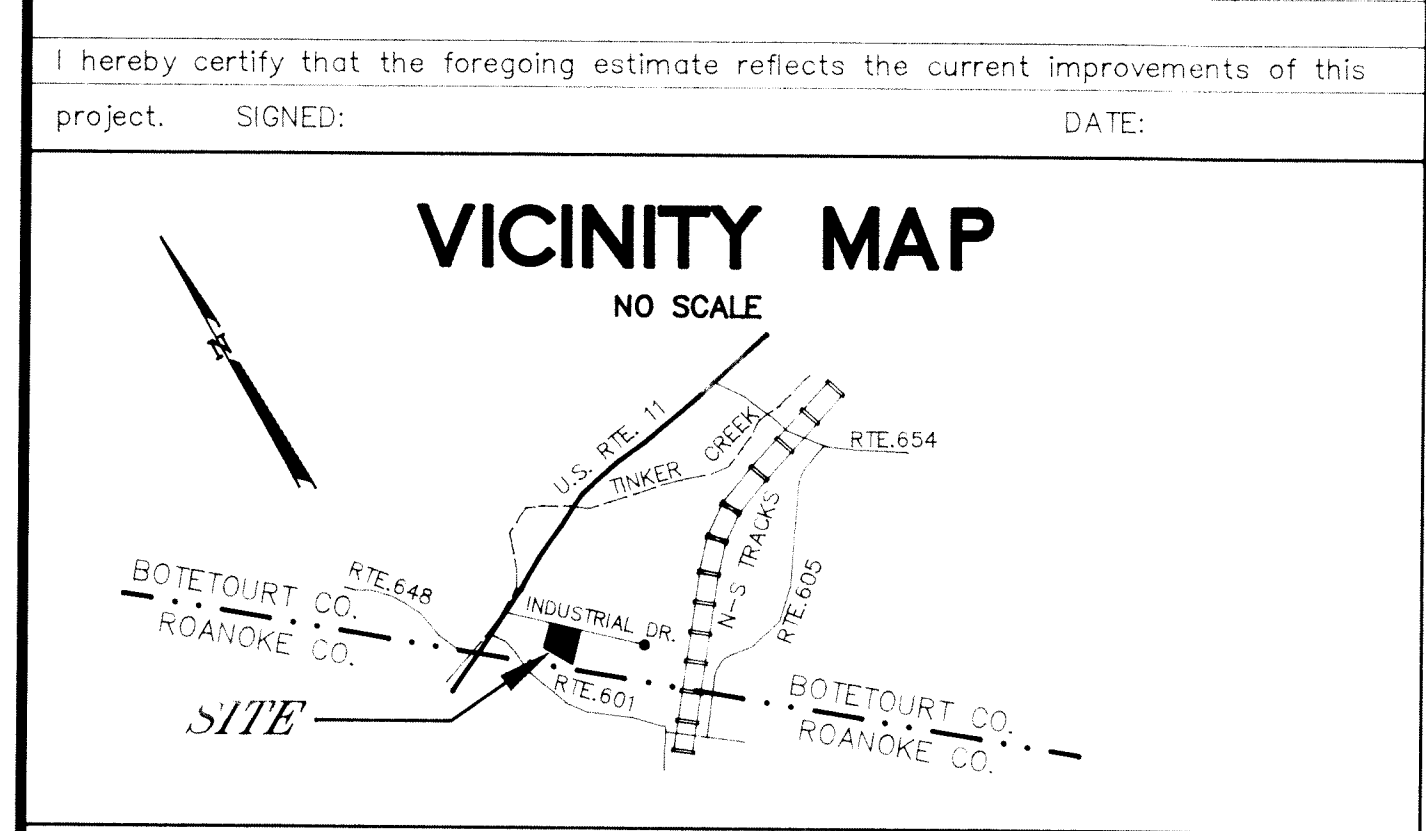


QUANTITY AND COST ESTIMATE				
Item	Quantity	Unit	Unit Price	Bondable Cost
CLEARING AND GRUBBING		ACRES		
EXCAVATION		CY		
EMBANKMENT		CY		
CURB INLET DI--		EACH		
CURB INLET DI--		EACH		
MANHOLE MH--		EACH		
MANHOLE MH--		EACH		
-IN. CONCRETE PIPE, CLASS III		LF		
-IN. CONCRETE PIPE, CLASS IV		LF		
-IN. C.M. CULVERT		LF		
-IN. C.M. CULVERT		LF		
BOX CULVERT		LS		
PAVED DITCH		LF		
RIPRAP--CLASS		SF		
SODDED SWALE		SY		
-IN. CONCRETE ENDWALL, EW--		EACH		
-IN. END SECTION, ES--		EACH		
DRIVEWAY, ENTRANCE TYPE		EACH		
SIDEWALK, -FT. WIDE		LF		
HEADER CURB & GUTTER, CG--		LF		
CURB & GUTTER, CG--		LF		
VALLEY GUTTER		EACH		
PAVEMENT DESIGN				
CATEGORY		SY		
CATEGORY		SY		
STREET SIGNS		EACH		
-IN. WATER LINE		LF		
-IN. WATER LINE		LF		
FIRE HYDRANT ASSEMBLIES		EACH		
BLOW-OFFS w/VAULT, FRAME & COVER		EACH		
-IN. GATE VALVES w/VAULT, FRAME & COVER		EACH		
-IN. GATE VALVES w/VAULT, FRAME & COVER		EACH		
SERVICE CONNECTIONS		EACH		
MISCELLANEOUS FITTINGS		EACH		
-IN. SANITARY SEWER		LF		
-IN. SANITARY SEWER		LF		
STD. MANHOLE w/FRAME & COVER		EACH		
SERVICE CONNECTIONS w/CLEANOUTS		EACH		
AS-BUILT PLANS		LS		
SUBTOTAL				
CONTINGENCY				
ESTIMATED TOTAL				
I hereby certify that the foregoing estimate reflects the current improvements of this project. SIGNED: DATE:				



ENGINEER'S NOTES

T.P. PARKER & SON ASSUMES NO RESPONSIBILITY FOR ADEQUACY OF PLANS OR FOR INFORMATION ON PLANS UNTIL SUCH PLANS HAVE BEEN APPROVED BY THE REQUIRED PUBLIC AGENCIES.

ANY WORK COMMENCED ON A PROJECT PRIOR TO PLAN APPROVAL IS AT SOLE RISK OF THE DEVELOPER.

T.P. PARKER & SON DOES NOT GUARANTEE THE COMPLETION OR QUALITY OF PERFORMANCE OF THE CONTRACTS OR THE COMPLETION OR QUALITY OF PERFORMANCE OF CONTRACTS BY SUBCONTRACTORS OR OTHER THIRD PARTIES.

SOURCE OF TOPOGRAPHIC MAPPING IS T.P. PARKER & SON
DATED APRIL 1992

BOUNDARY SURVEY WAS PERFORMED BY T.P. PARKER & SON
DATED APRIL 1992

VDOT NOTES

ALL NECESSARY UTILITY LATERALS WILL BE PLACED PRIOR TO PAVEMENT SURFACING, OR CONDUIT PROVISIONS BE MADE FOR THE SAME (I.e. WATER, SEWER, GAS AND TELEPHONE.)

CARE MUST BE TAKEN DURING CONSTRUCTION TO PREVENT EROSION, DUST, AND MUD FROM DAMAGING ADJACENT PROPERTY, CLOGGING DITCHES, TRACKING PUBLIC STREETS, AND OTHERWISE CREATING A PUBLIC OR PRIVATE NUISANCE TO SURROUNDING AREAS.

IF EROSION IS ENCOUNTERED IN ANY DRAINAGE EASEMENT, IT WILL BE THE RESPONSIBILITY OF THE DEVELOPER TO SOD, RIP-RAP, GROUT, PAVE, OR TO DO WHATEVER IS NECESSARY TO CORRECT THE PROBLEM.

MINIMUM PAVEMENT RADIUS OF 25 FEET REQUIRED AT ALL STREET INTERSECTIONS.

WHILE THESE PLANS HAVE BEEN APPROVED, SUCH APPROVAL DOES NOT EXEMPT CONNECTIONS WITH EXISTING STATE MAINTAINED ROADS FROM CRITICAL REVIEW AT THE TIME PERMIT APPLICATIONS ARE MADE. THIS IS NECESSARY IN ORDER THAT THE PREVAILING CONDITIONS ARE TAKEN INTO CONSIDERATION REGARDING SAFETY REQUIREMENTS. ADDITIONAL SAFETY ACCOMPANIMENTS SUCH AS TURNING LANES MAY OR MAY NOT BE REQUIRED.

SEWER NOTES

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL MANHOLES AFTER PAVING. MANHOLE TOPS SHALL BE ADJUSTED TO GRADE IF NECESSARY.

ALL EXISTING UTILITIES MAY NOT BE SHOWN, OR MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

HOUSE CONNECTIONS ARE TO BE MADE WITH 4" PIPE INSTALLED ON A MINIMUM GRADE OF 1/4 INCH TO 1 FOOT IN THE RIGHT OF WAY.

LATERALS FROM MANHOLES SHALL BE P.V.C. OR DUCTILE IRON OF SUFFICIENT LENGTH TO PROVIDE TWO (2) FEET OF BEARING ON NATURAL GROUND. ANY TRANSITION FROM DUCTILE IRON SHALL BE MADE WITH AN ADAPTOR COUPLING.

ALL TRENCHES SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS. LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER NOTES

A MINIMUM COVER OF THREE (3) FEET IS REQUIRED OVER PROPOSED LINES.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING VALVE VAULTS AFTER PAVING AND ADJUSTMENT TO FINAL GRADE IF NECESSARY.

ALL EXISTING UTILITIES MAY NOT BE SHOWN, OR MAY NOT BE SHOWN IN THE EXACT LOCATION. THE CONTRACTOR SHALL COMPLY WITH STATE WATER WORKS REGULATIONS, SECTION 12.05.03, WHERE LINES CROSS.

ALL TRENCHES SHALL BE COMPACTED ACCORDING TO VDOT STANDARDS. LINES SHALL BE STAKED PRIOR TO CONSTRUCTION.

WATER LINE SHALL BE MINIMUM CLASS 50 DUCTILE IRON IN ACCORDANCE TO AWWA C151 OR SDR14 PVC IN ACCORDANCE TO C-900.

GENERAL NOTES

ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF BOT. CO. AND/OR THE VIRGINIA DEPARTMENT OF TRANSPORTATION.

