STANDARD EROSION AND SEDIMENT CONTROL NOTES:

1. The contractor must notify the Jefferson County Division of Transportation and Engineering (303.271.8495) at least three days prior to starting construction.

2. All grading, erosion, and sediment control must conform to approved plans. Revisions to land disturbance areas, slopes, and/or erosion and sediment control measures are not permitted without prior approval from the Jefferson County Planning and Zoning Division. Field modifications to an equivalent BMP that does not affect the site hydrology may be approved by Jefferson County Transportation and Engineering staff.

3. The approved plans are valid for two (2) years from the date of approval from Jefferson County.

4. The landowner and/or contractor is responsible for obtaining a permit for Stormwater Discharges Associated with Construction Activity from the Colorado Department of Public Health and Environment, at least 10 days prior the start of construction activities for land disturbance areas of one acre or greater. The permit must be kept current throughout the construction process.

5. Erosion control BMPs must be installed prior to grading activities.

6. Approved erosion and sediment control BMPs shall be maintained and kept in good repair for the duration of the project. At a minimum, the property owner or contractor shall inspect all BMPs in accordance with the approved plans. All necessary maintenance and repair activities shall be completed immediately. Accumulated sediment and construction debris shall be removed and properly disposed.

7. All topsoil must be salvaged, segregated, and stockpiled separately from the overburden. Topsoil and overburden must be redistributed within the graded area after rough grading to provide a suitable base for areas that must be seeded and planted. Runoff from the stockpiled area must be controlled to prevent erosion and sedimentation of receiving waters.

8. Soils that are stockpiled for more than thirty (30) days shall be seeded and mulched within fourteen (14) days of stockpile construction.

9. The landowner and/or contractor must immediately take all necessary steps to control sediment discharge.

10. Soil stabilization measures shall be applied within 30 days to disturbed areas, which may not be at final grade, but will be left dormant for longer than 60 days.

11. If applicable, the following note shall be completed:
    Temporary vegetative cover consisting of (species/variety)(mix noted below) must be (drill) (hydro_)(broadcast) seeded at _____ pounds pure live seed per acre. Mulch consisting of _____, applied at a rate of _____ tons per acre and crimped must be used to stabilize the exposed surface.
    Soil amendments consisting of (specify type) must be incorporated into the soil to a depth of _____ inches below grade at _____ cubic yards per 1,000 square feet.
    Permanent vegetative cover consisting of (species/variety)(mix noted below) must be (drill) (hydro_)(broadcast) seeded at _____ pounds pure live seed per acre.
    (Temporary)(Permanent) Seed Mix
    Species Variety % of Mix Min. lbs. PLS/Acre

12. All disturbed slopes (unless in a competent rock cut) greater than or equal to 3:1 (H:V), flow lines of swales, gutter downspouts, or additional areas at the discretion of county staff, shall be protected with an erosion control blanket or equivalent BMP..

13. If it is necessary to move material in excess of 300 cubic yards and/or in excess of 10,000 square feet of land disturbance area to or from another unincorporated Jefferson County site, a grading permit or Notice of Intent (NOI) is necessary for the off-site property. If the material is moved to a property located within another jurisdiction, evidence is required that the local government has approved the grading operation.

14. The landowner and/or contractor is responsible for clean up and removal of all sediment and debris from all drainage infrastructure and public facilities during the entire construction process.

15. The landowner and/or contractor must take reasonable precautions to ensure that vehicles do not track or spill earth materials on to streets/roads and must immediately remove such materials if this occurs.

16. The landowner and/or contractor is responsible for controlling litter such as discarded building materials, concrete truck washout, chemicals, and sanitary waste, as applicable. In addition, spill prevention and containment BMPs for construction materials, waste, and fuel must be provided, as applicable. Locations of stockpiles, concrete washout areas, and trash receptacles must be clearly shown on the plans. Littering is defined and enforced by CRS 18-4-511.

17. Fugitive dust emissions resulting from grading activities and/or wind shall be controlled using the best available control technology, as defined by the Colorado Department of Public Health and Environment, at the time of grading.

18. Earth materials and construction supplies are to be stored on a construction site staging area, and are not to be stored on the street or sidewalk. Locations of stockpiles, concrete washout areas and trash receptacles are clearly located on the plans.

19. The Jefferson County Planning and Zoning Division, or its authorized representative, may modify the erosion and sediment control plan as field conditions warrant.

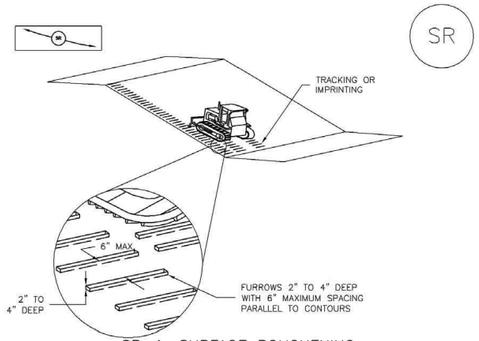
BMP LEGEND

DETAIL NO.	SHEET NO.		
1	2	SR	SURFACE ROUGHENING
2	2	ECB	EROSION CONTROL BLANKET
3	2	TSD	TEMPORARY SLOPE DRAIN
4	3	OP	OUTLET PROTECTION
5	3	RCS	ROUGH CUT STREET CONTROL
6	3	ED/DS	EARTH DIKES AND DRAINAGE SWALES
7	3	TER	TERRACING
8	4	CD	CHECK DAM
9	4	CWA	CONCRETE WASHOUT AREA
10	4	SP	STOCKPILE MANAGEMENT
11	5	SF	SILT FENCE
12	5	SCL	SEDIMENT CONTROL LOG
13	5	SBB	STRAW BALE BARRIER
14	6	RS	ROCK SOCK
15	6	IP	INLET PROTECTION
16	6	SB	SEDIMENT BASIN
17	7	CF	CONSTRUCTION FENCE
18	7	VTC	VEHICLE TRACKING CONTROL
19	7	SSA	STABILIZED STAGING AREA
20	8	TDC	TEMPORARY DIVERSION CHANNEL
21	8	DW	DEWATERING
21	9	TSC	TEMPORARY STREAM CROSSING

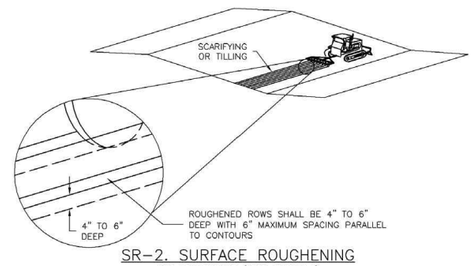
Revisions:	Designed By:	Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING 100 JEFFERSON COUNTY PARKWAY, SUITE 3550 GOLDEN, COLORADO 80419 (303) 271-8700
Details from UDFCD - November, 2010.	Drawn By:	Date Created: 07/25/2012	
	Checked By: Staff	Plot Date: 7/26/2012	
	File: GESC_Details_Sht1.dwg		
	File Location: G:\PROJECTS_CAD\Standards\PnZ Ersion Control Details		

