



CONSTRUCTION AND
PERMANENT CONTROL
MEASURE
INDEPENDENT
INSPECTION AND
ASSESSMENT REPORT:

City of Colorado Springs, Colorado

June 24, 2022





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1 Introduction

HDR was contracted by the Stormwater Enterprise of City of Colorado Springs (City) in September 2021 to perform independent third-party audits for the City’s approvals of Grading and Erosion Control Plan, City Stormwater Management Plans, and constructed Permanent Control Measures.

The City provided HDR a numbered list of each of the City’s approved plans, reports, and control measures. HDR randomly selected 25% of each type of project, by area within the City (Capital Project, Central, North, and South), and type of facility (Commercial, Industrial, Mixed Use/Other, Single Family Residential, Public Project). The City’s tracking code was provided in the first round of selections, so HDR team didn’t know which project was being selected. No facilities that HDR worked on were selected this year. The City then delivered copies of approved plans, reports, and control measures to HDR’s team for this audit.

2 Grading and Erosion Control (GEC) Audit

2.1 Plan Review Summary

Forty (40) GEC were independently reviewed by HDR utilizing GEC review audit checklist provided in the Workplan. From HDR’s independent third-party review of these plans, a total of eight (8) plans were non-compliant. This is a 20% non-complaint ratio of to the City’s approved plans.

The full list of reviewed plans is found in Appendix A.

Refer to Table 2-1 of the non-complaint plans and missing items in relation to checklist item/tier.

Table 2-1. Non-Compliant GEC Plans

Plan Number	Title	Missing Checklist Item	Notes
G-7	Monument Creek at Talamine	9-Tier 1 10-Tier 2 29-Tier 1	<ul style="list-style-type: none"> • Work shown outside the construction boundaries. Includes vehicle tracking control, stabilized staging area, and construction fence • Maintenance notes missing for Concrete Washout Area (CWA)
G-10	Barnes Chaparral Expansion	22-Tier 1 29-Tier 1	<ul style="list-style-type: none"> • Seeding details and notes are not shown • Maintenance notes missing for CWA
G-35	Fire Station #23 & Radio Shop	9-Tier 1 10-Tier 2	<ul style="list-style-type: none"> • Work (Silt Fence) shown outside the construction boundaries
G-51	Red Rock Point Filing 4	9-Tier 1 13-Tier 2	<ul style="list-style-type: none"> • Work (Spillway, VTC, Haul Road) shown outside construction boundaries • Retaining wall heights not shown
G-56	Outlook West Mesa	5-Tier 1	<ul style="list-style-type: none"> • Missing City Signature



Table 2-1. Non-Compliant GEC Plans

Plan Number	Title	Missing Checklist Item	Notes
G-72	Lot 2, Bass Pro Crossing at Northgate Filing 1	29-Tier 1	<ul style="list-style-type: none"> • Maintenance notes missing for CWA
G-96	Tutt and Stone Mesa Filing 1	29-Tier 1	<ul style="list-style-type: none"> • Missing Erosion Control Blanket and Details
G-103	Centura Lot 2 Interquest Filing 9	7-Tier 2 29-Tier 1	<ul style="list-style-type: none"> • Scale too small • Missing CWA Details • Missing Erosion Control Blanket (ECB) Notes

HDR carefully reviewed the elements on the plans that were considered to classify a plan as non-compliant. Several of the GEC plans had minor items (Tier 2) omitted from the plans, however all of the non-complaint GEC plans listed in Table 2-1 had major plan components (Tier 1) omitted and resulted in the non-compliance.

The maintenance notes were missing on a few plans for the Concrete Washout Areas and Erosion Control Blankets. The missing notes were considered important for maintaining the purpose of these control measures. Refer to Appendix B for the following plans where the maintenance notes were missing:

- Monument Creek at Talamine – Page B-2
 - Concrete washout area standard detail was included in the plans however the second sheet of standard maintenance notes were not included.
- Chaparral Road Improvement Plans – Page B-4
 - Concrete washout area standard detail was included in the plans however the second sheet of standard maintenance notes were not included.
 - Seeding and ECB are indicated to stabilize disturbed area in notes listed on page B-3, however there were no standard details or maintenance notes listed on the plans
- Lot 2, Bass Pro Crossing at Northgate – Page B-10
 - Concrete washout area standard detail was included in the plans however the second sheet of standard maintenance notes were not included.
- Tutt and Stone Mesa – Page B-11
 - Seeding and ECB are indicated to stabilize disturbed area, however there were no standard details or maintenance notes listed on the plans
- Centura Lot 2 Interquest – Page B-13
 - Concrete washout area standard detail and the second sheet of standard maintenance notes were not included.
 - ECB is indicated to stabilize disturbed area, however there were no standard details or maintenance notes listed on the plans



A few plans had work shown outside the limits of disturbance or construction area. The work was determined to be non-complaint if the ground would be disturbed by the installation or removal of the control measures. Some work outside the construction area were allowed if it was something that wouldn't disturb any ground like, inlet protection on a nearby curb inlet or rock sock located on concrete curb and gutter. Stabilized staging areas, vehicle tracking, silt fence and construction fence were all considered as disturbance.

- Monument Creek at Talamine – Page B-1
 - Stabilized staging area, vehicle tracking control, and construction fence were located outside of the limits of disturbance
- Fire Station #23 & Radio Shop – Page B-5
 - Silt fence installation was located outside of the limits of disturbance
- Red Rock Point – Pages B-6 & B-7
 - Vehicle tracking control, silt fence, permanent control measure spillway, and haul road were located outside of the limits of disturbance

One plan had important information missing according to the GEC checklist which was a GEC plan not signed by the city. Refer to Appendix B for plan G-56.

3 City Stormwater Management Plan (CSWMP) Audit

3.1 Report Review Summary

Thirty-seven (37) CSWMP were independently reviewed by HDR utilizing CSWMP review audit checklist. A total of two (2) plans were non-compliant. This is a 5% ratio of non-complaint of the plans reviewed.

The full list of reviewed CSWMP plans is found in Appendix C.

Refer to Table 3-1 of the non-complaint plans and missing items in relation to checklist item/tier.

Table 3-1: Non-Compliant CSWMP Reports

Plan Number	Title	Missing Checklist Item	Notes
C-88	Caliber at Briargate, Lot 3, Powers Office Park Filing No. 3	9-Tier 1 16-Tier 2	<ul style="list-style-type: none"> • Certificate not included. Approved on 7/13/21 • No existing vegetative cover noted
C-148	Kaleidos Subdivision/ Atlas Preparatory Charter School Filing No. 1b Lot 2	9-Tier 1	<ul style="list-style-type: none"> • Certificate not included. Approved on 9/8/21

Two of the CSWMPs that were not in compliance were missing Certificate of Training. HDR assumes these certificates were missed from the submissions due a recent update in regulations (certificates were only required after July 1, 2021). As more trainings are available from the City, this checklist item should be rarely seen on upcoming audits.

4 Permanent Control Measure (PCM) Audit

4.1 PCM Review Summary

Eleven (11) PCM were independently reviewed by HDR utilizing PCM review audit checklist from the Workplan. From the audit, two (2) constructed PCM was found to be out of compliance due to missing required documents. This is a 18% ratio of non-complaint of the PCMs reviewed.

HDR created a location map of the eleven PCM audit locations within the City. Refer to Appendix D for the location of PCM in-field audits and PCM Report Summaries can be found in Appendix E.

Table 4-1: Non-Compliant PCM Document Review

PCM Number	Title	Missing Checklist Item
PCM-33	Barnes Road Reconstruction (Barnes Road Underground Detention)	PE Certification City Final Acceptance Letter As-Built Plan
PCM-42	Rustic Hills Neighborhood Development (Broken Circle Underground Detention)	PE Certification City Final Acceptance Letter As-Built Plan Drainage Calculations for Water Quality Volume Refer to Appropriate Inspection & Maintenance Plan

5 Correspondence

The following list of correspondence with City during HDR's audit review:

- February 11, 2022 – Received Audit Work Plan from Erin Powers
- February 28, 2022 – Status of Executed Task Order and number of GEC and CSWMPs for review
- February 21, 2022 – List of randomly selected projects to be audited
- February 22, 2022 – City requesting revised project audit list
- February 22, 2022 – Revised list provided to the City
- March 1, 2022 – HDR checking on the status of the file transfer
- March 1, 2022 – HDR received CSWMPs files from the City

- March 2, 2022 – HDR received the GEC files from the City
- April 18, 2022 – HDR provided April Progress Report to the City
- April 20, 2022 – City confirmed receipt as well as provided list for PCM audit
- April 28, 2022 – HDR provided list of randomly selected PCM projects
- May 9, 2022 – City acceptance of HDR list of PCM projects
- May 9, 2022 – HDR requesting confirmation of location of PCMs
- May 10, 2022 – City provided location maps of each of the PCMs
- May 10, 2022 – City provided information on PCMs
- May 25, 2022 – City provided the rest of the PCMs information
- May 25, 2022 – HDR provided progress report to City
- June 13, 2022 – HDR inquired on PCM 33 and 42 if all necessary files were provided to HDR.

During the audit, two interim progress reports on the status of the audits were provided to the City in April and May of 2022.

Additional documentation or copies of the emails listed above can be provided by request.

6 Summary of Audit Findings

From the randomly selected projects for third party review, HDR found 20% of the GEC to be in non-compliance, 5% of CSWMPs to be in non-compliance, and 18% of the PCMs to be in non-compliance.

HDR recommends the following items for the City to focus on in upcoming review and approvals:

1. Confirm standard details with maintenance notes are on GEC.
2. Confirm all necessary signatures are shown on the GEC and CSWMPs.
3. Placement of BMPs that require earth disturbance activities to install that are outside of the limit of construction – includes construction fence (CF), Stabilized staging area (SSA), vehicle tracking control (VTA), and Concrete washout area (CWA)

7 References

City of Colorado Springs; Stormwater Enterprise
2020 Stormwater Construction Manual

City of Colorado Springs; Stormwater Enterprise
2021 Audit Work Plan

Appendix A. GEC Plan Selection

Table A-1: Selected GEC Plans reviewed

GEC Number	District	Project Type	Plan Title
G-4	Capital	Public	CSU Holland Park Blvd
G-7	Capital	Public	Monument Creek at Talamine
G-9	Capital	Public	Paseo Bridge Improvements
G-10	Capital	Public	Chaparral Road Improvement
G-21	Capital	Public	Monument Valley Park - Shadow Lake/Duck Lake
G-33	Central	Commercial	The Apartments at Greenways Filing No. 1, Lot 1
G-35	Central	Commercial	Fire Station #23 & Radio Shop
G-37	Central	Commercial	Prairie Winds Center Stockpile Plan
G-38	Central	Commercial	Carlton Academy
G-43	Central	Commercial	Outlook West Mesa Subdivision Filing No. 1, Lot 3
G-48	Central	Industrial	Clark Place Filing No. 1
G-51	Central	Mixed Use / Other	Red Rock Point 4
G-56	Central	Mixed Use / Other	Outlook West Mesa Filing No. 1, Lot 7
G-58	Central	Mixed Use / Other	Crest at Woodmen Loort Subdivision Filing No. 8, Lot 6
G-62	Central	Single Family Residential	Pony Park, The Colorado Spring Ranch Filing No. 4, Lot 62, Block 1
G-64	Central	Single Family Residential	Newport Estates, Filing No. 1
G-68	Central	Single Family Residential	Enclaves at Mountain Vista Rach Filing No. 7
G-70	North	Commercial	Colorado Crossing Filing No. 1A, Lot 7
G-72	North	Commercial	Bass Pro Crossing at Northgate Filing No. 1, Lot 2
G-76	North	Commercial	Autozone Store #6041, 8167 Carmela Grove
G-77	North	Commercial	Academy Christian Church Children's Ministry Addition
G-78	North	Commercial	Marketplace at Interquest Filling No. 22
G-83	North	Commercial	Springs at Northgate Filing No. 1
G-91	North	Commercial	Marketplace at Interquest Filing No. 23
G-96	North	Industrial	Laureate Storage, Tutt & Stone Mesa Subdivision
G-102	North	Mixed Use / Other	Victory Ridge Filing No. 9, Lot 1, Victory Ridge Apartments



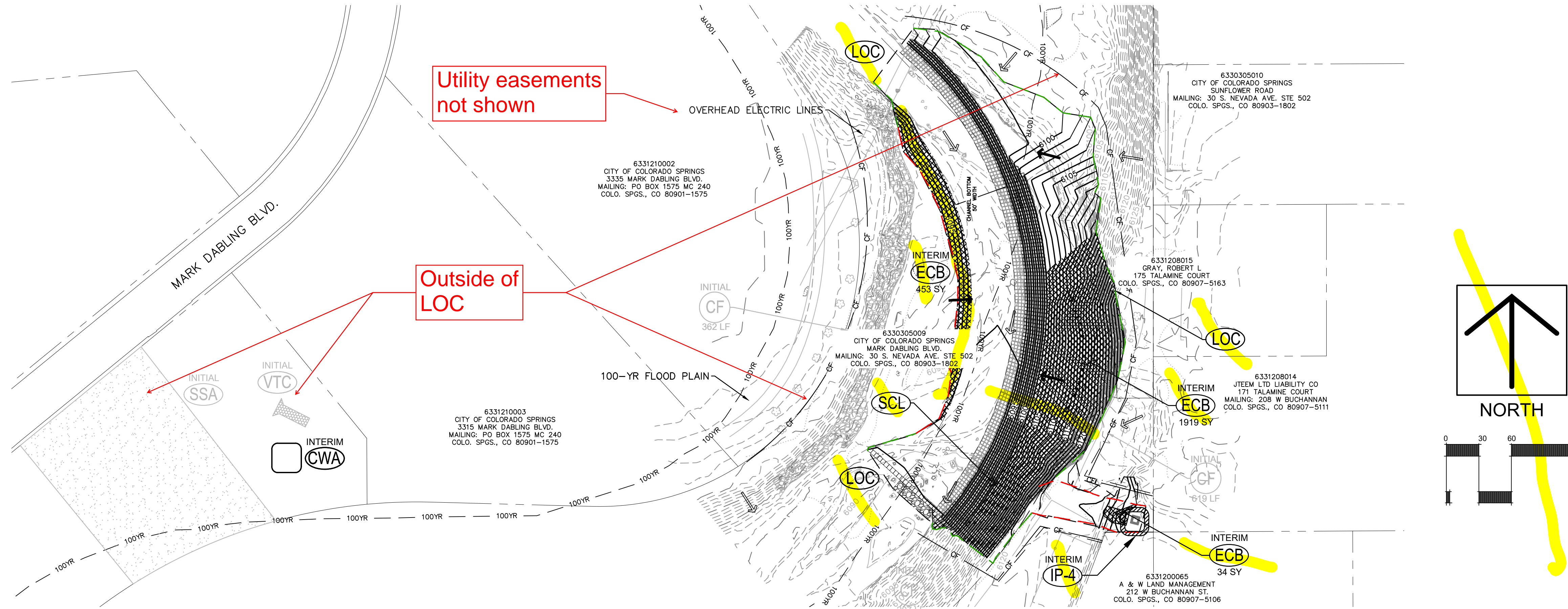
Table A-1: Selected GEC Plans reviewed

GEC Number	District	Project Type	Plan Title
G-103	North	Mixed Use / Other	Centura Interquest Fil No 9, Lot 2
G-107	North	Single Family Residential	Greenways at Sand Creek Filing No. 1 & 2
G-110	North	Single Family Residential	Sand Creek Stabilization at Aspen Meadows Subdivision Filing No. 1
G-115	North	Single Family Residential	Elan at Wolf Ranch Filing No. 1, Additional Water Quality Area F28
G-121	South	Commercial	Hancock & Academy Dunkin' Donuts
G-128	South	Commercial	Candlewood Suites Westgate @ Powers
G-131	South	Industrial	Peak Technology Campus, Colorado Springs Airport Filing No. 1D, Portion of Lot 7
G-132	South	Industrial	1570 Vapor Trail, TRW Subdivision Filing No. 5, Lot 1
G-139	South	Mixed Use / Other	Project Academy, Parking Lot, Taco Bell Subdivision Filing No. 2, Lot 2 & 3
G-142	South	Mixed Use / Other	Weber and Cimarron Apartments, Filing No. 1
G-144	South	Mixed Use / Other	Reagan Ranch
G-147	South	Mixed Use / Other	Weber Apartments, The Lowell Subdivision Filing No. 7, Lot 1 and 2
G-154	South	Public	Colorado Spring Airport, Integration Loop Extension for Flywheel East
G-158	South	Single Family Residential	Mosaica Filing No. 1, Replat of Lot 2

*Bold lines above are the plans found to be non-compliant.