THE CONTRACTOR OR DEVELOPER IS REQUIRED TO NOTIFY THE ENGINEERING DIVISION IN WRITING AT LEAST THREE (3) DAYS PRIOR TO ANY CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A. INSTALLATION OF APPROVED EROSION CONTROL DEVICES.
B. CLEARING AND GRUBBING.
C. SUBGRADE EXCAVATION.
D. INSTALLING STORM SEWERS OR CULVERTS.
E. INSTALLING CURB AND GUTTER FORMS.
F. PLACING CURB AND GUTTER.
G. PLACING OTHER CONCRETE.
H. PLACING GRAVEL BASE.
I. PLACING ANY ROADWAY SURFACE.
J. INSTALLING WATER LINES.
K. INSTALLING SANITARY SEWER LINES.

A PRECONSTRUCTION CONFERENCE SHOULD BE SCHEDULED WITH THE BOT. CO. ENGINEERING DIVISION, TO BE HELD AT LEAST ONE DAY PRIOR TO ANY CONSTRUCTION.

MEASURES TO CONTROL EROSION AND SILTATION MUST BE PROVIDED FOR PRIOR TO PLAN APPROVAL. PLAN APPROVAL IN NO WAY RELIEVES THE DEVELOPER OR CONTRACTOR OF THE RESPONSIBILITIES CONTAINED IN EROSION AND SILTATION CONTROL POLICIES.

A PERMIT MUST BE OBTAINED FROM THE VDOT RESIDENCY OFFICE, SALEM, PRIOR TO CONSTRUCTION IN THE HIGHWAY RIGHT OF WAY.

PLAN APPROVAL DOES NOT GUARANTEE THE ISSUANCE OF ANY PERMITS BY VDOT. AN APPROVED SET OF PLANS AND ALL PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.

FIELD CONSTRUCTION SHALL HONOR PROPOSED DRAINAGE DIVIDES AS SHOWN ON PLANS.

CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AT THE JOB SITE.

CONSTRUCTION DEBRIS SHALL BE CONTAINED IN ACCORDANCE WITH THE VIRGINIA LITTER CONTROL ACT. NO LESS THAN ONE LITTER RECEPTACLE SHALL BE PROVIDED ON-SITE.

THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING MUD FROM TRUCKS AND/OR OTHER EQUIPMENT PRIOR TO ENTERING PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT THE STREETS ARE IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.

THE DEVELOPER AND/OR CONTRACTOR SHALL SUPPLY ALL UTILITY COMPANIES WITH COPIES OF APPROVED PLANS, ADVISING THEN THAT ALL GRADING AND INSTALLATION SHALL CONFORM TO APPROVED PLANS.

CONTRACTORS SHALL NOTIFY UTILITIES OF PROPOSED CONSTRUCTION AT LEAST TWO, BUT NOT MORE THAN TEN WORKING DAYS IN ADVANCE. AREA PUBLIC UTILITIES MAY BE NOTIFIED THROUGH MISS UTILITY AT (800) 552-7001.

ALL WORK SHALL BE SUBJECT TO INSPECTION BY BOT. CO. AND/OR VDOT INSPECTORS.

FIELD CORRECTIONS SHALL BE APPROVED BY THE BOT. CO. ENGINEERING DIVISION PRIOR TO SUCH CONSTRUCTION.

GRADE STAKES SHALL BE SET FOR ALL CURB AND GUTTER, CULVERT, SANITARY SEWER, AND STORM SEWER.

LOCATION OF UNDERGROUND UTILITIES IS BASED ON FIELD SURVEYS, AS SHOWN BY AVAILABLE RECORDS, AND AS LOCATED BY THE UTILITY LOCATOR SERVICE. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

THE SITE WORK AND LANDSCAPING CONTRACTOR(S) SHALL COMPLY WITH LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES, BOTH ON AND OFF THE SITE. REFER TO THE VIRGINIA UNIFORM EROSION CONTROL SYSTEM CONTAINED IN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION, FOR DETAILED AND SPECIFICATIONS OF EROSION CONTROL ITEMS SHOWN ON THESE PLANS.

ALL STORM DRAIN CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

APPROVED FOR SANITARY SEWER CONSTRUCTION AND ADJUSTMENT TO PRECISE SANITARY SEWER

APPROVED FOR EROSION CONTROL

Kenneth P. Decker 6/16/92

REVISIONS			
No.	Date	Remarks	By
1	6-03-92	PER VDOT REVIEW	CLW
2	6-03-92	PER BOTETOURT COUNTY REVIEW	CLW
3			
4			
5			
6			
7			
8			
9			
10			

SHEET #

1
2
3
4
5

SHEET INDEX

TITLE

TITLE SHEET
DIMENSIONAL AND LANDSCAPING PLAN
GRADING, UTILITIES, AND EROSION CONTROL PLAN
GENERAL DETAILS
SOIL EROSION & SEDIMENTATION CONTROL DETAILS

LEGEND

ABBREVIATIONS		SYMBOLS	
AH/FH	ARROW HEAD, TOP OF FIRE HYDRANT	MINIMUM	100.5 E
APPROX	APPROXIMATE	NBL	NORTH BOUND LANE
ASPH	ASPHALT	PROP	PROPOSED
BC	BOTTOM OF CURB	PUE	PUBLIC UTILITY EASEMENT
BIT	BITUMINOUS	P/MT	PAVEMENT
BLDG	BUILDING	R	RADIUS
BLK	BLOCK	RT	RIGHT
BM	BENCHMARK	R/W	RIGHT OF WAY
BW	BOTTOM OF WALL	REQD	REQUIRED
CB	CINDER BLOCK	RR	RAILROAD
CG	CURB & GUTTER	RYS	REAR YARD SETBACK
CMP	CORRUGATED METAL PIPE	SAN	SANITARY
CONC	CONCRETE	SBL	SOUTH BOUND LANE
COR	CORNER	SD	STORM DRAIN
DBL	DOUBLE	SECT	SECTION
DEFL	DEFLECTION	SE	SLOPE EASEMENT
DI	DROP INLET	SS	SANITARY SEWER
DIA	DIAMETER	SSE	SANITARY SEWER EASEMENT
DE	DRAINAGE EASEMENT	STA	STATION
EBL	EAST BOUND LANE	STD	STANDARD
ELEC	ELECTRIC	STO	STORAGE
ELEV	ELEVATION	SYS	SIDE YARD SETBACK
ENTR	ENTRANCE	TBM	TEMPORARY BENCHMARK
EP	EDGE OF PAVEMENT	TC	TOP OF CURB
EW	ENDWALL	TEL	TELEPHONE
EXIST	EXISTING	TRANS	TRANSFORMER
FDN	FOUNDATION	TW	TOP OF WALL
FF	FINISHED FLOOR	TY	TYPICAL
HPT	HIGH POINT	VDOT	VIRGINIA DEPARTMENT OF TRANSPORTATION
INV	INVERT	VERT	VERTICAL
IP	IRON PIN	WBL	WEST BOUND LANE
LT	LEFT	YD	YARD
MBL	MINIMUM BUILDING LINE		
MH	MANHOLE		

NAME OF DEVELOPMENT

PRECISION HYDRAULICS

LOCATION

LOT 2 - BOTETOURT INDUSTRIAL PARK
INDUSTRIAL DRIVE
COUNTY OF BOTETOURT, VIRGINIA

OWNER

STEVE CRAFT & JAMES BUSSEY
5637 WILLIAMSON RD.
ROANOKE, VIRGINIA, 24012
PHONE: (703) 366-0229

DEVELOPER

SAME AS OWNER

TAX MAP #(S) 106C **BLOCK #(S)** 1 **PARCEL #(S)** 2

ENGINEER'S NOTES

T. P. PARKER & SON

816 Boulevard
Post Office Box 39
Salem, Virginia 24153
Telephone: 703-387-1153
FAX: 703-389-5767

BENCHMARK:
ARROWHEAD ON TOP OF FIRE
HYDRANT @ INTERSECTION OF
INDUSTRIAL DRIVE AND NORTH
COMMERCE STREET.
ELEVATION = 1162.58

STORM DRAIN SCHEDULE

- 45'-12" ADS PIPE @ 32.5 %
INV. IN = 1144.50
INV. OUT = 1129.90
VDOT STD. DI-1
TOP = 1134.00
INV. IN = 1129.90
INV. OUT = 1129.75
- 125'-15" ADS PIPE @ 3.80 %
INV. IN = 1129.75
INV. OUT = 1125.00
VDOT STD. DI-1
TOP = 1129.50
INV. IN = 1125.00
INV. OUT = 1124.85
- 27'-15" ADS PIPE @ 6.85 %
INV. IN = 1124.85
INV. OUT = 1123.00

ALL NEW STORM DRAIN SHALL BE "ADS CORRUGATED POLYETHYLENE PIPE" OR APPROVED EQUAL. ALL STORM DRAIN INSTALLATION SHALL BE IN ACCORDANCE WITH THE "PIPE BEDDING DETAIL" SHOWN ON SHEET 4 OF 5.

CONTRACTOR SHALL INSURE COMPACTION OVER DRAINAGE PIPE TO PREVENT PIPING AND EROSION ALONG THE PIPE WHERE CONSTRUCTION IS DOWN AN EXISTING SLOPE.

THE COST OF CONSTRUCTING THE TWO VEE-DITCHES, STORM DRAIN ITEMS 1 2 3 4 5, THE GROUTED RIP-RAP TRAPEZOIDAL DITCH DOWN THE SOUTHERN SLOPE, AND THE ARMORING OF THE SEDIMENTATION POND SLOPES SHALL BE BID SEPARATELY UNDER ALTERNATE BID ITEM NO. _____

SANITARY SEWER SCHEDULE

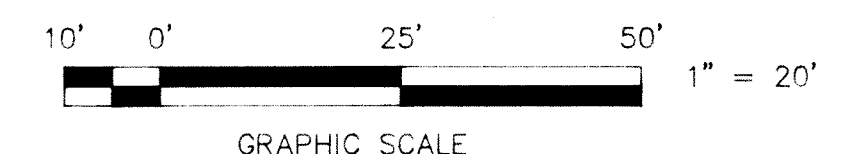
- 4" PVC S.S. @ 2.08 % MIN.
S.S.C.O. - INV. = 1133.00
- 38' - 4" PVC S.S. @ 2.08 %
S.S.C.O. - INV. = 1132.21
- 61' - 4" PVC S.S. @ 2.08 %
S.S.C.O. - INV. = 1133.00
- 30' - 4" PVC S.S. @ 6.87 %
S.S.C.O. - INV. = 1130.94
- 50' - 4" PVC S.S. @ 2.88 %
S.S.C.O. - INV. = 1129.50
- 45' - 4" PVC S.S. @ 3.00 %
INV. OUT = 1128.15
SEE "DETAIL FOR INSIDE DROP MANHOLE", SHEET 4 OF 5.

