

# MEADOWBROOK DIRT BORROW SITE

COUNTY OF EL PASO, STATE OF COLORADO

## DIRT BORROW SITE - GRADING & EROSION CONTROL PLANS

CLAREMONT BUSINESS PARK  
FILING NO. 2  
RECEPTION NO. 207712506

EXISTING MEADOWBROOK PARKWAY

LOT 2  
PLAT BOSSBROOK WEST  
SUBDIVISION NO. 2

LOT 1  
PLAT BOSSBROOK WEST  
SUBDIVISION NO. 2

SITE

EXISTING U.S. HIGHWAY NO. 24

**SITE MAP**  
N.T.S.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER QUALITY CONTROL DIVISION  
WQCD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO SPRINGS.
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIME INCLUDING THE FOLLOWING:
  - 3.1 EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - 3.2 CITY OF COLORADO SPRINGS/EL PASO COUNTY ENGINEERING CRITERIA MANUAL VOLUMES 1 AND 2.
  - 3.3 COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
  - 3.4 CDOT M&S STANDARDS.
4. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ACCURACY SHOW EXISTING CONDITION BOTH ONSITE AND OFFSITE ON THE CONSTRUCTION PLANS. ANY MODIFICATION NECESSARY DUE TO CONFLICT OMISSIONS OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPERS RESPONSIBILITY TO RECTIFY.
5. ONCE THE ESOPH HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL BMPs AS INDICATED ON THE GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY PCD INSPECTIONS STAFF.
6. IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORM WATER QUALITY CONTROL PERMIT (ESQCP), US ARMY CORPS OF ENGINEER ISSUED 401 AND/OR 404 PERMITS AND STATE AND FEDERAL DUST PERMITS.
7. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE CONSTRUCTION SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
8. ANY TEMPORARY SIGNAGE AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DPW AND MUTCD CRITERIA.
9. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRE BY EL PASO COUNTY DPW INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
10. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFFSITE DISTURBANCE, GRADING, OR CONSTRUCTION.

STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

1. BASED ON USGS NGVD 29 VERTICAL DATUM MONUMENT R76  
ELEVATION = 6286.32'

AREAS	29.5 AC
TOTAL AREA OF THE SITE TO BE CLEARED, EXCAVATED OR GRADED:	
RECEIVING WATERS:	SAND CREEK

OWNER:	THE LANDHUIS COMPANY 212 N. WAHSATCH AVE. SUITE 301 COLORADO SPRINGS, CO 80903 JEFF MARK (719) 635-3200
CIVIL ENGINEER:	M & S CIVIL CONSULTANTS, INC. 20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ P.E. (719) 955-5485
ENGINEERING DIVISION:	EL PASO COUNTY DEVELOPMENT SERVICES 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 DANIEL TORRES (719) 520-6305
TRAFFIC ENGINEERING:	EL PASO COUNTY PUBLIC SERVICES & TRANS. DEPT. 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460
WATER RESOURCES:	COLORADO SPRINGS UTILITIES 1521 HANCOCK EXPRESSWAY COLORADO SPRINGS, CO 80903 JOE NOBLE, P.E. (719) 668-3556
	CHEROKEE METRO DISTRICT 6250 PALMER PARK BLVD. COLORADO SPRINGS, CO 80915 (719) 597-5080
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
ELECTRIC DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80920 SARAH LABARRE (719) 668-4933
COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

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 NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160  
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN

JEFF MARK, LANDHUIS COMPANY  
PRESIDENT

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.

