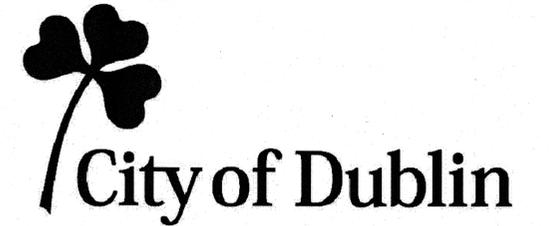


CITY OF DUBLIN, OHIO

ACADEMIC DRIVE

PHASE 1

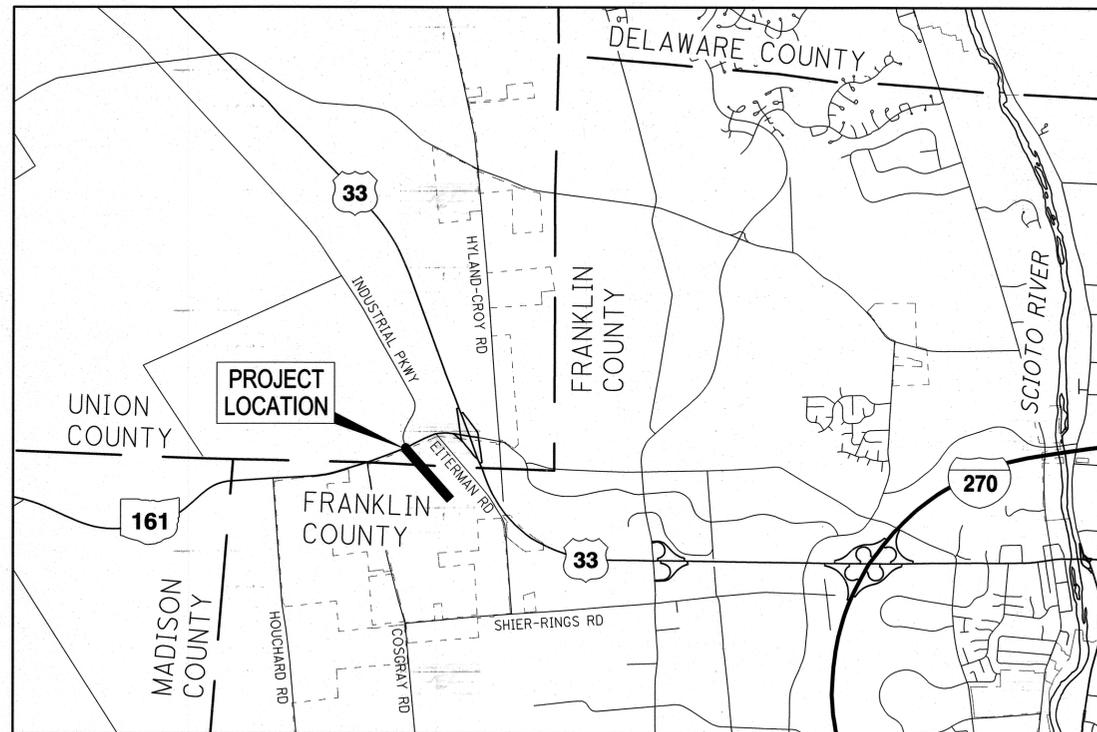


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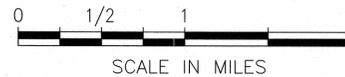
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ACADEMIC DRIVE	
DESIGN SPEED	40 MPH
LEGAL SPEED	35 MPH



LOCATION MAP



STANDARD CONSTRUCTION DRAWINGS

CITY OF DUBLIN		ODOT	CITY OF COLUMBUS	
PD-01	SL-01	BP-3.1	L-6306	AA-S102
PD-02	SL-02	DM-4.4	L-6309B	AA-S106
PD-03	SL-03	HL-20.11	L-6310	AA-S107
PD-08	SL-04	TC-41.20	L-6311	AA-S112
	SL-05	TC-41.30	L-6312	AA-S117
RD-02		TC-42.20	L-6637A	AA-S119
RD-05	WA-01	TC-52.10	L-6640	AA-S125A
RD-06		TC-52.20	L-7001	AA-S125B
RD-07		TC-65.10		AA-S128
		TC-65.11		AA-S133A
ST-03		TC-71.10		AA-S139
ST-04				AA-S150
ST-05		MT-95.30		AA-S151
		MT-101.60		



Kevin J. Gaudin
REGISTERED ENGINEER

7/25/14
DATE

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT ONLY AND DO NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

APPROVED:

Paul A. Hammersmith
CITY ENGINEER, CITY OF DUBLIN, OHIO

7/25/2014
DATE

APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO THE PROVISIONS OF THE WATER SERVICE AGREEMENT BETWEEN THE CITY OF DUBLIN, OHIO AND THE CITY OF COLUMBUS, OHIO ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

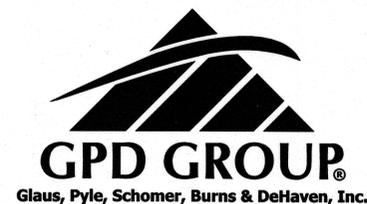
ADMINISTRATOR, DIVISION OF WATER
CITY OF COLUMBUS

DATE

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES
CITY OF COLUMBUS

DATE

Ohio Utilities Protection Service
Call 811
before you dig



1801 Watermark Drive, Suite 150
Columbus, OH 43215
Phone 614.210.0751 Fax 614.210.0752
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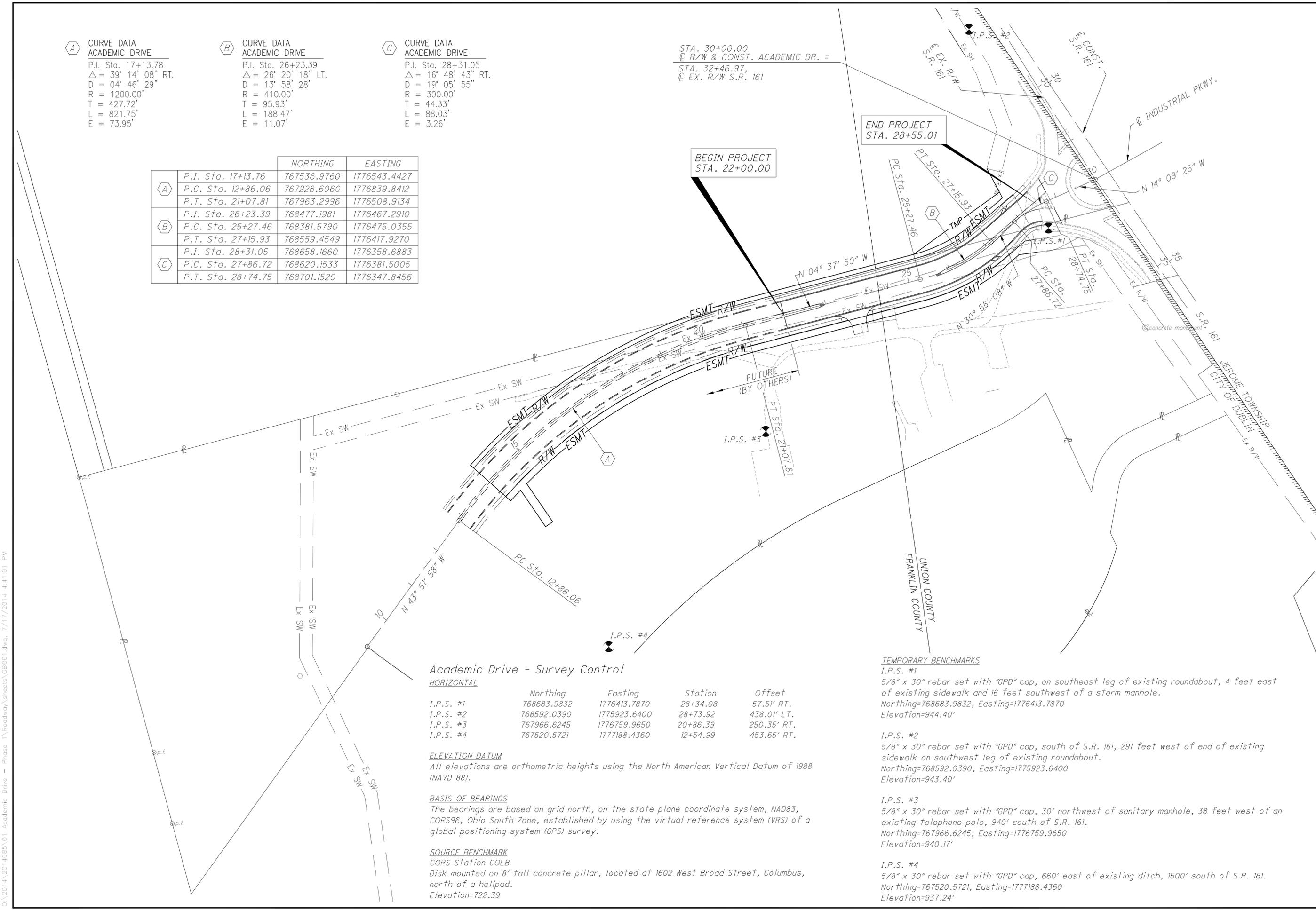
SCHEMATIC PLAN

**ACADEMIC DRIVE
PHASE 1**

Curve Label	Curve Name	P.I. Sta.	Delta	D	R	T	L	E
A	CURVE DATA ACADEMIC DRIVE	17+13.78	39° 14' 08" RT.	04' 46' 29"	1200.00'	427.72'	821.75'	73.95'
B	CURVE DATA ACADEMIC DRIVE	26+23.39	26° 20' 18" LT.	13' 58' 28"	410.00'	95.93'	188.47'	11.07'
C	CURVE DATA ACADEMIC DRIVE	28+31.05	16° 48' 43" RT.	19' 05' 55"	300.00'	44.33'	88.03'	3.26'

Curve Label	P.I. Sta.	NORTHING	EASTING
A	P.I. Sta. 17+13.76	767536.9760	1776543.4427
	P.C. Sta. 12+86.06	767228.6060	1776839.8412
	P.T. Sta. 21+07.81	767963.2996	1776508.9134
B	P.I. Sta. 26+23.39	768477.1981	1776467.2910
	P.C. Sta. 25+27.46	768381.5790	1776475.0355
	P.T. Sta. 27+15.93	768559.4549	1776417.9270
C	P.I. Sta. 28+31.05	768658.1660	1776358.6883
	P.C. Sta. 27+86.72	768620.1533	1776381.5005
	P.T. Sta. 28+74.75	768701.1520	1776347.8456

STA. 30+00.00
 @ R/W & CONST. ACADEMIC DR. =
 STA. 32+46.97,
 @ EX. R/W S.R. 161



Academic Drive - Survey Control

HORIZONTAL

I.P.S. #	Northing	Easting	Station	Offset
I.P.S. #1	768683.9832	1776413.7870	28+34.08	57.51' RT.
I.P.S. #2	768592.0390	1775923.6400	28+73.92	438.01' LT.
I.P.S. #3	767966.6245	1776759.9650	20+86.39	250.35' RT.
I.P.S. #4	767520.5721	1777188.4360	12+54.99	453.65' RT.

ELEVATION DATUM

All elevations are orthometric heights using the North American Vertical Datum of 1988 (NAVD 88).

BASIS OF BEARINGS

The bearings are based on grid north, on the state plane coordinate system, NAD83, CORS96, Ohio South Zone, established by using the virtual reference system (VRS) of a global positioning system (GPS) survey.

SOURCE BENCHMARK

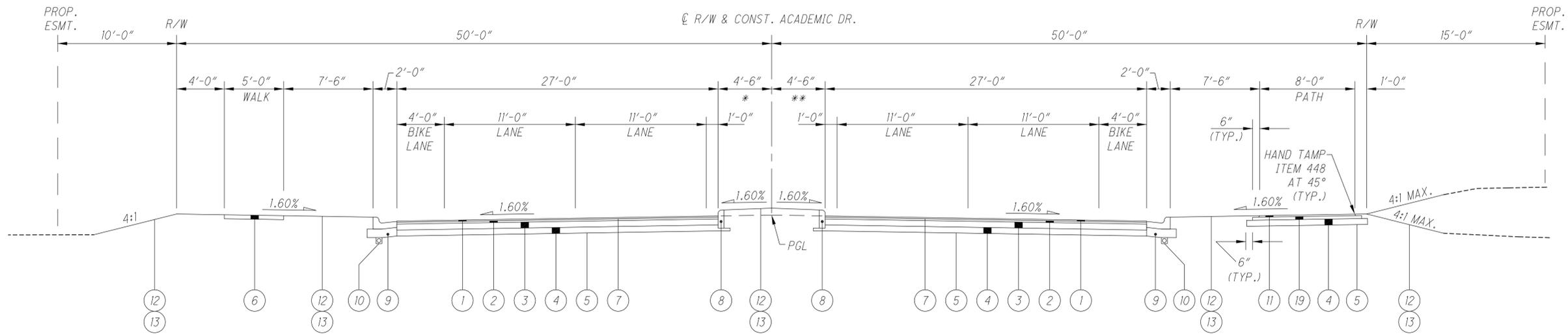
CORS Station COLB
Disk mounted on 8' tall concrete pillar, located at 1602 West Broad Street, Columbus, north of a helipad.
Elevation=722.39

TEMPORARY BENCHMARKS

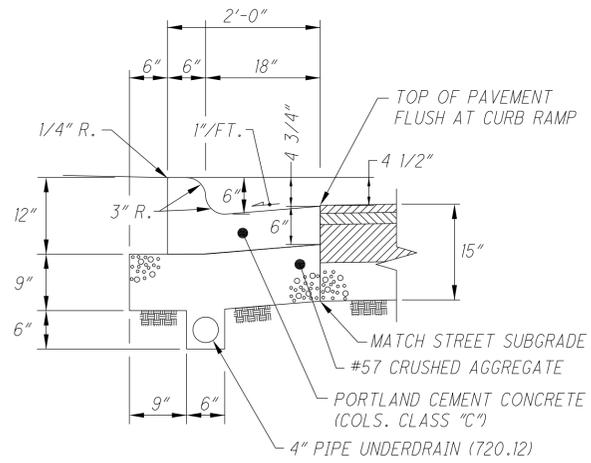
- I.P.S. #1
5/8" x 30" rebar set with "GPD" cap, on southeast leg of existing roundabout, 4 feet east of existing sidewalk and 16 feet southwest of a storm manhole.
Northing=768683.9832, Easting=1776413.7870
Elevation=944.40'
- I.P.S. #2
5/8" x 30" rebar set with "GPD" cap, south of S.R. 161, 291 feet west of end of existing sidewalk on southwest leg of existing roundabout.
Northing=768592.0390, Easting=1775923.6400
Elevation=943.40'
- I.P.S. #3
5/8" x 30" rebar set with "GPD" cap, 30' northwest of sanitary manhole, 38 feet west of an existing telephone pole, 940' south of S.R. 161.
Northing=767966.6245, Easting=1776759.9650
Elevation=940.17'
- I.P.S. #4
5/8" x 30" rebar set with "GPD" cap, 660' east of existing ditch, 1500' south of S.R. 161.
Northing=767520.5721, Easting=1777188.4360
Elevation=937.24'

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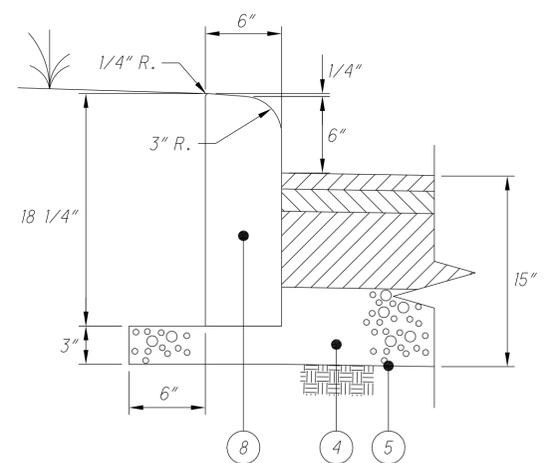
* VARIES 4'-6" TO 11'-11 1/4"
FROM STA. 27+86.72 TO STA. 28+55.01
** VARIES 0'-0" MIN TO 8'-7 1/2" MAX
FROM STA. 27+15.93 TO STA. 28+52



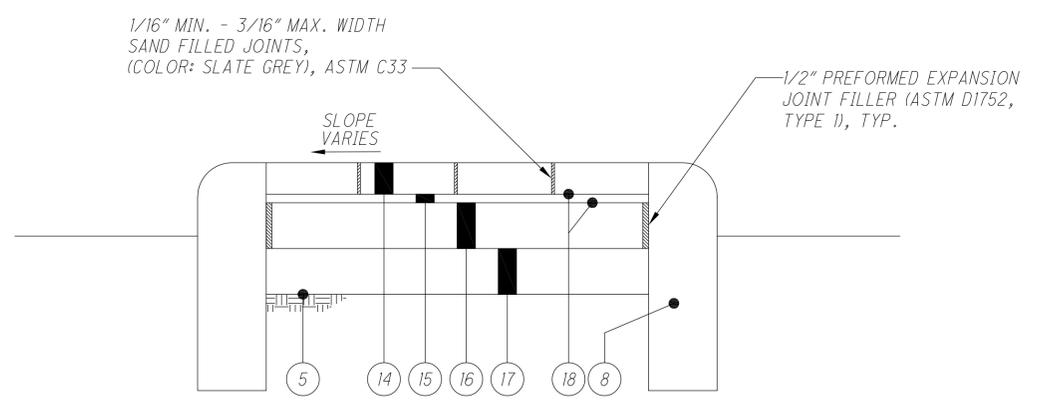
NORMAL SECTION - ACADEMIC DRIVE
STA. 22+00 TO STA. 28+55.01



6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN DETAIL
NOT TO SCALE



CURB, STRAIGHT 18", AS PER PLAN DETAIL
NOT TO SCALE



MEDIAN/PAVER DETAIL
NOT TO SCALE
STA. 22+87.1 TO STA. 22+97.6
STA. 25+66.3 TO STA. 25+76.8

SEE GENERAL NOTES (ITEM SPECIAL - PAVERS, AS PER PLAN) FOR DETAILED SPECIFICATIONS.

- ① ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC
- ② ITEM 448 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, MEDIUM TRAFFIC
- ③ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 204 - SUBGRADE COMPACTION
- ⑥ ITEM 608 - 4" CONCRETE WALK, AS PER PLAN
- ⑦ ITEM 407 - NTSS-IHM TRACKLESS TACK COAT FOR INTERMEDIATE COURSE @ 0.05 GAL/SY

- ⑧ ITEM 609 - CURB, STRAIGHT 18", AS PER PLAN (SEE DETAIL THIS SHEET)
- ⑨ ITEM 609 - 6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN (SEE DETAIL THIS SHEET)
- ⑩ ITEM 605 - 4" PIPE UNDERDRAIN (720.12)
- ⑪ ITEM 448 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC
- ⑫ ITEM 659 - SEEDING AND MULCHING, AS PER PLAN
- ⑬ ITEM 653 - 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN
- ⑭ 8" x 4" x 2-3/4" BRICK PAVERS, AS PER PLAN

- ⑮ 3/4" BITUMINOUS ASPHALT SETTING BED
- ⑯ 4" COLS. CLASS "C" CONCRETE BASE
- ⑰ ITEM 304 - 4" COMPACTED AGGREGATE BASE
- ⑱ NEOPRENE-MODIFIED ASPHALT ADHESIVE
- ⑲ ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

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GENERAL

CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITION, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS) SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. ITEM NUMBERS LISTED REFER TO CITY OF COLUMBUS ITEM NUMBERS UNLESS OTHERWISE NOTED.

THE CONTRACTOR INTENDING TO SUBMIT A BID FOR CITY OF DUBLIN (HEREAFTER REFERRED TO AS "CITY") CAPITAL IMPROVEMENT CONTRACTS SHALL BE PREQUALIFIED WITH THE OHIO DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH SECTION 102 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND CHAPTER 5525 OF THE OHIO REVISED CODE CONCERNING CONSTRUCTION CONTRACTS.

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE CONTRACT DOCUMENTS WHICH ARE CLEARLY NECESSARY FOR COMPLETION OF THE WORK AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK, THOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, SUCH INCIDENTAL ITEMS AS RELOCATION OF MAIL BOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, SPRINKLERS, OR OTHER MISCELLANEOUS ITEMS.

THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN, DIVISION OF ENGINEERING IN WRITING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER SHALL NOT BE RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO THE CONTRACT DOCUMENTS.

THE CITY SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. THE CONTRACTOR SHALL EXERCISE CAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.

ANY MODIFICATION TO THE WORK AS SHOWN ON THESE APPROVED PLANS SHALL HAVE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY AND AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, AND/OR THE LIMITS OF DISTURBANCE SHOWN.

PROPERTY BOUNDARIES, INCLUDING PROPERTY LINES AND ROAD RIGHT-OF-WAY, ARE SHOWN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR CORRECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE FINISHED WORK CONFORM TO THE LINES, GRADES, ELEVATIONS, AND DIMENSIONS CALLED FOR ON THE DRAWINGS AND TYPICAL SECTIONS. PAYMENT FOR CONSTRUCTION LAYOUT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 623, CONSTRUCTION LAYOUT STAKES.

THE CONTRACTOR SHALL SUBSTANTIALLY RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION.

ALL NON-PAVEMENT AREAS DISTURBED WITHIN THE DESIGNATED EASEMENTS, RIGHTS-OF-WAY, AND LIMITS OF DISTURBANCE AS SHOWN, SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 659, SEEDING AND MULCHING, AS PER PLAN. ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

NON-RUBBER Tired VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.

TRACKING OR SPILLING MUD, DIRT OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS OR SHARED-USE PATHS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE CITY. IF THE CONTRACTOR FAILS TO REMOVE THE MUD, DIRT, DEBRIS OR SPILLAGE, THE CITY OF DUBLIN RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE WITHHELD FROM MONIES THAT ARE DUE OR MAY BECOME DUE TO THE CONTRACTOR.

ALL SIGNS, LANDSCAPING, STRUCTURES, OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE PAID FOR BY THE CONTRACTOR.

ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURE. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED NOTING THAT INSPECTION HAS BEEN PERFORMED BY THE CITY OF COLUMBUS. PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION.

EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE HAULED OFFSITE BY THE CONTRACTOR AND COMPENSATION FOR HAULING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.

THE COST OF ALL ASPHALT PAVEMENT REMOVAL AND DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR ITEM 203, EXCAVATION. THE COST OF CONCRETE PAVEMENT REMOVAL AND DISPOSAL WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202, PAVEMENT REMOVED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT U.S. MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION OF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST FIRST BE COORDINATED WITH THE U.S. POSTAL SERVICE AND AFFECTED PROPERTY OWNERS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

PAVEMENT

PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES THE FULL DEPTH OF THE EXISTING PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER.

BUTT JOINTS BETWEEN EXISTING AND NEW PAVEMENT SHALL BE MADE WHERE INDICATED ON THE PLANS IN ACCORDANCE WITH ODOT STD. CONSTRUCTION DWG. BP-3.1.

THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER AT THE PRECONSTRUCTION MEETING HIS PROPOSED DESIGN MIX FORMULA FOR ALL BITUMINOUS MIXTURES TO BE PLACED ON THE PROJECT FOR REVIEW AND APPROVAL. A DESIGN MIX FORMULA SHALL BE SUBMITTED FOR EACH MIXTURE AND EACH PRODUCER AND SHALL PROVIDE GRADATION OF ALL COMPONENT AGGREGATES, PERCENTAGE OF BLENDING OF AGGREGATES, PERCENTAGE OF BITUMEN, ANY ADDITIVES AND APPLICATION RATE, NAMES AND ADDRESSES OF AGGREGATE SUPPLIERS, MARSHALL MIX DESIGN DATA, AND THE THEORETICAL LABORATORY DENSITY.

THE CONTRACTOR IS NOT PERMITTED TO USE ANY RECLAIMED MATERIALS IN ITEM 304.

ITEM SPECIAL -- EXPANSION MATERIAL

FULL DEPTH EXPANSION MATERIAL ONE-HALF (1/2) INCH THICK CONFORMING TO ASTM D 1752, TYPE 1 (RECYCLED RUBBER EXPANSION MATERIAL) SHALL BE UTILIZED WHERE NEW WORK MEETS EXISTING WALK, CURBS OR STRUCTURES. FIBROUS TYPE EXPANSION MATERIAL SHALL NOT BE USED.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY TO COMPLETE THE WORK AS NOTED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM SPECIAL, EXPANSION MATERIAL.

SUBGRADE

ALL SOIL SUBGRADES SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH ITEM 204, SUBGRADE COMPACTION, TO A DEPTH OF 12-INCHES BELOW THE SUBGRADE SURFACE. SUBGRADE SHALL BE SCARIFIED AND CONTAIN SUFFICIENT MOISTURE TO MEET ITEM 204 COMPACTION REQUIREMENTS.

SUBGRADE COMPACTION SHALL ALSO BE REQUIRED UNDER SIDEWALKS, SHARED-USE PATHS AND BRICK PAVER AREAS AND SHALL FOLLOW THE REQUIREMENTS FOR COMPACTION UNDER DRIVEWAYS AS DESCRIBED IN SECTION 204.03. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204, SUBGRADE COMPACTION.

THE CONTRACTOR SHALL DEFINE THE LIMITS OF ANY WEAK SOILS ENCOUNTERED BY PROOF ROLLING. WHERE SOFT SUBGRADE IS ENCOUNTERED IN CUTS, DUE TO NO FAULT OF THE CONTRACTOR, AND SATISFACTORY COMPACTION CANNOT BE OBTAINED, THE UNSTABLE MATERIAL SHALL BE REMOVED AND REPLACED PER SECTION 204.04, USING NO. 2 STONE CHOKED WITH 3" OF NO. 304 STONE, OR AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES:

ITEM 204 - EXCAVATION OF SUBGRADE 500 CU YD
ITEM 204 - GRANULAR EMBANKMENT, NO. 2 STONE 375 CU YD
ITEM 204 - GRANULAR EMBANKMENT, NO. 304 STONE 125 CU YD

ITEM 206 - LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN

THIS ITEM SHALL COMPLY WITH THE GENERAL MATERIAL AND CONSTRUCTION REQUIREMENTS OF ODOT CMS 206. LIME KILN DUST SHALL BE APPLIED AT A 6% RATE BY VOLUME. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 206 - LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN 4600 SQ YD

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK NOTED ABOVE, INCLUDING LIME KILN DUST, CURING COAT, AND TEST ROLLING, SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 206, LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN.

PROOF SURVEY

FOLLOWING COMPLETION OF CONSTRUCTION, A PROOF SURVEY SHALL BE PROVIDED BY THE CONTRACTOR TO THE DIVISION OF ENGINEERING THAT DOCUMENTS AS-BUILT INFORMATION OF ALL UTILITY ELEMENTS OF THIS PROJECT. THE SURVEY SHALL BE PREPARED AND SIGNED BY AN OHIO PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL REVISE THE ORIGINAL MYLARS IN RED INK, TO THE SATISFACTION OF THE CITY, SHOWING ALL CHANGES IN THE WORK. THE COST OF THE PROOF SURVEY, INCLUDING MYLAR REVISIONS, WILL BE PAID AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL - PROOF SURVEY.

SURVEY MONUMENTATION

THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF WILLFUL OR CARELESS DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTING OF MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION NOISE

ANY DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT. THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED SO AS TO ELIMINATE ALL UNNECESSARY NOISE, DUST, AND ODORS. THE USE OF OIL OR OTHER MATERIAL FOR DUST CONTROL, WHICH MAY CAUSE TRACKING, IS NOT PERMITTED.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NEITHER ORDER MATERIALS NOR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE CITY ENGINEER.

