OPEN GRADED AGGREGATE (VDOT NO. 57, 68, 7, OR 8). ALTERNATE MÁTERIAL MUST BE APPROVED BY THE CITY ENGINEER.

MAX DEPTH OF PIPE BEDDING MATERIAL IF USING OPEN GRADED AGGREGATE FOR BEDDING.

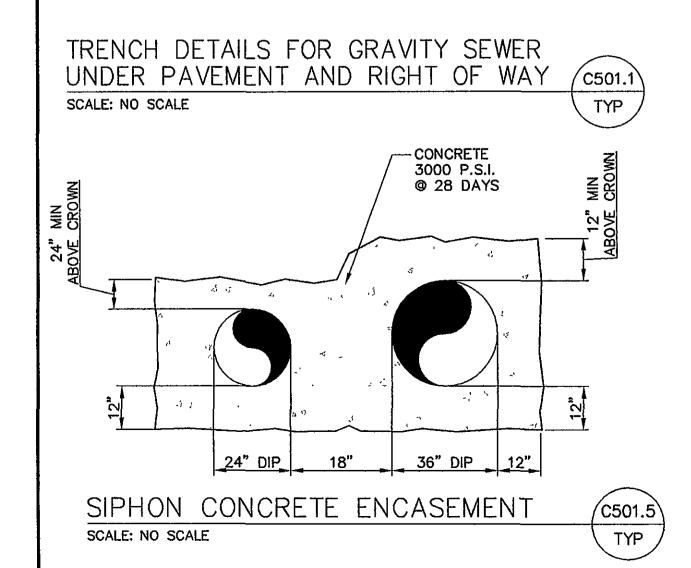
BACKFILL MATERIAL SHALL BE FLOWABLE FILL MEETING THE REQUIREMENTS OF VDOT SPECIAL PROVISION FOR FLOWABLE BACKFILL. THE MATERIAL MUST BE PLANT-CERTIFIED TO PROVIDE A 28-DAY COMPRESSIVE STRENGTH BETWEEN 20 AND 200 PSI. A CERTIFICATE OF MIX DESIGN MUST BE SUBMITTED TO THE INSPECTOR PRIOR TO PLACING THE MATERIAL IN THE TRENCH. A MIN OF TWO TEST CYLINDERS SHALL BE TAKEN FOR POURS WITH LESS THAN 50 CUBIC YARDS OF PLACEMENT. A MIN OF FOUR 6X12 TEST CYLINDERS SHALL BE TAKEN EVERY 50 CY OF PLACEMENT. CYLINDERS SHALL BE TESTED BY A QUALIFIED TESTING LABORATORY FOR 28-DAY STRENGTH. RESULTS SHALL BE PROVIDED TO THE INSPECTOR WITHIN 24 HOURS OF TESTING COMPLETION. THE COST OF ALL TESTING IS THE RESPONSIBILITY OF THE PERMITTEE. IF THE REPORT INDICATES THE COMPRESSIVE STRENGTHS ARE NOT BETWEEN 30 AND 200 PSI, THE PERMITTEE WILL BE RESPONSIBLE FOR REMOVING AND REPLACING THE BACKFILL WITH ACCEPTABLE BACKFILL AND COMPLETING THE RESTORATION OF THE STREET AT NO COST TO THE CITY OR AUTHORITY.

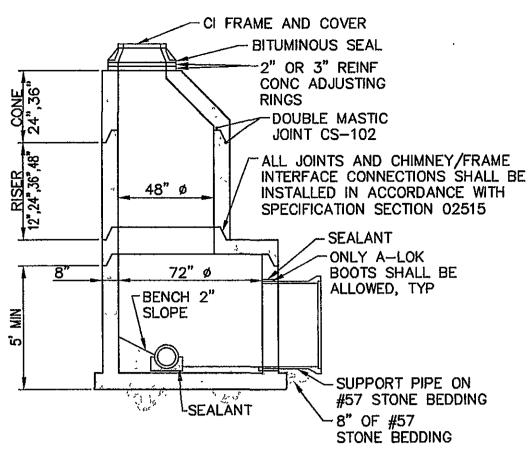
ALL ASPHALT PAVEMENT DEPTHS SHALL BE DETERMINED BY THE PRESENCE OF LANE STRIPING ON THE STREET. FOR STREETS WITH LANE STRIPPING, THE MINIMUM DEPTH SHALL BE 8" AND CONSIST OF TWO 3" LIFTS OF ASPHALT BASE MIX AND ONE 2" LIFT OF ASPHALT SURFACE MIX. FOR STREETS WITHOUT LANE STRIPING, THE MIN DEPTH SHALL BE 4 INCHES AND CONSIST OF ONE  $2\frac{1}{2}$  LIFT OF ASPHALT BASE MIX AND ONE  $2-\frac{1}{2}$  LIFT OF ASPHALT SURFACE MIX. THE ASPHALT SURFACE LAYER SHALL EXTEND OVER UNDISTURBED BASE A MIN OF 12" ON ALL SIDES. ALL PAVEMENT MATERIALS SHALL MEET VDOT REQUIREMENTS FOR SURFACE MIX(SM-9.5AL, SM-9.5, OR SM-12.5D), BASE MIX (BM-25), AND STONE AGGREGATE (21A OR 21B), PLANT CERTIFICATION FOR EACH MIX INCORPORATED INTO THE WORK SHALL BE PROVIDED TO THE INSPECTOR. WHEN MATCHING NON-STANDARD MATERIALS. THE INSPECTOR SHALL DETERMINE AN ACCEPTABLE MATERIAL

