

# SPACE VILLAGE FILING NO. 4

## A PORTION OF THE NW 1/4 OF SEC. 17, T14S, R65W, OF THE 6th P.M., EL PASO COUNTY, COLORADO

### GRADING & EROSION CONTROL PLAN

#### EL PASO COUNTY STANDARD NOTES

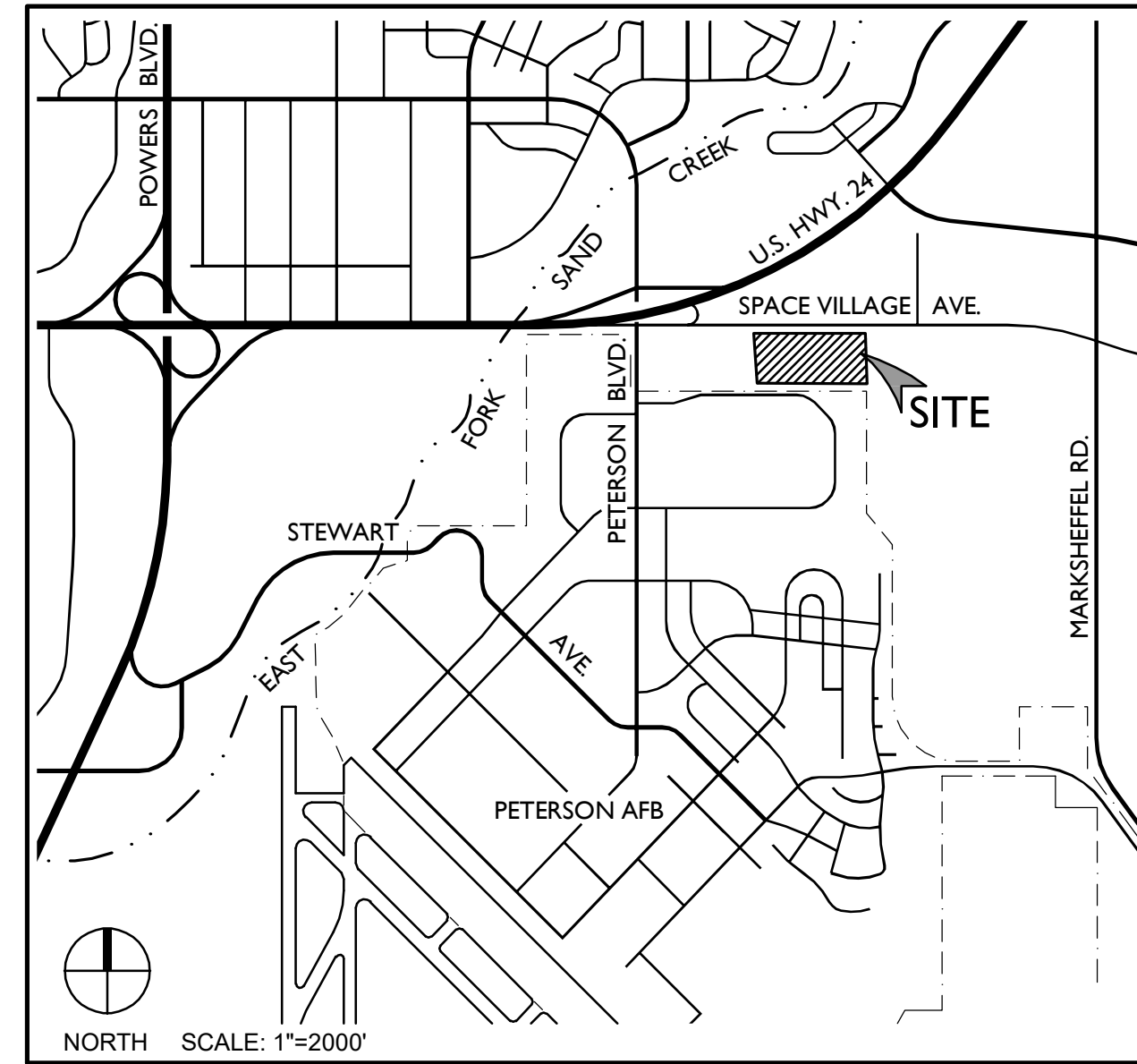
1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON-SITE AT ALL TIMES DURING AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATIVE CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF-SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK, OR STREAM.
14. DURING DEWATERING OPERATIONS, UNCONTAMINATED GROUNDWATER MAY BE DISCHARGED ON-SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. 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.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICALS IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BATCH PLANTS ARE NOT ALLOWED. ← This is not an EPC standard note. Please move elsewhere. There should only be 29 EPC standard GEC notes.  
Revised according to meeting coordination.

#### CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR ANY DAMAGE AT HIS EXPENSE.

#### VICINITY MAP



#### SHEET INDEX

- |   |      |   |
|---|------|---|
| 1 | C900 | GRADING & EROSION CONTROL COVER SHEET (SWMP - SITE MAP) |
| 2 | C901 | GRADING & EROSION CONTROL NOTES (SWMP SITE MAP)         |
| 3 | C905 | GRADING & EROSION CONTROL PLAN (SWMP - SITE MAP)        |
| 4 | C910 | GRADING & EROSION CONTROL DETAILS (SWMP - SITE MAP)     |
| 5 | C911 | GRADING & EROSION CONTROL DETAILS (SWMP - SITE MAP)     |
| 6 | C912 | GRADING & EROSION CONTROL DETAILS (SWMP - SITE MAP)     |
| 7 | C913 | GRADING & EROSION CONTROL DETAILS (SWMP - SITE MAP)     |

#### FLOODPLAIN

ZONE X, "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN." AS SHOWN ON FEMA FIRM MAP NO. 08041C0754G, EFFECTIVE DATE, DECEMBER 7, 2018.

#### EL PASO COUNTY STANDARD NOTES (CONTINUED)

23. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
24. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
25. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
26. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
27. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
28. A WATER SOURCE SHALL BE AVAILABLE ON-SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
29. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY COLE GARNER GEOTECHNICAL, DATE AUGUST 16, 2022, AND SHALL BE CONSIDERED A PART OF THESE PLANS.
30. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THE GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
WATER QUALITY CONTROL DIVISION  
WQCD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-15330  
ATTN: PERMITS UNIT

#### ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS AS APPLICABLE. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARING THIS PLAN FOR AND ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC.

JAY M. NEWELL, PE  
CO PE #35219  
FOR AND ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

#### OWNER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

OWNER/DEVELOPER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

#### EL PASO COUNTY

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

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

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

COUNTY ENGINEER / ECM ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_



2009 W. Littleton Blvd. #300 Littleton, CO 80120  
303.794.4727 | www.SterlingDesignAssociates.com

PREPARED UNDER THE DIRECT SUPERVISION OF  
JAY M. NEWELL, PE  
COLORADO REGISTRATION 35219  
FOR & ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

STERLING DESIGN ASSOCIATES, LLC		
ISSUES & REVISIONS		
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JN		
PROJECT:		

