

# 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.

\_\_\_\_\_  
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:**

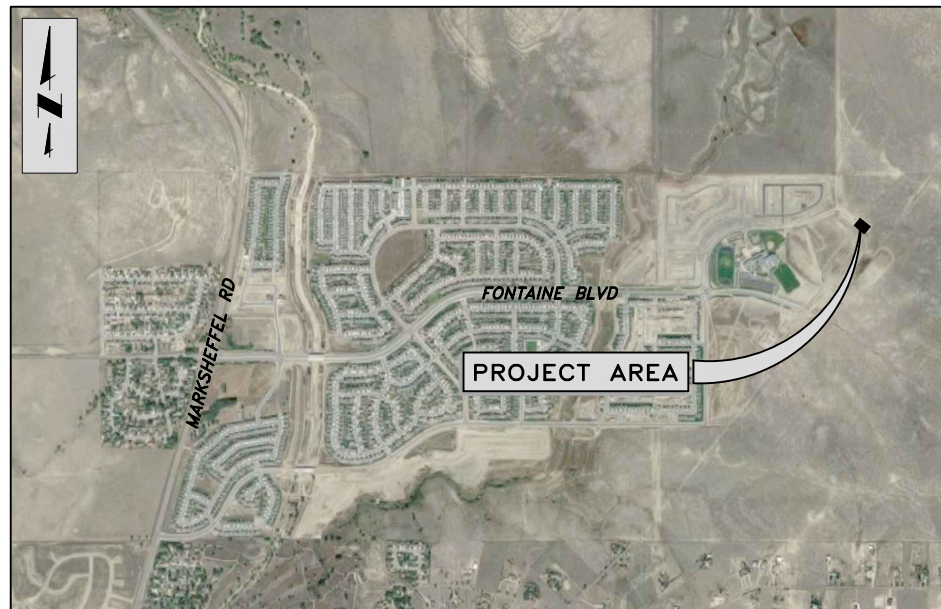
"COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY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

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

#### SHEET INDEX

SHEET NAME	DESCRIPTION
	COVER SHEET
<u>GENERAL</u>	
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<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: RICARD GALLEGOS  
PHONE: (719) 266-5212

N:\Projects\102 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102125\_Fema.dwg 2022/03/07 2:05 PM By: Andrew Hood

JOINS PANEL 0957

EL PASO COUNTY  
UNINCORPORATED AREAS  
080059

ROLLING HILLS BOOSTER  
PUMP STATION SITE  
APPROXIMATE LOCATION

24

PEACEFUL VALLEY RD

RAINTREE DR

GRASSLAND RD

Williams Creek

LEGEND

**SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD.**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AR, AD, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A No Base Flood Elevations determined.
- ZONE AE Base Flood Elevations determined.
- ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AD Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

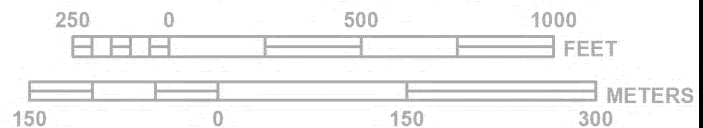
- ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)

MAP REPOSITORIES  
Refer to Map Repositories list on Map Index.  
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
MARCH 17, 1997  
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL  
DECEMBER 7, 2016 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.  
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



**NIP** PANEL 0976G

**FIRM**  
FLOOD INSURANCE RATE MAP  
EL PASO COUNTY,  
COLORADO  
AND INCORPORATED AREAS

PANEL 976 OF 1300  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLORADO SPRINGS, CITY OF	08000	0878	G
EL PASO COUNTY	08009	0879	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
08041C0976G

