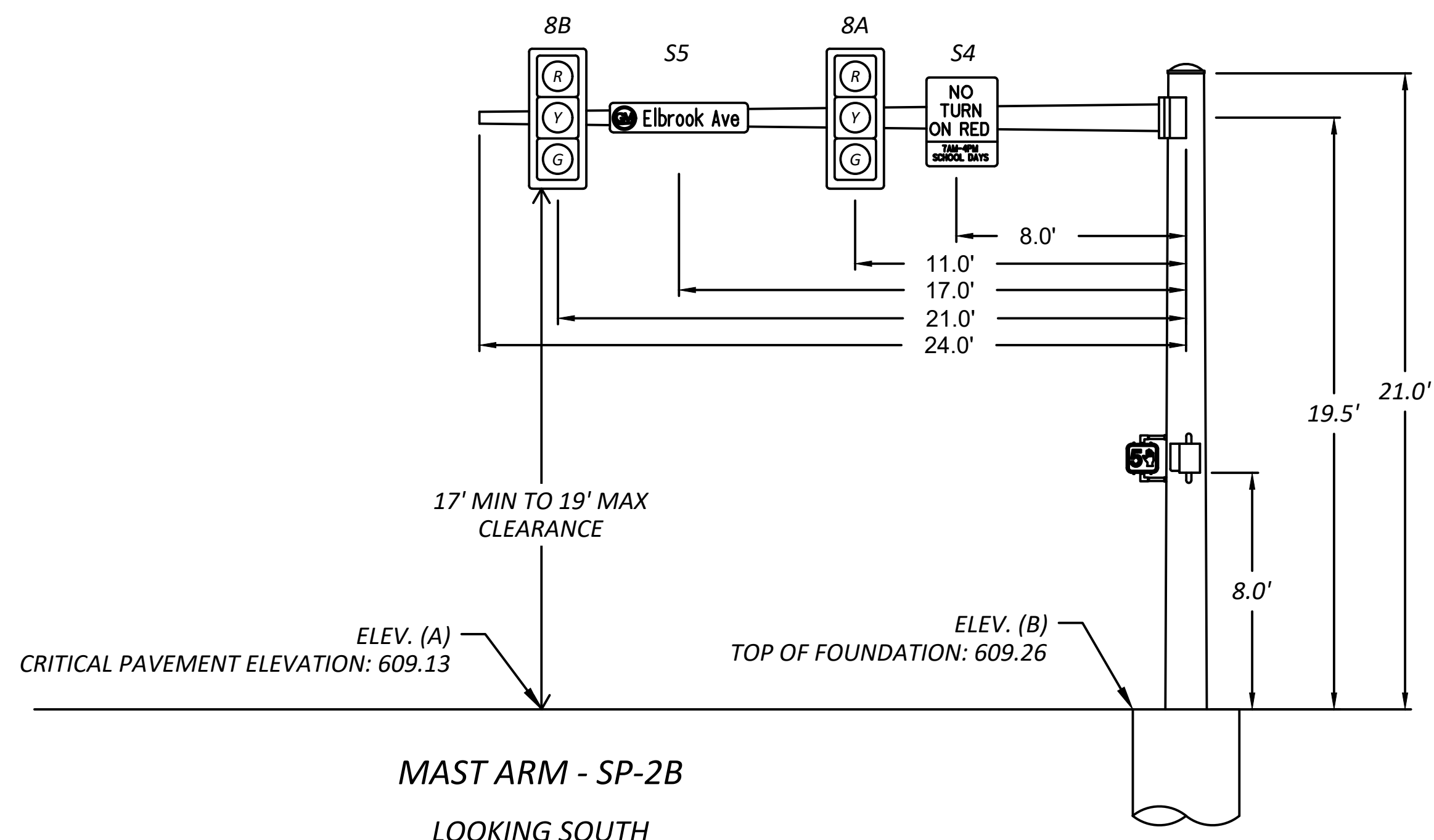
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