



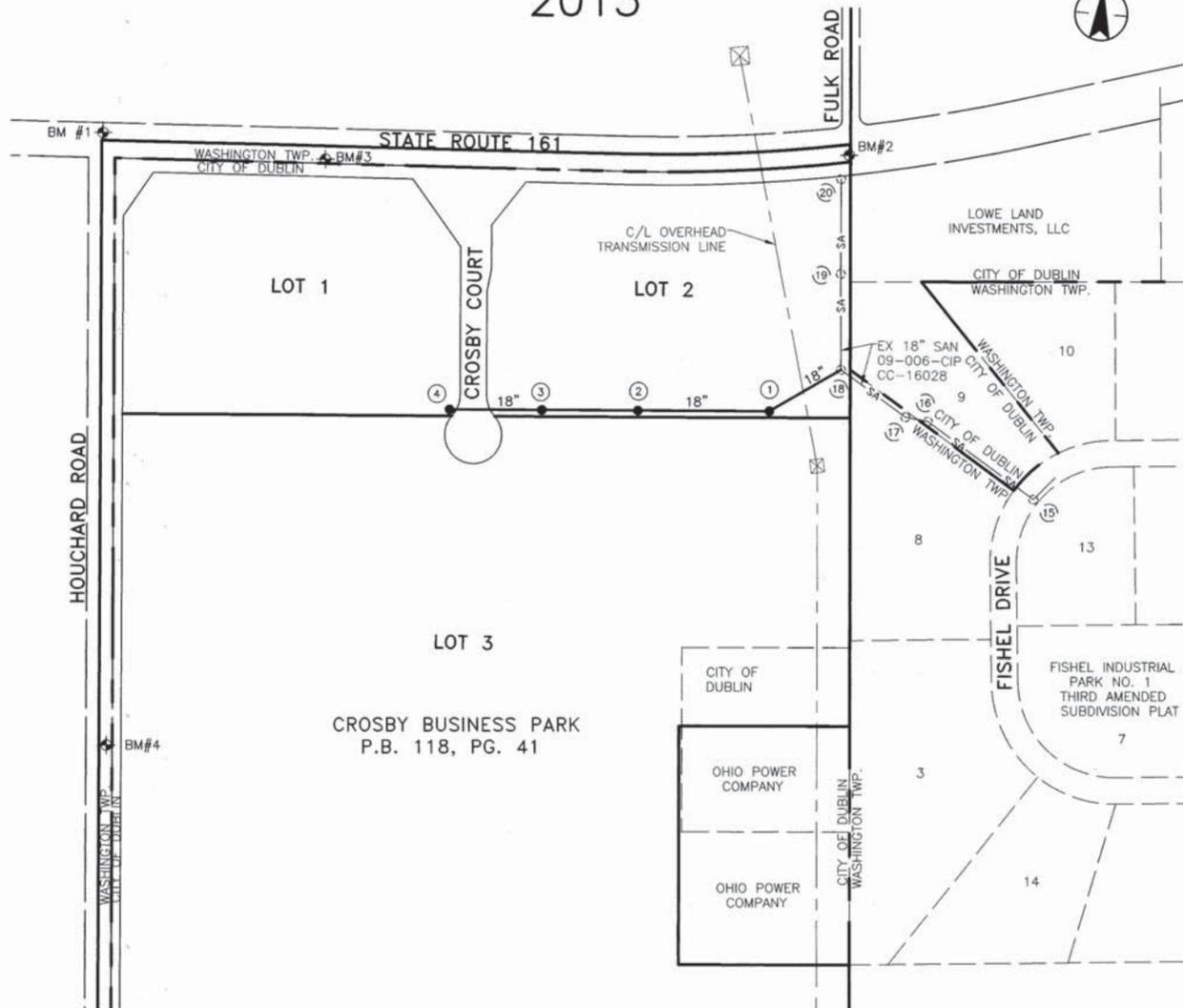
CITY OF DUBLIN, OHIO  
PUBLIC SANITARY SEWER IMPROVEMENTS  
FOR  
**CROSBY BUSINESS PARK**  
14-018-CIP  
2015

**BENCH MARKS**  
(1988 DATUM)

- SOURCE BENCHMARK BM #1 FRANKLIN COUNTY MONUMENT N29 BRASS PLUG IN CONCRETE MONUMENT AT THE INTERSECTION OF HOUGHARD ROAD AND DUBLIN-PLAIN CITY ROAD, 16.5 FEET NORTH OF THE CENTERLINE OF DUBLIN-PLAIN CITY ROAD, 33.0 FEET SOUTHEAST OF A POWER POLE, 0.3 FEET BELOW THE GROUND. ELEVATION 946.07
- BM #2 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE" N 767949.275 E 1773812.190 EL 943.82
- BM #3 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE" N 767835.885 E 1772621.345 EL 947.28
- BM #4 3/4" DIAMETER IRON PIPE 30" IN LENGTH WITH RED CAP STAMPED, "STANTEC TRAVERSE" N 766465.480 E 1772237.725 EL 944.89

STANDARD DRAWINGS	
CITY OF COLUMBUS	
AA-S102	AA-S119
AA-S106	AA-S149
AA-S107	AA-S150
AA-S117	AA-S160
AA-S111 (FRAME ONLY)	
CITY OF DUBLIN	
SA-01	SA-03
SA-02	

THE STANDARD DRAWINGS LISTED ABOVE SHALL BE CONSIDERED A PART OF THESE DRAWINGS.



