

THE CITY OF NORFOLK MODIFICATIONS TO HRPDC REGIONAL STANDARDS, 5th Edition

Section	Sub-Section	Name	Add/ Delete	Modification
All Sections Sections 200 - 800		Measurement for Payment.	Replace	See Appendix D for City of Norfolk Department of Utilities Measurement and Payment Item Descriptions. Replace all references to Measurement for Payment in the technical specifications with Appendix D.
109	XI	Standard Bid Items and Units	Delete	Use City of Norfolk Measurement and Payment descriptions. Refer to Appendix D.
All 100 sections		General Provisions	Replace	Revise all HRPDC General Provisions with Norfolk City Modifications and Department of Utilities Modifications
200	II.2.2	Quality Assurance	Add	Norfolk Arboricultural Specifications and Standard Practice Manual
	III.3.6	Submittals	Add	Add the following sentences: "Requests for substitutions shall be submitted at the pre-construction meeting and must be approved in writing by the Engineer prior to the start of any construction."
	V.5.6.A.1.c.	Hydraulic Cement Concrete	Delete	Delete the words, "fly ash"
	V.5.6.A.1.c.(1)	Hydraulic Cement Concrete	Delete	Delete the entire paragraph
	V.5.6.A.1.d.	Hydraulic Cement Concrete	Delete	Delete the words, "the fly ash content shall not exceed 30% for Class F,"
	V.5.6.A.6.g.	Hydraulic Cement Concrete	Delete	Delete the entire section

V.5.6.A.6.I	Hydraulic Cement Concrete	Delete	Delete the entire section
V.5.10.A.9	Ductile Iron Pipe	Add	Ductile Iron pipe shall have Protecto 401 ceramic epoxy lining, or equal hydrogen sulfide resistant lining approved by the Department.
V.10.B.5	PVC Pipe	Modify	Correct the second sentence to read: "When Compact fittings are used, they shall have a minimum acceptable pressure rating of 350 psi."
V. 5.10.D.	HDPE Pipe	Delete	HDPE shall not be used
V.5.10.E.1.a.b	Valves	Delete	Delete "with threaded connections" from the first sentence.
V.5.10.E.1.a.c	Valves	Add	Accessories: Provide zinc plated bonnet bolts, studs and nuts for unsubmerged service. Provide stainless bonnet bolts, studs and nuts for submerged service. Make wedging devices bronze to iron or bronze to bronze. Provide glands which are bronze or bronze bushed and bronze gland bolts and nuts.
V.5.10.E.1.c	Valve Operators	Delete	"A valve key wrench of adequate length and of each type required shall be provided for each project."
V.5.10.E.1.d	Valve Stem Extensions	Delete	Strike out section

200	V.5.10.E.3.	Check Valves	Add	Provide single disc swing check valves designed to allow a full diameter passage and to operate with a minimum loss of pressure. Provide 1/8 through 3 inch check valves that meet the requirements of MSS SP-80. Provide 4 inch through 24 inch check valves that meet the requirements of AWWA C508. Equip check valves with bronze renewable seat rings, bronze discs or disc rings and bronze disc hinge bushings and pins. Carefully mount discs and provide discs that swivel in disc hinges. Provide pins, discs and other parts that are noncorrosive, nonsticking and properly cured to operate satisfactorily within a temperature range of 34 to 100 degrees Fahrenheit and with the fluids specified. Equip 6 inch and larger check valves with outside levers and weights. Provide check valves manufactured by American Flow Control, Clow Valve, M&H Valve, Mueller Valve, or approved equal.
	V.5.10.G.3.c	Joint Restraint Devices	Add	Harnessing: For ductile-iron pipe and fittings with mechanical joints that require harnessing, provide ductile-iron mechanical joint retainer glands.
	V.5.10.G.4.c	Joint Restraint Devices	Add	Harnessing: For PVC joints requiring harnessing, provide Series 1300/1390 restraining fittings as manufactured by Uni-flange, Corp., Series 1110 HV and Series 2000 PV as manufactured by EBAA Iron Sales, Inc., or equal.
	V.5.11.A.5	Ductile Iron Pipe Fittings	Modify	Correct the second sentence to read: "When Compact fittings are used, they shall have a minimum acceptable pressure rating of 350 psi."
	V.5.11.A.7.a	Ductile Iron Pipe Fittings	Add	After ANSI/AWWA add "Current department approved linings include Protecto 401 ceramic epoxy lining. Other hydrogen sulfide resistant linings shall be submitted for review and approval as equal".
	V.5.11.B.8	PVC Pipe Fittings	Add	Add paragraph "For Mains installed, where cover is 10' (ten feet) or greater, the pipe shall be C900/C905 DR 18 or Ductile Iron."

