



**MEETING OF THE BOARD OF COUNTY COMMISSIONERS
BOULDER COUNTY
AGENDA**

Tuesday, April 1, 2025, 9:30 a.m.

Tuesday, April 1, 2025, 1:00 p.m.

Third Floor Hearing Room

County Court House

1325 Pearl Street, Boulder

This agenda is subject to change. Please call ahead to confirm an item of interest (303-441-3500). In-person meetings are held in the Third Floor Hearing Room, County Courthouse, 1325 Pearl Street, Boulder. Public comments are taken at meetings designated as Public Hearings. Meetings and hearings on this agenda are open to the public.

Boulder County wants to ensure that everyone has equal access to our programs, activities, and services. To request an Americans with Disability Act (ADA) accommodation, please email ADA@bouldercounty.gov, or call 303-441-1386. Submit your request as early as possible, and no later than two business days before the event.

To view a two-week forecast agenda of the commissioners' schedule, visit the Commissioners' [Advance Agenda](#).

All Commissioners' public hearings and meetings will be offered in a hybrid format where attendees can join through Zoom or in-person at the Boulder County Courthouse, 3rd Floor, 1325 Pearl Street, Boulder. The commissioners retain the right to switch all hearings and meetings to in-person only instead of hybrid if technical difficulties arise. To sign up for in-person public comment, please use the link in this agenda for each respective hearing. There will also be a kiosk located in the lobby of the 3rd Floor to sign up for in-person public comment. For questions regarding in-person hearings call 303-441-3500.

Pages

1. **Call to Order**
2. **9:30 a.m. Business Meeting**
 - **Virtual Attendee Link for Commissioners' April 1 Morning Session**
 - **Call-in information: 1-833-568-8864, Webinar ID: 161 676 1869**
 - **Registration Required**

- In-Person Comment Registration for Commissioners' April 1 Morning Session

3. Commissioners' Consent Items

3.a Clerk & Recorder's Office - RFP-131-25 Elections Ballot Print Vendor Award Recommendation (\$391,920)

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The evaluation committee recommends awarding RFP-131-25, Elections Ballot Print Vendor, to Runbeck Election Services, LLC, based on the evaluation criteria presented in the RFP.

- **Staff Contact(s):**
 - William Wayne, Clerk & Recorder's Office
 - Kelsey Coghlan, Office of Financial Management

3.b Human Resources - First Quarter FTE Requests

The Office of Financial Management (OFM) has verified the funding, and Human Resources (HR) has approved the classifications for several new full-time equivalent (FTE) positions. Under the General Fund (101), the County Attorney's Office requires two new positions to manage the increased workload resulting from the recognition of the Boulder County Employees Union. These positions include one FTE Labor Relations Administrator and one FTE Assistant County Attorney II. Additionally, under the Dedicated Resources Fund (117), the Parks and Open Space Department plans to use savings from existing grant funding to create two new term positions aimed at enhancing planning efforts and preparing more projects for implementation. These positions include two FTE Term Forestry Resource Technicians, with a term ending on June 25, 2026. The funding for all of these positions was discussed during the public hearing on March 27, 2025, and will be formally approved at the same business meeting through Resolution 2025-016.

- **Staff Contact(s):** B.J. Lambden, Human Resources

3.c Office of Financial Management - Resolution 2025-016

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Resolution 2025-016 appropriating additional sums of money for the calendar year 2025.

- **Staff Contact(s):** Emily Beam, Office of Financial Management

3.d Office of Sustainability, Climate Action & Resilience - Climate Equity Fund (\$341,160)

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The Evaluation Committee recommends awarding RFP-103-24, Climate Equity Fund, to JSI Research & Training Inc. JSI scored the highest in the sum of the evaluation criteria with an emphasis on Fiscal Responsibility. The pool of applicants was extremely competitive, with many very impressive proposals and teams. JSI provided ample evidence of experience and competencies in the categories we established for scoring, including: Community Knowledge and Relationships, Equity and Justice Lens, Experience with climate Action and Resilience, Fiscal Responsibility and the Overall Interview. JSI's proposal

aligned with our vision and provided the various elements of the project a plan with clarity, structure, and capacity.

- **Staff Contact(s):** Brett Fleishman, Office of Sustainability, Climate, Action & Resilience; Brandon Mitchell, Office of Financial Management

3.e Parks & Open Space - Bearberry Acquisition - (\$1,650,000) 15

On March 11, 2025, the Board of County Commissioners approved the acquisition of an open space property at 6201 Coal Creek Canyon Drive, 0 Coal Creek Canyon Drive, and 5614 Highway 72. This Purchase Agreement needs to be signed to complete the transaction.

- **Staff Contact(s):** Aaron Clark, Parks & Open Space

4. Commissioners' Discussion Items

4.a Community Planning & Permitting – Commissioner’s Call-Up of SPR-24-0070 Ritzer Additions 30

Staff request that the Board of County Commissioners determine whether or not a public hearing shall be held for SPR-24-0070 Ritzer Additions.

- **Action Requested:** Decision
- **Staff Contact(s):** Pete L'Orange, Community Planning & Permitting

4.b Sheriff's Office - Ratification of Commissioner Signature for Scope of Work with Motorola Solutions Public Safety Communications Products in the amount of \$2,837,788.32. 93

The Boulder County Sheriff's Office is requesting ratification of the Commissioner signature for the Scope of Work entered into by Boulder County and Motorola Solutions under the NASPO ValuePoint Public Safety Communications, Products, Services, and Solutions Administered by the State of Washington with Motorola Solutions, Master Agreement #00318 and the State of Colorado's Participating Addendum - Contract #173765. The Scope of Work was signed on March 27, 2025, in the amount of \$2,837,788.32.

Pages and portions of this contract are not being published at this time as they may contain protected trade secret information. Members of the public may request a more complete version of this contract through the Boulder County Open Records Center

- **Action Requested:** Ratification
- **Staff Contact(s):** Carey Weinheimer, Sheriff's Office; Brian Zierlein, Sheriff's Office

5. Authorization for Executive Session

Authorization for the Board of County Commissioners to go into Executive Session for Legal Advice on Wednesday, April 2nd, 2025, at 1:00 p.m. with Ben Pearlman, County

Attorney.

- **Action Requested:** Decision

6. **Scheduling & Communications**

6.a **[Canceled] Commissioners' Office - Cancellation Notice of Public Hearing for Docket SPR-25-0004 on April 3, 2025**

The Board of County Commissioners Public Hearing for Docket SPR-25-0004: Erickson Residence Appeal that was scheduled for Thursday, April 3, 2025, at 9:00 a.m. has been canceled. The applicants have chosen to withdraw their appeal request, so this hearing is no longer necessary.

- **Action Requested:** Note for the Record
- **Presenter(s):** Matthew Ramos, Clerk to the Board

6.b **[Tabled] Commissioners' Office - Tabling Notice of Public Hearing for Docket SE-23-0009 on April 3, 2025**

The Board of County Commissioners Public Hearing for Docket SE-23-0009: Walker Lot Recognition scheduled for Thursday, April 3 at 1:30 p.m. has been tabled to a date uncertain.

- **Action Requested:** Note for the Record
- **Presenter(s):** Matthew Ramos, Clerk to the Board

7. **Public Hearing - Orris/Big Lake LLC Residence & Driveway**

7.a **Community Planning & Permitting Docket LU-23-0019/SPR-23-0036: Orris/Big Lake LLC Residence & Driveway**

Limited Impact Special Use Review to permit 4,023 cubic yards of non-foundational earthwork for the development of a driveway, and Site Plan Review for the construction of a new 2,990-square-foot residence with 220 square feet of covered porch area on an approximately 37.7-acre parcel with a presumptive size maximum of 2,500 square feet. The application submitted by Stapp Lakes LLC & Big Lakes LLC c/o Christine B. Orris (applicant/property owner) and is in the Forestry (F) zoning district at 3310 County Road 96J, approximately 4.0 miles from Peak-to-Peak Highway in Section 22, Township 2N, Range 73W.

Public testimony will be taken.

- **Action Requested:** Decision
- **Presenter(s):** Summer Frederick, Community Planning & Permitting (In Person); Ian Brighton, Community Planning & Permitting; Christine Orris, Applicant/Owner; Sam Nishek, Agent; Heather Houston

8. **1:00 PM Public Hearings**

- **Virtual Attendee Link for Commissioners' April 1 Afternoon Session**

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- **Call-in information:** 1-833-568-8864, Webinar ID: 160 352 7307
- **Registration Required**
- **In-Person Comment Registration for Commissioners' April 1 Afternoon Session**

8.a **Community Planning & Permitting Docket LU-25-0002: Stone Earthwork and Grading**

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Limited Impact Special Review for approximately 2,100 cubic yards of non-foundational earthwork on a 1.34-acre parcel. The application is submitted by Robert & Diana Stone (owners/applicants) and Stewart Architecture, c/o Peter Stewart. The subject property is in the Estate Residential (ER) zoning district at 650 Longs Peak Drive, a 1.34-acre parcel located approximately 300 feet west of the intersection of Longs Peak Drive and Paragon Drive, in Section 12, Township 1S, Range 70W.

Public testimony will be taken.

- **Action Requested:** Decision
- **Presenter(s):** Pete L'Orange, Community Planning & Permitting (In Person); Peter Stewart, Agent (In Person); Diana Stone, Owner/Applicant (In Person)

8.b **Community Planning & Permitting Docket LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU**

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Limited Impact Special Review for an Equestrian Center with more than 25,000 square feet of floor area, an Agricultural Worker Accessory Dwelling Unit, and non-foundational earthwork exceeding 500 cubic yards, and Site Plan Review for a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet at 8130 N 73rd Street. The application is submitted by Starlings CO, LLC (applicant/owner) and Johnson & Repucci LLP, c/o Stephen Larson and ShelterBelt Design, c/o Paige Shavey (agents). The subject property is in the Agricultural (A) zoning district at 8130 N. 73rd Street, a 68-acre parcel located approximately .75-mile north of the intersection of N. 73rd Street and Nimbus Road, in Section 24, Township 2N, Range 70W.

Public testimony will be taken.

- **Action Requested:** Decision
- **Presenter(s):** Pete L'Orange, Community Planning & Permitting (In Person); Cody Harrison; Carrie Harrison; Scott Peppet; Kellie Zell; Nicole Delmage; Paige Schavey; Steve Larson; Francisco (Pancho) Zambrano



Boulder County Procurement

Downtown Courthouse • 1325 Pearl Street • Boulder, Colorado 80302 • 303.441.3525
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

RFP ANALYSIS AND RECOMMENDATION

Requesting Department: **Clerk & Recorder's Office**

RFP Title: **Elections Ballot Print Vendor**

RFP No.: 131-25

RFP Opening Date: March 25, 2025

No. of Vendors Contacted: 786

No. of Minority Owned, Women Owned, Disadvantaged, Veteran Owned Vendors Contacted: 279

This RFP has been posted in accordance with County Policy.

Evaluated by:

Stephanie Gnoza, Elections Director, Clerk & Recorder's Office
 Molly Halsey, Ballot Processing Manager, Clerk & Recorder's Office
 Kayla Gehring, Elections Specialist, Voting Systems, Clerk & Recorder's Office
 Diane Malone, Project Manager, Clerk & Recorder's Office

Bid Responses:

Fort Orange Press, Inc., 11 Sand Creek Rd Albany, NY 12205
KNOWiNK, LLC, 460 N Lindbergh Blvd, St Louis, MO 63141
KP, LLC, 3700 Seaport Blvd W, Sacramento CA 98691
Prodocument Solutions, dba, ProVote, 90 W Poplar Ave, Porterville, CA 93257
Runbeck Election Services, LLC, 2800 S 36th St, Phoenix, AZ 85034
SeaChange Printing & Marketing Services, LLC, 14505 27th Ave N Plymouth, MN 55447
Taylor Print & Visual Impressions, Inc., dba, Taylor Print Impressions, 1725 Roe Crest Dr, North Mankato, MN 56003

RESOLUTION # 2025-016

A RESOLUTION APPROPRIATING ADDITIONAL SUMS OF MONEY TO DEFRAY EXPENSES IN EXCESS OF AMOUNTS BUDGETED FOR THE COUNTY OF BOULDER, FOR THE CALENDAR YEAR 2025.

WHEREAS, certain operating expenditures for 2025 for Boulder County have exceeded those anticipated at the time of adoption of the 2025 budget, and

WHEREAS, there have been revenues received or otherwise made available in 2025, which were not anticipated or were not assured at the time of adoption of the 2025 budget, and

WHEREAS, a public hearing was held on March 27, 2025, before the Boulder County Board of Commissioners, Boulder County, Colorado to accept public comment, and

WHEREAS, the need exists to appropriate additional expenditures for use by various county funds and spending agencies, as follows:

General Fund	Amount
Assessor	\$152,000
General Administration	\$1,074,431
County Attorney	\$325,000
District Attorney	\$438,100
Housing	\$152,045
Total General Fund	\$2,141,576

Road and Bridge Fund	Amount
Road and Bridge Projects	\$1,965,807
Total Road and Bridge Fund	\$1,965,807

Dedicated Resources Fund	Amount
National Opioid Settlement	\$108,415
Grants and Special Projects	(\$338,380)
Road and Bridge Projects	\$516,000
Total Dedicated Resources Fund	\$286,035

Offender Management Fund	Amount
OMC Jail Improvement Operations	\$1,773,612
Total Offender Management Fund	\$1,773,612

Worthy Cause Fund	Amount
Worthy Cause Sales & Use Tax 2	\$885,000
Total Worthy Cause Fund	\$885,000

Sustainability Sales Tax Fund	Amount
Sustainability Sales Tax	(\$516,000)
Total Sustainability Sales Tax Fund	(\$516,000)

Wildfire Mitigation Sales Tax Fund	Amount
Wildfire Mitigation Sales & Use Tax	\$200,195
Total Wildfire Mitigation Sales Tax Fund	\$200,195

Emergency Services Sales Tax Fund	Amount
Emergency Services Sales & Use Tax	\$47,847
Total Emergency Services Sales Tax Fund	\$47,847

Affordable and Attainable Housing Sales Tax Fund	Amount
Affordable & Attainable Housing Sales & Use Tax	(\$152,045)
Total Affordable and Attainable Housing Sales Tax Fund	(\$152,045)

Total Boulder County \$6,632,027

AND, WHEREAS, Funds available to appropriate for the above purposes include:

General Fund	Amount
Carryforward	\$858,431
Fund Balance	\$1,283,145
Total General Fund	\$2,141,576

Road and Bridge Fund	Amount
Carryforward	\$1,965,807
Total Road and Bridge Fund	\$1,965,807

Dedicated Resources Fund	Amount
Fund Balance	(\$394,525)
Transfer	\$516,000
Unanticipated Revenue	\$164,560
Total Dedicated Resources Fund	\$286,035

Offender Management Fund	Amount
Fund Balance	\$1,773,612
Total Offender Management Fund	\$1,773,612

Worthy Cause Fund	Amount
Carryforward	\$885,000
Total Worthy Cause Fund	\$885,000

Sustainability Tax Fund	Amount
Fund Balance	(\$516,000)
Total Sustainability Sales Tax Fund	(\$516,000)

Wildlife Mitigation Sales Tax Fund	Amount
Carryforward	\$200,195
Total Wildfire Mitigation Sales Tax Fund	\$200,195

Emergency Services Sales Tax Fund	Amount
Carryforward	\$47,847
Total Emergency Services Sales Tax Fund	\$47,847

Affordable and Attainable Housing Sales Tax Fund	Amount
Fund Balance	(\$152,045)
Total Affordable and Attainable Housing Sales Tax Fund	(\$152,045)

Total Boulder County \$6,632,027

AND, WHEREAS, appropriate public notice of this action has been made as required by section C.R.S. 29-1-106.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Boulder County, Colorado, for the purposes detailed above:

THAT, the 2025 appropriations for Boulder County’s General Fund are hereby increased from \$270,293,399 to \$272,434,975.

THAT, the 2025 appropriations for Boulder County’s Road and Bridge Fund are hereby increased from \$23,157,764 to \$25,123,571.

THAT, the 2025 appropriations for Boulder County’s Dedicated Resources Fund are hereby increased from \$79,264,286 to \$79,550,321.

THAT, the 2025 appropriations for Boulder County’s Offender Management Fund are hereby increased from \$19,119,056 to \$20,892,668.

THAT, the 2025 appropriation for Boulder County’s Worthy Cause Fund is hereby increased from \$4,580,714 to \$5,465,714.

THAT, the 2025 appropriation for Boulder County’s Sustainability Sales Tax Fund is hereby decreased from \$19,067,959 to \$18,551,959.

THAT, the 2025 appropriation for Boulder County’s Wildfire Mitigation Sales Tax Fund is hereby increased from \$12,713,357 to \$12,913,552.

THAT, the 2025 appropriation for Boulder County’s Emergency Services Sales Tax Fund is hereby increased from \$11,953,397 to \$12,001,244:

THAT, the 2025 appropriation for Boulder County’s Affordable and Attainable Housing Sales Tax Fund is hereby decreased from \$15,985,682 to \$15,833,637.

ADOPTED this 1st day of April 2025:

BOARD OF COUNTY COMMISSIONERS

2025 Chair

2025 Vice-Chair

Commissioner

ATTEST:

Clerk to the Board



Boulder County Procurement

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Runbeck Election Services, LLC, 2800 S 36th St, Phoenix, AZ 85034
SeaChange Printing & Marketing Services, LLC, 14505 27th Ave N Plymouth, MN 55447
Taylor Print & Visual Impressions, Inc., dba, Taylor Print Impressions, 1725 Roe Crest Dr, North Mankato, MN 56003

PURCHASE AGREEMENT

THIS AGREEMENT (“Agreement”) is made and entered into this ____ day of _____, 2025, by and between the **COUNTY OF BOULDER**, a body corporate and politic (“County”) and **Florian Freymuth** (“Seller”), (collectively, the “Parties”).

RECITALS

County desires to purchase from Seller and Seller desires to sell to County that certain real property within the Counties of Boulder and Gilpin, State of Colorado, consisting of approximately 80 acres, and which is legally described on Exhibit A, attached hereto and incorporated herein by this reference (the “Property”).

AGREEMENT

NOW, THEREFORE, in consideration of the above recitals and the promises, payments, covenants, and undertakings hereinafter set forth, and other good and valuable consideration, which is hereby acknowledged and received for, County and Seller agree as follows:

PURCHASE PROVISIONS

1. Seller hereby agrees to sell and County hereby agrees to purchase the Property. Seller must provide a copy of any available engineering and/or survey work of the Property to County.

1.1. Septic Systems. County acknowledges Seller’s representation that the septic system associated with the residence in Boulder County is not permitted. Seller has no obligation to provide County with inspection reports, repair cost estimates, or repairs.

1.2. Survey. County may at its sole expense contract for an ALTA engineering survey of the Property sufficient to satisfy the requirements of the Title Company to delete the standard pre-printed exceptions from the County’s title policy, as set forth in Paragraph 6 below. The survey shall be certified to Seller, County, and the Title Company and shall include a certificate of acreage of the Property. The survey must be acceptable to County, in County’s sole discretion. Closing may be postponed for as long as is reasonably necessary for County to receive and approve the survey identified in this paragraph.

1.3. Home Inspection. At least 30 days before the closing date set forth in Paragraph 7 below, Seller will obtain a home inspection on the County’s behalf, with the County listed as the client and a written report provided to County and Seller. Seller and

County shall mutually agree upon the service provider for the inspection. County shall pay the cost of the home inspection at closing.

2. The purchase price for the Property is ONE MILLION SIX HUNDRED FIFTY THOUSAND DOLLARS (\$1,650,000.00), payable in good funds at closing. The Earnest Money will be applied to the purchase price for the Property. Additionally, Seller agrees to convey to County, at no extra cost, any quitclaim deeds requested by County to ensure that County receives title to the Property as historically described or to ensure that County receives Seller's right, title, and interest to any additional property adjacent to the Property for which Seller may have a claim by adverse possession or disputed boundary.

3. The purchase price for the Property must include all surface and subsurface water and water rights, ditches and ditch rights, ponds and pond rights, springs and spring rights, wells and well rights, whether decreed or not, if any, attached or appurtenant to or used in connection with the Property and owned by Seller. The purchase price will also include any and all minerals appurtenant to the Property. The purchase of the Property must also include any existing access to the Property to which Seller has title or in which Seller has an interest. If requested by County, Seller will convey to County access to the Property over any additional land owned by Seller.

4. Within twenty-one (21) calendar days after the execution of this Agreement by the Board of County Commissioners of Boulder County, Seller must furnish to County a title insurance commitment on all of the Property, to insure County's ownership of a fee simple interest in the Property, in the amount of the purchase price. The title commitment will include copies of all exception documents identified in the commitment. The title insurance commitment must be in a form acceptable to County, and issued by a title insurance company acceptable to County, which maintains an office in Boulder County, and is authorized to do business in the State of Colorado ("Title Company"). Seller will be solely responsible for the cost of said title commitment and an owner's policy of title insurance issued pursuant to the commitment.

5. Title to the Property must be merchantable in Seller, and the title commitment must contain no exceptions other than:

5.1. taxes and assessments for the current year, which will be adjusted and prorated to the date of delivery of the deed; and

5.2. rights-of-way, easements, restrictions, covenants, and mineral reservations, which are acceptable to County.

Seller must execute an affidavit concerning mechanic's liens and other reasonable documentation required by the Title Company to delete the standard pre-printed exceptions related to liens and rights of parties in possession.

6. Should title not be merchantable as aforesaid, or if the title commitment includes additional exceptions which are not acceptable to County (even though such additional exceptions would not make the title unmerchantable), a written notice of the defects must be given to Seller by County within 30 days after receipt of the title commitment and all exception documents as set forth in Paragraph 4 of this Agreement. If Seller provides County with a title commitment and exception documents before the execution of this Agreement by the Board of Commissioners, County will have 30 days from the date of the execution of the Agreement by the Board of Commissioners within which to provide Seller with a written notice of title defects. Seller agrees to attempt to correct such defects at Seller's expense within 120 days from receipt of said notice of defects, and the closing will be postponed for said 120 days. If Seller has not corrected such defects within said 120 days, County, at its option, may complete the transaction notwithstanding the defects or may, upon notice to Seller in recordable form, declare this Agreement terminated, whereupon all payment made by County to Seller must be returned to County and both parties will be released herefrom.

7. Unless postponed pursuant to the provisions of this Agreement, closing will take place on April 3, 2025, at a mutually agreeable time, or closing may be done virtually, or as may otherwise be mutually agreed to by the Parties. The closing will be handled by the title company issuing a title policy to the County. Grantor will have the title company provide County with settlement sheets for both buyer and seller at least 10 days before the closing.

7.1. At the closing of the sale of the Property to County, Seller must deliver to County the following:

a. A fully good and sufficient executed and acknowledged General Warranty Deed conveying to County good and merchantable title to the Property being purchased, free and clear of all liens, tenancies, and encumbrances except those set forth in Paragraphs 5.1 and 5.2 above;

b. Possession of the Property, free and clear of all existing leases and tenancies; except for those leases described in Paragraph 9.8 below, if any;

c. Documents acceptable to County and the Title Company evidencing the authority of Seller to execute this Agreement and to convey the Property being purchased to County;

d. All instruments, certificates, affidavits, and other documents necessary to satisfy the Requirements listed on Schedule B-1 of the title commitment;

e. A current update of the title commitment, at Seller's expense, showing title subject only to the permitted exceptions determined by Paragraph 5 of this Agreement. Seller will cause the Title Company to issue to County its

standard form owner's policy of title insurance insuring good and merchantable title to the Property in County, with the standard printed exceptions concerning liens and rights of parties in possession deleted, and subject only to the permitted exceptions as determined in Paragraph 5 of this Agreement;

f. A certification that the representations and warranties of Seller pursuant to Paragraph 9 hereof continue to be true and correct as of the date of closing;

g. Seller's closing costs, which include Seller's portion of the prorated taxes and other assessments affecting the Property, all incidental costs and fees customarily paid by Seller in Boulder County land transactions, the cost of providing Owner's extended title coverage, and one-half of the cost of any closing fee;

h. If applicable, an affidavit by a professional engineer as described in Paragraph 12;

i. Any other documents required by this Agreement to be delivered by Seller to the title company or reasonably required by County or the Title Company in connection herewith; and

j. Any quitclaim deeds as described in Paragraph 2 of this Agreement or documents required by Paragraph 3.

7.2. At the closing of the sale of the Property to County, County will deliver to Seller the following:

a. The applicable purchase price by County warrant, or other good funds for the Property; and

b. County's closing costs which include all incidental costs and fees customarily paid by purchasers in Boulder County and one-half of the cost of any settlement or closing fee charged by the Title Company.

7.3. Prior to the closing of the sale of the Property to County, Seller must remove all equipment, vehicles, salvage, rubbish, and other personal property from the Property. Closing may be postponed by County if equipment, vehicles, salvage, rubbish, and other personal property has not been removed prior to the scheduled closing date.

8. It is agreed that time is of the essence hereof. If County should fail or default in prompt payment of the purchase price for the Property according to the terms and conditions of this Agreement, and such failure is not attributable to any failure by Seller to timely and fully

perform all of Seller's obligations hereunder, Seller, at Seller's option, may in writing declare this Agreement terminated and retain all monies paid to Seller as liquidated damages. It is agreed that such payments are Seller's sole and only remedy for County's failure to perform the obligations of this Agreement. Seller expressly waives the remedies of specific performance and additional damages. If Seller is in default: (1) County may elect to treat this Agreement as terminated, in which case all payments and things of value received hereunder must be returned to County; or (2) County may elect to treat this Agreement as being in full force and effect, and County will have the right to an action for specific performance or damages, or both.

REPRESENTATIONS AND WARRANTIES

9. Seller hereby represents and warrants to County that as of the date of the signing of this Agreement:

9.1. Seller has received no notice of and has no other knowledge of any litigation, claim or proceeding pending or currently threatened which in any manner affects the Property; and

9.2. Seller has received no notice and has no other knowledge of any current, existing violations of, or pending investigations into possible violations of, any federal, state or local law, code, ordinance, rule, regulation or requirement affecting the Property; and

9.3. Seller has the full right, power, and authority to transfer and convey the Property to County as provided in this Agreement and to carry out Seller's obligations under this Agreement; and

9.4. Each and every document, schedule, item, and other information delivered or to be delivered by Seller to County hereunder, or made available to County for inspection hereunder, must be true, accurate, and correct to the best of Seller's knowledge; and

9.5. Seller has not entered into any agreement with any private person or entity or with any governmental or quasi-governmental entity with respect to the Property that may result in liability or expenses to County upon County's acquisition of all or any portion of the Property; and

9.6. There are no special assessments which now burden or encumber the Property and there are no special assessments currently proposed as to the Property; and

9.7. The execution and delivery of this Agreement and the performance of all of the obligations of Seller hereunder will not result in a breach of or constitute a default under any agreement entered into by Seller or under any covenant or restriction affecting the Property; and

9.8. There are no leases, tenancies or rental agreements relating to the Property, or to any part thereof, which cannot be terminated by Seller on or prior to the date of closing of the transactions provided in the Agreement; and

9.9. Seller has not granted or created, and has no knowledge of any third parties who may have the right to claim or assert any easement, right-of-way or claim of possession not shown by record, whether by grant, prescription, adverse possession or otherwise, as to any part of the Property, except as to the leases, if any, as described above; and

9.10. To the best of Seller's knowledge, no part of the Property has ever been used as a landfill, and no materials have ever been stored or deposited upon the Property which under any applicable governmental law or regulation would require that the Property be treated or such materials removed from the Property prior to the use of the Property for any purpose which would be permitted by law, but for the existence of said materials on the Property; and

9.11. To the best of Seller's knowledge, except for one unpermitted septic system, no underground storage tank, as that term is defined by federal statute or Colorado statute, is located on the Property which under applicable governmental law or regulation would require such underground storage tank to be upgraded, modified, replaced, closed or removed; and

9.12. To the best of Seller's knowledge, Seller has not caused or permitted the release of any hazardous substance on the Property. The terms "hazardous substance" and "release" as used herein has the same meaning and definition as set forth in Paragraphs (14), (22) and (23), respectively, of Title 42 U.S.C. Section 9601; provided, however, that the term "hazardous substance" as used herein also include "hazardous waste", as defined in Paragraph (5) of 42 U.S.C. Section 6903; and

9.13. Seller has received no actual notice from any oil company or related business of any intention to conduct operations for the drilling of any oil or gas well on the Property, whether such notice is in the form of a "thirty-day notice" under the rules of the Energy and Carbon Management Conservation Commission of the State of Colorado, a notice to commence earthwork for drilling operations, a notice for the location of access roads, or any other notice of any kind related to the conduct of operations for such drilling; and

9.14. Seller has no knowledge of any claims or purported claims of adverse possession pertaining to the Property and/or any land adjacent thereto by reason of the location of any exterior boundary fence lines, or otherwise.

Seller must, at the time of closing, certify to County in writing that the above and foregoing representations and warranties remain true and correct as of the date of closing. Seller agrees that if, at any time, it is discovered that any of the foregoing representations and warranties were not true and correct at the time they were made, Seller will indemnify County and hold it harmless from and against claims for any and all liabilities, costs or damages, including, but not limited to, attorney fees, suffered by or claimed against County as a result of the breach. This indemnity will survive the closing of the Property.

10. In addition to all other rights and remedies of County and Seller as set forth and provided in this Agreement, Seller agrees that County will have the right to terminate this Agreement and to make the same of no further force and effect:

10.1. If the representations and warranties of Seller as set forth and provided for in Paragraph 9 herein are not true and correct as of the date of the closing of the Property; or

10.2. If Seller fails or refuses to provide the title insurance commitment and title insurance policy to County within the time period and in the form and content required under the provisions of this Agreement; or

10.3. If any part of the Property is condemned, or if proceedings for such condemnation are commenced or notice of condemnation is received by Seller from a condemning authority prior to the date of closing of the Property; or

10.4. If any of the standards provided for in Paragraph 11 and/or 12 are not satisfied as of the date of closing of the Property; or

If County terminates this Agreement pursuant to this provision all sums paid hereunder by County to Seller must be returned to County.

INSPECTION AND ENVIRONMENTAL AUDIT

11. At all reasonable times during the term of this Agreement, County will have access to the Property for the purpose of conducting tests, studies, and surveys thereon, including, without limitation, environmental audits, soil and subsoil tests. County may perform or have performed at its option and/or expense the following inspections:

11.1. Soil and percolation tests;

11.2. Inspections for asbestos, PCBs, underground tanks, or other hazardous substances;

11.3. Any other inspections, tests, and/or studies deemed necessary by County, which do not materially damage the Property.

County will promptly provide to Seller copies of the results of all such tests, inspections, and studies following the receipt of same by County. Any inspections conducted by County will not mitigate or otherwise affect Seller's representations and warranties above. Prior to closing of the sale of the Property to County, County may, at its sole expense, obtain a Phase I environmental audit of the Property. The Phase I environmental audit and any follow up testing must be satisfactory to County, in the County's sole discretion. If the Phase I, or any other tests or inspections received by or performed by County, are not satisfactory to County, County will give Seller written notice of the defects. Seller agrees to attempt to correct such defects at Seller's expense within 120 days of said notice, or within a time agreed to, in writing, by both parties. If necessary, the closing set forth in Paragraph 7 of this Agreement, may be postponed for 120 days. If Seller has not corrected such defects within said 120 days, County, at its option, may complete the transaction notwithstanding the defects or may, upon notice to Seller in recordable form, declare this Agreement terminated, whereupon all payments made by County to Seller must be returned to County, and both parties released herefrom.

12. If any underground tank/s is/are located on the Property, said tank/s must be removed by Seller at Seller's expense prior to the closing of the Property. If any underground tank/s is/are removed prior to closing pursuant to this Paragraph, Seller will provide at the time of closing of the Property an affidavit, subscribed and sworn to by a registered professional engineer licensed in the State of Colorado and approved by County, stating that the Property meets all applicable federal, state and local laws, regulations, and standards regarding such sites, including without limitation, the following standards:

12.1. No more than 75 parts per million total petroleum hydrocarbons in the soil using an analytical test/s which are standard in the industry for the detection of specific compound mentioned herein.

12.2. No more than 10 parts per million total petroleum hydrocarbons in ground water, other than drinking water, using an analytical test/s which are standard in the industry for the detection of the specific compound mentioned herein.

12.3. The BTEX (benzene, toluene, ethyl benzene and xylene) and the petroleum contaminants in the ground water must not exceed the maximum contaminant levels for these components in the ground water as set forth by the state water quality provisions in effect at the time of the execution of this contract.

13. This contract is not intended and will not be deemed to create, expand, diminish or in any way affect any liability or responsibility of Seller or County for any hazardous materials or other environmental matters on or relating in any way to the Property. "Hazardous materials" as used herein will mean and include any pollutant, contaminants or hazardous or toxic materials,

wastes or materials as defined, listed or regulated by any federal, state or local law, regulation, order or decree. "Environmental matters" will mean and include any condition, claim, cost, order, demand, requirement or liability either (1) regulated or arising under any federal, state or local laws or regulations governing or relating to the environment, including without limitation RCRA, 42 U.S.C. Sec. 6901 et seq., and CERCLA, 42 U.S.C. Sec. 9601 et seq., as amended, or (2) caused by or relating to the presence or release of any hazardous materials in or to the air, soil, surface waters or groundwater.

REAL ESTATE COMMISSION

14. Any real estate commission due to any broker upon sale of the Property to County must be paid by Seller. County represents to Seller that County is not a party to a contract which requires the payment of any real estate commission upon sale of a fee simple interest in the Property to County.

PROPERTY TO REMAIN UNENCUMBERED

15. Seller agrees that Seller will not, so long as this Agreement is in effect, encumber or burden the Property or any part thereof without County's consent. Seller further agrees that during the term of this Agreement and through the date of delivery of possession of the Property to County, Seller must not develop the Property in any manner, including without limitation, constructing any improvements or erecting any structures on the Property, leasing mineral rights for the Property, or disturbing the surface of the Property.

ASSIGNMENT

16. Seller must not assign Seller's rights and obligations hereunder unless County first consents thereto in writing, which consent will not be unreasonably withheld.

County does, however, consent to Seller assigning Seller's rights hereunder in furtherance of an IRC Section 1031 tax-deferred exchange so long as County incurs no increased expense, delay of closing, or liability exposure and so long as the assignee complies with all of the provisions of this Agreement. Said consent does not give Seller the right to impose any responsibilities on County that are not set forth in this Agreement other than the consent to the assignment. Seller agrees that so long as County is not in default hereunder, Seller must not sell or convey any of the Property except to County pursuant to this Agreement. County may assign its rights to purchase all or a portion of the Property or any interest in the Property, without the consent of Seller and Seller will cooperate in executing appropriate documentation for the transfer of all or part of the Property, or any interest in the Property, to any assignee of County, so long as Seller incurs no increased expense or liability exposure and so long as the assignee complies with all of the provisions of this agreement.

CONDEMNATION

17.1. Condemnation of the Entire Property Which is the Subject of This Agreement

If another governmental entity or agency exercises its powers of eminent domain to acquire title to the Property, County will, in such event, release its rights and option to purchase as to the Property so condemned and will make no claim as to the monies paid for the Property so taken by the condemning authority. In the event of such a condemnation, the money so paid by the condemning authority for the Property so taken will be and become the sole and separate Property of Seller. The provisions of this Paragraph will not be construed, however, as precluding or preventing County from condemning any property which it is statutorily authorized to condemn.

17.2. Condemnation of a Portion of the Property Which is The Subject of This Agreement

If another governmental entity or agency exercises its powers of eminent domain to acquire title to a portion of the Property which is the subject of this Agreement, County will still retain the rights granted under this Agreement as to such of the Property described in Exhibit A which is not taken by the condemnation. In such event, the portion of the Property which is not condemned will remain subject to the terms of the Agreement. The purchase price of the portion of the Property remaining subject to this Agreement will be determined on a per acre basis, by dividing the total purchase price for the Property by the total acreage of the Property to determine a per acre price.

TAX CONSEQUENCES

18.1. Seller acknowledges that neither the County, nor any of its agents or attorneys, has made any representations as to the fair market value of the Property or the donation thereof, except to acknowledge the potential for a bargain sale due to the Property's current assessed value. Seller further acknowledges that neither the County, nor any of its agents or attorneys, has made any representations as to the tax treatment to be accorded to this bargain sale or to any proceeds thereof by the Internal Revenue Service under the Internal Revenue Code or by the officials of the State of Colorado under Colorado law. Seller acknowledges she is solely responsible for meeting any and all Internal Revenue Service and/or State of Colorado statutes, rules, and regulations related to potential tax benefits associated with this transaction and that the County has encouraged Seller to obtain her own legal, tax, and financial advice.

18.2. Seller intends to seek a fair market appraisal of the Property, and Seller may seek to pursue tax benefits associated with the bargain sale of the Property to the County if such appraisal substantiates a value higher than the price paid by County. If Seller

receives an appraisal of the Property Seller must provide the County with a full copy of the final signed appraisal that Seller will rely on for tax purposes and complete copies of all relevant tax documents before the County will sign any tax documents acknowledging receipt of a partial donation, if any. County will cooperate with Seller to provide documentation reasonably necessary for Seller to apply for tax benefits, except that County will have the right, in its sole discretion, not to sign any tax documents acknowledging receipt of a donation if County reasonably believes the donation value being sought is more than the actual donation value, or to note on Seller's tax forms the County's objection to the appraised value.

AGREEMENT TO SURVIVE CLOSING

19. The parties hereto agree that, except for such of the terms, conditions, covenants, and agreements hereof which are, by their very nature fully and completely performed upon the closing of the purchase-sale transactions herein provided for, all of the terms, conditions, representations, warranties, covenants, and agreements herein set forth and contained will survive the closing of any purchase-sale transaction herein provided for and will continue after said closing to be binding upon and inure to the benefit of the parties hereto, their successors, and assigns.

ENTIRE AGREEMENT

20. This Agreement, including exhibits, contains the entire contract, understanding, and agreement between the parties and supersedes all prior understandings, warranties, representations, letters of intent, all of which are by execution hereof rendered null and void.

NOTICE

21. Within sixty (60) days after a change of a party's address, that party must provide a written notice of any change of address to all other parties. Whenever notice is required to be given hereunder, it will be in writing and may be mailed, or hand delivered to the party entitled thereto, and if mailed, it will be done by registered or certified mail, return receipt requested. If mailed, said notice will be effective and complete as of the date of mailing. If hand delivered, said notice will be effective and complete upon completion of the hand delivery. Notice may also be accomplished by email, if emailed to a current email address specified in writing by the receiving party. Until changed by notice in writing, each party's mailing addresses are as follows:

To County: Real Estate Division
 Boulder County Parks & Open Space
 Administration Building
 5201 St. Vrain Road
 Longmont, Colorado 80503

With copy to: The Boulder County Attorney's Office
 P.O. Box 471
 Boulder, Colorado 80306

To Seller: Florian Freymuth
 13111 Wolf Park Road
 Hotchkiss, CO 81419

GOVERNING LAW

22. The validity and effect of this Agreement will be determined in accordance with the laws of the State of Colorado.

COUNTERPARTS

23. This Agreement may be executed in any number of counterparts, each of which will be deemed an original, and all of which will constitute one and the same agreement. Digital signatures conforming with the Uniform Electronic Transactions Act, C.R.S. §§ 24-71.3-101 through 24-71.3-121 will be acceptable to and binding upon all Parties.

RECORDING

24. This Agreement will be recorded in the office of the Clerk and Recorder of Boulder County, Colorado.

SEVERABILITY

25. If any part of this Agreement is found, decreed or held to be void or unenforceable, such finding, decree or holding will not affect the other remaining provisions of this Agreement which will remain in full force and effect.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date set forth above.

COUNTY OF BOULDER,
a body corporate and politic

By: _____

_____ of the Board of County Commissioners of Boulder County, Colorado.

State of Colorado
County of Boulder

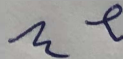
The foregoing instrument was acknowledged before me this ____ day of _____, 2025 by _____ of the Board of County Commissioners of Boulder County, Colorado.

(Notary official signature)

NOTARY
SEAL

(Commission expiration)

SELLER:



Florian Freymuth

EXHIBIT A

Legal Description—Parcel 1

That certain real estate situated in the County of Boulder, State of Colorado, and legally described as:

That portion of the North 1/2 of Section 29, lying Southerly of Colorado State Highway No. 72, being more particularly described as follows:

Beginning at the West 1/4 corner of Section 29, Township 1 South, Range 72 West of the 6th P.M., Boulder County, Colorado; thence North 02°36'10" West along the West line of the Northwest 1/4 of said Section 29 a distance of 1310.13 feet to a point on the apparent Southerly right-of-way line of Colorado State Highway No. 72; thence Southeasterly along the said apparent right of way, the following courses and distances: South 86°52'57" East 65.74 feet; thence South 81°39'58" East 356.42 feet to a point of curvature; thence along a 459.24 foot radius curve to the right (central angle of 38°38'03") an arc distance of 309.67 feet to a point of tangency; thence South 43°01'54" East 358.12 feet to a point of curvature; thence along a 696.56 foot radius curve to the left (central angle of 21°33'31") an arc distance of 262.09 feet to a point of tangency; thence South 64°35'25" East 257.53 feet to a point of curvature; thence along a 1422.78 foot radius curve to the left (central angle of 10°10'50"), an arc distance of 256.53 feet to a point of tangency; thence South 74°55'16" East 234.08 feet; thence South 72°44'26" East 735.34 feet; thence South 68°58'38" East 167.03 feet to a point of curvature; thence along a 3381.20 foot radius curve to the right (central angle of 03°20'54") an arc distance of 197.61 feet to a point of tangency; thence South 65°37'44" East 255.13 feet; thence South 67°43'07" East to a point on the East-West centerline of the said Section 29; thence North 87°47'07" West along the said East-West centerline 3313.93 feet to the Point of Beginning, County of Boulder, State of Colorado.

Legal Description—Parcel 2

All that portion of the NW 1/4 of the SE 1/4 of Section 29, Township 1 South, Range 72 West of the 6th P.M., located South and West of the Southwesterly boundary line of Colorado State Highway No. 72 and North of the boundary line between Gilpin County, Colorado.

Legal Description—Parcel 3

All that portion of the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 29, Township 1 South, Range 72 West of the 6th P.M., located south of the South boundary line of Colorado State Highway 72, and within the boundaries of the County of Gilpin, State of Colorado.



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
303-441-3930 • www.BoulderCounty.gov

MEMO TO: Boulder County Commissioners
FROM: Pete L'Orange – CP&P Development Review Team
DATE: March 27, 2025
RE: Call-up of SPR-24-0070: Ritzer Additions

Item	Pages
Staff Memo	2
Determination Letter (Attachment A)	A1 – A60
Public Comments (Attachment B)	B1

On March 5, 2025, the Community Planning & Permitting Department (CPP) issued a Determination Letter conditionally approving docket SPR-24-0070 Ritzer Additions, an application for Site Plan Review to deconstruct 242 square feet of residential floor area and construct 1,219 square feet of additions to an existing 5,044-square-foot house resulting in a total residential floor area of 6,021 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road. On March 19, 2025, the Board of County Commissioners (BOCC) requested that the application be called up to a Business Meeting to determine whether or not a public hearing for the proposal should be held. Staff request that the BOCC determine whether or not a public hearing shall be held for SPR-24-0070 Ritzer Additions.

The original application proposed the deconstruction of 302 square feet of existing above grade residential floor area and construction of a 376-square-foot addition to the first story and 748-square-foot addition to the second story of an existing 5,044-square-foot house. The applicant also proposed to construct a 288-square-foot detached accessory residential structure. The total residential floor area original proposed by the applicant was 6,154 square feet, which exceeded the presumed compatible size of 5,536 square feet. During the course of the application review, the applicant requested the application be placed on hold while they considered revisions to the proposal. The applicant submitted revised plans which included the deconstruction of 242 square feet of existing residential floor area and construction of a 1,219 square feet addition to the second story. The total resulting residential floor area proposed was 6,021 square feet.

The applicant proposed to overcome the presumed compatible size by using existing underground floor area in accordance with Article 4-806.A.2.b(i)(A)(1)(b) of the Boulder County Land Use Code (the Code). Specifically, the existing residence includes a 582-square-foot

basement, which is completely below grade and not visible. As such, the resulting above grade and visible floor area proposed is 5,536 square feet of residential floor area.

With the condition that the above grade and visible residential floor area does not exceed the presumed compatible size, staff found the proposed development was compatible with the character of the defined neighborhood. The above grade and visible residential floor areas in the defined neighborhood range between 987 square feet and 7,618 square feet. As such, the Determination Letter approved a maximum above grade and visible floor of 5,536 square feet. Staff did not identify any particular concerns related to the visual impact of the proposed development, as the proposed additions are to an existing structure, on a moderately large parcel, located away from other residences.

Following the issuance of the Determination Letter, CPP staff received one comment from a member of the public stating that they had no objections to the proposal as it would not have any significant impact on their property (Attachment B).

Staff request that the BOCC determine whether or not to call up the Director's Determination for SPR-24-0070 Ritzer Additions for review at a public hearing.



Community Planning & Permitting

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 303-441-3930 • www.BoulderCounty.gov

Claire Levy County Commissioner

Marta Loachamin County Commissioner

Ashley Stolzmann County Commissioner

3/5/2025

Josh Ritzer
 5775 Jay Road
 Boulder, CO 80301

Dear Applicant(s):

This letter certifies that in accordance with section 4-800 of the Boulder County Land Use Code, the Boulder County CPP Director has Approved with Conditions the site plan for the following, effective March 5, 2025.

Docket: SPR-24-0070 Ritzer Additions and Accessory Structure

Request: APPROVED: Site Plan Review to deconstruct 242 square feet of residential floor area and construct 1,219 square feet of additions to an existing 5,044-square-foot house resulting in a total residential floor area of 6,021 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road.

REVISED: Site Plan Review to deconstruct 242 square feet of residential floor area and construct 1,219 square feet of additions to an existing 5,044-square-foot house resulting in a total residential floor area of 6,021 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road.

ORIGINAL: Site Plan Review to deconstruct 302 square feet of residential floor area and construct 1,124 square feet of additions to an existing 5,044-square-foot house and construct a 288-square-foot accessory residential structure resulting in a total residential floor area of 6,154 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road.

Location: 5775 JAY ROAD

Zoning: Rural Residential

Applicant: Josh Ritzer

This is a Conditional Approval made by the CPP Director, and is not final until a 14-day referral period has transpired. During the next 14 days, the Board of County Commissioners (BOCC) may choose to call this docket up for a public hearing. If no hearing is required, this letter will serve as the final determination. Building, grading and access permits will be subject to any and all conditions of approval.

If the BOCC should decide to modify the CPP Director's approval, or determines that further review is necessary, a public hearing will be held. Upon completion of the public hearing and approval by the BOCC, if a building, grading or access permit has been applied for, it will continue in the process and permits may be issued subject to any and all conditions of approval.

In the event that you wish to appeal any conditions of the CPP Director's determination, you are entitled to appeal the determination to the BOCC. You must file an appeal for this purpose with the CPP Department in writing no later than 14 days after the date of this letter. If an appeal is requested, the BOCC will review the CPP Director's determination at a public meeting.

Please be aware that the attached Conditions of Approval become final if the docket is not called up by the BOCC at the end of the 14-day review period. There are no other administrative means to appeal. If you wish to resubmit information with regards to complying with any of the attached Conditions of Approval, and have this information reviewed for approval by staff prior to the end of the 14-day review period, your submissions must be received by the office no later than 10 days from the date of this letter.

Site Plan Review approval is valid for three years from the date of this letter although any changes in County regulations could affect the proposal prior to application for a building permit. In order to be issued a building permit, the project must comply with all policies and regulations in effect at the time of permit application.

A Building Permit cannot be issued for this project until the applicable conditions above have been met. Furthermore, a Certificate of Occupancy cannot be issued for this project until the applicable conditions above have been met. A SPR inspection will need to be scheduled with this department prior to the issuance of a Certificate of Occupancy. None of the conditions of approval will be waived or a Certificate of Occupancy issued for this project based upon the applicant's need to meet financial obligations (i.e., construction cost overruns or loan closing dates). Any future additions to the approved structure, regardless of size, will require SPR approval to amend this SPR.

The Public Notice sign must remain posted for 14 days after the date of this letter and then returned to the CPP Department in a timely manner after this date. Or, if your Site Plan Review application requires a public hearing, please return the sign after the final public hearing. We will begin processing a refund for the \$25 sign deposit when your sign is returned, and a check will be mailed to you within approximately 2 weeks.

Please carefully review the attached conditions of approval. Compliance with these conditions will be confirmed as is necessary throughout the process.

Sincerely,



Pete L'Orange
Senior Planner

SPR-24-0070: Ritzer Additions
5775 Jay Road
Page 1 of 15
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APPLICATION #: SPR-24-0070
APPLICANT: Josh Ritzer
PROJECT LOCATION: 5775 Jay Road
PROJECT SUMMARY: REVISED: Site Plan Review to deconstruct 242 square feet of residential floor area and construct 1,219 square feet of additions to an existing 5,044-square-foot house resulting in a total residential floor area of 6,021 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road.

ORIGINAL: Site Plan Review to deconstruct 302 square feet of residential floor area and construct 1,124 square feet of additions to an existing 5,044-square-foot house and construct a 288-square-foot accessory residential structure resulting in a total residential floor area of 6,154 square feet where the presumed compatible size is 5,536 square feet at 5775 Jay Road.

CONDITIONS OF APPROVAL

Article 4-802.A.2 of the Boulder County Land Use Code (the Code) states that Site Plan Review shall be required for any increase in residential floor area which results in a total residential floor area greater than 125% of the median residential floor area for the defined neighborhood in which the subject parcel is located. Given that, in this case, the applicant is proposing an increase in residential floor area to a total resulting size of 6,154 square feet, which would exceed 125% of the median residential floor area for the defined neighborhood, Site Plan Review is required.

Article 4-806.A of the Land Use Code states that no Site Plan Review can be approved without compliance with the following standards. All site plan review applications shall be reviewed in accordance with the following standards which the Director has determined to be applicable based on the nature and extent of the proposed development. ***Only those standards applicable to this project are included in this list.***

1. ***To provide a greater measure of certainty as to the applicable neighborhood relevant for comparison, the following definition of neighborhood shall be used to review proposed Site Plan Review applications:***
 - c. ***For applications outside of platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs,***

SPR-24-0070: Ritzer Additions
 5775 Jay Road
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Raymond, and Riverside, the defined neighborhood is the area within 1,500 feet from the applicable parcel. The neighborhood shall not include any parcels inside municipal boundaries, platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Gold Hill Historic District, Raymond, and Riverside.

The applicable neighborhood for the subject parcel is the area within 1,500 feet of the subject parcel, excluding any parcels inside municipal boundaries, platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Gold Hill Historic District, Raymond, and Riverside.

2. ***The size of the resulting development (residential or nonresidential) must be compatible with the general character of the defined neighborhood.***
 - a. ***In determining size compatibility of residential structures within the defined neighborhood, it is presumed that structures of a size within the larger of a total residential floor area of either (1) 125% of the median residential floor area for that defined neighborhood or (2) of a total residential floor area of 1,500 square feet in the mapped townsites of Allenspark, Eldora, Eldorado Springs, Raymond, and Riverside, or 2,500 square feet for all other areas of the County, are compatible with that neighborhood, subject also to a determination that the resulting size complies with the other Site Plan Review standards in this section 4-806.A.***

A. SIZE PRESUMPTION

The presumed compatible size of residential structures within the defined neighborhood (see Standard 1 above for the applicable neighborhood) is 5,536 square feet.

Median (total residential floor area) in the defined neighborhood*	4,429 square feet
125% of the median residential floor area in the defined neighborhood	5,536 square feet
Total existing residential floor area on the subject parcel*	5,044 square feet
Total proposed residential floor area	6,021 square feet

**Source: Boulder County Assessor's records, as verified by CPP staff for the subject parcel.*

SPR-24-0070: Ritzer Additions
5775 Jay Road
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March 6, 2025

b. Either the applicant or the Director may demonstrate that this presumption does not adequately address the size compatibility of the proposed development with the defined neighborhood.

i. Factors to be considered when determining the adequacy of this presumption and whether it can be overcome include:

A. The visibility of the proposed development from other private parcels within the defined neighborhood, as well as public roads and open space both within and outside that defined neighborhood.

1. The proposed development must be minimally visible from the above-listed areas. Mitigation of visibility impacts may be achieved by:

(b) underground construction to screen the proposed development; existing underground residential floor area may be considered.

B. ABILITY TO OVERCOME THE SIZE PRESUMPTION

There is an existing 5,044-square-foot residence on the subject parcel, including the following: a 1,782-square-foot first floor; an 1,872-square-foot second story; a 582-square-foot basement; a 748-square-foot attached garage; and a 460-square-foot greenhouse. Per Article 18-189D of the Code, gazebos, carports, greenhouses, and hoopouses are exempt from residential floor area, up to a combined size of 400 square feet; as such, only 60 square feet of the existing greenhouse is included in the existing residential floor area calculations.

The applicant proposes to deconstruct 242 square feet of existing residential floor area on the second story; the applicant then intends to construct a new 748-square-foot second story addition above the existing garage and a 471-square-foot second story addition on the northwest side of the residence. The total proposed residential floor area is 6,021 square feet with 5,439 square feet aboveground and visible.

This exceeds the presumed compatible size of 5,536 square feet by 582 square feet.

Article 4-806.A.2.b of the Code provides that either the applicant or Director may demonstrate that the presumed compatible size does not adequately address the size compatibility of the proposed development within the defined neighborhood. Per Article 4-806.A.2.b(i)(A)(1)(b), a proposed development may be able to overcome the presumed compatible size if visual impacts are

SPR-24-0070: Ritzer Additions
 5775 Jay Road
 Page 4 of 15
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sufficiently mitigated by underground construction to screen the proposed development; existing underground residential floor area may be considered in seeking to overcome the presumed compatible size.

Staff finds that the visibility of the proposed development from other private parcels within the defined neighborhood or area is partially mitigated as there is an existing 582-square-foot basement, which is completely underground and is not visible. The proposed resulting aboveground and visible floor area is 5,439 square feet. Aboveground and visible floor area totals within the defined neighborhood range from 987 square feet to 7,618 square feet, with a median size of 4,429 square feet. In order to ensure that the proposed development is compatible with development within the defined neighborhood, the aboveground floor area must not exceed a maximum of 5,536 square feet.

As such, staff finds the size presumption can be overcome pursuant to Article 4-806.A.2.b(i)(A) of the Code as the underground construction provides sufficient screening of the proposed development, and the resulting aboveground and visible floor area is in character with the surrounding area. Staff support the size as proposed since the aboveground and visible residential floor area does not exceed the presumed compatible size and is found to be compatible with the defined neighborhood.

C. APPROVED SIZE

RESIDENTIAL FLOOR AREA*	
Total existing residential floor area on the subject parcel	5,044 square feet
Total existing residential floor area on the subject parcel to remain	4,802 square feet
Approved NEW residential floor area	Approximately 1,219 square feet
TOTAL approved resulting residential floor area	Approximately 6,021 square feet; Maximum of 5,536 square feet above grade.

**Residential Floor Area includes all attached and detached floor area on a parcel including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, home offices, and workshops, excluding covered deck. Floor area does not include the area of any covered porch. Gazebos, carports, greenhouses and hoopouses up to a total combined size of 400 square feet are also exempt.*

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3. ***The location of existing or proposed buildings, structures, equipment, grading, or uses shall not impose an undue burden on public services and infrastructure.***

ACCESS REQUIREMENTS

The subject property is accessed via Jay Road, an asphalt Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Minor Arterial. Legal access has been demonstrated via adjacency to this public ROW.

The driveway design must comply with the [Multimodal Transportation Standards](#) (the Standards) for residential development, including without limitation:

- a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
- b. Standard Drawing 11 – Private Access
- c. Standard Drawing 14 – Access with Roadside Ditch
- d. Standard Drawing 15 – Access Profiles Detail
- e. Standard Drawing 16 – Access Grade & Clearance
- f. Standard Drawing 17 – Access Pull-Outs
- g. Standard Drawing 18 – Access Turnaround
- h. Standard Drawing 19 – Typical Turnaround & Pullout Locations

The driveway has an asphalt apron that does not extend ten feet from Jay Road. The asphalt apron will need to extend at least ten feet from Jay Road per Standard Drawing 14. The driveway is over 400 feet in length, and there is no proposed emergency turnaround on the proposed plans. An emergency pullout is required every 400 feet, and an emergency turnaround is required to be at least 50 feet from the front of the house per Standard Drawings 17, 18, and 19 respectively.

At building permit, submit revised plans that show a 10 foot asphalt apron, emergency pullouts every 400 feet, and an emergency turnaround that comply with the Standards.

The eastern inlet of the existing culvert in the roadside ditch along Jay Road is dented and the headwall is destroyed. The slope above the headwall is steep and eroded. The headwall around the western inlet is cracked. Standard Drawing 11 shows that the slope to the top of the culvert must be no steeper than 2:1.

At building permit, plans submitted for permitting must demonstrate how the eastern inlet of the culvert will be restored, how both headwalls will be replaced

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or restored, and regrading of the slope from the driveway to the top of the eastern headwall to comply with the Standards.

During construction, all vehicles shall be staged on the subject property or to one side of Jay Road to not impede the travel way. Materials, machinery, dumpsters, and other items shall be staged on the subject property.

At the final inspection, Boulder County Community Planning & Permitting must verify that the access and driveway has been constructed and that the culvert work has been completed to meet the Parcel Access Design Standards in the [Boulder County Multimodal Transportation Standards](#).

4. ***The proposed development shall avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors. Natural hazards may be identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Site Plan Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies. Development within or affecting such natural hazards may be approved, subject to acceptable measures that will satisfactorily mitigate all significant hazard risk posed by the proposed development to the subject property and surrounding area, only if there is no way to avoid one or more hazards, no other sites on the subject property can be reasonably developed, or if reasonably necessary to avoid significant adverse impacts based upon other applicable Site Plan Review criteria.***

GEOLOGICAL HAZARDS

The subject property lies within a [Major Geologic Hazard Area](#) as identified by the [Boulder County Comprehensive Plan](#). Specifically, the northern most portion of the subject parcel is located within a designated High Swelling Soil Potential area. However, no development is proposed within this area as part of this application. Therefore, staff have no concerns related to natural or geological hazards.

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5. ***The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and those posed to neighboring properties in the surrounding area by the proposed development. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the Urban-Wildland Interface Code; National Fire Protection Association (NFPA); International Fire Code; and the International Building Code.***

WILDFIRE MITIGATION

The proposed project is in Wildfire Zone 2 (eastern area of unincorporated Boulder County). In response to catastrophic wildfire events of the recent past and continued hazards of a changing climate, on May 12, 2022, the Board of County Commissioners adopted revisions to the Boulder County Building Code to ensure a minimum level of ignition resistance for all structures in Wildfire Zone 2. The approved updates to the Building Code took effect on June 6, 2022, and require the use of ignition-resistant materials for construction and a minimum three-foot non-combustible perimeter around the residence.

8. ***The development shall avoid agricultural lands of local, state or national significance as identified in the Comprehensive Plan or through the site plan review process. Development within or affecting such lands may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.***

The property is designated as having agricultural lands of statewide significance, as identified by the [Boulder County Comprehensive Plan](#). However, the proposed additions to the existing residence will only result in minimal changes to the footprint of the residence, in an area which has previously been disturbed. Therefore, staff find the proposal will not result in any adverse impacts to, or fragmentation of, significant agricultural lands.

10. ***The development shall not have a significant negative visual impact on the natural features or neighborhood character of surrounding area. Development shall avoid prominent, steeply sloped, or visually exposed portions of the property. Particular consideration shall be given to protecting views from public lands and rights-of-way, although impacts on views of or from private properties shall also be considered. Development within or affecting features***

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or areas of visual significance may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.

b. For development anywhere in the unincorporated areas of the county, mitigation of visual impact may include changing structure location, reducing or relocating windows and glazing to minimize visibility, reducing structure height, changing structure orientation, requiring exterior color and materials that blend into the natural environment, and/or lighting requirements to reduce visibility at night.

	APPROVED
Location:	As shown on the site plan dated January 15, 2025
Elevations:	As shown in the received materials dated January 15, 2025
Height:	Maximum 30' from existing grade
Exterior Materials:	Residence Additions: Hardi board siding; Asphalt & metal roofing
Exterior Colors:	Residence Additions: Light gray siding; Charcoal & dark gray roofing

A. HEIGHT VERIFICATION

The existing residence is approximately 32 feet 6 inches from the existing grade. This exceeds the maximum allowed height of 30 feet above grade in the Rural Residential zoning district. However, the existing residence was constructed in 1979. At that time, the maximum allowed height in the Rural Residential zoning district was 35 feet above grade. As such, staff find the existing residence is non-conforming. The applicant has not proposed any changes to the height of the existing residence and the proposed additions meet the current limit of 30 feet above existing grade. As such, staff find a variance is not required for the proposed additions.

Because the proposed height of the additions is within two feet of the maximum allowed 30 feet above existing grade, a licensed Surveyor must complete a Height Survey Verification Form.

Please note that the height verification is a two-part process that requires a licensed Surveyor to establish existing grade (the grade before any site work)

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prior to construction, in addition to a follow-up survey once all roof framing is in place. The two-part form must sufficiently establish existing grade in accordance with standard surveying practice.

Prior to issuance of building, [the first part of the Height Survey Verification form](#) is included as an attachment to this letter and must be completed and submitted to the Community Planning & Permitting Department.

Prior to rough frame inspection, the [second part of the form](#) will be provided upon building permit application and must be submitted to the Community Planning & Permitting Department.

B. EXTERIOR COLORS AND MATERIALS

The application materials indicate the exterior materials for the additions to the residence will include light gray Hardi board siding and charcoal asphalt shingles and dark gray metal roof; however, no materials or color samples were provided. To ensure that the proposed development is minimally visible as discussed in Criterion 2 above, exterior colors must be selected to minimize visual impacts of the development and help the development blend in with the natural environment and the neighborhood character of the surrounding area. These colors should be carefully selected from the dark to medium brown, tan, or gray color range to ensure that they are compatible with the policies and goals established by the Comprehensive Plan and provisions of the Code and will not result in an adverse impact on surrounding properties. Metal materials must have a matte finish.

Prior to issuance of building permits, submit to the Community Planning & Permitting Department for review and approval, exterior color samples (color chips, brochure, or catalog page) and material samples to be used including roof, siding, and trim. Please note that all samples need to be digital or small enough to fit into a file and will be kept for the record. Samples should be included as part of the building plan set required at the time of permit application.

Prior to issuance of a Certificate of Occupancy, the Community Planning & Permitting Department must inspect and verify that the approved color samples are used on the new structure.

C. EXTERIOR LIGHTING

The locations and types of exterior lighting fixtures were not provided in the application.

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Prior to issuance of building permits, one copy of a proposed lighting plan must be submitted to the Community Planning & Permitting Department for review and approval. Down lighting is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. The lighting plan must indicate the location of all exterior fixtures on the site and structure, and must include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. The lighting plan must be included as part of the building plan set required at the time of permit application.

Prior to issuance of a Certificate of Occupancy, the full installation of the approved lighting plan must be inspected and approved by the Community Planning & Permitting Department.

- 11. *The location of the development shall be compatible with the natural topography and existing vegetation and the development shall not cause unnecessary or excessive site disturbance. Such disturbance may include but is not limited to long driveways, over-sized parking areas, or severe alteration of a site's topography. Driveways or grading shall have a demonstrated associated principal use.***

A. LOCATION

The locations of the additions to the residence as shown on the site plan dated January 15, 2025, are approved as proposed.

B. EARTHWORK AND GRADING

No earthwork and grading numbers were provided by the applicant. However, given the limited amount of earthwork and grading anticipated for the proposed additions to the residence, and given the minimal earthwork anticipated for the required culvert work, staff do not have concerns related to earthwork and grading.

Prior to issuance of building and grading permits, submit to the Community Planning & Permitting Department for review and approval calculations for any proposed earthwork and grading in excess of 50 cubic yards. All reasonable efforts shall be made to minimize the site disturbance associated with this development proposal.

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C. UTILITIES

To minimize disturbances to the site, all utility service lines must be routed underground (see [Article 7-1200](#) of the Code) and should be located in areas already disturbed or proposed to be disturbed (e.g., along driveway).

Prior to issuance of building and grading permits, submit to the Community Planning & Permitting Department for review and approval a plan depicting the routing of all utility services. The utility routing plan must be included as part of the building plan set required at the time of permit application.

At the time of building inspections, full installation of the utilities per the approved plan must be inspected and confirmed by the Community Planning & Permitting Department.

12. ***Runoff, erosion, and/or sedimentation from the development shall not have a significant adverse impact on the surrounding area.***

A. REVEGETATION REQUIREMENT

Prior to issuance of a Certificate of Occupancy, all areas of exposed soil must be revegetated. If weather is not conducive to seeding or if adequate revegetation efforts have not occurred and vegetation is not adequately established at the time of final inspection request, an irrevocable letter of credit or monies deposited into a County Treasurer account must be provided to assure completion of revegetation. What is considered “adequate revegetation” is influenced by the amount of site disturbance, potential for significant erosion (steep slopes), and visibility. In all cases some level of germination and growth is required. Note that areas of disturbance not included on the revegetation plan are still subject to reseeding and matting. Please note that no species on List A, B or C in the county’s [Noxious Weed Management Plan](#) may be used to meet Revegetation requirements.

Site disturbance must be minimized, and final grading and seeding must be conducted prior to the issuance of a Certificate of Occupancy. Incomplete revegetation is the leading cause for delays in obtaining Occupancy.

B. EROSION CONTROL

Erosion control measures (such as a silt barrier) must be installed down slope of all disturbed areas prior to construction and maintained throughout the

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construction process until revegetation has been established. Erosion control construction must be in accordance with the Colorado Storm Water regulations. If any surface water is channeled around or through the disturbed areas, anchored straw bale barriers must also be installed to filter and slow channeled flow.

Prior to issuance of building or grading permits, details regarding the placement and construction of the erosion control measures must be submitted to and approved by the Community Planning & Permitting Department. The placement and profile of the erosion control measures may be shown on the Revegetation Plan. The erosion control measures must be installed before construction commences and remain in place until vegetation is sufficiently established on the disturbed soil.

Prior to any grading or site disturbance, the erosion control measures locations and materials must be installed as required per the approved plans.

At the time of the footing foundation inspection and all subsequent inspections, the Community Planning & Permitting Department must confirm the erosion control measures location and materials have been installed as required per the approved plans. Any other areas on site are subject to installation of silt fences, if needed.

- 15. The proposal shall be consistent with the Comprehensive Plan, any applicable intergovernmental agreement affecting land use or development, and this Code.***

As conditioned this proposal will be consistent with the Comprehensive Plan, intergovernmental agreements, and this Code.

ADDITIONAL REQUIREMENTS AND INFORMATION:

BUILDING PERMITS: A building permit, plan review, inspection approvals, and a Certificate of Occupancy ("C.O.") are required for the proposed residence.

We have updated the Building Code Amendment, the effective date for this new code is March 31, 2025. You can review the new [Boulder County Building Code Amendments, effective March 31, 2025](#).

Current building code amendment - [2015 Building Code Adoption & Amendments](#).

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Floor area is measure to the outside of outside walls and includes the stairs on each level. The 2015 Building Code Adoption & Amendments definitions:

AREA, FLOOR. The area of the building, existing or new, under consideration including basements and attached garages calculated without deduction for corridors, stairways, closets, the thickness of interior walls, columns, or other features as measured from the exterior face of the exterior walls.

AUTOMATIC FIRE SPRINKLER SYSTEM: According to R313.2.1 of the currently adopted 2015 Boulder County Building Code this addition triggers the requirement for an automatic residential fire sprinkler system to be installed throughout the home. This system shall be designed and installed in accordance with NFPA 13D or IRC Section P2904.

R313.2.1 Additions to existing one- and two-family dwellings. An automatic residential fire sprinkler system shall be installed throughout existing one- and two-family dwellings with additions when the sum of the total floor area of the addition plus the existing one- and two-family dwelling is increased to 4,800 sq. ft. or greater. The floor area of detached structures having floor areas of 120 square feet or greater that are located less than 50 feet from the dwelling shall be included in the floor area calculated for the dwelling.

Exceptions:

1. One-time additions not exceeding 200 square feet in floor area, and
2. Carport additions which are exempt from the definition of “Residential Floor Area” in Section 18-189D of the Boulder County Land Use Code.

DESIGN WIND AND SNOW LOADS: The design wind and snow loads for the property are 155 mph (Vult) and 40 psf, respectively.

BUILDSMART: Please refer to the county’s adoption and amendments to Chapter 11 of the IRC, the county’s “BuildSmart” program, for the applicable requirements for energy conservation and sustainability for residential additions and new residential buildings. Please be aware that there are energy related requirements of this code that may require the use of renewable energy systems (such as rooftop solar systems) that will also need to be approved by your electric utility provider. In some cases, there may be limitations on the size of on-site systems allowed by your utility provider that could constrain the project design. We strongly encourage discussions between the design team and the utility company as early in the process as possible in order to identify these constraints.

IGNITION-RESISTANT CONSTRUCTION AND DEFENSIBLE SPACE: Please refer to Section R327 of the Boulder County Building Code for wildfire hazard mitigation requirements, including ignition-resistant construction and defensible space.

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PLAN REVIEW: The items listed above are a general summary of some of the county's building code requirements. A much more detailed plan review will be performed at the time of building permit application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met. Our Residential Plan Check List and other Building Safety publications can be found at: [Building Publications, Applications and Forms - Boulder County](#).

ONSITE WASTEWATER TREATMENT SYSTEM (OWTS):

1. Boulder County Public Health issued a new permit for the installation of an absorption bed system on March 5, 1979. The permit was issued for an onsite wastewater treatment system (OWTS) adequate for a 5-bedroom house. BCPH approved the installation of the OWTS on April 21, 1980.
2. On July 13, 2014, BCPH issued a repair permit for the installation of a 2000-gallon septic tank. The permit was issued for a tank adequate for a 5-bedroom house. BCPH approved the installation of the OWTS on August 19, 2014. According to the application, the home has/will have 5 bedrooms after the addition.
3. Setbacks between all buildings and the OWTS serving this property and OWTS serving neighboring properties, must be in accordance with the Boulder County OWTS Regulations, Table 7-1. The house addition and the garden shed must be no closer than 20 feet to the absorption area and 5 feet to the septic tank. The garden cannot be on top of the absorption area. No activities or anything but native grasses should be in the absorption area. For the complete regulations, go to: <https://assets.bouldercounty.gov/wpcontent/uploads/2017/05/boulder-county-ows-regulations.pdf>

AVOID DAMAGE TO OWTS:

1. Heavy equipment should be restricted from the surface of the absorption field during construction to avoid soil compaction, which could cause premature absorption field malfunction. Caution should be used in conducting trenching and excavation activities so that sewer lines and other OWTS components are not damaged.

TRANSFERABLE DEVELOPMENT CREDITS (TDC) REQUIREMENTS: Boulder County's TDC program, effective August 8, 2008, requires that, in general, homeowners who wish to build residences with floor areas greater than 6,000 square feet in unincorporated Boulder County purchase TDC Certificates. Please be aware that it appears one development credit would be required for this proposed project. The actual number of development credits necessary will be determined during the building permit review, once the exact square footage of your project is calculated. The number of development credits you need to purchase will be based on the total residential floor area on your parcel, including the proposed project and all other existing residential floor area. The TDC Clearinghouse will provide you with information on Boulder County's new TDC

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program, help you to obtain TDC Certificates for sale or purchase, and facilitate the market for TDCs. See <https://www.bouldercounty.org/property-and-land/land-use/planning/transferable-development-credits-tdc/marketplace/> for more information.

BOULDER RURAL FIRE: Per the referral response from the Boulder Rural Fire Protection District, with driveway alone being just over 1,400 feet long, a cistern will be required. A pull-out or hammerhead may also be needed in the driveway. Additionally, any overhead obstructions will need to be mitigated.

XCEL ENERGY: Please be aware PSCo owns and operates existing natural gas and electric facilities within the subject property. As a safety precaution, PSCo would like to remind the developer to contact Colorado 811 for utility locates prior to construction.

The property owner/developer/contractor must complete the application process for any new natural gas or electric service, or modification to existing facilities including relocation and/or removal via xcelenergy.com/InstallAndConnect, particularly if any meters are involved.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.



Boulder County Land Use Department

Courthouse Annex Building • 2045 13th Street • PO Box 471
Boulder, Colorado 80302

Phone: 303-441-3925 • Fax: 303-441-4856
Email: building_official@bouldercounty.org
<http://www.bouldercounty.org/lu/>

Office Hours: Monday — Friday 8:00 AM to 4:30 PM

Intake Stamp

BP -

Existing Grade Verification Form

This verification form is to be completed by a Professional Land Surveyor licensed in the State of Colorado.

Surveyor Contact Information

Surveyor Name		
Company Name		
Address	Email Address	
	Phone	Fax
City	State	Zip Code

Field Survey Information

Site Location	Date of Survey	
City	State	Zip Code

Surveyor Verification

I (surveyor named above) am a Professional Land Surveyor licensed in the State of Colorado. I have conducted a field survey on the site named above of the existing grade (grade before any site work, including grading or excavation has occurred).

Surveyor Signature	Date
--------------------	------

Surveyor's Seal



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
303-441-3930 • www.BoulderCounty.gov

MEMO TO: County Health and Parks Departments, FPD
FROM: Pete L'Orange, Senior Planner
DATE: October 9, 2024
RE: Site Plan Review application SPR-24-0070

Docket SPR-24-0070: Ritzer Additions and Accessory Structure

Request: Site Plan Review to deconstruct 302 square feet of residential floor area and construct 1,124 square feet of additions to an existing 5,044-square-foot house and construct a 288-square-foot accessory residential structure resulting in a total residential floor area of 6,154 square feet where the presumed compatible size is 5,479 square feet at 5775 Jay Road.

Location: 5775 Jay Road, Section 15, Township 1N, Range 70W
Zoning: Rural Residential (RR) Zoning District
Owner: Luna Family Revocable Trust
Applicant: Josh Ritzer

Site Plan Review by the Boulder County Community Planning & Permitting Director is required for new building/grading/access or floodplain development permits in the plains and mountainous areas of unincorporated Boulder County. The subject review process considers potential significant impact to the ecosystem, surrounding land uses and infrastructure, and safety concerns due to natural hazards.

The Community Planning & Permitting staff values comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to planner@bouldercounty.gov. All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-1418 or email plorange@bouldercounty.gov to request more information.

Please return responses by **October 28, 2024.**

We have reviewed the proposal and have no conflicts.
 Letter is enclosed.

Signed Name _____ Printed Name _____

Agency or Address _____

Date _____



Boulder County Land Use Department

Courthouse Annex Building
 2045 13th Street • PO Box 471 • Boulder, Colorado 80302
 Phone: 303-441-3930
 Email: planner@bouldercounty.org
 Web: www.bouldercounty.org/lu
 Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
 Tuesday 10 a.m. to 4:30 p.m.

Shaded Areas for Staff Use Only
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number 24TMP-008969		Project Name Ritzer Remodel/Addition	
<input type="checkbox"/> Appeal	<input type="checkbox"/> Modification of Site Plan Review	<input type="checkbox"/> Road Name Change	<input type="checkbox"/> Special Use (Oil & Gas development)
<input type="checkbox"/> Correction Plat	<input type="checkbox"/> Modification of Special Use	<input type="checkbox"/> Road/Easement Vacation	<input type="checkbox"/> State Interest Review (1041)
<input type="checkbox"/> Exemption Plat	<input type="checkbox"/> Preliminary Plan	<input checked="" type="checkbox"/> Site Plan Review	<input type="checkbox"/> Subdivision Exemption
<input type="checkbox"/> Final Plat	<input type="checkbox"/> Resubdivision (Replat)	<input type="checkbox"/> Site Plan Review Waiver	<input type="checkbox"/> Variance
<input type="checkbox"/> Limited Impact Special Use	<input type="checkbox"/> Rezoning	<input type="checkbox"/> Sketch Plan	<input type="checkbox"/> Other:
<input type="checkbox"/> Limited Impact Special Use Waiver		<input type="checkbox"/> Special Use/SSDP	
<input type="checkbox"/> Location and Extent			
Location(s)/Street Address(es) 5775 Jay Road Boulder, CO 80301			
Subdivision Name TR, NBR 803-830 Rural BO & LGT			
Lot(s)	Block(s)	Section(s) 15	Township(s) 1N
Area in Acres 12.33	Existing Zoning Rural Residential	Existing Use of Property Residential	Range(s) 70W
Proposed Water Supply LHWD (current)	Proposed Sewage Disposal Method Septic (current)		

Applicants:

Applicant/Property Owner Josh Ritzer (new owner)		Email jritzer@gmail.com	
Mailing Address 1505 Oak Ave			
City Boulder	State CO	Zip Code 80304	Phone 650-248-0106
Applicant/Property Owner/Agent/Consultant Luna Family Revocable Trust		Email	
Mailing Address 5775 Jay Road			
City Boulder	State CO	Zip Code 80301	Phone
Agent/Consultant		Email	
Mailing Address			
City	State	Zip Code	Phone

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval.

I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner 	Printed Name RICHARD J. LUNA	Date 7-13-2024
Signature of Property Owner 	Printed Name MARY T LUNA	Date 7-13-2024

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.

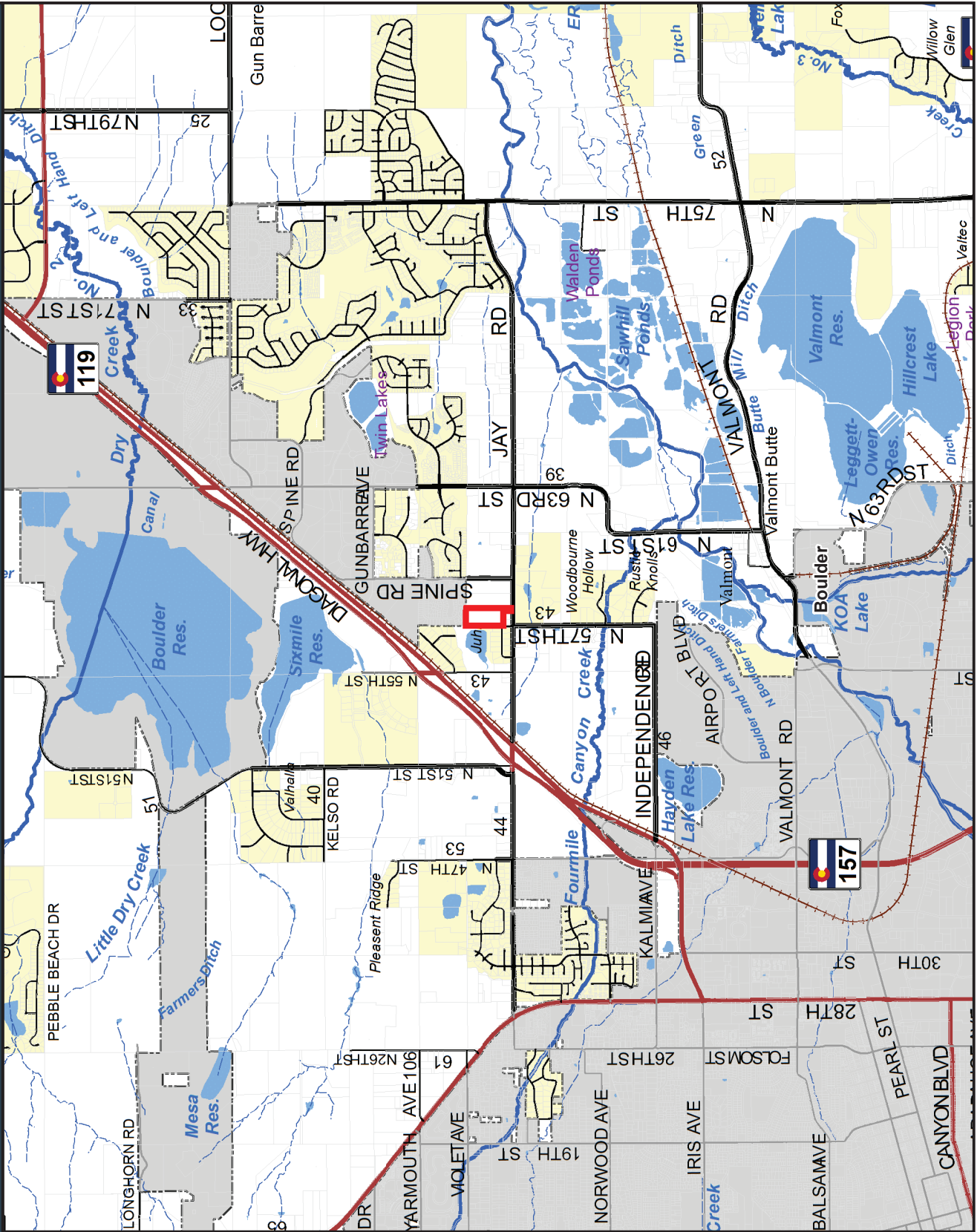


Community Planning & Permitting

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Vicinity

5775 JAY

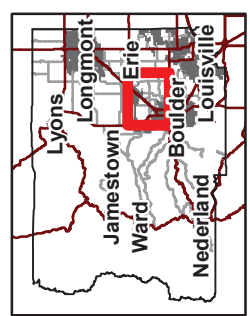


- Subject Parcel
- Municipalities
- Subdivisions
- Subdivisions



0 0.35 0.7 Miles

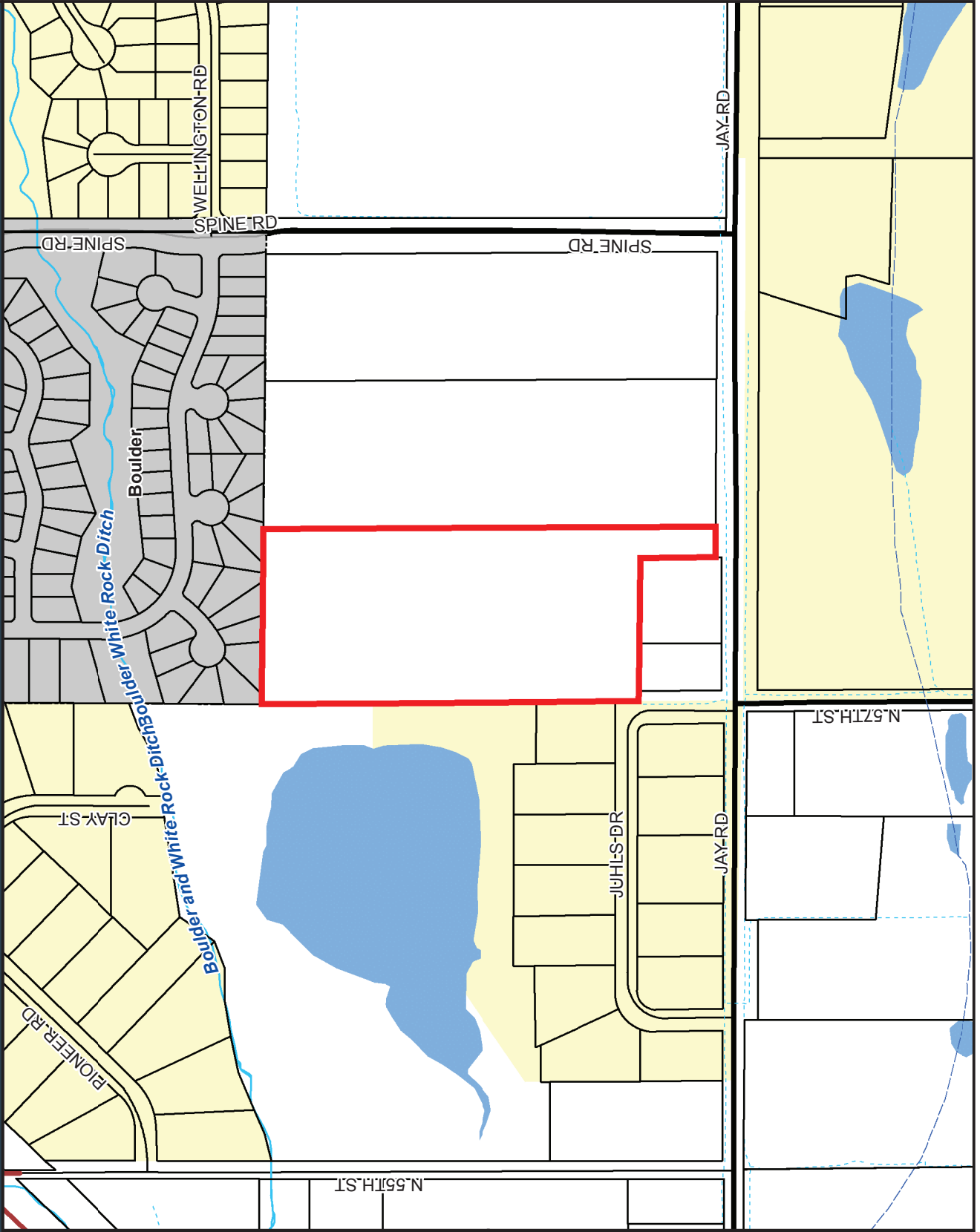
Area of Detail Date: 8/23/2024



The user agrees to all Terms of Use set forth by Boulder County. For Terms of Use, please visit: www.bouldercounty.org/mapdisclaimer

Location
5775 JAY

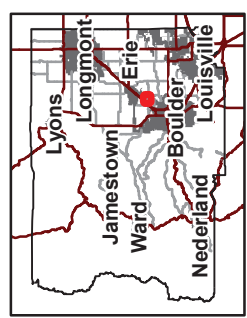
Community Planning & Permitting
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- Subject Parcel
- Subdivisions**
- Subdivisions



Area of Detail Date: 8/23/2024



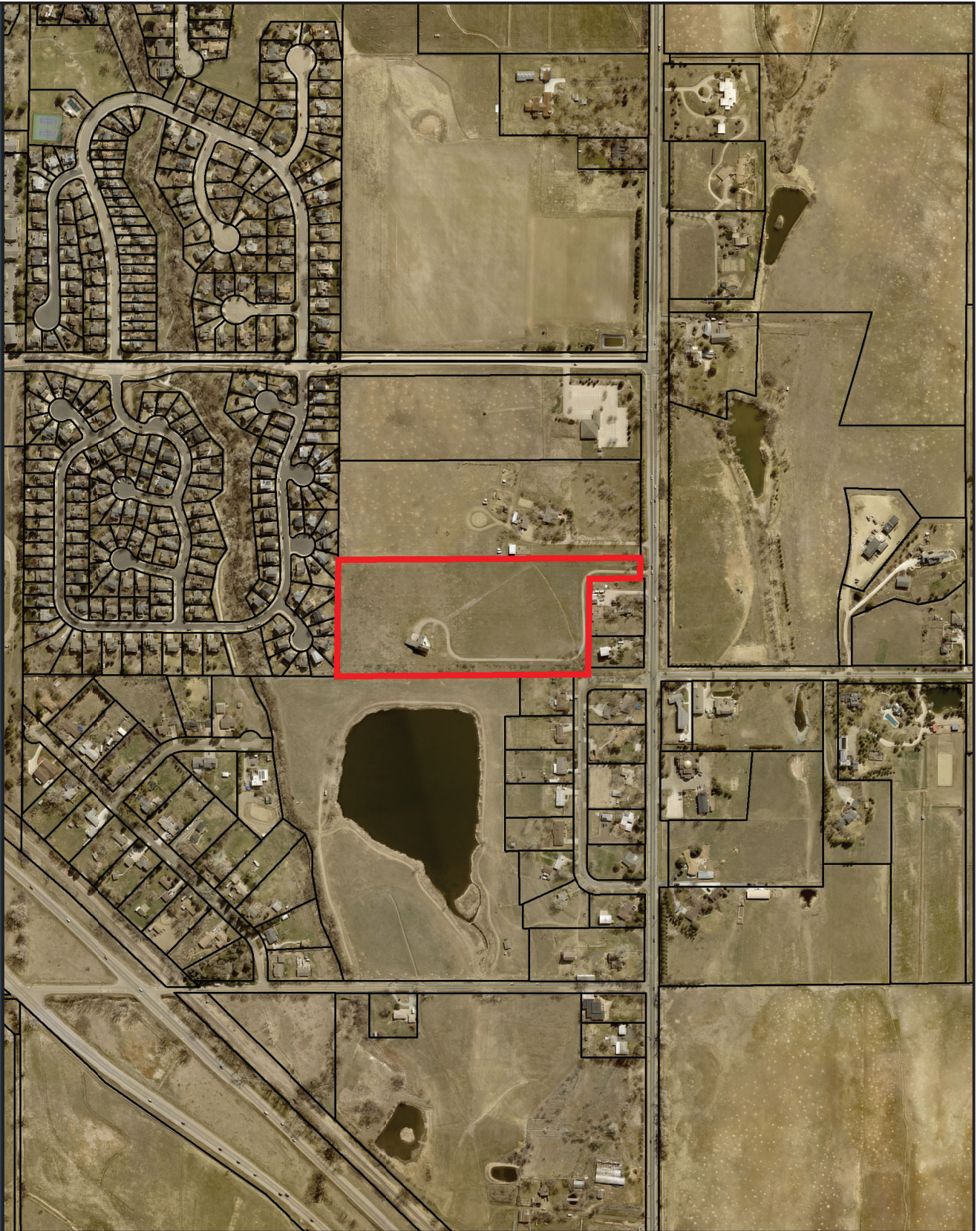
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Community Planning & Permitting

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Aerial
5775 JAY

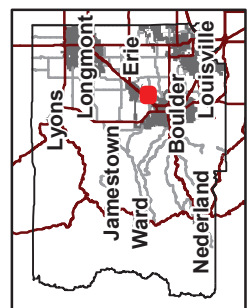


 Subject Parcel



0 0.05 0.1 Miles

Area of Detail Date: 8/23/2024



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Aerial
5775 JAY

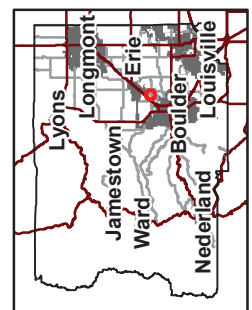


 Subject Parcel



0 0.015 0.03 Miles

Area of Detail Date: 8/23/2024



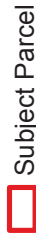
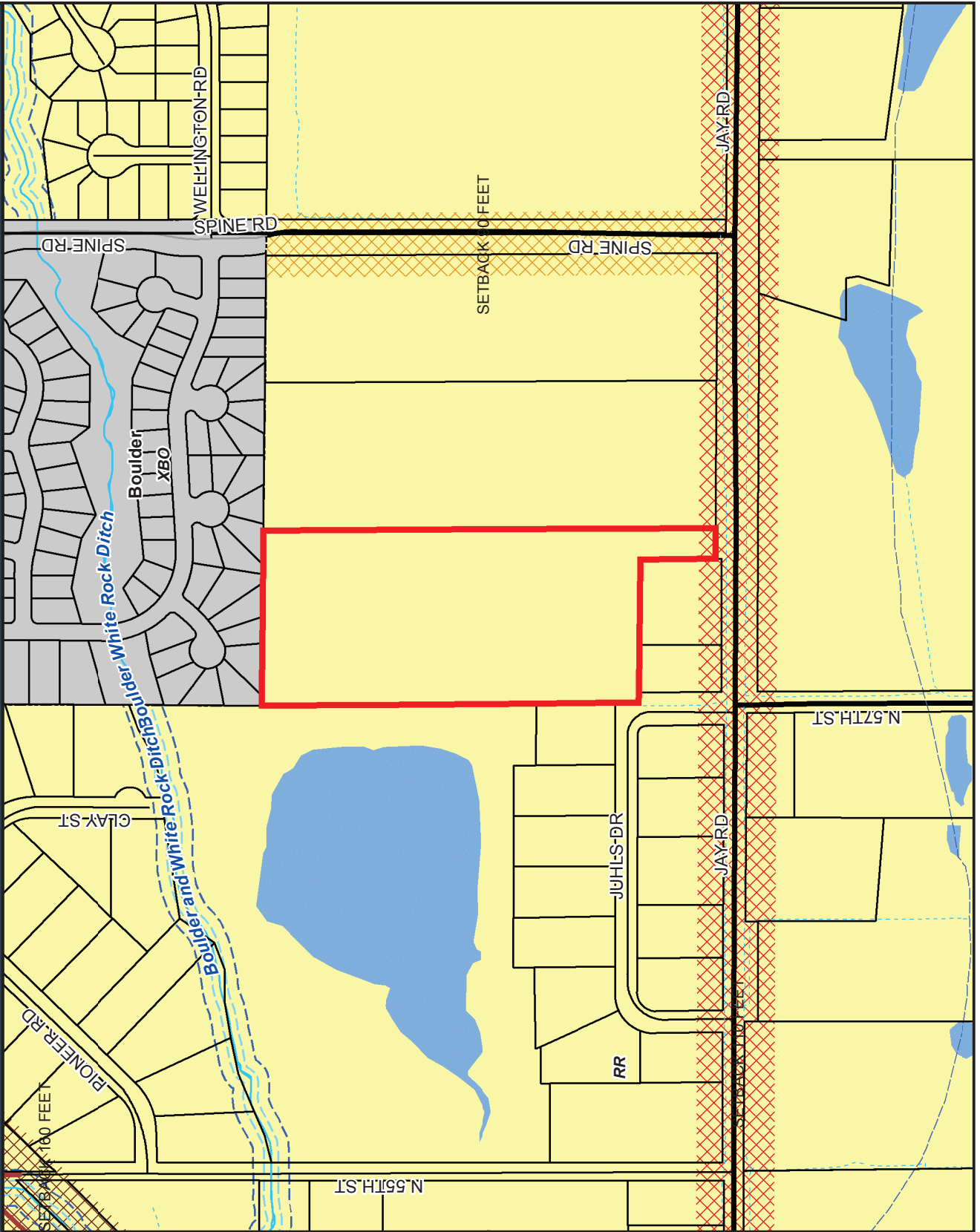
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Zoning
5775 JAY



Subject Parcel

Zoning Districts

Rural Residential

Ditch Setbacks

20 feet

50 feet

Major Road Setbacks

90 feet

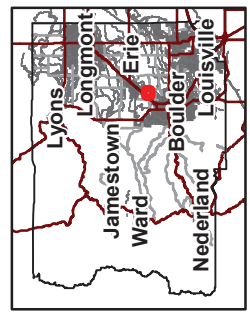
110 feet

160 feet



0 190 380 Feet

Area of Detail Date: 8/23/2024



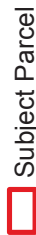
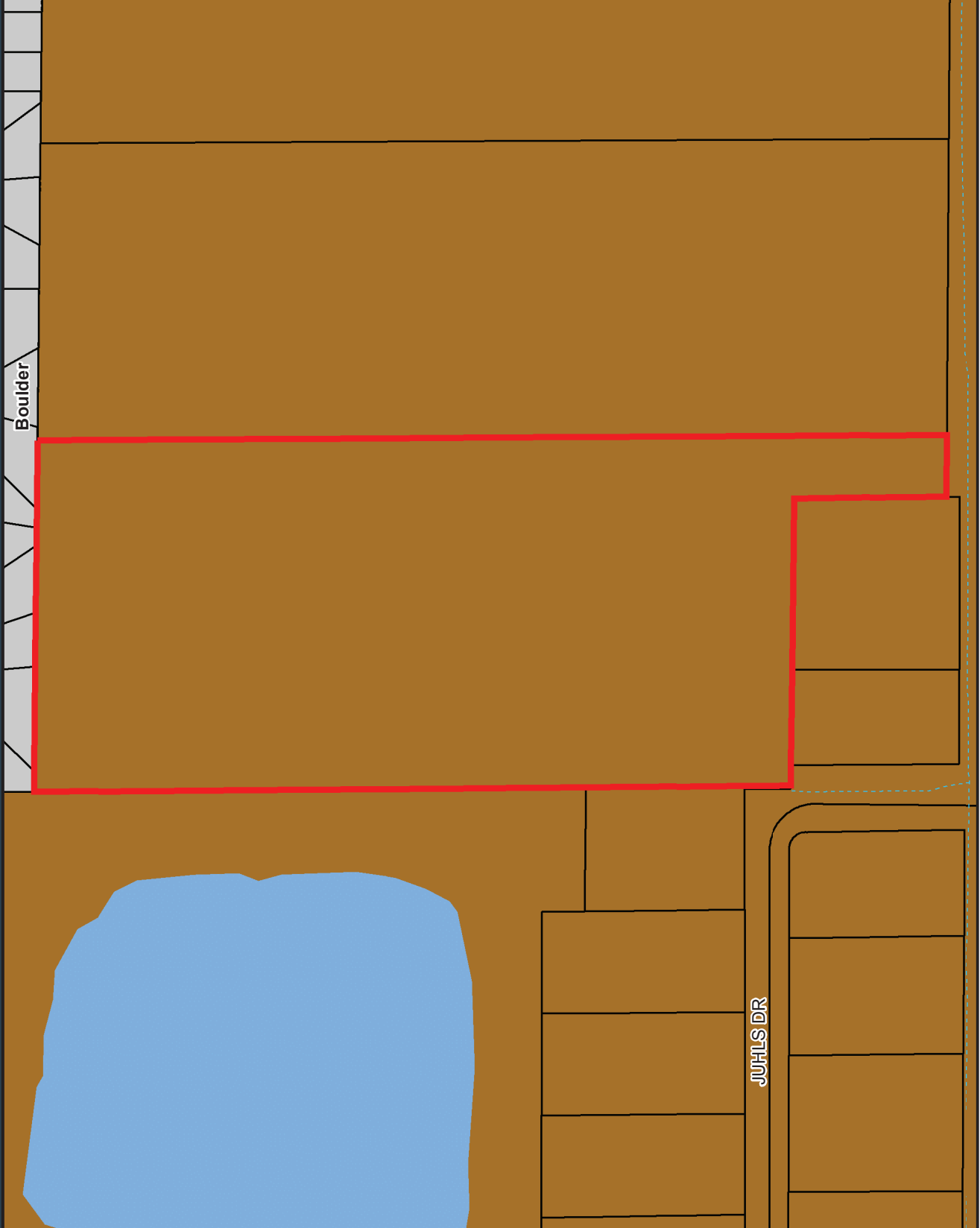
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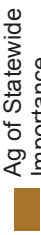
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Comprehensive Plan
5775 JAY



Subject Parcel

Significant Agricultural Land

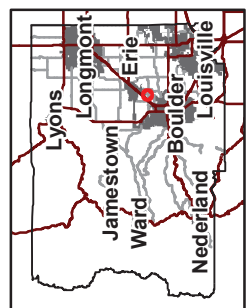


Ag of Statewide Importance



0 0.015 0.03 Miles

Area of Detail Date: 8/23/2024



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sgambrel

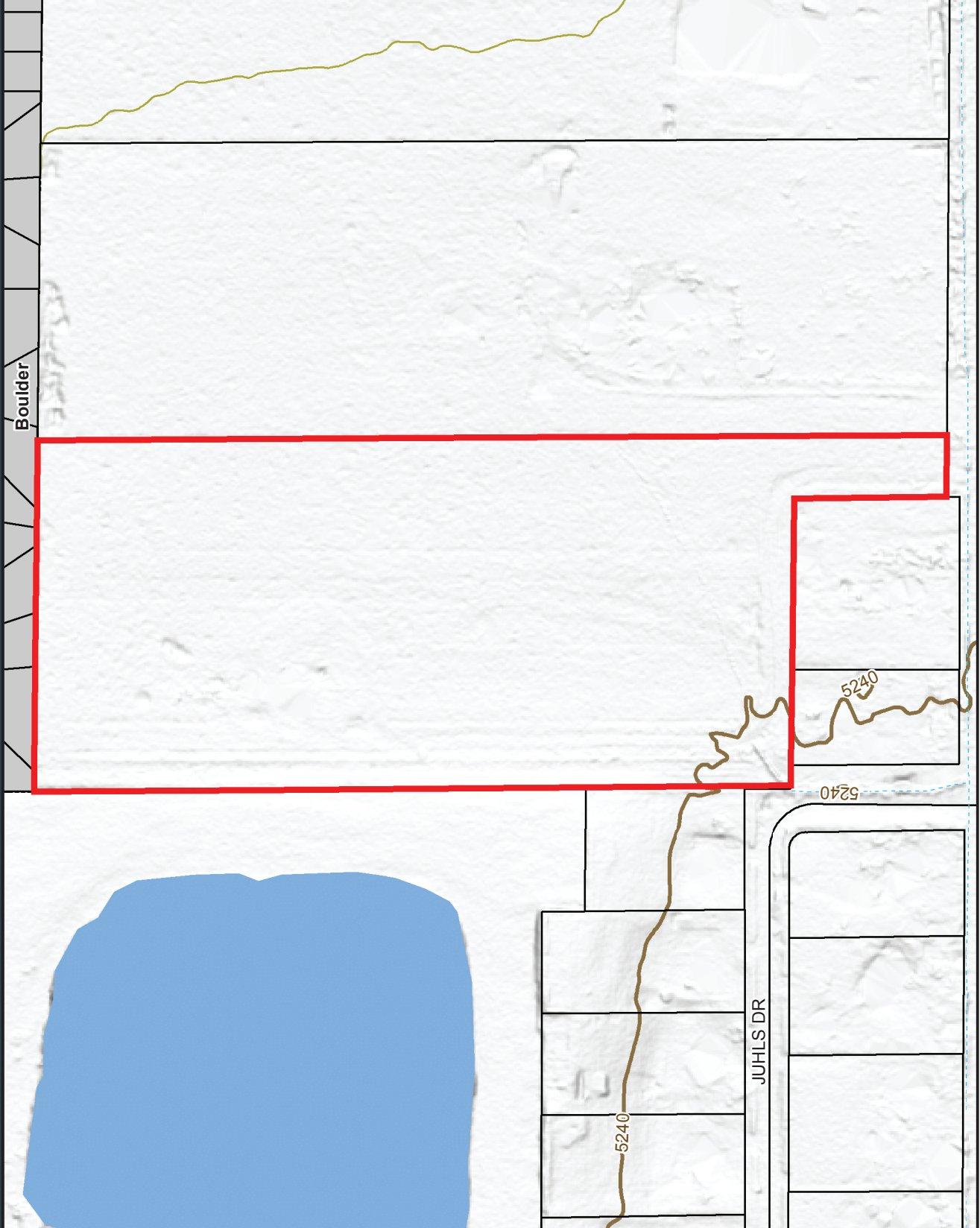


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Elevation Contours

5775 JAY



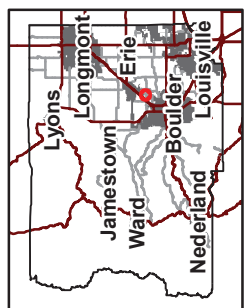
Boulder

- Subject Parcel
- Contours 40'
- Contours 20'



0 0.015 0.03 Miles

Area of Detail Date: 8/23/2024



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sgambrel

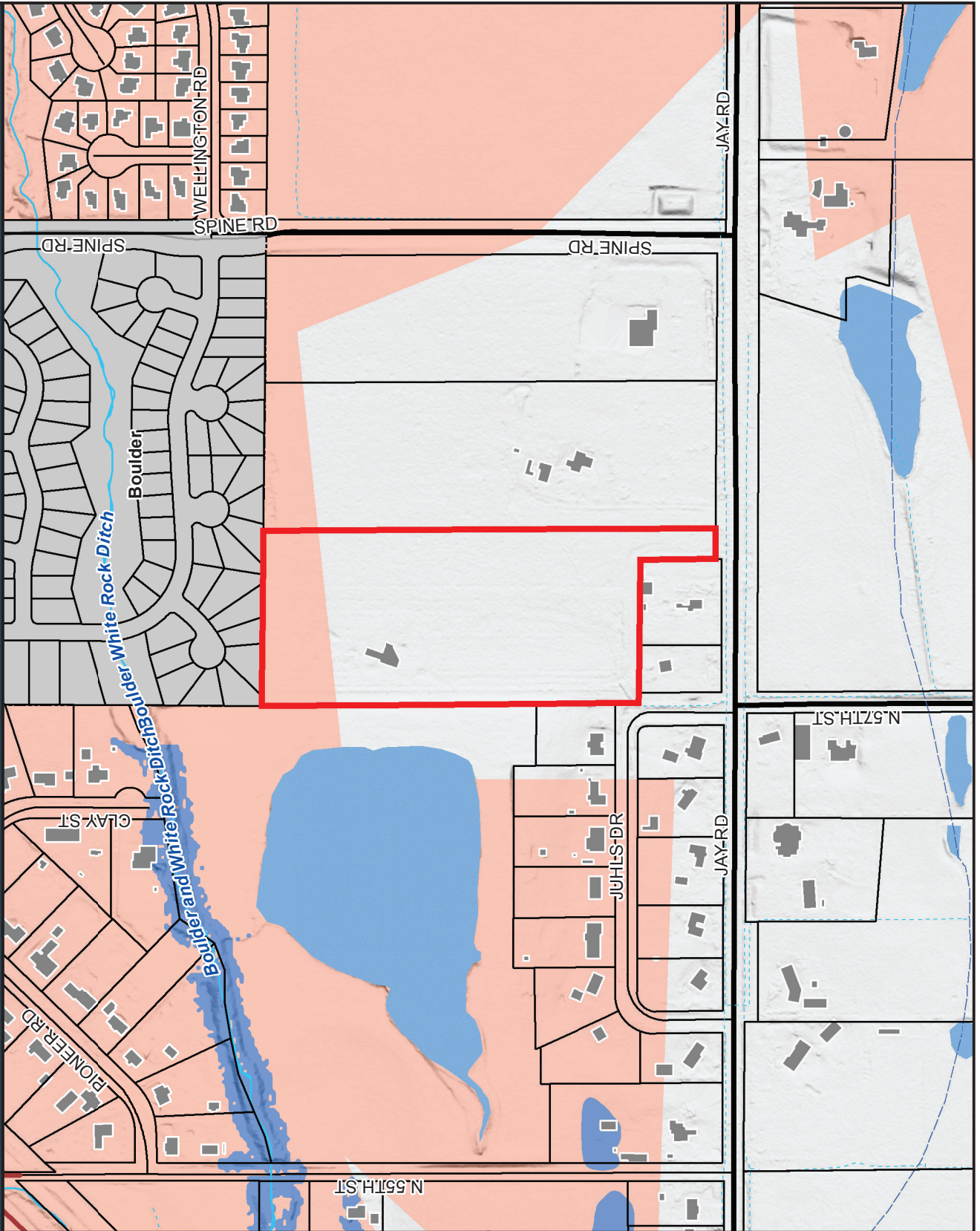




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Geologic Hazards

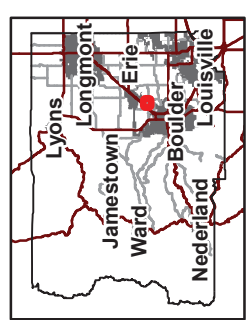
5775 JAY



-  Subject Parcel
-  High Swelling Soil Potential



Area of Detail Date: 8/23/2024



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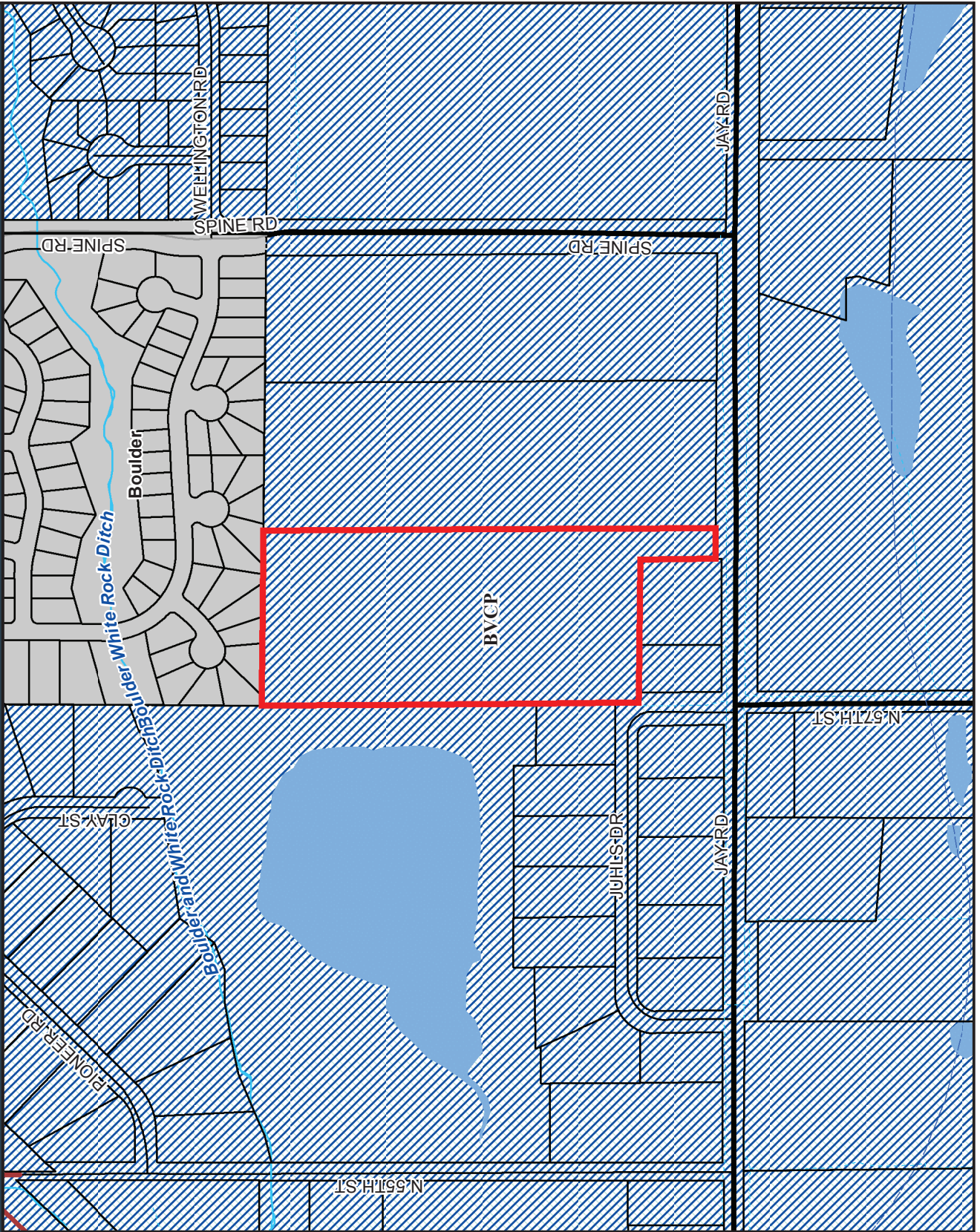


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Planning Areas

5775 JAY

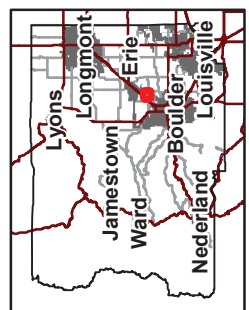


- Subject Parcel
- Airport Influence**
- Airport Influence
- Active IGA Boundary
- Active IGA Designation**
- BVCP



0 0.035 0.07 Miles

Area of Detail Date: 8/23/2024



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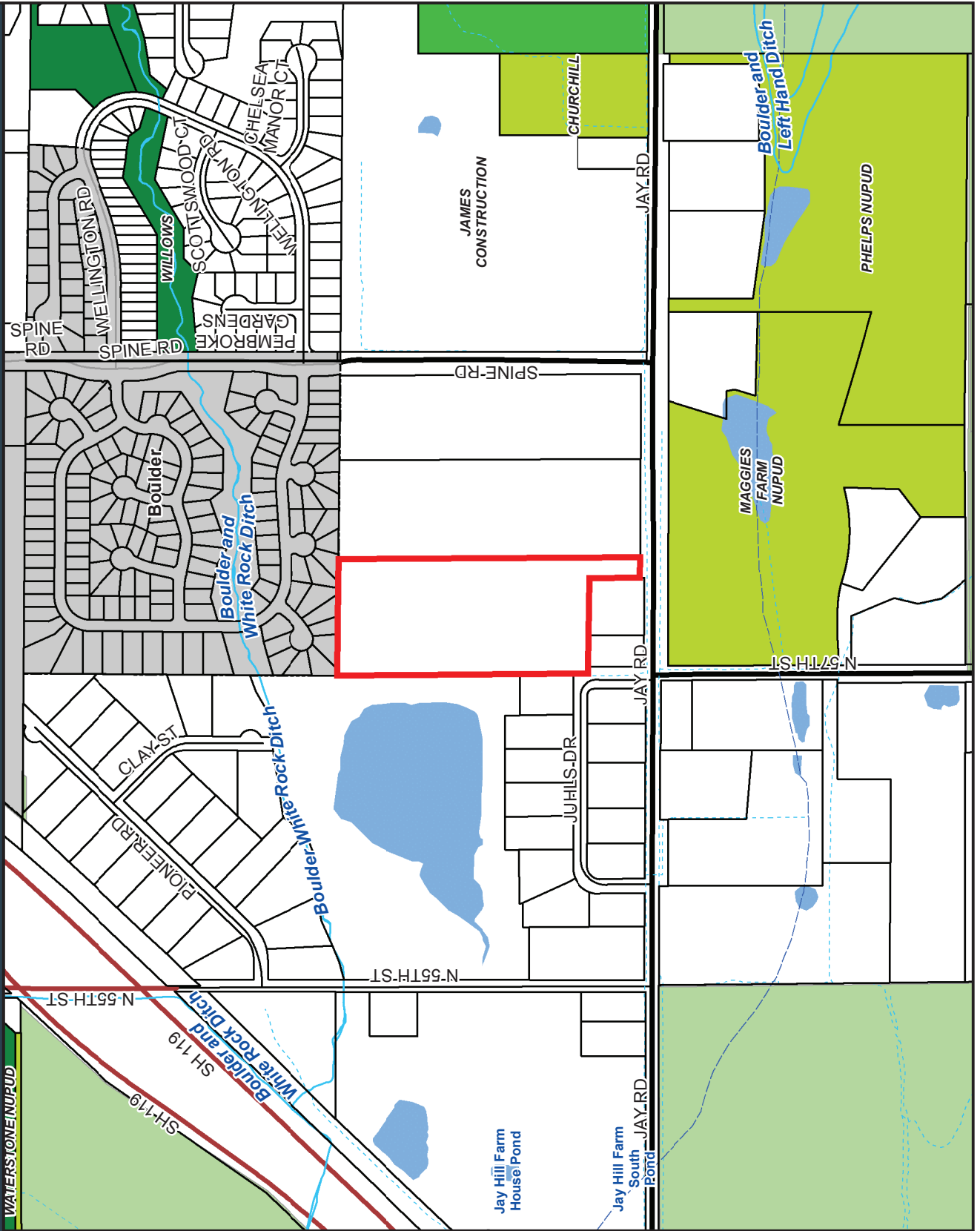


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Public Lands & CEs

5775 JAY

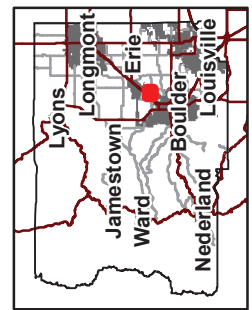


- Subject Parcel
- Boulder County Open Space**
- County Open Space
- Joint County/Municipal Open Space
- County Conservation Easement
- OSMP Properties



0 0.05 0.1 Miles

Area of Detail Date: 8/23/2024



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Narrative for 5775 Jay Road, Boulder

Project: Ritzer Addition/Remodel

Proposed Remodel and Addition Overview

We are excited to present our vision for our home remodel and small addition that we believe enhances both its aesthetic and functional value while preserving the core character of the property. These changes will significantly improve the home's visual appeal and contribute positively to the neighborhood.

The current state of the house has been recognized as an issue in the community, with people expressing concerns about the current condition and the unattractive garage roofline. Our remodel project aims to address these concerns with thoughtful, modern updates that integrate seamlessly into the neighborhood's architecture.

Most of the new square footage will be within the existing building footprint, with only 178 square feet added to the west side.

1. Addition Above the Garage

By adding a second level above the garage, we will not only improve the aesthetic harmony of the house but also create much-needed functional space for our large family. With two parents working from home and several children taking online classes, the additional space will greatly enhance the home's livability and allow for more efficient use of the interior.

- **Proposed addition:** 748 sq ft
- **Demolition of existing storage room:** 242 sq ft
- **Net addition:** 506 sq ft

2. Greenhouse Conversion into Front Door/Foyer/Exterior Front Patio Area

The front of the house currently lacks curb appeal, with no formal front entry or covered space. We propose repurposing the existing "greenhouse" space to create a traditional front door, foyer, and covered porch area, staying within the existing greenhouse footprint. This change will dramatically enhance the home's appearance without altering the roofline, providing both aesthetic and practical benefits.

- **Demolition of greenhouse:** 460 sq ft
- **New interior foyer:** 198 sq ft
- **New exterior covered front porch:** 262 sq ft
- **Total change in interior space:** -262 sq ft

3. West Wall Popout and Backyard Patio

To create a more open and inviting indoor-to-outdoor living space, we plan to align the west wall of the home, improving the flow between the kitchen, dining, and family room. This will also allow us to add a new covered patio at the back, enhancing our ability to enjoy the outdoors in a comfortable, functional space.

Narrative for 5775 Jay Road, Boulder

Project: Ritzer Addition/Remodel

- **West wall fill-in (walkway):** 80 sq ft
- **West wall fill-in (covered patio):** 98 sq ft
- **Total addition:** 178 sq ft

4. Add New Garden Shed

We would like to add a 12' x 24' garden shed to provide storage for essential gardening tools, equipment, and machinery, such as our riding mower and snow plow, which are necessary for maintaining our 12-acre parcel.

- **12 x 24 garden shed:** 288 sq ft

Summary of our proposed changes:

- **New conditioned space:** 1,124 sq ft (garage addition, foyer, west wall alignment)
- **Demolition space:** 702 sq ft (storage room above garage, greenhouse)
- **New outside covered space:** 982 sq ft (front porch, back patio)
- **New garden shed:** 288 sq ft

We believe this remodel/addition project will not only benefit our family by providing essential living space but will also significantly improve the overall appearance of the property, positively impacting the neighborhood.

Thank you for your time and consideration.

Josh and Andrea Ritzer (the new owners)

We are currently in the process of purchasing 5775 Jay Road. Our close of escrow date is October 11th, 2024. Our family will be moving in as soon as the remodel is completed.

Site Plan Review Fact Sheet

The applicant(s) is/are required to complete each section of this Site Plan Review (SPR) Fact Sheet even if the information is duplicated elsewhere in the SPR application. Completed Fact Sheets reduce the application review time which helps expedite the Director's Determination. Please make duplicates of this SPR Fact Sheet if the project involves more than two structures.

Structure #1 Information

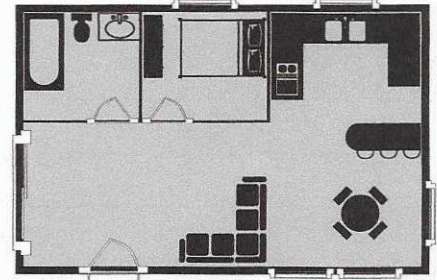
Type of Structure: (e.g. residence, studio, barn, etc.)		Residence			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		4,984	Deconstruction: 702		
		sq. ft.	sq. ft.		
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Non-Residential
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.	Same	
First Floor:	376	sq. ft.	sq. ft.	Exterior Wall Material	Hardi siding
Second Floor:	748	sq. ft.	sq. ft.	Exterior Wall Color	Light Gray
Garage:				Roofing Material	Asphalt + Metal
<input type="checkbox"/> Detached				Roofing Color	Charcoal + Dove Gray
<input type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.		
*Covered Porch:	sq. ft.	sq. ft.	sq. ft.	Total Bedrooms	5
Total:	1,124	sq. ft.	sq. ft.		

Project Identification:

Project Name:	Ritzer Remodel/Addition
Property Address/Location:	5775 Jay Road, Boulder
Current Owner:	Luna Family Revocable Trust
Size of Property in Acres:	12.33 acres

Determining Floor Area

Floor Area is measured in terms of square feet. The total square footage is as everything within the exterior face of the exterior walls including garages and basements. Covered porch area that is attached to the principal structure is not included (see Article 18-131A). The shaded area on the diagram indicates the area counted as square feet.



Structure #2 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		Garden shed			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		N/A	Deconstruction: 288		
		sq. ft.	sq. ft.		
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> No <input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Non-Residential
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.	10'	
First Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Material	Wood
Second Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Color	Light Gray
Garage:				Roofing Material	Asphalt
<input type="checkbox"/> Detached				Roofing Color	Charcoal
<input type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.		
*Covered Porch:	sq. ft.	sq. ft.	sq. ft.	Total Bedrooms	—
shed			288		
Total:	sq. ft.	sq. ft.	sq. ft.		

