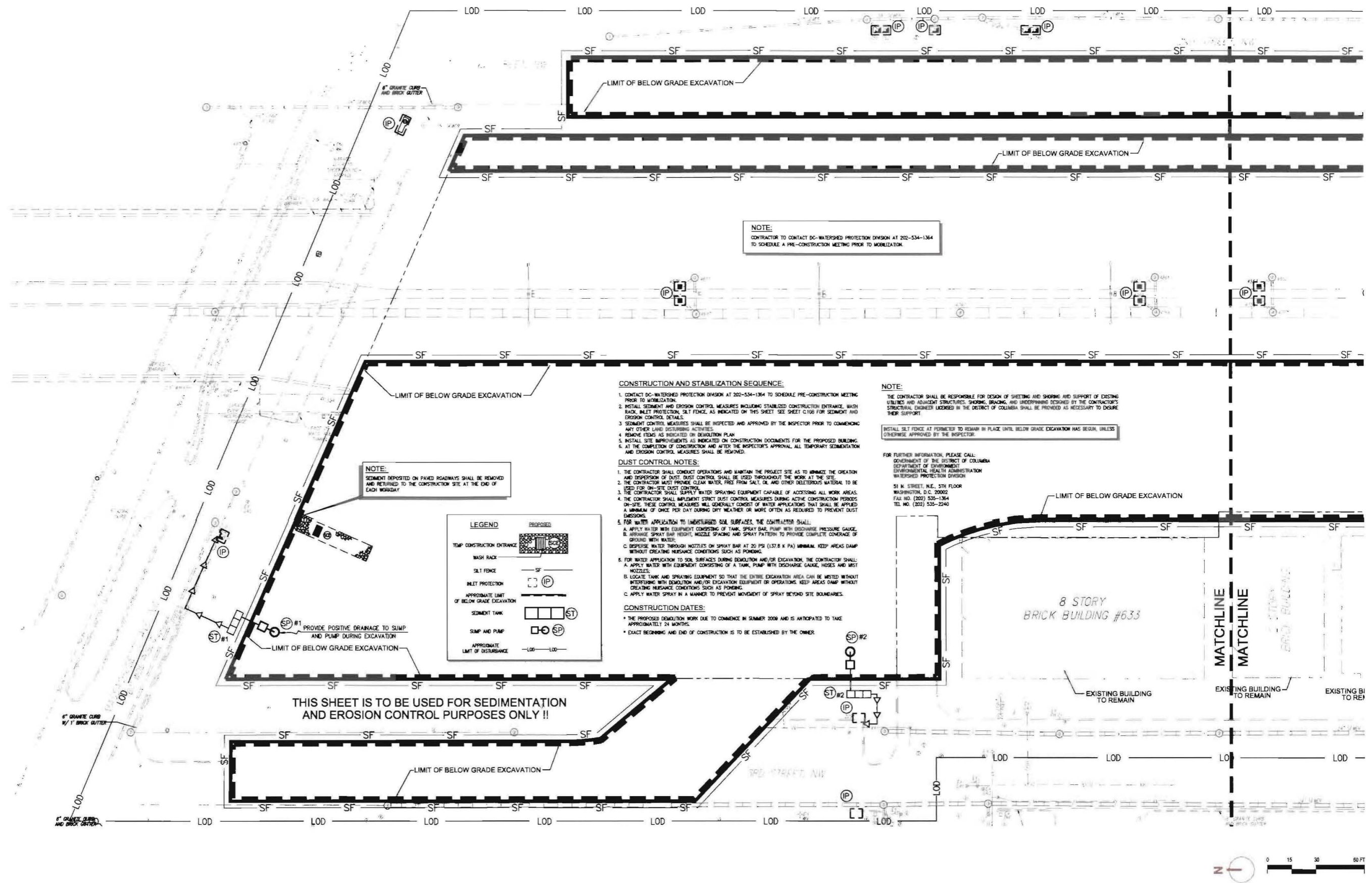


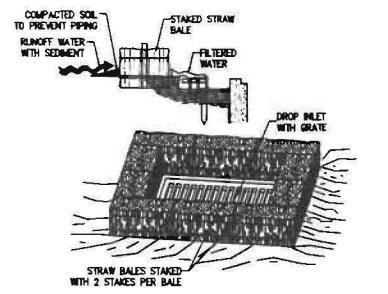
Preliminary Waterline Design - Quantities