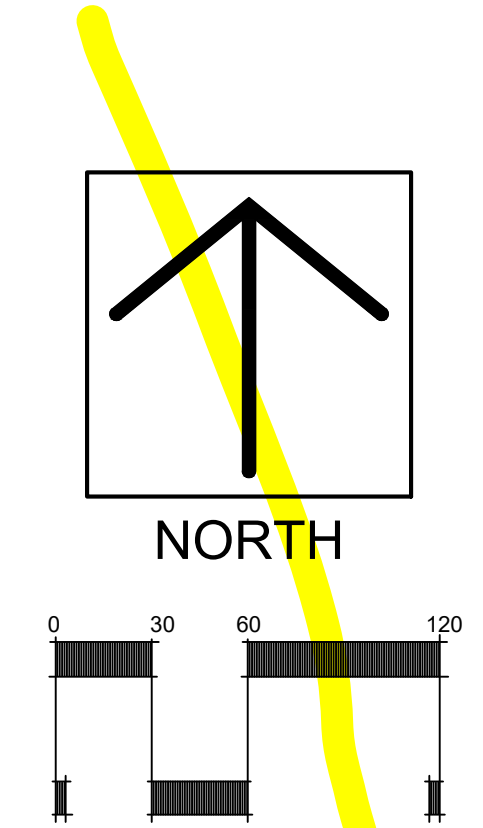
Appendix B. GEC Plan Comments



LEGEND

--- 5613 ---	EXISTING CONTOUR
— 5613 —	PROPOSED CONTOUR
---	100 YR FLOODPLAIN
→	EXISTING FLOW DIRECTION
→	PROPOSED FLOW DIRECTION
TOC	TOP OF CONCRETE/SLAB
FG	FINISH GRADE SPOT ELEVATION
PERF	PERFORATED PIPE
[Grid]	36" GROUDED BOULDERS
---	LOC LIMITS OF CONSTRUCTION
---	LIMITS OF DISTURBANCE
[Cross-hatch]	ECB EROSION CONTROL BLANKET
[Dotted]	SM SEEDING AND MULCHING
[Stippled]	SSA STABILIZED STAGING AREA
[Grid]	VTC VEHICLE TRACKING CONTROL
[Square]	CWA CONCRETE WASHOUT AREA
[Circle]	IP-4 INLET PROTECTION
[Circle]	SCL SEDIMENT CONTROL LOG
[Circle]	CF CONSTRUCTION FENCE
---	LINE OF FILL
---	LINE OF CUT

TOTAL AREA TO BE DISTURBED = 2.50 ACRES



GRADING AND EROSION CONTROL PLANS
MONUMENT CREEK AT TALAMINE
COLORADO SPRINGS, COLORADO

EROSION CONTROL PLAN - INTERIM

- GENERAL NOTES**
1. APPROPRIATE CONTROL MEASURES MUST BE IMPLEMENTED PRIOR TO THE START OF LAND DISTURBANCE ACTIVITY. MUST CONTROL POTENTIAL POLLUTANTS DURING EACH PHASE OF CONSTRUCTION, AND MUST BE CONTINUED THROUGH FINAL STABILIZATION. APPROPRIATE STRUCTURAL AND NON-STRUCTURAL CONTROL MEASURES MUST BE MAINTAINED IN OPERATIONAL CONDITION.
 2. SEE CONSTRUCTION BID PLANS FOR TYPICAL SECTIONS OF GROUDED BOULDERS.
 3. STAGING AREA, STOCKPILE AREA AND TEMPORARY DISPOSAL AREAS WILL BE DETERMINED BY THE CONTRACTOR.
 4. ALL DISTURBED AREAS OUTSIDE OF ROADWAYS SHALL BE SEEDED.
 5. PLACE SOIL RETENTION BLANKET ON ALL SLOPES STEEPER THAN 3:1 OR WHERE SHOWN ON PLANS
 6. ALL OTHER DISTURBED AREAS OUTSIDE OF ROADWAYS SHALL BE MULCHED UNLESS BLANKET IS SPECIFIED.
 7. EROSION LOG - 12"Ø x 10'
- THE CONTRACTOR MUST SUBMIT A FINAL EROSION CONTROL PLAN TO THE CITY OF COLORADO SPRINGS FOR APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION.



issued	04/07/2021

EC2
sheet number

AGGREGATE VEHICLE TRACKING CONTROL

SECTION A-A'

INSTALLATION NOTES

1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

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 TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VEHICLE TRACKING CONTROL

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19 REVISION: _____ DRAWING NO. 900-VTC-1

VTC

CONCRETE WASHOUT AREA PLAN

SECTION A-A'

CONCRETE WASHOUT AREA

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19 REVISION: _____ DRAWING NO. 900-CWA-1

CWA

Maintenance notes not included (Tier 1)

SM-3 Construction Fence (CF)

CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CONSTRUCTION FENCE 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. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN ADFCD)

CONSTRUCTION FENCE (CF)

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

Construction Fence (CF) SM-3

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

CF-3

EROSION CONTROL BLANKET

PERIMETER ANCHOR TRENCH

JOINT ANCHOR TRENCH

INTERMEDIATE CHECK SLOT

OVERLAPPING JOINT

STAPLE CHECK
TO BE USED ON SLOPE EVERY 15 FEET

INSTALLATION NOTES

1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
2. IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
6. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
7. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
8. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
9. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
10. COMPACT ALL TRENCHES.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	—	100%	—	DOUBLE/NATURAL
STRAW-COCOJUT	30% MIN.	70% MAX.	—	DOUBLE/NATURAL
COCONUT	100%	—	—	DOUBLE/NATURAL
EXCELSIOR	—	—	100%	DOUBLE/NATURAL

EROSION CONTROL BLANKET

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19 REVISION: _____ DRAWING NO. 900-ECB-1

ECB

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

IP-4

STRAW BALE SUMP INLET PROTECTION PLAN

SECTION A-A'

SUMP INLET PROTECTION

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19 REVISION: _____ DRAWING NO. 900-IP-4

IP-4

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 80% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDING WHENEVER POSSIBLE.
3. SEED DEPTH MUST BE 1/2 TO 3/4 INCHES WHEN DRILL-SEEDING IS USED.
4. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
5. SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING.
6. BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

MULCHING

1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
 - HAY OR STRAW MULCH
 - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER
 - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
 - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
 - HYDRAULIC MULCHING
 - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
 - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
 - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
 - EROSION CONTROL BLANKET
 - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

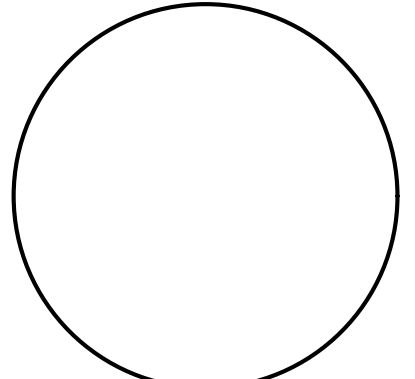
SEEDING & MULCHING

APPROVED: _____

CITY ENGINEER

ISSUED: 10/7/19 REVISION: _____ DRAWING NO. 900-SM

SM



PRC ENGINEERING
1466 NORTH PARK DRIVE, SUITE 400A
COLORADO SPRINGS, CO 80907



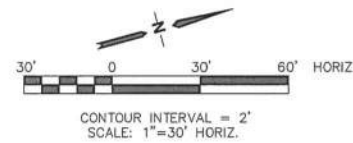
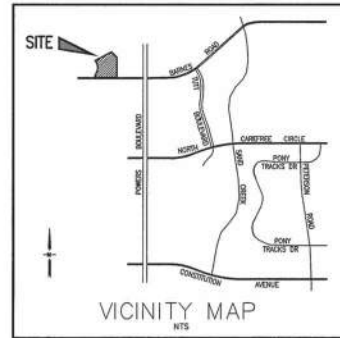
GRADING AND EROSION CONTROL PLANS
MONUMENT CREEK AT TALAMINE
COLORADO SPRINGS, COLORADO

EROSION CONTROL DETAILS

issued 04/07/2021

DT1
sheet number





ENGINEER'S STATEMENT:

THIS EROSION & STORMWATER QUALITY CONTROL/GRADING PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE OR STABILITY OF A PUBLIC WATER DRAINAGE CHANNEL, OR OTHER PROPERTY.

ENGINEER: JOHN P. SCHWAB 29891 DATE: 4/8/21

CITY PROJECT MANAGER'S STATEMENT:

I HEREBY CERTIFY THAT THE DRAINAGE AND GRADING FOR THE CHAPARRAL ROAD IMPROVEMENT PROJECTS SHALL BE CONSTRUCTED ACCORDING TO THE DESIGN PRESENTED IN THIS PLAN. I FURTHER UNDERSTAND THAT FIELD CHANGES MUST BE REVIEWED BY THE CITY REVIEW ENGINEER TO ENSURE CONFORMANCE WITH THE ORIGINAL DESIGN INTENT. I AM EMPLOYED BY AND PERFORM ENGINEERING SERVICES SOLELY FOR THE CITY OF COLORADO SPRINGS, AND THEREFORE AM EXEMPT FROM COLORADO REVISED STATUTE TITLE 12, ARTICLE 25, PART 1 ACCORDING TO 12-22-103(1), C.R.S.

Kevin Diekelman
 PRINTED NAME
 AUTHORIZED SIGNATURE DATE: 04/09/2021

CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW
 THIS GRADING AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH CITY CODE. THIS PLAN IS REVIEWED IN ACCORDANCE WITH THE STORMWATER CONSTRUCTION MANUAL: LATEST REVISIONS.
 DATE: 5/24/2021

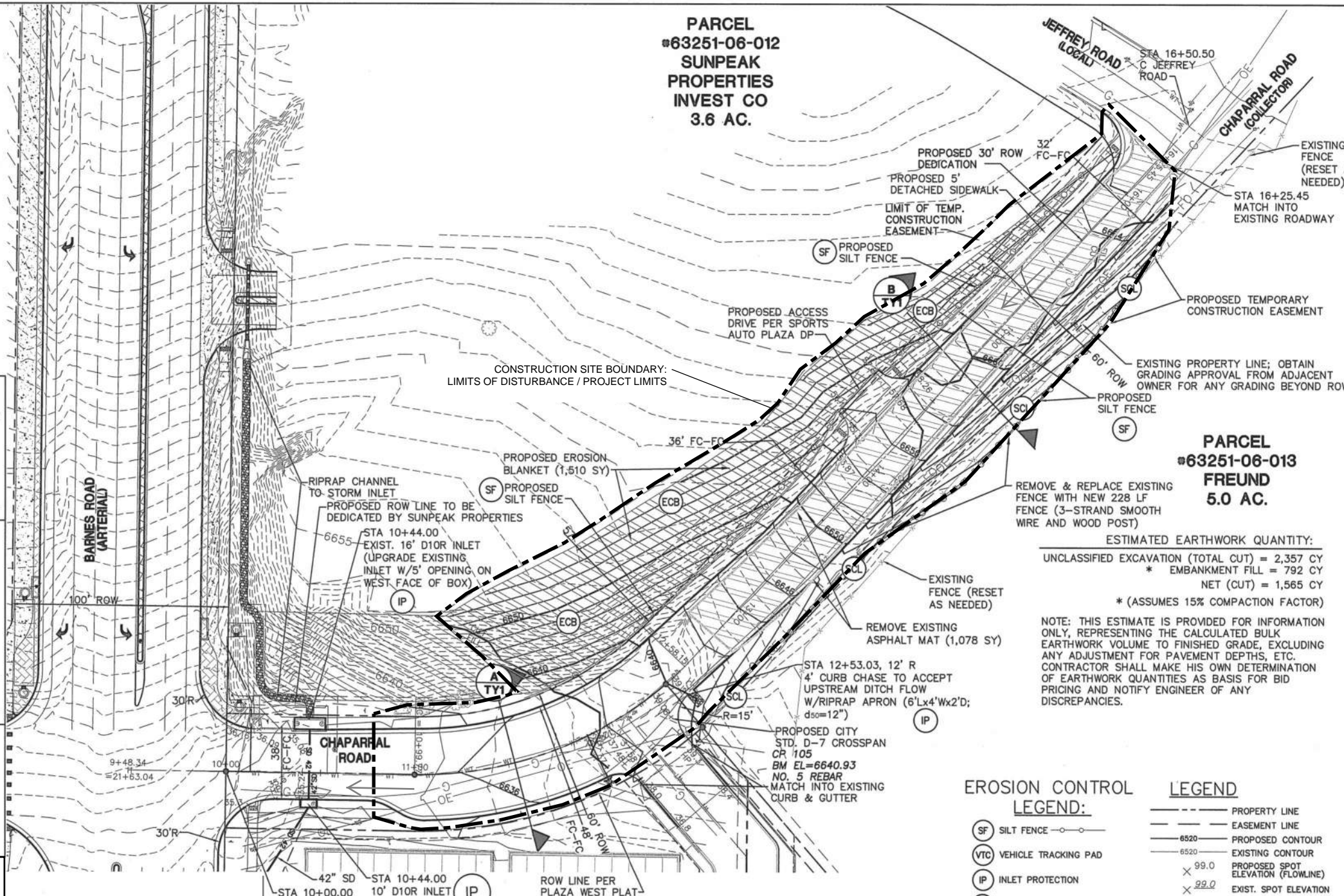
FOR THE SWENT MANAGER
 NOTES:

CONTRACTOR'S STATEMENT

I WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING CONSTRUCTION CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE A COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

NAME OF CONTRACTOR: _____ DATE: _____
 AUTHORIZED SIGNATURE: _____ PHONE: _____
 TITLE: _____
 ADDRESS: _____
 EMAIL ADDRESS: _____

BENCHMARK:
 CP 105: NO. 5 REBAR
 EL=6640.93 (DATUM: NAVD 88)



RECEIVING WATERS: SAND CREEK
 AREA OF DISTURBANCE: ± 47,465 SF
 THE PROJECT IS ANTICIPATED TO BEGIN IMMEDIATELY FOLLOWING APPROVAL OF THE GEC PERMIT. THE PROJECT IS ANTICIPATED TO BE COMPLETE WITHIN 60 DAYS. FINAL STABILIZATION IS ANTICIPATED TO BE COMPLETED BY JUNE 30, 2021.
 STOCKPILES WILL BE LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARIES. LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR.
 THE NEED FOR VEHICLE TRACKING CONTROL WILL BE DETERMINED BY THE GEC ADMINISTRATOR OR THE ENGINEER. THE LOCATION OF THE VTC WILL BE DETERMINED BY THE CONTRACTOR.
 STAGING AREAS WILL BE DETERMINED BY THE CONTRACTOR.
 DISTURBED AREAS AND AREAS DESIGNATED FOR ECB WILL BE RESEED. NO ADDITIONAL LANDSCAPING IS PROPOSED.
 NON-STRUCTURAL CONTROL MEASURES, SUCH AS STREET SWEEPING, WILL BE LOCATED BY THE CONTRACTOR AS DIRECTED BY THE GEC ADMINISTRATOR OR THE ENGINEER.
 LOCATIONS OF THE CONCRETE WASHOUT AREA(S) WILL BE DETERMINED BY THE CONTRACTOR.

EROSION CONTROL LEGEND:

- (SF) SILT FENCE
- (VTC) VEHICLE TRACKING PAD
- (IP) INLET PROTECTION
- (ECB) EROSION CONTROL BLANKET
- (CWA) CONCRETE WASHOUT AREA
- (SCL) SEDIMENT CONTROL LOG

LEGEND:

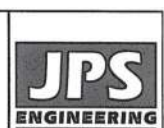
- PROPERTY LINE
- - - EASEMENT LINE
- 8520 PROPOSED CONTOUR
- 8520 EXISTING CONTOUR
- x 99.0 PROPOSED SPOT ELEVATION (FLOWLINE)
- x 99.0 EXIST. SPOT ELEVATION
- ← DIRECTION OF FLOW

NOTE:
 ALL EROSION CONTROL MEASURES SHALL CONFORM TO THE CITY OF COLORADO SPRINGS' STORMWATER CONSTRUCTION MANUAL.

Seed details/notes not shown or referenced.

THE WORK PROPOSED IN THIS PLAN UNDER THE TITLE "CHAPARRAL ROAD IMPROVEMENT PLANS" IS AN EXPANSION OF THE PPRTA PROJECT CURRENTLY IN PROGRESS KNOWN AS "BARNES ROAD ROADWAY IMPROVEMENTS PROJECT". WORK IMMEDIATELY ADJACENT TO THIS PROJECT, BUT OUTSIDE OF THE CONSTRUCTION SITE BOUNDARY SHOWN HEREIN IS PERMITTED UNDER PWK-GEC20-0034.

**CHAPARRAL ROAD IMPROVEMENT PLANS
 COLORADO SPRINGS, CO**



19 E. Wilamette Ave.
 Colorado Springs, CO
 80903
 Ph: 719-477-9429
 Fax: 719-471-0766
 www.jsengr.com



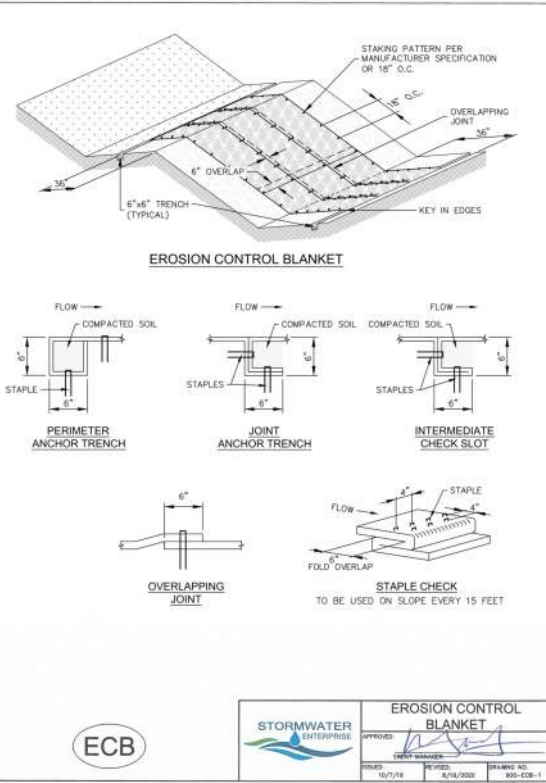
CALL UTILITY NOTIFICATION CENTER OF COLORADO
 1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE NUMBER UTILITIES.

NO.	DATE	BY	REVISION
1	11/20/20	JPS	CITY SUBMITTAL
2	4/01/21	JPS	ISSUE FOR BID

GRADING & EROSION CONTROL PLAN

HORIZ. SCALE: 1"=30'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RIDGELINE	CHECKED: JPS
CREATED: 8/11/20	LAST MODIFIED: 4/07/21
PROJECT NO: 092003	MODIFIED BY: BJJ

C1.1



INSTALLATION NOTES

- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
- IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER LONGITUDINALLY AND TRANSVERSELY FOR ALL EROSION CONTROL BLANKETS.
- INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
- STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
- COMPACT ALL TRENCHES.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE DEC INSPECTOR.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN VOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELISOR CONTENT	RECOMMENDED NETTING
STRAW	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	50% MIN.	70% MAX.	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELISOR	-	-	100%	DOUBLE/NATURAL