UTILITIES

UTILITIES KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT ARE LISTED BELOW WITH CONTACT INFORMATION.

COLUMBIA GAS 1600 DUBLIN ROAD COLUMBUS, OHIO 43215 TEL: 614-481-1057 CELL: 614-370-1906 CONTACT: ROB CALDWELL
AT&T 111 N. 4TH STREET ROOM 802 COLUMBUS, OHIO 43215 TEL: 614-223-7162 CONTACT: ROGER MIKESSELL

TIME WARNER CABLE 3760 INTERCHANGE DRIVE COLUMBUS, OHIO 43204 TEL: 614-481-5262 CELL: 614-348-2979 CONTACT: RAY MAURER
FRONTIER COMMUNICATIONS 2780 LIBERTY ROAD DELAWARE, OH 43015 TEL: 740-369-0826 CELL: 740-802-8890 CONTACT: ROBERT CHANDLER

AMERICAN ELECTRIC POWER 850 TECH CENTER DRIVE GAHANNA, OHIO 43230 TEL: 614-883-6831 CELL: 614-949-8883 CONTACT: PAUL PAXTON
CITY OF DUBLIN DIVISION OF ENGINEERING 5800 SHIER RINGS ROAD DUBLIN, OHIO 43016 TEL: 614-410-4621 CONTACT: MIKE SWEDER, P.E.

ODOT DISTRICT 6 (TRAFFIC) 400 EAST WILLIAM STREET DELAWARE, OHIO 43015 TEL: 740-833-8198 CONTACT: KRAIG SHREWSBERRY
CITY OF COLUMBUS DIVISION OF WATER 910 DUBLIN ROAD COLUMBUS, OHIO 43215 TEL: 614-645-7788

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 811 OR 800-362-2764) AND TO OWNERS OF UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST TWO WORKING DAYS BEFORE START OF CONSTRUCTION.

THE IDENTITY AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE CITY OF DUBLIN AND THE CITY ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OR DEPTHS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF THE SAME AND FOR ANY RESULTING CONTINGENT DAMAGE.

LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY ENGINEER.

CALCULATED
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GENERAL NOTES

ACADEMIC DRIVE
PHASE 1

TRENCH AND BACKFILL

TRENCH EXCAVATION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF OPEN TRENCH AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

ALL TRENCHES WITHIN PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. TRENCHES OUTSIDE THESE AREA SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NON-WORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (HOUSES, GARAGES, ETC.) OR PUBLIC INFRASTRUCTURE (PAVEMENTS, SIDEWALKS, CURBS, ETC.) SHALL BE ITEM 912, COMPACTED GRANULAR MATERIAL.

TRENCHES WITHIN 2 FEET OF PROPOSED PAVEMENT, CURB AND GUTTER, BERM, SHOULDERS, SIDEWALK, OR SHARED-USE PATH, OR WHERE SPECIFICALLY CALLED FOR ON THE PLANS, SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS.

GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS. ITEM 912 MATERIAL SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. SYNTHETIC OR MANMADE MATERIALS ARE UNACCEPTABLE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF TRENCHES WITHIN THE RIGHT-OF-WAY AND PUBLIC EASEMENTS FOR A PERIOD OF ONE YEAR FROM THE FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

ITEM 201 – TREES OR STUMPS REMOVED

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER ITEM 201 – TREES OR STUMPS REMOVED.

THE FOLLOWING IS AN ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZE	NO. OF TREES	NO. OF STUMPS
OVER 12"-24" (18" SIZE)	2	-

THE ABOVE TREE REMOVAL QUANTITIES ARE APPROXIMATE AND THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES.

TREE TRIMMING WITHIN THE CONSTRUCTION ZONE IS TO BE COMPLETED BY A CERTIFIED ARBORIST. AT THE COMPLETION OF THE PROJECT, THE ARBORIST IS TO RETURN AND TRIM ANY BROKEN BRANCHES AS NEEDED.

ITEM 604 – MANHOLES, CATCH BASINS AND INLETS, AS PER PLAN

THE CONTRACTOR WILL MAKE ALL FINAL GRADE ADJUSTMENT OF MANHOLE, CATCH BASIN AND INLET COVERS AND FRAME ASSEMBLIES USING INJECTION MOLDED HIGH DENSITY POLYETHYLENE (HDPE) ADJUSTMENT RINGS WHERE PRACTICAL. THESE ADJUSTMENT RINGS SHALL BE MANUFACTURED FROM POLYETHYLENE PLASTIC AS IDENTIFIED IN ASTM DESIGNATION D-1248 (STANDARD SPECIFICATION FOR POLYETHYLENE PLASTIC MOLDING AND EXTRUSION MATERIALS). INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS ONLY. THE ANNULAR SPACE BETWEEN THE RINGS AND CONE BASIN, THE RINGS, AND THE RINGS AND COVER FRAME SHALL BE SEALED UTILIZING AN APPROVED BUTYL SEALANT.

DRAINAGE

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES STORM SEWER, DRAIN, AND DITCH FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PUT INTO SERVICE. THE FLOW OF ALL STORM SEWER, DRAINS, AND OTHER WATERCOURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY ENGINEER. PAYMENT FOR THIS SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED IN LIKE KIND AND CONNECTED TO THE STORM SEWER SYSTEM OR OPEN CHANNEL OUTLET, RESTORING NORMAL FUNCTION TO THE TILE, AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHERE THE WORK CALLS FOR RELOCATION OF EXISTING DITCHES OR STORM SEWER, THE CONTRACTOR SHALL REESTABLISH THE OUTLETS OF ALL PRIVATE DRAINS ENCOUNTERED; SUCH AS DOWNSPOUTS, FOUNDATION DRAINS, CATCH BASINS, YARD DRAINS, ETC., INTO THE NEAREST NEW DITCH OR STORM SEWER. THE COST FOR REESTABLISHING PRIVATE DRAIN OUTLETS SHALL BE INCLUDED IN THE VARIOUS STORM SEWER ITEMS.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC SHALL BE PROVIDED AT THE OUTLET END OF STORM SEWERS AT THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS. ITEM 601 MATERIALS SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. BROKEN CONCRETE MATERIALS ARE UNACCEPTABLE. THE FILTER UNDERLYING ROCK CHANNEL PROTECTION BE FILTER FABRIC AS PER SECTION 601.09.

FLARED END SECTIONS CALLED FOR ON THE PLANS SHALL BE HANSON PIPE "CONCRETE FLARED END SECTION" OR APPROVED EQUAL, WITH THREADED RODS AND WING NUTS. N-12 ADAPTER FITTINGS FOR CONNECTION TO CONCRETE PIPE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE FLARED END SECTIONS.

ALL STORM SEWERS WITH PIPE DIAMETERS 12 INCHES TO 15 INCHES SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C76, WALL B, CLASS V. ALL STORM SEWERS WITH PIPE DIAMETERS 18 INCHES AND LARGER PIPE SHALL BE ASTM C-76, CLASS III, OR 901.02 ITEM 20 HDPP, UNLESS OTHERWISE SHOWN ON THE PLANS.

THE CONTRACTOR SHALL INCLUDE THE COST OF CONNECTION TO EXISTING STRUCTURES IN THE UNIT PRICE BID FOR THE VARIOUS 901 ITEMS. ALL MANHOLE CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE PROVISIONS OF ITEM 604.

ALL INLETS, CATCH BASINS, AND MANHOLES SHALL BE CHANNELIZED.

BICYCLE SAFE GRATES SHALL BE USED FOR ALL PROPOSED CURB AND GUTTER INLETS AND CATCH BASINS. ALL CATCH BASINS ARE TO BE EQUIPPED WITH EAST JORDAN #5110, TYPE M3 GRATES.

ALL EXISTING AND PROPOSED CASTINGS SHALL BE ADJUSTED TO MATCH THE SURROUNDING FINISH GRADE BY THE CONTRACTOR. TOP OF CASTING ELEVATIONS (T/C) PROVIDED ON THE PLANS ARE APPROXIMATE. TOP OF GRATE (T/G) ELEVATIONS FOR CURB AND GUTTER INLETS ARE THE CENTER OF GRATE ELEVATION AT THE FACE OF CURB. PAYMENT UNDER ITEM 604, MANHOLES ADJUSTED TO GRADE, SHALL ONLY BE FOR CASTING ADJUSTMENTS ON EXISTING MANHOLES THAT REQUIRE NO OTHER WORK. THE COST OF ALL CASTING ADJUSTMENTS SHALL BE INCLUDED IN THE VARIOUS SEWER ITEMS.

WHERE BACKFILLING WITH CONCRETE AROUND A STORM SEWER PIPE IS DETERMINED TO BE NECESSARY, BY EITHER CALL OUT ON THE PLANS, OR AS DIRECTED BY THE ENGINEER, THE WORK SHALL BE IN ACCORDANCE WITH THE CITY OF COLUMBUS STANDARD DRAWING AA-S151, TYPE 1 BEDDING FOR RIGID SEWER PIPE USING CLASS "A" CONCRETE. THE TOTAL LENGTH OF BACKFILL SHALL BE FOR ALL EXPOSED PORTIONS OF PIPE, OR AS DIRECTED BY THE ENGINEER.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY ENGINEER.

PAYMENT FOR ALL INSPECTIONS, CLEANING, AND MAINTENANCE OF EXISTING AND NEW STORM SEWER DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS CALL FOR 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 FOR BOTH 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, THE CITY 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 A PROPOSED CONDUIT WILL CONFLICT WITH AN EXISTING SEWER OR UNDERGROUND UTILITY WHEN CONSTRUCTED AS SHOWN ON THE PLAN, THE CITY ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION ON ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE CONFLICT.

PAYMENT FOR DETERMINATION OF LINE AND GRADE OF EXISTING UTILITIES AS REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

UNDERDRAIN OUTLETS

UNDERDRAIN PIPE OUTLETS SHALL BE ITEM 603, 4" CONDUIT, TYPE F. AN UNDERDRAIN PIPE OUTLET SHALL BE PROVIDED AT EACH PROPOSED CURB AND GUTTER INLET AND SHALL BE A MINIMUM OF 10 FEET IN LENGTH. A QUANTITY OF ITEM 603, 4" CONDUIT, TYPE F HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 608 – 4" CONCRETE WALK, AS PER PLAN

IN ADDITION TO THE CONCRETE WALK, THE CONTRACTOR SHALL SHAPE AND UNIFORMLY COMPACT THE SUBGRADE TO A SURFACE CONFORMING TO THE PLANS AND THE REQUIREMENTS OF ITEM 204 AND PLACE A 4" BASE OF #57 CRUSHED AGGREGATE THE FULL WIDTH OF THE WALK. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 608 – 4" CONCRETE WALK, AS PER PLAN.

ITEM 609 – COMBINATION CONCRETE CURB AND GUTTER, AS PER PLAN

THE COMBINATION CONCRETE CURB AND GUTTER SHALL BE IN ACCORDANCE WITH CITY OF DUBLIN STANDARD DRAWING RD-02.

WHERE THESE ITEMS ARE TO BE PLACED WITHIN OR ADJACENT TO EXISTING PAVEMENT, THE PAVEMENT SHALL BE SAWCUT, REMOVED AND REPLACED IN ACCORDANCE WITH THE PLAN LOCATIONS AND DETAILS. THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO SAWCUT, REMOVE AND REPLACE THE AFFECTED EXISTING PAVEMENT AREA SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PERTINENT 609 ITEM.

**AMERICANS WITH DISABILITIES ACT (ADA)
ITEM 608 – CURB RAMP, AS PER PLAN
ITEM 608 – DETECTABLE WARNING, AS PER PLAN**

ALL SIDEWALKS, PEDESTRIAN PATHS, CURB RAMPS, AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAGG).

THE ELEVATIONS AND SLOPES PROVIDED ON THE DRAWINGS ARE INTENDED TO CONVEY A DESIGN THAT IS COMPATIBLE WITH ADA GUIDELINES. THE CONTRACTOR SHALL DETERMINE THE EXISTING ELEVATIONS OF ADJACENT NEW OR EXISTING CONCRETE CURB AND ADJACENT NEW OR EXISTING WALK PRIOR TO THE START OF RAMP CONSTRUCTION. ADJUSTMENTS IN GRADE SHALL BE MADE BY THE CONTRACTOR BASED ON THE ELEVATION INFORMATION TO INSURE THAT THE FINISHED WORK IS IN ACCORDANCE WITH ADA GUIDELINES.

DETECTABLE WARNINGS SHALL BE PROVIDED WHEREVER A CURB RAMP CROSSES A VEHICULAR WAY, EXCLUDING UNSIGNALIZED DRIVEWAYS, IN ACCORDANCE WITH DUBLIN STANDARD DRAWING PD-03. ALL DETECTABLE WARNINGS SHALL BE ADA SOLUTIONS TACTILE WARNING SURFACE MATS – REPLACEABLE WET-SET COMPOSITE TACTILE WITH A DOME SPACING OF 2.35 INCHES, MANUFACTURER PART NUMBER 2448REP. BRICK RED COLOR SHALL BE USED IN MOST LOCATIONS UNLESS OTHERWISE NOTED. THE COST OF THIS WORK WILL BE PAID AT THE UNIT PRICE BID PER EACH, AND SHALL BE IN ADDITION TO ANY OVERLAPPING PAYMENTS PER SQUARE FOOT FOR SIDEWALK OR SHARED-USE PATH.

MAINTENANCE OF TRAFFIC

DUE TO THE NATURE OF THIS ROADWAY EXTENSION, IT IS ANTICIPATED THAT IMPACTS TO TRAFFIC ON SR-161 AND INDUSTRIAL PARKWAY SHALL BE MINIMAL, LIMITED TO THE PERIOD OF TIME NECESSARY TO REPLACE LANE CONTROL SIGNS AND PAVEMENT MARKINGS ASSOCIATED WITH THE NEW ROADWAY, AND DURING PAVEMENT RESURFACING ABUTTING THE ROUNDABOUT. DURING THESE TIMES, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON SR-161 AND INDUSTRIAL PARKWAY IN ACCORDANCE WITH ODOT STANDARD CONSTRUCTION DRAWING MT-95.30.

THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN, UNION COUNTY AND ODOT AT LEAST 14 DAYS IN ADVANCE OF ANY PLANNED LANE CLOSURES OR OTHER DISRUPTION OF TRAFFIC. LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN A STANDARD 48 X 30 INCH ROAD CLOSED SIGN WITH TYPE III BARRICADES AND LIGHTS, AS DETAILED IN ODOT STANDARD CONSTRUCTION DRAWING MT-101.60, NEAR STA. 28+75 LT. IN ORDER TO PREVENT NON-CONSTRUCTION TRAFFIC FROM ENTERING THE CONSTRUCTION AREA OF THE ROADWAY EXTENSION. THE ROADWAY EXTENSION SHALL BE CLOSED TO THE TRAVELING PUBLIC UNTIL ALL PROPOSED IMPROVEMENTS ARE COMPLETED AND ACCEPTED BY THE CITY.

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.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

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GENERAL NOTES

ACADEMIC DRIVE
PHASE 1

ITEM SPECIAL – PAVERS, AS PER PLAN

PAVERS: THE PAVERS SHALL BE REGIMENTAL FULL RANGE WITH A CHAMFERED EDGE AND SPACER LUGS, 8” x 4” x 2-3/4”, MADE BY BELDON BRICK COMPANY, CANTON, OHIO, LAID IN A RUNNING BOND PATTERN.

NEOPRENE-MODIFIED ASPHALT ADHESIVE: FURNISH NEOPRENE MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2% GRADE WM1 NEOPRENE, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10% LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY SEIDEL COMPANY, INC., NEWBURYPORT, MA, (617) 649-6740; HASTINGS PAVEMENT COMPANY, INC., LAKE SUCCESS, NY, (516) 379-3500; OR APPROVED EQUAL.

BITUMINOUS SETTING BED, 3/4 INCH: FURNISH ASPHALT CEMENT CONFORMING TO ASTM D 3381, PG64-22. FINE AGGREGATE SHALL BE NATURAL SAND AND/OR STONE SAND COMPOSED OF HARD, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL, OR OTHER DELETERIOUS SUBSTANCES. ALL SAND SHALL BE UNIFORMLY GRADED AND PASS A NO. 4 SIEVE, MEETING THE REQUIREMENTS OF ASTM C 136. THE DRIED FINE AGGREGATE SHALL BE MIXED WITH HOT ASPHALT CEMENT AT THE PLANT AND HEATED TO APPROXIMATELY 300 DEGREES (F). APPROXIMATE MATERIAL PROPORTIONS SHALL BE 7% ASPHALT CEMENT AND 93% FINE AGGREGATE; OR 140 LBS ASPHALT TO 1,860 LBS FINE AGGREGATE PER TON.

SAND: ALL JOINTS SHALL BE FILLED WITH A POLYMERIC SAND. SAND SHALL BE ALLIANCE GATOR MAXX POLYMERIC SAND FOR OVERLAYS AND SLATE GREY IN COLOR OR AN APPROVED EQUAL.

EDGING: A BRICK/PAVER EDGING SHALL BE PROVIDED ALONG ANY PAVER EDGE NOT RESTRAINED BY CURB, CURB-AND-GUTTER, SIDEWALK, SHARED-USE PATH, ETC. EDGING TO BE PERMALOC ASPHALT EDGE, BLACK, 3” x 3” OR APPROVED EQUAL.

PAYMENT: PAYMENT FOR THE WORK NOTED ABOVE WILL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL – PAVERS, AS PER PLAN, AND SHALL INCLUDE THE SUBGRADE COMPACTION, AGGREGATE BASE, CONCRETE BASE SLAB, BITUMINOUS SETTING BED, ASPHALT ADHESIVE, BRICK PAVERS, EDGING, AND SAND FILL. THE COST OF ALL CONCRETE CURBING WILL BE PAID UNDER THE APPROPRIATE 609 CURB ITEM.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN

USE OF LAW ENFORCEMENT OFFICES (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED IN THIS NOTE WILL NOT BE PERMITTED AT PROJECT COST UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. LEOS SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS FOR FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 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:

- A. FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED. IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.
- B. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE BLOCKAGE OF TRAFFIC IS REQUIRED.

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 CONTRACTOR SHALL UTILIZE ANY OF THE FOLLOWING LAW ENFORCEMENT AGENCY(S): CITY OF DUBLIN, UNION COUNTY SHERIFF'S OFFICE, OR OHIO STATE HIGHWAY PATROL.

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, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN 20 HOUR

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 AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN.

ITEM 659 – SEEDING AND MULCHING, AS PER PLAN

SEED: CERTIFICATION OF GRASS SEED SHALL BE PROVIDED BY SEED VENDOR FOR EACH GRASS-SEED MIXTURE STATING THE BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY; AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING. FURNISH NATIONAL TURFGRASS EVALUATION PROGRAM (NTEP) DATA FOR EACH SPECIES TO BE USED.

GRASS SEED MUST BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE A.O.S.A. "JOURNAL OF SEED TECHNOLOGY" RULES FOR TESTING SEEDS FOR PURITY AND GERMINATION TOLERANCES.

SEED SPECIES SHALL BE AS FOLLOWS, WITH NOT LESS THAN 90 PERCENT GERMINATION, NOT LESS THAN 98 PERCENT PURE SEED, AND NOT MORE THAN 0.5 PERCENT WEED SEED.

TURFGRASS SEED MIX PROPORTIONED BY WEIGHT:

- A. 80 PERCENT TALL FESCUE (FESTUCA ARUNDINACEA), WITH A MINIMUM OF 3 IMPROVED TURF-TYPE VARIETIES. KENTUCKY-31 AND ALTA VARIETIES ARE NOT APPROVED.
- B. 20 PERCENT PERENNIAL RYEGRASS (LOLIUM PERENNE).

SEEDING: SOW SEED AT A TOTAL RATE OF 7-9 LB. / 1,000 S.F. WITH A SPREADER OR SEEDING MACHINE. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY. THOROUGHLY COVER WITH STRAW AND TACK. TACK SHALL BE ADEQUATE TO PREVENT THE STRAW FROM BEING BLOWN AWAY.

PROTECT SEEDED AREAS WITH SLOPES EXCEEDING 3:1 WITH EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. COST OF EROSION CONTROL BLANKETS, MATERIAL, AND LABOR SHALL BE PAID FOR BY THE CITY.

HYDRO-SEEDING: NOT PERMITTED.

HYDRO-MULCHING: NOT PERMITTED.

TURF MAINTENANCE: MAINTAIN AND ESTABLISH TURF BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND REPLANTING TO ESTABLISH HEALTHY, VIABLE TURF. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH TURF. PROVIDE THE SAME MATERIALS AND INSTALLATION AS THOSE USED IN THE ORIGINAL INSTALLATION. WATER TURF WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.

MOW TURFGRASS SEED MIX AREAS AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. MOW AREAS TO A HEIGHT OF 2 TO 3 INCHES.

ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN

A MINIMUM 3 INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS TO BE SEEDED. PRIOR TO PLACING TOPSOIL IN CUT AREAS, THE EARTH SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO PLACE 3 INCHES OF TOPSOIL. THE COST OF EXCAVATION AND DISPOSAL OF SURPLUS MATERIALS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT ITEMS.

TOPSOIL SHALL BE REMOVED AND WASTED OR UTILIZED IN NON-LOAD BEARING FILLS IN ACCORDANCE WITH THE SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE PAID FOR THE REMOVAL OF EXCESS TOPSOIL AS REQUIRED TO OBTAIN A SUITABLE SUBGRADE. PAYMENT FOR TOPSOIL REMOVAL IS INCLUDED IN ITEM 203, EXCAVATION.

ALL TOPSOIL MATERIALS AND FINAL AREA OF SUBGRADE PREPARATION SHALL BE FREE FROM ROCK AND OTHER FOREIGN MATERIAL OF 1/2” OR GREATER IN ANY DIMENSION.

WATER

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2012 EDITION AND ALL REVISIONS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER LINE SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, AND ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.13 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.14 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, WITH THE FOLLOWING EXCEPTION: 150 PSI OF PRESSURE SHALL BE MAINTAINED FOR AT LEAST TWO HOURS IN ANY TESTED SECTION. THE CITY MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS REGARDLESS OF THE AMOUNT OF LEAKAGE.

ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF A.W.W.A. C-651. WHEN THE WATER MAINS ARE READY FOR DISINFECTION, THE CITY OF DUBLIN SHALL SUBMIT A WRITTEN REQUEST FOR CHLORINATION OF THE MAINS THAT NEED DISINFECTED, THREE (3) SETS OF "AS-BUILT" PLANS (FULL SIZE SHEETS ONLY), THE AS-BUILT SURVEY COORDINATES, WATER SERVICE REPORTS AND A PRESSURE TEST TO THE CITY OF COLUMBUS, DIVISION OF WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION OF ALL WATER MAINS CONSTRUCTED UNDER THIS PLAN.

NO SERVICE CONNECTION PERMITS SHALL BE ISSUED OR CONNECTIONS MADE TO ANY SERVICE TAPS UNTIL WATER MAINS HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS, DIVISION OF WATER.

ALL VALVE BOXES, SERVICE BOXES AND FIRE HYDRANTS SHALL BE LOCATED WITHIN THE EASEMENT AREA.

NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL HAVE THEIR SERVICE DISRUPTED MORE THAN TWO (2) TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY SANITARY OR STORM SEWER PIPING AND STRUCTURES AND ALL PROPOSED WATER MAINS. FOR INSTANCES WHERE TEN (10) FEET OF HORIZONTAL SEPARATION CANNOT BE MAINTAINED FROM A SEWER STRUCTURE, THE WATER LINE SHALL BE INSTALLED SUCH THAT THE STRUCTURE IS CENTERED BETWEEN THE PIPE JOINTS ON A FULL LENGTH (18 FOOT MINIMUM) PIECE OF WATER PIPE.

THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES TO FINAL GRADE IN BOTH PAVEMENT AND NON-PAVEMENT AREAS IN ACCORDANCE WITH ITEM 807.

ALL NEW AND EXISTING VALVES LOCATED WITHIN THE PROPOSED ROADWAY PAVEMENT OR SHARED-USE PATH PAVEMENT AREA SHALL HAVE COLUMBUS STANDARD HEAVY DUTY VALVE BOXES IN ACCORDANCE WITH ITEM 807. EACH NEW OR REPLACEMENT HEAVY DUTY BOX WILL BE PAID FOR SEPARATELY AT THE PRICE BID PER EACH.

