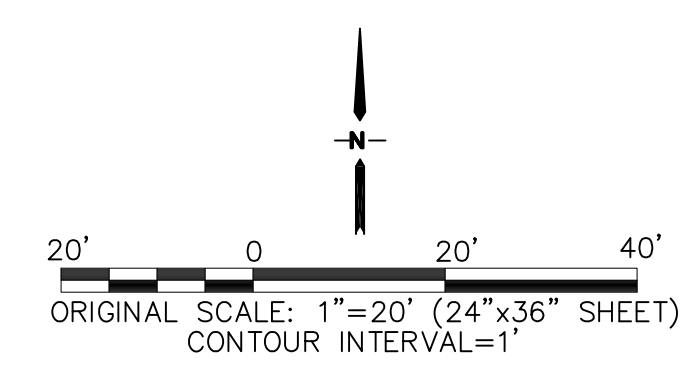
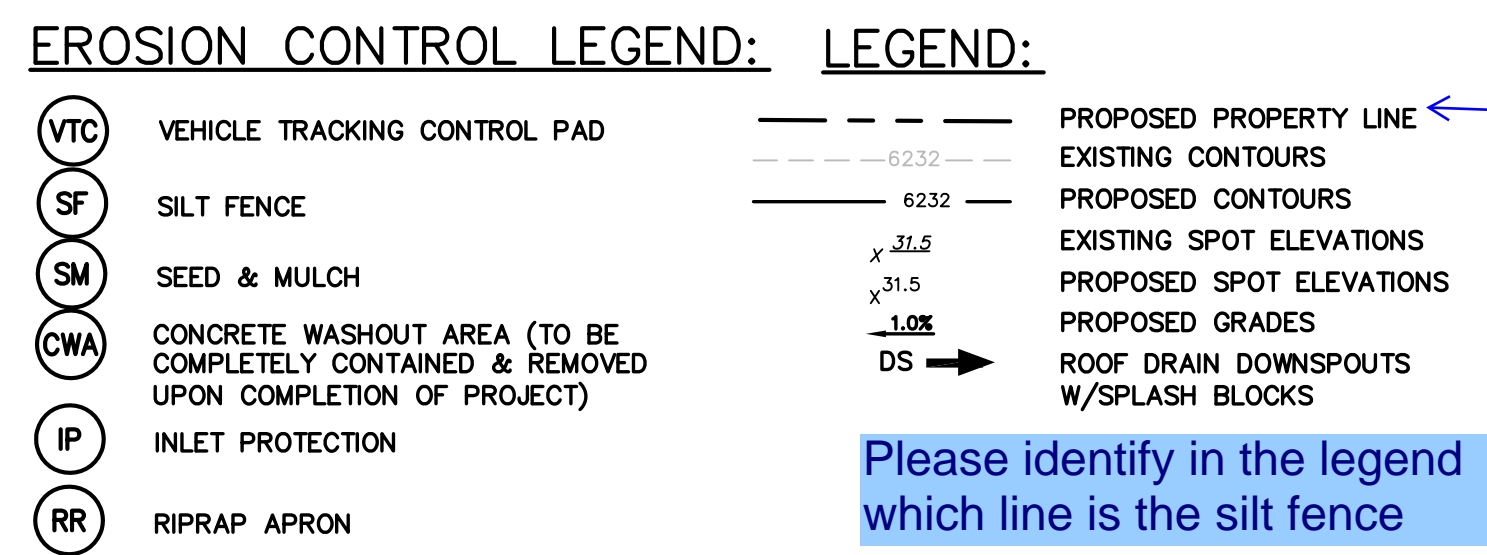
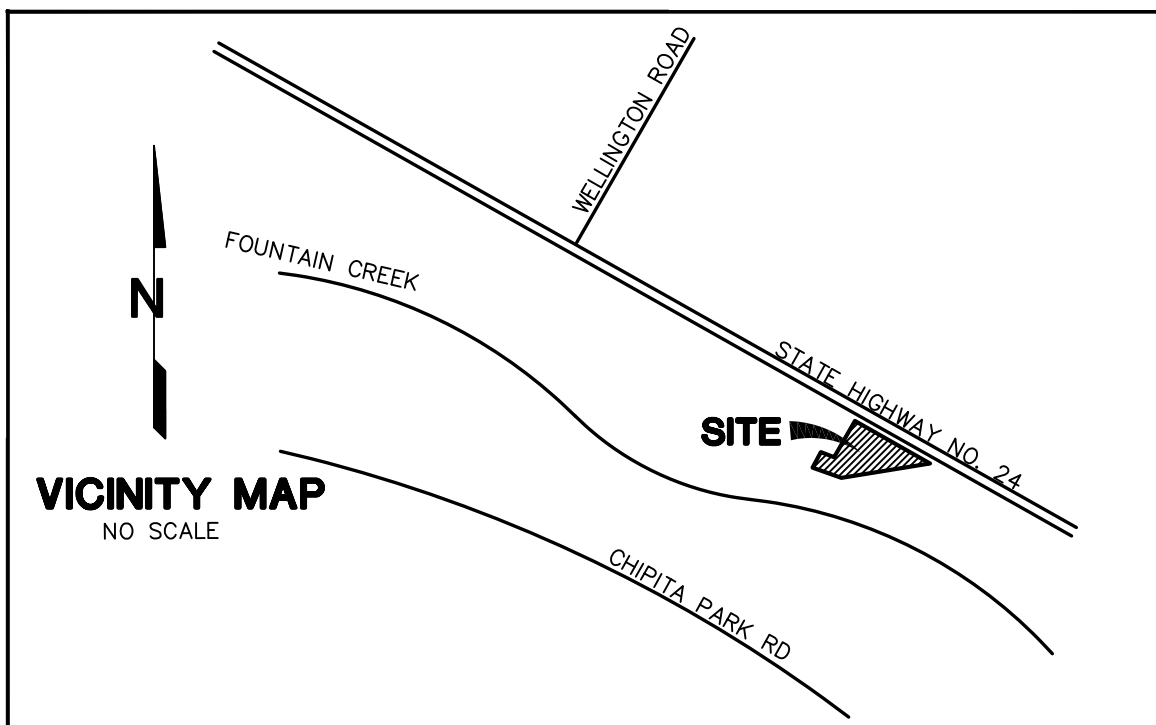


