

CHICK-FIL-A #05190
GRADING, EROSION, AND SEDIMENT CONTROL REPORT

August 2023

Prepared for:
Chick-Fil-A, Inc.
105 Progress
Irvine, CA. 92618
303-579-7206
Contact: Steve Schwartz

Prepared by:



5970 Greenwood Village Plaza Boulevard
Greenwood Village, Colorado 80111
303-751-0741
Contact: Kristofer K. Wiest, P.E.

Merrick Project No. 65121141

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LONE TREE PERMITTEES SIGNATURE PAGE

This Grading, Erosion and Sediment Control (GESC) report included herein has been prepared under my direct supervision in accordance with the requirements of the Grading, Erosion and Sediment Control Criteria Manual, as amended.



08/18/2023

Kellan D. Black, P.E.
Colorado Registered Professional
Engineer No. 57201
For and on Behalf of Merrick & Company

Chick-Fil-A, Inc. hereby certifies that the grading, erosion, and sediment control facilities for the Chick-Fil-A #05190 project shall be constructed according to the design presented in this report. I understand that the City of Lone Tree does not and will not assume liability for the grading, erosion and sediment control facilities designed and/or certified by my engineer and that the City of Lone Tree reviews GESC plans; but cannot, on behalf of the Chick-Fil-A #05190 project, guarantee that final review will absolve Chick-Fil-A, Inc. and/or their successors and/or assigns of future liability for improper design.

Chick-Fil-A, Inc.

Authorized Signature

Note:

The Grading, Erosion and Sediment Control Plan included herein has been placed in the City of Lone Tree file for this project and appears to fulfill applicable City of Lone Tree Grading, Erosion and Sediment Control criteria, as amended. Additional grading, erosion and sediment control measures may be required of the permittee(s) due to unforeseen erosion problems or if the submitted GESC Plan does not function as intended. The requirements of this GESC Plan shall run with the land and be the obligation of the permittee(s) until such time as the GESC Plan is properly completed, modified, or voided.

PROJECT DESCRIPTION

This project encompasses the construction of the fast-food restaurant Chick-Fil-A #05190 located at the corner of State Highway C-470 and South Yosemite Street (Lot 1, Block 2, Parkway Subdivision Filing No. 3, 3rd Amendment). The property consists of 1.33 acres of land, including Lot 1, Block 2 of the Parkway Subdivision Filing No. 3, 3rd Amendment. Over-lot grading was previously performed, along with commercial buildings, existing parking lot and storm sewer improvements needed to serve the sounding developments.

The site is located within the west half of Section 3, Township 6 South, Range 67 West of the Sixth Principal Meridian, County of Douglas, State of Colorado. The site is bounded on the north by an existing commercial building, to the west by an existing parking lot, to the south by State Highway C-470 and to the east by South Yosemite Street. See Figure 1 – Vicinity Map on page 5.

EXISTING SITE CONDITIONS

The majority of the site is covered is covered in asphalt paving within the existing parking lot to the At-Home – Home Goods store consisting of parking islands, drive isles and landscaping.

Generally, the site slopes from north to south at approximately 2%. There are no known major or minor drainage ways located adjacent to the site. Existing storm infrastructure captures and conveys peak storm runoff to a regional detention pond located northwest of the site, and just west of the existing parking lot.

The site is situated within Zone X, as shown in FIRM Map No 08035C00426 effective January 16, 2023. See Appendix B for Firm Map.

Since more than 1 acre of disturbed land will be associated with this project, a Colorado Stormwater Discharge Permit will be required.

ADJACENT AREAS

Runoff from State Highway C-470 and South Yosemite Street is captured by existing curb & gutter and conveyed to an existing storm infrastructure.

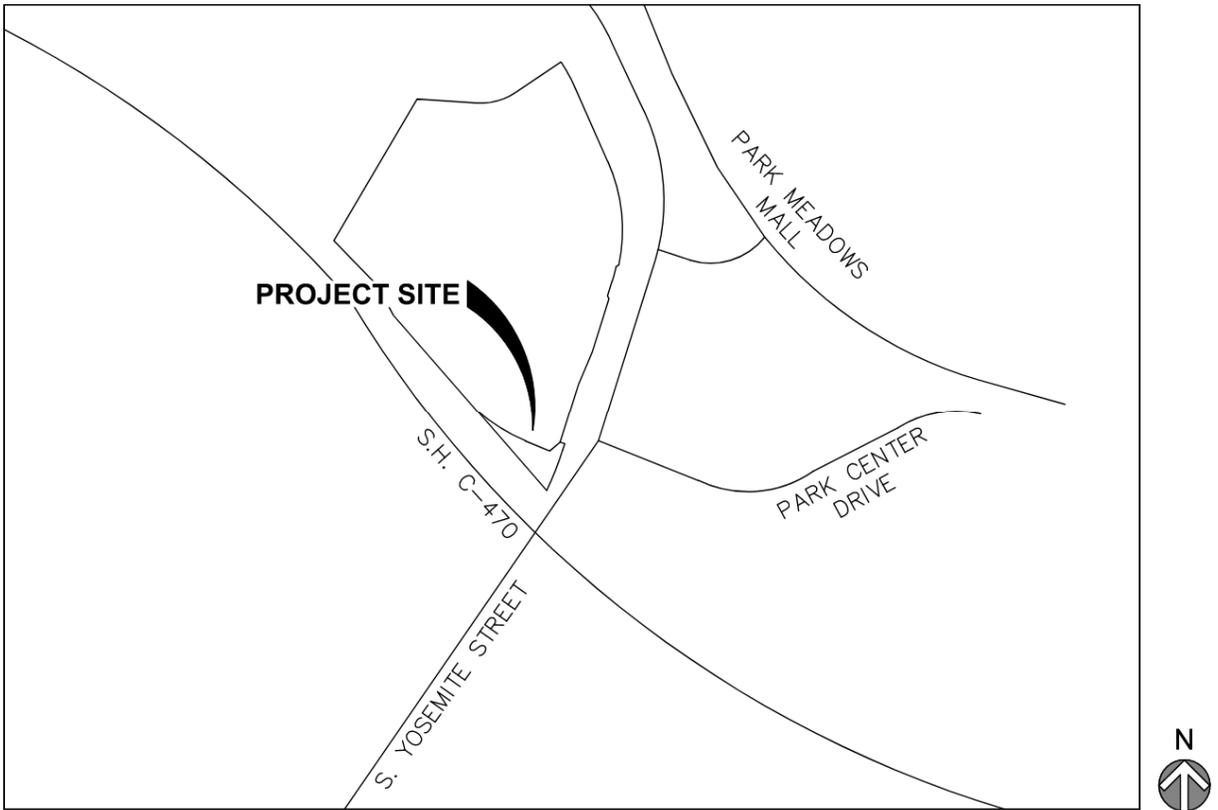


Figure 1 - Vicinity Map

UNDERLYING SOILS

The entire site is covered in "FoD", Fondis clay loam, classified as Hydrologic Soil Group C.

AREAS AND VOLUMES

A total area of 1.33 acres will be disturbed by the proposed grading within the site and within the southeast corner of the Parkway Subdivision Filing No. 3, 3rd Amendment plat. Removal of hardscape improvements across the project area will yield approximately 1,450 cubic yards. The estimated total unadjusted fill volume is 930 cubic yards and the estimated total unadjusted cut volume is 605 cubic yards, resulting in a net of 325 cubic yards of import.

EROSION AND SEDIMENT CONTROL MEASURES

The proposed erosion and sediment control measures can be seen on the Grading, Erosion and Sediment Control Plans (see Appendix D).

During construction activities silt fence (SF) and construction fence (CF) shall be maintained along the boundaries of the project site to define the limits of construction. Inlet protection (IP) will be installed at existing inlets in the vicinity of the site and at any new inlets installed during construction activity. Access to the construction area shall be through the vehicle tracking control (VTC) pad off the existing parking lot. The contractor shall install a concrete washout area (CWA) and a stabilized staging area (SSA); the staging area shall be large enough to fully contain parking, storage, and unloading and loading operations.

During the interim stage of construction, silt fence, inlet protection, and curb socks shall be maintained throughout the entire construction process. Silt fence shall be maintained to prevent runoff from carrying sediment off-site and impacting downstream waters. As proposed inlets are constructed inlet protection shall be placed around them to prevent sediment from entering the existing storm sewer system.

At completion of construction, the VTC, CWA, SSA, and inlet protection shall be removed. Silt fence shall be left in place until seeding has been established and approved by the City of Lone Tree. All disturbed areas where permanent landscaping is not provided shall be reseeded as soon as possible with a permanent seeding and mulching mix.

TIMING/PHASING SCHEDULE

The proposed construction schedule for this project is:

- Install initial BMPs – March 2024
- Begin grading and install interim BMPs – September 2024
- Complete grading, remove initial and interim BMPs, and install final BMPs – November 2024.
- Final stabilization/final landscaping – Summer 2025 (weather dependent)

The proposed construction is estimated to take 450-500 days.

PERMANENT STABILIZATION

Upon completion of construction activities, the site will be hardscaped with concrete and asphalt and will not need to be monitored during the final stabilization process. Permanent landscape features will be installed throughout the property and within the disturbed areas in the adjacent Right-of-Ways as shown on the approved landscape construction plans.

STORMWATER MANAGEMENT CONSIDERATIONS

During the initial phase of construction runoff from the site will flow in all directions from the site and will be collected by existing storm sewers. As such, particular care should be taken to make sure sediment from the site does not enter the public roadways or stormwater inlets. During active construction runoff from much of the central portion of the site will be collected by the yet-to-be installed private storm sewer system before entering the municipal storm sewer system.

MAINTENANCE

The construction, erosion, and sediment control measures shall be inspected by the contractor on a weekly basis during construction. Erosion and sediment control measures shall be inspected after every rain event as required by City of Lone Tree regulations. The standard notes and details in the Grading, Erosion, and Sediment Control Plan (See Appendix D) shall be followed.

OPINION OF PROBABLE COST

The estimated cost for the erosion and sediment control measures within City of Lone Tree is \$11,856.50. A detailed cost estimate for erosion and sediment control is provided in Appendix A. Construction costs are not included in the estimate.

CALCULATIONS

No special calculations were needed for the development of this GESC.

REFERENCES

1. Federal Emergency Management Agency Flood Insurance Rate Maps, Community-Panel Number 08035C00426, January 23, 2023.
2. Grading, Erosion and Sediment Control Manual, Douglas County, Colorado, Department of Public Works, <https://www.douglas.co.us/land/drainage-and-erosion-control/grading-erosion-and-sediment-control-manual-gesc-drainage-erosion-and-sediment-control-desc/>, March 2004.
3. National Cooperative Soil Survey for Castle Rock, Colorado, USDA, Web Soil Survey 1.1 [online], Accessed December 2020.

APPENDIX A

(OPINION OF PROBABLE COSTS)

APPENDIX B

(GESC PLAN AND REPORT CHECKLIST)

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ADJACENT AREAS

Runoff from State Highway C-470 and South Yosemite Street is captured by existing curb & gutter and conveyed to an existing storm infrastructure.

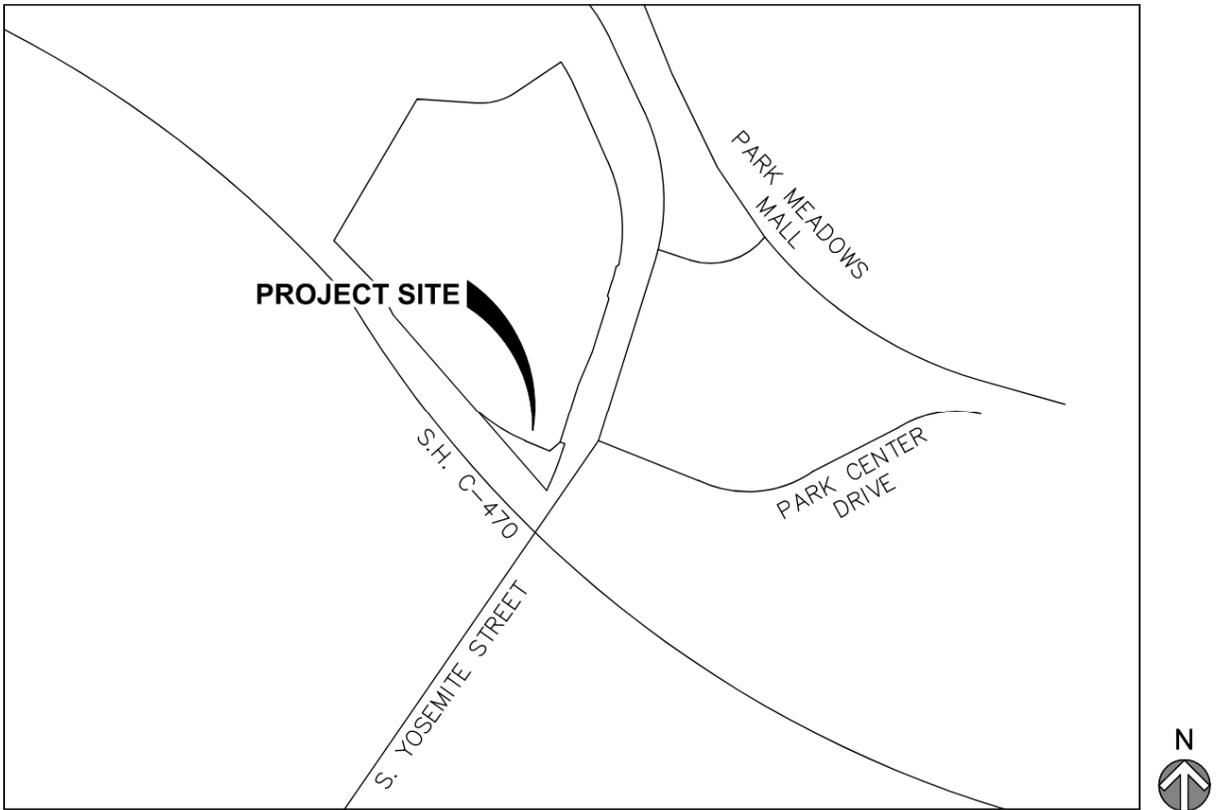


Figure 1 - Vicinity Map

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MAINTENANCE

The construction, erosion, and sediment control measures shall be inspected by the contractor on a weekly basis during construction. Erosion and sediment control measures shall be inspected after every rain event as required by City of Lone Tree regulations. The standard notes and details in the Grading, Erosion, and Sediment Control Plan (See Appendix D) shall be followed.

