### GRADING, EROSION, AND SEDIMENT CONTROL (GESC) GENERAL NOTES

- THE CASTLE PINES OR THEIR REPRESENTATIVES SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE CASTLE PINES PUBLIC WORKS HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL COMPLIANCE WITH THE DOUGLAS COUNTY GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL. CASTLE PINES, THROUGH ACCEPTANCE OF THIS DOCUMENT. ASSUMES NO RESPONSIBILITY (OTHER THAN AS STATED ABOVE) FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS.
- 2. THE ADEQUACY OF THIS GESC PLAN LIES WITH THE ORIGINAL DESIGN ENGINEER.
- THE GESC SHALL BE CONSIDERED VALID FOR THREE (3) YEARS FROM THE DATE OF ACCEPTANCE BY CASTLE PINES, AFTER WHICH TIME THE PLAN SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY CASTLE PINES IF CONSTRUCTION HAS NOT COMMENCED FOR THE PROJECT.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CASTLE PINES PUBLIC WORKS OR THEIR REPRESENTATIVES. THE CITY OF CASTLE PINES RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE GESC MANUAL, GESC PLAN OR GESC PERMIT.
- THE PLACEMENT OF EROSION AND SEDIMENT CONTROL MEASURES (CM3) SHALL BE IN ACCORDANCE WITH THE CASTLE PINES ACCEPTED GESC PLAN AND THE DOUGLAS COUNTY GESC MANUAL, AS AMENDED OR TO CASTLE PINES PROGRAM DOCUMENTS.
- ANY VARIATION IN MATERIAL, TYPE OR LOCATION OF EROSION AND SEDIMENT CONTROL CMs FROM THE CASTLE PINES ACCEPTED GESC PLAN WILL REQUIRE APPROVAL FROM AN ACCOUNTABLE REPRESENTATIVE OF THE CASTLE PINES PUBLIC WORKS.
- AFTER THE GESC PLAN HAS BEEN ACCEPTED, THE GESC PERMIT APPLIED FOR, FEES AND FISCAL SECURITY SUBMITTED TO THE CITY, AND THE GESC FIELD MANUAL OBTAINED AND REVIEWED, THE CONTRACTOR MAY INSTALL THE INITIAL-STAGE EROSION AND SEDIMENT CMs INDICATED ON THE ACCEPTED GESC PLAN.
- 8. THE FIRST CM TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION, INCLUDING CONSTRUCTION LIMITS ADJACENT TO STREAM CORRIDORS AND OTHER AREAS TO BE PRESERVED.
- AFTER INSTALLATION OF THE OTHER INITIAL-STAGE EROSION AND SEDIMENT CMs. THE PERMITTEE SHALL CALL CASTLE PINES AT 303-705-0216 TO SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE. THE REQUEST SHALL BE MADE A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE REQUESTED MEETING TIME. NO CONSTRUCTION ACTIVITIES SHALL BE PLANNED WITHIN 24 HOURS AFTER THE PRECONSTRUCTION MEETING UNLESS OTHERWISE APPROVED.
- THE OWNER OR OWNER'S REPRESENTATIVE, THE GESC MANAGER, THE GENERAL CONTRACTOR, AND THE GRADING SUBCONTRACTOR, IF DIFFERENT FROM THE GENERAL CONTRACTOR, MUST ATTEND THE PRECONSTRUCTION MEETING. IF ANY OF THE REQUIRED PARTICIPANTS FAIL TO ATTEND THE PRECONSTRUCTION MEETING, OR IF THE GESC FIELD MANUAL IS NOT ON SITE, OR IF THE INSTALLATION OF THE INITIAL CMs ARE NOT APPROVED BY THE CASTLE PINES EROSION CONTROL INSPECTOR, THE APPLICANT WILL HAVE TO PAY A REINSPECTION FEE, ADDRESS ANY PROBLEMS WITH CM INSTALLATION, AND CALL TO RESCHEDULE THE MEETING, WITH A CORRESPONDING DELAY IN THE START OF CONSTRUCTION. CASTLE PINES STRONGLY ENCOURAGES THE APPLICANT TO HAVE THE ENGINEER OF RECORD AT THE PRECONSTRUCTION MEETING.
- 11. CONSTRUCTION SHALL NOT BEGIN UNTIL THE CASTLE PINES EROSION CONTROL INSPECTOR APPROVES THE INSTALLATION OF THE NITIAL CM3 AND THE APPROVED GESC PERMIT IS PICKED UP FROM THE CITY AND IS IN-HAND ON THE SITE. THE COMPLETED PERMIT WILL BE AVAILABLE WITHIN 24-HOURS AFTER THE INSTALLATION OF THE INITIAL CMs ARE APPROVED.
- 12. THE GESC MANAGER SHALL STRICTLY ADHERE TO THE CASTLE PINES-APPROVED LIMITS OF CONSTRUCTION AND LIMITS OF DISTURBANCE AT ALL TIMES. THE CASTLE PINES PUBLIC WORKS MUST APPROVE ANY CHANGES TO THE LIMITS OF CONSTRUCTION OR DISTURBANCE AND, AT THE DISCRETION OF THE ENGINEERING DIVISION, ADDITIONAL EROSION/SEDIMENT CONTROLS MAY BE REQUIRED IN ANY ADDITIONAL AREAS OF CONSTRUCTION.
- 13. THE MAXIMUM AREA OF CONSTRUCTION SHALL BE LIMITED TO 40 ACRES (70 ACRES IF APPROVED FOR SOIL MITIGATION OPERATIONS) TO REDUCE THE AMOUNT OF LAND DISTURBED AT ANY ONE TIME UNLESS AN EXEMPTION IS APPROVED FOLLOWING CHERRY CREEK RESERVOIR CONTROL REGULATION 72. LARGER SITES SHALL BE DIVIDED INTO PHASES THAT ARE EACH 40 (OR 70 ACRES OR LESS IN SIZE. THESE PROJECTS SHALL CONDUCT GRADING ACTIVITIES IN ACCORDANCE WITH THE ACCEPTED GESC PLAN CM INSTALLATION AND APPROVAL BY CASTLE PINES AT THE START AND COMPLETION OF EACH PHASE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE GESC MANUAL AND/OR GESC FIELD MANUAL.
- 14. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES. FOR INFORMATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811, 1-800-922-1987, OR WWW.COLORADO811.ORG.
- 15. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OF DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
- 16. THE GESC PERMIT SHALL BE VALID FOR A PERIOD OF THREE (3) YEARS FROM THE DATE OF ISSUANCE AND MAY BE RENEWED A NEEDED AFTER THAT TIME PERIOD.
- 17. A COPY OF THE GESC PERMIT, ACCEPTED GESC PLANS AND THE GESC FIELD MANUAL SHALL BE ON SITE AT ALL TIMES.
- 18. THE GESC MANAGER SHALL BE RESPONSIBLE FOR ENSURING THAT THE SITE REMAINS IN COMPLIANCE WITH THE GESC PERMIT AND SHALL BE THE PERMITTEE'S CONTACT PERSON WITH THE CITY FOR ALL MATTERS PERTAINING TO THE GESC PERMIT. THE GESC MANAGER SHALL BE PRESENT AT THE SITE THE MAJORITY OF THE TIME AND SHALL BE AVAILABLE THROUGH A 24-HOUR CONTACT NUMBER. IN THE EVENT THAT THE CONTRACTOR'S GESC MANAGER IS NOT ON SITE AND CANNOT BE REACHED DURING A VIOLATION, THE ALTERNATE GESC MANAGER SHALL BE CONTACTED. IF NEITHER THE GESC MANAGER NOR ALTERNATE GESC MANAGER CAN BE CONTACTED DURING ANY VIOLATION, A STOP WORK ORDER MAY BE ISSUED.
- 19. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE CASTLE PINES-APPROVED ACCESS POINT. A VEHICLE TRACKING CONTROL PAD IS REQUIRED AT ALL ACCESS POINTS ON THE SITE. ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES MAY BE ADDED WITH AUTHORIZATION FROM THE CASTLE PINES PUBLIC WORKS.

