

**ROUNDING**

THE ROUNDING AT SLOPE BREAK POINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

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

ELECTRIC  
DUKE ENERGY ELECTRIC - TRANSMISSION  
139 E. 4TH STREET, ROOM 552A  
CINCINNATI, OH 45202  
MICHAEL ELLIS  
513.287.3733  
MICHAEL.ELLIS@DUKE-ENERGY.COM

DUKE ENERGY ELECTRIC - DISTRIBUTION  
2010 DANA AVENUE  
CINCINNATI, OH 45207  
AARON WRIGHT  
513.287.1266  
AARON.WRIGHT@DUKE-ENERGY.COM

GAS  
DUKE ENERGY GAS  
139 EAST 4TH ST, ROOM 460A  
CINCINNATI, OH 45202  
MARK BRANSCUM  
518.287.2517  
MARK.BRANSCUM@DUKE-ENERGY.COM

DUKE ENERGY GAS - TRANSMISSION  
OH/KYHOUSEBILL@DUKE-ENERGY.COM

OIL  
BP OIL  
150 W. WARRENVILLE RD.  
NAPERVILLE, IL 60563  
BPPIPELINESROW@BP.COM

SEWER/WATER  
BUTLER COUNTY WATER AND SEWER  
130 HIGH STREET  
HAMILTON, OH 45011  
JEFF FRECHTLING  
513.887.3320  
JEFF.FRECHTLING@BCOHIO.US

TELECOM  
ACD.NET - TELECOM - KEPS TECH  
1800 N GRAND RIVER AVE  
LANSING, MI 48906  
517.999.9999  
OSP@ACD.NET

CINCINNATI BELL  
221 E FOURTH ST  
BLDG 121-900  
BRECK COWAN  
CINCINNATI, OH 45202  
513.565.7187  
BRECK.COWAN@CINBELL.COM

CHARTER COMMUNICATION  
10920 KENWOOD RD  
CINCINNATI, OH 45242  
KENT RIEGER  
513.386.5499  
KENT.RIEGER@CHARTER.COM

TRAFFIC  
ODOT D08 TRAFFIC  
505 S STATE ROUTE 741  
LEBANON, OH 45036  
513.933.6689

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

**CONSTRUCTION NOISE**

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 6 PM AND 7 AM. IN ADDITION, DO

NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL  
POSITIONING METHOD: STATIC GNSS  
MONUMENT TYPE: IRON PINS & MAGS

VERTICAL POSITIONING  
ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID12B

HORIZONTAL POSITIONING  
REFERENCE FRAME: NAD83(2011) (EPOCH 2010.0)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC 2 STANDARD PARALLEL  
COORDINATE SYSTEM: OHIO STATE PLANE: SOUTH ZONE  
COMBINED SCALE FACTOR: 1.0000  
ORIGIN OF COORDINATE SYSTEM: 0,0

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

UNITS ARE IN U.S. SURVEY FEET.

**WORK LIMITS**

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

**CLEARING AND GRUBBING**

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

**ITEM 204 - PROOF ROLLING**

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 1 HOUR.

**PART-WIDTH CONSTRUCTION**

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

**ITEM SPECIAL - MAILBOX SUPPORT**

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

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS, TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

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

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

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

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

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, 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 APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

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 STATE.

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 ENGINEER.

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

**SEEDING AND MULCHING**

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

659, SOIL ANALYSIS TEST 2 EACH  
659, TOPSOIL 216 CU. YD.  
659, SEEDING AND MULCHING 1949 SQ. YD.  
659, REPAIR SEEDING AND MULCHING 97 SQ. YD.  
659, COMMERCIAL FERTILIZER 0.27 TON  
659, LIME 0.4 ACRES  
659, WATER 11 M. GAL.