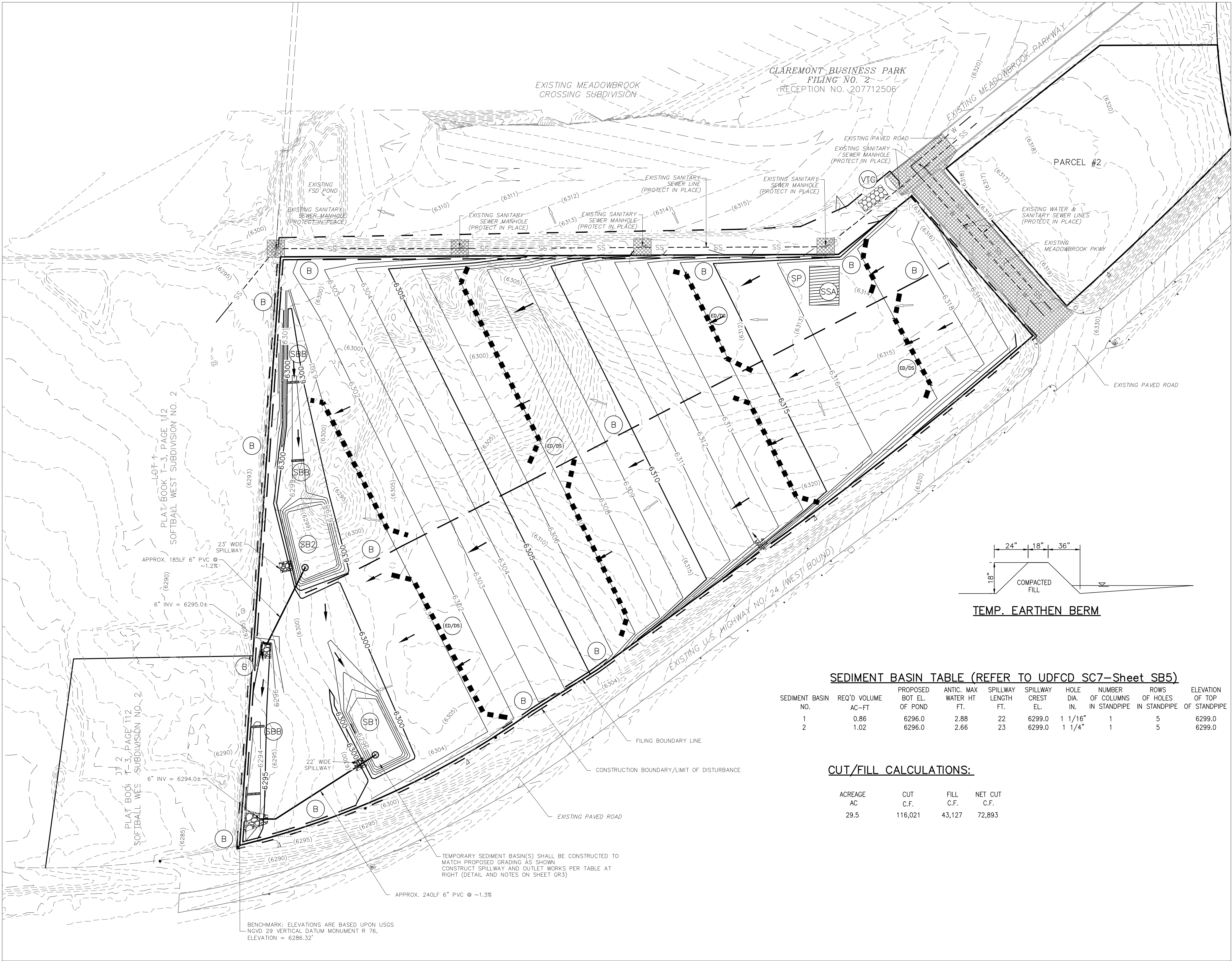
FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE  
DRAINAGE CRITERIA AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH EGM 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.

SHEET 1 TITLE SHEET  
SHEET 2 DIRT BORROW SITE GRADING PLAN  
SHEET 3 DIRT BORROW SITE GEC DETAILS

MEADOWBROOK DIRT BORROW SITE					
GRADING & EROSION CONTROL PLAN					
PROJECT NO. 43-089A		SCALE:		DATE: 10/23/2018	
		HORIZONTAL:			
DESIGNED BY: DLM		N/A			
DRAWN BY: SM		VERTICAL:			
CHECKED BY: JD		N/A			
20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.955.5485					
					
FOR AND ON BEHALF OF MRS. CIVIL CONSULTANTS, INC.					
					
YIRCIL A. SANCHEZ, COLORADO P.E. NO. 37160					
REVISIONS:					
NO.	DATE:	BY:	DESCRIPTION:	APPRO'D. BY:	DATE:
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR DEVIATIONS FROM THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARED OF THESE PLANS.					
CAUTION					





1" = 100'  
0 50 100 200  
Scale in Feet

**LEGEND**

- (6320)--- EXISTING MAJOR CONTOUR (5' INTERVAL)
- (6319)--- EXISTING MINOR CONTOUR (1' INTERVAL)
- - - - - EXISTING SANITARY SEWER LINE
- 6920--- PROPOSED MAJOR CONTOUR (5' INTERVAL)
- 6918--- PROPOSED MINOR CONTOUR (1' INTERVAL)
- FILING BOUNDARY LINE
- - - - - CONST BOUNDARY/LIMITS OF DISTURBANCE
- EXISTING VEGETATION (TREES/SHRUBS)
- x L.P./H.P. LOW POINT/HIGH POINT
- EXISTING FLOW DIRECTION ARROW
- FLOW DIRECTION & SLOPE
- FLOW DIRECTION ARROW/ EMERGENCY OVERFLOW
- REFRAIN FROM GRADING
- TEMPORARY RIP-RAP
- STRAW BALE DITCH CHECK
- EARTH BERM
- VEHICLE TRACKING CONTROL
- TEMPORARY SEDIMENT BASIN
- STOCK PILE STAGING
- STABILIZED STATION AREA
- EARTH DIKES & DRAINAGE SWALES

**SEDIMENT BASIN TABLE (REFER TO UDFCD SC7-Sheet SB5)**

SEDIMENT BASIN NO.	REQ'D VOLUME AC-FT	PROPOSED BOT EL. OF POND	ANTIC. MAX WATER HT. FT.	SPILLWAY LENGTH FT.	SPILLWAY CREST EL.	HOLE DIA. IN.	NUMBER OF COLUMNS IN STANDPIPE	ROWS OF HOLES IN STANDPIPE	ELEVATION OF TOP OF STANDPIPE
1	0.86	6296.0	2.88	22	6299.0	1 1/16"	1	5	6299.0
2	1.02	6296.0	2.66	23	6299.0	1 1/4"	1	5	6299.0