- 20. THE GESC MANAGER IS RESPONSIBLE FOR CLEANUP OF SEDIMENT OR CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED AREAS. PAVED AREAS INCLUDING STREETS ARE TO BE KEPT CLEAN THROUGHOUT BUILD-OUT AND SHALL BE CLEANED, WITH A STREET SWEEPER OR SIMILAR DEVICE, AT FIRST NOTICE OF ACCIDENTAL TRACKING OR AT THE DISCRETION OF THE CASTLE PINES EROSION CONTROL INSPECTOR. STREET WASHING IS NOT ALLOWED. CASTLE PINES RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO ENSURE AREA STREETS ARE KEPT FREE OF SEDIMENT AND/OR CONSTRUCTION DEBRIS.
- 21. APPROVED EROSION AND SEDIMENT CMs SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE GESC MANAGER SHALL INSPECT ALL CM3 IN ACCORDANCE WITH THE ACCEPTED GESC PLAN AND GESC MANUAL. LEVEL III VIOLATIONS SHALL BE CORRECTED IMMEDIATELY AFTER THE PERMITTEE(S) NOTICE THE VIOLATION(S) OR ARE NOTIFIED OF THE VIOLATION(S). GENERALLY CASTLE PINES WILL REINSPECT FOR COMPLIANCE WITHIN 48 HOURS OF NOTIFICATION OF LEVEL III VIOLATIONS. LEVEL II VIOLATIONS SHALL BE CORRECTED IMMEDIATELY, OR AS DIRECTED BY A CASTLE PINES EROSION CONTROL INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED.
- 22. STRAW BALES ARE NOT A CASTLE PINES ACCEPTED SEDIMENT CONTROL MEASURE. 23. TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE ACCEPTED GESC PLAN. THE GESC MANAGER SHALL SCHEDULE AN INSPECTION WITH THE CASTLE PINES EROSION CONTROL INSPECTOR AS SOON AS TOPSOIL STRIPPING IS COMPLETED. FAILURE TO SCHEDULE SUCH INSPECTION OR FAILURE TO STOCKPILE TOPSOIL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER. THE STOP WORK ORDER SHALL REMAIN IN PLACE UNTIL TOPSOIL IS STOCKPILED ON SITE OR APPROPRIATE SOIL AMENDMENTS ARE STOCKPILED ON SITE.
- 24. THE ACCEPTED GESC PLAN MAY REQUIRE CHANGES OR ALTERATIONS AFTER APPROVAL TO MEET CHANGING SITE OR PROJECT CONDITIONS OR TO ADDRESS INEFFICIENCIES IN DESIGN OR INSTALLATION. THE GESC MANAGER SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER AND CASTLE PINES PUBLIC WORKS OR THEIR REPRESENTATIVES FOR ANY PROPOSED CHANGES.
- 25. LINING OF TEMPORARY SWALES AND DITCHES SHALL BE IN ACCORDANCE WITH THE DOUGLAS COUNTY GESC CRITERIA MANUAL.
- 26. NO PERMANENT EARTH SLOPES GREATER THAN 3:1 SHALL BE ALLOWED WITHOUT APPROVAL. 27. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE GESC MANAGER. THE GESC MANAGER SHALL BE HELD RESPONSIBLE FOR OBTAINING ACCESS RIGHTS TO ADJACENT PROPERTY, IF NEEDED, AND REMEDIATING ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS,
- PROPERTIES. ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT. 28. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- 29. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS APPROVED BY THE CASTLE PINES PUBLIC WORKS.