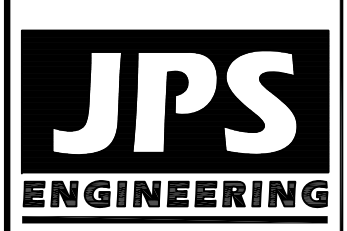
due to disturbance of less than one acre...

A grading and erosion control plan is not required for this submittal. Review of the GEC Plan is for information purposes only.



**GEC SHEET INDEX:**

C1	SITE GRADING & EROSION CONTROL PLAN
C2	CIVIL NOTES & DETAILS



19 E. Willamette Ave.  
Colorado Springs, CO 80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsengr.com



CALL UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE HIDDEN UTILITIES.

Identify the flood plain area

Please label the construction boundary and limits of disturbance

Please show all proposed contours. Are the swales existing?

Please identify this line. Is this a proposed contour?

Please identify in the legend which line is the silt fence

Is a new property line being proposed? If not, then call this out as existing property line.

**KEYED NOTES:**

- TOPSOIL STRIPPING / STOCKPILE AREA
- SITE PAVEMENT (PER GEOTECHNICAL REPORT; MIN. 6" CRUSHED ASPHALT)
- PREPARE & COMPACT BUILDING FOUNDATION PER PROJECT GEOTECHNICAL REPORT

Please provide the geotechnical report

**ESTIMATED EARTHWORK QUANTITY:**

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 42 CY  
 \* EMBANKMENT FILL = 680 CY  
 NET (FILL) = 638 CY  
 \* (ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

**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 LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THIS PLAN.

JOHN P. SCHWAB, CO P.E. 29891 DATE

**OWNER'S/DEVELOPER'S STATEMENT:**

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

NAME 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, 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 DIRECTOR'S DISCRETION.

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

PCD PROJECT NO. XX

**UTE PASS STORAGE**  
8775 W. HWY 24, CASCADE, CO

**SITE GRADING & EROSION CONTROL PLAN**

HORZ. SCALE: 1"=20'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RIDGELINE	CHECKED: JPS
CREATED: 2/02/18	LAST MODIFIED: 2/14/18
PROJECT NO: 111704	MODIFIED BY: BJJ
SHEET:	

**C1**

**BENCHMARKS:**  
 1. CDOT MONUMENT 2917, LOCATED ON SW SIDE OF HWY 24, 1,000' NORTHWEST OF PROJECT SITE ELEV=7477.22 (NAVD88)  
 2. NO. 4 REBAR LOCATED ST THE NORTH MOST CORNER OF PARCEL ELEV=7473.06 (NAVD88)

PROPOSED TYPE 13 INLET GR EL=7471.5  
15" SD INV OUT=7468.5

PROPOSED 55.4 LF 15" HDPE SD @ 1.0%  
PROPOSED CURB & GUTTER

PROPOSED 70.0 LF 15" HDPE SD @ 34.1%  
15" FES W/RIPRAP APRON INV=7444.0  
PROPOSED TYPE 16 INLET GR EL=7469.5  
15" INV IN=7467.95  
15" INV OUT=7467.85

FOUND #4 REBAR WIT WHITE PLASTIC CAP PLS 9646

Erosion control blankets will be required for this slope where the pipe is being installed.