**CUT/FILL CALCULATIONS:**

ACREAGE AC	CUT C.F.	FILL C.F.	NET CUT C.F.
29.5	116,021	43,127	72,893

**ADDITIONAL NOTES:**

1. STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.
2. THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.
3. A FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED TO CONDUCT THE WORK SHOWN WITHIN THE 100 YEAR FLOODPLAIN.
4. PROPOSED SLOPES SHALL BE 4:1 OR LESS.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE GEOTECHNICAL ENGINEERING REPORT AND KEEP A COPY ONSITE DURING ALL EARTHWORK OPERATIONS.
6. THE CONTRACTOR SHALL PROVIDE SUFFICIENT BUFFER BETWEEN THE LIMITS OF DISTURBANCE AND AREAS IN WHICH NO GRADING SHALL OCCUR TO MAKE SUFFICIENT TIE IN BETWEEN THE PROPOSED GRADE AND EXISTING GRADE WHICH MAY NOT BE CLEARLY ILLUSTRATED ON THIS PLAN.

**STATEMENT:**  
THE CITY OF COLORADO SPRINGS  
RECOGNIZES THE DESIGN ENGINEER  
AS HAVING RESPONSIBILITY FOR  
THE DESIGN; THE CITY HAS  
LIMITED ITS SCOPE OF REVIEW  
ACCORDINGLY. RESUBMITTAL  
REQUIRED IF CONSTRUCTION HAS  
NOT COMMENCED WITHIN 180 DAYS  
AFTER APPROVAL DATE.

FOR LOCATING  
& MARKING  
GAS,  
ELECTRIC,  
WATER &  
TELEPHONE  
LINES  
  
FOR BURED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987

**MEADOWBROOK DIRT BORROW SITE**

**GRADING & EROSION CONTROL PLAN**

PROJECT NO. 43-089A  
DESIGNED BY: DLM  
DRAWN BY: SM  
CHECKED BY: JD

SCALE: 1"=50'  
HORIZONTAL:  
VERTICAL: N/A

DATE: 10/24/2018  
SHEET 2 OF 3  
GR2

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

CIVIL CONSULTANTS, INC.

FOR AND ON  
BEHALF OF  
M&S CIVIL  
CONSULTANTS,  
INC.

REGISTERED PROFESSIONAL ENGINEER  
37160

REVISIONS:

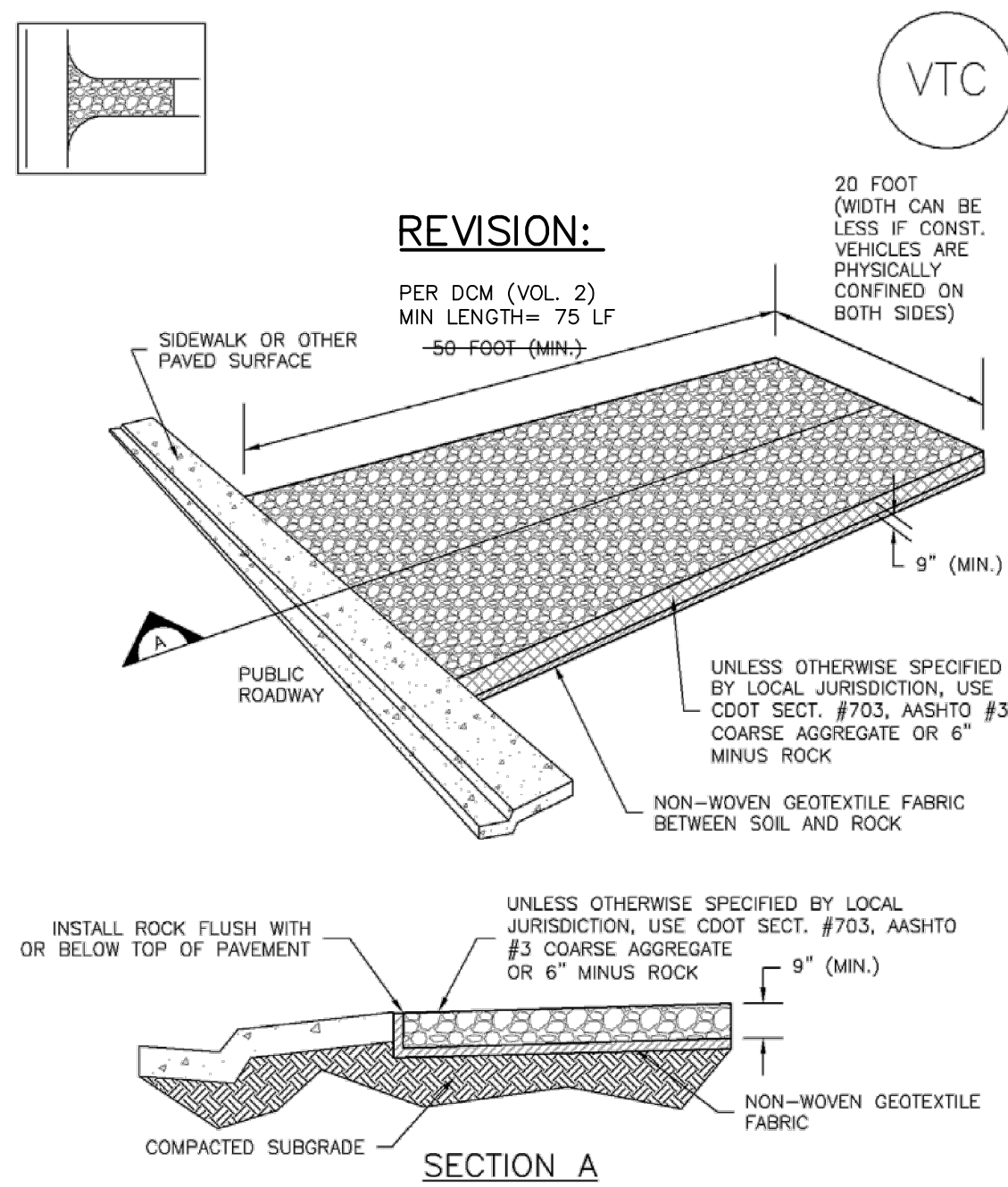
NO.	DATE	BY	DESCRIPTION

CAUTION



## Vehicle Tracking Control (VTC)

SM-4

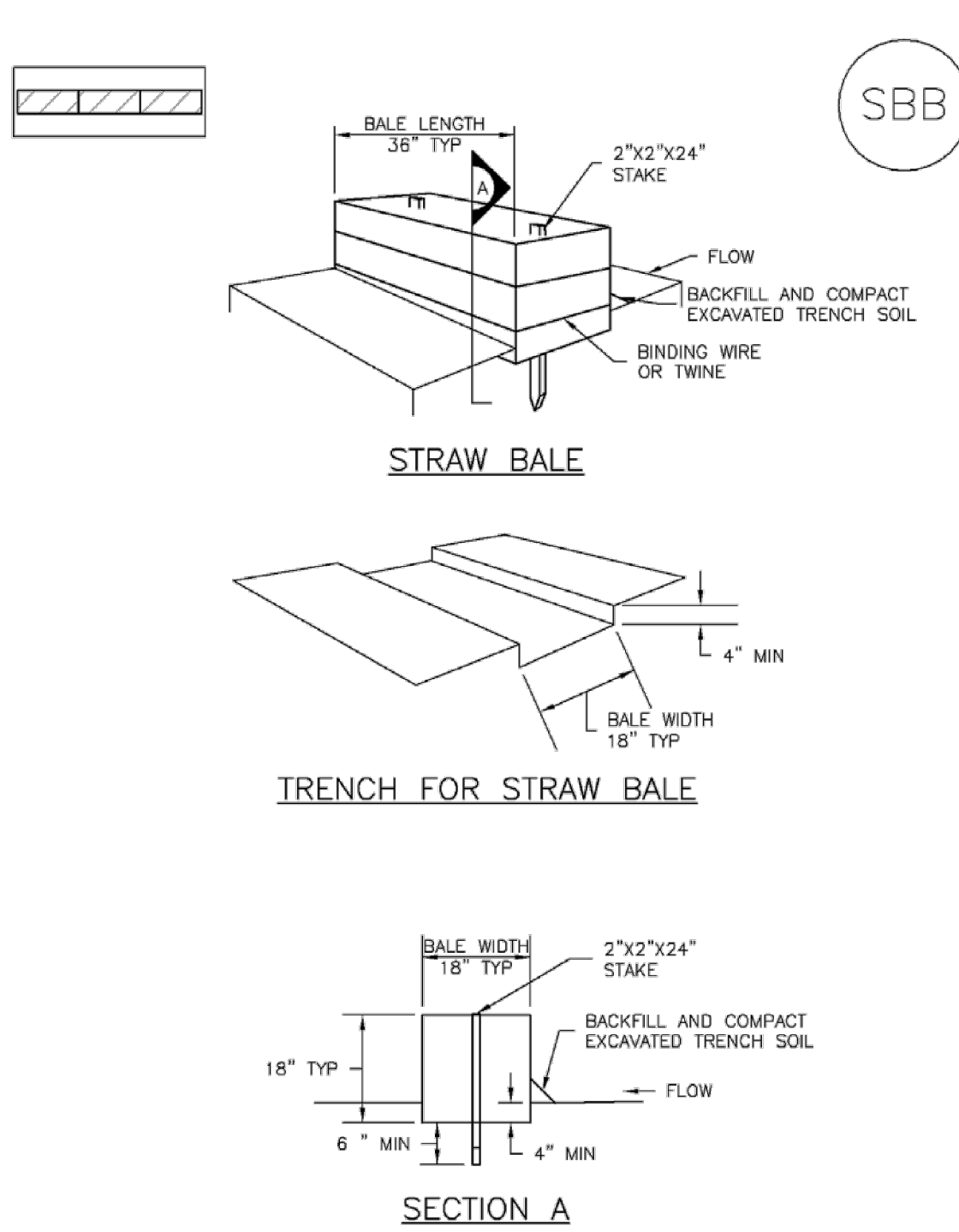


VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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

