



CITY OF CONCORD
New Hampshire's Main Street™
Community Development Department

David Cedarholm, PE
City Engineer

REPORT TO MAYOR AND THE CITY COUNCIL

FROM: David Cedarholm, PE, City Engineer

DATE: January 29, 2020

SUBJECT: Acceptance of the Recently Updated City of Concord, NH
Construction Standards and Details

Recommendation

Accept this report informing the Council of the 2020 edition of the City of Concord's Construction Standards and Details.

Background

The original edition of the City's Construction Standards was developed in the 1990s and since that time has provided guidance and clarity to the Concord development community to ensure private developments proposed within the City of Concord are designed and constructed to minimum standards. The document is updated every 2 to 5 years by the Engineering Services Division in coordination with General Services staff to stay current with engineering practices, new materials, and up-to-date construction methods. The last update occurred in 2016 and this edition is still available on the Engineering Services Division's webpage. The Construction Standards define the minimum requirements necessary for the design, layout, documentation, and construction of all proposed projects that deal with municipal infrastructure including facilities that are constructed by parties other than the City, but are to subsequently become public facilities. The document also provides standards for applicants before the Planning Board in accordance with

the City's Site Plan and Subdivision Regulations as they pertain to private developments.

Discussion

This new edition of the City's Construction Standards and Details (attached) features a more user friendly format containing subsection numbering for easier reference. A number of other new items that have been added to this edition including the requirement of using zinc coated ductile iron pipe for all water mains intended to become City owned infrastructure, and specific requirements for the design and sizing of exterior grease interceptors for all commercial establishments preparing food.

Zinc Coated Ductile Iron Pipe Requirement

For a number of years, Concord Engineering and General Services have been considering requiring zinc coated cement lined ductile iron pipe as opposed to the previous requirement of standard cement lined ductile iron pipe to provide better corrosion resistance and reduce the potential for corrosion related pipe failures in the future. In recent years, the City has experienced an increase in water main failures that could be attributed to galvanic corrosion. Engineering Services performed a detailed analysis of the risk posed by galvanic corrosion and evaluated the cost impact and benefit of requiring corrosion resistant piping materials and fittings. The purchase price of zinc coated ductile iron pipe is currently about 20% more than non-zinc coated pipe; however, when compared with the overall project costs, requiring zinc coated pipe is estimated to only add 2 and 4% to a typical water main replacement project cost. Many of our neighboring cities and large water districts in New Hampshire have already made the transition to zinc coated pipe for all new water main installations and replacement projects, and as a result pipe suppliers have informed us that non-zinc coated pipe will likely become a special order item within the next 5 to 10 years.

Exterior Grease Interceptor Requirement

The exterior grease interceptor requirements that have been added to the 2020 Construction Standards and Details was done in response to serious issues experienced by the City's sewer maintenance crews over the years caused by grease accumulation in the sewers downstream of certain restaurants. The new grease interceptor requirements are consistent with City's building codes, the Universal Plumbing Code, and is supported by the City's Sewer Ordinance Article 9-6-16.

The 2020 Construction Standards and Details also includes minor revisions with updated language pertaining to the use of High Density Polyethylene (HDPE) pipe, sewer pipe testing requirements, maintenance of traffic, and other miscellaneous sections.

w/att.