J:\projects\1811704\hammers-utp-jps-storage\dwg\civil\G1.dwg, 2/14/2018 9:53:35 PM

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:**

- Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.
- 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.
- 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, and the Drainage Criteria Manual Volume 2. Any deviations to regulations and standards must be requested, and approved, in writing.
- 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. During construction the SWMP is the responsibility of the designated Stormwater Manager, shall be located on site at all times and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the GEC. A preconstruction meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County DSD inspections staff.
- Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or final earth disturbance, has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than 30 days shall also be mulched within 21 days after interim grading. An area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented and established.
- Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.
- All persons engaged in earth disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SWMP).
- All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations, shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.
- Any earth disturbance shall be conducted in such a manner so as to effectively reduce 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.
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.
- Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
- Erosion control blanketing is to be used on slopes steeper than 3:1.
- Building, construction, excavation, or other 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. BMP's may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.
- 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.
- The owner, site developer, contractor, and/or their authorized agents shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, and sand that may accumulate in the storm sewer or other drainage conveyance system and stormwater appurtenances as a result of site development.
- 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.
- No chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.
- Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.
- No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.
- Individuals 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 included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County agencies, the more restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site at approved construction access points.
- Prior to actual construction the permittee shall verify the location of existing utilities.
- A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.
- The preliminary soils report for this site prepared by Entech Engineering, dated 2/18/13 shall be considered a part of these plans.
- At least ten days prior to the anticipated start of construction, for projects that will disturb 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

**GENERAL CIVIL NOTES:**

- All construction shall meet the following standards & specifications:
  - 2009 International Building Code.
  - Pikes Peak Regional Building Code, latest edition.
  - El Paso County Engineering Criteria Manual (ECM), latest edition.
  - Project Geotechnical Report.
- The contractor shall be responsible for the notification and field location of all existing utilities, whether shown on the plans or not, before beginning construction. Location of existing utilities shall be verified by the contractor prior to actual construction.
- The contractor shall have one (1) signed copy of these approved plans and one (1) copy of the appropriate design and construction standards and specifications at the job site at all times:
  - El Paso County Engineering Criteria Manual.
- Storm drain pipe shall be rcp class III with class C bedding unless otherwise noted.
- Stationing is at centerline unless otherwise noted. All elevations are at flowline unless otherwise noted. All dimensions are from face of curb unless otherwise noted. Lengths shown for storm sewer pipes are to center of manhole.
- Contractor shall coordinate with gas, electric, telephone and cable t.v. Utility suppliers for installation of all utilities. Minimum cover for all dry utilities shall be 36".
- Contractor shall remove and dispose of all existing structures, debris, waste and other unsuitable fill material found within the limits of excavation.
- Match into existing grades at 3:1 max cut and fill slopes.
- Revegetation of all disturbed areas shall be done with 4" topsoil and dry land grass seed after fine grading is complete ("foothills seed mix").
- Erosion control shall consist of silt fence and hay bales as shown on the drawing, and topsoil with grass seed, which will be watered until vegetation has been re-established.
- The erosion control measures outlined on this plan are the responsibility of the contractor to monitor and replace, regrade, and rebuild as necessary until vegetation is re-established.
- Contractor shall implement best management practices in a manner that will protect adjacent properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities within the project site.
- Additional erosion control measures may be required as determined by site conditions.
- The contractor will take the necessary precautions to protect existing utilities from damage due to this operation. Any damage to the utilities will be repaired at the contractor's expense, and any service disruption will be settled by the contractor.
- All backfill, sub-base, and/or base course material shall be compacted per the project geotechnical report and County specifications.
- All finished grades shall have a minimum 1.0% slope to provide positive drainage.
- Contractor shall obtain all required permits prior to beginning work.

Please provide the most updated Standard GEC Plan notes which have PCD instead of DSD.

