

LEGEND

SEDIMENT BASIN	(SB)	TOE	(TOE)
		TOP	(TOP)
SILT FENCE	(SF)	SF	
CONSTRUCTION FENCE	(CF)	CF	
STABILIZED STAGING AREA	(SSA)		
CONSTRUCTION MARKER	(CM)		
VEHICLE TRACKING CONTROL	(VTC)		
TEMPORARY STOCK PILE	(TSP)		
EROSION CONTROL BLANKET	(ECB)		
INLET PROTECTION	(IP)		
OUTLET PROTECTION	(OP)		
DIVERSION DITCH AND DIKE, TEMPORARY	(DD)		
LIMITS OF CONSTRUCTION	(LOC)		
CONCRETE WASHOUT AREA	(CWA)		
SEEDING & MULCHING & SURFACE ROUGHENING	(SM) (SR)		
TEMPORARY SLOPE DRAIN	(TSD)		
CHECK DAM	(CD)		
ROCK SOCKS	(RS)		
STORMWATER FLOW ARROWS			(ARROW)
PROPERTY LINES			(DASHED LINE)

BMP PHASING

INITIAL:

- 1) INSTALL VTC
- 2) INSTALL CWA
- 3) ESTABLISH SSA
- 4) INSTALL CONSTRUCTION MARKERS
- 5) INSTALL SILT FENCE
- 6) INSTALL SEDIMENT BASINS
- 7) INSTALL DIVERSION DITCHES

INTERIM:

- 1) LOCATE/INSTALL TEMPORARY STOCKPILE
- 2) MAINTAIN ALL BMPs
- 3) INSTALL RS
- 4) INSTALL INLET AND OUTLET PROTECTION

FINAL:

- 1) INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
- 2) REMOVE SILT FENCE AFTER STABILIZED

ENGINEER'S STATEMENT

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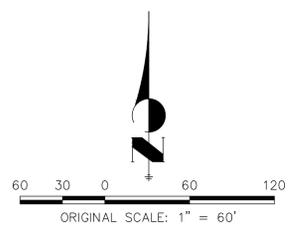
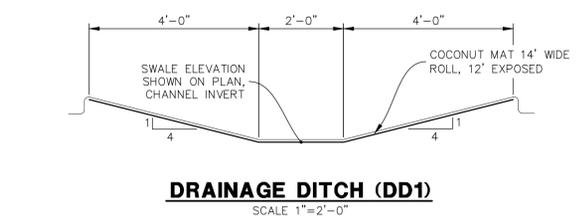
OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

DANE OLMSTEAD
 JACKSON DEARBORN PARTNERS
 404 S. WELLS ST.
 CHICAGO, IL 60607

DATE

MIKE A. BRAMLETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF JR ENGINEERING



NOTES

Note that this project does not anticipate utilizing batch plants in the SWMP text
 Note the existing on-site vegetation
 Unresolved.

1. REFER TO THE STORMWATER MANAGEMENT PLAN (SWMP) FOR A DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAMS FOR EROSION CONTROL FACILITIES.
2. ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY SEEDED PER THE PAWNEE BUTTES SEED INC - "LOW GROW NATIVE MIX" OR APPROVED EQUAL. SEE SHEET 8 FOR SEED MIX DETAILS.
3. P.I.E = PUBLIC IMPROVEMENTS EASEMENT



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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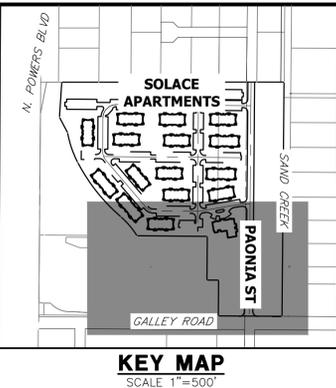
BY	DATE	No.	REVISION

