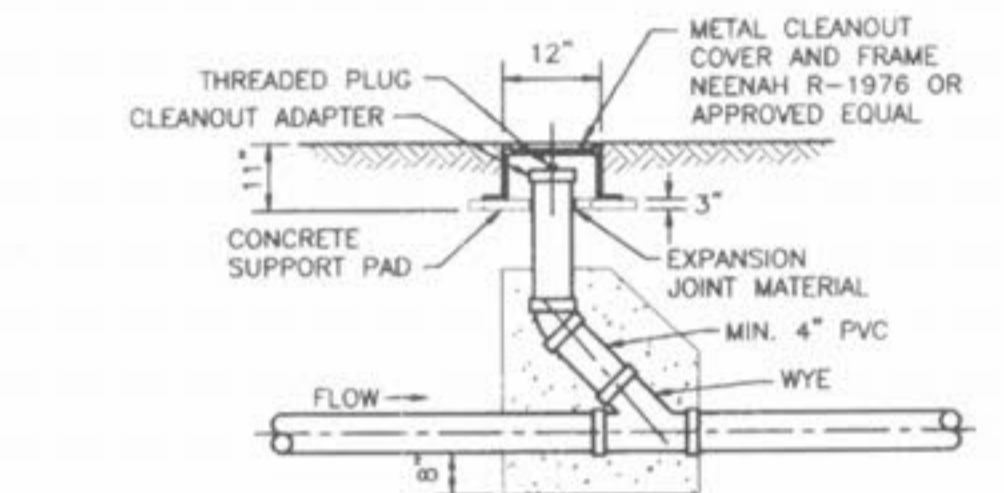


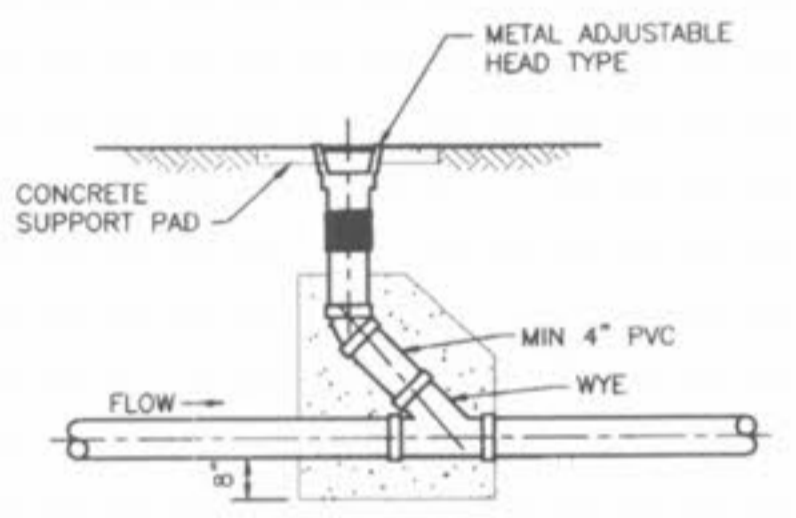
- NOTES:
1. GROUTED RIP-RAP IS REQUIRED AT ALL CREEK CROSSINGS WHERE THE EMBANKMENTS CROSSED ARE STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL RATIO SLOPE; AND ALSO WHERE THERE IS 3 FEET OR LESS COVER OVER THE TOP OF THE SEWER MAIN.
 2. PLACE RIP-RAP ON LOWER 3/4 OF SLOPE, GRADE UPPER 1/4 OF SLOPE AT 1 VERTICAL TO 2 HORIZONTAL SLOPE FOR SOD OR 1 VERTICAL TO 2.5 HORIZONTAL SLOPE FOR SEED AND STRAW.
 3. RIP-RAP TO BE "MSD 5" GRADATION, MINIMUM 12" THICK, GROUTED WITH 8 SACK MIX. SAND-CEMENT SLURRY, BROOM FINISH.
 4. INCORPORATE A 3 FEET DEEP TOE WALL ON EMBANKMENT'S UPPER EDGE OF RIP-RAP.
 5. TOP SURFACE OF RIP-RAP SHOULD NOT BE HIGHER THAN ADJACENT GROUND SURFACE.
 6. IF PIPE HAS LESS THAN 12" COVER, A PAVED CHANNEL MAY BE REQUIRED.
 7. DUCTILE IRON PIPE IS REQUIRED WITHIN THE CREEK LIMITS.