VICINITY MAP  
SCALE: 1" = 3000'

PREPARED FOR:  
CITY OF DUBLIN, OHIO  
5800 SHIER-RINGS ROAD  
DUBLIN, OHIO  
(614) 410-4600

PREPARED BY:  
**Stantec**  
1500 Lake Shore Drive, Suite 100  
Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387



*Kevin D. Kershner* E-64992 3/16/15  
REGISTERED ENGINEER NO. DATE

CITY OF DUBLIN, OHIO

APPROVALS:

*Paul A. Hammerski* 3/24/2015  
CITY ENGINEER, CITY OF DUBLIN, OHIO DATE

SANITARY SEWER MEETS OR EXCEEDS CITY OF COLUMBUS DESIGN STANDARDS (INCLUDING PER CAPITA FLOW, PEAKING FACTOR AND 1/1 ALLOWANCE) AND MATERIAL SPECIFICATIONS.  
\* APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO PROVISION OF THE SEWER SERVICE AGREEMENT WITH THE CITY OF DUBLIN, OHIO AND THE CITY OF COLUMBUS, OHIO, ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

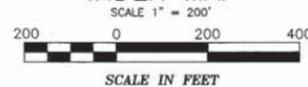
CITY OF COLUMBUS, OHIO

ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE CITY OF COLUMBUS, OHIO DATE

DIRECTOR OF PUBLIC UTILITIES CITY OF COLUMBUS, OHIO DATE

SIGNATURES ABOVE 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

**INDEX MAP**



ESTIMATE OF QUANTITIES			
ITEM	UNIT	TOTAL	DESCRIPTION
604	EA	1	MANHOLE, TYPE C
604	EA	3	MANHOLE, TYPE C W/ WATERTIGHT LID
901	LF	919	18" DIA. SANITARY SEWER PIPE W/ TYPE I BEDDING
915	EA	2	18" X 6" DIA. WYE FITTING
918	LF	60	6" DIA. DIAMETER PIPE, SANITARY HOUSE CONNECTION SERVICE

**INDEX OF SHEETS**

- SHEET 1 COVER SHEET
- SHEET 2 GENERAL NOTES AND DETAILS
- SHEET 3 PLAN & PROFILE, STRUCTURES EX 18-3
- SHEET 4 TRIBUTARY AREA MAP

REVISIONS		
NO.	DESCRIPTION	APPROVAL DATE

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**NOTICE TO CONTRACTORS:** THE ELECTRONIC FILES FOR THIS PROJECT ARE INSTRUMENTS OF SERVICE OF, AND ARE OWNED BY STANTEC CONSULTING SERVICES INC. DATA FROM SUCH ELECTRONIC FILES CAN BE PROVIDED FOR CONSTRUCTION STAKING. CONTACT KEVIN KERSHNER, P.E., STANTEC'S PROJECT MANAGER FOR THIS PROJECT, FOR INFORMATION ABOUT THE FEES ASSOCIATED WITH PROVIDING SUCH DATA AND THE RELEASE AND INDEMNITY THAT MUST BE SIGNED BEFORE THE DATA IS RELEASED.

**GENERAL NOTES**

- CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2012 EDITION, INCLUDING ALL SUPPLEMENTS THERETO, AND OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITIONS, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED. IF A CONFLICT BETWEEN SPECIFICATIONS IS FOUND, THE MORE STRICT SPECIFICATION WILL APPLY AS DECIDED BY THE CITY ENGINEER. ITEM NUMBERS LISTED REFER TO CITY OF COLUMBUS ITEM NUMBERS UNLESS OTHERWISE NOTED.
- THE CITY ENGINEER WILL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER WILL 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 INCLUDING BUT NOT LIMITED TO OHIO EPA PERMITS TO INSTALL (PTI) AND NOTICES OF INTENT (NOI), BUILDING PERMITS, ETC.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN DIVISION OF ENGINEERING IN WRITING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.
- 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.
- FOLLOWING COMPLETION OF CONSTRUCTION OF THE SITE IMPROVEMENTS AND BEFORE REQUESTING OCCUPANCY, A PROOF SURVEY SHALL BE PROVIDED TO THE DIVISION OF ENGINEERING THAT DOCUMENTS "AS-BUILT" ELEVATIONS, DIMENSIONS, SLOPES AND ALIGNMENTS OF ALL ELEMENTS OF THIS PROJECT. THE PROOF SURVEY SHALL BE PREPARED, SIGNED AND SUBMITTED BY THE PROFESSIONAL ENGINEER WHO SEALED THE CONSTRUCTIONS DRAWINGS.
- THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY AND AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, UNLESS OTHERWISE AUTHORIZED BY THE CITY ENGINEER.
- 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.
- NON-RUBBER TYRED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT THE WRITTEN 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 WATER COURSES 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 BIKE PATHS IS PROHIBITED ACCORDING TO SECTION 97.38 OF THE DUBLIN CODE OF ORDINANCES. ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE CITY. IF THE CONTRACTOR FAILS TO REMOVE SAID MUD, DIRT, DEBRIS, OR SPILLAGE, THE CITY RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- DISPOSAL OF EXCESS EXCAVATION WITHIN SPECIAL FLOOD HAZARD AREAS (100-YEAR FLOODPLAIN) IS NOT PERMITTED.
- ALL SIGNS, LANDSCAPING, STRUCTURES OR OTHER APPURTENANCES WITHIN RIGHT-OF-WAY DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED AND CONNECTED TO THE PUBLIC STORM SEWER SYSTEM AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURE. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT INSPECTION HAS BEEN CONDUCTED BY THE CITY OF DUBLIN PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION.
- BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (HOUSES, GARAGES, ETC.) OR PUBLIC INFRASTRUCTURE (PAVEMENT, CURBS, SIDEWALKS, BIKE PATHS, ETC.) SHALL BE COMPACTED GRANULAR BACKFILL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR FLOWABLE FILL ACCORDING TO ITEM 636. ITEM 911 OF THE STANDARD SPECIFICATIONS MAY BE USED ELSEWHERE.
- THE CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED CONSTRUCTION DRAWINGS AND A LIST OF PROPOSED PRECAST CONCRETE PRODUCT MANUFACTURERS TO THE CITY OF COLUMBUS CONSTRUCTION INSPECTION DIVISION BEFORE COMMENCING CONSTRUCTION.