G.E.S.C. STANDARD NOTES AND DETAILS

Project No.: | Sheet 1 | Of 9



SR–1. SURFACE ROUGHENING
FOR STEEP SLOPES (3:1 OR STEEPER)



SR–2. SURFACE ROUGHENING
FOR LOW SLOPES (LESS THAN 3:1)

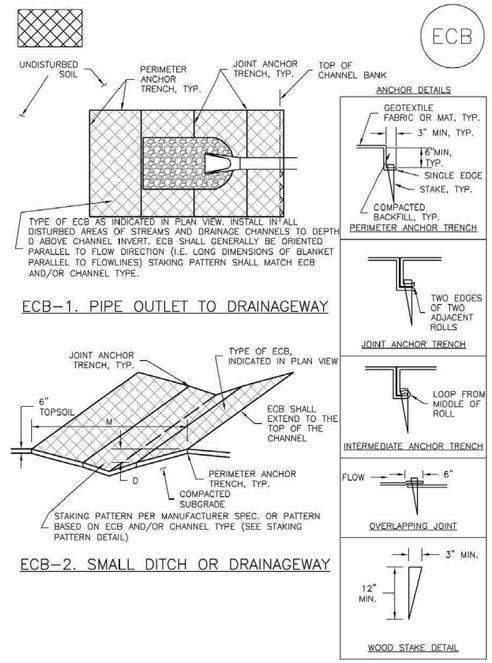
SURFACE ROUGHENING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION(S) OF SURFACE ROUGHENING.
2. SURFACE ROUGHENING SHALL BE PROVIDED PROMPTLY AFTER COMPLETION OF FINISHED GRADING (FOR AREAS NOT RECEIVING TOPSOIL) OR PRIOR TO TOPSOIL PLACEMENT OR ANY FORECASTED RAIN EVENT.
3. AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD WILL BE PLACED WITHOUT DELAY IN THE CONSTRUCTION SEQUENCE, SURFACE ROUGHENING IS NOT REQUIRED.
4. DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.
5. A FARMING DISK SHALL NOT BE USED FOR SURFACE ROUGHENING.

SURFACE ROUGHENING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACE UPON DISCOVERY OF THE FAILURE.
4. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
5. IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
6. IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER RILL EROSION.

SURFACE ROUGHENING
SR
Detail 1



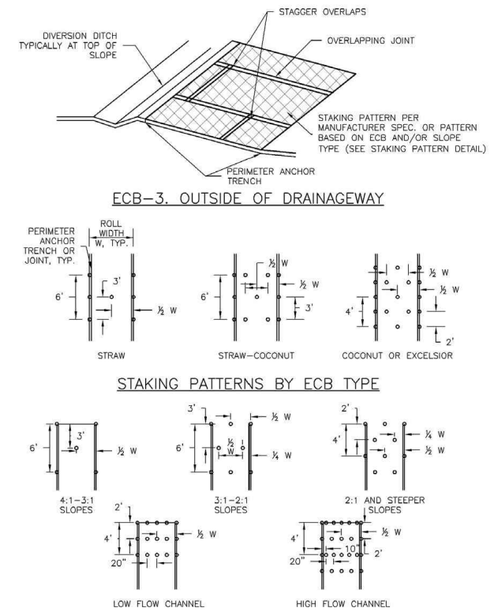
EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF ECB.
   - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
   - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR ECBs.
3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING Of ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-I.
9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.
10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATION

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELISIOR CONTENT	RECOMMENDED NETTING
STRAW*	-	100%	-	DOUBLE/ NATURAL
STRAW COCONUT	30% MIN	70% MAX	-	DOUBLE/ NATURAL
COCONUT	100%	-	-	DOUBLE/ NATURAL
EXCELSIOR	-	-	100%	DOUBLE/ NATURAL

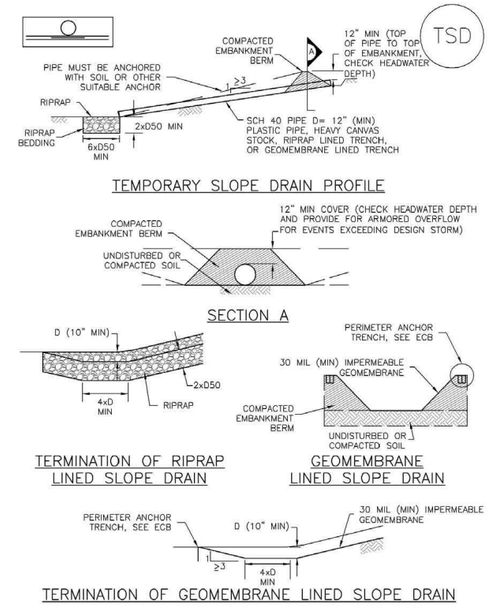
*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS



EROSION CONTROL BLANKET MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY JEFFERSON COUNTY.
5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED RESEEDED AND MULCHED AND THE ECB REINSTALLED.

ROLLED EROSION CONTROL PRODUCTS
ECB
Detail 2



TSD–1. TEMPORARY SLOPE DRAIN PROFILE

SLOPE DRAIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION AND LENGTH OF SLOPE DRAIN
   - PIPE DIAMETER, 0, AND RIPRAP SIZE, 050.
2. SLOPE DRAIN SHALL BE DESIGNED TO CONVEY PEAK RUNOFF FOR 2-YEAR 24-HOUR STORM AT A MINIMUM. FOR LONGER DURATION PROJECTS, LARGER MAY BE APPROPRIATE.
3. SLOPE DRAIN DIMENSIONS SHALL BE CONSIDERED MINIMUM DIMENSIONS; CONTRACTOR MAY ELECT TO INSTALL LARGER FACILITIES.
4. SLOPE DRAINS INDICATED SHALL BE INSTALLED PRIOR TO UPGRADIENT LAND-DISTURBANCE ACTIVITIES.
5. CHECK HEADWATER DEPTHS FOR TEMPORARY AND PERMANENT SLOPE DRAINS, DETAILS SHOW MINIMUM COVER; INCREASE AS NECESSARY FOR DESIGN HEADWATER DEPTH.
6. RIPRAP PAD SHALL BE PLACED AT SLOPE DRAIN OUTFALL.
7. ANCHOR PIPE BY COVERING WITH SOIL OR AN ALTERNATE SUITABLE ANCHOR MATERIAL

SLOPE DRAIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. INSPECT INLET AND OUTLET POINTS AFTER STORMS FOR CLOGGING OR EVIDENCE OF OVERTOPPING. BREACHES IN PIPE OR OTHER CONVEYANCE SHALL BE REPAIRED AS SOON AS PRACTICABLE IF OBSERVED.
5. INSPECT RIPRAP PAD AT OUTLET FOR SIGNS OF EROSION. IF SIGNS OF EROSION EXIST, ADDITIONAL ARMORING SHALL BE INSTALLED.
6. TEMPORARY SLOPE DRAINS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION. WHEN SLOPE DRAINS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED, MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

