

# ROLLING HILLS BOOSTER PUMP STATION STORMWATER MANAGEMENT PLAN (THE HILLS AT LORSON RANCH FILING NO. 1) PCD FILE NO. PPR-21-075

**APPLICANT:**

Name: Lucas Hale  
Company: Widefield Water and Sanitation District  
Address: 8490 Fontaine Boulevard  
Colorado Springs, CO 80925

**PREPARED BY**

Name: Rich Gallegos, P.E., CFM  
Company: RESPEC  
Address: 121 S. Tejon St., Suite 1110  
Colorado Springs, CO 80903

**CONTRACTOR:**

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

**QUALIFIED STORMWATER MANAGER:**

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

JUNE 2022





# TABLE OF CONTENTS

<b>1.0 SITE DESCRIPTION</b>	<b>1</b>
1.1 General Property Description	1
1.2 Description of Construction Activities	1
1.3 Phasing Plan	1
1.4 Proposed Sequence for Major Activities	1
1.5 Site Areas	2
1.6 Soil Erosion Potential & Drainage Patterns	2
1.7 Existing Vegetation	3
<b>2.0 STORMWATER MANAGEMENT</b>	<b>4</b>
2.1 Potential Pollution Sources	4
2.2 Pollutant Prevention Control Measures	4
2.3 Control Measure Selection	5
2.4 Material Handling and Spill Prevention	5
2.5 Non-Stormwater Discharges	6
2.6 Receiving Waters	6
2.7 Stream Crossings	6
2.8 Final Stabilization	7
2.9 Inspection and Maintenance	7
2.10 SWMP Revisions	8

## APPENDIX

APPENDIX A – MAPS & PLANS

APPENDIX B – GENERAL PERMIT APPLICATION

APPENDIX C – CONTRACTOR SEQUENCE OF ACTIVITIES

APPENDIX D – OPERATION AND MAINTENANCE INSPECTION RECORD

APPENDIX E – COMPLETED OPERATION AND MAINTENANCE INSPECTION RECORDS

APPENDIX F – STANDARD CONTROL MEASURES/BMP DETAILS



# 1.0 SITE DESCRIPTION

## 1.1 GENERAL PROPERTY DESCRIPTION

The Rolling Hills Booster Pump Station is a 0.707-acre site located within the larger Lorson Ranch Master Planned Community east of Marksheffel Road and Fontaine Boulevard; see Vicinity Map in Appendix A. More specifically, the site is located northeast of the intersection of Grayling Drive and Yellowthroat Terrace.

## 1.2 DESCRIPTION OF CONSTRUCTION ACTIVITIES

Construction at the site will consist of a building to house a potable water pump station, gravel drive around the building, gravel parking, a landscape block retaining wall, and landscaping. The Contractor will install erosion control measures (Best Management Practices) before clearing and grubbing activities. Grading activities will then commence to prepare the site to install water mains and water and wastewater service lines. After constructing the pump house structure, final stabilization measures will include compacted gravel drives and landscaping. As required, erosion control measures will be removed when the site is stabilized.

## 1.3 PHASING PLAN

The 0.707-acre site is small enough that a phasing plan is not warranted.

## 1.4 PROPOSED SEQUENCE FOR MAJOR ACTIVITIES

The Contractor selected for the project will determine the final sequencing of activities and overall schedule. The schedule will depend on the time of year construction occurs and supply chain delivery timeframes. The Contractor shall provide the information in Appendix C of this report.

A reasonable, general timeframe for a project of this size and complexity is as follows:

Description	Timeframe
Installation of Erosion Control BMPs	2 Days
Contractor Mobilization	2 Days
Construction Staking	2 Days
Rough Grading	2 Weeks
Construction of Site Improvements	6 Months
Removal of Erosion Control Measures	1 Week

A total of 7 months is estimated for construction, including final stabilization. Work will begin in the Spring of 2022 and finish in the Fall of 2022.



## 1.5 SITE AREAS

Construction activities will occur on the entire 0.707-acre site.

Total computed earthwork volumes for the project are estimated as follows:

Description	Volume
Cut	215 cubic yards
Fill (20% Compaction)	1,190 cubic yards
<b>Net</b>	<b>975 cubic yards (Export)</b>

A 20% compaction factor is used to compute the total earthwork quantities for fill areas.

## 1.6 SOIL EROSION POTENTIAL & DRAINAGE PATTERNS

### Soil Data

The National Resources Conservation Service (NRCS) Soil Survey has been and Nelson-Tassel fine sandy loams, 3 to 18 percent slopes exist at the site. Based upon the data available from the NRCS, the soil type has a Whole Soil K Factor of 0.24. The erosion K factor indicates sheet flow susceptibility and rill erosion from stormwater runoff. K values range from 0.02 to 0.69, where the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

The soil also has a hydrologic rating of B, which estimates the overall runoff potential. Soils are assigned one of four groups (A, B, C, or D), with group A soils having the highest infiltration rate (lowest runoff potential) and group D soils having the lowest infiltration rate (highest runoff potential).

### Drainage Plans

Previous studies included the site as part of two County approved Drainage Reports:

- *Final Drainage Plan (SSF 21-010) The Hills at Lorson Ranch Filing 1* (Lorson Ranch FDR), by Core Engineering Group, revised March 23, 2021, and approved on August 24, 2021, by the County.
- *Preliminary Drainage Plan (PUDSP 21-002) Skyline at Lorson Ranch*, by Core Engineering Group, revised May 2021 and approved on February 1, 2022, by the County.

Each report provides an existing and proposed condition analysis. The reports also conform to the Drainage Basin Planning Study for Jimmy Camp Creek. Based upon the approval dates listed, the *Preliminary Drainage Plan (PUDSP 21-002) Skyline at Lorson Ranch* has been used as the guiding document for this analysis.

Additionally, RESPEC has prepared the following site-specific drainage report:

- *Rolling Hills Booster Pump Station Small Subdivision Drainage Report (The Hills at Lorson Ranch Filing No. 1)*, PDC File Number PPR-21-075, by RESPEC, February 2022.



#### Site-Specific Drainage Patterns

The site drains to the south toward Grayling Drive with average slopes of 2%-3%. Flows entering Grayling Drive will be collected within a public storm sewer system and a public water quality/full spectrum detention basin.

The site is located in an Unshaded Zone X (areas outside of the 500-year floodplain) flood hazard area per the Federal Emergency Management Agency's Flood Insurance Rate Map panel 08041C0976G, effective date December 7, 2018.

### **1.7 EXISTING VEGETATION**

Existing vegetation consists primarily of native grasses and weeds with approximately 75% ground cover estimated from site photos/visits.

## **2.0 STORMWATER MANAGEMENT**

### **2.1 POTENTIAL POLLUTION SOURCES**

The location and type of potential pollution sources for this project were evaluated and summarized as follows:

- Clearing and grubbing areas with exposed soils
- Temporary stockpile areas within the limits of the site
- Vehicle tracking of soils onto public roadways
- Management of contaminated soils
- Loading and unloading operations
- Outdoor storage of materials
- Vehicle and equipment maintenance and fueling
- Significant dust-generating processes
- Routine maintenance activities utilizing fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.
- On-site waste management, including dumpsters
- Concrete truck washouts during construction
- Equipment washing
- Non-industrial waste such as trash and portable toilets during construction

### **2.2 POLLUTANT PREVENTION CONTROL MEASURES**

The following are standard practices to mitigate potential pollutants from entering stormwater runoff:

- The Contractor shall control wind erosion by spraying site roadways and temporarily stabilizing material stockpiles. In addition, a tarp shall cover each dump truck hauling material from the site.
- Snow removal and stockpiling will be considered before placement at the site. Snow stockpiles must be kept away from any stormwater conveyance system (i.e., inlets, ponds, outfall locations, roadway surfaces, etc.)
- The Contractor must implement tracking control to prevent unnecessary soil from entering paved surfaces. The measures to be used will be preventing equipment in the construction area from moving offsite. A vehicle tracking pad will be required according to El Paso County specifications. In addition, brooms and shovels may be needed for tracking control.
- Equipment fueling and maintenance shall be performed in a designated fueling area established to contain any spill resulting from fueling, maintenance, or repair of equipment. Contractors will be responsible for containment, clean-up, and disposal of any leak or spill and any costs associated with the clean-up and removal per applicable local, County, and state regulations.
- The Contractor or Operator shall ensure all packages and containers are intact and place storage containers, drums, and bags away from direct traffic routes to prevent accidental spills.



- Bulk storage, 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment or equivalent protection to contain spills and prevent spilled material from entering state waters.
- Empty drums shall be covered to prevent the collection of precipitation.
- Containers shall be stored on pallets to prevent corrosion of containers, which can result when containers come in contact with moisture on the ground.
- All construction trash and debris will be deposited in an on-site dumpster. All refuse dumpsters and receptacles shall be equipped with functional lids to prevent rain and snow from entering. Lids must be closed when dumpsters and containers are not actively in use.
- Provide regular removal of construction trash and debris.
- The construction crew will use portable restroom facilities during the construction phase.

The Contractor is not limited to these measures, which may require adjusting the control measures as the project progresses and implementing further controls as prudence and good judgment deem necessary.

### **2.3 CONTROL MEASURE SELECTION**

The Contractor will implement structural and non-structural control measures to protect properties and public facilities from the adverse effects of erosion, sedimentation, and release of other pollutants due to construction activities. Erosion control measures will be installed in areas shown on the approved grading and erosion control plan. The Contractor shall utilize vehicle tracking control pads to minimize soil tracked onto roadways and inspect the streets to ensure sediment is not washed into the offsite storm sewer by runoff.

All disturbed areas will be reseeded with a proposed seed mix and watered to establish a mature stand. Soil compaction will be minimized where final stabilization utilizes vegetative cover. All disturbed areas will be protected by silt fences, inlet protection, and temporary sediment traps until the site is re-vegetated. As required, control measures will be modified and maintained regularly to adapt to changing site conditions and adequately manage potential stormwater pollutants. The Contractor must review BMPs and pollutant sources regularly.

