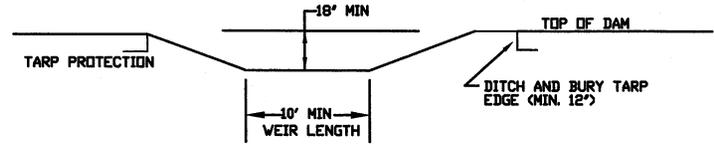
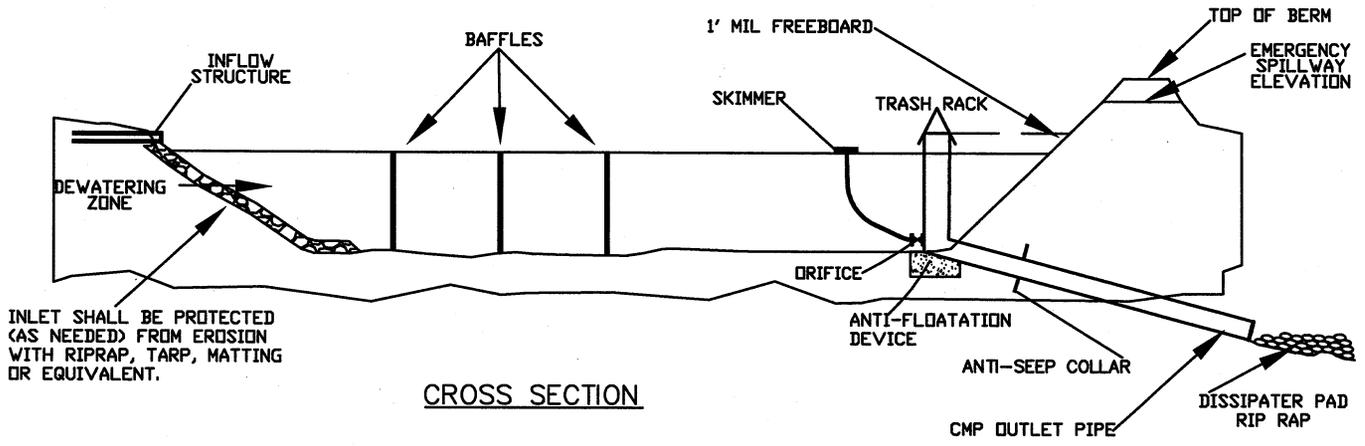


PLAN VIEW



SECTION THRU WEIR



CROSS SECTION

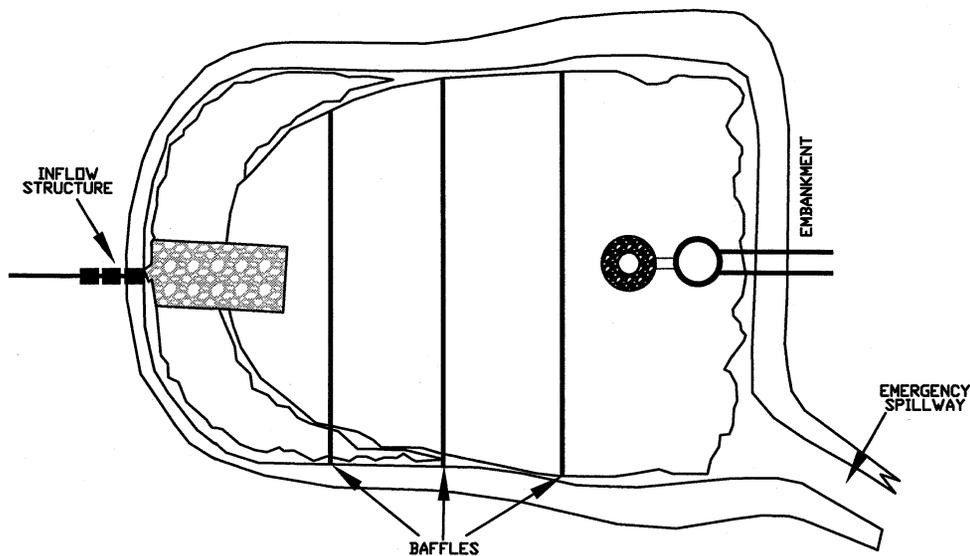
NOTES:

- 1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
- 2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPULINS OR EQUIVALENT FOR U.V. RESISTANCE.
- 3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
- 4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
- 5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
- 6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
- 7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

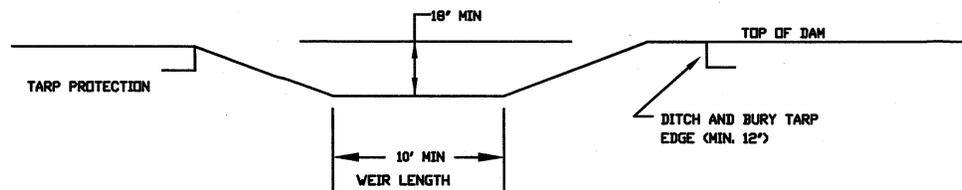


STANDARD SKIMMER ATTACHED TO PERMANENT RISER

EFFECTIVE: 01/31/08



PLAN VIEW



SECTION THRU WEIR

NOTE 1

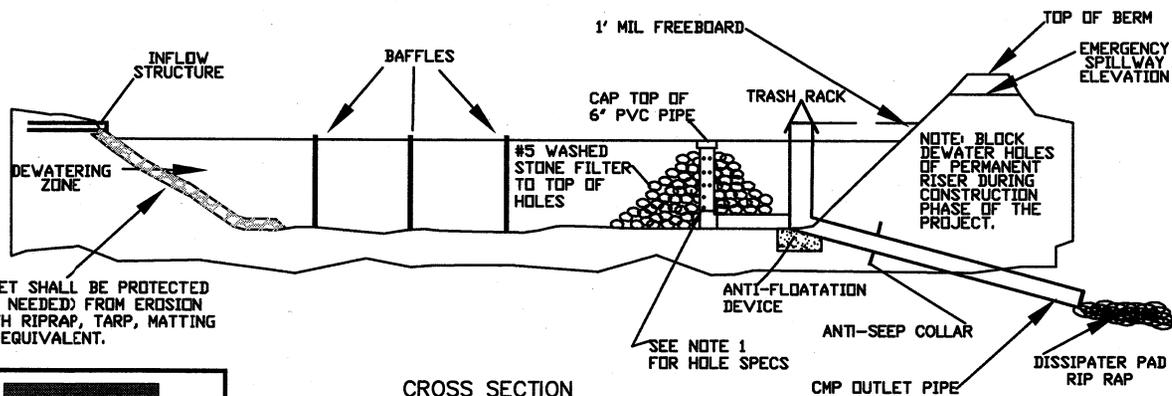
HOLE SPECS:

DEWATERING HOLES WILL BE INSTALLED IN SETS OF HORIZONTAL RINGS. THE FIRST SET OF HOLES WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER. RINGS WILL CONTINUE UP THE RISER IN INTERVALS OF 3 INCHES. HOLES WILL BE 3/4 INCH IN DIAMETER AND WILL BE SPACED EQUALLY AROUND THE RISER. THE NUMBER OF HOLES PER RING WILL EQUAL TO THE DRAINAGE AREA.

EXAMPLE:

A BASIN DRAINING 2.0 ACRES SHOULD HAVE 2 HOLES PER RING EVERY 3 INCHES ON THE RISER PIPE. THE FIRST RING (2 HOLES) WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER.

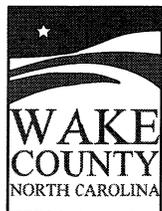
NOTE: ROUND DRAINAGE AREA TO THE NEAREST WHOLE NUMBER TO DETERMINE NUMBER OF HOLES.



CROSS SECTION

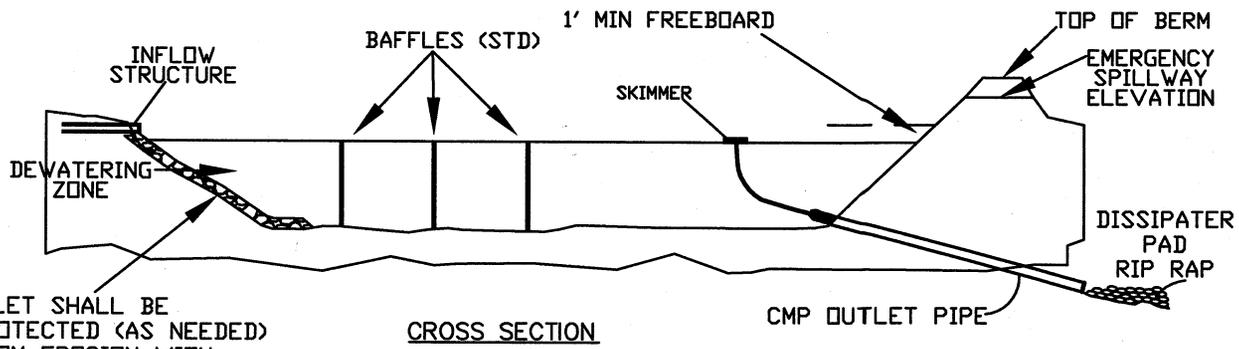
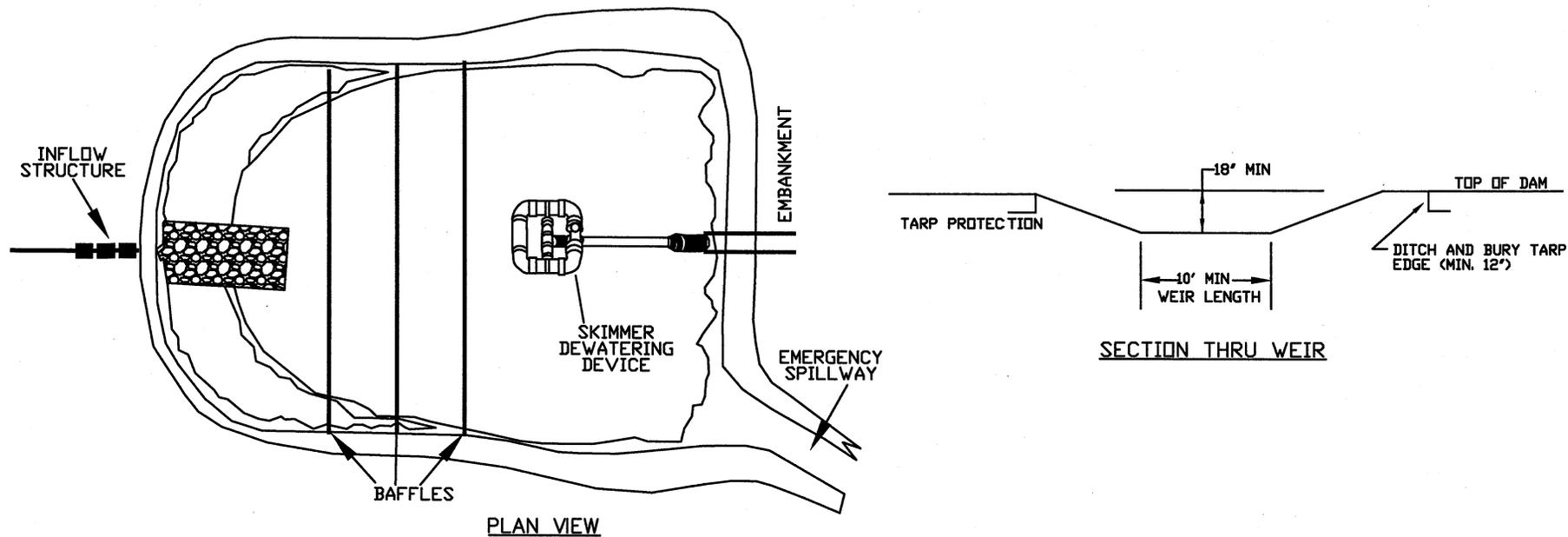
GENERAL NOTES:

- 1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
- 2) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
- 3) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
- 4) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
- 5) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL HEAVY DUTY SILVER TARPULINS OR EQUIVALENT FOR U.V. RESISTANCE.
- 6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
- 7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.



STANDARD CUSTOM BASIN ATTACHED TO PERMANENT RISER

EFFECTIVE: 01/31/08



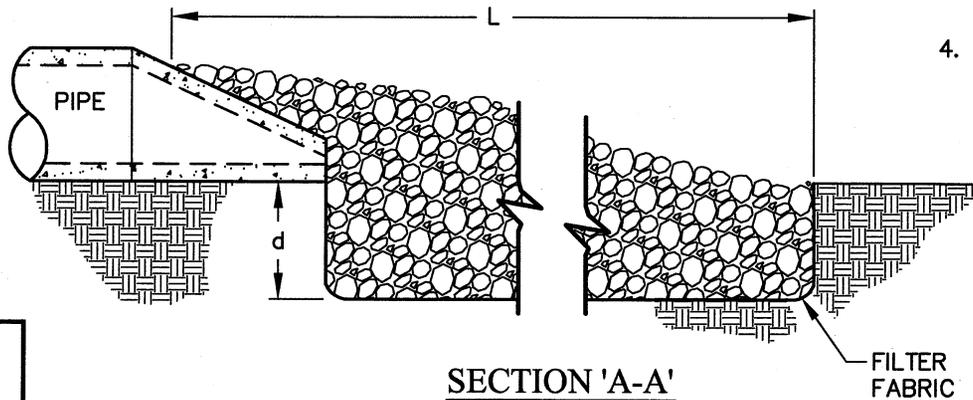
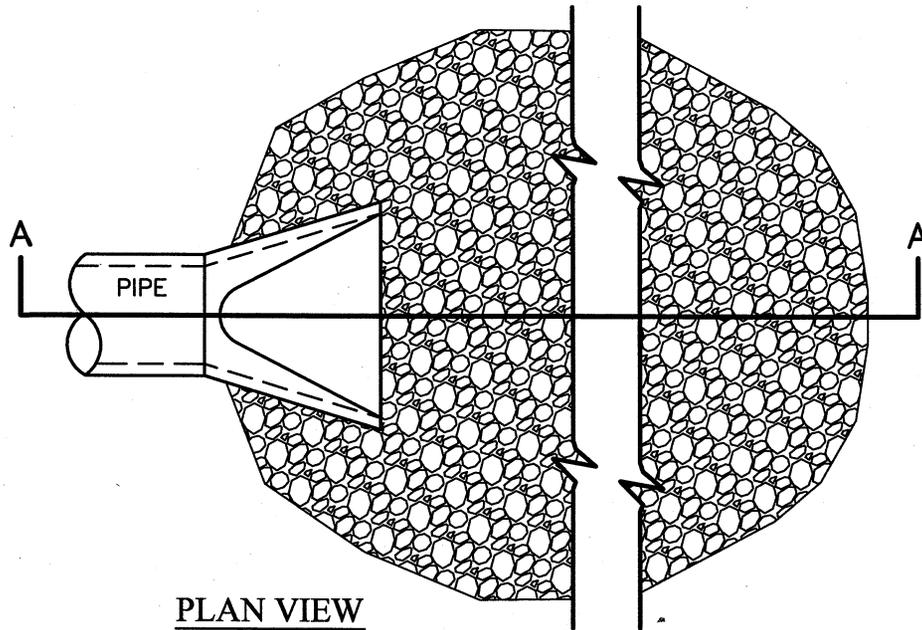
INLET SHALL BE PROTECTED (AS NEEDED) FROM EROSION WITH RIPRAP, TARP, MATTING OR EQUIVALENT.

- NOTES:
- 1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
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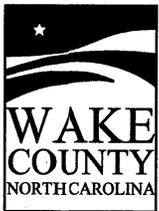
EFFECTIVE: 01/31/08

STANDARD SKIMMER BASIN



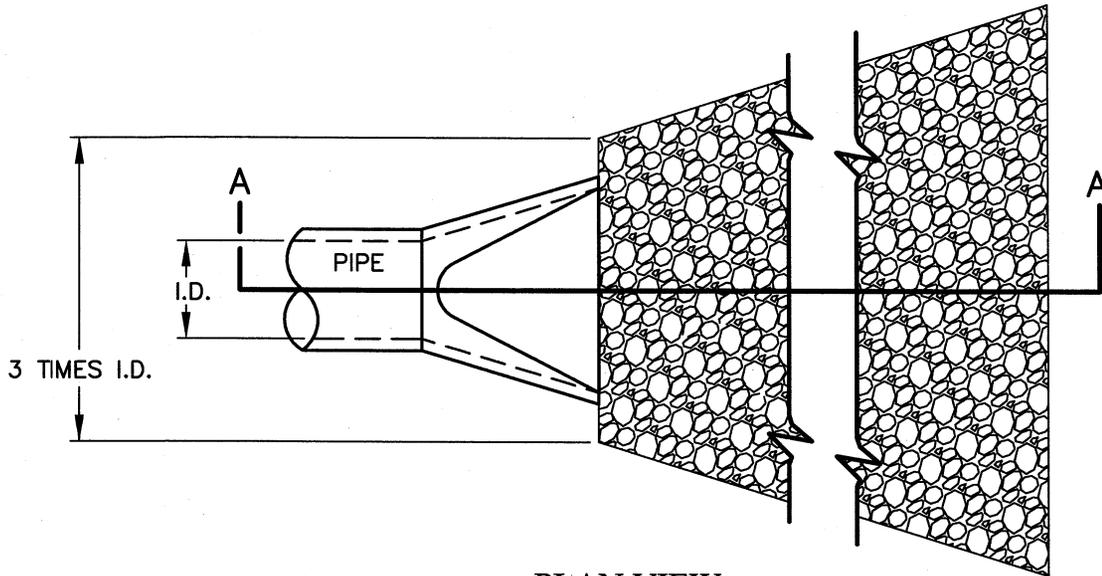
NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

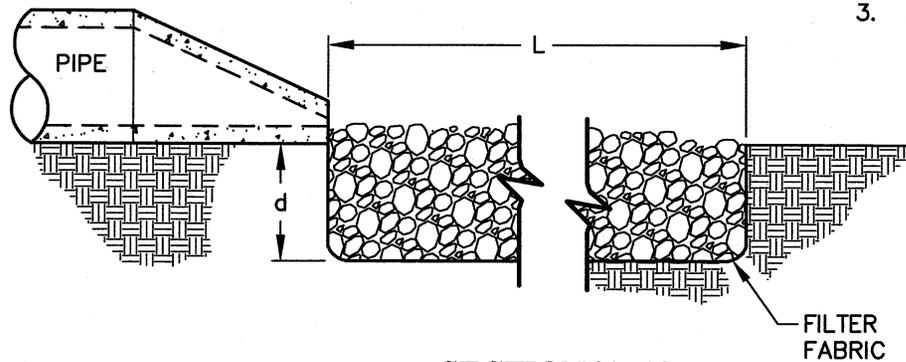
EFFECTIVE: 01/31/08



PLAN VIEW

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

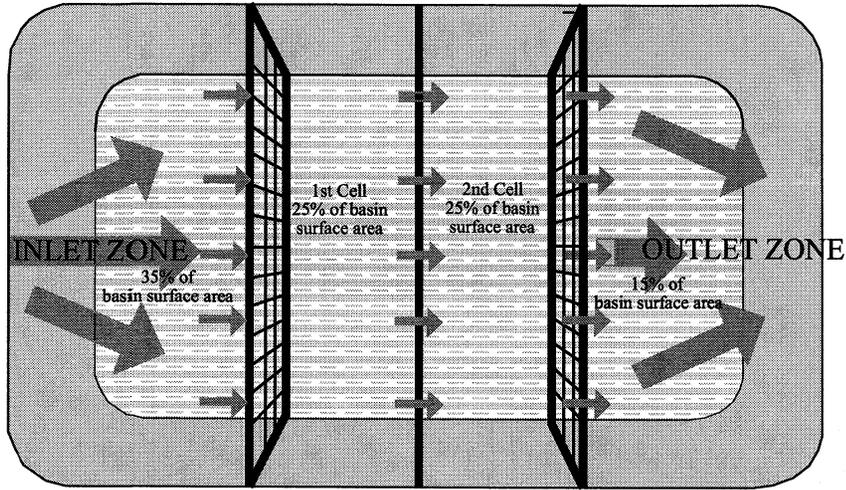


SECTION 'A-A'

**STANDARD PIPE OUTLET TO FLAT AREA
NO WELL-DEFINED CHANNEL**



EFFECTIVE: 01/31/08

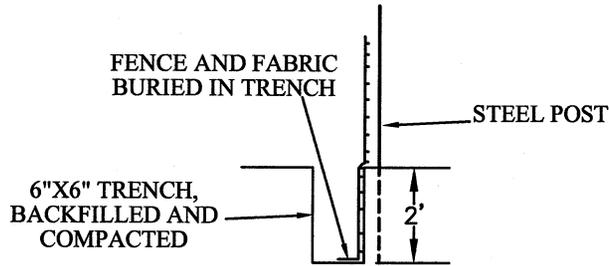
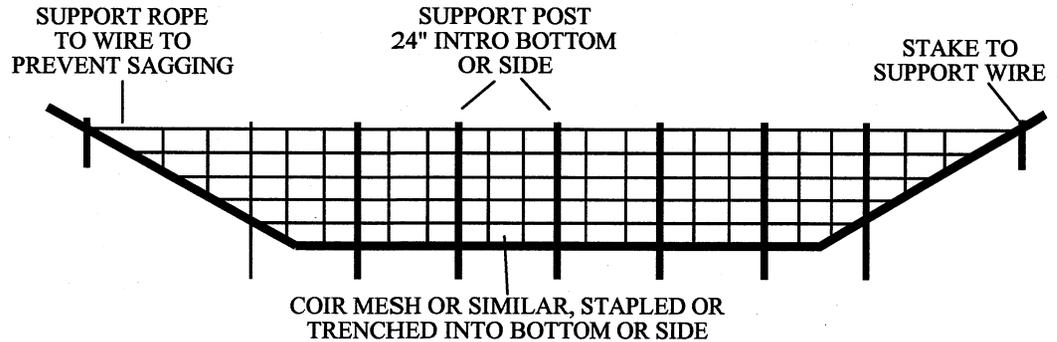


PLAN VIEW

NOTES:

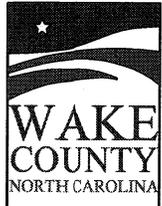
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.

CROSS SECTION

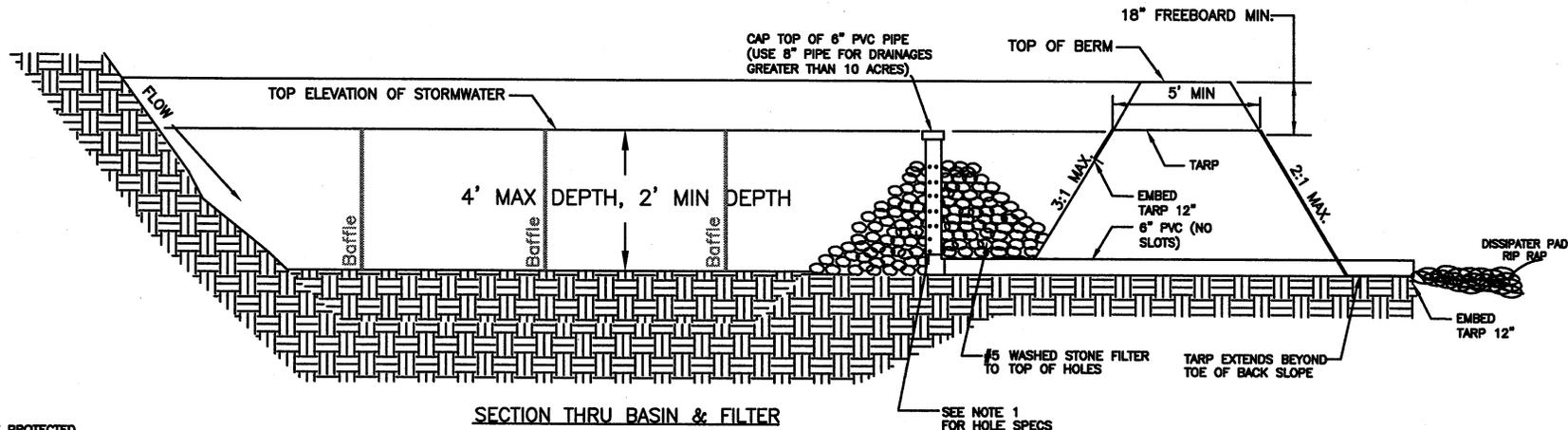


SECTION VIEW AT OPENING

STANDARD BAFFLES DETAIL



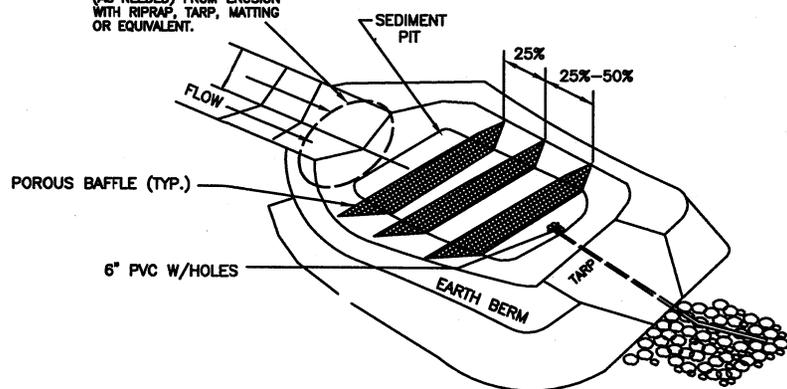
EFFECTIVE: 01/31/08



SECTION THRU BASIN & FILTER

SEE NOTE 1 FOR HOLE SPECS

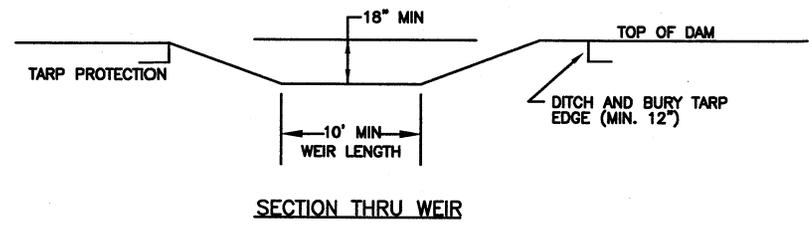
INLET SHALL BE PROTECTED (AS NEEDED) FROM EROSION WITH RIPRAP, TARP, MATTING OR EQUIVALENT.