SEND THE INFORMATION TO THE FOLLOWING ADDRESS:  
 CONSTRUCTION INSPECTION DIVISION  
 CITY OF COLUMBUS  
 1800 EAST 17TH AVENUE  
 COLUMBUS, OHIO 43219

SEND A COPY OF THE TRANSMITTAL LETTER TO THE FOLLOWING ADDRESS:  
 DIVISION OF ENGINEERING  
 CITY OF DUBLIN  
 5800 SHEIR RINGS ROAD  
 DUBLIN, OH 43016

**UTILITIES**

- 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	WIDE OPEN WEST MARK FREY 3675 CORPORATE DRIVE COLUMBUS, OHIO 43231 (614) 948-4616 (614) 668-8079 (MOBILE)	CITY OF DUBLIN DIVISION OF ENGINEERING MIKE SWEDER, P.E. 5800 SHIER-RINGS ROAD DUBLIN, OHIO 43016-1236 (614) 410-4621
AT&T (CABLE) ROGER MIKESELL 111 N. 4TH STREET, ROOM 802 COLUMBUS, OHIO 43215 (614) 223-7162	AMERICAN ELECTRIC POWER PAUL PAXTON 850 TECH CENTER DRIVE GAHANNA, OHIO 43230-6605 (614) 883-6831 (614) 949-8883 (MOBILE)	CITY OF COLUMBUS DIVISION OF WATER BRIAN HAEMMERLE 910 DUBLIN ROAD COLUMBUS, OHIO 43215 (614) 645-7788
COLUMBIA GAS OF OHIO MATT MYERS 3550 JOHNNY APPESEED CT. COLUMBUS, OHIO 43231 (614) 818-2113 (614) 315-3770 (MOBILE)	DUBLINK (TEAM FISHL) JOE TAPPER 1600 WALCUTT ROAD COLUMBUS, OH 43228 (614) 921-8620	FRONTIER COMMUNICATIONS ROBERT CHANDLER 2780 LIBERTY RD. DELAWARE, OHIO 43015 (740) 369-0826
TIME WARNER CABLE RAY MAURER 3760 INTERCHANGE DRIVE COLUMBUS, OHIO 43204 (614) 481-5262 (614) 348-2979 (MOBILE)		

- THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800-362-2764), PRODUCER'S UNDERGROUND PROTECTION SERVICE (TELEPHONE NUMBER 614-587-0486), AND TO OWNERS OF UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST 2 WORKING DAYS BEFORE START OF CONSTRUCTION.
- THE IDENTITY AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE CITY OF COLUMBUS AND THE CITY ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR DEPTHS OF UNDERGROUND FACILITIES SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. 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, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED, DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE CITY ENGINEER.
- PUBLIC STREET LIGHTING MAY BE IN THE VICINITY OF THIS PROJECT. CONTACT THE CITY OF DUBLIN, DIVISION OF ENGINEERING AT 410-4637, TWO DAYS PRIOR TO BEGINNING WORK.

**TRAFFIC CONTROL**

- DELETED.
- STEADY-BURNING, TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT.
- DELETED.

**EROSION AND SEDIMENT CONTROL**

- A SEDIMENT AND EROSION CONTROL PLAN MUST BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL IF A SEDIMENT AND EROSION CONTROL PLAN HAS NOT ALREADY BEEN INCLUDED WITH THE APPROVED CONSTRUCTION DRAWINGS. THIS PLAN MUST BE MADE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF CITY OF COLUMBUS STANDARD SPECIFICATIONS, AND THE CITY ENGINEER. AN INDIVIDUAL NPDES STORMWATER DISCHARGE PERMIT MAY BE REQUIRED. THE CONTRACTOR SHALL BE CONSIDERED THE PERMITTEE.
- THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE STORM WATER RUNOFF LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS.
- ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: HAY OR STRAW BALES, SEDIMENT BASINS, SILT FILTER FENCE, AGGREGATE 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 30 DAYS OR MORE SHALL BE SEEDED OR PROTECTED WITHIN SEVEN 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.