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

**PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS**

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 6 CU YD

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 12 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

**ITEM 202 REMOVAL MISC.: BOLLARD REMOVED**

IN ADDITION TO THE REQUIREMENTS OF ITEM 202, REMOVE AND DISPOSE OF BOLLARDS AS NOTED IN THE PLANS. REMOVE BOLLARDS AND CONCRETE SUPPORT (IF PRESENT) TO A MINIMUM OF 1-FOOT BELOW FINAL GRADE ELEVATION. BACKFILL THE CAVITY PER 202.02. ALL LABOR, MATERIAL, EQUIPMENT, TOOLS AND INCIDENTALS REQUIRED TO COMPLETE THE REMOVAL, DISPOSAL AND BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER EACH BOLLARD REMOVED.

**ITEM 638 INSTALL 1" COPPER WATER SERVICE CONNECTION (BCWS 2410)**

A POTENTIAL WATER SERVICE CONFLICT HAS BEEN IDENTIFIED IN THE PLANS. CONTRACTOR SHALL IDENTIFY THE WATER SERVICE LOCATION IN THE FIELD. AT THE DIRECTION OF THE ENGINEER, INSTALL NEW 1" COPPER WATER SERVICE IN ACCORDANCE WITH BUTLER COUNTY WATER AND SEWER STANDARDS AND SPECIFICATIONS. REFER TO: <http://des.butlercountyohio.org/html/contractors/documents/2410.rev2012.pdf>

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT THE DIRECTION OF THE ENGINEER:

ITEM 638 INSTALL 1" COPPER WATER SERVICE CONNECTION (BCWS 2410) 90 FT

CALCULATED  
DJB  
CHECKED  
JWB

GENERAL NOTES

BUT - 4 - 13.90

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SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
										01/SAE/OT	EXT	TOTAL				
			4	12	13	47				90	SPECIAL	63820824	90	FT	WATER WORK INSTALL 1" COPPER WATER SERVICE CONNECTION (BCWS 2410)	4
					7					7	621	00100	7	EACH	TRAFFIC CONTROL RPM, 1-WAY (WHITE)	
					7					7	621	00100	7	EACH	RPM, 2-WAY (WHITE/RED)	
					6					6	621	00100	6	EACH	RPM, 2-WAY 9YELLOW/YELLOW)	
				335						335	630	03100	335	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				22						22	630	08600	22	EACH	SIGN POST REFLECTOR	
						6				6	630	79101	6	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	34
						1				1	630	79500	1	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
						121				148	630	80100	148	SF	SIGN, FLAT SHEET	
						3				3	630	80510	3	EACH	SIGN, STREET NAME	
						57				57	630	83000	57	SF	COVERING OF SIGN	
						20				20	630	84900	20	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						2				2	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
						20				20	630	86002	20	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
					0.24					0.24	644	00104	0.24	MILE	EDGE LINE, 6", WHITE	
					0.03					0.03	644	00300	0.03	MILE	CENTER LINE, 4", SOLID DOUBLE YELLOW	
						389				389	644	00400	389	FT	CHANNELIZING LINE, 8"	
						99				99	644	00500	99	FT	STOP LINE, 24"	
						440				440	644	00600	440	FT	CROSSWALK LINE, 12"	
						20				20	644	00700	20	FT	TRANSVERSE/DIAGONAL LINE, 24", WHITE	
						4				4	644	01300	4	EACH	LANE ARROW, 6'	
						302				302	644	01500	302	FT	DOTTED LINE, 4", YELLOW	
						550				550	644	30000	550	FT	REMOVAL OF PAVEMENT MARKING	
															TRAFFIC SIGNALS	
						3				3	625	00450	3	EACH	CONNECTION, FUSED PULL APART	
						3				3	625	00460	3	EACH	CONNECTION, UNFUSED PULL APART	
						2				2	625	18510	2	EACH	BRACKET ARM, 30'	
						310				310	625	23000	310	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
						150				150	625	23400	150	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						28				28	625	25400	28	FT	CONDUIT, 2", 725.04	
						12				12	625	25402	12	FT	CONDUIT, 2", 725.05	
						51				51	625	25502	51	FT	CONDUIT, 3", 725.05	
						90				90	625	25602	90	FT	CONDUIT, 4", 725.05	
						327				327	625	25908	327	FT	CONDUIT, JACKED OR DRILLED, 725.052, 4"	
						2				2	625	26252	2	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), TYPE IV DISTRIBUTION, 194W, 120/277V	
						153				153	625	29000	153	FT	TRENCH	
						4				4	625	30706	4	EACH	PULL BOX, 725.08, 24"	
						4				4	625	31510	4	EACH	PULL BOX REMOVED	
						6				6	625	32000	6	EACH	GROUND ROD	
						153				153	625	36010	153	FT	UNDERGROUND WARNING/MARKING TAPE	
						2				2	625	75400	2	EACH	LIGHT POLE REMOVED	
						9				9	632	05007	9	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK, WITH BACKPLATE	34
						3				3	632	05087	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK, WITH BACKPLATE	34
						6				6	632	20731	6	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	34
						12				12	632	25000	12	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
						6				6	632	25010	6	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
						2				2	632	26000	2	EACH	PEDESTRIAN PUSHBUTTON	
						1,580				1,580	632	40500	1,580	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
						1,580				1,580	632	40700	1,580	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
						4				4	632	64010	4	EACH	SIGNAL SUPPORT FOUNDATION	
						1				1	632	64020	1	EACH	PEDESTAL FOUNDATION	
						45				45	632	68200	45	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
						1				1	632	70001	1	EACH	POWER SERVICE, AS PER PLAN	34

