EROSION CONTROL AND STORMWATER QUALITY WINDERMERE

AGENCY CONTACTS

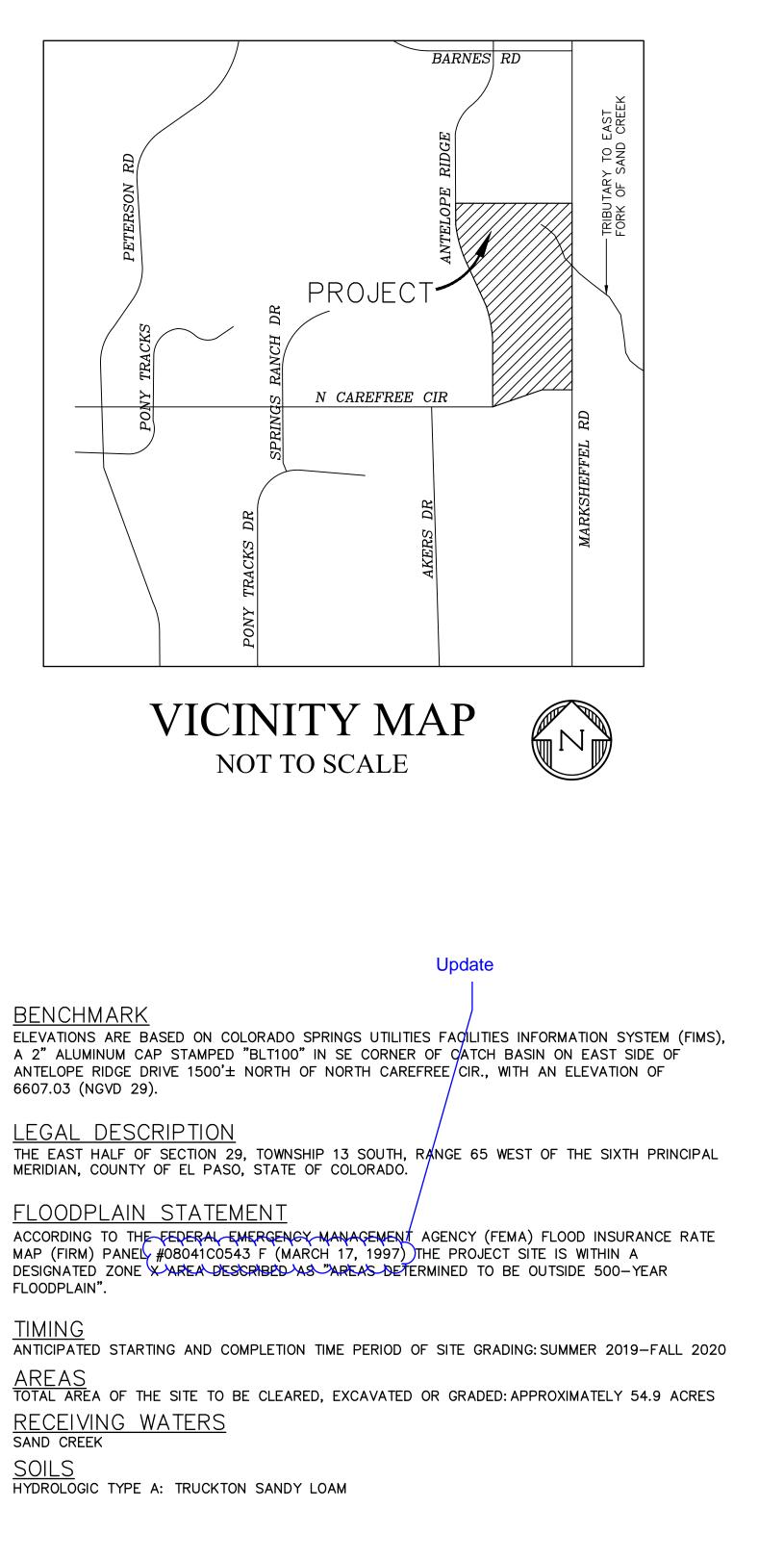
<u>COUNTY</u>	EL PASO COUNTY DEVELOPMENT SERVICES KARI PARSONS, PROJECT MANAGER/PLANNER II 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520–6300
<u>FIRE</u>	CIMARRON HILLS FIRE DEPARTMENT STEVE CONNER, FIRE CHIEF 1835 TUSKEGEE PL COLORADO SPRINGS, CO 80915 (719)591–0960
<u>WATER</u>	CHEROKEE METROPOLITAN DISTRICT JONATHON SMITH, SUPERINTENDENT OF WATER & WASTEWATER 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 (719) 597–5080
<u>WASTEWATER</u>	CHEROKEE METROPOLITAN DISTRICT JONATHON SMITH, SUPERINTENDENT OF WATER & WASTEWATER 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 (719) 597–5080
<u>ELECTRIC</u>	MOUNTAIN VIEW ELECTRIC ASSOCIATION LES ULFERS 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495–2283
<u>GAS</u>	COLORADO SPRINGS UTILITIES TODD STURTEVANT 1521 HANCOCK EXPRESSWAY COLORADO SPRINGS, CO 80947 (719) 668–3556
<u>TELEPHONE</u>	CENTURY LINK PATTY MOORE (719) 636–6096 (LOCATORS) (719) 597–8418 AT&T (LOCATORS) (719) 635–3674
<u>CABLE</u>	COMCAST DALE STEWART 213 N. UNION BLVD COLORADO SPRINGS, CO 80909