TEMPORARY SLOPE DRAINS
TSD
Detail 3

Revisions:	Designed By:	Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING, 100 JEFFERSON COUNTY PARKWAY, SUITE 3550, GOLDEN, COLORADO 80419, (303) 271–8700
Details from UDFCD - November, 2010.	Drawn By:	Date Created: 8/15/2001	G.E.S.C. STANDARD NOTES AND DETAILS
	Checked By: Staff	Plot Date: 7/26/2012 F.I.R. Date:	Project No.: Sheet 2 Of 9
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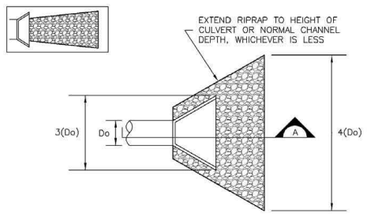
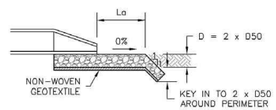


TEMPORARY OUTLET PROTECTION PLAN



SECTION A

TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE			
PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5 5	5 10	4 6
12	5 10	10 13	4 6
18	10 20 30 40	10 16 23 26	6 9 12 16
24	30 40 50 60	16 26 26 30	9 9 12 16

OP-1. TEMPORARY OUTLET PROTECTION

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - LOCATION OF OUTLET PROTECTION.
   - DIMENSIONS OF OUTLET PROTECTION.
2. DETAIL IS INTENDED FOR PIPES WITH SLOPE <. 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
3. TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.

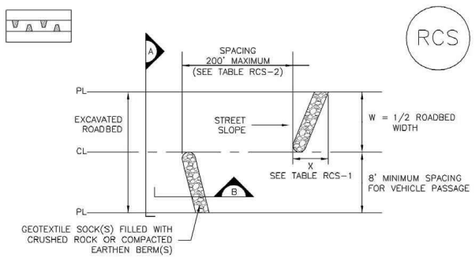
TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY. AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

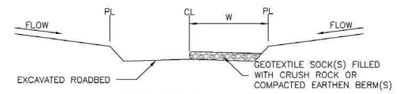
TEMPORARY OUTLET PROTECTION

TOP

Detail 4



ROUGH CUT STREET CONTROL PLAN



SECTION A

SECTION B

TABLE RCS-1	
W (FT)	X (FT)
20-30	5
31-40	7
41-50	9
51-60	10.5
61-70	12

TABLE RCS-2	
LONGITUDINAL STREET SLOPE (%)	SPACING (FT)
<2 2	NOT TYPICALLY NEEDED 200
3 4	200 150
5 6	100 50
7 8	25 25

RCS-1. ROUGH CUT STREET CONTROL

ROUGH CUT STREET CONTROL INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - LOCATION OF ROUGH CUT STREET CONTROL MEASURES.
2. ROUGH CUT STREET CONTROL SHALL BE INSTALLED AFTER A ROAD HAS BEEN CUT IN, AND WILL NOT BE PAVED FOR MORE THAN 14 DAYS OR FOR TEMPORARY CONSTRUCTION ROADS THAT HAVE NOT RECEIVED ROAD BASE.

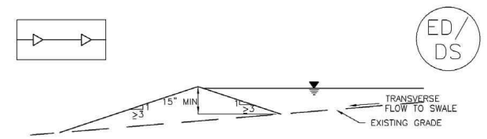
ROUGH CUT STREET CONTROL INSPECTION AND MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR DR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

ROUGH CUT STREET CONTROL

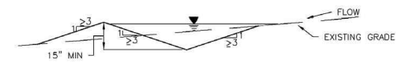
RCS

Detail 5

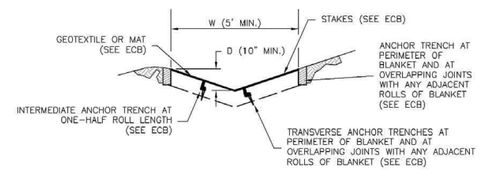


ED-1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM

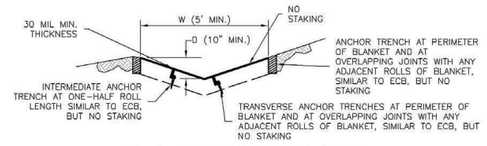
DS-1. COMPACTED UNLINED EXCAVATED SWALE



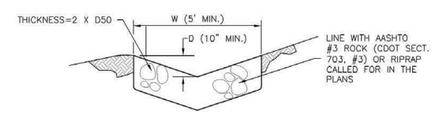
DS-2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL



DS-3. ECB LINED SWALE (CUT AND FILL OR BERM)



DS-4. SYNTHETIC LINED SWALE



DS-5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF DIVERSION SWALE
   - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED)
   - LENGTH OF EACH SWALE
   - DEPTH, D, AND WIDTH, W, DIMENSIONS
   - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL
   - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP D50
2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2-YEAR FLOW RATE OR 10 CFS.
3. EARTH DIKES AND SWALES INDICATED ON GESC PLAN SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE ACTIVITIES.
4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.
5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.
6. FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE ECB DETAIL.
7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

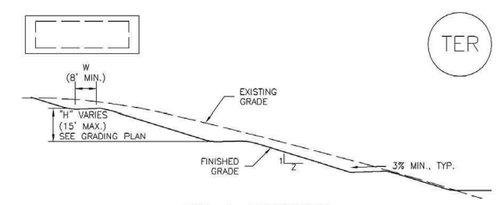
EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. J. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION: IF APPROVED BY JEFFERSON COUNTY, SWALES MAY BE LEFT IN PLACE.
5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

EARTH DIKES AND DRAINAGE SWALES

ED/DS

Detail 6



TER-1. TERRACING

TERRACING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF TERRACING
   -WIDTH (W), AND SLOPE (Z).
2. TERRACING IS TYPICALLY NOT REQUIRED FOR SLOPES OF 4:1 OR FLATTER.
3. GRADE TERRACES TO DRAIN BACK TO SLOPE AT A MINIMUM OF 3% GRADE.

TERRACING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. RILL EROSION OCCURRING ON TERRACED SLOPES SHALL BE REPAIRED, RESEEDED, MULCHED OR STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.
5. TERRACING MAY NEED TO BE RE-GRADED TO RETURN THE SLOPE TO THE FINAL DESIGN GRADE. THE SLOPE SHALL THEN BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.