	V.5.11.B.9	PVC Pipe Fittings	Add	Add paragraph "All fittings shall be molded or ductile iron. No fabricated fittings will be allowed."
	V.5.19.A.5	Ductile Iron Pipe fittings	Modify	Correct the second sentence to read: " When Compact fittings are used, they shall have a minimum acceptable pressure rating of 350 psi."
	V.5.19.B.3.	PVC Pipe	Delete	"couplings, and fabricated fittings" and "or fitting".
	V.5.19.B.6	PVC Pipe	Add	Add as the final sentence in the paragraph: "Where Schedule 80 PVC is used, solvent cement shall meet the requirement of ASTM D-2564."
	V.5.19.B.7.	PVC Pipe	Delete	Strike out paragraph
	V.5.19.E	Copper Water Pipe	Delete	Strike the sentence that starts, "Fittings shall be wrought..."
	V.5.19.F.1.c.	Valves	Delete	Strike out "with threaded connections".
	V.5.19.F.1.d.	Valves	Add	All gate valves for water shall open right (clockwise).
	V.5.19.F.3.a	Butterfly Valves	Modify	Replace "16 inches" with "20 inches".
200	V.5.19.F.1.d.	Valve Operators	Modify	Strike out the sentence that begins, "A valve key wrench..." Add the following: "NOTE: Water valves open right (clockwise)."
	V.5.19.F.5.	Valve Stem Extensions	Delete	Strike out paragraph
	V.5.19.H.2.	Fire Hydrants	Delete	"The fire hydrant shall be painted with a high gloss, alkalyd industrial enamel (colors to be selected by Owner)".
	V.5.19.H.3	Fire Hydrants	Delete	Strike out paragraph
	V.5.19.H.6	Fire Hydrants	Delete	Strike out paragraph

V.5.19.H.7	Fire Hydrants	Add	"All fire hydrants shall be manufactured in complete accordance with American Water Works Association Specification C502, latest revised edition, and shall be as manufactured by the Darling Valve & Manufacturing Company (Model B-50-B), Mueller Centurian A-421, Pacer Model W-67, Kennedy K-81, or approved equal. Hydrants shall have full 360 degree revolving heads and shall open by turning the operating nut to the right (clockwise).
V.5.19.K.4.a.	Concrete Reaction Blocking	Add	Add the phrase, ", or as designated by the Engineer," after the word, "Drawings".
V.5.19.K.4	Concrete Reaction Blocking	Delete	subsections b and c
V.5.19.L.2.	Tapping Valves and Sleeves	Delete	Strike out the sentence, "The valves shall be subjected to a factory test..."
V.5.19.L.3.a.	Tapping Sleeves for DI Pipe and PVC C-900	Modify	In the first sentence insert "full bodied" between "shall be" and "mechanical joint". Delete "in accordance with ANSI/AWWA C110/A21.10. and" from the sentence beginning with "Tapping sleeves shall be..."
V.5.19.L.3.b.	PVC pipe (Other than C-900)	Delete	Strike out the first paragraph, which begins, "Tapping sleeves shall be complete..."
V.5.20.B.	Subsurface Utility Warning Tape	Modify	Replace "metalized" with "non-metallic".