PERSPECTIVE VIEW

GENERAL NOTES

1. DRAW DOWN RISER & BARREL SHALL BE 6" SCH. 40 PVC WITH CLEAN-OUT CAP AND 3/4" HOLES. SEE NOTE 1 FOR NUMBER AND SPACING OF HOLES.
2. THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPULINS OR EQUIVALENT FOR U.V. RESISTANCE.
3. MAINTENANCE: SEDIMENT TO BE REMOVED AND PROPERLY DISPOSED OF WHEN BASIN IS HALF FULL. GRAVEL FILTER AROUND RISER SHOULD BE REPLACED AS NEEDED TO ENSURE DEWATERING.



SECTION THRU WEIR

NOTE 1

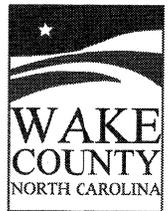
HOLE SPECS:

DEWATERING HOLES WILL BE INSTALLED IN SETS OF HORIZONTAL RINGS. THE FIRST SET OF HOLES WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER. RINGS WILL CONTINUE UP THE RISER IN INTERVALS OF 3 INCHES. HOLES WILL BE 3/4 INCH IN DIAMETER AND WILL BE SPACED EQUALLY AROUND THE RISER. THE NUMBER OF HOLES PER RING WILL EQUAL TO THE DRAINAGE AREA.

EXAMPLE

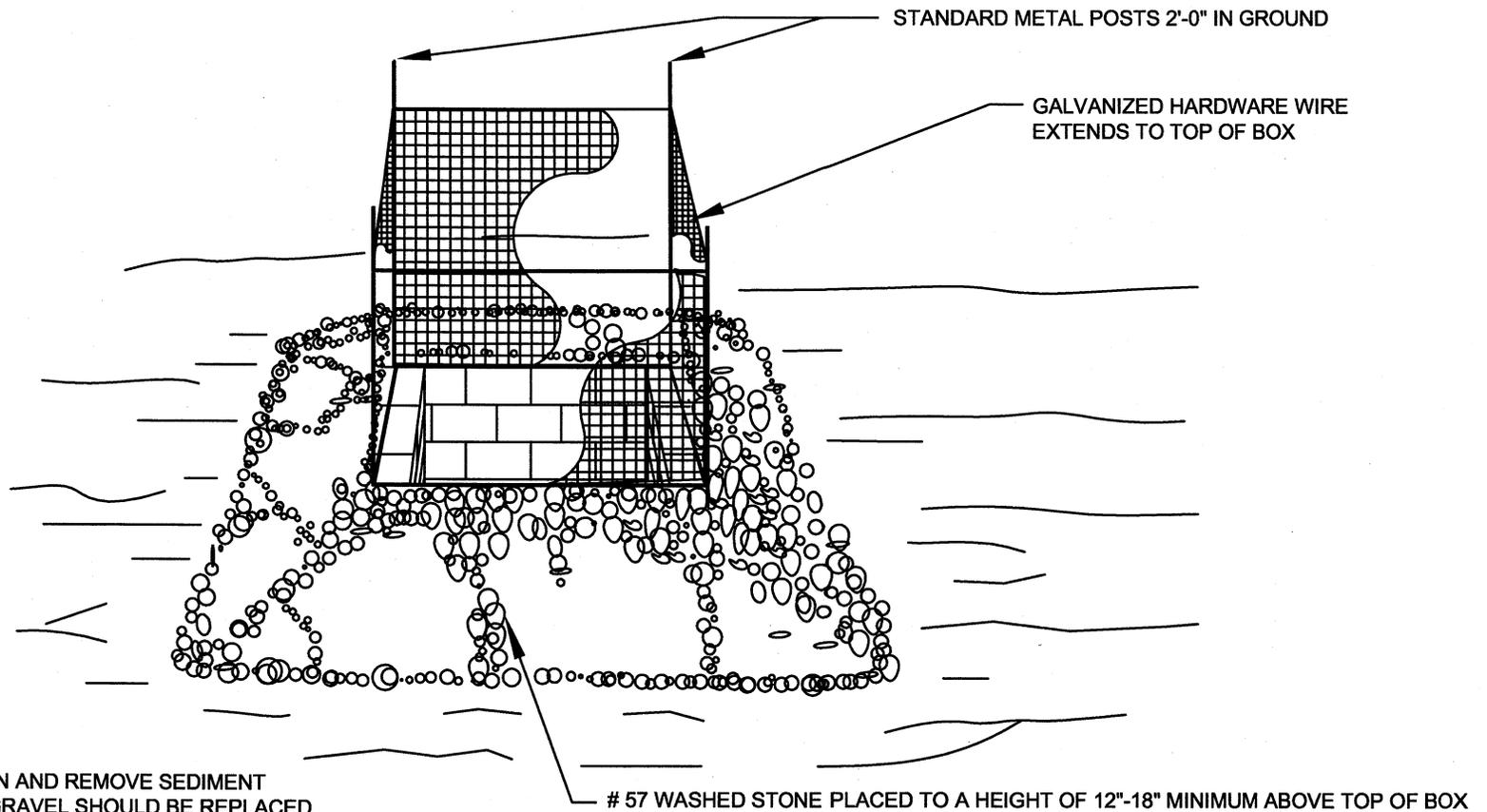
A BASIN DRAINING 2.0 ACRES SHOULD HAVE 2 HOLES PER RING EVERY 3 INCHES ON THE RISER PIPE. THE FIRST RING (2 HOLES) WILL BE SET 6 INCHES FROM THE BOTTOM OF THE RISER.

NOTE: ROUND DRAINAGE AREA TO THE NEAREST WHOLE NUMBER TO DETERMINE NUMBER OF HOLES.



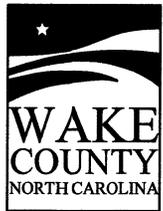
STANDARD CUSTOM BASIN

EFFECTIVE: 01/31/08



NOTE:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



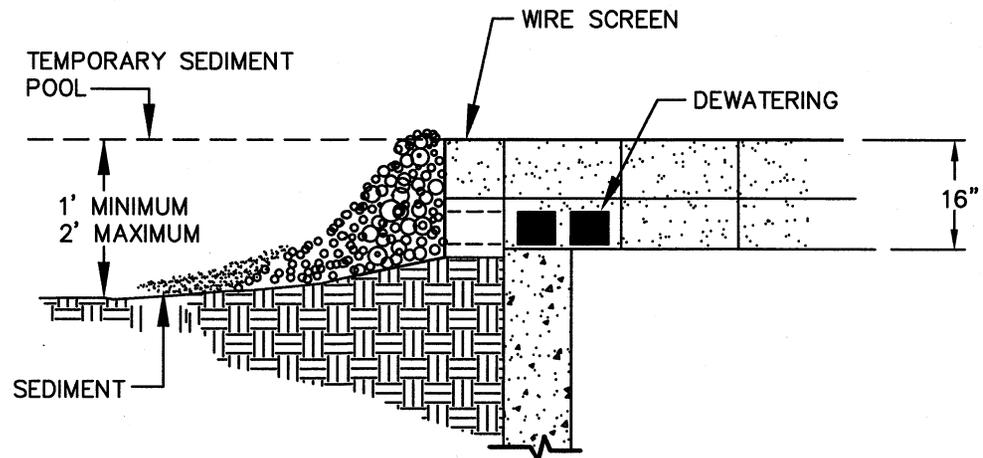
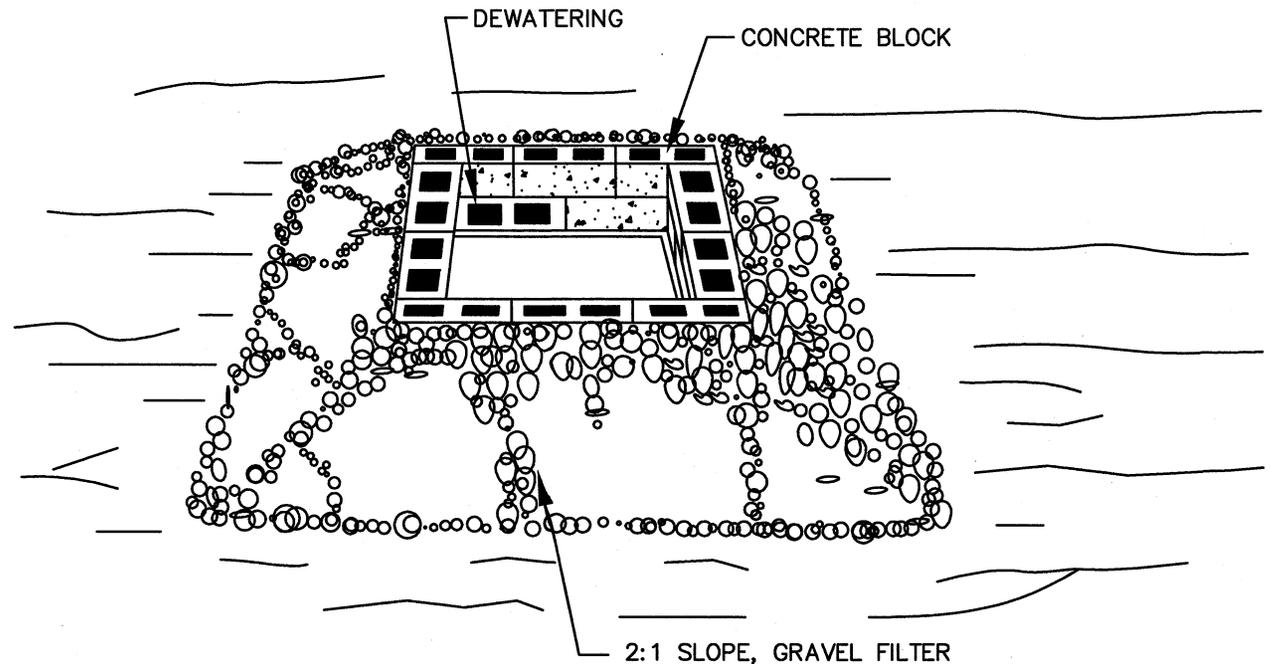
STANDARD GRAVEL YARD INLET PROTECTION

EFFECTIVE: 01/31/08

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

MAINTENANCE: INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

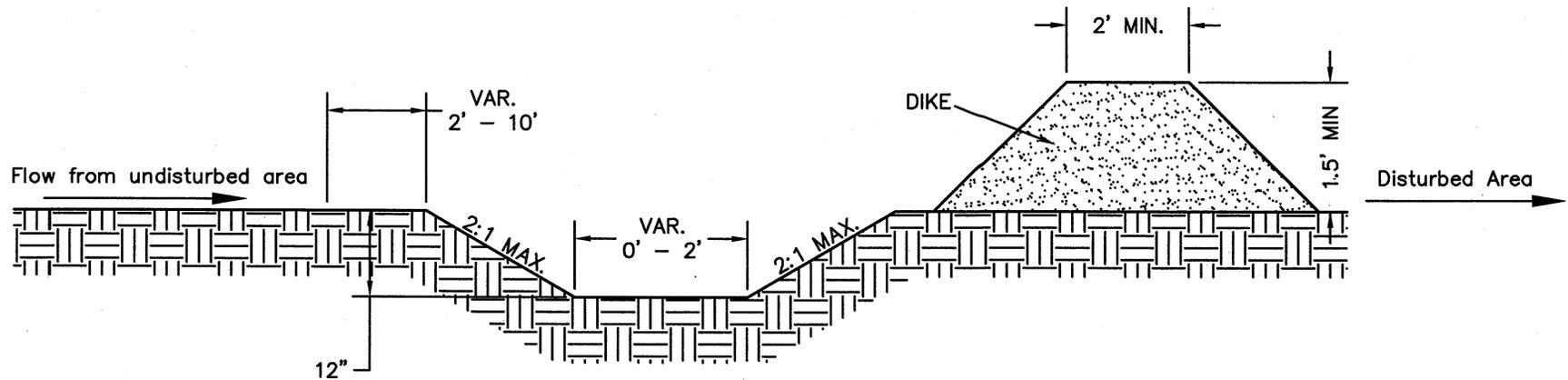


STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

EFFECTIVE: 01/31/08

NOTES:

1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 5 ACRES OR LESS.
4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.

