

EROSION CONTROL PLAN GENERAL NOTES

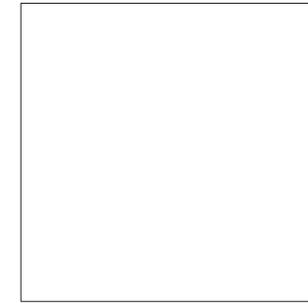
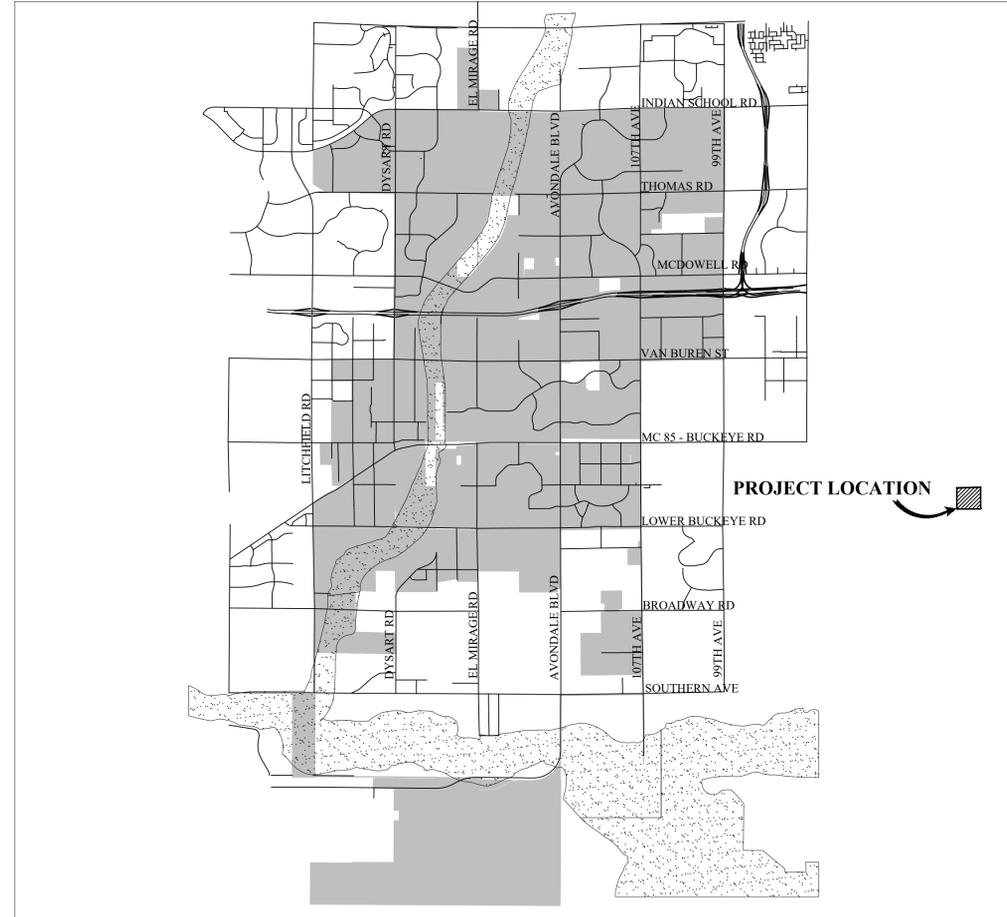
- Approval of this erosion control plan (ECP) does not constitute an approval of permanent road or drainage design (e.g. size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
- The implementation of these ECP plans and the construction, maintenance, replacement, and upgrading of these ECP BMPs is the responsibility of the applicant/contractor until all construction is completed and approved and vegetation/landscaping is established..
- If the project is phase the boundaries of the current phase clearing limits shall be shown on this plan and shall be defined in the field prior to construction. Future phases shall be protected and shown on this plan.
- The ECP BMPs shown on this plan must be constructed in conjunction with all cleaning and grading activities, and in such a manner as to insure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable water standards.
- The ECP BMPs shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ECP BMPs shall be upgraded as needed for unexpected storm events and to ensure that sediment and sediment laden water do not leave the site.
- The ECP BMPs shall be inspected daily by the applicant/contractor and maintained as necessary to ensure their continued functioning.
- The ECP BMPs on inactive sites shall be inspected and maintained a minimum of once a month or within 24 hours following a major storm event.
- At no time shall more than one foot of sediment be allowed to accumulate within a trapped catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water into the downstream system.
- Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.
- A stabilized construction entrance consisting of a minimum of six (6) inches of one (1) inches to three (3) inches diameter, washed, well-graded gravel or crushed rock shall be installed per MCFCD EC-5; all construction traffic shall enter and exit through this entrance. The stabilized construction entrance shall be re-graded or replaced when it becomes saturated or matted with site soils. The paved street adjacent to the site entrance shall be swept on a regular basis to remove any excess mud or dirt tracked out from the site. The cleaning operation shall not flush sediment laden water into the downstream storm water system.
- Any disturbed areas where construction has permanently or temporarily ceased shall be stabilized to prevent erosion. An acceptable stabilization method is hydroseeding. Areas which will be redisturbed within 14 days do not have to be stabilized.
- All storm drain inlets shall be equipped with approved inlet protection per MCFCD SPC-7 or the wattle with geotextile fabric to prevent sedimentation from entering storm drain pipes.
- All storm drain outlets shall have erosion protection velocity-dissipaters or energy dissipaters per MCFCD EC-11 installed immediately after the installation of storm drain pipe to prevent erosion in outlet areas.
- Any sediment which accumulates in the catch basins shall be removed from the catch basins as necessary to maintain a minimum of 75% of the required capacity of the basin during construction and 100% thereafter.
- A copy of the contractor's NOI, ATD, and SWPPP Information Form must be submitted with these plans.
- The contractor shall submit a copy of the NOT to the City at the termination of the project construction.

