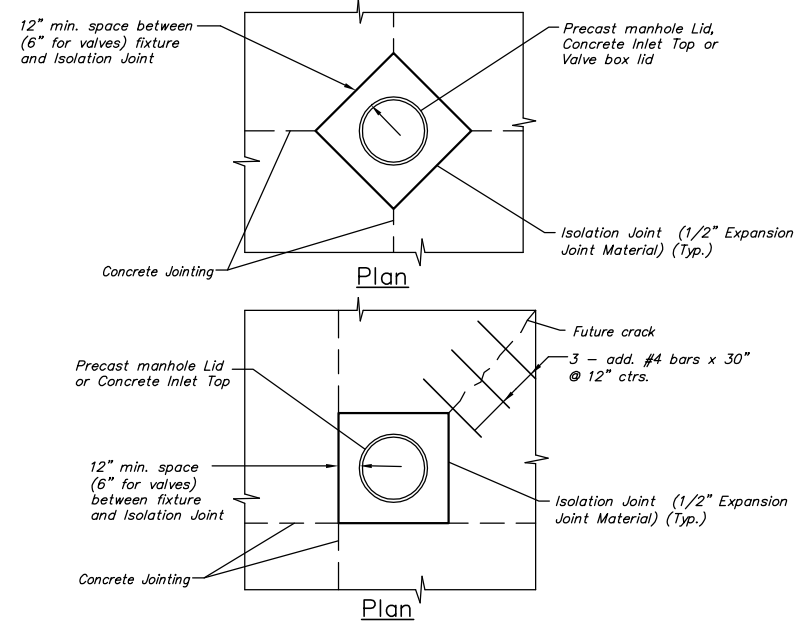
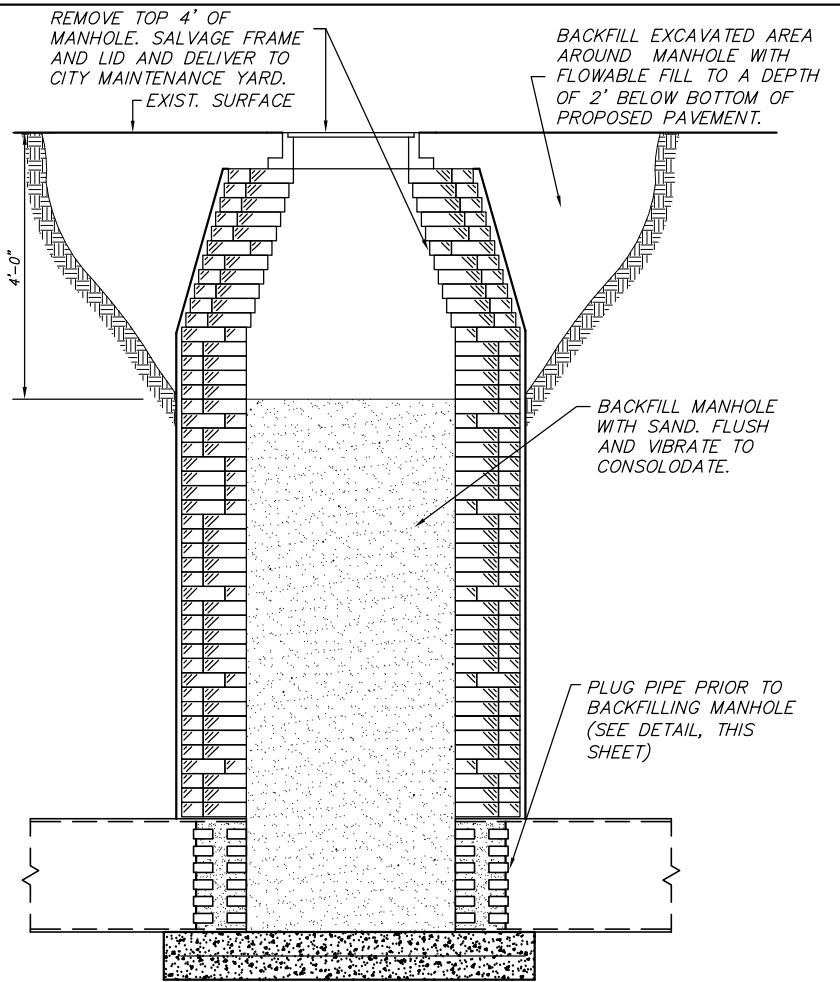