**SANITARY SEWERS**

- CONNECTIONS TO THE SANITARY SEWER WILL BE PERMITTED UPON RECEIVING AN OEPA PERMIT TO INSTALL (PTI) AND UPON RECEIVING A SATISFACTORY LETTER FROM THE DESIGN ENGINEER STATING THAT THE PROJECT HAS BEEN CONSTRUCTED AS PER THE PLANS, AND ALL OF THE CONDITIONS OF THE PTI HAVE BEEN MET. THE CITY OF DUBLIN IS RESPONSIBLE FOR OBTAINING ALL REQUIRED OHIO EPA APPROVALS AND PAYING REVIEW FEES.
- SANITARY SEWAGE COLLECTION SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RULES, REGULATIONS, STANDARDS AND SPECIFICATIONS OF THE CITY OF DUBLIN, OHIO EPA, OHIO DEPARTMENT OF HEALTH AND THE CURRENT EDITION OF THE GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD(TEN STATES) - RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES.
- THE MINIMUM REQUIREMENTS FOR SANITARY SEWER PIPE WITH DIAMETERS 15 INCHES AND SMALLER SHALL BE PVC SEWER PIPE ASTM D3034, SDR 35. PIPE FOR 6-INCH DIAMETER HOUSE SERVICE LINES SHALL BE PVC PIPE ASTM D3034, SDR 35. PVC PIPE SHALL NOT BE USED AT DEPTHS GREATER THAN 28 FEET. PIPE MATERIALS AND RELATED STRUCTURES SHALL BE SHOP TESTED IN ACCORDANCE WITH CITY OF COLUMBUS CONSTRUCTION INSPECTION DIVISION QUALITY CONTROL REQUIREMENTS. PVC SDR 35 SEWER PIPE JOINTS SHALL MEET ASTM D3212 SPECIFICATIONS.
- THE REQUIREMENTS FOR SANITARY SEWER PIPES WITH A DIAMETER OF 18 INCHES SHALL BE ADS SANITITE HP SANITARY SEWER PIPE (ASTM F2736) WITH GASKETED INTEGRAL BELL AND SPIGOT JOINTS (ASTM F477) INSTALLED IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURER'S RECOMMENDATIONS. PVC SEWER PIPE MEETING THE REQUIREMENTS OF ASTM F679 SDR35 AND F949 WILL ALSO BE ALLOWED AS ALTERNATES
- ALL IN-LINE WYE AND TEE CONNECTIONS IN CONCRETE SEWERS, 18 INCH DIAMETER AND LARGER, SHALL BE EITHER KOR-N-TEE OR KOR-N-SEAL CONNECTIONS CONFORMING TO THE MANUFACTURER'S RECOMMENDATIONS.

- GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 636, TYPE III OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER.
- ALL MANHOLE LIDS SHALL BE PROVIDED WITH CONTINUOUS SELF-SEALING GASKETS. THE APPROVED CONSTRUCTION DRAWINGS SHALL SHOW WHERE BOLT-DOWN LIDS ARE REQUIRED. SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE OR AS APPROVED BY THE CITY ENGINEER AND CONFORM TO THE CITY OF DUBLIN SANITARY MANHOLE STANDARD DRAWING. MANHOLE LIDS SHALL INCLUDE CITY OF DUBLIN LOGO.
- ALL PVC SEWER PIPES SHALL BE DEFLECTION TESTED NO LESS THAN 60 DAYS AFTER COMPLETION OF BACKFILLING OPERATIONS. ALL OTHER REQUIREMENTS SHALL BE ACCORDING TO ITEM 901.21 OF THE STANDARD SPECIFICATIONS.
- TEMPORARY BULKHEADS SHALL BE PLACED IN PIPES AT LOCATIONS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS AND SHALL REMAIN IN PLACE UNTIL THE SEWERS HAVE BEEN APPROVED FOR USE BY THE CITY ENGINEER. THE COST FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING BULKHEADS SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR THE VARIOUS SANITARY SEWER ITEMS.
- ALL SANITARY SEWERS INCLUDING SANITARY SEWER SERVICE LINES SHALL BE SUBJECTED TO AND PASS INFILTRATION OR EXFILTRATION TESTS ACCORDING TO ITEM 901 OF THE STANDARD SPECIFICATIONS AND MUST BE APPROVED FOR USE BY THE CITY ENGINEER BEFORE ANY SERVICE CONNECTIONS ARE TAPPED INTO SEWERS.