#### SPACE VILLAGE FILING NO. 4 EL PASO COUNTY, CO

CLIENT:  
COMMERCIAL BUILDING SERVICES  
7561 S. GRANT STR., SUITE A-4  
LITTLETON, COLORADO 80122

TEL: (303) 730-3001

SHEET TITLE:  
**GRADING & EROSION CONTROL  
COVER SHEET (SWMP-SITE MAP)**

SHEET NUMBER:  
**1 C900**





# SPACE VILLAGE FILING NO. 4

## A PORTION OF THE NW 1/4 OF SEC. 17, T14S, R65W, OF THE 6th P.M., EL PASO COUNTY, COLORADO

### FINAL DRAINAGE PLAN

#### GENERAL NOTES

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF IMPROVEMENTS SHALL MEET OR EXCEED THE GOVERNING CITY, COUNTY AND/OR STATE AND APPLICABLE UTILITY DISTRICT STANDARDS AND SPECIFICATIONS, AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE CITY AND APPLICABLE UTILITY DISTRICT(S).
2. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ON SITE AT ALL TIMES.
3. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARDS, UNLESS SPECIFICALLY STATED OTHERWISE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED, AND RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR RECEIVING, UNLOADING, STORING, AND UNCRATING ALL EQUIPMENT FURNISHED BY THE OWNER/DEVELOPER AND DELIVERED TO THE SITE.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
7. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE GOVERNING CITY, COUNTY, AND/OR STATE AND ALL UTILITY COMPANIES/DISTRICTS INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS, WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES/DISTRICTS TO OBTAIN TEMPORARY POWER, TELEPHONE AND WATER SERVICE DURING CONSTRUCTION. ALL COST FOR TEMPORARY SERVICES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND LICENSES FOR WORK INCLUDING, BUT NOT LIMITED TO DEMOLITION, STREET CUTS, UTILITY INTERFERENCES, TRAFFIC CONTROL, GRADING, AND UTILITY FROM ALL APPLICABLE AGENCIES; AND FOR COMPLYING WITH ALL PROVISIONS INCLUDED THEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF PROJECT SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
12. THE CONTRACTOR SHALL INSTALL AND MAINTAIN CONSTRUCTION FENCE PRIOR TO, AND THROUGHOUT CONSTRUCTION.
13. UTILITY TRENCHES ARE TO BE SLOPED OR BRACED AND SHEETED AS NECESSARY TO FURNISH SAFE WORKING CONDITIONS FOR THE WORKMEN AND THE PROTECTION OF OTHER UTILITIES IN COMPLIANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL HEALTH AND SAFETY RULES AND REGULATIONS.
14. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE M.U.T.C.D. TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY (CITY, COUNTY, OR STATE) FOR APPROVAL, PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN, OR AFFECTING, THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK, INSPECTIONS, AND CERTIFICATIONS AS REQUIRED BY THE CITY, STATE, OR LOCAL DISTRICTS. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH INSPECTION AND CERTIFICATION UNLESS OTHERWISE ARRANGED WITH THE OWNER/DEVELOPER, AND SHALL COORDINATE ALL CERTIFICATIONS, AND PROVIDE FIELD SURVEYED AS-BUILT INFORMATION FOR REVIEW BY THE OWNER/DEVELOPER AND/OR ENGINEER AS EARLY AS POSSIBLE IN THE CONSTRUCTION SCHEDULE TO AVOID POTENTIAL DELAYS.
16. THE CONTRACTOR SHALL NOTIFY THE GOVERNING CITY, COUNTY, AND/OR STATE AND LOCAL UTILITY COMPANIES/DISTRICTS AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
17. THE CONTRACTOR SHALL NOTIFY THE GOVERNING CITY, COUNTY, AND/OR STATE AND LOCAL UTILITY COMPANIES/DISTRICTS AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY.
18. ALL STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION, PRIOR TO ANY GROUND-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREA IS STABILIZED WITH HARD SURFACE OR PERMANENT LANDSCAPING. THE CONTRACTOR IS RESPONSIBLE FOR REFERRING TO ANY EROSION AND SEDIMENT CONTROL, STORMWATER MANAGEMENT, STORMWATER POLLUTION PREVENTION, OR SIMILAR PLAN AND/OR NARRATIVE AND ASSOCIATED PERMITS INCLUDING, BUT NOT LIMITED TO GRADING PERMITS; AND COMPLYING WITH THE REQUIREMENTS THEREIN.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ANY EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO STREET PAVEMENT, FENCES, SOD, LANDSCAPING, SPRINKLER SYSTEMS, AND UTILITIES DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL LOCATION AND CONDITION.
21. INCLUDED IN THIS PACKAGE IS THE DEMOLITION AND DISPOSAL OF ALL EXISTING UTILITIES, SITE IMPROVEMENTS AND SITE FURNISHINGS NEEDED FOR CONSTRUCTION OF THE IMPROVEMENTS SHOWN IN THIS SET OF CONSTRUCTION DRAWINGS. ALL QUESTIONS IN REGARD TO DEMOLITION SHALL BE SUBMITTED TO THE OWNER IN WRITING PRIOR TO BID.
22. ALL DEMOLITION, REMOVAL, DISPOSAL AND ABANDONMENT OF UTILITIES, STRUCTURES, SITE IMPROVEMENTS AND SITE FURNISHINGS SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS AND SPECIFICATIONS, AND PERMIT REQUIREMENTS.
23. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE CONSULTING ENGINEER FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.
24. RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. THE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS, GROUT, AND STEEL SHIMS TO ADJUST THE MANHOLE FRAMES TO THE REQUIRED FINAL GRADE IN CONFORMANCE WITH THE CITY OR UTILITY COMPANY/DISTRICT STANDARD SPECIFICATIONS. ALL FRAMES SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE WHICH SHALL BE AVAILABLE TO THE GOVERNING CITY, COUNTY, AND/OR STATE AND UTILITY DISTRICT INSPECTOR AT ALL TIMES.
26. AS-BUILT PLANS AND FIELD NOTES SHALL BE PROVIDED BY THE CONTRACTOR TO THE CITY, COUNTY, STATE, FEDERAL OR UTILITY DISTRICT, OR TO THE OWNER/DEVELOPER AS REQUIRED BY AND IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S OR OWNER/DEVELOPER'S CRITERIA. THE CONTRACTOR SHALL CONFIRM ANY REQUIREMENTS AS EARLY AS POSSIBLE IN THE CONSTRUCTION SCHEDULE TO ACCOUNT FOR PREPARATION AND REVIEW OF THE INFORMATION TO AVOID POTENTIAL DELAYS.
27. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE OWNER/DEVELOPER AND THE ENGINEER OF RECORD.
28. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE PROJECT MANAGER FOR THE OWNER/DEVELOPER AND THE ENGINEER IMMEDIATELY.
29. BENCHMARK VERIFICATION: THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND PROPOSED ELEVATIONS IN THIS CONSTRUCTION PLAN SET AGAINST THE PROJECT BENCHMARK, IDENTIFIED HEREIN, PRIOR TO COMMENCING WORK.
30. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE GOVERNING AUTHORITY'S STANDARDS AND SPECIFICATIONS.
31. THE SITE CONSTRUCTION PLANS LISTED WITHIN THIS PLAN SET ARE NOT FOR CONSTRUCTION UNLESS APPROVED BY THE APPROPRIATE GOVERNING JURISDICTION. THE CONTRACTOR SHALL CONFIRM SAID APPROVAL PRIOR TO CONSTRUCTION.
32. THE SITE CONSTRUCTION PLANS INDICATE THE WORK TO BE COMPLETED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE SAID WORK WITH THE OWNER AND THE TENANT CONSTRUCTION MANAGER(S) TO CONFIRM THE LIMITS AND DETAILS OF THE WORK TO BE PROVIDED AND COMPLETED. CONSTRUCTION SHALL ALSO BE COORDINATED WITH TENANT IMPROVEMENT PLANS AND LANDLORD WORKLETTER.
33. IF, DURING THE OVERLOT GRADING PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES, WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE GEOTECHNICAL ENGINEER IMMEDIATELY FOR RECOMMENDATIONS.
34. ALL EARTHWORK, GRADING, OVERLOT GRADING, BACKFILLING, FILLING, EXCAVATION, COMPACTION, PAVEMENT, AND FLATWORK CONSTRUCTION WILL BE IN ACCORDANCE WITH THE RECOMMENDATIONS FROM A GEOTECHNICAL INVESTIGATION PREPARED SPECIFICALLY FOR THIS SITE.
35. ALL CONCRETE PAVEMENT, CONCRETE FLATWORK, CONCRETE STRUCTURES AND CONCRETE UTILITIES SHALL BE IN ACCORDANCE WITH THE MATERIAL RECOMMENDATIONS FROM A GEOTECHNICAL INVESTIGATION PREPARED SPECIFICALLY FOR THIS SITE.
36. THE EARTHWORK FOR ANY BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL AND STRUCTURAL PLANS AND SPECIFICATIONS, AND THE GEOTECHNICAL INVESTIGATION.
37. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS AND SLOPES SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF SPOT ELEVATIONS WHICH DO NOT APPEAR TO BE CONSISTENT WITH THE CONTOURS AND SLOPES. SPOT ELEVATIONS AND SPECIFIC PROFILE DESIGN SHALL BE USED FOR SETTING ELEVATIONS OF CURB AND GUTTER AND UTILITIES.
38. SPOT ELEVATIONS REPRESENT FLOWLINE (BOTTOM FACE OF CURB) WHERE SHOWN AT CURB AND GUTTER UNLESS OTHERWISE NOTED.
39. CONTOURS SHOWN ARE FOR FINISHED PAVING, SIDEWALK, SLAB, OR GROUND. ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.
40. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.
41. THE CONTRACTOR SHALL HAVE FORMS CHECKED BY A SURVEYOR FOR INSTALLATIONS OF CURB & GUTTER OR CROSSPANS ADJACENT TO EXISTING PAVING. THE CROSS SLOPE SHALL NOT BE LESS THAN 2% OR GREATER THAN 4% FROM THE ESTABLISHED SAWCUT LINE TO THE PROPOSED EDGE OF CONCRETE. DO NOT PLACE CONCRETE IN APPLICABLE FORMS THAT HAVE NOT BEEN CHECKED, DO NOT PROVIDE CROSS SLOPES WITHIN THE SPECIFIED RANGE, OR APPEAR IN ANY WAY INCONSISTENT WITH SMOOTH AND CONTINUOUS TRAFFIC AND PEDESTRIAN OPERATIONS. CONTACT THE ENGINEER IMMEDIATELY FOR CLARIFICATIONS OR CORRECTIONS.
42. THE CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
43. THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL LANDSCAPED AND PAVED AREA.
44. ALL DISTURBED AREAS THAT ARE NOT DESIGNATED TO BE PAVED SHALL BE LANDSCAPED OR SEEDED, ACCORDING TO THE LANDSCAPE PLAN.
45. EXISTING DRAINAGE STRUCTURES SHALL BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
46. IF ANY EXISTING STRUCTURES, SIDEWALK, AND/OR CURB AND GUTTER, MODIFIED OR REMAINING, ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER PRIOR TO PROJECT CLOSEOUT.
47. ALL GRATES, MANHOLE RIMS, VALVE BOXES, VALVE COVERS, CLEANOUTS, AND VAULT OR BOX COVERS SHALL BE ADJUSTED TO THE "AS CONSTRUCTED" FINISHED GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.
48. NO PROPOSED SLOPE IN LANDSCAPED AREAS OR OPEN SPACE SHALL EXCEED THREE (3) HORIZONTAL FEET TO ONE (1) VERTICAL FOOT, OR AS OTHERWISE SPECIFIED BY LOCAL CRITERIA.
49. THE CONTRACTOR SHALL PROTECT THE PROJECT BENCHMARK THROUGHOUT CONSTRUCTION AND SET ADDITIONAL PROJECT BENCHMARKS AS NECESSARY TO MAINTAIN VERTICAL CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
50. THE CONTRACTOR SHALL FILL AND COMPACT BASEMENTS, CESSPOOLS, AND OTHER LARGE EXCAVATED AREAS WITH CLEAN FILL SUITABLE TO THE OWNER, AND IN ACCORDANCE WITH RECOMMENDATIONS OBTAINED FROM THE GEOTECHNICAL INVESTIGATION OR GEOTECHNICAL ENGINEER AND GRADE TO MATCH EXISTING OR PROPOSED FINISH GRADE, OR CONFIRM SUCH WORK HAS BEEN PERFORMED PRIOR TO CONSTRUCTION.
51. SITE IMPROVEMENTS ARE REQUIRED TO BE COVERED UNDER THE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) GENERAL PERMIT COR400000 FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES AS WELL AS EL PASO COUNTY REGULATIONS. STATE PERMIT APPLICATION SHALL BE MADE WITH THE COLORADO DEPARTMENT OF HEALTH & THE ENVIRONMENT THROUGH THE COLORADO ENVIRONMENTAL ONLINE SYSTEM (CEOS) ACCESSIBLE AT [HTTPS://CEOS.COLORADO.GOV/CO/CEOS/PUBLIC](https://ceos.colorado.gov/co/ceos/public). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING, COMPLETING, AND SUBMITTING ANY EL PASO COUNTY APPLICATION OR RELATED DOCUMENTS.
52. PERMIT(S) COVERAGE REQUIRES THE DEVELOPMENT OF A STORMWATER MANAGEMENT PLAN (PLAN) IDENTIFYING AND ADDRESSING THE FOLLOWING ITEMS SPECIFIC TO THIS CONSTRUCTION ACTIVITY: (A) QUALIFIED STORMWATER MANAGER, (B) SPILL PREVENTION AND RESPONSE PLAN, (C) MATERIALS HANDLING, (D) POTENTIAL SOURCES OF POLLUTION, (E) IMPLEMENTATION OF CONTROL MEASURES, (F) SITE DESCRIPTION, (G) SITE MAP, (H) FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT, AND (I) SITE INSPECTION REPORTS.
53. STERLING DESIGN ASSOCIATES, LLC HAS PREPARED AND MADE AVAILABLE A PLAN FOR THE OWNER PROVIDING FOR LOCAL JURISDICTIONAL ENTITLEMENT REVIEW. ONLY. THE PLAN IS INCOMPLETE WITHOUT ADDITIONAL INPUT FROM THE OPERATOR, INCLUDING, BUT NOT LIMITED TO, IDENTIFICATION OF THE PROJECT STORMWATER MANAGER AND INCLUSION OF A DETAILED CONSTRUCTION AND CONTROL MEASURE IMPLEMENTATION SCHEDULE. THE OPERATOR IS SOLELY RESPONSIBLE FOR COMPLETENESS AND IMPLEMENTATION OF A PLAN COMPLIANT WITH THE CDPS COR400000 AND LOCAL PERMIT REQUIREMENTS AT ALL TIMES OF SITE PERMIT COVERAGE.
54. THE OWNER AND OPERATOR MUST IMPLEMENT THE PROVISIONS OF THE PLAN AS WRITTEN AND AS MAY BE UPDATED, FROM COMMENCEMENT OF CONSTRUCTION ACTIVITY UNTIL FINAL STABILIZATION IS COMPLETE.
55. THE OPERATOR SHALL ENSURE ALL MATERIALS IMPORTED OR EXPORTED FROM THE SITE ARE PROPERLY SECURED AND COVERED TO PREVENT LOSS DURING TRANSPORT. ALL HALL ROUTES SHALL BE DOCUMENTED WITHIN THE PLAN. ALL OFF-SITE SPOIL, BORROW, AND WASTE DISPOSAL FACILITIES SHALL BE PROPERLY PERMITTED FOR OPERATION.