STATE	PROJECT NO.	YEAR	SHEET NO.	SHEETS
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**TYPICAL UTILITY BOX-OUT DETAILS**

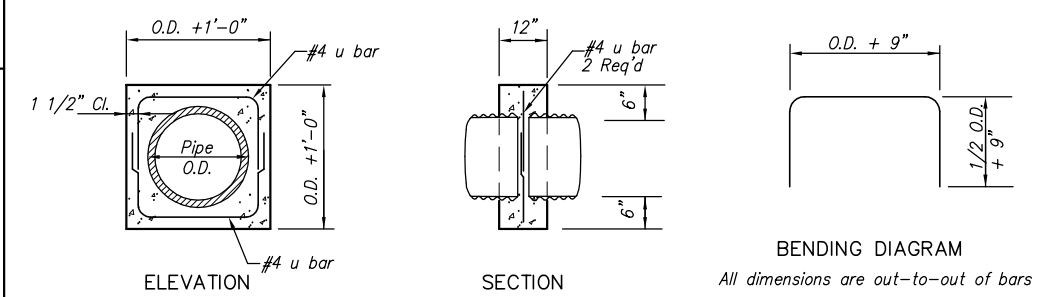
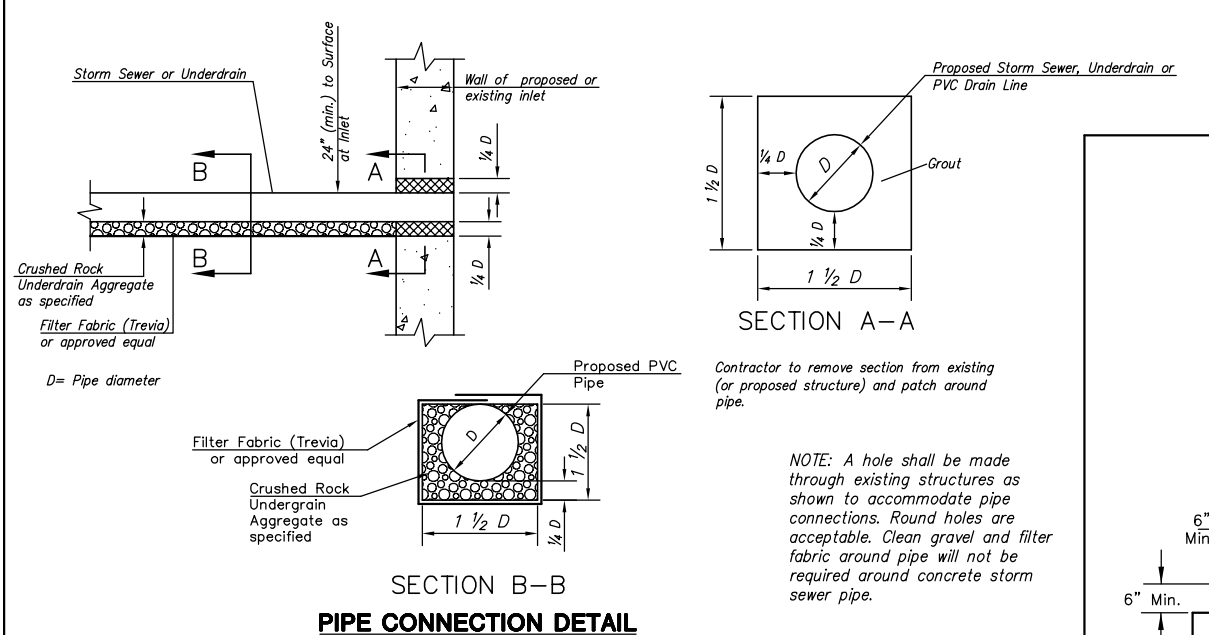
Note: Contractor shall construct box-outs around all surface utility fixtures, as shown, when fixtures fall on or near concrete joints, or as directed by the Engineer. All other fixtures shall have an isolation joint or bond breaker between them and concrete pavement. Cost shall be subsidiary.