OPINION OF PROBABLE COST

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CALCULATIONS

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REFERENCES

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2. Grading, Erosion and Sediment Control Manual, Douglas County, Colorado, Department of Public Works, <https://www.douglas.co.us/land/drainage-and-erosion-control/grading-erosion-and-sediment-control-manual-gesc-drainage-erosion-and-sediment-control-desc/>, March 2004.
3. National Cooperative Soil Survey for Castle Rock, Colorado, USDA, Web Soil Survey 1.1 [online], Accessed December 2020.

APPENDIX A

(OPINION OF PROBABLE COSTS)



CITY OF
LONE TREE

**GESC Permit
Opinion of Probable Cost**

Project: Chick-Fil-A #05190	Date: June 14, 2023
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BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$ 24.00	0	\$ -
2	Compost Blanket	CB	SF	\$0.36	0	\$ -
3	Compost Filter Berm	CFB	LF	\$ 2.00	0	\$ -
4	Concrete Washout Area	CWA	EA	\$ 100.00	1	\$ 100.00
5	Construction Fence	CF	LF	\$ 2.00	1,230	\$ 2,460.00
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Curb Sock	CS	LF	\$ 8.00	7	\$ 56.00
8	Dewatering	DW	EA	\$ 600.00	0	\$ -
9	Diversion Ditch	DD	LF	\$ 1.60	0	\$ -
10	Erosion Control Blanket	ECB	SY	\$ 5.00	0	\$ -
11	Inlet Protection	IP	LF	\$ 20.00	5	\$ 100.00
12	Reinforced Check Dam	RCD	LF	\$ 36.00	0	\$ -
13	Reinforced Rock Berm	RRB	LF	\$ 9.00	0	\$ -
14	RRB for Culvert Protection	RRC	LF	\$ 9.00	0	\$ -
15	Sediment Basin	SB	AC (1)	(2)	0.0	\$ -
16	Sediment Control Log	SCL	LF	\$ 2.00	1,635	\$ 3,270.00
17	Sediment Trap	ST	EA	\$ 600.00	0	\$ -
18A	Seeding and Mulching - Mobilization	SM	EA	\$ 1,000.00	1	\$ 1,000.00
18B	Seeding and Mulching - Installation	SM	AC	\$ 750.00	0.6	\$ 480.00
19	Silt Fence	SF	LF	\$ 2.00	665	\$ 1,330.00
20	Stabilized Staging Area	SSA	SY	\$ 2.00	257	\$ 514.00
21	Surface Roughening	SR	AC	\$ 600.00	0.0	\$ -
22	Temporary Slope Drain	TSD	LF	\$ 30.00	0	\$ -
23	Temporary Stream Crossing	TSC	EA	\$ 1,000.00	0	\$ -
24	Terracing	TER	AC	\$ 600.00	0.0	\$ -
25	Vehicle Tracking Control	VTC	EA	\$ 1,000.00	1	\$ 1,000.00
26	VTC with Wheel Wash	WW	EA	\$ 1,500.00	0	\$ -
27	Temporary Batch Plant Restoration		AC	\$ 5,000.00	0.0	\$ -

(1) Upstream Tributary Acre	SUB-TOTAL	\$ 10,310.00
(2) SB Cost = \$1000 +\$200(Upstream Tributary Acres)	15% CONTINGENCY	\$ 1,546.50
	GESC SURETY TOTAL (1)	\$ 11,856.50

NOTE: (1) **MINIMUM SURETY shall be \$2,500.00** (Per Section 16-31-110 of City Zoning Code)

APPENDIX B

(GESC PLAN AND REPORT CHECKLIST)



Project: Chick-Fil-A #05190	Date: 1/20/2023
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All Plan Sheets			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	1. Title Block (consistent on all sheets)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	2. Legal Name (Subdivision Name and Filing Number)
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	3. Sheet Number
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	4. Graphic and Written Scale
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	5. North Arrow
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	6. Current Date of Plan Preparation
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	7. City Acceptance Block (available upon request)

Cover Sheet			
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	1. Project name
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	2. Project address
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	3. Owner (and Applicant's if different) name and address
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	4. Design firm's name and address
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	5. Plan sheet index
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	6. Original date of preparation and subsequent revisions
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	7. The following note: <p style="margin-left: 40px;">THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEES DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEES, UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.</p>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	8. GESC Plan Designer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following note: <p style="margin-left: 40px;">THE GRADING, EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE <i>GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.</i></p>
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	9. General Location Map (at a reasonable scale) indicating: <ul style="list-style-type: none"> a. general vicinity of the site location b. major roadway names c. north arrow and scale



GESC Drawing Index Sheet (if applicable)

For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.

Initial GESC Plan

- | | | | | |
|---|--|---|-----|--|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 1. | Property Lines |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 2. | Existing and proposed easements |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 3. | Existing topography at one- or two-foot contour intervals, extending a minimum of 100 feet beyond the property line |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 4. | Location of any existing structures or hydrologic features within the mapping limits |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 5. | USGS Benchmark used for project |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 6. | Limits of construction encompassing all areas of work, including: <ul style="list-style-type: none"> • Access points, storage and staging areas, borrow areas, stockpiles, and utility tie-in locations in on-site and off-site locations • Stream corridors and other resource areas to be preserved and all other areas outside the limits of construction shall be lightly shaded to clearly show area not to be disturbed. |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 7. | Location of stockpiles, including topsoil, imported aggregates, and excess material |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 8. | Location of storage and staging areas for equipment, fuel, lubricant, chemical (and other materials) and waste storage |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> | 9. | Location of borrow or disposal areas |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 10. | Location of temporary roads |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 11. | Location, map symbol, and letter callouts of all initial erosion and sediment control BMPs |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 12. | Information to be specified for each BMP, such as type and dimensions, as called for in the Standard Notes and Details |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 13. | The following note: <ul style="list-style-type: none"> • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS. |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 14. | Other information as may be reasonably required by Lone Tree |



Interim GESC Plan

- | | | | | |
|---|--|---|----|---|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 1. | Items 1, 2, and 4 through 10 from the Initial GESC Plan |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 2. | Existing topography at one- or two-foot contour intervals extending a minimum of 100 feet beyond the property line, as shown on Initial GESC Plan. These contours shall be screened. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 2. | Location of all existing erosion and sediment control measures on site, as shown on the Initial GESC Plan Sheet. These control measures shall be screened. Dimension information for initial stage BMPs shall not be shown. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 3. | Proposed topography at one- or two-foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading |
| Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> | 4. | Outlines of cut and fill areas |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 5. | Location of all interim erosion and sediment controls, designed in conjunction with the proposed site topography, but also considering the controls designed for the existing topography. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 6. | Locations of all buildings, drainage features and facilities, paved areas, retaining walls, cribbing, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plat, SIP, RSP, or other improvement plan. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 7. | The following notes: <ul style="list-style-type: none"> • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS. • SHADED BMPs INSTALLED IN THE INITIAL STAGE SHALL BE LEFT IN PLACE IN THE INTERIM STAGE. • ALL INTERIM BMPs, INCLUDING SEEDING AND MULCHING OF DISTURBED AREAS, MUST BE COMPLETED PRIOR TO ISSUANCE OF ANY CURB AND GUTTER PERMITS. • SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 8. | Summary of cut and fill volumes |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 9. | Other information as may be reasonably required by Lone Tree |



Final GESC Plan

- | | | | | |
|---|-----------------------------|---|-----|---|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 1. | Items 1, 2, and 5 from the Initial GESC Plan |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 2. | Existing topography in areas of proposed contours shall not be shown. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 3. | Existing Initial and Interim BMPs shall be shown (screened). Dimension information shall not be shown. |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 4. | Directional flow arrows on all drainage features |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 5. | Any Initial or Interim BMPs that are to be removed and any resulting disturbed area to be stabilized |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 6. | Location of all Final erosion and sediment control BMPs (including seeding and mulching of any areas not stabilized in the Interim Plan), permanent landscaping, and measures necessary to minimize the movement of sediment off site until permanent vegetation can be established. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 7. | Show area of buildings, pavement, sod, and permanent landscaping (define types) per accepted improvement plan. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 8. | Show seeding and mulching (SM) everywhere except within the limits of buildings and pavement areas. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 9. | Show other BMPs considered by the designer to be appropriate. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 10. | Show the following BMPs to be removed prior to end of construction: <ul style="list-style-type: none"> • Indicate dewatering (DW) to be removed. • Indicate temporary stream crossings (TSC) to be removed. • Indicate stabilized staging area (SSA) to be removed. • Indicate street inlet protection (IP) to be removed. • Indicate vehicle tracking control (VTC) to be removed. • Indicate construction fence (CF) to be removed. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 11. | Include the following notes: <ul style="list-style-type: none"> • SEE COVER SHEET OF LONE TREE STANDARD NOTES AND DETAILS (SHEET 1 OF 3) FOR LEGEND OF BMP NAMES AND SYMBOLS. • SHADED BMPS INSTALLED IN THE INITIAL AND INTERIM GESC PLANS, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE CITY. • SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS, AND INLET AND OUTLET PROTECTION. |
| Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> | 12. | Other information as may be reasonably required by Lone Tree |



GESC Report

- | | | | | |
|---|-----------------------------|------------------------------|-----|---|
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 1. | <u>Name, Address, and Telephone Number of Applicant(s)</u> – The name, address, and telephone number of the Professional Engineer preparing (or supervising the preparation of) the GESC Plan shall also be included, if different from the Applicant's. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 2. | <u>Project Description</u> – A brief description of the nature and purpose of the land-disturbing activity, the total area of the site, the area of disturbance involved, and project location including township, range, section and quarter section, or the latitude and longitude, of the approximate center of the project. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 3. | <u>Existing Site Conditions</u> – A description of the existing topography, vegetation, and drainage; a description of any wetlands on the site; and any other unique features of the property. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 4. | <u>Adjacent Areas</u> – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 5. | <u>Soils</u> – A brief description of the soils on the site including information on soil type and names, mapping unit, erodibility, permeability, hydrologic soil group, depth, texture, and soil structure (this information may be obtained from the soil report for the site, for adjacent sites if acceptable to the County, or the applicable Soil Survey prepared by the Natural Resources Conservation Service). |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 6. | <u>Areas and Volumes</u> – An estimate of the quantity (in cubic yards) of excavation and fill involved (indicating a balance onsite), and the surface area (in acres) of the proposed disturbance. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 7. | <u>Erosion and Sediment Control Measures</u> – A description of the methods presented in the GESC Criteria Manual that will be used to control erosion and sediment on the site. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 8. | <u>Timing/Phasing Schedule</u> – A schedule indicating the anticipated starting and completion time periods of the site grading and/or construction sequence, including the installation and removal of erosion and sediment control BMPs. Indicate the anticipated starting and completion time periods of individual project phases. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 9. | <u>Permanent Stabilization</u> – A brief description, including applicable specifications, of how the site will be stabilized after construction is completed. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 10. | <u>Stormwater Management Considerations</u> – Explain how stormwater runoff from and through the site will be handled during construction. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 11. | <u>Maintenance</u> – Any special maintenance requirements over and above what is identified in the standard notes and details. |
| Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> | 12. | <u>Opinion of Probable Cost (City Format)</u> – An opinion of probable costs for erosion and sediment control, including anticipated maintenance during the construction phase, shall be submitted with the GESC Plan. This will be reviewed by City staff and used as a basis for fiscal security. Electronic or paper copies of the spreadsheet to be used for preparing the opinion of probable costs for erosion and sediment control are available upon request. Unit costs used to develop probable erosion and sediment control costs shall be those shown in the spreadsheet. |



Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	13. <u>Calculations</u> – Any calculations made for the design of such items as sediment basins or erosion control blanket selection.
Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	14. <u>Other Information</u> – As may be reasonably required by Lone Tree.
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	15. <u>The Following Note</u> – “This Grading, Erosion and Sediment Control Plan has been placed in the Lone Tree file for this project and appears to fulfill the applicable Douglas County Grading, Erosion and Sediment Control Criteria, as amended. I understand that additional grading, erosion and sediment control measures may be required of the Permittees, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Permittees until such time as the plan is properly completed, modified or voided.”
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	16. <u>Signature Page for Permittees</u> - Acknowledging the review and acceptance of responsibility, and a statement by the Professional Engineer acknowledging responsibility for the preparation of the GESC Plan (available upon request).