(719) 442-4733

Section 1 - Grading and Erosion Control BMPs	Quantity	Units			Price		Total	%	Remaining
Section 1 - Grading and Erosion Control BMPs	Quantity	Units			Price		IOCAI	Complete	
Earthwork*	140,000.00	CY	@	\$	3		420,000.00		\$ 420,000.00
Permanent Seeding* (inc. noxious weed mgmnt.)		AC	@	\$	582	=	\$ 0.00		\$ -
Mulching*		AC	@	\$	507	=	\$ 0.00		\$ -
Permanent Erosion Control Blanket*		SY	@	\$	6	=	\$ 0.00		\$ -
Temporary Erosion Control Blanket		SY	@	\$	3		\$ 0.00		\$ -
Vehicle Tracking Control	3.00	EA	@	\$	1626	=	\$ 4,878.00		\$ 4,878.00
Safety Fence		LF	@	\$	3	=	\$ 0.00		\$ -
Silt Fence	3,470.00	LF	@	\$	4	=	\$ 13,880.00		\$ 13,880.00
Temporary Seeding	52.00	AC	@	\$	485	=	\$ 25,220.00		\$ 25,220.00
Temporary Mulch	52.00	AC	@	\$	507	=	\$ 26,364.00		\$ 26,364.00
Erosion Bales	78.00	EA	@	\$	21	=	\$ 1,638.00		\$ 1,638.00
Erosion Logs		LF	@	\$	21	=	\$ 0.00		\$ -
Rock Ditch Checks		EA	@	\$	98	=	\$ 0.00		\$ -
Inlet Protection	3.00	EA	@	\$	153	=	\$ 459.00		\$ 459.00
Sediment Basin	3.00	EA	@	\$	1 <mark>62</mark> 5	=	\$ 4,875.00		\$ 4,875.00
Concrete Washout Basin	1.00	EA	@	\$	776	=	\$ 776.00		\$ 776.00
			@	\$		=	\$ 0.00		\$ -
* Subject to defect warranty financial assurance	e. DO NOT ENTER MORE								
THAN 80% COMPLETE. A minimum of 20% to be preliminary acceptance process	retained up to		Se	ctior	n 1 Subtota	=	\$ 498,090.00		\$ 498,090.00

ESIMATED COST OF TEMPORARY & PERMANENT BMPs INCLUDING INSTALLATION AND MAINTENANCE UNTIL FINAL STABILIZATION (FINAL & INTERIM STAGE)

E 1/2 OF SECTION 29,T13S, R65W OF THE 6TH P.M. EL PASO COUNTY, COLORADO



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	COLORA WATER WQCD-F 4300 CH DENVER, ATTN: F	() ,
<u>DE</u> :	<u>sign i</u>	

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO CRITERIA ESTABLISHED BY THE COUNTY FOR THE DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

TIM D. MCCONNELL P.E.# 33797

OWNER'S STATEMENT THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JAMES TODD STEPHENS

EL PASO COUNTY

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 THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

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

JENNIFER IRVINE, P.E. COUNTY ENGINEER

SHEET INDEX

OVER SHEET ROSION CONTROL AND STORMWATER QUALITY PLAN ROSION CONTROL DETAILS ROSION CONTROL DETAILS ROSION CONTROL DETAILS

ORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE IGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT D WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED PROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND NITY DEVELOPMENT DIRECTOR'S DISCRETION.

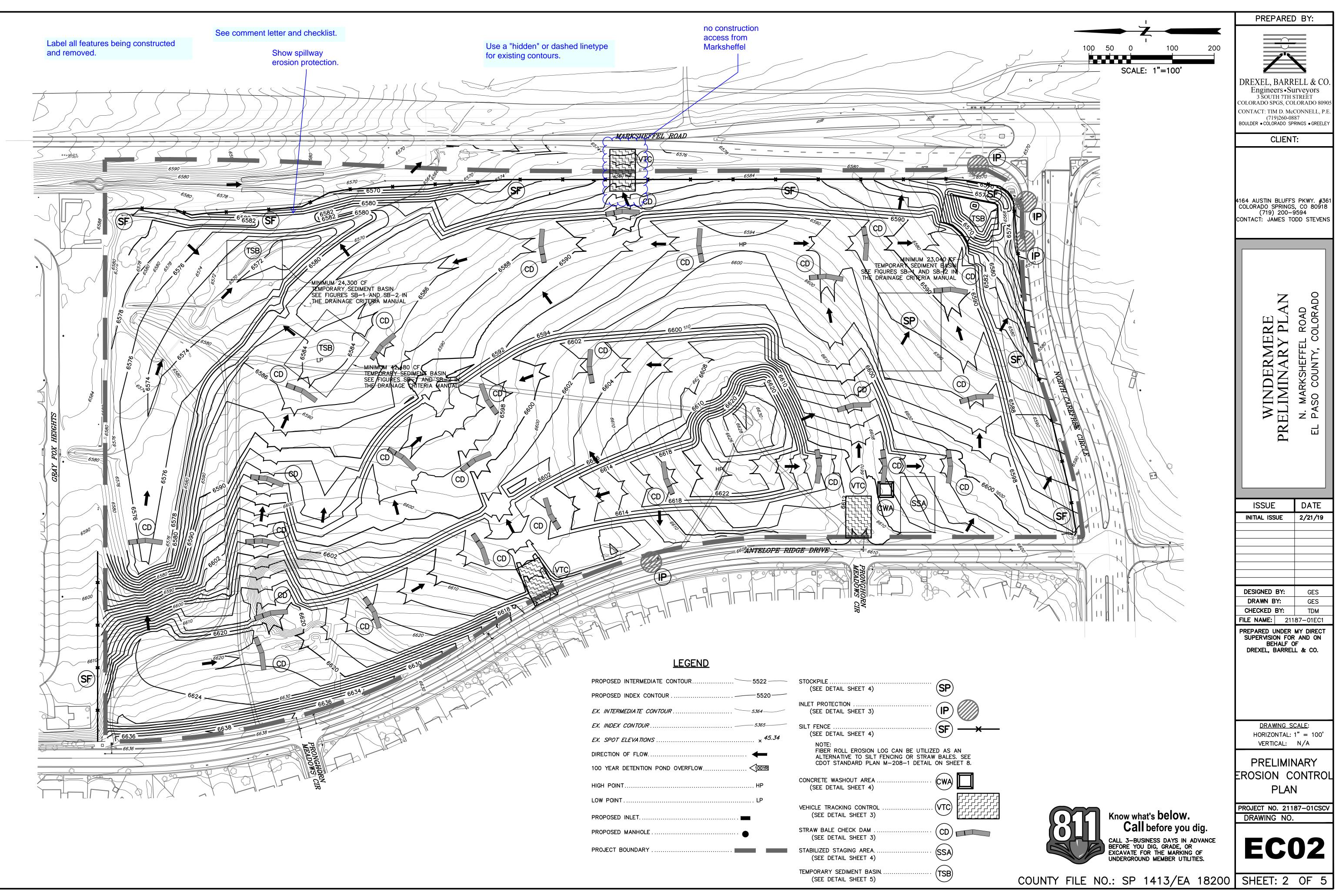
ST 10 DAYS PRIOR TO THE ANTICIPATED STASRT OF CNSTRUCTION, FOR TS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR VATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH IVIRONMENT, WATER QUALITY CONTROL DIVISION. THE APPLICATION NS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

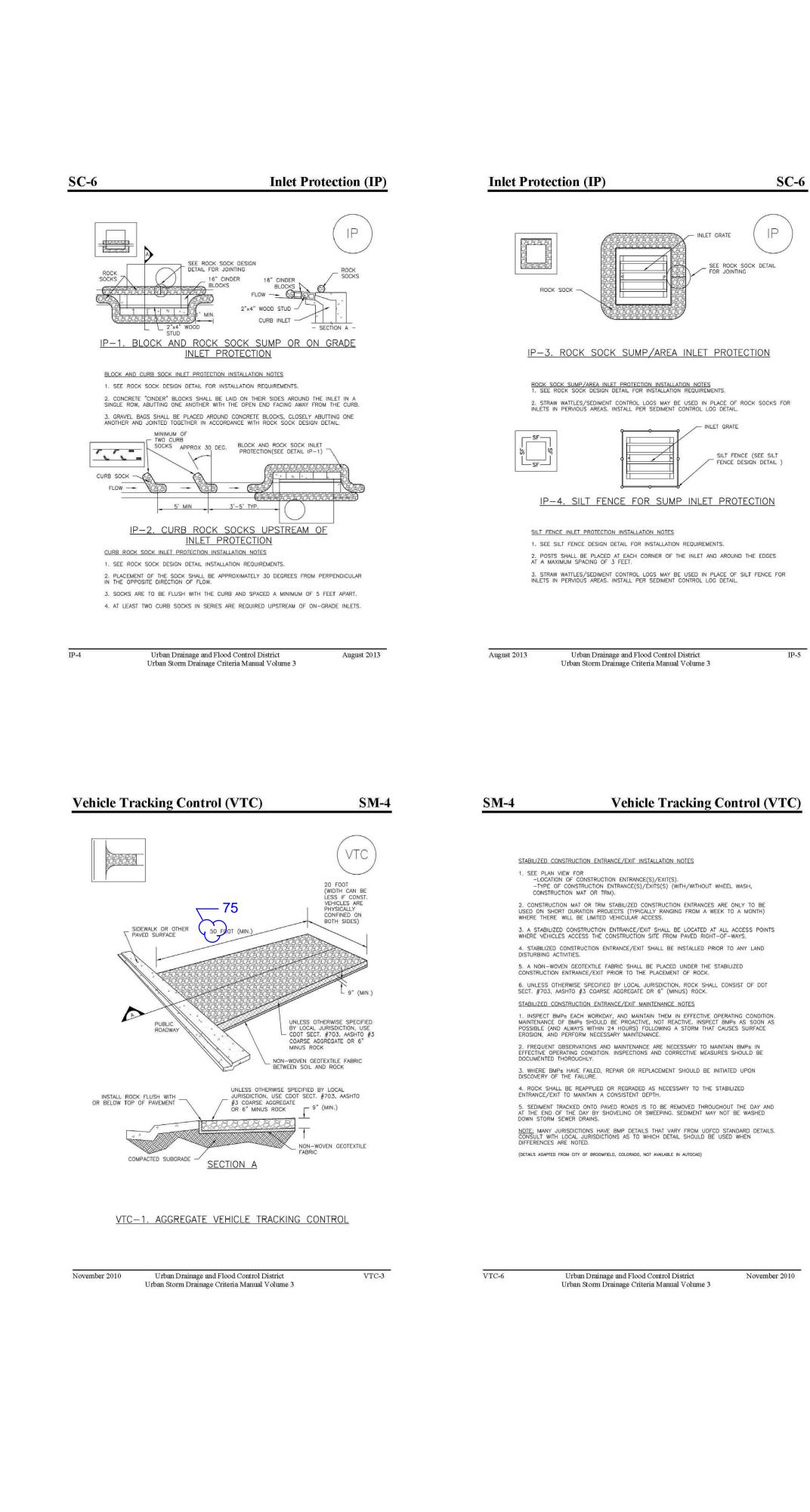
DO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT QUALITY CONTROL DIVISION PERMITS HERRY CREEK DRIVE SOUTH , CO 80246-1530 PERMITS UNIT

