CITY OF DUBLIN, OHIO

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

14-018-CIP

City of Dublin

Ohio Utilities Protection Service
Call 811 before you dig

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF WIDENING 0.31 MILES OF S.R. 161 TO ACCOMMODATE LEFT AND RIGHT TURN LANES, AND CONSTRUCTION OF THE CROSBY COURT INTERSECTION. INCLUDED WITH THIS PROJECT WILL BE AN 8' SHARED USE PATH, AND DRAINAGE IMPROVEMENTS.

SPECIFICATIONS

CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT SECTION 100 GENERAL PROVISIONS, CURRENT EDITION, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. REFER TO THE CITY OF DUBLIN GENERAL CONDITIONS DIVISION 100 FOUND IN THE PROPOSAL AND CONTRACT DOCUMENTS.

BENCHMARK (BASED ON NAVD 88)

BM "1" – SOURCE BENCHMARK – FCGS N29

BRASS PLUG IN CONCRETE MONUMENT AT THE INTERSECTION OF HOUCHARD ROAD AND DUBLIN–PLAIN CITY ROAD (S.R. 161), 16.5' NORTH OF THE CENTERLINE OF DUBLIN–PLAIN CITY ROAD (S.R. 161). 33' SOUTHEAST OF A POWER POLE, 0.3' BELOW THE GROUND

N: 767852.13 E: 1772111.19 ELEV = 946.07

BM "2"

3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE"

N: 767949.28 E: 1773812.19 ELEV = 943.82

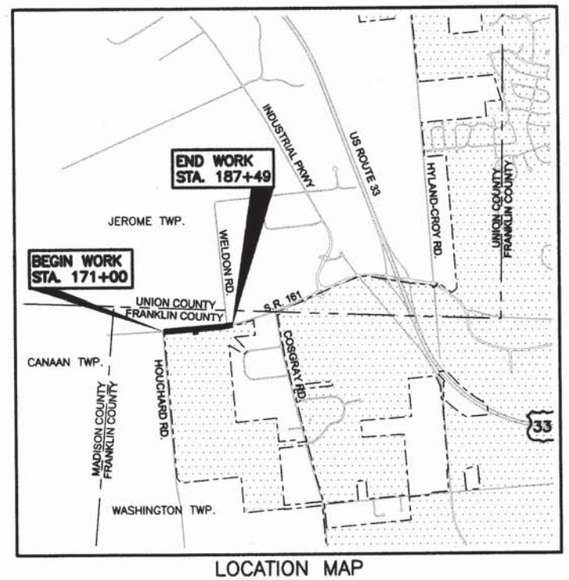
BM "3"

3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE"

N: 767835.89 E: 1772621.35 ELEV = 947.28

PLAN PREPARED BY:

Stantec
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383



LOCATION MAP

0 2000 4000
SCALE IN FEET

PORTIONS TO BE IMPROVED

INDEX OF SHEETS

LEGEND

- PROPOSED STORM SEWER, MANHOLE, CATCH BASIN
- EXISTING RIGHT–OF–WAY LINE
- PERMANENT RIGHT–OF–WAY
- EXISTING EASEMENT
- TEMPORARY EASEMENT
- WORK LIMITS
- RAILROAD SPIKE, IRON PIN, PK NAIL FOUND
- PROPERTY LINE
- BASELINE OR CENTERLINE
- EXISTING EDGE OF PAVEMENT
- EXISTING WATER MAIN, VALVE, AND HYDRANT
- EXISTING SANITARY SEWER, MANHOLE (FORCE MAIN)
- EXISTING GAS MAIN
- EXISTING STORM SEWER, MANHOLE AND INLET
- EXISTING UNDERGROUND TELEPHONE AND PEDESTAL
- EXISTING UNDERGROUND ELECTRIC AND PEDESTAL
- EXISTING FIBER OPTIC CABLE
- UTILITY POLES
- SIGNAL POLES
- POLE GUY WIRE
- SIGN
- TREE, TREE TO BE REMOVED

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

CITY OF DUBLIN	ODOT		CITY OF COLUMBUS	
PD–01	DM–1.2	1–18–13	AA–S133A	8–8–14
PD–02			AA–S150	7–9–12
PD–03	MT–97.10	7–18–14	AA–S151	7–9–12
RD–02	MT–99.20	7–19–13	1441	12–1–13
RD–06	MT–101.90	7–18–14		
	TC–41.20	10–18–13		
	TC–42.20	10–18–13		
	TC–71.10	1–17–14		
			SUPPLEMENTAL SPECIFICATIONS	
			1100	11–1–14

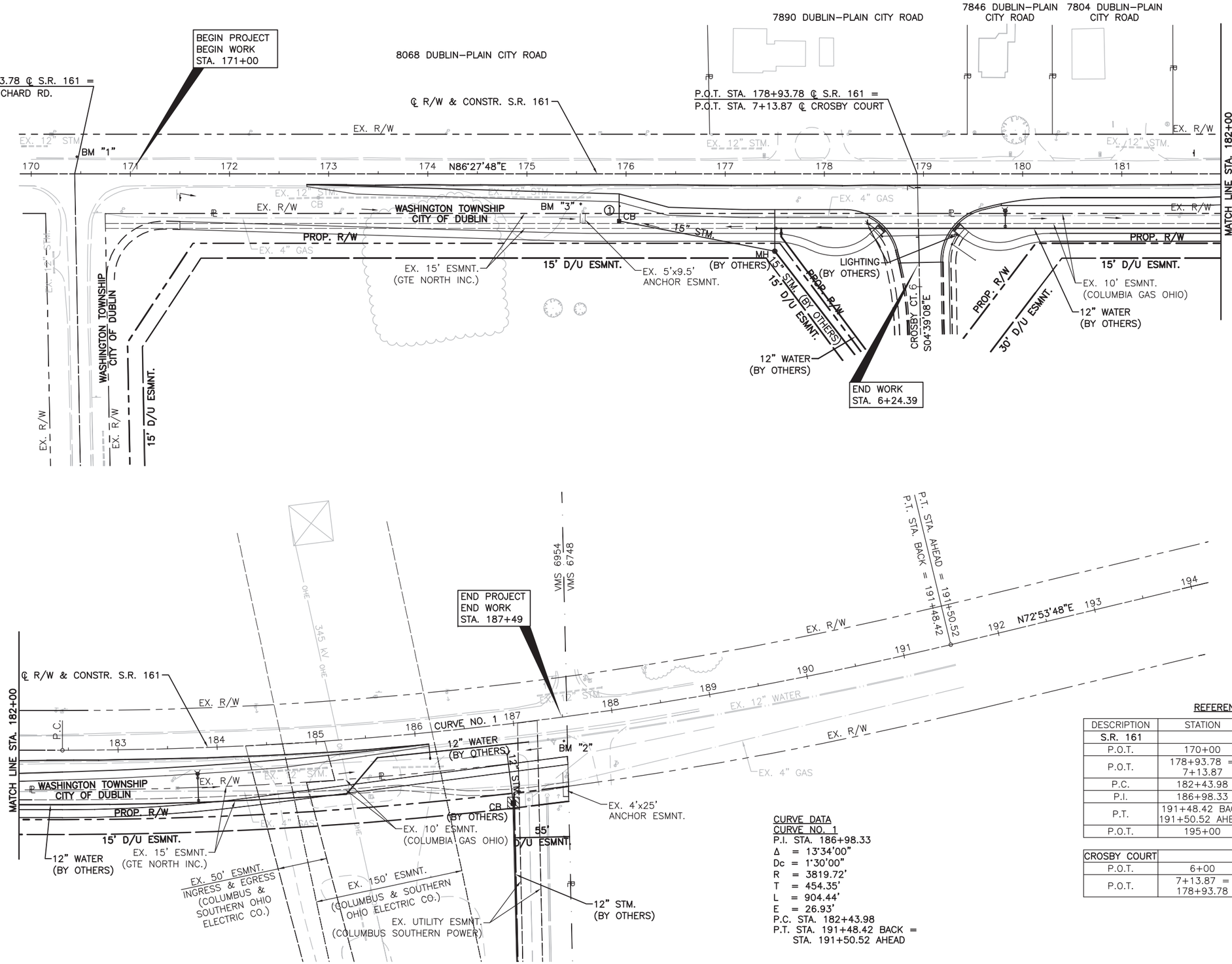
STATE OF OHIO
BRIAN HAGERTY
E61658
PROFESSIONAL ENGINEER
ENGINEER'S SEAL

Brian M Hagerty 3/18/15
REGISTERED ENGINEER DATE

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

APPROVED: Paul A. Hammersmith 3.20.2015
CITY ENGINEER, CITY OF DUBLIN, OHIO DATE

CIP NO. 14-018-CIP
CONSTRUCTION PROJECT NO.
S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT
1/24



CURVE DATA
CURVE NO. 1
P.I. STA. 186+98.33
Δ = 13°34'00"
Dc = 1°30'00"
R = 3819.72'
T = 454.35'
L = 904.44'
E = 26.93'
P.C. STA. 182+43.98
P.T. STA. 191+48.42 BACK =
STA. 191+50.52 AHEAD

REFERENCE POINTS

DESCRIPTION	STATION	NORTHING	EASTING
S.R. 161			
P.O.T.	170+00	767,832.00	1,772,066.28
P.O.T.	178+93.78 = 7+13.87	767,887.13	1,772,958.36
P.C.	182+43.98	767,908.73	1,773,307.89
P.I.	186+98.33	767,936.76	1,773,761.37
P.T.	191+48.42 BACK 191+50.52 AHEAD	768,070.38	1,774,195.63
P.O.T.	195+00	768,173.16	1,774,529.65

CROSBY COURT			
P.O.T.	6+00	767,773.64	1,772,967.59
P.O.T.	7+13.87 = 178+93.78	767,887.13	1,772,958.36

N

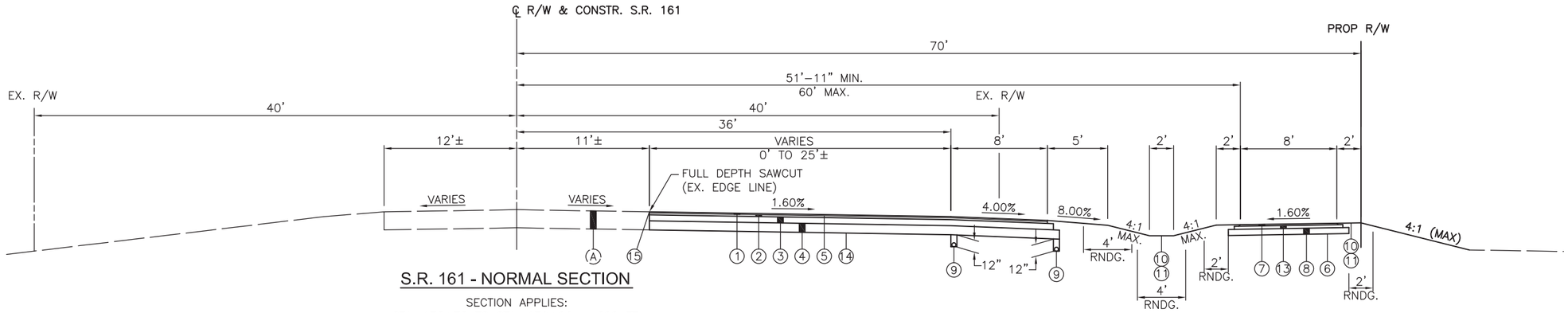
0 50 100 SCALE IN FEET

CALCULATED CNK CHECKED BMH

SCHEMATIC PLAN/REFERENCE POINTS

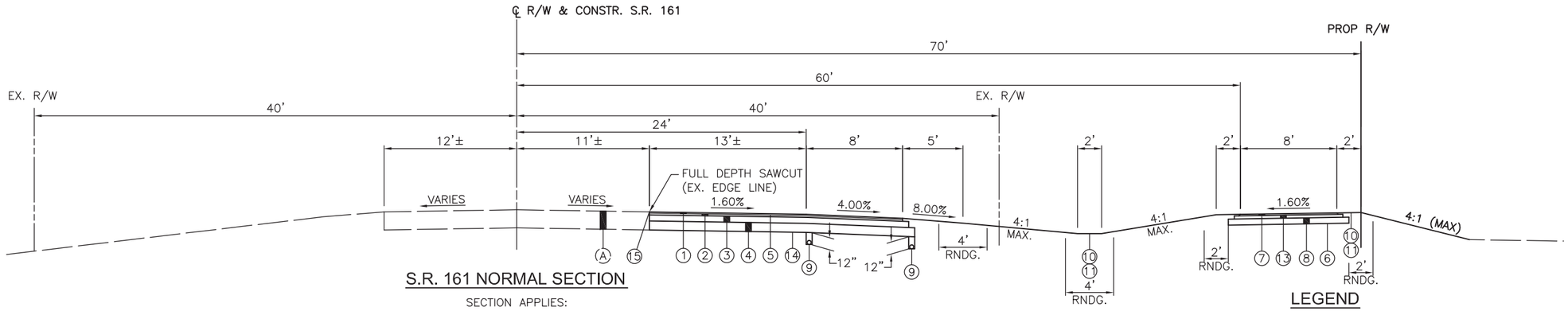
S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