**ESTIMATED TIME SCHEDULE:**

INSTALL BMP'S APRIL, 2018  
SITE GRADING APRIL, 2018  
SEEDING & MULCHING AUGUST, 2018  
STABILIZATION AUGUST, 2019  
TOTAL DISTURBED AREA: 0.73 ACRES  
RECEIVING WATERS: FOUNTAIN CREEK

**EXISTING VEGETATION:**

NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

**SEEDING MIX:**

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENNIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SUNN	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	2.0 LBS.
SIDEOATS GRAMA	EPHRAIM	5.5 LBS.
<b>TOTAL:</b>		<b>16.5 LBS.</b>

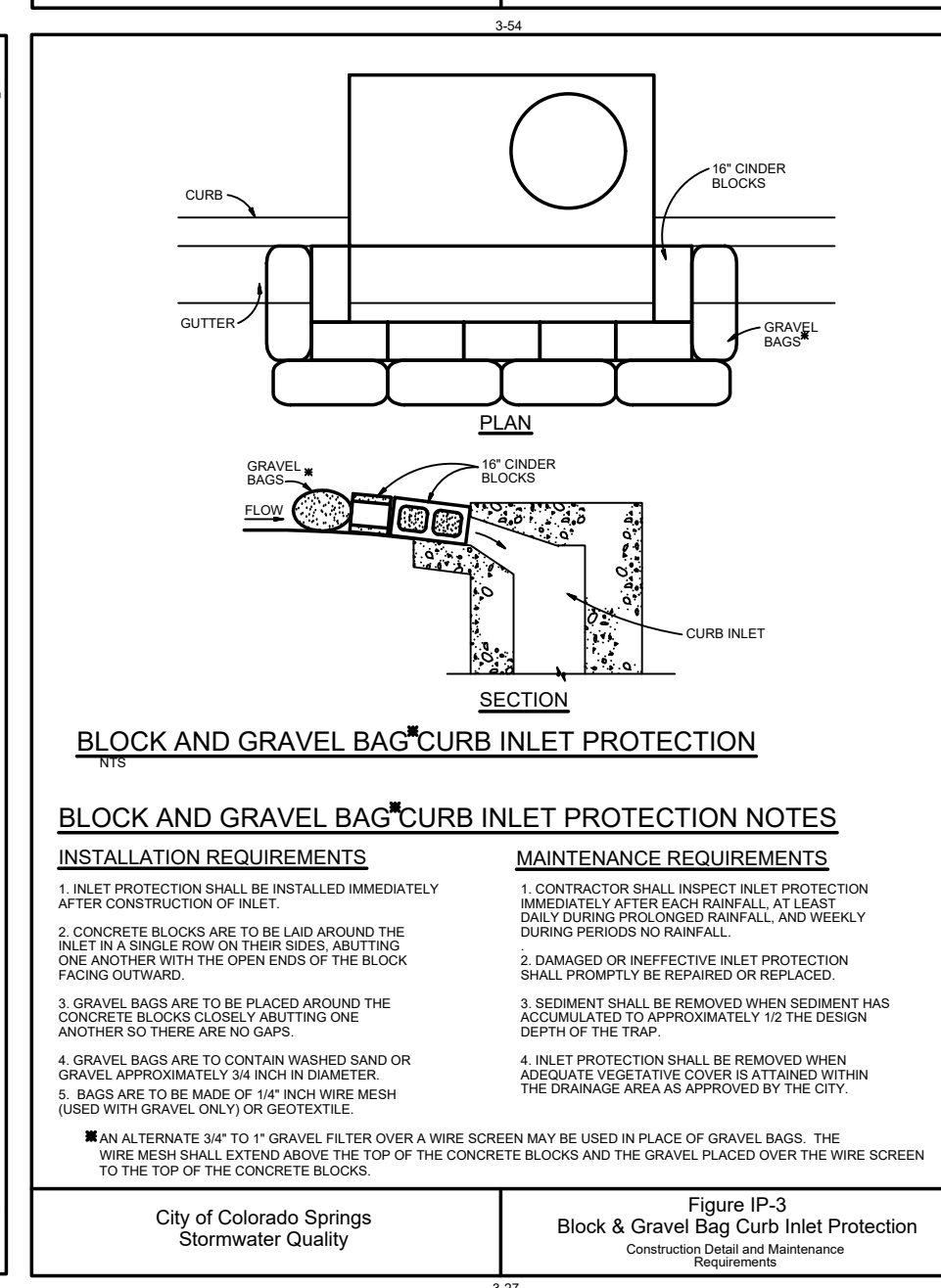
