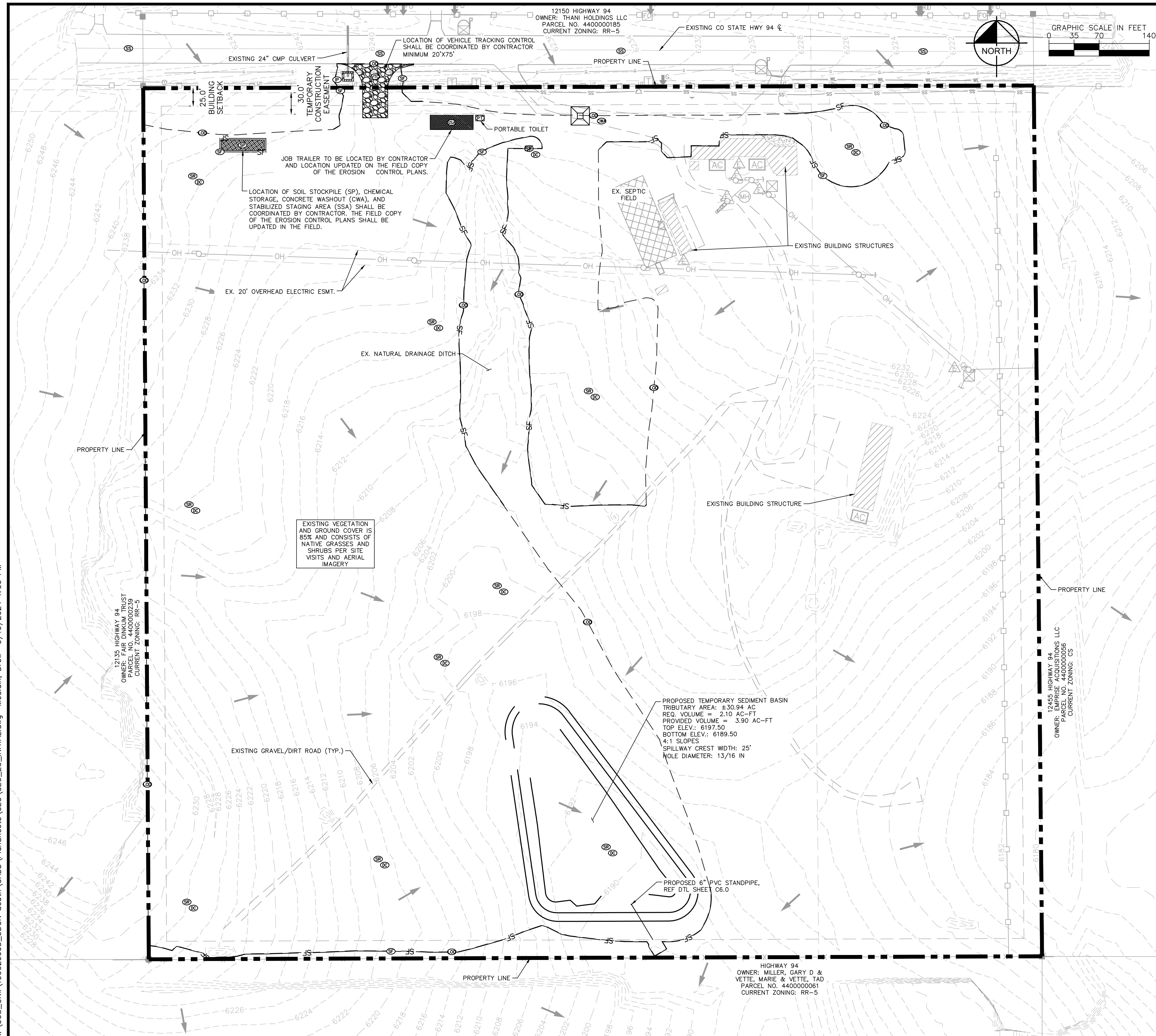


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LEGEND

- 6550 — PROPERTY LINE
- 6551 — EXISTING MAJOR CONTOUR
- --- EXISTING MINOR CONTOUR
- --- LIMITS OF CONSTRUCTION/DISTURBANCE
- SF — SILT FENCE
- --- EASEMENT
- --- EXISTING SANITARY SEWER
- --- EXISTING WATER LINE
- --- EXISTING STORM SEWER PIPE
- --- EXISTING GAS LINE
- --- EXISTING OVERHEAD ELECTRIC LINE
- --- EXISTING UNDERGROUND ELECTRIC UTILITY
- --- EXISTING FENCE
- SSA STABILIZED STAGING AREA
- CWA CONCRETE WASHOUT
- VTC VEHICLE TRACKING CONTROL
- SP SOIL STOCKPILE
- SR SURFACE ROUGHENING
- IP INLET PROTECTION
- EXISTING FLOW DIRECTION ARROW
- SS STREET SWEEPING AND VACUUMING PER UDFCD DETAIL SM-7
- DC DUST CONTROL PER UDFCD DETAIL EC-14
- EXISTING BUILDING

LIMITS OF CONSTRUCTION

ONSITE IMPROVEMENTS	= ±17.48 ACRES
OFFSITE IMPROVEMENTS	= ±0.07 ACRES
TOTAL	= ±17.55 ACRES
TOTAL AREA OF LAND DISTURBANCE	= ±17.55 ACRES

EXISTING VEGETATION NOTE:

EXISTING VEGETATION AND GROUND COVER IS 85% AND CONSISTS OF NATIVE GRASSES AND SHRUBS PER SITE VISITS AND AERIAL IMAGERY

NOTES

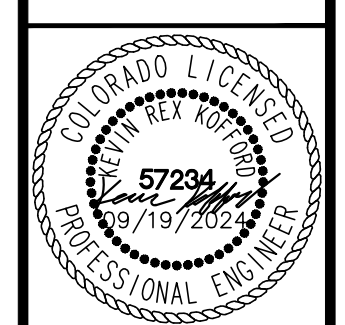
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16. SEE FINAL LANDSCAPING PLAN IN THE DEVELOPMENT PLAN FOR FINAL STABILIZATION MEASURES.

NO.	REVISION	BY	DATE

Kimley»Horn
 2024 KIMLEY-HORN AND ASSOCIATES, INC.
 2 North Nevada Avenue, Suite 900
 Colorado Springs, Colorado 80903 (719) 453-0180

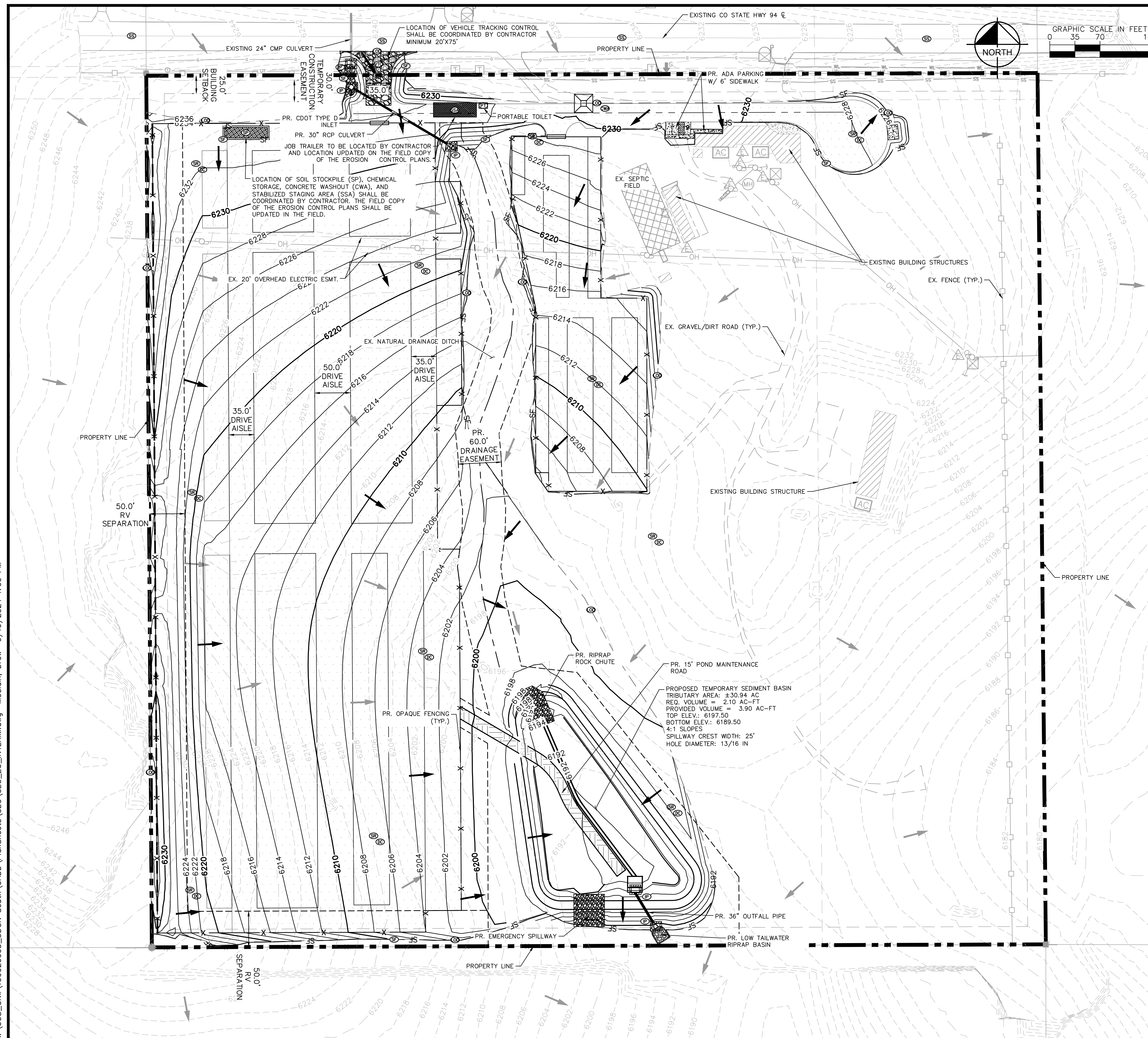
DESIGNED BY: KRK
 DRAWN BY: DPM
 CHECKED BY: KRK
 DATE: 04/16/2024

**UDON SOUTH
 GRADING AND EROSION CONTROL PLANS
 EL PASO COUNTY, COLORADO
 INITIAL PLAN**



PROJECT NO.
196020003
 SHEET
C2.0

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LEGEND

- 6550 --- PROPERTY LINE
- 6551 --- EXISTING MAJOR CONTOUR
- 6550 --- PROPOSED MAJOR CONTOUR
- 6551 --- PROPOSED MINOR CONTOUR
- (OD) --- LIMITS OF CONSTRUCTION/DISTURBANCE
- (SF) --- SILT FENCE
- S --- EASEMENT
- W --- EXISTING SANITARY SEWER
- --- EXISTING WATER LINE
- --- EXISTING STORM SEWER PIPE
- UT --- EXISTING FIBER OPTIC LINE
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- --- EXISTING FENCE
- (SSA) --- STABILIZED STAGING AREA
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- (VTC) --- VEHICLE TRACKING CONTROL
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- (SR) --- SURFACE ROUGHENING
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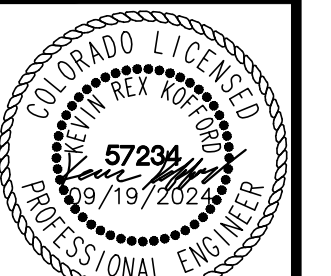
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Kimley»Horn