2 / 24



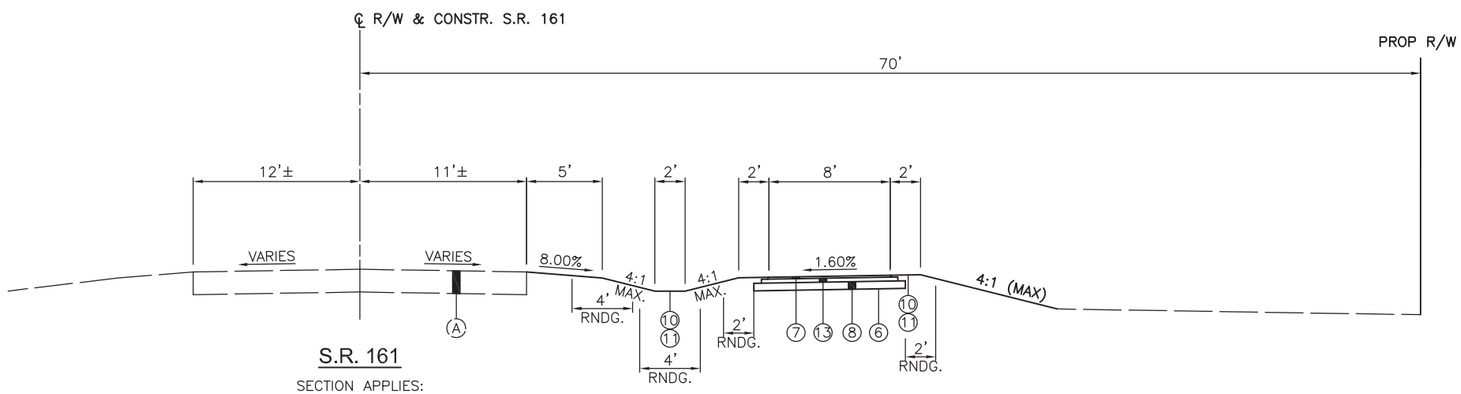
S.R. 161 - NORMAL SECTION

SECTION APPLIES:
STA. 172+78 TO STA. 179+00 = 622 FT.



S.R. 161 NORMAL SECTION

SECTION APPLIES:
STA. 179+00 TO STA. 181+50 = 250 FT.



S.R. 161

SECTION APPLIES:
STA. 171+00 TO STA. 171+50 = 50 FT. (NO MULTI–USE PATH)
STA. 171+50 TO STA. 172+78 = 128 FT.
STA. 186+13 TO STA, 187+49 = 136 FT.

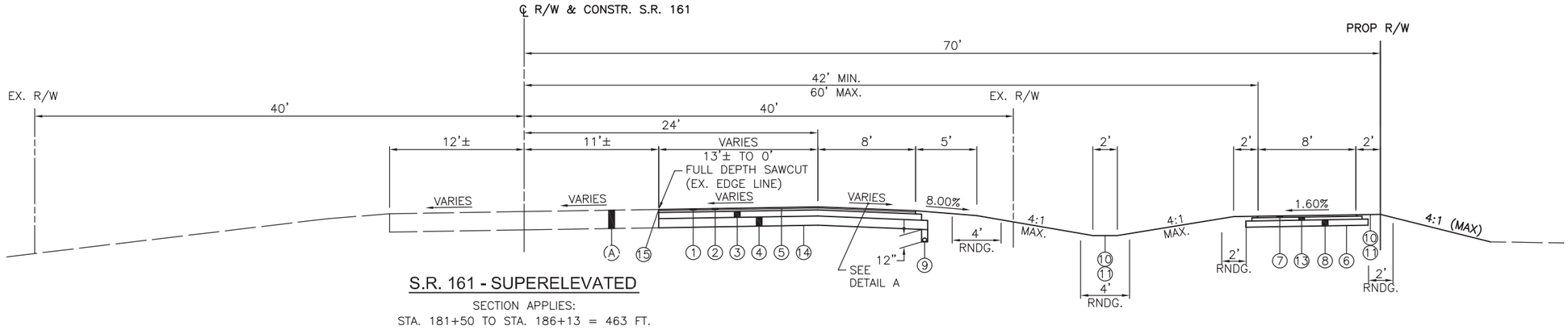
LEGEND

(1)	ITEM 441 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64–22
(2)	ITEM 441 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
(3)	ITEM 301 – 6" ASPHALT CONCRETE BASE COURSE, PG64–22
(4)	ITEM 304 – 9" AGGREGATE BASE
(5)	ITEM 407 – NTSS–1HM TRACKLESS TACK COAT (0.04 GAL./SQ. YD.)
(6)	ITEM 204 – SUBGRADE COMPACTION
(7)	ITEM 441 – 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64–22
(8)	ITEM 304 – 6" AGGREGATE BASE
(9)	ITEM 605 – 4" PIPE UNDERDRAIN (720.12)
(10)	ITEM 659 – SEEDING AND MULCHING, AS PER PLAN
(11)	ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN
(12)	ITEM 609 – COMBINATION CURB AND GUTTER, AS PER PLAN
(13)	ITEM 301 – 3" ASPHALT CONCRETE BASE COURSE, PG64–22
(14)	ITEM 205 – LIME KILN DUST STABILIZED EMBANKMENT
(15)	ITEM 423 – CRACK SEALING, TYPE II
(A)	EXISTING PAVEMENT

CALCULATED CNK
CHECKED BMH

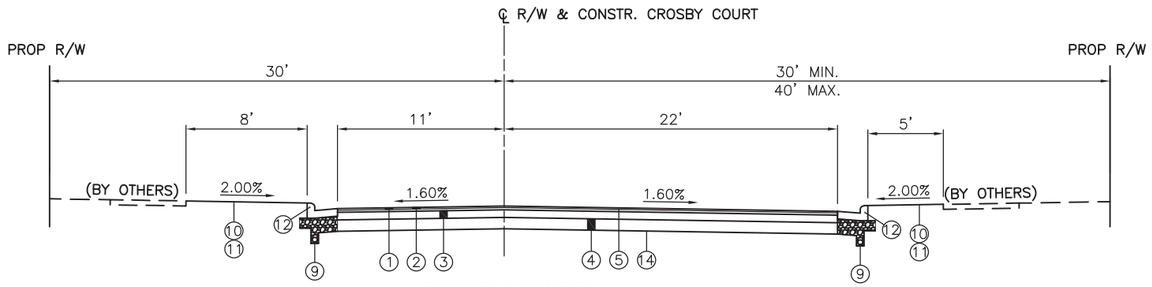
TYPICAL SECTIONS

S.R. 161 TURN LANE
IMPROVEMENTS
AT CROSBY COURT



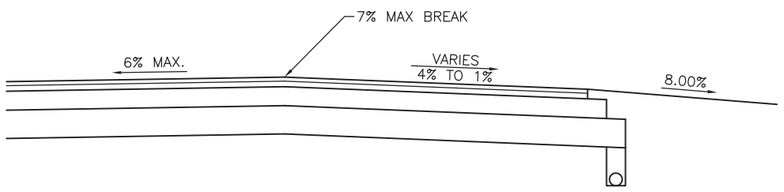
S.R. 161 - SUPERELEVATED

SECTION APPLIES:
STA. 181+50 TO STA. 186+13 = 463 FT.



CROSBY COURT

SECTION APPLIES:
STA. 6+24.39 TO STA. 7+13.87 = 85.64 FT.



DETAIL A

LEGEND

(1)	ITEM 441 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64–22
(2)	ITEM 441 – 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
(3)	ITEM 301 – 6" ASPHALT CONCRETE BASE COURSE, PG64–22
(4)	ITEM 304 – 9" AGGREGATE BASE
(5)	ITEM 407 – NTSS–1HM TRACKLESS TACK COAT (0.04 GAL./SQ. YD.)
(6)	ITEM 204 – SUBGRADE COMPACTION
(7)	ITEM 441 – 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64–22
(8)	ITEM 304 – 6" AGGREGATE BASE
(9)	ITEM 605 – 4" PIPE UNDERDRAIN (720.12)
(10)	ITEM 659 – SEEDING AND MULCHING, AS PER PLAN
(11)	ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED, AS PER PLAN
(12)	ITEM 609 – COMBINATION CURB AND GUTTER, AS PER PLAN
(13)	ITEM 301 – 3" ASPHALT CONCRETE BASE COURSE, PG64–22
(14)	ITEM 205 – LIME KILN DUST STABILIZED EMBANKMENT
(15)	ITEM 423 – CRACK SEALING, TYPE II
(A)	EXISTING PAVEMENT

CALCULATED CNK
CHECKED BMH

TYPICAL SECTIONS

S.R. 161 TURN LANE
IMPROVEMENTS
AT CROSBY COURT

GENERAL NOTES

CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT SECTION 100 GENERAL PROVISIONS, CURRENT EDITION, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. REFER TO THE CITY OF DUBLIN GENERAL CONDITIONS DIVISION 100 FOUND IN THE PROPOSAL AND CONTRACT DOCUMENTS.

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 CONSTRUCTION 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.

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.

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

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 CONTRACT DOCUMENTS.

THE CONTRACTOR 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 PRECAUTION 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, GRADE, 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.

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

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.

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.

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

TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS MAY REFLECT DEVIATIONS FROM THE ROADWAY PROFILES AND TYPICAL SECTION CROSS SLOPES IN SOME AREAS DUE TO PAVEMENT WARPING. IN ALL CASES, THE TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS SHALL GOVERN.

PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES THE FULL DEPTH OF THE EXISTING PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER. PAVEMENT REPLACEMENT SHALL BE CONDUCTED ACCORDING TO CITY OF COLUMBUS STANDARD DRAWING 1441 AND APPLICABLE CITY OF DUBLIN STANDARD DRAWINGS. THE REPLACEMENT OF DRIVEWAYS, HANDICAPPED RAMPS, SIDEWALKS, MULTI-USE PATHS, PARKING LOT PAVEMENT, ETC. SHALL BE PROVIDED ACCORDING TO THE APPROVED CONSTRUCTION DRAWINGS AND CITY OF DUBLIN STANDARD CONSTRUCTION DRAWINGS.

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.

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 SUBGRADE COMPACTION REQUIREMENTS.

NO BLASTING WILL BE PERMITTED ON THIS PROJECT.

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

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 ITEM 203. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES.

ITEM 203 – EXCAVATION	200 CY
ITEM 203 – SELECT GRANULAR EMBANKMENT, #2 STONE	200 CY

THE COST OF ALL ASPHALT PAVEMENT REMOVAL AND DISPOSAL SHALL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR ITEM 203 – EXCAVATION.

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 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.

AMERICANS WITH DISABILITIES ACT (ADA)

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.

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 PEDESTRIAN PATH.

ITEM 608 – 4" CONCRETE WALK, AS PER PLAN

IN ADDITION TO THE CONCRETE WALK, THE CONTRACTOR SHALL 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 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 MANUFACTURE'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.

UTILITIES

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 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 AND THE CITY ENGINEER.