H-SCALE 1"=60'
 V-SCALE N/A
 DATE 03/12/21
 DESIGNED BY JRM
 DRAWN BY JRM
 CHECKED BY

SOLACE AT CIMARRON HILLS

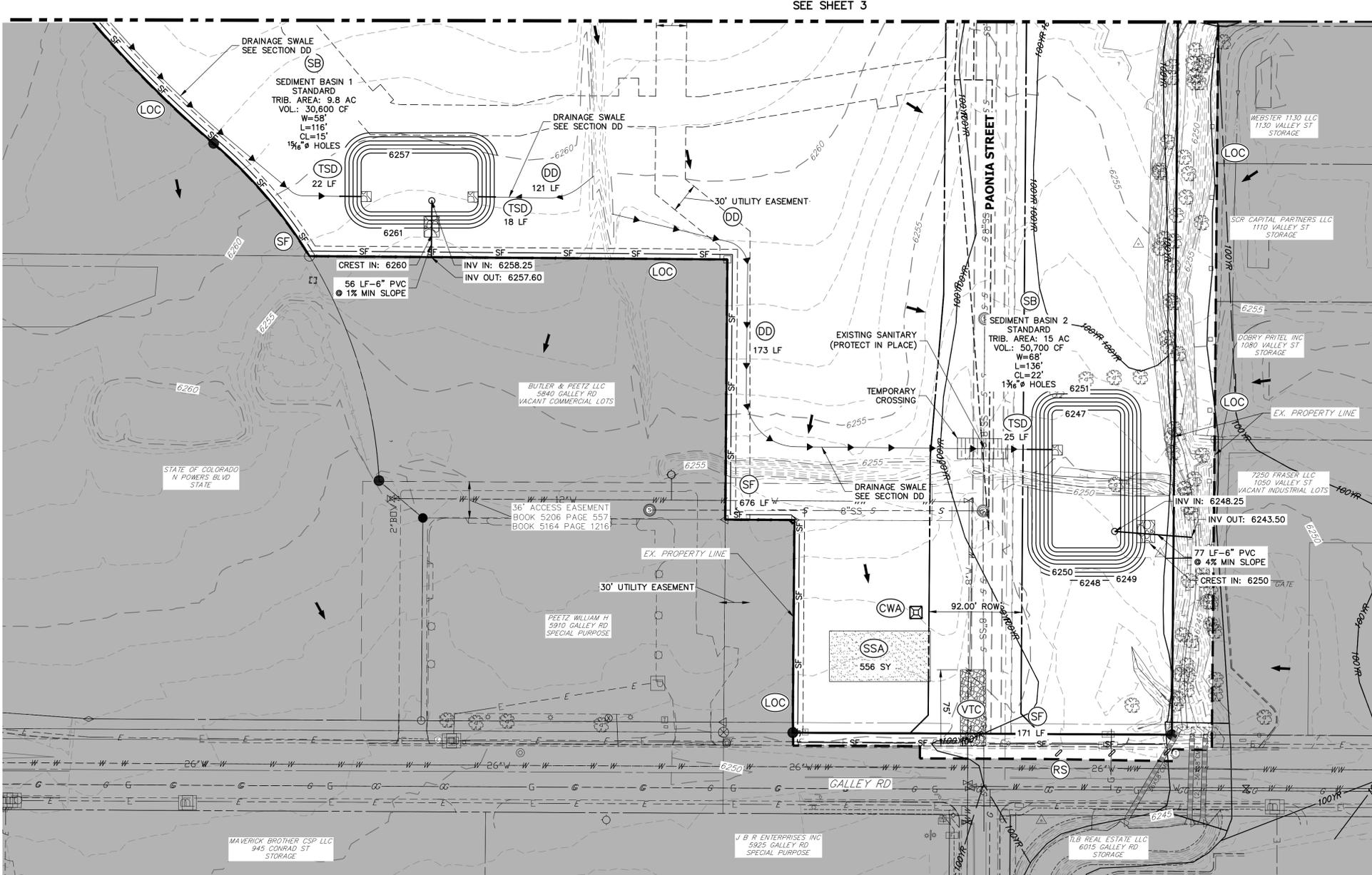
INITIAL GRADING AND EROSION CONTROL PLANS

SHEET 3 OF 10
 JOB NO. 25174.00



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LEGEND

SEDIMENT BASIN	SB	TOE	TOE
		TOP	TOP
SILT FENCE	SF	SF	SF
CONSTRUCTION FENCE	CF	CF	CF
STABILIZED STAGING AREA	SSA	SSA	SSA
CONSTRUCTION MARKER	CM	CM	CM
VEHICLE TRACKING CONTROL	VTC	VTC	VTC
TEMPORARY STOCK PILE	TSP	TSP	TSP
EROSION CONTROL BLANKET	ECB	ECB	ECB
INLET PROTECTION	IP	IP	IP
OUTLET PROTECTION	OP	OP	OP
DIVERSION DITCH AND DIKE, TEMPORARY	DD	DD	DD
LIMITS OF CONSTRUCTION	LOC	LOC	LOC
CONCRETE WASHOUT AREA	CWA	CWA	CWA
SEEDING & MULCHING & SURFACE ROUGHENING	SM SR	SM SR	SM SR
TEMPORARY SLOPE DRAIN	TSD	TSD	TSD
CHECK DAM	CD	CD	CD
ROCK SOCKS	RS	RS	RS
STORMWATER FLOW ARROWS	→	→	→
PROPERTY LINES	- - -	- - -	- - -

BMP PHASING

- INITIAL:**
- 1) INSTALL VTC
 - 2) INSTALL CWA
 - 3) ESTABLISH SSA
 - 4) INSTALL CONSTRUCTION MARKERS
 - 5) INSTALL SILT FENCE
 - 6) INSTALL SEDIMENT BASINS
 - 7) INSTALL DIVERSION DITCHES
- INTERIM:**
- 1) LOCATE/INSTALL TEMPORARY STOCKPILE
 - 2) MAINTAIN ALL BMPs
 - 3) INSTALL RS
