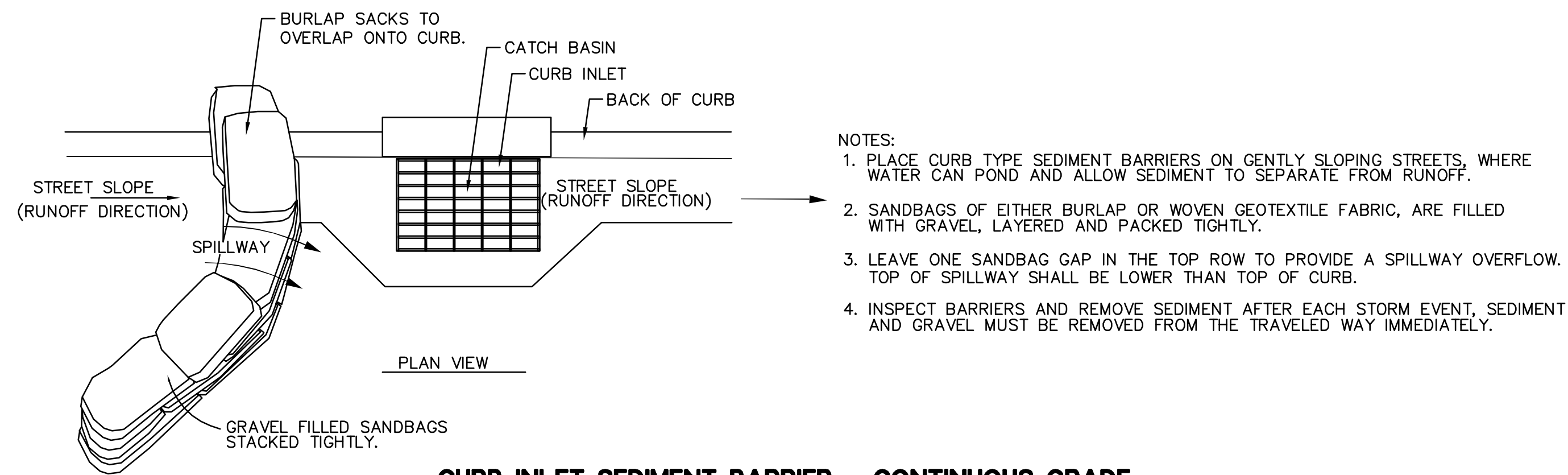
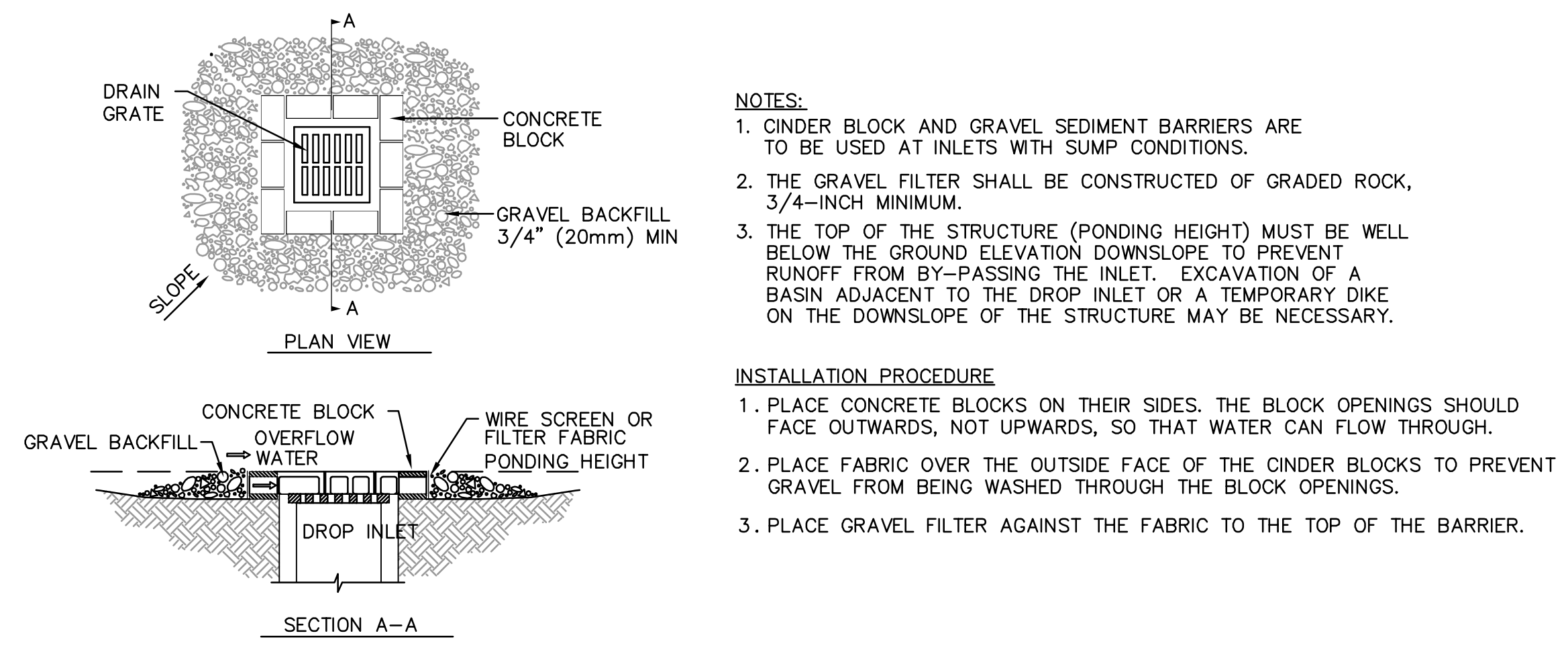