	V.5.21.F.1	Manhole Rehabilitation Using Cementious Products	Delete	Delete entire section
	V.5.21.I.2	Manhole Frame Seals	Delete	After "only be installed with" delete " the cementious lining and"
303	II.2.2.E.1	Trench Bedding and Backfilling	Modify	Replace "Contractor" with "Inspector".
	II.2.2.E.4.	Trench Bedding and Backfilling	Modify	Replace the paragraph with: "Backfill material shall be solidly compacted around the pipe in 6" layers up to sub-base of the roadway or the existing ground elevation. As a minimum, compact each layer of the backfill material to 95% maximum density as determined in accordance with VTM-1.
	II.2.2.E.7.	Trench Bedding and Backfilling	Modify	Replace in the first sentence, "...material to not less than the following percentages at the maximum..." with "...material to 95% maximum...".
	II.2.2.E.7.	Trench Bedding and Backfilling	Delete	sub sections "a – c".

	II.2.2.E.7.G.	Trench Bedding and Backfilling	Add	<p>“The City may, at any time, require compaction testing to ensure compliance with the specifications. A recognized testing laboratory that is selected by the City will conduct all tests. The testing laboratory is to be qualified in the field of the materials to be tested. If applicable, all tests will be conducted in accordance with V.D.O.T.’S “Manual for Virginia Testing Methods” (Current Edition, as Revised). Payment for all tests will be in accordance with the following:</p> <p>A) The cost of all tests failing to meet the minimum requirements will be borne by the Contractor.</p> <p>B) The costs of all tests that either meet or exceed the minimum requirements shall be borne by the City.</p>
	II.2.2.G.2.	Pavement Removal for Placement of Pipelines	Modify	<p>Replace the sentence beginning with “The minimum requirements for a ....” with ”Temporary paving shall be installed and maintained to provide a suitable driving surface on residential streets. Contractor shall allay dust. Acceptable daily temporary pavement shall be VDOT 21A Stone, BM-25, recycled asphalt pavement and crush concrete. Crushed concrete shall be permitted on a case by case basis. The inspector has the final decision of the acceptability of temporary paving”.</p>
801	II.2.3.	Tolerances	Delete	Complete Section
	II.2.2.C.7.	Pipe Installation	Modify	Replace “300” with “100”
	II.2.2.F.	Tracer Wire	Modify	<p>Replace “attached every 10 feet to” with “Directly on top of the pipe secure by placing acceptable Fill Material by hand.”.</p>
	II.2.2.G.	Subsurface Utility Tape	Modify	<p>Re-write the paragraph to read,” All non-metallic water mains shall be identified by a subsurface non-metallic utility warning tape placed at an elevation of 12” above the copper tracer wire or as directed by the owner, conforming to Section 200.”</p>

	II.2.3.A.	Valve Installation	Modify	After “direction of openings” insert the following, “(All water valves open right)”. Re-write the second sentence to read, “Valves found not opening to the right, or determined to be defective by the Owner shall be rejected, removed from the site, and replaced by the Contractor at no additional cost to the Owner.”
	II.2.6.C.	Restraint	Add	After “...coating” add the following, “or as directed by the Owner.”
	II.2.7.C.	Connections to Existing Mains	Delete	Delete the sentence that begins with, “Connection shall be...”.
	II.2.7.F.4	Connections to Existing Mains	Modify	Replace the paragraph with, "Tie-ins to existing mains shall only be performed after the new main has been satisfactorily pressure tested and chlorinated. The contractor may not tie-in the new main to the existing main until after the results of the bacteriological tests have been completed and approved by the owner."
801	II.2.7.G.	Tapping Existing Mains Under Pressure	Delete	Delete subsections 3,4, and 6.
	II.2.7.G.5.	Tapping Existing Mains Under Pressure	Modify	Change the sentence to read, "Pressure shall be maintained for one (1) hour period without evidence of leakage."
	II.2.7.G.7.	Tapping Existing Mains Under Pressure	Add	In the first sentence, after “...branch are acceptable” add the following, “unless otherwise directed by the Owner.”
	II.2.8.B.1.	Pressure Test	Modify	In the sentence which begins, “Water mains shall be...” remove the portion that states, “1.5 times the expected working pressure or” and the portion that states, “,whichever is greater”.