- BEFORE SANITARY SEWER INFILTRATION, LEAKAGE THROUGH JOINTS SHALL NOT EXCEED 100 GALLONS PER INCH OF TRIBUTARY SEWER DIAMETER PER 24 HOURS PER MILE OF LENGTH OR THE COMPUTED EQUIVALENT. ALL SANITARY SEWERS SHALL BE TESTED.
- AT THE DETERMINATION OF THE CITY ENGINEER, THE CONTRACTOR MAY BE REQUIRED TO PERFORM TV INSPECTION OF THE SANITARY SEWER SYSTEM PRIOR TO FINAL ACCEPTANCE BY THE CITY. THIS WORK SHALL BE COMPLETED BY THE CONTRACTOR AT HIS EXPENSE.
- VISIBLE LEAKS OR OTHER DEFECTS OBSERVED OR DISCOVERED DURING TV INSPECTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.
- ROOF DRAINS, FOUNDATION DRAINS, FIELD TILE OR OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE STRICTLY PROHIBITED ACCORDING TO SECTION 51.23 OF THE DUBLIN CODE OF ORDINANCES.
- ALL WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY FROM SANITARY SEWERS AND STORM SEWERS, TO THE GREATEST EXTENT PRACTICABLE. WHERE SANITARY SEWERS CROSS WATER MAINS OR OTHER SEWERS OR OTHER UTILITIES, TRENCH BACKFILL SHALL BE PLACED BETWEEN THE PIPES CROSSING AND SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS. IN THE EVENT THAT A WATER LINE MUST CROSS WITHIN 18 INCHES OF A SANITARY SEWER, THE SANITARY SEWER SHALL BE CONCRETE ENCASED OR CONSIST OF DUCTILE IRON PIPE MATERIAL.
- SERVICE RISERS SHALL BE INSTALLED WHERE THE DEPTH FROM WYES TO PROPOSED GROUND ELEVATION EXCEEDS 10 FEET. TOPS OF RISERS SHALL BE NO LESS THAN 9 FEET BELOW PROPOSED GROUND ELEVATION IF BASEMENT SERVICE IS INTENDED.

- WHERE SERVICE RISERS ARE NOT INSTALLED, A MINIMUM 5-FOOT LENGTH OF SANITARY SEWER SERVICE PIPE OF THE SAME SIZE AS THE WYE OPENING SHALL BE INSTALLED.
- THE CONTRACTOR SHALL FURNISH AND PLACE, AS DIRECTED, APPROVED WYE POLES MADE OF 2 INCHES X 2 INCHES LUMBER AT ALL WYE LOCATIONS. ENDS OF EXTENDED SERVICES, OR AT THE END OF EACH RISER WHERE RISERS ARE REQUIRED, WYE POLES SHALL BE VISIBLE BEFORE ACCEPTANCE BY THE CITY. THE COST OF THESE POLES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE VARIOUS SEWER ITEMS.
- EXISTING SANITARY SEWER FLOWS SHALL BE MAINTAINED AT ALL TIMES. COSTS FOR PUMPING AND BYPASSING SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE BID FOR THE RELATED ITEMS.
- THE CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, AND LABOR TO MAKE CONNECTIONS TO EXISTING MANHOLES. THE SEWER PIPE TO MANHOLE CONNECTIONS FOR ALL SANITARY SEWERS SHALL BE FLEXIBLE AND WATERTIGHT. ALL HOLES SHALL BE NEATLY CORED. THE SEWER PIPE BARREL AT THE SPRINGLINE SHALL NOT EXTEND MORE THAN 1 INCH BEYOND THE INSIDE FACE OF THE MANHOLE. TO MAINTAIN FLEXIBILITY IN THE CONNECTION, A 1-INCH SPACE SHALL BE LEFT BETWEEN THE END OF THE PIPE INSIDE THE MANHOLE AND THE CONCRETE CHANNEL; THIS SPACE SHALL BE FILLED WITH A WATERPROOF FLEXIBLE JOINT FILLER. ANY METAL THAT IS USED SHALL BE TYPE 300 SERIES STAINLESS STEEL. THE CONNECTION MAY BE ANY OF THE FOLLOWING TYPES:

- RUBBER SLEEVE WITH STAINLESS STEEL BANDING.
  - KOR-N-SEAL AS MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC.
  - LOCK JOINT FLEXIBLE MANHOLE SLEEVE AS MANUFACTURED BY INTERPACE CORPORATION.
  - OR EQUAL AS APPROVED BY THE CITY ENGINEER.
- RUBBER GASKET COMPRESSION.
  - PRESS WEDGE II AS MANUFACTURED BY PRESS-SEAL GASKET CORPORATION.
  - DURA SEAL III AS MANUFACTURED BY DURA TECH, INC.
  - LINK-SEAL AS MANUFACTURED BY THUNDERLINE CORPORATION.
  - OR EQUAL AS APPROVED BY THE CITY ENGINEER.

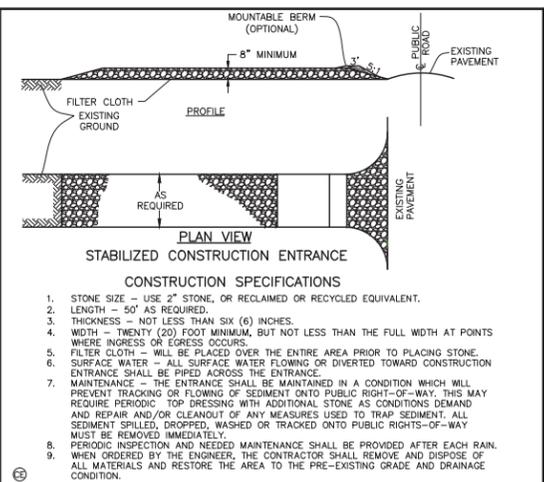
THE COST FOR THIS WORK ALONG WITH A NEW CHANNELIZED BASE FOR THE MANHOLE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE RELATED ITEMS OF WORK.