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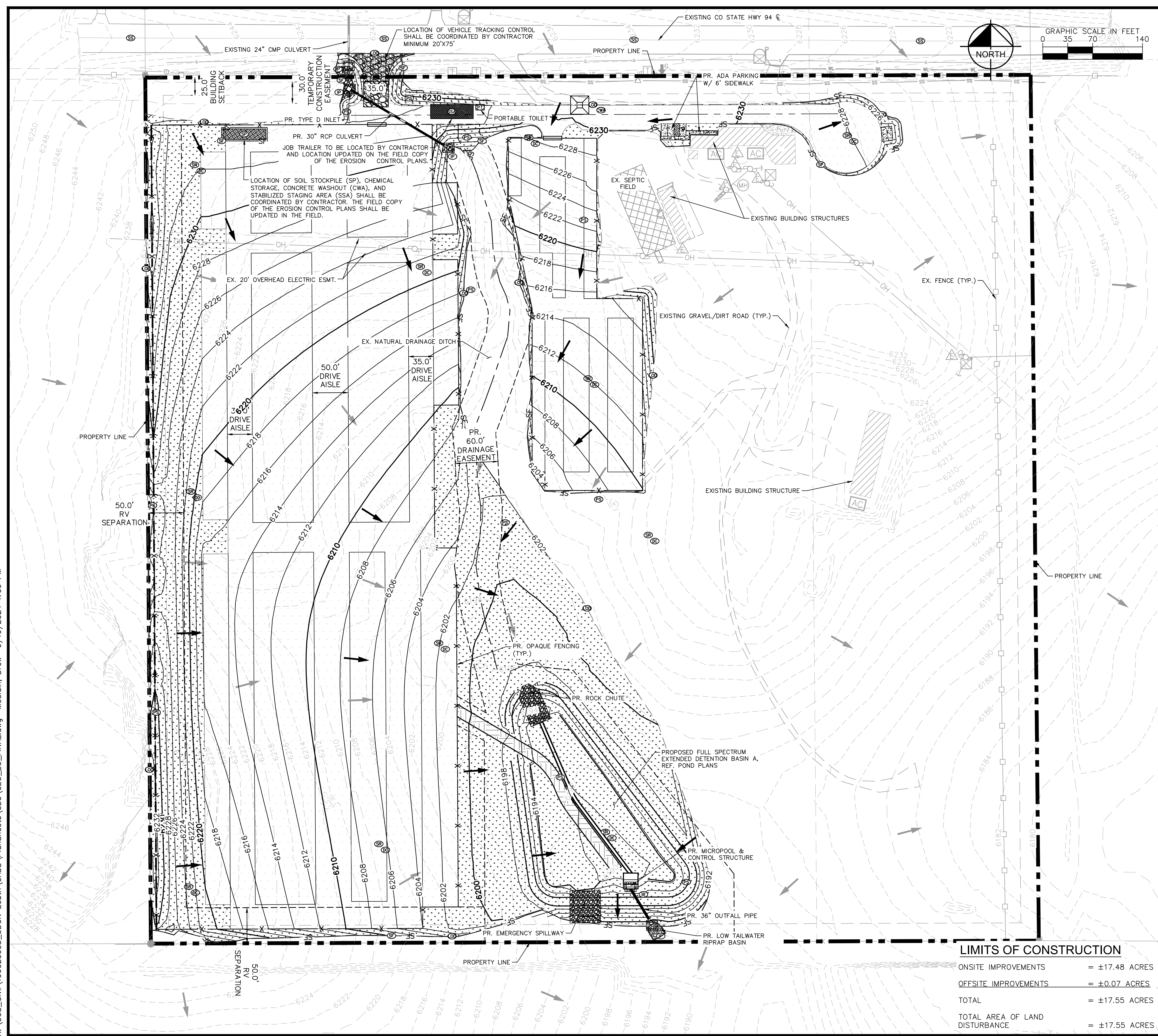
**UDON SOUTH
GRADING AND EROSION CONTROL PLANS
EL PASO COUNTY, COLORADO
INTERIM PLAN**



PROJECT NO.
196020003
SHEET
C3.0

NO.	REVISION	BY	DATE	APPR.

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LEGEND

- PROPERTY LINE
- - - EXISTING MAJOR CONTOUR
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- LIMITS OF CONSTRUCTION/DISTURBANCE
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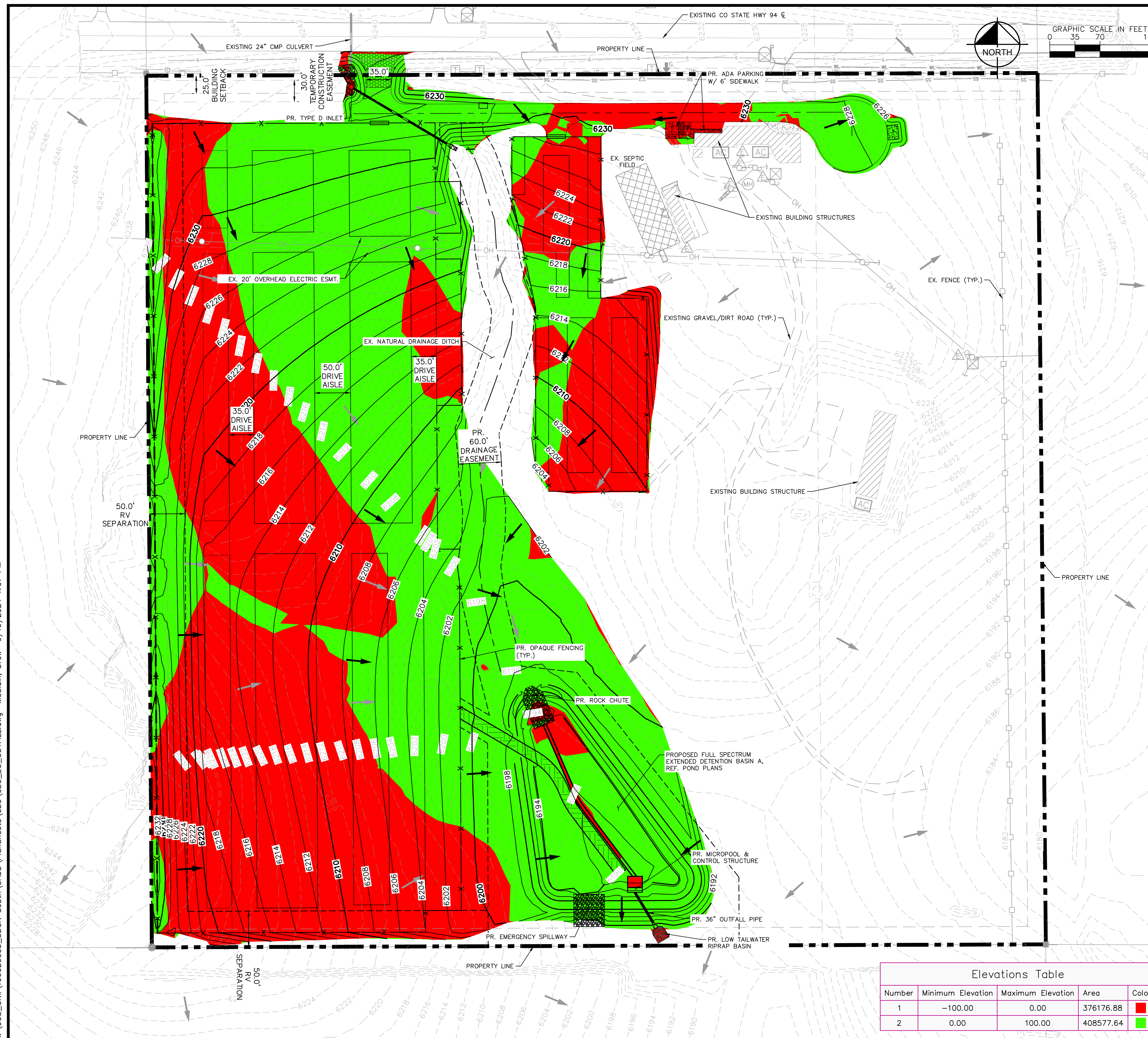
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<p style="font-size: 8px; margin: 0;">DESIGNED BY: KRK DRAWN BY: DPM CHECKED BY: KRK DATE: 04/16/2024</p>	<p style="font-size: 8px; margin: 0;">PROJECT NO. 196020003</p> <p style="font-size: 8px; margin: 0;">SHEET C4.0</p>

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LEGEND

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- PROPOSED MAJOR CONTOUR
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- --- PROPOSED FLOW DIRECTION ARROW

- [Pattern] --- FINAL STABILIZATION (REFERENCE FINAL LANDSCAPING PLANS)
- [Pattern] --- PROPOSED GRAVEL
- [Pattern] --- PROPOSED RIPRAP
- [Pattern] --- PROPOSED CONCRETE

CUT/FILL ORIGINAL:

- FILL = ±35827
- CUT = ±34831
- NET = ±995 (FILL)

***NET FILL UTILIZES A FILL FACTOR OF 1.2**

- LIMITS OF CONSTRUCTION**
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Elevations Table

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	-100.00	0.00	376176.88	Red
2	0.00	100.00	408577.64	Green