ENGINEER'S STATEMENT

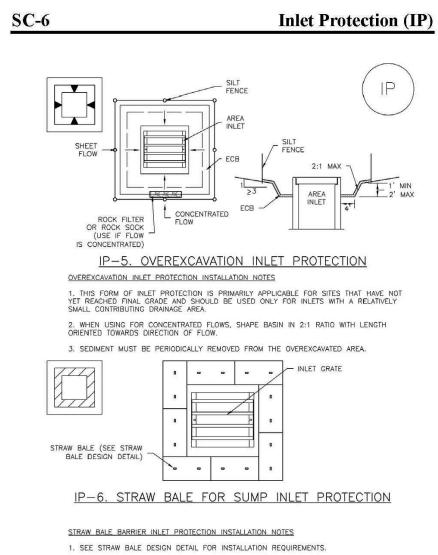
			DREXEL, BARR Engineers • Sta 3 SOUTH 7TH COLORADO SPGS, CC CONTACT: TIM D. MC (719)260-05 BOULDER • COLORADO SF CLIEN	UTVEYOTS STREET DLORADO 80905 CONNELL, P.E. 887 PRINGS • GREELEY
ATER QUALITY PLAN			164 AUSTIN BLUFF COLORADO SPRING (719) 200– CONTACT: JAMES TO	S, CO 80918 9594
 .12, THESE CONSTRUCTION DOCUMENTS OR A PERIOD OF 2 YEARS FROM THE TY ENGINEER. IF CONSTRUCTION HAS NOT E PLANS WILL NEED TO BE RESUBMITTED OF REVIEW FEES AT THE PLANNING AND DISCRETION. TICIPATED STASRT OF CNSTRUCTION, FOR COR MORE, THE OWNER OR OPERATOR L SUBMIT A PERMIT APPLICATION FOR ORADO DEPARTMENT OF PUBLIC HEALTH ONTROL DIVISION. THE APPLICATION ION OF A STORMWATER MANAGEMENT IG AND EROSION CONTROL PLAN MAY BE ICATION MATERIALS CONTACT: EALTH AND ENVIRONMENT 			WINDERMERE PRELIMINARY PLAN	N. MARKSHEFFEL ROAD EL PASO COUNTY, COLORADO
AS WERE PREPARED UNDER MY DIRECTION FICATIONS HAVE BEEN PREPARED THE COUNTY FOR THE DETAILED ON CONTROL PLANS AND SPECIFICATIONS, IN CONFORMITY WITH APPLICABLE ANSPORTATION PLANS. SAID PLANS AND WHICH THE PARTICULAR ROADWAY AND ARE CORRECT TO THE BEST OF MY ISIBILITY FOR ANY LIABILITY CAUSED BY INS ON MY PART IN PREPARATION OF IS.			ISSUE INITIAL ISSUE	DATE 2/21/19
DATE REMENTS OF THE GRADING AND EROSION			DESIGNED BY: DRAWN BY: CHECKED BY: FILE NAME: 2111 PREPARED UNDER SUPERVISION FOR BEHALF O DREXEL, BARRE	R AND ON OF
DATE				
OR GENERAL CONFORMANCE WITH NOT RESPONSIBLE FOR THE ACCURACY IS, AND/OR ELEVATIONS WHICH SHALL NTY THROUGH THE APPROVAL OF THIS OR THE COMPLETENESS AND/OR ENTS OF THE EL PASO COUNTY LAND			DRAWING S HORIZONTAL: VERTICAL:	N/A N/A
ANUAL, AND ENGINEERING CRITERIA			PROJECT NO. 211 DRAWING NO	
COUNTY FILE NO. SP 1	A13/FA	18200	SHEET: 1	OF 5

PREPARED BY:





SC-6



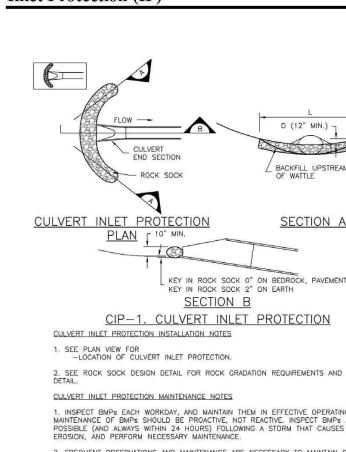


Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

August 2013

EC-12

CD-3



ng Control (VTC)	Check Dams (CD)	EC
	LENGTH, L	
OUT WHEEL WASH,	SECTION B (TYP.) D A	B
NCES ARE ONLY TO BE A WEEK TO A MONTH)		12
ED AT ALL ACCESS POINTS RIGHT-OF-WAYS.	COMPACTED BACKFILL, (TYP.) CHANNEL GRADE	
D PRIOR TO ANY LAND		OF CHECK DAM
THE STABILIZED CK.	CHECK DAM ELEVATION V	/IEW
SHALL CONSIST OF DOT K.		CHANNEL GRADE
IVE OPERATING CONDITION. SPECT BMPs AS SOON AS THAT CAUSES SURFACE	FLOW	
TO MAINTAIN BMP'S IN MEASURES SHOULD BE	D50 = 12" RIPRAP, TYPE M OR TYPE L D50= 9" (SEE TABLE MD-7, MAJOR DRAINAGE, VOL. 1	
BE INITIATED UPON	FOR GRADATION) SECTION A	
THE STABILIZED	8	
HROUGHOUT THE DAY AND MAY NOT BE WASHED		CHANNEL GRADE — CAVATION TO NEAT IE, AVOID OVER-EXCAVATION
UDFCD STANDARD DETAILS. D BE USED WHEN		(P.)
	GRADATION) <u>SECTION B</u>	
	SPACING BETWEEN CHECK DAMS SU	CH THAT ON B ^I