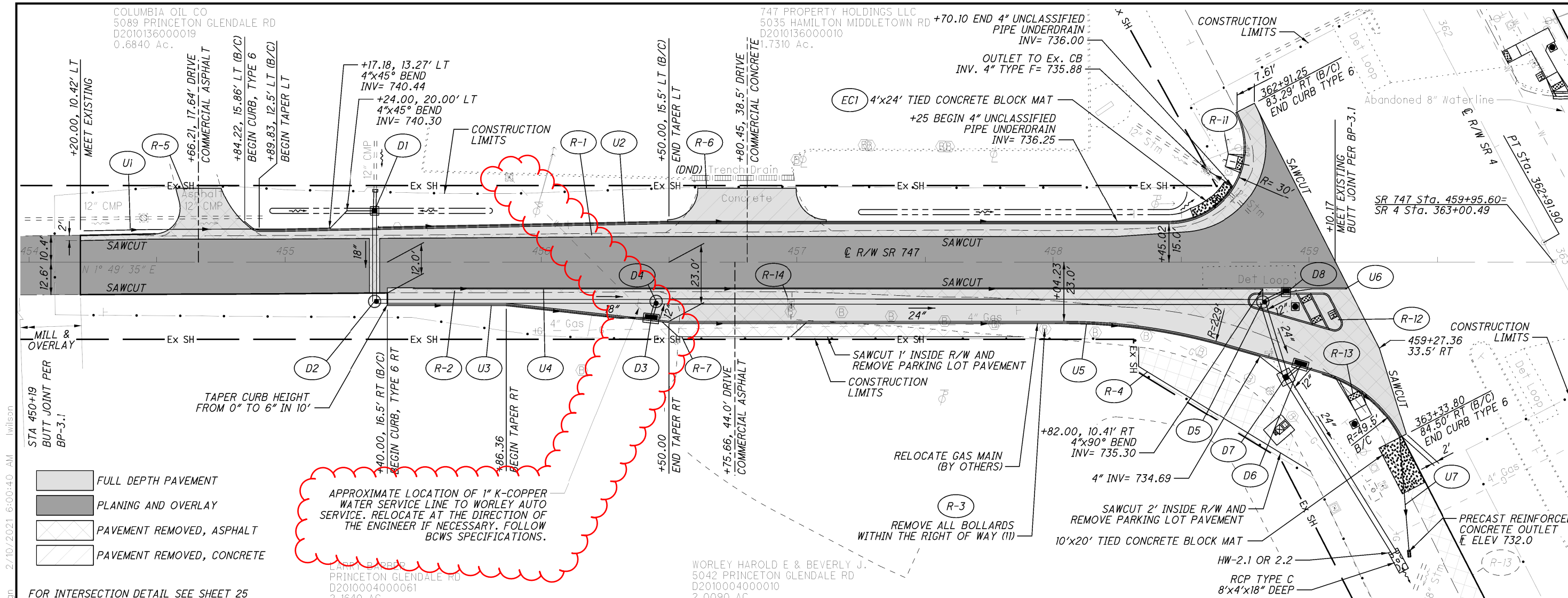
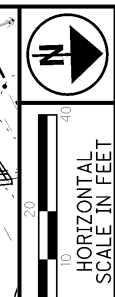
GENERAL SUMMARY

