

**PRIVATE DETENTION BASIN /
STORMWATER QUALITY BEST MANAGEMENT PRACTICE
MAINTENANCE AGREEMENT AND EASEMENT**

This PRIVATE DETENTION BASIN / STORMWATER QUALITY BEST MANAGEMENT PRACTICE MAINTENANCE AGREEMENT AND EASEMENT (Agreement) is made by and between EL PASO COUNTY by and through THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO (Board or County) and CS POWERS AND GALLEY, LLC, a limited liability company (Owner). The above may occasionally be referred to herein singularly as "Party" and collectively as "Parties."

Recitals

A. WHEREAS, Owner is the owner of certain real estate (the Property or Subdivision) in El Paso County, Colorado, which Property is legally described in Exhibit A attached hereto and incorporated herein by this reference; and

B. WHEREAS, Owner desires to plat and develop on the Property a subdivision to be known as Solace Apartment; and

C. WHEREAS, the development of this Property will substantially increase the volume of water runoff and will decrease the quality of the stormwater runoff from the Property, and, therefore, it is in the best interest of public health, safety and welfare for the County to condition approval of this subdivision on Owner's promise to construct adequate drainage, water runoff control facilities, and stormwater quality structural Best Management Practices ("BMPs") for the subdivision; and

D. WHEREAS, Chapter 8, Section 8.4.5 of the El Paso County Land Development Code, as periodically amended, promulgated pursuant to Section 30-28-133(1), Colorado Revised Statutes (C.R.S.), requires the County to condition approval of all subdivisions on a developer's promise to so construct adequate drainage, water runoff control facilities, and BMPs in subdivisions; and

E. WHEREAS, the Drainage Criteria Manual, Volume 2, as amended by Appendix I of the El Paso County Engineering Criteria Manual (ECM), as each may be periodically amended, promulgated pursuant to the County's Colorado Discharge Permit System General Permit (MS4 Permit) as required by Phase II of the National Pollutant Discharge Elimination System (NPDES), which MS4 Permit requires that the County take measures to protect the quality of stormwater from sediment and other contaminants, requires subdividers, developers, landowners, and owners of facilities located in the County's rights-of-way or easements to provide adequate permanent stormwater quality BMPs with new development or significant redevelopment; and

F. WHEREAS, Section 2.9 of the El Paso County Drainage Criteria Manual provides for a developer's promise to maintain a subdivision's drainage facilities in the event the County does not assume such responsibility; and

G. WHEREAS, developers in El Paso County have historically chosen water runoff detention basins as a means to provide adequate drainage and water runoff control in subdivisions,

which basins, while effective, are less expensive for developers to construct than other methods of providing drainage and water runoff control; and

H. WHEREAS, Owner desires to construct for the subdivision two detention basin/stormwater quality BMP(s) (“detention basin/BMP(s)”) as the means for providing adequate drainage and stormwater runoff control and to meet requirements of the County’s MS4 Permit, and to provide for operating, cleaning, maintaining and repairing such detention basin/BMP(s); and

I WHEREAS, Owner desires to construct the detention basin/BMP(s) on property that is or will be platted as Tract B, and as set forth on Exhibit B attached hereto; and

J. WHEREAS, Owner shall be charged with the duty of constructing the detention basin/BMP(s) and with the duties of operating, maintaining and repairing the detention basin/BMP(s) on the property described in Exhibit B; and

K. WHEREAS, it is the County’s experience that subdivision developers and property owners historically have not properly cleaned and otherwise not properly maintained and repaired these detention basins/BMPs, and that these detention basins/BMPs, when not so properly cleaned, maintained, and repaired, threaten the public health, safety and welfare; and

L. WHEREAS, the County, in order to protect the public health, safety and welfare, has historically expended valuable and limited public resources to so properly clean, maintain, and repair these detention basins/BMPs when developers and property owners have failed in their responsibilities, and therefore, the County desires the means to recover its costs incurred in the event the burden falls on the County to so clean, maintain and repair the detention basin/BMP(s) serving this Subdivision due to the Owner’s failure to meet its obligations to do the same; and

M. WHEREAS, the County conditions approval of this Subdivision on the Owner’s promise to so construct the detention basin/BMP(s), and further conditions approval on the Owner’s promise to reimburse the County in the event the burden falls upon the County to so clean, maintain and/or repair the detention basin/BMP(s) serving this Subdivision; and

N. WHEREAS, the County could condition subdivision approval on the Owner’s promise to construct a different and more expensive drainage, water runoff control system and BMPs than those proposed herein, which more expensive system would not create the possibility of the burden of cleaning, maintenance and repair expenses falling on the County; however, the County is willing to forego such right upon the performance of Owner’s promises contained herein; and

O. WHEREAS, the County, in order to secure performance of the promises contained herein, conditions approval of this Subdivision upon the Owner’s grant herein of a perpetual Easement over a portion of the Property for the purpose of allowing the County to periodically access, inspect, and, when so necessary, to clean, maintain and/or repair the detention basin/BMP(s).

Agreement

NOW, THEREFORE, in consideration of the mutual Promises contained herein, the sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals: The Parties incorporate the Recitals above into this Agreement.

2. Covenants Running with the Land: Owner agree that this entire Agreement and the performance thereof shall become a covenant running with the land, which land is legally described in Exhibit A attached hereto, and that this entire Agreement and the performance thereof shall be binding upon itself and its successors and assigns.

3. Construction: Owner shall construct on that portion of the Property described in Exhibit B attached hereto and incorporated herein by this reference, two detention basin/BMP(s). Owner shall not commence construction of the detention basin/BMP(s) until the El Paso County Planning and Community Development Department (PCD) has approved in writing the plans and specifications for the detention basin/BMP(s) and this Agreement has been signed by all Parties and returned to the PCD. Owner shall complete construction of the detention basin/BMP(s) in substantial compliance with the County-approved plans and specifications for the detention basin/BMP(s). Failure to meet these requirements shall be a material breach of this Agreement and shall entitle the County to pursue any remedies available to it at law or in equity to enforce the same. Construction of the detention basin/BMP(s) shall be substantially completed within one (1) year (defined as 365 days), which one year period will commence to run on the date the approved plat of this Subdivision is recorded in the records of the El Paso County Clerk and Recorder. Rough grading of the detention basin/BMP(s) must be completed and inspected by the El Paso County Planning and Community Development Department prior to commencing road construction.

In the event construction is not substantially completed within the one (1) year period, then the County may exercise its discretion to complete the project and shall have the right to seek reimbursement from the Owner and its successors and assigns for its actual costs and expenses incurred in the process of completing construction. The term actual costs and expenses shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tool and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the Provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

4. Maintenance: The Owner agrees for itself and its successors and assigns that it will regularly and routinely inspect, clean and maintain the detention basin/BMP(s) and otherwise keep the same in good repair, all at its own cost and expense. No trees or shrubs that will impair the structural integrity of the detention basin/BMP(s) shall be planted or allowed to grow on the detention basin/BMP(s).

5. Creation of Easement: Owner hereby grants the County a non-exclusive perpetual easement upon and across that portion of the Property described in Exhibit B. The purpose of the easement is to allow the County to access, inspect, clean, repair and maintain the detention

basin/BMP(s); however, the creation of the easement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

6. County's Rights and Obligations: Any time the County determines, in the sole exercise of its discretion, that the detention basin/BMP(s) is not properly cleaned, maintained and/or otherwise kept in good repair, the County shall give reasonable notice to the Owner and its successors and assigns that the detention basin/BMP(s) needs to be cleaned, maintained and/or otherwise repaired. The notice shall provide a reasonable time to correct the problem(s). Should the responsible parties fail to correct the specified problem(s), the County may enter upon the Property to so correct the specified problem(s). Notice shall be effective to the above by the County's deposit of the same into the regular United States mail, postage pre-paid. Notwithstanding the foregoing, this Agreement does not expressly or implicitly impose on the County a duty to so inspect, clean, repair or maintain the detention basin/BMP(s).

7. Reimbursement of County's Costs: The Owner agrees and covenants, for itself and its successors and assigns, that they will reimburse the County for its costs and expenses incurred in the process of completing construction of, cleaning, maintaining, and/or repairing the detention basin/BMP(s) pursuant to the provisions of this Agreement.

The term "actual costs and expenses" shall be liberally construed in favor of the County, and shall include, but shall not be limited to, labor costs, tools and equipment costs, supply costs, and engineering and design costs, regardless of whether the County uses its own personnel, tools, equipment and supplies, etc. to correct the matter. In the event the County initiates any litigation or engages the services of legal counsel in order to enforce the provisions arising herein, the County shall be entitled to its damages and costs, including reasonable attorney's fees, regardless of whether the County contracts with outside legal counsel or utilizes in-house legal counsel for the same.

8. Contingencies of Subdivision Approval: The Owner's execution of this Agreement is a condition of subdivision approval. Additional conditions of this Agreement include, but are not limited to, the following:

a. [Reserved]

The County shall have the right, in the sole exercise of its discretion, to approve or disapprove any documentation submitted to it under the conditions of this Paragraph, including but not limited to, any separate agreement or amendment, if applicable, identifying any specific maintenance responsibilities not addressed herein. The County's rejection of any documentation submitted hereunder shall mean that the appropriate condition of this Agreement has not been fulfilled.

9. Agreement Monitored by El Paso County Planning and Community Development Department and/or El Paso County Department of Public Works: Any and all actions and decisions to be made hereunder by the County shall be made by the Director of the El Paso County Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works. Accordingly, any and all documents, submissions, plan approvals, inspections, etc. shall be submitted to and shall be made by the Director of the Planning and Community Development Department and/or the Director of the El Paso County Department of Public Works.

10. Indemnification and Hold Harmless: To the extent authorized by law, Owner agrees, for itself and its respective successors and assigns, that they will indemnify, defend, and hold the County

harmless from any and all loss, costs, damage, injury, liability, claim, lien, demand, action and causes of action whatsoever, whether at law or in equity, arising from or related to their respective intentional or negligent acts, errors or omissions or that of their agents, officers, servants, employees, invitees and licensees in the construction, operation, inspection, cleaning (including analyzing and disposing of any solid or hazardous wastes as defined by State and/or Federal environmental laws and regulations), maintenance, and repair of the detention basin/BMP(s), and such obligation arising under this Paragraph shall be joint and several. Nothing in this Paragraph shall be deemed to waive or otherwise limit the defense available to the County pursuant to the Colorado Governmental Immunity Act, Sections 24-10-101, *et seq.* C.R.S., or as otherwise provided by law.

11. **Severability:** In the event any Court of competent jurisdiction declares any part of this Agreement to be unenforceable, such declaration shall not affect the enforceability of the remaining parts of this Agreement.

12. **Third Parties:** This Agreement does not and shall not be deemed to confer upon or grant to any third party any right to claim damages or to bring any lawsuit, action or other proceeding against either the County, the Owner, or their respective successors and assigns, because of any breach hereof or because of any terms, covenants, agreements or conditions contained herein.


13. **Solid Waste or Hazardous Materials:** Should any refuse from the detention basin/BMP(s) be suspected or identified as solid waste or petroleum products, hazardous substances or hazardous materials (collectively referred to herein as "hazardous materials"), the Owner shall take all necessary and proper steps to characterize the solid waste or hazardous materials and properly dispose of it in accordance with applicable State and/or Federal environmental laws and regulations, including, but not limited to, the following: Solid Wastes Disposal Sites and Facilities Acts, §§ 30-20-100.5 – 30-20-119, C.R.S., Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities, 6 C.C.R. 1007-2, *et seq.*, Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992k, and Federal Solid Waste Regulations 40 CFR Ch. I. The County shall not be responsible or liable for identifying, characterizing, cleaning up, or disposing of such solid waste or hazardous materials. Notwithstanding the previous sentence, should any refuse cleaned up and disposed of by the County be determined to be solid waste or hazardous materials, the Owner, but not the County, shall be responsible and liable as the owner, generator, and/or transporter of said solid waste or hazardous materials.

14. **Applicable Law and Venue:** The laws, rules, and regulations of the State of Colorado and El Paso County shall be applicable in the enforcement, interpretation, and execution of this Agreement, except that Federal law may be applicable regarding solid waste or hazardous materials. Venue shall be in the El Paso County District Court.

IN WITNESS WHEREOF, the Parties affix their signatures below.

Executed this 19 day of November, 2021, by:

CS Powers and Galley, LLC Owner

By: 
Ryan Tobias, Managing Member

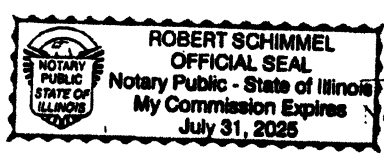
Attest:
By: [Signature]
Dane Olmstead, Member

The foregoing instrument was acknowledged before me this 19 day of November,

2021, by Ryan Tobias, Managing Member, and Dane Olmstead, Member, CS Powers Galley, LLC, Owner

Witness my hand and official seal.

My commission expires: 7/31/25



[Signature]
Notary Public

Executed this 15th day of DECEMBER, 2021, by:

BOARD OF COUNTY COMMISSIONERS
OF EL PASO COUNTY, COLORADO

By: [Signature]
Craig Dossey, Executive Director
Planning and Community Development Department
Authorized signatory pursuant to LDC

The foregoing instrument was acknowledged before me this 15th day of December, 2021, by Craig Dossey, Executive Director of El Paso County Planning and Community Development Department.

Witness my hand and official seal.