ECB

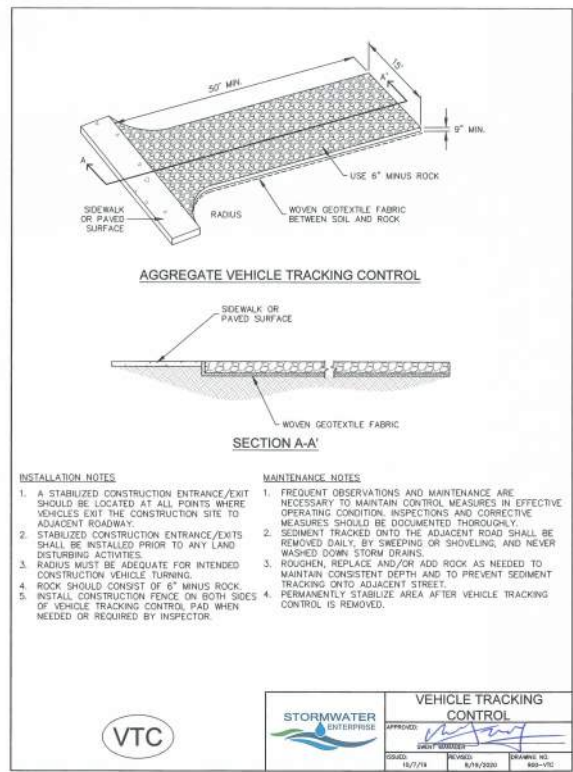
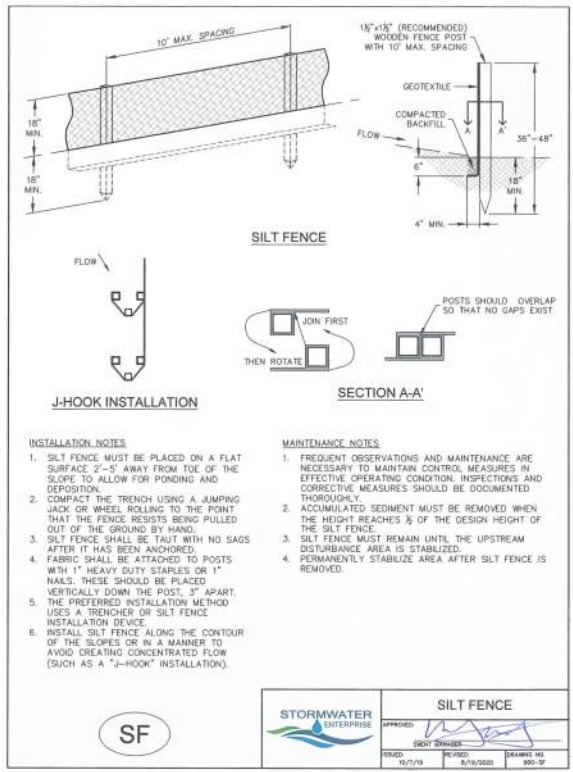
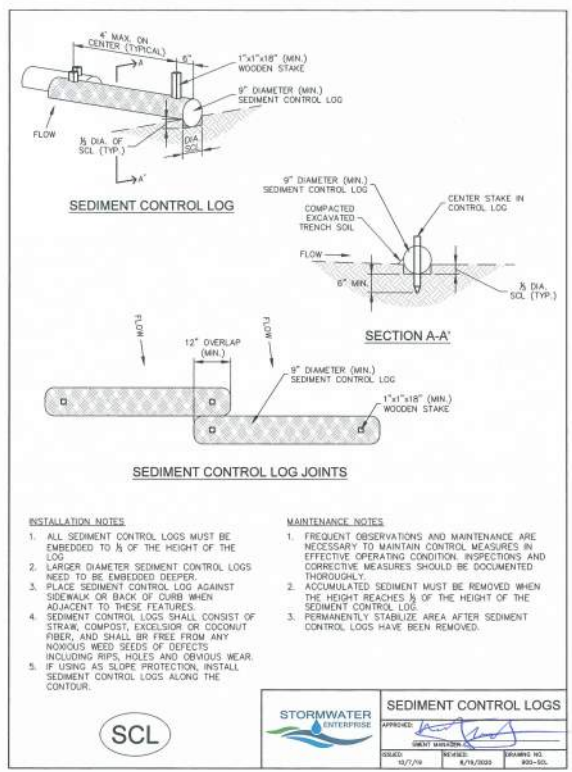
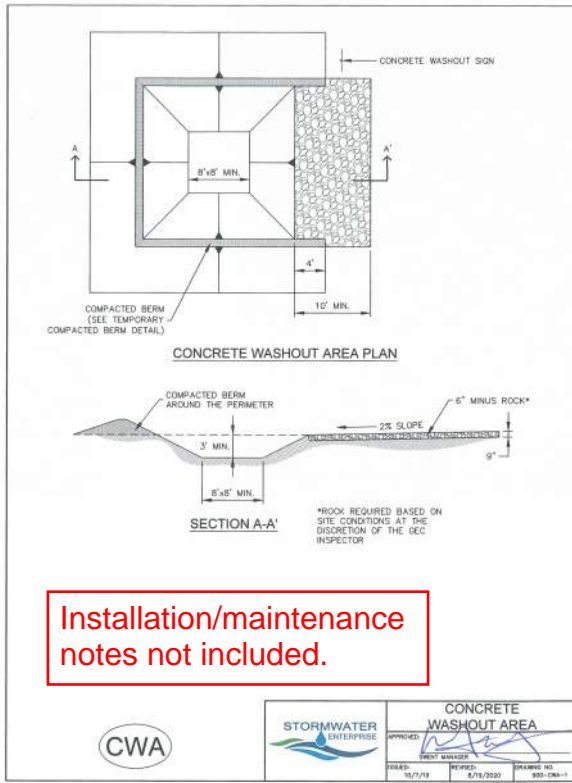
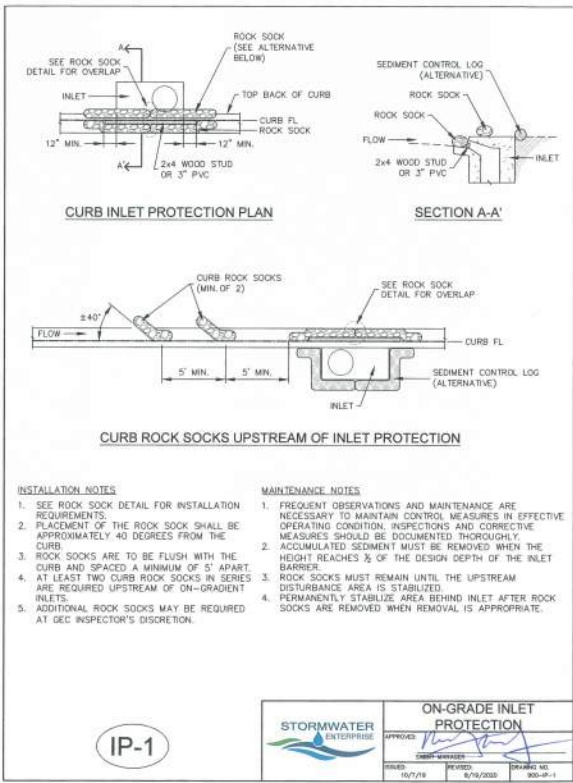
STORMWATER WATERRESISTANCE

EROSION CONTROL BLANKET

ISSUED: 10/7/19

REVISED: 8/18/2020

DRAWING NO. 900-ECB-2



HORIZONTAL AND VERTICAL DATUM:

THE HORIZONTAL DATUM USED FOR THIS SURVEY IS THE NAD-83 DATUM. THE COORDINATE SYSTEM IS A MODIFIED GROUND COORDINATE BASED ON THE COLORADO CENTRAL STATE PLANE COORDINATE SYSTEM. TO CONVERT TO STATE PLANE COORDINATES APPLY A SCALE FACTOR OF 0.99952489 AT NGS CS 203 (CONTROL POINT NUMBER 2).

VERTICAL DATUM IS BASED ON CP13 (POINT NUMBER 13), A CHISELED CROSS AT THE NW CORNER OF AN ELECTRICAL VAULT, NAVD88. ELEVATION=6854.21

BASIS OF BEARINGS IS BASED ON A LINE BETWEEN CP 2 AND CP 13, AN NGS ROD ON SLEEVE AND A CHISELED CROSS, WHICH BEARS S46°19'59"W.

STATEMENT:
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

REVIEW:
STREET DESIGN FOR CITY ENGINEERING:
CURB & GUTTER REVIEW _____ DATE: _____
FINAL REVIEW _____ DATE: _____
DRAINAGE DESIGN: _____ DATE: _____
THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED

SIGNAGE & STRIPING REVIEW:
TRAFFIC ENGINEERING: _____ DATE: _____

DESIGN DATA:
SIDEWALKS: WIDTH 5'
LOCATION: ATTACHED DETACHED
DESIGN SPEED: 20
CURB TYPE 1x2 3
R/W WIDTH 60' F/C-F/C 32'-48'
STREET TYPE COLLECTOR

PAVEMENT:
COMPOSITE SECTION:
HMA _____
BASE _____
SUBGRADE STABILIZATION:
CHEMICAL MECHANICAL
TYPE _____ THICKNESS _____

STATEMENTS:

A. SEWER - ANY CHANGES OR ALTERATIONS EFFECTING THE GRADE, ALIGNMENT, ELEVATION, AND DEPTH OF COVER OF SEWERS AND RESPONSIBILITY OF THE OWNER/DEVELOPER. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR ALL OPERATIONAL DAMAGES AND DEFECTS IN INSTALLATION AND MATERIAL FOR MAINS AND SERVICES FROM THE DATE OF APPROVAL UNTIL FINAL ACCEPTANCE IS ISSUED.

B. WATER - THIS APPROVAL SUBJECT TO THE FINAL STREET GRADE LEAVING A MINIMUM COVER OF 5' (FIVE FEET) OVER THE WATER MAIN. ANY CHANGES SHALL BE AT THE EXPENSE OF THE OWNER OR DEVELOPER.

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF JPS ENGINEERING.

JOHN P. SCHWAB, CO. PE. #29891 DATE _____

HORZ. SCALE: N/A DRAWN: BJJ
VERT. SCALE: N/A DESIGNED: JPS
SURVEYED: RIDGELINE CHECKED: JPS
CREATED: 10/20/20 LAST MODIFIED: 11/10/20
PROJECT NO: 092003 MODIFIED BY: BJJ
SHEET: **C1.3**

CHAPARRAL ROAD IMPROVEMENT PLANS
COLORADO SPRINGS, CO

JPS ENGINEERING

19 E. Wilamette Ave.
Colorado Springs, CO 80903

PH: 719-477-9429
FAX: 719-471-0766
www.jpseng.com

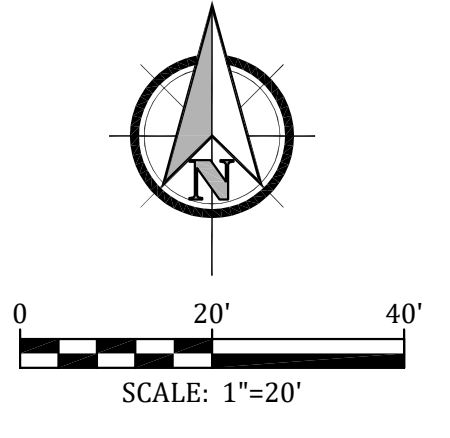
CALL UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	REVISION	BY	DATE

GENERAL NOTES



Grading Legend	
SF	Silt Fence
RS	Rock Sock
IP	Curb Inlet Protection
CWA	Concrete Washout Area
SSA	Stabilized Staging Area
PT	Portable Toilet
SP	Stock Pile Management
VTC	Vehicle Tracking
1.0%	Existing Flow Direction Arrow and Slope
---	Limits of Soil Disturbance/ Limits of Construction
---	Property Line
(5925)	Existing Contour
→	Emergency Overflow Path



HB&A
Architecture
Planning
102 E. Moreno Avenue
Colorado Springs, CO 80903
719.473.7063
www.hbaa.com

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 530-7342

**FIRE STATION #23
& RADIO SHOP**
393 Printers Parkway
Colorado Springs, CO 80910

641640407
City of Colorado Springs
375 Printers Parkway

6416404061
Commercial Condo
PPM West LLC

PRINTERS PARKWAY
(PUBLIC R.O.W. VARIES)
REC. NO. 200098056

Work outside LOD/LOC

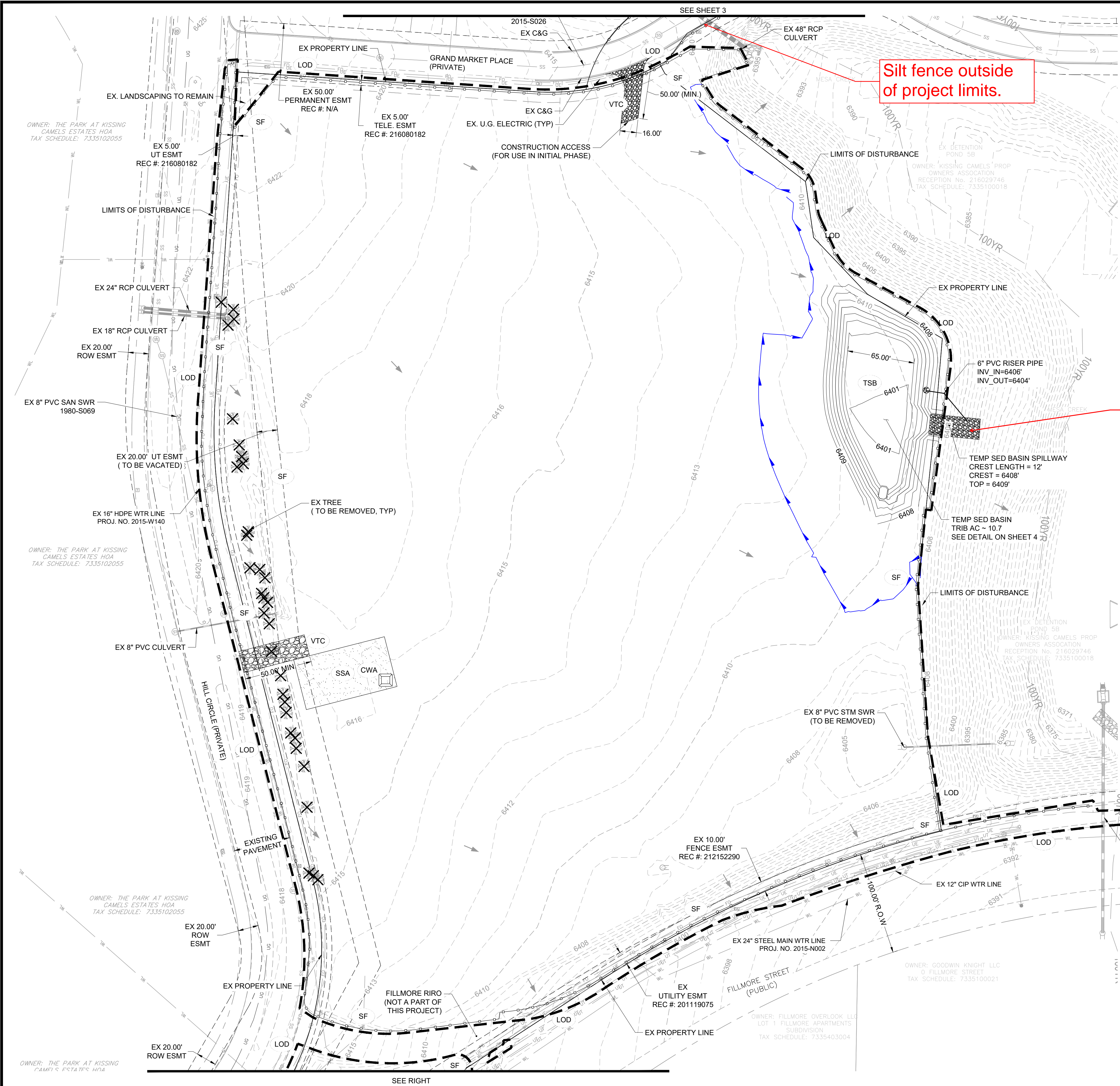
FOR BIDDING ONLY

issue / revision	date:
Concept Design	June 2020
Schematic Design	July 2020
Design Development	Nov 24, 2020
Permit Submittal	Feb 19, 2021
PPRBD Resubmittal	April 02, 2021

issue / revision	job #
	151-18

Grading & Erosion
Control Plan
Initial Phase

C-301

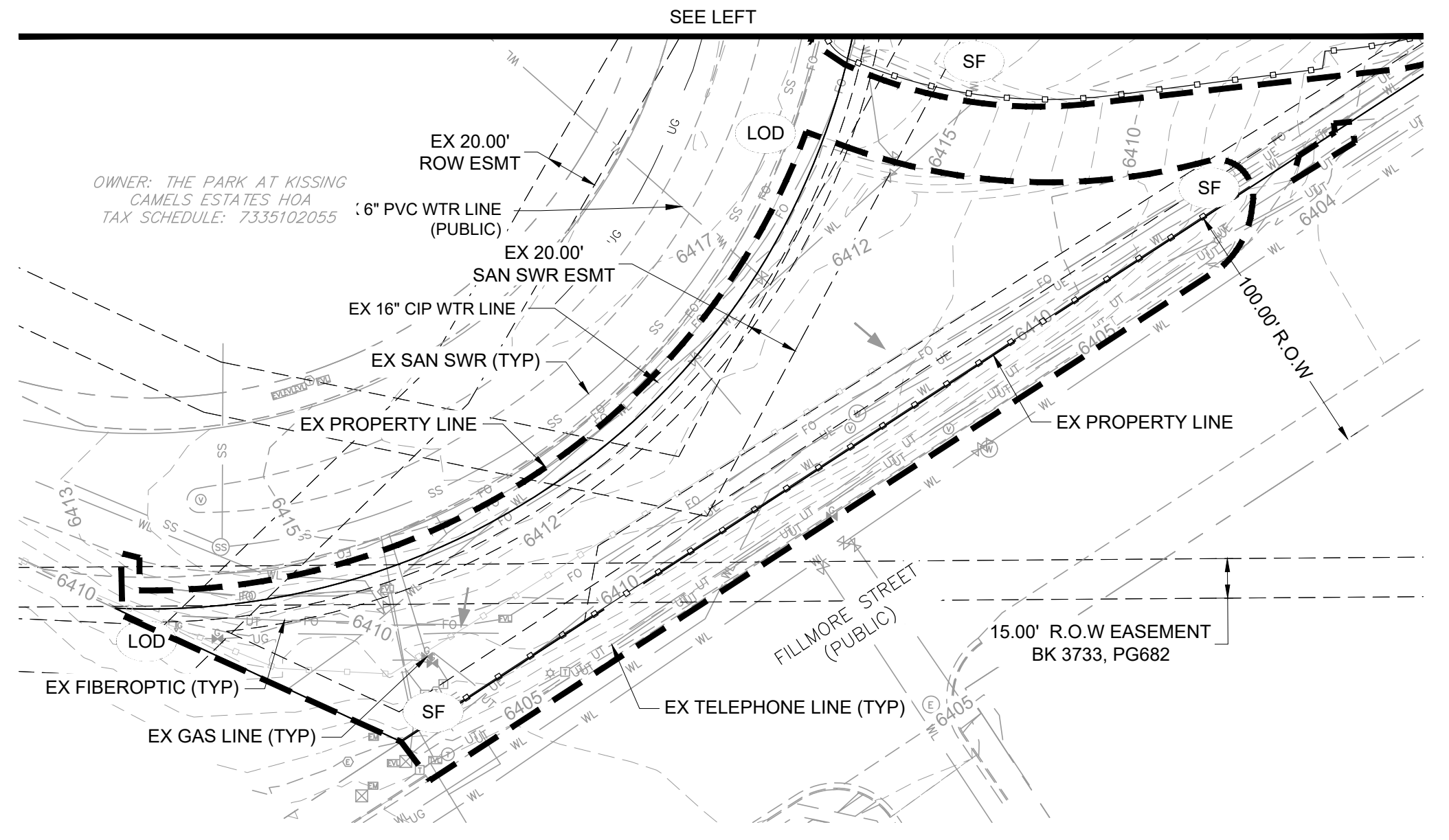


Silt fence outside of project limits.

Spillway outside of project limits

BMP LEGEND:

- CWA CONCRETE WASHOUT AREA
- CF CONSTRUCTION FENCE
- DD DIVERSION DITCH
- IP INLET PROTECTION
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE
- SSA STABILIZED STAGING AREA
- SP STOCKPILE MANAGEMENT
- VTC VEHICLE TRACKING CONTROL
- LOD LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY
- SM SEEDING AND MULCHING
- TSB TEMPORARY SEDIMENT BASIN
- ECB EROSION CONTROL BLANKET
- CUT-FILL DEMARCATION
- PROP FLOW DIRECTION
- EX FLOW DIRECTION
- TREE REMOVAL

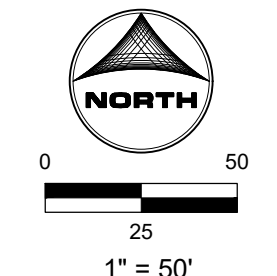


GRADING & EROSION CONTROL PLAN NOTES:

1. SEE SHEETS 5 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
3. AREA WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPORT OF ANY FILL.
4. STABILIZED STAGING AREA SHOWN CONCEPTUALLY. CONTRACTOR AND CITY OF COLORADO SPRINGS INSPECTOR TO DETERMINE IF NECESSARY AT INITIAL INSPECTION.
5. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
7. NON-STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.