Preparer’s Signature _____

Date _____

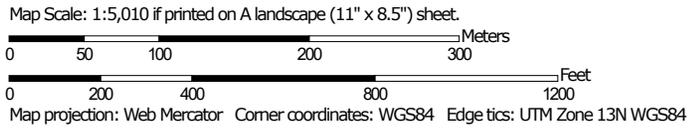
APPENDIX C

(FIRM, Soil Maps)

Soil Map—Castle Rock Area, Colorado
(CFA 470 & Yosemite)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Castle Rock Area, Colorado

Survey Area Data: Version 15, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

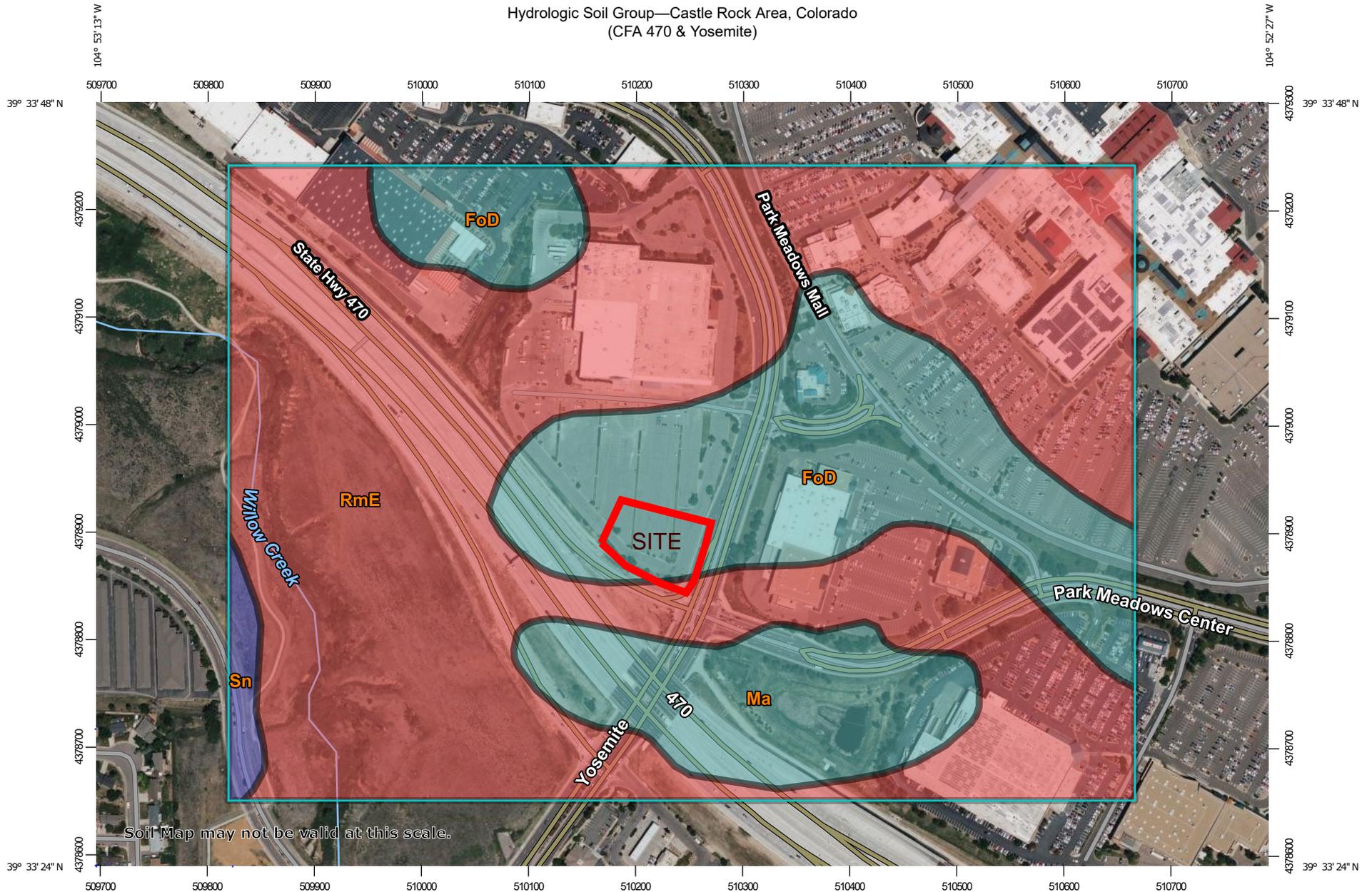
Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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.

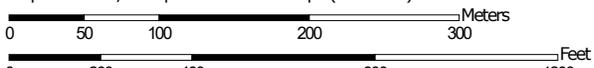
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FoD	Fondis clay loam, 3 to 9 percent slopes	29.3	23.6%
Ma	Manzanola clay loam	11.8	9.5%
RmE	Renohill-Buick complex, 5 to 25 percent slopes	81.4	65.6%
Sn	Satanta loam	1.5	1.2%
Totals for Area of Interest		124.1	100.0%

Hydrologic Soil Group—Castle Rock Area, Colorado
(CFA 470 & Yosemite)



Map Scale: 1:5,010 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Castle Rock Area, Colorado
 Survey Area Data: Version 15, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
FoD	Fondis clay loam, 3 to 9 percent slopes	C	29.3	23.6%
Ma	Manzanola clay loam	C	11.8	9.5%
RmE	Renohill-Buick complex, 5 to 25 percent slopes	D	81.4	65.6%
Sn	Satanta loam	B	1.5	1.2%
Totals for Area of Interest			124.1	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

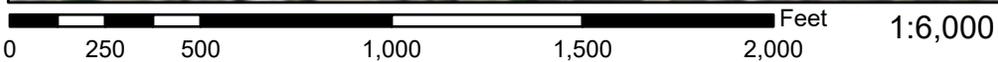
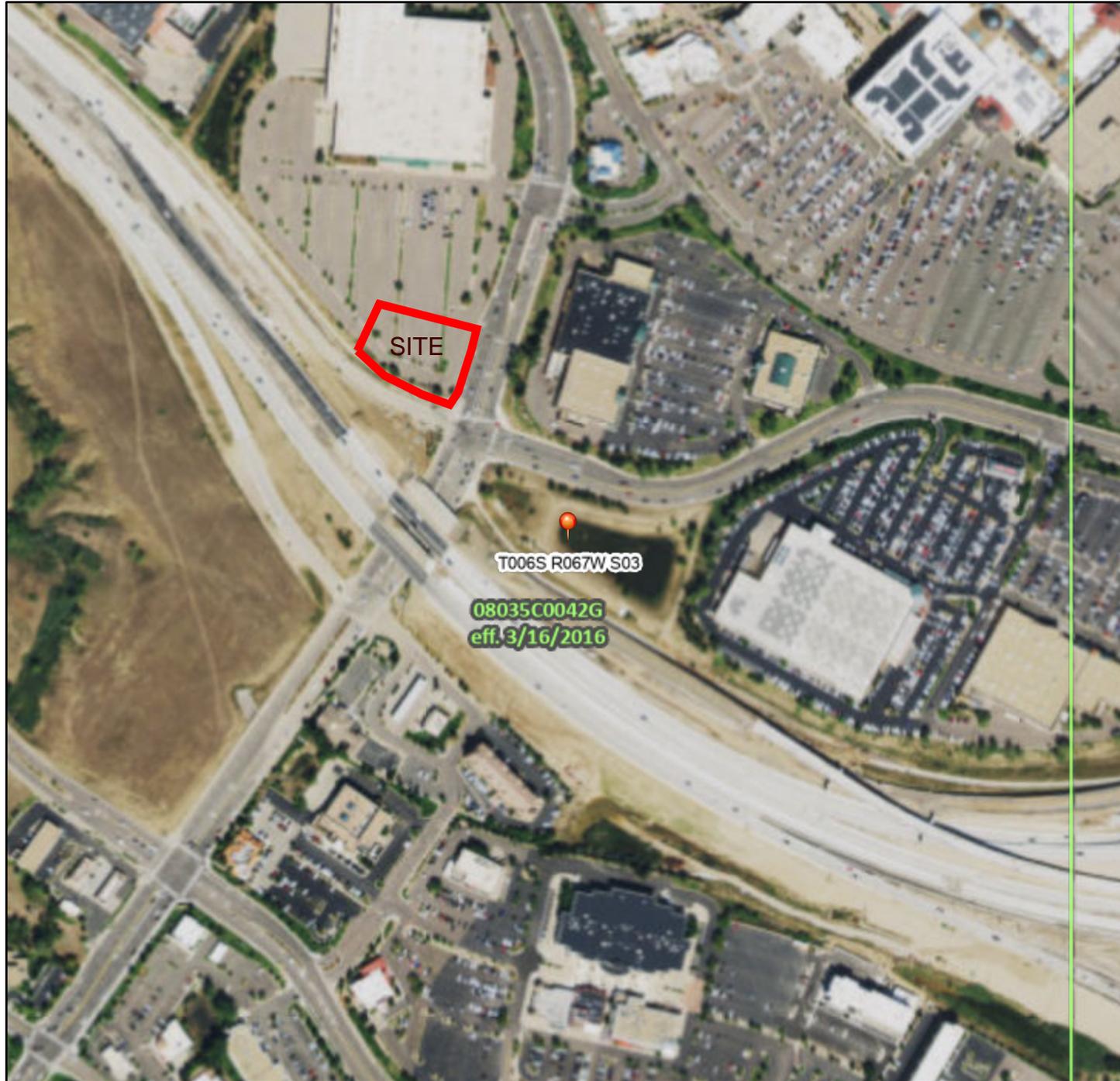
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

National Flood Hazard Layer FIRMMette



104°53'5"W 39°33'44"N



104°52'28"W 39°33'16"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **1/16/2023 at 5:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX D

(GESC Plan Drawings)

GRADING, EROSION, AND SEDIMENT CONTROL PLANS FOR: CHICK-FIL-A HWY 470 & YOSEMITE

CITY OF LONE TREE GENERAL NOTES:

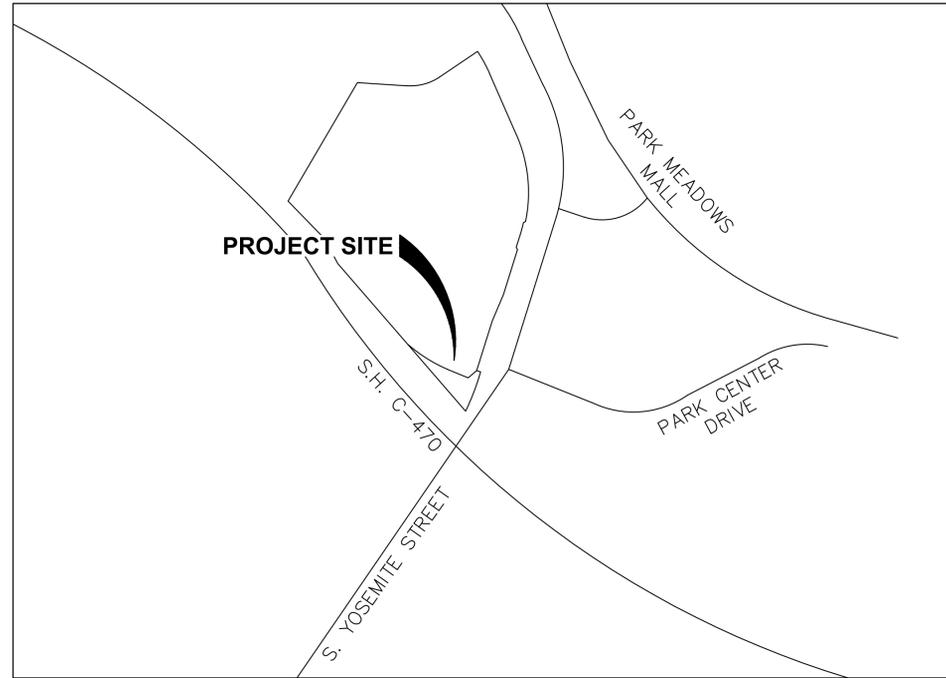
- THE CITY OF LONE TREE ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE ENGINEERING DIVISION HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL CONFORMANCE WITH THE CITY OF LONE TREE SUBDIVISION RESOLUTION OR APPROVED VARIANCES TO THOSE REGULATIONS. THE CITY OF LONE TREE ENGINEER, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY, OTHER THAN STATED ABOVE, FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS. THE OWNER AND ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE IS AFFIXED TO THIS DOCUMENT.
- ALL ROADWAY CONSTRUCTION SHALL CONFORM TO CURRENT DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF LONE TREE ENGINEERING DIVISION. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF LONE TREE PUBLIC WORKS, INSPECTION SECTION, (303) 662-8112, A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO STARTING CONSTRUCTION, AND/OR BEFORE RESTARTING CONSTRUCTION AFTER A SHUTDOWN OF MORE THAN 10 DAYS.
- LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION, CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT (800) 922-1987 OR 811.
- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY (SIGNED BY BOTH DESIGN ENGINEER AND CITY OF LONE TREE) OF THE CONSTRUCTION PLANS AND GESC REPORT AND PLAN, AND ONE (1) COPY OF THE DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS AT THE JOB SITE AT ALL TIMES.
- ALL PROPOSED STREET CUTS TO EXISTING PAVEMENTS FOR UTILITIES, STORM SEWER, OR OTHER PURPOSES ARE LISTED AND REFERENCED BELOW:
- A ROW/CONSTRUCTION PERMIT MUST BE OBTAINED BEFORE ANY WORK WITHIN EXISTING OR PROPOSED PUBLIC ROW. THE PERMIT APPLICATION MUST BE SUBMITTED TO THE CITY OF LONE TREE ENGINEER FOR REVIEW/PROCESSING A MINIMUM OF 7 DAYS PRIOR TO REQUESTED START FOR THE WORK IN THE ROW.
- A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF LONE TREE ENGINEER FOR ACCEPTANCE WITH THE PERMIT APPLICATION. AN EXCAVATION OR PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- THE CONSTRUCTION PLANS SHALL BE CONSIDERED VALID FOR TWO (2) YEARS FROM THE DATE OF CITY OF LONE TREE ACCEPTANCE/APPROVAL. IF APPLICABLE CONSTRUCTION PERMITS HAVE NOT BEEN OBTAINED, AND CONSTRUCTION STARTED WITHIN THAT TIME, THESE PLANS SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE CITY OF LONE TREE.
- CONTRACTOR SHALL NOTIFY THE CITY OF LONE TREE ENGINEER INSPECTOR WHEN WORKING OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ON ANY FACILITY WHICH WILL BE CONVEYED TO THE CITY, URBAN DRAINAGE AND FLOOD CONTROL DISTRICT, OR OTHER SPECIAL DISTRICT FOR MAINTENANCE (STORM SEWER, ENERGY DISSIPATORS, DETENTION OUTLET STRUCTURES, OR OTHER DRAINAGE INFRASTRUCTURES); FAILURE TO NOTIFY ENGINEERING INSPECTOR TO ALLOW THEM TO INSPECT THE CONSTRUCTION MAY RESULT IN NON-ACCEPTANCE OF THE FACILITIES/INFRASTRUCTURE BY CITY AND/OR URBAN DRAINAGE.