My commission expires: 9/2/2024

[Signature]
Petra Rangel
Notary Public

Approved as to Content and Form:

[Signature]
Assistant County Attorney



Exhibit A

A PARCEL OF LAND LOCATED IN THE SOUTH WEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 7, TOWNSHIP 14 SOUTH, RANGE 65 WEST OF THE 6TH P.M., CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF LOT 2, POWERS & GALLEY PLAZA FILING NO. 1 RECORDED IN PLAT BOOK A-4 AT PAGE 30 IN THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDER;

THENCE ON THE EASTERLY LINE OF SAID LOT 2, N00°27'47"E A DISTANCE OF 256.76 FEET, TO THE NORTHEASTERLY CORNER;

THENCE ON THE NORTHERLY LINE OF SAID LOT 2, N89°32'13"W A DISTANCE OF 414.58 FEET, TO A POINT ON THE EASTERLY LINE OF CDOT PARCEL EA-20 PROJECT C R200-142 RECORDED UNDER RECEPTION NO. 210035525, SAID POINT BEING A POINT OF NON-TANGENT CURVE;

THENCE ON SAID EASTERLY LINE, THE FOLLOWING COURSES:

1. ON THE ARC OF A CURVE TO THE LEFT WHOSE CENTER BEARS S58°24'52"W, HAVING A RADIUS OF 470.00 FEET, A CENTRAL ANGLE OF 17°54'45" AND AN ARC LENGTH OF 146.94 FEET, TO A POINT OF REVERSE CURVE;
2. ON THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 1080.00 FEET, A CENTRAL ANGLE OF 21°47'10" AND AN ARC LENGTH OF 410.66 FEET, TO A POINT OF COMPOUND CURVE;
3. ON THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 600.00 FEET, A CENTRAL ANGLE OF 17°38'16" AND AN ARC LENGTH OF 184.70 FEET, TO A POINT OF NON-TANGENT;
4. N27°49'47"W A DISTANCE OF 104.02 FEET;
5. N03°44'19"E A DISTANCE OF 206.36 FEET, TO A POINT ON THE SOUTHERLY LINE OF POWERS POINTE FILING NO. 5 RECORDED UNDER RECEPTION NO. 205094827;

THENCE ON SAID SOUTHERLY LINE AND THE SOUTHERLY LINE OF POWERS POINT FILING NO. 1 RECORDED UNDER RECEPTION NO. 97085192 AND O K SUBDIVISION RECORDED IN PLAT BOOK G-3 AT PAGE 42, SAID LINE BEING THE NORTHERLY LINE SHOWN ON THAT LAND SURVEY PLAT PREPARED BY OLIVER E. WATTS RECORDED UNDER RECEPTION NO. 212900123, N89°58'24"E A DISTANCE OF 1311.67 FEET, TO A POINT ON THE WESTERLY LINE OF CIMMARON INDUSTRIAL NO. 2 RECORDED IN PLAT BOOK Y-2 AT PAGE 22;

THENCE ON SAID WESTERLY LINE AND THE WESTERLY LINE OF CIMMARON-INDUSTRIAL NO. 1 RECORDED IN PLAT BOOK N-2 AT PAGE 6, S00°29'25"W A DISTANCE OF 1375.25 FEET, TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF GALLEY ROAD;

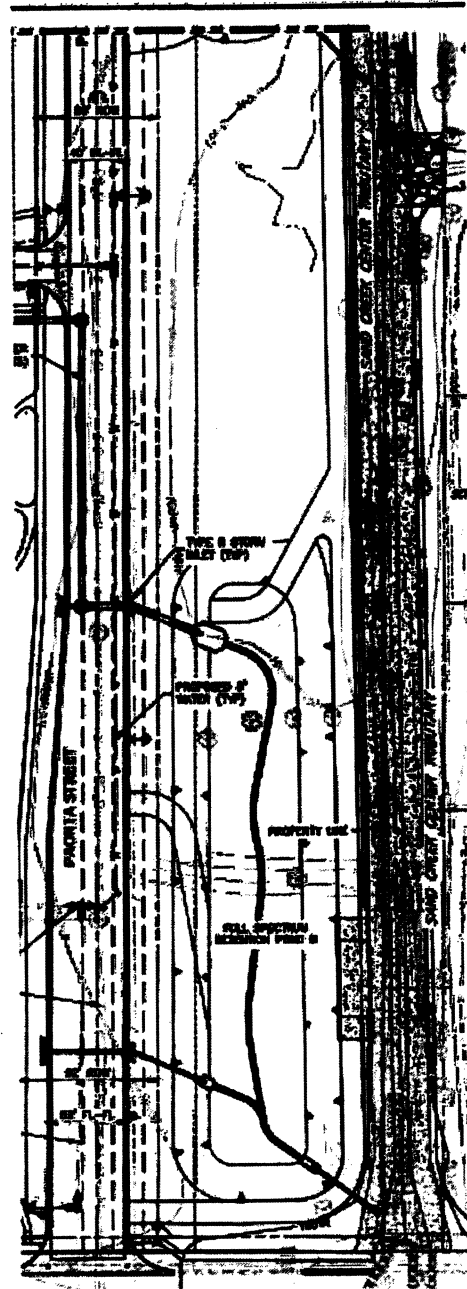
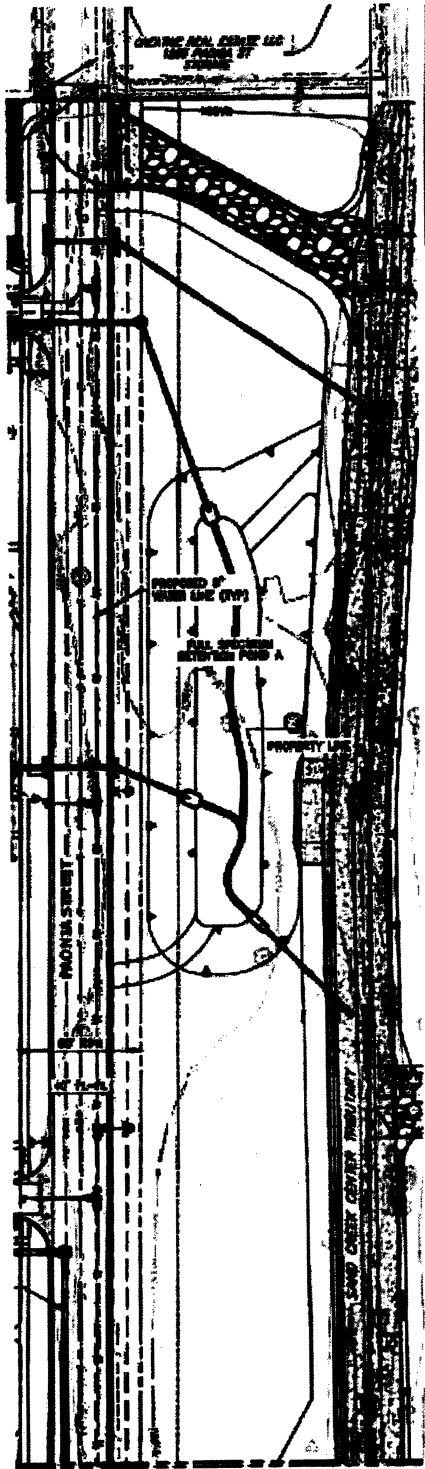
THENCE ON SAID NORTHERLY RIGHT-OF-WAY LINE, N89°42'00"W A DISTANCE OF 376.01 FEET, TO A POINT ON THE EASTERLY LINE OF THAT PROPERTY RECORDED IN BOOK 5913 AT PAGE 737;

THENCE ON SAID EASTERLY LINE AND THE EASTERLY LINE OF THAT PROPERTY RECORDED UNDER RECEPTION NO. 21538406, N00°27'47"E A DISTANCE OF 210.00 FEET;

THENCE ON THE NORTHERLY LINE OF SAID PROPERTY RECORDED UNDER RECEPTION NO. 215138406, N89°42'00"W A DISTANCE OF 68.61 FEET, TO THE POINT OF BEGINNING;

CONTAINING A CALCULATED AREA OF 1,255,877 SQUARE FEET OR 28.8310 ACRES.

Exhibit B



Pond A & B, Stormwater Facilities in Tract B
Solace Apartments Filing No. 1



J-R ENGINEERING
A Westrian Company

ACCEPTED for FILE
Engineering Review

11/30/2021 11:53 AM

EPC Planning & Community
Development Department

**STORMWATER MANAGEMENT PLAN
FOR
SOLACE APARTMENTS – FILING 1**

Prepared For (Applicant):

CS Powers and Galley, LLC
510 S Neil St.
Champaign, IL 61820
(734) 216-2577
Contact: Dane Olmstead

Prepared By:

JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, Colorado 80919
(303) 267-6240
Contact: Mike Bramlett

Qualified Stormwater Manager:

Contractor:

November, 2021

JR Project No.: 2-5174.00

**EI Paso County PCD File No.: SF-20-032
PPR-20-047**

ENGINEER OF RECORD:

The Stormwater Management 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 and State for Stormwater Management Plans.

Mike Bramlett

6/21/21

Mike Bramlett, P.E.
Registered Professional Engineer
State of Colorado No. 32314
For and on behalf of JR Engineering, LLC.

Date



REVIEW ENGINEER:

The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.

Review Engineer

Date

TABLE OF CONTENTS

1. Applicant / Contact Information	1
2. Site Description and Location	1
3. Proposed Sequence of Major Activities	2
4. BMPs for Stormwater Pollution Prevention	2
5. Final Stabilization and Long-Term Stormwater Management.....	5
6. Inspection and Maintenance.....	6

Appendices

- A. Vicinity Map**
- B. Soils Map**
- C. GEC Plans and Details**
- D. SWMP Report and GEC Plan Checklists**
- E. Inspection Report Template**

1. Applicant / Contact Information

Owner/Developer: CS Powers and Galley, LLC
Attn: Dane Olmstead
510 S Neil St
Champaign, IL 61820
(734) 216-2577

Engineer: JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, CO 80919
Attn: Mike Bramlett (303) 267-6240
mbramlett@jrengineering.com

SWMP Administrator: To Be Determined

Contractor: To Be Determined

2. Site Description and Location

Solstice Apartments Filing No. 1 is located in Section 7, Township 14 South, Range 65 West of the Sixth Principal Meridian, in the County of El Paso, State of Colorado. The site is east of N. Powers Blvd, and borders Sand Creek – Center Tributary to the east and Galley Rd to the south. Solace Apartments lies within the Sand Creek Drainage Basin. Flows from this site are ultimately tributary to Sand Creek. See Appendix A for a vicinity map.

The site is currently undeveloped grassland and encompasses approximately 29 acres. The development of the proposed site will include implementation of BMPs, site grading, utility and storm installation, roadway paving, associated residential site development, and removal of temporary BMPs. Refer to the GEC plans in Appendix C for the phasing of BMPs.

Site details:

- a. Estimated area to undergo disturbance: 29 acres
- b. Estimated 100-year runoff coefficients:
 - i. Historic: $C = 0.54$
 - ii. Developed: $C = 0.66$
- c. Soil erosion potential and potential impacts upon discharge: Site soils includes mostly Blakeland loamy sand and Ellicott loamy coarse sand. The majority of the soils are classified as Hydrologic Soils Group B (moderate runoff potential). Refer to Appendix B for a soils map. Eroded soil may adversely impact downstream drainageways. BMPs will be installed and maintained to mitigate adverse impacts due to soil erosion.

- d. Existing vegetation: Native meadow grasses (approximately 70% coverage), determined using a combination of visual field verification and aerial inspection.
- e. Location and description of potential pollution sources: Potential sources of pollution include: onsite vehicle fueling, portable toilets, temporary stock pile, and concrete washout area. The locations of these sources are shown in the GEC plans in Appendix C or will be determined by the contractor.
- f. Spill prevention and pollution controls for dedicated batch plants: Not applicable for this site since there will be no dedicated batch plants.
- g. Location and description of anticipated non-stormwater components of discharge: There will be a concrete washout area (CWA) where the cleaning of concrete trucks could produce a non-stormwater discharge. Proper installation and maintenance of the CWA will not allow runoff from this area. Another potential source of non-stormwater discharge could be the irrigation of permanent seeding (PS). Irrigation will be kept at a rate so as to not create runoff.
- h. Ultimate receiving waters: Sand Creek – Center Tributary
- i. Streams located within project area: Sand Creek – Center Tributary
- j. This project does not anticipate the use of an onsite batch plant.

3. Proposed Sequence of Major Activities

The project will follow standard construction sequences for construction, i.e., clearing and grubbing, overlot grading, utility installation, and street paving. The contractor will be responsible for implementing and maintaining the erosion and sediment control measures described in this document and the accompanying design drawings. The contractor may designate these tasks to certain subcontractors as they see fit, but the ultimate responsibility for implementing these controls and their proposed function at each phase of the project remains with the contractor. The order of major activities (with estimated completion dates) will be as follows:

1. Install VTC and other perimeter soil erosion control measures (June 2021).
2. Clear and rough grade for improvements (June 2021).
3. Excavate and install improvements including underground piping and drainage structures (July 2021).
4. Fine grading (July 2021).
5. Install paving (August 2021).
6. Install landscaping (March 2022).
7. Clean up and final stabilization (June 2022).

4. BMPs for Stormwater Pollution Prevention

See GEC plans in Appendix C for BMP locations and detail sheets.

- a. Erosion and Sediment Controls
 - i. Structural BMPs:
 1. Sediment basins (SBs) to collect runoff before it enters receiving waters

2. Silt fence (SF) along downstream limits of disturbed areas to filter sediment from runoff
 3. Stabilized staging area (SSA) near site entrance to consolidate construction equipment in a stabilized location
 4. Construction marker (CM) to identify limits of construction (LOC)
 5. Vehicle tracking control (VTC) at site entrance to prevent sediment from leaving the site via vehicle tires
 6. Temporary stock pile (TSP) to consolidate materials such as topsoil in a controlled area bounded by silt fence
 7. Erosion control blanket (ECB) placed on any slopes of 3:1 or greater, including the sides of sediment basins
 8. Inlet protection (IP) around culvert entrances
 9. Outlet protection (OP) at culvert outlets
 10. Diversion ditch (DD) to convey runoff to sediment basins
 11. Concrete washout area (CWA) to allow a controlled area for concrete trucks to be washed
 12. Reinforced rock berm (RRB) in Sand Creek – Center Tributary
- ii. Non-structural BMPs:
 1. Mulching (MU) to stabilize soils and promote seed growth
 2. Permanent seeding (PS) to stabilize disturbed areas
- b. Materials Handling and Spill Prevention
- i. General Materials Handling Practices:
 1. 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 in segregated areas so that spilled materials cannot combine and react.
 2. Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
 3. Materials no longer required for construction shall be removed from the site as soon as possible.
 4. 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.
 - ii. Specific Materials Handling Practices
 1. All pollutants, including waste materials and demolition debris, that occur onsite during construction shall be handled in a way that does not contaminate storm water.
 2. All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored onsite shall be covered and protected from vandalism.
 3. Maintenance, fueling, 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.

4. Wheel wash water shall be settled and discharged onsite by infiltration.
5. 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.
6. pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected onsite. 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.

iii. Spill Prevention and Response Procedures

1. 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 onsite storm water, it is critical to contain the released materials onsite and prevent their release into receiving waters.
2. Spill Response Procedures:
 - a. 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.
 - b. If spills represent an imminent threat of escaping onsite facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
 - c. The site superintendent, or his/her designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
 - d. Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
3. Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP administrator.
4. 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.
5. Recommended components of spill kits include the following:

- a. Oil absorbent pads (one bale)
- b. Oil absorbent booms (40 feet)
- c. 55-gallon drums (2)
- d. 9-mil plastic bags (10)
- e. Personal protective equipment including gloves and goggles
- 6. 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.
- 7. Notification procedures:
 - a. In the event of an accident or spill, the SWMP administrator shall be notified.
 - b. Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line: 887-518-5608), downstream water users, or other agencies may also need to be notified.
 - c. 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

- a. Permanent seeding will be provided to achieve long-term stabilization of the site.
- b. Seed Mix: Pawnee Buttes Seed Inc. – "Low Grow native Mix" or approved equal.
- c. Seeding Application Rate: Drill seed 0.25" to 0.5" into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25" to 0.5" into the soil. Apply seed at the following rates:
 - i. Dryland: 20-25 lbs/acre
 - ii. Irrigated: 40 lbs/acre
- d. Soil stabilization Practices:
 - i. Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- e. Soil Conditioning and Fertilization Requirements:
 - i. Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
 - ii. Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- f. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plan density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

Once vegetative plantings are in place, permanent seeding and mulching will be placed throughout the site. Once full site stabilization has occurred, all temporary BMP's should be removed and final site cleaning performed.