Item	Quantity	
Fire Hydrant	19	Each
6" Waterline - Fire Hydrant Service, Trench	420	LF
6" Waterline - Buiding Fire Service, Trench	450	LF
4" Waterline - Domestic Service, Trench	450	LF
8" Waterline - Ductile Iron, Restrained Joint, Trench	3420	LF
8" Waterline - Ductile Iron, Restrained Joint, Suspended	500	LF
12" Waterline - Ductile Iron, Restrained Joint, Trench	2740	LF

LEGEND:

EXISTING COMBINED SEWER TO BE REMOVED	--- CS ---
PROPOSED COMBINED SEWER	==== CS
EXISTING WATER LINE TO BE REMOVED	--- W ---
PROPOSED WATER	==== W
PROPOSED STORM DRAIN	=====
PROPOSED SANITARY SEWER LATERALS	-----
PROPOSED FIRE HYDRANT	●

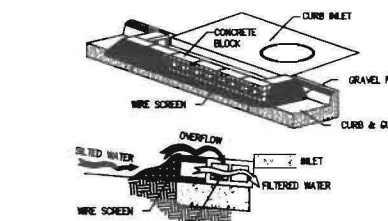




STRAW BALE DROP INLET SEDIMENT FILTER
(NOT TO SCALE)

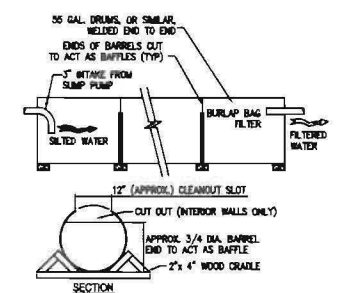


BURLAP DROP INLET SEDIMENT FILTER
(NOT TO SCALE)



CURB INLET SEDIMENT FILTER
(NOT TO SCALE)

1. TWO CONCRETE BLOCKS SHALL BE PLACED ON THEIR SIDES ABOUTING THE CURB AT EITHER SIDE OF THE INLET OPENING.
2. A 2" INCH BY 4" INCH STUD SHALL BE CUT AND PLACED THROUGH THE OUTER HOLES OF EACH SPACER BLOCK TO HELP KEEP THE FRONT BLOCKS IN PLACE.
3. CONCRETE BLOCKS SHALL BE PLACED ON THEIR SIDES ACROSS THE FRONT OF THE INLET AND ABOUTING THE SPACER BLOCKS AS ILLUSTRATED.
4. WIRE MESH SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE (WEEDING) OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. CHICKEN WIRE OR HARDWARE CLOTH WITH 1/2"-INCH OPENINGS SHALL BE USED.
5. TWO TO THREE INCH STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE DAMMER AS SHOWN.
6. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS, CLEANED AND REPLACED.

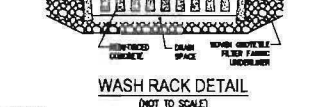


- CONSTRUCTION NOTES:**
1. THE STRUCTURE MAY BE CONSTRUCTED WITH STEEL DRUMS, STURDY WOOD OR OTHER MATERIAL SUITABLE FOR HANDLING THE PRESSURE EXERTED BY THE VOLUME OF THE WATER.
 2. SEDIMENT TANKS WILL HAVE A MINIMUM DEPTH OF TWO FEET.
 3. THE SEDIMENT TANK SHALL BE LOCATED FOR EASY CLEAN-OUT AND DISPOSAL OF THE TRAPPED SEDIMENT AND TO MINIMIZE THE INTERFERENCE WITH CONSTRUCTION ACTIVITIES.
 4. THE FOLLOWING FORMULA SHALL BE USED TO DETERMINE THE STORAGE VOLUME OF THE SEDIMENT TANK.
 5. PUMP DISCHARGE (G.P.M.) X 60 = CUBIC FEET OF STORAGE REQUIRED.
 6. ONCE THE WATER LEVEL REACHES THE TOP OF THE TANK, THE PUMP MUST BE SHUT OFF WHILE THE TANK DRAINS AND ADDITIONAL CAPACITY IS MADE AVAILABLE.
 7. THE TANK SHALL BE DESIGNED TO ALLOW FOR EMERGENCY FLOW OVER THE TOP OF THE TANK.
 8. CLEAN-OUT OF THE TANK IS REQUIRED ONCE ONE-THIRD OF THE ORIGINAL CAPACITY IS DEPLETED DUE TO SEDIMENT ACCUMULATION. THE TANK SHALL BE CLEARLY MARKED SHOWING THE CLEAN-OUT POINT.