PROJECT INFO:

TOTAL DISTURBANCE AREA = 13.6 AC±
 RECEIVING WATERS: MESA CREEK
 ANTICIPATED START OF CONSTRUCTION: MAY 2021
 ANTICIPATED END OF LAND DISTURBANCE: JANUARY 2022
 ANTICIPATED FINAL STABILIZATION: MARCH 2022



DRAWN BY: NQJ	JOB DATE: 3/29/2021	BAR IS ONE INCH ON OFFICIAL DRAWINGS. IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
APPROVED: KMH	JOB NUMBER: 200964	
CAD DATE: 4/14/2021		
CAD FILE: J:\2020\200964\CAD\DWG\C\GEC\Onsite\Initial_Plan		

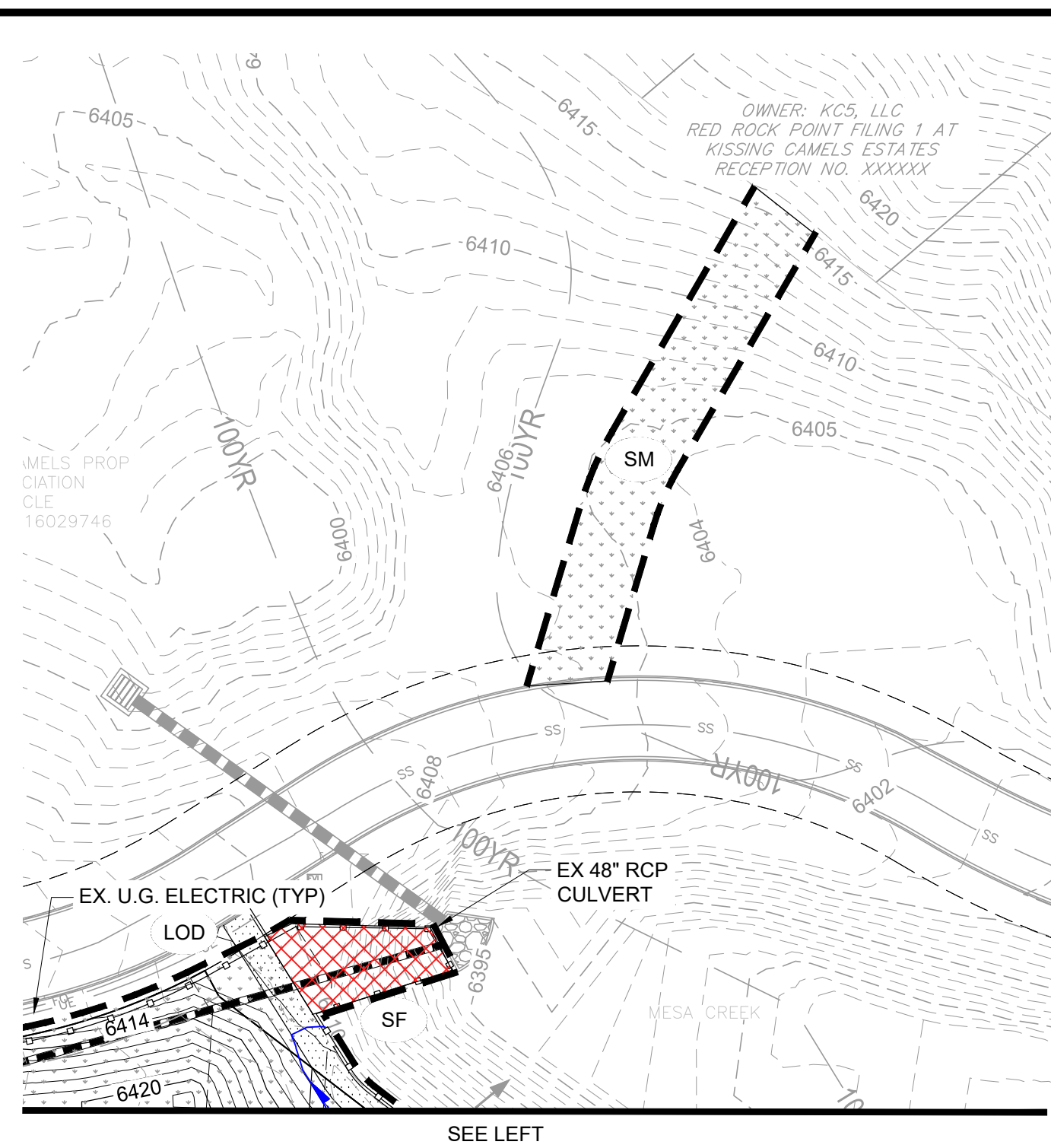
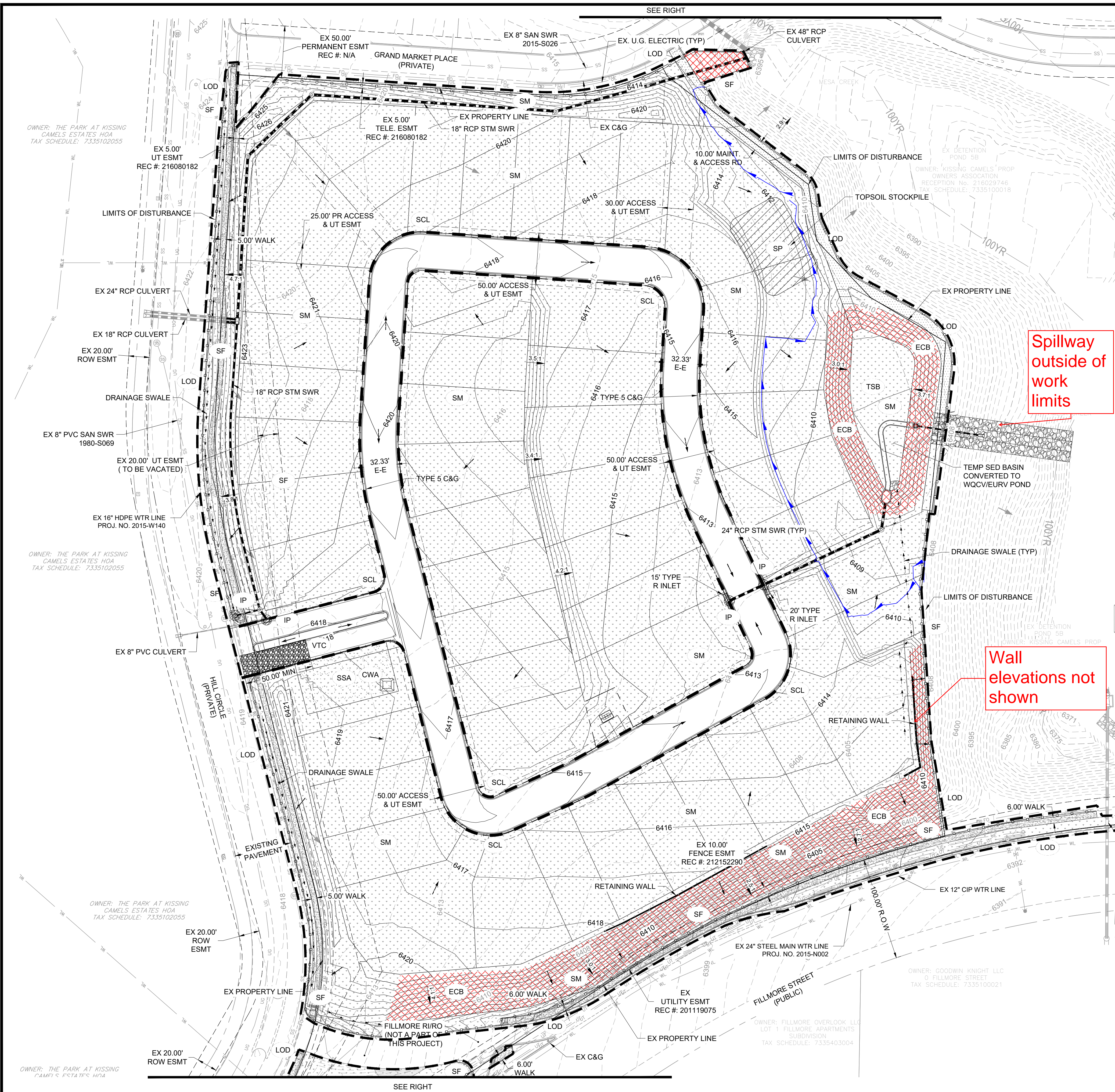
NO.	DATE	BY	REVISION DESCRIPTION

HR GREEN - COLORADO SPRINGS
 7222 COMMERCE CENTER DR SUITE 220
 COLORADO SPRINGS CO 80919
 PHONE: 719.300.4140 TOLL FREE: 800.728.7805
 FAX: 844.273.1057 | HRGreen.com

RED ROCK POINT 4
 KC5, LLC
 COLORADO SPRINGS, COLORADO

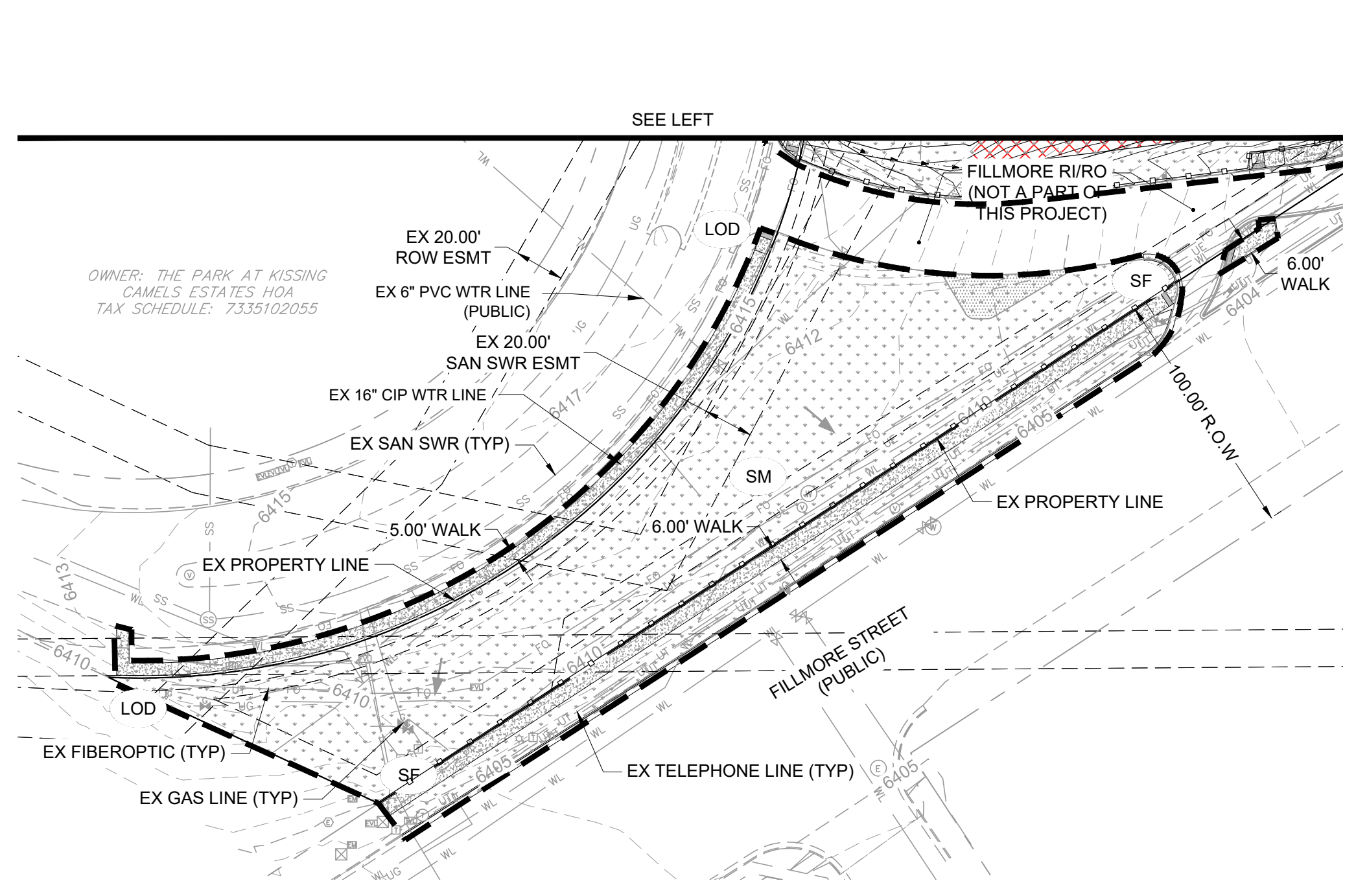
GRADING, EROSION & SQC PLAN
 INITIAL PLAN

SHEET
GEC
2



BMP LEGEND:

	CWA	CONCRETE WASHOUT AREA
	CF	CONSTRUCTION FENCE
	DD	DIVERSION DITCH
	IP	INLET PROTECTION
	SCL	SEDIMENT CONTROL LOG
	SF	SILT FENCE
	SSA	STABILIZED STAGING AREA
	SP	STOCKPILE MANAGEMENT
	VTC	VEHICLE TRACKING CONTROL
	LOD	LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY
	SM	SEEDING AND MULCHING
	TSB	TEMPORARY SEDIMENT BASIN
	ECB	EROSION CONTROL BLANKET
	CUT	CUT-FILL DEMARCATION
	FILL	CUT-FILL DEMARCATION
		PROP FLOW DIRECTION
		EX FLOW DIRECTION
		TREE REMOVAL

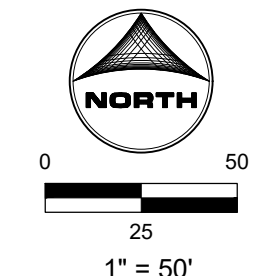


GRADING & EROSION CONTROL PLAN NOTES:

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 ANTICIPATED START OF CONSTRUCTION: MAY 2021
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DRAWN BY: NQJ	JOB DATE: 3/29/2021	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: KMH	JOB NUMBER: 200964	0" = 1"
CAD DATE: 4/14/2021		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
CAD FILE: J:\2020\200964\CAD\DWG\C\GEC\Onsite\Interim_Plan		

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen - COLORADO SPRINGS
 7222 COMMERCE CENTER DR SUITE 220
 COLORADO SPRINGS CO 80919
 PHONE: 719.300.4140 TOLL FREE: 800.728.7805
 FAX: 844.273.1057 | HRGreen.com

RED ROCK POINT 4
 KC5, LLC
 COLORADO SPRINGS, COLORADO

GRADING, EROSION & SQC PLAN
 INTERIM -VERTICAL PLAN

SHEET GEC 4

NO CHANGES ARE TO BE MADE TO THIS DRAWING WITHOUT WRITTEN PERMISSION OF HARRIS KOCHER SMITH.

PROPERTY DESCRIPTION:

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 13 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN, IN THE CITY OF COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO.

BASIS OF BEARING:

BEARINGS ARE GRID BEARINGS BASED ON THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE NAD83. THE NORTH LINE OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 13 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, MONUMENTED AT THE NORTHWEST CORNER BY A 3-1/2" ALUMINUM CAP 4" ABOVE GROUND STAMPED "22577" AND MONUMENTED AT THE WEST 1/16TH CORNER BY A 3-1/2" ALUMINUM CAP FLUSH WITH THE GROUND STAMPED "PE-LS 9853" BEARS N88°54'00"E.

BENCHMARK:

SITE BENCHMARK (BM) IS COLORADO SPRINGS UTILITIES SURVEY CONTROL MONUMENT "CTT61": A NAIL WITH TAG ON THE SOUTHWEST CORNER OF AN INLET AT THE NORTHEAST CORNER OF CENTENNIAL BOULEVARD AND FILLMORE STREET. THE ELEVATION OF SAID MONUMENT IS 6,398.39' (NGVD29).

GESC NOTES:

- 1. NO CLEARING, GRADING, EXCAVATION, OR OTHER LAND DISTURBING ACTIVITIES SHALL BE ALLOWED (EXCEPT FOR WORK DIRECTLY RELATED TO THE INSTALLATION OF INITIAL CONTROL MEASURES) UNTIL A CITY GEC PERMIT HAS BEEN ISSUED.
- 2. ALL LAND DISTURBING ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH AND THE APPROVED GEC PLAN AND CSWMP.
- 3. INITIAL CONTROL MEASURES SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY LAND DISTURBANCE ACTIVITIES TAKING PLACE. AN INITIAL SITE INSPECTION WILL NOT BE SCHEDULED UNTIL A CITY GEC PERMIT HAS BEEN 'CONDITIONALLY APPROVED.' CALL CITY STORMWATER INSPECTIONS, 385-5980, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE AN INITIAL INSPECTION AND OBTAIN FULL PERMIT APPROVAL.
- 4. INDIVIDUALS SHALL COMPLY WITH THE 'COLORADO WATER QUALITY CONTROL ACT' (TITLE 25, ARTICLE 8, CRS) AND THE 'CLEAN WATER ACT' (33 USC 1344), INCLUDING REGULATIONS PROMULGATED AND CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE CITY'S MS4 PERMIT, STORMWATER CONSTRUCTION MANUAL. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- 5. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
- 6. ALL CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION MEASURES ARE IMPLEMENTED. TEMPORARY CONSTRUCTION CONTROL MEASURES MUST BE REMOVED PRIOR TO PERMIT CLOSEOUT.
- 7. CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS OR ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- 8. 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. CONSTRUCTION CONTROL MEASURES MAY BE REQUIRED BY THE GEC INSPECTOR IF DEEMED NECESSARY BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES (E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.).
- 9. ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 10. THE PERMITTEE 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 AS A RESULT OF CONSTRUCTION ACTIVITIES.
- 11. 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. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO THE STORM SEWER SYSTEM AT ANY TIME.
- 12. SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT ALL STORAGE, EQUIPMENT FUELING, AND EQUIPMENT SERVICING AREAS SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITY. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT ADEQUATE PROTECTION. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY, OR CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.
- 13. SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED AS SOON AS POSSIBLE AFTER DISCOVERY.
- 14. NO CHEMICALS ARE TO BE ADDED TO THE DISCHARGE UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED BY THE STATE. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- 15. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER FINAL GRADING OR FINAL LAND DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN FOURTEEN (14) DAYS SHALL BE ROUGHENED, MULCHED, TACKIFIED, OR STABILIZED WITH TARPS WITHIN FOURTEEN (14) DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN SIXTY (60) DAYS SHALL ALSO BE SEEDED, UNLESS AN ALTERNATIVE STABILIZATION MEASURE IS ACCEPTED AT THE INSPECTOR'S DISCRETION. ALL TEMPORARY CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION IS ACHIEVED.
- 16. THE GEC PLAN WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE STORMWATER ENTERPRISE SHOULD ANY OF THE FOLLOWING OCCUR: GRADING DOES NOT COMMENCE WITHIN TWELVE (12) MONTHS OF THE CITY'S ACCEPTANCE OF THE PLAN, THE CONSTRUCTION SITE IS IDLE FOR TWELVE (12) CONSECUTIVE MONTHS, A CHANGE IN PROPERTY OWNERSHIP OCCURS, THE PLANNED DEVELOPMENT CHANGES, OR ANY OTHER MAJOR MODIFICATIONS ARE PROPOSED AS DEFINED IN THE STORMWATER CONSTRUCTION MANUAL.
- 17. IT IS NOT PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH ON ANY UTILITY EASEMENT OR UTILITY RIGHT-OF-WAY WITHOUT WRITTEN APPROVAL FROM THE UTILITY OWNER. CITY ACCEPTANCE OF THE GEC PLAN AND CSWMP DOES NOT SATISFY THIS REQUIREMENT. THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO EXISTING UTILITY FACILITIES TO ACCOMMODATE THE PLAN MUST BE APPROVED BY THE AFFECTED UTILITY OWNER PRIOR TO IMPLEMENTING THE PLAN. THE COST TO RELOCATE OR PROTECT EXISTING UTILITIES OR TO PROVIDE INTERIM ACCESS SHALL BE AT THE APPLICANT'S EXPENSE.
- 18. APPLICANT REPRESENTS AND WARRANTS THAT THEY HAVE THE LEGAL AUTHORITY TO GRADE AND/OR CONSTRUCT IMPROVEMENTS ON ADJACENT PROPERTY. THE CITY HAS NOT REVIEWED THE DEVELOPER'S AUTHORITY TO MODIFY ADJACENT PROPERTY. AN APPROVED GEC PERMIT DOES NOT PROVIDE APPROVAL FOR THE APPLICANT TO PERFORM WORK ON ADJACENT PROPERTY.
- 19. ALL UTILITY INSTALLATIONS WITHIN THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN ARE COVERED UNDER THIS PLAN. LOCATIONS OF UTILITIES WITHIN THE LIMITS OF DISTURBANCE MAY BE MODIFIED AFTER PLAN APPROVAL AS A FIELD CHANGE. UTILITY INSTALLATIONS RELATED TO THE PRIVATE DEVELOPMENT THAT EXTEND BEYOND THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN ARE CONSIDERED TO BE PART OF THE LARGER DEVELOPMENT, AND THEREFORE REQUIRE A PLAN MODIFICATION OR SEPARATE PLAN FOR THE ADDITIONAL DISTURBANCE AREA.
- 20. SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER FINAL GRADING OR FINAL LAND DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN FOURTEEN (14) DAYS SHALL BE ROUGHENED, MULCHED, TACKIFIED, OR STABILIZED WITH TARPS WITHIN FOURTEEN (14) DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN SIXTY (60) DAYS SHALL ALSO BE SEEDED, UNLESS AN ALTERNATIVE STABILIZATION MEASURE CAN BE JUSTIFIED AND IS ACCEPTED AT THE GEC INSPECTOR'S DISCRETION. ALL CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION IS ACHIEVED.
- 21. STREET SWEEPING WILL BE USED AS A NON-STRUCTURAL CONTROL MEASURE.
- 22. THE GEOLOGICAL HAZARD REPORT BY CTL THOMPSON ON NOVEMBER 22, 2019 STATES ADDITIONAL GEOTECHNICAL INVESTIGATION SHOULD BE CONDUCTED DUE TO A POTENTIAL FOR CONSOLIDATION. CONTRACTOR IS TO VERIFY WITH CTL THOMPSON ABOUT POTENTIAL CONSOLIDATION AREAS AND POSSIBLE SOLUTIONS FOR CONSOLIDATION.
- 23. TEMPORARY STABILIZATION IS REQUIRED IN AREAS OF CONSOLIDATION SPECIFIED IN THE GEOLOGICAL HAZARD REPORT BY CTL THOMPSON.