Residential vs. Non-Residential Floor Area

Residential Floor Area includes all attached and detached floor area (as defined in Article 18-162) on a parcel, including principal and accessory structures used or customarily used for residential purposes, such as garages, studies, pool houses, home offices and workshops. Gazebos and carports up to a total combined size of 400 square feet are exempt. Barns used for agricultural purposes are not considered residential floor area.

Note: If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Site Plan Review and shown on this Fact Sheet.

If a Limited Impact Special Review is required, then call 303-441-3930 and ask for a new Pre-Application conference for the Limited Impact Special Review.

*See Article 18-131A for definition of covered porch.

Grading Calculation

Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Review is required. Limited Impact Special Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).

If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading

This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

Earth Work and Grading Worksheet:

	Cut	Fill	Subtotal
Driveway and Parking Areas			
Berm(s)			
Other Grading			
Subtotal			Box 1
* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.			
	Cut	Fill	Total
Foundation			
Material cut from foundation excavation to be removed from the property			

Excess Material will be Transported to the Following Location:

Excess Materials Transport Location:

Narrative

Use this space to describe any special circumstances that you feel the Land Use Office should be aware of when reviewing your application, including discussion regarding any factors (listed in Article 4-806.2.b.i) used to demonstrate that the presumptive size limitation does not adequately address the size compatibility of the proposed development with the defined neighborhood. If more room is needed, feel free to attach a separate sheet.

See Narrative pages included

Is Your Property Gated and Locked? *No*

Note: If county personnel cannot access the property, then it could cause delays in reviewing your application.

Certification

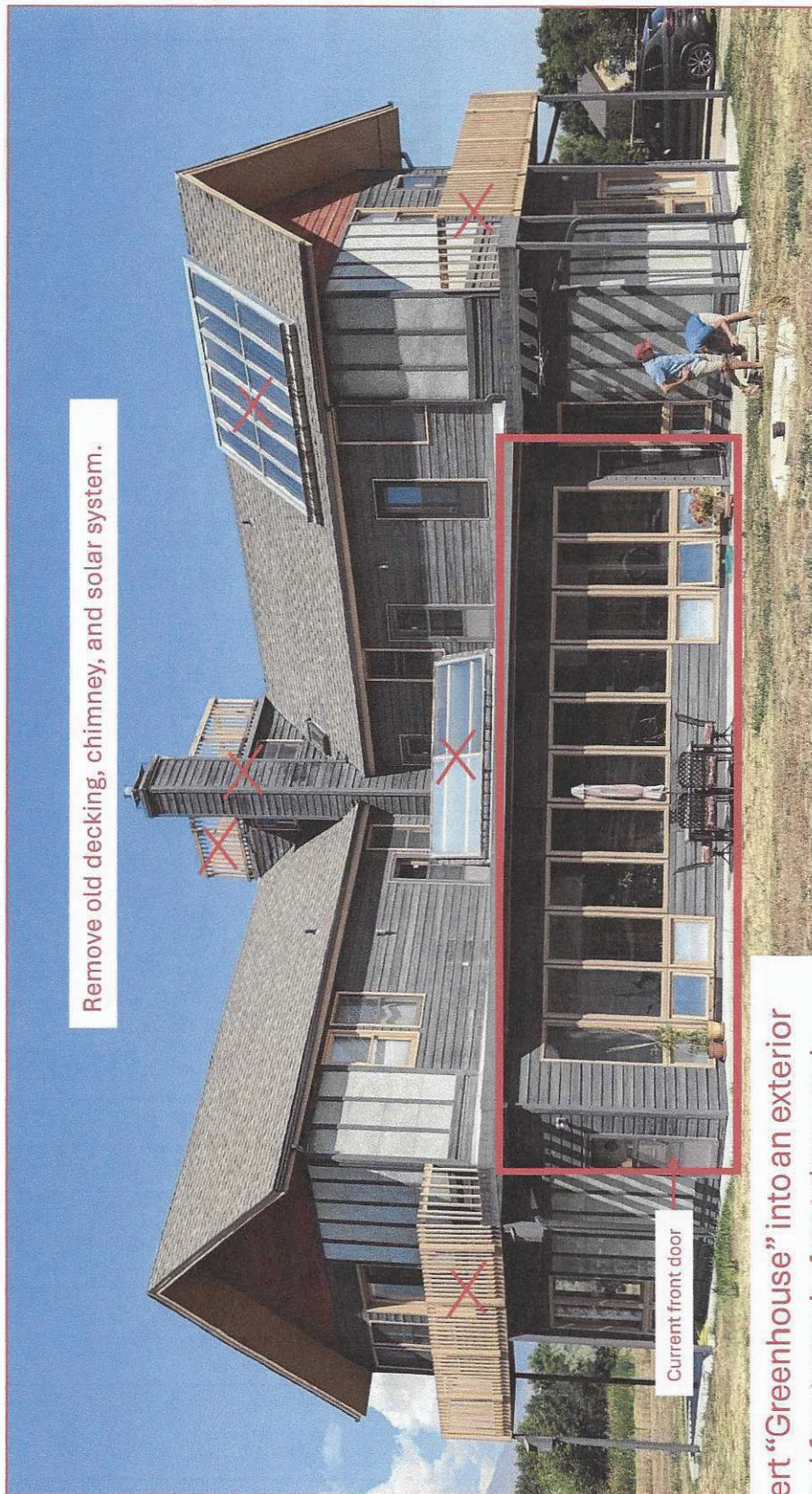
I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature <i>Josh Ritter</i>	Print Name <i>Josh Ritter</i>	Date <i>9/30/24</i>
------------------------------	-------------------------------	---------------------

5775 Jay Road
Ritzer Addition/Remodel

South Side

East Side



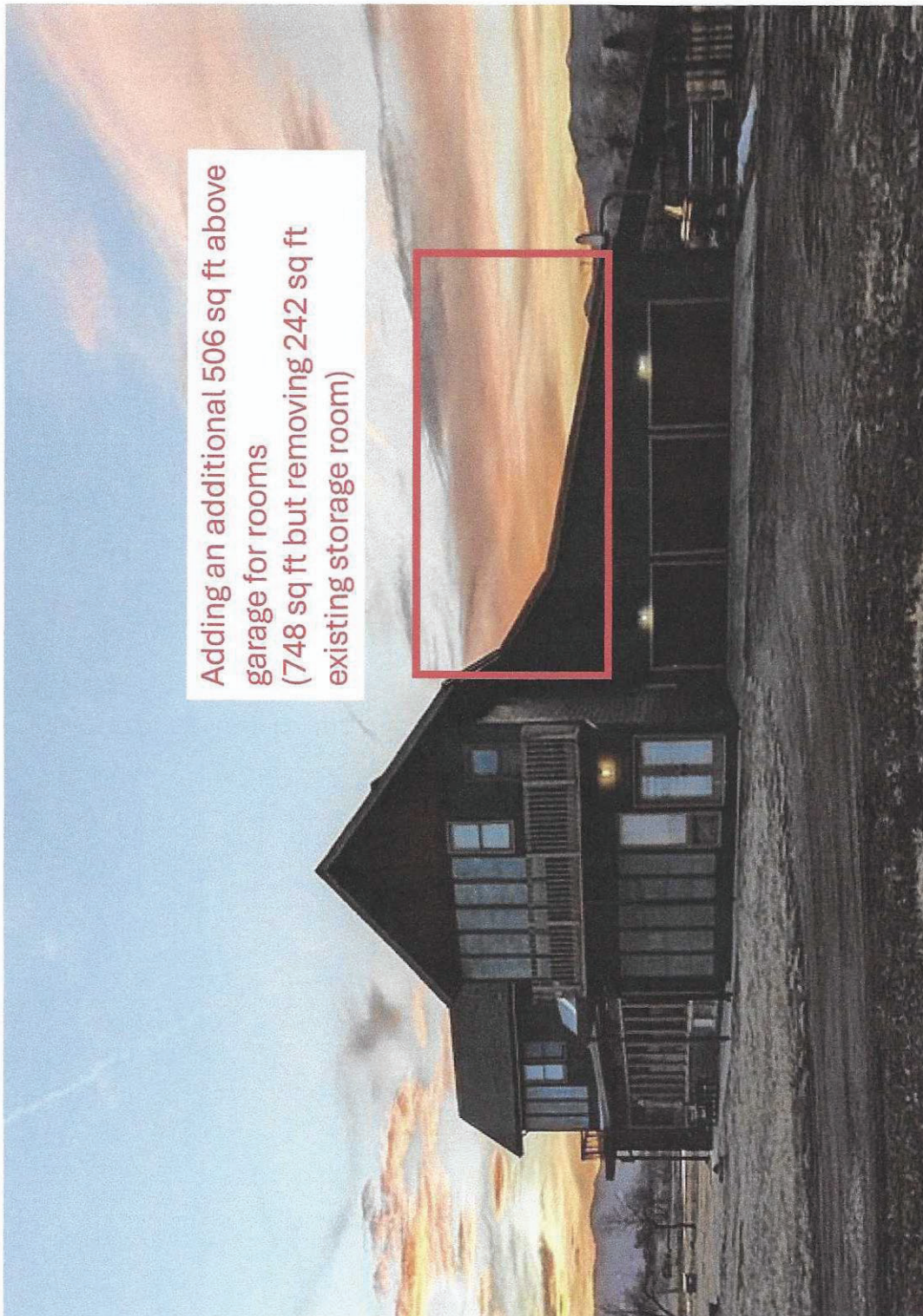
Remove old decking, chimney, and solar system.

Current front door

Convert "Greenhouse" into an exterior covered front porch, front door, and interior foyer to increase curb appeal

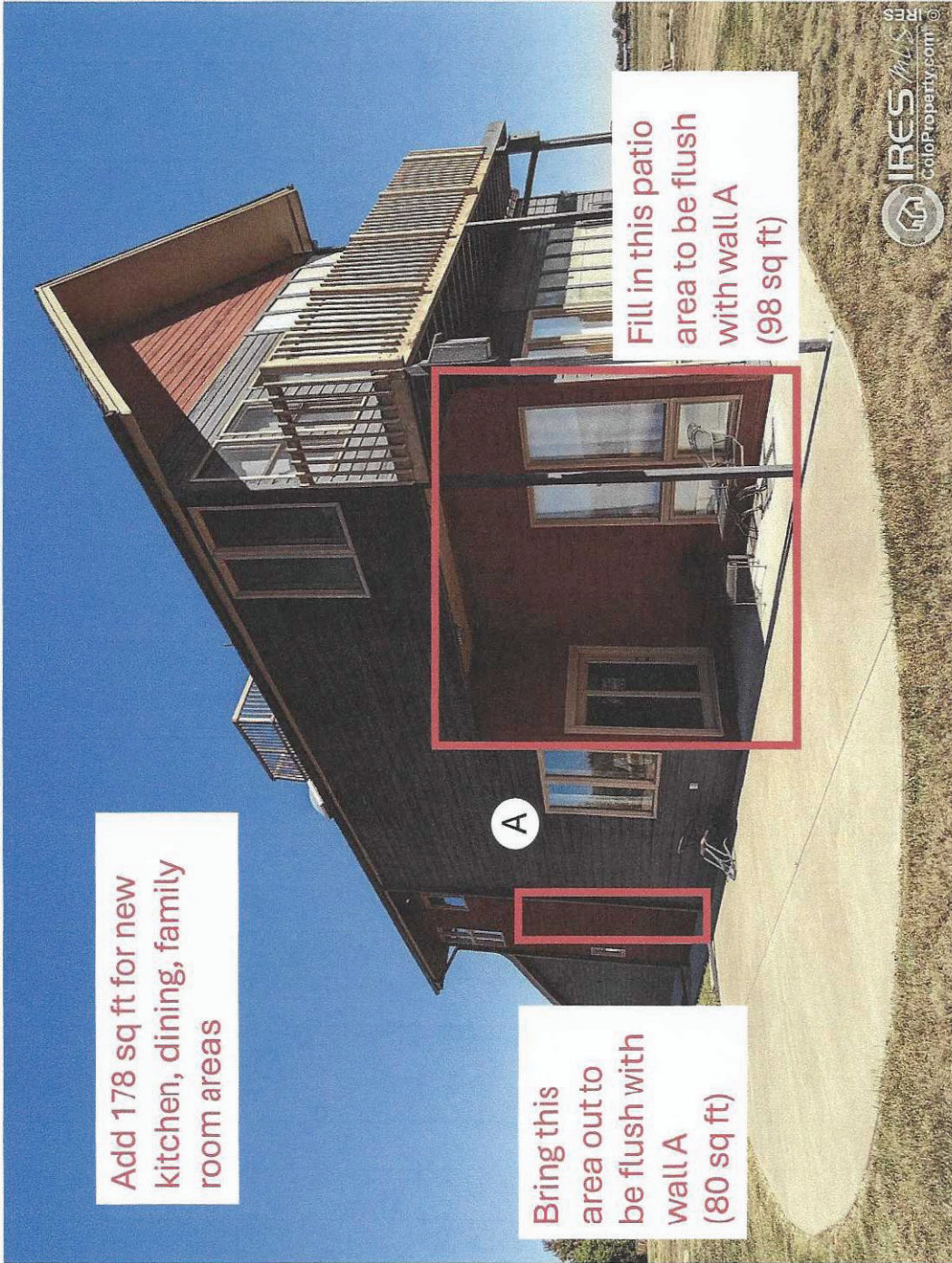
Southeast Side

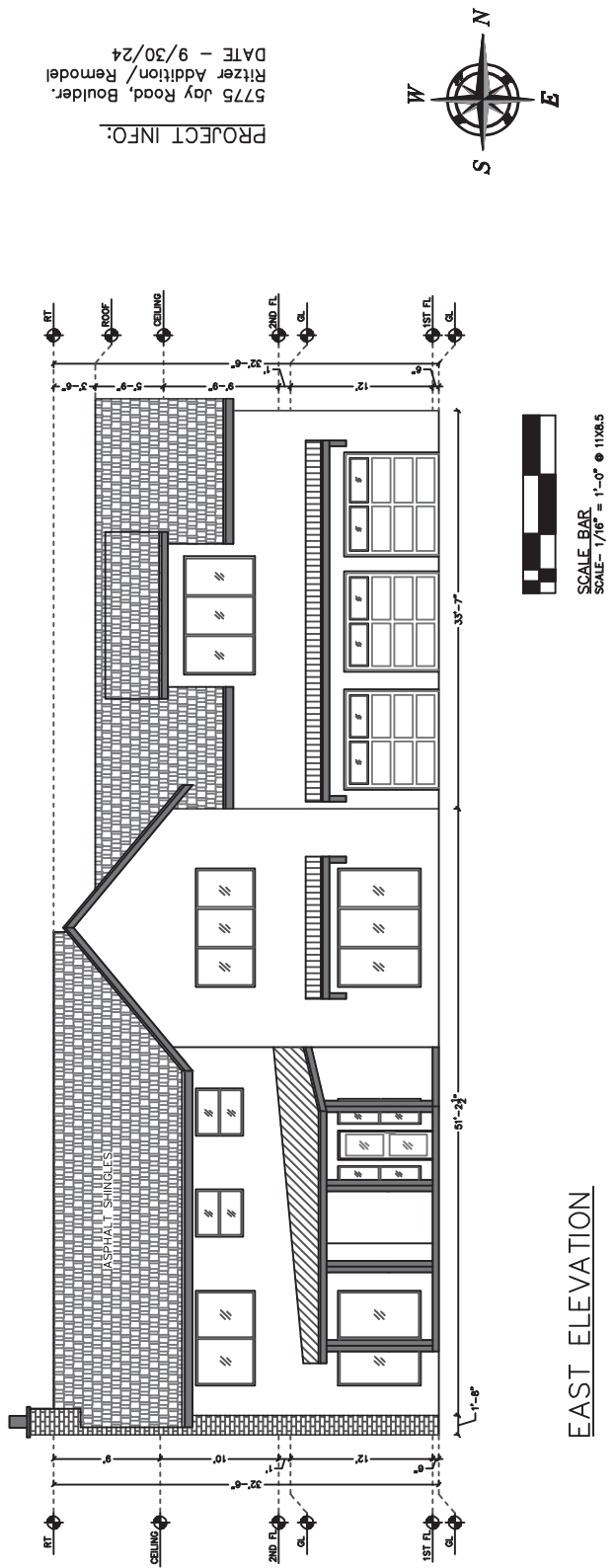
5775 Jay Road - East Side

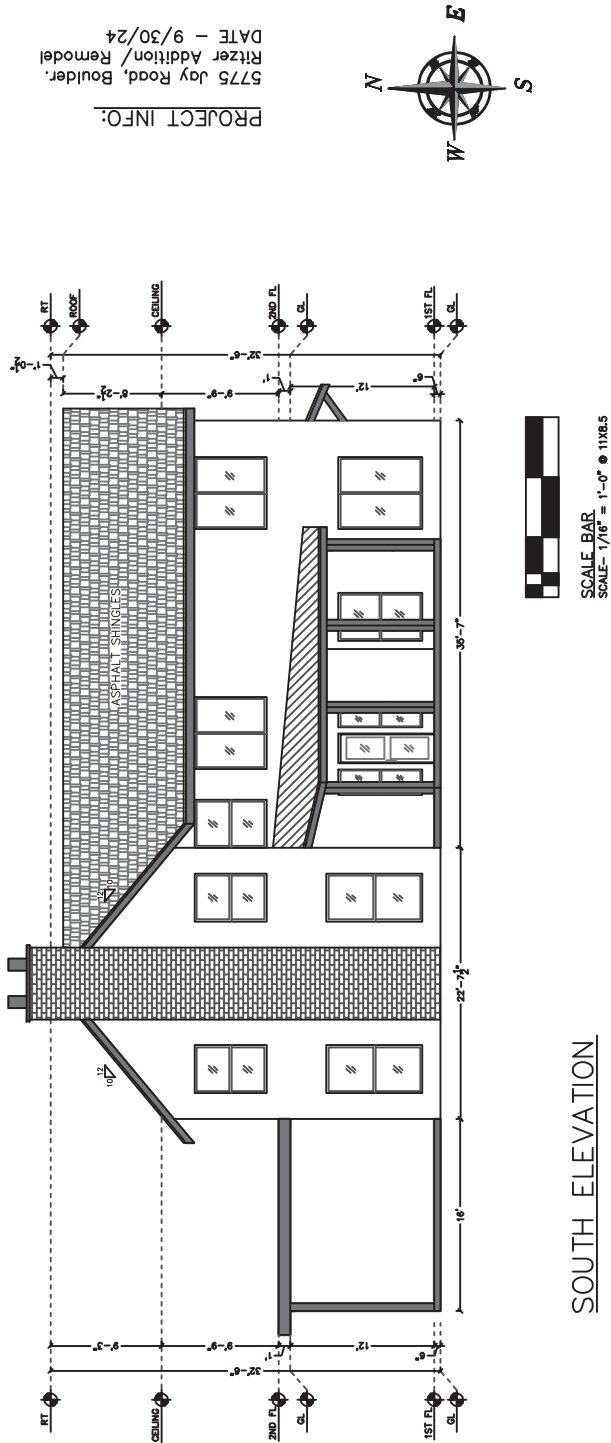


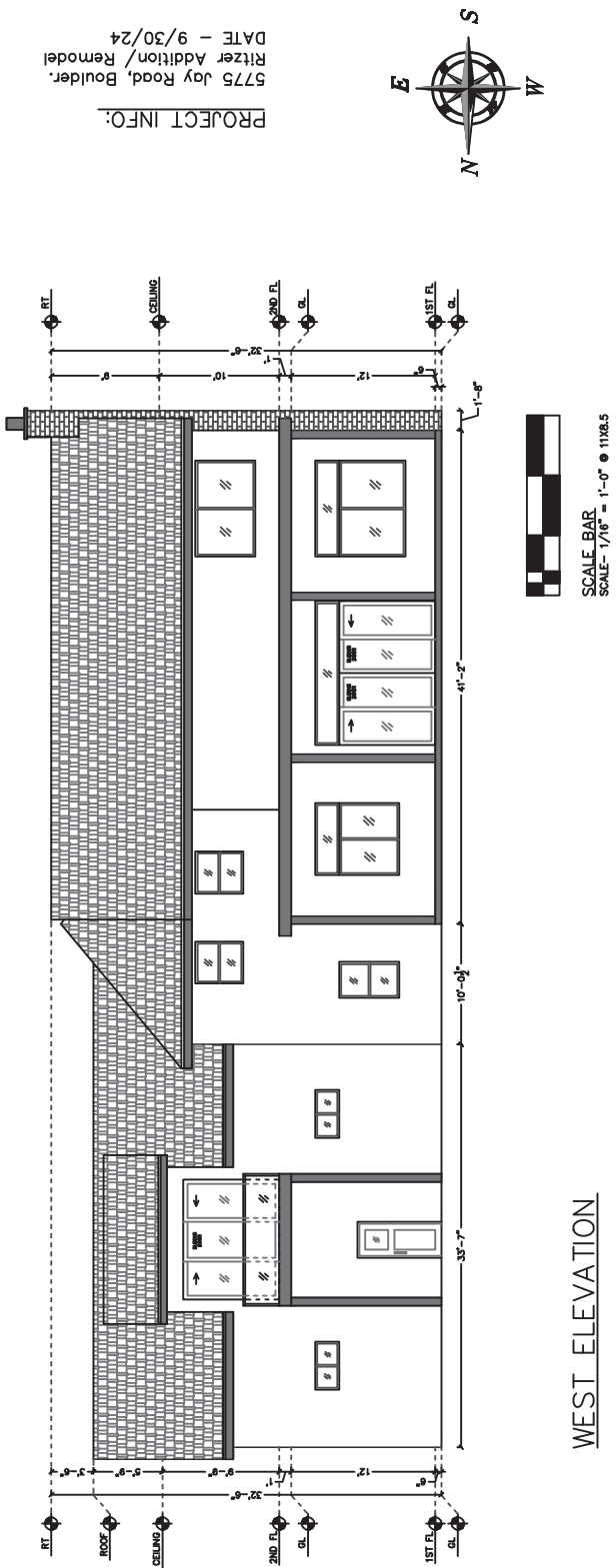
Adding an additional 506 sq ft above garage for rooms (748 sq ft but removing 242 sq ft existing storage room)

5775 Jay Road - West Side

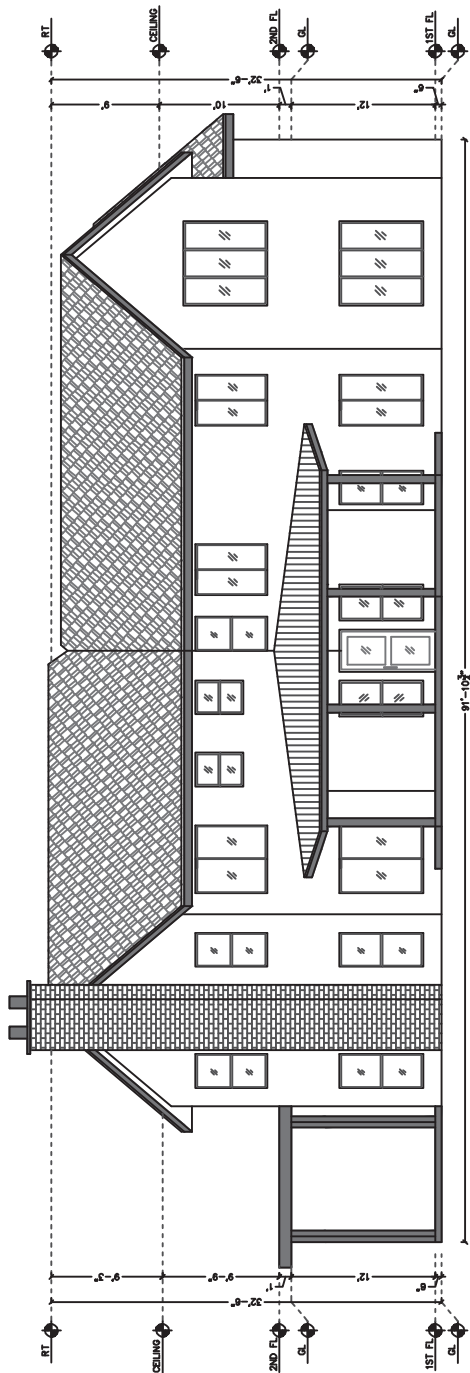








PROJECT INFO:
5775 Jay Road, Boulder,
Ritzer Addition/
Remodel
DATE - 9/30/24



SOUTH-EAST ELEVATION

Add Garden Shed



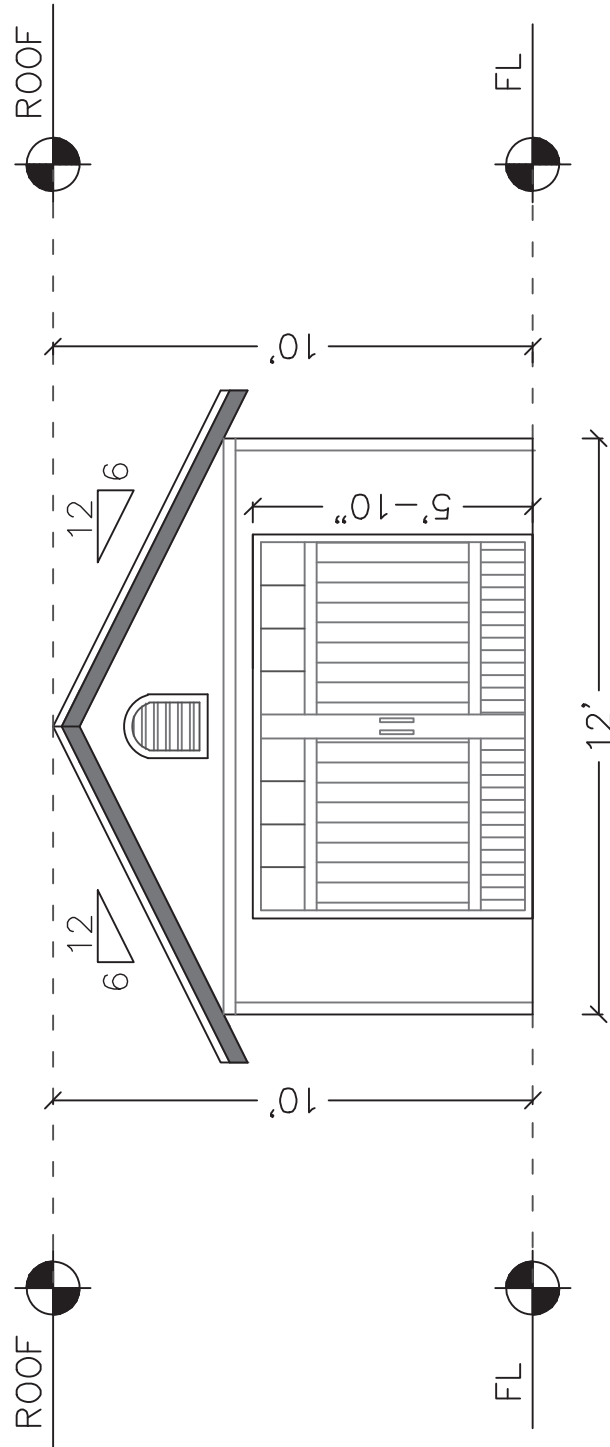
12' wide x 24' long x 10' high

288 sq ft

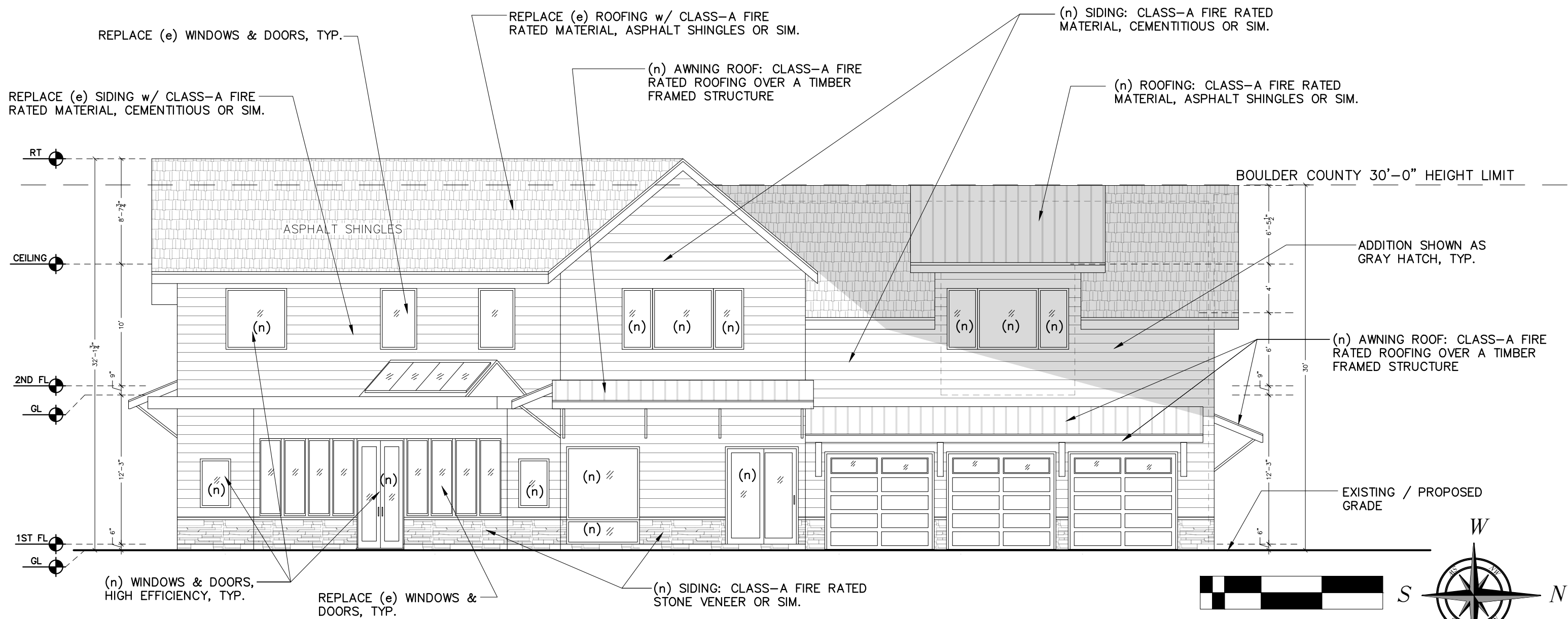
Install northwest of the house where the new garden is going.

5775 Jay Road, Boulder,
Ritzer Addition/Remodel
DATE - 9/30/24

PROJECT INFO:

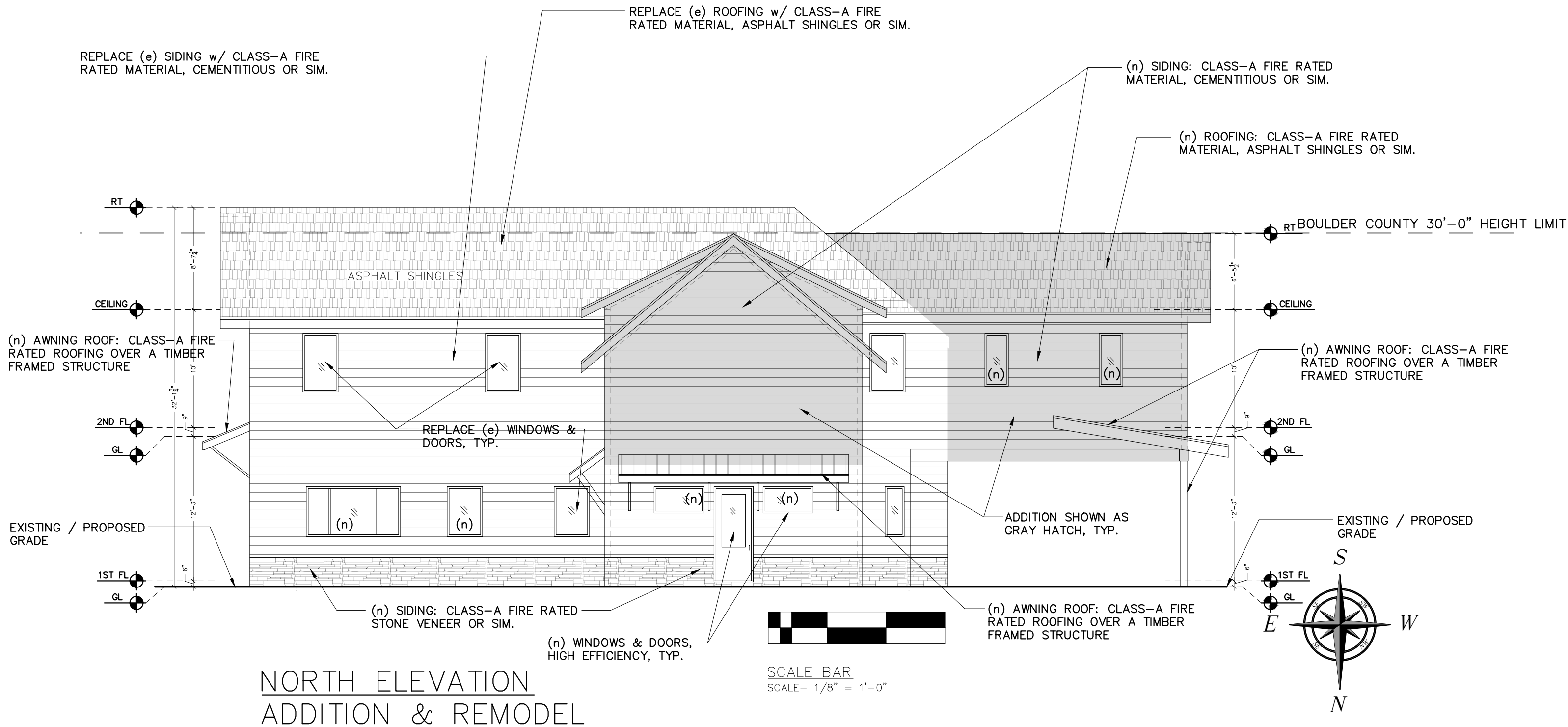


GARDEN SHED FRONT ELEVATION
SCALE- 1/4" = 1'-0" @ 11X8.5

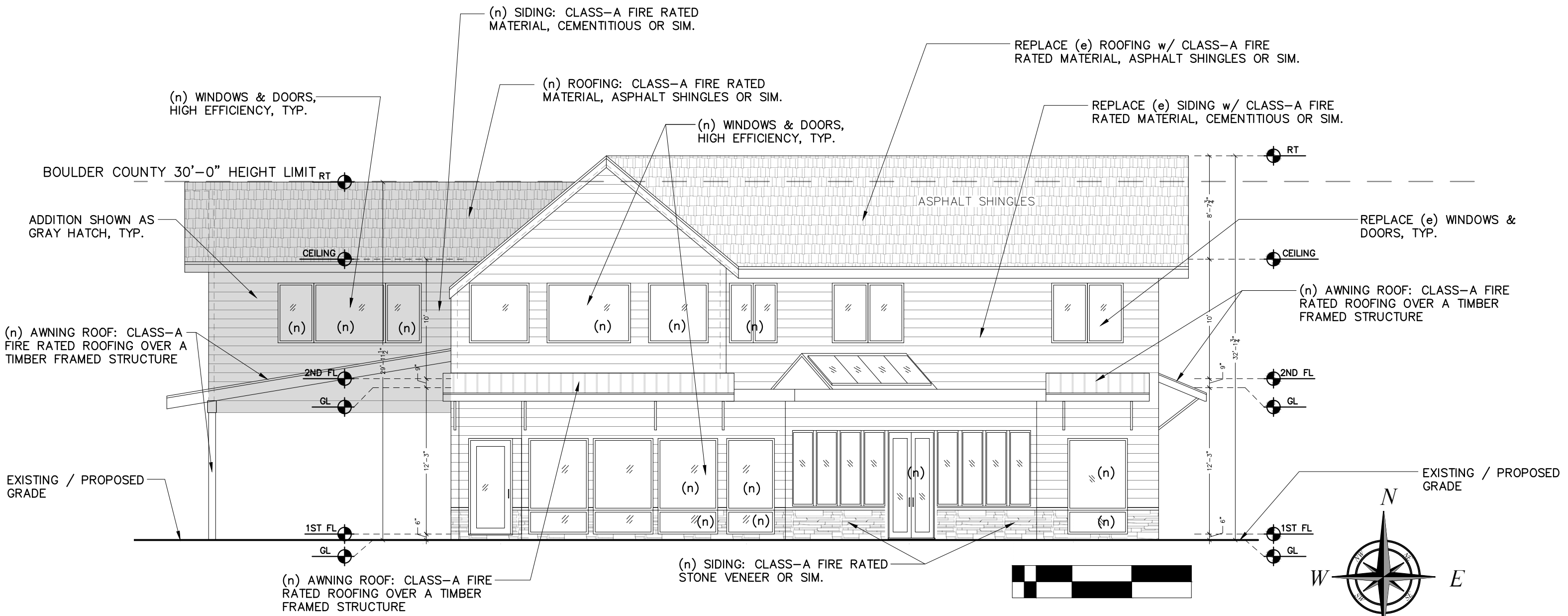


**EAST ELEVATION
ADDITION & REMODEL**

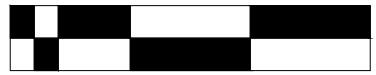
5775 JAY ROAD, BOULDER, CO. 80301
ADDITION & REMODEL



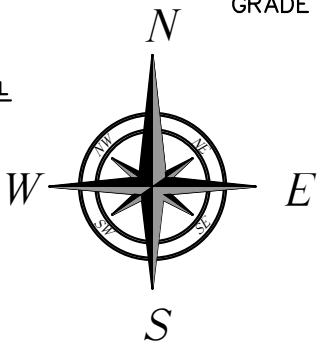
5775 JAY ROAD, BOULDER, CO. 80301
ADDITION & REMODEL



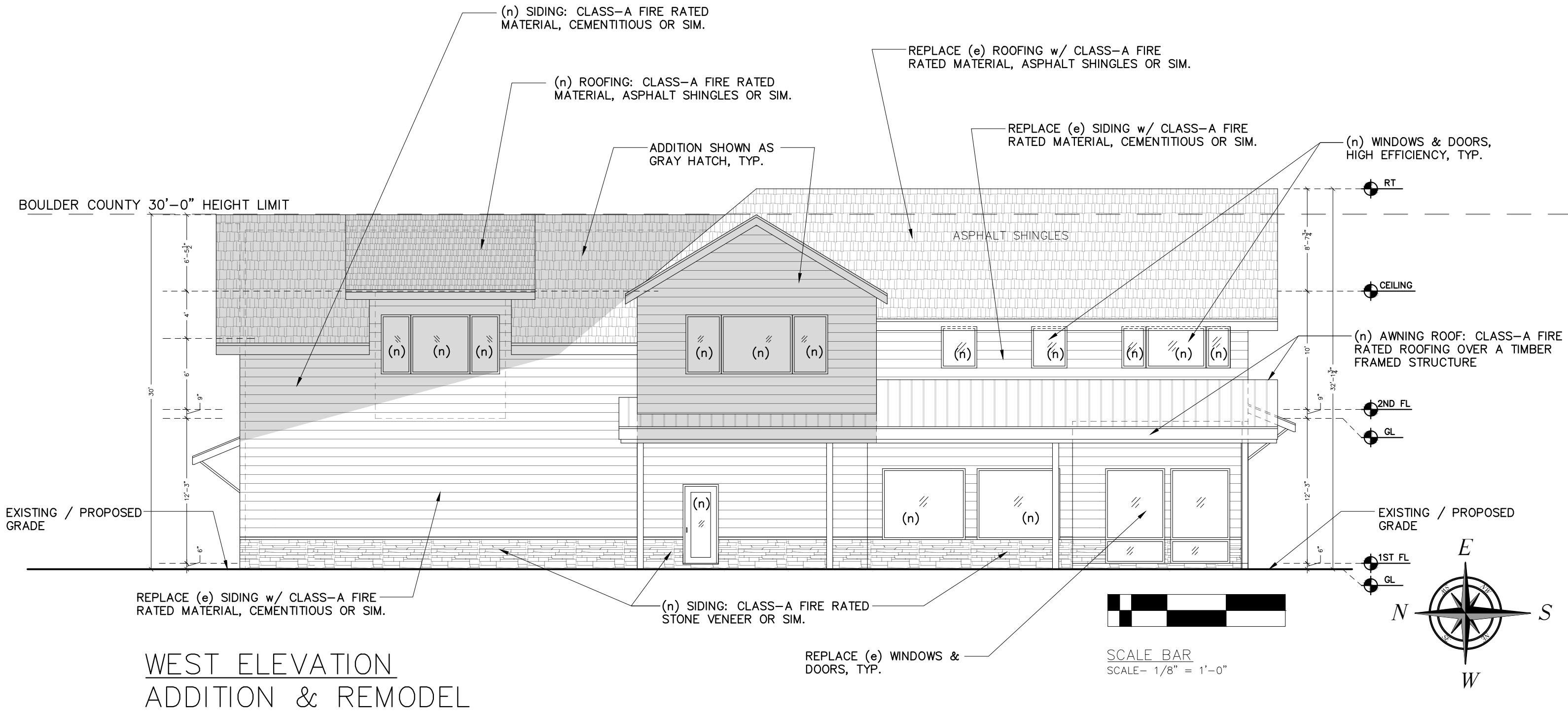
SOUTH ELEVATION
ADDITION & REMODEL



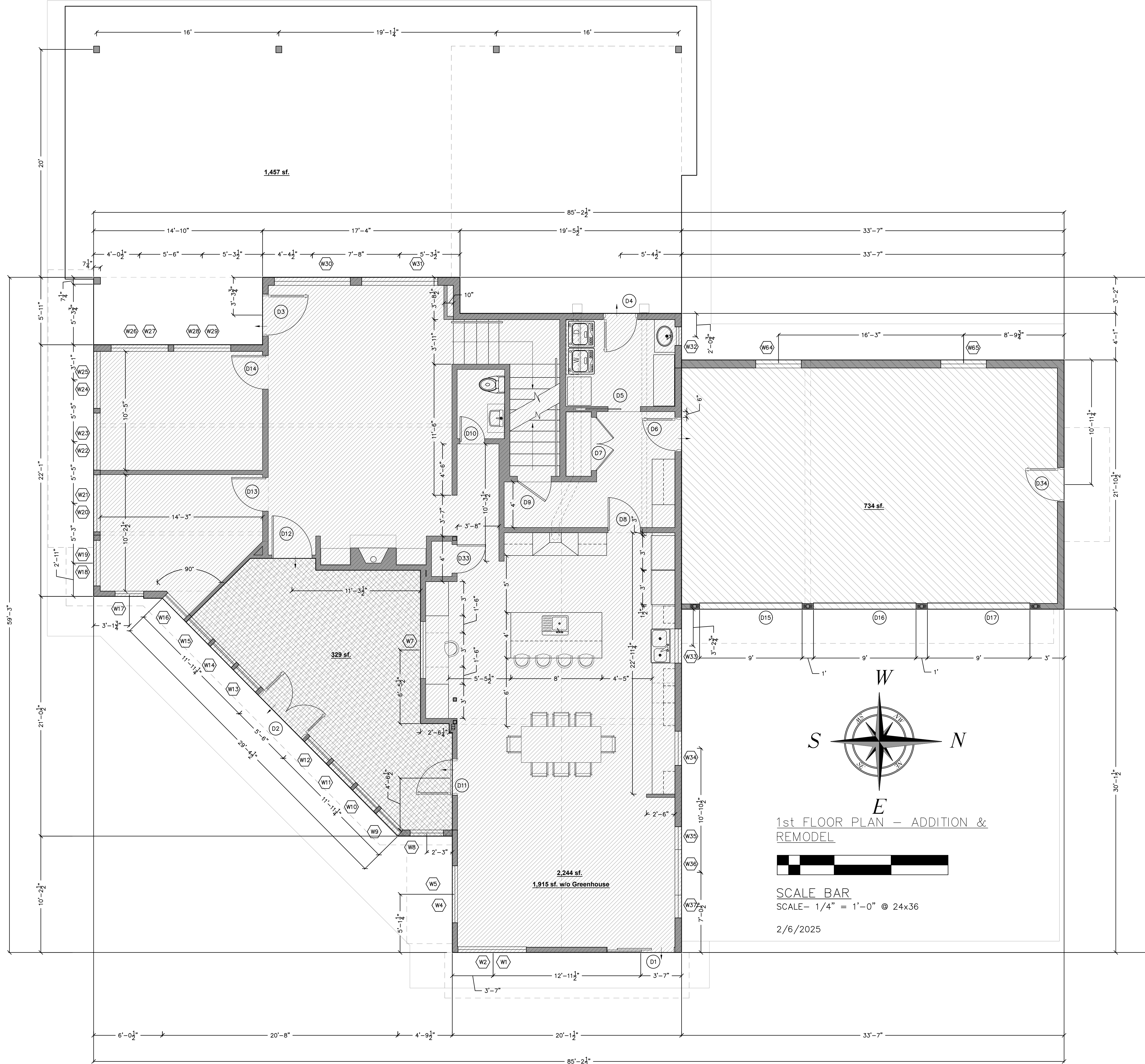
SCALE BAR
SCALE- 1/8" = 1'-0"



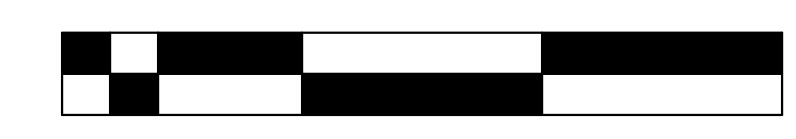
5775 JAY ROAD, BOULDER, CO. 80301
ADDITION & REMODEL



5775 JAY ROAD, BOULDER, CO. 80301
ADDITION & REMODEL



1st FLOOR PLAN - ADDITION & REMODEL



SCALE BAR
SCALE - 1/4" = 1'-0" @ 24x36

2/6/2025

5775 JAY ROAD, BOULDER, CO. 80301
INTERIOR REMODEL

Building Safety & Inspection Services Team

MEMO

TO: Pete L'Orange, Senior Planner
FROM: Michelle Huebner, Plans Examiner Supervisor
DATE: October 9, 2024

RE: Referral Response, SPR-24-0070: Ritzer Additions and Accessory Structure: Site Plan Review to deconstruct 302 square feet of residential floor area and construct 1,124 square feet of additions to an existing 5,044-square-foot house and construct a 288-square-foot accessory residential structure resulting in a total residential floor area of 6,154 square feet where the presumed compatible size is 5,479 square feet.

Location: 5775 Jay Road

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permits.** A building permit, plan review and inspections approvals are required for the proposed addition and convert the existing greenhouse to living area. A separate building permit is required for the shed.

Please refer to the county's [adopted 2015 editions of the International Codes and code amendments](#), which can be found via the internet under the link: [2015 Building Code Adoption & Amendments](#)

Stairs are not permitted or approvable in crawlspaces. The crawlspace must be less than 6'-8" or will count as basement area. The [2015 Building Code Adoption & Amendments](#)

definitions:

CRAWL SPACE. An under floor space below the first story floor of the building that does not meet the definition of story above grade plane, that has a ceiling height measured from the crawlspace grade or floor to the bottom of the floor joists above of less than six feet 8 inches, and that does not contain interior stairs, windows, wall, and ceiling finish materials, trim or finished flooring

Floor area is measure to the outside of outside walls and includes the stairs on each level. The [2015 Building Code Adoption & Amendments](#) definitions:

AREA, FLOOR. The area of the building, existing or new, under consideration including basements and attached garages calculated without deduction for corridors, stairways, closets, the thickness of interior walls, columns, or other features as measured from the exterior face of the exterior walls.

2. **Automatic Fire Sprinkler System.** According to R313.2.1 of the currently adopted 2015 Boulder County Building Code this addition triggers the requirement for an automatic residential fire sprinkler system to be installed throughout the home. This system shall be designed and installed in accordance with NFPA 13D or IRC Section P2904.

R313.2.1 Additions to existing one- and two-family dwellings. *An automatic residential fire sprinkler system shall be installed throughout existing one- and two-family dwellings with additions when the sum of the total floor area of the addition plus the existing one- and two-family dwelling is increased to 4,800 sq. ft. or greater. The floor area of detached structures having floor areas of 120 square feet or greater that are located less than 50 feet from the dwelling shall be included in the floor area calculated for the dwelling.*

Exceptions:

1. One-time additions not exceeding 200 square feet in floor area, and
 2. Carport additions which are exempt from the definition of “Residential Floor Area” in Section 18-189D of the Boulder County Land Use Code.
3. **BuildSmart.** (A HERS rating is required for this project) Please refer to the county’s adoption and amendments to Chapter 11 of the IRC, the county’s “BuildSmart” program, for the applicable requirements for energy conservation and sustainability for residential additions and new residential buildings. Please be aware that there are energy related requirements of this code that may require the use of renewable energy systems (such as rooftop solar systems) that will also need to be approved by your electric utility provider. In some cases, there may be limitations on the size of on-site systems allowed by your utility provider that could constrain the project design. We strongly encourage discussions between the design team and the utility company as early in the process as possible in order to identify these constraints.
 4. **Design Wind and Snow Loads.** The design wind and snow loads for the property are 155 mph (Vult) and 40 psf, respectively.
 5. **Ignition-Resistant Construction and Defensible Space.** Please refer to Section R327 of the Boulder County Building Code for wildfire hazard mitigation requirements, including ignition-resistant construction and defensible space.

6. **Plan Review.** The items listed above are a general summary of some of the county's building code requirements. A much more detailed plan review will be performed at the time of building permit application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met. Our [Residential Plan Check List](#) and other Building Safety publications can be found at: [Building Publications, Applications and Forms - Boulder County](#)

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-264.



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
303-441-3930 • www.BoulderCounty.gov

October 28, 2024

TO: Pete L'Orange, Senior Planner; Community Planning & Permitting, Development Review Team - Zoning

FROM: Tim Oliver, Planner II; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # SPR-24-0070: Ritzer Additions and Accessory Structure

The Development Review Team – Access & Engineering staff have reviewed the above referenced docket and have the following comments:

1. The subject property is accessed via Jay Road, an asphalt Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Minor Arterial. Legal access has been demonstrated via adjacency to this public ROW.
2. The driveway design must comply with the Multimodal Transportation Standards (the Standards) for residential development, including without limitation:
 - a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
 - b. Standard Drawing 11 – Private Access
 - c. Standard Drawing 14 – Access with Roadside Ditch
 - d. Standard Drawing 15 – Access Profiles Detail
 - e. Standard Drawing 16 – Access Grade & Clearance
 - f. Standard Drawing 17 – Access Pull-Outs
 - g. Standard Drawing 18 – Access Turnaround
 - h. Standard Drawing 19 – Typical Turnaround & Pullout Locations

The driveway has an asphalt apron that does not extend 10 feet from Jay Road. The asphalt apron will need to extend at least 10 feet from Jay Road per Standard Drawing 14. The driveway is over 400 feet in length, and there is no proposed emergency turnaround on the proposed plans. An emergency pullout is required every 400 feet, and an emergency turnaround is required to be at least 50 feet from the front of the house per Standard Drawings 17, 18, and 19 respectively.

At building permit, submit revised plans that show a 10 foot asphalt apron, emergency pullouts every 400 feet, and an emergency turnaround that comply with the Standards.

At final inspection, the Community Planning & Permitting Department must verify that the access and driveway has been constructed to comply with the Standards.

3. The eastern inlet of the existing culvert in the roadside ditch along Jay Road is dented, and the headwall is destroyed. The slope above the headwall is steep and eroded. The headwall around the western inlet is cracked. Standard Drawing 11 shows that the slope to the top of the culvert must be no steeper than 2:1.

At building permit, restore the eastern inlet of the culvert, replace or repair both headwalls, and regrade the slope from the driveway to the top of the eastern headwall to comply with the Standards.

4. During construction, all vehicles shall be staged on the subject property or to one side of Jay Road to not impede the travel way. Materials, machinery, dumpsters, and other items shall be staged on the subject property.

This concludes our comments at this time.



Public Health

Environmental Health Division

October 21, 2024

TO: Staff Planner, Community Planning and Permitting

FROM: Jessica Cannon, Environmental Health Specialist

SUBJECT: SPR-24-0070: Ritzer Additions and Accessory Structure

OWNER: Ritzer

PROPERTY ADDRESS: 5775 Jay Road

SEC-TOWN-RANGE: 15 1N 70

The Boulder County Public Health (BCPH) – Environmental Health division has reviewed the submittals for the above referenced docket and has the following comments.

OWTS:

1. Boulder County Public Health issued a new permit for the installation of an absorption bed system on 3/5/79. The permit was issued for an onsite wastewater treatment system (OWTS) adequate for a 5-bedroom house. BCPH approved the installation of the OWTS on 4/21/80.
2. On 7/13/14, BCPH issued a repair permit for the installation of a 2000-gallon septic tank. The permit was issued for a tank adequate for a 5-bedroom house. BCPH approved the installation of the OWTS on 8/19/14. According to the application, the home has/will have 5 bedrooms after the addition.
3. Setbacks between all buildings and the OWTS serving this property and OWTS serving neighboring properties, must be in accordance with the Boulder County OWTS Regulations, Table 7-1. The house addition and the garden shed must be no closer than 20 feet to the absorption area and 5 feet to the septic tank. The garden cannot be on top of the absorption area. No activities or anything but native grasses should be in the absorption area. For the complete regulations, go to: <https://assets.bouldercounty.gov/wp-content/uploads/2017/05/boulder-county-ows-regulations.pdf>

Avoid Damage to OWTS:

1. Heavy equipment should be restricted from the surface of the absorption field during construction to avoid soil compaction, which could cause premature absorption field malfunction. Caution should be used in conducting trenching and excavation activities so that sewer lines and other OWTS components are not damaged.

This concludes comments from the Public Health – Environmental Health division at this time. For additional information on the OWTS application process and regulations, refer to the following website: www.SepticSmart.org. If you have additional questions about OWTS, please do not hesitate to contact HealthOWS@bouldercounty.gov.

Cc: OWTS file, owner, Community Planning and Permitting

From: [Dean Rogers](#)
To: [L"Orange, Pete](#)
Subject: [EXTERNAL] SPR-24-0070
Date: Monday, October 28, 2024 12:28:13 PM

Pete,

Boulder Rural has the following recommendations regarding SPR-24-0070, the Ritzer additions and accessory structure at 5775 Jay Road.

1. With the total square footage of the existing house and proposed additions being over 4800 sq ft, sprinklers will be required. This is per Boulder County building code and adopted Boulder Rural fire code.
2. With driveway alone being just over 1400 feet long, a cistern will be required. A pull-out or hammerhead may also be needed in the driveway.
3. Any overhead obstructions will need to be mitigated.

If I missed anything, or if there are any questions, please let me know.

Thank you,

Dean Rogers, Engineer

Boulder Rural Fire Rescue
6230 Lookout Road, Boulder, CO 80301
O 303-530-9575 | C 720-498-0019
drogers@brfr.org | www.brfr.org





Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303.571.3284
donna.l.george@xcelenergy.com

October 18, 2024

Boulder County Community Planning and Permitting
PO Box 471
Boulder, CO 80306

Attn: Pete L'Orange

Re: Ritzer Additions and Accessory Structure, Case # SPR-24-0070

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the site plan for **Ritzer Additions and Accessory Structure**. Please be aware PSCo owns and operates existing natural gas and electric facilities within the subject property. As a safety precaution, PSCo would like to remind the developer to contact Colorado 811 for utility locates prior to construction.

The property owner/developer/contractor must complete the application process for any new natural gas or electric service, or modification to existing facilities including relocation and/or removal via [xcelenergy.com/InstallAndConnect](https://www.xcelenergy.com/InstallAndConnect), *particularly if any meters are involved*.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: [Eric Olson](#)
To: [LU Land Use Planner](#)
Subject: [EXTERNAL] Project # SPR-24-0070 Ritter Additions
Date: Friday, March 7, 2025 2:56:02 PM

We are neighbors of this property. We have reviewed the application and have no objections. It does not appear to have any significant impact on our property.

Eric and Jane Olson
4408 Wellington Rd.
Boulder CO 80301

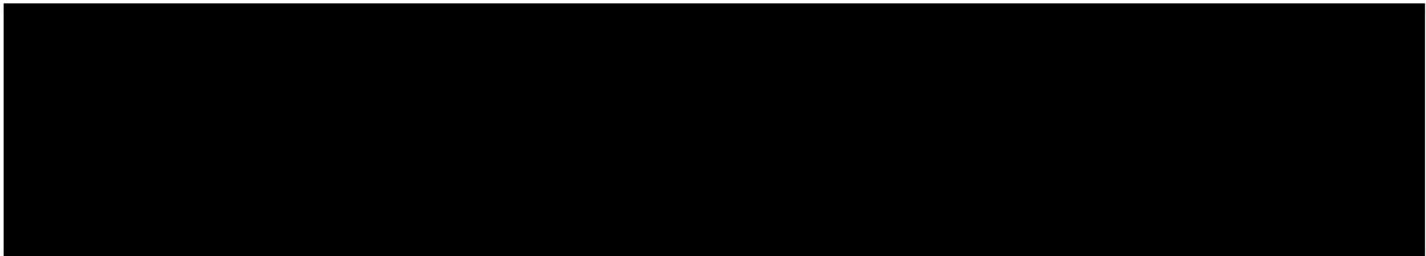


SCOPE OF WORK

Note for BOCC Business Meeting: This Scope of Work is entered into by Boulder County and Motorola Solutions under the NASPO ValuePoint Public Safety Communications, Products, Services, and Solutions Administered by the State of Washington with Motorola Solutions, Master Agreement #00318 and the State of Colorado's Participating Addendum - Contract #173765.

Pages and portions of this contract are not being published at this time as they may contain protected trade secret information. Members of the public may request a more complete version of this contract through the Boulder County Open Records Center available at: <https://bouldercounty.gov/records/colorado-open-records-act/>

XIII. Pricing and Payment Terms



The Agreement between the Parties and applicable NASPO discount is subject to the terms and conditions of the NASPO Master Agreement # 00318 and the State of Colorado's Participating Addendum - Contract # 173765.

Phase 1: Equipment Purchase	Price (\$)
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
Total Subscriber Equipment & Radio Management	\$2,837,788.32
Phase 2: Subscription Purchase	Price (\$)
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
Total Subscriptions, Licenses, Implementation	\$562,605.00

- a. Motorola Solutions will issue three invoices per phase upon completion of milestones. BSCO will make payments to Motorola Solutions within thirty (30) days after the date of each invoice where the services provided and amounts charged comply with this Agreement. BSCO will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution. If BSCO has purchased additional Professional or Subscription services, payment will be in accordance with the applicable addenda, subject to the terms of the Agreement. Overdue invoices will bear simple interest at the maximum allowable rate by state law.

- b. Payment for the Phase 1 Purchase will be in accordance with the following milestones:

Updated Bid Form



Motorola acknowledges the Customer may require the issuance(s) of a purchase order or notice to proceed as part of the Customer's procurement process. However, Customer agrees that the issuance or non-issuance of a purchase order or notice to proceed does not preclude the Customer from its contractual obligations as defined in this Agreement.

Motorola Solutions, Inc.

Customer: _____

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____



Community Planning and Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

**BOULDER COUNTY
BOARD OF COUNTY COMMISSIONERS
PUBLIC HEARING**

April 1, 2025 at 9:30 a.m.

All Commissioners' public hearings and meetings will be offered in a hybrid format where attendees can join **through Zoom** or **in-person** at the Boulder County Courthouse, 3rd Floor, 1325 Pearl Street, Boulder.

PUBLIC HEARING

STAFF PLANNER: Amber Knotts, Planner I

STAFF RECOMMENDATION REGARDING:

Docket LU-23-0019/SPR-23-0036: Orris/Big Lake LLC Residence & Driveway

- Proposal: Limited Impact Special Use Review to permit 1,585 cubic yards of non-foundational earthwork for driveway construction, and Site Plan Review to construct a new 2,990-square-foot residence with 220 square feet of covered porch area on a vacant 37.7-acre parcel at 3310 County Road 96J.
- Location: 3310 County Road 96J, approximately 4.0 miles west from Peak-to-Peak Hwy- Section 22, Township 2N, Range 73W
- Zoning: Forestry (F) Zoning District
- Applicant: Big Lake LLC (c/o Christine Orris)
- Agent: Sam Nishek (Barrett Studio)

STAFF RECOMMENDATION: Staff recommend that the Board of County Commissioners conditionally approve docket LU-23-0019/SPR-23-0036: Orris/Big Lake LLC Residence & Driveway.

PACKET CONTENTS:

Item	Pages
Staff Recommendation	1 – 31
Application Materials (Attachment A)	A1 – A110
Referral Responses (Attachment B)	B1 – B48
Public Comments (Attachment C)	C1

SUMMARY AND RECOMMENDATION:

This application for Limited Impact Special Review (LU) proposes 4,023 cubic yards of non-foundational earthwork to construct a driveway and Site Plan Review (SPR) for the construction of a 2,990-square-foot residence at 3310 County Road 96J (CR 96J). LU is required for the non-foundational earthwork portion of the application because it exceeds 500 cubic yards. The proposed earthwork is analyzed pursuant to the Special Use Criteria outlined in [Boulder County Land Use Code](#) (the Code), Article 4-601. SPR is required for development requiring a building permit on a vacant property, (Article 4-802.A.1). The residence is analyzed pursuant to the SPR standards outlined in Article 4-806 of the Code.

Staff recommend conditional approval of the proposal because, as conditioned, staff find the earthwork can meet the LU Criteria and the residential construction can meet the SPR Standards in the Code.

DISCUSSION:

The subject parcel is approximately 37.7 acres in size and is located approximately 4.0 miles west of the Peak-to-Peak Highway. It is also located west of Beaver Reservoir off of CR 96J right-of-way (ROW) as shown in Figure 1 below.

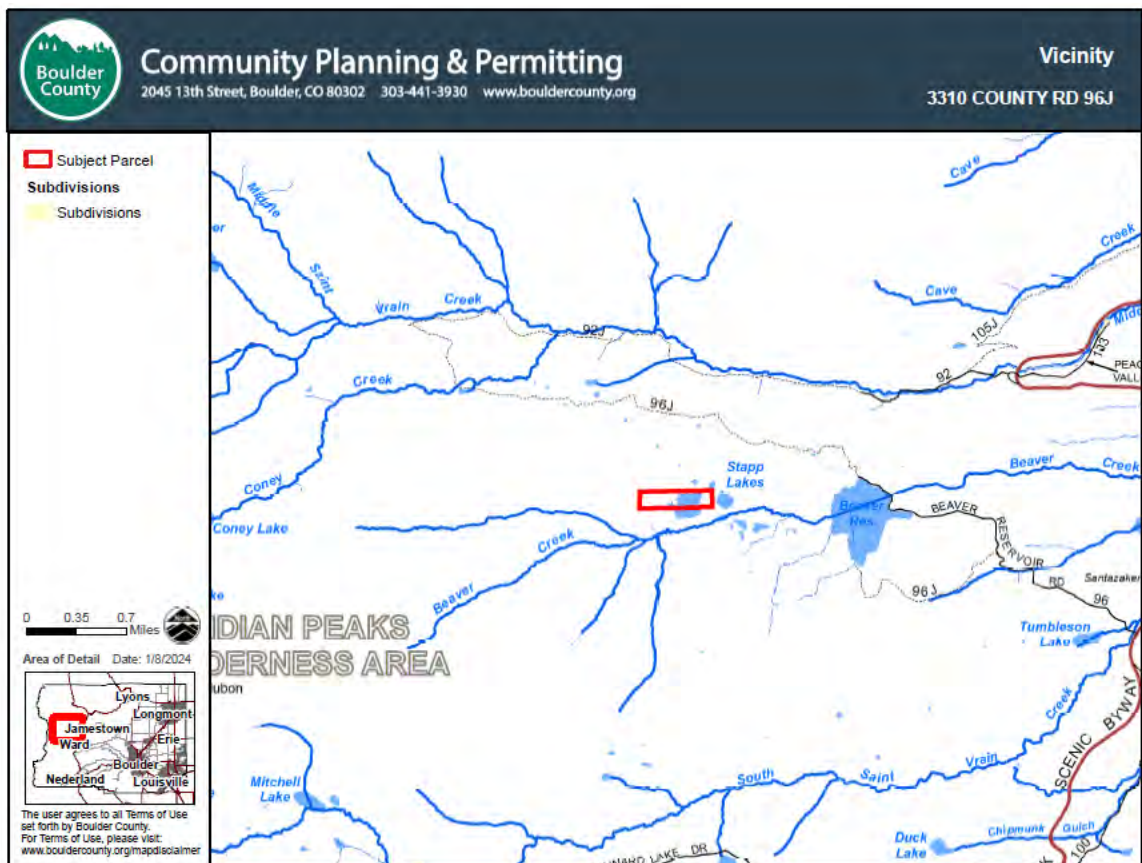


Figure 1: Vicinity Map showing location of the subject parcel

As determined by Community Planning & Permitting (CPP) staff, the parcel is a legal building lot eligible for permits as the parcel meets the minimum lot size of 35-acres to be considered a legal building lot. The parcel was created in current configuration in 2023, and is described on the Deed recorded November 17, 2023, at Reception 04028764. Legal access to the parcel is accessed from CR 96J, a Boulder County owned and maintained ROW with a Functional Classification of Local, via a

private gravel-surfaced road within a 20-foot access easement. Legal access to the subject parcel has been demonstrated via the easement recorded on April 2, 1998, at Reception 1787384, the easement recorded on February 5, 1999, at Reception 1902641 as well as the 30-foot access easement recorded on November 20, 2023, at Reception 04028765. The proposed physical access to the parcel will cross the adjacent private parcel to the south of the subject parcel, 3305 CR 96J. This parcel, 3305 CR 96J is also owned by the applicants and is historically known as Stapp Lakes Ranch. A portion of the non-foundational earthwork is proposed within the 30-foot access easement located at 3305 CR 96J. The United States Forest Service (USFS) lists a portion of the access road west of Beaver Reservoir as Road Number 508.1 on the 2016 USFS Motor Vehicle Use Map owned by the USFS.

Currently, the subject parcel is vacant as shown in the 2023 aerial photograph (Figure 2) below.



Figure 2: 2023 Aerial of the subject parcel and nearby properties.

The subject parcel encompasses a portion of Stapp Lake and is surrounded by a glacial moraine. Topographically the eastern portion of the subject parcel is characterized by a general upward and then downward slope from west to east in the area where development is proposed. The western portion of the subject parcel is primarily characterized by steep upward slopes south to north and moderate downward slopes west to east, adjacent to Stapp Lake. Figure 3, below, shows the slopes covering the entire subject parcel, a portion of the adjacent parcel located at 3305 CR96J and proposed locations for development, while Figure 4 is a detailed contour map of the eastern portion of the subject parcel where development is primarily proposed to take place.

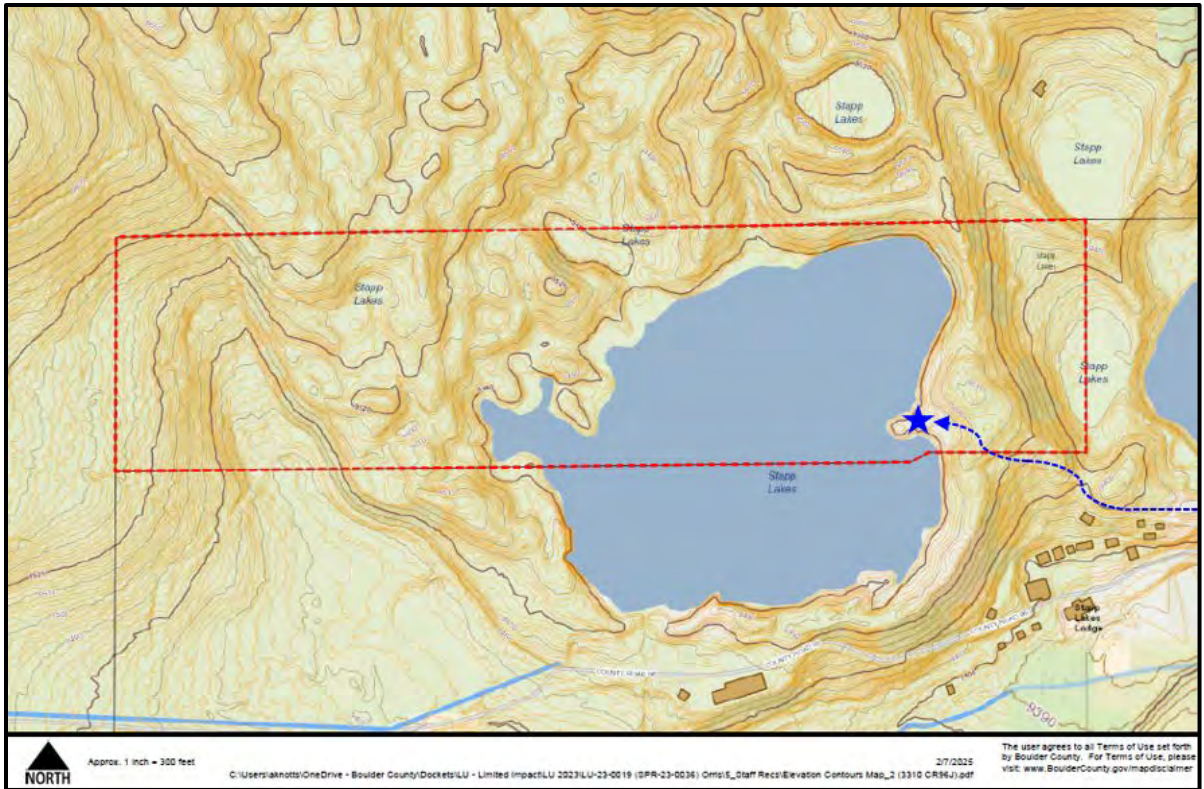


Figure 3: Contour map of subject parcel, with approximate development location shown with a blue star and proposed driveway alignment shown with a blue dashed line.

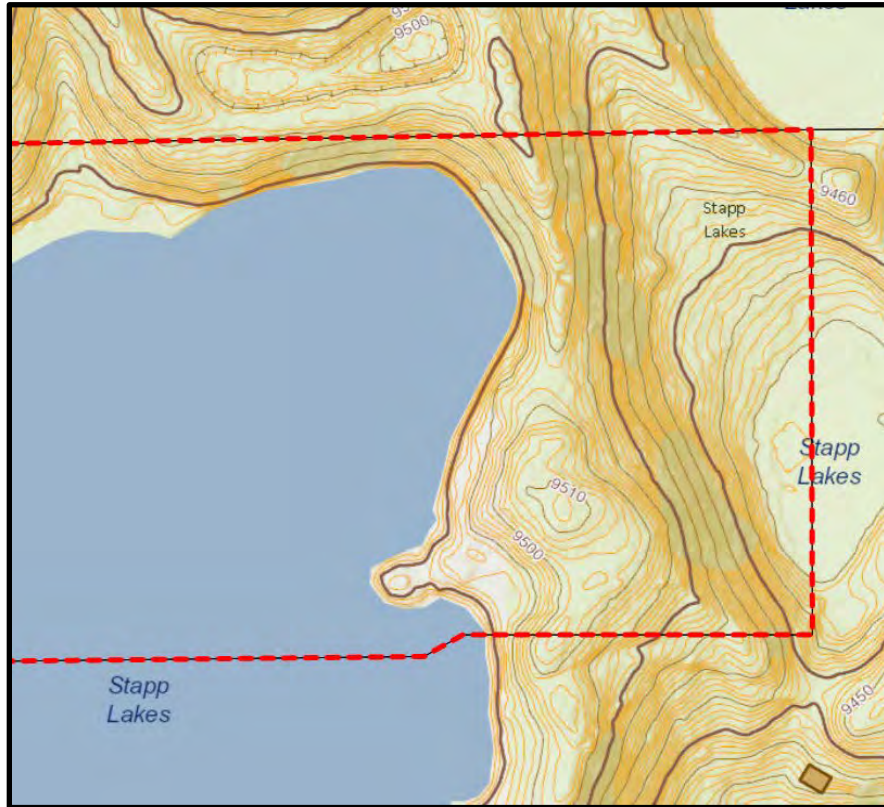


Figure 4: Detailed two-foot contour map of eastern parcel half.

The Boulder County Comprehensive Plan (BCCP) identifies the Indian Peaks Environmental Conservation Area that covers the entirety of the subject parcel, as well as Significant Natural Communities along its eastern boundary and northwestern portion of the subject parcel. Wetland and Riparian Areas are also identified along the eastern boundary and western portions of the subject parcel. These areas are shown in Figure 5, below, while impacts to these resources are discussed under LU Criterion 3, Criterion 4, Criterion 8 and SPR Standard 7.

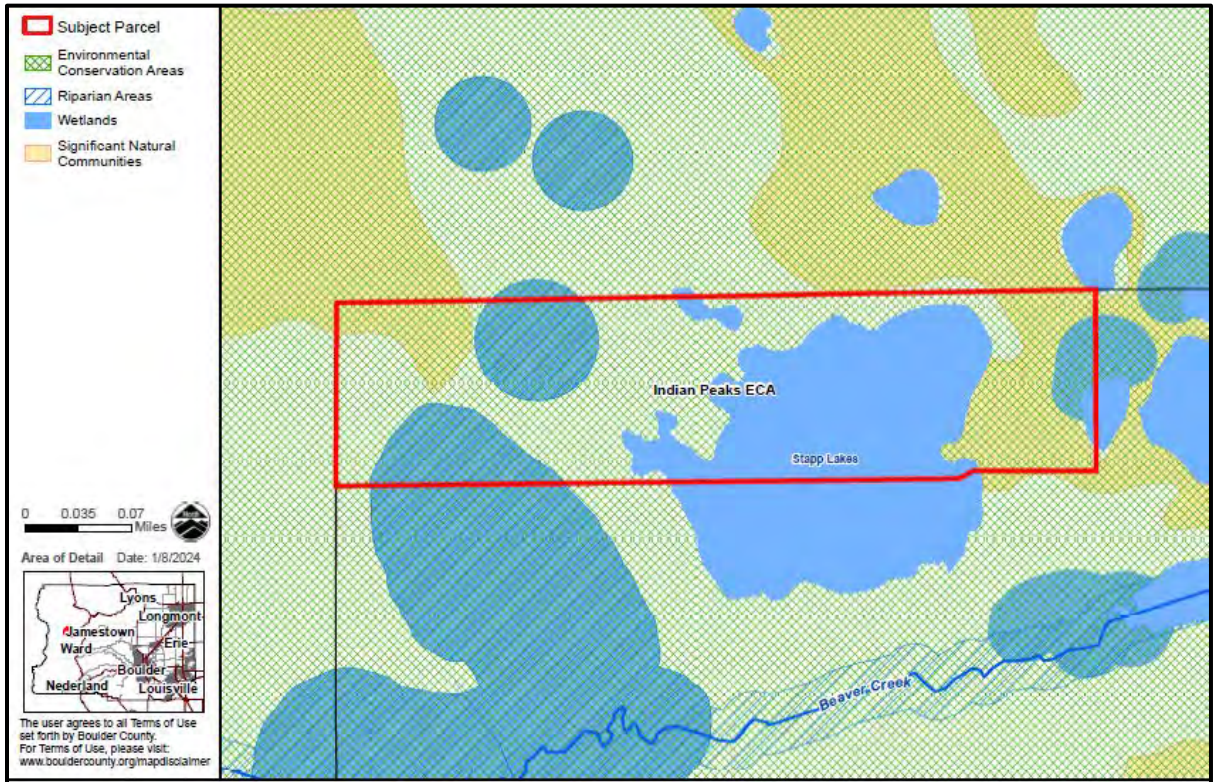


Figure 5: BCCP layers located on the Subject Parcel.

The majority of the subject parcel is considered to be within a landslide susceptibility area as shown in the Geologic Hazard Map, Figure 6 below.

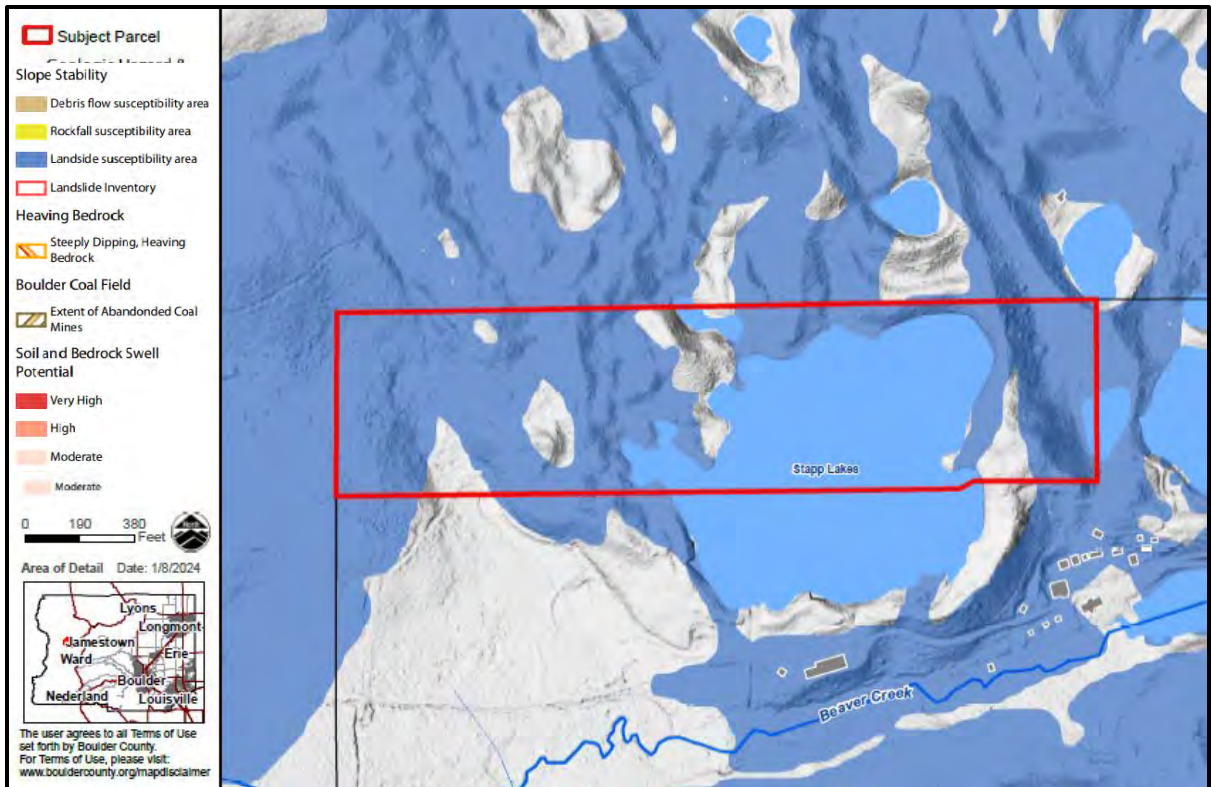


Figure 6: Geologic Hazard Map

The subject parcel is adjacent to USFS lands along the northern and western parcel boundary lines as shown in Figure 7 below.

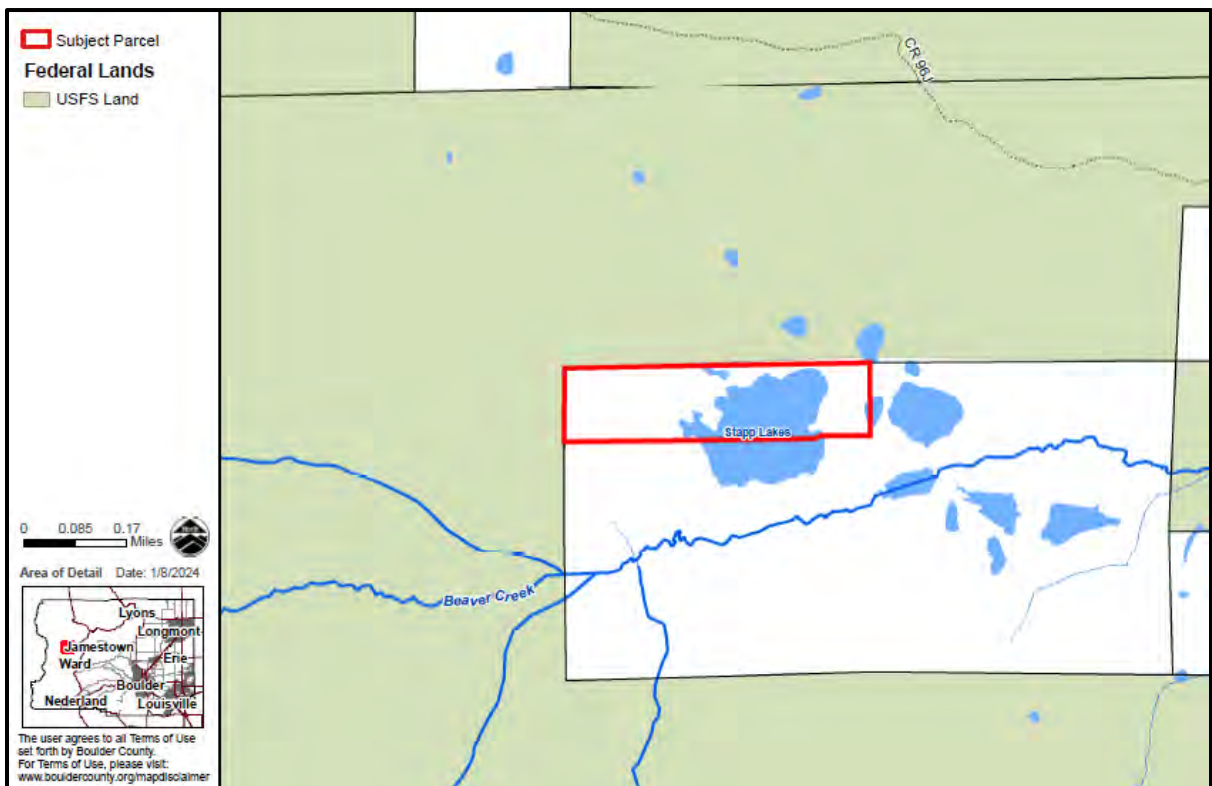


Figure 7: Public Lands Map

PROPOSAL:

The proposed development includes two parcels: 3310 CR 96J (“subject parcel,” where the residence is to be located) and 3305 CR 96J (located south of the subject parcel, through which the private access easement crosses). The proposal will require a significant amount of non-foundational earthwork and grading. The applicants request approval of 4,023 cubic yards of non-foundational earthwork, primarily related to the making the private access from 3305 CR 96J to the residence meet the Boulder County Multimodal Transportation Standards (MMTS). Per the application materials, the project will require approximately 2,277 cubic yards of non-foundational cut and 1,746 cubic yards of non-foundational fill, where 269 cubic yards of that cut and 268 cubic yards of that fill are to account for previously unpermitted grading that took place prior to the submittal of this application. Per Article 4-101.F.3.b of the Code, grading of more than 500 cubic yards requires LU.

The residence is proposed at 2,990 square feet of residential floor area, with an additional 220 square feet of covered porch. The proposed maximum height of the residence is 26 feet and two inches above existing grade (see Application Materials in Attachment A). As the parcel is currently considered vacant, per Article 4-802.A.1 of the Code, SPR is required for the proposed residence

As detailed in the criteria review below, staff find that the proposed non-foundational earthwork and grading can meet the Special Review Criteria in Article 4-601 of the Code and that the proposed new residence can meet the SPR Standards in Article 4-806 of the Code, with the recommended conditions of approval.

REFERRALS:

This application was referred to the typical agencies, departments, and nearby property owners. All responses received are attached and summarized below.

Boulder County Building Safety and Inspection Services Team: Boulder County Building Safety and Inspection Services reviewed the proposal and had no conflicts. Building permits, plan review, inspection approvals, electric vehicle charging outlet, and a Certificate of Occupancy (“C.O.”) are required for the proposed dwelling. The proposed residence will be required to meet the County’s BuildSmart requirements, must have an automated fire sprinkler system installed, and must be constructed with ignition-resistant materials and defensible space for wildfire mitigation. A grading permit and observation reports are required for driveway grading and access improvements. A more detailed plan review will be performed at the time of permit application, when full details are available, to assure that the proposal will meet all applicable minimum requirements.

Boulder County Public Health Department: The Public Health Department reviewed the proposal and found that an onsite wastewater treatment system (OWTS) permit has not been issued for this parcel. The OWTS permit must be applied for and issued prior to installation and before a building permit can be obtained. The OWTS must be installed, inspected, and approved before issuance of a Certificate of Occupancy. Boulder County Public Health must conduct an onsite investigation and review percolation rates, soil conditions and any design plans and specifications prior to OWTS permit issuance. The OWTS absorption field must be located a minimum distance of 100 feet from all wells, 25 feet from waterlines, 50 feet from waterways and 10 feet from property lines.

Boulder County Parks & Open Space – Natural Resource Planner: The Parks & Open Space (BCPOS) Natural Resource Planner reviewed the application materials and identified a number of natural resources on the subject parcel to be taken into consideration that include Significant Natural Communities consisting of old growth spruce and fir forest, Riparian Areas, Wetlands, Lynx habitat

areas and the parcels general proximity to Critical Wildlife Habitats and High Biodiversity Areas. The Canada Lynx is considered to be a Boulder County “Species of Concern”, along with Lake chub. The referral response shows the mapped potential for Lynx habitat, where the subject parcel has the potential to be within that range and notes that Lake chub can be found in nearby Beaver Lake. In addition to ecological designations, the referral response noted the geological history that dates back to the Pleistocene era, where most of the lakes within this area are glacial kettle lakes that were formed by isolated glacier ice melting out under morainal deposits. The referral response also noted concerns regarding the proposed residence’s location along the shoreline of Stapp Lake and further fragmentation of the Indian Peaks Environmental Conservation Area (ECA). In response to these concerns the BCPOS Natural Resource Planner states that adequate buffers between a development and a wetland or river riparian or a lake/pond riparian should be taken into consideration and that although Boulder County does not have a codified system for buffers, one could reference the “Planner’s Guide to Wetland Buffers for Local Governments,” 2008, Environmental Law Institute graph that shows recommended *Buffer Distance by Function*. Additionally, the referral response states all construction machinery must be cleaned prior to transportation to the parcel to remove Aquatic Nuisance Species (ANS) and weed seeds in accordance with State of Colorado ANS regulations; all erosion control straw barriers must be certified weed free; the specific type of bear-proof dumpsters should be reviewed and a construction staging plan that outlines where fuel or chemicals will be stored.

Boulder County Wildfire Mitigation Team: The Wildfire Mitigation Team reviewed the proposal and referral response noted that wildfire mitigation would be required for the proposed residence and driveway, with requirements for site location, ignition-resistant materials and construction, defensible space, emergency water supply, and emergency vehicle access.

Boulder County Development Review Team – Access & Engineering: Boulder County Development Review Team – Access & Engineering (DRT – A&E) reviewed the proposal and found that legal access to the parcel is demonstrated via the easement recorded on April 2, 1998, at Reception 1787384, the easement recorded on February 5, 1999, at Reception 1902641, as well as the 30-foot access easement recorded on November 20, 2023, at Reception 04028765. An Access Improvement and Maintenance Agreement (AIMA), which is an agreement for future maintenance responsibility, will need to be issued for the shared driveway. The shared driveway crosses parcel numbers 13230000039, 13230000037, and USFS parcel, and connects to CR 96J adjacent to the outlet of Beaver Reservoir. The referral response further indicated some design deficiencies, noting the driveway approach is shown as out-sloped, instead of the required in-slope with 2% grade between Station 7+50 and 11+50. The velocity calculations for the proposed roadside ditches were not provided in the revised drainage letter and the driveway profile does not indicate the location or depth of proposed cross culverts. The referral response also noted that the geotechnical report does not fully address geologic hazards associated with the driveway improvements above the north side of the historic cabins located on 3305 CR 96J. Lastly, the referral response noted that the driveway design does not currently meet the Boulder County MMTS and must comply with the MMTS.

Boulder County Historic Preservation Team: The Historic Preservation Team did not submit a formal referral response outlining specific concerns. However, this team deferred to DRT – A&E to ensure the design and construction of the driveway would not result in significant negative impacts to the adjacent historical cabins found along the northern property line of 3305 CR 96J and south of the development area.

Boulder County Public Works: Boulder County Public Works Department reviewed the proposal and found that the proposal must adhere to the Municipal Storm Water System (MS4) Construction

Program and a Stormwater Quality Permit (SWQP) is required. This team also notes that the drainage report must conform to Boulder County Storm Drainage Criteria Manual (SDCM) and that at this time the drainage letter does not meet the requirements. The SDCM follows Mile High Flood District (MHFD), Urban Storm Drainage Criteria Manual (USDCM) Volume 3, Chapter 4. MHFD does not recognize infiltration trenches as a stormwater control measure due to inadequate surface area. Acceptable stormwater control measures may include bioretention or other stormwater control measures described in MHFD USDCM. Design details, calculations, and worksheets must be submitted demonstrating the water quality capture volume is infiltrated or treated using a stormwater control measure identified in the MHFD USDCM. The drainage report must also adequately address the road drainage and velocities.

Wright Water Engineers: Wright Water Engineers were consulted as part of the review and had several comments pertaining to the drainage plan and construction specifications that are summarized below. More detail and drainage calculations are required for culverts, stilling basins, and roadside ditches. Additional energy dissipation, such as check dams, may be needed in some areas depending on the results of the calculations. Direct discharges to the lake must be avoided to the extent possible, and runoff must be routed over pervious areas such as a swale or vegetated buffer and does not recommend rock lined swales as they are prone to clog and difficult to maintain. Redirecting the runoff follows low impact development (LID) and County water quality concerns consistent with the requirements in the Storm Drainage Criteria Manual (SDCM) Section 1200. Wright Water Engineers recommend adherence to the MS4 Construction Program and permanent stormwater control measures be implemented. The Colorado Department of Public Health and Environment (CDPHE) requires notification of dredge and fill activities for projects impacting State Waters. Please contact CDPHE to determine applicable requirements. More information can be found at [CDPHE Dredge and Fill](#).

Boulder Valley Longmont Conservation District: The Boulder Valley and Longmont Conservation District reviewed the proposal and noted that care should be taken to ensure there is no stormwater or snowmelt runoff directly into the pristine lake waters and any disturbed areas for the building site and the new access road should be monitored and controlled for invasive weeds as the landscape recovers.

Colorado Department of Natural Resources Division of Water Resources: The Division of Water Resources (DWR) referral response indicated that the proposed water source for the residence is a residential well that has not been constructed, however it is anticipated that this office could issue a permit to construct a new well on the parcel. The well could be used for fire protection, ordinary household purposes, and the irrigation of not more than one acre of home gardens and lawns.

United States Forest Service: The USFS reviewed the proposal and stated that the private property must be surveyed by a licensed surveyor to avoid any/all encroachments on the federal taxpayer's land and if a road permit is needed, to contact Lauren Kryszczuk with the Boulder Ranger District.

Adjacent Property Owners: Notices were sent to all property owners within a 1,500-foot radius of the subject parcel. Staff received responses from one member of the public out of the eight application notices that were mailed to nearby property owners, stating they have no objections to the proposed project.

Agencies that responded with no conflicts: Xcel Energy, Colorado Geological Survey

Agencies that did not respond include: Boulder County Long Range Planning, Boulder County Assessor, Boulder County Attorney Office, Boulder County Code Compliance, Indian Peaks Fire Protection District, Town of Ward Planning Department, US Forest Service, History Colorado, Nature Conservancy of Colorado, St. Vrain & Left Hand Water District. **LIMITED IMPACT SPECIAL REVIEW**

SUMMARY:

CPP staff reviewed the conditions and standards for approval of a LU as they apply to the revised proposal for 4,023 cubic yards of non-foundational earthwork per Article 4-601 of the Code and finds the following:

Driveway Earthwork	2,277 cubic yards of cut and 1,746 cubic yards of fill
---------------------------	--

- (1) *Complies with the minimum zoning requirements of the zoning district in which the use is to be established, and will also comply with all other applicable requirements;***

The subject parcel is located within the Forestry zoning district and is a legal building lot. Per Article 4101.F.3.b of the Code, LU is required for grading exceeding 500 cubic yards. The SPR regulations (evaluated for the proposed residence) require driveways or grading to have a demonstrated associated Principal Use (see Article 4-806.A.11 of the Code); consequently, this driveway must be reviewed in combination with the proposed SPR.

The referral response provided by Boulder County Public Health noted OWTS permitting requirements must be met prior to issuance of building permits. Staff recommend a condition of approval requiring that the terms of the public health referral response be met.

The referral response provided by the Building Safety & Inspection Services team noted permitting requirements for the proposed non-foundational earthwork. Staff recommend a condition of approval requiring that the terms of the building team's referral response be met.

Therefore, as conditioned, staff find this criterion can be met.

- (2) *Will be compatible with the surrounding area. In determining compatibility, the Board should consider the location of structures and other improvements on the site; the size, height and massing of the structures; the number and arrangement of structures; the design of structures and other site features; the proposed removal or addition of vegetation; the extent of site disturbance, including, but not limited to, any grading and changes to natural topography; and the nature and intensity of the activities that will take place on the site. In determining the surrounding area, the Board should consider the unique location and environment of the proposed use; assess the relevant area that the use is expected to impact; and take note of important features in the area including, but not limited to, scenic vistas, historic townsites and rural communities, mountainous terrain, agricultural lands and activities, sensitive environmental areas, and the characteristics of nearby development and neighborhoods;***

For purposes of this review, staff consider the area within 1,500 feet of the subject parcel as the applicable surrounding area, which is consistent with the SPR defined neighborhood. Existing development within this area consists almost entirely of seasonal cabins and single-unit residences on adjacent public and private land. There are several cabins located on the surrounding 9,000-acre USFS parcel that are privately owned through a Recreation

Residence Special Use Permit granted by the USFS. Many of these adjacent cabins are historic in nature and are accessed from CR 96J by either unimproved forest service roads or historically established driveways.

The proposed driveway and access design for the subject parcel utilizes what was once an established forest service maintenance road. The unpermitted grading that is included in this review resulted in a realignment of this road but does follow much of the same historic alignment. In order to improve this road to bring it up to the current requirements outlined in the MMTS, a substantial amount of earthwork is required.

After reviewing the proposal and the unique features of the parcel, staff find that the proposed non-foundational earthwork is necessary to construct a driveway that meets the MMTS requirements and reaches an appropriate area for development. If the access and driveway were to be constructed elsewhere, staff find the overall site disturbance from earth movement would be more impactful to the surrounding area. By limiting the earthwork to what is necessary for the construction of the driveway and slope stabilization, changes to the natural topography are minimized and the overall intensity of development is reduced.

Because the proposed earthwork is necessary to provide access to the proposed residence location, staff find that the proposal is compatible with the surrounding area.

Therefore, staff find that this criterion is met.

(3) *The use will be in accordance with the Comprehensive Plan;*

The Indian Peaks ECA as identified in the BCCP covers the entirety of the subject parcel. An area of Significant Natural Communities is also identified in the BCCP, that consist of old-growth forest such as Engelmann spruce and subalpine fir encumbering the easternmost portion of the subject parcel, where development is proposed to occur. The proposed driveway and turnaround will be entirely within the identified Significant Natural Communities area. Wetland and Riparian areas are primarily identified on the western portion of the subject parcel and largely located outside of the proposed development area, although the referral response from BCPOS disputes that the shoreline of Stapp Lake should be mapped as Riparian habitat area. The BCPOS referral response indicated concerns with impacts to these resources caused by the proposed driveway and turnaround construction, and recommended conditions of approval to limit impacts from construction are discussed under LU Criterion 4 and LU Criterion 8 below. By following some of the original alignment of the Forest Service maintenance road, tree clearing of these identified Significant Natural Communities will be minimized and limited to what is necessary for wildfire mitigation than if a new route were proposed. Staff find construction of a driveway that primarily avoids the identified Significant Natural Communities area would likely result in a much wider area of disturbance for the development and potentially result in more substantial long-term impacts to the adjacent Stapp Lake if the driveway were to follow the shoreline in order to reach the general development area for the proposed residence.

Development within a potential Lynx habitat area is unavoidable as modeling projections indicate the entire subject parcel is within this potential habitat area. Similarly, the entire subject parcel is located within the Indian Peaks ECA and the proposed location for the driveway takes the shortest path possible to a reasonable build site for residential

construction such that overall fragmentation and disturbance within this designated area is minimized. See Figure 8 below depicting the historic alignment of the Forest Service maintenance road and the existing realignment of this road that was unpermitted.

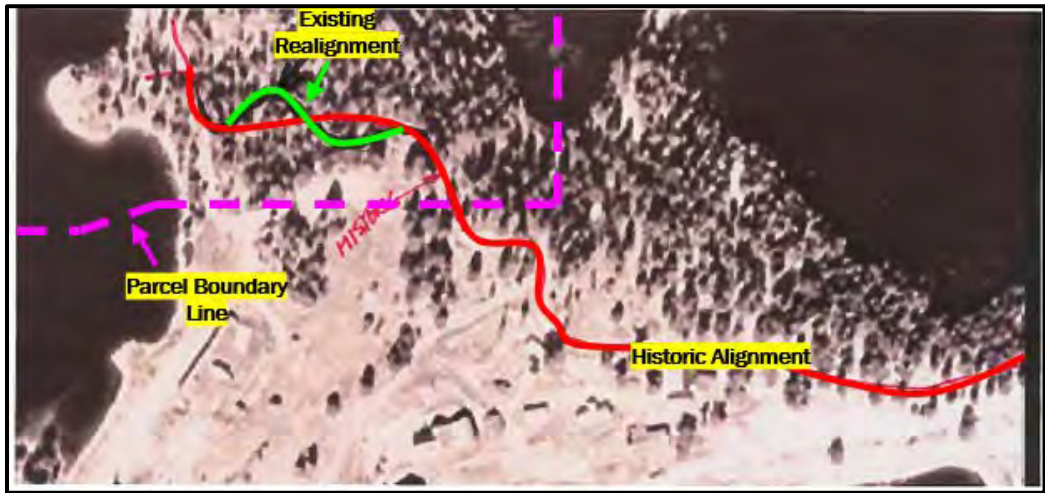


Figure 8: 1999 aerial photograph of the subject parcel with the historic alignment of the Forest Service maintenance road shown in the red line and the existing realignment of the access road shown in the green line.

Therefore, as conditioned, staff find that this criterion is met.

- (4) Will not result in an over-intensive use of land or excessive depletion of natural resources. In evaluating the intensity of the use, the Board should consider the extent of the proposed development in relation to parcel size and the natural landscape/topography; the area of impermeable surface; the amount of blasting, grading or other alteration of the natural topography; the elimination or disruption of agricultural lands; the effect on significant natural areas and environmental resources; the disturbance of plant and animal habitat, and wildlife migration corridors; the relationship of the proposed development to natural hazards; and available mitigation measures such as the preservation of open lands, the addition or restoration of natural features and screening, the reduction or arrangement of structures and land disturbance, and the use of sustainable construction techniques, resource use, and transportation management.**

Due to the slopes that characterize the subject parcel, constructing a driveway to the proposed residence that meets the MMTS requires substantial earthwork. Construction of the driveway as proposed will provide access to the most appropriate area of the parcel for development while leaving the vast majority of the 37.7-acre parcel undisturbed. Further, staff do not anticipate significant negative impacts to the natural areas or environmental resources which have been identified on the property if constructed utilizing Best Management Practices and to the specified engineered plans. Therefore, staff do not find that the proposed earthwork would constitute over-intensive use of the land or result in the excessive depletion of natural resources.

To ensure that the proposed earthwork meets county standards, final grade cuts and fills must not be steeper than a 1-½ to 1 slope. Grades steeper than a 1-½ to 1 slope will need to be supported by a retaining wall. Retaining walls or series of walls greater than four feet in height, as measured from the bottom of the footer to the top of the wall, require building

permits for construction. Staff recommend a condition that if retaining walls are required, wall details must be designed and stamped by a qualified Colorado-licensed professional engineer and calculations must be submitted for all retaining walls over six feet in height with permit application. Steep sloped areas of stable exposed bedrock are acceptable in lieu of constructing a retaining wall.

The proposed driveway is located above historic cabins as well as adjacent to a pristine high alpine lake. Runoff diverted from the driveway, such as sand, silt, and other debris, has the potential to obstruct drainage features such as rip-rap and culverts. Staff recommend a condition of approval that the applicants develop an annual maintenance plan describing recurring operations required to ensure drainage and water quality infrastructure continues to function as intended.

Cut sheet C-7 dated December 5, 2024, under *Note 11* of the *Erosion Control Notes* propose the use of straw bales or erosion control logs. Staff note that hay often contains seeds of aggressive, non-native grass species. *Note 12* under the *Erosion Control Notes*, states that no fields or chemicals must be stored near construction areas.

Staff recommend conditions of approval that if straw mulch or straw barriers are used, that all straw must be certified weed-free and a Revegetation Plan that includes native grass species to be submitted at time of building permit and that the erosion and sediment control details are to be consistent with the latest edition of the MHFD USDCM Volume 3. Staff also recommend a condition requiring that at time of building permit the applicants provide a construction staging plan that outlines where machinery will be refueled and where fuels or chemicals will be stored.

Therefore, as conditioned, staff find that this criterion can be met.

(5) *The use will not have a material adverse effect on community capital improvement programs;*

Staff have not identified any material adverse effects of the proposal on community capital improvement programs, and no referral agency responded with such a concern.

Therefore, staff find that this criterion is met.

(6) *The use will not require a level of community facilities and services greater than that which is available;*

The referral response from Xcel Energy indicated no concerns with the proposed driveway construction. To ensure an adequate response to structure or wildland fire on the subject parcel, the access must be constructed to meet MMTS that include appropriate pullouts at 400-foot intervals and a turnaround compliant with MMTS requirements. Staff find that the proposed non-foundational earthwork will not require a level of community facilities and services greater than that which is available if access is constructed to the specified engineered plans and meet the requirements of the MMTS.

Staff recommend a condition of approval requiring that the driveway and turnaround be constructed according to the MMTS as described in the referral response from DRT A&E dated January 31, 2024, and January 24, 2025.

Therefore, as conditioned, staff find that this criterion can be met.

(7) Will support a multimodal transportation system and not result in significant negative impacts to the transportation system or traffic hazards;

The subject parcel is accessed from CR 96J, a Boulder County owned and maintained ROW with a Functional Classification of Local, via a private gravel-surfaced road within a 20-foot access easement. Legal access to the subject parcel has been demonstrated via the easement recorded on April 2, 1998, at Reception 1787384, the easement recorded on February 5, 1999, at Reception 1902641 as well as the 30-foot access easement recorded on November 20, 2023, at Reception 04028765.

The USFS lists a portion of the access road west of Beaver Reservoir as Road Number 508.1 on the 2016 USFS Motor Vehicle Use Map. Staff recommend the applicants contact the Boulder Ranger District for more information on what, if any USFS requirements must be met for the proposed development.

The referral response from the DRT – A&E noted revised plans dated, December 17, 2024, do not fully meet the provisions outlined in the MMTS. Identified deficiencies show an out-sloped driveway between Station 7+50 and 11+50. Standard Drawing 11 of the MMTS requires an in-sloped driveway with a 2% grade. Additionally, staff find the distance between the access pull-out at Station 8+00 and the emergency turnaround at the proposed residence to be approximately 440 feet, which is not in compliance with Standard Drawing 17 of the MMTS. Per MMTS Standard Drawing 17, access pull-outs must be located at intervals of 400 feet. Lastly, the emergency turnaround is located within 50 feet of the proposed residence. Per MMTS Standard Drawings' 18 and 19, the emergency access turnaround must be located a minimum of 50 feet from the front of the residence and no greater than 150 feet from the rear of the residence. The 50-foot distance must be met if both distances cannot be simultaneously achieved due to the shape of the structure. Staff recommend a condition of approval that at time of building permit, the applicants submit revised plans demonstrating an access and driveway that complies with the MMTS.

Staff also recommend a condition of approval that the access be designed to avoid negative impacts to the transportation system that could be caused by the proposed development, including that all equipment and material staging occur on the project site.

Therefore, as conditioned, staff find this criterion can be met.

(8) Will not cause significant air, odor, water, or noise pollution;

Staff do not anticipate that the proposed project will cause any significant long-term air, odor, water, or noise pollution. The potential of air, odor, water, or noise pollution is limited to the period when construction is actually occurring. Due to the fact that there are environmentally sensitive conditions within the project area, staff identified some potential impacts which must be minimized and mitigated.

As discussed above, the project area is considered an environmentally important area and care must be taken that construction activities, equipment, and vehicles do not inadvertently cause pollution. Staff recommend a condition that all machinery needs to be

cleaned before entering the site in accordance the State of Colorado's ANS procedures through either steam (heat) or chemical cleaning. Staff also recommend conditions of approval that a spill kit, with written instructions, be kept on-site at all times in addition to grading limits must be clearly marked and Best Management Practices be implemented throughout the construction process and followed as they have been proposed on the site plan cut sheet A1.1, dated December 5, 2024.

Therefore, as conditioned, staff find this criterion can be met.

(9) Will be adequately buffered or screened to mitigate any undue visual impacts of the use;

Staff have limited concerns related to the visual impacts of the proposed non-foundational earthwork. The driveway and access will not be immediately visible from any public ROW or public lands and minimally visible from the adjacent Stapp Lakes Ranch parcel at 3305 CR 96J.

Therefore, staff find this criterion can be met.

(10) The use will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County;

Upon compliance with all applicable requirements and conditions including all Public Health and Building Codes, staff find that the proposed non-foundational earthwork will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County, and no referral agencies have responded with such a concern.

Therefore, as conditioned, staff find this criterion can be met.

(11) The use will establish an appropriate balance between current and future economic, environmental, and societal needs by minimizing the consumption and inefficient use of energy, materials, minerals, water, land, and other finite resources;

Staff find that the proposed non-foundational earthwork will minimize the inefficient use of land by localizing and clustering disturbance and is appropriate for the development of a single-unit residence on the subject parcel.

Therefore, staff find this criterion is met.

(12) The use will not result in unreasonable risk of harm to people or property – both onsite and in the surrounding area – from natural hazards. Development or activity associated with the use must avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors; all as identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Special Review or Limited Impact Special Review process using the best available information. Best available information includes, without

limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies.

The majority of the subject parcel is located within a high landslide susceptibility area, and considered a [Major Geologic Hazard Area](#) as identified by the BCCP. The applicants submitted a geotechnical report that identified the soil composition of the proposed development area. The geotechnical report addressed geological concerns pertaining to the development of the proposed residence as discussed under SPR Standard 4 below, however staff found there were inadequacies with the report that did not fully address the area associated with the proposed driveway improvements; particularly the potential impacts to the historic cabins directly below areas of where unpermitted grading had occurred along the access easement. Staff find that the potential for natural hazards can be mitigated if the proposal is constructed to the specified engineered plans.

Staff recommend a condition of approval that at time of building permit the applicants provide a revised geotechnical report that addresses the area associated with the proposed driveway to the residence. The revised geotechnical report must note any remediations or mitigations necessary for proper construction of the driveway. Grading plans must align with the findings and recommended mitigations found in the revised geotechnical report. Staff also recommend a condition that the required Revegetation and Erosion Control Plan include provisions for the installation of catch fencing downslope of all disturbed areas during construction to mitigate the risk to adjacent historic cabins and the adjacent waterways.

Therefore, as conditioned, staff find that this criterion can be met.

- (13) *The proposed use shall not alter historic drainage patterns and/or flow rates unless the associated development includes acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application.***

The Public Works referral response noted that a SWQP would be required for the proposed development and permanent stormwater control measures are required to be implemented even though the subject parcel is not located within a MS4 urbanized area, due to the development's adjacency to Stapp Lake. Staff recommend a condition of approval requiring the submittal of a SWQP application and applicable stormwater management checklist with any grading permit submittal.

The Public Works referral response included an extensive list of comments from Wright Water Engineers regarding the drainage plan and lack of certain design details that were submitted with the application materials. Staff recommend a condition requiring that the changes described in this memo, DRT – A&E referral response and Public Works referral response that include the comments from Wright Water Engineers, be included in the plans submitted for permitting.

The Public Works referral response also noted the drainage report does not conform to the SDCM. Staff recommend a condition that acceptable stormwater control measures be implemented that may include bioretention or other control measures described in MHFD USDCM Volume 3, Chapter 4 and design details, calculations, and worksheets demonstrating the water quality capture volume is infiltrated or treated using stormwater control measures identified in the MHFD USDCM Volume 3, Chapter 4.

Additionally, staff find the driveway profile does not indicate the location or depth of proposed cross culverts. The velocity calculations for the proposed roadside ditches were not provided in the revised drainage letter. Staff noted that portions of the drainage ditch may need energy dissipation. Staff recommend a condition of approval requiring the submittal of a revised drainage report with the building permit application that clearly shows the location and depth of proposed cross culverts and revised plans demonstrating that the ditch velocities are adequate to ensure stability of the ditch lining.

Therefore, as conditioned, staff find that this criterion is met.

SITE PLAN REVIEW SUMMARY:

Article 4-806 of the Code states that no SPR can be approved without compliance with the following standards. All site plan review applications must be reviewed in accordance with the following standards which the Director has determined to be applicable based on the nature and extent of the proposed development. Staff has reviewed these standards as they apply to the proposed residence and finds the following:

- (1) *To provide a greater measure of certainty as to the applicable neighborhood relevant for comparison, the following definition of neighborhood shall be used to review proposed Site Plan Review applications:***
 - c. For applications outside of platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Raymond and Riverside, the defined neighborhood is the area within 1,500 feet from the applicable parcel. The neighborhood shall not include any parcels inside municipal boundaries, platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Raymond and Riverside.***

The applicable neighborhood for the subject parcel is the area within 1,500 feet of the subject parcel.

- (2) *The size of the resulting development (residential or nonresidential) must be compatible with the general character of the defined neighborhood.***
 - a. In determining size compatibility of residential structures within the defined neighborhood, it is presumed that structures of a size within the larger of a total residential floor area of either (1) 125% of the median residential floor area for that defined neighborhood or (2) of a total residential floor area of 1,500 square feet in the mapped townsites of Allenspark, Eldora, Eldorado Springs, Raymond, and Riverside, or 2,500 square feet for all other areas of the County, are compatible with that neighborhood, subject also to a determination that the resulting size complies with the other Site Plan Review standards in this section 4-806.A.***

A. SIZE PRESUMPTION

Per Article 4-806.A.2.a of the Code, the size of a residential structure presumed to be compatible with the defined neighborhood is the larger of either 125% of the median residential floor area for that defined neighborhood or 2,500 square feet. In this case, 125% of the median residential floor area for the defined neighborhood is 720 square feet. Therefore, the presumed compatible size of residential structures within this defined neighborhood is 2,500 square feet.

Median (total residential floor area) in the defined neighborhood*	576 square feet
125% of the median residential floor area in the defined neighborhood	720 square feet
Total existing residential floor area on the subject parcel*	0 square feet
Total proposed residential floor area	2,990 square feet

**Source: Boulder County Assessor’s records, as verified by CPP staff for the subject parcel.*

B. ABILITY TO OVERCOME THE SIZE PRESUMPTION

The presumed compatible size of residential structures within the defined neighborhood is 2,500 square feet. The applicants propose to construct a residence that will consist of a 2,200-square-foot first floor, 318-square-foot second floor, 472-square-foot attached garage and 220 square feet of covered porch area. Per Article 18-189D of the Code, covered porches are not included in the calculation of residential floor area when attached to the principal structure.

Per Article 4-806.A.2.b.i.B.1, a proposed development may be able to overcome the size presumed to be compatible with the defined neighborhood due to the size of residences on at least two adjacent parcels. In this case, Staff find that the distribution of larger residential floor area adjacent to the subject parcel, including a parcel with 14,863 square feet of residential floor area at 3305 CR 96J and a parcel with 4,325 square feet of residential floor area located on the adjacent USFS parcel, parcel number 132300000028, allows the subject proposal to overcome the presumptive size of 2,500 square feet. The median residential floor area of these adjacent properties is 9,594 square feet. Both of these adjacent parcel’s consist of multiple historic cabins that count towards the cumulative residential size for each respective parcel. The largest cabin located on the adjacent USFS parcel is 754 square feet. The parcel to south, Stapp Lakes Ranch, located at 3305 CR 96J has a lodge in addition to several larger cabins that range in size from 1,336 square feet to 3,300 square feet along with many smaller sized cabins. In order for the development to remain in character with the defined neighborhood, the size of the resulting residence cannot exceed a maximum of 2,990 square feet. Staff find by limiting the proposal to the size as proposed, it will minimize overall site disturbance from construction and remain in character with other structures found within the defined neighborhood.

Staff recommend a condition of approval limiting the size of the residence to the floor area proposed in the application materials.

Therefore, as conditioned, staff find no conflict with this standard.

C. APPROVED SIZE

RESIDENTIAL FLOOR AREA*	
Total existing residential floor area on the subject parcel to remain	0 square feet
Approved NEW residential floor area	Maximum 2,990 square feet (2,200-square-foot first floor; 318-square-foot second floor; and 472-square-foot attached garage)
TOTAL approved resulting residential floor area	Maximum 2,990 square feet

**Residential Floor Area includes all attached and detached floor area on a parcel including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, home offices, and workshops, excluding covered deck. Floor area does not include the area of any covered porch. Gazebos, carports, detached greenhouses and hoopouses up to a total combined size of 400 square feet are also exempt.*

- (3) The location of existing or proposed buildings, structures, equipment, grading, or uses shall not impose an undue burden on public services and infrastructure.**

The proposed residence will be accessed via an easement across the adjacent parcel at 3305 CR 96J and legal access is demonstrated as described in the discussion of LU Criterion 7 above.

Staff do not foresee any undue burdens imposed on public services or infrastructure by this application if constructed per the specified engineered plans and therefore, as conditioned, find no conflicts with this standard.

- (4) The proposed development shall avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors. Natural hazards may be identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Site Plan Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies. Development within or affecting such natural hazards may be approved, subject to acceptable measures that will satisfactorily mitigate all significant hazard risk posed by the proposed development to the subject property and surrounding area, only if there is no way to avoid one or more hazards, no other sites on the subject property can be reasonably developed, or if reasonably necessary to avoid significant adverse impacts based upon other applicable Site Plan Review criteria.**

The proposed development area is adjacent to moderate upward west slope and steep downward east slope. The subject parcel is located within the remnants of old glacial remains from the Pleistocene era. The proposed development is also located within a landslide susceptibility area, an identified Major Hazard in the BCCP Geologic Hazard and Constraint Areas Map. The proposed residence will be located towards the bottom of a slope, in a generally flat area, where it is likely to be most stable. Additionally, there is no below grade floor area proposed, which reduces the potential for hazard risk that can be caused by subsurface excavation. Geotechnical reports indicate there will not be anticipated impacts from the identified geological hazards areas in respect to the construction of the proposed residence and the Colorado Geological Survey have also indicated they have no concerns. With the conditions requiring catch fencing and erosion control as discussed in Criterion 3 and Criterion 12 above for LU of the earthwork, including the submitted Geotechnical report, which identified the potential for geologic risks, staff anticipate potential hazard risk will be appropriately mitigated.

Therefore, as conditioned above under LU Criterion 3 and Criterion 12, staff find no conflict with this standard.

- (5) *The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and those posed to neighboring properties in the surrounding area by the proposed development. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the Urban-Wildland Interface Code; National Fire Protection Association (NFPA); International Fire Code; and the International Building Code.***

The proposed project is in Wildfire Zone 1 of unincorporated Boulder County. Therefore, wildfire mitigation is required. The Boulder County wildfire mitigation requirements are composed of site location, ignition-resistant materials and construction, defensible space, emergency water supply, and emergency vehicle access.

There are two paths for completing Boulder County's Defensible Space requirements: 1) Wildfire Partners Certificate or 2) Regulatory Wildfire Mitigation. Contact a Boulder County Wildfire Mitigation Specialist at 303-441-3926 to discuss these paths and associated steps.

Staff recommend a condition of approval requiring that wildfire mitigation take place as outlined in the Wildfire Mitigation referral comments.

Therefore, as conditioned, staff find no conflict with this standard.

- (6) *The proposed development shall not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geological Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application.***

The drainage impacts associated with the proposed driveway and structures are discussed under the LU Criterion 4 and Criterion 13 above.

Therefore, as conditioned above under LU Criterion 4 and Criterion 13, staff find no conflict with this standard.

- (7) *The development shall avoid significant natural ecosystems or environmental features, including but not necessarily limited to riparian corridors and wetland areas, plant communities, and wildlife habitat and migration corridors, as identified in the Comprehensive Plan or through the Site Plan Review process. Development within or affecting such areas may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable Site Plan Review criteria.***

As discussed under LU Criterion 3 above, the BCCP identifies several resources of concern on the subject parcel, and the BCPOS referral response expressed some concerns that should be taken into consideration.

The applicants submitted an Ecology Report, dated December 2024, that was intended to address concerns outlined in the BCPOS initial referral response dated February 4, 2024. The Ecology Report covers the glacial geology, the identified Significant Natural Communities, and various environmental impact considerations. Two species of concern were noted in the BCPOS referral response, Lake chub and Lynx habitat that may be found on, or nearby to the subject parcel. The submitted Ecology Report states that there are no known Lake chub populations found to occur on the parcel or adjacent parcel to the south and that many years ago, non-native fish were introduced to the lake that would have preyed upon any potential previously existing populations. The Ecology report also takes into consideration the modeling of Lynx habitat and indicates that this area is within a moderate to high Lynx habitat area that is part of a larger migratory corridor. The proposed location for development is intended to reduce habitat fragmentation to the Lynx by clustering development near existing development on the adjacent parcel to the south and near CR 96J. With the proposed residence confined to the eastern portion of the subject parcel in addition to the recommended relocation as discussed under SPR Standard 11 below, this results in the remainder of the subject parcel to be left largely undeveloped for the Lynx population to pass freely.

With the recommended condition to relocate of the residence as discussed below under SPR Standard 11, staff anticipate impacts from the construction of the proposed residence to the lake and other identified resources will be minimized.

Therefore, as conditioned, staff find no conflict with this standard.

- (8) *The development shall avoid agricultural lands of local, state or national significance as identified in the Comprehensive Plan or through the site plan review process. Development within or affecting such lands may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.***

No agricultural lands of significance are identified on the subject parcel, and therefore staff find no conflict with this standard.

- (9) *The development shall avoid significant historic or archaeological resources as identified in the Comprehensive Plan or the Historic Sites Survey of Boulder County, or through the site plan review process. Development within or affecting such resources may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.***

The potential impacts to historic resources are associated with the construction of the access and driveway and discussed under the LU Criterion 4 and Criterion 13 above. The construction and location of the proposed residence is not anticipated to impact historic resources if constructed to the specified engineered plans.

Therefore, staff find no conflict with this standard.

- (10) *The development shall not have a significant negative visual impact on the natural features or neighborhood character of surrounding area. Development shall avoid prominent, steeply sloped, or visually exposed portions of the property. Particular consideration shall be given to protecting views from public lands and rights-of-way, although impacts on views of or from private properties shall also be considered. Development within or affecting features or areas of visual significance may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.***

- b. *For development anywhere in the unincorporated areas of the county, mitigation of visual impact may include changing structure location, reducing or relocating windows and glazing to minimize visibility, reducing structure height, changing structure orientation, requiring exterior color and materials that blend into the natural environment, and/or lighting requirements to reduce visibility at night.***

Location	Not approved as shown on the submitted site plan dated December 5, 2024 (see discussion below)
Height	Approved at approximately 26 feet and 2 inches above existing grade
Exterior Materials	Cement and corrugated metal siding and standing-seam metal roof
Exterior Colors	Gray walls and gray roof

The application materials indicate that the proposed residence will be constructed at an approximate height of 26 feet and two inches above existing grade. In the Forestry zoning district where the subject parcel is located, the height limit for residential structures is 30 feet above existing grade. Staff have limited concerns related to the visual impacts of the structure due to the steep slopes that characterize the parcel. The proposed residence will

not be visible from any public lands or public ROW and will be minimally visible from the jointly owned parcel that is Stapp Lakes Ranch located at 3305 CR 96J.

A. TREE PRESERVATION

The preservation of existing trees is necessary to ensure there is minimal disturbance and minimal impacts to the Significant Natural Communities identified in the BCCP. Only those trees necessary to clear the building site, provide access, install the individual sewage disposal system, and provide for defensible space/forest management may be removed. Staff recommend a condition of approval requiring the submittal of a Tree Preservation Plan for staff approval prior to the issuance of any building or grading permits.

B. EXTERIOR COLORS AND MATERIALS

The application materials indicate that the proposed residence will use gray tones and cement and corrugated metal siding and a gray tone standing-seam metal roofing. However, no specific colors were submitted for the exterior of any structure. Staff recommend a condition requiring that the applicants include proposed color and material samples for all exterior materials as part of the building permit application for CPP review and approval, and that CPP staff verify the approved color samples are used on the new structure prior to the issuance of a Certificate of Occupancy.