**MAP REVISED**  
DECEMBER 7, 2018

Federal Emergency Management Agency

**JDS-HYDRO** CONSULTANTS, INC.  
5640 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  
FEMA FLOODPLAIN MAP

NO.	DESCRIPTION	BY	APP.	DATE
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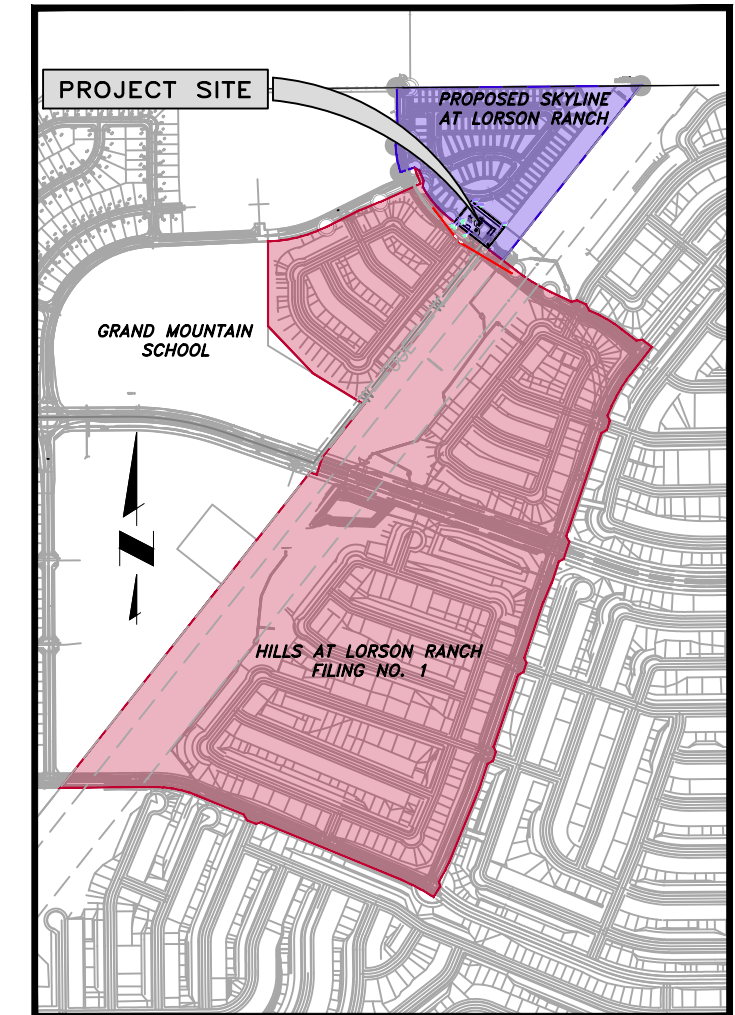
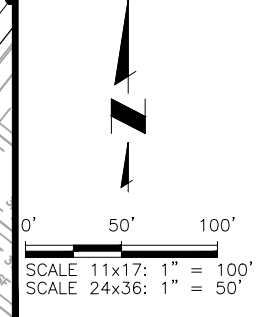
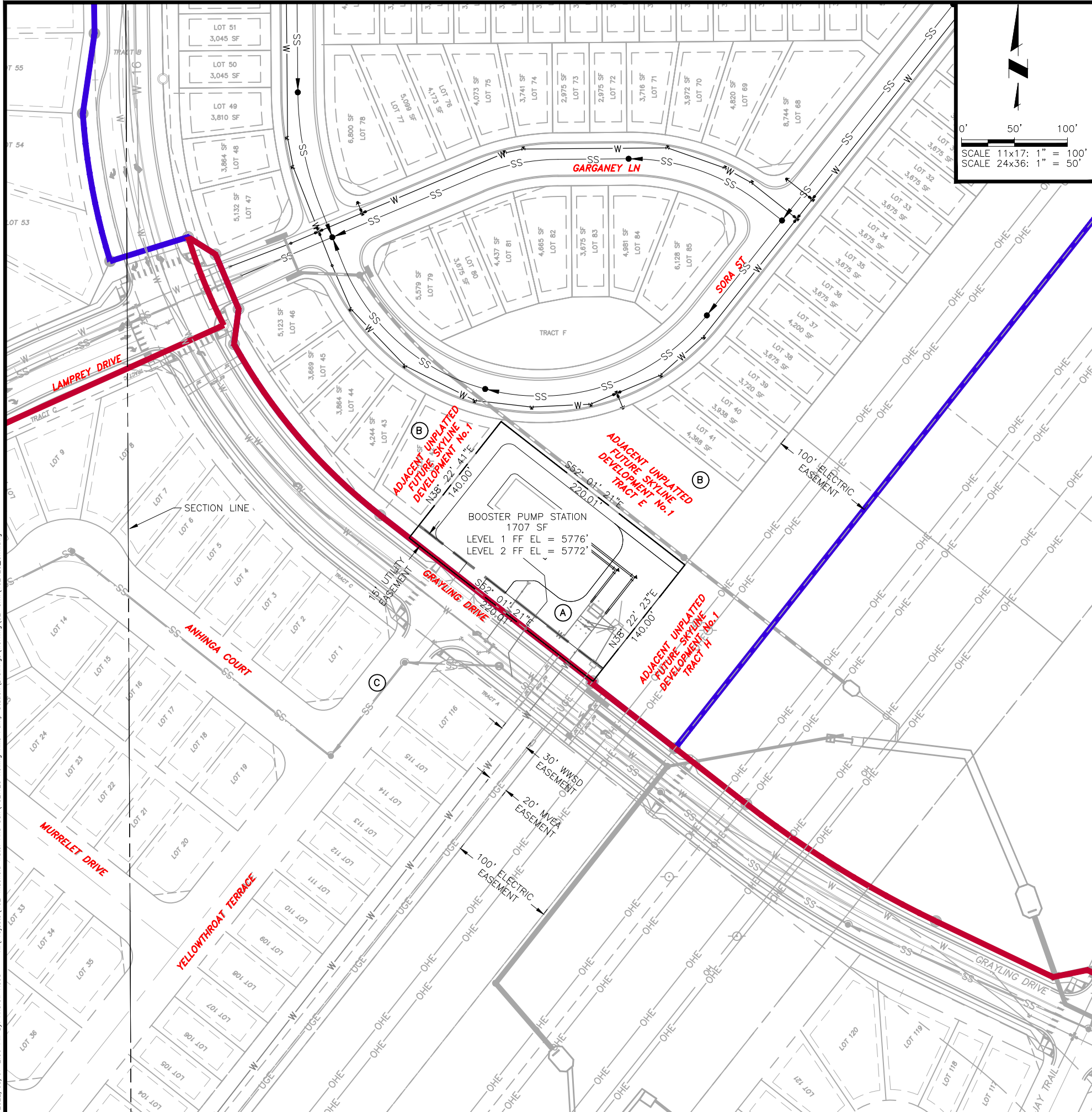
**FOR BID**

Project No.: 102.125  
Date: 03/02/22  
Design: GJD  
Drawn: ACH  
Check: GJD

**G4**  
SHEET ---- OF



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VICINITY MAP  
SCALE: 1"=1000'

- LEGEND:
- PROPOSED SKYLINE AT LORSON RANCH
  - HILLS AT LORSON RANCH FILING NO. 1
  - EX WATER LINE
  - PROPOSED WATER LINE

- (A) PROJECT LOCATION  
PERMANENT EASEMENT/FUTURE TRACT D OF PARCEL SCHED. #: 5500000440  
(SEE EASEMENT AGREEMENT REC. NO. 218025813)  
OWNER: WIDEFIELD WATER AND SANITATION DISTRICT  
PLAT #: UNPLATTED  
AC: 0.707 (30,800 SF)  
TAX STATUS: EXEMPT  
ZONING: PUD
- (B) ADJACENT PROPERTY  
SCHEDULE #: 5500000440  
OWNER: LORSON LLC NOMINEE FOR MURRAY FOUNTAIN LLC  
PLAT #: UNPLATTED  
LAND USE: VACANT LAND  
AC: 11.96  
TAX STATUS: TAXABLE  
ZONING: PUD
- (C) ADJACENT PROPERTY  
SCHEDULE #: 5513300004  
OWNER: SAINT AUBYN HOMES LLC  
MAILING ADDRESS: 212 N WAHSATCH AVE  
STE 301, COLO SPRINGS, CO 80903  
PLAT #: UNPLATTED  
LAND USE: VACANT LAND  
AC: 15.85  
TAX STATUS: TAXABLE  
ZONING: PUD

PCD File No. PPR-21-75

**JDS-HYDRO** CONSULTANTS, INC.  
5540 TECH CENTER DR, SUITE 100  
COLORADO SPRINGS, COLORADO 80919  
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WIDEFIELD WATER AND SANITATION DISTRICT  
ROLLING HILLS BOOSTER PUMP STATION  
OVERALL SITE PLAN/VICINITY MAP

NO.	DESCRIPTION	BY	APP.	DATE
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2				
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FOR BID

Project No.: 102.125  
Date: 03/02/22  
Design: GGM  
Drawn: ACH  
Check: GJD

**C1**  
SHEET ---OF

2022/03/07 2:06 PM By: Andrew Hood N:\Projects\102\_125 Widefield Water And San\102.125 Rolling Hills Pump Station Drawings\Working\02-Civil\102125\_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 LOOSENEED 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 - 992(\*1.15) = 1141 CY  
 NET - 926 CY FILL

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.**  
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 COLORADO SPRINGS, COLORADO 80919  
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**WIDEFIELD WATER AND SANITATION DISTRICT**  
 ROLLING HILLS BOOSTER PUMP STATION  
 GEC NOTES

NO.	DESCRIPTION	BY	APP.	DATE
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**FOR BID**

Project No.: 102.125  
 Date: 03/02/22  
 Design: GGM  
 Drawn: ACH  
 Check: GJD