DUCKETT CREEK SANITARY DISTRICT

| | | | |
|------------------------|--------------|--------------|---------------|
| TYPICAL CREEK CROSSING | Des. By: BSM | App. By: KLA | Detail No. 24 |
| | Old By: MDOB | Date: 1-8-01 | |



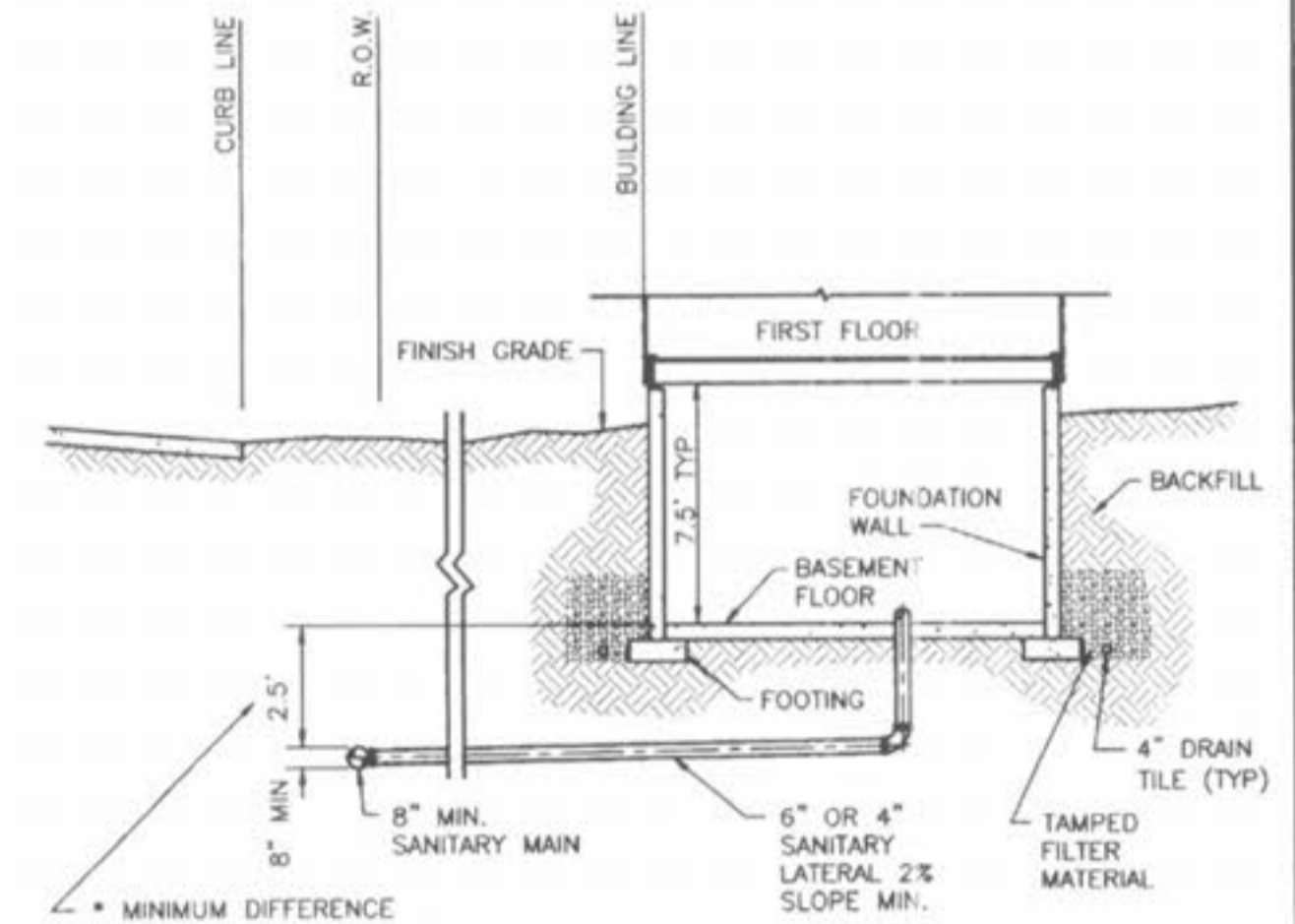
METAL FRAME AND COVER TYPE CLEANOUT