### **2.4 MATERIAL HANDLING AND SPILL PREVENTION**

The most probable sources of non-stormwater pollution are daily maintenance operations. If mobile fuel trucks are used to service equipment, absorbent materials and containers for the storage of used absorbent material will be nearby. The Contractor shall place debris, overburden, soil stockpiles, and waste materials away from runoff areas. The spill prevention plan provided by the Contractor shall include practices to reduce the potential for pollution in stormwater runoff. Included in the spill prevention plan shall be:



- Notification procedures to be used in the event of an accident
- Instructions for clean-up procedures and identification of a spill kit location
- Provisions for adsorbents to be made available for use in fuel areas and for containers to be available for used adsorbents
- Methods for adequately washing out concrete truck chutes and other equipment in a manner and location so that the materials and wash water cannot discharge from the site.

The project does not require a dedicated batch plant at the site.

## 2.5 NON-STORMWATER DISCHARGES

Non-stormwater discharges will be limited to potential excess irrigation flows. The design of site landscaping has been purposely designed to minimize the irrigation needs for the site.

Other potential non-stormwater discharges that are not anticipated include groundwater springs or construction dewatering operations. If dewatering is required, the Contractor shall obtain a Construction Dewatering Permit from the Colorado Department of Public Health and Environment.

This permit covers stormwater discharges from construction activities and does not include the following:

- Uncontaminated springs
- Concrete washout water
- Landscape irrigation return flow

This permit authorizes discharges resulting from emergency firefighting activities.

## 2.6 RECEIVING WATERS

The project site is in the Jimmy Camp Creek watershed, studied within the *Jimmy Camp Creek Drainage Basin Planning Study*, prepared by Kiowa Engineering Corporation, dated March 9, 2015. The East Fork of Jimmy Camp Creek is located approximately ¾-mile west of the project site.

Locally, the site will sheet flow to the Grayling Drive curb and gutter. The roadway drains to the southeast, where a 20' long sump inlet collects flows. A storm sewer within the Grayling Drive ROW directs flows to a regional full spectrum detention and water quality basin, located approximately 400' to the south.

## 2.7 STREAM CROSSINGS

No historic or proposed stream crosses the project area.



## 2.8 FINAL STABILIZATION

The Contractor shall install all soil erosion control measures for slopes, channels, ditches, or any disturbed land area within twenty-one (21) calendar days after final grading or final earth disturbance. For areas disturbed, soils should be mulched or revegetated within forty-five (45) days of disturbance. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented.

Vegetative cover density shall be a minimum of seventy percent (70%) of pre-disturbed levels to be considered stabilized.

The following seed mix and rates are for drill seeding and used for all seeded areas shown on the GEC Plan.

**El Paso County Conservation District Shotgun Mix**

Common Name (All Native)	Recommended Variety	Percent of Seed Mix	Non Irrigated PLS Rate Per Acre (Drilled)
Bluestem, Big	Kaw, Bison, Champ	20.0%	1.08
Gramma, Blue	Lovington, Hachita, Alma	10.0%	0.12
Green Needlegrass	Lodorm	10.0%	0.48
Wheatgrass, Western	Arriba, Barton	20.0%	1.60
Gramma, Sideoats	Vaughn, Butte, El Reno, Niner	10.0%	0.46
Switchgrass	Glackwell, Greenville	10.0%	0.20
Prairie Sandreed	Goshen, Pronghorn	10.0%	0.32
Yellow Indiangrass	Cheyenne, Holt, Llano	10.0%	0.51

Note: The above listed PLS rate per acre is for drilled application. If seeding is completed using broadcasting methods, the PLS rate shall be doubled.

The proposed on-site drainage channel will handle long-term stormwater quality management with rock check dams proposed to help prevent erosion and provide small amounts of detention. Additionally, the site will drain to a regional water quality and detention basin located to the southeast, which is designed to accommodate flows from the site. The regional basin will be constructed as a separate project.

This project does not rely on control measures owned or operated by another entity.

## 2.9 INSPECTION AND MAINTENANCE

A thorough inspection of the stormwater management system shall be performed every 14 days and within 24-hrs after any precipitation or snowmelt event that causes surface erosion. If any system deficiencies are noted, corrective actions must begin immediately. Documentation of inspection must be available if requested. Areas to be inspected for evidence of, or the potential for, pollutants leaving the construction



site boundaries, entering the stormwater drainage system, or discharging to state waters include:

- Construction site perimeter
- All disturbed areas
- Designated haul routes
- Material and waste storage areas exposed to precipitation
- Locations where stormwater has the potential to discharge offsite
- Locations where vehicles exit the site

In addition, implemented control measures shall be inspected to confirm they are in operational condition and are adequate to minimize pollutant discharges. These repairs may include, but are not limited to, the following:

- Repairing erosion of side slopes
- Cleaning silt fences whenever sediment has reached a depth of six (6) inches at the fence
- Repairing or replacing broken wooden parts or torn fabric on silt fences
- Removing any accumulated trash or debris

An Operation and Maintenance Inspection Record form is included in Appendix C. The Contractor must document the following items as part of the site inspections and kept within this report. Completed inspected records shall be kept in Appendix D of this SWMP and kept on-site.

- Inspection date
- Name(s), title(s), and signature(s) of personnel making inspection
- Weather conditions at the time of inspection
- Phase of construction at the time of inspection
- Estimated acreage of disturbance at the time of inspection
- Location(s) of discharges of sediment or other pollutants from the site
- Location(s) of control measures that need to be maintained
- Location(s) of control measures that fail to operate as designed or proved inadequate
- Location(s) where additional control measures are needed that were not in place at the time of inspection
- Description of the minimum inspection frequency utilized when conducting each inspection
- Deviations from the minimum inspection schedule
- Signed statement of compliance added to the report after corrective action has been implemented

30-day inspections must take place on this site where construction activity is complete, but the vegetative cover is still being established.

## **2.10 SWMP REVISIONS**

A copy (electronic or hardcopy) of this SWMP is to be retained on-site or on-site when construction activities occur at the site unless another location is approved by the Division. Records of the SWMP changes made that include the date and identification of the changes must be kept at the site within this report. The SWMP should be viewed as a “living document” throughout the project’s lifetime. This SWMP shall be



revised by informing the Engineer of deviations to the original plan. The Engineer will then update this report and all applicable drawings, forms, tables, etc., as deemed necessary.

Revisions to the SWMP are required when the following occurs:

- A change in design, construction, operation, or maintenance of the site requiring implementation of new or revised control measures
- The SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions
- Control measures identified in the SWMP are no longer necessary and are removed
- Corrective actions are taken on-site that result in a change to the SWMP

The provisions of the SWMP, as written and updated, must be implemented from the commencement of construction activity until final stabilization is complete.



# APPENDIX A

## MAPS & PLANS



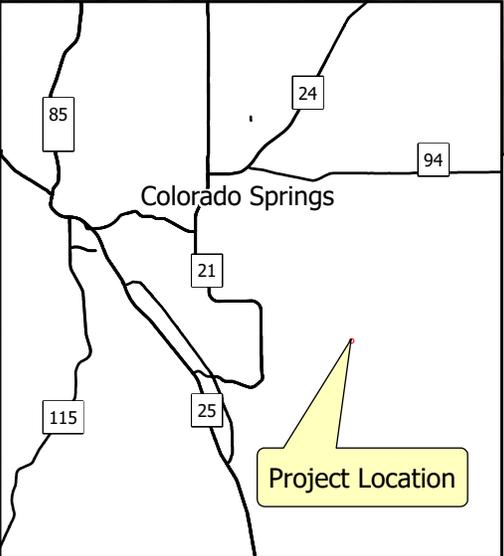
Project Location

Ivd

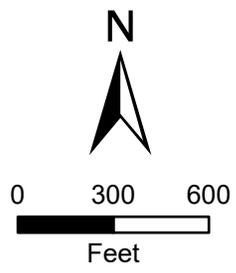
Fontaine Blvd

Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Maxar

Path: \\Projects\W9395 - Misc. COS Projects\###\###\DPS\Rolling Hills Booster Pump Station\Station.aprx



Project Location



Prepared by:

DOCUMENT IS FOR REVIEW PURPOSES ONLY AND NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES. PARCEL DATA SOURCED FROM EL PASO COUNTY OPEN DATA PORTAL. CONSULTANT MAKES NO CLAIMS TO ACCURACY OF DATA.

<p>ROLLING HILLS BOOSTER PUMP STATION</p> <p><b>VICINITY MAP</b></p>		
Job No.:	Date: December 2021	By: RLM

# WIDEFIELD WATER AND SANITATION DISTRICT

## ROLLING HILLS BOOSTER PUMP STATION

### GRADING AND EROSION CONTROL PLANS

EL PASO COUNTY, COLORADO

#### SIGNATURES

**GRADING AND EROSION CONTROL PLANS**  
**DESIGN ENGINEER'S STATEMENT:**

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

6-1-2022

RICHARD G. GALLEGOS, PE #36247

DATE



**OWNER/DEVELOPER'S STATEMENT:**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS

ROB BANNISTER PE, DISTRICT ENGINEER      DATE  
WIDEFIELD WATER AND SANITATION DISTRICT  
8495 FONTAINE BLVD, COLORADO SPRINGS, CO 80925

