

# **STORMWATER MANAGEMENT PLAN (SWMP)**

**for**

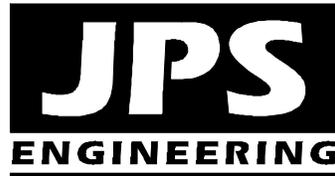
## **ROLLIN RIDGE - FILING NO. 1**

**Prepared for:**

**TC&C LLC**  
17572 Colonial Park Drive  
Monument, CO 80132

October 25, 2019

**Prepared by:**



**19 E. Willamette Ave.**  
**Colorado Springs, CO 80903**  
**(719)-477-9429**  
**[www.jpsengr.com](http://www.jpsengr.com)**

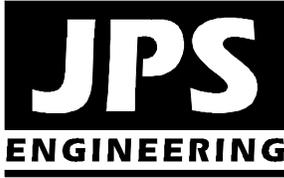
**JPS Project No. 081702**  
**SF-19-\_\_**

**ROLLIN RIDGE – FILING NO. 1**  
**STORMWATER MANAGEMENT PLAN (SWMP)**  
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**ROLLIN RIDGE FILING NO. 1  
STORMWATER MANAGEMENT PLAN (SWMP)**

October, 2019

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**I. QUALIFIED STORMWATER MANAGER**

**A. Qualified Stormwater Manager**

**Contractor:** To Be Determined

**B. Applicant / Contact Information**

**Owner/Developer:** TC&C LLC  
17572 Colonial Park Drive  
Monument, CO 80132  
Attn: Carl Turse (719)-651-4013  
carlturse@msn.com

**Engineer:** JPS Engineering, Inc.  
19 E. Willamette Avenue  
Colorado Springs, CO 80903  
Attn: John P. Schwab, P.E. (719)-477-9429  
john@jpsengr.com

## II. SPILL PREVENTION AND RESPONSE PLAN

### A. Spill Prevention and Response Procedures:

- The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on site and prevent their release into receiving waters.
- Spill Response Procedures:
  - Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
  - If spills represent an imminent threat of escaping on-site facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
  - The site superintendent, or his designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
  - Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
- Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP Administrator.
- Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be on-hand at all fueling sites for disposal of used absorbents.
- Recommended components of spill kits include the following:
  - Oil absorbent pads (one bale)
  - Oil absorbent booms (40 feet)
  - 55-gallon drums (2)
  - 9-mil plastic bags (10)
  - Personal protective equipment including gloves and goggles

### B. Notification Procedures:

- In the event of an accident or spill, the SWMP Administrator shall be notified as a minimum.
- Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line: 877-518-5608), downstream water users, or other agencies may also need to be notified.
- Any spill of oil which 1) violates water quality standards, 2) produces a “sheen” on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800)-424-8802.

### III. MATERIALS HANDLING

#### A. General Materials Handling Practices:

- Potential pollutants shall be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials. Chemicals that are not compatible shall be stored and segregated areas so that spilled materials cannot combine and react.
- Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
- Materials no longer required for construction shall be removed from the site as soon as possible.

#### B. Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.

#### C. Specific Materials Handling Practices:

- All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled in a way that does not contaminate storm water.
- All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored on site shall be covered and contained and protected from vandalism.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of.
- Wheel wash water shall be settled and discharged on site by infiltration. Wheel wash water shall not be discharged to the storm water system.
- Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and ad application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.
- pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected on site. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters.

- D. Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures
- E. Concrete Wash Water: Unless confined in a pre-defined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the job site. The discharge of water containing waste cement to the storm drainage system is prohibited.

**IV. POTENTIAL SOURCES OF POLLUTION**

Potential pollutant sources will be addressed as follows:

**POTENTIAL POLLUTION SOURCES**

<b>Potential Pollution Sources</b>	<b>Possible Site Contributions of Pollutants to Stormwater Discharges</b>
All disturbed and stored soils	Stockpiles of fill from site excavations, topsoil stockpiles.
Vehicle tracking of sediments	See GEC Plans for vehicle entrance and exits. Vehicle tracking control pads will be installed and maintained at all construction access points.
Management of contaminated soils	No contaminated soils are expected to be encountered.
Loading and unloading operations	Loading and unloading of construction materials
Outdoor storage activities (building material, fertilizers, chemicals, etc.)	Stockpiles and equipment storage areas (no fertilizers, petroleum or chemical products will be stored on-site).
Vehicle and equipment maintenance and fueling	Fueling will occur on-site using mobile equipment (will not be stored on-site). Equipment maintenance will occur off-site.
Significant dust or particulate-generating processes	Vehicle tracking, soil removed from excavation, stockpiles.
Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.	All equipment maintenance will occur off-site. No fertilizers, pesticides, detergents, and/or solvents will be used or stored on-site.
On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)	All waste will be removed from site as soon as possible, and disposed of at a permitted off-site disposal site
Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment	Properly contained concrete washout areas may be designated and maintained within the site, based on construction phasing.
Dedicated asphalt and concrete batch plants	No dedicated asphalt or concrete batch plants are planned on-site.

Non-industrial waste sources such as worker trash and portable toilets	Worker trash will be removed from the site as soon as possible. Portable toilets will be utilized and maintained as required based on construction phasing.
Other areas or procedures where potential spills can occur	Petroleum releases from equipment are possible.

## V. IMPLEMENTATION OF CONTROL MEASURES

### Narrative Description of Appropriate Stormwater Controls and Measures

#### Construction Phasing

##### ***Phase 1 – Mobilization, Clearing & Grubbing Operations***

Clearing and grubbing will be completed prior to initial overlot grading activities for this site. Perimeter control measures will be installed prior to the start of construction operations. These perimeter controls will include silt fencing and a vehicle tracking control pad.

##### ***Phase 2 – Earthwork, Road Grading, and Utility Installation***

Major earthwork activities will include overlot grading, foundation over-excavation, backfill, and compaction, utility construction, and rough and final grading for site improvements.

##### ***Phase 3 – Building Construction and Final Grading Activities***

This phase will include final grading of building sites and landscape areas. Appropriate temporary BMP's will be maintained until vegetation is re-established throughout the site.

##### ***Phase 4 – Stabilization***

All disturbed areas within the project will be revegetated. The specific revegetation requirements will include the following:

- Landscape plantings – per approved landscape plans
- Native seeding – all other disturbed areas

##### ***Phase 5 – Removal of Temporary Control Measures***

Temporary sediment control measures shall remain in place until vegetation has been adequately established to prevent erosion from storm runoff. Once adequate vegetation has been established, the temporary erosion control measures will be removed and disposed of off-site.

**BMP's for Stormwater Pollution Prevention (See GEC Plans):**

<u>Phase</u>	<u>BMP</u>
Clearing and Grubbing necessary for perimeter controls	VTC's
Initiation of perimeter controls	Silt Fence
Remaining clearing and grubbing	
Site Grading	IP
Extended detention basin (sediment basin during construction)	EDB / SB
Stabilization	SM
Removal of erosion control measures	

**Proposed Sequence of Major Activities / Timing Schedule**

The anticipated start and completion time period of the construction activities is from March, 2020 through September, 2020. The estimated schedule for erosion control activities is as follows:

- Install Initial BMP's: March, 2020
- Site Grading: March, 2020
- Seeding & Mulching: September, 2020
- Final Stabilization: September, 2021

**Erosion and Sediment Controls:**

- 1) Structural Practices / Control Measures (all structural Control Measures shall conform to ECM / DCM standards and details):
  - Silt fence at toe of slope along downstream limits of disturbed areas
  - Inlet protection (IP) at storm / culvert inlets
  - Sediment Basin (SB)
  - Extended Detention Basins (EDB)
- 2) Non-Structural Practices:
  - Preserve existing vegetation beyond limits of work
  - Temporary seeding of areas to remain disturbed for significant periods of time
  - Permanent seeding/mulching (SM) upon completion of rough grading

**Other Controls:**

- Contractor shall dispose of all waste materials at a permitted off-site disposal site.
- Vehicle tracking pads will be installed at all access points to limit off-site soil tracking.
- Street Sweeping: Contractor shall perform street sweeping following storm events and as required to keep adjoining public streets clean.

## **VI. SITE DESCRIPTION**

- A. Nature of Construction Activity
- Rollin Ridge Estates is a proposed subdivision of a 57-acre property located in northeastern El Paso County, Colorado. The Rollin Ridge Estates property is comprised of two parcels (El Paso County Assessor's Number 61270-00-064 and 61270-00-065) is located at the southwest corner of State Highway 83 (SH83) and Hodgen Road (see attached GEC Plans). Rollin Ridge Filing No. 1 consists of 16 rural residential lots (2.5-acre minimum size), along with a detention pond tract and a 5.3-acre tract for future commercial development. Site development activities will include site grading, utilities, road construction, and related site improvements.
- B. Proposed sequence of major activities:
- Mobilization / implementation of BMP's
  - Clearing and grubbing
  - Rough grading
  - Final grading of subdivision roads
  - Seeding and stabilization
- C. Total site area = 57-acres; Projected disturbed area = 12.3-acres (approx.)
- D. Soil erosion potential and potential impacts upon discharge:
- On-site soils are comprised of the following:
    - Type 21 – Cruckton sandy loam: Hydrologic Group B
    - Type 28 – Ellicott loamy coarse sand: Hydrologic Group A (30%)
    - Type 41 – Kettle gravelly loamy sand: Hydrologic Group B
    - Type 68 – Peyton-Pring complex: Hydrologic Group B
  - The majority of on-site soils are classified as Hydrologic Soils Group B (moderate infiltration rate; low to moderate erosion hazard).
  - Potential impacts upon discharge would include sedimentation closing and/or adversely affecting downstream waterways and habitat.
- E. Existing vegetation on site:
- Native grasses and shrubs (approx. 70% coverage, based on site inspection)
- F. Allowable non-stormwater components of discharge: none anticipated
- G. Receiving water: Surface drainage from this site will flow northerly into the existing downstream drainage system which flows to West Cherry Creek (ultimate receiving water). The stormwater outfalls immediately downstream of the project site consist of two existing culverts crossing Hodgen Road.
- H. Stream Crossings: There are no stream crossings located within the construction site boundary.