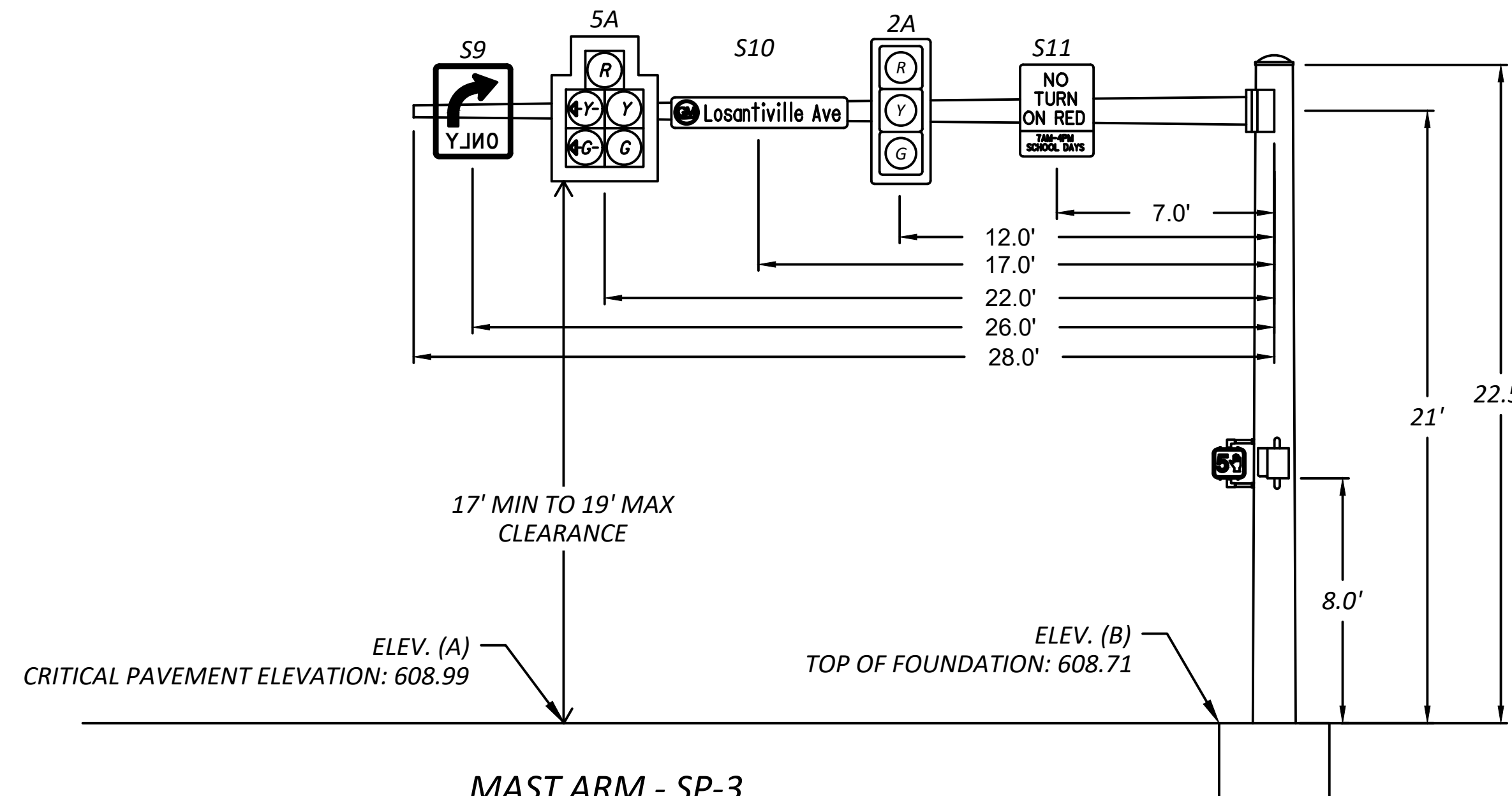
MAST ARM - SP-1
LOOKING NORTH