**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 DIRECTORS' DISCRETION.

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

DATE

# FOR BID



**VICINITY MAP**  
N.T.S.



PRE-EXCAVATION CHECKLIST	COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES																
<ul style="list-style-type: none"> <li><input type="checkbox"/> Gas and Other Utility Lines Shown on Construction Plans</li> <li><input type="checkbox"/> Utility Notification Center of Colorado (UNCC)--Call at Least Two (2) Business Days Ahead--1-800-922-1987</li> <li><input type="checkbox"/> Utilities Located &amp; Marked on the Ground</li> <li><input type="checkbox"/> Employees Briefed on Marking and Color Codes*</li> <li><input type="checkbox"/> Employees Trained on Excavation and Safety Procedures for Natural Gas Lines</li> <li><input type="checkbox"/> When Excavation Approaches Gas Lines, Employees Must Expose Lines by Careful Probing and Hand-Digging</li> </ul>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"><b>WHITE</b></td> <td>PROPOSED EXCAVATION</td> </tr> <tr> <td><b>MAGENTA</b></td> <td>TEMPORARY SURVEY MARKINGS</td> </tr> <tr> <td><b>RED</b></td> <td>ELECTRIC</td> </tr> <tr> <td><b>YELLOW</b></td> <td>GAS, OIL, STEAM</td> </tr> <tr> <td><b>ORANGE</b></td> <td>COMMUNICATION, CATV</td> </tr> <tr> <td><b>BLUE</b></td> <td>POTABLE WATER</td> </tr> <tr> <td><b>PURPLE</b></td> <td>IRRIGATION, RECLAIMED WATER, SLURRY LINES</td> </tr> <tr> <td><b>GREEN</b></td> <td>SEWER</td> </tr> </table> <div style="text-align: center; margin-top: 10px;"> <p style="font-size: 8px;">Always Call Before You Dig 811 or (800) 922-1987</p> </div>	<b>WHITE</b>	PROPOSED EXCAVATION	<b>MAGENTA</b>	TEMPORARY SURVEY MARKINGS	<b>RED</b>	ELECTRIC	<b>YELLOW</b>	GAS, OIL, STEAM	<b>ORANGE</b>	COMMUNICATION, CATV	<b>BLUE</b>	POTABLE WATER	<b>PURPLE</b>	IRRIGATION, RECLAIMED WATER, SLURRY LINES	<b>GREEN</b>	SEWER
<b>WHITE</b>	PROPOSED EXCAVATION																
<b>MAGENTA</b>	TEMPORARY SURVEY MARKINGS																
<b>RED</b>	ELECTRIC																
<b>YELLOW</b>	GAS, OIL, STEAM																
<b>ORANGE</b>	COMMUNICATION, CATV																
<b>BLUE</b>	POTABLE WATER																
<b>PURPLE</b>	IRRIGATION, RECLAIMED WATER, SLURRY LINES																
<b>GREEN</b>	SEWER																

#### SHEET INDEX

SHEET NAME	DESCRIPTION
	COVER SHEET
<u>GENERAL</u>	
G4	FEMA FLOODPLAIN MAP
<u>CIVIL</u>	
C1	OVERALL SITE PLAN/VICINITY MAP
C13	GEC NOTES
C14	FINAL GRADING PLAN
C15	EROSION CONTROL PLAN
C16	GEC DETAILS
C17	GEC DETAILS
C18	GEC DETAILS
C19	GEC DETAILS
C20	GEC DETAILS

#### PARTICIPANTS

**OWNER**  
WIDEFIELD WATER AND SANITATION DISTRICT  
8495 FONTAINE BLVD  
COLORADO SPRINGS, CO 80925  
CONTACT: ROBERT BANNISTER, PE  
PHONE: (719) 955-6118

**CONSULTING/DESIGN ENGINEER**  
JDS-HYDRO CONSULTANTS, A DIVISION OF RESPEC  
5540 TECH CENTER DR, STE 100  
COLORADO SPRINGS, CO 80903  
CONTACT: GWEN DALL, PE  
PHONE: (719) 227-0072

**CONSULTING/DESIGN ENGINEER**  
RESPEC  
121 SOUTH TEJON ST, SUITE 1110  
COLORADO SPRINGS, CO 80903  
CONTACT: RICHARD GALLEGOS  
PHONE: (719) 266-5212

**JDS-HYDRO** a Division of **RESPEC**  
5540 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072

PCD File No. PPR-21-75

2022/06/01 10:46 AM By: Richard Gallegos N:\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102.125\_GEC\_Details.dwg

**EROSION CONTROL NOTES:**

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE, AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- THIS SITE IS LESS THAN 1 ACRE AND THEREFORE WILL NOT DISTURB MORE THAN 1 ACRE SO A ESQCP AND ASSOCIATED SWMP IS NOT REQUIRED PER 5.6.2 OF THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- THIS SITE IS LESS THAN 1 ACRE AND THEREFORE WILL NOT DISTURB MORE THAN 1 ACRE SO A ESQCP AND ASSOCIATED SWMP IS NOT REQUIRED PER 5.6.2 OF THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- 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 VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- 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.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGE 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.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER 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.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- 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.
- 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.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 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.
- 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, AND WITH ORIGINAL MANUFACTURER'S LABELS.
- 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 CHEMICAL(S) 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.
- 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.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- 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.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION, THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 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.
- THE SOILS REPORT FOR THIS SITE WAS PREPARED BY CTL THOMPSON, INC. (DATED 08/11/2017), SUPPLEMENTAL RECOMMENDATIONS UPDATED (11/03/21) AND SHALL BE CONSIDERED A PART OF THESE PLANS
- 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 THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATIONS MATERIALS, CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
 WATER QUALITY CONTROL DIVISION  
 WQCD - PERMITS  
 4300 CHERRY CREEK DRIVE SOUTH  
 DENVER, CO 80246-1530  
 ATTN:PERMITS UNIT

**STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS**

- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

**TIMING, CONSTRUCTION STAGING, AND SEQUENCING:**

EXPECTED START DATE: SPRING 2022  
 INSTALL TEMPORARY EROSION CONTROL - 2 DAYS  
 - PERIMETER SILT FENCING  
 - VEHICLE TRACKING CONTROL PAD

ROUGH GRADING - 5 DAYS  
 INSTALL FINAL SITE IMPROVEMENTS - 10 MONTHS  
 REMOVE TEMPORARY EROSION CONTROL - 5 DAYS

**MINIMUM BEST MANAGEMENT PRACTICES ELEMENTS:**

- EROSION AND SEDIMENT CONTROL  
 INSTALL SEDIMENT TRAPPING DEVICES (PERIMETER CONTROLS) PRIOR TO THE START OF CONSTRUCTION.
- SPILL PREVENTION AND RESPONSE
- MATERIAL MANAGEMENT  
 MATERIAL AND EQUIPMENT STORAGE AREAS SHALL BE SECURE AND CONTAINED TO PREVENT DISCHARGE OF ANY MATERIAL IN RUNOFF. WASTE SHALL BE CONTAINED AND DISPOSED OF PROPERLY. MAINTAIN BMP'S DURING BUILDING AND UTILITY CONSTRUCTION.
- INSPECTION AND MAINTENANCE (SEE EROSION CONTROL NOTES)
- INSTALL FINAL STABILIZATION - BASE COURSE, LANDSCAPING, EROSION CONTROL BLANKETS, AND SEEDING.
- REMOVE TEMPORARY CONTROLS - SILT FENCING AFTER PERMANENT FEATURES ARE INSTALLED.

**FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT:**

FINAL STABILIZATION MEASURES INCLUDE BASE COURSE, PARTIAL LANDSCAPE, AND REVEGETATION

**EARTHWORK SUMMARY:**

PROPOSED SITE:  
 CUT - 215 CY  
 FILL - 1,190 CY (w/ 20% COMPACTION)  
 NET - 975 CY FILL (EXPORT)

DISTURBED AREA - 0.707 AC

**EROSION CONTROL FACILITIES:**

SILT FENCE - 360LF  
 VEHICLE TRACKING PAD - 1  
 STRAW BALES - 5  
 CONCRETE WASHOUT BASIN - 1

**JDS-HYDRO CONSULTANTS, INC.**  
 5440 TECH CENTER DR., SUITE 100  
 COLORADO SPRINGS, COLORADO 80919  
 (719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

**WIDEFIELD WATER AND SANITATION DISTRICT**  
 ROLLING HILLS BOOSTER PUMP STATION  
 GEC NOTES

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

**FOR BID**

*Richard G. Gallegos, Jr.*  
 RICHARD G. GALLEGOS, JR.  
 36247  
 PROFESSIONAL ENGINEER

6-1-2022

Project No.: 102.125  
 Date: 03/15/22  
 Design: GGM  
 Drawn: ACH  
 Check: GJD

PCD File No. PPR-21-75

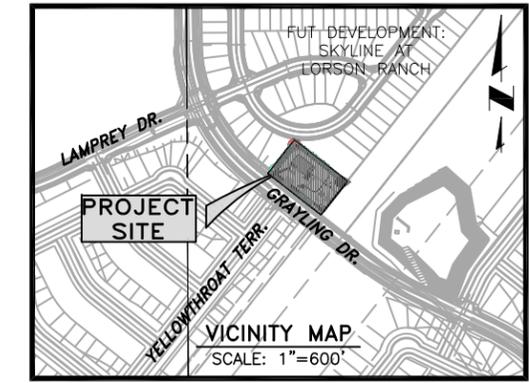
**C13**  
 SHEET 17 OF 78

**OVERALL LEGEND**

	EX EASEMENT/FUT PROPERTY		PP EROSION CONTROL SILT FENCE (INITIAL)
	EX RIGHT-OF-WAY		DEVELOPED FLOW DIRECTION
	EX PROPERTY SETBACK		PRE-DEVELOPED FLOW DIRECTION
	EX SANITARY SEWER MANHOLE		CONCRETE
	EX FIRE HYDRANT		BASE COURSE
	EX VALVE		GRAVEL/MULCH
	EX UTILITY POLE		VEHICLE TRACKING CONTROL(INITIAL)
	EX UG ELECTRIC LINE		STRAW BALE BARRIER (INITIAL)
	EX OH ELECTRIC LINE		STOCKPILE PROTECTION (INITIAL)
	EX/FUT STORM SEWER LINE		STABILIZED STAGING AREA (INITIAL)
	EX WATER LINE		CONCRETE WASHOUT AREA (INITIAL)
	EX SANITARY SEWER LINE		
	EX/PP BY DEVELOPER CONTOURS-MAJOR		
	EX/PP BY DEVELOPER CONTOURS-MINOR		
	PP WATER LINE		
	PP SANITARY SEWER LINE		
	PP CONTOURS-MAJOR		
	PP CONTOURS-MINOR		
	PP CHAIN LINK FENCE		
	PP UG ELECTRIC LINE		