- 30. ALL CHEMICAL OR HAZARDOUS MATERIAL SPILLS WHICH MAY ENTER WATERS OF THE STATE OF COLORADO, WHICH INCLUDE BUT ARE NOT LIMITED TO, SURFACE WATER, GROUND WATER AND DRY GULLIES OR STORM SEWER LEADING TO SURFACE WATER, SHALL BE IMMEDIATELY REPORTED TO THE CDPHE PER CRS 25-8-601. AND CASTLE PINES. RELEASES OF PETROLEUM PRODUCTS AND CERTAIN HAZARDOUS SUBSTANCES LISTED UNDER THE FEDERAL CLEAN WATER ACT (40 CFR PART 116) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER AS WELL AS THE CDPHE. CONTACT INFORMATION FOR CDPHE, CASTLE PINES AND THE NATIONAL RESPONSE CENTER CAN BE FOUND IN APPENDIX A OF THE GESC MANUAL, AS AMENDED. SPILLS THAT POSE AN IMMEDIATE RISK TO HUMAN LIFE SHALL BE REPORTED TO 911. FAILURE TO REPORT AND CLEAN UP ANY SPILL MAY RESULT IN ISSUANCE OF A STOP WORK ORDER.
- 31. ALL WORK ON SITE SHALL STAY A MINIMUM OF ONE HUNDRED (100) FEET AWAY FROM ANY DRAINAGEWAY, WETLAND, ETC. UNLESS OTHERWISE NOTED ON AN ACCEPTED GESC PLAN. WHERE FEASIBLE PRE-EXISTING VEGETATION WITHIN FIFTY (50) FEET OF A RECEIVING WATER WILL BE PROTECTED.
- 32. ALL PROJECTS SHALL BALANCE EARTHWORK QUANTITIES ON SITE. IN THE EVENT A VARIANCE IS GRANTED BY THE CITY OF CASTLE PINES TO ALLOW IMPORT OR EXPORT OF MATERIAL, THE PERMITTEE SHALL HAVE A GESC PERMIT IN HAND FOR THE IMPORT OR EXPORT SITE PRIOR TO ANY TRANSPORTING OF EARTHEN MATERIAL. THE GESC MANAGER SHALL NOTIFY THE CASTLE PINES EROSION CONTROL INSPECTOR OF THE LOCATION AND PERMIT NUMBERS OF BOTH THE EXPORTING AND IMPORTING SITES PRIOR TO ANY IMPORT/ EXPORT OPERATIONS.
- 33. THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING OR SUPPORT OF ANY EROSION OR SEDIMENT CM IS PROHIBITED (EXCEPT STEEL TEE-POSTS FOR USE IN SUPPORTING CONSTRUCTION FENCE AND STAKING FOR PORTABLE TOILETS).
- 34. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.
- 35. ALL DEWATERING ON SITE SHALL BE COORDINATED WITH A CASTLE PINES EROSION CONTROL INSPECTOR AND BE FREE OF SEDIMENT IN ACCORDANCE WITH THE GESC MANUAL.
- 36. ALL PERMANENT INSTALLATIONS OF PIPES FOR STORM SEWERS, SLOPE DRAINS, AND CULVERTS, TOGETHER WITH RIPRAP APRONS OR OTHER INLET AND OUTLET PROTECTION, REQUIRE INSPECTION BY CASTLE PINES PUBLIC WORKS REPRESENTATIVE (SEPARATE FROM GESC INSPECTIONS).
- 37. ALL DISTURBED AREAS SHALL BE DRILL SEEDED AND CRIMP MULCHED IN ACCORDANCE WITH THE GESC CRITERIA MANUAL WITHIN THIRTY (30) DAYS OF INITIAL EXPOSURE OR WITHIN FOURTEEN (14) DAYS OF SUBSTANTIAL COMPLETION (AS DEFINED BY CASTLE PINES) OF AN AREA, WHICHEVER IS LESS. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING. STABILIZATION (TEMPORARY OR PERMANENT) IS REQUIRED FOR AREAS THAT ARE INACTIVE FOR 14 DAYS OR LONGER.
- 38. ALL SLOPES STEEPER THEN 4:1 REQUIRE EROSION CONTROL BLANKETING. 39. HYDRAULIC SEEDING AND HYDRAULIC MULCHING ARE NOT AN ACCEPTABLE METHOD OF SEEDING OR MULCHING FOR PERMANENT
- STABILIZATION IN CASTLE PINES WITHOUT APPROVAL. 40. A GESC INSPECTION SHALL BE CONDUCTED FOR CERTIFICATE OR TEMPORARY CERTIFICATE OF OCCUPANCY OR INITIAL ACCEPTANCE
- 41. GESC MANAGER SHALL PROVIDE AND MAINTAIN PORTABLE TOILETS AND TRASH DUMPSTERS FOR THE PROJECT.







