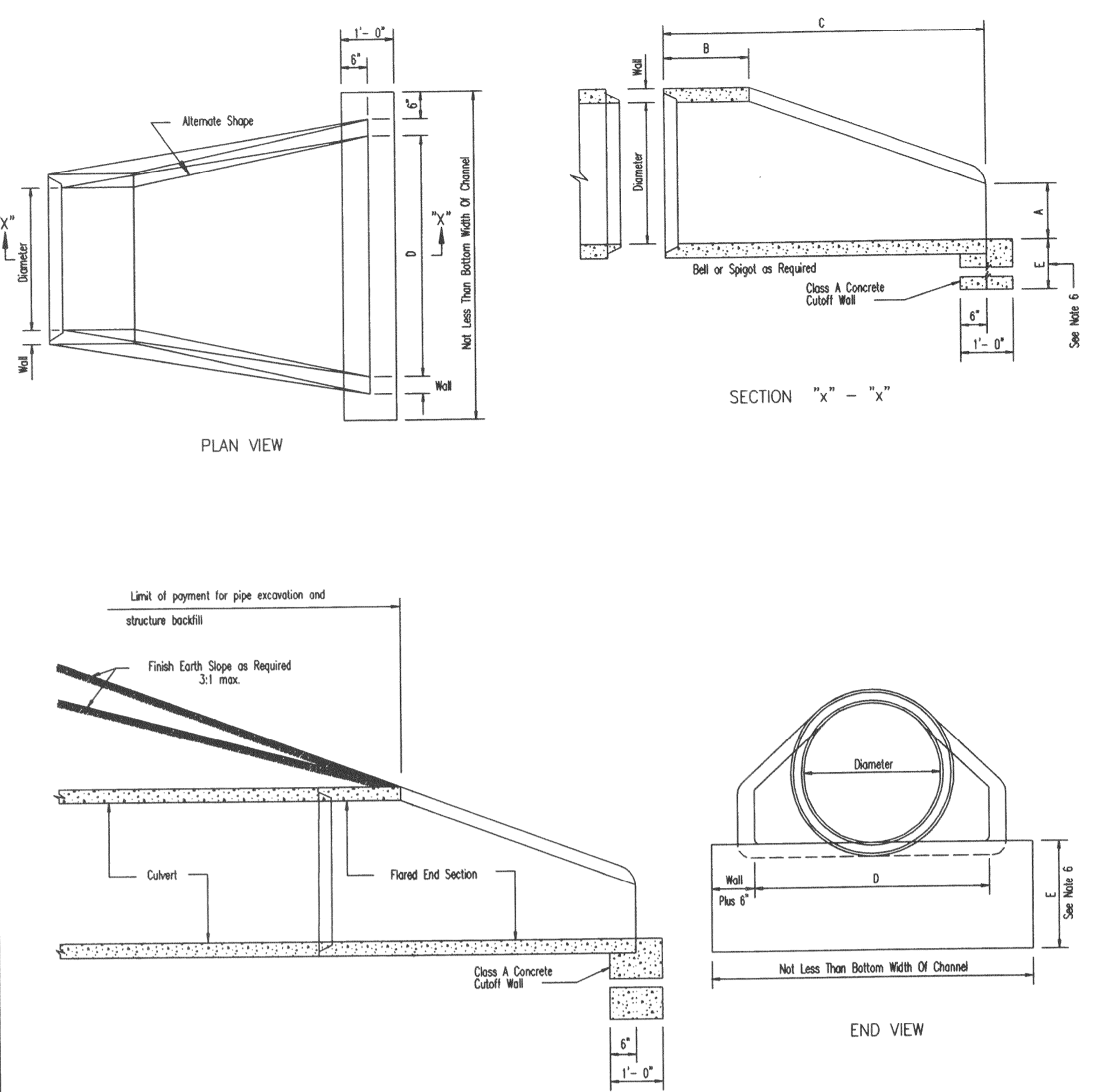


SAINT CHARLES COUNTY  
HIGHWAY DEPARTMENT  
ST. CHARLES, MISSOURI  
SEWER CONSTRUCTION DETAILS  
FLARED END SECTION  
(INLET/OUTLET PROTECTION)  
DATE: September, 2002 DRAWING  
C604.42