ITEM SPECIAL – SURVEY COORDINATES

"SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, BLOW OFFS, CHLORINATION TAPS, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, CASING PIPE TERMINI, AND OTHER FITTINGS. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 500' WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE MUNICIPALITY ENGINEER OR DESIGNATED REPRESENTATIVE ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

WATER ITEM	STA.	OFFSET	AS-BUILT		
			NORTHING	EASTING	C/L ELEV.
THRUST BLOCK AND PLUG	22+00	47' LT			
12" VALVE	22+20	47' LT			
12" X 6" ANCHORING TEE	24+75	47' LT			
6" VALVE	24+75	39.5' LT			
TYPE "A" HYDRANT	24+75	35.5' LT			
12" 45" HORIZ. BEND	28+03.84	47.57' LT			
12" 45" HORIZ. BEND	28+84.11	158.59' LT			
16" X 12" T.S. AND VALVE	28+99.62	160.86' LT			

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ITEM	DESCRIPTION	TOTAL	UNIT	ITEM	DESCRIPTION	TOTAL	UNIT	ITEM	DESCRIPTION	TOTAL	UNIT	CALCULATED			
												DLT	LMO		
GENERAL				DRAINAGE (CONTINUED)				SANITARY SEWER				GENERAL SUMMARY			
614	MAINTAINING TRAFFIC	1	LUMP	605	4" PIPE UNDERDRAINS (720.12)	1,196	LF	604	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	1	EACH				
614	LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN	20	HOUR												
623	CONSTRUCTION LAYOUT STAKES	1	LUMP	901	12" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED GRANULAR MATERIAL, 706.02	276	LF								
624	MOBILIZATION	1	LUMP	901	15" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED GRANULAR MATERIAL, 706.02	19	LF								
				901	18" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 911 COMPACTED BACKFILL, 706.02	116	LF	625*	CONNECTION, FUSED PULL APART	7	EACH				
				901	27" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 911 COMPACTED BACKFILL, 706.02	830	LF	625*	CONNECTION, UNFUSED PULL APART	14	EACH				
201	CLEARING AND GRUBBING	1	LUMP	901	27" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 911 COMPACTED BACKFILL, 706.02	39	LF	625*	LIGHT POLE, 35'	7	EACH				
201	TREE REMOVED, 18" SIZE	2	EACH	901	27" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 912 COMPACTED GRANULAR MATERIAL, 706.02	246	LF	625*	LIGHT POLE FOUNDATION (24' x 7' DEEP), AS PER PLAN	7	EACH				
202	CURB REMOVED AND DISPOSED OF	75	LF	901	30" PIPE, WITH TYPE 1 BEDDING, WITH ITEM 911 COMPACTED BACKFILL, 706.02			625*	TRANSFORMER BASE	7	EACH				
203	EXCAVATION	402	CY					625*	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	3,705	LF				
203	EMBANKMENT	4,067	CY	SPECIAL	30" CONCRETE FLARED END SECTION	1	EACH	625*	NO. 10 AWG POLE AND BRACKET CABLE	987	LF				
204	SUBGRADE COMPACTION (ROADWAY)	4,517	SY					625*	CONDUIT 2", 725.051	1,162	LF				
204	SUBGRADE COMPACTION (SUP)	704	SY					625*	CONDUIT 3", 725.051, SCH 80	144	LF				
204	SUBGRADE COMPACTION (DRIVEWAYS)	257	SY					625*	LUMINAIRE., AS PER PLAN	7	EACH				
204	EXCAVATION OF SUBGRADE	500	CY					625*	TRENCH, 24"	1,162	LF				
204	GRANULAR EMBANKMENT, NO. 2 STONE	375	CY	254	PAVEMENT PLANING, T = 1-1/4"	238	SY	625*	GROUND ROD	7	EACH				
204	GRANULAR EMBANKMENT, NO. 304 STONE	125	CY	254	PAVEMENT PLANING, T = 3"	19	SY	625*	CONNECTION, UNFUSED PERMANENT	6	EACH				
204	PROOF ROLLING	2	HOUR					625*	ELECTRICAL LIGHTING TEST, AS PER PLAN	1	LUMP				
206*	LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN	4,600	SY	301	ASPHALT CONCRETE BASE, PG64-22 (ROADWAY)	1,395	TON	625*	PLASTIC CAUTION TAPE	1,162	LF				
				301	ASPHALT CONCRETE BASE, PG64-22 (SUP)	106	TON	625*	CADWELDED CONNECTION	7	EACH				
608	4" CONCRETE WALK, AS PER PLAN	3,260	SF	304	AGGREGATE BASE (ROADWAY)	712	CY								
608	CURB RAMP, AS PER PLAN	4	EACH	304	AGGREGATE BASE (SUP)	117	CY	614*	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	0.35	MILE				
608	DETECTABLE WARNING, 2' x 6', AS PER PLAN	2	EACH	304	AGGREGATE BASE (DRIVEWAYS)	53	CY	614*	WORK ZONE LANE LINE, CLASS III, 642 PAINT	0.22	MILE				
								614*	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	0.04	MILE				
653	TOPSOIL FURNISHED AND PLACED, AS PER PLAN	469	CY	407	NTSS-1HM TRACKLESS TACK COAT	26	GAL	614*	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	340	LF				
				407	NTSS-1HM TRACKLESS TACK COAT FOR INTERMEDIATE COURSE	209	GAL	614*	WORK ZONE ARROW, CLASS III, 642 PAINT	4	EACH				
SPECIAL	PROOF SURVEY	1	LUMP	407	TACK COAT FOR INTERMEDIATE COURSE	6	GAL	614*	WORK ZONE YIELD LINE, CLASS III, 642 PAINT	30	LF				
SPECIAL	EXPANSION MATERIAL	10	LF					630*	SIGN SUPPORT ATTACHMENT	1	EACH				
				448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (ROADWAY)	309	TON	630*	SIGN, OVERHEAD EXTRUSHEET	224.0	SF				
				448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (SUP)	48	TON	630*+	GROUND MOUNTED SUPPORT, NO. 2 POST	128.1	LF				
				448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (DRIVEWAYS)	10	TON	630*+	GROUND MOUNTED SUPPORT, NO. 3 POST	53.0	LF				
207	PERIMETER FILTER FABRIC FENCE	1,200	LF	448	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, MEDIUM TRAFFIC (DRIVEWAYS)	409	TON	630*+	SIGN, FLAT SHEET	112.1	SF				
207	INLET PROTECTION	9	EACH	448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, MEDIUM TRAFFIC (ROADWAY)	14	TON	630*+	GROUND MOUNTED SUPPORT, ANCHOR POST, 2 1/4" SQUARE, AS PER PLAN	18	EACH				
207	CONSTRUCTION SEEDING AND MULCHING	5,625	SY	448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22, MEDIUM TRAFFIC (DRIVEWAYS)			630*+	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	3	EACH				
659	SEEDING AND MULCHING, AS PER PLAN	5,625	SY					644*	EDGE LINE	0.35	MILE				
659	COMMERCIAL FERTILIZER	0.76	TON					644*	LANE LINE, 4"	0.22	MILE				
659	WATER	30	M GAL	452	8" NON-REINFORCED CONCRETE PAVEMENT	105	SY	644*	CENTER LINE	0.04	MILE				
								644*	CHANNELIZING LINE, 8"	340	LF				
SPECIAL	NO. 2 STONE CHECK DAM	1	EACH	609	CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN	1,296	LF	644*	CROSSWALK LINE	184	LF				
				609	CURB, STRAIGHT 18", AS PER PLAN	924	LF	644*	TRANSVERSE/ DIAGONAL LINE	8	LF				
				SPECIAL	PAVERS, AS PER PLAN	10	SY	644*	LANE ARROW	9	EACH				
								644*	DOTTED LINE, 4"	71	LF				
								644*	DOTTED LINE, 8"	45	LF				
								644*	BIKE LANE SYMBOL	5	EACH				
								644*	YIELD LINE	30	LF				
								644*	REMOVAL OF PAVEMENT MARKING	24	LF				
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER FABRIC	3	CY					644*	REMOVAL OF PAVEMENT MARKING	5	EACH				
603	4" CONDUIT, TYPE F (FOR UNDERDRAIN OUTLET)	80	LF												
604	STANDARD CURB & GUTTER INLET (AA-S125A) W/ BIKE SAFE GRATE, AS PER PLAN	4	EACH	801	6 INCH WATER PIPE AND FITTINGS	24	LF								
604	STANDARD CURB & GUTTER INLET (AA-S125B) W/ BIKE SAFE GRATE AS PER PLAN	2	EACH	801	12 INCH WATER PIPE AND FITTINGS	755	LF								
604	STANDARD CATCH BASIN (AA-S133A) W/ BIKE SAFE GRATE, AS PER PLAN	1	EACH	802	6 INCH VALVE AND APPURTENANCES	2	EACH								
604	MANHOLE, TYPE C W/ 48" BASE I.D. (AA-S102), AS PER PLAN	5	EACH	802	12 INCH VALVE AND APPURTENANCES	2	EACH								
604	MANHOLE, TYPE C W/ 60" BASE I.D. (AA-S102), AS PER PLAN	1	EACH	809	FIRE HYDRANT	2	EACH								
				SPECIAL	SURVEY COORDINATES	1	LUMP								

* DENOTES OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (2013 EDITION)
 ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.
 + ITEM TO BE FURNISHED AND INSTALLED BY THE CITY OF DUBLIN.

**ACADEMIC DRIVE
PHASE 1**

GENERAL NOTES

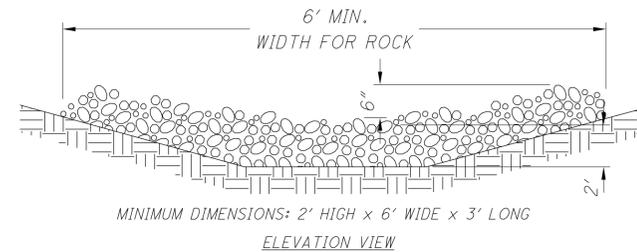
- A DETAILED TEMPORARY AND PERMANENT EROSION CONTROL PLAN MUST BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL BEFORE CONSTRUCTION IF ONE IS NOT INCLUDED IN THE PLANS. THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. THE CONTRACTOR SHALL BE CONSIDERED THE DEVELOPER OF THE STORMWATER DISCHARGE.
- THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE WATER LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS, WHETHER SPECIFICALLY SHOWN ON THE PLANS OR NOT.
- ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT FILTERS, SILT FILTER FENCE, ROCK CHECK DAMS, AND TEMPORARY GROUND COVER.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.
- DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 45 DAYS OR MORE SHALL BE SEEDED WITHIN 7 CALENDAR DAYS OF THE DISTURBANCE. OTHER SEDIMENT CONTROLS THAT ARE INSTALLED SHALL BE MAINTAINED UNTIL VEGETATIVE GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY SEDIMENT DEVICES AT THE CONCLUSION OF CONSTRUCTION BUT NOT BEFORE GROWTH OF PERMANENT GROUND COVER.
- ALL DENUDED AREAS, INCLUDING STOCKPILED TOPSOIL AND EXCAVATED MATERIAL, ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH ANCHORED STRAW MULCH.
- FINAL GRADING WILL BE CONSISTENT WITH PRECONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.
- REMOVE ONLY THE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION. PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.
- BACKFILL TRENCHES IMMEDIATELY AFTER USE. SEED AND MULCH TRENCH AREA WITHIN 2 WEEKS AFTER AREA OR SECTION HAS BEEN OPENED.
- SETTLING FACILITIES, SEDIMENT FILTERS, PERIMETER CONTROLS, AND OTHER PRACTICES INTENDED TO TRAP SEDIMENT SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING OR CONSTRUCTION AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.
- STORM SEWER INLET PROTECTION – ALL STORM SEWER INLETS WHICH ACCEPT WATER RUNOFF FROM THE PROJECT AREA SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT, UNLESS THE STORM SEWER SYSTEM DRAINS TO A SETTLING FACILITY. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS INDICATED IN THE PLANS AND AS DIRECTED BY THE CITY ENGINEER.
- WORKING IN OR CROSSING STREAMS – STREAMS INCLUDING BED AND BANKS SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPPED. TO THE EXTENT PRACTICABLE, CONSTRUCTION VEHICLES SHALL BE KEPT OUT OF STREAMS. WHERE IN-CHANNEL WORK IS NECESSARY, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. WHERE A STREAM MUST BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CULVERT SHALL BE PROVIDED.
- CONSTRUCTION ACCESS ROUTES – MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES AND EQUIPMENT IS ELIMINATED.

14. SLOUGHING AND DUMPING – NO SOIL, ROCK, DEBRIS, OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE UNLESS SUCH DUMPING OR PLACING IS AUTHORIZED BY THE CITY ENGINEER. UNSTABLE SOILS PRONE TO SLIPPING OR LANDSLIDING SHALL NOT BE GRADED, EXCAVATED, FILLED, OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS DONE IN ACCORDANCE WITH A QUALIFIED PROFESSIONAL ENGINEER'S RECOMMENDATIONS TO CORRECT, ELIMINATE, OR ADEQUATELY ADDRESS THE PROBLEMS.
15. MAINTENANCE AND INSPECTION – ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND CONSTRUCTED TO MINIMIZE MAINTENANCE REQUIREMENTS. THEY SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND INSPECTION OF ALL EROSION/SEDIMENT CONTROL DEVICES REQUIRED BY THE CITY ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY ENGINEER, ONCE EVERY 7 CALENDAR DAYS AND/OR WITHIN 24 HOURS AFTER A RAIN EVENT OF GREATER THAN 0.5 INCHES IN A 24-HOUR PERIOD. THESE INSPECTIONS SHALL IDENTIFY AREAS CONTRIBUTING TO STORMWATER DISCHARGES ASSOCIATED WITH THE PROJECT; EVALUATE THE ADEQUACY, IMPLEMENTATION, AND MAINTENANCE OF EXISTING AND PROPOSED EROSION/SEDIMENTATION MEASURES; AND DETERMINE WHETHER ADDITIONAL MEASURES ARE REQUIRED. ACCEPTABLE INSPECTION REPORTS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ENGINEER WITHIN 48 HOURS OF INSPECTION COMPLETION. THE REPORT SHALL CONTAIN THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLAN, AND IDENTIFYING ANY INCIDENTS OF NONCOMPLIANCE.

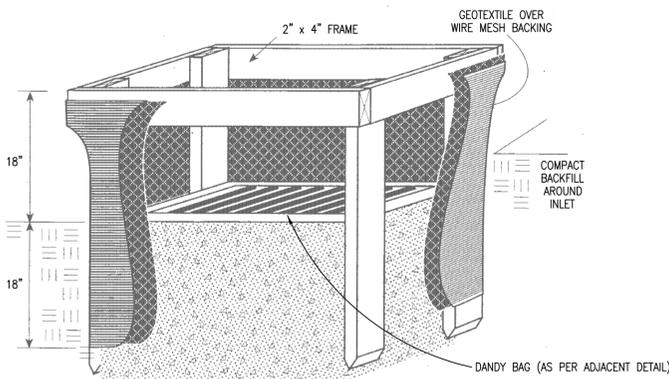
16. OUTFLOWS FROM DEWATERING OPERATIONS – ALL WATER PRODUCED FROM CLEANING AND DEWATERING OPERATIONS, WHETHER SPECIFICALLY FROM TRENCH DEWATERING OPERATIONS OR FROM MORE EXTENSIVE DEWATERING OPERATIONS, SHALL BE DISCHARGED IN SUCH A MANNER AS TO ELIMINATE EROSION FROM SUCH DISCHARGE.
17. ADDITIONAL CONTROLS – THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ARE TRACKED OFF-SITE BY CONSTRUCTION EQUIPMENT, VEHICLES, AND WORKERS. THE CONTRACTOR SHALL ALSO ENSURE THAT NO SOLID OR LIQUID WASTE IS DISCHARGED INTO ANY STORMWATER FLOW.
18. TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AVAILABILITY AND UPDATES – THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND ADJUSTMENTS TO THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN.

NO. 2 STONE CHECK DAM

FURNISH MATERIAL CONFORMING TO ITEM 601 – ROCK CHANNEL PROTECTION, NO. 2 STONE, WITHOUT FILTER. PLACE THE ROCK OUTSIDE THE TRAFFIC CLEAR ZONE IN THE DITCH. THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL, NO. 2 STONE CHECK DAM.

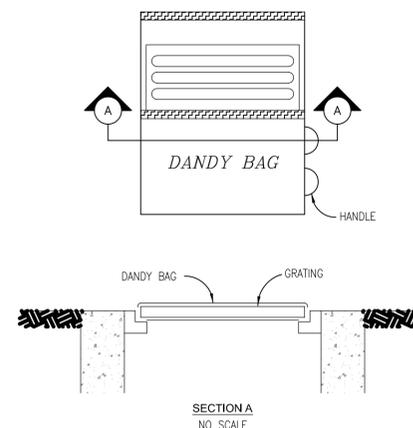


NO. 2 STONE CHECK DAM DETAIL



- Inlet protection shall be constructed either before upslope land disturbance begins or before the storm drain becomes operational.
- The earth around the inlet shall be excavated completely to a depth of at least 18 in.
- The wooden frame shall be constructed of 2-by-4-in. construction-grade lumber. The 2-by-4-in. posts shall be driven 1 ft. into the ground at four corners of the inlet and the top portion of 2-by-4-in. frame assembled using the overlap joint shown. The top of the frame shall be at least 6 in. below adjacent roads if ponded water would pose a safety hazard to traffic.
- Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.
- Geotextile shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 in. below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.
- Backfill shall be placed around the inlet in compacted 6-in. layers until the earth is even with notch elevation on ends and top elevation on sides.
- A compacted earth dike or a check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression and if runoff bypassing the inlet will not flow to a settling pond. The top of earth dikes shall be at least 6 in. higher than the top of the frame.

INLET PROTECTION DETAIL
FOR CATCH BASINS



INSTALLATION: STAND GRATE ON END. PLACE DANDY BAG OVER GRATE. FLIP GRATE OVER SO THAT OPEN END IS UP. PULL UP SLACK. TUCK FLAP IN. BE SURE END OF GRATE IS COMPLETELY COVERED BY FLAP OR DANDY BAG WILL NOT FIT PROPERLY. HOLDING HANDLES, CAREFULLY PLACE DANDY BAG WITH GRATE INSERTED INTO CATCH BASIN FRAME SO THAT RED DOT ON THE TOP OF THE DANDY BAG IS VISIBLE.

MAINTENANCE: AFTER SILT HAS DRIED, REMOVE IT FROM THE SURFACE OF DANDY BAG WITH BROOM.

DANDY BAG DETAIL
FOR CATCH BASINS

PROHIBITED CONSTRUCTION ACTIVITIES

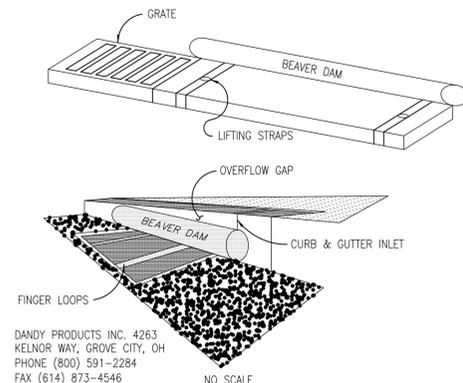
THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENTAL OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.
- INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.
- PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.
- DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, AND/OR ANY OTHER HARMFUL WASTE, INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.
- PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOWLINE OF A STREAM.
- DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.
- DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, WETLANDS, OR SURFACE WATERS.
- OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.
- STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY (PUBLIC OR PRIVATE) NOT PREVIOUSLY SPECIFIED BY THE CITY ENGINEER FOR SAID PURPOSES.

TEMPORARY EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE CITY ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 207, INLET PROTECTION	9 EACH
ITEM 207, PERIMETER FILTER FABRIC FENCE	1200 LF
ITEM SPECIAL, NO. 2 STONE CHECK DAM	1 EACH



INSTALLATION: STAND GRATE ON END. SLIDE THE BEAVER DAM BAG ON WITH DAM ON TOP OF GRATE. PULL ALL EXCESS DOWN. LAY UNIT ON ITS SIDE. CAREFULLY TUCK FLAP IN. PRESS VELCRO STRIPS TOGETHER. INSTALL THE UNIT MAKING SURE FRONT EDGE OF GRATE IS INSERTED IN FRAME FIRST THEN LOWER BACK INTO PLACE. PRESS VELCRO DOTS TOGETHER WHICH ARE LOCATED UNDER LIFTING STRAPS. THIS INSURES STRAPS REMAIN FLUSH WITH GUTTER.

MAINTENANCE: WITH A STIFF BRISTLE BROOM SWEEP SILT & OTHER DEBRIS OFF SURFACE AFTER EACH EVENT.

BEAVER DAM DETAIL
FOR CURB & GUTTER INLETS

PROJECT SITE DESCRIPTION

EXTENSION OF ACADEMIC DRIVE TO A POINT 650' SOUTH OF THE EXISTING ROUNDABOUT STUB AT SR-161 TO ACCOMMODATE ACCESS TO THE OHIO UNIVERSITY HERITAGE COLLEGE OF OSTEOPATHIC MEDICINE. ACADEMIC DRIVE IS PROPOSED AS A FOUR LANE CURBED ROADWAY WITH A CENTER MEDIAN AND DEDICATED BIKE LANES ON BOTH SIDES OF THE ROAD. PROJECT INCLUDES A SHARED-USE PATH ALONG THE EAST SIDE OF THE ROADWAY AND A CONCRETE SIDEWALK ALONG THE WEST SIDE. DRAINAGE IMPROVEMENTS WILL EXTEND 750' BEYOND THE PROPOSED ROADWAY TERMINUS TO OUTLET INTO A DETENTION BASIN.

USGS QUADRANTS: HILLIARD, OH 40083-A2-TF-024

LATITUDE: N 40° 06' 25"
LONGITUDE: W 83° 11' 10"

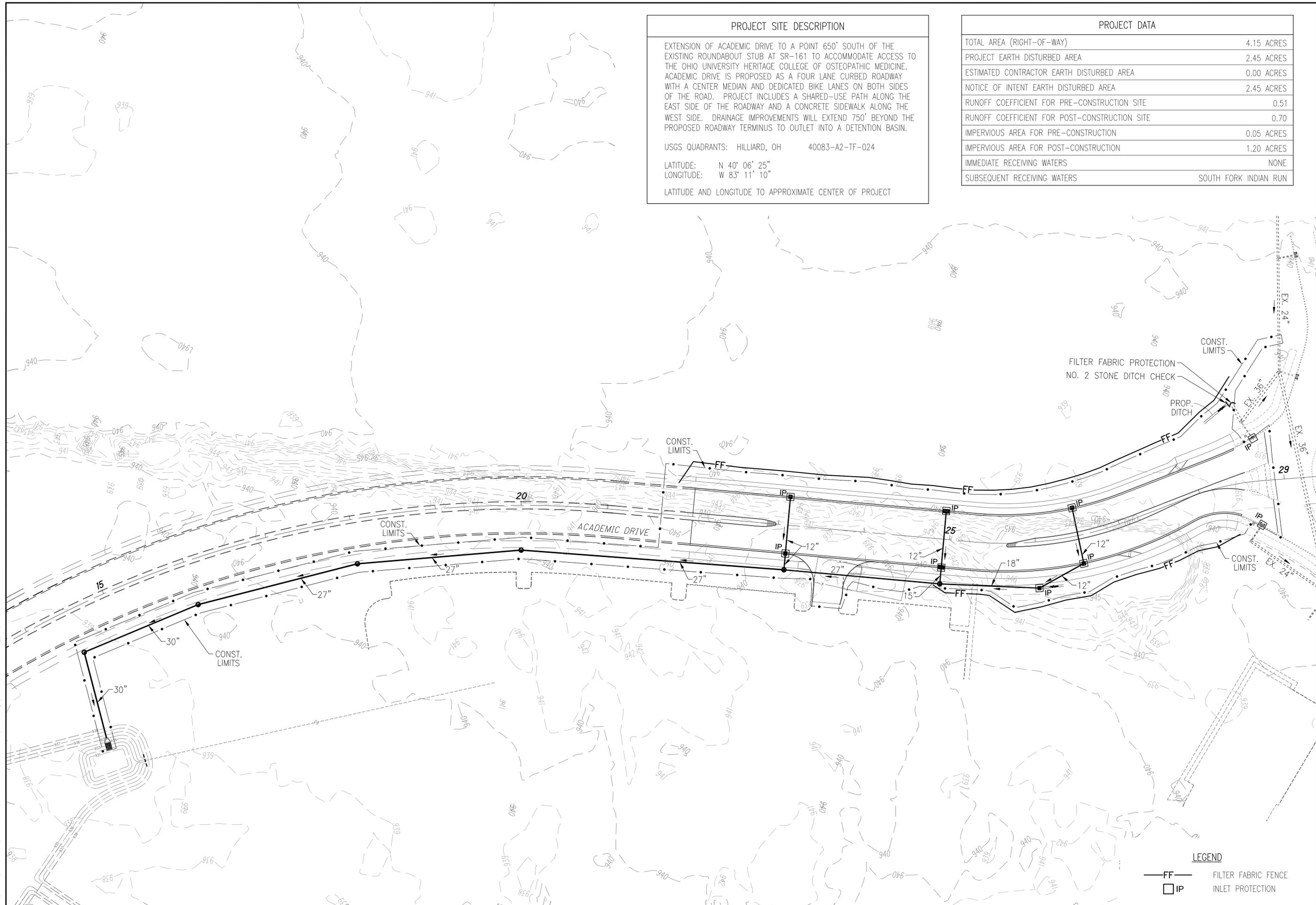
LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT DATA

TOTAL AREA (RIGHT-OF-WAY)	4.15 ACRES
PROJECT EARTH DISTURBED AREA	2.45 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	2.45 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.51
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.70
IMPERVIOUS AREA FOR PRE-CONSTRUCTION	0.05 ACRES
IMPERVIOUS AREA FOR POST-CONSTRUCTION	1.20 ACRES
IMMEDIATE RECEIVING WATERS	NONE
SUBSEQUENT RECEIVING WATERS	SOUTH FORK INDIAN RUN



CALCULATED	LMO	CHECKED	KJG
------------	-----	---------	-----



EROSION CONTROL PLAN

ACADEMIC DRIVE PHASE 1

LEGEND

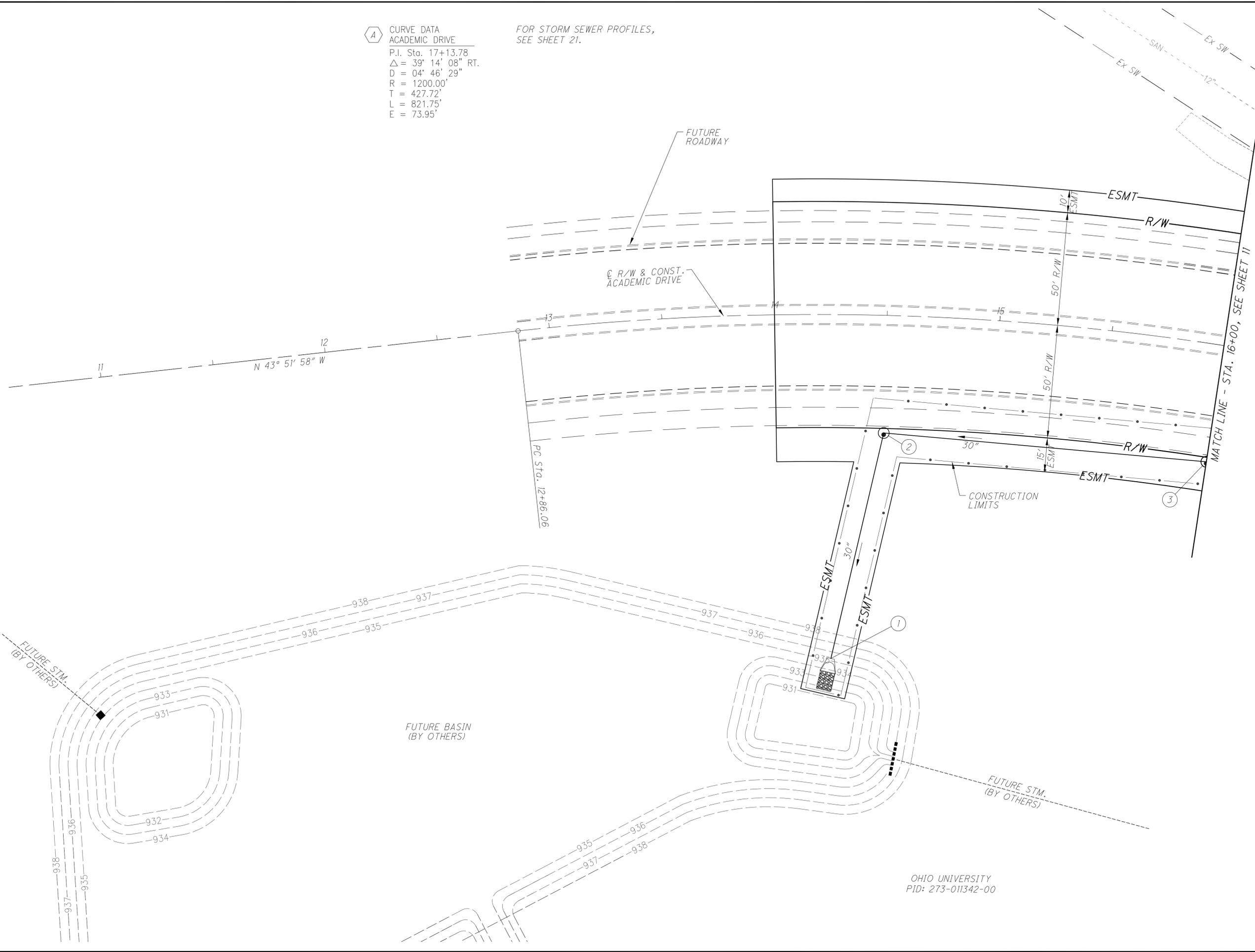
- FF FILTER FABRIC FENCE
- IP INLET PROTECTION

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A CURVE DATA
 ACADEMIC DRIVE
 P.I. Sta. 17+13.78
 $\Delta = 39^\circ 14' 08''$ RT.
 $D = 04' 46' 29''$
 $R = 1200.00'$
 $T = 427.72'$
 $L = 821.75'$
 $E = 73.95'$

FOR STORM SEWER PROFILES,
SEE SHEET 21.



CALCULATED
L.A.M.
CHECKED
K.J.G.

