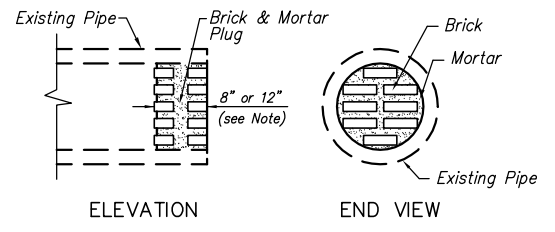


TYPICAL UTILITY BOX-OUT DETAILS

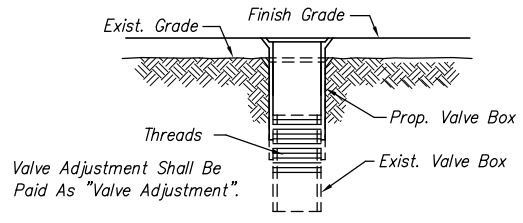
Note: Contractor shall construct box-outs around all surface utility fixtures, as shown, when fixtures fall on or near concrete joints, or as directed by the Engineer. All other fixtures shall have an isolation joint or bond breaker between them and concrete pavement. Cost shall be subsidiary.



PIPE PLUGGING DETAIL

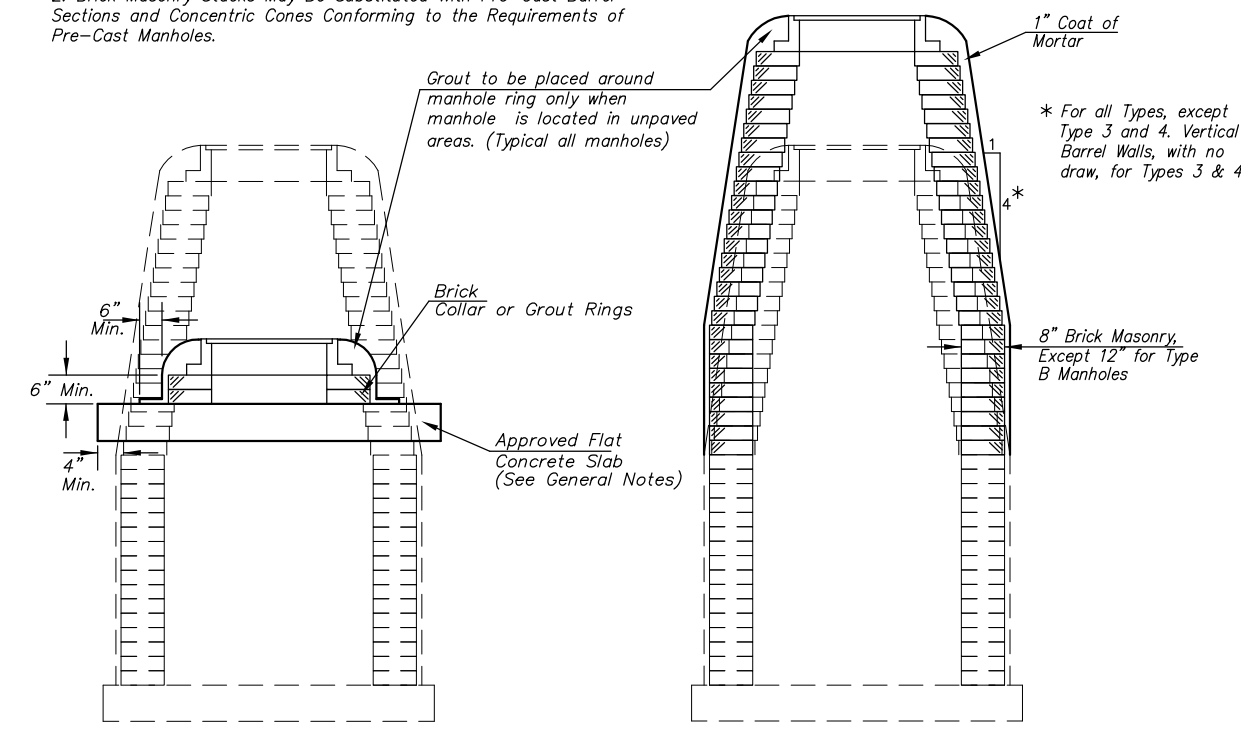
Note: Pipe Plugs Shall Be Constructed Of Brick Masonry, With Construction Requirements And Materials Conforming To The Same Requirements As Specified For A Masonry Construction In The Std. Specs. Pipes Having Diameters Of 18" Or Smaller Shall Be Plugged With 8" Thick Plug. Pipes Having Diameters Larger Than 18" Shall Be Plugged With 12" Thick Plug. The Construction Of Pipe Plugs Shall Not Be Paid For Directly, But Shall Be Considered Subsidiary To Pipe Installation.

The Contractor May Use Other Methods To Plug Existing Pipe If Approved By The Project Engineer.



WATER VALVE BOX ADJUSTMENT DETAIL

NOTES:
 1. Adjustments Less Than 12" Shall Be Achieved By Adding Or Removing The Required Thicknesses Of Brick And/or Grout Rings.
 2. Brick Masonry Stacks May Be Substituted With Pre-Cast Barrel Sections and Concentric Cones Conforming to the Requirements of Pre-Cast Manholes.