LEGEND

- | | | | |
|--|----------------------------------|--|-----------------------------|
| | PARCEL BOUNDARY | | CONCRETE WASHOUT AREA |
| | CONSTRUCTION NOTE CALLOUT | | EXISTING STORM DRAIN |
| | STABILIZED CONSTRUCTION ENTRANCE | | PROPOSED STORM DRAIN |
| | EXISTING CONTOURS | | PROPOSED STORMWATER INLET |
| | PROPOSED CONTOURS | | CHANNEL PROTECTION - WATTLE |
| | SILT FENCE | | INLET PROTECTION - WATTLE |
| | WATTLE | | FABRIC GRATE COVER |
| | DRYWELL | | |
| | ONSITE DRAINAGE PATTERN | | |
| | PERIMETER CONTROL - WATTLE | | |

PROJECT TITLE
EROSION CONTROL PLAN
 (Location, Street Address/Cross Roads)
 Section, Township & Range

AREA MAP



VICINITY MAP

OWNER

Company
 Contact Person
 Address
 City, State Zip
 Phone:
 Fax:

ENGINEER

Company
 Contact Person
 Address
 City, State Zip
 Phone:
 Fax:

CITY OF AVONDALE

MAYOR

KENNETH WEISE

VICE MAYOR

VERONICA MALONE

CITY MANAGER

CHERLENE PENILLA, ACTING

COUNCIL MEMBERS

BRYAN KILGORE TINA CONDE
 GLORIA SOLORIO CURTIS NIELSON
 MIKE PINEDA

CITY CLERK

MARCELLA CARRILLO

REVIEWED BY:

Development & Engineering Services Department

Signature _____

Date _____

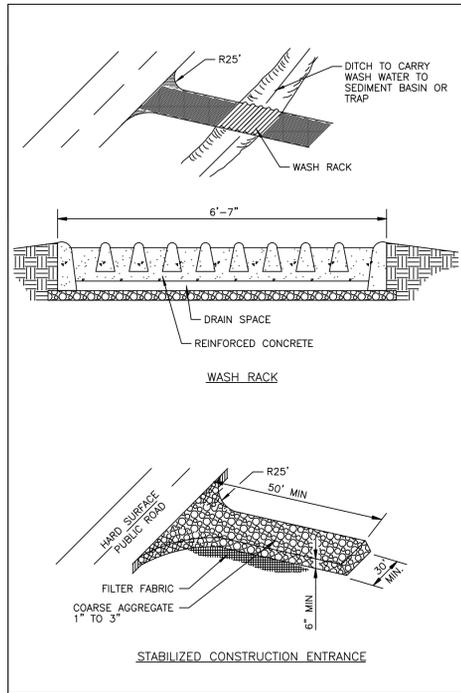
SHEET INDEX:

Sheet 1 - Cover Sheet
 Sheet 2 - Erosion & Sediment Control Plan
 Sheet 3-4 - BMP Details

NOTE:
 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF AVONDALE CONSTRUCTION SPECIFICATIONS CURRENTLY ON FILE AND AVAILABLE AT THE CITY OF AVONDALE ENGINEERING DEPARTMENT



DATE	SCALE	SHEET	NO.	(FIRM INFORMATION HERE)
NAME	NAME			
PROJECT NAME	NAME			
DRAWN BY	NAME			
SEAL				IMPROVEMENT PLANS
ORIGINAL PLAN DATE				
LATEST REVISION DATE				
SHEET NUMBER 1 OF 4				
PROJECT NUMBER XXXX				



EC-5

DEFINITION

A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER CLOTH LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK OR PARKING AREA.

