



NONE

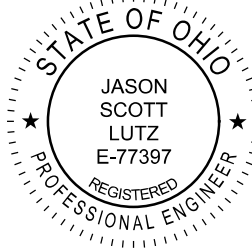
NONE

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5 PLANNING & ENGINEERING

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STAGE 3 COMPLETE

ENGINEER'S SEAL	STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS	
	BP-3.1	1/19/24	MT-97.10	4/19/19	TC-16.22	7/21/23		800	1/17/25
	BP-4.1	7/19/13	MT-97.12	1/20/17	TC-21.21	1/20/23		813	7/21/23
	BP-5.1	7/15/22	MT-99.20	4/19/19	TC-22.20	1/17/14		815	4/16/21
	BP-7.1	7/19/24	MT-101.60	1/17/25	TC-41.20	10/18/13		816	10/18/19
			MT-101.70	7/19/24	TC-42.20	10/18/13		825	7/19/24
	RM-4.2	7/19/24	MT-101.75	7/21/23	TC-52.20	1/15/21		832	7/19/24
			MT-101.90	7/17/20	TC-71.10	4/21/23		874	4/17/20
	HL-30.11	7/21/23	MT-102.10	7/21/23	TC-74.10	7/21/23		875	1/17/25
	HL-30.22	7/17/25	MT-102.20	4/19/19	TC-81.22	1/17/25		906	10/15/10
	HL-40.20	7/17/25	MT-120.00	7/19/24	TC-83.10	1/17/20		907	10/18/19
	HL-60.11	7/21/17			TC-83.20	7/19/24		913	4/16/21
					TC-85.10	1/19/24		916	7/19/24
	CB-2-2A,2B,2C	7/19/24			TC-85.20	4/21/23		SPECIAL PROVISIONS	
	CB-3A	7/19/24							

E191(220)

NONE

ASPHALT CONCRETE RESURFACING AND RELATED WORK ON S.R. 37
INSIDE THE CITY OF JOHNSTOWN IN LICKING COUNTY ALONG WITH
INSTALLATION OF NORTHBOUND RIGHT TURN LANE AND TRAFFIC
SIGNAL AT S.R. 37 AND LEAFY DELL RD./ PERSHING DR. INTERSECTION

PROJECT EARTH DISTURBED AREA = 0.30 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA = 0.15 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA = N/A (NOI NOT REQUIRED)

<i>L O C A T I O N</i>	<i>P L A N S P L I T</i>	<i>C O U N T Y</i>	<i>R O U T E</i>	<i>B E G I N</i> <i>SLM</i>	<i>E N D</i> <i>SLM</i>	<i>L E N G T H</i> <i>MILES</i>	<i>C I T Y / V I L L A G E</i>
<i>1</i>	<i>2</i>	<i>LIC</i>	<i>37</i>	<i>4.09</i>	<i>5.44</i>	<i>1.35</i>	<i>JOHNSTOWN</i>

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

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

Jason L. Sturgeon, P.E.
05


Pamela Boratyn

TITLE SHEET

DESIGN AGENCY	
	
DESIGNER	
CWN	
REVIEWER	
JSL	08/15/25
PROJECT ID	
101718	
SHEET	TOTAL
P.01	77

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LIC-37-4.09

MONROE TOWNSHIP

LICKING COUNTY

SIGNATURES ON THIS PAGE SIGNIFY ONLY THE CONCURRENCE WITH THE GENERAL PURPOSES AND
GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE
ENGINEER(S) PREPARING THE PLANS.

CITY MANAGER

DATE

SIGNATURE SHEET

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

SHEET

P.02

TOTAL

77

UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE. ODOT ASSUMES NO RESPONSIBILITY FOR THE LOCATION OR THE DEPTHS OF THE UNDERGROUND FACILITIES SHOWN ON THESE PLANS. AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHALL CALL THE OHIO UTILITIES PROTECTION SERVICE AT THE NUMBER LISTED ON THE TITLE SHEET. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY.

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

POWER

AMERICAN ELECTRIC POWER CO. (DISTRIBUTION)
38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772
ATTN: CLARKE SAUNDERS
740-985-3054
CMSAUNDERS@AEP.COM

AMERICAN ELECTRIC POWER CO. (TRANSMISSION)
700 MORRISON ROAD,
GAHANNA, OHIO 43230
ATTN: MIKE CARR
614-552-1893
MDCARR@AEP.COM
TL_PUBLICPROJECTS@AEP.COM

AEP SOLUTION CENTER (SERVICES AND STREET LIGHTING)
1-800-277-2177

TELECOM

BRIGHTSPEED (FORMERLY LUMEN)
2025 AKRON RD.
WOOSTER, OHIO 44691
ATTN: JEFF SCHOONOVER
740-263-2819
330-262-1128
JEFFERY.L.SCHOONOVER@BRIGHTSPEED.COM
RELOCATIONS@BRIGHTSPEED.COM

SPECTRUM CABLE TV
737 HOWARD ST.
ZANESVILLE, OHIO 43701
ATTN: JOSH HITE
740-466-7357
JOSHUA.HITE@CHARTER.COM

SUBMIT PLANS TO SPECTRUM:
DLMOHCONSTRUCTIONNEWARK@CHARTER.COM
DL-MOH-CONSTRUCTION-FRELO-TEAM@CHARTER.COM

GAS

COLUMBIA GAS OF OHIO
3550 JOHNNY APPLESEED CT.
COLUMBUS, OHIO 43231
ATTN: TARA NEMCIK
614-813-1402
TNEMCIK@NISOURCE.COM

UTILITIES (CONT'D)

WATER & SEWER

CITY OF JOHNSTOWN WATER
395 WEST JERSEY STREET
JOHNSTOWN, OHIO 43031
ATTN: TERRY NICHOLS
740-967-1139
TNICHOLS@JOHNSTOWNOHIO.ORG

CITY OF JOHNSTOWN SEWER
470 WEST JERSEY STREET
JOHNSTOWN, OHIO 43031
ATTN: RICK FITCH
740-967-7201
RFITCH@JOHNSTOWNOHIO.ORG

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED **"AS DIRECTED BY THE ENGINEER"** UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING THE COMPLETION OF THIS PROJECT.

ITEM 202, PAVEMENT REMOVED, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING EXISTING **10" STAMPED CONCRETE** CROSSWALKS AT THE LOCATIONS SHOWN IN THE PLANS.

ALL EXCAVATION, PAVEMENT SAWING, LABOR, EQUIPMENT, INCIDENTAL ITEMS NEEDED TO COMPLETE THE WORK AS DESCRIBED ABOVE, SHALL BE PAID FOR UNDER THE FOLLOWING:

ITEM 202, PAVEMENT REMOVED, AS PER PLAN
LOCATION 1: SEE SHEET 13

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET. THE CONTRACTOR SHALL REMOVE ONLY THE TREES NECESSARY TO CONSTRUCT THE PROJECT. **ALL TREES MARKED FOR REMOVAL IN THESE PLANS WILL BE REMOVED BY CITY OF JOHNSTOWN FORCES PRIOR TO PROJECT START DATE.**

CLEARING AND GRUBBING

ALTHOUGH ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT ARE BEING REMOVED BY CITY FORCES. A LUMP SUM QUANTITY IS BEING INCLUDED IN THE GENERAL SUMMARY FOR SCALPING AND REMOVAL OF ALL BRUSH AND SHURBS PER CMS 201.

PAVEMENT MARKINGS

ALL LONG LINE AND AUXILIARY PAVEMENT MARKINGS (STOP LINES, CROSSWALK LINES, CHANNELIZING LINES, ETC.) SHOWN IN THE PLANS ARE TAKEN FROM EXISTING LOCATIONS. THE CONTRACTOR SHALL DOCUMENT ALL PAVEMENT MARKING LOCATIONS THAT WILL BE REMOVED/ OBLITERATED DURING THIS PROJECT AND PLACE MARKINGS AT THE LOCATION OF THE EXISTING MARKINGS, UNLESS SHOWN OR STATED DIFFERENTLY IN THE PLANS AND/OR DIRECTED OTHERWISE BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER A MINIMUM OF **24 HOURS** PRIOR TO APPLYING PAVEMENT MARKING MATERIALS SO THAT ODOT PERSONNEL MAY BE PRESENT DURING PAVEMENT MARKING OPERATIONS. PER CMS 641.04, THE CONTRACTOR SHALL PROVIDE ODOT PERSONNEL A COPY OF THE DLS SHORT REPORT AT THE END OF EVERY WORKDAY THROUGH **CLOUD BASED REPORTING**. THE CONTRACTOR SHALL NOT RECEIVE PAYMENT FOR ANY WORK DONE WITHOUT NOTIFICATION AS STATED ABOVE OR IF DSL SHORT REPORTS ARE NOT PROVIDED DAILY. SEPARATE DLS REPORTS SHALL BE PROVIDED FOR EVERY RUN OF LONG LINE MARKING PLACED. COMBINED DLS REPORTS (I.E. CENTER LINE AND EDGE LINE) WILL NOT BE ACCEPTED OR PAID BY THE DEPARTMENT.

PAVEMENT PLANING, ASPHALT CONCRETE, BY DEPTH

DEPTH OF PLANING SHALL BE AS SHOWN IN THE PLANS. PLANING SHALL BE THE FULL WIDTH OF THE EXISTING PAVEMENT, INCLUDING PAVED SHOULDERS. THE ROADWAY SHALL BE PLANED SUCH THAT POSITIVE DRAINAGE IS CREATED FROM THE CENTER LINE TO THE EDGE OF PAVEMENT IN TANGENT SECTIONS AND SHALL FOLLOW EXISTING SUPERELEVATIONS WHERE APPLICABLE. ALL REQUIREMENTS OF ITEM 254 SHALL APPLY.

IF DURING PLANING OPERATIONS EXCESSIVE RIDGES OR OTHER IRREGULARITIES ARE FOUND, PLANING DEPTH ADJUSTMENTS SHALL BE MADE UP TO 3/8 INCH, AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID PER CMS 254.07.

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

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ITEM 204, SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND, IN THE FOLLOWING SEQUENCE:

- SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
- EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO CMS 204.05. IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE. (NOT APPLICABLE)
- COMPACT THE SUBGRADE ACCORDING TO CMS 204.03.
- APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN BELOW. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO CMS 204.06.
- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO CMS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
- PROOF ROLL THE STABILIZED AREAS ACCORDING TO CMS 204.06 TO VERIFY STABILITY.
- FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

UNSUITABLE SUBGRADE: N/A

UNSTABLE SUBGRADE: SEE CONTINGENCY QUANTITIES BELOW

ITEM 204, EXCAVATION OF SUBGRADE (12” DEPTH):
LOCATION 1: 50 CY

ITEM 204, GRANULAR MATERIAL, TYPE C
LOCATION 1: 50 CY

ITEM 204, PROOF ROLLING
LOCATION 1: 1 HOUR

ITEM 204, GEOTEXTILE FABRIC
LOCATION 1: 150 SY

ITEM 253, PAVEMENT REPAIR (A)

THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF **ASPHALT PAVEMENT** WHICH HAVE COMPLETELY FAILED AND NOT TO CORRECT SURFACE IRREGULARITIES. REPAIRS SHALL TAKE PLACE PRIOR TO ANY PLANING OPERATIONS, **AS DIRECTED BY THE ENGINEER. DEPTH OF EXCAVATION SHALL BE 7”.** THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 7” OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED, COMPACTED, AND TACKED IN TWO LIFTS).

PAYMENT SHALL INCLUDE ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, INCIDENTALS NEEDED TO COMPLETE THE WORK AS DESCRIBED ABOVE.

ITEM 253, PAVEMENT REPAIR (A)
LOCATION 1: 100 CY
ASPHALT BASE LIMITS: SLM 4.09-4.31, 5.06-5.44

ITEM 253, PAVEMENT REPAIR (B)

THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF **COMPOSITE** PAVEMENT WHICH HAVE COMPLETELY FAILED AND NOT TO CORRECT SURFACE IRREGULARITIES. REPAIRS SHALL TAKE PLACE PRIOR TO ANY PLANING OPERATIONS, **AS DIRECTED BY THE ENGINEER. DEPTH OF EXCAVATION SHALL BE 4” OR TOP OF BRICK (WHICHEVER COMES FIRST).** THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 4” OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED, COMPACTED, AND TACKED IN TWO LIFTS). **THIS ITEM SHOULD ALSO BE USED TO CORRECT RUTTING AT INTERSECTIONS.**

PAYMENT SHALL INCLUDE ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, INCIDENTALS NEEDED TO COMPLETE THE WORK AS DESCRIBED ABOVE.

ITEM 253, PAVEMENT REPAIR (B)
LOCATION 1: 200 CY
BRICK BASE LIMITS: SLM 4.31-5.06 (EDWARDS RD. TO DOUGLAS ST.)

ITEM 253, PAVEMENT REPAIR (C)

THE INTENT OF THIS OPERATION IS TO REPAIR THOSE AREAS OF **COMPOSITE** PAVEMENT WHICH HAVE COMPLETELY FAILED AND NOT TO CORRECT SURFACE IRREGULARITIES. REPAIRS SHALL TAKE PLACE PRIOR TO ANY PLANING OPERATIONS, **AS DIRECTED BY THE ENGINEER. DEPTH OF EXCAVATION SHALL BE 8” (4” ASPHALT CONCRETE, 4” BRICK BASE).** DO NOT DISTRUB CONCRETE BASE UNDER BRICK, IF PRESENT. THE MINIMUM WIDTH SHALL BE 4 FT. AFTER EXCAVATION HAS BEEN COMPLETED, THE FACE OF THE REPAIR SHALL BE COATED WITH 407 TACK COAT. REPLACEMENT MATERIAL WILL BE 8” OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 (PLACED, COMPACTED, AND TACKED IN TWO LIFTS). FULL DEPTH SAWING HAS BEEN ITEMIZED SEPARATELY.

PAYMENT SHALL INCLUDE ALL EXCAVATION, MATERIALS, LABOR, EQUIPMENT, INCIDENTALS NEEDED TO COMPLETE THE WORK AS DESCRIBED ABOVE.

ITEM 252, FULL DEPTH PAVEMENT SAWING
LOCATION 1: 1,620 FT

ITEM 253, PAVEMENT REPAIR (C)
LOCATION 1: 200 CY
BRICK BASE LIMITS: SLM 4.31-5.06 (EDWARDS RD. TO DOUGLAS ST.)

ITEM 407, NON-TRACKING TACK COAT

THE RATE OF APPLICATION OF THE ITEM 407, NON-TRACKING TACK COAT SHALL BE PER **CMS TABLE 407.06-1** AND SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF **0.08 GAL/SY** FOR TACK COAT UNDER THE INTERMEDIATE COURSE AND **0.05 GAL/SY** UNDER SURFACE COURSE, (FOR ESTIMATING PURPOSES ONLY).

ITEM 630, GROUND MOUNTED SUPPORT, NO 3 POST, AS PER PLAN

TYPE S SQUARE POSTS ALONG WITH POST ANCHOR BASE INSTALLATION PER **TC-41.20** SHALL BE USED FOR ALL GROUND-MOUNTED SUPPORTS.

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN

ON-SITE TOPSOIL MEETING THE REQUIREMENTS OF **CMS 659.05** IS ALLOWED FOR USE ON THIS PROJECT, AS DIRECTED BY THE ENGINEER.

TOPSOIL SHALL BE USED THROUGHOUT PROJECT LIMITS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

SEEDING AND MULCHING

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

ITEM 653, TOPSOIL FURNISHED AND PLACED, AS PER PLAN: 83 CY

ITEM 659, SOIL ANALYSIS TEST: 2 EACH

ITEM 659, SEEDING AND MULCHING, CLASS 1: SEE SHEET 59

ITEM 659, REPAIR SEEDING AND MULCHING: 37 SY

ITEM 659, INTER-SEEDING: 37 SY

ITEM 659, COMMERCIAL FERTILIZER: 0.10 TON

ITEM 659, LIME: 0.15 ACRE

ITEM 659, WATER: 4 MGAL

SEEDING AND MULCHING SHALL BE APPLIED 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 OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

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SHEET

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ITEM 611, CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN
ITEM 611, CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN
ITEM 611, MANHOLE ADJUSTED TO GRADE
ITEM 638, VALVE BOX ADJUSTED TO GRADE

THESE ITEMS SHALL BE USED TO ADJUST/ RECONSTRUCT CATCH BASINS, MANHOLES, AND WATER VALVE BOXES TO GRADE LOCATED THROUGHOUT THE PROJECT LIMITS AS DESCRIBED PER CMS AND DETAILS BELOW.

EXISTING CONCRETE COLLARS SHOULD ONLY BE ADJUSTED IF BROKEN, DAMAGED, OR MISALIGNED, AS DIRECTED BY THE ENGINEER. **ALL ADJUSTMENTS SHALL BE AGREED ON BY THE PROJECT ENGINEER AND THE CITY OF JOHNSTOWN BEFORE WORK MAY BEGIN.**

CATCH BASIN ADJUSTED TO GRADE INCLUDES ALL NECESSARY WORK TO RESET FRAME PER CMS **611.11D** AND SHALL ALSO INCLUDE THE REBUILDING OF STRUCTURE WALLS **DOWN TO 12 INCHES** BELOW THE BASIN FRAME, AS DIRECTED BY THE ENGINEER.

CATCH BASIN RECONSTRUCTED TO GRADE INCLUDES ALL WORK PER **CMS 611.11C** THAT REQUIRES THE REBUILDING OF STRUCTURE WALLS **GREATER THAN 12 INCHES** BELOW THE BASIN FRAME AND EXTENDS TO THE BOTTOM OF THE BASIN, AS DIRECTED BY THE ENGINEER.

PRIOR TO THE START OF THE PROJECT, THE CITY WILL BE MADE AWARE TO CLEAN OUT ALL CATCH BASIN DEBRIS WITHIN THEIR CORPORATION LIMITS AND WILL NOTIFY THE PROJECT ENGINEER WHEN THE WORK IS COMPLETED. ONCE VERIFIED BY THE ENGINEER, THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ALL CATCH BASIN DEBRIS AND DISPOSING OFF SITE AT THE COMPLETION OF THE PROJECT. THIS WORK SHALL BE INCLUDED IN THE CATCH BASIN ADJUSTMENT AND RECONSTRUCTION COSTS.

GAS VALVE BOXES AND TELEPHONE COMPANY MANHOLES ON THIS PROJECT SHALL NOT BE DISTURBED.

ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED ABOVE AND SHALL BE INCLUDED FOR PAYMENT WITH THE ITEMS LISTED BELOW.

ITEM 611, CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN
LOCATION 1: 5 EACH

ITEM 611, CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN
LOCATION 1: 1 EACH

ITEM 611, MANHOLE ADJUSTED TO GRADE
LOCATION 1: 8 EACH

ITEM 638, VALVE BOX ADJUSTED TO GRADE
LOCATION 1: 6 EACH

ITEM 613 – LOW STRENGTH MORTAR BACKFILL, TYPE 2

A CONTINGENCY QUANTITY OF ITEM 613 – LOW STRENGTH MORTAR BACKFILL HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE PROJECT ENGINEER. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 613, LOW STRENGTH MORTAR BACKFILL, TYPE 2
LOCATION 1: 25 CY

ITEM 638, FIRE HYDRANT AND GATE VALVE REMOVED AND RESET, AS PER PLAN

THIS ITEM INVOLVES RELOCATING AN EXISTING FIRE HYDRANT AND GATE VALVE AS SHOWN ON **SHEET 45** OF THE PLANS. ALL WORK SHALL ADHERE TO THE **CMS 638.15B** AND **CITY OF JOHNSTOWN** SPECIFICATIONS AS SHOWN ON WEBSITE BELOW:

[HTTPS://STATIC.SHOWIT.CO/FILE/HVSQYORFY2YJCM1W1VP22W/273542/WATER.PDF](https://static.showit.co/file/hvsqyorfy2yjcm1w1vp22w/273542/WATER.PDF)

A REPERSENTATIVE FROM THE CITY OF JOHNSTOWN SHALL BE ON-SITE FOR ALL WATER LINE WORK, UNLESS WRITTEN APPROVAL HAS BEEN GIVEN BY THE CITY.

PAYMENT SHALL INCLUDE ALL WORK, MATERIALS AND INCIDENTALS NECESSARY TO RELOCATE THE EXISTING FIRE HYDRANT AND GATE VALVE AS DESCRIBED ABOVE.

ITEM SPECIAL, 3/4” POLYETHYLENE WATER SERVICE LINE

THIS ITEM IS PROVIDED TO RELOCATE AN EXISTING WATER SERVICE LINE FOR THE SIGNAL FOUNDATION AS SHOWN ON **SHEET 37** OF THE PLANS. ALL WORK SHALL ADHERE TO THE **CITY OF JOHNSTOWN** SPECIFICATIONS AS SHOWN ON WEBSITE BELOW:

[HTTPS://STATIC.SHOWIT.CO/FILE/HVSQYORFY2YJCM1W1VP22W/273542/WATER.PDF](https://static.showit.co/file/hvsqyorfy2yjcm1w1vp22w/273542/WATER.PDF)

A REPERSENTATIVE FROM THE CITY OF JOHNSTOWN SHALL BE ON-SITE FOR ALL WATER LINE WORK, UNLESS WRITTEN APPROVAL HAS BEEN GIVEN BY THE CITY.

PAYMENT SHALL INCLUDE ALL WORK, MATERIALS AND INCIDENTALS NECESSARY TO RELOCATE THE EXISTING WATER LINE AS DESCRIBED ABOVE.

ITEM SPECIAL, 3/4” POLYETHYLENE WATER SERVICE LINE
LOCATION 1: 100 FT

ITEM SPECIAL, DECORATIVE CROSSWALK

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING A DECORATIVE STAMPED CONCRETE CROSSWALK. ALL WORK ON DECORATIVE CROSSWALK SHALL BE FINISHED PRIOR TO PLACING ASPHALT CONCRETE SURFACE COURSE.

ONCE EXISTING CROSSWALK HAS BEEN REMOVED, PROVIDE LEVEL SURFACE FOR PLACEMENT OF APPROXIMATELY 10” OF CLASS MS CONCRETE, PER CMS 499, BRINGING THE TOP OF CONCRETE SURFACE TO THE ELEVATION OF THE ADJOINING PAVEMENT.

THIS ITEM SHALL MEET ALL REQUIREMENTS OF CMS 451.07.

THE CONTRACTOR SHALL PROVIDE STAMPED COLORED CONCRETE. THE STAMPED CONCRETE SHALL BE PATTERNED AND COLORED AFTER THE CITY OF JOHNSTOWN’S **BIGELOW PARK BRICK AT THE SOUTHEAST CORNER OF THE U.S. 62 AND S.R. 37 INTERSECTION**. COLORING OF THE CONCRETE SHALL BE ACCOMPLISHED BY BLENDING/ MIXING COLORING AGENT WITHIN THE CONCRETE.

THE PATTERN AND COLOR SHALL BE APPROVED BY THE CITY OF JOHNSTOWN PRIOR TO PERFORMING THE TEST PANEL. A PRECONSTRUCTION 4’ x 4’ TEST PANEL SHALL BE CONSTRUCTED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER AND THE CITY OF JOHNSTOWN. THE TEST PANEL MUST BE APPROVED BEFORE PLACING ANY CONCRETE WHERE FORM LINERS WILL BE USED. IF THE INITIAL TEST PANEL IS NOT APPROVED BY THE ENGINEER AND THE CITY OF JOHNSTOWN, ADDITIONAL TEST PANELS WILL BE REQUIRED UNTIL APPROVED AT NO ADDITIONAL COST.

STEEL PLATES SHALL BE USED DURING THE CONCRETE CURING PROCESS FOR MAINTAINING TRAFFIC, AT THE DIRECTION OF THE ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTAL ITEMS NEEDED TO COMPLETE THE WORK AS DESCRIBED ABOVE, SHALL BE PAID FOR UNDER ITEM SPECIAL, DECORATIVE CROSSWALK.

ITEM SPECIAL, DECORATIVE CROSSWALK
LOCATION 1: SEE SHEET 13

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

SHEET

P.05

TOTAL

77

ITEM SPECIAL, MAILBOX SUPPORT, REMOVE AND RESET

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLANS, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., CONFORMING TO AASHTO M 181. ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POSTMASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION. PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY. MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE UNIT BID PRICE.

ITEM SPECIAL, MAILBOX SUPPORT SYSTEM, REMOVE AND RESET.
LOCATION 1: SEE SHEET 61

GENERAL NOTES



DESIGN AGENCY

DESIGNER
CWN

REVIEWER
JSL MM-DD-YY

PROJECT ID
101718

SHEET	TOTAL
P.06	77

SURVEYING PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING.

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID18

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.00002739

UNITS ARE IN U.S. SURVEY FEET.

SEE TABLE FOR CONTROL POINTS

POINT NO.	ALIGNMENT	STATION	OFFSET	SIDE	NORTHING	EASTING	ELEVATION	CODE	DESCRIPTION
CP01	CLX_LIC37	39+63.38	31.65	RT	786615.622	1915321.475	1146.86	CNPT	¾" REBAR W/ 2" ALUMINUM DISK CAP
CP02	CLX_LIC37	45+59.77	18.79	LT	786167.186	1915717.876	1153.75	CNPT	¾" REBAR W/ 2" ALUMINUM DISK CAP
CP03	CLX_LIC37	39+87.10	353.71	LT	786826.571	1915644.841	1143.57	CNPT	¾" REBAR W/ 2" ALUMINUM DISK CAP
CP04	CLX_LIC37	35+03.19	31.58	LT	787023.996	1915100.011	1138.66	CNPT	¾" REBAR W/ 2" ALUMINUM DISK CAP
1107112	CLX_LIC37	40+12.58	33.20	RT	786575.219	1915349.601	1148.21	IPIPE	½" IRON PIPE FOUND
1107122	CLX_LIC37	40+35.90	69.75	LT	786617.948	1915446.115	1146.78	IPIPE	1" IRON PIPE FOUND BENT N.W.
711112	CLX_LIC37	40+88.26	32.88	RT	786514.682	1915395.023	1149.20	IPIN	⅝" REBAR FOUND 6" BELOW GRADE
711114	CLX_LIC37	42+46.00	32.63	RT	786388.266	1915489.361	1151.14	IPIN	⅝" REBAR FOUND 6" BELOW GRADE
RW01	CLX_LIC37	38+25.00	33.00	RT	786725.850	1915237.810	0.00	IPINS	R/W MONUMENT TYPE B SET
RW02	CLX_LIC37	38+62.57	42.00	RT	786690.330	1915253.012	0.00	IPINS	R/W MONUMENT TYPE B SET
RW03	CLX_LIC37	38+62.58	33.00	RT	786695.695	1915260.238	0.00	IPINS	R/W MONUMENT TYPE B SET
RW04	CLX_LIC37	39+62.56	60.00	RT	786599.361	1915298.240	0.00	IPINS	R/W MONUMENT TYPE B SET
RW05	CLX_LIC37	39+62.58	33.00	RT	786615.456	1915319.919	0.00	IPINS	R/W MONUMENT TYPE B SET
RW06	CLX_LIC37	40+12.56	60.00	RT	786559.242	1915328.080	0.00	IPINS	R/W MONUMENT TYPE B SET
RW07	CLX_LIC37	40+88.22	50.00	RT	786504.503	1915381.257	0.00	IPINS	R/W MONUMENT TYPE B SET
RW08	CLX_LIC37	41+63.24	40.00	RT	786450.269	1915434.058	0.00	IPINS	R/W MONUMENT TYPE B SET
RW09	CLX_LIC37	41+63.26	33.00	RT	786454.431	1915439.686	0.00	IPINS	R/W MONUMENT TYPE B SET
RW10	CLX_LIC37	41+76.76	33.00	RT	786443.598	1915447.743	0.00	IPINS	R/W MONUMENT TYPE B SET

GENERAL NOTES



DESIGNER	
CWN	
REVIEWER	
JSL MM-DD-YY	
PROJECT ID	
101718	
SHEET	TOTAL
P.07	77

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF **1-LANE** OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON **S.R. 37**. CLOSURE OF LOCAL ROADS **LEAFY DELL RD.** AND **PERSHING DR.** ARE ALLOWED PER THE FLEXIBLE START DATE CONTRACT TABLE BELOW.

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES INCLUDING REPAIRS.

AT NO TIME SHALL TRAFFIC BE MAINTAINED ON THE PLANED SURFACE, AT LEAST ONE COURSE OF ASPHALT CONCRETE SHALL BE IN PLACE BEFORE OPENING TO TRAFFIC.

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

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

FLEXIBLE START DATE CONTRACT TABLE (PN 129)

DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE	DISINCENTIVE \$ PER DAY	WORK WINDOW	
			START	END
**S.R. 37/ LEAFY DELL RD. INTERSECTION	30	\$1,500	6/1/2026	7/15/2026

**SEE SHEETS 37-38 FOR CRITICAL WORK AREAS (TRAFFIC SIGNAL WORK NOT INCLUDED)

INTERIM COMPLETION DATE

ALL WORK WITH THE EXCEPTION OF ITEMS RELATED TO INSTALLATION OF THE TRAFFIC SIGNAL AT THE S.R. 37/ LEAFY DELL INTERSECTION SHALL BE COMPLETED BY **10/15/2026**.

LIQUDATED DAMAGES OF **\$1,500 PER DAY** SHALL BE ASSESSED IF THE INTERIM COMPLETION DATE STATED ABOVE IS NOT MET.

WORK RESTRICTIONS

ALL RESURFACING AND RELATED WORK AFFECTING TRAFFIC (EXCLUDING WIDENING AND SIGNAL WORK) INSIDE THE CITY OF JOHNSTOWN SHALL OCCUR FROM THE HOURS OF **7PM-5AM (I.E. NIGHT PAVING)**. ANY WORK OUTSIDE THESE HOURS SHALL BE APPROVED IN WRITING FROM THE VILLAGE, AT APPROVAL OF THE ENGINEER.

NO WORK SHALL OCCUR INSIDE THE CITY OF JOHNSTOWN FOR THE FOLLOWING EVENTS:
HARTFORD FAIR (8/2/26 – 8/8/26)
SWAPPER’S DAY (9/5/26 – 9/7/26)

NOTIFICATION OF ROAD CLOSURE OR RESTRICTIONS

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF TWENTY-ONE (21) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND/OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4510 OR EMAIL AT D05.PIO@DOT.OHIO.GOV

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4525 OR EMAIL AT BRIAN.BOSCH@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE-MENTIONED ITEMS, VIA MEDIA SOURCES.

DROP-OFFS IN WORK ZONES

DROP-OFFS THAT DEVELOP DURING CONSTRUCTION OPERATIONS AND THAT ARE NOT OTHERWISE PROVIDED FOR IN THE PLANS SHALL BE TREATED AS SHOWN ON STANDARD DRAWING **MT-101.90**. WHERE THE PLANS DO NOT PROVIDE SPECIFIC ITEMS FOR LABOR, EQUIPMENT, OR MATERIALS TO IMPLEMENT THE DROP-OFF TREATMENTS SPECIFIED, THEY SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

DUST CONTROL

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

ITEM 616, WATER: 5 MGAL

ITEM 614, WORK ZONE MARKING SIGN

THE CONTRACTOR SHALL PLACE ALL WORK ZONE MARKING SIGNS IN ACCORDANCE WITH CMS SECTION 614.04, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

R4-1 (DO NOT PASS)
LOCATION 1: 4 EACH

W8-H12A (NO EDGE LINES)
LOCATION 1: 4 EACH

ALL “NO EDGE LINES” SIGN LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

IN ADDITION, THE CONTRACTOR SHALL ERECT A “GROOVED PAVEMENT” SIGN 250 FEET IN ADVANCE OF ANY SECTION OF ROADWAY WHERE TRAFFIC MUST TRAVEL ON A PLANED SURFACE. “GROOVED PAVEMENT” SIGNS SHALL BE INCLUDED FOR PAYMENT WITH THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AS PER CMS SECTION 614.055.

ITEM 614, WORK ZONE MARKING SIGN
LOCATION 1: 8 EACH

ITEM 614, WORK ZONE PAVEMENT MARKINGS

THE CONTRACTOR SHALL PLACE ALL WORK ZONE PAVEMENT MARKINGS IN ACCORDANCE WITH **CMS 614.11** AND STANDARD DRAWING **MT-99.20** UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE QUANTITIES BELOW ARE FOR PLACEMENT OF TEMPORARY MARKINGS ON SURFACE AND INTERMEDIATE COURSES FOR BOTH THE CONCRETE AND ASPHALT SECTIONS OF ROADWAY.

ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT (SURFACE COURSE)
LOCATION 1: 1.35 MILE

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 8”, 642 PAINT (SURFACE COURSE)
LOCATION1: 523 FT

ITEM 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT (SURFACE COURSE) (STATE ROUTES ONLY)
LOCATION 1: 134 FT**

**DO NOT PLACE STOP BARS ON S.R. 37 AT LEAFY DELL RD./ PERSHING DR. INTERSECTION IF SIGNAL IS NOT OPERATIONAL.

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

SHEET

P.08

TOTAL

77

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FEET AND 475 FEET, RESPECTIVELY.

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

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC.

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

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONT'D.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

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

A TOTAL OF **3 PCMS** MAY BE REQUIRED FOR THIS PROJECT.

(PLACE AS DIRECTED BY THE ENGINEER)
3 PCMS X 3 MONTH = 9 SNMT

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
LOCATION 1: 9 SNMT

SEQUENCE OF OPERATIONS (S.R. 37/ LEAFY DELL INTERSECTION)

IT IS THE INTENT OF THIS SEQUENCE OF OPERATIONS TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC. THE CONTRACTOR SHALL COMPLETE ALL WORK AS DESCRIBED IN THE SEQUENCE OF OPERATIONS, FOR EACH PHASE OF CONSTRUCTION. BEFORE STARTING WORK ON THE NEXT PHASE OF CONSTRUCTION, APPROVAL SHALL BE GRANTED BY THE PROJECT ENGINEER. BEFORE THE CONTRACTOR MAY PROCEED.

THE CONTRACTOR MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC SEQUENCING, PROVIDED NO ADDITIONAL INCONVIENCE TO THE TRAVELING PUBLIC RESULTS THERE FROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL, IN WRITING, HAS BEEN GRANTED BY THE DEPARTMENT.