TERRACING

TER

Detail 7

Revisions:	Designed By:		Scale: (As Shown)	
	Drawn By:		Date Created: 8/15/2011	
	Checked By: Staff		Plot Date: 7/26/2012 F.I.R. Date:	
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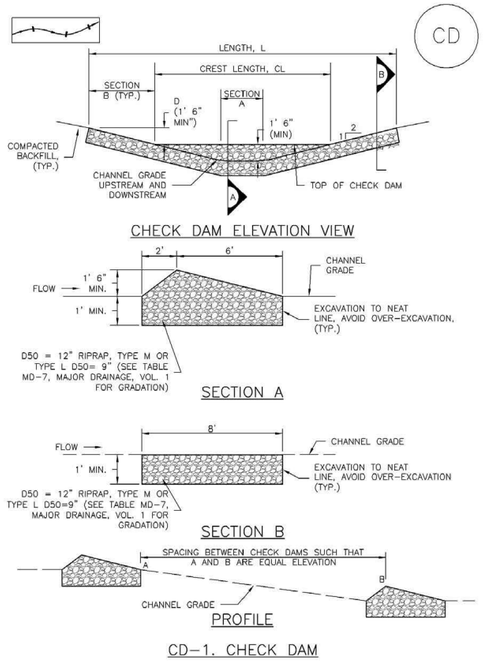
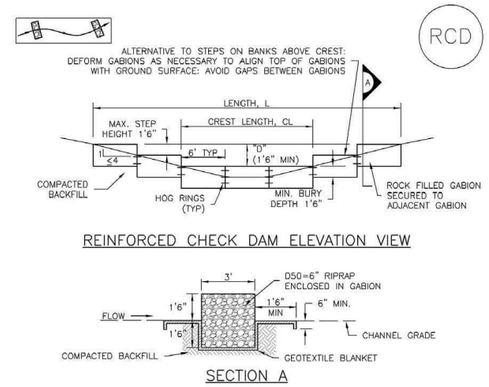
JEFFERSON COUNTY
DIVISION OF
PLANNING & ZONING
100 JEFFERSON COUNTY PARKWAY, SUITE 3550
GOLDEN, COLORADO 80419
(303) 271-8700

G.E.S.C. STANDARD PLANS AND DETAILS

Project No.: | Sheet 3 | Of 9



CD–1. CHECK DAM



REINFORCED CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF CHECK DAMS
   - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM)
   - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D)
2. CHECK DAMS INDICATED ON INITIAL GESC SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND DISTURBANCE ACTIVITIES.
3. REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 4.5 INCHES AND A MINIMUM WIRE THICKNESS OF 0.10 INCHES. WIRE "HOG RINGS" AT 4 INCH SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT SECTION.
4. THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1.5 FEET.
5. GEOTEXTILE BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1.5 FEET ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF CHECK DAMS
   - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM)
   - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D)
2. CHECK DAMS INDICATED ON INITIAL GESC SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBANCE ACTIVITIES.
3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9")
4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1 FOOT.
5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1.5 FEET HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR DR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY JEFFERSON COUNTY.
6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

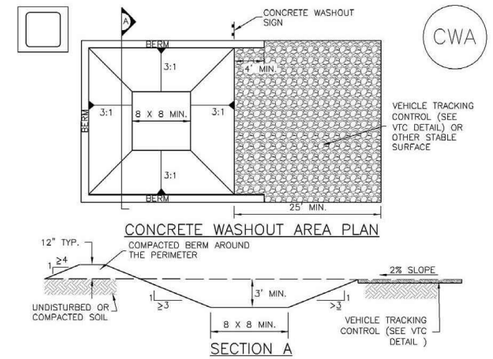
REINFORCED CHECK DAM MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED CHECK DAMS SHALL BE REMOVED AS NEEDED TO MAINTAIN THE EFFECTIVENESS OF BMP, TYPICALLY WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST.
5. REPAIR OR REPLACE REINFORCED CHECK DAMS WHEN THERE ARE SIGNS OF DAMAGE SUCH AS HOLES IN THE GABION OR UNDERCUTTING.
6. REINFORCED CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE JEFFERSON COUNTY.
7. WHEN REINFORCED CHECK DAMS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, AND COVERED WITH A GEOTEXTILE BLANKET, OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.

CHECK DAMS

CD

Detail 8



CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - CWA INSTALLATION LOCATION
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400 FEET OF ANY NATURAL DRAINAGE PATHWAY OR WATER BODY. DO NOT LOCATE WITHIN 1000 FEET OF ANY WELLS OR DRINKING WATER SOURCES. IF THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MINIMUM THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ONSITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8 FEET BY 8 FEET WITH SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3 FEET DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE A MINIMUM HEIGHT OF 1 FOOT.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

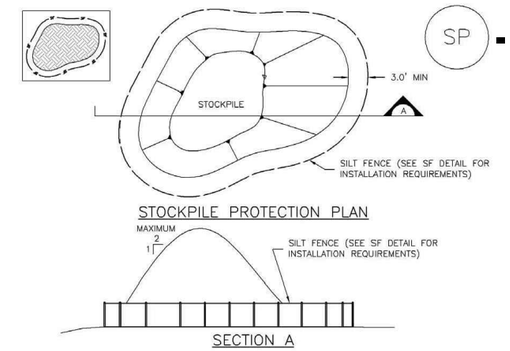
CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

Concrete Washout Area

CWA

Detail 9



SP–1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

2. SEE PLAN VIEW FOR:
   - LOCATIONS OF STOCKPILES
   - TYPE OF STOCKPILE PROTECTION
3. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER AND OTHER FACTORS.
4. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (GREATER THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER DO NOT LOCATE AN UNLINED CWA WITHIN 400 FEET OF ANY NATURAL DRAINAGE PATHWAY OR WATER BODY. DO NOT LOCATE WITHIN 1000 FEET OF ANY WELLS OR DRINKING WATER SOURCES. IF THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MINIMUM THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
5. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE THAN STOCKPILE PERIMETER CONTROL MAY NOT BE REQUIRED IF DEPICTED ON THE APPROVED PLANS.