2009 W. Littleton Blvd. #300 Littleton, CO 80120  
303.794.4727 | [www.SterlingDesignAssociates.com](http://www.SterlingDesignAssociates.com)

PREPARED UNDER THE DIRECT SUPERVISION OF  
JAY M. NEWELL, PE  
COLORADO REGISTRATION 35219  
FOR & ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

STERLING DESIGN ASSOCIATES, LLC	
ISSUES & REVISIONS	
NO: 1	DATE: - BY: -
DESCRIPTION: -	
NO: 2	DATE: - BY: -
DESCRIPTION: -	
NO: 3	DATE: - BY: -
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NO: 4	DATE: - BY: -
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NO: 5	DATE: - BY: -
DESCRIPTION: -	
NO: 6	DATE: - BY: -
DESCRIPTION: -	
DATE: <b>10/2022</b>	SCALE: <b>N/A</b>
PROJECT MANAGER: <b>JS</b>	PROJECT NO.: -
DRAWN BY: <b>JN</b>	DRAWING FILE: -
PROJECT: -	

#### SPACE VILLAGE FILING NO. 4 EL PASO COUNTY, CO

CLIENT:  
COMMERCIAL BUILDING SERVICES  
7561 S. GRANT STR., SUITE A-4  
LITTLETON, COLORADO 80122

TEL: (303) 730-3001

SHEET TITLE:  
**GRADING & EROSION CONTROL  
NOTES (SWMP-SITE MAP)**

SHEET NUMBER:  
**2** **C901**



#### CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

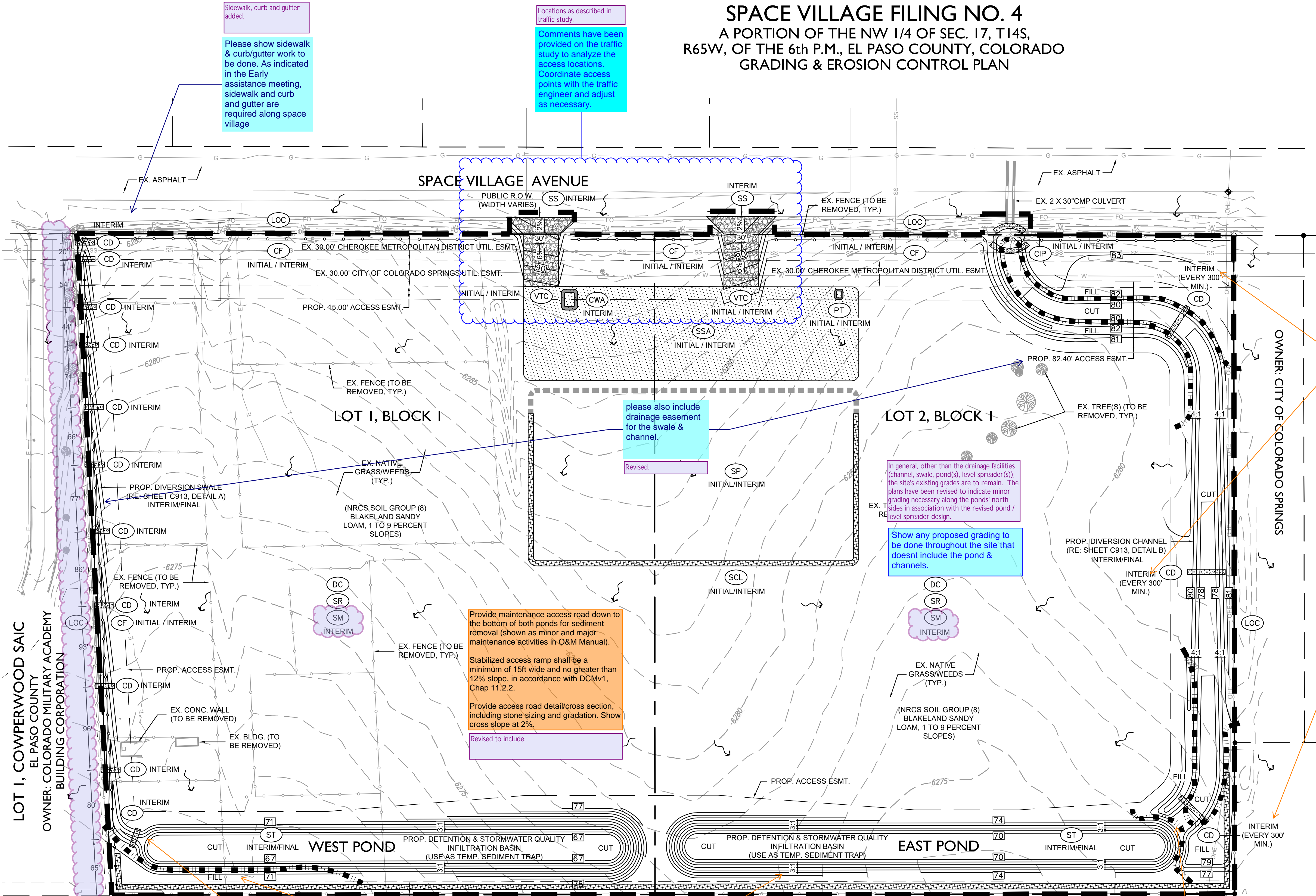
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR ANY DAMAGE AT HIS EXPENSE.



# SPACE VILLAGE FILING NO. 4

## A PORTION OF THE NW 1/4 OF SEC. 17, T14S, R65W, OF THE 6th P.M., EL PASO COUNTY, COLORADO

### GRADING & EROSION CONTROL PLAN



Sidewalk, curb and gutter added.

Please show sidewalk & curb/gutter work to be done. As indicated in the Early assistance meeting, sidewalk and curb and gutter are required along space village

Locations as described in traffic study.

Comments have been provided on the traffic study to analyze the access locations. Coordinate access points with the traffic engineer and adjust as necessary.

300' horizontal at 0.5% is equivalent to 1.5' vertical which is the design slope of the channel. The western swale does include specific spacing dimensions (see clouded) to avoid confusion.

Spacing should be based on vertical fall. Is this 300' horizontal spacing specific to this channel only because the grade is consistent? There is not any spacing notes on the western swale, so without some form of clarification, the contractor might apply these notes to the western swale. Please clarify.

please also include drainage easement for the swale & channel.

Revised.

In general, other than the drainage facilities (channel, swale, pond(s), level spreader(s)), the site's existing grades are to remain. The plans have been revised to indicate minor grading necessary along the ponds' north sides in association with the revised pond / level spreader design.

Show any proposed grading to be done throughout the site that doesn't include the pond & channels.

Provide maintenance access road down to the bottom of both ponds for sediment removal (shown as minor and major maintenance activities in O&M Manual).

Stabilized access ramp shall be a minimum of 15ft wide and no greater than 12% slope, in accordance with DCMV1, Chap 11.2.2.

Provide access road detail/cross section, including stone sizing and gradation. Show cross slope at 2%.

Revised to include.

#### BENCHMARK

AS PROVIDED ON ALTA/NSPS LAND TITLE SURVEY PREPARED BY ALTURA LAND CONSULTANTS, DATED APRIL 28, 2022 FOR THIS PROJECT.

"NGS BENCHMARK 'R 76' - LOCATED 0.2 MILE EAST ALONG HIGHWAY 94, FROM PETERSON ROAD, 22 FEET SOUTH-SOUTHEAST OF THE SOUTHEAST CORNER OF AN ADDITION TO THE BUILDING (SANDY'S RESTAURANT), 48 FEET NORTH OF THE CENTERLINE OF THE HIGHWAY, 3.5 FEET SOUTH OF A POWER POLE AND 3 FEET SOUTH OF A FIBERGLASS WITNESS POST. ELEVATION = 6289.86 FEET (NAVD 1988)"

#### GENERAL NOTES

- REFER TO SHEETS C900 AND C901 FOR PROJECT GENERAL NOTES.
- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE OR PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.

#### CUT/FILL SUMMARY

CUT	=	± 13,855 CY
FILL	=	± 1,556 CY
EXPORT	=	± 12,299 CY
(EXPORT OVER 22.8 AC. = 0.33')		
FINAL EXPORT	=	± 0 CY

CUT AND FILL ANALYSIS IS FROM EXISTING FINISH GRADE TO PROPOSED FINISH GRADE AND DOES NOT ACCOUNT FOR COMPACTION, SHRINK/SWELL, PAVEMENT SECTIONS, ETC., AND IS THEREFORE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.