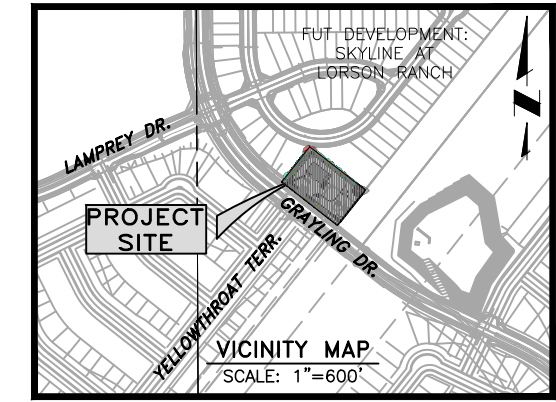
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OVERALL LEGEND			
	EX EASEMENT/FUT PROPERTY		PP EROSION CONTROL SILT FENCE (INITIAL)
	EX RIGHT-OF-WAY		DEVELOPED FLOW DIRECTION
	EX PROPERTY SETBACK		PRE-DEVELOPED FLOW DIRECTION
	EX SANITARY SEWER MANHOLE		CONCRETE
	EX FIRE HYDRANT		BASE COURSE
	EX 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		

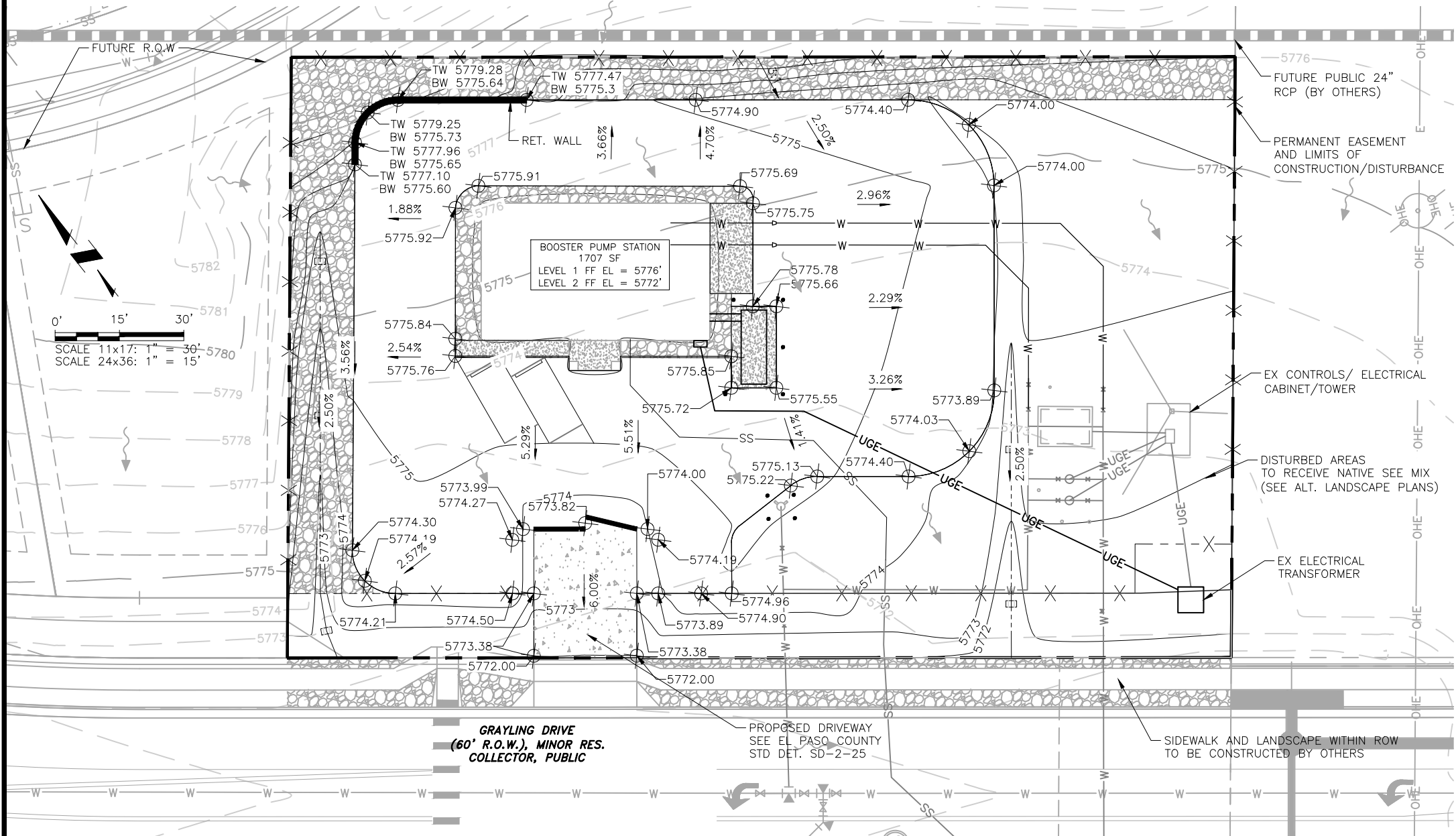
NOTE: SEE ALT. LANDSCAPE LEGEND FOR ADDITIONAL SYMBOLLOGY

- 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.



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Curb openings and sidewalk chases for conveying site runoff to Grayling Drive are not recommend due to increasing maintenance overtime. Recommend conveying site flows to RCP at rear of lot. If approved a maintenance agreement will be necessary for the chases.

Unresolved

The current proposed design will need to be revised so that concentrated flow across the sidewalk does not have the propensity to erode or scour the landscape and sidewalk areas

Revert design to sidewalk chase with cobble/riprap prior to chase inlet. Chase should be more aligned with gutter line as opposed to perpendicular out towards center of roadway.

Please also examine design options for conveying flows from west to east such that only one sidewalk chase would possibly be needed. Site flows out the driveway are also acceptable.