- g. Final Stabilization and Long-term Stormwater Quality.
 - i. After final stabilization occurs, Stormwater Quality of site will be maintained via the use of detention ponds/water quality ponds, all flows on site will be routed to these ponds and treated before being released into the adjacent Sand Creek Channel.
 - 1. Mowing and Trimming shall occur on a regular basis in the ponds and at their spillways.
 - ii. Onsite flows will also be treated via grass swales that route flows present in open spaces to the storm sewer system which eventually outfalls to the detention ponds.

6. Inspection and Maintenance

- a. Inspection Schedules:
 - i. The contractor shall inspect BMPs once every 14 days at a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in storm water running across the ground), to ensure that BMPs are maintained in effective operating condition.
- b. Inspection Procedures:
 - i. Site Inspection / Observation Items:
 - 1. Construction site perimeter and discharge points
 - 2. All disturbed areas
 - 3. Areas used for material / waste storage that are exposed to precipitation
 - 4. Other areas having a significant potential for storm water pollution, such as demolition areas or concrete washout areas, or locations where vehicles enter or leave the site
 - 5. Erosion and sediment control measures identified in the SWMP
 - 6. Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the conditions of spill response kits.
 - ii. Inspection Requirements:
 - 1. Determine if there is any evidence of, or potential for, pollutants entering the receiving waters.
 - 2. 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.
 - 3. Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.
 - iii. BMP Maintenance / Replacement and Failed BMPs:
 - 1. The 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.

2. 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.
3. The contractor shall update the GEC as required with any new BMPs added during the construction period.
4. The 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.

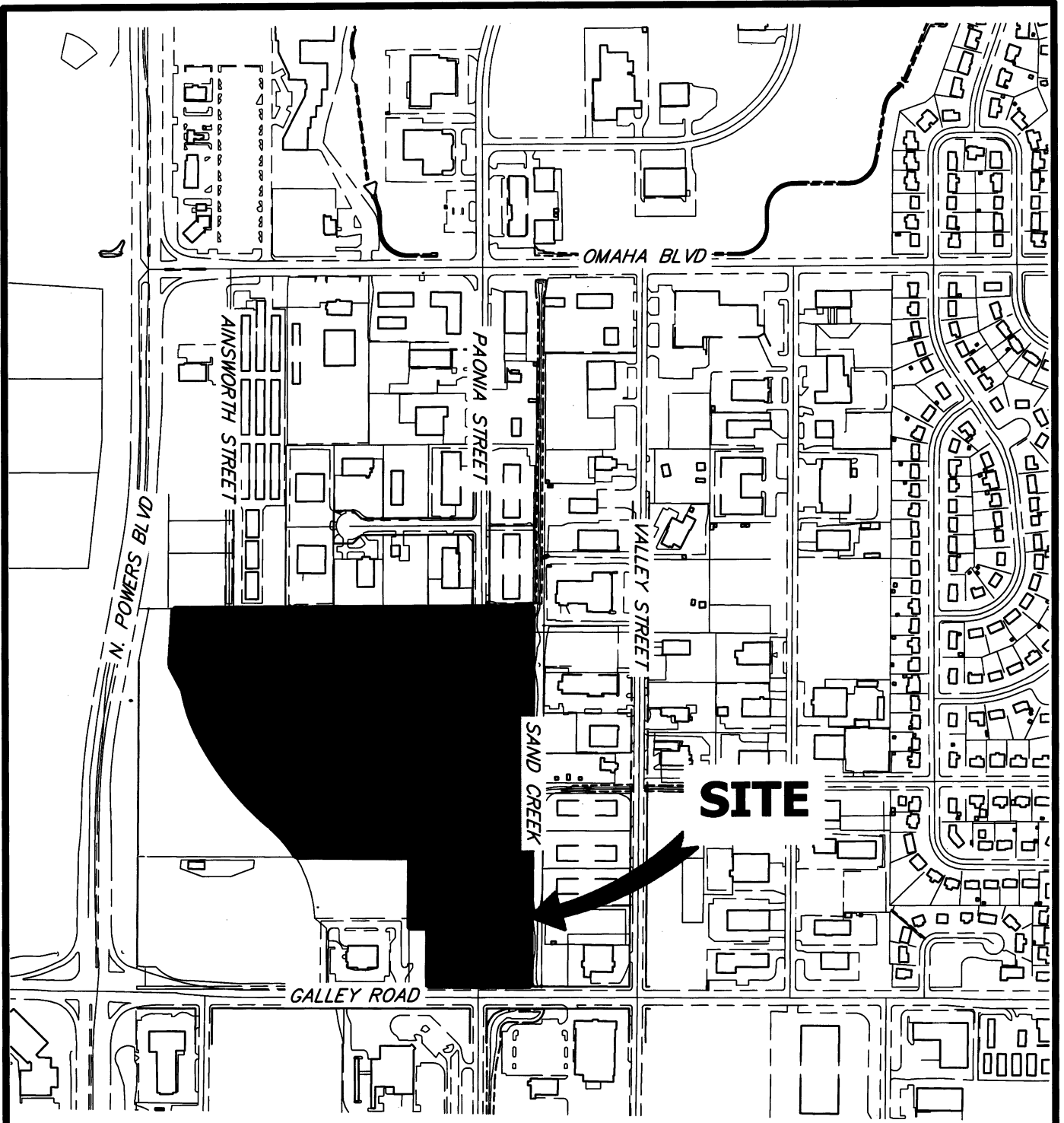
iv. Record Keeping and Documenting Inspections:

1. The contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site.
2. The 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.
3. Site inspection records shall include the following:
 - a. Inspection date
 - b. Name and title of personnel making the inspection
 - c. Location of discharges of sediment or other pollutants from the site
 - d. Location(s) of BMPs in need of maintenance
 - e. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
 - f. Location(s) where additional BMPs are needed that were not in place at the time of inspection
 - g. Deviations from the minimum inspection schedule

7. Additional Notes

- a. Please note that this document shall be viewed as a living document that is subject to change per additional review and modifications. The document shall be modified and amended as necessary to manage changing Stormwater quality issues present on the site during its construction. The Qualified Stormwater Manager shall amend this document when there is a change in design, construction, operation or maintenance of the site that would require the use of new or revised BMPs, or if current BMPs prove ineffective in managing the site.
- b. This project does not rely on BMPs or control measure operated or owned by another entity.

APPENDIX A – VICINITY MAP



SITE



ORIGINAL SCALE: 1" = 500'

VICINITY MAP
 SOLACE APARTMENTS
 JOB NO. 15504.03
 4/27/2018

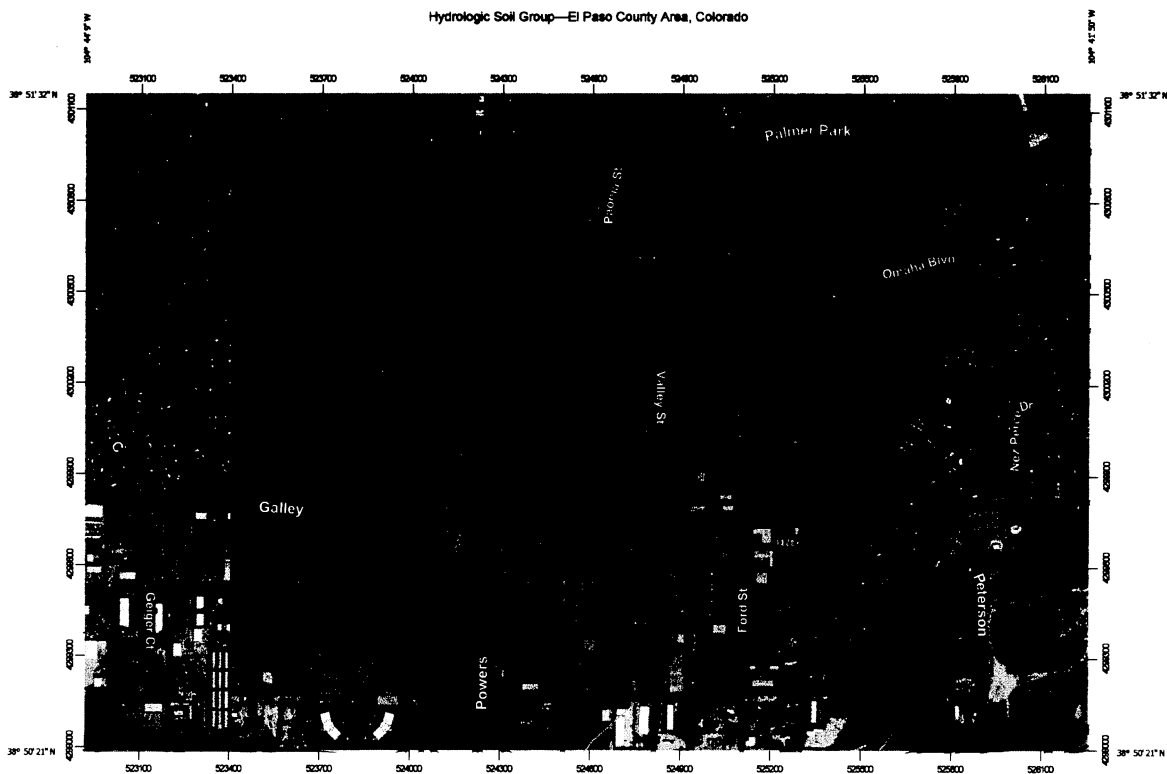


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 Fort Collins 970-491-9898 • www.jrengineering.com






























































APPENDIX B – SOILS MAP

Hydrologic Soil Group—El Paso County Area, Colorado



Map Scale: 1:15,300 if printed on A landscape (11" x 8.5") sheet.
0 200 400 600 800 1200 Meters
0 500 1000 2000 3000 Feet
Map projection: Web Mercator Corner coordinates: WGS84 Edge box: UTM Zone 13N WGS84

Hydrologic Soil Group—El Paso County Area, Colorado

<h3 style="text-align: center;">MAP LEGEND</h3> <p>Area of Interest (AOI)  Area of Interest (AOI)</p> <p>Soils</p> <p>Soil Rating Polygons</p> <table border="0"> <tr><td></td><td>A</td></tr> <tr><td></td><td>A/D</td></tr> <tr><td></td><td>B</td></tr> <tr><td></td><td>B/D</td></tr> <tr><td></td><td>C</td></tr> <tr><td></td><td>C/D</td></tr> <tr><td></td><td>D</td></tr> <tr><td></td><td>Not rated or not available</td></tr> </table> <p>Soil Rating Lines</p> <table border="0"> <tr><td></td><td>A</td></tr> <tr><td></td><td>A/D</td></tr> <tr><td></td><td>B</td></tr> <tr><td></td><td>B/D</td></tr> <tr><td></td><td>C</td></tr> <tr><td></td><td>C/D</td></tr> <tr><td></td><td>D</td></tr> <tr><td></td><td>Not rated or not available</td></tr> </table> <p>Soil Rating Points</p> <table border="0"> <tr><td></td><td>A</td></tr> <tr><td></td><td>A/D</td></tr> <tr><td></td><td>B</td></tr> <tr><td></td><td>B/D</td></tr> </table>		A		A/D		B		B/D		C		C/D		D		Not rated or not available		A		A/D		B		B/D		C		C/D		D		Not rated or not available		A		A/D		B		B/D	<h3 style="text-align: center;">MAP INFORMATION</h3> <p>The soil surveys that comprise your AOI were mapped at 1:24,000.</p> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: El Paso County Area, Colorado Survey Area Data: Version 17, Sep 13, 2019</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Aug 18, 2018—Sep 23, 2018</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>
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Hydrologic Soil Group

Map Unit Number	Map Unit Name	Rating	Area in Acres	Percent of Area
8	Blakeland loamy sand, 1 to 9 percent slopes	A	373.7	35.4%
10	Blendon sandy loam, 0 to 3 percent slopes	B	321.4	30.5%
11	Bresser sandy loam, cool, 0 to 3 percent slopes	B	31.9	3.0%
12	Bresser sandy loam, cool, 3 to 5 percent slopes	B	69.8	6.6%
13	Bresser sandy loam, cool, 5 to 9 percent slopes	B	41.4	3.9%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	A	96.1	9.1%
56	Nelson-Tassel fine sandy loams, 3 to 18 percent slopes	B	3.7	0.3%
70	Pits, gravel	A	10.3	1.0%
94	Travessilla-Rock outcrop complex, 8 to 90 percent slopes	D	51.5	4.9%
95	Truckton loamy sand, 1 to 9 percent slopes	A	35.7	3.4%
96	Truckton sandy loam, 0 to 3 percent slopes	A	19.7	1.9%
Totals for Area of Interest			1,055.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX C – GEC PLANS AND DETAILS

APPENDIX D – SWMP Report and GEC Plan Checklists

SHADING AND EROSION CONTROL STANDARD NOTES

1. CONSTRUCTION SHALL NOT EXCEED UNLESS A CONSTRUCTION PERMIT IS OBTAINED FROM PLANNING AND COMMUNITY DEVELOPMENT AND A PROFESSIONAL ENGINEER IS HELD FOR PLANNING AND COMMUNITY DEVELOPMENT INSPECTIONS.
2. STORMWATER RUNOFF FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATER OR FRESHWATER RESOURCES. POLLUTION SHALL BE A RESULT OF UNDESIRABLE POLLUTION OF ANY ON-SITE OR OFF-SITE WATER, INCLUDING STREAMS.
3. INTERFERENCES AVOIDED SPECIFIED IN THESE PLANS IN ORDER OF PRIORITY: (A) PREVIOUSLY ESTABLISHED CONSTRUCTION CONTROL MEASURES; (B) EXISTING AND PROPOSED PERMITS; (C) EXISTING AND PROPOSED STATE AND FEDERAL REGULATIONS; (D) EXISTING AND PROPOSED LOCAL ORDINANCES AND REGULATIONS; (E) EXISTING AND PROPOSED FEDERAL, STATE AND LOCAL REGULATIONS; (F) EXISTING AND PROPOSED FEDERAL, STATE AND LOCAL ORDINANCES AND REGULATIONS; (G) EXISTING AND PROPOSED FEDERAL, STATE AND LOCAL ORDINANCES AND REGULATIONS.
4. THE SHADING AND EROSION CONTROL MANAGEMENT PLAN (SEMP) FOR THIS PROJECT SHALL BE COMPLETED AND APPROVED BY THE APPROPRIATE AGENCY PRIOR TO THE START OF CONSTRUCTION. THE SEMP SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
5. THE SEMP SHALL BE APPROVED AND A NOTICE TO PROCEED HAS BEEN ISSUED. THE CONTRACTOR SHALL INSTALL THE SEMP AND EROSION CONTROL MEASURES AS DESCRIBED ON THE APPROVED PLAN. THE SEMP SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
6. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD DISTURB POLLUTANTS OR CAUSE EROSION. CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRS IN OBTAINING PERMITS AND REGULATIONS. ALL PROPOSED MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
8. CONSTRUCTION SHALL BE PERMITTED ON EXISTING AREAS AND ADJACENT AREAS WHICH WOULD DISTURB CONSTRUCTION ACTIVITIES THAT WOULD DISTURB POLLUTANTS OR CAUSE EROSION. POLLUTANTS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
9. FINAL STABILIZATION MUST BE INSTALLED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL EXPOSED EROSION CONTROL MEASURES HAVE BEEN REMOVED AND THE SURFACE IS STABLE AND CAPABLE OF WITHSTANDING THE DESIGN LOAD. FINAL STABILIZATION SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
11. EARTH RESTORATION SHALL BE CONDUCTED IN SUCH A MANNER AS TO BE EFFECTIVELY REVERSE ACCIDENTAL OR UNDESIRABLE ACTS OF NATURE. RESTORATION SHALL BE CONDUCTED IN SUCH A MANNER AS TO BE EFFECTIVELY REVERSE ACCIDENTAL OR UNDESIRABLE ACTS OF NATURE. RESTORATION SHALL BE CONDUCTED IN SUCH A MANNER AS TO BE EFFECTIVELY REVERSE ACCIDENTAL OR UNDESIRABLE ACTS OF NATURE. RESTORATION SHALL BE CONDUCTED IN SUCH A MANNER AS TO BE EFFECTIVELY REVERSE ACCIDENTAL OR UNDESIRABLE ACTS OF NATURE.
12. CONSTRUCTION OF NEW MEASURES OR REPAIRS TO EXISTING MEASURES FOR POLLUTION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
13. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
14. CONSTRUCTION SHALL BE PERMITTED ON EXISTING AREAS AND ADJACENT AREAS WHICH WOULD DISTURB CONSTRUCTION ACTIVITIES THAT WOULD DISTURB POLLUTANTS OR CAUSE EROSION. POLLUTANTS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
15. MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY. MATERIALS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.
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35. MATERIALS SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE UP-TO-DATE WITH ANY CHANGES MADE TO THE SEMP OR THE PROJECT.