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER STOCKPILE CONTROLS BY THE END OF THE WORKDAY.
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

STOCKPILE MANAGEMENT

SP

Detail 10

Revisions:	Designed By:	Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING, 100 JEFFERSON COUNTY PARKWAY, SUITE 3550, GOLDEN, COLORADO 80419, (303) 271–8700
	Drawn By:	Date Created: 8/15/2011	G.E.S.C. STANDARD PLANS AND DETAILS
	Checked By: Staff	Plot Date: 7/26/2012 F.I.R. Date:	Project No.: Sheet 4 Of 9
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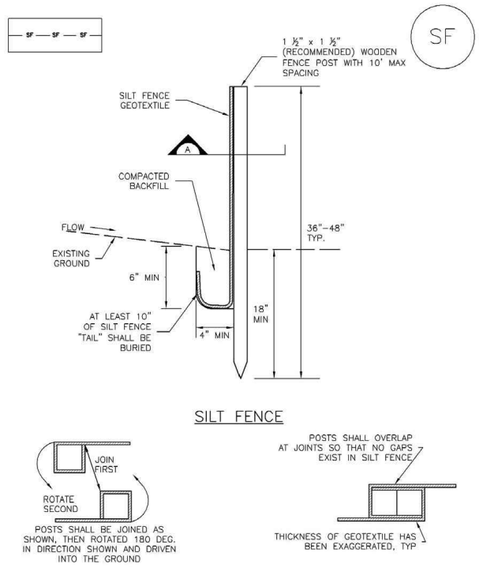


SF–1. SILT FENCE

SILT FENCE

SF

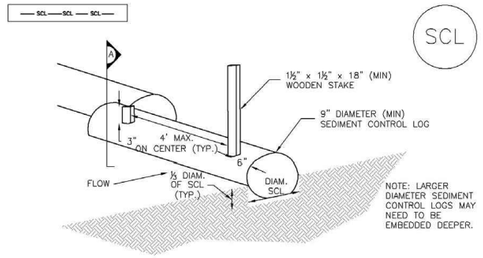
Detail 11

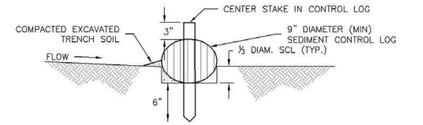
SILT FENCE INSTALLATION NOTES

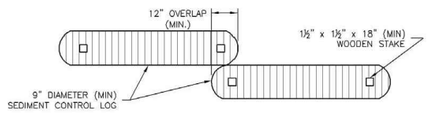
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOW OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL (2-5 FEET) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6 INCH BY 4 INCH ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A 'JUMPING JACK' OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SLIT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1 INCH HEAVY DUTY STAPLES OR NAILS WITH 1 INCH HEADS. STAPLES AND NAILS SHOULD BE PLACED 3 INCHES ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J HOOK". THE "J HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10 FEET TO 20 FEET).

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6 INCHES.
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY JEFFERSON COUNTY, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, All DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.







SCL–1. SEDIMENT CONTROL LOG

SEDIMENT CONTROL LOG

SCL

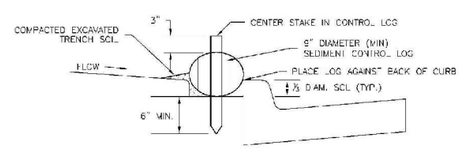
Detail 12

SEDIMENT CONTROL LOG INSTALLATION NOTES

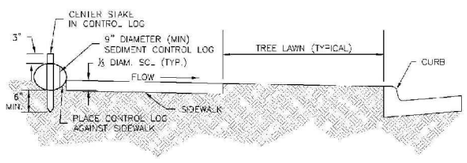
1. SEE SITE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
2. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES, AND OBVIOUS WEAR.
3. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGEWAYS.
4. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH WITH MORE ROBUST STAKING MAY BE ACCEPTABLE IF DEPICTED ON THE APPROVED PLANS.
5. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.
6. FOLLOW MANUFACTURERS GUIDANCE FOR STAKING. IF MANUFACTURERS INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4 FOOT CENTERS AND EMBEDDED A MINIMUM O F6 INCHES INTO THE GROUND. 3 INCHES OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

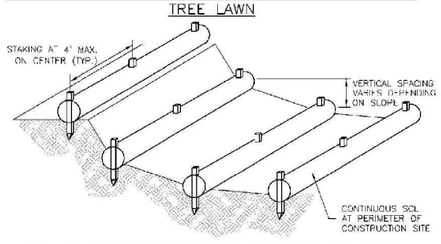
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE, INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.



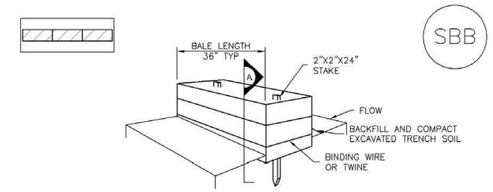
SCL–2. SEDIMENT CONTROL LOG AT BACK OF CURB

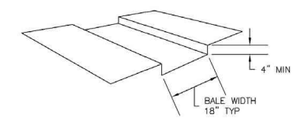


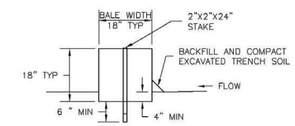
SCL–3. SEDIMENT CONTROL LOG AT SIDEWALK WITH TREE LAWN



SCL–4. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENG~H







SBB–1. STRAW BALE

STRAWBALE MAINTENANCE NOTES

1. SEE PLAN VIEW FOR:
   - LOCATIONS OF STRAW BALES
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN A SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36 INCHES BY 18 INCHES BY 18 INCHES.
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4 INCHES. STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALES. ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALES AND COMPACTED.
7. 2 WOODEN STAKES SHALL BE USED TO HOLD DOWN EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2 INCHES BY 2 INCHES BY 24 INCHES. WOODEN STAKES SHALL BE DRIVEN 6 INCHES INTO THE GROUND.

STRAWBALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD 8E PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2. OF THE HEIGHT OF THE STRAW BALE BARRIER.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABIU2ED AND APPROVED BY THE JEFFERSON COUNTY.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.

STRAW BAIL BARRIER

SBB

Detail 13

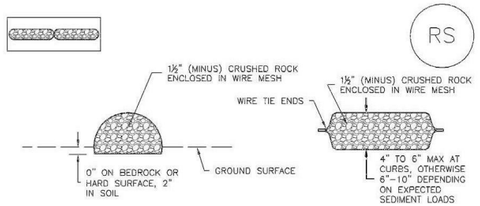
Revisions:	Designed By:	Scale: (As Shown)	
	Drawn By:	Date Created: 8/15/2011	
	Checked By: Staff	Plot Date: 7/26/2012 F.I.R. Date:	
	File: GESC_Details_Sht5.dwg	F.O.R. Date: For Const. Date:	
	File Location: G:\PROJECTS_CAD\Standards\PnZ Ersion Control Details		

JEFFERSON COUNTY
DIVISION OF
PLANNING & ZONING
100 JEFFERSON COUNTY PARKWAY, SUITE 3550
GOLDEN, COLORADO 80419
(303) 271–8700

G.E.S.C. STANDARD PLANS AND DETAILS

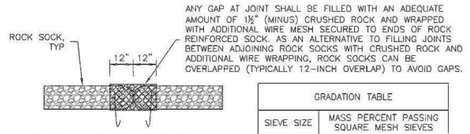
Project No.:

Sheet 5 Of 9



ROCK SOCK SECTION

ROCK SOCK PLAN



ROCK SOCK JOINTING

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1 1/2" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½ INCH, RECOMMENDED MINIMUM ROLL WIDTH OF 48 INCHES.
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS
5. ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
6. JEFFERSON COUNTY MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE IF SPECIFIED ON THE APPROVED PLANS.