Please contact County to discuss design prior to submission for review PCD Engineering Ed Schoenheit 719-520-6813

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

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FOR BID

Project No.: 102.125  
 Date: 03/02/22  
 Design: RGG  
 Drawn: ACH/AAC  
 Check: GJD

PCD File No. PPR-21-75

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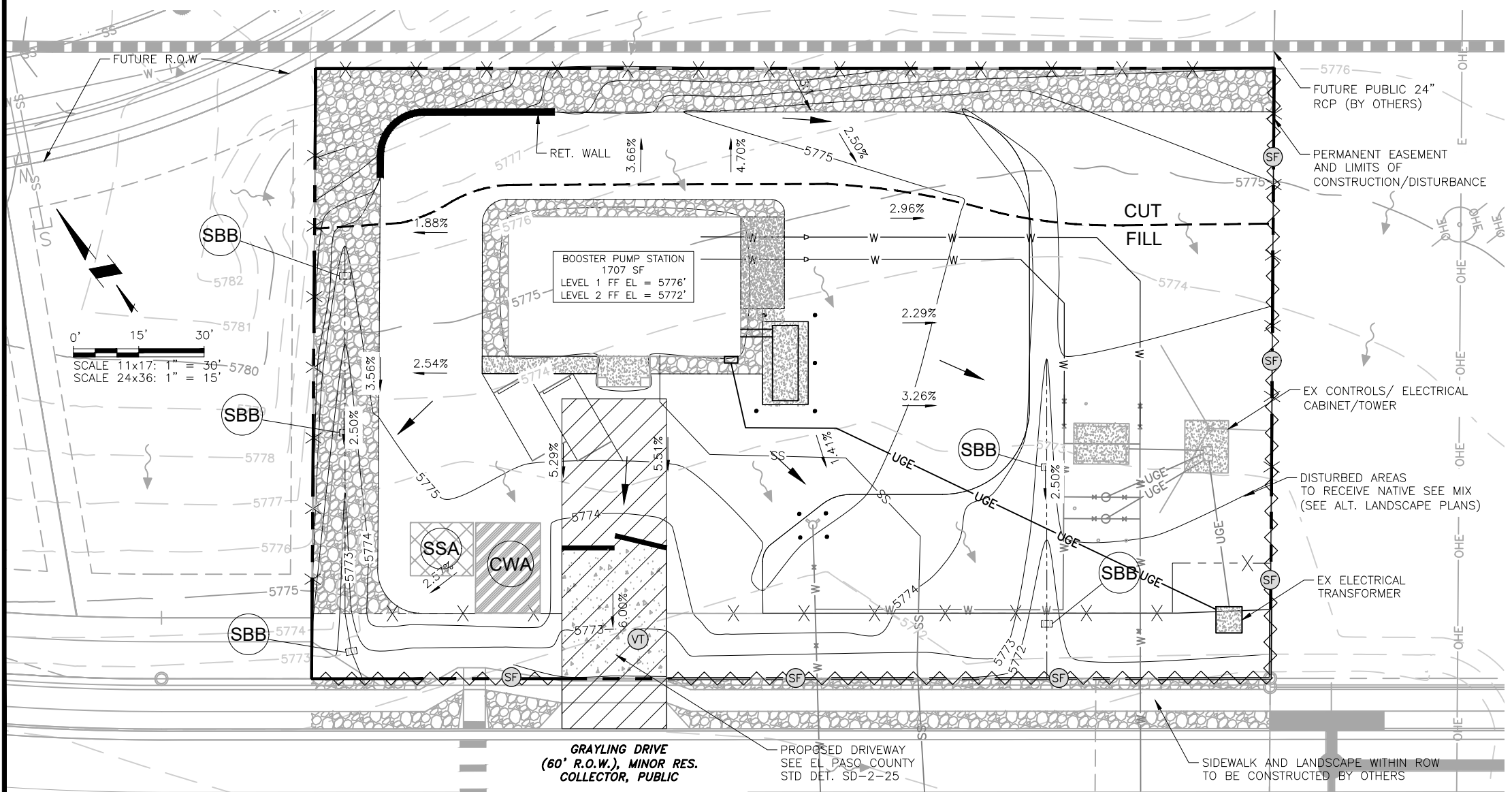
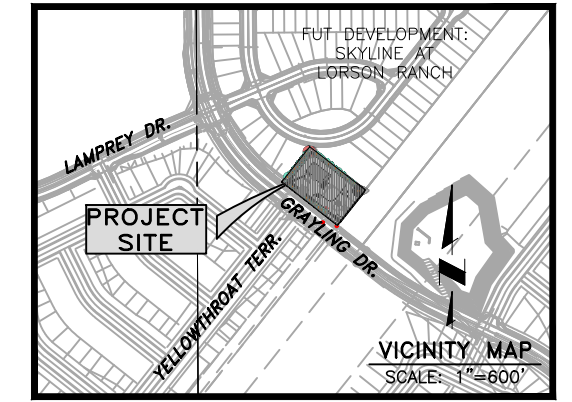
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**OVERALL LEGEND**

	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 SYMBOLLOGY

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

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Project No.: 102.125  
 Date: 03/02/22  
 Design: RGG  
 Drawn: AAC/ACH  
 Check: GJD