PORTABLE SEDIMENT TANK
(NOT TO SCALE)

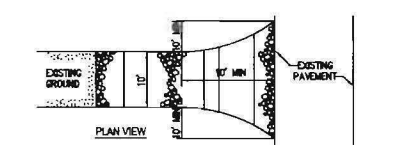
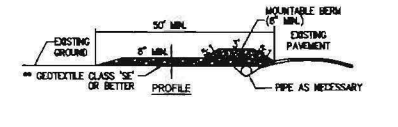


VEHICLE WASH DETAIL
(NOT TO SCALE)



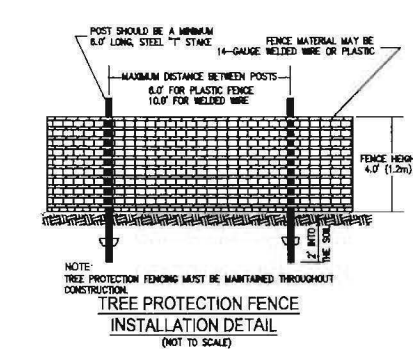
WASH RACK DETAIL
(NOT TO SCALE)

- MAINTENANCE:**
- STABILIZED CONSTRUCTION ENTRANCE THRESHOLD SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK A STOCKPILE OF ROCK MATERIAL SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. CONSTRUCTION VEHICLES SHALL STOP WITH FIRST THE FRONT WHEELS, THEN THE REAR WHEELS ON THE WASH RACK IN ORDER TO BOTH SETS OF WHEELS TO BE HOSED OFF.

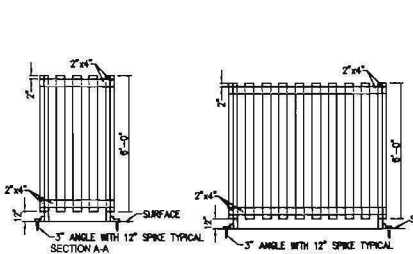
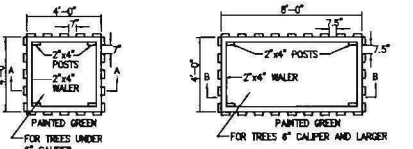


- CONSTRUCTION RAMP SPECIFICATION:**
1. STONE SIZE—USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
 2. LENGTH—AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 3. THICKNESS—NOT LESS THAN SIX (6) INCHES.
 4. WIDTH—TEN (10) FOOT MINIMUM, BUT NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS OCCURS.
 5. GEOTEXTILE FABRIC (FILTER CLOTH) WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. **THE PLAN APPROVAL AUTHORITY MAY NOT BE REQUIRED SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
 6. SURFACE WATER—ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCE SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE—THE ENTRANCE SHALL BE MAINTAINED IN CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WASHING—WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE. MUD DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE
(NOT TO SCALE)

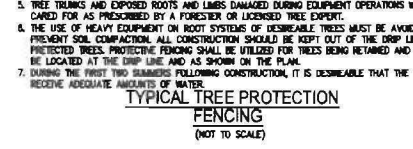


TREE PROTECTION FENCE INSTALLATION DETAIL
(NOT TO SCALE)

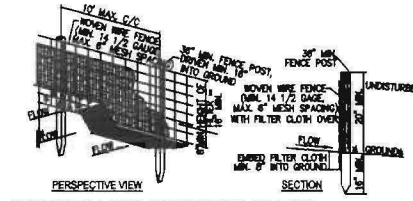


TYPICAL TREE PROTECTION FENCING
(NOT TO SCALE)

