Department of Design and Construction	SPECIFICATION BULLETIN	SB 26-005

Title: **MODIFICATION OF EXISTING STRUCTURES**

Prepared:	Approved:
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Mohammad Mahmud, P.E. — Date	How Sheen Pau, P.E. — Date
Director, Specifications	Associate Commissioner – Infrastructure Design

APPLICABILITY:

- This Specification Bulletin (SB) is effective for projects advertised on or after 4/24/2026.

SUPERSEDENCE:

- This SB supersedes the following SBs: **None.**

ATTACHMENTS:

1. *Section 51.71 (6 pages)*

REVISIONS TO THE NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD SEWER AND WATER SPECIFICATIONS, DATED 8/8/2022:

All references contained below are to the New York City Department of Environmental Protection Standard Sewer and Water Specifications, Dated August 8, 2022. Said Standard Specifications are hereby revised as follows:

a) **Refer** to Section 51.71 - Modification of Existing Structures
Delete in its entirety Section;
Substitute the revised Section in Attachment 1 (6 pages)

For questions regarding this bulletin, please contact Richard Jones, jonesri@ddc.nyc.gov.

SECTION 51.71 – MODIFICATION OF EXISTING STRUCTURES

51.71.1 DESCRIPTION

Existing chambers, siphon chambers, manholes, drop-pipe manholes, catch basins, outfalls, and other kinds of existing structures must be modified in accordance with the contract drawings within the limits and to the sizes, shapes, and dimensions, and to the elevations shown, complete.

51.71.2 MATERIALS

(A) Concrete must comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01**. Concrete used in existing outfall structures must comply with **Subsection 51.61.2(A)**.

(B) Brick and brick masonry must comply with the requirements of **Section 23.02**.

(C) Frames, covers, and gratings must be of cast iron, unless otherwise shown on the contract plans, complying with the requirements of **Section 22.01**, Type 1. Malleable iron or cast steel covers and gratings, when required, must comply with the requirements of **Section 22.01 and Section 22.04**.

(D) Hoods, hood hooks, hood hangers, installation hardware for hood hangers, and other hardware for catch basins must comply with the requirements of **Section 51.41**.

(E) Manhole steps must be gray cast iron ASTM A48, minimum Class 35B; or must be copolymer polypropylene plastic manhole steps with one-half (1/2) inch Grade 60 steel reinforcement. Manhole steps must be of one kind. Design of manhole steps must conform to **Drawing No. SE43 or SE46** of Sewer Design Standards.

(F) Hooks must be stainless steel one-half (1/2) inch square bar stock, and must be 18-8 stainless steel Type 303, complying with the requirements of ASTM A582. All other approved hangers together with fasteners must be 18-8 stainless steel Type 303, complying with the requirements of ASTM A582.

(G) Cement mortar must comply with the requirements of **Section 23.03**. Cement used in existing outfall structures must comply with **Subsection 51.61.2(D)**.

(H) Reinforcement must comply with the requirements of **General Specification 11 - Concrete, as modified in Section 23.01**.

(I) Structural steel must comply with the requirements of **Section 23.05**.

(J) Cast iron pipe must comply with the requirements of **Section 21.03**.

(K) Vitrified clay pipe must comply with the requirements of **Section 21.02**.

(L) Ductile iron pipe must comply with the requirements of **Section 21.06**.

(M) Bluestone must be tough, sound, durable, fine graded sandstone or quartzite, free from injurious seams and other imperfections and saw cut to the required dimensions. It must be set in a full bed of fresh mortar in compliance with the requirements of **Section 23.03**.

(N) Granite slabs must comply with the requirements of **Section 23.07**.

(O) Aluminum floor gratings must comply with the requirements of **Section 22.05**.

(P) Timber and lumber must comply with the requirements of **Section 23.06**. Timber columns for supports must have a minimum (Extreme Fiber in Bending) F_b = 1,700-psi and a minimum (Compression Parallel to Grain) F_c = 1,400-psi.

(Q) All materials to be used in existing outfall structures must comply with the materials specified in **Subsection 51.61.2**.

51.71.3 CONSTRUCTION METHODS

(A) GENERAL

(1) The existing chambers, siphon chambers, manholes, drop-pipe manholes, catch basins, outfalls and other kinds of existing structures must be modified in accordance with the sizes, shapes and dimensions, and to the elevations as shown on the plans or as ordered by the Engineer. All work must be performed “in the dry”.