0 10 20 40
HORIZONTAL
SCALE IN FEET

PLAN - ACADEMIC DRIVE
 STA. 12+00 TO STA. 16+00

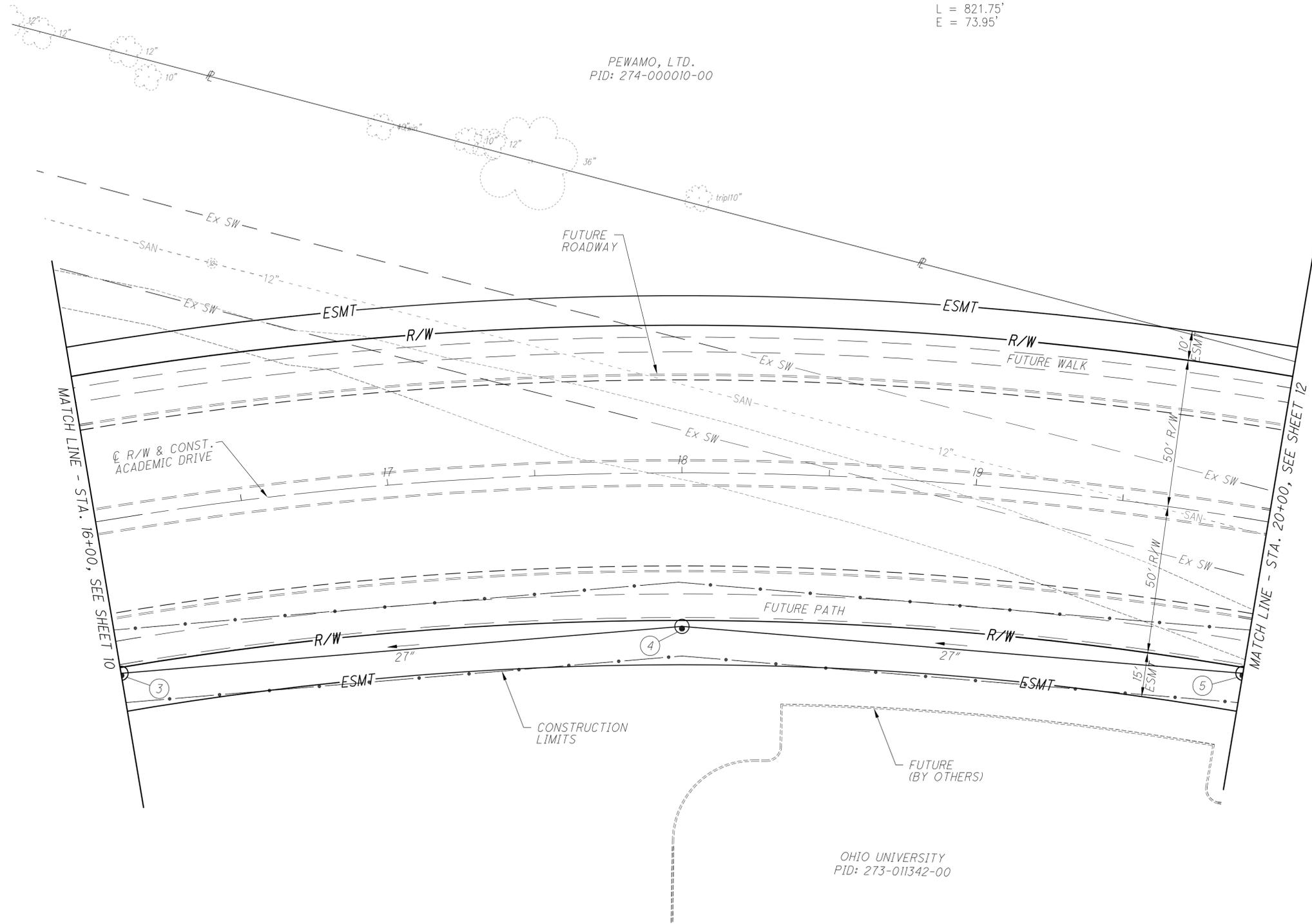
ACADEMIC DRIVE
 PHASE 1

OHIO UNIVERSITY
 PID: 273-011342-00

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A CURVE DATA
 ACADEMIC DRIVE
 P.I. Sta. 17+13.78
 $\Delta = 39^\circ 14' 08''$ RT.
 $D = 04' 46' 29''$
 $R = 1200.00'$
 $T = 427.72'$
 $L = 821.75'$
 $E = 73.95'$

FOR STORM SEWER PROFILES,
SEE SHEET 21.



CALCULATED
L.A.M.
CHECKED
K.J.G.

0 10 20 40
HORIZONTAL
SCALE IN FEET

PLAN - ACADEMIC DRIVE
STA. 16+00 TO STA. 20+00

ACADEMIC DRIVE
PHASE 1

A CURVE DATA
 ACADEMIC DRIVE
 P.I. Sta. 17+13.78
 $\Delta = 39^\circ 14' 08''$ RT.
 $D = 04^\circ 46' 29''$
 $R = 1200.00'$
 $T = 427.72'$
 $L = 821.75'$
 $E = 73.95'$

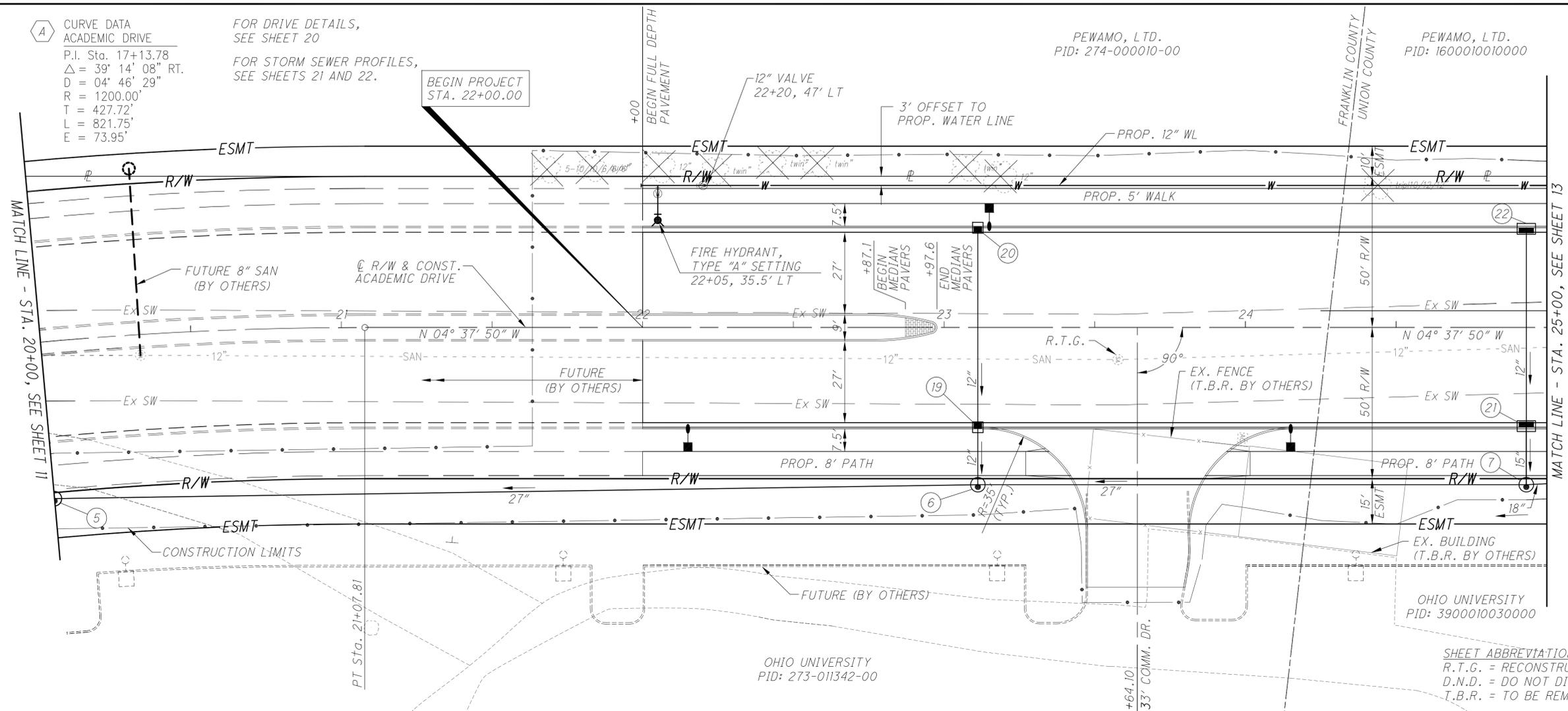
FOR DRIVE DETAILS,
 SEE SHEET 20

 FOR STORM SEWER PROFILES,
 SEE SHEETS 21 AND 22.

BEGIN PROJECT
STA. 22+00.00

PEWAMO, LTD.
PID: 274-000010-00

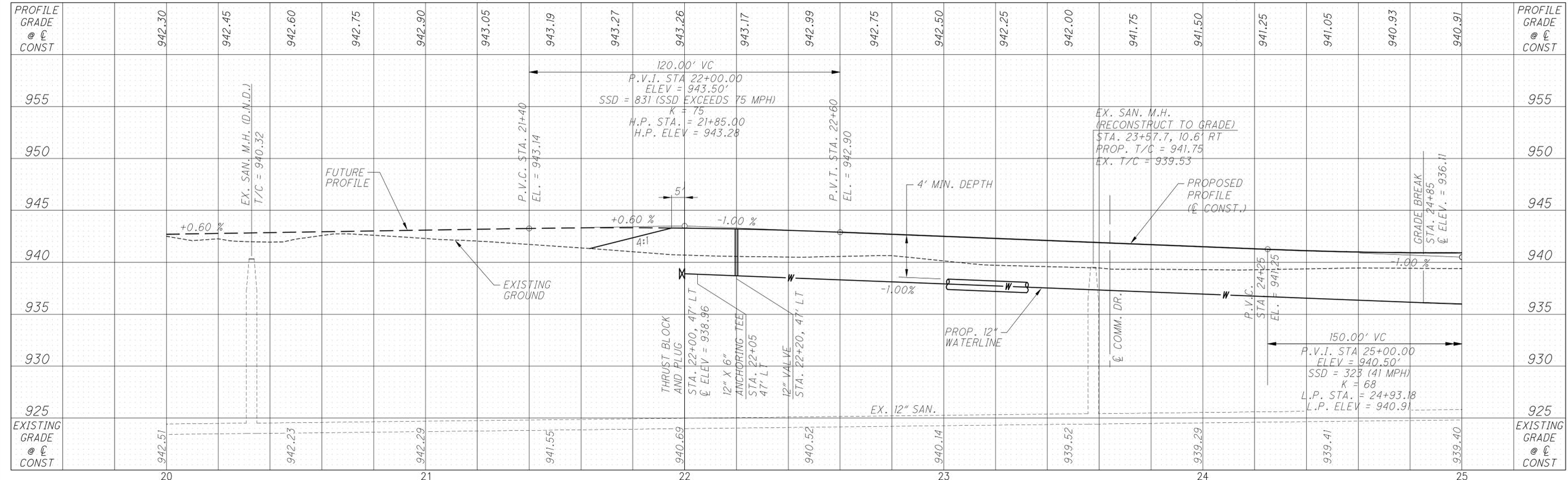
PEWAMO, LTD.
PID: 1600010010000



CALCULATED
 LAM
 CHECKED
 KJG

PLAN AND PROFILE - ACADEMIC DRIVE
 STA. 20+00 TO STA. 25+00

ACADEMIC DRIVE
 PHASE 1



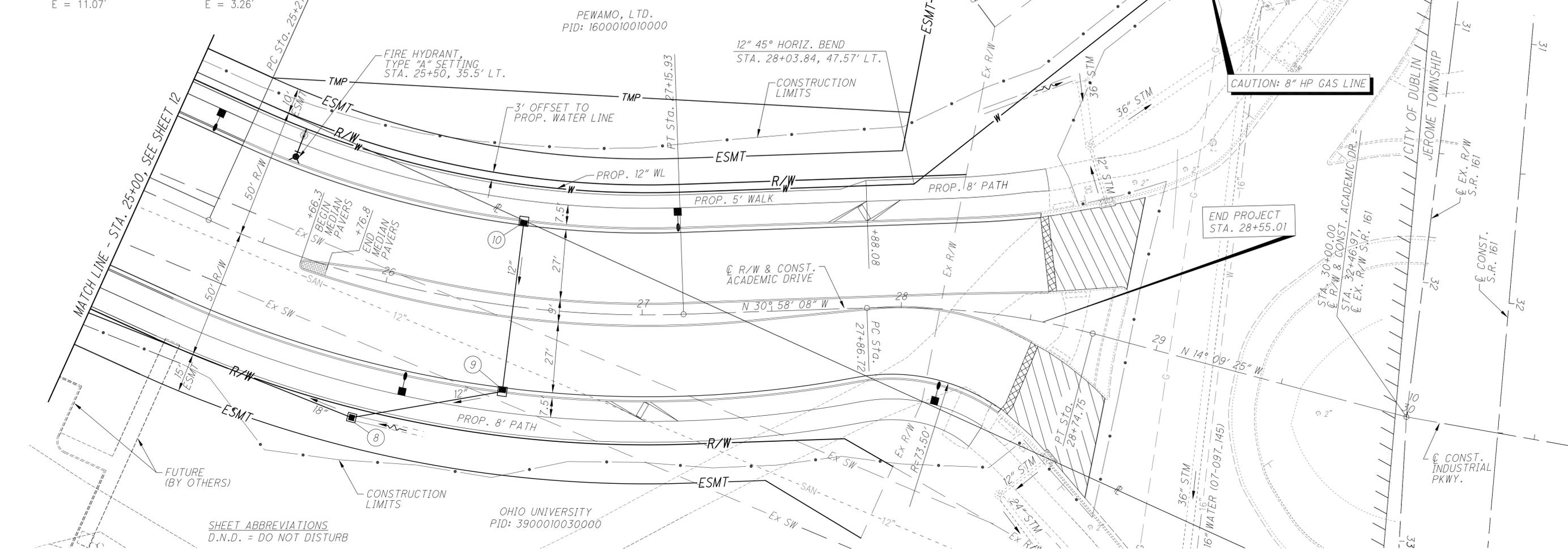
B CURVE DATA ACADEMIC DRIVE		C CURVE DATA ACADEMIC DRIVE	
P.I. Sta.	26+23.39	P.I. Sta.	28+31.05
Δ	26° 20' 18" LT.	Δ	16° 48' 43" RT.
D	13' 58" 28"	D	19' 05' 55"
R	410.00'	R	300.00'
T	95.93'	T	44.33'
L	188.47'	L	88.03'
E	11.07'	E	3.26'

 MILL AND RESURFACE 3",
SEE SHEET 19 FOR DETAILS.
 MILL AND RESURFACE 1.25",
SEE SHEET 19 FOR DETAILS.

FOR BIKE RAMP DETAILS,
SEE SHEET 19.
 FOR STORM SEWER PROFILES,
SEE SHEETS 21 AND 22.



 HORIZONTAL SCALE IN FEET
 CALCULATED LAM CHECKED KJG



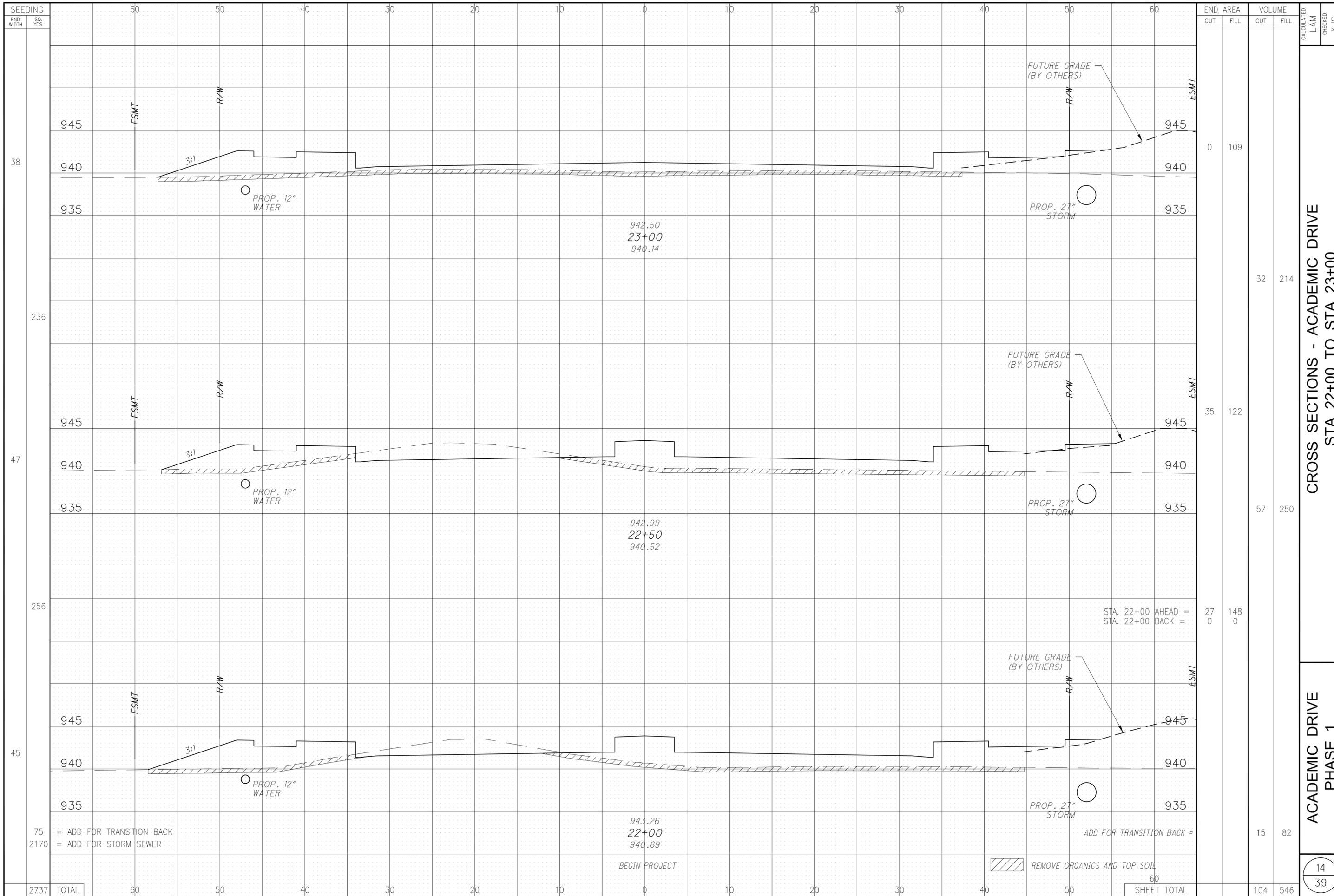
PROFILE GRADE @ ℓ CONST	940.91	940.98	941.15	941.40	941.70	942.00	942.30	942.60	942.90	943.20	943.50	943.80	944.10	944.40	944.70	944.70	944.70	945.14	946.96	948.63	PROFILE GRADE @ ℓ CONST
950																					950
945																					945
940																					940
935																					935
930																					930
925																					925
EXISTING GRADE @ ℓ CONST	939.40		939.22		939.16		939.09		938.94		938.79		938.75		945.18						EXISTING GRADE @ ℓ CONST

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PLAN AND PROFILE - ACADEMIC DRIVE
 STA. 25+00 TO STA. 30+00

ACADEMIC DRIVE
 PHASE 1

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END CUT	AREA FILL	VOLUME		CALCULATED LAM	CHECKED KJG
		CUT	FILL		
0	109				
		32	214		
35	122				
		57	250		
27	148				
0	0				
		15	82		
		104	546		

**CROSS SECTIONS - ACADEMIC DRIVE
STA. 22+00 TO STA. 23+00**

**ACADEMIC DRIVE
PHASE 1**

SEEDING	END WIDTH	SO. YDS.	60	50	40	30	20	10	0	10	20	30	40	50	60	ESMT
	38								942.50 23+00 940.14							
	236															
	47								942.99 22+50 940.52							
	256															
	45								943.26 22+00 940.69							
75	2170															
	2737	TOTAL	60	50	40	30	20	10	0	10	20	30	40	50	60	SHEET TOTAL

= ADD FOR TRANSITION BACK
= ADD FOR STORM SEWER

REMOVE ORGANICS AND TOP SOIL

ADD FOR TRANSITION BACK =

60

BEGIN PROJECT

STA. 22+00 AHEAD =
STA. 22+00 BACK =

27
0

148
0

FUTURE GRADE
(BY OTHERS)

FUTURE GRADE
(BY OTHERS)

FUTURE GRADE
(BY OTHERS)

3:1

3:1

3:1

PROP. 12"
WATER

PROP. 12"
WATER

PROP. 12"
WATER

PROP. 27"
STORM

PROP. 27"
STORM

PROP. 27"
STORM

ESMT

R/W

ESMT

R/W

ESMT

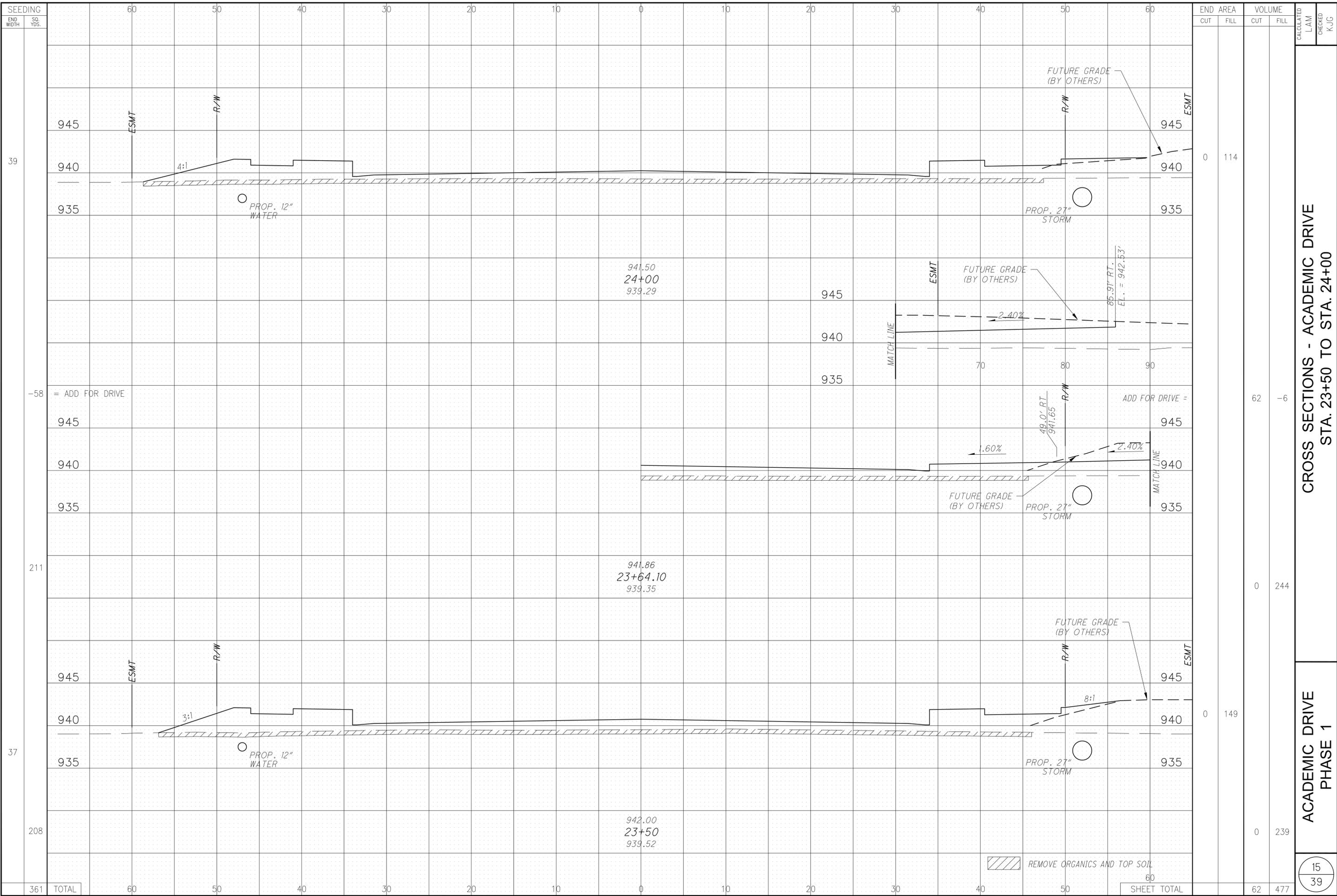
R/W

ESMT

ESMT

ESMT

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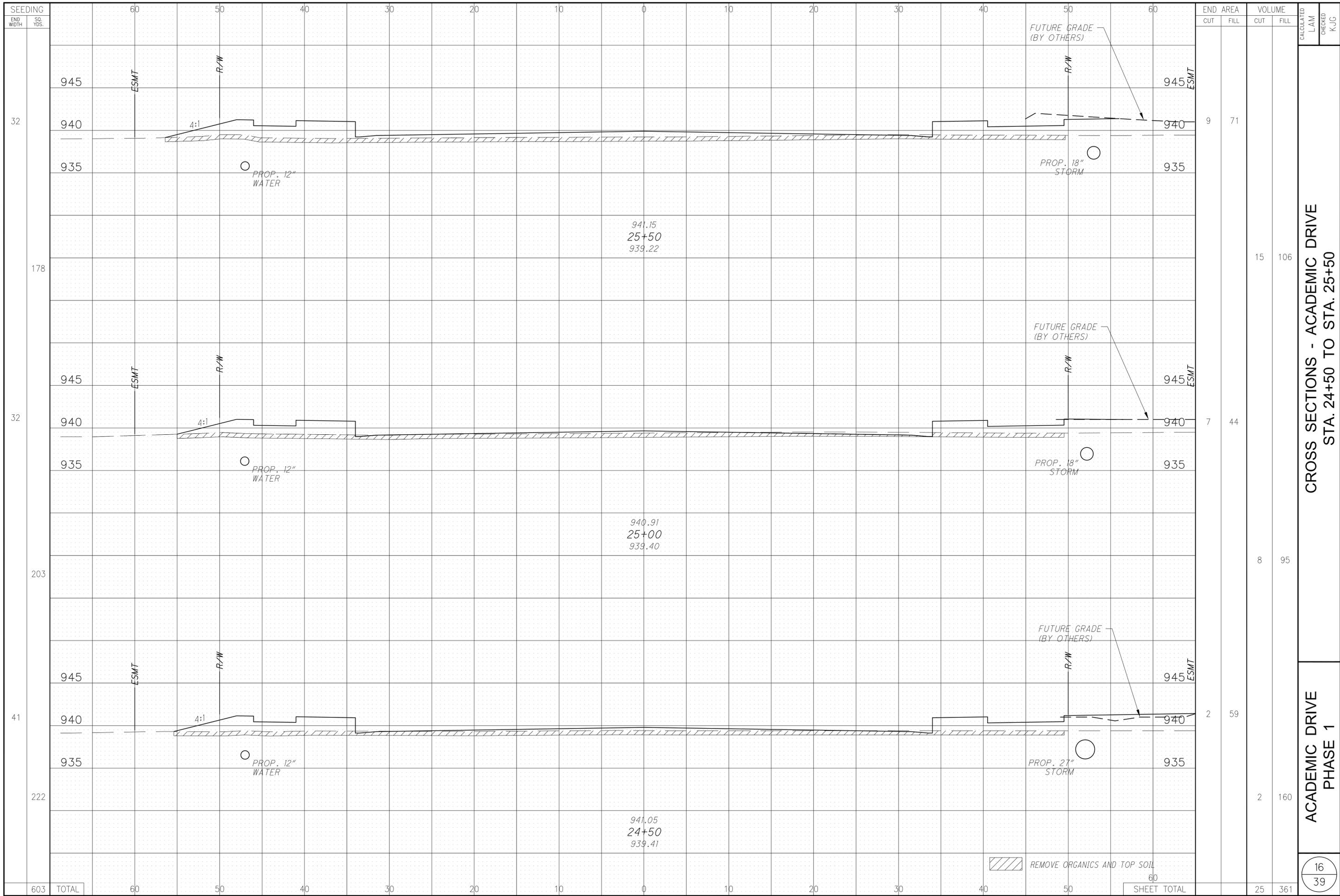
END CUT	AREA FILL	VOLUME		CALCULATED LAM	CHECKED KJG
		CUT	FILL		
0	114				
		62	-6		
0	244				
0	149				
0	239				
361	TOTAL	62	477		

