

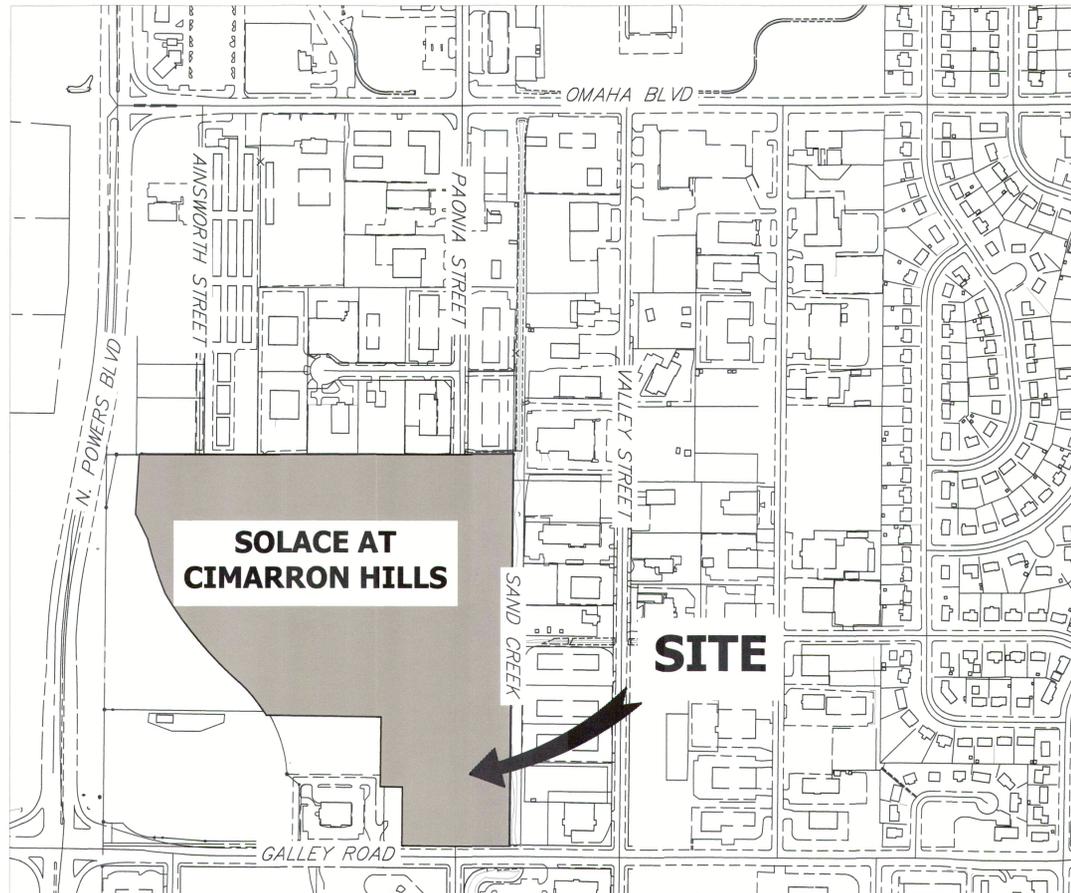
# SOLACE APARTMENTS FILING NO. 1

## A PORTION OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE P.M. EL PASO COUNTY, COLORADO

### GRADING AND EROSION CONTROL PLANS

#### ABBREVIATIONS

AC ACRE	FDP FINAL DEVELOPMENT PLAN	PL PROPERTY LINE
AD ALGEBRAIC DIFFERENCE	FDR FINAL DRAINAGE REPORT	PR PROPOSED
AH AHEAD	FES FINISHED END SECTION	PRC POINT OF REVERSE CURVATURE
ARCH ARCHITECT	FG FINISHED GRADE	PT POINT OF TANGENCY
ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS	FH FIRE HYDRANT	PV PLUG VALVE
ASSY ASSEMBLY	FL FLOWLINE	PVC POLYVINYL CHLORIDE
AVE AVENUE	FLING FILING	R RADIUS
BB BOX BASE	FO FIBER OPTIC CABLE	RCP REINFORCED CONCRETE PIPE
BK BACK	GB GRADE BREAK	RD ROAD
BNDY BOUNDARY	GE GAS EASEMENT	ROW RIGHT OF WAY
BOP BOTTOM OF PIPE	GIS GEOGRAPHIC INFORMATION SYSTEM	RT RIGHT
BOV BLOW OFF VALVE	GL GAS LINE	S SOUTH
BFV BUTTERFLY VALVE	GPS GLOBAL POSITIONING SYSTEM	STE STEEL
BLVD BOULEVARD	GV GATE VALVE	SAN SANITARY SEWER
BW BOTTOM OF WALL	HC HANDICAP	SF SQUARE FEET
C&G CURB & GUTTER	HDC HIGH DEFLECTION COUPLING	ST STREET
CATV CABLE TELEVISION	HDPE HIGH DENSITY POLYETHYLENE	STA STATION
CB CATCH BASIN	HGL HYDRAULIC GRADE LINE	STM STORM SEWER
CBC CONCRETE BOX CULVERT	HOA HOME OWNERS ASSOCIATION	SY SQUARE YARD
CDOT COLORADO DEPARTMENT OF TRANSPORTATION	HP HIGH POINT	SY-IN SQUARE YARD INCH
CDS CUL-DE-SAC	I INLET	TB THRUST BLOCK
CFS CUBIC FEET PER SECOND	IE IRRIGATION EASEMENT	TBC TOP BACK OF CURB
CL CENTER LINE	INT INTERSECTION	TBW TOP BACK OF WALK
CLOMR CONDITIONAL LETTER OF MAP REVISION	INV INVERT	TEL TELEPHONE
CLR CLEAR	IRR IRRIGATION	TOA TOP OF ASPHALT
CMP CORRUGATED METAL PIPE	KB KICK (THRUST) BLOCK	TOB TOP OF BOX