ALL SANITARY SEWER LINE SHALL BE SCHEDULE 40 PVC PIPE.

SANITARY SEWER CLEAN-OUTS IN TRAFFIC AREAS SHALL BE PROTECTED BY A CAST-IRON WATER METER BOX SET IN CONCRETE A MINIMUM OF SIX INCHES THICK AND TWENTY-FOUR INCHES IN DIAMETER. THE TOP OF THE BOX SHALL BE SET FLUSH WITH THE FINISH GRADES SHOWN ON THESE PLANS.

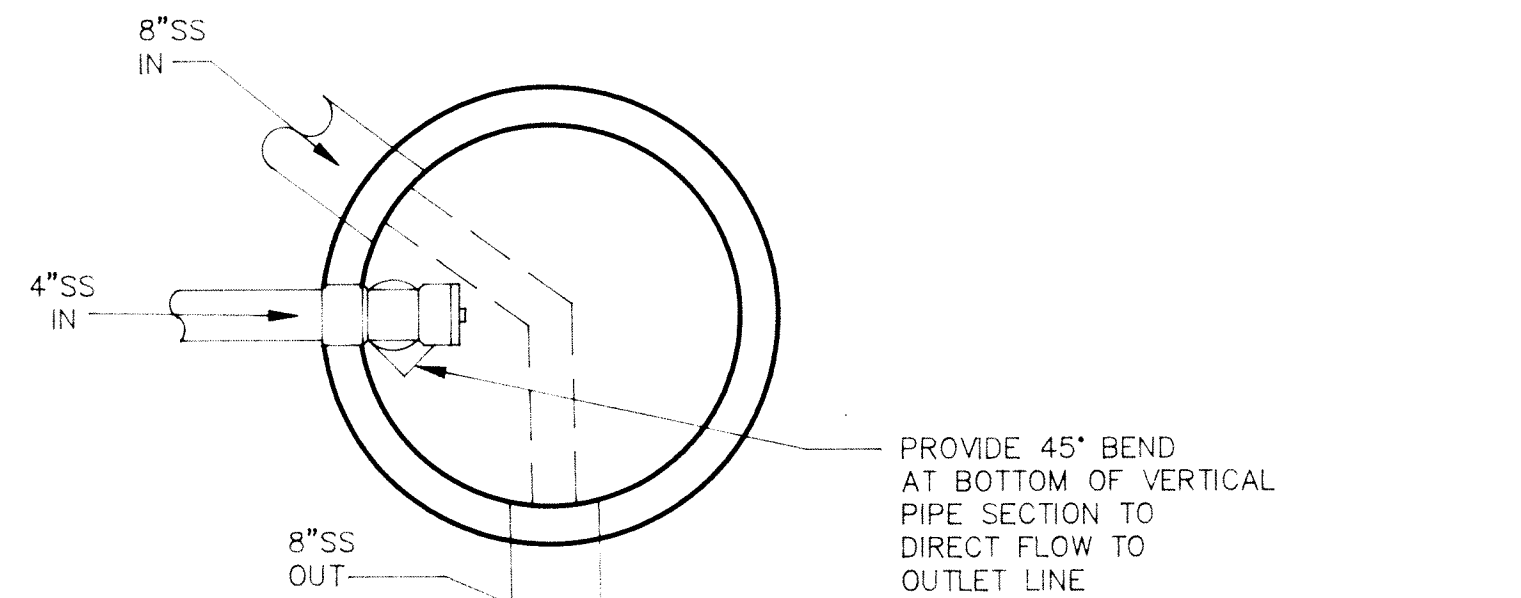
THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE NEW WATER METER AND THE 3/4" WATERLINE WITH THE CITY OF ROANOKE UTILITY DEPARTMENT.

BENCHMARK:
RAILROAD SPIKE SET IN
POLE # CNB-39A.
ELEVATION = 1136.54

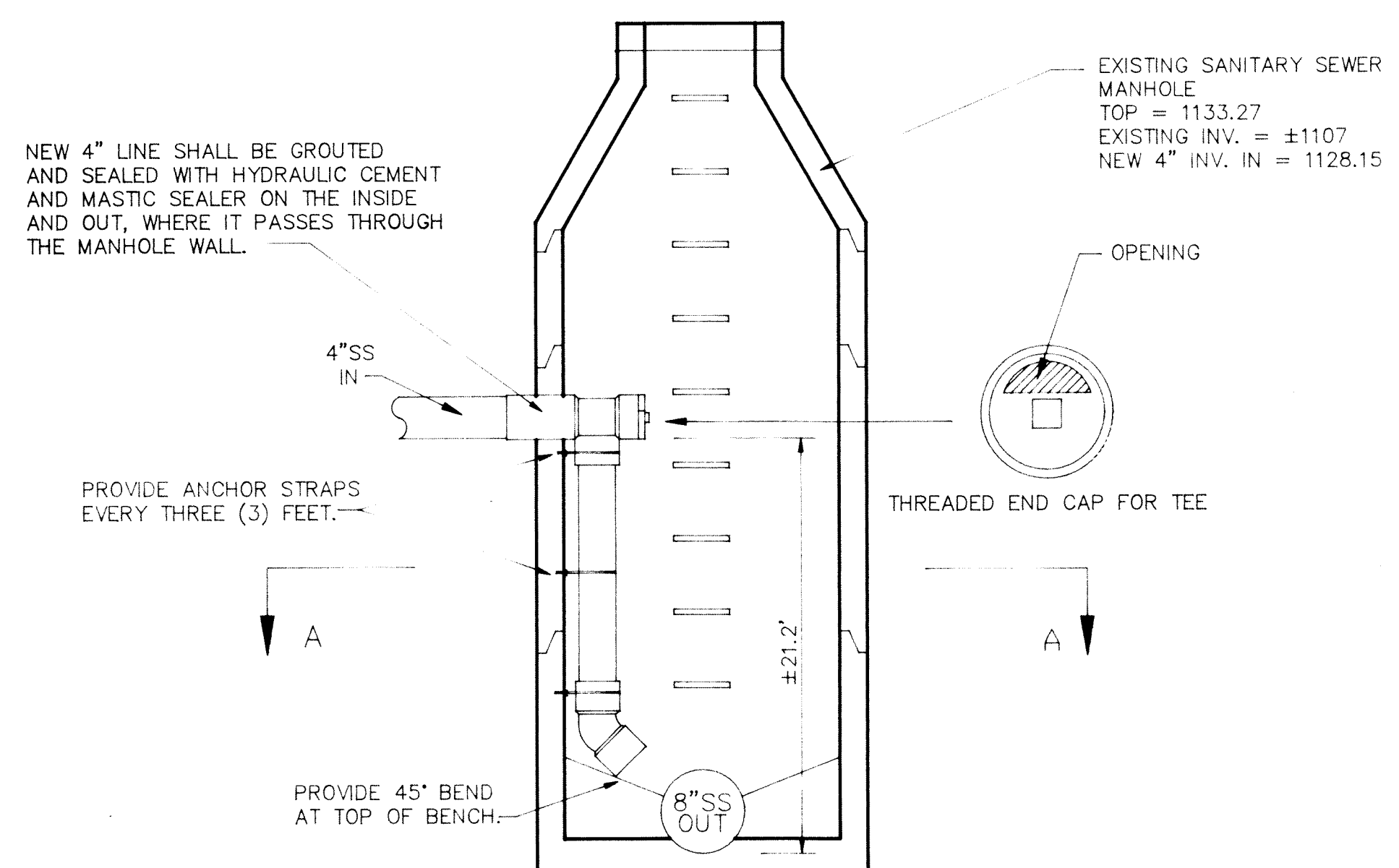


	GRADING, UTILITIES, AND SOIL EROSION PLAN FOR PRECISION HYDRAULICS SITUATE INDUSTRIAL DRIVE BOTETOURT INDUSTRIAL PARK COUNTY OF BOTETOURT, VIRGINIA	
	SCALE: 1"=20' DATE: MAY 6, 1992	
	DESIGNED BY C.L. WHITE DRAWN BY C.L. WHITE CHECKED BY W.O. # 92-0490 N.B. JW-52 TAX NO. 106C-1-2	T. P. PARKER & SON 816 Boulevard Post Office Box 39 Salem, Virginia 24153 Telephone: 703-387-1153 FAX: 703-380-6767
	TPP&S ENGINEERS SURVEYORS PLANNERS	