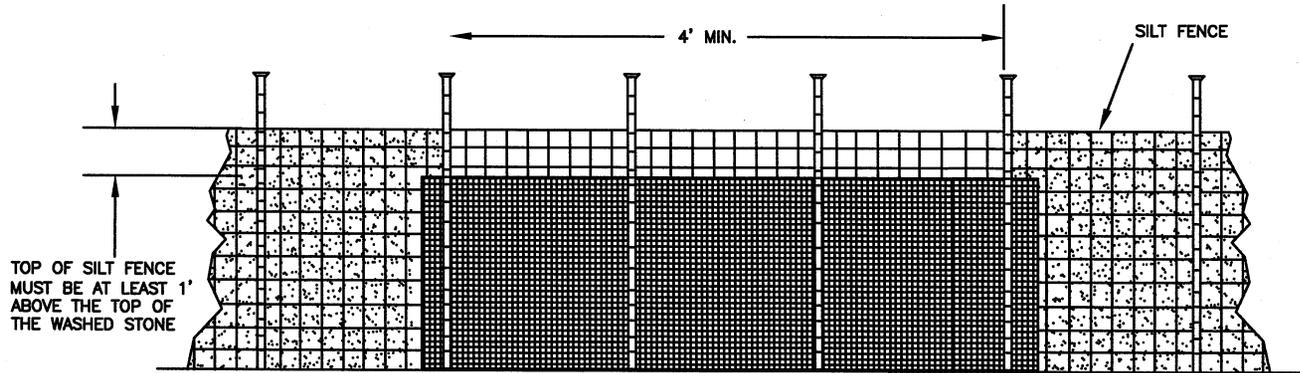


CROSS SECTIONAL VIEW

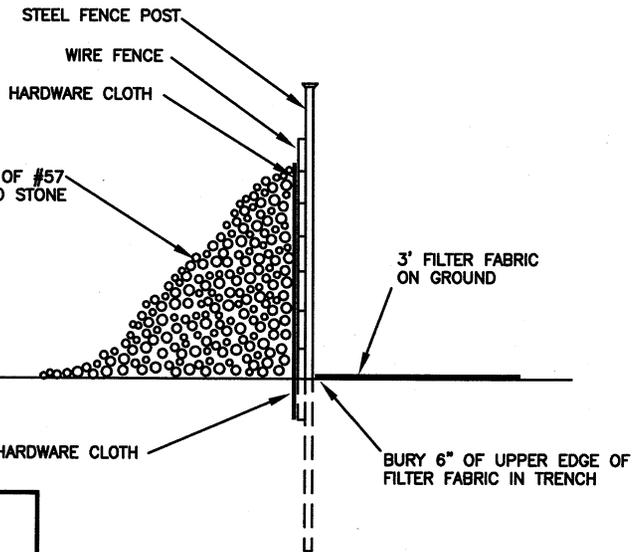
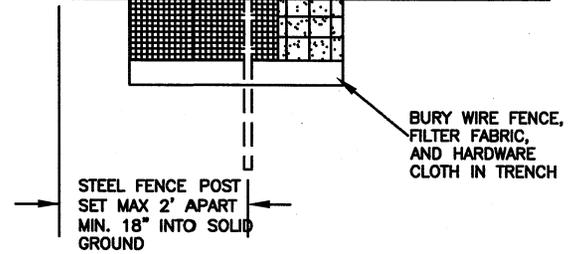


EFFECTIVE: 01/31/08

STANDARD CLEAN WATER DIVERSION



FRONT VIEW

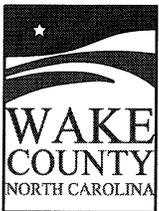


SECTION VIEW

NOTES:

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

STANDARD SILT FENCE OUTLET



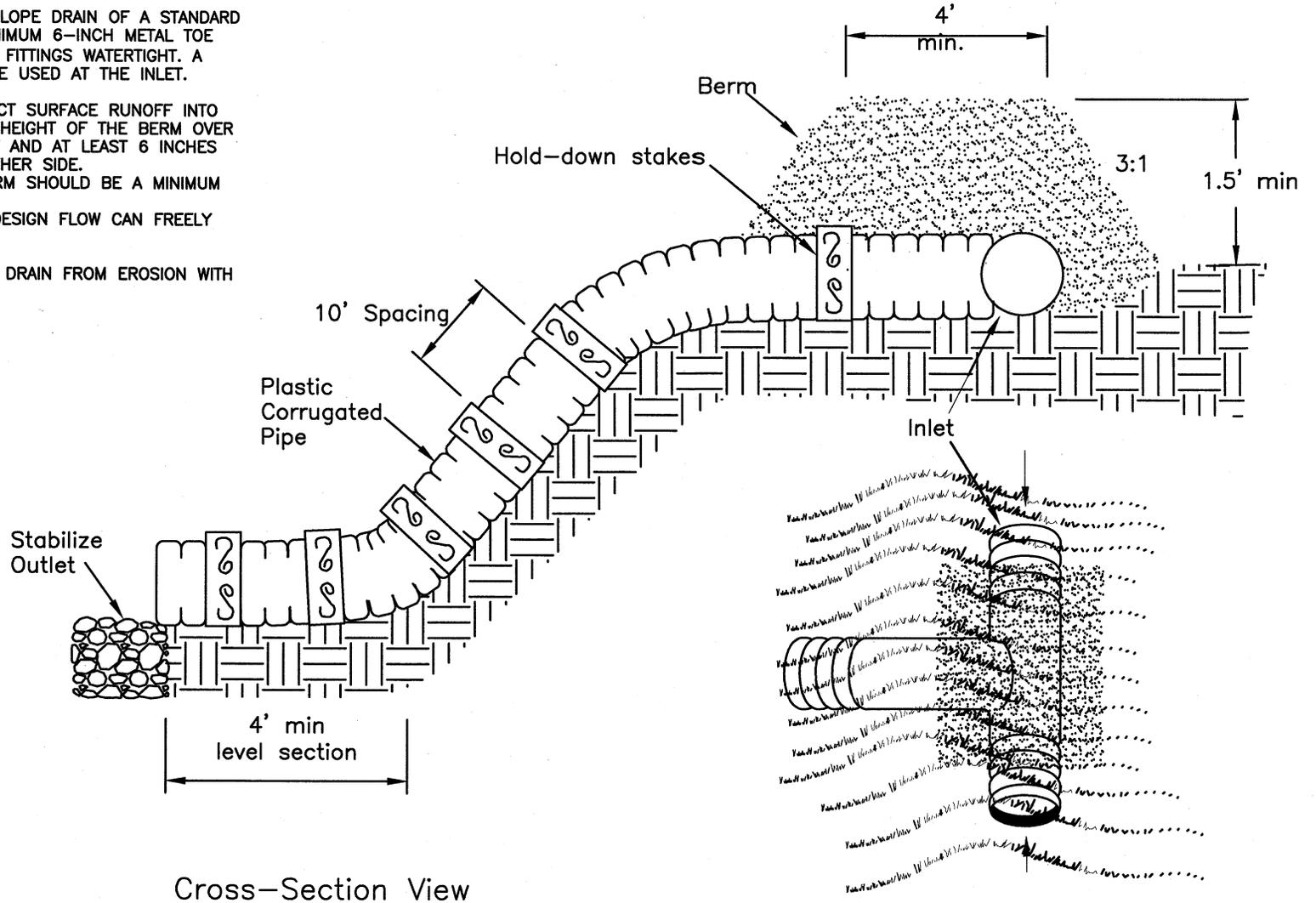
EFFECTIVE: 01/31/08

NOTES:

1. CONSTRUCT THE ENTRANCE TO THE SLOPE DRAIN OF A STANDARD FLARED-END SECTION OF PIPE WITH A MINIMUM 6-INCH METAL TOE PLATE (CROSS-SECTION VIEW). MAKE ALL FITTINGS WATERTIGHT. A STANDARD T-SECTION FITTING MAY ALSO BE USED AT THE INLET.

2. USE AN EARTHEN DIVERSION TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN. MAKE THE HEIGHT OF THE BERM OVER THE DRAIN CONDUIT A MINIMUM OF 1.5 FT AND AT LEAST 6 INCHES HIGHER THAN THE ADJOINING BERM ON EITHER SIDE. THE LOWEST POINT OF THE DIVERSION BERM SHOULD BE A MINIMUM OF 1 FT ABOVE THE TOP OF THE DRAIN SO THAT DESIGN FLOW CAN FREELY ENTER THE PIPE.

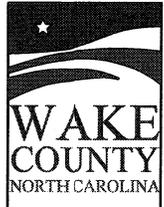
3. PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION WITH RIPRAP DISSIPATOR.