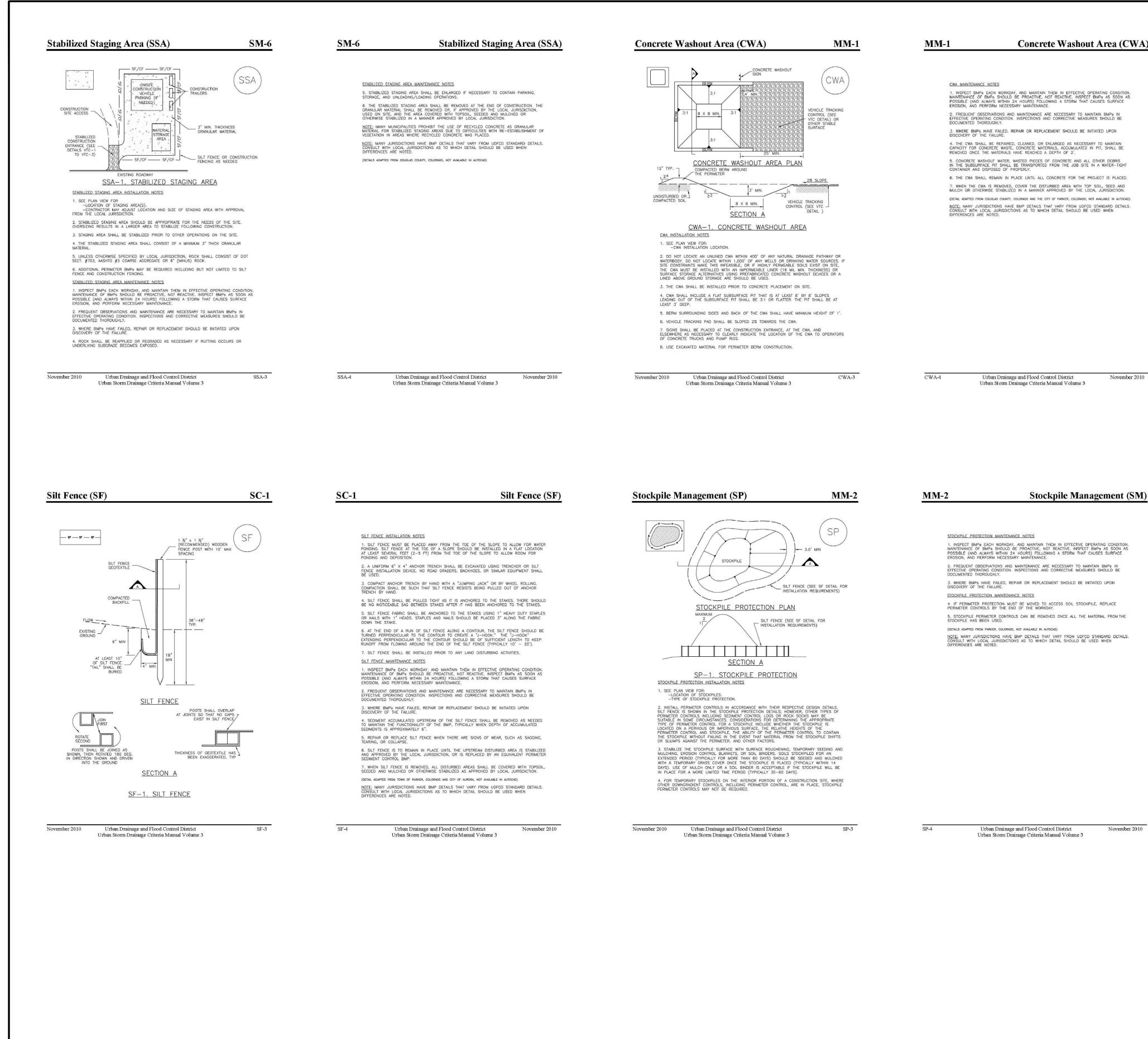
				PREPARED BY:
Inlet Protection (IP)	<u>SC-6</u>	<u>SC-6</u>	Inlet Protection (IP)	DREXEL, BARRELL & CO. Engineers • Surveyors 3 SOUTH 7TH STREET COLORADO SPGS, COLORADO 80905 CONTACT: TIM D. McCONNELL, P.E. (719)260-0887 BOULDER • COLORADO SPRINGS • GREELEY CLIENT:
CULVERT INLET PROTECTION PLAN 10° MIN. EVEN NOCK SOCK 0° ON BEDROCK, PAVEMENT KEY IN ROCK SOCK 0° ON BEDROCK, PAVEMENT SECTION P	CIP CIP ROCK SOCK	IS COMPLETE (TYPICALLY WITHIN 48 HOURS INSTALL INLET PROTECTION PRIOR TO ONSE 3. MANY JURISDICTIONS HAVE BMP DETAILS CONSULT WITH LOCAL JURISDICTIONS AS TO DIFFERENCES ARE NOTED. INLET PROTECTION MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAI MAINTENANCE OF BMPs SHOULD BE PROAC POSSIBLE (AND ALWAYS WITHIN 24 HOURS) EROSION, AND PERFORM NECESSARY MAINT 2. FREQUENT OBSERVATIONS AND MAINTENA EFFECTIVE OPERATING CONDITION. INSPECTIC DOCUMENTED THOROUGHLY. 3. WHERE BMPs HAVE FAILED, REPAIR OR I DISCOVERY OF THE FAILURE.	22, IP.3, IP.4, IP.5, IP.6) PROMPTLY AFTER INLET CONSTRUCTION OR PAVING). IF A RAINFALL/RUNOFF EVENT IS FORECAST, T OF EVENT. THAT VARY FROM UDFCD STANDARD DETAILS. WHICH DETAIL SHOULD BE USED WHEN INTAIN THEM IN EFFECTIVE OPERATING CONDITION. TIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS FOLLOWING A STORM THAT CAUSES SURFACE ENANCE. NCC ARE NECESSARY TO MAINTAIN BMPs IN DNS AND CORRECTIVE MEASURES SHOULD BE REPLACEMENT SHOULD BE INITIATED UPON INLET PROTECTION SHALL BE REMOVED AS	4164 AUSTIN BLUFFS PKWY. #361 COLORADO SPRINGS, CO 80918 (719) 200–9594 CONTACT: JAMES TODD STEVENS
 SECTION B CID-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 A DETAIL. CULVERT INLET PROTECTION MAINTENANCE NOTES INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING MAINTENANCE OF BMPs SHOULD BE PROACTIVE, INOT REACTIVE, INSPECT BMPs A POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES EROSION, AND PERFORM NECESSARY MAINTENANCE. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BH EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHO DOCUMENTED THOROUGHLY. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UDSCOVERY OF THE FAILURE. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WH SEDIMENT DEPTH IS ½ THE HEIGHT OF THE ROCK SOCK. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DE THE ALGAL STREMMENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION. (DETAILS ADAPTED FROM AURORA, CUCARDA, NOT AVAILABLE IN AUTOCAD) MOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDA CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHICH DETAIL SH	CONDITION. S SOON AS SURFACE IPS IN JLD BE PON EN THE STURBED RD DETAILS.	50% OF CAPACITY, A DEPTH OF 6" WHEN S STRAW BALES. 5. INLET PROTECTION IS TO REMAIN IN PLA PERMANENTLY STABILIZED, UNLESS THE LOC INLET PROTECTION IN STREETS. 