- PHASE 1
- PERFORM WIDENING, CURB, WALK AND DRAINAGE WORK ON NORTH SIDE OF S.R. 37
- PHASE 2
- PERFORM CURB AND WALK WORK ON SOUTH SIDE OF S.R. 37
- PHASE 3
- PERFORM PAVEMENT PLANING AND RESURFACING
- PHASE 4
- INSTALL TRAFFIC SIGNAL

ANY WORK NOT SPECIFIED IN THE ABOVE SEQUENCE MAY BE COMPLETED ANYTIME DURING THE PROJECT, WITH APPROVAL OF THE ENGINEER.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT GENERALLY BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (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) SHOULD BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS, **AS DIRECTED BY THE ENGINEER:**

- 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 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.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT 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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LAW ENFORCEMENT OFFICERS (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 HOURS PAID SHALL INCLUDE 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.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
LOCATION 1: 300 HOUR

DESIGN AGENCY

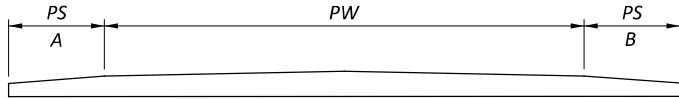


DESIGNER
CWN

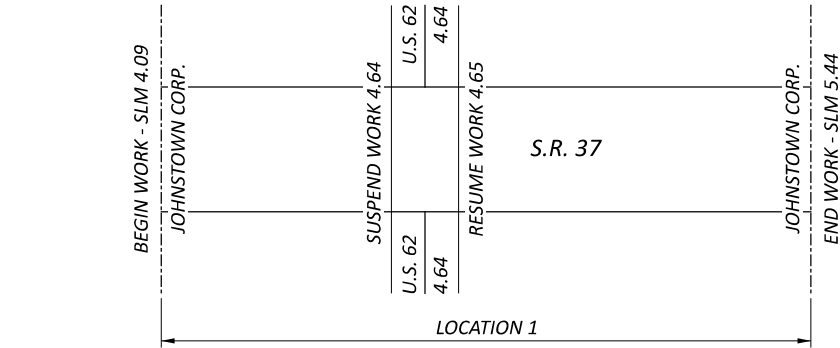
REVIEWER
JSL 08/15/25

PROJECT ID
101718

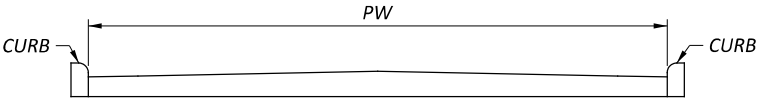
SHEET	TOTAL
P.09	77



TYPICAL 1

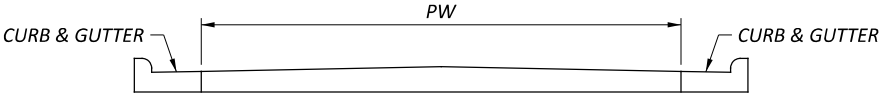


TYPICAL 2



TYPICAL 3

PW = PAVEMENT WIDTH
PS = PAVED SHOULDER
AS = AGGREGATE SHOULDER



TYPICAL 4



TYPICAL 5

PAVEMENT DATA													
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		PAVEMENT WIDTH (AVG.)	TYPICAL	PAVEMENT AREA	254	407	441	
										PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	NON-TRACKING TACK COAT @ 0.08 GAL./S.Y.	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
					MILES	LIN. FT.	FT.		SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.
1	LIC	S.R. 37	4.09	4.10	0.01	52.8	22.0	1	129.1	129.1	10.4	1.50	5.4
			4.10	4.13	0.03	158.4	26.0 AVG	1	457.6	457.6	36.7	1.50	19.1
			4.13	4.16	0.03	158.4	32.0	1	563.2	563.2	45.1	1.50	23.5
			4.16	4.19	0.03	158.4	42.0	2	739.2	739.2	59.2	1.50	30.8
			4.19	4.20	0.01	52.8	38.0 AVG	2	222.9	222.9	17.9	1.50	9.3
			4.20	4.23	0.03	158.4	28.5 AVG	2	501.6	501.6	40.2	1.50	20.9
			4.23	4.31	0.08	422.4	22.0	1	1,032.5	1,032.5	82.6	1.50	43.1
			4.31	4.56	0.25	1,320.0	30.0	3	4,400.0	4,400.0	352.0	1.50	183.4
			4.56	4.61	0.05	264.0	34.5 AVG	3	1,012.0	1,012.0	81.0	1.50	42.2
			4.61	4.64	0.03	158.4	45.0	3	792.0	792.0	63.4	1.50	33.0
			4.64	4.65	0.01	52.8			SUSPEND WORK THROUGH U.S. 62 INTERSECTION				
			4.65	4.75	0.10	528.0	44.0	4	2,581.3	2,581.3	206.6	1.50	107.6
			4.75	5.07	0.32	1,689.6	30.0	3	5,632.0	5,632.0	450.6	1.50	234.7
			5.07	5.44	0.37	1,953.6	24.0	5	5,209.6	5,209.6	416.8	1.50	217.1
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)										23,273.0	1,862.5		970.1



SEE SHEET 10 FOR STRAIGHT LINE DIAGRAM AND TYPICALS

SHOULDER DATA														
LOCATION	COUNTY	ROUTE	BEGIN LOG POINT SLM	END LOG POINT SLM	LENGTH		TYPICAL	PAVED SHOULDER WIDTH (FT.) WIDTHS ARE AVERAGE THROUGHOUT LIMITS		SHOULDER AREA	254	407	441	
											PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	NON-TRACKING TACK COAT @ 0.08 GAL./S.Y.	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
					MILES	LIN. FT.		A	B					
										SQ. YD.	SQ. YD.	GAL.	IN.	CU. YD.
1	LIC	S.R. 37	4.09	4.14	0.05	264.0	1	3	3	176.0	176.0	14.1	1.50	7.3
			4.14	4.16	0.02	105.6	3	2	2	46.9	46.9	3.8	1.50	2.0
			4.16	4.20	0.04	211.2	2	2	3	117.3	117.3	9.4	1.50	4.9
			4.20	4.23	0.03	158.4	2	2	5	123.2	123.2	9.9	1.50	5.1
			4.23	4.26	0.03	158.4	1	4	5	158.4	158.4	12.7	1.50	6.6
			4.26	4.31	0.05	264.0	1	3	3	176.0	176.0	14.1	1.50	7.3
			4.31	5.07	0.76	4,012.8	3,4			CURBED				
			5.07	5.20	0.13	686.4	5	3		228.8	228.8	18.3	1.50	9.5
			5.20	5.44	0.24	1,267.2	1	3	3	844.8	844.8	67.6	1.50	35.2
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)											1,871.4	149.9		77.9

SHOULDER DATA

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

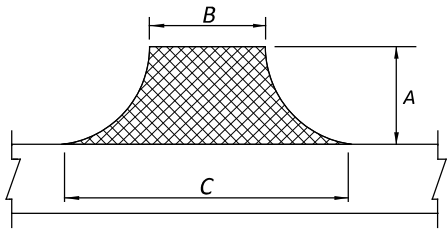
SHEET

P.11

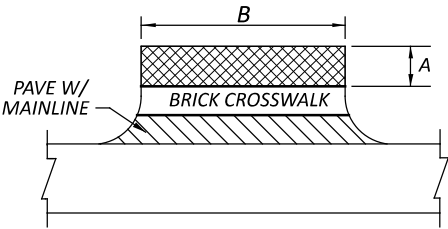
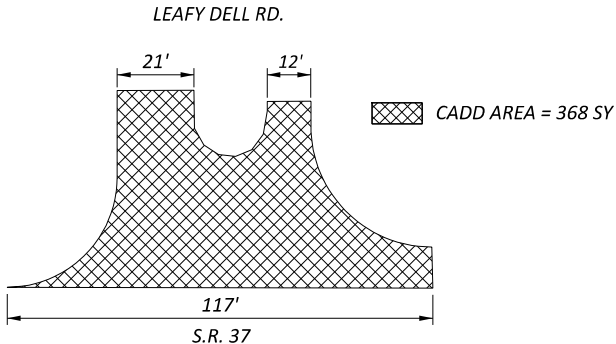
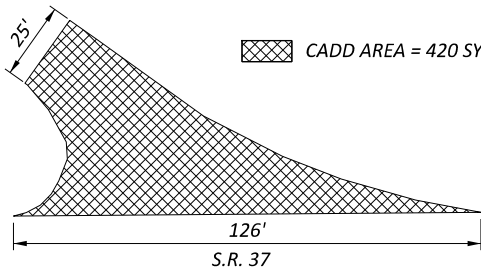
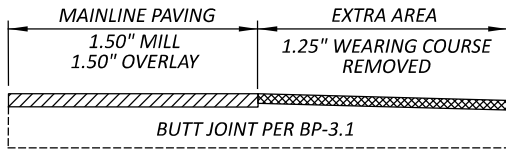
TOTAL

77

EXTRA AREA DATA													
LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	INTERSECTIONS			AREA	202	407	441		REMARKS
					DETAIL DIMENSION				WEARING COURSE REMOVED	NON-TRACKING TACK COAT @ 0.08 GAL./S.Y.	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
					A	B	C						
					FT.	FT.	FT.						
1	LIC	S.R. 37	CROTON RD.	LT	CADD AREA (SEE DETAIL)			420.0	420.0	33.6	1.25	14.6	
			MC CRAKEN DR.	RT	20	19	48	74.5	74.5	6.0	1.25	2.6	
			PERISHING DR.	RT	28	21	45	102.7	102.7	8.2	1.25	3.6	
			LEAFY DELL RD.	LT	CADD AREA (SEE DETAIL)			368.0	368.0	29.4	1.25	12.8	
			EDWARDS RD.	RT	22	33	52	103.9	103.9	8.3	1.25	3.6	
			W. MAPLE ST.	RT	20	21	39	66.7	66.7	5.3	1.25	2.3	
			E. MAPLE ST.	LT	20	20	37	63.4	63.4	5.1	1.25	2.2	
			PHALEN PL.	RT	5	30		16.7	16.7	1.3	1.25	0.6	SEE BRICK CROSSWALK DETAIL
			W. PRATT ST.	RT	5	23		12.8	12.8	1.0	1.25	0.4	SEE BRICK CROSSWALK DETAIL
			E. PRATT ST.	LT	5	23		12.8	12.8	1.0	1.25	0.4	SEE BRICK CROSSWALK DETAIL
			W. COLLEGE AVE.	RT	24	24	38	82.7	82.7	6.6	1.25	2.9	
			E. COLLEGE AVE.	LT	26	21	47	98.3	98.3	7.9	1.25	3.4	
			W. JERSEY ST.	RT	32	24	62	152.9	152.9	12.2	1.25	5.3	
			E. JERSEY ST.	LT	24	22	38	NO WORK					
			W. DOUGLAS ST.	RT	20	21	37	64.5	64.5	5.2	1.25	2.2	
			E. DOUGLAS ST.	LT	18	22	47	69.0	69.0	5.5	1.25	2.4	
			SCHOOL DR.	RT	18	29	56	85.0	85.0	6.8	1.25	3.0	
			CHAMBERS WAY	RT	27	26	98	186.0	186.0	14.9	1.25	6.5	
			CONCORD RD.	LT	75	19	105	NO WORK					
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)									1,979.9	158.3		68.8	



$$AREA = \left[\frac{A (B + C)}{2} \right] / 9$$



$$AREA = \frac{A \times B}{9}$$

BRICK CROSSWALK DETAIL



CROSSWALK/ CURB RAMP DATA											
LOCATION	REF. NO.	DESCRIPTION	SIDE	202			203	608		SPECIAL	REMARKS
				PAVEMENT REMOVED, AS PER PLAN	PAVEMENT REMOVED	WALK REMOVED	EXCAVATION	6" CONCRETE WALK	DETECTABLE WARNING	DECORATIVE CROSSWALK	
				SQ. YD.	SQ. YD.	SQ. FT.	CU. YD.	SQ. FT.	SQ. FT.	SQ. YD.	
1	CW-1	ON S.R. 37 BEFORE COSHOCTON ST.	L/R	32.8						32.8	SEE SHEET 18
	CW-2	COSHOCTON ST. (U.S. 62)	RT	43.1						43.1	SEE SHEET 19
	CW-3	COSHOCTON ST. (U.S. 62)	LT	30.9						30.9	SEE SHEET 19
	CW-4	ON S.R. 37 AFTER COSHOCTON ST.	L/R	40.2						40.2	SEE SHEET 19
	CW-5	ON S.R. 37 BEFORE PHALEN PL.	L/R	30.3						30.3	SEE SHEET 19
	CW-6	PHALEN PL.	RT	20.4						20.4	SEE SHEET 19
	CW-7	ON S.R. 37 AFTER PHALEN PL.	L/R	29.4						29.4	SEE SHEET 19
	CW-8	ON S.R. 37 BEFORE PRATT ST.	L/R	29.6						29.6	SEE SHEET 19
	CW-9	W. PRATT ST.	RT	15.3						15.3	SEE SHEET 19
	CW-10	E. PRATT ST.	LT	16.0						16.0	SEE SHEET 19
	CW-11	ON S.R. 37 AFTER PRATT ST.	L/R	27.6						27.6	SEE SHEET 19
	CR-8	ON S.R. 37 AFTER SCHOOL DRIVE	RT		6.5	83.4	2.00	176.0	16		WALK WITH DOMES, SEE SHEET 22
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)				315.6	6.5	83.4	2.0	176.0	16.0	315.6	

WAITING ON CONFIRMATION FROM CITY OF JOHNSTOWN ON MAIN/ JERSEY ST CURB RAMP UPGRADE. WORK AGREEMENT NEEDED.

CROSSWALK DATA

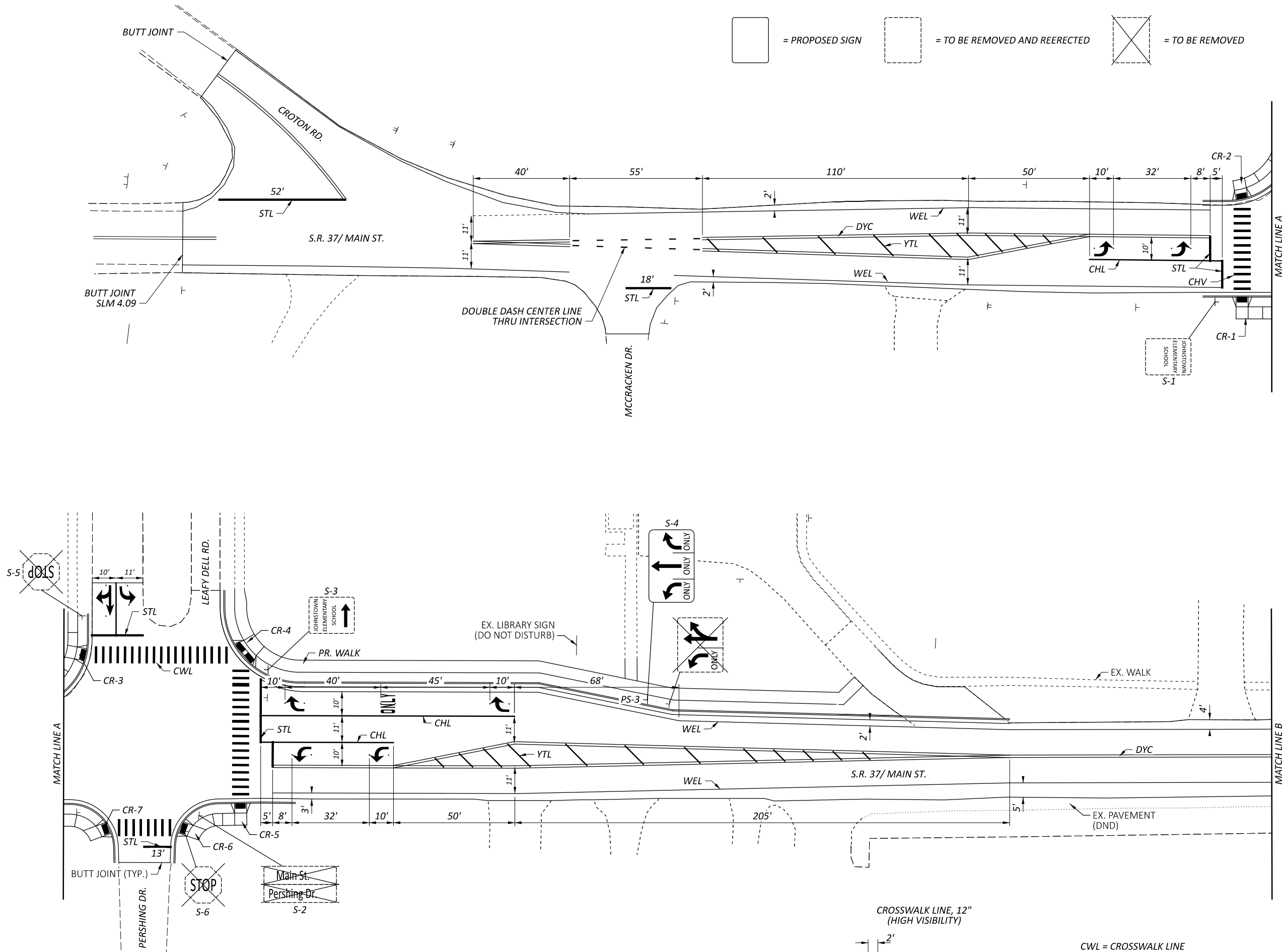
EDGE LINE DATA									
LOCATION	COUNTY	ROUTE	S.L.M		TOTAL LENGTH	INFORMATION ONLY		644	REMARKS
						WHITE EDGE LINE QUANTITIES		EDGE LINE, 6"	
			FROM	TO	MILE			MILE	
1	LIC	S.R. 37	4.09	4.31	0.22	0.44	0.44	0.44	
			4.31	5.07					NO QUANTITIES
			5.07	5.20	0.13	0.13	0.13	0.13	LEFT ONLY
			5.20	5.44	0.24	0.48	0.48	0.48	
LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)								1.05	

**PASSING ZONE CLOSURES (DOUBLE YELLOW SOLID LINE)
SLM 4.207 TO 4.292 (EASTBOUND/ WESTBOUND)

CENTER LINE DATA										
LOCATION	COUNTY	ROUTE	S.L.M.		TOTAL LENGTH	INFORMATION ONLY			644	REMARKS
						CENTER LINE QUANTITIES			CENTER LINE	
			FROM	TO		TOTAL MILES	HIGHWAY MILES	EQUIVALENT SOLID LINE		
					MILE				MILE	
1	LIC	S.R. 37	4.09	5.44	1.35	1.35	1.35	2.66**	1.48	0.13 MILES ADDED FOR TURN LANES
LOCATION 1 TOTALS (CARRIED TO GENERAL SUMMARY)									1.48	

AUXILIARY MARKING DATA																	
LOCATION	COUNTY	ROUTE	DESCRIPTION	SIDE	644												REMARKS PLACE STOP BARS A MINIMUM OF 4' FROM EDGE OF PAVED SHOULDER/ CROSSWALK, UNLESS SPECIFIED OR AS DIRECTED BY THE ENGINEER
					CHANNELIZING LINE, 8"	STOP LINE, 24"	CROSSWALK LINE, 12"	CROSSWALK LINE, 12" (HIGH VISIBILITY)	TRANSVERSE/ DIAGONAL LINES, 24"	SCHOOL SYMBOL MARKING	PARKING LOT STALL MARKING	LANE ARROW, 96"		WORD ON PAVEMENT	YIELD LINE	REMOVAL OF PAVEMENT MARKING	
												TURN		COMBO.			
									LT.	RT.		RT./TH.	96"				
									FT.	FT.		FT.	FT.	FT.			
1	LIC	S.R. 37	CROTON RD.	LT		52											SEE SHEET 16
			MCCRACKEN DR.	RT		18											SEE SHEET 16
			ON S.R. 37 BEFORE LEAFY DELL RD.		60	21		84	84			2					SEE SHEET 16
			PERSHING DR.	RT		13		56									SEE SHEET 16
			LEAFY DELL RD.	LT	22	21		133				1		1			SEE SHEET 16
			ON S.R. 37 AFTER LEAFY DELL RD.		170	40		140	98			2	2		1		SEE SHEET 16
			EDWARDS ST.	RT		13	68										SEE SHEET 17
			ON S.R. 37 AFTER EDWARDS ST.					70									SEE SHEET 17
			W. MAPLE ST.	RT			42										SEE SHEET 18
			E. MAPLE ST.	LT			42										SEE SHEET 18
			ON S.R. 37 BEFORE COSHOCTON ST.		200	23	99		71			2			1		51 SEE SHEET 18
			COSHOCTON ST. (U.S. 62)	RT			124										124 SEE SHEET 19
			COSHOCTON ST. (U.S. 62)	LT			93										93 SEE SHEET 19
			ON S.R. 37 AFTER COSHOCTON ST.		84	25	122				176	1			1		61 SEE SHEET 19
			ON S.R. 37 BEFORE PHALEN PL.				91									14	SEE SHEET 19
			PHALEN PL.	RT			62										31 SEE SHEET 19
			ON S.R. 37 AFTER PHALEN PL.				88				548					12	SEE SHEET 19
			ON S.R. 37 BEFORE PRATT ST.				89									14	SEE SHEET 19
			W. PRATT ST.	RT		21	45										SEE SHEET 19
			E. PRATT ST.	LT			47										23 SEE SHEET 19
			ON S.R. 37 AFTER PRATT ST.				84									12	SEE SHEET 20
			W. COLLEGE AVE.	RT		12	48										SEE SHEET 20
			E. COLLEGE AVE.	LT		11	44										SEE SHEET 20
			ON S.R. 37 BEFORE JERSEY ST.			15	58										SEE SHEET 20
			W. JERSEY ST.	RT		11	50										SEE SHEET 20
			E. JERSEY ST.	LT	NO WORK												SEE SHEET 20
			ON S.R. 37 AFTER JERSEY ST.			14	70										SEE SHEET 20
			ON S.R. 37 @ SLM 5.01						1								SEE SHEET 21
			W. DOUGLAS ST.	RT			44										SEE SHEET 21
			E. DOUGLAS ST.	LT			50										SEE SHEET 21
			SCHOOL DRIVE	RT				63									SEE SHEET 22
			ON S.R. 37 AFTER SCHOOL DRIVE	RT				70									SEE SHEET 22
			CHAMBERS WAY	RT				56									SEE SHEET 22
			CONCORD RD.	LT	NO WORK												SEE SHEET 22
			ON S.R. 37 @ SLM 5.36						1								SEE SHEET 22
			SUB-TOTALS				1,460	672				8	2	1			
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)					536	310	2,132		253	2	724	11		3	52	383	





PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN

DESIGN AGENCY



DESIGNER
CWN

REVIEWER
JSL 08/15/25

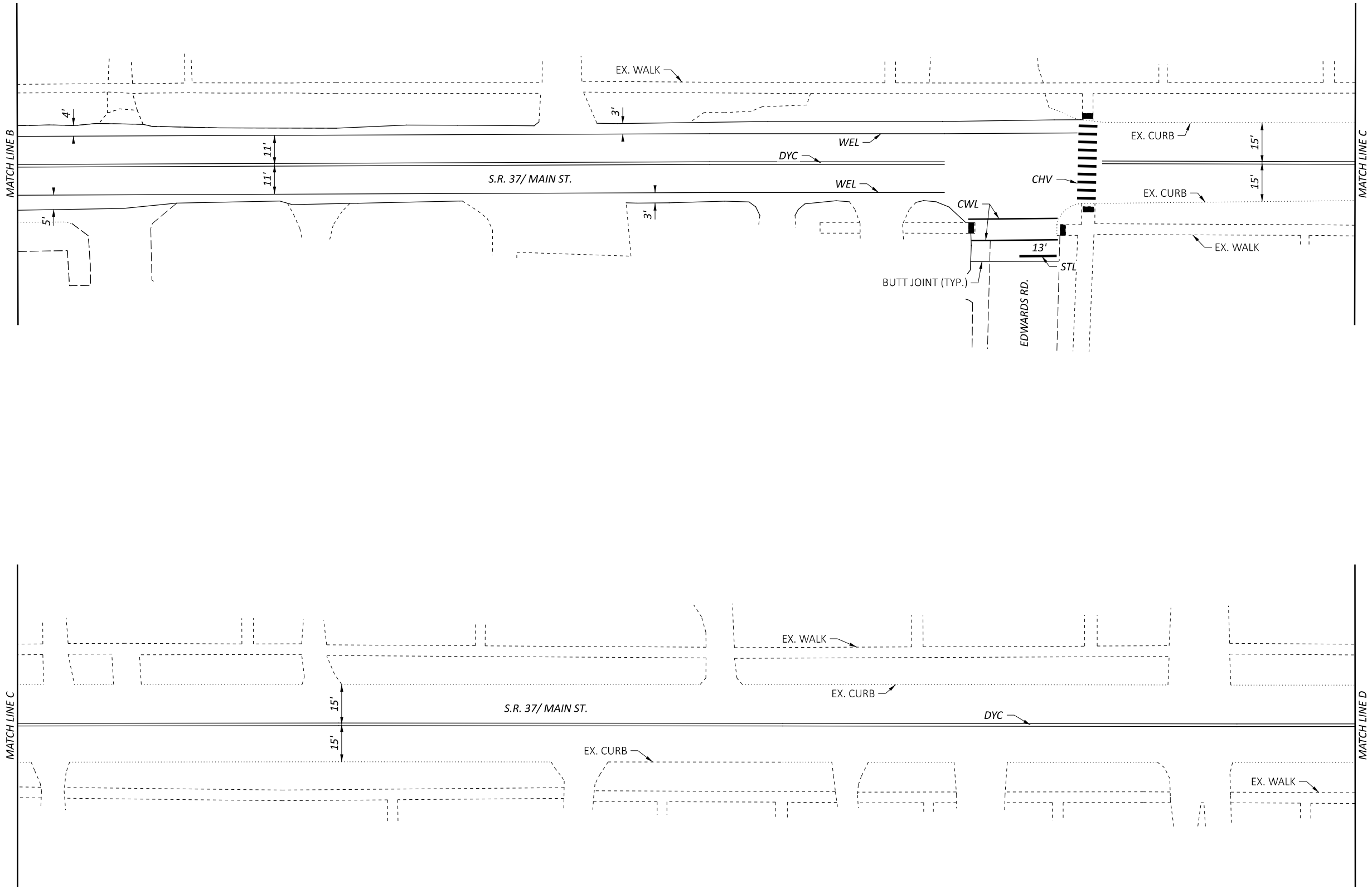
PROJECT ID
101718

SHEET TOTAL
P.16 77

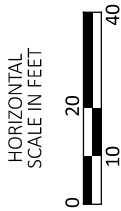
SEE SHEET 61 FOR CURB RAMP DATA
SEE SHEET 63 FOR SIGN DATA
SEE SHEET 65 FOR CURB RAMP DETAILS



CWL = CROSSWALK LINE
CHV = CROSSWALK LINE (HIGH VISIBILITY)
DYC = DOUBLE YELLOW CENTER LINE
STL = STOP LINE
WEL = WHITE EDGE LINE



PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN



DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

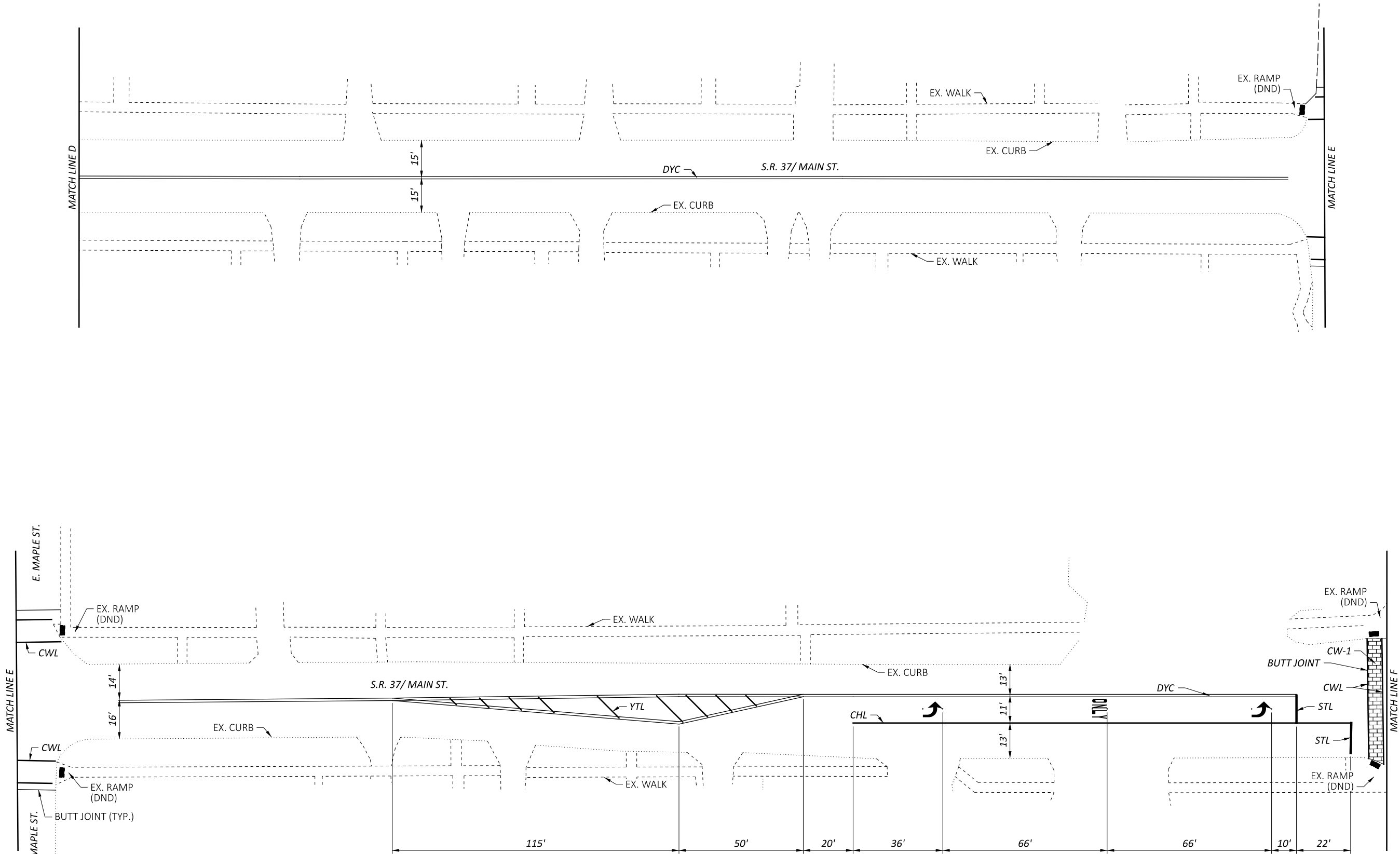
101718

SHEET

P.17

TOTAL

77



 BRICK CROSSWALK (REMOVE AND REPLACE)
SEE SHEET 13 FOR CROSSWALK DATA

CHL = CHANNELIZING LINE
CWL = CROSSWALK LINE
DYC = DOUBLE YELLOW CENTER LINE
STL = STOP LINE
YTL = YELLOW TRANSVERSE LINE

PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN

DESIGN AGENCY



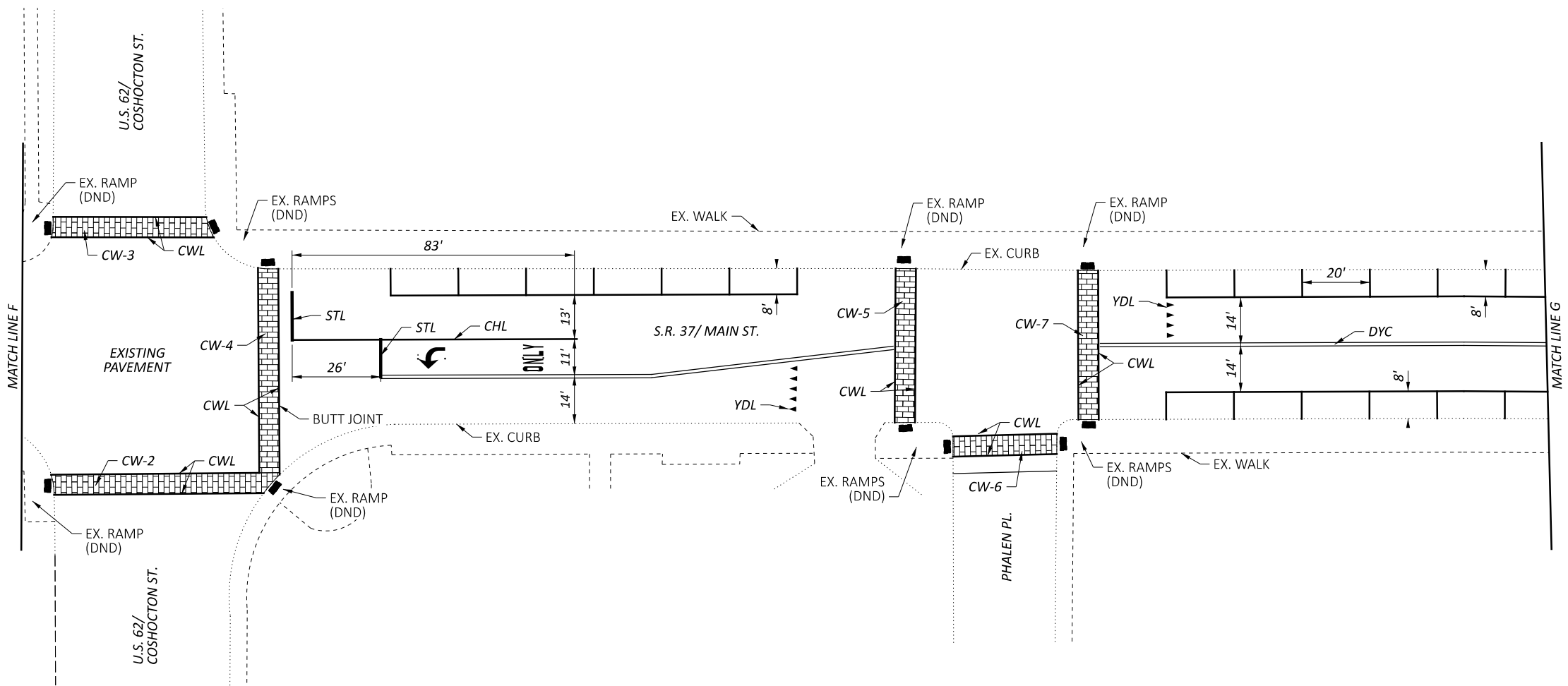
DESIGNER
CWN

REVIEWER
JSL 08/15/25

PROJECT ID
101718

SHEET TOTAL
P.18 77

HORIZONTAL
SCALE IN FEET
0 10 20 40



SHEET TOTAL

HORIZONTAL
SCALE IN FEET



A horizontal scale bar with a black and white alternating pattern. It is marked with the numbers 0, 10, 20, and 40.

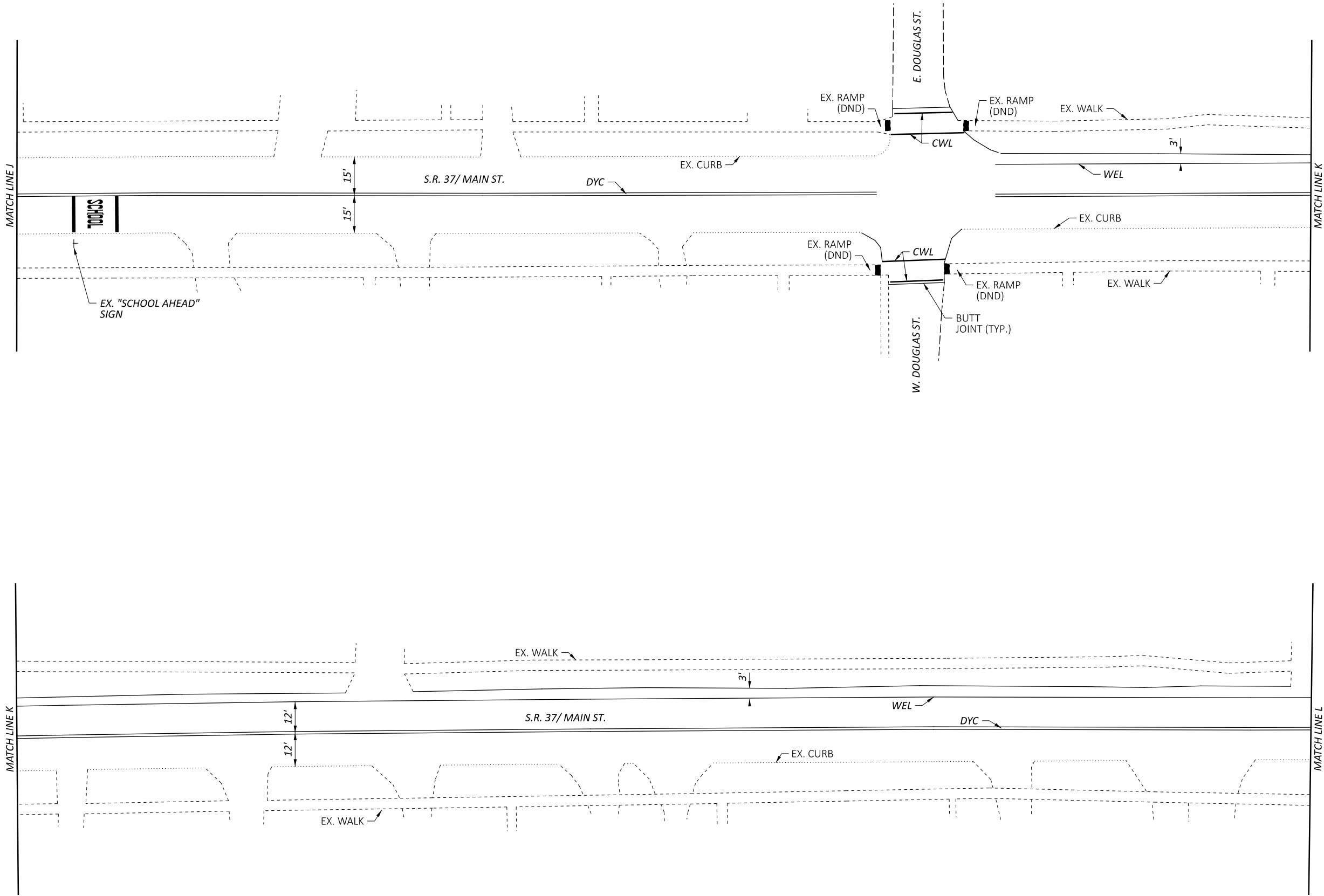


HORIZONTAL
SCALE IN FEET

10 20 40



DESIGNER	
CWN	
REVIEWER	
JSL	08/15/25
PROJECT ID	
101718	
SHEET	TOTAL
P.20	77



CWL = CROSSWALK LINE
DYC = DOUBLE YELLOW CENTER LINE
STL = STOP LINE
WEL = WHITE EDGE LINE

PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN

DESIGN AGENCY



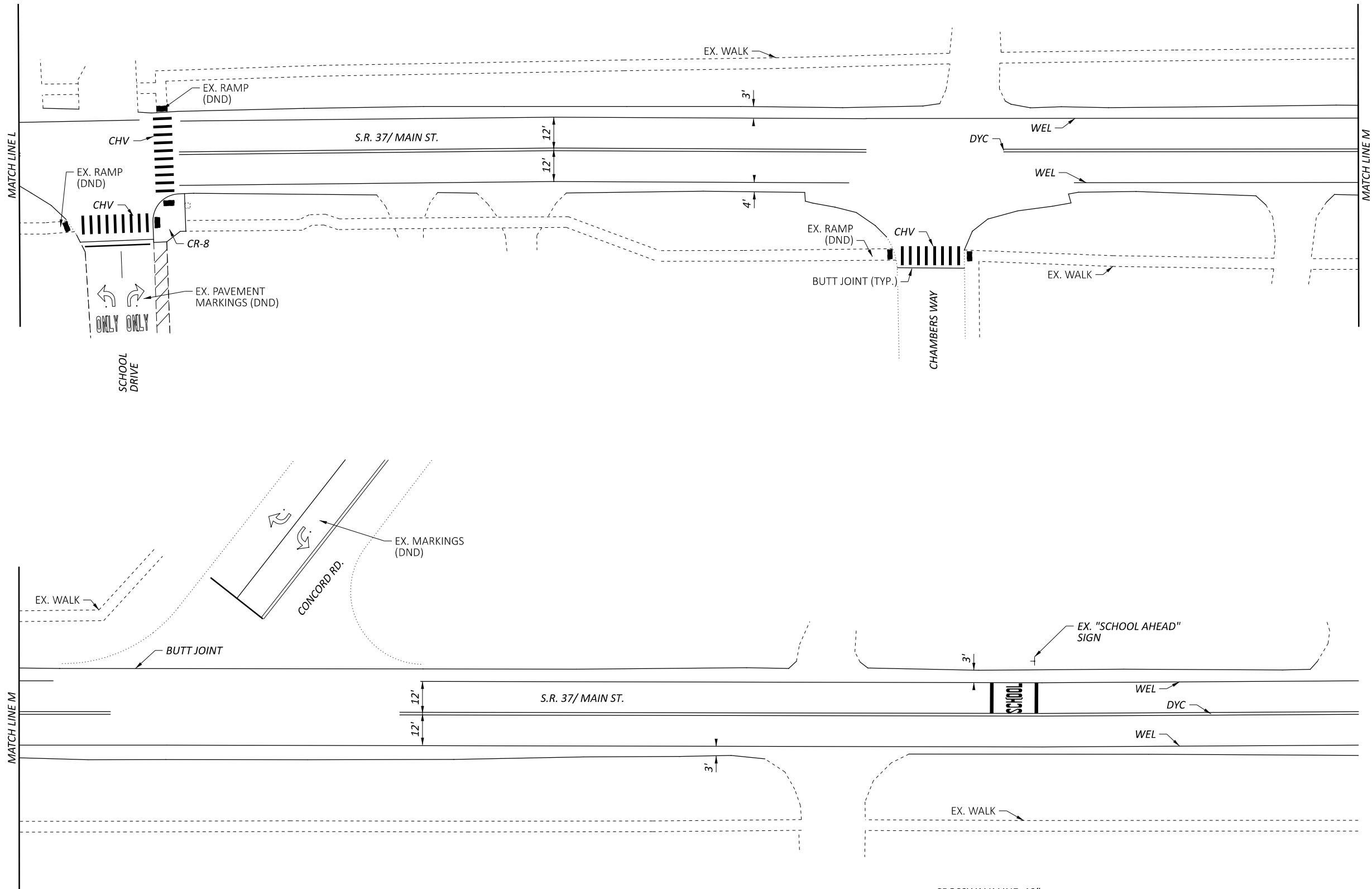
DESIGNER
CWN

REVIEWER
JSL 08/15/25

PROJECT ID
101718

SHEET	TOTAL
P.21	77





PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN



DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

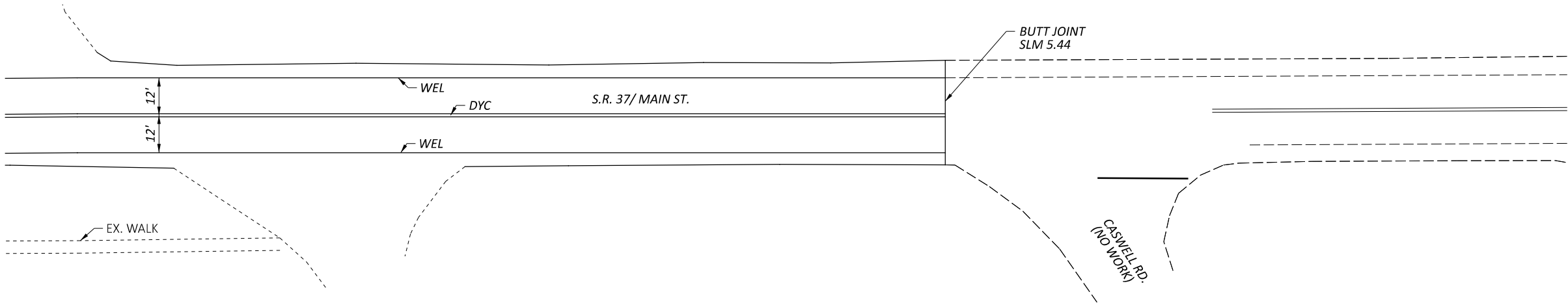
101718

SHEET

P.22

TOTAL

77



DYC = DOUBLE YELLOW CENTER LINE
WEL = WHITE EDGE LINE



DESIGN AGENCY

DESIGNER
CWN

REVIEWER
JSL 08/15/25

PROJECT ID
101718

SHEET	TOTAL
P.23	77

PLAN SHEET (S.R. 37)
CITY OF JOHNSTOWN



S.R. 37/ LEAFY DELL RD. INTERSECTION TOTALS							ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
3	4	5	59	60	61	62					
											ROADWAY
LS							201	11000		LS	CLEARING AND GRUBBING
					240		202	23000	240	SY	PAVEMENT REMOVED
					1,232		202	30000	1,232	SF	WALK REMOVED
					23		202	32000	23	FT	CURB REMOVED
					103		202	32500	103	FT	CURB AND GUTTER REMOVED
						411	202	35100	411	FT	PIPE REMOVED, 24" DIAMETER AND UNDER
						2	202	58100	2	EACH	CATCH BASIN REMOVED
			277				203	10000	277	CY	EXCAVATION
			106				203	20000	106	CY	EMBANKMENT
				382			204	10000	382	SY	SUBGRADE COMPACTION
	50						204	13000	50	CY	EXCAVATION OF SUBGRADE
	50						204	30020	50	CY	GRANULAR MATERIAL, TYPE C
	1						204	45000	1	hour	PROOF ROLLING
	150						204	50000	150	SY	GEOTEXTILE FABRIC
					1,522		608	10000	1,522	SF	4" CONCRETE WALK
					566		608	52000	566	SF	CURB RAMP
					560		609	12000	560	FT	COMBINATION CURB AND GUTTER, TYPE 2
					2		SPECIAL	690E50350	2	EACH	MAILBOX REMOVED AND RESET
											EROSION CONTROL
	83						653	10001	83	CY	TOPSOIL FURNISHED AND PLACED, AS PER PLAN
	2						659	00100	2	EACH	SOIL ANALYSIS TEST
			745				659	00500	745	SY	SEEDING AND MULCHING, CLASS 1
	37						659	14000	37	SY	REPAIR SEEDING AND MULCHING
	37						659	15000	37	SY	INTER-SEEDING
	0.10						659	20000	0.10	TON	COMMERCIAL FERTILIZER
	0.15						659	31000	0.15	ACRE	LIME
	4						659	35000	4	MGAL	WATER
											DRAINAGE
						404	611	04400	404	FT	12" CONDUIT, TYPE B
						2	611	98180	2	EACH	CATCH BASIN, NO. 3A
						1	611	98470	1	EACH	CATCH BASIN, NO. 2-2B
						1	611	98631	1	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN
		25					613	41200	25	CY	LOW STRENGTH MORTAR BACKFILL , TYPE 2



S.R. 37/ LEAFY DELL RD. INTERSECTION TOTALS								ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
5	60	61	62	63	66	71	72					
												PAVEMENT
		590						252	01500	590	FT	FULL DEPTH PAVEMENT SAWING
	99							301	56000	99	CY	ASPHALT CONCRETE BASE, PG64-22, (449)
	64							304	20000	64	CY	AGGREGATE BASE
	18							407	20000	18	GAL	NON-TRACKING TACK COAT
	26							452	14050	26	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
												WATER WORK
			1					638	10601	1	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET, AS PER PLAN
			2					638	10800	2	EACH	VALVE BOX ADJUSTED TO GRADE
100								SPECIAL	638E20768	100	FT	¾" POLYETHYLENE WATER SERVICE LINE
												TRAFFIC CONTROL
				33				630	03101	33	EACH	GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN
				8				630	75000	8	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM
				25				630	80100	25	SF	SIGN, FLAT SHEET
				6				630	80510	6	EACH	SIGN, STREET NAME
				5				630	84900	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
				2				630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION
				6				630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
												TRAFFIC SIGNALS
						2		625	00450	2	EACH	CONNECTION, FUSED PULL APART
						2		625	00460	2	EACH	CONNECTION, UNFUSED PULL APART
						2		625	17961	2	EACH	BRACKET ARM, 8', AS PER PLAN
							129	625	25400	129	FT	CONDUIT, 2", 725.04
							56	625	25500	56	FT	CONDUIT, 3", 725.04
							19	625	25600	19	FT	CONDUIT, 4", 725.04
							357	625	25902	357	FT	CONDUIT, JACKED OR DRILLED, 725.04, 4"
						2		625	27507	2	EACH	LUMINAIRE, TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, 120V, TYPE II)
							147	625	29002	147	FT	TRENCH, 24" DEEP
						4		625	30706	4	EACH	PULL BOX, 725.08, 24"
						8		625	32000	8	EACH	GROUND ROD
					1			625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (S.R. 37/LEAFY DELL RD.)