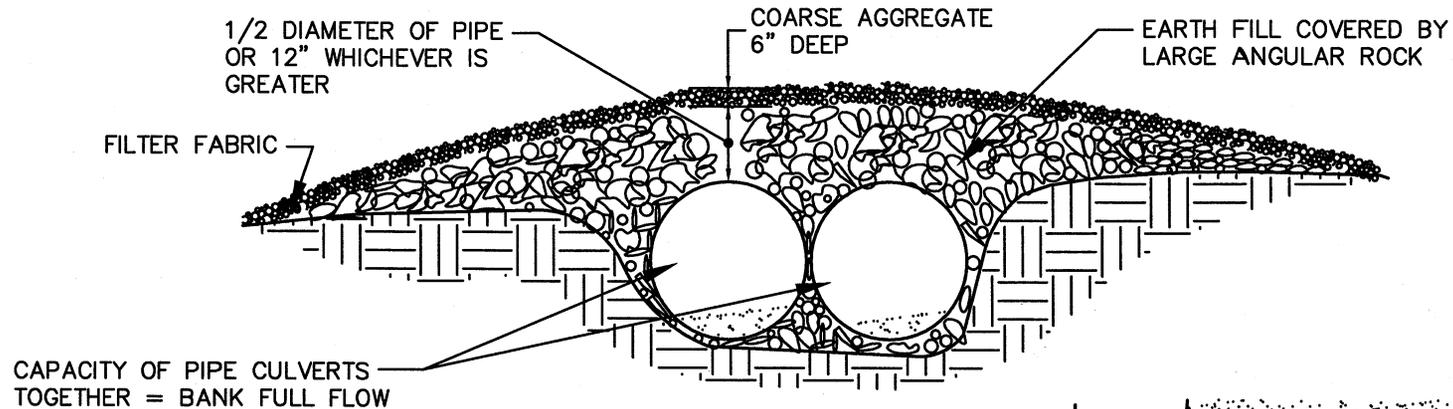
Cross-Section View

Plan View
Standard T-section

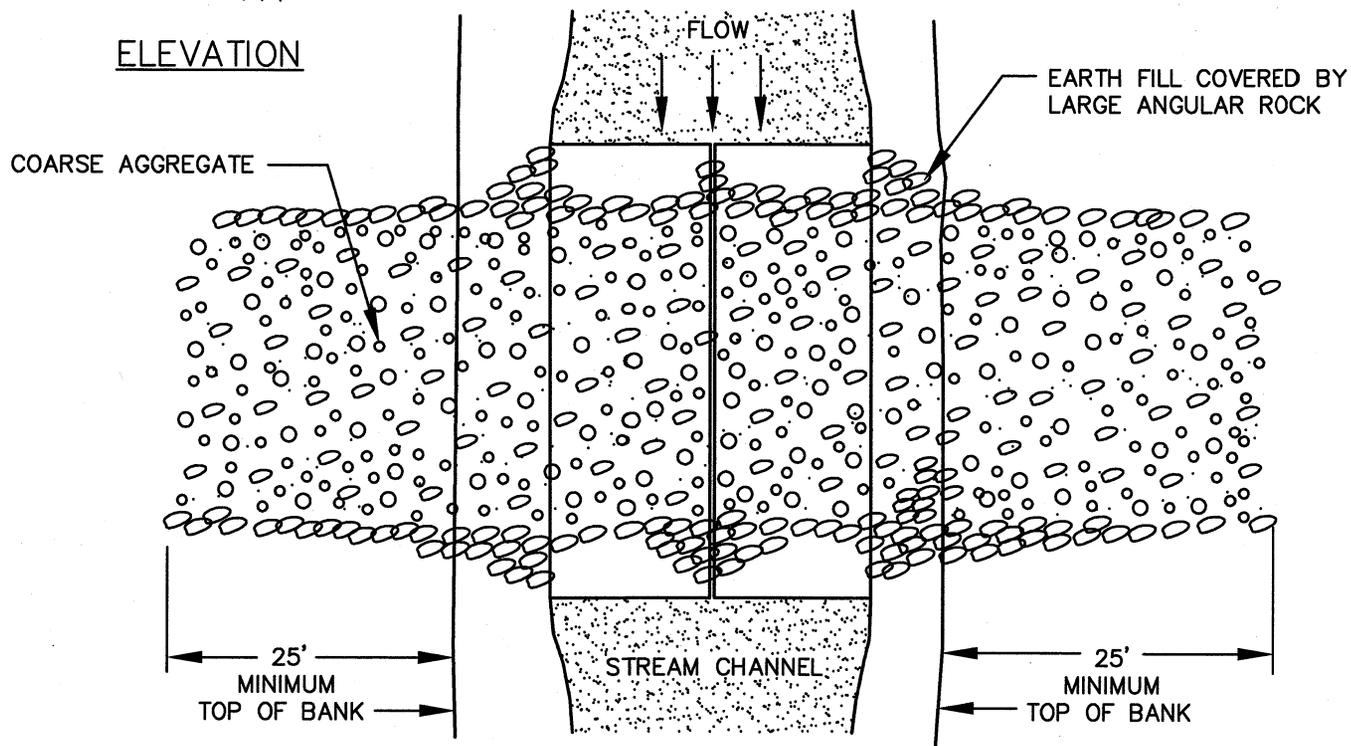
STANDARD TEMPORARY SLOPE DRAIN



EFFECTIVE: 01/31/08



ELEVATION



PLAN

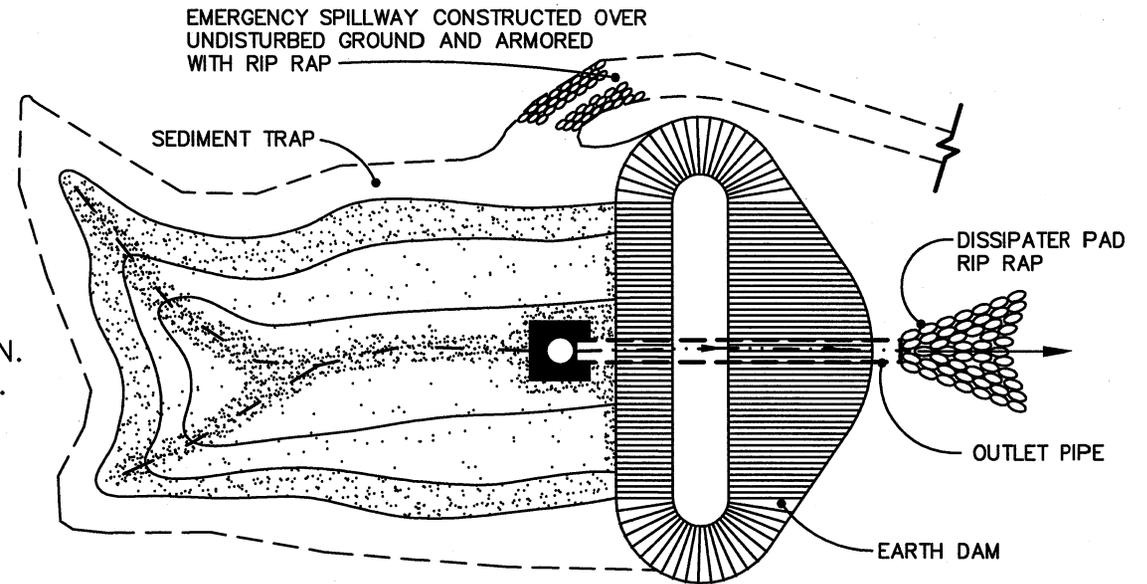
STANDARD TEMPORARY STREAM CROSSING



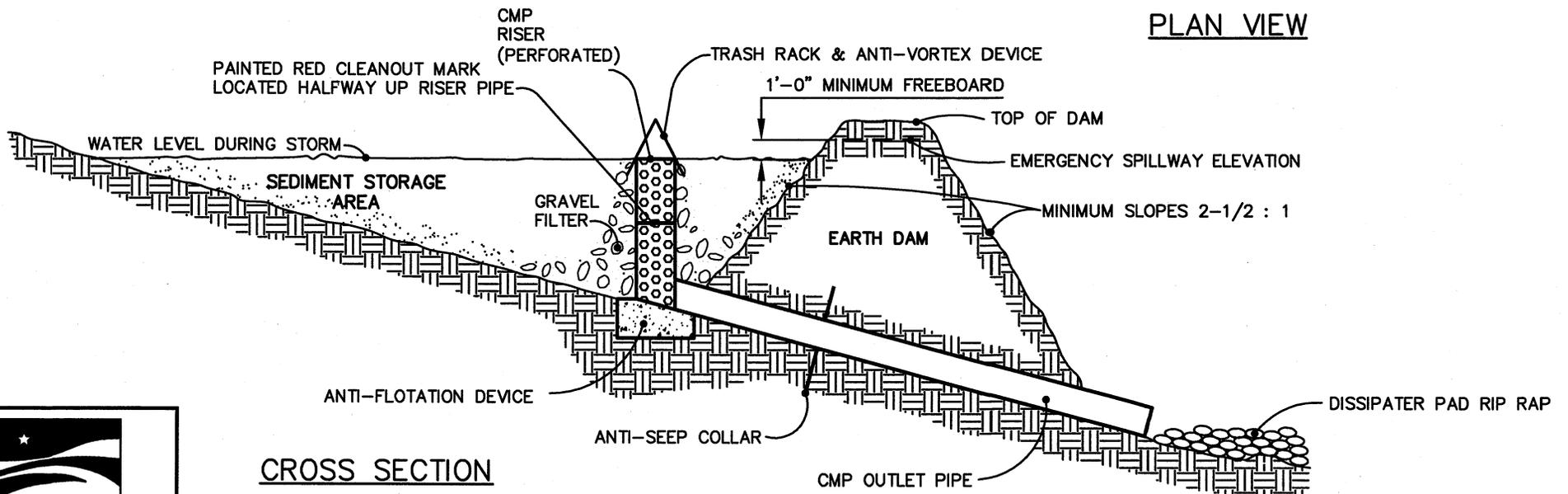
EFFECTIVE: 01/31/08

NOTES:

1. PROVIDE ALL CALCULATIONS FOR ORIFICE DESIGN.
2. PROVIDE ANTI-FLOTATION BLOCK CALCULATIONS.



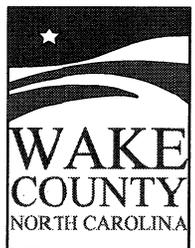
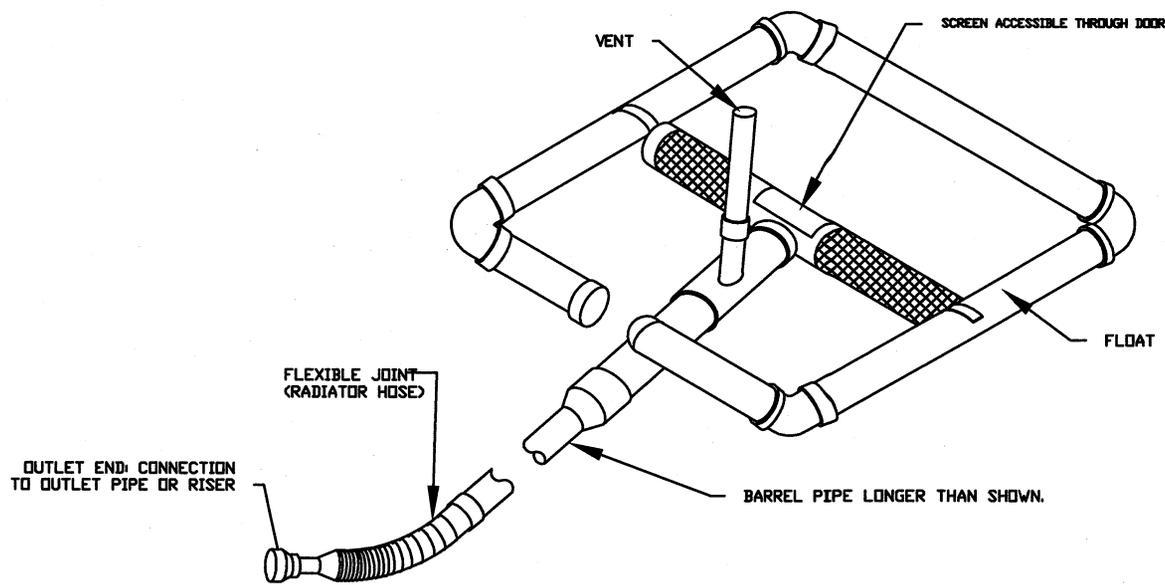
PLAN VIEW