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

AT&T (CONDUIT)
GARY VAN ALMSICK
111 N. 4TH STREET, ROOM 802
COLUMBUS, OHIO 43215
(614) 223-7276

AT&T (CABLE)
ROGER MIKESELL
111 N. 4TH STREET, ROOM 802
COLUMBUS, OHIO 43215
(614) 223-7162
(614) 208-7731 (MOBILE)

COLUMBIA GAS OF OHIO
MATT MYERS
3550 JOHNNY APPLESEED COURT
COLUMBUS, OHIO 43231
(614) 315-3770 (MOBILE)
(614) 818-2113

TIME WARNER CABLE
RAY MAURER
3760 INTERCHANGE DRIVE
COLUMBUS, OHIO 43204
(614) 481-5262
(614) 348-2979 (MOBILE)

WIDE OPEN WEST
MARK FREY
3675 CORPORATE DRIVE
COLUMBUS, OHIO 43231
(614) 668-8079 (MOBILE)
(614) 948-4616

AMERICAN ELECTRIC POWER
PAUL PAXTON
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230-6605
(614) 883-6831
(614) 949-8883 (MOBILE)

DUBLINK (TEAM FISHEL)
JOE TEPPER
1600 WALCUTT ROAD
COLUMBUS, OH 43228
(614) 921-8620

CITY OF DUBLIN
DIVISION OF ENGINEERING
MIKE SWEDER, P.E.
5800 SHIER-RINGS ROAD
DUBLIN, OHIO 43016-1236
(614) 410-4621

CITY OF COLUMBUS
DIVISION OF WATER
BRIAN HAEMMERLE
910 DUBLIN ROAD
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(614) 645-7788

FRONTIER COMMUNICATIONS
ROBERT CHANDLER
2780 LIBERTY RD.
DELAWARE, OHIO 43015
(740) 369-0826

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.

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 NONWORKING HOURS. TRENCHES OUTSIDE THESE AREAS SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NONWORKING 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, OR ITEM 636 – FLOWABLE CONTROLLED DENSITY FILL, TYPE 2 OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER. 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.

CONTINGENCY QUANTITIES

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

CALCULATED CNK
CHECKED TJS

GENERAL NOTES

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

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CALCULATED CNK
CHECKED TJS

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 1 EA

ITEM 609 – 6" CONCRETE COMBINATION CURB AND GUTTER, AS PER PLAN

THE 6" CONCRETE COMBINATION CURB AND GUTTER SHALL BE IN ACCORDANCE WITH CITY OF DUBLIN STANDARD DRAWING RD–02.

WHERE THIS ITEM IS 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.

STORM SEWER

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 SEWERS, DRAINS, AND OTHER WATER COURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY ENGINEER.

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 CLEANED 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 OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

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 PRIOR TO THE START OF PIPE LAYING.

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

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.

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

ALL STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C76, WALL B, CLASS IV FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES, CLASS III FOR 18 INCHES TO 24 INCH PIPES, AND 27 INCHES AND LARGER PIPE SHALL BE CLASS II, UNLESS OTHERWISE SHOWN ON THE PLANS.

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

ALL EXISTING AND PROPOSED CASTINGS SHALL BE ADJUSTED TO MATCH THE SURROUNDING FINISH GRADE BY THE CONTRACTOR. TOP OF CASTING ELEVATIONS PROVIDED ON THE PLANS ARE APPROXIMATE. 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 ADDITIONAL 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.

ITEM 630 – GROUND MOUNTED SUPPORT, NO. 3, 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 OR EDGE OF PAVEMENT 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 STANDARD CONSTRUCTION DRAWING TC–42.20. THE ANCHOR POST SHALL BE PAID FOR 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 – 2–1/4" SQUARE ANCHOR POST, 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 SCD 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 – SIGNS, FLAT SHEET

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.

ITEM 630 – REMOVAL OF GROUND MOUNTED SIGN AND STORAGE

ALL EXISTING GROUND MOUNTED SIGNS WITHIN THE PROJECT AREA SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE CITY AT A LOCATION TO BE DETERMINED WITHIN THE DUBLIN CITY LIMITS. THE CONTRACTOR SHALL COMPENSATE THE CITY IN AN AMOUNT EQUAL TO THE REPLACEMENT COST OF ANY SIGNS DAMAGED AS A RESULT OF THE CONSTRUCTION OPERATIONS. PAYMENT FOR SIGN REMOVAL AND DELIVERY WILL BE MADE AT THE UNIT PRICE BID PER EACH FOR ITEM 630, REMOVAL OF GROUND MOUNTED SIGN AND STORAGE.

ALL ROADWAY SIGNING WILL BE FURNISHED AND INSTALLED BY THE CITY OF DUBLIN INCLUDING, BUT NOT LIMITED TO, SUPPORTS, ANCHOR POSTS, SUPPORT ASSEMBLIES, FLAT SHEET AND POST REFLECTORS.

ITEM 644 – REMOVAL OF PAVEMENT MARKING

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE REMOVAL OF PAVEMENT MARKINGS:

ITEM 644 – REMOVAL OF PAVEMENT MARKING 1335 FT.

ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN

A MINIMUM OF 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.

ITEM 653 – TOPSOIL FURNISHED AND PLACED, AS PER PLAN 648 CU. YD.

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 SF 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 TO PREVENT THE STRAW FROM BEING BLOWN OR WASHED 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 & HYDRO–MULCHING ARE 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 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 7% RATE BY VOLUME. STABILIZATION SHALL EXTEND TO A DEPTH OF 16" BELOW SUBGRADE AND 2' BEYOND THE PAVED SHOULDER OR BACK OF CURB. 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 3464 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.

GENERAL NOTES

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ITEM 614 – MAINTAINING TRAFFIC

ACCESS TO ALL ADJOINING PROPERTIES AS WELL AS ACCESS FOR MAIL, WATER, SANITARY SERVICE, AND EMERGENCY VEHICLES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

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

IN THE EVENT THAT IT BECOMES NECESSARY FOR THE CITY TO PERFORM WORK OF AN IMMEDIATE NATURE (SUCH AS THE PLACEMENT OF BARRICADES OR REPLACEMENT OF SIGNS AND OTHER WARNING OR PROTECTIVE DEVICES) BECAUSE OF FAILURE OR REFUSAL OF THE CONTRACTOR TO PERFORM SUCH WORK AS REQUIRED BY THE CONTRACT, THE CONTRACTOR SHALL REIMBURSE THE CITY AT A RATE OF 2.5 TIMES THE ACTUAL COST OF THE LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM SUCH WORK. THE CITY SHALL BE REQUIRED TO NOTIFY OR ATTEMPT TO NOTIFY THE DESIGNATED REPRESENTATIVE OF THE CONTRACTOR OF THE NECESSITY TO PERFORM SUCH WORK. IF THE CONTRACTOR REFUSES OR FAILS WITHIN A REASONABLE TIME TO PERFORM OR CAUSE THE PERFORMANCE OF SUCH WORK, THE CITY SHALL BE REIMBURSED BY THE CONTRACTOR IN THE AMOUNT PROVIDED HEREIN BY WAY OF A DEDUCTION FROM THE CONTRACTOR'S NEXT PAYMENT UNDER THE CONTRACT. REASONABLE TIME FOR ALL STREETS INVOLVED ON THIS CONTRACT IS 2 HOURS FROM THE TIME OF NOTIFICATION BY THE CITY.

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, THEY MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED BY THE CITY ENGINEER.

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 SHALL 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) SHALL 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, FRANKLIN 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 AN UNIT PRICE HOURLY BASIS UNDER ITEM 614 – LAW ENFORCEMENT OFFICE 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	40 HOURS

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.

TRENCH FOR WIDENING

THE OPEN TRENCH 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 WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

DROPOFFS IN WORKZONE

THE DROPOFF ADJACENT TO THE TRAVELED LANE SHALL BE NO GREATER THAN 1.5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. THIS REQUIREMENT MAY BE MET BY TEMPORARILY PLACING SUBBASE AND BASE MATERIAL TO WITHIN 1.5 INCHES OF THE EXISTING GRADE ADJACENT TO THE TRAVELED LANE AND SLOPING THE MATERIAL AT 3:1 OR FLATTER WITHIN THE EXCAVATED AREA. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS DURING WORKING HOURS. THESE REQUIREMENTS SHALL BE MET AT NO ADDITIONAL COST.

DUST CONTROL

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

ITEM 616 – WATER	8 M GAL.

DRUM REQUIREMENTS

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED.

CONSTRUCTION SEQUENCE

PHASE 1

1. SAWCUT EXISTING PAVEMENT AND CONSTRUCT WIDENING, MULTI–USE PATH, STORM DRAINAGE, CROSBY COURT INTERSECTION AND FINAL PAVING PER ODOT SCD MT–101.90. ONE LANE, TWO WAY TRAFFIC CAN BE MAINTAINED PER MT–97.10 AS NEEDED.

PHASE 2

1. INSTALL ALL PAVEMENT MARKINGS AND PERMANENT SIGNING PER MT–99.20.

CALCULATED CNK
CHECKED TJS

MAINTENANCE OF TRAFFIC

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ITEM	DESCRIPTION	TOTAL	UNIT
	GENERAL		
614	MAINTAINING TRAFFIC	1	LUMP
623	CONSTRUCTION LAYOUT STAKES	1	LUMP
624	MOBILIZATION	1	LUMP
SPEC	PROOF SURVEY	1	LUMP
	ROADWAY		
201	CLEARING & GRUBBING	1	LUMP
202	PIPE REMOVED & DISPOSED OF	434	FT
202	CATCH BASIN REMOVED & DISPOSED OF	1	EA
202	CONCRETE PAVEMENT REMOVED	195	SY
203	EXCAVATION	1,023	CY
203	EMBANKMENT	3,338	CY
203	SELECT GRANULAR EMBANKMENT, #2 STONE	200	CY
204	SUBGRADE COMPACTION	1,693	SY
204	PROOF ROLLING	1	HR
206*	LIME KILN DUST STABILIZED SUBGRADE, 16" DEEP, AS PER PLAN	3,464	SY
608	4" CONCRETE WALK, AS PER PLAN	9,833	SF
608	DETECTABLE WARNING, AS PER PLAN	4	EA
608	CURB RAMP	2	EA
653	TOPSOIL FURNISHED & PLACED, AS PER PLAN	657	CY
	EROSION CONTROL		
207	INLET PROTECTION	1	EA
659	SEEDING & MULCHING, AS PER PLAN	7,884	SY
	DRAINAGE		
603	4" CONDUIT, TYPE F FOR UNDERDRIAN OUTLETS	83	FT
604	CATCH BASIN, AA-S133A	1	EA
604	PRECAST REINFORCED CONCRETE OUTLET	1	EA
605	4" PIPE UNDERDRAINS (720.12)	1,290	FT
605	4" UNCLASSIFIED PIPE UNDERDRAINS (720.12)	766	FT
901	12" PIPE, WITH TYPE 1 BEDDING, 706.02	48	FT
901	15" PIPE, WITH TYPE 1 BEDDING, 706.02	160	FT
SPEC.	12" ADS FLARED END SECTION WITH DISSIMILAR COUPLER	1	EA
	PAVEMENT		
301	ASPHALT CONCRETE BASE (ROADWAY)	1,067	TON
301	ASPHALT CONCRETE BASE (SHARED USE PATH)	254	TON
304	AGGREGATE BASE (ROADWAY)	817	CY
304	AGGREGATE BASE (SHARED USE PATH)	283	CY
407	NTSS – 1HM TRACKLESS TACK COAT	126	GAL
423	CRACK SEALING, TYPE II	4,365	PND
441*	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (ROADWAY)	218	TON
441*	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 (SHARED USE PATH)	113	TON
441*	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) (ROADWAY)	305	TON
609	COMBINATION CURB & GUTTER, AS PER PLAN	150	FT

ITEM	DESCRIPTION	TOTAL	UNIT
	TRAFFIC CONTROL *		
630 †	GROUND MOUNTED SUPPORT POST, NO. 3 POST, TYPE S, AS PER PLAN	41.2	FT
630 †	2-1/4" SQUARE ANCHOR POST, AS PER PLAN	4	EA
630 †	SIGN, FLAT SHEET	26.3	SF
630 †	SIGN, DOUBLE FACED, STREET NAME	2	EA
630 †	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	2	EA
630	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	1	EA
630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	1	EA
644	EDGE LINE, 4"	0.23	MILE
644	CENTER LINE, DOUBLE YELLOW, 4"	0.44	MILE
644	STOP LINE, 24"	29	FT
644	CHANNELIZING LINE, 8"	356	FT
644	CROSSWALK LINE, 12"	143	FT
644	TRANSVERSE/DIAGONAL LINE, 24"	249	FT
644	LANE ARROW, 72"	4	EA
644	REMOVAL OF PAVEMENT MARKING	1,335	FT
	MAINTENANCE OF TRAFFIC		
614	LAW ENFORCEMENT OFFICER, WITH PATROL CAR, AS PER PLAN	40	HR
616	WATER	8	M GAL

* ODOT CMS, 2013. ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CMS, 2012 EDITION.