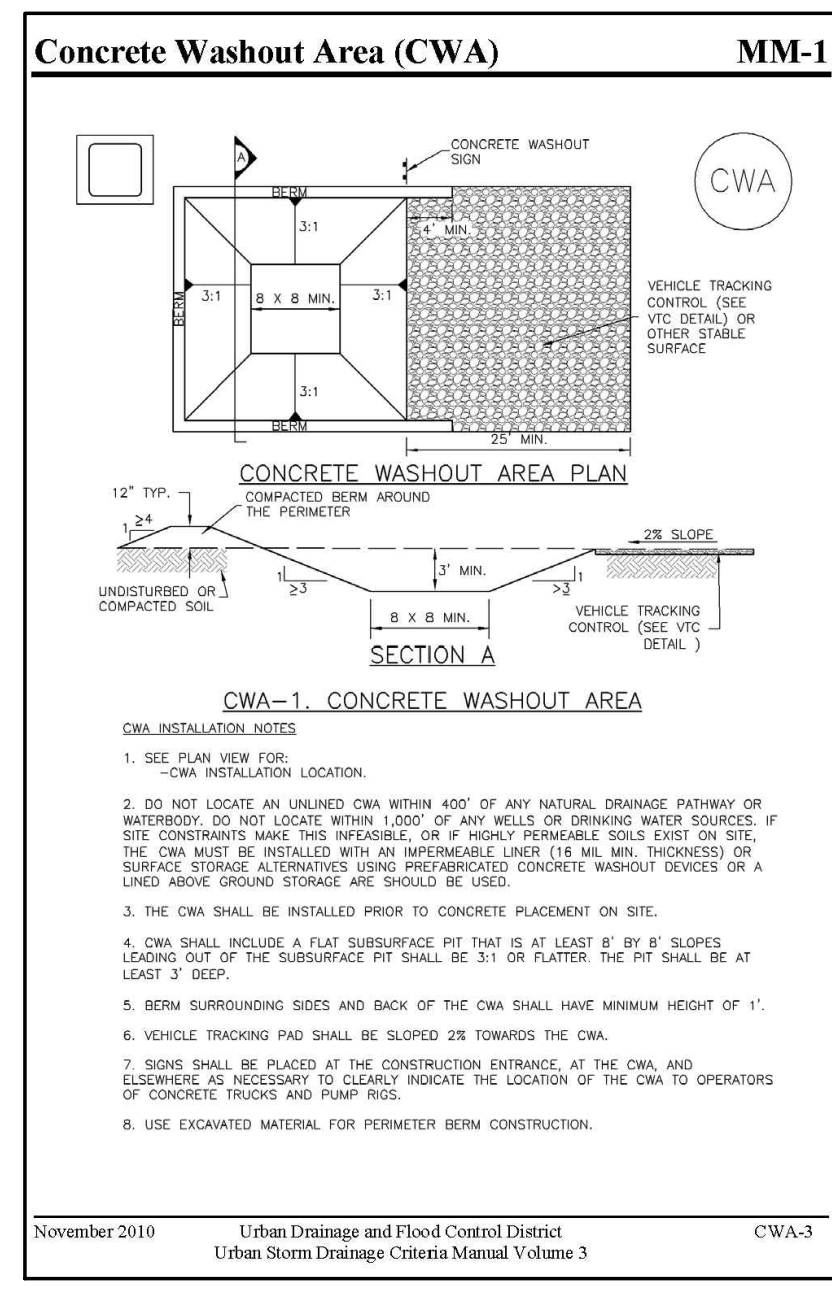
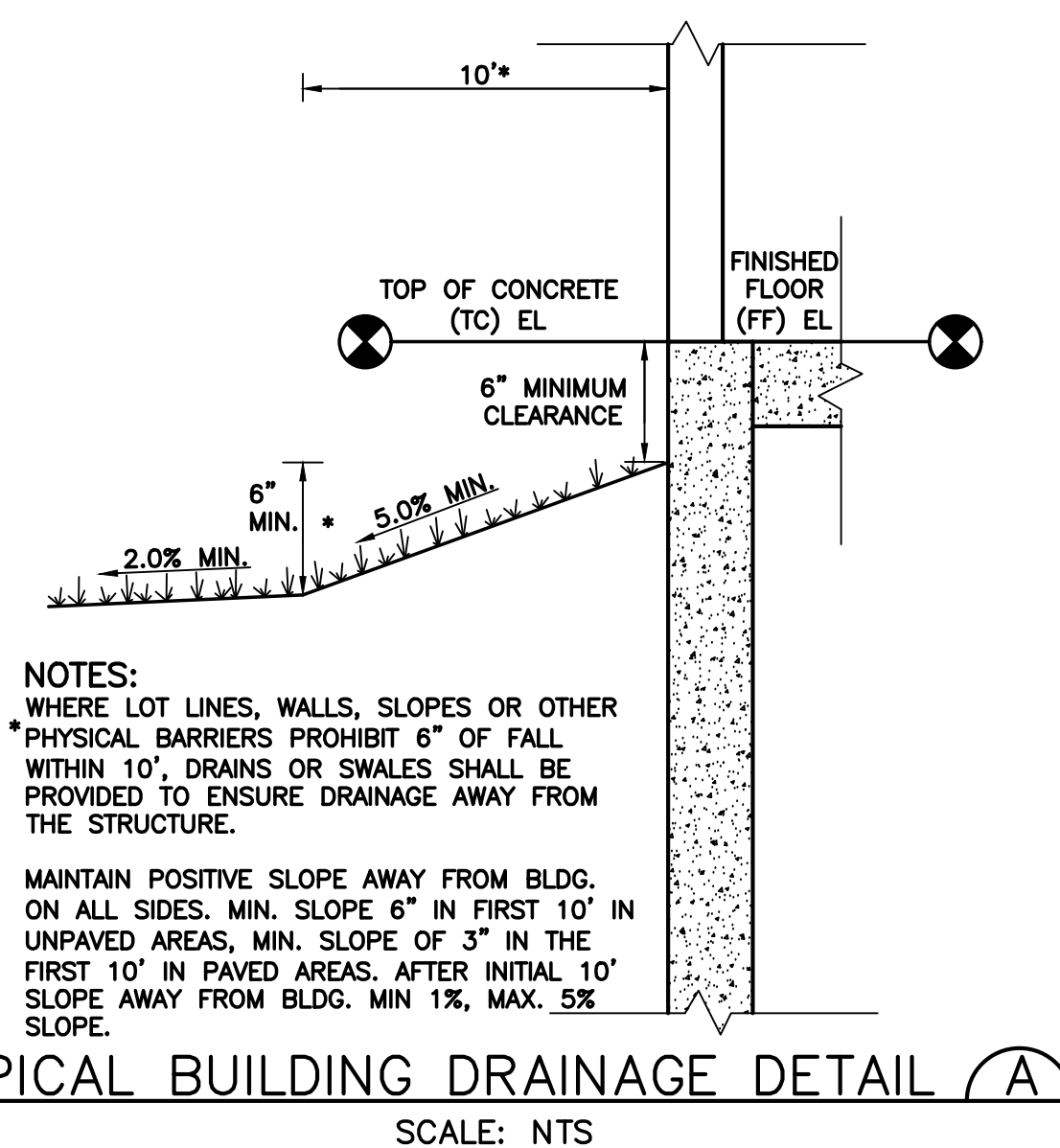
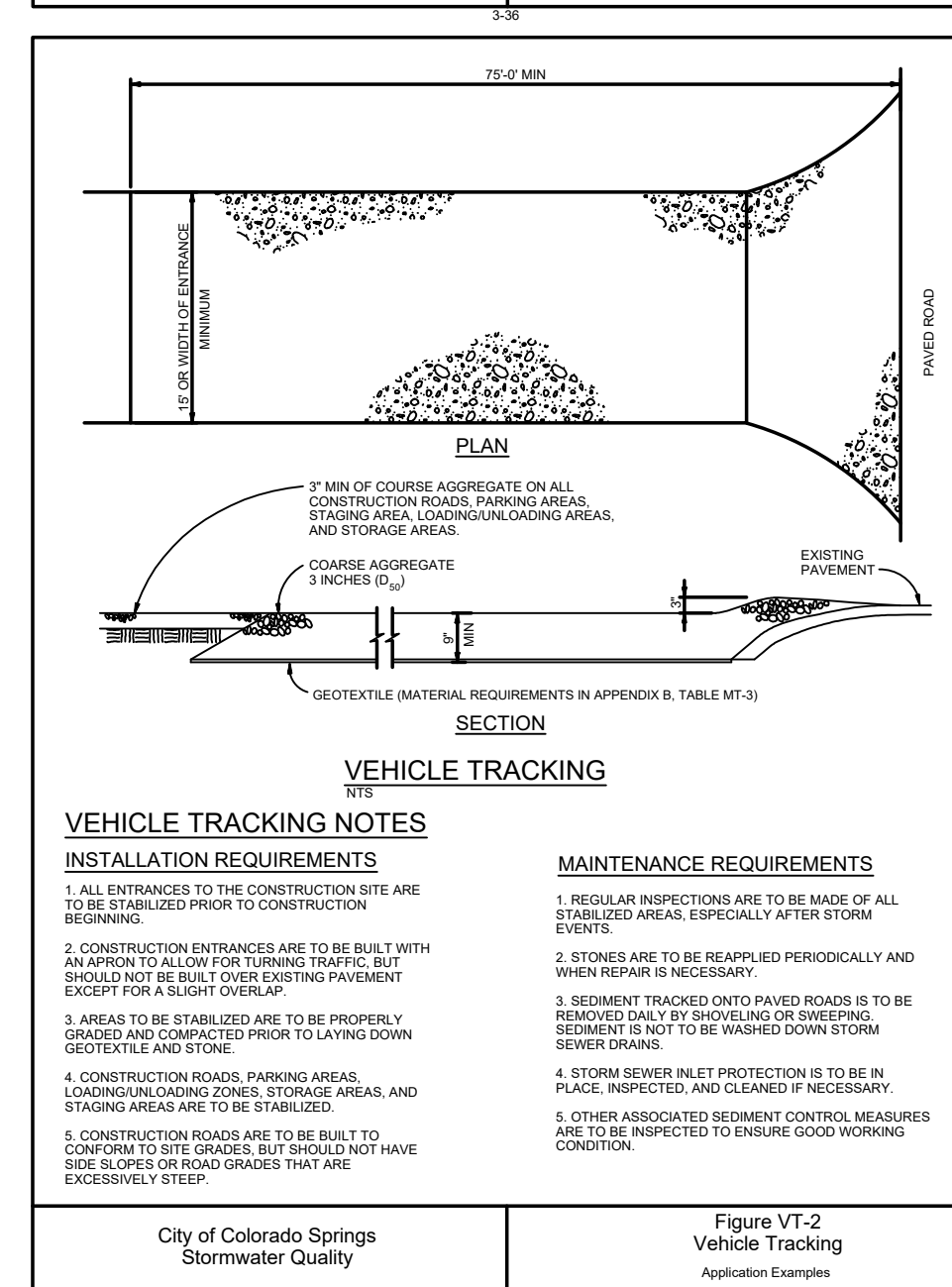
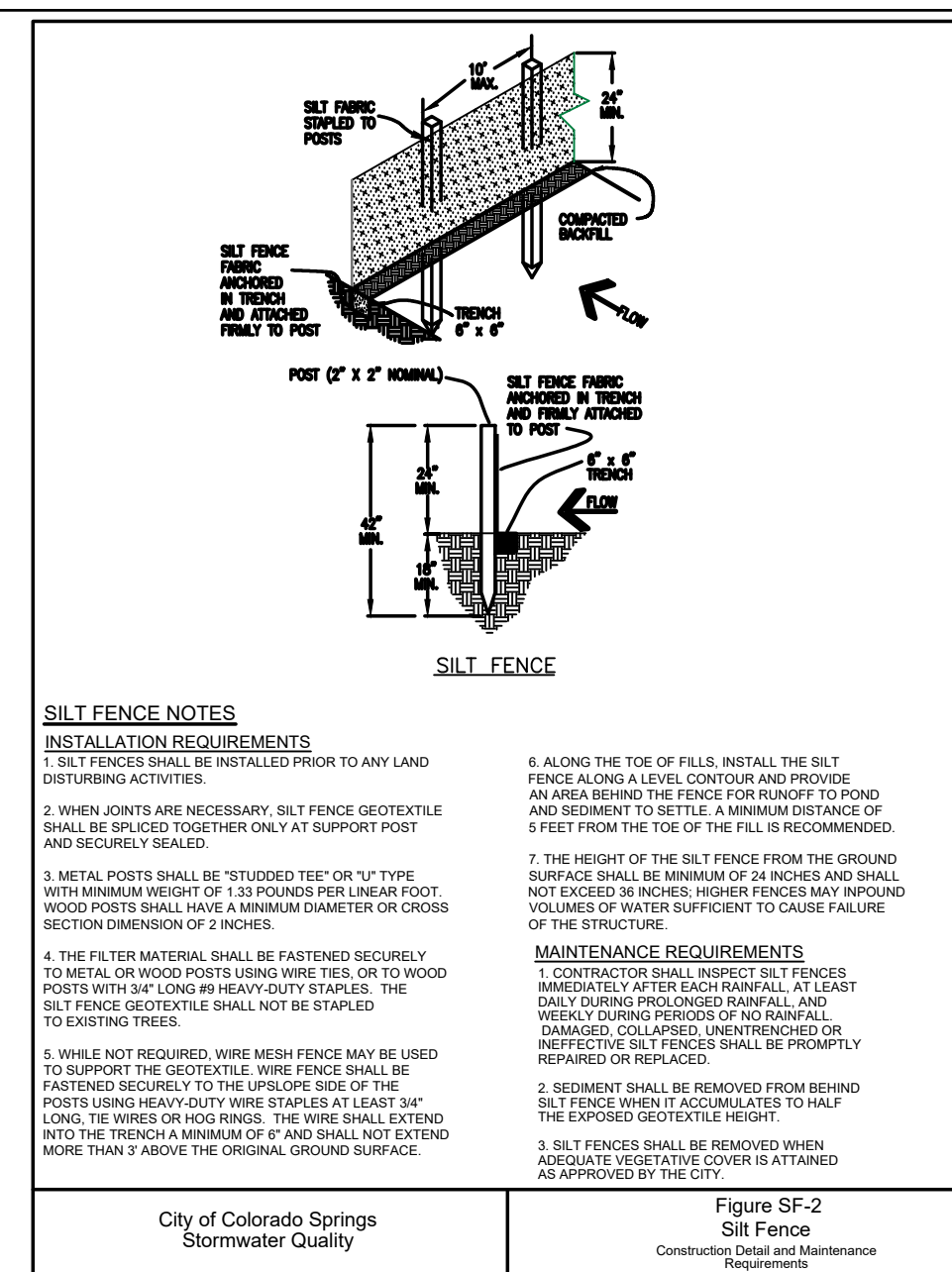
SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