## SC-3

## Straw Bale Barrier (SBB)

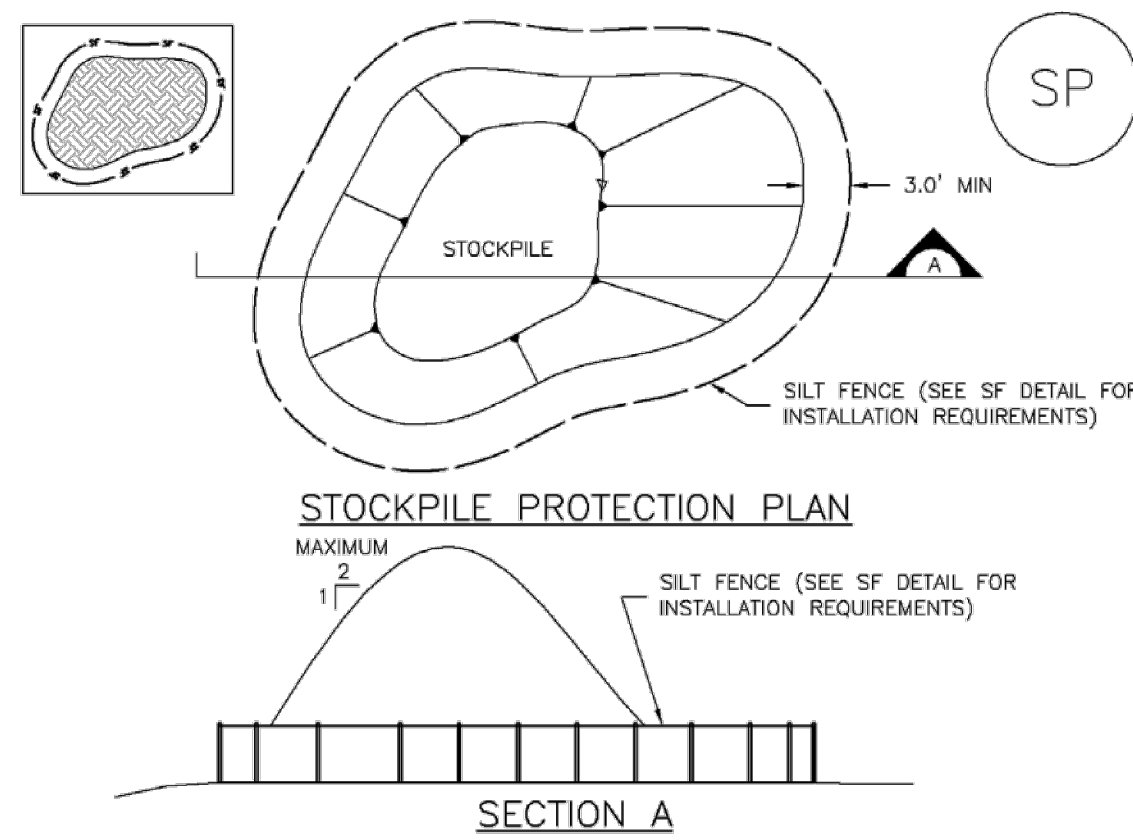


SBB-1. STRAW BALE

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

## Stockpile Management (SP)

MM-2



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

## SEEDING GUIDELINES:

- SEEDBED PREPARATION**
1. THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRIABLE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THEN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.
  2. **FERTILIZER**  
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAILABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIMING OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOLLOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.
  3. **SEEDING**  
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 3:3 (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD.
  4. **MULCHING**  
SEEDING AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE; PREVENT SURFACE COMPACTION OR CRUSTING; REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.
  5. **SUPPLEMENTAL WATER**  
IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.
- THE TIMING OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.