S.R. 37/ LEAFY DELL RD. INTERSECTION TOTALS					ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
4	36	67	71	72					
									TRAFFIC SIGNALS (CONT.)
			6		632	05007	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
			2		632	05087	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
			8		632	20731	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN
			8		632	25001	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN
			8		632	26001	8	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN (POLARA)
				1,101	632	40200	1,101	FT	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG
				314	632	40400	314	FT	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG
				1,559	632	40500	1,559	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
				374	632	40700	374	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
			2		632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION
			5		632	64020	5	EACH	PEDESTAL FOUNDATION
		2			632	64951	2	EACH	TEST HOLE PERFORMED, AS PER PLAN
				170	632	67300	170	FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
			1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN
			2		632	78111	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN
			5		632	89905	5	EACH	PEDESTAL, 10', TRANSFORMER BASE, AS PER PLAN
			1		633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN
			1		633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN
			1		633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN
			1		633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN (ALPHA)
			1		809	65990	1	EACH	ITS DEVICE, MISC.: HIGH SPEED ETHERNET RADIO (ITERIS)
			1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (SIEMENS)
			1		816	30001	1	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN (ITERIS)
									MAINTENANCE OF TRAFFIC
	2				614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)
	8				614	13312	8	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)
	8				614	13360	8	EACH	OBJECT MARKER, TWO WAY
	0.30				614	21100	0.30	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT
	0.60				614	22110	0.60	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT
4					616	10000	4	MGAL	WATER
	390				622	41100	390	FT	PORTABLE BARRIER, UNANCHORED



RESURFACING TOTALS						ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
4	5	10	11	12	13					
										ROADWAY
					7	202	23000	7	SY	PAVEMENT REMOVED
					316	202	23001	316	SY	PAVEMENT REMOVED, AS PER PLAN
				1,906		202	23500	1,906	SY	WEARING COURSE REMOVED
					83	202	30000	83	SF	WALK REMOVED
					316	SPECIAL	690E98300	316	SY	DECORATIVE CROSSWALK
					2	203	10000	2	CY	EXCAVATION
					176	608	13000	176	SF	6" CONCRETE WALK
					16	608	53020	16	SF	DETECTABLE WARNING
										DRAINAGE
	5					611	98631	5	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN
	1					611	98635	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE, AS PER PLAN
	8					611	99654	8	EACH	MANHOLE ADJUSTED TO GRADE
	6					638	10800	6	EACH	VALVE BOX ADJUSTED TO GRADE
										PAVEMENT
1,620						252	01500	1,620	FT	FULL DEPTH PAVEMENT SAWING
100						253	02000	100	CY	PAVEMENT REPAIR (A)
200						253	02000	200	CY	PAVEMENT REPAIR (B)
200						253	02000	200	CY	PAVEMENT REPAIR (C)
		23,273	1,872			254	01000	25,145	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"
		1,863	150	153		407	20000	2,166	GAL	NON-TRACKING TACK COAT
		971	78			441	50100	1,049	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M
				67		441	70000	67	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22

RESURFACING TOTALS				ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
8	9	14	15					
								TRAFFIC CONTROL
		1.05		644	00104	1.05	MILE	EDGE LINE, 6"
		1.48		644	00300	1.48	MILE	CENTER LINE
			536	644	00400	536	FT	CHANNELIZING LINE, 8"
			310	644	00500	310	FT	STOP LINE
			2,132	644	00620	2,132	FT	CROSSWALK LINE, 12"
			253	644	00700	253	FT	TRANSVERSE/DIAGONAL LINE
			2	644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"
			724	644	01200	724	EACH	PARKING LOT STALL MARKING
			11	644	01300	11	EACH	LANE ARROW, 96"
			3	644	01410	3	EACH	WORD ON PAVEMENT, 96"
			52	644	20800	52	FT	YIELD LINE
			383	644	30000	383	FT	REMOVAL OF PAVEMENT MARKING
								MAINTENANCE OF TRAFFIC
	300			614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
8				614	12460	8	EACH	WORK ZONE MARKING SIGN
	9			614	18601	9	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
1.35				614	21550	1.35	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT
523				614	23680	523	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT
134				614	26610	134	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT

TOTALS		PLAN SPLITS			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
INTERSECTION	RESURFACING	01/SAF/JOHN	02/NHS/JOHN	03/NHS/JOHN							
										ROADWAY	
LS		LS				201	11000		LS	CLEARING AND GRUBBING	
240	7	240		7		202	23000	247	SY	PAVEMENT REMOVED	
	316			316		202	23001	316	SY	PAVEMENT REMOVED, AS PER PLAN	3
	1,906		1,906			202	23500	1,906	SY	WEARING COURSE REMOVED	
1,232	83	1,232		83		202	30000	1,315	SF	WALK REMOVED	
23		23				202	32000	23	FT	CURB REMOVED	
103		103				202	32500	103	FT	CURB AND GUTTER REMOVED	
411		411				202	35100	411	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
2		2				202	58100	2	EACH	CATCH BASIN REMOVED	
277	2	277		2		203	10000	279	CY	EXCAVATION	
106		106				203	20000	106	CY	EMBANKMENT	
382		382				204	10000	382	SY	SUBGRADE COMPACTION	
50		50				204	13000	50	CY	EXCAVATION OF SUBGRADE	
50		50				204	30020	50	CY	GRANULAR MATERIAL, TYPE C	
1		1				204	45000	1	HOUR	PROOF ROLLING	
150		150				204	50000	150	SY	GEOTEXTILE FABRIC	
1,522		1,522				608	10000	1,522	SF	4" CONCRETE WALK	
	176			176		608	13000	176	SF	6" CONCRETE WALK	
566		566				608	52000	566	SF	CURB RAMP	
	16			16		608	53020	16	SF	DETECTABLE WARNING	
560		560				609	12000	560	FT	COMBINATION CURB AND GUTTER, TYPE 2	
5		5				623	40520	5	EACH	RIGHT-OF-WAY MONUMENT, TYPE B	
LS		LS				623	50000		LS	PRECONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
LS		LS				623	51000		LS	POST CONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
2		2				SPECIAL	69050350	2	EACH	MAILBOX REMOVED AND RESET	6
	316			316		SPECIAL	69098300	316	SY	DECORATIVE CROSSWALK	5
										EROSION CONTROL	
83		83				653	10001	83	CY	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	4
2		2				659	00100	2	EACH	SOIL ANALYSIS TEST	
745		745				659	00500	745	SY	SEEDING AND MULCHING, CLASS 1	
37		37				659	14000	37	SY	REPAIR SEEDING AND MULCHING CLASS 1	
37		37				659	15000	37	SY	INTER-SEEDING	
0.10		0.10				659	20000	0.10	TON	COMMERCIAL FERTILIZER	
0.15		0.15				659	31000	0.15	ACRE	LIME	
4		4				659	35000	4	MGAL	WATER	
		5,000				832	30000	5,000	EACH	EROSION CONTROL	

GENERAL SUMMARY

DESIGN AGENCY



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TOTALS		PLAN SPLITS			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
INTERSECTION	RESURFACING	01/SAF/JOHN	02/NHS/JOHN	03/NHS/JOHN							
										DRAINAGE	
404		404				611	04400	404	FT	12" CONDUIT, TYPE B	
2		2				611	98180	2	EACH	CATCH BASIN, NO. 3A	
1		1				611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
1		1				611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
25		25				613	41200	25	CY	LOW STRENGTH MORTAR BACKFILL , TYPE 2	
										PAVEMENT	
590	1,620	590	1,620			252	01500	2,210	FT	FULL DEPTH PAVEMENT SAWING	
	100		100			253	02000	100	CY	PAVEMENT REPAIR (A)	
	200		200			253	02000	200	CY	PAVEMENT REPAIR (B)	
	200		200			253	02000	200	CY	PAVEMENT REPAIR (C)	
	25,145		25,145			254	01000	25,145	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	
99		99				301	56000	99	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
64		64				304	20000	64	CY	AGGREGATE BASE	
18	2,166	18	2,166			407	20000	2,184	GAL	NON-TRACKING TACK COAT	
	1,049		1,049			441	50100	1,049	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M	
	67		67			441	70000	67	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22	
26		26				452	14050	26	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
										WATER WORK	
1		1				638	10601	1	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET, AS PER PLAN	5
2	6	2	6			638	10800	8	EACH	VALVE BOX ADJUSTED TO GRADE	5
100		100				SPECIAL	638E20768	100	FT	¾" POLYETHYLENE WATER SERVICE LINE5	5
										TRAFFIC CONTROL	
33		33				630	03101	33	EACH	GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN	4
8		8				630	75000	8	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM	
25		25				630	80100	25	SF	SIGN, FLAT SHEET	
6		6				630	80510	6	EACH	SIGN, STREET NAME	
5		5				630	84900	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
2		2				630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
6		6				630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	1.05		1.05			644	00104	1.05	MILE	EDGE LINE, 6"	
	1.48		1.48			644	00300	1.48	MILE	CENTER LINE	
	536		536			644	00400	536	FT	CHANNELIZING LINE, 8"	

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TOTAL

77

TOTALS		PLAN SPLITS			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
INTERSECTION	RESURFACING	01/SAF/JOHN	02/NHS/JOHN	03/NHS/JOHN							
										TRAFFIC CONTROL (CONT'D)	
	310		310			644	00500	310	FT	STOP LINE	
	2,132		2,132			644	00620	2,132	FT	CROSSWALK LINE, 12"	
	253		253			644	00700	253	FT	TRANSVERSE/DIAGONAL LINE	
	2		2			644	01110	2	EACH	SCHOOL SYMBOL MARKING, 96"	
	724		724			644	01200	724	FT	PARKING LOT STALL MARKING	
	11		11			644	01300	11	EACH	LANE ARROW, 96"	
	3		3			644	01410	3	EACH	WORD ON PAVEMENT, 96"	
	52		52			644	20800	52	FT	YIELD LINE	
	383		383			644	30000	383	FT	REMOVAL OF PAVEMENT MARKING	
										TRAFFIC SIGNALS	
2		2				625	00450	2	EACH	CONNECTION, FUSED PULL APART	
2		2				625	00460	2	EACH	CONNECTION, UNFUSED PULL APART	
129		129				625	25400	129	FT	CONDUIT, 2", 725.04	
56		56				625	25500	56	FT	CONDUIT, 3", 725.04	
19		19				625	25600	19	FT	CONDUIT, 4", 725.04	
357		357				625	25902	357	FT	CONDUIT, JACKED OR DRILLED, 725.04, 4"	
147		147				625	29002	147	FT	TRENCH, 24" DEEP	
4		4				625	30706	4	EACH	PULL BOX, 725.08, 24"	
8		8				625	32000	8	EACH	GROUND ROD	
1		1				625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (S.R. 37/LEAFY DELL RD.)	
6		6				632	05007	6	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	66
2		2				632	05087	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	66
8		8				632	20731	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	66
8		8				632	25001	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	66
8		8				632	26001	8	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN (POLARA)	66
1,101		1,101				632	40200	1,101	FT	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG	
314		314				632	40400	314	FT	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG	
1,559		1,559				632	40500	1,559	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
374		374				632	40700	374	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
2		2				632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION	
5		5				632	64020	5	EACH	PEDESTAL FOUNDATION	
2		2				632	64951	2	EACH	TEST HOLE PERFORMED, AS PER PLAN	66
170		170				632	67300	170	FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG	
1		1				632	70001	1	EACH	POWER SERVICE, AS PER PLAN	68
5		5				632	89905	5	EACH	PEDESTAL, 10', TRANSFORMER BASE, AS PER PLAN	68
1		1				633	65511	1	EACH	CABINET, TYPE TS-2, AS PER PLAN	68

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TOTAL

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TOTALS		PLAN SPLITS			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
INTERSECTION	RESURFACING	01/SAF/JOHN	02/NHS/JOHN	03/NHS/JOHN							
										TRAFFIC SIGNALS (CONT'D)	
1		1				633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN	68
1		1				633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	68
1		1				633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN (ALPHA)	69
1		1				809	65990	1	EACH	ITS DEVICE, MISC.: HIGH SPEED ETHERNET RADIO (ITERIS)	69
1		1				809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN (SIEMENS)	69
1		1				816	30001	1	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN (ITERIS)	69
										TRAFFIC SIGNALS ALTERNATES	
2		2			X	625	17961	2	EACH	BRACKET ARM, 8', AS PER PLAN (GENERIC) (ALTERNATE 1)	67
2		2			X	625	17961	2	EACH	BRACKET ARM, 8', AS PER PLAN (STERNBURG/VALMONT) (ALTERNATE 2)	67
2		2			X	625	27507	2	EACH	LUMINAIRE, TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, 120V, TYPE II) (GENERIC) (ALTERNATE 1)	66
2		2			X	625	27507	2	EACH	LUMINAIRE, TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, 120V, TYPE II) (STERNBERG) (ALTERNATE 2)	67
2		2			X	632	78111	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN (GENERIC) (ALTERNATE 1)	67
2		2			X	632	78111	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN (STERNBERG/VALMONT) (ALTERNATE 2)	68
										MAINTENANCE OF TRAFFIC	
	300		300			614	11110	300	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
2		2				614	12384	2	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
	8		8			614	12460	8	EACH	WORK ZONE MARKING SIGN	
8		8				614	13312	8	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	
8		8				614	13360	8	EACH	OBJECT MARKER, TWO WAY	
	9		9			614	18601	9	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9
0.30		0.30				614	21100	0.30	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
	1.35		1.35			614	21550	1.35	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
0.60		0.60				614	22110	0.60	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
	523		523			614	23680	523	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
	134		134			614	26610	134	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
4		4				616	10000	4	MGAL	WATER	
390		390				622	41100	390	FT	PORTABLE BARRIER, UNANCHORED	
										INCIDENTALS	
		LS	LS	LS		614	11000		LS	MAINTAINING TRAFFIC	
		9	9			619	16020	18	MNTH	FIELD OFFICE, TYPE C	
		LS	LS	LS		623	10000		LS	CONSTRUCTION LAYOUT STAKES AND SURVEYING	
		LS	LS	LS		624	10000		LS	MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

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REVIEWER

JSL 08/15/25

PROJECT ID

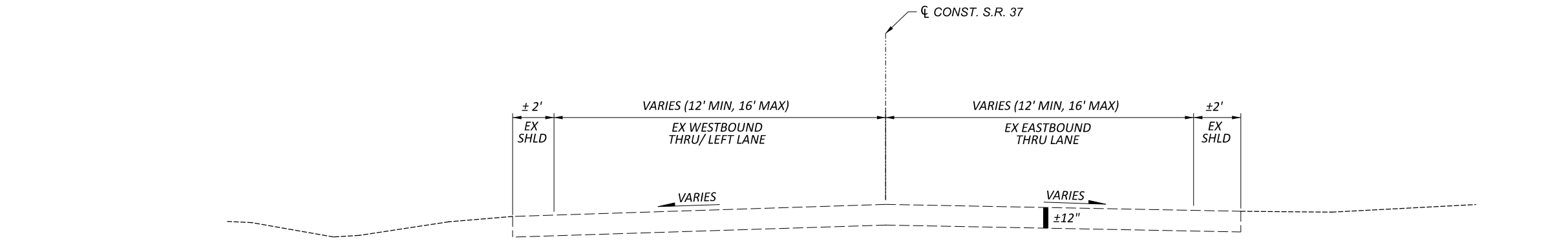
101718

SHEET

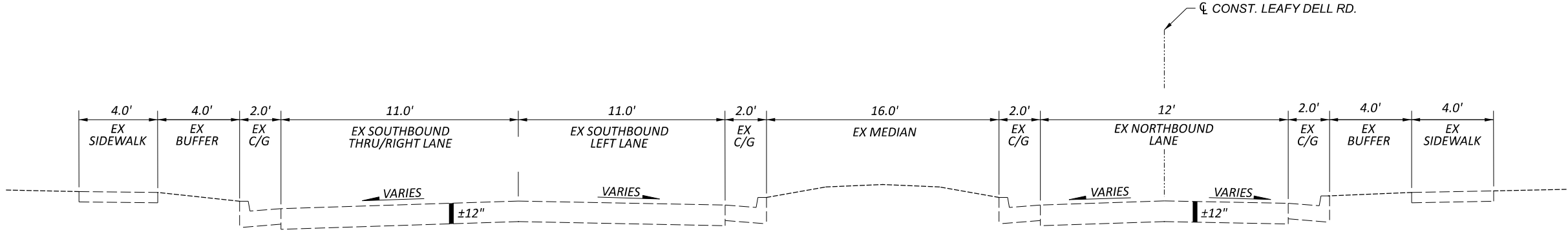
P.32

TOTAL

77

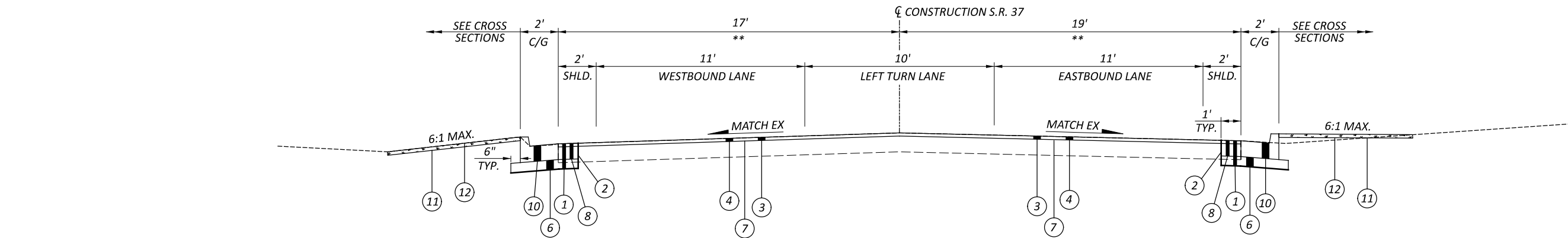


EXISTING SECTION - S.R. 37
STA. 3+15.00 TO STA. 7+35.00



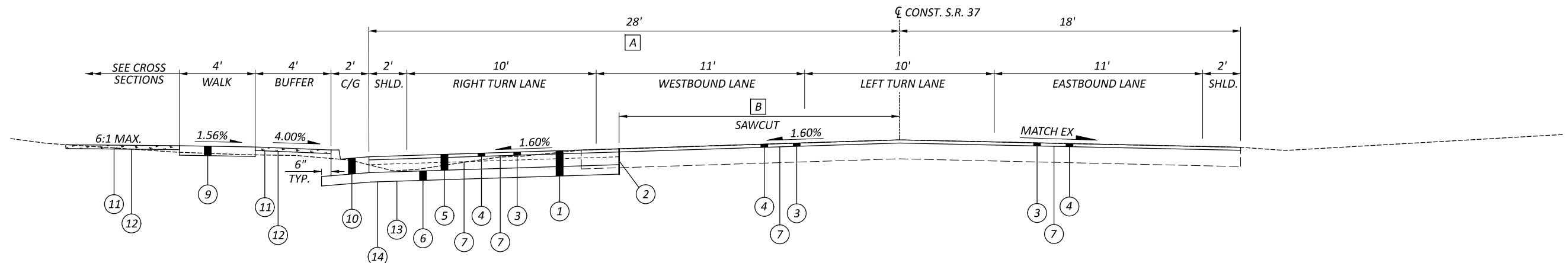
EXISTING SECTION - LEAFY DELL RD.
STA. 100+00.00 TO STA. 100+65.00





** SEE INTERSECTION DETAILS FROM STA. 3+25.14 TO STA. 4+41.06 LT
AND STA. 3+46.21 TO STA. 4+07.52 RT

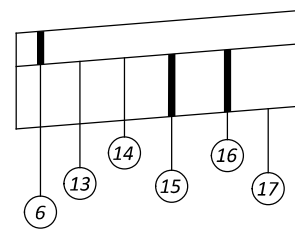
NORMAL SECTION - S.R. 37
STA. 3+15.00 TO STA. 4+39.50 = 124.5 FT



A 28' FROM STA. 4+41.06 TO STA. 5+40.00
TAPERS FROM 28' AT STA. 5+40.00 TO 18' AT STA. 5+90.00
TAPERS FROM 18' AT STA. 5+90.00 TO 15' AT STA. 7+35.00

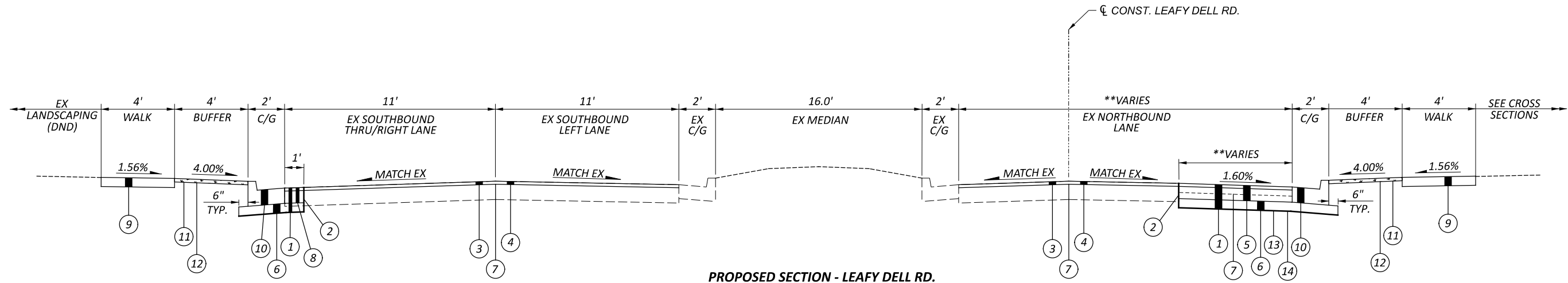
B TAPERS FROM 14.91' AT STA. 4+43.05 TO 10.36' AT STA. 7+35.00

NORMAL SECTION - S.R. 37
STA. 4+39.50 TO STA. 7+35.00 = 295.5 FT



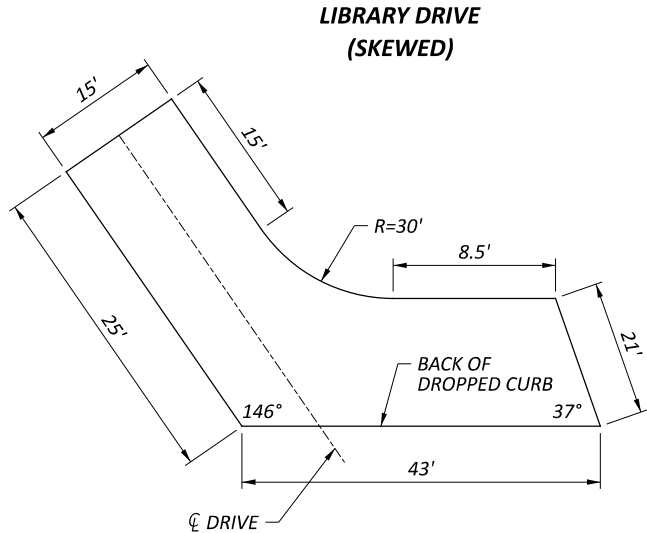
UNDERCUT DETAIL

- | | | | | | |
|---|---|----|--|----|---|
| 1 | ITEM 202, PAVEMENT REMOVED | 8 | ITEM 451, 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS (8.5" FINAL THICKNESS AFTER PLANING) | 15 | ITEM 204, 12" EXCAVATION OF SUBGRADE |
| 2 | ITEM 252, FULL DEPTH PAVEMENT SAWING | 9 | ITEM 608, 4" CONCRETE WALK | 16 | ITEM 204, 12" GRANULAR MATERIAL, TYPE C |
| 3 | ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE, 1.50" | 10 | ITEM 609, COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN, (10" THICK) | 17 | ITEM 204, GEOTEXTILE FABRIC |
| 4 | ITEM 441, 1.50" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M | 11 | ITEM 653, TOPSOIL, FURNISHED AND PLACED, AS PER PLAN (4" COMPACTED) | | |
| 5 | ITEM 301, 10" ASPHALT CONCRETE BASE, PG64-22 (449) (PLACE AND TACK IN TWO LIFTS) (8.5" FINAL THICKNESS AFTER PLANING) | 12 | ITEM 659, SEEDING AND MULCHING, CLASS 1 | | |
| 6 | ITEM 304, 6" AGGREGATE BASE | 13 | ITEM 204, SUBGRADE COMPACTION | | |
| 7 | ITEM 407, NON-TRACKING TACK COAT | 14 | ITEM 204, PROOF ROLLING | | |



PROPOSED SECTION - LEAFY DELL RD.
STA. 100+00.00 TO STA. 100+65.00 = 65.00 FT

** SEE INTERSECTION DETAILS FROM STA. 100+00.00 TO STA. 100+57.81



**LIBRARY DRIVE
(SKEWED)**

COMMERCIAL DRIVE BUILDUP

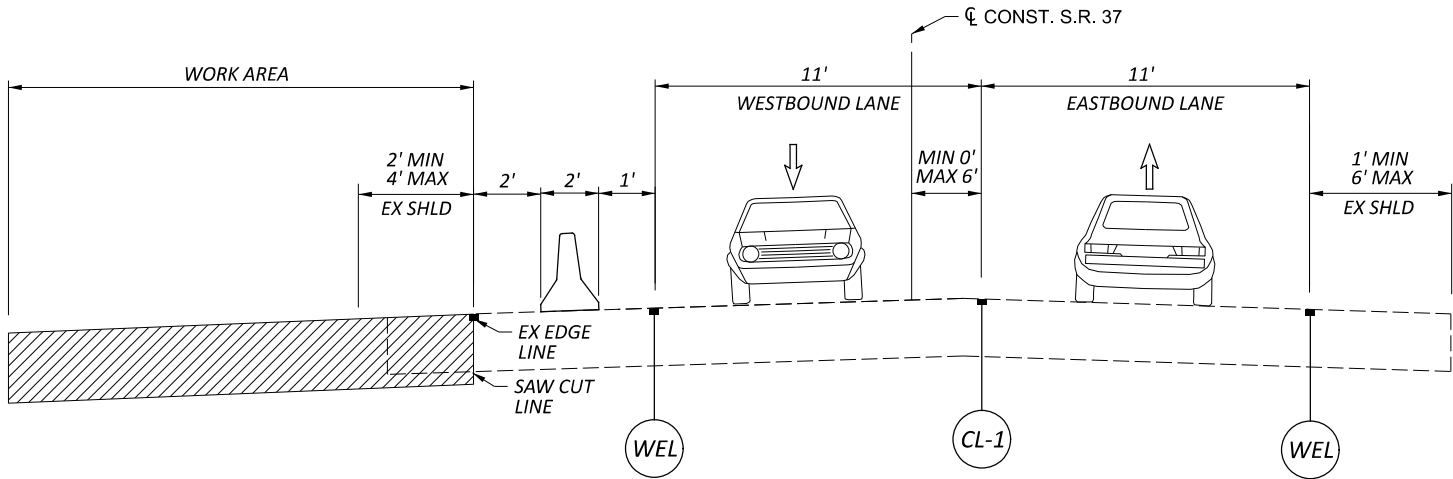
ITEM 452, 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
ITEM 304, 4" AGGREGATE BASE (IF NECESSARY)

- 1 ITEM 202, PAVEMENT REMOVED
- 2 ITEM 252, FULL DEPTH PAVEMENT SAWING
- 3 ITEM 202, WEARING COURSE REMOVED
- 4 ITEM 441, 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
- 5 ITEM 301, 10" ASPHALT CONCRETE BASE, PG64-22 (449) (PLACE AND TACK IN TWO LIFTS) (8.75" FINAL THICKNESS AFTER PLANING)
- 6 ITEM 304, 6" AGGREGATE BASE
- 7 ITEM 407, NON-TRACKING TACK COAT

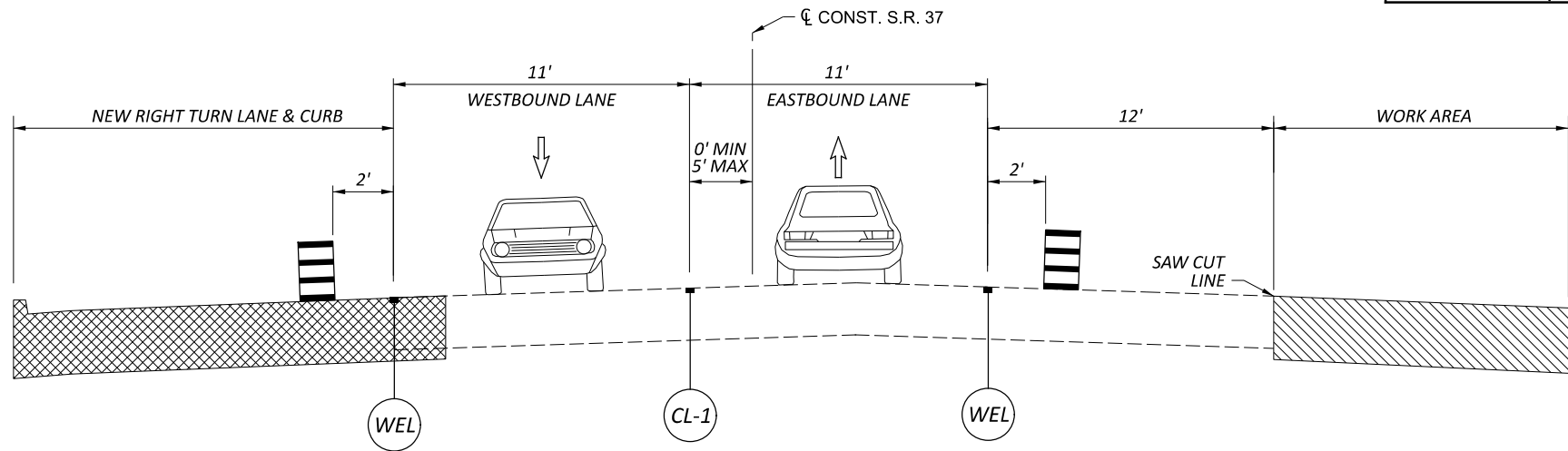
- 8 ITEM 452, 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS (8.75" FINAL THICKNESS AFTER PLANING)
- 9 ITEM 608, 4" CONCRETE WALK
- 10 ITEM 609, COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN, (10" THICK)
- 11 ITEM 653, TOPSOIL, FURNISHED AND PLACED, AS PER PLAN (4" COMPACTED)
- 12 ITEM 659, SEEDING AND MULCHING, CLASS 1
- 13 ITEM 204, SUBGRADE COMPACTION
- 14 ITEM 204, PROOF ROLLING

- 15 ITEM 204, 12" EXCAVATION OF SUBGRADE
- 16 ITEM 204, 12" GRANULAR MATERIAL, TYPE C
- 17 ITEM 204, GEOTEXTILE FABRIC

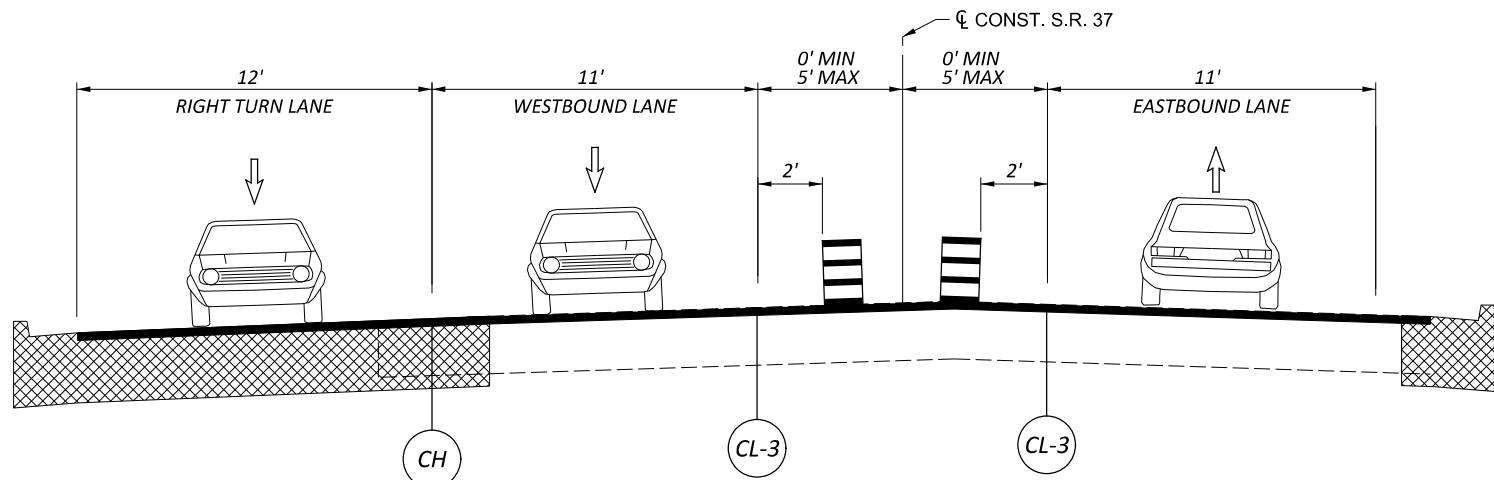




PHASE 1
WIDENING, BASE COURSE AND CURB AND GUTTER (LEFT)
(28-DAY CLOSURE OF LEAFY DELL RD. AND PERSHING DR.)
SECTION APPLIES:
STA. 3+95 TO STA. 7+85



PHASE 2
CURB AND GUTTER (RIGHT)
(28-DAY CLOSURE OF LEAFY DELL RD. AND PERSHING DR.)
SECTION APPLIES:
STA. 2+65 TO STA. 5+85



PHASE 3
MILLING AND RESURFACING
SECTION APPLIES:
STA. 0+15 TO STA. 7+35

SHEET NO.	REF. NO.	LOCATION (STATION TO STATION)	614					622
			WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	OBJECT MARKER, TWO WAY	WORK ZONE CENTERLINE, CLASS I, 642 PAINT	WORK ZONE EDGE LINE, 6", CLASS I, 642 PAINT	PORTABLE BARRIER, UNANCHORED
			EACH	EACH	EACH	MILE	MILE	FT
		PHASE 1						
37	PCB-1	3+95.00 TO 7+85.00	2	8	8			390
37	CL-1	1+00.00 TO 9+00.00				0.15		
37	WEL-1	1+00.00 TO 9+00.00					0.15	
37	WEL-2	1+00.00 TO 9+00.00					0.15	
		PHASE 2						
38	CL-2	1+00.00 TO 9+00.00				0.15		
38	WEL-3	1+00.00 TO 9+00.00					0.15	
38	WEL-4	1+00.00 TO 9+00.00					0.15	
TOTALS (CARRIED TO SUB-SUMMARY)			2	8	8	0.30	0.60	390

- CL-1 ITEM 614, WORK ZONE CENTER LINE, CLASS I, 642 PAINT
- WEL ITEM 614, WORK ZONE EDGE LINE, 4" CLASS I, 642 PAINT, (WHITE)
- CL-3 ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT
- CH ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT
- ITEM 622, PORTABLE BARRIER, 32"
- DIRECTION OF TRAVEL
- WORK AREA
- COMPLETED WORK



HORIZONTAL
SCALE IN FEET



A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 10, 20, and 40.