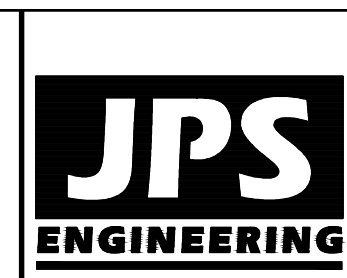
**SEDIMENT CONTROL MAINTENANCE PROGRAM:**

PERIODIC SITE INSPECTIONS BI-WEEKLY  
RE-VEGETATION OF EXPOSED SOILS WITHIN 21 DAYS OF GRADING  
SEDIMENT REMOVAL FROM BMP'S MONTHLY  
REMOVAL OF BMP'S AFTER STABILIZATION ACHIEVED

- AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.
- ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.



**UTE PASS STORAGE**  
8775 W. HWY 24, CASCADE, CO



19 E. Willamette Ave.  
Colorado Springs, CO  
80903  
PH: 719-477-9429  
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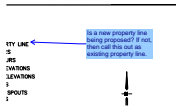
No.	REVISION	BY	DATE

**CIVIL NOTES & DETAILS**

HORIZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	N/A	CHECKED:	JPS
CREATED:	2/07/18	LAST MODIFIED:	2/14/18
PROJECT NO:	11704	MODIFIED BY:	BJJ
SHEET:	C2		

# Markup Summary

Locked (13)



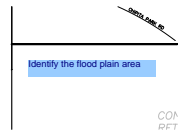
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**Page Label:** 1  
**Lock:** Locked  
**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:00 AM  
**Color:** ■

Is a new property line being proposed? If not, then call this out as existing property line.



**Subject:** Engineer  
**Page Label:** 1  
**Lock:** Locked  
**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:02 AM  
**Color:** ■

Please identify what this dashed line represents .



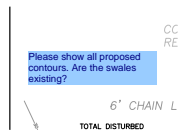
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**Page Label:** 1  
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**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:03 AM  
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Identify the flood plain area



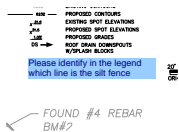
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**Page Label:** 1  
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**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:03 AM  
**Color:** ■

Please label the construction boundary and limits of disturbance



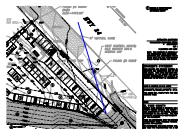
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Please show all proposed contours. Are the swales existing?

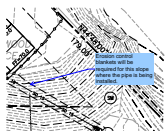


**Subject:** Engineer  
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**Date:** 7/13/2018 9:07:05 AM  
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Please identify in the legend which line is the silt fence



**Subject:** Arrow  
**Page Label:** 1  
**Lock:** Locked  
**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:05 AM  
**Color:** ■



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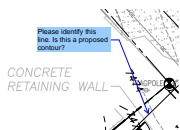
Erosion control blankets will be required for this slope where the pipe is being installed.

FOUNDATION PER PROJECT  
GEO TECHNICAL REPORT

Please provide the geotechnical report

**Subject:** Engineer  
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**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:07 AM  
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Please provide the geotechnical report



**Subject:** Engineer  
**Page Label:** 1  
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**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:08 AM  
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Please identify this line. Is this a proposed contour?



**Subject:** Engineer  
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**Author:** dsdgrimm  
**Date:** 7/13/2018 9:07:08 AM  
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A grading and erosion control plan is not required for this submittal. Review of the GEC Plan is for information purposes only.

due to disturbance of less than one acre...

**Subject:** Engineer  
**Page Label:** 1  
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**Date:** 7/13/2018 9:07:10 AM  
**Color:** ■

due to disturbance of less than one acre...



**Subject:** Engineer  
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**Date:** 7/13/2018 9:07:12 AM  
**Color:** ■

Please provide the most updated Standard GEC Plan notes which have PCD instead of DSD.