NOTE: SEE ALT. LANDSCAPE LEGEND FOR ADDITIONAL SYMBOLOLOGY

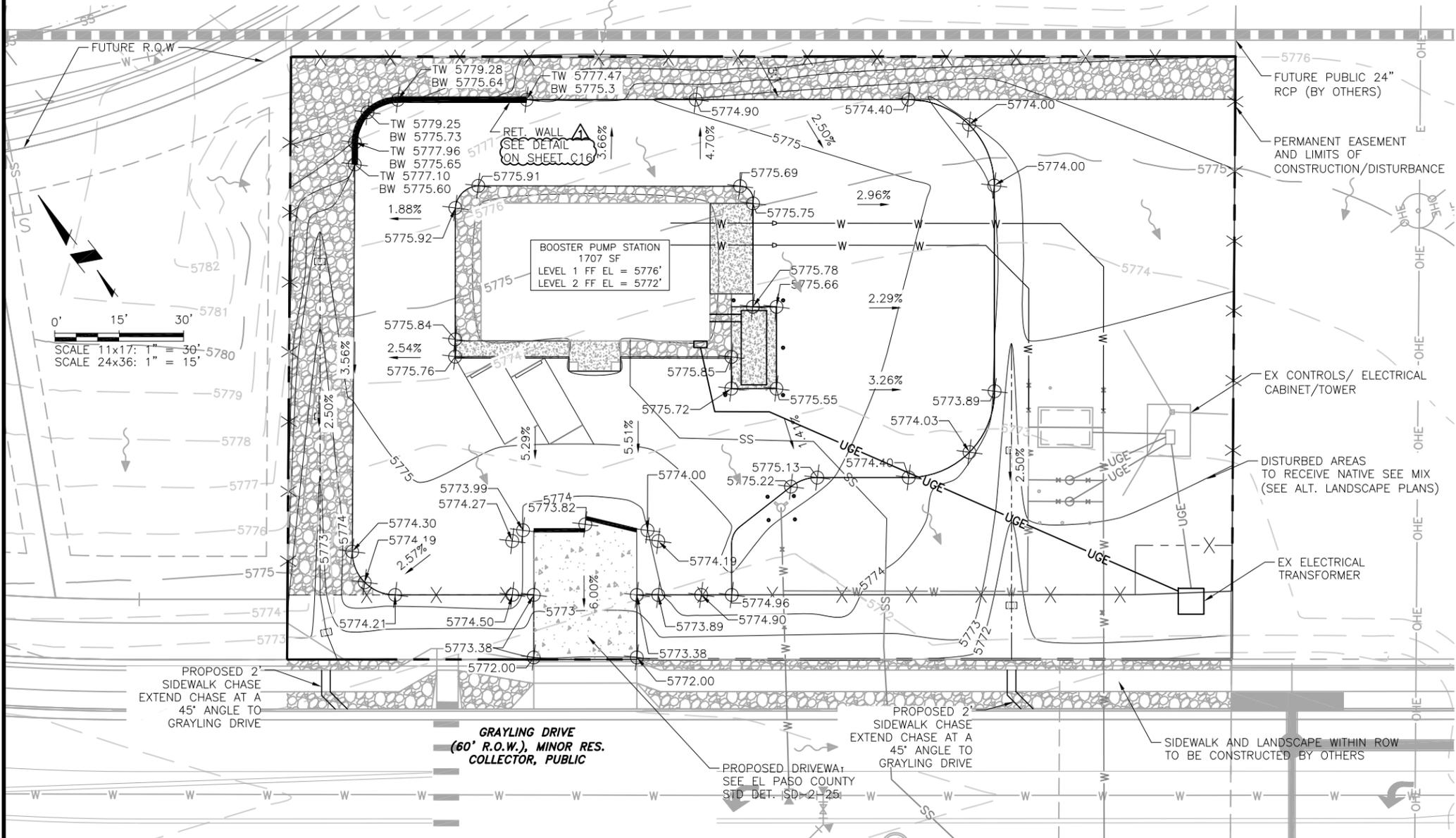
- GRADING AND EROSION CONTROL NOTES:**
- EXISTING VEGETATION CONSISTS OF NATIVE GRASS, CLOVER, AND WEEDS.
  - DRAINAGE FOR THIS SITE CONSIDERED IN FINAL DRAINAGE REPORT SF21-010 FOR "HILLS AT LORSON RANCH" DEVELOPMENT, REVISED 03/23/21.
  - NO BATCH PLANTS ARE PROPOSED AS A PART OF THIS PROJECT.
  - THERE ARE NO STREAM CROSSINGS WITHIN THE LIMITS OF THIS PROJECT.
  - ACCESS POINTS AND SITE NOT ACCESSIBLE TO PUBLIC.
  - ALL BMP'S ARE TEMPORARY AND MUST BE INSTALLED PRIOR TO LAND DISTURBANCE. NO BMP'S ARE PHASED FOR THIS PROJECT.
  - THE GEOTECHNICAL REPORT FOR THIS PROJECT HAS BEEN PREPARED BY CTL THOMPSON, INC. (DATED 08/01/2017) WITH SUPPLEMENTAL REPORT (DATED 11/03/2021).
  - THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
  - J-HOOKS TO BE INSTALLED WHEREVER SILT FENCE IS INSTALLED PERPENDICULAR TO CONTOURS.



**JDS-HYDRO CONSULTANTS, INC.**  
 5440 TECH CENTER DR., SUITE 100  
 COLORADO SPRINGS, COLORADO 80919  
 (719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

**WIDEFIELD WATER AND SANITATION DISTRICT**  
 ROLLING HILLS BOOSTER PUMP STATION  
 FINAL GRADING PLAN



NO.	DESCRIPTION	BY	APP.	DATE
1	ADDENDUM 3	SNW	GJD	04/22/22
2				
3				
4				
5				
6				
7				

**FOR BID**

6-1-2022  
 Project No.: 102.125  
 Date: 03/15/22  
 Design: RGG  
 Drawn: ACH/AAC  
 Check: GJD

PCD File No. PPR-21-75

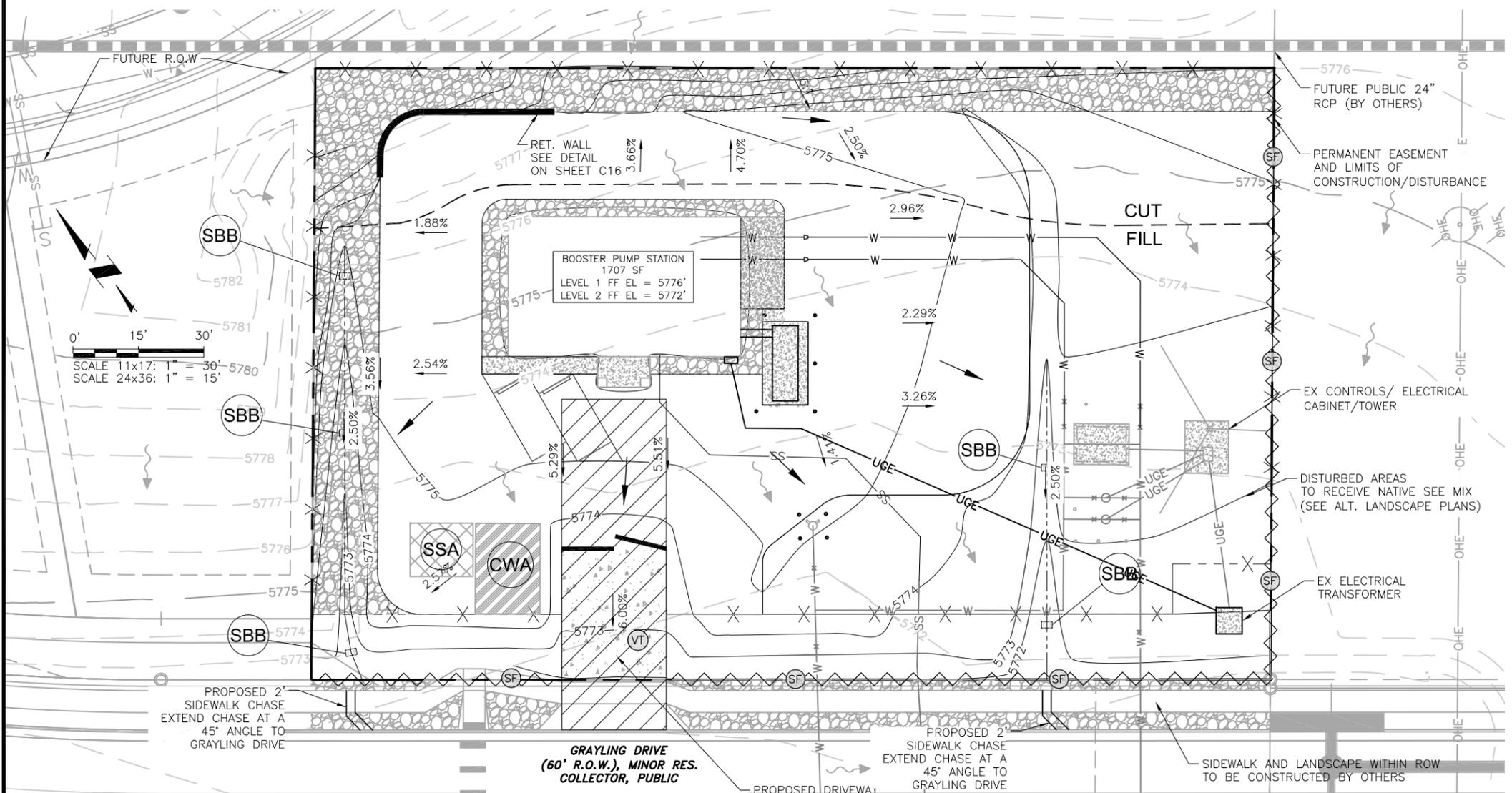
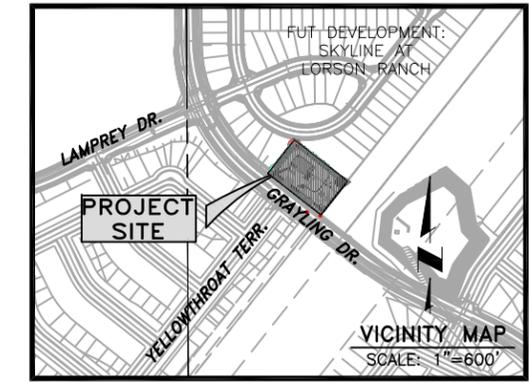
2022/06/01 10:57 AM By: Richard Gallegos NA\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102125\_Civil.dwg