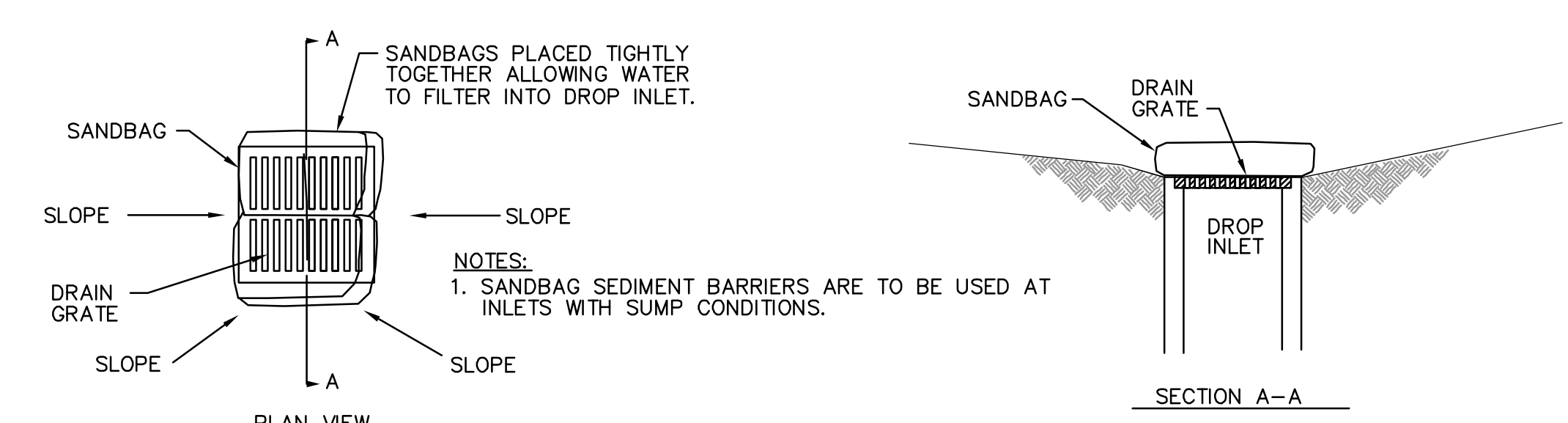
CURB INLET SEDIMENT BARRIER - SUMP



CURB INLET SEDIMENT BARRIER - CONTINUOUS GRADE



CINDER BLOCK AND GRAVEL SEDIMENT BARRIER

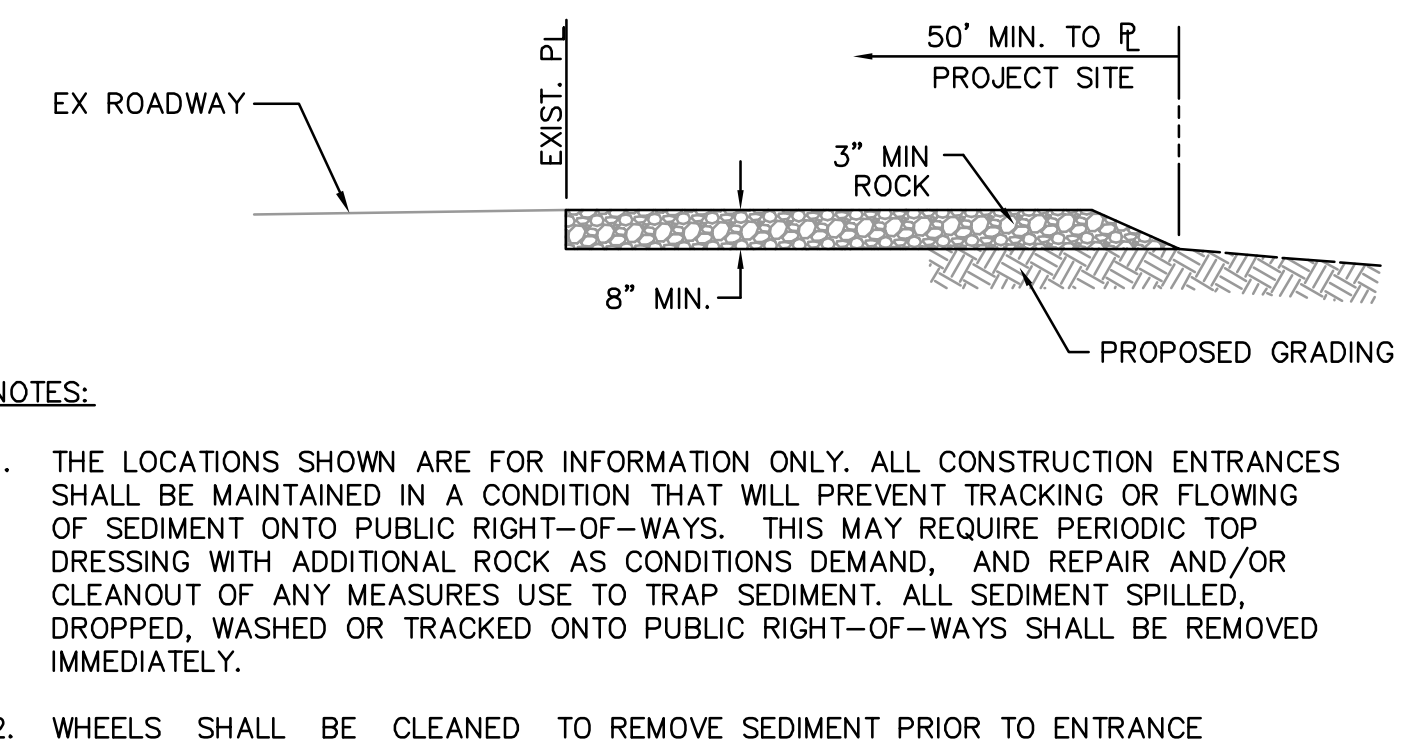


SANDBAG SEDIMENT BARRIER



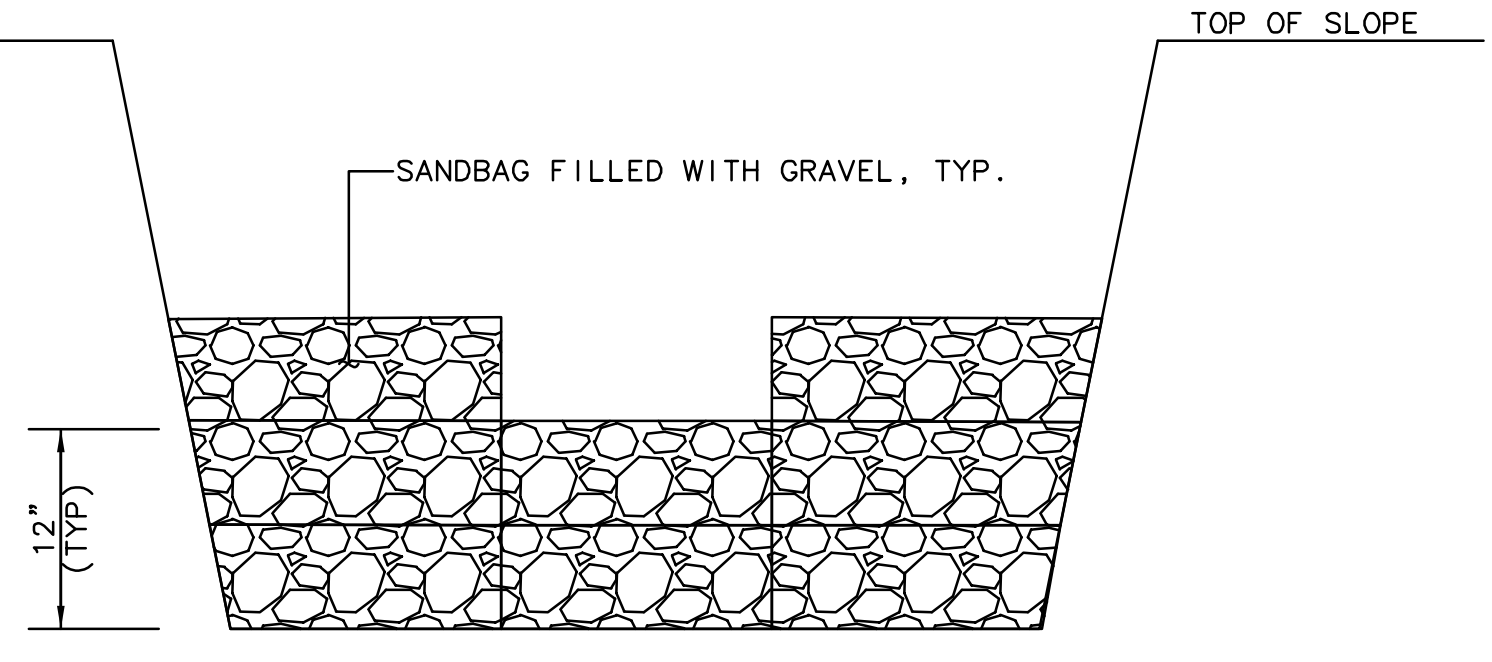
1 INLET PROTECTION

SCALE : NTS



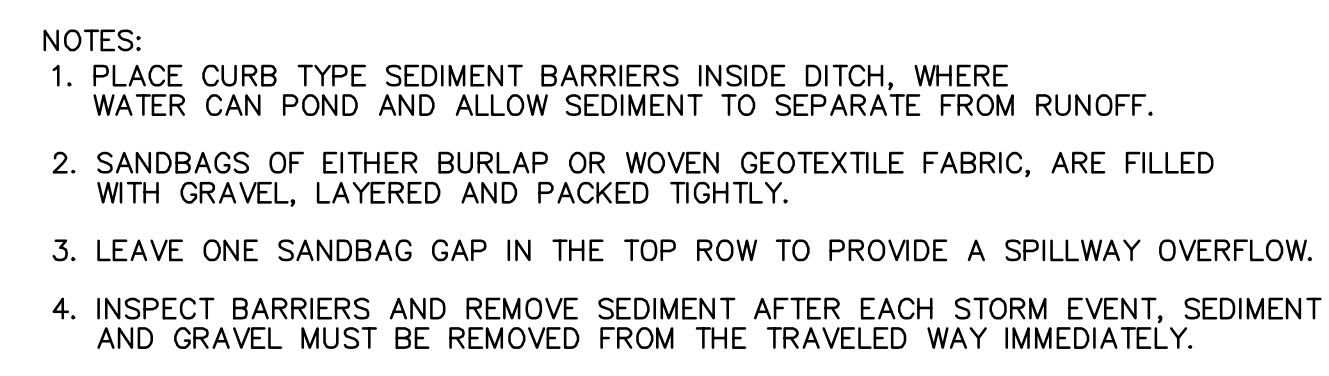