PURPOSE

THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. REDUCING TRACKOUT OF SEDIMENTS AND OTHER POLLUTANTS ONTO PAVED ROADS HELPS PREVENT DEPOSITION OF SEDIMENTS INTO LOCAL STORM DRAINS AND PRODUCTION OF AIRBORNE DUST.

APPROPRIATE APPLICATIONS

A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE USED AT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS. NPDES PERMITS REQUIRE THAT APPROPRIATE MEASURES BE IMPLEMENTED TO PREVENT TRACKOUT OF SEDIMENTS ONTO PAVED ROADWAYS.

LIMITATIONS

THE STABILIZED CONSTRUCTION ENTRANCE PLAN SHOULD BE REVIEWED AS PART OF THE PROJECT TRAFFIC CONTROL PLAN.

- CONSTRUCT ON LEVEL GROUND.
- STABILIZED CONSTRUCTION ENTRANCES ARE RATHER EXPENSIVE TO CONSTRUCT AND WHEN A WASH RACK IS INCLUDED, A SEDIMENT TRAP OF SOME KIND MUST ALSO BE PROVIDED TO COLLECT WASH WATER RUNOFF.

PLANNING CONSIDERATIONS

STABILIZED CONSTRUCTION ENTRANCES ARE NOT VERY EFFECTIVE IN REMOVING SEDIMENT FROM EQUIPMENT LEAVING A CONSTRUCTION SITE. EFFICIENCY IS GREATLY INCREASED, THOUGH WHEN A WASHING RACK IS INCLUDED AS PART OF A STABILIZED CONSTRUCTION ENTRANCE. BUILD ON LEVEL GROUND

+ ADVANTAGES:

- DOES REMOVE SOME SEDIMENT FROM EQUIPMENT AND SERVES TO CHANNEL CONSTRUCTION TRAFFIC IN AND OUT OF THE SITE.

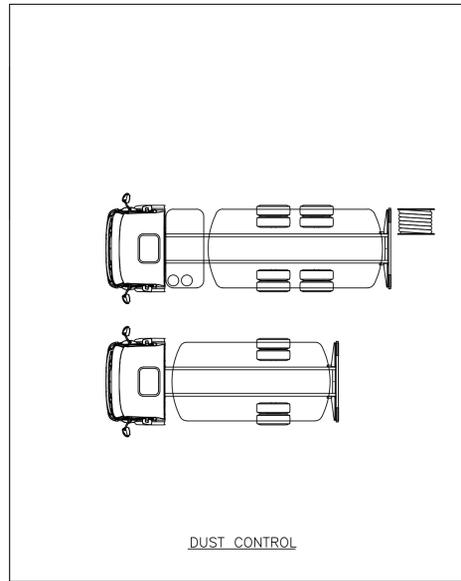
DESIGN & SIZING CONSIDERATIONS

THE AGGREGATE FOR STABILIZED CONSTRUCTION ENTRANCE APRONS SHALL BE 1 TO 3 INCHES IN SIZE, WASHED, WELL-GRADED GRAVEL OR CRUSHED ROCK. THE APRON DIMENSIONS RECOMMENDED ARE 30 FT. X 50 FT. AND 6 INCHES DEEP.

- ENTRANCE MUST BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
- WHEN WASH AREAS ARE PROVIDED, WASHING SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO A PROPERLY CONSTRUCTED SEDIMENT TRAP OR BASIN (POND).

MAINTENANCE REQUIREMENTS

- INSPECT MONTHLY AND AFTER EACH RAINFALL.
- REPLACE GRAVEL MAT WHEN SURFACE VOIDS ARE NO LONGER VISIBLE. PERIODIC TOP DRESSING WITH ADDITIONAL STONE WILL BE REQUIRED.
- ALL SEDIMENTS DEPOSITED ON PAVED ROADWAYS MUST BE REMOVED WITHIN 24 HOURS.
- REMOVE GRAVEL AND FILTER FABRIC UPON COMPLETION OF CONSTRUCTION.



EC-7

DEFINITION

A COMPREHENSIVE PLAN TO LIMIT OFFSITE SEDIMENT DEPRESSION BY MINIMIZING OR CONTROLLING AIRBORNE FUGITIVE COST.

PURPOSE

SEDIMENTS WHICH ARE TRANSPORTED FROM CONSTRUCTION SITES BY STORMWATER RUNOFF, WIND, EROSION AND VEHICLE TRACKOUT ARE OFTEN RE-DISPERSED TO THE AIR BY SUBSEQUENT VEHICULAR TRAFFIC AND HIGH WINDS. LIKEWISE, THESE SEDIMENTS MAY BE TRANSPORTED BY THE NEXT RAINFALL INTO PUBLIC STORM SEWER SYSTEMS. IMPLEMENTATION OF CONTROL MEASURES TO MINIMIZE THE GENERATION OF FUGITIVE DUST FROM CONSTRUCTION SITES WILL REDUCE PARTICULATE MATTER IN THE AIR, WHICH HAS SIGNIFICANT HEALTH EFFECTS TO WORKERS AND ANY NEARBY RESIDENTS.

