PRELIMINARY SITE GRADING CONSTRUCTION PLANS
FOR

# THE RIDGE AT LORSON RANCH

## EARLY OVERLOT GRADING / EROSION CONTROL PLANS

Know what's **below.**
**Call** before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

VICINITY MAP
NO SCALE

| SHEET INDEX | |
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| SHEET NO. | SHEET DESCRIPTION |
| C0.1 | COVER SHEET |
| C0.2 | NOTES (GENERAL, GRADING, EROSION CONTROL) |
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| C9.1 ~ C9.6 | POND C2.1, C4, & F OULET STRUCTURES AND DETAILS |
| C12.1 ~ C12.4 | DETAILS |
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| | |
| | |
| | |

### LEGEND

STREET R.O.W.

FUTURE STORM SEWER

### DEVELOPER'S STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

OWNERS SIGNATURE DATE

PREPARED FOR:
**LORSON, LLC**
N. WAHSATCH AVE., SUITE 301
COLORADO SPRINGS, CO 80903
719-635-3200
CONTACT: JEFF MARK

PREPARED BY:
**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
719-570-1100
CONTACT: RICHARD L. SCHINDLER P.E.

### WATER / SANITARY
WIDEFIELD WATER AND SANITATION DISTRICT
8495 FONTAINE BLVD.
COLORADO SPRINGS, CO 80925
719-390-7111

### CABLE
COMCAST
P.O. BOX 173838
DENVER, CO 80217
970-641-4774

### ELECTRIC
MOUNTAIN VIEW ELECTRIC
11140 E. WOODMEN RD.
COLORADO SPRINGS, CO 80831
719-495-2283

### SECURITY FIRE PROTECTION DISTRICT
400 SECURITY BOULEVARD
SECURITY, CO 80911
719-392-7121

### TELEPHONE
CENTURYLINK
7925 INDUSTRY ROAD
COLORADO SPRINGS, CO 80939
719-278-4651

### GAS
BLACK HILLS ENGERGY
7060 ALLEGRE ST.
FOUNTAIN, CO 80817
719-393-6639

### EL PASO COUNTY
PLANNING AND COMMUNITY DEVELOPMENT
2880 INTERNATIONAL CIRCLE
COLORADO SPRINGS, CO 80910
719-520-6300

### BASIS OF BEARING
BEARINGS ARE BASED ON THE SOUTH LINE OF THE NORTH HALF OF SECTION 23, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN AS BEING SOUTH 89°41'52" WEST. THE EAST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 3-1/2" ALUMINUM CAP MONUMENT AND THE WEST QUARTER CORNER OF SAID SECTION 23 IS A FOUND 2-1/2" ALUMINUM CAP MONUMENT

### BENCHMARK
FIMS MONUMENT F204 LOCATED AT THE NORTHWEST CORNER OF FONTAINE BLVD AND COTTONWOOD GROVE DR. ELEVATION 5724.072 (N.G.V.D. 29)

### TRAFFIC CONTROL NOTE
THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL DEVICES AND MONITORING NECESSARY TO SAFELY COMPLETE THE WORK SHOWN IN THESE CONSTRUCTION DOCUMENTS IN CONFORMANCE WITH M.U.T.C.D. GUIDELINES. THE CONTRACTOR SHALL COMPLETE ALL NECESSARY WORK FOR PLAN REVIEW, PERMITS AND PROCESSING. TRAFFIC CONTROL WILL NOT BE PAID SEPARATELY BUT IS INCLUDED IN THE COST OF THE PROJECT.

### CONSTRUCTION APPROVAL
COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

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

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

### ENGINEER'S APPROVAL
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 NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARING THIS PLAN

RICHARD L. SCHINDLER, P.E. # 33997
FOR AND ON BEHALF OF CORE ENGINEERING GROUP

PUD/SP 21-006


CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

COVER SHEET
EARLY GRADING AND
EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C0.1
TOTAL SHEETS: 23

## CONSTRUCTION NOTES

1. ALL WORK SHALL COMPLY WITH THE CODES AND POLICIES FOR EL PASO COUNTY.

2. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS GRADING PLAN WAS OBTAINED FROM AERIAL CONTOURS AND PREVIOUS CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND BE FAMILIAR WITH THE EXISTING CONDITIONS.

3. DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:
BASE OF ALL CUTS AND FILLS – 12 INCHES,
FULL DEPTH OF ALL EMBANKMENTS

4. THE CONTRACTOR IS RESPONSIBLE FOR THE RE-ESTABLISHMENT OF ALL SURVEY MONUMENTS DISTURBED WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM FLOODING AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING, REGARDLESS OF THE SOURCE OF WATER, SHALL BE PROMPTLY DEWATERED AND RESTORED.