## **VII. SITE MAP**

- SWMP Maps are provided on GEC Plans – Sheet C1.1
- Qualified Stormwater Manager shall update SWMP Maps as required based on field conditions throughout the project.

- Contractor shall update and annotate the SWMP Maps to show the location of the construction trailer, stabilized staging area, CWA, and other items as these locations are determined on site.

## **VIII. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT**

- A. Permanent seeding will be provided to achieve long-term stabilization of the site.
- B. Seed Mix: “Foothills Mix” or approved equal:
- C. Seeding Application Rate: Drill seed 0.25” to 0.5” into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25” to 0.5” into the soil. Apply seed at the following rates:
  - Dryland: 20-25 lbs/acre
  - Irrigated: 40 lbs/acre
- D. Soil Stabilization Practices:
  - Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- E. Soil Conditioning and Fertilizer Requirements:
  - Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
  - Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- F. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
- G. Structural Control Measures:
  - Re-seeding and landscaping for site stabilization
  - Permanent Stormwater Detention & Water Quality Ponds A and B
- H. Non-Structural Control Measures:
  - Proper Housekeeping Procedures
  - Proper Spill Containment Procedures

## **IX. INSPECTION REPORTS**

- A. Qualified Stormwater Manager: Designated Inspector shall be a Qualified Stormwater Manager per CDPHE criteria.
- B. Inspection Frequency:
  - Contractor shall inspect BMPs bi-weekly as a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in stormwater running across the ground), to ensure that BMPs are maintained in effective operating condition.

C. Inspection Procedures:

Site Inspection / Observation Items:

- Construction site perimeter and discharge points (including discharges into a storm sewer system)
- All disturbed areas
- Areas used for material / waste storage that are exposed to precipitation
- Other areas having a significant potential for stormwater pollution, such as demolition areas or concrete washout locations, or locations where vehicles enter or leave the site
- Erosion and sediment control measures identified in the SWMP
- Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the condition of spill response kits.

D. Inspection Requirements:

- Determine if there is any evidence of, or potential for, pollutants entering the drainage system.
- Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
- Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.

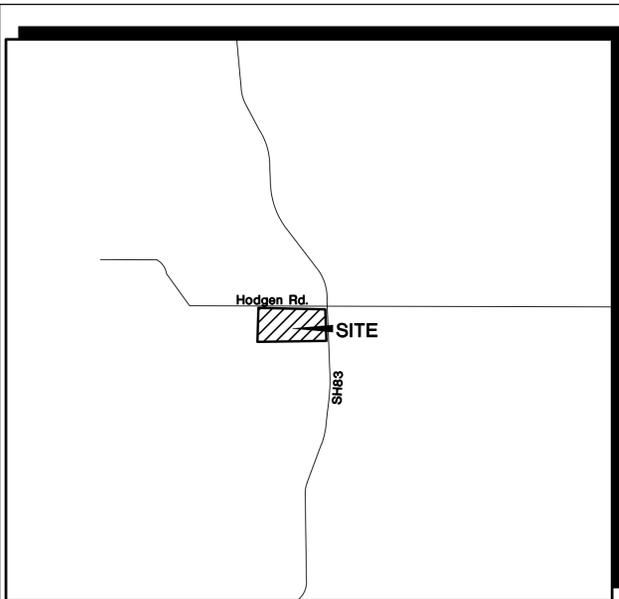
BMP Maintenance / Replacement and Failed BMPs:

- Contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.
- Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source, and should never be placed in ditches or streams.
- Contractor shall update Erosion Control Plans / SWMP Maps and SWMP Plan as required with any new BMPs added during the construction period.
- Contractor shall address BMPs that have failed or have the potential to fail without maintenance or modifications, as soon as possible, immediately in most cases, to prevent discharge of pollutants.

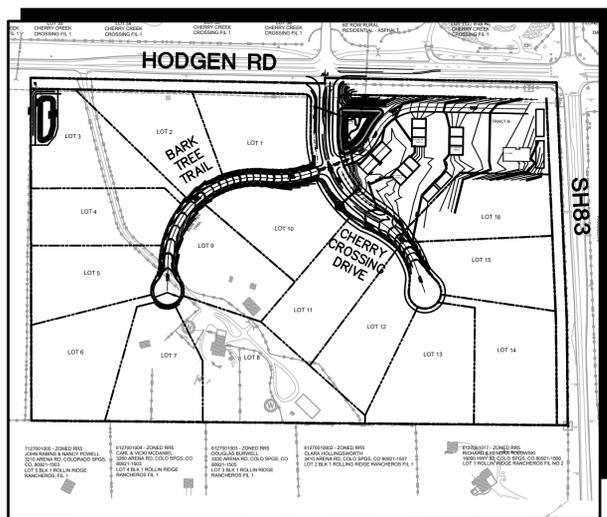
E. Inspection Reports:

- Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site. SWMP records shall be located in the project trailer.
- Inspection logs shall be signed by the Qualified Stormwater Manager.
- Permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.

- Site inspection records shall include the following:
  - Inspection date
  - Name and title of personnel making the inspection, along with Inspector's signature
  - Location of discharges of sediment or other pollutants from the site
  - Location(s) of BMPs that need to be maintained
  - Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
  - Location(s) where additional BMPs are needed that were not in place at the time of inspection
  - Deviations from the minimum inspection schedule
  - Notations regarding updates and revisions to SWMP Maps based on field conditions



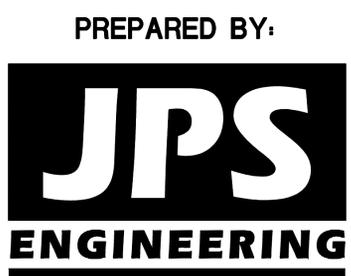
VICINITY MAP  
NOT TO SCALE



SITE MAP  
NOT TO SCALE

# ROLLIN RIDGE Filing No. 1 Grading & Erosion Control Plans El Paso County, Colorado

PREPARED FOR:  
**TC&C LLC**  
17572 Colonial Park Drive  
Monument, CO 80132



PREPARED BY:  
**19 East Willamette Avenue**  
Colorado Springs, Colorado 80903  
October, 2019

**AGENCIES/CONTACTS**

<b>DEVELOPER:</b>	TC&C LLC 17572 COLONIAL PARK DRIVE MONUMENT, CO 80132 MR. CARL TURSE (719) 487-6100	<b>GAS DEPARTMENT:</b>	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719)399-3176
<b>CIVIL ENGINEER:</b>	JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903 MR. JOHN P. SCHWAB, P.E. (719)477-9429	<b>ELECTRIC DEPARTMENT:</b>	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719)495-2283
<b>LOCAL ROADS &amp; DRAINAGE:</b>	EL PASO COUNTY PCD 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910 (719) 520-6300	<b>TELEPHONE COMPANY:</b>	CENTURY LINK COMMUNICATIONS (LOCATORS) (800)922-1987  A.T. & T. (LOCATORS) (719)635-3674
<b>STATE HIGHWAY</b>	COLORADO DEPARTMENT OF TRANSPORTATION REGION 2 5615 WILLS BLVD. PUEBLO, CO 81008 MS. VALERIE SWORD (719)546-5407		

**GEC PLAN SHEET INDEX**

G1	TITLE SHEET
G2	GENERAL NOTES & LEGEND
TY1	TYPICAL SECTIONS & DETAILS
C1.1	SITE GRADING & EROSION CONTROL PLAN
C1.2	NORTHEAST SITE GRADING & EROSION CONTROL PLAN
C2	EROSION CONTROL NOTES & DETAILS
C3.1	DETENTION POND A PLAN & DETAILS
C3.2	DETENTION POND B PLAN & DETAILS

**ENGINEER:**  
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 LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

JOHN P. SCHWAB, P.E. #29891 \_\_\_\_\_ DATE \_\_\_\_\_

**OWNER/DEVELOPER'S STATEMENT:**  
I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

TC&C LLC  
17572 COLONIAL PARK DRIVE  
MONUMENT, COLORADO 80132  
\_\_\_\_\_ DATE \_\_\_\_\_

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

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

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

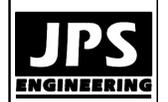
JENNIFER IRVINE, P.E., \_\_\_\_\_ DATE \_\_\_\_\_  
COUNTY ENGINEER / ECM ADMINISTRATOR

Z:\081702-rollin-ridge\dwg\civil\G1 - GEC.dwg Oct. 21, 2019 - 2:10pm

**BASIS OF BEARING:**  
BEGINNING AT THE SOUTHWEST CORNER OF PARCEL 3, AS DESCRIBED IN DEED RECORDED UNDER SAID RECEPTION NO. 217125842, SAID POINT ALSO BEING THE SOUTHEAST CORNER OF THAT TRACT OF LAND AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 200156068 OF SAID COUNTY RECORDS, AS MONUMENTED BY A 5/8" REBAR (NO CAP), FROM WHICH THE NORTHWEST CORNER OF SAID PARCEL 3, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF THAT RIGHT-OF-WAY PARCEL AS DESCRIBED IN DEED RECORDED UNDER RECEPTION NO. 206076668 OF SAID COUNTY RECORDS, AS MONUMENTED BY A 5/8" REBAR WITH ORANGE CAP STAMPED "PLS 32439" BEARS N00°06'39"W (S00°06'40"E PER THAT DEED RECORDED UNDER SAID RECEPTION NO. 217125842), A DISTANCE OF 1262.77 FEET (1262.73 FEET OF RECORD)

**BENCHMARK:**  
SURVEY CONTROL POINTS AS SHOWN.  
ALL ELEVATION BASED UPON NGS DESIGNATION "4 BB RESET"  
ELEVATION = 7570.80 (NAVD 88 VERTICAL DATUM)

**ROLLIN RIDGE ESTATES - FILING NO. 1**



19 E. Willamette Ave.  
Colorado Springs, CO  
80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsegr.com



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL OR VISIT US IN AN EXCAVATE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

NO.	REVISION	DATE	BY
1	FINAL PLAT SUBMITTAL	10/21/19	JPS

**GEC PLAN  
TITLE SHEET**

HORIZ. SCALE:	HS	DRAWN:	BJJ
VERT. SCALE:	VS	DESIGNED:	JPS
SURVEYED:	RAMPART	CHECKED:	JPS
CREATED:	8/13/19	LAST MODIFIED:	10/21/19
PROJECT NO.:	081702	MODIFIED BY:	BJJ

PCD FILE NO. SF-19-XXX

**G1**

**COUNTY GENERAL NOTES:**

- 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 LOCATION 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 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 DEPARTMENT (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 DSD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP WITH CLASS B BEDDING UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DSD 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 DEPARTMENT OF PUBLIC WORKS (DPW) AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO DEPARTMENT OF PUBLIC WORKS (DPW), 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.