 - 4) INSTALL INLET AND OUTLET PROTECTION
- FINAL:**
- 1) INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
 - 2) REMOVE SILT FENCE AFTER STABILIZED

ENGINEER'S STATEMENT

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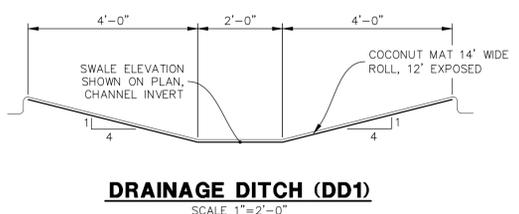
MIKE A. BRAMLETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF JR ENGINEERING

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

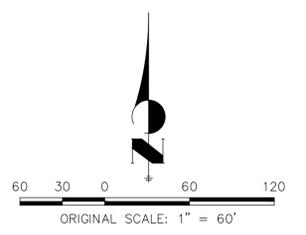
DANE OLMSTEAD
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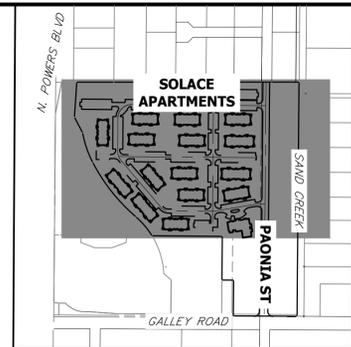
DATE



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LEGEND

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		TOP	(TOP)
SILT FENCE	(SF)	SF	
CONSTRUCTION FENCE	(CF)	CF	
STABILIZED STAGING AREA	(SSA)		
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TEMPORARY STOCK PILE	(TSP)		
EROSION CONTROL BLANKET	(ECB)		
INLET PROTECTION	(IP)		
OUTLET PROTECTION	(OP)		
DIVERSION DITCH AND DIKE, TEMPORARY	(DD)		
CUT AND FILL LINE	C/F	C/F	
LIMITS OF CONSTRUCTION	(LOC)		
LIMITS OF DISTURBANCE			
CONCRETE WASHOUT AREA	(CWA)		
SEEDING & MULCHING & SURFACE ROUGHENING	(SM/SR)		
TEMPORARY SLOPE DRAIN	(TSD)		
CHECK DAM	(CD)		
ROCK SOCKS	(RS)		