(ALTERNATIVE TO CONSTRUCTION FENCE) SCALE:  $1/2^{*} = 1-0^{*}$ 

- CM CONSTRUCTION MARKERS 6
- SEE PLAN VIEW FOR:

   TYPE OF CONSTRUCTION LIMIT INDICATOR (FENCE OR MARKERS).
   LOCATION AND LENGTH OF FENCE OR LINE OF MARKERS.
- 2. CONSTRUCTION FENCE OR MARKERS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO OTHER CMs AND ANY LAND-DISTURBING ACTIVITIES.
- 3. STEEL TEE POSTS SHALL BE UTILIZED FOR SUPPORT OF CONSTRUCTION FENCE. MAXIMUM SPACING FOR TEE POSTS SHALL BE 15'.
- INSTRUCTION FENCE MAINTENANCE NOTES

2. FENCE OR MARKERS SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF ANY DISTURBED AREA EXISTS AFTER FENCE REMOVAL, IT SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.



CURB SOCK INSTALLATION NOTES

CURB SOCK MAINTENANCE NOTES

1. SEE PLAN VIEW FOR LOCATION OF CURB SOCK.

12/19 06/20

SHOWN ARE FOR 24"x36' SHEETS; ADJUS ACCORDINGLY FOR 11"x17'

1-1/2" CRUSHED ROCK

MAXIMUM SPACING ALONG STREET GRADE

STREET SLOPE CURB SOCK SPACING (FT.)



	<u>CM L</u>	<u>EGEND</u>
* <b>.</b> *	CD	CHECK DAM
22,569	CB	COMPOST BLANKET
	CFB	COMPOST FILTER BERM
	CWA	CONCRETE WASHOUT AREA
<b>—</b>	CF	CONSTRUCTION FENCE
1	CM	CONSTRUCTION MARKER
	ĊS	CURB SOCK
•	<b>D</b> W	DEWATERING
-	DD	DIVERSION DITCH
	ECB	EROSION CONTROL BLANKET
		INLET PROTECTION
242	RCD	REINFORCED CHECK DAM
777	RRB	REINFORCED ROCK BERM
	RRC	RRB FOR CULVERT PROTECT
	SB	SEDIMENT BASIN
777	SCL	SEDIMENT CONTROL LOG
	ঙা	SEDIMENT TRAP
	SM	SEEDING AND MULCHING
←	(SF)	SILT FENCE
	SSA	STABILIZED STAGING AREA
Ƴ	SR	SURFACE ROUGHENING

(TSD) TEMPORARY SLOPE DRAIN (TSC) TEMPORARY STREAM CROSSING

PROTECTION

TERRACING

- VTC WITH WHEEL WASH
- ROCK AND RIPRAP GRADATIONS - - - (LOC) LIMITS OF CONSTRUCTION





CHECK DAM INSTALLATION NOTES

- 1. SEE PLAN VIEW FOR: LOCATIONS 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 PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM ND-DISTURBING ACTIVITIES.
- 3. RIPRAP UTILIZED FOR CHECK DAMS SHALL HAVE A D<sub>10</sub> MEDIAN STONE SIZE OF 12". 4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-8".

### 5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1'-6" HIGHER THAN THE CENTER OF THE CHECK DAM.

- CHECK DAM MAINTENANCE NOTES
- THE RECOMMENDED INSPECTION FREQUENCY FOR CHECK DAMS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- 2. SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
- 3. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND VEGETATED COVER IS
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL ANY DISTURBED AN SHALL BE SEEDED AND MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.





TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY CASTLE PINES.

---- DW DEWATERING (8)



1. THE RECOMMENDED INSPECTION FREQUENCY FOR CURB SOCKS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY. 2. SEDIMENT ACCUMULATED UPSTREAM OF CURB SOCK SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF THE CURB SOCK IS WITHIN 2 ½" OF THE CREST. 3. CURB SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE CITY APPROVES EARLIER REMOVAL OF CURB SOCKS IN STREETS.





GESC PLAN STANDARD NOTES AND DETAILS

## ROCK AND RIPRAP GRADATIONS

## DD DIVERSION DITCH 9

3. IF DIVERSION DITCHES ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

DIVERSION DITCH MAINTENANCE NOTES 1. THE RECOMMENDED INSPECTION FREQUENCY FOR DIVERSION DITCHES IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY. 2. DIVERSION DITCHES ARE TO REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION, OR, IF APPROVED BY THE CITY, LEFT IN PLACE.

5. IN LOCATIONS WHERE CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION DITCH, THE PERMITTEES SHALL INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12-INCHES.

4. FOR ECB LINED DITCHES, INSTALLATION OF EROSION CONTROL BLANKET SHALL CONFORM TO THE REQUIREMENTS OF DETAIL 10.

3. DIVERSION DITCHES INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

2. SEE DRAINAGE PLANS FOR DETAILS OF ANY PERMANENT CONVEYANCE FACILITIES OR DIVERSION DITCHES EXCEEDING A 2-YEAR FLOW RATE OF 10 CFS.

Depth, "D", and width, "w" dimensions.
 For ECB lined ditch, erosion control blanket type (see detail 10).
 For Riprap Lined ditch, size of Riprap, "D50".