**OVERALL LEGEND**

	EX EASEMENT/FUT PROPERTY		PP EROSION CONTROL SILT FENCE (INITIAL)
	EX RIGHT-OF-WAY		DEVELOPED FLOW DIRECTION
	EX PROPERTY SETBACK		PRE-DEVELOPED FLOW DIRECTION
	EX SANITARY SEWER MANHOLE		CONCRETE
	EX FIRE HYDRANT		BASE COURSE
	EX VALVE		GRAVEL/MULCH
	EX UTILITY POLE		VEHICLE TRACKING CONTROL (INITIAL)
	EX UG ELECTRIC LINE		STRAW BALE BARRIER (INITIAL)
	EX OH ELECTRIC LINE		STOCKPILE PROTECTION (INITIAL)
	EX/FUT STORM SEWER LINE		STABILIZED STAGING AREA (INITIAL)
	EX WATER LINE		CONCRETE WASHOUT AREA (INITIAL)
	EX SANITARY SEWER LINE		
	EX/PP BY DEVELOPER CONTOURS-MAJOR		
	EX/PP BY DEVELOPER CONTOURS-MINOR		
	PP WATER LINE		
	PP SANITARY SEWER LINE		
	PP CONTOURS-MAJOR		
	PP CONTOURS-MINOR		
	PP CHAIN LINK FENCE		
	PP UG ELECTRIC LINE		

NOTE: SEE ALT. LANDSCAPE LEGEND FOR ADDITIONAL SYMBOLOLOGY

- GRADING AND EROSION CONTROL NOTES:**
- EXISTING VEGETATION CONSISTS OF NATIVE GRASS, CLOVER, AND WEEDS.
  - DRAINAGE FOR THIS SITE CONSIDERED IN FINAL DRAINAGE REPORT SF21-010 FOR "HILLS AT LORSON RANCH" DEVELOPMENT, REVISED 03/23/21.
  - NO BATCH PLANTS ARE PROPOSED AS A PART OF THIS PROJECT.
  - THERE ARE NO STREAM CROSSINGS WITHIN THE LIMITS OF THIS PROJECT.
  - ACCESS POINTS AND SITE NOT ACCESSIBLE TO PUBLIC.
  - ALL BMP'S ARE TEMPORARY AND MUST BE INSTALLED PRIOR TO LAND DISTURBANCE. NO BMP'S ARE PHASED FOR THIS PROJECT.
  - THE GEOTECHNICAL REPORT FOR THIS PROJECT HAS BEEN PREPARED BY CTL THOMPSON, INC. (DATED 08/01/2017) WITH SUPPLEMENTAL REPORT (DATED 11/03/2021).
  - THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
  - J-HOOKS TO BE INSTALLED WHEREVER SILT FENCE IS INSTALLED PERPENDICULAR TO CONTOURS.



**JDS-HYDRO CONSULTANTS, INC.**  
5440 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

**WIDEFIELD WATER AND SANITATION DISTRICT**  
ROLLING HILLS BOOSTER PUMP STATION  
EROSION CONTROL PLAN

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

**FOR BID**

6-1-2022  
Project No.: 102.125  
Date: 03/15/22  
Design: RGG  
Drawn: AAC/ACH  
Check: GJD

**PCD File No. PPR-21-75**

**C15**  
SHEET 19 OF 78



# **APPENDIX B**

## **GENERAL PERMIT APPLICATION (WHEN COMPLETE)**



# **APPENDIX C**

## **CONTRACTOR SEQUENCE OF ACTIVITIES (WHEN COMPLETE)**



# APPENDIX D

## O&M INSPECTION RECORD TEMPLATES

# CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee					
Date of Inspection		Weather Conditions					
Permit Certification #		Disturbed Acreage					
Phase of Construction		Inspector Title					
Inspector Name							
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO						
<input type="checkbox"/>	<input type="checkbox"/>						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	<input type="checkbox"/>				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	<input type="checkbox"/>				
<ul style="list-style-type: none"> <li>• This is this a post-storm event inspection. Event Date: _____</li> </ul>	<input type="checkbox"/>				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	<input type="checkbox"/>				
<ul style="list-style-type: none"> <li>• Post-storm inspections at temporarily idle sites</li> <li>• Inspections at completed sites/area</li> <li>• Winter conditions exclusion</li> </ul>	<input type="checkbox"/>				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO				
<input type="checkbox"/>	<input type="checkbox"/>				

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached <b>Control Measures Requiring Routine Maintenance</b> and <b>Inadequate Control Measures Requiring Corrective Action</b> forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions <b>Inadequate Control Measures Requiring Corrective Action</b> form
Construction site perimeter	<input type="checkbox"/>	<input type="checkbox"/>	
All disturbed areas	<input type="checkbox"/>	<input type="checkbox"/>	
Designated haul routes	<input type="checkbox"/>	<input type="checkbox"/>	
Material and waste storage areas exposed to precipitation	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where stormwater has the potential to discharge offsite	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where vehicles exit the site	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	





## REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

<b>All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit</b>		
<b>a. Endangerment to Health or the Environment</b> Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>		
<b>b. Numeric Effluent Limit Violations</b> <ul style="list-style-type: none"> <li>o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)</li> <li>o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)</li> <li>o Daily maximum violations (See Part II.L.6.d of the Permit)</li> </ul> <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>		

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

\*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

“I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit.”

\_\_\_\_\_  
Name of Qualified Stormwater Manager

\_\_\_\_\_  
Title of Qualified Stormwater Manager

\_\_\_\_\_  
Signature of Qualified Stormwater Manager

\_\_\_\_\_  
Date

Notes/Comments



# **APPENDIX E**

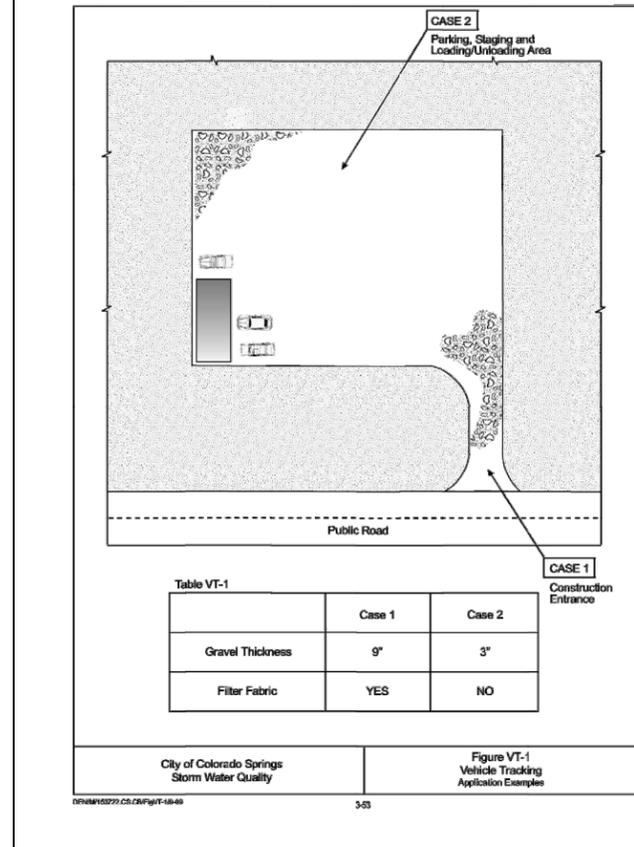
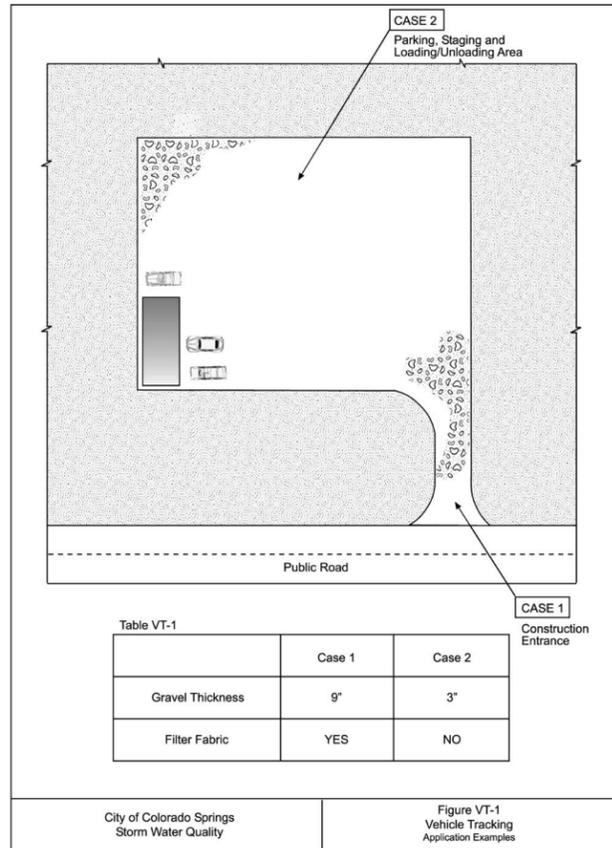
## **COMPLETED O&M INSPECTION RECORDS (WHEN COMPLETE)**



# **APPENDIX F**

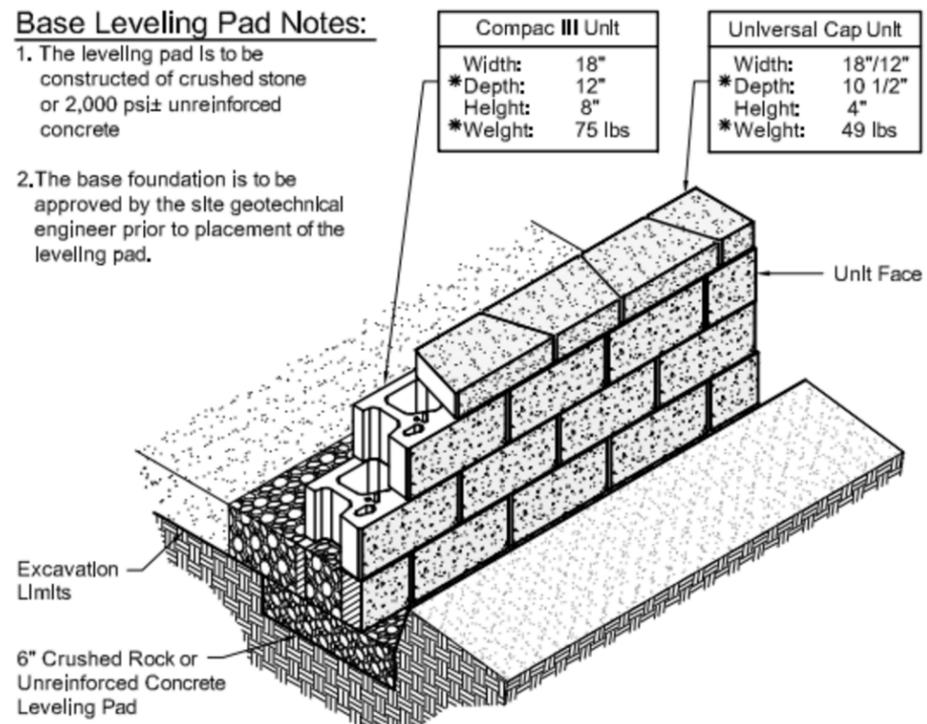
## **STANDARD CONTROL MEASURES/BMP DETAILS**

2022/06/01 10:17 AM By: Richard Gallegos N:\Projects\102\_125 Widefield Water And San\102\_125 Rolling Hills Pump Station Drawings\Working\02-Civil\102125\_GEC\_Details.dwg



