

GENERAL VICINITY MAP

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. accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this plan.

Michael Brady CO PE no. 36248 Managing Engineer

Owner's Statement:

The Owner will comply with the requirements of the Grading and Brosion Control Plan.

Michael Myers

Technical Services Supervisor

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, and Engineering Criteria Manual as amended.

10/25/2018 10:27:35 AM

County Engineer / ECM Administrator

REPORTING REQUIREMENTS

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETED: TOTAL AREA OF THE SITE TO BE CLEARED, EXCAVATED OR GRADED:

October 29, 2018 November 9, 2018 5.0 acres

NAME OF RECEIVING WATERS: South Clear Springs Ranch Drainage Ditch ultimately discharges to

SOILS INFORMATION:

Kim Loam (1-8% slopes); Limon Clay (0-3% slopes), Schamber-Razor Complex (8-50% slopes): [NRCS Soil Survey]

SUBDIVISION NAME: N/A.

BMP COST ESTIMATE: Estimate is for worst case scenario

(not inclusive of pavement or curb & gutter repair)

max. 1.00acre x \$582/acre = \$582 for Hydro Seeding / Mulching + fertilizer and tackifier

1 unit x \$1,625/unit = \$1,625 for Vehicle Tracking Control 50 units x \$6.00/unit = \$300 for Erosion Control Logs 50 LF x \$4/LF = \$200 for Silt Fence

Subtotal = \$2,707.00

Subtotal x 40% Maintenance of BMP's = \$1,082.80

Total = \$3,789.80

PROPOSED TOPOGRAPHY: The site will be returned as closely as possible to its pre-construction grade

LOCATION OF ANY OTHER PROPOSED FEATURES AND STRUCTURES ON THIS SITE: N/A

LOCATION AND PLANS FOR ALL DRAINAGE FEATURES: N/A

LOCATION OF PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES: N/A

LOCATION OF ANY DEDICATED ASPHALT OR CONCRETE BATCH PLANTS: N/A

IS THE SITE IN THE CITY'S STREAMSIDE ZONE: No

EMERGENCY OVERFLOW SWALES: N/A

FLOW ROUTE - FLOW THROUGH AND OVERFLOW OF PERMANENT BMP'S AND TEMPORARY SEDIMENT BASINS: N/A DETAIL DRAWINGS OF PERMANENT BMP'S: N/A

NOTES:

A designated concrete truck washout is not anticipated for this project. Fueling of equipment may occur along the project route; fueling guidelines are included in the SWMP. All disturbed areas outside the roadway will be reseeded.

Additional erosion control details on maintenance and installation are located in Attachment 3 to the SWMP/GESQCP Narrative

Standard Notes for El Pago County Grading and Brosion Control Plans

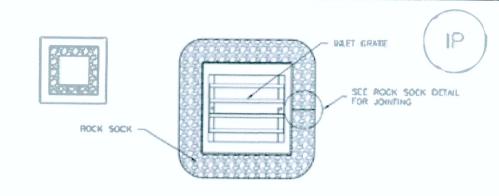
- ection may not commence until a Construction Permit is obtained from Planning and Community Development (PCD) and a preconstruction conference is held with PCD Inspection
- 2. Stormwater discharges from construction sites shall not conse or threaten to conse pollution, contemination, or degradation of State Vaters. All work and earth disturbance shall be done in a manner that minimum pollution of any on-site or off site vaters, including votands.
- Histolikalunding anything depicted in these piens in words or graphic representation, all design and construction related to reads, storm drainess and evolute control shall conform to the standards and requirements of the most recent variant of the relevant adopted El Paso County standards, including the Land Davidspment Code, the Engineering Criteria Manual, the Drainess Criteria Manual, and the Drainess Criteria Manual, and the Drainess and standards must be requested, and approved, in writing.
- 4. A separate Starsauder Management Plan (STMP) for this project shall be completed and an Evosion and Starsauder Quality Control Permit (ESQCF) issued prior to communicing construction the STMP is the responsibility of the designated Stormauter Manager, shall be located on site at all times and shall be kept up to date with work program and changes in the field.
- 5. Once the ESQCP has been issued, the contractor may install the initial stage evolute and sediment control RaPs as indicated on the GEC. A proconstruction 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 PCD inspections staff.
- i. Soil evotion control measures for all slopes, channels, ditches, or any disturbed lend area, shall be completed within 21 colonder days after final grading, or final earth disturbance, has been completed.