6. PRIOR TO PAVING OPERATIONS, THE ENTIRE SUBGRADE SHALL BE PROOF-ROLLED WITH A LOADED 988 FRONT-END LOADER OR SIMILAR HEAVY RUBBER TIRED VEHICLE (GVW OF 50,000 POUNDS WITH 18 KIP PER AXLE AT TIRE PRESSURES OF 90 PSI) TO DETECT ANY SOFT OR LOOSE AREAS. IN AREAS WHERE SOFT OR LOOSE SOILS, PUMPING OR EXCESSIVE MOVEMENT IS OBSERVED, THE EXPOSED MATERIALS SHALL BE OVER-EXCAVATED TO A MINIMUM DEPTH OF TWO FEET BELOW PROPOSED FINAL GRADE OR TO A DEPTH AT WHICH SOILS ARE STABLE. AFTER THIS HAS BEEN COMPLETED, THE EXPOSED MATERIALS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES AND MOISTURE CONDITIONED. THE SUBGRADE SHALL THEN BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTMM D-698) AT 0 TO +4.0% OF OPTIMUM MOISTURE CONTENT FOR A-6 AND A-7-6 SOILS ENCOUNTERED. OTHER SUBGRADE TYPES SHALL BE UNIFORMLY COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557) AT PLUS OR MINUS 2.0% OF OPTIMUM MOISTURE CONTENT. AREAS WHERE STABLE NATURAL SOILS ARE ENCOUNTERED AT PROPOSED SUBGRADE ELEVATION SHALL ALSO BE SCARIFIED (18 INCHES FOR A-7-6 SOILS BELOW FULL-DEPTH ASPHALT CONCRETE) AND COMPACTED AS OUTLINED ABOVE PRIOR TO PAVING OPERATIONS. SUBGRADE FILL SHALL BE PLACED IN SIX-INCH LIFTS AND UNIFORMLY COMPACTED, MEETING THE REQUIREMENTS AS PREVIOUSLY DESCRIBED.

7. SUBGRADE MATERIALS DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED, DISPOSED OF AND REPLACED WITH APPROVED MATERIALS.

8. FILL SHALL BE PLACED IN 8-INCH MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED PRIOR TO SUCCESSIVE LIFTS.

9. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DURING CONSTRUCTION ACTIVITIES AT ALL TIMES DURING GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:
   - HAY BALE BARRIERS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - SILT FENCE WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY SEDIMENTATION BASINS WHERE NEEDED AND/OR AS DIRECTED BY THE ENGINEER.
   - MULCHING AND SEEDING OF EXCESSIVE SLOPED AREAS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
   - TEMPORARY VEHICLE TRACKING CONTROL AS NEEDED AND/OR DIRECTED BY THE ENGINEER.
   - CONCRETE WASH AREAS.
   - INLET PROTECTION.

   THESE AND ALL EROSION CONTROL BEST MANAGEMENT PRACTICES AS SHOWN IN THE GRADING AND EROSION CONTROL PLANS SHALL BE STRICTLY ADHERED TO.

10. FINISHED CONTOURS/SPOT ELEVATIONS SHOWN HEREON REPRESENT FINISHED GRADES. ALL PAVEMENT SUBGRADES ARE BASED ON THE COMPOSITE ASPHALT PAVEMENT RECOMMENDATIONS MADE IN THE "GEOTECHNICAL STUDY" FOR THIS PROJECT.

11. THERE MAY BE SOME TOPSOIL WITHIN LORSON RANCH EAST THAT IS NOT SUITABLE FOR RE-USE. CONTRACTOR SHALL AMEND THE TOPSOIL AS NECESSARY AND RE-SPREAD IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS. IF TOPSOIL CANNOT BE AMENDED IT SHALL BE USED AS FILL WHERE NO FUTURE STRUCTURES OR ROADS WILL BE BUILT.

## ADDITIONAL SWMP PLAN CONTRACTOR NOTES.

1. *CONTRACTOR MUST ADD THEIR CONTACT INFORMATION TO THE SWMP PLANS PRIOR TO CONSTRUCTION*
2. *IF THE GRADING IS TO BE PHASED THE CONTRACTOR MUST PROVIDE PHASING MAPS FOR INSERTION INTO THE SWMP PLANS.*
3. *THE CONTRACTOR MUST PROVIDE THE CLIENT THE LOCATION OF ANY POTENTIAL SOURCES OF POLUTIONS SUCH AS FUELING AREAS, ETC TO BE INSERTED INTO THE SWMP PLANS.*
4. *THE ON-SITE SWMP PLAN SHALL BE LOCATED AT THE SE CORNER OF FONTAINE BLVD AND MARKSHEFFEL ROAD UNLESS OTHERWISE DOCUMENTED.*
5. *EXISTING VEGETATION WITHIN THE LIMITS OF CONSTRUCTION CONSISTS OF NATIVE GRASSES AND WEEDS. GROUND COVER IS ESTIMATED AT 70% DENSITY. EXISTING VEGETATION WILL BE VERIFIED VISUALLY IN THE FIELD PRIOR TO STARTING WORK.*

## EL PASO COUNTY STANDARD CONSTRUCTION NOTES:

1. *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.*
2. *CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).*
3. *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:*
   a. *EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)*
   b. *CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2*
   c. *COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION*
   d. *CDOT M & S STANDARDS*
4. *NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.*
5. *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.*
6. *CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.*
7. *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.*
8. *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.*
9. *ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.*
10. *CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.*
11. *ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.*
12. *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.*
13. *SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY PUBLIC WORK DEPARTMENT AND MUTCD CRITERIA.*
14. *CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY PWD, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.*
15. *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.*

## GEOTECHNICAL REPORT NOTE

1. ALL GRADING SHALL CONFORM TO THE GEOTECHICAL RECOMMENDATIONS PREPARED BY RMG, "PRELIMINARY SOILS AND GEOLOGY FOR THE RIDGE AT LORSON RANCH", DATED MARCH 17, 2021, JOB NO. 175706.

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

1. 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.
2. 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.
3. 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.
4. 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.
5. 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
6. 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.
7. 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.
8. 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.
9. All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that effect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.
10. 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.
11. 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).
12. 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.
13. 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.
14. 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.
15. Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
16. 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.
17. 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.
18. Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
19. 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.
20. 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.
21. 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.
22. 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.
23. No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
24. Owner/developer and their agents shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.
25. All construction traffic must enter/exit the site only at approved construction access points.
26. Prior to construction the permittee shall verify the location of existing utilities.
27. 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.
28. The soils report for this site has been prepared by RMG and shall be considered a part of these plans. See Geotechnical Report Note.
29. 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


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| NO. | DESCRIPTION | DATE |
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PREPARED FOR:
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COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# OVERLOT EARLY SITE GRADING PLAN NOTES

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C0.2
TOTAL SHEETS: 23

TYPICAL SECTION 50' R.O.W.
RESIDENTIAL URBAN LOCAL
NOT TO SCALE

NOTE:
Pavement section to be determined by Hveem analysis and design. Design to be approved by El Paso County PCD Engineering

KINGSTON PL, APEN BUTTE TER, COPER BUTTE WY, MISSION PEAK PL, PEARSOLL ST, LOST PEAK LN, LAKE TROUT DR
SPLIT MOUNTAIN DR, NYSTROM TER, SPLAKE ST, RAVEN RIDGE TER, FORAKER LN, BUCKNER WAY, SNOWFIELD CT,
GRAY WOLF CT, DONNAS DR, BROKEN TOP DR, SHUKSAN LN, SANDERLING ST, MERIDITH RIDGE WY, DANIS DR, JASONS RIDGE WY,
REGAN RIDGE DR, CODY RIDGE WAY, RIKERS RIDGE LN, LOGANS RIDGE LN

TYPICAL SECTION 60' R.O.W.
RESIDENTIAL URBAN COLLECTOR
NOT TO SCALE

WALLEYE DRIVE (AT GRAYLING DR)
LORSON BOULEVARD

DESIGN SPEED: 40 MPH
POSTED SPEED: 35 MPH

NOTE:
Pavement section to be determined by Hveem analysis and design. Design to be approved by PCD Engineering

DESIGN SPEED:
1. 50MPH (PRINCIPAL ARTERIAL)
2. 40MPH FOR TAPERS (WESTBOUND) (NON-RES COLLECTOR)

TYPICAL SECTION 100' R.O.W.
FONTAINE BLVD
NOT TO SCALE

NOTE:
Pavement section to be determined by Hveem analysis and design. Design to be approved by El Paso County PCD and Engineering


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FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# OVERLOT EARLY SITE GRADING
# TYPICAL ROADWAY SECTIONS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C0.3
TOTAL SHEETS: 23

## LEGEND

- 5721 — EXISTING MINOR CONTOUR
- 5720 — EXISTING MAJOR CONTOUR
- 5720 — PROPOSED CONTOUR
- EXISTING STORM SEWER
- (SF) PERIMETER EROSION CONTROL SILT FENCE, EROSION LOG, OR EARTH BERM
- SUBDIVISION BOUNDARY
- CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
- P/L PROPERTY LINE OR TRACT LINE
- ROW LINE
- STORMWATER RUNOFF DIRECTION
- X% SLOPE DIRECTION AND GRADE
- CUT/FILL LINE
- (VTC) VEHICLE TRACKING CONTROL
- COMPACTED EARTHEN BERM OR ROUGH CUT STREET CONTROL PLAN or STRAW BALE CHECK DAM
- (T) (G) (WO) LOT TYPE TRANSITION, GARDEN, WALK-OUT SEE DETAIL SHEET
- (PS) PERMANENT SEEDING
- (IP) INLET PROTECTION
- (MU) MULCH
- (DS2) UNLINED EARTHEN BERM BY CUT/FILL

## NOTE:

1. SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED
2. POND SLOPES SHALL BE 3:1
3. STRAW ECB SHALL BE PLACED ON ALL SIDE SLOPES AND PERMANENT SLOPES 3:1 OR STEEPER.
4. (TS) TEMPORARY SEEDING REQUIRED ON DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED AND SEEDED WITHIN 21 DAYS AFTER INTERIM GRADING.
5. THERE ARE NO ASPHALT BATCH PLANTS OR CONSTRUCTION OFFICE TRAILERS PLANNED FOR THIS SITE OR CONTRACTOR SHALL OBTAIN PERMIT IF DESIRED.
6. CONTRACTOR TO DETERMINE STOCKPILE AREAS AND STAGING AREAS AND SHOW THEM ON THE WORKING MAPS.
7. EXISTING VEGETATION CONSISTS OF GRASSES AND WEEDS. GROUND COVER ESTIMATED AT 70% DENSITY AND WILL BE FIELD VERIFIED AT THE TIME OF CONSTRUTION
8. THE STAGING AREA WILL BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION AND WILL BE DEPICTED ON THE SWMP PLAN AT THAT TIME
9. THE SWMP MANUAL IS LOCATED AT THE SE CORNER OF MARKSHEFFEL ROAD AND FONTAINE BOULEVARD.
10. THERE ARE NO STREAMS OR WETLANDS WITHIN THE LIMITS OF CONSTRUCTION