CO CLEAN OUT	LE LANDSCAPE EASEMENT	TOC TOP OF CURB OR CONCRETE
CONC CONCRETE	LF LINEAR FEET	TOF TOP OF FOUNDATION
CR CIRCLE	LN LANE	TOP TOP OF PIPE
CSP CORRUGATED STEEL PIPE	LQMR LETTER OF MAP REVISION	TW TOP OF WALL
CT COURT	LP LOW POINT	TYP TYPICAL
CTRB CONCRETE THRUST REDUCER	LS LUMP SUM	UDFCD URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
CY CUBIC YARD	LT LEFT	UE UTILITY EASEMENT
DBPS DRAINAGE BASIN PLANNING STUDY	MAX MAXIMUM	U&DE UTILITY & DRAINAGE EASEMENT
DE DRAINAGE EASEMENT	MDDP MASTER DEVELOPMENT DRAINAGE PLAN	UGE UNDERGROUND ELECTRIC
DIA DIAMETER	MH MANHOLE	VCP VITRIFIED CLAY PIPE
DIP DUCTILE IRON PIPE	MIN MINIMUM	VPC VERTICAL POINT OF CURVATURE
DR DRIVE	N NORTH	VPI VERTICAL POINT OF INTERSECTION
DRC DESIGN REVIEW COMMITTEE	NRCP NON-REINFORCED CONCRETE PIPE	VPT VERTICAL POINT OF TANGENCY
DU DWELLING UNITS	ODP OFFICIAL DEVELOPMENT PLAN	VTC VEHICLE TRACKING CONTROL
E EAST	OHE OVERHEAD ELECTRIC	W WEST
EA EACH	OHU OVERHEAD UTILITY	WL WATER LINE
EGL ENERGY GRADE LINE	PC POINT OF CURVATURE	WM WATER MAIN
EL ELEVATION	PCC POINT OF COMPOUND CURVATURE	WRD WATER RESOURCES DEPARTMENT
ELEC ELECTRIC	PCR POINT OF CURB RETURN	WS WATER SURFACE
EOA EDGE OF ASPHALT	PDP PRELIMINARY DEVELOPMENT PLAN	WSE WATER SURFACE ELEVATION
ESMT EASEMENT	PE PROFESSIONAL ENGINEER	WTR WATER
EST ESTIMATE	PI POINT OF INTERSECTION	YR YEAR
EX EXISTING	PKWY PARKWAY	



VICINITY MAP  
SCALE: 1" = 300'

#### SHEET INDEX

1	COVER SHEET
2	GENERAL NOTES
3-4	INITIAL GRADING AND EROSION CONTROL PLANS
5-6	INTERIM GRADING AND EROSION CONTROL PLANS
7-8	FINAL GRADING AND EROSION CONTROL PLANS
9-12	GRADING AND EROSION CONTROL DETAILS
TOTAL	12

#### EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

COUNTY ENGINEER/ECM ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

#### OWNER/DEVELOPER STATEMENT

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

*Dane Olmstead*  
DANE OLMSTEAD \_\_\_\_\_ DATE 11/12/2021

CS POWERS & GALLEY LLC  
510 S NEIL ST  
CHAMPAIGN, IL 61820

#### ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING, LLC  
DATE 11/11/21



#### OWNER

CS POWERS & GALLEY LLC  
510 S NEIL ST  
CHAMPAIGN, IL 61820  
P~734.216.2577

#### CIVIL ENGINEER

JR ENGINEERING  
5475 TECH CENTER DR  
SUITE 235  
COLORADO SPRINGS, CO 80919  
CONTACT: MIKE BRAMLETT  
C~719.659.7679

#### PLANNER

N.E.S. INC.  
619 N. CASCADE AVE  
SUITE 200  
COLORADO SPRINGS, CO 80903  
CONTACT: TAMARA BAXTER  
P~719.471.0073

#### ARCHITECT

LM ARCHITECTS  
819 S. WABASH AVE, FIFTH FLOOR  
CHICAGO, IL 60605  
P~312.995.5305

#### GEOTECHNICAL ENGINEER

CTL THOMPSON, INC  
5170 MARK DABLING BLVD  
COLORADO SPRINGS, CO 80918  
P~719.528.8300

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE AGENCIES, THESE DRAWINGS APPLY ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
CS POWERS & GALLEY LLC  
510 S NEIL ST  
CHAMPAIGN, IL 61820  
OFFICE PHONE (734) 216-2577

J.R. ENGINEERING  
A Weitian Company  
Central 303-740-8888 • Colorado Springs 719-593-2888  
Fort Collins 970-491-8888 • www.jrengineering.com

No.	REVISION	DATE



Know what's below.  
Call before you dig.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

PCD FILE #: SF-20-032

SOLACE APARTMENTS  
FILING NO. 1  
COVER SHEET  
SHEET 1 OF 12  
JOB NO. 25174.00



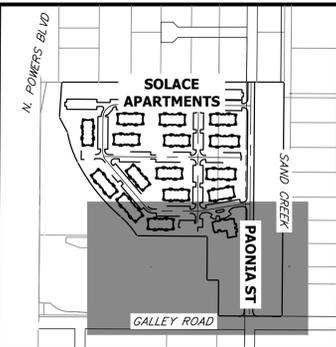








SEE SHEET 5



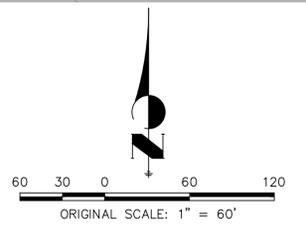
**KEY MAP**  
SCALE 1"=500'

**LEGEND**

SEDIMENT BASIN	SB	TOE	TOE
SILT FENCE	SF	SF	TOP
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		
CUT AND FILL LINE	C/F	C/F	C/F
LIMITS OF CONSTRUCTION/DISTURBANCE	LOC		
CONCRETE WASHOUT AREA	CWA		
SEEDING & MULCHING & SURFACE ROUGHENING	SM SR		
TEMPORARY SLOPE DRAIN	TSD		
CHECK DAM	CD		
ROCK SOCKS	RS		
STORMWATER FLOW ARROWS			

**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



**NOTES**

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
4. THIS PROJECT DOES NOT ANTICIPATE THE USE OF BATCH PLANTS ON-SITE.
5. EXISTING VEGETATION ON-SITE IS NATIVE MEADOW GRASSES W/ APPROXIMATELY 70% COVERAGE.



Know what's below.  
Call before you dig.

**ENGINEER'S STATEMENT**

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

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

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.

PREPARED FOR  
**CS POWERS & GALLEY LLC**  
 510 S NEIL ST  
 CHAMPAIGN, IL 61820  
 OFFICE PHONE (734) 216-2577

**J.R. ENGINEERING**  
 A Westman Company  
 Centennial 303-740-9383 • Colorado Springs 719-583-2593  
 Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

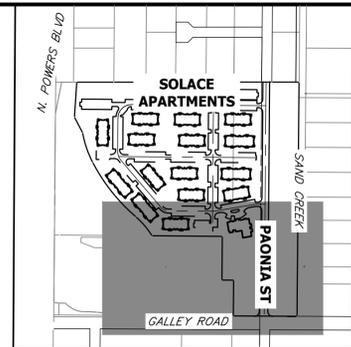
H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=60'	N/A	11/11/21	JRM	JRM	

**SOLACE APARTMENTS FILING NO. 1**  
**INTERIM GRADING AND EROSION CONTROL PLANS**





SEE SHEET 7



**KEY MAP**  
SCALE 1"=500'

**LEGEND**

SEDIMENT BASIN	SB	TOE	TOE
SILT FENCE	SF	SF	TOP
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		
CUT AND FILL LINE	C/F	C/F	
LIMITS OF CONSTRUCTION/DISTURBANCE	LOC		
CONCRETE WASHOUT AREA	CWA		
SEEDING & MULCHING & SURFACE ROUGHENING	SM SR		
TEMPORARY SLOPE DRAIN	TSD		
CHECK DAM	CD		
ROCK SOCKS	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

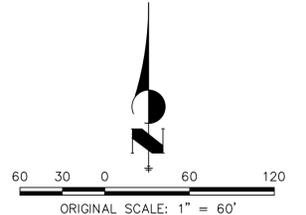
**ENGINEER'S STATEMENT**

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

Mike Bramlett  
 COLORADO REGISTERED PROFESSIONAL ENGINEER  
 32314  
 DATE 11/11/21  
 MIKE A. BRAMLETT, P.E.  
 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING

**NOTES**

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 SEEDING 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
4. THIS PROJECT DOES NOT ANTICIPATE THE USE OF BATCH PLANTS ON-SITE.
5. EXISTING VEGETATION ON-SITE IS NATIVE MEADOW GRASSES W/ APPROXIMATELY 70% COVERAGE.



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.

PREPARED FOR  
**CS POWERS & GALLEY LLC**  
 510 S NEIL ST  
 CHAMPAIGN, IL 61820  
 OFFICE PHONE (734) 216-2577

**J.R. ENGINEERING**  
 A Westman Company  
 Centennial 300-740-9888 • Colorado Springs 719-583-2583  
 Fort Collins 970-491-9888 • www.jrengineering.com

No.	REVISION	BY	DATE

H-SCALE	1"=60'
V-SCALE	N/A
DATE	11/11/21
DESIGNED BY	JRM
DRAWN BY	JRM
CHECKED BY	

**SOLACE APARTMENTS FILING NO. 1**  
**FINAL GRADING AND EROSION CONTROL PLANS**  
 SHEET 8 OF 12  
 JOB NO. 25174.00



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

INSTALLATION REQUIREMENTS

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.

MAINTENANCE REQUIREMENTS

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

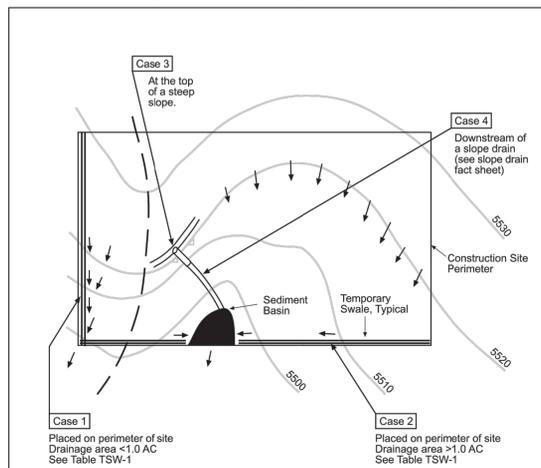


Table TSW-1

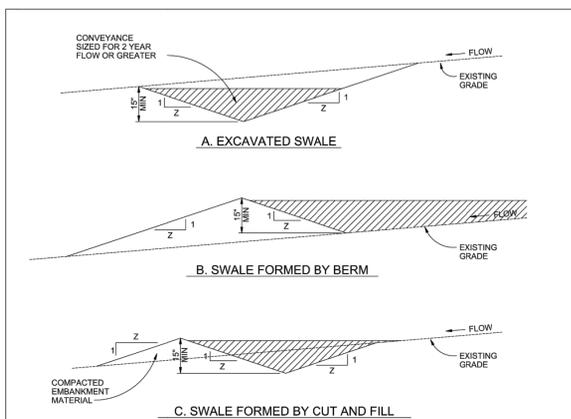
Temporary Swale Used as Perimeter Control	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Continuous Grade	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	NO <sup>(3)</sup>	NO <sup>(2)</sup>

- (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 Storm Water Quality

Figure TSW-1 Temporary Swale Application Examples

3-48



TEMPORARY SWALE

TEMPORARY SWALE NOTES

INSTALLATION REQUIREMENTS

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.

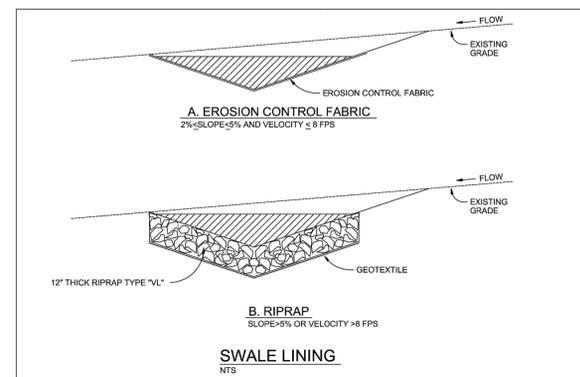
MAINTENANCE REQUIREMENTS

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

SWALE LINING NOTES

INSTALLATION REQUIREMENTS

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.

MAINTENANCE REQUIREMENTS

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

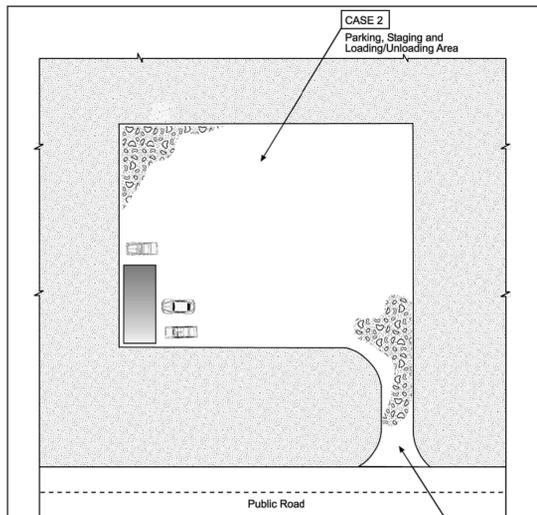


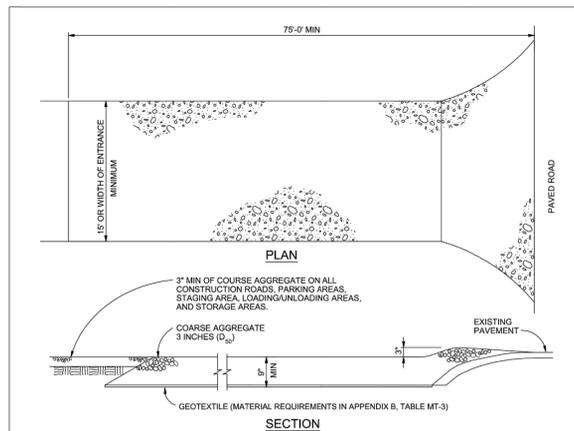
Table VT-1

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

City of Colorado Springs Storm Water Quality

Figure VT-1 Vehicle Tracking Application Examples

3-53



VEHICLE TRACKING

VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

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.

MAINTENANCE REQUIREMENTS

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)

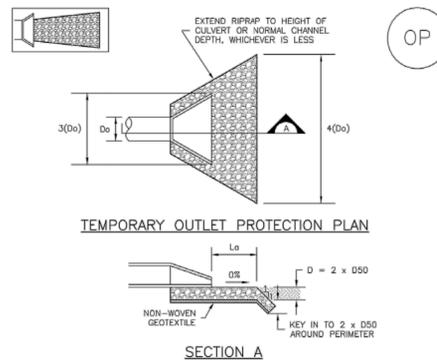


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE

PIPE DIAMETER, D <sub>0</sub> (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L <sub>a</sub> (FT)	RIPRAP D <sub>50</sub> DIAMETER MIN (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
18	10	10	6
	20	15	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)

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

TOP-3



Know what's below. Call before you dig.

