Design Standards Letter

Letter Number: **G-1964-26**

Letter Date: **06/01/1964**

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Section/Plan No.: **None**

Subject: **Separation of Water and Storm Sewer Lines**

Body

ALL DIVISION, DISTRICT AND URBAN ENGINEERS AND CHIEF COUNSEL

This will supersede procedures set out in General Letter No. 3, 1962, Separation of Water Lines and Storm Sewer Lines.

The Division of Health has approved the use of concrete pipe with rubber gasket type joints without encasement for those highway storm sewer installations where compliance with the minimum separation of water mains and sewer line requirements is impractical. The use of this type of pipe applies only to storm sewers and not to sanitary or combined sewers.

Where unusual conditions prevent compliance with the minimum vertical and horizontal separation established by the Division of Health, or where it is necessary for the storm sewer to pass over an existing water main, the conflicting portion of the storm sewer may either be (1) encased with 6" of reinforced concrete; (2) constructed using cast iron pipe with mechanical joints or compression joints, such as Fastite; or (3) constructed with concrete pipe having rubber gasket type joints complying with A.S.T.M. Specification 0443-63 T. The use of concrete pipe with gasket type joints is recommended in these situations. District Materials personnel have a copy of A.S.T.M. Specification C443-63 T.

For your information, we have attached illustrations of the three main types of gasketed joints which are approved for use.

> (1) A pipe joint having the grooved spigot, as referred to in General Letter 1962 - #3, is shown as No. 1. The ease of installation of this joint and maximum flexibility without leakage makes this the preferred joint for our usage, although, unfortunately, it is not readily or economically available. Special manufacture for the short lengths usually required is rather expensive.
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> (2) The pipe shown as No. 2, with the grooved spigot and round gasket, also makes an excellent joint, having considerable flexibility without leakage, although extra careful inspection is required to ensure proper positioning of the

gasket during installation.

(3) A pipe having a gasket cemented on the spigot is shown as No. 3. There are several companies manufacturing pipe with gasket joints similar to the one shown, and usually one of these types is available when needed, without the necessity of waiting for special manufacture.

It is preferred that pipe having a grooved spigot and gasket similar to No. 1 be specified for our use due to the simplicity of installation and the flexibility in the joint. A check should be made to determine if this pipe is readily available from at least one supplier to your area. A special provision is attached which may be used when this type of pipe is available.

In those cases where pipe having a grooved spigot and rectangular gasket similar to No. 1 is not available, the type shown as No. 2 may be used under the same special provisions, omitting the sentence regarding the cross-section of the gasket.

When pipe with a grooved spigot is not available, Type No. 3 may be used with the same special provision, omitting the reference to the grooved spigot and rectangular gasket.

Minimum vertical and horizontal separation of storm sewers from the existing water mains requires individual design consideration. Practical application would not permit physical contact with the water main under crossing conditions and would provide sufficient separation in parallel situations to ensure adequate backfill and compaction.

If clarification or additional information is desired, please advise.

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