REVISED JUNE 3, 1992 PER BOTETOURT CO. - CLW
REVISED JUNE 3, 1992 PER VDOT - CLW



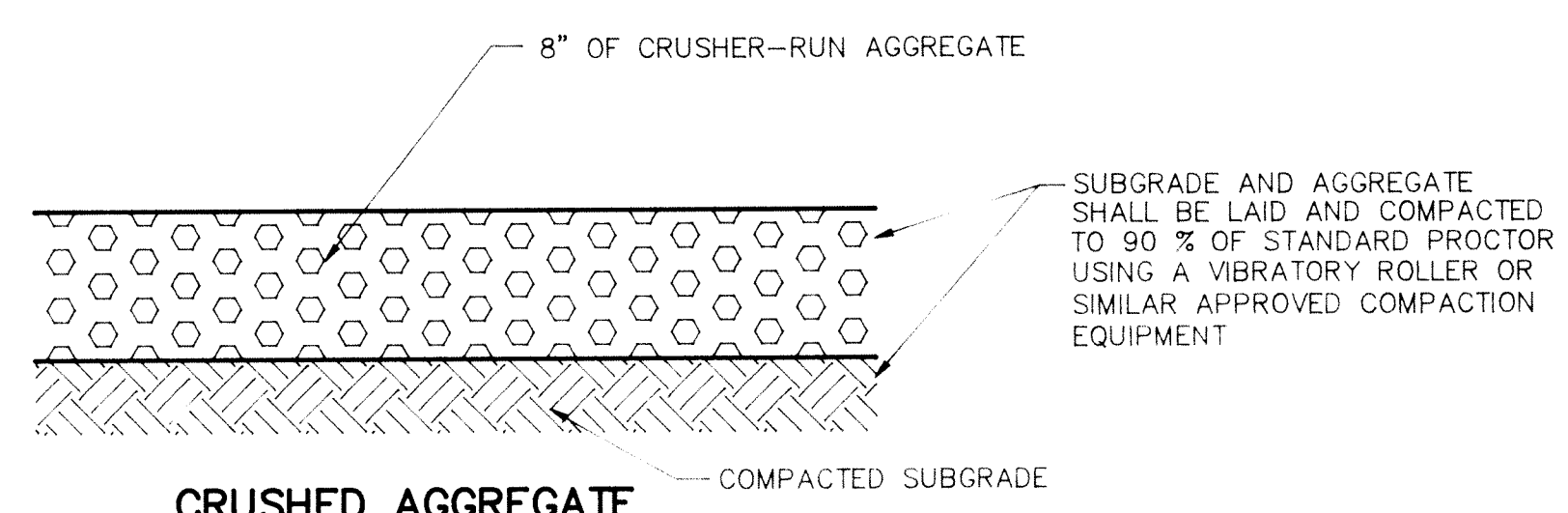
SECTION A-A



DETAIL FOR INSIDE DROP MANHOLE

NO SCALE

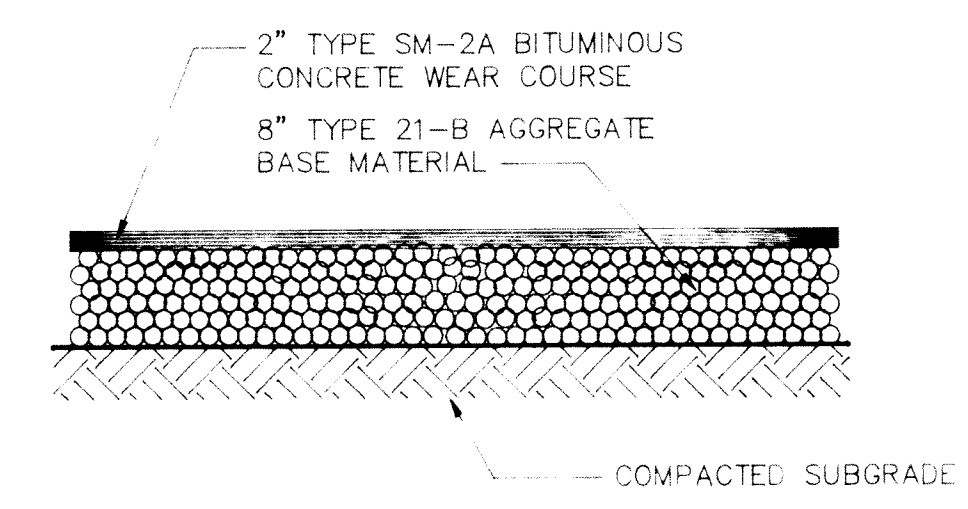
NOTE: CONTRACTOR SHALL CONTACT THE BOTETOURT COUNTY DEPT. OF PUBLIC WORKS (703) 992-8316 TO INSPECT THE CONSTRUCTION OF THE LATERAL-TO-MANHOLE JOINT PRIOR TO BACKFILLING AGAINST THE MANHOLE.



CRUSHED AGGREGATE PAVING DETAIL

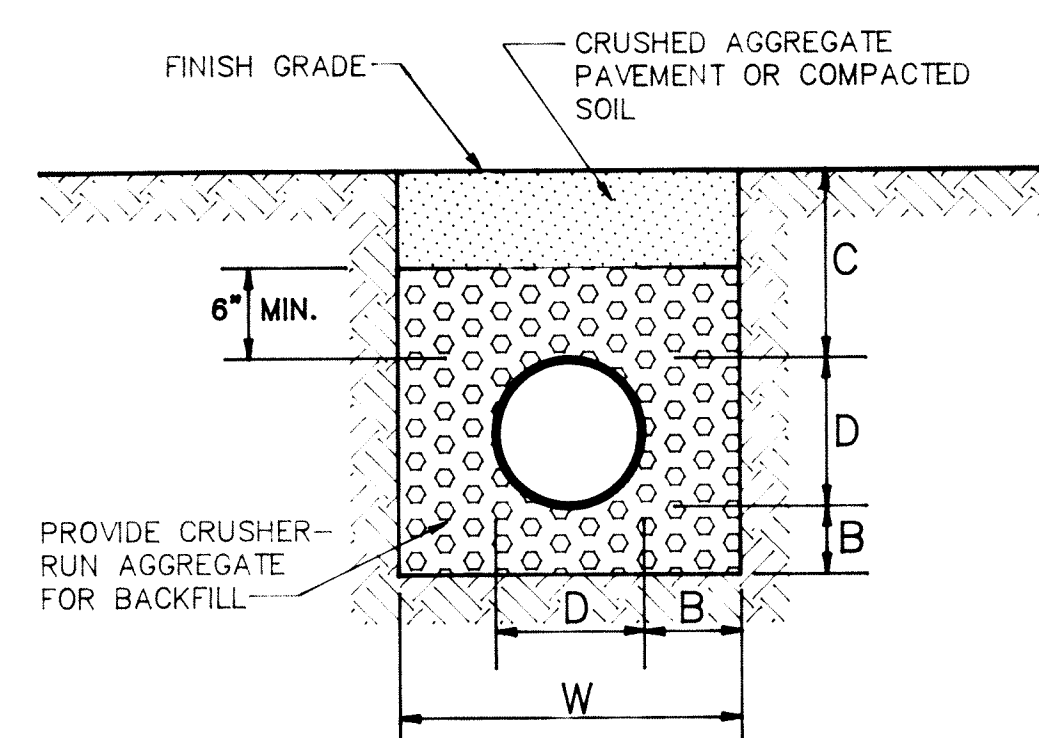
NO SCALE

ALL COMPACTION AND PAVING OPERATIONS SHALL CONFORM TO VDOT STANDARDS AND SPECIFICATIONS



BITUMINOUS PAVEMENT DETAIL

NO SCALE

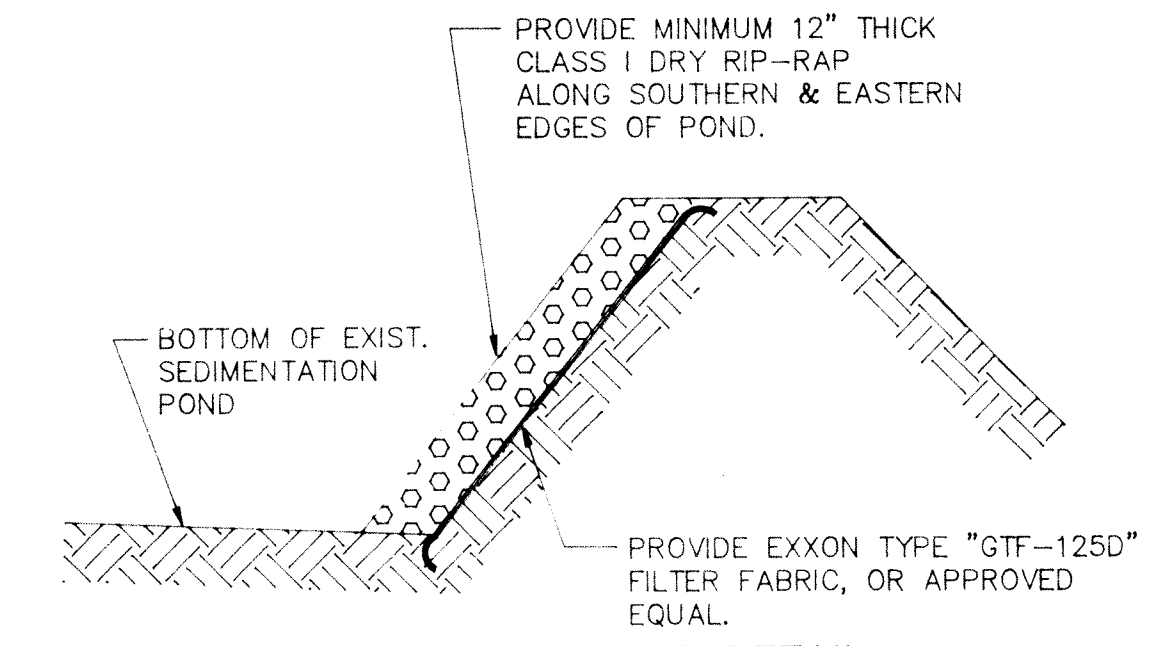


MINIMUM DIMENSIONS TRENCH INSTALLATION			
NOMINAL DIAMETER	MINIMUM THICKNESS	MINIMUM COVER	MIN. TRENCH WIDTH
10"	4"	12"	20"
12"	5"	12"	24"
15"	5"	12"	28"
18"	6"	12"	36"
24"	6"	12"	42"

PIPE BEDDING DETAIL

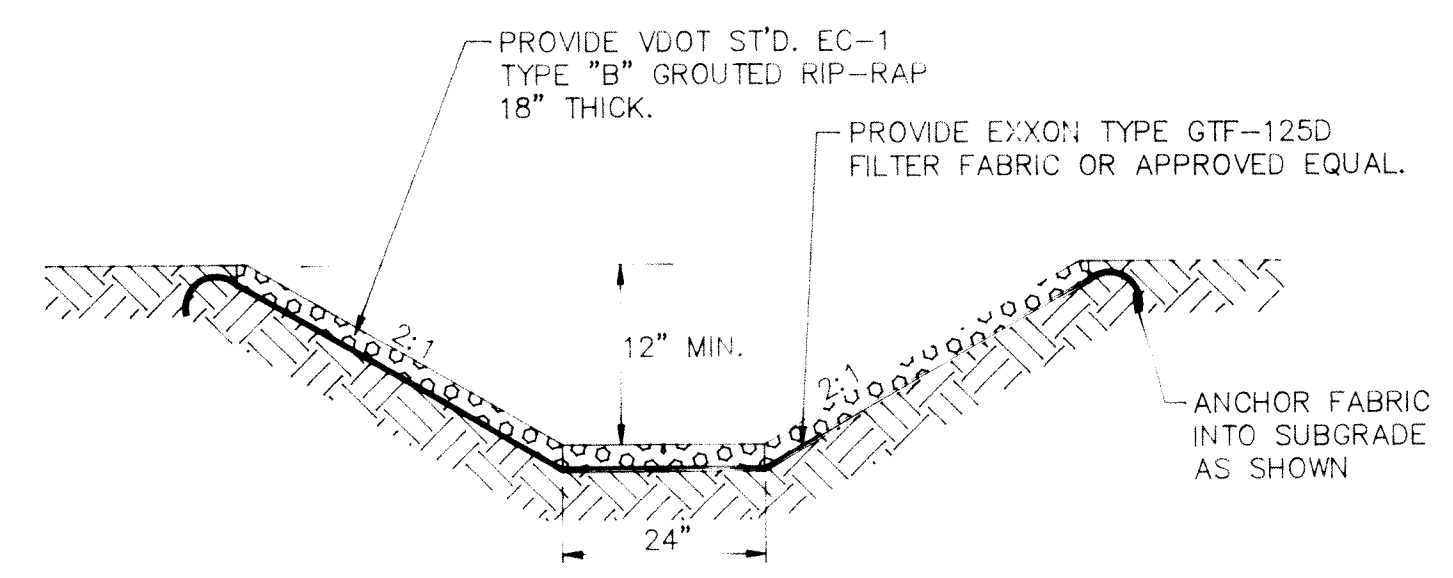
NO SCALE

- NOTES:**
1. CRUSHER-RUN AGGREGATE SHOULD BE USED AS THE BEDDING AND ENVELOPE MATERIAL AROUND THE CULVERT.
 2. THE CORRUGATED PIPE SHOULD BE LAID ON GRADE, ON A LAYER OF BEDDING MATERIAL AS SHOWN. THE BACKFILL MATERIAL SHOULD BE WELL COMPACTED IN SIX INCH LAYERS UNDER THE HAUNCHES, AROUND THE SIDES, AND ABOVE THE PIPE TO THE FINISH GRADE ELEVATION SHOWN ON THE PLANS.