**PROJECT GENERAL NOTES:**

- EXISTING CONTOUR DATA CONSISTS OF AERIAL TOPOGRAPHIC SURVEY DATA PROVIDED BY OWNER. JPS ENGINEERING TAKES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING TOPOGRAPHIC MAPPING.
- STATIONING IS AT CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE AT EDGE OF ASPHALT (EOA) UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE FROM EDGE OF ASPHALT TO EDGE OF ASPHALT UNLESS OTHERWISE NOTED.
- PROPOSED CONTOURS SHOWN ARE TO FINISHED GRADE.
- LENGTHS SHOWN FOR STORM SEWER PIPES ARE TO CENTER OF MANHOLE.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, DEBRIS, WASTE AND OTHER UNSUITABLE FILL MATERIAL FOUND WITHIN THE LIMITS OF EXCAVATION.
- MATCH INTO EXISTING GRADES AT 3:1 MAX CUT AND FILL SLOPES.
- REVEGETATION OF ALL DISTURBED AREAS SHALL BE DONE WITH SPECIFIED SEED MIX WITHIN 60 DAYS AFTER FINE GRADING IS COMPLETE.
- EROSION CONTROL SHALL CONSIST OF SILT FENCE AND BMP'S AS SHOWN ON THE DRAWING, AND TOPSOIL WITH GRASS SEED, WHICH WILL BE WATERED UNTIL VEGETATION HAS BEEN REESTABLISHED.
- THE EROSION CONTROL MEASURES OUTLINED ON THIS PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE, AND REBUILD AS NECESSARY UNTIL VEGETATION IS RE-ESTABLISHED.
- EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT ADJACENT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED BY SITE CONDITIONS.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE MATERIAL SHALL BE COMPACTED PER EL PASO COUNTY AND CDOT STANDARDS AND SPECIFICATIONS.
- ALL FINISHED GRADES SHALL HAVE A MINIMUM 1.0% SLOPE TO PROVIDE POSITIVE DRAINAGE.
- IN CASE OF CONFLICT BETWEEN PROPOSED SLOPES AND PROPOSED SPOT ELEVATIONS, SPOT ELEVATIONS SHALL GOVERN.
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO BEGINNING WORK.

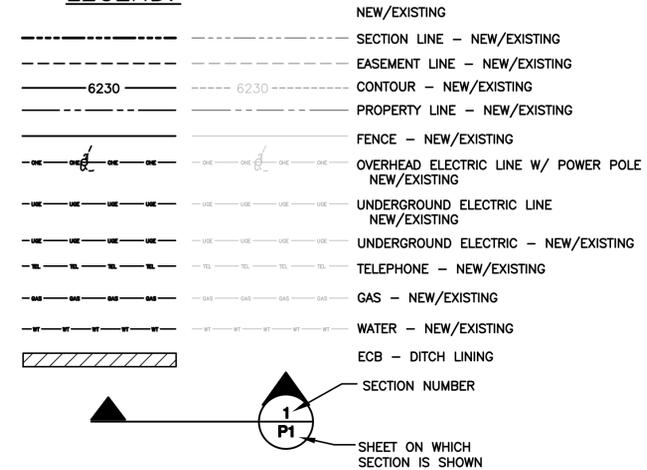
**GENERAL DRAINAGE & GRADING NOTES:**

- INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE IMPACTS WITHIN EACH LOT.
- BUILDERS AND PROPERTY OWNERS SHALL IMPLEMENT & MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES FOR PROTECTION OF DOWNSTREAM PROPERTIES AND FACILITIES INCLUDING PROTECTION OF EXISTING GRASS BUFFER STRIPS ALONG THE DOWNSTREAM PROPERTY BOUNDARIES.
- GRADING AND DRAINAGE WITHIN LOTS IS THE RESPONSIBILITY OF THE INDIVIDUAL BUILDERS AND PROPERTY OWNERS.
- FINAL GRADING TO COMPLY WITH H.U.D. STANDARDS CONTAINED IN SECTION 310 AND 602 OF THE MINIMUM PROPERTY STANDARDS (MPS) 4900.1. HANDBOOK 4140.3 CHG (DATA SHEET 79g), IF APPLICABLE, AND ALL LEGAL STANDARDS.

**COUNTY SIGNING AND STRIPING NOTES:**

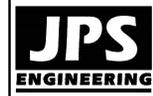
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD).
- ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 6" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8" LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD) (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

**LEGEND:**



**ROLLIN RIDGE - FILING NO. 1**

**GENERAL NOTES & LEGEND**



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Colorado Springs, CO  
80903  
PH: 719-477-9429  
FAX: 719-471-0766  
www.jpsenr.com



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1-800-922-1987  
CALL OR VISIT US IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKINGS OF UNDERGROUND MEMBER UTILITIES.

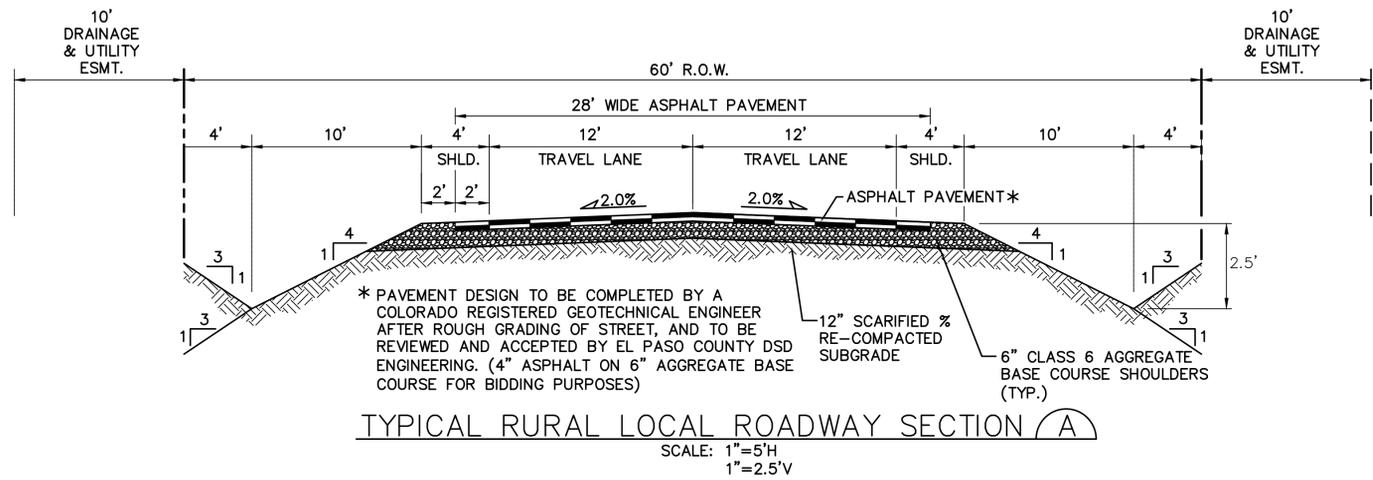
No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	10/21/19

HORIZ. SCALE:	HS	DRAWN:	B.J
VERT. SCALE:	VS	DESIGNED:	JPS
SURVEYED:	RAMPART	CHECKED:	JPS
CREATED:	8/29/19	LAST MODIFIED:	10/21/19
PROJECT NO:	081702	MODIFIED BY:	JPS