ONGITUDINAL SLOPE 3% TO 339 SCALE:  $1/2^{*} = 1'-0^{*}$ DIVERSION DITCH INSTALLATION NOTES 1. SEE PLAN VIEW FOR: - LOCATION OF DIVERSION DITCH. - TYPE OF DITCH (UNLINED, ECB LINED, PLASTIC LINED OR RIPRAP LINED). - LENGTH OF EACH TYPE OF DITCH.

- "D" (10" MIN.) ANCHOR TRENCH AT PERIMETER OF BLANKET AND AT OVERLAPPING JOINTS WITH ANY ADJACENT ROLLS OF BLANKET, SIMILAR TO DETAIL 10, BUT NO STAKING 30 MIL MIN. PLASTIC - TRANSVERSE ANCHOR TRENCHES AT PERIMETER OF BLANKET AND AT OVERLAPPING JOINTS WITH ANY ADJACENT ROLLS OF BLANKET, SIMILAR TO DETAIL 10, BUT NO STAKING INTERMEDIATE ANCHOR TRENCH AT ONE-HALF ROLL-LENGTH SIMILAR TO DETAIL 10, BUT NO STAKING PLASTIC LINED

"W" (5'-0" MIN.) STAKES PER DETAIL 1 \_\_"D" (10" MIN.) ANCHOR TRENCH AT PERIMETER OF BLANKET AND AT OVERLAPPING JOINTS WITH ANY ADJACENT ROLLS OF BLANKET. ROSION CONTROL BLANKET (ECB) SEE DETAIL 10 -SEE DETAIL 10 - TRANSVERSE ANCHOR TRENCHES AT PERIMETER OF BLANKET AND AT OVERLAPPING JOINTS WITH ANY ADJACENT ROLLS OF BLANKET. SEE DETAIL 10 INTERMEDIATE ANCHOR TRENCH AT ONE-HALF ROLL-LENGTH SEE DETAIL 10 ----EROSION CONTROL BLANKET (ECB) LINED LONGITUDINAL SLOPE 0.5% TO 3% SCALE: 1/2" = 1'-0" "W" (5'-0" MIN.)

UNLINED LONGITUDINAL SLOPE < 0.5% SCALE: 1/2" = 1'-0" <u>RIPRAP LINED</u> ONGITUDINAL SLOPE 3% TO 33% SCALE:  $1/2^{*} = 1'-0^{*}$ 

riprap type	D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	Typical stone Weight (pounds)	
VL 6		70 - 100 50 - 70 35 - 50 2 - 10	12 9 6 2	85 35 10 0.4	
L 9		70 - 100 50 - 70 35 - 50 2 - 10	15 12 9 3	160 85 35 1.3	
м	12	70 - 100 50 - 70 35 - 50 2 - 10	21 18 12 4	440 275 85 3	
н	18	100 50 - 70 35 - 50 2 - 10	30 24 18 6	1280 650 275 10	
νн	24	100 50 - 70 35 - 50 2 - 10	42 33 24 9	3500 1700 650 35	

TABLE 2. RIPRAP BEDDING

MATCHES SPECIFICATIONS FOR CDOT CLASS A FILTER MATERIAL AND UDFCD TYPE 1 BEDDING. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

TABLE 3. 1 1/2" CRUSHED ROCK

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER ANSHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.

SIEVE SIZE

1 1/2"

NO. 4

NO. 200

SIEVE SIZE

1 1/2"

3/4"

3/8"

MASS PERCENT PASSING SQUARE MESH SIEVES

CLASS A

20 - 90

0 - 20

0 - 3

MASS PERCENT PASSING SQUARE MESH SIEVES

NO. 4

90 - 100

20 - 55

0 - 15

0 - 5

SHEE

OF

TABLE	1.	RIPRAP	GRADATIONS
	••		

2'(W) E

~ 2" CLASS | COMPOST BLANKE

1. SEE PLAN VIEW FOR LENGTH OF COMPOST FILTER BERM.

3. FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.

4. FILTER BERMS SHALL BE A MINIMUM OF 1' H x 2' W.

2. SHALL BE APPLIED TO ALL SLOPES RECEIVING A COMPOST BLANKET AT 15' INCREMENTS.

5. FILTER BERMS SHALL BE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.

6. SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.

7. SOIL PREPARATION SHALL BE COMPLETE PER THE SPECIFICATIONS OUTLINED IN THESE CRITERIA PRIOR TO APPLICATION.

8. WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.

10. THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.

9. SEEDING SHALL BE DRILLED BEFORE THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.

11. COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS:

CLASS I COMPOST FOR COMPOST FILTER BERM STABLE TO VERY STABLE

MAXIMUM 5mmhos/cm

NEGATIVE RESUL

25-45 % OF DRY WEIGHT

20 TO 35% PASSIN

MUST BE REPORTED

STA + CLOPYRALID

CFBCOMPOST FILTER BERM 3

NOTE: IF A BIOSOLID COMPOST IS TO BE UTILIZED IT SHALL BE PRODUCED BY A FACILITY IN POSSESSION OF A VALID NOTICE OF AUTHORIZATION (NOA) FOR THE UNRESTRICTED USE AND DISTRIBUTION BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT. THE NOA SHALL BE PROVIDED UPON REQUEST TO CASTLE PINES.

NOTE: A LAB TEST DETAILING THE CHEMICAL, PHYSICAL, AND BIOLOGICAL PARAMETERS SHALL BE PROVIDED UPON REQUEST BY CASTLE PINES.