MOT PLAN SHEET
PHASE 1

DESIGN AGENCY



DESIGNER	
CWN	
REVIEWER	
JSL	08/15/25
PROJECT ID	
101718	
SHEET	TOTAL
P.37	77



1

PORTABLE CHANGEABLE MESSAGE SIGN

LEAFY DELL/
PERSHING
CLOSED

SCREEN 1

2

PORTABLE CHANGEABLE MESSAGE SIGN

LEAFY DELL/
PERSHING
CLOSED

SCREEN 1

3

PORTABLE CHANGEABLE MESSAGE SIGN

LEAFY DELL
CLOSED
AT S.R 37

SCREEN 1

4

ROAD CLOSED
LOCAL TRAFFIC ONLY

R11-3-66
MOUNT ON TYPE III
BARRICADES

5

ROAD CLOSED

R11-2-48
MOUNT ON TYPE III
BARRICADES

USE
CROTON/
EDWARDS

SCREEN 2

USE
CROTON/
MCCRACKEN

SCREEN 2

USE
EAGLES
NEST AVE

SCREEN 2

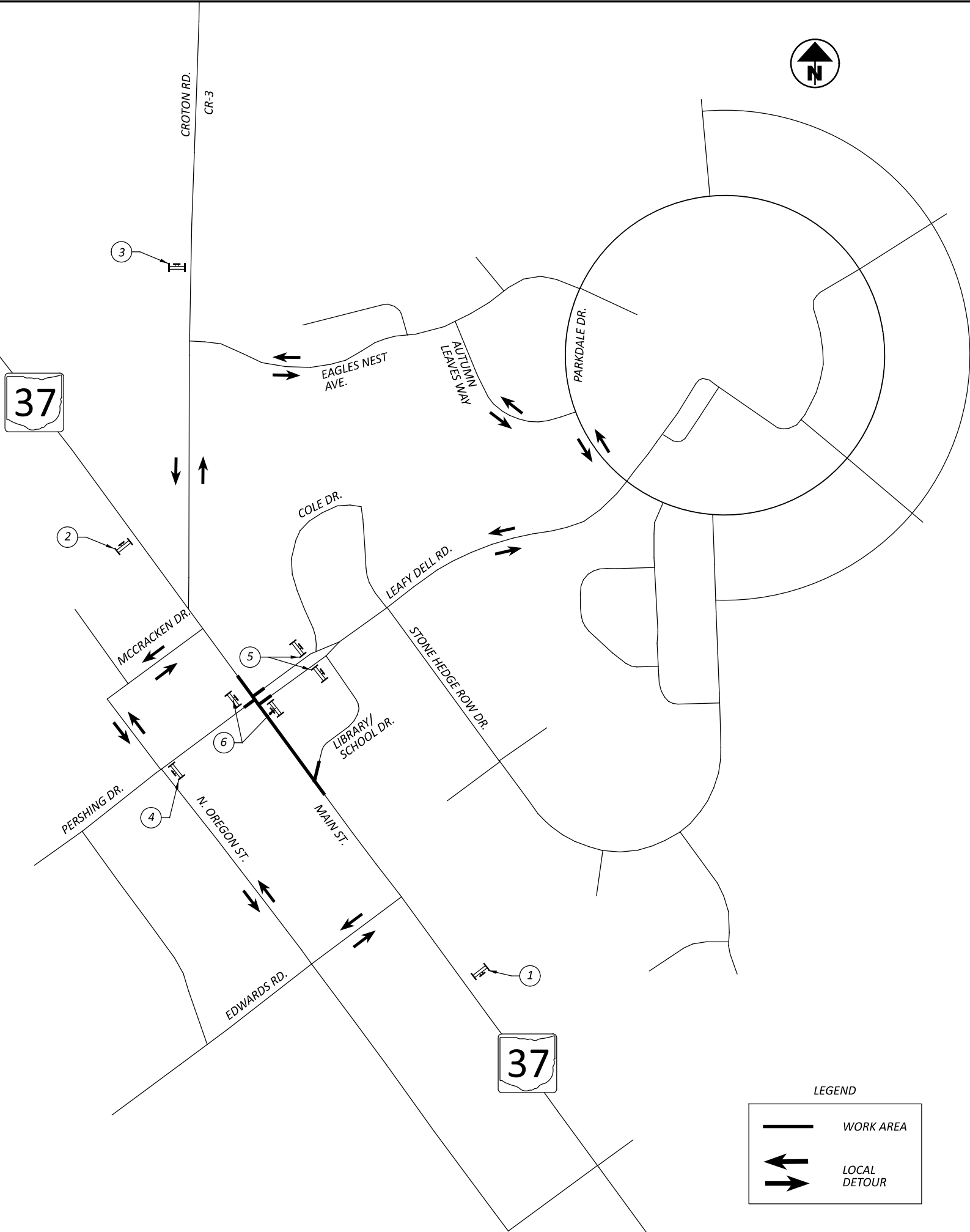
NOTES:
PLACE PORTABLE CHANGEABLE MESSAGE BOARDS (PCMS)
A MINIMUM OF 1 WEEK PRIOR TO CLOSURE TO ALERT TRAFFIC
EXACT PCMS LOCATIONS TO BE DETERMINED BY THE ENGINEER
SEE SHEET FOR BARRICADE PLACEMENT

6

NOTICE OF CLOSURE SIGN

ROAD WILL BE
CLOSED MONTH/DAY
FOR 28 DAYS
INFO: 740-323-4400

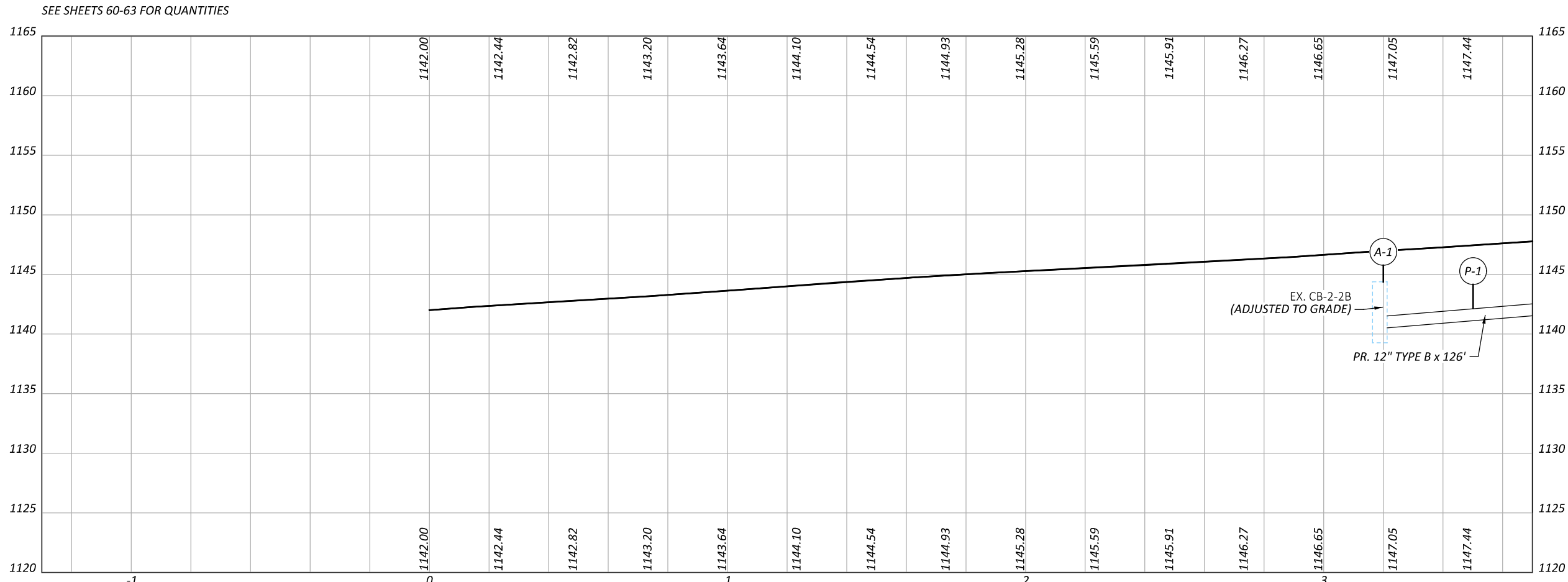
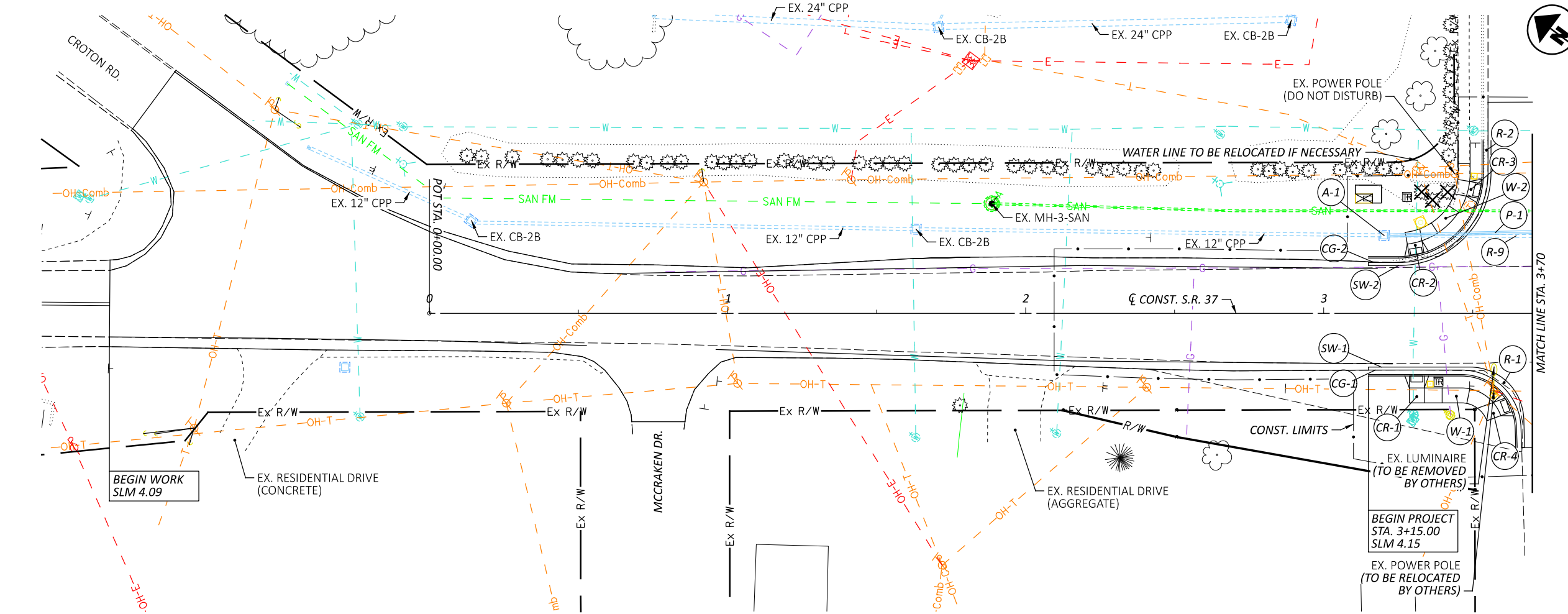
W20-H13-60



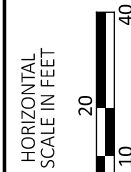
LEGEND

WORK AREA

LOCAL
DETOUR



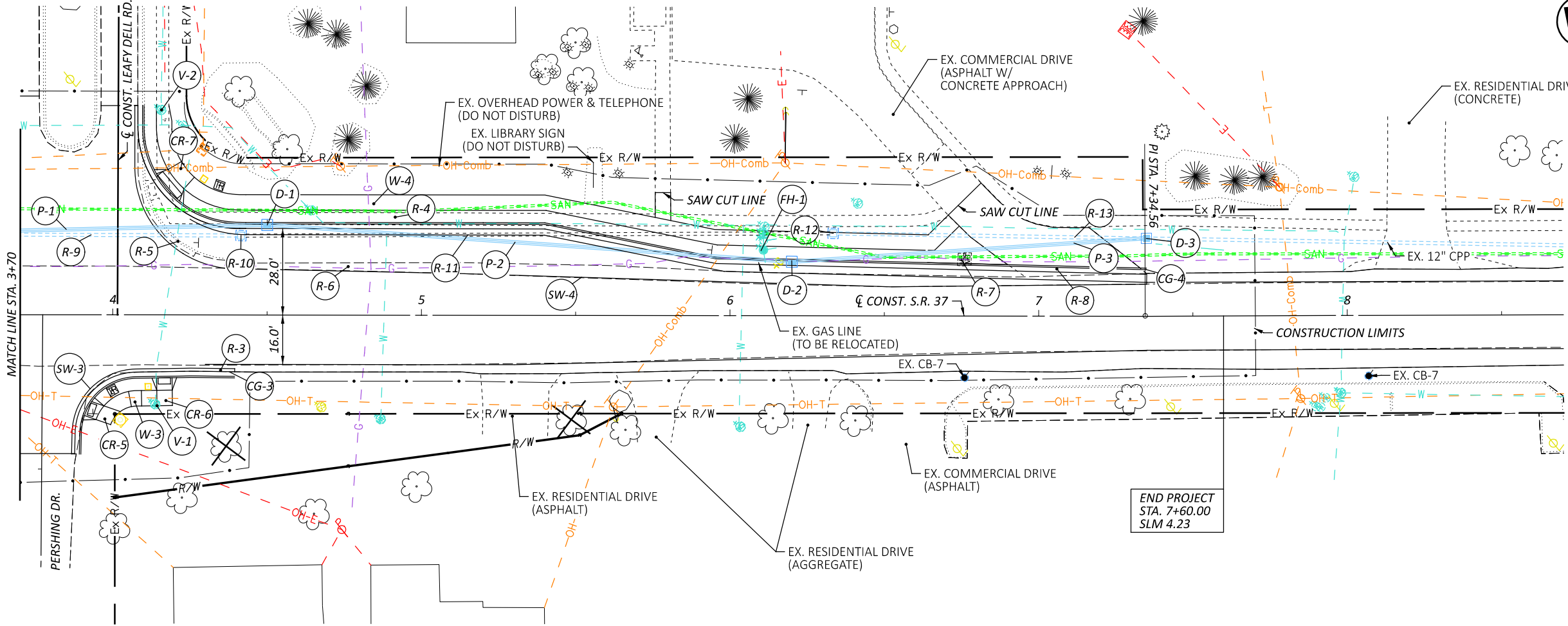
PLAN & PROFILE - S.R. 37
0+00.00 TO 3+70.00



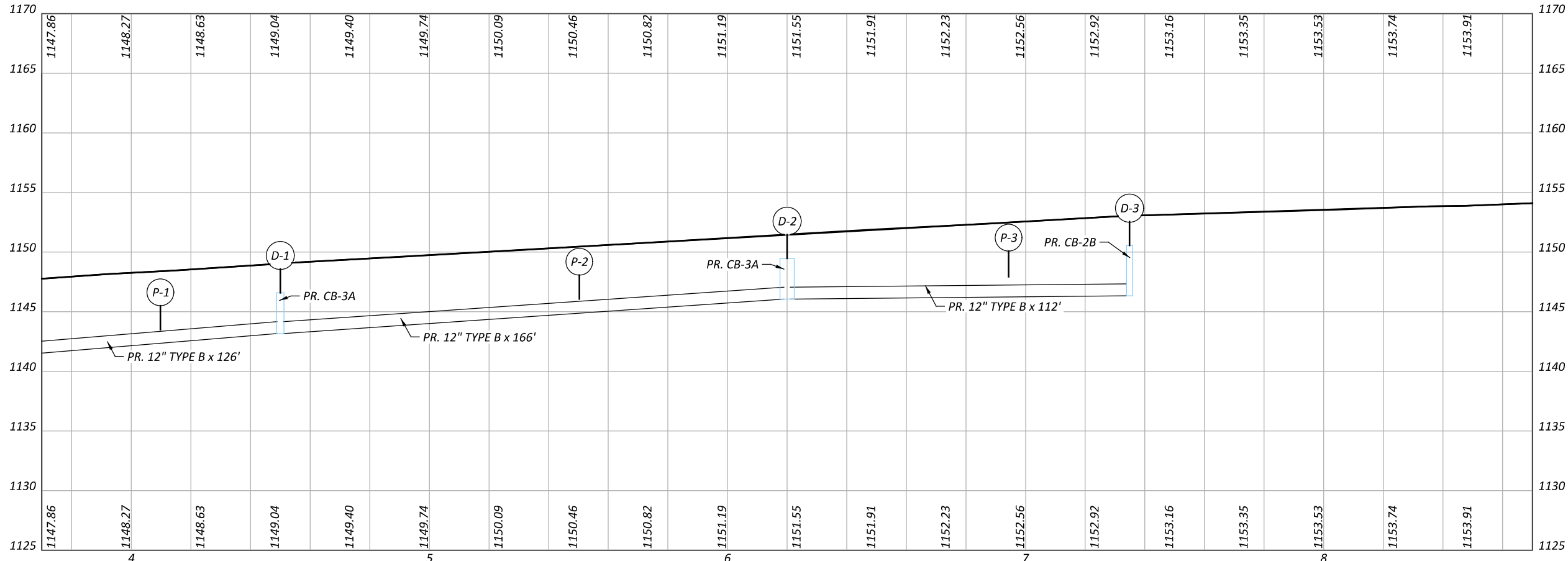
DESIGN AGENCY



DESIGNER	CWN
REVIEWER	JSL 08/15/25
PROJECT ID	101718
SHEET	P.40
TOTAL	77



SEE SHEETS 60-63 FOR QUANTITIES



PLAN & PROFILE - S.R. 37
3+70.00 TO 7+35.00

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

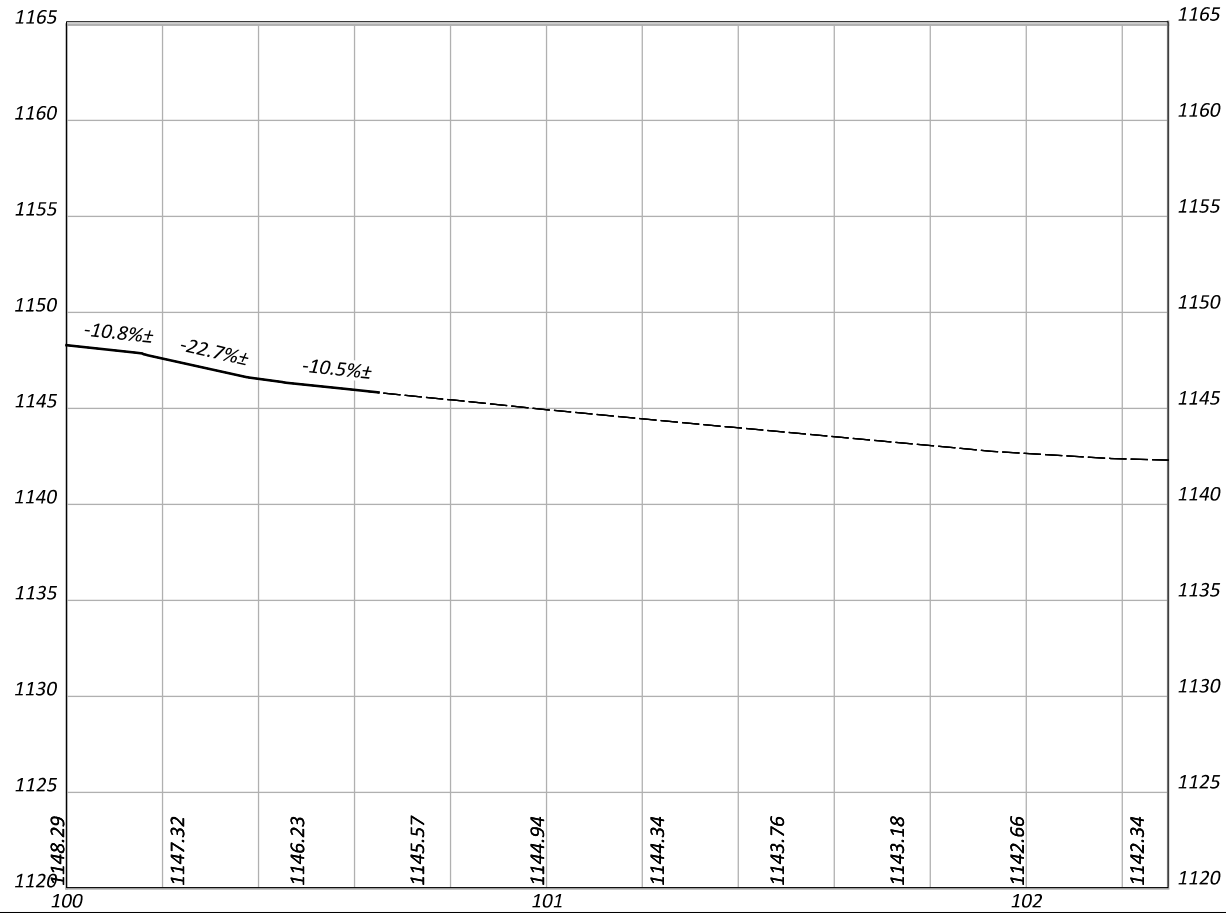
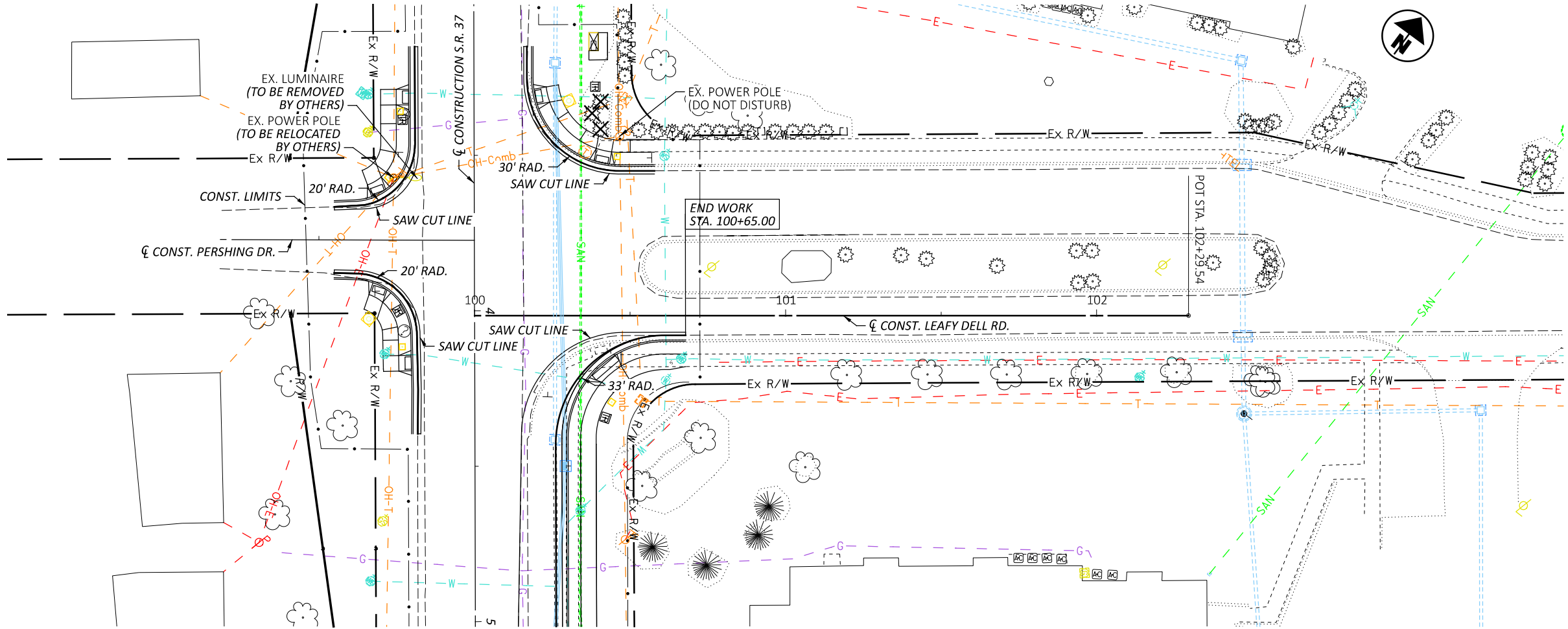
101718

SHEET

P.41

TOTAL

77



PLAN & PROFILE - LEAFY DELL RD.
STA. 100+00 TO STA. 102+29.54



DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

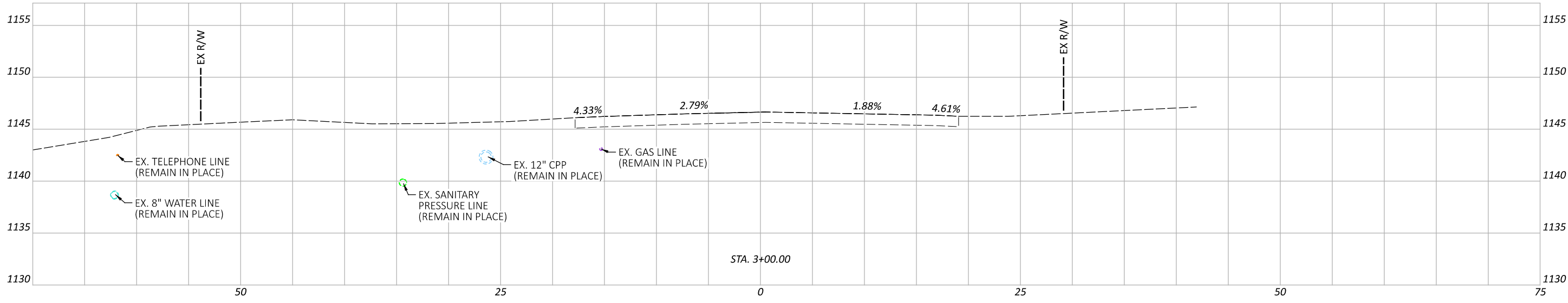
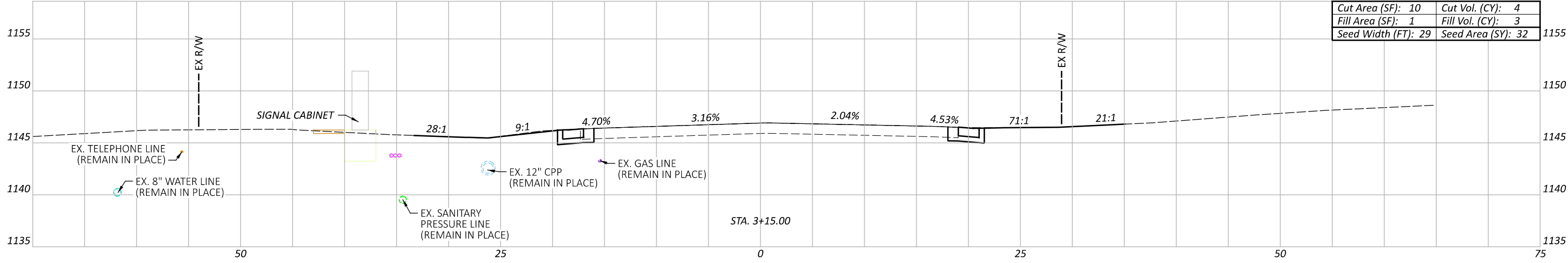
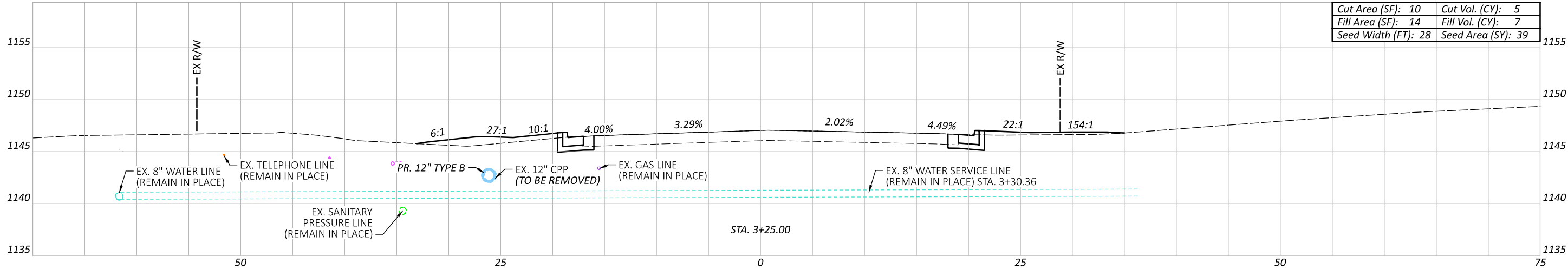
101718

SHEET

P.42

TOTAL

77



CROSS SECTIONS - S.R. 37
3+00 TO 3+25

DESIGN AGENCY



DESIGNER

CWN

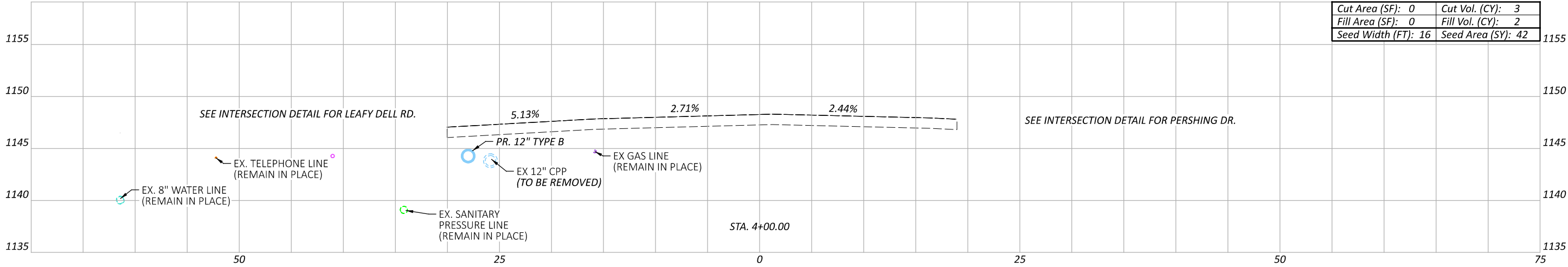
REVIEWER

JSL 08/15/25

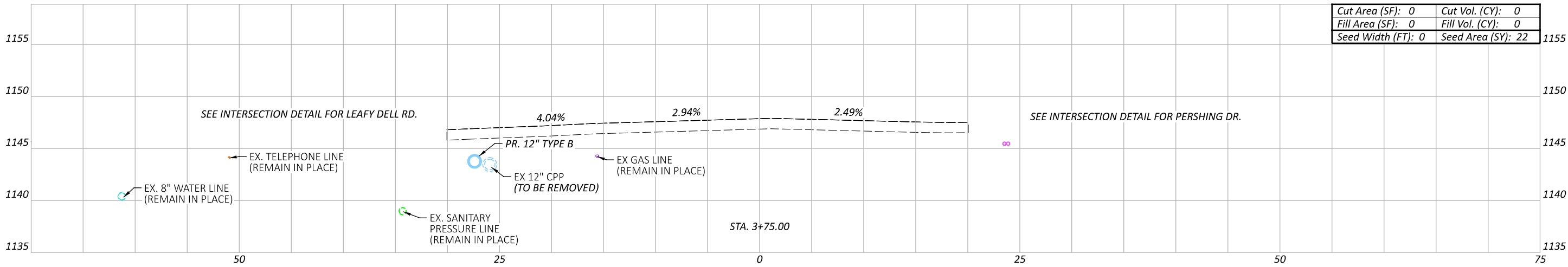
PROJECT ID

101718

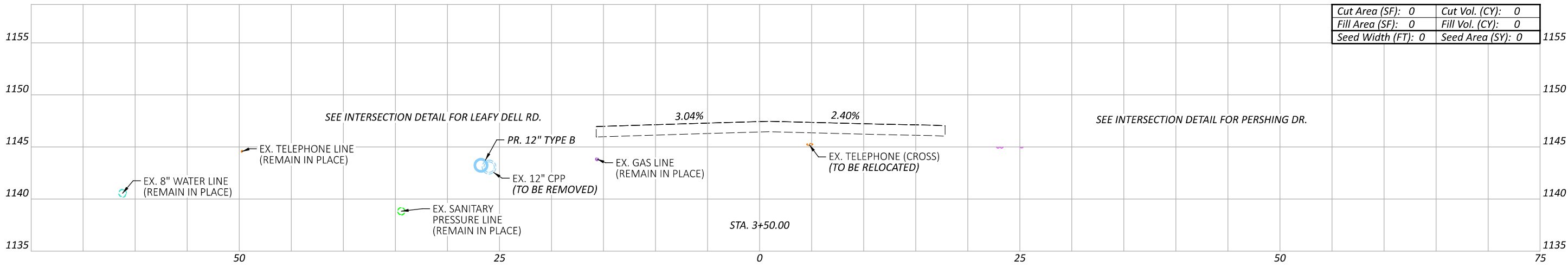
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Seeding	Cut	Fill		
71	9	10	P.43	77



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Fill Area (SF):	0	Fill Vol. (CY):	2
Seed Width (FT):	16	Seed Area (SY):	42



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):	0	Seed Area (SY):	22



Cut Area (SF):	0	Cut Vol. (CY):	0
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):	0	Seed Area (SY):	0

CROSS SECTIONS - S.R. 37
3+50 TO 4+00

DESIGN AGENCY



DESIGNER

CWN

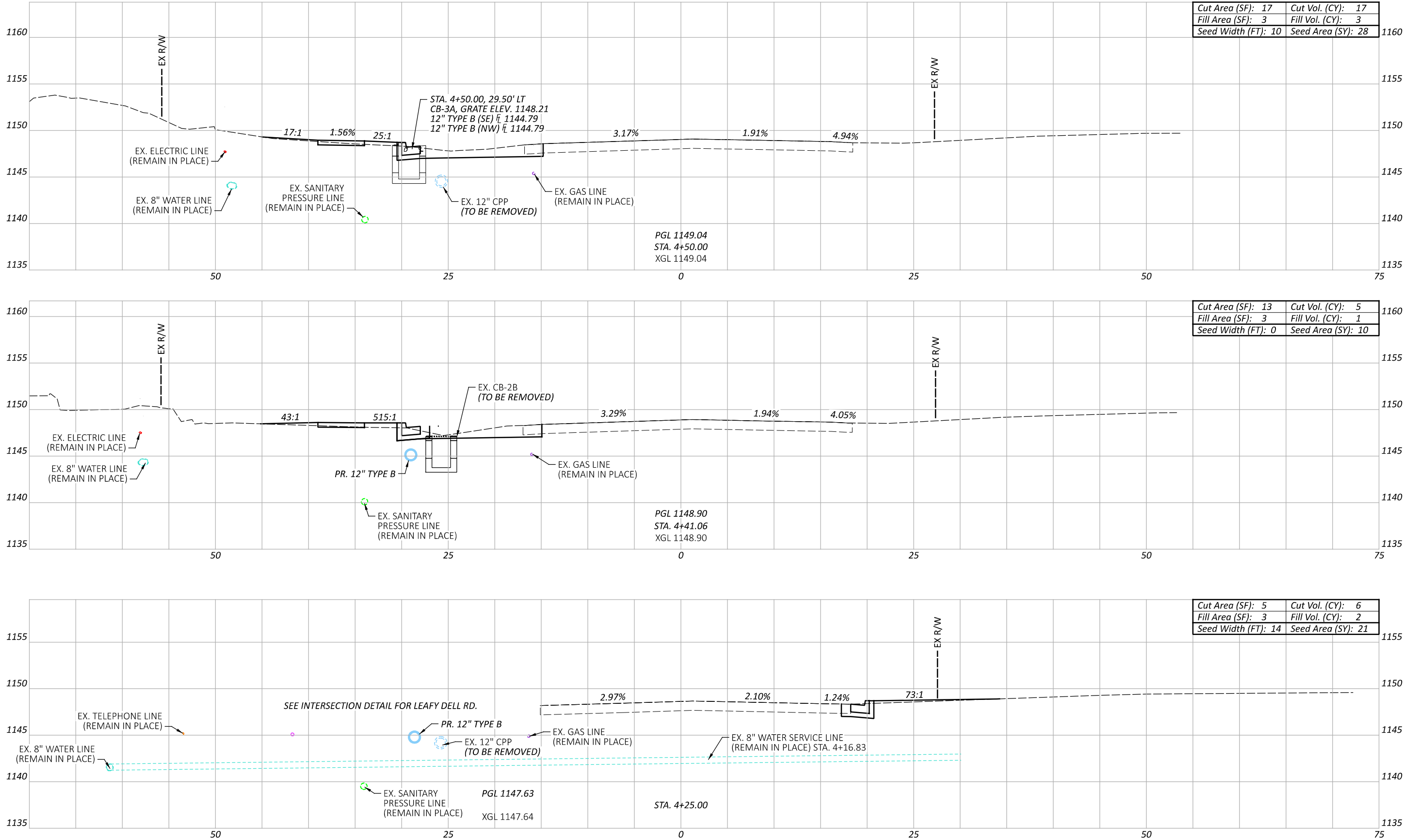
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill	P.44	77
64	3	2		



CROSS SECTIONS - S.R. 37
4+25 TO 4+50

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

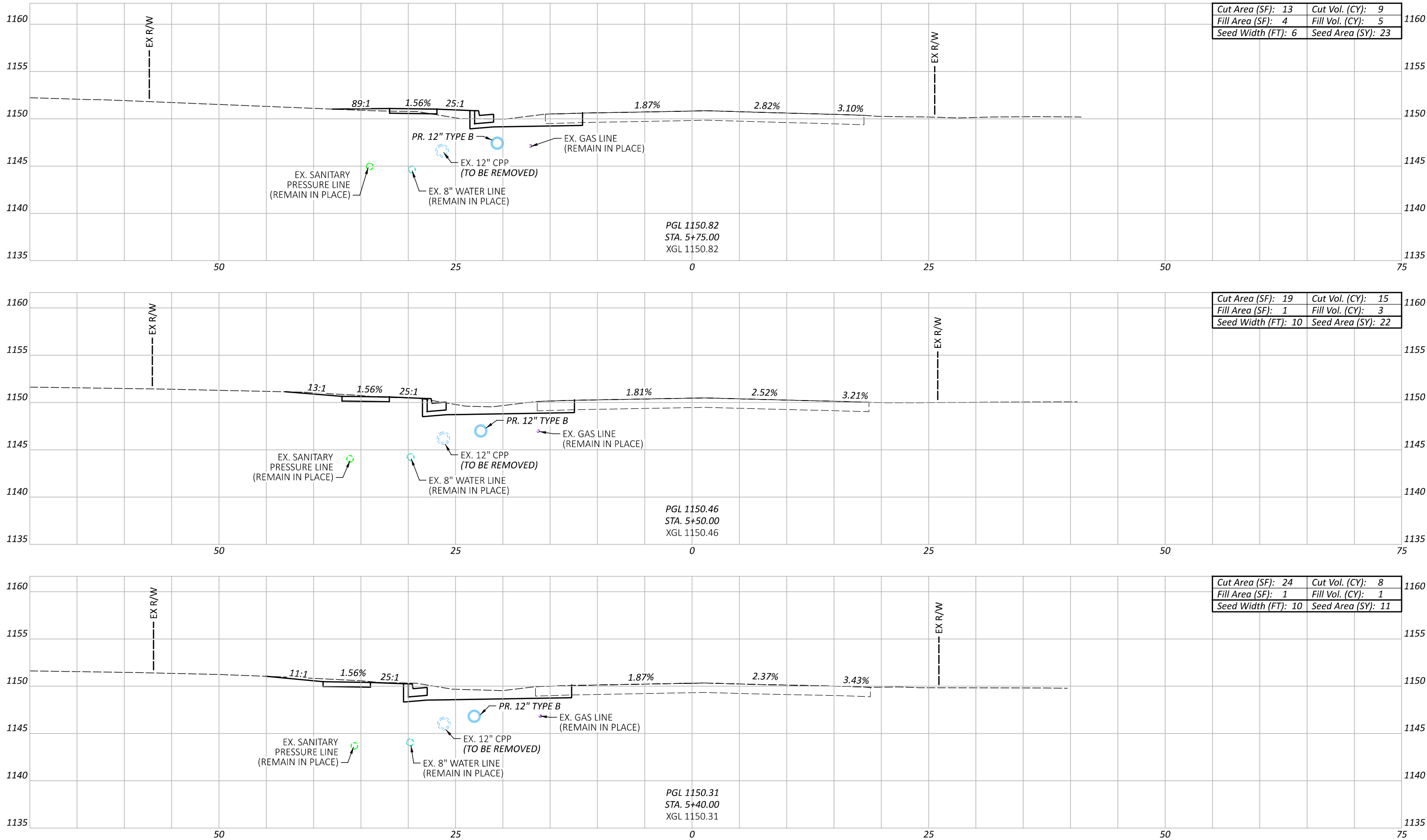
JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
59	28	6	P.45	77





