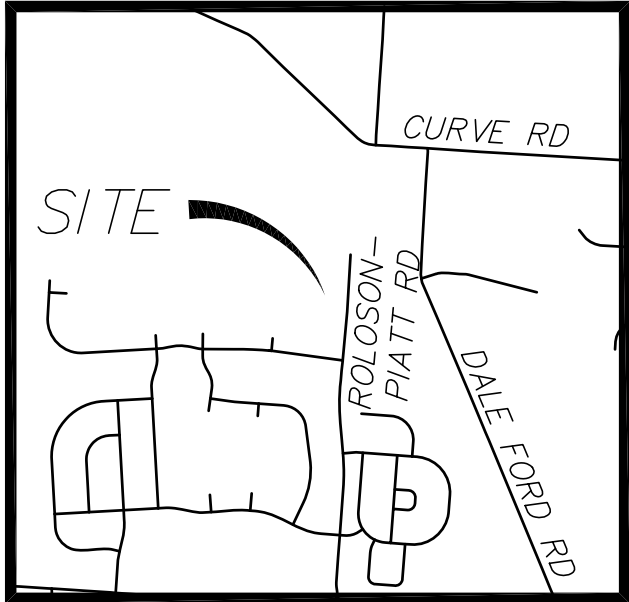


COMMON ACCESS DRIVE PLANS FOR

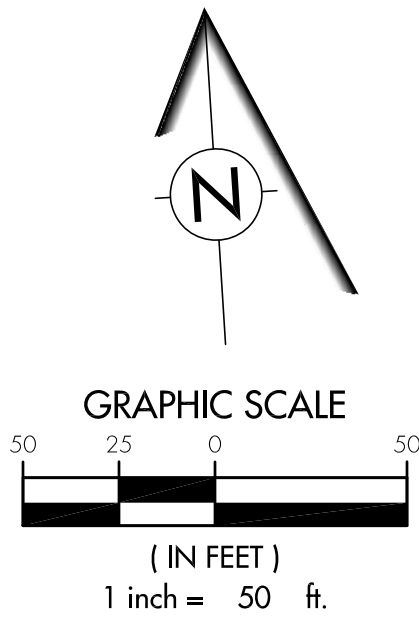
ROLOSON FIELD

FARM LOT 13, QUARTER-TOWNSHIP 2, TOWNSHIP 4, RANGE 18
BERLIN TOWNSHIP, DELAWARE COUNTY, OHIO

RPC# 08-26



LOCATION MAP
1" = 2000'



BENCHMARK

BM #1 - BENCHMARK SQUARE CUT NORTHEAST CORNER CONCRETE.
ELEV.=955.38 (ASSUMED DATUM)

STORMWATER MANAGEMENT

THE STORMWATER MANAGEMENT CALCULATIONS ARE BASED ON THE DELAWARE COUNTY STORM REQUIREMENTS.

FLOODPLAIN

THE PROPOSED LOTS ARE LOCATED IN FLOOD ZONE "X" PER THE FEMA FLOOD INSURANCE RATE MAP #39041C0120K, REVISED APRIL 16, 2009.

DITCH MAINTENANCE

ALL STORM APPURTENANCES OUTSIDE OF THE EXISTING NORTH THREE B'S & K ROAD ROAD RIGHT OF WAY SHALL BE PETITIONED TO BE ON THE COUNTY MAINTENANCE PROGRAM.

EXISTING UTILITY NOTES

THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS BASED ON FIELD OBSERVATIONS. THERE WERE NO SIGNS OF UNDERGROUND GAS MAINS . DELAWARE COUNTY AND/OR THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS. SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS.

THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES (TELEPHONE 800-362-2764 - TOLL FREE) AND THE OWNER'S OF UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE. THE ABOVE MENTIONED NOTICE SHALL BE GIVEN AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES LOCATED WITHIN THE PROJECT LIMITS:

DELAWARE COUNTY ENGINEER'S OFFICE
1610 STATE ROUTE 521
DELAWARE, OHIO 43015
P: 740.833.2400

DELAWARE COUNTY SANITARY ENGINEER
1610 STATE ROUTE 521
DELAWARE, OHIO 43015
P: 740.833.2240

DEL-CO WATER CO. INC.
6658 OLENTANGY RIVER ROAD
DELAWARE, OHIO 43015
P: 740.548.7746

SUBURBAN NATIONAL GAS
2626 LEWIS CENTER ROAD
LEWIS CENTER, OHIO 43035
P: 740.548.2450

AEP
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
P: 614.883.6701

CHARTER COMMUNICATIONS
3760 INTERCHANGE ROAD
COLUMBUS, OHIO 43215
P: 614.481.5012

FRONTIER COMMUNICATIONS
2780 LIBERTY ROAD
DELAWARE, OHIO 43015
P: 614.361.1684

SWANSON JOSHUA T & RACHEL M
PID: 41824001010001

MANOR NG LLC
PID: 41824001056001

MI HOMES OF CENTRAL OHIO LLC
PID: 418240010560030

INDEX MAP

SCALE: 1" = 50'

SHEET INDEX

- | | |
|---|----------------------------|
| 1 | COVER SHEET |
| 2 | GENERAL NOTES & DETAILS |
| 3 | GENERAL NOTES & QUANTITIES |
| 4 | EXISTING CONDITIONS |
| 5 | PRELIMINARY PLAT |
| 6 | PLAN & PROFILE |
| 7 | GRADING PLAN & PROFILE |
| 8 | SIGHT DISTANCE |

STANDARD DRAWINGS

THE FOLLOWING STANDARD DRAWINGS SHALL BE CONSIDERED A PART OF THIS PLAN:

DELAWARE COUNTY

DCED-R100
DCED-R2158A
DCED-R2202

DEVELOPER/OWNER:

MANOR NG LLC
ATTN: BRAD YATES
15 CLAIRE DAN DRIVE
POWELL, OHIO 43065
P: 614-206-3567

SURVEYOR

SCIOTO LAND SURVEYING SERVICE, INC.
ATTN: KAREN S. COFFMAN
173 NORTH SANDUSKY STREET
DELAWARE, OHIO 43015
P: 740-369-7577

GENERAL DEVELOPMENT SUMMARY

TOTAL SUBDIVISION ACREAGE	3.380 AC.
LOT 1	1.024 AC.
LOT 2	1.024 AC.
LOT 3	1.333 AC.
DISTURBED AREA	0.23 AC.
DEVELOPMENT DENSITY	0.888 DWELLING UNIT/ACRE
SIDE YARD SETBACK	25' (50' FROM R/W)
FRONT YARD SETBACK	120'
REAR YARD SETBACK	80'
COMMON ACCESS DRIVE	0.158 AC
ZONED:	FR-1

DELAWARE COUNTY APPROVAL:

THE DELAWARE COUNTY ENGINEER'S DESIGN, CONSTRUCTION AND SURVEYING STANDARDS, CURRENT EDITION, THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CURRENT EDITION (ENGLISH UNITS), INCLUDING STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS LISTED SHALL GOVERN THIS IMPROVEMENT.

THE DELAWARE COUNTY SIGNATURE ON THIS PLAN SIGNIFIES ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATION OF THE PROPOSED IMPROVEMENTS. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS.

DELAWARE COUNTY ENGINEER _____ DATE _____

ENGINEER STATEMENT:

THIS IS TO CERTIFY THAT GOOD ENGINEERING PRACTICES HAVE BEEN UTILIZED IN THE DESIGN OF THIS PROJECT AND THAT ALL MINIMUM STANDARDS, AS DELINEATED IN THE DELAWARE COUNTY "DESIGN, CONSTRUCTION, & SURVEY STANDARDS MANUAL" HAVE BEEN MET, INCLUDING THOSE STANDARDS GREATER THAN MINIMUM WHERE, IN MY OPINION, THEY ARE NEEDED TO PROTECT THE SAFETY OF THE PUBLIC. ANY VARIANCES TO THE ABOVE STANDARDS ARE CONSISTENT WITH SOUND ENGINEERING PRACTICES AND ARE NOT DETRIMENTAL TO THE PUBLIC SAFETY AND CONVENIENCE. THESE VARIANCES HAVE BEEN LISTED HEREIN AND HAVE BEEN APPROVED BY THE DELAWARE COUNTY ENGINEER.

