

ITEM SPECIAL - WATER MAIN:

- A. DESCRIPTION. THIS WORK CONSISTS OF CONSTRUCTING WATER MAINS, VALVES, FITTINGS AND BOXES. THE WORK ALSO INCLUDES FURNISHING ALL MATERIALS, EXCAVATION, BEDDING, LAYING PIPE, JOINTING, HYDROSTATIC TESTING, STERILIZING, BACKFILLING, RESTORATION OF DISTURBED FACILITIES AND SURFACES. DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIALS, AND OTHER ITEMS NECESSARY TO COMPLETE THE WORK.
- B. CONSTRUCTION AND MATERIAL SPECIFICATIONS. ALL WATER MAINS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH "COUNTY OF LAKE, OHIO - COUNTY OF LAKE, UTILITIES DEPARTMENT RULES AND REGULATIONS, APRIL 2018 AND AS MODIFIED HEREIN. A COPY OF THE SPECIFICATIONS IS ON FILE IN THE OFFICE OF THE LAKE COUNTY SANITARY ENGINEER, LAKE COUNTY ADMINISTRATION CENTER, 105 MAIN ST., PAINESVILLE, OHIO.
- C. OWNERSHIP. ALL WATER MAINS AND APPURTENANCES WITHIN THE DEDICATED RIGHT-OF-WAY ARE OWNED, OPERATED AND MAINTAINED BY THE LAKE COUNTY DEPARTMENT OF UTILITIES.
- D. INSPECTION. ALL WORK ON WATER MAINS AND APPURTENANCES SHALL BE INSPECTED BY, APPROVED BY, AND COORDINATED WITH THE LAKE COUNTY DEPARTMENT OF UTILITIES PRIOR TO BEING PLACED IN SERVICE. THE CONTRACTOR SHALL NOTIFY THE LAKE COUNTY DEPARTMENT OF UTILITIES AT LEAST THREE WORKING DAYS PRIOR TO INITIATING ANY WORK ON THE WATER MAINS AND APPURTENANCES.
- E. BACTERIOLOGICAL TESTING AND STERILIZATION. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO STERILIZE THE PROPOSED WATER MAINS AND APPURTENANCES FOR SAMPLE COLLECTION IN ACCORDANCE WITH THE WATER MAIN CONSTRUCTION AND MATERIAL SPECIFICATIONS AND AWWA STANDARD C650 SECTION 7.3. BACTERIOLOGICAL SAMPLES SHALL BE COLLECTED BY THE LAKE COUNTY DEPARTMENT OF UTILITIES IN AN APPROVED CONTAINER. WATER IN THE MAIN TO BE DISINFECTED SHOULD HAVE A TURBIDITY ACCEPTABLE TO THE LAKE COUNTY DEPARTMENT OF UTILITIES. ALL TESTS ARE TO BE PERFORMED BY THE LAKE COUNTY LABORATORY OR A LAKE COUNTY DEPARTMENT OF UTILITIES - APPROVED LABORATORY.
- F. SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL SCHEDULE THE WORK ON THE WATER MAINS AND APPURTENANCES TO MINIMIZE THE NUMBER AND DURATION OF INTERRUPTIONS TO WATER SERVICE. ALL WATER SERVICE INTERRUPTIONS SHALL BE SCHEDULED WITH THE LAKE COUNTY DEPARTMENT OF UTILITIES DURING OFF PEAK WATER DEMAND PERIODS AND SHALL NOT EXCEED A PERIOD OF FOUR HOURS THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION PLAN TO THE LAKE COUNTY DEPARTMENT OF UTILITIES FOR REVIEW AND APPROVAL PRIOR TO ANY WORK ON THE WATER MAINS. THE CONTRACTOR SHALL NOTIFY ALL CUSTOMERS AFFECTED BY THE WATER MAIN SHUT DOWN TWO (2) WORKING DAYS PRIOR TO THE PROPOSED SHUT DOWN.
- G. WATER MAIN MUST BE STAKED OUT BY A PROFESSIONAL SURVEYOR AND CUT SHEETS UTILIZED. NEW WATER MAINS MUST PROVIDE MINIMUM 18" VERTICAL SEPARATION FROM ALL STORM/SANITARY SEWERS, GAS LINES AND OTHER WATERLINES.
- H. THE CONTRACTOR SHALL NOTIFY THE LAKE COUNTY DEPARTMENT OF UTILITIES AT THE FOLLOWING LOCATION AT LEAST THREE WORKING DAYS PRIOR TO THE START OF THE WATER MAIN RELOCATION WORK:

LAKE COUNTY DEPARTMENT OF UTILITIES
 LAKE COUNTY ADMINISTRATION CENTER
 105 MAIN STREET
 PAINESVILLE, OHIO 44077
 (440) 350-2652

- I. THE EXISTING WATER SERVICE MAY BE TAKEN OFF SERVICE FOR 4 HOURS MAXIMUM, COORDINATED WITH LAKE COUNTY.

EXCAVATION, BACKFILL AND COMPACTION:

- 1. ALL EXCAVATION WILL BE CONSIDERED UNCLASSIFIED, NO COMPENSATION WILL BE ALLOWED THE CONTRACTOR FOR ROCK OR SHALE EXCAVATION.
- 2. ALL BACKFILL WILL BE AS DESCRIBED IN SPECIFICATION SECTION 310000 "COMPACTED BACKFILL", USING MACHINE MOUNTED COMPACTION EQUIPMENT TO MEET THE COMPACTION REQUIREMENT OF 100% OF MAXIMUM LABORATORY DRY DENSITY PER ASTM D 698.
- 3. THE OWNER AND THE ENGINEER DO NOT GUARANTEE NOR SUGGEST THE IN-SITU MATERIAL TO BE EXCAVATED WILL BE SUITABLE OR IN ITS PRESENT STATE WILL CONSIST OF THE PROPER MOISTURE CONTENT TO ACHIEVE THE COMPACTION REQUIREMENTS. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION AS TO THE BACKFILL MATERIAL HE WILL USE. UPON REQUEST, THE OWNER WILL PROVIDE ACCESS TO THE SITE FOR THE CONTRACTOR TO CONDUCT SUCH INVESTIGATION AND TESTS DEEMED NECESSARY TO MAKE HIS DETERMINATION. NO EXTRA PAYMENT WILL BE MADE TO DISPOSE OF UNSUITABLE MATERIAL OR FURNISH AND PLACE SUITABLE MATERIAL MEETING THE REQUIREMENTS OF SECTION 310000.
- 4. BACKFILLING OF ANY TRENCHES OR EXCAVATIONS WILL NOT BE PERMITTED WITHOUT MACHINE MOUNTED COMPACTION EQUIPMENT BEING USED.
- 5. SLAG PRODUCTS WILL NOT BE PERMITTED FOR BEDDING, BACKFILL, OR TRAFFIC COMPACTED SURFACE.
- 6. ALL UTILITY LINES CROSSING THE NEW WATERLINE TRENCH, (i.e. STORM SEWERS, STORM LATERALS, SANITARY SEWERS, SANITARY LATERALS, WATER MAINS, WATER SERVICE CONNECTIONS, GAS MAINS, GAS SERVICE CONNECTIONS, UNDERGROUND OCT CONDUITS, CABLE T.V. LINES) SHALL BE PROTECTED AND SUPPORTED WITH HARDWOOD PLANKS OR REMOVED AND REPLACED, RECONNECTED AND SUPPORTED ACROSS THE ENTIRE WIDTH OF THE TRENCH. NO ADDITIONAL COMPENSATION WILL BE PAID FOR THE ABOVE WORK UNLESS ANY OF THE ABOVE UTILITIES ARE ENCOUNTERED AND NOT SHOWN ON THE DRAWINGS.