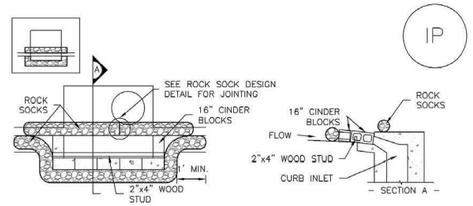
ROCK SOCK MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
6. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY JEFFERSON COUNTY.
2. WHEN ROCK SOCKS ARE REMOVED, All DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.

ROCK SOCK

RS

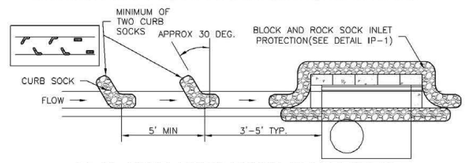
Detail 14



IP–1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

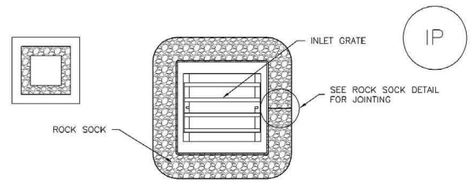
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP–2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

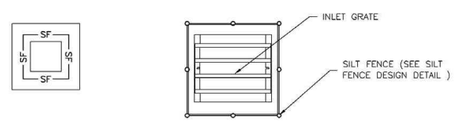
CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON–GRADE INLETS.



IP–3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP–4. SILT FENCE FOR SUMP INLET PROTECTION

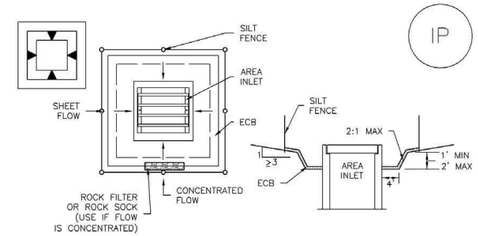
SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

INLET PROTECTION

IP

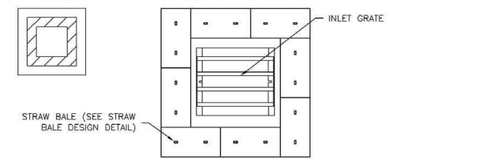
Detail 15



IP–5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

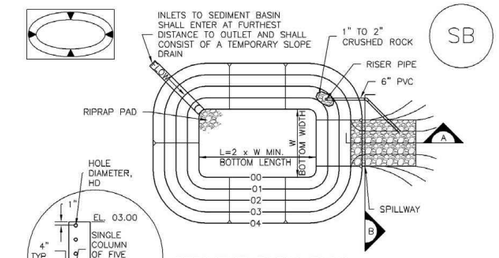
1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



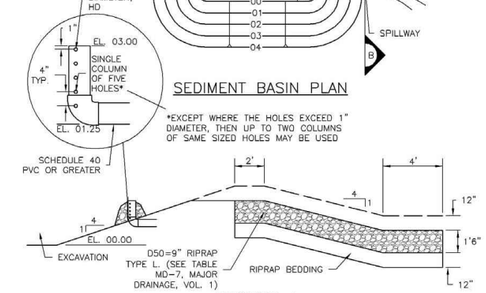
IP–6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

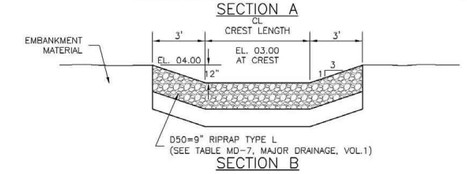
1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.



SEDIMENT BASIN PLAN



SECTION A



SECTION B

SB–1. SEDIMENT BASIN

TABLE SB–1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	13/16
3	28	5	½
4	33 ½	6	3/4
5	38 ½	8	23/32
6	43	9	31/32
7	47 ¼	11	25/32
8	51	12	27/32
9	55	13	⅞
10	58 ¼	15	15/16
11	61	16	31/32
12	64	18	1
13	67 ½	19	1 1/16
14	70 ½	21	1 ⅛
15	73 ¼	22	1 3/16

SEDIMENT BASIN INSTALLATION NOTES

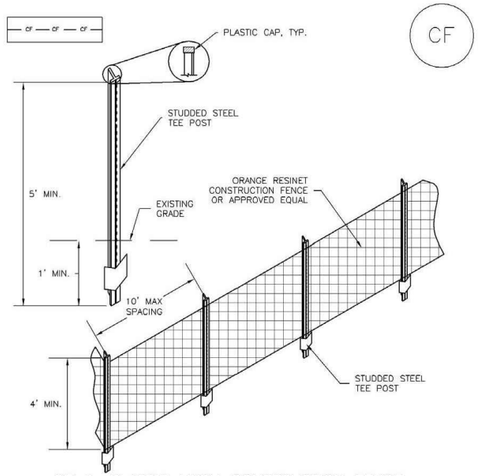
1. SEE PLAN VIEW FOR:
   - LOCATIONS SEDIMENT BASIN
   - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN0
   - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD
   - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLD DIAMETER HD, AND PIPE DIAMETER D.
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND DISTURBANCE ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15% BY WEIGHT PASSING THE NO. 200 SIEVE.
5. PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
6. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SEDIMENT BASIN

SB

Detail 16

Revisions:	Designed By:		Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING 100 JEFFERSON COUNTY PARKWAY, SUITE 3550 GOLDEN, COLORADO 80419 (303) 271–8700	G.E.S.C. STANDARD PLANS AND DETAILS
	Drawn By:		Date Created: 8/15/2011		
	Checked By: Staff		Plot Date: 7/26/2012 F.I.R. Date:		
	File: GESC_Details_Sht6.dwg		F.O.R. Date: For Const. Date:		Project No.: Sheet 6 Of 9
	File Location: G:\PROJECTS_CAD\Standards\PnZ Ersion Control Details				



CF–1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF CONSTRUCTION FENCE
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE CONTRACTOR GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

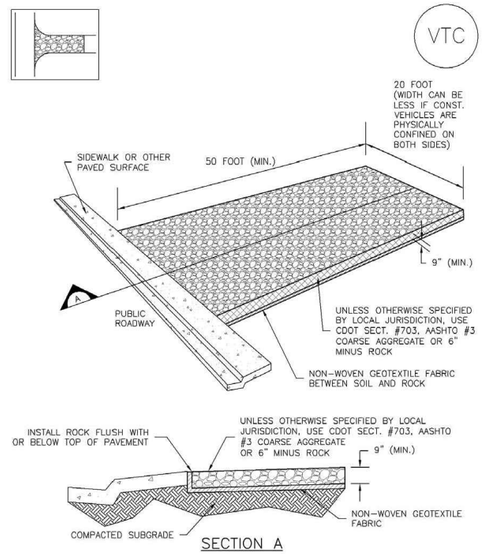
CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY JEFFERSON COUNTY.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL. SEEDED AND MULCHED.