CROSS SECTION

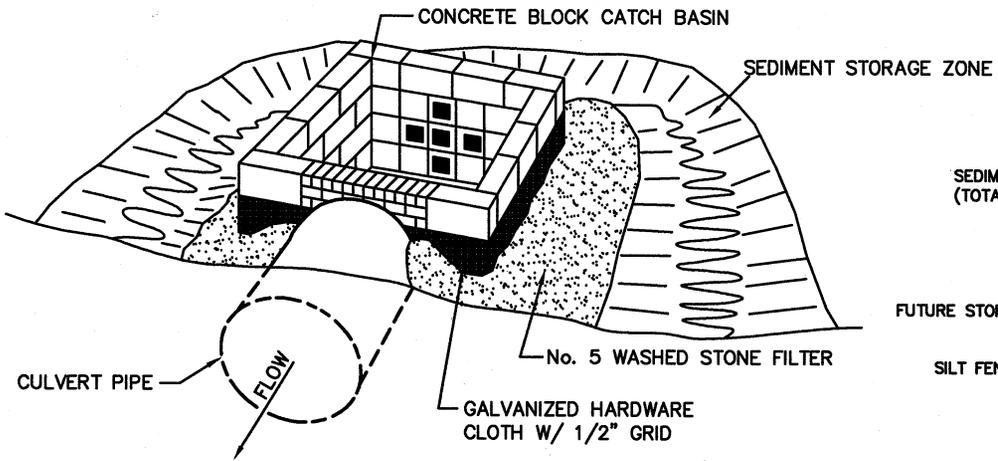
STANDARD RISER-BARREL SEDIMENT BASIN



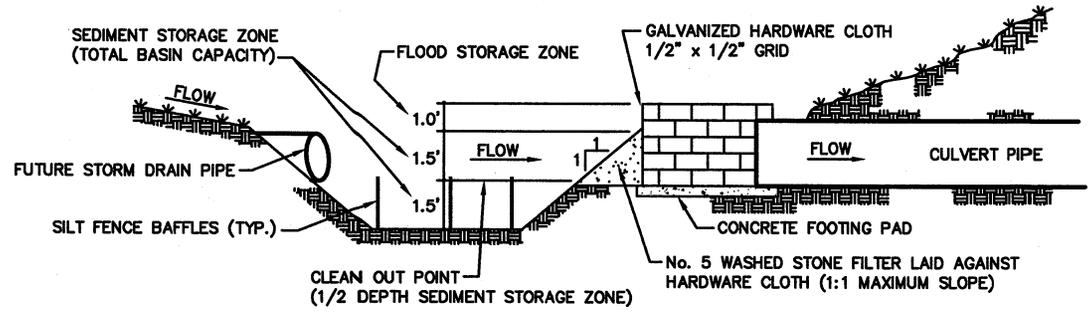


STANDARD SKIMMER DETAIL

EFFECTIVE: 01/31/08

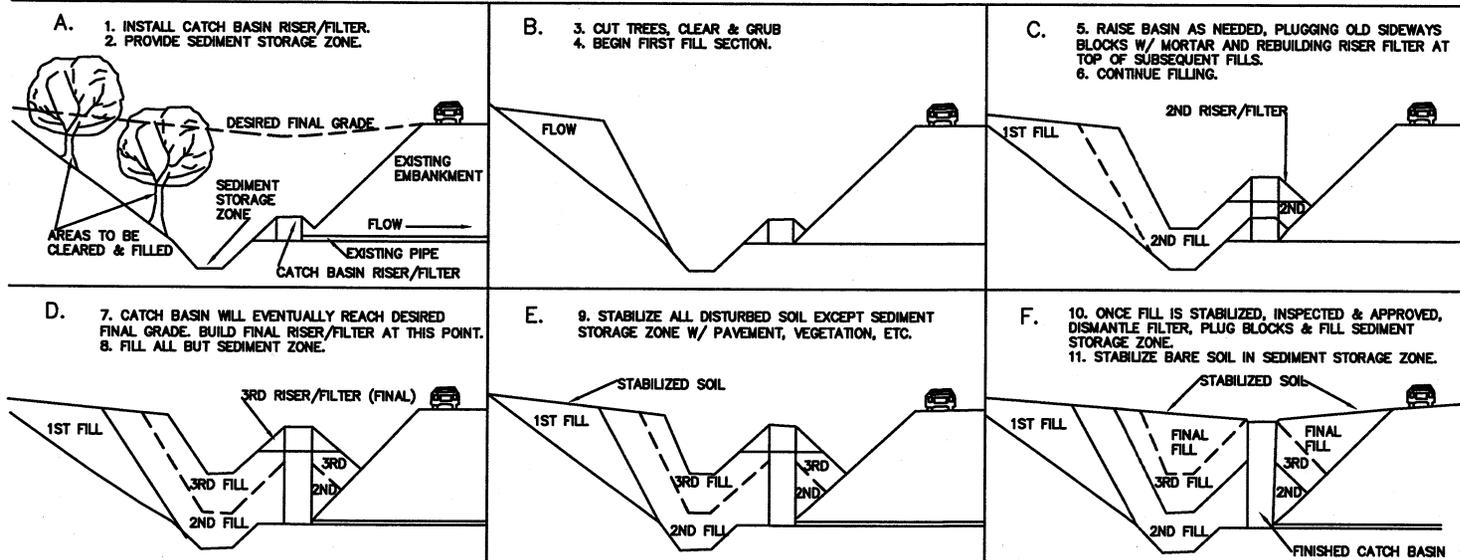


PERSPECTIVE VIEW



SECTION VIEW

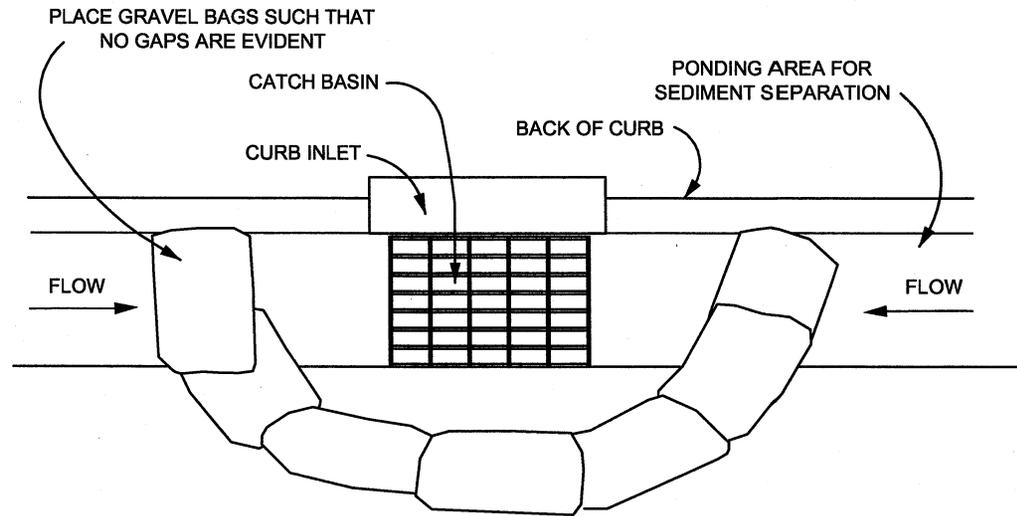
USE OF CATCH BASIN RISER/FILTER ON FILL SITES



STANDARD CATCH BASIN RISER/FILTER



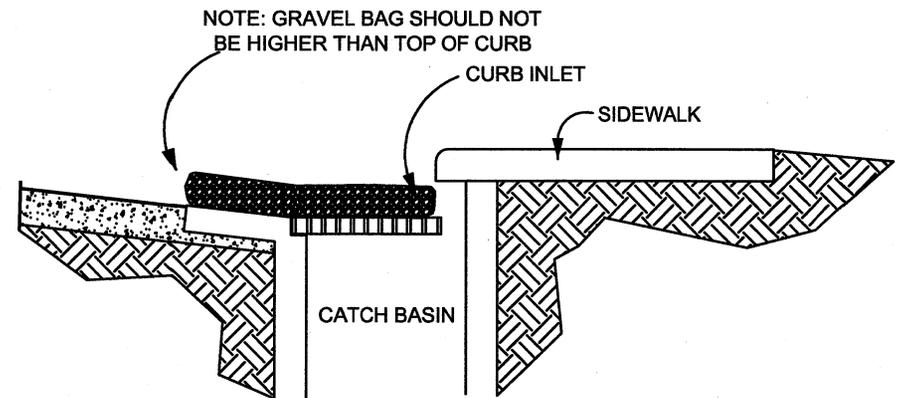
EFFECTIVE: 01/31/08



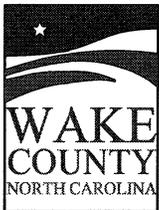
PLAN VIEW

NOTES:

1. PLACE GRAVEL BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. USE SAND BAGS OF WOVEN GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH $\frac{1}{2}$ INCH (OR SMALLER) GRAVEL. BAGS MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.
4. WHEN INSTALLING CURB INLET PROTECTION DEVICES, **NEVER** BLOCK THE CURB INLET.

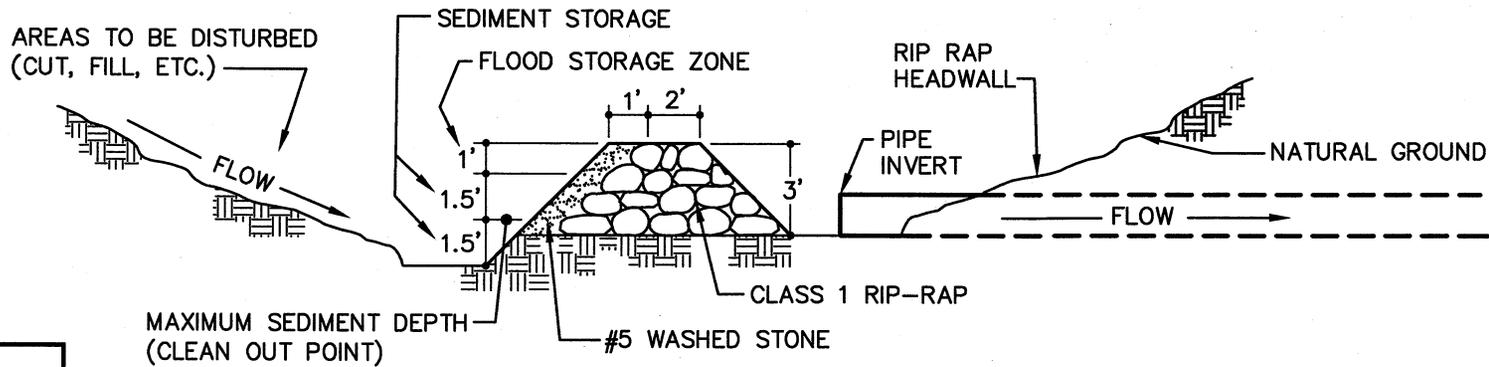
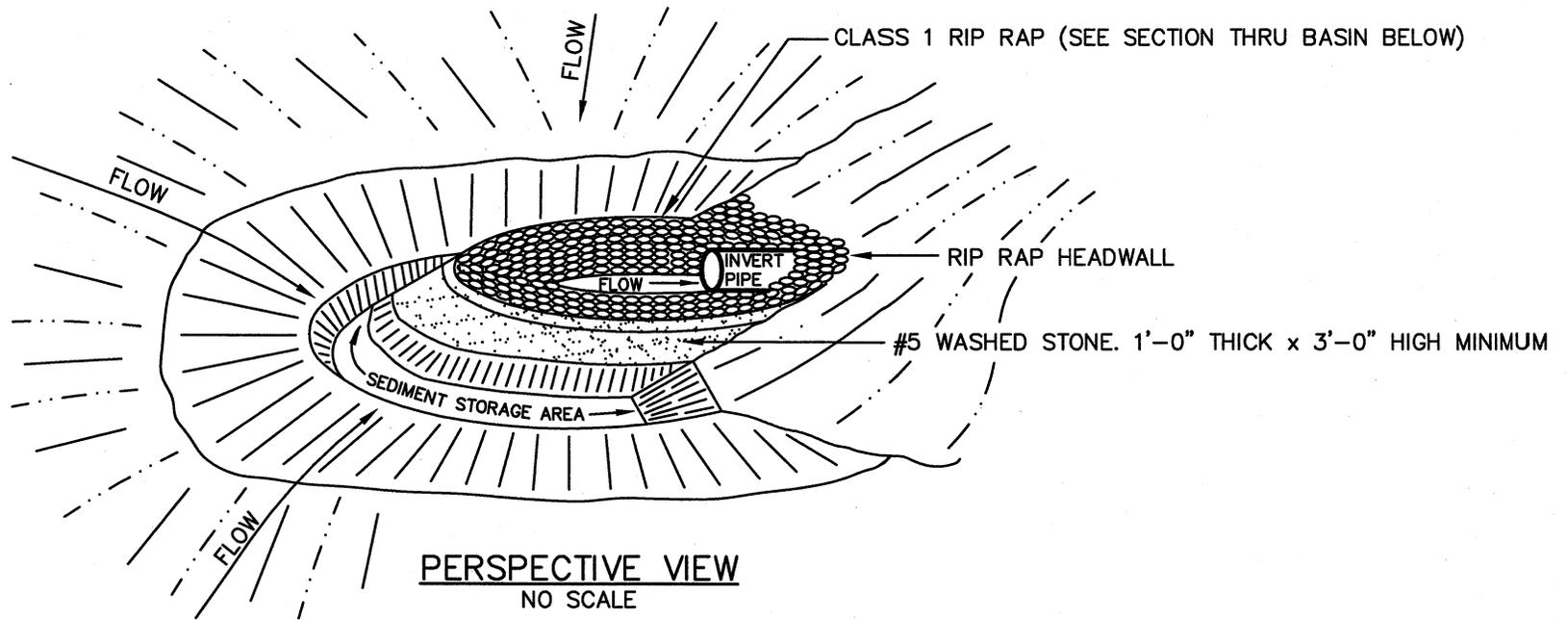


SECTION VIEW



STANDARD GRAVEL BAG CURB INLET PROTECTION

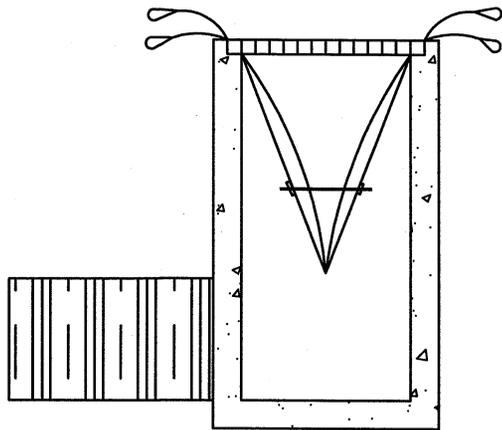
EFFECTIVE: 01/31/08



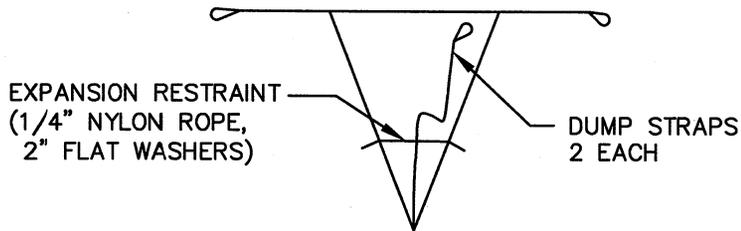
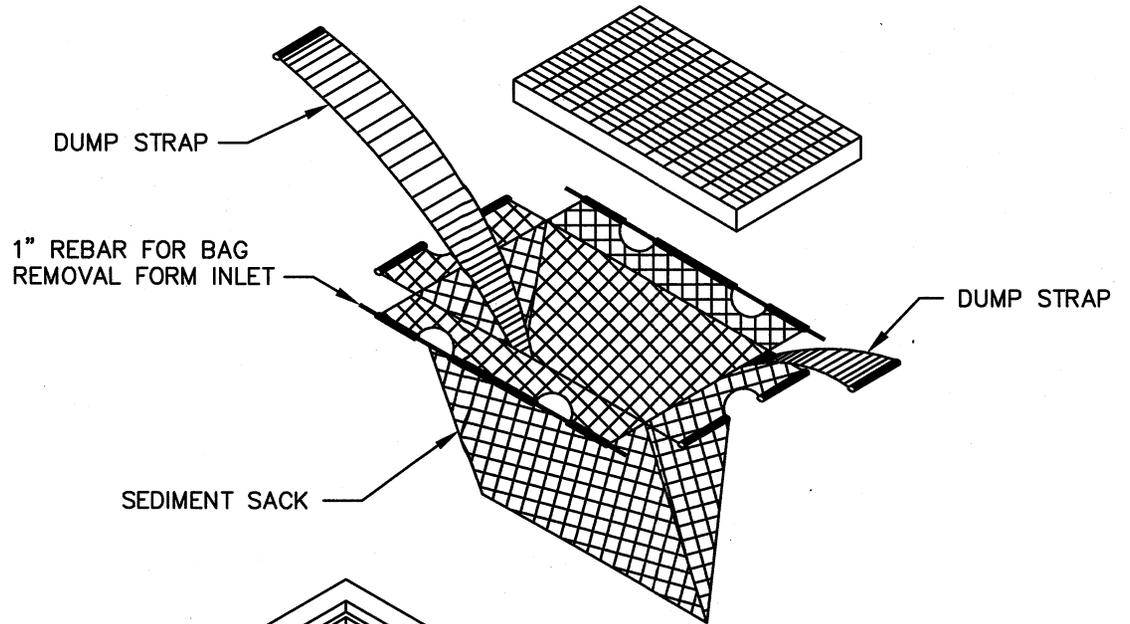
STANDARD HORSESHOE INLET PROTECTION