THE REPAIR SHALL BE RECTANGULAR AND SAW CUT IN STRAIGHT, UNIFORM LINES THAT ARE ALIGNED WITH THE STREET CENTERLINE. WHEN EDGES OF PAVEMENT HAVE BEEN UNDERMINED, PAVEMENT SHALL BE REMOVED TO A NEAT LINE 12" BEYOND THE UNDERMINED AREA. ANY INTIAL PAVEMENT REPAIR WITH AN AREA GREATER THAN 40 SQUARE FEET MAY BE NON-RECTANGULAR. HOWEVER, THE REPAIR SHALL BE SAW CUT IN STRAIGHT, UNIFORM LINES. ANY OTHER DEVIATION ON PATCH SHAPE MUST BE APPROVED BY THE INSPECTOR PRIOR TO THE REPAIR BEING MADE. THE FINISHED PATCH SURFACE SHALL BE WITHIN \$ INCH AT ANY POINT ACROSS THE PATCH AS IT RELATES TO THE SURROUNDING STREET SURFACE.

A FULL COVERAGE TACK COAT IS REQUIRED ON ALL SURFACES THAT WILL CONTACT THE NEW SURFACE LAYER

ANOTHER ACCEPTABLE TRENCH REPAIR METHOD IS UTR-1; SEE DETAIL UNDER ATTACHMENT 1 OF APPENDIX A.





1. ALL MANHOLE FRAMES AND COVERS SHALL BE EAST JORDAN IRON WORKS, INC. WATERTIGHT MANHOLE FRAME MODEL#1045Z, BOLT-DOWN MANHOLE COVER MODEL #1040ACLGS, OR APPROVED

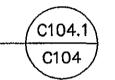
2. THE FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.

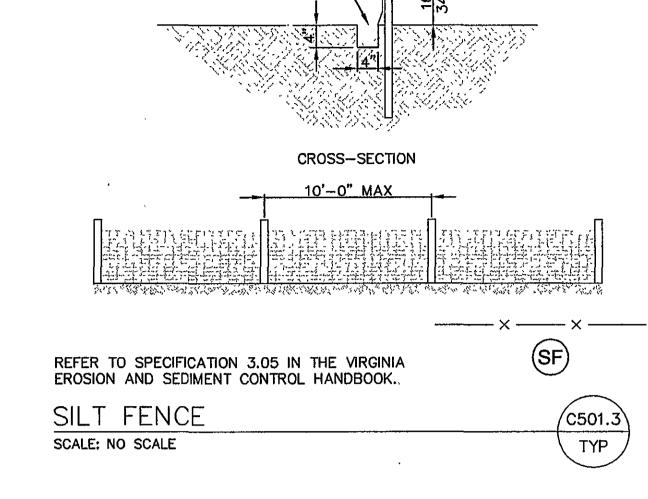
3. TOP INVERT LINE SHALL NOT ENTER THROUGH RISER CONE) SECTION OR JOINT.

4. GROUT ANNULAR SPACE BETWEEN PIPE AND PRECAST MANHOLE ON THE INSIDE OF MANHOLE.

5. AFTER THE BASE SECTION, THE MANHOLE DIAMETER CAN BE REDUCED 48" FOR THE RISER SECTION.

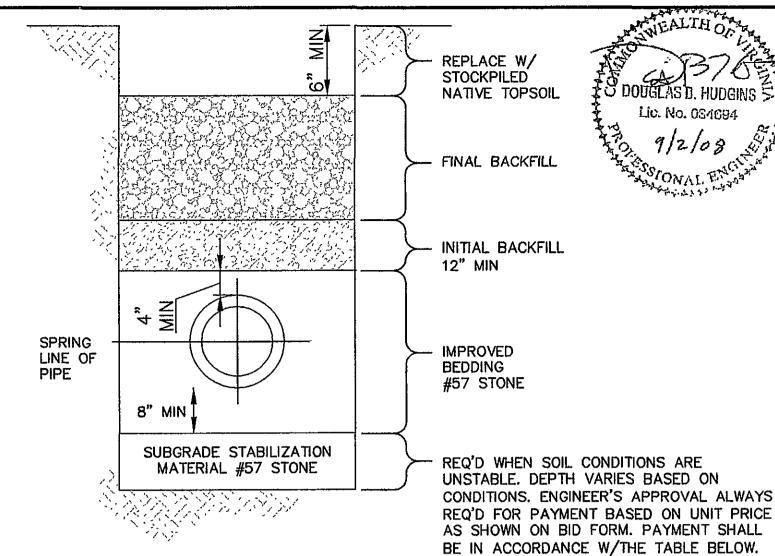
5'ø MANHOLE W/ ADAPTOR SCALE: 1/4" = 1'-0"