 Disturbed evens and stockplies which are not at final grade but will remain domest for longer than 30 days shall also be malched within 21 days after interim grading. An area that is going to remain in an interim state for more than 80 days shall also be maded. All temporary soil evotes control measures and Biffs shall be maintained notil personnest soil evotes control measures are implemental and
- 7. Temporary soil evoluse control facilities shall be removed and earth disturtance areas graded and stabilized with permanent soil evolute control measures parament to standards and specification prescribed in the DON Volume II and the Engineering Criteria Manual (ECM) appendix I.
- 8. All persons engaged in earth disturbance shall implement and maintain acceptable soil greaten and sediment control measures including BMPs in conformance with the greaten control technique Criteria Manual (DCM) Volume II and in accordance with the Stormwater Munegument Plan (SVMP).
- 9. All temperary evalues control facilities including HiPs and all parameters, facilities intended to central evalues of any earth disturbance operations shall be installed as defined in the approved plans, the SVMP and the DCE Volume II and maintained throughout the duration of the earth disturbance operation.
- 10. Any certis disturbance shall be conducted in such a manner so as to effectively reduce accelerated still excelen and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the experied area of any disturbed land shall be limited to the shortest practical period of time.
- 11. key temperary or permanent facility designed and constructed for the conveyance of stormweter around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive
- 12.Concrete wash water shall be contained and disposed of in accordance with the SVAP. No wesh water shall be displayed to or allowed to runoff to State Veters, including any surface or subsurface storm dreinage system or facilities.
- 13.Eventure countrol blumbating shall be used on slopes stemper them 34.
- 14. Building, construction, or other make materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved fractic Control Plan.

 Bill's may be required by El Paso County Engineering if deemed measurery, based on specific conditions and circumstances.
- tracking of noils and construction debris off-site shall be minimized. Materials tracked offsite shall be classed up and properly disposed of immediately.
- 16.Contractor shall be responsible for the removal of all wester from the construction site for disposal in accordance with local and State regulatory requirements. No construction delate, tree sizes, building materials shall be buried, dumped, or discharged at the site.
- 19. The owner, site denshipser, contractor, and/or their anticorined equals shall be responsible for the removal of all construction debris, dirt, tresh, rock, sediment, and send that may accommiss in the storm sower or other drainess conveyance system and stormwater appartmentous as a result of site development.
- in a nest, orderly manner, in their original containers, with original manufacturer's labels.
- 20. Bulk storage structures for petrolsum products and other chandcals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Veters, including any surface or subsurfacer storm drainage system or facilities.
- 21.50 person shell course the impalitment of stamuster flow in the flow line of the carb and sutter or in the ditch line
- 33. Individuals shall comply with the Colorado Veter Quality Control Act. (19tin 25, Article 8, C25), and the Clean Veter Act. (33 USC 1844), in addition to the requirements included in the DCM Volume II and the ECM Appendix I. All appropriate parmits must be obtained by the contractor prior to construction (EPER, Floodplain, 404, fagilire dust, etc.). In the event of conflicts between these requirements and how, rules, or regulations of other Federal, State, or County agencies, the more restrictive laws, rules, or regulations shall apply.
- 23. All construction traffic must enter/exit the site at approved construction access points

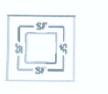
- 17. At least ten days prior to the enticipated start of construction, for projects that will disturb 1 core or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Vater Quality Division. The application contains cartification of completion of a stormwater management plan (SVMF), of which this grading and erceion control plan may be a part. For information or application materials contact:

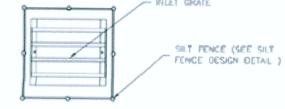
Calarado Department of Public Health and Environment Value: Quality Control Division. VQCD — Permits: 4300 Cherry Creek Drive South



IP-3, ROCK SOCK SUMP/AREA INLET PROTECTION

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR PALETS IN PERMOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

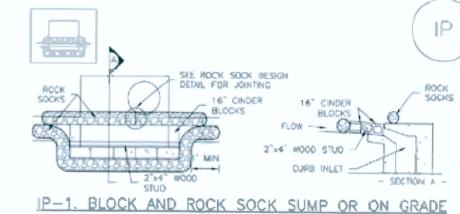




IP-4. SILT FENCE FOR SUMP INLET PROTECTION

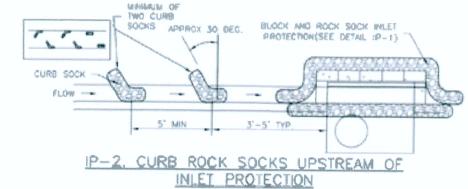
SILT FENCE INLET PROTECTION INSTALLATION NOTES

- 1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
- 2. POSTS SHALL BE PLACED AT EACH CORNER OF THE BILET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
- 3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SLE FENCE FOR PILETS IN PERMOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



PLOCK AND OWRE SOCK INLET PROFECTION INSTALLATION MOTES 1 SEE ROOK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAD ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANDTHER WITH THE OPEN END FACING KNAY FROM THE CURB. 3. CRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

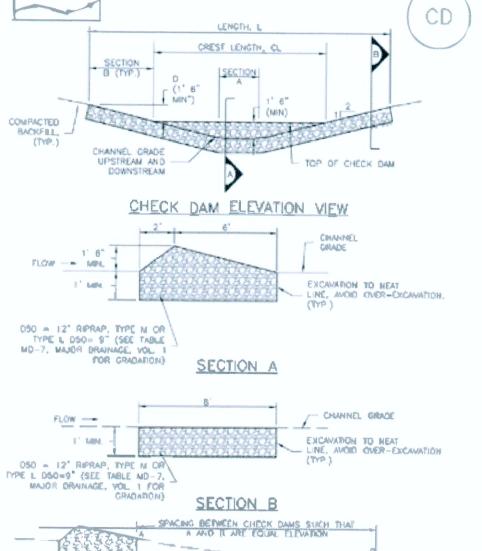


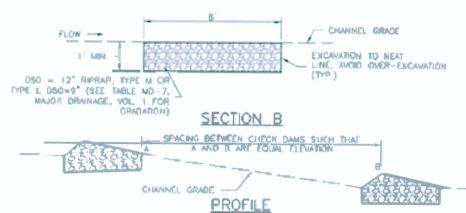
- CURE ROCK SOOK IN EL PROTECTION INSTALLATION NOTES
- . SEE ROOK SOCK DESIGN DETAIL DISTALLATION REQUIREMENTS.
- 2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
- 3. SOCKS ARE TO SE FLUSH WITH THE CLIRB AND SPACED A MEHIAM OF 5 FEET APART.