PREPARED UNDER THE DIRECT SUPERVISION OF  
JAY M. NEWELL, PE  
COLORADO REGISTRATION 35219  
FOR & ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

STERLING DESIGN ASSOCIATES, LLC		
ISSUES & REVISIONS	NO.:	DATE:
NO. 1	DATE:	BY:
DESCRIPTION:		
NO. 2	DATE:	BY:
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NO. 6	DATE:	BY:
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DATE:	SCALE:
10/2022	1" = 60'-0"
PROJECT MANAGER:	PROJECT NO.:
JS	
DRAWN BY:	DRAWING FILE:
JN	
PROJECT:	

#### SPACE VILLAGE FILING NO. 4 EL PASO COUNTY, CO

CLIENT:  
COMMERCIAL BUILDING SERVICES  
7561 S. GRANT STR., SUITE A-4  
LITTLETON, COLORADO 80122  
TEL: (303) 730-3001

#### GRADING & EROSION CONTROL PLAN (SWMP-SITE MAP)

SHEET TITLE:  
SHEET NUMBER:  
**3**

**C905**

#### CAUTION TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING IMPROVEMENTS AND UTILITIES AND SHALL REPAIR ANY DAMAGE AT HIS EXPENSE.

See MHFD guidance below regarding conservative design of full infiltration basins: Infiltration guidance met.

**Full Infiltration Section:** This section is designed to infiltrate the water stored in the basin into the subgrade below. UDFCD recommends a minimum infiltration rate of 2 times the rate needed to drain the WQCV over 12 hours. A conservative design could utilize the partial infiltration section with the addition of a valve at the underdrain outlet. In the event that infiltration does not remain adequate following construction, the valve could be opened and allow this section to operate as a partial infiltration section. It is rare that sand filters are designed to fully infiltrate.

Show spillway locations as shown on FDR drainage maps.

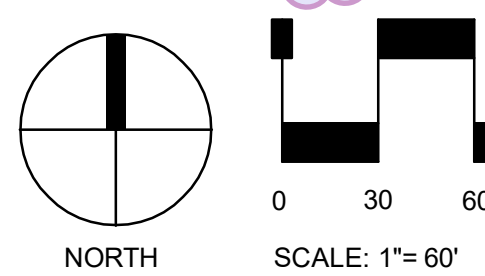
Pond and spreader spillways shown as requested.

Erosion protection likely needed at the concentrated inflow point do analysis of erosion potential and decide.

Channel and Swale no longer discharge to pond(s). Therefore protection is not necessary.

Erosion protection likely needed at the concentrated inflow point do analysis of erosion potential and decide.

Channel and Swale no longer discharge to pond(s). Therefore protection is not necessary.



---	PROPERTY LINE
---	ADJACENT PROPERTY LINE
---	EASEMENT LINE
---	EXIST. MAJOR CONTOUR
---	EXIST. MINOR CONTOUR
---	PROP. CONTOUR
---	EXIST. FENCE
---	EXIST. EDGE OF ASPHALT
---	EXIST. CURB AND GUTTER
---	EXIST. OVERHEAD ELECTRIC
---	EXIST. SANITARY SEWER
---	EXIST. WATERLINE
---	EXIST. GAS LINE
---	EXIST. ELECTRIC
---	EXIST. TELEPHONE
---	EXIST. FIBER OPTIC

---	PROP. CONCRETE
---	LIMITS OF CONSTRUCTION & DISTURBANCE
---	CONSTRUCTION FENCE (TYPE = FENCE (TYP. ALL))
---	SEDIMENT CONTROL LOG
---	CHECK DAM
---	DISCHARGE POINT
---	FLOW DIRECTION