BMP PHASING

INITIAL PROPERTY LINES

- 1) INSTALL VTC
- 2) INSTALL CWA
- 3) ESTABLISH SSA
- 4) INSTALL CONSTRUCTION MARKERS
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PREPARED FOR
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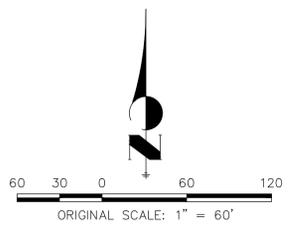
BY	DATE	No.	REVISION

SOLACE AT CIMARRON HILLS

FINAL GRADING AND EROSION CONTROL PLANS

SHEET 5 OF 10

JOB NO. 25174.00



- NOTES**
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DANE OLMSTEAD _____ DATE _____

JACKSON DEARBORN PARTNERS
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 CHICAGO, IL 60607

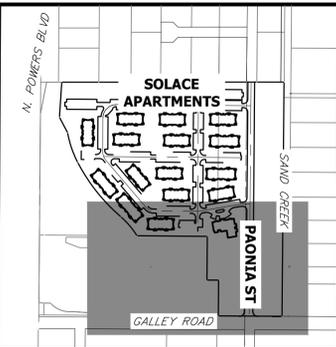
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MIKE A. BRAMLETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF JR ENGINEERING



SEE SHEET 5



KEY MAP
SCALE 1"=500'

LEGEND

SEDIMENT BASIN	SB	TOE	TOE
		TOP	TOP
SILT FENCE	SF	SF	SF
CONSTRUCTION FENCE	CF	CF	CF
STABILIZED STAGING AREA	SSA		
CONSTRUCTION MARKER	CM		
VEHICLE TRACKING CONTROL	VTC		
TEMPORARY STOCK PILE	TSP		
EROSION CONTROL BLANKET	ECB		
INLET PROTECTION	IP		
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DIVERSION DITCH AND DIKE, TEMPORARY	DD		
CUT AND FILL LINE	C/F	C/F	C/F
LIMITS OF CONSTRUCTION	LOC		
LIMITS OF DISTURBANCE			
CONCRETE WASHOUT AREA	CWA		
SEEDING & MULCHING & SURFACE ROUGHENING	SM SR		
TEMPORARY SLOPE DRAIN	TSD		
CHECK DAM	CD		
ROCK SOCKS	RS		

BMP PHASING

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 - 2) INSTALL CWA
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ENGINEER'S STATEMENT

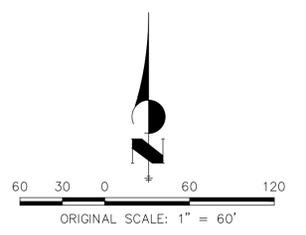
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COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING

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DANE OLMSTEAD DATE
JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
CHICAGO, IL 60607

UNLESS SHOWN OTHERWISE, THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
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Central 303-740-9888 • Colorado Springs 719-588-2593
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=60'	N/A	03/12/21	JRM	JRM	