APPROPRIATE APPLICATIONS

DUST CONTROL MEASURES SHOULD BE APPLIED AT THE FOLLOWING LOCATIONS AND ACTIVITIES:

- GRADING OPERATIONS (LAND CLEARING AND EARTHMOVING)
- EXPOSED AREAS, CLEARED UNSTABILIZED AREA.
- VEHICLE TRAFFIC ON UNPAVED SURFACES
- SEDIMENT TRACKING ON PAVED SURFACES
- SOIL AND DEBRIS STORAGE PILES

LIMITATIONS

DUST SUPPRESSANTS HAVE A RANGE OF LIMITATIONS AND PRECAUTIONS.

- ALL DUST SUPPRESSANTS ARE TEMPORARY IN NATURE AND MAY NEED REAPPLICATION(S) THROUGHOUT THE LIFE OF A PROJECT.
- DUST SUPPRESSANTS WILL GENERALLY EXPERIENCE SPOT FAILURES DURING HEAVY RAINFALL EVENTS. IF RUNOFF PENETRATES THE SOIL AT THE TOP OF A SLOPE TREATED WITH A SOIL BINDER, THE RUNOFF MAY COMPLETELY UNDERCUT THE STABILIZED SOIL LAYER AND DISCHARGE AT A POINT FURTHER DOWN THE SLOPE.

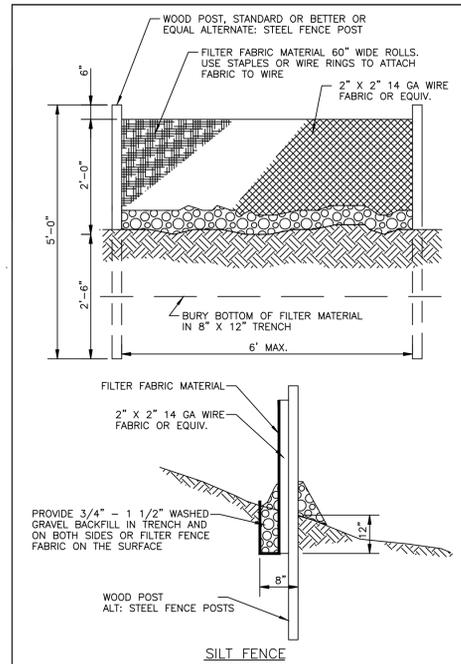
PLANNING CONSIDERATIONS

MANY OF THE REASONABLY AVAILABLE CONTROL MEASURES FOR CONTROLLING FUGITIVE DUST FROM CONSTRUCTION SITES CAN ALSO BE IMPLEMENTED AS BEST MANAGEMENT PRACTICES FOR STORMWATER POLLUTION PREVENTION. THOSE BEST MANAGEMENT PRACTICES INCLUDE:

- PROVIDE COVERS FOR TRUCKS TRANSPORTING MATERIALS THAT CONTRIBUTE DUST.
- PROVIDE FOR WET SUPPRESSION OR CHEMICAL STABILIZATION OF EXPOSED SOILS.
- PROVIDE FOR RAPID CLEANUP OF SEDIMENTS DEPOSITED ON PAVED ROADS.
- STABILIZE UNPAVED HAUL ROADS, PARKING AND STAGING AREAS.
- IMPLEMENT DUST CONTROL MEASURES FOR MATERIAL STOCKPILES.
- LIMIT THE AMOUNT OF AREAS DISTURBED BY CLEARING AND EARTH MOVING OPERATIONS BY SCHEDULING THESE ACTIVITIES IN PHASES.

MAINTENANCE REQUIREMENTS

DUST CONTROL IS AN ONGOING PROCESS DURING SITE CONSTRUCTION. RE-APPLICATION OF DUST CONTROL MEASURE MAY BE NECESSARY UNTIL CONSTRUCTION IS COMPLETE



SPC-5

DEFINITION

A GEOTEXTILE FABRIC STRETCHED BETWEEN EITHER WOODEN OR METAL POSTS WITH THE LOWER EDGE OF THE FABRIC SECURELY EMBEDDED IN THE SOIL. THE FENCE IS TYPICALLY LOCATED DOWNSTREAM OF DISTURBED AREAS TO INTERCEPT SHEET FLOW RUNOFF.