DIMENSIONS

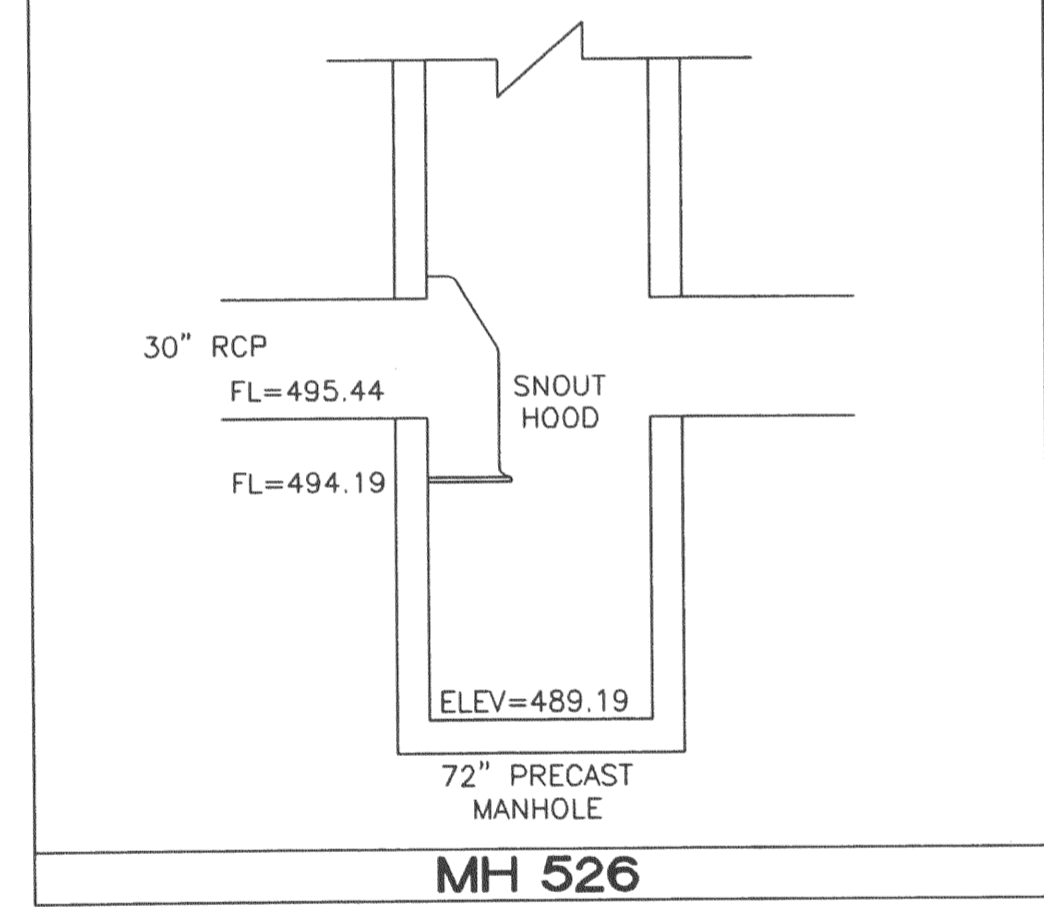
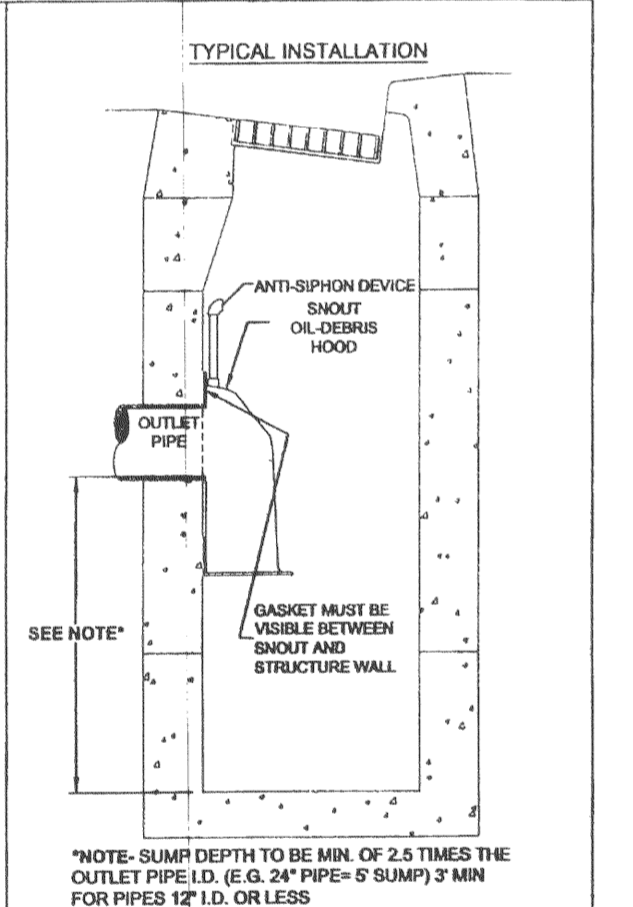
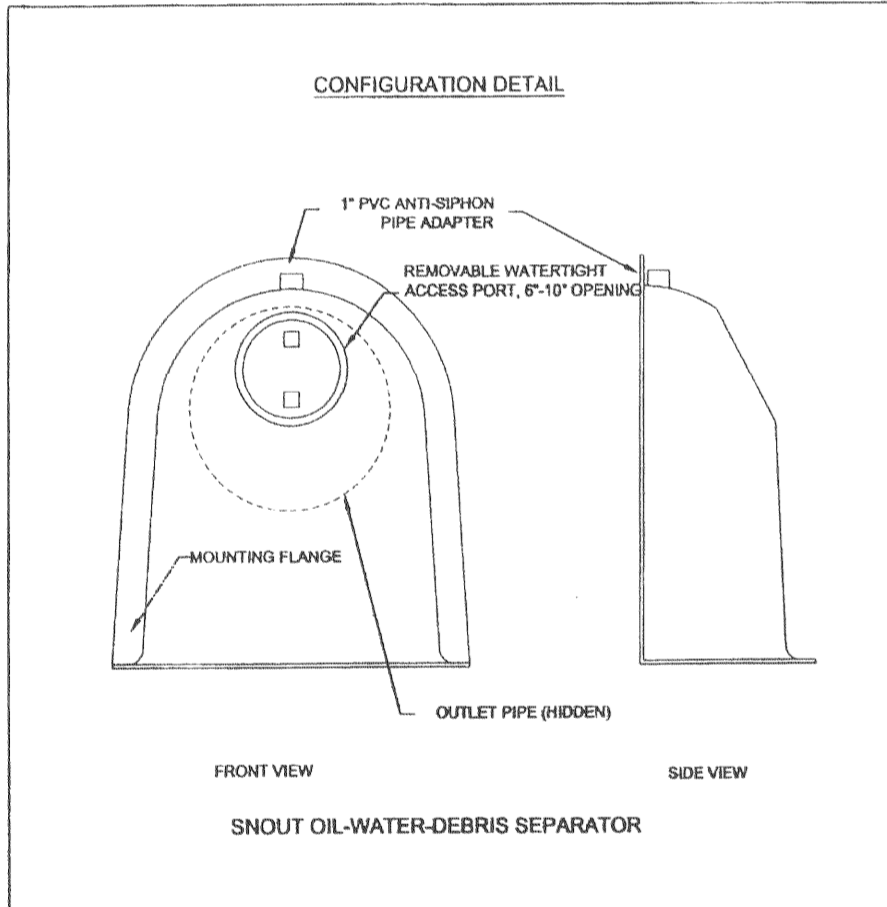
| Dia. | Wall   | A       | B(min.) | C(min.) | D     | E          |
|------|--------|---------|---------|---------|-------|------------|
| 12"  | 2"     | 4"      | 4'-0"   | 5'      | 2'-0" |            |
| 15"  | 2-1/4" | 6"      | 3'-10"  | 6'      | 2'-6" |            |
| 18"  | 2-1/2" | 9"      | 3'-10"  | 6'      | 3'-0" |            |
| 21"  | 2-3/4" | 9"      | 3'-2"   | 6'      | 3'-6" |            |
| 24"  | 3"     | 9-1/2"  | 2'-6"   | 6'      | 4'-0" |            |
| 27"  | 3-1/4" | 10-1/2" | 2'-1"   | 6'      | 4'-6" |            |
| 30"  | 3-1/2" | 1'-0"   | 1'-7"   | 6'      | 5'-0" |            |
| 36"  | 4"     | 1'-3"   | 2'-10"  | 8'      | 6'-0" | See Note 6 |
| 42"  | 4-1/2" | 1'-9"   | 2'-11"  | 8'      | 6'-6" |            |
| 48"  | 5"     | 2'-0"   | 2'-2"   | 8'      | 7'-0" |            |
| 54"  | 5-1/2" | 2'-3"   | 2'-11"  | 8'      | 7'-6" |            |
| 60"  | 6"     | 2'-6"   | 3'-3"   | 8'      | 8'-0" |            |
| 66"  | 6-1/2" | 2'-0"   | 1'-9"   | 8'      | 8'-6" |            |

