2019 BZS Winter School
Jen Martens, PE
DIVISION OF WATER
Overview

- OEPA Disruption rule & DOW Standard Drawing L-7401
- General Notes
- General design comments
  - Fire Hydrants
- OEPA Submittals
- Water Service Plans
- Questions – Comments – Concerns...
New Ohio EPA Disruption Rule - Summary

• Any section of pipe GREATER than 20 feet in length WILL REQUIRE CHLORINATION. This is now a requirement, and should be considered in both the designs and construction.
  – A sequencing/chlorination plan may be required during design, or from the contractor.

• From upcoming spec update: “When cutting into an existing water main, comply with the requirements of the Ohio Administrative Code Chapter 3745-83-02 - Water Distribution System Disruption of Service Rule. Excavate sufficiently below the area of the work to maintain water levels below the water main. If water from the trench enters the existing main, contact Division of Water immediately. Ensure that sufficiently sized pumps are utilized to remove water from the trench and backup pumps are kept on site for redundancy.”

• DOW field personnel will now be field testing for chlorine residual amounts after re-activating line.

• So, how does this affect you?
  – 20’ MAX!
Updated Standard Drawing L-7401

1. All water main installation, as well as the scheduling of any water shut downs, shall be as per item 801 of the current COMS. Time and duration of all shut downs shall be determined by Division of Water. The Contractor shall notify all water customers affected by the proposed work at least 24 hours in advance of the scheduled shut down.

2. Existing Water Mains 20” and greater must have prior approval of DOW to lower under a proposed utility. Approval will only be given under special circumstances and contingent upon the Contractor submitting a designed drawing, stamped by a Professional Engineer, detailing how the lowered main will be restrained to the existing water main.

3. All bends shall be secured by restraining glands, rodding or other methods as approved by the Engineer to restore the water main to service as soon as possible. For water mains 16” and under, concrete backing shall then be provided in accordance with Standard Detail L-6310 for over bends and L-6311 for sag bends. For water mains 20” and larger, refer to the design plans for any specific information regarding restraint methods and concrete backing.

4. All water main lowerings shall be less than or equal to 20 feet in length (cut to cut). If more than 20 feet is required, a water main relocation shall occur and will require pressure testing and chlorination.

5. All water mains shall be disinfected by swabbing with a 5% Hypochlorite Solution in accordance with the applicable sections of A.W.W.A. C-651.

6. 16” mains and smaller - for a depth of cover less than ten (10) feet, provide a flat bottom trench. For a depth of cover greater than ten (10) feet, provide 8-inches of CCS No. 57 for bedding. 20” mains and larger - provide 6-inches of CCS No. 57 for bedding for all situations.

7. If an existing water tap is within the limits of the water main lowering, Contractor shall expose the customer’s water service line at the curb stop to determine the existing material prior to cutting the existing pipe. If the customer’s water service line is found to be lead, DO NOT proceed with the lowering, and contact the Division of Water Distribution Engineering Group immediately at 614-645-7677. If after hours, DO NOT perform the lowering and contact the Division of Distribution Engineering Group immediately the following business day.

THE CITY OF COLUMBUS
ANDREW J. GINther, MAYOR
DEPARTMENT OF PUBLIC SERVICE

CITY OF COLUMBUS
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER

APPROVED: R.C. WALTERSFIELD 11/14/18
ADMINISTRATOR DATE

STANDARD DETAIL
TYPICAL WATER MAIN LOWERING
L-7401
Recently Added General Notes

• “Any work on the private water service line (between curb stop and meter) will require additional inspection by the Utility Meter Services Section (for 2-inch and smaller service lines) or the Utility Permit Office (for 3-inch and larger service lines). For 2-inch and smaller water service lines, call 614-645-8276, and for 3-inch and larger water service lines, call 614-645-8119, prior to 1:00 p.m. for same day inspection.”

• “Riser rings will not be permitted on any newly installed valve boxes to bring valves to final grade. The contractor shall ensure that the boxes are installed at the correct grade for final paving operations and that their paving contractor installs pavement correctly at lids during paving operations. Valve lids are not permitted to set above final grade and shall be a maximum of ¼” below final grade.”

