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THIS IS AN OVERLOT GRADING AND EROSION CONTROL PLAN ONLY. THIS PLAN DOES NOT REFLECT DETAILED/FINE GRADING ELEMENTS THAT WILL BE PART OF FINAL CONSTRUCTION DOCUMENTS FOR SITE DEVELOPMENT, PAVING OPERATIONS, PLACEMENT OF CURB & GUTTER, AND LANDSCAPING. BUILDING AND PARKING LOT LOCATIONS ARE PROVIDED FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.

The title and contents of this plan appear to be Final Grading and Erosion Control Plan in lieu of overlol grading. Please remove or revise this note.

Note has been revised

# TRAILS AT ASPEN RIDGE FILING NO. 2

COLORADO SPRINGS, COLORADO

## FINAL GRADING & EROSION CONTROL PLANS

NOVEMBER, 2019

OWNER'S STATEMENT:

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

RANDY O'LEARY, PRESIDENT \_\_\_\_\_ DATE \_\_\_\_\_

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 REPORT.

NICOLE SCHANEL, PE #52434 \_\_\_\_\_ DATE \_\_\_\_\_

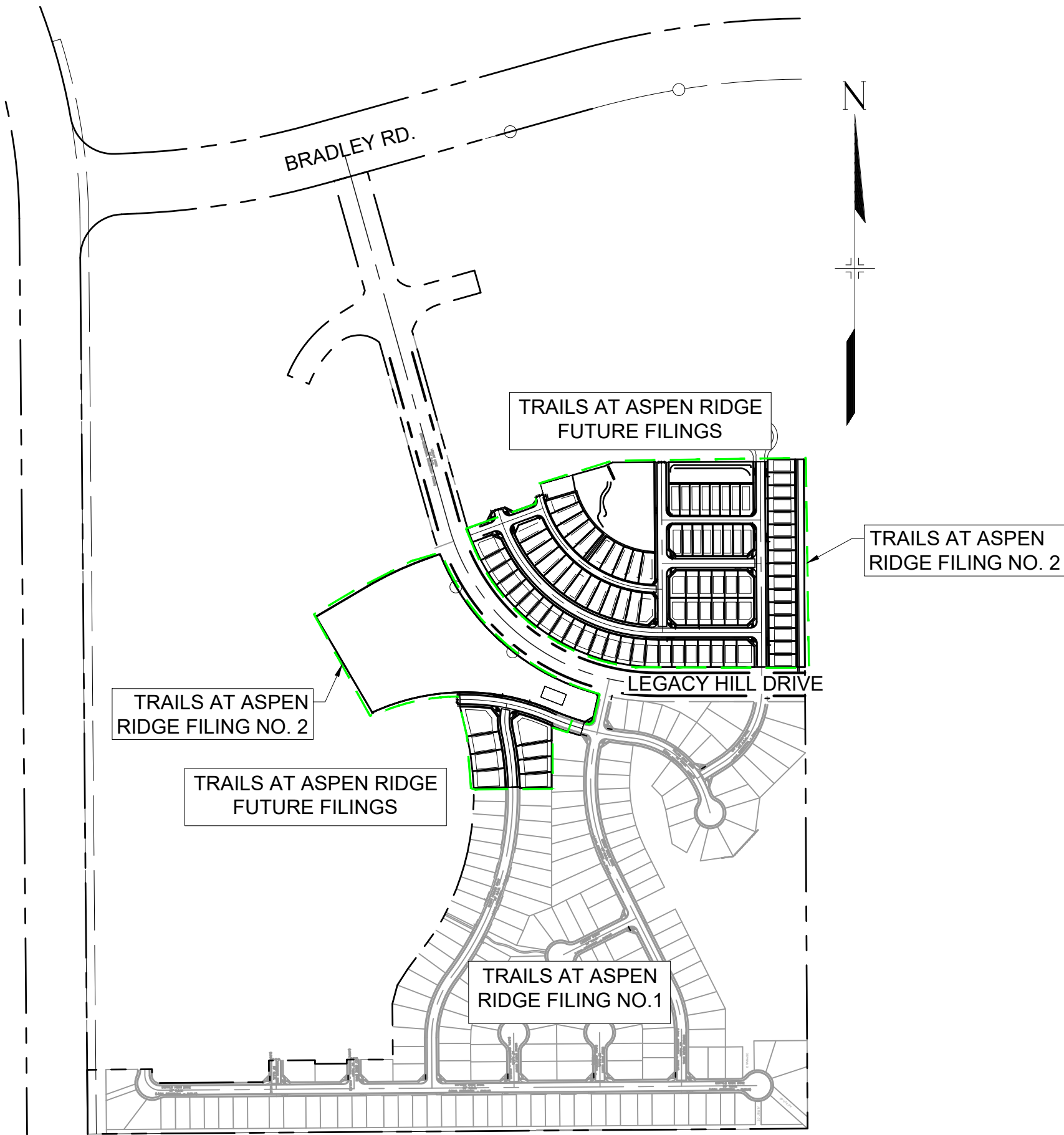
EL PASO COUNTY:

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 COMPLETENESS AND/ OR ACCURACY OF THIS DOCUMENT.

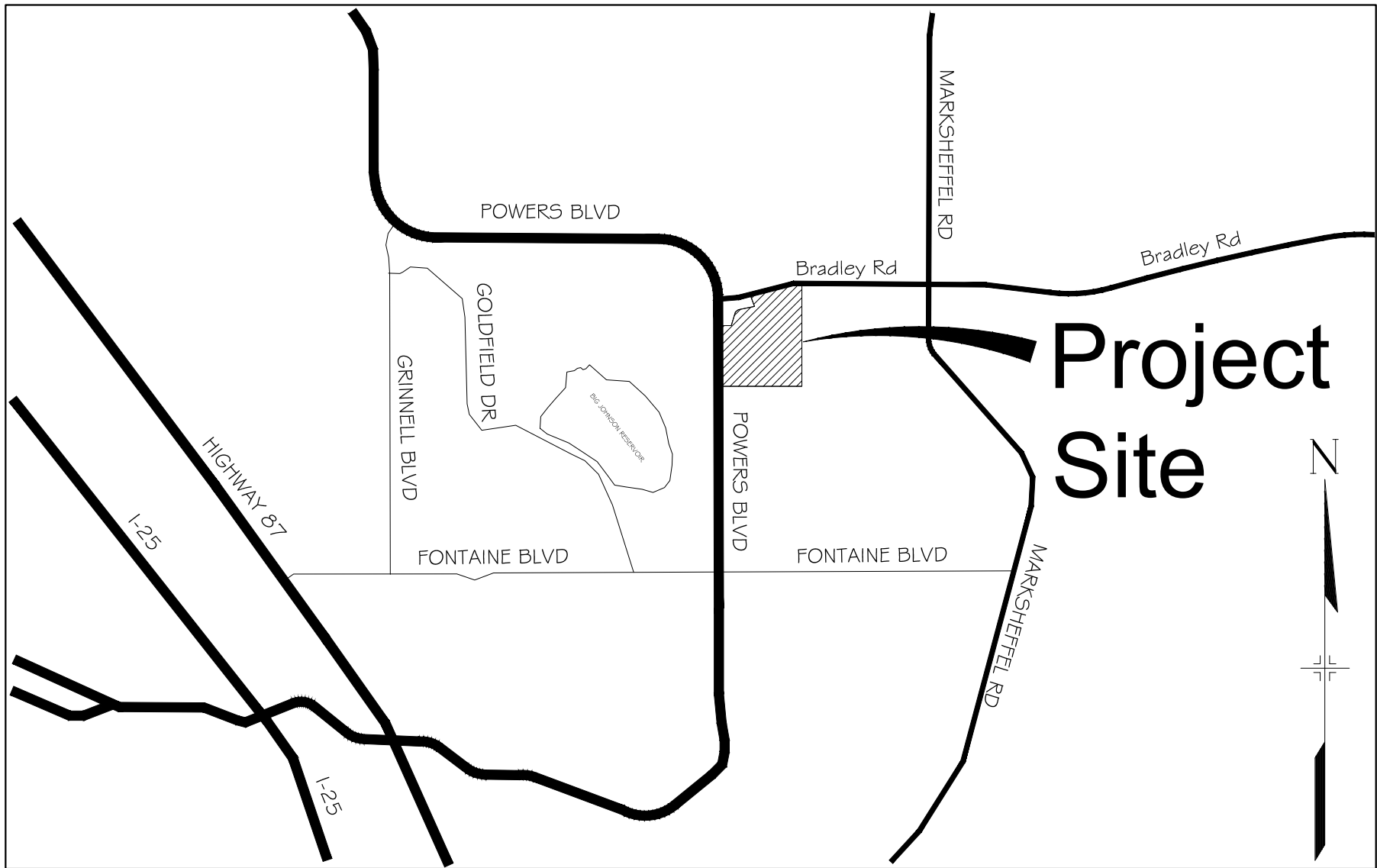
FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

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.

JENNIFER IRVINE, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
COUNTY ENGINEER / ECM ADMINISTRATOR



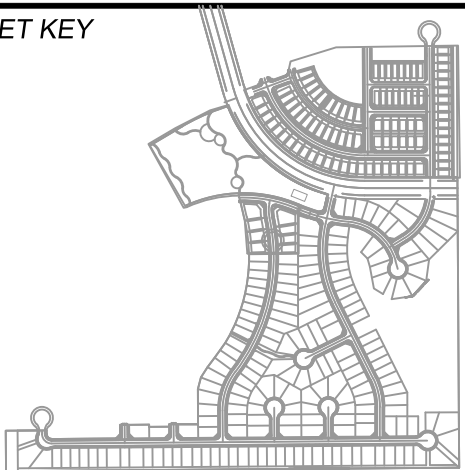
SITE MAP  
N.T.S.



VICINITY MAP  
N.T.S.

OWNER/DEVELOPER	COLA, LLC 555 MIDDLE CREEK PARKWAY, SUITE 380 COLORADO SPRINGS, CO 80921 RANDY O'LEARY, (719) 382-9433
CIVIL ENGINEER	MATRIX DESIGN GROUP 2435 RESEARCH PARKWAY, SUITE 300 COLORADO SPRINGS, CO 80920 NICOLE SCHANEL, (719) 659 6141
WATER & SANITARY SEWER	WIDEFIELD WATER AND SANITATION DISTRICT 8495 FONTAINE BOULEVARD COLORADO SPRINGS, CO 80925 ROBERT BANNISTER, (719) 390-7111
ELECTRIC	MOUNTAINVIEW ELECTRIC ASSOCIATION (719) 495-2283
GAS	COLORADO SPRINGS UTILITIES 1521 HANCOCK EXPRESSWAY COLORADO SPRINGS, CO MARY HOAGLUND (719) 668-4083
STREET	EL PASO COUNTY PUBLIC SERVICES DEPARTMENT (719) 520-6460
DRAINAGE	EL PASO COUNTY PUBLIC SERVICES DEPARTMENT (719) 520-6460
FIRE DEPARTMENT	SECURITY FIRE DEPARTMENT 400 SECURITY BOULEVARD SECURITY, CO 80911 (719) 392-7121

REFERENCE DRAWINGS	####	####	####	####
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GEC Titleblock X-886-PR SITE-F2 X-886-PR SITE 10415-Ex-Base X-886-PR SITE_F1	####	####	####	####
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**BENCHMARK**  
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206  
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD,  
ELEVATION - 5897.89' U.S. SURVEY FT

**BASIS OF BEARING**  
BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2" AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2" AULM. CAP PLS 10377)

PREPARED BY:



SEAL

**PRELIMINARY**  
THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE

TRAILS AT ASPEN RIDGE

FILING NO. 2  
FINAL GRADING & EROSION CONTROL PLANS

TITLE SHEET

FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 19.886.014

DESIGNED BY:	NMS	SCALE	DATE ISSUED:	NOVEMBER 2019	DRAWING No.
DRAWN BY:	CRD	HORIZ	N/A		
CHECKED BY:	NMS	VERT.	N/A	SHEET	1 OF 8

TS01







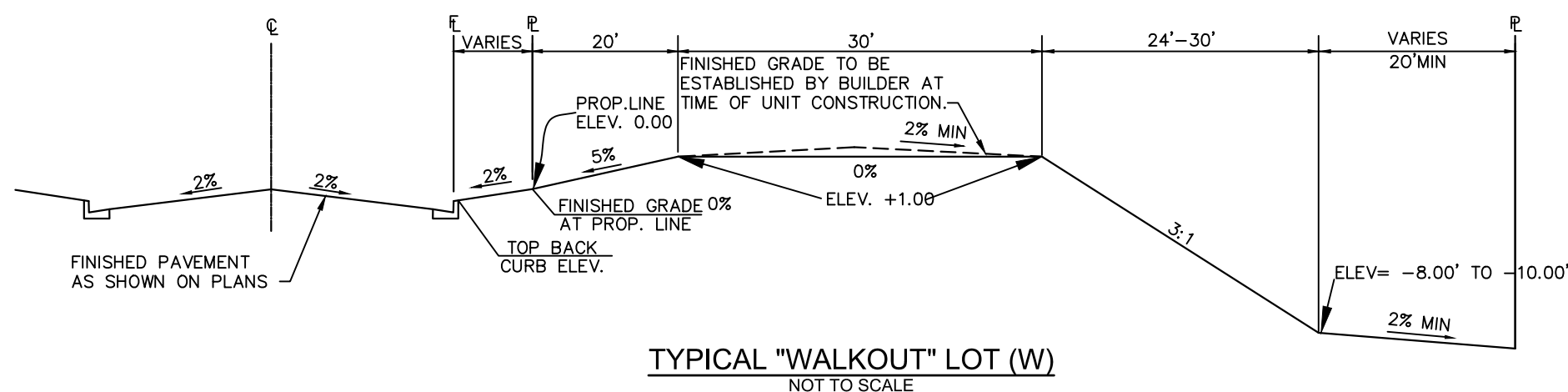
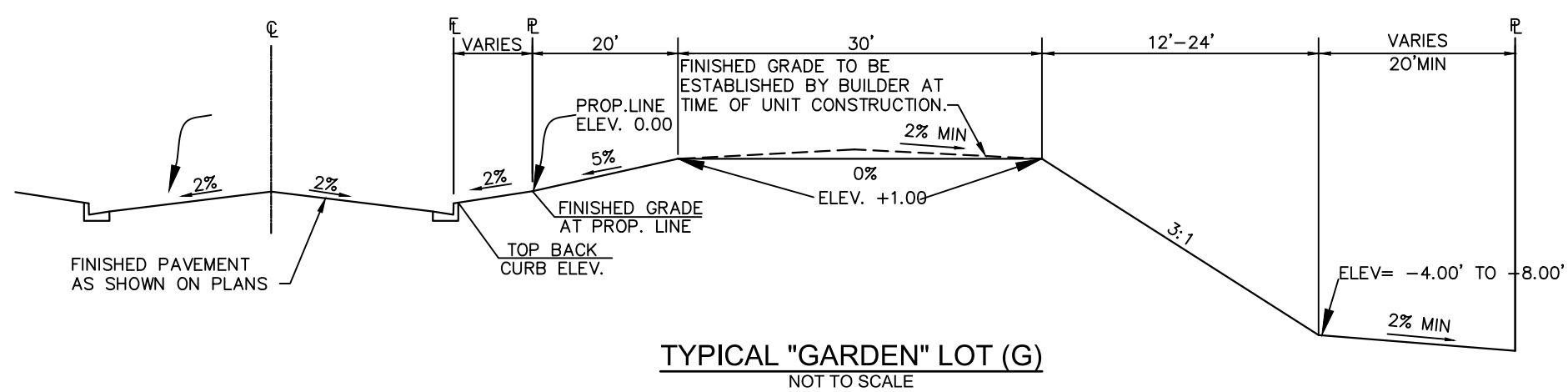
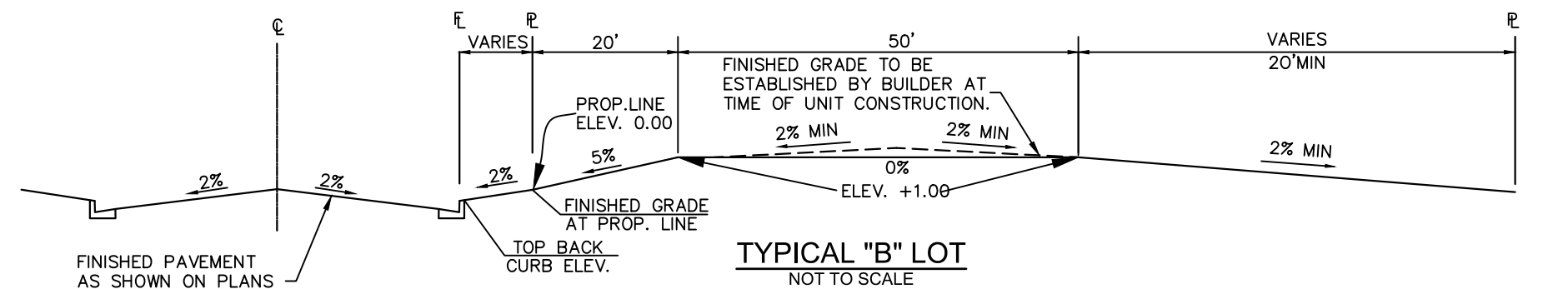
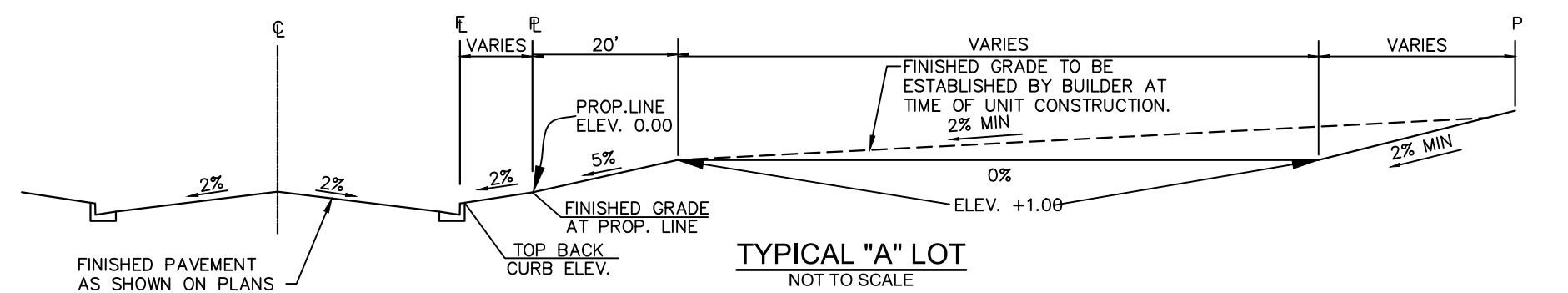


SYMBOLS

	PROPOSED CENTERLINE		PROPOSED MANHOLE
	EXISTING PAVED ROAD		EXISTING POWER POLE
	EXISTING UNDERGROUND UTILITY		THRUST BLOCK
	PROPOSED UNDERGROUND UTILITY		FIRE HYDRANT
	RIGHT OF WAY		EXISTING WATER VALVE
	EASEMENT		PROPOSED WATER VALVE
	EXISTING CURB & GUTTER		WATER FITTINGS
	PROPOSED CURB & GUTTER		EXISTING STORM INLET
	EXISTING CONTOUR		PROPOSED STORM DRAIN/INLET
	PROPOSED CONTOUR		PLUG PIPE
	LIMITS OF CONSTRUCTION		PROPOSED SIGN
			EXISTING SIGN

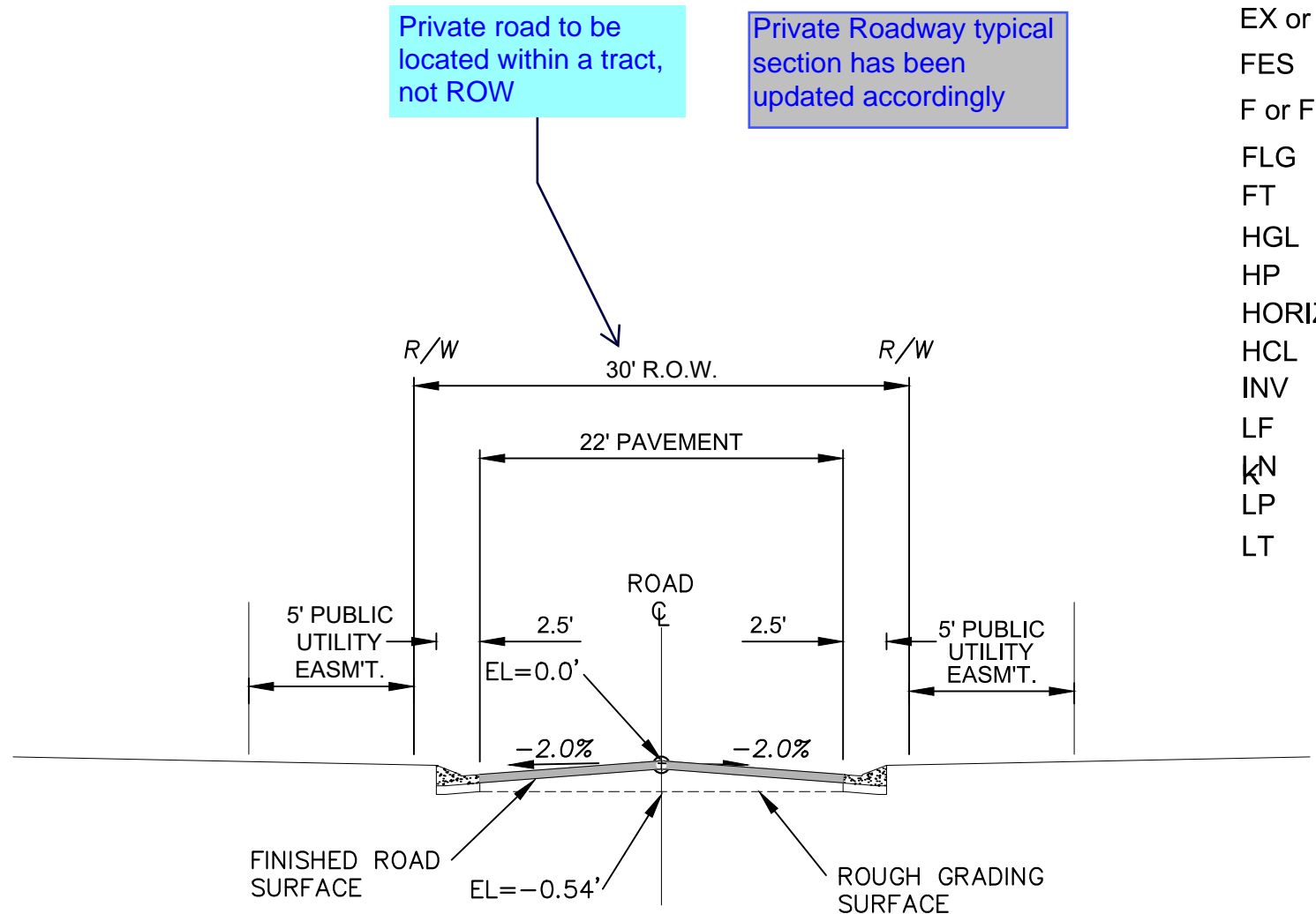
LOT TYPES

- A "A" LOT
- B "B" LOT
- G "GARDEN LEVEL" LOT
- W "WALKOUT" LOT
- T "TRANSITION" LOT

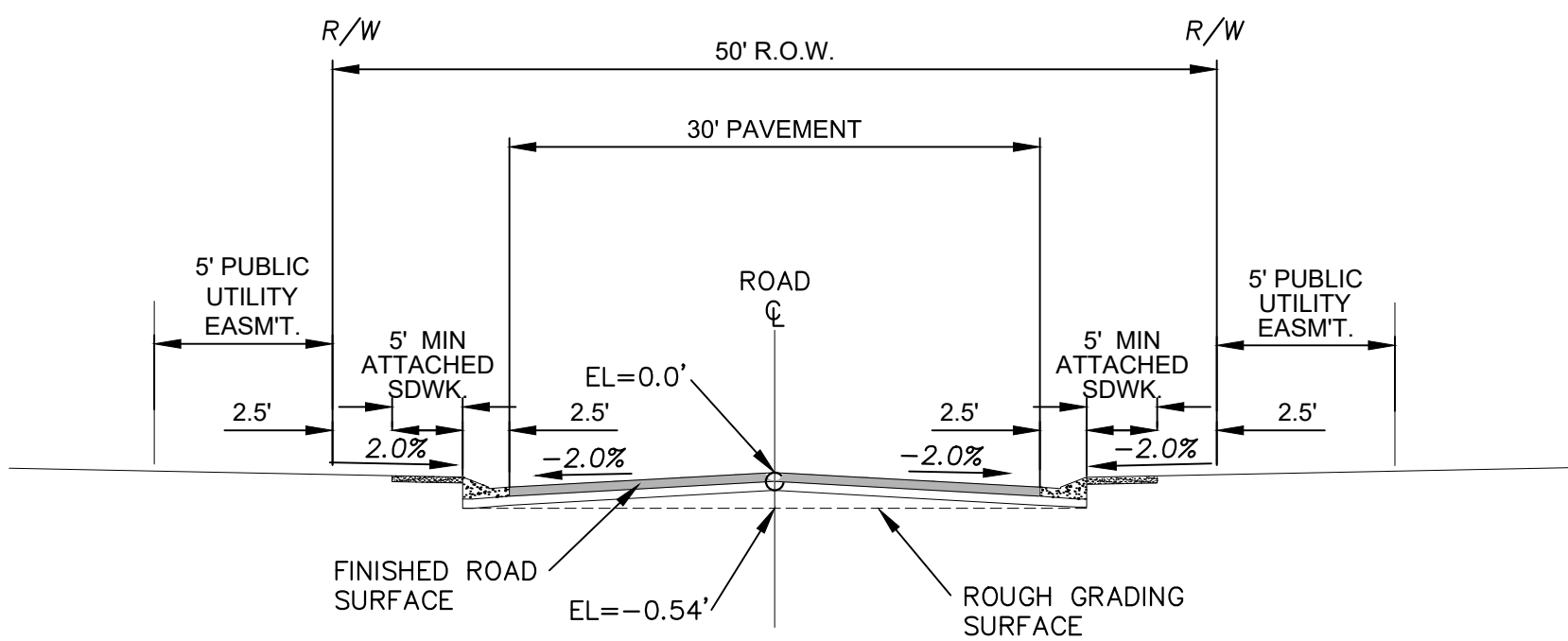


ABBREVIATIONS

ASSY	ASSEMBLY	MAX	MAXIMUM
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	MH	MANHOLE
APPROX	APPROXIMATE or APPROXIMATELY	MIN	MINIMUM
AVE	AVENUE	MJ	MECHANICAL JOINT
AVG	AVERAGE	NTS	NOT TO SCALE
BLVD	BOULEVARD	O/S	OFFSET
BTM	BOTTOM	PR	PROPOSED
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	PC	POINT OF CURVATURE
CEN	CENTER	PCC	POINT OF COMPOUND CURVE
C or CL	CENTERLINE	PCR	POINT OF CURB RETURN
CFS	CUBIC FEET PER SECOND	P or P/L	PROPERTY LINE
CONC	CONCRETE	PRC	POINT OF REVERSE CURVE
CONST	CONSTRUCTION	PT	POINT OF TANGENCY
CONT	CONTINUOUS	PVC	POINT OF VERTICAL CURVE or POLYVINYL CHLORIDE
DIA	DIAMETER	PVI	POINT OF VERTICAL INTERSECTION
DWG	DRAWING	PVMT	PAVEMENT
EA	EACH	PVT	POINT OF VERTICAL TANGENT
EGL	ENERGY GRADE LINE	RCP	REINFORCED CONCRETE PIPE
ELEV or EL	ELEVATION	RED	REDUCER
ESMT	EASEMENT	REF	REFERENCE
EX or EXIST	EXISTING	REQ	REQUIRED
FES	FLARED END SECTION	REV	REVISION
F or FL	FLOWLINE	ROW	RIGHT-OF-WAY
FLG	FLANGE	RT	RIGHT
FT	FOOT/FEET	SD	STORM SEWER
HGL	HYDRAULIC GRADE LINE	ST	STREET
HP	HIGH POINT	STA	STATION
HORIZ	HORIZONTAL	STD	STANDARD
HCL	HORIZONTAL CONTROL LINE	SS	SANITARY SEWER
INV	INVERT	SW or S/W	SIDEWALK
LF	LINEAR FEET	TAN	TANGENT
LN	LANE	TBC	TOP BACK OF CURB
LP	LOW POINT	TYP	TYPICAL
LT	LEFT	UG	UNDERGROUND
		UTIL	UTILITY
		VERT	VERTICAL
		W	WIDTH
		w/	WITH

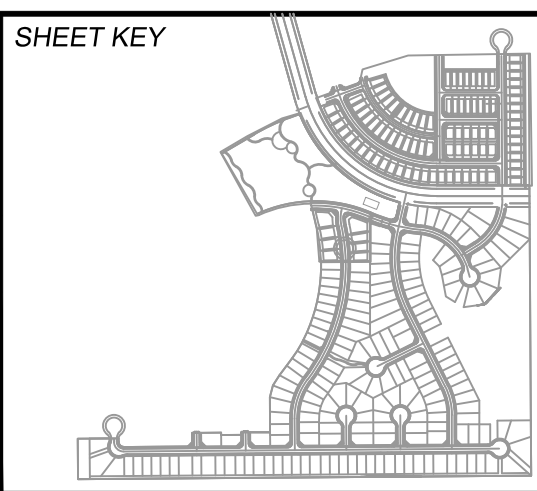


TYPICAL SECTION  
(PRIVATE ROADWAY)  
SCALE : N.T.S.



TYPICAL SECTION  
(URBAN LOCAL ROADWAY)  
SCALE : N.T.S.

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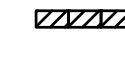


















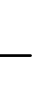
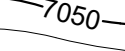










**BENCHMARK**  
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206  
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD, ELEVATION - 5897.89' U.S. SURVEY FT

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SEAL				TRAILS AT ASPEN RIDGE	
<b>PRELIMINARY</b> THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE				FILING NO. 2 FINAL GRADING & EROSION CONTROL PLANS	
				LEGEND & ABBREVIATION NOTES	
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 19.886.014				DESIGNED BY: NMS DRAWN BY: CRD CHECKED BY: NMS	SCALE DATE ISSUED: NOVEMBER 2019 DRAWING No. GEN01



			EXISTING BMP INSTALLED DURING THE FINAL GRADING OF FILING NO. 1
			HIGH POINT/LOW POINT
			EROSION CONTROL BLANKET
			TEMPORARY MULCHING AND SEEDING
			SEDIMENT CONTROL LOG
			STRAW BALE BARRIER
			VEHICLE TRACKING CONTROL
			SEDIMENT BASIN
			CONTRACTOR TO COORDINATE LOCATIONS OF CONCRETE WASHOUTS, STOCKPILES, AND STAGING AREAS WITH ADJACENT FILINGS
			INLET PROTECTION
			OUTLET PROTECTION
			DRAINAGE SWALE
			SILT FENCE
			PROPOSED CONTOURS
			EXISTING CONTOURS
			SLOPE DIRECTION
			CUT/FILL LINE
			PROPERTY BOUNDARY
			CONSTRUCTION BOUNDARY LINE
			LOT DRAINS TO STREET
			LOT DRAINS TO STREET/REAR OF LOT
			LOT DRAINAGE VARIES
			GARDEN LEVEL BASEMENT
			WALK OUT BASEMENT

BMP SEQUENCING	
INITIAL	SILT FENCE, CONSTRUCTION FENCE, VEHICLE TRACKING
INTERIM	SEDIMENT CONTROL LOGS, CHECK DAMS, TEMP SEDIMENT BASINS, INLET PROTECTION, STOCKPILES, STAGING
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING

A horizontal bar divided into segments with alternating black and white patterns. The segments are labeled with distances: 50', 0', 50', and 100'.

( IN FEET )  
1 inch = 50 ft.

## GRADING & EROSION CONTROL PLAN

DESIGNED BY:	NMS	SCALE	DATE ISSUED:	NOVEMBER 2019	DRAWING No. <b>GEC01</b>
DRAWN BY:	CRD	HORIZ. 1"=50'			
CHECKED BY:	NMS	VERT. N/A	SHEET	4 OF 8	

FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 19.886.014

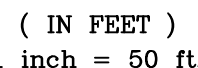


**Matrix**

**BASIS OF BEARING**  
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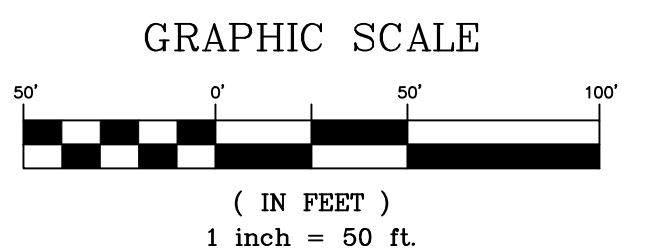
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<h1 style="text-align: center;">TRAILS AT ASPEN RIDGE</h1>				
<h2 style="text-align: center;">FILING NO. 2 FINAL GRADING &amp; EROSION CONTROL PLANS</h2>				
<h3 style="text-align: center;">GRADING &amp; EROSION CONTROL PLAN</h3>				
DESIGNED BY:	NMS	SCALE	DATE ISSUED:	NOVEMBER 2019
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				GEC02



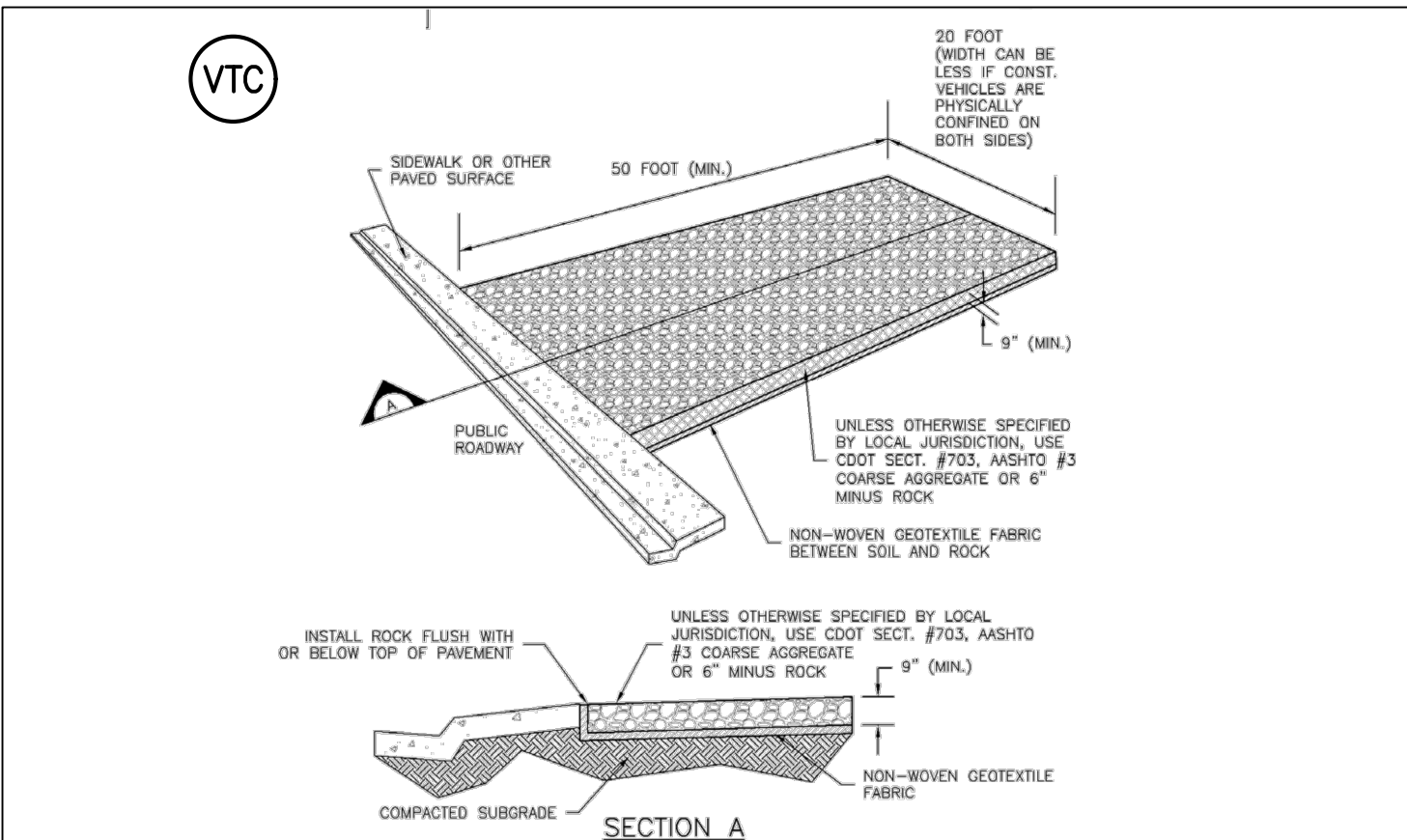


<i>TRAILS AT ASPEN RIDGE</i>			
FILING NO. 2 FINAL GRADING & EROSION CONTROL PLANS			
GRADING & EROSION CONTROL PLAN			
DESIGNED BY:	NMS	SCALE	DATE ISSUED: NOVEMBER 2019
DRAWN BY:	CRD	HORIZ. 1"=50'	DRAWING No. <b>GEC03</b>
CHECKED BY:	NMS	VERT. N/A	
		SHEET	6 OF 8





Know what's below.  
Call before you dig.



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

### STABILIZED CONSTRUCTION ENTRANCE/EXIT

#### INSTALLATION NOTES:

- SEE PLAN VIEW FOR:
  - LOCATION OF CONSTRUCTION ENTRANCE/EXIT.
  - TYPE OF CONSTRUCTION ENTRANCE/EXIT WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRIM.
- CONSTRUCTION MAT OR TRIM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECTION # 703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

#### 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 TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN CONSISTENT DEPTH.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN THE STORM SEWER DRAINS.

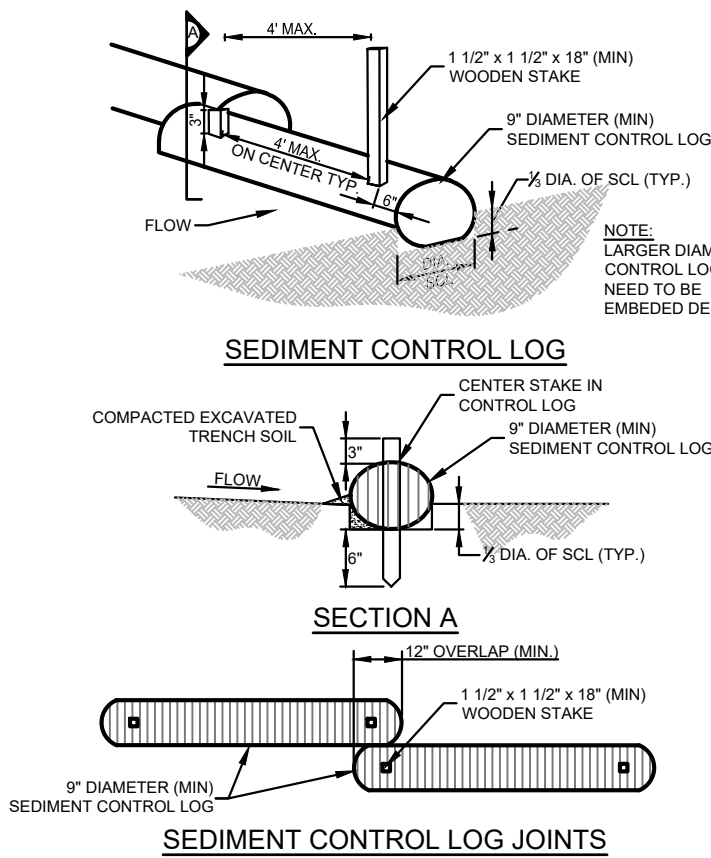
Figure SM-4  
Vehicle Tracking Control  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

Table 14-10. Recommended Seed Mix for Transition Areas<sup>1</sup>

Common Name (Variety)	Scientific Name	Growth Season	Growth Form	Seeds/Lb	Lbs PLS/Acre Drilled	Lbs PLS/Acre Broadcast or Hydroseeded
Sheep fescue (Duras)	<i>Festuca ovina</i>	Cool	Bunch	680,000	1.3	2.6
Western wheatgrass (Arriba)	<i>Pascopyrum smithii</i>	Cool	Sod	110,000	7.9	15.8
Alkali sacaton	<i>Spolobolus airoides</i>	Warm	Bunch	1,758,000	0.5	1.0
Slender wheatgrass	<i>Elymus trachycaulus</i>	Cool	Bunch	159,000	5.5	11.0
Canadian bluegrass (Rudens)	<i>Poa compressa</i>	Cool	Sod	2,500,000	0.3	0.6
Switchgrass (Pathfinder)	<i>Panicum virgatum</i>	Warm	Sod/ Bunch	389,000	1.3	2.6
Annual rye	<i>Lolium multiflorum</i>	Cool	Cover crop	227,000	10.0	20.0
				<b>TOTAL</b>	<b>26.8</b>	<b>53.6</b>
<b>Wildflowers</b>						
Blanket flower	<i>Faillardia aristata</i>	---	---	132,000	0.25	0.50
Prairie coneflower	<i>Ratibida columnaris</i>	---	---	1,230,000	0.20	0.40
Purple prairie clover	<i>Petalostemum purpurea</i>	---	---	210,000	0.20	0.40
Gayfeather	<i>Liatris punctata</i>	---	---	138,000	0.06	0.12
Flax	<i>Linum lewisii</i>	---	---	293,000	0.20	0.40
Penstemon	<i>Penstemon strictus</i>	---	---	592,000	0.20	0.40
Yarrow	<i>Achillea millefolium</i>	---	---	2,770,000	0.03	0.06
				<b>TOTAL</b>	<b>1.14</b>	<b>2.28</b>

<sup>1</sup>For side slopes or between wet and dry areas.  
<sup>2</sup>Substitute 1.7 lbs PLS/acre of inland saltgrass (*Danthonia spicata*) in salty soils.

SCL



#### INSTALLATION NOTES:

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

#### 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 SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

Figure SC-2  
Sediment Control Log  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

#### SEED MIX NOTES:

A MIXTURE DEVELOPED FOR ELEVATIONS 3,000 TO 8,000 FEET TO PROVIDE NATURAL COVER UNDER DRYLAND CONDITIONS. CONTAINS BOTH COOL AND WARM SEASON GRASSES ADAPTED TO THE WESTERN GREAT PLAINS AND SOUTHWESTERN REGION. HAS EXCELLENT COLD AND DROUGHT TOLERANCE. GOOD FOR SOIL STABILIZATION ON POOR SOILS.

#### CHARACTERISTICS:

GROWS 30-60 INCHES WITH AVERAGE RAINFALL.

#### SEEDING RATE:

BROADCAST: 20-25 LBS/ACRE  
DRILLED: 15-20 LBS/ACRE

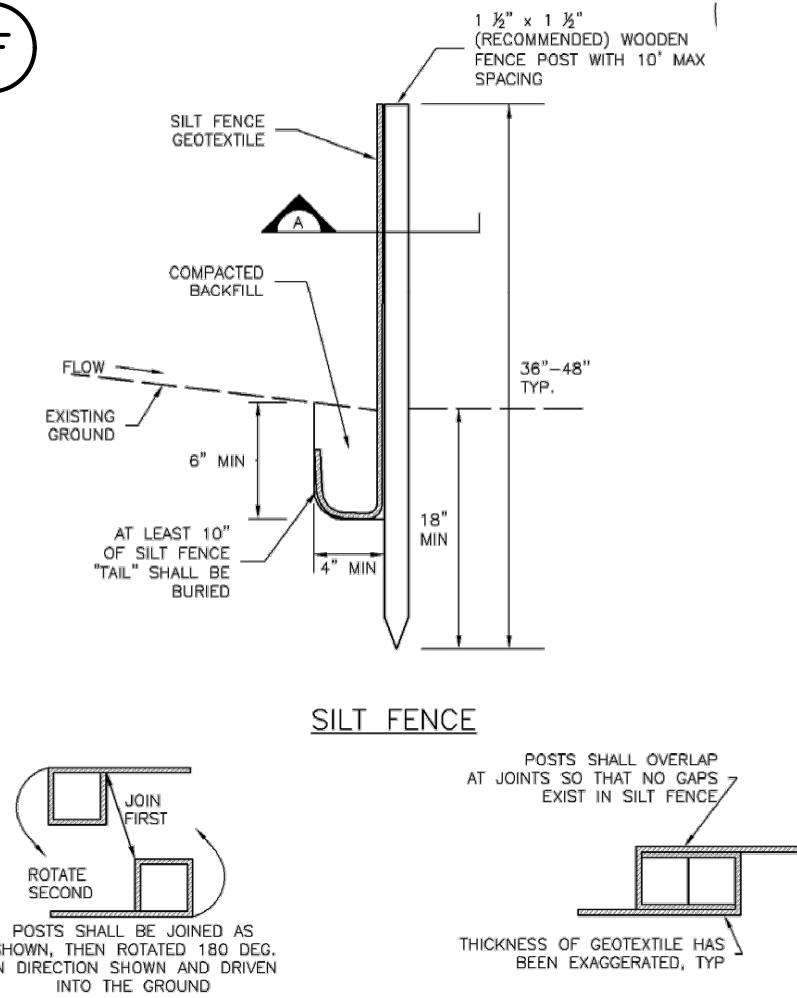
#### OVERSEEDING

BROADCAST: 10-15 LBS/ACRE  
DRILLED: 5-10 LBS/ACRE

#### MIX CONTAINS:

KIND AND VARIETY:	PURE	GERM	ORIGIN
ANNUAL RYEGRASS	15.72	97	OR
SLENDER WHEATGRASS	14.75	98	WA
CRESTED WHEATGRASS	10.91	96	SD
MOUNTAIN BROME	9.91	97	WY
CANADA BLUEGRASS	9.80	87	WA
HARD FESCUE	9.78	86	MT
SIDE-OATS GRAMA	5.78	80	TX
SWITCHGRASS	4.99	93	MN
BIG BLUESTEM	4.55	95	KS
BLUE GRAMA	2.37	95	MN
SAND DROPSEED	0.99	95	CO

SF



### SILT FENCE NOTES

#### SILT FENCE INSTALLATION NOTES:

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT TOP OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND OR WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK". THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE IN STALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

Figure SC-1  
Silt Fence  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

#### SILT FENCE 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 SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGN OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

SB

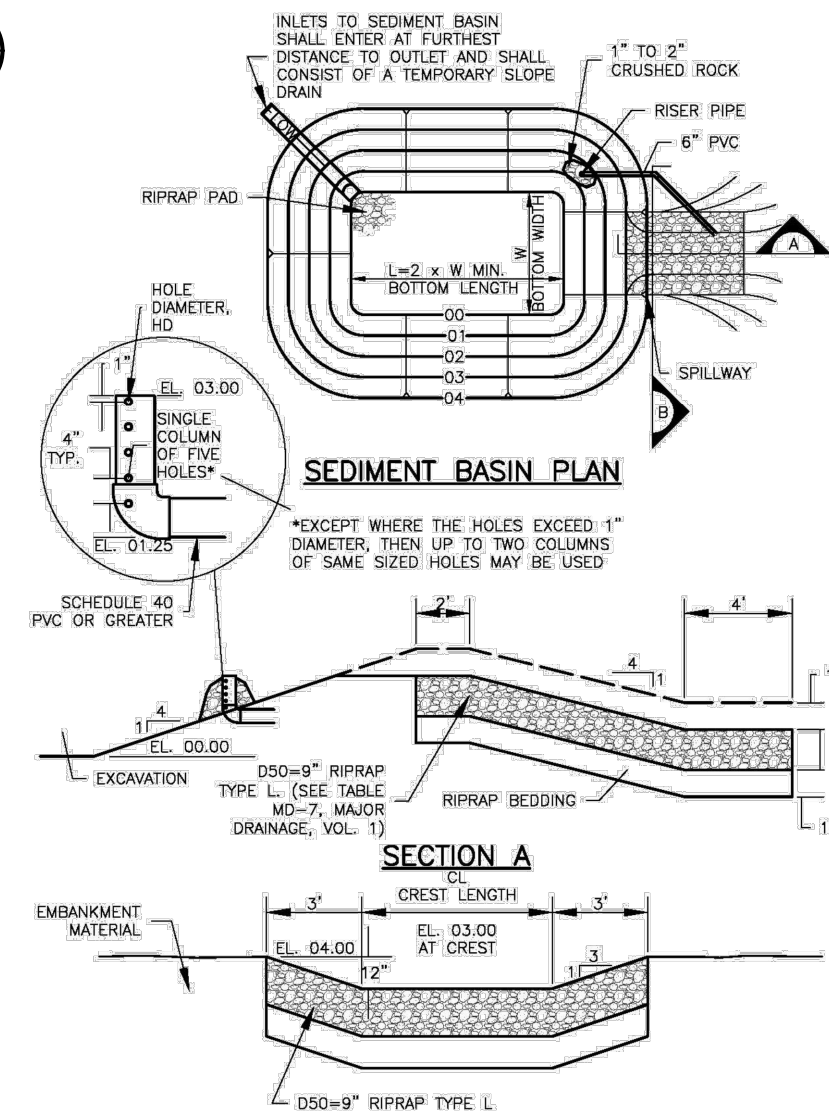


TABLE SB-1 SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage area (rounded to nearest acre), (ac)	Basin Bottom Width (w), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	1/2
2	21	3	1 1/8
3	28	5	1/2
4	33 1/2	6	3/4
5	38 1/2	8	1
6	43	9	1 1/8
7	47 1/2	11	1 1/4
8	51	12	1 1/2
9	55	13	1 3/4
10	58 1/2	15	1 3/4
11	61	16	1 3/4
12	64	18	1 3/4
13	67 1/2	19	1 3/4
14	70 1/2	21	1 3/4
15	73 1/2	22	1 3/4

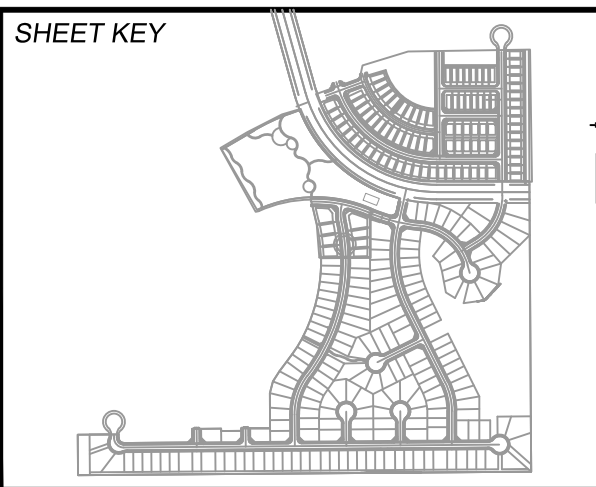
### SEDIMENT BASIN

#### SEDIMENT BASIN INSTALLATION NOTES:

- SEE PLAN VIEW FOR:
  - LOCATION OF SEDIMENT BASIN.
  - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
  - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
  - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS.

Figure SC-7  
Sediment Basin  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

REFERENCE DRAWINGS	###	###	###	###
GEC Titleblock	###	###	###	###
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CTB FILE: ---				
PLOT DATE: November 5, 2019 7:22:28 AM				
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.				



**BENCHMARK**  
COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206  
A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD,  
ELEVATION - 5897.89' U.S. SURVEY FT

**BASIS OF BEARING**  
BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2" AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2" AULM. CAP PLS 10377)