MATERIALS

SELECTION OF FABRIC TENSILE STRENGTH AND BURSTING STRENGTH CHARACTERISTICS SHALL BE SUPPORTED WITH WIRE MESH IN AND AS RECOMMENDED BY THE FABRIC MANUFACTURER. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE LIFE AT A TEMPERATURE RANGE OF 0° F. TO 120° F.

INSTALLATION

FILTER FENCES ARE TO BE CONSTRUCTED ON A LEVEL CONTOUR TO MAXIMIZE THE AVAILABLE PONDING AREA AND PREVENT CONCENTRATION OF FLOW AGAINST THE FENCE.

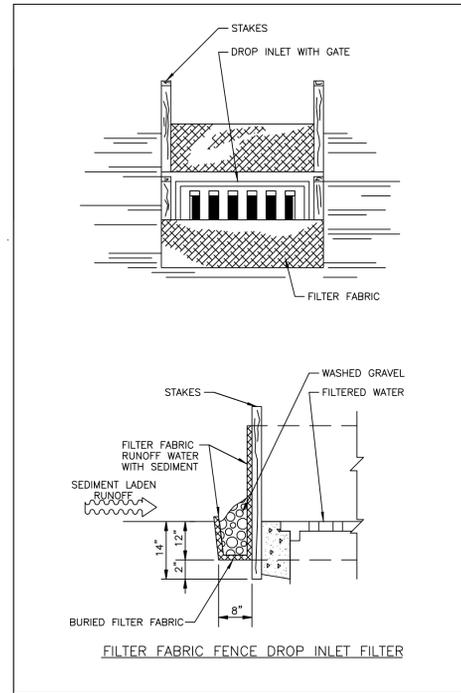
- POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES.
- A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES.
- THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED AND THE FILTER FABRIC STAPLED OR WIRED DIRECTLY TO THE POSTS.
- THE USE OF JOINTS SHOULD BE AVOIDED WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
- THE TRENCH SHALL BE BACKFILLED WITH 3/4-INCH MINIMUM DIAMETER WASHED GRAVEL OR COMPACTED-NATIVE MATERIAL.

MAINTENANCE REQUIREMENTS

INSPECT MONTHLY DURING DRY PERIODS AND IMMEDIATELY AFTER EACH RAINFALL. REPAIR AS NECESSARY. SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. FILTER FENCES SHOULD NOT BE REMOVED UNTIL THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED

COA NOTES:

A SILT FENCE IS REQUIRED FOR CONSTRUCTION SITE PERIMETER CONTAINMENT CONTROL OF SILT, DIRT AND DEBRIS AROUND A SITE INCLUDING ANY BASIN OUTFALL LOCATIONS. THE SILT FENCE IS REQUIRED TO BE INSTALLED AROUND THE CONSTRUCTION SITES' PERIMETER EXTENDING TO A DISTANCE WHERE THE ELEVATION REACHES 18" ABOVE THE SITE OUTFALL ELEVATION. ONCE THIS IS REACHED, APPROVED WATTLES MAY BE UTILIZED FOR THE REMAINING PERIMETER CONTROL REQUIREMENTS. FOR RELATIVELY FLAT SITES, THIS MAY REQUIRE THE ENTIRE PERIMETER TO USE SILT FENCE.



SPC-7

DEFINITION

A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN, DROP INLET, OR CURB INLET.

PURPOSE

TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

APPROPRIATE APPLICATIONS

WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS:

- FILTER FABRIC FENCE** - APPLICABLE WHERE THE INLET DRAINS A RELATIVELY SMALL (LESS THAN 1 ACRE) FLAT AREA (LESS THAN 5 PERCENT SLOPE). DO NOT PLACE FABRIC UNDER GRATE AS THE COLLECTED SEDIMENT MAY FALL INTO THE DRAIN WHEN THE FABRIC IS RETRIEVED.
- EXCAVATED DROP INLET SEDIMENT TRAP** - PROTECTION AGAINST SEDIMENT ENTERING A STORM DRAIN INLET CAN BE PROVIDED BY EXCAVATING AN AREA IN THE APPROACH TO THE DRAIN. THE DRAINAGE AREA FOR A DRAIN PROTECTED IN THIS MANNER IS ONE ACRE. PROVIDE WEEP HOLES TO DRAIN THE SHALLOW POOL.

+ ADVANTAGES:

- INLET PROTECTION PREVENTS SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM AND CLOGGING IT.