† PERFORMED BY CITY OF DUBLIN

CALCULATED CNK
CHECKED -

GENERAL SUMMARY

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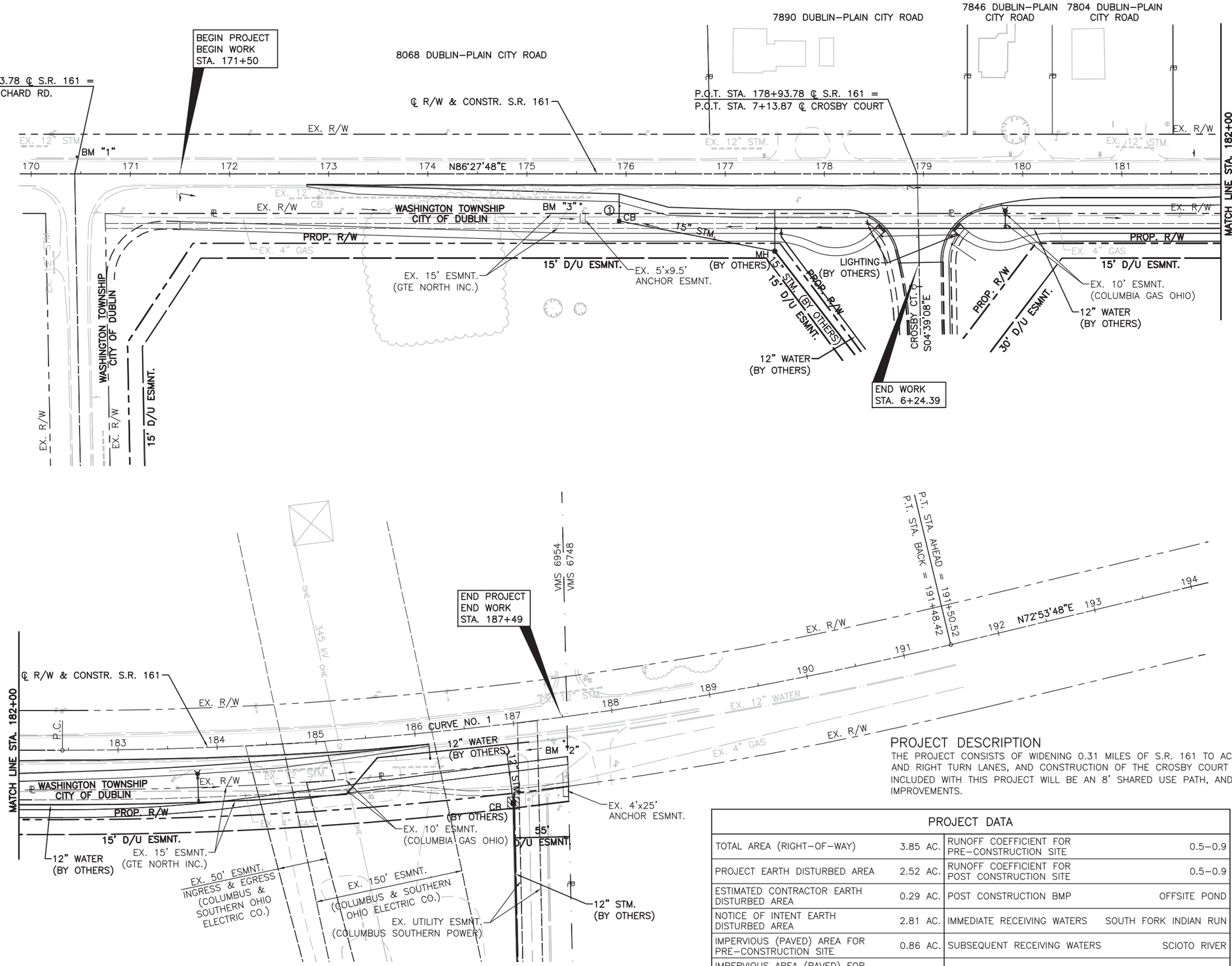


CURVE DATA
CURVE NO. 1
P.I. STA. 186+98.33
Δ = 13°34'00"
Dc = 1°30'00"
R = 3819.72'
T = 454.35'
L = 904.44'
E = 26.93'
P.C. STA. 182+43.98
P.T. STA. 191+48.42 BACK =
STA. 191+50.52 AHEAD

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF WIDENING 0.31 MILES OF S.R. 161 TO ACCOMMODATE LEFT AND RIGHT TURN LANES, AND CONSTRUCTION OF THE CROSBY COURT INTERSECTION. INCLUDED WITH THIS PROJECT WILL BE AN 8' SHARED USE PATH, AND DRAINAGE IMPROVEMENTS.

PROJECT DATA			
TOTAL AREA (RIGHT–OF–WAY)	3.85 AC.	RUNOFF COEFFICIENT FOR PRE–CONSTRUCTION SITE	0.5–0.9
PROJECT EARTH DISTURBED AREA	2.52 AC.	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.5–0.9
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.29 AC.	POST CONSTRUCTION BMP	OFFSITE POND
NOTICE OF INTENT EARTH DISTURBED AREA	2.81 AC.	IMMEDIATE RECEIVING WATERS	SOUTH FORK INDIAN RUN
IMPERVIOUS (PAVED) AREA FOR PRE–CONSTRUCTION SITE	0.86 AC.	SUBSEQUENT RECEIVING WATERS	SCIOTO RIVER
IMPERVIOUS AREA (PAVED) FOR POST–CONSTRUCTION SITE	1.70 AC.	NPDES GENERAL PERMIT NUMBER	

USGS QUADRANT HILLIARD, OHIO 2013
LAT. N 40°06'25"
LONG. W 83°11'55"

BMP'S FOR THIS PROJECT ARE PROVIDED BY AN OFFSITE POND SERVING THE PROPOSED DEVELOPMENT

SCALE IN FEET 0 50 100

CALCULATED CNK CHECKED BMH

PROJECT SITE PLAN

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

9
24

STA. 170+43.78 ℄ S.R. 161 =
℄ R/W HOUCHARD RD.

BEGIN PROJECT
BEGIN WORK
STA. 171+00

LARRY E. SEGNER (TRUSTEE)
8068 DUBLIN–PLAIN CITY ROAD

EX. R/W

EX. 12" STM.

BM "1"

40'

170 | 171 | 172 | 173 | ℄ R/W & CONSTR. S.R. 161 | 174 | N86°27'48"E | WORK LIMITS | 175

WORK LIMITS

BEGIN PAVEMENT TAPER
BEGIN SHOULDER TAPER
STA. 172+78, 10.84' RT.
& 12.84' ~~RT.~~

(TBR) CB

EX. 12" STM.

(TBR) END SHOULDER TAPER
STA. 173+28, 20.34' RT.

FULL DEPTH SAWCUT

8' PAVED SHOULDER

4" UD

EX. 12" STM. (TBR)

4" UD

GRAVEL PULL OFF

BEGIN SHARED USE PATH
STA. 171+50, 48.09' RT.

EX. R/W

EX. 4" GAS

(RBO) EX. 15' ESMNT
(GTE NORTH INC.)

WASHINGTON TOWNSHIP
CITY OF DUBLIN

EX. 10' ESMNT
(COLUMBIA GAS OHIO)

EX. R/W

70'

MATCH LINE STA. 175+50, SEE BELOW

℄ R/W HOUCHARD RD.

WASHINGTON TOWNSHIP
CITY OF DUBLIN

FUTURE
SHARED USE PATH

PROP. R/W

8' SHARED USE PATH

WORK LIMITS

PROP. TREE (TYP)
(BY OTHERS)

15' D/U ESMNT.

EX. 12" STM.

30' 30'

CITY OF DUBLIN

RBO – REMOVED BY OTHERS
TBR – TO BE REMOVED

FOR INTERSECTION & CURB RAMP DETAILS, SEE SHEET 21
FOR STORM SEWER PROFILES/UNDERDRAIN TABLE, SEE SHEET 22
FOR TRAFFIC CONTROL PLAN, SEE SHEET 23

P.O.T. STA. 178+93.78 ℄ S.R. 161 =
P.O.T. STA. 7+13.87 ℄ CROSBY COURT

KENNETH W. FULK (TRUSTEE)
7890 DUBLIN PLAIN CITY RD.

KENNETH W. FULK (TRUSTEE)
7846 DUBLIN PLAIN CITY RD.

KENNETH W. FULK (TRUSTEE)
7804 DUBLIN PLAIN CITY RD.

EX. R/W

EX. 12" STM.

40'

176 | 177 | ℄ R/W & CONSTR. S.R. 161 | 178 | WORK LIMITS | 179 | N86°27'48"E | 180

MATCH LINE STA. 175+50, SEE ABOVE

BEGIN RIGHT TURN TAPER
STA. 175+93, 20.26' RT.

FULL DEPTH SAWCUT

91°06'56"

FULL DEPTH SAWCUT

END RIGHT TURN TAPER
STA. 176+43, 33.76' RT.

END PAVEMENT TAPER
STA. 177+18, 36' RT. (RBO)

(RBO)

4" UD

4" UD

8' PAVED SHOULDER

BM "3"

(RBO)

70'

TYPE F

4" UD

EX. R/W

4" UD

8' PAVED SHOULDER

WASHINGTON TOWNSHIP
CITY OF DUBLIN

2" & 3" CONDUIT
(BY OTHERS)

FH
(BY OTHERS)

EX. 10' ESMNT
(COLUMBIA GAS OHIO)

EX. R/W

70'

MATCH LINE STA. 181+00, SEE SHEET 11

1 CB

15" STM.

EX. 15' ESMNT
(GTE NORTH INC.)

TYPE F

LIGHTING
(BY OTHERS)

12" WATER
(BY OTHERS)

8' SHARED USE PATH

PROP. R/W

WORK LIMITS

MH
(BY OTHERS)

15" STM. (BY OTHERS)

PROP. R/W

PULL BOX
(BY OTHERS)

(BY OTHERS)

℄ R/W & CONSTR. CROSBY COURT
S04°39'08"E

LIGHTING
(BY OTHERS)

8' SHARED USE PATH

PROP. R/W

WORK LIMITS

EX. 5'x9.5'
ANCHOR ESMNT.

15' D/U ESMNT.

PROP. TREE (TYP)
(BY OTHERS)

12" WATER
(BY OTHERS)

2" CONDUIT
(BY OTHERS)

30' D/U ESMNT.

15' D/U ESMNT.