**USE OF FIRE HYDRANTS**

- THE CONTRACTOR SHALL MAKE PROPER ARRANGEMENTS WITH THE DUBLIN SERVICE DEPARTMENT AND THE COLUMBUS DIVISION OF WATER FOR THE USE OF FIRE HYDRANTS WHEN USED FOR WORK PERFORMED UNDER THE CONTRACT AND PROVIDE THE CITY OF DUBLIN A COPY OF THE HYDRANT USAGE PERMIT OBTAINED FROM THE CITY OF COLUMBUS. THE CONTRACTOR SHALL ALSO SEND COPIES OF PERMITS OBTAINED FROM DUBLIN AND COLUMBUS TO THE WASHINGTON AND/OR PERRY TOWNSHIP FIRE DEPARTMENT. PERMITS SHALL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES.
- BEFORE THE FINAL ESTIMATE IS PAID, THE CONTRACTOR SHALL SUBMIT A LETTER FROM THE CITY OF COLUMBUS DIVISION OF WATER TO THE CITY ENGINEER STATING THAT THE CONTRACTOR HAS RETURNED THE SIAMESE VALVE TO THE CITY OF COLUMBUS AND HAS PAID ALL COSTS ARISING FROM THE USE OF THE FIRE HYDRANTS.

**SUBSURFACE INVESTIGATION**

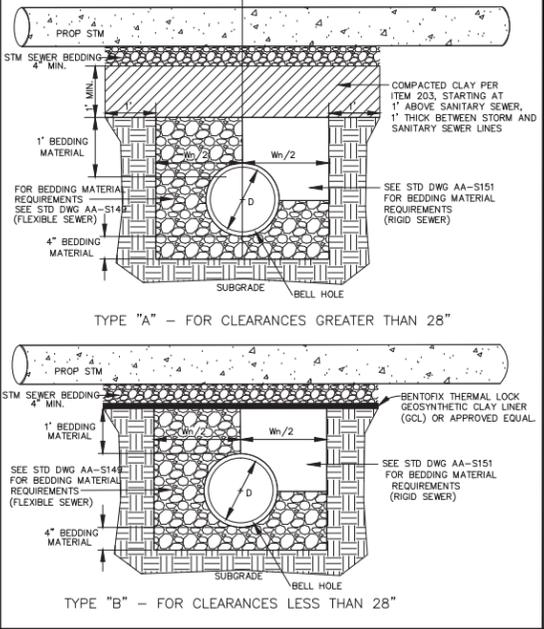
- SUBSURFACE INVESTIGATION WORK WAS NOT PERFORMED FOR THIS PROJECT. BIDDERS ARE RESPONSIBLE FOR EXAMINING THE SITE, REVIEWING DATA IN THE PUBLIC DOMAIN, QUESTIONING, AND SUBSURFACE INVESTIGATIONS AS DEEMED NECESSARY FOR THE PLANNING AND EXECUTION OF THE WORK. SUCH ADDITIONAL INVESTIGATIONS SHALL BE COORDINATED WITH THE CITY OF DUBLIN PRIOR TO UNDERTAKING.
- GROUNDWATER SHOULD BE MAINTAINED AT LEAST 3.0 FEET BELOW DEEPEST EXCAVATION.



**CONSTRUCTION SPECIFICATIONS**

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED EQUIVALENT.
- LENGTH - 50' AS REQUIRED.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
- WHEN ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL MATERIALS AND RESTORE THE AREA TO THE PRE-EXISTING GRADE AND DRAINAGE CONDITION.

FLEXIBLE SEWER PIPE		RIGID SEWER PIPE	
DIMENSIONS IN INCHES		DIMENSIONS IN INCHES	
D	Wh	D	Wh
6	30	24	48
8	30	27	52
10	30	30	56
12	32	36	64
15	36	42	72
18	40	48	80
21	44		