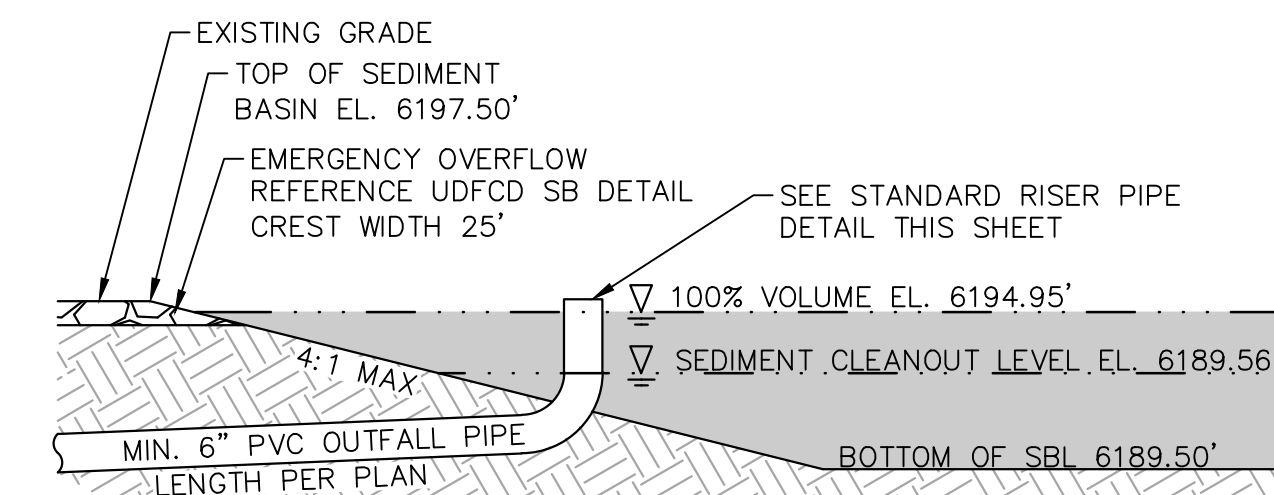
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<p>57294 Professional Engineer</p>	<p>PROJECT NO. 196020003</p> <p>SHEET C5.0</p>										
<p>DESIGNED BY: KRK DRAWN BY: DPM CHECKED BY: KRK DATE: 04/16/2024</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>REVISION</th> <th>BY</th> <th>DATE</th> <th>APPR</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	REVISION	BY	DATE	APPR					
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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 THESE PLANS 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 ENGINEERING SERVICE CO. DATED 08/02/2019
- 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 ARE 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.

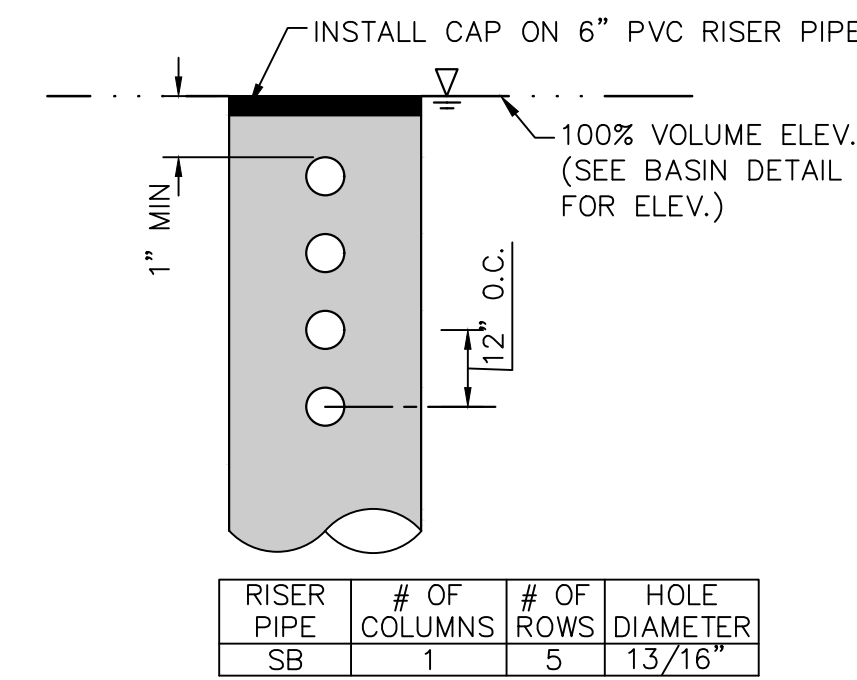
STANDARD GEC PLAN NOTES

- 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.
- ALL LAND DISTURBING ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH AND THE APPROVED GEC PLAN AND CSWMP.
- 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.
- 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.
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
- ALL CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION MEASURES ARE IMPLEMENTED. TEMPORARY CONSTRUCTION CONTROL MEASURES MUST BE REMOVED PRIOR TO PERMIT CLOSEOUT.
- 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.
- 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.).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 SEEDDED, 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.
- 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.
- 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.
- 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.
- "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."



SEDIMENT BASIN DETAIL

N.T.S.



STANDARD RISER PIPE DETAIL

N.T.S.

NO.	REVISION	BY	DATE	APPR

Kimley»Horn
 2024 KIMLEY-HORN AND ASSOCIATES, INC.
 2 North Nevada Avenue, Suite 900
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK
 DRAWN BY: DPM
 CHECKED BY: KRK
 DATE: 04/16/2024

**UDON SOUTH
 GRADING AND EROSION CONTROL PLANS
 EL PASO COUNTY, COLORADO
 GENERAL NOTES**



PROJECT NO.
196020003
 SHEET
C6.0

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Stabilized Staging Area (SSA)

SM-6

Description

A stabilized staging area is a clearly designated area where construction equipment and vehicles, stockpiles, waste bins, and other construction-related materials are stored. The contractor office trailer may also be located in this area. Depending on the size of the construction site, more than one staging area may be necessary.



Photograph SSA-1. Example of a staging area with a gravel surface to prevent mud tracking and reduce runoff. Photo courtesy of Douglas County.

Appropriate Uses

Most construction sites will require a staging area, which should be clearly designated in SWMP drawings. The layout of the staging area may vary depending on the type of construction activity. Staging areas located in roadways due to space constraints require special measures to avoid materials being washed into storm inlets.

Design and Installation

Stabilized staging areas should be completed prior to other construction activities beginning on the site. Major components of a stabilized staging area include:

- Appropriate space to contain storage and provide for loading/unloading operations, as well as parking if necessary.
- A stabilized surface, either paved or covered, with 3-inch diameter aggregate or larger.
- Perimeter controls such as silt fence, sediment control logs, or other measures.
- Construction fencing to prevent unauthorized access to construction materials.
- Provisions for Good Housekeeping practices related to materials storage and disposal, as described in the Good Housekeeping BMP Fact Sheet.
- A stabilized construction entrance/exit, as described in the Vehicle Tracking Control BMP Fact Sheet, to accommodate traffic associated with material delivery and waste disposal vehicles.

Over-sizing the stabilized staging area may result in disturbance of existing vegetation in excess of that required for the project. This increases costs, as well as requirements for long-term stabilization following the construction period. When designing the stabilized staging area, minimize the area of disturbance to the extent practical.

Stabilized Staging Area	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material	Yes

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

SM-6 Stabilized Staging Area (SSA)

- Minimizing Long-Term Stabilization Requirements**
- Utilize off-site parking and restrict vehicle access to the site.
 - Use construction mats in lieu of rock when staging is provided in an area that will not be disturbed otherwise.
 - Consider use of a bermed contained area for materials and equipment that do not require a stabilized surface.
 - Consider phasing of staging areas to avoid disturbance in an area that will not be otherwise disturbed.

See Detail SSA-1 for a typical stabilized staging area and SSA-2 for a stabilized staging area when materials staging in roadways is required.

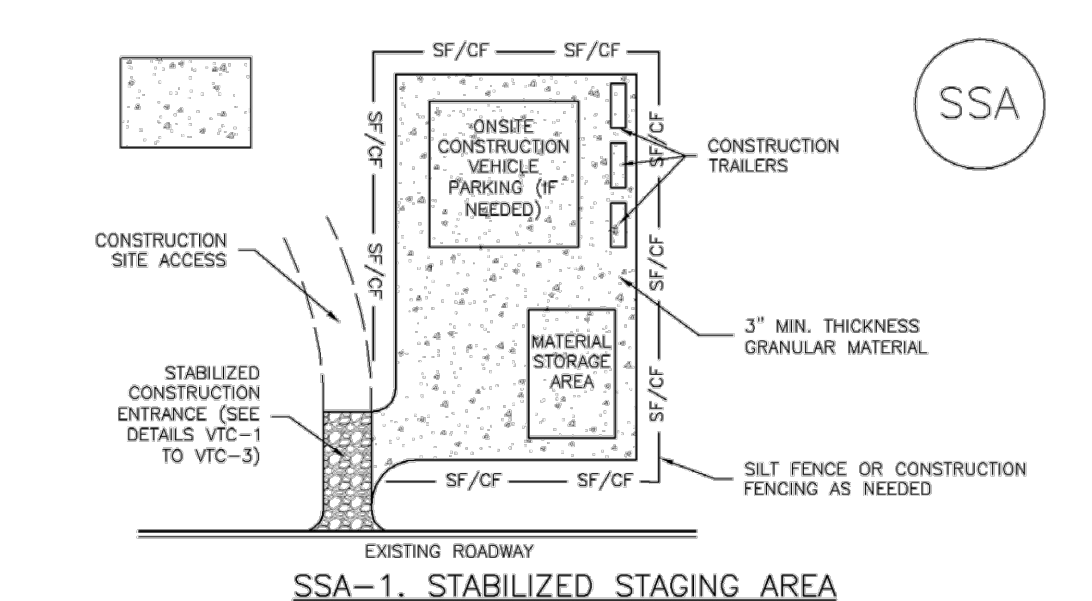
Maintenance and Removal

Maintenance of stabilized staging areas includes maintaining a stable surface cover of gravel, repairing perimeter controls, and following good housekeeping practices.

When construction is complete, debris, unused stockpiles and materials should be recycled or properly disposed. In some cases, this will require disposal of contaminated soil from equipment leaks in an appropriate landfill. Staging areas should then be permanently stabilized with vegetation or other surface cover planned for the development.

