

STORMWATER MANAGEMENT PLAN (SWMP)

for

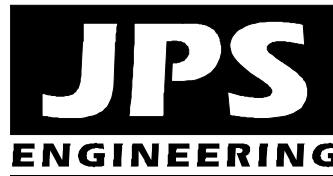
WOODFORD MANUFACTURING BUILDING ADDITION LOT 1, BLOCK 1, WAYNOKA ROAD INDUSTRIAL 2121 WAYNOKA ROAD, COLORADO SPRINGS, CO

Prepared for:

Hammers Construction, Inc.
1411 Woolsey Heights
Colorado Springs, CO 80915

October 12, 2018

Prepared by:



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

**JPS Project No. 051801
PPR-18-037**

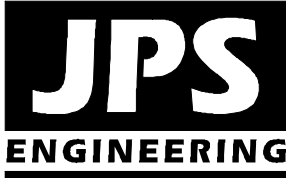
**WOODFORD MANUFACTURING BUILDING ADDITION
LOT 1, BLOCK 1, WAYNOKA ROAD INDUSTRIAL
2121 WAYNOKA ROAD, COLORADO SPRINGS, CO 80915
STORMWATER MANAGEMENT PLAN (SWMP)**

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**WOODFORD MANUFACTURING BUILDING ADDITION
LOT 1, BLOCK 1, WAYNOKA ROAD INDUSTRIAL
2121 WAYNOKA ROAD, COLORADO SPRINGS, CO
STORMWATER MANAGEMENT PLAN (SWMP)
PCD File No. PPR-1837**

October, 2018

1. Applicant / Contact Information

Developer: Hammers Construction, Inc.
1141 Woolsey Heights
Colorado Springs, CO 80915
Attn: Joe Butler (719)-570-1599
JButler@hammersconstruction.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

Contractor: Hammers Construction, Inc.
1141 Woolsey Heights
Colorado Springs, CO 80915
Attn: Joe Butler (719)-570-1599
JButler@hammersconstruction.com

2. Site Description

- a. Woodford Manufacturing is planning to construct an addition on the south side of the existing manufacturing building at 2121 Waynoka Road in El Paso County, Colorado. The project site is an existing 8.9-acre developed lot described as Lot 1, Block 1, Waynoka Road Industrial Subdivision. The site is located in the West ½ of the West ½ of Section 6, T14S, R66W of the 6th P.M (see vicinity map on Sh. G1 of attached Grading & Erosion Control Plans). Woodford Manufacturing also owns the adjoining vacant lot to the south (Lot 2, Block 1, Waynoka Road Industrial).

The two adjoining lots (El Paso County Assessor's No. 54062-05-001 and 54063-03-001) comprise a total area of 13.5 acres located on the east side of Waynoka Road, north of Palmer Park Boulevard. The properties are zoned Heavy Industrial (I-3). Site development activities will include site grading, utilities, a new school building, internal roads, parking lots, and site landscaping.

- b. Waynoka Road is a paved public street adjoining the west boundary of the properties. Waynoka Road curves to the east along both the north boundary of Lot 1 and the south boundary of Lot 2. The existing Cherokee Ridge Golf Course adjoins the east boundary of the two lots.
- c. The site development plan consists of proposed 18,000 square-foot building addition at the southeast corner of the existing industrial building, with associated parking and site improvements impacting a total disturbed area of approximately 3.5 acres. Access will continue to be provided by the two existing driveways on the south side of the building, connecting to Waynoka Road on the west side of the property. There will be no changes to the parking lot on the north side of the existing building. The proposed internal parking area improvements on the south side of the building will be paved with a combination of asphalt and concrete.
- d. Proposed sequence of major activities:
 - Mobilization / implementation of BMP's
 - Clearing and grubbing
 - Rough grading
 - Final grading of building site and parking areas
- e. Total site area = 8.9 acres; Projected disturbed area = 3.5 acres
- f. Historic runoff coefficient, $C = 0.35$;
Developed runoff coefficient, $C = 0.70$
- g. Existing vegetation on site: existing gravel and native meadow grasses (approx. 50% coverage)
- h. Potential pollution sources: vehicle fueling on-site
- i. Non-stormwater components of discharge: none anticipated
- j. Receiving water: Surface drainage from this site will flow southwesterly into the existing curb and gutter along the east side of Waynoka Road, which flows south to an existing downstream storm sewer system flowing into the Sand Creek Center Tributary Channel.
- k. Soil erosion potential and potential impacts upon discharge: On-site soils are comprised of Ellicott loamy coarse sand. These soils are classified as hydrologic soils group A (low runoff potential; high infiltration rate; slight to moderate hazard of erosion). Uncontrolled soil erosion may adversely impact downstream drainageways; on-site BMP's will be provided and maintained to mitigate adverse impacts.

3. Site Map (see Construction Drawings – Sheet C1.1)

4. BMP's for Stormwater Pollution Prevention (See Sheet C1.1 for GEC Plan and Sh. C2-C3 for BMP Details):

<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 / SF
Rain Garden (temporary sediment pond during construction)	RG / SB
Stabilization	SM
Removal of erosion control measures	

a. Erosion and Sediment Controls

1) Structural Practices:

- Vehicle Tracking Control (VTC) pad at construction entry
- Silt fence at toe of slope along downstream limits of disturbed areas
- Inlet protection (IP) at storm inlets
- Rain Garden (RG) at southwest corner of project area

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

b. Materials Handling and Spill Prevention

• 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.
- 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.
- 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, degreasing 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 at 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.
- Equipment maintenance and fueling: Contractor shall implement appropriate spill prevention and response procedures
- 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
- 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.
- Concrete Batch Plant: This project will not have an on-site dedicated batch plant.
- 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.

5. **Final Stabilization and Long-term Stormwater Management**

- Permanent seeding will be provided to achieve long-term stabilization of the site.
- Seed Mix: “Foothills Mix” or approved equal:

- 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
- 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.
- 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.
- 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.

6. 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.

7. Inspection and Maintenance

- a. Inspection Schedules:
 - 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.
- b. Inspection Procedures:
 - 1) 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.
- 2) 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.
- c. 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 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.
- d. Record Keeping and Documenting Inspections:
- Contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site.
 - 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
 - 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

WOODFORD MANUFACTURING BUILDING ADDITION

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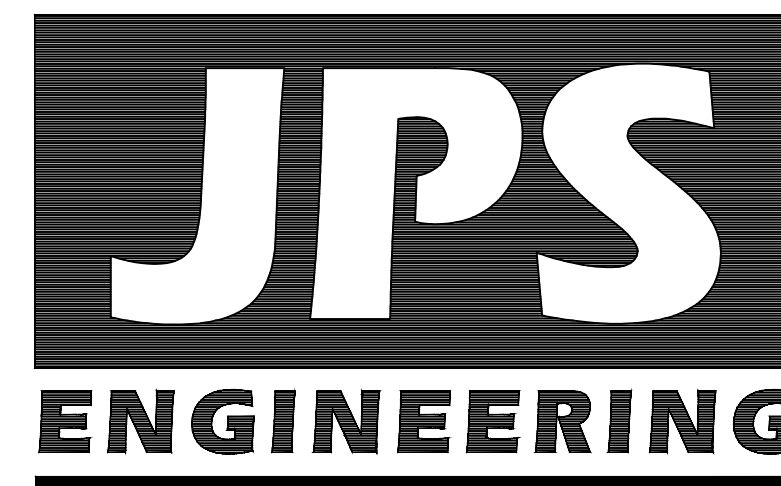
GRADING AND EROSION CONTROL PLANS El Paso County, Colorado