LAYER LINTYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE	---	---
SECTION LINE	---	---
PROPERTY LINE	---	---
EMPHASIS LINE	---	---
RIGHT OF WAY	---	---
PLACED IN LINE	---	---
CONTINGENT	---	---
CITY LIMITS	---	---
WIDE FENCE	---	---
CHAIN LINK FENCE	---	---
WOOD FENCE	---	---
MASONRY FENCE	---	---
SHEDDING	---	---
CONC. SHEDDING	---	---
CABLE TV	---	---
ELECTRIC	---	---
FIBER OPTIC	---	---
RAIL ROAD	---	---
SEWER MAIN	---	---
CULVERT MAIN	---	---
UNDERSIAT WELLY	---	---
SANITARY SEWER	---	---
STORM DRAIN	---	---
TELEPHONE	---	---
METER MAIN	---	---
RAW WATER LINE	---	---
SMALL/INTERMEDIATE FLOWING	---	---
DEPRESSION DITCH	---	---
DEPRESSION CHANNEL	---	---
MAJOR DRAINAGE BASIN	---	---
MINOR DRAINAGE BASIN	---	---
TOP OF SLOPE	---	---
EDGE OF SLOPE	---	---
INDEX CONTOUR	---	---
HYDRAULIC CONTOUR	---	---
DEPRESSION CHAN. (GRID)	---	---
DEPRESSION CHAN. (VERT)	---	---
TOP OF DITCH	---	---
CUT AND FILL LINE	---	---
5 FT FENCE	---	---
100 YEAR FLOODPLAIN	---	---
100 YEAR FLOODPLAIN PLANNING	---	---
BASE FLOOD ELEVATION	---	---
EDGE OF WETLANDS	---	---
STONE WALL	---	---
STORMWATER FLOW ARROWS	---	---

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER	---	---
MANHOLE	---	---
STORM INLET	---	---
AREA INLET - GRASS	---	---
AREA INLET - ROAD	---	---
FLARED END SECTION	---	---
WRAP	---	---
SANITARY SEWER	---	---
LINE MARKER	---	---
SERVICE MARKER	---	---
MANHOLE BY STRUCTURAL FLOW ARROWS	---	---
RAINER LINE	---	---
LINE MARKER	---	---
SERVICE MARKER	---	---
FIRE HYDRANT	---	---
FIRE CONNECTION	---	---
ROAD	---	---
BLIND-OFF VALVE	---	---
WELL	---	---
METER	---	---
VALVE	---	---
REDUCER	---	---
TRUNK BLOCK	---	---
PROBE	---	---
FLEX BY WELDED BLOCK	---	---
TEE	---	---
REVERSE ANCHOR	---	---
ANCHOR	---	---
WIRE WAD	---	---
WIRE WAD ASSEMBLY	---	---
TRANSDUCER	---	---
BLIND-OFF ASSEMBLY	---	---
GAS LINE	---	---
MARKER	---	---
SERVICE MARKER	---	---
VALVE	---	---
TEE	---	---
JOINT UTILITIES	---	---
CABLE TELEVISION FEDESTAL	---	---
ELECTRIC MARKER	---	---
ELECTRIC SERVICE MARKER	---	---
ELECTRIC FEDESTAL	---	---
ELECTRIC METER	---	---
ELECTRICAL SERVICE	---	---
FEED-OPTIC MARKER	---	---
FEED-OPTIC FEDESTAL	---	---
TELEPHONE MARKER	---	---
TELEPHONE FEDESTAL	---	---
UTILITY MARKER	---	---
UTILITY POLE	---	---
UTILITY ANCHOR	---	---
UTILITY POLE	---	---

STORM WATER MANAGEMENT

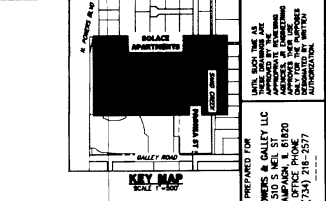
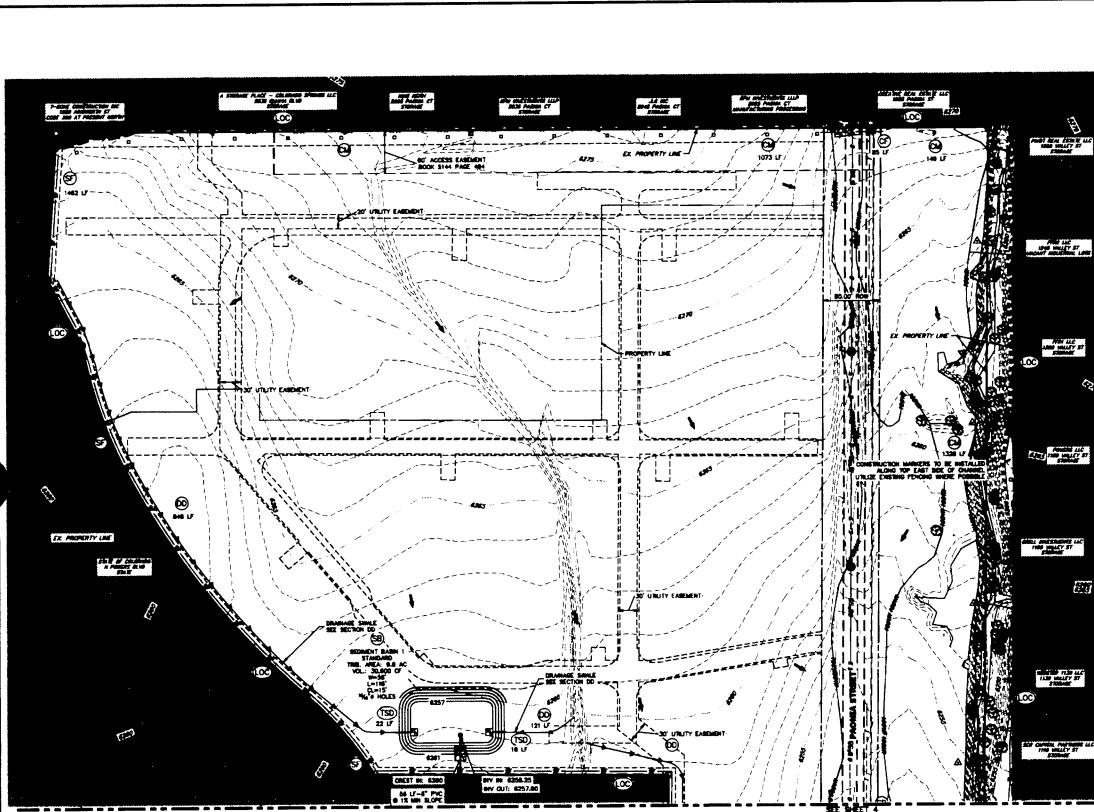
ACTY	SYMBOL
CHECK DAM	---
CONSTRUCTION ROAD STABILIZATION	---
CURS BODI WILET PROTECTION	---
CONCRETE BOND-OUT AREA	---
REINFORCED DITCH AND DIME TURBOFAST	---
EROSION CHANNEL TURBOFAST	---
DEBRISHING	---
EROSION CONTROL BLANKET	---
INLET FILTER	---
INLET PROTECTION	---
MOUNDING	---
SERVICE MARKER	---
SOIL PROTECTION	---
PAVED FLAME	---
PERMITSIT SEDING	---
REINFORCED CONCRETE DAM	---
ROUGH CUT STREET CONTROL	---
SEDIMENT BASH	---
SEDIMENT CONTROL LAS	---
SILT FILTER	---
STABILIZED STAGING AREA	---
SEDIMENT TRAP	---
STRAIN BALE BARRIER	---
TERRAZZO	---
TEMPORARY SEDING	---
TEMPORARY STREAM CHANNEL QUALITY IMPROV	---
TEMPORARY STREAM CROSSING FORD THE	---
TEMPORARY SLOPE GRASS	---
VEHICLE TRAFFIC CONTROL	---
VEHICLE TRAFFIC CONTROL WITH BACK	---
CONSTRUCTION MARKER	---
LATS OF CONSTRUCTION	---

PREPARED FOR: SOLACE APARTMENTS FILING NO. 1
 PREPARED BY: J.M. BURNETT, P.E.
 PROJECT NO. 2014-021
 SHEET 2 OF 12
 JOB NO. 20174.00

DATE: 11/11/14

FOR AND ON BEHALF OF AN ENGINEER:

811
 Know what's below.
 Call before you dig.



LEGEND

SEDIMENT BASIN	(Symbol)
SILT FENCE	(Symbol)
CONSTRUCTION FENCE	(Symbol)
STABILIZED STAGING AREA	(Symbol)
CONSTRUCTION MARKER	(Symbol)
VEHICLE TRADING CONTROL	(Symbol)
TEMPORARY STOCK PILE	(Symbol)
EROSION CONTROL BLANKET	(Symbol)
INLET PROTECTION	(Symbol)
OUTLET PROTECTION	(Symbol)
EROSION DITCH AND DIRT TOPOGRAPHY	(Symbol)
LIMITS OF CONSTRUCTION/DISTURBANCE	(Symbol)
CONCRETE WASHOUT AREA	(Symbol)
SEEDING & MULCHING & SURFACE REPAIRS	(Symbol)
TEMPORARY SLOPE DRAIN	(Symbol)
CHECK DAM	(Symbol)
ROCK BODIES	(Symbol)
STORMWATER FLOW ARROWS	(Symbol)
PROPERTY LINES	(Symbol)

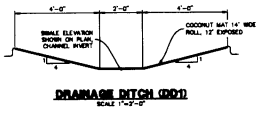
RMP PHASING

1) INITIAL LFC
2) INITIAL CONSTRUCTION MARKERS
3) INITIAL SLOPE PROTECTION
4) INITIAL EROSION CONTROL
5) INITIAL DRAINAGE DITCHES

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 NEGLIGENCE, ACTIVE ERROR OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

Mark Brundage
 DATE: 8/13/21
 COLORADO P.E. 35214
 FOR AND ON BEHALF OF J.R. ENGINEERING



- NOTES**
1. REFER TO THE STORMWATER MANAGEMENT PLAN (SWMP) FOR A DETAILED DESCRIPTION OF THE UNDERGROUND PROGRAM FOR DIVISION CONTROL FACILITIES.
 2. ALL EXPOSED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY SEEDING FOR THE PLANNED MATS SEED MIX. LOW GROW GRASS MIX OF 80% APPROXIMATELY. SEE SHEET 01 FOR SEED MIX DETAILS.
 3. ALL EXPOSED AREAS SHALL BE SEEDING WITH THE SEED MIX DETAILS. THIS PROJECT DOES NOT INCORPORATE THE USE OF BATCH PLANTS OR SEEDS.
 4. EXISTING VEGETATION ON-SITE IS NATIVE MEADOW GRASSES W/ APPROXIMATELY 10% COVER.



PCD FILE # SF-20-032

ORIGINAL SCALE: 1" = 60'

PREPARED FOR: SOLACE APARTMENTS

DATE: 8/13/21

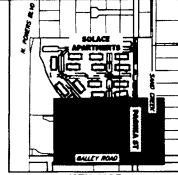
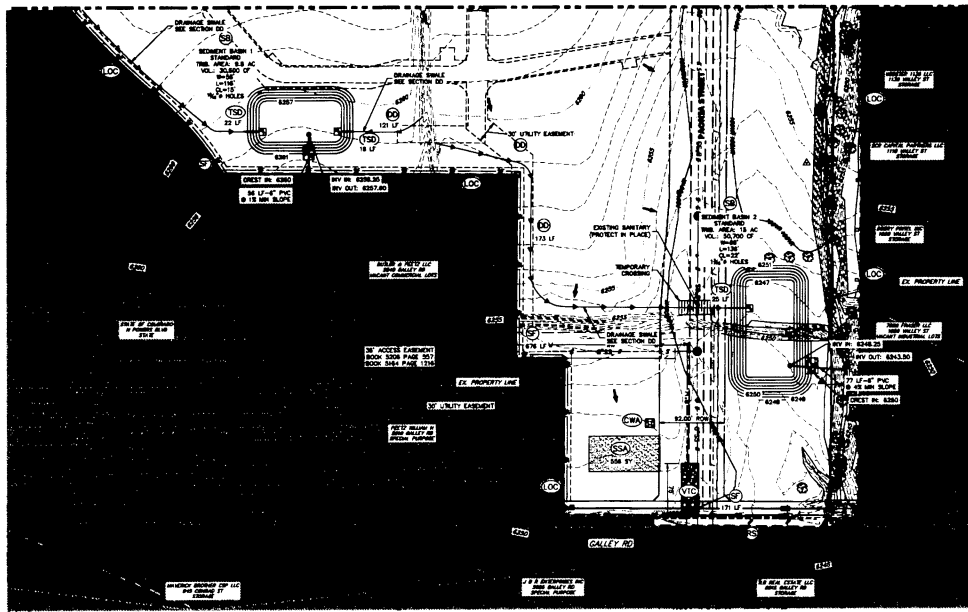
SCALE: 1" = 60'

PROJECT NO: SF-20-032

SHEET NO: 3 OF 12

JOB NO: 2574.00

J.R. ENGINEERING
 4000 S. W. 10TH AVE., SUITE 100
 DENVER, CO 80202
 (303) 733-2577



LEGEND

SEDIMENT BASIN	(Symbol)
SILT FENCE	(Symbol)
CONSTRUCTION FENCE	(Symbol)
STABILIZED STAGING AREA	(Symbol)
CONSTRUCTION BARRIER	(Symbol)
VEHICLE TRADING CONTROL	(Symbol)
TEMPORARY STOCK PILE	(Symbol)
EROSION CONTROL BLANKET	(Symbol)
INLET PROTECTION	(Symbol)
OUTLET PROTECTION	(Symbol)
EXTENSION DITCH AND ONE TEMPORARY	(Symbol)
LIMITS OF CONSTRUCTION/STABILIZATION	(Symbol)
CONCRETE BASH-OUT AREA	(Symbol)
SEEDING & MULCHING & SURFACE REPAIRS	(Symbol)
TEMPORARY SLOPE DRAIN	(Symbol)
CHECK DAM	(Symbol)
ROCK SOCKS	(Symbol)
STORMWATER FLOW ARROWS	(Symbol)
PROPERTY LINES	(Symbol)

BMP PHASING

- 1) INSTALL VTC
- 2) INSTALL SILT FENCE
- 3) INSTALL CONSTRUCTION BARRIERS
- 4) INSTALL SILT FENCE
- 5) INSTALL SEDIMENT BASINS
- 6) INSTALL EROSION CONTROL

SEEDING

- 1) LOCATE/INSTALL TEMPORARY STOCKPILE
- 2) MAINTAIN ALL BMPs
- 3) INSTALL RE
- 4) INSTALL INLET AND OUTLET PROTECTION

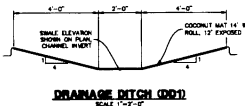
FINAL

- 1) INSTALL MULCH AND INTERMEDIATE SEEDING IN ALL DISTURBED AREAS
- 2) REMOVE SILT FENCE AFTER STABILIZED

ENGINEER'S STATEMENT

THE GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS 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 INADEQUATE ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

Mark A. Bennett, P.E.
 MARK A. BENNETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF J.R. ENGINEERS, INC.