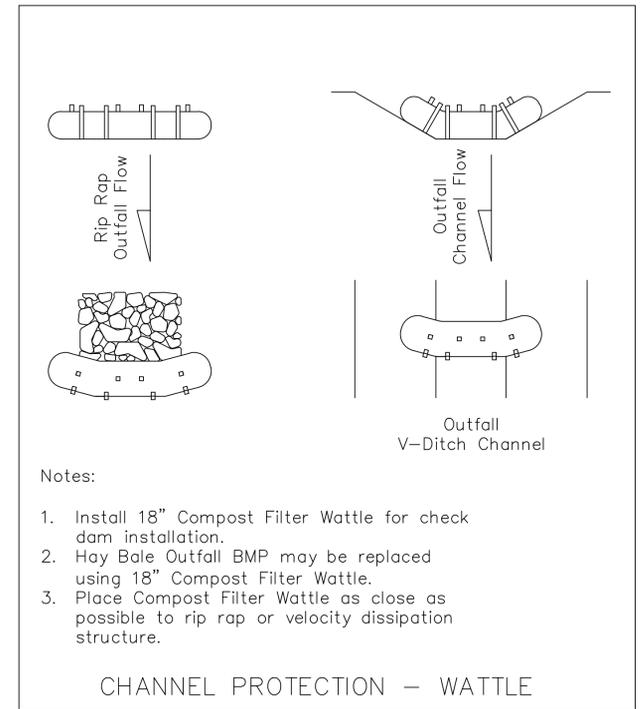
LIMITATIONS

- PONDING WILL OCCUR AT THE INLET WITH POSSIBLE SHORT TERM FLOODING.
- CURB INLETS ON SLOPES CANNOT BE EFFECTIVELY PROTECTED BECAUSE THE STORMWATER WILL BYPASS THE INLET AND CONTINUE DOWNGRADE.
- FILTER FABRIC FENCES ARE LIMITED TO STORM DRAIN INLETS FOR SMALL DRAINAGE AREAS OF FIVE ACRE OR LESS. FOR LARGER DRAINAGE AREAS, SMALLER SEDIMENT CATCHMENT AREAS ARE RECOMMENDED.

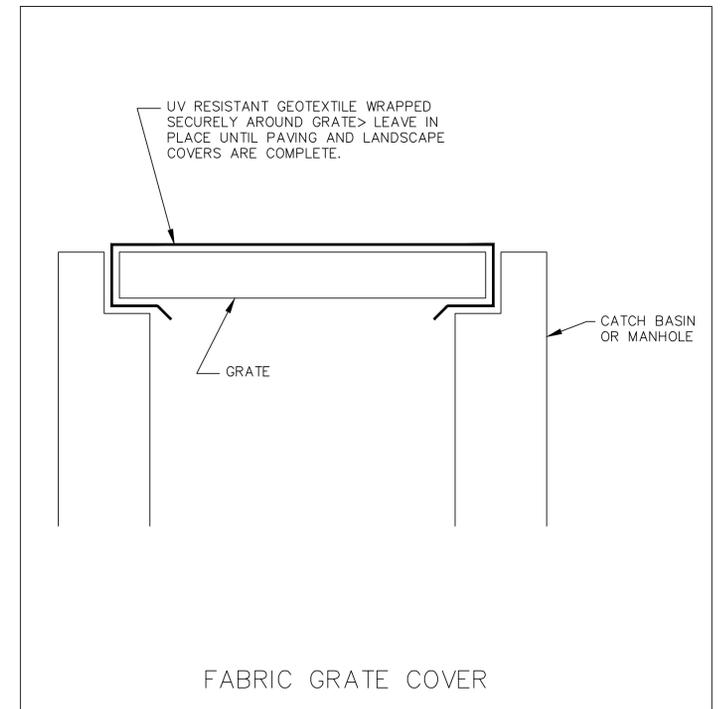
PLANNING CONSIDERATIONS

WHERE STORM SEWERS ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED, OR WHERE CONSTRUCTION IS ADJACENT TO AN EXISTING STORM SEWER, LARGE AMOUNTS OF SEDIMENT MAY ENTER THE STORM SEWER SYSTEM. IN CASES OF EXTREME SEDIMENT LOADING, THE STORM SEWER ITSELF MAY CLOG AND LOSE A MAJOR PORTION OF ITS CAPACITY. TO AVOID THESE PROBLEMS, IT IS NECESSARY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM AT THE INLETS.

THIS PRACTICE CONTAINS SEVERAL TYPES OF INLET FILTERS AND TRAPS WHICH HAVE DIFFERENT APPLICATIONS DEPENDENT UPON SITE CONDITIONS AND TYPE OF INLET. OTHER INNOVATIVE TECHNIQUES FOR ACCOMPLISHING THE SAME PURPOSE ARE ENCOURAGED, BUT ONLY AFTER SPECIFIC PLANS AND DETAILS ARE SUBMITTED TO AND APPROVED BY THE LOCAL GOVERNMENT.