OUTLOOK WEST MESA FILING NO.1 LOT 7

SITUATED IN THE NORTHWEST 1/4 OF SECTION 36, TOWNSHIP 13 SOUTH, RANGE 67 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

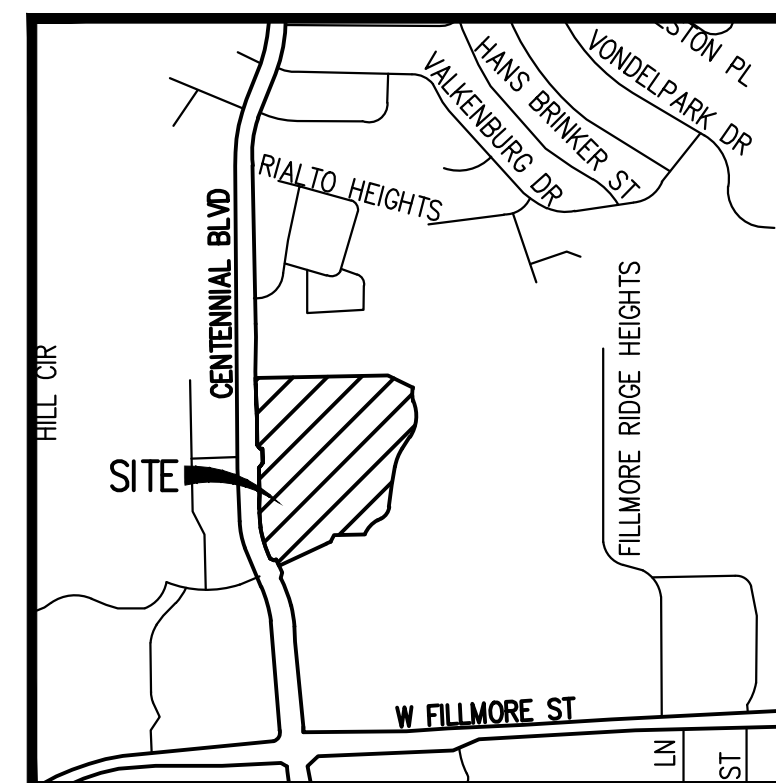
GRADING AND EROSION CONTROL PLAN

SUMMARY OF APPROXIMATE EARTHWORK QUANTITIES

CUT VOLUME	92849 CY
FILL VOLUME	114837 CY
NET (FILL)	21988 CY
AREA OF DISTURBANCE	32 ACRES

NOTE: EARTHWORK VOLUMES ARE UNADJUSTED AND DO NOT ACCOUNT FOR UTILITY SPOOLS, PAVEMENT SECTION, SOIL COMPACTION/SWELL, ETC.

TAX SCHEDULE NO.: 73362001
START DATE: AUGUST 2021
COMPLETION DATE: JUNE 2023
FINAL STABILIZATION DATE: AUGUST 2023
RECEIVING WATER: DOUGLAS CREEK



VICINITY MAP
SCALE: 1" = 1000'

ABBREVIATIONS

CO	CLEANOUT
E	EAST, EASTING
EL	ELEVATION
ESMT	EASEMENT
EX	EXISTING
MH	MANHOLE
N	NORTH, NORTHING
NO	NUMBER
PC	PAGE
PR	PROPOSED
ROW	RIGHT OF WAY
SB	SEDIMENT BASIN
SS	SANITARY SEWER
STA	STATION
STM	STORM
TYP	TYPICAL
WAT	WATER

SHEET INDEX

- 1 COVER
- 2 INITIAL (NORTH)
- 3 INITIAL (MID)
- 4 INITIAL (SOUTH)
- 5 INTERIM (NORTH)
- 6 INTERIM (MID)
- 7 INTERIM (SOUTH)
- 8 INTERIM (EAST)
- 9 FINAL (NORTH)
- 10 FINAL (MID)
- 11 FINAL (SOUTH)
- 12 FINAL (EAST)
- 13 DETAILS1
- 14 DETAILS2
- 15 DETAILS3
- 16 DETAILS4
- 17 DETAILS5

Not signed

CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW

THIS GRADING AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH CITY CODE. THIS PLAN IS REVIEWED IN ACCORDANCE WITH THE STORMWATER CONSTRUCTION MANUAL, LATEST REVISIONS.

SIGNED: *Michael Moore* DATE: 09/15/2021
FOR THE SWENT MANAGER
NOTES: Master Project # STM-MP21-0271 (& MP21-0424)

OPINION OF PROBABLE COST

ITEM	DESCRIPTION	ID	UNIT	INITIAL/INTERIM QUANTITY	UNIT COST	INITIAL/INTERIM TOTAL COST
1	CONCRETE WASHOUT AREA	CWA	EA	3	\$1000.00	\$3,000.00
2	CONSTRUCTION FENCE	CF	LF	5290	\$5.00	\$26,450.00
3	INLET PROTECTION - ALL TYPES	IP	EA	31	\$300.00	\$9,300.00
4	ROCK SOCKS	RS	LF	265	\$15.00	\$3,975.00
5	TEMPORARY SEDIMENT BASIN	TSB	CF	112317	\$3.00	\$336,951.00
6	SEDIMENT CONTROL LOG	SCL	LF	376	\$3.00	\$1,128.00
7	SILT FENCE	SF	LF	3422	\$2.00	\$6,844.00
8	STABILIZED STAGING AREA	SSA	SY	950	\$2.00	\$1,900.00
9	SURFACE ROUGHENING	SR	AC	22.98	\$600.00	\$13,788.00
10	VEHICLE TRACKING CONTROL	VTC	EA	3	\$1000.00	\$3,000.00
11	POND MAINTENANCE/SEDIMENT REMOVAL	PM	AC	1.55	\$1000.00	\$1,550.00
12	STREET MAINTENANCE	STM	LS	1	\$20000.00	\$20,000.00
INITIAL/INTERIM BMP COST SUB TOTAL						\$427,886.00
MOBILIZATION					\$5000.00	\$432,886.00
MAINTENANCE					40% OF SUBTOTAL	\$171,154.40
GRAND TOTAL						\$604,040.40

OWNER'S STATEMENT:

I, OWNER'S STATEMENT
THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING CONSTRUCTION CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER CHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

OWNER SIGNATURE: *Robert Place* DATE: 9/10/2021
NAME OF OWNER: Robert Place PHONE: 478-719-7504
TITLE: Vice President, Colorado MultiFamily MAIL: rplace@evr.com

CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW

THIS GRADING AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH CITY CODE. THIS PLAN IS REVIEWED IN ACCORDANCE WITH THE STORMWATER CONSTRUCTION MANUAL, LATEST REVISIONS.

SIGNED: _____ DATE: _____
FOR THE SWENT MANAGER

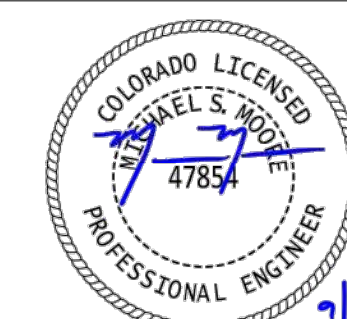
NOTES: _____

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. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE, OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