## INITIAL BMP'S:

1. PERIMETER SILT FENCE
2. VEHICLE TRACKING CONTOL PADS
3. SEDIMENT BASINS IN PONDS C2.1, C4
4. INLET PROTECTION FOR EXISTING INLETS
4. PLACEMENT OF ON-SITE SWMP MANUAL

## INTERIM BMP'S:

1. TEMPORARY SEDIMENT TRAPS AS GRADING PROGRESSES
2. TEMPORARY SEEDING/MULCHING AS NEEDED
3. STRAW BALE CHECKS AS NEEDED DURING GRADING

## FINAL BMP'S:

1. FINAL SEEDING AND MULCHING
2. STRAW ECB ON PERMANENT SLOPES 3:1 OR STEEPER.
3. POND OUTLET STRUCTURES

60 30 0 60 120

SCALE: 1"=60'

KEY MAP
NO SCALE

**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.1

TOTAL SHEETS: 23

**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE:
SEPT 28, 2021

PROJECT NO.
100.064

SHEET NUMBER
C4.2

TOTAL SHEETS: 23

**CORE ENGINEERING GROUP**


15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, CO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.3

TOTAL SHEETS: 23

SEE SHEET C4.6

SCALE: 1"=60'

**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH
# OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.4

TOTAL SHEETS: 23

**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C4.5
TOTAL SHEETS: 23

SEE SHEET C4.8




**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/20 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.6

TOTAL SHEETS: 23

SEE SHEET C4.5

**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.7

TOTAL SHEETS: 23

**CORE ENGINEERING GROUP**


15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.8

TOTAL SHEETS: 23

KEY MAP
NO SCALE

EAST SWALE AT 3%

EAST SWALE BY CUT/FILL AT 0.5%

EAST SWALE BY CUT/FILL AT 5.0%

SEE SHEET C4.7

SEE SHEET C4.8


**CORE ENGINEERING GROUP**
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/220 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH
# OVERLOT EARLY GRADING AND EROSION CONTROL PLAN

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C4.9

TOTAL SHEETS: 23

KEY MAP
NO SCALE

SEDIMENT BASIN C2.1 IS LOCATED IN TRACT G, THE HILLS AT LORSON RANCH FILING NO. 1. SEE MAINTENANCE AGREEMENT AT REC. NO. 220211669

CORE
ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | ADD PERMANENT SEEDING AT LAMPREY/YAMHILL | 11/24/20 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# THE RIDGE AT LORSON RANCH
# TEMPORARY SEDIMENT BASIN C2.1

DATE:
SEPT 28, 2021

PROJECT NO.
100.064

SHEET NUMBER
C4.10
TOTAL SHEETS: 23

POND CONCRETE CUTOFF WALL

NO SCALE

POND C2.1
EMERGENCY OVERFLOW
AND CONCRETE CUTOFF WALL
PROFILE

SCALE: NTS

CONCRETE LOW FLOW CHANNEL

N.T.S.

POND C2.1 IS LOCATED IN TRACT G, THE HILLS AT LORSON RANCH FILING NO. 1. SEE MAINTENANCE AGREEMENT AT REC. NO. 220211669

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | RAISE SITE 1' EAST OF POWERLINES | JAN 12, 2021 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# POND C2.1
# POND STRUCTURES AND TRICKLE CHANNEL

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C9.1

TOTAL SHEETS: 23

CONCRETE LOW FLOW CHANNEL

N.T.S.

POND CONCRETE CUTOFF WALL

NO SCALE

POND C4
EMERGENCY OVERFLOW
AND CONCRETE CUTOFF WALL
BTM=5775.00, TOP=5778.00
WIDTH=30', 4:1 SIDE SLOPES
FLOW DEPTH=1.87', Q100=138CFS

POND C4
EMERGENCY OVERFLOW
AND CONCRETE CUTOFF WALL
PROFILE

SCALE: NTS

SCALE: 1"=30'


CORE ENGINEERING GROUP
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BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | RAISE SITE 1' EAST OF POWERLINES | JAN 12, 2021 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# POND C4 POND STRUCTURES AND TRICKLE CHANNEL

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C9.2

TOTAL SHEETS: 23

NOTE:
1. POND SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED
2. STRAW ECB SHALL BE PLACED ON ALL POND SIDE SLOPES UNLESS NOTED OTHERWISE




CONCRETE LOW FLOW CHANNEL
N.T.S.

WQ POND F
1"=20'

WQ POND F
EMERGENCY OVERFLOW
PROFILE
SCALE: NTS

POND F
EMERGENCY OVERFLOW
BTM=5847.00, TOP=5848.00
WIDTH=10', 4:1 SIDE SLOPES
FLOW DEPTH=0.44', Q100=10.2cfs

GRAVEL ACCESS ROAD
NO SCALE

FOREBAY SECTION A-A
NO SCALE

FOREBAY SECTION B-B
NO SCALE

FOREBAY DETAIL
NO SCALE


CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1. | RAISE SITE 1' EAST OF POWERLINES | JAN 12, 2021 |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# WQ POND F POND STRUCTURES AND TRICKLE CHANNEL

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C9.3
TOTAL SHEETS: 23

DETAIL A
NO SCALE

OUTLET STRUCTURE DETAIL – PLAN VIEW
NO SCALE

NOTE:
AFTER CONCRETE STRUCTURE HAS BEEN POURED ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO GRATE CONSTRUCTION

GRATE 1
NO SCALE

GRATES 2,3,4,5
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION A–A
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE

TRASH RACK DETAIL
NO SCALE

ORIFICE PLATE DETAIL
NO SCALE

## OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.

| BAR SIZE | #4 | #5 | #6 |
|---|---|---|---|
| MIN. SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |

3. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
4. CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
5. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE ½" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/8" CHAMFER UNLESS OTHERWISE NOTED.
7. SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
8. REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
9. ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCITON OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

WQCV WELL-SCREEN NOTES:

1. Well-Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.

2. WQCV Well Screen
- Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
- Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
- Type and Size of Support Rod: TE 0.074"X0.50"
- Spacing of Support Rod (O.C.): 1.0 Inch
- Total Screen Thickness: 0.655"
- Carbon Steel Holding Frame Type: 3/4" x 1.0" angle

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE


CORE ENGINEERING GROUP
15004 1ST AVENUE S.
BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# POND C2.1
# FULL SPECTRUM
# OUTLET STRUCTURE DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C9.4
TOTAL SHEETS: 23

DETAIL A
NO SCALE

OUTLET STRUCTURE DETAIL – PLAN VIEW
NO SCALE

NOTE:
AFTER CONCRETE STRUCTURE HAS BEEN POURED ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO GRATE CONSTRUCTION

GRATE 1
NO SCALE

GRATES 2,3,4,5
NO SCALE

NOTE A:
SLOT FOR CLOSE MESH GRATES

OUTLET STRUCTURE DETAIL – SECTION A–A
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE

TRASH RACK DETAIL
NO SCALE

ORIFICE PLATE DETAIL
NO SCALE

## OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.

| BAR SIZE | #4 | #5 | #6 |
|---|---|---|---|
| MIN. SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |

3. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
4. CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
5. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE ½" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/8"x3/8" CHAMFER UNLESS OTHERWISE NOTED.
7. SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
8. REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
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WQCV WELL-SCREEN NOTES:

1. Well-Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.

2. WQCV Well Screen
- Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
- Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
- Type and Size of Support Rod: TE 0.074"X0.50"
- Spacing of Support Rod (O.C.): 1.0 Inch
- Total Screen Thickness: 0.655"
- Carbon Steel Holding Frame Type: 3/4" x 1.0" angle

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE


CORE ENGINEERING GROUP
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BURNSVILLE, MN 55306
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com


| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD – WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# POND C4
# FULL SPECTRUM
# OUTLET STRUCTURE DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C9.5
TOTAL SHEETS: 23

DETAIL A
NO SCALE

OUTLET STRUCTURE DETAIL – PLAN VIEW
NO SCALE

NOTE:
AFTER CONCRETE STRUCTURE HAS BEEN POURED ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO GRATE CONSTRUCTION

GRATE 1
NO SCALE

GRATES 2 & 3
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION A–A
NO SCALE

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE

TRASH RACK DETAIL
NO SCALE

ORIFICE PLATE DETAIL
NO SCALE

## OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.

| BAR SIZE | #4 | #5 | #6 |
|---|---|---|---|
| MIN. SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |

3. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
4. CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
5. EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE ½" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A ¾" CHAMFER UNLESS OTHERWISE NOTED.
7. SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
8. REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
9. ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCITON OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

WQCV WELL-SCREEN NOTES:

1. Well-Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.

2. WQCV Well Screen
- Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
- Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
- Type and Size of Support Rod: TE 0.074"X0.50"
- Spacing of Support Rod (O.C.): 1.0 Inch
- Total Screen Thickness: 0.655"
- Carbon Steel Holding Frame Type: 3/4" x 1.0" angle

OUTLET STRUCTURE DETAIL – SECTION B–B
NO SCALE


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COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# POND F WQ POND OUTLET STRUCTURE DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C9.6
TOTAL SHEETS: 23

**TYPICAL "A" LOT**

**TYPICAL "B" LOT**

**TYPICAL "GARDEN" LOT**

**TYPICAL "WALKOUT" LOT**

## Sediment Control Log (SCL) — SC-2

SEDIMENT CONTROL LOG

SECTION A

SEDIMENT CONTROL LOG JOINTS

SCL-1. SEDIMENT CONTROL LOG

November 2010 — Urban Drainage and Flood Control District, Urban Storm Drainage Criteria Manual Volume 3 — SCL-3

## EC-9 Rough Cut Street Control (RCS)

ROUGH CUT STREET CONTROL PLAN

SECTION A

SECTION B

TABLE RCS-1

| W (FT) | X (FT) |
|---|---|
| 20-30 | 5 |
| 31-40 | 7 |
| 41-50 | 8 |
| 51-60 | 10.5 |
| 61-70 | 12 |

TABLE RCS-2

| LONGITUDINAL STREET SLOPE (%) | SPACING (FT) |
|---|---|
| <2 | NOT TYPICALLY NEEDED |
| 2 | 200 |
| 3 | 200 |
| 4 | 150 |
| 5 | 100 |
| 6 | 50 |
| 7 | 25 |
| 8 | 25 |

RCS-1. ROUGH CUT STREET CONTROL

RCS-2 — Urban Drainage and Flood Control District, Urban Storm Drainage Criteria Manual Volume 3 — November 2010

STRAW BALE INLET PROTECTION
NTS

### STRAW BALE INLET PROTECTION NOTES

**INSTALLATION REQUIREMENTS**

1. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
2. BALES ARE TO BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE END OF THE BALES TIGHTLY ABUTTING ONE ANOTHER.
3. SEE STRAW BALE BARRIER FIGURE SBB-2 FOR INSTALLATION REQUIREMENTS.