CROSS SECTIONS - ACADEMIC DRIVE
STA. 23+50 TO STA. 24+00

ACADEMIC DRIVE
PHASE 1

15
39

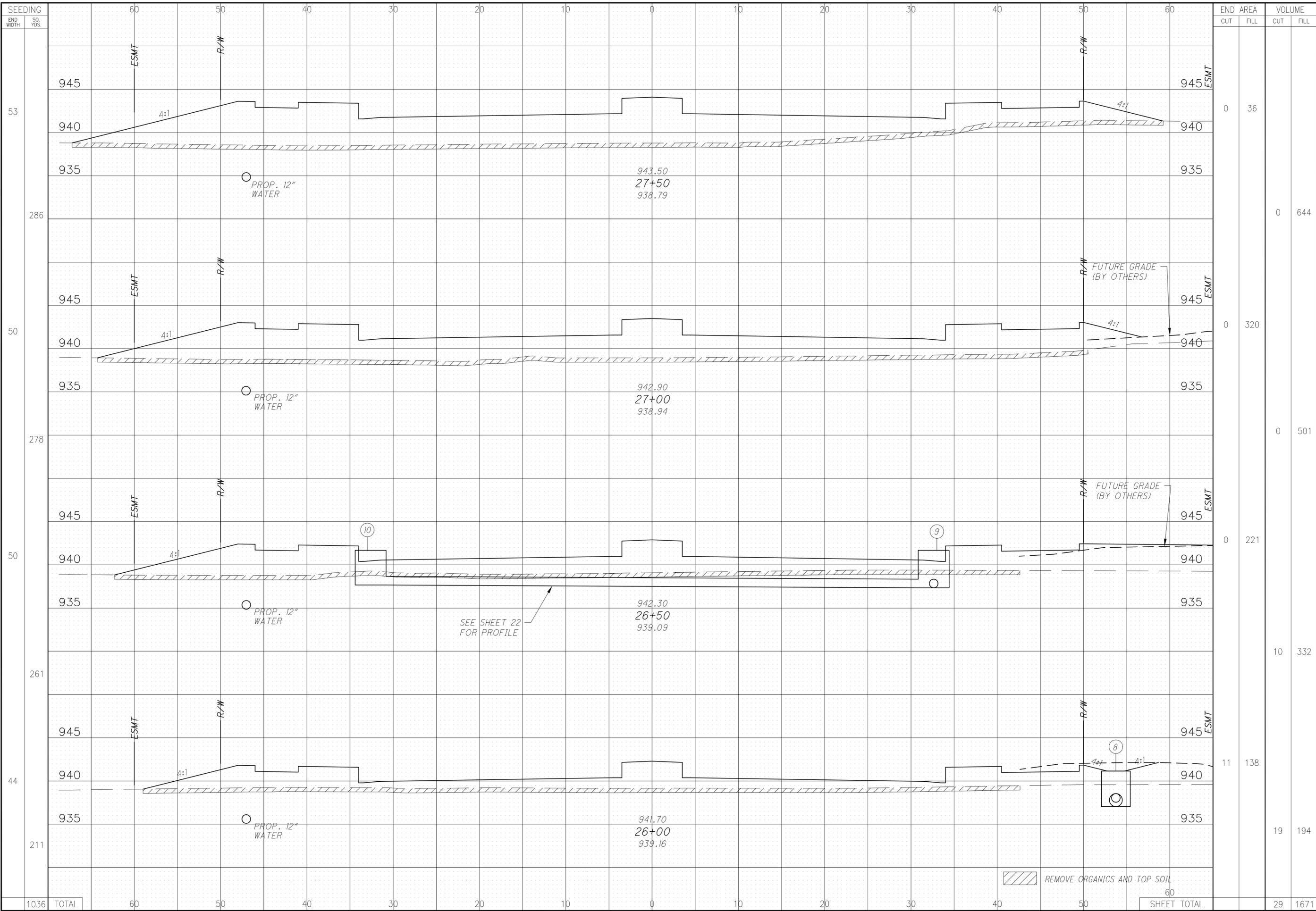
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**CROSS SECTIONS - ACADEMIC DRIVE
STA. 24+50 TO STA. 25+50**

**ACADEMIC DRIVE
PHASE 1**

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END CUT	AREA FILL	VOLUME	
		CUT	FILL
0	36	0	644
0	320	0	501
0	221	10	332
11	138	19	194
1036	TOTAL	29	1671

**CROSS SECTIONS - ACADEMIC DRIVE
STA. 26+00 TO STA. 27+50**

**ACADEMIC DRIVE
PHASE 1**

REMOVE ORGANICS AND TOP SOIL

SEE SHEET 22 FOR PROFILE

FUTURE GRADE (BY OTHERS)

FUTURE GRADE (BY OTHERS)

PROP. 12" WATER

PROP. 12" WATER

PROP. 12" WATER

PROP. 12" WATER

943.50
27+50
938.79

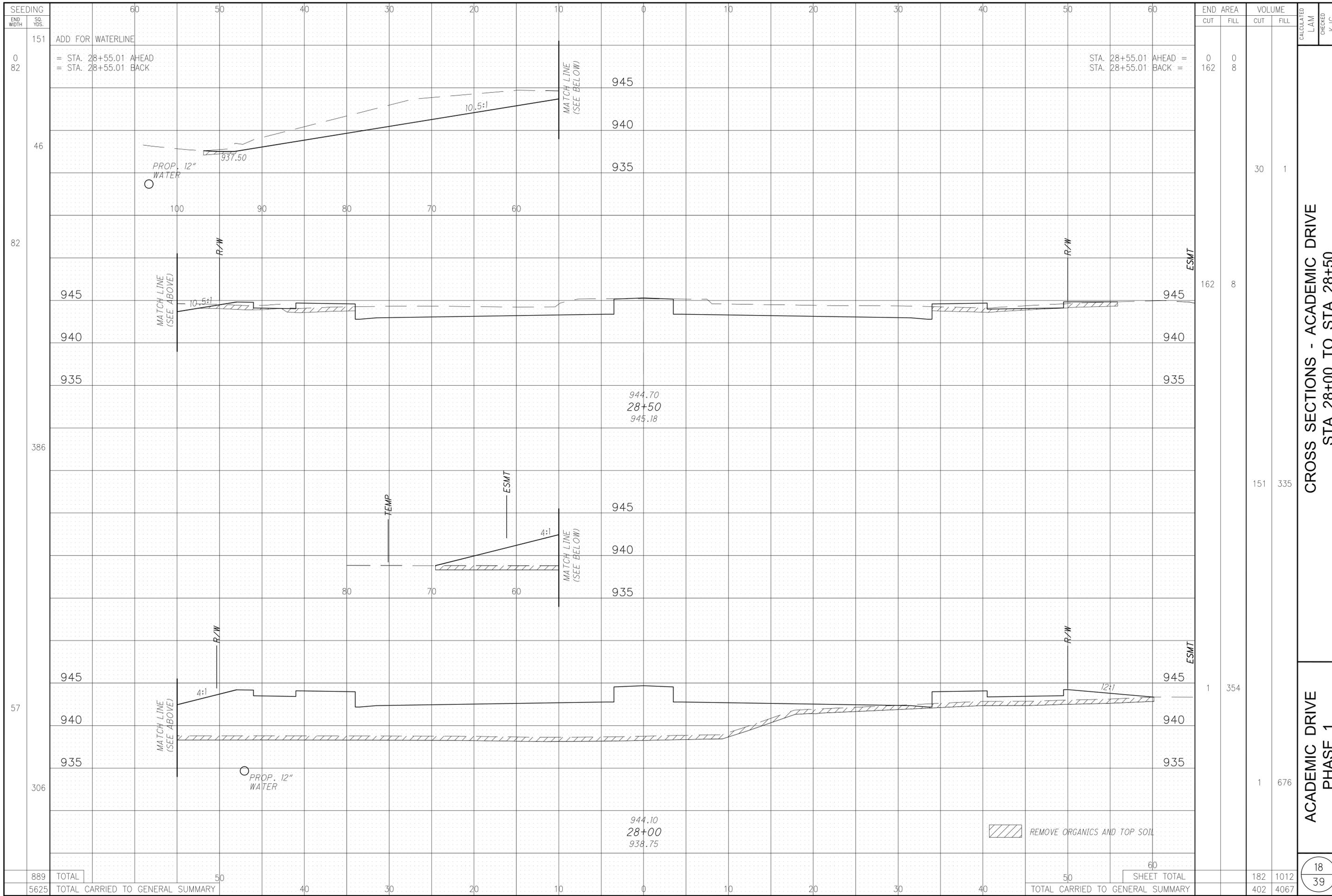
942.90
27+00
938.94

942.30
26+50
939.09

941.70
26+00
939.16

SHEET TOTAL

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SEEDING	END WIDTH	SO. YDS.	END AREA		VOLUME		CALCULATED LAM	CHECKED KJG
			CUT	FILL	CUT	FILL		
151	0	82	0	0	162	8		
	46	82			30	1		
	82	386	162	8	151	335		
	57	306	1	354	1	676		
889	TOTAL	5625	182	1012	402	4067		

CROSS SECTIONS - ACADEMIC DRIVE
STA. 28+00 TO STA. 28+50

ACADEMIC DRIVE
PHASE 1

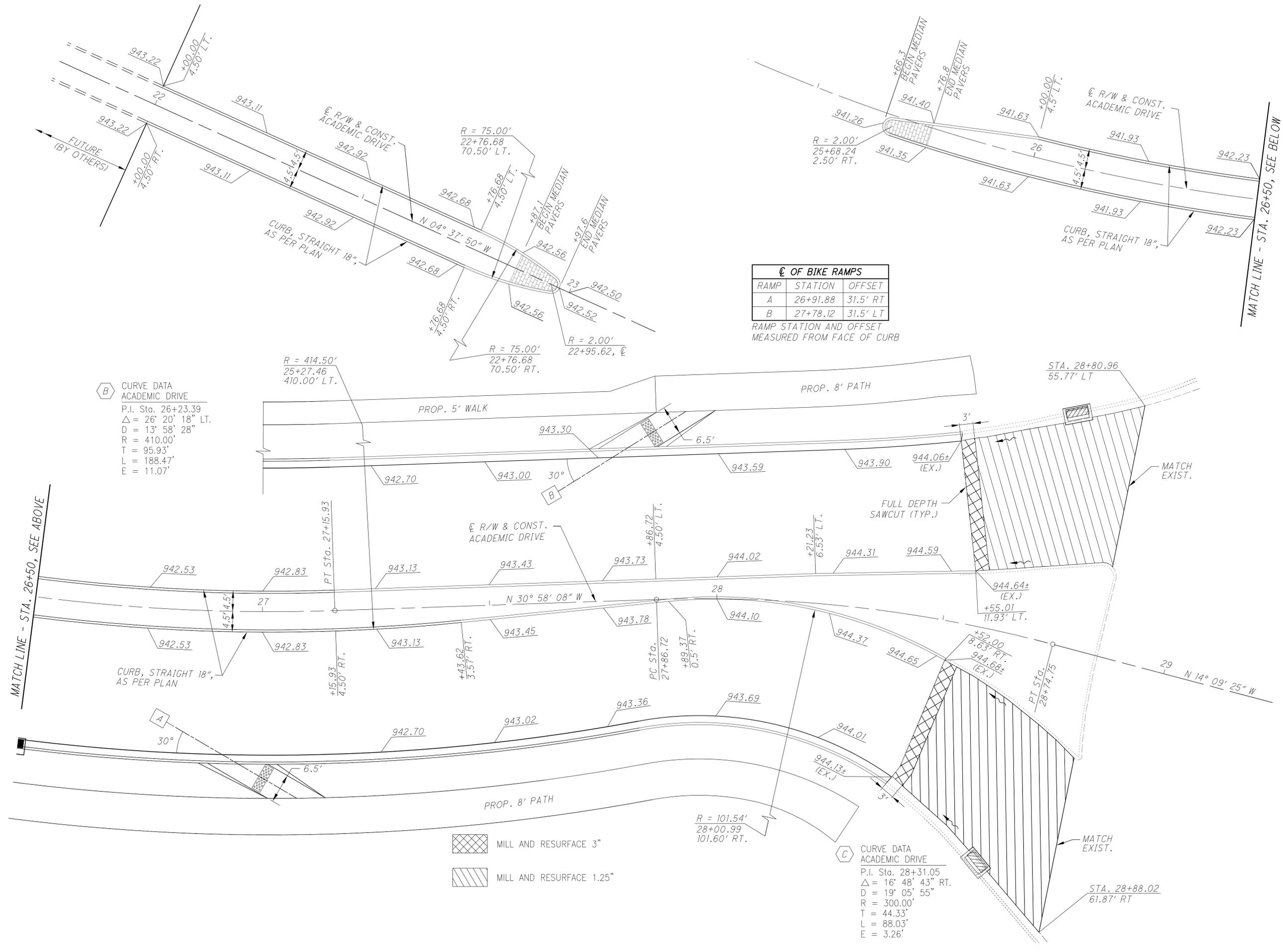
18
39



CALCULATED LMO CHECKED KJG

MEDIAN AND PAVEMENT DETAILS

ACADEMIC DRIVE PHASE 1



☐ OF BIKE RAMPS

RAMP	STATION	OFFSET
A	26+91.88	31.5' RT
B	27+78.12	31.5' LT

RAMP STATION AND OFFSET MEASURED FROM FACE OF CURB

Ⓟ CURVE DATA ACADEMIC DRIVE
 P.I. Sta. 26+23.39
 $\Delta = 26^\circ 20' 18''$ LT.
 $D = 13' 58' 28''$
 $R = 410.00'$
 $T = 95.93'$
 $L = 188.47'$
 $E = 11.07'$

Ⓞ CURVE DATA ACADEMIC DRIVE
 P.I. Sta. 28+31.05
 $\Delta = 16^\circ 48' 43''$ RT.
 $D = 19' 05' 55''$
 $R = 300.00'$
 $T = 44.33'$
 $L = 88.03'$
 $E = 3.26'$

- MILL AND RESURFACE 3"
- MILL AND RESURFACE 1.25"

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CALCULATED
L.A.M.
CHECKED
K.J.G.

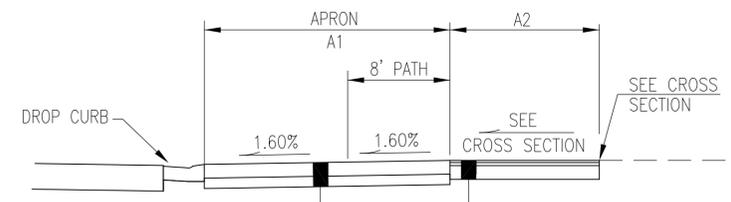
DRIVE DETAILS
STA. 23+64.10

ACADEMIC DRIVE
PHASE 1

FOR DRIVE CROSS SECTION, SEE SHEET 15.

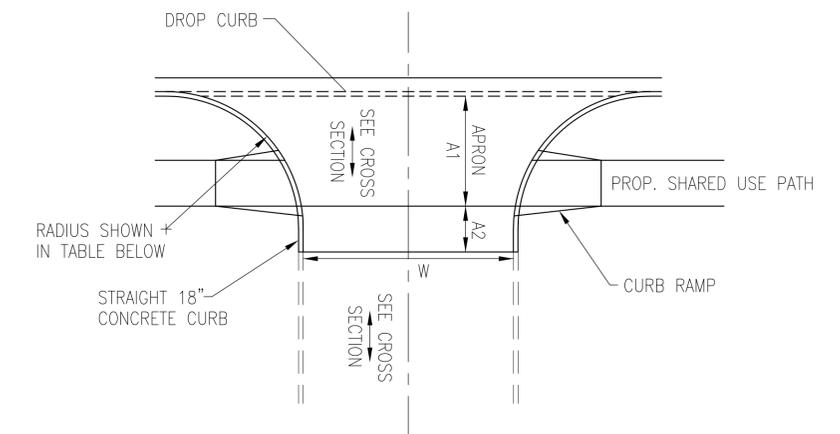
C OF CURB RAMP		
RAMP	STATION	OFFSET
C	23+39.00	45' RT
D	23+89.60	45' RT

RAMP STATION AND OFFSET MEASURED FROM FACE OF CURB



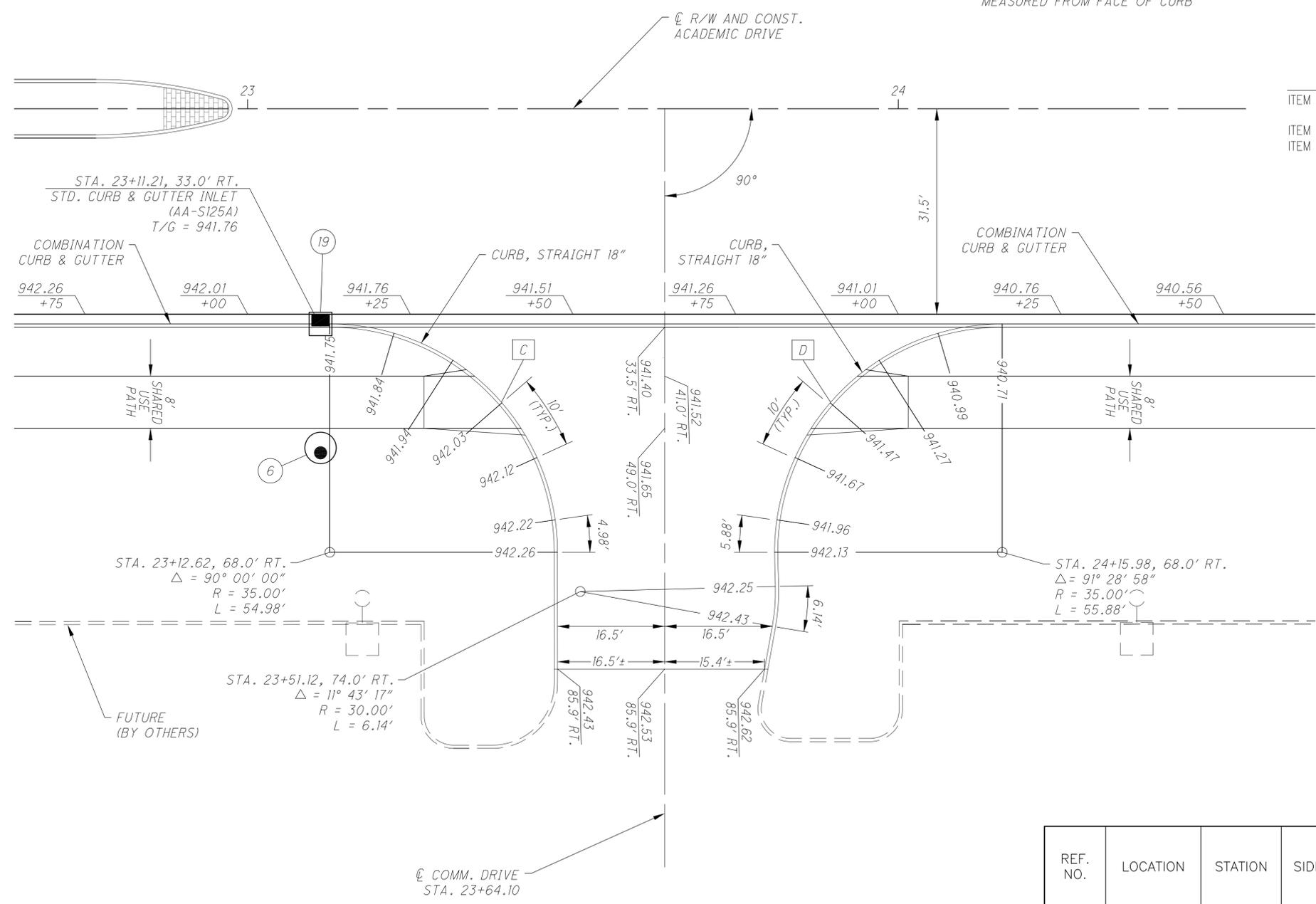
- ASPHALT COMMERCIAL
- ITEM 448 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)
 - ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL./SY)
 - ITEM 448 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS)
 - ITEM 304 - 8" AGGREGATE BASE
 - ITEM 204 - SUBGRADE COMPACTION

PROFILE

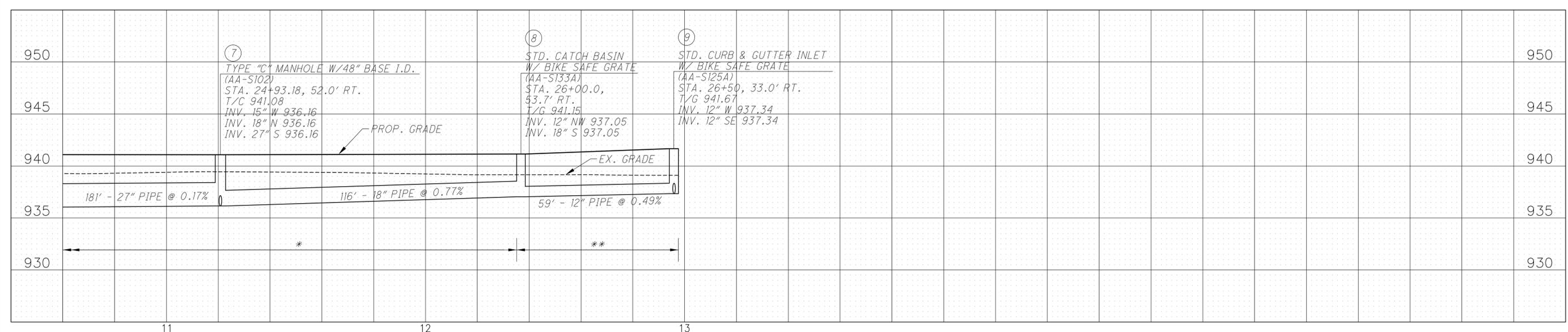
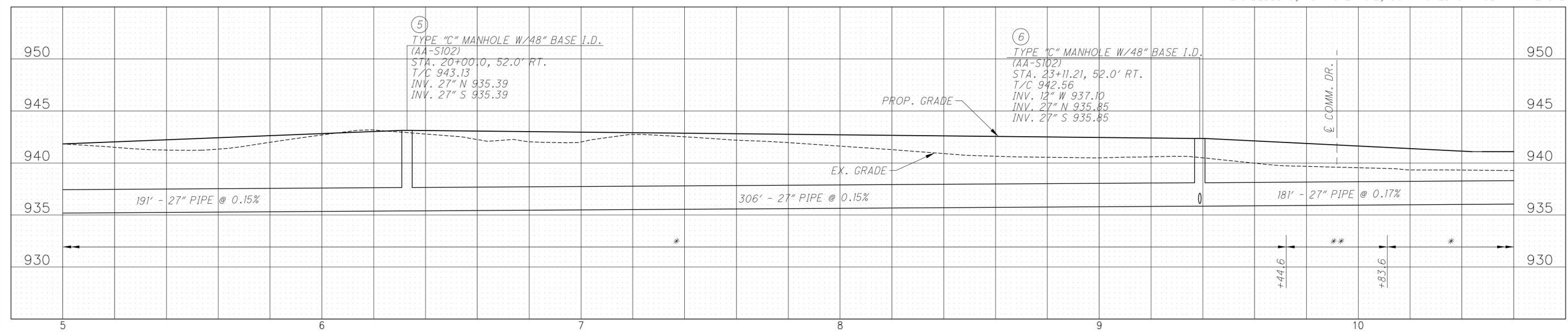
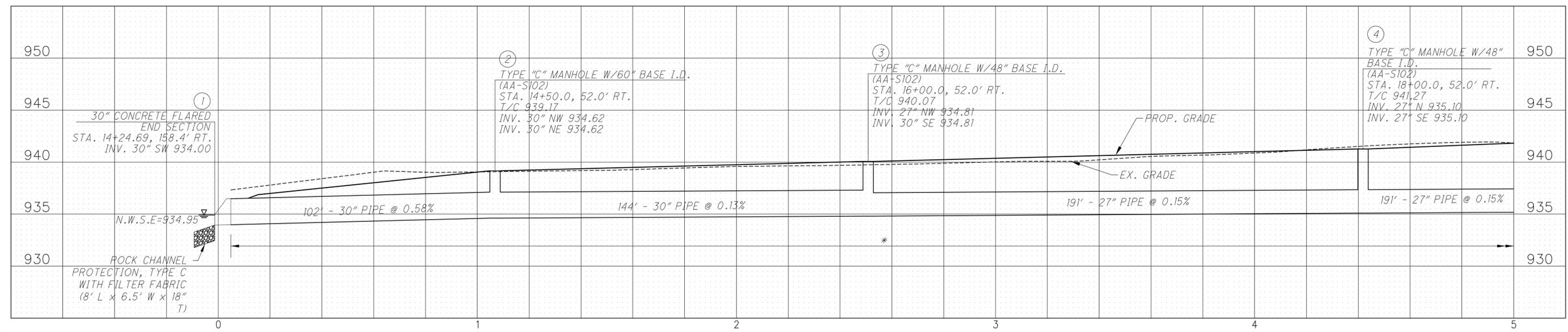


PLAN
CURBED DRIVEWAY

REF. NO.	LOCATION	STATION	SIDE	θ	W	TIE-IN OFFSET	RADIUS	APRON A1	BEYOND APRON A2	DRIVEWAY COMPOSITION	SERVICE TYPE
					LF			SF	SF		
DR1	ACADEMIC DR.	23+64.10	RT.	90	33	85.9'	35'	943	1296	ASPHALT	COMM.