SSA-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

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 FRUITING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

SM-6 Stabilized Staging Area (SSA)

- STABILIZED STAGING AREA MAINTENANCE NOTES**
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDS 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 LDFCD 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)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

CHECK DAM

CD

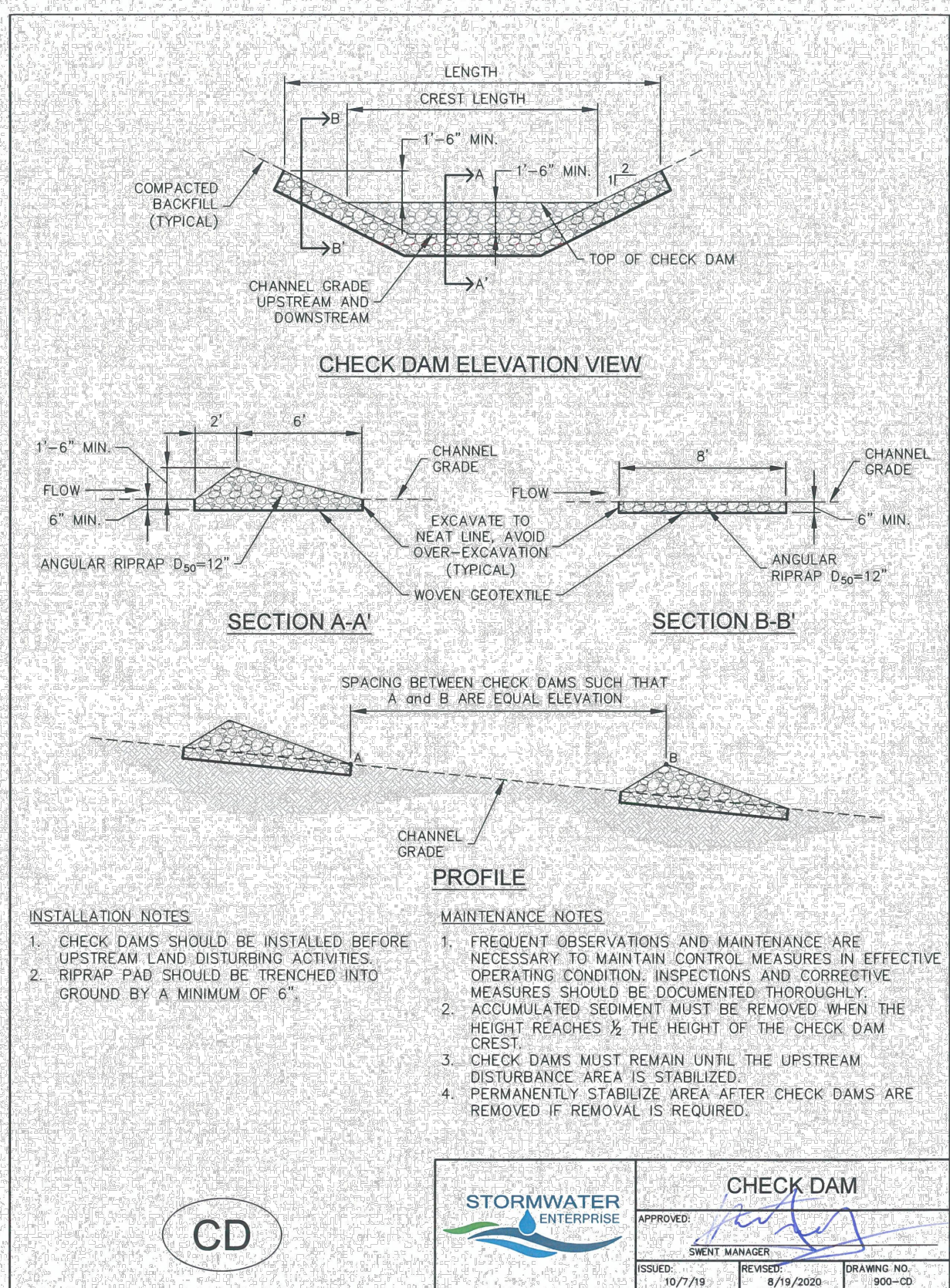


City of Colorado Springs Stormwater Enterprise CD-i Construction Control Measures December 2020

CD Check Dam

- 1.0 DESCRIPTION**
 - Check dams are small temporary rock dams constructed across a swale or drainage ditch.
- 2.0 PURPOSE**
 - Used to slow down the velocity of concentrated flow to limit erosion and to promote sedimentation.
 - Placed in areas of concentrated flow, such as a ditch or swale.
- 3.0 IMPLEMENTATION**
 - Place check dams at regular intervals perpendicular to the direction of flow.
 - Use check dams on mild or moderately steep slopes.
 - Install wide enough check dams to reach from bank to bank of the ditch or swale.
 - In general, the maximum spacing between check dams should be such that the toe of the upstream check dam is at the same elevation as the top of the downstream check dam.
 - During installation, place rock mechanically or by hand.
- 4.0 TIMING**
 - Install prior to land disturbing activities.
 - Remove after surrounding area has been permanently stabilized, or immediately prior to installation of a non-erodible lining. Permanently stabilize bare areas caused by check dams after removal.
- 5.0 MAINTENANCE**
 - Remove and properly dispose of sediment when it has accumulated to 1/2 of the height of the check dam crest.
 - Replace missing rocks causing voids in the check dam.
 - Inspect for erosion along the ends of check dams and repair when necessary.

City of Colorado Springs Stormwater Enterprise CD-1 Construction Control Measures December 2020



- INSTALLATION NOTES**
1. CHECK DAMS SHOULD BE INSTALLED BEFORE UPSTREAM LAND DISTURBING ACTIVITIES.
 2. RIPRAP PAD SHOULD BE TRENCHED INTO GROUND BY A MINIMUM OF 6".
- 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 1/2 THE HEIGHT OF THE CHECK DAM CREST.
 3. CHECK DAMS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
 4. PERMANENTLY STABILIZE AREA AFTER CHECK DAMS ARE REMOVED IF REMOVAL IS REQUIRED.

CD STORMWATER ENTERPRISE CHECK DAM APPROVED: [Signature] ISSUED: 05/17/15 REVISED: 8/29/2020 DRAWING NO.: 000-00

CONCRETE WASHOUT AREA

CWA



City of Colorado Springs Stormwater Enterprise CWA-i Construction Control Measures December 2020

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DESIGNED BY: KRK
DRAWN BY: DPM
CHECKED BY: KRK
DATE: 04/16/2024

UDON SOUTH
GRADING AND EROSION CONTROL PLANS
EL PASO COUNTY, COLORADO
DETAILS



PROJECT NO. 196020003
SHEET C7.0

NO.	REVISION	BY	DATE	APPR

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CWA
Concrete Washout Area

1.0 DESCRIPTION

- Concrete washout areas consist of either an excavated pit or a prefabricated haul-away container designed to contain concrete and concrete waste water.

2.0 PURPOSE

- Used to contain concrete and concrete waste water when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery.
- Concrete washout areas consolidate solids for easier disposal and prevent runoff of concrete waste water, which is alkaline and contains high levels of chromium.

3.0 IMPLEMENTATION

- Locate at least 50 feet away from State Waters, measured horizontally. Unlined concrete washout areas must be located at least 400 feet away from State Waters, and at least 1000 feet away from wells or drinking water sources.
- Do not locate in areas where shallow groundwater may be present, such as near natural drainages, springs, or wetlands.
- Do not place in areas subject to run-on.
- Label areas with appropriate signage.
- The addition of solvents, flocculents, or acid to wash water is prohibited.


4.0 TIMING

- Install prior to concrete activities.
- Remove after concrete activities have concluded.

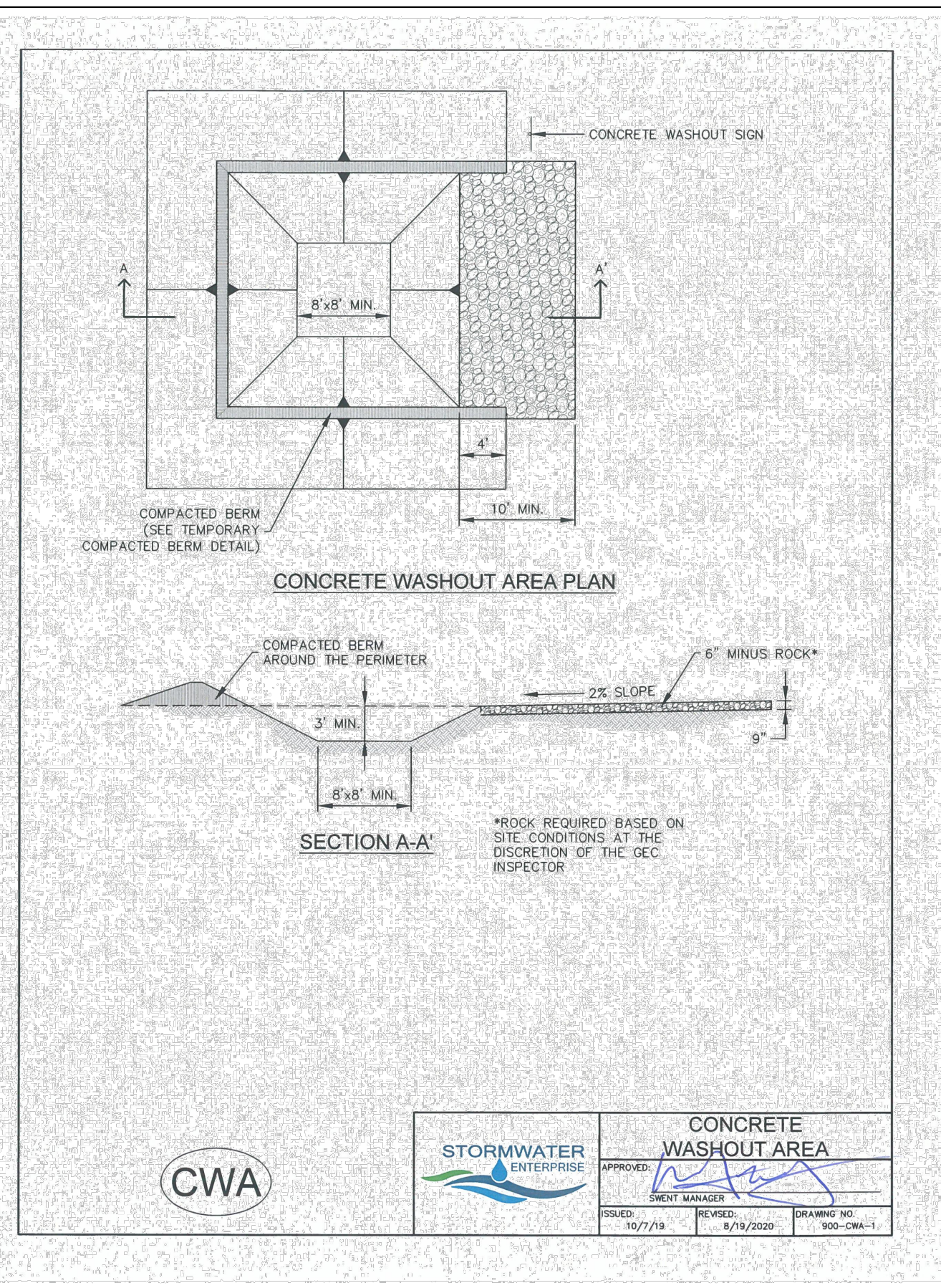
5.0 MAINTENANCE

- Clean out facilities once they are 2/3 full, or construct new facilities for additional capacity.
- Concrete waste must be permanently disposed of off-site in an appropriate manner.