## EROSION CONTROL CRITERIA:

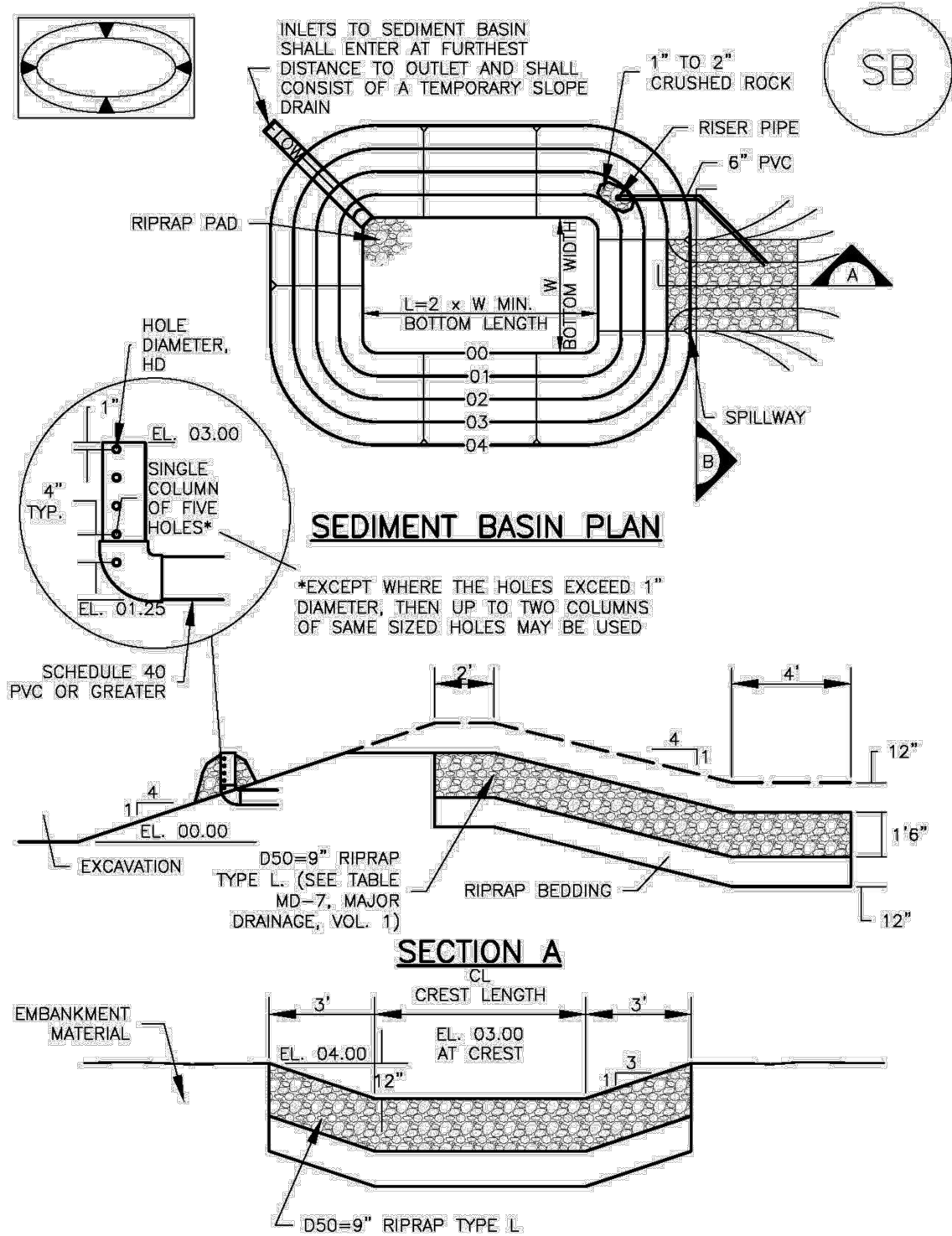
- EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
1. PRIOR TO START OF GRADING OPERATIONS, LOCATE AND SET THE SILT FENCE AND VEHICLE TRACKING CONTROL AS SHOWN ON THE EROSION CONTROL PLAN.
  2. THE SILT FENCE SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE SILT FENCES IS REQUIRED ONCE IT REACHES HALF THE HEIGHT OF THE SILT FENCES.
  3. EROSION CONTROL DEVICES SHOULD BE CHECKED AFTER EVERY STORM OR NOT MORE THAN EVERY 14 DAYS. REPAIRS OR REPLACEMENT SHOULD BE MADE AS NECESSARY TO MAINTAIN PROPER PROTECTION.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT THE FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