GENERAL NOTES:

- BENCHMARK: ELEVATIONS ARE BASED UPON THE NGS BENCHMARK UNBEW12T, A BRASS DISK STAMPED "UNBEW12T 1992" AND SET IN THE NORTHWEST CORNER OF A 24'X16' ROCK OUTCROP, LOCATED 0.2 MILE SOUTHWEST ALONG A PAVED ROAD FROM EXIT 191 OFF INTERSTATE 25 AND 22.5' EAST OF CENTERLINE. 123' NORTH OF THE OUTLET OF A 3' CORRUGATED METAL CULVERT AND APPROXIMATELY 350' WEST OF THE WEST EDGE OF ASPHALT OF SOUTHBOUND INTERSTATE 25. ELEVATION = 6125.32 NAVD83 / DOUGLAS COUNTY DATUM.
- PROJECT COORDINATES ARE MODIFIED COLORADO STATE PLANE CENTRAL ZONE COORDINATES. THE COMBINED FACTOR USED TO MODIFY COORDINATES WAS XXXX.
- SANITARY FACILITIES SHALL BE PROVIDED AND MAINTAINED ON THE SITE AT ALL TIMES BY THE CONTRACTOR.
- THE APPROPRIATE AUTHORITIES SHALL BE CONTACTED FOR ALL NECESSARY INSPECTIONS WITH AT LEAST 48 HOURS ADVANCE NOTICE.
- DUST SHALL BE PROPERLY CONTROLLED BY THE CONTRACTOR AT ALL TIMES.
- THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR UNDERGROUND UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND PROTECTING THEM DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PROJECT SAFETY INCLUDING BUT NOT LIMITED TO SAFETY DURING TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL, AND SECURITY.
- THE CONTRACTOR MUST SECURE ALL REQUIRED PERMITS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACT DOCUMENTS AND SPECIFICATIONS THAT ARE SPECIFIC TO THIS PROJECT SHALL CONTROL ALL WORK EXCEPT WHEN STANDARDS AND SPECIFICATIONS OF DOUGLAS COUNTY CONFLICT OR OVERRIDE.

LOT 1A-2, BLOCK 1 PARKWAY SUBDIVISION FILING NO. 3, 4TH AMENDMENT LOCATED IN THE WEST HALF OF SECTION 3 TOWNSHIP 6 SOUTH, RANGE 67 WEST OF THE 6TH P.M. CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO.

1.33 ACRES



VICINITY MAP
NTS

THE **GRADING, EROSION AND SEDIMENT CONTROL PLAN** INCLUDED HEREIN HAS BEEN PLACED IN THE CITY OF LONE TREE FILE FOR THIS PROJECT AND APPEARS TO FULFILL APPLICABLE LONE TREE GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEES, DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEES, UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

THE **GRADING, EROSION AND SEDIMENT CONTROL PLAN** INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.

GESC PLANS PREPARED BY:

MERRICK & COMPANY	DATE	P.E. NUMBER
PROJECT CONTACTS		
SANITARY SEWER SOUTHGATE WATER AND SANITATION 3722 EAST ORCHARD ROAD CENTENNIAL, CO 80121 CONTACT: DAVID KAHLICH PHONE: 432-770-4997 EMAIL: REVIEWS@SOUTHGATEDISTRICTS.ORG	ELECTRIC XCEL ENERGY 2655 NORTH 63RD STREET BOULDER, CO 80301 CONTACT: JOHN SEADLER PHONE: 720-610-2509 EMAIL: JOHN.SEADLER@XCELENERGY.COM	
WATER SOUTHGATE WATER AND SANITATION 3722 EAST ORCHARD ROAD CENTENNIAL, CO 80121 CONTACT: DAVID KAHLICH PHONE: 432-770-4997 EMAIL: REVIEWS@SOUTHGATEDISTRICTS.ORG	TELEPHONE / CABLE / FIBER LUMEN (PREVIOUSLY CENTURY LINK) CONTACT: TRAVIS YOUNG PHONE: 303-263-1725 EMAIL: TRAVIS.YOUNG@LUMEN.COM TELECOM CONTACT: MIKE PISARIK EMAIL: MPISARIK@GILESENGR.COM	
STORM DRAINAGE CITY OF LONE TREE PUBLIC WORKS 9220 KIMMER DR, SUITE 100 LONE TREE, CO 80124 CONTACT: JANET HERMAN PHONE: 303-708-1818 EMAIL: ENGINEERING@DOUGLAS.CO.US	DEVELOPER CHICK-FIL-A, INC. 5200 BUFFINGTON ROAD ATLANTA, GA 30349-2732 CONTACT: MR. STEVE SCHWARTZ PHONE: (303) 519-7206 EMAIL: STEVE.SCHWARTZ@CFACORP.COM	
GAS XCEL ENERGY 2655 NORTH 63RD STREET BOULDER, CO 80301 CONTACT: JOHN SEADLER PHONE: 720-610-2509 EMAIL: JOHN.SEADLER@XCELENERGY.COM	CIVIL ENGINEER MERRICK & COMPANY 5970 GREENWOOD PLAZA BLVD. GREENWOOD VILLAGE, CO 80111 CONTACT: MR. KELLAN BLACK PHONE: (303) 353-3590 EMAIL: KELLAN.BLACK@MERRICK.COM	

BASIS OF BEARING:

BEARINGS ARE BASED UPON THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 6 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, AS BEARING N02°13'40"W A DISTANCE OF 2699.17 FEET BETWEEN THE WEST QUARTER CORNER OF SAID SECTION 3, BEING A FOUND # 6 REBAR WITH A 3-1/4" ALUMINUM CAP, FLUSH WITH THE SURFACE, STAMPED RLS 16401 AND THE SOUTHWEST CORNER OF SAID SECTION 3 BEING A FOUND 3-1/4" ALUMINUM CAP, IN RANGE BOX DOWN 0.5' BELOW THE SURFACE, STAMPED LS 26298.

ORIGIN BENCHMARK:

PROJECT BENCHMARK IS RIDGEGATE BM 1 A 3.25" DIAMETER BRASS CAP SET ON THE NORTHWEST BRIDGE ABUTMENT OF RIDGEGATE PARKWAY STAMPED "RIDGEGATE BM 1 2021" AND IS APPROXIMATELY 0.7 MILES EAST ON RIDGEGATE PARKWAY FROM THE INTERSECTION OF I-25 AND RIDGEGATE PARKWAY IN LONE TREE, COLORADO. THE BENCHMARK IS 1.0 FEET FROM THE WEST EDGE OF THE ABUTMENT, 3.0 FEET NORTH OF THE BACK OF WALK AND 31 FEET NORTH OF THE WEST BOUND CENTERLINE OF RIDGEGATE PARKWAY. ELEVATION IS 5983.40 U.S. SURVEY FEET, NAVD 88 DOUGLAS COUNTY DATUM.

Local Control Grid Coordinates:

Point #601 N=1629556.03 E=3174717.09 ELEV=5825.14 Set 2" Alum Cap Stamped "Merrick & CO 601"
Point #602 N=1629607.89 E=3174208.72 ELEV=5823.87 Set 2" Alum Cap Stamped "Merrick & CO 602"
STATE PLANE, NAD83, COLORADO CENTRAL
COMBINED FACTOR 0.99967418745

LEGAL DESCRIPTION:

LOT 1A-2, BLOCK 2, PARKWAY SUBDIVISION FILING NO. 3 - 4TH AMENDMENT LOCATED IN THE WEST HALF OF SECTION 3, TOWNSHIP 6 SOUTH, RANGE 67 WEST OF THE SIXTH PRINCIPAL MERIDIAN
CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
1.33 ACRES, 2 LOTS
SP23-0008 (SITE IMPROVEMENT PLAN)

LEGEND:

	PROPERTY LINE
	WATER METER
	IRRIGATION METER
	GREASE INTERCEPTOR
	SINGLE CLEANOUT
	TWO-WAY CLEANOUT
	TRANSFORMER
	STORM INLET
	STORM MANHOLE
	LIGHT POLE
	PROPOSED TRAFFIC SIGN
	PAVEMENT STRIPING
	PARKING COUNT
	ELECTRIC SERVICE
	STORM SWALE
	STORM SEWER
	SEWER LINE
	GAS LINE
	FIRE LINE
	WATER LINE
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EX STORM MANHOLE
	EX SANITARY MANHOLE
	EX STORM INLET
	EX LIGHT POLE
	EX ELECTRIC SERVICE
	EX GAS SERVICE
	EX WATER LINE
	EX STORM SEWER
	EX SANITARY SEWER
	EX TELEPHONE SERVICE
	EX FIRE HYDRANT
	EX TRAFFIC SIGN
	EX MAJOR CONTOUR
	EX MINOR CONTOUR
	EX TREE
	EX IRRIGATION VALVE
	EX WATER VALVE
	EX ELECTRIC BOX
	CONCRETE PAVEMENT
	ACCESSIBLE PATH

Sheet List Table		
Sheet Number	Sheet Title	Sheet Description
01	COVER	C10.0
02	GENERAL NOTES	C10.1
03	INITIAL GESC PLAN	C10.2
04	INTERIM GESC PLAN	C10.3
05	FINAL GESC PLAN	C10.4
06	GESC DETAIL 1	C10.5
07	GESC DETAIL 2	C10.6
08	GESC DETAIL 3	C10.7



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5200 Buffington Road
Atlanta, Georgia 30349-2998



5970 GREENWOOD PLAZA BLVD
GREENWOOD VILLAGE, CO 80111
303-751-0741

FOR AND ON BEHALF OF
MERRICK AND COMPANY

GRADING, EROSION, AND SEDIMENT CONTROL PLANS

CHICK-FIL-A

HWY 470 & YOSEMITE

NWC OF HWY 470 & YOSEMITE

LONE TREE, CO 80124

LOTS 4 AND 5, NINE MILE CORNER AMENDMENT NO. 1

FSR#05190

BUILDING TYPE / SIZE: P13 LS LRG (MOD)
RELEASE: 22.05

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	65121141
PRINTED FOR	REVIEW
DATE	08/18/23
DRAWN BY	KEA
SHEET	
COVER	
SHEET NUMBER	
C10.0	

CITY OF LONE TREE APPROVAL

CITY OF LONE TREE

DATE

THESE CONSTRUCTION PLANS HAVE BEEN REVIEWED BY THE CITY OF LONE TREE FOR GRADING, EROSION, AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