CROSS SECTIONS - S.R. 37
5+40 TO 5+75

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

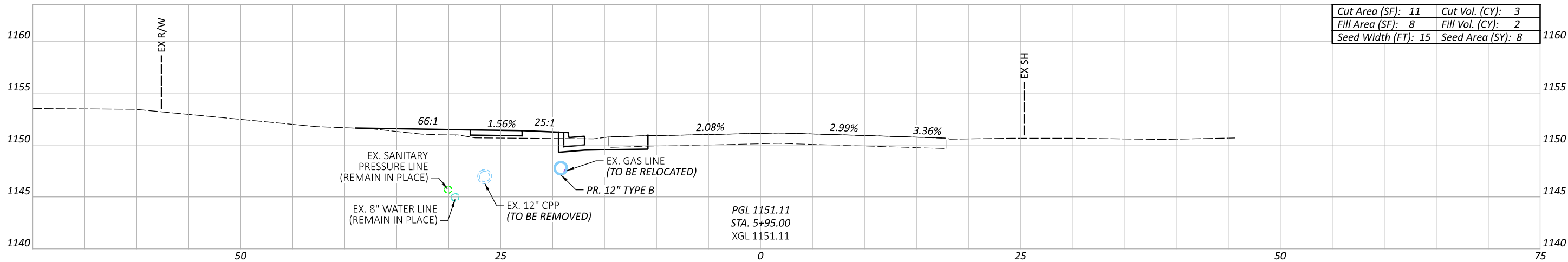
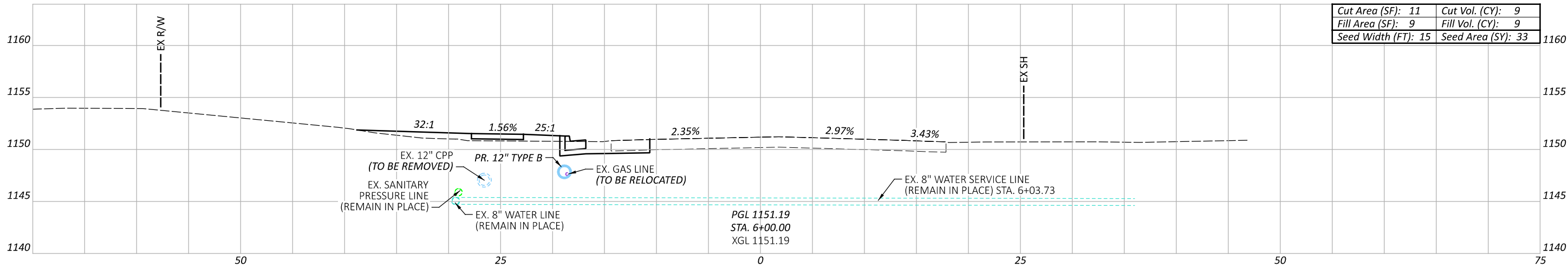
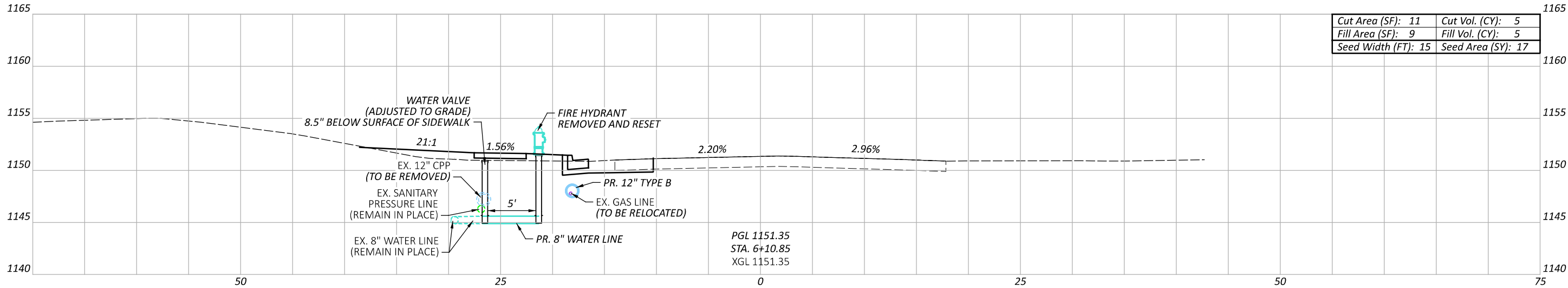
JSL 08/15/25

PROJECT ID

101718

Sheet Totals		
Seeding	Cut	Fill
56	32	9

SHEET	TOTAL
P.47	77



CROSS SECTIONS - S.R. 37
5+95 TO 6+10.85

DESIGN AGENCY



DESIGNER

CWN

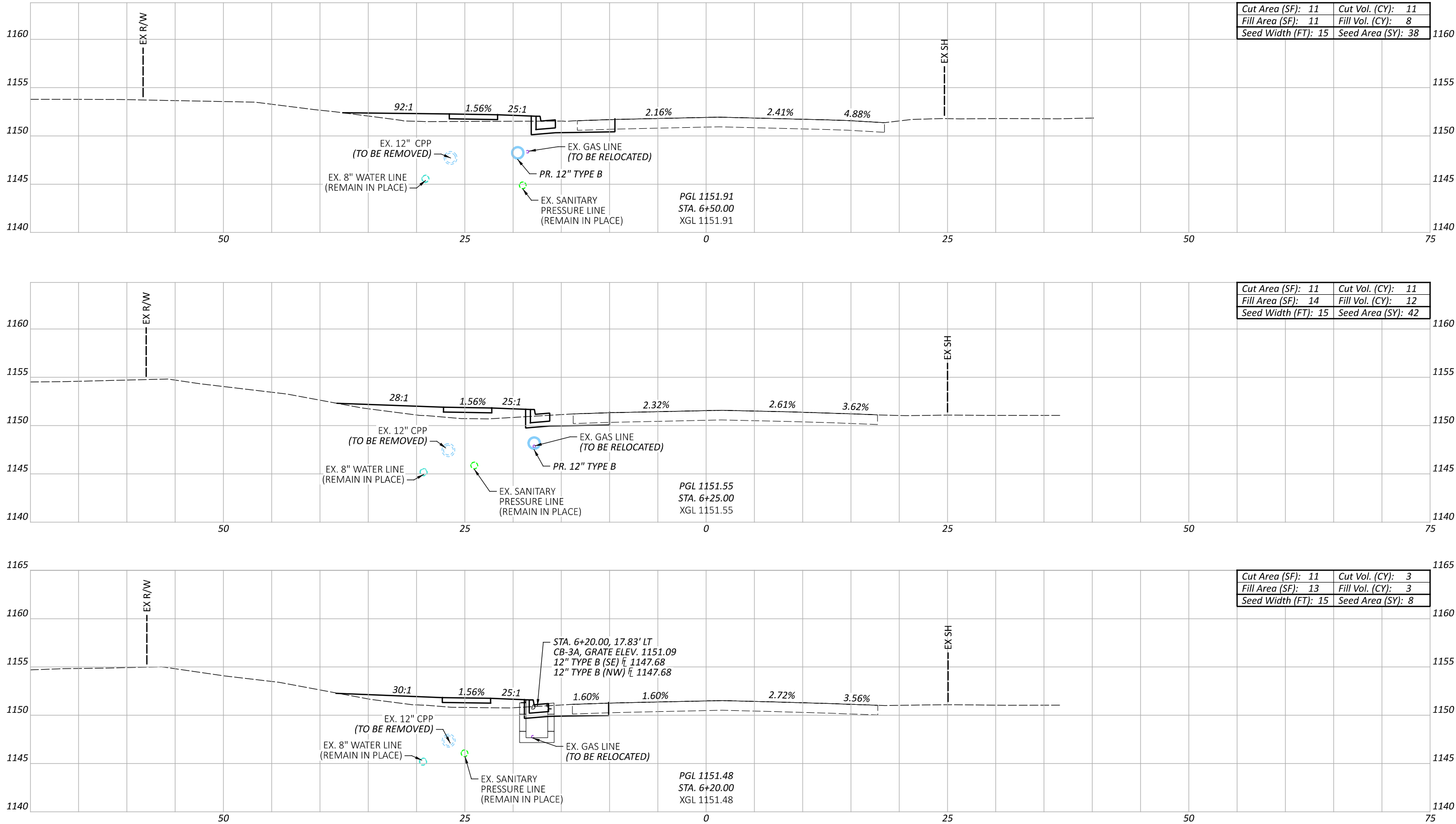
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
42	13	11	P.48	77



CROSS SECTIONS - S.R. 37
6+20 TO 6+50

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

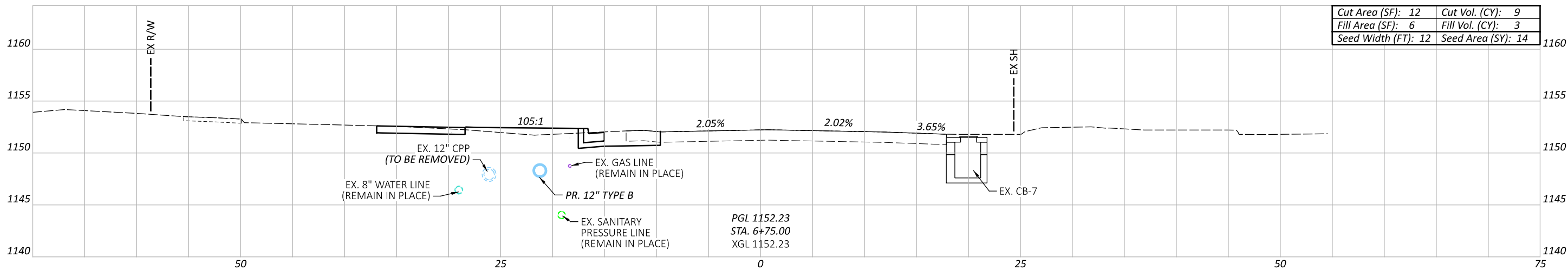
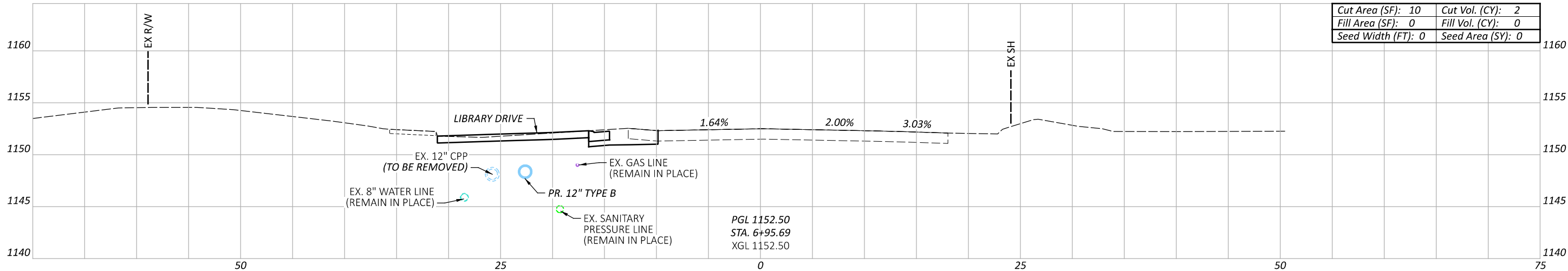
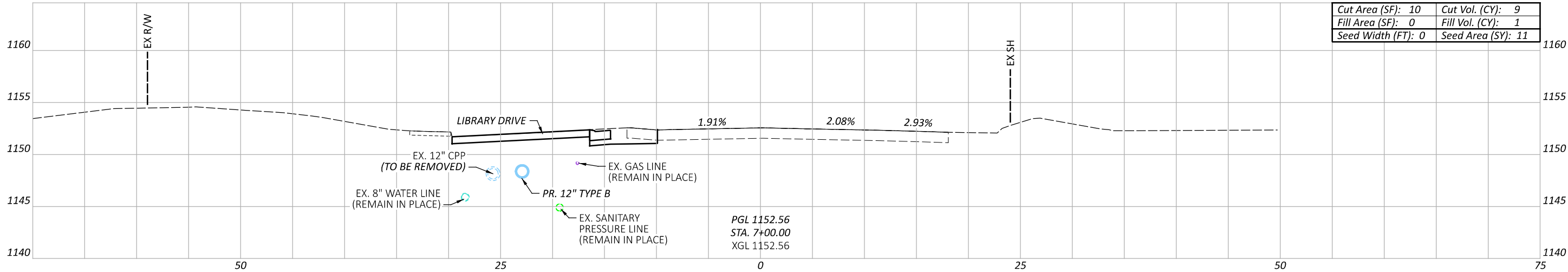
101718

Sheet Totals

Seeding 88 Cut 25 Fill 23

SHEET TOTAL

P.49 77



CROSS SECTIONS - S.R. 37
6+75 TO 7+00

DESIGN AGENCY



DESIGNER

CWN

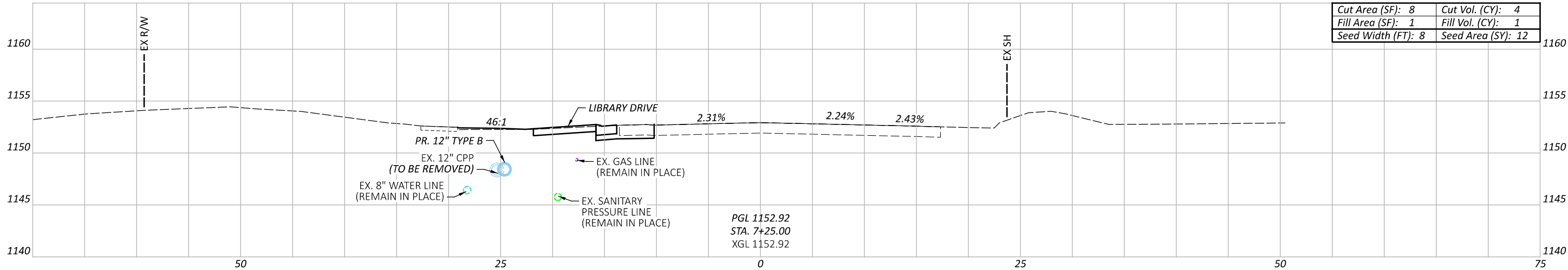
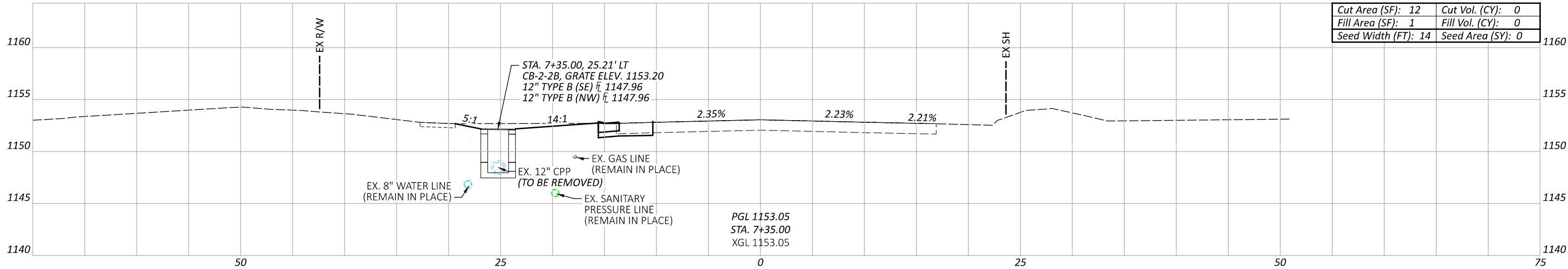
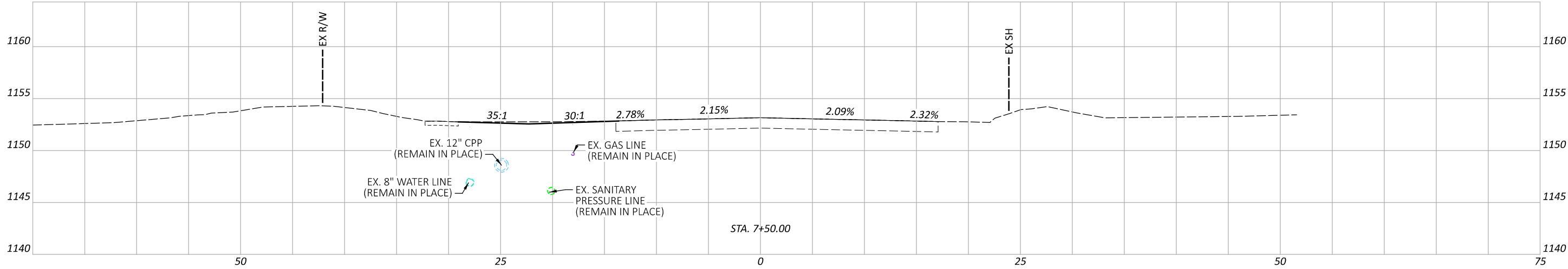
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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CROSS SECTIONS - S.R. 37
7+25 TO 7+50

DESIGN AGENCY



DESIGNER

CWN

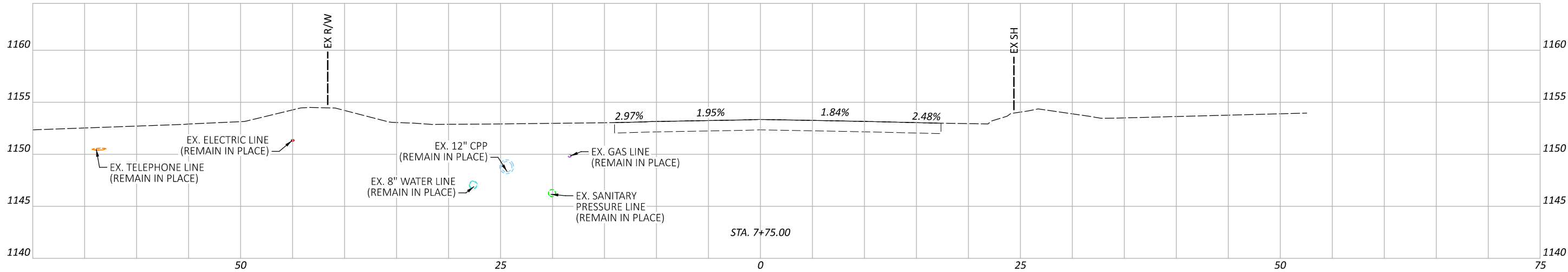
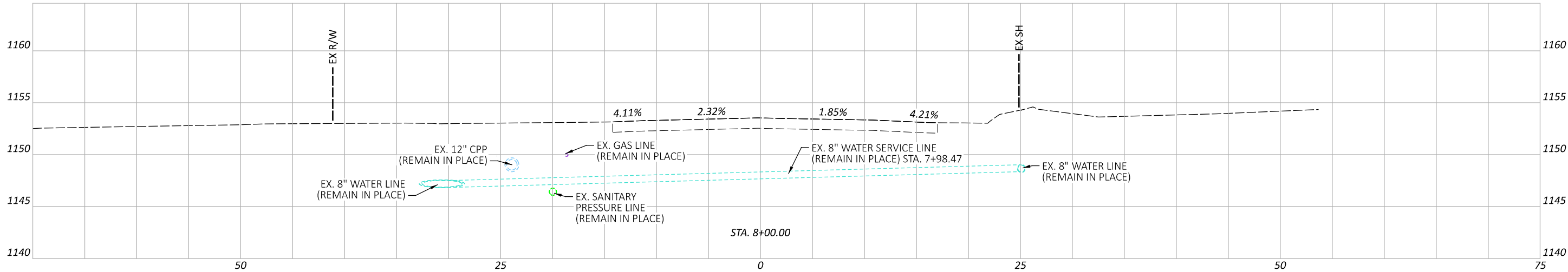
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
12	4	1	P.51	77



CROSS SECTIONS - S.R. 37
7+75 TO 8+00

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

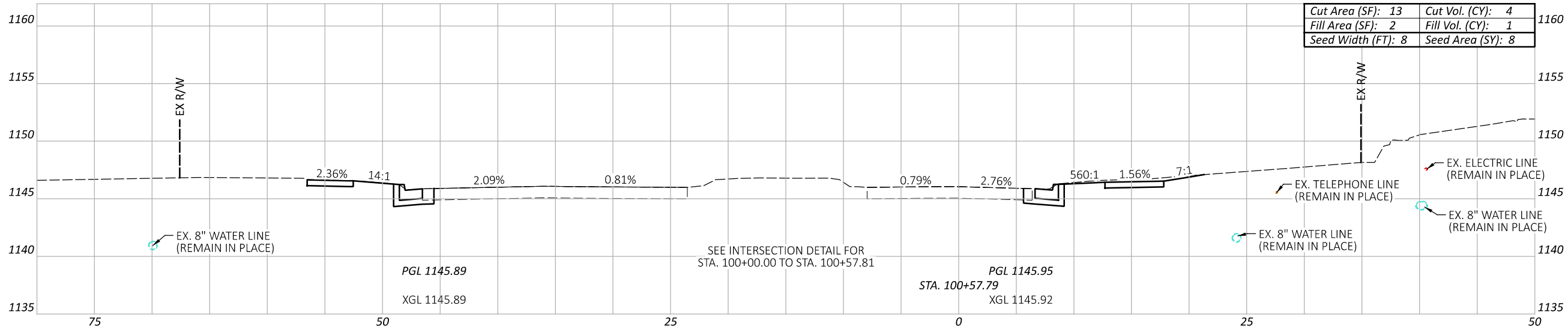
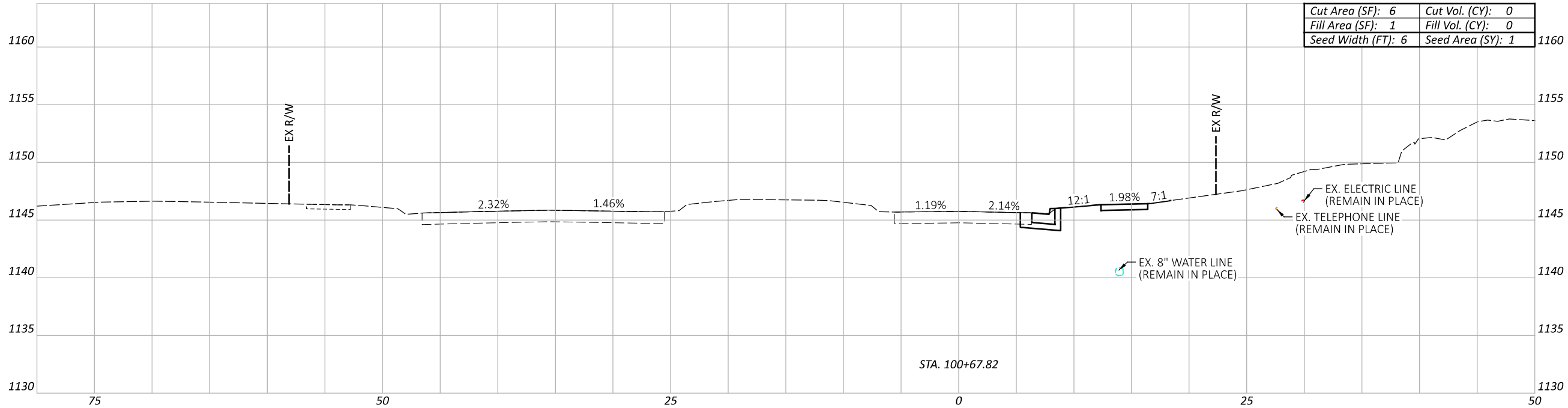
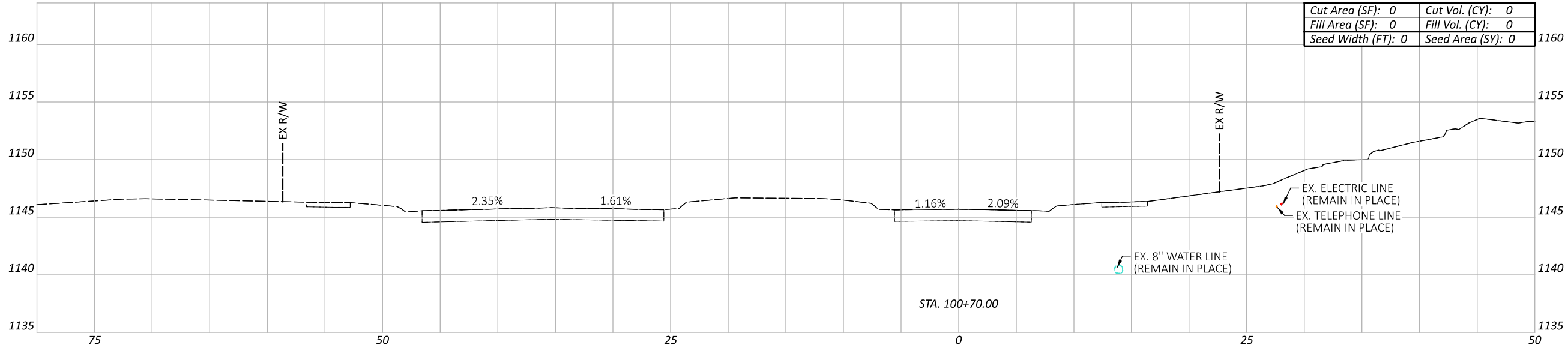
101718

SHEET

P.52

TOTAL

77



CROSS SECTIONS - LEAFY DELL RD.
STA. 100+57.79 TO 100+70.00

DESIGN AGENCY



DESIGNER

CWN

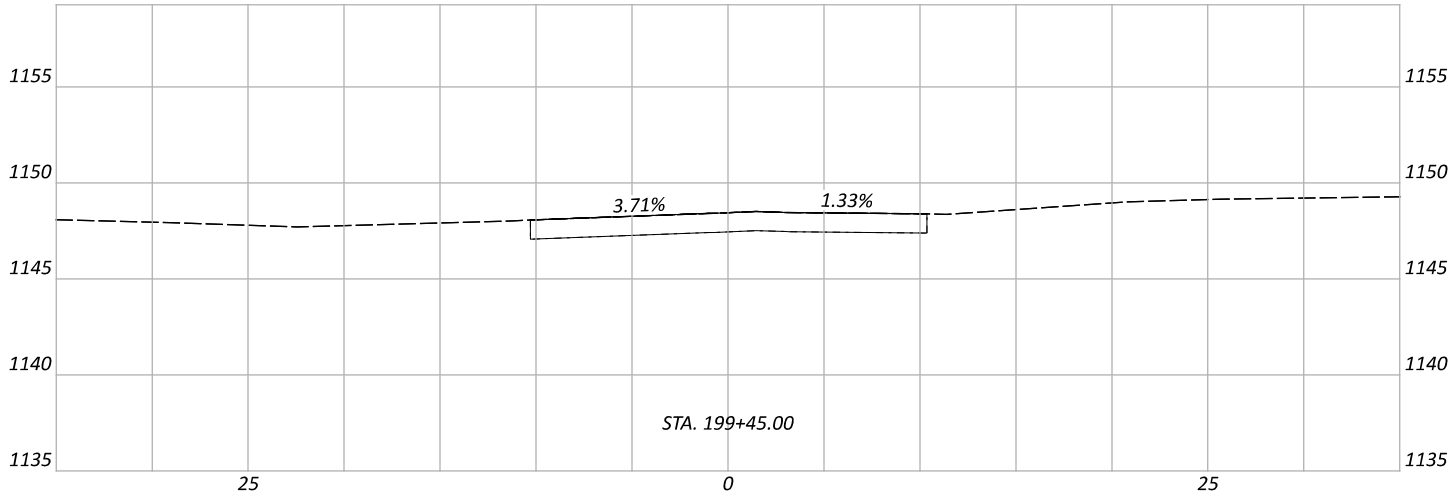
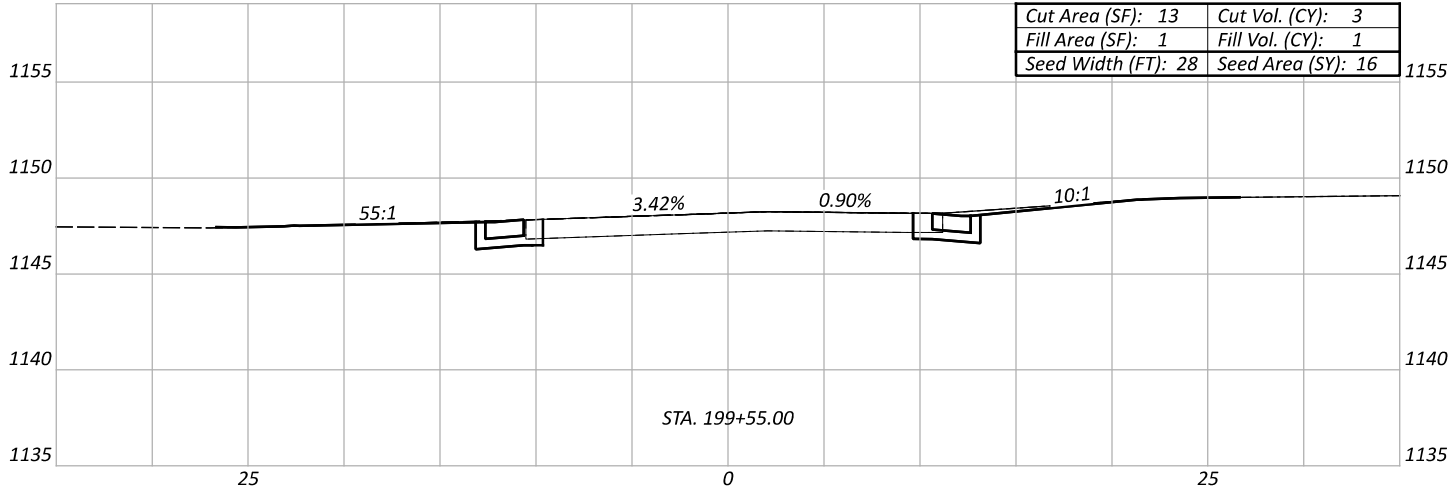
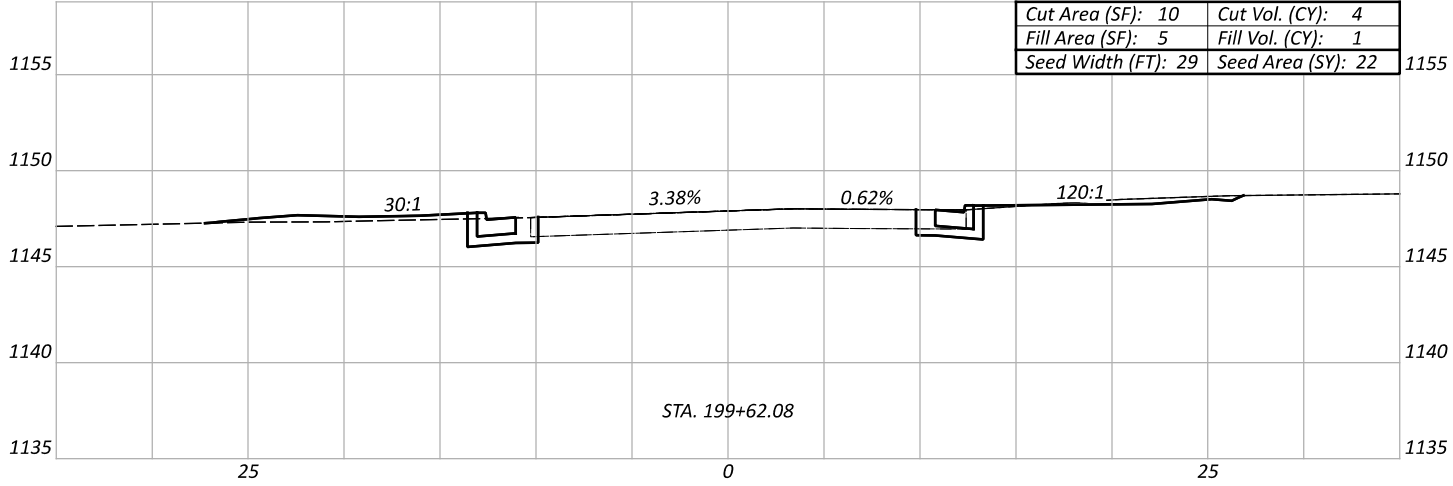
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
9	4	1	P.53	77



CROSS SECTIONS - PERSHING DR.
STA. 199+45.00 TO 199+62.08

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

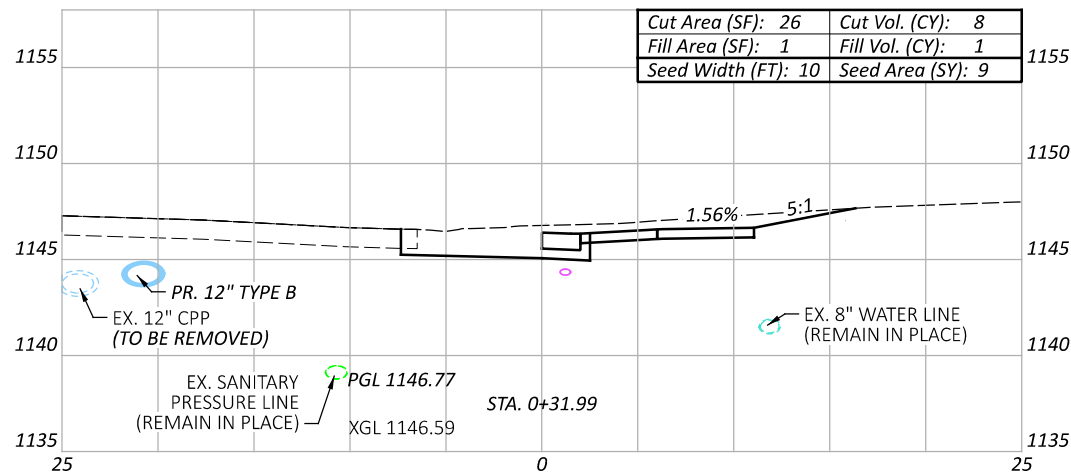
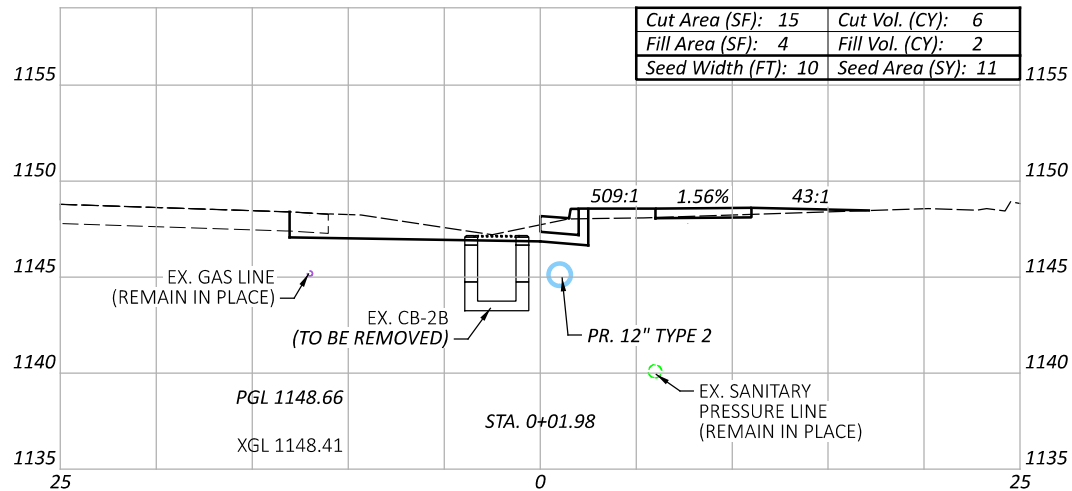
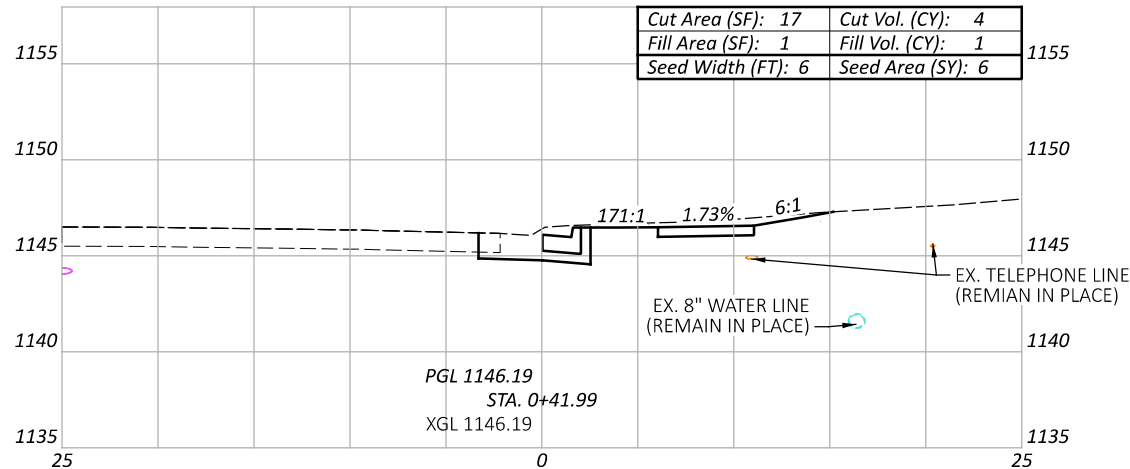
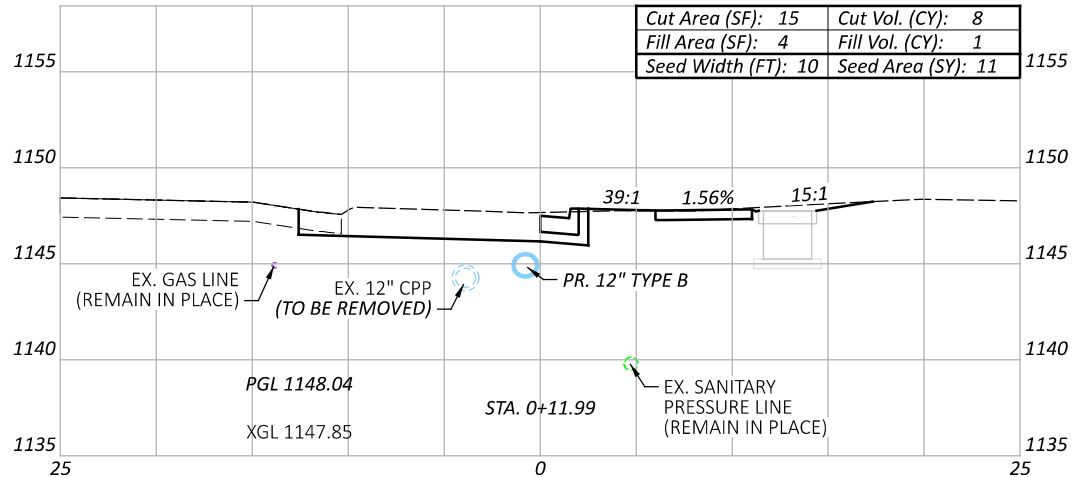
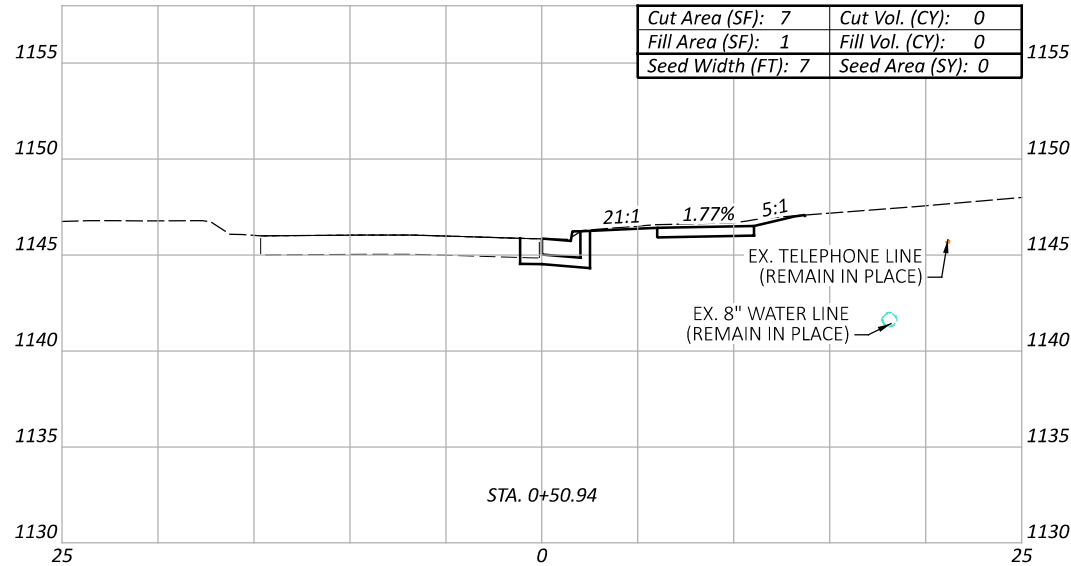
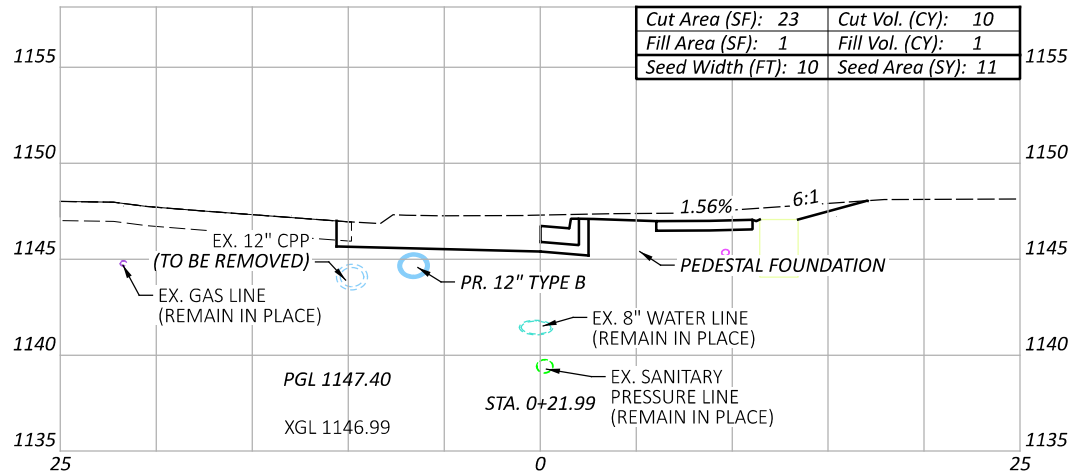
101718