REINFORCEMENT

| BARREL SECTION REINFORCEMENT (ONE LAYER ONLY IN CTR. OF WALL) | CIRCULAR                    |                             | ELLIPTICAL                       |                               |
|---|-----------------------------|-----------------------------|----------------------------------|-------------------------------|
|   | INNER CAGE SQ. IN./LIN. FT. | OUTER CAGE SQ. IN./LIN. FT. | AREA OF BARRELS SQ. IN./LIN. FT. | AREA OF WALL SQ. IN./LIN. FT. |
| 12"   | 0.07                        | —                           | 0.048                            | 0.048                         |
| 15"   | 0.07                        | —                           | 0.054                            | 0.054                         |
| 18"   | 0.07                        | —                           | 0.060                            | 0.060                         |
| 21"   | 0.07                        | —                           | 0.066                            | 0.066                         |
| 24"   | 0.07                        | —                           | 0.072                            | 0.072                         |
| 27"   | 0.13                        | —                           | 0.11                             | 0.078                         |
| 30"   | 0.14                        | —                           | 0.12                             | 0.084                         |
| 36"   | 0.12                        | 0.09                        | 0.13                             | 0.096                         |
| 42"   | 0.15                        | 0.12                        | 0.17                             | 0.108                         |
| 48"   | 0.18                        | 0.14                        | 0.20                             | 0.120                         |
| 54"   | 0.22                        | 0.16                        | 0.24                             | 0.132                         |
| 60"   | 0.25                        | 0.19                        | 0.28                             | 0.144                         |
| 66"   | 0.31                        | 0.23                        | 0.34                             | 0.156                         |

- GENERAL NOTES
- Do not scale drawing. Follow dimensions.
  - Slight variations in both shape and dimensions from those shown may be accepted if approved by the Engineer.
  - Not more than three lift holes may be drilled or cast in the End Section for handling and laying.
  - Lift legs or bars will be permitted in precast Cutoff Walls.
  - Cutoff Wall may be cast-in-place or precast.
  - Cutoff Wall to be constructed a minimum of 2' at intake end and 3' at outlet end or to rock.
  - For construction details refer to the Sewer Construction Details for Churns, Collars and Large Sewer Connections, Std. Draw. C604.41.
  - The details shown are adopted from the Missouri Department of Transportation, Standard Drawings.