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GENERAL CONSTRUCTION NOTES

- ALL CONTRACTOR AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS. THE APPROPRIATE EDITION OF THE GOVERNING JURISDICTION DESIGN AND CONSTRUCTION STANDARDS, THE STORM WATER MANAGEMENT PLAN, AND ALL REQUIRED PERMITS ON SITE AT ALL TIMES.
- ALL (SANITARY SEWER, STORM SEWER, UNDERDRAIN, WATER LINE, OR STREET) CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE EDITION OF THE GOVERNING JURISDICTION STANDARDS AND SPECIFICATIONS.
- THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO VARIOUS FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES, AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.
- MERRICK & COMPANY IS NOT RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK. MERRICK WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL CALL THE NATIONWIDE UTILITY CONTACT NUMBER (811) OR LOCAL UTILITY LOCATE SERVICE, TO REQUEST LOCATES OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY LAND DISTURBING ACTIVITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES, INCLUDING DEPTH. UTILITY LOCATIONS ARE APPROXIMATE ONLY AND ARE NOT RELIABLE FOR CONSTRUCTION PURPOSES. THE UTILITIES SHOWN ON THE PLANS ARE FROM THE BEST AVAILABLE INFORMATION AND MAY NOT INCLUDE ALL UTILITIES THAT EXIST ON THE PROJECT SITE. THE CONTRACTOR SHALL PARTICIPATE IN THE RESOLUTION OF ANY CONFLICTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY SITE CONDITIONS, EXISTING TOPOGRAPHIC DATA, AND LOCATIONS OF ALL UTILITIES PRIOR TO INITIATING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES ON THE PROJECT SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE PROJECT PLANS, SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AND NO ADDITIONAL COST TO THE OWNER. NOTIFY ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND PRIOR TO INITIATING ANY WORK.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE WORK AND SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. A COPY OF ALL PERMITS SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT LISTED BELOW:
- THE CONTRACTOR IS RESPONSIBLE FOR SAFETY OF ALL PERSONNEL AND EQUIPMENT ON THE PROJECT SITE AT ALL TIMES, AND IS NOT LIMITED TO NORMAL WORKING HOURS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS.
- TRAFFIC CONTROL STANDARDS FOR THIS PROJECT SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. A TRAFFIC CONTROL PLAN APPROVED BY OWNER FOR ON-SITE ACTIVITY AND/OR THE LOCAL ENTITY EXERCISING JURISDICTION OVER PUBLIC RIGHTS OF WAY SHALL BE OBTAINED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THERE SHALL BE NO WORK PERFORMED ON WEEKENDS OR HOLIDAYS, UNLESS ACCEPTED AND APPROVED IN WRITING AND IN ADVANCE BY THE OWNER, ENGINEER, AND LOCAL JURISDICTION.
- ALL WASTE MATERIALS SHALL BE PROPERLY DISPOSED OF IN AN APPROVED LANDFILL PERMITTED TO ACCEPT THAT PARTICULAR TYPE OF WASTE.
- DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER OR HIS DESIGNATED REPRESENTATIVE MAY CAUSE THE WORK TO BE DEEMED UNACCEPTABLE.
- INSTALL INITIAL SEDIMENTATION AND EROSION CONTROL MEASURES PRIOR TO INITIATING ANY WORK ON THE PROJECT SITE. MAINTAIN ALL EROSION CONTROL MEASURES UNTIL FINAL STABILIZATION AND REVEGETATION IS APPROVED BY THE COUNTY AND/OR CITY.
- THE PROJECT PLANS AND SPECIFICATIONS ARE INTENDED TO PROVIDE THE COMPLETED PROJECT IN A COMPLETE AND OPERABLE CONDITION. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND PROVIDE ALL LABOR NECESSARY TO COMPLETE THE PROJECT IN A NEAT AND WORKMANLIKE MANNER, INCLUDING ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK, WITHOUT ADDITIONAL COST TO THE OWNER.
- NOTIFY INSPECTORS OF ALL WORK ACTIVITY AT LEAST 24 HOURS IN ADVANCE.
- ANY INSPECTION BY THE GOVERNING AGENCY OR THE ENGINEER, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE APPLICABLE CODES AND AGENCY REQUIREMENTS.
- ANY DISRUPTION IN UTILITIES SHALL BE COORDINATED AT LEAST 24 HOURS IN ADVANCE WITH THE UTILITY OWNER, PROJECT OWNER, EMERGENCY PROVIDERS, ALL IMPACTED LOCAL RESIDENTS, AND IMPACTED BUSINESS OWNERS. METHOD OF NOTIFICATION SHALL BE SUBJECT TO APPROVAL OF THE PROJECT OWNER AND AFFECTED UTILITY OWNER.
- MAINTAIN EMERGENCY VEHICLE ACCESS TO AND THROUGH THE PROJECT SITE AT ALL TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF EXISTING UTILITIES AND SURFACE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES TO THE SATISFACTION OF THE OWNER, PROPERTY OWNER, AFFECTED UTILITY, OR LOCAL JURISDICTION. ALL SURFACE AND UTILITY RESTORATION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SURFACE RESTORATION SHALL BE REPLACED WITH LIKE KIND, SIZE, AND TYPE OF IMPROVEMENT THAT EXISTED PRIOR TO INITIATING CONSTRUCTION.
- THE PROJECT PLANS AND SPECIFICATIONS AS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, FOR AND ON BEHALF OF MERRICK AND COMPANY, REPRESENT THE FINAL CONSTRUCTION DOCUMENTS FOR THIS PROJECT. THE USE OF ANY ELECTRONIC OR OTHER MEDIA PURPORTING TO REPRESENT THE FINAL CONSTRUCTION DOCUMENTS FOR THIS PROJECT SHALL NOT BE RELIED UPON AS FINAL CONSTRUCTION DOCUMENTS. SHOULD THERE BE A CONFLICT BETWEEN SEALED DRAWINGS AND ELECTRONIC OR OTHER MEDIA FILES, THE SEALED DRAWINGS SHALL GOVERN. EACH USER OF ANY ELECTRONIC OR OTHER MEDIA WAIVES AND RELEASES MERRICK FROM ALL ACTIONS, CLAIMS, DAMAGES, ACTIONS, OBLIGATIONS, AND LIABILITIES OF ANY KIND OR NATURE WITH RESPECT TO THE ELECTRONIC OR OTHER MEDIA FILES.
- NOTHING CONTAINED IN THE CONTRACT DOCUMENTS SHALL CREATE, NOR SHALL BE CONSTRUED TO CREATE, ANY CONTRACTUAL RELATIONSHIP BETWEEN THE ENGINEER AND THE CONTRACTOR OR ANY SUBCONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPTLY NOTIFYING THE ENGINEER OF ANY PROBLEMS OR POTENTIAL PROBLEMS IN CONFORMANCE TO THE DESIGN LINE AND GRADE FOR ANY ELEMENT OF THE CONSTRUCTION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPTLY NOTIFYING THE ENGINEER OF SITE CONDITIONS THAT DIFFER FROM THOSE SHOWN ON THE APPROVED PLANS.
- IN THE EVENT THE CONTRACTOR ALLOWS, AUTHORIZES, APPROVES OR CONSTRUCTS ITEMS THAT DIFFER FROM THE APPROVED PLAN, SPECIFICATIONS, OR OTHER CONTRACT DOCUMENTS, WITHOUT WRITTEN APPROVAL BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LIABILITY ARISING FROM SUCH CHANGES.

CITY OF LONE TREE GENERAL NOTES

- THE CITY OF LONE TREE ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE ENGINEERING DIVISION HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL CONFORMANCE WITH THE CITY OF LONE TREE SUBDIVISION RESOLUTION OR APPROVED VARIANCES TO THOSE REGULATIONS. THE CITY OF LONE TREE ENGINEER, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY, OTHER THAN STATED ABOVE, FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS. THE OWNER AND ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE IS AFFIXED TO THIS DOCUMENT.
- ALL ROADWAY CONSTRUCTION SHALL CONFORM TO CURRENT DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY OF LONE TREE ENGINEERING DIVISION. THE CITY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF LONE TREE PUBLIC WORKS, INSPECTION SECTION, (303) 662-8112, A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO STARTING CONSTRUCTION, AND/OR BEFORE RESTARTING CONSTRUCTION AFTER A SHUTDOWN OF MORE THAN TEN (10) DAYS.
- LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION, CONTACT: UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT (800) 922-1987 OR 811.
- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY (SIGNED BY BOTH DESIGN ENGINEER AND CITY OF LONE TREE) OF THE CONSTRUCTION PLANS AND GESC REPORT AND PLAN, AND ONE (1) COPY OF THE DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS AT THE JOB SITE AT ALL TIMES.
- ALL PROPOSED STREET CUTS TO EXISTING PAVEMENTS FOR UTILITIES, STORM SEWER, OR OTHER PURPOSES ARE LISTED AND REFERENCED BELOW:
- A ROW/CONSTRUCTION PERMIT MUST BE OBTAINED BEFORE ANY WORK WITHIN EXISTING OR PROPOSED PUBLIC ROW. THE PERMIT APPLICATION MUST BE SUBMITTED TO THE CITY OF LONE TREE ENGINEER FOR REVIEW/PROCESSING A MINIMUM OF SEVEN (7) DAYS PRIOR TO REQUESTED START FOR THE WORK IN THE ROW.
- A PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE SUBMITTED TO THE CITY OF LONE TREE ENGINEER FOR ACCEPTANCE WITH THE PERMIT APPLICATION. AN EXCAVATION OR PUBLIC IMPROVEMENTS CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN APPROVED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- THE CONSTRUCTION PLANS SHALL BE CONSIDERED VALID FOR TWO (2) YEARS FROM THE DATE OF CITY OF LONE TREE ACCEPTANCE/APPROVAL. IF APPLICABLE CONSTRUCTION PERMITS HAVE NOT BEEN OBTAINED, AND CONSTRUCTION STARTED WITHIN THAT TIME, THESE PLANS SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE CITY OF LONE TREE.
- CONTRACTOR SHALL NOTIFY THE CITY OF LONE TREE ENGINEER INSPECTOR WHEN WORKING OUTSIDE OF THE PUBLIC RIGHT-OF-WAY ON ANY FACILITY WHICH WILL BE CONVEYED TO THE CITY, MILE HIGH FLOOD DISTRICT, OR OTHER SPECIAL DISTRICT FOR MAINTENANCE (STORM SEWER, ENERGY DISSIPATORS, DETENTION OUTLET STRUCTURES, OR OTHER DRAINAGE INFRASTRUCTURES), FAILURE TO NOTIFY ENGINEERING INSPECTOR TO ALLOW THEM TO INSPECT THE CONSTRUCTION MAY RESULT IN NON-ACCEPTANCE OF THE FACILITIES/INFRASTRUCTURE BY CITY AND/OR MILE HIGH FLOOD DISTRICT.

EXISTING SUBSURFACE UTILITY NOTES

- THE EXISTING SUBSURFACE UTILITIES DEPICTED IN THESE PLANS ARE IN ACCORDANCE WITH THEIR ACHIEVED QUALITY LEVELS AS DEFINED BY THE AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD 38-02, "STANDARD GUIDELINE FOR COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
- THE SUBSURFACE UTILITY ENGINEERING NOTIFICATION AND INVESTIGATION WAS PERFORMED BETWEEN ~~---/---/---~~ AND ~~---/---/---~~. MERRICK WILL NOT BE HELD LIABLE FOR ANY CHANGES IN FIELD CONDITIONS BEYOND THE DATES IN WHICH THE SUBSURFACE UTILITY INVESTIGATION WAS COMPLETED.
- THE FOLLOWING UTILITIES WERE NOT INCLUDED AS PART OF THE SUBSURFACE UTILITY ENGINEERING INVESTIGATION: LANDSCAPE IRRIGATION SYSTEMS, UTILITY SERVICES TO RESIDENCES OR BUSINESSES, UNDERGROUND STORAGE TANKS, SEPTIC TANKS, WELLS, AND TRAFFIC DETECTION DEVICES.
- THE CONTRACTOR SHALL COMPLY WITH ARTICLE 1.5 OF TITLE 9, CRS ("EXCAVATION REQUIREMENTS") WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT PHONE NO. 811, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER. UTILITY SERVICE LATERALS SHALL ALSO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING. THE CONTRACTOR SHALL LOCATE NON-MEMBER UTILITIES, SUCH AS STORM SEWER AND DITCH FACILITIES, AS NECESSARY TO PREVENT DAMAGE THERETO.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LOCATIONS OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE PLANS AND TO ASCERTAIN WHETHER ANY OTHER STRUCTURES AND UTILITIES MAY EXIST. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. REPAIR OF DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



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Chick-fil-A
5200 Buffington Road
Atlanta, Georgia 30349-
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FOR AND ON BEHALF OF
MERRICK AND COMPANY

GRADING, EROSION, AND SEDIMENT CONTROL PLANS

CHICK-FIL-A
HWY 470 & YOSEMITE
NWC OF HWY 470 & YOSEMITE
LONE TREE, CO 80124
LOTS 4 AND 5, NINE MILE CORNER AMENDMENT NO. 1

FSR#05190
BUILDING TYPE / SIZE: P13 LS LRG (MOD)
RELEASE: 22.05

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	65121141
PRINTED FOR	REVIEW
DATE	08/18/23
DRAWN BY	KEA
SHEET	