PRINTED NAME: *Michael Moore* DATE: 9/15/21
PHONE NUMBER: (303) 623-6300

SEAL

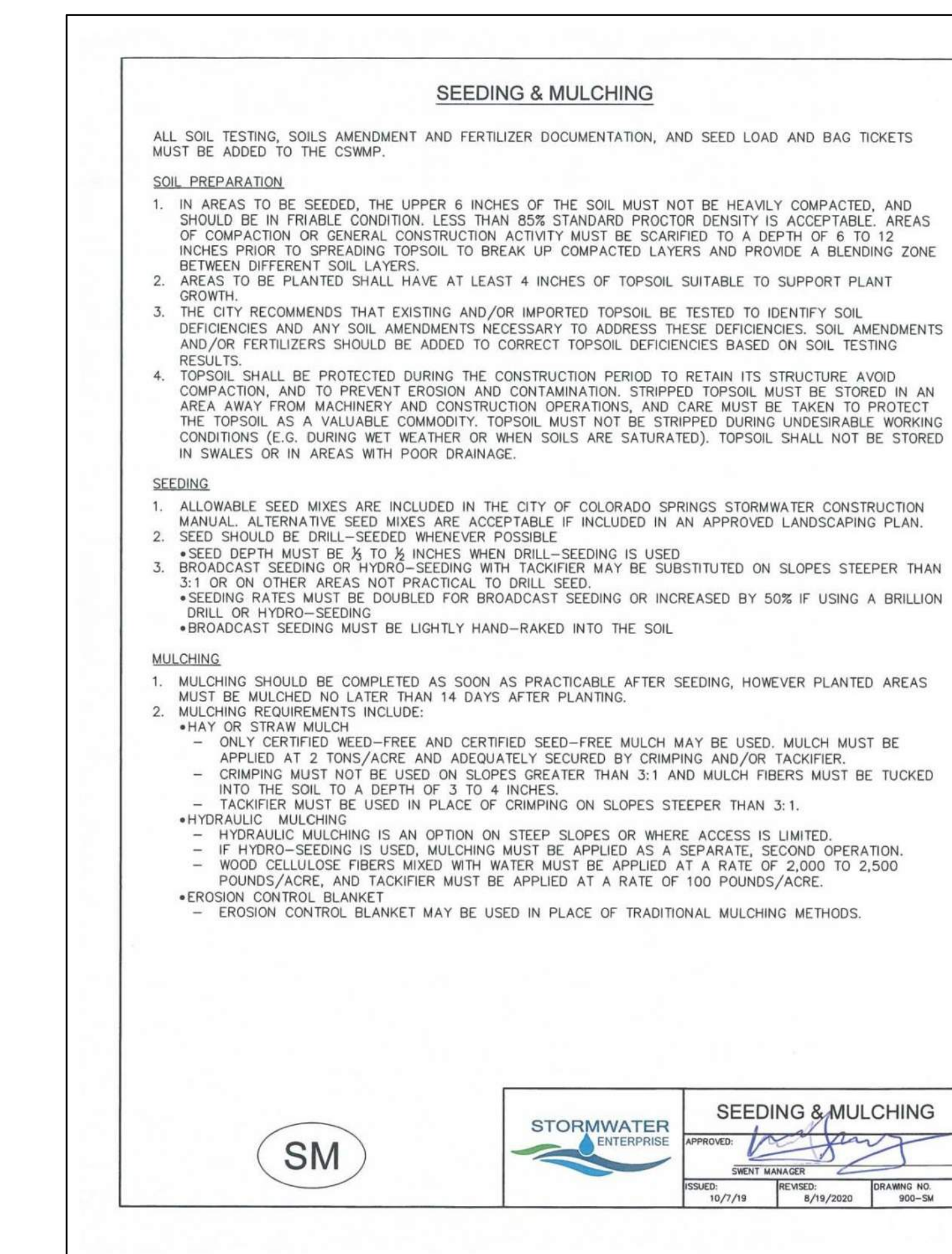
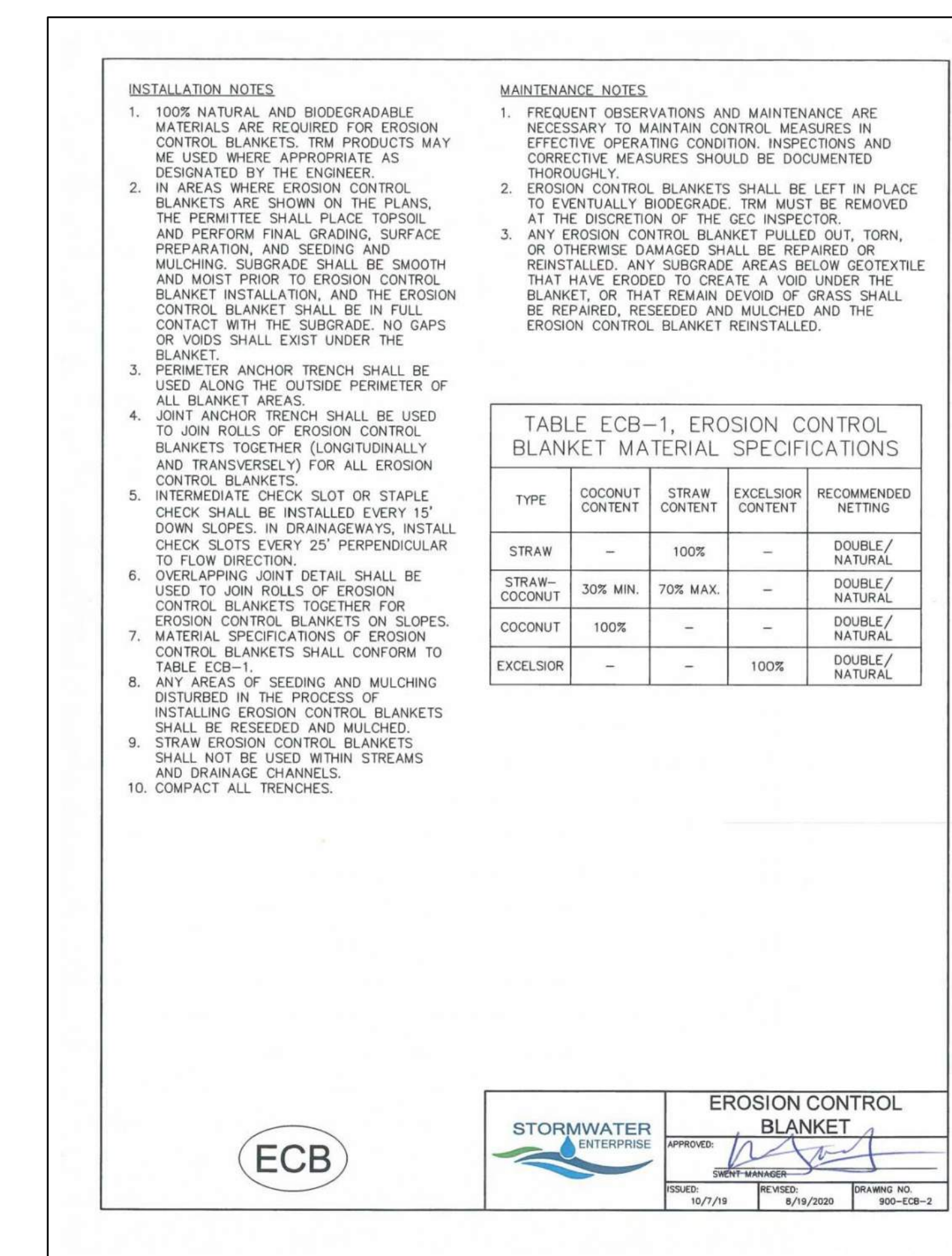
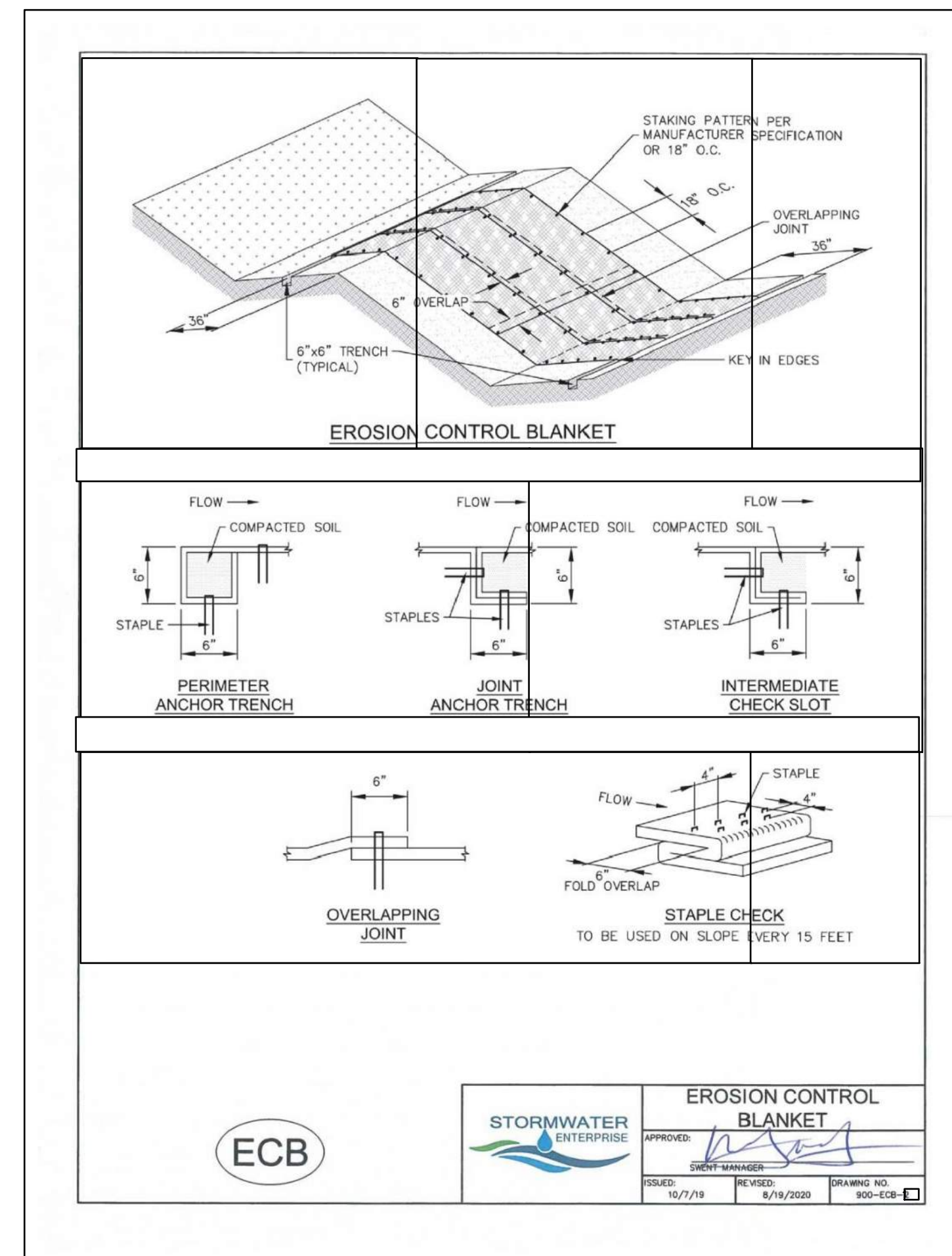
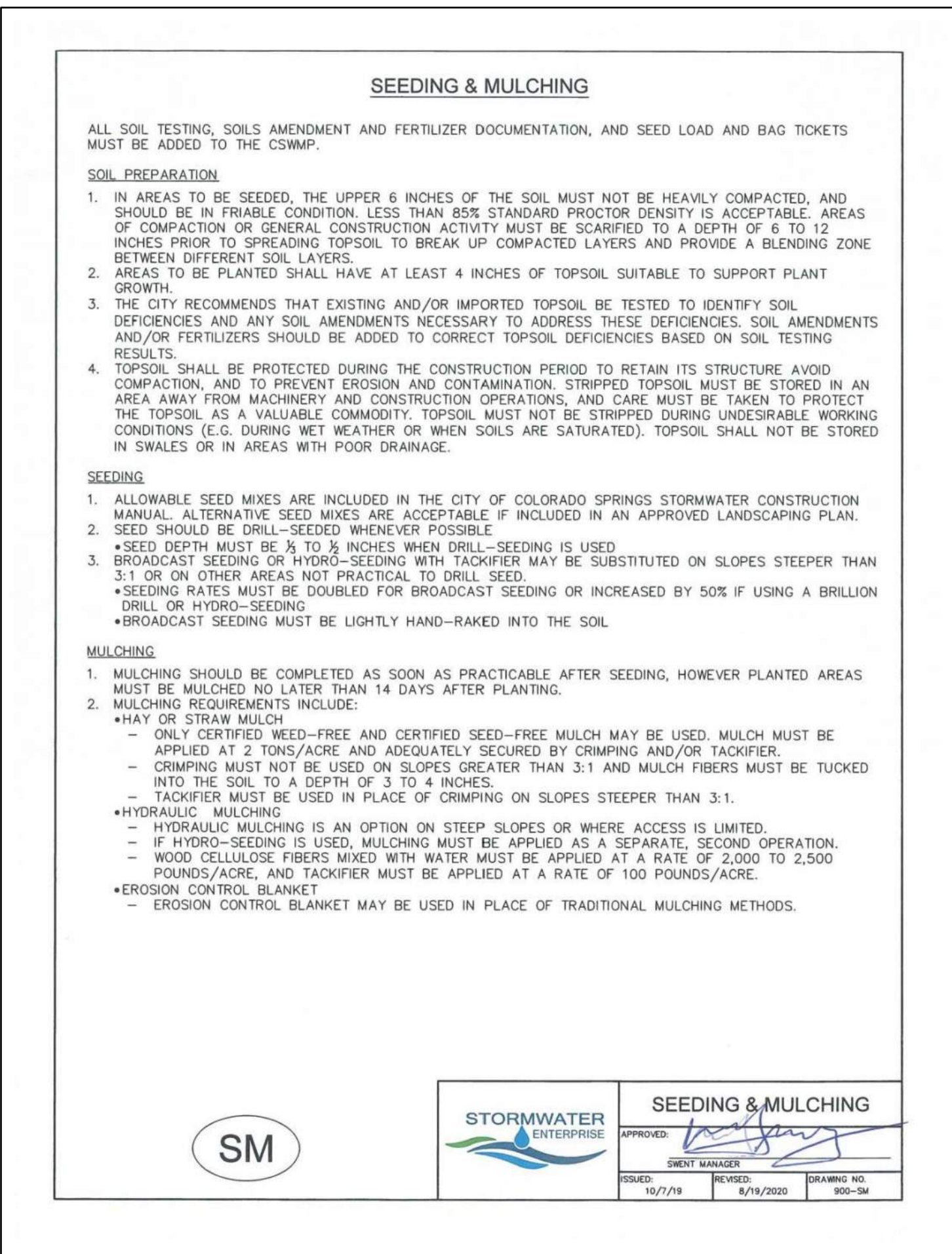
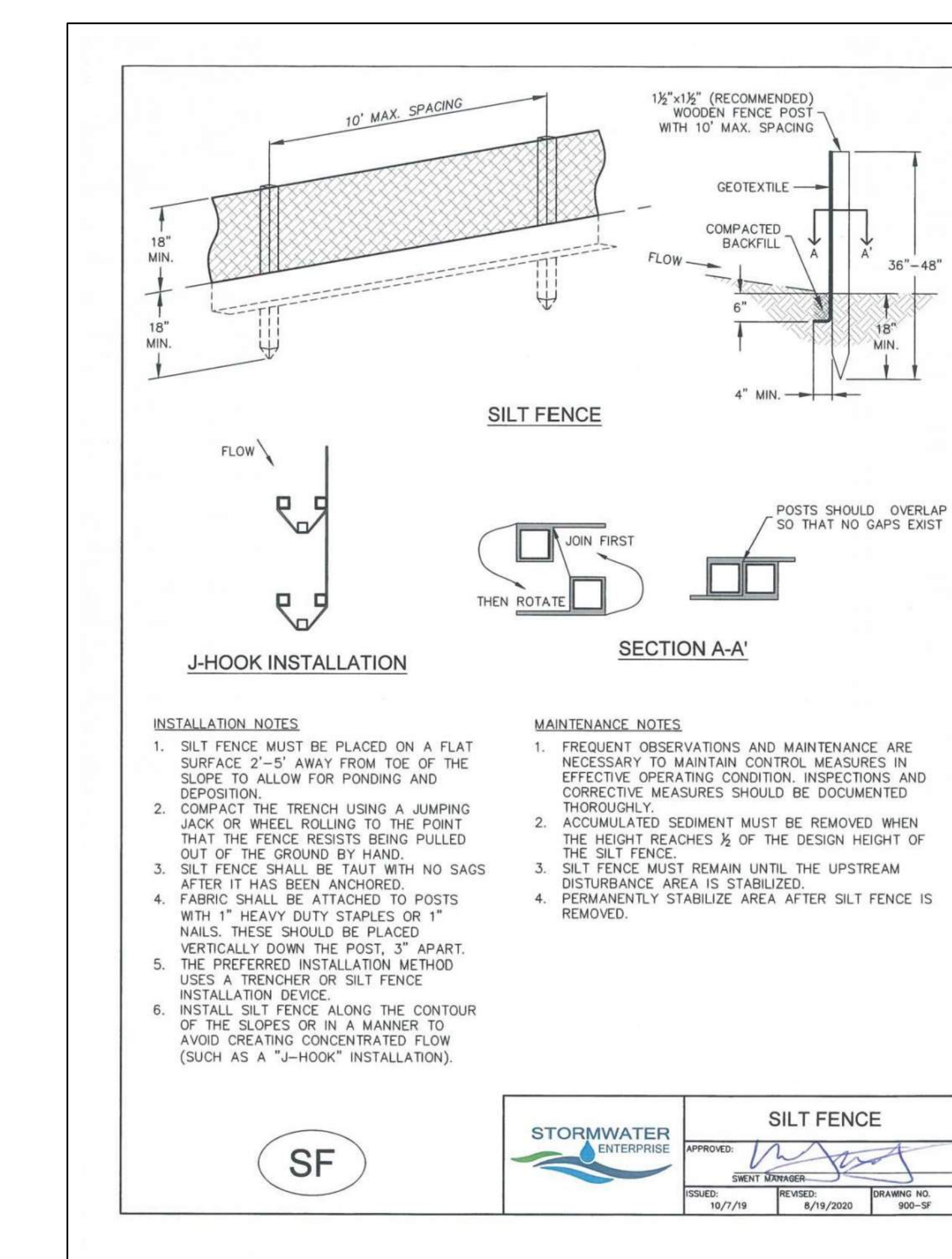
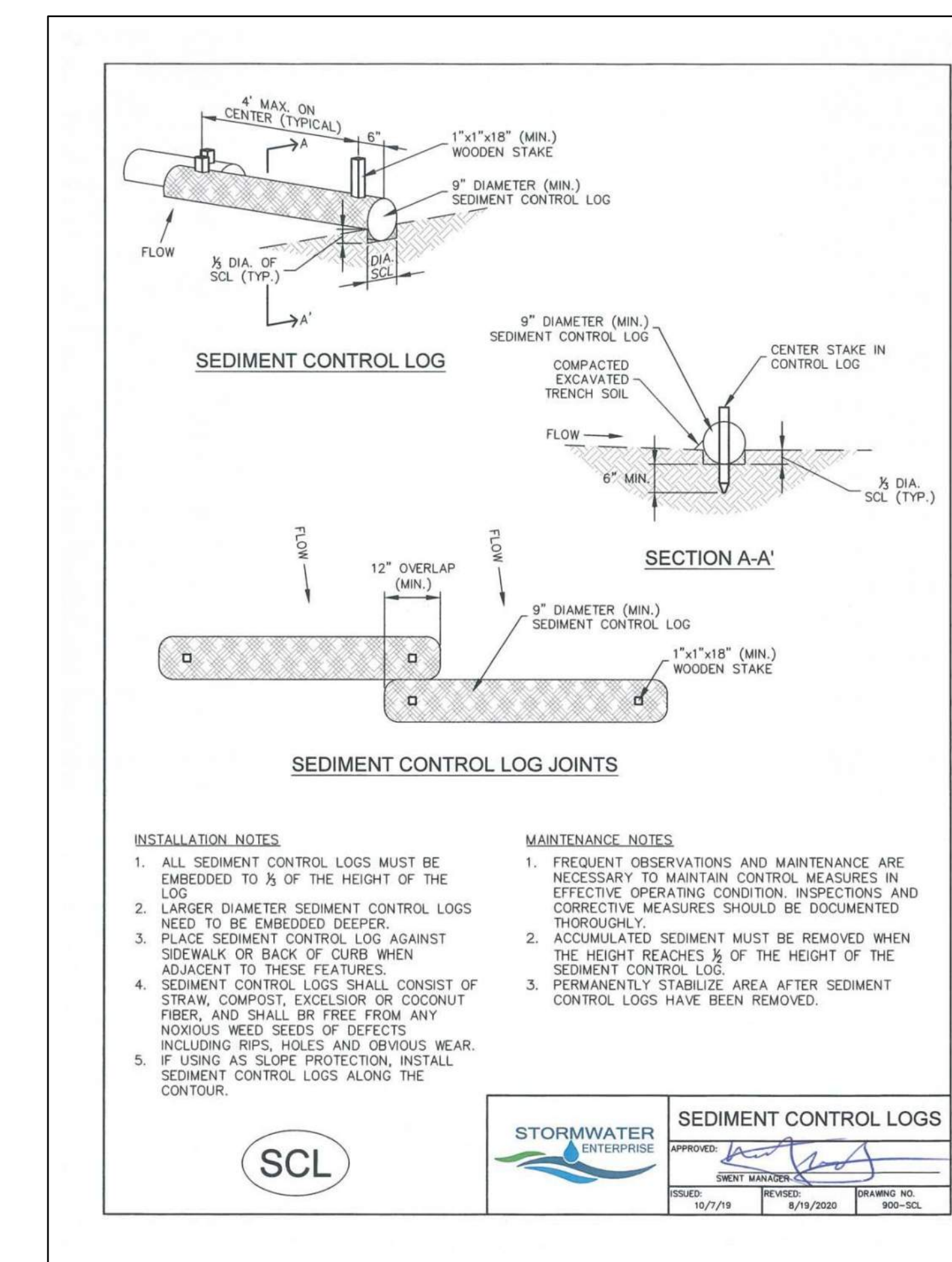
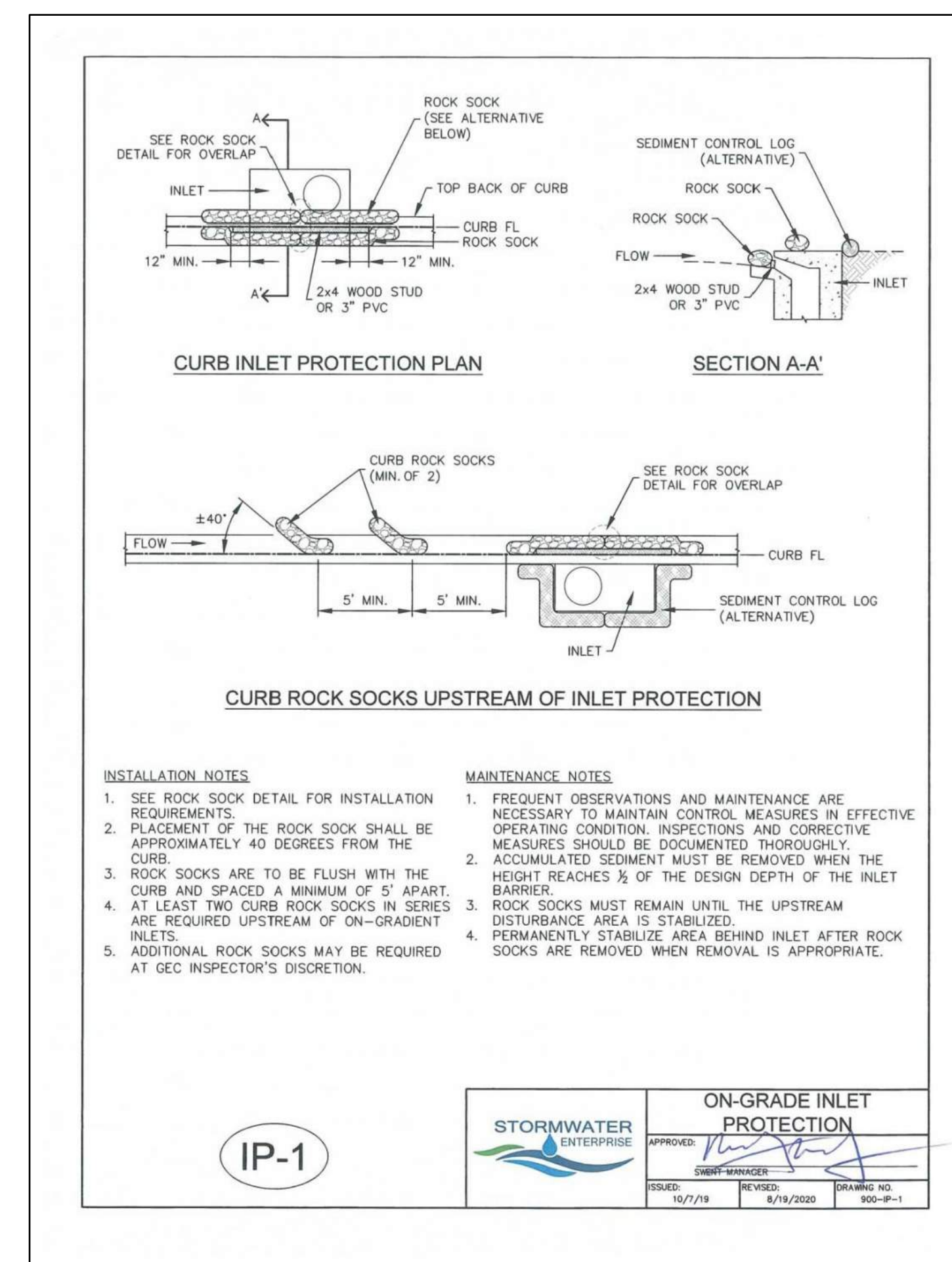
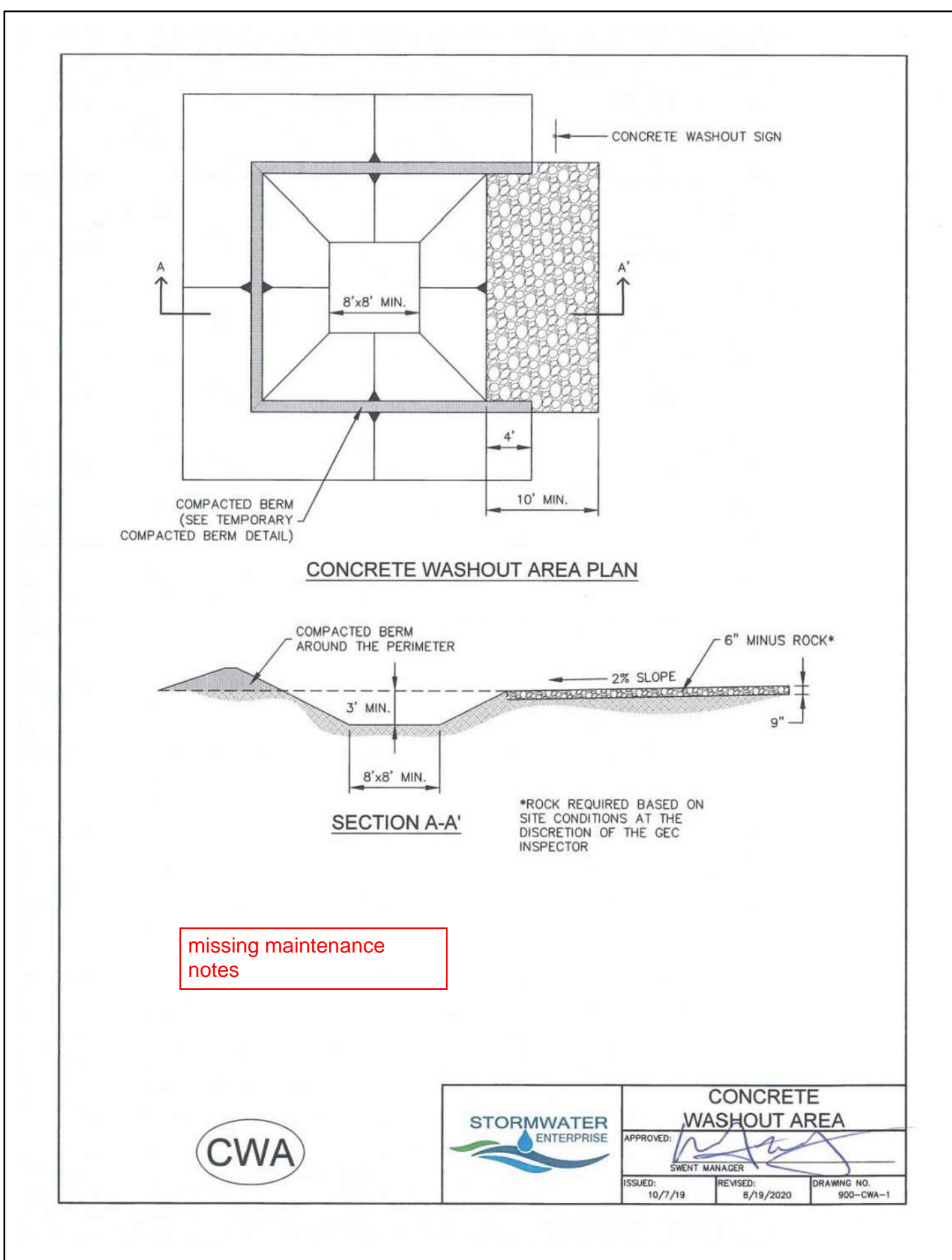


Know what's below.
Call before you dig.