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Construction Control Measures
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INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CONCRETE WASHOUT AREA
 - LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
- AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
- THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
- CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
- BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
- CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
- SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
- USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 3/4 THE HEIGHT OF THE CONCRETE WASH AREA.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.


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Construction Control Measures
December 2020

CULVERT INLET PROTECTION

CIP



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Stormwater Enterprise



Construction Control Measures
December 2020

CIP
Culvert Inlet Protection

1.0 DESCRIPTION

- Culvert inlet protection consists of a permeable sediment barrier installed upstream of a flared end section entrance to a culvert or storm sewer.

2.0 PURPOSE

- Used to prevent sediment and debris from entering a culvert or storm drainage system prior to permanent stabilization of the contributing disturbed area.
- Culvert inlet protection slows down runoff velocity to filter runoff and to promote sedimentation prior to entry into a culvert or storm drainage system.

3.0 IMPLEMENTATION

- Install culvert inlet protection at flared end section inlets to culverts and storm sewers that are operable and receiving runoff from disturbed areas during construction.
- Culvert inlet protection is not a stand alone control measure and should be used in conjunction with other upgradient control measures. Culvert inlet protection with a contributing drainage area including of one acre or more of disturbed area must be part of a treatment train.


4.0 TIMING

- Install prior to land disturbing activities, or immediately after pipe installation.
- Remove and properly dispose of culvert inlet protection after the contributing drainage area has been permanently stabilized.

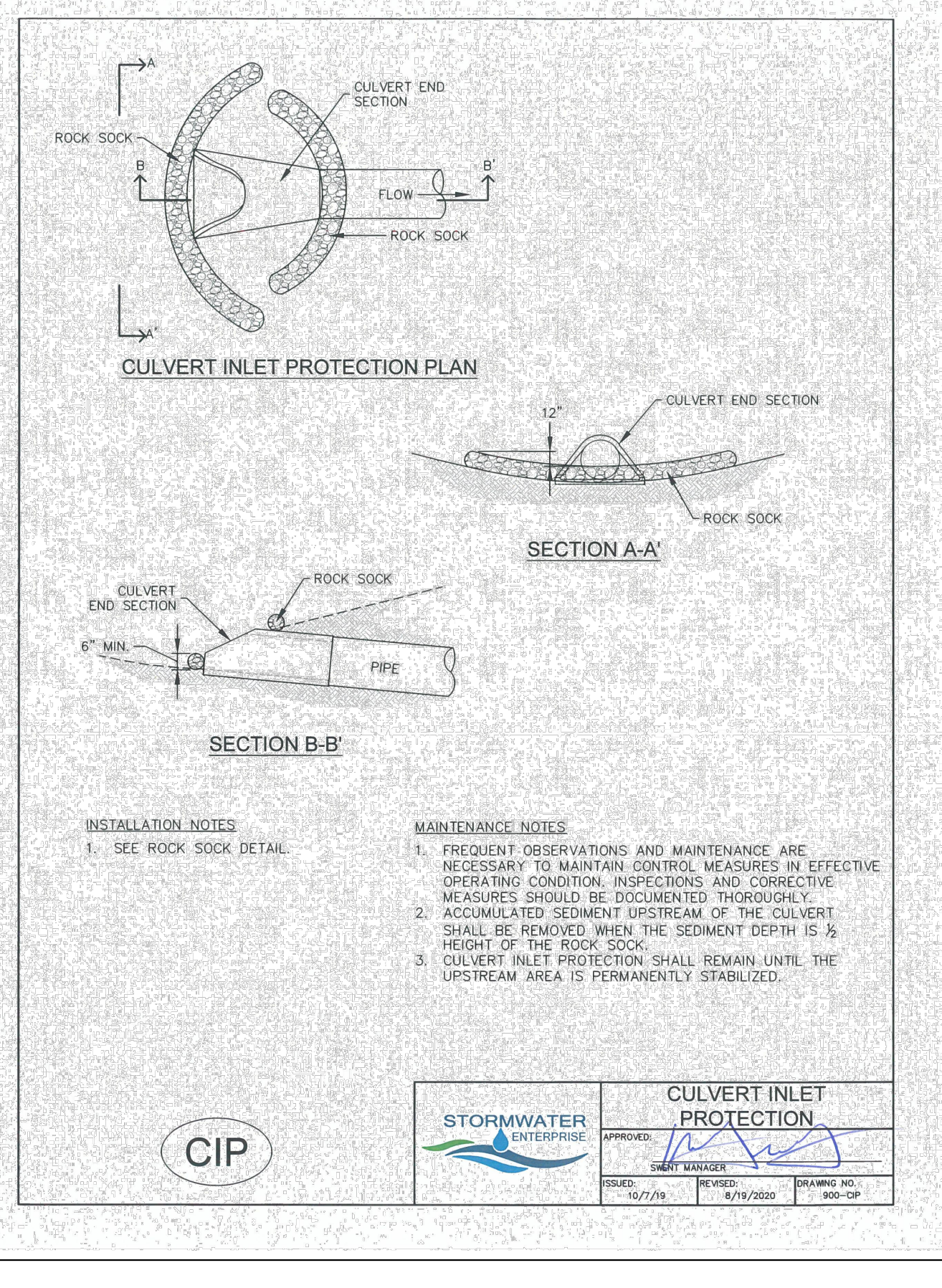
5.0 MAINTENANCE

- Remove and properly dispose of sediment when it has accumulated to 1/2 of the height of the rock sock.
- Inspect for displaced rock socks that are no longer protecting the inlet.

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PORTABLE TOILET

PT



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Construction Control Measures
December 2020

PT
Portable Toilet

1.0 DESCRIPTION

- The portable toilet detail provides requirements for portable toilet use on construction sites.

2.0 PURPOSE

- Used to minimize the risk of pollutant migration to State Waters.

3.0 IMPLEMENTATION

- Place portable toilet a minimum of 10 feet from the back of curb or on a trailer for road projects or sites that are mostly paved.
- Anchor portable toilet to the ground, at a minimum of two opposing corners (on a diagonal) using U-shaped rebar stakes.


4.0 TIMING

- Install as needed.
- Remove prior to the end of construction. Permanently stabilize any disturbed areas associated with the installation, maintenance, and/or removal of the toilets.



5.0 MAINTENANCE

- Portable toilets shall be serviced at the necessary intervals to eliminate the possibility of overflow.

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Construction Control Measures
December 2020

 <p style="font-size: 8px;">2024 KIMLEY-HORN AND ASSOCIATES, INC. 2 North Nevada Avenue, Suite 900 Colorado Springs, Colorado 80903 (719) 453-0180</p>	<p style="font-size: 8px;">DESIGNED BY: KRK DRAWN BY: DPM CHECKED BY: KRK DATE: 04/16/2024</p>
<p style="font-size: 8px;">UDON SOUTH GRADING AND EROSION CONTROL PLANS EL PASO COUNTY, COLORADO DETAILS</p>	 <p style="font-size: 8px;">PROJECT NO. 196020003</p> <p style="font-size: 8px;">SHEET C8.0</p>
<p style="font-size: 8px;">NO.</p>	<p style="font-size: 8px;">REVISION</p>
<p style="font-size: 8px;">BY</p>	<p style="font-size: 8px;">DATE</p>
<p style="font-size: 8px;">APPR</p>	


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SEDIMENT CONTROL LOG

SCL




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Stormwater Enterprise



Construction Control Measures
December 2020

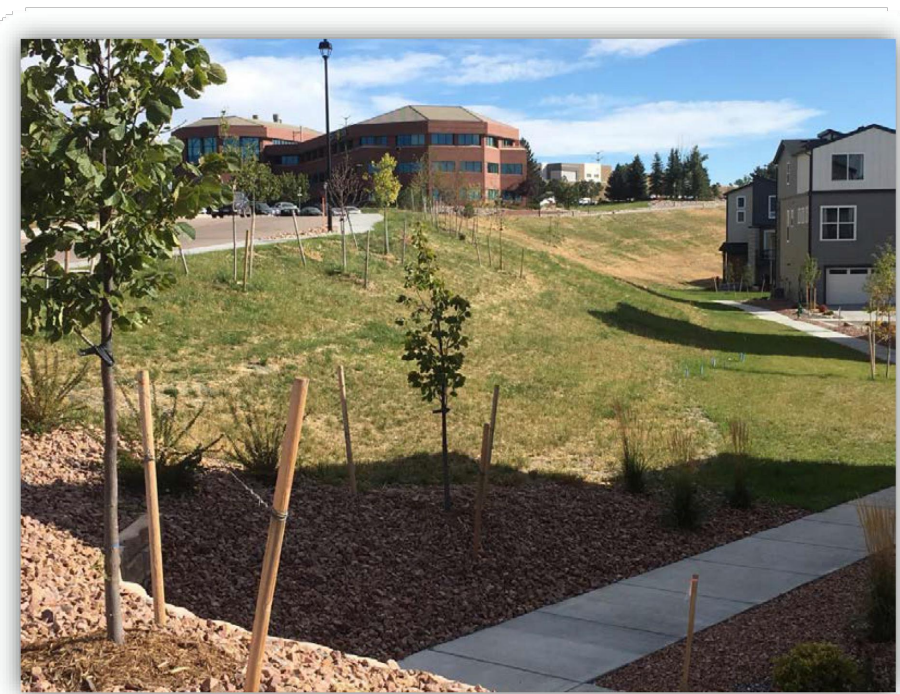
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Construction Control Measures
December 2020

SEEDING & MULCHING

SM




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December 2020

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Construction Control Measures
December 2020

SEEDING & MULCHING

SM

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

SOIL PREPARATION:

- IN AREAS TO BE SEED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE 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.
- AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
- 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.
- 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:

- 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.
- SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
- SEED DEPTH MUST BE 1/2 TO 3/4 INCHES WHEN DRILL-SEEDED IS USED.
- 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.