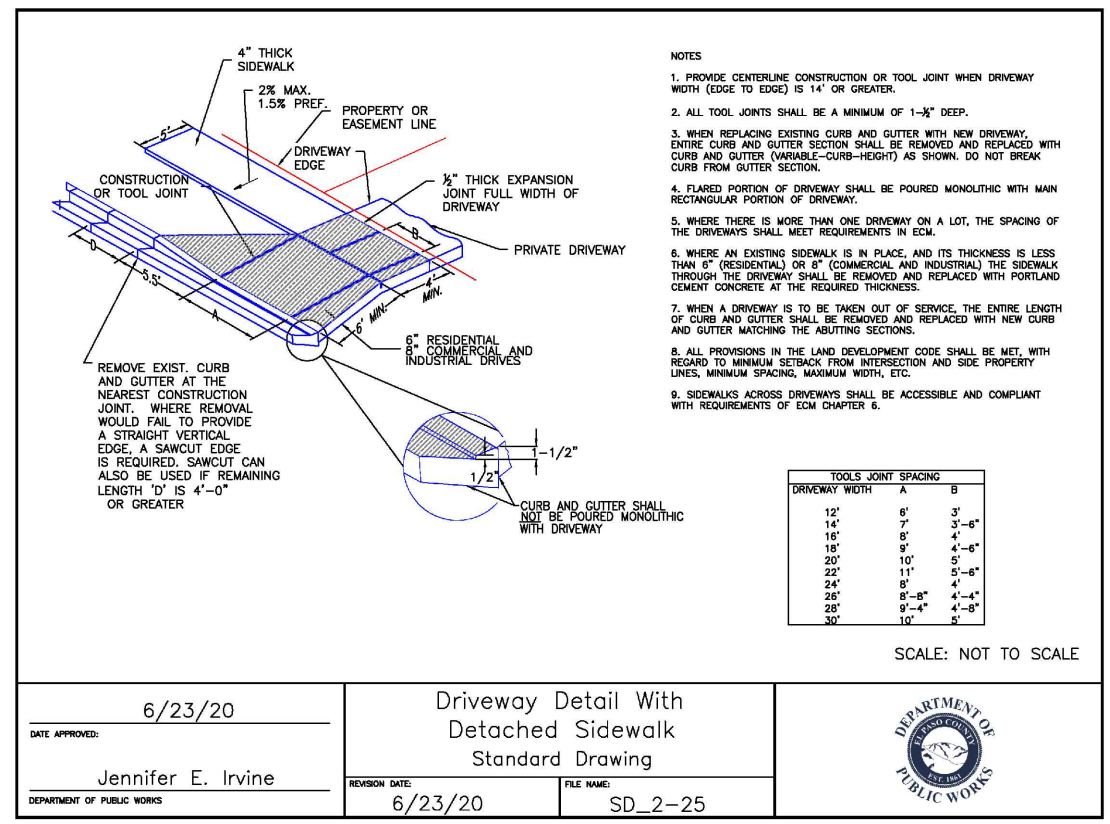
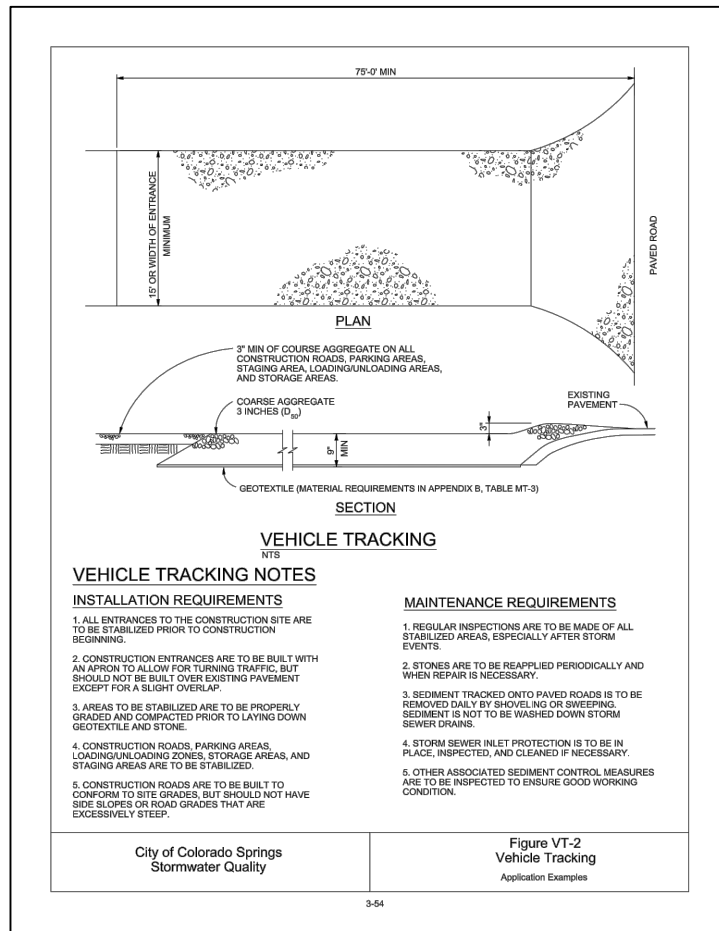
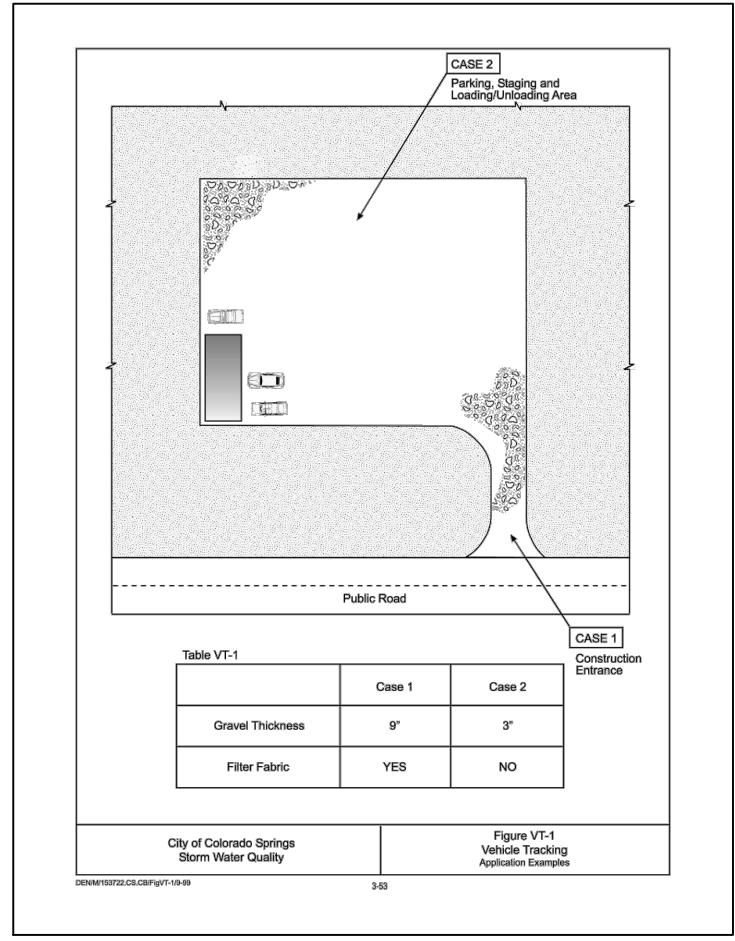
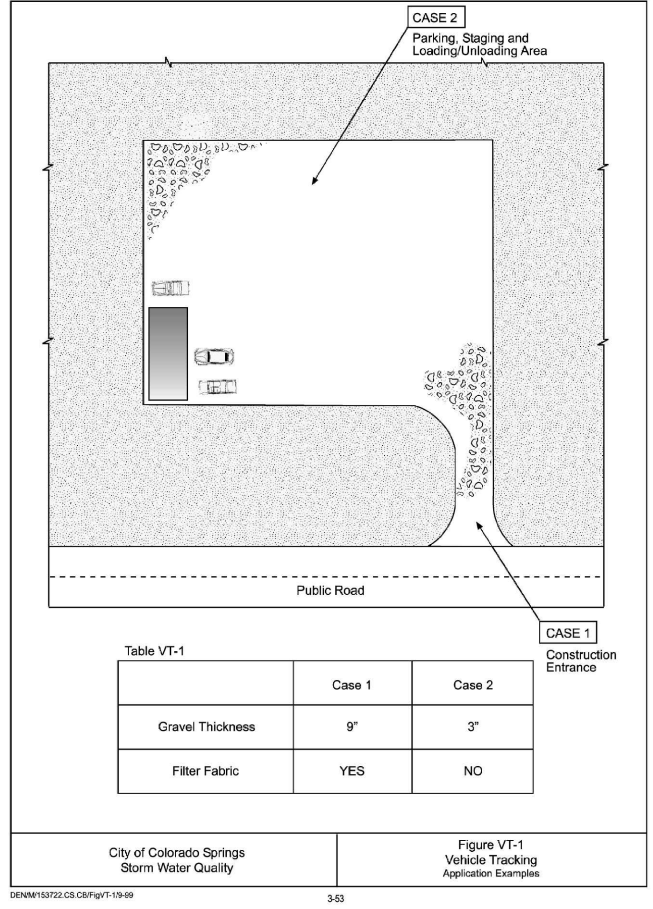
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**WIDEFIELD WATER AND SANITATION DISTRICT**  
 ROLLING HILLS BOOSTER PUMP STATION  
 GEC DETAILS