CITY OF DUBLIN

BEGIN WORK
STA. 6+24.39

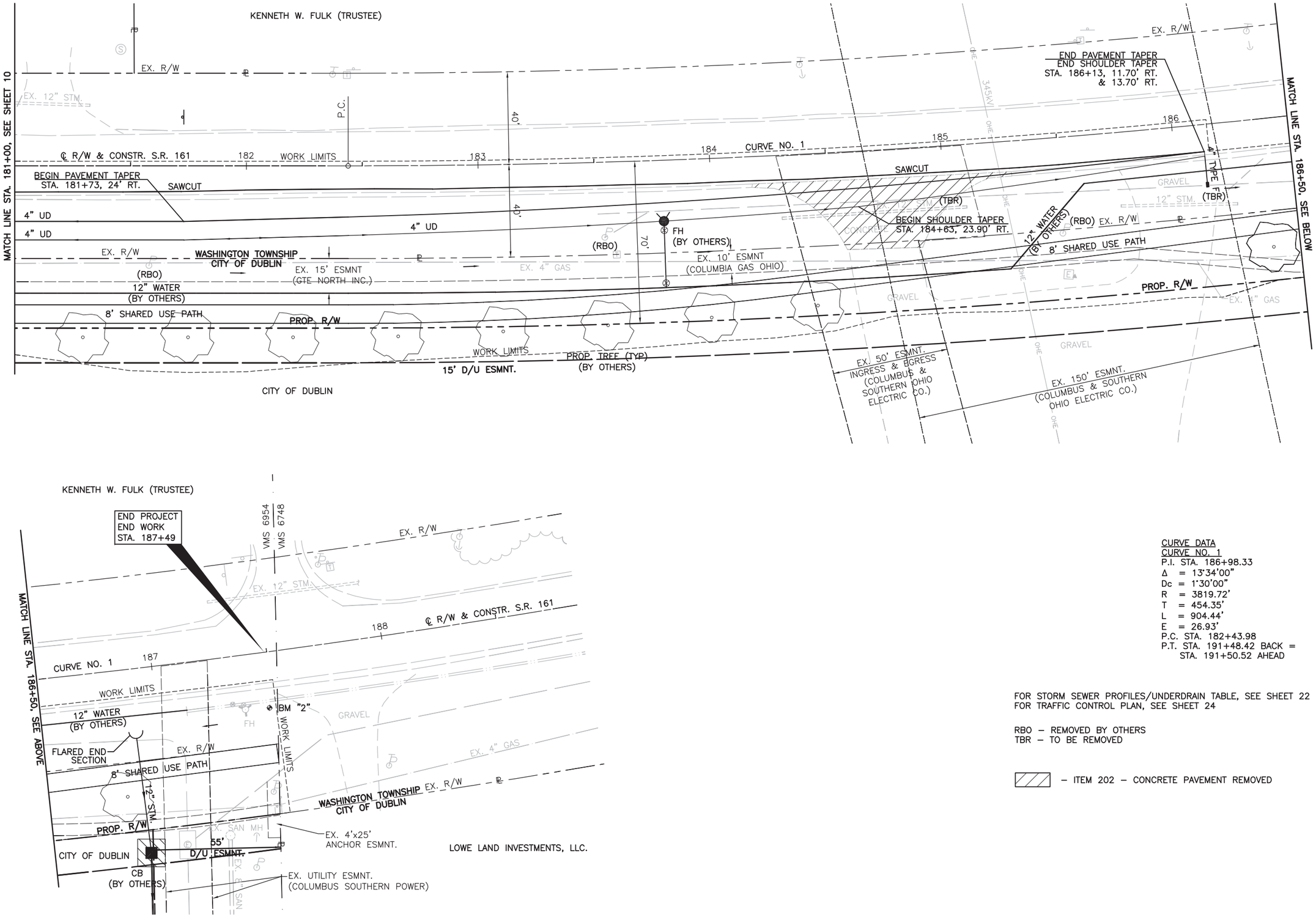
SCALE IN FEET
0 20 40

CALCULATED CNK
CHECKED BMH

PLAN
STA. 170+00 TO STA. 181+00

S.R. 161 TURN LANE
IMPROVEMENTS
AT CROSBY COURT

10
24



CURVE DATA
CURVE NO. 1
P.I. STA. 186+98.33
Δ = 13°34'00"
Dc = 1°30'00"
R = 3819.72'
T = 454.35'
L = 904.44'
E = 26.93'
P.C. STA. 182+43.98
P.T. STA. 191+48.42 BACK =
STA. 191+50.52 AHEAD

FOR STORM SEWER PROFILES/UNDERDRAIN TABLE, SEE SHEET 22
FOR TRAFFIC CONTROL PLAN, SEE SHEET 24

RBO – REMOVED BY OTHERS
TBR – TO BE REMOVED

– ITEM 202 – CONCRETE PAVEMENT REMOVED

N

SCALE IN FEET
0 20 40

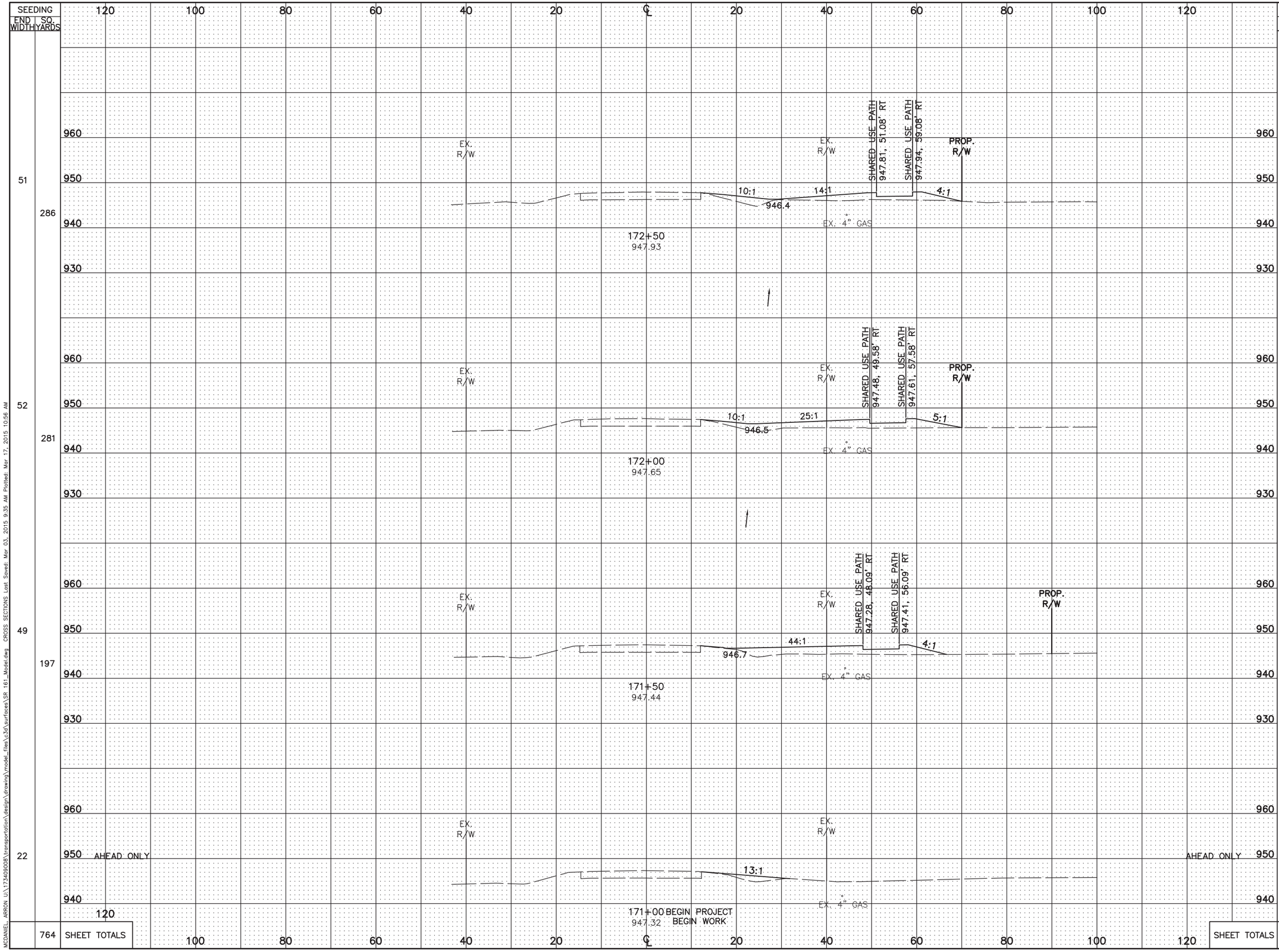
CALCULATED CNK
CHECKED BMH

PLAN
STA. 181+00 TO STA. 187+15.52

S.R. 161 TURN LANE
IMPROVEMENTS
AT CROSBY COURT

11
24

SEEDING END WIDTH	SEEDING SQ. YARDS
51	286
52	281
49	197
22	
	764



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	55	0	118
0	72	0	131
0	69	0	74
0	11		
		0	323

SHEET TOTALS

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 171+00 TO STA. 172+50

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

12
24

SEEDING END WIDTH	SEEDING SQ. YARDS
42	236
43	253
248	122
52	160
	771

SHEET TOTALS

120 100 80 60 40 20 $\mathbb{C}_L$ 20 40 60 80 100 120

960 950 940 930

EX. R/W

FULL DEPTH SAWCUT 948.12, 11.06' RT
E/P 948.06, 14.49' RT
E/S 947.74, 22.49' RT
EX. R/W
SHARED USE PATH 948.06, 55.56' RT
SHARED USE PATH 948.19, 63.56' RT
PROP R/W
7:1
8:1
4:1
945.9
EX. 12" STM.
EX. 4" GAS

174+00
948.24

EX. R/W

FULL DEPTH SAWCUT 948.27, 11.46' RT
E/P 948.25, 12.99' RT
E/S 947.93, 21.00' RT
EX. R/W
SHARED USE PATH 948.25, 54.07' RT
SHARED USE PATH 948.38, 62.07' RT
PROP R/W
6:1
8:1
5:1
946.0
EX. 12" STM.
EX. 4" GAS

173+50
948.43

EX. R/W

FULL DEPTH SAWCUT 948.16, 10.88' RT
E/P 948.15, 11.50' RT
E/S 947.96, 16.14' RT
EX. R/W
SHARED USE PATH 948.15, 52.57' RT
SHARED USE PATH 948.28, 60.57' RT
PROP. R/W
9:1
10:1
4:1
946.2
EX. 12" STM.
EX. 4" GAS

173+00
948.43

EX. R/W

FULL DEPTH SAWCUT 948.01, 10.84' RT
E/S 947.93, 12.84' RT
EX. R/W
SHARED USE PATH 948.01, 51.92' RT
SHARED USE PATH 948.14, 59.92' RT
PROP. R/W
13:1
12:1
4:1
946.3
EX. 12" STM.
EX. 4" GAS

172+78
948.21

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
28	11	51	21
27	12	40	37
16	28	9	29
6	43	3	51
		103	138

SHEET TOTALS

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 172+78 TO STA. 174+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

13
24

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SEEDING END WIDTH	SEEDING SQ. YARDS	120	100	80	60	40	20	℄	20	40	60	80	100	120	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
40	225					EX. R/W			FULL DEPTH SAWCUT 947.82, 11.29' RT	E/P 947.65, 22.15' RT	E/S 947.32, 30.44' RT	EX. R/W	SHARED USE PATH 947.49, 60.00' RT	SHARED USE PATH 947.62, 68.00' RT PROP. R/W	11	33	51	33
												7:1	4:1	4:1				
												945.3						
												15" STM.		EX. 4" GAS				
								176+00 948.10										
												① CB, AA-S133A FOR DETAILS, SEE SHEET 22						
41	219					EX. R/W			FULL DEPTH SAWCUT 947.91, 11.32' RT	E/P 947.79, 18.98' RT	E/S 947.47, 26.98' RT	EX. R/W	SHARED USE PATH 947.79, 59.91' RT	SHARED USE PATH 947.92, 67.91' RT PROP. R/W	44	3	81	6
												8:1	5:1	4:1				
												EX. 12" STM.		945.4 EX. 4" GAS				
								175+50 948.34										
38	217					EX. R/W			FULL DEPTH SAWCUT 947.91, 11.23' RT	E/P 947.81, 17.48' RT	E/S 947.49, 25.48' RT	EX. R/W	SHARED USE PATH 947.81, 58.56' RT	SHARED USE PATH 947.94, 66.56' RT PROP. R/W	44	3	52	13
												8:1	6:1	4:1				
												EX. 12" STM.		945.6 EX. 4" GAS				
								175+00 948.08										
40	228					EX. R/W			FULL DEPTH SAWCUT 947.90, 11.28' RT	E/P 947.83, 15.98' RT	E/S 947.51, 23.99' RT	EX. R/W	SHARED USE PATH 947.83, 57.06' RT	SHARED USE PATH 947.96, 65.06' RT PROP R/W	12	11	37	20
												8:1	7:1	4:1				
												EX. 12" STM.		945.7 EX. 4" GAS				
		120						174+50 948.08										
	889	SHEET TOTALS	100	80	60	40	20	℄	20	40	60	80	100	120	SHEET TOTALS		221	72

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 174+50 TO STA. 176+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

14
24

SEEDING END WIDTH	SEEDING SQ. YARDS	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
80	294	10	88	18	111
26	142	9	32	17	54
25	142	9	26	18	45
26	183	10	23	19	52
	761 SHEET TOTALS			72	262