SOLACE AT CIMARRON HILLS
FINAL GRADING AND EROSION CONTROL PLANS

RECOMMENDED ANNUAL GRASSES				
SPECIES (COMMON NAME)	GROWTH SEASON	SEEDING DATE	POUNDS OF PURE LIVE SEED (PLS) (PLS/ACRE)	PLANTING DEPTH (INCHES)
1. OATS	COOL	MARCH 16 - APRIL 30	35-50	1-2
2. SPRING WHEAT	COOL	MARCH 16 - APRIL 30	25-35	1-2
3. SPRING BARLEY	COOL	MARCH 16 - APRIL 30	25-35	1-2
4. ANNUAL RYEGRASS	COOL	MARCH 16 - JUNE 30	10-15	1/2
5. MILLET	WARM	MAY 16 - JULY 15	3-15	1/2-3/4
6. SUDANGRASS	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
7. SORGHUM	WARM	MAY 16 - JULY 15	5-10	1/2-3/4
8. WINTER WHEAT	COOL	SEPTEMBER 1 - 30	20-35	1-2
9. WINTER BARLEY	COOL	SEPTEMBER 1 - 30	20-35	1-2
10. WINTER RYE	COOL	SEPTEMBER 1 - 30	20-35	1-2
11. TRITICALE	COOL	SEPTEMBER 1 - 30	25-40	1-2

THIS TABLE WAS TAKEN FROM UDFCD FOR RECOMMENDED ANNUAL GRASSES FOR THE DENVER METROPOLITAN AREA. THIS TABLE MAY BE USED UNLESS A SITE-SPECIFIC SEED MIX IS REQUESTED AND APPROVED.

TABLE TS-1

TEMPORARY SEEDING NOTES

- | | |
|--|--|
| <p>INSTALLATION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. DISTURBED AREAS ARE TO BE SEED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS. 2. IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME. 3. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENEED. 4. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1, AND 1 INCH FOR SLOPES STEEPER THAN 2:1. 5. ANNUAL GRASSES LISTED IN TABLE TS-1 ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAPWEED, PURPLE LOOSESTRIFE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE. 6. TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES. 7. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED. 8. ALL SEEDING AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING). 9. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH. | <p>MAINTENANCE REQUIREMENTS</p> <ol style="list-style-type: none"> 1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDED AREAS TO ENSURE GROWTH. 2. AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RE-SEEDED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED. 3. SEEDING AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES. |
|--|--|

City of Colorado Springs Stormwater Quality

Figure TS-1
Temporary Seeding
Construction Detail and Maintenance Requirements

3-47

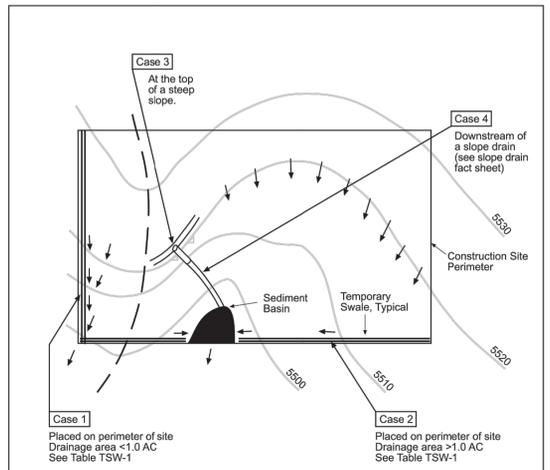


Table TSW-1

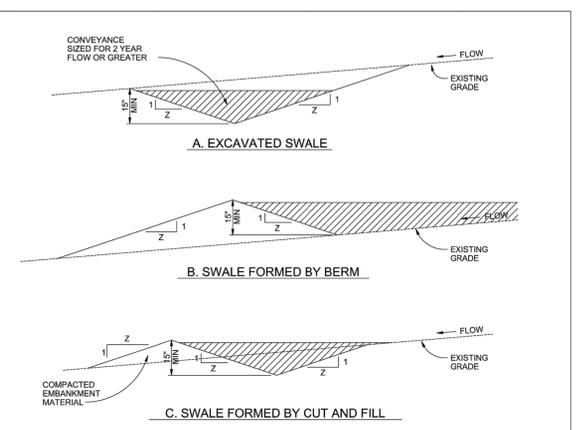
Temporary Swale Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK ⁽¹⁾	OK ⁽¹⁾
Area of Concentrated Flow	NO ⁽³⁾	NO ⁽²⁾

(1) Silt Fence or Straw Bale Barrier may be used as alternative to a Temporary Swale.
(2) With Temporary Swales Sediment Basin is required for concentrated flow from drainage areas > 1.0 AC.
(3) Check Dam is required at concentrated flow for drainage areas > 1.0 acres.