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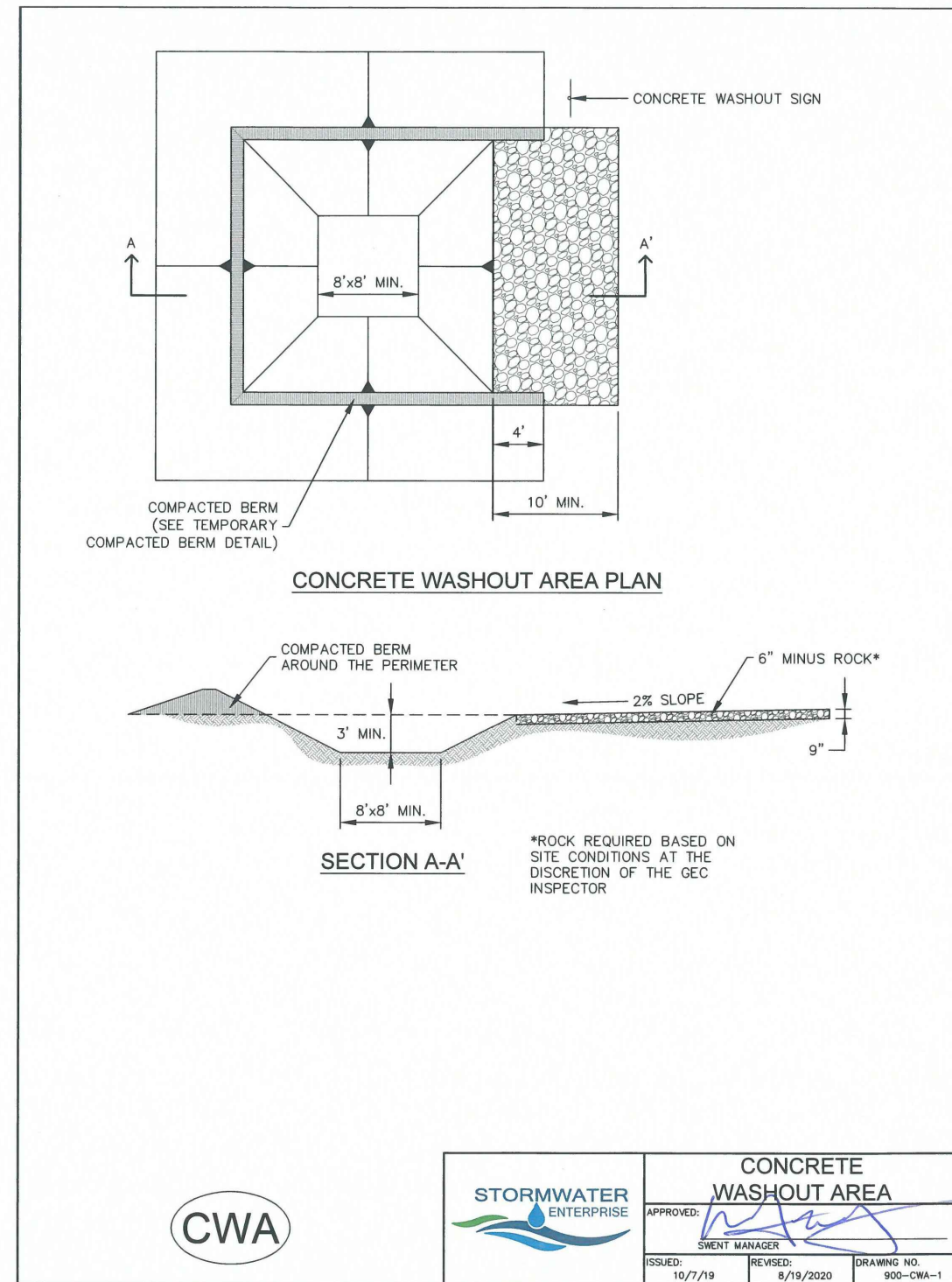
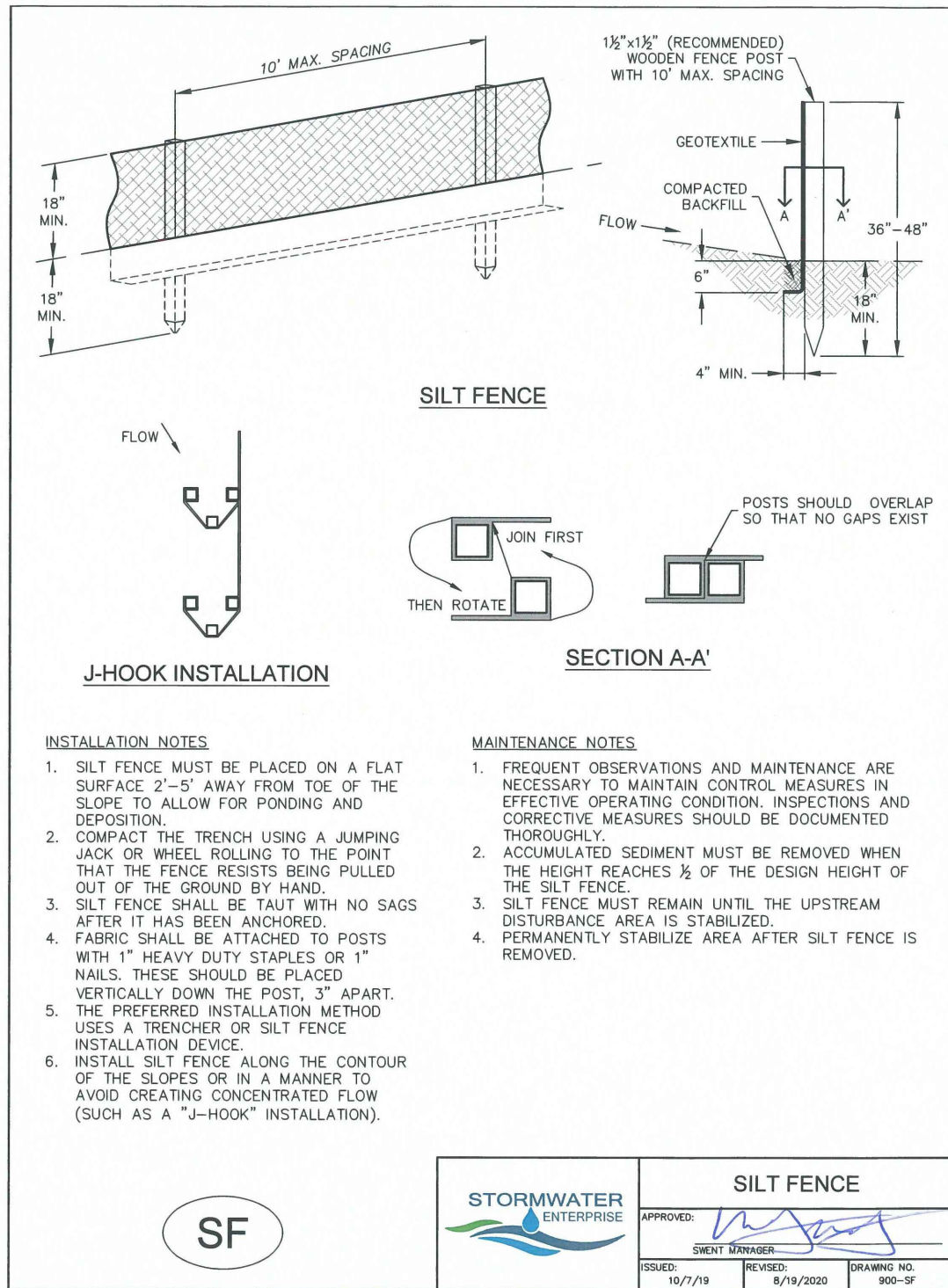
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**WIDEFIELD WATER AND SANITATION DISTRICT**  
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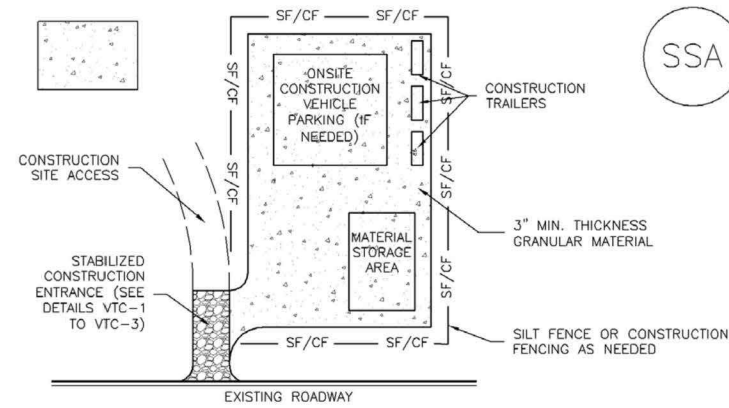
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PCD File No. PPR-21-75