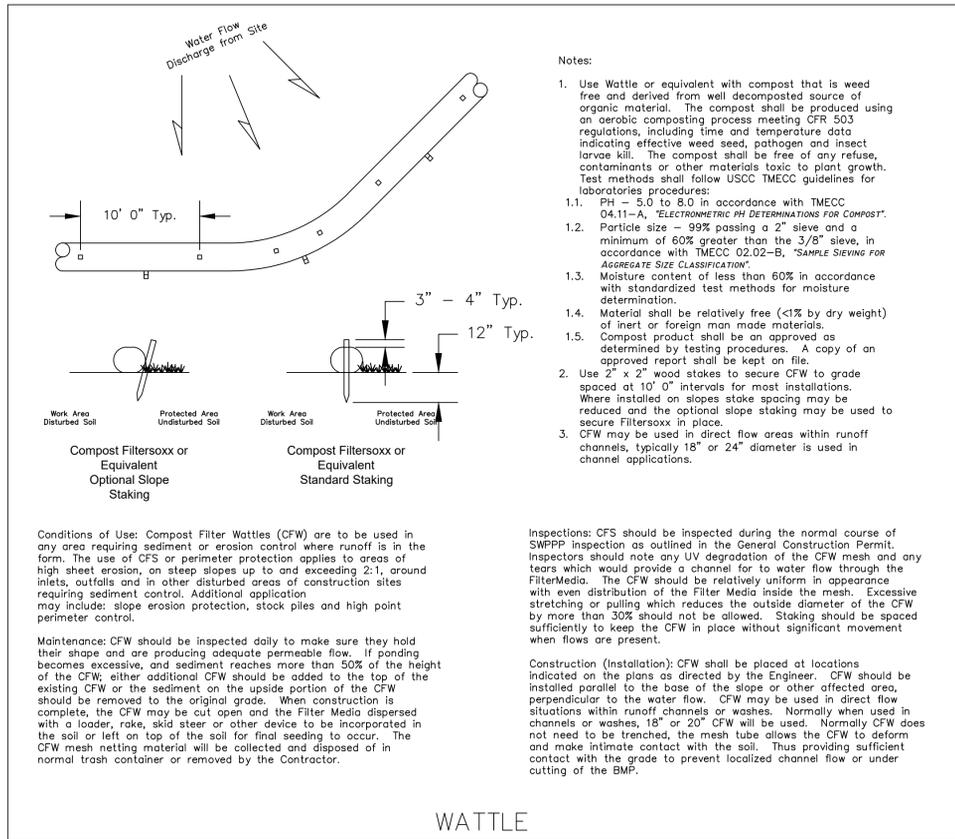
COA BMP 101



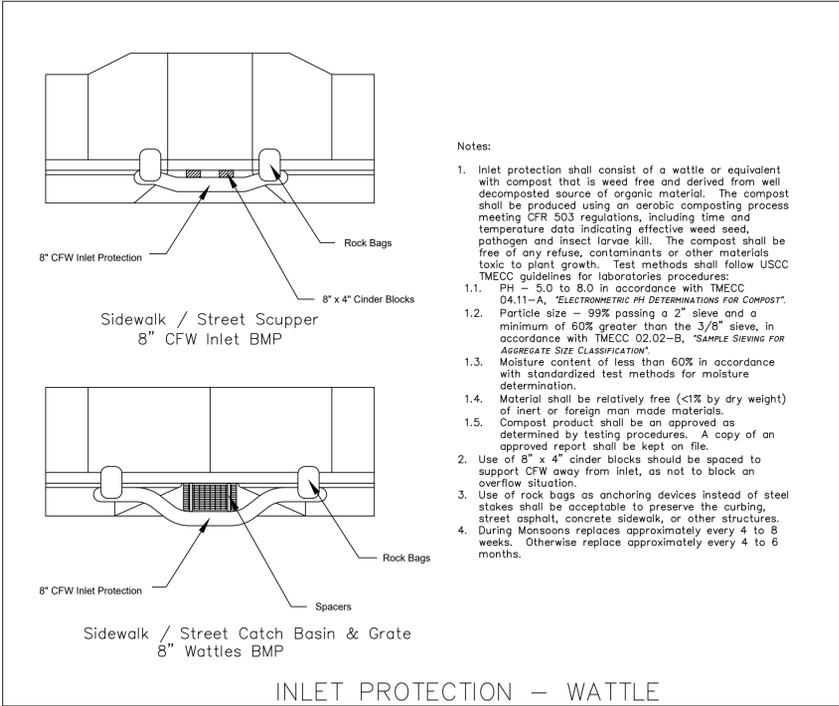
COA BMP 102

DATE APPROVED		PROJECT NAME	
NAME	NAME	NAME	NAME
SEAL	SEAL	SEAL	SEAL
Erosion Control Plan			
SHEET NUMBER			
3 OF 4			
PROJECT NUMBER			
XXXX			