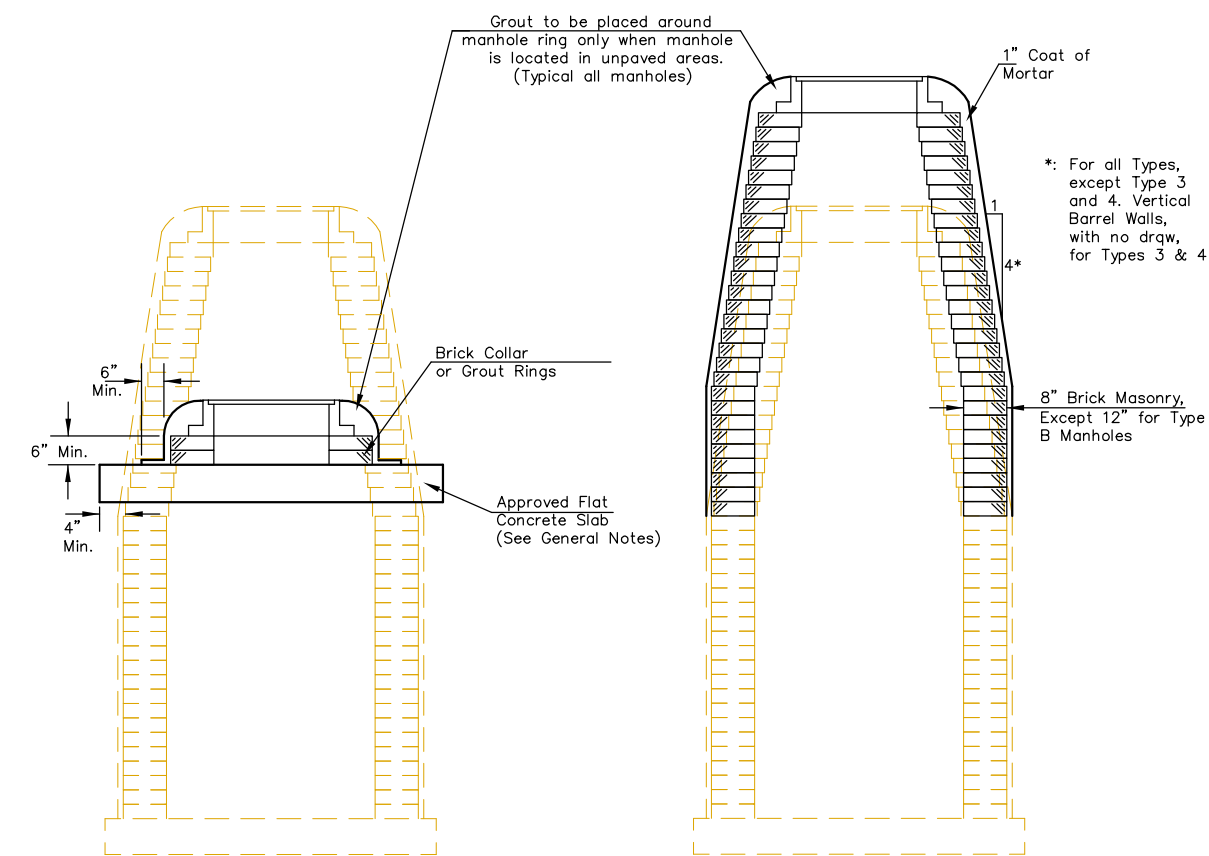
**MANHOLE ABANDON DETAIL**

NOTE: CONTRACTOR MAY COMPLETELY REMOVE MANHOLE AT NO ADDITIONAL COST TO OWNER.