6. WHEN INLET PROTECTION AT AREA INLET COVERED WITH TOP SOIL, SEEDED AND MUL APPROVED BY THE LOCAL JURISDICTION. (DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AN NOTE: MANY JURISDICTIONS HAVE BMP DETJ CONSULT WITH LOCAL JURISDICTIONS AS TO DIFFERENCES ARE NOTED. NOTE: THE DETAILS INCLUDED WITH THIS FA METHODS OF INLET PROTECTION METHODS AS DISCOURAGES USE OF PROPRIETARY INLET PROPRIETARY INLET PROTECTION METHODS DISCOURAGES USE OF PROPRIETARY INLET PROPRIETARY METHODS ARE USED, THE APP BE INCLUDED IN THE SWAP AND THE BMP IN THE MANUFACTURER'S DETAILS.	ACT SHEET SHOW COMMONLY USED, CONVENTIONAL NVER METROPOLITAN AREA. THERE ARE MANY ON THE MARKET. UDFOD NEITHER ENDORSES NOR PROTECTION; HOWEVER, IN THE EVENT PROPRIATE DETAIL FROM THE MANUFACTURER MUST MUST BE INSTALLED AND MAINTAINED AS SHOWN R PROHIBIT THE USE OF STRAW BALES FOR INLET	DERMERE INARY PLAN RKSHEFFEL ROAD COUNTY, COLORADO
August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 EC-12 Check D	IP-7 Ams (CD)	IP-8 Urban Drainage and Floo Urban Storm Drainage Cr		PRELIN N. MA
 CHECK DAM INSTALLATION NOTES 1. SEE PLAN YEW FOR: CHECK DAM TYPE (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 SWAP SHALL BE INSTALLED AFTER CONSTRUINED. THENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING AGTIVITIES. 3. RIPRAP JUTUZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR TH APPLICATION. TYPEAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (IO OR TYPE L (DSO 9'). 4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'. 5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN OF THE CHECK DAM. CHECK DAM MAINTENANCE NOTES 1. INSPECT BWPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING A MONIMUM AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BWP EFFECTIVE OPERATIONS AND DERFORM NECESSARY MAINTENANCE. 3. WHERE BMPB HAVE FAILED, REPAR OR REPLACEMENT SHOULD BE INITIATED UP DISCOVERY OF THE FAILURE. 4. SEDMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED SEDMENT DEPTH IS WITHIN ½ OF THE HEIGHT OF THE CREST. 5. CHECK DAMA ARE TO REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUTHAIN DUPETH IS WITHIN ½ OF THE HEIGHT OF THE CREST. 6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUTHAIN DUPETH IS WITHIN ½ OF THE HEIGHT OF THE CREST. 6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUTHAIN DUPED THAN DURAGE DAMD AND ALL BED AND APPROPRED BY THE LOCAL JUR DOCUMENTED. 6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUTHAI COMPACTED BACKFILL DISTURBED AREA SHOULD DE SEDMENT DEPTH IS WITHIN ½ OF THE HEIGHT OF THE CREST. 6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUTHAICOME DAM DAMEREA APPROVED BY THE LOCAL JUR DOMEACTION. 	ICTION E 50 12") THE CENTER CONDITION. SOON AS RFACE S IN D BE DN WHEN THE IS LE VERED WITH RISDICTION. D DETAILS.			ISSUE DATE INITIAL ISSUE 2/21/19 INITIAL ISSUE SBN INITIAL ISSUE SBN DESIGNED BY: SBN DRAWN BY: SBN CHECKED BY: TDM FILE NAME: 21187-01ECDT PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF DREXEL, BARRELL & CO.
CD-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2010		Know what's below. Call before you di CALL 2-BUSINESS DAYS IN ADV BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OI UNDERGROUND MEMBER UTILITIES	
		COUNTY FILE	E NO.: SP 1413/EA 18	