ADJUSTABLE HEAD TYPE CLEANOUT

DUCKETT CREEK SANITARY DISTRICT

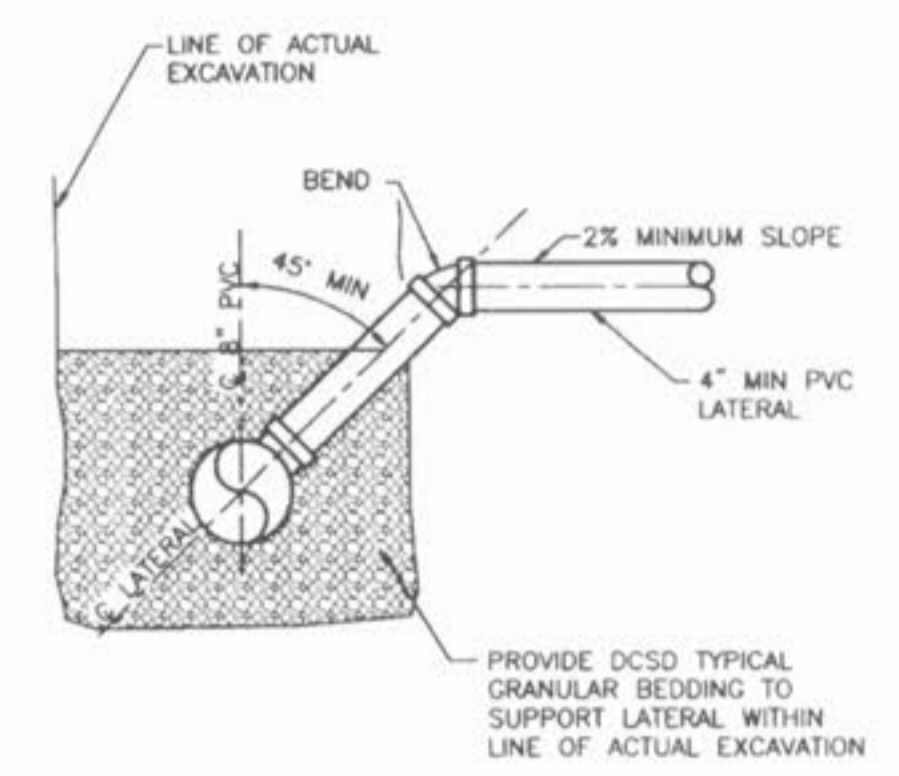
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|--|--------------|--------------|---------------|
| TYPICAL SEWER LATERAL CLEANOUT DETAILS | Des. By: BSM | App. By: KLA | Detail No. 25 |
| | Old By: MDOB | Date: 1-8-01 | |