MULCHING:


- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
- 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 SEEDING 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.

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Construction Control Measures
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Construction Control Measures
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SILT FENCE

SF



City of Colorado Springs
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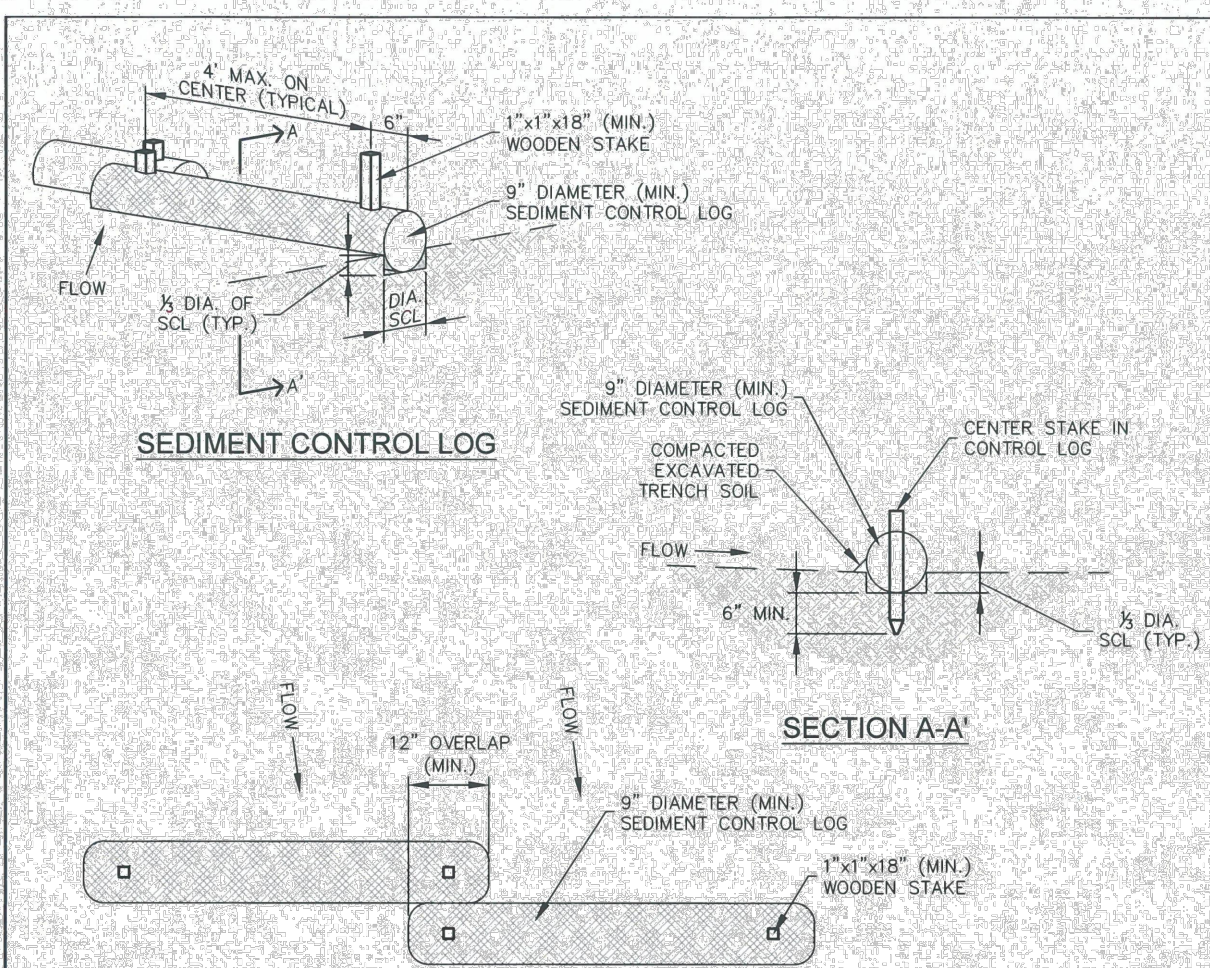
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SEDIMENT CONTROL LOG JOINTS




INSTALLATION NOTES:

- ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO 1/2 OF THE HEIGHT OF THE LOG.
- LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
- PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELISOR OR COCONUT FIBER, AND SHALL BE FREE FROM ANY NOXIOUS WEED SEEDS OR DEFECTS, INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.


MAINTENANCE NOTES:

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.

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SEEDING AND MULCHING


SM

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Construction Control Measures
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SEDIMENT CONTROL LOG


SCL

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SEDIMENT CONTROL LOG

SCL

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UDON SOUTH
GRADING AND EROSION CONTROL PLANS
EL PASO COUNTY, COLORADO
DETAILS

Kimley»Horn
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DESIGNED BY: KRK
DRAWN BY: DPM
CHECKED BY: KRK
DATE: 04/16/2024

PROJECT NO.
196020003
SHEET
C9.0

DATE: _____ BY: _____
REVISION: _____ NO. _____

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.

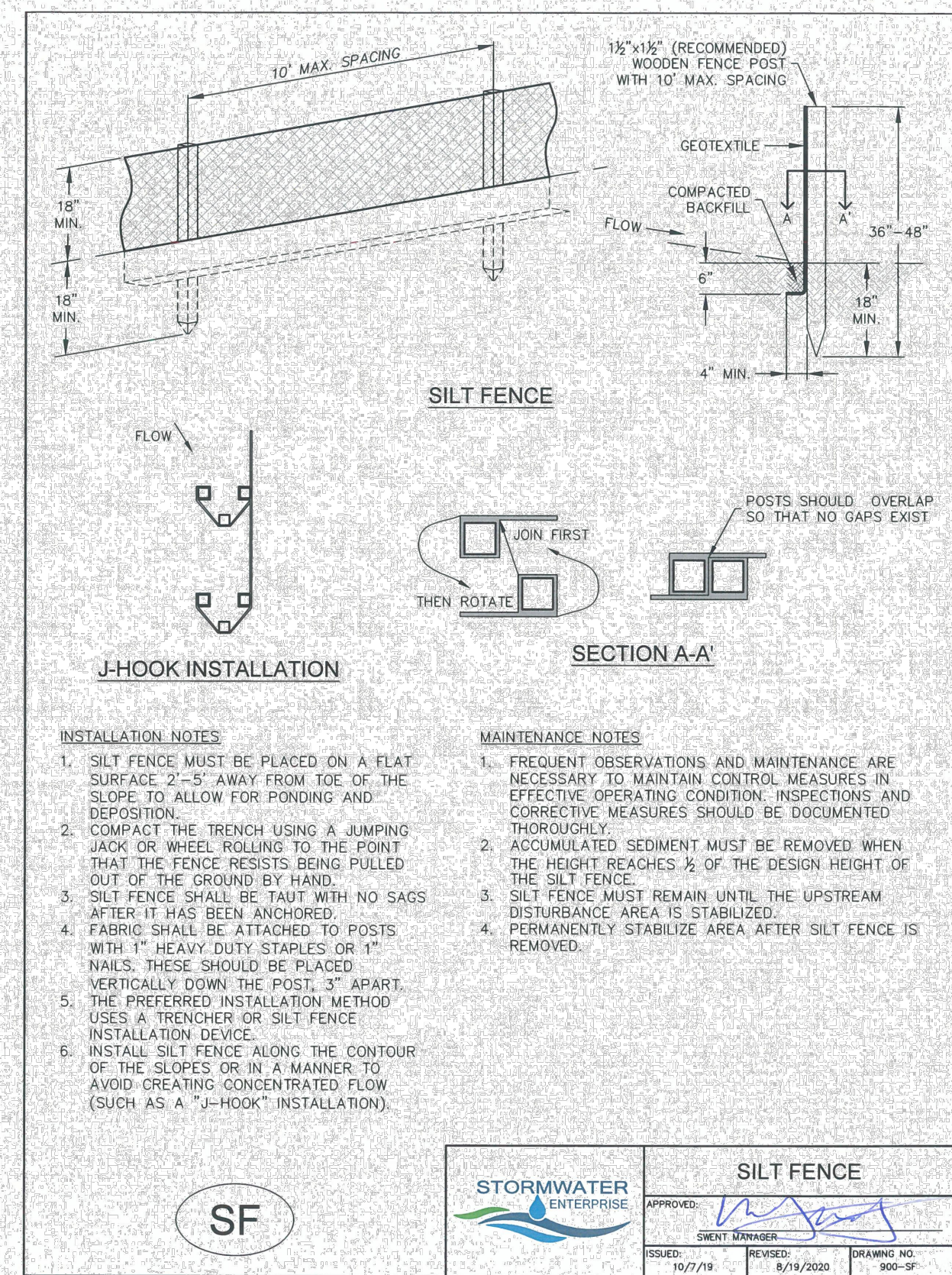
5.0 MAINTENANCE

- 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.

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Construction Control Measures
December 2020



STORMWATER ENTERPRISE

SILT FENCE

APPROVED: [Signature]

SHEET NUMBER: [Blank]

DATE: 10/7/19

REVISION: 8/18/2020

DRAWING NO: 800-SF

STOCKPILE PROTECTION

SP



City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020

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.