1120 Lincoln Street, Suite 1000
Denver, Colorado 80203
P: 303.623.6300 F: 303.623.6311
HarrisKocherSmith.com

ISSUE DATE: 02-19-2021	PROJECT #: 200425
DATE	REVISION COMMENTS
06-10-2021	PRICING BID SET
07-16-2021	PER CITY COMMENTS
08-03-2021	PER CITY COMMENTS
09-09-2021	PERMIT SET



REVIEW:

STREET DESIGN FOR CITY ENGINEERING: _____ DATE _____

UTILITY GRADE REVIEW _____ DATE _____

CURB & GUTTER REVIEW _____ DATE _____

FINAL REVIEW _____ DATE _____

DRAINAGE DESIGN: _____ DATE _____

This is filed in accordance with section 7.7.906 (Drainage Ordinance) of the code of the City of Colorado Springs, 2001 as amended.

48 HOURS BEFORE YOU DIG,
CALL 811
FOR LOCATING BURIED GAS,
ELECTRIC, TELEPHONE, WATER
AND WASTEWATER LINES

NO.	REVISION DESCRIPTION	BY	DATE
1	CITY COMMENTS	BHY	03/12/21
2	CITY COMMENTS	BHY	03/16/21

PREPARED UNDER DIRECT SUPERVISION FOR AND ON BEHALF OF
EXECUTIVE CONSULTING ENGINEERS, INC.

ECE
EXECUTIVE CONSULTING ENGINEERS
13540 Meadowgrove Drive, Suite 200
Colorado Springs, Colorado 80921
(719) 531-0707

DATE 03/16/21

THESE DRAWINGS ARE PREPARED BY EXECUTIVE CONSULTING ENGINEERS FOR A DEFINED PROJECT AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART FOR ANY OTHER PROJECTS. REUSE OR MODIFICATION OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF EXECUTIVE CONSULTING ENGINEERS SHALL BE AT THE SOLE RISK OF THE USER. THE USER SHALL INDEMNIFY AND HOLD EXECUTIVE CONSULTING ENGINEERS HARMLESS FROM ANY LIABILITIES, DAMAGES AND LOSSES.

PROJECT NAME **LOT 2, POLARIS POINTE SHOPS FILING NO. 3A (REPLAT OF LOT 2 POLARIS POINTE SHOPS FILING NO. 3) (225 SPECTRUM LOOP) GRADING AND EROSION CONTROL PLAN**

DRAWING TITLE: **EROSION CONTROL DETAILS**

H-Scale N.T.S.
V-Scale N.T.S.
Date 02/02/21
Project No. 1820
Designed by BHY
Checked by -
SHEET: C3.5
SHEET 5 OF 6

K:\COS_Civil\196025000_Laureate Storage\CADD\PlanSheets\CD\GEC\196025000GEC_DT.dwg Brehmer, Noah 7/8/2021 1:47 PM

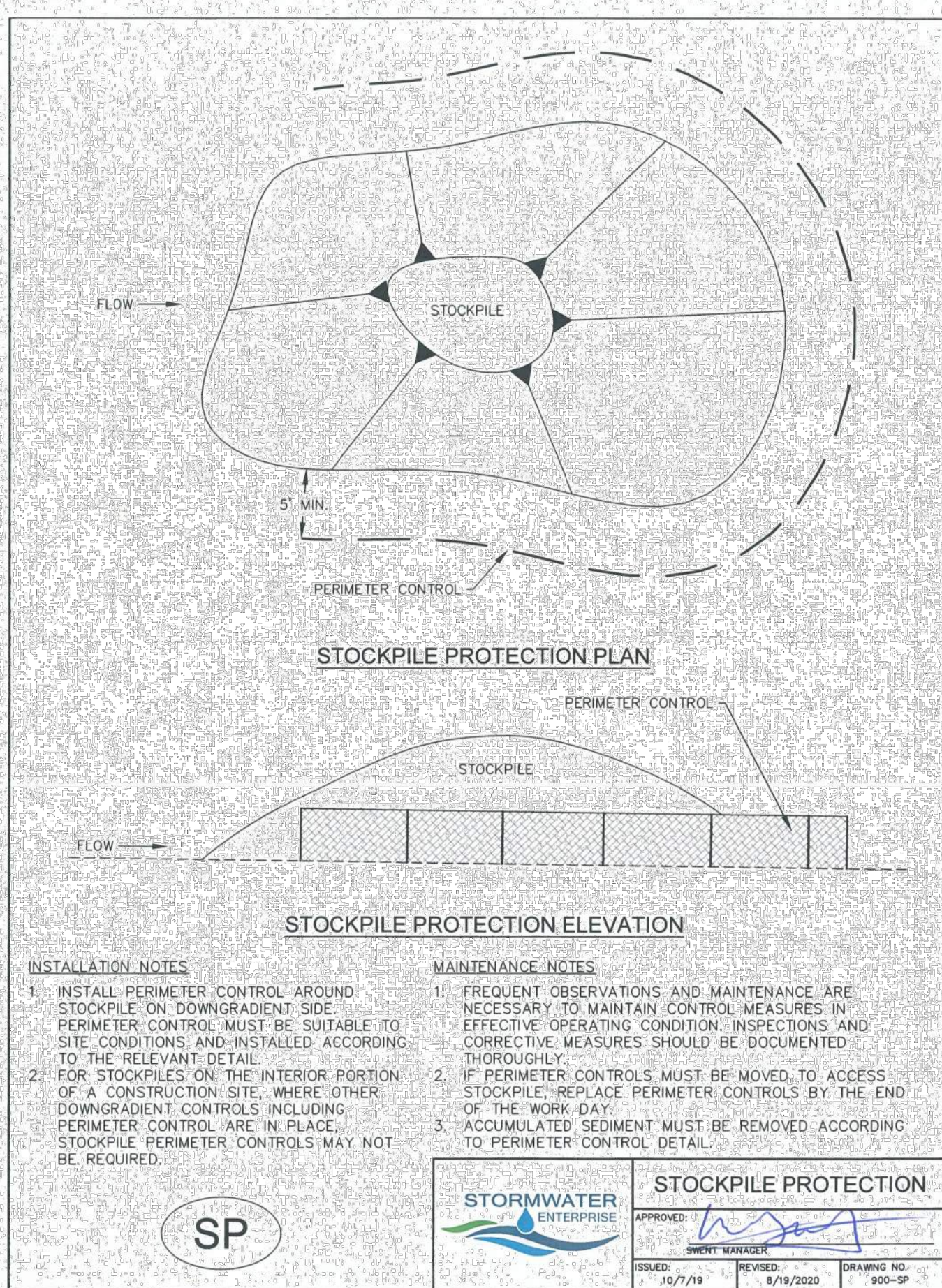
SP
Stockpile Protection

- 1.0 DESCRIPTION**
- Perimeter control placed around stockpiles of soil and other erodible materials.
- 2.0 PURPOSE**
- Used to avoid the migration of sediment and other materials from stockpiles.
- 3.0 IMPLEMENTATION**
- Install perimeter control around stockpile on downgradient side.
 - Stockpile perimeter controls may not be required for stockpiles on the interior portion of a construction site where other downgradient controls including perimeter control are in place.
- 4.0 TIMING**
- Install immediately after stockpile has formed or limits are known, whichever occurs first.
 - Remove stockpile protection after the stockpile has been removed.
- 5.0 MAINTENANCE**
- Remove and properly dispose of sediment according to the perimeter control detail.
 - If perimeter controls must be moved to access stockpile, replace perimeter controls by the end of the work day.
 - Inspect for and repair and/or replace perimeter controls as needed to maintain functionality.

City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020



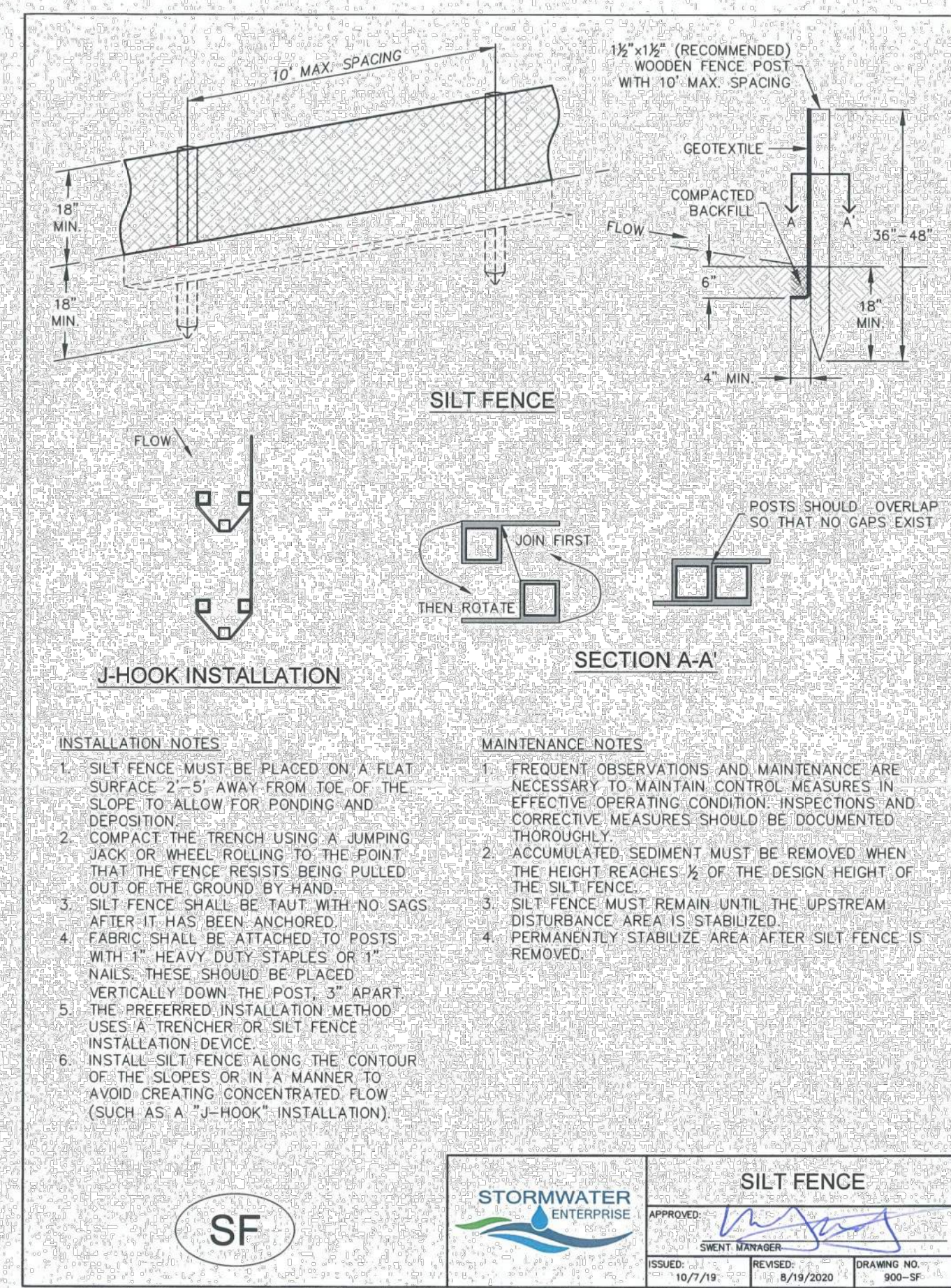
SF
Silt Fence

- 1.0 DESCRIPTION**
- Silt fence is a temporary sediment barrier consisting of woven geotextile fabric attached to supporting posts and trenched into the soil.
- 2.0 PURPOSE**
- Used to intercept sheet flow prior to leaving a construction site.
 - May be used around the perimeter of a construction site.
- 3.0 IMPLEMENTATION**
- Install silt fence to intercept sheet flow runoff from disturbed areas.
 - Silt fence is not designed to be used as a filter fabric.
 - Do not install silt fence across streams, channels, swales, ditches, or other drainageways.
 - Install silt fence along the contour of slopes or in a manner to avoid creating concentrated flow (i.e. "J-hook" installation).
 - The maximum tributary drainage area per 100 linear feet of silt fence is 1/4 acre.
 - Properly installed silt fence should not be easily pulled out by hand and there should be no gaps between the ground and fabric.
- 4.0 TIMING**
- Install prior to land disturbing activities.
 - Remove silt fence after the upstream area has been permanently stabilized.
- 5.0 MAINTENANCE**
- Remove and properly dispose of sediment when it has accumulated to 1/2 of the height of the exposed silt fence.
 - Inspect for and repair or replace damaged silt fence.

City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020



Missing erosion control blank details and maintenance notes

ENGINEER NOTICE TO CONTRACTOR NOTES

- NEITHER THE OWNER, NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING: SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL SLOPES, STREETS, UTILITIES, AND STORM SEWERS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK AT 719-284-7272. THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM HIS OPERATIONS BY APPROPRIATE MEANS (SAND BAGS, HAY BALES, TEMPORARY DESILTING BASINS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHATEVER OWNER, AGENCY, OR ASSOCIATION IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
- EXCEPT AS NOTED HEREON ALL UTILITY SERVICES WITHIN THIS DEVELOPMENT ARE UNDERGROUND INSTALLATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES, AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. FOR UTILITY MARK-OUT SERVICE, CALL 811.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
- LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS TO BE MET BY WORK TO BE DONE SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
- CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- WHERE TRENCHES ARE WITHIN 10 FEET OF FUTURE BUILDING SITES, SOILS REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF WORK BY A QUALIFIED SOILS ENGINEER WHICH CERTIFY THAT TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH THE ON-SITE EARTHWORK SPECIFICATIONS.
- ANY WORK DONE WITHOUT INSPECTION OR MATERIALS TESTING IS SUBJECT TO REMOVAL OR CORRECTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE FIELD ENGINEER.
- PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL JOIN CONDITIONS FOR GRADING, DRAINAGE AND UNDERGROUND FACILITIES, INCLUDING LOCATION AND ELEVATION OF EXISTING UNDERGROUND FACILITIES AT CROSSINGS WITH PROPOSED UNDERGROUND FACILITIES. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE PLANS, THE SOILS AND/OR GEOLOGY REPORTS, AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK.
- SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS OR IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT KIMLEY-HORN AND ASSOCIATES BEFORE PROCEEDING WITH THE WORK IN QUESTION.
- APPROVAL OF THESE PLANS BY THE CITY DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
- THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY OF COLORADO SPRINGS DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR COUNTY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF COLORADO SPRINGS FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
- AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE ENGINEER PRIOR TO ACCEPTANCE OF THIS PROJECT BY THE CITY OF COLORADO SPRINGS.
- THE AREA WHICH IS DEFINED AS A NON GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT OR COLORADO DIVISION OF WILDLIFE. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.
- EXISTING TOPOGRAPHY WAS BASED FROM THE ALTA SURVEY BY CLARK LAND SURVEYING, INC., DATED 11/1/2019.
- NOTES AND DETAILS DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- IF AT ANY TIME DURING THE GRADING OPERATION, ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, GRADING IN THAT AREA WILL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED.
- STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
- ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.
- DIMENSIONS TO PIPELINES ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
- CONSTRUCTION STAKING FOR IMPROVEMENTS SHOWN IN THESE PLANS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR.
- ALL DIMENSIONS ARE IN FEET OR DECIMALS THEREOF.
- CONTRACTOR TO BE AWARE OF ALL OVERHEAD LINES AT ALL TIMES, SO AS NOT TO DISTURB THEM.
- WATER SHALL BE PROVIDED ONSITE AND USED TO CONTROL DUST DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
- STORM DRAINAGE SYSTEMS SHOWN ON THESE PLANS HAVE BEEN DESIGNED FOR THE FINAL SITE CONDITION AT COMPLETION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE SITE, DURING INTERIM CONDITIONS OF CONSTRUCTION.
- RETAINING WALLS LOCATED CLOSER TO THE PROPERTY LINE THAN THE HEIGHT OF THE WALL SHALL BE BACKFILLED NOT LATER THAN 10 DAYS AFTER CONSTRUCTION OF THE WALL AND NECESSARY STRUCTURAL SUPPORTING MEMBERS UNLESS RECOMMENDED OTHERWISE BY RESPONSIBLE ENGINEER.