	II.2.8.B.7.	Pressure Test	Modify	Replace this subsection with, "The test pressure shall be maintained at the pressure stated in the project specifications throughout the duration of the test period. The water used to maintain the test pressure shall be measured and shall be less than the allowable leakage in order for the main to have passed the test."
	II.2.8.C.2.	Leakage Test	Modify	Insert the word "excess" between "...until the" and "leakage."
802	II.2.1.E.	General	Add	Provide cut sheets for all manholes, 100 ft. stations and end-of-line cleanouts.
	II.2.1.F.	General	Add	All Services which are reconnected to the replaced sewer main shall be shown on the "As Built" drawings with the exact distance from the nearest manhole and with the details of the method of reconnection.
	II.2.2.C.4.	Pipe Laying	Add	"If a swab is in the pipe for cleaning, the grade shall be checked and recorded for each joint of pipe.
	II.2.2.C.6	Pipe Laying	Modify	After "...shall be closed" insert " by use of a temporary bulkhead" and delete " to the satisfaction of the Owner".
	II.2.2.D.1.	Alignment and Grade	Modify	Replace "Drawings" with "approved laying schedule".
	II.2.2.D.2.	Alignment and Grade	Delete	Entire subsection
	II.2.3.B.	Manhole Installation	Add	To the end of the second sentence after: non-shrink grout-"and coated to match surfaces of manholes."
	II.2.4.B.1.a. (5).	Pipe Testing - Gravity Lines	Add	"Contractor is responsible for uncovering and restoring spot check sites at no additional cost to the Owner."
	II.2.4.B.1.a. (8)	Pipe Testing - Gravity Lines	Modify	Replace the last sentence with, "See Section 811."
802	II.2.5.B	Connections	Modify	In parentheses should read (where stubs are bricked up or openings do not exist).
	II.2.6	Manhole Coating Warranty	Modify	In third line change to Final Completion.

803	II.2.2.F	Tracer Wire	Modify	Replace "attached every 10 feet to" with "Directly on top of the pipe secure by placing acceptable Fill Material by hand."
	II.2.2.G	Subsurface Utility Tape	Modify	Re-write the paragraph to read "All non-metallic water mains shall be identified by a subsurface non-metallic utility warning tape placed at an elevation of 12" above the copper tracer wire or as directed by the Owner, conforming to Section 200."
	II.2.3.A	Valve Installation	Modify	After "direction of openings" insert the following; "(All sanitary sewer valves open left)". Re-write the second sentence to read "Valves found not opening to the left, or determined to be defective by the Owner shall be rejected, removed from the site, and replaced by the Contractor at no additional cost to the Owner."
805	I.1.2.B.2	Unusual Conditions	Modify	Replace the second half of the sentence that begins, "pressure tested in place..." and ends "...and tested in place." with, ", and meets current Virginia Department of Health Sewage Collection and Treatment Regulations."
810	II.2.2.F.3	Acceptance of Cleaning Operation	Add	A television inspection shall be completed after cleaning to verify that the cleaning operation was successful. The television inspection shall be in accordance with Section 811 - Television Inspection.
811	I.1.2.D.	Submittals	Add	Overflow Prevention Plan
	I.1.2.E.	Submittals	Add	Overflow Containment and Cleanup Plan
	II.2.1.B.1.	Equipment	Add	Sewer scanner and evaluation technology, similar to the Blackhawk pipeline assessment system, is an acceptable alternative to CCTV.
	II.2.2.A.2.	Flow Control	Modify	The end of the last sentence to read, "...unless approved by the Owner in advance".
Standard Details	CI_08	Residential Entrance w/out Curb and Gutter	Delete	Use Norfolk Public Works/Codes Standard Driveway Entrance Detail

DS_02	Precast Concrete Conflict Manhole	Delete
EW_01	Pipe Bedding Details	Delete
EW_02	Payment Limits Trench Excavation and Backfill	Delete
EW_03	Trench Width Detail for Payment of Contingent Items	Delete
EW_04	Typical trench Detail for HDPA (Type S) Storm Drain Pipe	Delete
FE_01	Typical Chain Link Fence & Gate Detail	Delete
LS_01	Tree Planting - Slopes	Delete
RC_01	Pavement Patching for Flexible Pavement	Delete
RC_02	Utility Locations	Delete
RC_03	Continous Shoulder Rumble Strips	Delete