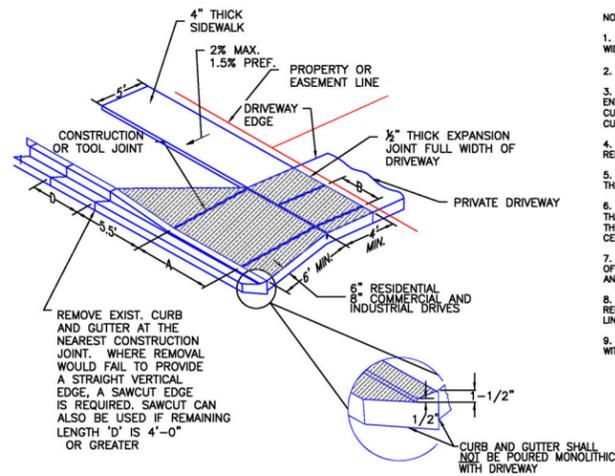
**Base Leveling Pad Notes:**

- The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
- The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.



**Compac III Unit/Base Pad Isometric Section View**

\*Dimensions & Weight May Vary by Region

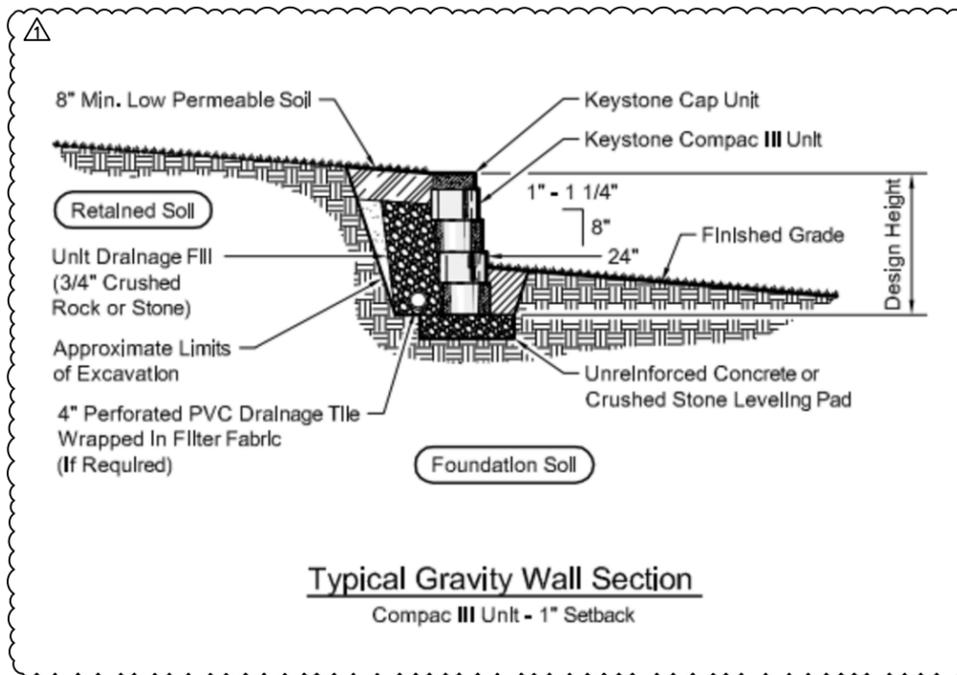


**NOTES**

- PROVIDE CENTERLINE CONSTRUCTION OR TOOL JOINT WHEN DRIVEWAY WIDTH (EDGE TO EDGE) IS 14' OR GREATER.
- ALL TOOL JOINTS SHALL BE A MINIMUM OF 1-3/8" DEEP.
- WHEN REPLACING EXISTING CURB AND GUTTER WITH NEW DRIVEWAY, ENTIRE CURB AND GUTTER SECTION SHALL BE REMOVED AND REPLACED WITH CURB AND GUTTER (VARIABLE-CURB-HEIGHT) AS SHOWN. DO NOT BREAK CURB FROM GUTTER SECTION.
- FLARED PORTION OF DRIVEWAY SHALL BE POURED MONOLITHIC WITH MAIN RECTANGULAR PORTION OF DRIVEWAY.
- WHERE THERE IS MORE THAN ONE DRIVEWAY ON A LOT, THE SPACING OF THE DRIVEWAYS SHALL MEET REQUIREMENTS IN ECM.
- WHERE AN EXISTING SIDEWALK IS IN PLACE, AND ITS THICKNESS IS LESS THAN 6" (RESIDENTIAL) OR 8" (COMMERCIAL AND INDUSTRIAL) THE SIDEWALK THROUGH THE DRIVEWAY SHALL BE REMOVED AND REPLACED WITH PORTLAND CEMENT CONCRETE AT THE REQUIRED THICKNESS.
- WHEN A DRIVEWAY IS TO BE TAKEN OUT OF SERVICE, THE ENTIRE LENGTH OF CURB AND GUTTER SHALL BE REMOVED AND REPLACED WITH NEW CURB AND GUTTER MATCHING THE ADJUTING SECTIONS.
- ALL PROVISIONS IN THE LAND DEVELOPMENT CODE SHALL BE MET, WITH REGARD TO MINIMUM SETBACK FROM INTERSECTION AND SIDE PROPERTY LINES, MINIMUM SPACING, MAXIMUM WIDTH, ETC.
- SIDEWALKS ACROSS DRIVEWAYS SHALL BE ACCESSIBLE AND COMPLIANT WITH REQUIREMENTS OF ECM CHAPTER 6.

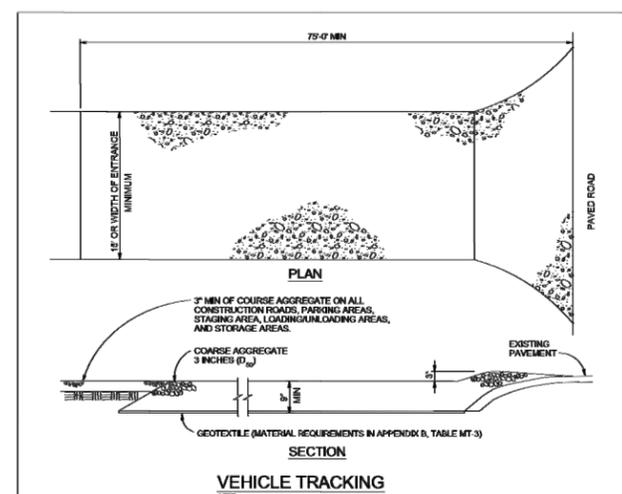
DRIVEWAY WIDTH	A	B
12'	6'	3'
14'	7'	3'-6"
16'	8'	4'
18'	9'	4'-6"
20'	10'	5'
22'	11'	5'-6"
24'	8'-4"	4'-4"
26'	9'-4"	4'-8"
30'	10'	5'

SCALE: NOT TO SCALE



**Typical Gravity Wall Section**

Compac III Unit - 1" Setback



**VEHICLE TRACKING NOTES**

**INSTALLATION REQUIREMENTS**

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADES THAT ARE EXCESSIVELY STEEP.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REPLACED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality

Figure VT-2 Vehicle Tracking Application Examples

PCD File No. PPR-21-75

WIDEFIELD WATER AND SANITATION DISTRICT  
ROLLING HILLS BOOSTER PUMP STATION  
GEC DETAILS

JDS-HYDRO CONSULTANTS, INC.  
5540 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