REGISTERED PROFESSIONAL ENGINEER _____ NO. _____ DATE _____



TerrainEvolution

Your bridge between Vision and Success

720 East Broad Street | Suite 203 | Columbus, OH 43215
P: 614.385.1090 | F: 614.385.1085 | E: info@terrainevolution.com

BERLIN TOWNSHIP, DELAWARE COUNTY, OHIO
ROLOSON FIELD
COMMON ACCESS DRIVE

COVER SHEET

DRAWING SET STATUS:

- | | |
|-------------------------------------|-----------------------------|
| ☒ | PRELIMINARY ENGINEERING SET |
| ☐ | AGENCY REVIEW SET |
| ☐ | CONSTRUCTION DOCUMENT SET |
| ☐ | AS-BUILT DOCUMENT SET |

DESIGN: _____ DRAFT: _____ CHECK: _____

DGR: _____ DGR: _____ JPW: _____

PROJECT NO.: 26-006

DATE: AUGUST, 2026

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: N/A

SHEET NO.: 1 / 8

GENERAL NOTES SUBDIVISION		STORM SEWERS		CONDITION OF THE EXISTING SOILS AS A SUBSTITUTE FOR A CLAY CORE (E.G., EXISTING CLAY MATERIAL).		3.TREES AND LANDSCAPING SHALL NOT BE PERMITTED ON EMBANKMENT SURFACES	
1.THE DELAWARE COUNTY DESIGN, CONSTRUCTION AND SURVEYING STANDARDS, LATEST EDITION, TOGETHER WITH THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS, LATEST EDITION, ALONG WITH THE DELAWARE COUNTY ENGINEER (DCEO) SUPPLEMENTAL SPECIFICATIONS, SHALL GOVERN ALL MATERIALS AND WORKMANSHIP INVOLVED IN THE IMPROVEMENTS SHOWN ON THESE PLANS, UNLESS OTHERWISE NOTED.		1.THE CONTRACTOR SHALL INCLUDE IN THE UNIT PRICE BID FOR ITEM 603, ALL TRENCHING, EXCAVATION AND BACKFILLING PER STANDARD DRAWING DCED R-100, AND THE REMOVAL AND DISPOSAL OF BRUSH, TREES, STUMPS ETC. WITHIN THE AREA OF EXCAVATION OF THE TRENCH, UNLESS BID IN ITEM 203.					
2.A PRECONSTRUCTION CONFERENCE SHALL BE HELD AT THE COUNTY ENGINEER'S OFFICE BEFORE ANY WORK IS BEGUN. REPRESENTATIVES OF THE OWNER, DESIGN ENGINEER, AND CONTRACTOR SHALL BE IN ATTENDANCE. A SCHEDULE OF SEQUENCE OF EVENTS DURING CONSTRUCTION MUST BE SUBMITTED FOR REVIEW PRIOR TO THIS MEETING.		2.THE PROPOSED ELEVATIONS AND LOCATIONS OF INLETS, CATCH BASINS, AND PIPES, AND THE ESTIMATED LENGTHS OF PIPES, MAY BE ADJUSTED BY THE COUNTY ENGINEER DURING THE ENTIRE IMPROVEMENT OF THIS PROJECT. BASIS OF PAYMENT FOR POSSIBLE ADJUSTMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR VARIOUS STORM SEWERS TO BE ADJUSTED.					
3.PROOF SURVEYS ARE REQUIRED TO BE PERFORMED BY THE OWNER IN ORDER TO DEMONSTRATE CONCLUSIVELY THAT THE FACILITIES ARE CONSTRUCTED TO THE CAPACITY, ELEVATIONS, SLOPES, GRADES AND SIZES SHOWN ON THE APPROVED PLANS. SUCH SURVEYS SHALL BE CONDUCTED BY A REGISTERED PROFESSIONAL SURVEYOR, SHALL EMPLOY STANDARD TECHNIQUES, AND SHALL PRODUCE AND FURNISH FIELD NOTES TO THE COUNTY ENGINEER FOR REVIEW AND RECORD PURPOSES. REDUCTION OF NOTES AND ANY PLOTTING NECESSARY TO MAKE NOTES INTERPRETABLE SHALL BE COMPLETED BY THE SURVEYOR PERFORMING THE PROOF SURVEY. PROOF SURVEYS SHALL BE IN ADDITION TO, AND SEPARATE FROM, OTHER INSPECTIONS BY THE COUNTY ENGINEER. ALL DISCREPANCIES REVEALED IN THE AS-CONSTRUCTED FACILITIES BY THE PROOF SURVEY SHALL BE RECTIFIED BY THE OWNER AND THE PROOF SURVEY RE-PERFORMED IN ORDER TO DEMONSTRATE CONFORMANCE. THE PROOF SURVEY SHALL BE APPROVED BY THE COUNTY ENGINEER, IN WRITING, PRIOR TO THE RELEASE OF THE BUILDING PERMITS.		3.UNLESS OTHERWISE NOTED ON THE PLANS, ALL STORM SEWERS SHALL BE AS HEREAFTER SPECIFIED:					
		TYPE A CONDUIT – STORM CULVERT LOCATED WITHIN PUBLIC RIGHT-OF-WAY, UNDER PAVEMENT, SIDEWALKS OR MULTI-USE PATHS (C.O.C. 706.02 OR 706.04)					
		TYPE B CONDUIT – STORM SEWER LOCATED WITHIN PUBLIC RIGHT-OF-WAY, UNDER PAVEMENT, SIDEWALKS OR MULTI-USE PATHS (C.O.C. 706.02, 706.04, 720.10, 720.13 OR 720.14)					
		TYPE C CONDUIT – STORM SEWER <u>NOT</u> UNDER PAVEMENT, SIDEWALKS OR MULTI-USE PATHS AND <u>NOT</u> LOCATED WITHIN PUBLIC RIGHT-OF-WAY (C.O.C. 706.02, 706.04, 720.10, 720.12 (TUBING NOT INCLUDED), 720.13 OR 720.14)					
4.BE ADVISED: A SUBSURFACE DRAINAGE SYSTEM MAY EXIST ON THIS SITE. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAIN PIPES OR TILES ENCOUNTERED IN THE FIELD AT ALL TIMES AND, IF DAMAGED, SHALL REPAIR OR REPLACE THEM IMMEDIATELY WITH THE SAME SIZE AND QUALITY OF MATERIALS AS FOUND. ALL DRAINAGE TILES ENCOUNTERED IN THE FIELD SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AT A STRUCTURE.		4.ALL TYPE "A", "B", AND "C" CONDUIT SHALL HAVE JOINTS, PER CITY OF COLUMBUS 901.15 AND SHALL USE TYPE C BITUMINOUS PIPE JOINT FILLER.					
5.THE CONTRACTOR SHALL NOTIFY THE COUNTY ENGINEER'S OFFICE FORTY EIGHT (48) HOURS PRIOR TO ANY CONSTRUCTION.		5.GRANULAR BEDDING SHALL BE PROVIDED FOR ALL TYPE "A", "B", AND "C" CONDUIT PER DELAWARE COUNTY STANDARD DRAWINGS DCED S-149, DCED S-151, DCED S-152, DCED S-153 AND DCED S-155.					
6.THE CONTRACTOR'S BID SHALL BE COMPREHENSIVE AND INCLUDE ALL LABOR AND MATERIALS NECESSARY TO COMPLETE ALL IMPROVEMENTS ACCORDING TO THE ENGINEERING PLANS AND SPECIFICATIONS.		6.ALL PIPES OUTSIDE THE RIGHT-OF-WAY SHALL HAVE A COVER OF 1.5 FEET MINIMUM. WHEREVER THIS IS NOT THE CASE, EMBANKMENT SHALL BE PLACED TO PROVIDE A MINIMUM COVER PRIOR TO THE INSTALLATION OF THE STORM SEWER.					
7.THE CONTRACTOR SHALL LOCATE ALL UTILITIES OR UNDERGROUND STRUCTURES PRIOR TO CONSTRUCTION AND NOTIFY EACH RESPECTIVE UTILITY OWNER FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTACT O.U.P.S. AT 1-800-362-2764.		7.OPENINGS SHALL BE PROVIDED IN THE DRAINAGE STRUCTURES TO ACCOMMODATE UNDERDRAIN OUTLETS. ANY CORING NECESSARY SHALL BE INCLUDED WITHIN THE COST OF THE UNDERDRAIN. UNDERDRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PLAN SPECIFICATIONS.					
8.IF A DISCREPANCY EXISTS BETWEEN THE PLANS AND SPECIFICATIONS, THE COUNTY ENGINEER AND THE OWNER'S ENGINEER SHALL BE NOTIFIED BEFORE WORK IS COMMENCED.		8.WHERE PLASTIC PIPE (HDPE) IS USED FOR STORM SEWERS TO BE PLACED ON DRAINAGE MAINTENANCE, 100% OF THE PIPE SHALL BE MANDRELLED 30 DAYS AFTER INSTALLATION. ALL PLASTIC PIPE FAILING THE MANDREL TEST SHALL BE RETESTED AND/OR REPLACED PER THESE STANDARDS AND SUPPLEMENTAL SPECIFICATIONS. IN ADDITION TO NOTIFYING THE COUNTY INSPECTOR, PLEASE ALSO NOTIFY MATT LANUM AT 740-368-1921 AT LEAST 2 BUSINESS DAYS PRIOR TO THE INSTALLATION TO GIVE THEM BOTH THE CHANGE TO OBSERVE THE CONSTRUCTION OF DRAINAGE FACILITIES TO BE PLACED ON DRAINAGE MAINTENANCE. PARTICULARLY INCLUDING THE MANDREL TESTING.					
9.IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXERCISE SAFETY PRECAUTIONS AND TO PROVIDE ALL SAFETY EQUIPMENT TO SAFEGUARD WORKMEN AND ALL PERSONS ON OR NEAR THE WORK SITE.		GRADING NOTES					
10.THE CONTRACTOR SHALL EXAMINE THE WORK SITE AND SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUALITY AND QUANTITIES OF WORK TO BE PERFORMED.		10.EXCAVATION AND EMBANKMENT SHALL COMPLY WITH C.O.C. ITEM 203 AND DELAWARE COUNTY SUPPLEMENTAL SPECIFICATIONS.					
11.HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING FEATURES WITHIN THIS SUBDIVISION IS APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF EXISTING FEATURES SHOWN ON PLANS, SUCH AS GAS LINES, WATER LINES AND FIELD TILE, TO PROPERLY EXECUTE THE WORK OF HIS CONTRACT. IT SHALL FURTHER BE THE RESPONSIBILITY OF THE CONTRACTOR TO EXERCISE DUE CAUTION AROUND EXISTING COMPLETED WORK ON THE SITE.		11.THE CONTRACTOR'S BID SHALL BE COMPREHENSIVE AND INCLUDE ALL LABOR AND EQUIPMENT TO COMPLETE ALL EXCAVATION, FILL AND GRADING IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS AND SPECIFICATIONS.					
12.THE CONTRACTOR SHALL REPAIR OR REPLACE ANY AND ALL EXISTING WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS CONTRACT AT HIS OWN EXPENSE. ALL SAID WORK IS TO BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND THE COUNTY ENGINEER.		12.EXCAVATION AND EMBANKMENT QUANTITIES DO NOT INCLUDE ANY PROVISION FOR UNDERCUTTING, FOOTINGS, OR UNSUITABLE MATERIAL.					