NO.	REVISION #1	REVISION #2	REVISION #3	DATE	BY
1				JUN 17 / 16 / 20	JRH
2				JUN 2 / 4 / 21	JRH
3				JUN 4 / 6 / 21	JRH

Kimley»Horn
2021 KIMLEY-HORN AND ASSOCIATES, INC.
2 North Nevada Avenue, Suite 300
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: NMB
DRAWN BY: NMB
CHECKED BY: JRH
DATE: 7/7/2021

LAUREATE STORAGE
GRADING AND EROSION CONTROL PLAN
EROSION CONTROL DETAILS AND NOTES



PROJECT NO.
196025000

SHEET
C4.3

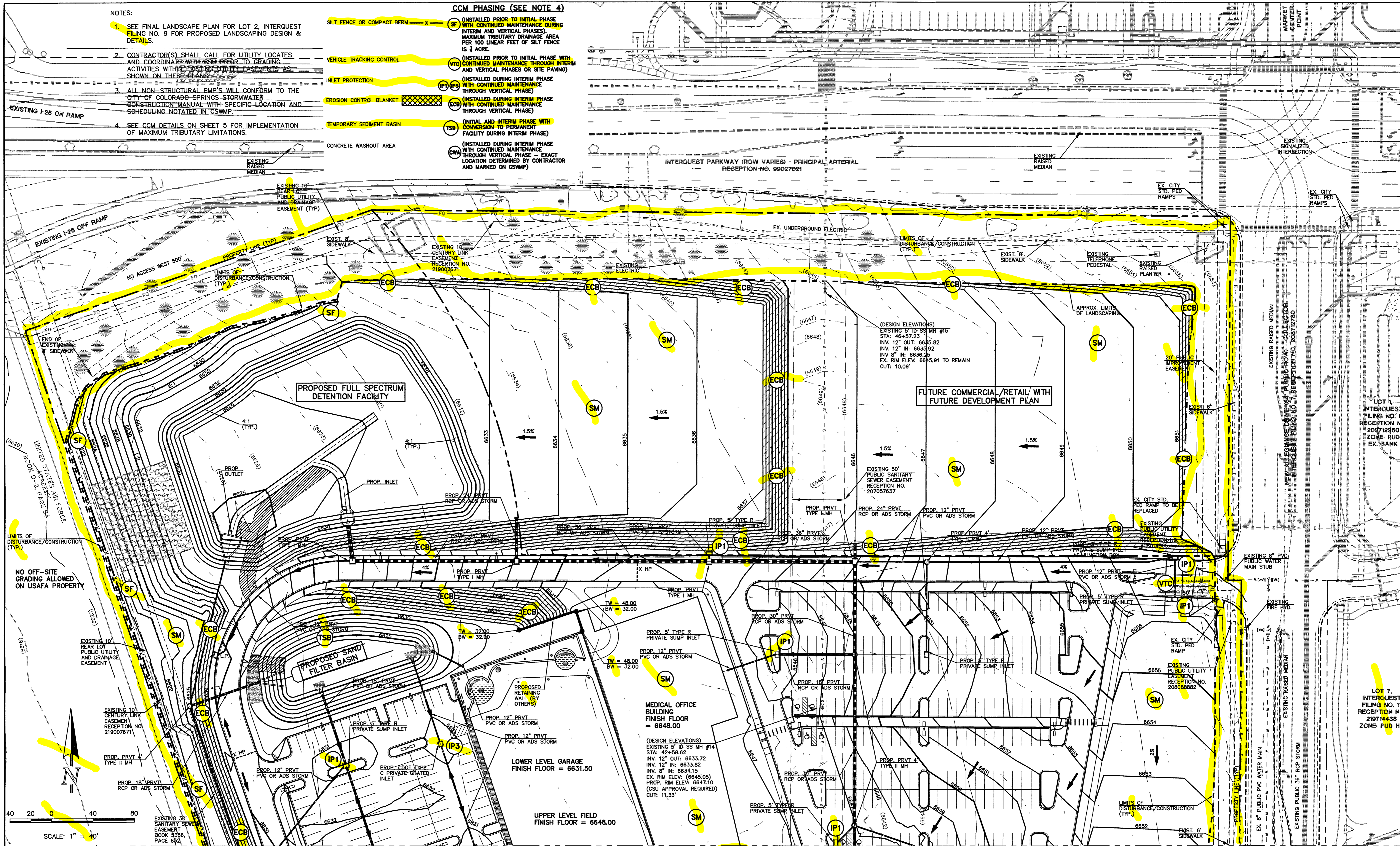


NOTES:

- SEE FINAL LANDSCAPE PLAN FOR LOT 2, INTERQUEST FILING NO. 9 FOR PROPOSED LANDSCAPING DESIGN & DETAILS.
- CONTRACTOR(S) SHALL CALL FOR UTILITY LOCATES AND COORDINATE WITH CSJ PRIOR TO GRADING ACTIVITIES WITHIN EXISTING UTILITY EASEMENTS AS SHOWN ON THESE PLANS.
- ALL NON-STRUCTURAL BMP'S WILL CONFORM TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL WITH SPECIFIC LOCATION AND SCHEDULING NOTATED IN CSWMP.
- SEE CCM DETAILS ON SHEET 5 FOR IMPLEMENTATION OF MAXIMUM TRIBUTARY LIMITATIONS.

CCM PHASING (SEE NOTE 4)

- SILT FENCE OR COMPACT BERM (SF)** (INSTALLED PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES) MAXIMUM TRIBUTARY DRAINAGE AREA PER 100 LINEAR FEET OF SILT FENCE IS 1/2 ACRE.
- VEHICLE TRACKING CONTROL (VTC)** (INSTALLED PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM AND VERTICAL PHASES OR SITE PAVING)
- INLET PROTECTION (IP1/IP2)** (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- EROSION CONTROL BLANKET (ECB)** (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- TEMPORARY SEDIMENT BASIN (TSB)** (INITIAL AND INTERIM PHASE WITH CONVERSION TO PERMANENT FACILITY DURING INTERIM PHASE)
- CONCRETE WASHOUT AREA (CWA)** (INSTALLED DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE - EXACT LOCATION DETERMINED BY CONTRACTOR AND MARKED ON CSWMP)



NO OFF-SITE GRADING ALLOWED ON USAFA PROPERTY

NO ACCESS WEST 500'

EXISTING 10' REAR LOT PUBLIC UTILITY AND DRAINAGE EASEMENT (TYP)

EXISTING 10' CENTURY LINK EASEMENT (RECEPTION NO. 219007671)

EXISTING 30' SANITARY SEWER EASEMENT BOOK 3366, PAGE 632

SCALE: 1" = 40'

LEGEND

(6770)	EXISTING CONTOUR		EXISTING VEGETATION
6770	PROPOSED CONTOUR		PROPOSED INLET
	PROPERTY LINE		PROPOSED STORM SEWER PIPE
	EXISTING FLOW DIRECTION	HP	PROPOSED HIGH POINT
	PROPOSED FLOW	LP	PROPOSED LOW POINT
	LIMITS OF DISTURBANCE/CONSTRUCTION		

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS
811
 UTILITY NOTIFICATION OF COLORADO
 IT'S THE LAW

THE LOCATIONS OF EXISTING 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 UNDERGROUND UTILITIES.

NO.	REVISION	DATE
	Scale too small - typical all plan sheets	

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

KYLE R. CAMPBELL, COLORADO P.E. #29794

DATE: 4/21/21

CLASSIC CONSULTING

619 N. Cascade Avenue, Suite 200
 Colorado Springs, Colorado 80903

(719)785-0790
 (719)785-0790(Fax)

LOT 2, INTERQUEST FILING NO. 9

GRADING AND EROSION CONTROL PLAN
 STM-REV21-0540

DESIGNED BY	KRC	SCALE	DATE	04/19/21
DRAWN BY	LDB	(H) 1" = N/A	SHEET	2 OF 5
CHECKED BY	KRC	(V) 1" = N/A	JOB NO.	2190.70

N:\219070\DRAWINGS\CONSTRUCT\CON\GCC GRADING\219070-GCC-02.dwg, 4/22/2021 10:35:30 AM, 1:1

Appendix C. CSWMP Selection

Table B-2: Selected CSWMP Reports reviewed

CSWMP Number	District	Project Type	Title of Report
C-2	Capital	Mixed Use / Other	Pine Oaks Public Water Mains, Sundance at Rock Creek Filing No. 1
C-8	Capital	Public	Sand Creek Downstream East Fork Confluence
C-13	Capital	Public	Colorado Springs Utilities, N 30 th Street and Glen Eyrie Circle Water Main Replacement
C-15	Capital	Public	Colorado Springs Utilities, Drake Temporary Natural Gas Generation
C-16	Capital	Public	Colorado Springs Utilities, Shook's Run Underground Electric
C-24	Central	Commercial	Quick Quack Fillmore Street
C-25	Central	Commercial	Quick Quack Woodmen Road
C-26	Central	Commercial	Barnes Center Apartments Filing No. 2, Lot 1
C-30	Central	Commercial	Carmax Expansion, Tutt Powers Subdivision Filing No. 3
C-33	Central	Commercial	Raising Cane's, Toys 'R' Us Filing No. 3, Lot 1
C-46	Central	Industrial	Western Forge, 4607-4725 Forge Road
C-47	Central	Mixed Use / Other	Palomino Ranch Patio Homes
C-52	Central	Mixed Use / Other	Outlook West Mesa Filing No. 1, S. Centennial Boulevard & W. Fillmore Street
C-55	Central	Mixed Use / Other	Dublin Springs Independent Living, 6410 and 6450 Source Center Point
C-58	Central	Single Family Residential	Pony Park, The Colorado Springs Ranch Filing No. 4, Lot 62
C-62	Central	Single Family Residential	Red Rock Point 1 at Kissing Camels Estates F1 & F2 & F
C-65	North	Commercial	Colorado Crossing Filing No. 1A, Lot 7
C-67	North	Commercial	Bass Pro Crossing at Northgate Filing No. 1, Lot 2
C-76	North	Commercial	U-Haul at Tiffany Square, Corporate Centre Filing No. 1, Lot 2
C-80	North	Commercial	Shiloh Mesa Commercial Filing No. 1, Lot 2
C-85	North	Commercial	Vibe Express Car Wash, Woodmen Heights Commercial Center Filing No. 2, Lot 5



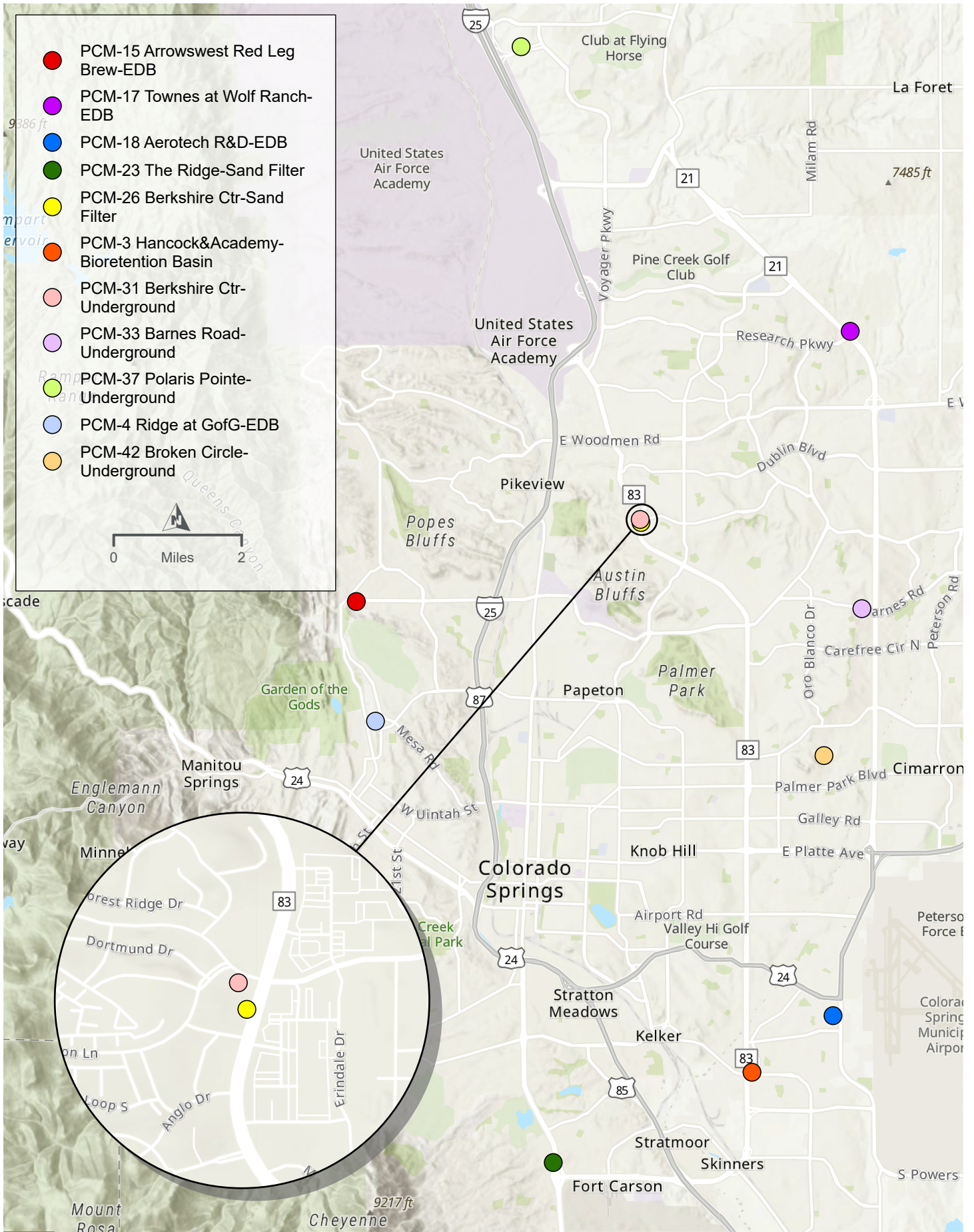
Table B-2: Selected CSWMP Reports reviewed

CSWMP Number	District	Project Type	Title of Report
C-88	North	Mixed Use / Other	Caliber At Briargate, Powers Office Park Filing No. 3, Lot 3
C-92	North	Mixed Use / Other	Interquest Filing No. 9, Lot 2
C-98	North	Single Family Residential	Aspen Meadows Filing No. 1
C-105	North	Single Family Residential	Elan at Wolf Ranch Additional Water Quality Area F28
C-108	North	Single Family Residential	Ascent at Quail Brush
C-109	North	Single Family Residential	Wolf Ranch - Detention Basin F 14
C-111	South	Commercial	1515 South Tejon Street
C-115	South	Commercial	Creekwalk North, Creekwalk Filing No. 1
C-119	South	Commercial	Fire Station #23 & Radio Shop, Fire Operations & Training Center Subdivision, Lot 1
C-124	South	Industrial	Airport Oz Subdivision, Lot 1
C-125	South	Industrial	Sam's Properties Filing No. 1, Lot 1
C-126	South	Mixed Use / Other	Taco Bell Subdivision Filing No. 2, Lot 2 & 3
C-127	South	Mixed Use / Other	Weber & Cimarron Apartments Filing No. 1
C-130	South	Mixed Use / Other	Pinecreek Apartments, Wentworth Apartments Subdivision Filing No. 1, Lot 1, Block 1
C-142	South	Public	Colorado Springs Airport Filing 1D, Integration Loop Extension For Flywheel East
C-148	South	Single Family Residential	Kaleidos Subdivision, Atlas Preparatory Charter School Filing No. 1b, Lot 2

*Bold lines above are the plans found to be non-compliant.



Appendix D. PCM Location Map



**POND INSPECTIONS
PERMANENT CONTROL MEASURES**



Appendix E. PCM Report Summaries



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 3 Hancock and Academy Dunkin Donuts

Feature: Sand Filter

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
 - Drainage Letter

- PE Certification Yes

- As-Built Plan Yes

- Reference to Appropriate Inspection & Maintenance Plan Yes

- City Final Acceptance Letter Yes

- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

BIORETENTION/SAND FILTER BASIN	
INFILTRATION MEDIA (PRESENT BASED ON OBSERVATION)	YES
UNDERDRAIN CONNECTION TO OUTLET STRUCTURE	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Site is in overall good condition.

Pictures:









Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 4 Ridge at Garden of the Gods

Feature: Extended Detention Basin

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
 - Drainage Letter
- PE Certification Yes

- As-Built Plan Yes

- Reference to Appropriate Inspection & Maintenance Plan Yes

- City Final Acceptance Letter Yes

- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? **Yes**

 - Do site grading and constructed conveyance systems appear to direct runoff from areas identified in the drainage Report for treatment by the control measure? **Yes**
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

EXTENDED DETENTION BASIN (EDB)	
FOREBAY(S)	YES
MICROPOOL	YES
LOW-FLOW CHANNEL	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Site is in overall good condition.

Pictures:









Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 15 Red Leg Brewing

Feature: Detention/WQ Pond

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
 - Drainage Report

- PE Certification Yes

- As-Built Plan Yes

- Reference to Appropriate Inspection & Maintenance Plan Yes

- City Final Acceptance Letter Yes

- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

EXTENDED DETENTION BASIN (EDB)	
FOREBAY(S)	YES
MICROPOOL	YES
LOW-FLOW CHANNEL	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Site was in overall good condition.

Pictures:







Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 17 Townes at Wolf Ranch

Feature: Extended Detention Basin

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification Yes
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

EXTENDED DETENTION BASIN (EDB)	
FOREBAY(S)	YES
MICROPOOL	YES
LOW-FLOW CHANNEL	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Site appeared to be in overall good condition with all plan features installed.

Pictures:









Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 18 Aerotech RV Park

Feature: Extended Detention Basin

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification Yes
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems
Appear to direct runoff from areas identified in the drainage
Report for treatment by the control measure? Yes
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

EXTENDED DETENTION BASIN (EDB)	
FOREBAY(S)	YES
MICROPOOL	YES
LOW-FLOW CHANNEL	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Sparse vegetation along the slopes and bottom. Metal grate appeared to be added to inlet, owner was notified and will remove.

Pictures:









Field Inspection Completed by: Trent Davis, HDR, Inc

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Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 23 The Ridge Sand Filter

Feature: Sand Filter

Date: June 1, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Cloudy 55 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
 - Only addendum included.

- PE Certification Yes

- As-Built Plan Yes

- Reference to Appropriate Inspection & Maintenance Plan Yes

- City Final Acceptance Letter Yes

- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

BIORETENTION/SAND FILTER BASIN	
INFILTRATION MEDIA (PRESENT BASED ON OBSERVATION)	YES
UNDERDRAIN CONNECTION TO OUTLET STRUCTURE	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Site is in overall good condition.

Pictures:







Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 26 Berkshire Center

Feature: Sand Filter

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification Yes
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

BIORETENTION/SAND FILTER BASIN	
INFILTRATION MEDIA (PRESENT BASED ON OBSERVATION)	YES
UNDERDRAIN CONNECTION TO OUTLET STRUCTURE	YES
OUTLET STRUCTURE	YES
EMERGENCY OVERFLOW	YES

Notes: Sand filter basin located in common access easement is full of silt and debris. Media did not appear to be filtering as intended. Curb was also undermined from recent flooding. Owner is aware of the issue and has been in contact with COS.

Pictures:







Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 31 Berkshire Center

Feature: Underground Detention Facility

Date: May 13, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 55-70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification Yes
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

UNDERGROUND CONTROL MEASURES	
ACCESS POINT	YES
OUTLET STRUCTURE	YES

Notes: Structure appeared to be placed per project plans. Did not enter to verify due to confined space entry.

Pictures:





Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 33 Barnes Rd Underground

Feature: Underground Stormtech

Date: May 26, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc) Yes
- PE Certification No
- As-Built Plan No
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter No
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems Yes
 Appear to direct runoff from areas identified in the drainage
 Report for treatment by the control measure?
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

UNDERGROUND CONTROL MEASURES	
ACCESS POINT	MANHOLE
OUTLET STRUCTURE	18 INCH RCP

Notes: Site is in overall good condition.

Pictures:





Field Inspection Completed by: Trent Davis, HDR, Inc

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Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 37 Polaris Pointe

Feature: Underground Stormtech

Date: June 2, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Cloudy 50 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification Yes
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan Yes
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM Yes

PCM Field Inspection

- Is the PCM located per the plan? **Yes**

 - Do site grading and constructed conveyance systems
Appear to direct runoff from areas identified in the drainage
Report for treatment by the control measure? **Yes**
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

UNDERGROUND CONTROL MEASURES	
ACCESS POINT	MANHOLE
OUTLET STRUCTURE	30 INCH POLYPRO

Notes: Site is in overall good condition.

Pictures:









Field Inspection Completed by: Trent Davis, HDR, Inc



Permanent Control Measures Audit

Project Name: COS 3rd Party Audits

Site: PCM 42 Broken Circle Underground

Feature: Storm Sewer

Date: May 26, 2022

Project Owner: City of Colorado Springs

HDR Project No: 10337945

Weather Conditions: Clear 70 deg

PCM Document Review

Does the City have the following documents on file, and do the documents appear to be appropriate for the specific PCM:

- Drainage Report (Drainage Letter, etc.) Yes
- PE Certification No
- As-Built Plan Yes
- Reference to Appropriate Inspection & Maintenance Plan No
- City Final Acceptance Letter Yes
- Does the Report contain appropriate WQ Storage Volume for specific PCM No

PCM Field Inspection

- Is the PCM located per the plan? Yes

 - Do site grading and constructed conveyance systems
Appear to direct runoff from areas identified in the drainage
Report for treatment by the control measure? Yes
-

Are the following features present based on the type of control measure and installed in accordance with the approved drainage report?

UNDERGROUND CONTROL MEASURES	
ACCESS POINT	MANHOLE
OUTLET STRUCTURE	GROUTED RIPRAP

Notes: Site is in overall good condition.

Pictures:





Field Inspection Completed by: Trent Davis, HDR, Inc

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