- NOTES**
1. REFER TO THE EROSION MANAGEMENT PLAN (EMMP) FOR A DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAM FOR EROSION CONTROL MEASURES.
 2. ALL CONSTRUCTION SHALL BE PERMANENTLY MAINTAINED UNLESS OTHERWISE NOTED. ALL CONSTRUCTION SHALL BE PERMANENTLY MAINTAINED UNLESS OTHERWISE NOTED.
 3. ALL CONSTRUCTION SHALL BE PERMANENTLY MAINTAINED UNLESS OTHERWISE NOTED.
 4. THIS PROJECT DOES NOT ANTICIPATE THE USE OF MATCH PLANTS.
 5. VERIFY VEGETATION ON-SITE OR WITHIN WEDDOW BOUNDARIES BY APPROXIMATELY 10% COVER.



PREPARED FOR:
 SOLACE APARTMENTS, LLC
 510 S. WELLS ST.
 CHAMPAGNE, IL 61820
 (734) 214-2977

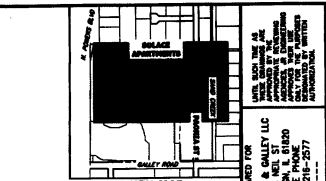
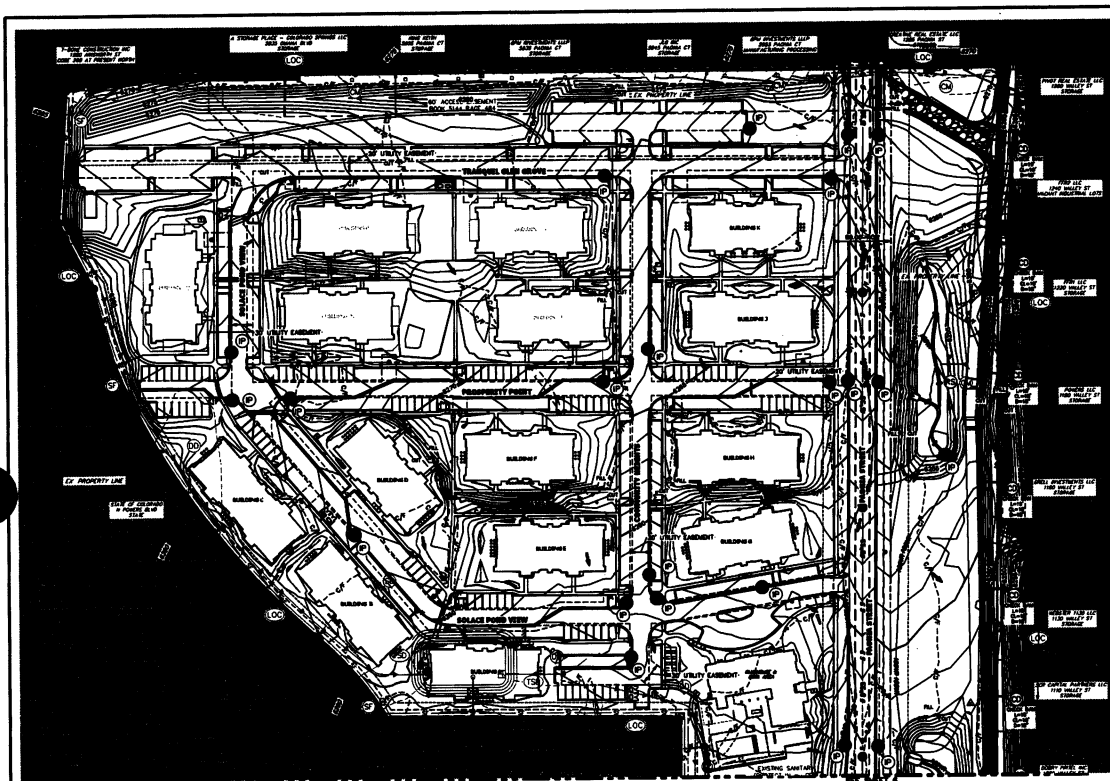
J.R. ENGINEERING
 A Division of
 J.R. ENGINEERS, INC.
 1000 S. WELLS ST. CHAMPAGNE, IL 61820
 (734) 214-2977

NO.	DATE	BY	REVISION
1	11/17/21	JRM	ISSUED FOR PERMIT

SOLACE APARTMENTS FLUING NO. 1
 INITIAL GRADING AND EROSION CONTROL PLANS

DESIGNED BY: JRM
 DRAWN BY: JRM
 CHECKED BY: JRM

SHEET 4 OF 13
 JOB NO. 25174.00



LEGEND

SEDIMENT BASIN	
SILT FENCE	
CONSTRUCTION FENCE	
STABILIZED STAGING AREA	
CONSTRUCTION BARRIER	
VEHICLE TRACING CONTROL	
TEMPORARY STOCK PILE	
EROSION CONTROL BLANKET	
INLET PROTECTION	
OUTLET PROTECTION	
EXPANDED STITCH AND ONE-TWO-TWO	
CUT AND FILL LINE	
LIMITS OF CONSTRUCTION/DISTURBANCE	
CONCRETE WEIGHT AREA	
SEEDING & MULCHING & SOIL PROTECTION	
TEMPORARY SLOPE DRAIN	
CHECK DAM	
ROCK SOCKS	
STORMWATER FLOW ARROWS	
PROPERTY LINES	

IMP PHASING

1. METAL VTS	1. METAL VTS
2. METAL S	2. METAL S
3. METAL CONSTRUCTION BARRIERS	3. METAL CONSTRUCTION BARRIERS
4. METAL SILT FENCE	4. METAL SILT FENCE
5. METAL SEDIMENT STILES	5. METAL SEDIMENT STILES

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY CLOSE PERSONAL SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND PLAN HAS BEEN PREPARED ACCORDING TO THE CUSTOMER REQUIREMENTS OF THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENCE, ACTS, OMISSIONS OR CHANGES ON MY PART IN PREPARING THIS PLAN.

M. B. [Signature] 1/11/22

STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 NO. 12345

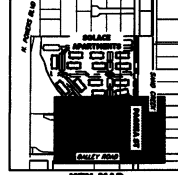
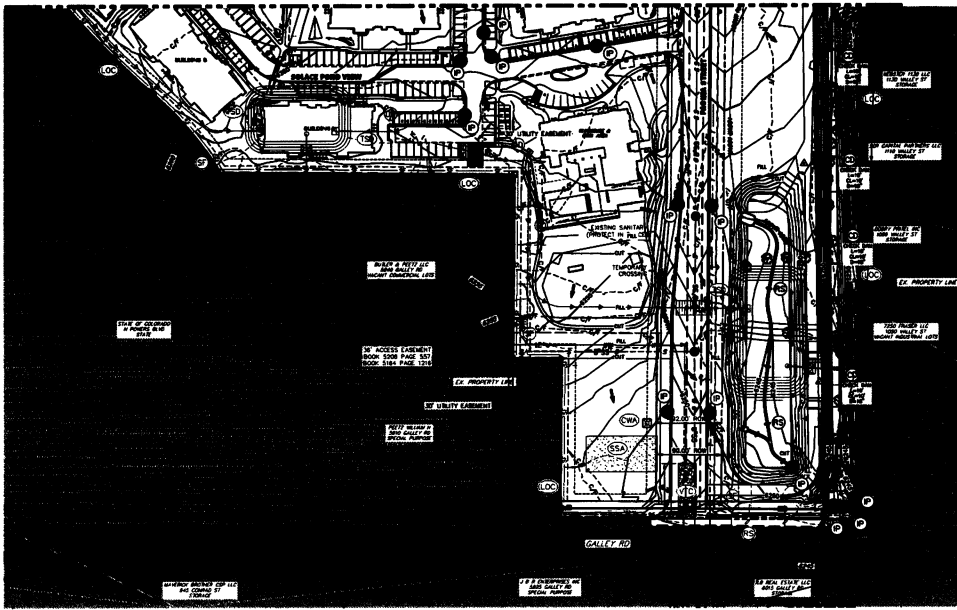


- NOTES**
1. REFER TO THE STORMWATER MANAGEMENT PLAN SHEET FOR A COMPLETE LISTING OF THE REQUIREMENTS FOR DESIGN.
 2. ALL DISTURBED AREAS ARE TO BE REVEGETATED WITH APPROPRIATE SPECIES FOR THE FORESTED AREAS AND TO BE MAINTAINED FOR A PERIOD OF 12 MONTHS AFTER THE END OF CONSTRUCTION.
 3. THE PROJECT OWNER SHALL MAINTAIN THE USE OF BARE SOILS TO A MINIMUM.
 4. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.



PCD FILE # SF-20-032

SOLACE APARTMENTS FILING NO. 1
 INTERIM GRADING AND EROSION CONTROL PLANS
 SHEET 5 OF 12
 JOB NO. 23174.00



LEGEND

SEDIMENT BASIN	(Symbol)
SILT FENCE	(Symbol)
CONSTRUCTION FENCE	(Symbol)
STABILIZED STAGING AREA	(Symbol)
CONSTRUCTION BARRIER	(Symbol)
VEHICLE TRAFFIC CONTROL	(Symbol)
TEMPORARY STOCK PILE	(Symbol)
EROSION CONTROL BLANKET	(Symbol)
INLET PROTECTION	(Symbol)
OUTLET PROTECTION	(Symbol)
EROSION DITCH AND DIKE, TEMPORARY	(Symbol)
CUT AND FILL LINE	(Symbol)
LIMITS OF CONSTRUCTION/STURBANCE	(Symbol)
CONCRETE BARBOUT AREA	(Symbol)
SEEDING & MULCHING & SURFACE REPAIRS	(Symbol)
TEMPORARY SLOPE GRASS	(Symbol)
CHECK DAM	(Symbol)
ROCK BODIES	(Symbol)
STORMWATER FLOW ARROWS	(Symbol)

CONSTRUCTION

INSTALL VTC	11/15/24
INSTALL Silt	11/15/24
INSTALL CONSTRUCTION BARRIERS	11/15/24
INSTALL Silt FENCE	11/15/24
INSTALL SEDIMENT BODIES	11/15/24
INSTALL EROSION DITCHES	11/15/24

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. THIS 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 INCIDENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

M.A. Bennett, P.E.
 M.A. BENNETT, P.E.
 COLORADO P.E. 32314
 FOR AND ON BEHALF OF J.R. ENGINEERING, INC.

NOTES

1. REFER TO THE ENGINEER'S SUBMITTAL PLAN SHEET FOR DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAM FOR EROSION CONTROL FACILITIES.
2. ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY RESEED TO THE ORIGINAL GRADE WITH THE SAME SEED TYPE AND APPROXIMATE EQUAL SOIL SHEET 8 FOR MORE DETAILS.
3. SEE EROSION CONTROL PLAN SHEET 8 FOR MORE DETAILS.
4. THIS PROJECT DOES NOT ANTICIPATE THE USE OF BUNCH PLANTS SPECIES.
5. CONSIDER VEGETATION OR OTHER MEANS TO MAINTAIN VEGETATION GRASSES BY APPROXIMATELY 10% COVER.

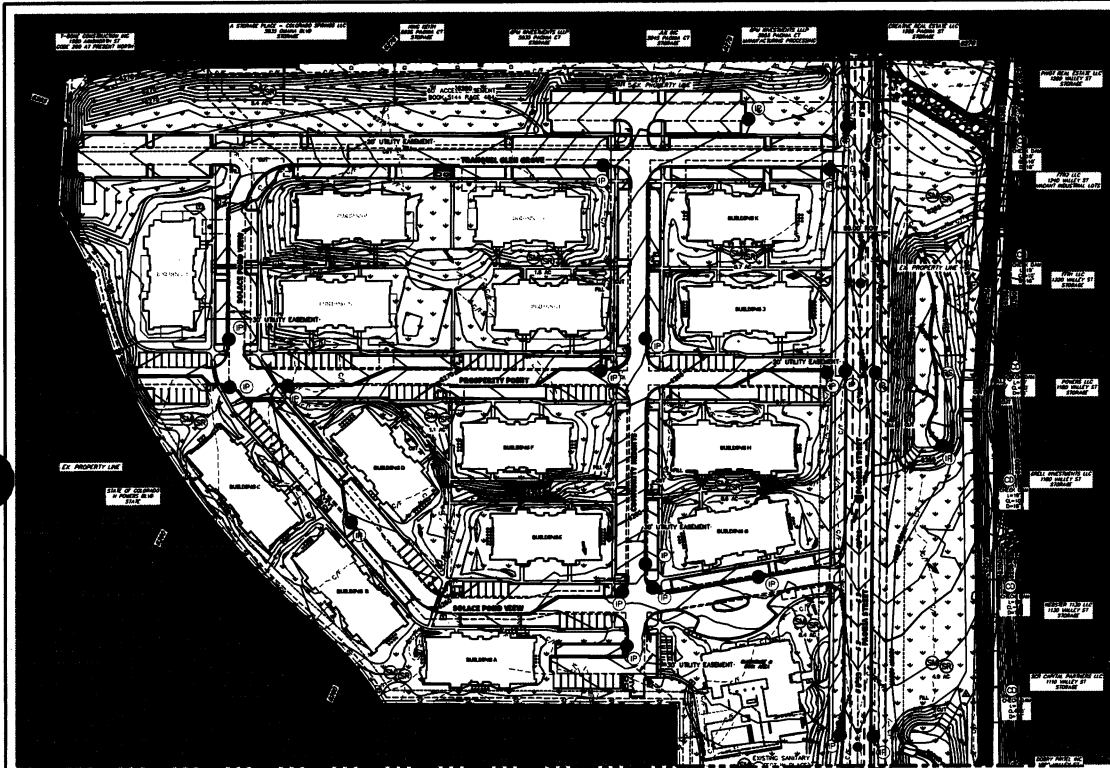


PREPARED FOR:
 SOLACE APARTMENTS FILING NO. 1
 INTERIM GRADING AND EROSION CONTROL PLANS

DATE: 11/15/24
 DRAWN BY: JRM
 CHECKED BY: JRM

J.R. ENGINEERING, INC.
 310 S. WALDEN ST.
 CHAMPAGNE, IL 61820
 (708) 214-7977

JOB NO. 23174-00



LEGEND

- SEGMENT DRAIN
- SILT FENCE
- CONSTRUCTION FENCE
- STABILIZED STAGING AREA
- CONSTRUCTION BARRIER
- VEHICLE TRADING CONTROL
- TEMPORARY STOCK PILE
- EROSION CONTROL BLANKET
- INLET PROTECTION
- OUTLET PROTECTION
- INCREASE DITCH AND DYE
- OUT AND FILL LINE
- LIMITS OF CONSTRUCTION/DISTURBANCE
- CONCRETE WASHOUT AREA
- SEEDING & MULCHING & SURFACE HARDENING
- TEMPORARY SLOPE DRAIN
- CHECK DAM
- ROCK SOCKS
- STABILIZED FLOW ARROWS
- PROPERTY LINES