LCDU WATER WORKS NOTES:

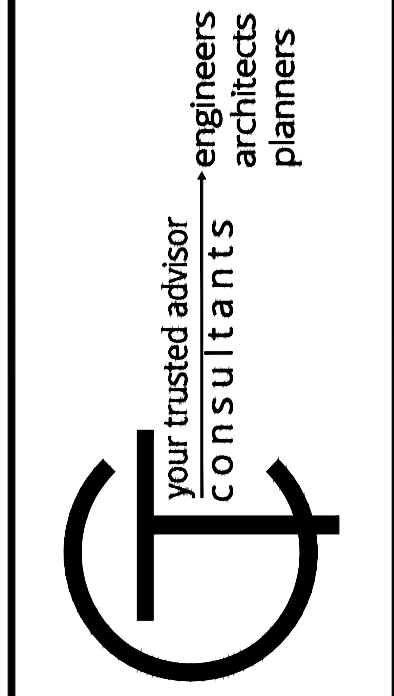
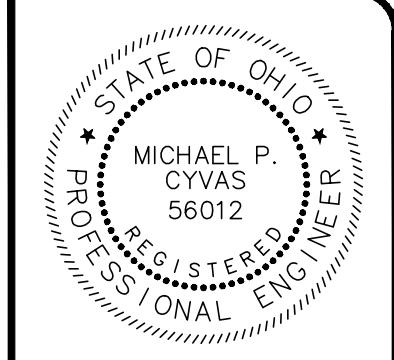
- 1. ONLY WATER/SEWER CONTRACTORS LICENSED BY THE LAKE COUNTY BOARD OF COMMISSIONERS MAY INSTALL WATER MAINS.
- 2. THIS APPROVAL BY THE LCDU SHALL EXPIRE IF THE WATERLINE CONSTRUCTION HAS NOT BEEN INITIATED BY A DEVELOPER WITHIN (12) MONTHS OF THE EFFECTIVE APPROVAL DATE AS SHOWN ON THE ORIGINALLY SUBMITTED FOR APPROVAL BLUEPRINT COPY. (THIS IS NOT TO BE CONSTRUED AS THE DATE THAT IS SHOWN ON THE ORIGINAL MYLAR TITLE SHEET.)
- 3. THE CONTRACTOR SHALL NOTIFY THE LCDU AT LEAST 48 HOURS IN ADVANCE OF ANY WORK IN THEIR SYSTEMS.
- 4. THE LCDU SHALL PERFORM INSPECTION SERVICES. THE COST OF INSPECTION SHALL BE INCLUDED AS PART OF THIS CONSTRUCTION PROJECT AT THE CURRENT BASE RATE AS ESTABLISHED BY THE LAKE COUNTY BOARD OF COMMISSIONERS. (SEE SECTION 7 FEE SCHEDULE) COST FOR LAKE COUNTY INSPECTION FEE AND OTHER FEES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR OTHER WATERLINE ITEMS.
- 5. WATERLINE WORK SHALL NOT BEGIN UNTIL THE AREAS OF CONSTRUCTION ARE ROUGH GRADED.
- 6. ALL WATERLINES ON THIS PROJECT SHALL BE LAID AT THE ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS. HIGH POINTS IN THE WATERLINE MUST OCCUR AT THE STATIONED HYDRANT TEE LOCATIONS.
- 7. ALL HYDRANTS SHALL BE POSITIONED SO THAT THE STEAMER NOZZLES POINT IN THE DIRECTION SHOWN ON THE PLANS.
- 8. THE PROPOSED WATERLINE SHALL HAVE 5' MINIMUM COVER OVER THE TOP OF PIPE AT ALL PLACES, EXCEPT AT SPECIFIC HYDRANT TEE LOCATIONS AS SHOWN ON THE PLANS.
- 9. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 304 OR 316. WITH ANTI-GALLING AGENT.
- 10. ALL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR PRELIMINARY CHECKING. THE ENGINEER SHALL FORWARD CHECKED SHOP DRAWINGS TO THE LCDU FOR FINAL CHECKING AND APPROVAL.
- 11. THE LCDU SHALL PROVIDE WATER FOR THE NEW WATER MAIN WITHOUT COST FOR THE INITIAL OPERATION. ALL WATER FOR FLUSHING OPERATIONS SHALL BE PAID FOR BY THE CONTRACTOR AT CURRENT RATES AS ESTABLISHED BY THE LAKE COUNTY BOARD OF COMMISSIONERS PER 100 CUBIC FEET OF WATER USED. (SEE SECTION 7 FEE SCHEDULE)
- 12. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON PIPE, ANSI A21.51, THICKNESS CLASS 53, UNLESS OTHERWISE SHOWN ON THE PLANS, WITH PUSH-ON JOINTS, CEMENT LINED ANSI A 21.4. FITTINGS TO BE FULL BODY-ONLY.