PREPARED FOR:

HAMMERS CONSTRUCTION

1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

PREPARED BY:

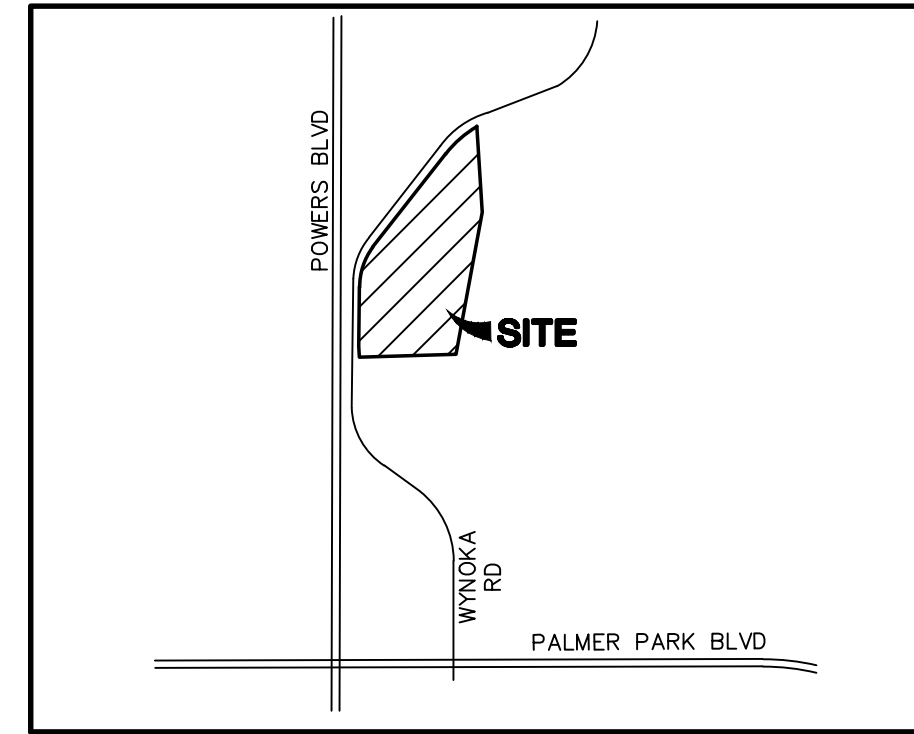


19 East Willamette Avenue
Colorado Springs, Colorado 80903

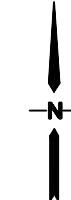
OCTOBER, 2018

AGENCIES/CONTACTS

DEVELOPER:	HAMMERS CONSTRUCTION 1411 WOOLSEY HEIGHTS COLORADO SPRINGS, CO 80915 MR. JOE BUTLER (719) 570-1599	GAS DEPARTMENT:	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719) 359-3176
CIVIL ENGINEER:	JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903 MR. JOHN P. SCHWAB, P.E. (719) 477-9429	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719) 495-2283
LOCAL ROADS & DRAINAGE:	EL PASO COUNTY PCD 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910 MR. GILBERT LAFORCE, P.E. (719) 520-7945	TELEPHONE COMPANY:	QWEST COMMUNICATIONS (LOCATORS) (800) 922-1987
		FIRE DEPARTMENT:	FALCON FIRE PROTECTION DISTRICT (719) 495-4050



VICINITY MAP
NOT TO SCALE



SHEET INDEX

G1	GEC TITLE SHEET
C1.1	SITE GRADING & EROSION CONTROL PLAN
C2	CIVIL NOTES & DETAILS
C3	GRADING & EROSION CONTROL NOTES AND DETAILS

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.

HAMMERS CONSTRUCTION DATE
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

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.

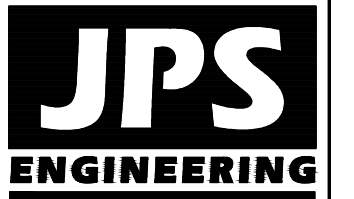
FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

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

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

PCD PROJECT NO. PPR-1837

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2121 WAYNOKA RD, COLORADO SPRINGS, COLORADO 80915



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

No.	REVISION	DATE	BY
1	DP SUBMITTAL	7/24/18	JPS
2	COUNTY COMMENTS	9/14/18	JPS
3	COUNTY COMMENTS	10/12/18	JPS

GEC TITLE SHEET

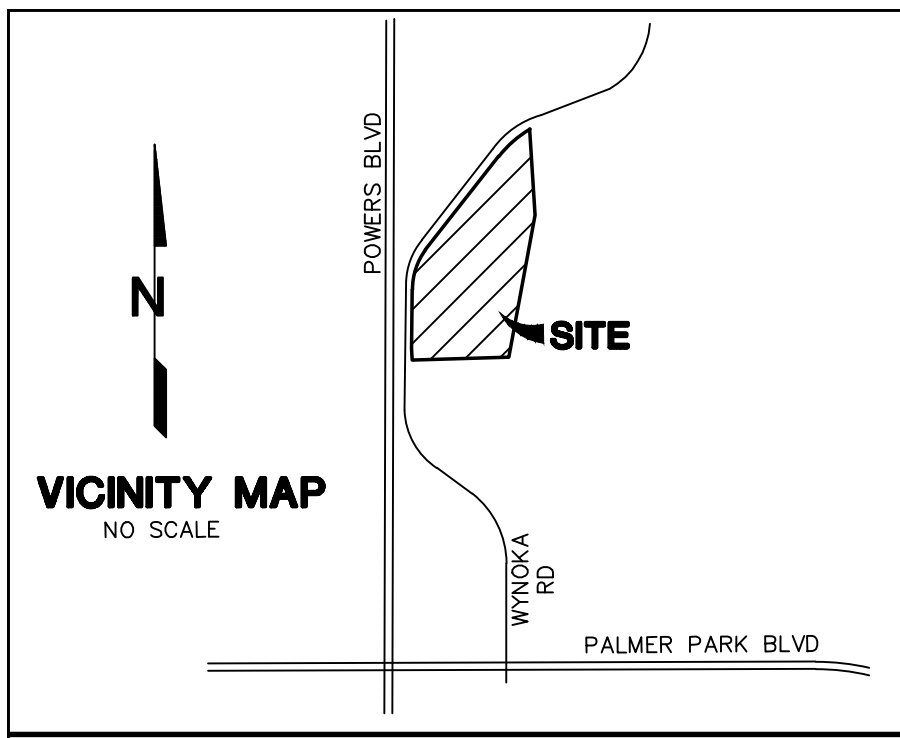
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CREATED: 9/14/18	LAST MODIFIED: 10/12/18
PROJECT NO: 051801	MODIFIED BY: BJJ