City of Colorado Springs Stormwater Quality

Figure TSW-1
Temporary Swale
Application Examples

3-49



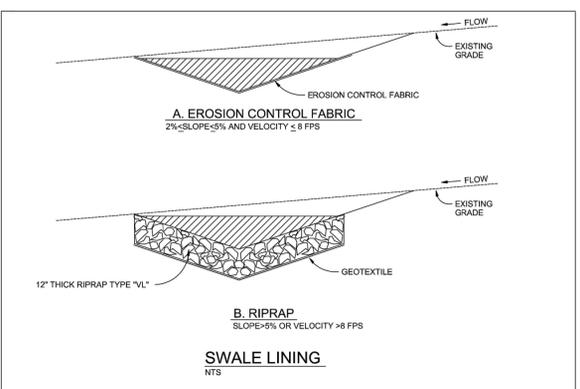
TEMPORARY SWALE NOTES

- | | |
|---|--|
| <p>INSTALLATION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES. 2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT. 3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 1% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT. 4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITH 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698. 5. SWALES WITH SLOPE > 2% SHALL BE LINED, SEE FIGURE TSW-3. 6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET. 7. Z SHALL BE 3 OR GREATER. | <p>MAINTENANCE REQUIREMENTS</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. 2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT. 3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED. 4. TEMPORARY SWALES SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY. |
|---|--|

City of Colorado Springs Stormwater Quality

Figure TSW-2
Temporary Swale
Construction Detail and Maintenance Requirements

3-50



SWALE LINING NOTES

- | | |
|--|---|
| <p>INSTALLATION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER INSTALLATION OF EROSION CONTROL FABRIC LINING. 2. SWALES WITH EASILY ERODIBLE SOILS AND SLOPES LESS THAN 2% SHALL BE LINED WITH EROSION CONTROL FABRIC. 3. VELOCITIES FOR EROSION CONTROL FABRICS SHALL NOT EXCEED 8 FPS. SWALES WITH VELOCITIES GREATER THAN 8 FPS SHALL BE LINED WITH RIP RAP. | <p>MAINTENANCE REQUIREMENTS</p> <ol style="list-style-type: none"> 1. CONTRACTOR SHALL INSPECT SWALE LININGS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL. 2. DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED. 3. REFER TO THE EROSION CONTROL BLANKETS FACTSHEET FOR PROPER MAINTENANCE. 4. DISPLACED RIPRAP OR COARSE AGGREGATE IS TO BE REPLACED AS SOON AS POSSIBLE. 5. SWALE LININGS ARE TO REMAIN IN PLACE AND BE PROPERLY MAINTAINED UNTIL THE TEMPORARY SWALE IS REMOVED. |
|--|---|