- TREE PROTECTION NOTES:**
1. TREES AS SHOWN ON THE PLAN TO REMAIN SHALL BE PROTECTED AS SHOWN TO PREVENT MECHANICAL INJURY. TREE PROTECTION MEASURES SHOULD BE AS CLOSE TO THE DRAIN LINE OF THE TREE AS POSSIBLE AND AS SHOWN ON THE PLAN FOR STREET TREES AT THE CURB. PROTECTION FENCING SHALL BE EXTENDED AT EDGE OF PAVING.
 2. BOWERS WILL NOT BE ALLOWED TO TREES DURING BUILDING OPERATIONS.
 3. NO STORAGE OF EQUIPMENT OR CONSTRUCTION MATERIALS SHALL BE ALLOWED WITHIN TREE PROTECTION FENCING.
 4. HEAVY EQUIPMENT OPERATORS WILL BE CAUTIONED TO AVOID DAMAGE TO EXISTING TREE TRUNKS AND ROOTS DURING LAND LEVING OPERATIONS. TUNNEL UNDER ROOT SYSTEM WHEN INSTALLING UTILITY LINES, IF POSSIBLE.
 5. TREE TRUNKS AND EXPOSED ROOTS AND LIMBS DAMAGED DURING EQUIPMENT OPERATIONS WILL BE CARED FOR AS PRESCRIBED BY A FORESTER OR LICENSED TREE EXPERT.
 6. THE USE OF HEAVY EQUIPMENT ON ROOT SYSTEMS OF DESIRABLE TREES MUST BE AVOIDED TO PREVENT SOIL COMPACTON. ALL CONSTRUCTION SHOULD BE KEPT OUT OF THE DRAIN LINE OF PROTECTED TREES. PROTECTIVE FENCING SHALL BE UTILIZED FOR TREES BEING RETAINED AND SHALL BE LOCATED AT THE DRAIN LINE AND AS SHOWN ON THE PLAN.
 7. DURING THE FIRST TWO SEASONS FOLLOWING CONSTRUCTION, IT IS DESIRABLE THAT THE TREES RECEIVE ADEQUATE AMOUNTS OF WATER.



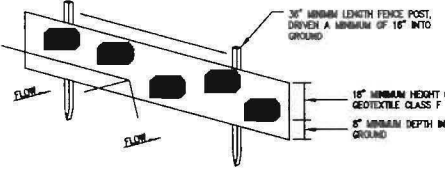
BRICKBAT DETAIL
(NOT TO SCALE)



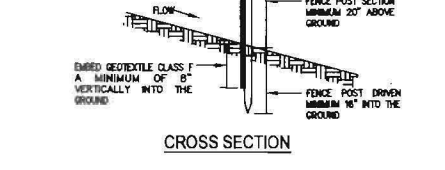
STRAW BALE DIKE
(NOT TO SCALE)

- CONSTRUCTION SPECIFICATIONS:**
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BOWERS ARE HORIZONTAL.
 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
 4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPIDE STORM FLOW OR DRAINAGE.

SILT FENCE
(NOT TO SCALE)



SILT FENCE DESIGN DETAIL
(NOT TO SCALE)



SILT FENCE DESIGN DETAIL
(NOT TO SCALE)

JOINING TWO ADJACENT SILT FENCE SECTIONS

- CONSTRUCTION SPECIFICATION:**
1. FENCE POSTS SHALL BE A MINIMUM OF 30' LONG DRIVEN 18' MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" SQUARE (MINIMUM) CUT, OR 1 3/4" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STAKED 1" OR 1 1/2" SECTION WEIGHING NOT LESS THAN 100 POUND PER LINEAR FOOT.
 2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	20 LBS./IN. (MIN.)	TEST: ASTM D-4595
TENSILE MODULUS	20 LBS./IN. (MIN.)	TEST: ASTM D-4595
FLOW RATE	0.3 GAL./FT ² (MAX.)	TEST: ASTM D-5141
FILTERING EFFICIENCY	75% (MIN.)	TEST: ASTM D-5141
 3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
 4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR 8% OF AREA SEDIMENT ACCUMULATION REACHED TO THE FABRIC HEIGHT.

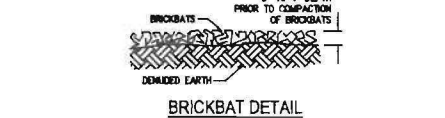
SILT FENCE DESIGN CRITERIA:

SLOPE STEEPNESS	SLOPE LENGTH (MAX.)	SILT FENCE LENGTH (MAX.)
FLATTER THAN 50:1	UNLIMITED	1,000 FEET
50:1 TO 10:1	125 FEET	750 FEET
10:1 TO 5:1	100 FEET	500 FEET
5:1 TO 3:1	60 FEET	300 FEET
3:1 TO 2:1	40 FEET	250 FEET
2:1 AND STEEPER	20 FEET	125 FEET

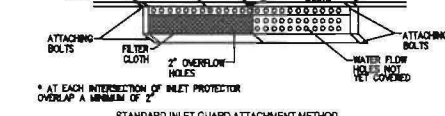
NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM, SOIL CLASS A) MAXIMUM SLOPE LENGTH AND SILT FENCE WILL BE UNLIMITED. IN THESE AREAS A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.