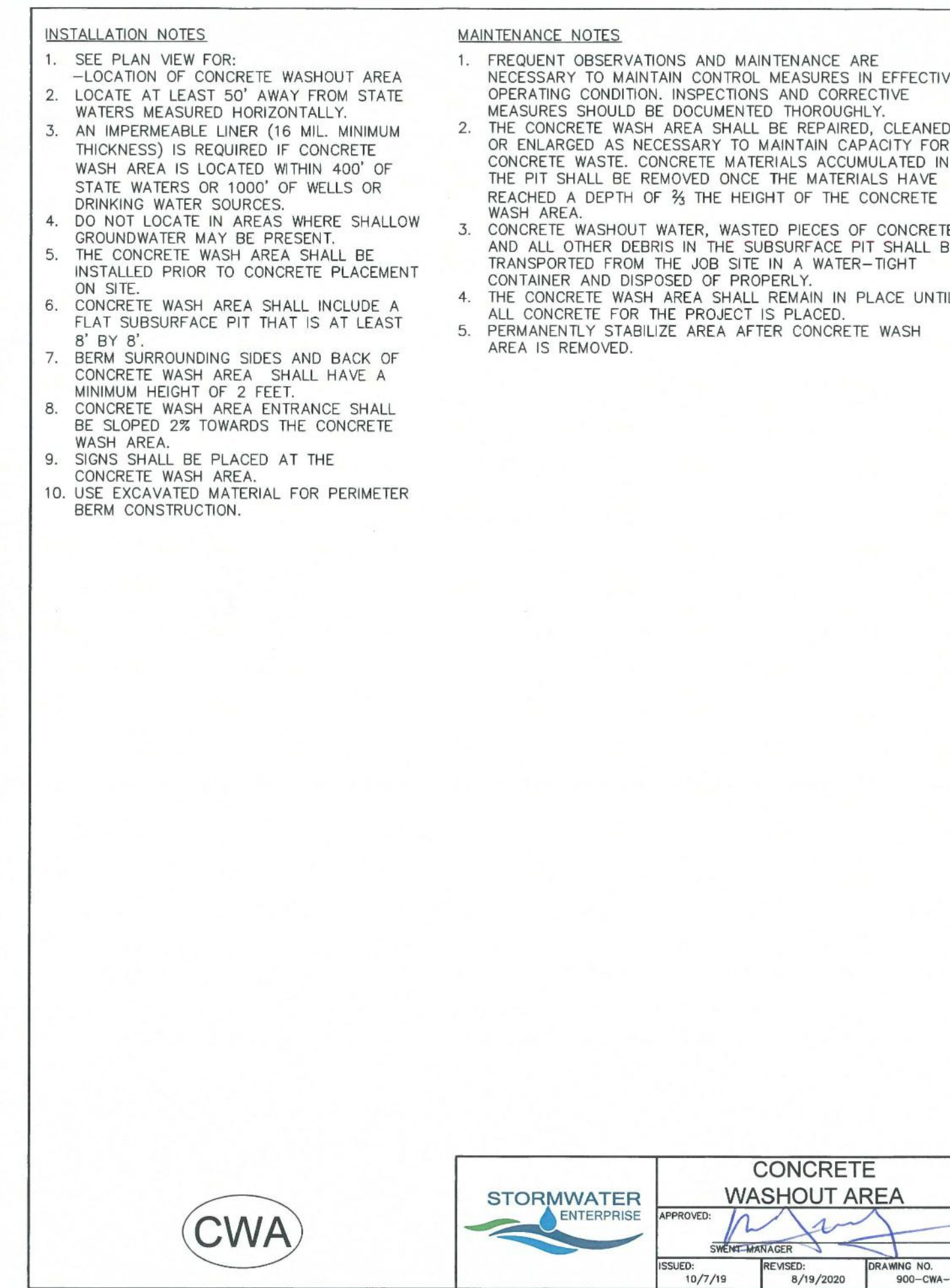
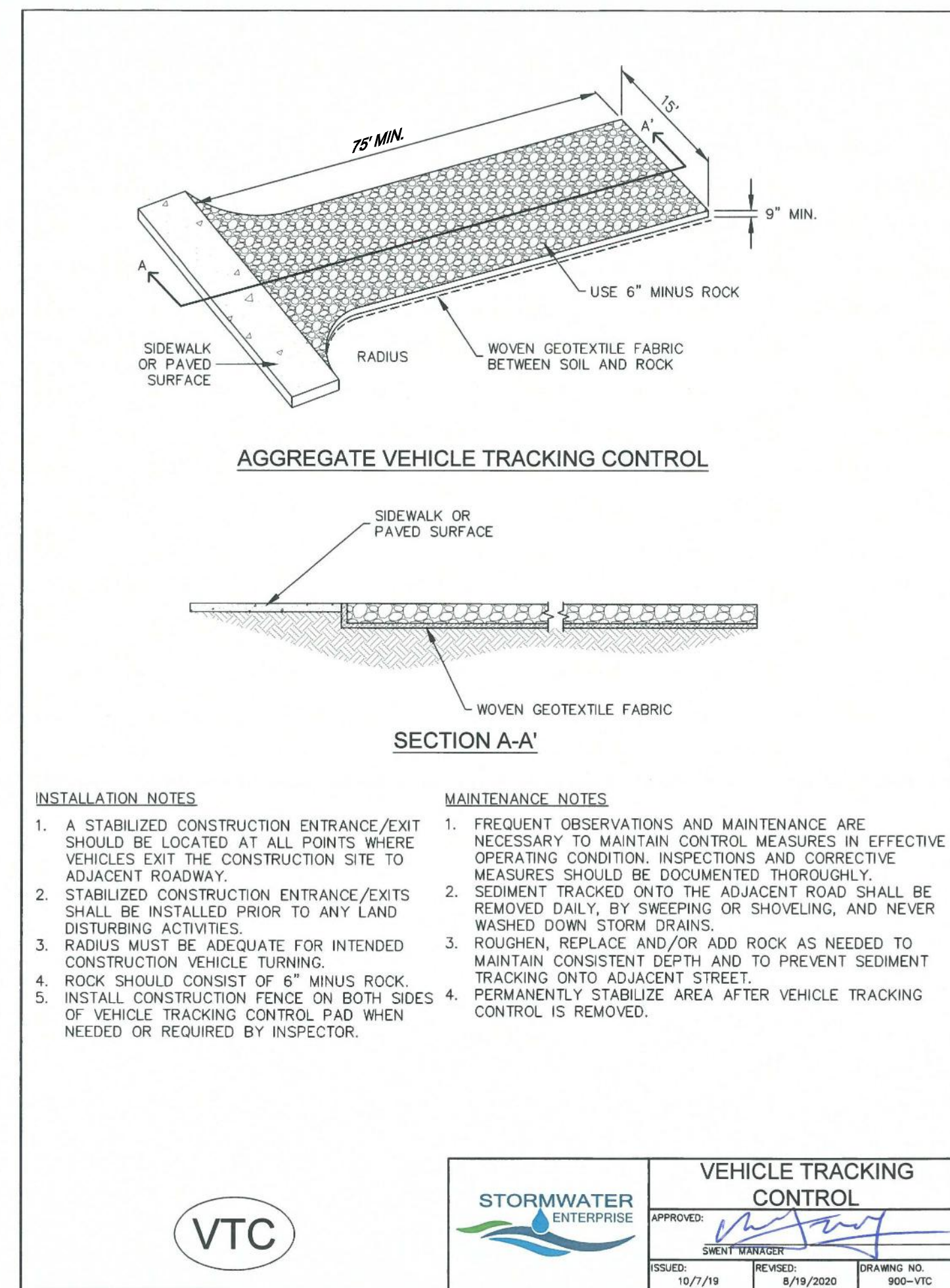
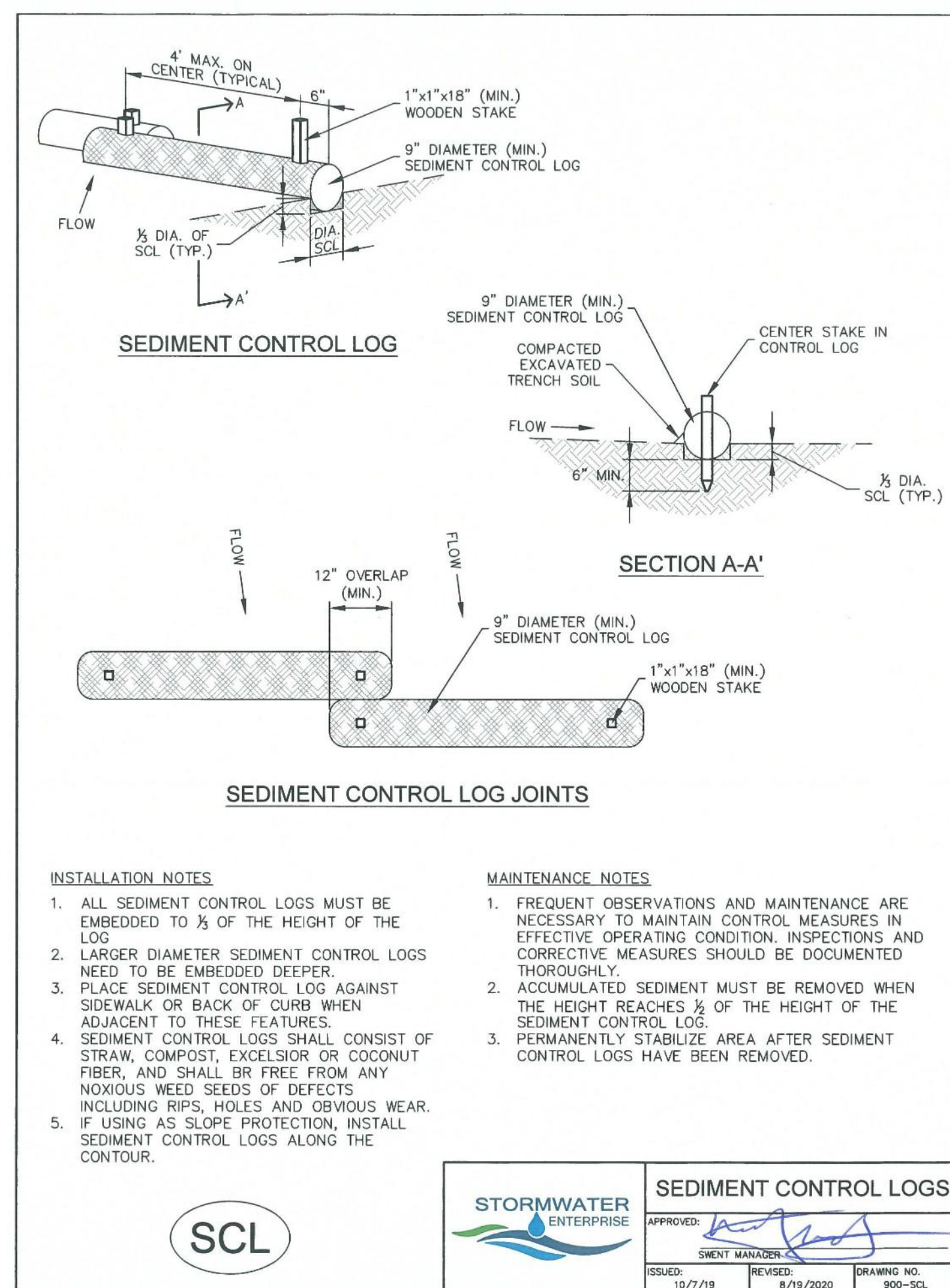
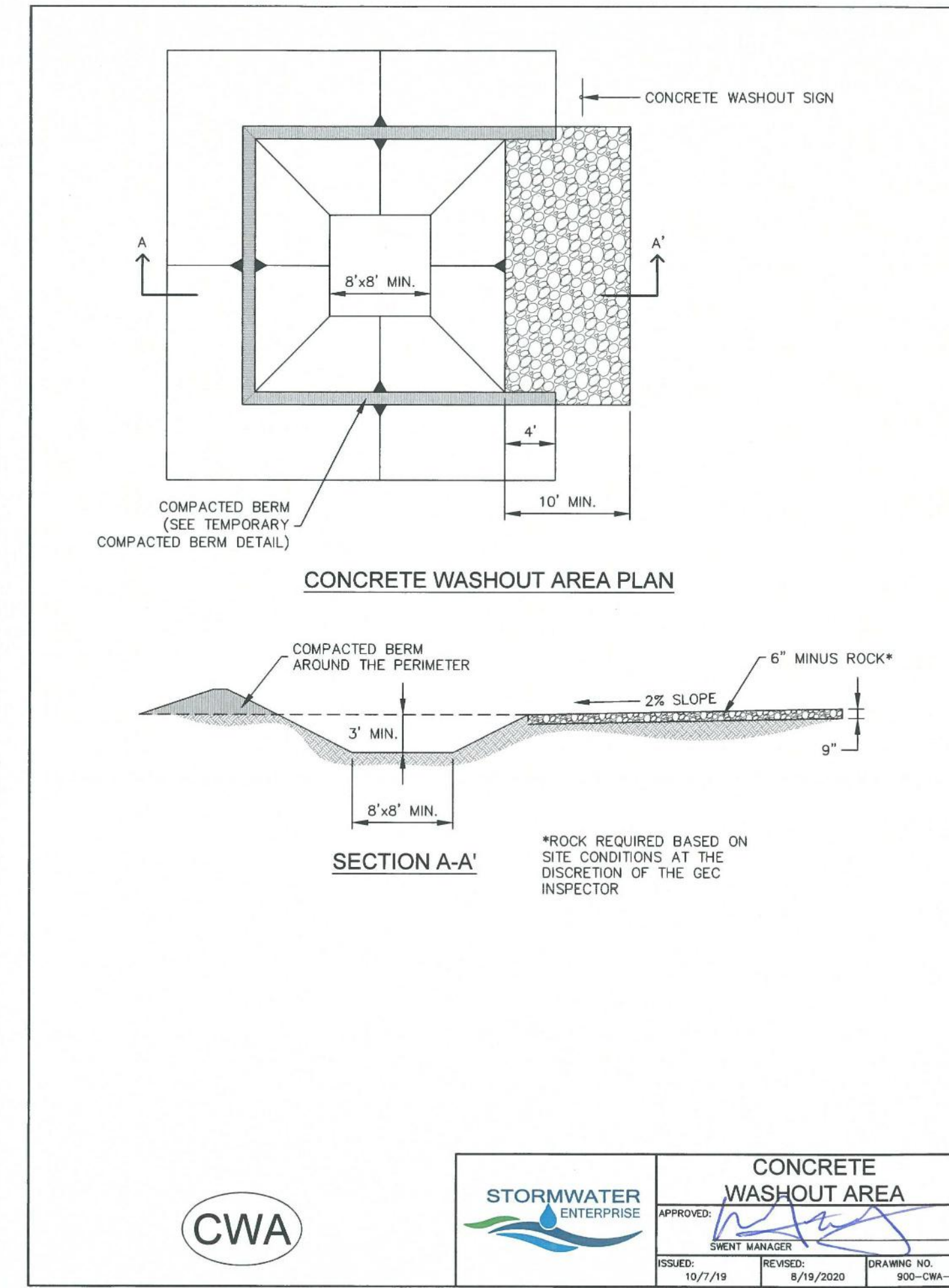
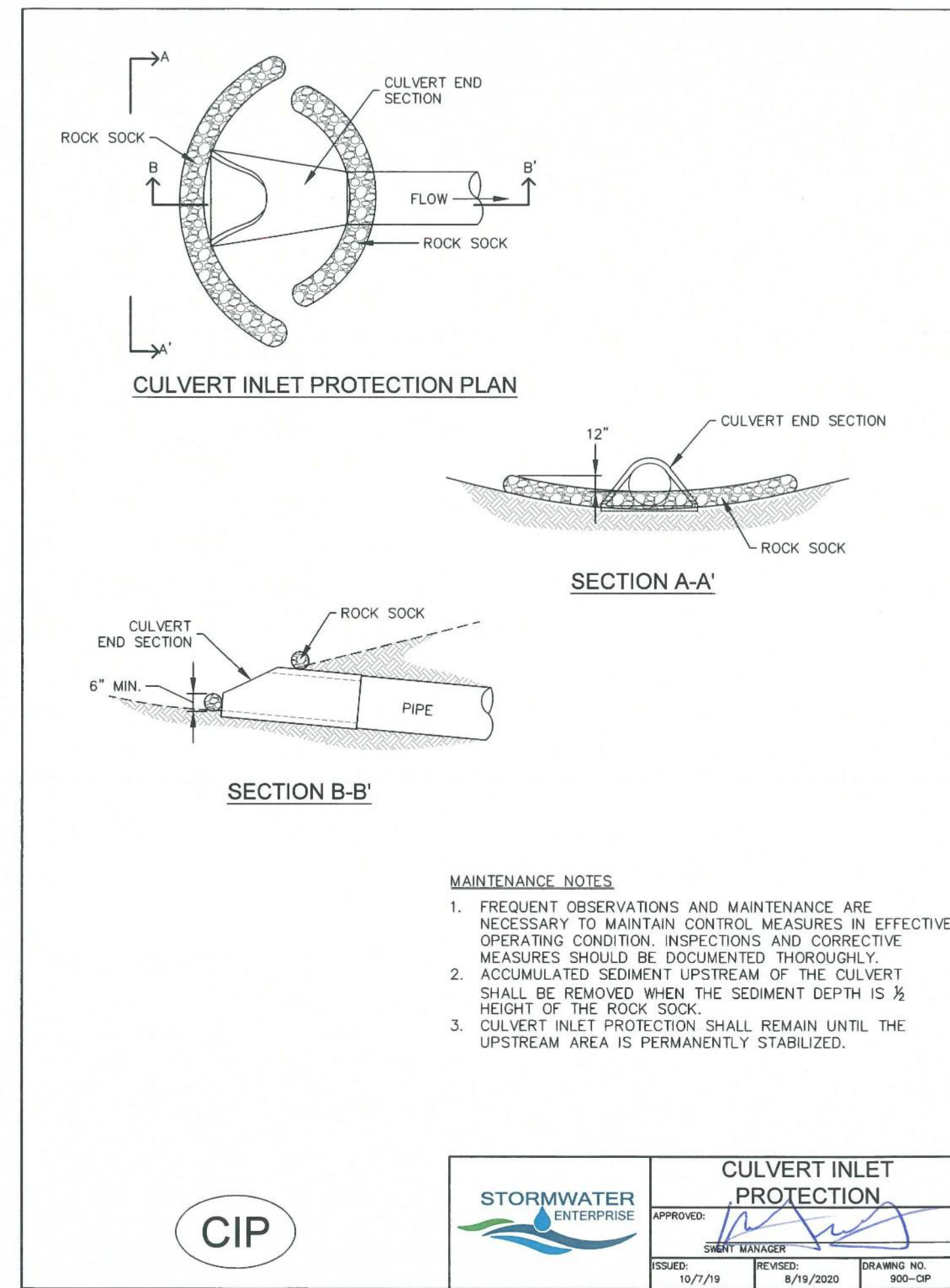
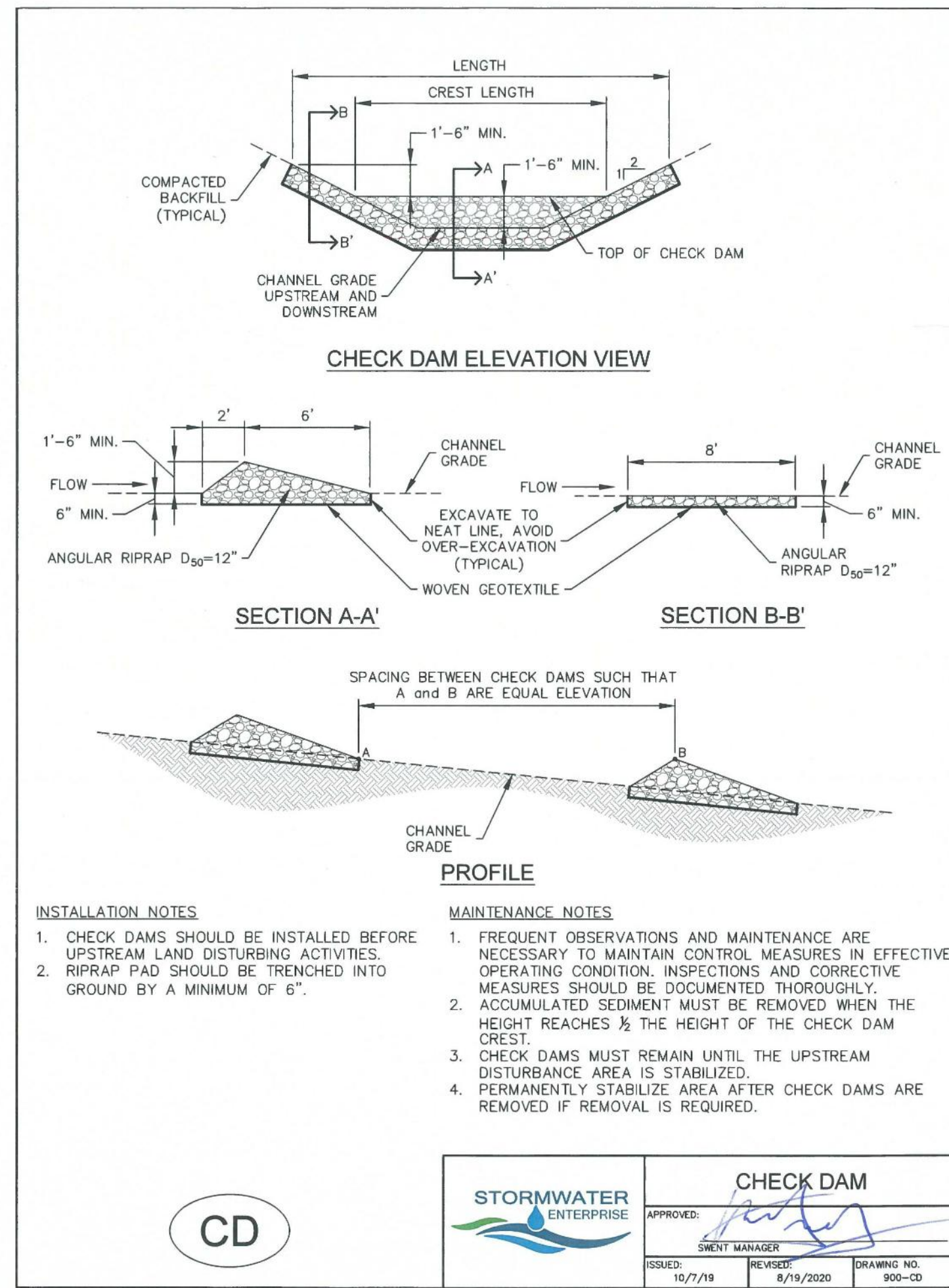
---	VEHICLE TRACKING CONTROL (PRE-MANUFACTURED MAT) (FOR USE ON TOP OF EXISTING PAVEMENT)
---	STABILIZED STAGING AREA
---	CONCRETE WASHOUT AREA
---	CUT/FILL LIMIT
---	PORTABLE TOILET(S)
---	CULVERT INLET PROTECTION