4 AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLESS.

- GENERAL BLET PROTECTION METALATION NOTES 1. SEE PLAN VIEW FOR: ATION OF INLET PROTECTION -TYPE OF INLET PROTECTION (P.1. IP.2. IP.3. IP.4. IP.5. IP.6)
- 2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAYING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RANFALL/PRINCES EVENT IS FORECAST, INSTALL INLET PROTECTION FROM TO ONSET OF EVENT.
- 3. MANY JURISDICTIONS HAVE BUP DETAILS THAT WARY FROM UDFOD STANDARD DETAILS.
 CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN
 DIFFERENCES ARE NOTED. INLET PROJECTION MAINTEMANCE HOTES
- 1, INSPECT BNPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION, MAINTENANCE OF BMPs SNOULD BE PROACTIVE, NOT REACTIVE INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM MECESSARY MAINTENANCE. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPS
- EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY. 3. WHERE 6MP'S HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INTIMED UPON DISCOVERY OF THE FAILURE.
- 4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS HECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES SOR OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR X OF THE HEIGHT FOR S. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
- 6. WHEN DRET PROTECTION AT AREA BLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVENED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAIL MONPTED FROM TOWN OF FHRMER, COLORADO AND ONY OF AURORA, COLORADO, NOT AMBLABLE IN INFOCACE) NOTE, MANY JURISDICTIONS HAVE BUSY DETAILS THAT VARY FROM UDFCD STANDARD DETAILS.
 CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN
 OFFERENCES ARE NOTED.
- ROSE. THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF PALET PROTECTION OF THE GENVER METHODOLITAN AREA. INERE ARE MANY PROPRIETARY PALET PROTECTION METHODS ON THE MARKET. LOCGO NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SHAP AND THE BAP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS. NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK MITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET

PROTECTION IS ACCEPTABLE.





CD-1. CHECK DAM

OFFICE DAM INSTALLATION MOTES

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 SIMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE. BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES. 3. RIPRIA UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE PPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (050 12")

- CA TYPE L (050 9"). 4. RIPRAP PAD SHALL BE IRENCHED INTO THE GROUND A WINMUM OF 1". 3. THE ENDS OF THE CHECK DAM SHALL BE A MENIMUM OF 1' 6" HICHER THAN THE CENTER
- CHECK DAW MATHEMANCE MOTES I. BESPECT BUPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUPS SHOULD BE PROACTIVE. NOT REACTIVE. RESPECT BUPS 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 BINDS WE EFFECTIVE OPERATING CONDITION INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- 3. WHERE BAPA HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INFRATED UPON DISCOVERY OF THE FAILURE. 4. SEDULENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN IS 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 DAWS ARE REMOVED, EXCAVATIONS SHALL BE FILED WITH SUITABLE COMPACTED BACKFILL DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANUER APPROVED BY THE LOCAL JURISDICTION. DOERNILY ADAPTED FROM DOUGLAS IGOLANTY, DOLENGADO, NOT PAMELABLE IN AUTOCOD)
- MOTE: MANY JURISDICTIONS HAVE BUP DETAILS THAT VARY FROM LIDEOD STANDARD DETAILS.
 CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN
 DIFFERENCES ARE NOTED.