C. EXTERIOR LIGHTING

The locations and types of exterior lighting fixtures were not indicated in the application materials. Given the visible position in the landscape and the rural character of the area, lighting has the potential to cause negative visual impacts. Staff recommend a condition of approval that lighting on site be limited to one fixture for each exterior entrance and the use of landscape or driveway lighting is not allowed. Staff recommend a condition requiring the submittal of an exterior lighting plan with manufacture cut sheets for CPP staff approval, prior to the issuance of any building or grading permits, and that CPP staff verify that the exterior lighting has been added to the structure according to the approved plan prior to the issuance of a Certificate of Occupancy.

As conditioned, staff find no conflict with this standard.

- (11) *The location of the development shall be compatible with the natural topography and existing vegetation and the development shall not cause unnecessary or excessive site disturbance. Such disturbance may include but is not limited to long driveways, over-sized parking areas, or severe alteration of a site's topography. Driveways or grading shall have a demonstrated associated principal use.***

A. LOCATION

The proposed location for the residence as shown on cut sheet A1.1 on the Site Plan dated December 5, 2024, is on a peninsula located at Stapp Lake, where the design closely follows the shoreline of the peninsula. As discussed under SPR Standard 7 above, staff expressed concern regarding the environmental impacts' development would have to this pristine subalpine lake with the proposed residence being located right on the edge of the shoreline. As discussed under LU Criterion 13 above, staff identified stormwater control measures

necessary to ensure impacts from this development are minimized. Staff find development on the peninsula would result in unnecessary site disturbance close to the Stapp Lake shoreline. Staff find the potential for negative impacts could be mitigated if the residence were to be relocated 100 feet east from the most western edge of the peninsula shoreline. By relocating the residence 100 feet east from its current proposed location, and with permanent stormwater control measures in place as conditioned under LU Criterion 13, impacts from runoff, erosion and sedimentation would be minimized. There is a relatively flat area suitable for development to the east of the peninsula before the topography begins to upslope from the west to the east. In addition to the recommended relocation, there must be a minimum setback of approximately 25 feet from the shoreline from both the northwest and southwest elevations. Although significant earthwork is still required to provide vehicular access, staff find the relocation of the residence to be the most suitable for development when considering other site constraints, BCCP environmental resource designations, and proximity to existing development on the adjacent parcel to the south. Therefore, staff recommend conditions of approval requiring the proposed residence be relocated and setback 100 feet east from the most western edge of the peninsula shoreline, in addition to the minimum 25-foot setback from the shoreline for both the northwest and southwest elevations in the area staff has recommended the residence to be relocated to. See Figure 9 below depicting the recommended relocation for the proposed residence. Staff also recommend a condition of approval that a setback survey be completed to verify the location of the structure.

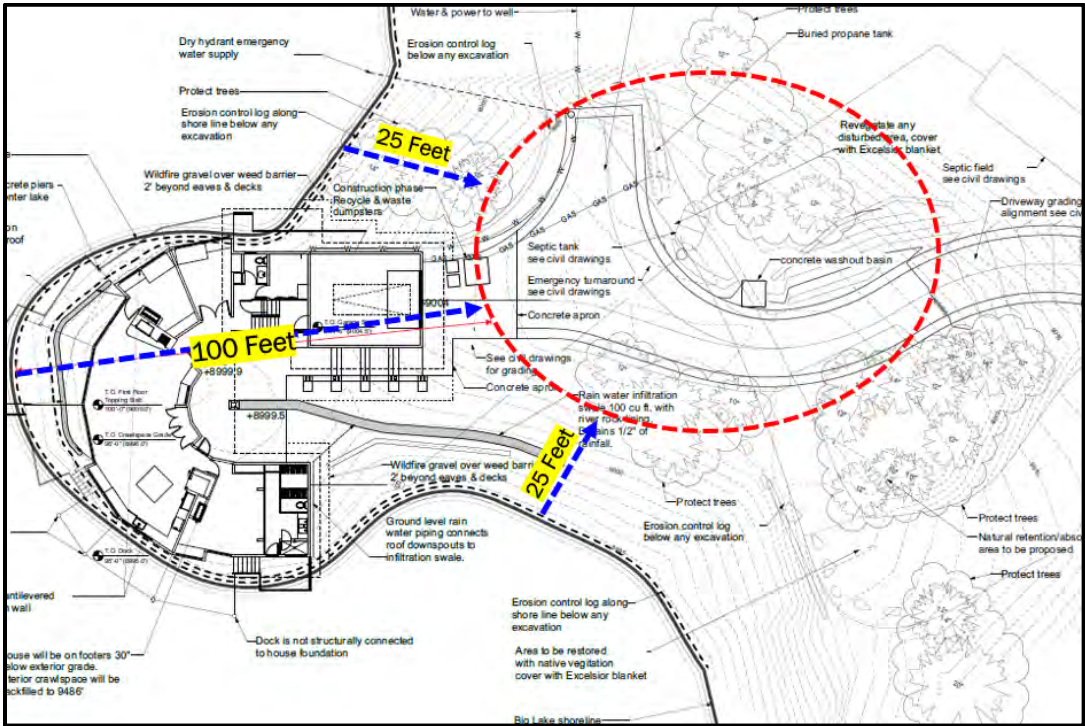


Figure 9: Site Plan that shows the recommended relocation 100 feet setback from the western most edge of the Peninsula with the relocation for residence shown with the red dashed circle and minimum setbacks shown in the blue dashed lines.

B. EARTHWORK AND GRADING

The proposed non-foundational earthwork exceeds that which is allowed under the SPR Standards and is therefore addressed under the LU review Criterion above. The following

foundational earthwork and grading requirements associated with the proposed residence are recommended for approval:

Foundational Earthwork (exempt from 500 cubic yards threshold)	77 cubic yards cut, 185 cubic yards fill
--	--

C. GRADING NARRATIVE

The earthwork calculations submitted by the applicants indicate that construction of the residence will require 77 cubic yards of foundation cut and 185 cubic yards of backfill. Any fill placed around the new residence must be placed in a manner which promotes positive drainage away from the residence and does not result in drainage to the adjacent waterway. Because staff recommend a relocation of the residence and because there will be required changes to the drainage plan in order to implement permanent stormwater control measures as discussed under LU Criterion 13 above, it is unclear at this time what the total amount of excess materials on site will be from the resulting earthwork. Staff note that transporting fill in excess of 50 cubic yards to a separate parcel (receiving site) within Boulder County may require additional county review for the receiving site, including SPR or LU if excess cut created during site development to be transported off-site within Boulder County exceeds 50 cubic yards.

Staff recommend a condition of approval that a grading narrative be submitted at time of building permit application and the location and receipt for any transport and dumping be submitted to the CPP Department to verify the receipt of fill materials.

D. UTILITIES

To minimize disturbances to the site, staff recommend a condition requiring all utility service lines be routed underground (see Article 7-1200 of the Code) and located in areas already disturbed or proposed to be disturbed (e.g., along driveway).

As conditioned, staff find no conflict with this standard.

(12) *Runoff, erosion, and/or sedimentation from the development shall not have a significant adverse impact on the surrounding area*

With the above-described requirement for submittal of a Revegetation and Erosion Control Plan under LU Criterion 4, staff find that the proposed development will not result in adverse impacts to the surrounding area from runoff, erosion, or sedimentation.

Therefore, as conditioned, staff find no conflict with this standard.

(13) *The development shall avoid Natural Landmarks and Natural Areas as designated in the Goals, Policies & Maps Element of the Comprehensive Plan and shown on the Zoning District Maps of Boulder County. The protection of Natural Landmarks and Natural Areas shall also be extended to their associated buffer zones. Development within or affecting such Landmarks or Areas may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be*

reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.

The BCCP does not identify any Natural Landmarks or Natural Areas on the subject property.

Therefore, staff find no conflicts with this standard.

- (14) *Where an existing principal structure is proposed to be replaced by a new principal structure, construction or subsequent enlargement of the new structure shall not cause significantly greater impact (with regard to the standards set forth in this Section 4-806) than the original structure.***

There is no existing principal structure on the subject parcel.

Therefore, staff find that this standard is not applicable.

- (15) *The proposal shall be consistent with the Comprehensive Plan, any applicable intergovernmental agreement affecting land use or development, and this Code.***

As conditioned, staff find no conflict with this standard.

RECOMMENDATION:

Staff has determined that, as conditioned, the proposal can meet all the applicable criteria of the Boulder County Land Use Code for Limited Impact Special Review and for Site Plan Review. Therefore, staff recommend that the Board of County Commissioners **CONDITIONALLY APPROVE** Docket LU-23-0019/SPR-23-0036: Orris/Big Lake LLC Residence & Driveway, subject to the following conditions:

1. The development is subject to the requirements of the Boulder County Building Safety and Inspection Services Team and adopted County Building Codes, as outlined in the referral comments, including, but not limited to required fire sprinkler system, ignition resistant materials and defensible space, and the BuildSmart energy efficiency and sustainability requirements. ***We have updated the Building Code Amendment, the effective date for this new code is March 31, 2025. You can review the new [Boulder County Building Code Amendments, effective March 31, 2025](#)***
2. The development must be constructed to the specified engineered plans, and an observation report is required.
3. The development is subject to the requirements of the Boulder County Public Health-Environmental Health division on site wastewater treatment system (OWTS) requirements as outlined in the referral comments.
4. The improved driveway must comply with the Boulder County MMTS for residential development, including without limitation:
 - a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Mountain Access)
 - b. Standard Drawing 11 – 12 Private Access
 - c. Standard Drawing 14 – Access with Roadside Ditch
 - d. Standard Drawing 15 – Access Profiles Detail

- e. Standard Drawing 16 – Access Grade & Clearance
- f. Standard Drawing 18 – Access Turnaround
- g. Standard Drawing 19 – Typical Turnaround & Pullout Locations

The access drive travel surface must be between 12 and 18 feet in width, plus an additional 2' horizontal clearance on each side

The emergency access turnaround must be located a minimum of 50 feet from the front of the residence and no greater than 150 feet from the rear of the residence. a minimum 30-foot centerline radius is required for the emergency access turnaround

The access must be surfaced with 4" ABC (Class 6) or other suitable material as approved by the County Engineer

At building or grading permit submittal, the plans must include a driveway design that meets the MMTS.

At building permit, ensure all retaining wall details and calculations are included in the building permit plan set.

During construction, all materials, machinery, vehicles dumpsters, and other items must be staged on the subject property; no items are permitted to be stored or staged on CR 96J.

Prior to the issuance of a Certificate of Occupancy, the CPP Department must verify that the driveway has been constructed according to the approved plan.

5. The applicants must contact the United States Forest Service Boulder Ranger District for more information on what, if any USFS requirements must be met for the proposed development.
6. **At time of building or grading permit submittal**, the applicants are to submit to the CPP Department a maintenance plan describing recurring operations required to ensure drainage and water quality infrastructure continues to function as intended. This maintenance plan must be submitted and updated on an annual basis.
7. **At time of building or grading permit submittal**, the applicants must submit to the CPP Department a construction staging plan that outlines where machinery will be refueled and where fuels or chemicals will be stored.
8. **At time of building or grading permit submittal**, a Revegetation and Erosion Control Plan must be submitted for approval. The erosion and sediment control details must be consistent with the latest edition of the Mile High Flood District's Urban Storm Drainage Criteria Manual Volume Construction sequence and must adhere to the sequencing notes on the Erosion and Sediment Control Plan. Any straw used for mulching, or straw bales used for erosion control, must be certified weed-free. The revegetation plan must include native grass species to be used, mapped delineation of all disturbance areas (this includes

construction staging areas, driveway, utility lines, and septic system), locations of silt fence or erosion control logs down slope of disturbed areas, and matting requirements on steeper slopes. New horticultural plantings should emphasize xeriscaping principles (Article 7-200-B-8, the Code).

- a. **Prior to any grading or site disturbance**, the silt barrier location and materials must be installed as required per the approved plans.
- b. **Prior to any grading or site disturbance**, the location of the catch fencing must be installed downslope of all areas of disturbance and upslope of the perimeter control as required per the approved plans.

Prior to issuance of a Certificate of Occupancy, the full installation of the approved Revegetation and Erosion Control Plan must be inspected and approved by the CPP Department. If weather is not conducive to seeding or if adequate revegetation efforts have not occurred and vegetation is not adequately established at the time of final inspection request, an irrevocable letter of credit or monies deposited into a County Treasurer account will be required to assure the success of revegetation. You should consider the following well in advance of your revegetation inspection:

- a. Whether you are applying for a Certificate of Occupancy, final inspection, or the return of funds held in escrow for completion of revegetation, some level of germination and growth of grass seed is required.
- b. Keep in mind that the steeper the slopes and dryer the soil, the greater the attention needed to establish a level of germination adequate to obtain revegetation approval.
- c. Areas of disturbance found at inspection not included on the revegetation plan are still subject to reseeding and matting.

Incomplete revegetation is the leading cause for delays in obtaining a Certificate of Occupancy.

9. **At building or grading permit submittal**, the applicants must apply for a Stormwater Quality Permit.
 - a. **At building permit**, provide a complete Stormwater Quality Permit submittal to stormwater@bouldercounty.gov
10. **At building or grading permit submittal**, submit a revised geotechnical report that addresses the area associated with the proposed driveway to the residence. The revised geotechnical report must note any remediations or mitigations necessary for proper construction of the driveway. Grading plans must align with the findings and recommended mitigations found in the revised geotechnical report.
11. The development must adhere to MS4 New Development and Boulder County Storm Drainage Criteria Manual (SDCM) requirements including providing for detention and permanent stormwater management.
 - a. Acceptable stormwater control measures may include bioretention or other stormwater control measures described in the Mile High Flood District (MHFD), Urban Storm Drainage Criteria Manual (USDCM) Volume 3, Chapter 4 and design details, calculations, and worksheets demonstrating the water quality capture

volume is infiltrated or treated using stormwater control measures identified in the MHFD USDCM Volume 3, Chapter 4.

- b. **At building permit**, provide the Permanent Stormwater Management Facilities checklist found on the [Boulder County Stormwater Quality Permit Website](https://www.bouldercounty.gov/stormwater-quality-permit-website) and send to stormwater@bouldercounty.gov
12. Biodegradable hydraulic fluids must be used in all equipment and machinery operating in surface waters.
13. All equipment must be cleaned and disinfected in accordance the State of Colorado's Aquatic Nuisance Species (ANS) procedures through either steam (heat) or chemical cleaning to prevent aquatic invasive species and noxious weeds before entering the construction site. A spill kit, with written instructions, must be kept on-site at all times.
14. All construction activities require the use of Best Management Practices.
15. **At building permit**, please review and address all referral comments from Boulder County Public Works and referral comments from Boulder County Access and Engineering.
16. **At building or grading permit submittal**, a revised drainage report is required. The report must clearly show the location and depth of proposed cross culverts and plans must demonstrate that the ditch velocities are adequate to ensure stability of the ditch lining.

Final grade cuts and fills must not be steeper than a 1-½ to 1 slope. Grades steeper than a 1-½ to 1 slope will need to be supported by a retaining wall. Retaining walls or series of walls greater than four feet in height, as measured from the bottom of the footer to the top of the wall, require building permits for construction. Steep sloped areas of stable exposed bedrock are acceptable in lieu of constructing a retaining wall. At permitting, the height of the retaining wall must be provided and, if greater than four feet in height, wall details must be designed and stamped by a qualified Colorado-licensed professional engineer. Calculations must be submitted for all retaining walls over 6 feet in height.

The revised grading and drainage plan must be signed and sealed by a qualified Colorado-licensed Professional Engineer, Landscape Architect, or Architect.

Prior to the issuance of a Certificate of Occupancy, the CPP Department must verify that the drainage and permanent erosion control improvements have been installed according to the approved plan.

17. The approved size for the residential development is a maximum 2,990 square feet of residential floor area.
18. The design of the residence as shown on the submitted elevation drawings dated December 5, 2024, is approved as proposed.

19. The approved height for the residence is approximately 26 feet and two inches above existing grade.
20. **At building permit submittal**, submit a revised site plan that depicts the required relocation of the residence setback 100 feet east from the western most edge of the peninsula shoreline, with a minimum approximate setback of 25 feet from the shoreline for the southwest and northwest elevations from the area where the residence is required to be relocated to.
21. **Prior to the foundation form inspection** the completed [Setback Survey Verification Form](#) must be submitted to the CPP Department.
22. **At building permit submittal**, submit to the CPP Department for review and approval, revised elevation drawings that show the elevations for the residence in the required relocation area.
23. The development is subject to the requirements of the Boulder County Wildfire Mitigation Team and as outlined in the referral comments, including, but not limited to ignition resistant materials, defensible space, emergency vehicle access and emergency water supply.
24. **Prior to issuance of building or grading permits**, submit to the CPP Department, for review and approval, a Tree Preservation Plan that indicates which trees will be preserved. The maximum preservation of existing mature trees is required while also providing for fire safe defensible space requirements. The Tree Preservation Plan must be included as part of the building plan set required at the time of permit application.
 - a. **Prior to issuance of a Certificate of Occupancy**, the full installation of the approved Tree Preservation Plan must be inspected and approved by the CPP Department.
25. Colors must be selected to minimize visual impacts of the development and help the development blend in with the natural environment and the neighborhood character of the surrounding area. These colors should be carefully selected from the dark to medium brown, gray, or green color range and have a matte finish to ensure that they are compatible with the policies and goals established by the BCCP and provisions of the Code and will not result in an adverse impact on surrounding properties.
 - a. **At building permit submittal**, include samples of all proposed exterior colors and materials for the proposed residence as well as all retaining walls for staff approval.
 - b. **Prior to the issuance of a Certificate of Occupancy**, the full installation of the approved colors and materials must be inspected and verified by the CPP Department.
 - c. **Prior to issuance of a Certificate of Occupancy**, the CPP Department must inspect and verify that the approved exterior colors and materials are used on the new structure.

26. Exterior lighting on site is limited to one fixture for each exterior entrance and the use of landscape or driveway lighting is not allowed.
 - a. **Prior to issuance of building permits**, one copy of a proposed lighting plan must be submitted to the CPP for review and approval. The lighting plan must be included as part of the building plan set required at the time of permit application.
 - b. **Prior to Certificate of Occupancy**, CPP staff must verify that the exterior lighting has been added to the structure according to the approved plans.

NOTE: [Down lighting](#) is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. All exterior light fixtures must be in conformance with Article 7-1600 and Article 18-162A of the Code.

27. **Prior to issuance of building permits**, submit to this office a narrative describing where excess foundation cut (other than that used for backfill within the foundation) will be transported.
 - a. **Prior to Certificate of Occupancy**, the location and receipt for transport and dumping must be submitted to the CPP Department so that receipt of fill materials may be verified.
28. **Prior to issuance of building and grading permits**, submit to the CPP Department for review and approval a plan depicting the routing of all utility services. The utility routing plan must be included as part of the building plan set required at the time of permit application. To minimize disturbances to the site, all utility service lines must be routed underground (see Article 7-1200 of the Code) and should be located in areas already disturbed or proposed to be disturbed (e.g., along driveway).
 - a. **At the time of building inspections**, full installation of the utilities per the approved plan must be inspected and confirmed by the CPP Department.
29. The Applicants shall be subject to the terms, conditions, and commitments of record and in the file for Docket LU-23-0019/SPR-23-0036: Orris/Big Lake LLC Residence & Driveway.

MEMO TO: Agencies and Adjacent Property Owners
FROM: Amber Knotts, Planner I
DATE: January 9, 2025
RE: Docket **LU-23-0019/SPR-23-0036**

Docket LU-23-0019/SPR-23-0036: Orris Residence

Request: **REVISED:** Limited Impact Special Use Review to permit 4,023 cubic yards of non-foundational earthwork for the development of a driveway, and Site Plan Review for the construction of a new 2,990-square-foot residence with 220 square feet of covered porch area on an approximately 37.7-acre parcel with a presumptive size maximum of 2,500 square feet.

ORIGINAL: Limited Impact Special Use Review to permit 1,585 cubic yards of non-foundational earthwork for the development of a driveway, and Site Plan Review for the construction of a new 2,990-square-foot residence with 220 square feet of covered porch area on an approximately 37.7-acre parcel with a presumptive size maximum of 2,500 square feet.

Location: 3310 County Road 96J, approximately 4.0 miles from Peak-to-Peak Highway in Section 22, Township 2N, Range 73W.
Zoning: Forestry (F) Zoning District
Applicants/Owners: Stapp Lakes Ranch LLC c/o Christine B. Orris
Agent: Sam Nishek, Barrett Studio Architects

Limited Impact Special Review is required of proposed uses that may have greater impacts on services, neighborhoods, or the environment than those allowed by right under the Boulder County Land Use Code. This process will review conformance of the proposed use with the Boulder County Comprehensive Plan and the Land Use Code.

Site Plan Review by the Boulder County Land Use Director is required for new building/grading/access or floodplain development permits in the plain and mountainous areas of unincorporated Boulder County. The Review considers potential significant impact to the ecosystem, surrounding land uses and infrastructure, and safety concerns due to natural hazards.

This process includes a public hearing before the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of this hearing.

The Community Planning & Permitting staff and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to planner@bouldercounty.gov. All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-3930 or

email planner@bouldercounty.gov to request more information. If you have any questions regarding this application, please contact me at 303-441-1709 or aknotts@bouldercounty.gov .

Please return responses by **January 24, 2025.**

We have reviewed the proposal and have no conflicts.

Letter is enclosed.

Signed _____ PRINTED Name _____

Agency or Address _____

Date _____



Boulder County Land Use Department

Courthouse Annex Building
2045 13th Street • PO Box 471 • Boulder, Colorado 80302
Phone: 303-441-3930
Email: planner@bouldercounty.org
Web: www.bouldercounty.org/lu
Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
Tuesday 10 a.m. to 4:30 p.m.

Shaded Areas for Staff Use Only
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number		Project Name	
<input type="checkbox"/> Appeal <input type="checkbox"/> Correction Plat <input type="checkbox"/> Exemption Plat <input type="checkbox"/> Final Plat <input checked="" type="checkbox"/> Limited Impact Special Use <input type="checkbox"/> Limited Impact Special Use Waiver <input type="checkbox"/> Location and Extent	<input type="checkbox"/> Modification of Site Plan Review <input type="checkbox"/> Modification of Special Use <input type="checkbox"/> Preliminary Plan <input type="checkbox"/> Resubdivision (Replat) <input type="checkbox"/> Rezoning	<input type="checkbox"/> Road Name Change <input type="checkbox"/> Road/Easement Vacation <input type="checkbox"/> Site Plan Review <input type="checkbox"/> Site Plan Review Waiver <input type="checkbox"/> Sketch Plan <input type="checkbox"/> Special Use/SSDP	<input type="checkbox"/> Special Use (Oil & Gas development) <input type="checkbox"/> State Interest Review (1041) <input type="checkbox"/> Subdivision Exemption <input type="checkbox"/> Variance <input type="checkbox"/> Other:
Location(s)/Street Address(es) TBD CR 96 J, Ward CO 80481			
Subdivision Name			
Lot(s)	Block(s)	Section(s)	Township(s)
Area In Acres 37.7	Existing Zoning F	Existing Use of Property residential	Range(s) 1
Proposed Water Supply Well		Proposed Sewage Disposal Method On site Waste Water	

Applicants:

Applicant/Property Owner Big Lake, LLC			Email
Mailing Address C/O CHRISTINE B ORRIS, 101 MODEL T RD			
City BOULDER	State CO	Zip Code 80302	Phone
Applicant/Property Owner/Agent/Consultant			Email
Mailing Address			
City	State	Zip Code	Phone
Agent/Consultant Sam Nishek - Barrett Studio Architects			Email sam@barrettstudio.com
Mailing Address 3980 Broadway St, Suite 103-224			
City Boulder	State CO	Zip Code 80304	Phone 303-449-1141 ex 2

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval. I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner <i>Christine B Orris</i>	Printed Name Christine B. Orris	Date 12-27-23
Signature of Property Owner	Printed Name	Date

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.



Community Planning & Permitting

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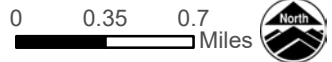
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3310 COUNTY RD 96J

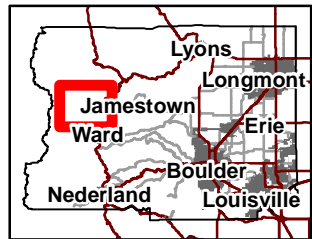
Subject Parcel

Subdivisions

Subdivisions



Area of Detail Date: 1/8/2024



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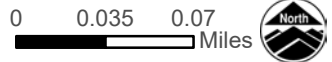
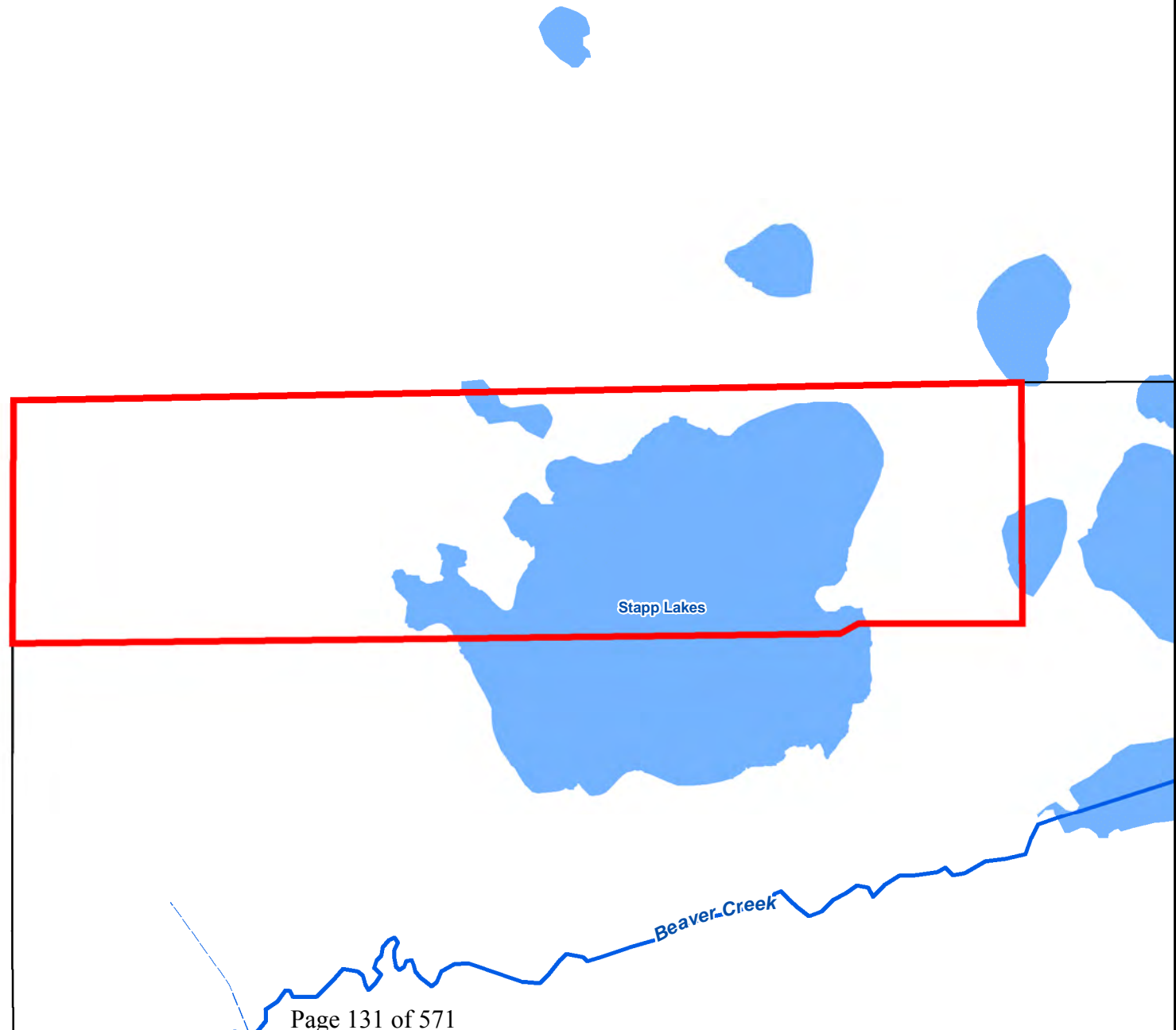
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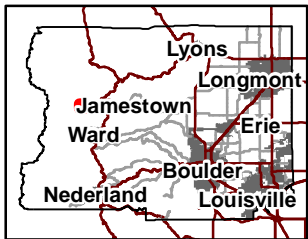
Location

3310 COUNTY RD 96J

 Subject Parcel



Area of Detail Date: 1/8/2024



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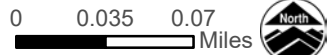
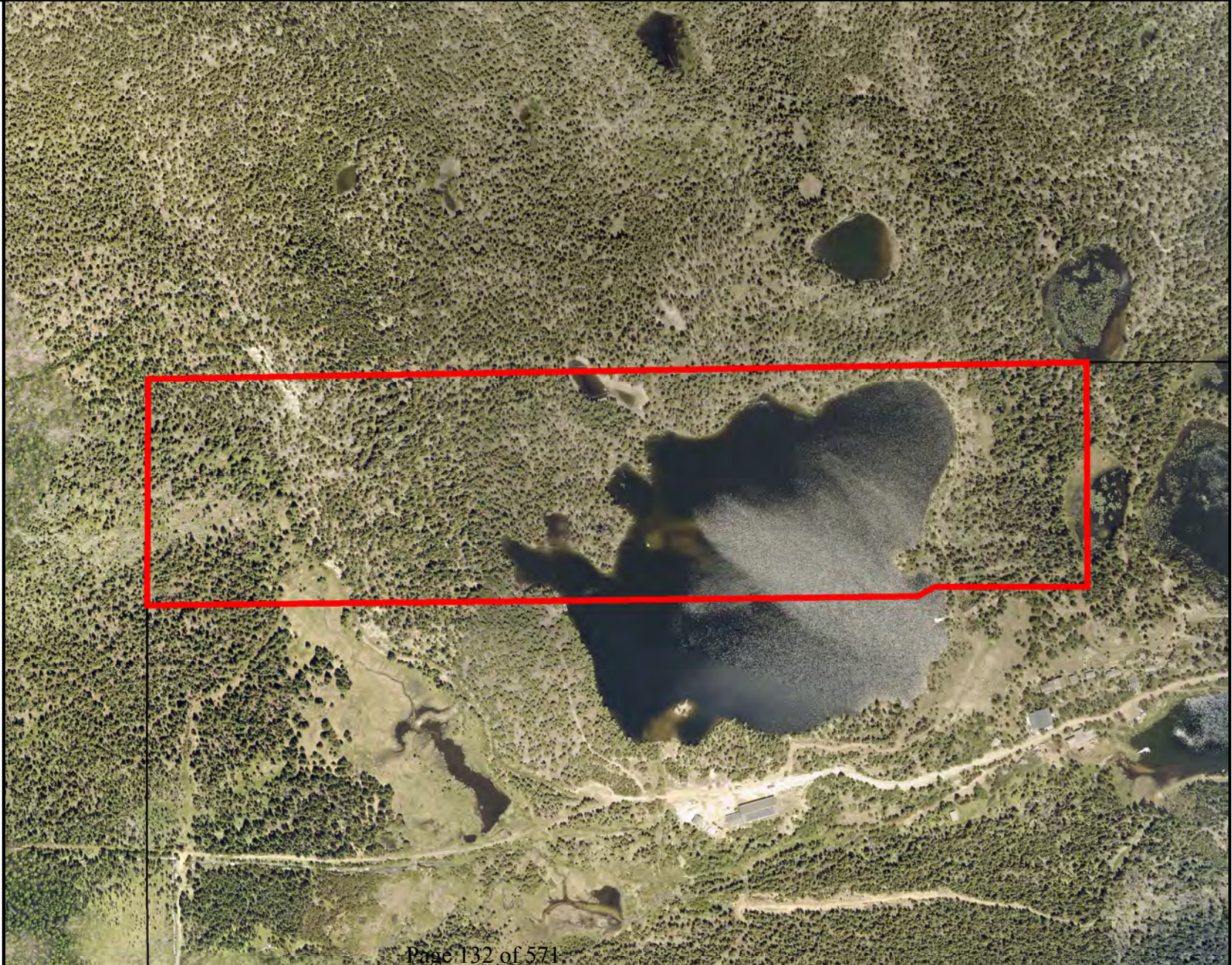
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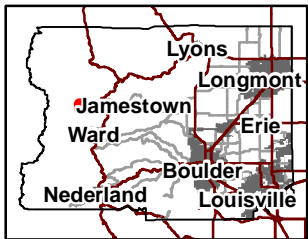
Aerial

3310 COUNTY RD 96J

 Subject Parcel



Area of Detail Date: 1/8/2024



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Aerial

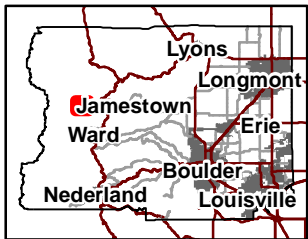
3310 COUNTY RD 96J

 Subject Parcel



0 0.085 0.17 Miles 

Area of Detail Date: 1/8/2024



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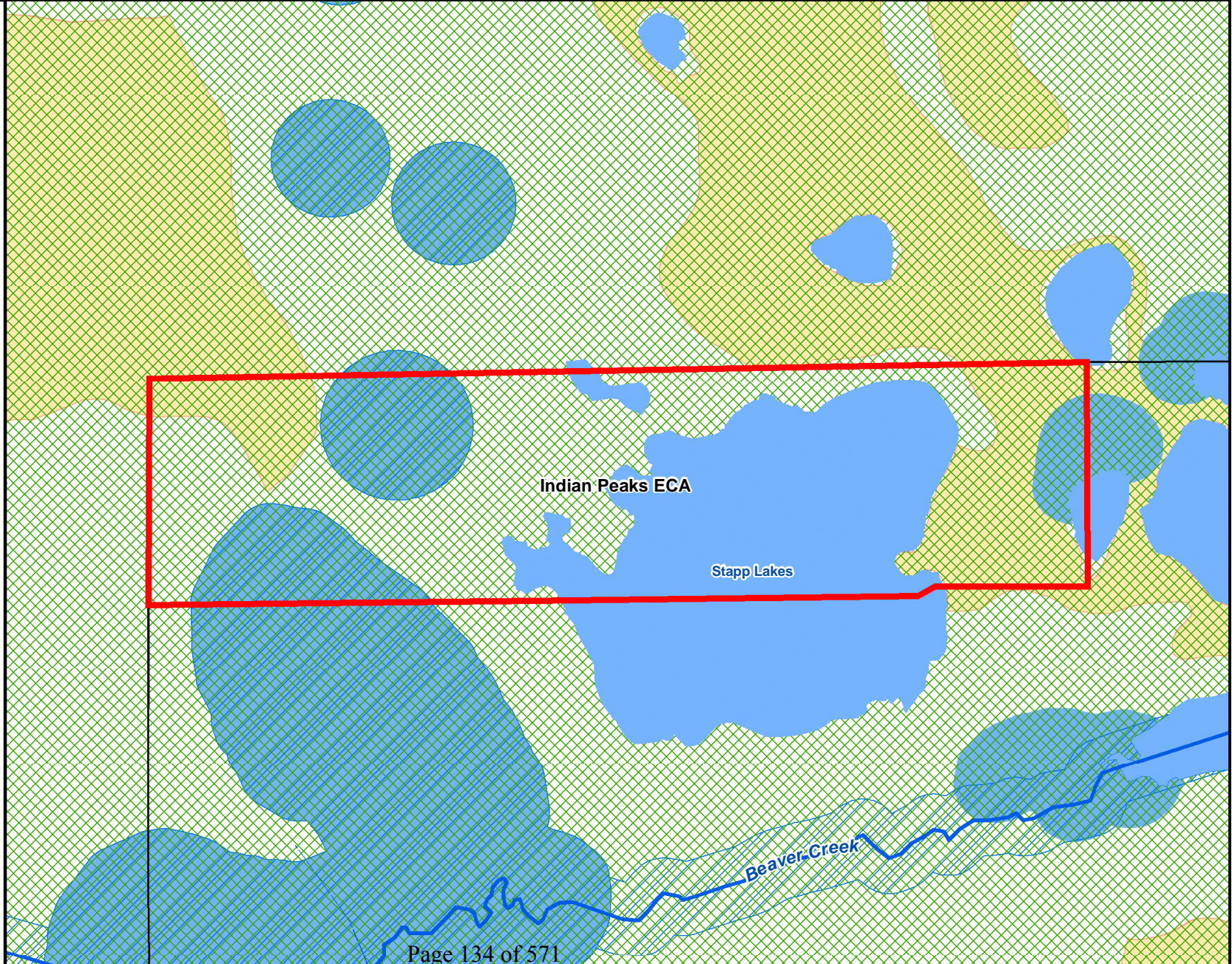
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Comprehensive Plan

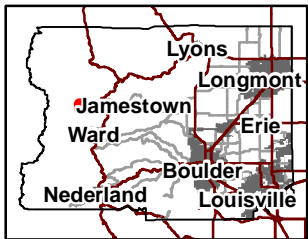
3310 COUNTY RD 96J

-  Subject Parcel
-  Environmental Conservation Areas
-  Riparian Areas
-  Wetlands
-  Significant Natural Communities



0 0.035 0.07 Miles 

Area of Detail Date: 1/8/2024



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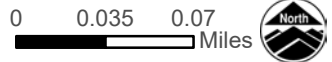
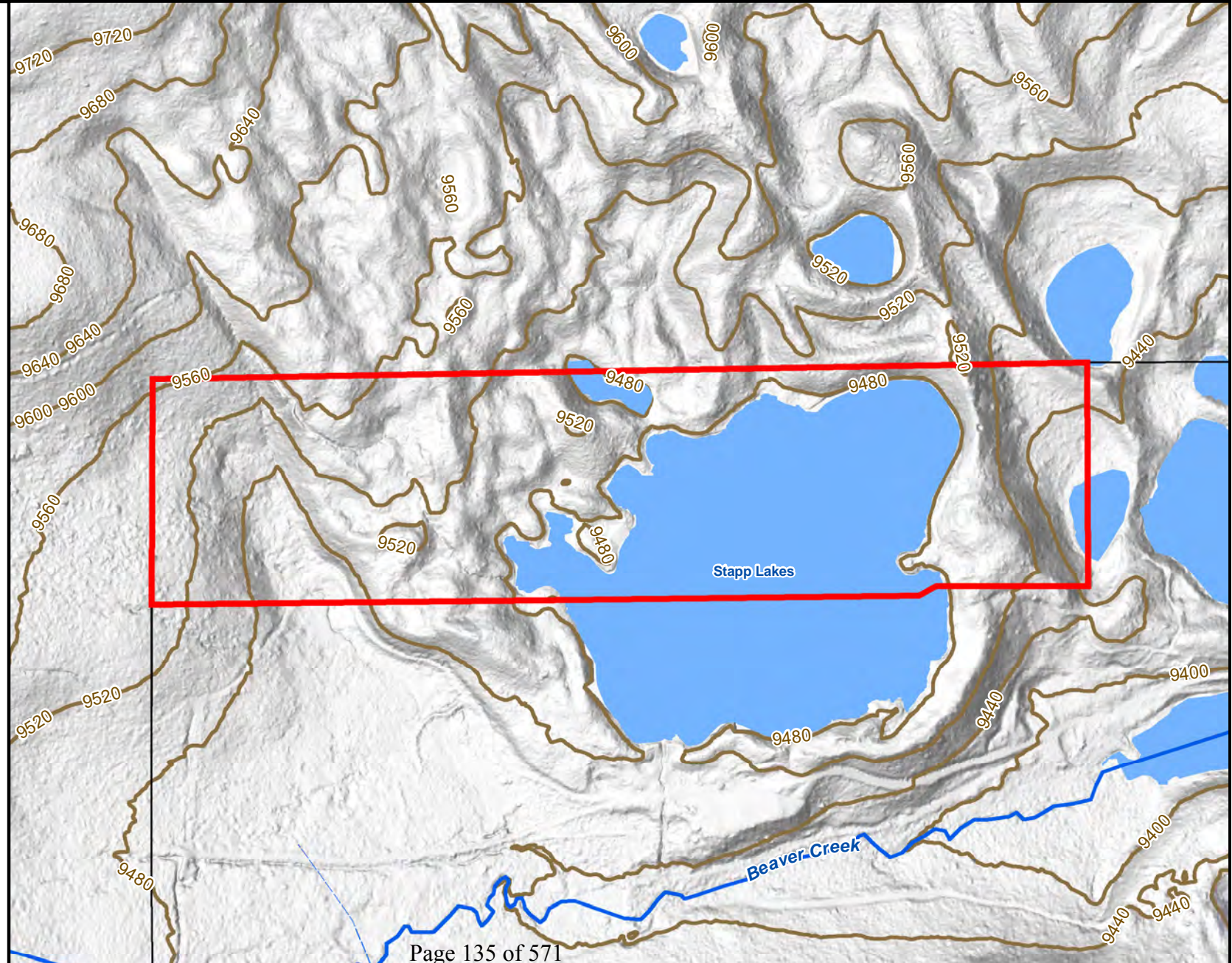
Community Planning & Permitting

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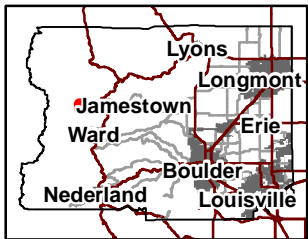
Elevation Contours

3310 COUNTY RD 96J

-  Subject Parcel
-  Contours 40'



Area of Detail Date: 1/8/2024



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Subject Parcel

Geologic Hazard & Constraint Areas
Geology Element

Slope Stability

- Debris flow susceptibility area
- Rockfall susceptibility area
- Landside susceptibility area
- Landslide Inventory

Heaving Bedrock

- Steeply Dipping, Heaving Bedrock

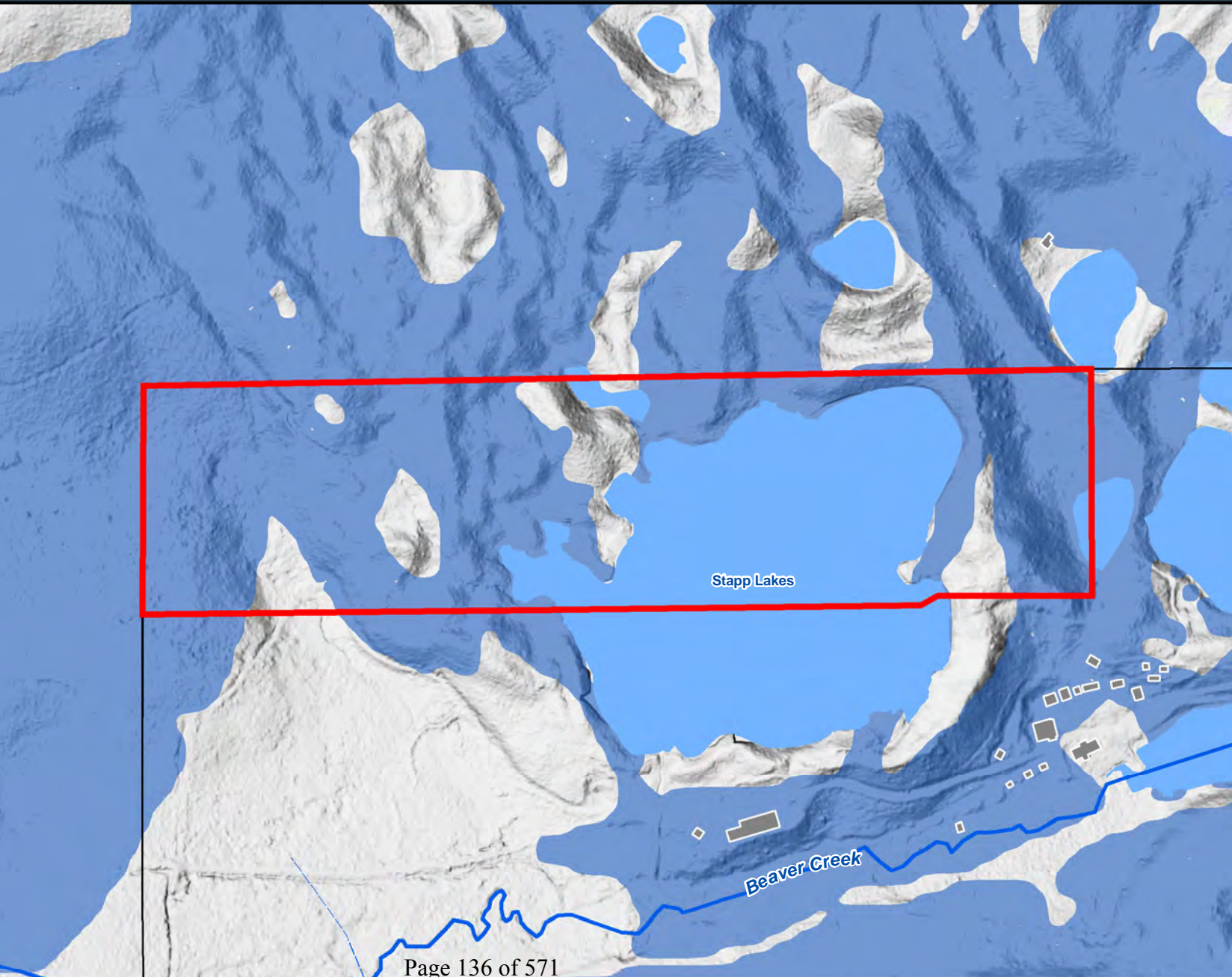
Boulder Coal Field

- Extent of Abandoned Coal Mines

Soil and Bedrock Swell Potential

- Very High
- High
- Moderate

0 190 380 Feet



Area of Detail Date: 1/8/2024

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Community Planning & Permitting

2045 13th Street, Boulder, CO 80302 303-441-3930 www.bouldercounty.org

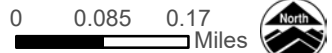
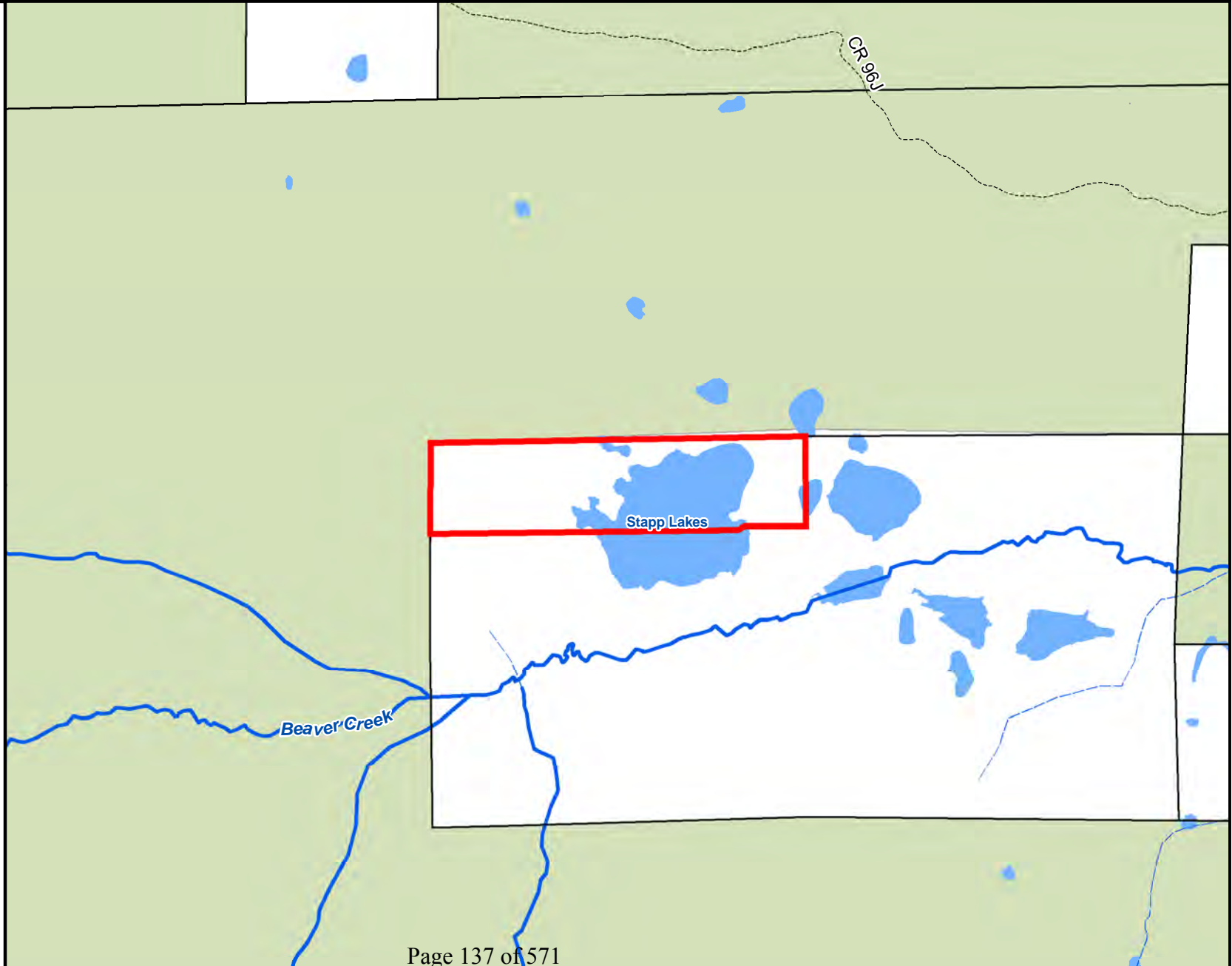
Public Lands & CEs

3310 COUNTY RD 96J

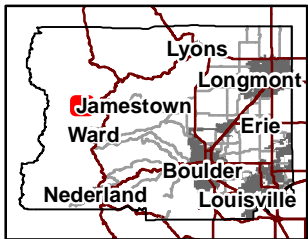
Subject Parcel

Federal Lands

USFS Land



Area of Detail Date: 1/8/2024



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Community Planning & Permitting

2045 13th Street, Boulder, CO 80302 303-441-3930 www.bouldercounty.org

Zoning

3310 COUNTY RD 96J

Subject Parcel

Zoning Districts

Forestry

Ditch Setbacks

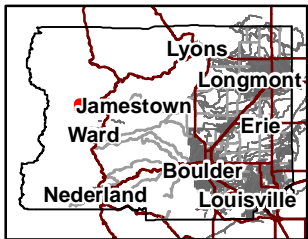
20 feet

50 feet

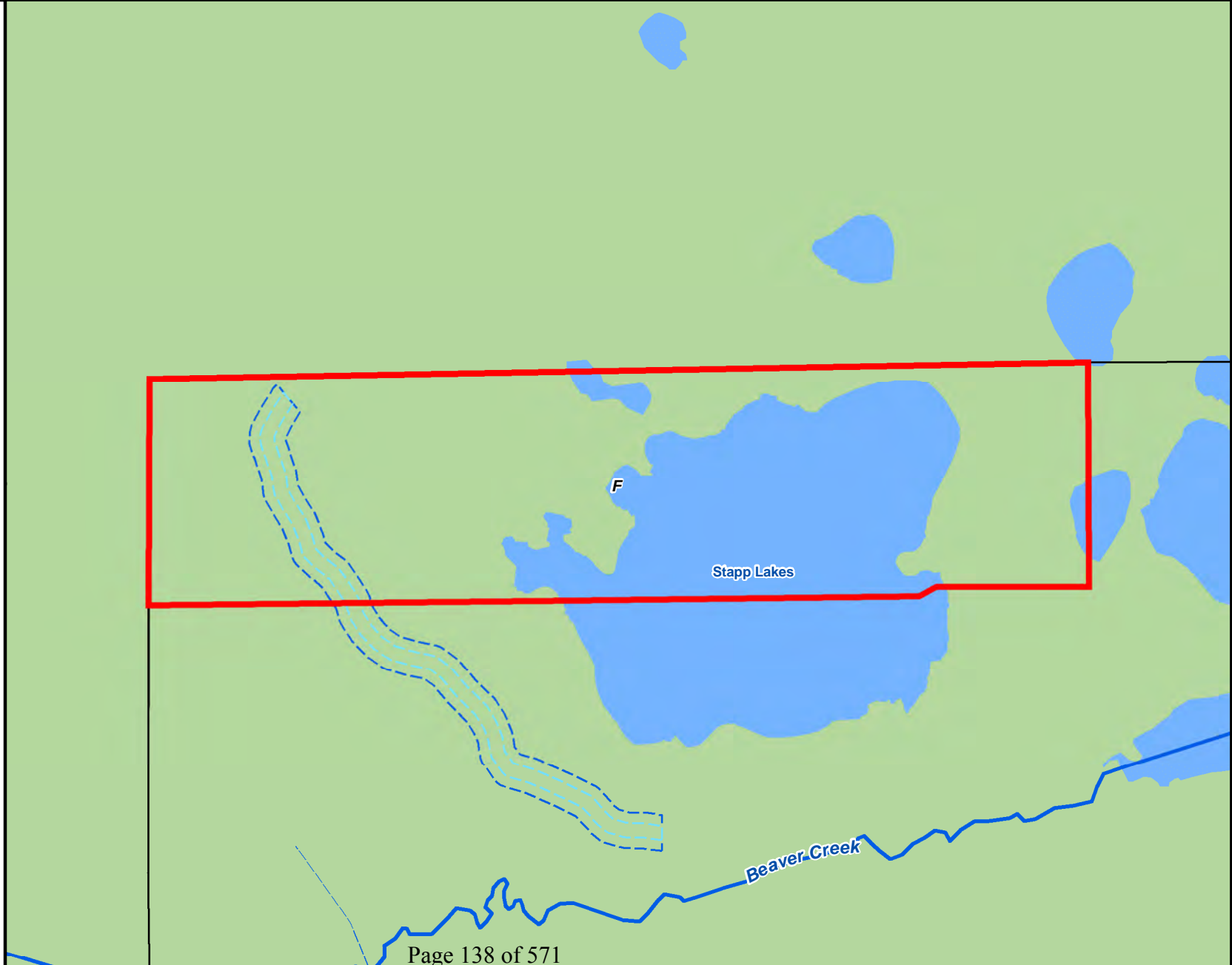
0 190 380 Feet



Area of Detail Date: 1/8/2024



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Site Plan Review Fact Sheet

The applicant(s) is/are required to complete each section of this Site Plan Review (SPR) Fact Sheet even if the information is duplicated elsewhere in the SPR application. Completed Fact Sheets reduce the application review time which helps expedite the Director's Determination. Please make duplicates of this SPR Fact Sheet if the project involves more than two structures.

Structure #1 Information

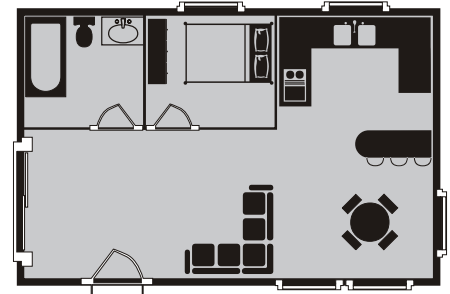
Type of Structure: (e.g. residence, studio, barn, etc.)		Residence			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		0 sq. ft.		Deconstruction:	
Are new floor areas being proposed where demolition will occur? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input type="checkbox"/> Residential <input type="checkbox"/> Non-Residential	
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.		26-2
First Floor:	2200 sq. ft.	sq. ft.	2200 sq. ft.	Exterior Wall Material	metal
Second Floor:	318 sq. ft.	sq. ft.	318 sq. ft.	Exterior Wall Color	grey
Garage: <input type="checkbox"/> Detached <input type="checkbox"/> Attached	472 sq. ft.	sq. ft.	472 sq. ft.	Roofing Material	metal
*Covered Porch:	220 sq. ft.	sq. ft.	220 sq. ft.	Roofing Color	grey
Total:	3210 sq. ft.	sq. ft.	3210 sq. ft.	Total Bedrooms	2

Project Identification:

Project Name: Big Lake Residence
Property Address/Location: TBD CR 96 J
Current Owner: Big Lake LLC
Size of Property in Acres: 37.77

Determining Floor Area

Floor Area is measured in terms of square feet. The total square footage is as everything within the exterior face of the exterior walls including garages and basements. **Covered porch area that is attached to the principal structure is not included (see Article 18-131A).** The shaded area on the diagram indicates the area counted as square feet.



Structure #2 Information

Type of Structure: (e.g. residence, studio, barn, etc.)					
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)				Deconstruction:	
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> No <input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input type="checkbox"/> Residential <input type="checkbox"/> Non-Residential	
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.		
First Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Material	
Second Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Color	
Garage: <input type="checkbox"/> Detached <input type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.	Roofing Material	
*Covered Porch:	sq. ft.	sq. ft.	sq. ft.	Roofing Color	
Total:	sq. ft.	sq. ft.	sq. ft.	Total Bedrooms	

Residential vs. Non-Residential Floor Area

Residential Floor Area includes all attached and detached floor area (as defined in Article 18-162) on a parcel, including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, home offices and workshops. Gazebos and carports up to a total combined size of 400 square feet are exempt. Barns used for agricultural purposes are not considered residential floor area.

Note: If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Site Plan Review and shown on this Fact Sheet.

If a Limited Impact Special Review is required, then call 303-441-3930 and ask for a new Pre-Application conference for the Limited Impact Special Review.

*See Article 18-131A for definition of covered porch.

Grading Calculation

Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Review is required. Limited Impact Special Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).

If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading

This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

Earth Work and Grading Worksheet:

	Cut	Fill	Subtotal
Driveway and Parking Areas	2008	1478	3486
Berm(s)	na	na	na
Other Grading <u>unpermitted</u>	269	268	537
Subtotal	2277	1746	4023 <small>Box 1</small>

* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.

	Cut	Fill	Total
Foundation	76.08	185.0	261.08
Material cut from foundation excavation to be removed from the property			0

Excess Material will be Transported to the Following Location:

Excess Materials Transport Location:	No excess material will be transported off site

Narrative

Use this space to describe any special circumstances that you feel the Land Use Office should be aware of when reviewing your application, including discussion regarding any factors (listed in Article 4-806.2.b.i) used to demonstrate that the presumptive size limitation does not adequately address the size compatibility of the proposed development with the defined neighborhood. If more room is needed, feel free to attach a separate sheet.

See attached

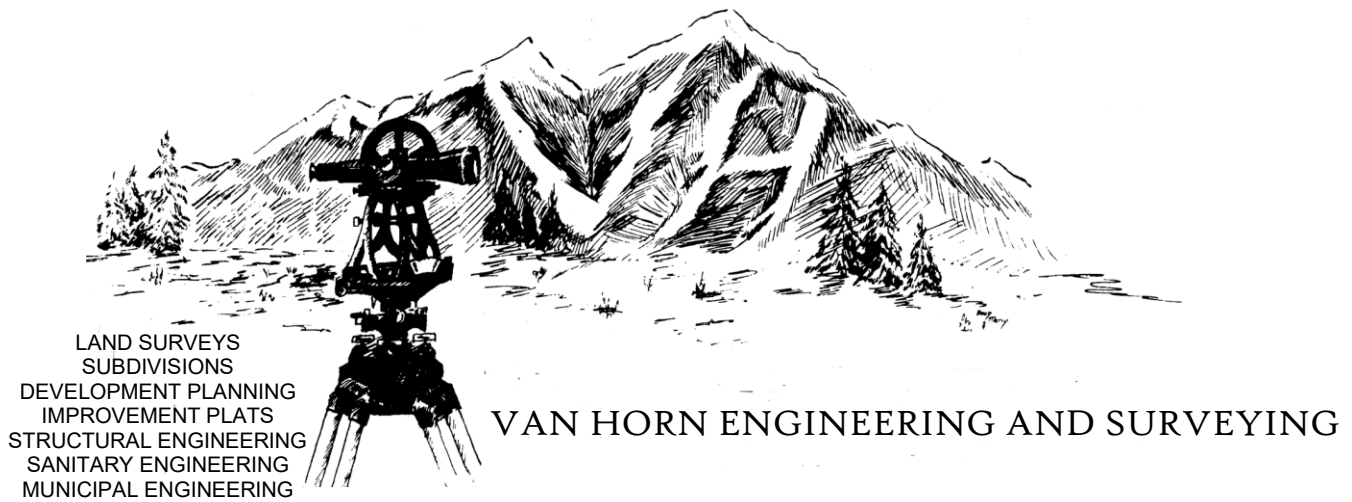
Is Your Property Gated and Locked? Yes, Contact me to schedule your visit. sam@barrettstudio.com

Note: If county personnel cannot access the property, then it could cause delays in reviewing your application.

Certification

I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature		Print Name	Sam Nishek	Date	12/19/2024
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**Big Lake Earthwork Narrative
3310 County Road 96J,
Boulder County, Colorado**

This letter, and the plan view driveway survey worksheet is submitted to provide an approximate value for the amount of earth disturbed on site, and to evaluate drainage on site and through the site. The existing driveway has been field surveyed, a surface created, and a profile has been developed based on the current (summer '24) condition. This driveway existed prior and aerial maps are included to show that this driveway (approximate alignment) and other driveways (access roads) that existed on site back to 1999 or earlier. There have been minor changes in horizontal and vertical alignment over the years. Aerial mapping prior to this that was available to Van Horn Engineering is not clear enough to adequately distinguish these travel paths on site.

Earthwork volumes were estimated utilizing tools provided by AutoCAD. When the base surface (existing grades) and comparison surface (proposed grades) are compared, there is a reported 2008 cubic yards of cut and 1478 cubic yards of fill, for a net of 530 cubic yards of cut. It should be noted that these estimates were made with cut and fill factors of 1.0. The real net volume may change depending on the swelling properties of the soil.

There was question about the unpermitted grading performed on site in 2022. When calculated using the average end area volume method, this unpermitted grading resulted in a total cut and fill of 537 CY. As was stated in the submitted drainage letter, this figure is both cut and fill combined. Not

only this, but no material was imported nor removed during the unpermitted grading, all material was relocated to other points along the driveway. See the cross sections on sheet 5 on the accompanying planset for better detail.

No guarantees of the accuracy of the numbers is given since no historic surveying quantification is available. We feel we have done the best we can with the information in hand on this application for the stated purpose.

Let me know if there are questions.

Sincerely,

Lonnie A Sheldon, PLS #26974, for Van Horn Engineering and Surveying Inc., Cell: 970-443-3271,
Email: lonnie@vanhornengineering.com

Attachments:

- *The plan view driveway survey worksheet is included in this submittal
- *Aerial photos are included in the attached drainage letter to show the historic driveway back to Big Lake and the changes made in the alignment which was obtained by graphical overlay. Photos also show historic disturbed area which is larger than the current area of disturbance.
- *There is an attached document of supplemental photos along the length of the driveway. Photos show extent of existing forest maintenance road and performed unpermitted grading.
- *A Drainage Narrative is included.

Stapp Lakes Earthwork Quantities - Worksheet of approximate quantities. September 27, 2023

STATION increase	Description	CURRENT (SF)	HISTORIC (SF)	DIFFERENCE (SF)	Current Avg end area (SF)	Current Volume (CF)	Current Volume (CY)	Historic Avg end area (SF)	Historic Volume (CF)	Historic Volume (CY)
0= Begin	Control Pt. 101	121	60	61	92	3220	119	46.5	2135	79
35		63	31	32	40	1520	56	19.5	1216	45
38		17	10	7	26	962	36	7	259	10
37	PRC	35	28	7	21.5	860	32	4	280	10
40		8	7	1	9.5	323	12	2	34	1
34	PRC	11	8	3	10.5	420	16	2	120	4
40		10	9	1	14	560	21	1.5	40	1
40		18	16	2	13	819	30	2	126	5
63		8	6	2	25.5	1020	38	9	80	3
40		43	27	16	33.5	1340	50	15.5	640	24
40	CP 298	24	9	15	20	1100	41	10.5	825	31
55		16	10	6	15	750	28	4.5	300	11
50		14	11	3	18.5	925	34	5	150	6
50	Cabin	23	16	7	24.5	1078	40	7.5	308	11
44	CP 340	26	18	8	26.5	1325	49	8	400	15
50		27	19	8	26	1300	48	7	400	15
50		25	19	6	27.5	1705	63	9	372	14
62		30	18	12	43.5	3262.5	121	27.5	900	33
75		57	14	43	38.5	3157	117	25.5	3526	131
82	CP 399	20	12	8	24	1440	53	9.5	480	18
60		28	17	11	26	520	19	7.5	220	8
20		24	20	4	22.5	1012.5	38	5	180	7
45		21	15	6	23.5	470	17	8.5	120	4
20		26	15	11	19	1330	49	7.5	770	29
70		12	8	4	16	1216	45	4.5	304	11
76		20	15	5	20	1280	47	5	320	12
64		20	15	5	10	0	0	0	0	0
							1219			537

Note that cut and fill are summed collectively at each cross section.



BARRETT STUDIO architects

PROJECT NARRATIVE: Big Lake Residence Limited Impact Special Review 12/05/2024

Christy and Jay Orris, are planning to build a residence on their 37.7 acre property at 3310 CR 96J

We are submitting for a Limited Impact Special Review for this project due to the amount of grading required to improve the existing forest road into a driveway.

The proposed boundary of the 37.7 acre parcel is not within 1,500 feet of any other private parcel besides the Stapp Lake Ranch. The PSM is 2,500 square feet. However, the Adjacent Stapp lake Ranch has a residential floor area of 14,863 sq ft and the Adjacent government parcel has a residential floor area of 4,325 sq ft. The average of these two adjacent parcels is 9,548 sq feet which is the calculated size limit per the adjacency rule.

The proposed residential floor area for the 2 bedroom residence and attached garage is 2,990 sq feet.

The house is designed to follow the curved shoreline of the private lake. It is mostly a low slung single story home with a low pitched roof, there is a half level transition to the single car garage and a small second story guest suite. The highest part of the shed roof will be 26'-2" above existing grade.

Due to distance and terrain, the house will not be visible to any other private parcels, nor the original buildings of Stapp Lake Ranch, except for one cabin. The home will not be visible from any public roads. The home will be over 500' from the nearest adjacent property which is a government owned parcel.

The exterior materials of the house are exposed concrete foundation, corrugated painted grey metal siding, and standing seam painted grey metal roofing to visually blend in with the natural terrain, vegetation and the lake surface. The painted metal roofing and siding, the natural finish Ipe wood decking, the powder coated galvanized deck structure are all durable and stable materials that do not degrade the water or soil environments while also being considered ignition resistant for wildfire resistance.

The roof water drainage will be routed with gutters, downspouts and piping so that it will drain into rock lined infiltration swales that follow the slope and gives the rain water time to infiltrate into the pervious surface.

There is not an established County, State or Federal required setback distance between the lake shore and the perimeter of the house. We have sited the house on this relatively flat area near the lake rather than build it into the steep hillside that surrounds the other possible lake front sites.

Before and during construction, the Storm Water Quality Permit will be implemented and followed to minimize the impact of construction near the lake. Additional measures during construction will include the installation of a construction fence around the lake edge to capture wind borne debris. Recycling and construction waste dumpsters will have hinged covers to contain their contents. A daily round of

exterior cleanup will be required of the general contractor to keep any construction waste from entering the lake.

The lake will provide much of the wildfire defensible space around the house while selective thinning of trees and shrubs and the emergency turnaround will provide defensible space along the east side.

The house will be considered Off- Grid with solar PV panels and battery backup as well as a buried propane tank. A well will be drilled for domestic water. A sewer lift pump, septic tank and field will be installed to treat the waste water from the 2 bedroom home. This system will be designed and installed to comply with all Health Department requirements.

Access will be provided by building the driveway along the layout of the existing forest management road. A 30' wide access easement has been recorded with the subdivision of the property. Two emergency access pullouts along the driveway and an emergency turnaround will be provided near the residence. The driving surface will be 12' wide on the straight sections and 14' wide in the curves. Please see the Civil Engineering drawings and Drainage report for the design and layout of this road.

Please review the letter from the owners to understand their commitment to this land.
Please review the comment response letter, the ecology report and the revised submittal documents that address the previous staff comments.

Thank you for your review.
Best Regards,
Sam Nishek, Barrett Studio Architects.

To: Boulder County Planning
Re: Stapp Lakes Ranch/ Big Lake Residence
From: Jay and Christy Orris

To any who may read this as part of our application,

As the guardians of Stapp Lakes Ranch, we wanted to ensure that the County and its staff have an understanding of our intentions and how we see our role in being the stewards of the incredible property that comprises Stapp Lakes Ranch.

We were fortunate enough to hear of and purchase this piece of land 12 years ago. As Christy often says, the ranch found us, rather than us finding it. At that time, we were looking for a place in the high mountains that could be a retreat for our family and give us the opportunity to ensure our boys grew up with an appreciation of everything that Colorado offers. We were specifically looking for something simple that was within a reasonable drive (not up I-70!) of our permanent residence in Sunshine Canyon.

Little did we imagine that a gem like Stapp Lakes Ranch was within a 45 minute drive of our house, and actually (quietly) on the market. As you know from the County records, there are about 30 structures or remains of structures on the ranch, which covered 320 acres at the time of purchase. We were not seeking anything this large or complicated, but once it found us it was clear that it was in our future.

We were very fortunate that the fourth owner of the property, David Sellers, put his heart and soul, and his wallet into Stapp Lakes before we came along. He effectively rescued the remaining intact structures after the neglect at the end of the Jerry Henderson / Dawson Foundation ownership period and the ashram that followed him. Without David's dedication to the property, many structures would have fallen into complete disrepair or collapse. We have continued in that role, ensuring that buildings remain structurally sound, bringing water systems into compliance and performing forest mitigation work in accordance with the plan we develop every ten years with the US Forest Service.

We view ourselves more as *caretakers* than *owners* of this land, its structures and its history. We tell our kids that this ranch is not "ours" and neither will it be "theirs" and that we have a responsibility to manage this ranch into the future.

Our intention for Stapp Lakes Ranch is to continue stewarding this land as a contiguous property and use it in the vision mentioned above. Although by right we could, we have no intention to subdivide it to develop the property and sell parcels of it. And especially not into 9 homes centering around Big Lake (aka Stapp Lake), a possibility suggested in correspondence we received from the County. Our role is as stewards, not as developers.

We carved out the ± 38-acre parcel of land, the "Big Lake Property" which contains the proposed home site, only on the advice of County staff. The rationale for that was the

tremendous difficulty, if not sheer impossibility, of bringing the numerous structures on the ranch built more than 100 years ago up to modern code, as we were told would be required if we built on a single property. As you know, it is especially difficult to balance modern code requirements with the historical nature of the buildings.

Of anyone, we have the strongest interest in maintaining the natural beauty of this property. We practice catch and release, barbless-hook fishing, work with the Forest Service and contractors to mitigate fire risk and improve the health of the forest and allow no hunting on or through the ranch. We don't allow fossil-fuel powered boats on the lakes and ensure our trash is properly handled and removed from the ranch. We have no interest and gain no benefit from disrupting the nature and wildlife around us or compromising the natural environment. This property is a safe refuge for numerous moose and other animals, and it will remain that way as long as we are the custodians of its future.

We hope this helps explain our philosophy and our commitment to the stewardship of this land. It is in our best interest to protect its natural features tenaciously. Modern technologies like solar power and greatly improved building materials have enabled us to consider building in this new location while minimizing the environmental impact. And that is our intent for the ranch in general and for the project you now have in front of you.

Thank you for your consideration of our application.

Jay and Christy Orris

EXISTING CONDITIONS SITE PLAN – BIG LAKE LLC (CHRISTY AND JAY ORRIS)

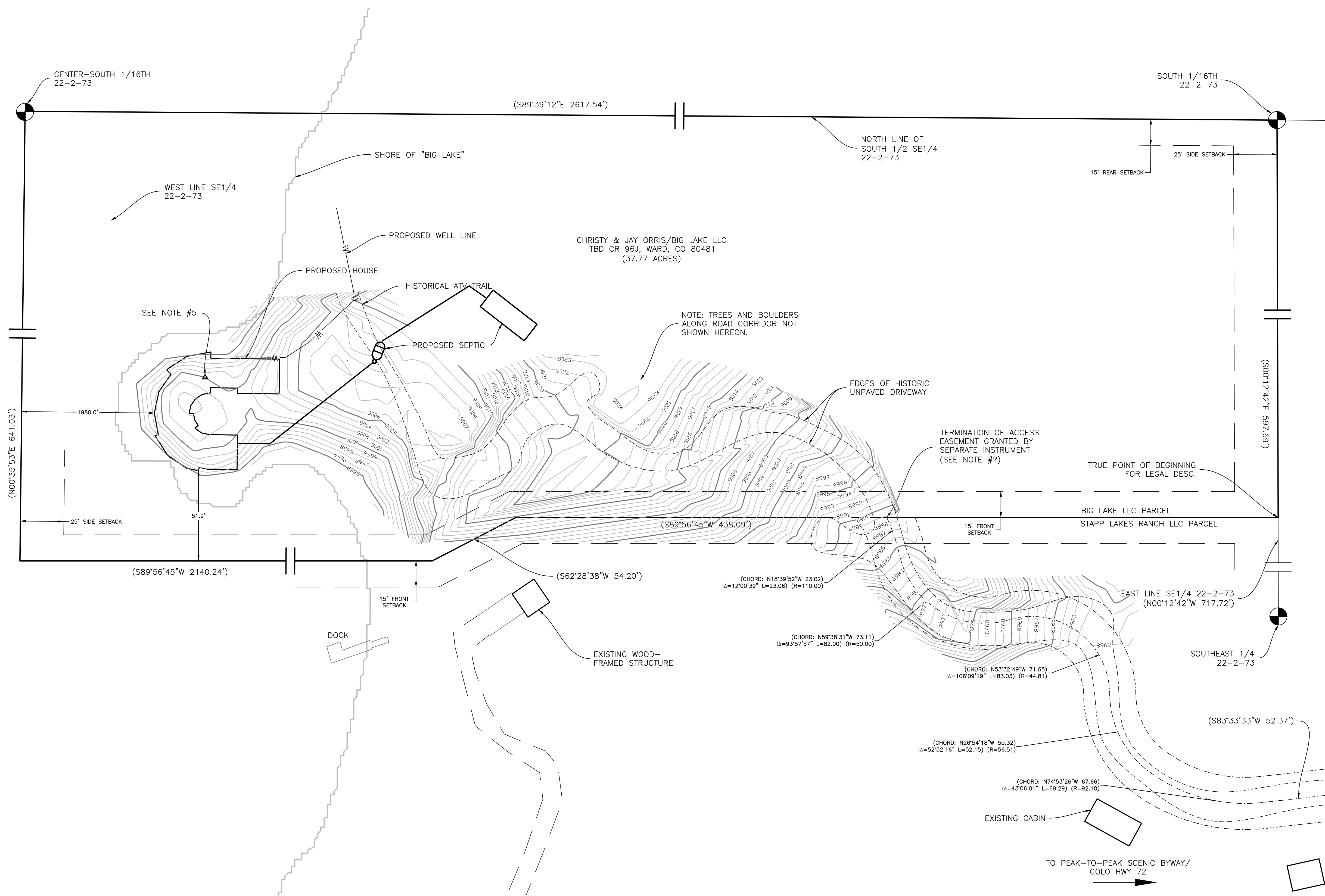
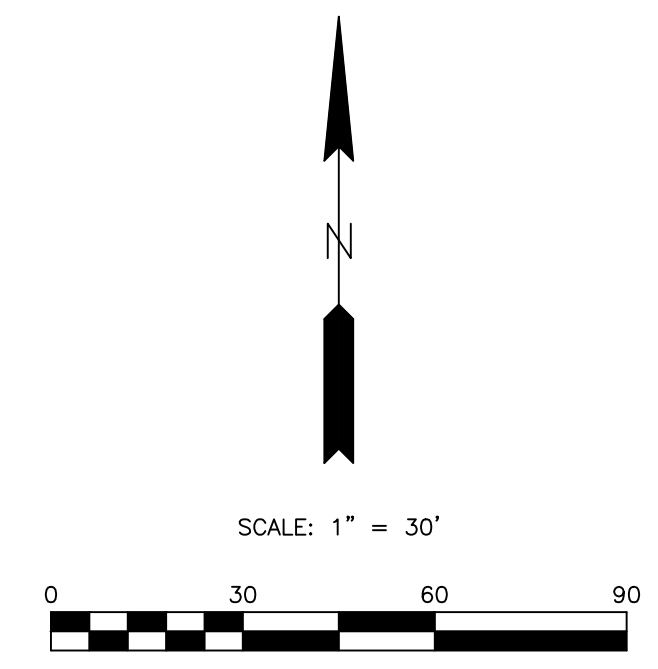
A TRACT OF LAND SITUATE IN THE S1/2 OF THE SE1/4 OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 73 WEST OF THE 6TH P.M., MORE PARTICULARLY DESCRIBED AS FOLLOWS:

LEGAL DESCRIPTION (NO RECEP. NO. AS OF THE DATE SHOWN ON THIS SITE PLAN, SEE NOTE #??):

COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION AND CONSIDERING THE EAST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION TO BEAR N00°12'42"W WITH ALL BEARINGS HEREIN RELATIVE THERETO;

THENCE N00°12'42"W ALONG SAID EAST LINE 717.72' TO THE TRUE POINT OF BEGINNING;

THENCE DEPARTING SAID EAST LINE S89°56'45"W 438.09'; THENCE S62°28'38"W 54.20'; THENCE S89°56'45"W 2140.24' TO THE WEST LINE OF SAID SOUTHEAST 1/4; THENCE ALONG THE SAID WEST LINE N00°35'53"E 641.03' TO THE CENTER-SOUTH 1/16TH OF SAID SECTION; THENCE S89°39'12" ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 2617.54' TO THE SOUTH 1/16TH OF SAID SECTION; THENCE S00°12'42"E 597.69' TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 37.77 ACRES, MORE OR LESS AND IS SUBJECT TO ALL EASEMENTS AND RIGHT OF WAYS OF RECORD. COUNTY OF BOULDER, STATE OF COLORADO.



- Legend**
- ALIQUOT MONUMENTATION (AS NOTED)
 - PROPERTY LINES
 - BUILDING SETBACKS
 - EDGE ACCESS EASEMENT
 - PROPOSED SEPTIC LINE
 - PROPOSED WELL LINE
 - 9000 EXISTING MAJOR CONTOUR (5')
 - 9001 EXISTING MINOR CONTOUR (1')
 - REFERENCE ELEVATION (SEE NOTE #5)

BY	REVISION	DATE
JTG	UPDATING SEPTIC LOCATION	10/24/2024

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

SITE PLAN FOR BIG LAKE RESIDENCE
BIG LAKE RESIDENCE
3310 CR96J, UNINC. BOULDER COUNTY

DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE:	1"=30'
DATE:	12-22-2023
SHEET	1
OF	1
PROJ. NO.	2012-06-18

File:
NOTICE: DUTY OF COOPERATION
Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL
Date: December 5, 2024
Revisions:

Big Lake Residence
3310 CR 96J, Ward CO 80481

BARRETT STUDIO architects
Architecture Community/Urban Design Interiors
Matting: 3980 N Broadway, Suite 103 PMB-224, Boulder, Colorado 80304, phone: 303.449.1141, email: bsa@barrettstudio.com, web: www.barrettstudio.com

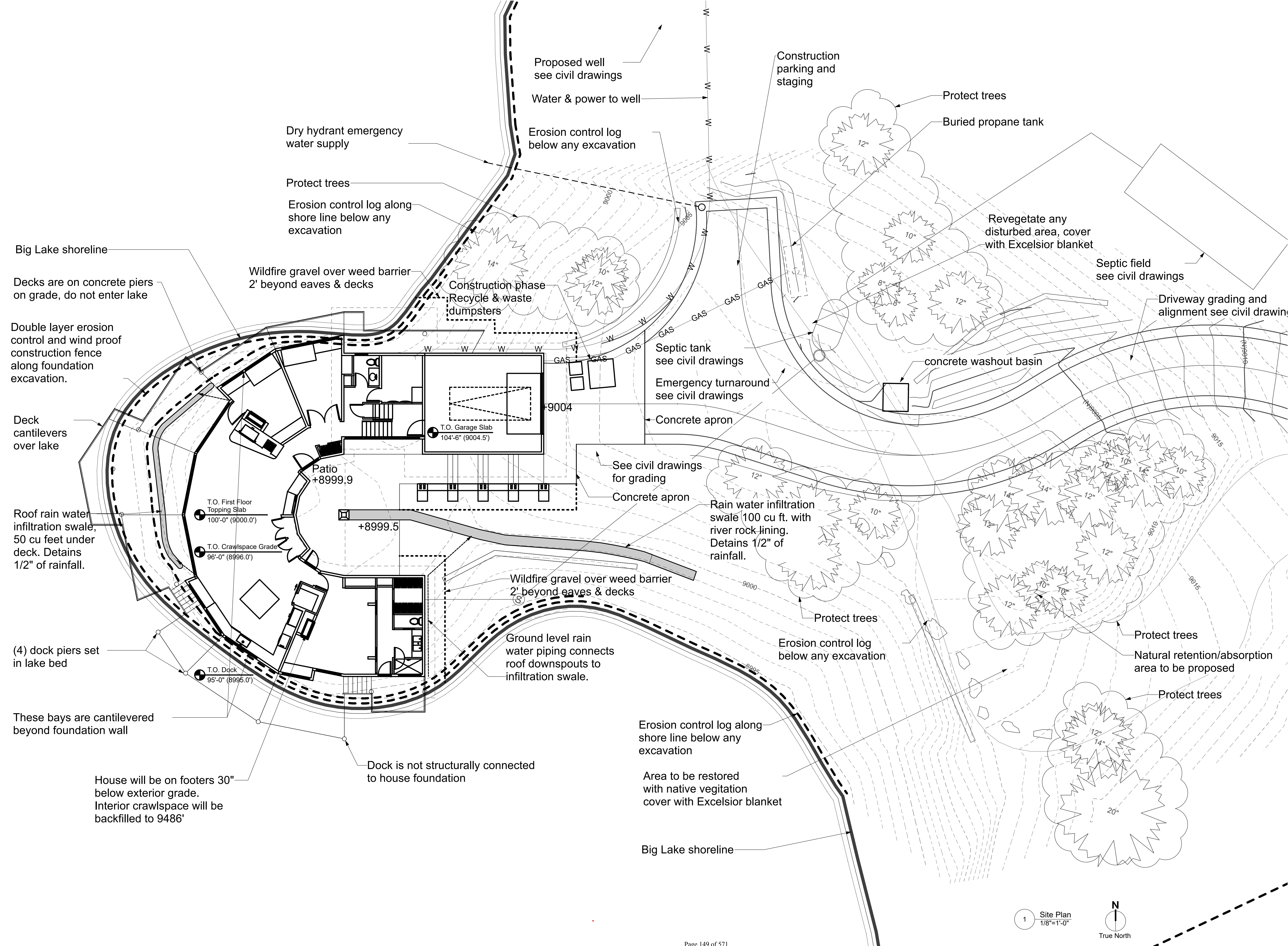


Site Plan

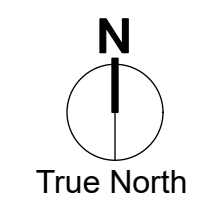
Drawing Number:

A1.1

Sheet: 1 of: ©Copyright 2024 Barrett Studio Architects



1 Site Plan
1/8"=1'-0"

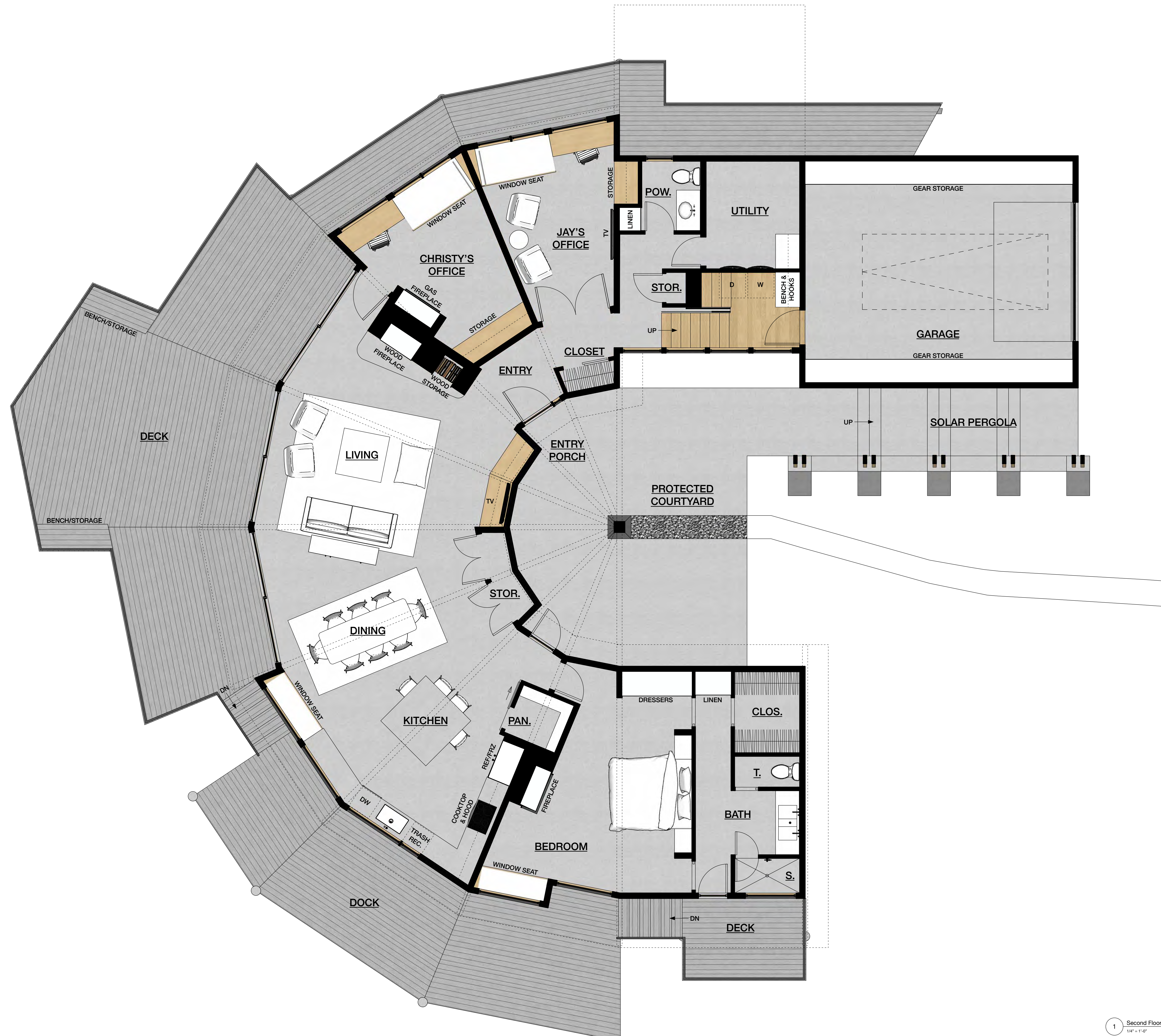


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Date: December 5, 2024
Revisions:



Big Lake Residence
3310 CR 96J, Ward CO 80481



BARRETT STUDIO architects
Architecture Community/Urban Design Interiors
Mailing: 3980 N Broadway, Suite 103 PMB-224, Boulder, Colorado 80304 phone: 303.449.1141 email: bsa@barrettstudio.com web: www.barrettstudio.com

Preliminary Drawing Set
Not for Construction

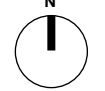
Plans

Drawing Number:

2.0

Sheet: of:

1 Second Floor Plan
1/4" = 1'-0"

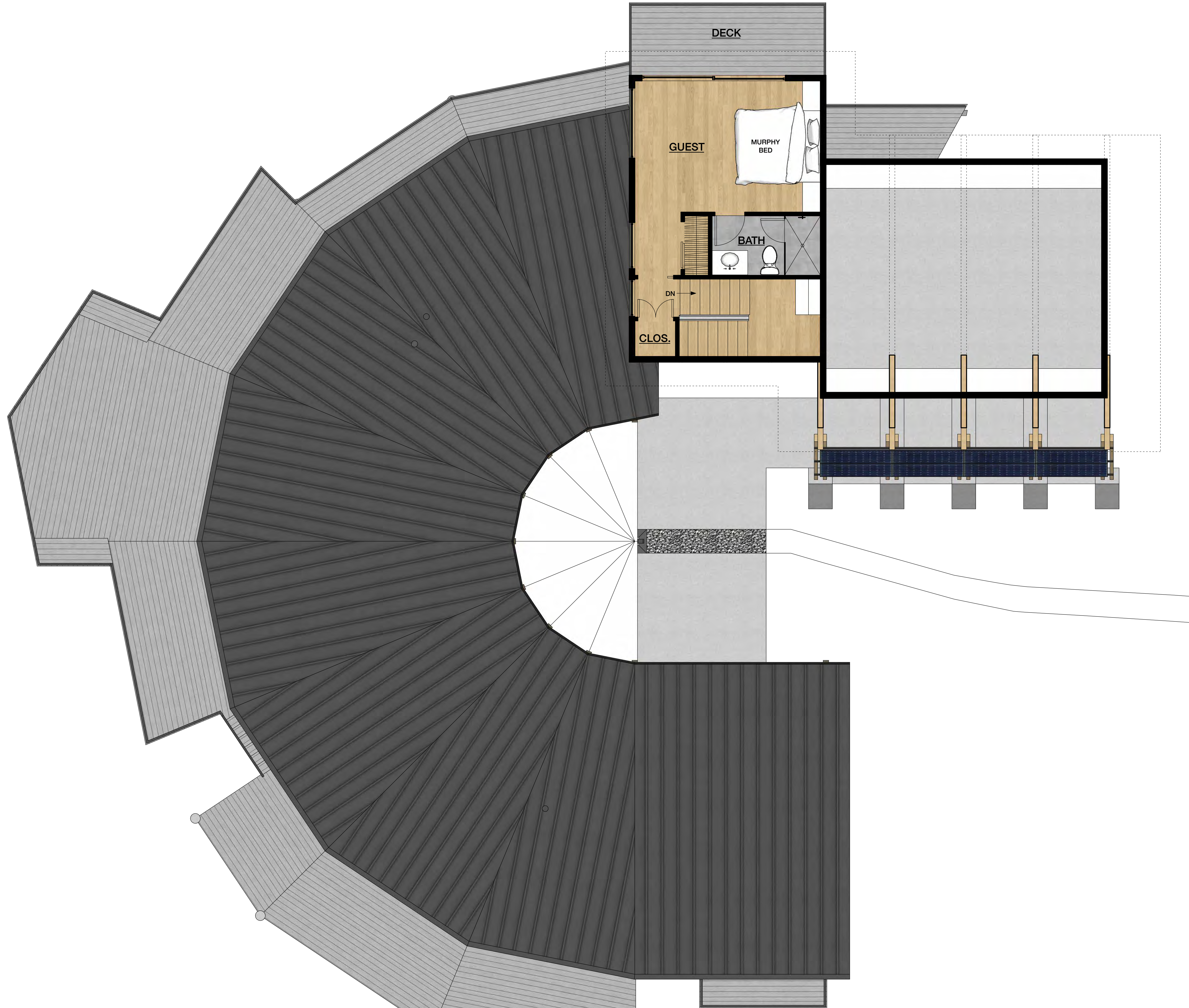


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3310 CR 96J, Ward CO 80481



BARRETT STUDIO architects
Architecture Community/Urban Design Interiors
Mailing: 3980 N Broadway, Suite 103 PMB 224, Boulder, Colorado 80304 phone: 303.449.1141 email: bsa@barrettstudio.com web: www.barrettstudio.com

Preliminary Drawing Set
Not for Construction

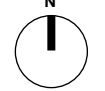
Plans

Drawing Number:

2.1

Sheet: of:

1 Second Floor Plan
1/4" = 1'-0"



NOTICE: DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL

Date: December 5, 2024
Revisions:

Big Lake Residence
3310 CR 96J, Ward CO 80481



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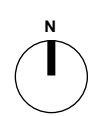
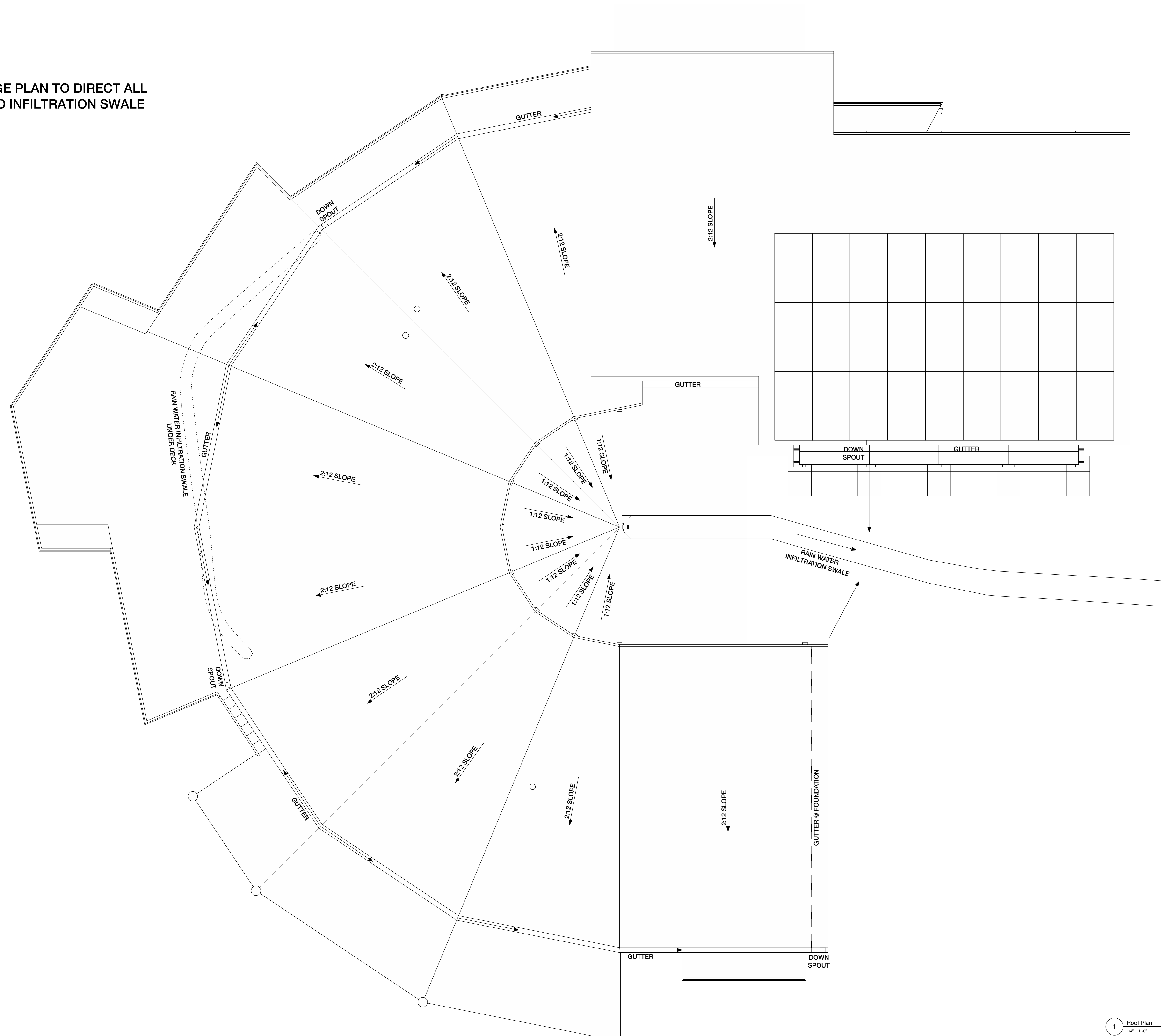
Preliminary Drawing Set
Not for Construction




Plans
Drawing Number:

2.2

Sheet: of:
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ROOF DRAINAGE PLAN TO DIRECT ALL RAIN WATER TO INFILTRATION SWALE



Material Key	
	Standing Seam Metal Roof
	Corrugated Metal Siding
	Concrete - Clear Sealed Above Grade, Waterproof Below Grade

Elevation Keynotes	
①	Powder Coated Galvanized Steel Deck & Dock Framing
②	Ipe E 84 Ignition Resistant Wood Deck & Dock Decking - Untreated
③	Painted Steel Guardrail
④	Aluminum Clad Windows
⑤	Solar Panels

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 Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL

Date: December 5, 2024
 Revisions:



1 South Elevation
 1/4" = 1'-0"



2 North Elevation
 1/4" = 1'-0"

Big Lake Residence
 3310 CR 96J, Ward CO 80481

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Preliminary Drawing Set
 Not for Construction

Elevations
 Drawing Number:
4.0
 Sheet: of:
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NOTICE: DUTY OF COOPERATION

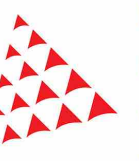
Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL

Date: December 5, 2024
Revisions:

Big Lake Residence
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Preliminary Drawing Set
Not for Construction

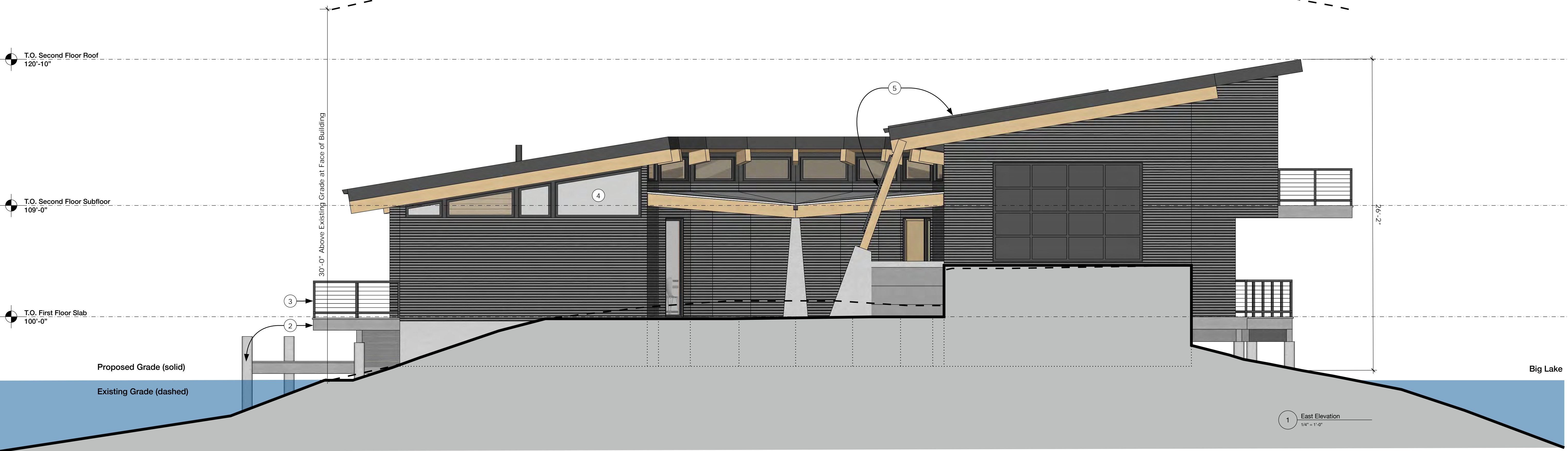
Elevations

Drawing Number:

4.1

Sheet: of:

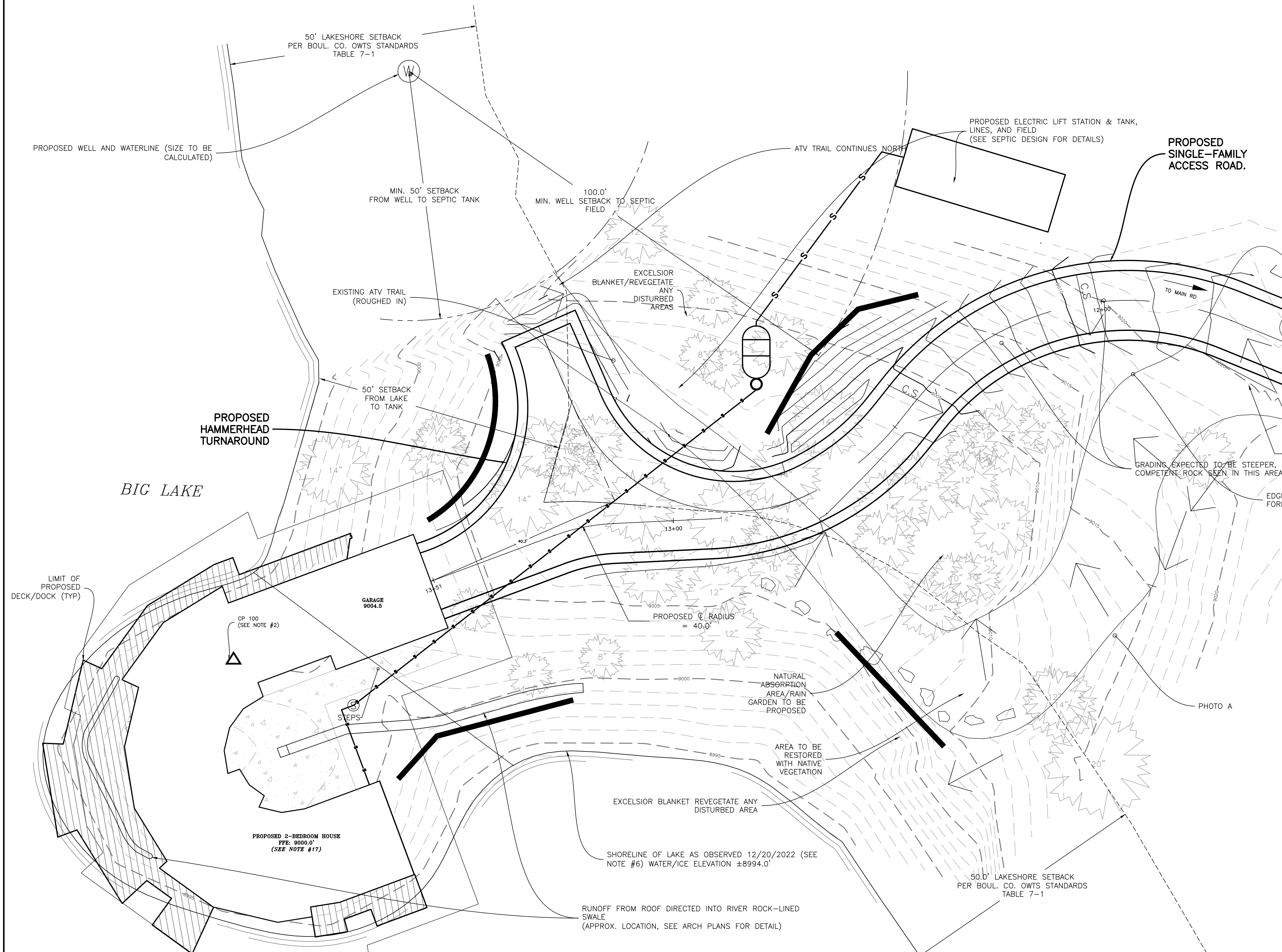
Material Key		Elevation Keynotes	
	Standing Seam Metal Roof	①	Powder Coated Galvanized Steel Deck & Dock Framing
	Corrugated Metal Siding	②	Ipe E 84 Ignition Resistant Wood Deck & Dock Decking - Untreated
	Concrete - Clear Sealed Above Grade, Waterproof Below Grade	③	Painted Steel Guardrail
		④	Aluminum Clad Windows
		⑤	Solar Panels



STAPP LAKES RANCH HOUSE LOCATION (PENINSULA)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

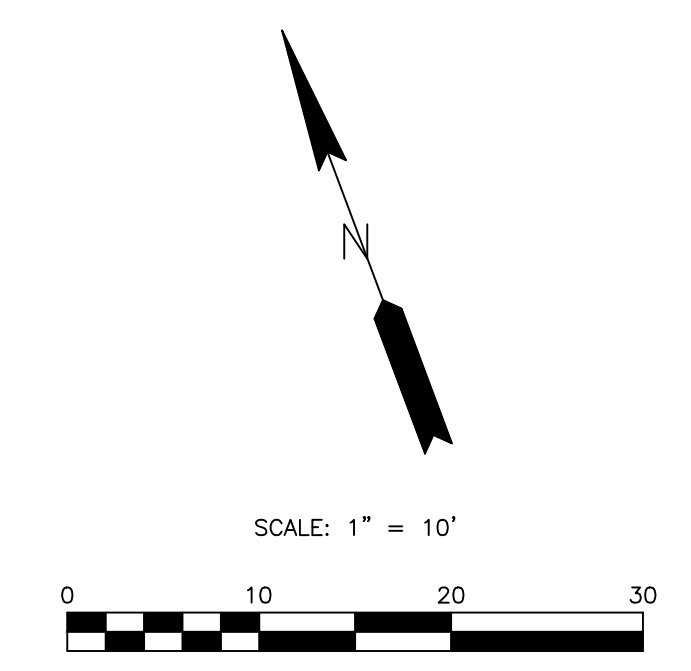


LEGAL DESCRIPTION

BIG LAKE LLC PARCEL (BOULDER COUNTY ASSESSOR PARCEL NO. 13230000040):
Legal Description per Special Warranty Deed of Recp. No. 04028764
 A PORTION OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 73 WEST OF THE 6TH P.M., BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION AND CONSIDERING THE EAST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION TO BEAR N00°12'42"W WITH ALL BEARINGS HEREIN RELATIVE THERETO;
 THENCE N00°12'42"W ALONG SAID EAST LINE 717.72' TO THE TRUE POINT OF BEGINNING;
 THENCE DEPARTING SAID EAST LINE S89°56'45"W 438.09';
 THENCE S62°28'38"W 54.20';
 THENCE S89°56'45"W 2140.24' TO THE WEST LINE OF SAID SOUTHEAST 1/4;
 THENCE ALONG THE SAID WEST LINE N00°35'53"E 641.03' TO THE CENTER-SOUTH 1/16TH OF SAID SECTION;
 THENCE S89°39'12"E ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 2617.54' TO THE SOUTH 1/16TH OF SAID SECTION;
 THENCE S00°12'42"E 597.69' TO THE POINT OF BEGINNING.
 SAID PARCEL CONTAINS 37.77 ACRES, MORE OR LESS, AND IS SUBJECT TO ALL EASEMENTS AND RIGHT OF WAYS OF RECORD.
 COUNTY OF BOULDER, STATE OF COLORADO.

SURVEYOR'S/ENGINEER'S NOTES:

- THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAN.
- THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00 FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS 9000.00' BENCHMARK. A MORE REALISTIC ELEVATION FOR THIS PARCEL IS AROUND 9500' BASED ON GOOGLE EARTH.
- THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PREScribed BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
- THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
- AT THE TIME OF THE ORIGINAL SURVEYING THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
- NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
- NO EXTERNAL PARCEL LINES OR ASSOCIATED SETBACKS ARE SHOWN HEREON.
- SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
- NO UTILITIES TO CABINS ARE SHOWN ON THIS ROAD DESIGN.
- THE PURPOSE OF THIS PLAN/DESIGN IS TO DEPICT THE EXISTING FOREST MAINTENANCE ROAD ON THE SUBJECT PROPERTY AS COMPARED TO A DESIGNED OR PROPOSED ROAD GENERALLY FOLLOWING THE SAME ALIGNMENT BUT BEING GEOMETRICALLY CORRECT IN WIDTH WITH RADIAL/CIRCULAR CURVES. THE PROPOSED ROAD IS NOT IN THE HISTORIC SAME ALIGNMENT FROM 11+50 TO 13+50.
- EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
- PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
- PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
- THIS DESIGN PROFILE BASICALLY FOLLOWS THE VERTICAL PROFILE OF THE EXISTING FOREST MAINTENANCE ROAD, BOTH ARE SHOWN HEREON.
- ALL WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).
- SEE GEOLOGIC REPORT PREPARED BY AMERICAN GEOSERVICES FOR SLOPE STABILITY ANALYSIS.



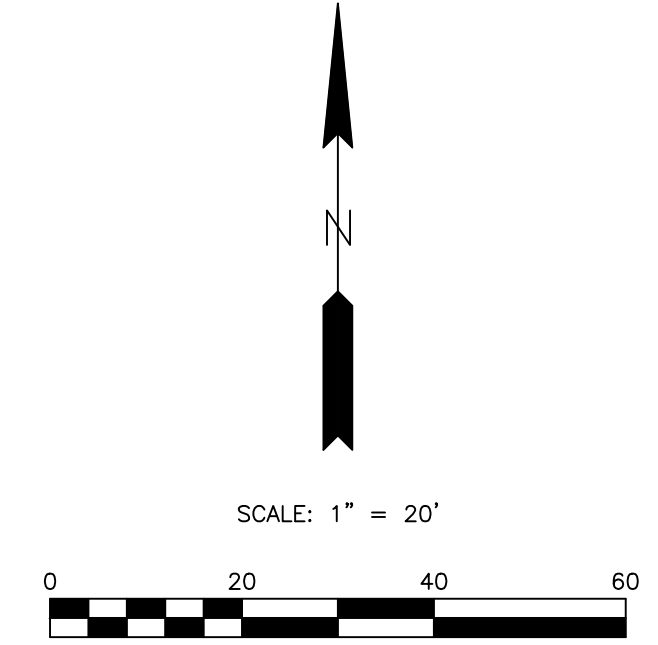
BY:	
REVISION:	
DATE:	
SHEET:	FOREST MAINT. RD. DESIGN (WEST END)
PROJECT:	BIG LAKE RESIDENCE 3310 CR 96J, UNINC. BOULDER COUNTY
DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE:	1"=10'
DATE:	12/17/2024
SHEET:	C1
OF:	7
PROJ. NO.:	2012-06-18



STAPP LAKES RANCH DRIVEWAY DESIGN (WEST END)

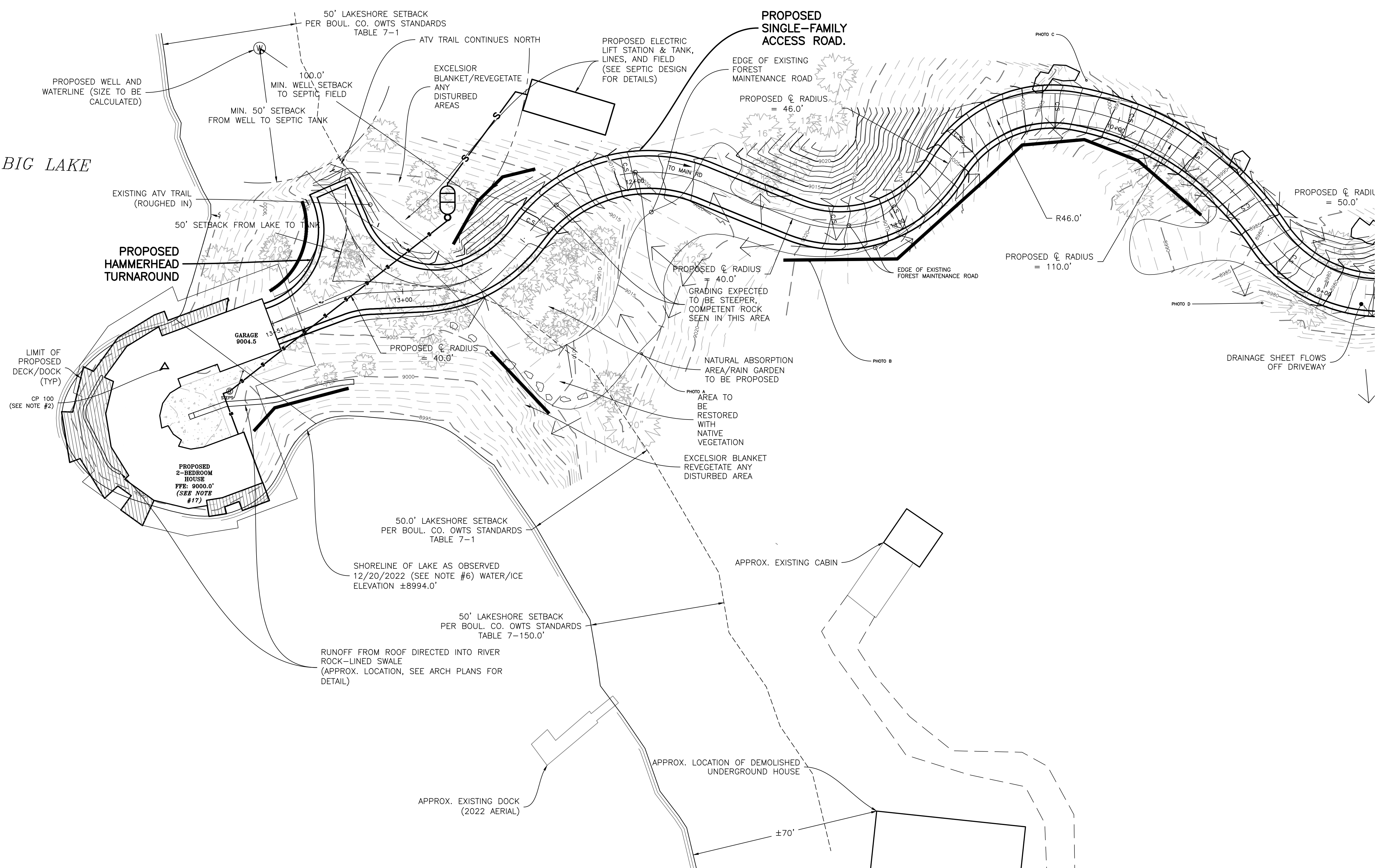
3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊕	WELL
△	CONTROL POINT
— W —	PROPOSED WELL WATER LINE
— S —	PROPOSED SEPTIC LINE
— 9000 —	EX. MAJOR CONTOUR (5')
— 9001 —	EX. MINOR CONTOUR (1')
— 9005 —	PROP. MAJOR CONTOUR (5')
— 9006 —	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⬢	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
↔	INTENDED CROSS-SLOPE DIRECTION
▬	PROPOSED EROSION LOG



SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAN.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK 9000.00' BENCHMARK. A MORE REALISTIC ELEVATION FOR THIS PARCEL IS 9500' BASED ON GOOGLE EARTH.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 566-9388 • FAX: (970) 566-8101

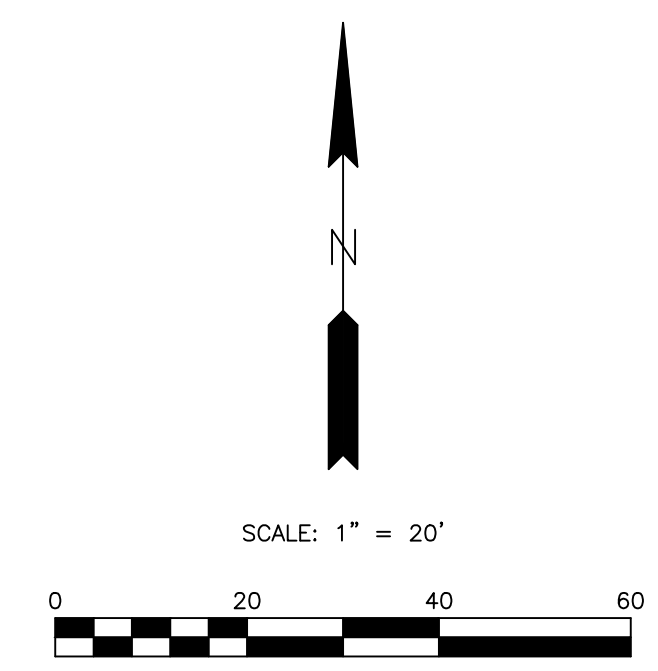
FOREST MAINT. RD. DESIGN (WEST END)
BIG LAKE RESIDENCE
3310 CR 96J, UNINC. BOULDER COUNTY

DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE	1"=20'
DATE:	12/17/2024
SHEET	C2
OF	7
PROJ. NO.	2012-06-18

STAPP LAKES RANCH DRIVEWAY DESIGN (MIDDLE SEGMENT)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊗	WELL
△	CONTROL POINT
— W —	PROPOSED WELL WATER LINE
— S —	PROPOSED SEPTIC LINE
— 9000 —	EX. MAJOR CONTOUR (5')
— 9001 —	EX. MINOR CONTOUR (1')
— 9005 —	PROP. MAJOR CONTOUR (5')
— 9006 —	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⊖	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
↖	INTENDED CROSS-SLOPE DIRECTION
▬	PROPOSED EROSION LOG

SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

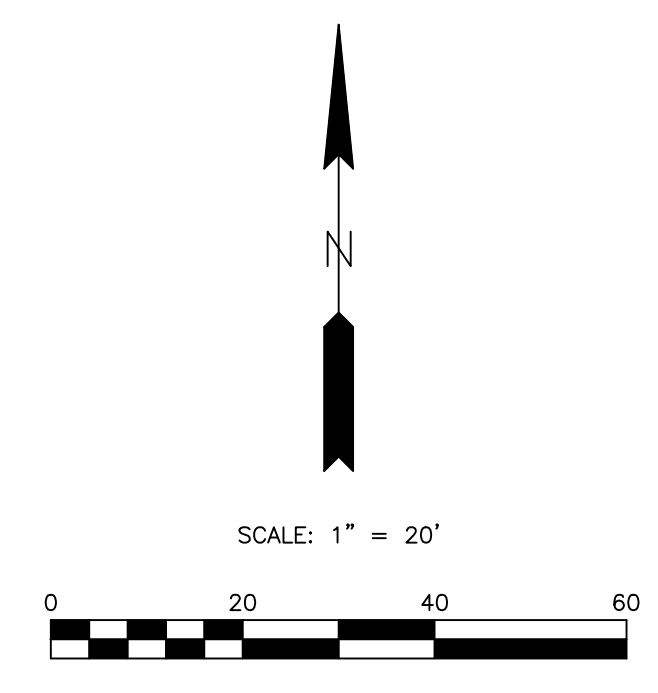
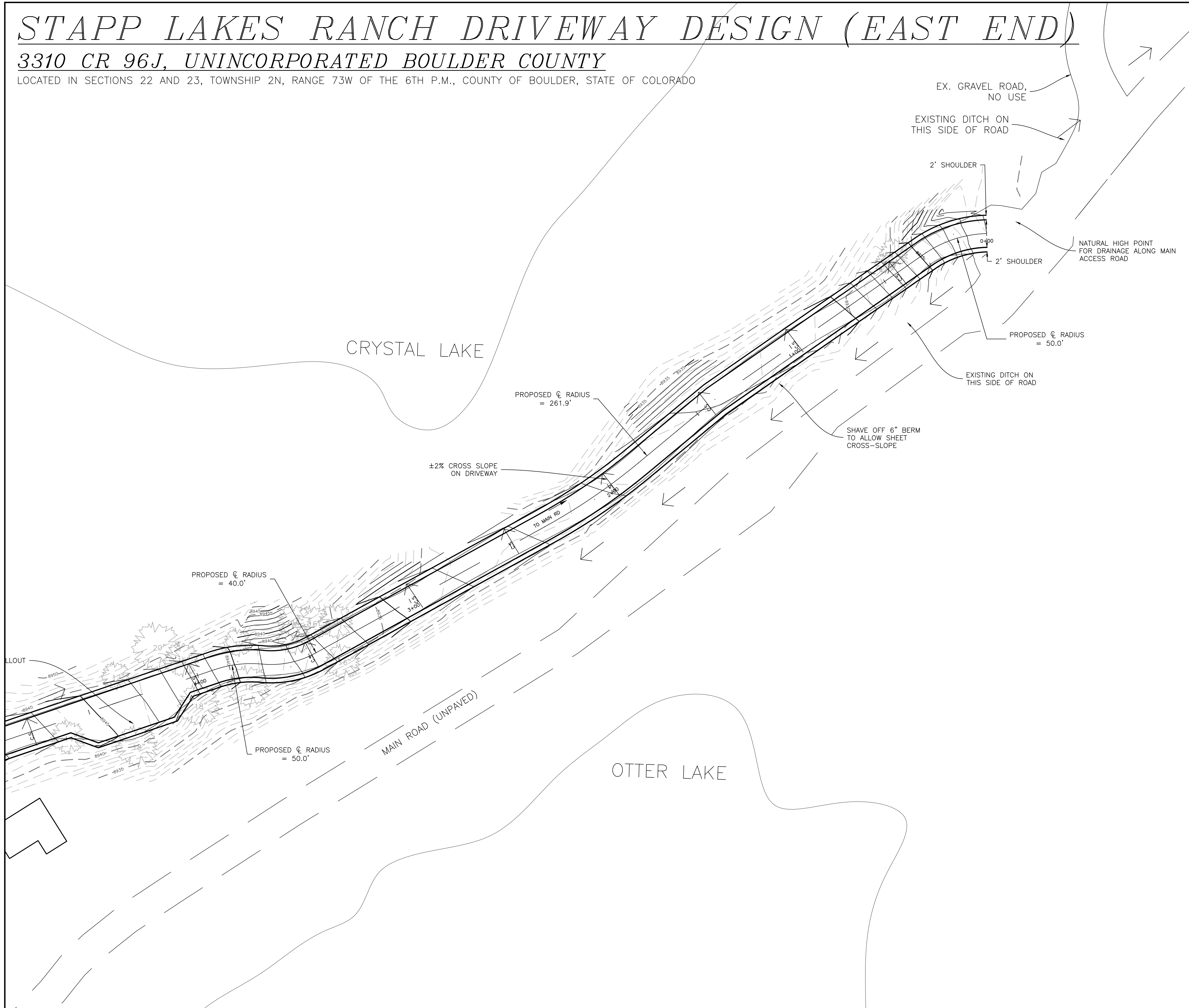
SHEET FOREST MAINT. RD. DESIGN (MIDDLE)
PROJECT BIG LAKE RESIDENCE
 3310 CR 96J, UNINC. BOULDER COUNTY

DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE	1"=20'
DATE:	12/17/2024
SHEET	C3
OF	7
PROJ. NO.	2012-06-18

STAPP LAKES RANCH DRIVEWAY DESIGN (EAST END)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊕	WELL
⊙	CONTROL POINT
W	PROPOSED WELL WATER LINE
S	PROPOSED SEPTIC LINE
—	EX. MAJOR CONTOUR (5')
- - -	EX. MINOR CONTOUR (1')
—	PROP. MAJOR CONTOUR (5')
- - -	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⊕	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
↔	INTENDED CROSS-SLOPE DIRECTION
█	PROPOSED EROSION LOG

SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

FOREST MAIN. RD. DESIGN (EAST END)
BIG LAKE RESIDENCE
3310 CR 96J, UNINC. BOULDER COUNTY

DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE:	1"=20'
DATE:	12/17/2024
SHEET	C4
OF	7
PROJ. NO.	2012-06-18

BIG LAKE RESIDENCE ROAD PROFILE AND CROSS SECTIONS

3310 CR 96J, UNINCORPORATED BOULDER COUNTY, COLORADO

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

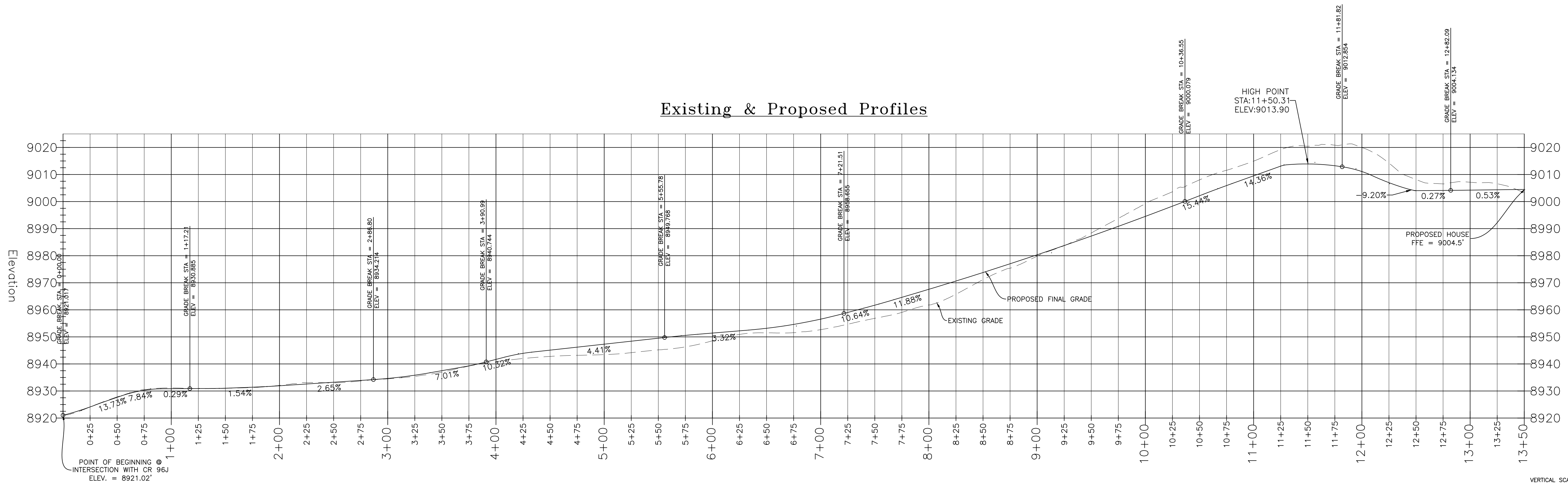
DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

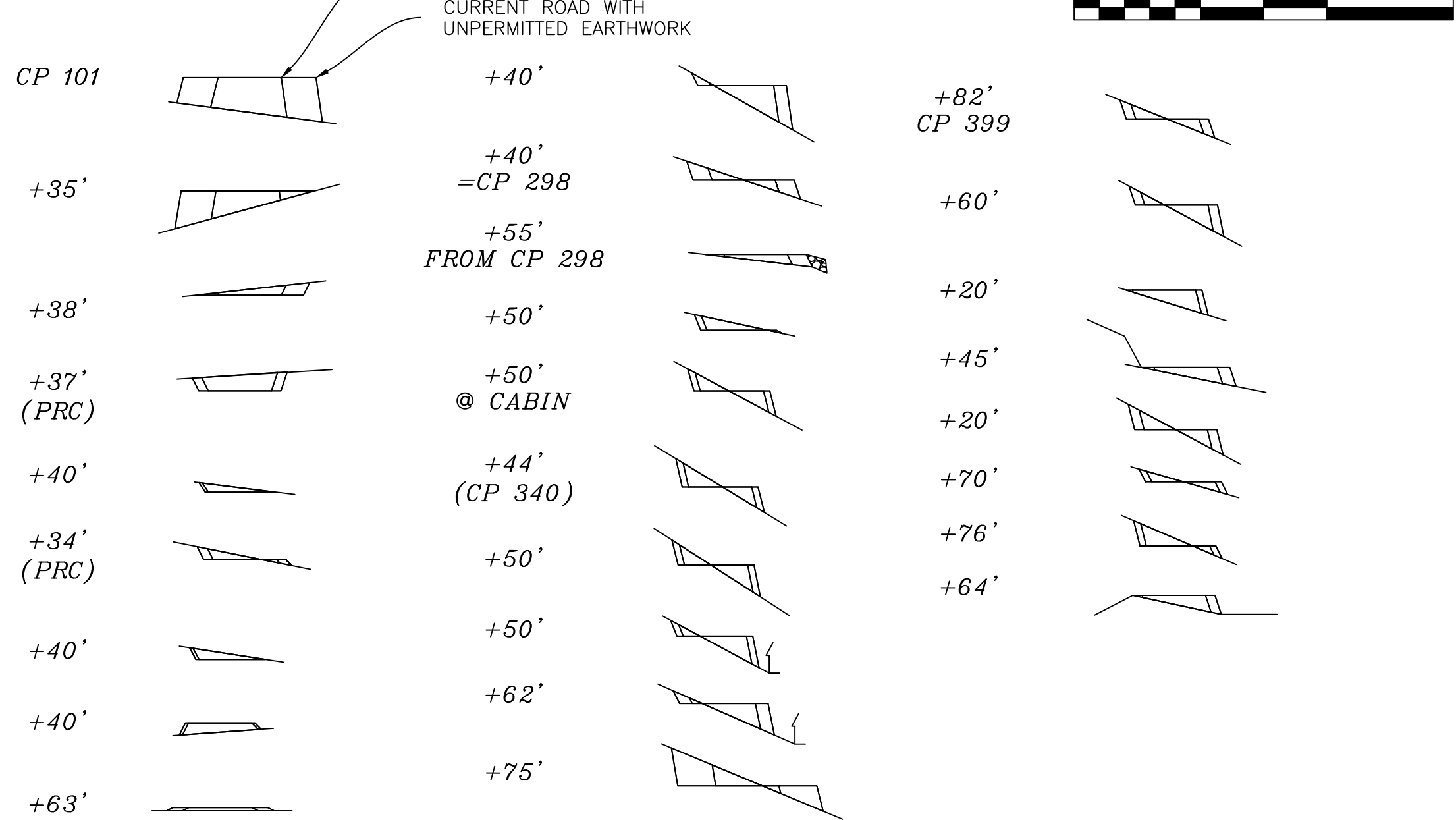
CHRISTY AND JAY ORRIS/BIG LAKE LLC
 PROJECT
BIG LAKE RESIDENCE
3310 CR 96J, BOULDER COUNTY

DRAWN BY: JTG
 CHECKED BY: LAS
 SCALE: AS NOTED
 DATE: 12/17/2024
 SHEET
C5
 OF
7
 PROJ. NO. 2012-06-18

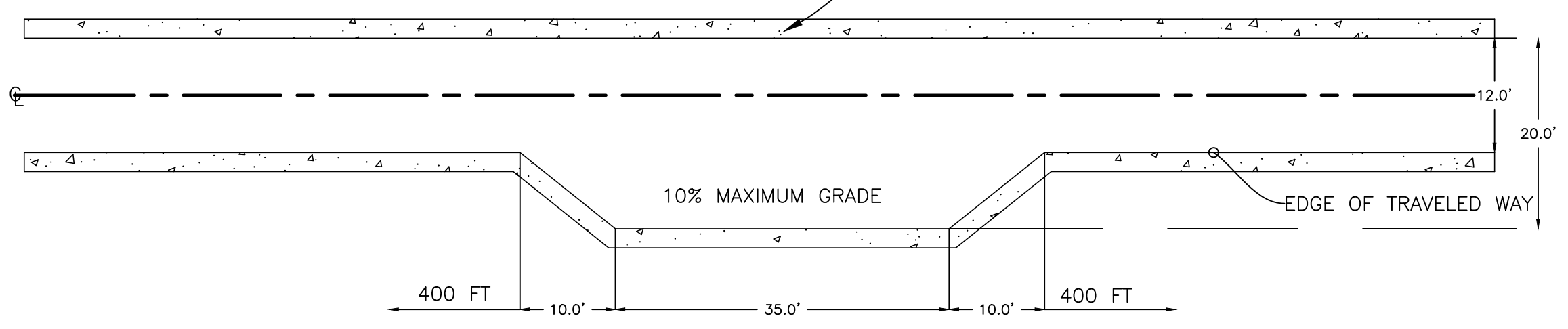
Existing & Proposed Profiles



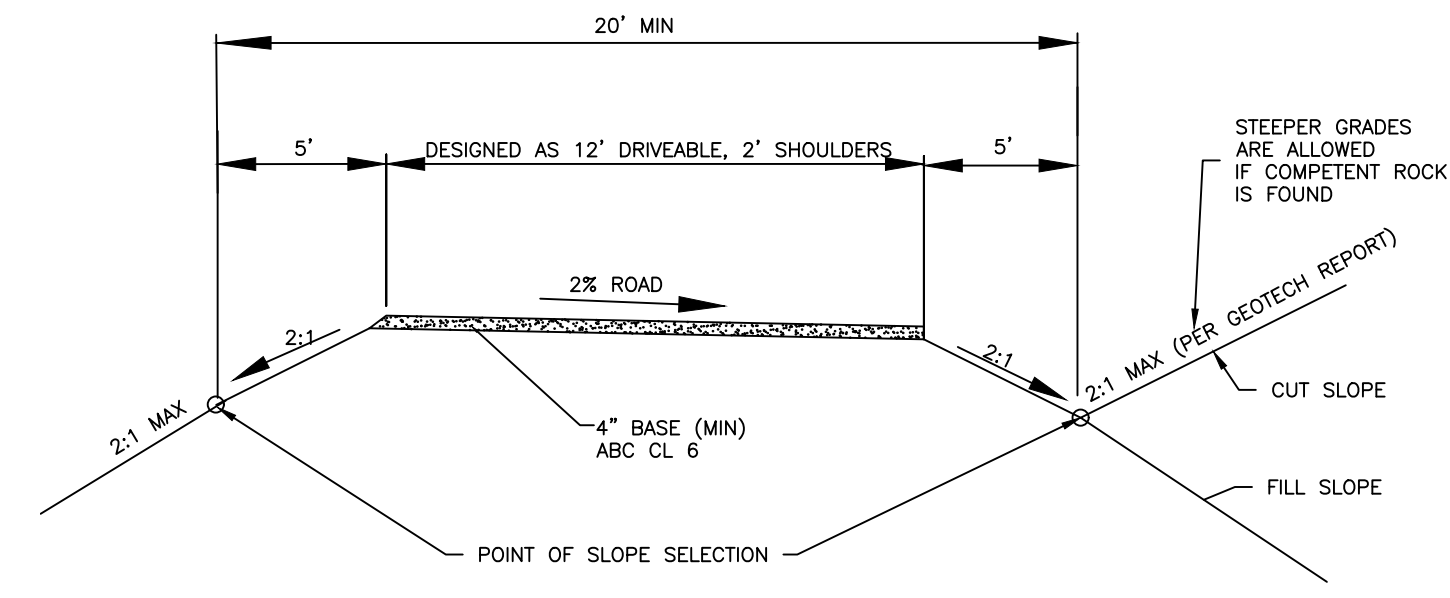
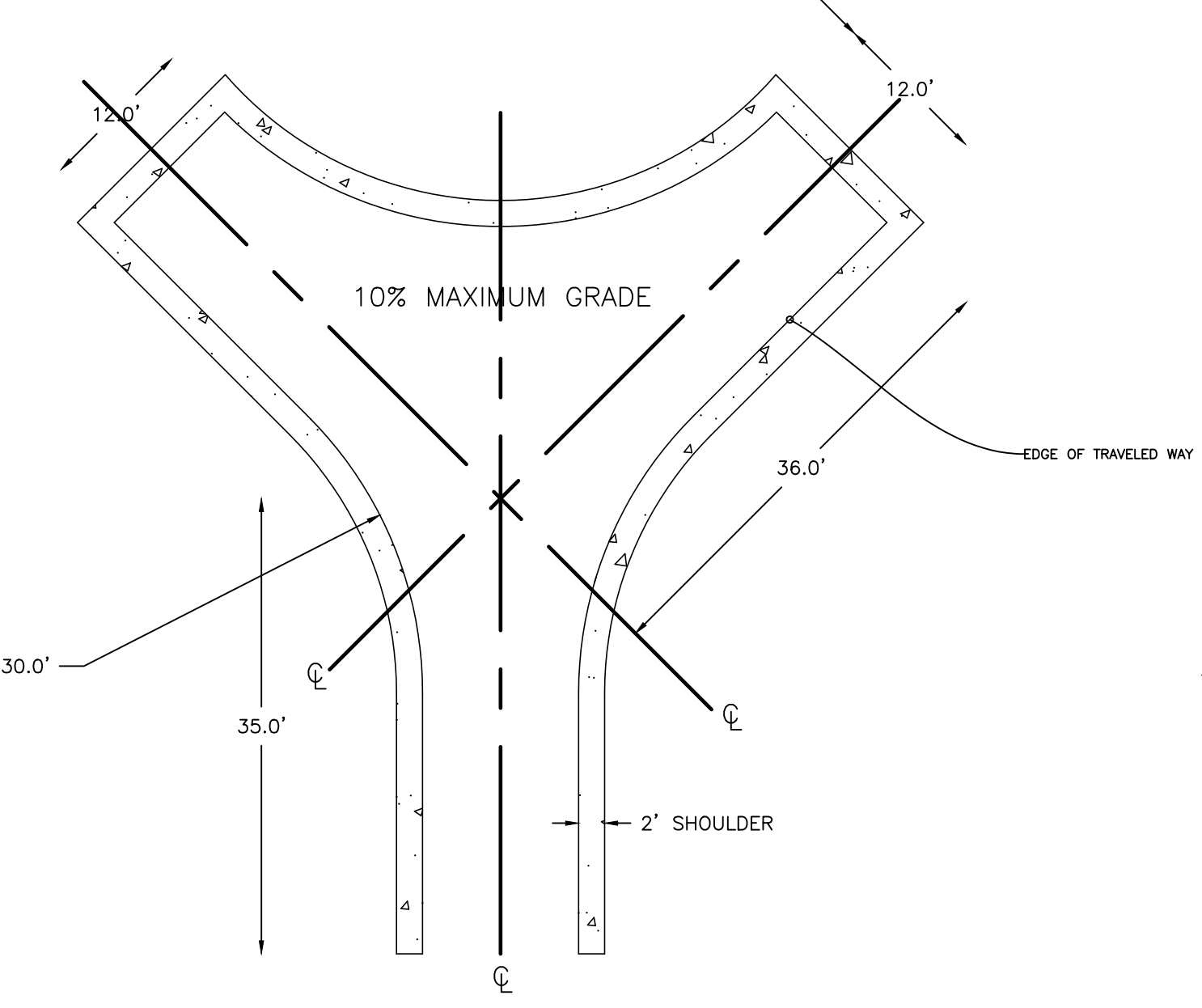
CROSS-SECTIONS



PULL-OUT CONFIGURATION



Y-CONFIGURATION



ONE-LANE PRIVATE ACCESS SECTION

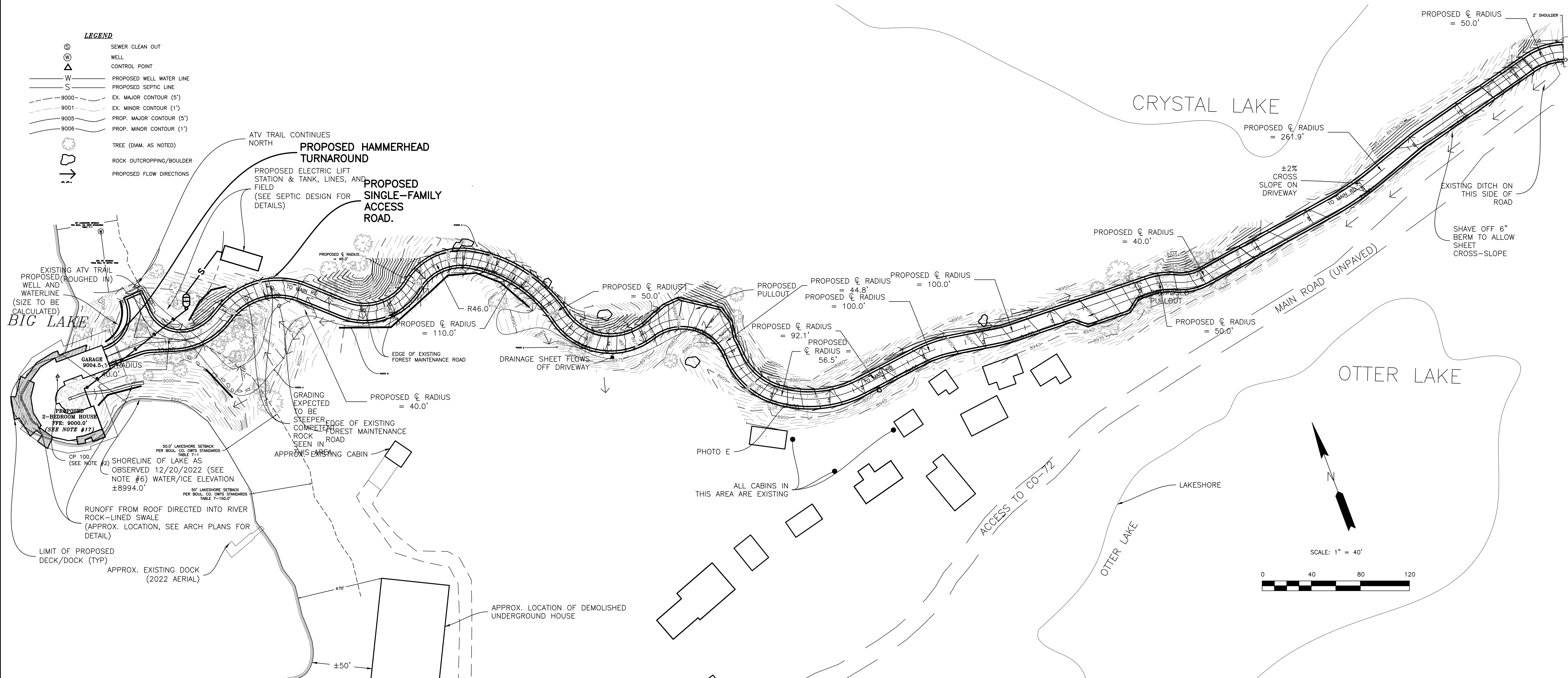
SURVEYOR'S NOTES:

1. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
3. THE PROPOSED DRIVEWAY WILL SERVE THE NEWLY CREATED PARCEL (BOULDER COUNTY PARCEL NO. 132300000040) WITH THE ASSIGNED ADDRESS 3310 CR96J, WARD, CO 80481.
4. PER BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES" DOCUMENT, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
5. PER BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES", THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
6. DIMENSIONS SHOWN FOR THE PULL-OUT AND HAMMERHEAD TURNAROUND WERE OBTAINED FROM BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES" DOCUMENT.
7. A DESIGN WAIVER IS BEING REQUESTED TO ALLOW GRADES EXCEEDING 6% THROUGH CURVES, AS REQUIRED BY THE BOULDER COUNTY "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES."

BIG LAKE RESIDENCE ROAD PLAN OVERVIEW NOTES

UNINCORPORATED BOULDER COUNTY, STATE OF COLORADO

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



SURVEYOR'S/ENGINEER'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE INTENT OF THIS WORKSHEET IS TO ACCOMPANY SUBMITTED DRAINAGE/EARTHWORK REPORTS. ADDITIONAL DETAIL TO FOLLOW ON FINAL DRIVEWAY DESIGN SHEET #5
3. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
4. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
6. THE NEWLY CREATED PARCEL WHERE THE BIG LAKE RESIDENCE IS TO BE CONSTRUCTED HAS AN ASSIGNED ADDRESS OF 3310 CR 96J, WARD, CO 80481.
7. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
8. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
9. THE PROPERTY LINES FOR THE NEWLY CREATED BIG LAKE LLC PARCEL ARE NOT SHOWN HEREON. SAID PARCEL HAS A BOULDER COUNTY RECEPTION NO. OF 132300000040.
10. SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
11. EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
12. THE SHOWN LOCATIONS FOR THE PROPOSED CROSS-CULVERTS AND STILLING BASINS HEREON WERE OBTAINED FROM HANDWRITTEN NOTES. THE LOCATIONS WILL BE FINALIZED DURING CONSTRUCTION TO "BEST-FIT" THE NEEDED LOCATIONS FOR THIS DESIGN, 18" CORRUGATED STEEL CULVERTS, 20' LONG ARE SHOWN (SPECIFIC SIZE/LENGTH TO BE DETERMINED AT A LATER DATE BEFORE CONSTRUCTION). CULVERTS ARE TO COMPLY WITH AASHTO STANDARD M 36.
13. THE DISTURBED AREA WAS MEASURED TO BE ±0.75 ACRES. ALL DISTURBED AREA IS TO BE SEEDED/MULCHED/FABRIC COVERED.
14. ON SITE EROSION CONTROL TO BE PROVIDED AT THE DIRECTION OF THE ENGINEER
15. STRAW BALES OR EROSION LOGS ARE TO BE USED FOR ON SITE EROSION CONTROL AT THE DIRECTION OF THE ENGINEER.
16. PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
17. PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
18. THIS DESIGN PROFILE BASICALLY FOLLOWS THE VERTICAL PROFILE OF THE EXISTING FOREST MAINTENANCE ROAD, BOTH ARE SHOWN ON PAGE 5 OF THIS PLANSET.
19. ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).

REVISION	DATE	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

ROAD PLAN OVERVIEW NOTES
BIG LAKE RESIDENCE
3310 CR 96J, BOULDER COUNTY

SHEET: **C6**
 OF: **7**

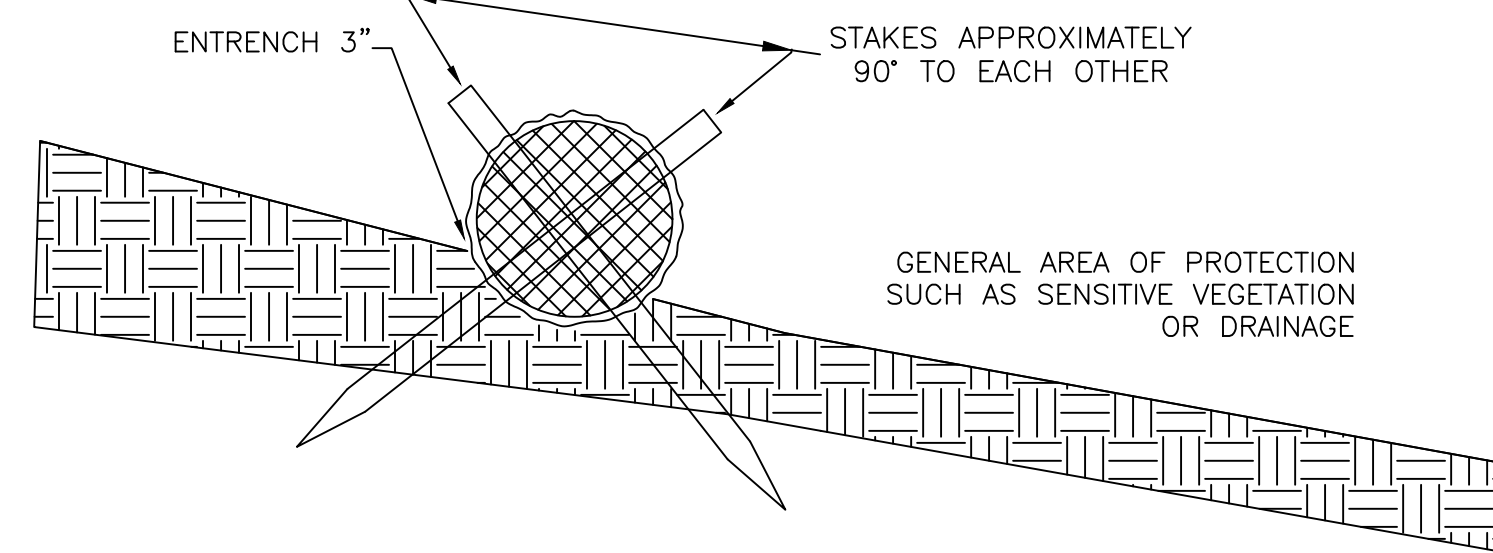
PROJ. NO. 2012-06-18

DRAWN BY: JTG
 CHECKED BY: LAS
 SCALE: 1"=40'
 DATE: 12/17/2024

BIG LAKE RESIDENCE EROSION PLAN

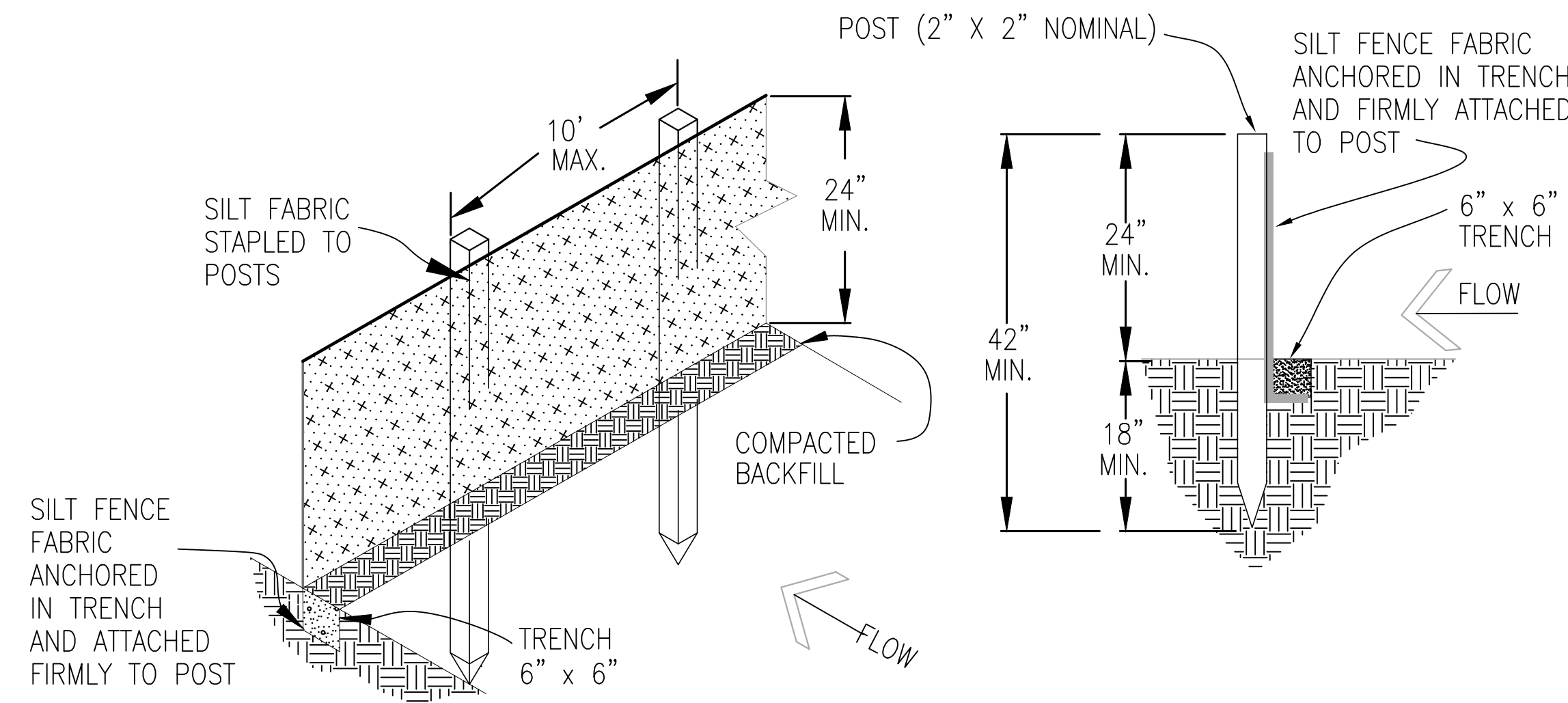
UNINCORPORATED BOULDER COUNTY, STATE OF COLORADO

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

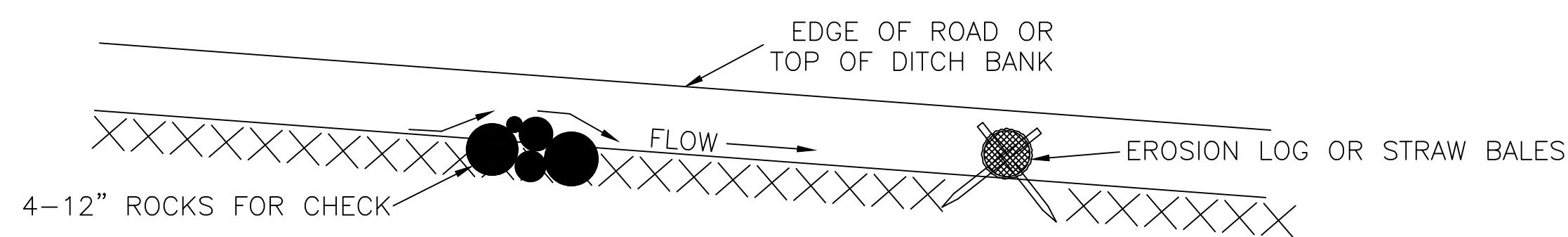


**EROSION LOGS
TYPICAL STAKING PATTERN**

NTS

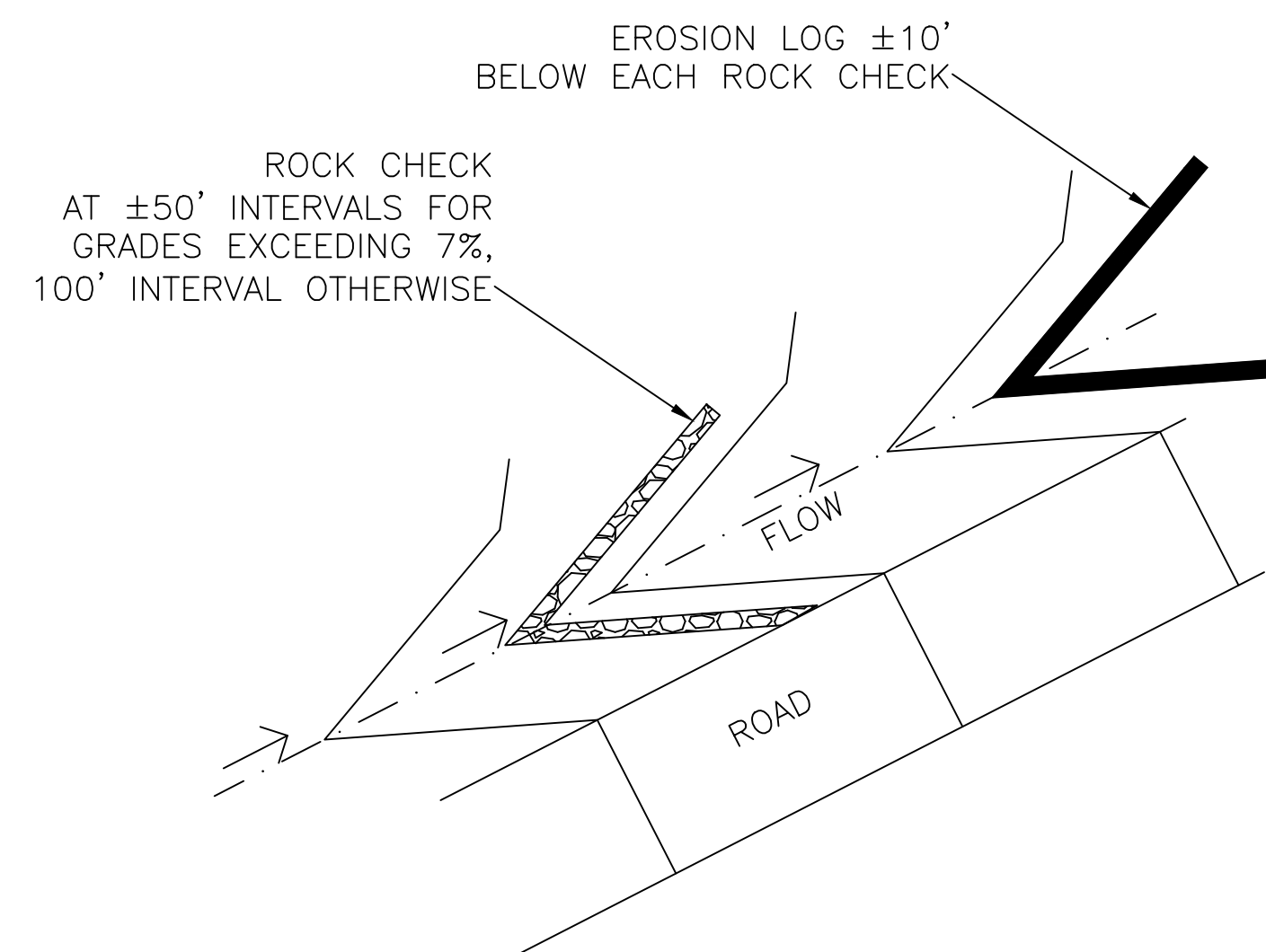


SILT FENCE
NTS



ROCK CHECK STRUCTURE—PROFILE VIEW

NTS



ROCK CHECK STRUCTURE—PLAN VIEW

NTS

EROSION CONTROL NOTES

1. THIS DRIVEWAY DESIGN IS REPRESENTATIONAL ONLY AND IS NOT TO BE CONSTRUED AS A LAND SURVEY PLAT NOR AN IMPROVEMENT SURVEY PLAT.
2. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
3. ALL REQUIRED IMPROVEMENTS SHALL BE COMPLETED OR GUARANTEED IN ACCORDANCE WITH BOULDER COUNTY LAND USE CODE SECTION 9-903 AND BOULDER COUNTY STORM DRAINAGE CRITERIA MANUAL.
4. PROPOSED DRIVEWAY IS TO BE SURFACED WITH A MINIMUM 4" ABC CLASS 5 ROAD BASE.
5. TRASH DUMPSTERS SHALL BE SECURED AGAINST BEARS AND OTHER ANIMALS. TRASH DUMPSTERS DURING AND AFTER CONSTRUCTION ARE TO HAVE A METAL LID TO PREVENT TRASH FROM ENTERING THE BIG LAKE AND OTHER LOCAL WATERWAYS.
6. UTILITIES ARE SCHEMATIC. THE ACTUAL LOCATIONS WILL BE FIELD FIT AT THE TIME OF INSTALLATION.
7. LIMITS OF DISTURBANCE SHALL BE DESIGNATED IN THE FIELD PRIOR TO COMMENCEMENT OF EXCAVATION, GRADING, OR CONSTRUCTION WITH CONSTRUCTION BARRIER FENCING OR SOME OTHER METHOD APPROVED BY STAFF.
8. ALL AREAS DISTURBED SINCE 2020 ARE TO BE REVEGETATED USING EXCELSIOR BLANKETS.
9. SLOPES ARE NOT TO EXCEED 1.5:1 AT PULLOUTS AND THE HAMMERHEAD TURNAROUND, AS STATED IN 5.3.2.2 OF THE BOULDER COUNTY MULTIMODAL TRANSPORTATION STANDARDS.
10. THE TOP OF ALL CUT SLOPES ARE TO BE ROUNDED WITH A MINIMUM 10' RADIUS WHERE THE MATERIAL IS NOT SOLID ROCK. WHEN NOT SOLID ROCK, THE SLOPE IS TO BE REVEGETATED.
11. SILT FENCING AND STRAW BALES TO BE PLACED PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION. EROSION CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCING.
12. NO FUELS OR CHEMICALS SHALL BE STORED NEAR PROPOSED CONSTRUCTION AREAS.
13. EROSION CONTROL MEASURES WILL BE INSPECTED WEEKLY DURING CONSTRUCTION AND MAINTAINED IN WORKING ORDER.
14. ALL DISTURBED AREAS TO BE TOPSOILED AND SEEDED. SEED WILL BE DRILLED OR RAKED TO INSURE $\frac{1}{2}$ " TO $\frac{1}{4}$ " COVER.
15. ALL SLOPES STEEPER THAN 4:1 SHALL BE RESEEDED WITH GRASS MIXES WITH DEEP ROOTING CHARACTERISTICS.
16. AFTER SEEDING ENTIRE DISTURBED SITE WILL BE MULCHED USING CLEAN HAY AT A RATE OF 1.5 TONS/ACRE. SLOPES STEEPER THAN 2:1 SHALL BE BLANKETED WITH BIODEGRADABLE EXCELSIOR BLANKET EROSION CONTROL FABRIC WITH A MINIMUM WEIGHT OF $\frac{3}{4}$ #/sq.yd. INSTALLED PER MANUFACTURES SPECIFICATIONS.
17. ADDITIONAL SEEDING MAY BE NECESSARY IN THE FOLLOWING YEARS TO ENSURE ADEQUATE VEGETATIVE COVER TO STABILIZE SOILS. SILT FENCING OR EROSION LOGS SHALL REMAIN IN PLACE AND REGULARLY MAINTAINED UNTIL SOILS ARE STABILIZED WITH ESTABLISHED VEGETATION.
18. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL.

SURVEYOR'S/ENGINEER'S NOTES:

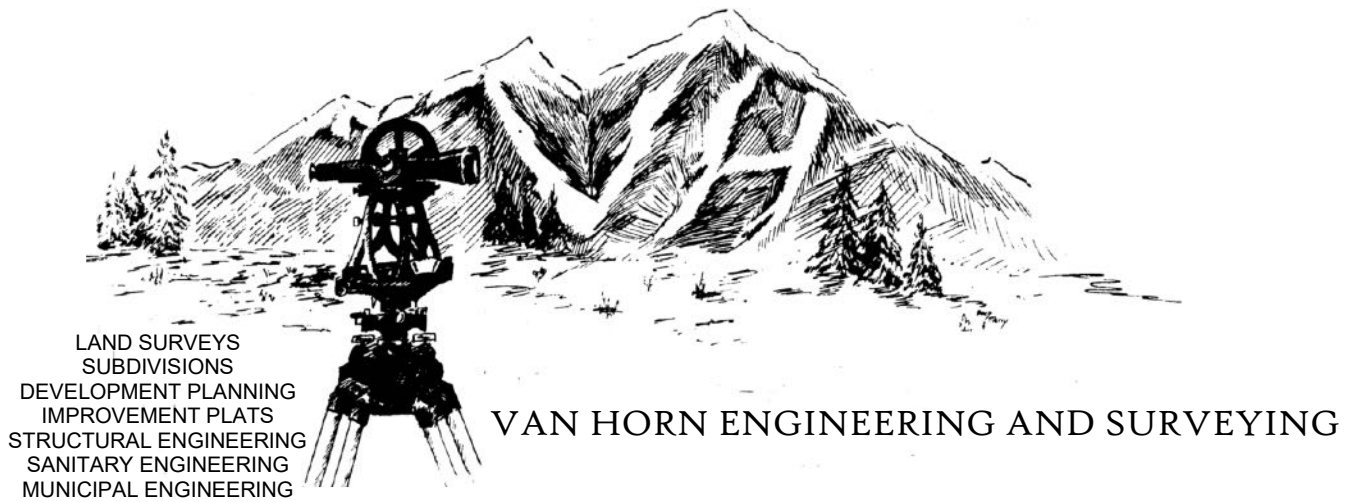
1. THIS DRIVEWAY DESIGN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE INTENT OF THIS WORKSHEET IS TO ACCOMPANY SUBMITTED DRAINAGE/EARTHWORK REPORTS.
3. THE CONTOURS SHOWN IN THIS PLANSET ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
4. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
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8. THE PROPERTY LINES FOR THE NEWLY CREATED BIG LAKE LLC PARCEL ARE NOT SHOWN HEREON. SAID PARCEL HAS A BOULDER COUNTY RECEPTION NO. OF 132300000040.
9. SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
10. EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
11. THE DISTURBED AREA WAS MEASURED TO BE ±0.7 ACRES. ALL DISTURBED AREA IS TO BE SEEDED/MULCHED/FABRIC COVERED.
12. ON SITE EROSION CONTROL TO BE PROVIDED AT THE DIRECTION OF THE ENGINEER
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16. ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).

REVISION	DATE	BY

VAN HORN ENGINEERING AND SURVEYING
1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
PHONE: (970) 586-9388 • FAX: (970) 586-8101

EROSION CONTROL PLAN
BIG LAKE RESIDENCE
3310 CR96J, BOULDER COUNTY

SHEET	PROJECT
DRAWN BY: JTG	CHECKED BY: LAS
SCALE: NO SCALE	DATE: 12/05/2024
SHEET	OF
C7	7
PROJ. NO.	2012-06-18



**Big Lake Drainage and Stormwater Narrative/Letter
3310 County Road 96J,
Boulder County, Colorado**

The attached Worksheet is used to show the stormwater drainage plan across the portion of the subject property where a driveway has been upgraded-changed or widened. This letter follows Boulder County's 11-17-2021 Effective Date Memorandum for the allowance of the use of Drainage Letters on Private Development and Public Capital Projects as well as referral comments from Boulder County relating to a previous submittal of this land use project. This project is a private development (single use residential driveway to a 37+ acre parcel) in unincorporated Boulder County.

The bullet item from the required response Memo are abbreviated below followed by a narrative answer or information relative to the bullet topic. See also attached items relative to this analysis and narrative answers:

- Description of property location.
 - The property is located at 3310 County Road 96J in rural Boulder County. CR 96J comes off of Highway 72 near Camp Dick and runs through 3305 CR 96J. The property is west of Highway 72 approximately 2.5 miles past Beaver Reservoir and has a locked gate. The property is a 37 acre parcel that was recently subdivided from 3305 CR 96J. The property is located in parts of Sections 22, 23, 26 and 27 all in Township 2 North, Range 73 West of the 6th P.M.
- Description of proposed project. This is an evaluation for earth work quantities (at various stages), storm drainage and a proposed driveway vertical and horizontal alignment design with associated potential impacts.
- Site Plan showing entire property and disturbed area with distances to waterways.
 - The attached Land Survey Plat shows the overview of the project site including the lakes and section lines. The attached Road Worksheet

- shows the driveway reconstruction area in relation to the ponds, cabins, and proposed single family structure at the west end of the proposed driveway. This project will add minimal impervious area to limit runoff.
- Effects on adjacent or nearby drainage features.
 - A proposed rain garden/drainage feature will capture sheet flows from the west end of the driveway. From station 7+09.65 to approximately 11+50, the flows sheet flow off the driveway, west of the existing historical cabins. Other flows for the majority of the driveway will be directed into the ditch on the upslope side of the proposed driveway, from station 0+00 to 7+09.65, and into the existing roadside ditch on the north side of CR 96J.
 - The ditch splits flow east and west approximately at the east terminus of the driveway. See plan set for better detail.
 - Materials for the driveway and house were selected to minimize potential adverse effects on Big Lake.
 - The house roof is to be constructed such that runoff will be directed to infiltrate into a pervious area.
 - Roof gutters direct flow towards an infiltration swale to be installed at the center of the protected courtyard.
 - Swale is to be lined with free-draining river rock.
 - Swale extends east past the edge of the house to allow sufficient infiltration.
 - Vegetation surrounding swale will be protected to the greatest extent possible.
 - Erosion control measures are to be taken to comply with the SWQP plan.
 - Proposed flow directions.
 - Driveway will be super-elevated such that the surface flow off the driveway flows towards the proposed ditch on the uphill side.
 - At the far northwest end of the driveway, surface runoff is to be directed to a proposed natural retention area/rain garden at the approximate apex of the existing forest maintenance road.
 - Flow directions proposed and other notes are given on the attached Road Plan Overview Worksheet.
 - Peak Discharge for Minor/Major.
 - The largest contributing area proposed for the roadside has been roughed out at less than ½ Acre. The major storm (100 year) has a flow value of less than 2 c.f.s. which is easily contained in the proposed ditch.
 - Roadside ditch design
 - Ditch capacity was calculated along the distance between the western beginning of the ditch and the eastern end where it intersects with existing CR 96J.
 - $n = 0.020$ for a smooth open channel with firm soil bed material
 - From USGS Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains
 - $S \approx 42.6/766 = 5.56\%$

- Slope calculated between westernmost point of ditch and point of beginning at eastern end of driveway.
 - For a ditch with a depth of 1 foot and slopes of 2:1 on the sides, $A = 2\text{sqft}$
 - 2:1 in accordance with the recommendations found in the geotechnical report
 - For a fully flowing ditch (depth of one foot), hydraulic radius $R = 2\text{sqft}/0.45\text{ft} = 4.44\text{ft}$
 - So, $Q = (1.49/n)AR^{2/3}S^{1/2} = 96.6\text{cfs}$ when flowing at full capacity
 - Considering the 2cfs flow from the contributing basin in a 100-year storm event, the ditch as detailed here is more than sufficient to handle the flows.
- Demonstrate that detention is not required.
 - According to BCSD Section 1203.1, the first exemption applies which allows no detention. That is: the parcel is greater than 3 acres, it is for one single family dwelling and the total impervious area is less than 10%. The subject parcel has an area of 37.77 acres. 10% of this area would be approximately 164,500sqft, and the total impervious cover post construction will be drastically less than this amount.
- Potential impacts on downstream features.
 - There are cabins near the road in the middle of the driveway reach and a lake downstream (on each end of the driveway length). See notes on drainage worksheet. Sheet flow is promoted across the driveway where distributed flows will stay distributed and not concentrated and where there are no sensitive environmental features (ponds) downstream. All disturbed areas are proposed to be seeded and erosion control blanketed, or hydro-mulched.
- Disturbance of one acre or less, MS4 Area?
 - Considering the historic access at 10 to 12' wide, the area of historic, current and future disturbance is just less than one acre
 - Disturbance estimate includes all unpermitted grading performed in 2022 and 2023.
 - Unpermitted grading was calculated to be approximately 537 CY. This number is the sum of the both cut and fill, though it should be noted no material was imported nor removed from the site during this period of unpermitted grading.
 - Area of disturbance
 - Withholding the building site, well, and septic as exempted by Boulder County's "Earthwork & Grading" publication
 - Area of disturbance = $\pm 31,000 = 0.71$ acres
- Lots within a Subdivision – associated drainage report?
 - This is for rural Boulder County – no subdivision, and therefore, no existing drainage report.
- Neighboring structures
 - There is an underground house that collapsed just along a roughed in road that follows, more or less, the eastern shore of the Big Lake.

- At its closest point, the western edge of the underground house was approximately 50' from the shore of the Big Lake.
 - See Sheet 6 of the plan set for better detail about the underground house's location
 - Photography from the 1920's-1930's suggests a boat house and dock in the Big Lake, suggesting that the area immediately surrounding the lake has been developed in the past.
 - There has been question about the "forest maintenance" status of the existing roughed in road, the first picture attached below shows the general alignment has existed for some time.
 - The earliest aerial imagery available to this office suggest the road has been in its current location since at least 1999.
 - The second attached picture is from approximately the late 1980's/early 1990's, per the owner.
 - Two additional photos suggest that the forest maintenance road has existed in its approximate current location for some time.
 - While the proposed house will be closer than the underground house, there exists a common precedent at the ranch for building near the lake shore
 - Pictures suggest measures to mitigate runoff were not present in construction of the underground house, measures will be taken for the proposed house.
- P.E. Stamped Letter.
 - This is such a letter
- Other information.
 - A spreadsheet for earthwork quantities is included in this submittal.
 - The plan view driveway survey worksheet is included.
 - A sheet detailing measures to mitigate erosion into the Big Lake is included in this plan set.
 - Aerial photos are included to show the historic driveway back to Big Lake and the changes made in the alignment which was obtained by graphical overlay.
 - Van Horn has used the best available data available to us in preparing this report. Approximations have been made and noted. No guarantees are presented. We plan to stay plugged into the driveway changes with survey staking and as-built mapping if needed or requested. We are available for any questions.
 - Photos are included from various locations on site with narratives and descriptions provided.

Sincerely,

Lonnie A Sheldon, PLS #26974, for Van Horn Engineering and
Surveying Inc., Cell: 970-443-3271,
Email: lonnie@vanhornengineering.com



Looking towards Indian Peaks, underground house visible on lake shore



Underground house and maintenance road, circa early 90's



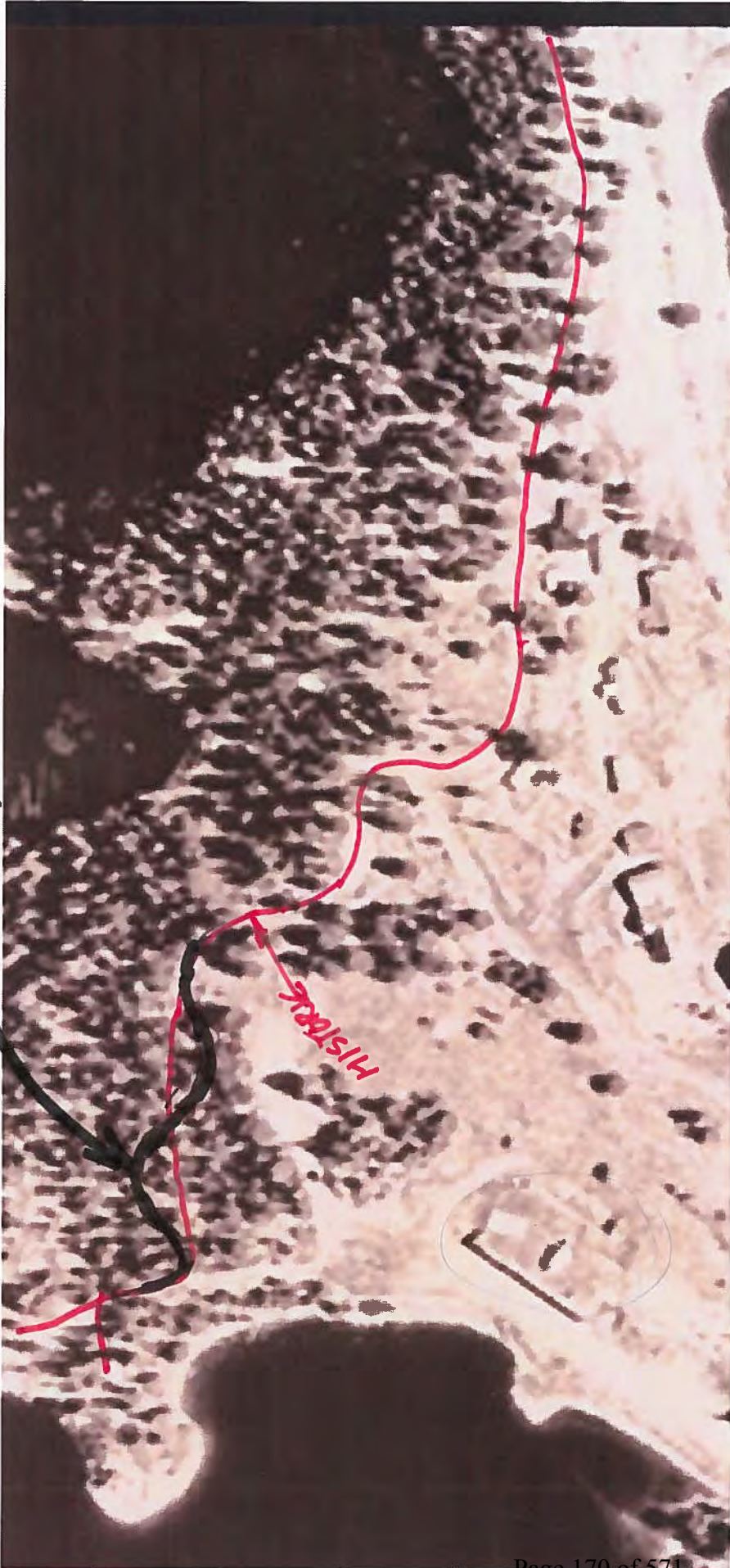
Big Lake and old boat house/dock, circa 1920's-30's

EXISTING



Google Earth ~~2006~~ 4/2006

EXISTING



Google Earth 1999 (sept)

Stapp Lake Ranch Pictures Related to Road Overview Worksheet – September 2023



Picture #1

From "A" looking left (north)
downhill



Picture #2

From "A" looking
right/center (northeast)
across driveway



Picture #3

From "A" looking right
(southeast) across driveway



Picture #4

From "B" looking left
(northeast) downhill



Picture #5

From "B" looking
left/center (east) downhill



Picture #6

From "B" looking right
(south) downhill



Picture #7

From "C" looking
right/center (northeast)
uphill



Picture #8

From "C" looking right
(north) uphill



Picture #9

From "C" looking left (south) downhill



Picture #10

From "C" looking left (south) downhill



Picture #11

From "D" looking left
(northwest) uphill



Picture #12

From "D" looking left
(northwest) uphill



Picture #13

From "D" looking right
(east) downhill



Picture #14

From "D" looking right
(east) downhill



Picture #15

From "D" looking right
(southeast) downhill



Picture #16

From "E" looking left
(northwest) uphill



Picture #17

From "E" looking left
(northwest) uphill



Picture #18

From "E" looking right (east)
downhill



Picture #19

From "E" looking right
(east) downhill



BARRETT STUDIO architects

December 19, 2024

TO: Amber Knotts, Planner I; Community Planning & Permitting, Development Review

FROM: Barrett Studio Architects

SUBJECT: Response to comments from access and engineering. Also, see separate Ecology report for response to Open Space letter.

Ian Brighton, Planner II; Community Planning & Permitting, Access & Engineering

Docket # LU-23-0019/SPR-23-0036

3305 County Road 96J

The Development Review Team – Access & Engineering (A&E) staff has reviewed the above referenced docket and has the following comments:

1. The subject property is accessed from County Road 96 (CR96), a Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Local, via a private gravel surfaced road within a 20-foot access easement. Legal access to the subject property has been demonstrated via the easement recorded on Apr. 2nd , 1998 at Reception 1787384, the easement recorded on Feb. 5th , 1999 at Reception 1902641 as well as the 30-foot access easement recorded on Nov. 20, 2023 at Reception 04028765.
2. The United States Forest Service (USFS) lists a portion of the access road west of Beaver Reservoir as Road Number 508.1 on the 2016 USFS Motor Vehicle Use Map (see image below). Prior to building permit, please contact the Boulder Ranger District at VisitARP@usda.gov for more information on what, if any USFS requirements must be met for the proposed development. Response: The Civil engineer has sent multiple queries to USFS and has not received a response. Perhaps when they are included on the referral, they will respond.
3. Materials submitted by the applicant include a 30-foot access easement recorded on 11/20/2023 at Reception 04028765 between Stapp Lake Ranch LLC and Big Lake LLC. The easement appears to follow an alignment of unpermitted grading that was noted on a hold request issued on June 26, 2023 (attached). Please be aware that the recently recorded legal easement does not constitute County approval for the unpermitted work or the proposed private access road. Response: Further grading on the project will only be done with an approved permit.

4. An Access Improvement and Maintenance Agreement (AIMA), which is an agreement for future maintenance responsibility, will be issued for the shared driveway during building permit review. The shared driveway crosses parcel number 132300000039, 132300000037, and USFS property and connects to CR96J adjacent to the outlet of Beaver Reservoir. The AIMA will be prepared by the Access & Engineering staff, signed by the property owner and notarized, and approved as part of the building permit process. Response: The owner will sign the AIMA when it is issued.

5. The Boulder County Geologic Hazards and Constraint Areas Map indicates the area is susceptible to landslides. Grading plans submitted by the applicant indicate several areas of proposed grading exceed a 2:1 slope as well. Additionally, during a site visit on June 16, 2023, unconsolidated soils and loose boulders were observed on and adjacent to the unpermitted road improvements as well as adjacent to existing structures. Response: See Civil drawings for the design of the driveway and the areas of revegetation.

Please submit a geotechnical report certified by a qualified Colorado-licensed Professional Engineer that identifies geologic hazards and potential adverse impacts to the proposed development and existing buildings. Response: See attached Geotechnical Report that addresses possible geologic hazards.

At building permit, submit grading plans that align with the findings and recommended mitigations found within the geotechnical report. Response: See Civil drawings for the design of the driveway and the areas of revegetation.

6. As noted above, the construction of unpermitted road improvements appears to be incomplete, as proper compaction of the grading and surface materials are both absent. Please note that all areas of unpermitted grading not approved as part of this review must be restored to previous conditions or better. Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated.

At building permit, applicant must submit revised plans that includes the methods for properly completing the driveway construction. Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated.

At building permit, should any part of the proposed alignment be modified, the applicant must provide revised plans indicating how all disturbed areas will be restored and revegetated. Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated.

7. The civil plans, submitted by the applicant and dated 4/10/23, do not meet the Boulder County Multimodal Transportation Standards (Standards) in the following ways: Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated. The design has been modified to address the points below.

a. The proposed driveway design does not indicate a consistent 2% cross slope that conveys stormwater runoff to a borrow ditch located on the upslope side of the driveway, as required by Standard Drawing 11 of the Standards.

b. The centerline radius of the curve at Station 12+50 is 34 feet. Table 5.5.1 of the Standards requires a minimum centerline radius of 40 feet.

c. Pullouts at Stations 8+00 and 12+50 do not meet the dimension requirements outlined in Standard Drawing 17.

d. Slopes exceed 1.5:1 at the northeast corner of the proposed hammerhead turnaround at Station 12+75, as well as the northwest corner of the proposed garage, which does not comply with Section 5.3.2.2 of the Standards.

e. The driveway profile does not indicate the location or depth of proposed cross culverts.

At building permit, provide revised plans demonstrating a driveway design that is compliant with the Standards, including without limitation: Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated. The design has been modified to address the points below.

a. Section 5.3.2.2 Cut & Fill Slopes

b. Table 5.5.1 – Parcel Access Design Standards (1-Lane Mountain Access)

c. Standard Drawing 11 – 12 Private Access

d. Standard Drawing 14 – Access with Roadside Ditch

e. Standard Drawing 15 – Access Profiles Detail

2 f. Standard Drawing 16 – Access Grade & Clearance

g. Standard Drawing 17 – Access Pullouts

h. Standard Drawing 18 – Access Turnaround

i. Standard Drawing 19 – Typical Turnaround & Pullout Locations

Where a Standard cannot be met, submit to the County a design exception form, completed by a qualified Colorado-licensed Professional Engineer, that includes an explanation as to why the Standard cannot be met. Be aware that an application for a design exception does not guarantee approval.

Also note that retaining walls or a series of retaining walls over four feet tall, as measured from the bottom of the footing to the top of the wall, must be stamped by a qualified Colorado-licensed Professional Engineer. Calculations shall be submitted for any retaining walls over six feet in height.

8. The application contains some materials that appear to contradict one another, including:

a. The grading plans indicate a 14-foot width along the length of the driveway, whereas the narrative states that a 14-foot width will be used at the curves of the alignment and 12 foot width will be used at the straightaways.

b. The grading plans indicate centerline grades of up to 18% between Stations 6+25 and 9+50, however the Proposed Driveway Profile sheet submitted by the applicant indicates centerline grades of 15.4%. The profile sheet proposes the addition of up to 10 feet of fill to overcome sections that exceed maximum grade requirements in the Standards, however the additional fill is not shown on the grading plans. Retaining walls or significant additional grading of adjacent slopes will be required to achieve the design depicted in the driveway profile.

Please provide revised plans and earthwork calculations that correct any inconsistencies and provide a design compliant with the Standards. Response: The revised civil plans indicate the areas of grading to finish the driveway and the areas that will be revegetated. The design has been modified to address the points above.

9. The earthwork calculations provided by the applicant differentiate between new and historic grading. Staff disagrees with this differentiation based on aerial imagery indicating that significant grading occurred between July 2022 and August 2023. Please provide revised earthwork calculations that include all grading quantities. Response: The attached Earthworks letter clarifies the amount of unpermitted grading that was done since 2022 as well as the amount of grading that will be required to complete the driveway and residence.

10. A third-party consultant reviewed the drainage letter dated 9/27/2023. A summary of the review is below:

a. All temporary and permanent proposed features such as well construction, septic construction, pipelines, staging areas, parking areas, etc. must be identified on plans submitted at building permit. Response: The permanent site features and the temporary construction dumpster, washout, and staging areas are shown on the site plan.

b. More detail and drainage calculations are required for culverts, stilling basins, and roadside ditches. Additional energy dissipation, such as check dams, may be needed in some areas depending on the results of the calculations. Plans submitted by the applicant must align with the findings in the drainage report. Response: See the Drainage letter and civil drawings for clarity.

c. Roofing materials, galvanized siding materials, and pressure treated lumber may negatively impact Stapp Lake. Direct discharges to the lake must be avoided to the extent possible, and runoff must be routed over pervious areas such as a swale or vegetated buffer prior to discharge to a sensitive receiving water. Redirecting the runoff follows low impact development (LID) and County water quality concerns consistent with the requirements in Storm Drainage Criteria Manual (SDCM) Section 1200. Response: There are no direct discharges into the lake from the residence roof – see architectural roof plan and site plan. There is no pressure treated framing material used in the deck or dock construction. See Architectural plans, project narrative and ecological report.

d. The Colorado Department of Public Health and Environment (CDPHE) requires notification of dredge and fill activities for projects impacting State Waters. Please contact CDPHE to determine applicable requirements. More information can be found at <https://cdphe.colorado.gov/dredge-and-fill>. Response: CDPHE will be contacted before permitting to approve the 4 dock piers and the dry hydrant pipe which will be the only construction activity that contacts the water.

At building permit, provide a revised drainage letter demonstrating how storm runoff from the proposed development meets the requirements in the SDCM. Response: See the attached Civil drawings and Architectural site plan for drainage and revegetation measures.

11. Plans submitted by the applicant indicate an area of disturbance exceeds an acre in size. As a part of Boulder County's water quality protection program, a stormwater quality permit (SWQP) is required.

At building permit, submit a SWQP and revised plans identifying all areas of disturbance including construction areas, staging areas, temporary access areas, and parking areas. The total area of disturbance must be clearly labeled. Response: A SWQP will be submitted during the building permitting phase.

NOTE: The SWQP must be issued prior to work beginning on the project. Please visit Boulder County's stormwater website at <https://bouldercounty.gov/transportation/permits/stormwaterquality-permit/> or contact tdstormwater@bouldercounty.org for more information. Response: A SWQP will be submitted during the building permitting phase.

This concludes our comments at this time.

ECOLOGICAL ASSESSMENT & RESPONSE TO COMMENTS

BIG LAKE RESIDENCE BOULDER COUNTY, COLORADO



prepared for:

JAY AND CHRISTY ORRIS
101 MODEL T ROAD, BOULDER CO 80302

prepared by:

BIRCH ECOLOGY, LLC
710 TENACITY DRIVE, SUITE 101, LONGMONT, CO 80504



BIRCH ECOLOGY

DECEMBER 2024

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1.0 INTRODUCTION & BACKGROUND

Jay and Christy Orris acquired the 320-acre Stapp Lakes Property in 2012. In June 2023, they submitted plans to build a single-family residence and driveway. In consultation with the County, to streamline permitting for a single-family residence, they subsequently subdivided the original property to create the 37.7-acre Big Lake property, which is the subject of this application.

The current proposal is the Big Lake LLC Residence and Driveway. The property is located at 3310 County Road 96J, in Section 22 of Township 2 North and Range 73 West (Figures 1 & 2). The project will require a Limited Impact Special Use Review to permit earthwork for the driveway and a Site Plan Review for the construction of a new 2,900 square foot residence with an attached garage.

Two comment letters have been received in response to the January 12, 2024 submittal. The first was a January 31, 2024 letter from Ian Brighton from the Community Planning & Permitting department. Mr. Brighton's letter provided comments specific to access and engineering.

- The Design Team, including the project architects and engineers, are providing a response memo to Ian Brighton's letter.
 - Please refer to the Project Narrative for the Big Lake Residence Limited Impact Special Review prepared by Sam Nishek of Barrett Studio Architects, dated 12/5/24; the Big Lake Drainage and Stormwater Narrative prepared by Lonnie Sheldon of Van Horn Engineering and Surveying; the Big Lake Earthwork Narrative prepared by Lonnie Sheldon of Van Horn Engineering and Surveying; and the associated plan sets dated 12/17/24.
 - Additionally, property owners Christy and Jay Orris have provided a personal statement regarding their vision for the property which has been included as a part of the submittal documents to the County.

The following Ecological Assessment Report responds to the second comment letter dated February 4, 2023, from Boulder County Parks and Open Space Natural Resource Planner Ron West. Please note, although dated in 2023, this date is a typographical error as the letter was transmitted to the project team on February 20, 2024.

Mr. West's letter identifies several concerns related to the proposed residence and its potential to disturb sensitive habitats. In response to these concerns, we conducted background research, performed on-site analysis, and gathered additional site and design information from the project team. We then worked with the Orris Family and their architects and engineers to refine their plan and develop ways to reduce the potential impacts. This memo provides details of the project background, environmental setting, proposed design, mitigation measures, BMPs for project construction and alternatives analysis which are relevant for project review. Section 3 specifically addresses each of the comments provided in Mr. West's letter.

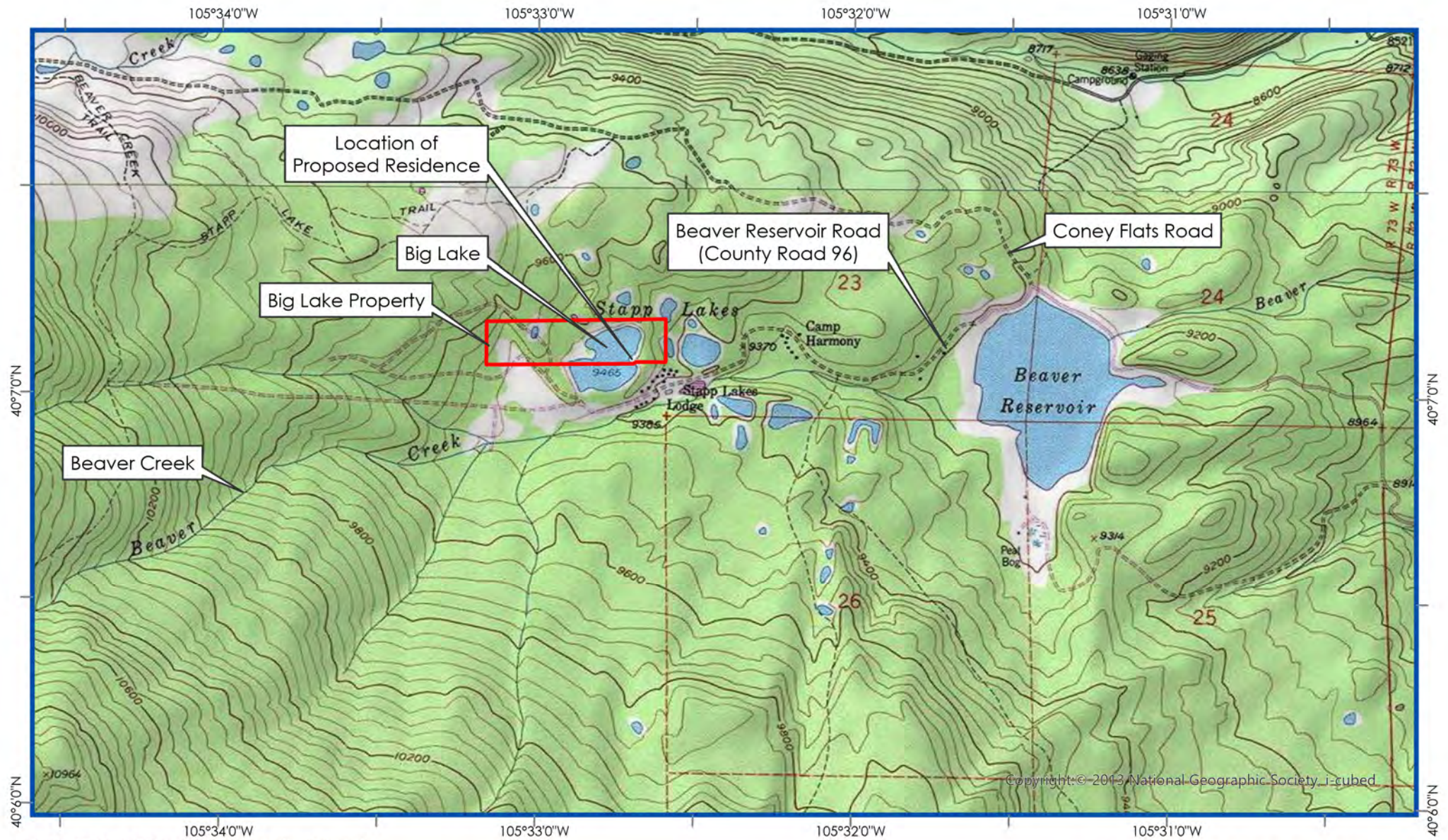
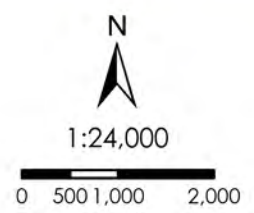


FIGURE 1. PROJECT LOCATION MAP
Big Lake Property, Colorado

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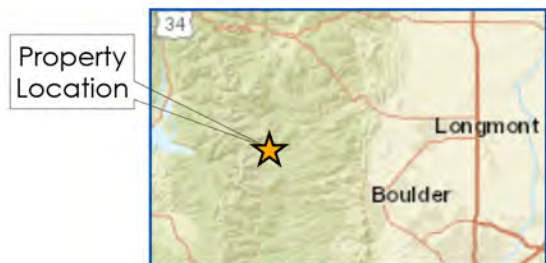
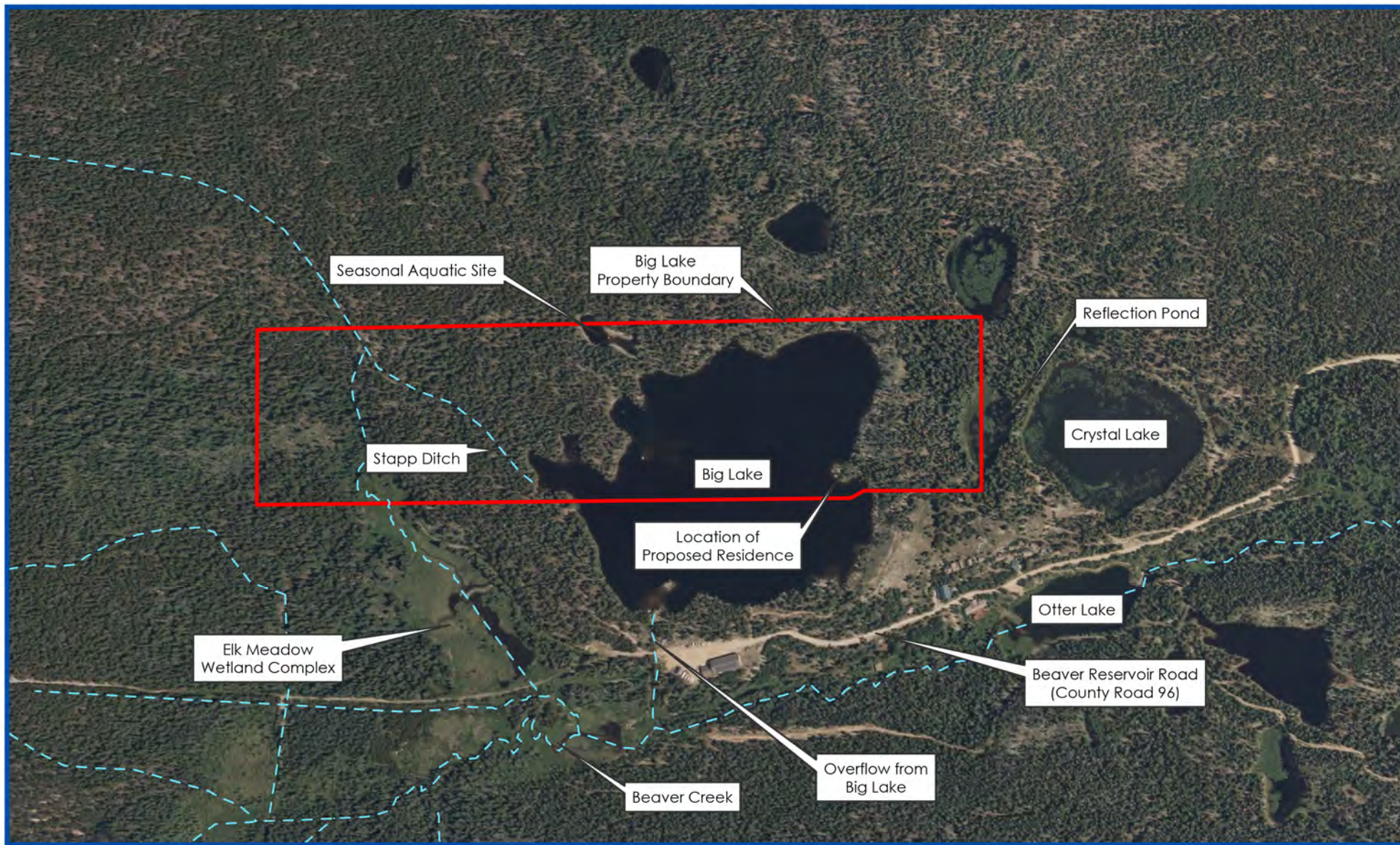


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LEGEND

- Streams & Ditches
- Big Lake Property

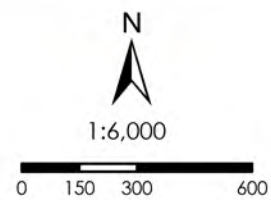


FIGURE 2. AERIAL PHOTO & HYDROLOGY MAP
Big Lake Property, Colorado

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2.0 SITE ASSESSMENT

2.1 Environmental Setting

The 37.7-acre Big Lake Property is situated near the continental divide above Ward, CO (Figure 1). The rectangular project site is bounded by the Arapaho-Roosevelt Forest on the north and west sides, and by the Stapp Lakes property to the south and east (Figure 2).

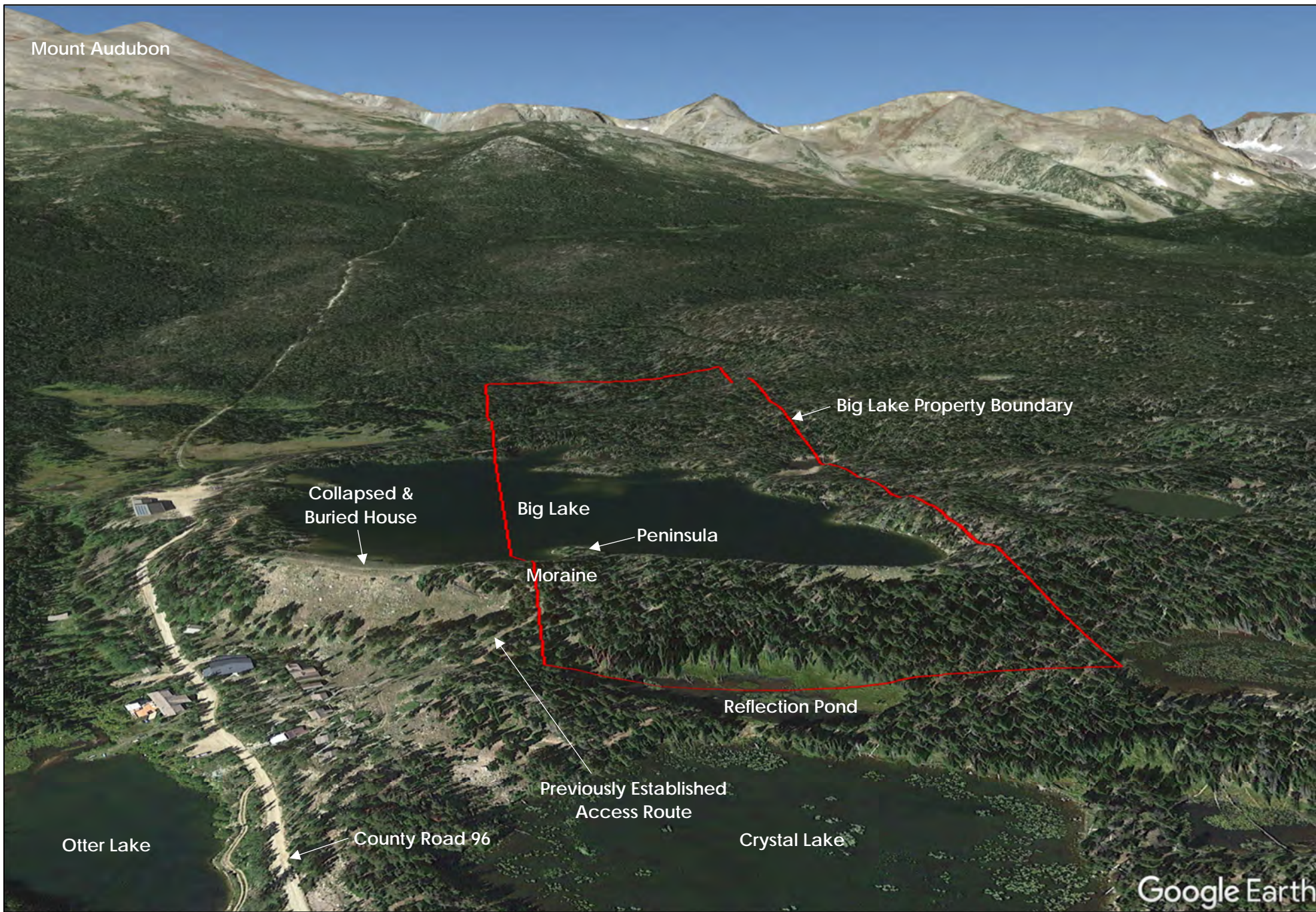


2.1.1 Geology

Elevations range from a high of $\pm 9,600$ feet in the northwest corner, to a low of $\pm 9,430$ feet in the east, near the Reflection Pond (Figure 3). The landscape in this area has been shaped by moraines deposited during the last glaciation.

Big Lake was formed by a glacier that pushed up a mounded terminal moraine to the south, receded, and then pushed slightly more material forward to create a secondary moraine (Figure 4). The center of this secondary moraine appears to have been removed by a subsequent minor glacial advance. Water filled the depression behind the terminal moraine to form Big Lake; while the secondary moraine creates two small peninsulas along the east and west sides of the lake. The moraine rises steeply from the shoreline of Big Lake on the north and east sides (Photos 1 & 2).





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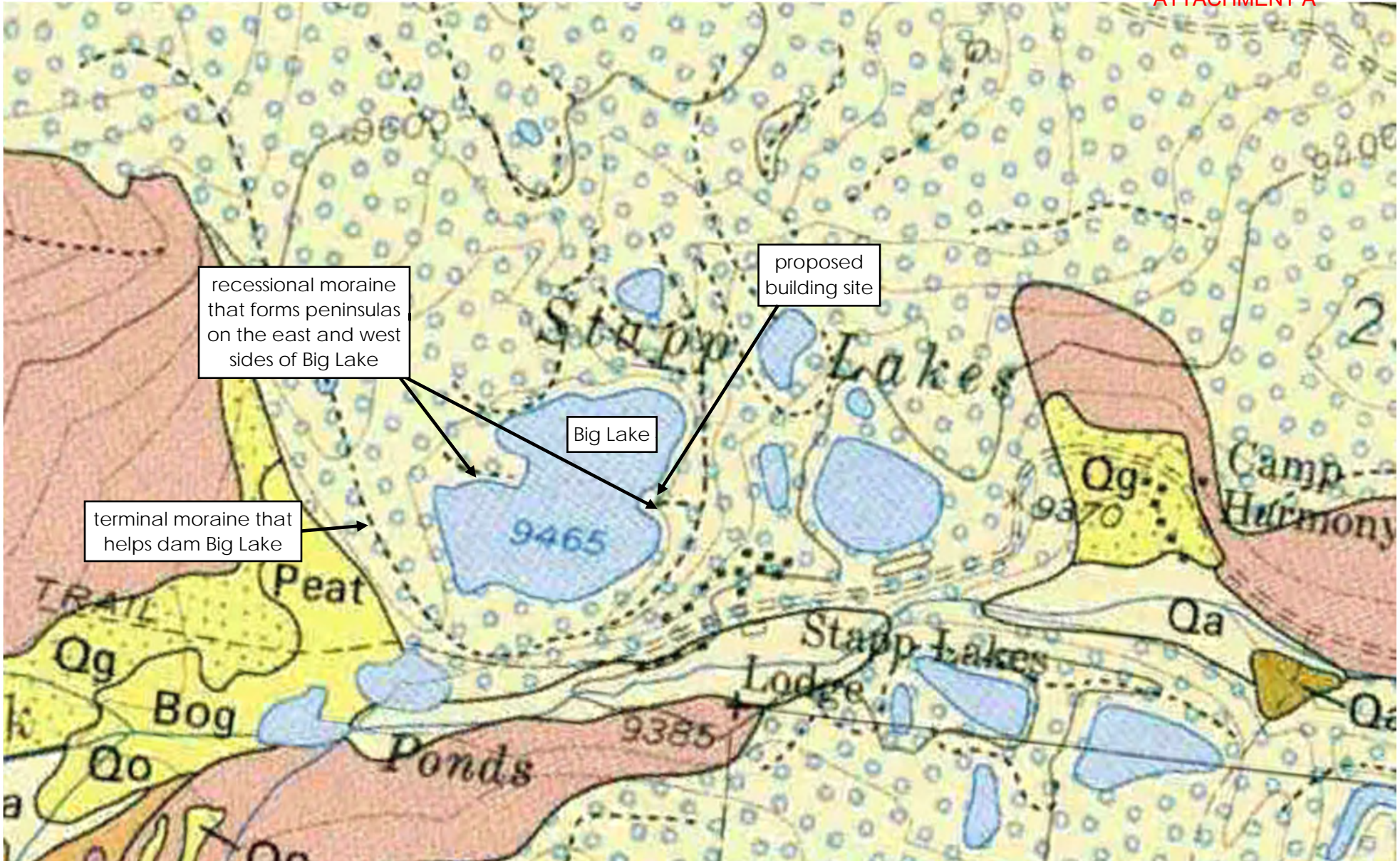


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Google Earth
Page 193 of 371
mapping from 2018

FIGURE 3. OBLIQUE AERIAL PHOTO
BIG LAKE RESIDENCE

DECEMBER 2024



recessional moraine that forms peninsulas on the east and west sides of Big Lake

proposed building site

Big Lake

terminal moraine that helps dam Big Lake

Geologic Map of the Ward Quadrangle, Boulder County, Colorado 1976, Gable and Madole

GEOLOGIC UNITS

- Trend of lateral and terminal moraines
- Qo – Organic-Rich Sediment (Holocene & Upper Pleistocene)
- Qp – Glacial Till of Pinedale Age (Upper Pleistocene)
- Qg – Outwash Gravel (Upper Pleistocene)
- Qbl – Till of Bull Lake Age (Upper Pleistocene)
- Ysp – Silver Plume Quartz Monzonite (Precambrian)

FIGURE 4. GEOLOGY MAP BIG LAKE RESIDENCE

DECEMBER 2024

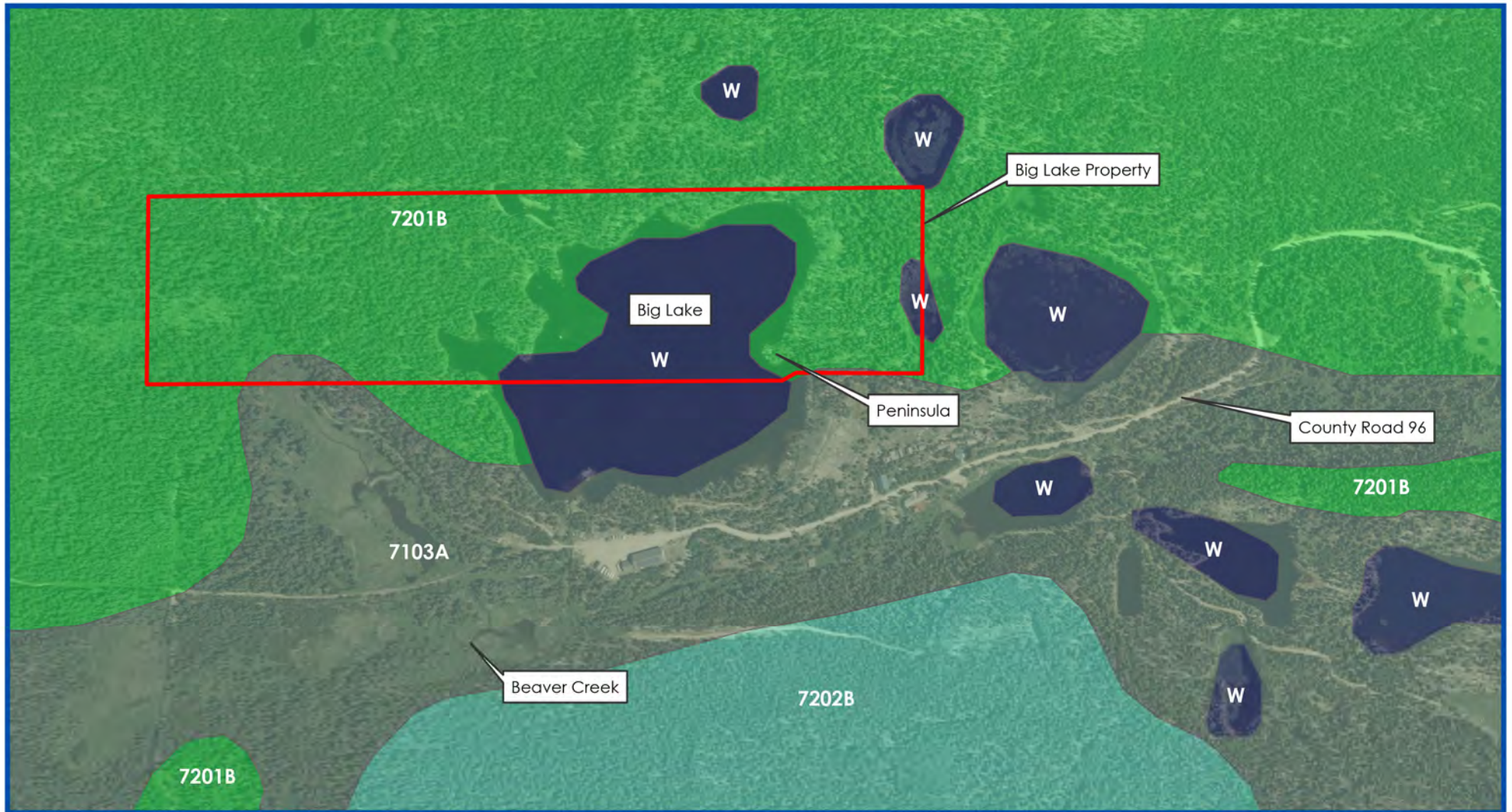
Glacial till underlies much of the Big Lake Property.



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LEGEND


 Big Lake Property

Soil Types

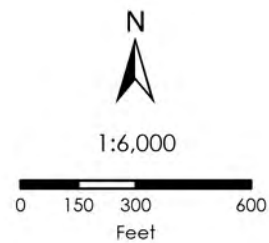
 7103A* - Cryaquolls-Leigh

 7201B - Leighcan family, till substratum, 5-40% slopes

 7202B - Leighcan family, till substratum-Cryaquolls complex, 5-40% slopes

 W - Water

*Hydric Soil Rating



**FIGURE 5. NRCS SOIL MAP
BIG LAKE RESIDENCE**

DECEMBER 2024

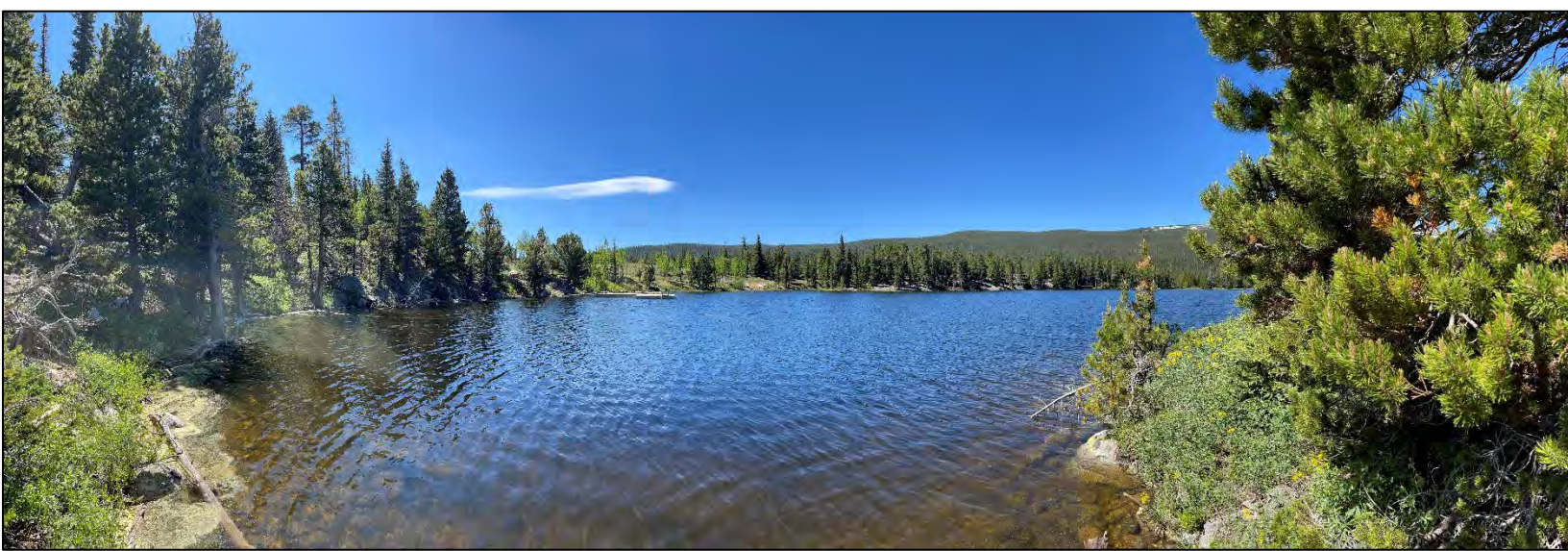
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The proposed location for the single-family residence is on the eastern peninsula, which covers $\pm 6,500$ ft². Because it is a moraine, the soil on the peninsula is comprised of glacial till (Figure 5). The physical mounding of the moraine forms steep banks at the lake margin with rocky soil that supports little to no wetland development on the peninsula (Photos 3 & 4).



2.1.2 Hydrology

Big Lake has a total surface area of ± 17.5 acres, of which ± 11.4 acres is within the Big Lake Property (Figure 2). Snowmelt, precipitation and groundwater are naturally dammed by the moraine. In addition, water is diverted into Big Lake via the Stapp Ditch on the west side. Big Lake spills over the southern moraine down a small channel into North Beaver Creek. Beaver Creek continues east to Otter Lake, and then flows to Beaver Reservoir (Figure 2).

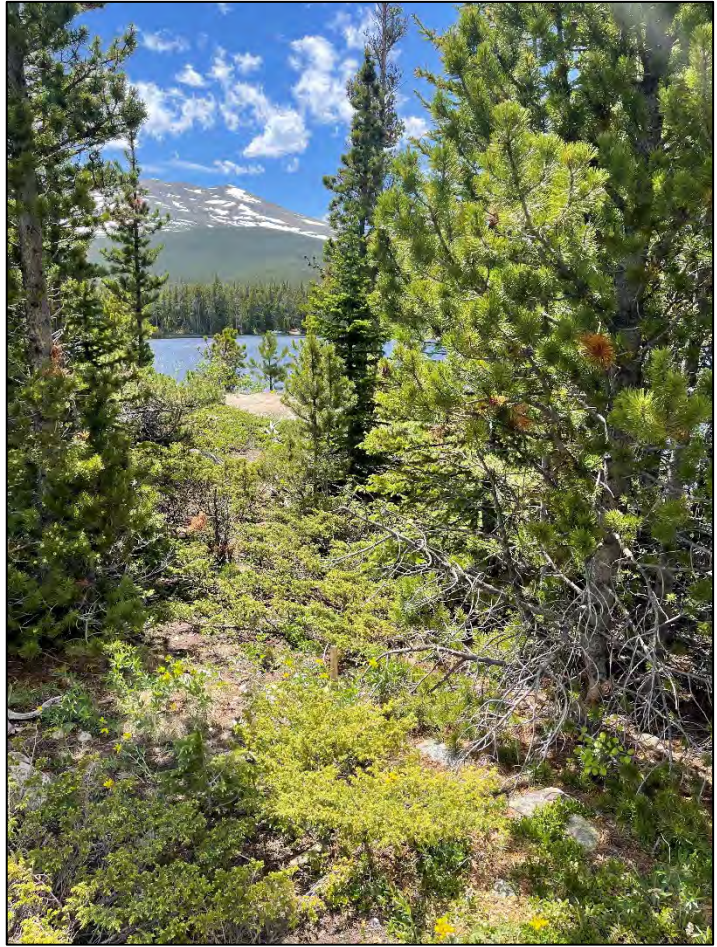
The Reflection Pond on the east side of the property is separated from Big Lake by a tall, forested moraine (Photo 5). This pond drains to the east into Crystal Lake. To the northwest of Big Lake, there is a small seasonal aquatic site, less than $\frac{1}{4}$ acre in size, which is fed by high groundwater and snowmelt.

To the west of Big Lake, the property is crossed by an unnamed intermittent stream that flows south through The Elk Meadow Wetland Complex to join Beaver Creek (Photo 6). This area is fed by groundwater discharge and occasional overflows from the Stapp Ditch that occur during spring runoff.

2.1.3 Vegetation

The forested hillsides surrounding Big Lake are dominated by subalpine fir (*Abies lasiocarpa*) and Engelmann spruce (*Picea engelmannii*), with limber pine (*Pinus flexilis*), lodgepole pine (*Pinus contorta*) and aspen (*Populus tremuloides*) (Photo 7).

On the peninsula where the residence is proposed, the vegetation is characterized by primarily subalpine fir trees with some Engelmann spruce, limber pine, lodgepole pine, a few small aspens, and one ponderosa pine (*Pinus ponderosa*) (Photo 8). In the shrub layer, common juniper (*Juniperus communis*) is abundant, where it grows with kinnikinnik (*Arctostaphylos uva-ursi*) and Woods' rose (*Rosa woodsii*). The rocky and mounded ground supports an herbaceous understory dominated by elk sedge (*Carex geyeri*) and abundant forbs, including golden banner (*Thermopsis divaricarpa*), dwarf bilberry (*Vaccinium caespitosum*), whole-leaf paintbrush (*Castilleja integra*), and fireweed (*Epilobium angustifolium*) (Photo 9). Wetlands are very limited along the bank of the peninsula due to the steep grade and rocky soil at the shoreline (Photos 3 & 4). Wetlands are more developed on the south, west and northwest sides of Big Lake (Photo 10).



High quality wetlands occur at the Reflection Pond to the east, where yellow pond lily (*Nuphar lutea*) grows in the aquatic habitat (Photo 5). Wetlands also occur in association with a small, seasonal pond to the northwest of Big Lake and along the intermittent stream to the west of Big Lake, the upper reach of the Elk Meadow Wetland Complex.

2.1.4 Land Use

The project area has a rich land use history that has shaped the surrounding landscape. In 1893, Issac and Mattie Stapp created a homestead on the adjacent Stapp Lakes parcel and opened a guest ranch (Photo 11). At that time, out-of-town visitors frequented the site to enjoy the natural beauty of the mountains, ride horses, hunt in the area, and fish in several of the lakes, including Big Lake (Photo 12).

Over the years, the adjacent Stapp Lakes property has been a home to summer camps and schools. In 1958, Jerry and Mary Henderson purchased the Stapp Lakes property, began a school, and constructed an underground house along the south shore of Big Lake (See photo on Page 29). The underground house has since collapsed and remains buried on the southeast shore within the Stapp Lakes Parcel (Photo 13).

Jay and Christy Orris purchased the property in 2012 and now oversee the land. Visitation has been and continues to be much reduced from its peak use as a guest ranch. Jay and Christy intend to steward the land and protect its resources; they have stated they have no intention of further subdividing the land. They are requesting to build one single-family residence, with only limited use during the winter months.

2.2 Project Details

2.2.1 Proposed Residence

The proposed residence is designed to fit with the shape and radius of the peninsula (Figure 6). The residential floor area and attached garage total 2,990 square feet with a footprint of 2,465 square feet. The project will consist of a two-bedroom house with no basement, a small one-room second story on the north side of the building, and an attached one-car garage that is a half-level higher than the main building to fit with the natural slope of the land. The highest part of the roof would be 26'-2" above the existing grade. A standing seam metal roof and corrugated metal siding would limit degradation.

2.2.2 Deck and Dock

The deck and dock are the only elements that would extend beyond the perimeter of the peninsula. These features cover a total of 1,117 ft². The concrete footings for the house are all located on the peninsula, such that only the deck forms a cantilevered surface over 171 ft² of water. The dock would not be structurally connected to the house foundation and would be supported by four dock piers set in the lake bed. The deck and dock would be constructed of powder-coated galvanized steel deck and dock framing and untreated Ipe E 84 Ignition Resistant Wood Deck and Dock Decking; these materials are specially designed for use in docks and were selected because they do not present a water quality risk from chemical leaching (Figure 6, Sheet 5 of 6).

2.2.3 Homesite Drainage Plan

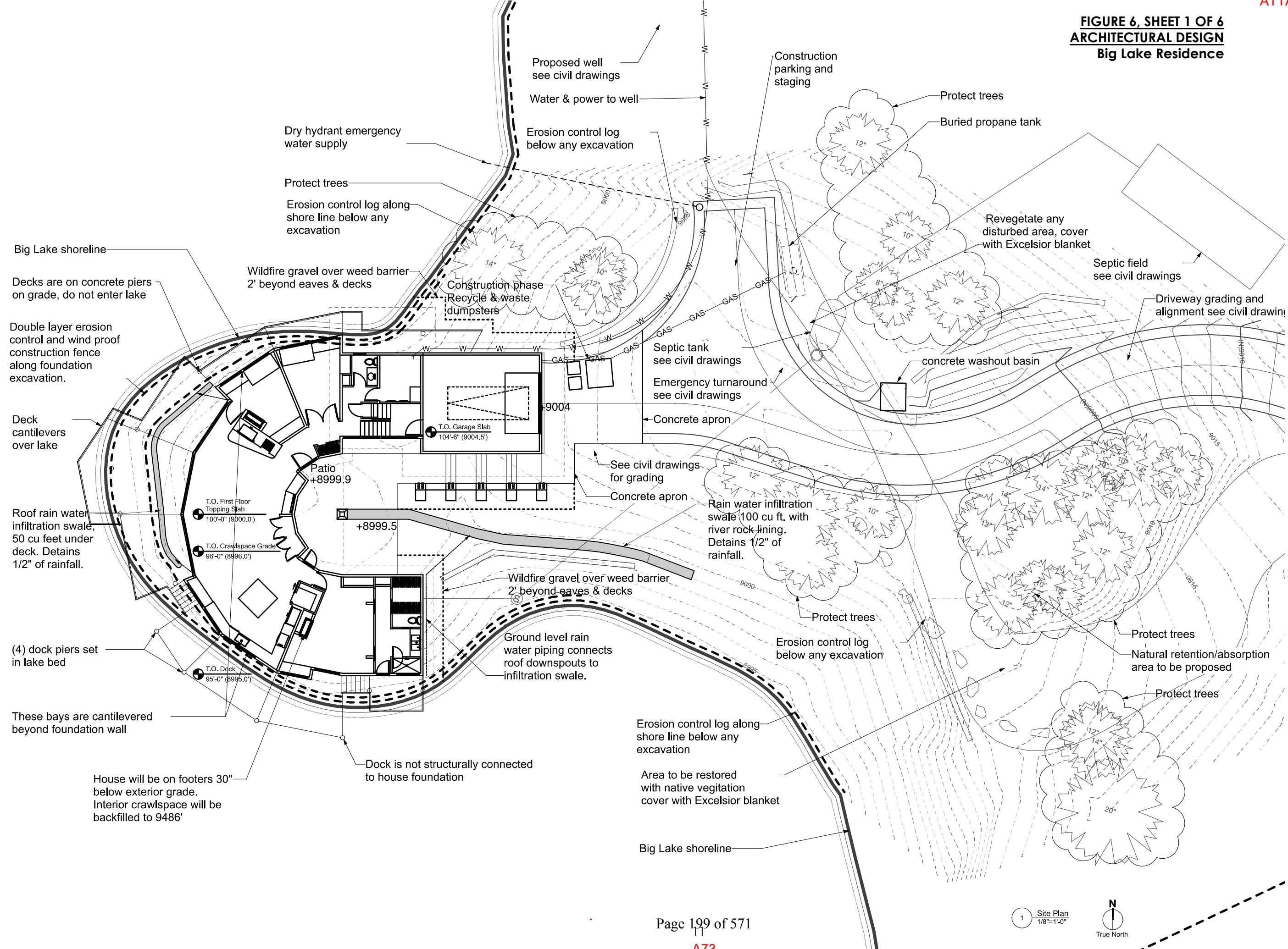
The drainage plan for the house has been designed to limit the potential for water quality impacts to Big Lake by limiting the cover of impervious surfaces and promoting infiltration, rather than directing runoff into Big Lake. As shown by Figure 6, Sheets 1 and 4, runoff from the roof will be collected in rain gutters, then would flow through downspouts to a rainwater infiltration swale to be located beneath the cantilevered deck. The swale below the deck will hold 50 cubic feet of water. This will retain the first ½ inch of a heavy rain event on the roof. Pending the final percolation tests, this is being designed to infiltrate the runoff within 12 hours. Due to the careful selection of building materials, this runoff should not contain harmful contaminants. The glacial till soil on the peninsula is not prone to erosion and should not wash down into the lake if the swale is overtopped.

As shown by Figure 6, Sheet 4, the runoff from the remainder of the roof and the concrete patio / courtyard will be directed away from Big Lake and will be routed into another rainwater infiltration swale lined by river rock. Additionally, the foundation on this interior side of the peninsula will have a gravel base over weed barrier, extending 2 feet out from the eaves and decks.

FIGURE 6, SHEET 1 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

NOTICE: DUTY OF COOPERATION
Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a timely notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL
Date: December 5, 2024
Revisions:



Revised Land Use Submittal
Date: December 5, 2024
Revisions:

Big Lake Residence
3310 CR 96J, Ward CO 80481



BARRETT STUDIO architects
Architecture Community/Urban Design Interiors
Mailings: 998A N Broadway, Suite 103 PMS-224, Boulder, Colorado 80304, phone: 303-449-1141 email: bsa@barrettstudio.com web: www.barrettstudio.com

Site Plan

Drawing Number:

A1.1

Sheet: 1 of: 1
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FIGURE 6, SHEET 2 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

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REVISED LAND USE
SUBMITTAL

Date: December 5,
2024
Revisions:



Big Lake Residence
3310 CR 96J, Ward CO 80481

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Architecture Community/Urban Design Interiors
mailing: 3980 N Broadway, Suite 103 PMB 224, Boulder, Colorado 80504 phone: 303-449-1141 email: bs@barrettstudio.com web: www.barrettstudio.com

Preliminary Drawing Set
Not for Construction

Plans
Drawing Number:

2.0

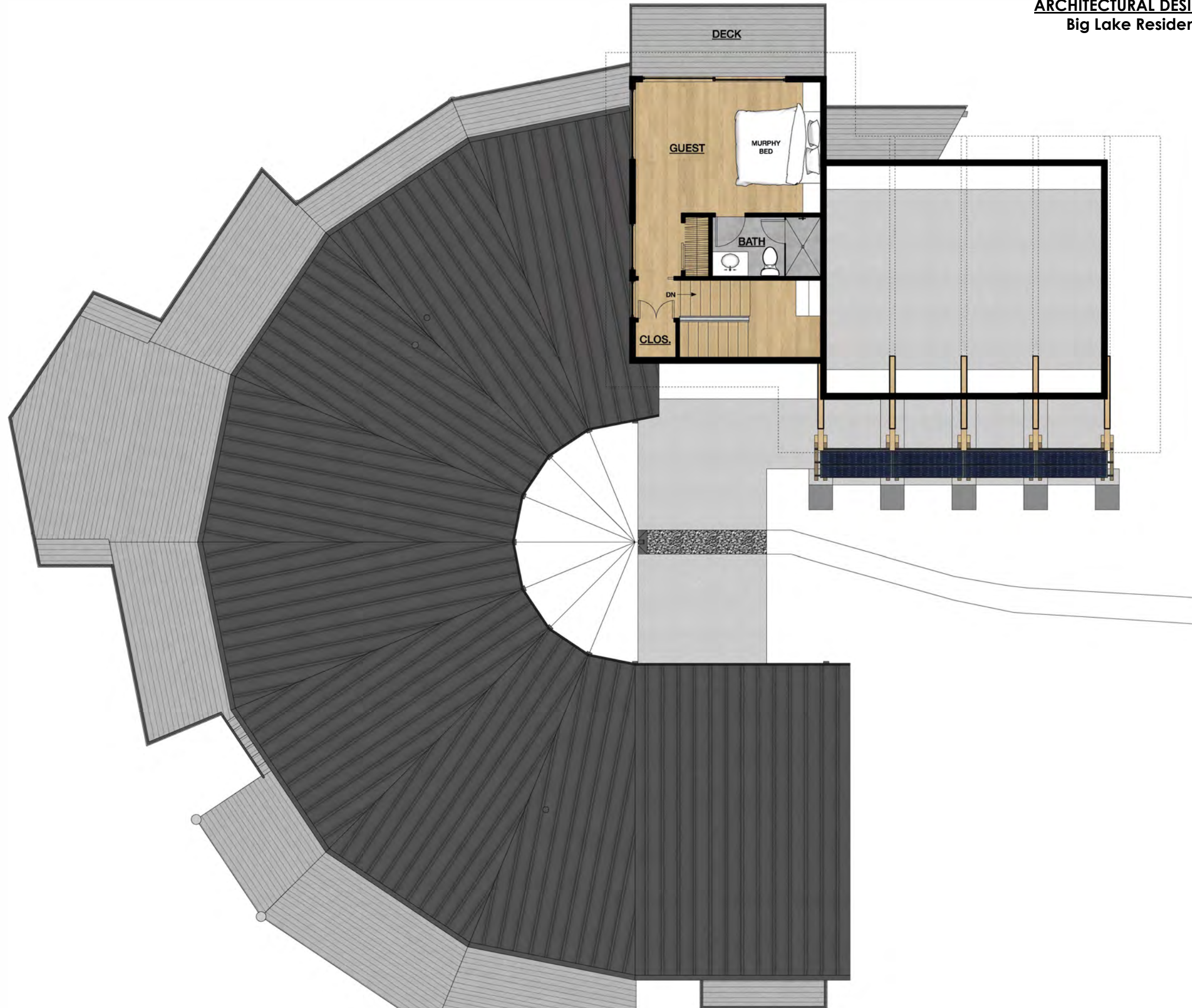
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FIGURE 6, SHEET 3 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

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REVISED LAND USE
SUBMITTAL

Date: December 5,
2024
Revisions:



Big Lake Residence
3310 CR 96J, Ward CO 80481



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Preliminary Drawing Set
Not for Construction

Plans

Drawing Number:

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FIGURE 6, SHEET 4 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

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REVISED LAND USE
SUBMITTAL

Date: December 5,
2024
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Big Lake Residence
3310 CR 96J, Ward CO 80481



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Preliminary Drawing Set
Not for Construction

Plans

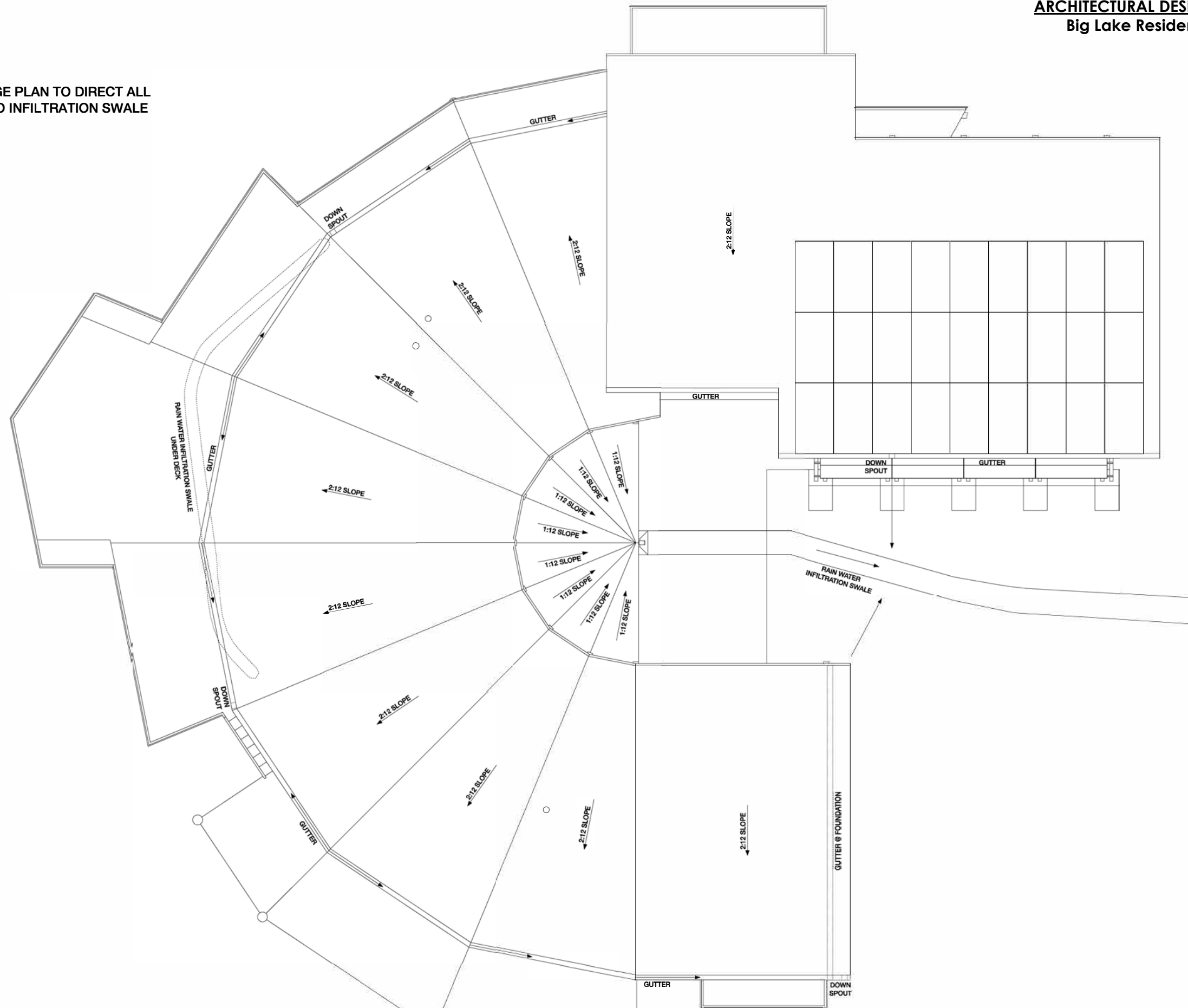
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Sheet: of:

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ROOF DRAINAGE PLAN TO DIRECT ALL
RAIN WATER TO INFILTRATION SWALE






Material Key		Elevation Keynotes	
	Standing Seam Metal Roof	①	Powder Coated Galvanized Steel Deck & Dock Framing
	Corrugated Metal Siding	②	Ipe E 84 Ignition Resistant Wood Deck & Dock Decking - Untreated
	Concrete - Clear Sealed Above Grade, Waterproof Below Grade	③	Painted Steel Guardrail
		④	Aluminum Clad Windows
		⑤	Solar Panels

FIGURE 6, SHEET 5 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

NOTICE: DUTY OF COOPERATION
 Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

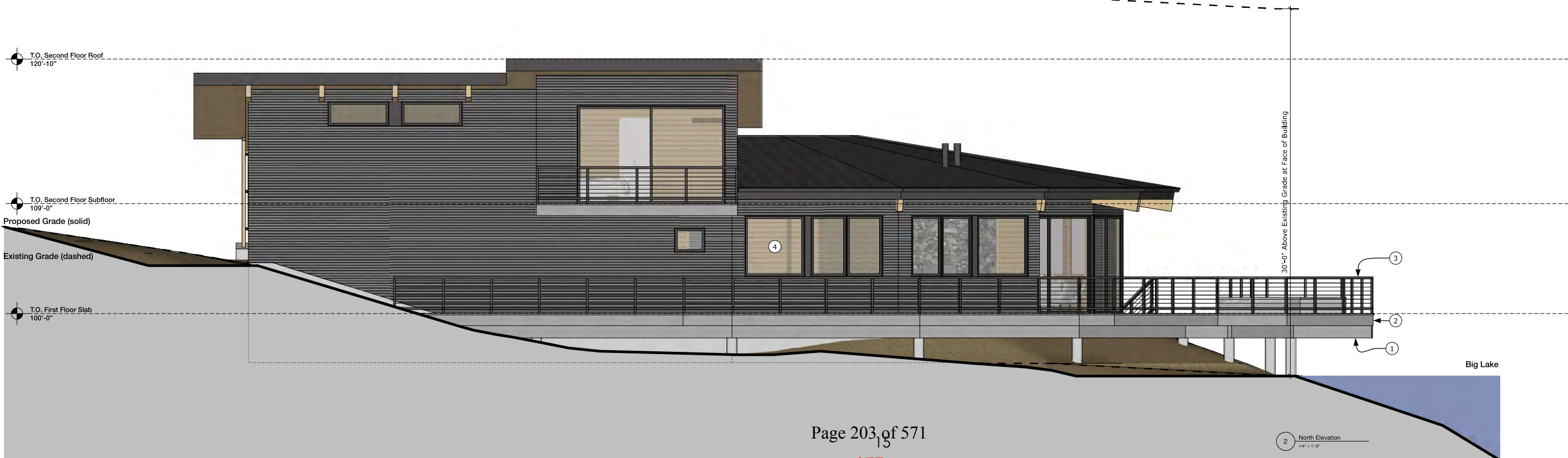
REVISED LAND USE SUBMITTAL

Date: December 5, 2024
 Revisions:



Big Lake Residence
3310 CR 96J, Ward CO 80481

BARRETT STUDIO architects
 Architecture Community/Urban Design Interiors
 3380 N Broadway, Suite 103 PWB224, Boulder, Colorado 80304
 phone: 303-448-1141 email: bsa@barrettstudio.com web: www.barrettstudio.com



Preliminary Drawing Set
Not for Construction

Elevations
 Drawing Number:
4.0
 Sheet: of:
 ©Copyright 2024 BARRETT STUDIO ARCHITECTS

FIGURE 6, SHEET 6 OF 6
ARCHITECTURAL DESIGN
Big Lake Residence

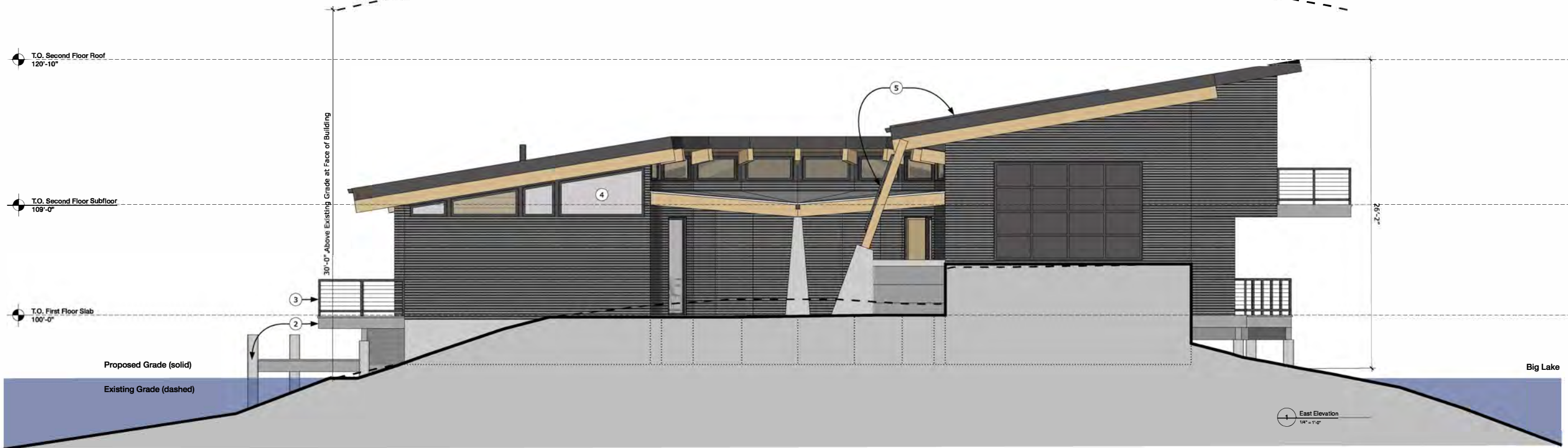
NOTICE: DUTY OF COOPERATION

Reliance on these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

REVISED LAND USE SUBMITTAL

Date: December 5, 2024
 Revisions:

Material Key		Elevation Keynotes	
	Standing Seam Metal Roof	①	Powder Coated Galvanized Steel Deck & Dock Framing
	Corrugated Metal Siding	②	Ipe E 84 Ignition Resistant Wood Deck & Dock Decking - Untreated
	Concrete - Clear Sealed Above Grade, Waterproof Below Grade	③	Painted Steel Guardrail
		④	Aluminum Clad Windows
		⑤	Solar Panels



Big Lake Residence
3310 CR 96J, Ward CO 80481

BARRETT STUDIO architects
 Architecture Community/Urban Design Interiors
 3980 N Broadway, Suite 103 PMB 224, Boulder, Colorado 80504
 phone: 303.449.1141 email: bs@barrettstudio.com web: www.barrettstudio.com



Preliminary Drawing Set
Not for Construction

Elevations
 Drawing Number:
4.1
 Sheet: of:

2.2.4 Utilities

The residence would be equipped as an Off-Grid house. Solar PV panels with a battery backup and a buried propane tank would provide power and heat. A well would be located north of the house along the existing ATV trail, and the water tank would be within the house. Sewer services would be provided via an electric lift pump, septic tank, and septic field and would be installed according to all regulations to protect water quality. Each of these features would follow the designated setbacks from other structures and the lake. The house will be designed with dark-sky lighting to limit light pollution.

2.2.5 Driveway Access

Access to the homesite would be provided via a 1,348-foot-long driveway with a road base surface. Figure 7, Sheets 1 to 7 contain the civil drawings prepared by Van Horn Engineering; Figure 8 is an overview of the proposed road on an aerial photo base which shows the relationship to Big Lake and other water bodies on the property. Figures 9 and 10 are more detailed views of the plan on the aerial photo base. For Figures 8-10, the yellow arrows show the direction of flow for runoff, which is further discussed below in Section 2.2.6, Stormwater.

Most of the initial road grading has already been completed and follows an old forest road for much of its length. The proposed driveway would be 12' wide in straight sections and 14' wide along curves, with 2' shoulders. Two emergency access pullouts and a hammerhead turnaround would be provided. Figure 7, Sheet 2 of 7 shows where the final approach to the house was redesigned to pull the driveway away from Big Lake, better manage runoff, reduce grading, and preserve key trees near the peninsula (Figures 7 -9). In this location, the area that was initially graded will be restored with native vegetation and proper erosion control BMPs will be installed.

2.2.6 Stormwater

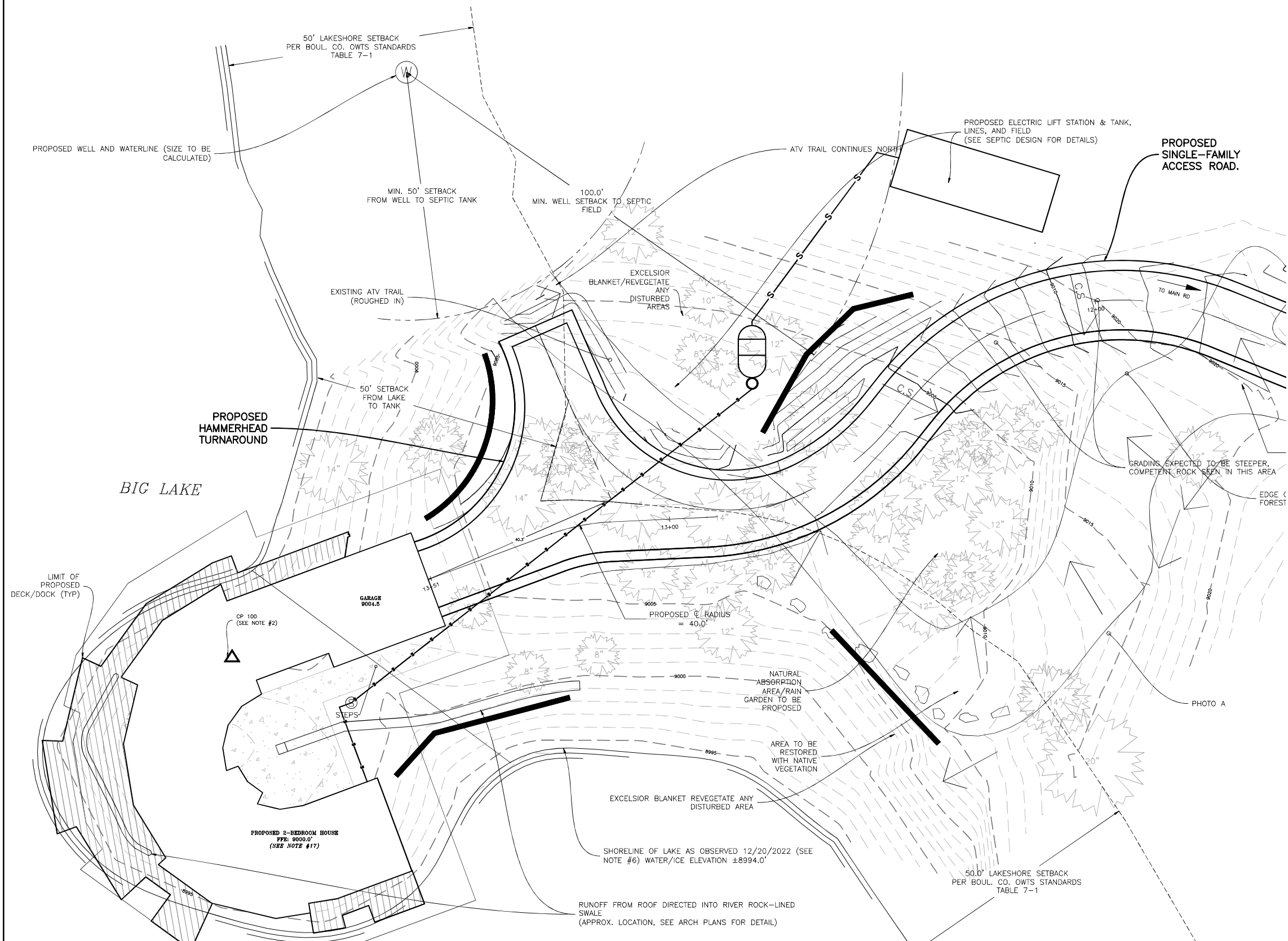
The proposed driveway and stormwater management plan have been carefully designed to limit the potential for erosion and water quality impacts. Through the design process, all culverts have been eliminated and there would be no direct surface discharge to Big Lake or any of the adjacent water bodies. The road will have a road base surface, which is more pervious than a standard asphalt road, and due to its limited size, there should not be a large increase in runoff as a result of this project. As shown by the yellow drainage arrows, runoff will flow to the uphill side of the road, or to roadside ditches or vegetated areas far away from the lakes. This should allow runoff to be naturally filtered through vegetation, as it is today. Figure 9 and Figure 7, Sheet 2 of 7 illustrate the drainage plan near the residence and peninsula. As shown by these figures, the graded areas will slope and drain away from Big Lake into rain gardens which are designed to promote infiltration.

Figures 6 and 7 also illustrate the erosion control BMPs which are to be implemented during and after project construction. These include erosion control logs placed downslope of the driveway and around the foundation of the residence.

STAPP LAKES RANCH HOUSE LOCATION (PENINSULA)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGAL DESCRIPTION

BIG LAKE LLC PARCEL (BOULDER COUNTY ASSESSOR PARCEL NO. 132300000040);
LEGAL DESCRIPTION FOR SPECIAL PARTIAL DEED OF GIFT, NO. 24028224
 A PORTION OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 73 WEST OF THE 6TH P.M., BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION AND CONSIDERING THE EAST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION TO BEAR N00°12'42"W WITH ALL BEARINGS HEREIN RELATIVE THERETO; THENCE N00°12'42"W ALONG SAID EAST LINE 717.72' TO THE TRUE POINT OF BEGINNING; THENCE DEPARTING SAID EAST LINE S89°56'45"W 438.09'; THENCE S62°28'38"W 54.20'; THENCE S89°56'45"W 2140.24' TO THE WEST LINE OF SAID SOUTHEAST 1/4; THENCE ALONG THE SAID WEST LINE N00°35'53"E 641.03' TO THE CENTER-SOUTH 1/16TH OF SAID SECTION; THENCE S89°39'12"E ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 2617.54' TO THE SOUTH 1/16TH OF SAID SECTION; THENCE S00°12'42"E 597.89' TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 37.77 ACRES, MORE OR LESS, AND IS SUBJECT TO ALL EASEMENTS AND RIGHT OF WAYS OF RECORD.

SURVEYOR'S/ENGINEER'S NOTES:

- THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
- THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00 FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS 9000.00' BENCHMARK. A MORE REALISTIC ELEVATION FOR THIS PARCEL IS AROUND 9500' BASED ON GOOGLE EARTH.
- THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
- THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO.
- AT THE TIME OF THE ORIGINAL SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
- NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
- NO EXTERNAL PARCEL LINES OR ASSOCIATED SETBACKS ARE SHOWN HEREON.
- SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
- NO UTILITIES TO CABINS ARE SHOWN ON THIS ROAD DESIGN.
- THE PURPOSE OF THIS PLAN/DESIGN IS TO DEPICT THE EXISTING FOREST MAINTENANCE ROAD ON THE SUBJECT PROPERTY AS COMPARED TO A DESIGNED OR PROPOSED ROAD GENERALLY FOLLOWING THE SAME ALIGNMENT BUT BEING GEOMETRICALLY CORRECT IN WIDTH WITH RADIAL/CIRCULAR CURVES. THE PROPOSED ROAD IS NOT IN THE HISTORIC SAME ALIGNMENT FROM 114+50 TO 134+50.
- EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
- PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
- PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13'6" (13'-6") THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
- THIS DESIGN PROFILE BASICALLY FOLLOWS THE VERTICAL PROFILE OF THE EXISTING FOREST MAINTENANCE ROAD, BOTH ARE SHOWN HEREON.
- ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).
- SEE GEOLOGIC REPORT PREPARED BY AMERICAN GEOSERVICES FOR SLOPE STABILITY ANALYSIS.

LEGEND

- ⊙ SEWER CLEAN OUT
- ⊕ WELL
- △ CONTROL POINT
- W PROPOSED WELL WATER LINE
- S PROPOSED SEPTIC LINE
- 9000- EX. MAJOR CONTOUR (5')
- 9001- EX. MINOR CONTOUR (1')
- 9005- PROP. MAJOR CONTOUR (5')
- 9006- PROP. MINOR CONTOUR (1')
- ⊙ TREE (DIAM. AS NOTED)
- ⊕ ROCK OUTCROPPING/BOULDER
- PROPOSED FLOW DIRECTIONS
- INTENDED CROSS-SLOPE DIRECTION
- PROPOSED EROSION LOG

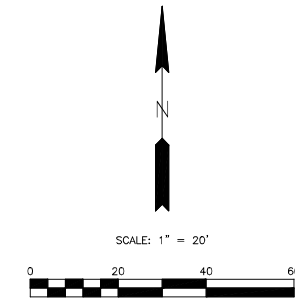
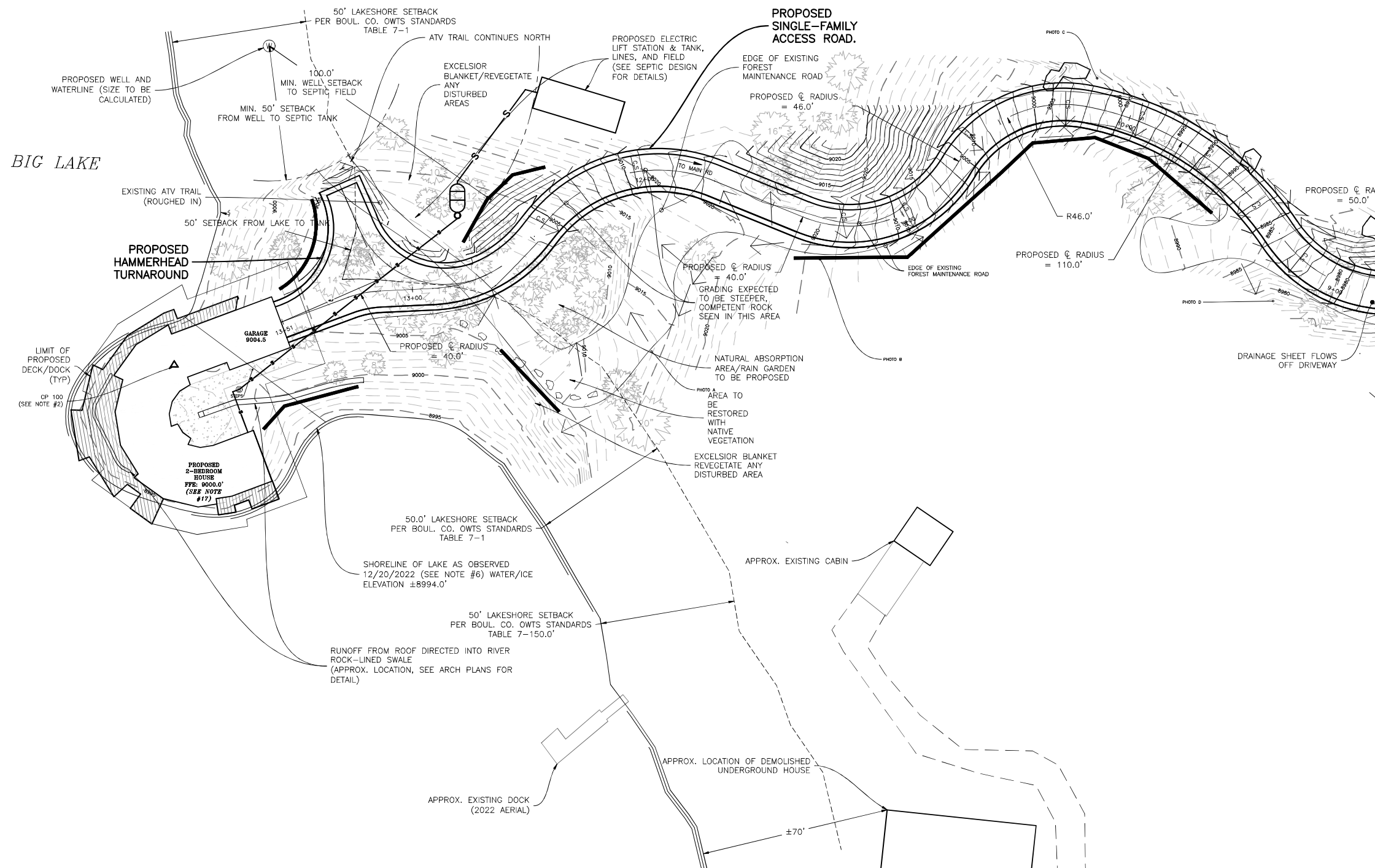
FIGURE 7, SHEET 1 OF 7
CIVIL DESIGN
 Big Lake Residence

DATE	
REVISION	
BY	
VAN HORN ENGINEERING AND SURVEYING 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517 PHONE: (970) 586-9388 • FAX: (970) 586-8101	
SHEET	FOREST MAINT. RD. DESIGN (WEST END)
PROJECT	BIG LAKE RESIDENCE
	3310 CR 96J, UNINC. BOULDER COUNTY
DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE	1"=10'
DATE:	12/17/2024
SHEET	C1
OF	7
PROJ. NO.	2012-06-18

STAPP LAKES RANCH DRIVEWAY DESIGN (WEST END)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊕	WELL
△	CONTROL POINT
W	PROPOSED WELL WATER LINE
S	PROPOSED SEPTIC LINE
9000	EX. MAJOR CONTOUR (5')
9001	EX. MINOR CONTOUR (1')
9005	PROP. MAJOR CONTOUR (5')
9006	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⊕	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
→	INTENDED CROSS-SLOPE DIRECTION
—	PROPOSED EROSION LOG

SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK 9000.00' BENCHMARK. A MORE REALISTIC ELEVATION FOR THIS PARCEL IS 9500' BASED ON GOOGLE EARTH.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

**FIGURE 7, SHEET 2 OF 7
CIVIL DESIGN
Big Lake Residence**

BT	
REVISION	
DATE	

VAN HORN ENGINEERING AND SURVEYING
1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
PHONE: (970) 566-9388 • FAX: (970) 566-8101

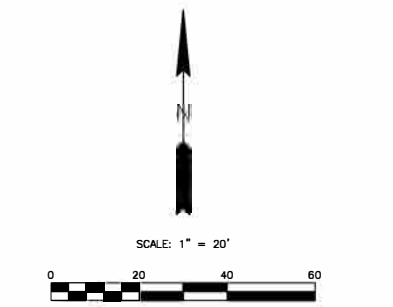
FOREST MAINT. RD. DESIGN (WEST END)
BIG LAKE RESIDENCE
3310 CR 96J, UNINC. BOULDER COUNTY

SHEET	C2
OF	7
PROJ. NO.	2012-06-18

STAPP LAKES RANCH DRIVEWAY DESIGN (MIDDLE SEGMENT)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊕	WELL
△	CONTROL POINT
W	PROPOSED WELL WATER LINE
S	PROPOSED SEPTIC LINE
9000	EX. MAJOR CONTOUR (5')
9001	EX. MINOR CONTOUR (1')
9005	PROP. MAJOR CONTOUR (5')
9006	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⬢	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
↘	INTENDED CROSS-SLOPE DIRECTION
—	PROPOSED EROSION LOG

SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAN.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

**FIGURE 7, SHEET 3 OF 7
CIVIL DESIGN
Big Lake Residence**

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD., ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

SHEET
FOREST MAINT. RD. DESIGN (MIDDLE)
 PROJECT
BIG LAKE RESIDENCE
3310 CR 96J, UNINC. BOULDER COUNTY

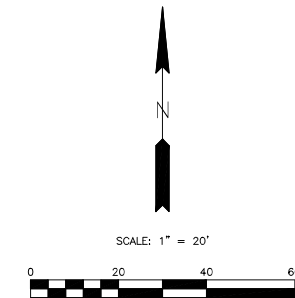
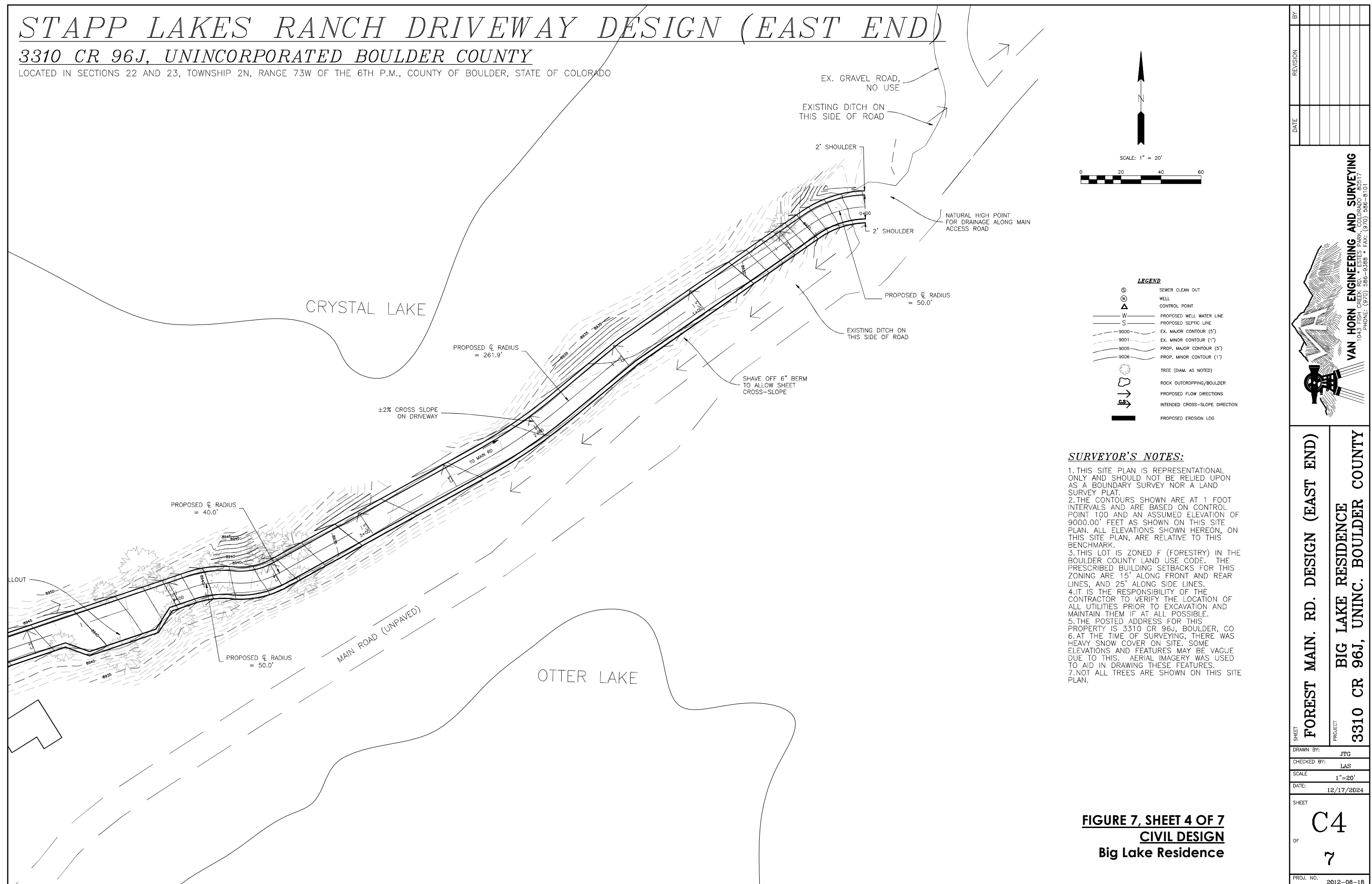
DRAWN BY: JTG
 CHECKED BY: LAS
 SCALE: 1"=20'
 DATE: 12/17/2024

SHEET
C3
 OF
7
 PROJ. NO. 2012-06-18

STAPP LAKES RANCH DRIVEWAY DESIGN (EAST END)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGEND

⊙	SEWER CLEAN OUT
⊕	WELL
△	CONTROL POINT
—W—	PROPOSED WELL WATER LINE
—S—	PROPOSED SEPTIC LINE
—9000—	EX. MAJOR CONTOUR (5')
—9001—	EX. MINOR CONTOUR (1')
—9005—	PROP. MAJOR CONTOUR (5')
—9006—	PROP. MINOR CONTOUR (1')
⊙	TREE (DIAM. AS NOTED)
⬢	ROCK OUTCROPPING/BOULDER
→	PROPOSED FLOW DIRECTIONS
↔	INTENDED CROSS-SLOPE DIRECTION
▬	PROPOSED EROSION LOG

SURVEYOR'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAN.
2. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
3. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
5. THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
6. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES.
7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.

**FIGURE 7, SHEET 4 OF 7
CIVIL DESIGN
Big Lake Residence**

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
 PHONE: (970) 586-9388 • FAX: (970) 586-8101

FOREST MAIN. RD. DESIGN (EAST END)
BIG LAKE RESIDENCE
3310 CR 96J, UNINC. BOULDER COUNTY

SHEET	PROJECT
DRAWN BY: JTG	3310 CR 96J, UNINC. BOULDER COUNTY
CHECKED BY: LAS	
SCALE: 1"=20'	
DATE: 12/17/2024	
SHEET	
OF	
PROJ. NO. 2012-06-18	

C4
7

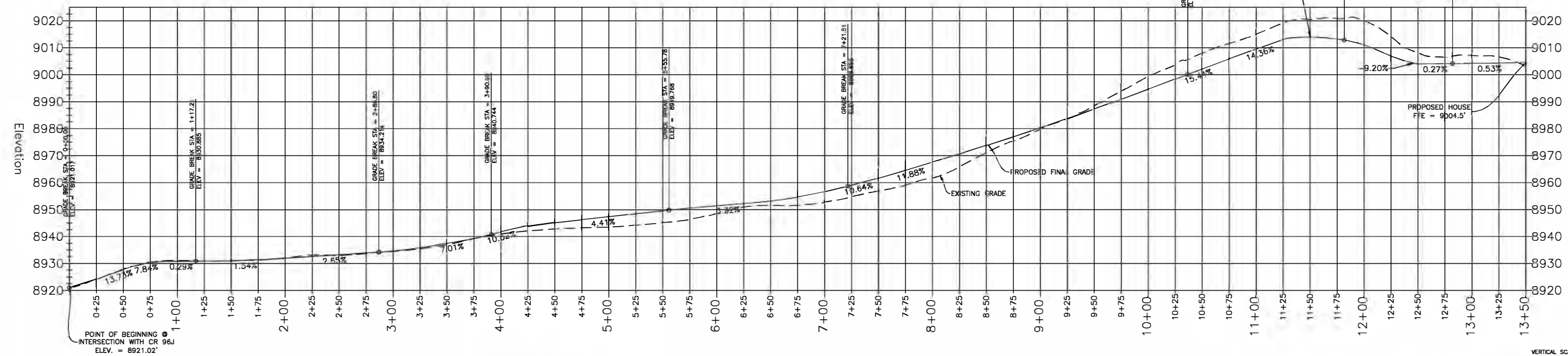
BIG LAKE RESIDENCE ROAD PROFILE AND CROSS SECTIONS

3310 CR 96J, UNINCORPORATED BOULDER COUNTY, COLORADO

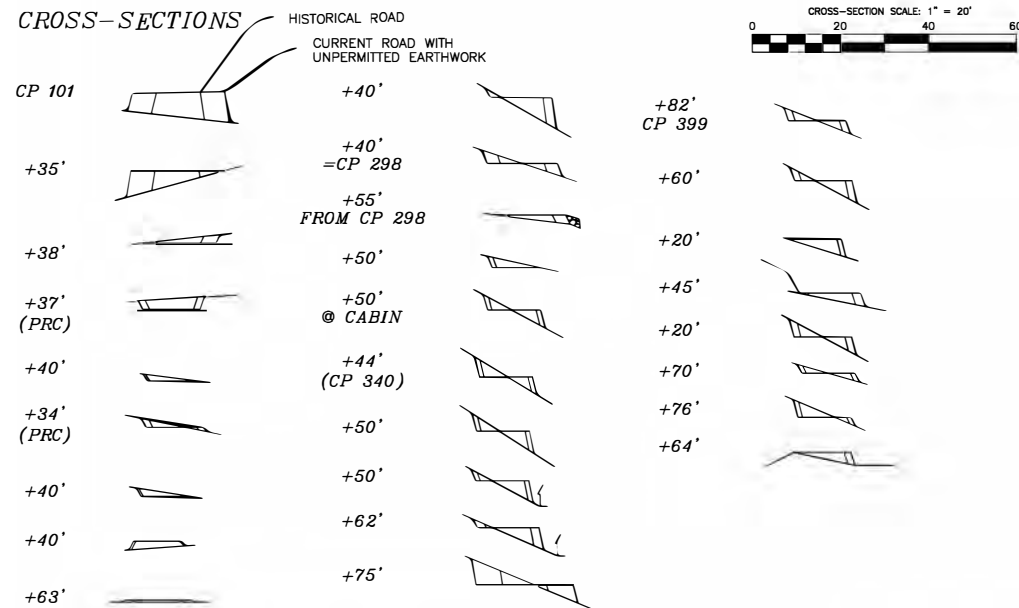
LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

FIGURE 7, SHEET 5 OF 7
CIVIL DESIGN
Big Lake Residence

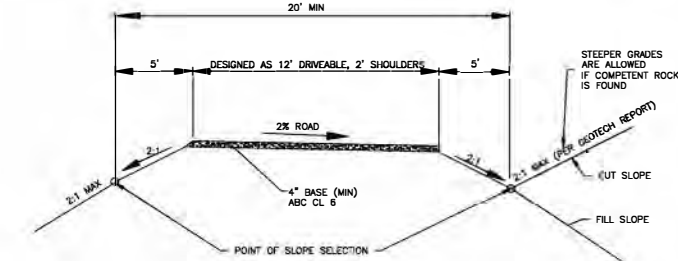
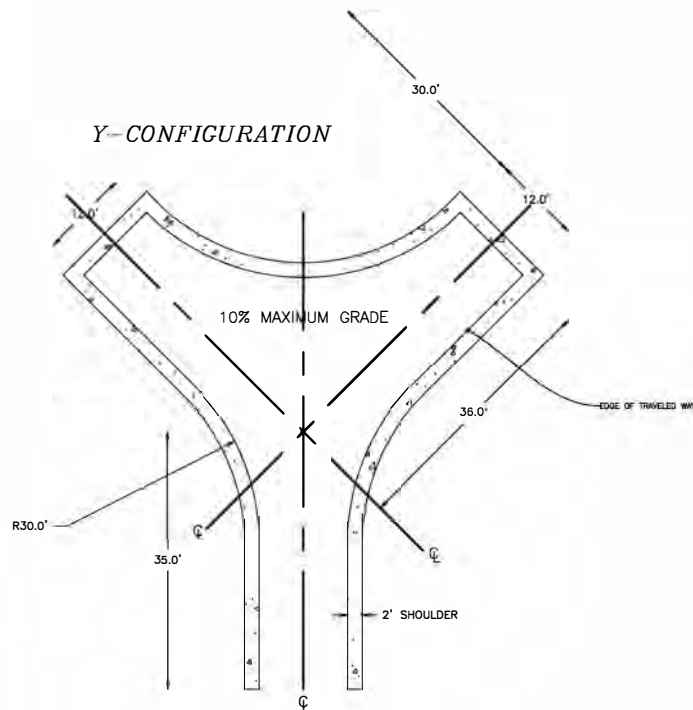
Existing & Proposed Profiles



CROSS-SECTIONS

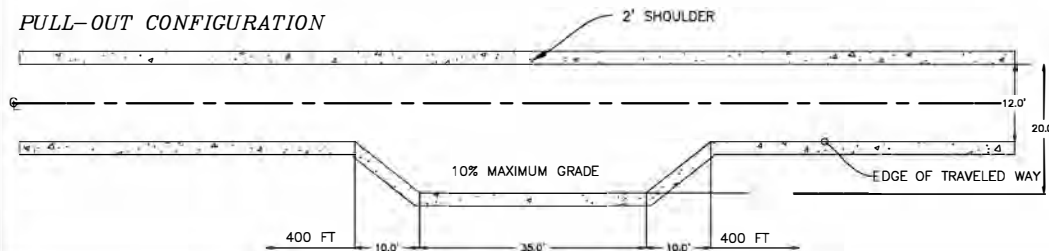


Y-CONFIGURATION



ONE-LANE PRIVATE ACCESS SECTION
PER STANDARD DRAWING 11, BOUL. CO.
MULTIMODAL DESIGN STANDARDS

PULL-OUT CONFIGURATION



SURVEYOR'S NOTES:

1. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
3. THE PROPOSED DRIVEWAY WILL SERVE THE NEWLY CREATED PARCEL (BOULDER COUNTY PARCEL NO. 132300000040) WITH THE ASSIGNED ADDRESS 3310 CR96J, WARD, CO 80481.
4. PER BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES" DOCUMENT, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
5. PER BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES", THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
6. DIMENSIONS SHOWN FOR THE PULL-OUT AND HAMMERHEAD TURNAROUND WERE OBTAINED FROM BOULDER COUNTY'S "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES" DOCUMENT.
7. A DESIGN WAIVER IS BEING REQUESTED TO ALLOW GRADES EXCEEDING 6% THROUGH CURVES, AS REQUIRED BY THE BOULDER COUNTY "DRIVEWAY ACCESS FOR EMERGENCY VEHICLES."

DATE	REVISION	BY

VAN HORN ENGINEERING AND SURVEYING
1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517
PHONE: (970) 586-9388 • FAX: (970) 586-8101

CHRISTY AND JAY ORRIS/BIG LAKE LLC
PROJECT
BIG LAKE RESIDENCE
3310 CR 96J, BOULDER COUNTY

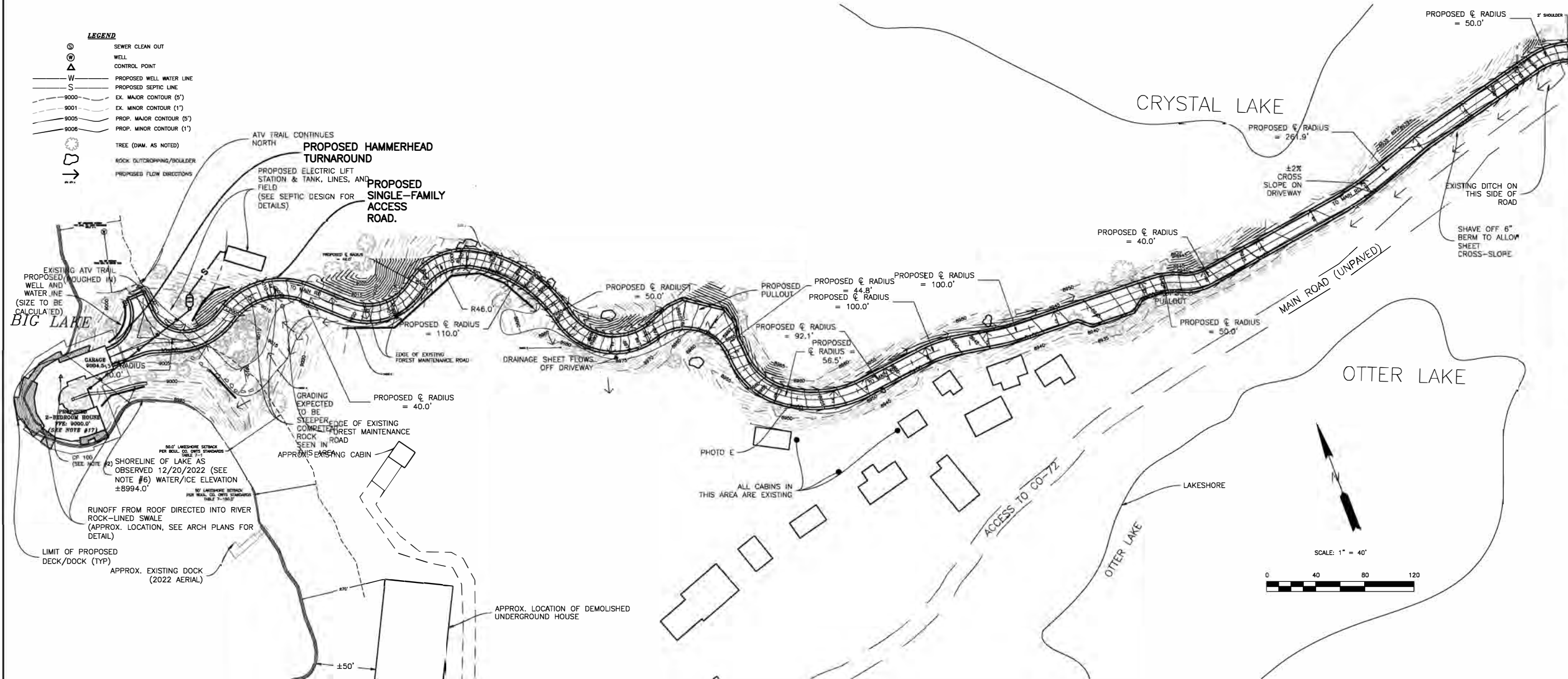
SHEET	7
CHECKED BY:	JTG
SCALE	AS NOTED
DATE:	12/17/2024
SHEET	C5
OF	7
PROJ. NO.	2012-06-18

BIG LAKE RESIDENCE ROAD PLAN OVERVIEW NOTES

UNINCORPORATED BOULDER COUNTY, STATE OF COLORADO

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO

FIGURE 7, SHEET 6 OF 7
CIVIL DESIGN
Big Lake Residence



SURVEYOR'S/ENGINEER'S NOTES:

1. THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE INTENT OF THIS WORKSHEET IS TO ACCOMPANY SUBMITTED DRAINAGE/EARTHWORK REPORTS. ADDITIONAL DETAIL TO FOLLOW ON FINAL DRIVEWAY DESIGN SHEET #5
3. THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
4. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
6. THE NEWLY CREATED PARCEL WHERE THE BIG LAKE RESIDENCE IS TO BE CONSTRUCTED HAS AN ASSIGNED ADDRESS OF 3310 CR 96J, WARD, CO 80481.
7. AT THE TIME OF SURVEYING, THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
8. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
9. THE PROPERTY LINES FOR THE NEWLY CREATED BIG LAKE LLC PARCEL ARE NOT SHOWN HEREON. SAID PARCEL HAS A BOULDER COUNTY RECEPTION NO. OF 132300000040.
10. SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
11. EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
12. THE SHOWN LOCATIONS FOR THE PROPOSED CROSS-CULVERTS AND STILLING BASINS HEREON WERE OBTAINED FROM HANDWRITTEN NOTES. THE LOCATIONS WILL BE FINALIZED DURING CONSTRUCTION TO "BEST-FIT" THE NEEDED LOCATIONS FOR THIS DESIGN, 18" CORRUGATED STEEL CULVERTS, 20' LONG ARE SHOWN (SPECIFIC SIZE/LENGTH TO BE DETERMINED AT A LATER DATE BEFORE CONSTRUCTION). CULVERTS ARE TO COMPLY WITH AASHTO STANDARD M 36.
13. THE DISTURBED AREA WAS MEASURED TO BE ±0.75 ACRES. ALL DISTURBED AREA IS TO BE SEEDED/MULCHED/FABRIC COVERED.
14. ON SITE EROSION CONTROL TO BE PROVIDED AT THE DIRECTION OF THE ENGINEER
15. STRAW BALES OR EROSION LOGS ARE TO BE USED FOR ON SITE EROSION CONTROL AT THE DIRECTION OF THE ENGINEER.
16. PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
17. PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
18. THIS DESIGN PROFILE BASICALLY FOLLOWS THE VERTICAL PROFILE OF THE EXISTING FOREST MAINTENANCE ROAD, BOTH ARE SHOWN ON PAGE 5 OF THIS PLANSET.
19. ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).

BY	REVISION	DATE

VAN HORN ENGINEERING AND SURVEYING
1043 FISH CREEK RD., ESTES PARK, COLORADO 80517
PHONE: (970) 586-9395 • FAX: (970) 586-8101

ROAD PLAN OVERVIEW NOTES
BIG LAKE RESIDENCE
3310 CR 96J, BOULDER COUNTY

SHEET: **C6**
OF: **7**

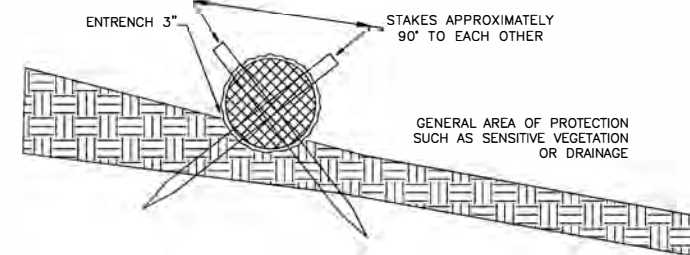
PROJECT: **BIG LAKE RESIDENCE**
DRAWN BY: **JTG**
CHECKED BY: **LAS**
SCALE: **1"=40'**
DATE: **12/17/2024**

PROJ. NO. **2012-06-18**

BIG LAKE RESIDENCE EROSION PLAN

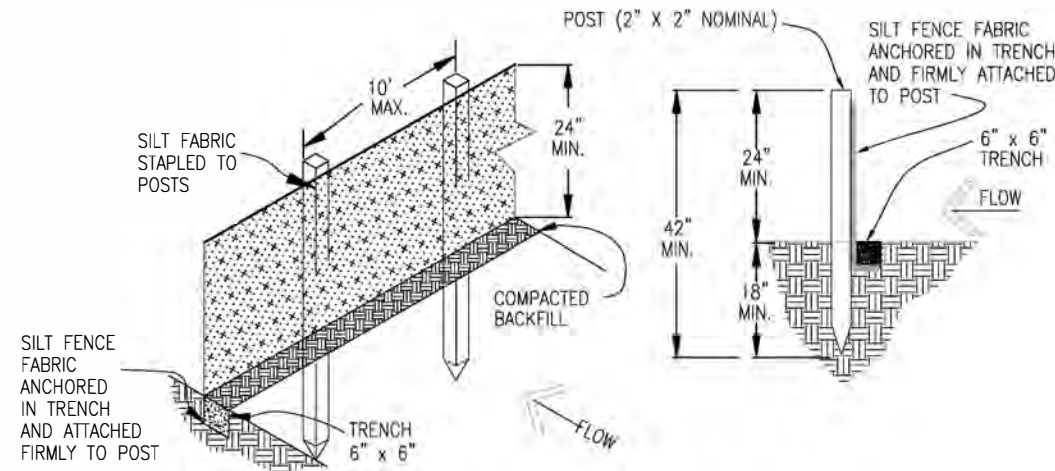
UNINCORPORATED BOULDER COUNTY, STATE OF COLORADO

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



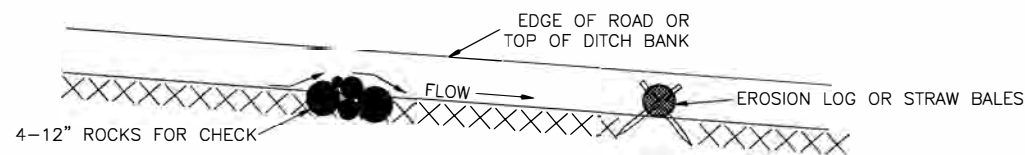
**EROSION LOGS
TYPICAL STAKING PATTERN**

NTS



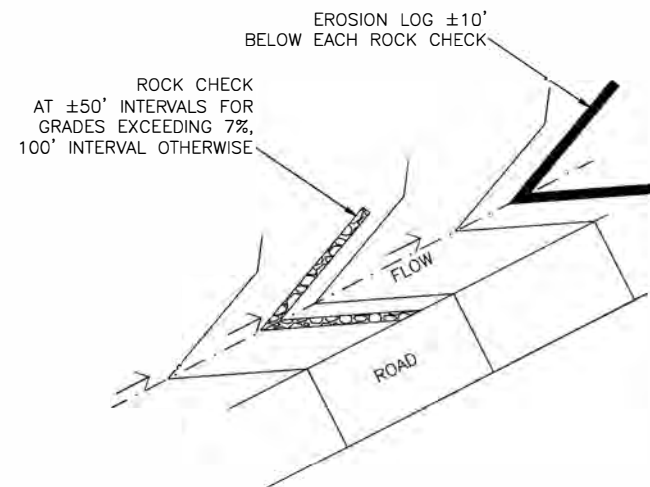
SILT FENCE

NTS



ROCK CHECK STRUCTURE—PROFILE VIEW

NTS



ROCK CHECK STRUCTURE—PLAN VIEW

NTS

EROSION CONTROL NOTES

1. THIS DRIVEWAY DESIGN IS REPRESENTATIONAL ONLY AND IS NOT TO BE CONSTRUED AS A LAND SURVEY PLAT NOR AN IMPROVEMENT SURVEY PLAT.
2. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
3. ALL REQUIRED IMPROVEMENTS SHALL BE COMPLETED OR GUARANTEED IN ACCORDANCE WITH BOULDER COUNTY LAND USE CODE SECTION 9-903 AND BOULDER COUNTY STORM DRAINAGE CRITERIA MANUAL.
4. PROPOSED DRIVEWAY IS TO BE SURFACED WITH A MINIMUM 4" ABC CLASS 5 ROAD BASE.
5. TRASH DUMPSTERS SHALL BE SECURED AGAINST BEARS AND OTHER ANIMALS. TRASH DUMPSTERS DURING AND AFTER CONSTRUCTION ARE TO HAVE A METAL LID TO PREVENT TRASH FROM ENTERING THE BIG LAKE AND OTHER LOCAL WATERWAYS.
6. UTILITIES ARE SCHEMATIC. THE ACTUAL LOCATIONS WILL BE FIELD FIT AT THE TIME OF INSTALLATION.
7. LIMITS OF DISTURBANCE SHALL BE DESIGNATED IN THE FIELD PRIOR TO COMMENCEMENT OF EXCAVATION, GRADING, OR CONSTRUCTION WITH CONSTRUCTION BARRIER FENCING OR SOME OTHER METHOD APPROVED BY STAFF.
8. ALL AREAS DISTURBED SINCE 2020 ARE TO BE REVEGETATED USING EXCELSIOR BLANKETS.
9. SLOPES ARE NOT TO EXCEED 1.5:1 AT PULLOUTS AND THE HAMMERHEAD TURNAROUND, AS STATED IN 5.3.2.2 OF THE BOULDER COUNTY MULTIMODAL TRANSPORTATION STANDARDS.
10. THE TOP OF ALL CUT SLOPES ARE TO BE ROUNDED WITH A MINIMUM 10' RADIUS WHERE THE MATERIAL IS NOT SOLID ROCK. WHEN NOT SOLID ROCK, THE SLOPE IS TO BE REVEGETATED.
11. SILT FENCING AND STRAW BALES TO BE PLACED PRIOR TO ANY DEMOLITION, GRADING OR CONSTRUCTION. EROSION CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCING.
12. NO FUELS OR CHEMICALS SHALL BE STORED NEAR PROPOSED CONSTRUCTION AREAS.
13. EROSION CONTROL MEASURES WILL BE INSPECTED WEEKLY DURING CONSTRUCTION AND MAINTAINED IN WORKING ORDER.
14. ALL DISTURBED AREAS TO BE TOPSOILED AND SEEDED. SEED WILL BE DRILLED OR RAKED TO INSURE 1/4" TO 1/2" COVER.
15. ALL SLOPES STEEPER THAN 4:1 SHALL BE RESEEDED WITH GRASS MIXES WITH DEEP ROOTING CHARACTERISTICS.
16. AFTER SEEDING ENTIRE DISTURBED SITE WILL BE MULCHED USING CLEAN HAY AT A RATE OF 1.5 TONS/ACRE. SLOPES STEEPER THAN 2:1 SHALL BE BLANKETED WITH BIODEGRADABLE EXCELSIOR BLANKET EROSION CONTROL FABRIC WITH A MINIMUM WEIGHT OF 1#/sq.yd. INSTALLED PER MANUFACTURES SPECIFICATIONS.
17. ADDITIONAL SEEDING MAY BE NECESSARY IN THE FOLLOWING YEARS TO ENSURE ADEQUATE VEGETATIVE COVER TO STABILIZE SOILS. SILT FENCING OR EROSION LOGS SHALL REMAIN IN PLACE AND REGULARLY MAINTAINED UNTIL SOILS ARE STABILIZED WITH ESTABLISHED VEGETATION.
18. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF EROSION CONTROL.

SURVEYOR'S/ENGINEER'S NOTES:

1. THIS DRIVEWAY DESIGN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAT.
2. THE INTENT OF THIS WORKSHEET IS TO ACCOMPANY SUBMITTED DRAINAGE/EARTHWORK REPORTS.
3. THE CONTOURS SHOWN IN THIS PLANSET ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00' FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS BENCHMARK.
4. THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PRESCRIBED BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
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7. NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
8. THE PROPERTY LINES FOR THE NEWLY CREATED BIG LAKE LLC PARCEL ARE NOT SHOWN HEREON. SAID PARCEL HAS A BOULDER COUNTY RECEPTION NO. OF 132300000040.
9. SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
10. EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
11. THE DISTURBED AREA WAS MEASURED TO BE ±0.7 ACRES. ALL DISTURBED AREA IS TO BE SEEDED/MULCHED/FABRIC COVERED.
12. ON SITE EROSION CONTROL TO BE PROVIDED AT THE DIRECTION OF THE ENGINEER.
13. STRAW BALES OR EROSION LOGS ARE TO BE USED FOR ON SITE EROSION CONTROL AT THE DIRECTION OF THE ENGINEER.
14. PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
15. PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
16. ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).







**FIGURE 7, SHEET 7 OF 7
CIVIL DESIGN
Big Lake Residence**

BY:	
REVISION:	
DATE:	
<p>VAN HORN ENGINEERING AND SURVEYING 1043 FISH CREEK RD. • ESTES PARK, COLORADO 80517 PHONE: (970) 586-9388 • FAX: (970) 586-8101</p>	
<p>EROSION CONTROL PLAN BIG LAKE RESIDENCE 3310 CR96J, BOULDER COUNTY</p>	
SHEET:	
PROJECT:	
DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE:	NO SCALE
DATE:	12/05/2024
SHEET:	C7
OF:	7
PROJ. NO.:	2012-06-18



FIGURE 8.
AERIAL WITH PROPOSED PLAN
 Big Lake Residence

LEGEND:

-  Direction of Flow
-  Proposed Driveway, House, & Utilities
-  Proposed Contours
-  Existing Access Route
-  Estimated Breakline
-  Shoreline Surveyed 12/20/22



Date: December 2024
 Contour Interval = 2 ft
 Scale: 1 in = 115 ft

Survey & Road Design by Van
 Horn Engineering & Surveying
 of Estes Park, CO.

Architectural design by
 Barrett Studio Architects
 of Boulder, CO.

prepared by:






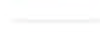


Birch Ecology LLC

710 Tenacity Drive
 Suite 101
 Longmont, Colorado 80504
 (720) 350-2530
 www.birchecology.com

FIGURE 9.
WEST AERIAL WITH PROPOSED PLAN
Big Lake Residence



LEGEND:

-  Direction of Flow
-  Proposed Driveway, House, & Utilities
-  Proposed Contours
-  Existing Access Route
-  Estimated Breakline
-  Shoreline Surveyed 12/20/22



Date: December 2024
Contour Interval = 2 ft
Scale: 1 in = 60 ft

Survey & Road Design by Van
Horn Engineering & Surveying
of Estes Park, CO.

Architectural design by
Barrett Studio Architects
of Boulder, CO.

prepared by:







Birch Ecology LLC
710 Tenacity Drive
Suite 101
Longmont, Colorado 80504
(720) 350-2530
www.birchecology.com



FIGURE 10.
EAST AERIAL WITH PROPOSED PLAN
 Big Lake Residence

LEGEND:

-  Direction of Flow
-  Proposed Driveway, House, & Utilities
-  Proposed Contours
-  Existing Access Route



Date: December 2024
 Contour Interval = 2 ft
 Scale: 1 in = 60 ft

Survey & Road Design by Van
 Horn Engineering & Surveying
 of Estes Park, CO.

Architectural design by
 Barrett Studio Architects
 of Boulder, CO.

prepared by:



Birch Ecology LLC
 710 Tenacity Drive
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 Longmont, Colorado 80504
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2.3 Construction Site Management

The construction team will follow strict protocols to limit the potential for trash and debris to degrade the habitat quality surrounding the proposed home. The General Contractor and subcontractors will be vetted and hired with environmental sensitivity in mind.

Construction Site Best Management Practices to limit the potential ecological impacts will include the following:

- **Rock check dams, erosion control logs, and silt fences** will mitigate and contain erosion along the road.
- **Double layer erosion control** would be placed along the foundation excavation.
- **Construction fence** will surround the entire periphery of the construction site. This fence will be made of weather-resistant materials with a screen to contain any wind-blown trash.
- **Enclosed portable storage containers** will be used to protect building materials delivered to the site from wind and keep packaging from being dislodged.
- The **garage space will be enclosed** as soon as practicable to provide a protected indoor work area.
- **Construction dumpsters will be equipped with metal lids** which will be secured each night to prevent trash from blowing away.
- A **designated, contained washout area** will be provided for all contractors. Rinsate will be collected in enclosed drums which will be collected by a waste disposal service and properly disposed of offsite. The storage area will be lined to prevent contamination from seepage, in the event of a spill.
- The construction supervisor will conduct **daily site inspections** to ensure compliance with Best Management Practices.
- **Daily cleanup** will be a requirement for all contractors.

2.4 Alternatives Analysis

2.4.1 Alternate Driveway Access Location

The comment letter proposes that an old driveway along the south side of the lake could have been used rather than the existing route that has been partially graded. Figure 11 illustrates the potential alternative route on an aerial photo base, along with the proximity to the lake shoreline, buried house, and existing cabins. The historic aerial photo below shows the outline of the buried house and the old access route along the lakeshore.



As shown by Figure 11, the alternative route would begin near the existing maintenance building, then traverse up a steep hill. This hill presents a design challenge which was acknowledged in Mr. West's letter. At the top of the slope, a 40-foot-radius turn is required, then the route continues around parallel to the lake edge, continuing east and then north to connect to existing road grading near the peninsula.

The south access alternative would traverse along the shoreline for more than 800 feet. As shown by the photo at left and on Figure 11, the road could not be feasibly pulled further from the lakeshore due to the proximity of the collapsed






underground house. Disturbing this structure could risk contamination from unknown building materials that could be excavated during road construction. Routing over the top of the buried house presents additional challenges and is not a feasible option. North of the underground house, an existing cabin prevents the road from being routed farther uphill and away from Big Lake (Figure 11). The steep slope near this cabin would necessitate additional grading to bench in the road.

When comparing access alternatives between the southern route and the partially constructed route proposed by the design team, it is our assessment that the least environmentally impactful alternative is to use the partially constructed driveway.



FIGURE 11.
ALTERNATIVES ANALYSIS: DRIVEWAY ACCESS
 Big Lake Residence

LEGEND:

-  South Access Alternative
-  Proposed Driveway, House, & Utilities
-  Estimated Breakline
-  Existing Access Route
-  Shoreline Surveyed 12/20/22



Date: December 2024
 Contour Interval = 2 ft
 Scale: 1 in = 100 ft

Survey & Road Design by Van
 Horn Engineering & Surveying
 of Estes Park, CO.

Architectural design by
 Barrett Studio Architects
 of Boulder, CO.

prepared by:



Birch Ecology LLC

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2.5 Summary Points

Field reconnaissance has revealed site- and project-specific characteristics that make the proposed Big Lake Residence less impactful than may be apparent through a desktop review.

2.5.1 Environmental Characteristics that Reduce Impact

- The glacial till that comprises the peninsula is resistant to erosion.
- The steep and rocky shoreline of the peninsula lacks wetland development.
- Limited impacts to use the existing access route that is already partially improved. Most of this route was already in existence prior to the grading work completed for this project.
- This site is not pristine and has been used in the past as a guest ranch. Since the Orris family acquired the property, visitation has been and continues to be much reduced from its peak use as a guest ranch.
- The Orris Family has no intention of further subdividing or developing the Big Lake property. They have a primary interest in retaining the natural character and beauty.
- The proposed residence will be off-grid.

2.5.2 Mitigation Measures

- Use of powder-coated galvanized steel deck and dock framing and untreated Ipe E 84 Ignition Resistant Wood Deck and Dock Decking. These materials are specially designed for use in docks and were selected because they do not present a water quality risk from chemical leaching.
- Limited increase in stormwater runoff due to the small area of impervious surfaces and the use of a road base driveway instead of asphalt.
- Stormwater will be routed to swales and rain gardens that will promote infiltration. No culverts will be used and there will be no direct discharge of runoff to Big Lake or any of the other water bodies onsite.
- The residence will use dark-sky lighting.
- Construction site BMPs with daily inspections and daily site cleanup.
- Disturbances will be restored with native vegetation.
- Primarily seasonal use due to limited winter access.
- Compliance with required setbacks and percolation testing for the septic system.

3.0 COMMENT RESPONSES

3.1 Landscape-Level Geology

Mr. West's letter notes that the geological context is a region covered by Pleistocene recessional/terminal moraines.

Big Lake is a moraine-dammed lake, and a recessional moraine forms the peninsula where the residence is proposed to be built (Figure 4). In this case, the geology facilitates project construction on the peninsula because it dramatically rises out of Big Lake forming the vertical separation between the lake and building site (Photo 3). The coarse, rocky shoreline lacks wetland development and is resistant to erosion.

As noted in the letter, this is one of the only private, developable lots in this area. The other moraines and kettle lakes located in the surrounding area will not be affected by the project and they are protected from future development. These surrounding moraines and lakes are common on the surrounding landscape, and the impact from the single proposed residence upon the overall geologic context is minimal.

3.2 Landscape-Level Ecology

The comment letter notes the relationship of the project site within its ecological context by pointing out surrounding High Biodiversity Areas and Critical Wildlife Habitats as well as showing that the site is within a Significant Natural Community—an Engelmann spruce/subalpine fir forest.

3.2.1 High Biodiversity Areas

The comment letter states the site is bracketed by High Biodiversity Areas. The small disturbance associated with the construction of one single family residence on Big Lake should have no measurable effect on these High Biodiversity Areas which are more than a mile away. The nearest high biodiversity area is Middle Saint Vrain Creek at Peaceful Valley which is just over one mile to the northeast of the peninsula. Tumblesom Lake is approximately 1.5 miles southeast of the peninsula. The area designated around Mount Audubon is 2.25 miles to the southwest. It should be noted that all three of these areas see high levels of recreational use. Big Lake does not drain into any of these High Biodiversity Areas.

3.2.2 Critical Wildlife Habitat

The letter discusses potential impacts to lake chub (*Couesius plumbeus*) as well as river otter (*Lontra canadensis*).

The lake chub is an "S1" species that was thought to be extirpated in Boulder County until 1989 when it was re-discovered in Barker Reservoir. Since then, Beaver Reservoir was designated as a Critical Wildlife Habitat due to the potential presence of Lake Chub. The US Forest Service specifies the primary threats to lake chub are "habitat alteration, declining water quality and quantity, and the introduction of non-native fishes." (2006). Specifically, trout and other large predatory fishes are known to be particularly harmful to lake chub:

*"The presence of non-native species can also negatively affect lake chubs and other native fishes through the combined pressures of predation, competition, potential for addition of new parasites and disease, and altering behavioral components of the native fish assemblage. Introduction of large predatory fish species such as largemouth bass (*Micropterus salmoides*), rock bass (*Ambloplites rupestris*), northern pike (*Esox lucius*), or trout (*Oncorhynchus* or *Salvelinus*) could have an especially significant impact on lake chub populations" (USFS, 2006).*

While only six known populations exist within Colorado, lake chub are prevalent in Canada and some northern states. Colorado marks the southern extent of lake chub.

It should be noted that Beaver Reservoir is impacted by highly variable water levels with a large seasonal drawdown, as well as numerous buildings, boats, fishing, a road, and land disturbance along a significant area of the shoreline (Photos 14 -16), yet it has been known to support lake chub. Considering the nature of the proposed activities and volume of water + physical separation of these water bodies, it is highly unlikely that the construction of one residence at Big Lake would have any impact on the lake chub at Beaver Reservoir.

Lake chub are not known to occur on the Stapp Lakes property. Non-native fish were introduced to Big Lake many years ago and would have already preyed upon any previously existing population, if they were ever present here. At least two prior owners, dating back to the Stapp family in 1899, stocked trout in Big Lake. A 2001 fish inventory conducted at the site identified Brook Trout, Longnose Sucker, Lake Trout, and Longnose Dace as the most abundant species. Currently, several trout species inhabit Big Lake.

The other species of concern mentioned is the river otter which is found at Beaver Reservoir. River otters have been increasing in Colorado following re-introductions conducted between 1976-1991. These reintroductions have been very successful, and otters are now found in nearly every major river basin in Colorado. Their status has been downlisted by the State from Endangered to Threatened (and they do not have a federally protected status).

Our personal sightings of river otters have been in the Eagle River adjacent to active river construction projects, and in the years thereafter near the Eagle River Park, just off I-70. These heavily used areas are known to support healthy otter populations.

The proposed residence and driveway will not impact wetlands or riparian habitats, and the project is limited in scope across a large tract of land. The project has been designed to protect the water quality of Big Lake with careful selection of building materials and the stormwater management plan that diverts water away from the lake. The proposed single-family residence and driveway should not impact the continued existence and spread of river otters in the area.

3.2.3 Significant Natural Community

The project site is mapped as a Significant Natural Community, and the comment letter notes this is due to the presence of an old-growth Engelmann spruce/subalpine fir forest. As noted in the letter, this plant community is locally abundant. The location on the peninsula is not in the heart of the forested area, which occurs on the higher topography of the moraine. The trees in this location have a smaller stature on the rocky, mounded soil of the peninsula, and

include primarily subalpine fir trees with some Engelmann spruce, limber pine, lodgepole pine and a few small aspens, as described in more detail in Section 2.1.3 (Photo 8). One ponderosa pine (*Pinus ponderosa*) was also found on the peninsula.



To access the peninsula, the road followed sections of an old alignment for at least half of its length (Photo 16). Although it did require some additional grading and loss of trees, it allowed sections of an existing road to be connected up to provide a more direct route to the peninsula at a safer grade for access. Changing this route would require additional tree removal.

3.2.4 Elevation

The letter expresses the opinion of Boulder County staff that “developments at this elevation should be discouraged.” This is a high elevation area, however the land use code does not prohibit private development at this elevation; the nearby town of Ward is located at 9,450 feet, a similar elevation to the site which sits at 9,480 feet. The fact that this is one of the remaining private areas that could be developed means that the county’s goal of limiting development at high elevation will be achieved independent of what occurs on this property. When considering the property itself, only one single-family residence is proposed to be constructed on the 38-acre property, thereby preserving many acres of land through a large lot size.

3.3 Access & Already-Completed Impacts

The comment letter suggests that instead of the proposed driveway, there is another existing driveway that begins at the large maintenance building, crosses flat terrain near the lake, and continues past an existing cabin about 200 feet away from the proposed home site. The letter acknowledges that there are grade changes that make this route difficult, but suggests this alternative route was improved about 10 years ago.

While this alternative driveway access appears to be a reasonable alternative, it comes with some significant environmental drawbacks as discussed in Section 2.4. In addition to the steep grade needed to navigate from the maintenance building up to the moraine surrounding Big Lake, this route then parallels a section of the shoreline of Big Lake. This route has a higher potential to impact water quality and wetlands, which are more developed on this side of the lake. Additionally, the road could not be moved further from the water because the collapsed underground house is located along this area and it could subside further if driven over (Photo 13 and Figure 11). Even if the road was constructed closer to the shoreline, there is a chance that the buried house could be disturbed. This disturbance could open up further environmental concerns which could have the potential to enter Big Lake.

Our recommendation is to leave the collapsed underground house undisturbed and route the driveway along the proposed alignment.

The second access-related item is that the County has identified that 750 linear feet of road was constructed without permits on land that had not previously served as an access road. We concur that permits should have been obtained prior to this initial grading work. However, the route that exists today is the least environmentally damaging way to access the peninsula. It can be argued how much of this road previously existed, but even the comment letter states that at least half of the road follows an alignment that already existed. The initial grading work for the driveway diverges from the old forest road in two areas to decrease the slope to meet Boulder County standards. The grading work removed several trees but did not disturb wetlands or sensitive riparian habitats. Given that the initial road grading has been completed, the least ecologically damaging alternative is to utilize that route, rather than create an additional disturbance (Photo 17).

3.4 Cumulative Impacts

Boulder County staff is concerned about cumulative impacts from additional houses that could be constructed around the lake. They hope to limit development of this area by any further subdivision of the original Stapp Lakes Ranch.

The ± 38-acre Big Lake property was divided from the remaining 282-acre adjacent Stapp Lakes parcel based on guidance from the county. Based upon this approach, which follows the county's previous guidance, this report will consider the Big Lake LLC ± 38-acre property independently from the 282-acre Stapp Lakes parcel.

The proposed construction is for one single-family residence within the ± 38-acre parcel. The Orris family is seeking to construct a residence for their own private use. As expressed in the included letter from the Orrises, they wish to maintain the character and beauty of the land. Additional residences along Big Lake would be inconsistent with their long-term vision for the land.

3.5 Habitat Fragmentation

The comment letter states that Boulder County staff believes construction of the house would contribute to landscape-level habitat fragmentation. As noted in the comment letter, the 12,000-acre area surrounding and containing the property has limited development.

The location of the proposed residence and road limit habitat fragmentation. The proposed residence is on the southeast side of the ±38-acre property near existing structures on the parcel immediately to the south, rather than further north, away from existing structures. The proposed land use is a low-density, low impact project for overall habitat fragmentation, considering the parcel size and large tracts of undeveloped USFS lands to the north and west. Additionally, the majority of the 37.7-acre parcel will be preserved in a natural state.

3.6 Riparian Areas and Wetlands

The project would not have any direct vegetation impacts to riparian/wetland plant communities. Riparian and wetland vegetation are sparse along the shoreline of the peninsula. The zone of saturated soil along the shore is limited by the steep rise in topography

and presence of dense, rocky till material which limits the development of hydrophytic plant communities (Photos 3 & 4). The access road, as it is already graded in, did not cross any wetlands or riparian areas based on our site reconnaissance visit. The higher-quality wetlands in the Reflection Pond to the east of the moraine that forms Big Lake will not be disturbed (Photo 5). Likewise, the wetlands on the western side of the parcel that feed into the Elk Meadows Wetland Complex would not be disturbed (Photo 6).

Mr. West's letter suggests a 100-foot setback from Big Lake; however there is no existing regulation that specifies this setback for the residence. Given the water quality protections in the stormwater management plan, the low amount of expected runoff, and low-impact design of the home with dock-approved materials, plus the lack of riparian/wetland vegetation in the area of the peninsula, a 100-foot setback may not be necessary. Additionally, the septic system must be designed and installed in accordance with Boulder County regulations following a percolation test. The septic design will follow all the required setbacks which have been established to protect water quality, as shown by Figure 7.

3.7 Environmental Conservation Area & Protection of Biodiversity on a Landscape Level

We affirm that the ecological quality of this property should be valued and maintained. Staff are concerned that further development of private land will result in habitat fragmentation.

The letter particularly expresses concern that the project may result in further road development. However, the road that accesses the site is already of sufficient quality for construction and on-going use of the proposed house.

The letter also comments that the size of the house is irrelevant to habitat fragmentation and that impacts may be much more far-reaching than simply the house itself to include forestry and outbuildings as well as impacts from the presence of dogs or cats from future owners.

A minimal amount of habitat loss will result from the proposed single-family residence and driveway. On a landscape scale, this represents a minimally impactful activity since it is small in size, preserves a majority of the parcel in its natural state, and would utilize an existing road and be closer to disturbances associated with prior land uses on the Stapp Lakes Ranch property. Since the ranch passed into private ownership with the Henderson's purchase, use has been less impactful than its initial use as a guest ranch. The Orrises plan to continue its use as a private residence and are not considering commercial use. Both the Stapp Lakes parcel and the Big Lake parcel will continue to be owned by them.

3.8 Lynx Habitat

Modeling of lynx habitat indicates that this area is moderate to high lynx habitat and is part of a larger migratory corridor. The proposed location of the house reduces habitat fragmentation by situating the residence on the south side of the property near County Road 96 and existing cabins, thereby leaving the large majority of the site natural, connected habitat. Locating the residence on the peninsula with a steep hill beside it makes it less likely to inhibit migration. There are vast undisturbed areas surrounding the small area of proposed disturbance where animals can freely pass, and the proposed residence will not significantly decrease these passable areas. The west side of the property, which is more important for

migration according to Figure 7 of Mr. West's letter, will remain undisturbed. It should be noted that due to limited access, the home will be used seasonally and is expected to be largely unoccupied during the winter months, reducing potential disturbances to lynx.

3.9 Conclusion

The proposed project has been designed to limit visual impacts and disturbances to the historic Stapp Lakes Ranch property by utilizing a mostly-constructed old forest road to access the site; avoiding steep areas that would increase grading; locating the proposed home in the southeastern corner of the Big Lake property closest to existing structures and road



access; and minimizing shoreline disturbance at the homesite. The construction of one home still represents a decrease in overall land use / impact from the historic use of Stapp Lakes as a guest ranch, school camp, and retreat center. Additionally, the landowners, architect, and builder are attempting to conscientiously minimize the environmental impact and promote land stewardship by carefully addressing concerns raised by the County with practical design modifications as discussed in this report.

4.0 PHOTOS



Photo 1. The rocky shoreline of the peninsula is formed by glacial till. (6/17/24).



Photo 2. The moraine rises steeply above the shoreline of Big Lake on the north and west sides. Big Lake is shown on the left, and the right side of the moraine slopes down to the Reflection Pond. (6/17/24).



Photo 3. The peninsula is a steep, rocky mound comprised of glacial till. This area lacks wetland development. (6/17/24).

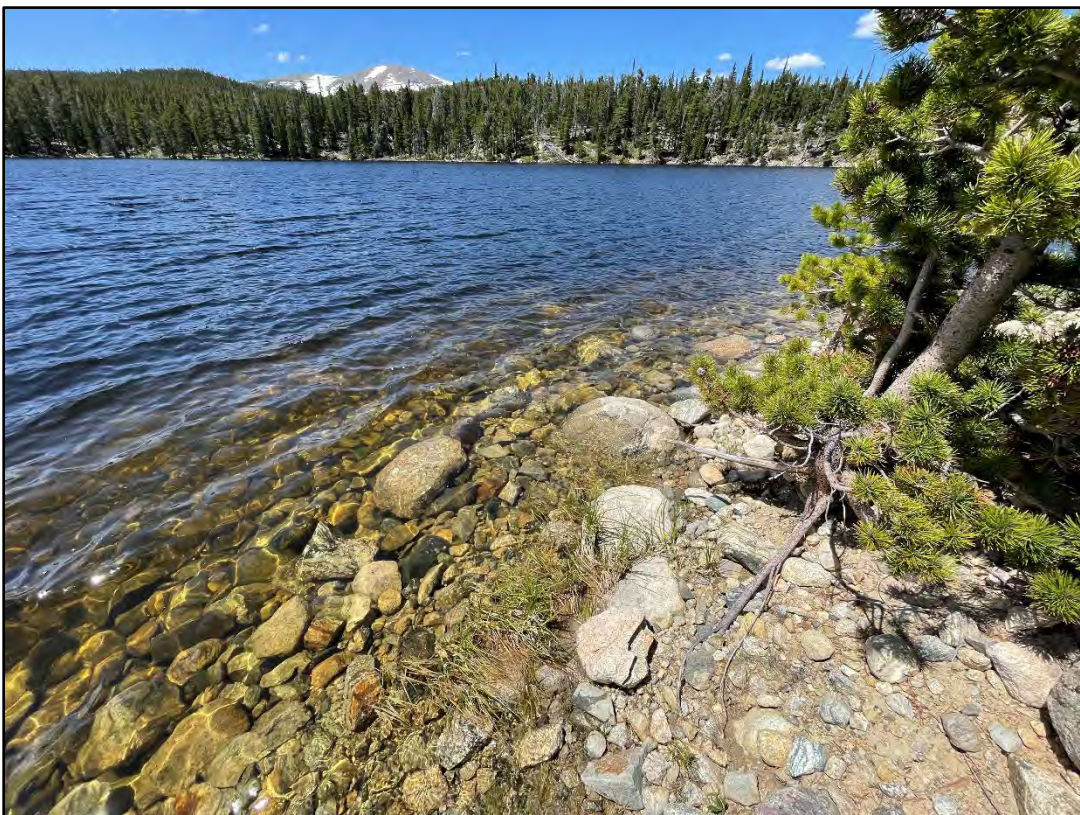


Photo 4. The rocky shoreline of the peninsula only has very limited patchy areas of wetland plants. (6/17/24).



Photo 5. Higher-quality wetlands occur at the Reflection Pond to the east of Big Lake. This area would not be disturbed by the proposed house construction, and it is on the other side of the moraine. (6/17/24).



Photo 6. Stream channel above the Elk Meadows Wetland Complex to the west of Big Lake. (6/17/24).



Photo 7. Engelmann spruce, subalpine fir, and limber pine grow with lodgepole pine and aspen on the forested hillsides above Big Lake. (6/17/24).



Photo 8. Panoramic view of Big Lake from the peninsula, with limber pine, lodgepole pine and aspen. (6/17/24).



Photo 9. Common juniper, golden banner, and kinnikinnick are common understory plants on the peninsula. (6/17/24).



Photo 10. Wetlands are more developed on the south side of Big Lake near the overflow channel. (6/17/24).



Photo 11. Panoramic view from the moraine south of Big Lake, showing the historic Stapp Lakes Ranch buildings surrounding Otter Lake. (6/17/24).

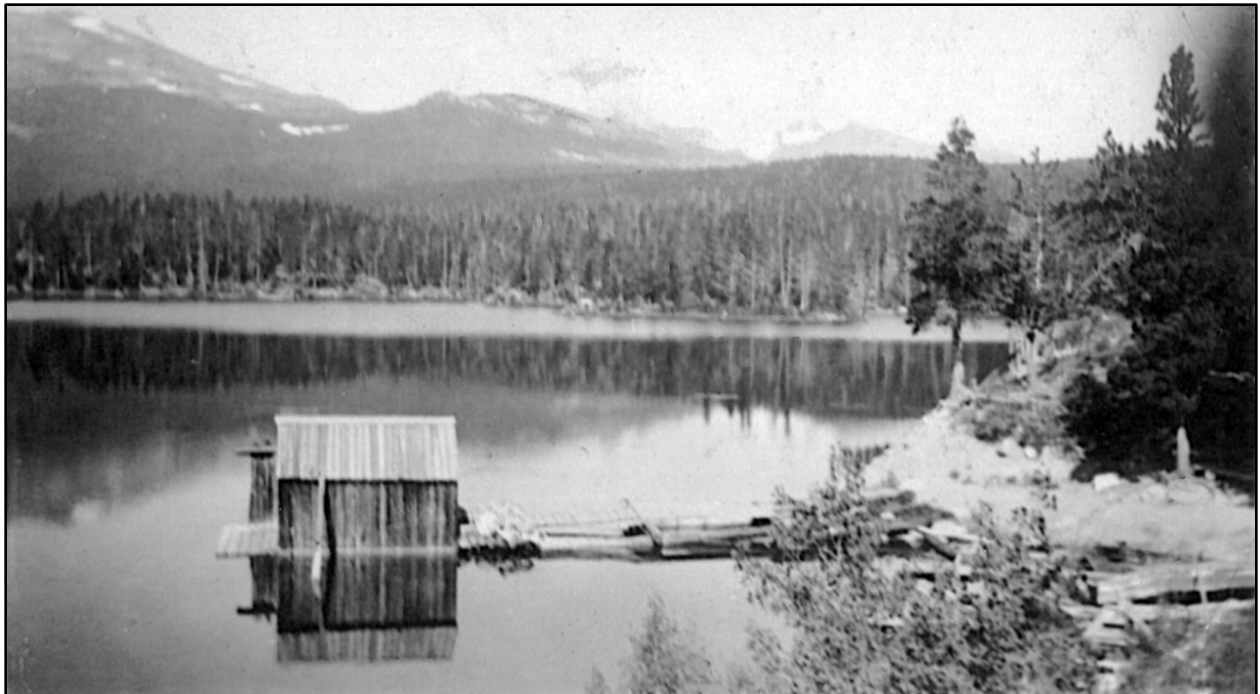


Photo 12. Historic boat house in Big Lake. Undated photo from 1940's or earlier.



Photo 13. Panoramic view over the location of the collapsed underground house. Prior owners worked to restore the area by re-grading the site to bury the entrance and then planting trees near the shoreline. (6/17/24).



Photo 14. Google Earth aerial of Beaver Reservoir showing the disturbed shoreline. This view shows the low water level in fall. (10/2023).



Photo 15. Google Earth aerial of Beaver Reservoir when it is nearly full in July. (7/2016).



Photo 16. A zoomed-in view of the Google Earth aerial showing disturbances near Beaver Reservoir. (10/2023).



Photo 17. The partially improved road follows the alignment of an old forest road for most of its length. (6/17/24).



Community Planning & Permitting

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Building Safety & Inspection Services Team

MEMO

TO: Amber Knotts, Planner I
 FROM: Michelle Huebner, Plans Examiner Supervisor
 DATE: January 13, 2025

RE: Referral Response, LU-23-0019/SPR-23-0036: Orris Residence.
 REVISED: Limited Impact Special Use Review to permit 4,023 cubic yards of non-foundational earthwork for the development of a driveway, and Site Plan Review for the construction of a new 2,990-square-foot residence with 220 square feet of covered porch area on an approximately 37.7-acre parcel with a presumptive size maximum of 2,500 square feet.
 ORIGINAL: Limited Impact Special Use Review to permit 1,585 cubic yards of non-foundational earthwork for the development of a driveway, and Site Plan Review for the construction of a new 2,990-square-foot residence with 220 square feet of covered porch area on an approximately 37.7-acre parcel with a presumptive size maximum of 2,500 square feet.

Location: 3310 County Road 96J

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permit.** A building permit, plan review, inspection approvals, and a Certificate of Occupancy ("C.O.") are required for the proposed residence. Separate building permits are required for the: solar photovoltaic system and work / repairs to the historic structures.

Stairs are not permitted or approvable in crawlspaces. The crawlspace must be less than 6'-8" or will count as basement area. The [2015 Building Code Adoption & Amendments](#) definitions:

CRAWL SPACE. An under floor space below the first story floor of the building that does not meet the definition of story above grade plane, that has a ceiling height measured from the crawlspace grade or floor to the bottom of the floor joists above of less than six feet 8 inches, and that does not contain interior stairs, windows, wall, and ceiling finish materials, trim or finished flooring

Floor area is measure to the outside of outside walls and includes the stairs on each level. The [2015 Building Code Adoption & Amendments](#) definitions:

AREA, FLOOR. The area of the building, existing or new, under consideration including basements and attached garages calculated without deduction for

corridors, stairways, closets, the thickness of interior walls, columns, or other features as measured from the exterior face of the exterior walls.

2015 Building Code Adoption & Amendments

We are in the process of **updating the building code**. Please review the draft amendments - [Board of Review - 2021 BCBC Amendments Draft](#)

2. **Automatic Fire Sprinkler System.** Under the 2015 International Residential Code (“IRC”) as adopted by Boulder County, all new one- and two-family dwellings and townhouses are required to be equipped with an automatic fire sprinkler system that is designed and installed in accordance with NFPA 13D or IRC Section P2904.
3. **BuildSmart.** Please refer to the county’s adoption and amendments to Chapter 11 of the IRC, the county’s “BuildSmart” program, for the applicable requirements for energy conservation and sustainability for residential additions and new residential buildings. Please be aware that there are energy related requirements of this code that may require the use of renewable energy systems (such as rooftop solar systems) that will also need to be approved by your electric utility provider. In some cases, there may be limitations on the size of on-site systems allowed by your utility provider that could constrain the project design. We strongly encourage discussions between the design team and the utility company as early in the process as possible in order to identify these constraints.
4. **Design Wind and Snow Loads.** The design wind and ground snow loads for the property are 175 mph (Vult) and 75 psf, respectively.
5. **Electric vehicle charging outlet.** Boulder County Building Code requires:
 - a. R329.1 Electric vehicle charging pre-wire option. In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:
 - i. A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - ii. Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - iii. Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.
6. **Grading Permit.** The grading permit must be submitted with the building permit for the dwelling. The inspections approvals are required for the proposed non-foundational grading. Please refer to the county’s adopted 2015 editions of the International Codes and code amendments, including IBC Appendix Chapter J for grading.

7. **Observation Reports.** The design professional responsible for the design or a similarly qualified Colorado-licensed design professional is to observe the grading and submit a stamped report to Building Safety & Inspection Services for review and approval. The final report is to state that the work has been completed in substantial conformance with the approved engineered plans.
8. **Electric vehicle charging outlet.** Boulder County Building Code requires:
 - a. R329.1 Electric vehicle charging pre-wire option. In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:
 - i. A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - ii. Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - iii. Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.
9. **Ignition-Resistant Construction and Defensible Space.** Please refer to Section R327 of the Boulder County Building Code for wildfire hazard mitigation requirements, including ignition-resistant construction and defensible space.
10. **Plan Review.** The items listed above are a general summary of some of the county's building code requirements. A much more detailed plan review will be performed at the time of building permit application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met. Our [Residential Plan Check List](#) and other Building Safety publications can be found at: [Building Publications, Applications and Forms - Boulder County](#)

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640 or contact us via e-mail at building@bouldercounty.org



Public Health

Environmental Health Division

June 2, 2023

TO: Staff Planner, Land Use Department

FROM: Jessica Epstein, Environmental Health Specialist

SUBJECT: LU-23-0019/SPR-23-0036: Orris Residence project

OWNER: STAPP LAKES RANCH LLC

PROPERTY ADDRESS: 3305 County Road 96J

SEC-TOWN-RANGE: 22 -2N -73

The Boulder County Public Health (BCPH) – Environmental Health division has reviewed the submittals for the above referenced docket and has the following comments.

OWTS:

1. This property is listed on the assessor's record of as having 8 buildings with bathrooms and multiple other buildings without bathrooms. Only one approved OWTS permit exists for a workshop on this property. All other OWTS are not permitted and Public Health has no record of them.
2. The OWTS for the workshop was installed without a permit in 1988. In 2013, BCPH issued a permit for the workshop and backdated it to 6/10/88 as an approval date to show how old the system actually was at the time. The installation was verified by an OWTS engineer and the verification was approved by BCPH.
3. **This property was purchased on 7/9/12 without issuance of the required Conditional Property Transfer Certificate for all of the unapproved OWTS. The owner must now apply for the certificate and sign the repair agreement form before Public Health can approve this project. (<https://assets.bouldercounty.gov/wp-content/uploads/2018/05/repair-agreement-form.pdf>).**
4. For the proposed home, an onsite wastewater treatment system (OWTS) permit has not been issued by Boulder County Public Health. The owner or their agent (e.g., contractor) must apply for an OWTS permit, and the OWTS permit must be issued prior to installation and before a building permit can be obtained. The OWTS components must be installed, inspected and approved before a Certificate of Occupancy or Final Building Inspection approval will be issued by Community Planning and Permitting (CP&P).
5. Boulder County Public Health must conduct an onsite investigation and review percolation rates, soil conditions and any design plans and specifications prior to OWTS permit issuance. The OWTS absorption field must be located a minimum distance of 100' from all wells, 25' from waterlines, 50' from waterways and 10' from property lines.
6. Setbacks between all buildings and the OWTS serving this property and OWTS serving neighboring properties, must be in accordance with the Boulder County OWTS Regulations, Table 7-1.

This concludes comments from the Public Health – Environmental Health division at this time. For additional information on the OWTS application process and regulations, refer to the following

website: www.SepticSmart.org. If you have additional questions about OWTS, please do not hesitate to email HealthOWS@bouldercounty.org.

Cc: OWTS file, owner, Community Planning and Permitting



Community Planning & Permitting

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Feb. 5, 2025

TO: Amber Knotts, Planner I; Community Planning & Permitting, Development Review

FROM: Ian Brighton, Planner II; Community Planning & Permitting, Access & Engineering

SUBJECT: Docket LU-23-0019/SPR-23-0036: Orris Residence at 3310 County Road 96J
 (RE-REFERRAL)- ADDENDUM

Access & Engineering (AE) staff has reviewed the above re-referenced docket and has the following comments in addition to comments provided on Jan. 24, 2025 (Attached):

1. Velocity calculations for the proposed roadside ditches were not provided in the revised drainage letter. Plans submitted at building permit must demonstrate that ditch velocities are adequate to ensure stability of the ditch lining. Portions of the drainage ditch may need energy dissipation.
2. Applicants submitted an ecological assessment dated December of 2024 that identifies an alternate driveway to the south of the proposed residence. The narrative and analysis from the ecological assessment notes site constraints with the alternative route including an existing collapsed underground house, an existing cabin and steep grades. Staff finds that more details for the alternative alignment would be needed to make an assessment.
3. The proposed driveway is located above historic cabins as well as adjacent to a pristine high-alpine lake. Runoff from the driveway diverts sand, silt, and other debris that can obstruct drainage features such as rip-rap and culverts. Staff recommends applicants develop an annual maintenance plan describing recurring operations required to ensure drainage and water quality infrastructure continues to function as intended.

This concludes our comments at this time.



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Jan. 24, 2025

TO: Amber Knotts, Planner I; Community Planning & Permitting, Development Review

FROM: Ian Brighton, Planner II; Community Planning & Permitting, Access & Engineering

SUBJECT: Docket LU-23-0019/SPR-23-0036: Orris Residence at 3310 County Road 96J
 (RE-REFERRAL)

A referral for LU-23-0019 was submitted on Jan. 31st, 2024 (attached). Access & Engineering (AE) staff has reviewed the above re-referenced docket and has the following comments in addition to previously provided comments:

1. Comments #1-4, and #11 on the AE referral dated Jan.31st 2024 remain valid to the re-referred docket.
2. Applicants have submitted a geotechnical report in response to comment # 5. Although the report addresses geologic hazards associated with the proposed residence, staff finds the report does not address the area associated with the proposed driveway improvements. Of particular concern are the historic cabins directly below areas of unpermitted grading. Please note Comment #6 requests revised plans demonstrating proper compaction and grading of the road improvements.

At building permit, provide a revised Geotechnical report that addresses the area associated with the proposed driveway to the residence. The revised geotechnical report must note any remediations or mitigations necessary for proper construction of the driveway. Grading plans must align with the findings and recommended mitigations found in the revised geotechnical report.

3. Revised plans submitted by the applicant demonstrate adequate restoration and revegetation of disturbed areas.
4. Staff finds the revised plans dated Dec. 17th, 2024 don't meet the Standards in the following ways:
 - a. The proposed driveway is shown as outsloped between Station 7+50 and 11+50. Standard Drawing 11 of the Standards requires an insloped driveway with a 2% grade.
 - b. The distance between the Access Pull-Out at Station 8+00 and the emergency turnaround at the proposed residence was measured to be approximately 440 feet, which is not in

compliance with Standard Drawing 17 of the Standards. Access Pull-Outs must be located at intervals of 400 feet.

- c. The emergency turnaround is located within 50 feet of the proposed residence. Per Standard Drawing 18 and 19 of the Standards, the emergency access turnaround must be located a minimum of 50 feet from the front of the residence and no greater than 150 feet from the rear of the residence. The 50-foot distance shall be met if both distances cannot be simultaneously achieved due to the shape of the structure.

At building permit, provide revised plans demonstrating compliance with the Standards.

5. Comment #7 in the AE referral lists portions of the proposed driveway that do not meet the Boulder County Multimodal Standards (the Standards) for residential construction in the Mountains. Comments 7a, 7b, 7c, and 7d have been addressed. Comment 7e regarding cross culverts will need to be addressed in revised plans submitted at the time of Building Permit review.
6. A third party consultant is reviewing the revised drainage letter. Further comments will be provided upon completion of the review.

This concludes our comments at this time.



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Jan. 31, 2024

TO: Amber Knotts, Planner I; Community Planning & Permitting, Development Review

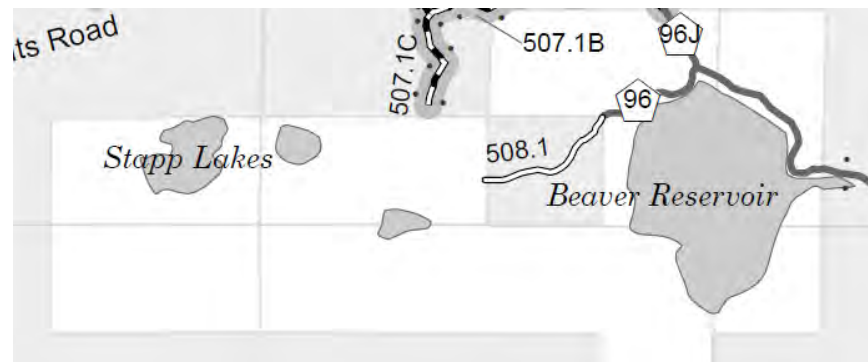
FROM: Ian Brighton, Planner II; Community Planning & Permitting, Access & Engineering

SUBJECT: Docket # LU-23-0019/SPR-23-0036

3305 County Road 96J

The Development Review Team – Access & Engineering (A&E) staff has reviewed the above referenced docket and has the following comments:

1. The subject property is accessed from County Road 96 (CR96), a Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Local, via a private gravel-surfaced road within a 20-foot access easement. Legal access to the subject property has been demonstrated via the easement recorded on Apr. 2nd, 1998 at Reception 1787384, the easement recorded on Feb. 5th, 1999 at Reception 1902641 as well as the 30-foot access easement recorded on Nov. 20, 2023 at Reception 04028765.
2. The United States Forest Service (USFS) lists a portion of the access road west of Beaver Reservoir as Road Number 508.1 on the 2016 USFS Motor Vehicle Use Map (see image below). Prior to building permit, please contact the Boulder Ranger District at VisitARP@usda.gov for more information on what, if any USFS requirements must be met for the proposed development.



3. Materials submitted by the applicant include a 30-foot access easement recorded on 11/20/2023 at Reception 04028765 between Stapp Lake Ranch LLC and Big Lake LLC. The easement appears to follow an alignment of unpermitted grading that was noted on a hold request issued on June 26, 2023 (attached). Please be aware that the recently recorded legal easement does not constitute County approval for the unpermitted work or the proposed private access road.
4. An Access Improvement and Maintenance Agreement (AIMA), which is an agreement for future maintenance responsibility, will be issued for the shared driveway during building permit review. The shared driveway crosses parcel number 13230000039, 13230000037, and USFS property and connects to CR96J adjacent to the outlet of Beaver Reservoir. The AIMA will be prepared by the Access & Engineering staff, signed by the property owner and notarized, and approved as part of the building permit process.

5. The Boulder County Geologic Hazards and Constraint Areas Map indicates the area is susceptible to landslides. Grading plans submitted by the applicant indicate several areas of proposed grading exceed a 2:1 slope as well. Additionally, during a site visit on June 16, 2023, unconsolidated soils and loose boulders were observed on and adjacent to the unpermitted road improvements as well as adjacent to existing structures.

Please submit a geotechnical report certified by a qualified Colorado-licensed Professional Engineer that identifies geologic hazards and potential adverse impacts to the proposed development and existing buildings.

At building permit, submit grading plans that align with the findings and recommended mitigations found within the geotechnical report.

6. As noted above, the construction of unpermitted road improvements appears to be incomplete, as proper compaction of the grading and surface materials are both absent. Please note that all areas of unpermitted grading not approved as part of this review must be restored to previous conditions or better.

At building permit, applicant must submit revised plans that includes the methods for properly completing the driveway construction.

At building permit, should any part of the proposed alignment be modified, the applicant must provide revised plans indicating how all disturbed areas will be restored and revegetated.

7. The civil plans, submitted by the applicant and dated 4/10/23, do not meet the Boulder County Multimodal Transportation Standards (Standards) in the following ways:
 - a. The proposed driveway design does not indicate a consistent 2% cross slope that conveys stormwater runoff to a borrow ditch located on the upslope side of the driveway, as required by Standard Drawing 11 of the Standards.
 - b. The centerline radius of the curve at Station 12+50 is 34 feet. Table 5.5.1 of the Standards requires a minimum centerline radius of 40 feet.
 - c. Pullouts at Stations 8+00 and 12+50 do not meet the dimension requirements outlined in Standard Drawing 17.
 - d. Slopes exceed 1.5:1 at the northeast corner of the proposed hammerhead turnaround at Station 12+75, as well as the northwest corner of the proposed garage, which does not comply with Section 5.3.2.2 of the Standards.
 - e. The driveway profile does not indicate the location or depth of proposed cross culverts.

At building permit, provide revised plans demonstrating a driveway design that is compliant with the Standards, including without limitation:

- a. Section 5.3.2.2 Cut & Fill Slopes
- b. Table 5.5.1 – Parcel Access Design Standards (1-Lane Mountain Access)
- c. Standard Drawing 11 – 12 Private Access
- d. Standard Drawing 14 – Access with Roadside Ditch
- e. Standard Drawing 15 – Access Profiles Detail

- f. Standard Drawing 16 – Access Grade & Clearance
- g. Standard Drawing 17 – Access Pullouts
- h. Standard Drawing 18 – Access Turnaround
- i. Standard Drawing 19 – Typical Turnaround & Pullout Locations

Where a Standard cannot be met, submit to the County a design exception form, completed by a qualified Colorado-licensed Professional Engineer, that includes an explanation as to why the Standard cannot be met. Be aware that an application for a design exception does not guarantee approval.

Also note that retaining walls or a series of retaining walls over four feet tall, as measured from the bottom of the footing to the top of the wall, must be stamped by a qualified Colorado-licensed Professional Engineer. Calculations shall be submitted for any retaining walls over six feet in height.

8. The application contains some materials that appear to contradict one another, including:
 - a. The grading plans indicate a 14-foot width along the length of the driveway, whereas the narrative states that a 14-foot width will be used at the curves of the alignment and 12-foot width will be used at the straightaways.
 - b. The grading plans indicate centerline grades of up to 18% between Stations 6+25 and 9+50, however the Proposed Driveway Profile sheet submitted by the applicant indicates centerline grades of 15.4%. The profile sheet proposes the addition of up to 10 feet of fill to overcome sections that exceed maximum grade requirements in the Standards, however the additional fill is not shown on the grading plans. Retaining walls or significant additional grading of adjacent slopes will be required to achieve the design depicted in the driveway profile.

Please provide revised plans and earthwork calculations that correct any inconsistencies and provide a design compliant with the Standards.

9. The earthwork calculations provided by the applicant differentiate between new and historic grading. Staff disagrees with this differentiation based on aerial imagery indicating that significant grading occurred between July 2022 and August 2023. Please provide revised earthwork calculations that include all grading quantities.
10. A third-party consultant reviewed the drainage letter dated 9/27/2023. A summary of the review is below:
 - a. All temporary and permanent proposed features such as well construction, septic construction, pipelines, staging areas, parking areas, etc. must be identified on plans submitted at building permit.
 - b. More detail and drainage calculations are required for culverts, stilling basins, and roadside ditches. Additional energy dissipation, such as check dams, may be needed in some areas depending on the results of the calculations. Plans submitted by the applicant must align with the findings in the drainage report.
 - c. Roofing materials, galvanized siding materials, and pressure treated lumber may negatively impact Stapp Lake. Direct discharges to the lake must be avoided to the extent possible, and runoff must be routed over pervious areas such as a swale or vegetated buffer prior to discharge to a sensitive receiving water. Redirecting the runoff

follows low impact development (LID) and County water quality concerns consistent with the requirements in Storm Drainage Criteria Manual (SDCM) Section 1200.

- d. The Colorado Department of Public Health and Environment (CDPHE) requires notification of dredge and fill activities for projects impacting State Waters. Please contact CDPHE to determine applicable requirements. More information can be found at <https://cdphe.colorado.gov/dredge-and-fill>.

At building permit, provide a revised drainage letter demonstrating how storm runoff from the proposed development meets the requirements in the SDCM.

11. Plans submitted by the applicant indicate an area of disturbance exceeds an acre in size. As a part of Boulder County's water quality protection program, a stormwater quality permit (SWQP) is required.

At building permit, submit a SWQP and revised plans identifying all areas of disturbance including construction areas, staging areas, temporary access areas, and parking areas. The total area of disturbance must be clearly labeled.

NOTE: The SWQP must be issued prior to work beginning on the project. Please visit Boulder County's stormwater website at <https://bouldercounty.gov/transportation/permits/stormwater-quality-permit/> or contact tdstormwater@bouldercounty.org for more information.

This concludes our comments at this time.



Community Planning & Permitting

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June 26, 2023

TO: Amber Knotts, Planner I; Community Planning & Permitting, Development Review

FROM: Ian Brighton, Planner II; Community Planning & Permitting, Access & Engineering

SUBJECT: Docket # LU-23-0019/SPR-23-0036 HOLD REQUEST

3305 County Road 96J

Pursuant to Article 4-805.C.2 of the Boulder County Land Use Code, Access & Engineering staff requests the review be placed on hold for the following reasons:

1. During a site visit conducted on June 16th, 2023, staff observed recent grading on the site. Subsequent review of aerial imagery indicate that the work may constitute a re-alignment and be considered unpermitted grading.

All unpermitted earthwork/grading must cease until the grading violation is resolved. Please contact Martin Laws at mlaws@bouldercounty.org for more information.

2. Plans submitted by the applicant have wide ranging storm drainage implications, including storm flows directly into the adjacent lake and potential adverse impacts from unconsolidated soils that have been placed on the property from unpermitted grading on the property.

Please submit a drainage letter stamped by a Colorado-licensed professional Engineer. The drainage letter must identify potential impacts to adjacent down-gradient structures as well as the lake adjacent to the proposed residence. See attached Memorandum dated November 9th, 2021 detailing specific items to include in the letter.

3. The driveway profile on plans submitted by the applicant indicate grades over 18%, which is not in compliance with the Standards for residential development in the mountains.

Please provide revised plans indicating driveway grades compliant with the Standards. Grades may not exceed 16% for 200 feet for accesses serving one dwelling unit. Revised plans should include updated grading calculations and reflect any changes to the road alignment should there be any changes to the proposed structure locations.

4. The existing road from the terminus of County Road 96 to and through the subject property varies in width from 17 feet up to 22 feet in width. The maximum width of a private road is 18 feet according to the Standards. Additionally, the drive exceeds the boundaries of the 20-foot easement at multiple points.

Please provide updated plans demonstrating that the existing access drive and associated improvements such as ditches, culverts, and shoulders are within the legal bounds of the easement.

Additional comments will be provided once the requested materials are submitted.



Public Works Department

Memorandum

Date: February 3, 2025

To: Amber Knotts, Planner I, Community Planning & Permitting

From: Jennifer Keyes, Boulder County Stormwater Quality Coordinator

Subject: LU-23-0019/SPR-23-0036: Orris Residence at 3310 County Road 96J

The Public Works Department and its drainage consultant have reviewed the above-referenced project, and have the following comments:

1. As a part of Boulder County's water quality protection and Municipal Separate Storm Sewer System (MS4) Construction Program, a Stormwater Quality Permit (SWQP) is required for this project based on the disturbance illustrated in the submitted materials.
 - a. **At building permit**, provide a complete SWQP submittal to stormwater@bouldercounty.gov.
2. The proposed residence is immediately adjacent to a natural alpine lake, a unique and sensitive ecosystem in Boulder County. Per Article 4-806.6 of the Land Use Code (the Code), the proposed development shall not alter historic drainage patterns and must include acceptable mitigation measures to compensate for anticipated drainage impacts. Additionally, the drainage report must conform to Boulder County Storm Drainage Criteria Manual (SDCM). The drainage letter does not meet these requirements. The SDCM follows Mile High Flood District (MHFD), Urban Storm Drainage Criteria Manual (USDCM) Volume 3, Chapter 4. MHFD does not recognize infiltration trenches as a stormwater control measure (SCM) due to inadequate surface area. Acceptable stormwater control measures may include bioretention or other SCMs described in MHFD USDCM, Volume 3, Chapter 4. Design details, calculations, and worksheets must be submitted demonstrating the water quality capture volume is infiltrated or treated using an SCM identified in the MHFD USDCM Criteria Manual, Volume 3, Chapter 4. The drainage report must also adequately address the road drainage and velocities. It is not understood based on the submitted materials whether the drainage requirements will affect the residential design drawings.
 - a. **At building permit**, provide a revised drainage report to stormwater@bouldercounty.gov
3. Additional comments are provided on the attached submitted drainage report.
 - a. **At building permit**, provide a revised drainage report to stormwater@bouldercounty.gov

Commissioner Claire Levy • Commissioner Marta Loachamin • Commissioner Ashley Stolzmann

Boulder County Courthouse • 1325 Pearl Street • Boulder, Colorado 80302

Mailing Address: P.O. Box 471 • Boulder, CO 80306 • www.BoulderCounty.gov

Commissioners@bouldercounty.gov • Telephone: 303.441.3500 • Fax: 303.441.4525



Public Works Department

4. Additional information on the decking is required. Treated lumber or metal may not be approved if there is a potential impact to water quality.
 - a. **At building permit**, provide detailed information about decking to stormwater@bouldercounty.gov

This concludes Public Works' comments at this time. Questions may be submitted to stormwater@bouldercounty.gov. Applicants are encouraged to review the information on the Boulder County Stormwater Quality Permit website:
<https://www.bouldercounty.org/transportation/permits/stormwater-quality-permit/>

Storm Drainage Criteria Manual website:

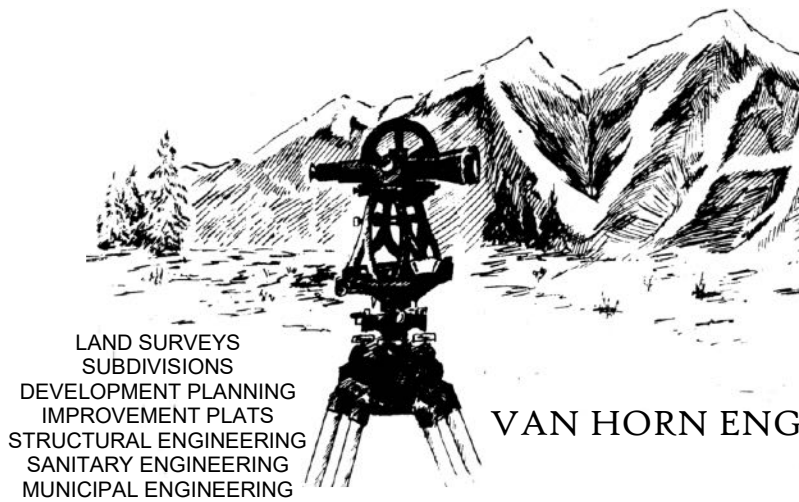
<https://bouldercounty.gov/transportation/floodplain-management/storm-drainage-criteria-manual/>

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VAN HORN ENGINEERING

**Big Lake Drainage and Stormwater Management Plan
3310 County Road 96J
Boulder County, Colorado**

The attached Worksheet is used to show the stormwater management of the subject property where a driveway has been upgraded. This letter follows Boulder County's 11-17-2021 Effective Ordinance allowance of the use of Drainage Letters on Private Development Projects as well as referral comments from Boulder County regarding the submittal of this land use project. This project is a private residential driveway to a 37+ acre parcel) in unincorporated

The bullet item from the required response Memo are attached as a narrative answer or information relative to the bullet topic. The following are relative to this analysis and narrative answers:

- Description of property location.
 - The property is located at 3310 County Road 96J. CR 96J comes off of Highway 72 near CR 3305 CR 96J. The property is west of Highway 72 about 1.5 miles past Beaver Reservoir and has a 37+ acre parcel that was recently subdivided. The property is located in parts of Sections 22 North, Range 73 West of the 6th P.M.
- Description of proposed project. This is an evaluation of the existing drainage system (at various stages), storm drainage and a proposed driveway vertical and horizontal alignment design with associated potential impacts.
- Site Plan showing entire property and disturbed area with distances to waterways.
 - The attached Land Survey Plat shows the overview of the project site including the lakes and section lines. The attached Road Worksheet

Orris' Big Lake Residence – Stapp Lakes
Drainage & Water Quality Comments
Date: 1-29-2025

See Drainage Letter and Civil Plans. Major comments include:

1. The River-Rock lined swale presents several issues:
 - a. MHFD does not recommend rock-lined infiltration trenches as SCMs because they frequently clog and are difficult to maintain. MHFD recommends vegetated swales.
 - b. No sizing information is provided to demonstrate that the area is sufficient for infiltration. If this stormwater control measure (SCM) is allowed, the applicant should provide sizing using the Runoff Reduction worksheet in the MHFD SCM workbook.
 - c. The plans do not appear to include a design detail for the trench. If Boulder County chooses to allow this SCM, a design detail should be provided. The trench should not contain any geotextile layers as this will increase susceptibility to clogging.
 - d. A bioretention area sized to infiltrate the WQCV would be a more appropriate SCM.
 - e. WVE recommends using a SCM meeting the requirements of Chapter 4 of Volume 3 of the MHFD Manual. The current plan does not meet these requirements and lacks sufficient detail.
2. The applicant still has not provided velocity calculations for the ditches along the road. Provide velocity calculations and analysis to show that ditch will not be susceptible to erosion due to high velocities. See permissible velocities in Chow's Open Channel Hydraulics.
3. Please provide details related to the "Natural Absorption Area/ Rain Garden to be Proposed." How much volume will this area contain? How will it drain? If this is a buffer rather than a rain garden, quantify ratio of UIA:RPA and compare to MHFD V3C4 criteria.
4. I did not see discussion of deck materials in the drainage letter. If all or portions of the deck will drain directly to the lake, it should be constructed of materials that will not leach pollutants. Pressure treated lumber and traditional decking surfaces have potential to leach many pollutants. Please specify materials that will be used for the deck and verify that they are substantially inert to leaching of pollutants.
5. I disagree with their interpretation of the area of disturbance relative to the MS4 permit. The MS4 permit states:
Applicable Construction Activity: Construction activities with land disturbance (surface disturbing and associated activities) of one or more acres, or disturbing less than one acre if that construction activity is part of a larger common plan of development or sale that would disturb, or has disturbed one or more acres, unless excluded in Part I.E.3.a.i. Applicable construction activities include the land disturbing activity and all activities and materials associated with the construction site and located at, or contiguous to, the land disturbing activities.
 - a. This definition does not exempt the building site or grading related to the well or septic from the definition of disturbance.
 - b. Site could potentially meet large lot single family site exemption, but need to demonstrate that WQCV is infiltrated, which applicant has not yet shown.
 - c. Regardless of MS4 status, this project is in a pristine area immediately next to the lake, necessitating SCMs.
6. I recommend an enforceable maintenance plan for all drainage and water quality infrastructure.

shows the driveway reconstruction area in relation to the ponds, cabins, and proposed single family structure at the west end of the proposed driveway. This project will add minimal impervious area to limit runoff.

- Effects on adjacent or nearby drainage features.
 - A proposed rain garden/drainage feature will capture sheet flows from the west end of the driveway. From station 7+09.65 to approximately 11+50, the flows sheet flow off the driveway, west of the existing historical cabins. Other flows for the majority of the driveway will be directed into the ditch on the upslope side of the proposed driveway, from station 0+00 to 7+09.65, and into the existing roadside ditch on the north side of CR 96J.
 - The ditch splits flow east and west approximately at the east terminus of the driveway. See plan set for better detail.
 - Materials for the driveway and house were selected to minimize potential adverse effects on Big Lake.
 - The house roof is to be constructed such that runoff will be directed to infiltrate into a pervious area.
 - Roof gutters direct flow towards an infiltration swale to be installed at the center of the protected courtyard.
 - Swale is to be lined with free-draining river rock.
 - Swale extends east past the edge of the house to allow sufficient infiltration.
 - Vegetation surrounding swale will be protected to the greatest extent possible.
 - Erosion control measures are to be taken to comply with the SWQP plan.
- Proposed flow directions.
 - Driveway will be super-elevated such that the surface flow off the driveway flows towards the proposed ditch on the uphill side.
 - At the far northwest end of the driveway, surface runoff is to be directed to a proposed natural retention area/rain garden at the approximate apex of the existing forest maintenance road.
 - Flow directions proposed and other notes are given on the attached Road Plan Overview Worksheet.
- Peak Discharge for Minor/Major.
 - The largest contributing area proposed for the roadside has been roughed out at less than ½ Acre. The major flow value of less than 2 c.f.s. which is easily captured by the existing ditch.

Please provide a map that shows drainage areas, should not be "roughed out" - define based on topographic mapping and show drainage basins on plans.
- Roadside ditch design
 - Ditch capacity was calculated along the beginning of the ditch and the eastern end where it intersects with existing CR 96J.

What is the velocity? The ditch is steep. Can you show that the velocity is less than the permissible velocity for the ditch lining?
 - $n = 0.04$ for channel with firm soil bed material
 - $n = 0.04$ for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains
 - $S \approx 42.6/766 = 5.56\%$

- Slope calculated between westernmost point of ditch and point of beginning at eastern end of driveway.
 - For a ditch with a depth of 1 foot and slopes of 2:1 on the sides, $A = 2\text{sqft}$
 - 2:1 in accordance with the recommendations found in the geotechnical report
 - For a fully flowing ditch (depth of one foot), hydraulic radius $R = 2\text{sqft}/0.45\text{ft} = 4.44\text{ft}$
 - So, $Q = (1.49/n)AR^{2/3}S^{1/2} = 96.6\text{cfs}$ when flowing at full capacity
 - Considering the 2cfs flow from the contributing basin in a 100-year storm event, the ditch as detailed here is more than sufficient to handle the flows.
- Demonstrate that detention is not required.
 - According to BCSD Section 1203.1, the first exemption applies which allows no detention. That is: the parcel is greater than 3 acres, it is for one single family dwelling and the total impervious area is less than 10%. The subject parcel has an area of 37.77 acres. 10% of this area would be approximately 164,500sqft, and the total impervious cover post construction will be drastically less than this amount.
- Potential impacts on downstream features.
 - There are cabins near the road in the middle of the driveway reach and a lake downstream (on each end of the driveway length). See notes on drainage worksheet. Sheet flow is promoted across the driveway where distributed flows will stay distributed and not concentrated and where there are no sensitive environmental features (ponds) downstream. All disturbed areas are proposed to be seeded and erosion control blanketed, or hydro-mulched.
- **Disturbance of one acre or less, MS4 Area?**
 - Considering the historic access at 10 to 12' wide, the area of historic, current and future disturbance is just less than one acre
 - Disturbance estimate includes all unpermitted grading performed in 2022 and 2023.
 - Unpermitted grading was calculated to be approximately 537 CY. This number is the sum of the both cut and fill, though it should be noted no material was imported nor removed from the site during this period of unpermitted grading.
 - Area of disturbance
 - **Withholding the [do not think this is how the] MS4 regulations work. and septic as exempted by Boulder County's "Earthwork & Grading" publication**
 - Area of disturbance = $\pm 31,000 = 0.71$ acres
- Lots within a Subdivision – associated drainage report?
 - This is for rural Boulder County – no subdivision, and therefore, no existing drainage report.
- Neighboring structures
 - There is an underground house that collapsed just along a roughed in road that follows, more or less, the eastern shore of the Big Lake.

- At its closest point, the western edge of the underground house was approximately 50' from the shore of the Big Lake.
 - See Sheet 6 of the plan set for better detail about the underground house's location
 - Photography from the 1920's-1930's suggests a boat house and dock in the Big Lake, suggesting that the area immediately surrounding the lake has been developed in the past.
 - There has been question about the "forest maintenance" status of the existing roughed in road, the first picture attached below shows the general alignment has existed for some time.
 - The earliest aerial imagery available to this office suggest the road has been in its current location since at least 1999.
 - The second attached picture is from approximately the late 1980's/early 1990's, per the owner.
 - Two additional photos suggest that the forest maintenance road has existed in its approximate current location for some time.
 - While the proposed house will be closer than the underground house, there exists a common precedent at the ranch for building near the lake shore
 - Pictures suggest measures to mitigate runoff were not present in construction of the underground house, measures will be taken for the proposed house.
- P.E. Stamped Letter.
 - This is such a letter
- Other information.
 - A spreadsheet for earthwork quantities is included in this submittal.
 - The plan view driveway survey worksheet is included.
 - A sheet detailing measures to mitigate erosion into the Big Lake is included in this plan set.
 - Aerial photos are included to show the historic driveway back to Big Lake and the changes made in the alignment which was obtained by graphical overlay.
 - Van Horn has used the best available data available to us in preparing this report. Approximations have been made and noted. No guarantees are presented. We plan to stay plugged into the driveway changes with survey staking and as-built mapping if needed or County should consider requiring this.
 - Photos are included from various locations on site with narratives and descriptions provided.

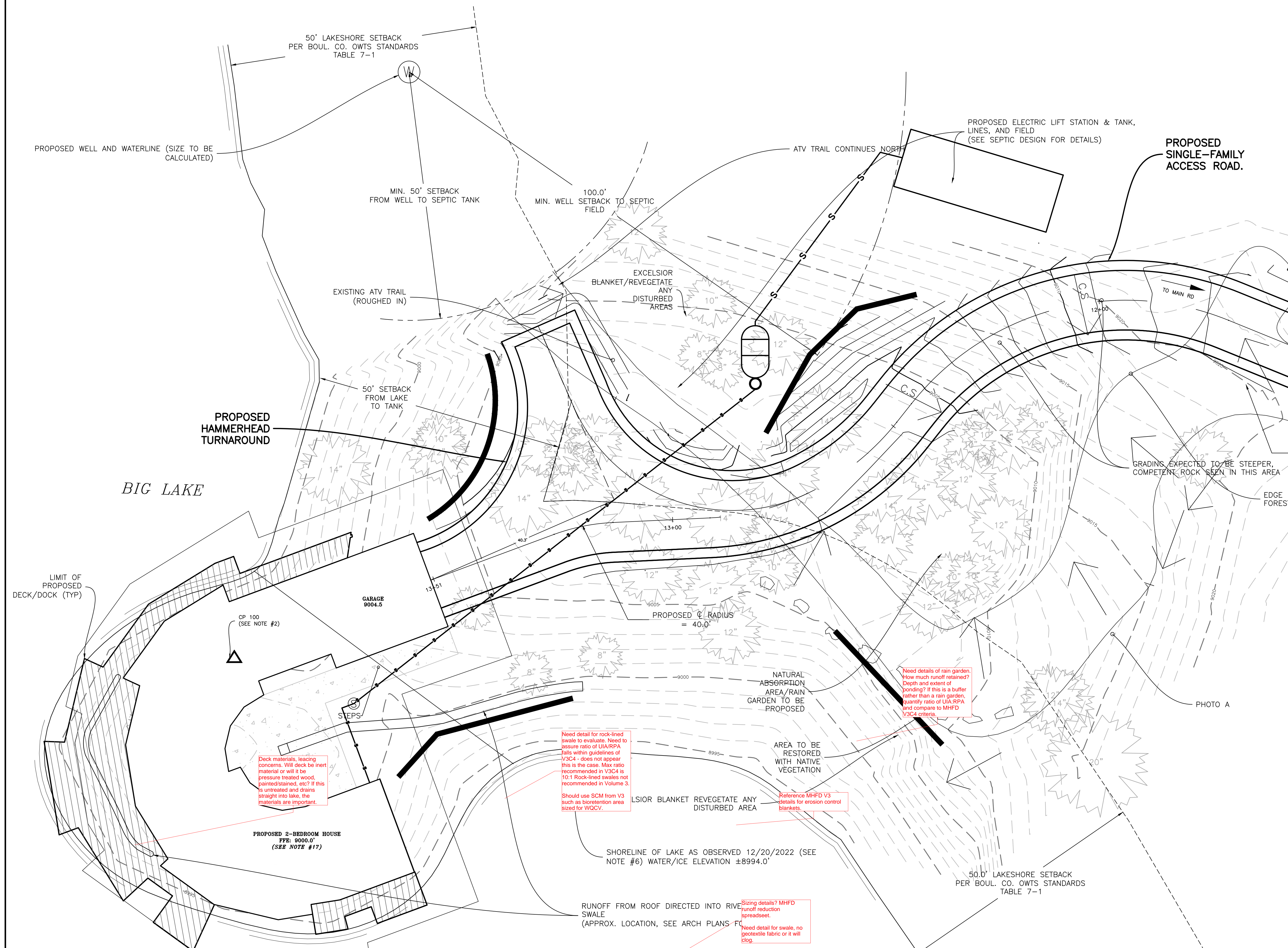
Sincerely,

Lonnie A Sheldon, PLS #26974, for Van Horn Engineering and
Surveying Inc., Cell: 970-443-3271,
Email: lonnie@vanhornengineering.com

STAPP LAKES RANCH HOUSE LOCATION (PENINSULA)

3310 CR 96J, UNINCORPORATED BOULDER COUNTY

LOCATED IN SECTIONS 22 AND 23, TOWNSHIP 2N, RANGE 73W OF THE 6TH P.M., COUNTY OF BOULDER, STATE OF COLORADO



LEGAL DESCRIPTION

BIG LAKE LLC PARCEL (BOULDER COUNTY ASSESSOR PARCEL NO. 13230000040):
 Legal Description per Special Warranty Deed of Recd. No. 04028744
 A PORTION OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 22, TOWNSHIP 2 NORTH, RANGE 73 WEST OF THE 6TH P.M., BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION AND CONSIDERING THE EAST LINE OF THE SOUTHEAST 1/4 OF SAID SECTION TO BEAR N00°12'42"W WITH ALL BEARINGS HEREIN RELATIVE THERETO;
 THENCE N00°12'42"W ALONG SAID EAST LINE 717.72' TO THE TRUE POINT OF BEGINNING;
 THENCE DEPARTING SAID EAST LINE S89°56'45"W 438.09';
 THENCE S62°28'38"W 54.20';
 THENCE S89°56'45"W 2140.24' TO THE WEST LINE OF SAID SOUTHEAST 1/4;
 THENCE ALONG THE SAID WEST LINE N00°35'53"E 641.03' TO THE CENTER-SOUTH 1/16TH OF SAID SECTION;
 THENCE S89°39'12"E ALONG THE NORTH LINE OF THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 2617.54' TO THE SOUTH 1/16TH OF SAID SECTION;
 THENCE S00°12'42"E 597.69' TO THE POINT OF BEGINNING.
 SAID PARCEL CONTAINS 37.77 ACRES, MORE OR LESS, AND IS SUBJECT TO ALL EASEMENTS AND RIGHT OF WAYS OF RECORD.
 COUNTY OF BOULDER, STATE OF COLORADO.

SURVEYOR'S/ENGINEER'S NOTES:

- THIS SITE PLAN IS REPRESENTATIONAL ONLY AND SHOULD NOT BE RELIED UPON AS A BOUNDARY SURVEY NOR A LAND SURVEY PLAN.
- THE CONTOURS SHOWN ARE AT 1 FOOT INTERVALS AND ARE BASED ON CONTROL POINT 100 AND AN ASSUMED ELEVATION OF 9000.00 FEET AS SHOWN ON THIS SITE PLAN. ALL ELEVATIONS SHOWN HEREON, ON THIS SITE PLAN, ARE RELATIVE TO THIS 9000.00' BENCHMARK. A MORE REALISTIC ELEVATION FOR THIS PARCEL IS AROUND 9500' BASED ON GOOGLE EARTH.
- THIS LOT IS ZONED F (FORESTRY) IN THE BOULDER COUNTY LAND USE CODE. THE PREScribed BUILDING SETBACKS FOR THIS ZONING ARE 15' ALONG FRONT AND REAR LINES, AND 25' ALONG SIDE LINES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION AND MAINTAIN THEM IF AT ALL POSSIBLE.
- THE POSTED ADDRESS FOR THIS PROPERTY IS 3310 CR 96J, BOULDER, CO
- AT THE TIME OF THE ORIGINAL SURVEYING THERE WAS HEAVY SNOW COVER ON SITE. SOME ELEVATIONS AND FEATURES MAY BE VAGUE DUE TO THIS. AERIAL IMAGERY WAS USED TO AID IN DRAWING THESE FEATURES, INCLUDING THE CABINS SHOWN ON THIS SITE PLAN.
- NOT ALL TREES ARE SHOWN ON THIS SITE PLAN.
- NO EXTERNAL PARCEL LINES OR ASSOCIATED SETBACKS ARE SHOWN HEREON.
- SEE SHEET C5 FOR EXISTING FOREST MAINTENANCE ROAD PROFILE.
- NO UTILITIES TO CABINS ARE SHOWN ON THIS ROAD DESIGN.
- THE PURPOSE OF THIS PLAN/DESIGN IS TO DEPICT THE EXISTING FOREST MAINTENANCE ROAD ON THE SUBJECT PROPERTY AS COMPARED TO A DESIGNED OR PROPOSED ROAD GENERALLY FOLLOWING THE SAME ALIGNMENT BUT BEING GEOMETRICALLY CORRECT IN WIDTH WITH RADIAL/CIRCULAR CURVES. THE PROPOSED ROAD IS NOT IN THE HISTORIC SAME ALIGNMENT FROM 11+50 TO 13+50.
- EARTHWORK QUANTITIES ARE SUMMARIZED ON A SEPARATE DOCUMENT.
- PER BOULDER COUNTY, THE MAXIMUM GRADE FOR A DRIVEWAY IS 12% TO ENSURE ACCESS FOR EMERGENCY VEHICLES. IN THE MOUNTAINS THERE MAY BE A 14% GRADE FOR UP TO 200 FEET, AND 16% FOR 200 FEET IF SERVING A SINGLE DWELLING UNIT.
- PER BOULDER COUNTY, THERE MUST BE A VERTICAL CLEARANCE OF 13.5' (13'-6"). THE REMOVAL OF SOME TREE LIMBS OR BRUSH MAY BE REQUIRED TO ATTAIN THIS.
- THIS DESIGN PROFILE BASICALLY FOLLOWS THE VERTICAL PROFILE OF THE EXISTING FOREST MAINTENANCE ROAD, BOTH ARE SHOWN HEREON.
- ALL-WEATHER SURFACING IS PROPOSED FOR THIS DRIVEWAY (4" THICK CLASS 5 ROAD BASE OR EQUIVALENT).
- SEE GEOLOGIC REPORT PREPARED BY AMERICAN GEOSERVICES FOR SLOPE STABILITY ANALYSIS.

LEGEND

- ⊙ SEWER CLEAN OUT
- ⊕ WELL
- △ CONTROL POINT
- W PROPOSED WELL WATER LINE
- S PROPOSED SEPTIC LINE
- 9000 EX. MAJOR CONTOUR (5')
- 9001 EX. MINOR CONTOUR (1')
- 9005 PROP. MAJOR CONTOUR (5')
- 9006 PROP. MINOR CONTOUR (1')
- ⊙ TREE (DIAM. AS NOTED)
- ⊕ ROCK OUTCROPPING/BOULDER
- PROPOSED FLOW DIRECTIONS
- ↘ INTENDED CROSS-SLOPE DIRECTION
- ▬ PROPOSED EROSION LOG

BY:	
REVISION:	
DATE:	
SHEET:	C1
PROJECT:	FOREST MAINT. RD. DESIGN (WEST END) BIG LAKE RESIDENCE 3310 CR 96J, UNINC. BOULDER COUNTY
DRAWN BY:	JTG
CHECKED BY:	LAS
SCALE:	1"=10'
DATE:	12/17/2024
SHEET:	C1
OF:	7
PROJ. NO.:	2012-06-18





Parks & Open Space

5201 St. Vrain Road • Longmont, CO 80503
 303-678-6200 • POSinfo@bouldercounty.org
 www.BoulderCountyOpenSpace.org

TO: Amber Knotts, Community Planning & Permitting Department
FROM: Ron West, Natural Resource Planner
DATE: March 5, 2025
SUBJECT: Docket LU-23-0019/SPR-23-0036, Big Lake LLC, 3310 County Road 36J, re-referral

Staff has reviewed the newly submitted materials, and will limit discussion to select subjects; the original POS referral memo is appended below.

The Ecological Assessment is largely well-done, however it does not add much to the discussion of the proposal. With the small exception of the final approach of the driveway, very little has changed from the original application. The house is proposed in the exact same location, with the same access route. Most of the “added” mitigation is either already a requirement for any project of this kind or was already included in the original submittal. For example, silt fences, construction fences, dark-sky lighting, native seed revegetation, a designated washout area, leach field setbacks, site inspections and clean-ups are *all* standard BMPs or are county requirements for a construction project.

Staff does not understand how a “double” silt fence along the lake edge would improve control of runoff. Is there even room for such a fence along the lake edge? Excavation is proposed essentially *on* the lake shore. Figures 1A and 1B show construction stakes at the site. How would a single silt fence even be located? Drawing 4.0 shows deck pilings literally on the water’s edge. Figure 4.1 shows the house foundation about 6 feet from the water. And *under* the deck, a new infiltration swale is proposed, which of course needs to be constructed. Machinery cannot work and maneuver with a silt fence here, let alone two silt fences.

Staff notes that this swale would retain ½-inch of rain. What happens in the swale when a 1-inch thunderstorm develops -- a rain event which is rather common?

Staff also asks how accurate are the drawings? On Drawing C1, under Surveyor’s/Engineer’s Notes, #6 states that, “At the time of the original surveying, there was heavy snow cover on site. Some elevations and features may be vague due to this.”

Is the existing cabin, southeast of the proposed house site, on the subject parcel, and if so, how is it to be used? Will the associated dock on the lake shore be removed?

Is the large maintenance structure on the larger parcel to be used for construction staging and/or long-term maintenance of the proposed house?

Figure 1A -- A construction stake at the site -- "Edge of House"



Figure 1B -- Another stake



The application repeatedly states that the driveway was essentially there before it was improved. Staff has no doubt that parts of it existed as a two-track and/or graded in the

historic past. However, at least one section, shown in Figures 2A and 2B, certainly appears to not show an old road bed. This section is about 250 feet long.

Figure 2A -- 2022



Figure 2B -- 2024



That there is currently “no intention” of further subdivision of the larger parcel is not germane. Cumulative impacts need to consider the reasonably foreseeable future. Although the applicants have no intention to do so, properties change ownership all the time. It is certainly relevant that the larger parcel could be divided in the foreseeable future into 8 additional 35-acre parcels, and subsequently 8 more large houses scattered over the kettle lakes.

Drawing C-7, Erosion Control Notes:

Note 4 – “Trash dumpsters shall be secured against bears.” The specific type of bear-proof dumpster to be used should be reviewed.

Note 11 calls for straw bales. If straw mulch or straw bale barriers are used, all straw must be certified weed-free. *Hay* (as called out in Note 16) cannot be used as it contains seeds of aggressive, non-native grass species.

Note 12 – “No fuels or chemicals shall be stored near construction areas.” Where would machinery be fueled and where would construction staging occur?

Drawing C-7, Surveyor’s and Engineer’s Notes:

Note 11 states that, “The disturbed area was measured to be +/- 0.7 acres.” Is this the proposed construction site for the house? Or is it the already completed road work, or both? For example, just the road bed and shoulders for a 1300-foot-long driveway would be almost 0.5 acres, and this is without cut and fill slopes, and without the proposed house site area.

Possible disturbance of the buried underground house site is part of the justification to not use the top-of-the-moraine access alternative. It’s stated that, “Disturbing this structure could risk contamination from unknown building materials that could be excavated during road construction.” If this is a concern, then the buried house *should* be entirely excavated, regardless of driveway alternative, and the contamination hauled off-site. Staff considers this to be a basic stewardship-of-the-land management. *Whatever* is underground will certainly be leaching into the groundwater that percolates through the moraine from Stapp Lake to Beaver Creek and lower ponds.

That the proposed residence would be less disturbing than past use as a guest ranch is not germane to the development review.

Given the pristine nature of the water in Stapp/Big Lake, all construction machinery must be cleaned prior to transportation to the parcel. It must be cleaned to remove aquatic nuisance species (ANS) and weed seeds in accordance with State of Colorado ANS regulations. This involves either steam (heat) or chemical cleaning, not just power washing.

Staff did not know that Stapp Ditch feeds into Big/Stapp Lake. What is the status of the water in the ditch? Does it have a water right associated with it? Who owns it, and how often is the ditch maintained? Without this ditch water, would the lake be “drawn down” in late season or in dry years. (The Ecological Assessment notes that Peterson Lake has large fluctuations, and thus affects its ecology.)

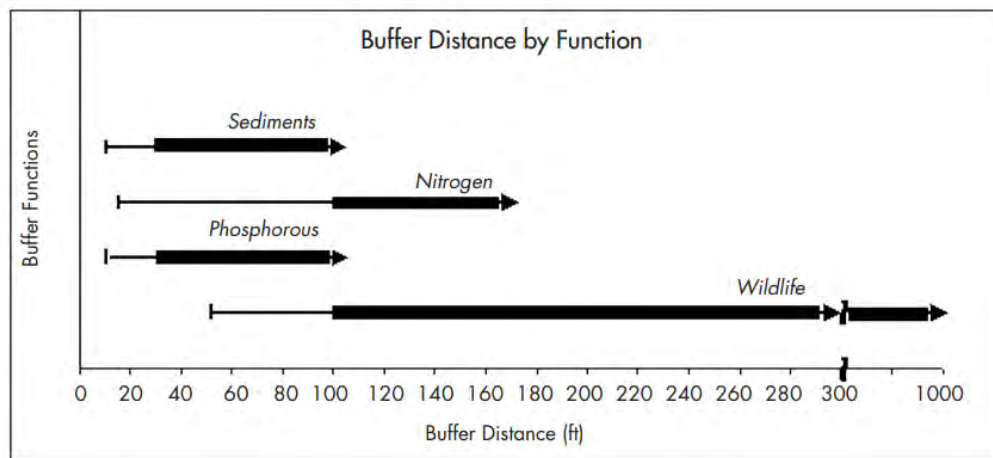
The letter from the applicants, to Boulder County Planning, states that they steward the subject parcel and the larger parcel as a contiguous property. Although management of the larger property is not the subject of this review, what are the specific techniques being used to do so? How are the historic buildings preserved? How is forest management completed? How are non-native weed species controlled? How is the ditch maintained? (The ditch is on the subject parcel.) In other words, are there any commitments of record to this stewardship?

Building a road without permits and then arguing that, since it's "already there," it must be the route with the least environmental impact, is fallacious. The driveway route with the least environmental impact is certainly one that isn't 1300-feet long.

Concerning a setback from the lake, the Environmental Assessment's conclusion is rather ambivalent -- "...a 100-foot setback may not be necessary." This is based on mitigating measures, many of which have been discussed above.

There is a great deal of research about "adequate" buffers between a development and a wetland or river riparian or a lake/pond riparian – water bodies. Hundreds of counties and municipalities across the country have regulations for this. Currently, Boulder County does not have a system for buffers. Figure 3 shows one summary graph for four functions, from "Planner's Guide to Wetland Buffers for Local Governments," 2008, Environmental Law Institute. Other summaries show distances for up to nine functions. The City of Longmont, even in an urban setting, has recently adopted 150 feet for a standard buffer, with increases depending on situations.

Figure 3 – Summary by four functions; note that these distances are in feet



*Effective buffer distance for water quality and wildlife protection functions. The thin arrow represents the range of potentially effective buffer distances for each function as suggested in the science literature. The thick bar represents the buffer distances that may **most** effectively accomplish each function (30 - > 100 feet for sediment and phosphorous removal; 100 - > 160 feet for nitrogen removal; and 100 - > 300 feet for wildlife protection. Depending on the species and the habitat characteristics, effective buffer distances for wildlife protection may be either small or large.*

Conclusion

Although not part of review, does a "retreat" that would have "only limited use" in the winter need a garage? Does it have to be 3000 square feet and require a new 1300-foot driveway? Does it need three bathrooms, two offices, an electric sewage lift pump (instead of a gravity-feed), and a walk-in closet?

Aldo Leopold – one of our greatest conservationists – was a professor in Madison Wisconsin. In 1935 he also wanted a retreat for his family, with five children. They bought an

abandoned/neglected farm and, being the only structure on the property, moved into a cleaned-out chicken coop. Well beyond Leopold's death in 1948, the family stayed in the now-famous "Shack."

The Sustainability Element of the county's Comprehensive Plan states that, "...concern has grown from the global to the local level about whether the social, economic and physical resources we have come to depend on will be sufficient or available to future generations to meet their needs and aspirations...and what we in the present intend to do about it."

Indeed, what do we intend to do about it?

TO: Amber Knotts, Community Planning & Permitting Department
FROM: Ron West, Natural Resource Planner
DATE: February 4, 2023 [correction -- 2024]
SUBJECT: Docket LU-23-0019/SPR-23-0036, Orris/Big Lake LLC, 3310 CR 96J

Site Conditions

The 38-acre parcel is dominated by upper montane/lower subalpine forest, with small lakes and wetlands. Additional details are presented below. A driveway was recently constructed/improved to the proposed house site, before this review of the proposal.

County Comprehensive Plan Designations

The parcel has the following designations in the Boulder County Comprehensive Plan, or from other resource inventories.

- Environmental Conservation Area (ECA) – Indian Peaks
- Significant Natural Community – old growth spruce/fir forest
- Riparian Areas
- Wetlands
- Lynx Habitat
- Adjacent to Public Lands – US Forest Service, on north
- Proximity to Critical Wildlife Habitats and High Biodiversity Areas -- see below

Discussion

Staff has reviewed the submitted materials. From a natural resource perspective, this is a very complex docket.

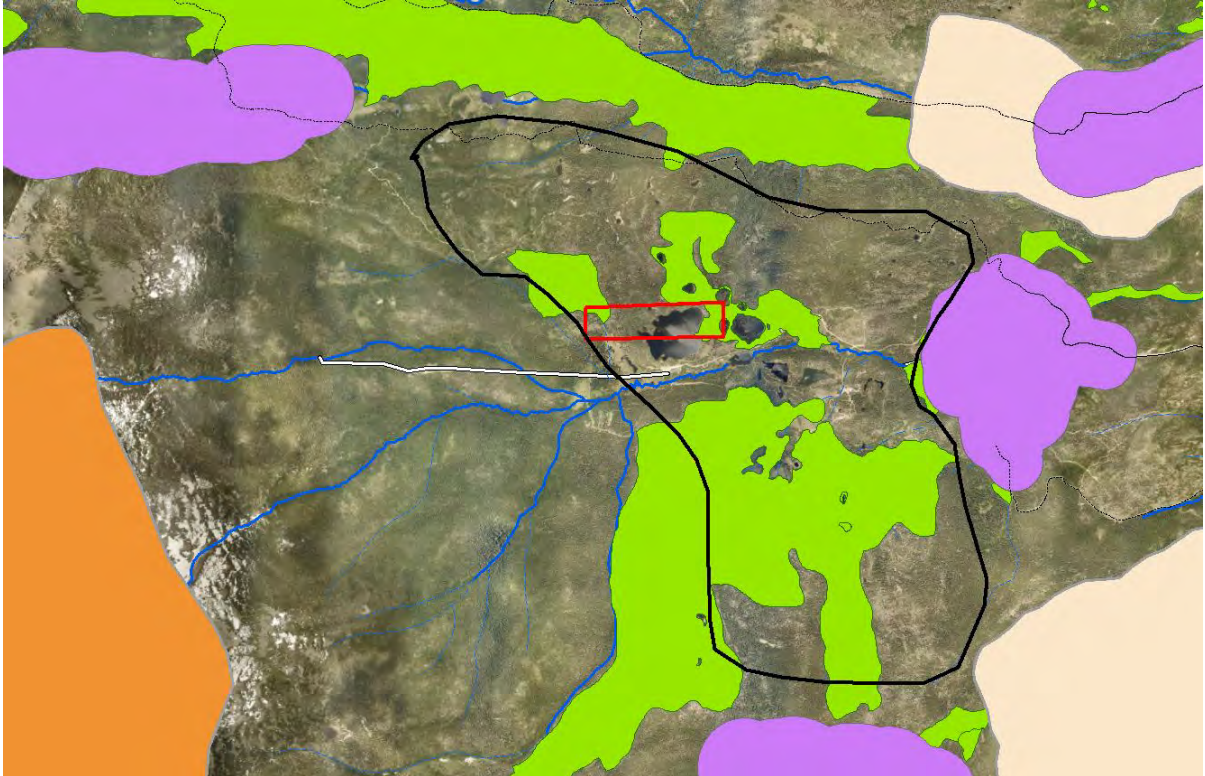
The most important natural resource aspect of the subject parcel is its landscape-level geological and ecological context. Geologically, it is in a large, relatively rare area of Pleistocene recessional/terminal moraines, as shown in Figure 1. These moraines are visible in aerial photographs as well as their associated kettle lakes and ponds. Most or all of the Stapp Lakes are glacial kettles, formed by isolated glacier ice melting out under morainal deposits.

Figure 1. Area of recessional/terminal moraines and kettles, with subject parcel in red.



Ecologically, the subject parcel is “bracketed” by High Biodiversity Areas and Critical Wildlife Habitats, and the proposed house site itself is within a Significant Natural Community – Figure 2. This latter community type is old-growth, Engelmann spruce/subalpine fir forest. Although locally abundant near the site, any old-growth forest type is rare, especially in the Front Range.

Figure 2. Subject parcel in the context of Significant Natural Communities, and nearby Critical Wildlife Habitats and High Biodiversity Areas. Green is significant communities, purple is critical habitat, and beige and orange are high biodiversity areas.



The nearest Critical Wildlife Habitat – less than a mile to the east – is Beaver Reservoir. Its primary county-species-of-concern is lake chub, which was thought to be extinct in the county until re-discovered in 1989. The local stream system and the various Stapp Lakes may support this rare species. Lake chub is: an “S1” species, with less than six known populations in the state (CSU Natural Heritage Program); is officially endangered in Colorado; is a US Forest Service sensitive species; and is a “Tier 1” species -- of most critical needs -- in the State Wildlife Action Plan. The parcel is also only about one mile from the Indian Peaks Wilderness area, to the west.

Beaver Reservoir -- and likely the Stapp Lakes -- is also known as a river otter concentration area, and supports beaver as well. Once abundant, river otter and beaver are species that are slowly making a recovery in the county.

At 9480 feet in elevation, this is one of the highest private areas of the county with the potential for continued developments -- see cumulative impacts below. In general, staff believes that developments at this elevation should be discouraged.

Access, and Already-Completed Impacts

Instead of the proposed 1370-foot driveway, there is an existing driveway access that starts at the large maintenance building, crosses flat terrain near the lake, and continues past an existing cabin, which is only about 200 feet away from the proposed house site. (There are

grade changes from this point that would still have to be negotiated.) This existing drive appears to have been improved about 10 years ago, long before the proposed alignment was improved.

On the latter improvements, completed without permits, staff estimates that only about one-half of the alignment existed beforehand -- as a 4X4 road. (Whether or not parts of it had been used as a “forest maintenance” road is debatable.) In other words, about 750 linear feet of the new access road was recently constructed on undisturbed ground. These new road sections are shown in Figure 3.

Figure 3. New road segments, constructed without permit.



Cumulative Impacts

Staff is also concerned with potential cumulative impacts from other future houses, possibly on the same lake. The “remaining” Stapp Lake Ranch parcel is about 288 acres. Divided into additional 35-acre parcels, this could result in eight more developable parcels. Given the existing other cabins and the historic structures, it is not known how many of such parcels could be developed with new houses.

However, given some “creative” parceling (which staff has seen before), several more parcels could be configured to allow other houses on the main Stapp Lake, and/or simply scattered around the 288 acres. The resulting, up-to-eight-more dwellings and their individual access driveways, would result in significantly more cumulative impacts to Stapp Lake itself, or other smaller lakes, or on waterways on the larger parcel. As noted above, staff believes this area is one of the highest and largest privately-owned parcels in the county that still could see significant future developments.

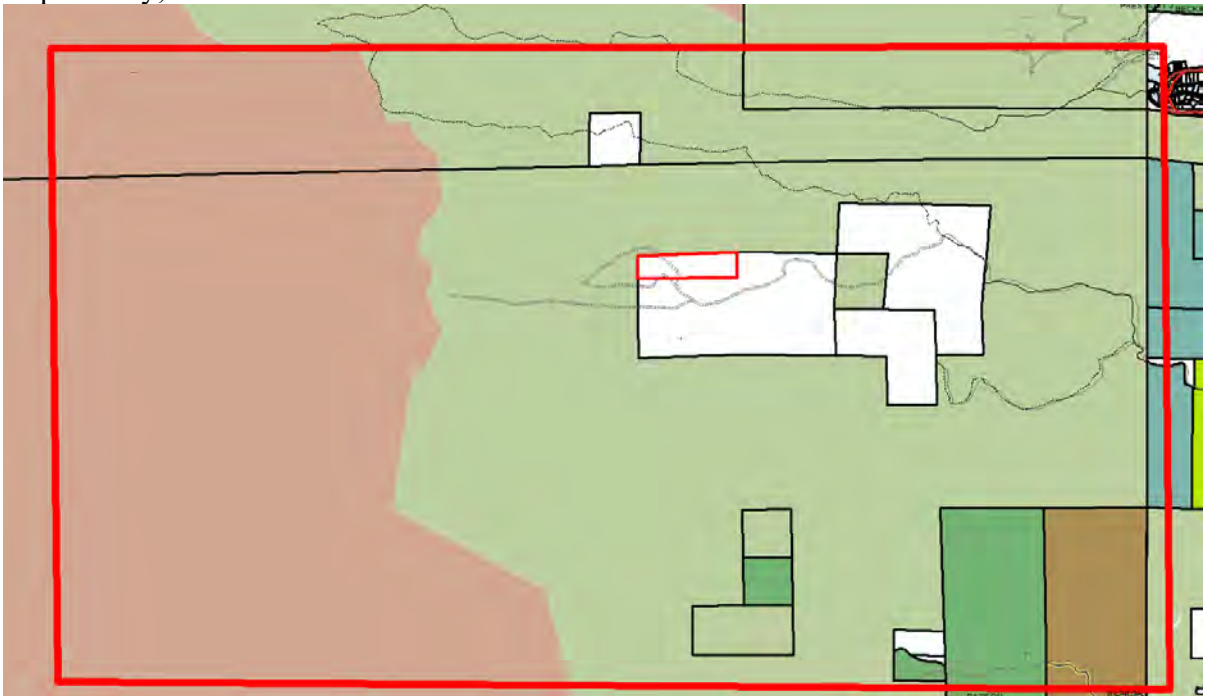
Habitat Fragmentation

Staff believes that the new house would contribute to landscape-level, habitat fragmentation in the county.

The simplest way to present habitat fragmentation is through aerial photography. Figure 4 shows an area drawn around the “wildest” portion of this landscape, mostly centered on the subject parcel. Within this 12,000-acre area, the only existing developments are: the historic cabins and a few other structures on the large Stapp Lakes parcel; the “seasonal encampments” at and near Beaver Reservoir; and the two-wheel drive and 4X4 routes shown in the figure as thin black lines. These 12,000 acres represent one of the least-fragmented landscape areas in the county.

A basic premise of conservation biology and landscape ecology is to protect “core habitats” – large-acreage areas that are undeveloped or minimally developed.

Figure 4. A “regional” look at the area. The large red box is about 12,000 acres in size; small red box is the subject parcel; lighter green and brick red are USFS and USFS wilderness, respectively; blue is conservation easements.



Riparian Areas and Wetlands

Although riparian and wetland areas are often associated with streams and rivers, lakeshores are also a component of riparian habitats. The riparian and wetlands on the subject parcel, as mapped in the Comprehensive Plan, are incomplete. For example, a very obvious wetland -- a shallow kettle pond -- can be seen in aerial photographs on the eastern boundary of the subject parcel. Similarly, the shorelines of all of these kettles, including Stapp Lake itself, should be mapped as riparian. The proposed house site is immediately adjacent to Stapp Lake

– in fact, two to six feet away from the shoreline in locations. Decks and dock extend into and over the lake.

Boulder County has been attempting to define a “standard” set-back -- for houses and structures -- from wetland and riparian areas. (Even irrigation ditches on the plains have a standard 50-foot set-back required.) Numerous local governments across the country have established various set-back distances for structures from water bodies. These vary by the associated local conditions of rivers, streams, lakes, vegetation, resources, and terrain. However, the consensus in the ecological literature is for a 250-foot set-back, to minimize all impacts associated with a house near a waterbody.

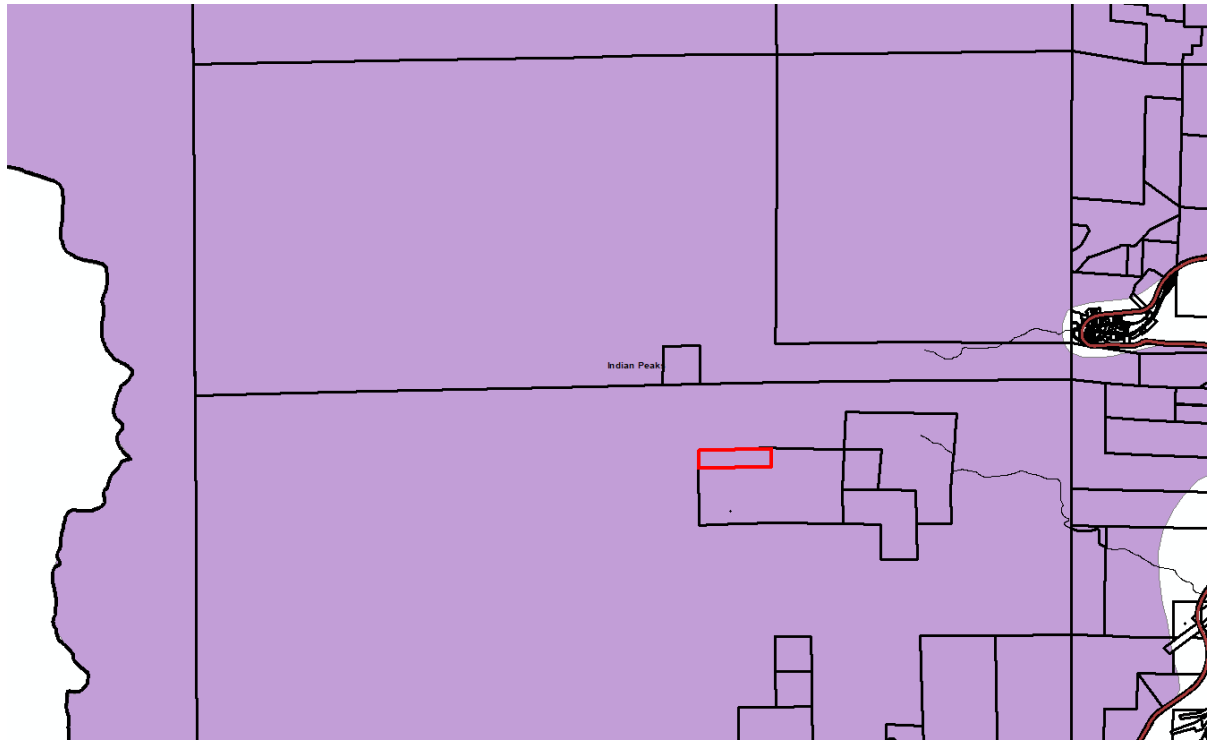
Such impacts would include direct runoff into the lake from the house and driveway. These include oil drippings, grease, salts and other deicers, radiator coolant, fertilizers, pesticides, pet waste, and mud, sand, and gravel. Other household products, chemicals, and litter can enter the lake from the area of outdoor garbage bins, while construction materials and liquids can enter during the months-long construction phase. Intense summer thunderstorms can repeatedly deliver an inch of precipitation, from one storm. All of this local rain flows into the lake.

Since the county has not yet established a standard set-back from waterbodies, staff suggests at least 100 feet be required for this proposal. This would also help to reduce negative impacts to wildlife use of the lake, both during the day and at night when windows throw a “beacon effect.”

Environmental Conservation Area and the Protection of Biodiversity on a Landscape Level

For years, one of staff’s main concerns is the ongoing development of the county’s most remote mountain roads. In the subject case, this is one of a handful of private holdings on County Road 96J, and is located about 3.6 miles from the Peak to Peak Highway. From a natural resource perspective, it is highly undesirable that these most-remote parcels are being developed. Such developments significantly increase habitat fragmentation in the county. See Figure 5.

Figure 5. The subject parcel within the context of part of the Environmental Conservation Area.



Habitat fragmentation in core habitat landscapes is a primary cause of biodiversity loss. This is a significant negative impact to the county's largest, and in some ways most important, Environmental Conservation Area – the Indian Peaks ECA.

In the Boulder County Comprehensive Plan, the first Goal for Environmental Management is that, “Unique or distinctive...ecosystems...should be conserved and preserved in recognition of the irreplaceable character of such resources and their importance to the quality of life in Boulder County” (page 2, Goals). Further, “Boulder County’s overarching intention is to maintain the overall health and integrity of our rich and diverse environment *to the greatest extend possible...* (page 2, Environmental Resources Element; emphasis added).

Specific to ECA’s, policies state that “ECA’s are a planning tool...for analyzing land use[s]...in the context of the cumulative effects of developments, roads, trails, and increased human presence at a landscape-scale on these large and complex ecosystems. This land use decision-making tool is used as a strategy for maintaining the wide-ranging animal species, native plant communities, and natural ecological processes that operate at this landscape scale.”

When considering habitat fragmentation, whether the proposed residence is “large” or “small” is unimportant; there are unavoidable human impacts that result from any residence. Staff is also concerned with the long-term possibilities on the subject parcel. If the proposal is constructed, a subsequent landowner could easily propose additional outbuildings if the use is for agriculture or forestry. This is a large parcel – about 38 acres.

Impacts to wildlife from wide-ranging, free-roaming dogs are a likely result of residential

development in an area that currently has minimal developments. Even if such roaming does not occur with the current landowner, it could be a daily occurrence via a future owner. Domestic cats have also consistently been identified as major predators of native bird and small mammal species (Loss et.al. 2013).

Lynx Habitat

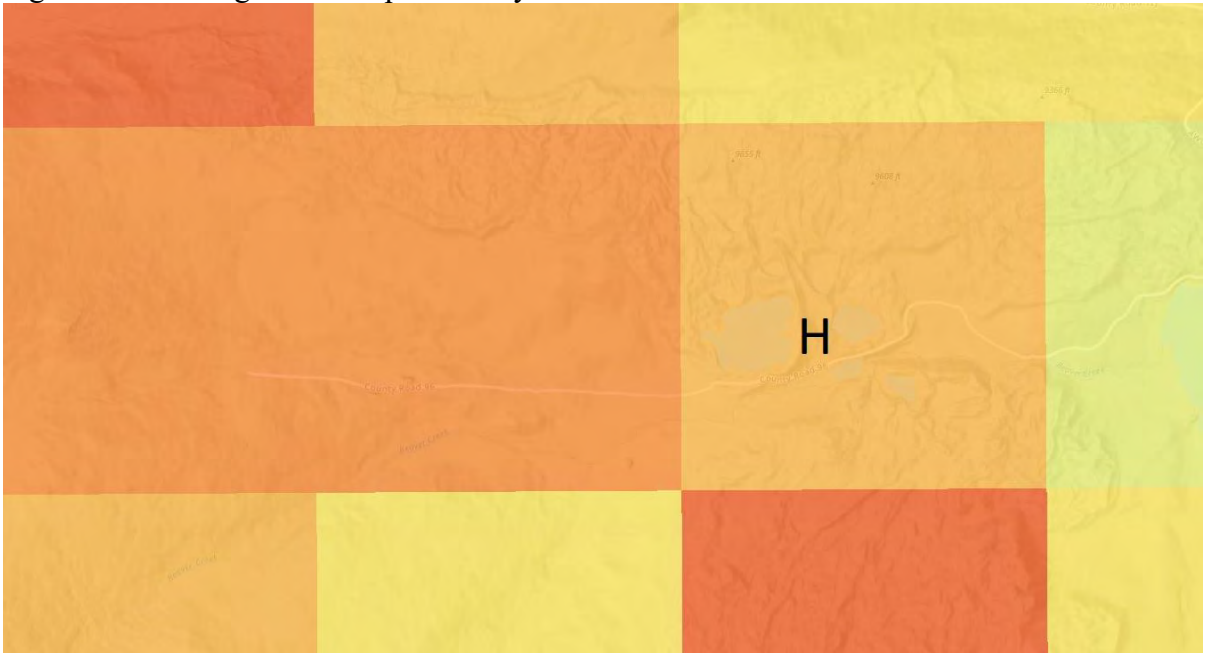
Canada lynx have been a Boulder County “species of concern” for about 30 years (BOCO 1994). Colorado’s population is the southernmost in the country (Armstrong, et. al, 2011). Lynx are federally listed as a threatened species, and state-listed as endangered. Radio and satellite-collared lynx have been repeatedly found in Boulder County during the state’s reintroduction program, over the years 1999 to 2010 (Theobald and Shenk, 2010). The subject parcel is surrounded by a large area of potential lynx habitat, as mapped by Colorado Parks and Wildlife– Figure 6.

Figure 6. Mapped potential lynx habitat. Red box is subject parcel.



More precise modeling results by Parks and Wildlife show that the “probability of observing” lynx (within the study’s parameters) varies from 53 to 67 percent in the summer, while in the winter it is 40 to 60 percent. These are high figures – the highest cohort starts at 68 percent. Figure 7 shows summer modeling. The data are “pixelated,” and the darker the color, the higher the probability of observing.

Figure 7. Modeling results of probable lynx use – summer. “H” is house site.



On the state level, the longest and perhaps most important, landscape-level wildlife *movement linkage* in Colorado stretches from Kenosha Pass on the south, north to the Wyoming border, spanning the Continental Divide (SREP 2005). The subject locale is nearly in the middle of this linkage – by both latitude and elevation. Among other wide-ranging species such as wolverine and wolf, this linkage is centered on the landscape movement requirements of lynx. Lynx are a species that require large undeveloped areas to persist. The proposal would further fragment such habitat.

Recommendation

- The above discussions should be considered during review.

Literature Cited

Armstrong, David M., James P. Fitzgerald and Carron A. Meaney, 2011, *Mammals of Colorado*, Denver Museum of Nature and Science and University Press of Colorado, second edition, 620 pp.

Boulder County Parks and Open Space (BOCO), 1994, *Animal Species of Special Concern in Boulder County*, 8 pp.

Loss, Scott R., Tom Will and Peter P. Marra, 2013, The impact of free-ranging domestic cats on wildlife of the United States, Smithsonian Conservation Biology Institute & U.S. Fish & Wildlife Service, published online, *Nature Communications*, January 23.

Southern Rockies Ecosystem Project (SREP), 2005, Linking Colorado's Landscapes – A Statewide Assessment of Wildlife Linkages, Phase I, in collaboration with Colorado Department of Transportation, U.S. Department of Transportation, The Nature Conservancy, and Colorado State University,

Theobald, David M. and Tanya M. Shenk, 2011, Areas of high habitat use from 1999-2010 for radio-collared Canada lynx reintroduced to Colorado, Colorado Division of Wildlife, Denver.



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
 303-441-3930 • www.BoulderCounty.gov

Wildfire Mitigation Team

MEMO

TO: Amber Knotts, Planner I
FROM: Kyle McCatty, Wildfire Mitigation Specialist
DATE: June 13, 2023
RE: Referral Packet and Public Notice for LU-23-0019/SPR-23-0036: Orris Residence project at 3305 County Road 96J

Thank you for the referral. We have the following comments for the applicants:

Decades of catastrophic wildfires, research, and case studies have shown that extreme wildfires are inevitable in the forests of Boulder County and across the Western US. Still, the loss of life and homes does not have to be inevitable. The conditions that principally determine if a house ignites occur within 100 feet of the house, including the house itself. That is why Boulder County has such strong wildfire mitigation requirements in our Land Use and Building Code. Boulder County encourages all homeowners to voluntarily take responsibility to mitigate their own home's risk of igniting in a wildfire through Wildfire Partners.

Wildfire Mitigation is required; the proposed project is in [Wildfire Zone 1](#) (the foothills or mountains—approximately west of highways 7, 36, or 93) of the unincorporated portion of Boulder County. The Boulder County Wildfire Mitigation requirements are composed of site location, ignition-resistant materials and construction, defensible space, emergency water supply, and emergency vehicle access.

Site Location

A Boulder County Wildfire Mitigation Specialist has reviewed the site location as part of the Site Plan Review process, and no conflicts have been identified.

Ignition-Resistant Materials and Construction

Since the proposed development is located within a potentially hazardous area, all exterior building materials (including any proposed decking) must be ignition-resistant construction or better.

For additional ignition-resistant construction information, please contact the Building Safety & Inspection Services Team at 303-441-3926. Refer to the Boulder County publication: [Building with Ignition Resistant Materials](#) for specific requirements. All exterior materials must be clearly noted on the building plans and must be reviewed and approved as "ignition resistant" by the Building Safety & Inspection Services Team.

Claire Levy County Commissioner

Marta Loachamin County Commissioner

Ashley Stolzmann County Commissioner

Defensible Space

Adequate defensible space is required for all structures on the property with any utilities to prevent the spread of fire to and from structures. This requires limbing and/or removal of trees and shrubs to provide necessary vertical and horizontal fuel separation within a minimum of 100 ft. from the home and within 30 ft. along both sides of a driveway. More information can be found by referring to the Colorado State Forest Service publication [Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones – 2012 Quick Guide](#).

Follow the Colorado State University [FireWise Plant Materials – 6.305](#), [Fire-Resistant Landscaping – 6.303](#), and Colorado State Forest Service [Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones – 2012 Quick Guide](#) publications when choosing plants and designing revegetation and landscaping.

Emergency Water Supply

An emergency water supply is required to aid in the defense of the structures from a wildfire and assist in firefighting efforts. The Indian Peaks Fire Protection District typically requires an individual cistern in lieu of contributing to a community cistern fund. Contact Chief Sequoia Zahn of the Indian Peaks Fire Protection District for their individual cistern requirements at sequoiazahn@gmail.com; 303-459-9062; or 303-618-1579. If installing an individual cistern and the Fire Protection District does not have its own installation requirements follow the Boulder County publication: [Emergency Water Supply for Firefighting](#).

Emergency Vehicle Clearance

Emergency vehicle clearance is required to allow for safe ingress and egress of emergency vehicles. Emergency personnel try their best to respond to calls in a timely manner, often while negotiating difficult terrain. Planning for access by emergency vehicles improves safety for homeowners and their families by providing for a more efficient response by firefighters and other emergency personnel arriving on the scene. This is especially important in rural and mountainous areas where response times may be considerably longer than in cities, where emergency services are closer by. Refer to the Boulder County publication: [Driveway Access for Emergency Vehicles](#) for specific clearance-related requirements.

Timeline

After applying for, but prior to issuance of any permits, a Boulder County Wildfire Mitigation Specialist will contact you to schedule a Wildfire Partners or Regulatory Wildfire Mitigation assessment and defensible space marking. Based upon the compliance path selected, either a Wildfire Partners Assessment report or a Wildfire Mitigation Plan will be created to describe the wildfire mitigation requirements.

Before scheduling rough framing inspections, the plan's defensible space and water supply portion must be implemented and inspected by the Community Planning & Permitting Department. All trees marked for removal must be cut, and all slash, cuttings, and debris must be removed and/or properly disposed of. The [Fire Sprinkler or Fire Cistern Approval Form](#) must be submitted to the Boulder County Building Safety & Inspection Services at ezbp@bouldercounty.org (or P.O. Box 471, Boulder, Colorado, 80306) after the fire protection district completes the applicable portion of the form. If an individual cistern was required, it must be located on-site in an appropriate location (subject to approval by the fire protection district), fitted with an appropriate dry hydrant connection, and be filled, and tested by the local fire protection district.

At the time of final inspection, all remaining required items in the Wildfire Partners Assessment report or the Wildfire Mitigation Plan are to be fully implemented and inspected. Ground surfaces within three feet of both existing and new structures, and at least 2 feet beyond the driplines of decks, bay windows, and other eaves and overhangs, must be covered with an allowable non-combustible ground cover over a weed barrier material. The driveway vertical and horizontal vegetation clearance must be in place and conform to the Parcel Access Design Standards in the [Boulder County Multimodal Transportation Standards](#).

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum land use and building code requirements. I can be reached at 720-564-2625 or via e-mail at kmccatty@bouldercounty.org.

From: [McCatty, Kyle](#)
To: [Knotts, Amber](#); [#WildfireMitigation](#)
Subject: RE: Referral Inquiry-LU-23-0019/SPR-23-0036
Date: Tuesday, January 30, 2024 1:52:37 PM
Attachments: [image001.png](#)

Yes, it will. In that case, I'd add if there are wildland fuels within at least 75 feet of the residence, the residence either needs to be at least 75 feet away from all property lines, or the following more restrictive increased ignition-resistant exterior materials are required:

- Double pane tempered glass is required within at least 50 feet of property lines.
- Wood and fire-retardant-treated wood are not allowed.
- Heavy timber (IBC Section 602.4) and log wall construction (see definition in R327) are allowed.
- Deck surface must be an ASTM E84 (UL 723) flame-spread index no greater than 75.

Please let me know if that will work or if you need a new referral response. If it is the latter, I can get it to you by the end of the day.

Thanks,
Kyle

From: [Kryszczuk, Lauren - FS, CO](#)
To: [Knotts, Amber](#)
Subject: [EXTERNAL] 07/25/2023 Following Up Referral Packet and Public Notice for LU-23-0019/SPR-23-0036: Orris Residence project at 3305 County Road 96J
Date: Tuesday, July 25, 2023 11:18:57 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Good afternoon Amber,

I am getting myself caught up on Boulder County inquiry emails this morning. In your working with these applicants, can you kindly remind them to have their private property surveyed by a licensed surveyor to avoid any/all encroachments on the federal taxpayer's land. Also, if they need to apply for a road permit I am the person to reach out to at the Boulder Ranger District.

Thank you for passing this information along. Have a nice day!



Lauren Kryszczuk
Realty and Land Specialist
Forest Service
Arapaho and Roosevelt National Forests and
Pawnee National Grassland
Boulder Ranger District

c: 720-708-0988
o: 303-541-2534
lauren.kryszczuk@usda.gov

2140 Yarmouth Avenue
 Boulder, CO 80301
www.fs.fed.us



Caring for the land and serving people

From: Milner, Anna <amilner@bouldercounty.org>
Sent: Friday, May 26, 2023 10:08 AM
To: #WildfireMitigation <WildfireMitigation@bouldercounty.org>; Historic <historic@bouldercounty.org>; #CodeCompliance <codecompliance@bouldercounty.org>; !LongRange <longrange@bouldercounty.org>; nfishbein@tnc.org; office@svlhwcd.org; scott.griibling@svlhwcd.org; BDRCO@xcelenergy.com; Donna.L.George@xcelenergy.com; Vanessa McCracken <bldrvalleyandlongmontcds@gmail.com>; CSFS_Boulder@mail.colostate.edu; hc_filesearch@state.co.us; Kryszczuk, Lauren - FS, CO <Lauren.Kryszczuk@usda.gov>; sequoiazahn@gmail.com; Atherton-Wood, Justin <jatherton-wood@bouldercounty.org>; Moline, Jeffrey <jmoline@bouldercounty.org>; Flax, Ron <rflax@bouldercounty.org>; Frederick, Summer <sfrederick@bouldercounty.org>; Goldstein, Andrew <agoldstein@bouldercounty.org>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.org>; Huebner,

Michelle <mhuebner@bouldercounty.org>; Northrup, Elizabeth (Liz) <enorthrup@bouldercounty.org>; Sanchez, Kimberly <ksanchez@bouldercounty.org>; Transportation Development Review <TransDevReview@bouldercounty.org>; West, Ron <rowest@bouldercounty.org>

Cc: Knotts, Amber <aknotts@bouldercounty.org>

Subject: [External Email]Referral Packet and Public Notice for LU-23-0019/SPR-23-0036: Orris Residence project at 3305 County Road 96J

[External Email]

If this message comes from an **unexpected sender** or references a **vague/unexpected topic**; Use caution before clicking links or opening attachments.
Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov

Please find attached the electronic public notice and referral packet for **LU-23-0019/SPR-23-0036: Orris Residence** project at **3305 County Road 96J**.

Please return responses and direct any questions to [Amber Knotts](#) by **January 30, 2023**. (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

Best Regards,
Anna

Anna Milner | Admin. Lead Tech.

Boulder County Community Planning & Permitting

Pronouns: she/her/hers

Physical address: 2045 13th St., Boulder CO 80302

Mailing address: PO Box 471, Boulder, CO 80306

(720) 564-2638 (Direct)

amilner@bouldercounty.org

Service hours are 8 a.m.-4:30 p.m. Monday, Wednesday, Thursday, Friday, and 10 a.m.-4:30 p.m. Tuesday

*My core working hours are 7am-5:30pm Tues - Fri

New: Boulder County has a new website: BoulderCounty.gov! Bookmark it today. Email addresses will transition at a later date.

www.bouldercounty.gov



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COLORADO
Division of Water Resources
 Department of Natural Resources

January 29, 2024

Amber Knotts, Planner I
 Boulder County Community Planning & Permitting
 Transmission via email: aknotts@bouldercounty.gov

Re: LU-23-0019/SPR-23-0036, Orris Residence
 Pt. SE¼ of Sec. 22, Twp. 2 N, Rng. 73 W, 6th P.M.
 Water Division 1, Water District 5

Dear Ms. Knotts:

We have reviewed the above-referenced Site Plan Review to construct a 2,990-square foot residence on a vacant approximately 37.7-acre parcel and Limited Impact Special Use Review to permit 1,585 cubic yards of earthwork for driveway development. The submitted material does not appear to qualify as a “subdivision” as defined in section 30-28-101(10)(a), C.R.S. Therefore, pursuant to the State Engineer’s March 4, 2005 and March 11, 2011 memorandums to county planning directors, this office will only perform a cursory review of the referral information and provide comments regarding the proposed water supply. The comments will not state an opinion on the adequacy of the water supply or the ability of the water supply plan to satisfy any County regulations or requirements, and cannot be used to guarantee the physical availability of water.

The proposed source of water supply for the subject property is a well to be constructed. The parcel is greater than 35 acres in size, therefore it is anticipated that this office could issue a permit to construct a new well on the parcel that could be used for fire protection, ordinary household purposes inside not more than three single-family dwellings, the watering of poultry, domestic animals and livestock on a farm or ranch, and the irrigation of not more than one acre of home gardens and lawns. A final determination of the ability of the lot owner to obtain a permit to construct a new well and the allowed use of the well will be made at the time a well permit application is received by this office.

This office has no concerns with the proposed Site Plan Review and Limited Impact Special Review. Should you or the applicants have any questions regarding this matter, please contact Kate Fuller of this office at 303-866-3581 ext. 8245 or kathleen.fuller@state.co.us.

Sincerely,

Kate Fuller, P.E.
 Water Resources Engineer

Cc: Applicants’ Agent (Sam Nishek, sam@barrettstudio.com)
 Referral file no. 31168



COLORADO GEOLOGICAL SURVEY

1801 Moly Road
Golden, Colorado 80401



Matthew L. Morgan
State Geologist and
Director

January 23, 2025

Amber Knotts
Boulder County Community Planning & Permitting
aknotts@bouldercounty.gov

Location:
0.1182, -105.5451

Subject: LU-23-0019/SPR-23-0036: Big Lake LLC Residence & Driveway at 3310 County Road 96J Boulder County, CO; CGS Unique No. BO-24-0009-2

Dear Amber:

At your request (January 9, 2025), the Colorado Geological Survey has reviewed the LU-23-0019/SPR-23-0036: Big Lake LLC Residence & Driveway (aka Orris Residence) at 3310 County Road 96J resubmittal. The available referral documents include:

- Geotechnical Evaluation Report, 3305 Co Rd 96J, Ward, CO 80481 (American Geoservices Project No. 0206-B24, July 23, 2024)

Provided the recommendations in American Geoservices' Geotechnical Evaluation Report are adhered to, the Colorado Geological Survey has no objection to approval of LU-23-0019 and SPR-23-0036.

Thank you for the opportunity to review and comment on this project. If you have questions or need further review, please call me at (303) 384-2643, or e-mail carlson@mines.edu.

Sincerely,

A handwritten signature in black ink, appearing to read "Jill Carlson".

Jill Carlson, C.E.G.
Engineering Geologist



Planner

Boulder County Planning and Permitting

Re: Docket LU-23-0019/SPR-23-0036

To Whom it May Concern:

Thank you for allowing us the opportunity to comment on the Orris Residence docket. The Conservation Districts conducted an extensive review. Since the new house proposed is along the shoreline of Stapp Lake, care should be taken to ensure there is no stormwater/snowmelt runoff directly into the pristine lake waters and any disturbed areas for the building site and the new access road should be monitored and controlled for invasive weeds as the landscape recovers.

Regards,

Vanessa McCracken

Vanessa McCracken
District Manager
Boulder Valley & Longmont Conservation Districts



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303.571.3284
Donna.L.George@xcelenergy.com

January 14, 2025

Boulder County Community Planning and Permitting
PO Box 471
Boulder, CO 80306

Attn: Amber Knotts

Re: Orris Residence - Revised, Case # SPR-23-0036 and LU-23-0019

Public Service Company of Colorado's Right of Way & Permits Referral Desk has **no apparent conflict** with **Orris Residence – Revised**.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: [Wufoo](#)
To: [LU Land Use Planner](#)
Subject: [EXTERNAL] Ask a Planner - Judy Ward - LU-23-0019 - 3310 County Rd 96J
Date: Tuesday, March 11, 2025 10:02:50 PM

Boulder County Property Address : 3310 County Rd 96J

If your comments are regarding a specific Docket, please enter the Docket number: LU-23-0019

Name: Judy Ward

Email Address: jward2452@me.com

Phone Number: (303) 521-8741

Please enter your question or comment: We have a cabin adjacent to this property. It was built by my husband Tom Ward's mother one hundred years ago, The Oris family are the best neighbor we have ever had. Even though there will be noise to deal with and perhaps some traffic connection, we have no objections to this project.

Public record acknowledgement:

I acknowledge that this submission is considered a public record and will be made available by request under the Colorado Open Records Act.



Community Planning and Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

**BOARD OF COUNTY COMMISSIONERS
PUBLIC HEARING**

April 1, 2025 at 1:00 p.m.

**Boulder County Courthouse, 3rd Floor,
1325 Pearl Street, Boulder
Virtual and in-person**

LU-25-0002 STONE EARTHWORK & GRADING STAFF RECOMMENDATION

DATE PUBLISHED: March 25, 2025

STAFF PLANNER: Pete L’Orange, Senior Planner

Docket LU-25-0002 Stone Earthwork and Grading

Proposal: Limited Impact Special Review for approximately 2,100 cubic yards of non-foundational earthwork on a 1.34-acre parcel.

Location: 650 Longs Peak Drive, a 1.34-acre parcel located approximately 300 feet west of the intersection of Longs Peak Drive and Paragon Drive, in Section 12, Township 1S, Range 70W.

Zoning: Estate Residential (ER) Zoning District

Owner/Applicants: Robert & Diana Stone

Agents: Stewart Architecture, c/o Peter Stewart

PACKET CONTENTS:

Item	Pages
Staff Recommendation	1 – 18
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STAFF RECOMMENDATION:

Staff recommend that the Board of County Commissioners conditionally approve docket LU-25-0002 Stone Earthwork & Grading.

SUMMARY AND RECOMMENDATION:

This application requests Limited Impact Special Review for non-foundational earthwork exceeding 500 cubic yards related to the rebuilding of a Marshall Fire impacted parcel. The non-foundational earthwork is analyzed pursuant to the Special Use Criteria outlined in Article 4-601 of the Boulder County Land Use Code (the Code).

Staff recommend conditional approval of the proposed earthwork with a limitation of the area of earthwork to the south and west of the residence. As conditioned, staff find the proposed earthwork can meet all of the criteria for Limited Impact Special Use Review.

DISCUSSION:

The subject parcel is approximately 1.34 acres in size, located on the north side of Longs Peak Drive, approximately 300 feet west of the intersection of Longs Peak Drive and Paragon Drive in the Paragon Estates subdivision (see Figure 1 below).

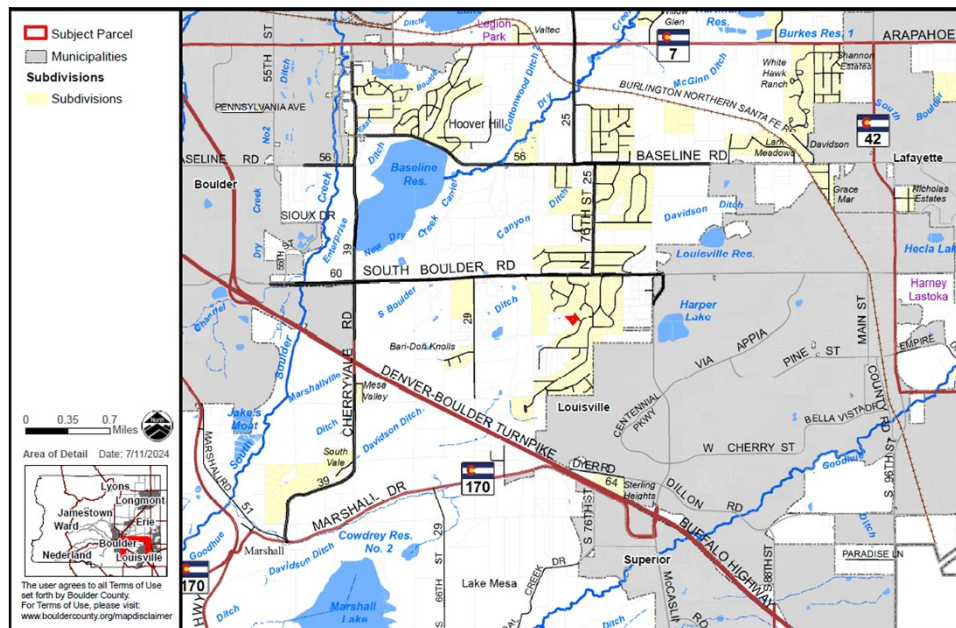


Figure 1: Vicinity Map showing location of the subject parcel.

The Boulder County Comprehensive Plan indicates that there are not any identified environmental resources on the subject parcel (see Figure 2 below), however there is a mapped riparian area immediately south of the subject parcel. There are also some identified Agricultural Lands of Local Importance in the vicinity. The subject parcel is also in an area identified as High Swelling Soil Potential Area (see Figure 3 below).

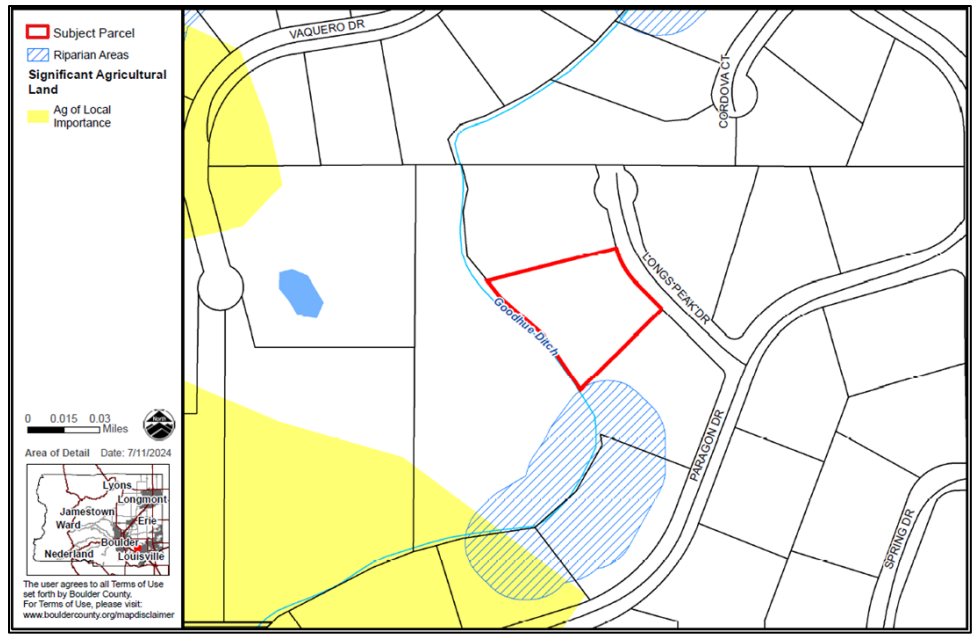


Figure 2: Comprehensive Plan map.

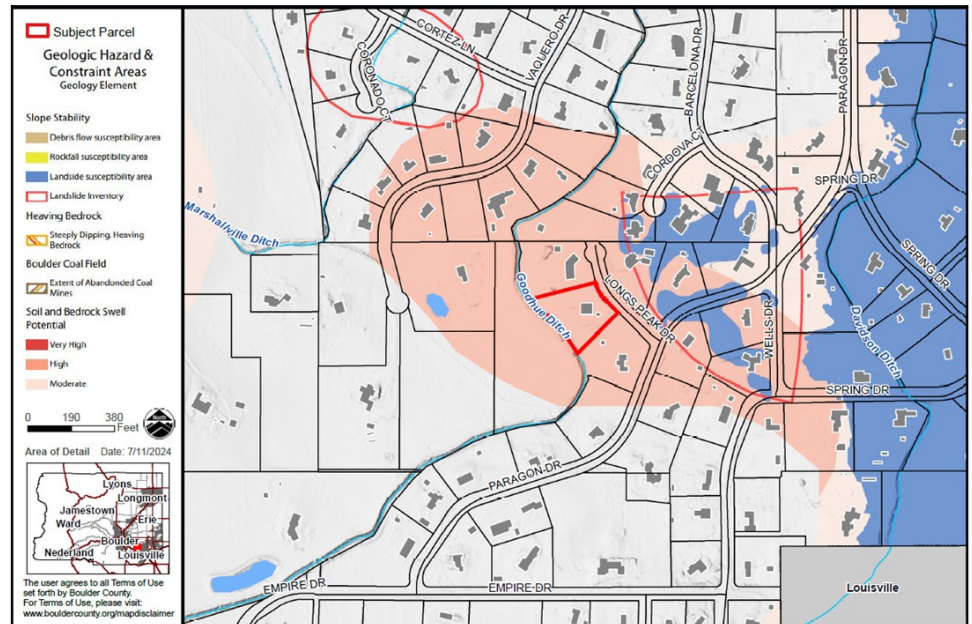


Figure 3: Geological hazards, with identified High Swelling Soil Potential areas indicated in dark pink.

PROPOSAL:

The subject parcel was impacted by the December 2021 Marshall Fire, and the previous residence was destroyed during that event. In 2024, the property owners applied for and received a building permit for a new 5,929-square-foot residence with attached garage through the Article 19-500 provisions of the Code (BP-24-0733); the residence is currently under construction. The work approved through Article 19-500 included approximately 497 cubic yards of non-foundational earthwork (see Figure 4 below).

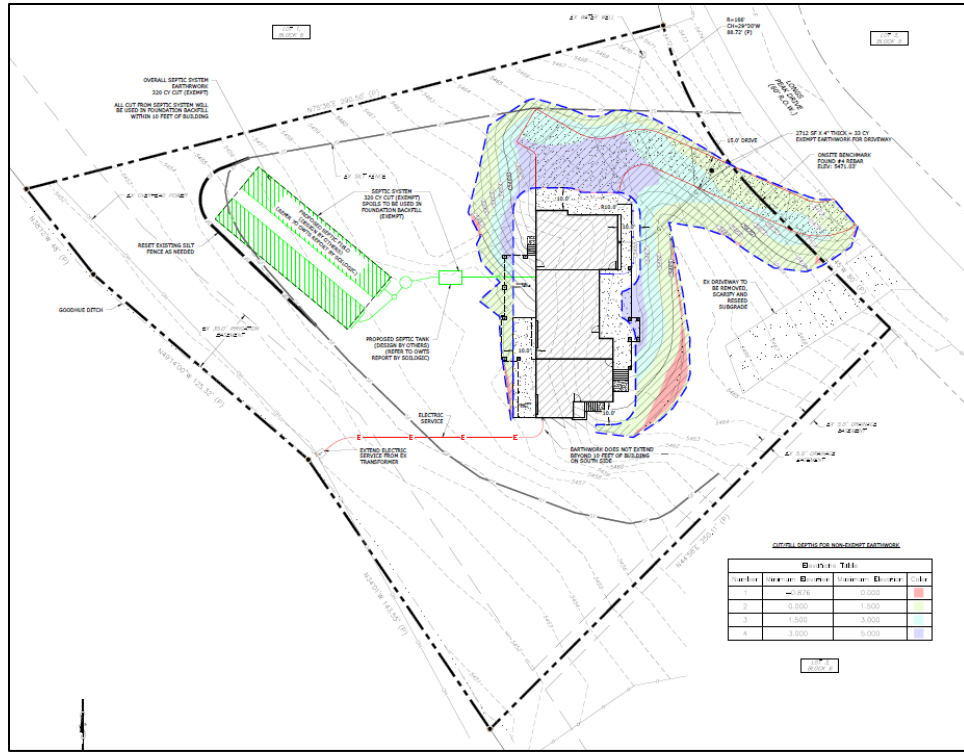


Figure 4: Grading plan approved through Article 19-500.

Subsequent to that building permit, the applicants have proposed additional non-foundational earthwork, now totaling 2,136 cubic yards. This earthwork is intended to flatten both the front and rear yard areas, to allow for the construction of an additional parking pad next to the garage on the north side of the residence, and to reduce the runoff on to the adjacent parcel (see Figures 5 and 6 below). The proposal will include 234 cubic yards of cut and 1,902 cubic yards of fill – 53 cubic yards of fill related to the proposed parking pad and 234 cubic yards of cut and 1,849 cubic yards of fill related to flattening of the front and rear yard areas.

Per Article 4-104.F.3.b of the Code, earthwork and grading in excess of 500 cubic yards in the Estate Residential zoning district may be approved through a Limited Impact Special Review. Staff find that, as conditioned, the proposal can meet all of the applicable criteria set forth in Article 4-601.A of the Code. As such, staff recommend approval of the proposed earthwork subject the recommended conditions of approval discussed below.

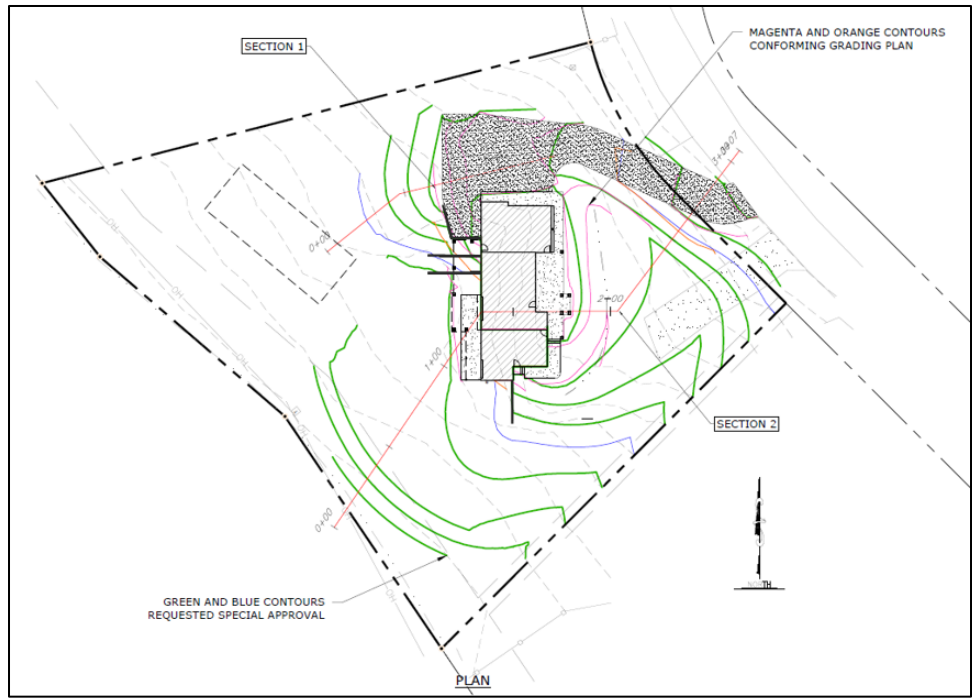


Figure 5: Plan for additional earthwork, with proposed contours indicated in green and blue lines.

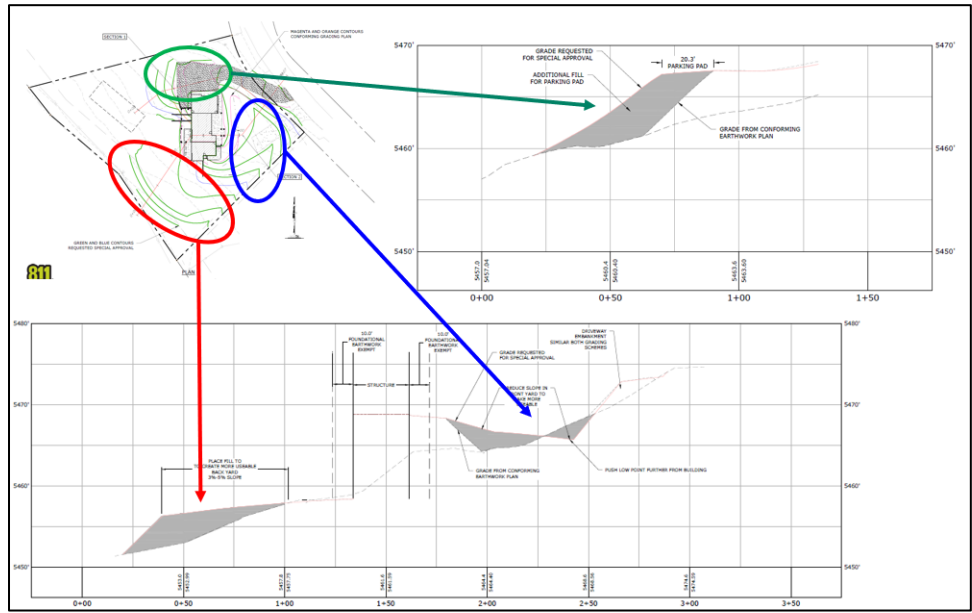


Figure 6: Additional earthwork plan shown in Figure 5 with grading profiles for the parking pad indicated in green, the front yard indicated in blue, and the rear yard indicated in red.

REFERRALS:

This application was referred to the typical agencies, departments, and nearby property owners within 1,500 feet of the property. All responses received are attached and summarized below.

Boulder County Building Safety and Inspection Services Team: Boulder County Building Safety and Inspection Services reviewed the proposal and responded that the proposed grading will require permitting. They also noted that observation reports from the design professional responsible for the design or a similarly qualified Colorado-licensed design professional will be required for the proposed earthwork and grading. A more detailed plan review will be performed at the time of permit application, when full details are available, to assure that the proposal will meet all applicable minimum requirements.

Boulder County updated the Building Code Amendment in January 2025; the effective date for this new code is March 31, 2025. Any building permit applications submitted as of the effective date will be subject to the new building code amendments.

Boulder County Development Review Team – Access & Engineering: Boulder County Development Review Team – Access & Engineering Group (A&E) reviewed the proposal and noted that the driveway must meet the Boulder County Multimodal Transportation Standards (MMTS). They also provided comment on the drainage requirements for the subject parcel and recommended several conditions of approval related to managing drainage and runoff.

Boulder County Parks & Open Space – Natural Resources Planner: The Natural Resources Planner reviewed the proposal and expressed concern about the amount and extent of the proposed grading in the southwest portion of the subject parcel. They recommended limiting the grading in that area to the existing silt fence location.

Goodhue Ditch Company: This agency reviewed the application and stated that any work impacting the ditch would require an agreement between the property owners and the ditch company. They also stated that no fill material could be placed within the ditch or ditch easement and that ditch bank slopes must be maintained to allow equipment access along the ditch; they noted the proposed slope of approximately 14% adjacent to the ditch could be hazardous for various pieces of ditch equipment and would make ditch cleaning and debris removal more difficult in that area. They also requested additional information on the septic system and stormwater flow and control measures.

Colorado Division of Water Resources: This agency reviewed the application and noted that the property's ability to obtain a well permit will be reviewed upon application and provided guidance on that process.

Xcel Energy: This agency's referral response noted that Xcel owns and operates existing underground electrical facilities on the subject parcel. They also stated that the property owner or their agent will need to complete the Xcel application process for any new electric service, or modification to existing facilities.

Lumen Communications: This agency reviewed the application and noted that there are underground facilities within the project area and the project will need to be reviewed by their engineers to determine if there is any conflict.

Adjacent Property Owners: Notices were mailed to 112 nearby property owners. Staff did not receive any public comments.

Agencies that sent a response indicating no conflicts include: Boulder County Public Health; and Mountain View Fire Protection District.

Agencies that did not respond include: Boulder County Long Range Planning; Boulder County Stormwater Team; the City of Boulder Planning and Development Services Department; and the City of Louisville Planning Department.

LIMITED IMPACT SPECIAL REVIEW SUMMARY:

The Community Planning & Permitting staff reviewed the conditions and standards for approval of a Limited Impact Special Review. Staff has reviewed these standards as they apply to the proposed non-foundational earthwork.

- (1) *Complies with the minimum zoning requirements of the zoning district in which the use is to be established, and will also comply with all other applicable requirements;***

The subject parcel is zoned Estate Residential and is a legal building lot. Per Article 4-104.F.3.b of the Code, Limited Impact Special Review is required for grading exceeding 500 cubic yards. The applicants have proposed approximately 2,136 cubic yards of non-foundational earthwork. Specifically, they have proposed 53 cubic yards of fill related to the proposed parking pad, and 234 cubic yards of cut and 1,849 cubic yards of fill related to flattening of the front and rear yard areas. Per the referral response from the Boulder County Building Safety & Inspection Services Team, the proposed earthwork will require a grading permit. A qualified Colorado-licensed design professional must observe the grading and submit an observation report to ensure that the work is completed in substantial conformance with the approved engineered plans. Staff recommend as conditions of approval that grading permits are obtained, and that the grading observation and associated report be carried out per the referral response. In addition to the grading permit requirements, the plans as submitted include several retaining walls over four feet in height. All retaining walls that are four feet tall or taller, as measured from the top of wall to the wall footing, must be designed by a structural engineer. Staff recommends as a condition of approval that the plans submitted for permitting for any retaining walls four feet or taller be signed and sealed by a structural engineer.

The submitted grading plans show a significant amount of earthwork within both the 20-foot and 50-foot setbacks for the Goodhue Ditch (see Figure 7 below). Per the Goodhue Ditch Company, no permission has obtained from them for work within this setback. As such, staff find that the proposed work within the ditch setback is not in compliance with this criterion. As discussed in more detail and

conditioned in Criterion 4 below, staff recommend that the proposed earthwork be reduced so as to avoid any work within the ditch setback.

In addition to the ditch setbacks, there is a five-foot drainage easement on the southeastern (side) lot line of the subject parcel, as outlined in the Access & Engineering referral response. As such, no grading can occur within this easement. Staff recommends as a condition of approval that revised plans be submitted for permit which do not include any grading within the five-foot drainage easement.



Figure 7: Proposed grading plan overlaid on zoning map with ditch setback.

Finally, when staff conducted a site visit on February 26, 2025, staff observed a significant amount of dirt on the subject parcel. Based on conversation with the property owners on-site during that site visit, much of this material was imported from other Marshall Fire impacted properties. Per Article 5-16.Q of the Code, any earthwork over 50 cubic yards requires some level of review, and per Article 4-104.C.12 earthwork over 500 cubic yards requires Limited Impact Special Review. While the exact amount of material imported to the subject parcel is not known, staff estimate it to be well over 50 cubic yards. As such, review and permitting would have been required. As discussed in more detail under Criterion 10 below, staff find that the imported material should be removed from the subject parcel and recommend removal of the material as a condition of approval.

Therefore, as conditioned here and in Criteria 4 and 10 below, staff find this criterion can be met.

- (2) Will be compatible with the surrounding area. In determining compatibility, the Board should consider the location of structures and other improvements on the site; the size, height and massing of the structures; the number and arrangement of structures; the design of structures and other site features; the proposed removal or addition of vegetation; the extent of site disturbance, including, but not limited to, any grading and changes to natural topography; and the nature and intensity of the activities that will take place on the site. In determining the surrounding area, the Board should consider the unique location and environment of the proposed use; assess the relevant area that the use is expected to impact; and take note of important features in the area including, but not limited to, scenic vistas, historic townsites and rural communities, mountainous terrain, agricultural lands and activities, sensitive environmental areas, and the characteristics of nearby development and neighborhoods;**

For purposes of this review, staff considers the platted subdivision of Paragon Estates as the surrounding area for the subject parcel, which is consistent with the Site Plan Review defined neighborhood as defined in Article 4-806.A.1 of the Code. Existing development within this area consists primarily of single-unit dwellings and undeveloped parcels; many of the currently undeveloped parcels previously had residences which were destroyed during the Marshall Fire.

Many of the other parcels in the surrounding area have slopes similar to the existing slope on the subject parcel. Staff find that creating a large, flat area over most of the subject parcel as proposed would not be in character with the other parcels in the area. This is especially true on the western portion of the subject parcel, where the change in terrain would be especially visible. This is in contrast to the eastern portion of the subject parcel, where the proposed change in terrain will be tucked between the house and Longs Peak Drive, which is uphill from the residence location. Staff find the proposed earthwork in this area would not significantly impact the character of the area. However, staff find the reduction in earthwork as discussed and recommended as a condition of approval in Criterion 4 below will help to ensure that the proposed earthwork remains compatible with the surrounding area.

Therefore, as conditioned in Criterion 4 below, staff find that this criterion can be met.

- (3) The use will be in accordance with the Comprehensive Plan;**

As discussed above, there not any environmental resources identified in the Boulder County Comprehensive Plan on the subject parcel (see Figure 2 above); however, there is a mapped riparian area immediately south of the subject parcel. Staff find that the proposed earthwork on the west side of the subject parcel and the resulting changes to drainage patterns on-site (discussed in more detail in Criterion 13 below) has the potential to have adverse impacts on this

riparian area. However, with the reduction in earthwork as discussed and recommended as a condition of approval in Criterion 4 below, staff find that adverse impacts to the riparian area can be avoided.

Staff have not identified any significant conflicts with any specific goals or policies of the comprehensive plan related to the proposed earthwork.

Therefore, as conditioned in Criterion 4 below, staff find that this criterion can be met.

- (4) *Will not result in an over-intensive use of land or excessive depletion of natural resources. In evaluating the intensity of the use, the Board should consider the extent of the proposed development in relation to parcel size and the natural landscape/topography; the area of impermeable surface; the amount of blasting, grading or other alteration of the natural topography; the elimination or disruption of agricultural lands; the effect on significant natural areas and environmental resources; the disturbance of plant and animal habitat, and wildlife migration corridors; the relationship of the proposed development to natural hazards; and available mitigation measures such as the preservation of open lands, the addition or restoration of natural features and screening, the reduction or arrangement of structures and land disturbance, and the use of sustainable construction techniques, resource use, and transportation management;***

The area of disturbance proposed by the applicants is approximately one acre and the subject parcel is approximately 1.34 acre in size; this would result in approximately 74% of the subject parcel being recontoured. Staff finds this to be an excessive amount of disturbance and recommend that the proposed earthwork be reduced. Specifically, given the potential for adverse impacts to the Goodhue Ditch and the riparian area to the south of the subject parcel, staff recommend as a condition of approval that earthwork related to the rear yard be limited to the existing silt fence as installed to the south of the residence, and then tie into the proposed earthwork for the parking pad on the north side of the residence (see Figure 8 below). Additionally, staff recommend as a condition of approval that plans submitted for permitting reflect this restriction.

Staff find that this will provide the applicants the ability to create the outdoor space they desire, while reducing the total amount of earthwork on the subject parcel and preventing adverse impacts to the riparian area and the ditch. This is also generally consistent with the areas of the subject parcel which have previously been disturbed through the Marshall Fire clean up work and the construction of the new residence. Staff find this will help to limit the potential impacts to areas on the subject parcel which have not previously been disturbed.

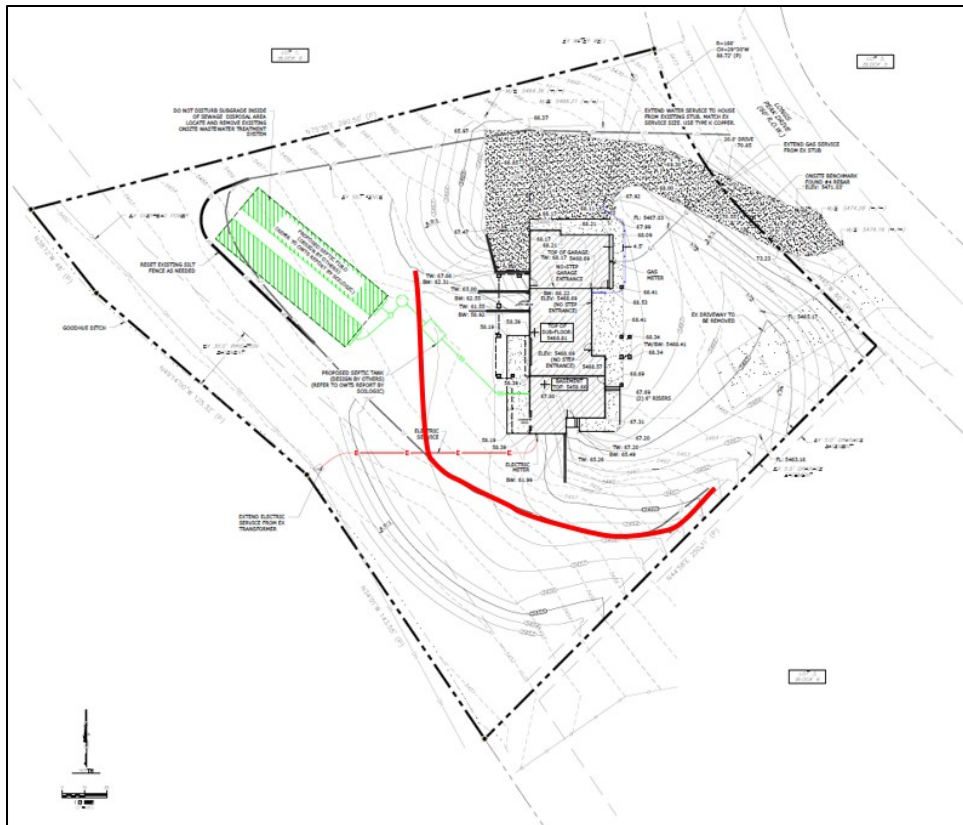


Figure 8: Site plan, with staff recommended limit of area of earthwork to the south and west of the residence indicated in red.

Therefore, as conditioned, staff find that this criterion can be met.

(5) The use will not have a material adverse effect on community capital improvement programs.

Staff have not identified any capital improvement programs which might be impacted by the proposed earthwork; additionally, no referral agency has responded with any such concern.

Therefore, staff find that this criterion is met.

(6) The use will not require a level of community facilities and services greater than that which is available;

Staff did not identify any conflicts related to this criterion and no referral agencies responded with any such concerns.

Therefore, staff find that this criterion is met.

(7) Will support a multimodal transportation system and not result in significant negative impacts to the transportation system or traffic hazards;

The subject property is accessed from Longs Peak Drive, a Boulder County owned and maintained right-of-way (ROW) as shown on the First Addition to Paragon Estates subdivision plat recorded May 27, 1955, at Reception #90556852. Legal access is demonstrated via this platted ROW.

In their referral response, the Access & Engineering Group noted that the driveway as shown the application materials is proposed at 20-feet wide; per the Boulder County Multimodal Transportation Standards (MMTS), the maximum allowed width for driveways in the plains is 16 feet. The driveway approved through Article 19-500 was 15 feet wide. To ensure that the driveway meets the MMTS, staff recommend as a condition of approval that plans submitted for permitting demonstrate compliance with the MMTS.

Additionally, to help ensure that the proposed development does not result in any adverse impacts to the transportation system, staff recommend as a condition of approval that, during construction, all vehicles, materials, machinery, dumpsters, and other items must be staged on the subject property.

Therefore, as conditioned, staff find this criterion can be met.

(8) *Will not cause significant air, odor, water, or noise pollution;*

Staff have not identified any potential air, odor, or noise pollution which might result from the proposed earthwork, and no referral agencies have responded with any such concerns.

However, staff find the proposed earthwork has the potential to result in water pollution due to increased runoff and drainage being directed to the Goodhue Ditch. This is especially true during construction when the subject parcel has active disturbance. To reduce the potential for runoff resulting in pollution into the ditch, staff recommends as a condition of approval that appropriate erosion control measures be installed downslope of any areas of disturbance during construction and until the site is revegetated. Additionally, staff recommends standard revegetation of all disturbed areas as a condition of approval.

As discussed in more detail in Criterion 13 below, staff find that the proposed earthwork in the southwest portion of the subject parcel actively directs drainage towards the ditch. This increased drainage has the potential of result in pollutants entering the ditch. However, as conditioned in Criterion 4 above, staff finds that reducing the area of disturbance, in conjunction with the recommended conditions related to erosion control and revegetation, can help to reduce the potential for runoff leading to water pollution.

Therefore, as conditioned here and in Criterion 4 above, staff find this criterion can be met.

(9) Will be adequately buffered or screened to mitigate any undue visual impacts of the use;

With the recommended condition for revegetation, staff find the proposed earthwork will not result in any undue visible impacts; additionally, no referral agencies have responded with any such concerns.

Therefore, as conditioned in Criterion 8 above, staff find this criterion can be met.

(10) The use will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County;

As discussed above, staff observed a significant amount of cut material on the subject parcel during a site visit. Based on conversations with the property owners on-site, this material was imported from other Marshall Fire properties. Due to the risk of soil contamination from fire debris and ash, the county required that all demolition contractors for Marshall Fire impacted properties to remove debris and ash so that the property is visually clean and must remove soil over impacted areas. If the depth of the removal is between three and six inches, soil testing is also required to test for the presence of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and/or silver. Alternately, contractors may elect to remove 12 inches of soil, in which case no testing is required. Staff does not know where the stockpiled material on the subject parcel came from. As such, staff does not know whether it came from any contaminated sites.

Staff finds the use of potentially contaminated soil as fill on the subject parcel poses a significant potential health risk to both the current residents and any future residences, especially should a resident on the subject parcel decide to grow any vegetables on site. If the soil is contaminated, it also poses the risk of leeching into groundwater in the area, which could spread the contamination farther. Therefore, staff recommend as a condition of approval the stockpiled material be removed from the subject parcel and properly disposed of at an appropriate landfill site. Additionally, staff recommends as condition of approval that Haul Receipts from an approved landfill for the soil removed be submitted for verification.

Therefore, as conditioned, staff find this criterion can be met.

(11) The use will establish an appropriate balance between current and future economic, environmental, and societal needs by minimizing the consumption and inefficient use of energy, materials, minerals, water, land, and other finite resources;

Staff have not identified any concerns or conflicts with this criterion in relation to the proposed earthwork; additionally, no agencies have responded with any such concerns.

Therefore, staff find this criterion is met.

- (12) *The use will not result in unreasonable risk of harm to people or property – both onsite and in the surrounding area – from natural hazards. Development or activity associated with the use must avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors; all as identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Special Review or Limited Impact Special Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies;***

As discussed above, the subject parcel is located within a High Swelling Soil Potential area as identified in the Boulder County Comprehensive Plan. However, staff find that there is no way to avoid this area, as the designated area covers the entirety of the subject parcel. A soils report was submitted as part of the building permit application which recommended specific compaction methods and requirements for the subject parcel. Staff recommends as a condition of approval that these methods and requirements be followed for the proposed non-foundational earthwork as well. The recommended condition of approval for observation reports as discussed in Criterion 1 above will help to ensure that this occurs during construction.

Therefore, as conditioned here and in Criterion 1 above, staff find that this criterion can be met.

- (13) *The proposed use shall not alter historic drainage patterns and/or flow rates unless the associated development includes acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application;***

As discussed above, staff find that the earthwork as proposed would result in significant alterations to historic drainage patterns and flow rates. Specifically, the proposed grading along the southern parcel line and the steep slopes of the proposed grading in the southwest corner of the subject parcel actively direct runoff toward the Goodhue Ditch and, given the slope of these areas, staff finds that the flow rate of the runoff would likely be significantly increased. The recommended conditions of approval discussed in Criterion 4 above to reduce the proposed earthwork in the southwest corner of the subject parcel and to prohibit any grading in the five-foot drainage easement along the eastern property line will help to reduce the potential for these impacts. Additionally, the proposed project must comply with the Boulder County Storm Drainage Criteria Manual (SDCM). As discussed in the Access & Engineering referral response, staff find that a drainage letter is necessary to determine the exact impacts to the Goodhue Ditch and to ensure that the proposed project is in compliance with the SDCM. As such, staff recommend as a condition of approval that a drainage letter be submitted to the county before permit application for review and approval and that plans submitted for permitting demonstrate compliance with SDCM.

If the drainage letter determines that there will be any increase in volume or rate of runoff, approval from the Goodhue Ditch will be required. However, given the potential of impacts to the Goodhue Ditch in general, staff recommends as a condition of approval that the applicants submit documentation of approval from the Goodhue Ditch Company prior to the issuance of any grading permits.

Per the Access & Engineering referral response, if the total area of disturbance is one acre or more in size, a Stormwater Quality Permit (SWQP) will be required as a part of Boulder County's water quality protection and Municipal Separate Storm Sewer System (MS4) Construction Program. Staff believe that, with the recommended reduction in grading as conditioned in Criterion 4 above, the area of disturbance will likely be less than one acre; however, to ensure compliance with the MS4 program, staff recommend as a condition of approval that, if the proposed area of disturbance on the plans submitted for permitting is one acre or more in size, the applicants apply for and obtain a SWQP.

Therefore, as conditioned here and in Criterion 4 above, staff find that this criterion can be met.

RECOMMENDATION:

Staff have determined that, as conditioned and limited to the south and west of the residence, the proposed earthwork can meet all the applicable criteria of the Boulder County Land Use Code for Limited Impact Special Review. Therefore, staff recommend that the Board of County Commissioners **CONDITIONALLY APPROVE Docket LU-25-0002 Stone Earthwork & Grading**, subject to the following conditions:

1. The development is subject to the requirements of the Boulder County Building Safety and Inspection Services Team and adopted County Building Codes, as outlined in the referral comments.
2. A qualified Colorado-licensed design professional must observe the grading and submit an observation report to ensure that the work is completed in substantial conformance with the approved engineered plans.
3. **At building permit**, submit plans for all retaining walls four feet or taller signed and sealed by a structural engineer.
4. **At building permit**, submit revised plans that do not propose any grading within the five-foot drainage easement.
5. The grading proposed for the front yard area east of the residence and for the parking pad north of the residence is approved as proposed. The extent of the earthwork related to the rear yard is limited to the existing silt fence as installed to the south of the residence and then going north to tie into the proposed earthwork for the parking pad on the north side of the residence as reflected in Figure 8 in the staff recommendation. **At building permit**, submit revised grading plans and grading calculations which reflect this restriction for county staff review and approval.
6. The driveway design must comply with the Standards for residential development, including without limitation:
 - Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
 - Standard Drawing 11 – Private Access
 - Standard Drawing 14 – Access with Roadside Ditch
 - Standard Drawing 15 – Access Profiles Detail
 - Standard Drawing 16 – Access Grade & Clearance

At building permit, submit revised plans that show a driveway width that complies with the Boulder County Multimodal Transportation Standards, a driveway cross slope that complies with the standards, and surfacing material callouts that comply with the Standards for county staff review and approval.
7. **During construction, all vehicles**, materials, machinery, dumpsters, and other items must be staged on the subject property.
8. **Prior to issuance of building permits**, details regarding the placement and construction of the silt barrier must be submitted to and approved by the Community Planning & Permitting Department. The placement and profile of the silt fence may be shown on the Revegetation Plan. The silt barrier must be installed before construction commences and remain in place until vegetation is sufficiently established on the disturbed soil.

Prior to any grading or site disturbance, the silt barrier location and materials must be installed as required per the approved plans.

At the time of the footing foundation inspection and all subsequent inspections, the Community Planning & Permitting Department must confirm the silt barrier location and materials have been installed as required per the approved plans. Any other areas on site are subject to installation of silt fences, if needed.

9. **Prior to issuance of building or grading permits**, submit to the Community Planning & Permitting Department for review and approval one copy of the proposed Revegetation Plan that conforms to the requirements as described on the materials located on our [Revegetation Page](#).

The plan must show the location of all erosion control devices such as silt fence, straw bales, riprap, and retaining walls. Cut and fill slopes are not to exceed a slope of 2:1. The grade of all cut and fill slopes must be included on the revegetation plan. The plan must include details regarding the reclamation of existing and proposed cut and fill slopes.

Prior to issuance of a Certificate of Occupancy for the residence, the full installation of the approved revegetation plan must be inspected and approved by the Community Planning & Permitting Department. If weather is not conducive to seeding or if adequate revegetation efforts have not occurred and vegetation is not adequately established at the time of final inspection request, an irrevocable letter of credit or monies deposited into a County Treasurer account will be required to assure the success of revegetation. You should consider the following well in advance of your revegetation inspection:

- a. Whether you are applying for a Certificate of Occupancy, final inspection, or the return of funds held in escrow for completion of revegetation, some level of germination and growth of grass seed is required.
- b. Keep in mind that the steeper the slopes and dryer the soil, the greater the attention needed to establish a level of germination adequate to obtain revegetation approval.
- c. Areas of disturbance found at inspection not included on the revegetation plan are still subject to reseeding and matting.

Incomplete revegetation is the leading cause for delays in obtaining a Certificate of Occupancy.

10. All stockpiled soil materials which have been imported from other Marshall Fire impacted sites must be removed from the subject parcel and properly disposed of at an appropriate landfill site.

Prior to issuance of building or grading permits, submit to this office a narrative describing where imported cut material will be transported.

At the time of final inspection, the location and receipt for transport and dumping must be submitted to the Community Planning & Permitting Department so that receipt of fill materials may be verified.

11. All non-foundational earthwork must be carried out in accordance with the recommendations of the geotechnical subsurface exploration report dated August 30, 2023 and submitted to Boulder County as part of the building permit application for the residence (BP-24-0733).
12. ***At grading permit application***, submit a drainage letter to Community Planning & Permitting staff for review and approval demonstrating there is no increase in the volume or rate of runoff to the Goodhue Ditch and that all the requirements in the Boulder County Storm Drainage Criteria Manual (SDCM) are being met.
13. ***At grading permit application***, submit documentation of approval of grading plan and drainage letter from the Goodhue Ditch Company.
14. If plans submitted for permitting show an area of disturbance of one acre or more, a Stormwater Quality Permit (SWQP) will be required for this project.

At building permit, provide a complete SWQP submittal to stormwater@bouldercounty.gov.

15. The Applicants shall be subject to the terms, conditions, and commitments of record and in the file for **Docket LU-25-0002: Stone Earthwork and Grading**.



Boulder County Land Use Department

Courthouse Annex Building
 2045 13th Street • PO Box 471 • Boulder, Colorado 80302
 Phone: 303-441-3930
 Email: planner@bouldercounty.org
 Web: www.bouldercounty.org/lu
 Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
 Tuesday 10 a.m. to 4:30 p.m.

<i>Shaded Areas for Staff Use Only</i>
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number		Project Name			
<input type="checkbox"/> Appeal <input type="checkbox"/> Correction Plat <input type="checkbox"/> Exemption Plat <input type="checkbox"/> Final Plat <input checked="" type="checkbox"/> Limited Impact Special Use <input type="checkbox"/> Limited Impact Special Use Waiver <input type="checkbox"/> Location and Extent		<input type="checkbox"/> Modification of Site Plan Review <input type="checkbox"/> Modification of Special Use <input type="checkbox"/> Preliminary Plan <input type="checkbox"/> Resubdivision (Replat) <input type="checkbox"/> Rezoning		<input type="checkbox"/> Road Name Change <input type="checkbox"/> Road/Easement Vacation <input type="checkbox"/> Site Plan Review <input type="checkbox"/> Site Plan Review Waiver <input type="checkbox"/> Sketch Plan <input type="checkbox"/> Special Use/SSDP	<input type="checkbox"/> Special Use (Oil & Gas development) <input type="checkbox"/> State Interest Review (1041) <input type="checkbox"/> Subdivision Exemption <input type="checkbox"/> Variance <input type="checkbox"/> Other:
Location(s)/Street Address(es) 650 Longs Peak Dr					
Subdivision Name PARAGON ESTATES 1					
Lot(s) 2	Block(s) 6	Section(s)	Township(s)	Range(s)	
Area in Acres 1.3 acres	Existing Zoning ER	Existing Use of Property None (destroyed by the Marshall Fire)		Number of Proposed Lots	
Proposed Water Supply On site well		Proposed Sewage Disposal Method On Site Water Treatment system			

Applicants:

Applicant/Property Owner Robert & Diana Stone			Email rsbuff@comcast.net
Mailing Address 650 Longs Peak Dr			
City Boulder	State CO	Zip Code 80303	Phone
Applicant/Property Owner/Agent/Consultant Peter Stewart, Stewart Architecture			Email peter@stewart-architecture.com
Mailing Address 1132 Jefferson Ave			
City Louisville	State CO	Zip Code 80027	Phone 303-665-6668
Agent/Consultant			Email
Mailing Address			
City	State	Zip Code	Phone

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval. I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner 	Printed Name Robert Stone	Date 12/19/24
Signature of Property Owner 	Printed Name Diana L. Stone	Date 12/19/24

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.






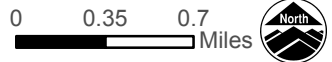
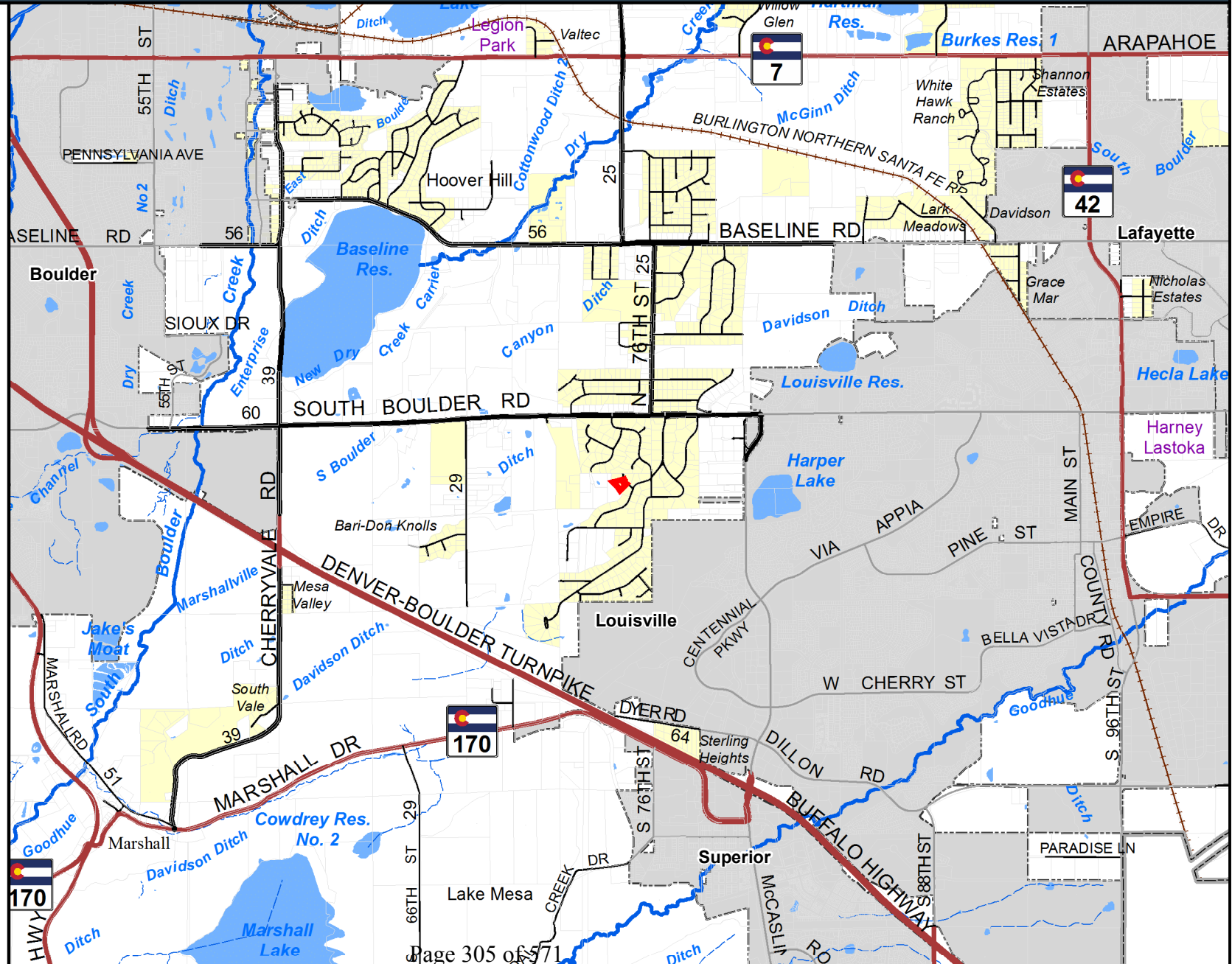
Community Planning & Permitting

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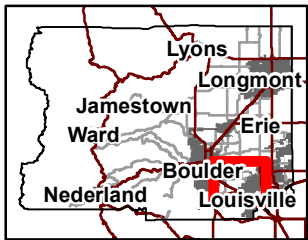
Vicinity

650 LONGS PEAK DR

-  Subject Parcel
-  Municipalities
- Subdivisions**
-  Subdivisions



Area of Detail Date: 7/11/2024



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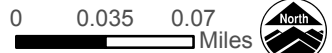
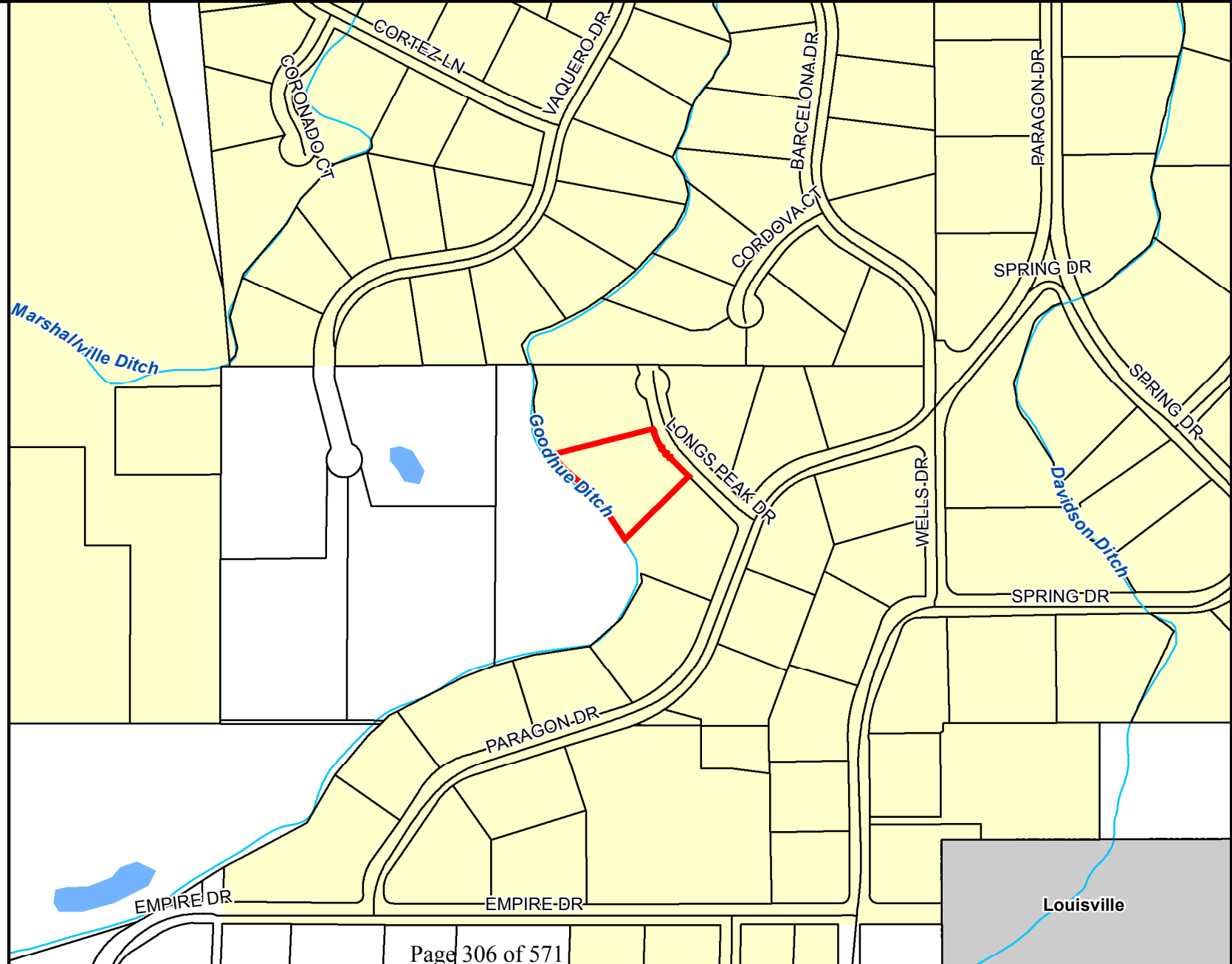
Location

650 LONGS PEAK DR

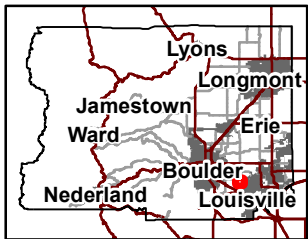
Subject Parcel

Subdivisions

Subdivisions



Area of Detail Date: 7/11/2024



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Aerial

650 LONGS PEAK DR

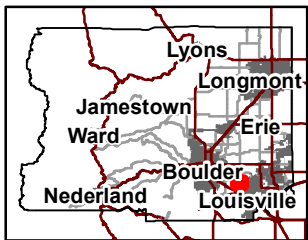
 Subject Parcel



0 0.05 0.1 Miles



Area of Detail Date: 7/11/2024



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Aerial

650 LONGS PEAK DR

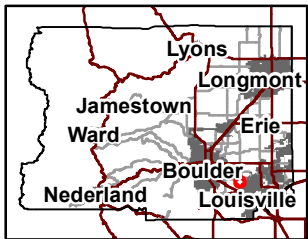
 Subject Parcel



0 0.015 0.03 Miles



Area of Detail Date: 7/11/2024



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Comprehensive Plan

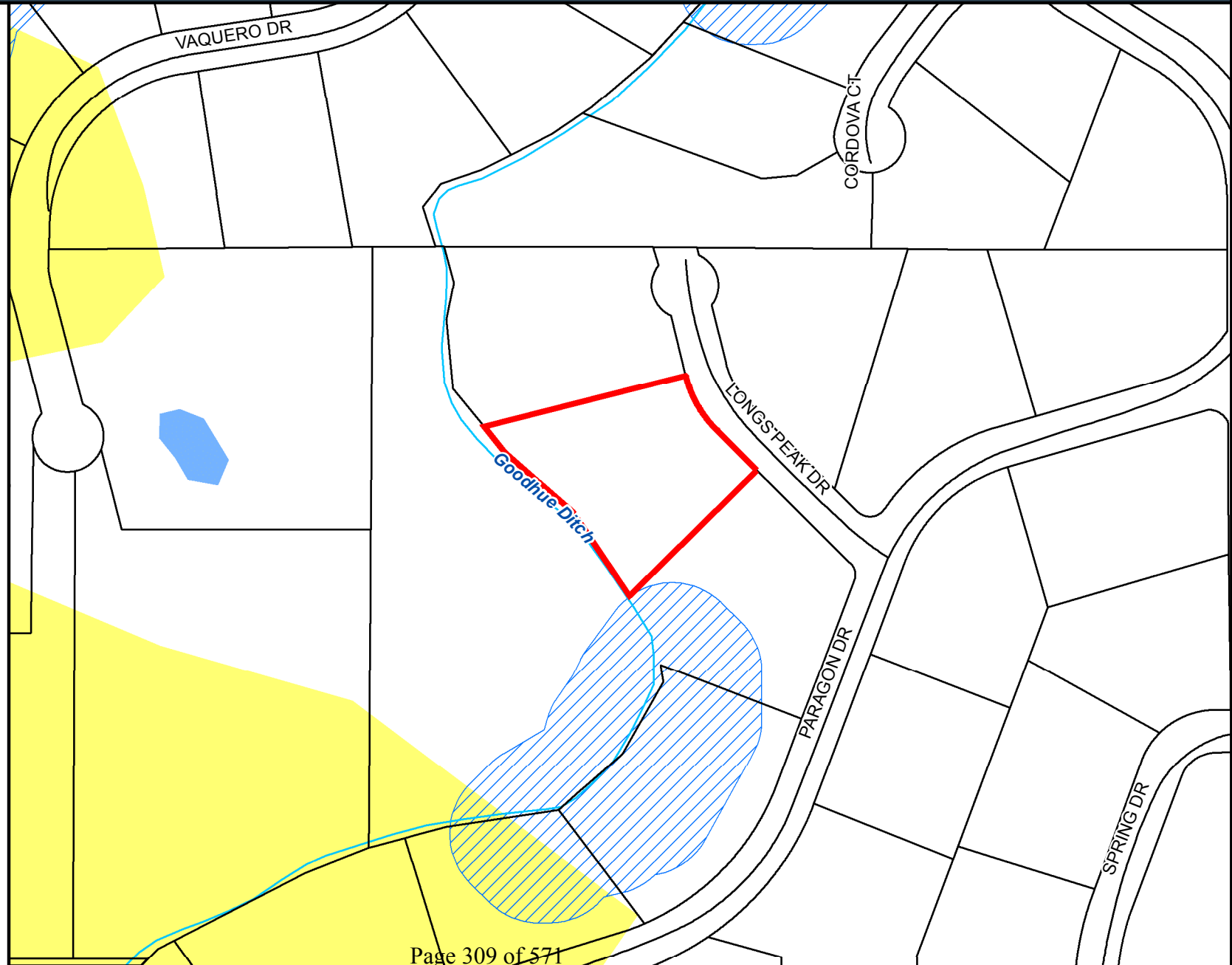
650 LONGS PEAK DR

Subject Parcel

Riparian Areas

Significant Agricultural Land

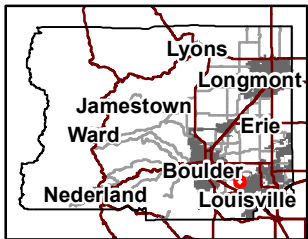
Ag of Local Importance



0 0.015 0.03 Miles



Area of Detail Date: 7/11/2024



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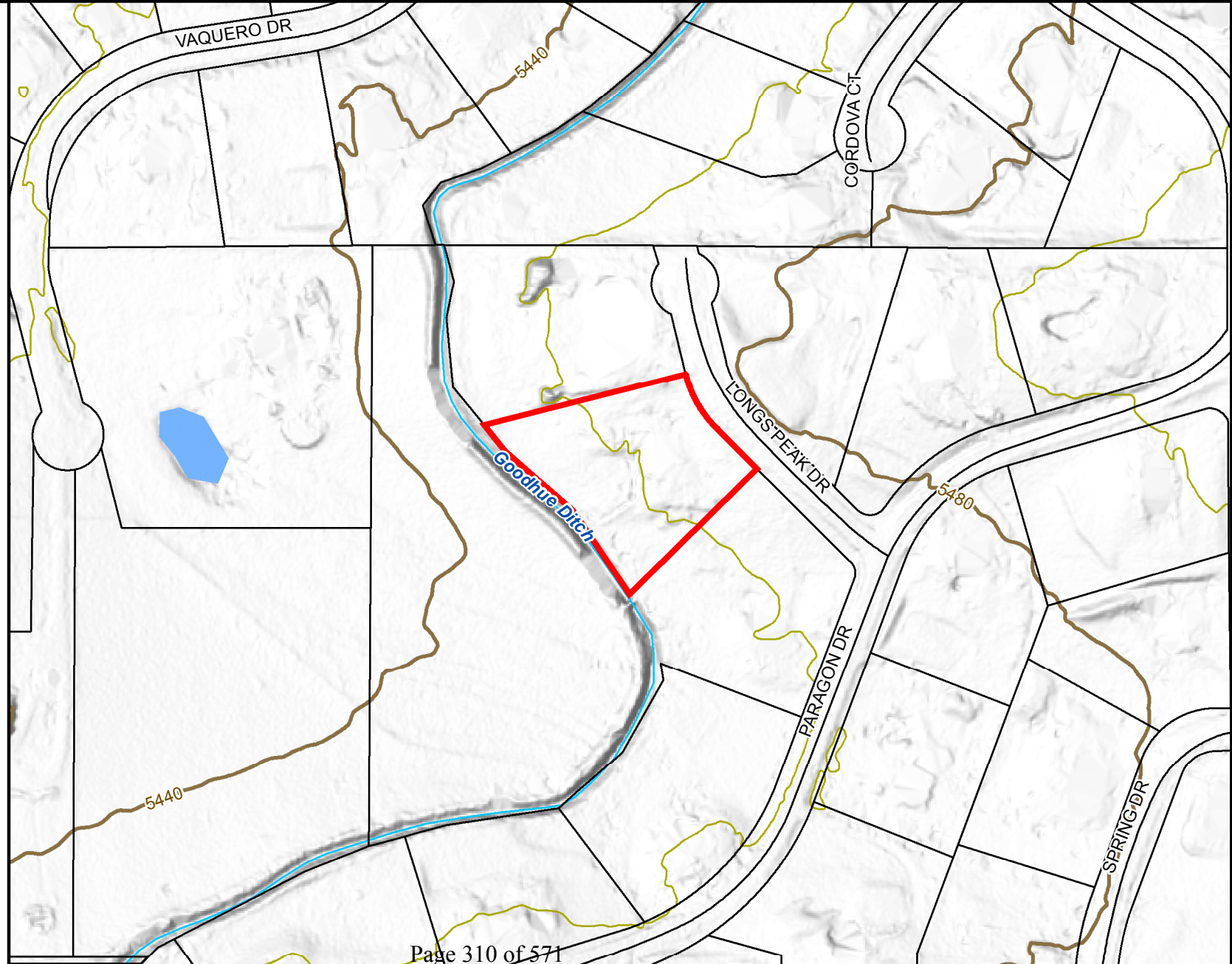
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Elevation Contours

650 LONGS PEAK DR

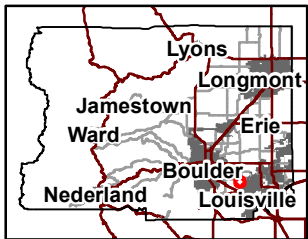
-  Subject Parcel
-  Contours 40'
-  Contours 20'



0 0.015 0.03 Miles



Area of Detail Date: 7/11/2024



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Geologic Hazards

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Subject Parcel

Geologic Hazard & Constraint Areas Geology Element

Slope Stability

- Debris flow susceptibility area
- Rockfall susceptibility area
- Landside susceptibility area
- Landslide Inventory

Heaving Bedrock

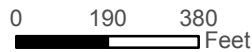
- Steeply Dipping, Heaving Bedrock

Boulder Coal Field

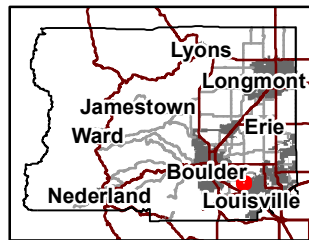
- Extent of Abandoned Coal Mines

Soil and Bedrock Swell Potential

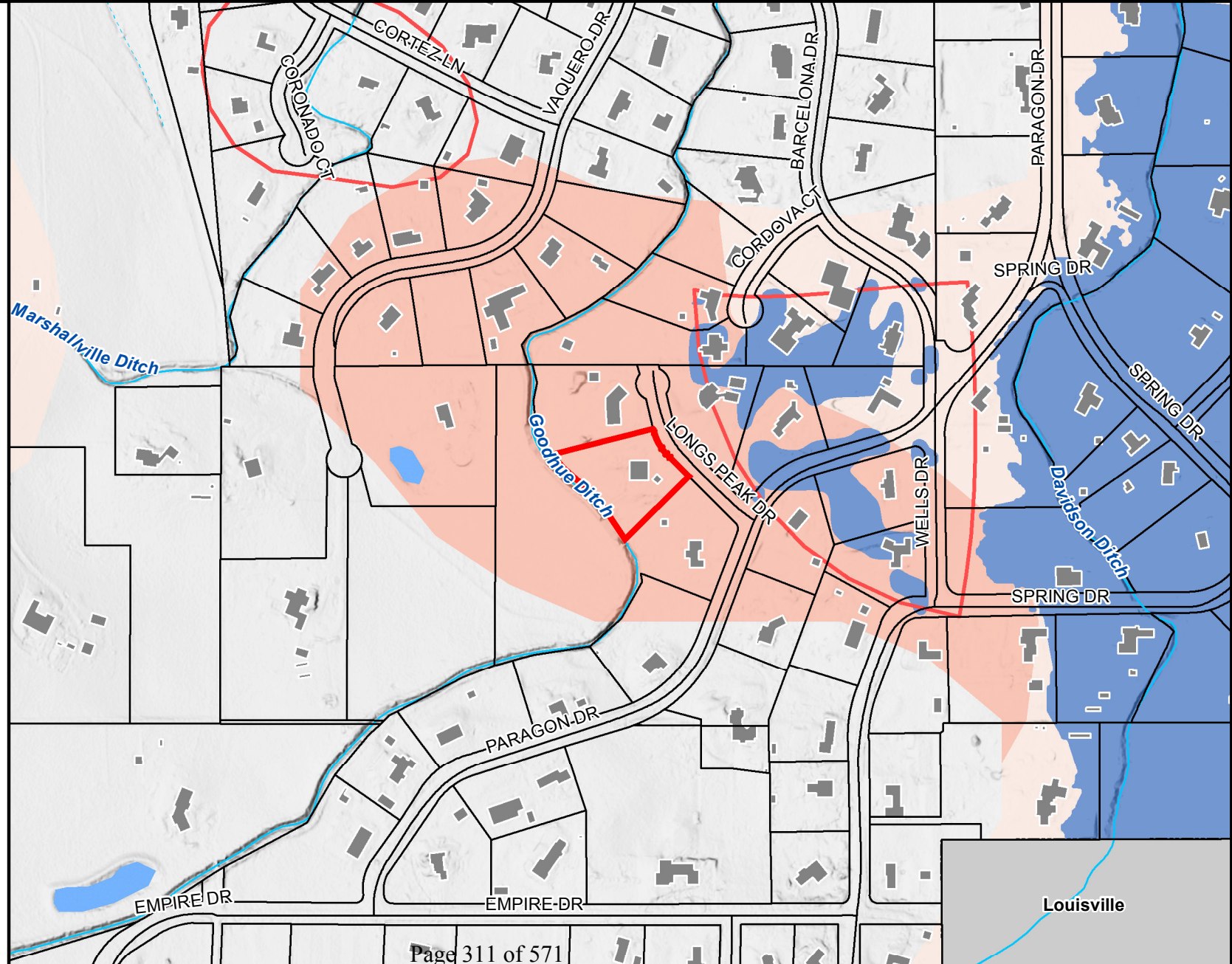
- Very High
- High
- Moderate



Area of Detail Date: 7/11/2024



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Planning Areas

650 LONGS PEAK DR

Subject Parcel

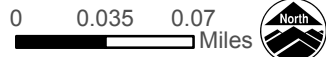
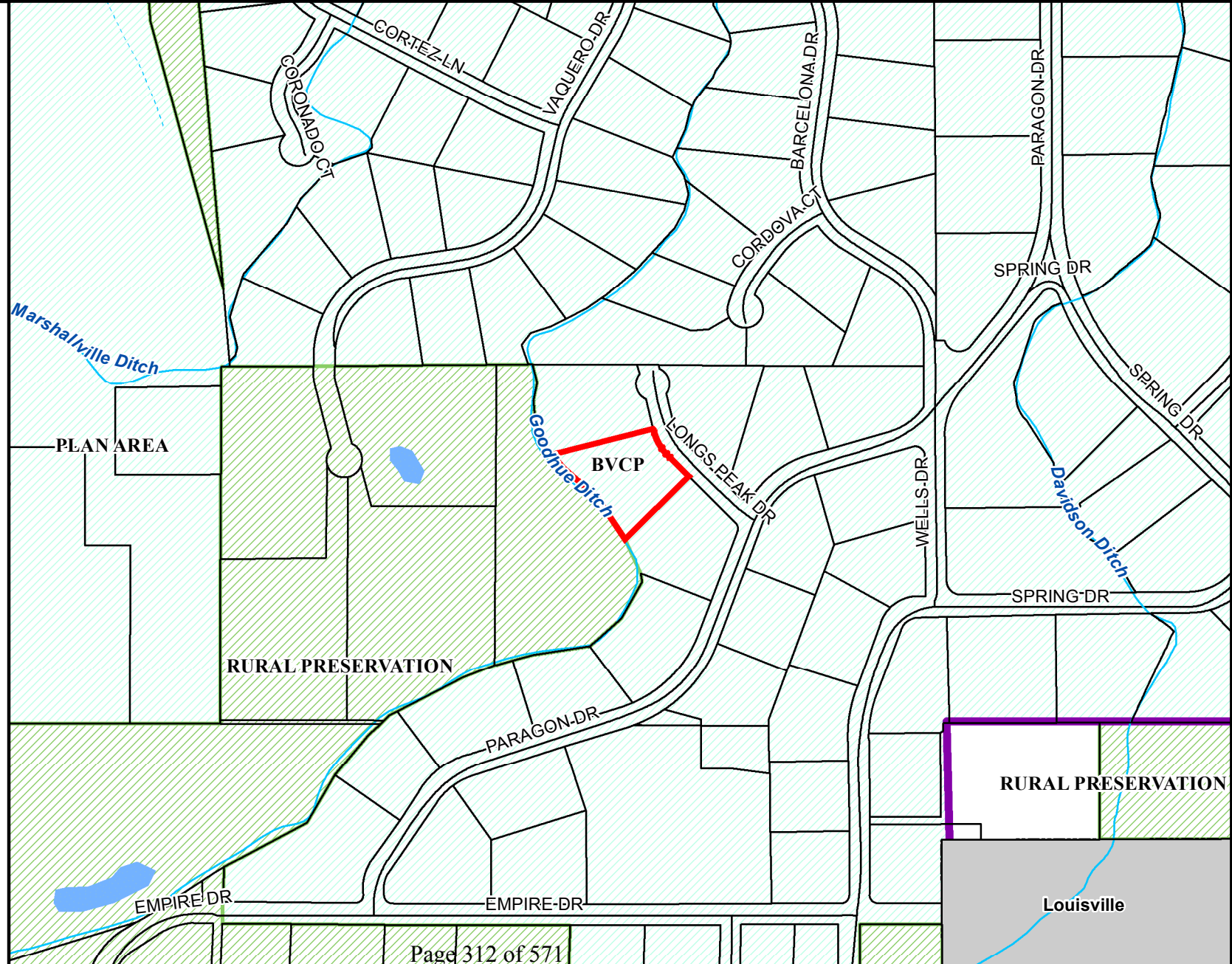
Active IGA Boundary

Active IGA Designation

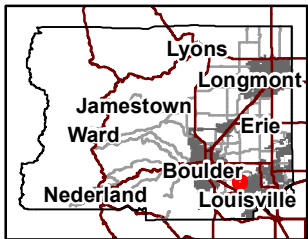
RURAL PRESERVATION

BVCP

PLAN AREA



Area of Detail Date: 7/11/2024



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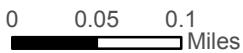
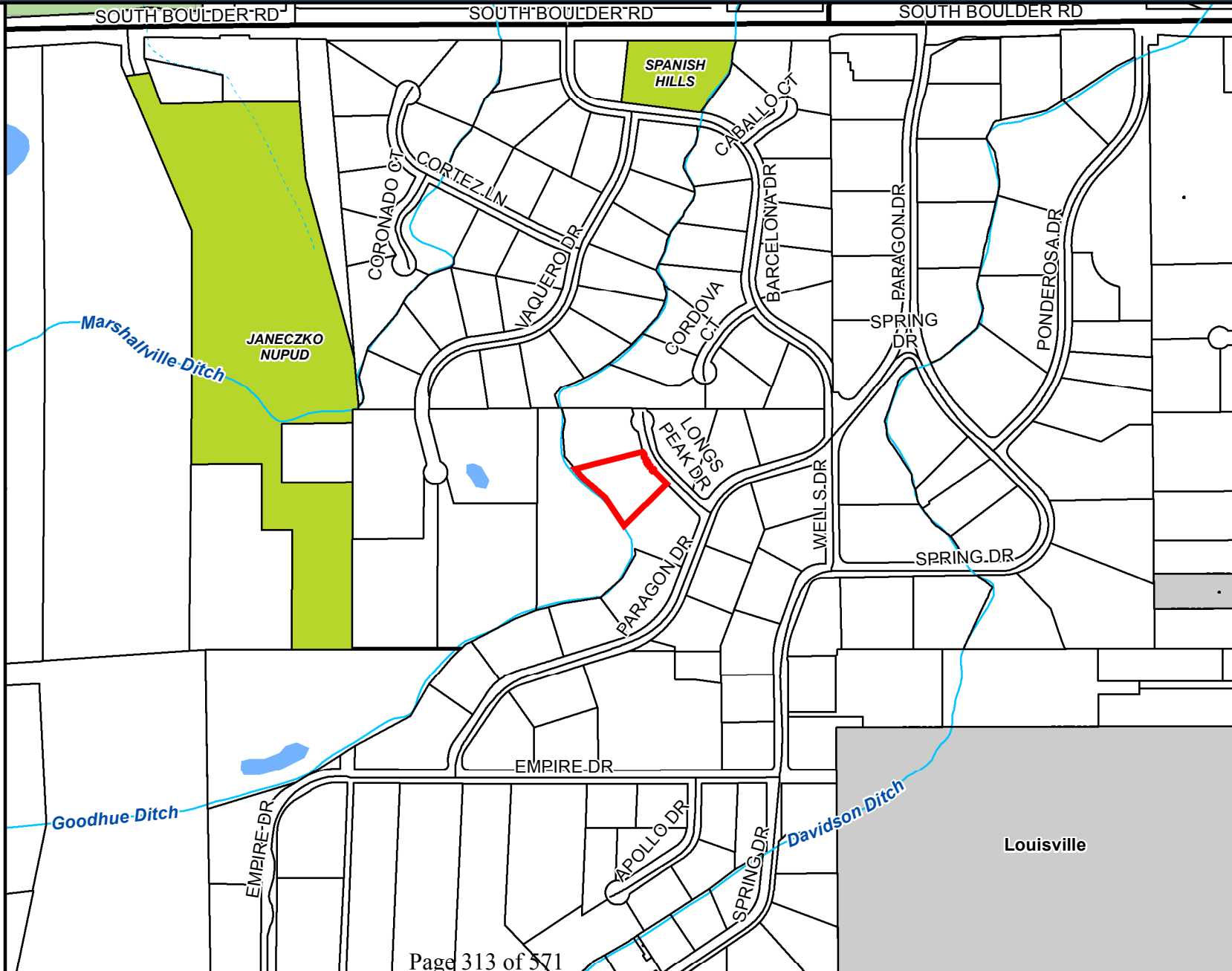
Public Lands & CEs

650 LONGS PEAK DR

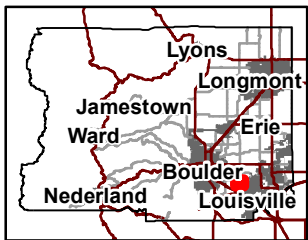
Subject Parcel

Boulder County Open Space

- County Conservation Easement
- OSMP Properties
- Other Municipal OS-BCPOS data



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Zoning

650 LONGS PEAK DR

Subject Parcel

Zoning Districts

Estate Residential

Ditch Setbacks

20 feet

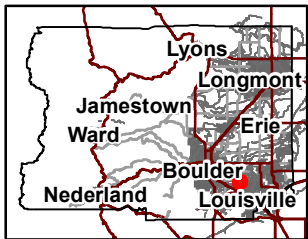
50 feet



0 190 380 Feet



Area of Detail Date: 7/11/2024



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February 10, 2025

Pete L'Orange
Senior Planner
Boulder County Community Planning & Permitting
2045 13th Street
Boulder, CO 80302

Re: 650 Longs Peak Drive
Fire Rebuild
LU-25-0002

Dear Pete,

Civil Resources prepared civil construction plans to accompany the building permit for a Marshall Fire rebuild at 650 Longs Peak Drive. The plan ("Conforming Plan") depicted grading of less than 500 cubic yards of non-exempt earthwork. The Conforming Plan indicated a steep slope (approximately 5H to 1V) off the front porch and a pronounced drainage swale along the east side of the house. It also limited grading in the back yard to match pre-existing grades as close as possible to the house while still meeting drainage requirements. The back yard near the southwest corner of the structure would have a slope in excess of 10 percent. The driveway was reconfigured to meet current County slope regulations, which required some non-exempt fill on the north side of the building.

At the Owner's request, we prepared an alternate grading plan which exceeds 500 cubic yards of non-exempt earthwork but provides a grading design that is more functional:

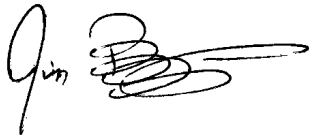
- The front yard grading has been flattened by pushing the swale further east,
- The south side yard swale will be better defined, to minimize runoff entering the adjacent property,
- Rear yard grading has been flattened at the southwest corner of the lot by placing fill above existing grade,
- An additional parking pad has been added west of the garage

It should be noted that virtually the entire lot was disturbed by the fire and related cleanup work. Therefore, there are very little natural/native areas to be retained. The additional fill for the revised grading will come from other Marshall Fire rebuild projects. If not used on this project, that material would otherwise need to be hauled to an off-site disposal area. The resulting plan meets code and best design practices for drainage, and does not impact adjacent properties.

Please refer to the attached Conforming Plan, revised plans, and Exhibit A which depicts cross sections of the two designs. If you have any questions, please do not hesitate to call.

Sincerely,

CIVIL RESOURCES, LLC



Jim Brzostowicz, P.E.
Principal

J:\Diverge Homes - 313\313.001.19 650 Longs Peak\Submittals\2025-02-05\650 Longs Peak Grading.doc

Grading Calculation

Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Use Review (LISR) is required. A Limited Impact Special Use Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).

If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading

This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

Earth Work and Grading Worksheet:

	Cut	Fill	Subtotal
Driveway and Parking Areas	0	53	53
Berm(s)			
Other Grading (General site)	234	1849	2083
Subtotal			2136
Box 1			
* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.			
	Cut	Fill	Total
Foundation	404	942	1346
Material cut from foundation excavation that will be removed from the property			0

Excess Material will be Transported to the Following Location:

Excess Materials Transport Location: Cut materials to be used in finished grading. Fill material from other Marshall Fire rebuild sites.

Is Your Property Gated and Locked?

Note: If county personnel cannot access the property, it could cause delays in reviewing your application.

Certification

I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature	Date 2/5/2025
-----------	------------------



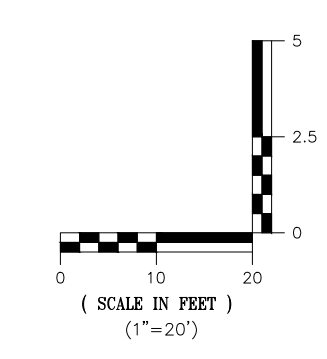
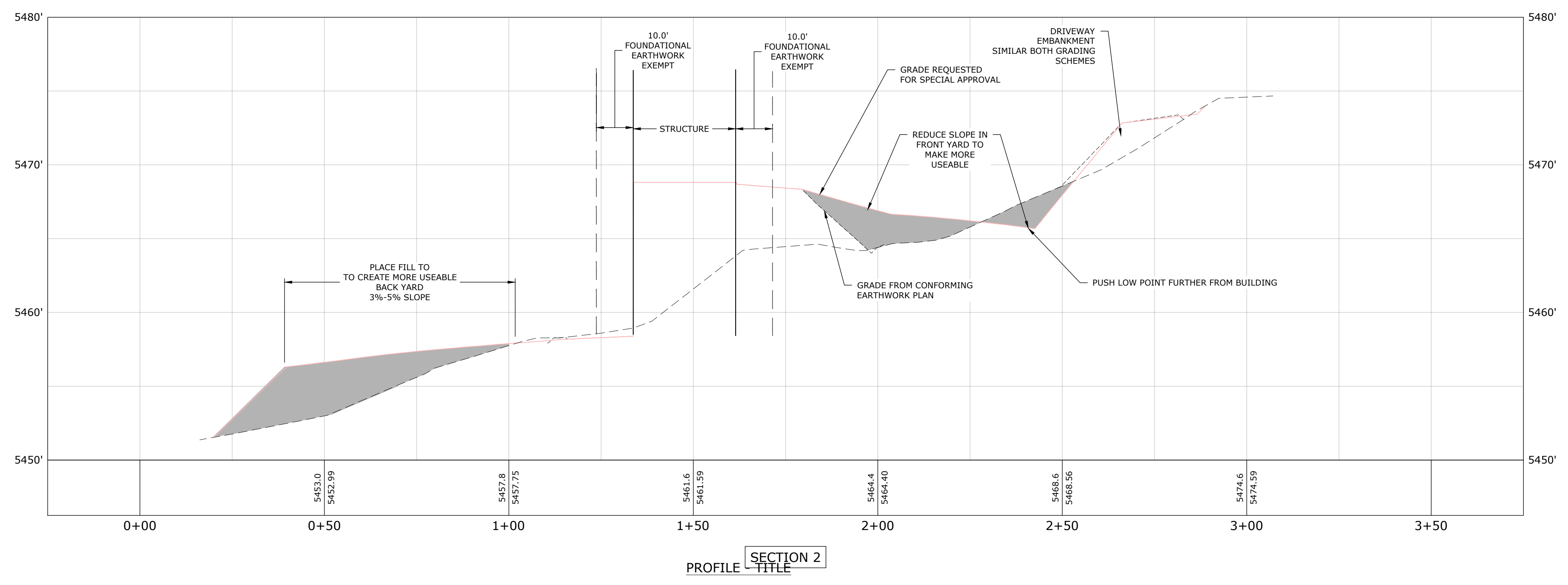
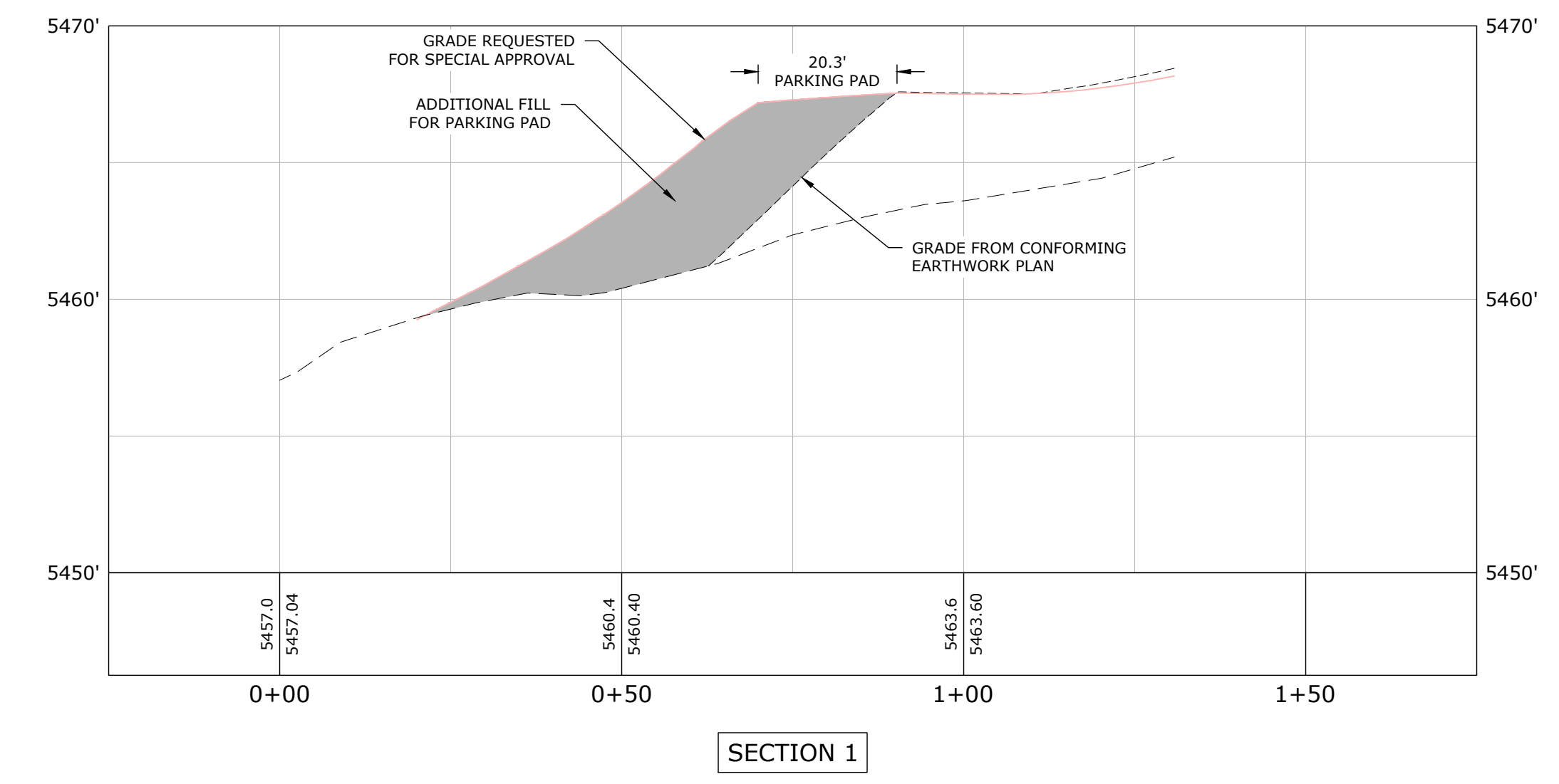
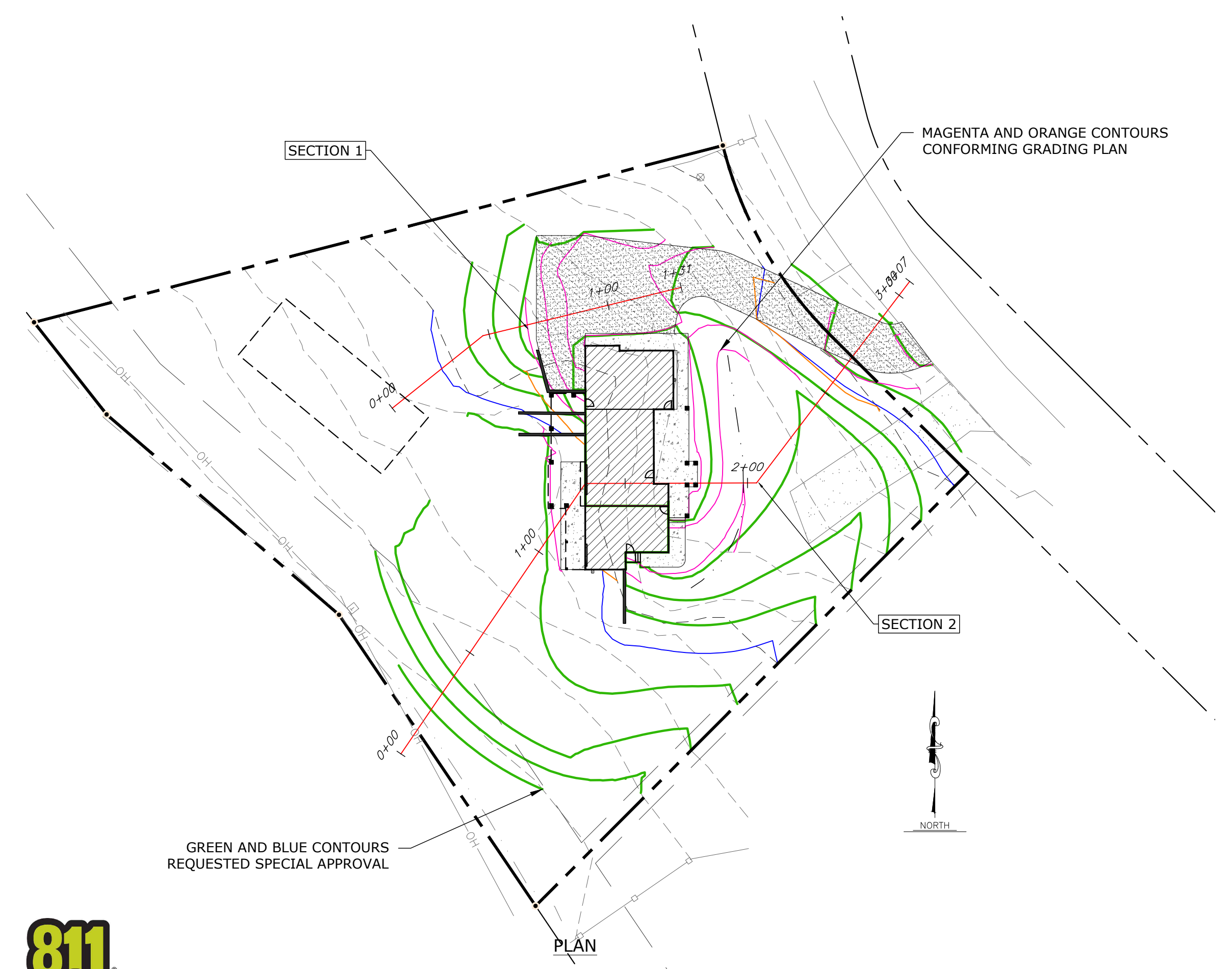
CIVIL RESOURCES

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SUITE 200
FIRESTONE, CO 80530
303.833.1416
WWW.CIVILRESOURCES.COM



603 S. PUBLIC RD, UNIT 765
LAFAYETTE, CO 80026
WWW.DIVERGEGROUP.COM

650 LONGS PEAK DRIVE
COUNTY OF BOULDER, CO



REVISIONS		
NO.	DESCRIPTION	DATE

DESIGNED BY: xxx DATE: 02-05-25
DRAWN BY: xxx SCALE: AS NOTED
CHECKED BY: xxx AS NOTED
JOB NO.: ###
DWG NAME: EARTHWORK COMPARISON.DWG

EARTHWORK
COMPARISON

SHEET:
EXH. A

I:\DIVERGE HOMES - 313\313.001.19 650 LONGS PEAK\DESIGN\EARTHWORK COMPARISON



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650 LONGS PEAK DRIVE
COUNTY OF BOULDER, CO



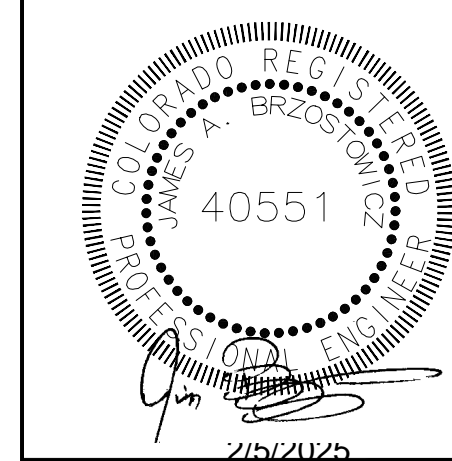
GENERAL LEGEND	
WW 5207.78	WINDOW WELL
---	PROPOSED ELEVATION
---	PROPERTY LINE
---(27.40)---	PROPOSED MAJOR CONTOURS
---(27.50)---	PROPOSED MINOR CONTOURS
[Hatched Box]	PROPOSED BUILDING
[Stippled Box]	PROPOSED HARDSCAPE
[Dotted Box]	PROPOSED GRAVEL DRIVE
---	PROPOSED SWALE
---	PROPOSED WATER LINE
---	PROPOSED ELECTRIC LINE
---	PROPOSED SANITARY SEWER
---	PROPOSED GAS LINE
---	EXISTING EASEMENT
---	EXISTING MAJOR CONTOURS
---	EXISTING MINOR CONTOURS
---	EXISTING WATER LINE
---	EXISTING SANITARY SEWER

- NOTES:
- BACKGROUND SURVEY DATA PROVIDED BENCHMARK SURVEYING, IN PDF CAD & FORMAT, FROM "IMPROVEMENT LOCATION CERTIFICATE, LOT 2, BLOCK 6, FIRST ADDITION TO PARAGON ESTATES" DATED 09/20/2023.
 - ON SITE BENCHMARK INFORMATION: SMARTNET NORTH AMERICAN CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) NETWORK WAS USED TO ESTABLISH A GPS DERIVED ELEVATION ON AN ON-SITE BENCHMARK AT THE EAST SIDE OF THE SITE, BEING A FOUND #4 REBAR WITH AN ELEVATION OF 5471.03 FEET (NAVD 88). NGS POINT W 413, BEING A STEEL ROD LOCATED 0.6 MILES NORTH OF THE SUBJECT PARCEL, WITH A PUBLISHED ELEVATION OF 5459.62 FEET, WAS CHECKED INTO WITH AN AS-MEASURED ELEVATION OF 5459.62 FEET. NO DIFFERENTIAL LEVEL WAS PERFORMED TO ESTABLISH THE ELEVATION OF THE ON-SITE BENCHMARK.

Earth Work and Grading Worksheet:

	Cut	Fill	Subtotal
Driveway and Parking Areas	0	53	53
Berm(s)			
Other Grading (General site)	234	1849	2083
Subtotal			2136
Box 1			
* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.			
	Cut	Fill	Total
Foundation	404	942	1346
Material cut from foundation excavation that will be removed from the property			0

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADJUSTED SEPTIC TANK	01/08/24
2	ARCH. COORDINATION	01/16/24
3	REV EARTHWORK TABLE	04/08/24
4	GRADING ADJUSTMENT	04/25/24
5	GRADING ADJUSTMENT	10/28/24
6	GRADING ADJUSTMENT	11/08/24
7	ALTERNATE GRADING	02/05/25



DESIGNED BY: CMH DATE: 01-10-24
DRAWN BY: CMH SCALE: 1"=20'
CHECKED BY: JAB
JOB NO.: 313.001.09
DWG NAME: 313001190GP ALTERNATE



GRADING AND UTILITY PLAN

SHEET:
C1.0

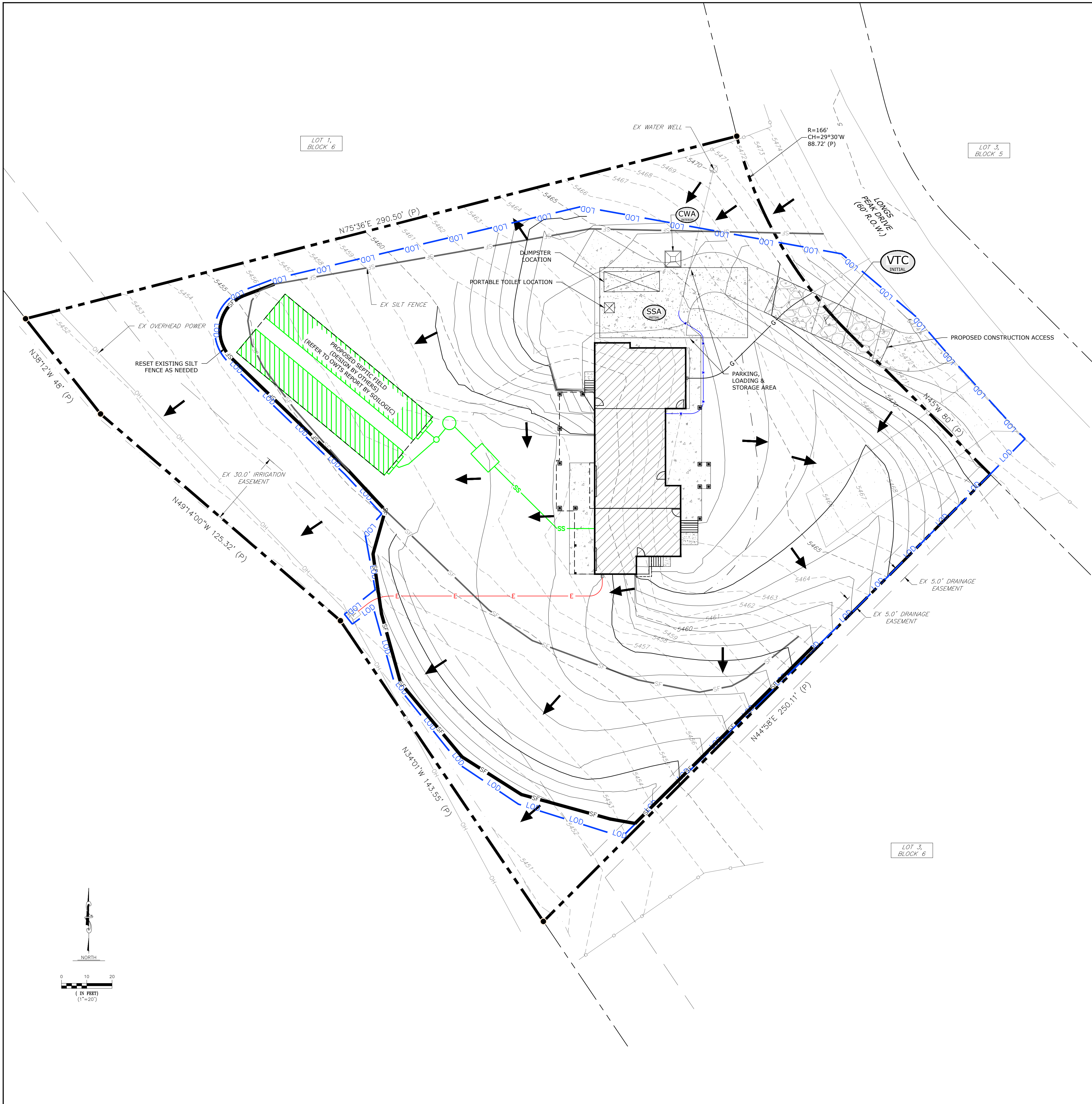


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650 LONGS PEAK DRIVE
COUNTY OF BOULDER, CO

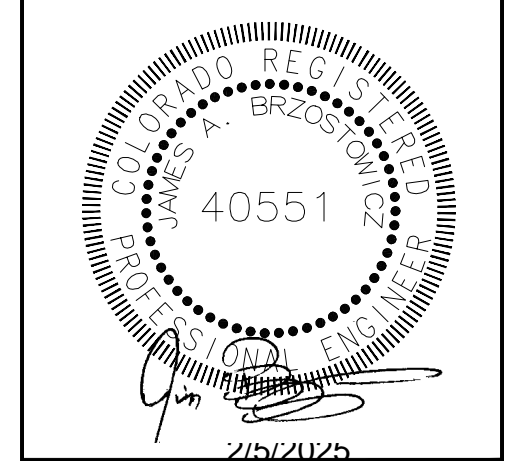


BMP LEGEND

- CD CHECK DAM
- CB COMPOST BLANKET
- CFB COMPOST FILTER BERM
- CWA CONCRETE WASHOUT AREA
- CF CONSTRUCTION FENCE
- CM CONSTRUCTION MARKER
- DW DEWATERING
- DD DIVERSION DITCH
- ECB EROSION CONTROL BLANKET
- IP INLET PROTECTION
- RCD REINFORCED CHECK DAM
- RRB REINFORCED ROCK BERM
- RRC RRB FOR CULVERT PROTECTION
- SB SEDIMENT BASIN
- SCL SEDIMENT CONTROL LOG
- ST SEDIMENT TRAP
- SM
- SF SILT FENCE
- SSA STABILIZED STAGING AREA
- SR SURFACE ROUGHENING
- TSD TEMPORARY SLOPE DRAIN
- TSC TEMPORARY STREAM CROSSING
- TER TERRACING
- VTC VEHICLE TRACKING CONTROL
- WW VTC WITH WHEEL WASH
- LOC LIMITS OF CONSTRUCTION
- LOD LIMITS OF DISTURBANCE
- TBR TO BE REMOVED

- PROPERTY LINE
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- DIRECTION OF FLOW

REVISIONS		
NO.	DESCRIPTION	DATE
1	ADJUSTED SEPTIC TANK	01/08/24
2	ARCH. COORDINATION	01/16/24
3	REV EARTHWORK TABLE	04/08/24
4	ALTERNATE GRADING	02/05/25



DESIGNED BY: CMH DATE: 01-10-24
DRAWN BY: CMH SCALE: 1"=20'
CHECKED BY: JAB
JOB NO.: 313.001.09
DWG NAME: 313001195WMP-CS-ALT

CONSTRUCTION EXHIBIT

SHEET: **C1.1**



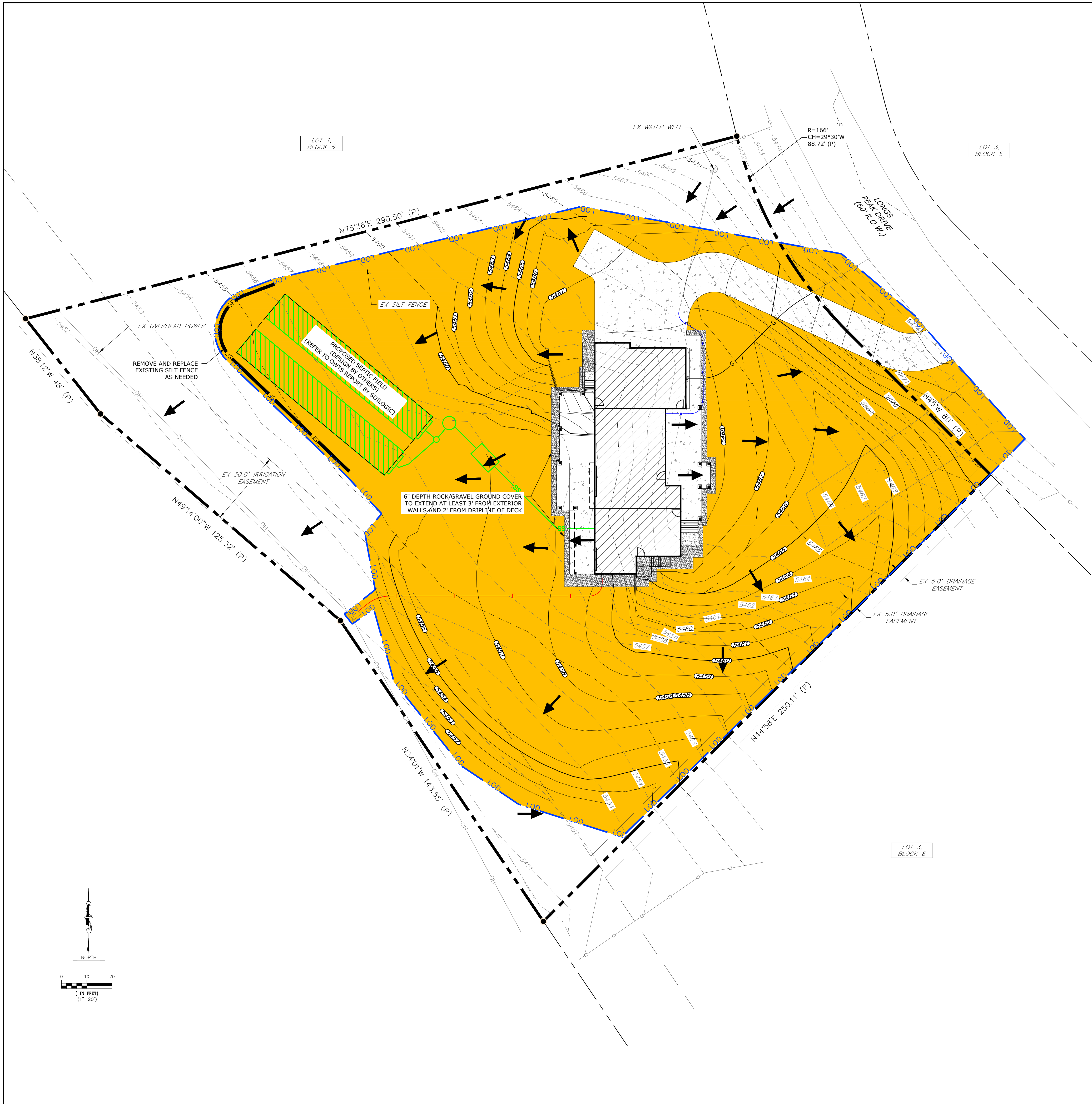


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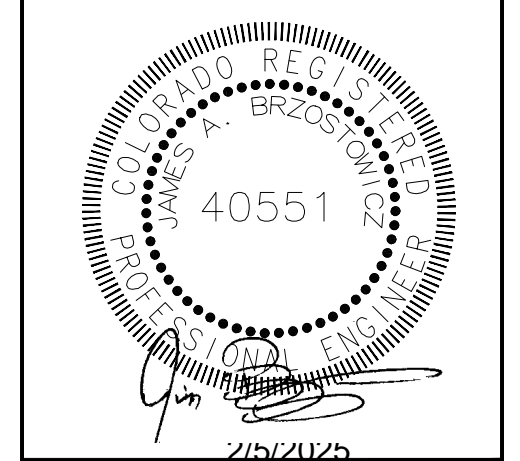
BMP LEGEND

- CD CHECK DAM
- CB COMPOST BLANKET
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- CWA CONCRETE WASHOUT AREA
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- DD DIVERSION DITCH
- ECB EROSION CONTROL BLANKET
- IP INLET PROTECTION
- RCD REINFORCED CHECK DAM
- RRB REINFORCED ROCK BERM
- RRC RRB FOR CULVERT PROTECTION
- SB SEDIMENT BASIN
- SCL SEDIMENT CONTROL LOG
- ST SEDIMENT TRAP
- SM SLOPE MAT
- SF SILT FENCE
- SSA STABILIZED STAGING AREA
- SR SURFACE ROUGHENING
- TSD TEMPORARY SLOPE DRAIN
- TSC TEMPORARY STREAM CROSSING
- TER TERRACING
- VTC VEHICLE TRACKING CONTROL
- WW VTC WITH WHEEL WASH
- LOC LIMITS OF CONSTRUCTION
- LOD LIMITS OF DISTURBANCE
- TBR TO BE REMOVED

- PROPERTY LINE
- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- PROP MAJOR CONTOURS
- PROP MINOR CONTOURS
- DIRECTION OF FLOW
- DISTURBED AREA (TO BE RESEEDED)
- ROCK/GRAVEL GROUND COVER

SEED MIX - BOULDER COUNTY		
COMMON NAME	% OF MIX	# PLS/AC
WESTERN WHEATGRASS	25%	7.94
SIDEOTS GRAMA	15%	2.74
BLUE GRAMA	20%	0.84
BUFFALOGRASS	15%	9.33
LITTLE BLUESTERN	13%	1.74
GREEN NEEDLEGRASS	12%	2.31

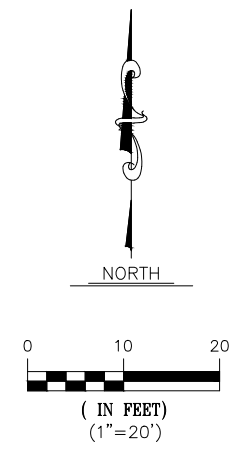
REVISIONS		
NO.	DESCRIPTION	DATE
1	ADJUSTED SEPTIC TANK	01/08/24
2	ARCH. COORDINATION	01/16/24
3	REV EARTHWORK TABLE	04/08/24
4	ALTERNATE GRADING	02/05/25



DESIGNED BY: CMH DATE: 01-10-24
DRAWN BY: CMH SCALE: 1"=20'
CHECKED BY: JAB
JOB NO.: 313.001.09
DWG NAME: 31300119REVEG-ALT

REVEGETATION EXHIBIT

SHEET: C1.2





Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

Building Safety & Inspection Services Team

MEMO

TO: Pete L'Orange, Senior Planner
 FROM: Michelle Huebner, Plans Examiner Supervisor
 DATE: February 24, 2025

RE: Referral Response, LU-25-0002: Stone Earthwork and Grading. Limited Impact Special Review for approximately 2,100 cubic yards of non-foundational earthwork on a 1.34-acre parcel.

Location: 650 Longs Peak Drive

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permit.** A grading permit, plan review, and inspection approvals are required for the grading. The construction documents must be Stamped, signed and sealed by the Colorado design.

We have updated the **Building Code Amendment**, the effective date for this new code is March 31, 2025. You can review the new [Boulder County Building Code Amendments, effective March 31, 2025](#)

Please refer to the county's adopted 2015 editions of the International Codes and code amendments, which can be found via the internet under the link: [2015 Building Code Adoption & Amendments](#)

2. **Grading Permit.** A separate grading permit and plan review and inspections approvals are required for the proposed non-foundational grading. Please refer to the county's adopted 2015 editions of the International Codes and code amendments, including IBC Appendix Chapter J for grading.
3. **Observation Reports.** The design professional responsible for the design or a similarly qualified Colorado-licensed design professional is to observe the grading and submit a stamped report to Building Safety & Inspection Services for review and approval. The final report is to state that the work has been completed in substantial conformance with the approved engineered plans.

4. **Plan Review.** The items listed above are a general summary of some of the county's building code requirements. A much more detailed plan review will be performed at the time of grading permit application.

If the applicants should have questions or need additional information, we'd be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640.



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
 303-441-3930 • www.BoulderCounty.gov

March 7, 2025

TO: Pete L'Orange, Senior Planner; Community Planning & Permitting, Development Review Team - Zoning

FROM: Tim Oliver, Planner II; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive

The Development Review Team – Access & Engineering staff have reviewed the above referenced docket and have the following comments:

1. The subject property is accessed from Longs Peak Drive, a Boulder County owned and maintained right-of-way (ROW) as shown on the First Addition to Paragon Estates subdivision plat recorded May 27, 1955, at Reception #90556852. Legal access is demonstrated via this platted ROW.
2. The driveway design must comply with the Multimodal Transportation Standards (the Standards) for residential development, including without limitation:
 - a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
 - b. Standard Drawing 11 – Private Access
 - c. Standard Drawing 14 – Access with Roadside Ditch
 - d. Standard Drawing 15 – Access Profiles Detail
 - e. Standard Drawing 16 – Access Grade & Clearance

The submitted plans propose a 20-foot-wide driveway. A 15-foot-wide driveway was approved on the building permit plans for BP-24-0733. The maximum allowable driveway width is 16 feet per the Standards.

The plans have a cross slope on the driveway sloping towards the downhill side of the driveway. The cross slope on the driveway must slope towards the uphill side of the driveway.

The surfacing material for the gravel driveway must be 4 inches of Class 6 Aggregate Road base.

At building permit, submit revised plans that show a driveway width that complies with the Standards, a driveway cross slope that complies with the standards, and surfacing material callouts that comply with the Standards.

At final inspection, the Community Planning & Permitting Department must verify that the access and driveway has been constructed to comply with the Standards.

3. There are retaining walls on the submitted plans that are over 4 feet tall. All retaining walls that are 4 feet tall or taller, as measured from the top of wall to the wall footing, must be designed by a structural engineer.

At building permit, submit plans for all retaining walls 4 feet or taller signed and sealed by a structural engineer.

4. The proposed grading on the submitted plans ties into the existing grades on the east property line. There is a drainage easement offset 5 feet from the property line. No grading can be proposed within this drainage easement.

At building permit, submit revised plans that do not propose any grading within the drainage easement.

5. As a part of Boulder County's water quality protection and Municipal Separate Storm Sewer System (MS4) Construction Program, a Stormwater Quality Permit (SWQP) is required for this project because the submitted materials propose over an acre of disturbance.

At building permit, provide a complete SWQP submittal to stormwater@bouldercounty.gov.

6. Before the Access & Engineering group can complete a review of this application, a drainage letter demonstrating there is no increase in the volume or rate of runoff to the Goodhue Ditch and that all the requirements in the Boulder County Storm Drainage Criteria Manual (SDCM) are being met must be submitted to TransDevReview@bouldercounty.gov. If there is an increase in the volume or rate of runoff, approval from Goodhue Ditch must be obtained per Section 401.1 of the SDCM.
7. Staff has concern about the steepness and proximity of the grading to the Goodhue Ditch, southwest of the residence. Staff recommends limiting the grading in this backyard area to decrease the limits of disturbance and help alleviate the velocity of the runoff entering the Goodhue Ditch
8. During construction, all vehicles must be staged on the subject property or to one side of Longs Peak Drive to not impede the travel way. Materials, machinery, dumpsters, and other items must be staged on the subject property.

This concludes our comments at this time.



Parks & Open Space

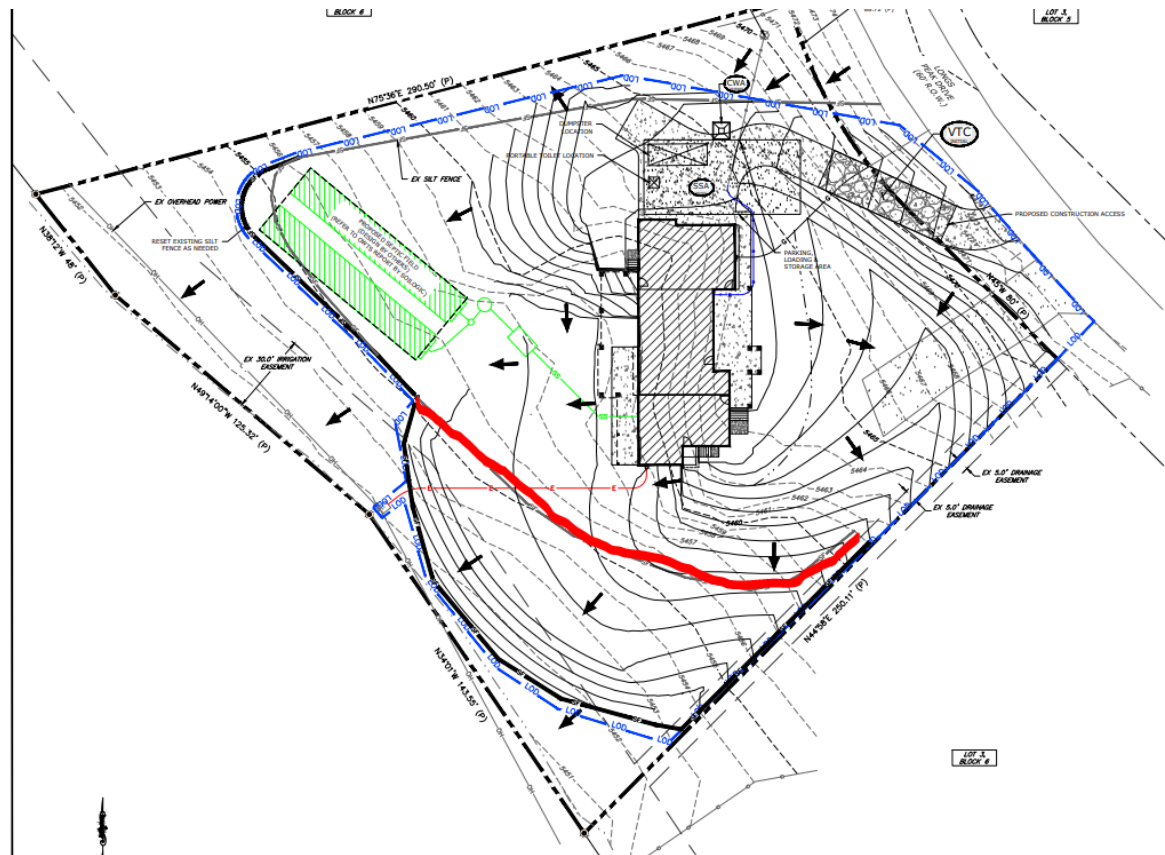
5201 St. Vrain Road • Longmont, CO 80503
303-678-6200 • POSinfo@bouldercounty.org
www.BoulderCountyOpenSpace.org

TO: Pete L'Orange, Community Planning & Permitting Department
FROM: Ron West, Natural Resource Planner
DATE: March 12, 2025
SUBJECT: Docket LU-25-0002, Stone, 650 Longs Peak Drive

Staff has reviewed the submitted materials, and has substantial concern with part of the proposal. Although Drawing C1.1 is not precise, it appears that the proposed grading would be about 6 feet from the edge of the property line, and thus about 8 feet from the edge of the Goodhue Ditch embankment. In this area, the fill would be almost 5 feet deep, and would end in a steep slope towards the ditch. (What is the existing "30.0' irrigation easement" on the drawing, which the grading would cover?)

All of this new fill area would be unnecessary site disturbance, and is apparently to find a "use" for the large amount of fill material that has already been hauled to the site.

Staff recommends that the limit of grading be the existing silt fence, as shown below. Even this more-limited amount of grading covers about 70 percent of the entire lot.





March 15, 2025

[via email]

Mr. Cory Peterson
Goodhue Ditch & Reservoir Company
P.O. Box 276
Louisville, CO 80027

**Subject: Project Goodhue – Stone Earthwork and Grading at 650 Longs Peak Drive –
Boulder County Referral Packet for Docket LU-25-0002 – Initial Review**

Dear Mr. Peterson:

Schnabel Engineering has reviewed the documents associated with Boulder County, Community Planning & Permitting, Docket LU-25-0002: Stone Earthwork and Grading on behalf of the Goodhue Ditch & Reservoir Company (Goodhue). These review comments are intended to be preliminary in nature with the expectation that additional review(s) of revised plans will occur prior to Goodhue approval. The proposed work will occur on the 1.34 acre lot located at 650 Longs Peak Drive, in Section 12, Township 15, Range 70 West of the 6th P.M. The Goodhue Ditch traverses along the bottom of the slope on the western side of the parcel.

The Docket LU-25-0002 documents relevant to the Goodhue Ditch that were reviewed include:

- Application Materials
- 3b-Earth Work and Grading Worksheet
- 4-Build Plans_650 Longs Peak
- 7-Site-Vicinity Map
- 9a-Plan and Profile_Grading 11-14-24
- 9b- Landscape-Erosion Control

The preliminary plans provided are for the grading around the reconstructed/expanded home at 650 Longs Peak Drive. Most of the proposed work is outside of the Goodhue easement on the property, but there is proposed fill in the rear yard that may adversely affect Goodhue's access for ditch operations and maintenance. The plan proposes to flatten the rear yard at the southwest corner of the lot by placing fill above the existing grade. This proposed fill encroaches into the Goodhue easement and creates a steep side slope that would need to be accessed and traversed by equipment (e.g. backhoe). The proposed slope shown on *9a-Plan and Profile_Grading* sheet shows a 4:1 (H:V) slope, which equates to about a 14% slide slope. Such a slope could be hazardous for traversing with various pieces of ditch equipment. It also would make ditch cleaning and debris removal more difficult in that area.

**Goodhue – Boulder County Referral Packet LU-25-0002
Stone Earthwork and Grading at 650 Longs Peak Drive**

The drawing also does not completely show the ditch, only the centerline. To better evaluate the impacts of the proposed fill material and possible alternatives, additional topographical information is required. Goodhue would like to see the surveyed location of the toe of bank and top of bank for the ditch to be shown on the grading plan sheets. The Goodhue Ditch & Reservoir Company's preference would be for the existing grade to remain within the ditch easement but is willing to discuss alternatives that address Goodhue's concerns and owner's goals.

This review is based on the information included in Docket LU-25-0002 and the Goodhue Ditch & Reservoir Company retains the right to provide additional review and comments throughout the remainder approval process.

Please contact me if clarifications or further discussions are needed on any of these items.

Sincerely,

SCHNABEL ENGINEERING, LLC



Dan Mathes
Associate Engineer

GOODHUE DITCH COMPANY

March 14, 2025

Pete L'Orange, Senior Planner
Boulder County Community Planning & Permitting
P.O. Box 471
Boulder, CO 80306

Subject: 650 Longs Peak Drive

Dear Mr. L'Orange:

The Goodhue Ditch and Reservoir Company ("Goodhue") has reviewed the Stone Earthwork at 650 Longs Peak Drive (LU-25-0002).

Based on the review of the applicants materials, the Goodhue has the following preliminary comments:

1. Any and all work within or impacting the Goodhue Ditch will require an agreement with applicable fees, including advance deposit for legal and engineering review. Applicant can reach the ditch company at the following email address (manager.goodhue@gmail.com).
2. Fill material shall not be permitted within the ditch or the ditch easement.
3. Ditch bank slopes must be maintained to allow equipment access along the ditch.
4. Additional information is requested on the septic system including: design parameters, soil conditions, overflow locations, water quality protection measures etc.
5. More detail is requested on stormwater controls and flow.
6. The Goodhue easement will require an updated legal description and must be recorded with the County. Please provide updated survey information.

Goodhue looks forward to working with the applicant and providing additional comments, modifications, restrictions and requirements once the required review deposit and information is provided.

Sincerely,

Cory Peterson,
City of Louisville, serving as President of the Goodhue Ditch and Reservoir Company



COLORADO
Division of Water Resources
Department of Natural Resources

March 14, 2025

Pete L'Orange, Senior Planner

Boulder County Community Planning and Permitting Planning Division

Transmitted via email: plorange@bouldercounty.gov

Re: Case No. LU-25-0002 650 Longs Peak Drive

Applicant: Robert and Diana Stone

The SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Sec. 12, Twp. 1 South, Rng. 70 West, 6th PM

Water Division 1, Water District 6

CDWR Assigned Referral No. 32740

Dear Pete L'Orange:

We have received the limited impact special review referral for LU-25-0002 to construct a new residential structure at 650 Longs Peak Drive in Boulder County.

This referral does not appear to qualify as a "subdivision" as defined in section 30-28-101(10)(a), C.R.S. Therefore, pursuant to the State Engineer's March 4, 2005 and March 11, 2011 memorandums to county planning directors, this office will only perform a cursory review of the referral information and provide informal comments. The comments do not address the adequacy of the water supply plan for this project or the ability of the water supply plan to satisfy any County regulations or requirements. In addition, the comments provided herein cannot be used to guarantee a viable water supply plan or infrastructure, the issuance of a well permit, or physical availability of water.

The proposed water uses, estimated water requirements, and proposed water supply were not provided. The ability for the Applicant to obtain a well permit and the allowed use(s) will be determined at the time the permit application is submitted to and reviewed by the State Engineer's Office. In order to apply to re-permit the well, the Applicant must submit



LU-25-0002, Boulder County
March 14, 2025

Page 2 of 2

the completed [GWS-44](#) form and a copy of the property deed to DWRpermitsonline@state.co.us after which they will be invoiced for the \$100 filing fee. Evaluation of complete permit applications will take approximately 4-6 weeks.

Please contact Ariel.Hacker@state.co.us or 303-866-3581 x 8234 with any questions.

Sincerely,



Ioana Comaniciu, P.E.

Water Resources Engineer



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303.571.3284
donna.l.george@xcelenergy.com

February 28, 2025

Boulder County Community Planning and Permitting
PO Box 471
Boulder, CO 80306

Attn: Pete L'Orange

Re: Stone Earthwork and Grading, Case # LU-25-0002

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the limited impact special review for **Stone Earthwork and Grading**. Please be aware PSCo owns and operates existing natural gas and electric utilities within the subject property. As a safety precaution, PSCo would like to remind the developer to contact Colorado 811 for utility locates prior to construction.

The property owner/developer/contractor must complete the application process for any new natural gas or electric service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: [Morgan, Heather](#)
To: [L"Orange, Pete](#)
Subject: Fw: Under Review: Referral Packet for Docket LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive
Date: Thursday, March 13, 2025 2:43:21 PM
Attachments: [Utility Map.pdf](#)

See below.

Thank you,
Heather Morgan

From: Gaard, Jordan <Jordan.Gaard@lumen.com>
Sent: Thursday, March 13, 2025 2:32:48 PM
To: Morgan, Heather <hmorgan@bouldercounty.gov>
Subject: [EXTERNAL] Under Review: Referral Packet for Docket LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive

Date: **2/20/2025**
Attn: **Heather Morgan**
RE: **RELO - LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive**
Requestor Project ID: **LU-25-0002**

Lumen has received your project notification.

It has been determined that Lumen does have facilities within your proposed construction area. If you have submitted project plans for review, they will be sent to our Engineering team for conflict analysis, and the estimated review time is 10 business days. Please follow the instructions below when you are ready to submit plans for our review.

Any changes or additions to the project plans or parameters must be submitted using the [Lumen Relocation Request Portal](#) by selecting the option "Update An Existing Project". Please reference the Project ID **P-644624** with any future communications.

Thank you for your cooperation!

Lumen Intake Team
relocations@lumen.com

Remember: Please contact your State One Call prior to construction – call811.com or dial 811 on your phone.

This communication is the property of Lumen Technologies and may contain confidential or privileged information. Unauthorized use of this communication is strictly prohibited and may be unlawful. If you have received this communication in error, please immediately notify the sender by reply e-mail and destroy all copies of the communication and any attachments.

From: Morgan, Heather <hmorgan@bouldercounty.gov>
Sent: Thursday, February 20, 2025 10:01 AM
To: !LongRange <longrange@bouldercounty.gov>; ReferralsXcelDistribution@xcelenergy.com; Hester, Renee <Renee.Hester@lumen.com>; relocations <relocations@centurylink.com>; Ranglos,

Chris <ranglosc@bouldercolorado.gov>; Peterson, Cory <cpeterson@louisvilleco.gov>; Beck, Darren <dbeck@bouldercounty.gov>; manager.goodhue@gmail.com; johnathonoppermann@gmail.com; planning@louisvilleco.gov; sarah.brucker@state.co.us; prevention@mvfpd.org; Atherton-Wood, Justin <jatherton-wood@bouldercounty.gov>; Flax, Ron <rflax@bouldercounty.gov>; Frederick, Summer <sfrederick@bouldercounty.gov>; HealthWaterQuality-EnvironmentalBP LU <HealthWQ-EnvironBPLU@bouldercounty.gov>; Huebner, Michelle <mhuebner@bouldercounty.gov>; Morgan, Heather <hmorgan@bouldercounty.gov>; Sanchez, Kimberly <ksanchez@bouldercounty.gov>; Skufca, Erika <eskufca@bouldercounty.gov>; TD Stormwater Shared Mailbox <stormwater@bouldercounty.gov>; Transportation Development Review <TransDevReview@bouldercounty.gov>; West, Ron <rowest@bouldercounty.gov>
Cc: L'Orange, Pete <plorange@bouldercounty.gov>; Duchi, Trevor <tduchi@bouldercounty.gov>
Subject: Referral Packet for Docket LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive

Please find attached the public notice and referral packet for Docket **LU-25-0002: Stone Earthwork and Grading at 650 Longs Peak Drive**.

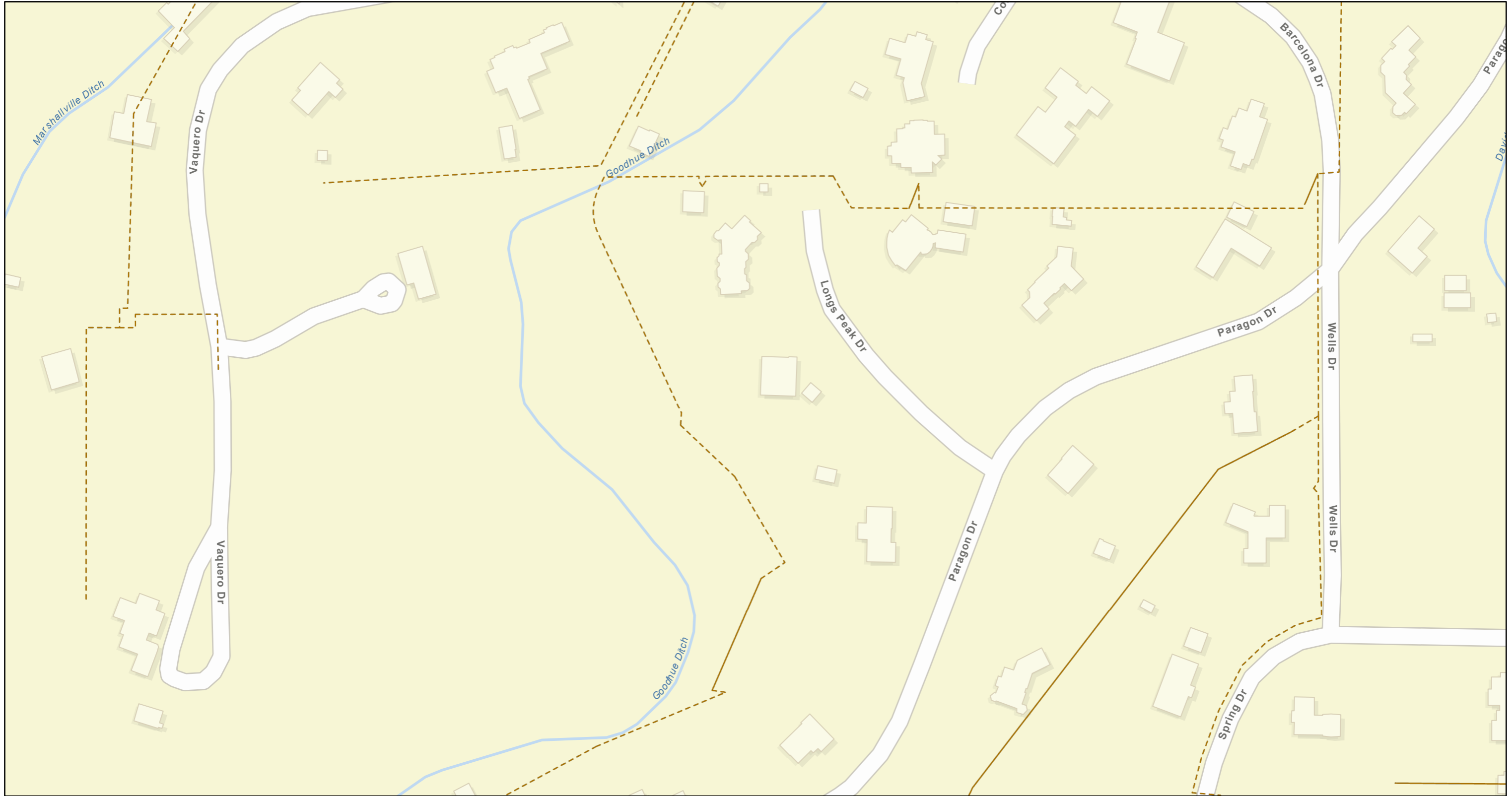
Please return responses and direct any questions to [Pete L'Orange](#) by **March 7, 2025**. (Boulder County internal departments and agencies: Please attach the referral comments in Accela.)

**Heather Morgan | Lead Administrative Technician – Planning Division
Boulder County Community Planning & Permitting**

P.O. Box 471, Boulder, CO 80306 | Courthouse Annex—2045 13th St., Boulder, CO 80302
hmorgan@bouldercounty.gov | (720) 864-6510 | www.boco.org/cpp
My working hours are Tuesday – Friday from 6:00 a.m. to 4:30 p.m.

This communication is the property of Lumen Technologies and may contain confidential or privileged information. Unauthorized use of this communication is strictly prohibited and may be unlawful. If you have received this communication in error, please immediately notify the sender by reply e-mail and destroy all copies of the communication and any attachments.

Lumen Facility Map



3/13/2025, 3:31:39 PM

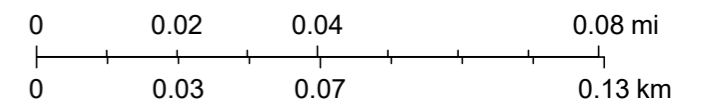
Local Copper Aerial Route

— Aerial, In Service

Local Copper UG Route

- - - Underground, In Service

1:2,257



Esri Community Maps Contributors, City of Boulder, Boulder County, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
 303-441-3930 • www.BoulderCounty.gov

MEMO TO: Agencies and Adjacent Property Owners
FROM: Pete L'Orange, Senior Planner
DATE: February 20, 2025
RE: Docket LU-25-0002

Docket LU-25-0002: Stone Earthwork and Grading

Request: Limited Impact Special Review for approximately 2,100 cubic yards of non-foundational earthwork on a 1.34-acre parcel.
Location: 650 Longs Peak Drive, a 1.34-acre parcel located approximately 300 feet west of the intersection of Longs Peak Drive and Paragon Drive, in Section 12, Township 1S, Range 70W.
Zoning: Estate Residential (ER) Zoning District
Applicant/Owner: Robert & Diana Stone
Agent: Stewart Architecture, c/o Peter Stewart

Limited Impact Special Review is required of proposed uses that may have greater impacts on services, neighborhoods, or the environment than those allowed by right under the Boulder County Land Use Code. This process will review conformance of the proposed use with the Boulder County Comprehensive Plan and the Land Use Code.

This process includes a public hearing before the Board of County Commissioners. Adjacent property owners and holders of liens, mortgages, easements or other rights in the subject property are notified of this hearing.

The Community Planning & Permitting staff and County Commissioners value comments from individuals and referral agencies. Please check the appropriate response below or send a letter to the Community Planning & Permitting Department at P.O. Box 471, Boulder, Colorado 80306 or via email to planner@bouldercounty.gov. All comments will be made part of the public record and given to the applicant. Only a portion of the submitted documents may have been enclosed; you are welcome to call the Community Planning & Permitting Department at 303-441-3930 or email planner@bouldercounty.gov to request more information. If you have any questions regarding this application, please contact me at 303-441-1418 or plorange@bouldercounty.gov.

Please return responses by **March 7, 2025**.

We have reviewed the proposal and have no conflicts.
 Letter is enclosed.

Signed Michelle Kelly PRINTED Name Michelle Kelly

Agency or Address Mountain View Fire District

Date 2/24/25

Claire Levy County Commissioner Marta Loachamin County Commissioner Ashley Stolzmann County Commissioner



Community Planning and Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

**BOARD OF COUNTY COMMISSIONERS
PUBLIC HEARING**

April 1, 2025 at 1:00 p.m.

**Boulder County Courthouse, 3rd Floor,
1325 Pearl Street, Boulder
Virtual and in-person**

DATE PUBLISHED: March 25, 2025

STAFF PLANNER: Pete L’Orange, Senior Planner

STAFF RECOMMENDATION

Docket LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU

Proposal: Limited Impact Special Review for an Equestrian Center with more than 25,000 square feet of floor area, an Agricultural Worker Accessory Dwelling Unit, and non-foundational earthwork exceeding 500 cubic yards, and Site Plan Review for a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet.

Location: 8130 N. 73rd Street, a 68-acre parcel located approximately .75 mile north of the intersection of N. 73rd Street and Nimbus Road, in Section 24, Township 2N, Range 70W.

Zoning: Agricultural (A) Zoning District

Owners/Applicants: Starlings CO, LLC

Agents: Johnson & Repucci LLP c/o Stephen Larson and ShelterBelt Design c/o Paige Schavey

PACKET CONTENTS:

Item	Pages
Staff Recommendation	1 – 45
Application Materials (Attachment A)	A1 – A163
Referral Responses (Attachment B)	B1 – B18
Public Comments (Attachment C)	C1 – C10

STAFF RECOMMENDATION:

Staff recommend that the Board of County Commissioners conditionally approve docket LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU.

SUMMARY AND RECOMMENDATION:

This application requests Limited Impact Special Review for an Equestrian Center with more than 25,000 square feet of floor area, for an Agricultural Worker Accessory Dwelling Unit (Ag Worker ADU), and for non-foundational earthwork exceeding 500 cubic yards; the application also requests Site Plan Review for construction a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet.

Limited Impact Special Use Review is required for the Equestrian Center with more than 25,000 square feet of floor area, for the Ag Worker ADU, and for earthwork exceeding 500 cubic yards; these are analyzed pursuant to the Special Use Standards outlined in Article 4-601 of the Boulder County Land Use Code (the Code). Site Plan Review is required for the proposed residence; this is analyzed pursuant to the Site Plan Review standards outlined in Article 4-806 of the Code.

Staff recommend conditional approval of the proposal because, as conditioned, staff find the equestrian center, the Ag Worker ADU, and the earthwork can meet all of the criteria for Limited Impact Special Use Review. Staff also recommend conditional approval of the proposed residence because, as conditioned, staff find it can meet all of the standards for Site Plan Review.

DISCUSSION:

The subject parcel is approximately 68 acres in size, located on the east side of N. 73rd Street, approximately 0.75 mile north of the intersection of N. 73rd Street and Nimbus Road (see Figure 1 below).

The Boulder County Comprehensive Plan indicates that a significant portion of the northern part of the subject parcel is located within identified Agricultural Lands of National Importance; there are additional Agricultural Lands of National and Local Importance on the southern portion of the parcel (see Figure 2 below). There is also an identified Riparian area associated with the Highland Ditch, and a very small Critical Wildlife Habitat in the southeast corner of the subject parcel. Finally, there is a viewshed protection score of 1.85 out of 5 along N. 73rd Street.

The northern two-thirds of the subject parcel is identified as being located within a High Swelling Soil Potential Area; there is also an identified Landslide Susceptibility area south of the Highland Ditch (see Figure 3 below).

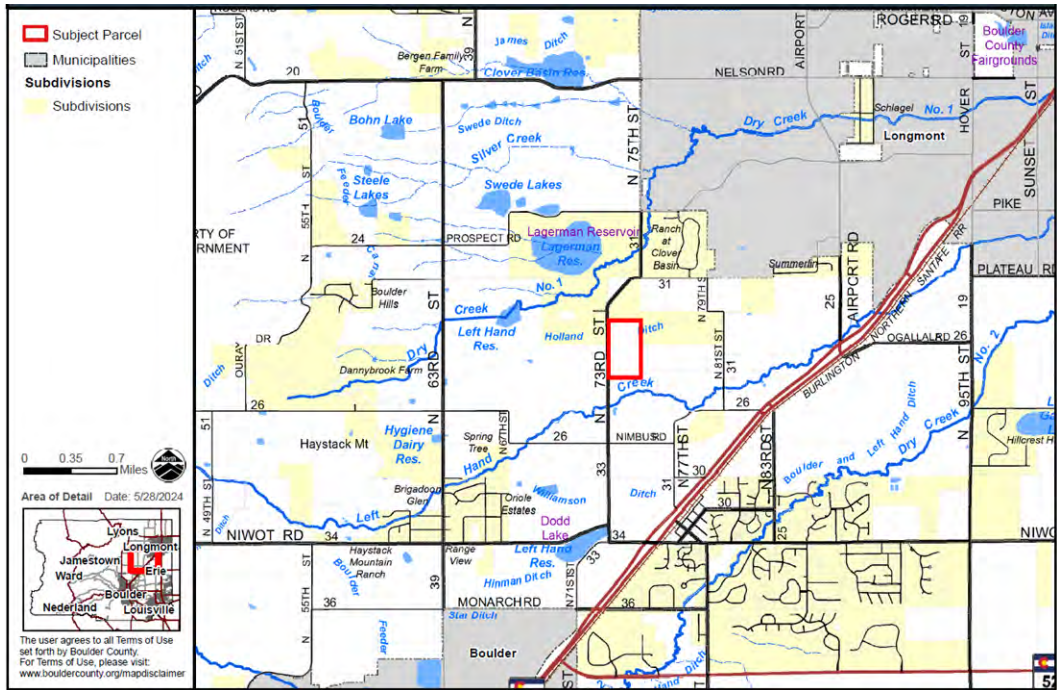


Figure 1: Vicinity Map showing location of the subject parcel.

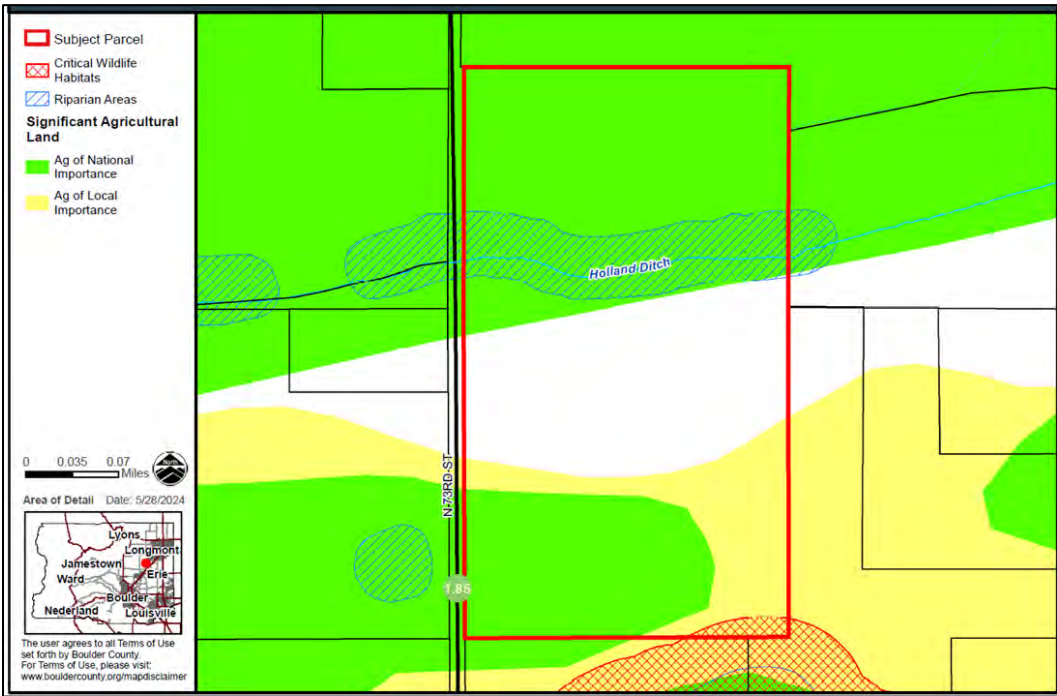


Figure 2: Comprehensive Plan map of subject parcel.

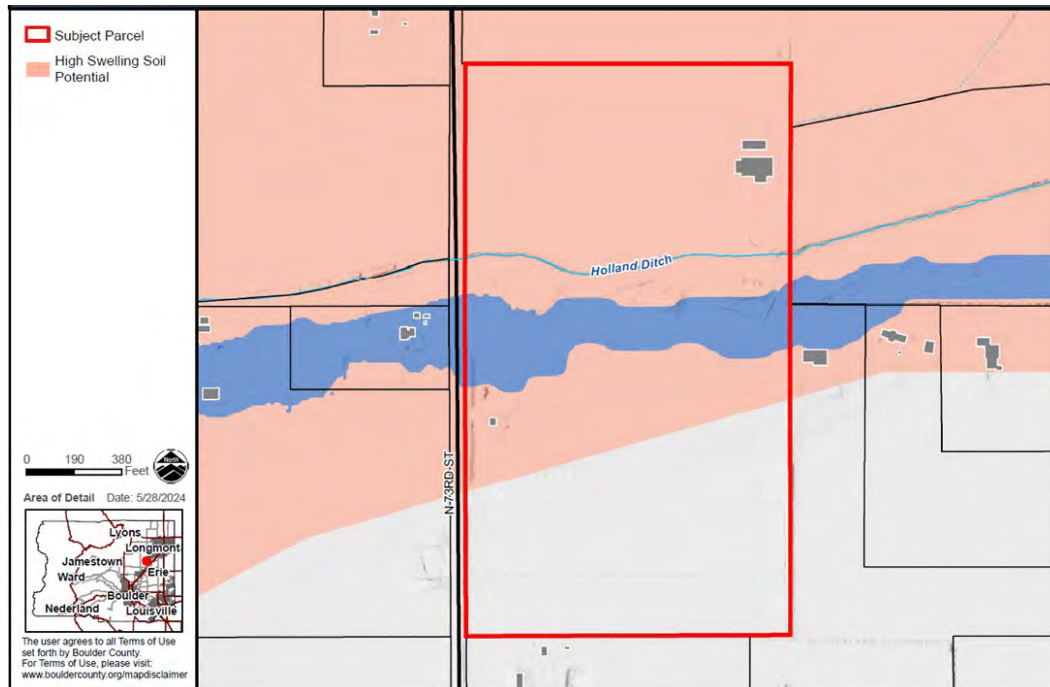


Figure 3: Geological hazards located on the subject parcel.

EQUESTRIAN CENTER CONTEXT:

Equestrian Centers are allowed by right in the Agricultural Zoning District but are subject to specific provisions under Article 4-502.A.5 of the Code. These provisions were added as part of a 1998 Land Use Code amendment. Equestrian centers which were operating prior to the adoption of this amendment were allowed to continue at their existing levels, provided they submitted a site plan and description of the operation, including number and types of competitive events, to the county by December 31, 1999. If they were to increase the number or type of events, or add lighting for nighttime riding activities, they were required to go through the Special Review process. Any equestrian centers established after the code amendments are, of course, subject to the new provisions and any required reviews. Every equestrian center that goes through a planning process is reviewed on a case-by-case basis based on the specifics of the property and the proposal.

Staff reviewed the planning and land use records to develop a general context for equestrian centers in unincorporated Boulder County. Factors that staff reviewed include: the number of reviewed equestrian centers; the distribution of equestrian centers in unincorporated Boulder County; which equestrian centers were grandfathered as existing prior to the code amendments; whether any of the grandfathered equestrian centers required additional reviews; and how much floor area was related to equestrian center activities versus other activities for each site.

Based on the planning and land use records, including the proposed equestrian center on the subject parcel, staff identified a total of 29 equestrian centers as having been reviewed by the county (see Table 1 below). Staff have not inspected each approved or documented equestrian center to determine if they are still in operation; rather, staff

focused their analysis on the characteristics of those reviewed equestrian centers. They are scattered throughout the county, but there is some slight clustering west of Longmont and around the Louisville/Lafayette/Erie area (see Figure 4 below). Of those 29 existing equestrian centers, only one of those (Magpie Meadows Farm at 7754 Ute Road) was not in operation prior to the 1998 code amendment.¹

Name	Location	Acreage	Residential Floor Area	Agricultural Floor Area	Total Floor Area	Review Process	Pre-1999 Grandfathered
Starlings CO	8130 N. 73rd Street	68	5,352	51,194	56,726	LU (2024, under review)	N
Nighthawk Equestrian	5555 Nelson Road	35	2,844	43,743	46,587	SU (2019, Approved)	Y
Canino	10024 Lookout	134	7,705	38,164	45,869		Y
Boulder Equestrian Center	8778 Arapahoe	10	3,197	32,236	35,433	SU (1990, Approved)	Y
Carlisle	11050 Jasper	55	10,002	25,369	35,371		Y
Windswept Farms	10985 Lookout Road	44	1,500	34,734	36,234	LU (2023, approved)	Y
Treadwell	8002 Arapahoe	31.5	5,345	27,402	32,747	SU (1983, Approved)	Y
Wasson	10594 N 65th	40	9,471	22,443	31,914		Y
Full Moon Farm	9143 Valmont	25	0	26,344	26,344		Y
Miles	11051 Jasper	43	4,176	21,135	25,311		Y
Anderson	7132 Baseline	37	13,724	9,316	23,040		Y
Hansen	7659 East County Line	40	2,167	18,616	20,783		Y
Rossing	13781 N 115th	55	4,794	12,626	17,420		Y
Tanksalvala	10505 N 65th	20	3,306	12,696	16,002		Y
Magpie Meadows	7754 Ute Road	4.5	4,706	10,961	15,667	SU (2022, On Hold)	N
Schultz	6650 Nelson	29	2,676	11,514	14,190		Y
Nemmers	14128 N 115th	5	1,664	12,374	14,038		Y
Middlecreek	7484 N 49th	45	3,388	7,380	10,768		Y
Winters	7160 Nimbus	12	5,843	3,636	9,479		Y
Taylor	9647 N 63rd	29	5,545	2,376	7,921		Y
Brinkman	10145 N 65th	10	3,485	4,092	7,577		Y
Kinne	3575 Nimbus	10	2,855	4,702	7,557		Y
Cameron	10282 Arapahoe	15	2,596	4,656	7,252		Y
Hunnes	4650 Pleasant Ridge	8.5	4,797	1,917	6,714		Y
Moore	5150 St Vrain	10	2,535	3,920	6,455		Y
Marten	2401 N 119th	10	4,216	2,018	6,234		Y
Roark	11623 Wasatch	40	4,089	1,542	5,631		Y
Masters	12257 Baseline	16	3,016	2,480	5,496		Y
Avery	11026 Maple	4.8	2,031	2,072	4,103		Y

Table 1: Approved Equestrian Centers in unincorporated Boulder County.

¹ The Magpie Meadows proposal was submitted in 2022 (docket SU-22-0009) but is currently on hold at the request of the Access & Engineering team for additional information.

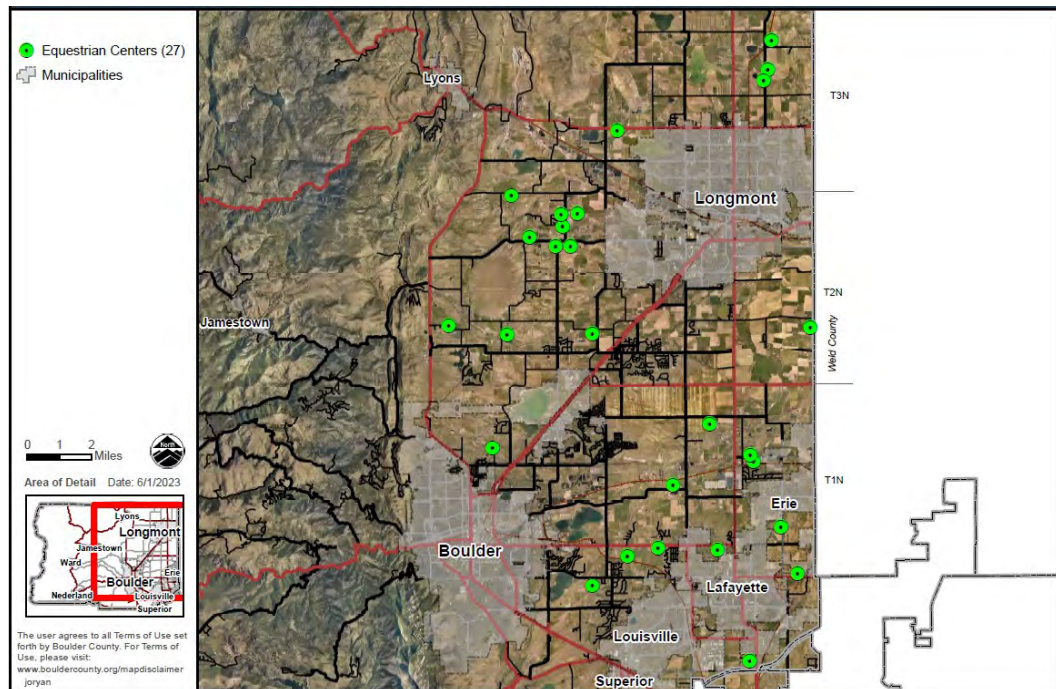


Figure 4: Approved Equestrian Centers in Boulder County.

Based on the planning records, four of the equestrian centers in operation prior to the code amendments have been subject to another review process, not including the application for the subject property. The Boulder Equestrian Center at 8778 Arapahoe Road and the Treadwell Equestrian Center at 8002 Arapahoe Road both went through the Special Review process prior to 1998. In reviewing their status after the adoption of the code amendment, staff determined they were operating legally but were still subject to the conditions of those Special Review approvals, including floor area and number and types of events. The Boulder Equestrian Center (docket SU-90-0009, then known as the Randolph Equestrian Center and originally called the Paclamar Equestrian Center) was approved for a total of 35,433 square feet for floor area (3,197 square feet for the residence and 32,236 square feet related to agricultural activities). The Treadwell Equestrian Center (docket SU-83-0024, originally the Cunningham Horse Training Center) was originally approved with 28,065 square feet of floor area (5345 square feet the residence and 22,720 square feet of agricultural floor area); an additional 4,682 square feet of agricultural floor area have been added since for an existing total of 32,747 square feet of floor area (27,402 square feet of agricultural floor area).

The third grandfathered equestrian center which has gone through a subsequent review is the Nighthawk Equestrian Center at 5555 Nelson Road. Originally the Foothills Equestrian Center, the Nighthawk Equestrian Center went through Special Review in 2019 (docket SU-19-0011) in order to expand the approved use of the site to include on-site camping for those attending events at the equestrian center and to allow for members of the public outside of those who board or train at the facility to attend events. Per Article 4-502.A.5.c, equestrian centers require Special Review in order to have competitive events open to participants outside of those who board or train there. The Nighthawk Equestrian Center was approved for a total floor area of 47,555 square

feet (2,844 square feet for the residence and 44,711 square feet of agricultural floor area, including an Ag Worker ADU); to date, they have built 46,587 square feet, with the remaining 968 square feet specifically allocated to the Ag Worker ADU (the square footage for Nighthawk Equestrian Center listed in Table 1 reflects what has been built).

Finally, Windswept Farms at 10985 Lookout Road went through the Limited Impact Special Review in 2023 for 34,734 square feet of agricultural floor area and approximately 1,500 square feet of residential floor for a detached, single unit dwelling to be used for staff housing (docket LU-23-0007). The total resulting floor area proposed was 36,234 square feet. No concerns were expressed regarding the proposed floor area, and the floor area was approved at a total of 36,234 square feet.

The remainder of the reviewed equestrian centers all fall under the pre-1998 code amendment provision.

PROPOSAL:

The applicants have proposed the develop the subject parcel as an equestrian training and breeding center (“Equestrian Center”), with multiple structures supporting that use, including an Agricultural Worker Accessory Dwelling Unit (Ag Worker ADU). See Figure 5 below for the proposed site plan. The total proposed floor area for the Equestrian Center is approximately 49,925 square feet; the proposed Ag Worker ADU is 1,010 square feet, plus 278-sqaure-foot covered porch. The applicants have also prosed a new 5,352-square-foot residence as customary and incidental to the Equestrian Center use.

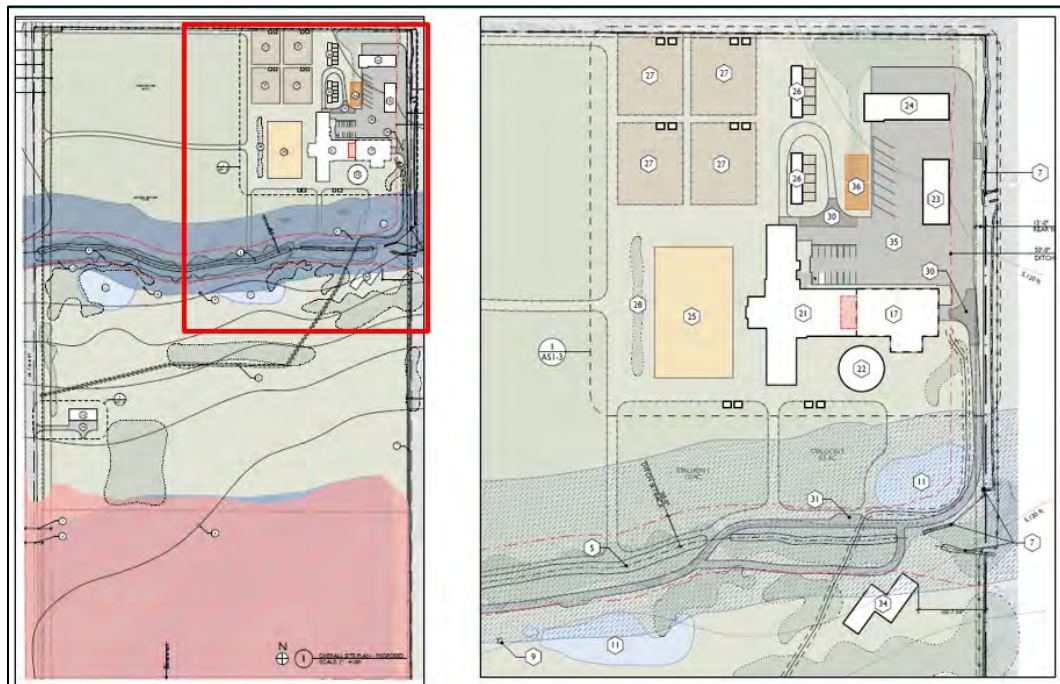


Figure 5: Proposed site plan, with detail of the northeastern portion of the subject parcel.

According to the Boulder County Assessor’s records, there is a 12,144-square-foot “Special Purpose Barn” and a 4,000-square-foot equipment shed on the subject parcel. Staff also observed an approximately 900-square-foot accessory structure the use of which is not known. Per the application materials, approximately 1,472 square feet of the existing special purpose barn and all of the 900-square-foot accessory structure are proposed to be deconstructed.

The applicants then propose to build a total of 20 structures, 17 of which would be new, one of which would be the existing barn with new additional floor area, one being an existing structure which will be relocated on the subject parcel, and the final structure being a residence as customary and incidental to the equestrian center. The total resulting floor area proposed is 56,565 square feet (see Table 2 below). Per the Code, covered porches attached to a principal structure, Agricultural Worker ADUs, agricultural accessory structures (such as barns) are not included in residential floor area (RFA) calculations. As such, the total resulting RFA as proposed is 5,352 square feet and the total non-residential floor area is 51,213 square feet.

Structure	Total	RFA or Non-RFA
Residence	5,082 sq. ft.	RFA
Residence (Screened Porch)	270 sq. ft.	RFA
Residence (Covered Porch)	116 sq. ft.	Exempt from RFA
Stable and Arena	30,077 sq. ft.	Non-RFA
Heavy Equipment Storage	4,000 sq. ft.	Non-RFA
Hay/Bedding Storage	4,000 sq. ft.	Non-RFA
Daily Equipment Storage	4,000 sq. ft.	Non-RFA
Ag Worker ADU	1,010 sq. ft.	Non-RFA
Ag Worker ADU covered porch	278 sq. ft.	Non-RFA
Dry Lot Sheds (120 sq. ft. x 12)	1,440 sq. ft.	Non-RFA
Horse Run Sheds (1,280 sq. ft. x 2)	2,506 sq. ft.	Non-RFA
Round Pen (covered)	3,848 sq. ft.	Non-RFA

Table 2: Existing and proposed square footage, include RFA status.

REFERRALS:

This application was referred to the typical agencies, departments, and nearby property owners within 1,500 feet of the property. All responses received are attached and summarized below.

Boulder County Building Safety and Inspection Services Team: Boulder County Building Safety and Inspection Services reviewed the proposal and responded that the proposed structures will be required to meet the county’s BuildSmart requirements and must

have an automated fire sprinkler system installed, be constructed with ignition-resistant materials and defensible space for wildfire mitigation and include an electrical vehicle charging outlet in the garage. They also noted that, as the property will exceed 25,000 square feet of total floor area, the 2015 International Green Construction Code will apply to new construction on the parcel. The Building team also noted that soils report will be required at building permit and that grading observation reports will be required. A more detailed plan review will be performed at the time of permit application, when full details are available, to assure that the proposal will meet all applicable minimum requirements.

Boulder County Development Review Team – Access & Engineering: Boulder County Development Review Team – Access & Engineering (A&E) reviewed the proposal and determined the property has legal access via N. 73rd Street. They noted that the proposed driveway must meet the Boulder County Multimodal Transportation Standard, including emergency pullouts and turnarounds. The Access & Engineering team also provided comment on the grading plans as submitted and noted that a stormwater quality permit and a drainage letter will be required. Finally, they reviewed the Transportation System Impact Analysis (TSIR); while they requested some additional information from the applicants regarding staffing and operations, they accepted the conclusions.

Boulder County Public Health Department: The Public Health Department reviewed the proposal and noted that a new onsite wastewater treatment system (OWTS) permit will be necessary for the proposed OWTS. They provided recommendations on avoiding damage to the OWTS during construction. They also provided on the requirements for decommissioning of the existing OWTS.

Boulder County Floodplain Management Team: The Floodplain Management team reviewed the application materials and stated that, due to recent updates to the floodplain maps, the subject parcel is no longer within the Floodplain Overlay (FO) district; however, the southern portion of the subject parcel is still located within the 500-year floodplain and a known fluvial hazard zone. They also provided recommendations to the applicants regarding flood insurance.

Colorado Division of Water Resources: This agency reviewed the application and noted that the existing well can only be used for livestock owned by the property owners and may not be used for any horses being boarded on-site. They also noted that the well cannot be used for the residence or the Ag Worker ADU. Finally, they noted that it is not clear whether the existing ponds on-site were constructed in accordance with Colorado State law and that the applicants must coordinate with the Water Commissioner to ensure the pond are in compliance.

Xcel Energy: This agency's referral response noted that Xcel owns and operates existing natural gas service facilities to the main house. For new natural gas service or modification to any of the existing facilities, the applicants must complete Xcel's application process.

Adjacent Property Owners: Notices were mailed to 33 nearby property owners. Staff have received three public comments. The first stated concern about traffic along N. 73rd Street in general, but noted that they did not oppose the proposal; the second and third comments also expressed concerns about traffic, and also expressed a desire that lighting be limited to prevent light pollution. One comment also requested a restriction on when outdoor work could occur.

Agencies that sent a response indicating no conflicts include: Boulder County Conservation Easement Team.

Agencies that did not respond include: Boulder County Long Range Planning; Boulder County Stormwater team; Boulder County Parks & Open Space – Natural Resource Planner; Left Hand Water District; Poudre Valley REA; Holland Ditch Company; and Mountain View Fire Protection District.

LIMITED IMPACT SPECIAL REVIEW SUMMARY:

The Community Planning & Permitting staff reviewed the conditions and standards for approval of a Limited Impact Special Review. Staff has reviewed these standards as they apply to the proposed Equestrian Center, the Ag Worker ADU, and the earthwork. Staff also reviewed the Equestrian Center requirements per Article 4-502.A and the Ag Worker ADU per Article 4-516.H of the Code.

- (1) *Complies with the minimum zoning requirements of the zoning district in which the use is to be established, and will also comply with all other applicable requirements;***

The subject parcel is zoned Agricultural and is a legal building lot. Equestrian Centers, Ag Worker ADUs, and earthwork exceeding 500 cubic yards can be approved through the Limited Impact Special Review process.

All of the existing and proposed structures meet the required setbacks for the Agricultural zoning district. There is a supplemental setback of 90 feet along N. 73rd Street; there is also a supplemental setback along the Holland Ditch. The applicants are not proposing any structures within either of the supplemental setbacks.

Equestrian Center

As discussed above, the project as proposed would result in over 25,000 square feet of floor area, all of which is related to the equestrian center, a defined agricultural use. Properties with over 25,000 square feet of floor area, all of which is related to an agricultural use, must be reviewed the Limited Impact Special Review process.

Additional Provisions for an Equestrian Center under Article 4-502.A.5 include the following:

- a. *Setback Requirements: Unlighted outdoor equestrian arenas shall be set back 300 feet from existing schools, churches and dwelling on other lots, unless reduced through Special Review or Site Plan Review.***

There are no existing or proposed outdoor equestrian arenas located within 300 feet of any existing school, church, or dwelling on other lots. The propose round pen, which is unlighted, is located approximately 600 feet from the nearest residence located on another parcel; the proposed outdoor arena area is located approximately 825 feet from the nearest residence located on another parcel. Therefore, staff find this provision is met.

- b. *Limited Impact Special Review is required for any equestrian center with amplified sound and/or lighted outdoor riding, driving, or showing of horses.***

Staff have confirmed with the applicants that there will be no amplified sound or lighting for outdoor riding, driving, or showing of horses. Therefore, staff find this provision is not applicable to this application.

- c. *Special Review is required for competitive events open to participants outside of those who board or train at the facility.***

Per the application materials submitted, and as confirmed by the applicants, the proposed equestrian center use will not include any competitive events open to any persons outside of those who board or train at the facility. Therefore, staff find the proposal does not require Special Review.

- d. *Existing establishments will be considered conforming at their present levels of use provided a site plan and description of the operation, including number and types of competitive events, is submitted to the Community Planning & Permitting Department by December 31, 1999. Increasing the number of competitive events or lighting for night time riding activities will require Special Review or Limited Impact Special Review as required in (b) above (Section 4-600).***

There is no existing equestrian center on the subject parcel. Therefore, staff find this provision is not applicable to this application.

- e. *One Single Unit Dwelling, occupied by the owner or manager of the equestrian center, will be considered customary and incidental as a part of this use.***

As discussed above, the applicants have proposed a single unit dwelling on the subject parcel. The applicants have confirmed that the single unit

dwelling will be occupied by the property owners. Therefore, staff find this provision is met.

The proposed residence is reviewed under the Site Plan Review Standards below.

- f. This use requires a building lot. Activities related to the use may occur on agricultural outlots which do not prohibit the activity, however no structures related to the use are allowed on the outlot.***

The subject parcel is over 35 acres in size. Per Article 9-100.A.2, this constitutes a legal building lot. Therefore, staff find this provision is met.

- g. Boarding of horses is permitted.***

Per the applicants, the majority of the horses on-site will be owned by the property owners, and all of the horses on the property will be part of the equestrian center's training program. They stated that there will be times when a trainee's horse is stabled on site for a period of time. A small number of horses (6-8) will be stabled for the duration of a weekend clinic; up to two horses will be stabled for training for up to 6-12 months. The applicants have stated that the facility will for training, not for boarding. However, while staff find stabling for a weekend does not necessarily constitute "boarding," staff find that stabling horses for a period up to a year, even if it is no more than two at any time, would be considered boarding. Per this provision, however, boarding is allowed as part of an equestrian center use. Therefore, staff find that this provision is met.

In addition to the provisions discussed above, Article 4-502.A.3 and 4, provide that the parking and loading requirements for an equestrian center must be sufficient for the use as proposed. The application materials plans show 11 parking spaces, one of which must be ADA van accessible, and 6 spaces for vehicles with trailers. Per the referral response from the Access & Engineering Team, the proposed parking and loading spaces are sufficient for the use as proposed.

Therefore, staff find that the proposed equestrian center meets all of the additional provisions under Article 4-502.A.5.

Agricultural Worker Accessory Dwelling Unit

The applicants have proposed a 1,010-square-foot, two-bed and one-bath Agricultural Worker Accessory Dwelling Unit, with a 278-square-foot covered porch. The Ag Worker ADU is proposed to be attached to the Daily Equipment Storage Building; no internal communication is proposed between the Ag Worker ADU and the rest of the storage building. Ag Worker ADUs are allowed in

the Agricultural Zoning District, if approved through the Limited Impact Special Review process.

Additional Provisions for Agricultural Worker Units under Article 4-516.H.6 include the following:

- a. The applicant shall adequately demonstrate that the property size and nature of the agricultural work on the property requires a second household for labor on-site.***

The subject parcel is approximately 68 acres in size. Per the application materials, the equestrian center would include stabling and breeding of horses, training of both horses and riders, and hay production. The equestrian center would stable up to 15 horses; the haying operations would occur on the southern portion of the parcel (approximately 30 acres). Per the application materials, the agricultural worker “needs to be on hand early in the morning for proper daily feeding times, the frequent moving of horses from the stable out to pasture or the paddocks, and especially during foaling season when constant 24 hour monitoring is required leading up to the birth and the time after.” Staff find that the level and nature of the agricultural activities on the subject parcel supports the request for a second household for on-site labor. Therefore, staff find this provision is met.

- b. The applicant shall adequately demonstrate that the worker is substantially employed in farming the property.***

As discussed above, the agricultural worker on the subject parcel carries out a wide range of agricultural activities and responsibilities related to equestrian center activities and the haying operations on the property. To ensure that this provision continues to be met, staff recommend as a condition of approval that the applicants provide evidence that the agricultural worker is substantially employed in farming the property as part of the annual reports required under provision 4-415.H.6.g below. Therefore, as conditioned, staff find this provision can be met.

- c. The applicant shall adequately demonstrate that the unit is necessary for operating the farm.***

As reflected in the application materials and discussed above, a significant amount of time and manpower, which exceed that which can be provided the property owners on their own, is necessary for the day-to-day operations of the proposed equestrian center. As such, the Agricultural Worker ADU is necessary for operating the equestrian center. Therefore, staff find this provision is met.

- d. *The accessory dwelling may be detached from the principal dwelling, provided it is either closely clustered with the principal structure or located where appropriate for the agricultural operation with which it is associated.*

The applicants have proposed to locate the Ag Worker ADU as part of the daily equipment storage building. This would place the Ag Worker ADU approximately 700 feet from the principal residence (see Figure 6 below). However, staff find that the proposed location for the Ag Worker ADU is appropriate, as it places it near the equestrian center operations.

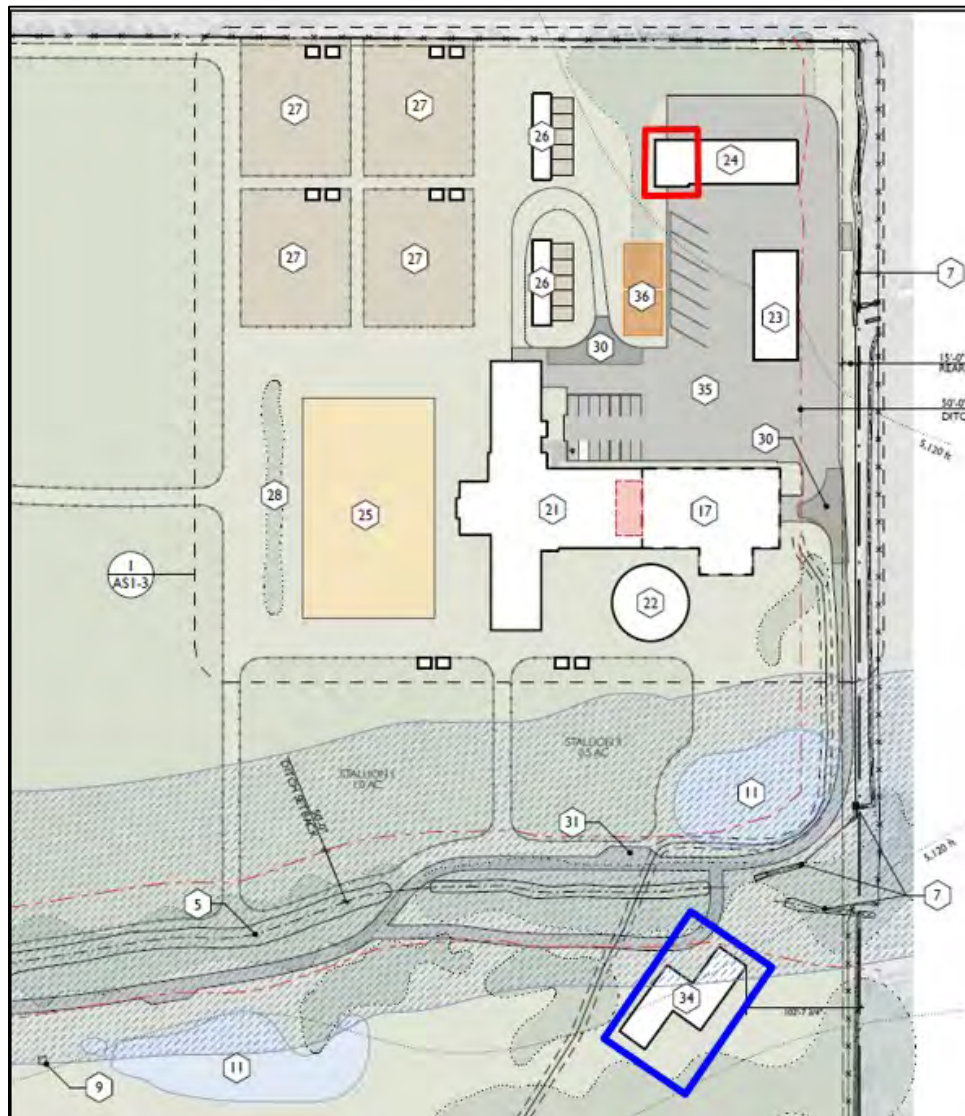


Figure 6: Proposed site plan, with proposed Ag Worker ADU indicated in red and the proposed residence indicated in blue.

Therefore, staff find this criterion is met.

- e. The accessory dwelling is limited to 1,800 square feet. The Board may approve covered porches to proposed accessory dwellings which exceed these specified square footage limitations, provided that no other portion of the floor area of the proposed dwelling exceeds the specified limitation, and provided that the Board approves the additional covered porch area in accordance with the special use criteria. In no event shall any such approved covered porch area ever be enclosed.***

The Ag Worker ADU is proposed to be 1,010 square feet, with a 278-square-foot covered porch area; the total size of the Ag Worker ADU is proposed at 1,288 square feet. Staff find the size proposed Ag Worker ADU is in compliance with this provision. Therefore, staff find this provision is met.

- f. The property owner or a member of the owner's immediate family must work and live on the property.***

Per the applicants, the property owners will reside in the proposal principal residence and will be actively involved in the daily training sessions and other required operations. Therefore, staff find this provision is met.

- g. The owner must submit an annual report to the Community Planning & Permitting Department indicating that the purpose for which the accessory unit was approved has not changed, and that the unit continues to be occupied in accordance with the approval. Any impermissible change in use of the unit can result in termination of the right to occupy or use the unit.***

Staff recommend a condition of approval requiring the property owners to submit an annual report to the Community Planning & Permitting Department indicating that the accessory dwelling continues to be used as an Agricultural Worker Unit that is occupied in accordance with the approval of this docket. As conditioned, staff find this provision can be met.

- h. A notice of these provisions will be recorded in the real property records of the Clerk and Recorder's Office.***

Staff recommend a condition of approval requiring, prior to the issuance of any building permits for the Agricultural Worker Unit, a signed affidavit be recorded that recognizes the conditions of approval for this docket. As conditioned, staff find this provision can be met.

- i. Agricultural accessory dwellings approved by Boulder County or legally nonconforming prior to October 19, 1994 shall be permitted to be repaired, remodeled or replaced, provided the new structure is in the same general location and does not exceed 1,800 square feet.***

There is no existing agricultural worker accessory dwelling on the subject parcel. Therefore, staff find this provision is not applicable.

Therefore, as conditioned, staff find the Agricultural Worker ADU can meet all of the required provisions.

Non-Foundational Earthwork

Per Article 4-102.F.3.c of the Code, Limited Impact Special Review is required for grading exceeding 500 cubic yards in the Agricultural zoning district. The applicants have proposed approximately 2,496 cubic yards of non-foundational earthwork. Per the referral response from the Boulder County Building Safety & Inspection Services Team, the proposed earthwork will require a grading permit. A qualified Colorado-licensed design professional must observe the grading and submit an observation report to ensure that the work is completed in substantial conformance with the approved engineered plans. Staff recommend as conditions of approval that grading permits are obtained and that the grading observation and associated report be carried out per the referral response. Additional impacts and requirements for the proposed earthwork are discussed in other criteria below. As conditioned, staff the proposed earthwork can meet this criterion.

Therefore, as conditioned, staff find this criterion can be met.

- (2) ***Will be compatible with the surrounding area. In determining compatibility, the Board should consider the location of structures and other improvements on the site; the size, height and massing of the structures; the number and arrangement of structures; the design of structures and other site features; the proposed removal or addition of vegetation; the extent of site disturbance, including, but not limited to, any grading and changes to natural topography; and the nature and intensity of the activities that will take place on the site. In determining the surrounding area, the Board should consider the unique location and environment of the proposed use; assess the relevant area that the use is expected to impact; and take note of important features in the area including, but not limited to, scenic vistas, historic townsites and rural communities, mountainous terrain, agricultural lands and activities, sensitive environmental areas, and the characteristics of nearby development and neighborhoods;***

For purposes of this review, staff consider the properties within 1,500 feet of the subject parcel as the applicable surrounding area, which is consistent with the defined neighborhood for the Site Plan Review. Existing development within this area consists primarily of single unit residences, many with agricultural activities and structures.

Equestrian Center

The proposed equestrian center use is a defined agricultural use, which is generally appropriate for the Agricultural zoning district. Most of the proposed equestrian center structures are located in the northeast portion of the parcel. Staff find this portion of the parcel is an appropriate location for the proposed equestrian center structures as it clusters them in one portion of the subject parcel, which is where the existing development is generally located. The exception to this clustering of structures is the proposed 4,000-square-foot heavy equipment storage building, which is proposed to be located on the southern portion of the parcel (see Figure 7 below). While this structure would not be clustered with the rest of the development, staff find this location is appropriate as it would provide access and storage for equipment that will be used for the haying operations which take place on the southern portion of the parcel. The southern portion of the lot is down-slope from the rest of the parcel. Locating this structure closer to the hay fields will allow for that equipment to access the fields without having the drive down N. 73rd Street.

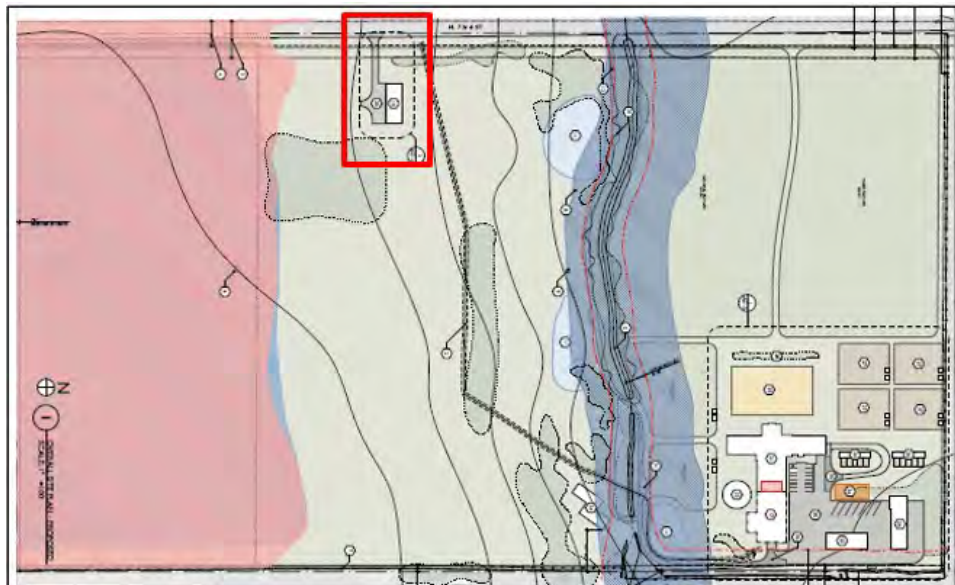


Figure 7: Proposed site plan, with heavy equipment storage building indicated in red. NOTE: North is to the right on the image.

The proposed equestrian center structures range from approximately 12 feet in height (sheds) to approximately 32 feet 7.5 inches (stable and arena). Staff find the range of heights for the proposed structures are compatible with the surrounding area as there are a number of other parcels with agricultural structures which, based on pictometry measurements, are in the range of 25 to 30 feet in height. Additionally, the existing special use barn is approximately 32.5 feet in height; staff find the very minimal increase in height to the structure will not result in any adverse impacts on the character of the area. As such, while the proposed stable and arena is slightly higher than other agricultural structures in the area, staff find that the heights for the proposed structures are in character with the rest the neighborhood.

Staff evaluated the total floor area proposed in relation to other parcels in the area. The applicants have proposed a total of 56,565 square feet of floor area, including the proposed residence (the compatibility of the residential floor area is discussed under the Site Plan Review standards below). The total floor area on other parcels in neighborhood range from 1,150 square feet to 48,105 square feet. The proposed floor area for the subject parcel would make it the largest in the neighborhood. However, the proposed floor area is all located well back from the public right-of-way, which helps to reduce the impact of the proposed development. As discussed in more detail under Criterion 9 below, staff recommend several conditions of approval which will serve to reduce and mitigate the visible impacts of the proposed development.

Staff also evaluated the resulting size of the equestrian center in relation to other equestrian centers in unincorporated Boulder County. The proposal would result in the largest floor area for equestrian centers in unincorporated Boulder County; the next largest equestrian center, Nighthawk Equestrian, was approved in 2019 for a total of 47,655 square feet. Considering specifically the equestrian centers which have gone through a land use review process, the approved total floor areas range between 32,747 square feet and 47,655 square feet, with an average of approximately 37,617 square feet. The proposal would exceed that median by 19,109 square feet, and the largest existing equestrian center by 9,914 square feet. However, staff also considered the size of the subject parcel in relation to the proposed development. The applicants have proposed a total of 56,565 square feet of floor area on a 68-acre parcel; this approximately 832 square feet per acre. The other four equestrian centers which have been reviewed and approved through a land use review process have the following square footage and acreage:

Name	Location	Parcel Acreage	Total Floor Area	Square Footage per Acre	Review Process
Starlings CO	8130 N. 73rd Street	68	56,565	832	LU (2024, under review)
Nighthawk Equestrian	5555 Nelson Road	35	46,587	1,331	SU (2019, Approved)
Boulder Equestrian Center	8778 Arapahoe Road	10	35,433	3,543	SU (1990, Approved)
Windswept Farms	10985 Lookout Road	44	36,234	824	LU (2023, Approved)
Treadwell	8002 Arapahoe Road	31.5	32,747	1,040	SU (1983, Approved)

Table 3: Approved Equestrian Centers, with parcel acreage, total floor area, and square footage per acre.

Based on the floor area to parcel size analysis, the floor area proposed by the applicants is generally consistent with the floor area approved for Windswept Farms in 2023, and well below the other three previous approvals. While the Code does not specifically consider the ratio of floor area to parcel size in the Agricultural zoning district, staff find it to be a useful method to help evaluate the overall impact of the proposed floor area. As such, while the equestrian center as proposed would have significantly more floor area than other equestrian centers, staff find that the significantly larger size of the parcel adequately serves to mitigate the proposed square footage.

As such, based on the application materials submitted, staff find that level and nature of the agricultural activities on the subject parcel, the total proposed floor area can be found to support the floor areas for each of the proposed structures.

Finally, as discussed in more detail in Criterion 4 below, staff evaluated the anticipated number of people coming and going from the subject parcel for the proposed equestrian center and found that there will be a relatively low number of people coming to the subject parcel at any given time. As such, staff do not anticipate the level of activities proposed for the equestrian center will be out of character with the rest of the surrounding area.

As such, staff find the proposed equestrian center use would not be out of character with the surrounding area and recommend approval of the floor areas proposed for the equestrian center structures, including the Ag Worker ADU, not to exceed a total of 51,213 square feet.

Ag Worker ADU

Staff have not identified any conflicts with the uses of the Ag Worker ADU in relation to the character of the surrounding area; no referral agencies have responded with any such concerns.

Earthwork

In regard to the proposed non-foundational earthwork, while the applicants propose a significant amount of earthwork, per the application materials, much of it is intended to provide “safe footing for the horses and reduces any inclines where a horse may feel the need to run.” Based on the grading plan submitted with the application, and as observed by staff during a site visit, the existing contours of the proposed development area are uneven (see Figure 8 below). The proposed earthwork is intended to smooth out these contours.

Additionally, the extent of the area where earthwork is proposed is generally limited to the development area, and it does not extend to areas where it is not necessary; the exception to this is a proposed berm west of the uncovered riding area west of the stable. Per the calculations submitted by the applicants,

construction of this berm would require approximately 839 cubic yards of fill – approximately 61% of the non-foundational fill and approximately one-third of the total non-foundational earthwork. Unless necessary for drainage control, berms are typically considered unnecessary earthwork. Staff find the proposed berm does not provide any necessary drainage control. As such, staff find the berm is excessive and unnecessary, and staff recommend that the proposed berm be removed.

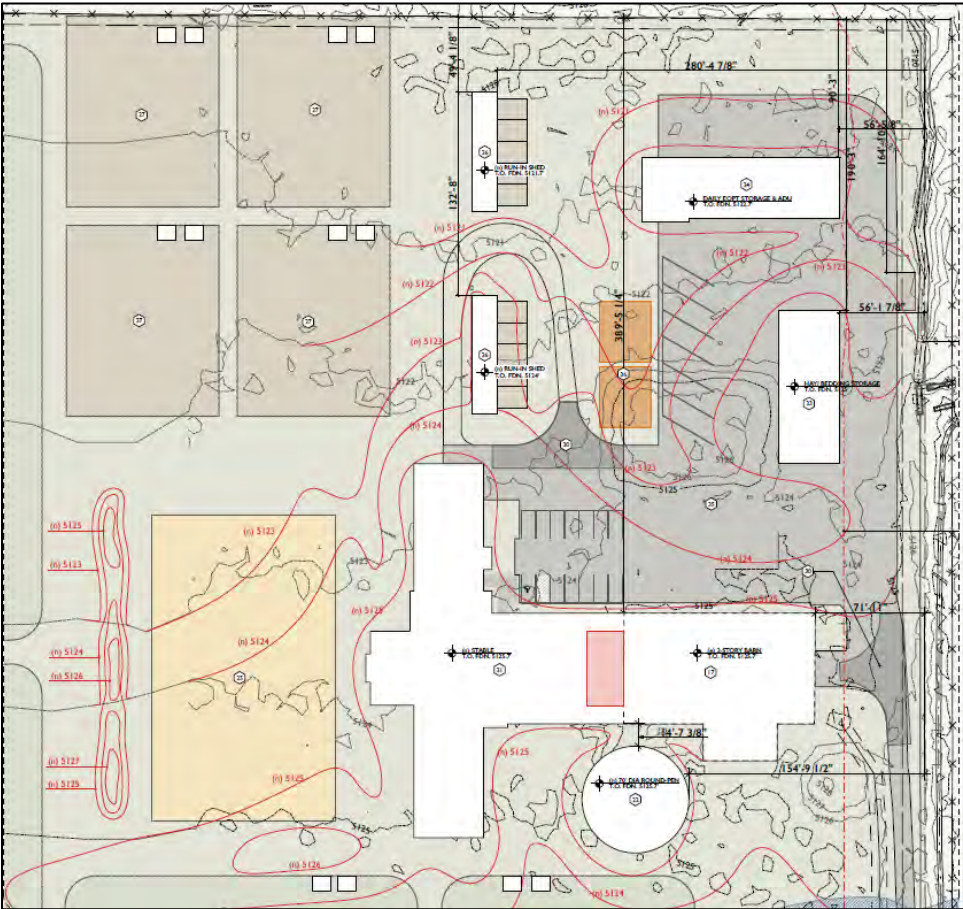


Figure 8: Proposed grading plan, with existing contours indicated by gray lines and proposed contours indicated in red lines.

Another signification portion of the non-foundational earthwork is related to the removal of part of the existing septic system north of the existing barn. The applicant has proposed to remove this system and install a new one. In doing so, they propose to flatten a currently raised portion of ground (see Figures 9 and 10 below). The raised area is approximately two feet above the surrounding area. While the application materials do not include the number of cubic yards of earthwork specifically related to the flattening of these area, staff estimate that it is approximately 8,800 square feet by two feet tall, resulting in a total of approximately 652 cubic yards of cut. Given that this is a previously disturbed area and given the applicants' desire to smooth the site contours, effectively

returning it a natural grade, staff find this section of earthwork is justified and appropriate.



Figure 9: Photo of existing barn with raised septic system area indicated in red.

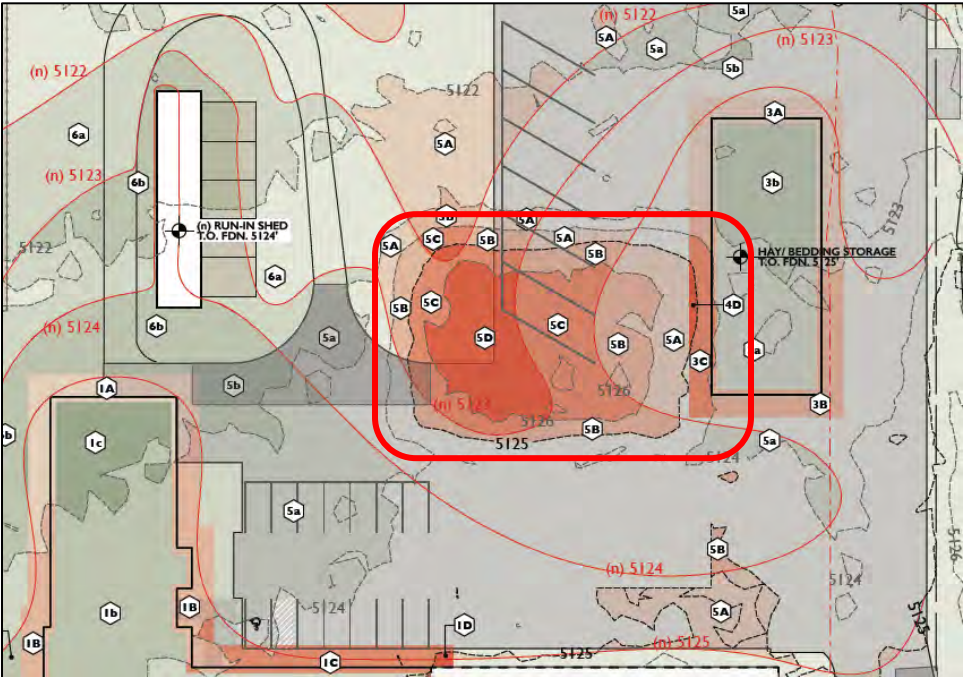


Figure 10: Detail from proposed cut and fill plan, with volume shading; proposed area of cut related to the existing septic system outlined in red.

Finally, as noted in the referral response from the Access & Engineering Team, the grading plans submitted with the application do not show the full extent of the proposed grading and where the proposed contours tie into the existing contours. Given staff’s concerns about the berm and necessity of addressing the Access & Engineering Team’s referral response, staff recommend as a condition of approval that revised grading plans be submitted at permit which show the

full extent of the grading and with the berm removed. This will significantly reduce the amount of non-foundational earthwork required.

Therefore, as conditioned, staff find that this criterion can be met.

(3) The use will be in accordance with the Comprehensive Plan;

The Comprehensive Plan indicates that a significant portion of the subject parcel is located in areas identified as Agricultural Lands of National and Local Importance (see Figure 11 below). There is also an identified riparian area associated with the Holland Ditch, and a very small Critical Wildlife Habitat area in the southeast corner of the subject parcel (impacts to the riparian area and the critical wildlife habitat are discussed in Criterion 4 below). Finally, the Comprehensive Plan indicates that there is a Viewshed Protection Score of 1.85 out of 5 along N. 73rd Street; visual impacts, including potential impacts related to this viewshed protection score, are discussed under Criterion 9 below for the equestrian center and Site Plan Review Standard 10 for the residence.

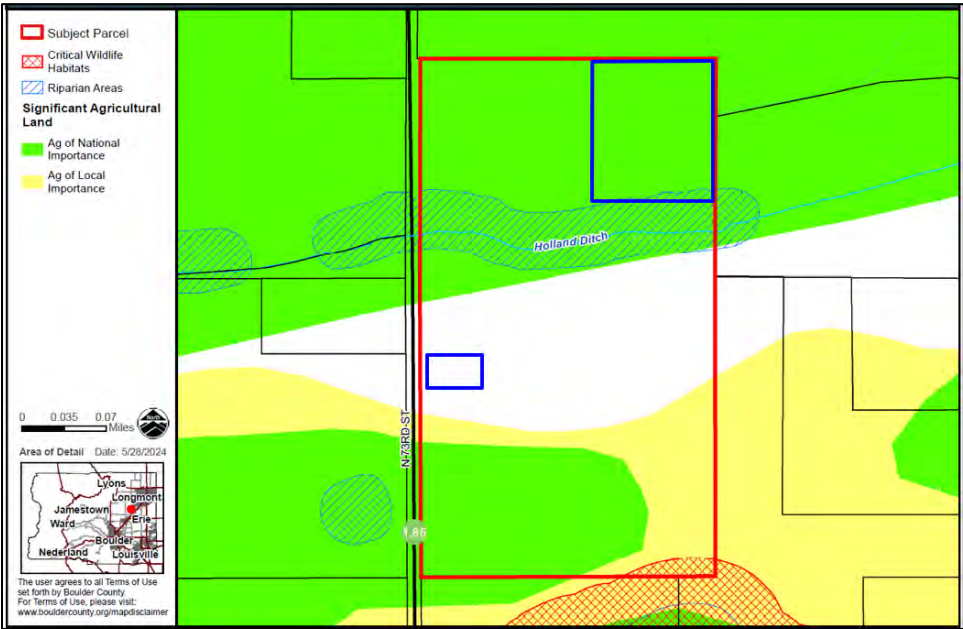


Figure 11: Comprehensive Plan map of the subject parcel. The proposed areas of development associated with the Equestrian Center are indicated in blue.

Staff evaluated the proposal in relation to the goals and policies set forth in the Boulder Valley Comprehensive Plan and identified one guiding principle and two specific policies which are particularly relevant to this application.

- Guiding Principle 5, states “Maintain the rural character and function of the unincorporated area of Boulder County by protecting environmental resources, agricultural uses, open spaces, vistas, and the distinction between urban and rural areas of the county.” Staff find that, while the proposed development includes a significant amount of floor area, the

proposed use of equestrian center is one that is typically located in, and associated with, rural and agricultural portions of the county. As such, staff find the proposal does not conflict with this guiding principle.

- Agricultural Element Policy AG 1.03: Agricultural Lands of Importance states, *“It is the policy of Boulder County to encourage the preservation and utilization of those lands identified in the Agricultural Element as Agricultural Lands of National, Statewide, or Local Importance and other agricultural lands for agricultural or rural uses.”* Staff find that the proposed equestrian center use is consistent with this policy, as equestrian centers are a defined agricultural use.
- Agricultural Element Policy AG 1.12: Land Unification states, *“The county shall continue to discourage the fragmentation of large parcels of agricultural land and to encourage the assemblage of smaller parcels into larger, more manageable and productive tracts.”* In this case, the proposed development is generally clustered in the northeast corner of the subject parcel (except for the equipment storage barn on the southern portion of the parcel, discussed above). To access the proposed development, the existing driveway transverses the whole width of the subject parcel. However, in this specific instance, staff find this does not result in any fragmentation of agricultural lands of importance, as the driveway generally follows the Holland ditch, before cutting north and running adjacent to the eastern property line. Additionally, the area south of the driveway is largely steeply sloped and outside of the designated agricultural lands of importance.

Staff have not identified any significant conflicts with any other goals or policies of the comprehensive plan related to the equestrian center, the Ag Worker ADU, or the earthwork.

Therefore, staff find that this criterion is met.

- (4) *Will not result in an over-intensive use of land or excessive depletion of natural resources. In evaluating the intensity of the use, the Board should consider the extent of the proposed development in relation to parcel size and the natural landscape/topography; the area of impermeable surface; the amount of blasting, grading or other alteration of the natural topography; the elimination or disruption of agricultural lands; the effect on significant natural areas and environmental resources; the disturbance of plant and animal habitat, and wildlife migration corridors; the relationship of the proposed development to natural hazards; and available mitigation measures such as the preservation of open lands, the addition or restoration of natural features and screening, the reduction or arrangement of structures and land disturbance, and the use of***

sustainable construction techniques, resource use, and transportation management.

Equestrian Center

As discussed above, while the proposed equestrian center includes a significant amount for floor area, the level and nature of the activities support the proposed floor area. Additionally, the estimated “footprint” of the proposed development area, not including the open fields and grazing pastures, is approximately six acres in size; this is approximately only 8.8% of the total parcel size. Therefore, staff find that the overall size of the subject parcel and clustering of the proposed development in generally one area helps to mitigate the impact of the use.

Staff also considered the potential impact of the proposal in regard to the number people coming and go from the subject parcel, and whether that would constitute an over-intensive use of the property. The routine, day-to-day activities on the subject parcel involve a relatively low number of people at any given time, with approximately 15 people traveling to the equestrian center per day, Monday through Friday, and 10 people Saturday and Sunday. Per information provided by the applicants, the trainings are done on an individual basis (except on special occasions for clinics). For each session, an individual arrives at the beginning of their session and stays for the duration of the session, approximately 90 minutes total (half hour to prepare their horse, 30-45 minute session, and half hour to untack and load up); there are approximately four to five training sessions per day. The rest of the 10-11 people traveling to the site are not training but are caring and tending to the horses. Given the size of the subject parcel, and that much of the activity will occur inside the stable and arena building, staff find the anticipated number of people would not result in an over-intensive use of the subject parcel.

Additionally, the application materials do state that the equestrian center would occasion host training clinics, which would bring in a higher number of people to the subject parcel. Per the applicants, these clinics would last for the duration of a weekend, starting either Friday or Saturday and ending Sunday. These clinics would happen only three or four times a year and would include approximately 50 people. Additionally, six to eight times per year, clinics for approximately 25 people will travel to the site. For the proposed clinics, there will typically be only six to eight individuals who will bring horses. Typically, these horses stay for the duration of the clinic. Staff find that these clinics are consistent with the activities allowed as part of an Equestrian Center Use.

As discussed above, there is an identified riparian area which runs along the Holland Ditch (see Figure 10 above). However, the development associated with the equestrian center use avoids the riparian, with the exception of the driveway and staff do not have any concerns related to the driveway’s impact on the riparian area. As also discussed above, there is a very small critical wildlife

habitat area on the subject parcel, located in the far southeast corner. Staff do not anticipate any impacts to this critical wildlife habitat as there is no development proposed or existing anywhere near the southeast corner of the subject parcel.

Ag Worker ADU

Staff do not anticipate that the proposed ADU will result in an over-intensive use of land or an excessive depletion of natural resources.

Earthwork

Finally, as discussed above, with the exception of the proposed berm, staff find the proposed earthwork and grading is generally supported by the proposed nature of the activities on site. Therefore, with the recommended condition to remove the proposed berm, staff find the proposed earthwork is not considered an over-intensive use of land.

Therefore, as conditioned in Criterion 2 above, staff find that this criterion can be met.

(5) *The use will not have a material adverse effect on community capital improvement programs*

Staff have not identified any capital improvement programs which might be impacted by the proposed equestrian center, ADU, or earthwork; additionally, no referral agency has responded with any such concern.

Therefore, staff find that this criterion is met.

(6) *The use will not require a level of community facilities and services greater than that which is available;*

Per the application materials submitted, the applicants propose to decommission and remove the existing onsite wastewater treatment system (OWTS), and to install a new OWTS to support the proposed development on the subject parcel. This new OWTS will require a permit from Boulder County Public Health and will have to comply with all Boulder County OWTS regulations.

Staff did not receive any response from the Mountain View Fire Protection District. However, the Access & Engineering Team noted in their referral response that emergency pullouts and turnarounds shown on the submitted site plans do not comply with the Boulder County Multimodal Transportation Standards (MMTS). Specifically, the proposed pullouts are more than the allowed 400 feet apart and the proposed emergency turnarounds are within 50 feet of the front of the horse barn and the proposed residence, which is not in accordance with the MMTS requirements. To ensure that the emergency pullouts and turnaround meet the MMTS requirements, staff recommend as a

condition of approval that revised plans be submitted for permitting which meet the requirements for emergency pullout and turnaround locations.