13.SITE CLEARING SHALL COMPLY WITH C.O.C. ITEM 201. REMOVAL OF EXISTING PIPE, PAVEMENT, STRUCTURES AND OTHER OBSTRUCTIONS SHALL COMPLY WITH C.O.C. ITEM 202.		13.AFTER THE TOPSOIL IS REMOVED, PROOFROLL THE PAVEMENT AND BUILDING AREA SUBGRADES TO BE FILLED. SOFT AREAS SHOULD BE UNDERCUT AND STABILIZED PRIOR TO FILLING OPERATIONS. RELATIVE DEPTH OF UNDERCUT WILL BE DETERMINED WHEN SOFT AREAS ARE DISCOVERED. THE DELAWARE COUNTY ENGINEER SHALL DETERMINE THE DEPTH AND EXTENT OF THE UNDERCUT.					
14.ALL MATERIAL DEEMED UNSUITABLE BY THE COUNTY ENGINEER SHALL BE REMOVED FROM THE PROPOSED RIGHT-OF-WAY, CONSTRUCTION LIMITS OR FOR ANY EXCAVATION FOR THE STORM SEWER SYSTEM. THE MATERIAL REMOVED INCLUDES, BUT IS NOT LIMITED TO, ORGANIC SOIL, TOPSOIL, VEGETATION, TREES, STUMPS, ROOTS OR EXCESSIVELY WET INORGANIC MATERIALS. THE MATERIAL SHALL BE REMOVED REGARDLESS OF THE AMOUNT OF EMBANKMENT TO BE CONSTRUCTED AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.		(SEE EROSION CONTROL NOTES ON SHEETS XX-XX)					
15.THE DELAWARE COUNTY ENGINEER OR HIS DESIGNATED REPRESENTATIVE SHALL OBSERVE AND APPROVE ALL SUB-BASE MATERIALS AND COMPACTION IN PUBLIC FILL AREAS.		PIPE UNDERDRAINS					
16.NON-ORGANIC SITE SOILS ARE ACCEPTABLE AS USE FOR STRUCTURAL FILL PROVIDED THEY MEET ALL REQUIREMENTS OF C.O.C. ITEM 203. MOISTURE ADJUSTMENT MAY BE REQUIRED AND SHALL BE PREFORMED BY THE CONTRACTOR.		1.ALL MATERIALS AND WORKMANSHIP FOR UNDERDRAINS SHALL COMPLY WITH C.O.C. ITEM 605.					
17.ANY LANDSCAPE FEATURES, SUCH AS TREES, FENCES, RETAINING WALLS, ETC. IN DRAINAGE EASEMENTS SHALL BE REVIEWED BY THE DELAWARE COUNTY SOIL AND WATER CONSERVATION DISTRICT (DCSWCD) AND THE DELAWARE COUNTY ENGINEER (DCEO) PRIOR TO INSTALLATION. THE DCSWCD AND DCEO WILL REVIEW THE PROPOSED IMPROVEMENTS TO ASSURE THAT THE IMPROVEMENTS WILL NOT INTERFERE WITH THE STORM WATER CONTROL FACILITIES.		2.UNDERDRAINS SHALL BE INSTALLED AND BACKFILLED TO SUBGRADE ELEVATIONS IMMEDIATELY PRIOR TO CONSTRUCTION OF SUB-BASE AND AFTER THE PROOFROLL OF THE SUBGRADE. HOWEVER, WHERE SUBSURFACE CONDITIONS ARE SUCH THAT IMPROVEMENT OF UNSTABLE SUBGRADE CAN BE ACCOMPLISHED THROUGH DRYING ACTION OF UNDERDRAINS, THE COUNTY ENGINEER MAY AUTHORIZE OR REQUIRE THE CONTRACTOR TO DELAY CONSTRUCTION OF THE SUB-BASE AS NECESSARY.					
18.ALL CONTRACTOR(S) WORKING ON THIS SITE SHALL REFERENCE ALL IRON PINS AND MONUMENTS BEFORE EXCAVATING AT OR NEAR SAID IRON PINTS OR MONUMENTS. IF ANY PINS OR MONUMENTS ARE DESTROYED OR DAMAGED BY THE CONTRACTOR, THEY SHALL BE REPLACED BY A PROFESSIONAL OHIO LICENSED SURVEYOR AT THE COMPLETION OF THE PROJECT OR AT THE DIRECTION OF THE COUNTY ENGINEER AT NO EXPENSE TO THE OWNER. THE COST FOR THIS SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS.		3.IMMEDIATELY PRIOR TO THE CONSTRUCTION OF CURBS, THE MATERIAL LOCATED ABOVE AND WITHIN THE UNDERDRAIN TRENCH SHALL BE REMOVED TO A DEPTH NECESSARY TO EXPOSE CLEAN #8 OR #57 STONE. BACKFILL THE EXCAVATED AREA WITH CLEAN #8 OR #57 STONE.					
19.ALL QUESTIONS SHALL BE DIRECTED TO THE DELAWARE COUNTY ENGINEER AT (740) 833-2400.		4.REINFORCED ENDS SHALL BE PROVIDED FOR THE EXPOSED ENDS OF ALL UNDERDRAIN OUTLETS, IF THE EXPOSED PIPE ENDS ARE UNPROTECTED BY HEADWALLS, CATCH BASINS, OR MANHOLES. THE LAST 10 FEET OF UNDERDRAIN SHALL BE TYPE "F" WHEN OUTLETTING IN DITCH.					
BACKFILLING FOR STORM SEWERS, CULVERTS AND UTILITIES		SITE CLEANUP					
1.UTILITY TRENCHES OUTSIDE THE RIGHT-OF-WAY SHALL BE BACKFILLED WITH SOILS MEETING THE REQUIREMENTS OF ITEM 203 (100 PCF OR GREATER). THESE TRENCHES ARE TO BE COMPACTED IN ACCORDANCE TO STANDARD DRAWING DCED R-100 AT +/- 2% OF OPTIMUM MOISTURE.		1.DURING CONSTRUCTION AND PRIOR TO ACCEPTANCE OF ANY PUBLIC IMPROVEMENTS, THE OWNER/DEVELOPER SHALL REMOVE OR CAUSE TO BE REMOVED ALL REFUSE, RUBBISH, UNUSED MATERIALS, EXCESS EARTH, FILL, ROCK, DEBRIS, AND FOREIGN MATTER FROM ALL PUBLIC RIGHTS OF WAY, IMPROVEMENTS, AND/OR EASEMENTS AS WERE DEPOSITED, LEFT OR RESULTED FROM THE CONSTRUCTION OF IMPROVEMENTS OF ANY NATURE WITHIN THE DEVELOPMENT. SUCH REMOVAL SHALL TAKE PLACE WITHIN TWENTY-FOUR (24) HOURS AFTER BEING NOTIFIED BY THE COUNTY ENGINEER THAT SUCH WORK IS REQUIRED, AND SHALL BE COMPLETED TO THE SATISFACTION OF THE COUNTY ENGINEER.					
2.ALL UTILITY TRENCHES IN THE RIGHT-OF-WAY RUNNING PARALLEL TO THE EDGE PAVEMENT AND NOT OVER FIVE FEET (5') IN DEPTH SHALL BE BACKFILLED ACCORDING TO STANDARD DRAWING DCED R-100.		2.THIS WORK SHALL BE PERFORMED IN A MANNER WHICH PREVENTS EROSION AS WELL AS PREVENTS STORM WATER FROM ACCUMULATING OR PONDING ON THE SITE. THE WORK SHALL ALSO BE PERFORMED IN A MANNER THAT PREVENTS DISRUPTING OR IMPEDING SURFACE DRAINAGE FROM ONSITE OR OFFSITE SOURCES AND PREVENTS ANY NEGATIVE EFFECTS ON ADJACENT PROPERTIES. A SIX-INCH OVERLAY OF TOPSOIL SHALL BE PROVIDED AND SHALL BE SEEDED PER DELAWARE COUNTY STANDARDS.					
3.ALL UTILITY TRENCHES UNDER ROAD PAVEMENT, STARTING AT A DISTANCE OF FIVE FEET (5') FROM THE EDGE OF THE PAVEMENT AND EXTENDING ONE FOOT (1') IN DISTANCE FOR EACH ONE FOOT (1') IN DEPTH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIALS PER STANDARD DRAWING DCED R-100 OR LOW STRENGTH MORTAR BACKFILL. ALSO, THE TOP OF ALL UTILITY CONDUITS SHALL BE LOCATED AT LEAST ONE FOOT BELOW THE UNDERDRAINS.		SEEDING					
4.ALL UTILITY TRENCHES OVER FIVE FEET (5') IN DEPTH WHICH RUN PARALLEL TO THE EDGE OF PAVEMENT OR THAT ARE IN THE ZONE OF INFLUENCE SHALL BE BACKFILLED AS PER STANDARD DRAWING DCED R-100.		1.BASED ON CONSTRUCTION START-UP DATE AND CONTRACTOR'S SCHEDULE OF EVENTS, THE SEEDING MIXTURE AND SEDIMENT CONTROL MAY BE CHANGED TO COMPLY WITH DELAWARE COUNTY STANDARDS AND SUPPLEMENTAL SPECIFICATIONS, DUE TO A NON- GROWING SEASON AT THE TIME OF START-UP.					
5.THE CONTRACTOR SHALL INCLUDE IN THE UNIT PRICE BID FOR UNDERGROUND UTILITY PIPE, ALL TRENCHING, BACKFILLING AS PER PLAN, AND THE REMOVAL AND DISPOSAL OF BRUSH, TREES, STUMPS, ETC. WITHIN THE AREA OF EXCAVATION OF THE TRENCH.		2.THE CONTRACTOR SHALL APPLY TEMPORARY AND PERMANENT SEEDING, FERTILIZER, AND MULCHING TO THE SATISFACTION OF THE COUNTY ENGINEER.					
6.THE CONTRACTOR SHALL REFER TO THE UTILITY PLAN AND PROFILE SHEETS TO DETERMINE CRITICAL UTILITY CROSSINGS.		3.ALL SEEDING AND MULCHING SHALL BE BASED ON DELAWARE COUNTY STANDARDS AND SUPPLEMENTAL SPECIFICATIONS.					
7.IN PAVEMENT, SIDEWALK, AND UTILITY CROSSING AREAS THE BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL PER C.O.C. ITEM 304, AND ALL OTHER REMAINING AREAS SHALL BE BACKFILLED PER C.O.C. ITEM 603.08.		RETENTION/DETENTION BASINS					
8.THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN THAT EXISTING PRIOR TO COMMENCEMENT OF CONSTRUCTION TO THE SATISFACTION OF THE COUNTY ENGINEER.		1.ANTI-SEEP COLLARS ARE REQUIRED FOR ALL RETENTION/DETENTION POND OUTLETS. A MINIMUM OF ONE COLLAR IS REQUIRED. COLLARS MUST BE CONSTRUCTED (EXCAVATED) A MINIMUM OF 3.0' INTO UNDISTURBED SOIL ON ALL THREE SIDES. CLASS C CONCRETE PER CURRENT DELAWARE COUNTY SUPPLEMENTAL SPECIFICATIONS SHALL BE USED FOR REPLACEMENT OF THE EXCAVATED MATERIAL. THE COLLARS MUST BE A MINIMUM OF 8 INCHES THICK.					
9.CASING PIPE REQUIRED WITHIN THE RIGHT-OF-WAY SHALL BE SDR 21 OR SCHEDULE 40 FOR NON-PRESSURIZED LINES AND C-900 (LESS THAN 12-INCHES) OR C-905 (GREATER THAN 12-INCHES) FOR PRESSURIZED LINES.		2.A CLAY CORE OF SUFFICIENT THICKNESS IS REQUIRED FOR ALL DETENTION AND RETENTION PONDS IN CUT AREAS. THE COUNTY ENGINEER SHALL FIELD APPROVE THE CORE THICKNESS OR THE					