2 STABILIZED CONSTRUCTION ENTRANCE

SCALE : NTS



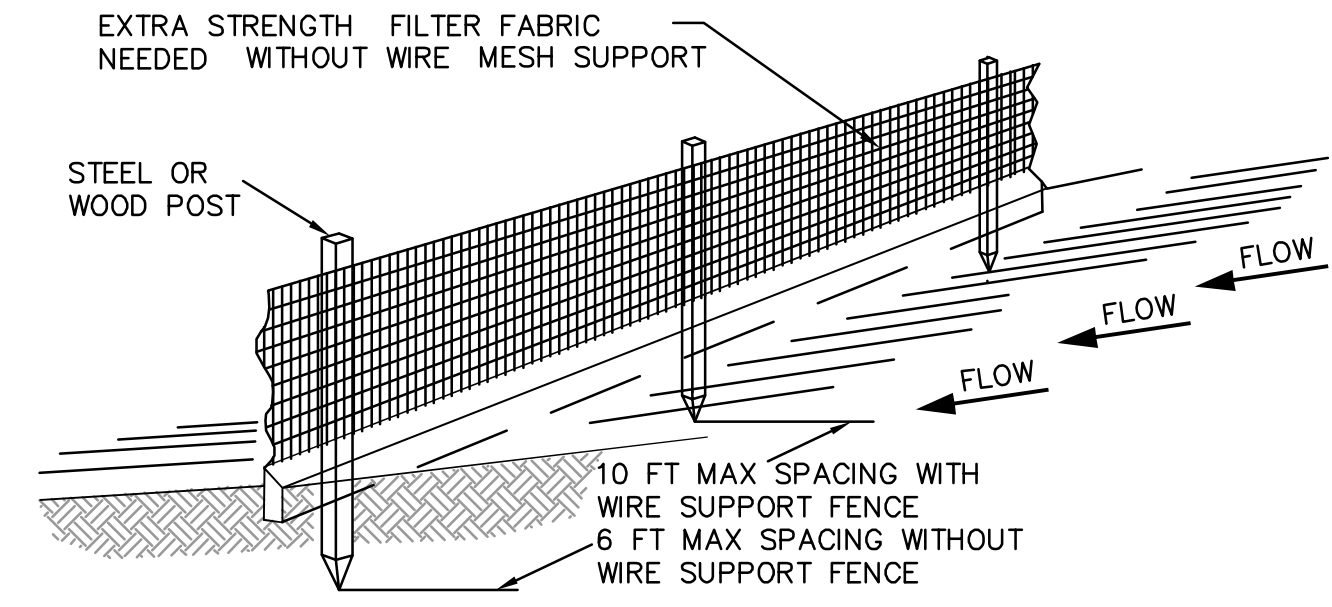
3 CHAIN LINK FENCE SILT BARRIER

SCALE : NTS



4 CHECK DAM

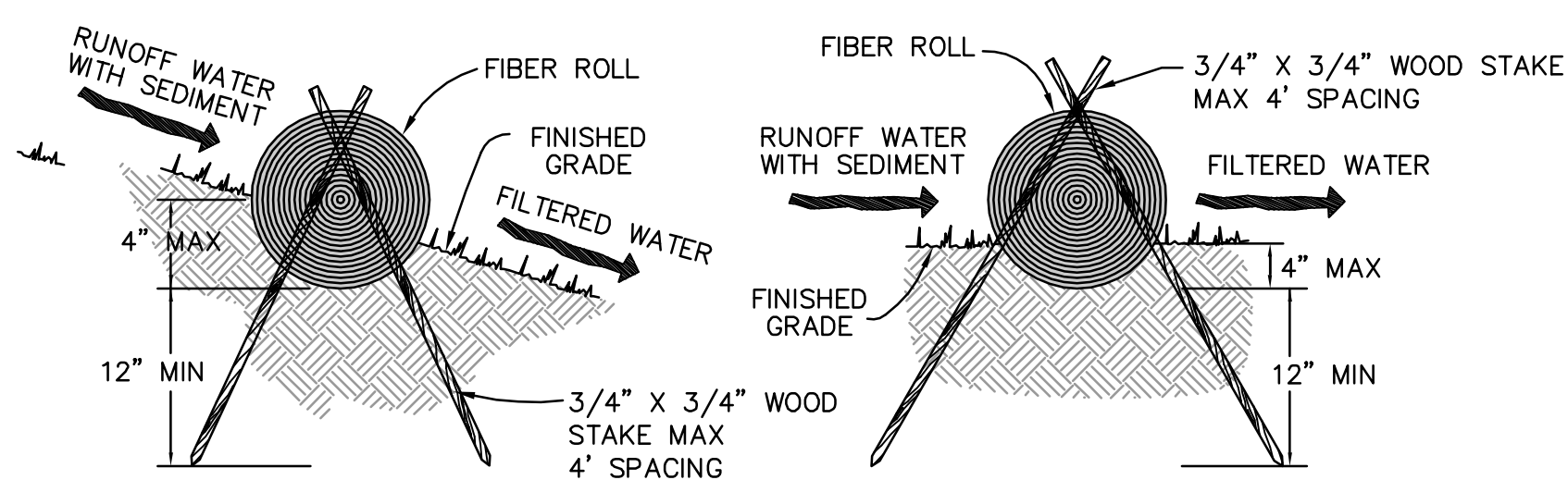
SCALE : NTS



5 STANDARD DETAIL TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL TRENCH WITH GRAVEL

NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



6 ENTRENCHMENT DETAIL IN SLOPE AREA

ENTRENCHMENT DETAIL IN FLAT AREA

NOTES:

- PREPARE SLOPE BEFORE THE FIBER ROLL PROCEDURE IS STARTED.
- FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, RUN PARALLEL TO THE CONTOUR. INSTALL FIBER ROLL FROM THE BOTTOM OF THE SLOPE AND WORK UP.
- USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE FIBER ROLL AND INTO THE SOIL FOR WOODEN STAKES.
- DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE FIBER ROLL.
- INSTALL STAKES AT LEAST EVERY THREE FEET APART THROUGH THE FIBER ROLL.
- ADJACENT FIBER ROLLS SHALL BE TIGHTLY ABUT.
- RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.
- INSTALL AT LOCATIONS SHOWN ON PLANS. IN SLOPE AREAS SPACE FIBER ROLLS EVERY 10 VERTICAL FEET ON SLOPE.