LCDU WATER WORKS NOTES:

- 13. LOCATION OF STERILIZATION AND TESTING CONNECTIONS SHALL BE AS DIRECTED BY THE LCDU AND ALL COSTS ASSOCIATED WITH PLACING AND UTILIZING SAID STERILIZATION AND TESTING CONNECTIONS SHALL BE INCLUDED IN THE PRICE BID PER LINEAL FOOT OF THE WATER MAINS. NO BACTERIA SAMPLES ARE TO BE TAKEN FROM FIRE HYDRANTS.
- 14. LCDU WILL MAKE THE NECESSARY NEW SERVICE CONNECTION TAPS FOR THE CONTRACTOR AT CURRENT RATES AS ESTABLISHED BY THE LAKE COUNTY BOARD OF COMMISSIONERS PER 8" AND GREATER TAPS WITHIN RIGHT OF WAY. (SEE SECTION 7 FEE SCHEDULE) SERVICE CONNECTIONS TO EXISTING BUILDINGS SHALL BE MADE BY THE CONTRACTOR.
- 15. NO WATER SERVICE CONNECTIONS TO ANY BUILDING SHALL BE PERMITTED PRIOR TO FINAL ACCEPTANCE BY THE LCDU INCLUDING RECTIFICATION OF ALL PUNCH LIST ITEMS.
- 16. ALL CURB STOP BOXES, VALVE BOXES, ETC. TO BE SET AS SHOWN ON THE PLANS. RIMS WILL BE RAISED OR LOWERED AND BOXES PLUMBED BY THE CONTRACTOR AT TIME OF HOUSE CONSTRUCTION WHEN FINAL YARD GRADING IS COMPLETED.
- 17. ALL PROJECT HYDRANTS SHALL HAVE A FIELD COAT OF APPROVED PAINT APPLIED BY THE CONTRACTOR WITH THE EXCEPTION OF HYDRANTS THAT ARE FACTORY PAINTED WITH A ONE COAT UV RESISTANT HIGH GLOSS 2-PART POLYURETHANE ENAMEL, COLOR AS SPECIFIED. IF THE COATING ON THE HYDRANT IS DAMAGED BEFORE INSTALLATION THE HYDRANT MUST BE PAINTED.
- 18. THE CONTRACTOR SHALL NOTIFY THE FIRE DEPARTMENT PRIOR TO ANY PRESSURE TESTING. FIRE DEPARTMENT SHALL WITNESS ANY PRESSURE TESTING.
- 19. ALL PROPOSED WATER LINES SHALL BE LAID OUT BY A REGISTERED SURVEYOR WITH GRADE STAKES AT A MINIMUM OF EVERY 50' AND AT ALL FITTINGS AND A CUT SHEET PROVIDED PRIOR TO CONSTRUCTION.
- 20. THE CONTRACTOR/DEVELOPER SHALL SUBMIT A THREE YEAR MAINTENANCE BOND TO THE COMMISSIONERS BY DEVELOPER IN THE AMOUNT OF TEN PERCENT OF THE FINAL CONSTRUCTION COSTS AS CERTIFIED BY THE DEVELOPER'S ENGINEER, FOR PUBLIC EXTENSION PROJECTS.

MAINTENANCE OF TRAFFIC:

- 1. SEE MAINTENANCE OF TRAFFIC SHEET FOR REQUIREMENTS REGARDING LANE CLOSURES, TRAFFIC SIGNAL MODIFICATIONS, PAVEMENT MARKINGS, SIGNS AND BARRICADES.



NO	REVISION	DATE

ERIE STREET WATER LINE REPLACEMENT

LAKE COUNTY DEPARTMENT OF UTILITIES

- WILLOUGHBY -

WATERWORKS NOTES

PROJECT NO.	
180608	
DISCIPLINE	
CIVIL	
SHEET NAME	
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