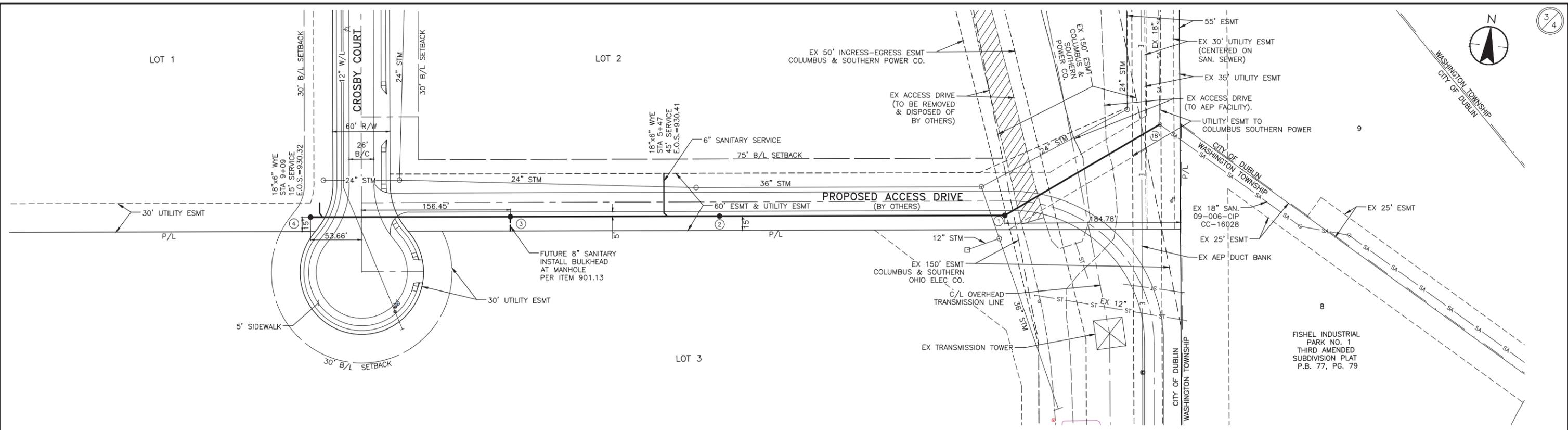


CITY OF DUBLIN, OHIO  
 SANITARY SEWER PLAN  
 FOR  
**CROSBY BUSINESS PARK**

PREPARED BY:  
**Stantec**  
 1500 Lake Shore Drive, Suite 100  
 Columbus, Ohio 43204  
 (614) 486-4383  
 (614) 486-4387

DESIGN: JDC	NOT TO SCALE	ORDER NO.	DATE
DRAWN: DWG			
CHECKED: KDK			

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STRUCTURE AND PIPE DATA

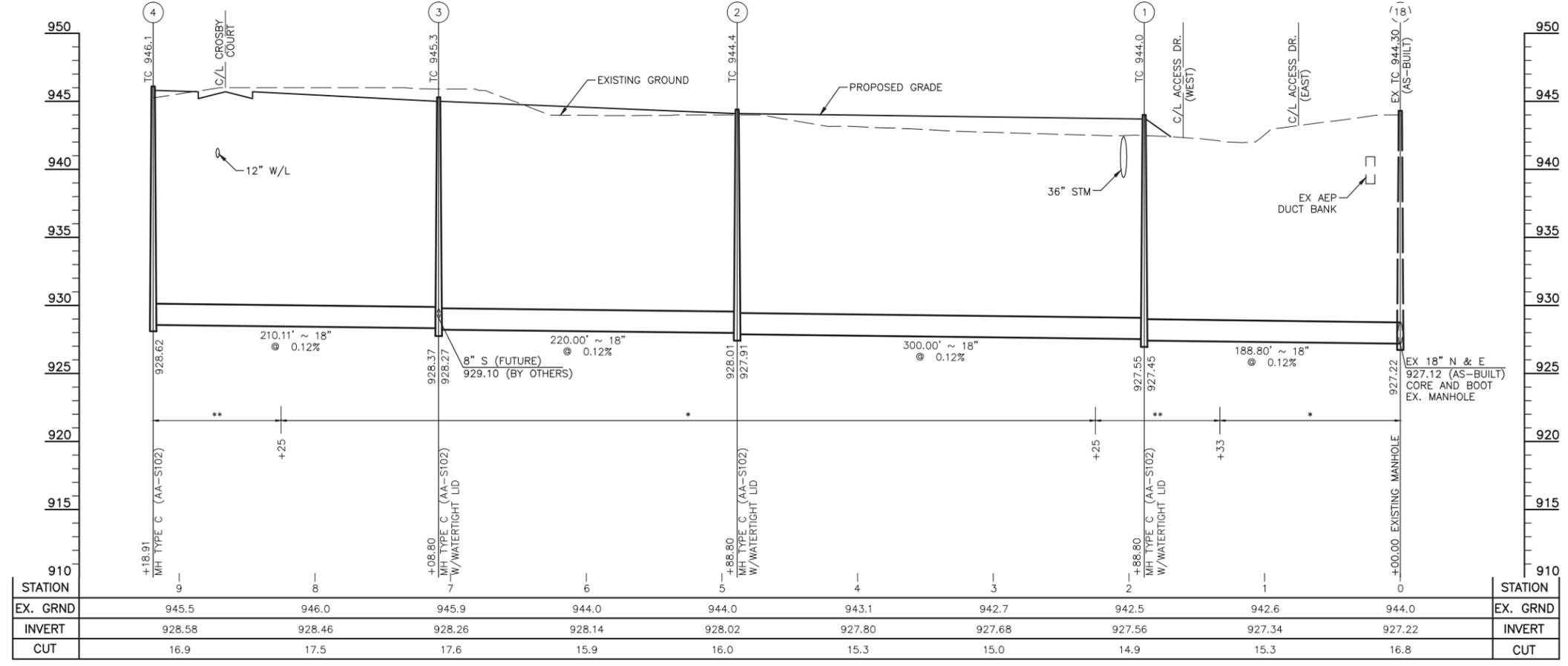
STRUCTURE NO.	NORTHING	EASTING	DIRECTION	DISTANCE	AS-BUILT NORTHING	AS-BUILT EASTING
EX 18	767460.87	1773835.51	S 55°10'50" W	188.80'		
1	767353.07	1773680.51	S 85°20'52" W	300.00'		
2	767310.89	1773381.50	S 85°20'52" W	220.00		
3	767310.89	1773162.22	S 85°20'52" W	210.11		
4	767293.85	1772952.80				

SERVICE AND RISER DATA

LOT #	STATION	SERVICE LENGTH	RISER	SERVICE INVERT
EX MH 18	0+00.00			
MH 1	1+88.80			
MH 2	4+69	0	0	929.41
Lot 2	5+47	45	0	930.41
MH 3	7+08.80			
Lot 1	9+09	15	0	930.32
MH 4	9+18.91			

NOTE: FOR LONG SERVICES, LOCATE AT LEAST 2' OF RISER AT END OF SERVICE. IF RISER IS 2' OR LESS LOCATE ENTIRE RISER AT END OF SERVICE.