2" (75mm) 100% PASSING 1" (25mm) 95% TO 100% PASSING 3/4" (19mm) 85% TO 90% PASSING 3/6" (9.5mm) 50% TO 60% PASSING

MUST REPORT MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION LOW

6.0 - 8.0

COMPOST FILTER BERM DETAIL

COMPOST FILTER BERM NOTES:

INIMUM STABILITY INDICATOR

MATURITY INDICATOR EXPRESSED A PERCENTAGE OF GERMINATION/VIGOR MATURITY INDICATOR EXPRESSED AS

AMMONIA N/ NITRATE N RATIO MATURITY INDICATOR EXPRESSED AS

ARY, SECONDARY NUTRIENTS

ESTING AND TEST REPORT SUBMITTAL

UM MANUFACTURING/PRODUCTION

RGANIC MATTER PER CUBIC Y

RISK FACTOR RELATING TO PLANT

CHEMICAL CONTAMINANTS

GERMINATION AND HEALTH

CARBON TO NITROGEN RATIO

TESTED FOR CLOPYRALID MOISTURE CONTENT

ORGANIC MATTER CONTENT PARTICLE SIZE DISTRIBUTION

TRACE ELEMENT

REQUIREMENTS

SOLUBLE SALTS

- CLASS I COMPOST FILTER BERMS

COMPOST BLANKET AND COMPOST FILTER BERM

2" CLASS I COMPOST BLANKET

STABLE TO VERY STABLE       MAXIMUM Smmhos/cm       6.0 - 8.0       > 10       80+/80+       < 4       20:1
MAXIMUM 5mmhos/cm 6.0 - 8.0 > 10 80+/80+ < 4 20:1
6.0 - 8.0 > 10 80+/80+ < 4 20:1
> 10 80+/80+ < 4 20:1
80+/80+ < 4 20:1
< 4 20:1
20:1
YES/NEGATIVE RESULT
30-60 %
25-45 % OF DRY WEIGHT
3" (75mm) 100% PASSING 1" (25mm) 95% TO 100% PASSING 3/4" (19mm) 85% TO 90% PASSING 3/8" (9.5mm) 50% TO 60% PASSING #4 20 TO 35% PASSING
MUST BE REPORTED
STA + CLOPYRALID
MUST REPORT
MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
LOW
-

CB COMPOST BLANKET 2

"W" (5'-0" MIN.)

11. COMPOST USED IN THE APPLICATION OF THE COMPOST BLANKET SHALL BE A CLASS I COMPOST AS DEFINED BY THE FOLLOWING PHYSICAL, CHEMICAL, AND BIOLOGICAL PARAMETERS

## 9. COMPOST FILTER BERM SHALL BE UTILIZED ON SLOPES WITH A MAXIMUM SPACING OF 15 FEET PER THE REQUIREMENTS FOUND IN THE COMPOST FILTER BERM SECTION.

COMPOST BLANKET NOTES:

1. SEE PLAN VIEW FOR AREA OF COMPOST BLANKET.

MAY BE USED IN PLACE OF STRAW MULCH OR EROSION CONTROL BLANKET IN AREAS WHERE ACCESS IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.

3. SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL; SHALL BE PROHIBITED IN AREAS OF POSSIBLE CONCENTRATED FLOW.

4. Soil preparation shall be complete per the specifications outlined in these criteria prior to application.

WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO APPLICATION.

- 6. SHALL BE EVENLY APPLIED AT A DEPTH OF 2 INCH.

NOTE: NO Concentrated Flows

PROPER SOIL PREPARATION

- 7. MAYBE APPLIED UTILIZING PNEUMATIC BLOWER, OR BY HAND.

- 8. SEEDING SHALL BE DRILLED PRIOR TO THE APPLICATION OF COMPOST OR SEED MAY BE COMBINED AND BLOWN WITH THE PNEUMATIC BLOWER.

- 10. THE RECOMMENDED INSPECTION FREQUENCY IS WEEKLY, DURING AND AFTER ANY STORM EVENT.



06/20 SHEETS; ADJUST ACCORDINGLY FOR 11"x17' SHEETS.

CASTLE PINES REISSUE

2

**CASTLE PINES** 



TABLE 7.1 - EROSION CONTROL BLANKET TYPE						
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	NETTING MIN.		
STRAW*	-	100%	-	DOUBLE/NATURAL		
STRAW-COCONUT	30% MIN.	70% MAX.	-	DOUBLE/NATURAL		
COCONUT	100%	-	-	DOUBLE/NATURAL		
EXCELSIOR	-	-	100%	DOUBLE/NATURAL		











- 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 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- 5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- 6. PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THIS SHEET PERTAIN TO STANDARD SEDIMENT BASIN(S) IDENTIFIED ON THE GESC PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.



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- 1. THE RECOMMENDED INSPECTION FREQUENCY FOR SEDIMENT BASIN IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- 2. SEDIMENT ACCUMULATED IN SEDIMENT BASIN SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1.0 FOOT.
- SEDIMENT BASING ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE CITY.
- IF SEDIMENT BASINS ARE REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.



SB SEDIMENT BASIN (15) 



CASTLE PINES REISSUE	12/19	FOR 24"x36"
CASTLE PINES REISSUE	06/20	SHEETS; ADJUST
		ACCORDINGLY
		SHEETS.

2





 SEE PLAN VIEW FOR:

 AREA OF SEEDING AND MULCHING.
 TYPE OF SEED MIX (PERMANENT, TEMPORARY, OR LOW-GROWTH).

 2. All brands furnished shall be free from such noxious seeds as russian or canadian thistle, coarse fescue, European Bindweed, Johnson grass, knap weed and leafy spurge.

- THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WET, MOLDY, OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO CASTLE PINES UPON REQUEST.
- 4. DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT: 5. IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO THE CONTRACTOR AND FORWARDED TO THE CASTLE PINES EEDSTON CONTRACTOR.
- 6. The formula used for determining the quantity of pure live seed (PLS) shall be (pounds of seed) X (purity) X (germination) = pounds of pure live seed (PLS).
- 7. PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE CITY. 8. ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH). HAUL ROADS AND OTHER COMPACTED AREAS SHALL BE LOOSENED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL.
- 9. Soil is to be thoroughly loosened (tilled) to a depth of at least 6 inches prior to seeding. The top 6 inches of the seed bed shall be free of rocks greater than 4 inches and soil clods greater than 2 inches. Seeding over any compacted areas that haven't been thoroughly loosened shall be rejected.
- SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH NOT LESS THAN 1/4 INCH AND NOT MORE THAN 3/4 INCH. ROW SPACING SHALL BE NO MORE THAN 6 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW. AT LEAST 50 PERCENT OF THE MULCH, BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
- 11. IF THE PERMITTEE DEMONSTRATES TO THE CITY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE. SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 14 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA (AS DEFINED BY THE COUNTY). THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- 13. MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEDING. 14. TACKIFIER SHOULD BE UTILIZED TO HELP PREVENT STRAW DISPLACEMENT.

### SEEDING AND MULCHING MAINTENANCE NOTES

- 1. SEEDED AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY FOR A PERIOD OF TWO YEARS FOLLOWING INITIAL SEEDING. REPAIRS AND RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS FAILING TO MEET THE REQUIRED COVERAGE.
- 2. REQUIRED COVERAGE FOR STANDARD, OPEN SPACE AND LOW GROWTH SEED MIXES SHALL BE DEFINED AS FOLLOWS: 1. THREE (3) PLANTS PER SQUARE FOOT WITH A MINIMUM HEIGHT OF 3 INCHES. THE 3 PLANTS PER SQUARE FOOT SHALL BE OF THE VARIETY AND SPECIES FOUND IN THE CASTLE PINES-APPROVED MIX.
- 2. NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT).
- FREE OF ERODED AREAS. FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC

### 3. REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DEFINED AS FOLLOWS:

- 1. AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES PLANTED. 2. NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT).
- FREE OF ERODED AREAS.
- FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC
- 4. RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE CITY.

## SM SEEDING AND MULCHING 18

### CASTLE PINES PERMANENT DRILL SEEDING MIX

<u>SPECIES</u>	VARIETY	<u>NOTES</u>	<u>% in Mix</u>	POUNDS OF PLS PER <u>ACRE</u>
BIG BLUESTEM	KAW	PNWS	10	1.1
YELLOW INDIANGRASS	CHEYENNE	PNWS	10	1
SWITCHGRASS	BLACKWELL	PNWS	10	0.4
SIDEOATS GRAMA	VAUGHN	PNWB	10	0.9
WESTERN WHEATGRASS	ARRIBA	PNCS	10	1.6
BLUE GRAMA	HACHITA	PNWB	10	0.3
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
PRAIRIE SANDREED	GOSHEN	PNWS	10	0.7
GREEN NEEDLEGRASS	LODORM	PNCB	10	1
SLENDER WHEATGRASS	PRYOR	PNCB	5	0.6
STREAMBANK WHEATGRASS	SODAR	PNCS	5	0.6
			TOTAL	9.2

### CASTLE PINES TEMPORARY DRILL SEEDING MIX

<u>SPECIES</u>	VARIETY	<u>NOTES</u>	<u>% in Mix</u>	Pounds of PLS PER <u>Acre</u>		
SMOOTH BROMEGRASS	LINCOLN	PICS	30	3.9		
INTERMEDIATE WHEATGRASS	OAHE	PICS	30	4.5		
PUBESCENT WHEATGRASS	LUNA	PICS	30	4.2		
ANNUAL RYEGRASS	N/A	AICB	10	0.8		
			TOTAL	13.4		

### CASTLE PINES LOW-GROWTH DRILL SEEDING MIX

<u>SPECIES</u>	VARIETY	<u>NOTES</u>	<u>% in Mix</u>	Pounds of PLS PER <u>Acre</u>
BUFFALOGRASS	TEXOKA	PNWS	20	3.2
BLUE GRAMA	HACHITA	PNWB	20	0.6
WESTERN WHEATGRASS	ARRIBA	PNCS	20	3.2
SIDEOATS GRAMA	VAUGHN	PNWB	20	1.8
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
STREAMBANK WHEATGRASS	SODAR	PNCS	10	1.2
			TOTAL	11.0

- 2. TEMPORARY STREAM CROSSING DIMENSIONS, D50, AND NUMBER OF CULVERTS INDICATED (FOR CULVERT CROSSING) SHALL BE CONSIDERED MINIMUM DIMENSIONS; ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 3. SEE ROCK AND RIPRAP GRADATIONS FOR RIPRAP AND 1-1/2" CRUSHED ROCK GRADATIONS
- 4. FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

- 1. THE RECOMMENDED INSPECTION FREQUENCY FOR TEMPORARY STREAM CROSSINGS IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- 2. SEDIMENT ACCUMULATED UPSTREAM OF TEMPORARY STREAM CROSSINGS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 6-INCHES OF THE CREST (FORD CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES
- 3. TEMPORARY STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
- 4. WHEN TEMPORARY STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED AN COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