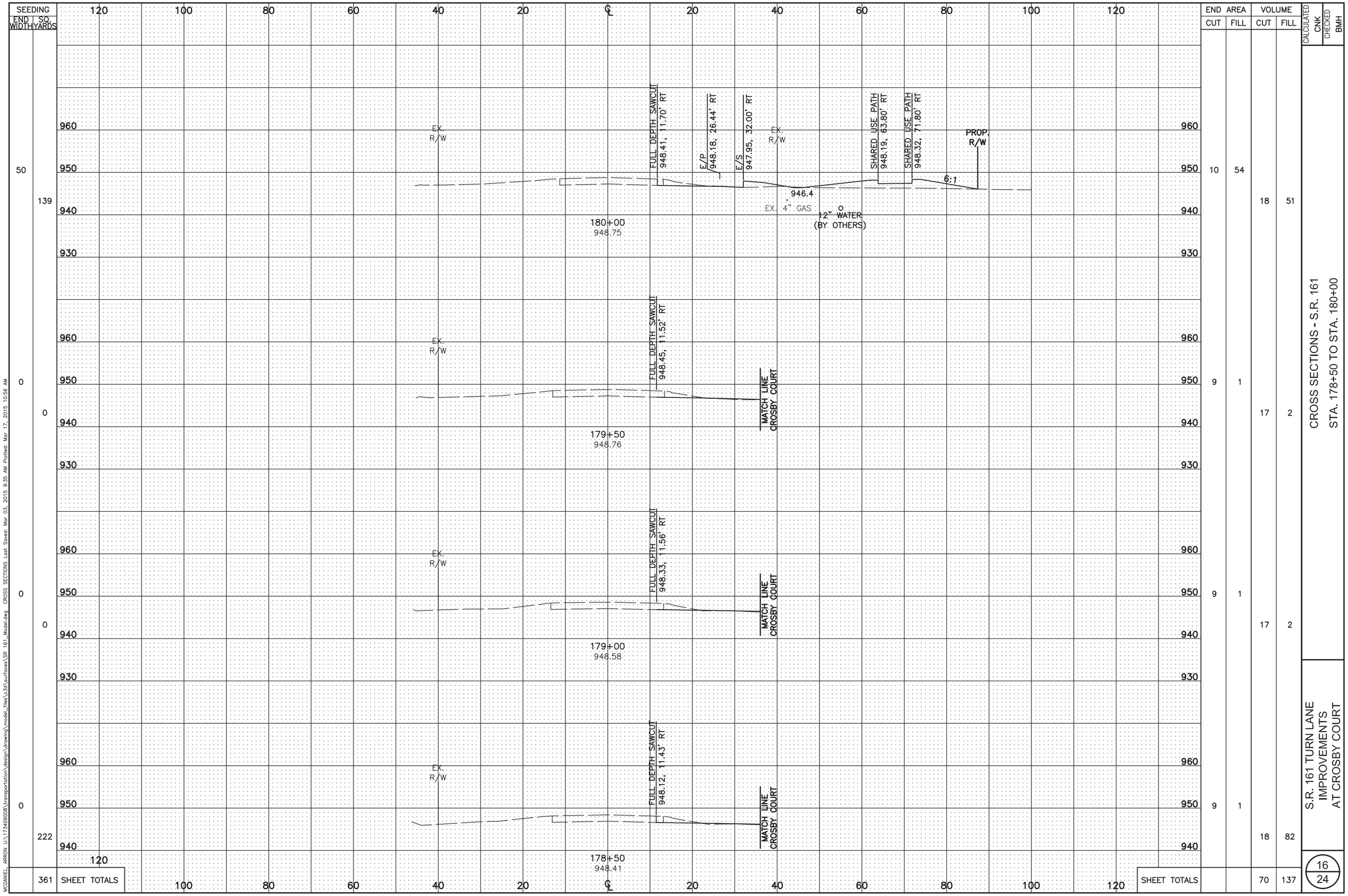
CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 176+50 TO STA. 178+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

15/24

SEEDING END WIDTH	SEEDING SQ. YARDS
50	139
0	0
0	0
0	222
	361



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	54	18	51
9	1	17	2
9	1	17	2
9	1	18	82
		70	137

SHEET TOTALS

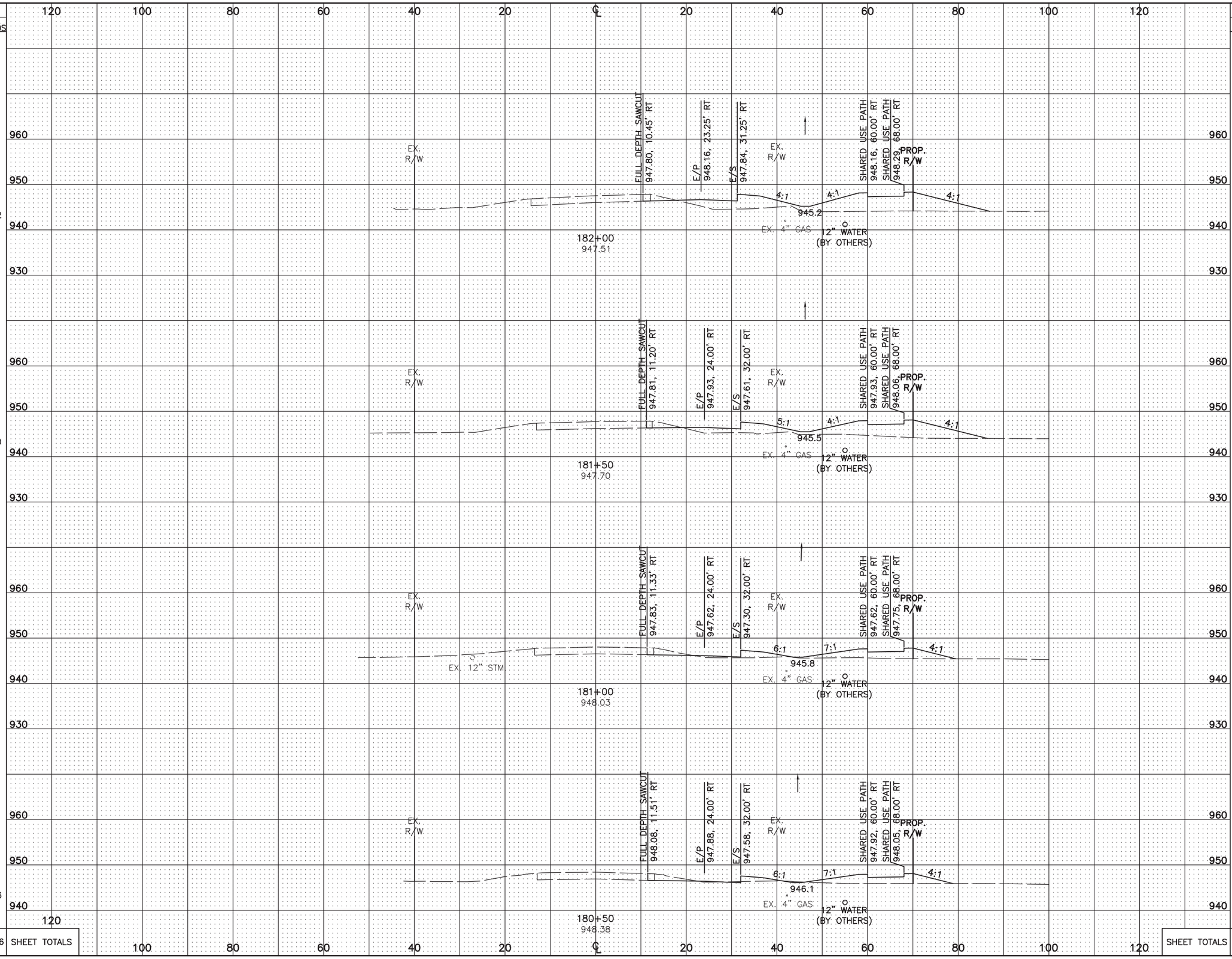
CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 178+50 TO STA. 180+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

16
24

SEEDING END WIDTH	SEEDING SQ. YARDS
50	272
48	250
42	231
41	253
	1006



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	155	13	255
7	120	15	166
9	59	18	100
10	49	19	95
		65	616

SHEET TOTALS

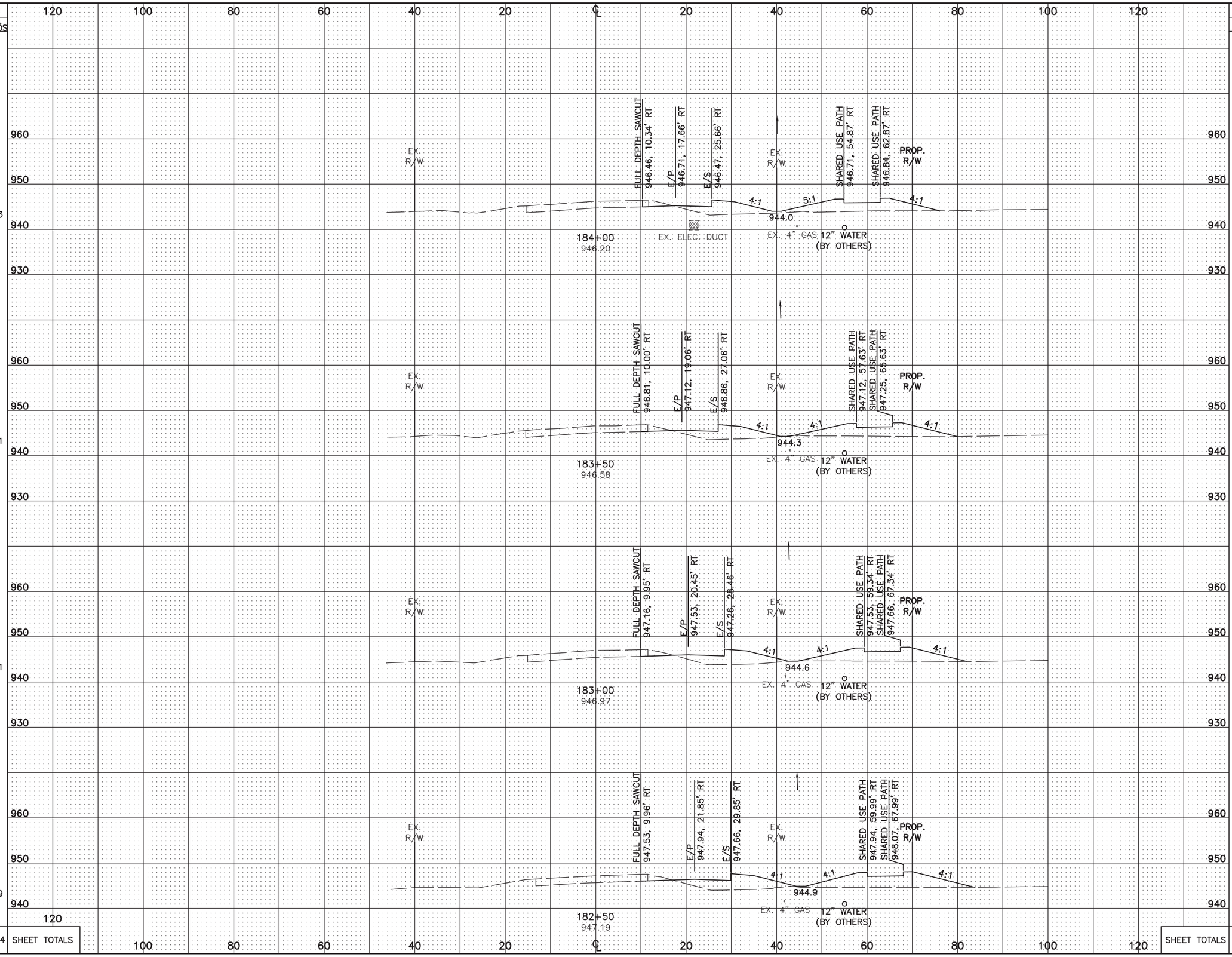
CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 180+50 TO STA. 182+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

17
24

SEEDING END WIDTH	SEEDING SQ. YARDS
44	253
47	261
47	261
47	269
	1044



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
6	98	11	187
6	104	12	199
7	111	12	223
6	130	12	264
		47	873

SHEET TOTALS

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 182+50 TO STA. 184+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

18
24

SEEDING END WIDTH	SEEDING SQ. YARDS
50	336
46	247
43	233
41	236
	1052

SHEET TOTALS

120 100 80 60 40 20 $\mathbb{C}_L$ 20 40 60 80 100 120

960 950 940 930

EX. R/W

FULL DEPTH SAWCUT 945.62, 11.70' RT
E/P 945.66, 13.70' RT
EX. 12" STM.
4:1 4:1
942.9
186+13
945.28
12" WATER (BY OTHERS)
EX. ELEC. DUCT
EX. R/W
SHARED USE PATH 945.62, 42.12' RT
SHARED USE PATH 945.75, 50.12' RT
5:1
PROP. R/W
EX. 4" GAS

FULL DEPTH SAWCUT 945.78, 11.76' RT
E/P 945.82, 13.46' RT
E/S 945.64, 17.98' RT
4:1 4:1
943.2
185+50
945.45
EX. ELEC. DUCT
12" WATER (BY OTHERS)
EX. R/W
SHARED USE PATH 945.82, 44.76' RT
SHARED USE PATH 945.95, 52.76' RT
6:1
PROP. R/W
EX. 4" GAS

FULL DEPTH SAWCUT 945.94, 11.27' RT
E/P 946.07, 14.86' RT
E/S 945.86, 21.38' RT
4:1 4:1
943.5
185+00
945.53
EX. ELEC. DUCT
EX. 12" STM.
EX. R/W
SHARED USE PATH 946.07, 47.61' RT
SHARED USE PATH 946.20, 55.61' RT
8:1
PROP. R/W
EX. 4" GAS
12" WATER (BY OTHERS)

FULL DEPTH SAWCUT 946.21, 10.87' RT
E/P 946.40, 16.26' RT
E/S 946.12, 24.26' RT
4:1 4:1 4:1
943.7
184+50
945.91
EX. ELEC. DUCT
EX. 12" STM.
EX. 4" GAS
12" WATER (BY OTHERS)
EX. R/W
SHARED USE PATH 946.40, 51.13' RT
SHARED USE PATH 946.53, 59.13' RT
PROP. R/W

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17	50	29	160
8	87	44	91
40	11	67	39
32	31	35	119
		175	409

SHEET TOTALS

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 184+50 TO STA. 186+13

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

19
24

SEEDING END WIDTH	SEEDING SQ. YARDS
	465
52	
	280
51	
	283
51	
	208
	1236

120 100 80 60 40 20 $\mathbb{C}_L$ 20 40 60 80 100 120

ADD FOR CROSBY COURT

ADD FOR CROSBY COURT

ITEM 203 EXCAVATION 823 CU. YD.
ITEM 203 EMBANKMENT 3,338 CU. YD.
ITEM 659 SEEDING & MULCHING 7,884 SQ. YD.