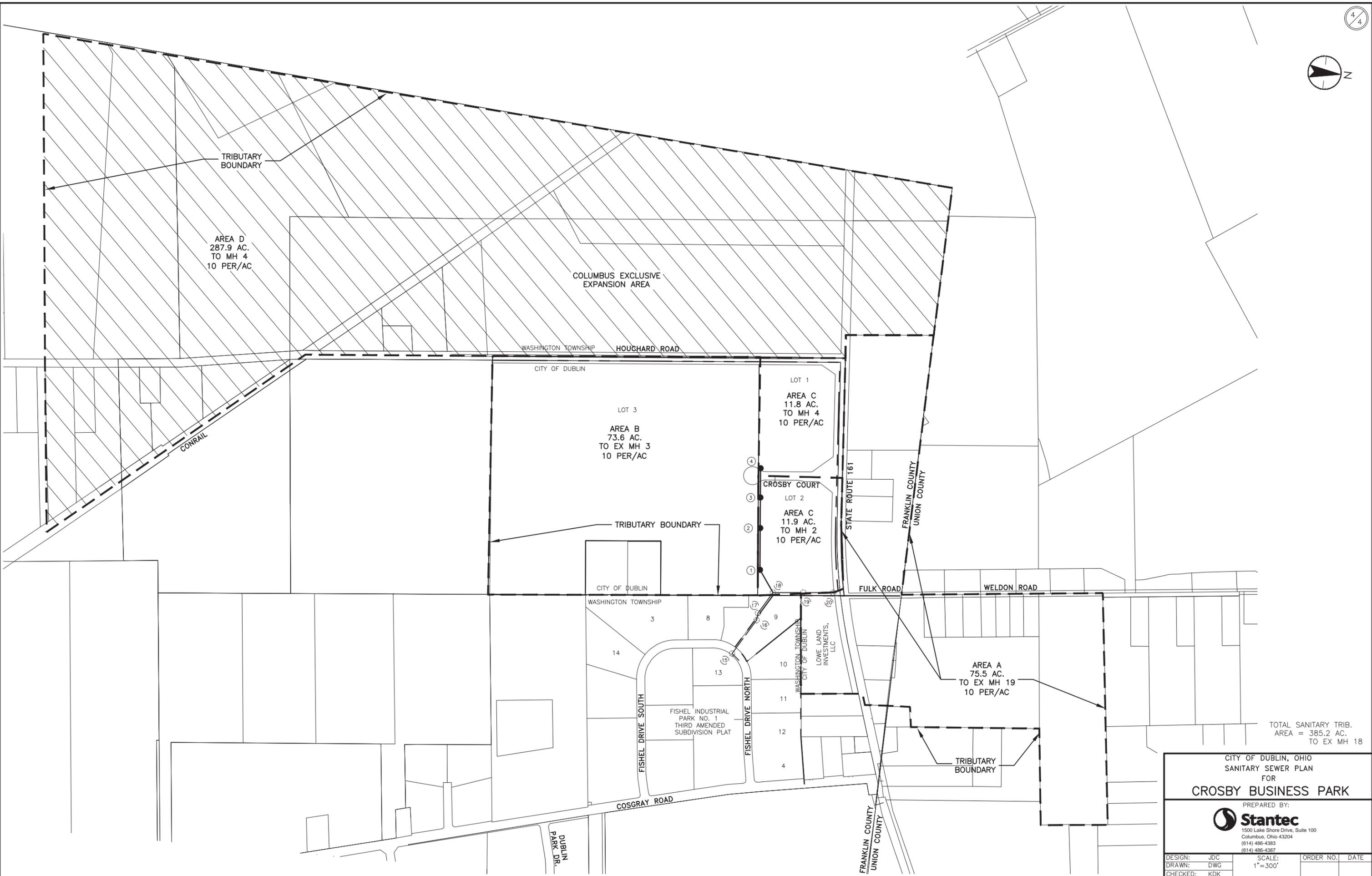
- \* COMPACTED BACKFILL PER ITEM 911.
- \*\* COMPACTED GRANULAR BACKFILL. SEE GENERAL NOTES.



CITY OF DUBLIN, OHIO  
SANITARY SEWER PLAN  
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Columbus, Ohio 43204  
(614) 486-4383  
(614) 486-4387

DESIGN: JDC      SCALE:      ORDER NO.      DATE  
DRAWN: DWG      HORIZ. 1"=50'  
CHECKED: KDK      VERT. 1"=5'



TOTAL SANITARY TRIB.  
AREA = 385.2 AC.  
TO EX MH 18

CITY OF DUBLIN, OHIO  
SANITARY SEWER PLAN  
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DESIGN: JDC	SCALE: 1"=300'	ORDER NO.	DATE
DRAWN: DWG			
CHECKED: KDK			

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