MAST ARM - SP-2A
LOOKING WEST



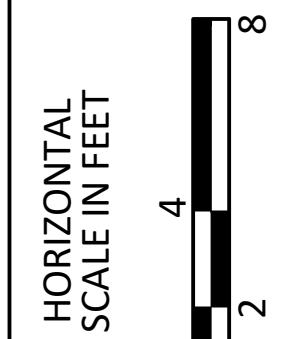
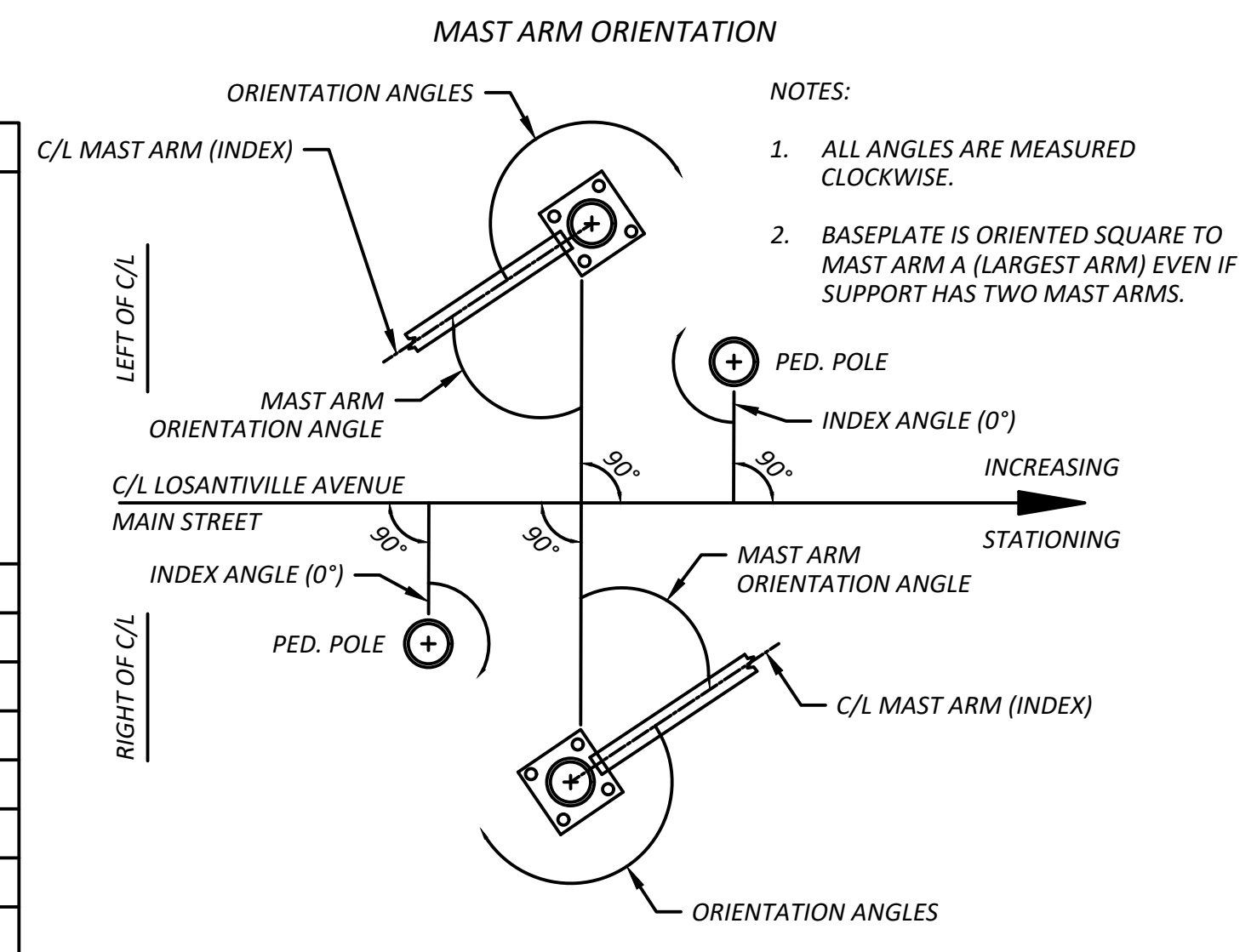
MAST ARM - SP-2B
LOOKING SOUTH



MAST ARM - SP-3
LOOKING EAST

MAST ARM TABLE

SUPPORT NO.	MAST ARM	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS													MAST ARM INDEX ANGLE	ORIENTATION ANGLES FROM MAST ARM A					
				A	B	POLE DESIGN TYPE	MAST ARM DESIGN NO.	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	R		SECOND MAST ARM B	PEDESTRIAN SIGNAL HEAD	PEDESTRIAN PUSHBUTTON	DISCONNECT	CONTROLLER	HANDHOLE
SP-1	A	23+17.5	33.1' LT	608.54	609.84	TC-81.22	TC-81.22	4	19.5	18	33	31	26	21	17	13	-	-	90	-	270	270	180	225	180
SP-2	A	22+55.7	29.7' RT	608.97	609.13	TC-12.31	TC-81.22	12	21	19.5	45	43	40	36	30	25	-	-	0	-	0/90	0/90	-	-	180
	B			609.26	DES. 6	2	21	19.5	24	21	17	11	8	-	-	-	-	-	90	-	-	-	-	-	-
SP-3	A	23+16.8	32.0' RT	609.97	609.97	TC-81.22	TC-81.22	4	22.5	21	28	26	22	17	12	7	-	-	0	-	0/270	0/270	-	-	180
PS-1	-	22+64.5	33.3' LT	608.41		TC-83.20		-	8	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	
PS-2	-	22+59.4	21.4 LT	608.33		TC-83.20		-	14	-	-	-	-	-	-	-	-	-	-	270	270	-	-	-	
PS-3	-	23+17.5	22.4' LT	609.41		TC-83.20		-	8	-	-	-	-	-	-	-	-	-	-	90	90	-	-	-	



TRAFFIC SIGNAL DETAILS
LOSANTIVILLE AVENUE & ELBROOK AVENUE

DESIGN AGENCY	TEC Engineering, Inc. 2440 Westchester, Inc. 7288 Central Express Blvd. Mason, OH 45040
DESIGNER	AFS
REVIEWER	DGO
DATE	2/2/24
PROJECT ID	23039-003
SHEET	TOTAL
21	21