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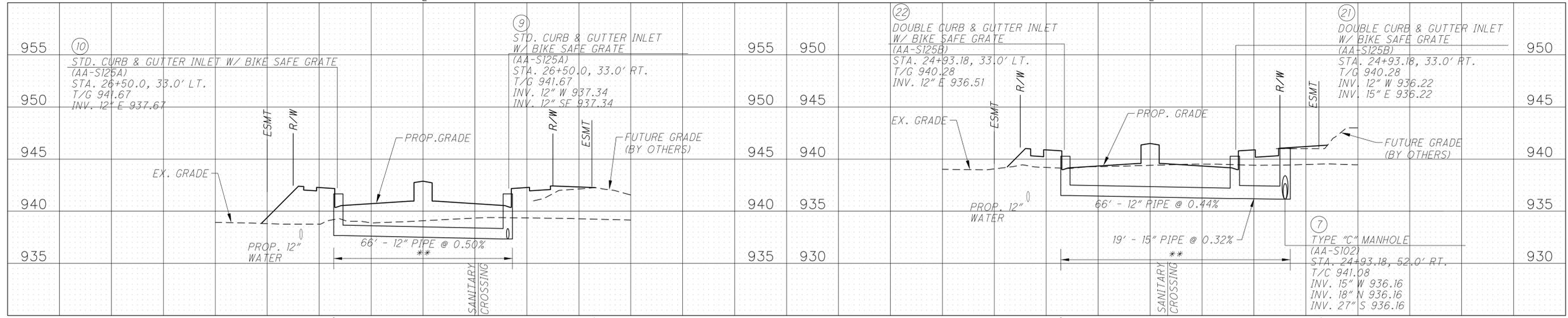


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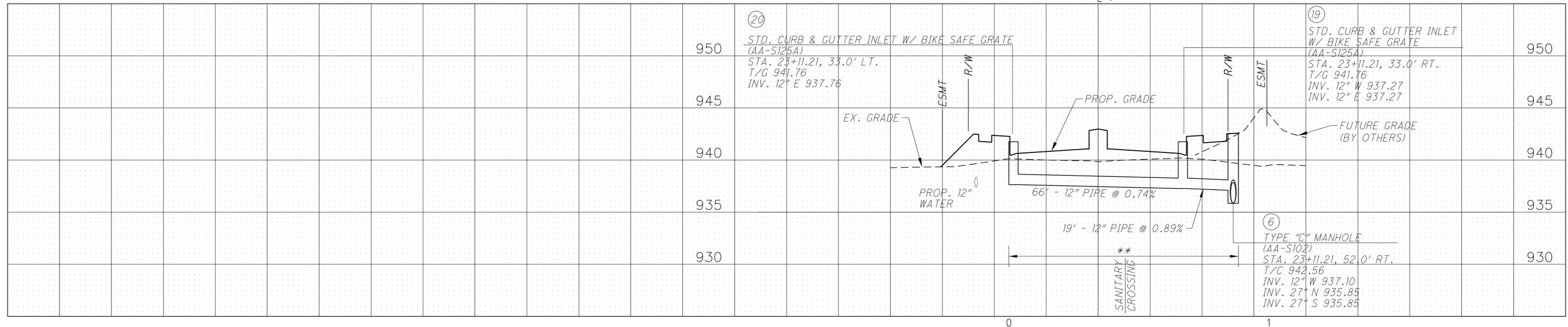
CL R/W & CONST. ACADEMIC DR.

CL R/W & CONST. ACADEMIC DR.



* = TYPE I BEDDING, WITH ITEM 911, COMPACTED BACKFILL
 ** = TYPE I BEDDING, WITH ITEM 912, COMPACTED GRANULAR MATERIAL

CL R/W & CONST. ACADEMIC DR.

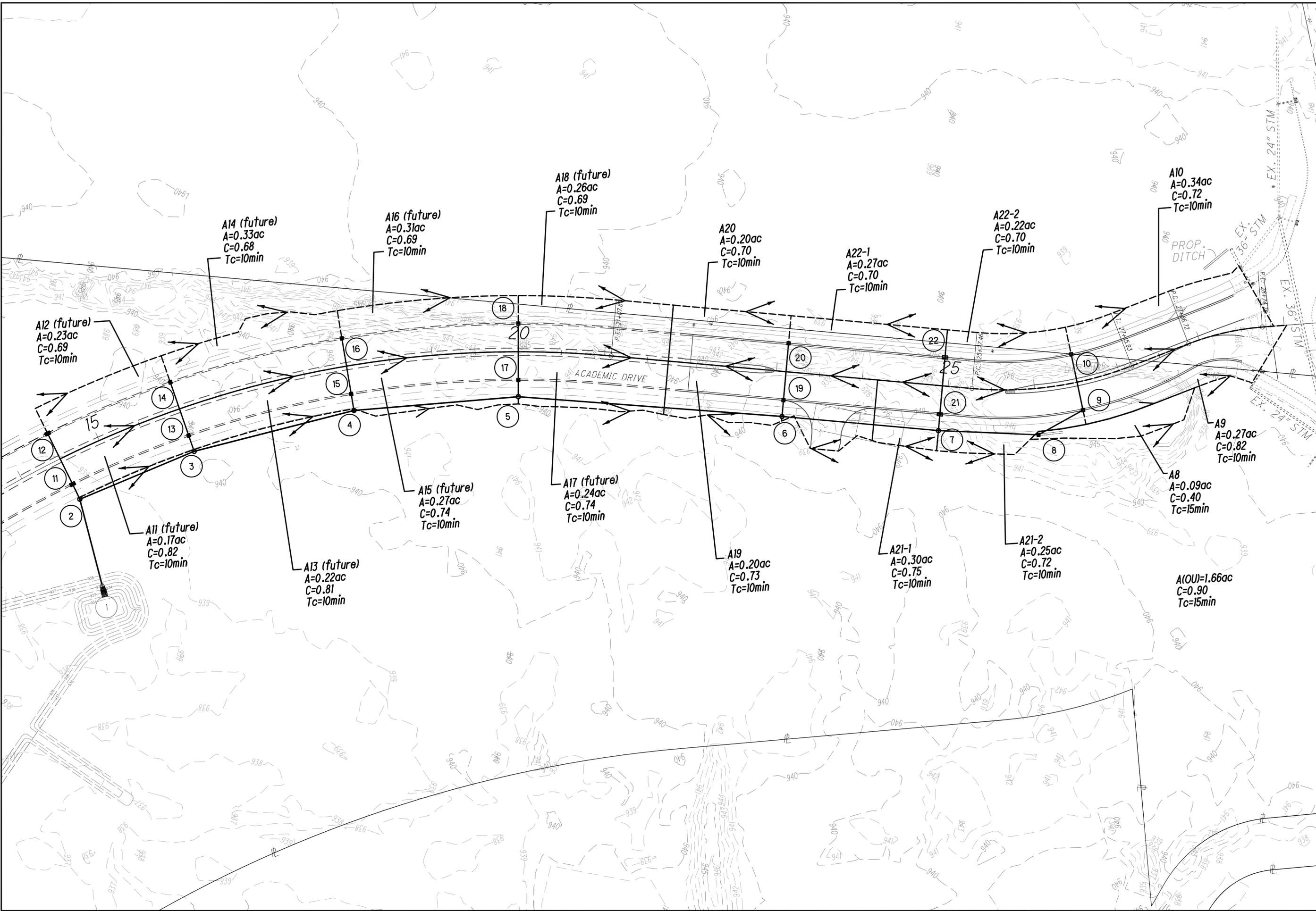


CALCULATED
L.A.M.
CHECKED
K.J.G.

STORM SEWER PROFILES

ACADEMIC DRIVE
PHASE 1

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CALCULATED	DLT
CHECKED	LMO
LMO	LMO

ACADEMIC DRIVE
PHASE 1

23
39

STORM WATER INLET COMPUTATIONS - 5 YEAR (n=0.015)																		
NUMBER	INLET		DRAINAGE AREA (ACRES)	C	TIME (MIN.)	I-5 (IN./HR.) *	Q-5 (CFS)	Q (CARRYOVER) (CFS)	Q TOTAL (GUTTER FLOW)	SL (LONGITUDINAL SLOPE) (FT./FT.)	SX (CROSS SLOPE) (FT./FT.)	S (GUTTER SLOPE) (FT./FT.)	GUTTER WIDTH (FT.)	SPREAD (FT.)	TOTAL FLOW INTERCEPTED (CFS)	CARRY OVER FLOW (CFS)	% PICK UP	REMARKS
	TYPE	INLET STATION																
19	AA-S125A	23+11.21	0.20	0.73	10.00	4.18	0.61	0.00	0.61	0.010	0.016	0.0833	1.50	5.24	0.53	0.08	87%	
21	AA-S125B	24+93.18	0.55	0.74	10.00	4.18	1.70	0.28	1.98	0.000	0.016	0.0833	1.50	10.95	1.98	0.00	100%	SAG
9	AA-S125A	26+50.00	0.27	0.82	10.00	4.18	0.93	0.00	0.93	0.012	0.016	0.0833	1.50	6.38	0.73	0.20	79%	
20	AA-S125A	23+11.21	0.20	0.70	10.00	4.18	0.59	0.00	0.59	0.010	0.016	0.0833	1.50	5.19	0.52	0.07	89%	
22	AA-S125B	24+93.18	0.49	0.70	10.00	4.18	1.43	0.31	1.74	0.000	0.016	0.0833	1.50	10.00	1.74	0.00	100%	SAG
10	AA-S125A	26+50.00	0.34	0.72	10.00	4.18	1.02	0.00	1.02	0.012	0.016	0.0833	1.50	6.74	0.78	0.24	76%	

STORM SEWER DESIGN COMPUTATIONS - 5 YEAR (n=0.013)																		
FROM POINT	TO POINT	DRAINAGE AREA (ACRES)	C	CA		TIME (MIN.)	I-5 INTENSITY (IN./HR.)*	Q-5 RUNOFF (CFS)	INVERT ELEV.		RIM ELEV. (FT.)	LENGTH (FT.)	SLOPE (FT./FT.)	DIAMETER (IN.)	CAPACITY (CFS)	VELOCITY (FT./S.)	FLOW TIME (MIN.)	REMARKS
				INCREMENTAL	CUMULATIVE				UPPER (FT.)	LOWER (FT.)								
10	9	0.34	0.72	0.25	0.25	10.00	4.18	1.0	937.67	937.34	941.67	66	0.0050	12	2.71	3.03	0.36	
9	8	0.27	0.82	0.22	0.47	10.36	4.13	1.9	937.34	937.05	941.67	59	0.0049	12	2.69	3.50	0.28	
8	7	1.75	0.88	1.54	2.01	15.00	3.58	7.2	937.05	936.16	941.15	116	0.0077	18	9.90	5.75	0.34	
22	21	0.49	0.70	0.34	0.34	10.00	4.18	1.4	936.51	936.22	940.28	66	0.0044	12	2.54	3.15	0.35	
21	7	0.55	0.74	0.41	0.75	10.35	4.13	3.1	936.22	936.16	940.28	19	0.0032	15	3.90	3.33	0.10	
7	6	0.00	0.00	0.00	2.76	15.34	3.55	9.8	936.16	935.85	941.08	181	0.0017	27	13.79	3.55	0.85	
20	19	0.20	0.70	0.14	0.14	10.00	4.18	0.6	937.76	937.27	941.76	66	0.0074	12	3.30	3.01	0.37	
19	6	0.20	0.73	0.14	0.28	10.37	4.12	1.2	937.27	937.10	941.76	19	0.0089	12	3.63	3.90	0.08	
6	5	0.00	0.00	0.00	3.04	16.19	3.47	10.5	935.85	935.39	942.56	306	0.0015	27	12.90	3.40	1.50	
5	4	0.00	0.00	0.00	3.04	17.69	3.33	10.1	935.39	935.10	943.13	191	0.0015	27	12.90	3.38	0.94	
4	3	0.00	0.00	0.00	3.04	18.63	3.25	9.9	935.10	934.81	941.27	191	0.0015	27	12.90	3.37	0.94	
3	2	0.00	0.00	0.00	3.04	19.58	3.18	9.7	934.81	934.62	940.07	144	0.0013	30	15.91	3.21	0.75	
2	1	0.00	0.00	0.00	3.04	20.32	3.12	9.5	934.62	934.03	939.17	102	0.0058	30	33.60	5.58	0.30	

* FROM IDF CURVES FOR COLUMBUS, OHIO CREATED FROM THE RAINFALL FREQUENCY ATLAS OF THE MIDWEST (HUFF & ANGEL, 1992)

HYDRAULIC GRADE LINE COMPUTATIONS - 10 YEAR (n=0.013)

FROM POINT	TO POINT	OUTLET INVERT ELEV.	OUTLET WATER SURFACE ELEV.	PIPE DIA.	FLOW RATE	PIPE LENGTH	FRICTION SLOPE	FRICTION LOSS (HF)	VELOCITY OUTLET PIPE (VO)	CONTROL LOSS (HO)	DISCHARGE INFLOW PIPE (QI)	VELOCITY INFLOW PIPE (VI)	MAX INFLOW PRODUCT (QI * VI)	INFLOW VELOCITY HEAD (VI*2/2G)	MAX EXPAN. LOSS (HI)	MAX ANGLE (AI)	LOSS COEFF. (K)	MAX BEND LOSS (HB)	TOTAL JUNCTION LOSS (HT)	INLET CORRECT. FACTOR (X=1.3HT)	SHAPE CORRECT. FACTOR (Y=0.5X)	FINAL HEAD LOSS (H)	INLET WATER SURFACE ELEV.	RIM ELEV.	REMARKS
		FT.	FT.	IN.	CFS	FT.	%	FT.	FT/S	FT.	CFS	FT/S		FT.	FT.	DEG.		FT.	FT.	FT.	FT.	FT.	FT.	FT.	
1	2	934.03	936.53	30	10.7	102	0.07	0.071	5.78	0.130	10.8	3.30	35.64	0.169	0.059	90	0.70	0.118	0.307	0.399	0.200	0.271	936.80	939.17	
2	3	934.62	937.12	30	10.8	144	0.07	0.101	3.30	0.042	10.8	3.43	37.04	0.183	0.064	15	0.10	0.018	0.124	0.161	0.081	0.182	937.30	940.07	
3	4	934.81	937.30	27	10.8	191	0.12	0.229	3.43	0.046	11.3	3.44	38.87	0.184	0.064	15	0.10	0.018	0.128	0.166	0.083	0.312	937.61	941.27	
4	5	935.10	937.61	27	11.3	191	0.13	0.248	3.44	0.046	11.3	3.44	38.87	0.184	0.064	15	0.10	0.018	0.128	0.166	0.083	0.331	937.95	943.13	
5	6	935.39	937.95	27	11.3	306	0.13	0.398	3.44	0.046	10.2	3.63	37.03	0.205	0.072	90	0.70	0.144	0.262	0.341	0.170	0.568	938.51	942.56	
6	7	935.85	938.51	27	10.2	181	0.11	0.199	3.63	0.051	7.4	5.89	43.59	0.539	0.189	90	0.70	0.377	0.617	0.802	0.401	0.600	939.11	941.49	
7	8	936.16	939.11	18	7.4	116	0.50	0.580	5.89	0.135	1.7	3.59	6.10	0.200	0.070	30	0.28	0.056	0.261	0.339	0.170	0.750	939.86	941.15	
8	9	937.05	939.86	12	1.7	59	0.24	0.142	3.59	0.050	0.9	3.16	2.84	0.155	0.054	70	0.61	0.095	0.199	0.259	0.129	0.271	940.13	941.67	
9	10	937.34	940.13	12	0.9	66	0.07	0.046	3.16	0.039	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.039	0.051	0.025	0.071	940.21	941.67	
6	19	937.10	938.51	12	1.4	19	0.15	0.029	4.07	0.064	0.7	3.15	2.21	0.154	0.054	0	0.00	0.000	0.118	0.153	0.077	0.106	938.62	941.76	
19	20	937.27	938.62	12	0.7	66	0.04	0.026	3.15	0.039	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.039	0.051	0.025	0.051	938.67	941.76	
7	21	936.16	939.11	15	2.8	19	0.19	0.036	3.37	0.044	1.3	3.26	4.24	0.165	0.058	0	0.00	0.000	0.102	0.133	0.066	0.102	939.21	940.28	
21	22	936.22	939.21	12	1.3	66	0.13	0.086	3.26	0.041	0.0	0.00	0.00	0.000	0.000	0	0.00	0.000	0.041	0.053	0.027	0.113	939.33	940.28	

$$H_o = 0.25 \frac{V_o^2}{2g}$$

$$H_t = H_o + H_i + H_b$$

- 90° K=0.70
- 80° K=0.66
- 70° K=0.61
- 60° K=0.55
- 50° K=0.47
- 40° K=0.38
- 30° K=0.28
- 25° K=0.22
- 20° K=0.16
- 15° K=0.10

$$H_i = 0.35 \frac{V_i^2}{2g}$$

$$\text{FINAL H} = H_f + \text{SCF}$$

$$H_b = K \frac{V_i^2}{2g}$$

STORM SEWER COMPUTATIONS

ACADEMIC DRIVE
PHASE 1

CALCULATED
DLT
CHECKED
KJG

0:\2014\2014085\01 Academic Drive - Phase 1\Roadway\sheets\YG001.dwg, 7/18/2014 8:13:26 AM



CALCULATED
 LAM
 CHECKED
 KJG

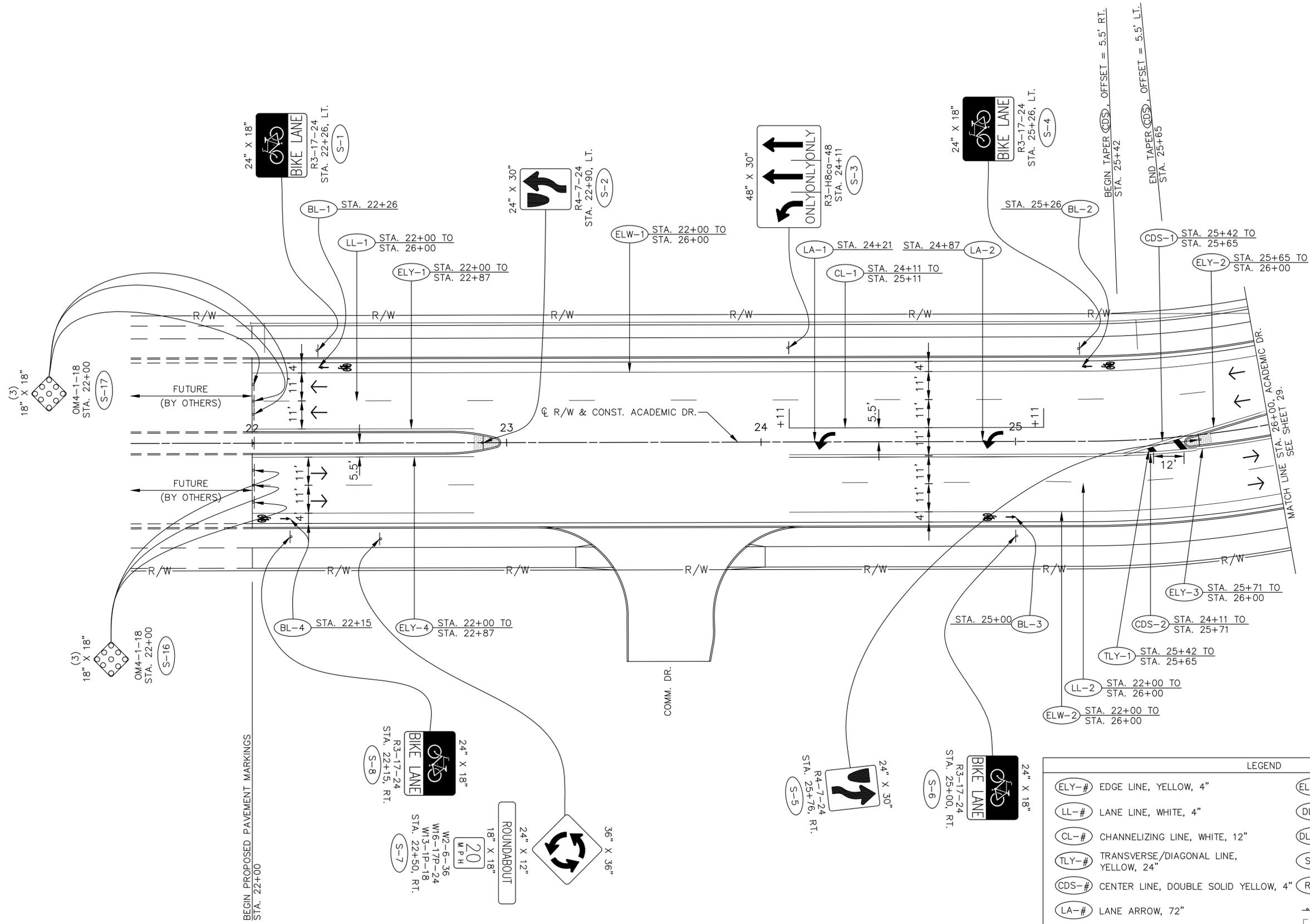
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 HORIZONTAL
 SCALE IN FEET

GRADING PLAN

ACADEMIC DRIVE
 PHASE 1

26
 39

SHEET 27 NOT USED



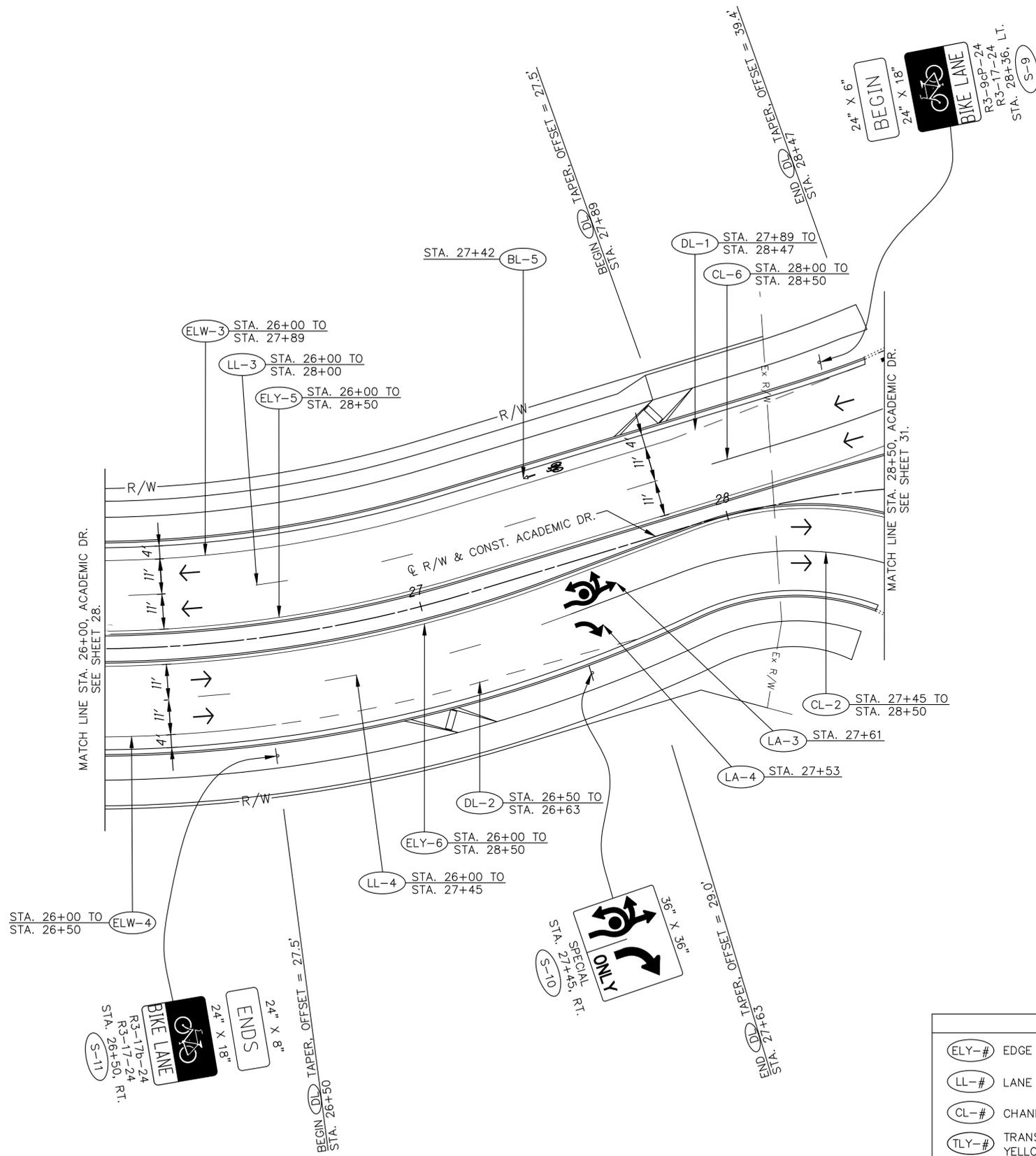
LEGEND	
(ELY-#)	EDGE LINE, YELLOW, 4"
(LL-#)	LANE LINE, WHITE, 4"
(CL-#)	CHANNELIZING LINE, WHITE, 12"
(TLY-#)	TRANSVERSE/DIAGONAL LINE, YELLOW, 24"
(CDS-#)	CENTER LINE, DOUBLE SOLID YELLOW, 4"
(LA-#)	LANE ARROW, 72"
(YL-#)	YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)
(BL-#)	BIKE LANE SYMBOL
(CWL-#)	CROSSWALK LINE, WHITE, 12" (SEE DETAIL ON SHEET 34)
(ELW-#)	EDGE LINE, WHITE, 4"
(DL-#)	DOTTED LINE, WHITE, 4"
(DL2-#)	DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(S-#)	PROPOSED SIGN
(R-#)	EXISTING SIGN TO BE REMOVED
+/-	SIGN, GROUND MOUNTED
[---]	EXISTING SIGN TO REMAIN
[]	PROPOSED SIGN
[→]	TRAFFIC FLOW ARROW
[---]	EXISTING CANTILEVER SUPPORT TO REMAIN



SIGNING AND PAVEMENT MARKING PLAN
STA. 22+00 TO STA. 26+00 - ACADEMIC DR.