DOWNWARD ADJUSTMENT (GREATER THAN 12")

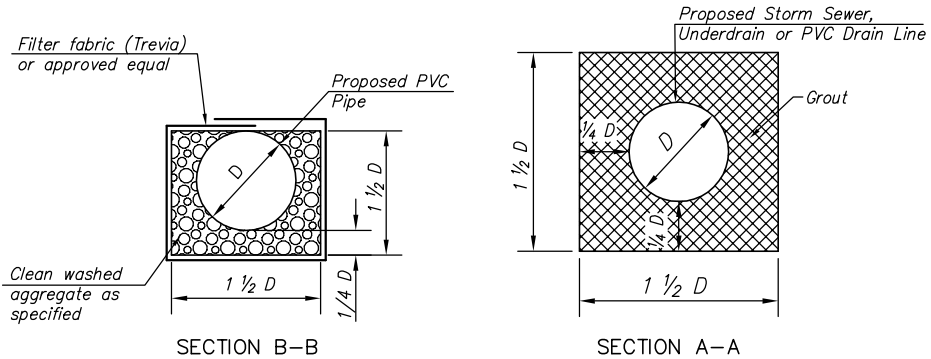
All Types
 The Appropriate Portions Of The Draw And Barrel Of Type A, B, C, D, 1 And 2 Manholes Shall Be Removed. A Flat Concrete Slab Shall Be Placed And The Ring And Cover Reset. All Work And Materials Shall Conform To The Details Shown And The General Notes.

Courses Of Brick Barrel Supporting The Wide Flange Ring For Type 4 Manholes And Flat Concrete Slab For Type 3 Manholes Shall Be Removed As Necessary Prior To Re-setting The Wide Flange Ring Or Flat Concrete Slab And Ring. All Work And Materials Shall Conform To The Details Shown And The General Notes.

UPWARD ADJUSTMENT (GREATER THAN 12")

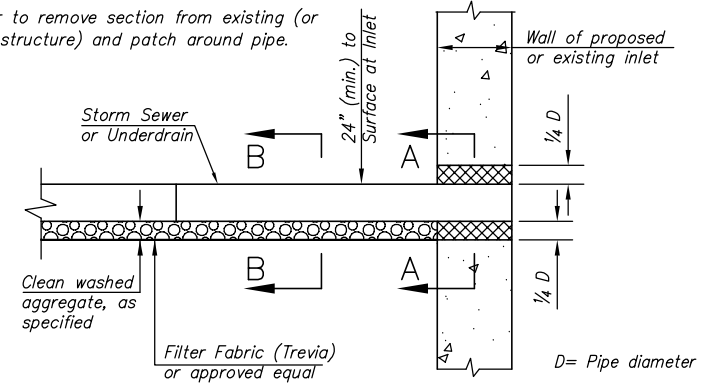
All Types
 The Entire Draw Of Types A, B, C, D, 1 And 2 Manholes Shall Be Removed, The Manhole Barrel Raised The Appropriate Amount, A New Draw Constructed, And The Ring And Cover Re-set. The Upper Portion Of Type 3 Manholes Shall Be Removed To The Bottom Of The Flat Concrete Slab, The Brick Masonry Barrel Supporting The Slab Shall Be Raised The Appropriate Amount, And The Slab And Ring And Cover Reset. The Wide Flange Ring And Cover Of Type 4 Manholes Shall Be Removed, The Brick Masonry Barrel Supporting The Ring Shall Be Raised The Appropriate Amount And The Ring And Cover Reset. All Work Required For A Greater Than Twelve Inch (12") Upward Adjustment Of Any Manhole Shall Be Accomplished With Brick Masonry In Accordance With The Details Shown And The General Notes.

MANHOLE ADJUSTMENT DETAILS



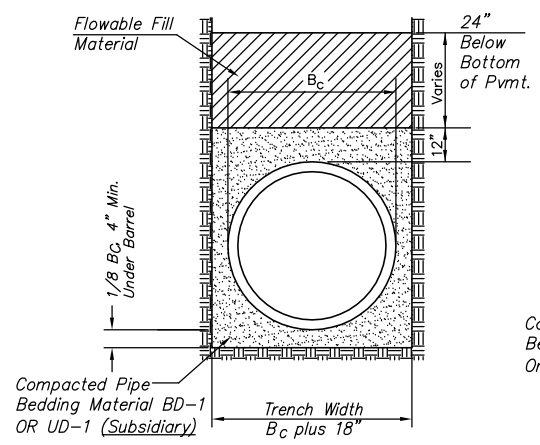
PIPE CONNECTION DETAIL

Contractor to remove section from existing (or proposed structure) and patch around pipe.

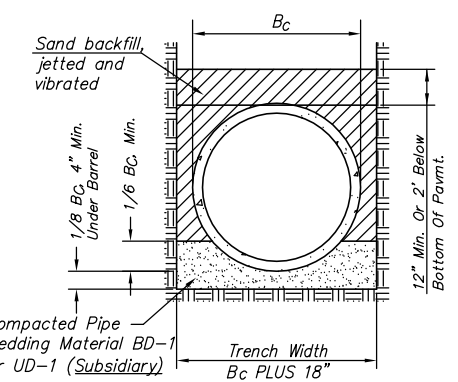


ELEVATION

NOTE: A hole shall be made through existing structures as shown to accommodate pipe connections. Round holes are acceptable. Clean gravel and filter fabric around pipe will not be required around concrete storm sewer pipe.



FLOWABLE FILL DETAIL (Sanitary Sewer Pipe)



STORM SEWER TRENCH DETAIL (Storm Sewer Pipe)

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<p>MKEC ENGINEERING CONSULTANTS 411 N. WEBB ROAD WICHITA, KS. 67206 316-684-9600</p>	<p>CENTRAL AND OLIVER INTERSECTION PROJECT NAME</p>		
	<p>MISCELLANEOUS DETAILS SHEET TITLE</p>		
	<p>JRA DESIGN BY:</p>	<p>JSB DRAWN BY:</p>	<p>JRA CHECKED BY:</p>
	<p>JAN. 2007 DATE</p>	<p>05709 JOB NO.</p>	<p>27 / 68 SHEET/OF</p>