*NOTE: DIFFERENCE IN DEPTH INCREASES WITH PIPE SIZE

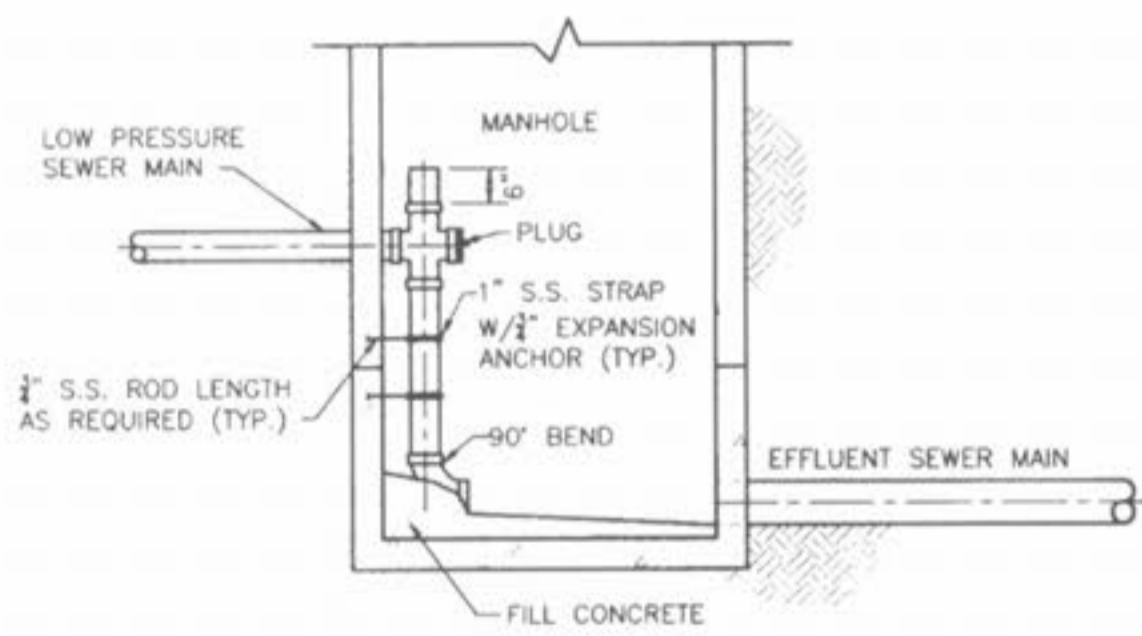
DUCKETT CREEK SANITARY DISTRICT

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|--|--------------|--------------|---------------|
| TYPICAL SANITARY SEWER LATERAL PROFILE | Des. By: BSM | App. By: KLA | Detail No. 26 |
| | Old By: MDOB | Date: 1-9-01 | |



DUCKETT CREEK SANITARY DISTRICT

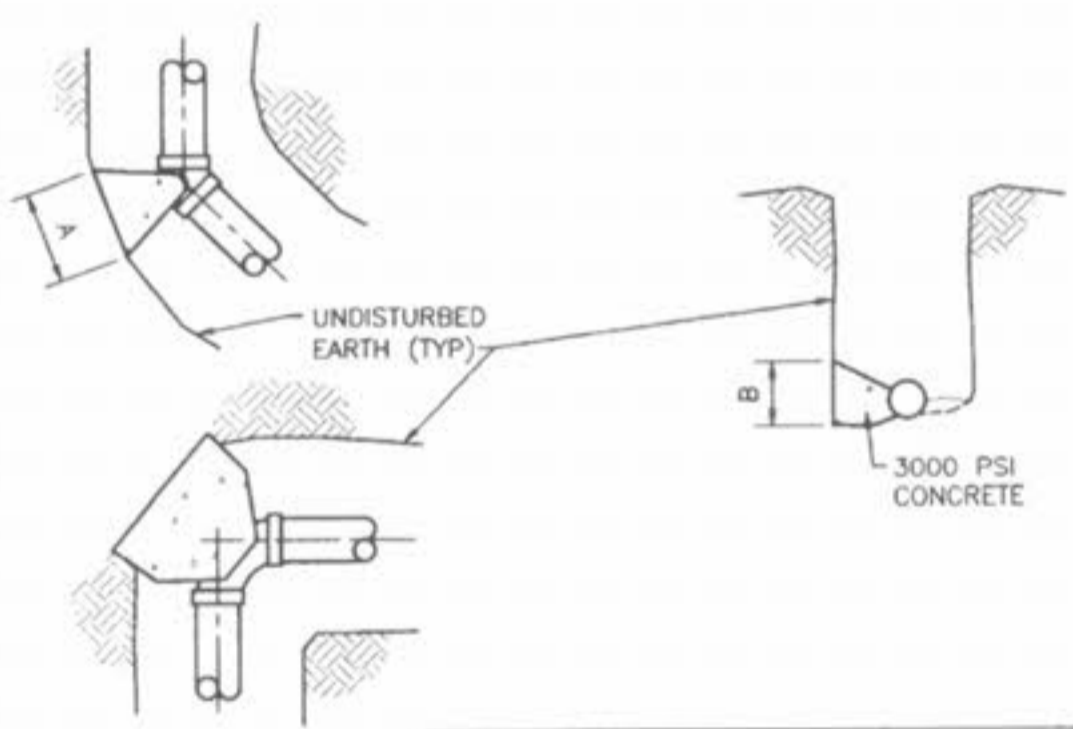
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|-------------------------------------|--------------|--------------|---------------|
| SANITARY SEWER LATERAL RISER DETAIL | Des. By: BSM | App. By: KLA | Detail No. 27 |
| | Old By: MDOB | Date: 1-9-01 | |