**MAINTENANCE REQUIREMENTS**

1. CONTRACTOR SHALL INSPECT STRAW BALE INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNENTRENCHED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
3. SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALES WHEN IT ACCUMULATES TO APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.
4. INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality — Figure IP-2 Straw Bale Inlet Protection — Construction Detail and Maintenance Requirements — 3-26

PLAN VIEW

SECTION A-A

NOTES:
1. SIGN MATERIAL, EXCAVATION, AND RESTORATION ARE INCLUDED IN THE COST OF THE CONCRETE WASHOUT STRUCTURE.
2. EROSION BALES MAY BE USED AS AN ALTERNATIVE FOR THE BERM.

1/1/08 — DATE APPROVED: John A. McCarty, DEPARTMENT OF TRANSPORTATION — Concrete Washout Structure, Standard Drawing — REVISION DATE: 7/17/07 — FILE NAME: SD_3-84 — EL PASO COUNTY DEPARTMENT OF TRANSPORTATION


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DESIGNED: RLS
CHECKED: RLS

# GRADING AND EROSION CONTROL DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C12.1
TOTAL SHEETS: 23

## Vehicle Tracking Control (VTC) SM-4

SECTION A

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

SEDIMENT BASIN
NTS

### SEDMENT BASIN NOTES

**INSTALLATION REQUIREMENTS**

1. SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
3. THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.
4. THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. BAFFLES MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.
5. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
6. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
7. 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**

1. CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
2. SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
3. SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE 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



## EC-6 Rolled Erosion Control Products (RECP)

SILT FENCE

**INSTALLATION REQUIREMENTS**

1. SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
2. WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPLICED TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
3. METAL POSTS SHALL BE "STUDDED TEE" OR "U" TYPE WITH MINIMUM WEIGHT 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
4. THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG, #9 HEAVY-DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
5. WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3" ABOVE THE ORIGINAL GROUND SURFACE.
6. ALONG THE TOE OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
7. THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES; HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

**MAINTENANCE REQUIREMENTS**

1. CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNENTRENCHED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
2. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
3. SILT FENCES 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

City of Colorado Springs Stormwater Quality | Figure SF-3 Silt Fence Joint Tying — Construction Detail and Maintenance Requirements

C4 (2.02+0.61)

C2.1 (1.73+0.4)

Required Area per Row (in²)

| Design Volume (acre-ft) | Depth at Outlet (ft) 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 |
|---|---|---|---|---|---|---|---|---|
| 2 | 15.04 | 7.71 | 5.10 | 3.76 | 2.95 | 2.41 | 2.02 | 1.73 |
| 1 | 7.52 | 3.86 | 2.55 | 1.88 | 1.48 | 1.21 | 1.01 | 0.87 |
| 0.6 | 4.51 | 2.31 | 1.53 | 1.13 | 0.89 | 0.72 | 0.61 | 0.52 |
| 0.4 | 3.01 | 1.54 | 1.02 | 0.75 | 0.59 | 0.48 | 0.40 | 0.35 |
| 0.2 | 1.50 | 0.77 | 0.51 | 0.38 | 0.30 | 0.24 | 0.20 | 0.17 |
| 0.1 | 0.75 | 0.39 | 0.26 | 0.19 | 0.15 | 0.12 | 0.10 | 0.09 |
| 0.06 | 0.45 | 0.23 | 0.15 | 0.11 | 0.09 | 0.07 | 0.06 | 0.05 |
| 0.04 | 0.30 | 0.15 | 0.10 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 |
| 0.02 | 0.15 | 0.08 | 0.05 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 |
| 0.01 | 0.08 | 0.04 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |

LORSON BLVD

TABLE SB-1

LORSON BLVD

Circular Perforation Sizing

| Hole Diameter (in) | Hole Diameter (in) | Area per Row (in²) n = 1 | n = 2 | n = 3 |
|---|---|---|---|---|
| 1/4 | 0.250 | 0.05 | 0.10 | 0.15 |
| 5/16 | 0.313 | 0.08 | 0.15 | 0.23 |
| 3/8 | 0.375 | 0.11 | 0.22 | 0.33 |
| 7/16 | 0.438 | 0.15 | 0.30 | 0.45 |
| 1/2 | 0.500 | 0.20 | 0.39 | 0.59 |
| 9/16 | 0.563 | 0.25 | 0.50 | 0.75 |
| 5/8 | 0.625 | 0.31 | 0.61 | 0.92 |
| 11/16 | 0.688 | 0.37 | 0.74 | 1.11 |
| 3/4 | 0.750 | 0.44 | 0.88 | 1.33 |
| 7/8 | 0.875 | 0.60 | 1.20 | 1.80 |
| 1 | 1.000 | 0.79 | 1.57 | 2.38 |
| 1 1/8 | 1.125 | 0.99 | 1.99 | 2.98 |
| 1 1/4 | 1.250 | 1.23 | 2.45 | 3.68 |
| 1 3/8 | 1.375 | 1.48 | 2.97 | 4.45 |
| 1 1/2 | 1.500 | 1.77 | 3.53 | 5.30 |
| 1 5/8 | 1.625 | 2.07 | 4.15 | 6.22 |
| 1 3/4 | 1.750 | 2.41 | 4.81 | 7.22 |
| 1 7/8 | 1.875 | 2.73 | 5.52 | 8.28 |
| 2 | 2.000 | 3.14 | 6.28 | 9.42 |
| n = Number of columns of perforations | | | | |
| Minimum steel plate thickness | | 1/4" | 5/16" | 3/8" |