CONTRACTOR SHALL PLUG OPEN ENDS OF PIPE TO BE ABANDONED WHEN CUT OR BROKEN DURING CONSTRUCTION ACTIVITIES.



**COLLAR DETAIL**



**DOWNWARD ADJUSTMENT (GREATER THAN 12")**

All Types

**UPWARD ADJUSTMENT (GREATER THAN 12")**

All Types

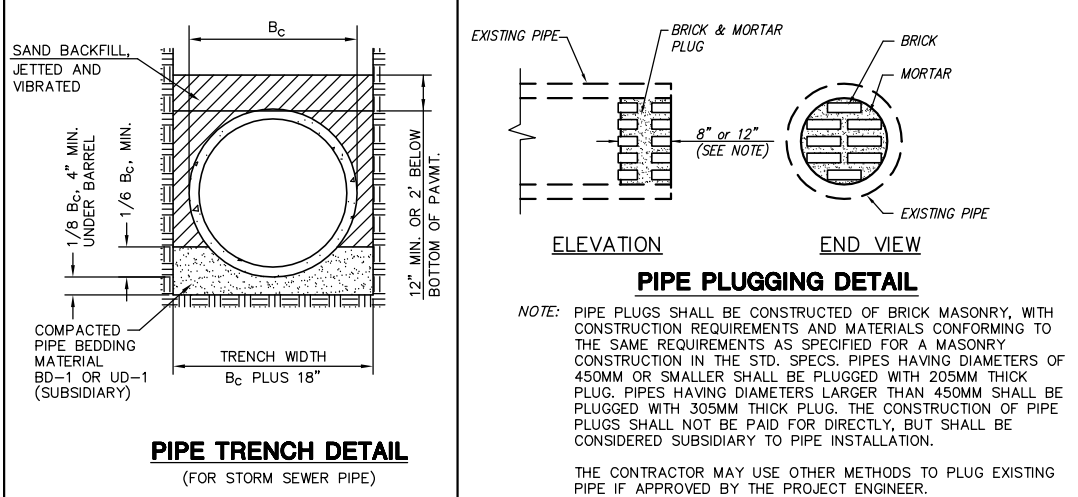
THE APPROPRIATE PORTIONS OF THE DRAW AND BARREL OF TYPE A, B, C, D, 1 AND 2 MANHOLES SHALL BE REMOVED. THE MANHOLE BARREL RAISED THE APPROPRIATE AMOUNT, A NEW DRAW CONSTRUCTED, AND THE RING AND COVER RE-SET. THE UPPER PORTION OF TYPE 3 MANHOLES SHALL BE REMOVED TO THE BOTTOM OF THE FLAT CONCRETE SLAB, 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.

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 ADJUSTMENTS**

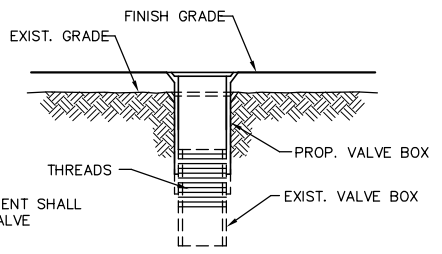
NOTES:

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



**PIPE TRENCH DETAIL**

**PIPE PLUGGING DETAIL**



**WATER VALVE BOX ADJUSTMENT DETAIL**

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KANSAS DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

PROJECT NO. 87 N-0235-01 SEDGWICK CO.

M K E C ENGINEERING CONSULTANTS, INC. WICHITA, KANSAS

DESIGNED BY: JRA	CHECKED BY: JRA
DRAWN BY: WNJ	DATE: JULY 2004 SHEET 40 OF 120