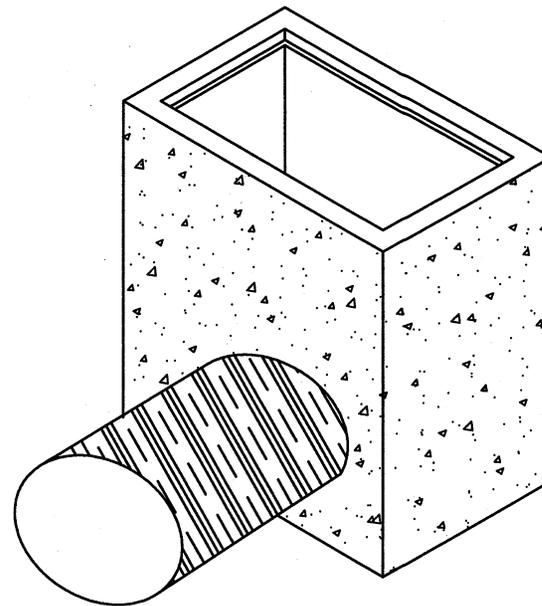
EFFECTIVE: 01/31/08



INSTALLATION DETAIL



BAG DETAIL



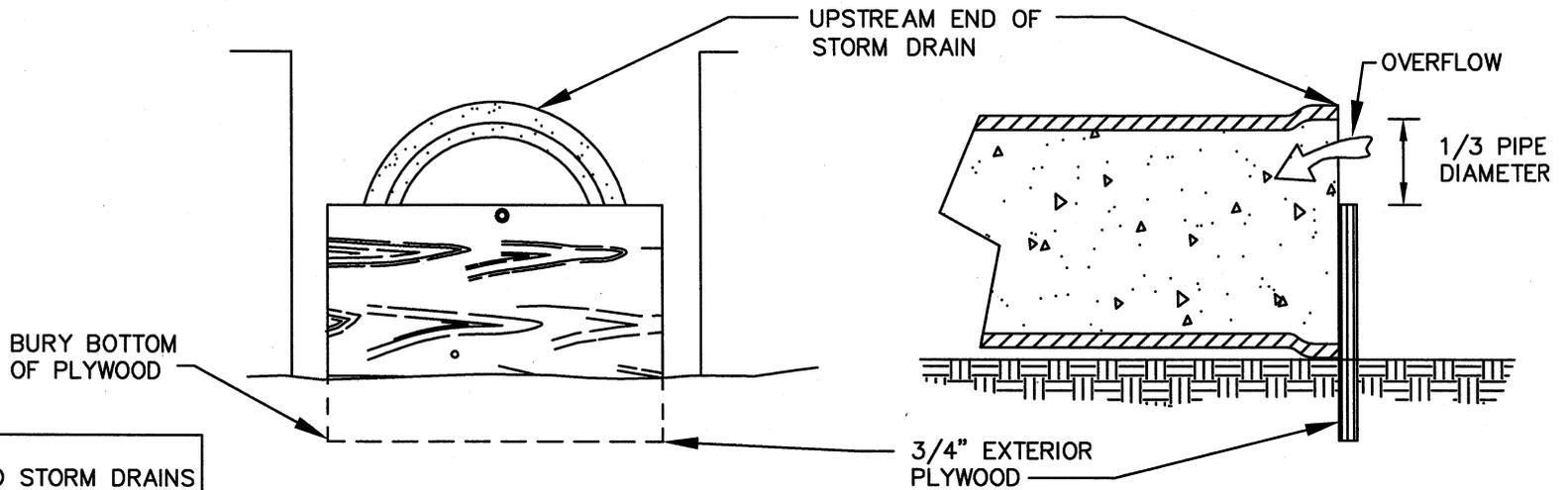
NOTES:

1. SOME MUNICIPALITIES DO NOT ALLOW GUTTER PROTECTION ON PUBLIC ROADS. SILT BAGS SHOULD BE USED WITH THESE CASES.
2. BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.



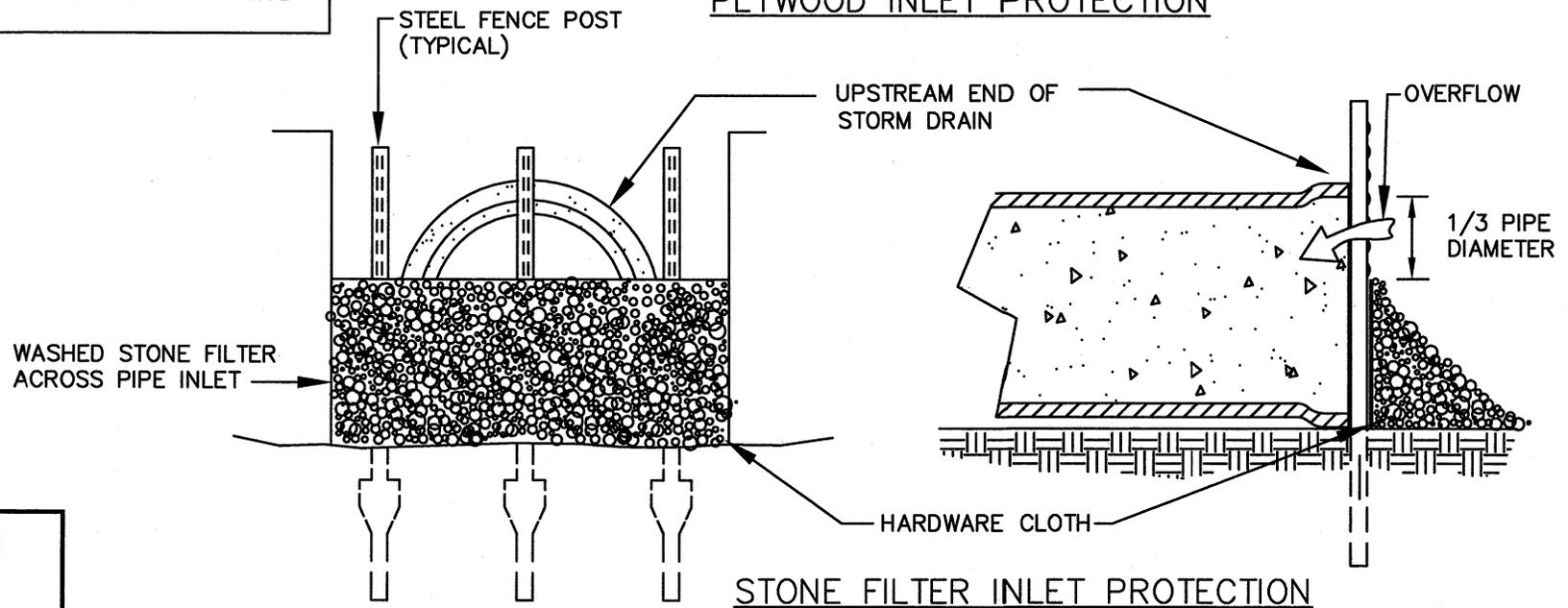
EFFECTIVE: 01/31/08

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE



NOTE:
 ALL PARTIALLY COMPLETED STORM DRAINS SHALL BE PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THESE DETAILS.

PLYWOOD INLET PROTECTION

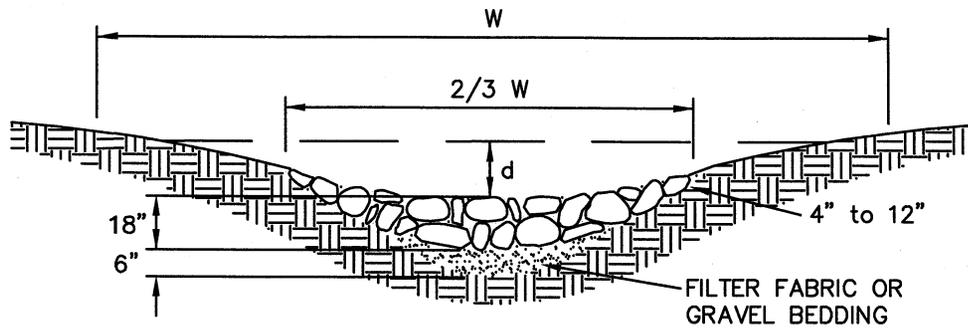


STONE FILTER INLET PROTECTION

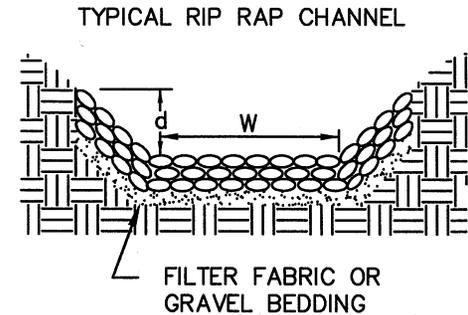
STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)



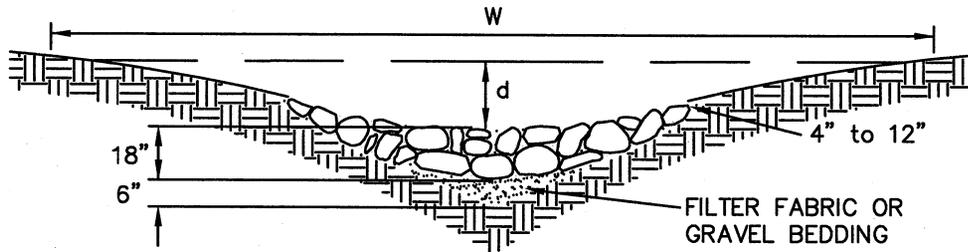
EFFECTIVE: 01/31/08



PARABOLIC-SHAPED WATERWAY WITH STONE CENTER DRAIN
(SHAPED BY BULLDOZER)



TRAPEZOIDAL



V-SHAPED WATERWAY WITH STONE CENTER DRAIN
(SHAPED BY MOTOR GRADER)

NOTES:

- TO BE USED WHERE EXCESSIVE STORMWATER VELOCITIES PROHIBIT VEGETATIVE LININGS.
- SIZE OF STONE MUST BE DETERMINED BY APPROPRIATE DESIGN PROCEDURE.
- DIMENSIONS FOR d & W VARIES ACCORDING TO DESIGN.