FILTER FABRIC

EXTEND FABRIC INTO TRENCH



PIPE SIZE	(IN)	MAX. TRENCH WIDTH (FT) FROM BOTTOM OF TRENCH TO A POINT ONE FOOT ABOVE TOP OF PIPE.
4, 6, 8,	10	3'-0"
12 THRU	24	4'-0"
27 THRU	36	5'-4"
42 AND	48	6'-6"
54 AND	60	7'-6"

FOR DUCTILE IRON PIPE, IMPROVED BEDDING #57 STONE MAY BE REDUCED TO THE CROWN OF THE

TRENCH DETAILS FOR GRAVITY SEWER IN GRASSED AREA SCALE: NO SCALE

C501.4 TYP

See A

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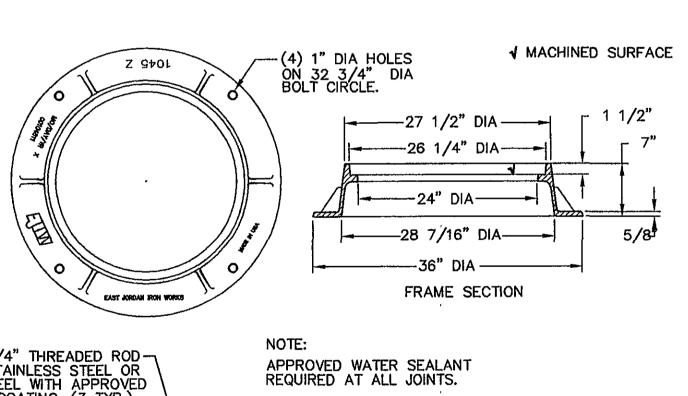
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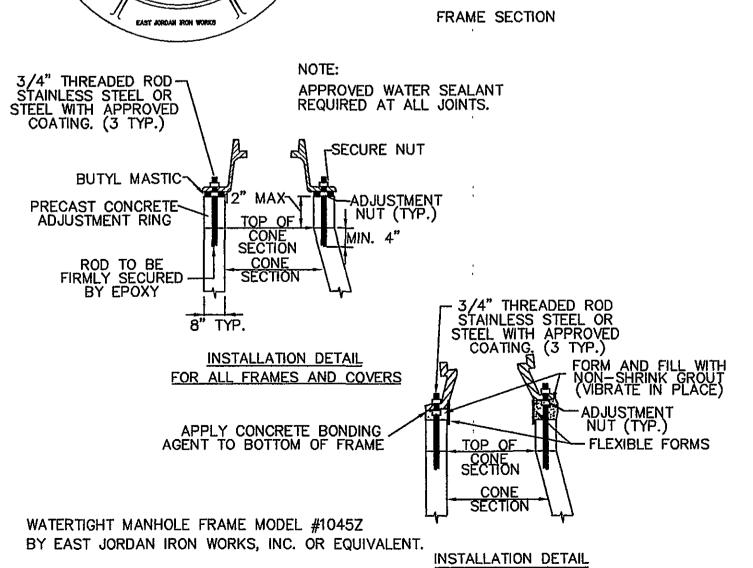
VIRGINIA WATER IMPROVEMENTS A

WESTER INTERCEPTO

DETAIL

YPICAL





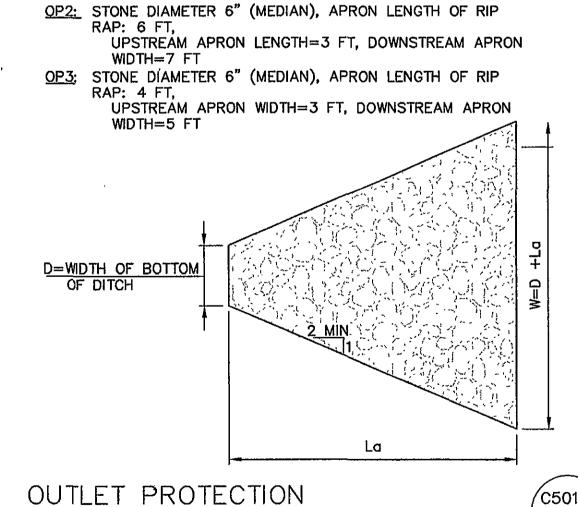
MANHOLE FRAME INSTALLATION

SCALE: NO SCALE

FOR SLOPE ADJUSTMENT

C501.6

TYP



OP1: STONE DIAMETER 6" (MEDIAN), APRON LENGTH OF RIP RAP: 6 FT. UPSTREAM APRON WIDTH=3 FT.

DOWNSTREAM APRON WIDTH=7 FT

/C501.7 SCALE: NO SCALE TYP

TYP

**VERIFY SCALE** 

Bar Scale measures on original drawing

Drawn: MJM Checked: DBH 6/25/08 Date: AS SHOWN Scale: Job No. 12307.08 Archived File Name:

Designed: ETA

C501