DEL-CO WATER COMPANY
GENERAL NOTES FOR WATER LINE CONSTRUCTION
(UPDATED JANUARY 16, 2025)

1. GENERAL NOTES AS MODIFIED BY DEL-CO WATER AND SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS SHALL SUPERSEDE THE REQUIREMENTS OF THE DEL-CO WATER COMPANY CONSTRUCTION STANDARDS MANUAL WHEREVER DISCREPANCIES OCCUR.

2. STANDARD GENERAL NOTES:

a. WATERLINE DESIGN, MATERIALS, AND INSTALLATION METHODS SHALL CONFORM TO APPLICABLE SECTIONS OF RECOMMENDED STANDARDS FOR WATER WORKS (TEN STATES STANDARDS), AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, AND THE DEL-CO WATER COMPANY CONSTRUCTION STANDARDS MANUAL. CONTRACTOR SHALL OBTAIN A COPY OF THE STANDARDS AND HAVE IN THEIR POSSESSION AT ALL TIMES DURING CONSTRUCTION. COORDINATE WORK WITH DEL-CO WATER (740) 548-7746.

b. DEL-CO WATER'S SIGNATURE ON THIS PLAN SIGNIFIES ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND LOCATION OF THE PROPOSED WATERLINE IMPROVEMENTS. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHO PREPARED AND CERTIFIED THESE PLANS. DEL-CO WATER COMPANY TAKES NO RESPONSIBILITY, FINANCIAL OR OTHERWISE, REGARDING ERRORS IN THIS PLAN.

c. CORRECTION OF ERRORS SHALL BE TO THE APPLICABLE DEL-CO WATER COMPANY STANDARD, AND THE SOLE RESPONSIBILITY OF THE DEVELOPER. ALL CORRECTIONS, OR REVISIONS THAT AFFECT DEL-CO'S WATERLINE PLANS, DIRECTLY OR INDIRECTLY SHALL BE SUBMITTED TO, AND APPROVED BY DEL-CO WATER COMPANY PRIOR TO REVISIONS BEING ISSUED.