Sheet Totals

Seeding	Cut	Fill
38	7	2

SHEET TOTAL

P.54 77



CROSS SECTIONS - LEAFY DELL RD. RADIUS (RIGHT)
STA. 0+01.98 TO 0+50.94

DESIGN AGENCY



DESIGNER

CWN

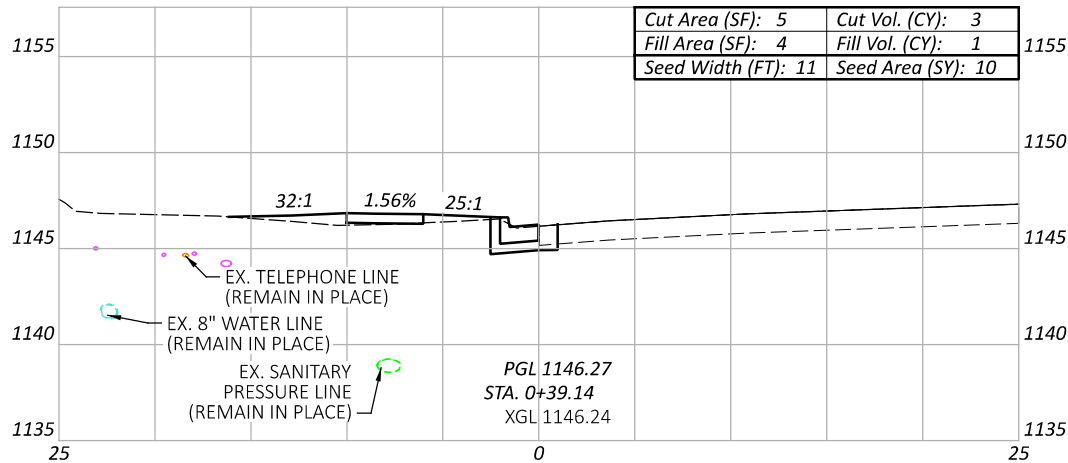
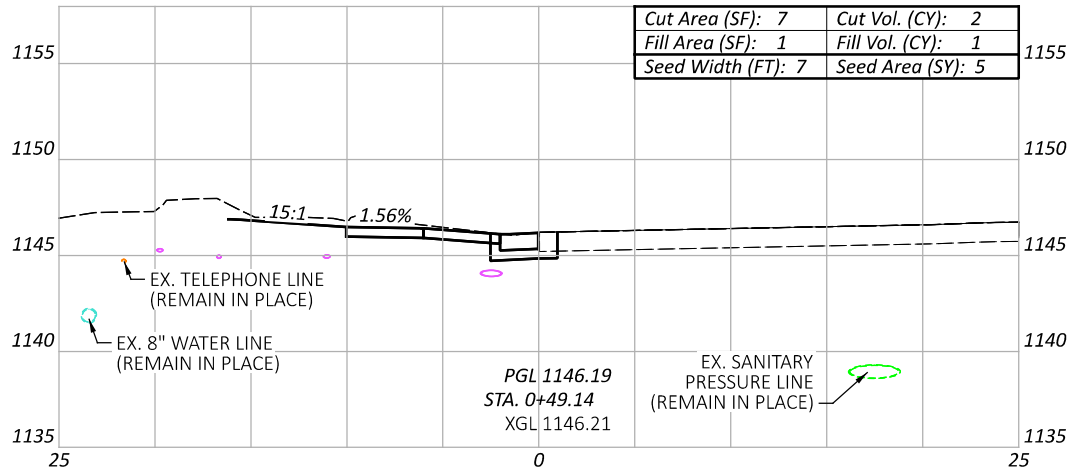
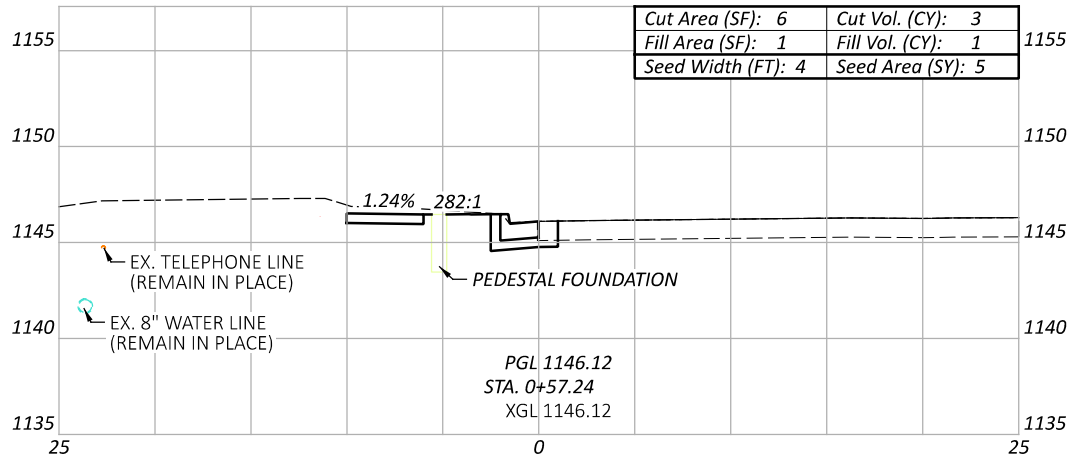
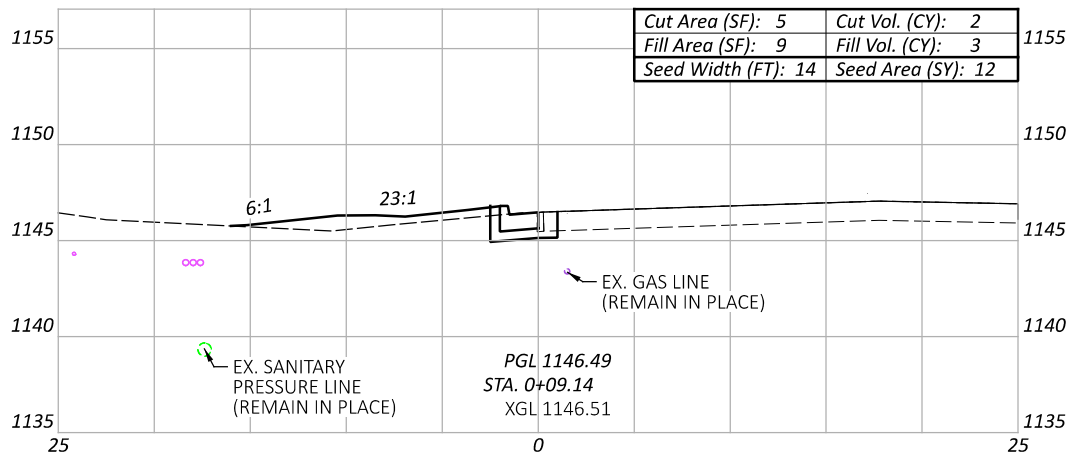
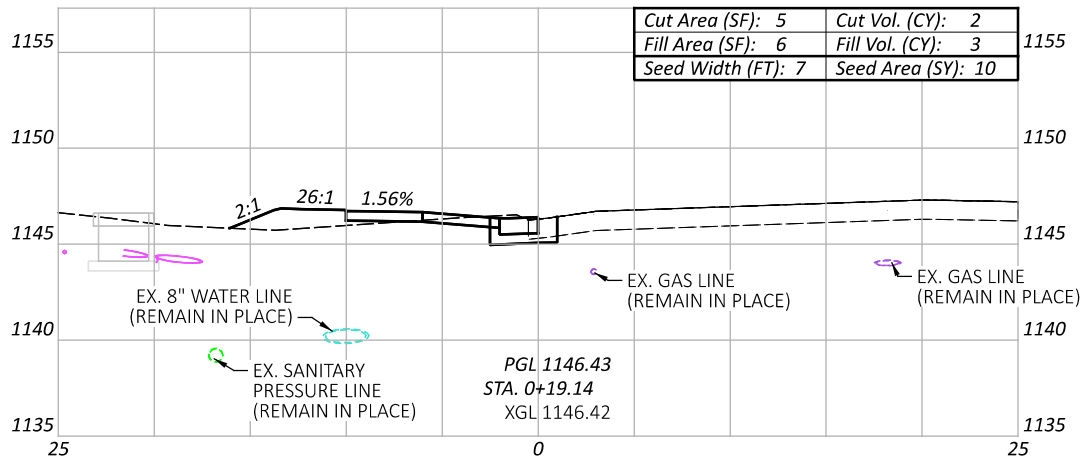
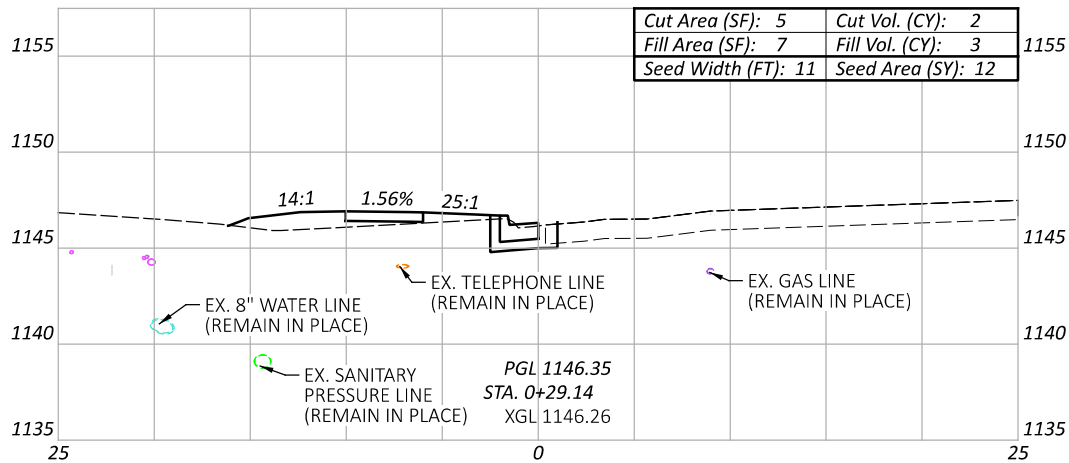
REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
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CROSS SECTIONS - LEAFY DELL RD. RADIUS (LEFT)
STA. 0+09.14 TO 0+57.24

DESIGN AGENCY

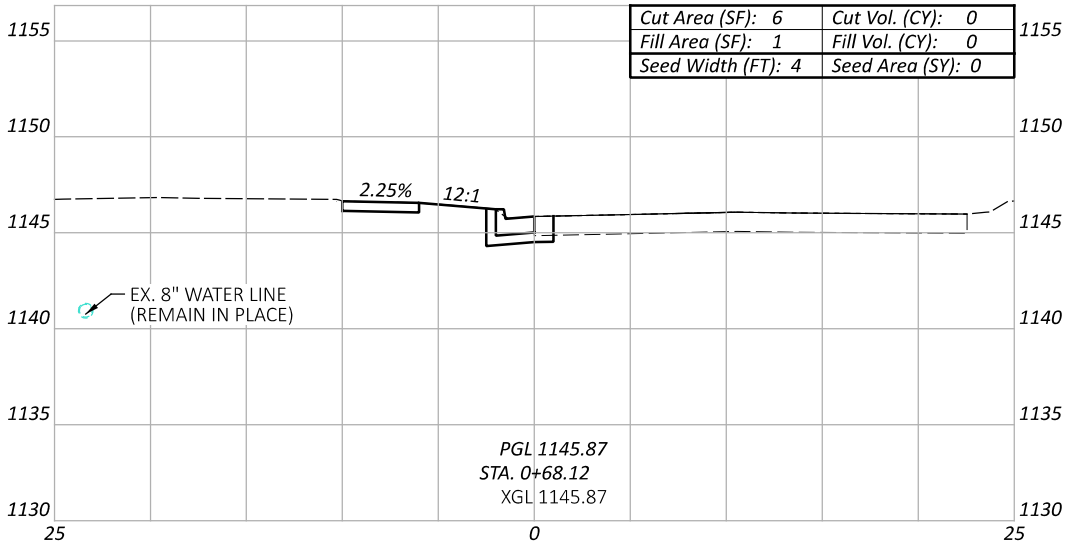


DESIGNER
CWN

REVIEWER
JSL 08/15/25

PROJECT ID
101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
54	14	12	P.56	77



Sheet Totals			PROJECT ID	
Seeding	Cut	Fill	SHEET	TOTAL
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CROSS SECTIONS - LEAFY DELL RD. RADIUS (LEFT)
STA. 0+68.12

DESIGN AGENCY

DESIGNER

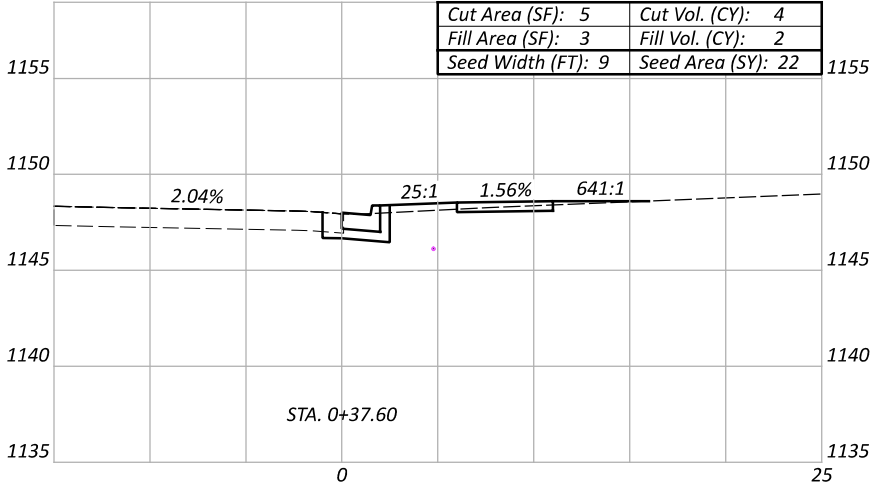
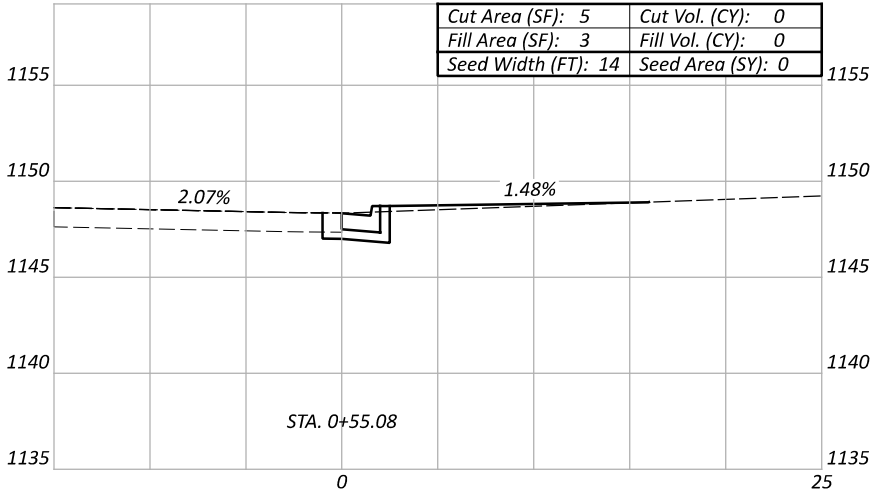
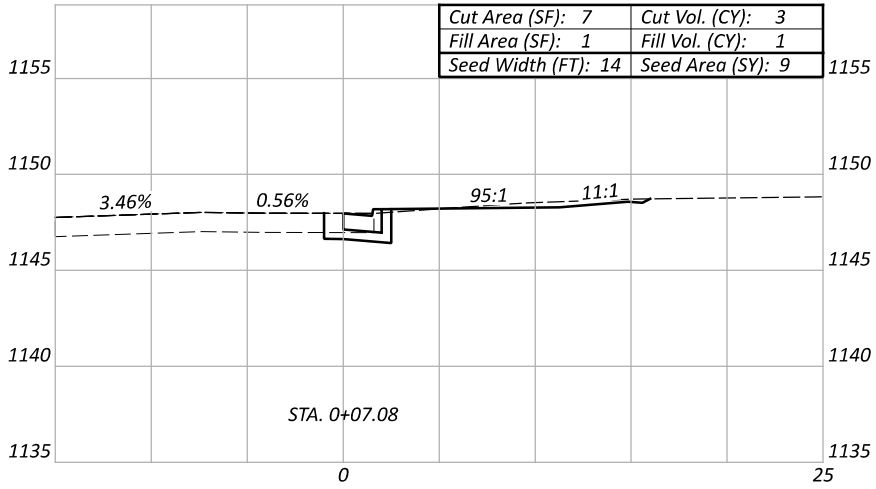
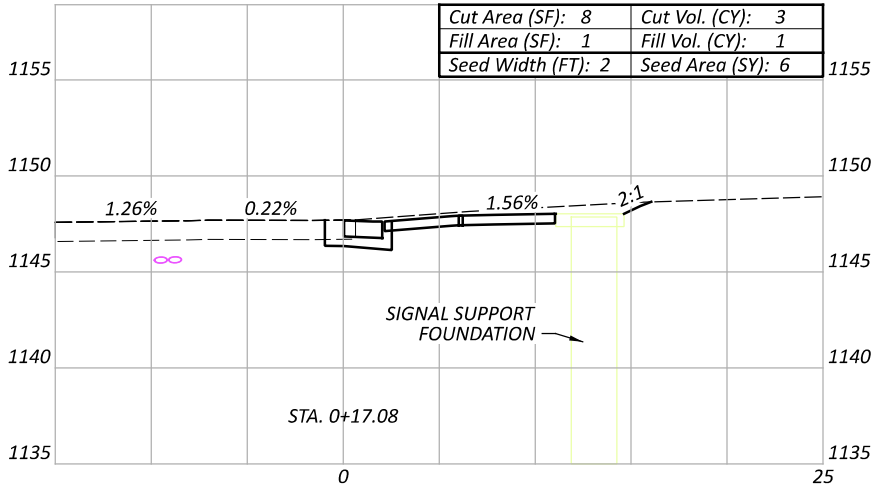
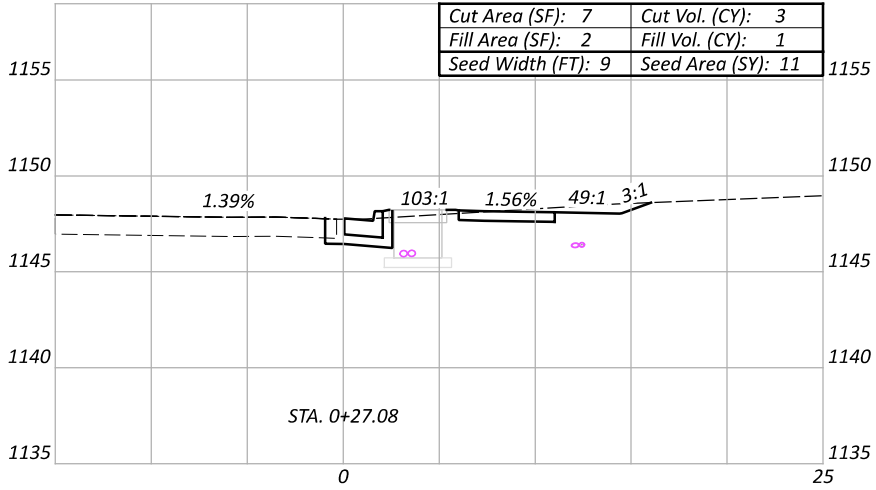
CWN

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JSL 08/15/25

PROJECT ID

101718



CROSS SECTIONS - PERSHING DR. RADIUS (RIGHT)
STA. 0+07.08 TO 0+55.08

DESIGN AGENCY



DESIGNER

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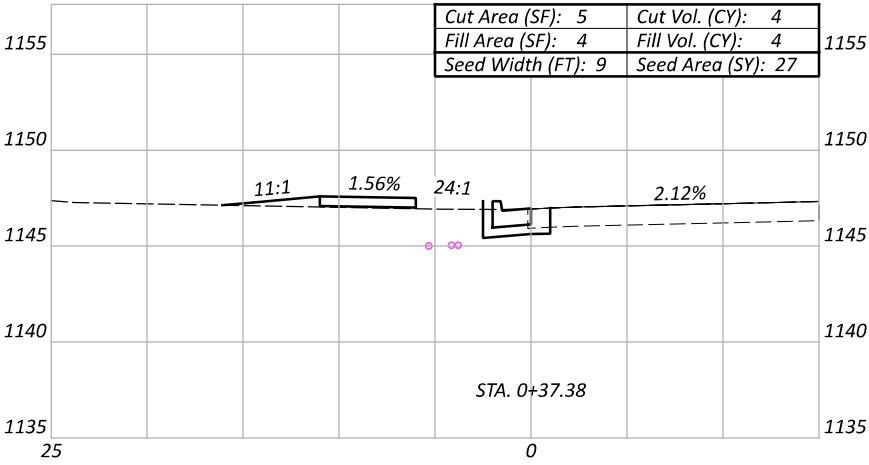
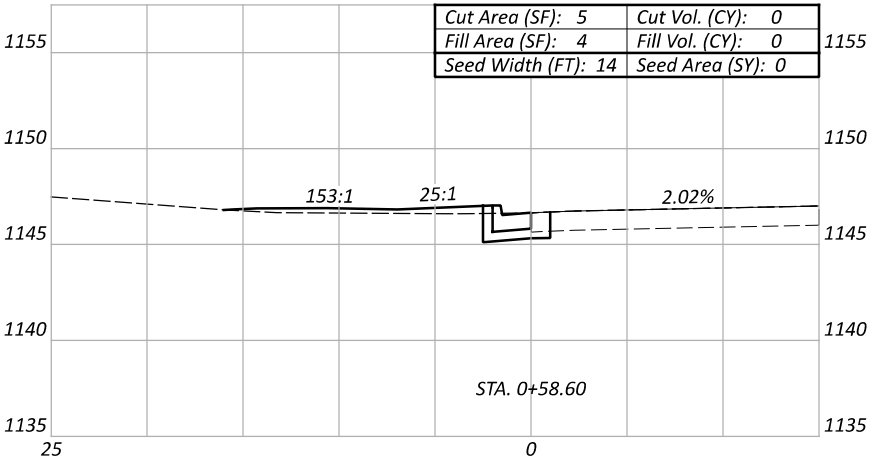
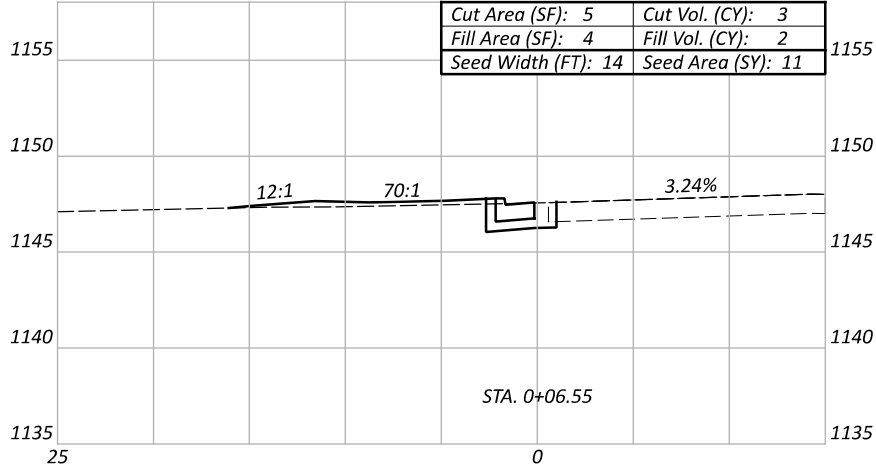
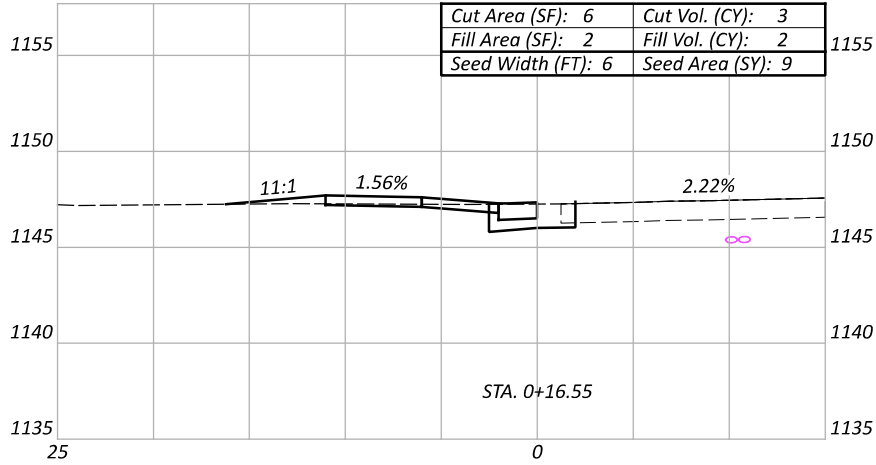
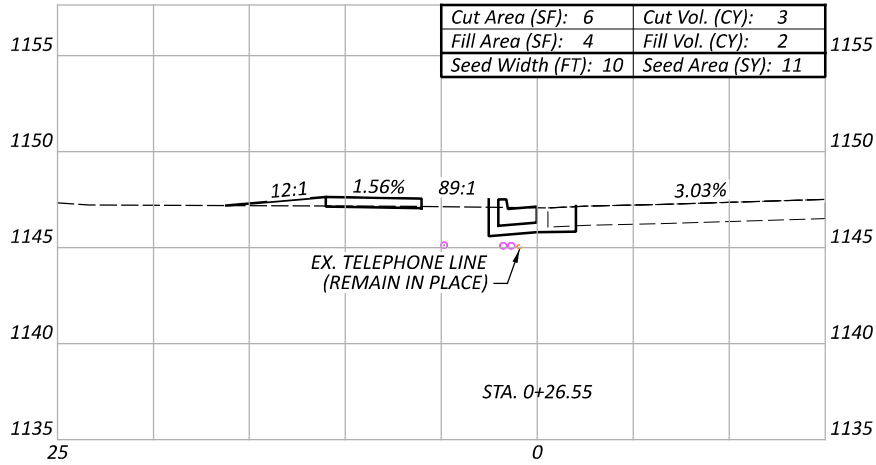
REVIEWER

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PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
48	13	5	P.58	77



EARTHWORK DATA					
SHEET NO.	STATION		203		659
			EXCAVATION	EMBANKMENT	SEEDING AND MULCHING, CLASS 1
	FROM	TO	CU. YD.	CU. YD.	SQ. YD.
	S.R. 37				
43	3+00.00	3+25.00	9	10	71
44	3+50.00	4+00.00	3	2	64
45	4+25.00	4+50.00	28	6	59
46	4+75.00	5+25.00	56	4	73
47	5+40.00	5+75.00	32	9	56
48	5+95.00	6+10.85	13	11	42
49	6+20.00	6+50.00	25	23	88
50	6+75.00	7+00.00	20	4	25
51	7+25.00	7+50.00	4	1	12
52	7+75.00	8+00.00			
	LEAFY DELL RD.				
53	100+57.79	100+70.00	4	1	9
	PERSHING DR.				
54	199+45.00	199+62.08	7	2	38
	LEAFY DELL RD. RADIUS (RIGHT)				
55	0+01.98	0+50.94	36	6	48
	LEAFY DELL RD. RADIUS (LEFT)				
56	0+09.14	0+57.24	14	12	54
57	0+68.12	0+68.12			
	PERSHING DR. RADIUS (RIGHT)				
58	0+07.08	0+55.08	13	5	48
	PERSHING DR. RADIUS (LEFT)				
59	0+06.55	0+58.60	13	10	58
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)			277	106	745

CROSS SECTIONS - PERSHING DR. RADIUS (LEFT)
STA. 0+06.55 TO 0+58.60

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
58	13	10	P.59	77

WIDENING DATA										
SHEET NO.	LOCATION (STATION TO STATION)	SIDE	LENGTH	PAVEMENT WIDTH	PAVEMENT AREA *CADD AREA	204	301	304	407	452
						SUBGRADE COMPACTION	D= 10"	D= 6"	NON-TRACKING TACK COAT @ 0.05 GAL/S.Y.	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
			FT.	FT.	SQ. YD.		ASPHALT CONCRETE BASE, PG64-22, (449) CU. YD.	AGGREGATE BASE CU. YD.		
	S.R. 37									
40	3+15.00 TO 3+56.14	LT	69.7	1.0	7.7	7.7		1.3		7.7
40	3+15.00 TO 3+67.41	RT	71.3	VAR	10.3*	10.3		1.7		10.3
41	3+86.69 TO 4+39.51	RT	71.0	1.0	7.9	7.9		1.3		7.9
41	4+07.05 TO 7+35.00	LT	327.5	VAR	355.7*	355.7	98.8	59.3	17.8	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)						381.6	98.8	63.6	17.8	25.9

ROADWAY DATA													
SHEET NO.	REF NO.	STATION		SIDE	202				252	608		609	SPECIAL
					PAVEMENT REMOVED	WALK REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	FULL DEPTH PAVEMENT SAWING	4" CONCRETE WALK	CURB RAMP	COMBINATION CURB AND GUTTER, TYPE 2	MAILBOX SUPPORT SYSTEM, REMOVE AND RESET
		FROM	TO		SQ. YD.	SQ. FT.	FT.	FT.	FT.	SQ. FT.	SQ. FT.	FT.	EACH
		S.R. 37											
40	R-1	3+15.00	3+67.41	RT	7.9								
40	R-2	3+15.00	3+56.14	LT	7.4	89.2	9.6	47.7					
41	R-3	3+86.89	4+39.50	RT	9.8								
41	R-4	4+07.05	6+73.52	LT		1,142.4							
41	R-5	4+07.05	4+40.02	LT			13.0	54.5					
41	R-6	4+07.05	6+95.69	LT	105.2								
41	R-7	6+75.00		LT									2
41	R-8	6+95.69	7+35.00	LT	108.9								
40	SW-1	3+15.00	3+67.41	RT					74				
40	SW-2	3+15.00	3+56.14	LT					72				
41	SW-3	3+86.89	4+39.50	RT					73				
41	SW-4	4+07.05	7+35.00	LT					371				
40	W-1	3+39.71	3+49.03	RT						44.2			
40	W-2	3+36.11	3+45.25	LT						67.4			
41	W-3	4+05.12	4+09.39	RT						18.8			
41	W-4	4+14.07	6+73.52	LT						1,391.8			
40	CR-1	3+27.21	3+39.71	RT							81.0*		
40	CR-2	3+27.25	3+38.30	LT							67.0*		
40	CR-3	3+41.89	3+53.06	LT							90.0*		
40	CR-4	3+48.02	3+63.62	RT							86.0*		
41	CR-5	3+90.44	4+06.11	RT							76.0*		
41	CR-6	4+09.39	4+20.73	RT							86.0*		
41	CR-7	4+13.37	4+26.39	LT							80.0*		
40	CG-1	3+15.00	3+61.41	RT								69	
40	CG-2	3+15.00	3+55.14	LT								69	
41	CG-3	3+87.69	4+39.50	RT								70	
41	CG-4	4+08.05	7+35.00	LT								352	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)					239.2	1,231.6	22.6	102.2	590	1,522.2	566.0	560	2

*SEE SHEET 62 FOR CURB RAMP ELEVATIONS



DRAINAGE DATA												
SHEET NO.	REF NO.	STATION		SIDE	202		611				638	
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	12" CONDUIT, TYPE B	CATCH BASIN, NO. 3A	CATCH BASIN, NO 2-2B	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET
		FROM	TO		FT.	EACH	FT.	EACH	EACH	EACH	EACH	EACH
		S.R. 37										
40	A-1	3+20.29		LT						1		
40-41	R-9	3+20.29	4+41.53	LT	119							
41	R-10	4+41.53		LT		1						
41	R-11	4+41.53	6+33.39	LT	190							
41	R-12	6+33.39		LT		1						
41	R-13	6+33.39	7+35.00	LT	102							
40-41	P-1	3+20.29	4+50.00	LT			126					
41	P-2	4+50.00	6+20.00	LT			166					
41	P-3	6+20.00	7+35.00	LT			112					
41	D-1	4+50.00		LT				1				
41	D-2	6+20.00		LT				1				
41	D-3	7+35.00		LT					1			
41	FH-1	6+10.84		LT							1	
41	V-1	4+13.83		RT								1
41	V-2	4+15.71		RT								1
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)					411	2	404	2	1	1	1	2

CONDUIT DETAILS										
REF NO.	CFN	LENGTH (FT)	SIZE	TYPE	SLOPE	START STRUCT. REF. NO.	START INVERT ELEV.	STOP STRUCT. REF. NO.	STOP INVERT ELEV.	EXISTING DISPOSITION
P-1	N/A	126.00	12"	TYPE B	2.05%	A-1	1142.14	D-1	1144.79	
P-2	N/A	166.00	12"	TYPE B	1.69%	D-1	1144.79	D-2	1147.68	
P-3	N/A	112.00	12"	TYPE B	0.25%	D-2	1147.68	D-3	1147.96	

CATCH BASIN DETAILS									
REF NO.	REFERENCE ALIGNMENT	STATION	OFFSET	SIDE	TYPE	GRATE/ RIM ELEV.	INVERT ELEV.	CONNECTED PIPES	EXISTING DISPOSITION
D-1	S.R. 37	4+50.00	29.50'	LT	CB-3A	1148.21	1144.79	(IN) P-2 SE 12" 1144.79, (OUT) P-1 NW 12" 1144.79	
D-2	S.R. 37	6+20.00	17.83'	LT	CB-3A	1151.09	1147.68	(IN) P-3 SE 12" 1147.68, (OUT) P-2 NW 12" 1147.68	
D-3	S.R. 37	7+35.00	25.21'	LT	CB-2-2B	1153.20	1147.96	(IN) EXISTING SE 12" 1147.96, (OUT) P-3 NW 12" 1147.96	

SIGN DATA														
SHEET NO.	REF NO.	LOCATION	DESCRIPTION	SIDE	CODE	WIDTH	HEIGHT	630						
								GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN	SIGN ATTACHMENT ASSEMBLY, MAST ARM	SIGN FLAT SHEET	SIGN, STREET NAME	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
						IN.	IN.	FT.	EACH	SQ. FT.	EACH	EACH	EACH	EACH
		S.R. 37												
16	S-1	3+20.00	JOHNSTOWN ELEMENTARY	RT				11.0					1	1
16	S-2	4+00.00	MAIN ST./ PERSHING DR.	RT								2		1
16	S-3	4+28.00	JOHNSTOWN ELEMENTARY	LT				11.0					1	1
16	S-4	5+85.00	LANE USE CONTROL	LT	R3-H8B	48	30	11.0		10		1		1
		LEAFY DELL RD.												
16	S-5	100+57.00	STOP	LT								1		1
		PERSHING DR.												
16	S-6	199+68.00	STOP	RT								1		1
		MAST ARM												
73	S-7	MA-A	PERSHING DR.		D3-1A	60	18		1		1			
73	S-8	MA-A	LEAFY DELL RD.		D3-1A	72	18		1		1			
73	S-9	MA-B	MAIN ST.		D3-1	36	18		1		1			
73	S-10	MA-C	LEAFY DELL RD.		D3-1A	72	18		1		1			
73	S-11	MA-C	PERSHING DR.		D3-1A	60	18		1		1			
73	S-12	MA-D	MAIN ST.		D3-1	36	18		1		1			
73	S-13	MA-A	LEFT TURN ONLY		R3-5L	30	36		1	7.5				
73	S-14	MA-C	LEFT TURN ONLY		R3-5L	30	36		1	7.5				
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)								33.0	8	25.0	6	5	2	6

SIGN DATA

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

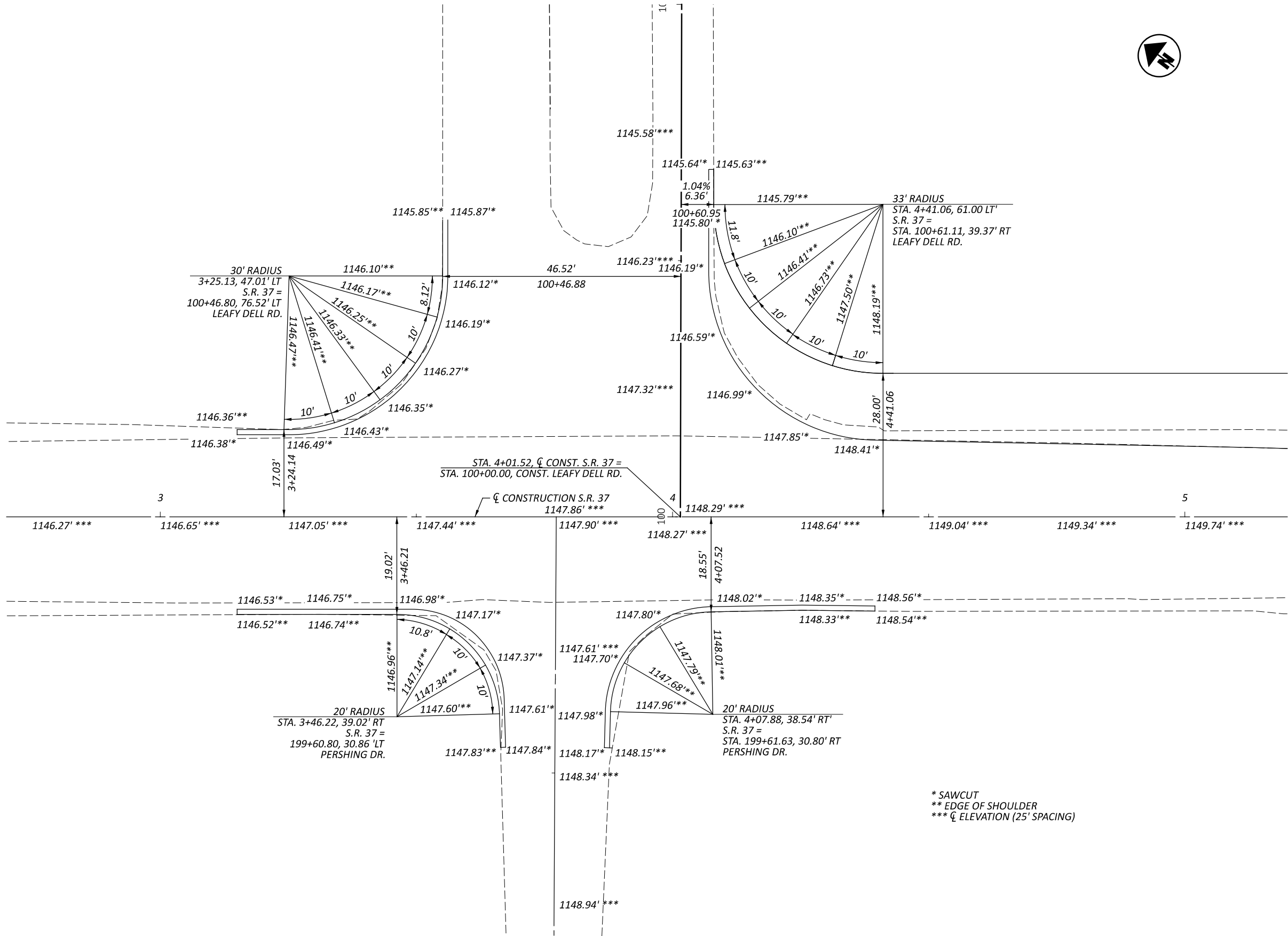
101718

SHEET

P.63

TOTAL

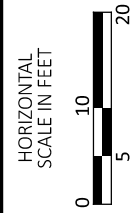
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* SAWCUT
** EDGE OF SHOULDER
*** $\bar{C}$ ELEVATION (25' SPACING)



INTERSECTION DETAILS
S.R. 37 / LEAFY DELL RD.