KEY MAP

PHASING

PHASE 1: INITIAL SIE, EXISTING SIE, METALL CONSTRUCTION BARRIERS, METALL SLOPE STABILIZATION, METALL EROSION CONTROL STRUCTURES

PHASE 2: LOCAL METALL TEMPORARY STOCKPILE, LOCAL METALL SIE, METALL INLET AND OUTLET PROTECTION

PHASE 3: METALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS, REMOVE SILT FENCE AFTER STABILIZED

ENGINEER'S STATEMENT

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

M. J. Brantley

M. J. BRANTLEY, P.E.
 300 S. W. 10th St.
 CHANDLER, AZ 85224
 (480) 948-2577

NOTES

- REFER TO THE SITEWORK MANAGEMENT PLAN (SWMP) FOR DETAILED DESCRIPTIONS OF THE RESTORATION PROCEDURES FOR OPENED AREAS.
- ALL EROSION CONTROL MEASURES SHALL BE PERMANENTLY SEEDING FOR THE PERMANENT BENTHIC LIFE OF THE OPEN AREAS.
- ALL EROSION CONTROL MEASURES SHALL BE INSTALLED WITHIN 14 DAYS OF COMMENCEMENT OF CONSTRUCTION.
- THE PROJECT DOES NOT ANTICIPATE THE USE OF BATCH PLANTS.
- EXISTING VEGETATION ON-SITE IS MAINTAINED UNLESS OTHERWISE APPROVED BY THE CONTRACTOR.

811

Have your location. Call before you dig.

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROJECT INFORMATION

PREPARED FOR: CS POWER & GALLEY LLC
 300 S. W. 10th St.
 CHANDLER, AZ 85224
 (480) 248-2577

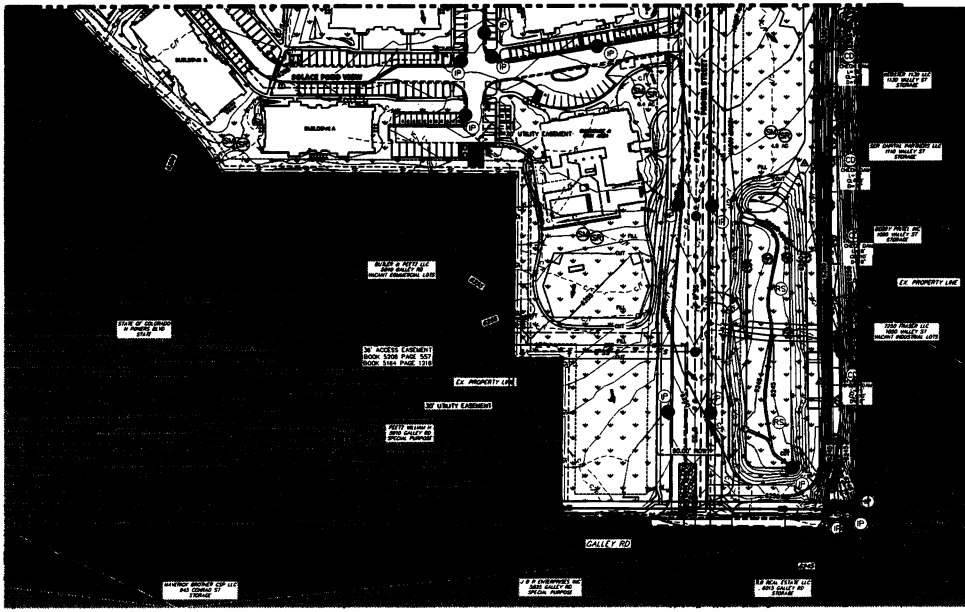
J.R. ENGINEERING
 A Limited Liability Company
 10000 W. 10th St., Suite 100
 CHANDLER, AZ 85224

PROJECT: SOLACE APARTMENTS FILING NO. 1 FINAL GRADING AND EROSION CONTROL PLANS

DESIGNED BY: JRM
 CHECKED BY: JRM

DATE: 1/11/23

SHEET 7 OF 12
 JOB NO. 23174-00



LEGEND

- SEDIMENT BASIN
- SILT FENCE
- CONSTRUCTION FENCE
- STABILIZED STAGING AREA
- CONSTRUCTION BARRIER
- VEHICLE TRAFFIC CONTROL
- TEMPORARY STOCK PILE
- EROSION CONTROL BLANKET
- INLET PROTECTION
- OUTLET PROTECTION
- EROSION DITCH AND DIRT TEMPORARY
- OUT AND FILL LINE
- LIMITS OF CONSTRUCTION/DISTURBANCE
- CONCRETE ISLAND/AREA
- SEEDING & MULCHING & SURFACE REPAIRING
- TEMPORARY SLOPE GRASS
- CHECK DAM
- ROCK SODS
- STORMWATER FLOW ARROWS
- PROPERTY LINES

SMP PHASING

- 1) INSTALL VTC
- 2) INSTALL SODS
- 3) INSTALL CONSTRUCTION BARRIERS
- 4) INSTALL SILT FENCE/SODS
- 5) INSTALL SEDIMENT BASIN
- 6) INSTALL EROSION STILES
- 7) INSTALL EROSION STILES
- 8) INSTALL TEMPORARY STOOPLES
- 9) INSTALL ALL SPTS
- 10) INSTALL SILT AND OUTLET PROTECTION
- 11) INSTALL SILT AND OUTLET PROTECTION
- 12) REMOVE SILT FENCE AFTER STABILIZED

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. THIS 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 INADEQUATE ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

Eric A. Brendel, P.E.
 ERIC A. BRENDEL, P.E.
 COLORADO P.E. 33314
 FOR AND ON BEHALF OF AN ENGINEER REGISTERED IN THE STATE OF COLORADO

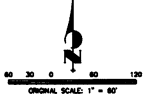
PREPARED FOR:
SOLACE APARTMENTS
 1400 S. YALE ST. UNIT 1
 CHAMPAGNE, IL 61820
 (708) 214-7577

PREPARED BY:
J.R. ENGINEERING
 1010 N. GARDEN ST. SUITE 200
 CHICAGO, IL 60610
 (773) 549-8888 - COMMUNICATIONS

NO.	REVISION	DATE	BY	CHECKED BY

SOLACE APARTMENTS FILING NO. 1
 FINAL GRADING AND EROSION CONTROL PLANS

SHEET 8 OF 12
 JOB NO. 25174-00



NOTES

- REFER TO THE EROSION MANAGEMENT PLAN (EMP) FOR A DETAILED DESCRIPTION OF THE MAINTENANCE PROGRAM FOR EROSION CONTROL FACILITIES.
- ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE PERMANENTLY RESEED FOR THE PROJECT DURATION PER THE SLOPE GRASS SCHEDULE OF MATERIALS TO BE USED FOR SEED AND MULCH.
- ALL SLOPE GRASS SHALL BE PLANTED AT THE TIME OF DISTURBANCE AND APPROXIMATELY 15% FOR SEED AND MULCH.
- THE PROJECT DOES NOT ANTICIPATE THE USE OF BATCH PLANTS SPECIFIC.
- EXISTING VEGETATION ON-SITE IS TO BE MAINTAINED UNLESS OTHERWISE APPROVED BY THE OWNER.



FILTER FABRIC INLET PROTECTION

INSTALLATION REQUIREMENTS

1. Filter fabric shall be installed in accordance with the manufacturer's instructions.
2. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

MAINTENANCE REQUIREMENTS

1. Filter fabric shall be inspected regularly for damage.
2. Filter fabric shall be replaced as needed.
3. Filter fabric shall be replaced as needed.
4. Filter fabric shall be replaced as needed.

DETAILING NOTES

1. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
2. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

City of Colorado Springs
Storm Water Quality

Figure 81-1
Filter Fabric Inlet Protection
Standard Detail

MATCHING NOTES

INSTALLATION REQUIREMENTS

1. Filter fabric shall be installed in accordance with the manufacturer's instructions.
2. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Filter fabric shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

MAINTENANCE REQUIREMENTS

1. Filter fabric shall be inspected regularly for damage.
2. Filter fabric shall be replaced as needed.
3. Filter fabric shall be replaced as needed.
4. Filter fabric shall be replaced as needed.

City of Colorado Springs
Storm Water Quality

Figure 81-1
Matching
Standard Detail

SEDIMENT BASIN PLAN

SECTION A-A

SECTION B-B

City of Colorado Springs
Storm Water Quality

Figure 81-2
Sediment Basin
Standard Detail

TABLE 81-1 SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Basin Type	Basin Length (ft)	Basin Width (ft)	Basin Depth (ft)	Basin Volume (cu ft)
Standard	100	10	4	4000
Standard	150	15	4	9000
Standard	200	20	4	16000
Standard	300	30	4	36000
Standard	400	40	4	64000
Standard	500	50	4	100000

INSTALLATION NOTES

1. Sediment basin shall be installed in accordance with the manufacturer's instructions.
2. Sediment basin shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Sediment basin shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Sediment basin shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

MAINTENANCE NOTES

1. Sediment basin shall be inspected regularly for damage.
2. Sediment basin shall be replaced as needed.
3. Sediment basin shall be replaced as needed.
4. Sediment basin shall be replaced as needed.

City of Colorado Springs
Storm Water Quality

Figure 81-3
Sizing Information for Standard Sediment Basin
Standard Detail

SEDIMENT BASIN PLAN

SECTION A-A

SECTION B-B

City of Colorado Springs
Storm Water Quality

Figure 81-2
Sediment Basin
Standard Detail

SEDIMENT BASIN PLAN

SECTION A-A

SECTION B-B

City of Colorado Springs
Storm Water Quality

Figure 81-2
Sediment Basin
Standard Detail

SURFACE ROUNDING NOTES

INSTALLATION NOTES

1. Surface rounding shall be installed in accordance with the manufacturer's instructions.
2. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

MAINTENANCE NOTES

1. Surface rounding shall be inspected regularly for damage.
2. Surface rounding shall be replaced as needed.
3. Surface rounding shall be replaced as needed.
4. Surface rounding shall be replaced as needed.

City of Colorado Springs
Storm Water Quality

Figure 81-3
Surface Rounding
Standard Detail

SURFACE ROUNDING NOTES

INSTALLATION NOTES

1. Surface rounding shall be installed in accordance with the manufacturer's instructions.
2. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
3. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.
4. Surface rounding shall be installed in a trench that is at least 1/2" deep and 1/2" wide.

MAINTENANCE NOTES

1. Surface rounding shall be inspected regularly for damage.
2. Surface rounding shall be replaced as needed.
3. Surface rounding shall be replaced as needed.
4. Surface rounding shall be replaced as needed.

City of Colorado Springs
Storm Water Quality

Figure 81-3
Surface Rounding
Standard Detail

PREPARED FOR:
CS PROJECTS & SOLUTIONS, LLC
 10000 N. W. 11th Ave.
 Suite 100
 Greenwood, CO 80031
 (724) 744-7277

J.R. ENGINEERING
 10000 N. W. 11th Ave.
 Suite 100
 Greenwood, CO 80031
 (724) 744-7277

NO.	DATE	BY	CHKD	DESCRIPTION

SOLACE APARTMENTS FILING NO. 1
GRADING AND EROSION CONTROL DETAILS

SHEET 9 OF 12
 JOB NO. 25174.00



ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

M. J. B...
 M. J. B...
 1/11/21

M. J. B...
 M. J. B...
 1/11/21

Plant	Species	Rate	Plant	Rate
1. Blue Spruce	100%	100%	100%	100%
2. Colorado Blue Spruce	100%	100%	100%	100%
3. Douglas Spruce	100%	100%	100%	100%
4. Gambel's Quercus	100%	100%	100%	100%
5. Gambel's Quercus	100%	100%	100%	100%
6. Gambel's Quercus	100%	100%	100%	100%
7. Gambel's Quercus	100%	100%	100%	100%
8. Gambel's Quercus	100%	100%	100%	100%
9. Gambel's Quercus	100%	100%	100%	100%
10. Gambel's Quercus	100%	100%	100%	100%

TABLE TB-1

TEMPORARY SEEDING NOTES

INSTALLATION REQUIREMENTS

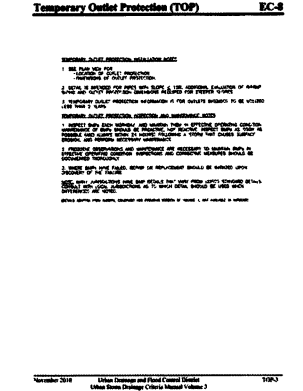
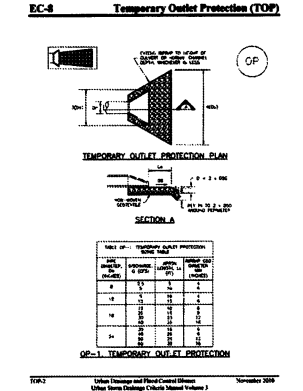
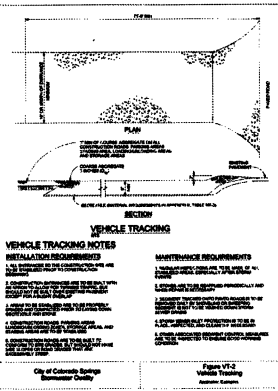
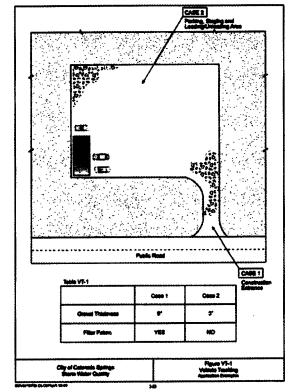
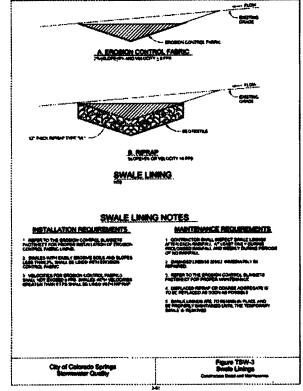
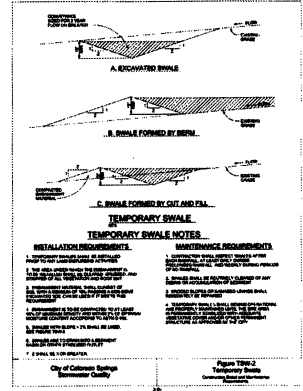
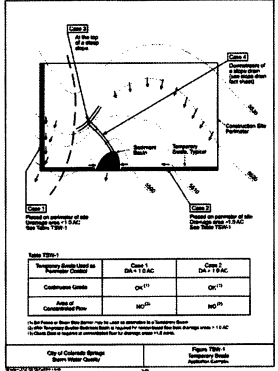
1. Seeding shall be done within 14 days of the start of construction.
2. Seeding shall be done in accordance with the following specifications:

MAINTENANCE REQUIREMENTS

1. Seeding shall be done in accordance with the following specifications:

City of Colorado Springs
Sustainable Quality

Figure TB-1
Temporary Seeding
Construction Detail



PREPARED FOR:
CS POND & SUELLY LLC
300 S. UNIVERSITY
CHAMPAGNE, IL 61820
(312) 216-2877

FOR ENGINEERING:
J.F.R. ENGINEERING
1000 W. UNIVERSITY
CHAMPAGNE, IL 61820
(312) 216-2877

DATE: 11/11/21

PROJECT: SOLACE APARTMENTS FILING NO. 1

CONTRACT NO.: SF-20-032

SHEET NO. OF 12

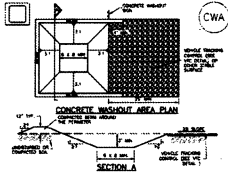
JOB NO. 25174.00

811
Here's where to call before you dig.

ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN HERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

M. A. BENEY, P.E.
M. A. BENEY, P.E.
COLORADO P.E. NO. 12345
FOR AND ON BEHALF OF J. BENEY & ASSOCIATES

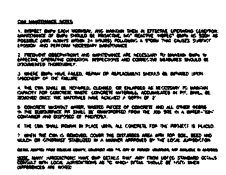
Concrete Washout Area (CWA) MM-1



- CWA-1. CONCRETE WASHOUT AREA**
1. ALL CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:
 - a. ALL CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:
 - b. ALL CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:
 - c. ALL CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:
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 10. THE CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) CWA-1

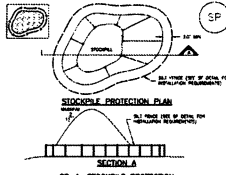
Concrete Washout Area (CWA) MM-1



- CWA-1. CONCRETE WASHOUT AREA**
1. ALL CONCRETE SHALL BE PLACED AND FINISHED TO THE FOLLOWING SPECIFICATIONS:
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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) CWA-1

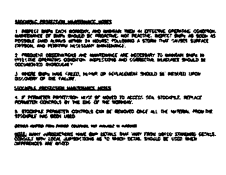
Stockpile Management (SP) MM-2



- SP-1. STOCKPILE PROTECTION**
1. THE PROTECTION WALL SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
 - a. THE PROTECTION WALL SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
 - b. THE PROTECTION WALL SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) SP-1

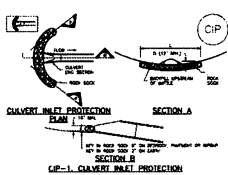
Stockpile Management (SM) MM-2



- SM-1. STOCKPILE MANAGEMENT**
1. THE STOCKPILE SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
 - a. THE STOCKPILE SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) SM-1

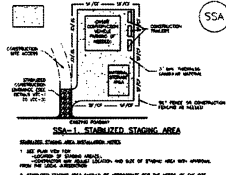
Inlet Protection (IP) SC-6



- IP-1. INLET PROTECTION**
1. THE INLET PROTECTION SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
 - a. THE INLET PROTECTION SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
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August 2013 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) IP-1

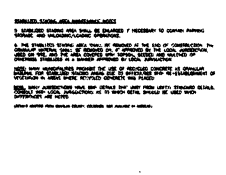
Stabilized Staging Area (SSA) SM-6



- SSA-1. STABILIZED STAGING AREA**
1. THE STABILIZED STAGING AREA SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:
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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) SSA-1

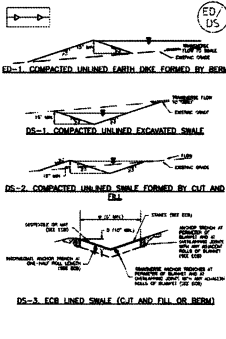
Stabilized Staging Area (SSA) SM-6



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November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) SSA-1

Earth Dikes and Drainage Swales (ED/DWS) EC-18



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage (Check Manual Volume 2) ED/DWS



ENGINEER'S STATEMENT
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

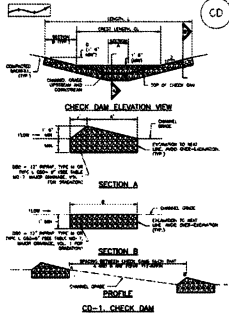
John A. Bennett, P.E.
JOHN A. BENNETT, P.E.
3031 S. WASHINGTON, P.O. BOX 1000
DENVER, COLORADO 80202
(303) 733-1111

DATE: 11/11/21

PREPARED FOR: CS PROPERTY MANAGEMENT, LLC 3100 S. WASHINGTON CHAMPION, CO. 80602 (303) 714-7277	DATE:	NOV 11 2021
	BY:	
J.R. ENGINEERING 1415 S. WASHINGTON CHAMPION, CO. 80602 (303) 714-7277	DATE:	NOV 11 2021
	BY:	
SOLACE APARTMENTS FILING NO. 1 GRADING AND EROSION CONTROL DETAILS	DATE:	NOV 11 2021
	BY:	
SHEET 11 OF 12 JOB NO. 25174.00		

Check Dams (CD)

EC-12



November 2010 Urban Drainage and Flood Control District (Urban Storm Drainage Check Dammed Version) CD-1

EC-12

Check Dams (CD)

- GENERAL NOTES:**
- SEE DRAWING FOR DIMENSIONS AND MATERIALS. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
 - CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC WORKS, EDITION 2002, WITH THE LATEST REVISIONS.
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November 2010 Urban Drainage and Flood Control District (Urban Storm Drainage Check Dammed Version) CD-1



811
Know what's below.
Call before you dig.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

M.A. Bennett
M.A. BENNETT, P.E.
COLUMBIA, P.A. 2004
FOR AND ON BEHALF OF J.R. ENGINEERS



PREPARED FOR: CS APARTMENTS LLC 300 S. M. ST. CHAMPAIGN, IL 61820 (724) 216-2577	
PREPARED BY: J.R. ENGINEERS 1000 S. M. ST. CHAMPAIGN, IL 61820 (724) 216-2577	
NO.	DATE
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SOLACE APARTMENTS FILING NO. 1
 GRADING AND EROSION CONTROL DETAILS
 SHEET 12 OF 12
 JOB NO. 23174.00



2880 International Circle, Suite 110
 Colorado Springs, CO 80910
 Phone 719-520-6300
 Fax 719-520-6695
 www.epasoco.com

**EL PASO COUNTY PLANNING AND
 COMMUNITY DEVELOPMENT
 DEPARTMENT**

GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
1. GRADING AND EROSION CONTROL PLAN			
a	Vicinity map.	✓	
b	Adjacent city/town/jurisdictional boundaries, subdivision names, and property parcel numbers labeled.	✓	
c	North arrow and acceptable scale (1"=20' to 1"=100').	✓	
d	Legend for all symbols used in the plan.	✓	
e	Existing and proposed property lines. Proposed subdivision boundary for subdivision projects.	✓	
f	All existing structures.	✓	
g	All existing utilities.	✓	
h	Construction site boundaries.	✓	
i	Existing vegetation (notes are acceptable in cases where there is no notable vegetation, only grasses/weeds, or site has already been stripped).	✓	
j	FEMA 100-yr floodplain.	✓	
k	Existing and proposed water courses including springs, streams, wetlands, detention ponds, stormwater quality structures, roadside ditches, irrigation ditches and other water surfaces. Show maintenance of pre-existing vegetation within 50 feet of a receiving water.	✓	
l	Existing and proposed contours 2 feet or less (except for hillside).	✓	
m	Limits of disturbance delineating all anticipated areas of soil disturbance.	✓	
n	Identify and protect areas outside of the construction site boundary with existing fencing, construction fencing or other methods as appropriate.	✓	
o	Offsite grading clearly shown and called out.	N/A	
p	Areas of cut and fill identified.	✓	
q	Conclusions from soils/geotechnical report and geologic hazards report incorporated in grading design (slopes, embankments, materials, mitigation, etc.)	✓	
r	Proposed slopes steeper than 3:1 with top and toe of slope delineated. Erosion control blanketing or other protective covering required.	✓	
s	Stormwater flow direction arrows.	✓	
t	Location of any dedicated asphalt / concrete batch plants.	N/A	
u	Areas used for staging, storage of building materials, soils (stockpiles) or wastes. The use of construction office trailers requires PCD permitting.	✓	
v	All proposed temporary construction control measures, structural and non-structural. Temporary construction control measures shall be identified by phase of implementation to include "initial," "interim," and "final" or shown on separate phased maps identifying each phase.	✓	
w	Vehicle tracking provided at all construction entrances/exits. Construction fencing, barricades, and/or signage provided at access points not to be used for construction.	✓	
x	Temporary sediment ponds provided for disturbed drainage areas greater than 1 acre.	✓	



2880 International Circle, Suite 110
 Colorado Springs, CO 80910
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**EL PASO COUNTY PLANNING AND
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 DEPARTMENT**

GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
y	Dewatering operations to include locations of diversion, pump and discharge(s) as anticipated at time of design.	N/A	
z	All proposed temporary construction control measure details. Custom or other jurisdiction's details used must meet or exceed EPC standards.	✓	
aa	Any offsite stormwater control measure proposed for use by the project and not under the direct control or ownership of the Owner or Operator.	N/A	
bb	Existing and proposed permanent storm water management facilities, including areas proposed for stormwater infiltration or subsurface detention.	✓	
cc	Existing and proposed easements (permanent and construction) including required off site easements.	✓	
dd	Retaining walls (not to be located in County ROW unless approved via license agreement). Design by P.E. and building permit from Regional Building Department required for walls greater than or equal to 4 feet in height, series of walls, or walls supporting a surcharge.	N/A	
ee	Plan certified by a Colorado Registered P.E., with EPC standard signature blocks for Engineer, Owner and EPC.	✓	
ff	<p>Engineer's Statement (for standalone GEC Plan): 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.</p> <hr/> <p>Engineer of Record Signature _____ Date _____</p>	✓	
gg	<p>Engineer's Statement (for GEC Plan within Construction Drawing set): These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to the criteria established by the County for detailed roadway, drainage, grading and erosion control plans and specifications, and said plans and specifications are in conformity with applicable master drainage plans and master transportation plans. Said plans and specifications meet the purposes for which the particular roadway and drainage facilities are designed and are correct to the best of my knowledge and belief. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparation of these detailed plans and specifications.</p> <hr/> <p>Engineer of Record Signature _____ Date _____</p>	N/A	
hh	<p>Owner's Statement (for standalone GEC Plan): I, the owner/developer have read and will comply with the requirements of the Grading and Erosion Control Plan.</p> <hr/> <p>Owner Signature _____ Date _____</p>	✓	



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**EL PASO COUNTY PLANNING AND
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 DEPARTMENT**

GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
ii	<p>Owner's Statement (for GEC Plan within Construction Drawing set): I, the owner/developer have read and will comply with the requirements of the grading and erosion control plan and all of the requirements specified in these detailed plans and specifications.</p> <p>_____ Owner Signature Date</p>	N/A	
jj	<p>El Paso County (standalone GEC Plan): 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.</p> <p>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.</p> <p>_____ County Engineer/ECM Administrator Date</p>	✓	
a	Soils report / geotechnical investigation as appropriate for grading/utilities/drainage/road construction.	✓	
b	Use Agreement/easement between the Owner or Operator and other third party for use of all offsite grading or stormwater control measures, used by the owner or operator but not under their direct control or ownership.	N/A	
c	Floodplain Development Permit	X	
d	USACE 404/wetlands permit/mitigation plan	X	
e	FEMA CLOMR	N/A	
f	State Engineer's permit/Notice Of Intent to Construct		
g	Stormwater Management Plan (SWMP)	X	
h	Financial Assurance Estimate (FAE) (signed)	X	
i	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)	X	
j	Pre-Development Site Grading Acknowledgement and Right of Access Form (signed)	X	
k	Conditions of Approval met?	X	



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**EL PASO COUNTY PLANNING AND
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 DEPARTMENT**

GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
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.	✓	



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**EL PASO COUNTY PLANNING AND
 COMMUNITY DEVELOPMENT
 DEPARTMENT**

GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
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.	✓	



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		Applicant	PCD
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 _____ and shall be considered a part of these plans.	X	
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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GRADING AND EROSION CONTROL PLAN CHECKLIST

Revised: July 2019

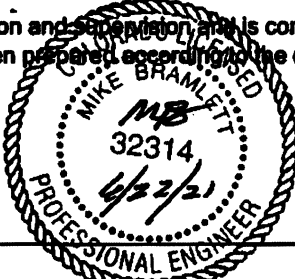
Applicant	PCD
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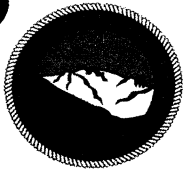
4. Applicant Comments:

a	ALL ITEMS MARKED 'N/A' ARE ITEMS THAT ARE NOT ASSOCIATED WITH THE PROJECT. ALL REQUIRED ITEMS APPLICABLE TO THIS PROJECT ARE INCLUDED IN GEC PLANS.		
b			
c			

5. Checklist Review Certifications:

a	<p>Engineer of Record: The Grading and Erosion Control Plan was prepared under my direction and supervision and is complete and 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.</p> <p><i>[Handwritten Signature]</i> <i>4/23/21</i> _____ Engineer of Record Signature Date</p>		
b	<p>Review Engineer: The Grading and Erosion Control Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.</p> <p>_____ Review Engineer Date</p>		