SILT FENCE INSTALLATION DETAIL
(NOT TO SCALE)

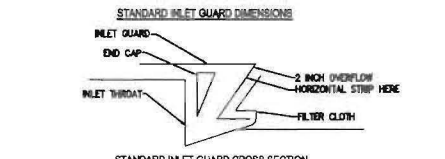
- DEFINITION:** TEMPORARY GROUND COVER CONSISTING OF BROKEN BRICK (1/2 PEECE OR SMALLER) PLACED OVER DENuded EARTH.
- PURPOSE:** BROCKBATS PROVIDE A TEMPORARY GROUND COVER OVER DENuded URBAN EARTH TO PREVENT THE TRANSPORTATION OF SEDIMENT FROM THE SITE.
- CONDITIONS WHEN PRACTICE APPLIES:** BROCKBATS MAY BE USED ON ANY SITE IN NEED OF TEMPORARY GROUND COVER.
- DESIGN CRITERIA:** BROCKBATS SHALL BE PLACED TO A DEPTH OF 3 INCHES TO 4 INCHES COVERING THE DENuded EARTH ON THE SITE, THEN COMPACTED AND LEVELED.



STANDARD INLET GUARD ATTACHMENT METHOD



STANDARD INLET GUARD CROSS SECTION
(NOT TO SCALE)



STANDARD INLET GUARD CROSS SECTION
(NOT TO SCALE)

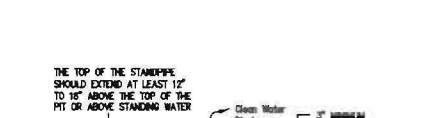
LIST OF STANDARD SYMBOLS

EARTH DIKE	A-2 / B-3
STRAW BALE DIKE	SD
SILT FENCE	SF
TEMPORARY SHALE	A-2 / B-3
STABILIZED CONSTRUCTION ENTRANCE	SCE
GRADE STABILIZATION STRUCTURE	GSS-2
PIPE SLOPE DRAIN	PSD-12
PERIMETER DIKE/SHALE	GSS-3
INLET PROTECTION	IP
DIVERSION	D
GRASSSED WATERWAY	G
LINED WATERWAY	L
ROCK OUTLET PROTECTION	ROP
SUBSURFACE DRAIN	S
TREE PROTECTION	TP
SEDIMENT TANK	ST
SUMP AND PUMP	SP
SHIELDING AND SHORING	SS

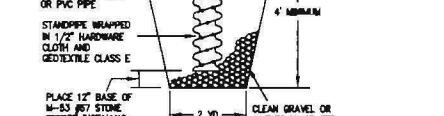
- STANDARD EROSION AND SEDIMENT CONTROL MEASURES AND SEQUENCE:**
1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
 2. PROVIDE TEMPORARY STONE CONSTRUCTION ENTRANCE WHERE SHOWN. PROVIDE WATER SOURCE AND HOSE TO CLEAN ALL EQUIPMENT LEAVING SITE.
 3. INSTALL SILT FENCE AS SHOWN.
 4. NO DISTURBED AREA WILL BE DENuded FOR MORE THAN 7 CALENDAR DAYS. INSTALL THE NECESSARY TEMPORARY OR PERMANENT VEGETATIVE STABILIZATION MEASURES TO ACHIEVE ADEQUATE EROSION AND SEDIMENT CONTROL.
 5. ALL CONSTRUCTION TO BE INSPECTED DAILY BY THE CONTRACTOR, AND ANY DAMAGED SLOPE OR EROSION CONTROL DEVICES OR MEASURES WILL BE REPAIRED AT THE CLOSE OF THE DAY.
 6. ALL SILT FENCE TO BE MAINTAINED IN WORKING CONDITION.
 7. STABILIZED CONSTRUCTION ENTRANCES TO BE PERIODICALLY SUPPLEMENTED WITH ADDITIONAL STONE AS NEEDED.
 8. CONTROLS CAN BE REMOVED AFTER THEIR CONTRIBUTING BASINS HAVE BEEN PERMANENTLY STABILIZED, AND APPROVAL OF INSPECTOR IS OBTAINED.