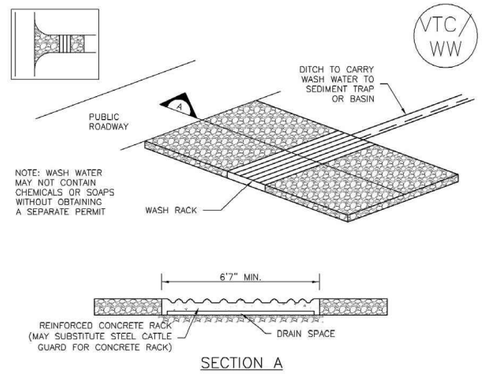
CONSTRUCTION FENCE

CF

Detail 17



VTC–1. AGGREGATE VEHICLE TRACKING CONTROL

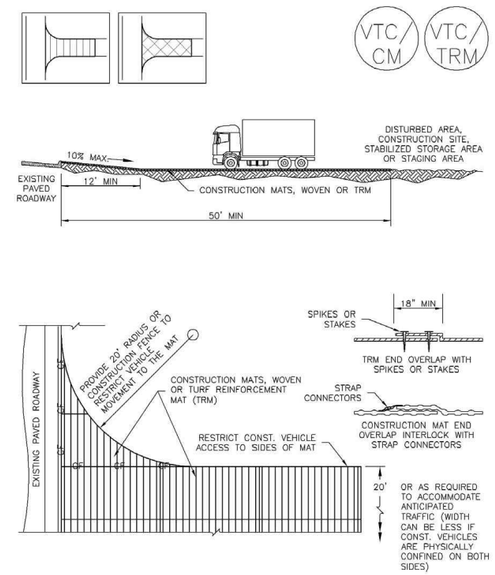


VTC–2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VEHICLE TRACKING CONTROL

VTC

Detail 18



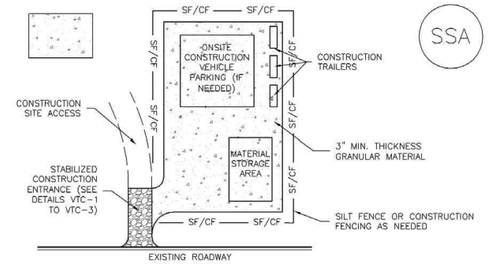
VTC–3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1 SEE PLAN VIEW FOR
   - LOCATION OF CONSTRUCTION ENTRANCES/EXITS.
   - TYPE OF CONSTRUCTION ENTRANCES/EXITS (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM)
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED ROW.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE ACTIVITIES.
5. A NON WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY JEFFERSON COUNTY, ROCK SHALL CONSIST OF DOT SECT #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS



SSA–1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1 SEE PLAN VIEW FOR
   - LOCATION OF STAGING AREA(S).
   - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM JEFFERSON COUNTY.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL UNLESS OTHERWISE SPECIFIED BY JEFFERSON COUNTY.
5. ROCK SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL or DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED IF NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY JEFFERSON COUNTY, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

STABILIZED STAGING AREA

SSA

Detail 19

Revisions:	Designed By:		Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING 100 JEFFERSON COUNTY PARKWAY, SUITE 3550 GOLDEN, COLORADO 80419 (303) 271–8700
	Drawn By:		Date Created: 8/15/2011	
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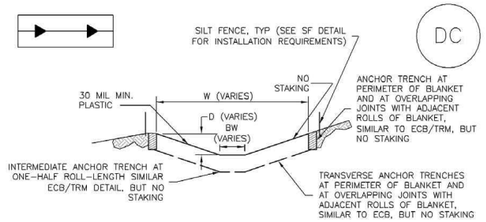
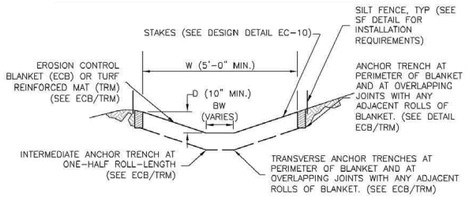
	File Location: G:\PROJECTS_CAD\Standards\PnZ Ersion Control Details			

G.E.S.C STANDARD NOTES AND DETAILS

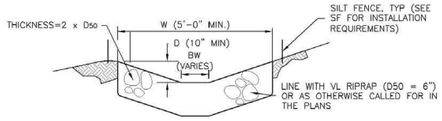
Project No.: | Sheet 7 | Of 9



DC-1. PLASTIC LINED DIVERSION CHANNEL



DC-2. GEOTEXTILE OR MAT LINED DIVERSION CHANNEL



DC-3. RIPRAP LINED DIVERSION CHANNEL

DIVERSION CHANNEL INSTALLATION NOTES

1 SEE PLAN VIEW FOR
- LOCATION OF DIVERSION CHANNEL.
- TYPE OF CHANNEL (UNLINED, GEOTEXTILE OR MAT LINED, PLASTIC LINED, OR RIPRAP LINED).
- LENGTH OF EACH TYPE OF CHANNEL.
- DEPTH (D), WIDTH (W), AND BOTTOM WIDTH (BW)
- FOR RIPRAP LINED CHANNEL, SIZE OF RIPRAP, D50 SHALL BE SHOWN ON PLANS

2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE STRUCTURES.
3. DIVERSION CHANNELS INDICATED ON THE SWMP SHALL BE INSTALLED PRIOR TO WORK IN DOWNGRADIENT AREAS OR NATURAL CHANNELS.
4. FORE GEOTEXTILE OR MAT LINED CHANNELS INSTALLATION OF GEOTEXTILE OR MAT SHALL CONFORM TO THE REQUIREMENTS OF DETAIL ECB. FOR PLASTIC LINED CHANNELS, INSTALLATION OF ANCHOR TRENCHES SHALL CONFORM TO THE REQUIREMENTS OF DETAIL ECB.
5. WHERE CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION CHANNEL, THE PERMITTEE SHALL INSTALL A TEMPORARY STREAM CROSSING CONFORMING TO THE REQUIREMENTS OF DETAIL TSC.