3 FIBER ROLL

SCALE : NTS

EROSION CONTROL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
- ALTHOUGH SPECIFIC LOCATIONS FOR SEDIMENT CONTROL FACILITIES ARE SHOWN ON THESE PLANS, IT IS INTENDED THIS EROSION CONTROL PLAN BE MODIFIED WHEN NECESSARY TO MEET FIELD CONDITIONS. BASIN AND TRAP SIZES AND ELEVATIONS MAY BE ADJUSTED AS LONG AS THE MINIMUM AREAS AND DEPTHS FOR SEDIMENTS SETTLING AND STORAGE ARE NOT REDUCED.
- THE CONTRACTOR SHALL UPDATE THE PLANS TO REFLECT CHANGING SITE CONDITIONS. PLAN UPDATES SHALL BE BASED UPON GENERAL SURVEY DATA. EROSION CONTROL EFFECTIVENESS SHALL ALSO BE MONITORED AND THE PLANS UPGRADED AS REQUIRED TO PREVENT SIGNIFICANT QUANTITIES OF SEDIMENT FROM ENTERING THE DOWNSTREAM DRAINAGE SYSTEM.
- THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE STORM RUN OFF FROM LEAVING THE SITE. SAND BAGS, SILT FENCES AND FIBER ROLLS SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. ALL EXISTING, TEMPORARY, OR PERMANENT CATCH BASINS SHALL USE ONE OF THE SEDIMENT BARRIERS SHOWN.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO PUBLICLY AND/OR PRIVATELY OWNED AND MAINTAINED ROADS CAUSED BY THE CONTRACTOR'S GRADING ACTIVITIES, AND WILL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON THE HAUL ROUTE. ADJACENT PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORKING DAY.
- BEST MANAGEMENT PRACTICES AS DEFINED IN THE SWPPP SHALL BE OPERABLE YEAR ROUND.
- THE NAME, ADDRESS AND 24 HOUR TELEPHONE NUMBER OF THE PERSON RESPONSIBLE FOR IMPLEMENTATION OF EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND THE CITY.
- ALL TRUCK TIRES SHALL BE CLEANED PRIOR TO EXITING THE PROPERTY.
- STOCKPILED MATERIAL
 - EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREAS.
 - ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY, UNLESS STOCKPILING IS NECESSARY.
 - SURROUND ALL STOCKPILES WITH PERIMETER SILT FENCES, FIBER ROLLS, APPROPRIATELY SIZED SECONDARY CONTAINMENT, OR OTHER RUNOFF CONTROLS.
 - STABILIZE INACTIVE STOCKPILES WITH SOIL STABILIZER AND/OR MULCH, OR COVER WITH A TARPULIN.
 - COVER STOCKPILES OF CRUSHED AC OR PCC PAVEMENT WITH A TARPULIN OR PROVIDE CASE-SPECIFIC DESIGNED SECONDARY CONTAINMENT AND CONTAINMENT AND SURROUND WITH APPROPRIATE RUNOFF CONTROLS.
 - USE INLET PROTECTION FOR STORM DRAIN STRUCTURES ADJACENT TO THE MATERIAL.
 - THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION PLACEMENT.
- IF NO WORK HAS PROGRESSED FOR A PERIOD OF 6-WEEKS, FINAL DRAINAGE AND EROSION CONTROL IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED WINTERIZATION PLAN.
- SEDIMENT AND DEBRIS SHALL BE REMOVED FROM TEMPORARY BASINS AND DRAIN INLETS AFTER EACH STORM. ALL SLOPES SHALL BE REPAIRED AS SOON AS POSSIBLE WHEN DAMAGED.
- PADS SHALL BE GRADED TO MINIMIZE STANDING WATER. SPECIFIC LOCATIONS REQUIRING SUPPLEMENTAL GRADING TO ACHIEVE ACCEPTABLE DRAINAGE SHALL BE DETERMINED BY THE CONSTRUCTION MANAGER.
- STUBBED OUT ENDS OF PARTIALLY COMPLETED SUBDRAINS SHALL BE WRAPPED WITH AN APPROVED FABRIC TO PREVENT SOIL AND DEBRIS FROM ENTERING THE PIPE.
- HAUL ROADS ARE CURRENTLY NOT SHOWN ON THE PLANS. EROSION CONTROL MEASURES SHALL BE TAKEN TO MINIMIZE EROSION RELATED TO HAUL ROADS.
- DISPOSAL AREAS FOR SEDIMENT TO BE DETERMINED IN FIELD. WHEN MATERIAL IS STOCKPILED, IT SHALL BE SURROUNDED BY FIBER ROLLS.
- TEMPORARY AND PERMANENT SLOPES GREATER THAN 5 FEET SHALL BE SEEDDED UNLESS OTHERWISE SHOWN ON THE PLAN.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DURING GRADING OPERATION, BEFORE OCTOBER 1 AND PRIOR TO INSTALLATION OF STORM DRAINAGE SYSTEM. SUCH ADDITIONAL MEASURES WILL BE CONTINGENT UPON THE STAGE OF GRADING OPERATION, CONTRACTOR SHALL IMPLEMENT ANY ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED BY THE ENGINEER.
- THE EROSION CONTROL PLAN COVERS ONLY THE FIRST WINTER DURING WHICH CONSTRUCTION IS TO TAKE PLACE. PLANS ARE TO BE RESUBMITTED PRIOR TO SEPTEMBER 1ST OF EACH SUBSEQUENT YEAR UNTIL THE SITE IMPROVEMENTS ARE ACCEPTED BY THE CONSTRUCTION MANAGER, THE ARCHITECT AND THE CITY ENGINEER.
- ALL DISTURBED SLOPE AREAS SHALL BE HYDROSEEDDED PRIOR TO OCTOBER 1.
- ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE PROJECT INSPECTOR.