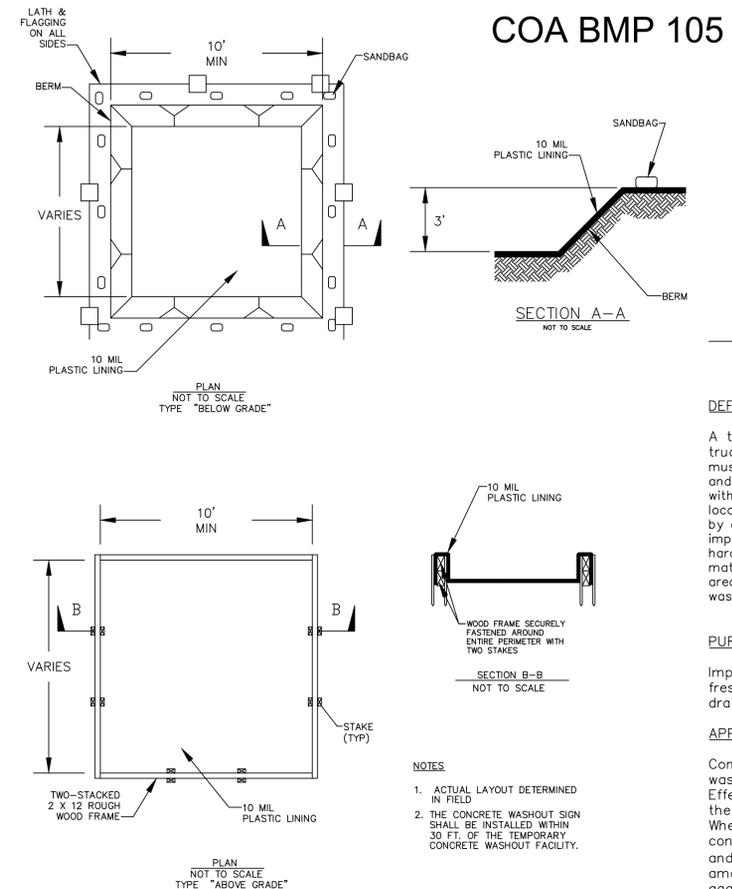




COA BMP 103



COA BMP 104



COA BMP 105

CONCRETE WASHOUT

DEFINITION
A temporary pit or bermed area for washout of concrete trucks, tools, mortar mixers, etc. The concrete wash-out area must be located as far as possible away from the watercourse and other drainage ways. Unless the entire project site is located within the floodplain, the concrete wash-out area must also be located above the floodplain. The washout area must be contained by constructing a temporary sub-surface pit or by using impervious structural barriers to contain concrete waste while it hardens. The wash-out area must be lined with an impervious material to hold wash water while it evaporates. The wash-out area must be built with adequate capacity to hold concrete wastes and potential rainfall, and prevent overtopping and runoff.

PURPOSE
Improper washout of concrete trucks, tools, etc. may allow fresh concrete or cement laden mortar to enter a storm drainage system.

APPROPRIATE APPLICATIONS
Concrete transit mixers must be cleaned in the designated wash-out area only. Effective when vehicles, tools, and mixers can be moved to the pit location. Where this is not practical, temporary ponds may be constructed to allow for settling and hardening of cement and aggregates. Washout area/pits are appropriate for minor amounts of wash water which result from cleaning of aggregate materials or concrete trucks, tools, etc.

PLANNING CONSIDERATIONS
1. Wash out into a slurry pit which will later be backfilled. Do this only with the approval of the property owner.
2. Wash out into a temporary pit where the concrete wash can harden, be broken up, and then properly disposed of off-site.

DESIGN & SIZING CRITERIA
1. Locate wash out pits away from storm drains, open ditches, or stormwater receiving waters.
2. DO NOT wash out concrete trucks into storm drains, sanitary sewers, street gutters, or stormwater channels.
3. Washout cannot be connected to any storm water facilities, or retention basins.

MAINTENANCE REQUIREMENTS
Properly dispose of hardened concrete products on a routine basis to prevent the buildup of waste materials to an unmanageable size and to maintain percolation of water. All materials used to construct the temporary wash-out area must be removed from the construction site following construction. Ground disturbance at the wash-out area must be permanently stabilized at the end of construction.

(FIRM INFORMATION HERE)

PROJECT NUMBER	NAME
PROJECT NAME	NAME
PROJECT TYPE	NAME
DATE	DATE
SEAL	SEAL
ORIGINAL PLAN DATE	
LATEST REVISION DATE	
SHEET NUMBER	4 OF 4
PROJECT NUMBER	XXXX