DESIGN AGENCY

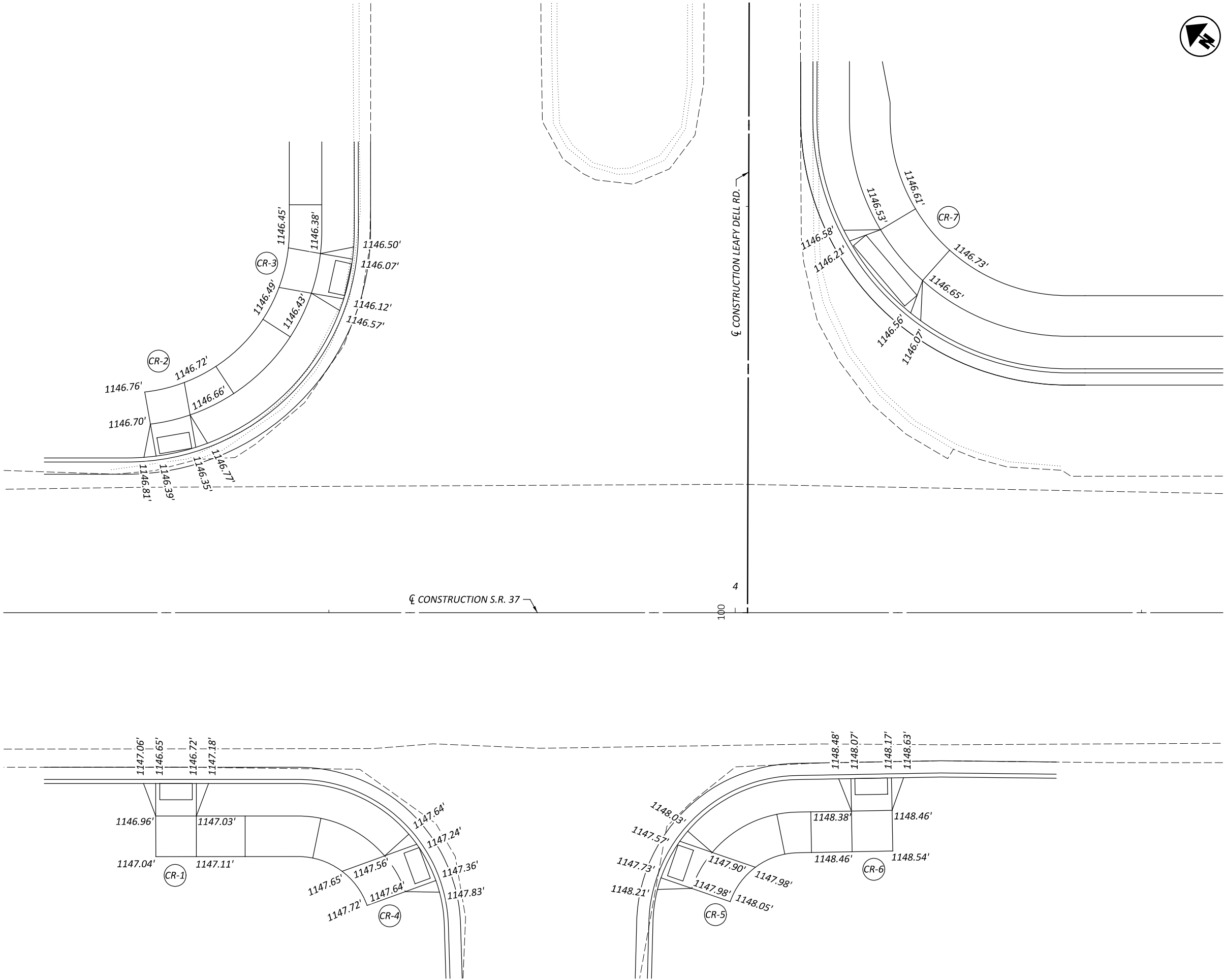


DESIGNER
CWN

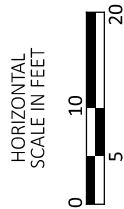
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PROJECT ID
101718

SHEET TOTAL
P.64 77



CURB RAMP DETAILS
S.R. 37 / LEAFY DELL RD.



DESIGN AGENCY



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101718

SHEET

P.65

TOTAL

77

STANDARD CONSTRUCTION DRAWINGS & SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS:

- HL-30.11, HL-30.22, HL-40.20, HL-60.11
- TC-16.22, TC-21.21, TC-22.20, TC-81.22, TC-83.20, TC-85.10, TC-85.20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- SS 813, SS 825, SS 913, SS 916

GENERAL

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC CONTROL EQUIPMENT AND MATERIALS IN CONFORMANCE TO THESE PLANS AND SPECIFICATIONS, THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS), SUPPLEMENTAL SPECIFICATIONS (SS), STANDARD CONSTRUCTION DRAWINGS (SCD), AND PLAN INSERT SHEETS (PIS).

BEFORE ANY EQUIPMENT IS ORDERED OR INSTALLATION HAS BEGUN, THREE SETS OF A COMPLETE SCHEDULE OF EQUIPMENT INCLUDING CATALOG CUTS, DIAGRAMS, DRAWINGS, BROCHURES, OR OTHER DESCRIPTIVE DATA SHALL BE SUBMITTED TO THE ENGINEER. ONE COPY WILL BE RETURNED MARKED "APPROVED" IF FOUND SATISFACTORY. WORK MAY BEGIN WHEN THE APPROVED COPY IS RECIEVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF WORK FOR THE PROJECT TO THE PROJECT ENGINEER FOR APPROVAL. THE SCHEDULE SHALL BE SUBMITTED NOT LESS THAN TWO WEEKS IN ADVANCE OF STARTING WORK.

ANY EQUIPMENT OR MATERIAL NOT SPECIFICALLY CALLED FOR IN THESE SPECIFICATIONS BUT NECESSARY TO PROVIDE A COMPLETE AND SUCCESSFULLY OPERATING SYSTEM SHALL BE FURNISHED AS INCIDENTAL TO THE CONTRACT. PAYMENT FOR SUCH ITEMS WILL BE MADE UNDER THE APPROPRIATE RELATED ITEM AT THE CONTRACT BID PRICE, COMPLETE AND IN PLACE.

ALL NECESSARY PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY SIGNAL MAY BE PLACED IN OPERATION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

GUARANTEE

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

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

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

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

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

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER, THE CITY OF JOHNSTOWN, AND 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.

PAINT CHIP SUBMITTAL

PRIOR TO ANY PAINTING, THE CONTRACTOR SHALL SUBMITT PAINT SAMPLES TO BOTH THE ENGINEER AND JOHNSTOWN OFFICIALS. PAINT SAMPLES SHALL BE REPRESENTATIVE OF THE COLOR, TYPE, AND MANUFACTURER THAT WILL BE USED FOR FINISHING THE VARIOUS ITEMS. THE ENGINEER AND JOHNSTOWN OFFICIALS SHALL REVIEW THE PAINT SAMPLES PRIOR TO THE COMMENCEMENT OF THE FINISHING PROCESS.

PAINT SAMPLES SHALL BE SUBMITTED FOR ALL PROPOSED TRAFFIC SIGNAL ITEMS CALLED FOR IN THIS PLAN SET INCLUDING THE FOLLOWING; SIGNAL SUPPORTS, SIGNAL HEADS, PEDESTRIAN HEADS, PUSHBUTTONS, SIGNS, BRACKET ARMS, LUMINAIRES, AND CONTROLLER CABINETS. ANY COST ASSOCIATED WITH PROVIDING PAINT SAMPLES SHALL BE INCIDENTAL TO THE INDIVIDUAL ITEMS TO BE PAINTED.

TRANSITION TO SIGNAL CONTROL

RESPONSILTY FOR DETERMINING WHETHER SIGNAL CONTROL IS APPROPRIATE AND JUSTIFIED BY CURRENT CONDITIONS, AND FOR SETTING THE DATE WHEN ANY NEWLY SIGNALIZED INTERSECTION IS PLACED INTO CYCLING OPERATION, RESTS WITH THE MAINTAINING AGENCY, NOT THE ENGINEER. WHEN THE MAINTAINING AGENCY AUTHORIZES CYCLING OPERATION OF A TRAFFIC SIGNAL AT AN INTERSECTION NOT CURRENTLY UNDER SIGNAL CONTROL, NEW SIGNALS SHALL FLASH FOR **7 DAYS** PRIOR TO THE **10 DAY** PERFORMANCE TEST AND BEFORE BEING PLACED ON REGULAR CYCLING OPERATION. **SCD MT-120.00** SHALL BE IMPLEMENTED FOR TRANSITION TO SIGNAL CONTROL. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO **ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN**.

VARMINT GUARDS

VARMINT GUARDS SHALL BE INSTALLED ON ALL SIGNAL SUPPORTS AS SHOWN ON **SCD HL-10.31** EXCEPT AS MODIFIED HEREIN. VARMINT GUARDS SHALL CONSIST OF **THIN SHEET (1/16" MINIMUM)** OF STAINLESS STEEL SHEETING. ATTACH SHEETING WITH **3/4"** STAINLESS STEEL BANDS WITH A MINIMUM **2"** OVERLAP. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE SIGNAL SUPPORT AND INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION

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

1. EXISTING SIGNAL INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME 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 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.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION (CONTINUED)

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 **4 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 **C&MS 105.15** AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF PATASKALA 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 **CM&S 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 **8 HOURS** AND SHALL NOT INCLUDE THE HOURS OF **7AM TO 7PM**. 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.

MAINTENANCE OF TRAFFIC SIGNAL INSTALLATION (CONTINUED)

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN **C&MS 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 625, ARC FLASH CALCULATIONS AND LABEL

ARC FLASH CALCULATIONS AND LABEL SHALL BE INSTALLED AS PER **SS 825** AT EACH PROPOSED CONTROL CENTER SHOWN IN THE PLANS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE INTERSECTION SUB-SUMMARY.

ITEM 625, ARC FLASH CALCULATIONS AND LABEL (1 EACH)

ITEM 625, LUMINAIRE, TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, LED, 120V, TYPE II) (GENERIC) (ALTERNATE 1)

THIS ITEM CONSISTS OF SUPPLYING AND INSTALLING A DECORATIVE TEARDROP-STYLE LED LUMINAIRE FOR ROAD ILLUMINATION. HL-10.11 SHOWS A TEARDROP-STYLE LED LUMINAIRE SCHEMATICALLY. THIS ITEM CONSISTS OF A BASE FITTER, GLASS (NOT ACRYLIC) SAG TYPE GLOBE AND A BASIC HOISING WITH NO DECORATIVE FEATURES SUCH AS FINIAL, CROWN, BAND OR RIBS.

PROVIDE A LUMINAIRE WITH A B-U-G UP-LIGHTING RATING OF U4 OR LESS.PROVIDE A LUMINIARE COMPATIBLE WITH THE LIGHTING BRANCH CIRCUIT SHOWN IN THE PLANS. ASSURE THE LUMINAIRE CAN MOUNT A PHOTOCELL OR WIRELESS CONTROL THAT USES A NEMA STANDARD PHOTOCELL RECEPTACLE.

PROVIDE A LUMINAIRE WITH 3G VIBRATION RATING. PROTECT EACH LUMINAIRE USING A SURGE PROTECTIVE DEVICE (SPD) CONFORMING TO ODOT SUPPLEMENTAL SPECIFICATION 913. ASSURE THE LUMINAIRE HAS A NOMINAL COLOR TEMPERATURE (CCT) OF 3000K. PROVIDE A LUMINAIRE WITH FACTORY-APPLIED BLACK FINISH MEETING SUPPLEMENTAL SPECIFICATION 916.

PROVIDE A LUMINAIRE LISTED ON THE ODOT SS 813 APPROVED LIST OR AN APPROVED EQUAL. [HTTPS://WWW.DOT.STATE.OH.US/DIVISIONS/CONSTRUCTIONMGT/MATERIALS/APPROVED-LIST/MATERIALS/SOLID_STATE_LUMINAIRES_SS_813.PDF](https://www.dot.state.oh.us/divisions/constructionmgt/materials/approved-list/materials/solid_state_luminaires_ss_813.pdf)

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 LUMINAIRE FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.



ITEM 625, LUMINAIRE. TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, 120V, TYPE II) (STERNBERG) (ALTERNATE 2)

IN ADDITION TO THE REQUIREMENTS LISTED IN THE GENERIC PAY ITEM, LUMINAIRES FOR TEARDROP LIGHTING UNITS SHALL BE AS FOLLOWS:

THE LAMPS SHALL BE LED WITH A TYPICAL LUMEN EQUIVALENT TO 100 WATTS. THE LUMINAIRES SHALL BE THE "LIBERTYVILLE 1914LED" STYLE AS MANUFACTURED BY STERNBERG LIGHTING, 555 LAWRENCE AVE., ROSELLE, ILLINOIS 60172 OR APPROVED EQUAL.

ITEM 625, BRACKET ARM, 8', AS PER PLAN (GENERIC) (ALTERNATE 1)

BRACKET ARMS SHALL BE HOT-DIPPED GALVANIZED AND COATED USING AN APPROVED THERMOSET POWDER MATERIAL PROCESS. ALL VISIBLE ELEMENTS OF THE LIGHTING MOUNTING HARDWARE, SHALL BE PROPERLY PREPARED PRIMED AND PAINTED ACCORDING TO THESE SPECIFICATIONS. ALL COATINGS SHALL BE PREFORMED UNDER CONTROLLER ENVIRONMENTAL CONDITIONS, AND IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION, MATERIAL HANDLING, AND APPLICATION. THE COATING SHALL BE BLACK THERMOSET POLYESTER POWDER COAT FINISH PER FEDERAL STANDARD PAINT # 17038.

PAYMENT FOR ITEM 625, BRACKET ARM, 8', AS PER PLAN WILL BE AT THE CONTRACT UNIT PRICE FOR EACH, IN PLACE, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS (INCLUDING THE ANCHOR BOLTS) NECESSARY TO PURCHASE, TRANSPORT, STORE, ERECT, ADJUST AND REPAIR THE SIGNAL SUPPORT.

ITEM 625, BRACKET ARM, 8', AS PER PLAN (STERNBERG/VALMONT) (ALTERNATE 2)

THE BRACKET ARM SHALL BE FLUTED, USING THE 16-SHARP FLUTE STYLE TO MATCH THE DESIGN OF THE COMBINATION SIGNAL SUPPORT POLES AND SHALL INCORPORATE ALL OF THE DESIGN FEATURES, ACCESSORIES OR REQUIREMENTS OF THE STANDARD BID ITEM.

THE BRACKET ARM SHALL BE THE "OXFORD CSA" STYLE AS MANUFACTURED BY STERNBURG LIGHTING, 555 LAWRENCE AVE., ROSELLE, ILLINOIS 60172. THE "DS30" STYLE AS MANUFACTURED BY VALMONT INDUSTRIES, INC. 58027 CHARLOTTE AVENUE, ELKHART, INDIANA 46516 OR AN APPROVED EQUAL.

TEST HOLE PERFORMED, AS PER PLAN

IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER UNDERGROUND UTILITIES WHILE EXCAVATING FOR SIGNAL SUPPORT FOUNDATIONS. AFTER ACCURATELY IDENTIFYING THE PROPOSED LOCATION OF THE FOUNDATION, AS SHOWN IN THE PLANS AND AFTER MODIFYING THAT LOCATION, IF NECESSARY, BASED ON THE FIELD MARKING OF UNDERGROUND UTILITY LOCATION, THE CONTRACTOR DISCOVERS A UTILITY CONFLICT DURING THE EXCAVATION OPERATION, THE CONTRACTOR WILL BE COMPENSATED FOR EACH PARTIAL FOUNDATION EXCAVATION ACCORDING TO THE BID PRICE.

BEFORE THE CONTRACTOR BEGINS THE EXCAVATION AT THE MODIFIED LOCATION, THE CONTRACTOR SHALL VERIFY THAT THERE WILL BE NO OVERHEAD UTILITY CONFLICTS RESULTING FROM THE NEW SIGNAL SUPPORT LOCATION. NEW SUPPORT LOCATIONS ARE TO BE APPROVED BY THE ENGINEER. **THIS WORK SHALL BE COMPLETED PRIOR TO APPROVAL OF FINAL CUT SHEETS FOR SIGNAL SUPPORTS.**

THE WORK WILL INCLUDE BACKFILLING, COMPACTING, AND RESTORATION OF THE EXCAVATION TO THE SITE S ORIGINAL CONDITION. EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH ITEM 632 TEST HOLE PERFORMED TO BE USED AT THE DIRECTION OF THE ENGINEER.

ITEM 632, TEST HOLE PERFORMED, AS PER PLAN (2 EACH)

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. CITY OF PATASKALA FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

ITEM 632, PEDESTRIAN PUSHBUTTON, AS PER PLAN (POLARA)

THE PEDESTRIAN PUSHBUTTONS SHALL ADHERE TO THE REQUIREMENTS OF CMS 632.09 AND 732.06 AND BE POLARA BULLDOG MODELL III, OR APPROVED EQUAL. THE PUSHBUTTONS SHALL FACE THE SIDEWALK AND BE MOUNTED ON THE PEDESTAL NO HIGHER THAN 4' ABOVE SIDEWALK SURFACE. SEE SIGNAL PLANS FOR DETAILS.

PUSHBUTTONS SHALL INCLUDE THE COST TO PROVIDE PEDESTRIAN CROSSING SIGNS PER CMS 632.29. PEDESTRIAN CROSSING SIGNS SHALL BE OMUTCD R10-3E SIGNS AND HAVE NOMINAL DIMENSIONS OF 9"x15". PEDESTRIAN CROSSING SIGNS SHALL BE CAST ALUMINUM AND SHALL BE INTERGRAL TO THE PUSHBUTTON. SIGNS SHALL BE BOLTED 6" ABOVE PUSHBUTTON (WITH STAINLESS STEEL HARDWARE) ON THE POLES, BANDING WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL FIELD DRILL AND TAP INTO PEDESTALS IN TWO PLACES TO ACCOMMODATE THE INSTALLATION OF THE SIGNS.

ALL COSTS INCLUDING TOOLS, MATERIALS, AND LABOR TO PROVIDE AND INSTALL A PEDESTRIAN PUSHBUTTON WITH INTERGRAL SIGN IN ACCORDANCE WITH THIS NOTE AND THE PLAN DETAILS SHALL BE INCLUDED IN THE BID ITEM PRICE.

ITEM 632 COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD TO COVER ATTACHMENT HARDWARE, SIGNAL HEADS, AND BACKPLATES. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

ITEM 632, VEHICULAR SIGNAL HEAD, (LED), BY SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDTION TO THE REQUIREMENTS OF CMS 632 & 732, THE FOLLOWING SHALL APPLY:

- SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF **BLACK** POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
- PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
- ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE **FERROUS METAL**.
- THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
- ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE **YELLOW** LENS LOCATED IN FRONT OF THE MAST ARM.
- ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH **CMS 732.22** AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER, **REFLECTIVE SHEETING SHALL BE TYPE ASTM D4956 TYPE XI LISTED UNDER TYPE J ON THE DEPARTMENTS QUALIFIED PRODUCT LIST.**
- THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF **CMS 732.04-C**. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.
- SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.
- SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPEACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.
- BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS OR TETHERED HEADS.
- IT IS NOT PERMITTED TO HAVE SIGNAL CABLE WIRING WITH THE EXTERIOR SHEATHING REMOVED, EXPOSING THE MULTI-CONDUCTORS TO THE ELEMENTS OR BY BEING OUTSIDE OF THE SIGNAL HOUSING AND MOUNTING BRACKET. ALL EXPOSED SIGNAL CABLE EXTERIOR SHEATHING SHALL BE **100%** INTACT IF OUTSIDE THE SIGNAL HEAD HOUSING OR EXPOSED TO THE ELEMENTS IN ANY WAY.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR EACH COMPLETE SIGNAL HEAD, FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

ITEM 632, COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN (GENERIC) (ALTERNATE 1)

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

ALL SIGNAL AND POWER CABLES SHALL BE RUN INSIDE THE SIGNAL SUPPORTS. THE USE OF EXTERNAL CONDUIT RISERS FOR SIGNALS, LIGHTING, OR POWER CABLING, OR ANY OTHER USE, AS SHOWN IN **SCD TC-83.10** SHALL BE PROHIBITED.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ATTACHMENTS OR CONNECTIONS TO EACH SIGNAL SUPPORT POLE. ALL HOLES IN THE POLE NECESSARY TO ATTACH WIRE OR OTHERWISE USE EQUIPMENT SPECIFIED IN THESE PLANS AND QUANTITIES SHALL BE INSTALLED DURING THE MANUFACTURE OF THE POLE OR SHALL BE DRILLED, REAMED, OR HOLE SAWED BY THE CONTRACTOR. FLAME CUTTING (OXYACETYLENE OR ELECTRICAL ARC) WILL NOT BE ACCEPTED. ALL CUT EDGES OR OTHER DEFECTS IN THE ZINC COATING SHALL BE CLEANED AND COVERED WITH TWO COATS OF ZINC RICH REPAIR PAINT MATCHING THE FACTORY FINISH. ALL BANDING, WHERE USED, SHALL BE FACTORY PAINTED TO MATCH THE SIGNAL SUPPORTS.

POLES AND ARMS SHALL BE HOT-DIPPED GALVANIZED AND COATED USING AN APPROVED THERMOSET POWDER MATERIAL PROCESS. ALL VISIBLE ELEMENTS OF THE SIGNAL MOUNTING HARDWARE SHALL BE PROPERLY PREPARED, PRIMED, AND PAINTED ACCORDING TO THESE SPECIFICATIONS. ALL COATINGS SHALL BE PERFORMED UNDER CONTROLLED ENVIRONMENTAL CONDITIONS IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS PERTAINING TO SURFACE PREPERATION, MATERIAL HANDLING, AND APPLICATION. THE COATING SHALL BE BLACK THERMOSET POLYESTER POWDER COAT FINISH PER FEDERAL STANDARD PAINT #17038.

THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS TO THE ENGINEER THAT ILLUSTRATE THE HARDWARE TO BE FURNISHED AND THE CURVATURE OF THE MAST ARM TO ILLUSTRATE THE COSMETIC APPEARANCE OF THE SUPPORTS, ARMS, AND HARDWARE TO BE FURNISHED. THE SUPPORT SUPPLIER SHALL PROVIDE STRUCTURAL DESIGN DATA SIGNED AND SEALED BY AN OHIO LICENSED PROFESSIONAL ENGINEER DEMONSTRATING THAT EACH SUPPORT PROVIDED CONFORMRS TO ALL APPLICABLE OHIO DEPARTMENT OF TRANSPORTATION DESIGN CRITERIA. THE CONTRACTOR SHALL ALSO SUBMIT COLOR CHIPS TO THE ENGINEER TO CONFIRM THE COLOR OF THE FINISH FOR THE SIGNAL SUPPORTS. THE ENGINEER SHALL APPROVE THE SHOP DRAWINGS AND THE COLOR ON THE CHIPS BEFORE SUPPORTS ARE ORDERED.

PAYMENT FOR ITEM 632 COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL SIGNAL SUPPORT DESIGN, LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.



ITEM 632, COMBINATION SIGNAL SUPPORT, TYPE 12.31, DESIGN 10, AS PER PLAN (STERNBERG/VALMONT) (ALTERNATE 2)

THE SIGNAL SUPPORT POLES AND MAST ARMS SHALL BE FLUTED USING 16-SHARP FLUTE STYLE AND SHALL INCORPORATE ALL OF THE DESIGN FEATURES, ACCESSORIES, OR REQUIREMENTS OF THE STANDARD BID ITEM. THE MAST ARMS SHALL HAVE A PRONOUNCED UPSWEEP BEGINNING AT THE ATTACHMENT END AND EXTENDING A UNIFORM DISTANCE TOWARD THE UNSUPPORTED END OF THE ARM. THE REMAINING LENGTH OF THE ARM SHALL BE STRAIGHT AND SHALL HAVE A NORMAL RISE PER ODOT'S STANDARD DRAWING TC-81.21.

THE TOP OF THE SIGNAL POLE SHALL BE CAPPED WITH AN ORNAMENTAL TOP. THE ORNAMENTAL TOP SHALL BE THE "RPBP" STYLE AS MANUFACTURED BY STERNBERG LIGHTING, 555 LAWRENCE AVE., ROSEVILLE, ILLINOIS 60172. THE "ALHAMBRA" STYLE AS MANUFACTURED BY VALMONT INDUSTRIES, INC. 58027 CHARLOTTE AVENUE, ELKHART, INDIANA 46516, OR AN APPROVED EQUAL.

THE BASE OF THE SUPPORTS SHALL BE COVERED WITH A DECORATIVE SPLIT PEDESTAL BASE HAVING INTERNAL CORROSION RESISTANT HARDWARE. THE SPLIT SPEDESTAL SHALL BE THE "OXFORD 9201SS" STYLE AS MANUFACTURED BY STERNBERG LIGHTING, 555 LAWRENCE AVE., ROSEVILLE, ILLINOIS 60172. THE "HUNTINGTON" STYLE AS MANUFACTURED BY VALMONT INDUSTRIES, INC. 58027 CHARLOTTE AVENUE, ELKHART, INDIANA 46516, OR AN APPROVED EQUAL.

ITEM 632 SIGNAL SUPPORT FOUNDATION

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

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

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

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

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

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

ITEM 632 POWER SERVICE, AS PER PLAN

THE POWER SUPPLY AGENCY FOR THIS PROJECT IS:

**AMERICAN ELECTRIC POWER CO.
1-800-277-2177**

POWER CABLE SHALL BE PROVIDED AS PER **C&MS 632.23** BETWEEN THE CONTROL CABINET AND THE TAP-IN LOCATION NOTED IN THE PLAN. WHEN THE POWER CABLE IS IN PLACE AND TWO WEEKS PRIOR TO THE TIME THAT ELECTRICAL POWER WILL BE REQUIRED, THE CONTRACTOR SHALL CONTACT **AMERICAN ELECTRIC POWER CO.** TO ESTABLISH POWER. **AMERICAN ELECTRIC POWER CO.**WILL MAKE THE FINAL ELECTRICAL SERVICE CONNECTION.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CONNECT POWER CABLE INTO THE POWER COMPANY'S CIRCUIT. A COMMON PHOTO ELECTRIC RELAY AND CONTRACTOR WITH HAND/OFF/AUTO SWITCH SHALL CONTROL ALL LUMINAIRES. PHOTO ELECTRIC RELAY SHALL BE LOCATED AT THE DESIGNATED SIGNAL POLE WHERE NOTED. THE VOLTAGE SUPPLIED SHALL BE **120/240 VOLTS, 120 VOLTS** PER CIRCUIT WITH ONE CIRCUIT FOR TRAFFIC SIGNALS AND ONE CIRCUIT FOR STREET LIGHTING. POWER CABLE CONDUCTORS SHALL BE COPPER. THE NEUTRAL OF THE POWER CABLE SHALL ONLY BE GROUNDED IN THE MAIN POWER SERVICE DISCONNECT SWITCH UNLESS THERE IS A SWITCHED NEUTRAL FOR A GENERATOR AT CONTROLLER OR UPS CABINET.

PROVIDE AN AVAILABLE FAULT CURRENT SIGN ON THE OUTSIDE OF THE FRONT DOOR OF THE POWER SERVICE DISCONNECT SWITCH AT THE CONTROLLER CABINET IN ACCORDANCE WITH THE **2014 NATIONAL ELECTRICAL CODE PARAGRAPH 110.24.**

POWER SHALL BE METERED. THE CONTRACTOR SHALL SUPPLY THE REQUIRED METER BASE. THE METER SHALL HAVE A LEVERED OPERATED BYPASS. THE DISCONNECT ENCLOSURE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ITEM 632 AND SHALL INCLUDE A PADLOCK EQUAL TO MASTER 4BKA OR WILSON BOHANNON 660, WITH A LOCK BODY OF BRASS OR BRONZE, KEYED TO STATE MASTER. THE DISCONNECT ENCLOSURES SHALL BE PLACED AT THE LOCATIONS SHOWN IN THE PLAN. SEE SIGNAL AT INTERSECTION OF U.S.62 AND WENDY'S DRIVE IN JOHNSTOWN FOR AN EXAMPLE OF DISCONNECT DESIRED.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND FEES ASSOCIATED WITH ESTABLISHING THE NEW POWER SERVICE. ADDITIONALLY, THE CONTRACTOR IS RESPONSIBLE FOR POWER USAGE FEES UNTIL THE SIGNAL IS ACCEPTED BY THE ENGINEER.

PAYMENT FOR THE AFOREMENTIONED WORK SHALL BE MADE AT THE UNIT PRICE BID FOR POWER SERVICE, COMPLETE IN PLACE, INCLUDING WEATHER-HEAD, CONDUIT RISER, FITTINGS, CLAMPS, DISCONNECT SWITCH WITH ENCLOSURE, METER BASE, GROUND RODS, MOUNTING HARDWARE, PADLOCK AND KEY, POWER CABLE, PHOTOCCELL, AND ALL OTHER INCIDENTALS (UNLESS ITEMIZED SEPARATELY) MECESSARY FOR COMPLETE SERVICE AS SHOWN IN THE PLANS, ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 632, PEDESTAL, 10', TRANSFORMER BASE, AS PER PLAN

THIS ITEM INCLUDES FURNISHING AND INSTALLING AN ALUMINUM PEDESTAL AND TRANSFORMER BASE PER **CMS 732.15** AND **SCD TC-83.20**. THE ALUMINUM PEDESTAL AND TRANSFORMER BASE SHALL BE PAINTED BLACK TO MATCH SIGNAL SUPPORTS.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID AND INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO ERECT THE PEDESTAL.

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

IN ADDITION TO THE REQUIREMENTS OF **C&MS 632** AND **732** THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED.
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF **C&MS 732.04**. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN), TYPE D2, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 633, CONTROLLER WORK PAD, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ADDTIONAL EXCAVTION, EMBANKMENT, AND CONCRETE NECESSARY TO EXTEND THE CONTROLLER WORK PAD TO THE DIMENSIONS **9'L X 6'W** AND PROVIDE A LEVEL WORK PAD.

THE CONTRACTOR SHALL CONSTRUCT THE WORK PAD AS FOLLOWS:

- EXCAVATE A MINIMUM OF 9" BELOW GRADE
- PLACE AND COMPACT 6" OF MATERIAL CONFORMING TO **304.02**
- INSTALL A CAST-IN-PLACE WORK PAD THAT IS A MINIMUM OF 4" THICK

THE CONTROLLER WORK PAD SHALL BE IN ACCORDANCE WITH **CMS 633.11, SCD TC-83.20, AND PIS 208320.**

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID AND INCLUDE ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO CONSTRUCT THE CONCRETE WORK PAD.

ITEM 633, CABINET FOUNDATON, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ADDITIONAL EXCAVATION AND CONCRETE NECESSARY TO EXTEND THE CONTROLLER CABINET FOUNDATION TO S UPPORT THE UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A FOUNDATION LARGE ENOUGH TO ACCOMMODATE THE UPS BEING PROVIDED BY SEPARATE BID ITEM.

THE CONTROLLER AND UPS CABINET FOUNDATION SHALL BE IN ACCORDANCE WITH **CMS 633.10, SCD TC-83.20, AND PIS 208320.**

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID AND INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY TO CONSTRUCT THE FOUNDATION, INCLUDING CONDUIT ELLS AND ANCHOR BOLTS, RESTORATION OF DISTURBED AREA AND DISPOSAL OF SURPLUS MATERIAL AS PER CMS 104.04

ITEM 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).

THE GROUND-MOUNTED CABINET SHALL BE A NEMA TS-2, TYPE 1, CABINET SIZE 7 WITH 16 LOAD SWITCH BAYS, LED UNDER-SHELF LIGHTING, POWER HARNESSSES FOR BOTH TS2 TYPE 1 AND TYPE 2 CONTROLLERS AND SHALL HAVE A MINIMUM OF THREE SHELVES.

EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE LOOP DETECTOR TERMINATION PANEL FOR THE SECOND DETECTOR RACK SHALL BE OMITTED.

THE CABINET SHALL BE FURNISHED WITH AN EDI MMU AS ALLOWED ON THE TAP/ APPROVED PRODUCTS LIST.

THE EXTERIOR OF THE CONTROLLER CABINET SHALL BE FINISHED TO MATCH THE SIGNAL SUPPORT FINISH COLOR. ALL PAINTING SHALL BE PERFORMED UNDER CONTROLLED ENVIROMENT CONDITIONS AND IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION, MATERIAL HANDLING, AND APPLICATION. THE TOP FINISH COAT OF PAINT SHALL BE SIMILAR TO FEDERAL STANDARD PAINT #17038 (BLACK). THE CONTRACTOR SHALL PROVIDE A PAINT SAMPLE CHIP TO BE SUBMITTED WITH THE CABINET SHOP DRAWINGS FOR REVIEW AND APPROVAL. THE APPLICATION PROCEDURE SHALL GUARANTEE A FINISH THAT WILL NOT SCALE, FLAKE, OR PEEL.

SEE SIGNAL AT INTERSECTION OF U.S.62 AND WENDY'S DRIVE IN JOHNSTOWN FOR AN EXAMPLE OF CABINET DESIRED.

PAYMENT FOR ITEM 633 CABINET, TYPE TS-2, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.



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

IN ADDITION TO THE REQUIREMENTS OF **C&MS 633 AND 733**, POLE ATTACHMENT HARDWARE WILL BE INCLUDED FOR POLE-MOUNTED CABINETS, AND A CABINET RISER (8-INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS. THE UPS SYSTEM SHALL BE **ALPHA POWER, MODEL FXM1100** OR APPROVED EQUAL. BEFORE PERFORMING THE WORK, THE CONTRACTOR, THE DISTRICT TRAFFIC ENGINEER AND THE PROJECT ENGINEER WILL PERFORM A SITE INSPECTION TO ESTABLISH THE LOCATION OF THE UPS CABINET AND FOUNDATION.

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

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

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

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

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

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

ITEM 809 ATC CONTROLLER, AS PER PLAN (SIEMENS)

THE CONTROLLER UNIT SHALL BE FURNISHED AND INSTALLED PER **SS 809** AND BE LISTED ON THE TRAFFIC AUTHORIZED PRODUCTS (TAP) LIST.

THE CONTROLLER SHALL BE AN **SIEMENS M60 SERIES** AND COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED.

THE CONTROLLER SHALL HAVE 6 MODES OF COMMUNICATION, ADAPTIVE TRAFFIC CONTROLL FEATURES, REPORTS, PREEMPTION, DIAGNOSTICS, AND INTERNAL TIME BASED COORDINATION. THE CONTROLLER SHALL INCLUDE A "PORT 3 MODULE" AND AN ETHERNET PORT. IN ADDITON, THE CONTROLLER SHALL PROVIDE THE FOLLOWING FEATURES:

- EXTENDED MONITORING
- MANUAL CONTROL AND PUSHBUTTON
- AUTOMATIC/MANUAL TRANSFER SWITCH
- COORDINATED/FREE SWITCH
- DETECTOR TEST SWITCHES
- 8 FLASHER RELAY POSITIONS
- POLICE PANEL WITH FLASH, MANUAL/AUTOMATIC, AND ON/OFF SWITCHES
- MANUAL PUSHBUTTON SWITCH WITH A MINIMUM CARD LENGTH OF 10 FEET
- 8 PORT SDLC PANEL
- SURGE SUPPRESOR IN MODULAR PACKAGE UTILIZING A 12 PIN BEAU CONNECTOR WITH LED FAILURE INDICATORS
- AUXILARY POWER SHALL CHARGE BATTERIES

ITEM 809, ITS DEVICE, MISC.: HIGH SPEED ETHERNET RADIO (ITERIS)

THE CONTRACTOR SHALL FURNISH AND INSTALL A HIGH SPEED ETHERNET RADIO PER MANUFACTURER RECOMMEDATIONS. THE RADIO SHALL BE AN **ITERIS VANTAGE PEGASUS** (5.8 GHZ) OR APPROVED EQUAL.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COMPONENTS NECESSARY TO INSTALL THE HIGH SPEED ETHERNET RADIO FULLY FUNCTIONAL WITH THE TRAFFIC SIGNAL INSTALLATION AT THE LOCATION IN THE PLANS. **THE MASTER CONTROLLER IS LOCATED AT THE U.S. 62/ S.R. 37 INTERSECTION.**

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH RADIO INSTALLED AT THE INTERSECTION, COMPLETE IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 816, VIDEO DETECTION SYSTEM, AS PER PLAN (ITERIS)

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING A COMPLETE AND OPERATIONAL **ITERIS VANTAGE** VIDEO DETECTION CAMERA SYSTEM IN CONFORMANCE WITH SS 816 & SS 907 AND ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR, BUT NOT LIMITED TOO, SUPPLYING AND INSTALLING SIX (6) VIDEO DETECTION CAMERAS (120 VAC) WITH 74" MAST ARM CAMERA BRACKET MOUNT (PAINTED BLACK TO MATCH SIGNAL SUPPORT), MANUFACTURER RECOMMENDED COAXIAL CABLE FROM EACH VIDEO CAMERA TO A TERMINATION POINT IN THE TRAFFIC SIGNAL CABINET, CABINET MOUNTING HARDWARE, PC SOFTWARE, PORTABLE BATTERY OPERATED COLOR LCD MONITOR (5" MINIMUM SCREEN), AND ALL OTHER COMPONENTS NECESSARY TO INSTALL A VIDEO DETECTION CAMERA SYSTEM COMPLETE IN PLACE THAT IS FULLY FUNCTIONAL WITH THE TRAFFIC SIGNAL INSTALLATION.

THE VIDEO DETECTION CABINET HARDWARE SHALL BE CAPABLE OF RUNNING ALL THE DESIGNATED CAMERAS SHOWN IN THE PLANS AT THE INTERSECTION. THE CAMERAS SHALL BE CONFIGURED TO PERFORM VEHICLE DETECTION AND OR TRAFFIC COUNTS AS SPECIFIED. A BATTERY OPERATED COLOR VIDEO VIEWING EYEPIECE SHALL BE PROVIDED TO VIEW AND CONFIGURE THE VIDEO DETECTION CAMERAS.

ITEM 816, VIDEO DETECTION SYSTEM, AS PER PLAN (ITERIS) (CONT'D)

TEN (10) BUSINESS DAYS PRIOR TO INSTALLATION OF THE VIDEO DETECTION SYSTEM, THE CONTRACTOR SHALL CONTACT THE **CITY OF JOHNSTOWN** SO A REPRESENTATIVE CAN BE PRESENT FOR THE CONFIGURATION OF THE VIDEO DETECTION CAMERA SYSTEM.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH DETECTION SYSTEM INSTALLED AT THE INTERSECTION, COMPLETE IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

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:

- 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.
 - PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (**725.04**) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
 - 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.
 - 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.
 - IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
 - 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.
 - 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.
- CONDUITS.
 - 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.
 - THE **725.05** CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
 - BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
 - 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.
- WIRE FOR GROUNDING AND BONDING.
 - 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:

GROUNDING AND BONDING (CONTINUED)

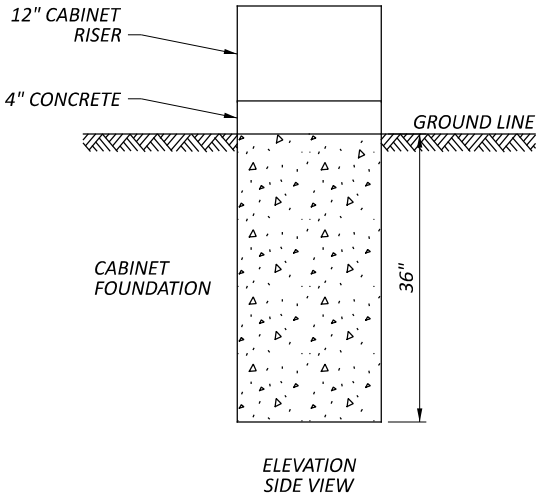
- USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
 - 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.
- 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.
- GROUND ROD.
 - 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.
 - THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
 - 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
- POWER SERVICE AND DISCONNECT SWITCH.
 - 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.
 - THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
 - 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.
 - 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.
 - PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.