City of Colorado Springs Stormwater Quality

Figure TSW-3
Swale Linings
Construction Detail and Maintenance

3-51

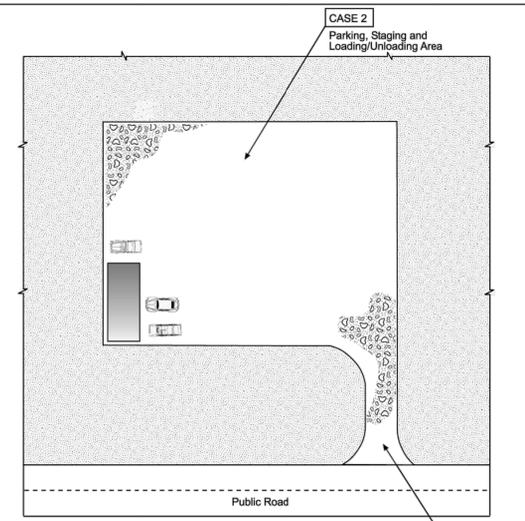


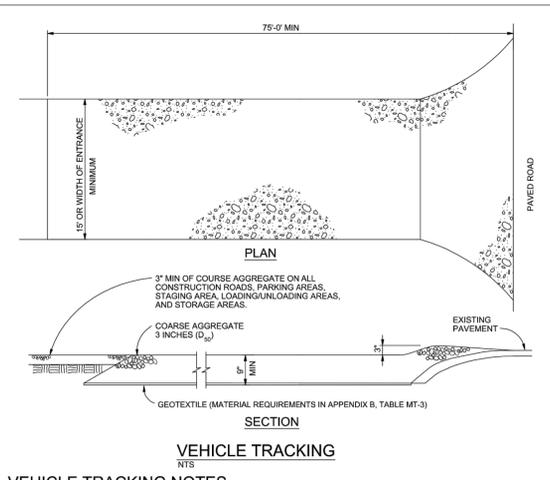
Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

City of Colorado Springs Stormwater Quality

Figure VT-1
Vehicle Tracking
Application Examples

3-53



- VEHICLE TRACKING NOTES**
- | | |
|--|---|
| <p>INSTALLATION REQUIREMENTS</p> <ol style="list-style-type: none"> 1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING. 2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP. 3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE. 4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED. 5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP. | <p>MAINTENANCE REQUIREMENTS</p> <ol style="list-style-type: none"> 1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS. 2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY. 3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS. 4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY. 5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION. |
|--|---|

City of Colorado Springs Stormwater Quality

Figure VT-2
Vehicle Tracking
Application Examples

3-54

EC-8 Temporary Outlet Protection (TOP)

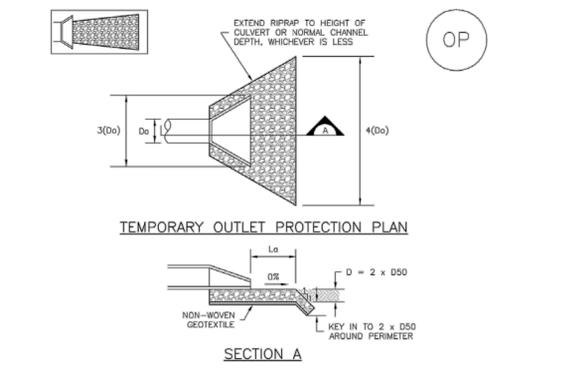


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE

PIPE DIAMETER, D _p (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L _a (FT)	RIPRAP D ₅₀ DIAMETER MIN (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
18	10	10	6
	15	9	9
24	30	23	12
	40	28	16
30	30	16	9
	40	28	6
40	50	28	12
	60	30	16

OP-1. TEMPORARY OUTLET PROTECTION

TOP-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Temporary Outlet Protection (TOP) EC-8

- 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.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

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ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

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								03/12/21	JRM	JRM	

SOLACE AT CIMARRON HILLS

GRADING AND EROSION CONTROL DETAILS

SHEET 8 OF 10

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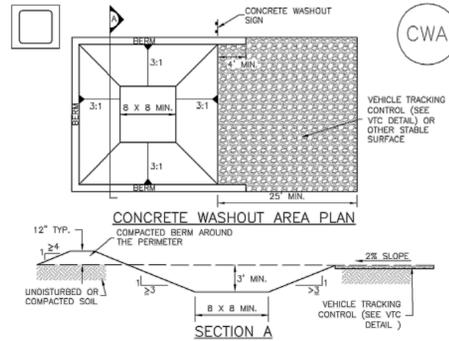
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Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

- CWA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - TYPE OF STOCKPILE LOCATION.
 - DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (18 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
 - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
 - CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
 - BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
 - VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
 - SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
 - USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