BUT - 4 - 13.90

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47

COLUMBIA OIL CO  
5089 PRINCETON GLENDALE RD  
D2010136000019  
0.6840 Ac.

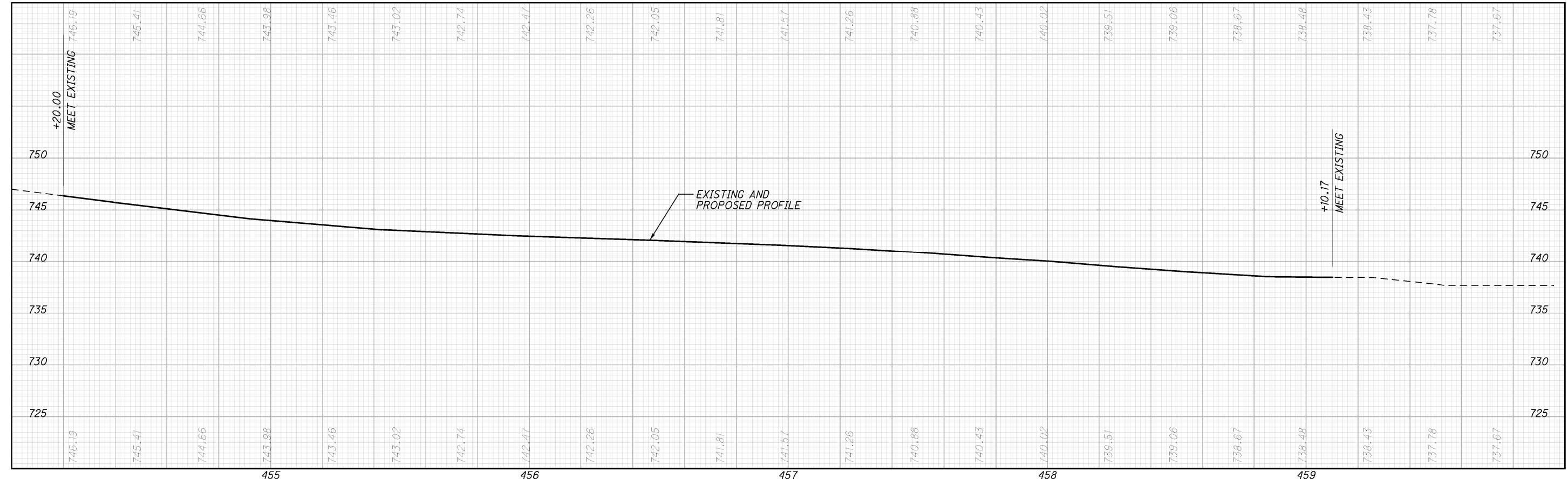
747 PROPERTY HOLDINGS LLC  
5035 HAMILTON MIDDLETOWN RD  
D2010136000010  
1.7310 Ac.



- FULL DEPTH PAVEMENT
- PLANING AND OVERLAY
- PAVEMENT REMOVED, ASPHALT
- PAVEMENT REMOVED, CONCRETE

APPROXIMATE LOCATION OF 1" K-COPPER WATER SERVICE LINE TO WORLEY AUTO SERVICE. RELOCATE AT THE DIRECTION OF THE ENGINEER IF NECESSARY. FOLLOW BCWS SPECIFICATIONS.

FOR INTERSECTION DETAIL SEE SHEET 25



PLAN AND PROFILE  
SR 747 STA. 454+00 TO STA. 459+95.60

BUT -4-13.90

15  
47

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