d. THE CONTRACTOR IS RESPONSIBLE FOR THE SUBMISSION OF GPS COORDINATES TO THE DEL-CO WATER GIS DEPARTMENT AT THE COMPLETION OF THE WATERLINE INSTALLATION. BASED ON THE CIRCUMSTANCES OF THE PROJECT, POINTS MAY BE REQUIRED TO BE UPLOADED DAILY. THESE COORDINATES SHALL INCLUDE ALL HORIZONTAL AND VERTICAL (NORTHING, EASTING, ELEVATION) SURVEY COORDINATES. THE SURVEY COORDINATES SHALL BE OBTAINED AT THE COMPLETION OF WATER MAIN INSTALLATION AND SHALL INCLUDE ALL VALVES, TEES, FIRE HYDRANTS, BENDS, PLUGS, REDUCERS, TAPPED TEES, CURB BOXES, AIR RELEASES, 2" END OF LINE FIRE HYDRANTS, ENDS OF CASING PIPE, AND SERVICE SADDLES. GPS POINTS AND DEPTHS ARE ALSO REQUIRED ON SERVICE LINE BORES AT EACH SIDE OF THE ROAD IN ADDITION TO THE SADDLE/WATER MAIN AND METER LOCATIONS. GPS POINTS SHOULD ALSO BE COLLECTED EVERY 10 FEET ON SERVICES LINES THAT ARE BEING DEFLECTED. ADDITIONAL GPS COORDINATES ARE REQUIRED ON TOP OF THE EXPOSED WATER MAIN EVERY 60' ON STRAIGHT RUNS, AND AT EVERY BELL (20') WHERE THE WATERLINE IS BEING DEFLECTED WITHOUT FITTINGS AND WHERE THE TRENCH CAN BE SAFELY ENTERED. ALL GPS POINTS SHALL BE COLLECTED ON THE CENTER OR CENTERLINE OF THE FEATURE. FOR HYDRANTS, POST INDICATOR VALVES AND 2" FLUSH HYDRANTS, THE POINT CORRECT LOCATION TO ENSURE ACCURACY, THE GPS ROD AND LEVEL MUST BE UTILIZED FOR ALL POINTS. ALL GPS POINTS SHALL ALSO HAVE PERTINENT ATTRIBUTES COLLECTED, ESPECIALLY PIPE MATERIAL AND PIPE DIAMETER WHERE APPLICABLE. IF THE COORDINATES ARE UNABLE TO BE COLLECTED ON TOP OF THE WATER MAIN OR FITTING, IT SHALL BE NOTATED IN THE GPS ATTRIBUTES. IF A COORDINATE IS UNABLE TO BE COLLECTED DIRECTLY ON TOP OF THE FEATURE, AN OFFSET POINT MUST BE COLLECTED BY A CAPABLE SURVEY GRADE UNIT.

i. GPS COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD WITH THE NSRS2007 ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE NORTH COORDINATE SYSTEM, NORTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDRETH. ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 0.6 FOOT OR LESS HORIZONTAL AND VERTICAL.

ii. THE GPS COORDINATES SHALL BE SUBMITTED TO THE DEL-CO WATER GIS DEPARTMENT IN DIGITAL FORM, EXCLUDING PORTABLE DOCUMENT FORMAT (PDF). PREFERRED FILE TYPES INCLUDE COMMA DELIMITED TEXT FILES AND MICROSOFT EXCEL. THE ABOVE-LISTED GPS

iii. COORDINATE INFORMATION SHALL BE SUBMITTED TO THE DEL-COWATER GIS OR ENGINEERING DEPARTMENT AS PART OF THE AS-BUILT DRAWING SUBMITTAL WHERE APPLICABLE.

i. CONTRACTORS ARE REQUIRED TO SUPPLY (OWN OR RENT) AND MAINTAIN THEIR OWN GPS DEVICES. DEL-CO WATER RESERVES THE RIGHT TO DENY INADEQUATE GPS DEVICES THAT ARE UNABLE TO PROVIDE SUFFICIENT ACCURACY REQUIRED FOR SUBMISSION.

e. AS-BUILT DRAWINGS ARE REQUIRED FOLLOWING THE COMPLETION OF CONSTRUCTION. ONE SET OF DRAWINGS MARKED "AS-BUILT" SHALL BE SUBMITTED BY THE DEVELOPER TO DEL-CO'S INSPECTION DEPARTMENT FOR REVIEW AND APPROVAL. WATER MAINS CANNOT RECEIVE A FINAL ACCEPTANCE UNTIL AS-BUILT DRAWINGS HAVE BEEN APPROVED. PLEASE NOTE: TAPS MAY NOT BE PURCHASED NOR INSTALLED UNTIL WATER LINES HAVE RECEIVED A FINAL ACCEPTANCE.

f. WATER MAINS SHALL BECOME THE OWNERSHIP OF DEL-CO WATER UPON FINAL ACCEPTANCE.

g. WATERLINE CONSTRUCTION PLANS ARE APPROVED FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE APPROVAL LETTER OR SIGNED PLANS. IF CONSTRUCTION HAS NOT STARTED WITHIN ONE YEAR OF THE DATE OF APPROVAL, PLANS SHALL BE RESUBMITTED TO DEL-CO WATER COMPANY FOR APPROVAL.

3. WATERLINE CONSTRUCTION:

a. WATERLINES SHALL BE NSF 61 APPROVED, AND COMPLIANT WITH ASTM D2241 & OHIO EPA ENG-08-002 STANDARDS.

b. USE THE FOLLOWING TYPE AND CLASS OF PIPE UNLESS OTHERWISE INDICATED ON THE DRAWINGS:

i. 2-INCH WATER LINE PIPE: CLASS 200 SDR 21 YELOMINE PVC (RESTRAINED JOINT).

ii. 4-INCH WATER LINE PIPE: CLASS 200 SDR 21 PVC.

iii. 6-INCH WATER LINE PIPE: CLASS 200 SDR 21 PVC.

iv. 8-INCH TO 12-INCH WATER LINE PIPE: CLASS 160 SDR 26 PVC.

v. 16-INCH AND LARGER WATER LINE PIPE: AWWA C151 CLASS 52 DIP.

vi. 4-INCH PIPE AND LARGER USED FOR FIRE SERVICE: AWWA C900 DR 18 (150 PSI)

vii. ALL SIZES OF DEL-CO-OWNED WATERLINES USED ON MASTER METER PROJECTS: CLASS 200 SDR 21 PVC.

c. ALL SIZES OF DUCTILE IRON PIPE SHALL BE INSTALLED WITH V-BIO ENHANCED POLYETHYLENE ENCASEMENT AND IN ACCORDANCE WITH DEL-CO WATER SUBDIVISION CONSTRUCTION STANDARDS SECTION 02731 DUCTILE IRON.

d. ALL FITTINGS SHALL BE MECHANICAL JOINT CONFORMING TO AWWA C153.

e. MECHANICAL JOINT OR TRANSITION ACCESSORY PACK T-BOLTS SHALL BE CORROSION RESISTANT.

f. CROSSES SHALL NOT BE USED WITHOUT APPROVAL OF DEL-CO WATER COMPANY.

g. ALL VALVES SHALL BE MECHANICAL JOINT CONFORMING TO AWWA WITH AISI 304 STAINLESS STEEL EXTERNAL HARDWARE AND SHALL BE RESILIANT-SEATED GATE VALVES PER AWWA C509. USE OF BUTTERFLY VALVES IS PROHIBITED.

h. PROVIDE HEAVY-DUTY VALVE BOXES ON ALL HOT-TAPS AND AT VALVES LOCATED UNDER GRAVEL OR PAVEMENT SURFACES.

i. TOP OF VALVE BOX SHALL BE FLUSH WITH FINISHED GRADE IN PAVED AREAS, AND 4 INCHES ABOVE FINISHED GRADE IN NON-PAVED AREAS.

j. MAINTAIN A MINIMUM 10-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL SEPARATION BETWEEN WATERLINES AND SANITARY AND STORM SEWERS.

k. ALL OTHER BURIED UTILITIES SHALL MAINTAIN A MINIMUM 5-FOOT HORIZONTAL SEPARATION, AND 2-FOOT VERTICAL SEPARATION FROM THE CENTERLINE OF WATERLINES AS FINALLY LAID AND CONSTRUCTED.