- ALL SEED SHALL BE DELIVERED TO THE SITE IN SEALED CONTAINERS. CONTAINERS SHALL BE CLEARLY MARKED AS TO SPECIES, PURITY, PERCENT GERMINATION, DEALER'S GUARANTEE AND DATES OF HARVEST AND TEST. THE SUPPLIER SHALL BE APPROVED BY THE CITY AND THE SEED EXAMINED AT THE TIME CONTAINERS ARE OPENED.
- MULCH SHALL BE A FIBROUS WOOD CELLULOSE MATERIAL CAPABLE OF UNIFORM SUSPENSION WHEN ADDED TO WATER AND TREATED IN A SLURRY TANK. THE CONTENT OF THE FIBER BEFORE MIXING INTO THE SLURRY SHALL NOT EXCEED 15% (FIFTEEN PERCENT) OF THE DRY WEIGHT OF THE FIBER, AS DETERMINED BY CALIFORNIA TEST NO. 228. COMMERCIALY PACKAGED FIBER SHALL HAVE THE MOISTURE CONTENT MARKED ON THE PACKAGE. A CERTIFICATE OF COMPLIANCE MAY BE REQUIRED BY THE ENGINEER.
- STABILIZER CAN BE TYPE M OR EQUAL, APPLIED AT 150 POUNDS PER ACRE FOR ALL SLOPES. STABILIZING EMULSION SHALL CONFORM TO THE REQUIREMENTS IN SECTION 20-2.11, "STABILIZING EMULSION", OF THE CALTRANS STANDARD SPECIFICATION EXCEPT THAT THE STABILIZING SHALL BE ORGANIC DERIVATIVE SUCH AS GUM ARABIC, GUM GUAJAC, SEAMED EXTRACT, UNREFINED WHEAT STARCH, OTHER SIMILAR PRODUCT OR PROCESSED ORGANIC ADHESIVE USED AS A SOIL BINDER.
- FERTILIZER SHALL BE 16/20/0 + 13S (SULFUR) APPLIED AT 280 POUNDS PER ACRE.
- WATER FOR HYDROMULCHING SHALL BE CLEAR. SUFFICIENT WATER SHALL BE ADDED TO THE SLURRY MIXTURE TO ENSURE UNIFORM DISTRIBUTION OF HYDROMULCH SOLIDS.
- OTHER AGENTS SUCH AS PHOTO-CHEMICAL DYES, WATER PENETRANTS AND TACKIFIERS MAY BE ADDED AT THE DISCRETION OF THE CONTRACTOR OR ENGINEER.
- HYDROSEEDING SHALL BE MADE IN THE FOLLOWING SINGLE APPLICATION:
 - ALL SEED FERTILIZER AND STABILIZING EMULSION WITH 2000 POUNDS OF MULCH PER ACRE SHOULD BE APPLIED WITHIN 30 MINUTES OF BEING ADDED TO THE SLURRY TANK.
 - APPLICATION RATES FOR THE MULCH PRODUCTS WITH MOISTURE CONTENTS GREATER THAN 15% (FIFTEEN PERCENT) SHALL BE INCREASED BY THE FOLLOWING FACTOR C:

$$C = \frac{85}{\text{PERCENT FIBER (SOLIDS) IN PRODUCT}}$$
 - FOLLOW UP APPLICATIONS SHALL BE MADE TO COVER WEAK SPOTS, TRENCHING BACKFILLS OR OTHER DISTURBANCES AS DIRECTED BY THE ENGINEER.
- VELOCITY CHECK DAMS SHALL BE CONSTRUCTED OF 2 GRAVEL SACKS WIDE AND SHALL EXTEND COMPLETELY ACROSS THE STREET WITH ONE SACK HIGHER ON EACH END OF THE DAM. GRAVEL SACKS SHALL BE COVERED WITH DIRT MATERIAL WHEN SACKS ARE IN PLACE. BAGS SHALL BE STAGGERED SO ENDS DO NOT ALIGN.
- GRAVEL MATERIAL IN SACK SHALL BE PEA GRAVEL.
- SACKS SHALL BE CONSTRUCTED OF WOVEN POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE FABRIC. MINIMUM FABRIC WEIGHT IS 4 OUNCES PER SQUARE YARD AND THE MULLEN BURST STRENGTH SHOULD EXCEED 300 PFI. MATERIALS SHOULD CONFORM TO ASTM D3786 AND HAVE ULTRAVIOLET STABILITY IN EXCESS OF 70 PERCENT ACCORDING TO ASTM D4355. BURLAP IS NOT ACCEPTABLE.
- GRAVEL SACKS SHALL BE AT LEAST 4" HIGHER THAN THE FIBER ROLL AT THE NEAREST CATCH BASIN.
- INSPECT SACKS BEFORE AND AFTER EACH RAIN EVENT AND WEEKLY DURING THE WET SEASON.
- RESHAPE BARRIER OR REPLACE GRAVEL SACKS AS NEEDED.
- REPAIR ANY WASHOUTS OR OTHER DAMAGE CAUSED BY CONSTRUCTION.
- REMOVE SILT WHEN THE DEPTH REACHES ONE-THIRD THE BARRIER HEIGHT.
- REMOVE SILT AND DISPOSE OF SO AS NOT TO CAUSE SILTATION PROBLEMS.
- PREVENT WATER FROM FLOWING AROUND THE ENDS OF THE BARRIER.
- FROM MAY THROUGH OCTOBER, WATER SHOULD NOT BE ALLOWED TO POND BEHIND GRAVEL SACK BARRIERS FOR MORE THAN 7 DAYS.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL FIELD MANUAL, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD AND/OR THE CALIFORNIA STORM WATER MANAGEMENT PRACTICE HANDBOOKS.
- EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN ON THE EROSION CONTROL PLAN SHALL BE IN PLACE AT THE END OF EACH WORK DAY AND ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON (OCTOBER 1ST TO APRIL 15TH), AS WELL AS AFTER EACH STORM. BREACHES IN DIKES AND SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHENEVER RAIN IS FORECAST.
- ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND DAILY THEREAFTER OR AS DIRECTED BY THE INSPECTOR. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
- STANDBY CREWS SHALL BE ALERTED BY THE PERMITEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAIN STORMS.
- GRADED AREAS, INCLUDING, BUT NOT LIMITED TO, CUT AND FILL SLOPES, STREETS, PARKING AREAS AND BUILDING PADS SHALL BE HYDRO SEEDED PER ABAC, IN ADDITION TO HYDRO SEEDING, AN APPLICATION OF STRAW WITH A TACKIFIER OR MULCH MAY BE REQUIRED BY THE CITY. SUGGESTED MIX DESIGN AS FOLLOWS:

BROMUS CARINATUS	CALIFORNIA BROME	10 LBS/ACRE
DESCHAMPSIA CAESPITOSA	NON	4 LBS/ACRE
ELYMUS GLAUCUS	BLUE WILDREY	8 LBS/ACRE
ELYMUS TRITICOIDES	CREeping WILDREY	3 LBS/ACRE
KOELERIA MACRANTHA	NON	4 LBS/ACRE
MELICA CALIFORNICA	WESTERN MELIC GRASS	8 LBS/ACRE
MELICA IMPERFECTA	SMALL FLOWER MELIC	4 LBS/ACRE
STIPA LEPIDA	NEEDLEGRASS	4 LBS/ACRE
TOTAL =		45 LBS/ACRE
- BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE TOWN ENGINEER.
- GRAVEL BAGS, CATCH BASINS AND INLETS SHALL BE CLEANED OUT WHENEVER SEDIMENT REACHES 1/2 INCH IN ELEVATION AGAINST THE BASE OF THE GRAVEL BAG. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN AND SERVICE GRAVEL BAGS, FILTERS, AND SEDIMENT BARRIERS. REPAIR AND/OR REPLACE THEM WHEN THEY DO NOT FUNCTION PROPERLY. AFTER PAVING, ALL CATCH BASINS SHALL BE PROVIDED WITH INLET PROTECTION.
- NEARBY OFF-SITE INLETS THAT MAY RECEIVE SEDIMENT-LADEN WATER SHALL BE PROTECTED.
- REFUELING OF VEHICLES AND EQUIPMENT SHALL BE PROHIBITED WITHIN 100 FEET OF ALL DRAINAGES.
- ALL EQUIPMENT AND VEHICLES SHALL BE CLEAN OF GREASE AND/OR HYDRAULIC LEAKS.
- STENCIL ALL CATCH BASINS AND INLETS WITH A "NO DUMPING, DRAINS TO BAY", THERMOPLASTIC DECAL.

RECORD DRAWINGS

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BY: BKF ENGINEERS DATE: JUNE 2011



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College of San Mateo
Site Package
San Mateo, CA

Developed for
San Mateo County Community College District

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1	Submittal	09 APRIL 2009
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4	Final	09 APRIL 2009
5	Final	09 APRIL 2009

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EROSION CONTROL DETAILS

C9.04