EMBANKMENT ARMORING DETAIL

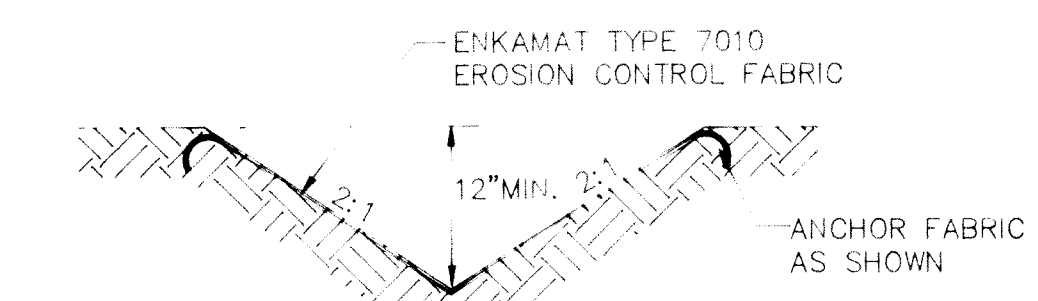
NO SCALE



TRAPEZOIDAL DITCH SECTION

NO SCALE

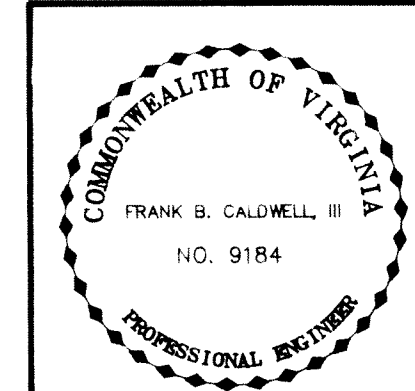
TRAPEZOIDAL DITCH SHALL EXTEND FROM THE TOP OF SLOPE TO THE BOTTOM OF THE EXISTING SEDIMENT POND AS SHOWN ON SHEET 3 OF 5.



VEE-DITCH DETAIL

NO SCALE

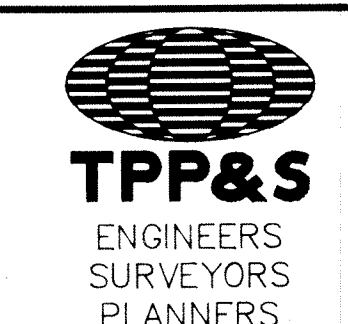
"TYPE A" - EARTH ONLY, ENKAMAT NOT REQUIRED
"TYPE B" - ENKAMAT REQUIRED TO FULL DEPTH



GENERAL DETAILS
FOR
PRECISION HYDRAULICS
SITUATE INDUSTRIAL DRIVE
BOTETOURT INDUSTRIAL PARK
COUNTY OF BOTETOURT, VIRGINIA