TSC TEMPORARY STREAM CROSSING 23



### ELEVATION SCALE: 1/2" = 1'-0'

TERRACING INSTALLATION NOTES

- 1. SEE PLAN VIEW FOR: WIDTH, "W", AND SLOPE, "Z".
- 2. TERRACING IS NOT REQUIRED FOR SLOPES OF 4 TO 1 OR FLATTER.
- 3. EARTH (VEGETATED) SLOPES STEEPER THAN 3 TO 1 ARE NOT ALLOWED ON THE SITE. TERRACING MAINTENANCE NOTES
- THE RECOMMENDED INSPECTION FREQUENCY FOR TERRACING IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY. 2. ANY RILL EROSION OCCURRING ON SLOPES SHALL BE REPAIRED AND RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 18.
- TER TERRACING (24)



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EXCAVATION SHALL TAKE PLACE SPECIFIED) CULVERT CROSSING - ELEVATION CALE: 1'' = 5' - 0'8' MIN. - D50-12" MIN. RIPRAP

LENGTH. "L



SCALE: 1'' = 5' - 0'

# GESC PLAN STANDARD NOTES AND DETAILS



## VTC VEHICLE TRACKING CONTROL 25

- VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE GRAVEL MATERIAL REMOVED OR, IF APPROVED BY THE CITY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.
- VEHICLE TRACKING CONTROL MAINTENANCE NOTES 1. THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL IS DAILY. GRAVEL SURFACE SHALL BE CLEAN AND LOOSE ENOUGH TO RUT SLIGHTLY UNDER WHEEL LOADS AND CAUSE LOOSE GRAVEL TO DISLODGE MUD FROM TIRES. WHEN GRAVEL BECOMES COMPACTED OR FILLED WITH SEDIMENT SO THAT THE EFFECTIVENESS OF THE PAD IS DIMINISHED, CONTRACTOR SHALL RIP, TURN OVER, OR OTHERWISE LOOSEN GRAVEL, PLACE ADDITIONAL NEW GRAVEL, OR REPLACE WITH NEW GRAVEL AS NECESSARY TO RESTORE EFFECTIVENESS.
- A CASTLE PINES TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR EACH NEW ACCESS POINT ONTO EITHER CITY OF CASTLE PINES R.O.W. OR DOUGLAS COUNTY R.O.W. 5. A STOP SIGN INSTALLED IN ACCORDANCE WITH THE <u>MANUAL ON UNIFORM TRAFFIC CONTROL</u> <u>DEVICES (MUTCD)</u>, AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.
- 3. ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE
- 1. VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING, ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- VEHICLE TRACKING CONTROL INSTALLATION NOTES





### WW VTC WITH WHEEL WASH (26) **A**

- 5. VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITY SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE RIPRAP MATERIAL REMOVED OR, IF APPROVED BY THE CITY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED.
- ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES AN AVERAGE OF 12-INCHES.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH MAINTENANCE NOTES 1. THE RECOMMENDED INSPECTION FREQUENCY FOR VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES IS DAILY. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM PAD SURFACE.
- 4. ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY CONTRACTOR 5. A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), A AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.
- . VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE ANI RESISTANT TO WEATHERING, ROUNDED STONE OR BOULDERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD USING A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES ALTHOUGH NOT NORMALLY USED, THE CITY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM.



# SSA STABILIZED STAGING AREA 20

- 5. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION UNLESS PERMANENT PAVEMENT IS USED. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE CITY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDED AND CRIMP MULCHED OR
- 3. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS. 4. ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STABILIZED STAGING AREA.
- 2. GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL OR PAVEMENT IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA MAINTENANCE NOTES 1. THE RECOMMENDED INSPECTION FREQUENCY FOR THE STABILIZED STAGING AREA IS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- 5. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3" GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE), 3" MINIMUM THICKNESS PAVEMENT, OR OTHER APPROVED MATERIAL.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- 2. STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS. 3. IF REQUIRED BY THE CITY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STABILIZED STAGING AREA INSTALLATION NOTES SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH CITY



### SILT FENCE INSTALLATION NOTES

SILT FENCE MAINTENANCE NOTES

SILT FENCE GEOTEXTILE

EXISTING GROUND

FLOW 🖘

COMPACTED BACKFILL

AT LEAST 11" OF SILT FENCE GEOTEXTILE SHALL BE BURIED —

6" MIN.

2. ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE; NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK", OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR

4. SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

THE RECOMMENDED INSPECTION FREQUENCY FOR SILT FENCE IS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.

. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6-INCHES.

SF SILT FENCE (19)

- 1 1/2"x1 1/2" WOODEN FENCE POSTS 8'-4" MAX. SPACING

-1 1/2"

—— 3" MIN.

ELEVATION SCALE: 1" = 1'-0"

POSTS SHALL OVERLAP AT JOINTS SO THAT NO GAPS EXIST IN SILT FENCE

- UNDISTURBED VEGETATION ON DOWN GRADIENT SIDE

ICKNESS OF GEOTEXTILE H

(FOR SILT FENCE SHOW IN INITIAL GESC PLAN)

3. SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:

ROTATE SECOND

POST SHALL BE JOINED AS SHOWN, THEN ROTATED 180° IN DIRECTION SHOWN AND DRIVEN INTO THE GROUND

 $\approx$ 

6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
 90 LB. TENSILE STRENGTH PER ASTM D4622.
 UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D4355.