NO.	DESCRIPTION	BY	APP.	DATE
1	ADDENDUM 3	SNW	GJD	04/22/22
2				
3				
4				
5				
6				
7				

**FOR BID**

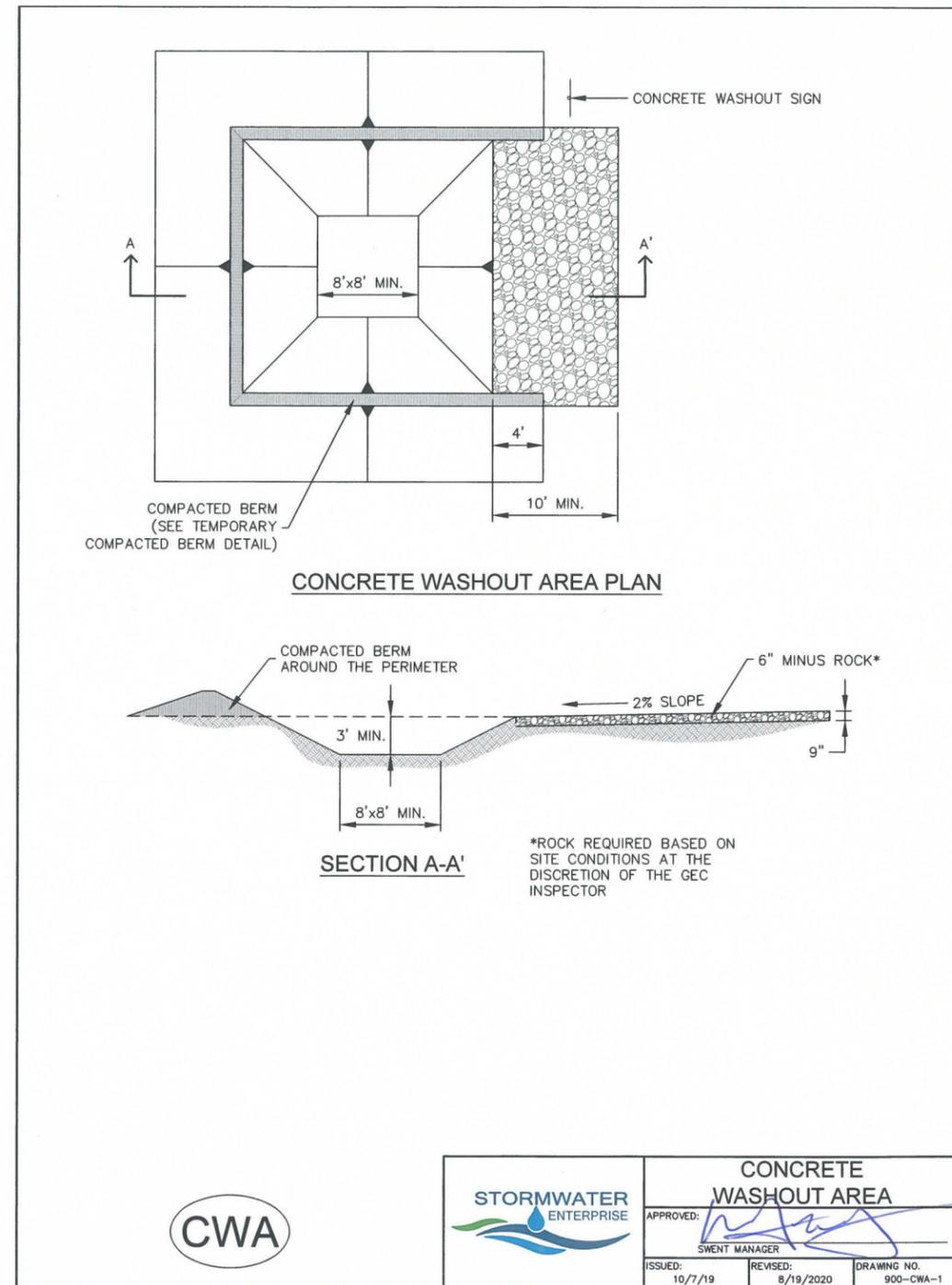
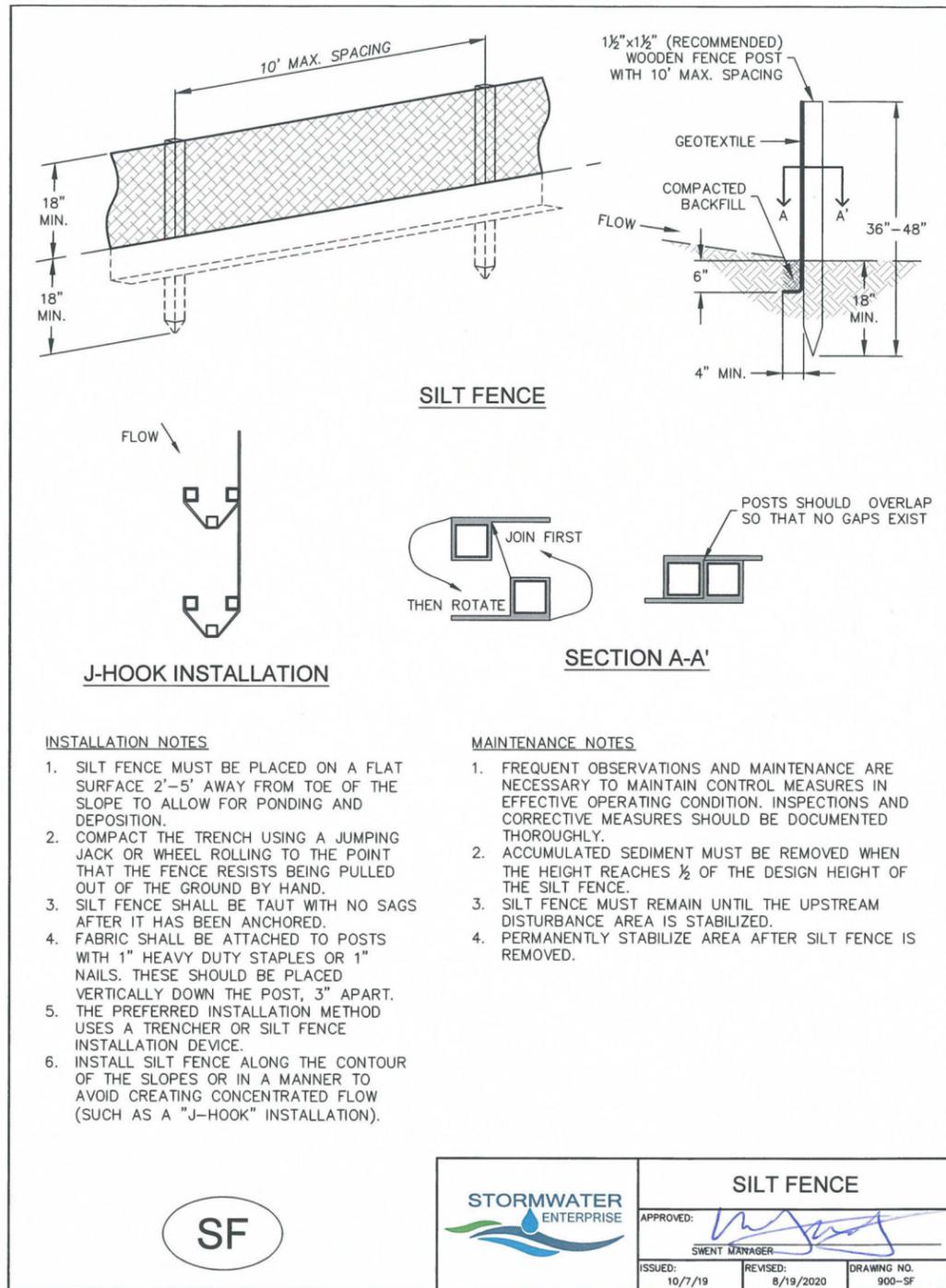
36247

PROFESSIONAL ENGINEER

6-1-2022

Project No.: 102.125  
Date: 03/15/22  
Design: RGG  
Drawn: AAC  
Check: GJD

2022/06/01 10:18 AM By: Richard Gallegos N:\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102.125\_GEC\_Details.dwg



**JDS-HYDRO** CONSULTANTS, INC.  
 5440 TECH CENTER DR., SUITE 100  
 COLORADO SPRINGS, COLORADO 80919  
 (719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

**WIDEFIELD WATER AND SANITATION DISTRICT**  
 ROLLING HILLS BOOSTER PUMP STATION  
 GEC DETAILS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

**FOR BID**

*[Signature]*  
 RICHARD G. GALLEGOS, JR.  
 36247  
 PROFESSIONAL ENGINEER

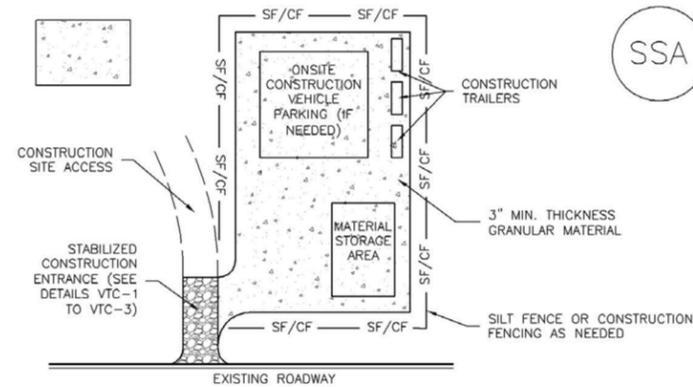
6-1-2022  
 Project No.: 102.125  
 Date: 03/15/22  
 Design: RGG  
 Drawn: AAC  
 Check: GJD

PCD File No. PPR-21-75

**C17**  
 SHEET 21 OF 78

**Stabilized Staging Area (SSA)**

**SM-6**



**SSA-1. STABILIZED STAGING AREA**

**STABILIZED STAGING AREA INSTALLATION NOTES**

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

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- 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.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

**SM-6**

**Stabilized Staging Area (SSA)**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- 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)

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

**JDS-HYDRO** CONSULTANTS, INC.  
5540 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072  
DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

**WIDEFIELD WATER AND SANITATION DISTRICT**  
ROLLING HILLS BOOSTER PUMP STATION  
GEC DETAILS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

**FOR BID**  
  
6-1-2022

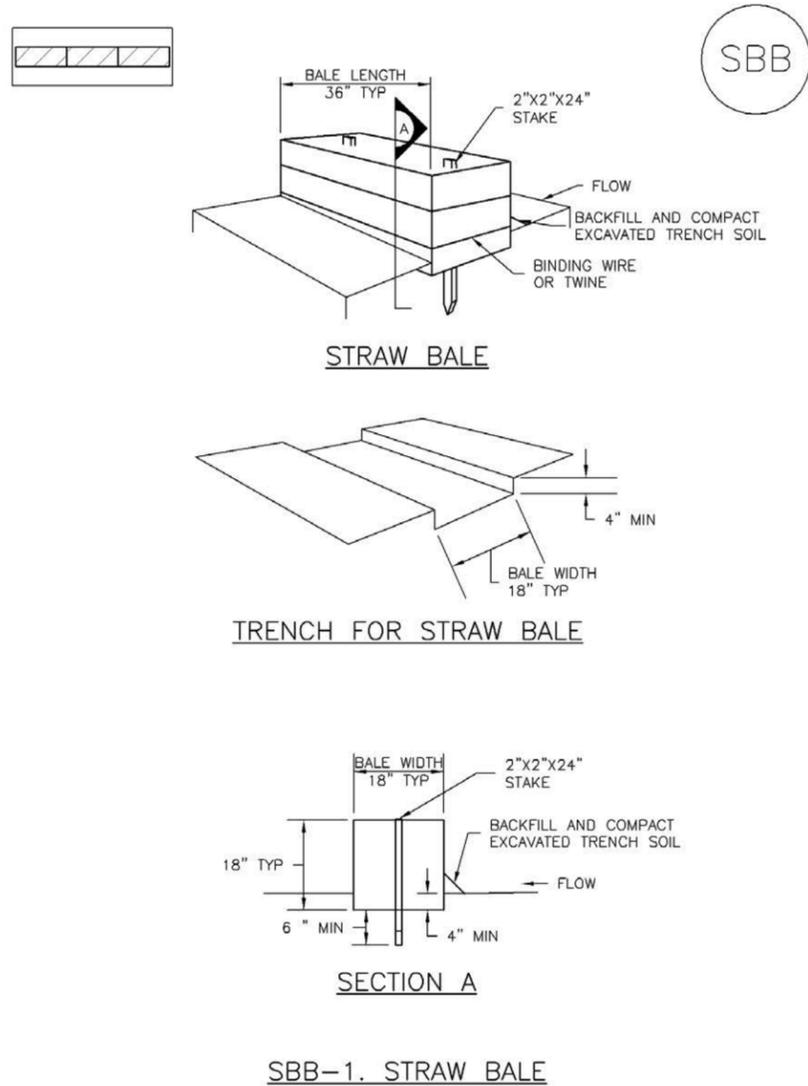
Project No.: 102.125  
Date: 03/15/22  
Design: RGG  
Drawn: AAC  
Check: GJD

PCD File No. PPR-21-75

**C18**  
SHEET 22 OF 78

SC-3

Straw Bale Barrier (SBB)



SBB-1. STRAW BALE

SBB-2

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

November 2010

Straw Bale Barrier (SBB)

SC-3

STRAW BALE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:  
-LOCATION(S) OF STRAW BALES.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"X18"X18".
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"X2"X24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

STRAW BALE 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. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, 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.

