

Colorado Springs Police Department Firing Range

GRADING, EROSION AND STORMWATER QUALITY CONTROL PLAN

15095 Sniper Road
Fountain / El Paso County, Colorado 80817

HB&A
Architecture
AND
Planning
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Colorado Springs, CO 80903
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www.hbaa.com

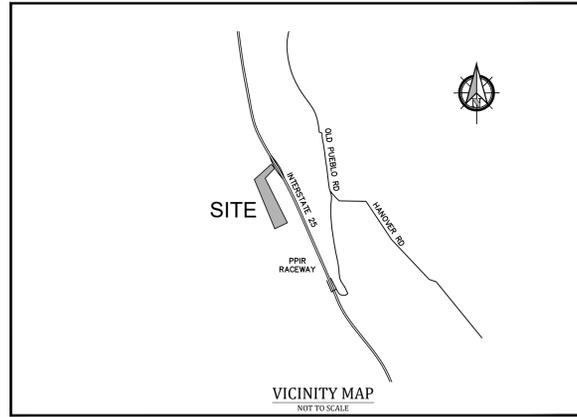
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

COLORADO SPRINGS POLICE
DEPT. FIRING RANGE

15905 SNIPER LANE
FOUNTAIN, CO 80817

PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing.
- 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 SMWP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SMWP 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 ECM Administrator prior to implementation.
- Earth disturbances shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.
- Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration and vegetation control measures must be loosened prior to installation of the control measure(s).
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off site.
- Concrete wash water shall be contained and disposed of in accordance with the SMWP. 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 apertures 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 ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.
- Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills 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 5, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- A water source shall be available on site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.
- The soils report for this site has been prepared by Kumar & Assoc. Inc. 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 (SMWP), 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.



PRE-EXCAVATION CHECKLIST

- Gas and other utility lines of record shown on the plans.
- Utilities Central Locating called at least 2 business days ahead. (1-800-922-1987)
- Utilities located and marked.
- Employees briefed on marking and color codes.*
- Employees trained on excavation and safety procedures for natural gas lines.
- When excavation approaches gas lines, employees expose lines by careful probing and hand digging.

*A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE

Natural Gas	Yellow
Electric	Red
Water	Blue
Wastewater	Green

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Vehicle Tracking Control	2	EA	\$ 2,370.00	\$ 4,740.00
Silt Fence	3,218	LF	\$ 2.50	\$ 8,045.00
Concrete Washout	1	EA	\$ 760.00	\$ 760.00
Permanent Seeding	4	AC	\$ 800.00	\$ 3,200.00
Rollered Erosion Control Product	20,855	SF	\$ 0.40	\$ 8,342.00
Inlet Protection	3	EA	\$ 200.00	\$ 600.00
Maintenance (40% OF E.C.)	1	LS	\$ 10,275.00	\$ 10,275.00
			TOTAL	\$ 35,962.00

GENERAL GRADING AND EROSION CONTROL NOTES

TIMING
Anticipated starting and completion time period of site grading: Spring 2020 - Winter 2020
Expected date on which the final stabilization will be completed: Spring 2021

AREAS
Total area of the site to be cleared, excavated, or graded: 17.20 Acres

RECEIVING WATERS
Name of receiving waters: Jimmy Camp Creek / Fountain Creek

EARTHWORKS
3,053 CY CUT, 133,276 CY FILL, NET 130,224 CY FILL.

STATEMENTS

ENGINEER'S STATEMENT
THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

ANDREW W. McCORD, P.E. 25057 _____ DATE _____
FOR AND ON BEHALF OF KIWAA ENGINEERING CORPORATION

OWNER'S STATEMENT
THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

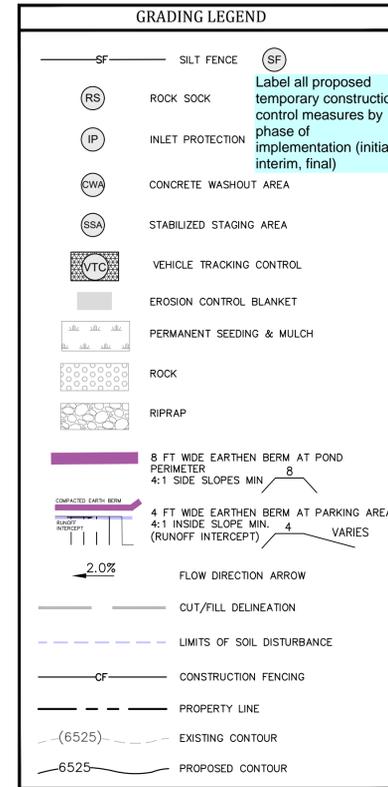
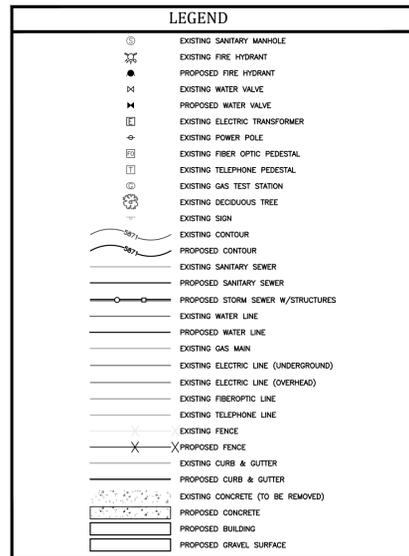
BY: PAT RIGDON _____
TITLE: COLORADO SPRINGS POLICE DEPARTMENT

ADDRESS: CSPD FIRING RANGE
15905 SNIPER LANE
FOUNTAIN, COLORADO 80817

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 AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

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



SITE SOIL TYPE NOTE:

According to the Soil Survey for El Paso County, Colorado, Soils within the subject site are classified to be within Hydrologic Soils Group C (Limon Clay #47) (See Figure 2). The soils all well drained, typical of alluvial fans, and have a low hazard of erosion and soil blowing.

SHEET INDEX

- C-100 Grading and Erosion Control Plan -- Cover Sheet
- C-101 Grading and Erosion Control Plan
- C-102 Grading and Erosion Control Details 1 of 2
- C-103 Grading and Erosion Control Details 2 of 2

SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	lbs/acre
SIDE-OATS GRAMA	El Reno	3.0
WESTERN WHEAT GRASS	Barton	2.5
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pastura	2.0
SAND DROPSIED SWITCH GRASS	Native	0.5
WEeping LOVE GRASS	Nebraska 28	3.0
	Morpha	1.0
		14.0 lbs

SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.



Know what's below.
Call before you dig.

Unresolved. Add PCD Project Number PPR-19-043

C-100