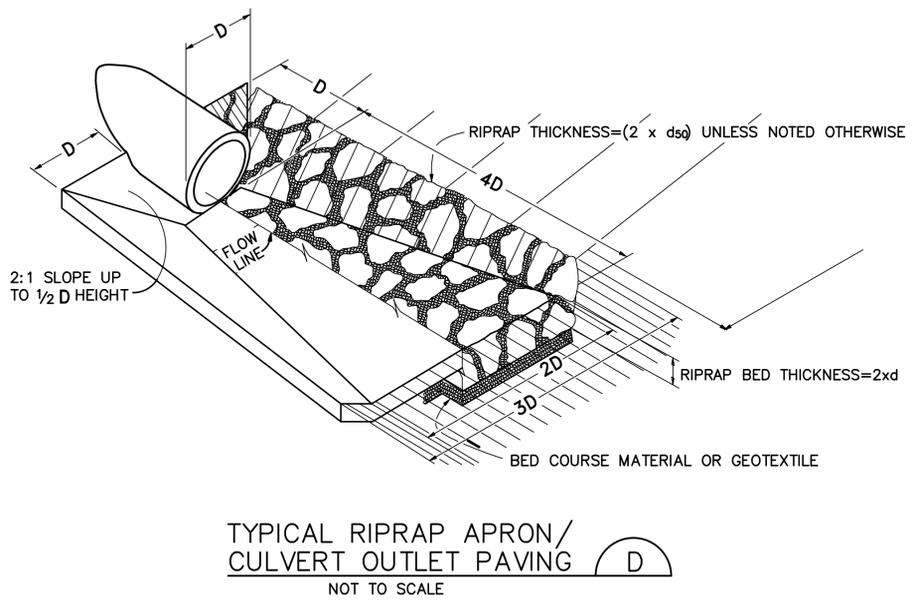
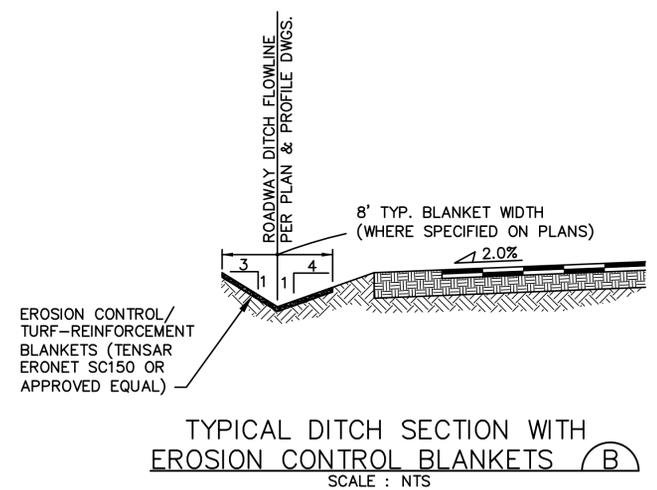
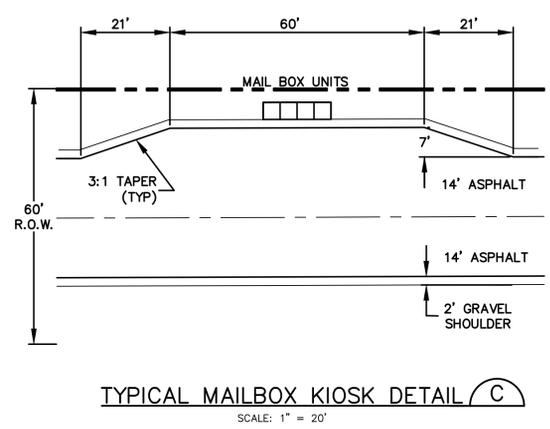
SHEET: **G2**

PCD FILE NO. SF-19-XXX

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DESIGN DATA	REFERENCE STANDARD
ROAD CLASSIFICATION: RURAL LOCAL	
DESIGN SPEED: 30 MPH	ECM TABLE 2-5
POSTED SPEED: 30 MPH	ECM TABLE 2-5
ROADWAY WIDTH: 28' EOA-EOA	ECM FIGURE 2-8
MIN. HORIZONTAL RADIUS: 300'	ECM TABLE 2-5
MIN. GRADE: 1.0%	ECM TABLE 2-5
MAX. GRADE: 8.0%	ECM TABLE 2-5
MAX. CUL-DE-SAC GRADE: 2.0%	ECM TABLE 2-31
MIN. K-VALUE (CREST): 19	ECM TABLE 2-12
MIN. K-VALUE (SAG): 37	ECM TABLE 2-14



# ROLLIN RIDGE - FILING NO. 1



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Colorado Springs, CO  
80903  
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CALL OR VISIT WWW.COCOLORADO.COM IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

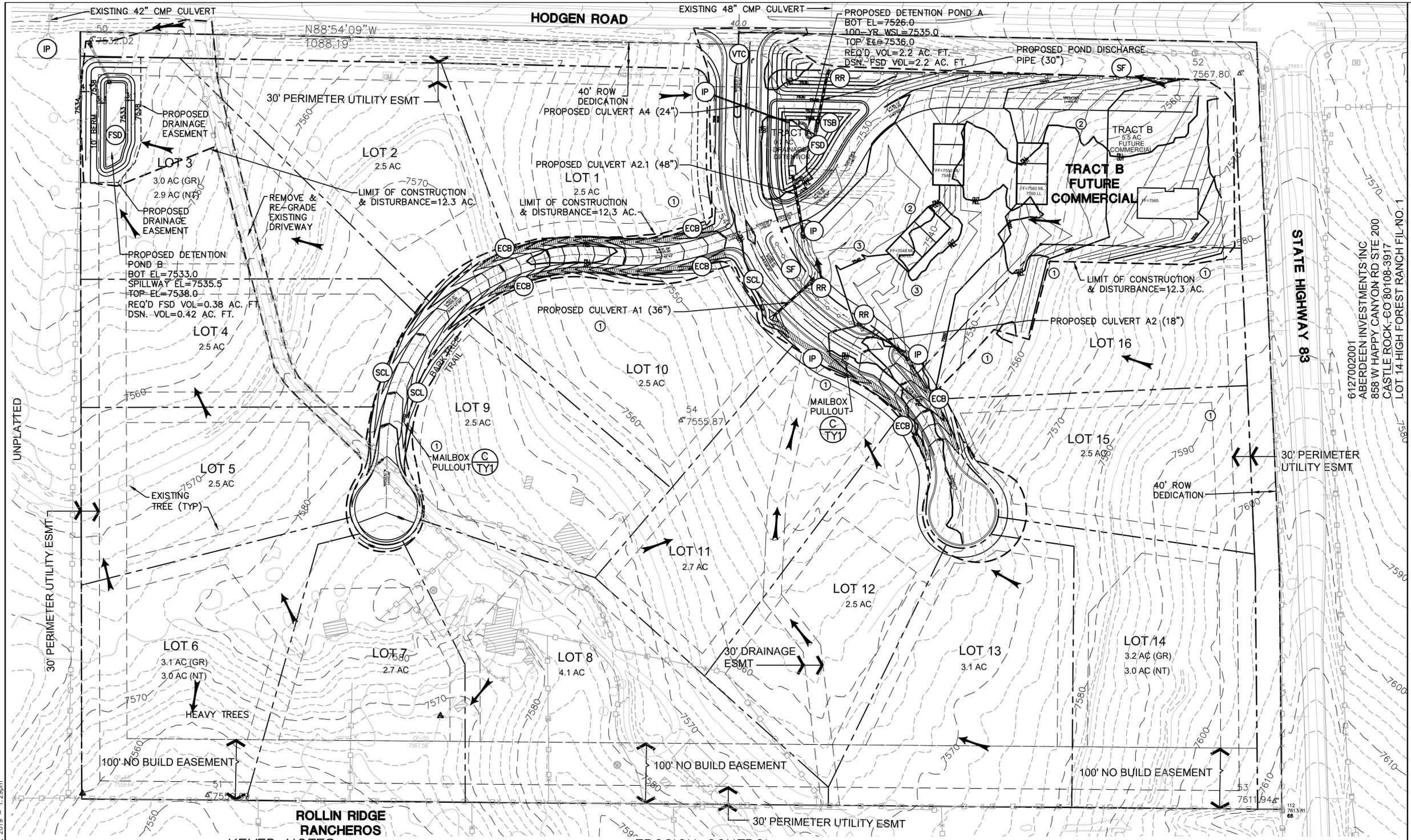
No.	REVISION	BY	DATE
1	FINAL PLAT SUBMITTAL	JPS	10/21/19

## TYPICAL SECTIONS AND DETAILS

HORIZ. SCALE: 1"=5'	DRAWN: BJJ
VERT. SCALE: AS SHOWN	DESIGNED: JPS
SURVEYED: RAMPART	CHECKED: JPS
CREATED: 8/29/17	LAST MODIFIED: 10/21/19
PROJECT NO: 081702	MODIFIED BY: BJJ

SHEET: TY1

Z:\081702-rollin-ridge\dwg\civil\TY1.dwg Oct. 21, 2019 - 1:20pm



**KEYED NOTES:**

1 CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS. ANY PERMANENT BERMS SHALL BE REVIEWED AND APPROVED BY EL PASO COUNTY.

2 TOPSOIL STOCKPILE AREA

3 CONTRACTOR STAGING/EQUIPMENT STORAGE AREA

**BENCHMARK:**  
SURVEY CONTROL POINTS AS SHOWN. ALL ELEVATION BASED UPON NGS DESIGNATION "4 BB RESET" ELEVATION = 7570.80 (NAVD 88 VERTICAL DATUM)

**ESTIMATED EARTHWORK QUANTITY:**

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 14,461 CY  
 \* EMBANKMENT FILL = 29,188 CY  
 NET (FILL) = 14,727 CY  
 \* (ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME TO FINISHED GRADE, EXCLUDING ANY ADJUSTMENT FOR PAVEMENT DEPTHS, ETC. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

- EROSION CONTROL:**
- RR RIPRAP
  - VTC VEHICLE TRACKING PAD
  - SF SILT FENCE
  - FSD FULL-SPECTRUM DETENTION BASIN
  - SCL SEDIMENT CONTROL LOG
  - ECB EROSION CONTROL BLANKET
  - IP INLET PROTECTION
  - TSB TEMPORARY SEDIMENT BASIN

- LEGEND:**
- |     |   |     |     |                      |
|-----|---|-----|-----|----------------------|
| --- | NEW/EXISTING                                      | TEL | TEL | TEL - NEW/EXISTING   |
| --- | SECTION LINE - NEW/EXISTING                       | GAS | GAS | GAS - NEW/EXISTING   |
| --- | EASEMENT LINE - NEW/EXISTING                      | WT  | WT  | WATER - NEW/EXISTING |
| --- | CONTOUR - NEW/EXISTING                            |     |     |                      |
| --- | PROPERTY LINE - NEW/EXISTING                      |     |     |                      |
| --- | FENCE - NEW/EXISTING                              |     |     |                      |
| --- | OVERHEAD ELECTRIC LINE W/ POWER POLE NEW/EXISTING |     |     |                      |
| --- | UNDERGROUND ELECTRIC LINE NEW/EXISTING            |     |     |                      |
| --- | UNDERGROUND ELECTRIC - NEW/EXISTING               |     |     |                      |

**ROLLIN RIDGE - FILING NO. 1**

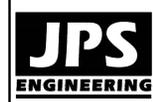
**SITE GRADING & EROSION CONTROL PLAN**

HORZ. SCALE: 1"=80'  
 VERT. SCALE: N/A  
 SURVEYED: N/A  
 CREATED: 9/12/17  
 PROJECT NO: 081702

DRAWN: BJJ  
 DESIGNED: JPS  
 CHECKED: JPS  
 LAST MODIFIED: 10/25/19  
 MODIFIED BY: BJJ

SHEET: **C1.1**

PCD FILE NO. SF-19-XXX



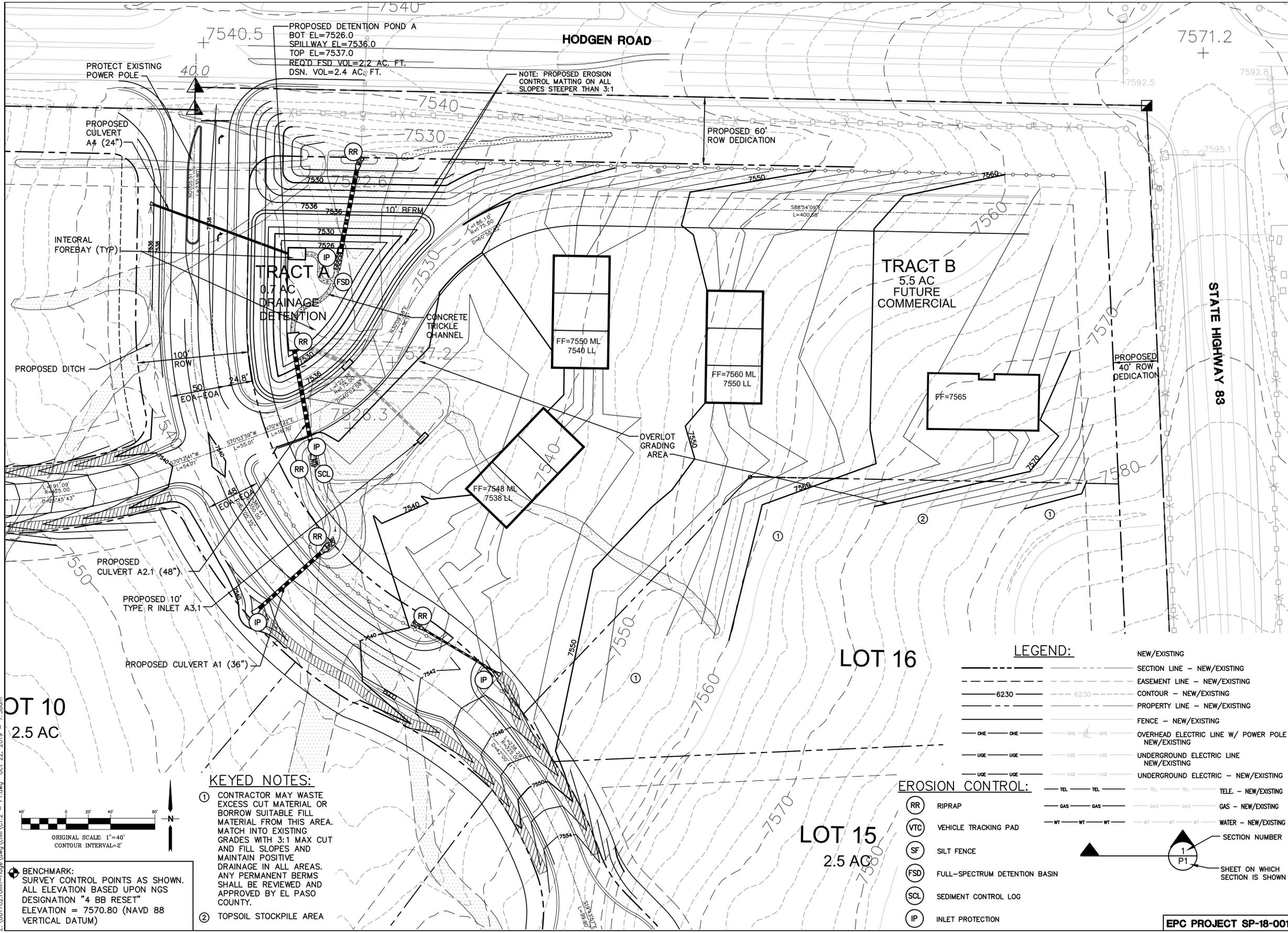
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 80903  
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No.	REVISION	DATE
1	FINAL PLAT SUBMITTAL	10/25/19

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PROPOSED DETENTION POND A  
 BOT EL=7526.0  
 SPILLWAY EL=7536.0  
 TOP EL=7537.0  
 REQ'D FSD VOL=2.2 AC. FT.  
 DSN. VOL=2.4 AC. FT.

NOTE: PROPOSED EROSION CONTROL MATTINGS ON ALL SLOPES STEEPER THAN 3:1

**LEGEND:**

- |     |   |
|-----|---|
| --- | NEW/EXISTING                                      |
| --- | SECTION LINE - NEW/EXISTING                       |
| --- | EASEMENT LINE - NEW/EXISTING                      |
| --- | CONTOUR - NEW/EXISTING                            |
| --- | PROPERTY LINE - NEW/EXISTING                      |
| --- | FENCE - NEW/EXISTING                              |
| --- | OVERHEAD ELECTRIC LINE W/ POWER POLE NEW/EXISTING |
| --- | UNDERGROUND ELECTRIC LINE NEW/EXISTING            |
| --- | UNDERGROUND ELECTRIC - NEW/EXISTING               |
| --- | TELE. - NEW/EXISTING                              |
| --- | GAS - NEW/EXISTING                                |
| --- | WATER - NEW/EXISTING                              |

**EROSION CONTROL:**

- (RR) RIPRAP
- (VTC) VEHICLE TRACKING PAD
- (SF) SILT FENCE
- (FSD) FULL-SPECTRUM DETENTION BASIN
- (SCL) SEDIMENT CONTROL LOG
- (IP) INLET PROTECTION

**KEYED NOTES:**

- ① CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS. ANY PERMANENT BERMS SHALL BE REVIEWED AND APPROVED BY EL PASO COUNTY.
- ② TOPSOIL STOCKPILE AREA

LOT 10  
2.5 AC

LOT 15  
2.5 AC

LOT 16

**ROLLIN RIDGE - FILING NO. 1**



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No.	REVISION	DATE
1	COUNTY COMMENTS	4/30/18
2	COUNTY COMMENTS	8/30/18
3	COUNTY COMMENTS	10/19/18
4	COUNTY COMMENTS	8/28/19
5	FILING NO. 1 SUBMITTAL	10/21/19

**NORTHEAST SITE GRADING PLAN**

HORZ. SCALE: 1"=40'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: RAMPART	CHECKED: JPS
CREATED: 4/27/18	LAST MODIFIED: 10/21/19
PROJECT NO: 081702	MODIFIED BY: BJJ

SHEET: **C1.2**

EPC PROJECT SP-18-001

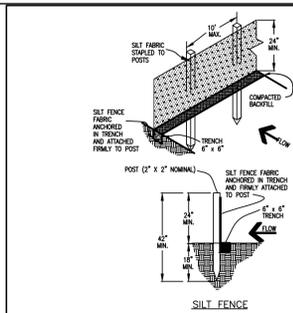
Z:\081702-rollin-ridge\dwg\civil\C1.2 - F1.dwg Oct. 22, 2019 - 7:58am

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:**

REVISED 7/02/19

- 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 ADAPTED 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.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- 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 AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE EGM 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 DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- 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, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE EGM 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 ONSITE 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 EGM 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 HAS BEEN PREPARED BY KUMAR & ASSOC., DATED 2/25/19 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 APPLICATION 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



**SILT FENCE NOTES**

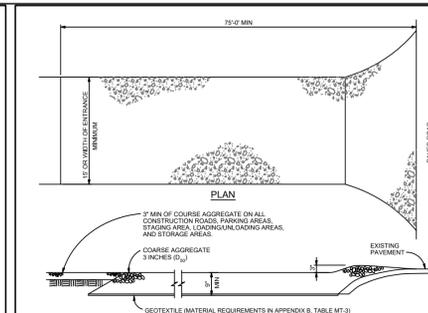
**INSTALLATION REQUIREMENTS**

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE AND SECURELY SEALED.
- METAL POSTS SHALL BE "TYPED" TEE OR "U" TYPE WITH MINIMUM HEIGHT OF 1.33 POUNDS PER LINEAR FOOT OR WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIE, OR TO WOOD POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" TO EXISTING TREES.
- WIRE NOT REQUIRED: WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSIDE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. THE WIRE OR HOOD RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4" AND SHALL NOT EXTEND MORE THAN 4" ABOVE THE ORIGINAL GROUND SURFACE.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
- DAMAGED OR NESTING BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNDESTRUCTED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
- SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
- STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements



**VEHICLE TRACKING NOTES**

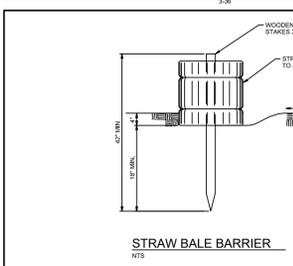
**INSTALLATION REQUIREMENTS**

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVED SURFACES EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONES.
- 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 GRADERS, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADERS THAT ARE EXCESSIVELY STEEP.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED ONLY BY SHOVELING OR BEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND REPAIRED AS 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



**STRAW BALE BARRIER NOTES**

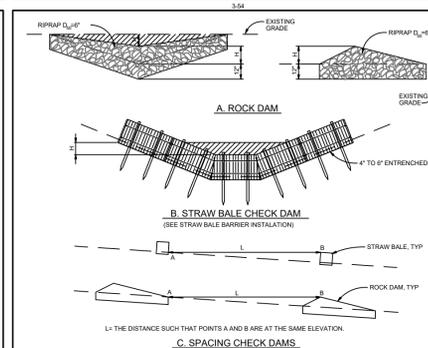
**INSTALLATION REQUIREMENTS**

- STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- BALES SHALL COVER OF APPROXIMATELY 3 CUBIC FEET OF CERTIFIED WOOD FREE MAY OR STRAW AND NOT LESS THAN 15 POUNDS.
- BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE ENDS OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
- EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAD BALE TO BE SECURELY JOINED TOGETHER.
- STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG METAL STAKES TO BE USED TO BE 1/2" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- BALES ARE TO BE BOUND WITH EITHER WIRE OR STRAP AND CHECKED SUCH THAT THE BUNDLING ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
- GAPS BETWEEN BALES ARE TO BE CHINKED FILLED BY WEAVING WITH STRAW OR THE SAME MATERIAL OF THE BALE.
- END BALES ARE TO EXTEND UPSLOPE SO THE STRAPPED BUNDLES CANNOT FLOW AROUND THE CREEP OF THE BARRIER.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
- DAMAGED OR NESTING BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNDESTRUCTED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
- SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
- STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SBB-2 Straw Bale Barrier Construction Detail and Maintenance Requirements



**CHECK DAM NOTES**

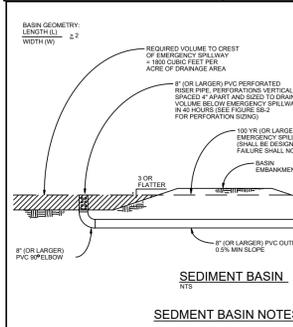
**INSTALLATION REQUIREMENTS**

- STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
- THE "W" DIMENSION SHALL BE SELECTED TO PROVIDE NEAR FLOW CONTINUITY FOR 3-YEAR FLOW OR GREATER.
- CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
- WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
- REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
- ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND DAMS PRIOR TO EACH STORM OR WHEN 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REDUCED.
- CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
- WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality Figure CD-1 Check Dam Construction Detail and Maintenance Requirements



**SEDIMENT BASIN NOTES**

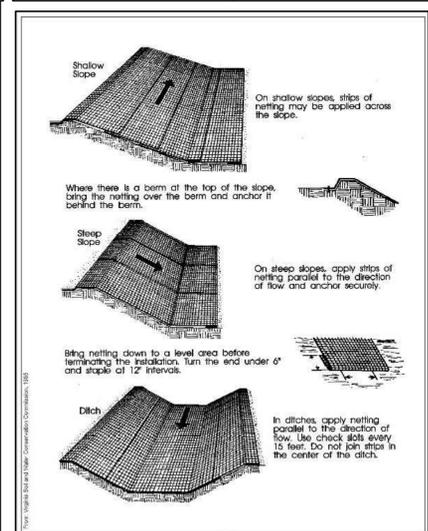
**INSTALLATION REQUIREMENTS**

- SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
- THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
- THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN THE VOLUME IN 4 HOURS.
- THE OUTLET IS TO BE LOCATED AT THE FURTHEST POINT FROM THE HILL OF THE BASIN. BARRIERS MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND FILTER THE SEDIMENT.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A 200 SIEVE. GRANULAR FILL CAN BE USED IF IT MEETS THE FOLLOWING:
- EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM.
- WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
- SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
- SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PERMANENTLY MAINTAINED WITH THE SITE AREA. EMBANKMENTS SHALL BE STABILIZED WITH VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SB-1 Sediment Basin Construction Detail and Maintenance Requirements



City of Colorado Springs Storm Water Quality Figure ECB-1 Erosion Control Blanket Application Examples

**SEEDING MIX:**

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOATS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

**SEDIMENT CONTROL MAINTENANCE PROGRAM:**

PERIODIC SITE INSPECTIONS BI-WEEKLY  
 RE-VEGETATION OF EXPOSED SOILS WITHIN 21 DAYS OF GRADING  
 SEDIMENT REMOVAL FROM BMP'S MONTHLY  
 REMOVAL OF BMP'S AFTER STABILIZATION ACHIEVED

1 AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.  
 2 ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

**ESTIMATED TIME SCHEDULE:**

INSTALL BMP'S	MARCH, 2020
ROADWAY GRADING	MARCH, 2020
SEEDING & MULCHING	SEPTEMBER, 2020
STABILIZATION	SEPTEMBER, 2021

**CONTROL MEASURE/BMP PHASING PLAN:**

**INITIAL CONTROL MEASURES:**

- VTC AT SITE ACCESS
- SILT FENCE ALONG DOWNSTREAM GRADING LIMITS

**INTERIM CONTROL MEASURES:**

- STRAW BALES/SCL CHECK DAMS

**FINAL CONTROL MEASURES:**

- RIPRAP APRONS
- PERMANENT DETENTION AND WATER QUALITY FACILITIES
- SEEDING AND LANDSCAPING

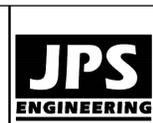
NOTE: NO DEDICATED ASPHALT/CONCRETE BATCH PLANTS ARE PROPOSED

**NON-STRUCTURAL CONTROL MEASURES:**

**CONTROL MEASURES:**

- PROPER HOUSEKEEPING MEASURES
- PROPER SOIL CONTAINMENT PROCEDURES

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NO.	REVISION	DATE
1	FINAL PLAT SUBMITTAL	10/25/19

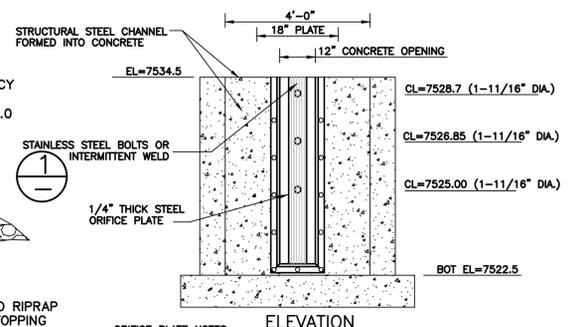
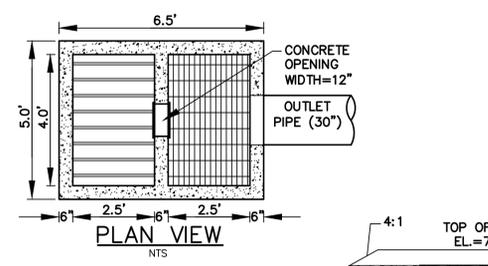
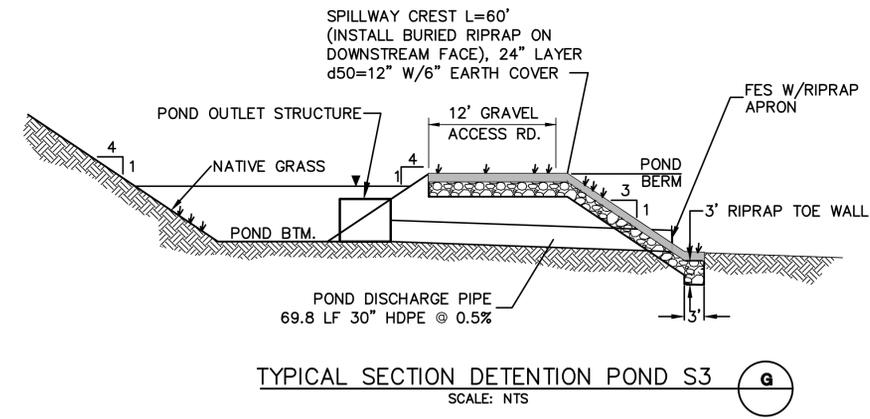
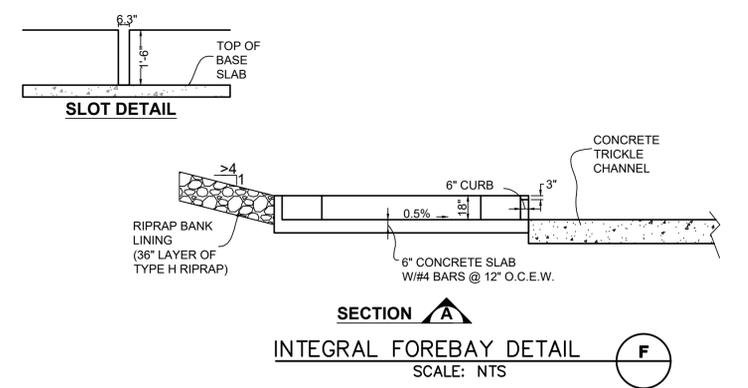
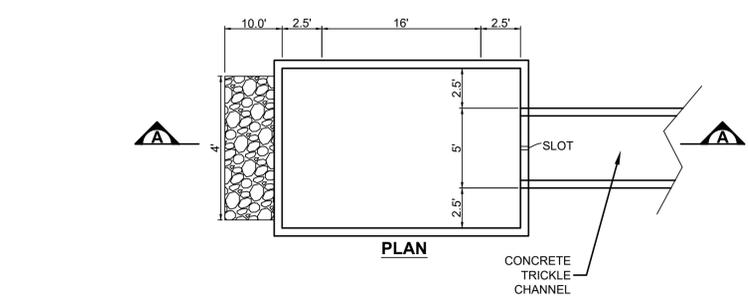
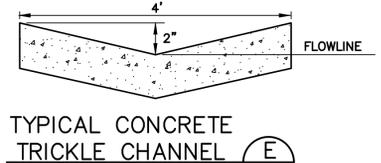
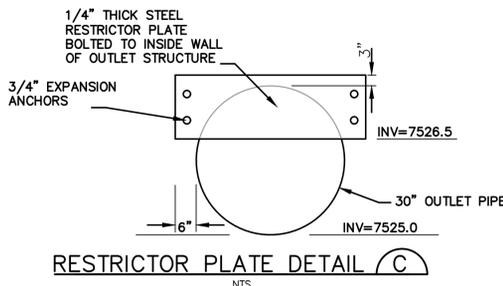
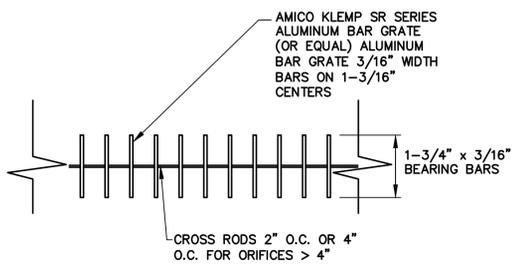
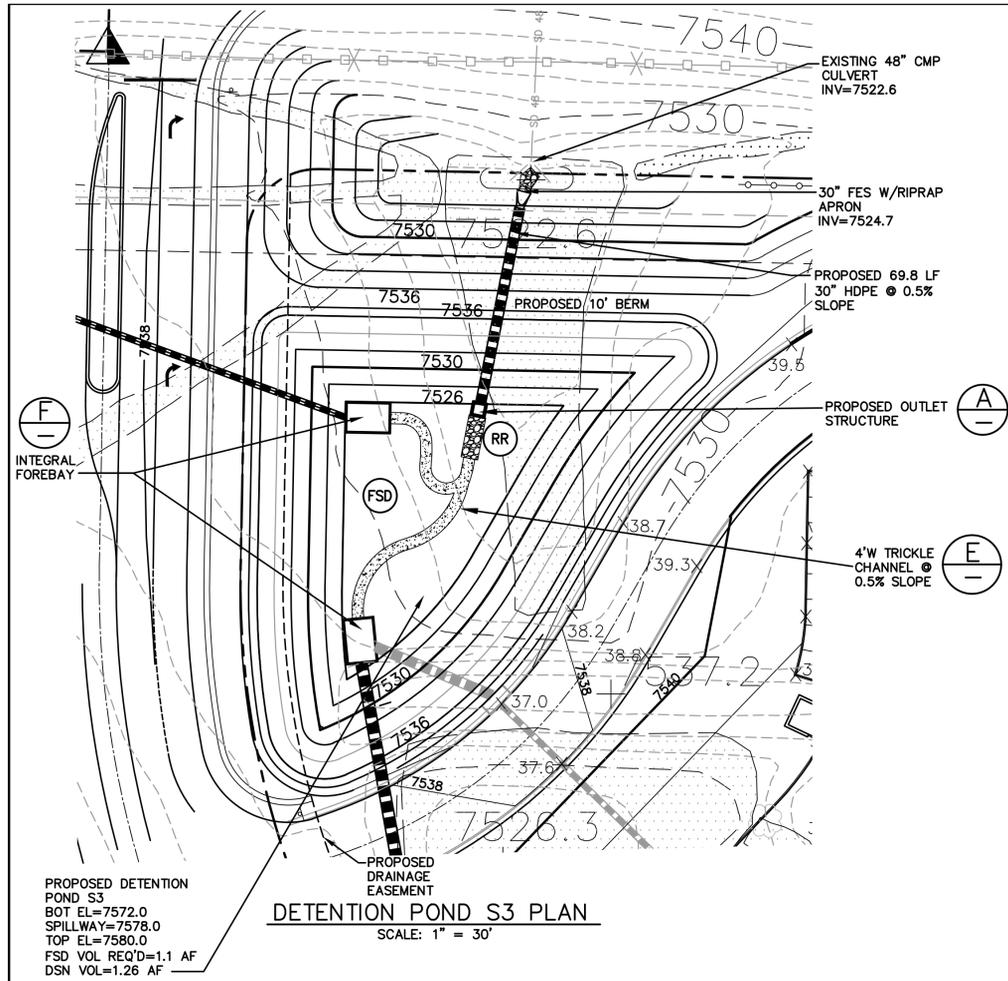
**EROSION CONTROL NOTES & DETAILS**

HORIZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	RAMPART	CHECKED:	JPS
CREATED:	8/29/19	LAST MODIFIED:	10/25/19
PROJECT NO.:	081702	MODIFIED BY:	BJJ

SHEET: **C2**

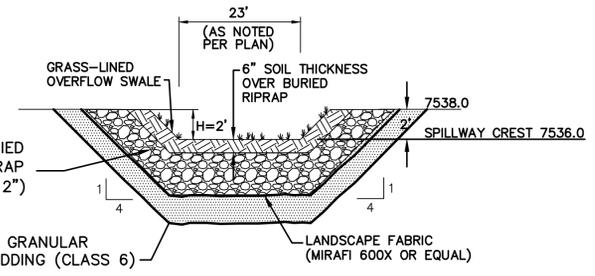
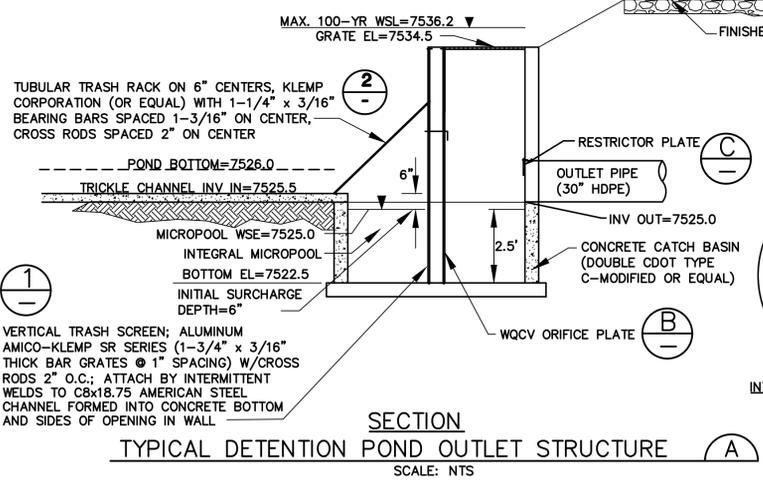
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- ORIFICE PLATE NOTES:**
1. MINIMIZE THE NUMBER OF COLUMNS.
  2. PROVIDE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
  3. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- EURY AND WQCV TRASH RACKS:**
1. WELL-SCREEN TRASH RACKS (FOR CIRCULAR ORIFICES) SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE MOUNTING FRAME.
  2. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.
- OVERFLOW TRASH RACKS:**
1. ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
  2. TRASH RACKS SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
  3. TRASH RACKS SHALL BE DESIGNED SUCH THAT THE DIAGONAL DIMENSION OF EACH OPENING IS SMALLER THAN THE DIAMETER OF THE OUTLET PIPE.
  4. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

**ORIFICE PLATE AND TRASH RACK DETAILS AND NOTES (B)**  
NTS



- RIPRAP NOTES:**
1. RIPRAP SHALL HAVE A MINIMUM SPECIFIC GRAVITY OF 2.6.
  2. RIPRAP GRADATION SHALL CONFORM TO TABLE 10-7 AND 10-8 OF THE EPC DRAINAGE CRITERIA MANUAL.
  3. CONTRACTOR SHALL SUBMIT RIPRAP GRADATION TO ENGINEER FOR APPROVAL PRIOR TO DELIVERY.

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1	FINAL PLAT SUBMITTAL	10/21/19

**DETENTION POND A PLAN & DETAILS**

HORZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE: <td>N/A</td> <td>DESIGNED: <td>JPS</td> </td>	N/A	DESIGNED: <td>JPS</td>	JPS
SURVEYED: <td>N/A</td> <td>CHECKED: <td>JPS</td> </td>	N/A	CHECKED: <td>JPS</td>	JPS
CREATED:	RAMPART	LAST MODIFIED:	JPS
PROJECT NO.:	7/02/19	MODIFIED BY:	10/21/19
SHEET:	081702		BJJ

**C3.1**

PCD File No. SF-18-041

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MEMBER UTILITIES

NO.	REVISION	DATE
1	FINAL PLAT SUBMITTAL	10/21/19

BY	JPS
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DATE	10/21/19
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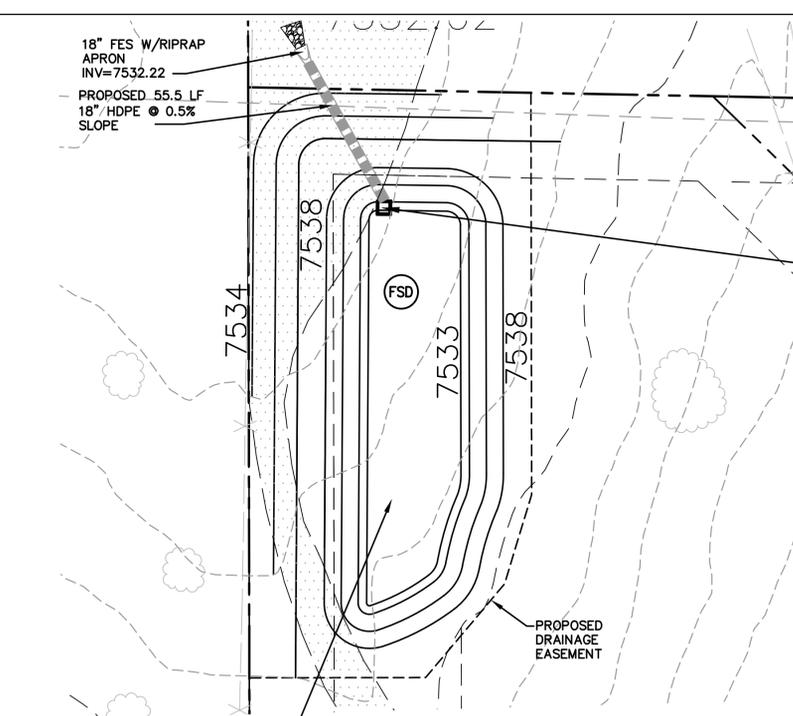
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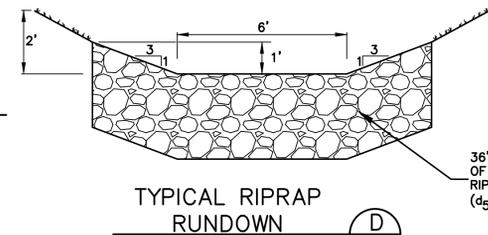
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# ROLLIN RIDGE - FILING NO. 1

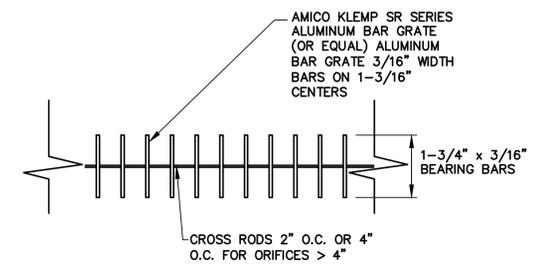
## DETENTION POND B PLAN & DETAILS



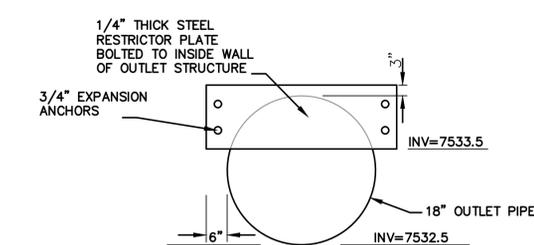
**DETENTION POND B PLAN**  
SCALE: 1" = 30'



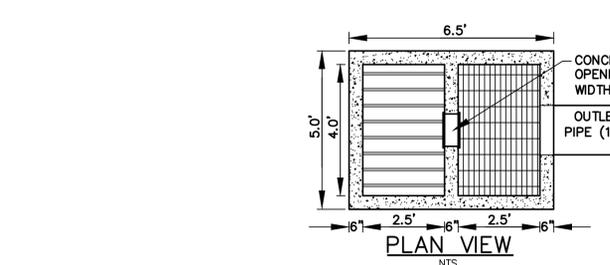
**TYPICAL RIPRAP RUNDOWN**  
SCALE: NTS



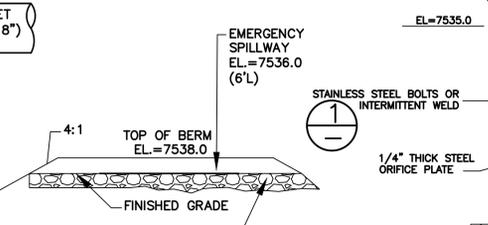
**TRASH GRATE SECTION**  
SCALE: NTS



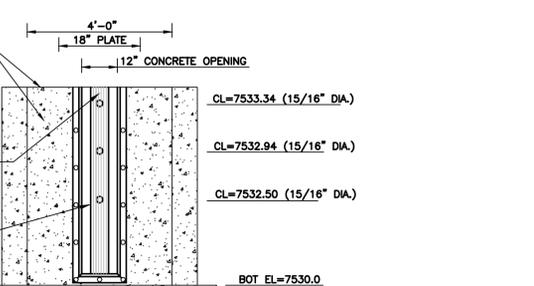
**RESTRICTOR PLATE DETAIL**  
SCALE: NTS



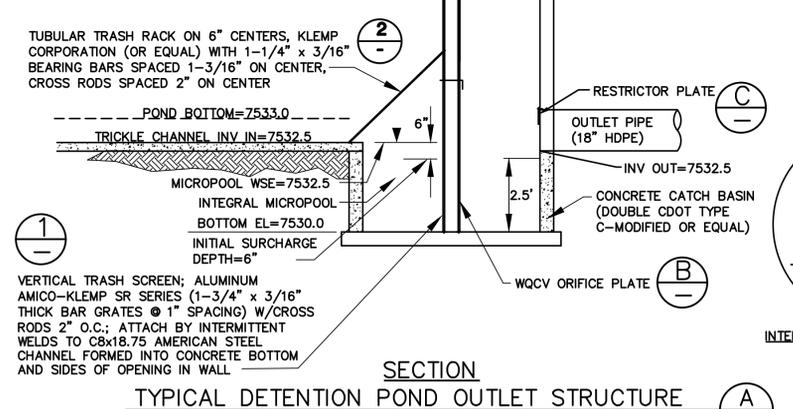
**PLAN VIEW**  
SCALE: NTS



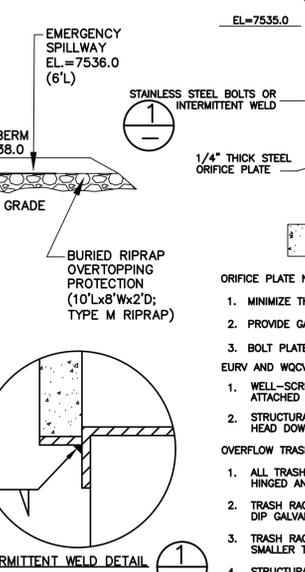
**TYPICAL CONCRETE TRICKLE CHANNEL**  
SCALE: NTS



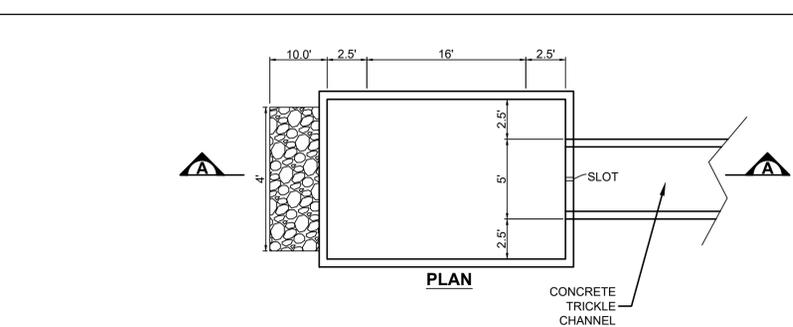
**ELEVATION**  
SCALE: NTS



**TYPICAL DETENTION POND OUTLET STRUCTURE**  
SCALE: NTS



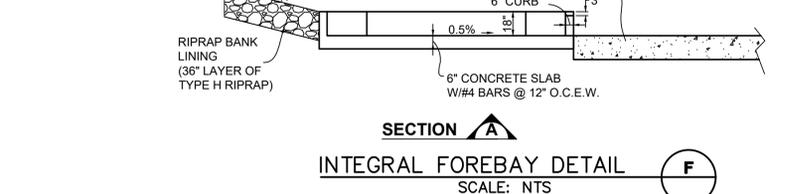
**ORIFICE PLATE AND TRASH RACK  
DETAILS AND NOTES**  
SCALE: NTS



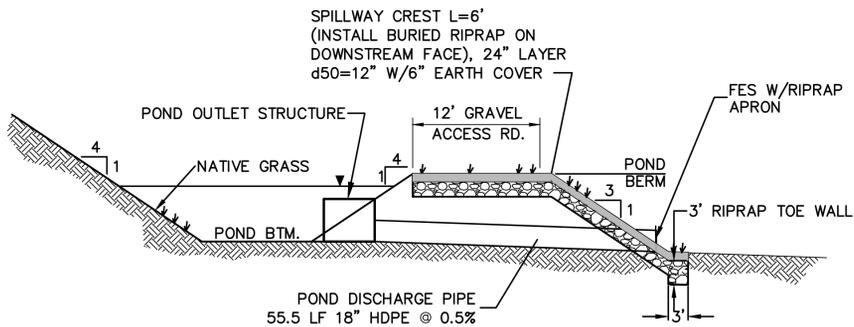
**PLAN**  
SCALE: NTS



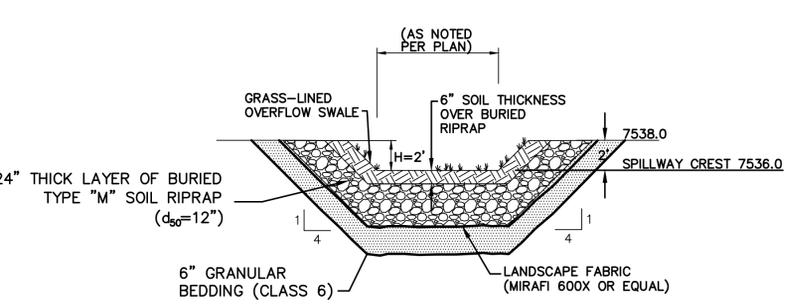
**SLOT DETAIL**  
SCALE: NTS



**SECTION**  
SCALE: NTS



**TYPICAL SECTION DETENTION POND S3**  
SCALE: NTS



**PROPOSED SPILLWAY DETAIL**  
SCALE: NTS

- RIPRAP NOTES:**
- RIPRAP SHALL HAVE A MINIMUM SPECIFIC GRAVITY OF 2.6.
  - RIPRAP GRADATION SHALL CONFORM TO TABLE 10-7 AND 10-8 OF THE EPC DRAINAGE CRITERIA MANUAL.
  - CONTRACTOR SHALL SUBMIT RIPRAP GRADATION TO ENGINEER FOR APPROVAL PRIOR TO DELIVERY.

**PROPOSED SPILLWAY DETAIL**  
SCALE: NTS

Z:\081702-rollin-ridge\dwg\civil\C3.2.dwg Oct. 22, 2019 8:06am

HORZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	N/A	CHECKED:	JPS
CREATED:	RAMPART	LAST MODIFIED:	JPS
PROJECT NO.:	7/02/19	MODIFIED BY:	10/21/19
SHEET:	081702		BJJ

**C3.2**

PCD File No. XX