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STORMWATER MANAGEMENT PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
1. STORMWATER MANAGEMENT PLAN (SWMP)			
1	Applicant (owner/designated operator), SWMP Preparer, Qualified Stormwater Manager, and Contractor Information. (On cover/title sheet)	✓	
2	Table of Contents	✓	
3	Site description and location to include: vicinity map with nearest street/crossroads description.	✓	
4	Narrative description of construction activities proposed (e.g., may include clearing and grubbing, temporary stabilization, road grading, utility / storm installation, final grading, final stabilization, and removal of temporary control measures)	✓	
5	Phasing plan – may require separate drawings indicating initial, interim, and final site phases for larger projects. Provide "living maps" that can be revised in the field as conditions dictate.	✓	
6	Proposed sequence for major activities: Provide a construction schedule of anticipated starting and completion dates for each stage of land-disturbing activity depicting conservation measures anticipated, including the expected date on which the final stabilization will be completed.	✓	
7	Estimates of the total site area and area to undergo disturbance; current area of disturbance must be updated on the SWMP as changes occur.	✓	
8	Soil erosion potential and impacts on discharge that includes a summary of the data used to determine soil erosion potential	✓	
9	A description of existing vegetation at the site and percent ground cover and method used to determine ground cover	✓	
10	Location and description of all potential pollution sources including but not limited to: disturbed and stored soils; vehicle tracking; management of contaminated soils; loading and unloading operations; outdoor storage of materials; vehicle and equipment maintenance and fueling; significant dust generating process; routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.; on-site waste management; concrete truck/equipment washing; dedicated asphalt, concrete batch plants and masonry mixing stations; non-industrial waste such as trash and portable toilets	✓	
11	Material handling to include spill prevention and response plan and procedures.	✓	
12	Spill prevention and pollution controls for dedicated batch plants	✓	
13	Other SW pollutant control measures to include waste disposal and off site soil tracking	✓	
14	Location and description of any anticipated allowable non-stormwater discharge (ground water, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.)	✓	
15	Name(s) of ultimate receiving waters; size, type and location of stormwater outfall or storm sewer system discharge	✓	
16	Description of all stream crossings located within the project area or statement that no streams cross the project area	✓	



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STORMWATER MANAGEMENT PLAN CHECKLIST

Revised: July 2019

		Applicant	PCD
17	SWMP Map to include:	✓	
17a	construction site boundaries	✓	
17b	flow arrows to depict stormwater flow directions	✓	
17c	all areas of disturbance	✓	
17d	areas of cut and fill	✓	
17e	areas used for storage of building materials, soils (stockpiles) or wastes	✓	
17f	location of any dedicated asphalt / concrete batch plants	✓	
17g	location of all structural control measures	✓	
17h	location of all non-structural control measures	✓	
17i	springs, streams, wetlands and other surface waters, including areas that require maintenance of pre-existing vegetation within 50 feet of a receiving water	✓	
18	Narrative description of all structural control measures to be used. Modifications to EPC standard control measures must meet or exceed County-approved details.	✓	
19	Description of all non-structural control measures to be used including seeding, mulching, protection of existing vegetation, site watering, sod placement, etc.	✓	
20	Technical drawing details for all control measure installation and maintenance; custom or other jurisdiction's details used must meet or exceed EPC standards	✓	
21	Procedure describing how the SWMP is to be revised	✓	
22	Description of Final Stabilization and Long-term Stormwater Quality (describe nonstructural and structural measures to control SW pollutants after construction operations have been completed, including detention, water quality control measure etc.)	✓	
23	Specification that final vegetative cover density is to be 70% of pre-disturbed levels	✓	
24	Outline of permit holder inspection procedures to install, maintain, and effectively operate control measures to manage erosion and sediment	✓	
25	Record keeping procedures identified to include signature on inspection logs and location of SWMP records on-site	✓	
26	If this project relies on control measures owned or operated by another entity, a documented agreement must be included in the SWMP that identifies location, installation and design specifications, and maintenance requirements and responsibility of the control measure(s).	✓	
	Please note: all items above must be addressed. If not applicable, explain why, simply identifying "not applicable" will not satisfy CDPHE requirement of explanation.		
2. ADDITIONAL REPORTS/PERMITS/DOCUMENTS			
a	Grading and Erosion Control Plan (signed)		
b	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)		
3. Applicant Comments:			



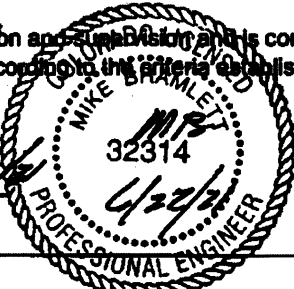
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STORMWATER MANAGEMENT PLAN CHECKLIST

Revised: July 2019

		Applicant	FCD
a			
b			
c			
4. Checklist Review Certifications:			
a	<p>Engineer of Record: The Stormwater Management 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 and State for Stormwater Management Plans.</p> <p><i>[Signature]</i> _____ Date <i>6/22/20</i></p>		
b	<p>Review Engineer: The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.</p> <p>_____ Date _____</p>		



SWMP Content Checklist - Stormwater Discharges Associated with Construction Activity (COR400000)

ART I.C.2.a...	Yes	No
i) Qualified Stormwater Manager - Does the SWMP list individual(s) by title and name who are designated as the site's qualified stormwater manager(s) responsible for implementing the SWMP in its entirety?	✓	
ii) Spill Prevention and Response Plan - Does the SWMP have a spill prevention and response plan?	✓	
iii) Materials Handling - Does the SWMP describe and locate all control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff	✓	
iv) Potential Sources of Pollution - Does the SWMP list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This shall include, but is not limited to, the following pollutant sources:		
a) disturbed and stored soils	✓	
b) vehicle tracking of sediments	✓	
c) management of contaminated soils	✓	
d) loading and unloading operations	✓	
e) outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)	✓	
f) vehicle and equipment maintenance and fueling	✓	
g) significant dust or particulate generating processes (e.g., saw cutting material, including dust)	✓	
h) routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.	✓	
i) on-site waste management practices (waste piles, liquid wastes, dumpsters)	✓	
j) concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment	✓	
k) dedicated asphalt, concrete batch plants and masonry mixing stations	✓	
l) non-industrial waste sources such as worker trash and portable toilets	✓	
vi) Implementation of Control Measures - Does the SWMP include design specifications that contain information on the implementation of the control measure in accordance with good engineering hydrologic and pollution control practices; including as applicable drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.	✓	
Notes:		

SWMP Content Checklist - Stormwater Discharges Associated with Construction Activity (COR400000)

	Yes	No
vi) Site Description - Does the SWMP include a site description which includes, at a minimum, the following:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) the nature of the construction activity at the site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) the proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g.: clearing, grading, utilities, vertical, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) a summary of any existing data used in the development of the construction site plans or SWMP that describe the soil or existing potential for soil erosion	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) a description of the percent of existing vegetative ground cover relative to the entire site and the method for determining the percentage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) a description of any allowable non-stormwater discharges at the site, including those being discharged under a division low risk discharge guidance policy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) a description of areas receiving discharge from the site. Including a description of the immediate source receiving the discharge. If the stormwater discharge is to a municipal separate storm sewer system, the name of the entity owning that system, the location of the storm sewer discharge, and the ultimate receiving water(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) a description of all stream crossings located within the construction site boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Notes:

SWMP Content Checklist - Stormwater Discharges Associated with Construction Activity (COR400000)

	Yes	No
vii) Site Map - Does the SWMP include a site map which includes, at a minimum, the following:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) construction site boundaries	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) flow arrows that depict stormwater flow directions on-site and runoff direction	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) all areas of ground disturbance including areas of borrow and fill	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) areas used for storage of soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) locations of dedicated asphalt, concrete batch plants and masonry mixing stations	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) locations of all structural control measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) locations of all non-structural control measures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) locations of springs, streams, wetlands and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with Part I.B.1.a.i.(d)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) locations of all stream crossings located within the construction site boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
viii) Final Stabilization and Long Term Stormwater Management - Does the SWMP describe the practices used to achieve final stabilization of all disturbed areas at the site and any planned practices to control pollutants in stormwater discharges that will occur after construction operations are completed. Including but not limited to, detention/retention ponds, rain gardens, stormwater vaults, etc	<input checked="" type="checkbox"/>	<input type="checkbox"/>

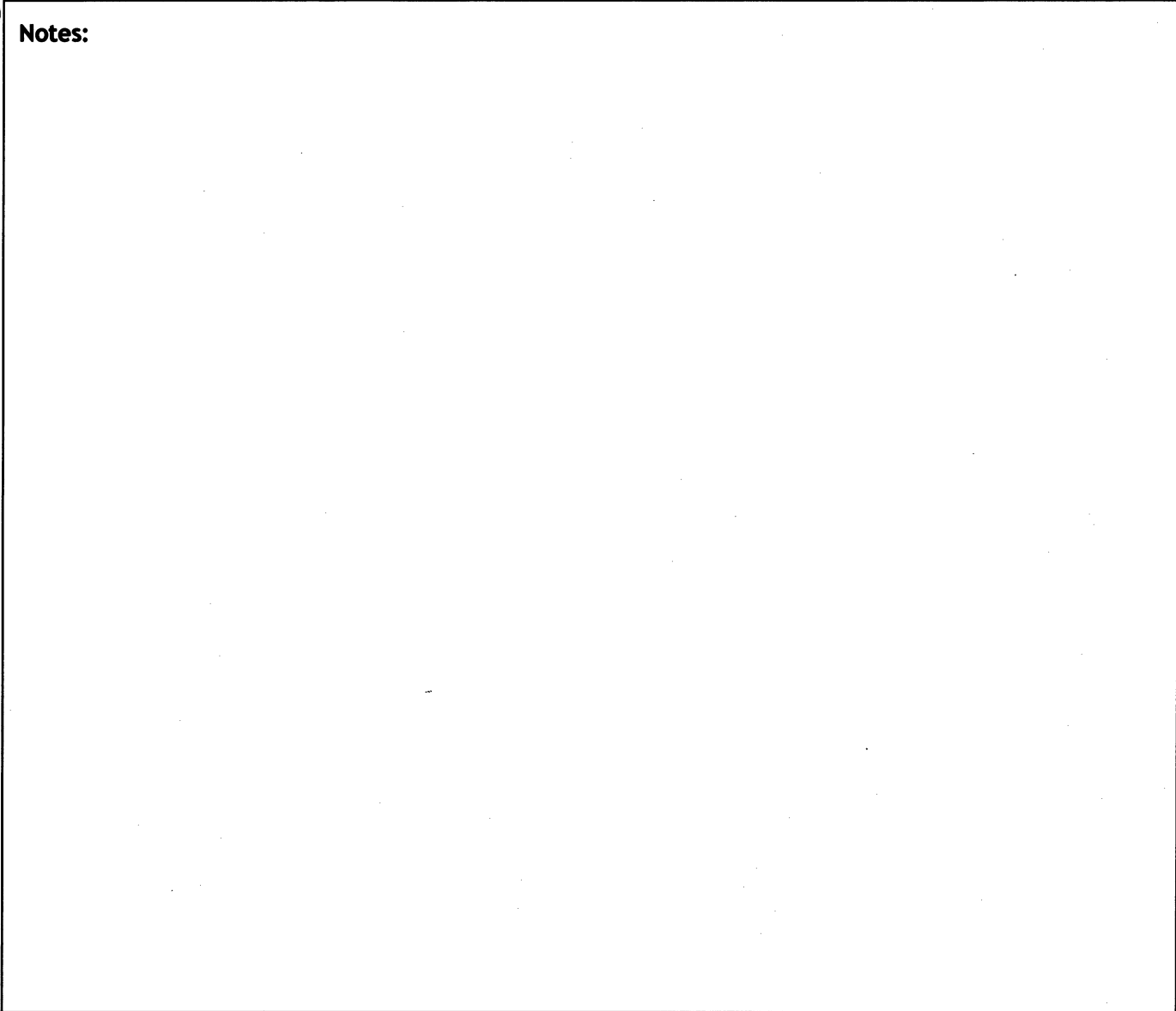
Notes:

SWMP Content Checklist - Stormwater Discharges Associated with Construction Activity (COR400000)

	Yes	No
ix) Inspection Reports - Does the SWMP include documented inspection reports in accordance with Part I.D. of the permit?		✓
a) Is the inspector a qualified stormwater manager?	✓	
b) Do the inspection records meet the minimum required inspection frequency identified on the inspection reports? <ul style="list-style-type: none"> • What minimum inspection frequency is being implemented at the site? • Is a reduced inspection frequency being implemented? 	✓	
c) Were the following areas inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters:		
1) Construction site perimeter	✓	
2) All disturbed areas	✓	
3) Designated haul routes	✓	
4) Material and waste storage areas exposed to precipitation	✓	
5) Locations where stormwater has the potential to discharge offsite	✓	
6) Locations where vehicles exit the site	✓	
d) Do the inspection records include the following requirements:		
1) Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges	✓	
2) Determine if there are new potential sources of pollutants	✓	
3) Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges	✓	
4) Identify all areas of non-compliance with the permit requirements and, if necessary, implement corrective action as described below	✓	
e) Do the inspection reports include, at a minimum, the following items:		
1) The inspection date	✓	
2) Name(s) and title(s) of personnel conducting the inspection	✓	
3) Weather conditions at the time of inspection	✓	
4) Phase of construction at the time of inspection	✓	
5) Estimated acreage of disturbance at the time of inspection	✓	
6) Location(s) of discharges of sediment or other pollutants from the site	✓	
7) Location(s) of control measures requiring routine maintenance (see Section VI)	✓	
8) Location(s) and identification of inadequate control measures and requiring corrective actions (see Section VII)	✓	
9) Location(s) and identification of additional control measures are needed that were not in place at the time of inspection	✓	
10) Description of the minimum inspection frequency and any deviations from the minimum inspection schedule	✓	
11) After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the report shall contain the following statement: "I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."	✓	

SWMP Content Checklist - Stormwater Discharges Associated with Construction Activity (COR400000)

Notes:

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APPENDIX E – Inspection Report Template

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee					
Date of Inspection		Weather Conditions					
Permit Certification #		Disturbed Acreage					
Phase of Construction		Inspector Title					
Inspector Name							
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO						
<input type="checkbox"/>	<input type="checkbox"/>						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	<input type="checkbox"/>				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	<input type="checkbox"/>				
<ul style="list-style-type: none"> • This is this a post-storm event inspection. Event Date: _____ 	<input type="checkbox"/>				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Post-storm inspections at temporarily idle sites 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Inspections at completed sites/area 	<input type="checkbox"/>				
<ul style="list-style-type: none"> • Winter conditions exclusion 	<input type="checkbox"/>				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO				
<input type="checkbox"/>	<input type="checkbox"/>				

INSPECTION REQUIREMENTS
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached Control Measures Requiring Routine Maintenance and Inadequate Control Measures Requiring Corrective Action forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions Inadequate Control Measures Requiring Corrective Action form
Construction site perimeter	<input type="checkbox"/>	<input type="checkbox"/>	
All disturbed areas	<input type="checkbox"/>	<input type="checkbox"/>	
Designated haul routes	<input type="checkbox"/>	<input type="checkbox"/>	
Material and waste storage areas exposed to precipitation	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where stormwater has the potential to discharge offsite	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where vehicles exit the site	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit	
a. Endangerment to Health or the Environment Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>	
b. Numeric Effluent Limit Violations <ul style="list-style-type: none"> o Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit) o Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit) o Daily maximum violations (See Part II.L.6.d of the Permit) <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>	

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	If "YES" document below
	<input type="checkbox"/>	<input type="checkbox"/>	

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

“I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit.”

Name of Qualified Stormwater Manager

Title of Qualified Stormwater Manager

Signature of Qualified Stormwater Manager

Date

Notes/Comments