C2.1

C4

TABLE SB-2

City of Colorado Springs Stormwater Quality | Figure SB-2 Outlet Sizing — Application Techniques and Maintenance Requirements



**SED. BASIN C2.1**
VOL=2.49AC-FT
DEPTH=4.5'
AREA PER ROW=2.13

**SED. BASIN C4**
VOL=2.6ac-ft
DEPTH=4.0'
AREA PER ROW=2.63

**LORSON BLVD SED. BASIN**
VOL=0.06ac-ft
DEPTH=2.0'
AREA PER ROW=0.15

## Rolled Erosion Control Products (RECP) EC-6

ECB-3. OUTSIDE OF DRAINAGEWAY

STAKING PATTERNS BY ECB TYPE

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE



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CHECKED: RLS

# GRADING AND EROSION CONTROL DETAILS

DATE: SEPT 28, 2021

PROJECT NO. 100.064

SHEET NUMBER C12.2

TOTAL SHEETS: 23

## EC-2 Temporary and Permanent Seeding (TS/PS)

**Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses**

| Common[a] Name | Botanical Name | Growth Season[b] | Growth Form | Seeds/ Pound | Pounds of PLS/acre |
|---|---|---|---|---|---|
| **Alakali Soil Seed Mix** | | | | | |
| Alkali sacaton | *Sporobolus airoides* | Cool | Bunch | 1,750,000 | 0.25 |
| Basin wildrye | *Elymus cinereus* | Cool | Bunch | 165,000 | 2.5 |
| Sodar streambank wheatgrass | *Agropyron riparium 'Sodar'* | Cool | Sod | 170,000 | 2.5 |
| Jose tall wheatgrass | *Agropyron elongatum 'Jose'* | Cool | Bunch | 79,000 | 7.0 |
| Arriba western wheatgrass | *Agropyron smithii 'Arriba'* | Cool | Sod | 110,000 | 5.5 |
| **Total** | | | | | **17.75** |
| **Fertile Loamy Soil Seed Mix** | | | | | |
| Ephriam crested wheatgrass | *Agropyron cristatum 'Ephriam'* | Cool | Sod | 175,000 | 2.0 |
| Dural hard fescue | *Festuca ovina 'duriuscula'* | Cool | Bunch | 565,000 | 1.0 |
| Lincoln smooth brome | *Bromus inermis leyss 'Lincoln'* | Cool | Sod | 130,000 | 3.0 |
| Sodar streambank wheatgrass | *Agropyron riparium 'Sodar'* | Cool | Sod | 170,000 | 2.5 |
| Arriba western wheatgrass | *Agropyron smithii 'Arriba'* | Cool | Sod | 110,000 | 7.0 |
| **Total** | | | | | **15.5** |
| **High Water Table Soil Seed Mix** | | | | | |
| Meadow foxtail | *Alopecurus pratensis* | Cool | Sod | 900,000 | 0.5 |
| Redtop | *Agrostis alba* | Warm | Open sod | 5,000,000 | 0.25 |
| Reed canarygrass | *Phalaris arundinacea* | Cool | Sod | 68,000 | 0.5 |
| Lincoln smooth brome | *Bromus inermis leyss 'Lincoln'* | Cool | Sod | 130,000 | 3.0 |
| Pathfinder switchgrass | *Panicum virgatum 'Pathfinder'* | Warm | Sod | 389,000 | 1.0 |
| Alkar tall wheatgrass | *Agropyron elongatum 'Alkar'* | Cool | Bunch | 79,000 | 5.5 |
| **Total** | | | | | **10.75** |
| **Transition Turf Seed Mix[c]** | | | | | |
| Ruebens Canadian bluegrass | *Poa compressa 'Ruebens'* | Cool | Sod | 2,500,000 | 0.5 |
| Dural hard fescue | *Festuca ovina 'duriuscula'* | Cool | Bunch | 565,000 | 1.0 |
| Citation perennial ryegrass | *Lolium perenne 'Citation'* | Cool | Sod | 247,000 | 3.0 |
| Lincoln smooth brome | *Bromus inermis leyss 'Lincoln'* | Cool | Sod | 130,000 | 3.0 |
| **Total** | | | | | **7.5** |