(2) The Contractor’s means and methods of construction for the modification of existing structure must be submitted, prior to the start of work, to the Engineer for written approval.

(3) The Contractor must be required to submit plans, details, and other substantiating data as necessary to establish the adequacy of the Contractor's proposed means and methods of construction. These documents must be prepared under the direction of and be signed and sealed by a Professional Engineer licensed to practice in the State of New York.

(B) GENERAL CONSTRUCTION PROVISIONS - The requirements of **DIVISION IV - GENERAL CONSTRUCTION PROVISIONS** apply to the work to be done hereunder.

(C) DEMOLITION WORK ON EXISTING STRUCTURES

(1) Portion(s) of the existing structure that are specified to be demolished must be removed within the limits shown, specified, or ordered. Removal of portion(s) of structure beyond the limits shown, specified, or ordered must not be permitted unless approved in writing by the Engineer.

(2) The Contractor must temporarily support the existing structure with adequate shoring and bracing prior to demolition of any portion of the existing structure so as to prevent collapse to portions of the structure required to remain and to provide for safe working conditions. Prior to placing temporary shoring and bracing the Contractor must submit to the Engineer for approval drawings together with computations signed and sealed by a New York State Licensed Professional Engineer detailing the method of temporary shoring and bracing the Contractor will utilize. The Contractor must also include on these drawings and computations recommendations for removal of earth and other loads so as to relieve all stresses that will cause overburden to the areas of the structure that are to be demolished and rebuilt. All supports must be placed close to the area(s) to be demolished and must be secure and evenly spaced. (These drawing and computation requirements can be waived by written approval of the Engineer.)

(3) All existing reinforcing bars must be incorporated into the new modified portion of the structure(s) and must be cut to lengths as directed in the field by the Engineer to meet minimum lap requirements and to maintain continuity of the structure. Dowelling must be provided as shown, specified, or ordered.

(D) INVERTS - Inverts of chambers, manholes, etc. must be formed between transverse templates and must be screeded. Where the radii of inverts are too small to permit screeding between templates, the inverts must be shaped by means of interior forms. The concrete for inverts must be deposited continuously for their entire cross section and length. Inverts must be carefully protected from all injury during the progress of the work. The inverts must be troweled smooth.

(E) SIDE WALLS - Concrete in the side walls of chambers, manholes, etc. must be deposited continuously to the height and to the thickness approved and for their entire length.

(F) ROOF - Concrete in the roof of chambers, manholes, etc. must be deposited continuously for the full depths, and for the entire widths and lengths of the roofs. The outer surfaces of roofs must be finished true and smooth.

(G) STEPS AND LADDERS - The Contractor must furnish and install in the chambers, manholes, etc. steps and ladders of the size, shape, and spacing shown on the plans and on the Sewer Design Standards.

(H) SETTING FRAMES AND COVERS - The brick masonry or concrete for the chambers, manholes, etc. must be built to within such distance of the final grade as shown, specified, or ordered. Frames and covers must be as shown on the Sewer Design Standards. The frames must be set on the masonry or concrete in a full bed of stiff fresh cement mortar.

(I) REINFORCEMENT AND STRUCTURAL STEEL - The steel reinforcement must be of the dimensions and shapes shown; and installed in the manner specified in **General Specification 11 - Concrete, as modified in Section 23.01**. Structural steel must be of the shapes and sizes shown; and installed as directed.

(J) REMOVAL OF FORMS - Forms must be removed in accordance with **General Specification 11 - Concrete, as modified in Section 23.01**.

(K) BULKHEADS - Approved construction joint bulkheads with provisions for keying and doweling for future sewers must be provided, where shown or required.

(L) CONNECTIONS - All connections to chambers, manholes, etc. of existing, new, or future sewers, and all catch basin connections must be constructed as shown on the plans or as directed. All connections for future sewers must be closed with bulkheads of brick masonry eight (8) inches thick, unless otherwise shown on the plans or specified.

(M) WATERSTOPS - Waterstops must be provided between each successive pour in accordance with **Section 25.04**. Details must be submitted for waterstops as part of the shop drawings.

(N) FOOTINGS, CRADLES, ENCASEMENTS, ETC - The concrete for the footings, cradles, encasements, etc. must be deposited continuously for the entire cross section and for such longitudinal distances as approved.

(O) WALLS, HEADWALLS, ETC. - The concrete for the walls, headwalls, etc. must be deposited continuously to the height, to the thickness, and for such longitudinal distances as approved.

