### SECTION 630 – SANITARY SEWERS

**DESCRIPTION**

**630.01.01 WORK INVOLVED**

***ADD THE FOLLOWING TO THIS SUBSECTION:***

B. This work shall consist of construction of a wastewater collection pipe and sanitary sewer manholes as shown on the Contract Drawings.

C. Any manhole or pipeline removal, replacement, or adjustment shall be performed in such a manner that the flow of the existing sewer is maintained.

***ADD The following subsection TO THIS SECTION:***

**630.01.70 STANDARDS**

1. All sanitary sewer improvements shall be constructed in accordance with the Southern Nevada Design and Construction Standards for Wastewater Collection Systems, most recent edition.

**MATERIALS**

***ADD The following subsection TO THIS SECTION:***

**630.02.02 MANHOLES**

E. Cast-in-place and precast manhole bases will be allowed for new construction of sewer pipe.

**CONSTRUCTION**

***ADD The following subsections TO THIS SECTION:***

**630.03.70 MANHOLE ADJUSTMENT**

A. When adjusting manholes, all components must be set in a bed of grout: Burke Type V nonmetallic, nonshrink. Burke can be mixed with equal parts of sand and Type V cement for components, but shall be used full strength in pipe inverts.

1. Range of grade ring height allowed for new manhole construction or existing manhole adjustment shall be 0 to 12 inches in accordance with the Design and Construction Standards for Wastewater Collection Systems, Drawing No. SD-5.
2. Class A concrete collars for sanitary sewer manholes shall be constructed in accordance with the Design and Construction Standards for Wastewater Collection Systems, Drawing No. SD-4.

D. When adjusting manholes, Contractor shall install plywood covers in sanitary sewer manhole inverts as well as steel plate covers over manholes (after manhole rings/frames are removed) to prevent debris from entering sewer manholes and corresponding lines.Debris in the manholes shall be removed prior to plywood removal. Plywood and steel covers for manholes shall be installed and removed in the presence of the CITY utilities inspector. All debris dropped into the sewer manholes and corresponding lines shall be retrieved at Contractor’s expense. Contractor shall clean (e.g., jet vac or equivalent) the debris out of the affected manholes and/or sewer lines in the presence of the City’s representative and approved by the Owner.

E. Frames and covers shall be match marked in pairs before removal and/or replacement. Covers shall fit into the frames without rocking. The integrity of the frames and covers are the responsibility of the contractor.

***Note to Spec Writer – Section 693 is to be used on all projects with new sewer and storm drain pipelines and structures, rehabilitated manholes, and rehabilitated sewer lines.***

**630.03.71 VIDEO INSPECTION**

1. Internal video inspection shall be performed by the Contractor per Section 693 – INTERNAL INSPECTION OF SEWER AND STORM DRAIN FACILITIES.

**METHOD OF MEASUREMENT**

**630.04.01 MEASUREMENT**

***ADD THE FOLLOWING TO THIS SUBSECTION:***

The quantity of (SIZE) (TYPE) SANITARY SEWER PIPE will be measured per linear foot, measured from the end of pipe or inside face of structures.

The quantity of (SIZE) (TYPE) SANITARY SEWER MANHOLE will be measured per each.

The quantity of REPLACE SANITARY SEWER PIPE WITH PVC PIPE (XX INCH) will be measured per linear foot.

The quantity of [FILL IN ITEM DESCRIPTION] will be measured per [UNIT].

No direct measurement shall be made for [FILL IN ITEM DESCRIPTION].

**BASIS OF PAYMENT**

**630.05.01 PAYMENT**

***CHANGE This subsection to read as follows:***

NOTE TO SPEC WRITER: Make sure video inspection is incidental to new structures and pipe replacements per DCSWCS SD-18

The accepted quantity of (SIZE) (TYPE) SANITARY SEWER PIPE will be paid for at the contract unit price of linear foot and shall include all materials, equipment and labor required including, but not limited to, removal of pavement and the placing of the Permanent Patch; excavation (regardless of depth); shoring; dewatering; bedding; backfill; compaction; connections to existing facilities; abandon manholes; abandon pipe and connection of laterals; protection of existing utilities; internal video inspection; disposal of all excess unsuitable material including disposal fees and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

The accepted quantity of (SIZE) (TYPE) SANITARY SEWER MANHOLE will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, excavation; removal of existing manhole; shoring; grading; shaping; dewatering; aggregate base materials; granular backfill; drain rock; compaction; dowels; concrete; reinforcing steel; cones; steps; grout; PVC lining; precast concrete component; beams; grade rings; frames; grates; castings; lids; concrete collars around manholes; protection and restoration of all existing facilities; internal video inspection; support and protection of all utilities and maintain existing sewer flows and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

NOTE TO SPEC WRITER: If you have a utility, crossing under a VCP pipe, it cannot be supported and it should be replaced per DSCWCS SD-18. Any other instances that meet the criteria for DSCWCS should also be quantified.

The accepted quantity of REPLACE SANITARY SEWER PIPE WITH PVC PIPE (XX INCH), regardless of burial depth, will be paid for at the contract unit price of linear foot and shall include all materials, equipment and labor required including, but not limited to: trench excavation; placing of the temporary pavement patch; shoring; cutting and removal of segment of existing sewer pipe; furnishing and installation of new sewer pipe; bedding; trench backfill; compaction; connection to existing sewer pipe; connection and transition couplings / fittings; slurry encasement of sanitary sewer line (where required) for water quality purposes; support and protection of existing utilities; internal video inspection, disposal of all excess unsuitable material including disposal fees and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

Unless otherwise provided in the Special Provisions, no payment will be made for the removal of pavement and the placing of the Permanent Patch in accordance with section 208 “Trench Excavation and Backfill”. The cost thereof shall be considered as included in the price bid for Sanitary Sewer Pipe.

Unless otherwise provided in the Special Provisions, no payment will be made for Internal Video Inspection as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Internal Video Inspection is required.

The accepted quantity of [FILL IN ITEM DESCRIPTION] will be paid for at the contract unit price of [UNIT] and shall include all materials, equipment and labor required including, but not limited to, [FILL IN] and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

Unless otherwise provided in the Special Provisions, no payment will be made for [FILL IN ITEM DESCRIPTION] as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which [FILL IN ITEM DESCRIPTION] is required.

Payment will be made under:

|  |  |  |
| --- | --- | --- |
| **ITEM NO.** | **ITEM DESCRIPTION** | **UOM** |
| 630.XXXX | (SIZE) (TYPE) SANITARY SEWER PIPE | LF |
| 630.XXXX | (SIZE) (TYPE) SANITARY SEWER MANHOLE | EA |

**END OF SECTION 630**