l. PROVIDE CONCRETE THRUST BLOCKING FOR ALL FITTINGS, VALVES, ANCHOR TEES, AND HYDRANTS.

m. BURY WATERLINES A MINIMUM DEPTH OF 48-INCHES TO THE TOP OF PIPE.

n. ALL ENGINEERED FILL TO BE PLACED OVER OR UNDER DEL-CO WATER LINES SHALL BE IN PLACE PRIOR TO THE CONSTRUCTION OF THE WATER LINES

o. PLACE A 5-FOOT STEEL FENCE POST OR 4'X4" WOOD POST AT VALVES AND THE ENDS OF LINES. PAINT BLUE.

p. TRACER WIRE:

i. INSTALL COPPERHEAD@OR EQUAL 12-GAUGE HIGH STRENGTH 452LB BREAK STRENGTH 30 MIL HDPE JACKET, COPPER-CLAD, STEEL REINFORCED TRACER WIRE ON ALL WATER MAINS AND SERVICE LINES INSTALLED BY TRENCHING METHODS.

ii. INSTALL COPPERHEAD@OR EQUAL 12-GAUGE EXTRA HIGH STRENGTH 1150LB BREAK STRENGTH 45 MIL HDPE JACKET, COPPER-CLAD, STEEL REINFORCED TRACER WIRE ON ALL WATER MAINS AND SERVICE LINES INSTALLED BY BORING METHODS.

iii. FASTEN WIRE TO PIPE IN TWO PLACES PER PIPE SECTION. EXTEND TRACER WIRE TO GROUND SURFACE AT ALL VALVES AND HYDRANTS AS SHOWN IN THE DEL-CO STANDARD DETAIL. SPLICE WIRES USING BURNDY COPPER SPLIT BOLT KS-15. THOROUGHLY WRAP THE CONNECTOR AND BARE WIRES WITH 3M TEMFLEX 2155 RUBBER SPLICING TAPE. COVER ENTIRE CONNECTION WITH SCOTCH SUPER 88 HEAVY DUTY GRADE ELECTRICAL TAPE.

iv. CONNECT ALL SERVICE LINE WIRES TO MAIN LINE WIRES USING BURNDY COPPER SPLIT BOLT KS-15. THOROUGHLY WRAP THE CONNECTOR AND BARE WIRES WITH 3M TEMFLEX 2155 RUBBER SPLICING TAPE. COVER ENTIRE CONNECTION WITH SCOTCH SUPER 88 HEAVY DUTY GRADE ELECTRICAL TAPE.

v. CONTRACTOR SHALL TEST THE CONTINUITY OF ALL WIRE USING A THIRD-PARTY TESTER.

1.CONTRACTOR SHALL CONTACT DEL-CO.S INSPECTION DEPARTMENT A MINIMUM OF 24 HOURS PRIOR TO TEST.

2.TESTER SHALL SEND A SIGNED REPORT TO DEL-CO WATER INSPECTION DEPARTMENT AFFIRMING ALL WIRE HAS CONTINUITY.

3.CONTRACTOR SHALL REPAIR ALL DEFICIENCIES.

4. WATER SERVICE CONSTRUCTION (BETWEEN MAIN LINE AND METER PIT):

a. ALL WATER SERVICES SHALL BE CONSTRUCTED AND INSTALLED PER AWWA C800.

b. FOR METERS 1-INCH AND SMALLER, USE 1-INCH CLASS 200 SDR 7 IRON PIPE SIZE (IPS) POLYETHYLENE PIPE.

c. CONNECTIONS TO PVC PIPE SHALL BE MADE WITH APPROVED TAPPING SADDLE AND CORPORATION STOP PER DEL-CO SUBDIVISION CONSTRUCTION STANDARDS MANUAL.

d. CONNECTIONS TO DIP SHALL BE BY DIRECT TAP OR SADDLE AND APPROVED CORPORATION STOP PER DEL-CO SUBDIVISION CONSTRUCTION STANDARDS MANUAL.

e. PROVIDE A CURB STOP WITH 1-INCH FEMALE IRON PIPE THREADS ON THE CUSTOMER SIDE AT THE END OF SERVICE LINES. LOCATE AT ROW, BUT A MINIMUM OF FIVE FEET FROM EDGE OF SIDEWALK UNLESS OTHERWISE APPROVED OR DIRECTED BY DEL-CO WATER.

f. ALL SERVICE LINE VALVES 1½-INCH AND LARGER SHALL BE MECHANICAL JOINT GATE VALVES, RESTRAINED WITH DUCT-LUGS AND GALVANIZED ALL THREAD ROD, OR ANCHOR TEES WHERE APPLICABLE.

g. MINIMUM DEPTH OF COVER SHALL BE 48 INCHES.

h. PLACE A 5-FOOT STEEL FENCE POST OR 4'X4" WOOD POST AT THE ENDS OF ALL SERVICE LINES, PAINT BLUE.

i. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SPECIAL BACKFILL MATERIAL FOR ALL LINES, INCLUDING THOSE INSTALLED BY DEL-CO WATER COMPANY, WHERE REQUIRED BY THE COUNTY OR CITY ENGINEER.

5. FIRE HYDRANTS:

a. FIRE HYDRANTS SHALL CONFORM TO AWWA C502 FOR DRY BARREL HYDRANTS.

b. MAIN VALVE: 5.25-INCH COMPRESSION.

c. NOZZLES:

i. THREADING: CONFORM TO NFPA NATIONAL STANDARD FIRE HOSE THREADS.

ii. 4.5-INCH STEAMER, EXCEPT IN THE FOLLOWING LOCATIONS PROVIDE AN INTEGRAL STORZ CONNECTION: HARRINGTON HIHS50 OR EQUAL: BERKSHIRE, BERLIN, CONCORD, GENOA, KINGSTON, LIBERTY, ORANGE, PORTER, TRENTON, AND SCIOTO TOWNSHIPS; CITY OF POWELL; AND THE VILLAGES OF SUNBURY AND GALENA.

iii. TWO 2.5-INCH HOSE CONNECTIONS.

iv. IN FRANKLIN COUNTY/CITY OF COLUMBUS, A 4" STEAMER IS REQUIRED ALONG WITH THE TWO 2.5-INCH HOSE CONNECTIONS. INTEGRAL STORZ CONNECTIONS ARE PROHIBITED.

d. INLET CONNECTION: 6-INCH MECHANICAL JOINT.

e. OPERATING NUT: 1.5-INCH PENTAGON, TURN COUNTERCLOCKWISE TO OPEN. EXCEPTING FROM THIS WILL BE ANY PROJECTS WITHIN FRANKLIN COUNTY OF CITY OF WORTHINGTON FIRE DEPARTMENTS WHERE A 1-INCH SQUARE, TURN COUNTERCLOCKWISE NUT IS REQUIRED.

f. PLACEMENT OF HYDRANT: 2 FEET FROM THE BACK OF CURB OR 8 FEET FROM THE EDGE OF PAVEMENT ON NON-CURBED STREETS.

g. EXTENSIONS AND PARTS: SHALL BE MANUFACTURED BY THE ORIGINAL EQUIPMENT MANUFACTURER.

h. APPROVED MANUFACTURERS: MUELLER SUPER CENTURION 200, AMERICAN FLOW CONTROL B-84-B, CLOW MEDALLION, M&H MODEL 129M, AVK NOSTALGIC 2780, OR KENNEDY GUARDIAN K81D. OR EJ WATERMASTER 50D250.

i. PAINTING: REPAINT ALL HYDRANTS AFTER INSTALLATION PER DEL-CO SUBDIVISION CONSTRUCTION STANDARDS MANUAL SECTION 02731, PART 2.06.

i. LIBERTY TOWNSHIP, POWELL, AND VILLAGE OF SUNBURY: SAFETY RED.

ii. OTHER TOWNSHIPS: SAFETY YELLOW

iii. FIRE HYDRANTS LOCATED ON PRIVATE WATER LINES SHALL BE PAINTED INDUSTRIAL GREEN.

6. FLUSHING HYDRANTS

a. ALL DEAD ENDS LINE SHALL HAVE EITHER AN AUTOMATIC FLUSHING DEVICE OR A 2" END OF LINE FIRE HYDRANT IN ACCORDANCE WITH SECTION 02731 FLUSHING HYDRANTS.