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

PROFILE

CD-1. CHECK DAM

CHANNEL GRADE -----



TEMPORARY SEEDING NOTES

1. SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER OR LIME. 2. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENED.

3. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1 AND 1 INCH FOR SLOPES STEEPER THAN 2:1.

4. ANNUAL GRASSES LISTED IN THE TABLE BELOW 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.

5. THE TABLE BELOW ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.

6. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED. 7. ALL SEEDED AREAS ARE TO BE MULCHED.

8. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

MULCHING NOTES

INSTALLATION REQUIREMENTS

1. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED-AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.

2. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL.

3. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.

4. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES) OR WITH A TACKIFIER. 5. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.

2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

SEEDING PLAN

NATIVE SEEDING MIX

SOIL PREPARATION, FERTILIZER, SEEDING, MULCHING AND MULCH TACKIFIER WILL BE REQUIRED FOR DISTURBED AREAS EXCLUDING THE RIGHT-OF-WAYS.

THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME	SCIENTIFIC NAME	LBS PLS/ACRE
SAND BLUESTEM V. ELIDA WESTERN WHEATGRASS V. ARRIBA SIDEOATS GRAMA V. VAUGHN GALLETA V. VIVA (CARYOPSIS) LITTLE BLUESTEM V. PASTURA PRARIE SANDREED V. GASHEN SWITCHGRASS V. NEBR 28 BLANKETFLOWER PRARIE CONEFLOWER BLUE FLAX OATS WINTER WHEAT	ANDROPOGON HALLII PASCOPYRUM SMITHII BOUTELOUA CURTIPENDULA HILARIA JAMESII SCHIZACHYRIUM SCOPARIUM CALAMOVILFA LONGIFOLIA PANICUM VIRGATUM GAILLARDIA ARISTATA RATIBIDA COLUMINIFERA LINUM LEWISII AVENA SATIVA TRITICUM AESTIVUM	2.0 7.0 4.0 1.0 3.0 2.0 1.0 1.0 0.5 1.0 3.0 3.0
TOTAL/POUNDS/ACRE		28.5

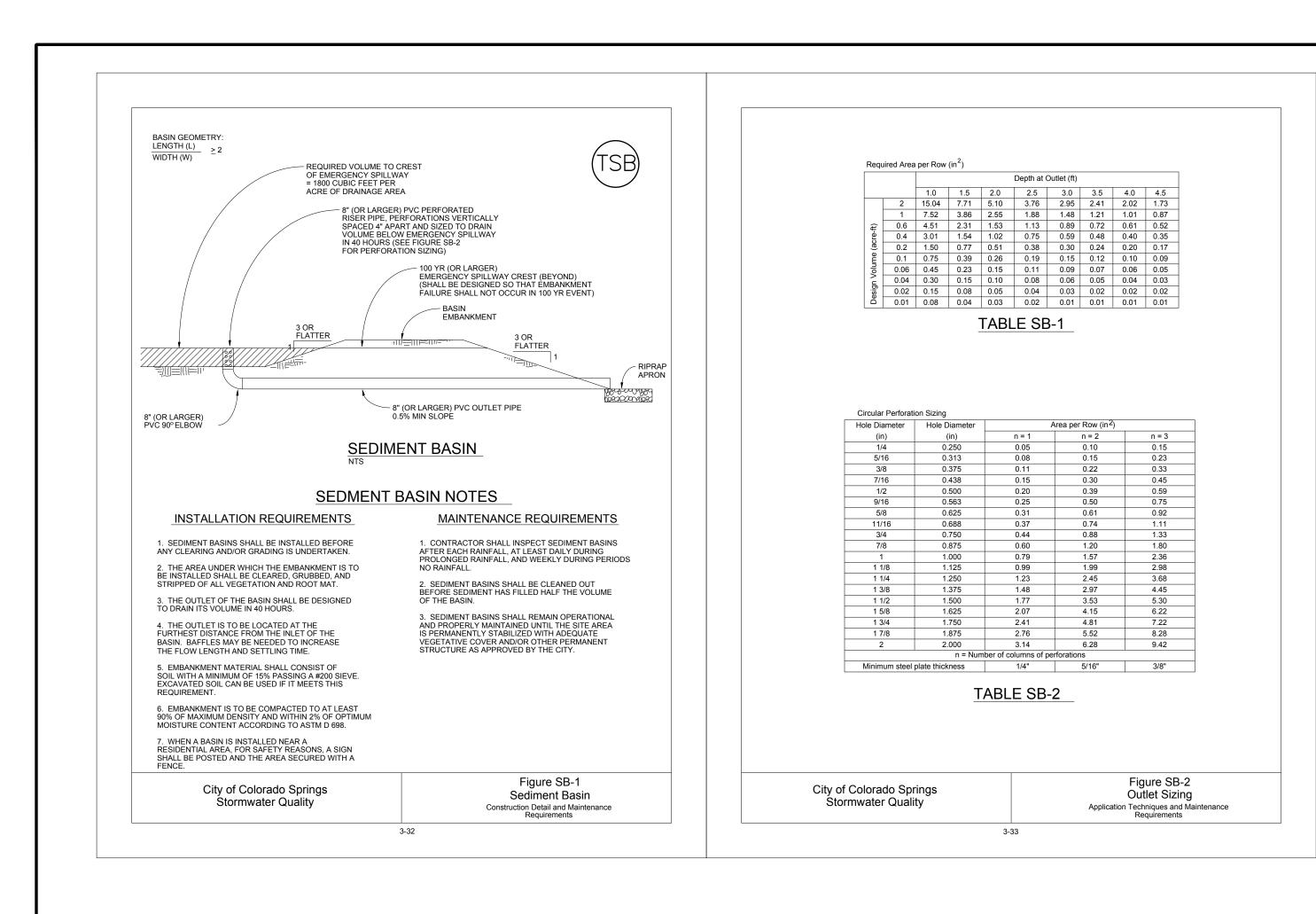
FERTILIZER	RATE PER ACRE
NITROGEN	27
PHOSPHORUS (P205)	69

SEEDING APPLICATION: DRILL SEED 0.25"-0.5" INTO TOPSOIL. AREA NOT ACCESSIBLE TO A DRILL SEEDER AND SLOPES STEEPER THAN 2:1 SHALL BE HAND BROADCAST AT DOUBLE THE ABOVE SEED RATE AND RAKED AT 1/4 TO 1/2 INTO THE TOPSOIL.

MULCHING APPLICATION: 1 1/2 TONS CERTIFIED WEED FREE NATIVE HAY PER ACRE MECHANICALLY CRIMED IN TOPSOIL IN COMBINATION WITH AN ORGANIC MULCH TACKIFIER.