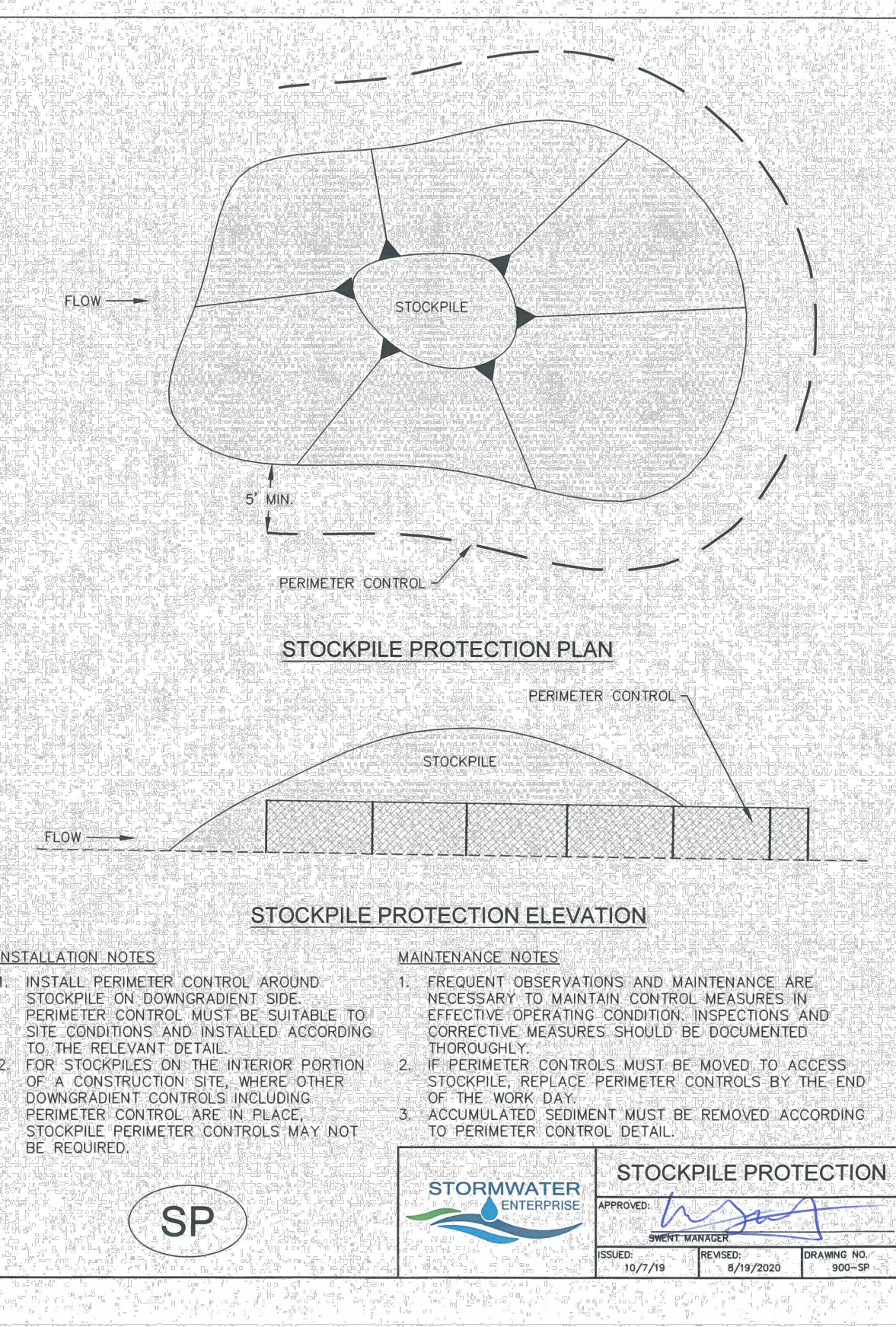
5.0 MAINTENANCE

- 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



STORMWATER ENTERPRISE

STOCKPILE PROTECTION

APPROVED: [Signature]

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DATE: 10/7/19

REVISION: 8/18/2020

DRAWING NO: 800-SP

SURFACE ROUGHENING

SR



City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020

SR
Surface Roughening

1.0 DESCRIPTION

- Surface roughening is a practice where the soil surface is roughened by the creation of grooves and depressions that run parallel to the contour of the land.

2.0 PURPOSE

- Used to create variations in the soil surface that slow down the velocity of runoff, increase infiltration, reduce erosion, and trap soil.
- May be used to help establish vegetative cover by reducing runoff velocity and giving seed an opportunity to take hold.

3.0 IMPLEMENTATION

- Roughen soil in areas flatter than 3:1.
- Surface roughening may be completed by furrowing, scarifying, ripping, or disking soil.
- Grooves must be installed along contours to avoid concentrating flow.
- Do not use in areas with extremely sandy or rocky soils.

4.0 TIMING

- Install after overlot grading activities when area is in an interim condition or at final grade.
- Remove prior to permanent stabilization during soil preparation.

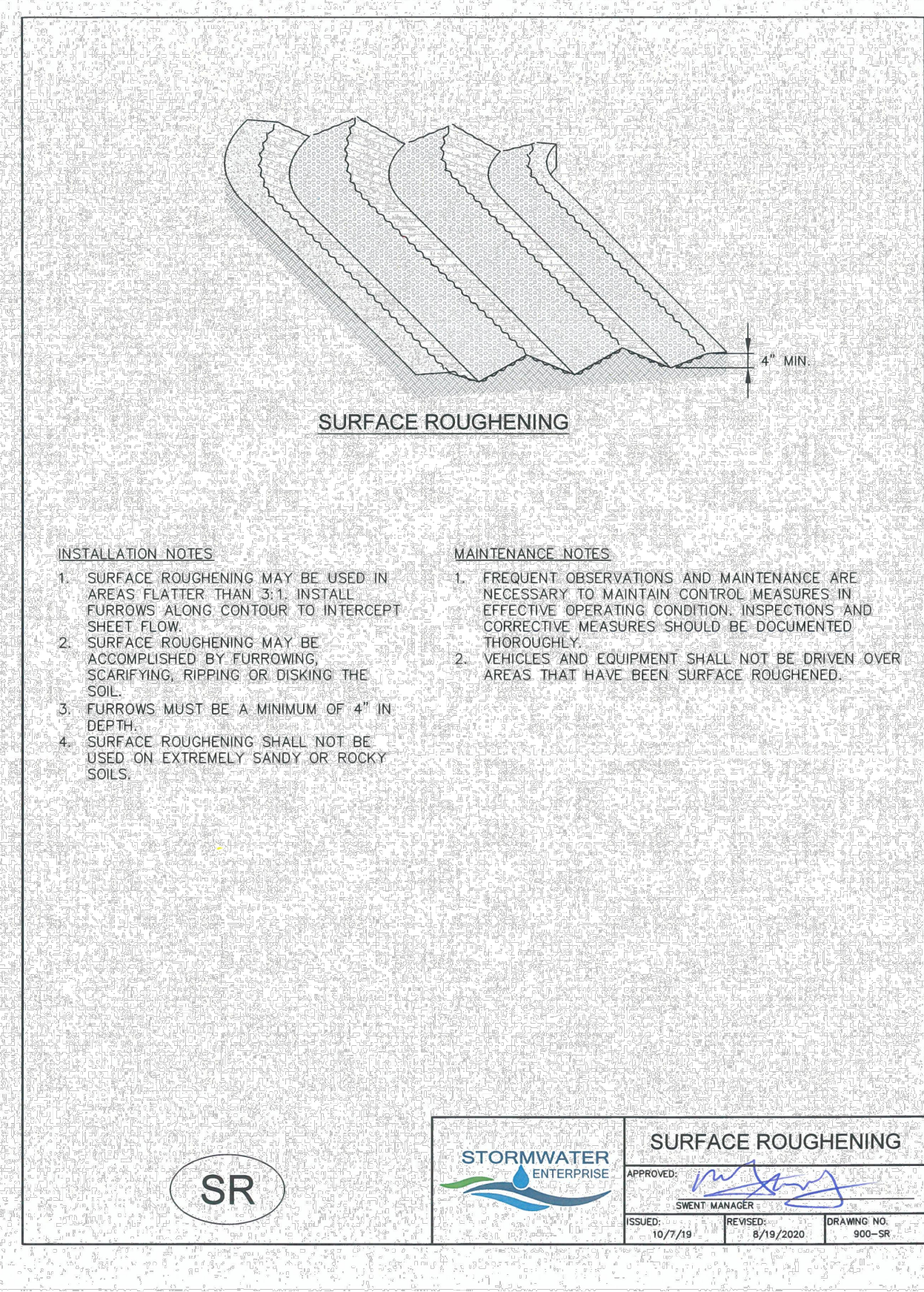
5.0 MAINTENANCE

- Inspect roughened areas for signs of erosion. Repeat surface roughening as needed.
- Do not allow vehicles to drive over surface roughened areas.

City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020



STORMWATER ENTERPRISE

SURFACE ROUGHENING

APPROVED: [Signature]

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DATE: 10/7/19

REVISION: 8/18/2020

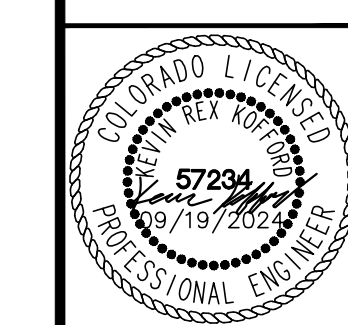
DRAWING NO: 800-SR

NO.	REVISION	BY	DATE	APPR

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DESIGNED BY: KRK
DRAWN BY: DPM
CHECKED BY: KRK
DATE: 04/16/2024

UDON SOUTH
GRADING AND EROSION CONTROL PLANS
EL PASO COUNTY, COLORADO
DETAILS



PROJECT NO.
196020003

SHEET
C10.0

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TEMPORARY SEDIMENT BASIN

TSB



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Stormwater Enterprise



Construction Control Measures
December 2020

TSB
Temporary Sediment Basin

1.0 DESCRIPTION

- Temporary sediment basins are small impoundments of water with a small outlet structure built on a construction site.

2.0 PURPOSE

- Used to capture and slowly release runoff prior to discharge from a construction site to allow sediment to settle out.

3.0 IMPLEMENTATION

- Temporary sediment basins for drainage areas larger than 15 acres must be individually designed by engineer.
- Erosion and other sediment controls should be implemented upstream of temporary sediment basins.

4.0 TIMING

- Install prior to upstream land disturbance.
- Remove temporary sediment basin after upstream area has been stabilized. Permanently stabilize area after basin has been removed.