---	SEDIMENT TRAP
---	SURFACE ROUGHENING
---	SEEDING & MULCHING
---	DUST CONTROL
---	STREET SWEEPING
---	STOCKPILE MANAGEMENT

Add seeding and mulching to the Legend and show locations on the plan.

Already shown. "FINAL" added as appropriate.





STERLING DESIGN ASSOCIATES, LLC

NO.	DATE	BY
1		
2		
3		
4		
5		
6		

DATE: 10/2022 SCALE: N/A

PROJECT MANAGER: JS PROJECT NO.:

DRAWN BY: JN DRAWING FILE:

PROJECT:

**SPACE VILLAGE FILING NO. 4 EL PASO COUNTY, CO**

CUSTOMER:  
COMMERCIAL BUILDING SERVICES  
7561 S. GRANT STR., SUITE A-4  
LITTLETON, COLORADO 80122

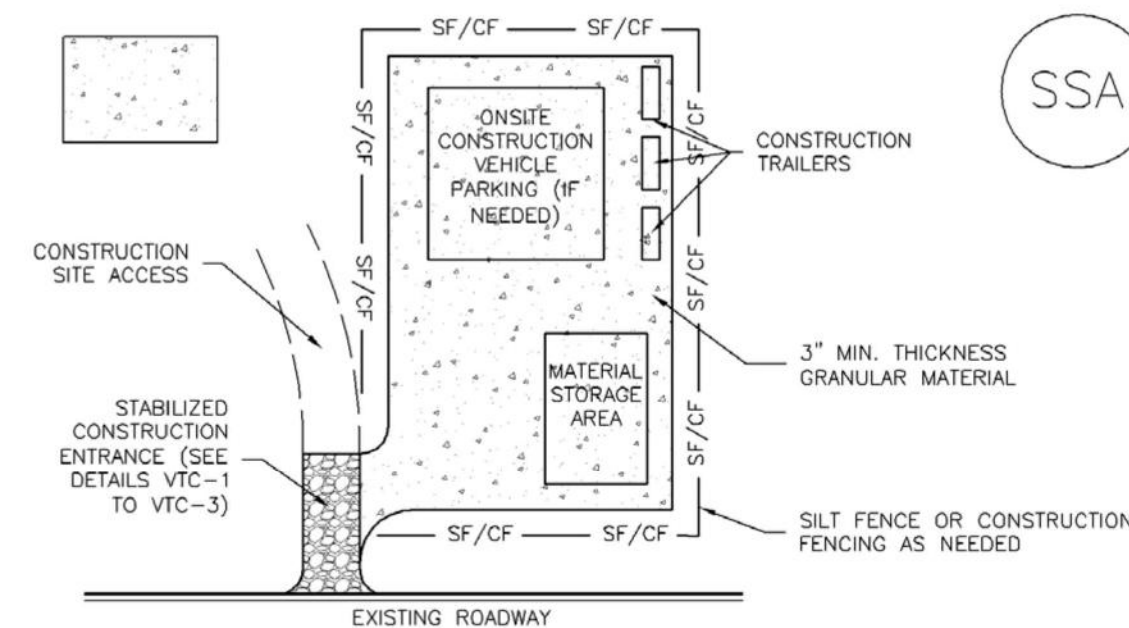
TEL: (303) 730-3001

**GRADING & EROSION CONTROL DETAILS (SWMP-SITE MAP)**

SHEET NUMBER:



**Stabilized Staging Area (SSA) SM-6**



SSA-1. STABILIZED STAGING AREA

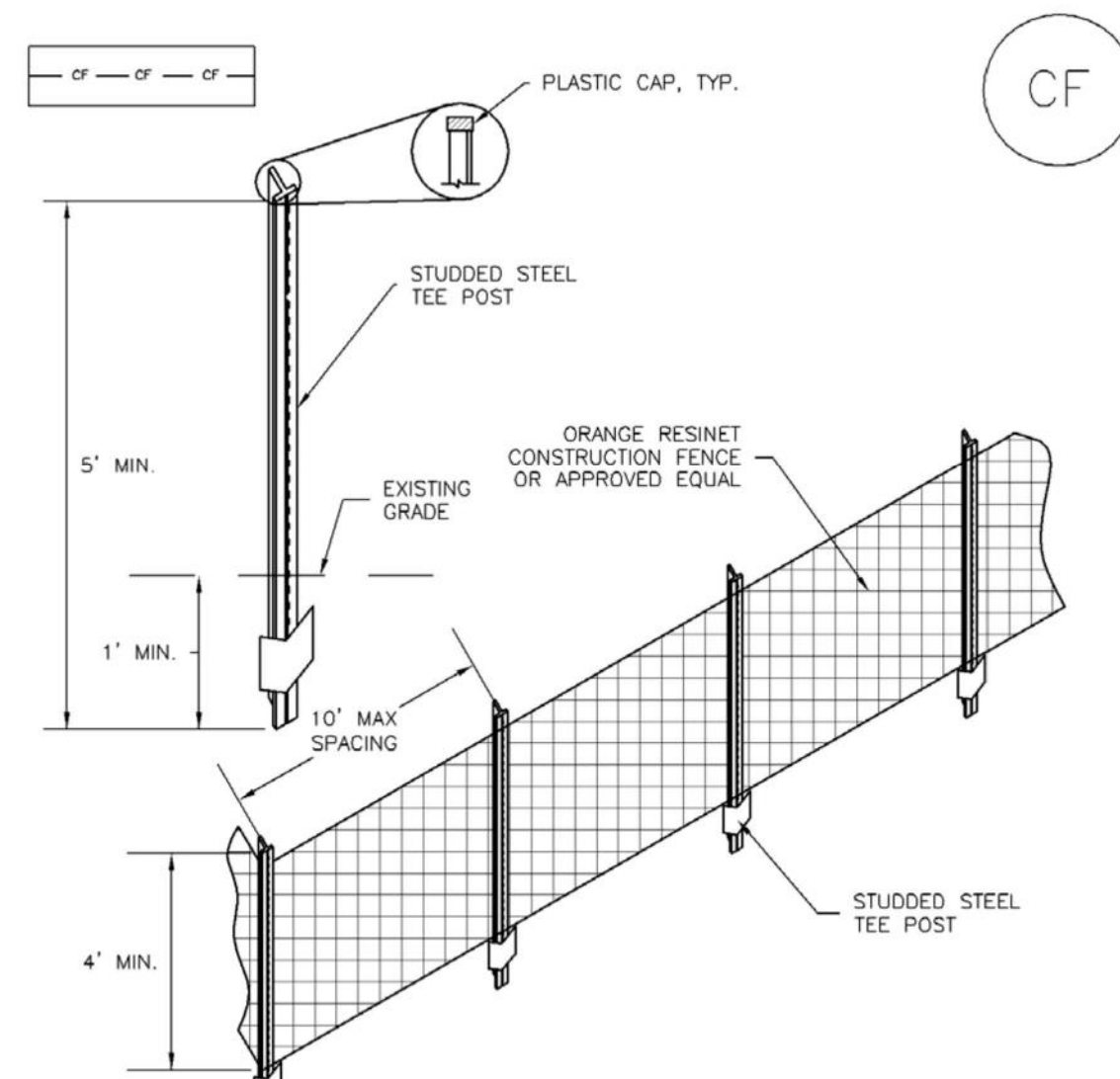
**STABILIZED STAGING AREA INSTALLATION NOTES**

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

**STABILIZED STAGING AREA MAINTENANCE NOTES**

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

**Construction Fence (CF) SM-3**



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.

**PORTABLE TOILET PLAN**

**ISOMETRIC**

**INSTALLATION NOTES**

1. PORTABLE TOILETS SHALL BE PLACED A MINIMUM OF 10 FEET BEHIND ALL CURBS, SIDEWALKS, AND OTHER IMPERVIOUS AREAS; 50 FEET FROM STORM INLETS, AND 100 FEET FROM WATERWAYS.
2. PORTABLE TOILETS IN THE RIGHT-OF-WAY ARE REQUIRED TO BE PLACED ON MOBILE TRAILERS AND MUST BE ANCHORED OR WEIGHTED DOWN. PORTABLE TOILETS MAY BE INSTALLED IN ACCORDANCE WITH NOTE #1 IN STAGING AREAS/YARDS.
3. PORTABLE TOILETS SHALL BE SECURELY ANCHORED TO THE GROUND USING U-SHAPED REBAR STAKES, OR OTHER EFFECTIVE ANCHORING.
4. ANCHORING SHALL BE POSITIONED ON AT LEAST TWO OPPOSING (DIAGONAL) CORNERS.
5. TOILET CONTAINMENT PANS MAY BE USED IN PLACE OF A TRAILER AT THE OEC. INSPECTOR'S DISCRETION. TOILET CONTAINMENT PANS MUST BE ANCHORED IN PLACE AND MUST NOT BE USED WITHIN THE CITY R.O.W.

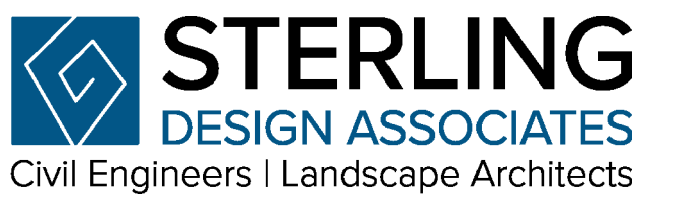
**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. PORTABLE TOILETS SHALL BE SERVICED AT THE NECESSARY INTERVALS TO ELIMINATE THE POSSIBILITY OF OVERFLOW.
3. WHEN THE PORTABLE TOILETS ARE REMOVED, ANY DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE TOILETS MUST BE PERMANENTLY STABILIZED.

**PORTABLE TOILET**

APPROVED: [Signature]  
SHELVE MANAGER

ISSUED: 2/19/19 REVISED: 8/19/2022 DRAWING NO. 900-PTM



PREPARED UNDER THE DIRECT SUPERVISION OF  
JAY M. NEWELL, PE  
COLORADO REGISTRATION 35219  
FOR & ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

**Stabilized Staging Area (SSA) SM-6**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

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

**Construction Fence (CF) SM-3**

**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 AUTOCAD)

**Sediment Trap (ST) SC-8**

**SEDIMENT TRAP INSTALLATION NOTES**

1. SEE PLAN VIEW FOR:
  - LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
2. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADE LAND-DISTURBING ACTIVITIES.
3. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

**SEDIMENT TRAP 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. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES 1/2 THE HEIGHT OF THE RIPRAP OUTLET.
  5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
  6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE:** MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

STERLING DESIGN ASSOCIATES, LLC

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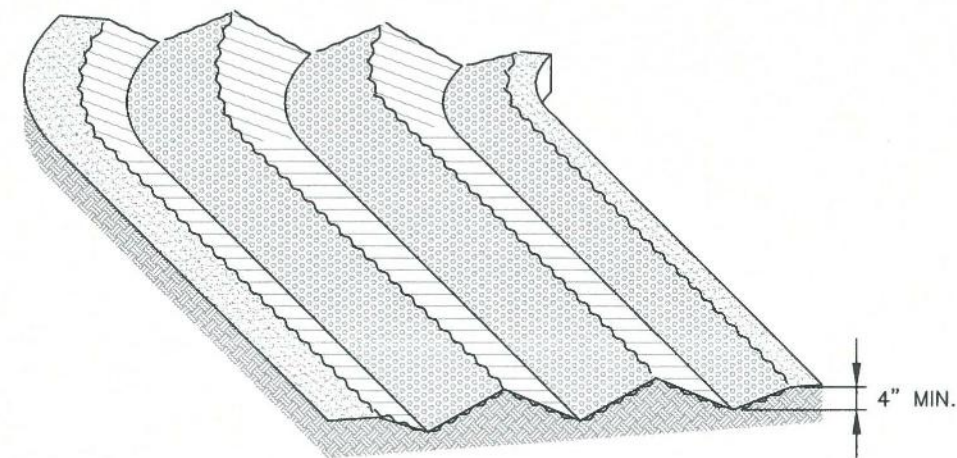
**SPACE VILLAGE FILING NO. 4 EL PASO COUNTY, CO**

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7561 S. GRANT STR., SUITE A-4  
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**GRADING & EROSION CONTROL DETAILS (SWMP-SITE MAP)**





**SURFACE ROUGHENING**

**INSTALLATION NOTES**

1. SURFACE ROUGHENING MAY BE USED IN AREAS FLATTER THAN 3:1. INSTALL FURROWS ALONG CONTOUR TO INTERCEPT SHEET FLOW.
2. SURFACE ROUGHENING MAY BE ACCOMPLISHED BY FURROWING, SCARIFYING, RIPPING OR DISKING THE SOIL.
3. FURROWS MUST BE A MINIMUM OF 4" IN DEPTH.
4. SURFACE ROUGHENING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS. CONTRACTOR SHALL CONFIRM USE OF SURFACE ROUGHENING WITH COUNTY PRIOR TO ANY APPLICATION.

**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. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.



STORMWATER ENTERPRISE

**SURFACE ROUGHENING**

APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-58

( MODIFIED AUGUST 2022 )

Chapter 5  
Native Vegetation Requirements and Guidelines

**Table 5-1. El Paso County Conservation District All-Purpose Mix for Upland, Transition and Permanent Control Measure Areas**

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				Irrigated broadcast Irrigated hydroseeded	Non-irrigated broadcast Non-irrigated hydroseeded Irrigated drilled	Non-irrigated drilled
Bluestem, big	<i>Andropogon gerardii</i>	Warm, sod	20	4.4	2.2	1.1
Gramma, blue	<i>Bouteloua gracilis</i>	Warm, bunch	10	0.5	0.25	0.13
Green needlegrass <sup>1</sup>	<i>Nassella viridula</i>	Cool, bunch	10	2	1	0.5
Wheatgrass, western <sup>2</sup>	<i>Pascopyrum smithii</i>	Cool, sod	20	6.4	3.2	1.6
Gramma, sideoats	<i>Bouteloua curtipendula</i>	Warm, bunch	10	2	1	0.5
Switchgrass <sup>2</sup>	<i>Panicum virgatum</i>	Warm, bunch/sod	10	0.8	0.4	0.2
Prairie sandreed	<i>Calamovilfa longifolia</i>	Warm, sod	10	1.2	0.6	0.3
Yellow indiagrass <sup>2</sup>	<i>Sorghastrum nutans</i>	Warm, sod	10	2	1	0.5
Seed rate (lbs PLS/acre)				19.3	9.7	4.8

<sup>1</sup>For portions of facilities located near or on the bottom or where wet soil conditions occur. Planting of potted nursery stock wetland plants 2-foot on-center is recommended for sites with wetland hydrology.