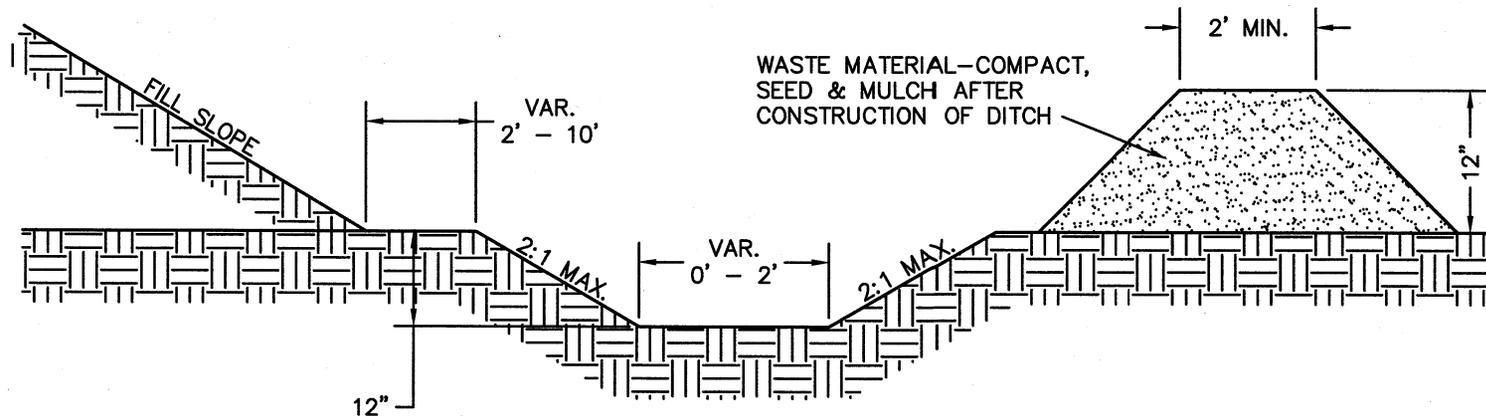


EFFECTIVE: 01/31/08

STANDARD RIP-RAP LINED CHANNELS

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

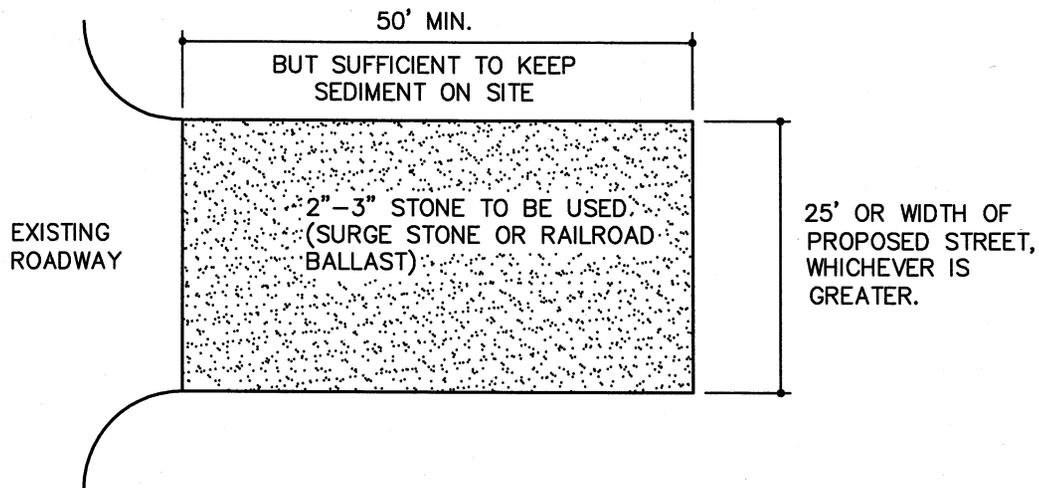


CROSS SECTIONAL VIEW



EFFECTIVE: 01/31/08

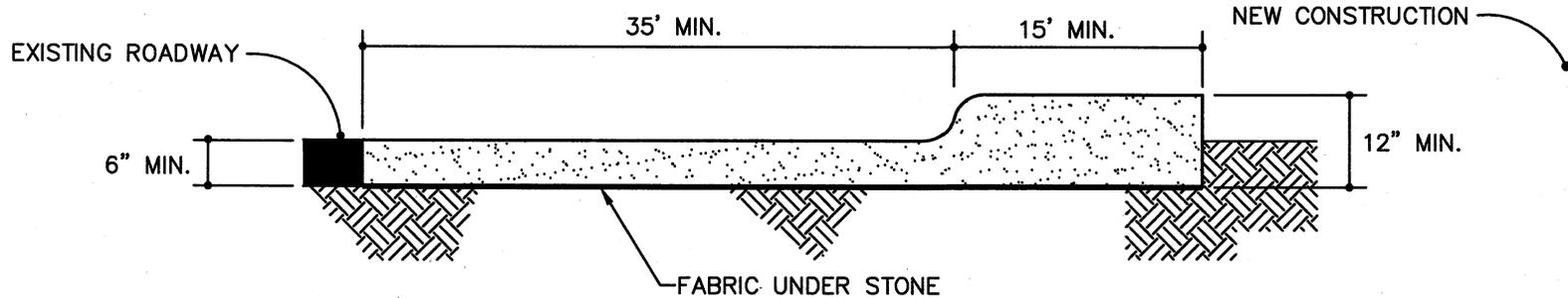
STANDARD TEMPORARY DIVERSION DITCH



PLAN VIEW

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.

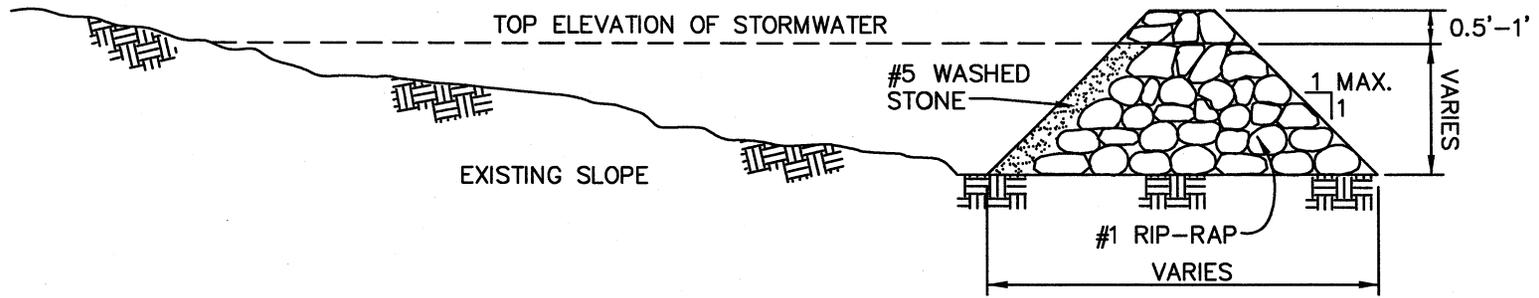


CROSS SECTION

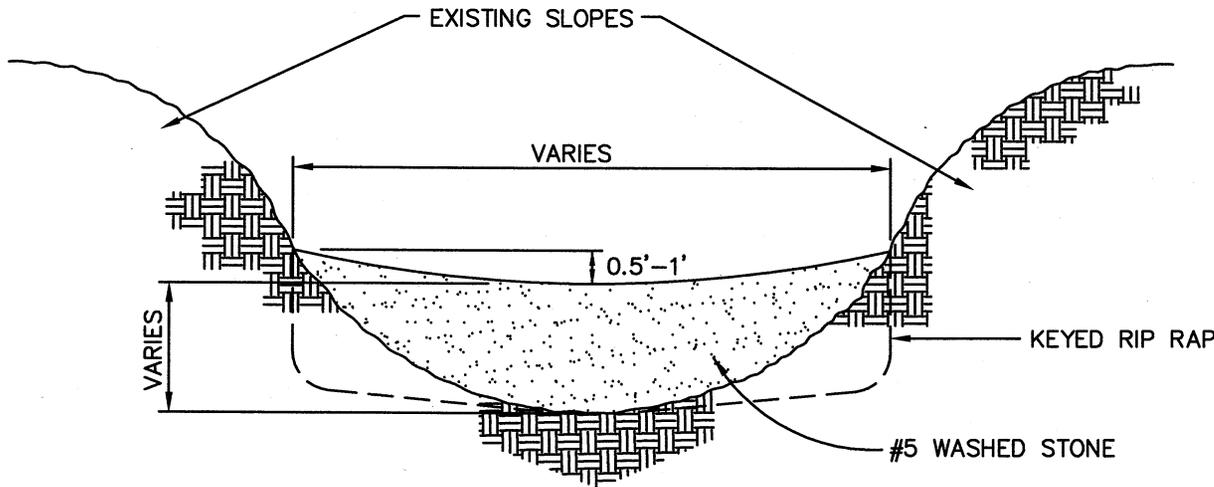


STANDARD CONSTRUCTION ENTRANCE

EFFECTIVE: 01/31/08



SIDE VIEW



FRONT VIEW

CONSTRUCTION NOTES:

HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.

KEY RIP RAP INTO THE DAM FOR STABILIZATION.



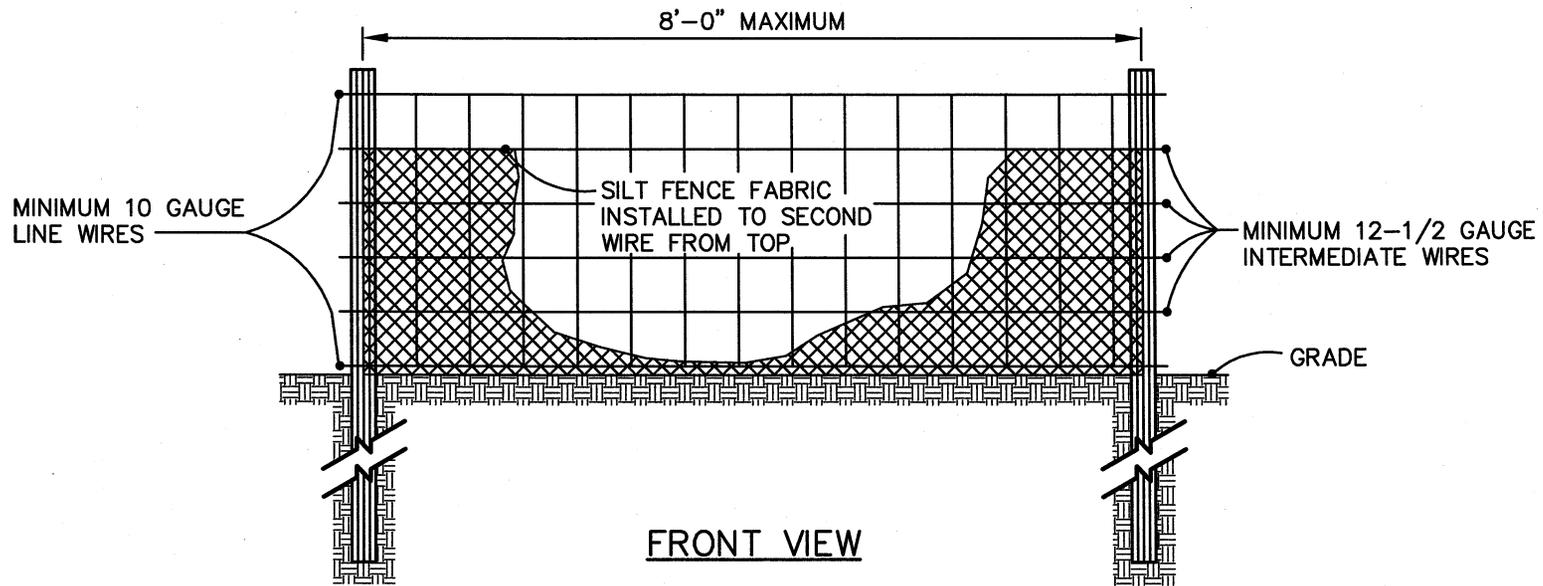
STEP SEQUENCE

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

STANDARD CHECK DAM

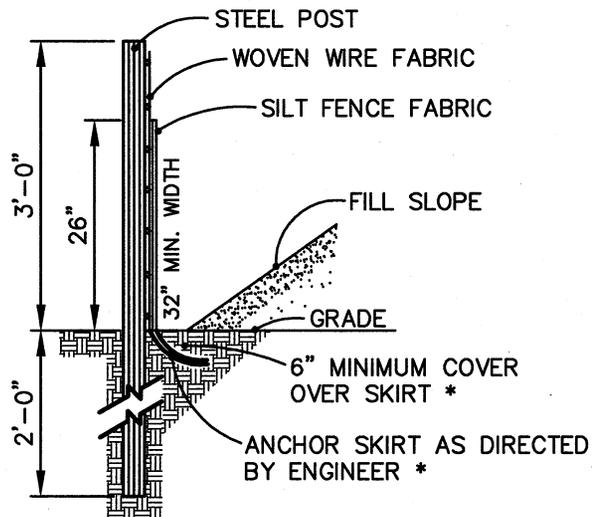


EFFECTIVE: 01/31/08



NOTE:

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.



STANDARD TEMPORARY SILT FENCE



EFFECTIVE: 01/31/08