**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, SEEDING 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

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

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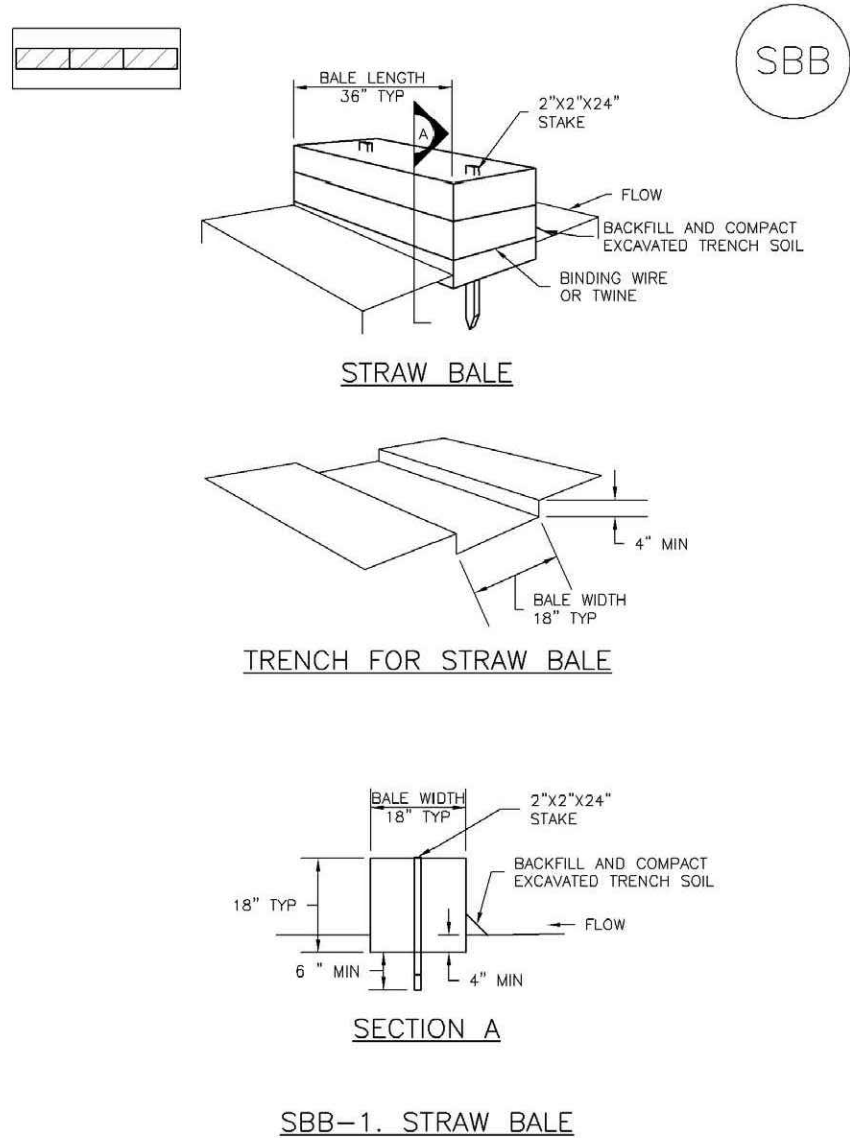
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SC-3