## NOTE:

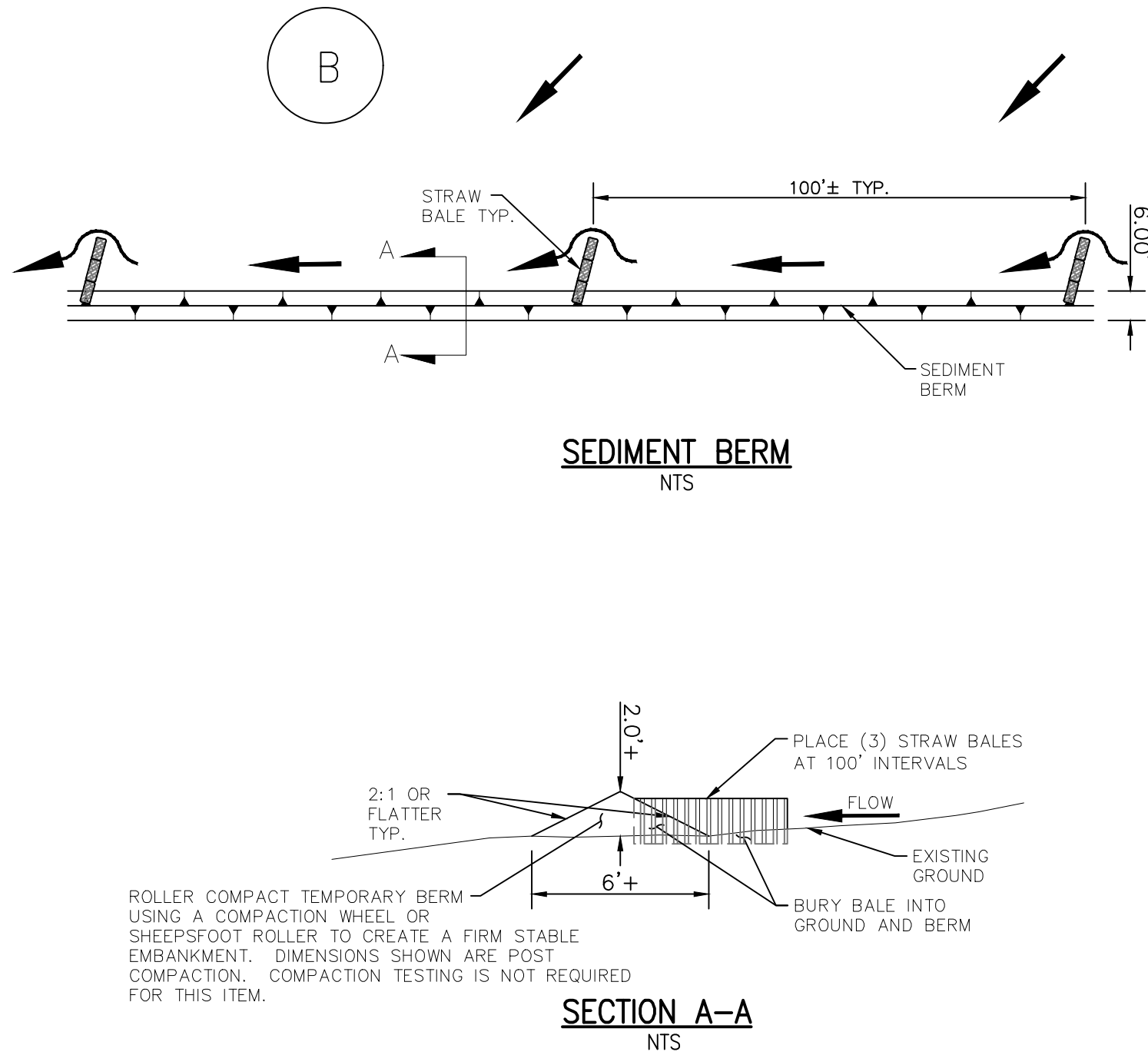
SEE URBAN DRAINAGE CRITERIA MANUAL (VOL. 3)  
FOR INSTALLATION AND MAINTENANCE (TYP)

## Sediment Basin (SB)

SC-7



August 2013 Urban Drainage and Flood Control District SB-5  
Urban Storm Drainage Criteria Manual Volume 3

EROSION PROTECTION & REVEGETATION REQUIREMENTS  
"PER U.S.D.A. SOIL CONSERVATION SERVICE GUIDELINES"

1. PRACTICE NO. & NAME \_\_\_\_\_ 342 - CRITICAL AREA TREATMENT

RANGE SITE \_\_\_\_\_ SANDY FOOTHILLS

2. PLANNED:

SEEDING PREP:

A METHOD \_\_\_\_\_

B DATES \_\_\_\_\_ OCT 15 - MAY 31

C CLEAN TILLED \_\_\_\_\_ XX

FIRM SEEDBED \_\_\_\_\_ XX

STUBBLE COVER \_\_\_\_\_

INTERSEED \_\_\_\_\_

OTHER \_\_\_\_\_

SEEDING OPERATION:

A METHOD: \_\_\_\_\_ XX

DRILL \_\_\_\_\_

INTERSEED \_\_\_\_\_ XX

BROADCAST \_\_\_\_\_

B DRILL SPACING \_\_\_\_\_ 6-12"

C TYPE \_\_\_\_\_ GRASS W/AGITATOR

C DATE \_\_\_\_\_ OCT 15 - MAY 31

D PLANTING DEPTH \_\_\_\_\_ 1/4 - 1/2"

FERTILIZER:

POUNDS ACTUAL PER ACRE N2 \_\_\_\_\_

(AVAILABLE) \_\_\_\_\_

P205 \_\_\_\_\_

K \_\_\_\_\_

WEED CONTROL: N/A

MOWING \_\_\_\_\_

CHEMICAL \_\_\_\_\_

DATES \_\_\_\_\_

SEE S.C.S. FOR SPECIFIC RECOMMENDATIONS AT HERBICIDE APPLICATION TIME.

MULCH:

KIND \_\_\_\_\_ LONG - STEM NATIVE HAY

AMOUNT \_\_\_\_\_ 4,000 POUNDS/ACRE

HOW APPLIED \_\_\_\_\_ N/A

HOW ANCHORED \_\_\_\_\_ CRIMPED

ANCHORAGE DEPTH \_\_\_\_\_ 4"

SEED:

VARIETY	SPECIES	REQUIRED PLS RATES PER ACRES (100%)
EL RENO	SIDEOTS GRAMMA	3.0
BARTON	WESTERN WHEATGRASS	2.5
NATIVE	SLENDER WHEATGRASS	2.0
PASTURA	LITTLE BLUESTEM	2.0
NATIVE	SAND DROPSSEED	0.5
NEBRASKA 28	SWITCH GRASS	3.0
MORPHA	WEEPING LOVE GRASS	1.0