QUANTITIES CARRIED TO GENERAL SUMMARY

960 950 940 930

BACK ONLY

BACK ONLY

EX. R/W

EX. R/W

SHARED USE PATH 945.23, 40.00' RT

SHARED USE PATH 945.36, 48.00' RT

4:1 4:1 8:1

942.8

187+49
945.10
END WORK
END PROJECT

EX. 12" WATER

EX. 4" GAS

EX. ELEC. DUCT

960 950 940 930

EX. R/W

EX. R/W

PROP. R/W

SHARED USE PATH 944.74, 40.20' RT

SHARED USE PATH 944.87, 48.20' RT

4:1 4:1 8:1

942.6

187+00
945.11

12" WATER
(BY OTHERS)

EX. 4" GAS

EX. ELEC. DUCT

12" STM. W/ FLARED END SECTION
FOR DETAILS, SEE SHEET 22

960 950 940 930

EX. R/W

EX. R/W

PROP. R/W

SHARED USE PATH 945.13, 41.06' RT

SHARED USE PATH 945.26, 49.06' RT

4:1 4:1 7:1

942.7

186+50
945.28

12" WATER
(BY OTHERS)

EX. 4" GAS

EX. ELEC. DUCT

120 100 80 60 40 20 $\mathbb{C}_L$ 20 40 60 80 100 120

SHEET TOTALS

SHEET TOTALS

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		47	212
2	59		
		6	103
5	55		
		5	113
0	67		
		12	80
		70	508

CALCULATED CNK
CHECKED BMH

CROSS SECTIONS - S.R. 161
STA. 186+50 TO STA. 187+49

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

20
24

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SHARED USE PATH
CURVE DATA E
Δ = 25°27'11"
R = 100'
T = 22.59'
L = 44.42'
P.C. STA. 177+46.84, 60' RT.
R.P. STA. 177+46.84, 160' RT.
P.C.C. STA. 177+89.82, 69.71' RT.

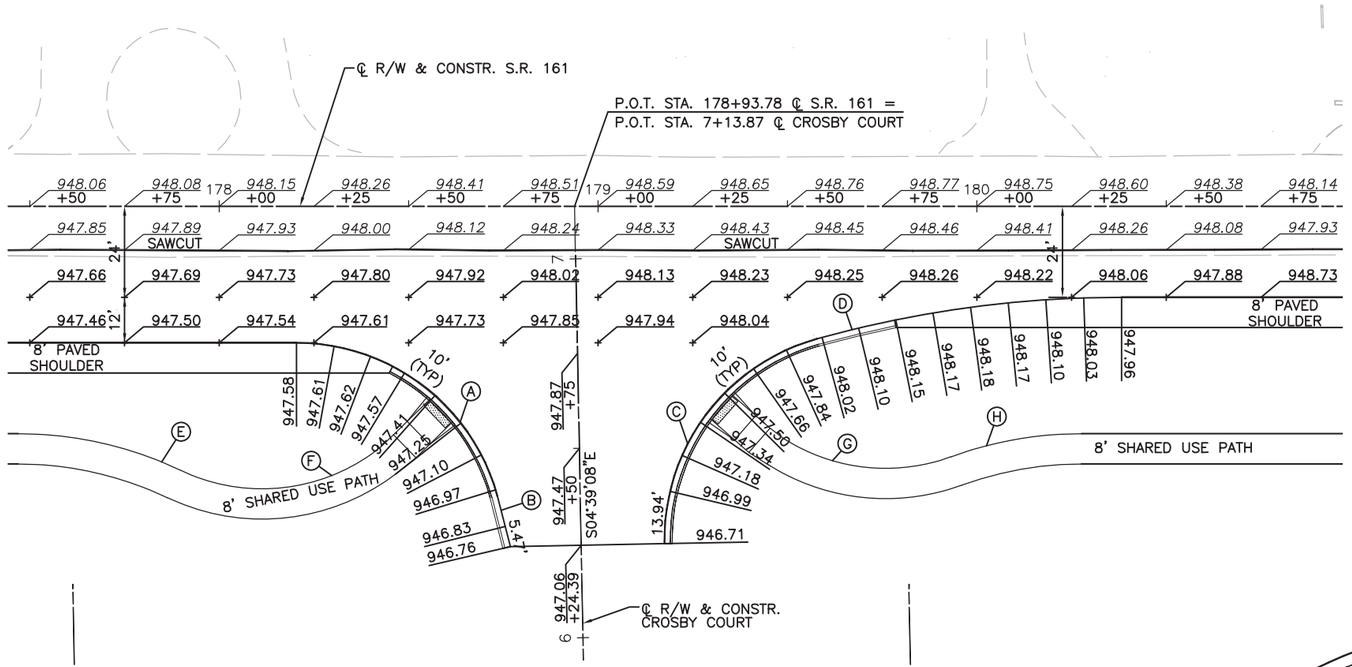
SHARED USE PATH
CURVE DATA F
Δ = 64°17'08"
R = 50'
T = 31.42'
L = 56.10'
P.C.C. STA. 177+89.82, 69.71' RT.
R.P. STA. 178+11.31, 24.56' RT.
P.T. STA. 178+42.66, 63.51' RT.

SHARED USE PATH
CURVE DATA G
Δ = 52°22'00"
R = 50'
T = 24.59'
L = 45.70'
P.C. STA. 179+49.25, 61.48' RT.
R.P. STA. 179+75.91, 19.18' RT.
P.C.C. STA. 179+93.13, 66.12' RT.

SHARED USE PATH
CURVE DATA H
Δ = 20°08'56"
R = 100'
T = 17.77'
L = 35.17'
P.C.C. STA. 179+93.13, 66.12' RT.
R.P. STA. 180+27.58, 160' RT.
P.C.C. STA. 180+27.58, 60' RT.

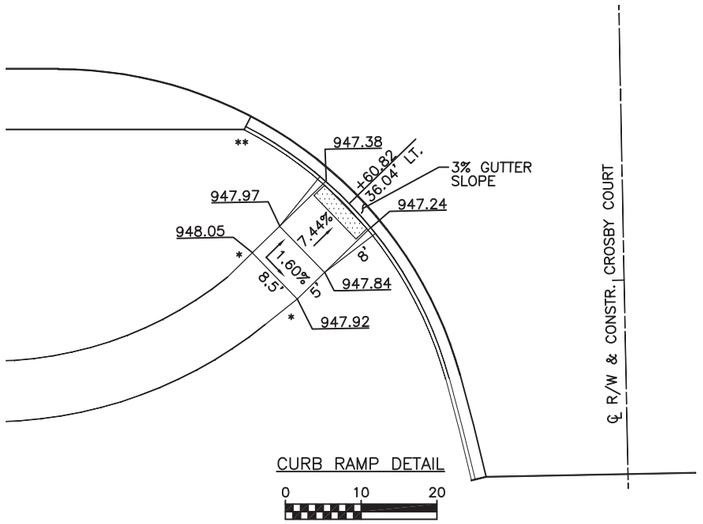
E/P RADIUS RETURN
CURVE DATA A
Δ = 74°34'25"
R = 55'
T = 41.88'
L = 71.59'
P.C. STA. 178+20.39, 36' RT.
R.P. STA. 178+20.39, 86' RT.
P.C.C. STA. 6+37.91, 21.86' LT.

E/P RADIUS RETURN
CURVE DATA B
Δ = 02°16'24"
R = 350'
T = 6.94'
L = 13.89'
P.C.C. STA. 6+37.91, 21.86' LT.
R.P. STA. 5+51.40, 361' LT.
P.T. STA. 6+24.39, 18.70' LT.



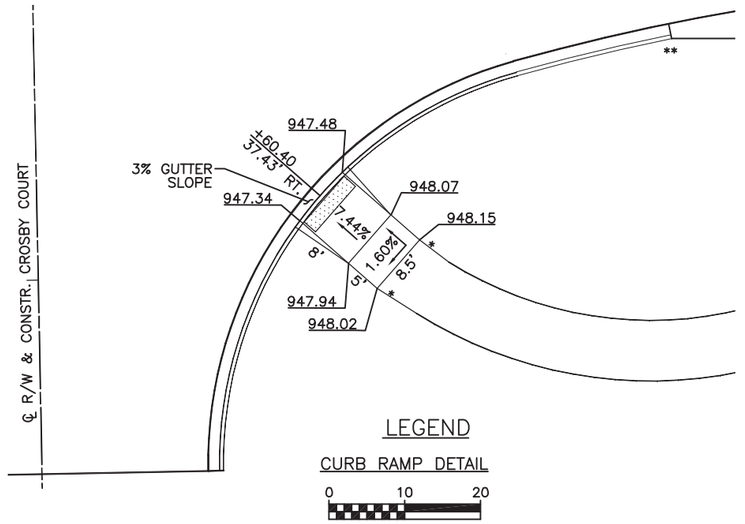
E/P RADIUS RETURN
CURVE DATA C
Δ = 75°34'11"
R = 55'
T = 42.64'
L = 72.54'
P.C. STA. 6+24.39, 22' RT.
R.P. STA. 6+24.39, 72' RT.
P.C.C. STA. 179+57.77, 34.98' RT.

E/P RADIUS RETURN
CURVE DATA D
Δ = 15°32'46"
R = 300'
T = 40.95'
L = 81.40'
P.C.C. STA. 179+57.77, 34.98' RT.
R.P. STA. 180+38.17, 324' RT.
P.T. STA. 180+38.17, 24' RT.