## Temporary and Permanent Seeding (TS/PS) EC-2

**Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)**

| Common Name | Botanical Name | Growth Season[b] | Growth Form | Seeds/ Pound | Pounds of PLS/acre |
|---|---|---|---|---|---|
| **Sandy Soil Seed Mix** | | | | | |
| Blue grama | *Boutelowa gracilis* | Warm | Sod-forming bunchgrass | 825,000 | 0.5 |
| Camper little bluestem | *Schizachyrium scoparium 'Camper'* | Warm | Bunch | 240,000 | 1.0 |
| Prairie sandreed | *Calamovilfa longifolia* | Warm | Open sod | 274,000 | 1.0 |
| Sand dropseed | *Sporobolus cryptandrus* | Cool | Bunch | 5,298,000 | 0.25 |
| Vaughn sideoats grama | *Bouteloua curtipendula 'Vaughn'* | Warm | Sod | 191,000 | 2.0 |
| Arriba western wheatgrass | *Agropyron smithii 'Arriba'* | Cool | Sod | 110,000 | 5.5 |
| **Total** | | | | | **10.25** |
| **Heavy Clay, Rocky Foothill Seed Mix** | | | | | |
| Ephriam crested wheatgrass[d] | *Agropyron cristatum 'Ephriam'* | Cool | Sod | 175,000 | 1.5 |
| Oahe Intermediate wheatgrass | *Agropyron intermedium 'Oahe'* | Cool | Sod | 115,000 | 5.5 |
| Vaughn sideoats grama[e] | *Bouteloua curtipendula 'Vaughn'* | Warm | Sod | 191,000 | 2.0 |
| Lincoln smooth brome | *Bromus inermis leyss 'Lincoln'* | Cool | Sod | 130,000 | 3.0 |
| Arriba western wheatgrass | *Agropyron smithii 'Arriba'* | Cool | Sod | 110,000 | 5.5 |
| **Total** | | | | | **17.5** |

[a] All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

[b] See Table TS/PS-3 for seeding dates.

[c] If site is to be irrigated, the transition turf seed rates should be doubled.

[d] Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

[e] Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.



## Temporary and Permanent Seeding (TS/PS) EC-2

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

**Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses**

| Species* (Common name) | Growth Season[b] | Pounds of Pure Live Seed (PLS)/acre[c] | Planting Depth (inches) |
|---|---|---|---|
| 1. Oats | Cool | 35 - 50 | 1 - 2 |
| 2. Spring wheat | Cool | 25 - 35 | 1 - 2 |
| 3. Spring barley | Cool | 25 - 35 | 1 - 2 |
| 4. Annual ryegrass | Cool | 10 - 15 | ½ |
| 5. Millet | Warm | 3 - 15 | ½ - ¾ |
| 6. Sudangrass | Warm | 5–10 | ½ - ¾ |
| 7. Sorghum | Warm | 5–10 | ½ - ¾ |
| 8. Winter wheat | Cool | 20–35 | 1 - 2 |
| 9. Winter barley | Cool | 20–35 | 1 - 2 |
| 10. Winter rye | Cool | 20–35 | 1 - 2 |
| 11. Triticale | Cool | 25–40 | 1 - 2 |

[a] Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.



## EC-2 Temporary and Permanent Seeding (TS/PS)

**Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses**

| | Annual Grasses (Numbers in table reference species in Table TS/PS-1) | | Perennial Grasses | |
|---|---|---|---|---|
| **Seeding Dates** | **Warm** | **Cool** | **Warm** | **Cool** |
| January 1–March 15 | | | ✓ | ✓ |
| March 16–April 30 | 4 | 1,2,3 | ✓ | ✓ |
| May 1–May 15 | 4 | | ✓ | |
| May 16–June 30 | 4,5,6,7 | | | |
| July 1–July 15 | 5,6,7 | | | |
| July 16–August 31 | | | | |
| September 1–September 30 | | 8,9,10,11 | | |
| October 1–December 31 | | | ✓ | ✓ |

### Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

## Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.



## Earth Dikes and Drainage Swales (ED/DS) EC-10

ED-1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM

DS-1. COMPACTED UNLINED EXCAVATED SWALE

DS-2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL

DS-3. ECB LINED SWALE (CUT AND FILL OR BERM)



## SC-8 Sediment Trap (ST)

SEDIMENT TRAP PLAN

SECTION A

SECTION B

ST-1. SEDIMENT TRAP



## Stockpile Management (SP) MM-2

STOCKPILE PROTECTION PLAN

SECTION A

SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF STOCKPILES.
   - TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.



## Stabilized Staging Area (SSA) SM-6

SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   - LOCATION OF STAGING AREA(S).
   - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.



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| NO. | DESCRIPTION | DATE |
|---|---|---|
| | | |

PREPARED FOR:
LORSON, LLC
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
(719) 635-3200
CONTACT: JEFF MARK

PROJECT:
THE RIDGE AT LORSON RANCH
FONTAINE BLVD - WALLEYE DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

# GRADING AND EROSION CONTROL DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C12.3
TOTAL SHEETS: 23

**TYPICAL "A" LOT DRAINAGE PATTERN**
N.T.S.

NOTES:

1. SIDEYARD SWALE TO BE CONSTRUCTED AT 2% MIN. SLOPE.
2. HP LOCATION ON EACH LOT WILL VARY DEPENDING UPON EXACT HOUSE FOOTPRINT AND LOCATION
3. TOF ELEVATION MUST BE MIN. 18" HIGHER THAN ESTABLISHED HP.

**TYPICAL "B", "G", "W/O" LOT DRAINAGE PATTERN**
N.T.S.

## MULCHING NOTES

### INSTALLATION REQUIREMENTS

1. ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDED AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.

2. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.

3. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.

4. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.

5. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL) USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.

6. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

### MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.

2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

| City of Colorado Springs Stormwater Quality | Figure MU-1 Mulching Construction Detail and Maintenance Requirements |
|---|---|


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DESIGNED: RLS
CHECKED: RLS

# GRADING AND EROSION CONTROL DETAILS

DATE: SEPT 28, 2021
PROJECT NO. 100.064
SHEET NUMBER C12.4
TOTAL SHEETS: 23