(2)

% OF SPECIES IN MIXTURE

21

18

14

14

4

21

7

PLS SEEDING RATE PER SPECIES/ACRE

(1) X (2) = (3)

0.63

0.45

0.28

0.28

0.02

0.63

0.07

(4)

PLANNED ACRE

75.8

75.8

75.8

75.8

75.8

75.8

(5)

TOTAL PLS LBS/ (3) X (4)

46.8

34.11

21.2

21.2

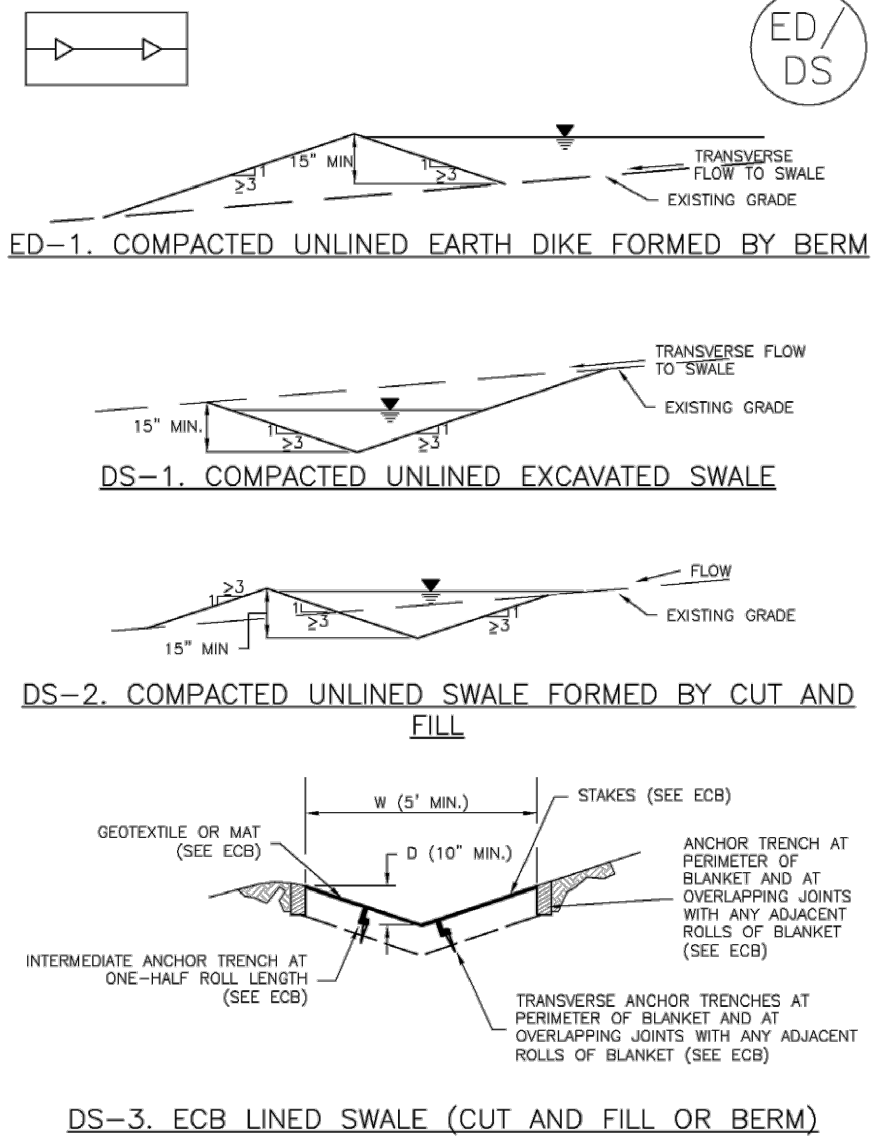
1.5

47.8

5.3

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

EC-10



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



MEADOWBROOK DIRT BORROW SITE

GRADING &amp; EROSION CONTROL DETAILS

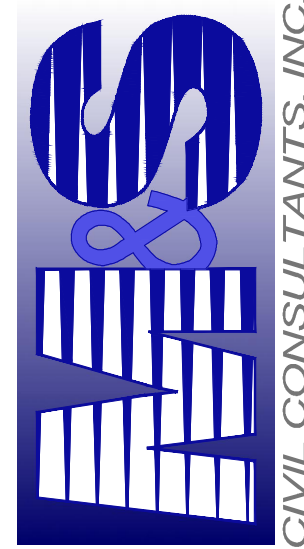
PROJECT NO. 43-089A DATE: 09/19/2018

SCALE: HORIZONTAL: N/A VERTICAL: N/A

DESIGNED BY: DLM DRAWN BY: SM CHECKED BY: JD

SHEET 3 OF 3 GR3

20 BOULDER CRESCENT SUITE 110  
COLORADO SPRINGS CO 80903  
PHONE: 719.555.5485



FOR AND ON  
BEHALF OF  
M&S CIVIL  
CONSULTANTS,  
INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160



REVISIONS: NO. DATE: BY: DESCRIPTION:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION