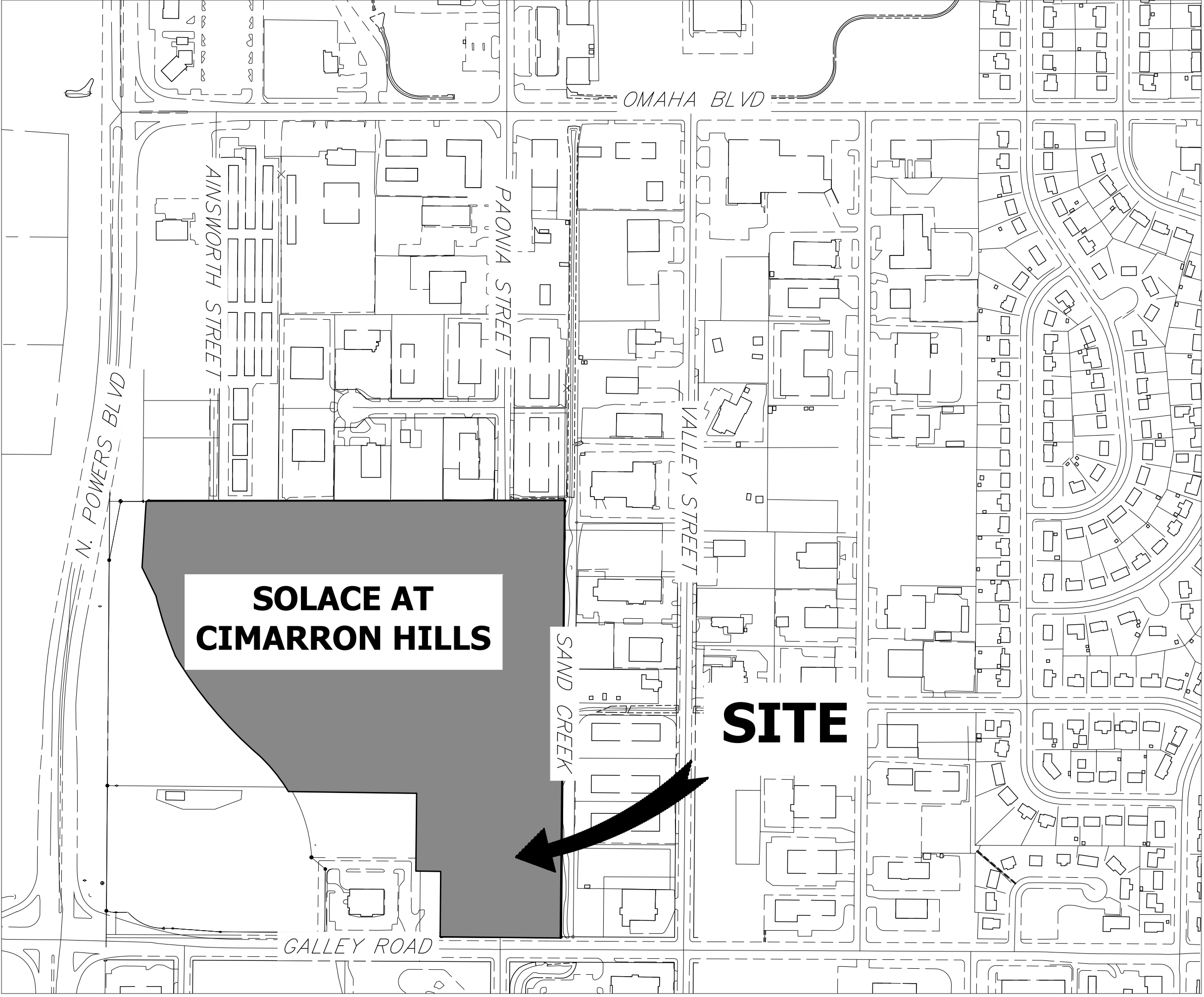


SOLACE AT CIMARRON HILLS
A PORTION OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE P.M.
EL PASO COUNTY, COLORADO
GRADING AND EROSION CONTROL PLANS

ABBREVIATIONS

AC	ACRE	FDP	FINAL DEVELOPMENT PLAN	PL	PROPERTY LINE
AD	ALGEBRAIC DIFFERENCE	FDR	FINAL DRAINAGE REPORT	PR	PROPOSED
AH	AHEAD	FES	FLARED 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	FIL	FILING	R	RADIUS
BB	BOX BASE	FO	FIBER OPTIC CABLE	RC	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	HDOPE	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
CD	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	LOMR	LETTER OF MAP REVISION	TW	TOP OF WALL
CT	COURT	LP	LOW POINT	TY	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	FINAL GRADING AND EROSION CONTROL PLANS
7-10	GRADING AND EROSION CONTROL DETAILS

TOTAL 10

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

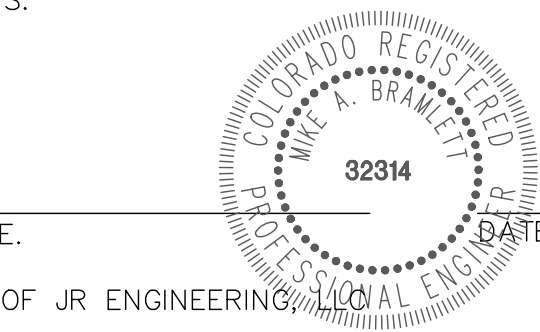
DATE

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

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



DEVELOPER

JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, IL 60607
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

LCM 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 AGENCIES, OR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

JACKSON DEARBORN PARTNERS
404 S. WELLS ST.
SUITE 400
CHICAGO, IL 60607
OFFICE PHONE (734) 216-2577

JR ENGINEERING
A Western Company
Central 303-740-9888 • Colorado Springs 719-583-2593
Fort Collins 970-491-9888 • www.jrengineering.com

SOLACE AT CIMARRON HILLS

COVER SHEET

SHEET 1 OF 10

JOB NO. 25174.00

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



GRADING AND EROSION CONTROL STANDARD NOTES

1. CONSTRUCTION MAY NOT COMMENCE UNTIL A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT AND A PRECONSTRUCTION CONFERENCE IS HELD WITH PLANING AND COMMUNITY DEVELOPMENT INSPECTIONS.
2. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
3. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
4. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
5. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
6. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
7. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES, ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
8. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
9. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
10. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
11. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
12. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
13. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
14. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
15. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
16. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
18. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
19. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
20. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
21. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
22. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
23. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
24. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
25. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
26. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
27. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
28. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
29. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY CTL THOMPSON INCORPORATION (DECEMBER 2019) AND SHALL BE CONSIDERED A PART OF THESE PLANS.
30. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:  
  
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

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE		
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV		
ELECTRIC		
FIBER OPTIC		
GAS MAIN		
IRRIGATION MAIN		
OIL/PETRO. MAIN		
OVERHEAD UTILITY		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
RAW WATER LINE		
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)		
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		
SILT FENCE		
100 YEAR FLOODPLAIN		
500 YEAR FLOODPLAIN		
FLOODWAY		
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		
STORMWATER FLOW ARROWS		

UTILITIES LEGEND

	EXISTING	PROPOSED
<b>STORM SEWER</b>		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		
RIPRAP		
<b>SANITARY SEWER</b>		
LINE MARKER		
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
<b>WATER LINE</b>		
LINE MARKER		
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL		
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
<b>GAS LINE</b>		
MARKER		
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
<b>DRY UTILITIES</b>		
CABLE TV MARKER		
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER		
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER		
IRRIGATION PEDESTAL		
TELEPHONE MARKER		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		

STORM WATER MANAGEMENT

	KEY	SYMBOL
CHECK DAM		
CONSTRUCTION ROAD STABILIZATION		
CURB SOCK INLET PROTECTION		
CONCRETE WASHOUT AREA		
DIVERSION DITCH AND DIKE, TEMPORARY		
DIVERSION CHANNEL, TEMPORARY		
DEWATERING		
EROSION CONTROL BLANKET		
INLET FILTER		
INLET PROTECTION		
MULCHING		
OUTLET PROTECTION		
PAVED FLUME		
PERMENENT SEEDING		
REINFORCED CONCRETE DAM		
ROUGH CUT STREET CONTROL		
SEDIMENT BASIN		
SEDIMENT CONTROL LOG		
SILT FENCE		
SURFACE ROUGHENING		
STABILIZED STAGING AREA		
SEDIMENT TRAP		
STRAW BALE BARRIER		
TERRACING		
TEMPORARY SEEDING		
TEMPORARY STREAM CROSSING CULVERT/BRIDGE		
TEMPORARY STREAM CROSSING FORD TYPE		
TEMPORARY SLOPE DRAIN		
VEHICLE TRACKING CONTROL		
VEHICLE TRACKING CONTROL WITH WASH RACK		
CONSTRUCTION MARKER		
LIMITS OF CONSTRUCTION		

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

PREPARED FOR:  
**JACKSON DEARBORN PARTNERS**  
404 S. WELLS ST.  
SUITE 400  
CHICAGO, IL 60607  
OFFICE PHONE (734) 216-2577

**J-R ENGINEERING**  
A Western Company  
  
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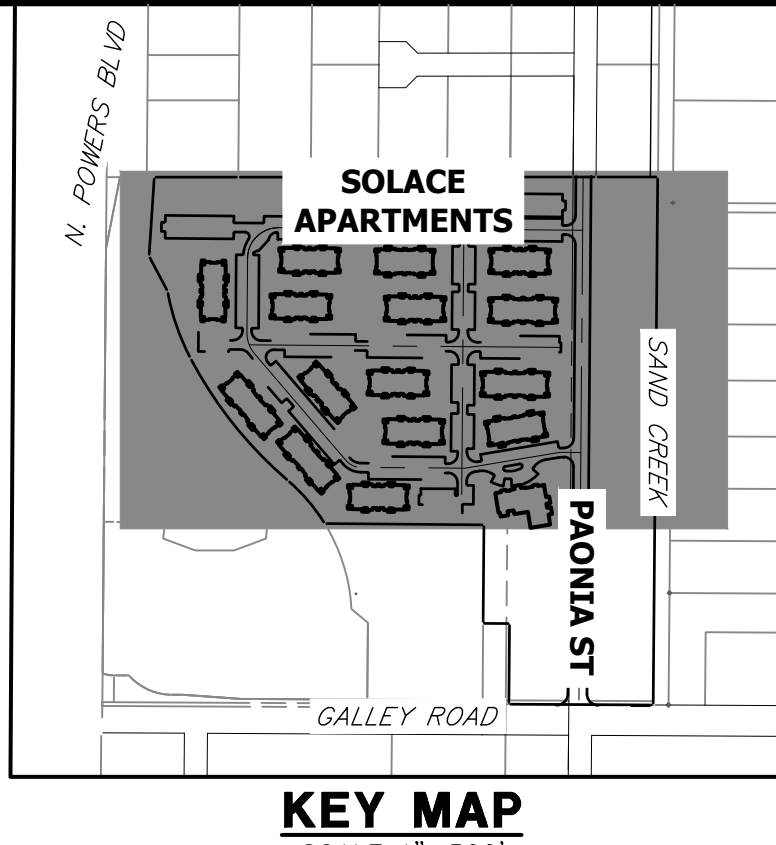
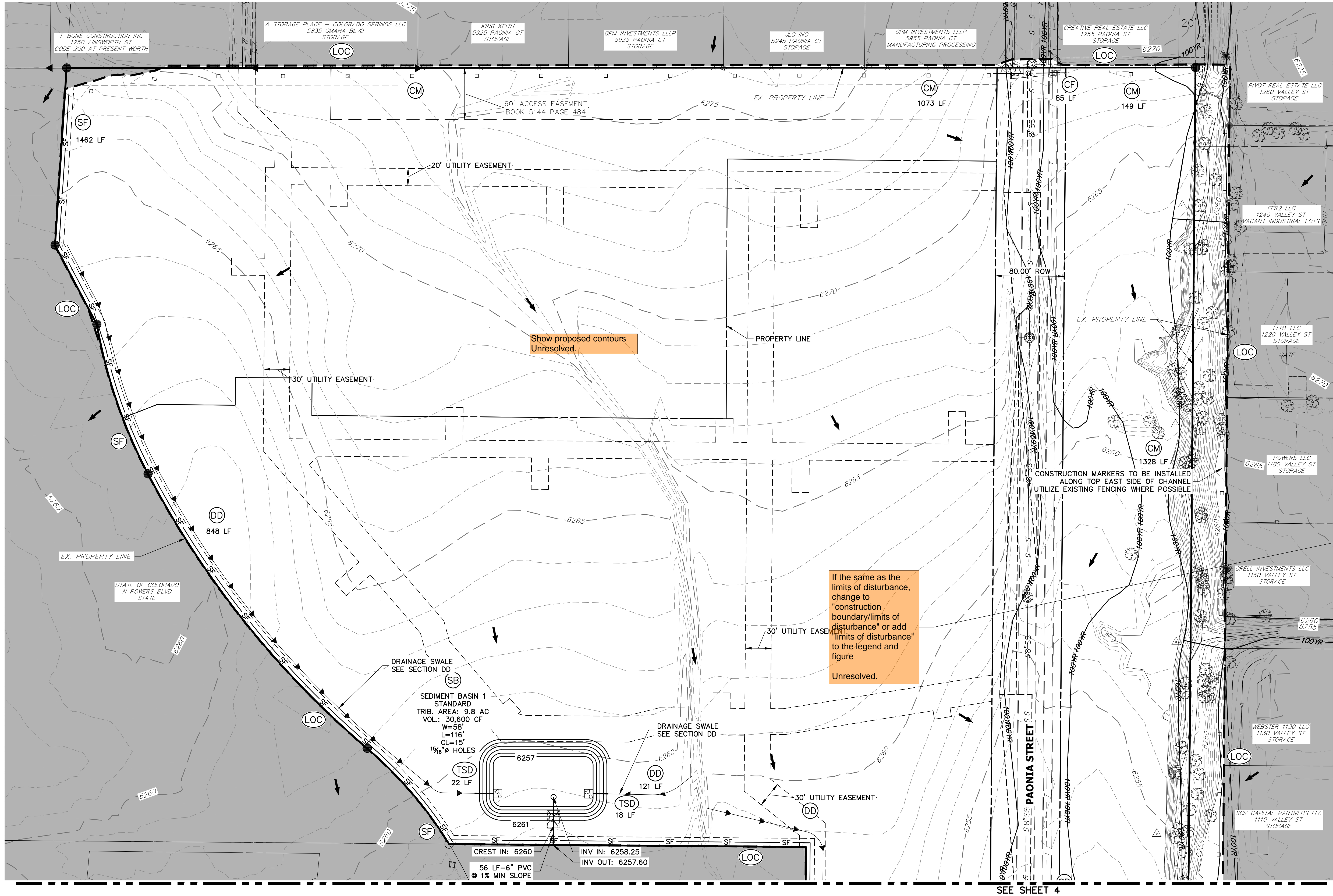
BY	DATE	REVISION	No.	N/A	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
						03/12/21	JRM	JRM	

**SOLACE AT CIMARRON HILLS**  
**GRADING & EROSION CONTROL DETAILS & LEGEND**



Know what's below.  
Call before you dig.





LEGEND

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

BMP PHASING

INITIAL:  
1) INSTALL VTC  
2) INSTALL CWA  
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INTERIM:  
1) LOCATE/INSTALL TEMPORARY STOCKPILE  
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FINAL:  
1) INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS  
2) REMOVE SILT FENCE AFTER STABILIZED

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

OWNER/DEVELOPER STATEMENT

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

DATE

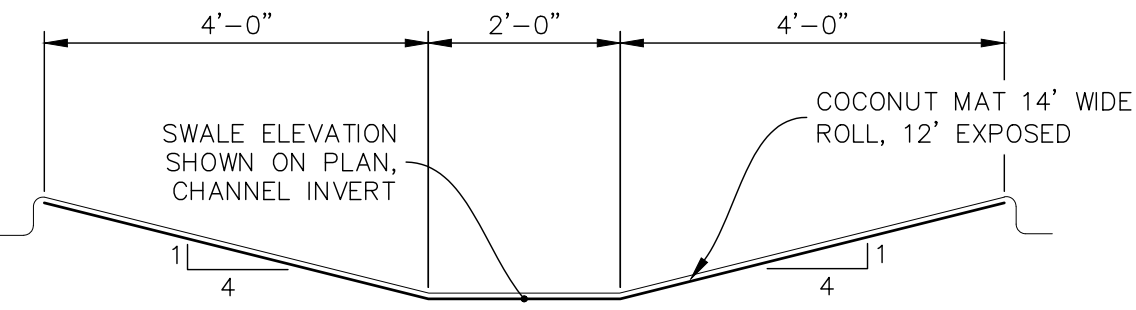
Note that this project does not anticipate utilizing batch plants in the SWMP text  
Note the existing on-site vegetation  
Unresolved.

NOTES

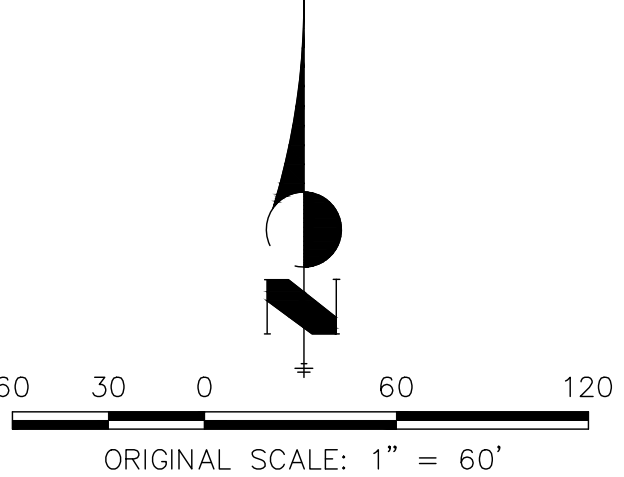
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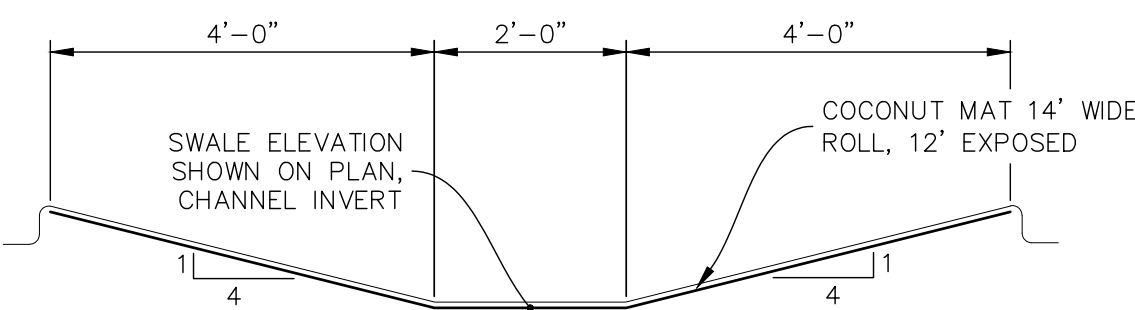
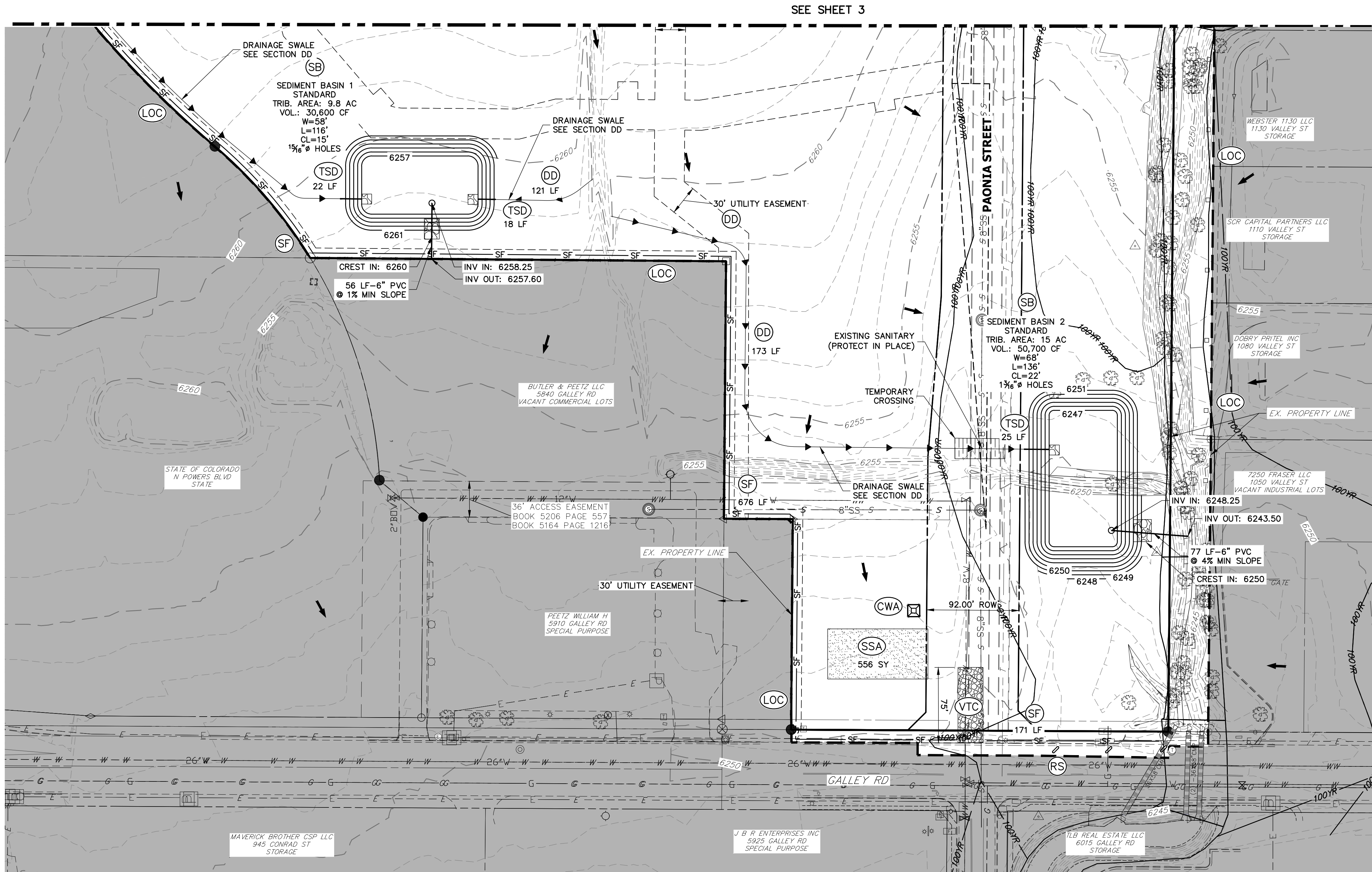
Know what's below.  
Call before you dig.



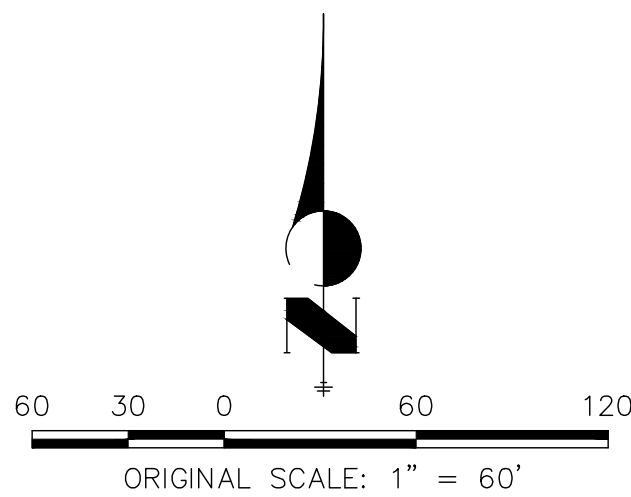
DRAINAGE DITCH (DD1)  
SCALE 1"=2'-0"







**DRAINAGE DITCH (DD1)**  
SCALE 1"=2'-0"



**NOTES**

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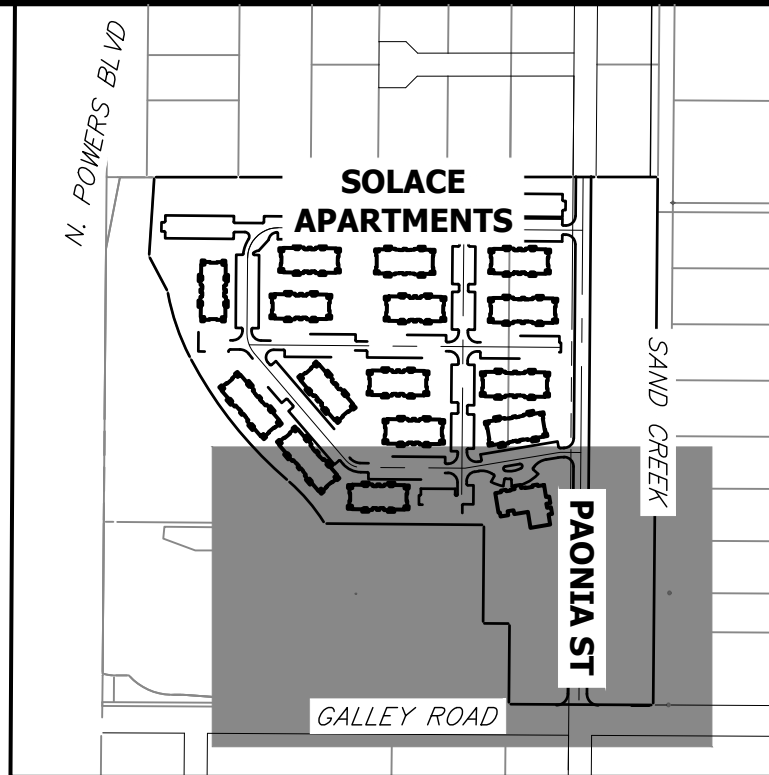
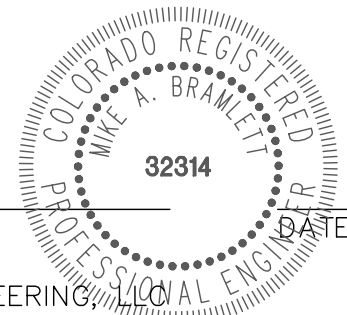
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COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING



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

**LEGEND**

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

**BMP PHASING**

- INITIAL:
- 1) INSTALL VTC
  - 2) INSTALL CWA
  - 3) ESTABLISH SSA
  - 4) INSTALL CONSTRUCTION MARKERS
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- FINAL:
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  - 2) REMOVE SILT FENCE AFTER STABILIZED

SOLACE AT CIMARRON HILLS

INITIAL GRADING AND  
EROSION CONTROL PLANS

SHEET 4 OF 10

JOB NO. 25174.00

PREPARED FOR  
**JACKSON DEARBORN PARTNERS**

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SUITE 400  
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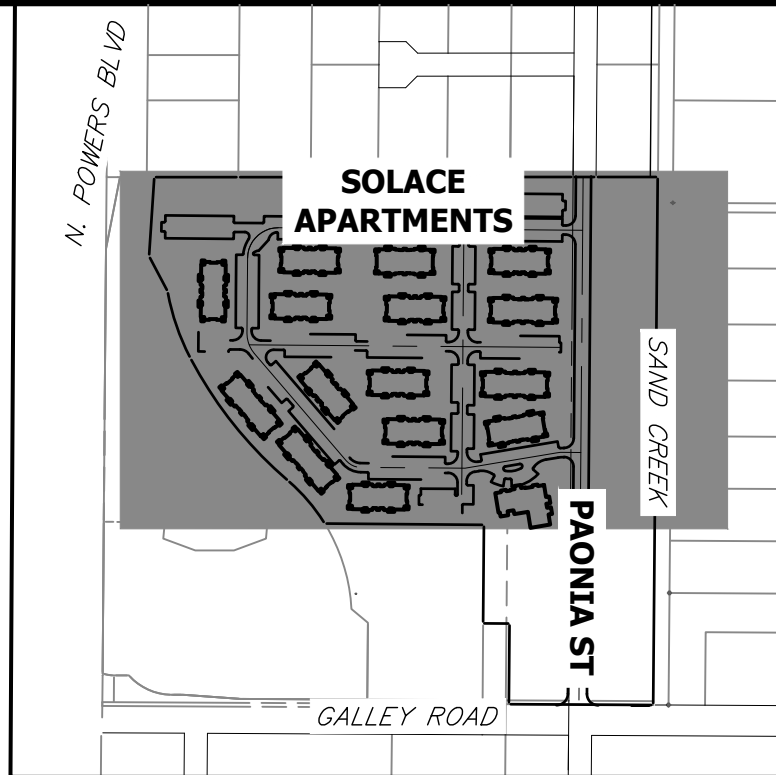
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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.





LEGEND	
SEDIMENT BASIN	
SILT FENCE	
CONSTRUCTION FENCE	
STABILIZED STAGING AREA	
CONSTRUCTION MARKER	
VEHICLE TRACKING CONTROL	
TEMPORARY STOCK PILE	
EROSION CONTROL BLANKET	
INLET PROTECTION	
OUTLET PROTECTION	
DIVERSION DITCH AND DIKE, TEMPORARY	
CUT AND FILL LINE	
LIMITS OF CONSTRUCTION	
LIMITS OF DISTURBANCE	
CONCRETE WASHOUT AREA	
SEEDING & MULCHING & SURFACE ROUGHENING	
TEMPORARY SLOPE DRAIN	
CHECK DAM	
ROCK SOCKS	

- BMP PHASING**
- INITIAL PHASES**
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  - 3) ESTABLISH SSA
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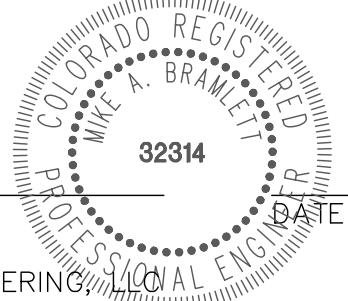
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SOLACE AT CIMARRON HILLS  
FINAL GRADING AND EROSION  
CONTROL PLANS

SHEET 5 OF 10

JOB NO. 25174.00

BY DATE

No. REVISION

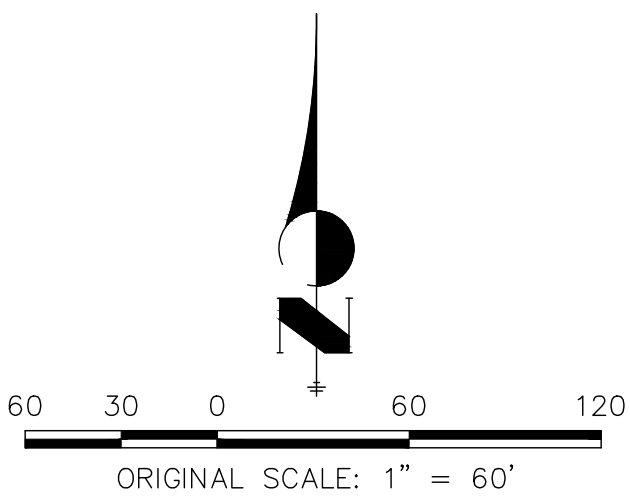
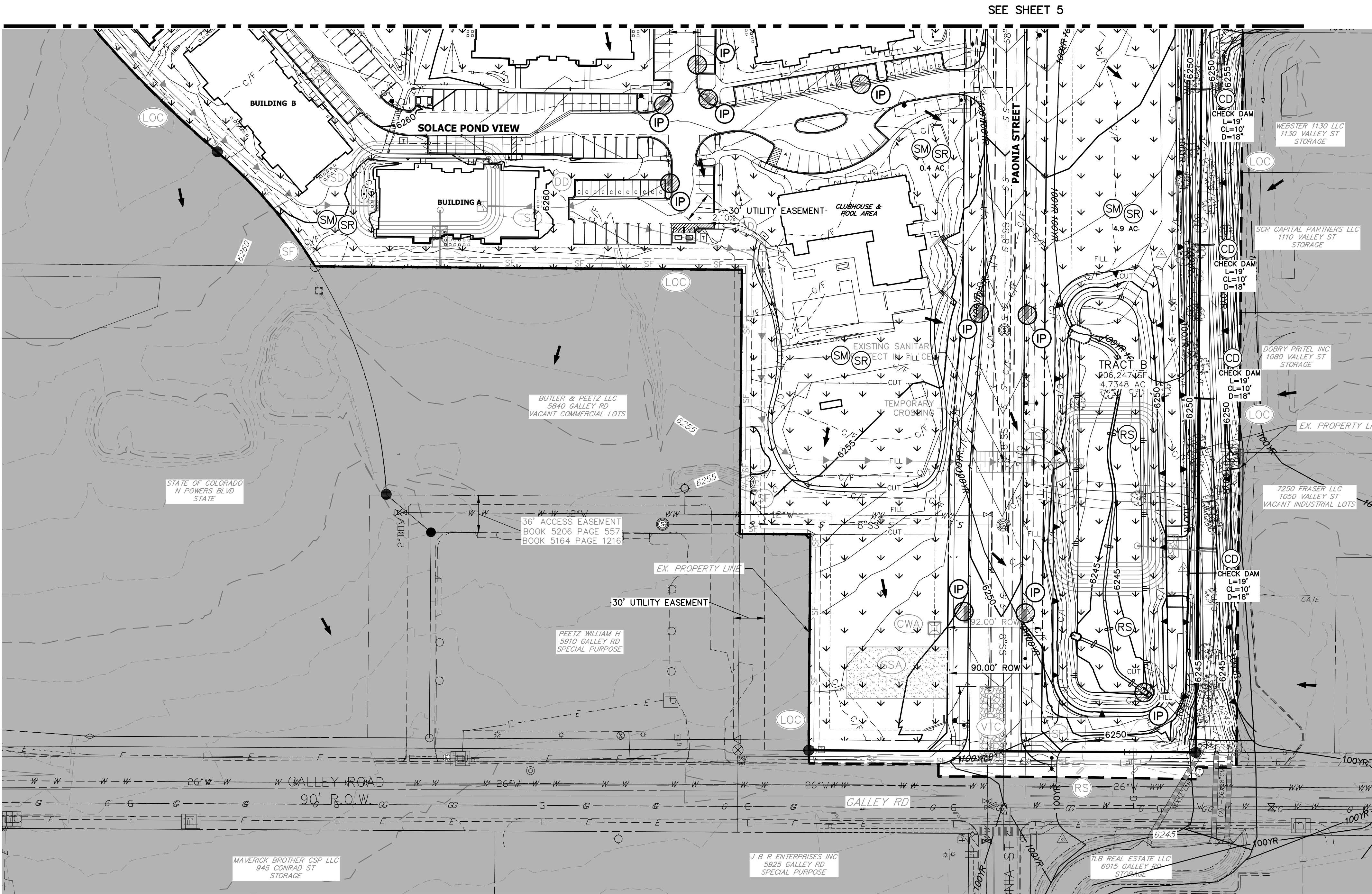
H-SCALE 1"=60'  
V-SCALE N/A  
DATE 03/12/21  
DESIGNED BY JRM  
DRAWN BY JRM  
CHECKED BY

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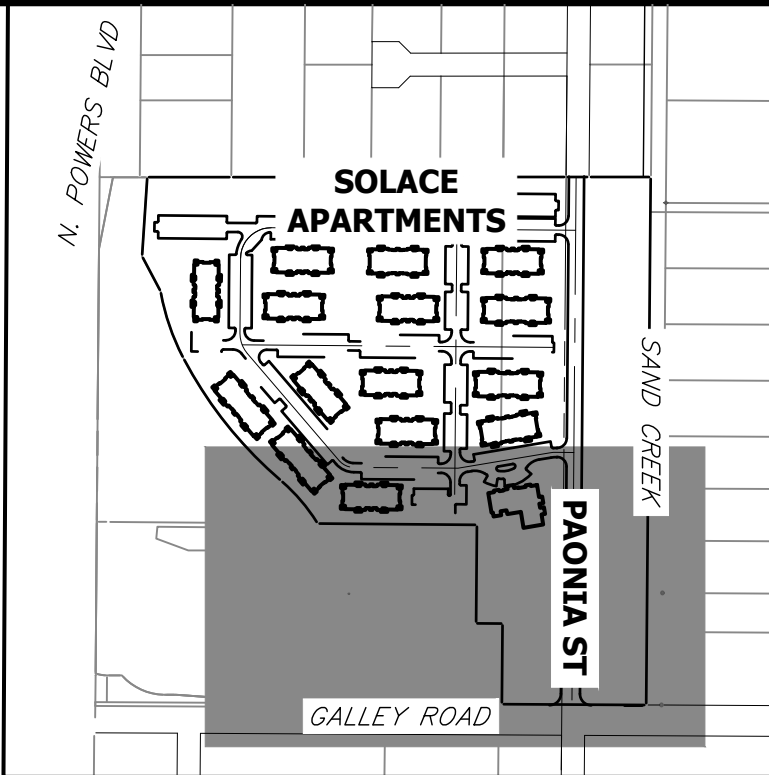
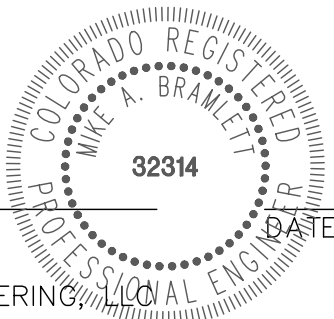
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STABILIZED STAGING AREA	SSA	
CONSTRUCTION MARKER	CM	
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INLET PROTECTION	IP	
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DIVERSION DITCH AND DIKE, TEMPORARY	DD	
CUT AND FILL LINE	C/F	
LIMITS OF CONSTRUCTION	LOC	
LIMITS OF DISTURBANCE		
CONCRETE WASHOUT AREA	CWA	
SEEDING & MULCHING & SURFACE ROUGHENING	SM SR	
TEMPORARY SLOPE DRAIN	TSD	
CHECK DAM	CD	
ROCK SOCKS	RS	

**BMP PHASING**

- STORMWATER DRAINAGE ARROWS
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SOLACE AT CIMARRON HILLS

FINAL GRADING AND EROSION  
CONTROL PLANS

SHEET 6 OF 10

JOB NO. 25174.00

PREPARED FOR  
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4. FILTER FABRIC PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED IN THE DRAINAGE AREA AS APPROVED BY THE CITY.

**Figure IP-1**  
**Filter Fabric Inlet Protection**  
Construction Detail and Maintenance Requirements



STORMWATER  
ENTERPRISE

APPROVED: [Signature]  
SWMT MANAGER

ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING: 90
--------------------	-----------------------	----------------

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN CONTROL MEASURE EFFECTIVENESS, SPECIFICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW SPILLWAY CREST).
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SEDIMENT BASIN REMOVAL.

TSB



STORMWATER  
ENTERPRISE

SEDIMENT BASIN

APPROVED: *[Signature]*

SWEET MANAGER

ISSUED: 10/27/19

REVISED: 8/19/2020

DRAWING NO.: 900-TSR

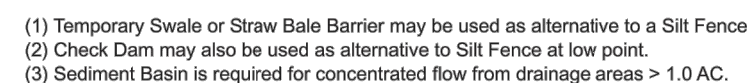
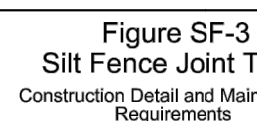


Figure SF-1  
Silt Fence  
Application Examples



**Figure SF-2**  
**Silt Fence**  
Construction Detail and Maintenance Requirements



1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SURFACE ROUGHENED AREAS.
2. SURFACE ROUGHENING IS TO BE REPEATED AS OFTEN AS NECESSARY.
3. VEHICLES OR EQUIPMENT IS NOT TO BE DRIVEN OVER AREAS THAT HAVE BEEN ROUGHENED.
4. AS SURFACE ROUGHENING IS ONLY A TEMPORARY CONTROL, ADDITIONAL TREATMENTS MAY BE NECESSARY TO MAINTAIN THE SOIL SURFACE IN A ROUGHENED CONDITION.

34



32314

MIKE A. BRAMLETT

COLORADO REGISTERED PROFESSIONAL ENGINEER

MECHANICAL ENGINEERING

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. MULLET	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	MAINTENANCE REQUIREMENTS
<ol style="list-style-type: none"> <li>1. DISTURBED AREAS ARE TO BE SEEDDED WITHIN 21 DAYS AFTER CONSTRUCTION ACTIVITY OR GRADING ENDS IF SEASON ALLOWS.</li> <li>2. IF NECESSARY, SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER, OR LIME.</li> <li>3. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENEED.</li> <li>4. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1, AND 1 INCH FOR SLOPES STEEPER THAN 2:1.</li> <li>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, KNAWEED, PURPLE LOOSESTRIPE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.</li> <li>6. TABLE TS-1 ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.</li> <li>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.</li> <li>8. ALL SEEDDED AREAS ARE TO BE MULCHED (SEE FACTSHEET ON MULCHING).</li> <li>9. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.</li> </ol>	<ol style="list-style-type: none"> <li>1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL SEEDDED AREAS TO ENSURE GROWTH.</li> <li>2. AREAS WHERE GROWTH IS NOT OCCURRING QUICKLY OR THE MULCH HAS BEEN REMOVED SHALL BE RE-SEEDDED AS SOON AS POSSIBLE AND RE-MULCHED IF NEEDED.</li> <li>3. SEEDDED AREAS ARE NOT TO BE DRIVEN OVER WITH CONSTRUCTION EQUIPMENT OR VEHICLES.</li> </ol>

City of Colorado Springs  
Stormwater Quality

Figure TS-1  
Temporary Seeding  
Construction Detail and Maintenance Requirements

Case 3  
At the top of a steep slope.

Case 4  
Downstream of a slope drain (see slope drain fact sheet)

5500

Construction Site Perimeter

5510

Sediment Basin

Temporary Swale, Typical

Case 1  
Placed on perimeter of site  
Drainage area < 1.0 AC  
See Table TSW-1

Case 2  
Placed on perimeter of site  
Drainage area > 1.0 AC  
See Table TSW-1

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

06/06/1153722-CL-CL/PL/2W-19-09

3-49

<p>CONVEYANCE SIZED FOR 2 YEAR FLOW OR GREATER</p> <p><b>A. EXCAVATED SWALE</b></p>	
<p><b>B. SWALE FORMED BY BERM</b></p>	
<p><b>C. SWALE FORMED BY CUT AND FILL</b></p>	
<p><b>TEMPORARY SWALE</b> NTS</p> <p><b>TEMPORARY SWALE NOTES</b></p>	
<p><b>INSTALLATION REQUIREMENTS</b></p> <ol style="list-style-type: none"><li>1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.</li><li>2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.</li><li>3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.</li><li>4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.</li><li>5. SWALES WITH SLOPE &gt; 2% SHALL BE LINED, SEE FIGURE TSW-3.</li><li>6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET.</li><li>7. Z SHALL BE 3 OR GREATER.</li></ol>	<p><b>MAINTENANCE REQUIREMENTS</b></p> <ol style="list-style-type: none"><li>1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.</li><li>2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT.</li><li>3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.</li><li>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.</li></ol>
<p>City of Colorado Springs Stormwater Quality</p>	<p>Figure TSW-2 Temporary Swale Construction Detail and Maintenance Requirements</p>

**A. EROSION CONTROL FABRIC**  
2% SLOPE-5% AND VELOCITY  $\leq$  8 FPS

12" THICK RIPRAP TYPE "VL"

**B. RIPRAP**  
SLOPE-5% OR VELOCITY  $>$  8 FPS

**SWALE LINING**  
NTS

## 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

CASE 2

Parking, Staging and  
Loading/Unloading Area

CASE 1

Construction  
Entrance

Table VT-1

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

City of Colorado Springs  
Storm Water Quality

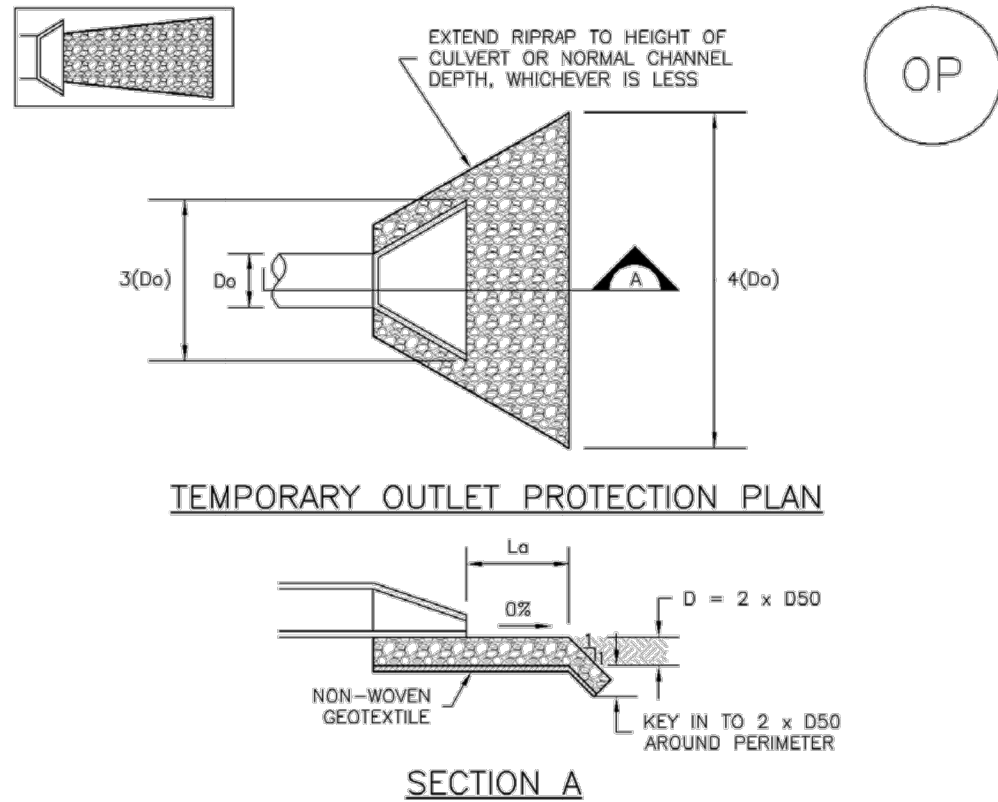
Figure VT-1  
Vehicle Tracking  
Application Examples

DENR/M153722 CS CS/Reg/VT-1-19-69

3-53

<p>Case 1 Placed on perimeter of site Drainage area &lt;1.0 AC See Table TSW-1</p> <p>Case 2 Placed on perimeter of site Drainage area &gt;1.0 AC See Table TSW-1</p>	<p>Table VT-1</p> <table><tr><th>Vehicle Tracking</th><th>Case 1</th><th>Case 2</th></tr><tr><td>Gravel Thickness</td><td>9"</td><td>3"</td></tr><tr><td>Filter Fabric</td><td>YES</td><td>NO</td></tr></table> <p>City of Colorado Springs Storm Water Quality</p> <p>Figure VT-1 Vehicle Tracking Application Examples</p>	Vehicle Tracking	Case 1	Case 2	Gravel Thickness	9"	3"	Filter Fabric	YES	NO
Vehicle Tracking	Case 1	Case 2								
Gravel Thickness	9"	3"								
Filter Fabric	YES	NO								

## EC-8 Temporary Outlet Protection (TOP)



PIPE DIAMETER, D <sub>o</sub> (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L <sub>a</sub> (FT)	RIPRAP D <sub>50</sub> DIAMETER MIN (INCHES)
8	2.5 5	5 10	4 6
12	5 10	10 15	6 9
18	10 20	15 30	9 12
24	20 40	30 60	12 16

TOP-2 Urban Drainage and Flood Control District  
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## Temporary Outlet Protection (TOP) EC-8

### TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR  
-LOCATION OF OUTLET PROTECTION.  
-DIMENSIONS OF OUTLET PROTECTION.
  2. DETAIL IS INTENDED FOR PIPES WITH SLOPE ≤ 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
  3. TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.
- TEMPORARY OUTLET PROTECTION INSPECTION AND MAINTENANCE NOTES
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

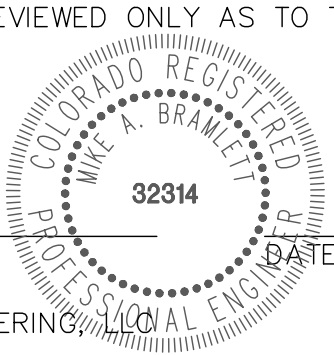
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### ENGINEER'S STATEMENT

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

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

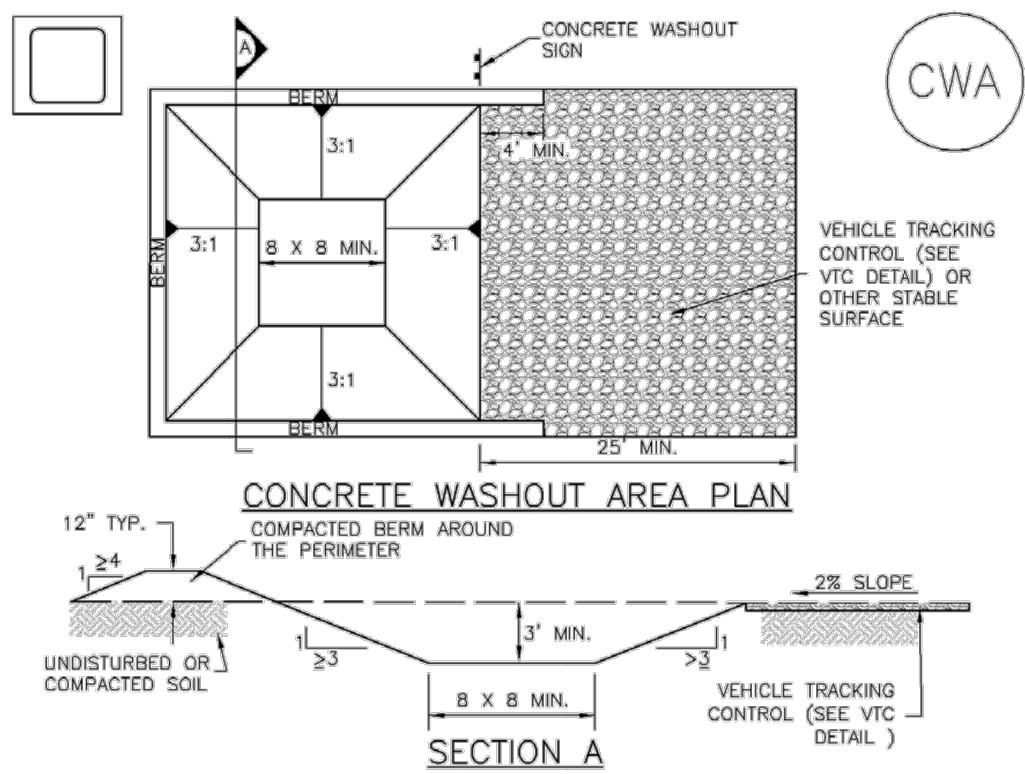
BY	DATE	REVISION	No.	N/A	N/A	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
								03/12/21	JRM	JRM	
SOLACE AT CIMARRON HILLS											
GRADING AND EROSION CONTROL DETAILS											
SHEET 8 OF 10											
JOB NO. 25174.00											





Concrete Washout Area (CWA)

MM-1



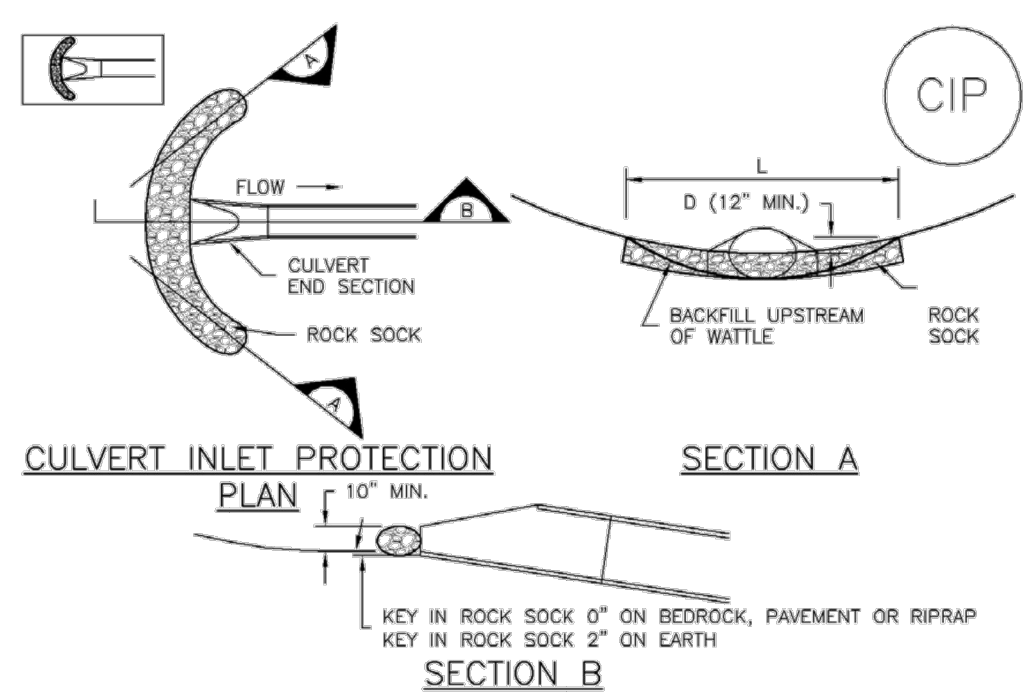
CWA-1. CONCRETE WASHOUT AREA

- CWA INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:  
- CWA INSTALLATION LOCATION.
  2. 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 (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINER ABOVE GROUND STORAGE ARE SHOULD BE USED.
  3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
  4. 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.
  5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
  6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
  7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE. AT THE CWA, AND WHEREVER AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
  8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

- CULVERT INLET PROTECTION INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:  
- LOCATION OF CULVERT INLET PROTECTION.
  2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.
- CULVERT INLET PROTECTION 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.
  4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS  $\frac{1}{2}$  THE HEIGHT OF THE ROCK SOCK.
  5. 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.

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MM-1

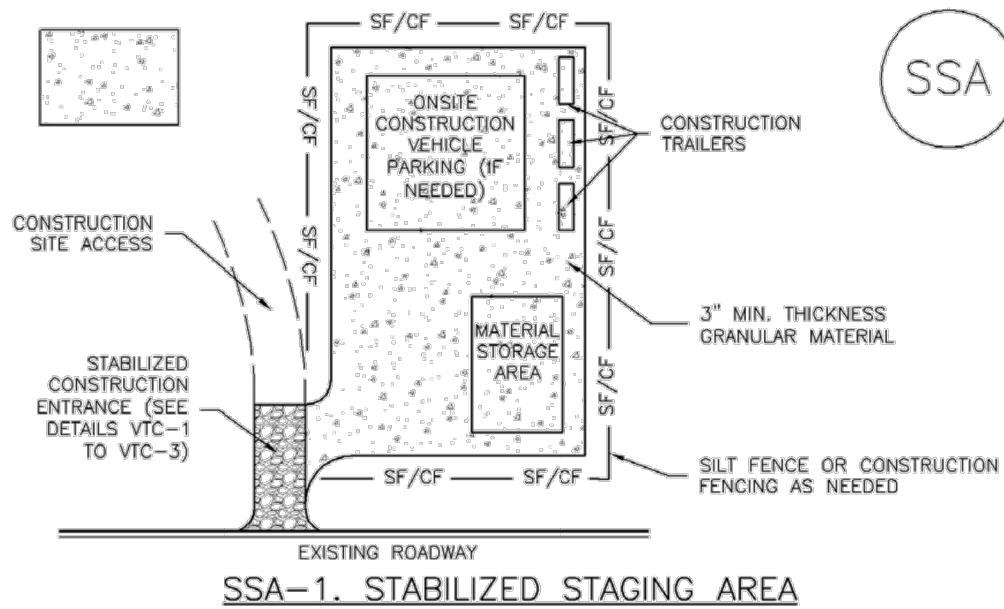
Concrete Washout Area (CWA)

- CWA 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.
  4. 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'.
  5. 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.
  6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
  7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CWA-4 Urban Drainage and Flood Control District  
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Stabilized Staging Area (SSA)

SM-6



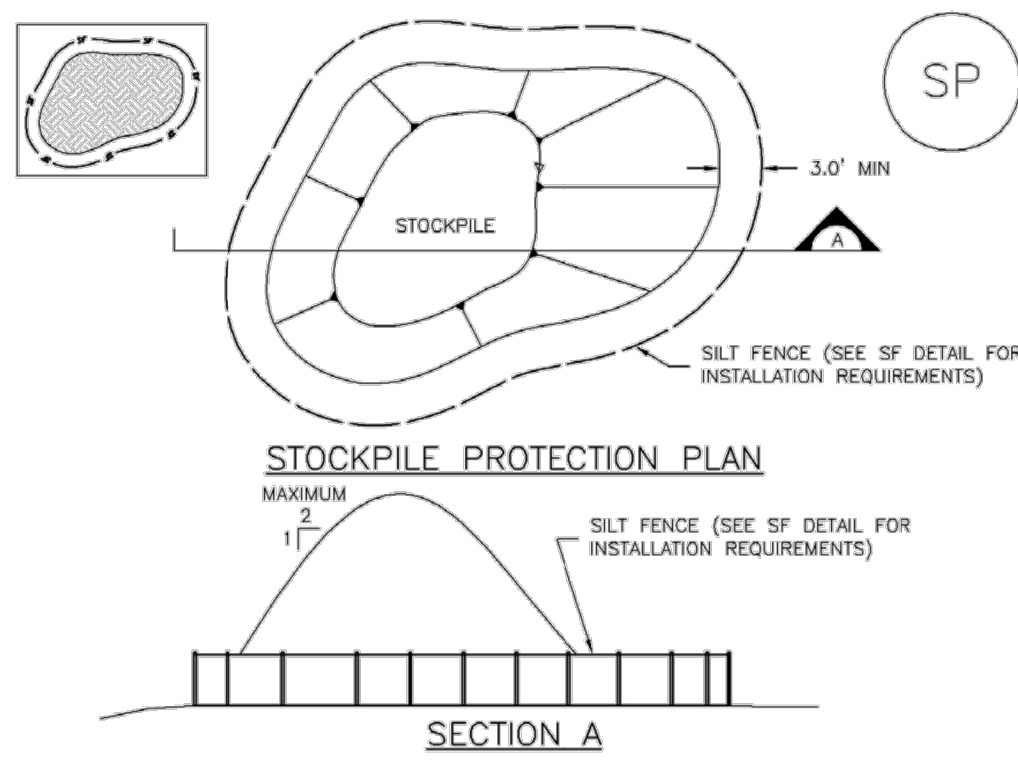
SSA-1. STABILIZED STAGING AREA

- STABILIZED STAGING AREA INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:  
- LOCATION OF STAGING AREA(S).  
- CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
  2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
  3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
  4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
  5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
  6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.
- STABILIZED STAGING AREA 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.
  4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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Stockpile Management (SP)

MM-2



SP-1. STOCKPILE PROTECTION

- STOCKPILE PROTECTION INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:  
- LOCATION OF STOCKPILES.  
- TYPE OF STOCKPILE PROTECTION.
  2. 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 PEROUS OR IMPERVIOUS 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.
  3. 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 SEED 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).
  4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADE CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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SM-6

Stabilized Staging Area (SSA)

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

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MM-2

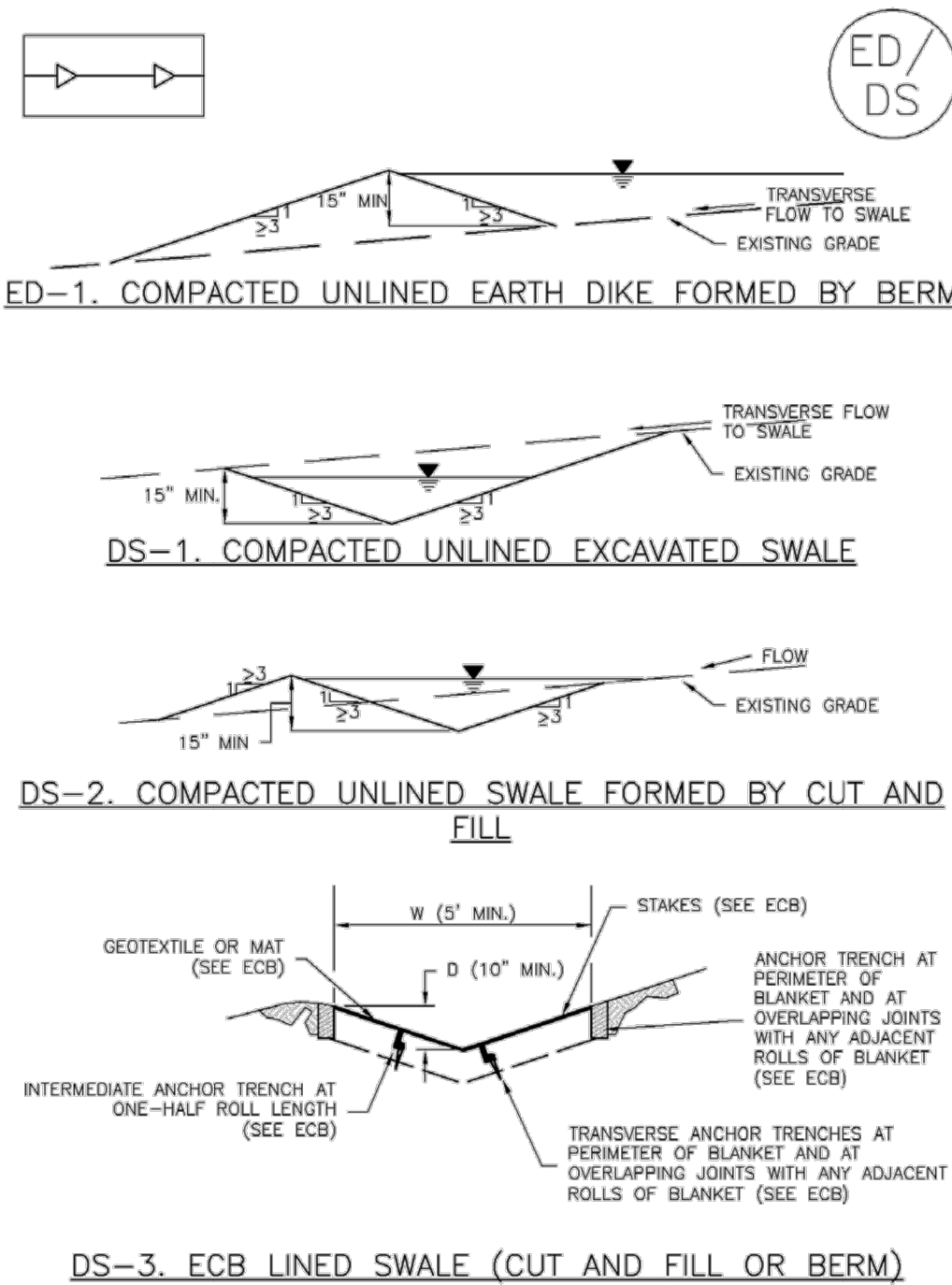
Stockpile Management (SM)

- STOCKPILE PROTECTION 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.
- STOCKPILE PROTECTION INSTALLATION NOTES**
4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
  5. 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.

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Earth Dikes and Drainage Swales (ED/DS)

EC-10



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ENGINEER'S STATEMENT

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

PREPARED FOR  
JACKSON DEARBORN PARTNERS

404 S. WELLS ST.  
SUITE 400  
CHICAGO, IL 60607  
OFFICE PHONE  
(734) 216-2577

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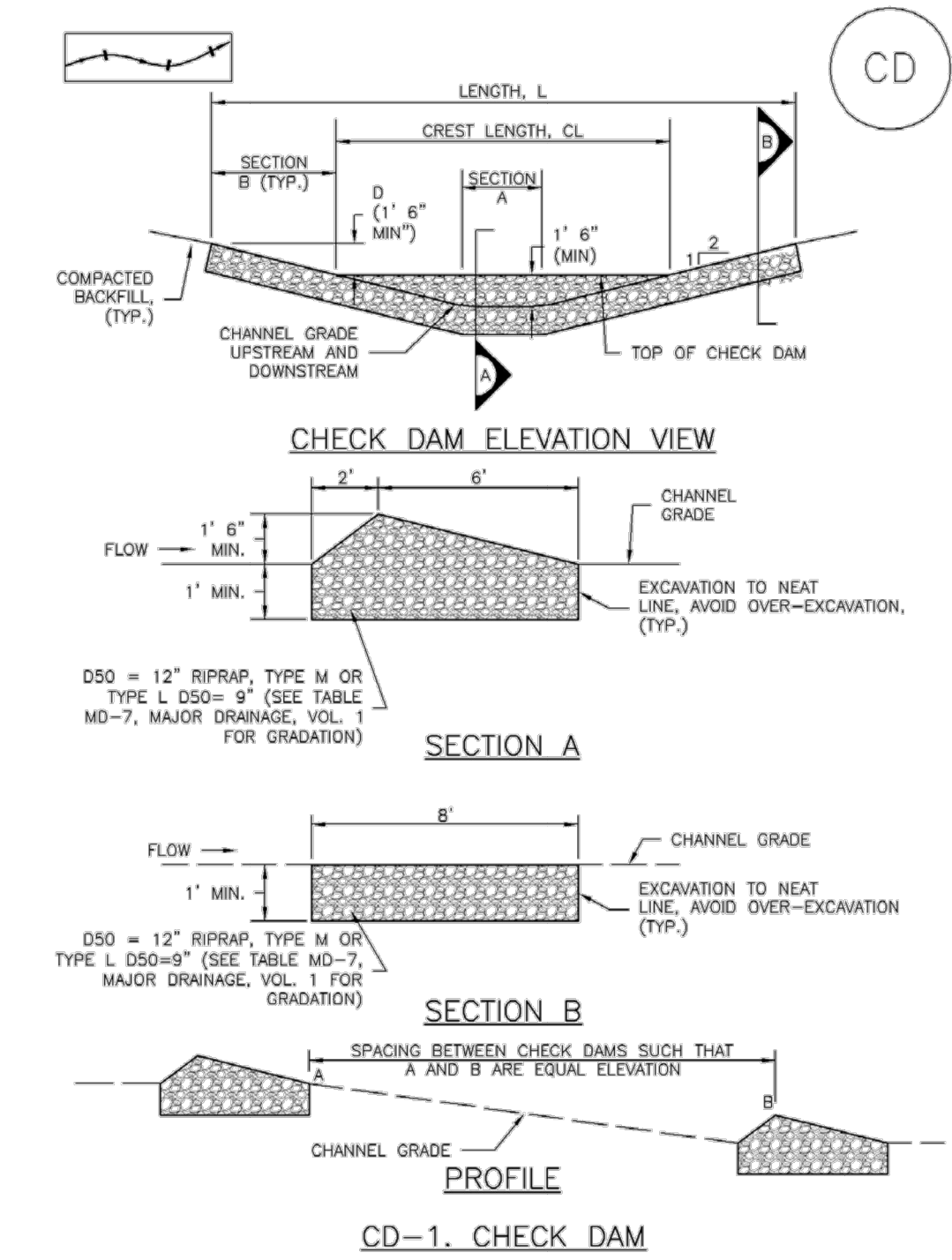
Central 303-740-9383 • Colorado Springs 719-583-2593  
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	REVISION	No.	N/A	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
						03/12/21	JRM	JRM	
SOLACE AT CIMARRON HILLS									
GRADING AND EROSION CONTROL DETAILS									
SHEET 9 OF 10									
JOB NO. 25174.00									



Know what's below.  
Call before you dig.





CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION OF 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 SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (DSO 12") 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 THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

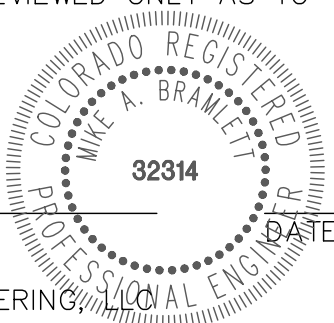
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  3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
  5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
  6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, 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.



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COLORADO P.E. 32314  
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SOLACE AT CIMARRON HILLS

GRADING AND EROSION  
CONTROL DETAILS

SHEET 10 OF 10

JOB NO. 25174.00

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	N/A	REVISION	BY	DATE
		03/12/21	JRM	JRM					

**J.R. ENGINEERING**  
A Western Company

Centennial 303-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • [www.jrengineering.com](http://www.jrengineering.com)

PREPARED FOR  
**JACKSON DEARBORN PARTNERS**  
404 S. WELLS ST.  
SUITE 400  
CHICAGO, IL 60607  
OFFICE PHONE  
(734) 216-2577

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