WD_02	Water Service Installation Detail	Replace	Use the Norfolk Standard Detail for Typical Tap Installatioin, CW 01
WD-03	Water Meter Box (Type I)	Replace	Use the Norfolk Standard Detail for Water Meter Box & Cover, CW 02
WD_04	Water Meter Box (Type II)	Delete	
WD_05	Blow Off Assembly	Replace	Use the Norfolk Standard Detail for Air Vent/ Blow-Off Valve, CWS 03
WD_06	Fire Hydrant Setting (TypeI)	Replace	Use the Norfolk Standard Detail for Fire Hydrant Installation, CW 04 and Fire Hydrant Connection, CW 05.
WD _07	Fire Hydrant Setting (Type II)	Delete	
WD _08	Fire Hydrant Setting (Type II)	Delete	
WD_09	Temporary Manifold For Test and Chlorination	Delete	
WD_10	Precast Concrete Vault - Non-Load Bearing	Delete	
WD_11	Precast Concrete Vault - H20 Loading	Delete	
WD_12	Metal Meter Vault	Delete	

WD_13	Water Sampling Station	Delete	
WS_01	Standard Valve Box Frame and Cover	Delete	Use the Norfolk Standard Detail for Large Valve Box Frame and Cover, CWS 01 and CWS 02 for Small Valve Box Frame and Cover.
WS_02	Valve Setting Detail	Delete	
WS_03	Manual Air Vent Assembly	Replace	Use the Norfolk Standard Detail for Air Vent/ Blow-Off Valve, CWS 03
WS_04	Steel Casing Detail	Replace	Use the Norfolk Standard Detail for Water Line Casing, CWS 07A and CWS 07B
WS_05	Standard Thrust Blocks	Delete	
WS_06	Obstruction Bypass Uniform Offset	Replace	Use the Norfolk Standard Detail For lowering or new construction CW06
WS_07	Restraining Rod Detail	Delete	
WS_08	Typical Tracer Wire Box Installation	Delete	
SS_01	Standard Precast Concrete Manhole w/Extended Monolithic Base	Replace	Use Norfolk Standard Detail for Standard Precast Sewer Manhole, CS 03
SS_02	Precast Concrete Shallow Manhole	Replace	Use Norfolk Standard Detail for Shallow Precast Sewer Manhole, CS 04

SS_03	Sanitary Sewer Straddle Manhole	Delete	
SS_04	Sanitary Sewer Interior Drop Manhole	Replace	Use Norfolk Standard Detail for Standard Precast Sewer Drop Manhole, CS 05
SS_05	Sanitary Sewer Exterior Drop Manhole (For Existing Manhole Only)	Replace	Use the Norfolk Standard Detail for Standard D.I. Drop Connection for Existing Brick Manhole, CS 01
SS_06	Sanitary Sewer Manhole Adjustment	Delete	
SS_07	Sanitary Sewer Manhole Invert Shaping	Delete	
SS_08	Connection into Existing Manhole	Delete	
SS_09	Sanitary Sewer Manhole Casting (24")	Replace	Use the Norfolk Standard Detail for standard 30" manhole casting and cover C06
SS_10	Sanitary Sewer Manhole Cover (24")	Replace	Use the Norfolk Standard Detail for standard 30" manhole casting and cover C06
SS_11	Saniary Service Lateral Clean Out Frame and Cover	Replace	Use Norfolk Standard Detail for Mainlline Cleanout Casting and Cover, CS 10

SS_12	Sanitary Service Lateral Clean Out Frame and Cover For Heavy Loads	Delete	
SS_13	Sanitary Sewer Main Line Clean Out Box	Replace	Use Norfolk Standard Detail for Mainline Cleanout Casting and Cover, CS 10
SS_14	Sanitary Sewer Service Connection	Replace	Use Norfolk Standard Detail for Typical Wye/Lateral Layout and Property Line Cleanout, CS 11
SS_15	Dual Sanitary Sewer Service Connections	Delete	Dual Service connection not allowed.
SS_16	Deep Sanitary Sewer Service Connection	Delete	
SS_17	Force Main Saxophone	Replace	Use the Norfolk Standard Detail for Force Main Saxophone, CS 14
SS_18	Force Main to HRSD Force Main	Delete	