GENERAL NOTES

SHEET NUMBER

C10.1

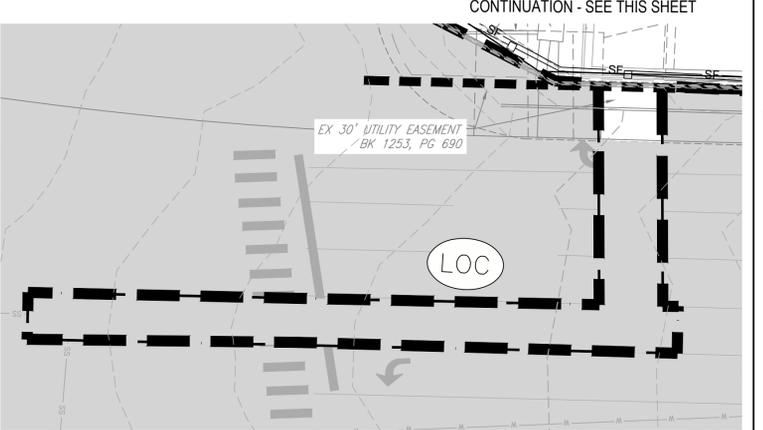
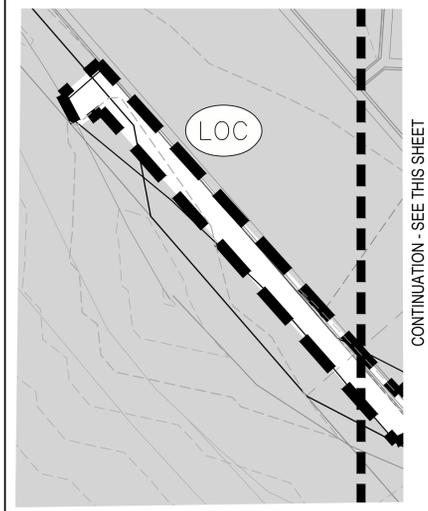
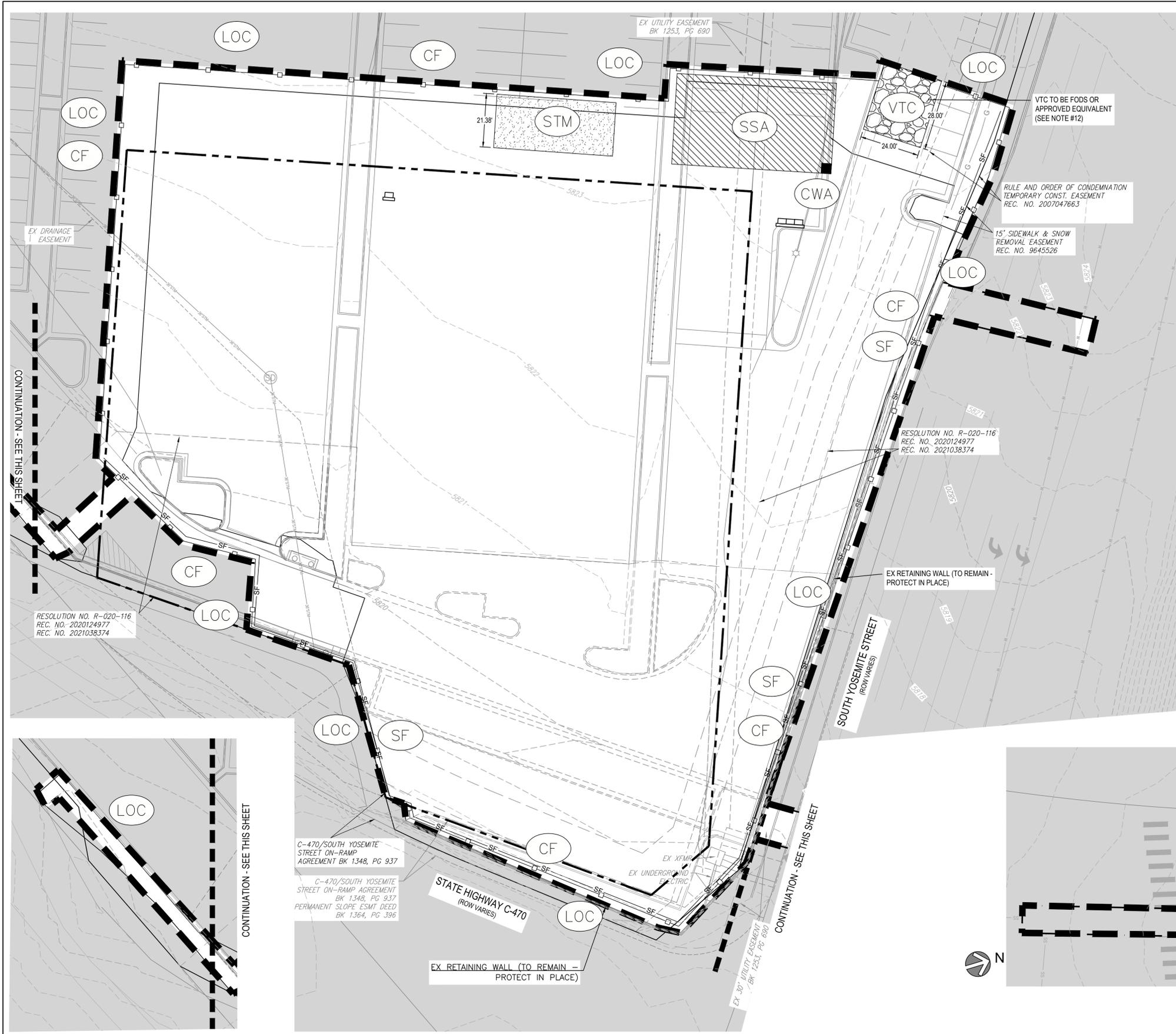
CITY OF LONE TREE APPROVAL	
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NOTES:

1. INTERIOR SILT FENCE SHOULD BE PLACED BY THE CONTRACTOR TO INTERMITTENTLY INTERCEPT GROUND FLOW. LOCATION TO BE BASED ON SITE CONDITIONS.
2. REFER TO EROSION CONTROL DETAILS (C9.0-C9.3)
3. OWNER/CONTRACTOR MUST OBTAIN THE CDPS GENERAL PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION.
4. THE CITY OF LOVELAND'S "STANDARD EROSION AND SEDIMENT CONTROL CONSTRUCTION PLAN NOTES, FEBRUARY 2005" TAKE PRECEDENCE OVER THE "GENERAL EROSION CONTROL NOTES" WHENEVER THERE IS A QUESTION OR CONFLICT IN THE NOTES.
5. THE OWNER/CONTRACTOR MUST ADHERE AND ABIDE TO THE RULES AND REGULATIONS IMPOSED BY THE CITY OF LOVELAND.
6. SLOPE PROTECTION SHOULD BE ADDED TO ALL AREAS OF SLOPES GREATER THAN 4:1. CONTRACTOR TO USE "TRACKED" VEHICLE, RUN PERPENDICULAR TO SLOPE TO INHIBIT RILL/GULLEY EROSION. CONTRACTOR MAY USE OTHER WINDROW-TYPE METHODS AS APPROVED BY ENGINEER. TYPICAL ALL SLOPES, REPEAT AS NECESSARY UNTIL LANDSCAPING IS INSTALLED.
7. ALL VEHICLE SPEEDS SHALL BE LIMITED TO A MAXIMUM OF 25 MILES PER HOUR.
8. ALL UNPAVED ROADWAYS AND DISTURBED SURFACE AREAS SHALL BE WATERED AS NEEDED TO PREVENT FUGITIVE DUST EMISSIONS.
9. ALL PORTABLE TOILETS SHALL BE PLACED ON A PERVIOUS SURFACE AND STAKED DOWN ON ALL FOUR SIDES.
10. ALL ADJACENT ROADWAYS AND PAVEMENT SHALL BE KEPT CLEAR OF DIRT AND DEBRIS AND SHALL BE CLEANED USING DRY METHODS ONLY IMMEDIATELY UPON TRACKING.
11. SEE COVER SHEET OF LONE TREE GESC STANDARD NOTES AND DETAILS (SHEET 1) FOR LEGEND OF BMP NAMES AND SYMBOLS.
12. CONTRACTOR TO INSTALL TYPICAL ENTRANCE LAYOUT (2X4) FODS TRACKOUT CONTROL SYSTEM FOR THE VEHICLE TRACKING CONTROL OR AN APPROVED EQUIVALENT.

TEMPORARY BMP LEGEND:

- SF SILT FENCE
- CF CONSTRUCTION FENCE
- DD DIVERSION DITCH
- RS ROCK SOCK
- CIP CURB INLET PROTECTION
- LOC LIMITS OF CONSTRUCTION
- SSA STABILIZED STAGING AREA
- VTC VEHICLE TRACKING CONTROL
- CWA CONCRETE WASHOUT AREA
- SB SEDIMENT BASIN
- DIP3 DROP INLET WATTLE FILTER
- SM SEEDING AND MULCHING
- STM STOCKPILE MANAGEMENT



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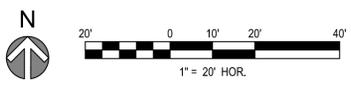
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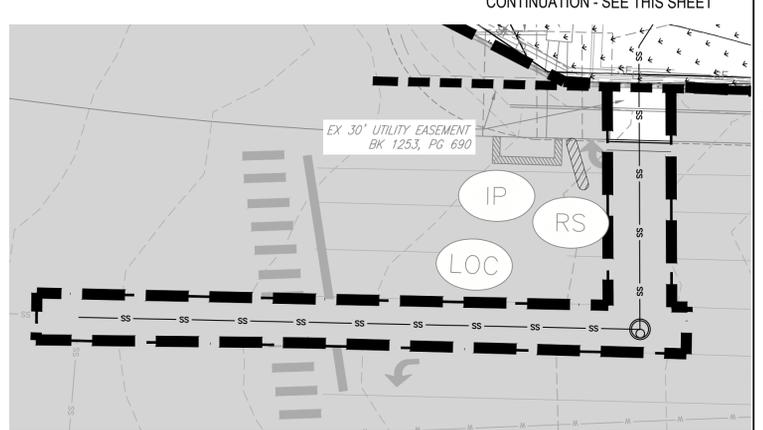
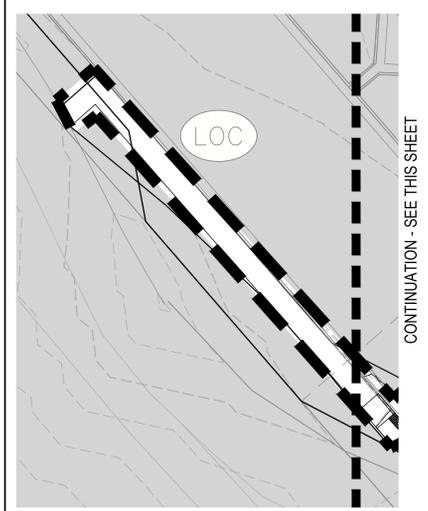
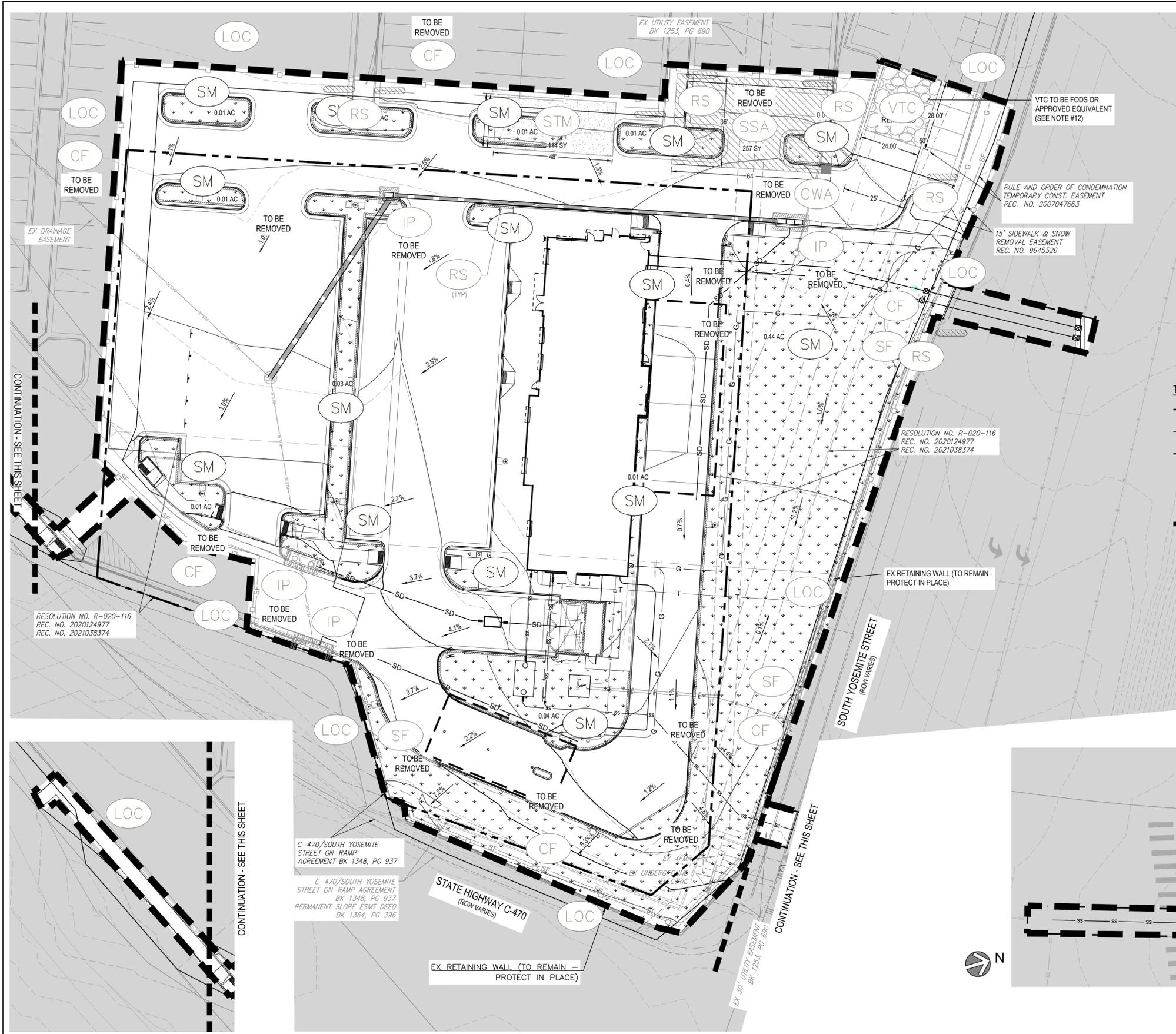
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CONSULTANT PROJECT # 65121141
 PRINTED FOR REVIEW
 DATE 08/18/23
 DRAWN BY KEA
 SHEET INITIAL GESC PLAN
 SHEET NUMBER
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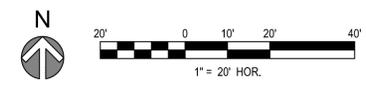