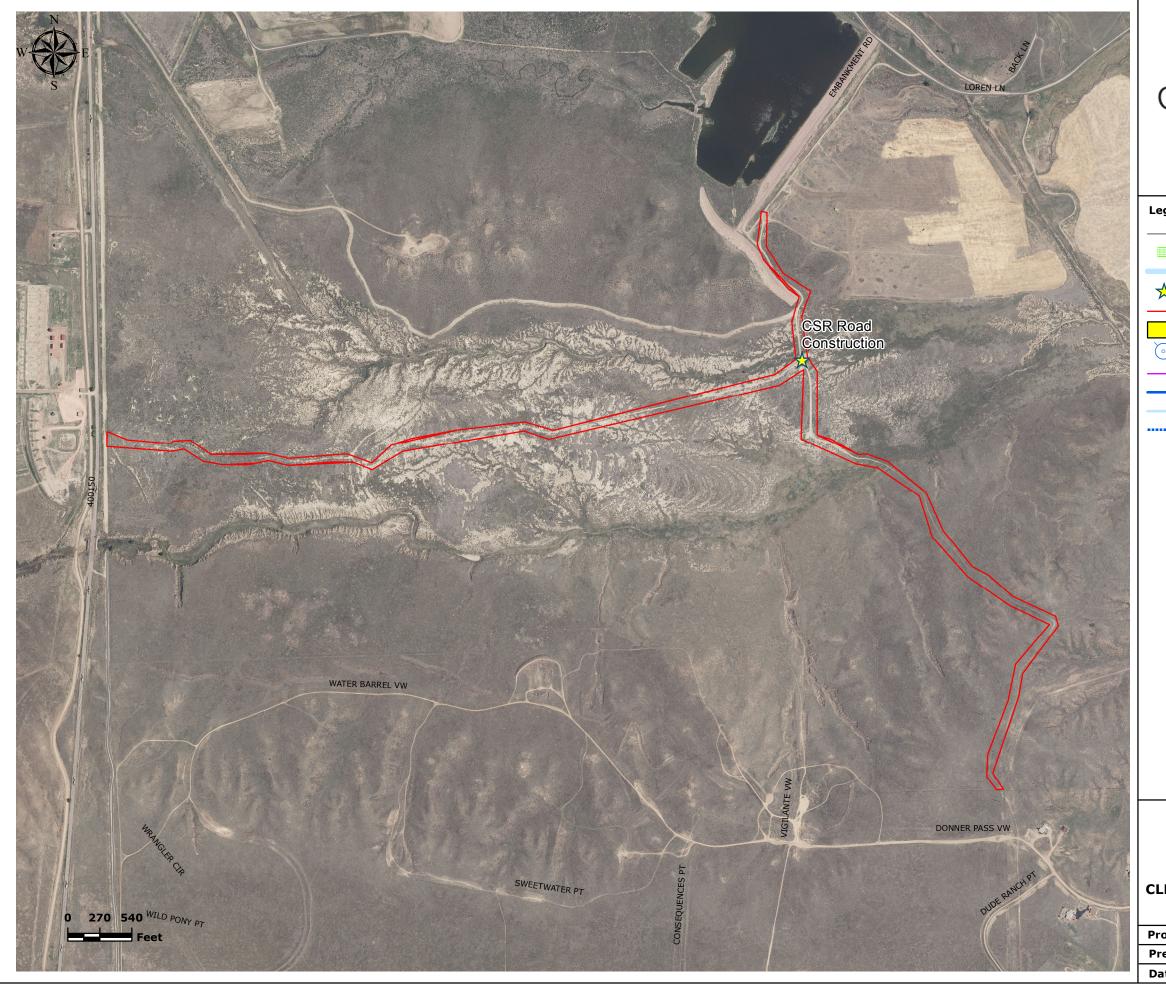
ENVIRONMENT, HEALTH, & SAFETY DEPARTMENT

TECHNICAL SERVICES SECTION P.O. Box 1103, Mail Code 940 COLORADO SPRINGS, CO 80947 (719) 668-8688

TITLE PAGE **EROSION AND STORMWATER QUALITY CONTROL PLAN**

Clear Springs Ranch **Access Road Fire Break**

| Project No: | See SWMP | Figure |
|--------------|--------------|--------|
| Prepared By: | RSC | 1 |
| Date: | OCTOBER 2018 | of 4 |





It's how we're all connected

Environmental Services Department 121 South Tejon Street, Fourth Floor Colorado Springs, Colorado 80903

Legend:

--- Streets

Colorado Springs SW Inlets

Water Way

Construction Project Location

Boundary of Planned Construction Disturbance

Construction Project Impervious Areas

Hydrant

NonPotablePipe

PotablePipe

RawPipe

Existing Water Service Line

SWMP / ESQCP **EXISTING SITE CONDITIONS**

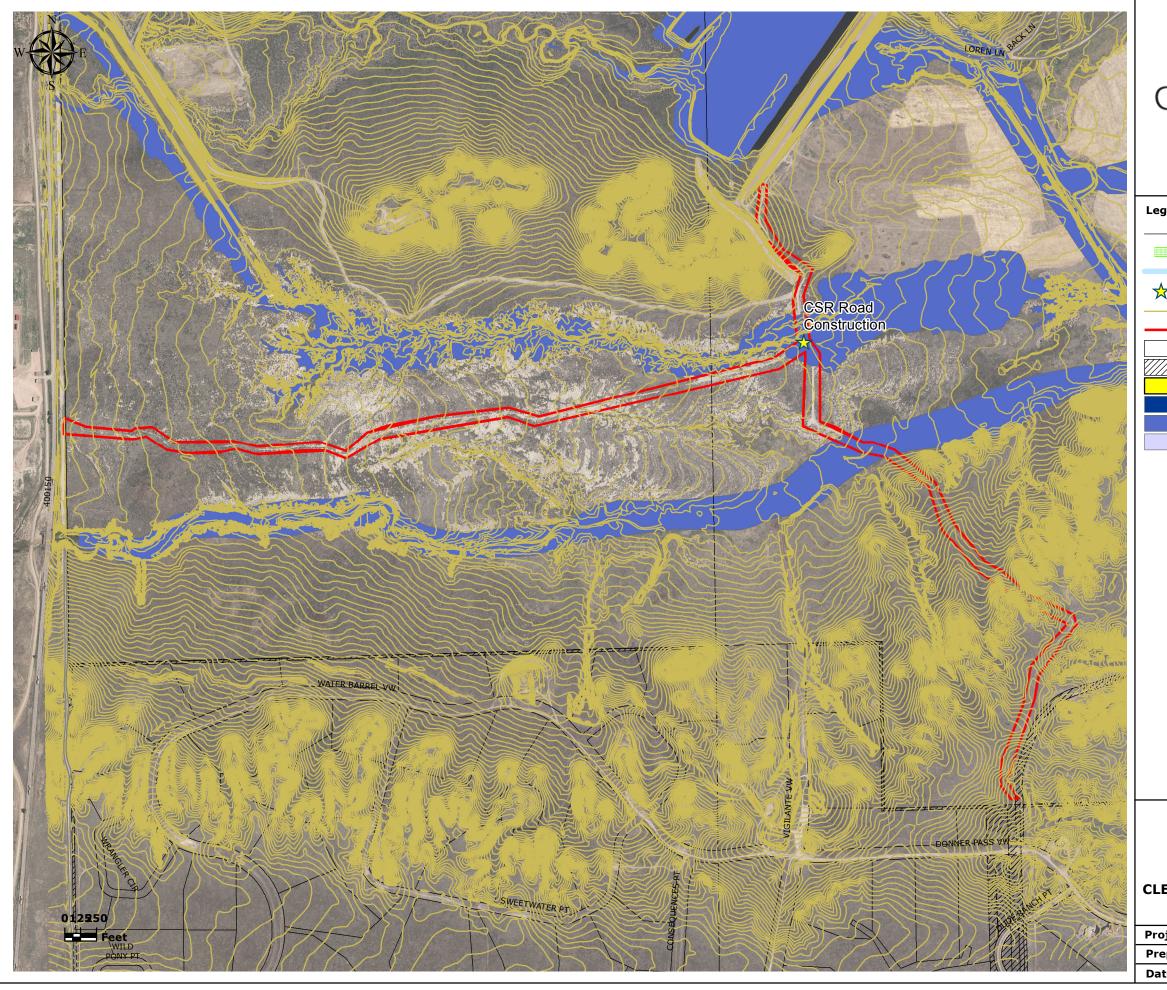
CLEAR SPRINGS RANCH ROAD CONSTRUCTION

Project No: WO# 3344840

Prepared By: RICHARD SEBASTIAN-COLEMAN

OCTOBER 2018

Figure Number





It's how we're all connected

Environmental Services Department 121 South Tejon Street, Fourth Floor Colorado Springs, Colorado 80903

Legend:

Streets

Colorado Springs SW Inlets

Water Way

Construction Project Location

Existing and Proposed Contours (2ft Intervals)

Boundary of Construction Project

Property Boundaries

UtilityEasements

Othicy Education

Impervious Areas at Project Site

10 Year FEMA Flood Zone 100 Year FEMA Flood Zone

500 Year FEMA Flood Zone

SWMP / ESQCP PROPOSED SITE CONDITIONS CLEAR SPRINGS RANCH ROAD CONSTRUCTION

Project No: WO# 3344840

Prepared By: RICHARD SEBASTIAN-COLEMAN

Date: AUGUST 2018

Figure Number