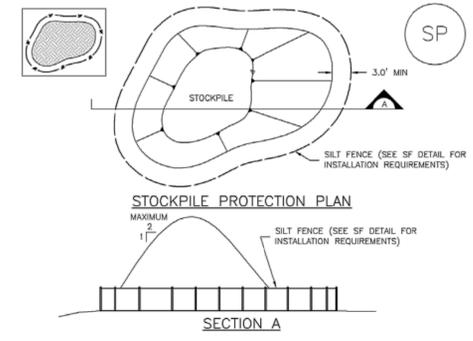
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Concrete Washout Area (CWA) MM-1

- CWA MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - 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'.
 - 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.
 - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
 - WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.**

CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Stockpile Management (SP) MM-2



SP-1. STOCKPILE PROTECTION

- STOCKPILE PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STOCKPILES.
 - TYPE OF STOCKPILE PROTECTION.
 - 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 IMPVIOUS 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.
 - STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
 - FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNWIND CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

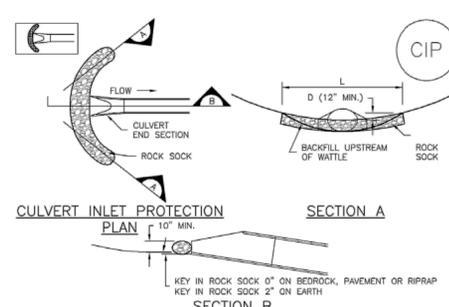
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SP-3

Stockpile Management (SM) MM-2

- STOCKPILE PROTECTION MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- STOCKPILE PROTECTION MAINTENANCE NOTES**
- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL, STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
 - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
- (DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.**

SP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Inlet Protection (IP) SC-6

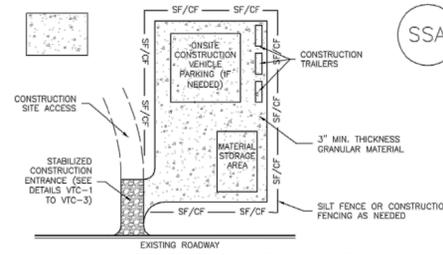


CIP-1. CULVERT INLET PROTECTION

- CULVERT INLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF CULVERT INLET PROTECTION.
 - SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.
- CULVERT INLET PROTECTION MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 3/8 THE HEIGHT OF THE ROCK SOCK.
 - CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.**

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-7

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

- STABILIZED STAGING AREA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF STAGING AREA(S).
 - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
 - STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
 - STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
 - THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
 - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
 - ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.
- STABILIZED STAGING AREA MAINTENANCE NOTES**
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

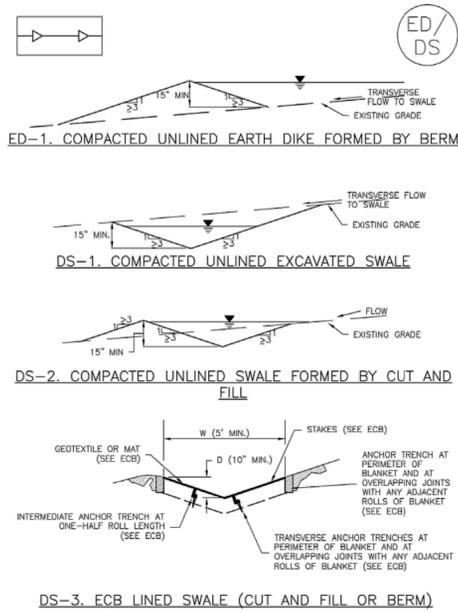
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

Stabilized Staging Area (SSA) SM-6

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION, THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.**
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.**
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Earth Dikes and Drainage Swales (ED/DS) EC-10



ED/DS-3 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

811 Know what's below. Call before you dig.

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DESIGNED BY JRM DRAWN BY JRM CHECKED BY

NO. REVISION

BY DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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SOLACE AT CIMARRON HILLS

GRADING AND EROSION CONTROL DETAILS

SHEET 9 OF 10

JOB NO. 25174.00