SAINT CHARLES COUNTY  
HIGHWAY DEPARTMENT  
ST. CHARLES, MISSOURI  
SEWER CONSTRUCTION DETAILS  
FLARED END SECTION  
(PRECAST CONCRETE)  
DATE: June, 2002 DRAWING  
C604.40



INSPECTION REQUIREMENTS:

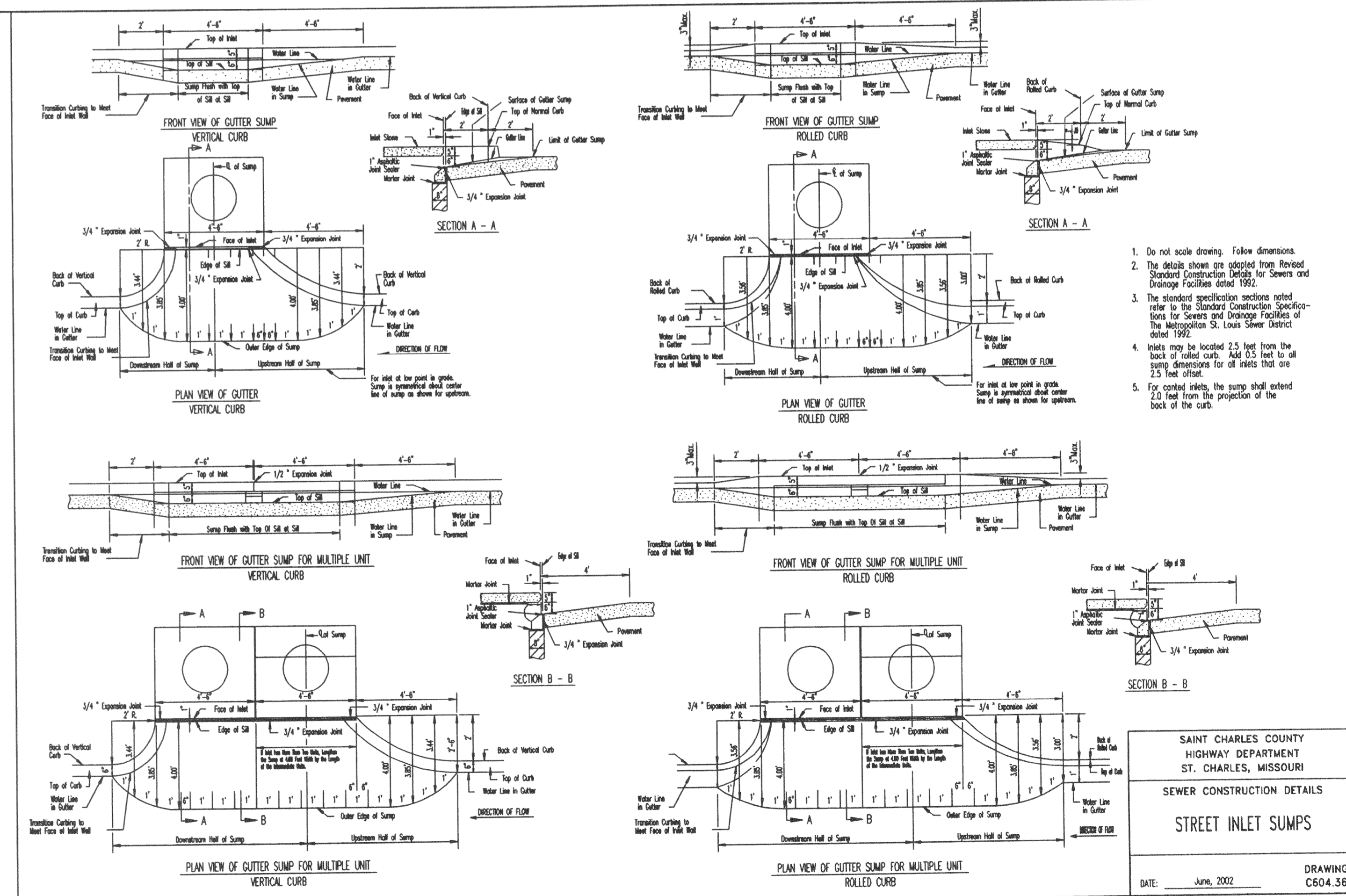
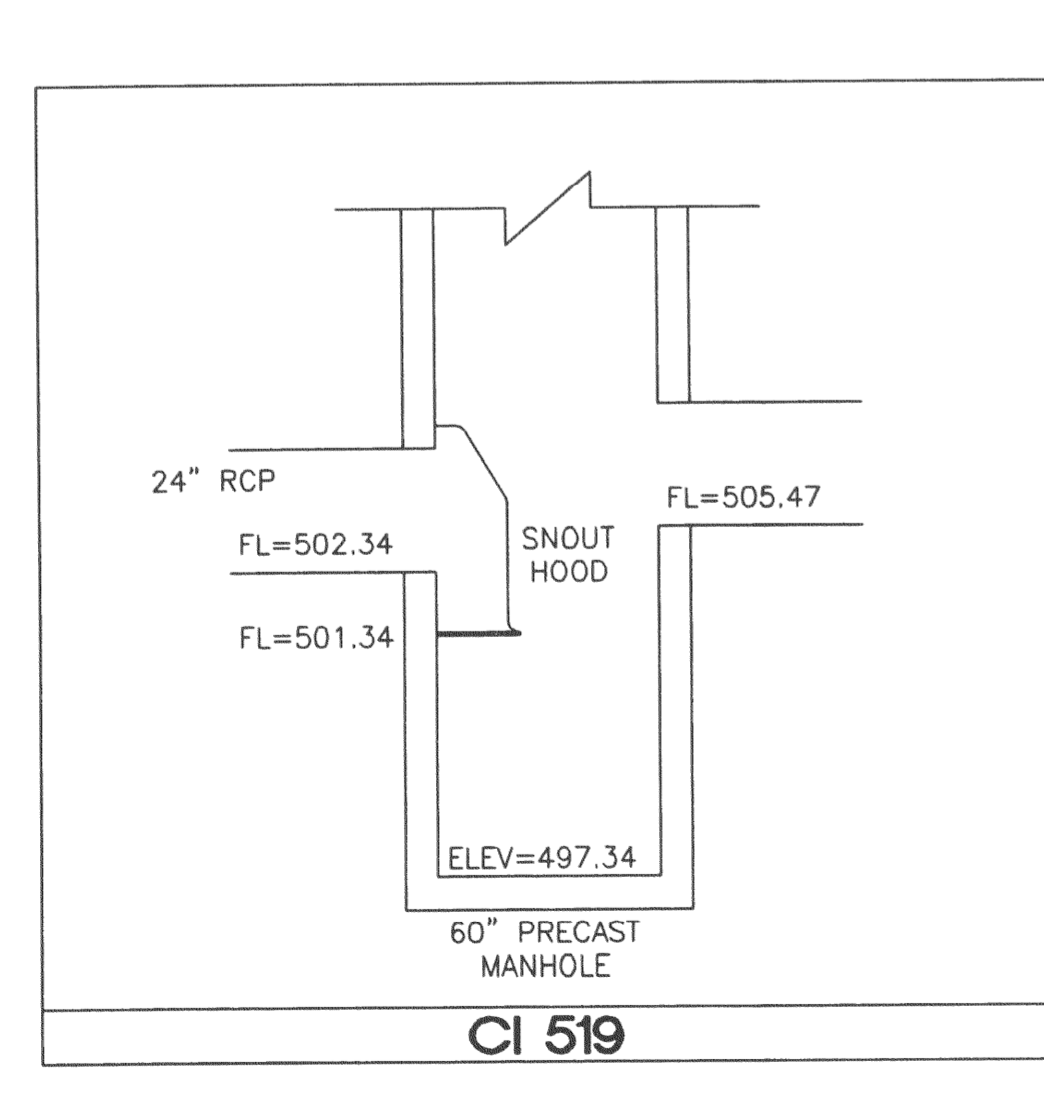
- MANUFACTURER: ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE PROVIDED BY: BEST MANAGEMENT PRODUCTS, INC., 53 MT. ARCHER RD., LYME, CT 06371. TOLL FREE: (800) 504-8008 OR (877) 434-3197 WEB SITE: www.bmpinc.com
- CONFIGURATION: ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
- PIPE COVERAGE: THE SIZE OF THE HOOD SHALL PERMIT THE O.D. OF THE OUTLET PIPE TO BE COVERED COMPLETELY.
- HOOD POSITION: THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A MINIMUM DISTANCE EQUAL TO 1/2 THE OUTLET PIPE I.D. WITH A MINIMUM DISTANCE OF 6" FOR PIPES <math>\leq 12</math>" I.D. GREATER INSERTION DEPTH IS PERMISSIBLE.
- ANTI-SIPHON VENT: VENT WITH ELBOW AND FEMALE ADAPTER SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
- MOUNTING SURFACE PREPARATION: THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
- SNOUT/STRUCTURE INTERFACE: THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS. OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER MUST BE INSTALLED TO PROVIDE PROPER SEAL. (SEE DETAIL "B")
- ACCESSORIES: IF OIL BOOMS OR FLOW DEFLECTORS ARE SPECIFIED, THEY MUST BE INSTALLED AND PRESENT FOR INSPECTION.
- INSTALLATION INSTRUCTIONS: INSTRUCTIONS SHALL BE FURNISHED WITH EACH UNIT OF INSPECTOR WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:  
A. INSTALLATION INSTRUCTIONS  
B. PVC ANTI-SIPHON VENT PIPE, FEMALE ADAPTER WITH NUT, O-RING GASKETS  
C. OIL-RESISTANT CRUSHED GELL FOAM GASKET WITH PSA BACKING  
D. 3/8" STAINLESS STEEL BOLTS  
E. ANCHOR SHIELDS (SEE BELOW FOR MULTI-PART SNOOTS 38", 48", 54", 66" AND SPLIT SNOOTS ONLY.)  
F. STAINLESS NUTS AND BOLTS PLUS GASKET TO SECURE TOP AND BOTTOM OF SNOUT.