7. DISINFECT ALL WATER LINES IN ACCORDANCE WITH AWWA C651 AND DEL-CO WATER SPECIFICATIONS.

8. ALL PIPE INSTALLATION AND PRESSURE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND C605 FOR PLASTIC PIPE, AND DEL-CO SPECIFICATIONS.

a. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NECESSARY TO PERFORM PRESSURE TEST.

b. SCHEDULE TEST BETWEEN 8:00 AM AND 2:00 PM WEEKDAYS. NOTIFY

DEL-CO WATER 24 HOURS PRIOR TO TESTING.

9. OBTAIN WRITTEN APPROVAL OF MATERIAL AND MANUFACTURERS LIST FROM DEL-CO WATER PRIOR TO BEGINNING CONSTRUCTION.

10. PROVIDE CASING PIPE FOR ALL ROAD CROSSINGS UNLESS OTHERWISE APPROVED BY DEL-CO. CASING PIPE SHALL BE STEEL PIPE WITH 0.375-INCH WALL THICKNESS, OR PVC C900 FOR WATERLINES 12-INCH DIA. OR LESS. CASINGS FOR WATERLINES LARGER THAN 12-INCH DIA. MAY BE AWWA C905.

11. EASEMENTS SHALL BE PROVIDED TO DEL-CO WATER BEFORE PERMISSION WILL BE GIVEN TO MAKE NEW SERVICE LINE CONNECTIONS.

12. CONNECTIONS TO EXISTING WATER LINES WILL BE MADE BY DEL-CO WATER AT THE CONTRACTOR'S EXPENSE OR PERFORMED BY CONTRACTORS WHO ARE APPROVED FOR MAKING CONNECTIONS. NOTIFY ALL PROPERTY OWNERS, AND DEL-CO WATER, IN WRITING 48 HOURS BEFORE STARTING CONSTRUCTION.

13. CONTRACTOR SHALL EXCAVATE TO DETERMINE THE LOCATION AND DEPTH OF EXISTING WATER LINES WHEREVER COVER OVER THE WATER LINES IS BEING REDUCED. IF THE FINAL DEPTH OF THE WATERLINE WILL BE BELOW DEL-CO WATER STANDARDS, CONTRACTOR SHALL SUBMIT A RELOCATION PLAN FOR APPROVAL BY DEL-CO WATER, AND RELOCATE THE WATER LINE AT THEIR EXPENSE.

14. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING THE WATER LINE PRIOR TO FINAL ACCEPTANCE BY DEL-CO WATER, AND REPAIRING ALL DAMAGES FROM CONSTRUCTION ACTIVITY.

15. DO NOT FILL NEW WATER LINES UNTIL APPROVED BY DEL-CO WATER.

16. BOOSTER PUMPS ARE NOT ALLOWED ON INDIVIDUAL SERVICES.

17. ALL WATER MAINS, INCLUDING THOSE NOT DESIGNED TO PROVIDE FIRE PROTECTION, SHALL BE SIZED FOLLOWING AN ANALYSIS BASED ON FLOW DEMANDS, AND PRESSURE REQUIREMENTS. THE SYSTEM SHALL BE DESIGNED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI AT GROUND LEVEL AT ALL POINTS IN THE DISTRIBUTION SYSTEM UNDER ALL DESIGNED FLOW CONDITIONS. NORMAL WORKING PRESSURE IN THE DISTRIBUTION SYSTEM SHALL NOT BE LESS THAN 35 PSI.

18. DEL-CO WATER REQUIRES ALL WATERLINES INTENDED FOR OWNERSHIP AND MAINTENANCE BY DEL-CO WATER, REGARDLESS OF PIPE SIZE, TO SECURE EPA APPROVAL PRIOR TO THE START OF CONSTRUCTION.

DEL-CO WATER COMPANY
SUPPLEMENT TO THE GENERAL NOTES FOR THE CONSTRUCTION OF OFF-SITE WATERLINES
(UPDATED JANUARY, 2025)

1. THE GENERAL NOTES FOR THE CONSTRUCTION OF OFF-SITE WATERLINES LISTED BELOW SHALL SUPPLEMENT THE DEL-CO WATER GENERAL NOTES FOR WATERLINE CONSTRUCTION LISTED ABOVE. THESE GENERAL NOTES ADDRESS THE DESIGN AND CONSTRUCTION OF WATERLINES TO BE INSTALLED BY AN OWNER/DEVELOPER ON PROPERTY NOT OWNED BY THE OWNER/DEVELOPER.

2. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ALL REQUIRED EASEMENT(S) FOR ALL PROPOSED OFFSITE WATERLINES AND APPURTENANCES.

A. DEL-CO WILL PROVIDE A STANDARD EASEMENT FORM TO BE USED BY THE OWNER/DEVELOPER.

B. THE OWNER/DEVELOPER WILL PROVIDE ALL EASEMENT EXHIBITS.

C. ALL ORIGINAL EASEMENTS SHALL BE RETURNED TO DEL-CO WATER. DEL-CO WATER WILL RECORD ALL EASEMENTS AT THE COUNTY COURTHOUSE.

3. THE OWNER/DEVELOPER SHALL PROVIDE A VIDEO DOCUMENTING THE EXISTING CONDITION OF ALL OFFSITE PROPERTIES IMPACTED BY THE WATERLINE CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION.

A. COMMENTARY IDENTIFYING POTENTIAL CONFLICTS, SURFACE FEATURES, ETC. ON THE IMPACTED PROPERTY(S) SHALL BE INCORPORATED INTO THE PRECONSTRUCTION VIDEO.

B. A COPY OF THE PRECONSTRUCTION VIDEO SHALL BE PROVIDED TO DEL-CO WATER CO., INC. PRIOR TO THE START OF CONSTRUCTION.

4. PROPERTY OWNERS SHALL BE NOTIFIED OF THE PROJECT DURING THE DESIGN PHASE AND/OR A MINIMUM OF NINETY (90) DAYS PRIOR TO THE START OF CONSTRUCTION.

A. DEL-CO SHALL REVIEW AND APPROVE THESE CONSTRUCTION NOTICES.

B. PROPERTY OWNERS SHALL BE NOTIFIED OF THE INSTALLATION OF ALL ABOVE GROUND APPURTENANCES ON THEIR PROPERTY INCLUDING, BUT NOT LIMITED TO VALVES, HYDRANTS, & ETC.

5. WATERLINE CONSTRUCTION

A. ONCE WATERLINE CONSTRUCTION HAS BEGUN ON A SPECIFIC PROPERTY, THE CONTRACTOR SHALL REMAIN ON THAT PROPERTY UNTIL ALL OF THE WATERLINES HAVE BEEN INSTALLED AND YARD RESTORATION IS COMPLETED.

B. ALL OPEN EXCAVATIONS SHALL BE PROPERLY SECURED AT THE END OF EACH WORKDAY.

C. CONTRACTOR SHALL COORDINATE THE EXCAVATION ACROSS EXISTING DRIVES WITH THE PROPERTY OWNER SO AS TO NOT LIMIT OR PREVENT ACCESS TO THE PROPERTY.

ALL EXISTING CONCRETE OR ASPHALT DRIVEWAY CROSSINGS SHALL BE COMPLETED USING DIRECTIONAL DRILLING OR OTHER APPROVED TRENCHLESS METHODS UNLESS PREVIOUSLY AGREED UPON IN WRITING BY THE PROPERTY OWNER.

EXCAVATIONS THAT CROSS EXISTING GRAVEL DRIVEWAYS SHALL BE BACKFILLED PER DEL-CO WATER DETAIL D-18 GRAVEL ROADWAY & DRIVEWAY PAVEMENT REPLACEMENT.

ALL TREES, SHRUBS, FENCES, LANDSCAPE FEATURES, ETC. SHALL BE PRESERVED AND PROTECTED FROM DAMAGE DUE TO THE WATERLINE CONSTRUCTION UNLESS AGREED UPON BY THE PROPERTY OWNER PRIOR TO CONSTRUCTION. DEL-CO WATER RESERVES THE RIGHT TO REQUIRE THE WATERLINE TO BE INSTALLED USING DIRECTIONAL DRILLING METHODS WITH RESTRAINED JOINT PIPE SO AS TO PROTECT THESE FEATURES.

D. ALL WATERLINE BACKFILL SHALL BE COMPACTED. RESTORATION SHALL BE PERFORMED IMMEDIATELY FOLLOWING THE COMPLETION OF CONSTRUCTION UNLESS APPROVED BY DEL-CO WATER OR THE PROPERTY OWNER.