<sup>2</sup>Species that will do well in the bottom of pond areas.



**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 SEEDDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% 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-SEEDED WHENEVER POSSIBLE.
  - SEED DEPTH MUST BE 1/2 TO 3/4 INCHES WHEN DRILL-SEEDED IS USED
3. BROADCAST SEEDING OR HYDRO-SEEDED WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
  - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLIANT DRILL OR HYDRO-SEEDED
  - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL
4. THE CONTRACTOR SHALL CONFIRM WHICH SEED MIX TO USE WITH THE COUNTY PRIOR TO ORDERING OR ANY APPLICATION.

**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-SEEDED 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.



STORMWATER ENTERPRISE

**SEEDING & MULCHING**

APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-59

( MODIFIED AUGUST 2022 )

Chapter 5  
Native Vegetation Requirements and Guidelines

**Table 5-2. El Paso County All-Purpose Low Grow Mix for Upland and Transition Areas**

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS		
				Irrigated broadcast Irrigated hydroseeded	Non-irrigated broadcast Non-irrigated hydroseeded Irrigated drilled	Non-irrigated drilled
Buffalograss	<i>Buchloe dactyloides</i>	Warm, sod	25	9.6	4.8	2.4
Gramma, blue	<i>Bouteloua gracilis</i>	Warm, bunch	20	10.8	5.4	2.7
Gramma, sideoats	<i>Bouteloua curtipendula</i>	Warm, bunch	29	5.6	2.8	1.4
Green needlegrass	<i>Nassella viridula</i>	Cool, bunch	5	3.2	1.6	0.8
Wheatgrass, western	<i>Pascopyrum smithii</i>	Cool, sod	20	12	6	3
Dropseed, sand	<i>Sporobolus cryptandrus</i>	Warm, bunch	1	0.8	0.4	0.2
Seed rate (lbs PLS/acre)				42	21	10.3



**Wind Erosion/Dust Control (DC)**

**EC-14**

**Description**

Wind erosion and dust control BMPs help to keep soil particles from entering the air as a result of land disturbing construction activities. These BMPs include a variety of practices generally focused on either graded disturbed areas or construction roadways. For graded areas, practices such as seeding and mulching, use of soil binders, site watering, or other practices that provide prompt surface cover should be used. For construction roadways, road watering and stabilized surfaces should be considered.



**Photograph DC-1.** Water truck used for dust suppression. Photo courtesy of Douglas County.

**Appropriate Uses**

Dust control measures should be used on any site where dust poses a problem to air quality. Dust control is important to control for the health of construction workers and surrounding waterbodies.

**Design and Installation**

The following construction BMPs can be used for dust control:

- An irrigation/sprinkler system can be used to wet the top layer of disturbed soil to help keep dry soil particles from becoming airborne.
- Seeding and mulching can be used to stabilize disturbed surfaces and reduce dust emissions.
- Protecting existing vegetation can help to slow wind velocities across the ground surface, thereby limiting the likelihood of soil particles to become airborne.
- Spray-on soil binders form a bond between soil particles keeping them grounded. Chemical treatments may require additional permitting requirements. Potential impacts to surrounding waterways and habitat must be considered prior to use.
- Placing rock on construction roadways and entrances will help keep dust to a minimum across the construction site.
- Wind fences can be installed on site to reduce wind speeds. Install fences perpendicular to the prevailing wind direction for maximum effectiveness.

Wind Erosion Control/ Dust Control	
<b>Functions</b>	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	Moderate

**Maintenance and Removal**

When using an irrigation/sprinkler control system to aid in dust control, be careful not to overwater. Overwatering will cause construction vehicles to track mud off-site.

November 2010 Urban Drainage and Flood Control District DC-1  
Urban Storm Drainage Criteria Manual Volume 3

**Street Sweeping and Vacuuming (SS)**

**SM-7**

**Description**

Street sweeping and vacuuming remove sediment that has been tracked onto roadways to reduce sediment transport into storm drain systems or a surface waterway.



**Photograph SS-1.** A street sweeper removes sediment and potential pollutants along the curb line at a construction site. Photo courtesy of Tom Gore.

**Appropriate Uses**

Use this practice at construction sites where vehicles may track sediment offsite onto paved roadways.

**Design and Installation**

Street sweeping or vacuuming should be conducted when there is noticeable sediment accumulation on roadways adjacent to the construction site. Typically, this will be concentrated at the entrance/exit to the construction site. Well-maintained stabilized construction entrances, vehicle tracking controls and tire wash facilities can help reduce the necessary frequency of street sweeping and vacuuming.

On smaller construction sites, street sweeping can be conducted manually using a shovel and broom. Never wash accumulated sediment on roadways into storm drains.

**Maintenance and Removal**

- Inspect paved roads around the perimeter of the construction site on a daily basis and more frequently, as needed. Remove accumulated sediment, as needed.
- Following street sweeping, check inlet protection that may have been displaced during street sweeping.
- Inspect area to be swept for materials that may be hazardous prior to beginning sweeping operations.

Street Sweeping/ Vacuuming	
<b>Functions</b>	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	Yes

November 2010 Urban Drainage and Flood Control District SS-1  
Urban Storm Drainage Criteria Manual Volume 3

**STERLING DESIGN ASSOCIATES**  
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JAY M. NEWELL, PE  
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FOR & ON BEHALF OF STERLING DESIGN ASSOCIATES, LLC

STERLING DESIGN ASSOCIATES, LLC

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EL PASO COUNTY, CO**

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LITTLETON, COLORADO 80122

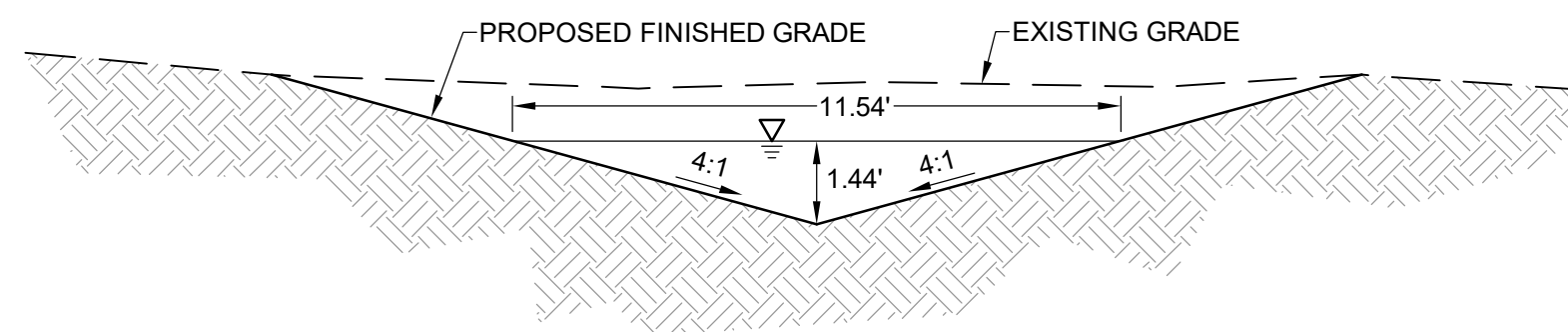
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**GRADING & EROSION CONTROL  
DETAILS (SWMP-SITE MAP)**

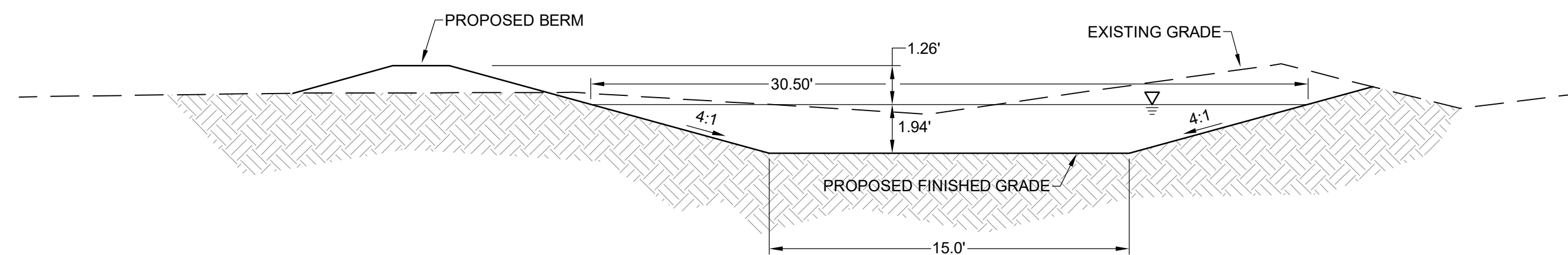
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**DIVERSION SWALE**  
NOT TO SCALE **(A)**



**DIVERSION CHANNEL**  
NOT TO SCALE **(B)**

**STOCKPILE PROTECTION PLAN**

**STOCKPILE PROTECTION ELEVATION**

**INSTALLATION NOTES**

1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRADIENT SIDE. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
2. FOR STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

**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. IF PERIMETER CONTROLS MUST BE MOVED TO ACCESS STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
3. ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.

**STORMWATER ENTERPRISE**

**STOCKPILE PROTECTION**

APPROVED: [Signature]  
SWENT WEAVER

ISSUED: 10/7/19    REVISED: 8/19/2020    DRAWING NO. 900-SP

**SP**

**TEMPORARY COMPACTED BERM**

**INSTALLATION NOTES**

1. COMPACTED BERM MUST BE A MINIMUM HEIGHT OF ONE FOOT. BASE WIDTH IS DETERMINED BY HEIGHT.
2. COMPACTED BERMS MUST BE ADEQUATELY COMPACTED. NOT ALL SOILS ARE SUITABLE FOR COMPACTED BERMS.
3. INSTALL COMPACTED BERMS ALONG CONTOUR; DO NOT INSTALL PERPENDICULAR TO SLOPE.
4. THE MAXIMUM TRIBUTARY DRAINAGE AREA PER 100 LINEAR FEET OF COMPACTED BERMS SHALL BE ¼ ACRE.

**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. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE BERM.

**STORMWATER ENTERPRISE**

**TEMPORARY COMPACTED BERM**

APPROVED: [Signature]  
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ISSUED: 10/7/19    REVISED: 8/19/2020    DRAWING NO. 900-TCB

**TCB**

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**GRADING & EROSION CONTROL  
DETAILS (SWMP-SITE MAP)**