ENGINEER'S STATEMENT

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

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



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

PREPARED FOR  
**CS POWERS & GALLEY LLC**  
 510 S NEIL ST  
 CHAMPAIGN, IL 61820  
 OFFICE PHONE (734) 216-2577

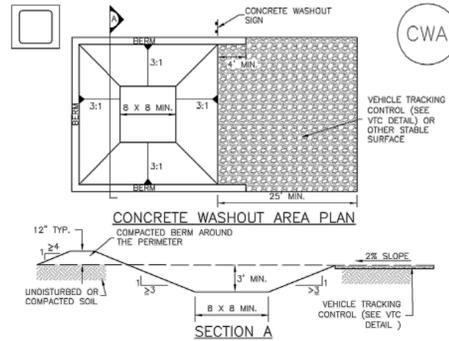
**J.R. ENGINEERING**  
 A Westwin Company  
 Centennial 303-740-9383 • Colorado Springs 719-583-2593  
 Fort Collins 970-491-9888 • www.jrengineering.com

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	No.	REVISION	BY	DATE

SOLACE APARTMENTS FILING NO. 1 GRADING AND EROSION CONTROL DETAILS SHEET 10 OF 12 JOB NO. 25174.00

**Concrete Washout Area (CWA)**

MM-1



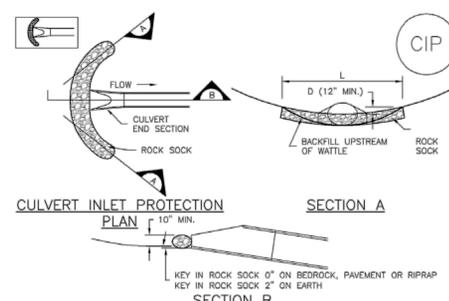
**CWA-1. CONCRETE WASHOUT AREA**

- 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.

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

**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

**Concrete Washout Area (CWA)**

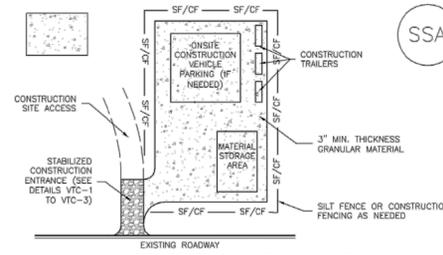
MM-1

- 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.

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

**Stabilized Staging Area (SSA)**

SM-6



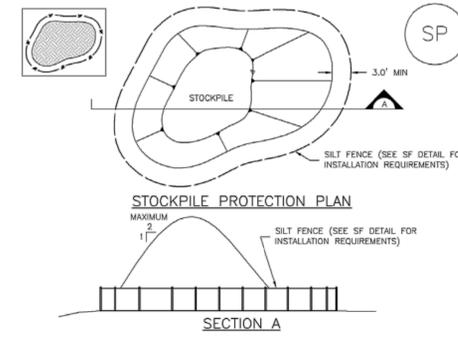
**SSA-1. STABILIZED STAGING AREA**

- 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

**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

**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)

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

**Stockpile Management (SM)**

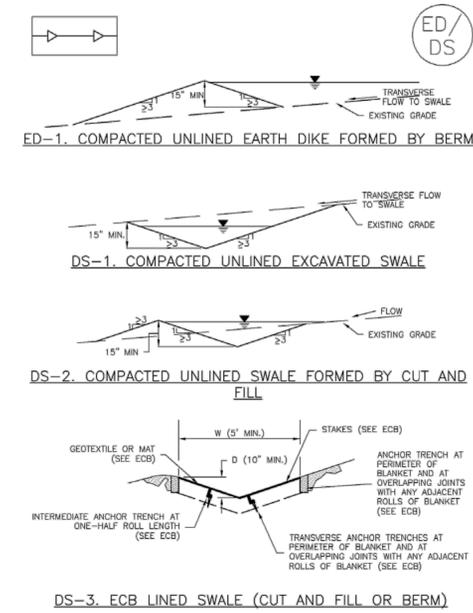
MM-2

- 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 INSTALLATION 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.

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

**Earth Dikes and Drainage Swales (ED/DS)**

EC-10



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

**ENGINEER'S STATEMENT**  
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

Mike Bramlett  
32314  
11/11/21

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



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.

PREPARED FOR  
**CS POWERS & GALLEY LLC**  
510 S NEIL ST  
CHAMPAIGN, IL 61820  
OFFICE PHONE (734) 216-2577

**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9383 • Colorado Springs 719-583-2593  
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION	No.	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				N/A	N/A	11/11/21	JRM	JRM	

SOLACE APARTMENTS FILING NO. 1  
GRADING AND EROSION CONTROL DETAILS

SHEET 11 OF 12  
JOB NO. 25174.00