• “If during excavation, the polyethylene encasement on the existing water main becomes damaged, the contractor shall repair the polyethylene encasement per manufacturer’s specifications and DOW Standard Drawings L-1003 and L-1004, at their own expense. Ensure that the entire exposed area is covered with new polyethylene encasement and securely taped, prior to backfilling.”
DOW Design comments:

- General issues:
  - Show the water main, valves, fire hydrants, curb boxes, etc... per survey and field locates. Label sizes and record plan #'s
    - Compare survey info to the record plan, and fill in missing information.
    - Do not rely on GIS to create the base map
  - CMS 2018 edition
    - Section 816 is no longer
      - Abandonments moved to 808
  - Updates to the DOW design guidelines coming soon.
  - Water Line only plans:
    - Agreements, inspection fees, recorded easements, and OEPA approval
DOW Design comments:

- Fire Hydrants:
  - New Fire hydrants can only be included in a Dr-E or Water Line Only plan
  - Location:
    - Fire hydrants must be a minimum of 6’ beyond radius return of a drive or street intersection
    - 2’ back of curb or 8’ off edge of pavement (preferred)
    - 300’ spacing for commercial, and 400’ for residential
    - 5’ typical bury, 7’ max bury (Using 1 - 24”hydrant extension; COC CMS 810)
  - If relocating more than 15’, must abandon the existing setting, and provide a new connection, per CMS 809.06.
  - Allowed on a water service plan, if modifying an existing fire hydrant setting for the actual service.
DOW Design comments:

- Fire hydrants: Type A
  - “Anchor tee and valve”
- Type A Modified
  - Additional 90 deg bend and second 6” valve
DOW Design comments:

- Fire hydrants: Type B
  - “Tee and valve”
- Type B Modified
  - Not used very often
  - 90 deg bend is flipped to short side
Ohio EPA Submittals

• General issues:

  — Do not submit directly to the OEPA. COC-DOW must review submittal package, and prepare cover letter.

  — Plans: 3 sets of do not have a fully signed title sheet.

  — Forms: Use the most current forms, and answer questions appropriately.
    • Typically, Water Supply Data Sheet, Project Summary Sheet for Proposed Waterline Extensions, and Self-Certification Annual Report Summary are only forms required.

  — Missing check or made payable to wrong individual; Should be for $185, and made payable to the Treasurer, State of Ohio

  — PE who signed the plans must be the PE who signs and seals the Project Summary
Water Service Plan Design

• General comments:
  - Water Service Plan Design Manual
    • Updated August – Check regularly for updates to manual and notes
    • [https://www.columbus.gov/utilities/document-library/](https://www.columbus.gov/utilities/document-library/)
  
  - Do not copy a plan over from a previous job; please ensure that notes, street names, tap sizes, etc. are accurate
  
  - Will need a certified address prior to approving WSP
    • Lots will need to be combined into 1 parcel
  
  - Edit standard notes list as necessary, as indicated by the last sentence on the notes:

    **PLEASE NOTE THAT NOT ALL OF THESE NOTES MAY APPLY TO EVERY SPECIFIC SITE, USE THE RELEVANT ONES AND ADJUST AS NECESSARY.**

  - Service sizes and locations **MUST MATCH** the MEP plans.
Water Service Plan Design - Continued

– Must be a stand-alone plan set, and use the Title Block provided in the Water Service Plan Design Manual

– Per 2.0.18 in the WSP Design Manual; “There shall be no more than 150’ of service line, from the Control Valve to the Meter, unless approved by DOW.”

– Fire does not review for water service, and DOW does not review for Fire
  • Private hydrant spacing, access, etc.

– Plan Expiration
  • Valid for 1 year from the date of the plan approval
  • If inspection by DOW of water service work has not commenced within this 12-month period, the engineer may be required to resubmit for approval
  • The engineer may request and extension; must be approved by DOW
Open Discussion

• Questions?
• Comments?
• Concerns?
• Suggestions?

Water Distribution Engineering
645-7677