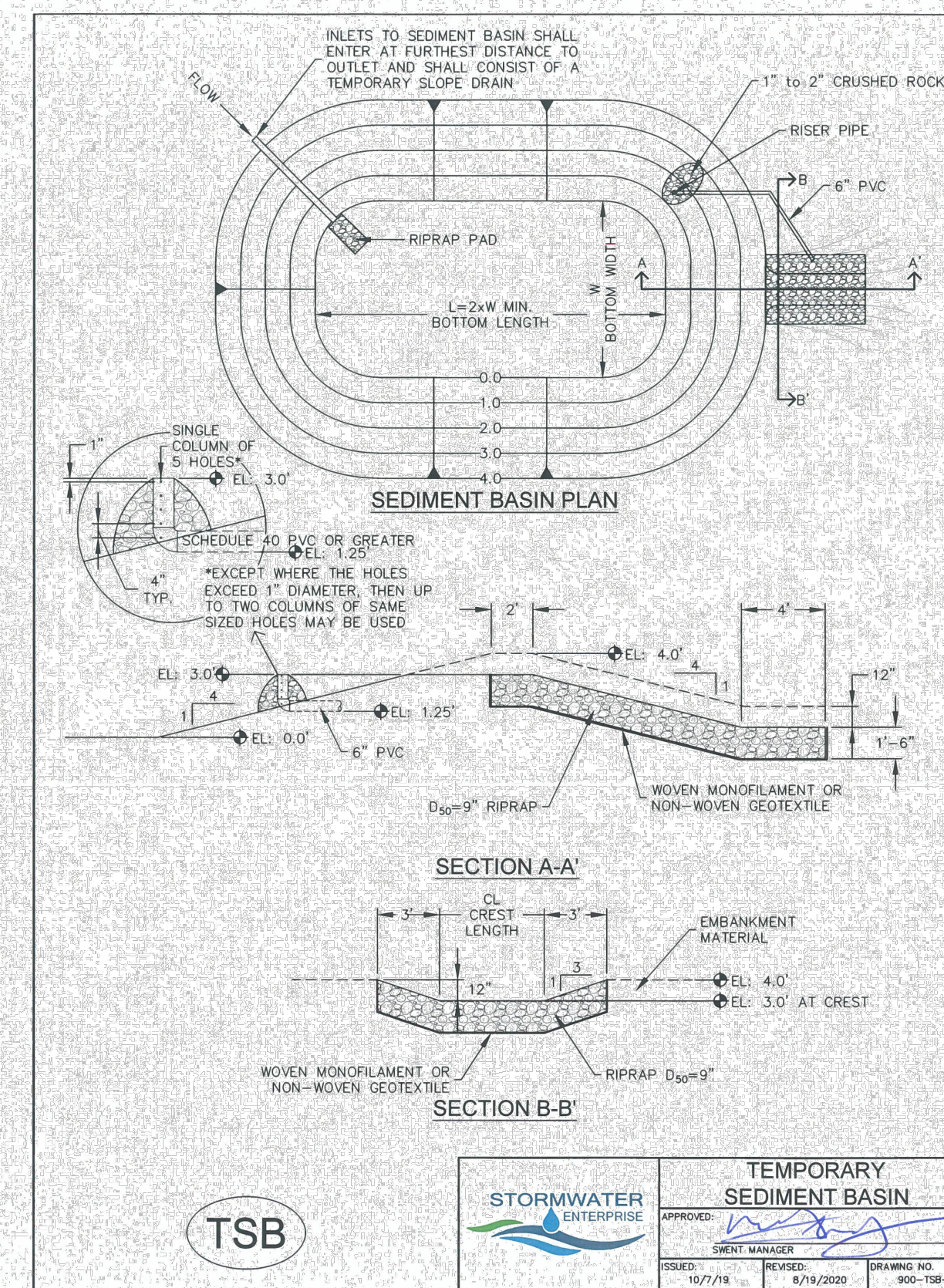
5.0 MAINTENANCE

- Remove sediment from basin as needed to maintain the effectiveness of the temporary sediment basin. This is typically when sediment depth reaches one foot.
- Inspect sediment basin embankments for stability and seepage.
- Inspect the inlet and outlet of the basin, repair damage, and remove debris.

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Construction Control Measures
December 2020



UPSTREAM DRAINAGE AREA (ROUNDED TO NEAREST ACRE), (AC)	Basin Bottom Width (W), (FT)	Spillway Crest Length (CL), (FT)	Hole Diameter (HD), (IN)
1	12 $\frac{1}{2}$	2	1 $\frac{1}{2}$
2	17	3	2
3	23	4	3
4	28	5	4
5	33	6	5
6	38	7	6
7	43	8	7 $\frac{1}{2}$
8	47 $\frac{1}{2}$	9	8 $\frac{1}{2}$
9	51	10	9 $\frac{1}{2}$
10	55	11	10 $\frac{1}{2}$
11	59	12	11 $\frac{1}{2}$
12	63	13	12 $\frac{1}{2}$
13	67	14	13 $\frac{1}{2}$
14	70 $\frac{1}{2}$	15	14 $\frac{1}{2}$
15	73 $\frac{1}{2}$	16	15 $\frac{1}{2}$

INSTALLATION NOTES:

- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE No. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698.
- PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES. DESIGN CALCULATIONS MUST BE APPROVED PRIOR TO IMPLEMENTATION.

MAINTENANCE NOTES:

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

TSB

APPROVED:	DESIGNED:
SHEET MANAGER	DRAWING NO.
15/7/18	8/18/2020
	900-TSB-2

VEHICLE TRACKING CONTROL

VTC



City of Colorado Springs
Stormwater Enterprise



Construction Control Measures
December 2020

VTC
Vehicle Tracking Control

1.0 DESCRIPTION

- Vehicle tracking control consists of a pad of coarse stone aggregate placed on a geotextile filter fabric.

2.0 PURPOSE

- Used to reduce the tracking of sediment onto roadways by construction vehicles.
- As vehicles drive over the VTC device, mud and sediment is removed from the tires.

3.0 IMPLEMENTATION

- Locate at construction entrance/exit.
- Organize site to ensure that all vehicles use the vehicle tracking control device.
- Where possible, grade VTC device to drain to construction site rather than to street.
- Proprietary VTC devices may be used if approved as an alternative Construction Control Measure.

4.0 TIMING

- Install prior to land disturbing activities.
- Remove when the potential for sediment migration onto adjacent roadways no longer exists (typically after site has been stabilized). Permanently stabilized area after vehicle tracking control is removed.

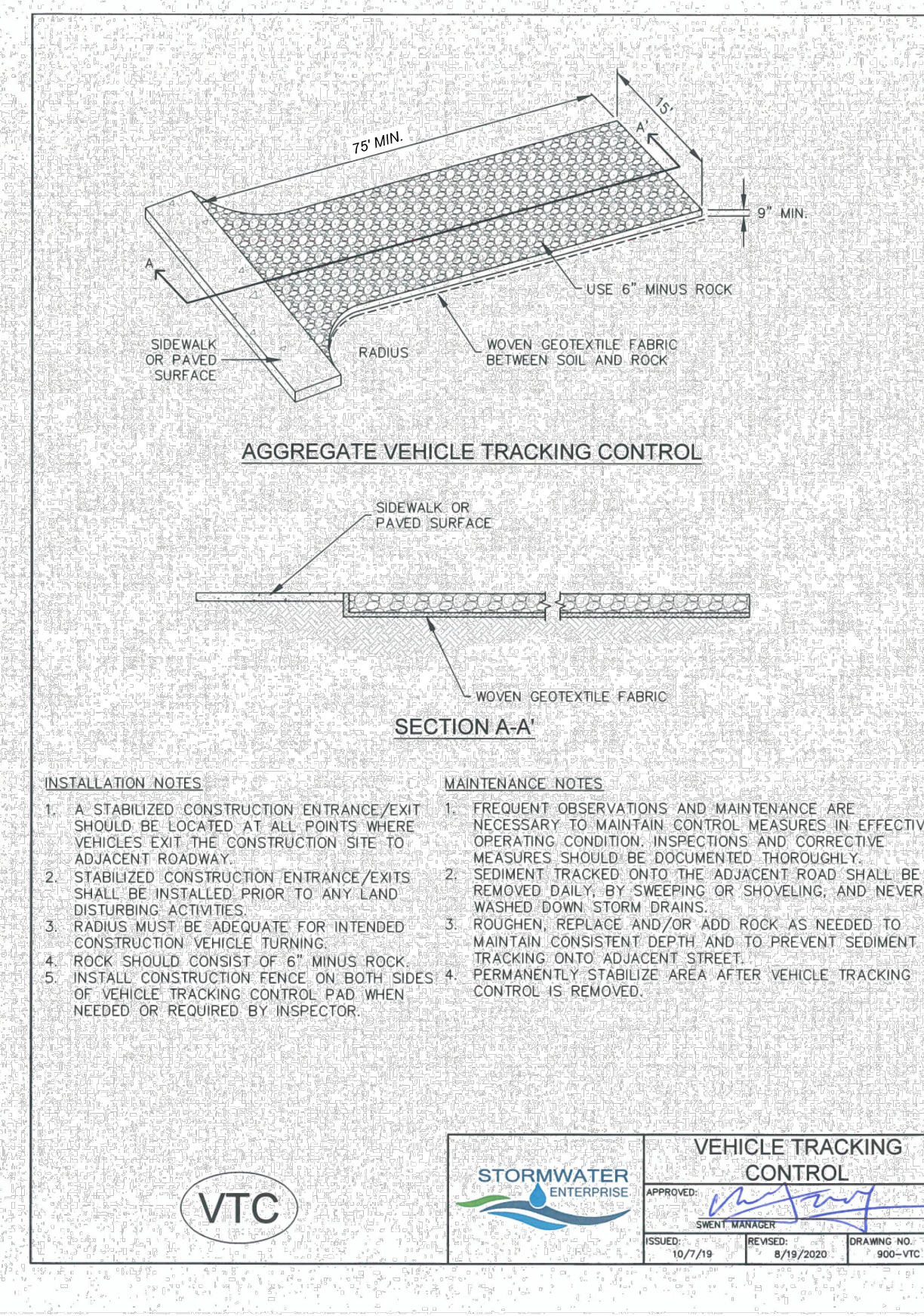
5.0 MAINTENANCE

- Roughen, replace, and/or add rock as needed to maintain a consistent depth and to prevent sediment tracking onto adjacent street.
- Sediment tracked onto the adjacent road shall be removed daily, by sweeping or shoveling, and never washed down storm drains.

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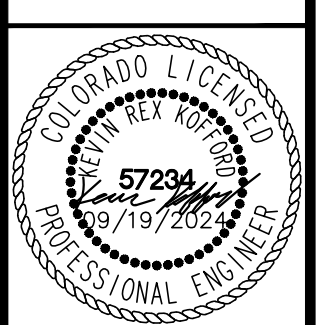


Construction Control Measures
December 2020



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UDON SOUTH
GRADING AND EROSION CONTROL PLANS
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DETAILS



PROJECT NO.
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