NOTE: INVERT-BOTTOM SHALL BE WORKED TO PROVIDE POSITIVE DRAINAGE THROUGH MANHOLE

DUCKETT CREEK SANITARY DISTRICT

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|---|--------------|--------------|---------------|
| LOW PRESSURE SEWER MAIN CONNECTION AT MANHOLE | Des. By: BSM | App. By: KLA | Detail No. 28 |
| | Old By: MDOB | Date: 1-9-01 | |



| MAIN SIZE | A x B 22 1/2" | A x B 45" | A x B 90" | A x B TEE |
|-----------|---------------|-----------|-----------|-----------|
| 2" | .5' x 1' | .5' x 1' | 1' x 1' | 1' x 1' |
| 4" | 1' x 1' | 1' x 1' | 1.5' x 1' | 1' x 1' |
| 6" | 1' x 1' | 1.5' x 1' | 2' x 1' | 1.5' x 1' |
| 8" | 1' x 1' | 2' x 1' | 2' x 1' | 2' x 1' |

DUCKETT CREEK SANITARY DISTRICT

| | | | |
|---------------------------------------|--------------|--------------|---------------|
| THRUST BLOCK DETAIL AND SIZE SCHEDULE | Des. By: BSM | App. By: KLA | Detail No. 29 |
| | Old By: MDOB | Date: 1-9-01 | |

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|-------|-------------------------------------|
| ISSUE | REMARKS/DATE |
| 10 | CITY COMMENTS 02/03/06 |
| 11 | CITY COMMENTS 02/15/06 |
| 3 | DCSD COMMENTS 03/03/06 |
| 4 | DCSD COMMENTS 03/15/06 |
| 5 | DCSD AND CITY COMMENTS 11-14-05 |
| 6 | CITY COMMENTS 11-14-05 |
| 7 | CITY COMMENTS 11-22-05 |
| 8 | WATER DISTRICT #7 COMMENTS 01-17-06 |
| 9 | DEVELOPER REVISIONS 01-24-06 |

PREPARED FOR:
CMB RHODES, L.L.C.
 5031 NEW BAUMGARTNER ROAD
 ST. LOUIS, MISSOURI 63129
 (314) 437-5771

PREPARED BY:
THE STERLING CO.
 ENGINEERS & SURVEYORS
 5055 NEW BAUMGARTNER ROAD
 ST. LOUIS, MISSOURI 63129
 (314) 437-0440 FAX 437-9944
 E-Mail: sterling@sterling-eng.com

PROJECT: **COUNTRYSHIRE**
 SHEET TITLE: **DCSD CONSTRUCTION DETAILS**

DRAWN: **LG**
 DESIGNED: **JCM**
 CHECKED: **gm**

| |
|--|
| NO. 02 12 311 |
| M.S.D. SHEET CD 11 |
| PIR |
| DIGITAL FILE LOCATION: SUMMS-STER-10-2 |
| DATE: 02/03/06 |

COUNTRYSHIRE