CURB RAMP DETAIL
0 10 20

734.60 – EXIST. ELEVATION
734.42 – PROP. ELEVATION



LEGEND
CURB RAMP DETAIL
0 10 20

* – TAPER SHARED USE PATH TO MATCH CURB RAMP IN 5'
** – TAPER CURB HEIGHT FROM 6" TO 0" IN 10'

NOTE: ALL ELEVATIONS ARE TOP OF PAVEMENT

CONTRACTOR SHALL MAINTAIN A 3% GUTTER SLOPE AT CURB RAMP AND TRANSITION TO NORMAL SLOPE IN 5'

N

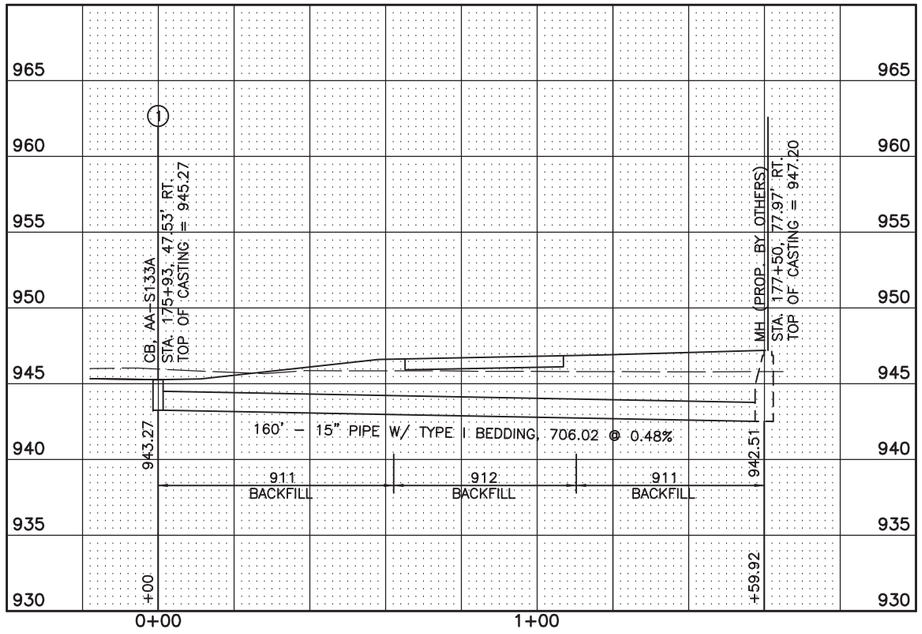
0 20 40 SCALE IN FEET

CALCULATED CNK
CHECKED BMH

INTERSECTION & CURB RAMP DETAILS

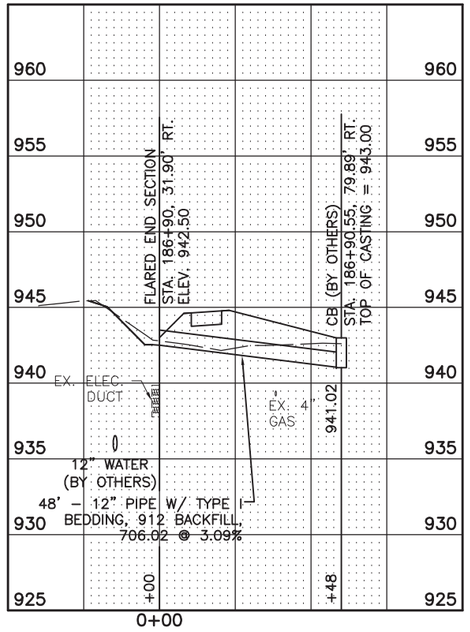
S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

21
24



UNDERDRIAN TABLE

STATION	LOCATION	SHEET NUMBER	603 4" CONDUIT, TYPE F FOR UNDERDRIAN OUTLETS	604 PRECAST REINFORCED CONCRETE OUTLET	605 4" PIPE UNDERDRAINS (720.12)	605 4" UNCLASSIFIED PIPE UNDERDRAINS (720.12)	REMARKS
			FT.	EACH	FT.	FT.	
173+00 – 172+78	E/P				22		TIE INTO EX. UD
173+00 – 172+78	E/S				22		
173+00 – 175+93	E/P		8		293		
173+00 – 175+93	E/S		19		293		OUTLET TO CB 1, ELEV. 944.20, 41.39' RT.
175+93 – 177+50	E/P		8		57	100	UNCLASSIFIED FROM 176+50, ELEV. 944.95 TO 177+50, ELEV. 944.70. OUTLET MH (BY OTHERS) 177+50, 77.97' RT., ELEV. 942.51
175+93 – 177+50	E/S		34		57	100	UNCLASSIFIED FROM 176+50, ELEV. 944.63 TO 177+50, ELEV. 944.38. OUTLET MH (BY OTHERS) 177+50, 77.97' RT., ELEV. 942.51
178+39.95 – 177+50	E/P					91	UNCLASSIFIED FROM 178+39.95, ELEV. 945.12 TO 177+50, ELEV. 944.70. OUTLET MH (BY OTHERS) 177+50, 77.97' RT., ELEV. 942.51
178+39.95 – 177+50	E/S					90	UNCLASSIFIED FROM 178+39.95, ELEV. 944.93 TO 177+50, ELEV. 944.38. OUTLET MH (BY OTHERS) 177+50, 77.97' RT., ELEV. 942.51
178+39.95 – 6+24.39	CURB				58		TIE INTO UD (BY OTHERS)
182+00 – 6+24.39	E/P					147	TIE INTO UD AT THE BACK OF CURB, NO E/P UD FROM STA. 181+25 TO 182+00
182+00 – 6+24.39	E/S & CURB				75	238	UNCLASSIFIED FROM 181+25, ELEV. 944.76 TO 6+24.39, ELEV. 944.51. TIE INTO UD (BY OTHERS)
182+00 – 186+13	E/S		14	1	413		OUTLET STA. 186+13, 27' RT. ELEV. 943.12
TOTALS CARRIED TO GENERAL SUMMARY			83	1	1290	766	

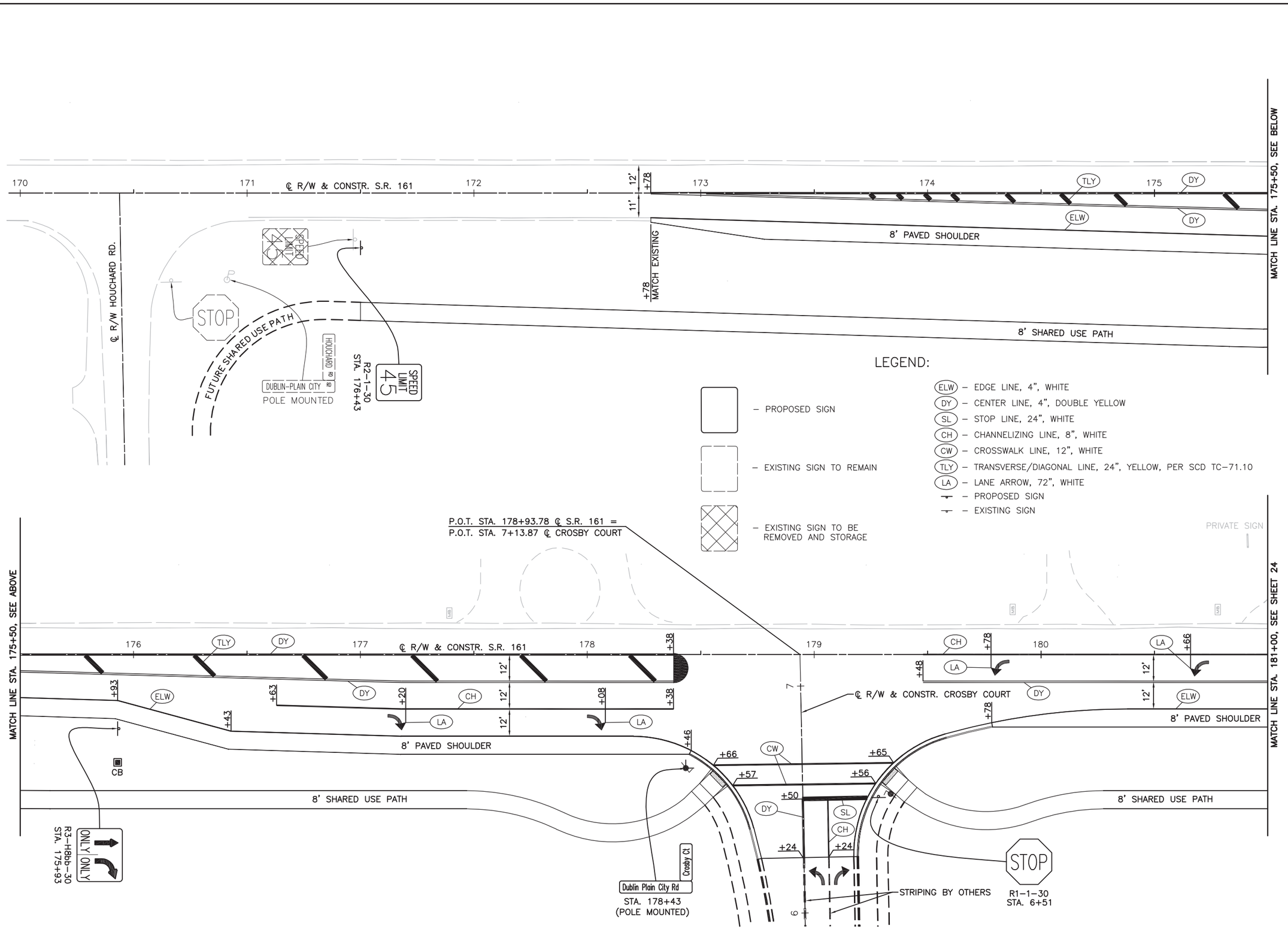


CALCULATED CNK
CHECKED –

STORM SEWER PROFILES

S.R. 161 TURN LANE
IMPROVEMENTS
PHASE III IMPROVEMENTS

22
24



N

0 20 40 SCALE IN FEET

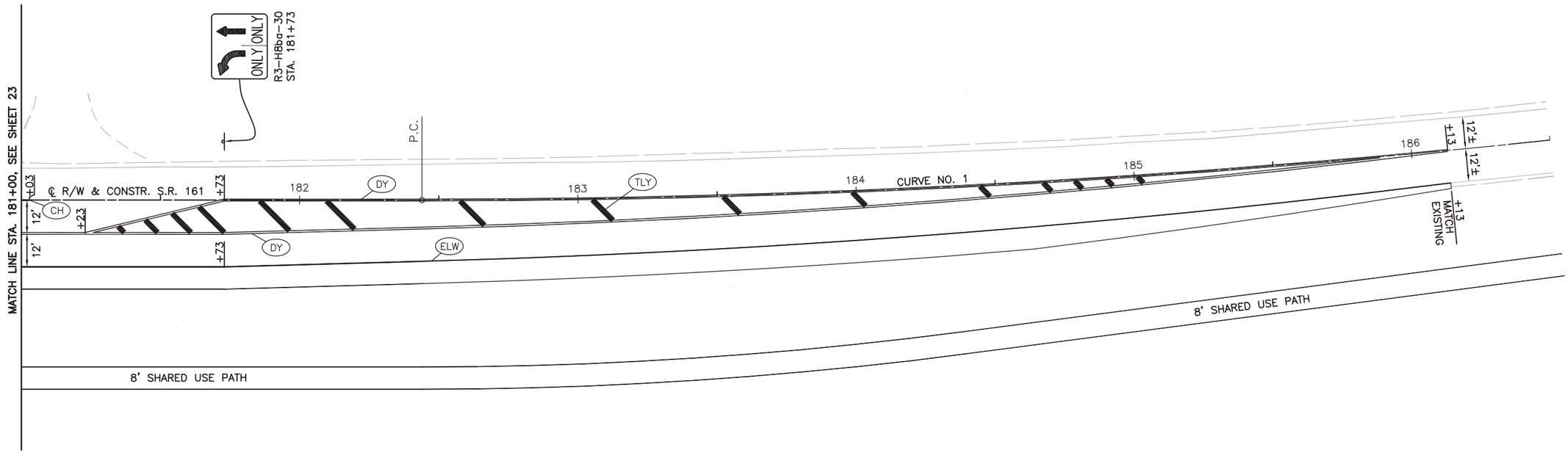
CALCULATED CNK
CHECKED BMH

TRAFFIC CONTROL PLAN
STA. 170+00 TO STA. 181+00

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

23
24

MCDANIEL, ARRON U:\173409008\transportation\design\drawing\plan_set\173409008_SR 161_tc01.dwg TRAFFIC CONTROL Last Saved: Mar 13, 2015 12:55 PM Plotted: Mar 17, 2015 10:58 AM



LEGEND:

- PROPOSED SIGN
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED AND STORAGE

- (ELW) – EDGE LINE, 4", WHITE
- (DY) – CENTER LINE, 4", DOUBLE YELLOW
- (SL) – STOP LINE, 24", WHITE
- (CH) – CHANNELIZING LINE, 8", WHITE
- (CW) – CROSSWALK LINE, 12", WHITE
- (TLY) – TRANSVERSE/DIAGONAL LINE, 24", YELLOW, PER SCD TC-71.10
- (LA) – LANE ARROW, 72", WHITE
- – PROPOSED SIGN
- – EXISTING SIGN

N

0 20 40 SCALE IN FEET

CALCULATED CNK
CHECKED BMH

TRAFFIC CONTROL PLAN
STA. 181+00 TO STA. 186+13

S.R. 161 TURN LANE IMPROVEMENTS AT CROSBY COURT

24
24