NOTES:

- INTERIOR SILT FENCE SHOULD BE PLACED BY THE CONTRACTOR TO INTERMITTENTLY INTERCEPT GROUND FLOW. LOCATION TO BE BASED ON SITE CONDITIONS.
- REFER TO EROSION CONTROL DETAILS (C9.0-C9.3)
- OWNER/CONTRACTOR MUST OBTAIN THE CDPS GENERAL PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION.
- THE CITY OF LOVELAND'S "STANDARD EROSION AND SEDIMENT CONTROL CONSTRUCTION PLAN NOTES, FEBRUARY 2005" TAKE PRECEDENCE OVER THE "GENERAL EROSION CONTROL NOTES" WHENEVER THERE IS A QUESTION OR CONFLICT IN THE NOTES.
- THE OWNER/CONTRACTOR MUST ADHERE AND ABIDE TO THE RULES AND REGULATIONS IMPOSED BY THE CITY OF LOVELAND.
- SLOPE PROTECTION SHOULD BE ADDED TO ALL AREAS OF SLOPES GREATER THAN 4:1. CONTRACTOR TO USE "TRACKED" VEHICLE, RUN PERPENDICULAR TO SLOPE TO INHIBIT RILL/GULLEY EROSION, CONTRACTOR MAY USE OTHER WINDROW-TYPE METHODS AS APPROVED BY ENGINEER. TYPICAL ALL SLOPES, REPEAT AS NECESSARY UNTIL LANDSCAPING IS INSTALLED.
- ALL VEHICLE SPEEDS SHALL BE LIMITED TO A MAXIMUM OF 25 MILES PER HOUR.
- ALL UNPAVED ROADWAYS AND DISTURBED SURFACE AREAS SHALL BE WATERED AS NEEDED TO PREVENT FUGITIVE DUST EMISSIONS.
- ALL PORTABLE TOILETS SHALL BE PLACED ON A PERVIOUS SURFACE AND STAKED DOWN ON ALL FOUR SIDES.
- ALL ADJACENT ROADWAYS AND PAVEMENT SHALL BE KEPT CLEAR OF DIRT AND DEBRIS AND SHALL BE CLEANED USING DRY METHODS ONLY IMMEDIATELY UPON TRACKING.
- SEE COVER SHEET OF LONE TREE GESC STANDARD NOTES AND DETAILS (SHEET 1) FOR LEFEND OF BMP NAMES AND SYMBOLS.
- SHADED BMPs WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL REVEGETATION ESTABLISHMENT IS APPROVED BY THE COUNTY.
- SEE CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, CULVERTS, STORM DRAINS AND OUTLET PROTECTION.

TEMPORARY BMP LEGEND:

- SF SILT FENCE
- CF CONSTRUCTION FENCE
- DD DIVERSION DITCH
- RS ROCK SOCK
- CIP CURB INLET PROTECTION
- LOC LIMITS OF CONSTRUCTION
- SSA STABILIZED STAGING AREA
- VTC VEHICLE TRACKING CONTROL
- CWA CONCRETE WASHOUT AREA
- SB SEDIMENT BASIN
- DIP3 DROP INLET WATTLE FILTER
- SM SEEDING AND MULCHING
- STM STOCKPILE MANAGEMENT



CITY OF LONE TREE APPROVAL	
CITY OF LONE TREE	DATE
THESE CONSTRUCTION PLANS HAVE BEEN REVIEWED BY THE CITY OF LONE TREE FOR GRADING, EROSION, AND SEDIMENT CONTROL IMPROVEMENTS ONLY.	
ENGINEERING DIVISION ACCEPTANCE BLOCK	

GRADING, EROSION, AND SEDIMENT CONTROL PLANS

CHICK-FIL-A
HWY 470 & YOSEMITE
NWC OF HWY 470 & YOSEMITE
LONE TREE, CO 80124
 LOTS 4 AND 5, NINE MILE CORNER AMENDMENT NO. 1

FSR#05190
 BUILDING TYPE / SIZE: P13 LRG (MOD)
 RELEASE: 22.05

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	65121141
PRINTED FOR	REVIEW
DATE	08/18/23
DRAWN BY	KEA
SHEET	FINAL GESC PLAN

SHEET NUMBER
C10.4



Chick-fil-A
 5200 Buffington Road
 Atlanta, Georgia 30349-2998



FOR AND ON BEHALF OF
 MERRICK AND COMPANY



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Sheet Revisions		MLP
6/30/05	ADOPTED FROM DOUGLAS COUNTY GESC PLANS	
5/ /08	EDIT UPDATES	GAW
11/ /08	ADD CURB SOCK DETAIL (REF UF0CD, V3 FIGURE C5-23), MISC. NOTE EDITS	GAW

NOTE: SCALES SHOWN ARE FOR 24"x36" SHEETS; ADJUST ACCORDINGLY FOR 11"x17" SHEETS.

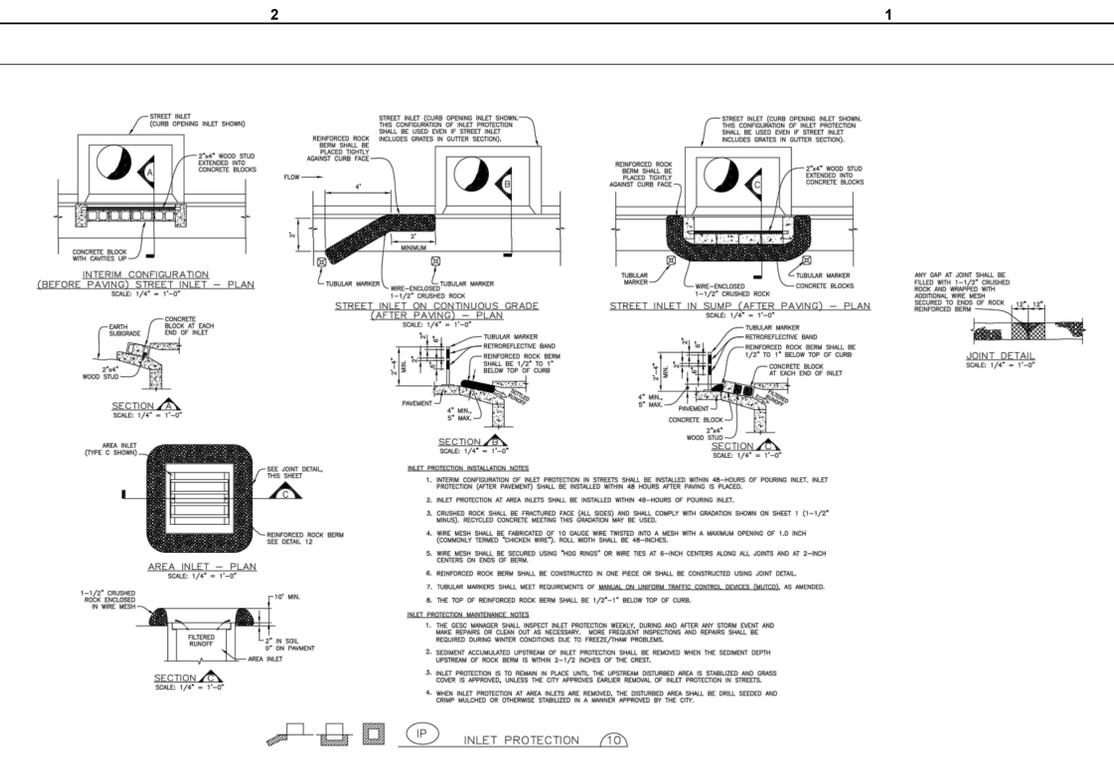
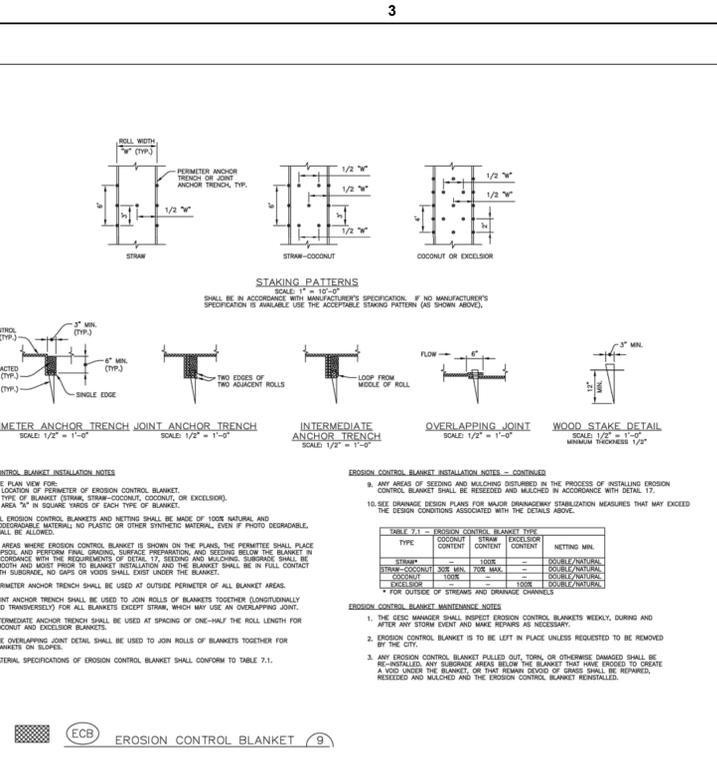
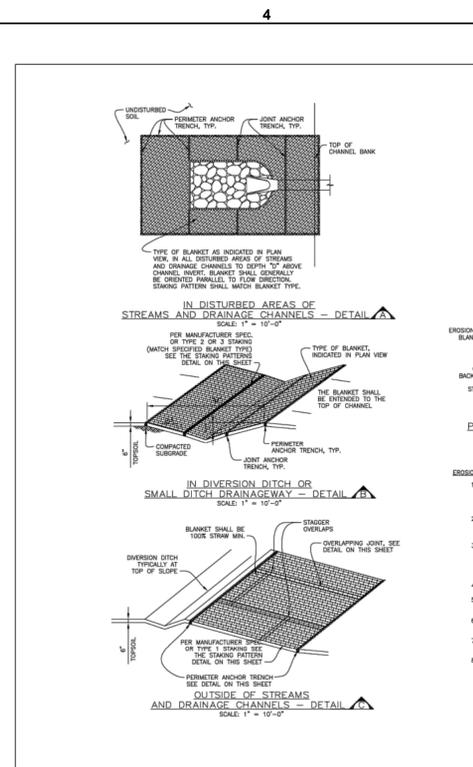
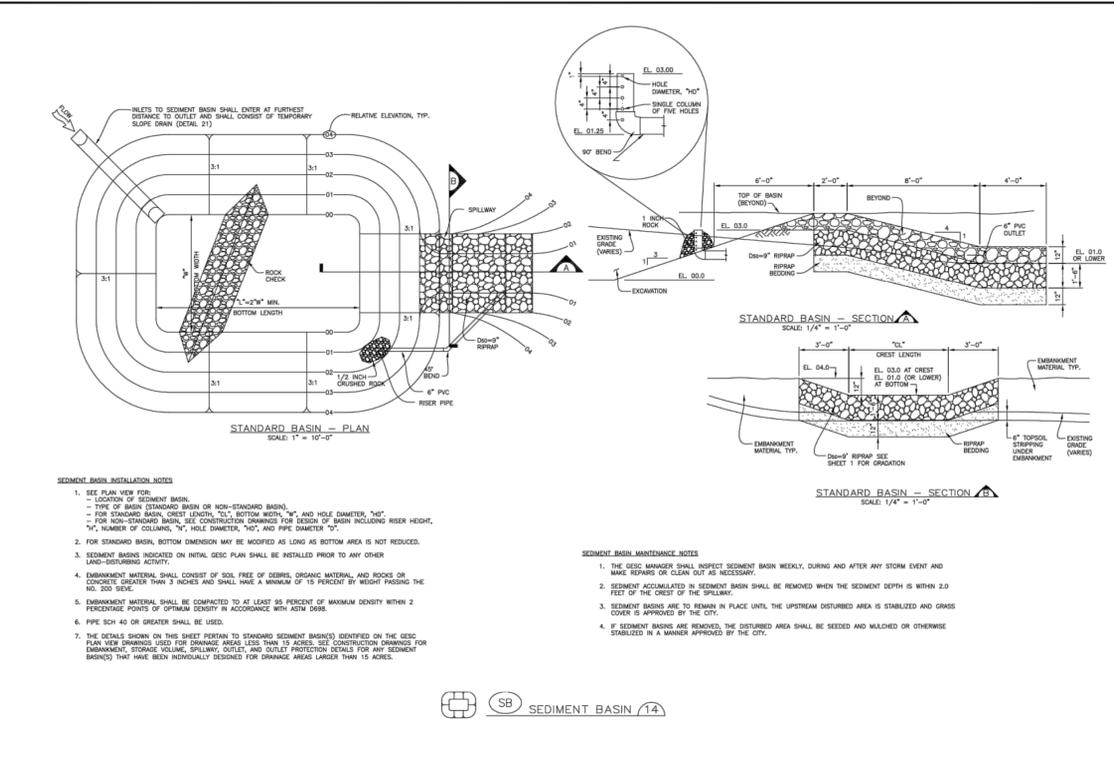
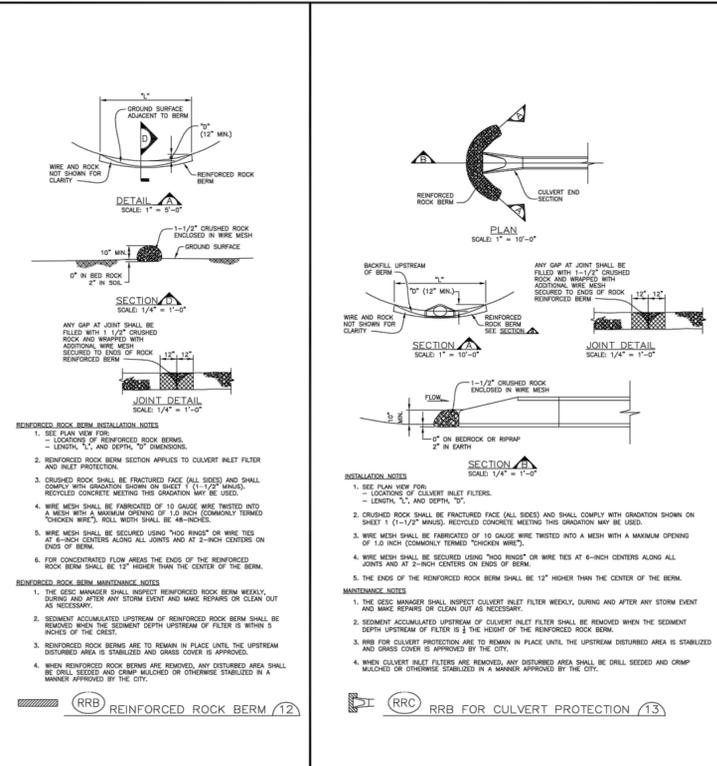
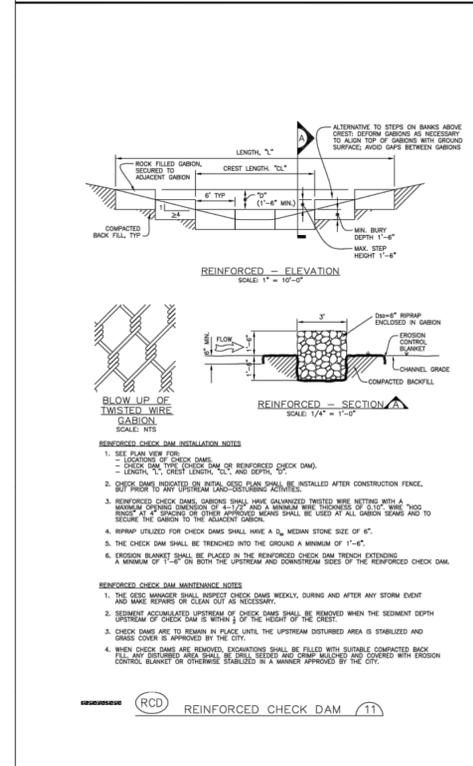