			PREPAREI	D BY:
BE TILLED IMMEDIATELY PRI OOSENED. PTH IS TO BE 4 INCHES FO 2:1.	T GROWTH BY APPLYING TOPSOIL, I OR TO APPLYING SEEDS. COMPAC OR SLOPES FLATTER THAN 2:1 ANI	T SOILS ESPECIALLY D 1 INCH FOR SLOPES	DREXEL, BARR Engineers • Su 3 SOUTH 7TH 3 COLORADO SPGS, CO CONTACT: TIM D. Mc (719)260-08 BOULDER • COLORADO SP CLIEN	LIVEYOIS STREET DORADO 80905 CONNELL, P.E. 887 PRINGS • GREELEY
E NOT TO CONTAIN ANY N	E BELOW ARE TO BE USED FOR TE OXIOUS WEED SEEDS INCLUDING RU , EUROPEAN BINDWEED, JOHNSON	ISSIAN OR CANADIAN		
	QUIREMENTS FOR SEEDING RATES, S PES OF ANNUAL GRASSES.	SEEDING DATES, AND		
TO BE APPLIED USING MEC LIMITED THEN HYDRAULIC S	HANICAL TYPE DRILLS EXCEPT WHE SEEDING MAY BE USED.	RE SLOPES ARE STEEP	4164 AUSTIN BLUFFS COLORADO SPRINGS	S PKWY. # 361 5. CO 80918
AREAS ARE TO BE MULCH C SEEDING IS USED THEN	ED. HYDRAULIC MULCHING SHALL BE DO	ONE SEPARATELY TO	(719) 200–9 CONTACT: JAMES TO	9594
ECOMING ENCAPSULATED IN				
<u>NOTES</u> N REQUIREMENTS				
ED FOR MULCH CAN BE C H HAY, OR STRAW OF OAT ARTMENT OF AGRICULTURE	ERTIFIED CLEAN, WEED-AND SEED- S, BARLEY, WHEAT, RYE, OR TRITIC WEED FREE FORAGE CERTIFICATION	CALE CERTIFIED BY THE I PROGRAM.	AN	4D RADO
VOOD CHIPS. WOOD CHIPS BE PRODUCED FROM RECYC	CONSIST OF VIRGIN WOOD FIBER M CANNOT CONTAIN ANY GROWTH C CLED MATERIAL. A RATE OF 2 TONS PER ACRE.		IERE Y PL	EL ROAD COLORADO
TTING (USED ON SMALL A	CRIMPING (TUCKING MULCH FIBER REAS WITH STEEP SLOPES) OR WIT ARE NOT TO BE USED IN THE PRE	H A TACKIFIER.	DERM	MARKSHEFFEL SO COUNTY, C
CE REQUIREMENTS SPECTIONS ARE TO BE MA	DE OF ALL MULCHED AREAS.			• •
) BE REPLACED IMMEDIATE E AREA SHOULD BE RESEE	ELY IN THOSE AREAS IT HAS BEEN EDED.	I REMOVED, AND IF	SEL W	L PA.
			bl Id	
LAN				
NG MIX				
	NING, MULCHING AND MULCH TA CLUDING THE RIGHT-OF-WAYS. HALL BE USED:		ISSUE INITIAL ISSUE	DATE 2/21/19
AME	SCIENTIFIC NAME	LBS PLS/ACRE		
STEM V. ELIDA HEATGRASS V. ARRIBA RAMA V. VAUGHN VIVA (CARYOPSIS) STEM V. PASTURA	ANDROPOGON HALLII PASCOPYRUM SMITHII BOUTELOUA CURTIPENDULA HILARIA JAMESII SCHIZACHYRIUM SCOPARIUM	2.0 7.0 4.0 1.0 3.0 2.0		
DREED V. GASHEN S V. NEBR 28 WER	CALAMOVILFA LONGIFOLIA PANICUM VIRGATUM GAILLARDIA ARISTATA	1.0 1.0 0.5	DESIGNED BY: DRAWN BY: CHECKED BY:	SBN SBN TDM
EFLOWER	RATIBIDA COLUMINIFERA LINUM LEWISII AVENA SATIVA	1.0 3.0 3.0		87-01ECDT
AT NDS/ACRE	TRITICUM AESTIVUM	28.5	SUPERVISION FOR BEHALF (DREXEL, BARREL	R AND ON DF
RATE PER	ACRE			
S (P205) 27 69				
EEDER AND SLOPES ST	.25"–0.5" INTO TOPSOIL. AREA EEPER THAN 2:1 SHALL BE HA RAKED AT 1/4 TO 1/2 INTO	ND BROADCAST AT	DRAWING S HORIZONTAL: VERTICAL:	
	CERTIFIED WEED FREE NATIVE COMBINATION WITH AN ORGAI		EROSI CONTR DETAI	ROL
			PROJECT NO. 211 DRAWING NO.	
Know what's below Call before ye			EC	
CALL 2-BUSINESS DAYS BEFORE YOU DIG, GRADE, EXCAVATE FOR THE MARK	IN ADVANCE OR KING OF			
	TYTESFILE NO.: SP	1413/EA 18200	SHEET: 4	OF 5



PREPARED) BY:
DREXEL, BARR Engineers • Su 3 SOUTH 7TH S COLORADO SPGS, COI CONTACT: TIM D. McC (719)260-08 BOULDER • COLORADO SPI CLIENT	ITVEYOTS STREET LORADO 80905 CONNELL, P.E. 87 RINGS • GREELEY
4164 AUSTIN BLUFFS COLORADO SPRINGS (719) 200–9 CONTACT: JAMES TC	, CO 80918 9594
WINDERMERE PRELIMINARY PLAN	N. MARKSHEFFEL ROAD EL PASO COUNTY, COLORADO
ISSUE	DATE
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