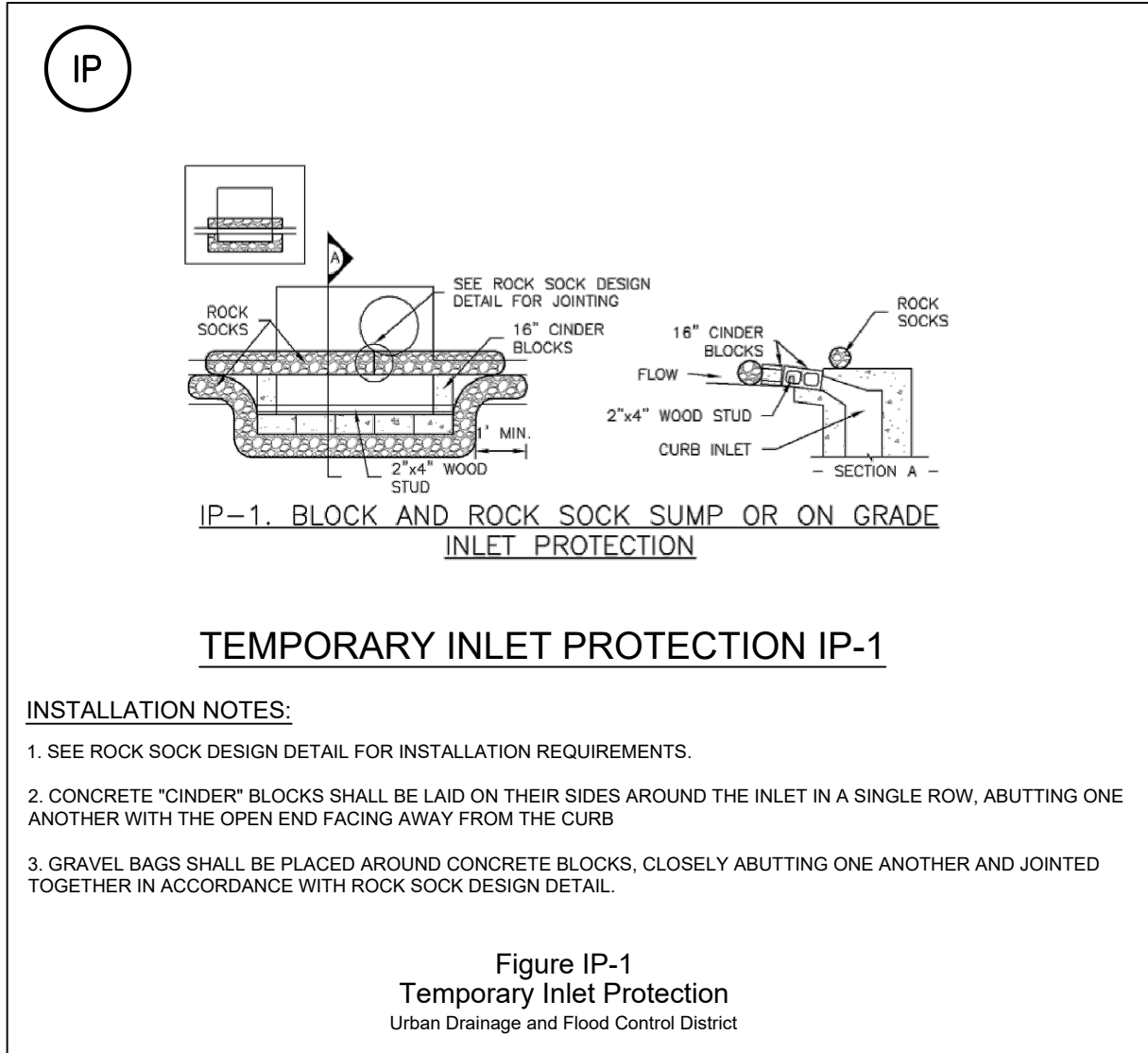
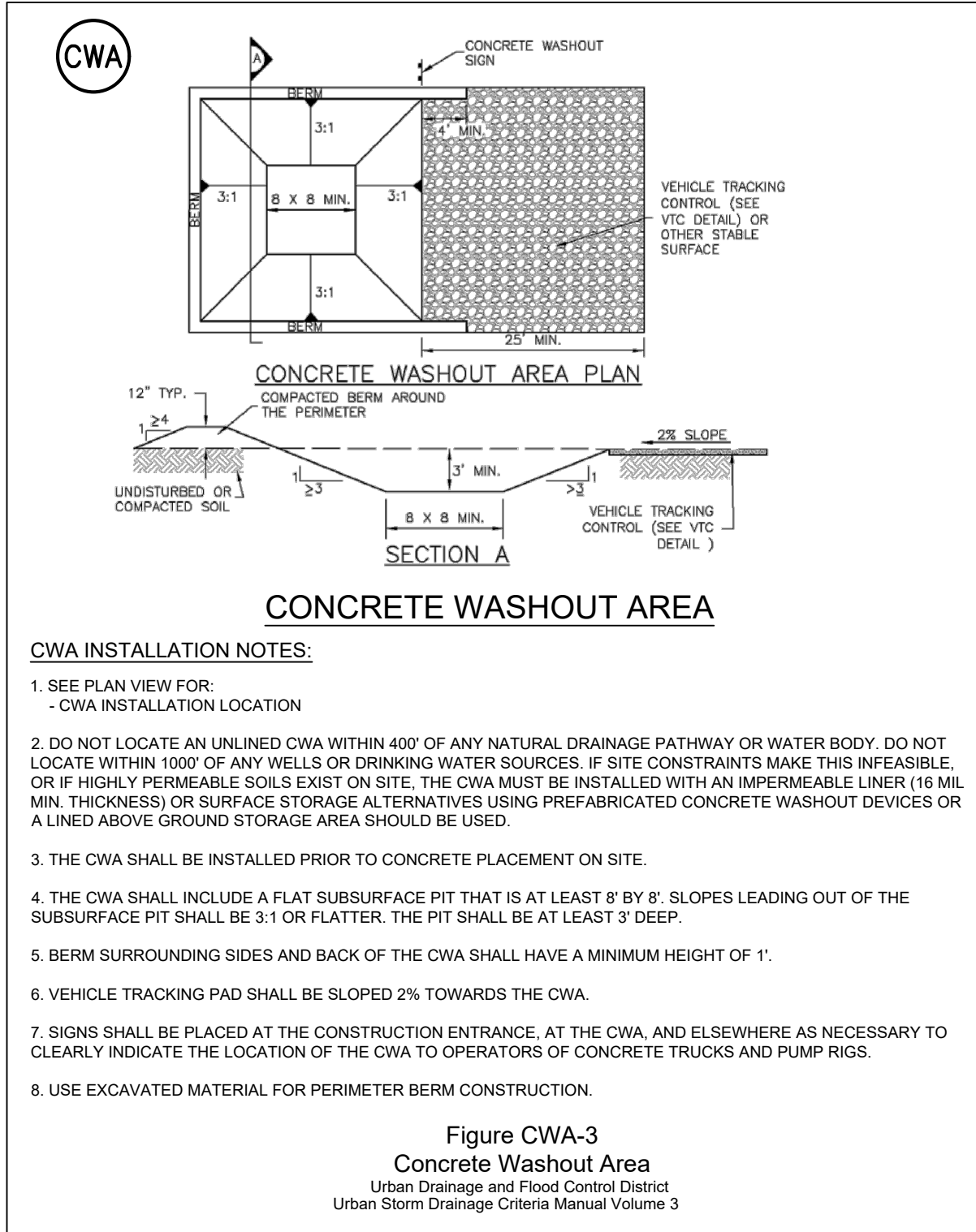
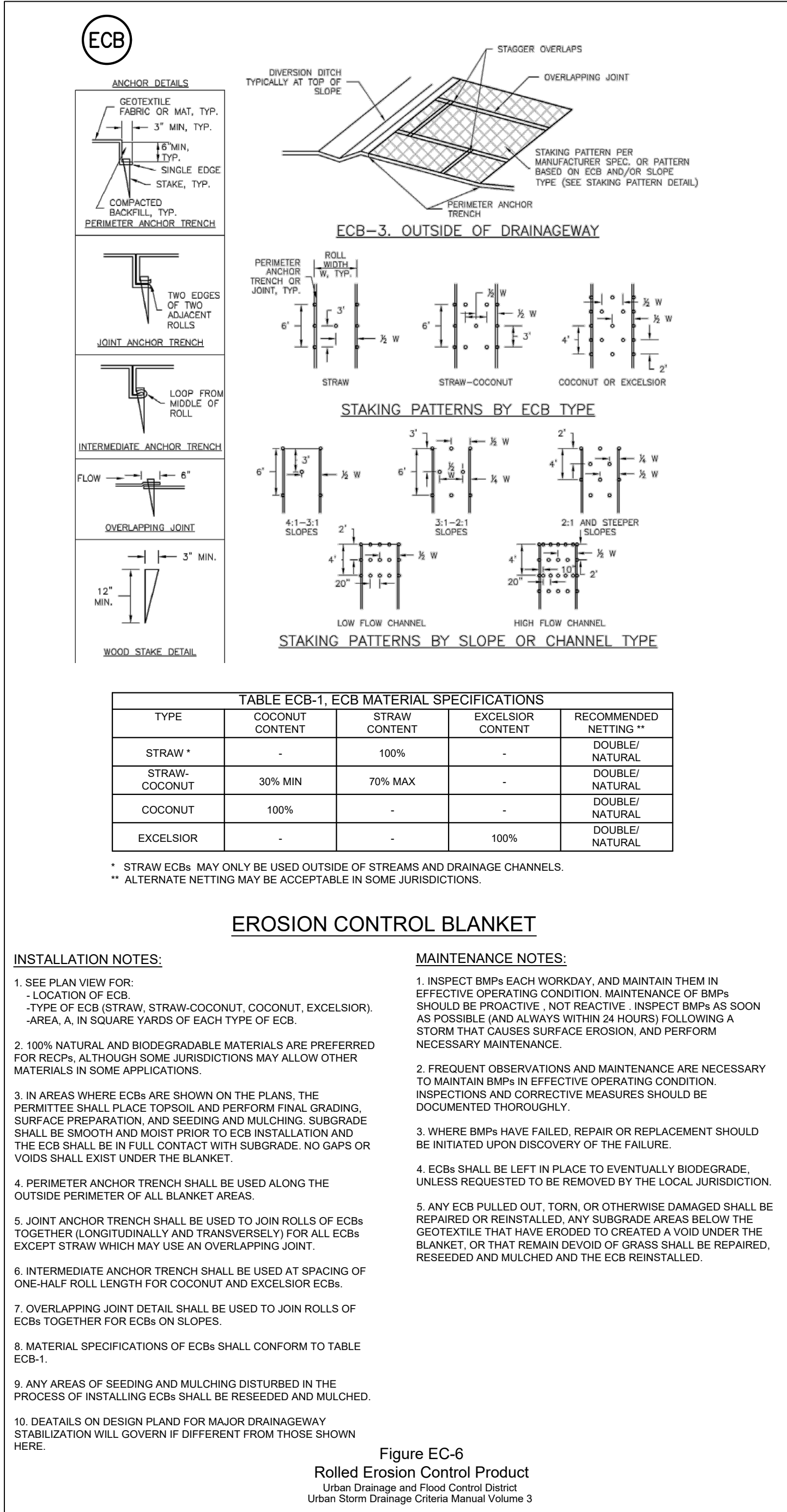
PREPARED BY:

SEAL  
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MATRIX DESIGN GROUP, INC.  
PROJECT No. 19.886.014


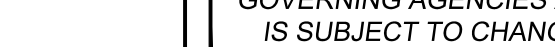
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EROSION CONTROL DETAILS			
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DRAWN BY:	CRD	HORIZ	DRAWING No.
CHECKED BY:	NMS	VERT.	ECN01





Please provide the stock pile and staging area BMP details

Details have been added

REFERENCE DRAWINGS	####	####	####	####	####	####	####	<div>SHEET KEY</div>  <div>N</div>	<div>BENCHMARK</div> <div>COLORADO SPRINGS UTILITIES (FIMS) MONUMENT F206 A BERNTSEN TOP SECURITY MONUMENT SYSTEM WITH A 3.5-INCH DIAMETER ALUMINUM CAP IN A ROAD BOX, LOCATED ON THE NORTHWEST CORNER OF FONTAINE BOULEVARD AND POWERS BOULEVARD, ELEVATION - 5897.89' U.S. SURVEY FT</div> <div>BASIS OF BEARING</div> <div>BEARINGS ARE BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M. SAID LINE BEARS S89°51'23"E FROM THE NORTHWEST CORNER OF SAID SECTION 9 (2 1/2" AULM. CAP PLS 17664) TO THE N 1/4 CORNER OF SAID SECTION 9 (3 1/2" AULM. CAP PLS 10377)</div>	<div>PREPARED BY:</div> 	<div>SEAL</div> <div>PRELIMINARY</div> <div>THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE</div>	TRAILS AT ASPEN RIDGE							
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No.		DATE	DESCRIPTION				BY					FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 19.886.014				DATE ISSUED: NOVEMBER 2019 8 OF 8		DRAWING No. ECN02	
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