CITY OF LONE TREE
 DEPARTMENT OF PUBLIC WORKS
 Engineering Division

GESC GRADING, EROSION, AND SEDIMENT CONTROL

GESC PLAN STANDARD NOTES AND DETAILS

SHEET 2 OF 3



Chick-fil-A

Chick-fil-A
 5200 Buffington Road
 Atlanta, Georgia 30349-2998



MERRICK
 5970 GREENWOOD PLAZA BLVD
 GREENWOOD VILLAGE, CO 80111
 303-751-0741

FOR AND ON BEHALF OF
 MERRICK AND COMPANY

GRADING, EROSION, AND SEDIMENT CONTROL PLANS

CHICK-FIL-A
HWY 470 & YOSEMITE
 NWC OF HWY 470 & YOSEMITE
 LONE TREE, CO 80124
 LOTS 4 AND 5, NINE MILE CORNER AMENDMENT NO. 1

FSR#05190
 BUILDING TYPE / SIZE: P13 LS LRG (MOD)
 RELEASE: 22.05

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 65121141
 PRINTED FOR REVIEW
 DATE 08/18/23
 DRAWN BY KEA
 SHEET
GESC DETAIL 2
 SHEET NUMBER
C10.6



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5200 Buffington Road
Atlanta, Georgia 30349-2998

Chick-fil-A
5200 Buffington Road
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HWY 470 & YOSEMITE
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SHEET
GESC DETAIL 3

SHEET NUMBER
C10.7
08 OF 08

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. STAGING AREA MUST BE LOCATED AND SIZE OF STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- STABILIZED STAGING AREA SHALL BE STABILIZED WITH GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).
- IF REQUIRED BY THE CITY, SITE ACCESS ROADS SHALL BE STABILIZED WITH GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE) TO A MINIMUM OF 3" OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).
- THE STABILIZED STAGING AREA SHALL BE STABILIZED WITH GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

STABILIZED STAGING AREA MAINTENANCE NOTES

- THE GESC MANAGER SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF STABILIZED STAGING AREA SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 6" HIGHER THAN THE TOP OF THE STABILIZED STAGING AREA.
- SEDIMENT TRAPS SHALL BE MAINTAINED AND CLEANED AS NECESSARY.
- WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

STABILIZED STAGING AREA (19)

SEEDING AND MULCHING INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEEDING CONTROL LOG.
- SEEDING CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-OUTSTANDING ACTIVITIES.
- SEEDING CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELLOCEL, OR COCOPEAT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

SEEDING CONTROL LOG MAINTENANCE NOTES

- THE GESC MANAGER SHALL INSPECT SEEDING CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEEDING CONTROL LOG SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 6" HIGHER THAN THE TOP OF THE SEEDING CONTROL LOG.
- SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION, AT THE DISTURBED AREA EXISTING AT THE END OF CONSTRUCTION, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

SEEDING AND MULCHING (17)

CITY OF LONE TREE PERMANENT DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	#. IN MIX	POUNDS OF PLS PER ACRE
BIG BLUESTEM	KAW	PMAB	10	1.1
YELLOW INDOGRASS	CHEVENE	PMAB	10	1
SWITCHGRASS	BLACKWELL	PMAB	10	0.4
SEEDS OF GRAMA	WAUGH	PMAB	10	0.9
WESTERN WHEATGRASS	ARIBA	FNCS	10	1.6
BLUE GRAMA	HACHTA	PMAB	10	0.3
INDIANSPOKE WHEATGRASS	CRITANA	FNCS	10	1
PRAIRIE SANDPICK	GOSHEN	PMAB	10	0.7
GREEN NEEDLEGRASS	LOOMRA	FNCS	10	1
SLANDER WHEATGRASS	FRYOR	FNCS	5	0.6
STREPTAGRAM WHEATGRASS	SODAR	FNCS	5	0.6
TOTAL				9.2

CITY OF LONE TREE TEMPORARY DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	#. IN MIX	POUNDS OF PLS PER ACRE
SMOOTH BROMGRASS	LINCOLN	FNCS	30	3.9
INTERMEDIATE WHEATGRASS	OHNE	FNCS	30	4.5
PURSHOOT WHEATGRASS	LUNA	FNCS	30	4.2
ANNUAL REEDGRASS	N/A	ACB	10	1.6
TOTAL				13.4

CITY OF LONE TREE LOW-GROWTH DRILL SEEDING MIX

SPECIES	VARIETY	NOTES	#. IN MIX	POUNDS OF PLS PER ACRE
BUFFALOGRASS	TEXOMA	PMAB	30	3.2
BLUE GRAMA	HACHTA	PMAB	30	0.6
WESTERN WHEATGRASS	ARIBA	FNCS	30	3.2
SEEDS OF GRAMA	WAUGH	PMAB	30	1.6
INDIANSPOKE WHEATGRASS	CRITANA	FNCS	10	1
STREPTAGRAM WHEATGRASS	SODAR	FNCS	10	1.2
TOTAL				11.0

SEEDING AND MULCHING MAINTENANCE NOTES

- SEEDS AND MULCH ARE TO BE APPLIED TO THE DISTURBED AREA AS SPECIFIED IN THE GESC PLAN.
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SEEDING AND MULCHING (17)

SEEDING AND MULCHING MAINTENANCE NOTES

- SEEDS AND MULCH ARE TO BE APPLIED TO THE DISTURBED AREA AS SPECIFIED IN THE GESC PLAN.
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SEEDING AND MULCHING (17)

SEDIMENT TRAP INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
- SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-OUTSTANDING ACTIVITIES.
- SEDIMENT TRAP BEAM SHALL BE CONSTRUCTED FROM MATERIAL FROM THE SAME SOURCE AS THE TRAP.
- SEDIMENT TRAP SHALL BE CONSTRUCTED TO A MINIMUM OF 6" HIGHER THAN THE TOP OF THE TRAP OUTLET STRUCTURE.
- THE TOP OF THE TRAP BEAM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE TRAP OUTLET STRUCTURE.
- THE END OF THE TRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

- THE GESC MANAGER SHALL INSPECT SEDIMENT TRAPS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 6" HIGHER THAN THE TOP OF THE SEDIMENT TRAP.
- SEDIMENT TRAPS SHALL BE MAINTAINED AND CLEANED AS NECESSARY.
- WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

SEDIMENT TRAP (18)

SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-OUTSTANDING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELLOCEL, OR COCOPEAT FIBER.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- THE GESC MANAGER SHALL INSPECT SEDIMENT CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 6" HIGHER THAN THE TOP OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION, AT THE DISTURBED AREA EXISTING AT THE END OF CONSTRUCTION, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.

SEDIMENT CONTROL LOG (15)

VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES

- VEHICLE TRACKING CONTROL WITH WHEEL WASH SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
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VEHICLE TRACKING CONTROL WITH WHEEL WASH (25)

VEHICLE TRACKING CONTROL INSTALLATION NOTES

- VEHICLE TRACKING CONTROL SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
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VEHICLE TRACKING CONTROL (24)

CURB SOCK INSTALLATION NOTES

- SOCKS WILL BE USED UPSTREAM OF INLET PERPENDICULAR TO AND FLUSH WITH CURB.
- NO LESS THAN TWO 10" DIAMETER SOCKS MUST BE USED IN SEQUENCE, SPACED NO MORE THAN 5 FEET APART.
- NO LESS THAN 8 SOCKS SHALL BE USED IF THE 4" SOCK IS USED, ALSO SPACED NO MORE THAN 5 FEET APART.
- SOCKS SHALL BE INSTALLED PERPENDICULAR, OPPOSITE THE DIRECTION OF FLOW (SEE DETAIL B).

CURB SOCK (26)

TEMPORARY STREAM CROSSING INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF TEMPORARY STREAM CROSSING.
- TEMPORARY STREAM CROSSING DIMENSIONS, DIAL, AND NUMBER OF CULVERTS INDICATED FOR CULVERT CROSSING SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY CHANGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOOD OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SEE SHEET 1 FOR RIPRAP AND 1-1/2" CRUSHED ROCK DIMENSIONS.
- FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOGS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

TEMPORARY STREAM CROSSING (22)

SLOPE DRAIN INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SLOPE DRAIN.
- PIPE DIAMETER, "D", AND RIPRAP SIZE, "D", SHALL BE AS SPECIFIED IN THE GESC PLAN.
- FOR CULVERT CROSSING: LENGTH, OVER LENGTH, "L", CROSSING HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "D", AND NUMBER, TYPE AND CLASS OF GULVERTS.
- TEMPORARY STREAM CROSSING DIMENSIONS, DIAL, AND NUMBER OF CULVERTS INDICATED FOR CULVERT CROSSING SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY CHANGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOOD OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SEE SHEET 1 FOR RIPRAP AND 1-1/2" CRUSHED ROCK DIMENSIONS.
- FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOGS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

SLOPE DRAIN (21)

SURFACE ROUGHENING INSTALLATION NOTES

- SURFACE ROUGHENING SHALL BE PROVIDED ON ALL FINISHED GRADES (SLOPES AND FLATS) WITHIN 3 DAYS OF COMPLETION OF FINISH GRADE FOR AREAS NOT RECEIVING TOPSOIL OR WITHIN 2 DAYS OF TOPSOIL PLACEMENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOIL IS TO BE PLACED WITHIN 7-DAYS OF FINISH GRADE DO NOT NEED SURFACE ROUGHENING.
- DISTURBED SURFACES SHALL BE REROUGHENED USING RIPRAP OR TILING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN SLOPE USING EQUIPMENT TRACKS.
- VEHICLES AND EQUIPMENT SHALL GENERALLY BE CONFINED TO ACCESS RIMES AND SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISH AREAS, SEEDING AND MULCHING SHALL BE APPLIED TO THE DISTURBED AREA AS SPECIFIED IN THE GESC PLAN.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND WIDTH OVER ANY RILL EROSION.

SURFACE ROUGHENING (20)

Sheet Revisions

DATE	DESCRIPTION	BY	APP.
6/30/05	ADOPTED FROM DOUGLAS COUNTY GESC PLANS	MLP	
5/ /08	EDIT UPDATES	GAW	
11/ /08	ADD CURB SOCK DETAIL (REF. UDFCD, V3 FIGURE C5-23), MISC. NOTE EDITS	GAW	
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CITY OF LONE TREE
DEPARTMENT OF PUBLIC WORKS
Engineering Division

GESC GRADING, EROSION, AND SEDIMENT CONTROL

GESC PLAN STANDARD NOTES AND DETAILS

SHEET 3 OF 3



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