SHEET: **G1**

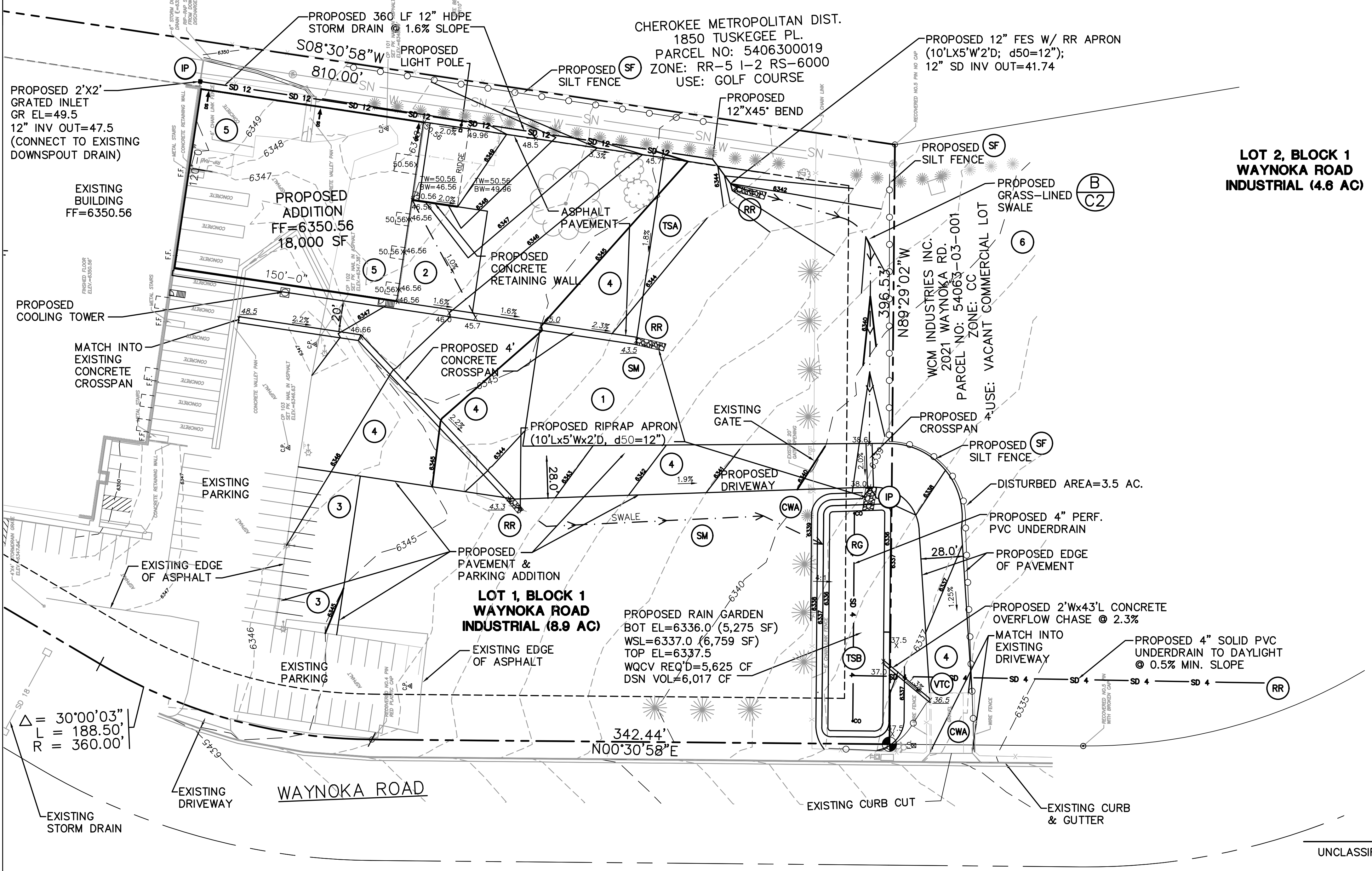
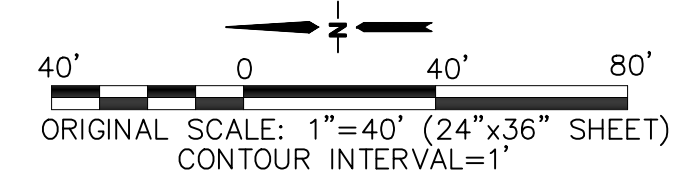
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BENCHMARK:
NGS BENCHMARK "R 76".
ELEVATION=6289.86 (NAVD-1988)

NOTE: 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 TO BE ACCEPTABLE.



- EROSION CONTROL LEGEND:**
- (VTC) VEHICLE TRACKING CONTROL PAD
 - (SF) SILT FENCE
 - (SM) SEED & MULCH
 - (CWA) CONCRETE WASHOUT AREA (TO BE COMPLETELY CONTAINED & REMOVED UPON COMPLETION OF PROJECT)
 - (IP) INLET PROTECTION
 - (RG) RAIN GARDEN
 - (RR) RIPRAP APRON
 - (TSB) TEMPORARY SEDIMENT BASIN
 - (TSA) TEMPORARY STAGING AREA
- LEGEND:**
- 6232 — PROPOSED PROPERTY LINE
 - 6232 — EXISTING CONTOURS
 - 6232 — PROPOSED CONTOURS
 - x 31.5 — EXISTING SPOT ELEVATIONS
 - x 31.5 — PROPOSED SPOT ELEVATIONS
 - 1.0% — PROPOSED GRADES
 - DS — ROOF DRAIN DOWNSPOUTS; INSTALL TRANSITION COUPLINGS & CONNECT TO SITE STORM SEWER W/ 6" PVC SD LATERALS @ 1.0% MIN. SLOPE (COORDINATE W/ ARCH / MEP PLANS)



- KEYED NOTES:**
- 1 TOPSOIL STRIPPING / STOCKPILE AREA
 - 2 6" CONCRETE PAVEMENT (PER GEOTECHNICAL REPORT)
 - 3 3" ASPHALT PAVEMENT (PER GEOTECHNICAL REPORT)
 - 4 5" ASPHALT PAVEMENT (PER GEOTECHNICAL REPORT)
 - 5 PREPARE & COMPACT BUILDING FOUNDATION, SLABS, & PAVEMENT PER PROJECT GEOTECHNICAL REPORT
 - 6 CONTRACTOR MAY WASTE EXCESS CUT OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA; MAINTAIN POSITIVE DRAINAGE & MATCH INTO EXISTING GRADES W/ 3:1 MAX. SLOPES

ESTIMATED EARTHWORK QUANTITY:
 UNCLASSIFIED EXCAVATION (TOTAL CUT) = 374 CY
 * EMBANKMENT FILL = 1,357 CY
 NET (FILL) = 983 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.

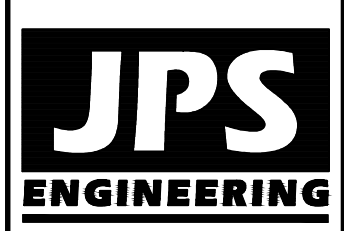
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 ELEVATION=6289.86 (NAVD-1988)

COLORADO SPRINGS CITY OF
 N. POWERS BLVD.
 PARCEL NO: 64001-000-55
 ZONE: PBC/CR AO AP22 SS
 USE: POLITICAL SUBDIVISION

PCD PROJECT NO. PPR-1837

WOODFORD MANUFACTURING BUILDING ADDITION
 2121 WAYNOKA RD, COLORADO SPRINGS, COLORADO 80915

SITE GRADING & EROSION CONTROL PLAN



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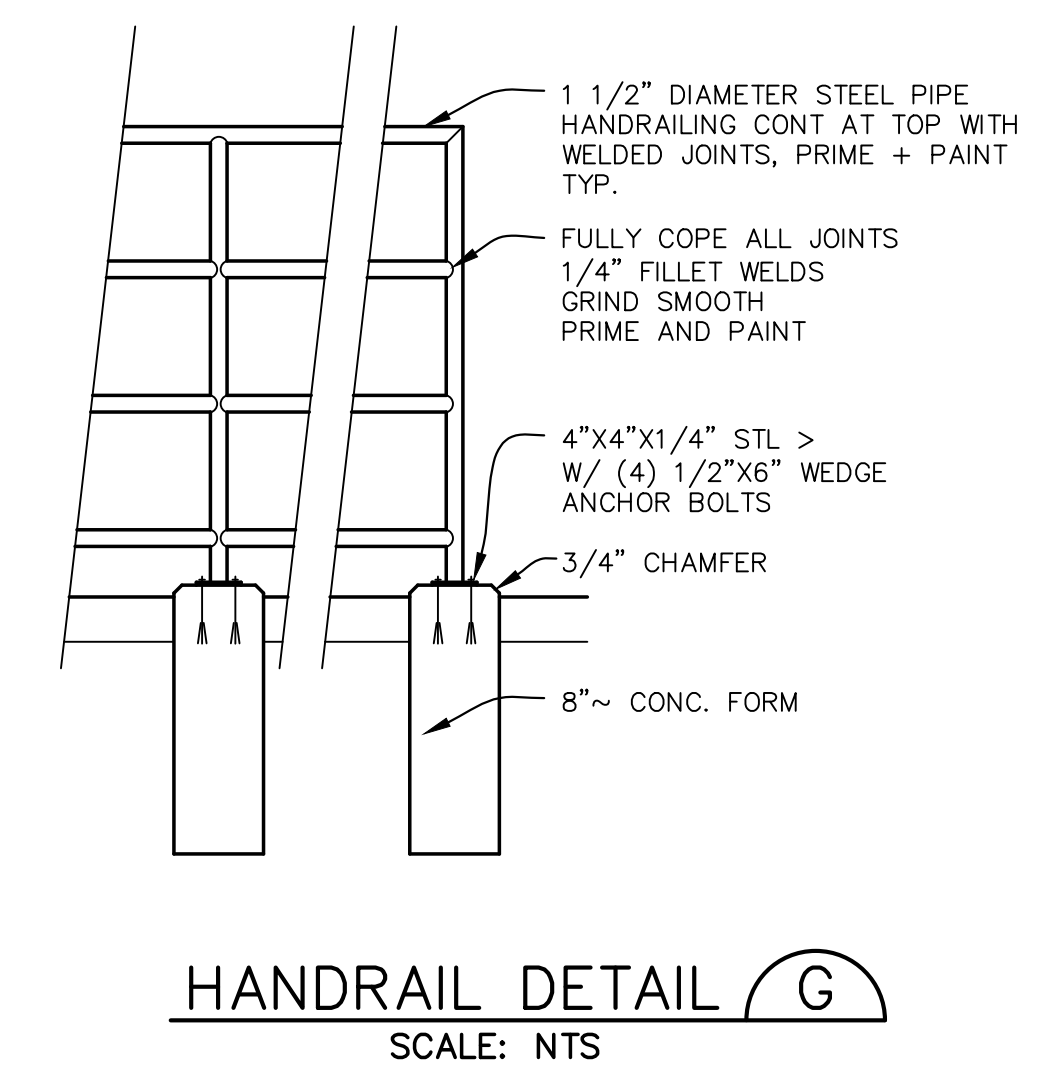
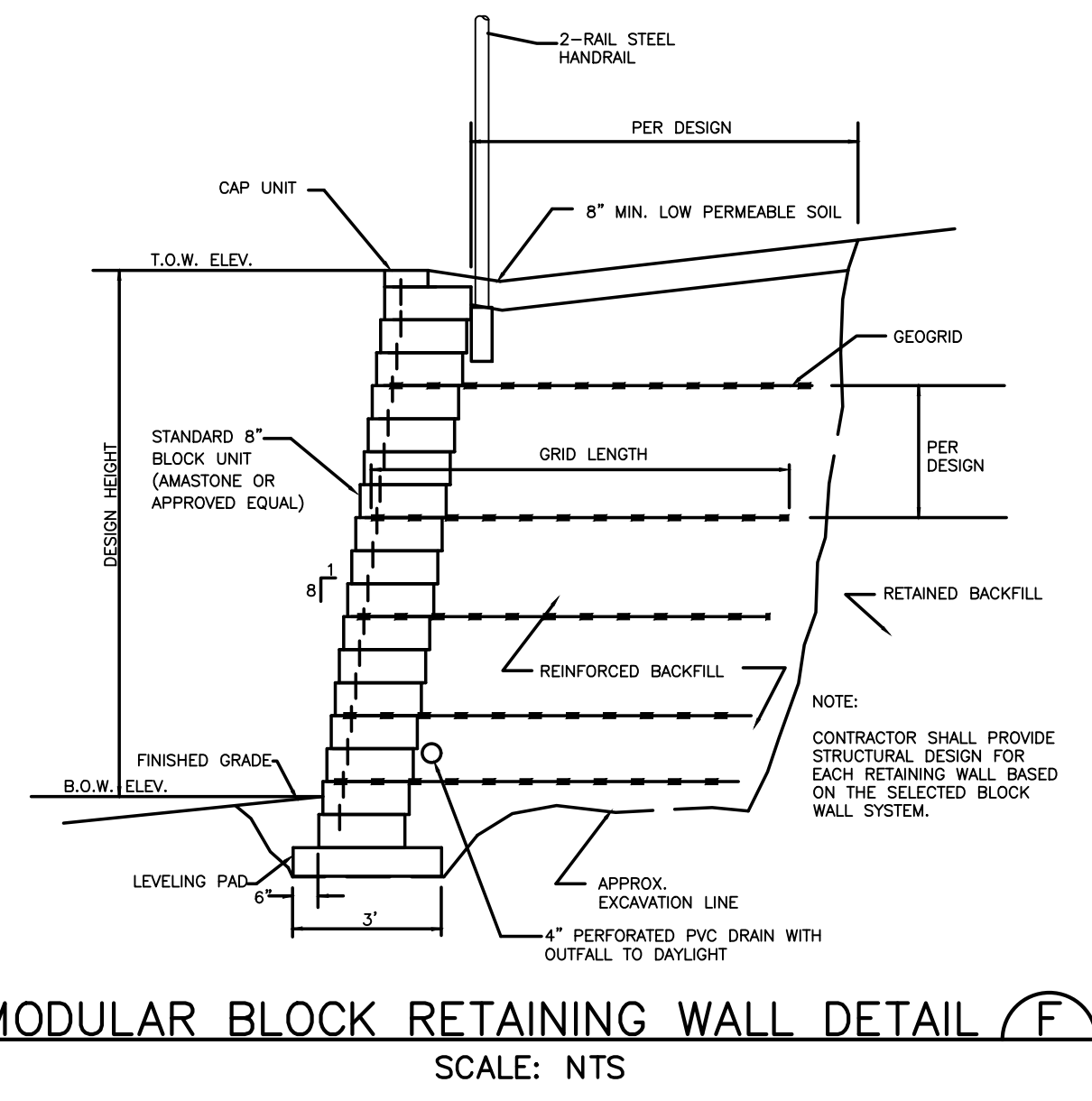
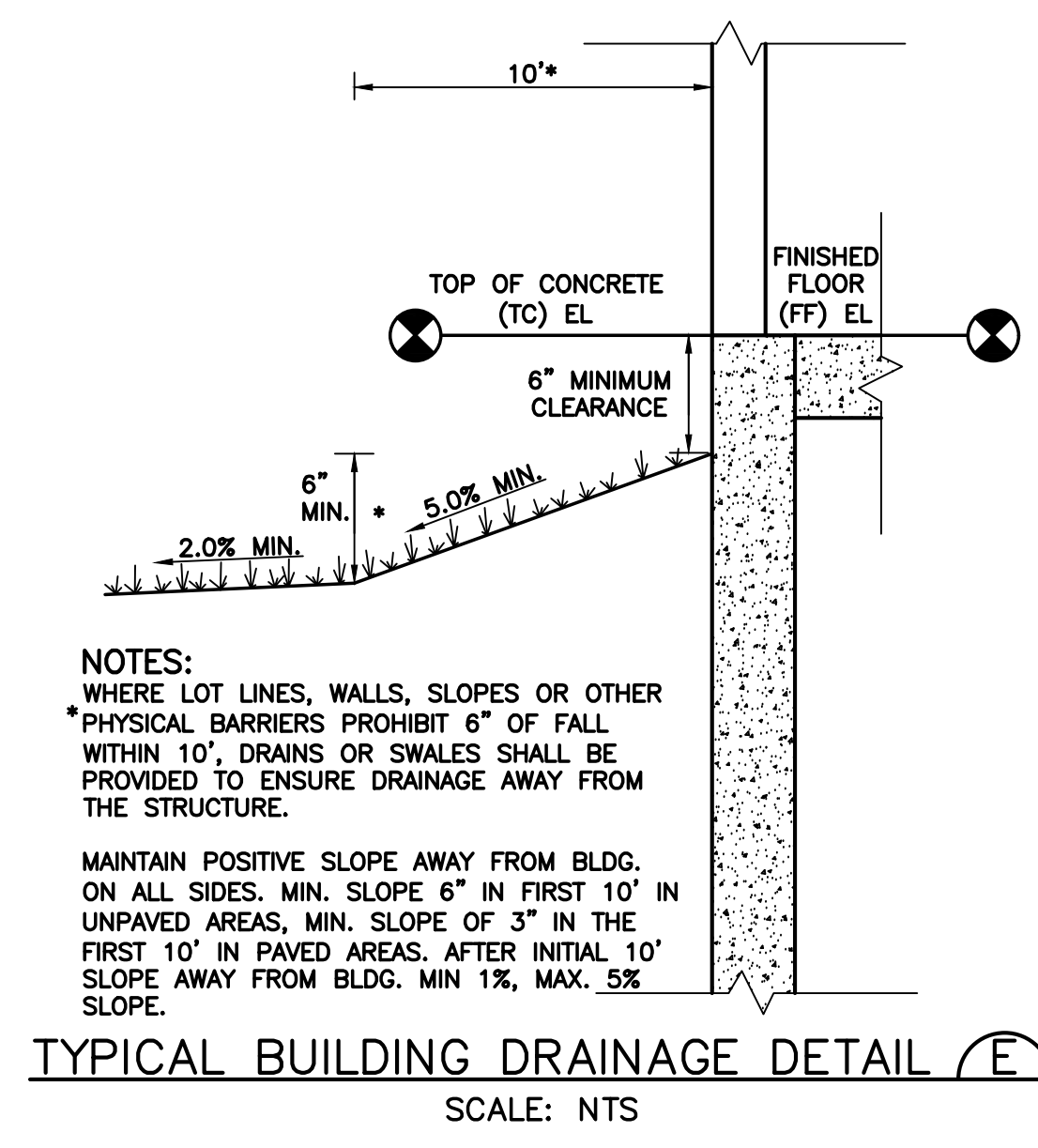
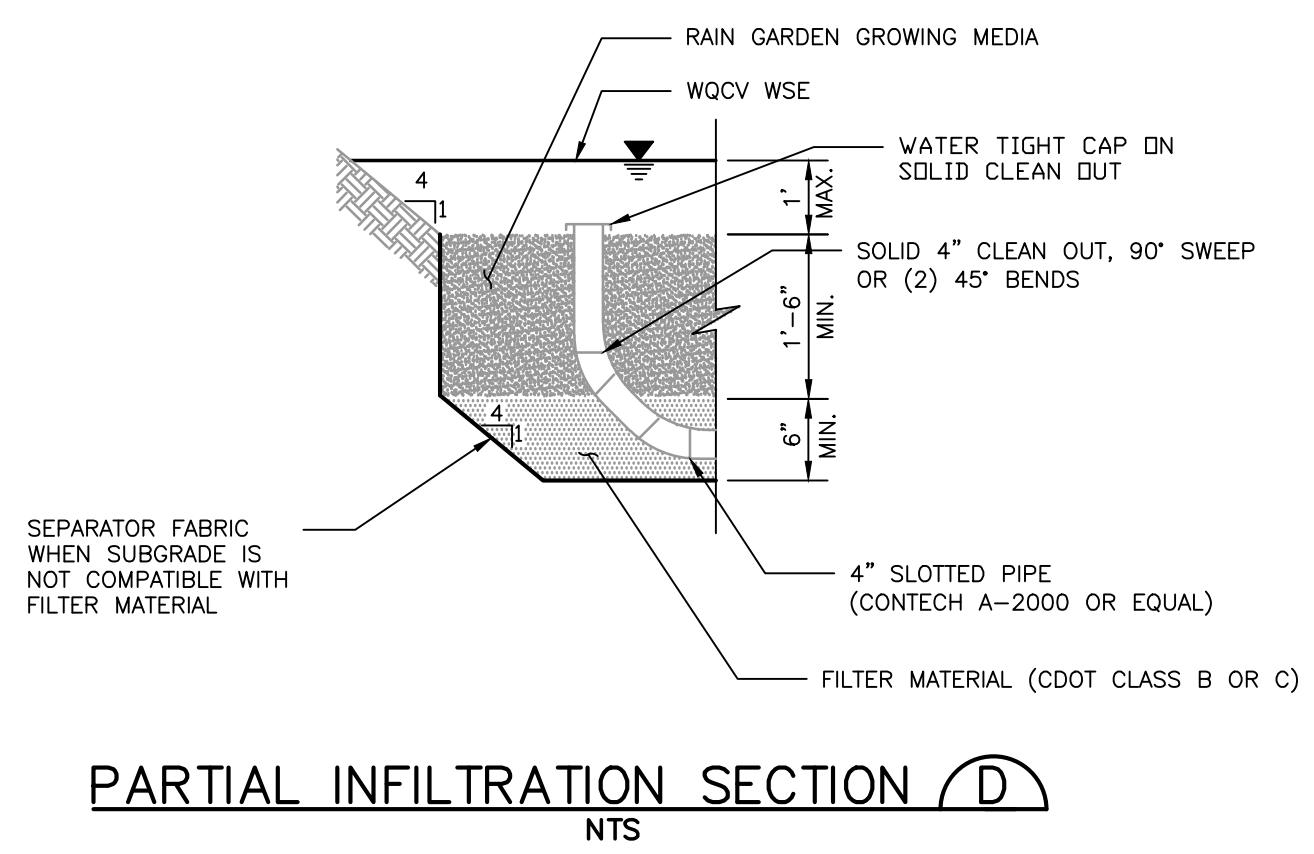
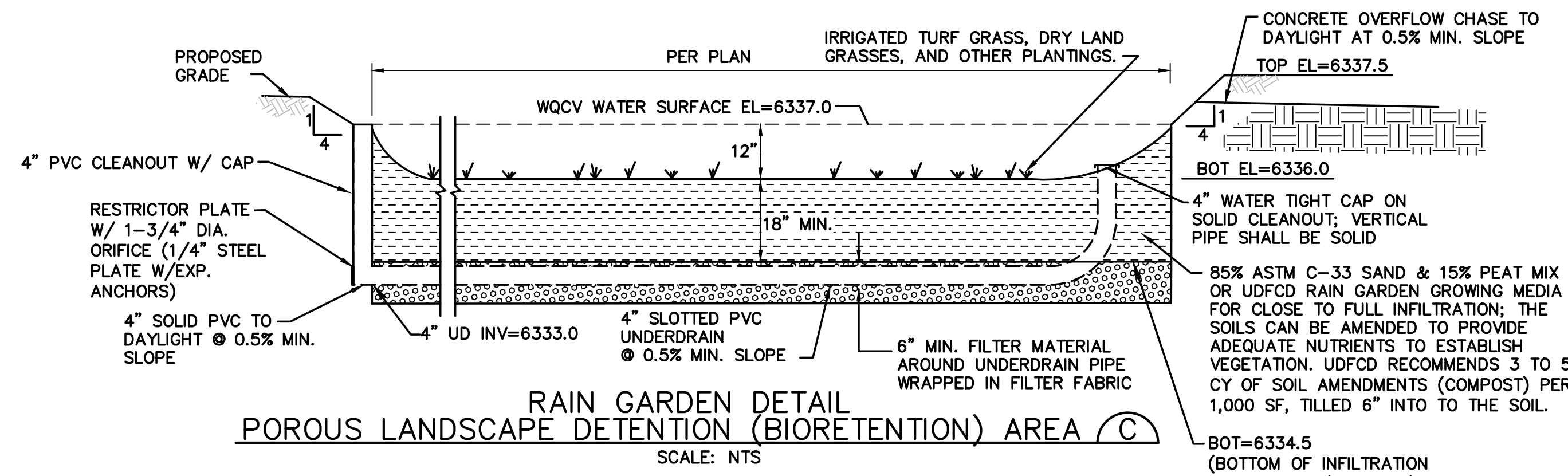
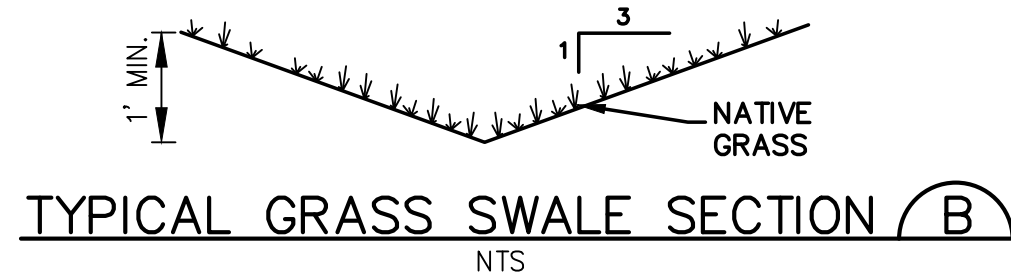
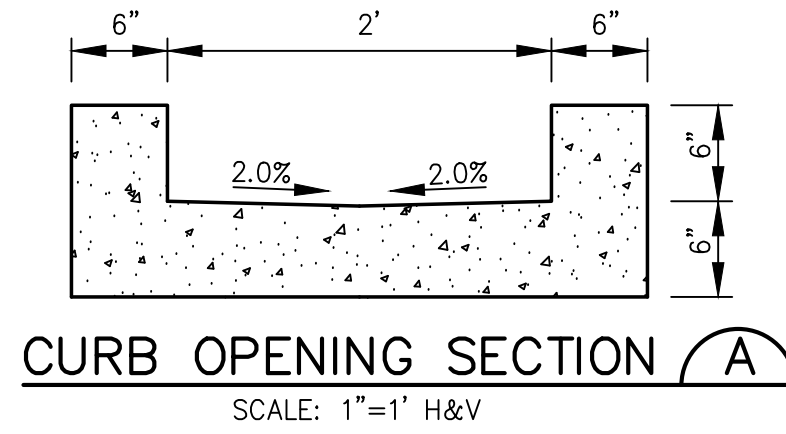
CALL UTILITY NOTIFICATION CENTER OF COLORADO
 1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES.

NO.	REVISION	DATE
1	DP SUBMITTAL	7/24/18
2	COUNTY COMMENTS	9/18/18
3	COUNTY COMMENTS	10/12/18

HORZ. SCALE: 1"=40'	DRAWN: BJJ
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: -	CHECKED: JPS
CREATED: 7/06/18	LAST MODIFIED: 10/12/18
PROJECT NO: 051801	MODIFIED BY: BJJ

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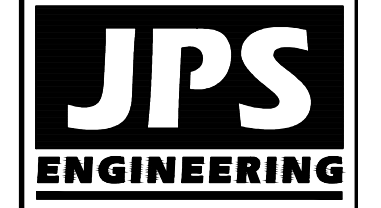
2018/08/15 10:00 AM C:\Users\jpsengr\OneDrive\Documents\Woodford Manufacturing Building Addition\Woodford Manufacturing Building Addition.dwg



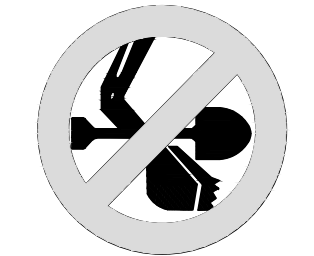
GENERAL CIVIL NOTES:

- All construction shall meet the following standards & specifications:
 - 2009 International Building Code.
 - Pikes Peak Regional Building Code, latest edition.
 - El Paso County Engineering Criteria Manual (ECM), latest edition.
 - Project Geotechnical Report.
- The 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 actual construction.
- The contractor shall have one (1) signed copy of these approved plans and one (1) copy of the appropriate design and construction standards and specifications at the job site at all times:
 - El Paso County Engineering Criteria Manual.
- Storm drain pipe shall be rcp class iii with class c bedding unless otherwise noted.
- Stationing is at centerline unless otherwise noted. All elevations are at flowline unless otherwise noted. All dimensions are from face of curb unless otherwise noted. Lengths shown for storm sewer pipes are to center of manhole.
- Contractor shall coordinate with gas, electric, telephone and cable t.v. Utility suppliers for installation of all utilities. Minimum cover for all dry utilities shall be 36".
- 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 4" topsoil and dry land grass seed after fine grading is complete ("foothills seed mix").
- Erosion control shall consist of silt fence and hay bales as shown on the drawing, and topsoil with grass seed, which will be watered until vegetation has been re-established.
- The erosion control measures outlined on this plan are the responsibility of the contractor to monitor and replace, regrade, and rebuild as necessary until vegetation is re-established.
- Contractor shall implement best management practices 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 the project geotechnical report and County specifications.
- Concrete used in curb and gutter, sidewalk, and crosspan construction shall meet County criteria.
- All finished grades shall have a minimum 1.0% slope to provide positive drainage.
- Contractor shall obtain all required permits prior to beginning work.

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2121 WAYNOKA RD, COLORADO SPRINGS, COLORADO 80915



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 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 TO DETERMINE DEPT. IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES.

No.	REVISION	DATE
1	DP SUBMITTAL	7/24/18
2	COUNTY COMMENTS	9/14/18

CIVIL NOTES & DETAILS

HORIZ. SCALE:	N/A	DRAWN:	BJJ
VERT. SCALE:	N/A	DESIGNED:	JPS
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PROJECT NO:	051801	MODIFIED BY:	BJJ

SHEET: **C2**

PCD PROJECT NO. PPR-1837

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STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS.

- Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.
- 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 Volume 2. Any deviations to 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. During construction the SWMP is the responsibility of the designated Stormwater Manager, shall be located on site at all times and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the 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 DSD inspections staff.
- Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or final earth disturbance, has been completed. Disturbed areas and stockpiles which are not at final grade but will remain dormant for longer than 30 days shall also be mulched within 21 days after interim grading. An area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented and established.
- Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.
- All persons engaged in earth disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SMWP).
- All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations, shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.
- Any earth disturbance shall be conducted in such a manner so as to effectively reduce 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.
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.
- Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
- Erosion control blanketing is to be used on slopes steeper than 3:1.
- Building, construction, excavation, or other waste materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved Traffic Control Plan. BMPs may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.
- 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.
- The owner, site developer, contractor, and/or their authorized agents shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, and sand that may accumulate in the storm sewer or other drainage conveyance system 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 chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.
- Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.
- No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.
- Individuals 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 included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County agencies, the more restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site at approved construction access points.
- Prior to actual construction the permittee shall verify the location of existing utilities.
- A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.
- The preliminary soils report for this site prepared by Entech Engineering, dated 2/18/13 shall be considered a part of these plans.
- At least ten days prior to the anticipated start of construction, for projects that will disturb 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

ESTIMATED TIME SCHEDULE:

INSTALL BMP'S SEPTEMBER, 2018
SITE GRADING SEPTEMBER, 2018
SEEDING & MULCHING APRIL, 2019
STABILIZATION AUGUST, 2020
TOTAL DISTURBED AREA: 3.5 ACRES
RECEIVING WATERS: SAND CREEK

EXISTING VEGETATION:

NATIVE GRASSES (APPROXIMATELY 70 PERCENT COVERAGE)

SEEDING MIX:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENNIAL 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.

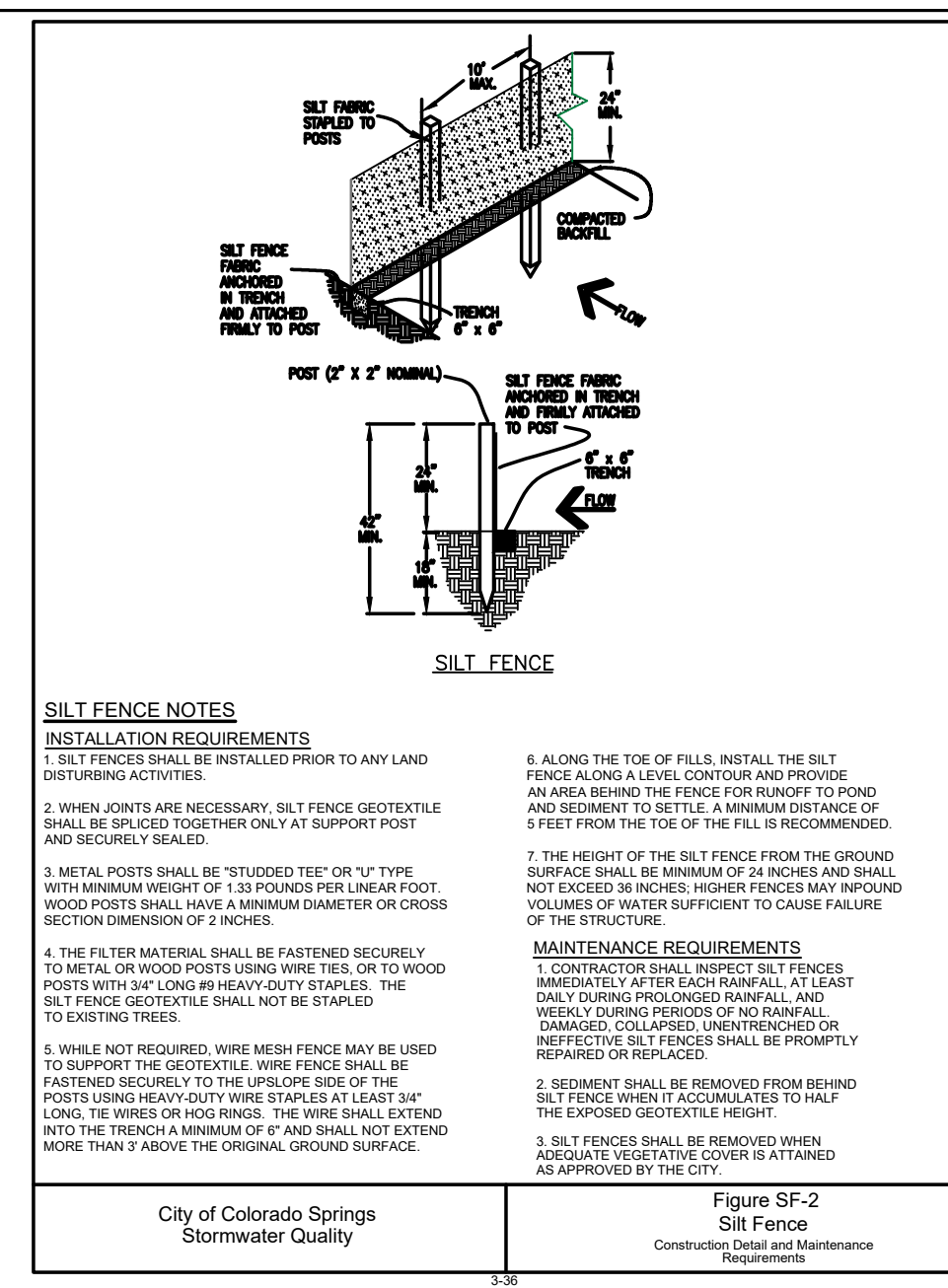
SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

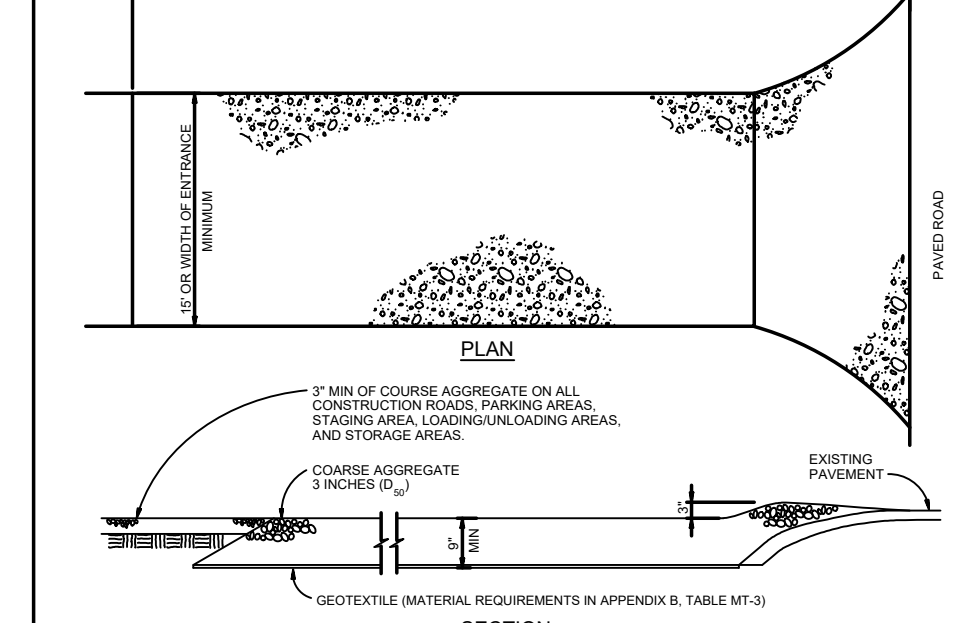
SEDIMENT CONTROL MAINTENANCE PROGRAM:

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

- AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.
- 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.



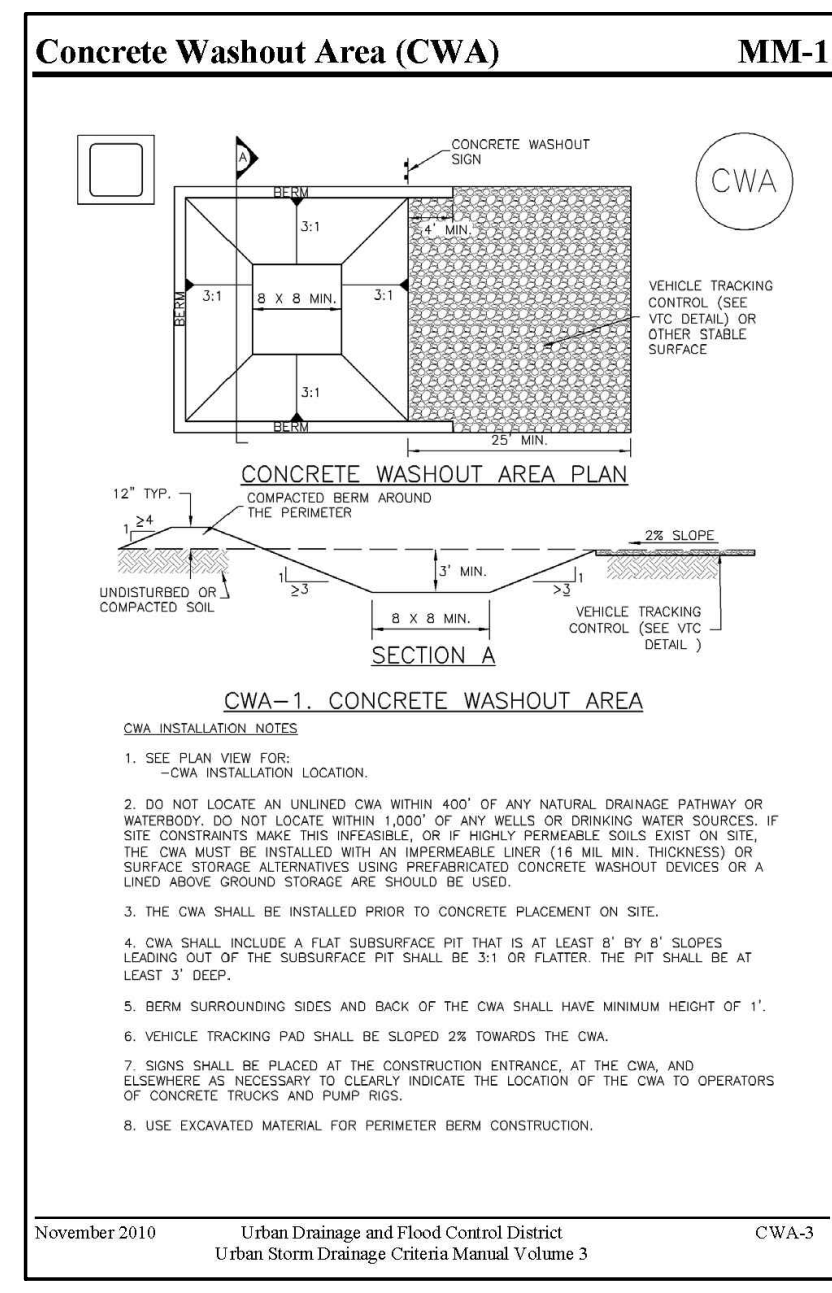
City of Colorado Springs Stormwater Quality Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements



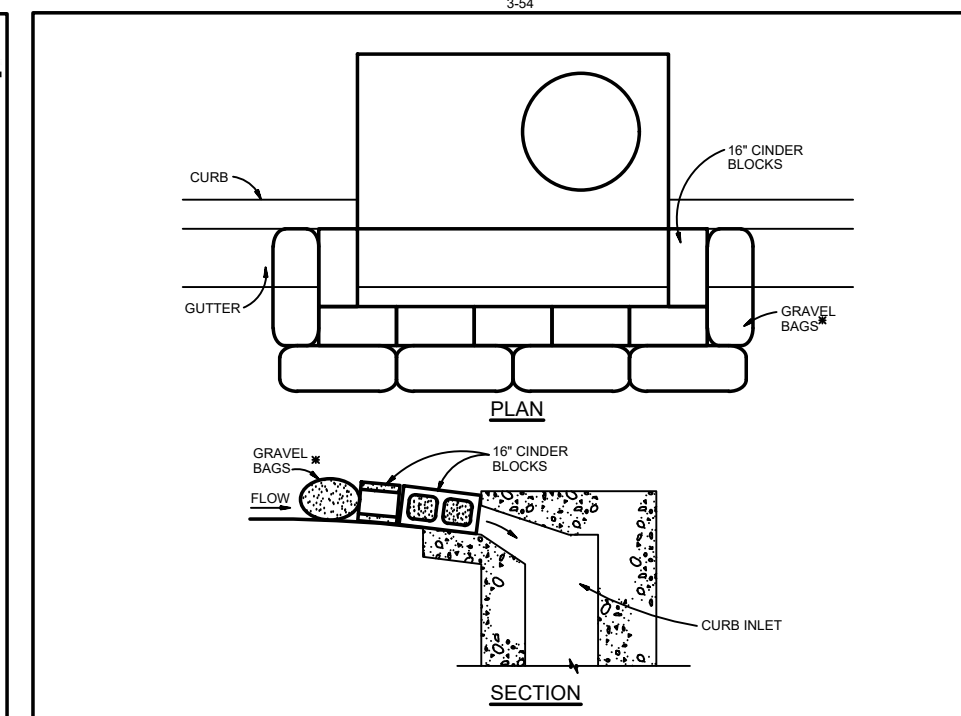
City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples

NO.	REVISION	DATE
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2	COUNTY COMMENTS	9/14/18

City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples



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



City of Colorado Springs Stormwater Quality Figure IP-3 Block & Gravel Bag Curb Inlet Protection Requirements

INSTALLATION REQUIREMENTS	MAINTENANCE REQUIREMENTS
1. ALLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.	1. ALLET PROTECTION SHALL BE INSPECTED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
2. CONCRETE BLOCKS ARE TO BE LAD AROUND THE INLET IN A SINGLE ROW ON THEIR SIDES AND ENDING ONE ANOTHER WITH THE OPEN ENDS OF THE BLOCK FACING OUTWARD.	2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. GRAVEL BAGS ARE TO BE PLACED AROUND THE CONCRETE BLOCKS TO ACCUMULATE TO APPROXIMATELY TO THE DESIGN DEPTH OF THE TRAP.	3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. GRAVEL BAGS ARE TO CONTAIN WASHED SAND OR GRAVEL APPROXIMATELY 3/4 INCH IN DIAMETER.	4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. BAGS ARE TO BE MADE OF 1/4 INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE.	5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality Figure IP-3 Block & Gravel Bag Curb Inlet Protection Requirements

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GRADING & EROSION CONTROL NOTES & DETAILS

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

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