ACADEMIC DRIVE
PHASE 1

SHEET 27 NOT USED



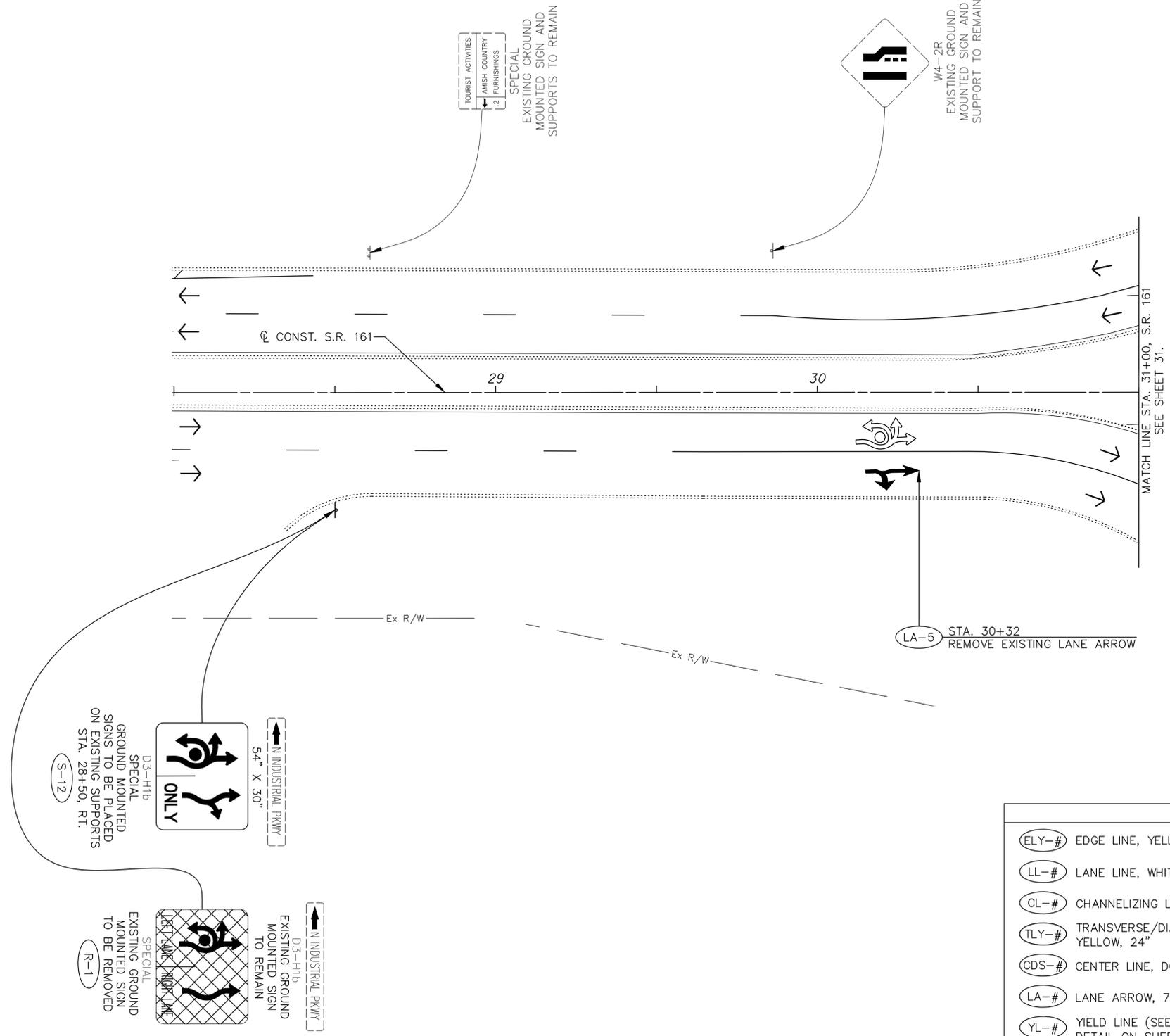
LEGEND	
(ELY-#) EDGE LINE, YELLOW, 4"	(ELW-#) EDGE LINE, WHITE, 4"
(LL-#) LANE LINE, WHITE, 4"	(DL-#) DOTTED LINE, WHITE, 4" (6' LONG, 6' GAP)
(CL-#) CHANNELIZING LINE, WHITE, 12"	(DL2-#) DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(TLY-#) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"	(S-#) PROPOSED SIGN
(CDS-#) CENTER LINE, DOUBLE SOLID YELLOW, 4"	(R-#) EXISTING SIGN TO BE REMOVED
(LA-#) LANE ARROW, 72"	—/— SIGN, GROUND MOUNTED
(YL-#) YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)	— — — EXISTING SIGN TO REMAIN
(BL-#) BIKE LANE SYMBOL	□ PROPOSED SIGN
(CWL-#) CROSSWALK LINE, WHITE, 12" (SEE DETAIL ON SHEET 34)	→ TRAFFIC FLOW ARROW
	□ — — — EXISTING CANTILEVER SUPPORT TO REMAIN

CALCULATED: BEB
 CHECKED: AKF

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 HORIZONTAL SCALE IN FEET

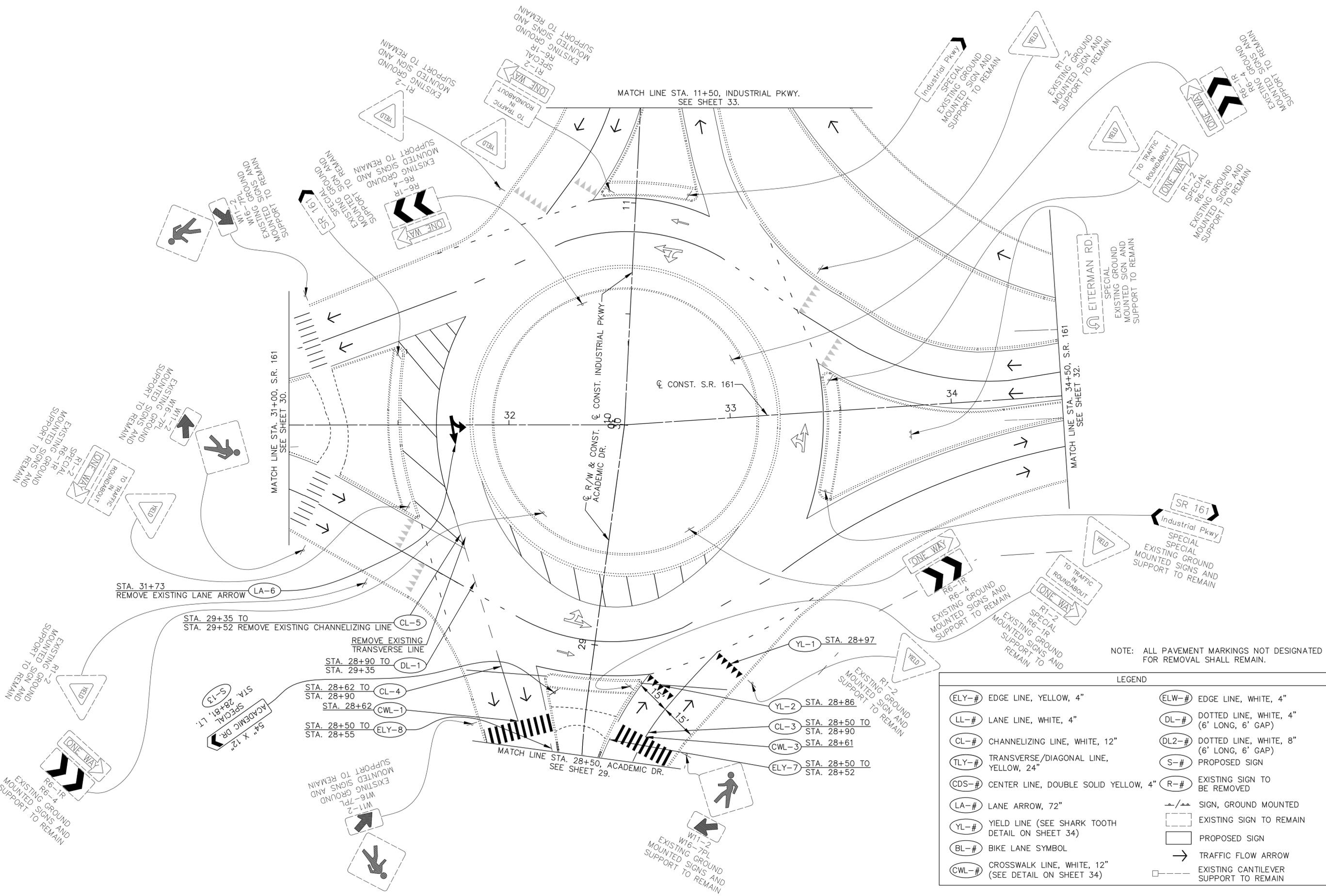
SIGNING AND PAVEMENT MARKING PLAN
 STA. 26+00 TO STA. 28+50 - ACADEMIC DR.

ACADEMIC DRIVE
 PHASE 1



LEGEND	
(ELY-#) EDGE LINE, YELLOW, 4"	(ELW-#) EDGE LINE, WHITE, 4"
(LL-#) LANE LINE, WHITE, 4"	(DL-#) DOTTED LINE, WHITE, 4" (6' LONG, 6' GAP)
(CL-#) CHANNELIZING LINE, WHITE, 12"	(DL2-#) DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(TLY-#) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"	(S-#) PROPOSED SIGN
(CDS-#) CENTER LINE, DOUBLE SOLID YELLOW, 4"	(R-#) EXISTING SIGN TO BE REMOVED
(LA-#) LANE ARROW, 72"	—/+— SIGN, GROUND MOUNTED
(YL-#) YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)	□ EXISTING SIGN TO REMAIN
(BL-#) BIKE LANE SYMBOL	□ PROPOSED SIGN
(CWL-#) CROSSWALK LINE, WHITE, 12" (SEE DETAIL ON SHEET 34)	→ TRAFFIC FLOW ARROW
	□— EXISTING CANTILEVER SUPPORT TO REMAIN

NOTE: ALL PAVEMENT MARKINGS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.



NOTE: ALL PAVEMENT MARKINGS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.

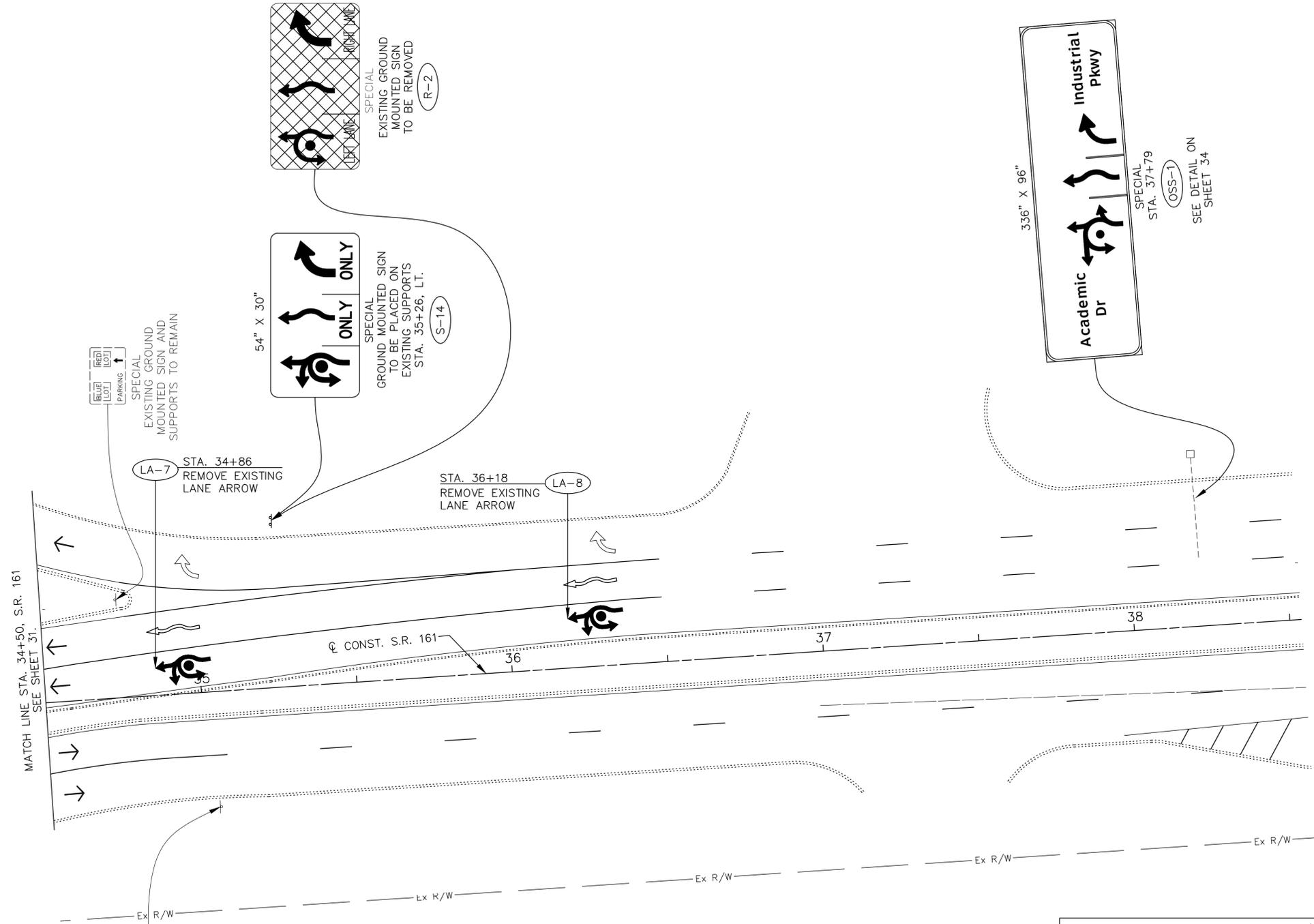
LEGEND	
(ELY-#) EDGE LINE, YELLOW, 4"	(ELW-#) EDGE LINE, WHITE, 4"
(LL-#) LANE LINE, WHITE, 4"	(DL-#) DOTTED LINE, WHITE, 4" (6' LONG, 6' GAP)
(CL-#) CHANNELIZING LINE, WHITE, 12"	(DL2-#) DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(TLY-#) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"	(S-#) PROPOSED SIGN
(CDS-#) CENTER LINE, DOUBLE SOLID YELLOW, 4"	(R-#) EXISTING SIGN TO BE REMOVED
(LA-#) LANE ARROW, 72"	—/— SIGN, GROUND MOUNTED
(YL-#) YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)	□ EXISTING SIGN TO REMAIN
(BL-#) BIKE LANE SYMBOL	□ PROPOSED SIGN
(CWL-#) CROSSWALK LINE, WHITE, 12"	→ TRAFFIC FLOW ARROW
	□ EXISTING CANTILEVER SUPPORT TO REMAIN

CALCULATED
 BEB
 CHECKED
 AKF

0 20 40
 HORIZONTAL
 SCALE IN FEET

SIGNING AND PAVEMENT MARKING PLAN
 STA. 31+00 TO STA. 34+50 - S.R. 161

ACADEMIC DRIVE
 PHASE 1



LEGEND	
(ELY-#) EDGE LINE, YELLOW, 4"	(ELW-#) EDGE LINE, WHITE, 4"
(LL-#) LANE LINE, WHITE, 4"	(DL-#) DOTTED LINE, WHITE, 4" (6' LONG, 6' GAP)
(CL-#) CHANNELIZING LINE, WHITE, 12"	(DL2-#) DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(TLY-#) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"	(S-#) PROPOSED SIGN
(CDS-#) CENTER LINE, DOUBLE SOLID YELLOW, 4"	(R-#) EXISTING SIGN TO BE REMOVED
(LA-#) LANE ARROW, 72"	—/— SIGN, GROUND MOUNTED
(YL-#) YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)	□ EXISTING SIGN TO REMAIN
(BL-#) BIKE LANE SYMBOL	□ PROPOSED SIGN
(CWL-#) CROSSWALK LINE, WHITE, 12" (SEE DETAIL ON SHEET 34)	→ TRAFFIC FLOW ARROW
	□ EXISTING CANTILEVER SUPPORT TO REMAIN

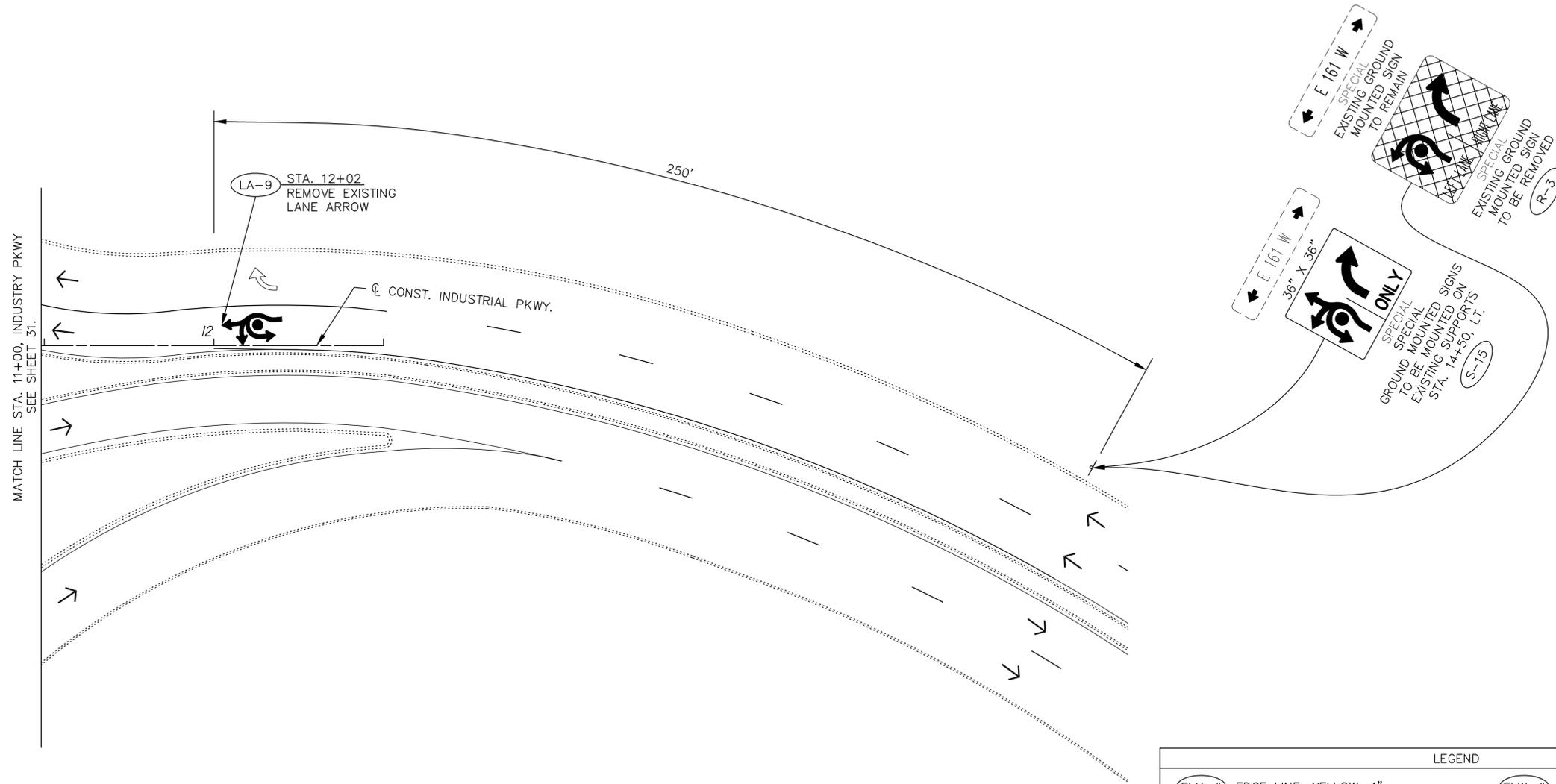
NOTE: ALL PAVEMENT MARKINGS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.

CALCULATED
 BEB
 CHECKED
 AKF

0 10 20 40
 HORIZONTAL SCALE IN FEET

SIGNING AND PAVEMENT MARKING PLAN
 STA. 34+50 TO END - S.R. 161

ACADEMIC DRIVE
 PHASE 1



LEGEND	
(ELY-#) EDGE LINE, YELLOW, 4"	(ELW-#) EDGE LINE, WHITE, 4"
(LL-#) LANE LINE, WHITE, 4"	(DL-#) DOTTED LINE, WHITE, 4" (6' LONG, 6' GAP)
(CL-#) CHANNELIZING LINE, WHITE, 12"	(DL2-#) DOTTED LINE, WHITE, 8" (6' LONG, 6' GAP)
(TLY-#) TRANSVERSE/DIAGONAL LINE, YELLOW, 24"	(S-#) PROPOSED SIGN
(CDS-#) CENTER LINE, DOUBLE SOLID YELLOW, 4"	(R-#) EXISTING SIGN TO BE REMOVED
(LA-#) LANE ARROW, 72"	—/— SIGN, GROUND MOUNTED
(YL-#) YIELD LINE (SEE SHARK TOOTH DETAIL ON SHEET 34)	— EXISTING SIGN TO REMAIN
(BL-#) BIKE LANE SYMBOL	□ PROPOSED SIGN
(CWL-#) CROSSWALK LINE, WHITE, 12" (SEE DETAIL ON SHEET 34)	→ TRAFFIC FLOW ARROW
	□ EXISTING CANTILEVER SUPPORT TO REMAIN

NOTE: ALL PAVEMENT MARKINGS NOT DESIGNATED FOR REMOVAL SHALL REMAIN.

CALCULATED
BEB

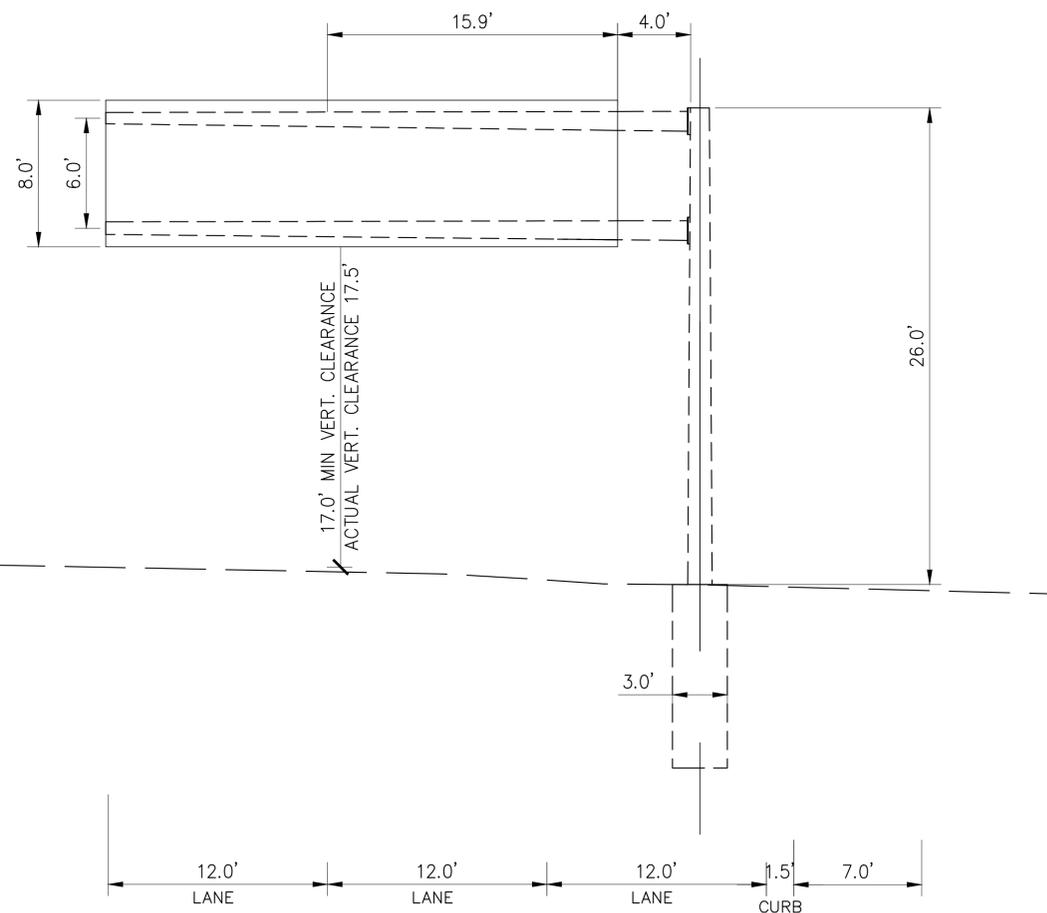
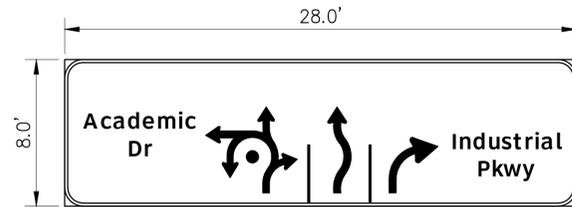
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HORIZONTAL
SCALE IN FEET

SIGNING AND PAVEMENT MARKING PLAN
 STA. 11+50 TO END - INDUSTRIAL PKWY

ACADEMIC DRIVE
 PHASE 1

Drawing File: C:\2014\2014065\01 Academic Drive - Phase 1\Traffic\Sheets\2014065TED01.dwg Layout: TED01
 Date: Jul 29, 2014 Time: 8:20 pm User:



OSS-1 EXISTING CANTILEVER SIGN SUPPORT
 TYPE TC-12.30 DESIGN NO. 10, STA. 37+79 S.R. 161

ITEM 644 – REMOVAL OF PAVEMENT MARKING, AS PER PLAN

THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS SPECIFIED FOR REMOVAL AS SHOWN ON THE PAVEMENT MARKING REMOVAL PLAN IN SUCH A MANNER AS TO ENSURE THAT THE PAVEMENT SURFACE IS NOT DAMAGED. THE METHOD OF PAVEMENT MARKING REMOVAL SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE PAVEMENT OR PAVEMENT MARKINGS TO REMAIN DURING THE REMOVAL PROCESS. SHOULD THE CONTRACTOR DAMAGE THE PAVEMENT OR PAVEMENT MARKINGS TO REMAIN, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL RESTORE THE PAVEMENT OR PAVEMENT MARKINGS TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING CONDITION AS APPROVED BY THE ENGINEER AT THE CONTRACTOR'S COST. ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THE WORK DESCRIBE ABOVE SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE FOR ITEM 644 – REMOVAL OF PAVEMENT MARKING, AS PER PLAN.

ITEM 630, GROUND MOUNTED SUPPORT, NO. 2 & NO. 3 POST, TYPE S, AS PER PLAN

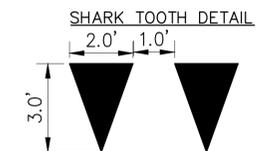
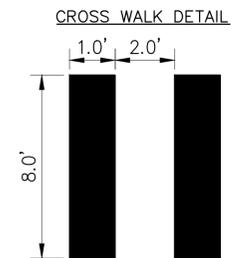
ALL SIGN SUPPORTS SHALL BE 2 INCH SQUARE GALVANIZED POSTS WITH DIE CUT KNOCK OUTS (ALLIED QUICK – PUNCH SUPPORTS OR APPROVED EQUAL). A SINGLE BREAKAWAY ANCHOR SHALL BE USED. ALL SIGNS SHALL BE ERECTED WITH A 7-FOOT VERTICAL CLEARANCE BETWEEN THE TOP OF CURB AND THE BOTTOM OF EACH SIGN, UNLESS OTHERWISE DESIGNATED BY THE CITY ENGINEER. HORIZONTAL CLEARANCE FOR BOTH CURB AND DITCH SECTIONS SHALL BE AS PER ODOT STANDARDS. THE ANCHOR POST SHALL BE PAID SEPARATELY. PAYMENT FOR THIS ITEM SHALL BE FOR THE LENGTH ONLY, INCLUDING THE 8" OVERLAP IN THE ANCHOR POST, AND ALL MISCELLANEOUS ATTACHMENT HARDWARE.

ITEM 630, GROUND MOUNTED SUPPORT, ANCHOR POST, 2 1/4" SQUARE, AS PER PLAN

IN ADDITION TO ITEMS 630 AND 730, THE ANCHOR POST PROVIDED AND INSTALLED WITH THE GROUND MOUNTED SIGN SUPPORT SHALL BE AS PER ODOT STD. DWG. TC-41.20, AND SHALL BE 48" IN LENGTH. THE ANCHOR SHALL BE 2 1/4 INCHES SQUARE, 12 GA., WITH A 2 1/2 INCH OVERSLEEVE 18 INCHES LONG OVER TOP OF THE ANCHOR. THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH.