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

NO.	DESCRIPTION	BY	APP.	DATE
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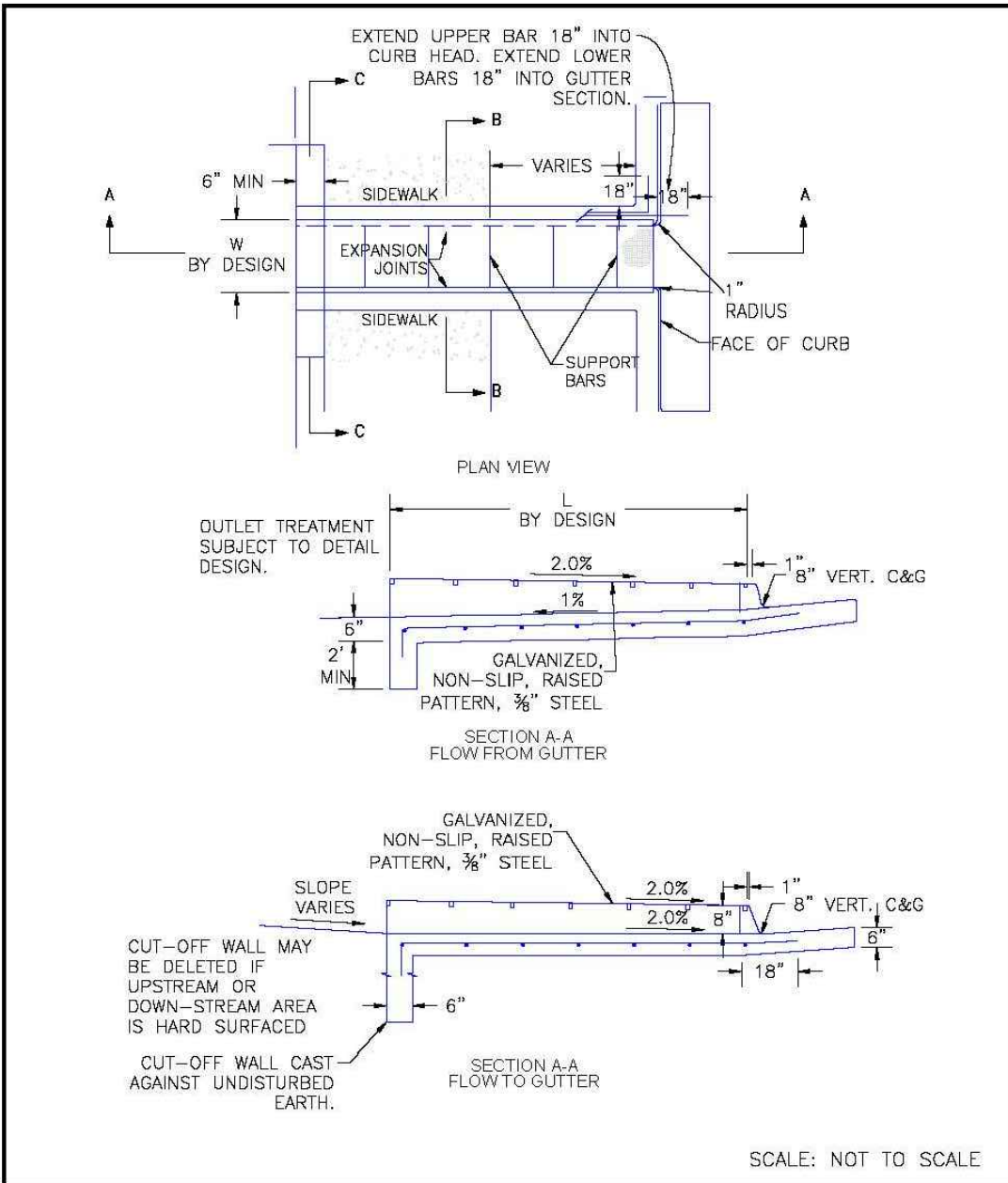
Project No.: 102.125  
Date: 03/02/22  
Design: RGG  
Drawn: AAC  
Check: GJD

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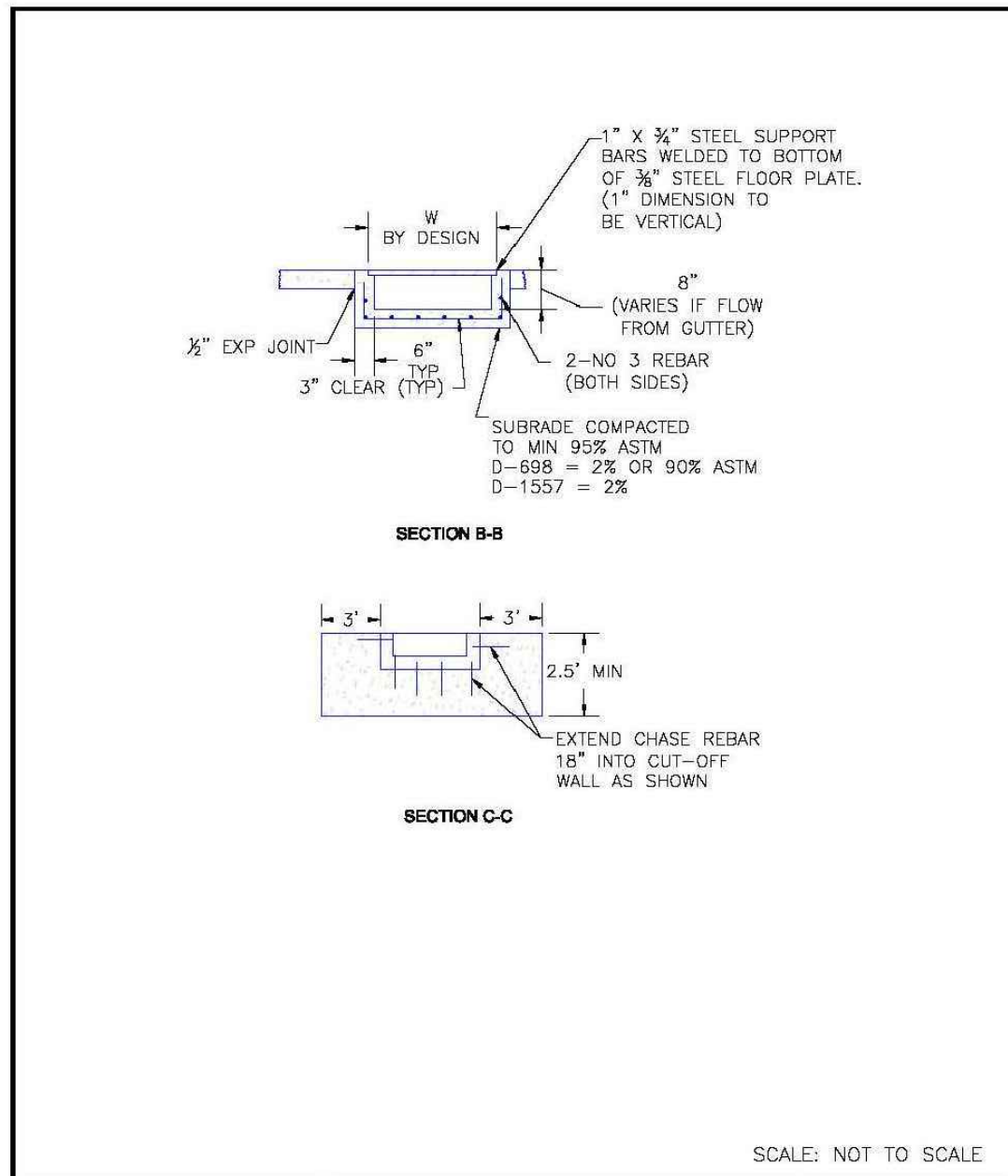
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8/11/11 DATE APPROVED:	Curb Opening with Drainage Chase Detail 1 of 2 Standard Drawing	
André P. Brackin DEPARTMENT OF TRANSPORTATION	REVISION DATE: 12/8/15 FILE NAME: SD_3-25	



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	

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