(P) BOULDER PROTECTION PLACEMENT - Boulders are placed to prevent scour and erosion at sewer outfalls. The Contractor must remove all debris, clean and prepare the tidal flat/existing ground, and must excavate the existing surface to the depth required in order to install the boulder protection where shown, specified, or as ordered. Boulder aprons and protections must be placed in compliance with all permits and as shown, specified, or ordered. The layer of boulders must be placed in order to obtain a minimum of voids between stones. Dropping of boulders into place will not be permitted.

(Q) STEEL SHEET PILING AND COMPOSITE SHEET PILING - Steel Sheet Piling and Composite Sheet Piling must be tested and installed in accordance with the manufacturer's recommendations, as directed by the Engineer, and with the applicable sections of **Section 70.11 - Piles** as determined solely by the Engineer.

(R) REPLACING EXISTING HOOD, HOOD HOOKS, OR HOOD HANGERS

(1) Where the substitution of a new hood and hood hanger is ordered to replace either existing hood and hood hooks, or existing hood and hood hanger, all materials being replaced must be removed. Catch basin surfaces must be carefully protected from all injury during the progress of the work.

(2) Installation of new hood, hooks, and/or hood hangers must be in accordance with **Subsection 51.41.3(C)**.

51.71.4 PRICE TO COVER

The contract price for "MODIFICATION OF EXISTING STRUCTURES" must be the unit price bid per each modification of existing structure and must cover the cost of all labor, materials, plant, equipment, samples, tests and insurance required and necessary to modify the existing structure within the limits and of the sizes, dimensions, and to the elevations shown, including the earth excavation of all materials of whatever nature encountered (See **Section 40.03 - Earth Excavation**); temporary shoring and bracing; temporary steel or composite sheet piling; demolition of existing structure within limits shown, specified, or ordered;

additional excavation required to relieve overburden; reinforcement and structural steel; all sheeting and bracing; pumping; fluming; bridging; breaking down and filling in of abandoned sewer appurtenances; connections; maintaining flow in sewers; backfilling; fill for grade; preparation of all shop drawings; obtaining of necessary permits and special construction requirements for constructing “in the dry”; cleaning up; and furnishing and installing all other items necessary to complete this work and do all work incidental thereto, all in accordance with the plans and specifications, and as directed by the Engineer. Included in the price hereunder must be the cost for all labor and materials required to install granite slabs, manhole frames and covers, manhole steps, hood, hooks, hood hangers, catch basin frames and gratings, and all other hardware; in accordance with the plans, specifications, and standards, and as directed by the Engineer.

The contract price hereunder must also include the cost of all labor and materials required to connect at the chambers, manholes, etc. all existing and new sewers and basin connections; and all required structural steel, reinforcement, and bulkheads for future sewer connections, as shown on the plans or as directed by the Engineer.

In addition, included in the price hereunder must be the cost of all labor and materials necessary to remove all specified or ordered existing sewers, manholes, bulkheads, structures, debris, and appurtenances, that may be in the line of the work and do all work incidental thereto, all in accordance with **Subsections 10.13 and 10.28** of the specifications and as directed by the Engineer.

Also, included in the bid price for the modification of existing outfall structure must be the cost of all labor, materials and equipment necessary and required, within the limits of payment shown on the contract drawings, to construct permanent steel or composite sheet piling bulkheads; sewers with encasements and foundations; chambers, manholes and catch basins with foundations; headwalls and foundations; retaining walls; tide gates; bar screens (trash racks); permanent fencing; boulders for aprons and protections; all dredging required for placement of stone ballast, riprap, slope pavement aprons, boulder aprons, boulder protections, etc. No separate payment will be made for the above work.

51.71.5 SEPARATE PAYMENT

The Contractor is notified that payment for the cost of furnishing, delivering and placing of Timber Piles; Structural Steel H-Piles; Concrete Filled Steel Pipe Piles; Continuous Flight Auger Piles; Mini-Piles; Stone Ballast; Riprap; Slope Pavements; and Grouted Stone Pavements within modification of existing outfall limits must be made under the unit price bid for the respective bid items.

Payment for the cost of furnishing and placing concrete and steel reinforcing bars required to construct Concrete Pile Caps atop Steel or Composite Sheet Piling Bulkheads must be made under Item No. 73.21AC - ADDITIONAL CONCRETE, and Item No. 73.51AS - ADDITIONAL STEEL REINFORCING BARS.