US Patent # 6126817 CANADIAN Patent # 2285146

INSTALLATION REQUIREMENTS FOR SNOOT HOODS INSTALLED IN STORMWATER QUALITY IMPROVEMENT STRUCTURES

| DESCRIPTION   | DATE     | SCALE |
|---|----------|-------|
| OIL-DEBRIS HOOD INSTALLATION REQUIREMENTS (TYPICAL) | 04/13/05 | NONE  |

DRAWING NUMBER  
INRQ-SN



- Do not scale drawing. Follow dimensions.
- The details shown are adopted from Revised Standard Construction Details for Sewers and Drainage Facilities dated 1992.
- The standard specification sections refer to the Standard Construction Specifications for Sewers and Drainage Facilities of the Metropolitan St. Louis Sewer District dated 1992.
- Inlets may be located 2.5 feet from the back of rolled curbs. Add 0.5 feet to all sump dimensions for all inlets that are 2.5 feet offset.
- For covered inlets, the sump shall extend 2.0 feet from the projection of the back of the curb.

SAINT CHARLES COUNTY  
HIGHWAY DEPARTMENT  
ST. CHARLES, MISSOURI  
SEWER CONSTRUCTION DETAILS  
STREET INLET SUMPS  
DATE: June, 2002 DRAWING  
C604.36

REVISIONS

06/06/08 REVISED STORM SEWERS

IMPROVEMENT PLANS  
BELLEAU CROSSING  
STORM DETAILS 3

ST. CHARLES ENGINEERING & SURVEYING, INC.  
801 S. FIFTH STREET, SUITE 202  
ST. CHARLES, MO 63301  
TEL: (636) 947-0607 FAX: (636) 947-2448

STATE OF MISSOURI  
KARL E. BERRY  
SURVEYOR  
NUMBER  
PE-2003015039  
PROFESSIONAL ENGINEER

07-08

ORDER NO.  
04-1419-01

DATE  
11/26/07

D-6

SEE STANDARD