November 2010

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

SBB-3

**JDS-HYDRO** CONSULTANTS, INC.  
5540 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072  
DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

WIDEFIELD WATER AND SANITATION DISTRICT  
ROLLING HILLS BOOSTER PUMP STATION  
GEC DETAILS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

**FOR BID**

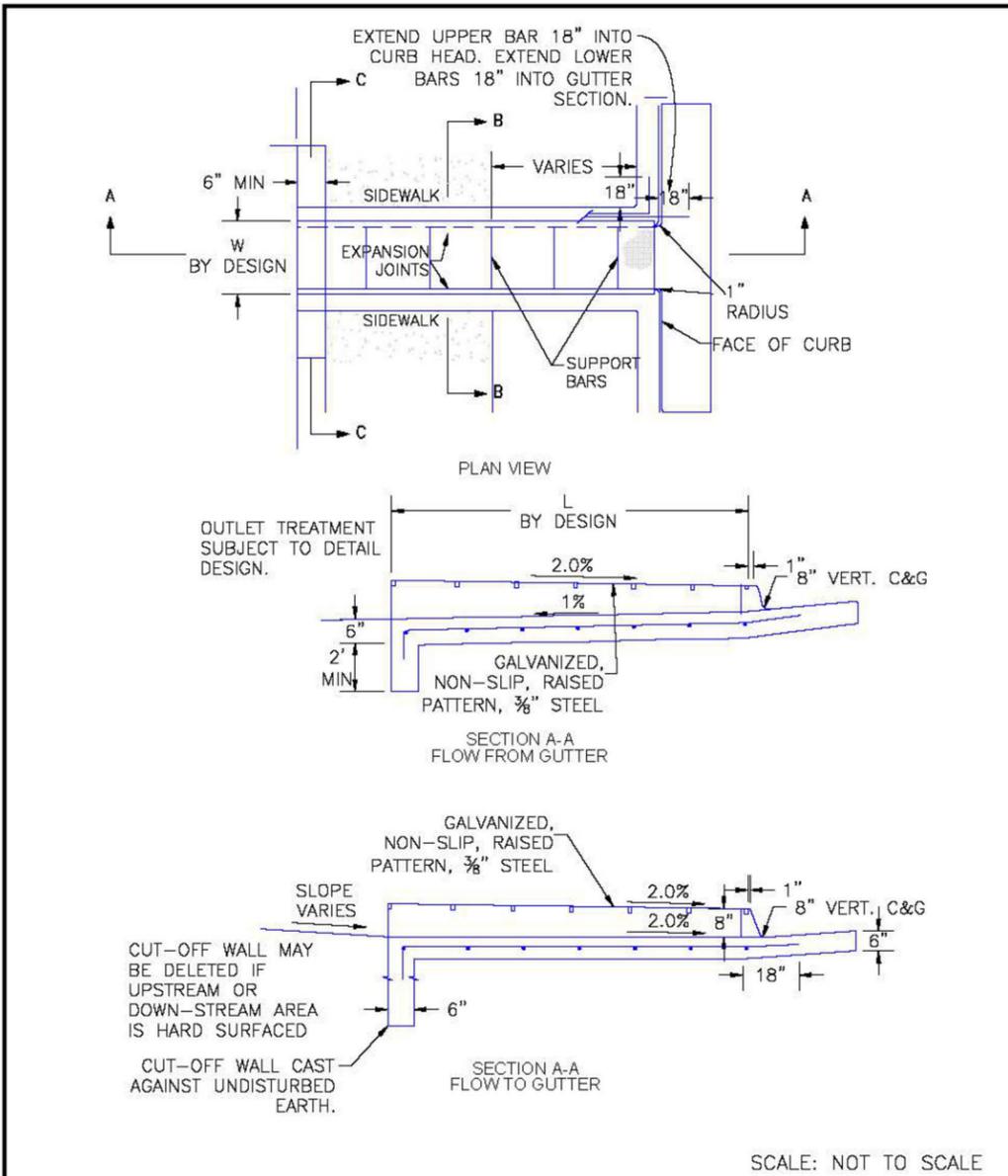
6-1-2022

Project No.: 102.125  
Date: 03/15/22  
Design: RGG  
Drawn: AAC  
Check: GJD

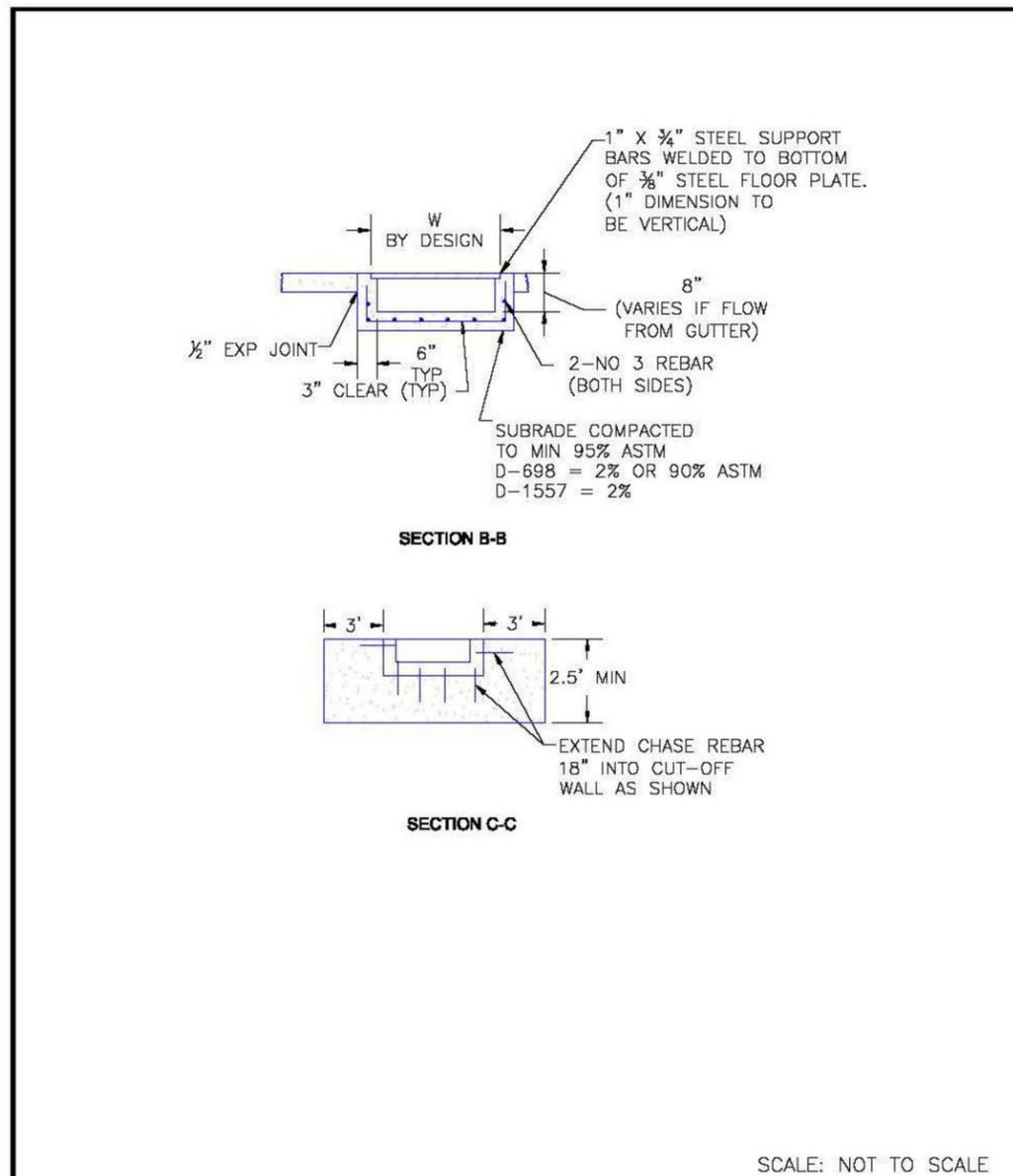
PCD File No. PPR-21-75

2022/06/01 10:19 AM By: Richard Gallegos N:\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102.125\_GEC\_Details.dwg

2022/06/01 10:20 AM By: Richard Gallegos N:\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102125\_GEC\_Details.dwg



8/11/11 DATE APPROVED:	Curb Opening with Drainage Chase Detail 1 of 2 Standard Drawing	
André P. Brackin DEPARTMENT OF TRANSPORTATION	REVISION DATE: 12/8/15 FILE NAME: SD_3-25	



8/11/11 DATE APPROVED:	Curb Opening with Drainage Chase Detail 2 of 2 Standard Drawing	
André P. Brackin DEPARTMENT OF TRANSPORTATION	REVISION DATE: 11/10/04 FILE NAME: SD_3-25A	

**JDS-HYDRO** CONSULTANTS, INC.  
5440 TECH CENTER DR., SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO CONSULTANTS, INC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

WIDEFIELD WATER AND SANITATION DISTRICT  
ROLLING HILLS BOOSTER PUMP STATION  
GEC DETAILS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

FOR BID

6-1-2022  
Project No.: 102.125  
Date: 03/15/22  
Design: RGG  
Drawn: AAC  
Check: GJD

PCD File No. PPR-21-75