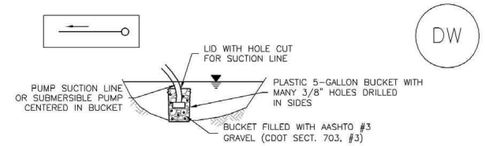
DIVERSION CHANNEL MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK DIVERSION CHANNELS ARE TO REMAIN IN PLACE UNTIL WORK IN THE DOWNGRADIENT AREA OR NATURAL CHANNEL IS NO LONGER REQUIRED. IF APPROVED BY JEFFERSON COUNTY, DIVERSION CHANNEL MAY BE LEFT IN PLACE.
5. IF DIVERSION CHANNELS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

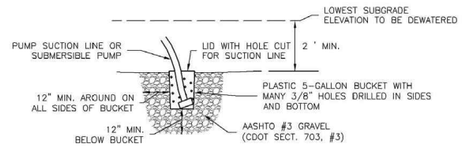
TEMPORARY
DIVERSION CHANNEL

TDC

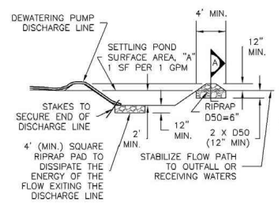
Detail 20



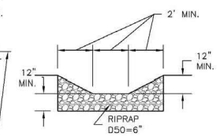
DW-1. DEWATERING POND ALREADY FILLED WITH WATER



DW-2. DEWATERING SUMP FOR SUBMERSED PUMP



DW-3. SUMP DISCHARGE SETTLING BASIN



SETTLING BASIN SECTION A

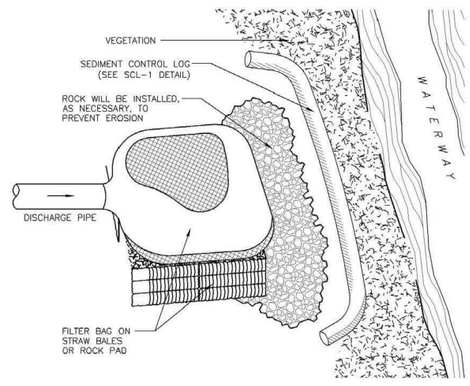
DEWATERING INSTALLATION NOTES

1 SEE PLAN VIEW FOR
- LOCATION OF DEWATERING EQUIPMENT.
- TYPE OF DEWATERING OPERATION (DW-1 TO DW-4)

2. THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE INA ACCORDANCE WITH THE REQUIREMENTS OF THIS PERMIT.
3. THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL. A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK FILLED TO FINAL GRADE.
4. DEWATERING OPERATIONS SHALL USE ON OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE. WELL POINTS OR OTHER MEANS APPROVED BY JEFFERSON COUNTY TO REDUCE THE PUMPING OF SEDIMENT TO ALLOWABLE LEVELS PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE. SETTLING BASIN SHOWN ABOVE IF A 4-SQUARE FOOT RIPRAP PAD IS PLACED AT THE DISCHARGE POINT AND THE DISCHARGE END OF THE LINE IS STAKED IN PLACE TO PREVENT MOVEMENT OF THE LINE.

DEWATERING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.
5. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.



DW-4. DEWATERING FILTER BAG

DEWATERING
OPERATIONS

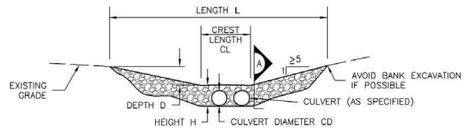
DW

Detail 21

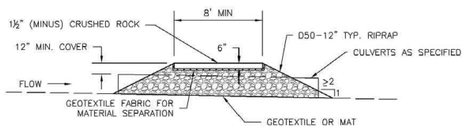
Revisions:	Designed By:		Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING 100 JEFFERSON COUNTY PARKWAY, SUITE 3550 GOLDEN, COLORADO 80419 (303) 271-8700
	Drawn By:		Date Created: 8/15/2011	
	Checked By: Staff		Plot Date: 7/26/2012 F.I.R. Date:	
	File: GESC_Details_Sht8.dwg		F.O.R. Date: For Const. Date:	
	File Location: G:\PROJECTS_CAD\Standards\PnZ Ersion Control Details			

G.E.S.C. STANDARD PLANS AND DETAILS

Project No.: Sheet 8 Of 9

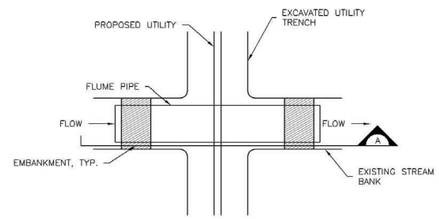


CULVERT CROSSING SECTION

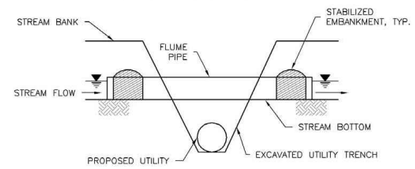


SECTION A

TSC-1. CULVERT CROSSING

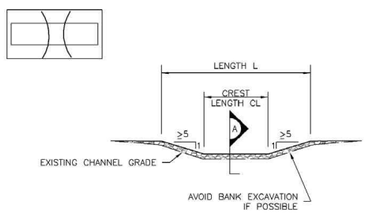


FLUME CROSSING PLAN

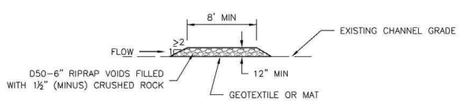


SECTION A

TSC-3. FLUME CROSSING



FORD CROSSING SECTION



SECTION A

TSC-2. FORD CROSSING

TEMPORARY STREAM CROSSING INSTALLATION NOTES

1 SEE PLAN VIEW FOR

- LOCATION OF TEMPORARY STREAM CROSSINGS.
- STREAM CROSSING TYPE (FORD, CULVERT, OR FLUME)
- FOR FORD CROSSING: LENGTH (L), CREST LENGTH (CL) AND DEPTH (D)
- FOR CULVERT CROSSING: LENGTH (L), CREST LENGTH (CL) AND CROSSING HEIGHT (H), DEPTH (D), CULVERT DIAMETER (CD), AND NUMBER, TYPE, AND CLASS OR GAUGE OF CULVERTS.

2. TEMPORARY STREAM CROSSING DIMENSIONS, D50, AND NUMBER OF CULVERTS INDICATED (FOR CULVERT CROSSINGS) SHALL BE CONSIDERED MINIMUM DIMENSIONS. THE ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENT SHALL BE IMMEDIATELY REPAIRED.

3. SEE MAJOR DRAINAGE CHAPTER IN UDFCD VOLUME III FOR RIPRAP GRADATIONS.

4. WHERE FAILURE OF A STREAM CROSSING CAN RESULT IN SIGNIFICANT DAMAGE OR HARM, IT MUST BE DESIGNED BY A STRUCTURAL ENGINEER.

TEMPORARY STREAM CROSSING MAINTENANCE NOTES

1 INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION. AND PERFORM NECESSARY MAINTENANCE.

2 FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. REMOVE SEDIMENT ACCUMULATED UPSTREAM OF CROSSING AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE CROSSING.

5. STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED AND SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION

6. WHEN STREAM CROSSINGS ARE REMOVED. THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY JEFFERSON COUNTY.

TEMPORARY STREAM CROSSING

TSC

Detail 21

Revisions:	Designed By:		Scale: (As Shown)	JEFFERSON COUNTY DIVISION OF PLANNING & ZONING 100 JEFFERSON COUNTY PARKWAY, SUITE 3550 GOLDEN, COLORADO 80419 (303) 271-8700	G.E.S.C. STANDARD PLANS AND DETAILS
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