SILTATION EROSION CONTROL NOTES:

1. ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE INSTALLED BEFORE THE START OF ANY EXCAVATION AND/OR CONSTRUCTION AS PER STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR THE DISTRICT OF COLUMBIA. IF AN ON-SITE INSPECTION REVEALS FURTHER EROSION CONTROL MEASURES ARE NECESSARY, THE SAME SHALL BE PROVIDED.
2. ALL DEBRIS IS TO BE REMOVED FROM THE SITE.
3. ALLEY AND / OR STREET SHALL BE SHEPT CLEAN AT ALL TIMES DURING EXCAVATION AND CONSTRUCTION.
4. ALL SEDIMENT AND EROSION CONTROL MEASURES TO BE INSPECTED DAILY BY THE CONTRACTOR. ANY DAMAGED DEVICE OR MEASURE WILL BE REPAIRED OR REPLACED BY THE CLOSE OF DAY OR AS ORDERED BY THE AGENCY.
5. ALL VEHICLES LEAVING THE SITE SHALL EXIT THROUGH THE CONSTRUCTION ENTRANCE ONLY AND SHALL BE WASHED DOWN TO REMOVE MUD FROM TIRES BEFORE ENTERING THE STREET. CONSTRUCTION ENTRANCE TO BE MAINTAINED IN GOOD WORKING CONDITIONS.
6. ALL CATCH BASINS AND AREA DRAINS SHALL BE PROTECTED DURING EXCAVATION AND CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS IMMEDIATE CLEANING.
7. IF ANY CATCH BASIN OR DRAIN BECOMES CLOGGED AS A RESULT OF EXCAVATION OR CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS IMMEDIATE CLEANING.
8. ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE BOUNDARY NOT SHOWN TO BE PAVED SHALL BE SEEDING OR COVERED AS PER OPERATIONS WITHIN SEVEN DAYS OF DISTURBANCE.
9. WHEN SEDIMENT TRAP/SEDIMENT TANK HAS REACHED 67% CAPACITY, CLEAN OUT OF SAME IS REQUIRED.
10. ANY STOOPING, REGARDLESS OF LOCATION ON SITE SHALL BE STABILIZED WITHIN 14 DAYS AND COVERED WITH PLASTIC OR CANVAS. AFTER ITS ESTABLISHMENT AND FOR THE DURATION OF THE PROJECT.
11. AFTER RAZE OR DEMOS, THERE IS NEED FOR GROUND COVER TO PREVENT EROSION AND SEDIMENT RUNOFF FROM OCCURRING, SUCH AS SEED, SOIL, PAVING, BROCKBATS OR MUDH, ETC.
12. AT THE COMPLETION OF CONSTRUCTION PROJECT AND AFTER THE D.C. EROSION AND SEDIMENT CONTROL INSPECTOR APPROVAL, ALL TEMPORARY STABILIZATION AND EROSION CONTROL MEASURES AND DEVICES SHALL BE REMOVED AND ALL DENuded AREAS SHALL BE PERMANENTLY STABILIZED.



SUMP PIT
(NOT TO SCALE)



SUMP PIT
(NOT TO SCALE)

- CONSTRUCTION SPECIFICATIONS:**
1. PIT DIMENSIONS ARE OPTIONAL WITH THE MINIMUM DIAMETER BEING 2 TIMES THE STANDPIPE DIAMETER. SHOULD EXTEND AT LEAST 12" ABOVE THE TOP OF THE PIT OR ABOVE STANDING WATER.
 2. THE STANDPIPE SHOULD BE CONSTRUCTED BY PERFORMING A 12"-24" DIAMETER CORRUGATED OR PVC PIPE. THEN WRAPPING WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE CLASS E. THE PERFORATING SHALL BE 1/2" x 6" SLOTS OR 1" DIAMETER HOLES.
 3. A BASE OF FILTER MATERIAL, CONSISTING OF CLEAN GRAVEL OR #57 STONE SHOULD BE PLACED IN THE PIT TO A DEPTH OF 12". AFTER INSTALLING THE STANDPIPE, THE PIT SURROUNDING THE STANDPIPE SHOULD THEN BE BACKFILLED WITH THE SAME FILTER MATERIAL.
 4. THE STANDPIPE SHOULD EXTEND 12"-18" ABOVE THE LIP OF THE PIT OR THE HIGHER CREST ELEVATION (WHICHEVER IS HIGHER) AND THE FILTER MATERIAL SHOULD EXTEND 3" MINIMUM ABOVE THE ANTICIPATED STANDING WATER ELEVATION.
 5. IF DISCHARGE WILL BE PUMPED DIRECTLY TO A STORM DRAINAGE SYSTEM, THE STANDPIPE SHOULD BE WRAPPED WITH FILTER CLOTH BEFORE INSTALLATION. IF DESIRED, 1/4"-1/2" HARDWARE CLOTH MAY BE PLACED AROUND THE STANDPIPE, PRIOR TO ATTACHING THE FILTER CLOTH. THIS WILL INCREASE THE RATE OF WATER SEEPAGE INTO THE PIPE.