Payment for Modification Of Existing Structures will be made under the Item Number as calculated below:

The Item Numbers for Modification Of Existing Structures have eleven characters. (The decimal point is considered a character, the third character.)

(1) The first five characters must define Modification Of Existing Structures:

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(2) The sixth character must define the Kind of Existing Structure being modified:

C - Chamber
M - Manhole
D - Drop-Pipe Manhole
S - Siphon Chamber
T - Interceptor Sewer Manhole
L - Culvert Chamber
B - Catch Basin
N - Double Catch Basin
F – Outfall

(3) The seventh and eighth characters must define the Type of Structure to which the Existing Structure will be modified to (if applicable). See examples below:

00 - No Type
01 - Type 1 or Type I
C2 - Type C-2
0M - Manhole
W3 - Type 3 With Curb Piece
X3 - Type 3 Without Curb Piece
W0 - No Type With Curb Piece
X0 - No Type Without Curb Piece

(4) The ninth, tenth, and eleventh characters must define either the Type of Existing Structure to be modified or the Number of the Existing Structure to be modified. See examples below:

000 - No Number/No Type
003 - No. 3
012 - No. 12
28A - No. 28A
001 - Type 1 or Type I
002 - Type 2 or Type II
0B2 - Type B-2
0W3 - Type 3 With Curb Piece
0X3 - Type 3 Without Curb Piece
0W0 - No Type With Curb Piece
0X0 - No Type Without Curb Piece

(5) Examples of Item Numbers together with Description and Pay Unit as provided in the Bid Schedule are provided below:

Item No.	Description	Pay Unit
51.71C00000	MODIFICATION OF EXISTING CHAMBER	EACH
51.71C00001	MODIFICATION OF EXISTING CHAMBER NO.1	EACH
51.71C00002	MODIFICATION OF EXISTING CHAMBER NO.2	EACH
51.71M00000	MODIFICATION OF EXISTING MANHOLE	EACH
51.71M00001	MODIFICATION OF EXISTING MANHOLE NO. 1	EACH
51.71M00002	MODIFICATION OF EXISTING MANHOLE NO. 2	EACH
51.71M0033A	MODIFICATION OF EXISTING MANHOLE NO. 33A	EACH
51.71M000B1	MODIFICATION OF EXISTING MANHOLE TYPE B-1	EACH
51.71D00000	MODIFICATION OF EXISTING DROP-PIPE MANHOLE	EACH
51.71D00001	MODIFICATION OF EXISTING DROP-PIPE MANHOLE NO. 1	EACH
51.71D00028	MODIFICATION OF EXISTING DROP-PIPE MANHOLE NO. 28	EACH
51.71S00000	MODIFICATION OF EXISTING SIPHON CHAMBER	EACH
51.71T00000	MODIFICATION OF EXISTING INTERCEPTOR SEWER MANHOLE	EACH
51.71L00000	MODIFICATION OF EXISTING CULVERT CHAMBER	EACH
51.71F00000	MODIFICATION OF EXISTING OUTFALL	EACH
51.71F00001	MODIFICATION OF EXISTING OUTFALL NO. 1	EACH
51.71F00002	MODIFICATION OF EXISTING OUTFALL NO. 2	EACH
51.71B00000	MODIFICATION OF EXISTING CATCH BASIN	EACH
51.71B00001	MODIFICATION OF EXISTING TYPE 1 CATCH BASIN	EACH
51.71B00002	MODIFICATION OF EXISTING TYPE 2 CATCH BASIN	EACH
51.71B02001	MODIFICATION OF EXISTING TYPE 1 CATCH BASIN TO TYPE 2	EACH
51.71B01002	MODIFICATION OF EXISTING TYPE 2 CATCH BASIN TO TYPE 1	EACH
51.71BW30X3	MODIFICATION OF EXISTING TYPE 3 CATCH BASIN WITHOUT CURB PIECE TO TYPE 3 WITH CURB PIECE	EACH

Item No.	Description	Pay Unit
51.71BX30W3	MODIFICATION OF EXISTING TYPE 3 CATCH BASIN WITH CURB PIECE TO TYPE 3 WITHOUT CURB PIECE	EACH
51.71B0M000	MODIFICATION OF EXISTING CATCH BASIN TO MANHOLE	EACH
51.71NW00X0	MODIFICATION OF EXISTING DOUBLE CATCH BASIN WITHOUT CURB PIECE TO DOUBLE CATCH BASIN WITH CURB PIECE	EACH