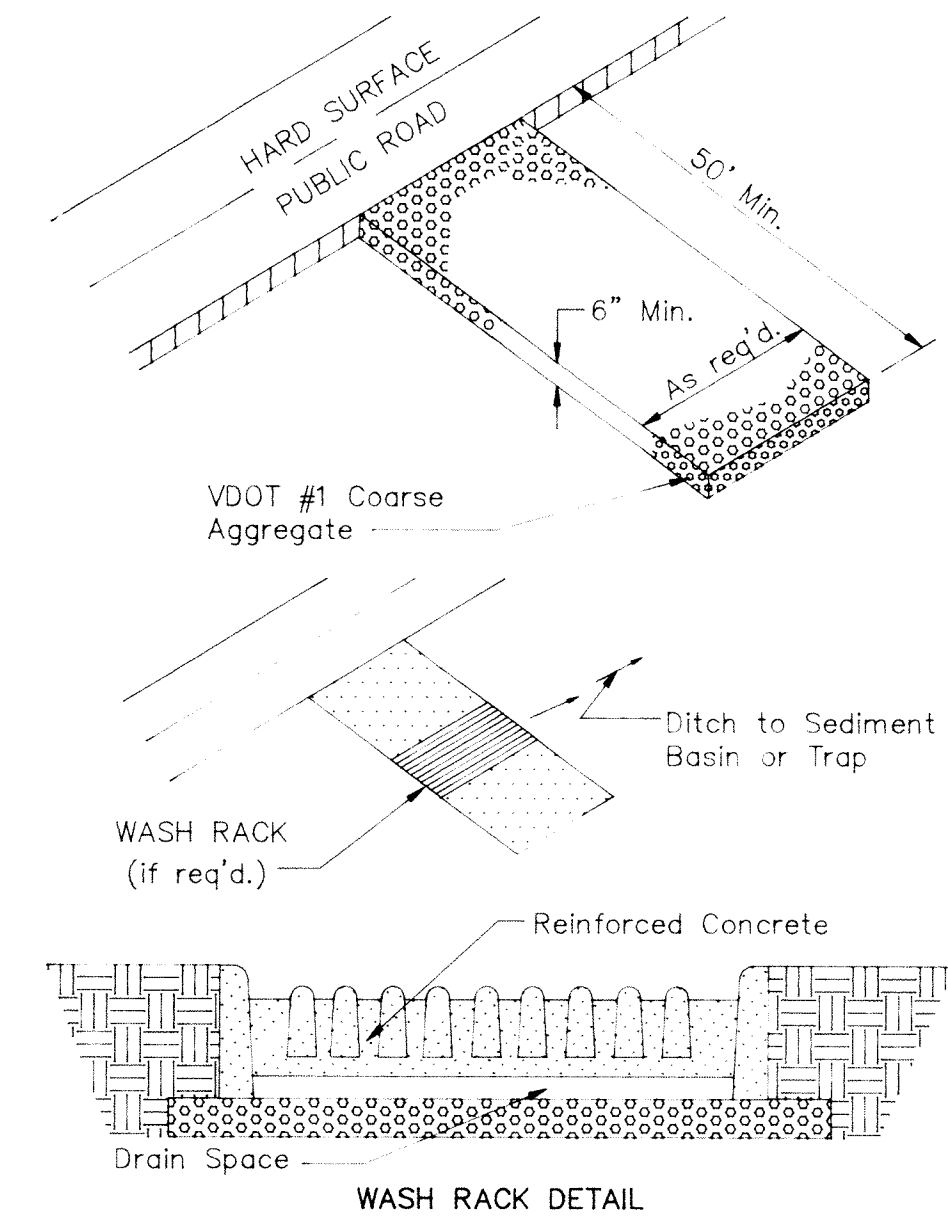
SCALE: AS SHOWN DATE: MAY 6, 1992

DESIGNED BY C.L. WHITE
DRAWN BY C.L. WHITE
CHECKED BY _____
W.O. # 92-0490
N.B. JW-52
TAX NO. 106C-1-2

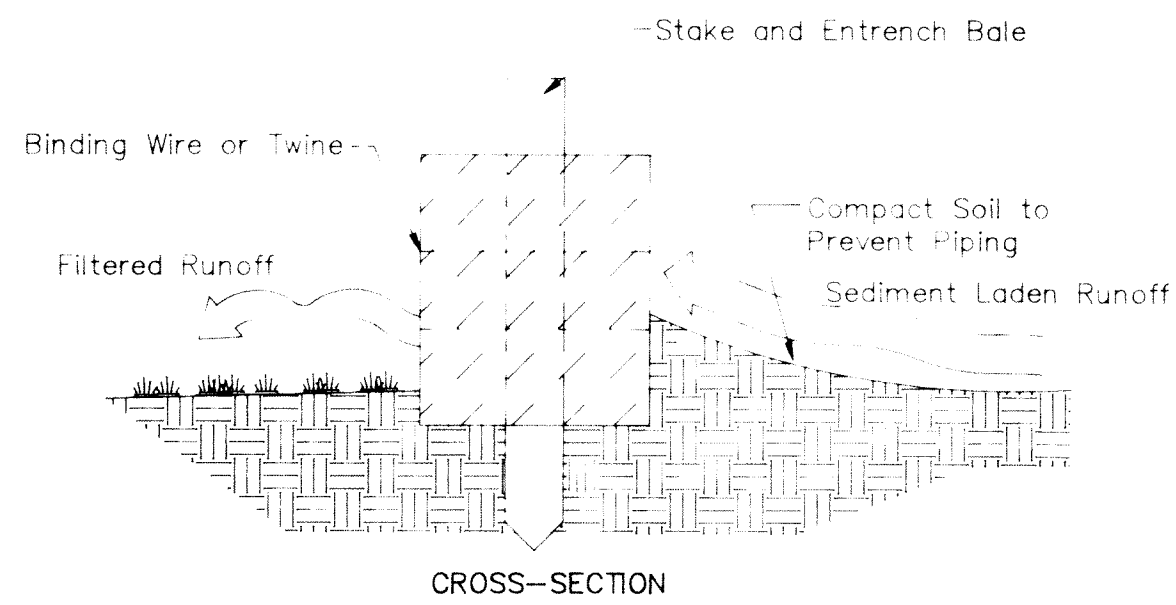


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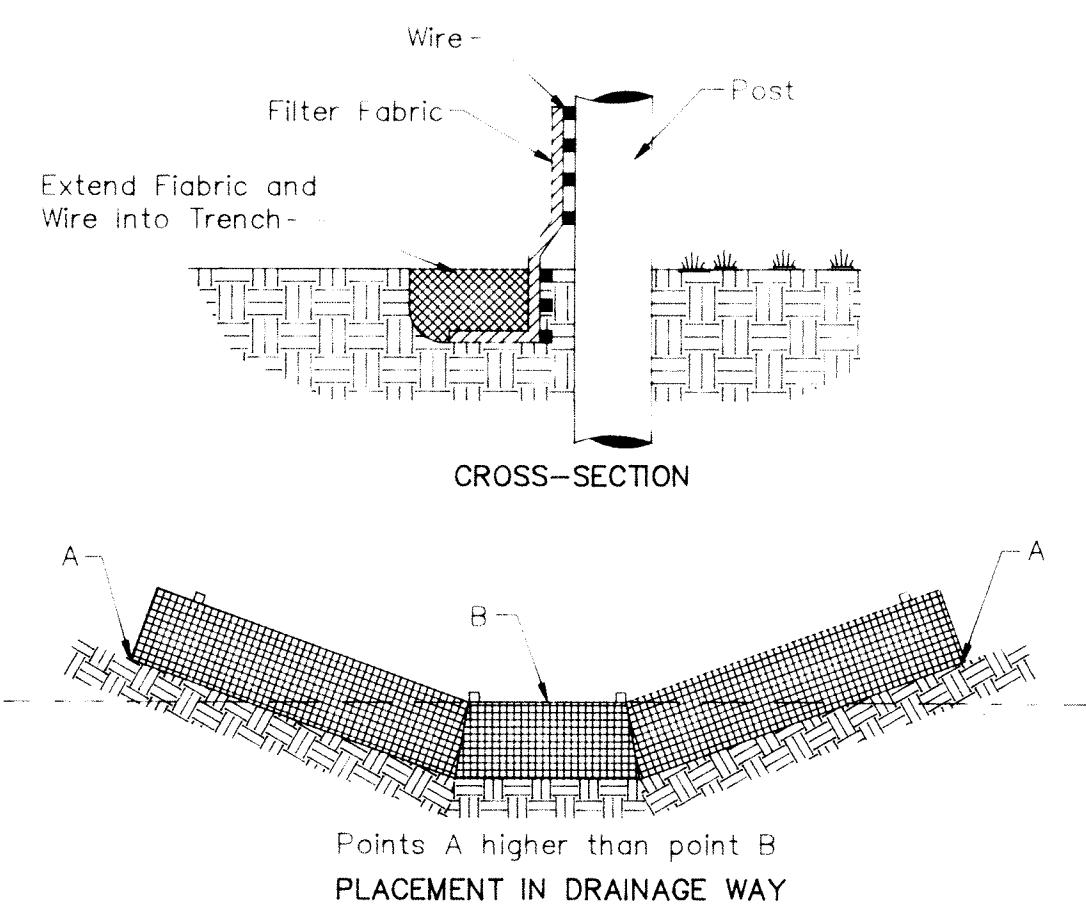
REVISED JUNE 3, 1992 PER BOTETOURT CO. - CLW
REVISED JUNE 3, 1992 PER VDOT - CLW



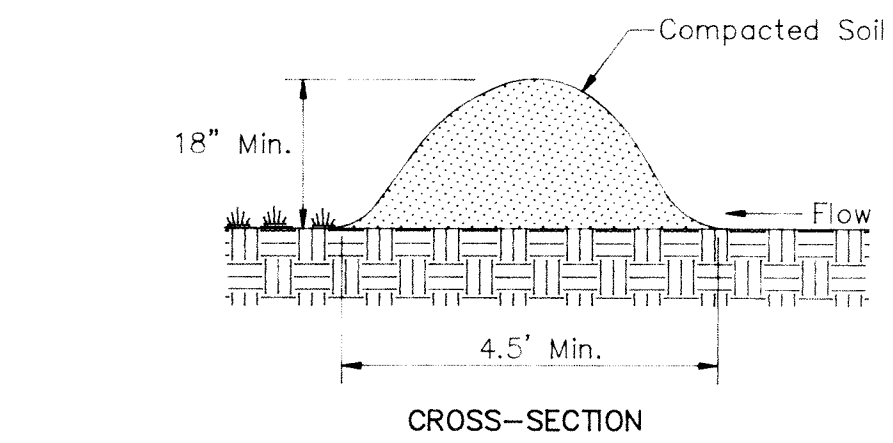
CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE



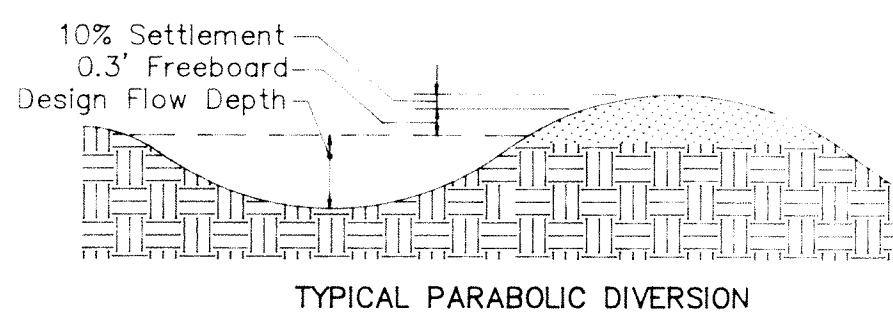
STB STRAW BALE BARRIER



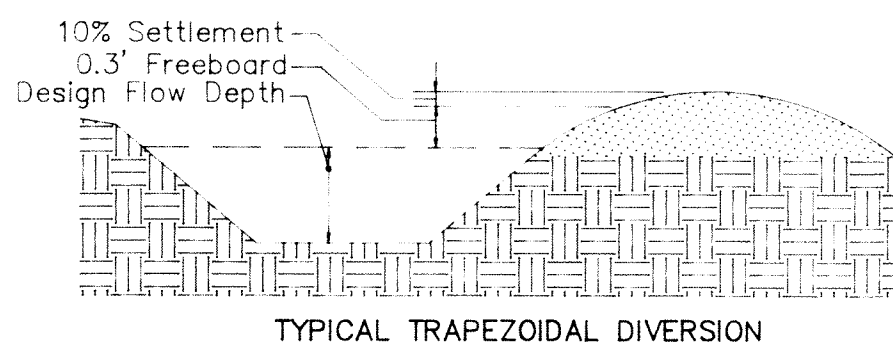
SF SILT FENCE



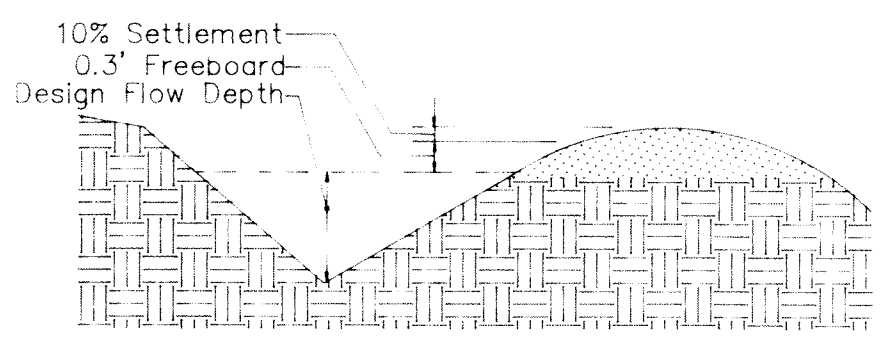
DD TEMPORARY DIVERSION DIKE



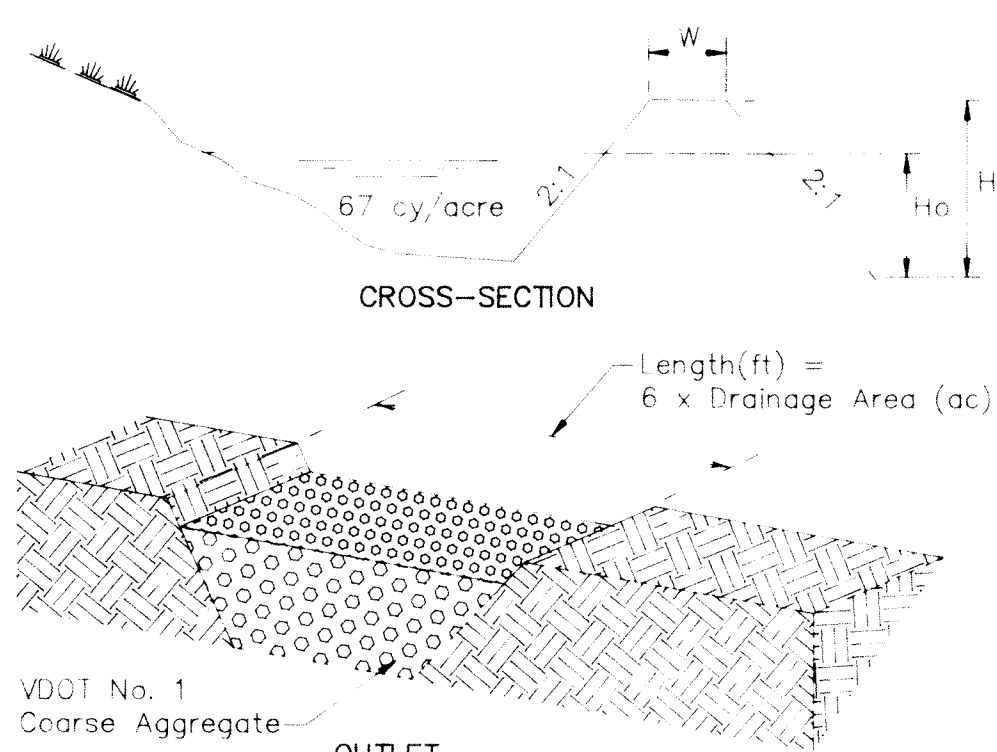
TYPICAL PARABOLIC DIVERSION



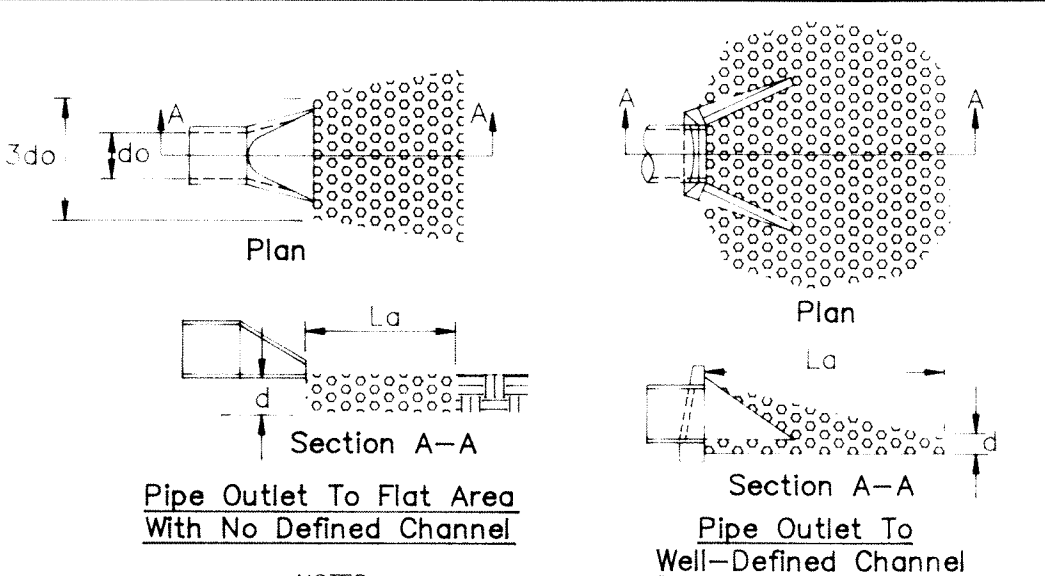
TYPICAL TRAPEZOIDAL DIVERSION



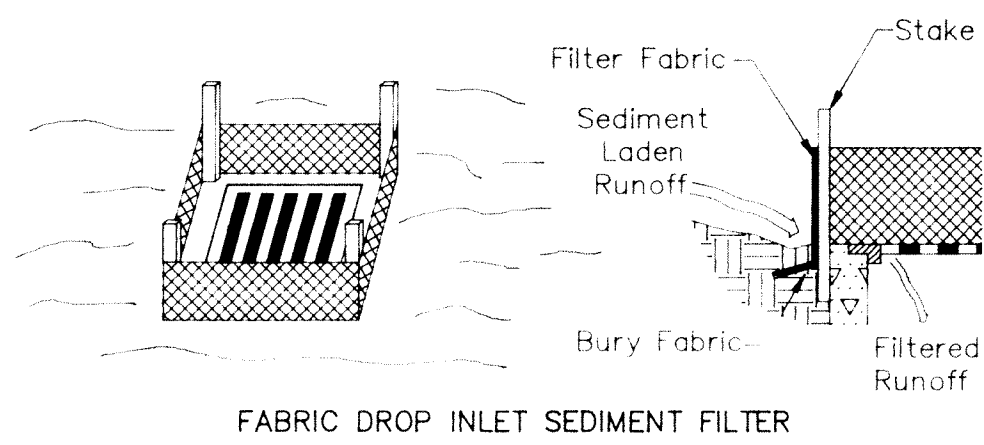
DV TYPICAL VEE DIVERSION



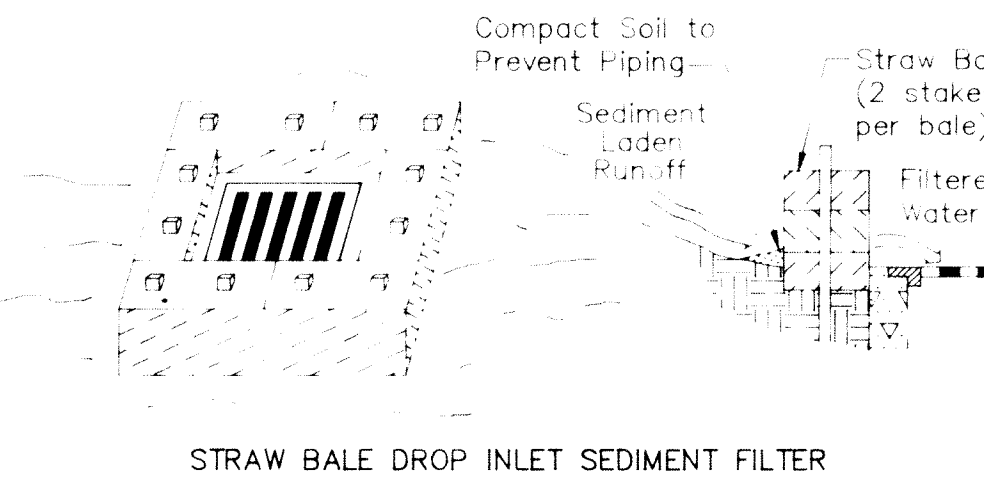
ST SEDIMENT TRAP



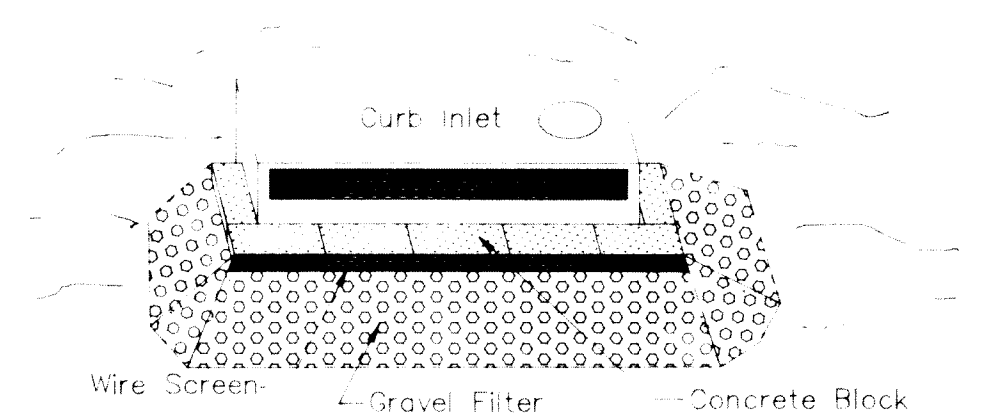
OP OUTLET PROTECTION



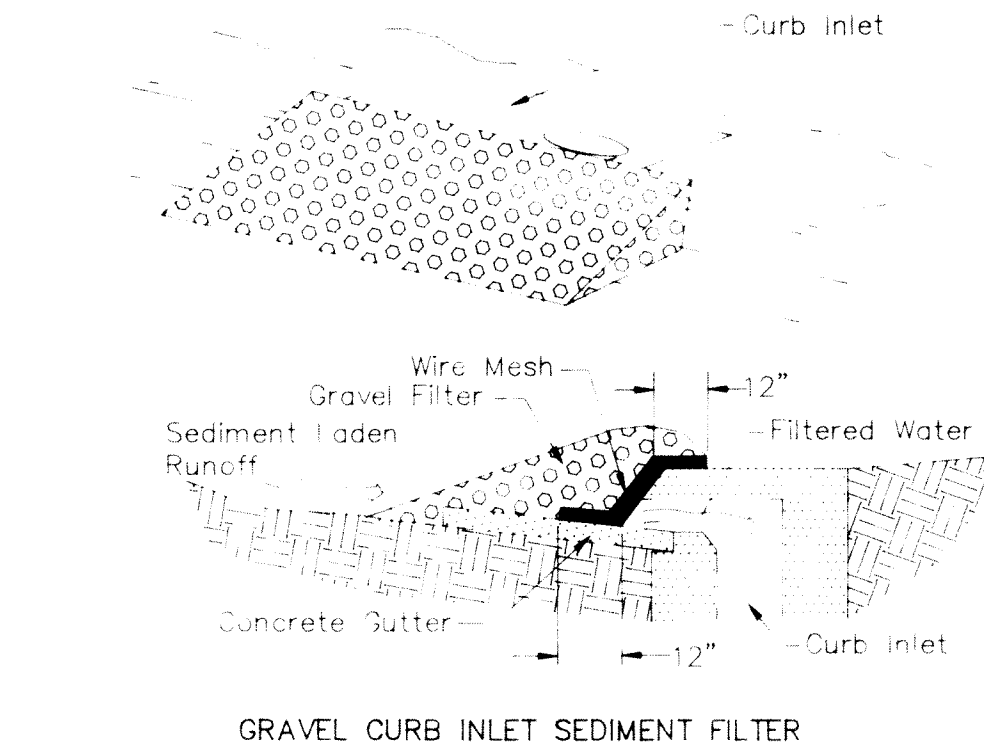
FABRIC DROP INLET SEDIMENT FILTER



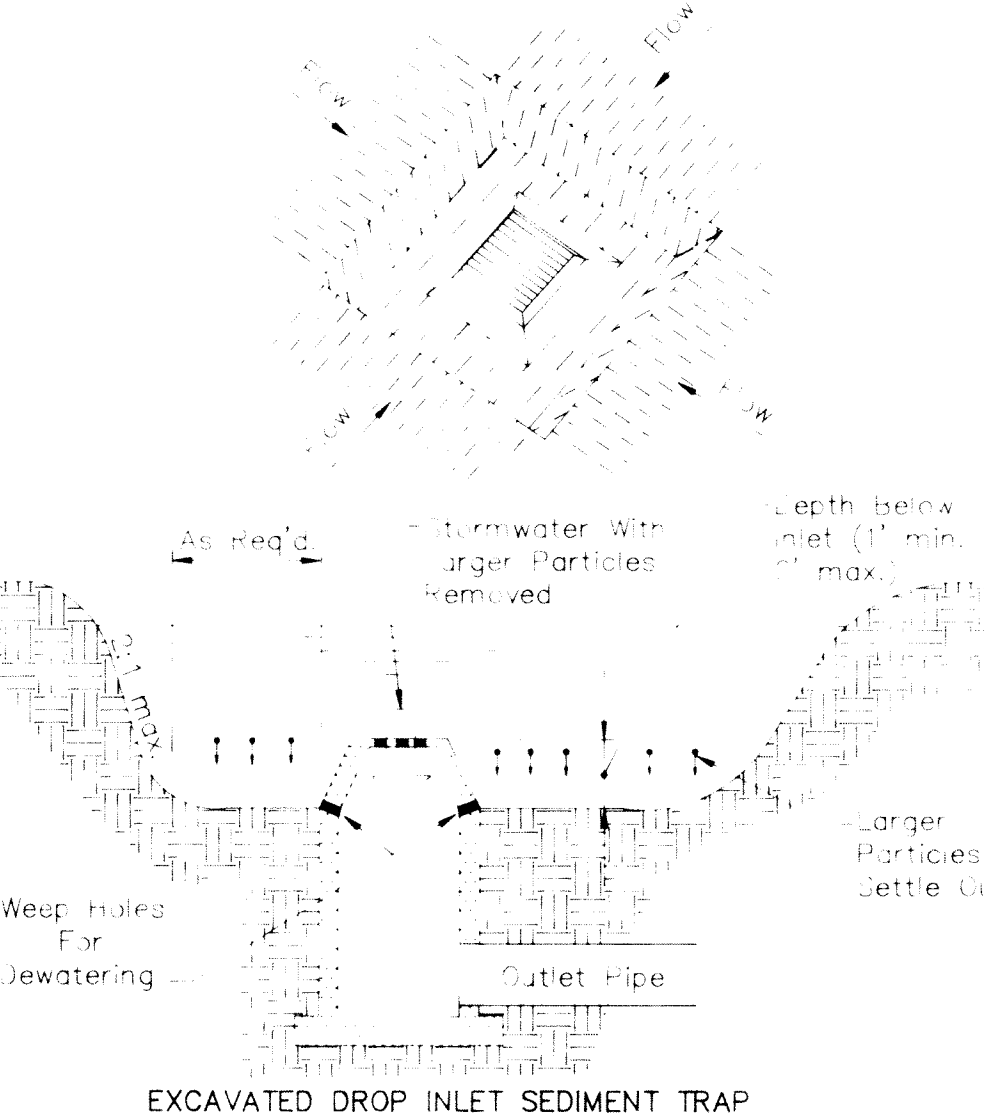
STRAW BALE DROP INLET SEDIMENT FILTER



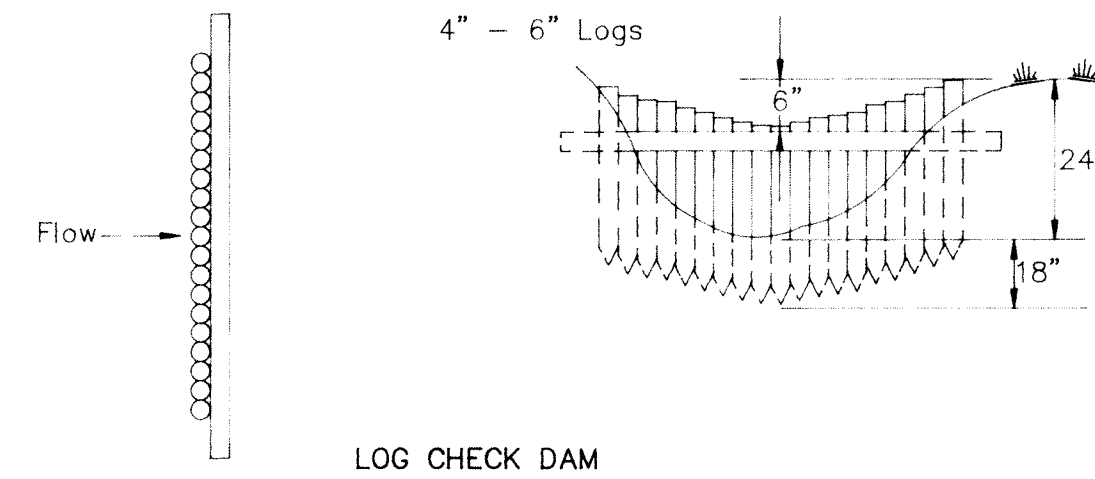
BLOCK AND GRAVEL CURB INLET SEDIMENT FILTER



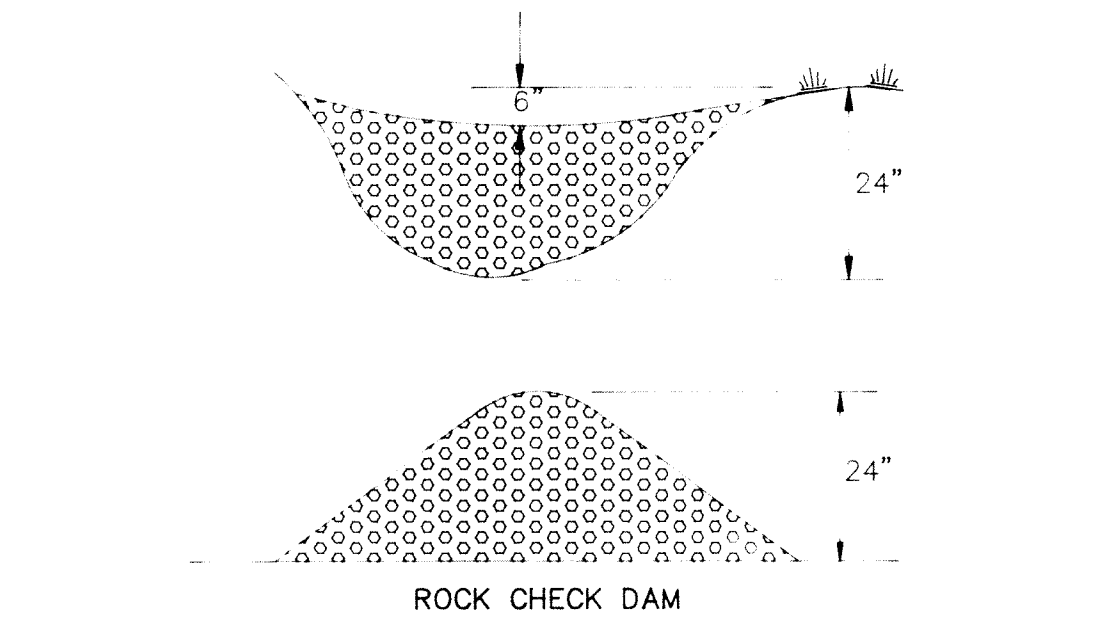
GRAVEL CURB INLET SEDIMENT FILTER



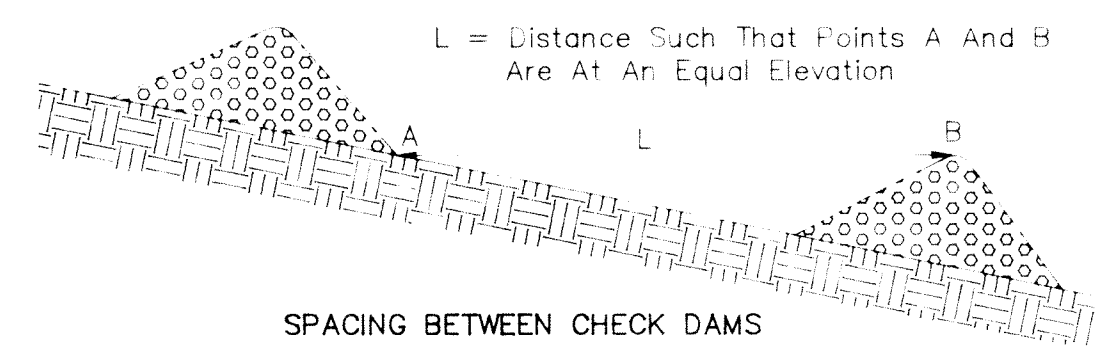
IP STORM DRAIN INLET PROTECTION



LOG CHECK DAM



ROCK CHECK DAM



CD CHECK DAM



EXCAVATED DROP INLET SEDIMENT TRAP

EROSION-SILTATION CONTROL COST ESTIMATE

ALL COSTS GIVEN ARE COMPLETE IN PLACE

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
CONSTRUCTION ENTRANCE	EA		\$	\$
SILT FENCE	LF			
INLET PROTECTION	EA			
TEMPORARY DIVERSION DIKE	LF			
TEMPORARY FILL DIVERSION	LF			
SEDIMENT TRAP	EA			
CHECK DAM	EA			
PERMANENT SEEDING	1000 SF			
SUB-TOTAL				\$
10% CONTINGENCY				\$
TOTAL PROJECT COST				\$

GENERAL EROSION & SEDIMENT CONTROL NOTES

- ALL SOIL EROSION & SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- THE APPROVING AUTHORITY MAY ADD TO, DELETE, RELOCATE, CHANGE, OR OTHERWISE MODIFY CERTAIN EROSION AND SEDIMENT CONTROL MEASURES WHERE FIELD CONDITIONS ARE ENCOUNTERED THAT WARRANT SUCH MODIFICATIONS.
- ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE PLAN SHALL BE PLACED IN ADVANCE OF THE WORK BEING PERFORMED, AS FAR AS PRACTICAL.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LEAVE THE SITE ADEQUATELY PROTECTED AGAINST EROSION, SEDIMENTATION, OR ANY DAMAGE TO ANY ADJACENT PROPERTY AT THE END OF EACH DAY'S WORK.
- FOR THE EROSION CONTROL KEY SYMBOLS SHOWN ON THE PLANS, REFER TO THE VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

TYPE A

- 15 OCTOBER TO 1 FEBRUARY
K-31 FESCUE @ 5 LB / 1000 SF
BORZY WINTER RYE @ 1/2 LB / 1000 SF
- 1 FEBRUARY TO 1 JUNE
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF
- 1 JUNE TO 1 SEPTEMBER
K-31 FESCUE @ 5 LB / 1000 SF
GERMAN MILLET @ 1/2 LB / 1000 SF
- 1 SEPTEMBER TO 15 OCTOBER
K-31 FESCUE @ 5 LB / 1000 SF
ANNUAL RYE @ 1/2 LB / 1000 SF

TYPE B (SLOPES 3:1 OR STEEPER)

- 15 MARCH TO 1 MAY
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF
- 15 AUGUST TO 1 OCTOBER
CROWN VETCH @ 1/2 LB / 1000 SF
PERENNIAL RYEGRASS @ 1/2 LB / 1000 SF
RED TOP @ 1/8 LB / 1000 SF

- LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE
- FERTILIZER: 4-8-8 @ 4 LB / 1000 SF
20-20-20 @ 7 LB / 1000 SF

- MULCH: SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
- SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

- SEED APPLICATION: **APPLY SEED & MULCH WITH A HYDROSEEDER.**
- MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

PS PERMANENT SEEDING MIXTURE

TOTAL DISTURBED AREA = 1.86 AC. = 81,020 SQ. FT.

EROSION AND SILTATION CONTROL DETAILS FOR

PRECISION HYDRAULICS

LOT 2 - BOTETOURT INDUSTRIAL PARK
COUNTY OF BOTETOURT, VIRGINIA

NO SCALE

DESIGNED BY **CLW**
DRAWN BY **(CAD)**
CHECKED BY
W.O. # **92-0490**
N.B. **JW-52**
TAX NO. **106C-1-2**

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