TS-2 SIZE 6/7 CABINET DETAIL

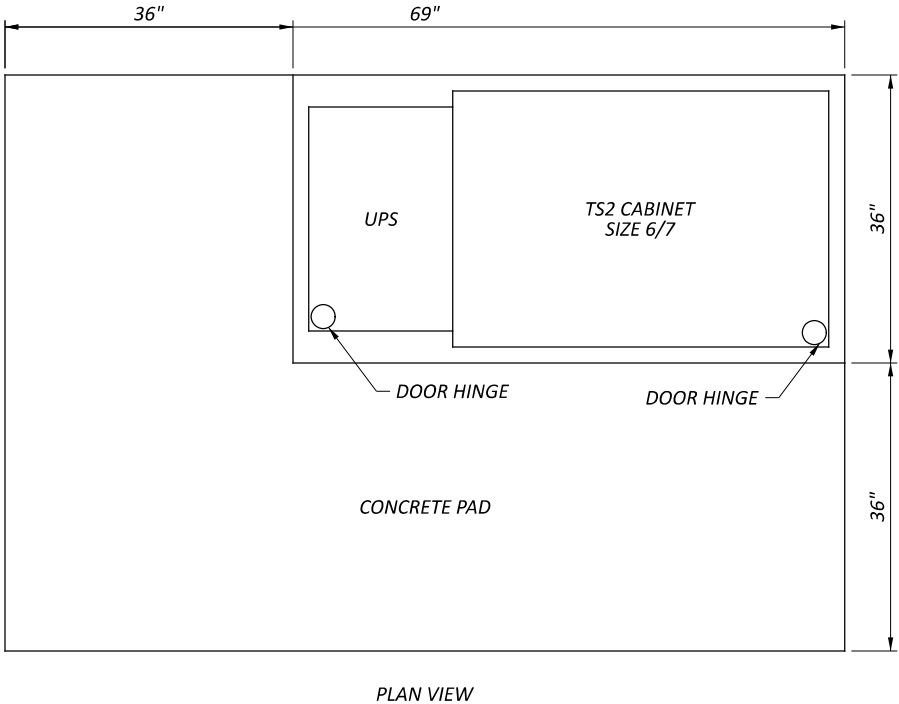
CABINET FOUNDATION DETAIL



NOTES:

1. THE SIZE OF THE UPS FOUNDATION MAY VARY BASED ON THE CABINET SIZE PROVIDED.
2. THE UPS FOUNDATION ELEVATION SHOULD MATCH THE CABINET FOUNDATION ELEVATION.
3. THE UPS CABINET SHALL BE MOUNTED FLUSH AGAINST THE SIGNAL CABINET AND SEALED.
4. CONDUIT AND WIRING FROM THE SIGNAL CABINET TO THE UPS SHALL BE INSTALLED THROUGH THE CABINET RISER.

CABINET AND WORK PAD DETAIL

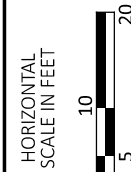
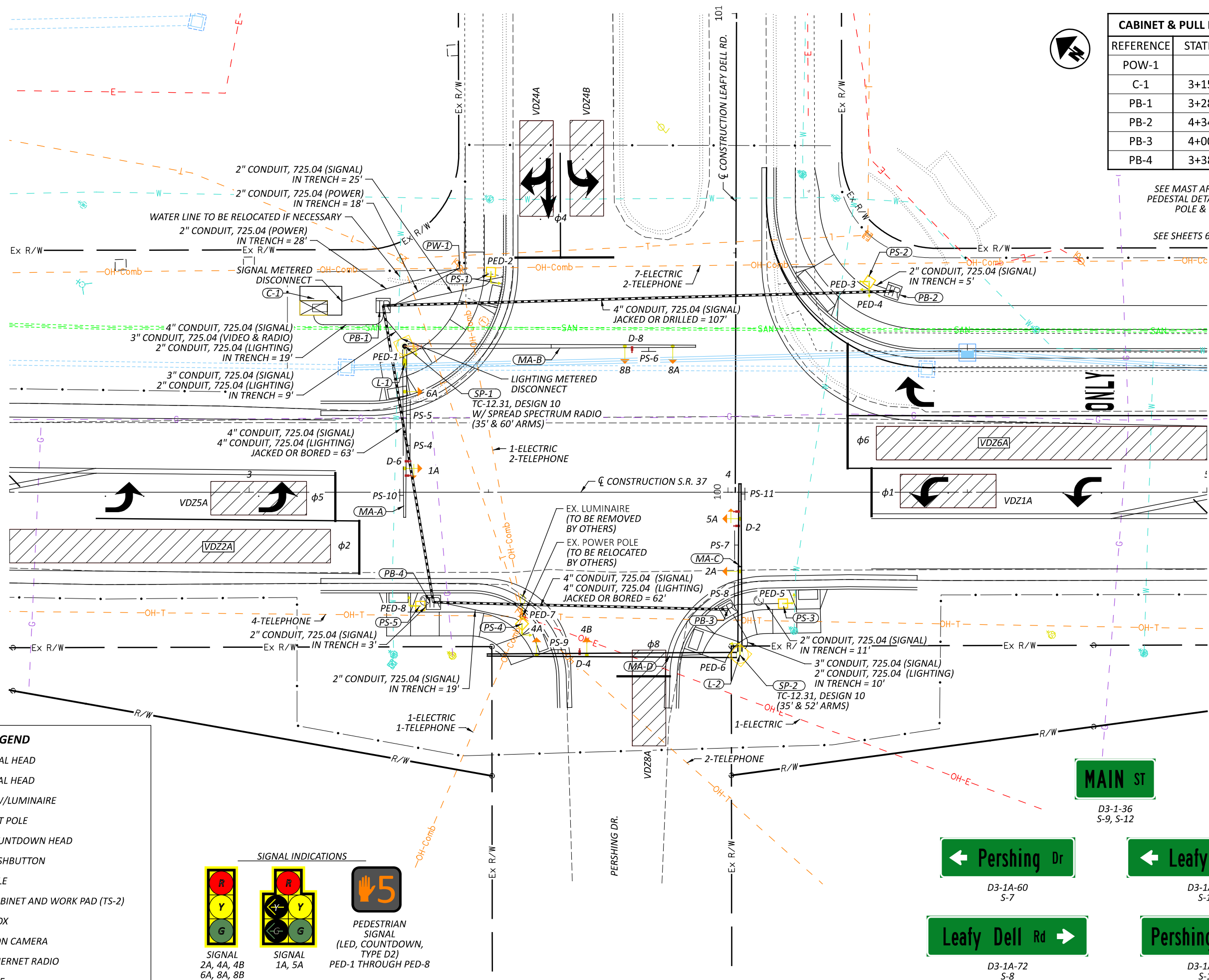


SHEET NO.	REF NO.	LOCATION	625											632													633					809		816	
			CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PULL APART	BRACKET ARM, 8', AS PER PLAN	CONDUIT, 2", 725.04	CONDUIT, 3", 725.04	CONDUIT, 4", 725.04	CONDUIT, JACKED OR DRILLED, 4", 725.05	LUMINAIRE, TEARDROP, SOLID STATE (LED), AS PER PLAN (100W, LED, 120V, TYPE II)	TRENCH, 24" DEEP	PULL BOX, 725.08, 24"	GROUND ROD	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, APP	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, APP	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	COVERING OF VEHICULAR SIGNAL HEAD, AS PER PLAN	PEDESTRIAN PUSHBUTTON, AS PER PLAN (POLARA)	SIGNAL CABLE, 2 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	SIGNAL SUPPORT FOUNDATION	PEDESTAL FOUNDATION	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG	POWER SERVICE, AS PER PLAN	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31, DESIGN 10, AS PER PLAN	PEDESTAL, 10' TRANSFORMER BASE, AS PER PLAN	CABINET, TYPE TS-2, AS PER PLAN	CABINET FOUNDATION, AS PER PLAN	CONTROLLER WORK PAD, AS PER PLAN	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN (ALPHA)	ITS DEVICE, MISC.: HIGH SPEED ETHERNET RADIO	ATC CONTROLLER, AS PER PLAN (SIEMENS)	VIDEO DETECTION SYSTEM, AS PER PLAN (ITERIS)
			EACH	EACH	EACH	FT	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
73	S.R. 37 & LEAFY DELL RD./ PERSHING DR.														8																			1	
	C-1	GROUND MOUNTED CABINET										1															1	1	1	1		1			
	PW-1	POWER SERVICE																					1												
	SP-1	SIGNAL SUPPORT										1									1				1							1			
	SP-2	SIGNAL SUPPORT										1									1				1										
	PS-1	10' PEDESTAL SUPPORT										1														1									
	PS-2	10' PEDESTAL SUPPORT										1														1									
	PS-3	10' PEDESTAL SUPPORT										1														1									
	PS-4	10' PEDESTAL SUPPORT										1														1									
	PS-5	10' PEDESTAL SUPPORT										1														1									
	1A	VEHICULAR SIGNAL HEAD												1																					
	2A	VEHICULAR SIGNAL HEAD											1																						
	4A	VEHICULAR SIGNAL HEAD											1																						
	4B	VEHICULAR SIGNAL HEAD											1																						
	5A	VEHICULAR SIGNAL HEAD												1													1								
	6A	VEHICULAR SIGNAL HEAD											1																						
	8A	VEHICULAR SIGNAL HEAD											1																						
	8B	VEHICULAR SIGNAL HEAD											1																						
	PED-1	PEDESTRIAN SIGNAL HEAD													1		1																		
	PED-2	PEDESTRIAN SIGNAL HEAD													1		1																		
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	PED-5	PEDESTRIAN SIGNAL HEAD													1		1																		
	PED-6	PEDESTRIAN SIGNAL HEAD													1		1																		
	PED-7	PEDESTRIAN SIGNAL HEAD													1		1																		
	PED-8	PEDESTRIAN SIGNAL HEAD													1		1																		
	L-1	LIGHTING		1	1	1				1																									
	L-2	LIGHTING		1	1	1				1																									
	PB-1	PULL BOX										1																							
	PB-2	PULL BOX										1																							
	PB-3	PULL BOX										1																							
	PB-4	PULL BOX										1																							
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)			2	2	2					2		4	8	6	2	8	8	8					2	5		1	2	5	1	1	1	1	1	1	1



SHEET NO.	REF NO.	LOCATION	625												632														633					809		816
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EACH	EACH	EACH	FT	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
73	S.R. 37 & LEAFY DELL RD./ PERSHING DR.																																			
	PW-1 TO C-1	CONDUIT				28																														
	PW-1 TO PB-1	CONDUIT					18																													
	C-1 TO PB-1	CONDUIT				19	19	19																												
	PB-1 TO SP-1	CONDUIT				9	9																													
	PB-1 TO PB-2	CONDUIT							107																											
	PB-1 TO PB-4	CONDUIT							126																											
	PB-1 TO PS-1	CONDUIT				25					25																									
	PB-2 TO PS-2	CONDUIT				5					5																									
	PB-3 TO SP-2	CONDUIT				10	10				10																									
	PB-3 TO PS-3	CONDUIT				11					11																									
	PB-4 TO PS-4	CONDUIT				19					19																									
	PB-4 TO PS-5	CONDUIT				3					3																									
	PB-4 TO PB-3	CONDUIT							124																											
	C1 TO 1A, 6A	VEH. SIGNAL CABLE																				113														
	C1 TO 2A, 5A	VEH. SIGNAL CABLE																				261														
	C1 TO 4A, 4B	VEH. SIGNAL CABLE																			275															
	C1 TO 8A, 8B	VEH. SIGNAL CABLE																			143															
	C-1 TO PED-1	PED. SIGNAL CABLE																52		57																
	C-1 TO PED-2	PED. SIGNAL CABLE																68		73																
	C-1 TO PED-3	PED. SIGNAL CABLE																165		170																
	C-1 TO PED-4	PED. SIGNAL CABLE																165		170																
	C-1 TO PED-5	PED. SIGNAL CABLE																199		204																
	C-1 TO PED-6	PED. SIGNAL CABLE																198		203																
	C-1 TO PED-7	PED. SIGNAL CABLE																135		140																
	C-1 TO PED-8	PED. SIGNAL CABLE																119		124																
	PW-1 TO C-1	POWER CABLE																						170												
	C-1 TO SP-1	LUMINAIRE CABLE																	43																	
	SP-1 TO L-1	LUMINAIRE CABLE																	41																	
	C-1 TO SP-2	LUMINAIRE CABLE																	189																	
	SP-2 TO L-2	LUMINAIRE CABLE																	41																	
LOCATION 1 TOTALS (CARRIED TO SUB-SUMMARY)						129	56	19	357		147							1,101	314	1,559	374				170											





TRAFFIC SIGNAL PLAN
S.R. 37/ LEAFY DELL RD.

DESIGN AGENCY



DESIGNER

CWN

REVIEWER

JSL 08/15/25

PROJECT ID

101718

SHEET

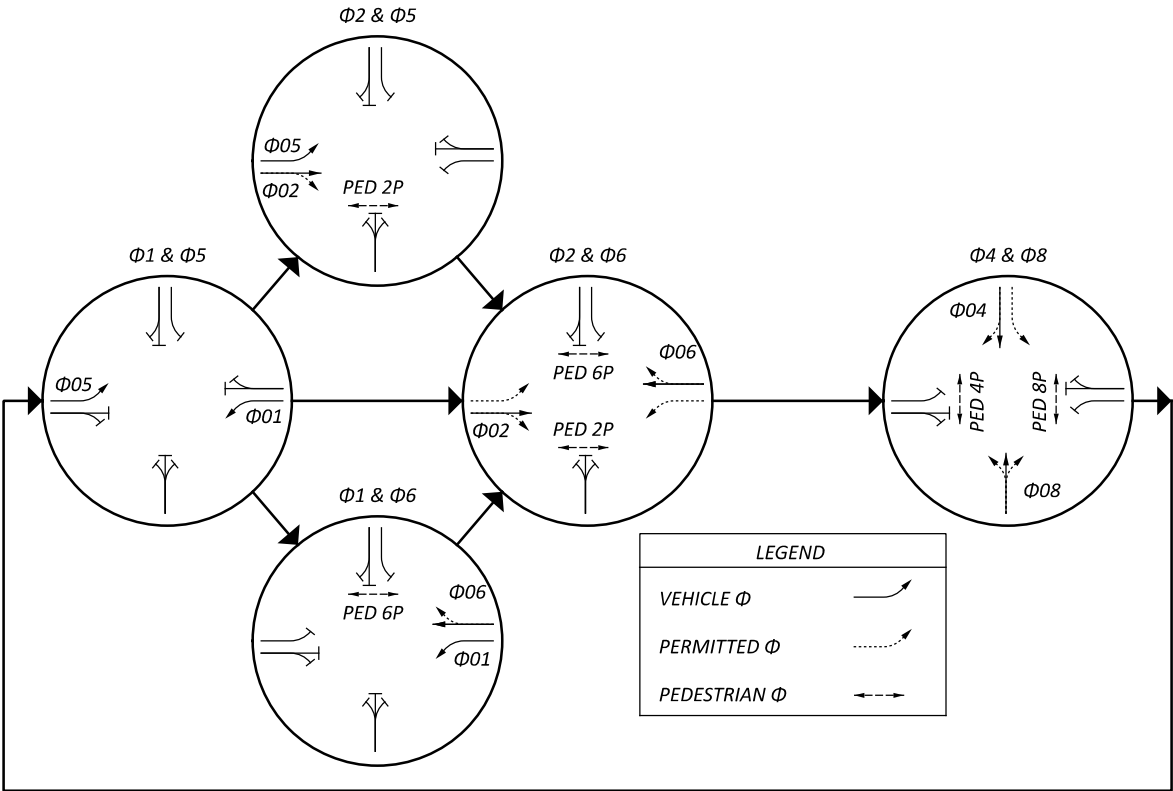
TOTAL

P.73 77

SIGNAL TIMING CHART

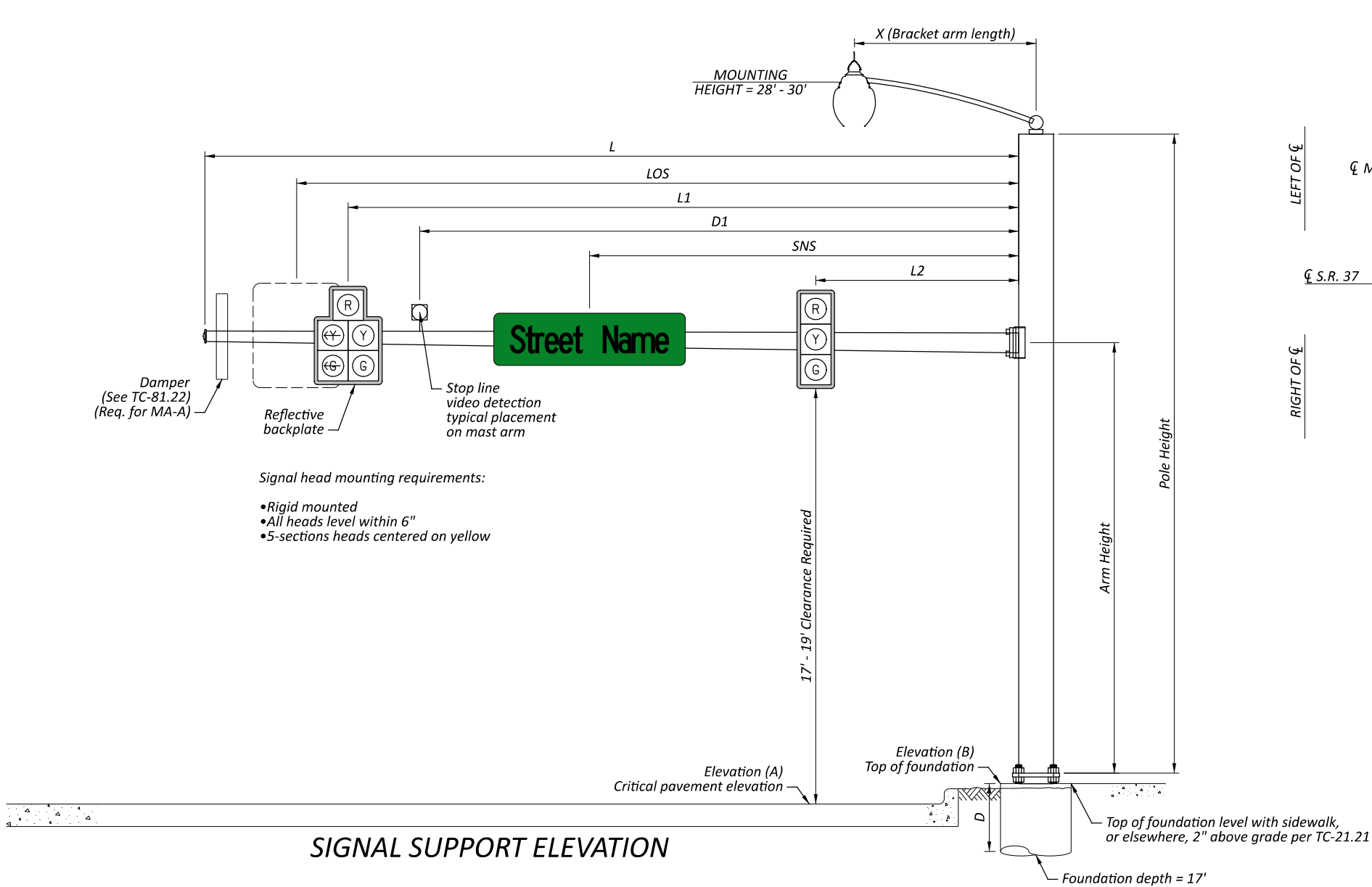
INTERSECTION: S.R. 37 & LEAFY DELL RD. / PERSHING DR.									
MAINTAINING AGENCY: CITY OF JOHNSTOWN									
START UP		DUAL ENTRY: YES		PHASES:		2 & 6, 4 & 8			
		REST IN RED:		RING 1 -		RING 2 -			
START IN:	ALL RED FLASH	OVERLAP				A	B	C	D
TIME FOR: FLASH , ALL RED (SEC.):	9, 6								
FIRST PHASE(S):	2 & 6	PHASES							
COLOR DISPLAYED:	GREEN								
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		NB LT	SB	-	WB	SB LT	NB	-	EB
MINIMUM GREEN (INITIAL) (SEC.)		7	15	-	10	7	15	-	10
ADDED INITIAL *(SEC./ACTUATION)		-	-	-	-	-	-	-	-
MAXIMUM INITIAL *(SEC.)		-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)		3	3	-	3	3	3	-	3
TIME BEFORE REDUCTION *(SEC.)		-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)		-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)		-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)		15	40	-	30	15	40	-	30
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)		3.5	4.5	-	3.5	3.5	4.5	-	3.5
ALL RED CLEARANCE (SEC.)		2.5	1	-	1.5	2.5	1	-	1.5
DELAYED GREEN (LPI) ^ (SEC.)		-	-	-	-	-	-	-	-
FLASHING YELLOW ARROW DELAY^ (SEC.)		-	-	-	-	-	-	-	-
WALK (SEC.)		-	7	-	7	-	7	-	7
PEDESTRIAN CLEARANCE (SEC.)		-	20	-	20	-	20	-	20
RECALL	MAXIMUM (ON/OFF)	NO	NO	-	NO	NO	NO	-	NO
	MINIMUM (ON/OFF)	NO	YES	-	YES	NO	YES	-	YES
	PEDESTRIAN (ON/OFF)	NO	YES	-	YES	NO	YES	-	YES
MEMORY (ON/OFF)		NO	NO	-	NO	NO	NO	-	NO
*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.									

- NOTES:
- All movements shall be actuated. The primary through movement shall have min recall active to rest in green.
 - For protected/ permissive phases, implement call omits to avoid yellow ball trap.
 - Enable $\Phi 1$, 3 and $\Phi 5$, 7 detector switching to allow $\Phi 1$ and $\Phi 5$ to extend $\Phi 2$ and $\Phi 6$ or $\Phi 3$ and $\Phi 7$ to extend $\Phi 4$ and $\Phi 8$, respectively, when allocated green time for left turn phases are exhausted.
 - Countdown pedestrian signal heads shall go to zero on yellow per OMUTCD Figure 4E-2.
 - Video detection units for dilemma zone detection shall place a constant call to the controller when vehicle travel times to the stop bar are between 2.5 and 6.0 seconds. Speed trigger shall be set for vehicles traveling 35 MPH and greater.
 - Video shall have queue detection configured and a zone placed at 100-200 feet from the stop bar for slow moving vehicle extensions. Speed trigger shall be set at 1 - 35 MPH.
 - All detector delays shall be placed on the controller.
 - For any entry to flashing operation programming shall run minor street green (typ. $\Phi 4$ & $\Phi 8$), all-red clearance and then flashing operation.

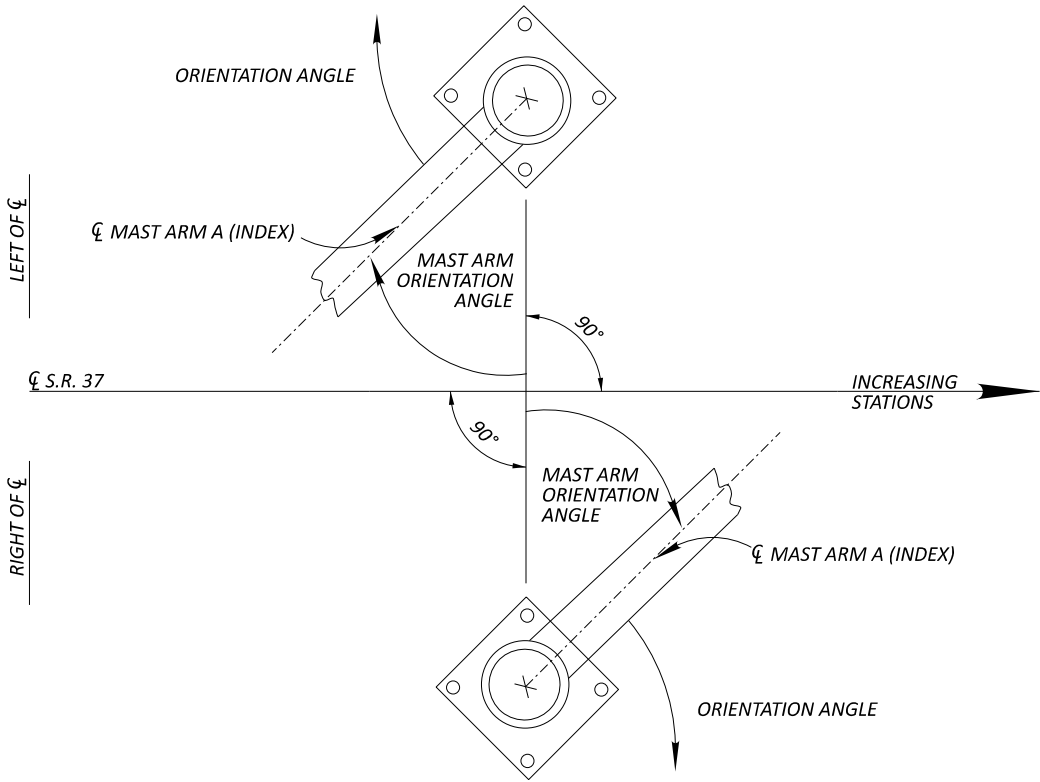


VIDEO DETECTION CHART								
DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY PROGRAMMED IN CONTROLLER (SEC.)	EXTENSION PROGRAMMED IN CONTROLLER (SEC.)	DETECTOR NO.	PURPOSE	DETECTION ZONE LENGTH (FT)
VDZ2A	SB	PRESENCE	2			D-2	STOP LINE	20
VDZ5A	SB LT	PRESENCE	5				DILEMMA	100
VDZ4A	WB	PRESENCE	4			D-4	STOP LINE	20
VDZ4B	WB	PRESENCE	4				STOP LINE	20
VDZA6A	NB	PRESENCE	6			D-6	DILEMMA	100
VDZ1A	NB LT	PRESENCE	1				STOP LINE	20
VDZ8A	EB	PRESENCE	8			D-8	STOP LINE	20



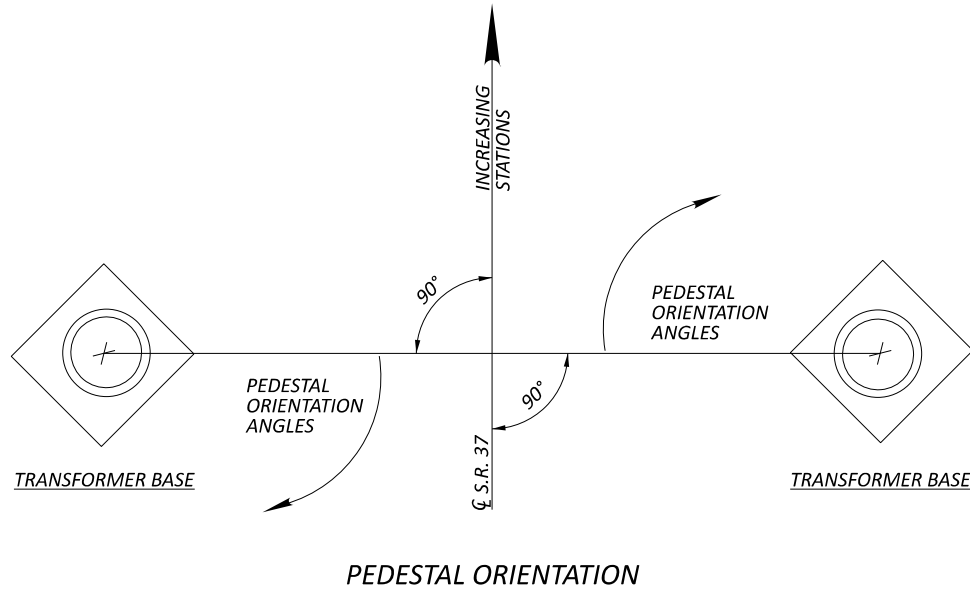
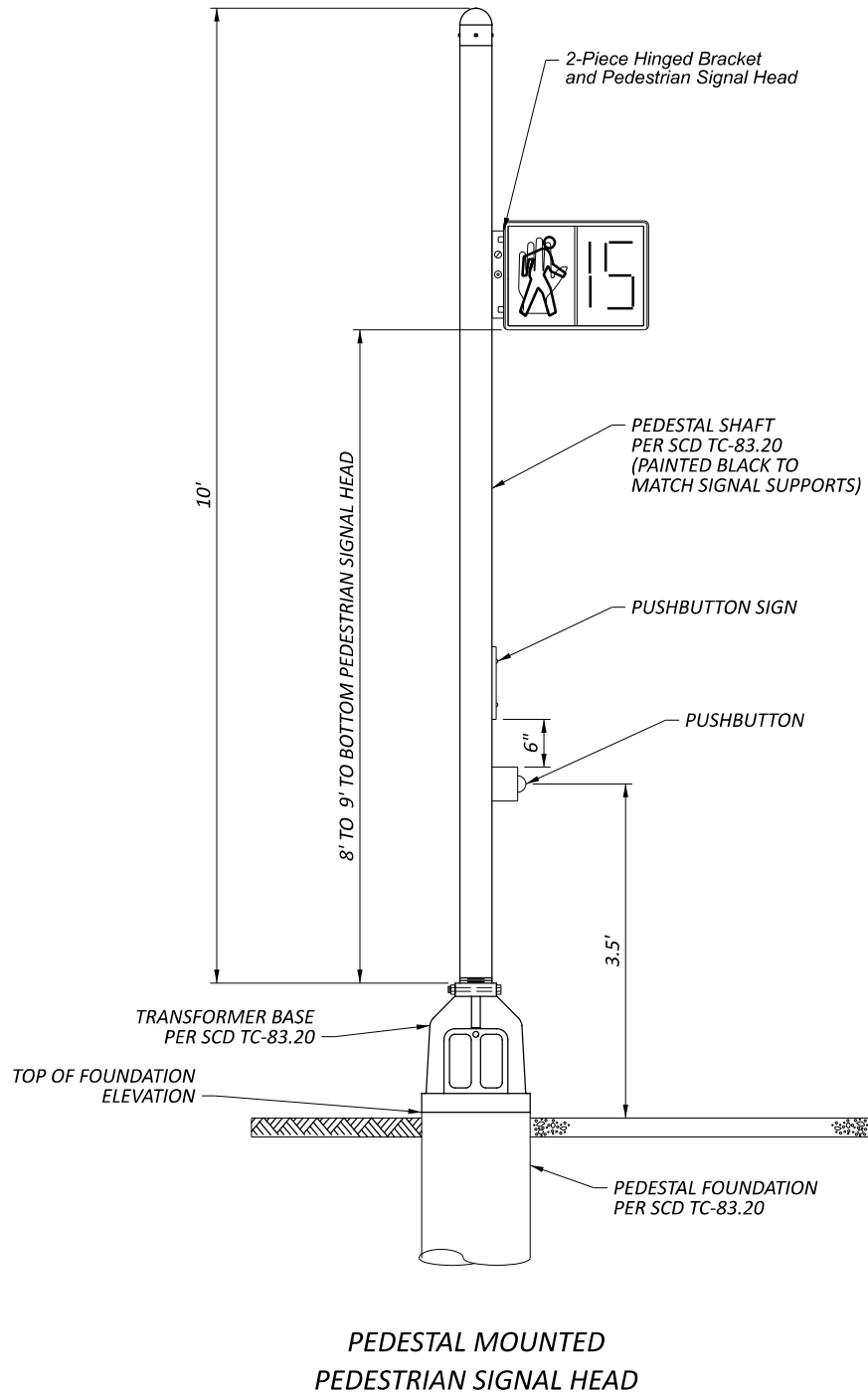


SIGNAL SUPPORT ELEVATION

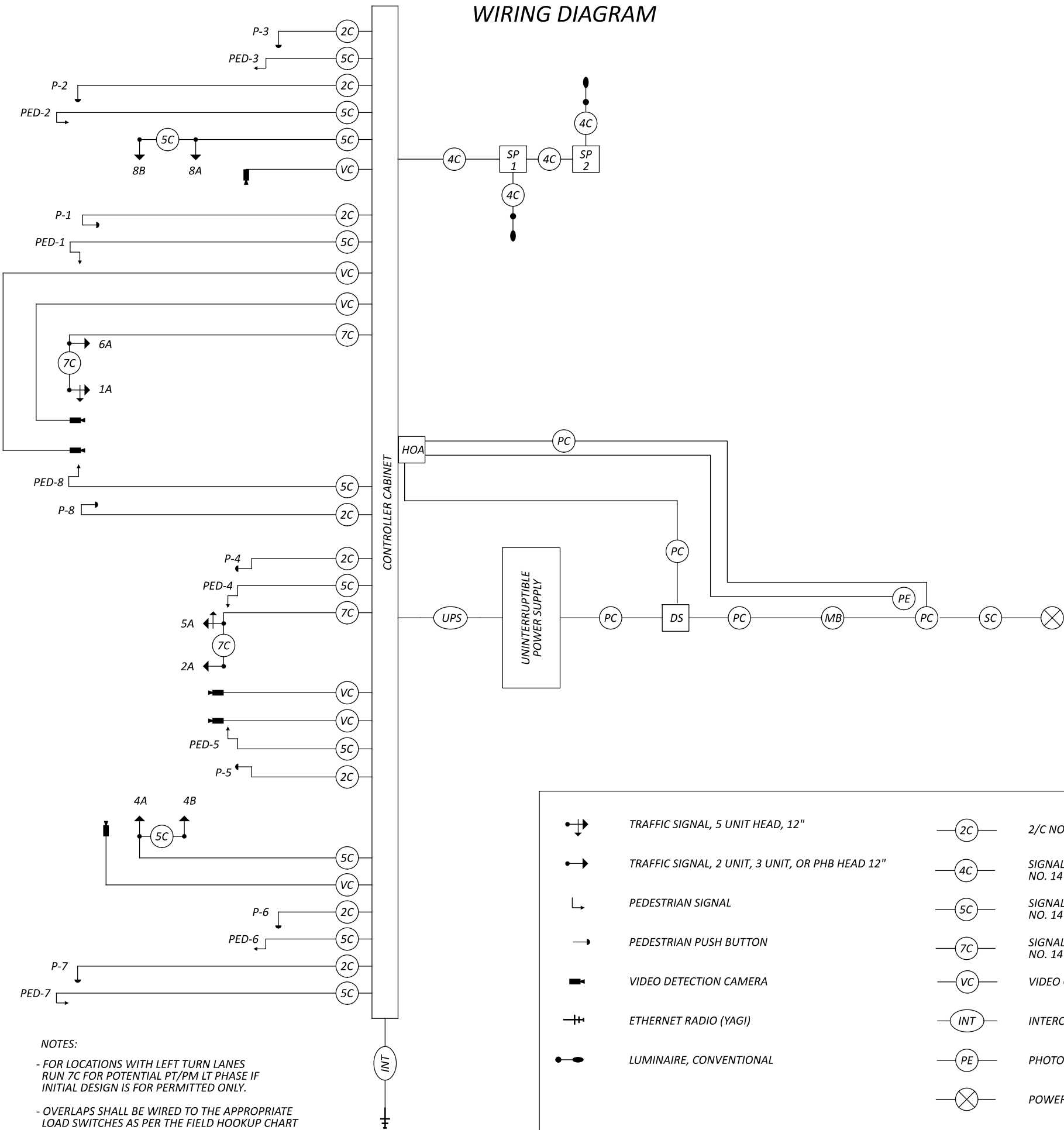


POLE ORIENTATION

MAST ARM TABLE																						
SUPPORT NO.	MAST ARM	STATION (S.R.37)	OFFSET (S.R.37)	ELEVATION		SIGNAL SUPPORT DETAILS												ORIENTATION ANGLES				
				A (PAVNT. ELEV.)	B (TOP OF FOUND.)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	FOUNDATION DEPTH	D1	LOS	SNS	X	MAST ARM ANGLE	BRACKET ARM	PEDESTRIAN SIGNAL HEAD	PUSHBUTTON	HANDHOLE
								FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG
SP-1	MA-A	3+32.5	30.5 LT	1146.41	1146.63	TC-12.31	10	28	19	35	24.74	8.74	17	23.26	30.4	16.74	8	0	0	0	90	180
	MA-B	3+32.5	30.5 LT	1146.81	1146.63	TC-12.31	10	28	19	60	55.21	45.21	17	46.71		50.21		270				
SP-2	MA-C	4+05.0	34.0 RT	1148.03	1148.77	TC-12.31	10	28	18	35	27.71	16.71	17	26.21	32.9	22.96	8	0	0			180
	MA-D	4+05.0	34.0 RT	1147.89	1148.77	TC-12.31	10	28	18	60	44.22	33.72	17	35.22		39.72		270		270	0	



PEDESTAL TABLE						
PEDESTAL NO.	STATION	OFFSET	TOP OF FOUNDATION ELEVATION	POLE HEIGHT (FT)	ORIENTATION ANGLES	
					PEDESTRIAN SIGNAL HEAD	PUSHBUTTON
PS-1	3+50.50	46.00' LT	1146.47	10	0	0
PS-2	4+29.50	44.00' LT	1147.07	10	0 / 90	90 / 180
PS-3	4+11.50	23.25' RT	1148.53	10	90	90
PS-4	3+57.00	27.50' RT	1147.56	10	180	180
PS-5	3+35.75	23.75' RT	1147.22	10	270	270



FIELD WIRING HOOKUP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1A (NB LT)	R	Φ6 R	R	8A, 8B (EB)	R	Φ8 R	R
	Y	Φ6 Y			Y	Φ8 Y	
	G	Φ6 G			G	Φ8 G	
	<--Y---	Φ1 Y			-	-	
	<--G---	Φ1 G			-	-	
2A (SB)	R	Φ2 R	R	-	-	-	-
	Y	Φ2 Y			-	-	
	G	Φ2 G		-	-	-	-
	-	-			-	-	
-	-	-	-	-	-	-	-
	-	-			-	-	
	-	-			-	-	
	-	-			-	-	
-	-	-	-	PEDESTRIAN MOVEMENTS			
	-	-		PED A	W	'Φ2 PED/ LS 2P G	OUT
4A, 4B (WB)	R	Φ4 R	R	-	DW	'Φ2 PED/ LS 2P R	
	Y	Φ4 Y		PED B	W	Φ4 PED/ LS 4P G	OUT
	G	Φ4 G		-	DW	Φ4 PED/ LS 4P R	
5A (SB LT)	R	Φ2 R	R	PED C	W	Φ6 PED/ LS 6P G	OUT
	Y	Φ2 Y		-	DW	Φ6 PED/ LS 6P R	
	G	Φ2 G		PED D	W	'Φ8 PED/ LS 8P G	OUT
	<--Y---	Φ5 Y		-	DW	'Φ8 PED/ LS 8P R	
	<--G---	Φ5 G		OVERLAPS			
6A (NB)	R	Φ6 R	R	-	-	-	-
	Y	Φ6 Y			-	-	
	G	Φ6 G		-	-	-	-
LS = LOAD SWITCH					-	-	

LEGEND

	TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		2/C NO. 14 AWG (LEAD-IN CABLE)		SERVICE CABLE, 3 CONDUCTOR, NO. 8 AWG
	TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD 12"		SIGNAL CABLE, 4 CONDUCTOR, NO. 14 AWG		POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
	PEDESTRIAN SIGNAL		SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		SIGNAL SUPPORT POLE NO. X
	PEDESTRIAN PUSH BUTTON		SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		METER BASE
	VIDEO DETECTION CAMERA		VIDEO CAMERA CABLE		DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
	ETHERNET RADIO (YAGI)		INTERCONNECT CABLE		UNINTERRUPTIBLE POWER SUPPLY CABLE
	LUMINAIRE, CONVENTIONAL		PHOTOELECTRIC CELL		HAND/ OFF/ AUTO SWITCH
			POWER SOURCE		