6. POST CONSTRUCTION CONDITIONS

A. PROPERTIES NOT OWNED BY THE DEVELOPER THAT ARE AFFECTED BY THE WATERLINE CONSTRUCTION SHALL BE RETURNED TO "PRECONSTRUCTION" GRADES AND CONDITIONS FOLLOWING THE WATERLINE INSTALLATION.

B. YARD RESTORATION SHALL COMMENCE IMMEDIATELY FOLLOWING THE WATERLINE INSTALLATION.

C. ALL VALVE BOXES, MANUAL AIR RELEASE PITS, ETC. SHALL BE SET TO THE APPROPRIATE GRADE TO MINIMIZE THE IMPACT TO THE PROPERTIES NOT OWNED BY THE DEVELOPER.

D. ALL MARKER POSTS, BLOW-OFFS AND ETC. SHALL BE REMOVED PRIOR TO YARD RESTORATION.

ESTIMATE OF QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
201	LUMP	SUM	CLEARING & GRUBBING
203	261	CY	EXCAVATION
203	84	CY	EMBANKMENT
203	984	SY	SUBGRADE COMPACTION
203	1	HRS	PROOF ROLLING
207	1	SY	CONSTRUCTION ENTRANCE
301	37	CY	NO. 2 STONE
304	37	CY	AGGREGATE BASE-ODOT ITEM 304
301	192	CY	ASPHALT CONCRETE BASE COURSE
404	43	CY	ASPHALT SURFACE COURSE, TYPE 1 (448), PG 64-22
616	LUMP	SUM	DUST CONTROL
623	LUMP	SUM	CONSTRUCTION LAYOUT STAKES
623	LUMP	SUM	MOBILIZATION
630	1	EA	PRIVATE DRIVE & ADDRESS SIGN
659	100	SY	SEEDING AND MULCHING
SPEC	298	LF	SILT FENCE
SPEC	LUMP	EA	PROOF SURVEY PER DELAWARE COUNTY STANDARD
638	68	LF	16" PVC C-909 WATER PIPE
638	3	EA	1" TYPE "K" SOFT COPPER WATER SERVICE TAPS-LONG, COMPLETE
638	1	EA	FIRE HYDRANT ASSEMBLY-TYPE 1, DEAD END-COMplete W/16" VALVE
SPEC	1	EA	WATER METER

ESTIMATE OF QUANTITIES NOTES

QUANTITIES LISTED ABOVE ARE ESTIMATES AND SUBJECT TO REVISION DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO PREPARING & SUBMITTING THEIR BID.

ALL ITEMS OF WORK CALLED FOR ON THIS PLAN, FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS INDICATED, SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

BIDDING INSTRUCTIONS

1. THE PROJECT IS NON-PREVAILING WAGE AND IS NON-TAXABLE.

2. THE COSTS FOR TRAFFIC CONTROL, TEMPORARY SIGNAGE, TRASH REMOVAL, PORTABLE TOILETS, TEMPORARY ROADS, AND CONSTRUCTION CONTROL STAKING ARE TO BE INCLUDED IN THE BID.

3. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO PROVIDE SURETY FOR THE VALUE OF THE CONSTRUCTION AS REQUIRED BY THE CONTROLLING GOVERNMENT ENTITIES.

NOTES:

1. THE IDENTITY AND LOCATION OF THE EXISTING UNDERGROUND AND OVERHEAD UTILITY FACILITIES KNOWN TO BE LOCATED IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS BASED ON FIELD OBSERVATIONS. DELAWARE COUNTY AND/OR THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OF THE UNDERGROUND FACILITIES SHOWN ON THE PLANS. SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS. THE CONTRACTOR SHALL CAUSE NOTICE TO BE GIVEN TO THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES (TELEPHONE 800-362-2764 - TOLL FREE) AND THE OWNERS OF UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND UTILITY PROTECTION SERVICE. IN ACCORDANCE WITH SECTION 153.64 OF THE REVISED CODE, THE ABOVE MENTIONED NOTICE SHALL BE GIVEN AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

2. ALL TREES AND SHRUBS INCLUDING PROTRUDING BRANCHES WITHIN 16' HORIZONTALLY AND 20' VERTICALLY FROM THE CENTERLINE OF THE CAD SHALL BE REMOVED AND MAINTAINED AS CLEARED AREA UNLESS THERE IS A MORE RESTRICTIVE STANDARD IN CONCORD TOWNSHIP.

3. A POLE-SIGN SHALL BE INSTALLED AT THE SUB DIVIDER'S EXPENSE, LOCATED AT THE CAD INTERSECTION WITH THE CONNECTING PUBLIC OR PRIVATE ROAD. SUCH SIGN MAY BE INTEGRATED INTO A COMMON MAILBOX STRUCTURE. THE POLE-SIGN SHALL BE MADE OF ROT-RESISTANT WOOD OR COMPARABLE WEATHER-RESISTANT MATERIAL. THE POLE-SIGN SHALL BE PLACED OUTSIDE THE PUBLIC RIGHT-OF-WAY AND SHALL INCLUDE THE WORDS "PRIVATE DRIVE" IN CONTRASTING LETTERS. THE "PRIVATE DRIVE" SIGN SHALL BE NO LARGER THAN TWO SQUARE FEET (1 FOOT X 2 FEET) ON EACH SIDE. ALL CAD ADDRESSES SHALL BE DISPLAYED COLLECTIVELY ON THE POLE-SIGN AT THE CAD ENTRANCE AND SHALL BE MADE OF REFLECTIVE MATERIAL. THE "PRIVATE DRIVE" SIGN AND ADDRESSES SHALL BE LEGIBLE FROM THE CONNECTING PUBLIC OR PRIVATE ROAD AND CONTINUOUSLY MAINTAINED AT THIS LOCATION. A RENDERING OF THE SIGN INCLUDING PROPOSED MATERIALS SHALL BE SUBMITTED AT THE TIME OF PRELIMINARY PLAN APPLICATION.

4. EACH LOT SHALL INDIVIDUALLY DISPLAY ITS ADDRESS AT THE DRIVEWAY ENTRANCE TO THE CAD WHEN THE ADDRESS IS ASSIGNED. THE ADDRESS-SIGN SHALL BE MADE OF REFLECTIVE MATERIAL AND BE LEGIBLE FROM EACH LOT'S DRIVEWAY ENTRANCE.

DRAWING SET STATUS:

☒ PRELIMINARY ENGINEERING SET

☐ AGENCY REVIEW SET

☐ CONSTRUCTION DOCUMENT SET

☐ ASBUILT DOCUMENT SET

DESIGN	DRAFT	CHECK
DGR	DGR	JPW

PROJECT NO.: 26-006

DATE: AUGUST, 2026

SCALE:

HORIZONTAL: N/A

VERTICAL: N/A

SHEET NO.: 3 / 8

TerrainEvolution

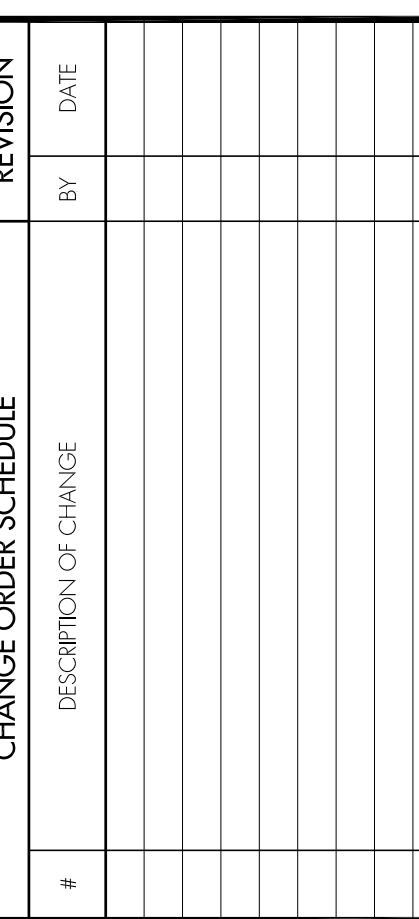
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BERLIN TOWNSHIP, DELAWARE COUNTY, OHIO

ROLOSON FIELD
COMMON ACCESS DRIVE

GENERAL NOTES & QUANTITIES



BERLIN TOWNSHIP, DELAWARE COUNTY, OHIO