ITEM 630, SIGN, FLAT SHEET

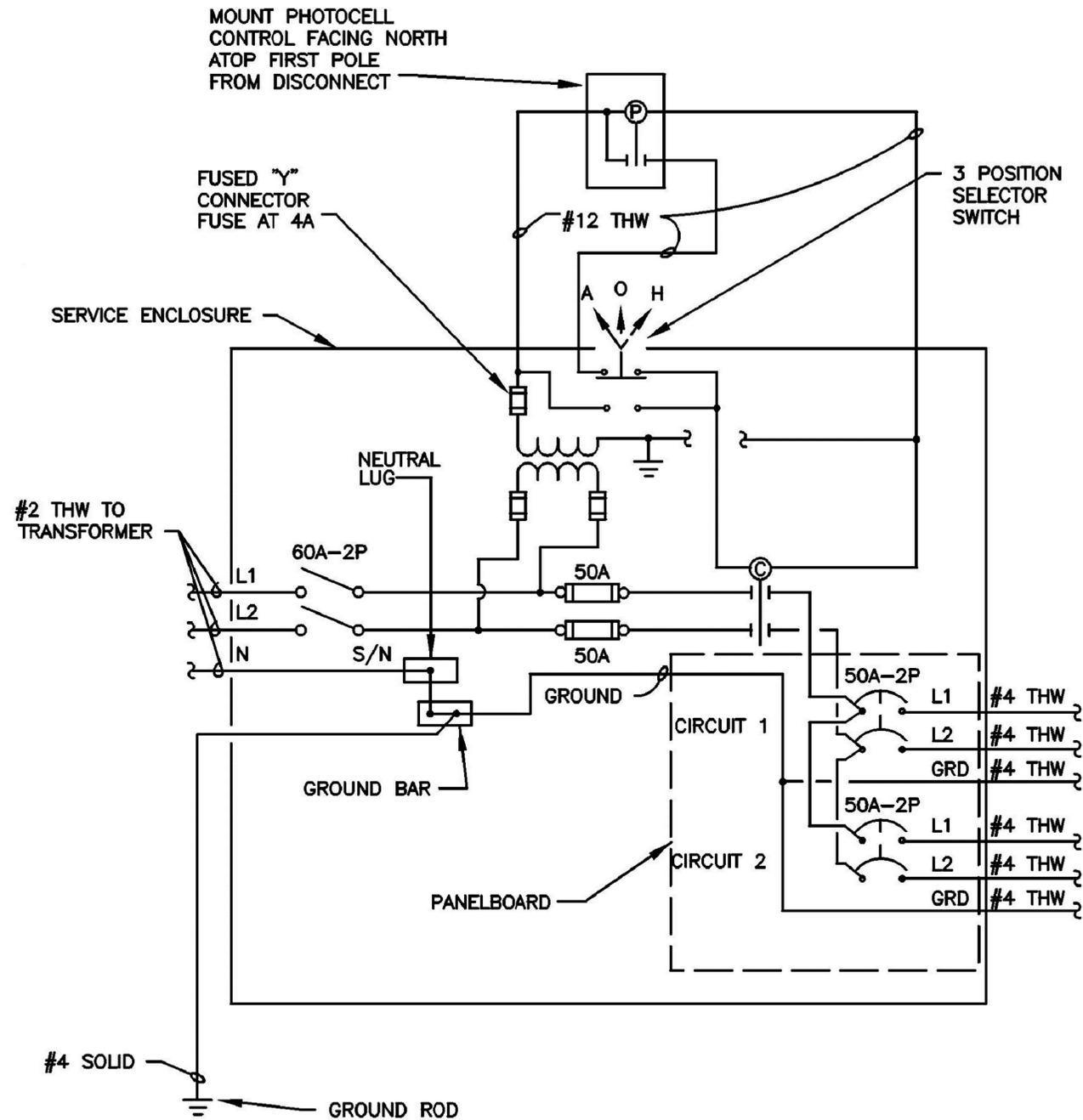
CUSTOM TRAFFIC CONTROL SIGNS, AS SHOWN ON THE DRAWINGS, SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE PROVISIONS OF ODOT ITEM 630 UNLESS OTHERWISE NOTED.



CALCULATED
 BEB
 CHECKED
 AKF

CANTILEVER SIGN ELEVATION DETAIL TRAFFIC CONTROL NOTES
 OSS-1 STA. 37+79, S.R. 161

ACADEMIC DRIVE
 PHASE 1



EXISTING POWER SERVICE SCHEMATIC DIAGRAM
NOT TO SCALE

CONDUIT AND CONDUIT SLEEVES INSTALLATION UNDER PAVEMENTS

ALL CONDUITS AND SLEEVES PLACED UNDER SIDEWALK, BIKEPATH, DRIVEWAY, AND STREET PAVEMENT SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF ANY SUBBASE OR NEW PAVEMENT. PAYMENT FOR TRENCH SHALL BE MADE PER ITEM 625, "TRENCH, 24" DEEP". 3" SCH 80 CONDUIT SLEEVES SHALL EXTEND 3' BEYOND THE BACK OF CURB LINE OR EDGE OF PAVEMENT.

ITEM SPECIAL, ELECTRICAL LIGHTING TEST, AS PER PLAN

THE CONTRACTOR SHALL PERFORM A SERIES OF ELECTRICAL TESTING FOR THE STREET LIGHTING INSTALLATIONS, AS OUTLINED IN ODOT ITEM 625.19. THE CONTRACTOR SHALL NOT PERFORM TESTING FOR THE LOWERING DEVICE OPERATION NOTED IN ITEM 625.19, SUBPARAGRAPH E, AS IT IS NOT APPLICABLE TO THIS PROJECT. THE INTENT OF THIS TESTING ITEM IS TO PERFORM A COMPREHENSIVE TESTING OF THE LIGHTING INSTALLATIONS THAT IS APPROPRIATE FOR THE LIGHTING SYSTEM WITH A #4 AWG 600 VOLT DISTRIBUTION CABLE LIGHTING CIRCUIT. A HIGH VOLTAGE TEST IS NOT APPLICABLE TO THIS PROJECT.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL, ELECTRICAL LIGHTING TEST, AS PER PLAN, COMPLETE AND IN PLACE, ALL CONNECTIONS AND SYSTEMS TESTED AND ACCEPTED.

UNDERGROUND UTILITY NOTIFICATION

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY EXTENSIVE FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT. EXTREME CAUTION SHALL BE EXERCISED IN AREAS WITH UNDERGROUND ELECTRICAL CONDUIT OR CABLE, SEWERS, WATERLINES, OR ANY OTHER UNDERGROUND UTILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MARKING ALL UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRICAL CONDUIT, DUCT AND/OR CABLE, SEWERS, AND DRAINS TO PREVENT DAMAGE DURING CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY THE UTILITIES, BY O.U.P.S. OR DIRECTLY BY TELEPHONE, FORTY EIGHT (48) HOURS IN ADVANCE OF WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO ANY AND ALL UNDERGROUND UTILITY BY THE EXCAVATION ETC., AND WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE TO REPAIR THE DAMAGE TO AN "AS WAS" CONDITION.

OHIO UTILITIES PROTECTION SERVICE (OUPS): 1-800-362-2764 OR DIAL 811.

ODOT SPECIFICATION AND DRAWING STANDARDS FOR USE IN THE CITY OF DUBLIN

THE FOLLOWING ITEMS SHALL CONFORM TO THE CORRESPONDING OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATION ITEM NUMBER AND CITY OF DUBLIN STANDARD DRAWING NUMBER:

	STANDARD DRAWING	PERFORMANCE	MATERIAL
LUMINAIRE	SL-01	625.08	725.11
TRANSFORMER BASE	SL-02	-----	-----
LIGHT POLE	SL-03	625.09	725.21
POLE FOUNDATIONS	SL-04	625.10	-----
TRENCHES	SL-05	625.13	-----
CABLE CONNECTIONS AND SPLICES	----	625.17	725.15
CONDUIT	----	625.12	725.05
GROUND ROD	----	625.16	725.16
TESTING	----	625.19	-----

ITEM 625, LUMINAIRE, AS PER PLAN

THIS ITEM SHALL CONSIST OF AN CREE EDGE AREA LIGHT, LED LUMINAIRE WITH TYPE II & III DISTRIBUTION (AS SPECIFIED ON THE LIGHTING PLAN DETAIL SHEETS), DIRECT MOUNTING, 480 VOLT SINGLE PHASE, MULTIPLE LED, 525 mA DRIVE CURRENT, COLOR TO BE BRONZE.

APPROVED MANUFACTURERS:

TYPE II: CREE LED - ARE-EDG-2M-DA-08-D-UH-BZ-525-40K
TYPE III: CREE LED - ARE-EDG-3M-DA-14-D-UH-BZ-525-40K

ITEM 625, LIGHT POLE FOUNDATION (24" X 7' DEEP), AS PER PLAN

THE TOP OF THE FOUNDATIONS SHALL BE ONE INCH ABOVE GROUND LEVEL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOUNDATION ELEVATIONS PRIOR TO INSTALLATION OF THE FOUNDATIONS. THE FOUNDATION DEPTH IN NO CASE SHALL BE LESS THAN THE SPECIFIED FOUNDATION DEPTH PER PAY ITEM, BUT SHALL OTHERWISE BE IN CONFORMANCE TO ODOT SPECIFICATIONS REGARDING FOUNDATIONS IN BEDROCK. THE FOUNDATION SHALL FOLLOW CITY STANDARD SL-04.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID, COMPLETE AND IN PLACE, AND ACCEPTED.

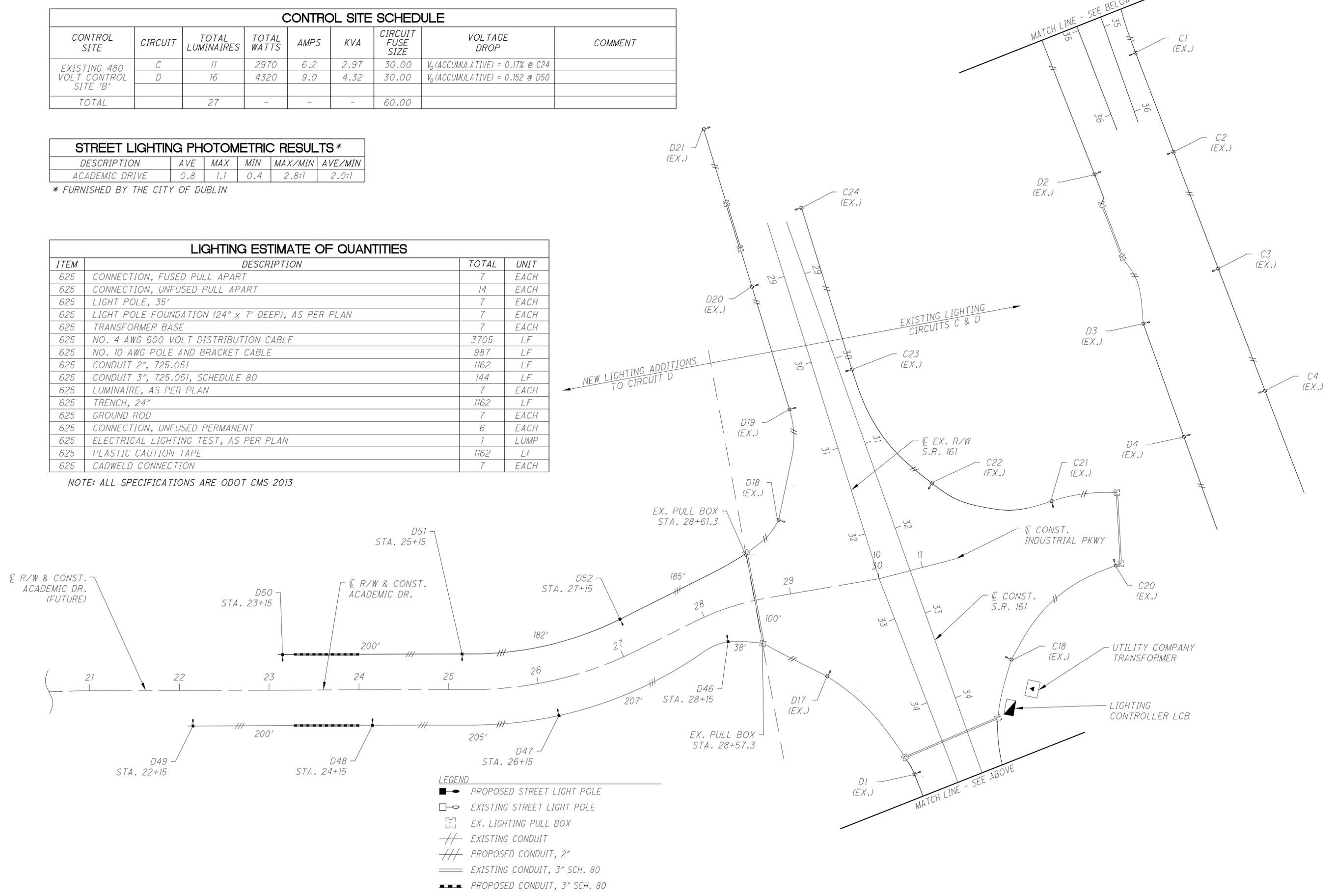
CONTROL SITE SCHEDULE								
CONTROL SITE	CIRCUIT	TOTAL LUMINAIRES	TOTAL WATTS	AMPS	KVA	CIRCUIT FUSE SIZE	VOLTAGE DROP	COMMENT
EXISTING 480 VOLT CONTROL SITE 'B'	C	11	2970	6.2	2.97	30.00	V _b (ACCUMULATIVE) = 0.17% @ C24	
	D	16	4320	9.0	4.32	30.00	V _b (ACCUMULATIVE) = 0.152 @ D50	
TOTAL		27	-	-	-	60.00		

STREET LIGHTING PHOTOMETRIC RESULTS *					
DESCRIPTION	AVE	MAX	MIN	MAX/MIN	AVE/MIN
ACADEMIC DRIVE	0.8	1.1	0.4	2.8:1	2.0:1

* FURNISHED BY THE CITY OF DUBLIN

LIGHTING ESTIMATE OF QUANTITIES			
ITEM	DESCRIPTION	TOTAL	UNIT
625	CONNECTION, FUSED PULL APART	7	EACH
625	CONNECTION, UNFUSED PULL APART	14	EACH
625	LIGHT POLE, 35'	7	EACH
625	LIGHT POLE FOUNDATION (24" x 7' DEEP), AS PER PLAN	7	EACH
625	TRANSFORMER BASE	7	EACH
625	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	3705	LF
625	NO. 10 AWG POLE AND BRACKET CABLE	987	LF
625	CONDUIT 2", 725.051	1162	LF
625	CONDUIT 3", 725.051, SCHEDULE 80	144	LF
625	LUMINAIRE, AS PER PLAN	7	EACH
625	TRENCH, 24"	1162	LF
625	GROUND ROD	7	EACH
625	CONNECTION, UNFUSED PERMANENT	6	EACH
625	ELECTRICAL LIGHTING TEST, AS PER PLAN	1	LUMP
625	PLASTIC CAUTION TAPE	1162	LF
625	CADWELD CONNECTION	7	EACH

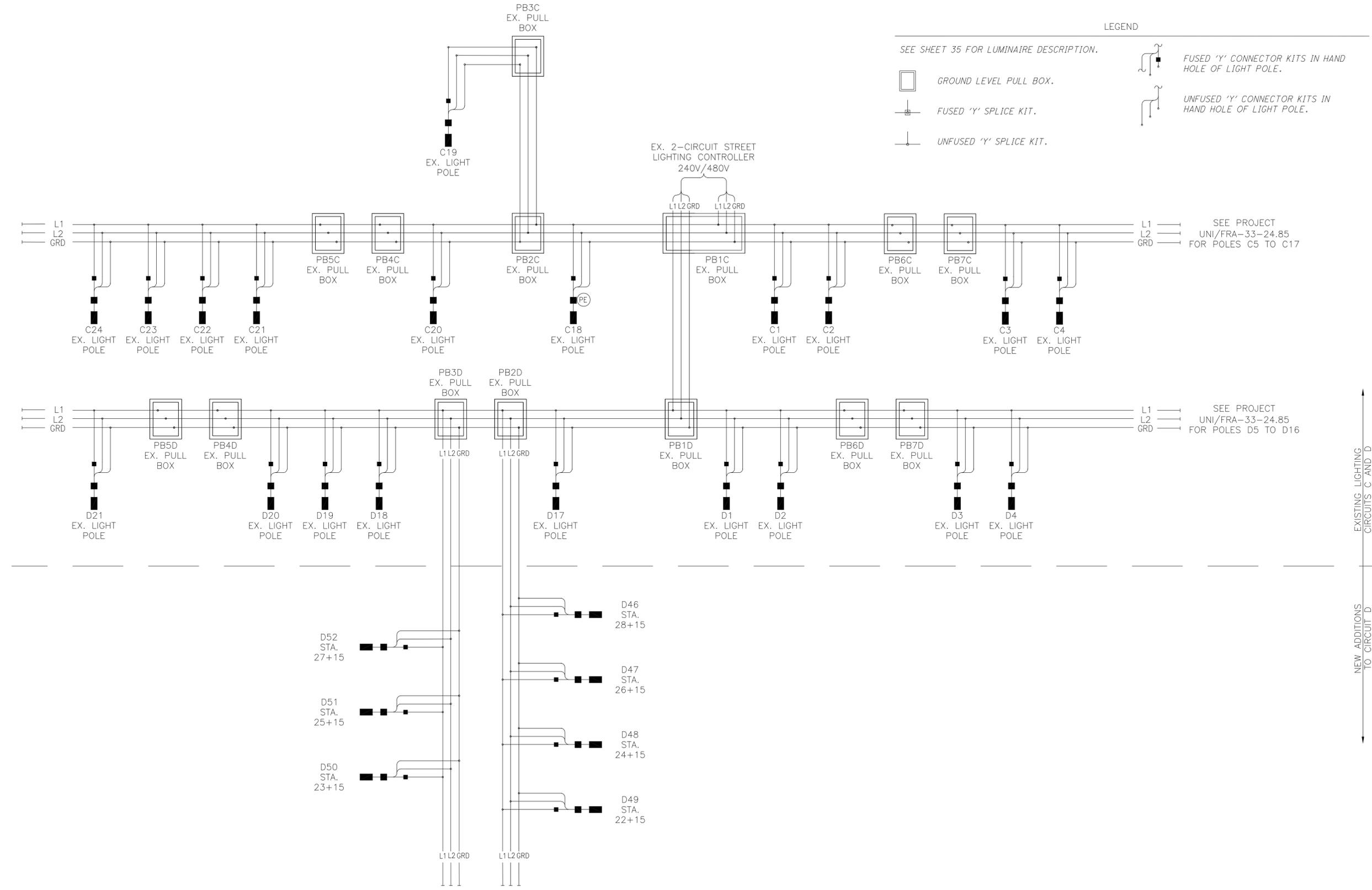
NOTE: ALL SPECIFICATIONS ARE ODOT CMS 2013



LEGEND

	PROPOSED STREET LIGHT POLE
	EXISTING STREET LIGHT POLE
	EX. LIGHTING PULL BOX
	EXISTING CONDUIT
	PROPOSED CONDUIT, 2"
	EXISTING CONDUIT, 3" SCH. 80
	PROPOSED CONDUIT, 3" SCH. 80

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**STREET LIGHTING CIRCUIT DIAGRAM
ACADEMIC DRIVE**

**ACADEMIC DRIVE
PHASE 1**

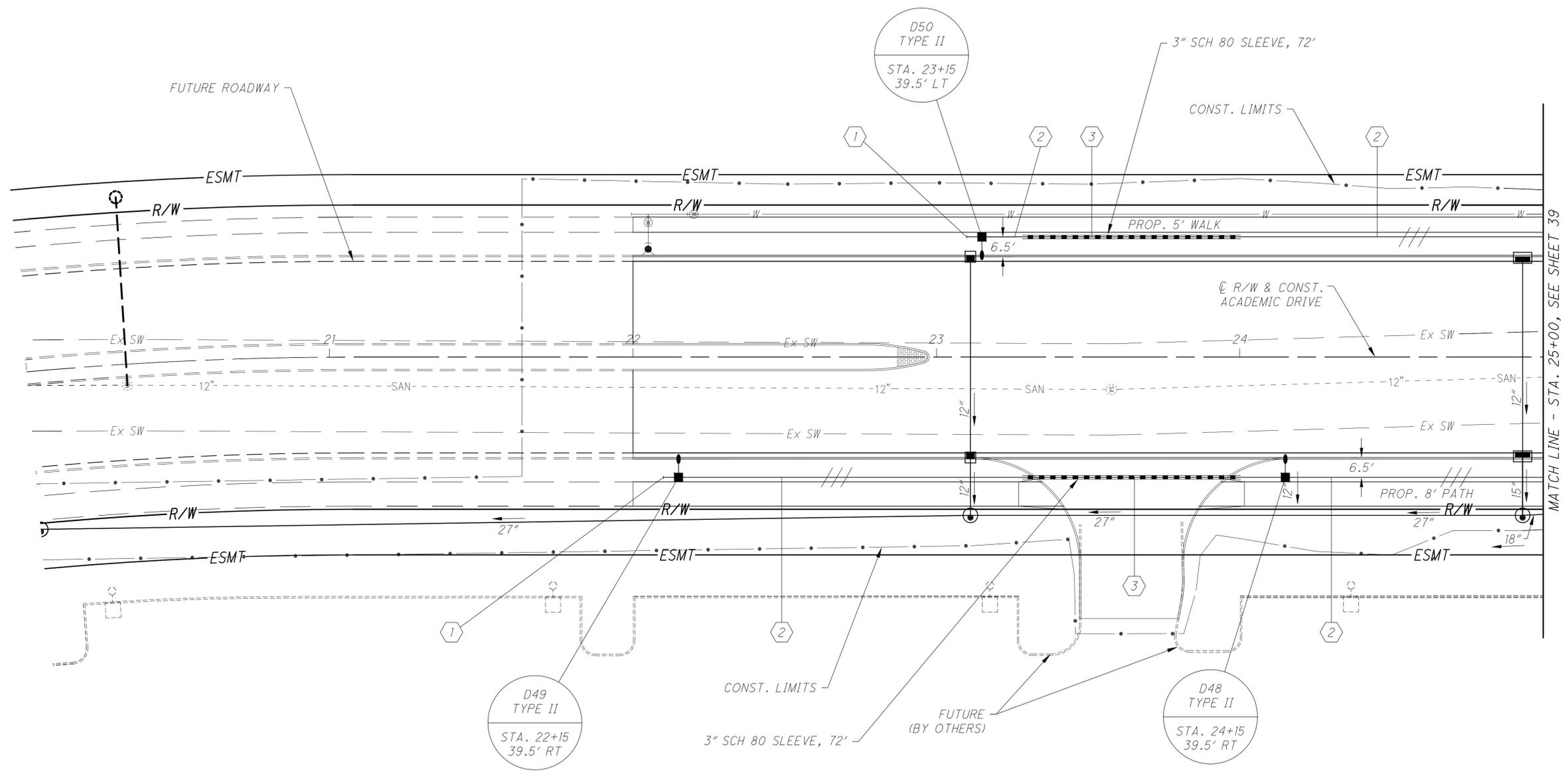
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CALCULATED
RCS
CHECKED
SDS

CODED NOTES

- ① STUB OUT 2" CONDUIT 5.0' BEYOND POLE FOUNDATION AT 2.0' BELOW FINISHED GRADE. INSTALL PULLWIRE AND CAP CONDUIT.
- ② (2) #4, (1) #4 GRD. IN 2" CONDUIT.
- ③ (2) #4, (1) #4 GRD. IN 2" CONDUIT; PLACE 2" CONDUIT IN 3" CONDUIT, AS SHOWN IN DUBLIN STANDARD DRAWING SL-05.



LEGEND

- PROPOSED STREET LIGHT POLE
- PROPOSED CONDUIT, 2"
- PROPOSED CONDUIT, 3" SCH. 80

**LIGHTING PLAN - ACADEMIC DRIVE
STA. 20+00 TO STA. 25+00**

**ACADEMIC DRIVE
PHASE 1**



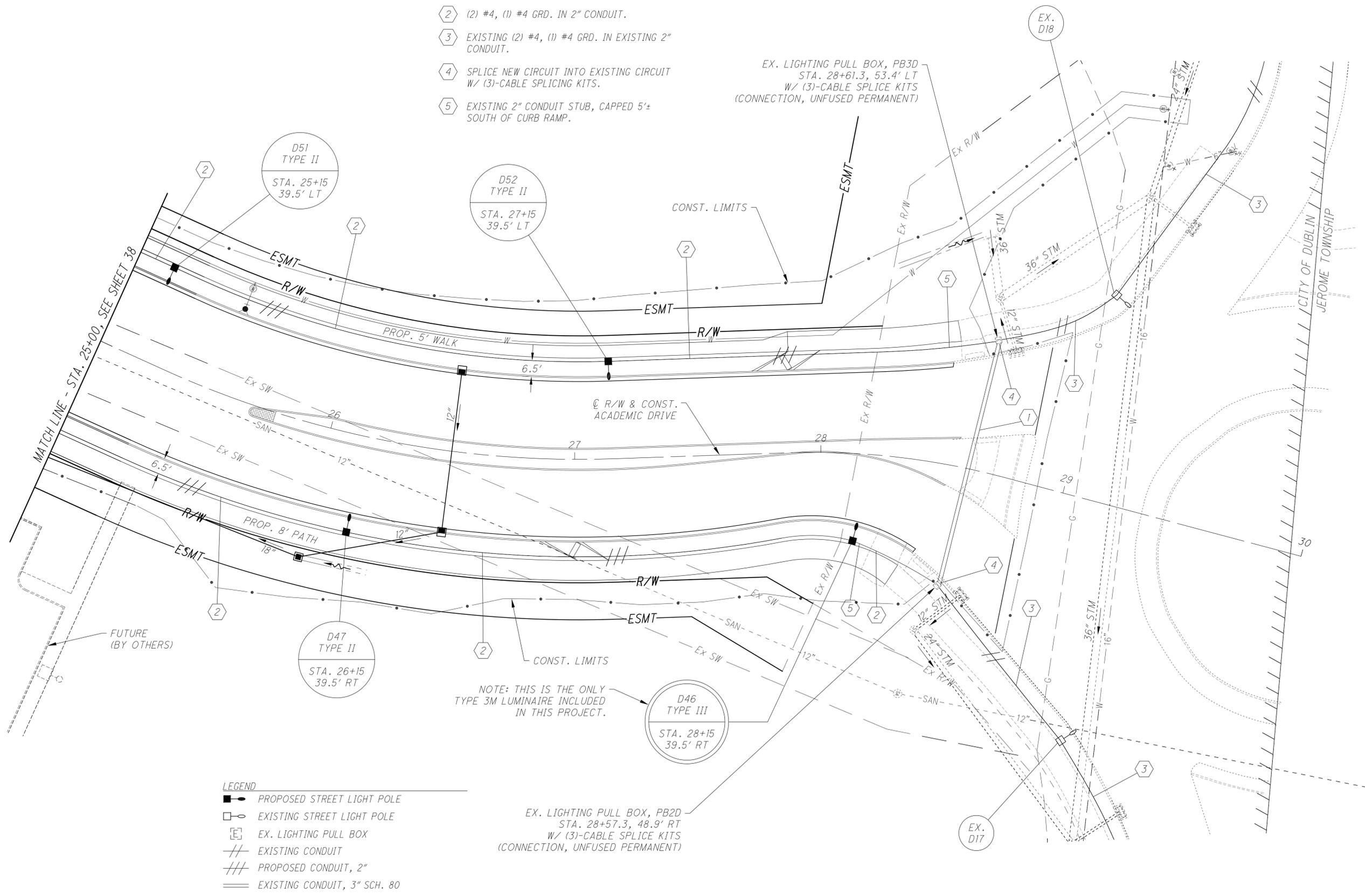
CALCULATED
RCS
CHECKED
SDS

LIGHTING PLAN - ACADEMIC DRIVE
STA. 25+00 TO STA. 30+00

ACADEMIC DRIVE
PHASE 1

CODED NOTES

- 1 EXISTING (2) #4, (1) #4 GRD. IN 2" CONDUIT; PLACE 2" CONDUIT IN 4" CONDUIT SLEEVE.
- 2 (2) #4, (1) #4 GRD. IN 2" CONDUIT.
- 3 EXISTING (2) #4, (1) #4 GRD. IN EXISTING 2" CONDUIT.
- 4 SPLICE NEW CIRCUIT INTO EXISTING CIRCUIT W/ (3)-CABLE SPLICE KITS.
- 5 EXISTING 2" CONDUIT STUB, CAPPED 5'± SOUTH OF CURB RAMP.



- LEGEND
- PROPOSED STREET LIGHT POLE
 - EXISTING STREET LIGHT POLE
 - EX. LIGHTING PULL BOX
 - EXISTING CONDUIT
 - PROPOSED CONDUIT, 2"
 - EXISTING CONDUIT, 3" SCH. 80

NOTE: THIS IS THE ONLY TYPE 3M LUMINAIRE INCLUDED IN THIS PROJECT.

EX. LIGHTING PULL BOX, PB2D
STA. 28+57.3, 48.9' RT
W/ (3)-CABLE SPLICE KITS
(CONNECTION, UNFUSED PERMANENT)

EX. LIGHTING PULL BOX, PB3D
STA. 28+61.3, 53.4' LT
W/ (3)-CABLE SPLICE KITS
(CONNECTION, UNFUSED PERMANENT)

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