Per the application materials, water to the subject parcel is provided via both an existing well and a tap from the Left Hand Water District. Per the referral response from the Colorado Division of Water Resources, the existing well can only be used for watering livestock on a farm or ranch and that the applicants may only use it for their own horses and cannot be used for any stabled trainees' horses. The applicants have stated that the water from the well is not currently potable, so they would only use the well if they can design an adequate filtration system; if that is not feasible, the applicants will just use the Left Hand Water District tap. The water district did not respond to the referral request.

Therefore, as conditioned, staff find that this criterion can be met.

(7) *Will support a multimodal transportation system and not result in significant negative impacts to the transportation system or traffic hazards;*

The subject property is accessed via N 73rd Street, an asphalt Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Collector. Legal access has been demonstrated via adjacency to this public ROW.

Per the referral response from the Access & Engineering Team, the minimum ROW width requirement for a Collector is 70 feet. However, N. 73rd Street is 60 feet at the subject property. As such, the Access & Engineering Team have requested that the applicants provide a five-foot ROW dedication to the County at the subject property. Staff find that this dedication would not result in any conflicts with the proposed activities on the subject parcel, as there is already a 90-foot supplemental setback along N. 73rd Street, which prevents any development within that supplemental set back; the requested dedication would fall within this supplemental setback. As such, staff recommend that a five-foot ROW dedication be included as a condition of approval to allow for potential future widening of N. 73rd Street to meet required width requirements for a Collector road.

The Access & Engineering Team also reviewed the transportation system impact analysis (TSIR) submitted by the applicants and agreed with its conclusions. As such, staff find the proposed equestrian center use will not result in adverse impacts to the transportation system once the proposed project is developed. In order to prevent any adverse impacts to traffic along N. 73rd Street during construction, staff recommend as a condition of approval that during construction, all vehicles, machinery, dumpsters, and other items must be staged on the subject property.

Per the applicants, the existing driveway is to be paved to prevent rutting over time, which would be very challenging with trailers. The parking areas, both at

the stable and at the residence would also be paved for similar reasons. The drive court and additional areas would be constructed with an 100% permeable TRUEGRID commercial paver combined with pea gravel. Per the applicants, this will maintain permeability and will reduce road maintenance by keeping the pea gravel in place. To ensure that the driveway meets the MMTS requirements, staff recommend as a condition of approval that plans submitted for permitting show a driveway which meets the standards for a one-lane plains access.

Therefore, as conditioned, staff find this criterion can be met.

(8) *Will not cause significant air, odor, water, or noise pollution;*

Staff have not identified any potential air pollution which might result from the proposed equestrian center, Ag Worker ADU, or proposed earthwork, and no referral agencies have responded with any such concerns.

Staff find the proposed equestrian center does have the potential to result in odor and/or water pollution, largely as a result of manure from the horses kept on-site. Water pollution is of particular concern, given the proposed flattening of the subject parcel and the proximity to both the Holland Ditch and an irrigation lateral along the eastern property line. To help mitigate and prevent any significant odor or water pollution impacts which may result from manure on site, staff recommend as a condition of approval that the applicants submit a manure management plan and then implement the plan. Additionally, as discussed in more detail and as conditioned in Criterion 13 below, erosion control and revegetation will also help to prevent potential water pollution during construction.

Per the application materials and as confirmed by the applicants, there is no outdoor amplified sound proposed for the equestrian center. As such, staff do not have any particular concerns about significant or undue noise pollution resulting from the proposed equestrian center once it is constructed. Given the rural character of the area and the wide open nature of the subject parcel, however, staff find that construction of the proposed development will result in temporary noise impacts. To limit the noise impacts of construction, staff recommend as a condition of approval that any outdoor construction or grading activities during the construction of the equestrian center use be limited to between 8:00 am and 5:00 pm, Monday through Friday; indoor construction activities may occur outside these hours provided the noise levels do not exceed those permitted under the Boulder County Noise Ordinance.

There is no indication that the proposed Ag Worker ADU will cause significant air, odor, or noise pollution in addition to the impacts discussed above, and no referral agency responded with such a concern.

Therefore, as conditioned here and in Criterion 13 below, staff find this criterion can be met.

(9) *Will be adequately buffered or screened to mitigate any undue visual impacts of the use;*

As discussed above, staff find that the location of the proposed equestrian center structures and Ag Worker ADU are generally appropriate, given the size of the subject parcel, the level of activities on the subject parcel, and the location of development on adjacent parcels. However, per the application materials, the applicants propose to remove a line of existing trees along the northern property line. Staff recommend as a condition of approval that these trees be retained, as they would help to screen the development visually from the property to the north and from a significant portion of N. 73rd Street north of the subject parcel. Additionally, as discussed in Criterion 2 above, staff have recommended the removal of the proposed berm; however, staff find that the location of the proposed berm would an appropriate location for additional trees to help screen the stable and arena structure from the properties to the west and from N. 73rd Street adjacent to the subject parcel. As such, staff recommend as a condition of approval that a minimum of ten trees be planted west of the outdoor arena, where the berm was proposed. Staff recommend that all required deciduous trees must have at least a two-and-a-half inch caliper and coniferous trees must be at least six feet in height.

Due the rural natural of the area surrounding the subject parcel, staff find the area is particularly susceptible to light pollution. As such, staff find that limiting the number and location of exterior lighting fixtures is an appropriate measure to reduce and mitigate the potential for light pollution. The elevations as submitted by the applicants indicate dark-sky compliant exterior lighting fixtures on the proposed structures; however, no information on the specific fixtures was provided. Staff recommend as a condition of approval that locations and fixture information for all exterior lighting be provided at permitting. Additionally, given the very rural nature of the area surrounding the subject parcel, staff find that lighting has the potential to cause negative visual impacts. In order to minimize adverse visual impacts, staff recommend as a condition of approval that exterior lighting fixtures must be limited as follows: one ceiling or wall mounted fixture is permitted for each exterior entrance; no landscape lighting is permitted; and no driveway lighting is permitted.

Therefore, due to the mitigating factors outlined above and as, staff find this criterion can be met.

(10) *The use will not otherwise be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County*

Staff have not identified any impacts of the proposed equestrian center, the Ag Worker ADU, or earthwork which would be detrimental to the health, safety, or welfare of the present or future inhabitants of Boulder County; additionally, no referral agencies have responded with any such concerns.

Therefore, staff find this criterion is met.

- (11) *The use will establish an appropriate balance between current and future economic, environmental, and societal needs by minimizing the consumption and inefficient use of energy, materials, minerals, water, land, and other finite resources.***

Per the applicants, roof-top solar panels will be installed on the indoor riding arena, as well as other equestrian center structures as suitable. Staff have not identified any other concerns or conflicts with this criterion; additionally, no agencies have responded with any such concerns.

Therefore, staff find this criterion is met.

- (12) *The use will not result in unreasonable risk of harm to people or property – both onsite and in the surrounding area – from natural hazards. Development or activity associated with the use must avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors; all as identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Special Review or Limited Impact Special Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies.***

As discussed above, the subject parcel is located within a High Swelling Potential Area; additionally, there is an identified Landslide Susceptibility area associated with hillside south of the Holland Ditch. Per the referral response from the Building division, due to the High Swelling Soil Potential Area designation, a soils report which address the soil and bedrock swell potential on the parcel will be required at building permit; as such, staff recommend the soils report be included as a condition of approval. The applicants have not proposed any development in the Landslide Susceptibility Area; as such, staff find the proposed development will not result in any unreasonable risk of harm related to the Landslide Susceptibility Area.

Therefore, as conditioned, staff find that this criterion can be met.

- (13) *The proposed use shall not alter historic drainage patterns and/or flow rates unless the associated development includes acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application.***

As discussed above, the applicants have proposed a significant amount of earthwork and grading associated with the development of the equestrian center. While staff have found that the amount of earthwork is generally supported by the proposal, staff find the amount of earthwork has the potential to result in alterations to drainage and run-off on site and may require additional water detention or water quality treatment may be necessary. In order to help determine this, staff recommend that a drainage letter, as described in the Access & Engineering referral response, be submitted for review and approval at building permit application. Additionally, as the proposed development will result in over one acre of ground disturbance, and as part of Boulder County's water quality protection and Municipal Separate Storm Sewer System (MS4) Construction Program, a Stormwater Quality Permit (SWQP) is required for this project. Staff recommend as a condition of approval that applicants provide a complete SWQP submittal at building permit.

Additionally, to help ensure that the proposed development does not result in any runoff or excessive erosion, staff find that both erosion control measures and revegetation of any disturbed area is necessary. As such, staff recommend as a condition of approval that the applicants include revegetation information and erosion controls measures on plans submitted for permitting for review and approval and that erosion control measures be installed and remain in place until revegetation is complete.

Therefore, as conditioned, staff find that this criterion is met.

Staff find, as conditioned, the proposed Equestrian Center, the Ag Worker ADU, and the proposed earthwork can meet all of the standards for Limited Impact Special Review and recommend approval.

SITE PLAN REVIEW SUMMARY:

Per Article 4-802.A.3 of the Boulder County Land Use Code (the Code), Site Plan Review is required for any cumulative increase in floor area of more than 1,000 square feet on a parcel over that existing as of September 8, 1998. In this case, the applicant has proposed to construct a new residence resulting in a total of 5,352 square feet of

residential floor area, where 125% of the median residential floor area for the defined neighborhood is 5,934 square feet.

Article 4-806 of the Boulder County Land Use Code states that no Site Plan Review can be approved without compliance with the following standards. All site plan review applications must be reviewed in accordance with the following standards which the Director has determined to be applicable based on the nature and extent of the proposed development. Only those standards applicable to this project are included in this list. Staff has reviewed these standards as they apply to the proposed residence and find the following:

(1) To provide a greater measure of certainty as to the applicable neighborhood relevant for comparison, the following definition of neighborhood shall be used to review proposed Site Plan Review applications:

c. For applications outside of platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Raymond, and Riverside, the defined neighborhood is the area within 1,500 feet from the applicable parcel. The neighborhood shall not include any parcels inside municipal boundaries, platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Gold Hill Historic District, Raymond, and Riverside.

The applicable neighborhood for the subject parcel is area within 1,500 feet of the subject parcel, not including any parcels inside municipal boundaries, platted subdivisions with seven or more developed lots or the townsites of Allenspark, Eldora, Eldorado Springs, Gold Hill Historic District, Raymond, and Riverside.

(2) The size of the resulting development (residential or nonresidential) must be compatible with the general character of the defined neighborhood.

a. In determining size compatibility of residential structures within the defined neighborhood, it is presumed that structures of a size within the larger of a total residential floor area of either (1) 125% of the median residential floor area for that defined neighborhood or (2) of a total residential floor area of 1,500 square feet in the mapped townsites of Allenspark, Eldora, Eldorado Springs, Raymond, and Riverside, or 2,500 square feet for all other areas of the County, are compatible with that neighborhood, subject also to a determination that the resulting size complies with the other Site Plan Review standards in this section 4-806.A.

A. SIZE PRESUMPTION

The presumed compatible size of residential structures within the defined neighborhood (see Standard 1 above for the applicable neighborhood) is 5,934 square feet.

Median (total residential floor area) in the defined neighborhood*	4,747 square feet
125% of the median residential floor area in the defined neighborhood	5,934 square feet
Total proposed residential floor area	5,352 square feet

**Source: Boulder County Assessor’s records, as verified by CPP staff for the subject parcel.*

B. PROPOSED SIZE

RESIDENTIAL FLOOR AREA*	
Total existing residential floor area on the subject parcel	0 square feet
Proposed NEW residential floor area	Approximately 5,352 square feet
TOTAL resulting residential floor area	Approximately 5,352 square feet

**Residential Floor Area includes all attached and detached floor area on a parcel including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, home offices, and workshops, excluding covered deck. Floor area does not include the area of any covered porch. Gazebos, carports, detached greenhouses and hoopouses up to a total combined size of 400 square feet are also exempt.*

Information submitted with the application materials indicate the size of the proposed new residence is as follows: 2,638-square-foot first story; 1,401-square-foot second story; a 270-square-foot screened porch; and a 1,043-square-foot attached garage. The proposed carport and the ADU are exempted from RFA. Per Article 18-131A of the Code, covered porches attached to a principal structure are not included in residential floor area; however, to be considered a “covered porch,” per the Code, it cannot be enclosed with solid walls, glass, or screens. The plans submitted for the proposed residence indicate the 270-foot-porch is to be screened. As such, it is not exempted under Article 18-131A and is included in the residential floor area calculations. Staff support the size of the residence as proposed since it is under the presumptive size limitation and since the resulting size of 5,352 square feet (all above grade and visible) is found to be compatible with the general character of the defined neighborhood.

Additionally, the above grade and visible residential floor areas in the defined neighborhood range between 1,778 square feet and 8,813 square feet; staff find

the proposed above grade floor area to be compatible with the general character of the defined neighborhood.

Therefore, staff recommend approval of the approximately 5,352 square feet of residential floor area as proposed.

- (3) *The location of existing or proposed buildings, structures, equipment, grading, or uses shall not impose an undue burden on public services and infrastructure.***

ACCESS TO PROPERTY

As discussed in LU Criterion 7 above, the subject parcel is accessed via N. 73rd Street and has demonstrated legal access. As also discussed in LU Criteria 6 and 7 above, the driveway must meet the Boulder County Multimodal Transportation Standards (MMTS), including adequate access for emergency vehicles. However, as the proposed equestrian center and the residence share the same driveway, staff find that, with the recommended condition of approval in LU Criteria 6 and 7, that the proposed residence drive will meet the MMTS and, as such, will not impose an undue burden on public services or infrastructure.

Therefore, as conditioned in LU Criteria 6 and 7 above, staff find this standard can be met.

- (4) *The proposed development shall avoid natural hazards, including those on the subject property and those originating off-site with a reasonable likelihood of affecting the subject property. Natural hazards include, without limitation, expansive soils or claystone, subsiding soils, soil creep areas, or questionable soils where the safe-sustaining power of the soils is in doubt; landslides, mudslides, mudfalls, debris fans, unstable slopes, and rockfalls; flash flooding corridors, alluvial fans, floodways, floodplains, and flood-prone areas; and avalanche corridors. Natural hazards may be identified in the Comprehensive Plan Geologic Hazard and Constraint Areas Map or through the Site Plan Review process using the best available information. Best available information includes, without limitation, updated topographic or geologic data, Colorado Geologic Survey landslide or earth/debris flow data, interim floodplain mapping data, and creek planning studies. Development within or affecting such natural hazards may be approved, subject to acceptable measures that will satisfactorily mitigate all significant hazard risk posed by the proposed development to the subject property and surrounding area, only if there is no way to avoid one or more hazards, no other sites on the subject property can be reasonably developed, or if reasonably necessary to avoid significant adverse impacts based upon other applicable Site Plan Review criteria.***

GEOLOGICAL HAZARDS

As discussed in LU Criterion 12 above, the subject parcel is located within a [Major Geologic Hazard Area](#) as identified by the [Boulder County Comprehensive Plan](#) (see Figure 4 above). Specifically, the subject parcel is located within a High Swelling Soil Potential Area. As part of the building permit process, the Building Safety & Inspection Services Team will require the applicants to submit a soils report; this is included as recommended condition of approval under LU Criterion 12. As also discussed above, there is an identified Landslide Susceptibility Area on the subject parcel, south of the proposed residence; however, the proposed residence avoids this area.

Therefore, as conditioned in LU Criterion 12 above, staff find this standard is met.

- (5) ***The site plan shall satisfactorily mitigate the risk of wildfire both to the subject property and those posed to neighboring properties in the surrounding area by the proposed development. In assessing the applicable wildfire risk and appropriate mitigation measures, the Director shall consider the referral comments of the County Wildfire Mitigation Coordinator and the applicable fire district, and may also consult accepted national standards as amended, such as the Urban-Wildland Interface Code; National Fire Protection Association (NFPA); International Fire Code; and the International Building Code.***

The proposed project is in Wildfire Zone 2 (eastern area of unincorporated Boulder County). In response to catastrophic wildfire events of the recent past and continued hazards of a changing climate, on May 12, 2022, the Board of County Commissioners adopted revisions to the Boulder County Building Code to ensure a minimum level of ignition resistance for all structures in Wildfire Zone 2. The approved updates to the Building Code took effect on June 6, 2022, and require the use of ignition-resistant materials for construction and a minimum three-foot non-combustible perimeter around the residence.

Therefore, with this building permit requirement, staff find this standard is met.

- (6) ***The proposed development shall not alter historic drainage patterns and/or flow rates or shall include acceptable mitigation measures to compensate for anticipated drainage impacts. The best available information should be used to evaluate these impacts, including without limitation the Boulder County Storm Drainage Criteria Manual, hydrologic evaluations to determine peak flows, floodplain mapping studies, updated topographic data, Colorado Geologic Survey landslide, earth/debris flow data, and creek planning studies, all as applicable given the context of the subject property and the application.***

DRAINAGE LETTER

As discussed in LU Criterion 13 above, staff find that the significant amount of proposed earthwork and grading on the subject parcel requires both a drainage letter and a Stormwater Quality Permit (SWQP). Staff find that, with the submission of these at building permit, the potential drainage impacts of the proposed residence can be adequately addressed.

Therefore, as conditioned in Criterion 13 above, staff find this standard can be met.

- (7) ***The development shall avoid significant natural ecosystems or environmental features, including but not necessarily limited to riparian corridors and wetland areas, plant communities, and wildlife habitat and migration corridors, as identified in the Comprehensive Plan or through the Site Plan Review process. Development within or affecting such areas may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable Site Plan Review criteria.***

As discussed above, there is an identified riparian area which runs along the Holland Ditch (see Figure 11 above). The proposed residence encroaches into this riparian area (see Figure 12 below).

However, based on staff observation during a site visit to the subject parcel, the proposed residence is located in a previously disturbed area, and is on the south side of the existing driveway spur for the residence. As such, staff find the proposed residence is not likely to have any significant impacts on the riparian area.

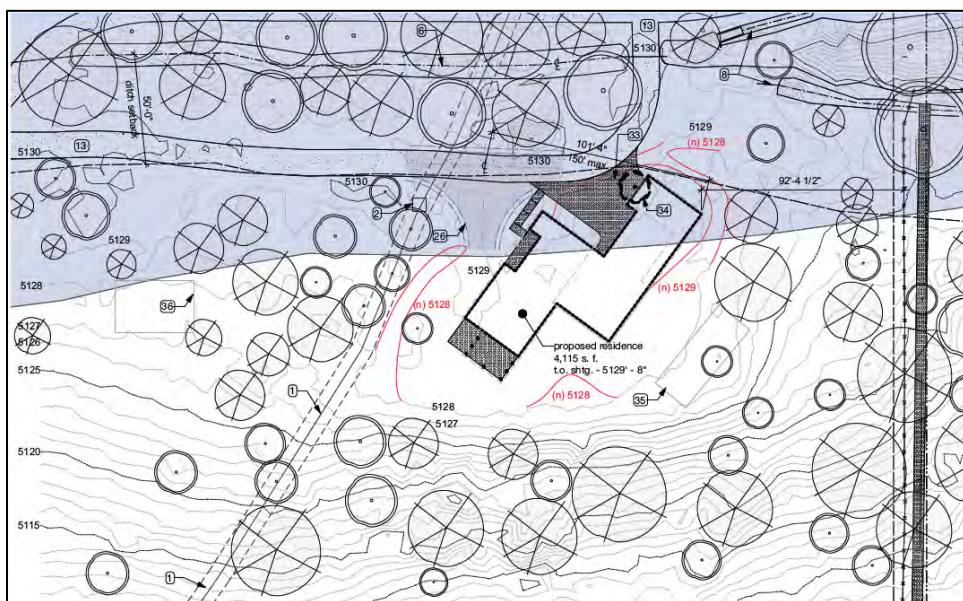


Figure 12: Site plan for proposed residence, with the mapped riparian area indicated in blue.

Therefore, staff find this standard is met.

- (8) The development shall avoid agricultural lands of local, state or national significance as identified in the Comprehensive Plan or through the site plan review process. Development within or affecting such lands may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.**

As discussed above, much of the subject parcel is located within Agricultural Lands of National and Local Importance. The proposed residence is located the very edge of the Agricultural Lands of National Importance on the northern portion of the parcel. However, based on staff observations on-site, the area south of the main driveway and the Holland Ditch and is effectively cut off from the rest of the agricultural land and is not practical for actual agricultural activities. As such staff find the proposed residence will not have any adverse impact on agricultural lands of significance.

Therefore, staff find this standard is met.

- (9) The development shall avoid significant historic or archaeological resources as identified in the Comprehensive Plan or the Historic Sites Survey of Boulder County, or through the site plan review process. Development within or affecting such resources may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.**

There are no known historic or archaeological resources on the subject parcel.

Therefore, staff find this standard is met.

- (10) The development shall not have a significant negative visual impact on the natural features or neighborhood character of surrounding area. Development shall avoid prominent, steeply sloped, or visually exposed portions of the property. Particular consideration shall be given to protecting views from public lands and rights-of-way, although impacts on views of or from private properties shall also be considered. Development within or affecting features or areas of visual significance may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably**

necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.

a. For development anywhere in the unincorporated areas of the county, mitigation of visual impact may include changing structure location, reducing or relocating windows and glazing to minimize visibility, reducing structure height, changing structure orientation, requiring exterior color and materials that blend into the natural environment, and/or lighting requirements to reduce visibility at night.

Location:	As shown on the site plan dated November 18, 2024 and staked in the field
Elevations:	As shown in the application materials dated November 18, 2024
Height:	Approximately 29' from existing grade
Exterior Materials:	Brick and Board and Batten siding and Asphalt shingle roof
Exterior Colors:	Red and white siding and Gray roof

A. ELEVATIONS

The applicants submitted elevations for the proposed residence. Based on these elevations, staff have not identified any significant or undue visual impacts from the proposed residence. Staff recommend approval of the elevations for the residence as submitted.

B. HEIGHT VERIFICATION

Because the proposed height of the structure is within two feet of the maximum allowed 30 feet above existing grade, a licensed Surveyor must complete a [Height Survey Verification Form](#). Please note that the height verification is a two-part process that requires a licensed Surveyor to establish existing grade (the grade before any site work) prior to construction, in addition to a follow-up survey once all roof framing is in place. The two-part form must sufficiently establish existing grade in accordance with standard surveying practice. Staff recommend as a condition of approval that the Height Survey Verification form be completed. Staff recommend the height survey be included as a condition of approval.

C. EXTERIOR COLORS AND MATERIALS

The application materials indicate that the proposed residence will have brick and board and batten siding in red and white, and a gray asphalt shingle roof; however, no samples were provided with the application materials. Staff do not have any concerns with the colors or materials as proposed. Staff find they are compatible with the policies and goals established by the Comprehensive Plan

and provisions of the Code and will not result in an adverse impact on surrounding properties. To ensure compatibility with the surrounding area, staff recommend as a condition of approval that the applicants submit exterior color and material details as part of the building permit application.

D. EXTERIOR LIGHTING

As discussed in LU Criterion 9 above, staff find the rural natural of the area surrounding the subject parcel is particularly susceptible to light pollution and, as such, limiting the location and number of lighting fixtures is an appropriate measure to mitigation light pollution resulting from the proposed residence. The elevations submitted for the residence do not include any location or fixture information for exterior lighting. However, as conditioned in LU Criterion 9 above, staff find the exterior lighting for residence can be adequately addressed at building permit.

Therefore, as conditioned here and in LU Criterion 9 above, staff find this standard can be met.

- (11) *The location of the development shall be compatible with the natural topography and existing vegetation and the development shall not cause unnecessary or excessive site disturbance. Such disturbance may include but is not limited to long driveways, over-sized parking areas, or severe alteration of a site's topography. Driveways or grading shall have a demonstrated associated principal use.***

A. LOCATION

The proposed location of the residence is generally clustered with the rest of the development, in the context of the entire parcel. Additionally, as discussed above, the location is in a previously disturbed area, which is not useful for any agricultural activities. As such, staff recommend approval of the location of the proposed residence as shown on the site plan dated November 18, 2024.

B. EARTHWORK AND GRADING

The following foundational earthwork and grading requirements are associated with the proposed residence:

Foundational Earthwork (exempt from 500 cubic yards threshold)	317 cubic yards cut; 79 cubic yards fill
Other Earthwork (Swale)	26 cubic yards cut; 3 cubic yards fill

Staff find that the grading and earthwork specifically related to the residence is reasonable and recommend approval of it. However, given the total amount of earthwork proposed on the property as a whole, staff recommend that the conditions of approval in LU Criterion 1 related to grading permitting requirements, LU Criterion 2 related to revised grading plans, and LU Criterion 13 related to submission of a drainage letter and SWQP, all be applied to the earthwork and grading associated with the proposed residence. As conditioned, staff find this standard can be met.

C. UTILITIES

To minimize disturbances to the site, all utility service lines should be routed underground (see [Article 7-1200](#) of the Code) and located in areas already disturbed or proposed to be disturbed (e.g., along driveway).

Therefore, as conditioned, staff find this standard can be met.

(12) *Runoff, erosion, and/or sedimentation from the development shall not have a significant adverse impact on the surrounding area*

A. REVEGETATION REQUIREMENT

As discussed in LU Criterion 13, in order to limit the potential for runoff, erosion, or sedimentation to cause adverse impacts to the surrounding area, staff recommend as a condition of approval that the applicants revegetate all areas of exposed soil. If weather is not conducive to seeding or if adequate revegetation efforts have not occurred and vegetation is not adequately established at the time of final inspection request, an irrevocable letter of credit or monies deposited into a County Treasurer account must be provided to assure completion of revegetation.

B. EROSION CONTROL MEASURES

As also discussed in LU Criterion 13, staff recommend as a condition of approval that the applicants install erosion control measures (e.g., silt fencing) down slope of all disturbed areas prior to construction and maintain them throughout the construction process until revegetation has been established. These erosion control measures must be shown on plans submitted for permitting.

Therefore, as conditioned in LU Criterion 13 above, staff find this standard can be met.

(13) *The development shall avoid Natural Landmarks and Natural Areas as designated in the Goals, Policies & Maps Element of the Comprehensive Plan and shown on the Zoning District Maps of Boulder County. The protection of Natural Landmarks and Natural Areas shall also be extended to their*

associated buffer zones. Development within or affecting such Landmarks or Areas may be approved, subject to acceptable mitigation measures and in the discretion of the Director, only if no other sites on the subject property can be reasonably developed, or only if reasonably necessary to avoid significant adverse impacts based upon other applicable site plan review criteria.

There are no identified Natural Landmarks, Natural Areas, or associated buffer zones that fall within the boundaries of the subject parcel. Therefore, staff find no conflicts with this standard.

- (14) Where an existing principal structure is proposed to be replaced by a new principal structure, construction or subsequent enlargement of the new structure shall not cause significantly greater impact (with regard to the standards set forth in this Section 4-806) than the original structure.***

The applicants do not propose to replace any existing residence. Therefore, staff find this standard is not applicable.

- (15) The proposal shall be consistent with the Comprehensive Plan, any applicable intergovernmental agreement affecting land use or development, and this Code.***

As conditioned, staff find the proposed residence can be found to be consistent with the Comprehensive Plan.

Staff find, as conditioned, the proposed residence can meet all of the standards for Site Plan Review and recommend approval.

RECOMMENDATION:

Staff have determined that, as conditioned, the proposal can meet all the applicable criteria of the Boulder County Land Use Code for Site Plan Review and Limited Impact Special Review. Therefore, staff recommend that the Board of County Commissioners

CONDITIONALLY APPROVE Docket LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU, subject to the following conditions:

1. The development is subject to the requirements of the Boulder County Building Safety and Inspection Services Team and adopted County Building Codes, as outlined in the referral comments, including, but not limited to required sprinklering, ignition resistant materials and defensible space, and the BuildSmart energy efficiency and sustainability requirements.
2. ***Prior to the issuance of any building permits for the Agricultural Worker Unit***, a signed affidavit from the property owners must be recorded that recognizes the conditions of approval for this docket.

3. The property owner must submit an annual report to the Community Planning & Permitting Department indicating that the Agricultural Worker accessory dwelling continues to be used as an Agricultural Worker Unit that is occupied in accordance with the approval of this docket and that the agricultural worker is substantially employed in farming the property.
4. **At building permit**, the applicant must submit revised grading plans that show the complete proposed grading, including all proposed contours tying back into existing.
5. A qualified Colorado-licensed design professional must observe the grading and submit an observation report to ensure that the work is completed in substantial conformance with the approved engineered plans.
6. **Prior to issuance of building permits**, an Onsite Wastewater Treatment System (OWTS) permit must be applied for and issued by Boulder County Public Health.
7. The total floor area of all structures associated with the equestrian center, including the Ag Worker ADU, is approved at a maximum floor area of 51,213 square feet.
8. The berm as proposed and shown in the submitted plans is denied. Plans submitted for permitting must have the berm removed.
9. **Prior to issuance of any Certificate of Occupancy**, the applicants must provide Boulder County a five-foot ROW dedication to allow for potential future widening of N. 73rd Street to meet required width requirements for a Collector road.
10. **During construction**, all vehicles, materials, machinery, dumpsters, and other items must be staged on the subject property; no items are permitted to be stored or staged on N. 73rd Street.
11. The driveway design must comply with the Multimodal Transportation Standards (the Standards) for residential development, including without limitation:
 - a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
 - b. Standard Drawing 11 – Private Access
 - c. Standard Drawing 14 – Access with Roadside Ditch
 - d. Standard Drawing 15 – Access Profiles Detail
 - e. Standard Drawing 16 – Access Grade & Clearance
 - f. Standard Drawing 17 – Access Pull-Outs
 - g. Standard Drawing 18 – Access Turnaround
 - h. Standard Drawing 19 – Typical Turnaround & Pullout Locations

The proposed emergency pullouts are more than 400 feet apart. Emergency pullouts have to be within 400 feet of each other per Standard Drawing 17 – Access Pull-Outs of the Standards.

The proposed emergency turnarounds are within 50 feet of the front of the house barn and the proposed residence. The emergency turnarounds must be no closer than 50 feet to the front of the structures per Standard Drawing 18 – Access Turnaround of the Standards.

At building permit, submit revised plans that show the proposed emergency pullouts within 400 feet of each other and the emergency turnarounds further than 50 feet from the front of structures.

At final inspection, the Community Planning & Permitting Department must verify that the access and driveway has been constructed to comply with the Standards.

12. **At the time of building permit application**, the applicants must submit a manure management plan for review and approval by Community Planning & Permitting staff. The approved manure management plan must be implemented as part of standard operations for the equestrian center.
13. To limit the noise impacts of construction, any outdoor construction or grading activities during the construction of the equestrian center be limited to between 8:00 am and 5:00 pm, Monday through Friday; indoor construction activities may occur outside these hours provided the noise levels do not exceed those permitted under the Boulder County Noise Ordinance.
14. The existing trees along the northern property line must be retained so as to screen the development from the adjacent property and N. 73rd Street to the north.
15. The placement of no less than ten trees is required to the west side of the outdoor riding arena, in place of the proposed berm, to mitigate the visual impacts of the equestrian center. Deciduous trees must have at least a two-and-a-half inch caliper and coniferous trees must be at least six feet in height. The intent is not to completely hide the development, but to break up the mass of the facade and soften the structures' hard lines. Native tree species must be used.

At building permit, indicate the location and species for the required trees on plans submitted for permitting for review and approval by Community Planning & Permitting staff.

16. **Prior to issuance of building permits**, one copy of a proposed lighting plan must be submitted to the Community Planning & Permitting Department for review

and approval. In accordance with Article 7-1600 of the Code, [down lighting](#) is required, meaning that all bulbs must be fully shielded to prevent light emissions above a horizontal plane drawn from the bottom of the fixture. The lighting plan must indicate the location of all exterior fixtures on the site and structure and must include cut sheets (manufacturer's specifications with picture or diagram) of all proposed fixtures. Exterior lighting fixtures must be limited as follows: one ceiling or wall mounted fixture is permitted for each exterior entrance; no landscape lighting is permitted; and no driveway lighting is permitted. The lighting plan must be included as part of the building plan set required at the time of permit application.

At the final inspection, the full installation of the approved lighting plan must be inspected and approved by the Community Planning & Permitting Department.

17. **At building permit application**, the applicants must submit a soils report which addresses the soil and bedrock swell potential on the parcel.
18. **At building permit**, submit a drainage letter conforming with the requirements set out in the November 9, 2021, memorandum titled "Allowance of the use of Drainage Letters on Private Development and Public Capital Projects" (attached to the Access & Engineering referral response).
19. **At building permit**, the applicants must provide a complete Stormwater Quality Permit (SWQP) submittal to stormwater@bouldercounty.gov.

Prior to any site disturbance, the applicants must obtain the SWQP.

20. **Prior to issuance of building or grading permits**, submit to the Community Planning & Permitting Department for review and approval one copy of the proposed Revegetation Plan that conforms to the requirements as described on the materials located on our [Revegetation Page](#).

The plan must show the location of all erosion control devices such as silt fence, straw bales, riprap and retaining walls. Cut and fill slopes are not to exceed a slope of 2:1. The grade of all cut and fill slopes must be included on the revegetation plan. The plan must include details regarding the reclamation of existing and proposed cut and fill slopes.

Prior to issuance of a Certificate of Occupancy, the full installation of the approved revegetation plan must be inspected and approved by the Community Planning & Permitting Department. If weather is not conducive to seeding or if adequate revegetation efforts have not occurred and vegetation is not adequately established at the time of final inspection request, an irrevocable letter of credit or monies deposited into a County Treasurer account will be required to assure the success of revegetation. You should consider the following well in advance of your revegetation inspection:

- a. Whether you are applying for a Certificate of Occupancy, final inspection, or the return of funds held in escrow for completion of revegetation, some level of germination and growth of grass seed is required.
- b. Keep in mind that the steeper the slopes and dryer the soil, the greater the attention needed to establish a level of germination adequate to obtain revegetation approval.
- c. Areas of disturbance found at inspection not included on the revegetation plan are still subject to reseeding and matting.

Incomplete revegetation is the leading cause for delays in obtaining a Certificate of Occupancy.

21. ***Prior to issuance of building permits***, details regarding the placement and construction of the silt fence must be submitted to and approved by the Community Planning & Permitting Department. The placement and profile of the silt fence may be shown on the Revegetation Plan. The silt fence must be installed before construction commences and remain in place until vegetation is sufficiently established on the disturbed soil.

Prior to any grading or site disturbance, the silt barrier location and materials must be installed as required per the approved plans.

At the time of the footing foundation inspection and all subsequent inspections, the Community Planning & Permitting Department must confirm the silt barrier location and materials have been installed as required per the approved plans. Any other areas on site are subject to installation of silt fences, if needed.

22. The residence is approved at approximately 5,352 square feet as proposed.
23. The elevations of the residence, dated November 18, 2024, are approved as proposed.
24. ***Prior to issuance of building or grading permits***, the [first part of the Height Survey Verification form](#) must be completed and submitted to the Community Planning & Permitting Department.

Prior to rough frame inspection, the [second part of the form](#) will be provided upon building permit application and must be submitted to the Community Planning & Permitting Department.

25. ***Prior to issuance of building permits***, submit to the Community Planning & Permitting Department for review and approval, one digital set of exterior color samples (color chips, brochure, or catalog page) and material samples to be used including roof, siding and trim. All exterior materials must have a matte finish.

Samples must be included as part of the building plan set required at the time of permit application.

26. ***Prior to issuance of a Certificate of Occupancy***, the Community Planning & Permitting Department must inspect and verify that the approved color samples are used on the new structure.
27. The location of the residence is approved as shown on the site plan dated November 18, 2024.
28. To minimize disturbances to the site, all utility service lines should be routed underground (see Article 7-1200 of the Land Use Code) and located in areas already disturbed or proposed to be disturbed (e.g., along driveway).
29. The Applicants shall be subject to the terms, conditions, and commitments of record and in the file for **Docket LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU.**



Boulder County Land Use Department

Courthouse Annex Building
 2045 13th Street • PO Box 471 • Boulder, Colorado 80302
 Phone: 303-441-3930
 Email: planner@bouldercounty.org
 Web: www.bouldercounty.org/lu
 Office Hours: Mon., Wed., Thurs., Fri. 8 a.m. to 4:30 p.m.
 Tuesday 10 a.m. to 4:30 p.m.

<i>Shaded Areas for Staff Use Only</i>
Intake Stamp

Planning Application Form

The Land Use Department maintains a submittal schedule for accepting applications. Planning applications are accepted on Mondays, by appointment only. Please call 303-441-3930 to schedule a submittal appointment.

Project Number		Project Name		
<input type="checkbox"/> Appeal <input type="checkbox"/> Correction Plat <input type="checkbox"/> Exemption Plat <input type="checkbox"/> Final Plat <input checked="" type="checkbox"/> Limited Impact Special Use <input type="checkbox"/> Limited Impact Special Use Waiver <input type="checkbox"/> Location and Extent	<input type="checkbox"/> Modification of Site Plan Review <input type="checkbox"/> Modification of Special Use <input type="checkbox"/> Preliminary Plan <input type="checkbox"/> Resubdivision (Replat) <input type="checkbox"/> Rezoning	<input type="checkbox"/> Road Name Change <input type="checkbox"/> Road/Easement Vacation <input type="checkbox"/> Site Plan Review <input type="checkbox"/> Site Plan Review Waiver <input type="checkbox"/> Sketch Plan <input type="checkbox"/> Special Use/SSDP	<input type="checkbox"/> Special Use (Oil & Gas development) <input type="checkbox"/> State Interest Review (1041) <input type="checkbox"/> Subdivision Exemption <input type="checkbox"/> Variance <input type="checkbox"/> Other:	
Location(s)/Street Address(es) 8130 N. 73rd St. Longmont, CO 80503				
Subdivision Name Foothills East				
Lot(s) -	Block(s) -	Section(s) 24	Township(s) 2N	Range(s) 70W
Area in Acres 68.3	Existing Zoning A - Ag	Existing Use of Property Agricultural		Number of Proposed Lots -
Proposed Water Supply (e) Well & Left Hand Water		Proposed Sewage Disposal Method OWTS, existing and new		

Applicants:

Applicant/Property Owner	Starlings CO, LLC	Email	sclarson@j-rlaw.com
Mailing Address	850 W. South Boulder Rd, Ste 100		
City	Louisville	State	CO
Zip Code	80027	Phone	
Applicant/Property Owner (Agent/Consultant)	Stephen C. Larson, Johnson & Repucci LLP	Email	sclarson@j-rlaw.com
Mailing Address	850 W. South Boulder Rd, Ste 100		
City	Louisville	State	CO
Zip Code	80027	Phone	(303)546-5606
Agent/Consultant	Paige Schavey, ShelterBelt Design	Email	paige@shelterbeltdesign.com
Mailing Address	6145 Broadway		
City	Denver	State	CO
Zip Code	80216	Phone	(720)313-0205

Certification (Please refer to the Regulations and Application Submittal Package for complete application requirements.)

I certify that I am signing this Application Form as an owner of record of the property included in the Application. I certify that the information and exhibits I have submitted are true and correct to the best of my knowledge. I understand that all materials required by Boulder County must be submitted prior to having this matter processed. I understand that public hearings or meetings may be required. I understand that I must sign an Agreement of Payment for Application processing fees, and that additional fees or materials may be required as a result of considerations which may arise in the processing of this docket. I understand that the road, school, and park dedications may be required as a condition of approval.

I understand that I am consenting to allow the County Staff involved in this application or their designees to enter onto and inspect the subject property at any reasonable time, without obtaining any prior consent.

All landowners are required to sign application. If additional space is needed, attach additional sheet signed and dated.

Signature of Property Owner		Printed Name	Starlings CO, LLC, a Colorado limited liability company. By: Starlings Holding, LLC, a Delaware corporation, its Manager, by: Stephen C. Larson, Attorney in Fact	Date	11/5/24
Signature of Property Owner		Printed Name		Date	

The Land Use Director may waive the landowner signature requirement for good cause, under the applicable provisions of the Land Use Code.






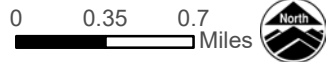
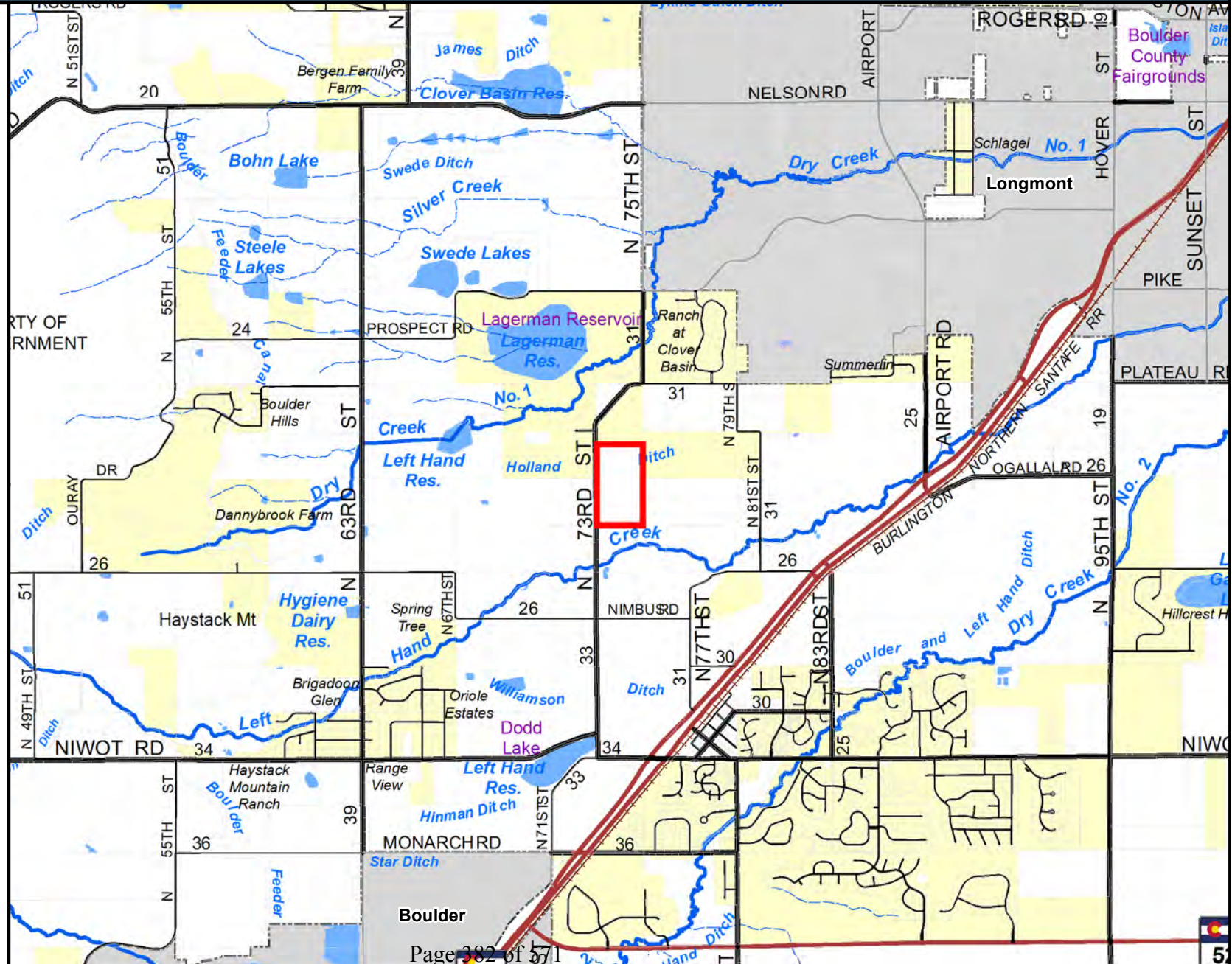
Community Planning & Permitting

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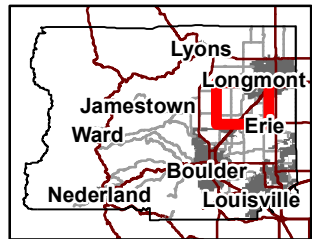
Vicinity

8130 N 73RD ST

-  Subject Parcel
-  Municipalities
- Subdivisions**
-  Subdivisions



Area of Detail Date: 5/28/2024



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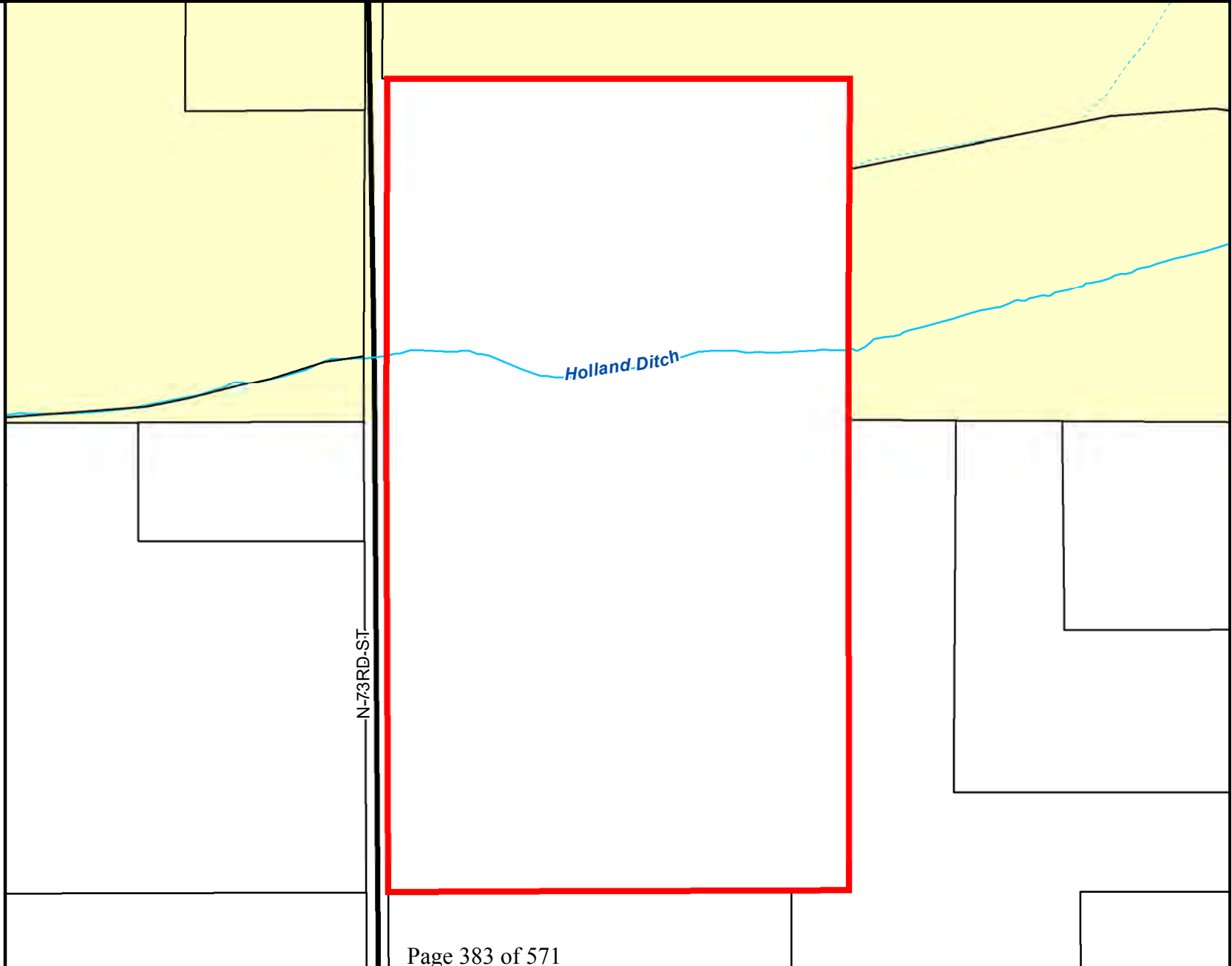
Location

8130 N 73RD ST

 Subject Parcel

Subdivisions

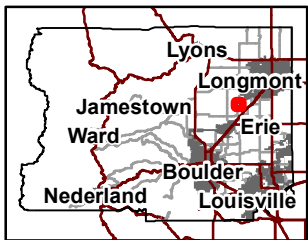
 Subdivisions



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Area of Detail Date: 5/28/2024




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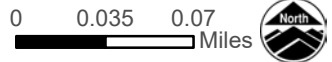


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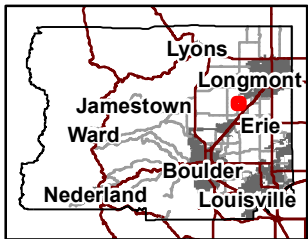
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Aerial
8130 N 73RD ST

 Subject Parcel



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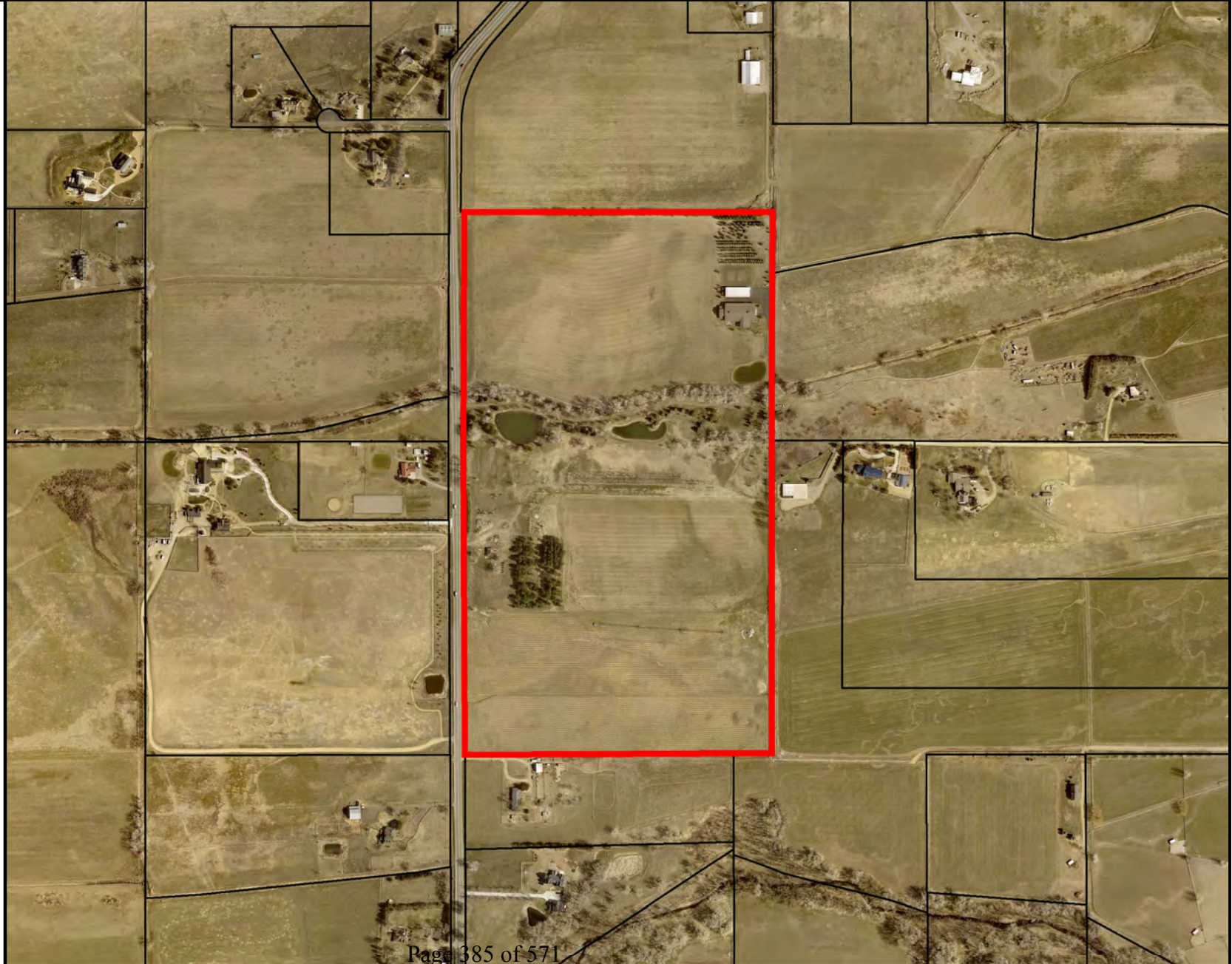


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Aerial
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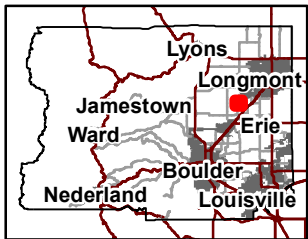
 Subject Parcel



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Comprehensive Plan

8130 N 73RD ST

Subject Parcel

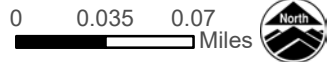
Critical Wildlife Habitats

Riparian Areas

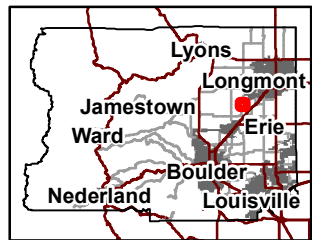
Significant Agricultural Land

Ag of National Importance

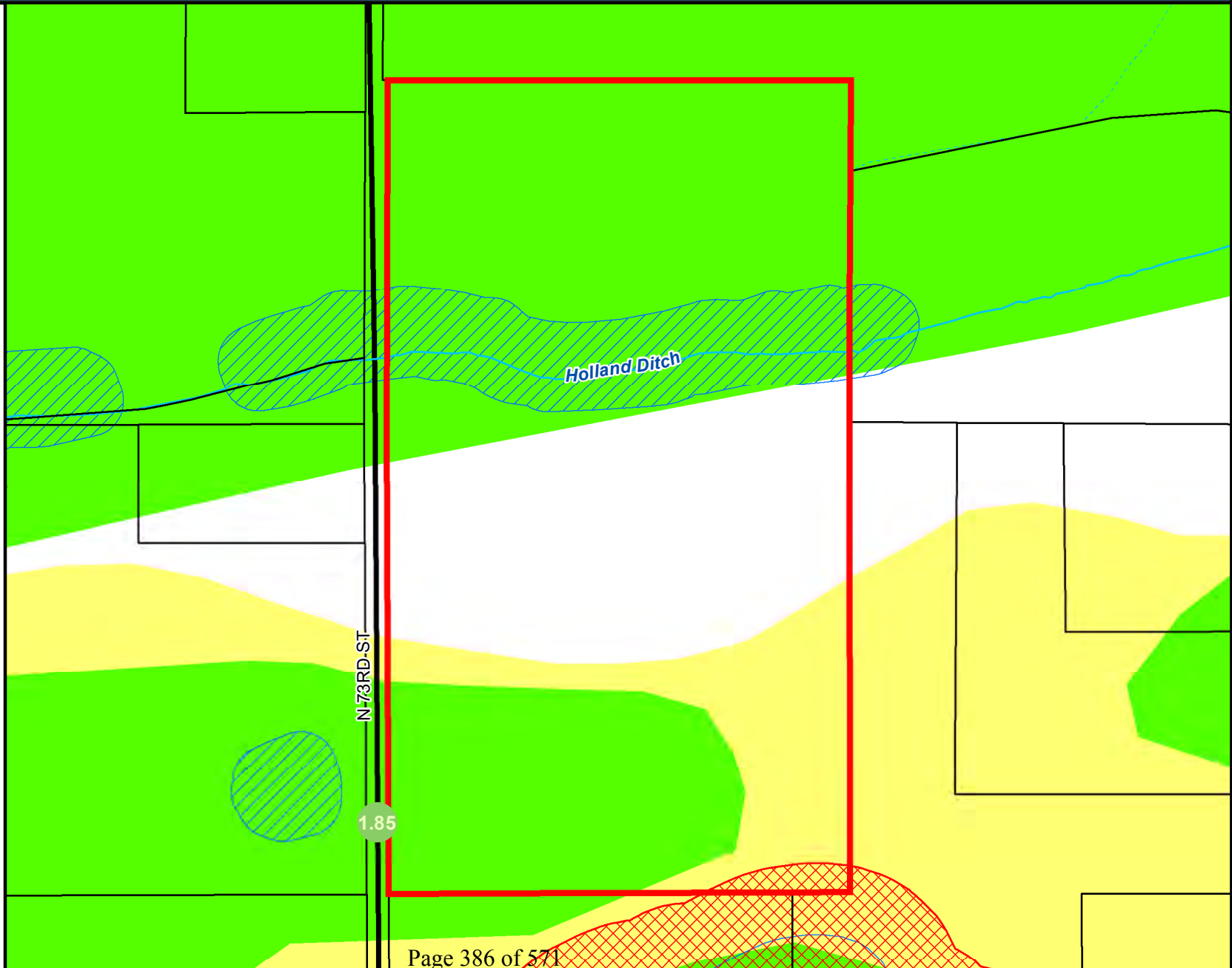
Ag of Local Importance



Area of Detail Date: 5/28/2024



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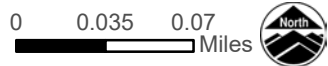
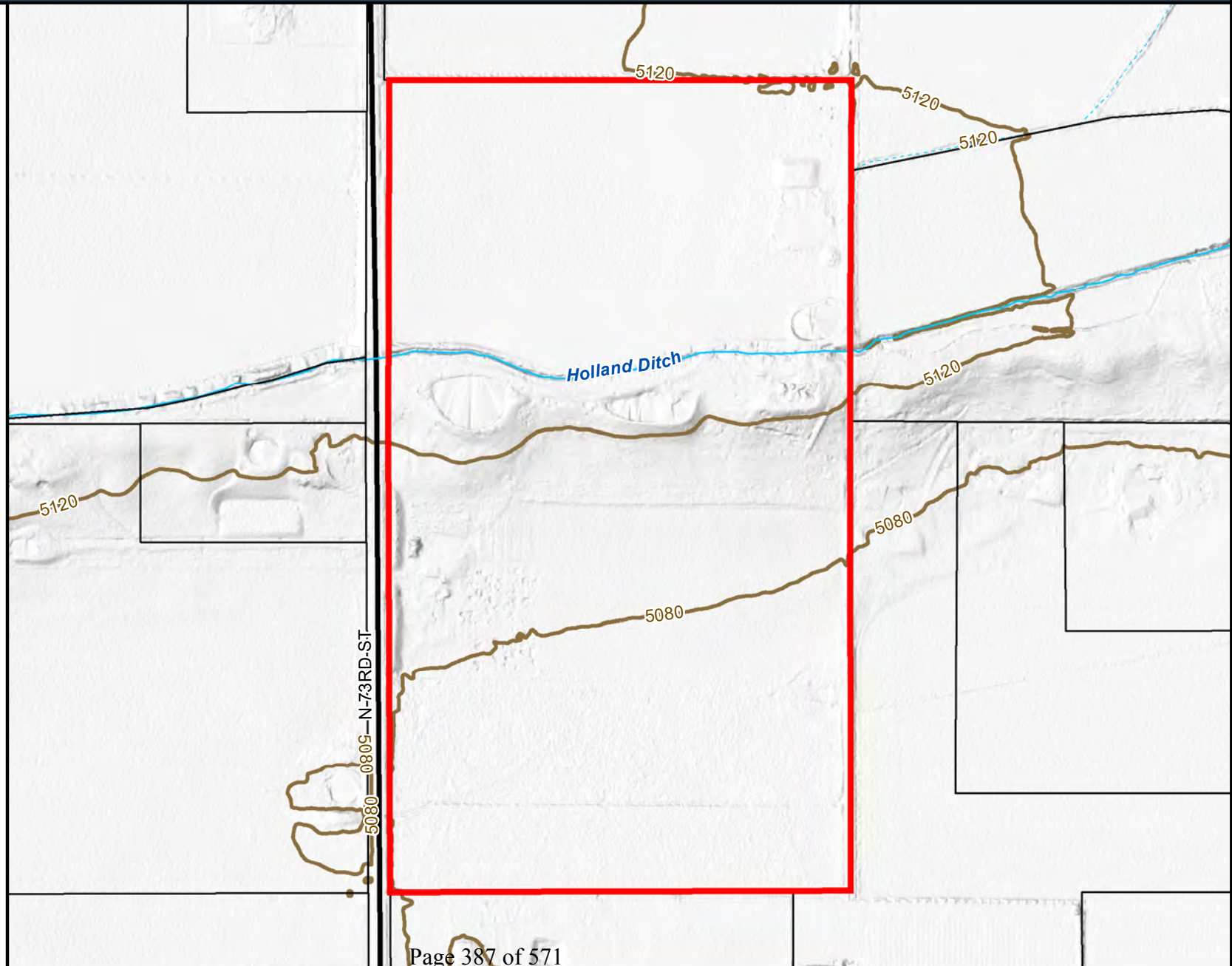
Community Planning & Permitting

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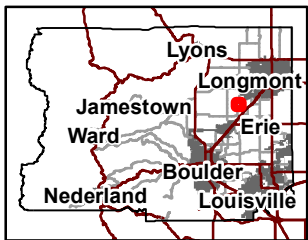
Elevation Contours

8130 N 73RD ST

-  Subject Parcel
-  Contours 40'



Area of Detail Date: 5/28/2024



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Floodplain

8130 N 73RD ST

Subject Parcel

Floodplain

100-Year Floodplain

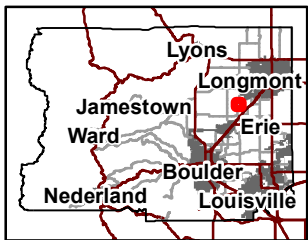
500-Year Floodplain



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Area of Detail Date: 6/10/2024



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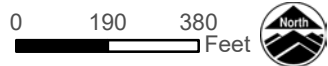
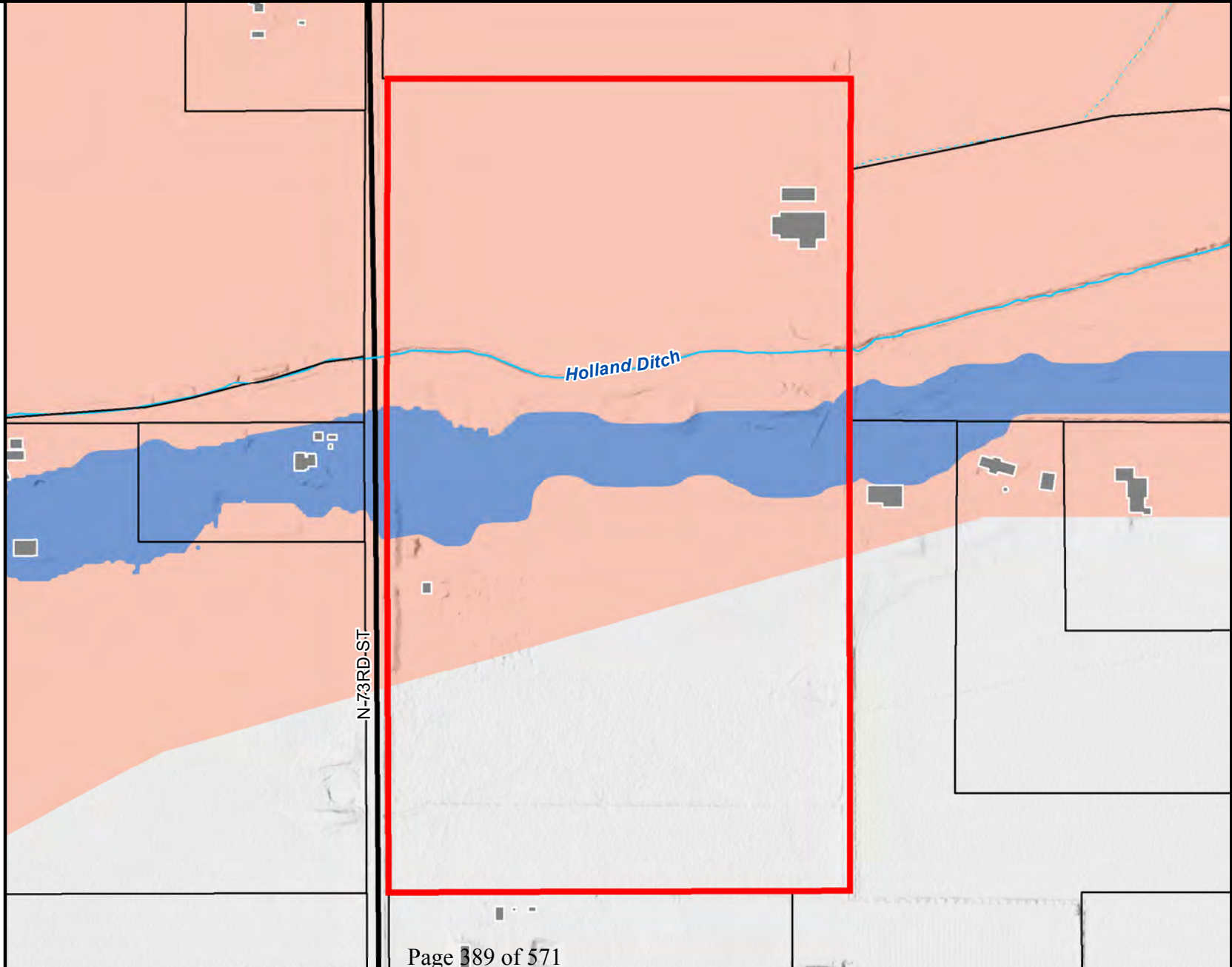
Community Planning & Permitting

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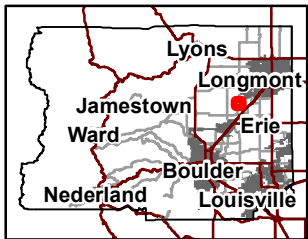
Geologic Hazards

8130 N 73RD ST

-  Subject Parcel
-  High Swelling Soil Potential



Area of Detail Date: 5/28/2024



The user agrees to all Terms of Use set forth by Boulder County. For Terms of Use, please visit: www.bouldercounty.org/mapdisclaimer



Community Planning & Permitting

2045 13th Street, Boulder, CO 80302 303-441-3930 www.bouldercounty.org

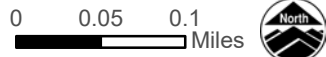
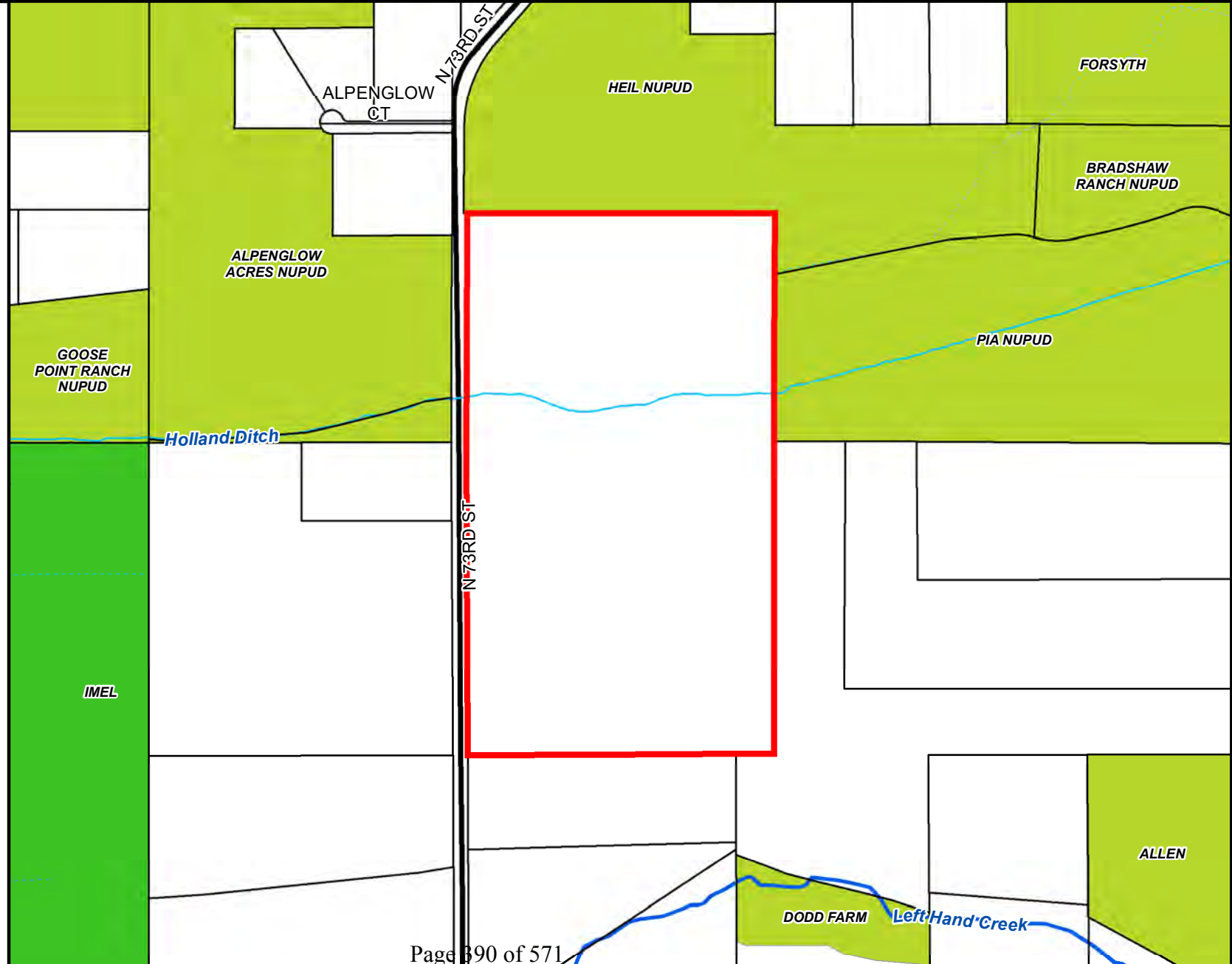
Public Lands & CEs

8130 N 73RD ST

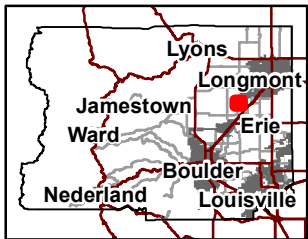
Subject Parcel

Boulder County Open Space

- Joint County/Municipal Open Space
- County Conservation Easement
- OSMP Properties



Area of Detail Date: 5/28/2024



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Community Planning & Permitting

2045 13th Street, Boulder, CO 80302 303-441-3930 www.bouldercounty.org

Zoning
8130 N 73RD ST

Subject Parcel

Zoning Districts

Agricultural

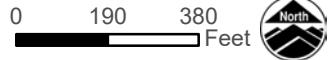
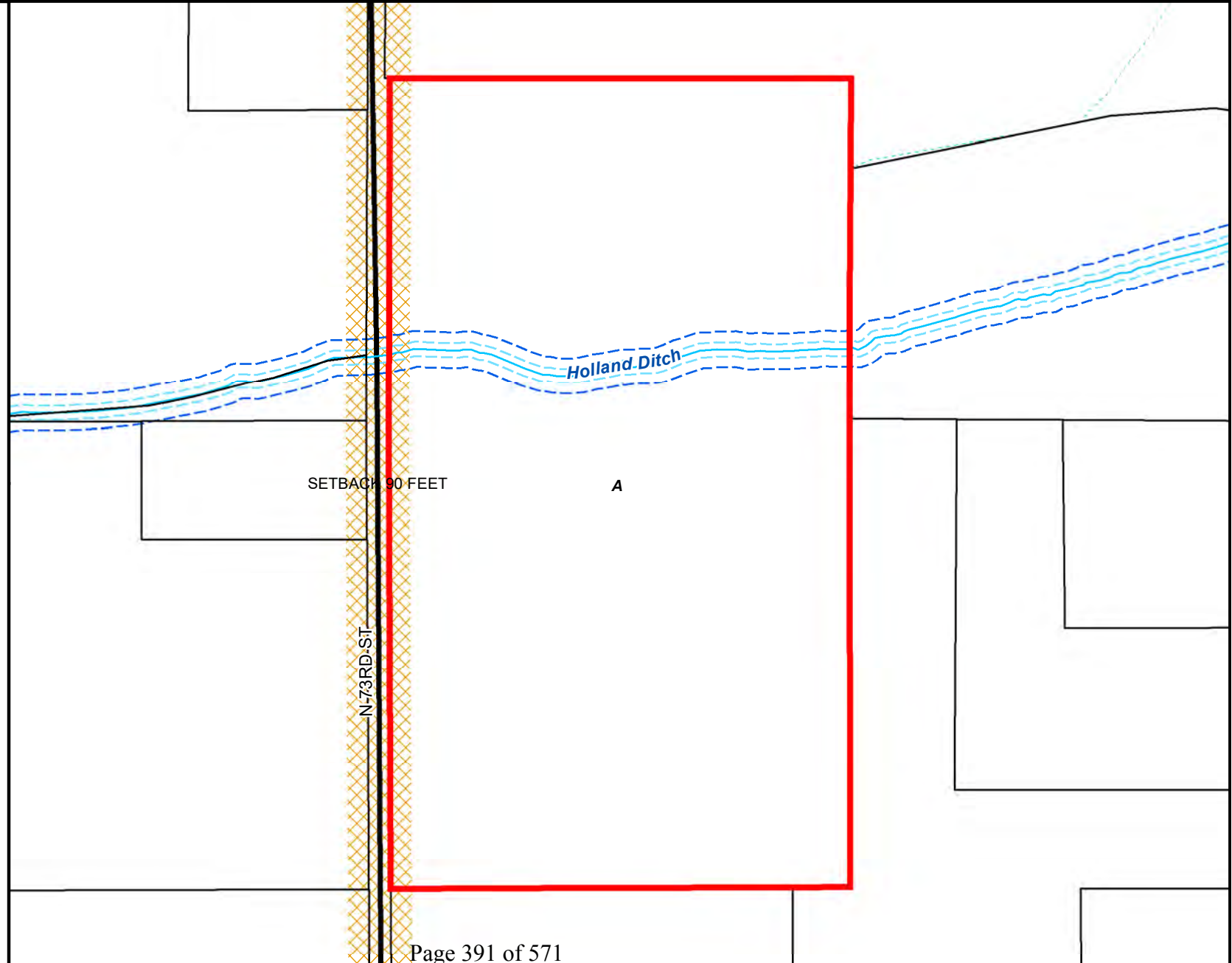
Ditch Setbacks

20 feet

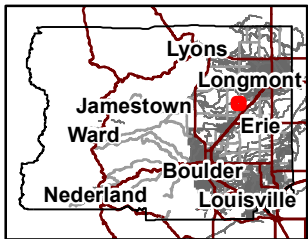
50 feet

Major Road Setbacks

90 feet



Area of Detail Date: 5/28/2024



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Narrative / Development Report

November 13, 2024

Client / Owner:

Starlings CO LLC

8050 W. South Boulder Rd, STE 100

Louisville, CO 80027

Project: 73CO | 73rd St. Farm**Project Address:** 8130 N 73rd St. Longmont, CO 80503**Site Description:**

8130 N 73d St., Parcel Number 131724000011, is located in the Foothills East Subdivision of Unincorporated Boulder County. The area of the property is 68.3 acres and it is zoned Agricultural. The site is a developed lot with multiple large, irrigated hay fields. The site is bifurcated by Holland Ditch, running West to East, splitting the property roughly 1/3 to 2/3 with a number of moderate existing ponds adjacent to the ditch. The site is generally flat north of the existing ponds with a moderate slope to the south, south of the existing ponds. Vegetation on the property consists of a moderate growth of grasses, trees, and shrubs.

The South half of the property is characterized by flooding and is in the flood plain, is topographically quite flat and is mostly devoid of trees. There is an existing 1-story, wood frame building, 768 sq. ft. The North half of the property is “high ground” with a drop in grade just South of Holland Ditch, is again topographically quite flat and is mostly devoid of trees except for an existing copse of coniferous trees planted by the previous owner in the Northeast most corner of the lot. There is an existing 2-story barn with a garage, 12,093 sq. ft. and an existing 1-story metal frame building, 4,000 sq. ft. The land around Holland Ditch is riparian and is where most of the trees and tall vegetation on the property are located. The entire property was measured to have high ground water, with groundwater noted in all borings at depths ranging from 5-9 ft below existing grade when measured just past the seasonal groundwater high. Soils on the site were found to be ranging for low to moderate expansion potential to moderate to very high expansion potential.

Site Proposal:

The proposal for this site is in support of the business CH Equine, an equestrian training and breeding center and includes agricultural uses inclusive of a 15-stall stable with integral office, storage, and supporting programming (12,792 sq. ft.) an attached riding arena (17,285 sq. ft.), horse runs and dry lots as well as heavy

SHELTERBELT DESIGN

THE INSIDE SPACES THAT SUPPORT OUTSIDE EXPERIENCES

farm equipment storage for hay production, hay/bedding storage, daily farm equipment storage with an ADU for live-on-site staff (5,288 sq. ft.) In addition to the agricultural use, the proposal includes residential use, which is customary and incidental. The proposed residence will be ~5,000 sq. ft.

CH Equine equestrian facility is not open to the public. The equestrian complex will be located North of Holland Ditch, with the facility buildings clustered near the existing 2-story barn, which is to be partially demolished and added onto. The residence will be located just South of Holland Ditch. The South 2/3rd of the property will remain the same, to continue hay production. The proposal includes the demolition of the existing 1-story wood frame structure and the relocation of the existing 1-story metal building to the approximate location of the existing 1-story wood frame structure.

PROPOSED SQUARE FOOTAGE TABLE

Residential Building Areas:

Residence First Floor (conditioned):	2,638 s.f.
Residence Second Floor (conditioned):	1,401 s.f.
Total Conditioned Area:	4,039 s.f.
Attached Garage (unconditioned):	1,043 s.f.
Attached Screened Porch (unconditioned):	270 s.f.
Total Unconditioned Area:	1,313 s.f.

Detached Residential Floor Area

(n) ADU covered patio:	278 s.f.
(n) Barn covered patio:	180 s.f.
Total Detached Residential Floor Area:	458 s.f.
Total Combined Residential Building Area:	5,810 s.f.
Presumptive Size Maximum:	5,934 s.f.

Agricultural Building Areas:

(n) Stable (conditioned):	3,189 s.f.
(n) Stable (unconditioned):	9,603 s.f.
Total Stable Area:	12,792 s.f.
(e) Indoor Arena:	12,093 s.f.
(e) Indoor Arena to be Demolitioned:	1,472 s.f.
Total (e) Indoor Arena Area:	10,621 s.f.

(n) Indoor Arena (unconditioned):	6,664 s.f.
Total Indoor Arena Area:	17,285 s.f.
(n) Covered Round Pen (unconditioned):	3,848 s.f.
(n) Hay/Bedding Storage (unconditioned):	4,000 s.f.
(n) Daily Farm Equipment Storage (unconditioned):	4,000 s.f.
(n) ADU (conditioned+ 278 covered patio):	1,288 s.f.
(n) Heavy Equipment Storage (unconditioned):	4,000 s.f.
Total Combined Agr. Conditioned Floor Area:	4,199 s.f.
Total Combined Agr. Building Area:	47,213 s.f.

Residential Floor Area Compatibility

The total proposed residential square footage is 5,810 sq. ft.

The current residential Presumptive Size Maximum is 5,934 sq. ft. As such, the proposed residential floor area is below the PSM and is therefore in keeping with the neighborhood. The residence is to be sited just South of Holland Ditch, within an existing copse of trees. This location will provide proximity and privacy to the occupants, as well as screening to reduce visual impact to the neighborhood.

Non-Residential Floor Area Compatibility

The total proposed agricultural square footage is 47, 213 sq. ft. The proposed facility is for the year-round breeding and training of horses. Additional use includes occasional clinics, about 3 or 4 times a year. The equestrian facility programming includes the necessary paddocks, fenced pastures, 15-stall stable, outdoor riding arena and a covered round pen for the successful operation of the business. The existing wood framed barn (12,093 sq ft) will be partially demolished and expanded by about 6,664 sq. ft. to house a regulation size dressage arena (198' x 66') and an attached 15-stall stable (12,792 sq ft). The existing metal storage building (4,000 sq ft) will be relocated to the southern half of the property, near the existing wood framed building to be demolished, to store the heavy equipment necessary for hay production. A new storage building (4,000 sq. ft.) is to be located near the stable and arena for hay/bedding storage. An additional storage building (4,000 sq. ft.) for storage of everyday farm equipment with an attached ADU (1,288 sq. ft.) for live-on-site and seasonal staff. Lastly, the proposal includes a covered 70 ft. diameter round pen (3,848 sq ft) to be used for warm-ups and cool-downs of the horses.

Indoor Arena & Stable (30,077 sq ft)

The addition to the existing barn will allow for dressage training and clinics to take place and be protected during inclement weather, while the attached 15-stall stable will permanently house several horses and allow them to be tacked and taken to and from the stalls or arena under the protection of a roof. The stable will also provide space necessary for the functions and programs of the facility, including grooming stalls, a laundry room, storage for tack and saddles for the owners and the students, a classroom for instruction, bathrooms, office, feed storage, a vet and farrier stall, a foaling stall. Leading from the stable to the arena, there is a mounting area where the trainers can help riders mount and dismount before entering the arena, as well as additional room for a second rider to approach and wait while a trainer exits the arena. Nearby is an open observation platform for the trainers and students to observe those riding. The existing bump out will be preserved and slightly modified for the storage of the regularly used tractor and drag, to smooth out the arena between riders, and other equipment used for the maintenance of the arena, as well as an additional restroom for staff use only. The existing upstairs will be used as secured, additional storage for the stable.

Hay / Bedding Storage Building (4,000 sq. ft)

To reduce fire risk in the stable, a separate storage building will be used to house the hay and bedding used by the facility. The 4,000 sq. ft. building is sized to accommodate 6 months of hay for 15 horses. A typical horse consumes ~60 lbs of hay per day, or ~5.05 cubic ft of hay per day. A 4,000 sq. ft. building with a wall height of 16 ft (allowing some clearance for a forklift or bale handler) can fit about 11,089 square bales of hay, equaling about 184 days of hay supply.

Heavy Equipment Storage Building (4,000 sq. ft)

The existing 1-story metal building will be relocated to the lower part of the property where the existing 1-story building is located. This is to keep the heavy machinery to be used for hay production closer to the hay fields as well as to not interfere with the functions of the equestrian facility.

Daily Equipment Storage Building with ADU (5,288 sq. ft)

A 4-bay metal storage building (4,000 sq. ft) will be used to house the equipment used in the daily operation of the facility, to reduce exposure to dust and dirt and prolong the life of the equipment. This will accommodate a vehicle for the on-site staff, seasonal staff, a farm truck, tractor, gators, lawn mower, tractor attachments such as front bucket, tillers, hitch trailers, pallet fork, bush hog, etc,

as well as wheelbarrows, hand buckets, and other hand tools. Along the back wall, vertical storage as well as work benches will be placed.

A 2 bed, 1 bath, ADU (1,010 sq ft plus a 278 sq ft covered patio) will be attached to the Daily Equipment Storage building to house on-site and seasonal staff. This location allows proximity to necessary equipment used daily and visibility to the charges of the staff, being the horses in the stable and at pasture. This location also reduces fire risk in the stable by separating occupancy types. Staff needs to be on hand early in the morning for proper daily feeding times, the frequent moving of horses from the stable out to pasture or the paddocks, and especially during foaling season when constant 24 hour monitoring is required leading up to the birth and the time after. Seasonal staff ranges from summer interns to guest trainers.

Outdoor Riding Arena:

The outdoor riding arena will be used when weather permits and will allow for additional training while the indoor arena is used by another rider or trainer. The 100' x 200' footprint allows for the placement of a regulation size dressage arena within, with clearance around the perimeter for coaching. The footprint also provides the flexibility for other types of training and coaching. This arena will not have lighting or a sound system.

Covered Round Pen (3,848 sq ft):

The covered 70' diameter round pen will be located south of the indoor arena/stable. This placement provides protection from the strong Western and Northern winds allowing the structure to remain open on the sides. The location also allows proximity to the indoor arena and quick access to the stalls. The structure will allow for the warming-up and cooling-down of the horses while the arenas are in use. This structure will also be used when

Horse Runs with Sheds:

These two (2) structures will each house five (5) horses during the day when they are 'turned out' but need to have their movement restricted and therefore placed in a controlled environment. Each structure will have five (5) fenced-in areas, each measuring 32' x14' allowing for some movement but not enough for the horses to fully gallop. The structures will have power and water.

Dry Lots with Sheds:

Four (4) lots, each with two (2) sheds measuring 120' x 100'. These will be used for daily turnouts for training horses that need more room than that allowed in the horse runs. These sheds will not have power but will have water supply.

Gelding and Mare Pastures:

These will each be enclosed using open wire fencing to allow for maximum visibility and will each have water supply. By using wire fencing, unobstructed views across the northern property are achieved and maintained as they currently exist.

Stallion Pastures:

These will each be enclosed using open wire fencing to allow for visibility, and will each have water supply at one (1) of the two (2) loafing sheds measuring 12' x 10', within each pasture. The smaller pastures reduce the stallion's risk of aggression and injury, and their location closer to the stable reduces the distance and the time with the handlers when moving the stallions during 'turnouts.' The loafing sheds provide protection to the animals during inclement weather.

Muck Pad:

This open air 15' x 25' concrete pad for muck collection along the East side of the property, is placed for easy access by the collection trucks, down-wind from any human frequented spaces and out of the way from any structures that are up-wind in neighboring properties, and out of the 50' wetland ditch setback.

Parking Area/ Drive Court/ Driveway:

A new parking area and drive court of a combination of permeable and impermeable materials will extend from the existing gravel driveway at the eastern end of the existing 2-story building to reach the proposed stable entry, hay/bedding storage, and daily equipment storage buildings. This new drive court will accommodate the required Emergency Access Turnaround (hammerhead) by Boulder County Multimodal Transportation Standards. Additionally, the existing gravel driveway will be modified to accommodate pullouts every 400 feet starting from N 73rd St. New paving will be added to access the proposed private residence.

SEPTIC & WELL/WATER

There are two septic systems on the property - a 7 bedroom system located on the North side of the property, servicing the existing barn, and a 3 bedroom system on the South side of property that used to service the residence that was demolished. The previous residence was damaged by a vehicular accident and as such, the building was demolished and the septic was never used. The existing 7 bedroom system has been inspected and requires some repairs - it is to be replaced and relocated further North, to be sized in support of the proposed stable. A new OWTS system will be designed and installed to service the proposed residence.

Current water supply comes from an ag. well and an existing 3/4" tap through Left Hand Water. The well is 26' deep and documented to have a flow rate of 30 gpm at the time of drilling April 20, 1960. The original well has since been abandoned and a new one drilled around 2000.

CH Equine equestrian facility is not open to the public and the septic and water supply can be sized as such.

CHARACTER OF THE NEIGHBORHOOD

The proposed development plan for this property is in keeping with the character of the neighborhood. There are several private equestrian facilities and private residences along 73rd St. The existing houses, equestrian facilities and agricultural buildings are all independently built, resulting in varying sizes and styles ranging from single-story brick ranch homes, to 2-story contemporary structures with varying siding materials. The proposed materials for the facilities will be in keeping with the existing material palette found in the neighborhood, consisting of white board and batten, white lap siding, and red brick. The roofing on the equestrian buildings will be dark gray, standing seam metal and the roofing on the residence will be gray asphalt.

GRADING AND EARTH WORK

The strategy taken regarding grading at the equine core was to prioritize horse & handler safety rather than minimizing cut and full. A pastoral quality to the grade is not only in keeping with the character of the development but it ensures safe footing for the horses and reduces any inclines where a horse may feel the need to run, potentially causing harm to itself or the handler. Additionally, the existing site is very flat and a broad approach to grading will ensure there are no areas for water to pool and stagnate.

END.

Site Plan Review Fact Sheet

The applicant(s) is/are required to complete each section of this Site Plan Review (SPR) Fact Sheet even if the information is duplicated elsewhere in the SPR application. Completed Fact Sheets reduce the application review time which helps expedite the Director's Determination. Please make duplicates of this SPR Fact Sheet if the project involves more than two structures.

Structure #1 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		Residence			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		none sq. ft.	Deconstruction: N/A		sq. ft.
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> No <input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input checked="" type="checkbox"/> Residential <input type="checkbox"/> Non-Residential	
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	n/a sq. ft.	n/a sq. ft.	n/a sq. ft.	29'-6 5/8"	Brick/ board n batten
First Floor:	2638 sq. ft.	n/a sq. ft.	2638 sq. ft.	Exterior Wall Material	Red & White
Second Floor:	1401 sq. ft.	n/a sq. ft.	1401 sq. ft.	Exterior Wall Color	Asphalt
Garage: <input type="checkbox"/> Detached <input checked="" type="checkbox"/> Attached	1043 sq. ft.	n/a sq. ft.	1043 sq. ft.	Roofing Material	Gray
*Covered Porch:	386 sq. ft.	n/a sq. ft.	386 sq. ft.	Roofing Color	4
Total:	5468 sq. ft.	n/a sq. ft.	5468 sq. ft.	Total Bedrooms	

Structure #2 Information

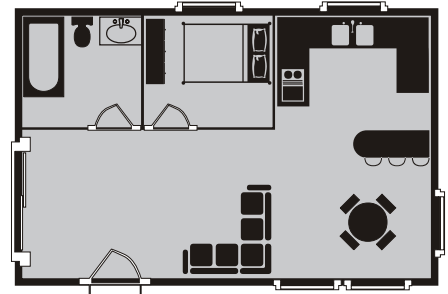
Type of Structure: (e.g. residence, studio, barn, etc.)					
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)			Deconstruction:		
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> No <input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
Proposed Floor Area (New Construction Only)				<input type="checkbox"/> Residential <input type="checkbox"/> Non-Residential	
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Material	
First Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Color	
Second Floor:	sq. ft.	sq. ft.	sq. ft.	Roofing Material	
Garage: <input type="checkbox"/> Detached <input type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.	Roofing Color	
*Covered Porch:	sq. ft.	sq. ft.	sq. ft.	Total Bedrooms	
Total:	sq. ft.	sq. ft.	sq. ft.		

Project Identification:

Project Name: 73CO - 73rd Farmhouse
Property Address/Location: 8130 N. 73rd St. Longmont, CO 80503
Owner: Starlings CO LLC
Size of Property in Acres: 68.3

Determining Floor Area

Floor Area is measured in terms of square feet. The total square footage is as everything within the exterior face of the exterior walls including garages and basements. **Covered porch area that is attached to the principal structure is not included (see Article 18-131A).** The shaded area on the diagram indicates the area counted as square feet.



Residential vs. Non-Residential Floor Area

Residential Floor Area includes all attached and detached floor area (as defined in Article 18-162) on a parcel, including principal and accessory structures used or customarily used for residential purposes, such as garages, studios, pool houses, home offices and workshops. Gazebos and carports up to a total combined size of 400 square feet are exempt. Barns used for agricultural purposes are not considered residential floor area.

Note: If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Site Plan Review and shown on this Fact Sheet.

If a Limited Impact Special Review is required, then call 303-441-3930 and ask for a new Pre-Application conference for the Limited Impact Special Review.

*See Article 18-131A for definition of covered porch.

Limited Impact Special Use Review Fact Sheet

Project Identification

Project Name: 73rd St. Farm
Property Address/Location: 8130 N. 73rd St., Niwat, CO
Current Owner: Starlings CO, LLC
Size of Property in Acres: 68.3 ACRES

The applicant(s) is/are required to complete each section of this Limited Impact Special Use Review Fact Sheet even if the information is duplicated elsewhere in the application. Completed Fact Sheets reduce the application review time which helps expediate the Director's Determination. Please make duplicates of this Limited Impact Special Use Review Fact Sheet if the project involves more than two structures.

Determining Floor Area

If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Limited Impact Special Use Review and shown on this Fact Sheet.

Structure #1 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		STABLE & ARENA			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		12,093 sq. ft.		Deconstruction: 1,472 sq. ft.	
Are new floor areas being proposed where demolition will occur?					
<input checked="" type="checkbox"/> Yes (include the new floor area square footage in the table below)					
<input type="checkbox"/> No					
Proposed Floor Area (New Construction Only)					
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.		32'-7 1/2"
First Floor:	19,276 sq. ft.	sq. ft.	19,276 sq. ft.	Exterior Wall Material	MASONRY & COMPOSITE SIDING
Second Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Color	WHITE & RED BRICK
Garage:				Roofing Material	METAL ROOF
	<input type="checkbox"/> Detached	sq. ft.	sq. ft.		
	<input checked="" type="checkbox"/> Attached	sq. ft.	sq. ft.		
Covered Deck:	180 sq. ft.	sq. ft.	180 sq. ft.	Roofing Color	GREY
Total:	19,456 sq. ft.	sq. ft.	19,456 sq. ft.	Total Bedrooms	0

Structure #2 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		HEAVY EQUIPMENT STORAGE			
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		4,000 sq. ft.		Deconstruction: sq. ft.	
Are new floor areas being proposed where demolition will occur?					
<input type="checkbox"/> Yes (include the new floor area square footage in the table below)					
<input checked="" type="checkbox"/> No					
Proposed Floor Area (New Construction Only)					
	Finished	Unfinished	Total	Height (above existing grade)	
Basement:	sq. ft.	sq. ft.	sq. ft.		21'-8"
First Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Material	COMPOSITE SIDING
Second Floor:	sq. ft.	sq. ft.	sq. ft.	Exterior Wall Color	WHITE
Garage:				Roofing Material	METAL ROOF
	<input type="checkbox"/> Detached	sq. ft.	sq. ft.		
	<input checked="" type="checkbox"/> Attached	sq. ft.	sq. ft.		
Covered Deck:	sq. ft.	sq. ft.	sq. ft.	Roofing Color	GREY
Total:	sq. ft.	sq. ft.	N / A sq. ft.	Total Bedrooms	0

Limited Impact Special Use Review Fact Sheet

Project Identification

Project Name: 73rd St. Farm
Property Address/Location: 8130 N. 73rd St., Niwat, CO
Current Owner: Starlings CO, LLC
Size of Property in Acres: 68.3 ACRES

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Determining Floor Area

If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Limited Impact Special Use Review and shown on this Fact Sheet.

Structure #3 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		HAY/ BEDDING STORAGE	
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		sq. ft.	Deconstruction: sq. ft.
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> Yes (include the new floor area square footage in the table below) <input type="checkbox"/> No			
Proposed Floor Area (New Construction Only)			
	Finished	Unfinished	Total
Basement:	sq. ft.	sq. ft.	sq. ft.
First Floor:	sq. ft.	4,000 sq. ft.	4,000 sq. ft.
Second Floor:	sq. ft.	sq. ft.	sq. ft.
Garage: <input type="checkbox"/> Detached <input checked="" type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.
Covered Deck:	sq. ft.	sq. ft.	sq. ft.
Total:	sq. ft.	4,000 sq. ft.	4,000 sq. ft.
			Height (above existing grade) 23'-2"
			Exterior Wall Material COMPOSITE SIDING
			Exterior Wall Color WHITE
			Roofing Material METAL ROOF
			Roofing Color GREY
			Total Bedrooms 0

Structure #4 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		DAILY EQUIPMENT STORAGE & ADU	
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		sq. ft.	Deconstruction: sq. ft.
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> Yes (include the new floor area square footage in the table below) <input type="checkbox"/> No			
Proposed Floor Area (New Construction Only)			
	Finished	Unfinished	Total
Basement:	sq. ft.	sq. ft.	sq. ft.
First Floor:	1,010 sq. ft.	sq. ft.	1,010 sq. ft.
Second Floor:	sq. ft.	sq. ft.	sq. ft.
Garage: <input type="checkbox"/> Detached <input checked="" type="checkbox"/> Attached	sq. ft.	4,000 sq. ft.	4,000 sq. ft.
Covered Deck:	sq. ft.	278 sq. ft.	278 sq. ft.
Total:	1,010 sq. ft.	4,278 sq. ft.	5,288 sq. ft.
			Height (above existing grade) 25'-3"
			Exterior Wall Material COMPOSITE SIDING
			Exterior Wall Color WHITE
			Roofing Material METAL ROOF
			Roofing Color GREY
			Total Bedrooms 2

Limited Impact Special Use Review Fact Sheet

Project Identification

Project Name: 73rd St. Farm
Property Address/Location: 8130 N. 73rd St., Niwat, CO
Current Owner: Starlings CO, LLC
Size of Property in Acres: 68.3 ACRES

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Determining Floor Area

If an existing wall(s) and/or roof(s) are removed and a new wall(s)/roof(s) are constructed, the associated floor area due to the new wall(s)/roof(s) are considered new construction and must be included in the calculation of floor area for the Limited Impact Special Use Review and shown on this Fact Sheet.

Structure #5 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		SHEDS @ DRY LOTS (x12)	
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		sq. ft.	Deconstruction: sq. ft.
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> Yes (include the new floor area square footage in the table below) <input checked="" type="checkbox"/> No			
Proposed Floor Area (New Construction Only)			
	Finished	Unfinished	Total
Basement:	sq. ft.	sq. ft.	sq. ft.
First Floor:	sq. ft.	120 sq. ft.	120 sq. ft.
Second Floor:	sq. ft.	sq. ft.	sq. ft.
Garage: <input type="checkbox"/> Detached <input checked="" type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.
Covered Deck:	sq. ft.	sq. ft.	sq. ft.
Total:	sq. ft.	120 sq. ft.	120 sq. ft.
			Height (above existing grade)
			12'-3"
			Exterior Wall Material
			METAL PANEL
			Exterior Wall Color
			WHITE
			Roofing Material
			METAL ROOF
			Roofing Color
			GREY
			Total Bedrooms
			0

Structure #6 Information

Type of Structure: (e.g. residence, studio, barn, etc.)		SHEDS @ HORSE RUNS (x2)	
Total Existing Floor Area: (Finished + Unfinished square feet including garage if attached.)		sq. ft.	Deconstruction: sq. ft.
Are new floor areas being proposed where demolition will occur? <input type="checkbox"/> Yes (include the new floor area square footage in the table below) <input checked="" type="checkbox"/> No			
Proposed Floor Area (New Construction Only)			
	Finished	Unfinished	Total
Basement:	sq. ft.	sq. ft.	sq. ft.
First Floor:	sq. ft.	1,248 sq. ft.	1,248 sq. ft.
Second Floor:	sq. ft.	sq. ft.	sq. ft.
Garage: <input type="checkbox"/> Detached <input checked="" type="checkbox"/> Attached	sq. ft.	sq. ft.	sq. ft.
Covered Deck:	sq. ft.	sq. ft.	sq. ft.
Total:	sq. ft.	1,248 sq. ft.	1,248 sq. ft.
			Height (above existing grade)
			16'-1"
			Exterior Wall Material
			METAL PANEL
			Exterior Wall Color
			WHITE
			Roofing Material
			METAL ROOF
			Roofing Color
			GREY
			Total Bedrooms
			0

Grading Calculation

Cut and fill calculations are necessary to evaluate the disturbance of a project and to verify whether or not a Limited Impact Special Review is required. Limited Impact Special Review is required when grading for a project involves more than 500 cubic yards (minus normal cut/fill and backfill contained within the foundation footprint).

If grading totals are close to the 500 yard trigger, additional information may be required, such as a grading plan stamped by a Colorado Registered Professional Engineer.

Earth Work and Grading

This worksheet is to help you accurately determine the amount of grading for the property in accordance with the Boulder County Land Use Code. Please fill in all applicable boxes.

Note: Applicant(s) must fill in the shaded boxes even though foundation work does not contribute toward the 500 cubic yard trigger requiring Limited Impact Special Use Review. Also, all areas of earthwork must be represented on the site plan.

Earth Work and Grading Worksheet:

	Cut	Fill	Subtotal
Driveway and Parking Areas	841.07 y3	96.2 y3	937.28 y3
Berm(s)	n/a	839.24 y3	839.24 y3
Other Grading Swales, etc.	252.57 y3	466.98 y3	719.56 y3
Subtotal			2,496.08 y3

Box 1

* If the total in Box 1 is greater than 500 cubic yards, then a Limited Impact Special Review is required.

	Cut	Fill	Total
Foundation	2,930.45 y3	1,992.46 y3	4,922.91 y3
Material cut from foundation excavation to be removed from the property			0 y3

Excess Material will be Transported to the Following Location:

Excess Materials Transport Location:
Excess material to be redistributed evenly around the property

Narrative

Use this space to describe any special circumstances that you feel the Land Use Office should be aware of when reviewing your application, including discussion regarding any factors (listed in Article 4-806.2.b.i) used to demonstrate that the presumptive size limitation does not adequately address the size compatibility of the proposed development with the defined neighborhood. If more room is needed, feel free to attach a separate sheet.

See attached

Is Your Property Gated and Locked?

Note: If county personnel cannot access the property, then it could cause delays in reviewing your application.

Certification

I certify that the information submitted is complete and correct. I agree to clearly identify the property (if not already addressed) and stake the location of the improvements on the site within four days of submitting this application. I understand that the intent of the Site Plan Review process is to address the impacts of location and type of structures, and that modifications may be required. Site work will not be done prior to issuance of a Grading or Building Permit.

Signature <i>Paige Schavey</i>	Print Name Paige Schavey	Date 11/12/2024
-----------------------------------	-----------------------------	--------------------

Residence Fdn Cut					
	area (sq ft)	depth (ft)	volume (ft3)	top 12" / 2	total
a	3075	3	9224	1537	7687
b	429	1	429	215	215
c	1134	1	1134	567	567
d	75	1	75	38	38
e	114	1	114	57	57

total (ft3)	8563
conversion	27
Total (y3)	317

Swale Cut					
	area (sq ft)	depth (ft)	volume (ft3)	top 12" / 2	total
1	710	1	710	355	355
2	3	1	3	1	1
3	60	2	120	30	90
4	3	2	6	2	5
5	331	1	331	165	165
6	172	1	172	86	86
7	19	1	19	9	9
8	41	1	41	20	20
9	0	1	0	0	0
10	17	1	17	9	9

total (ft3)	703
conversion	27
Total (y3)	26

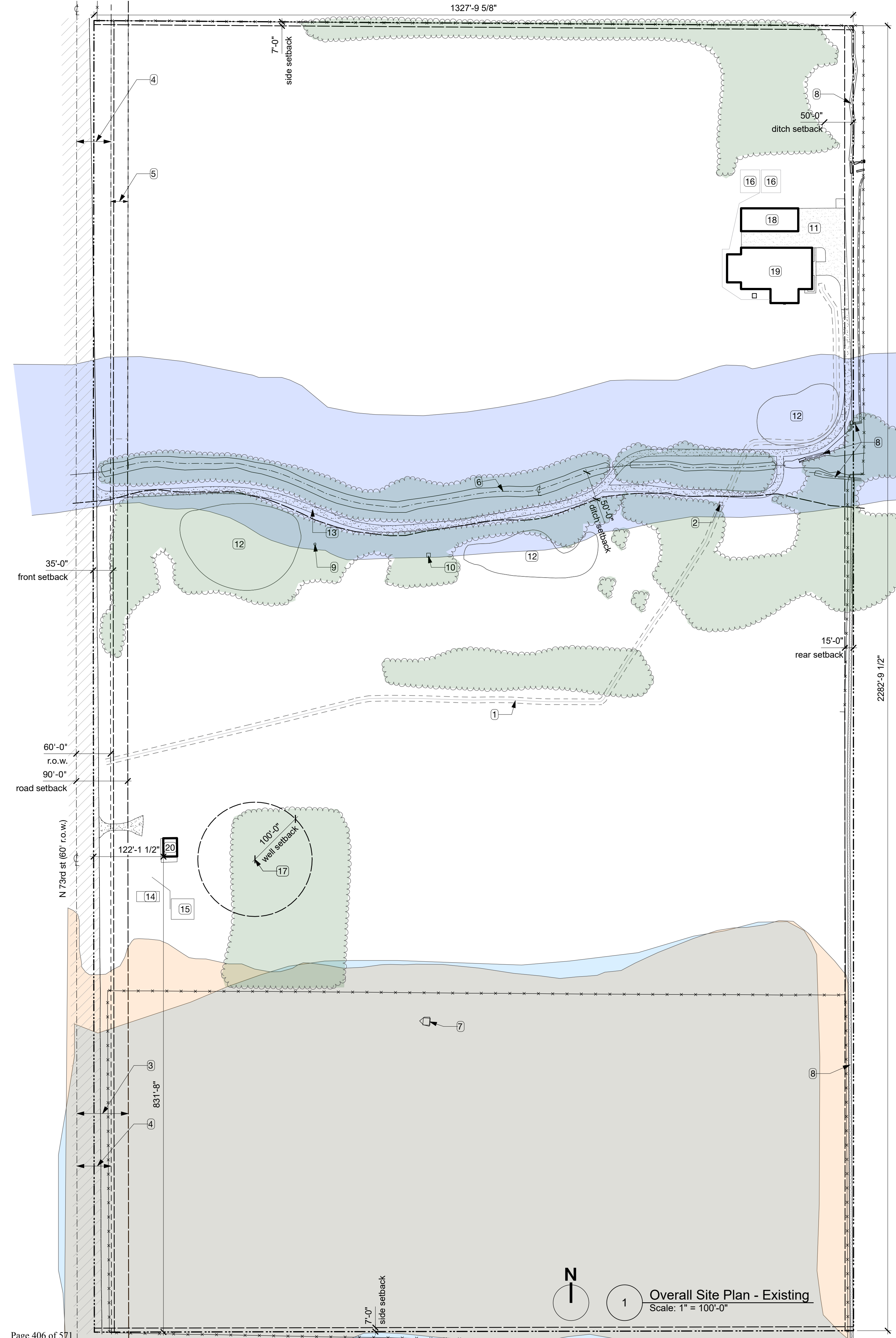
Residence Fdn Fill					
	area (sq ft)	depth (ft)	volume (ft3)	top 12" / 2	total
A	735	3	2204	367	1836
B	97	1	97	48	48
C	72	2	143	36	108
D	112	1	112	56	56
E	190	1	190	95	95
F		1	0	0	0

total (ft3)	2143
conversion	27
Total (y3)	79
	397

Swale Fill					
	area (sq ft)	depth (ft)	volume (ft3)	top 12" / 2	total
1	98	1	98	49	49
2	60	1	60	30	30

total (ft3)	79
conversion	27
Total (y3)	3
	29
	425

1327'-9 5/8"



Site Plan Notes

- 1 10' wide PVREA electric easement
- 2 (e) electrical panel & meter
- 3 90' road setback
- 4 N 73rd st. 60' r.o.w.
- 5 30' water pipeline easement
- 6 Holland Ditch
- 7 (e) center pivot irrigation on concrete pad
- 8 (e) concrete ditch
- 9 (e) bronze statue
- 10 (e) concrete pump structure
- 11 (e) asphalt
- 12 (e) pond
- 13 (e) dirt/gravel drive
- 14 (e) abandoned absorption bed: approximate location (no record)
- 15 (e) septic tank and leech field (3 bed): approximate location
- 16 (e) septic tank and leech field (7 bed): approximate location
- 17 (e) well: approximate location
- 18 (e) 1-story metal frame bldg, 4,000 s.f.

Site Plan Legend

- Riparian Area
- Flood Zone AE (100 year floodplain)
- Flood Zone X (500 yr floodplain)
- tree line
- (e) tree

File:
NOTICE: DUTY OF COOPERATION
 Release of these plans contemplates further cooperation among the owner, his or her contractor, and the architect. Design and construction are complex. Although the architect and his/her consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the architect shall relieve the architect from responsibility for all consequences. Changes made from the plans without consent of the architect are unauthorized and shall relieve the architect from all consequences arising out of such changes.

LU
 Date: 18 November, 2024
 Revisions:

73rd. St. Farm
 Starlings CO LLC
 8130 N. 73rd St.
 Longmont, CO 80503

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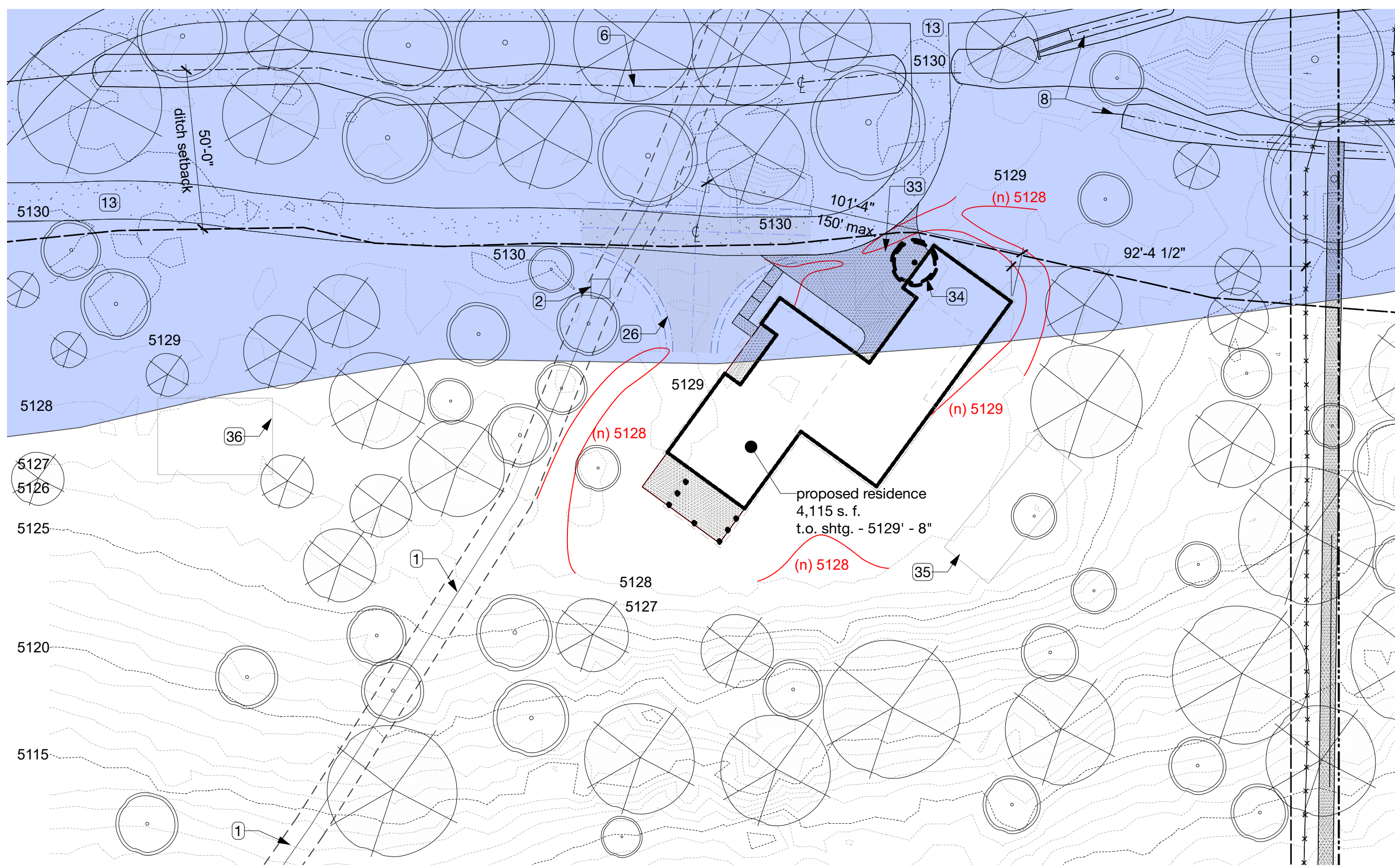
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Residence
 Existing Site Plan

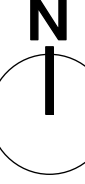
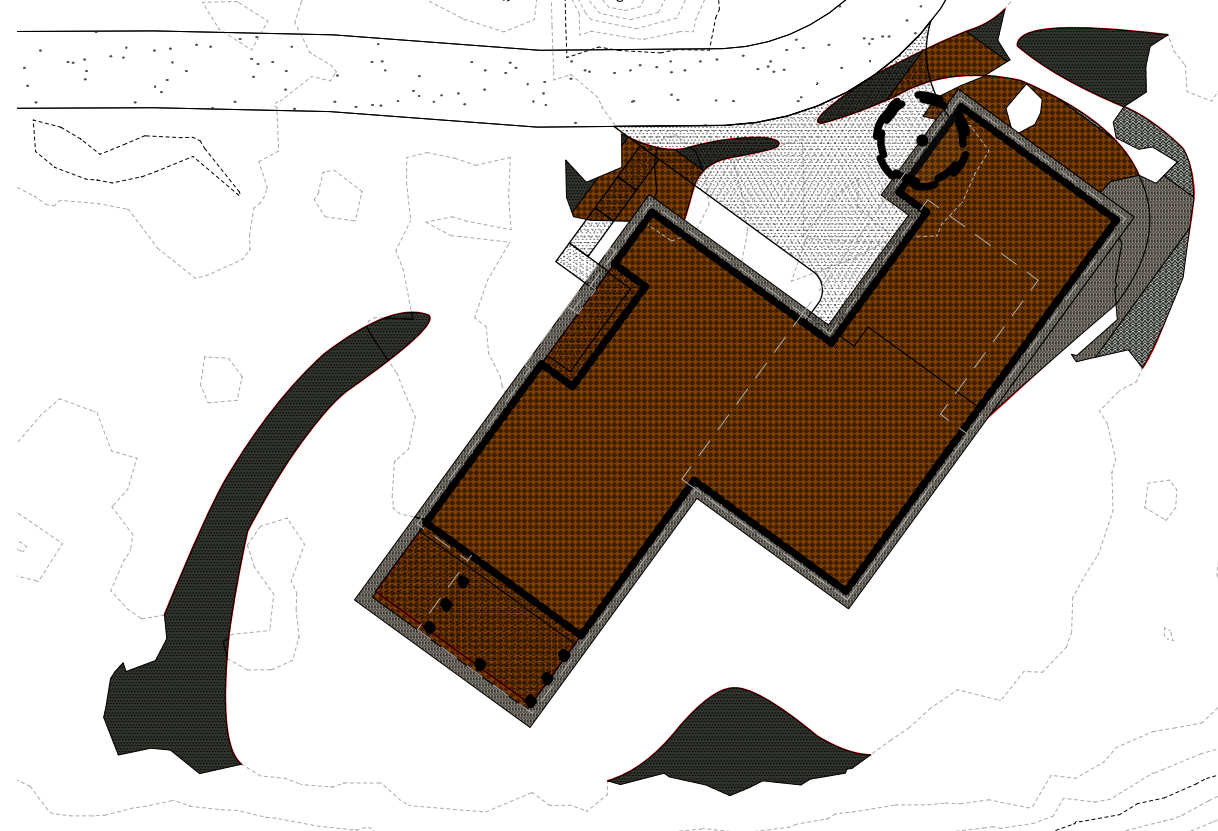
Sheet Number:

A1.0

1 Overall Site Plan - Existing
 Scale: 1" = 100'-0"



2 Site Plan
Scale: 1" = 30'-0"



3 Areas of Earth Work
Scale: 1" = 30'-0"

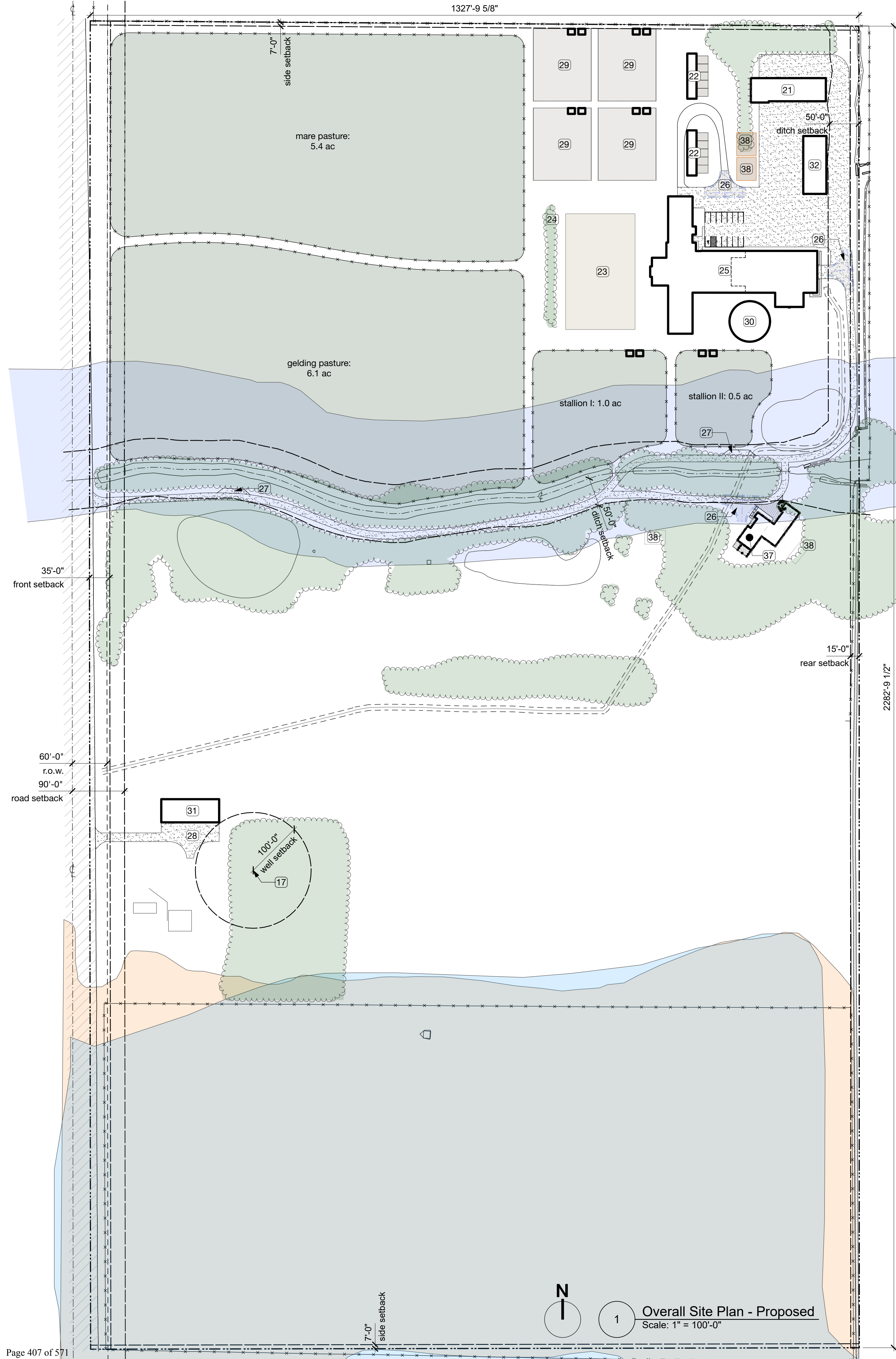
Earth Work Legend	
	Driveway / Parking Fill
	Other Cut
	Other Fill
	Foundation Cut
	Foundation Fill

Site Plan Notes

- 1 10' wide PVREA electric easement
- 2 (e) electrical panel & meter
- 3 90' road setback
- 4 N 73rd st. 60' r.o.w.
- 5 30' water pipeline easement
- 6 Holland Ditch
- 7 (e) center pivot irrigation on concrete pad
- 8 (e) concrete ditch
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- 10 (e) concrete pump structure
- 11 (e) asphalt
- 12 (e) pond
- 13 (e) dirt/gravel drive
- 14 (e) abandoned absorption bed: approximate location (no record)
- 15 (e) septic tank and leach field (3 bed): approximate location
- 16 (e) septic tank and leach field (7 bed): approximate location
- 17 (e) well: approximate location
- 18 (e) 1-story metal frame bldg, 4,000 s.f.
- 19 (e) 2-story barn w/ garage, 11,385 s.f.
- 20 (e) 1-story wood frame bldg, 768 s.f.
- 21 (n) farm equipment storage w/ ADU, see Blackburn Architects
- 22 (n) 32' x 14' horse runs, see Blackburn Architects
- 23 (n) 120' x 200' arena: see Blackburn Architects
- 24 (n) berm w/ plantings: see Blackburn Architects

Site Plan Legend

- Riparian Area
- Flood Zone AE (100 year floodplain)
- Flood Zone X (500 yr floodplain)
- tree line
- (e) tree
- 25 (n) horse barn, see Blackburn Architects
- 26 (n) emergency access turnaround per Boulder County Multimodal Transportation Standards
- 27 (n) emergency access pull-out per Boulder County Multimodal Transportation Standards
- 28 (n) drive
- 29 (n) 100' x 125' dry lots: see Blackburn Architects
- 30 (n) 70' round pen, see Blackburn Architects
- 31 (e) building: relocated, for equipment storage, see Blackburn Architects
- 32 (n) hay/bedding storage, see Blackburn Architects
- 33 (n) driveway: residence
- 34 (e) tree: demo for (n) residence
- 35 (n) leach field location option A
- 36 (n) leach field location option B
- 37 (n) residence 4,115 s. f. (conditioned)
- 38 (n) septic tank and leach field: approximate location



1 Overall Site Plan - Proposed
Scale: 1" = 100'-0"

File:
NOTICE: DUTY OF COOPERATION
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Residence
Proposed Site Plan

Sheet Number:

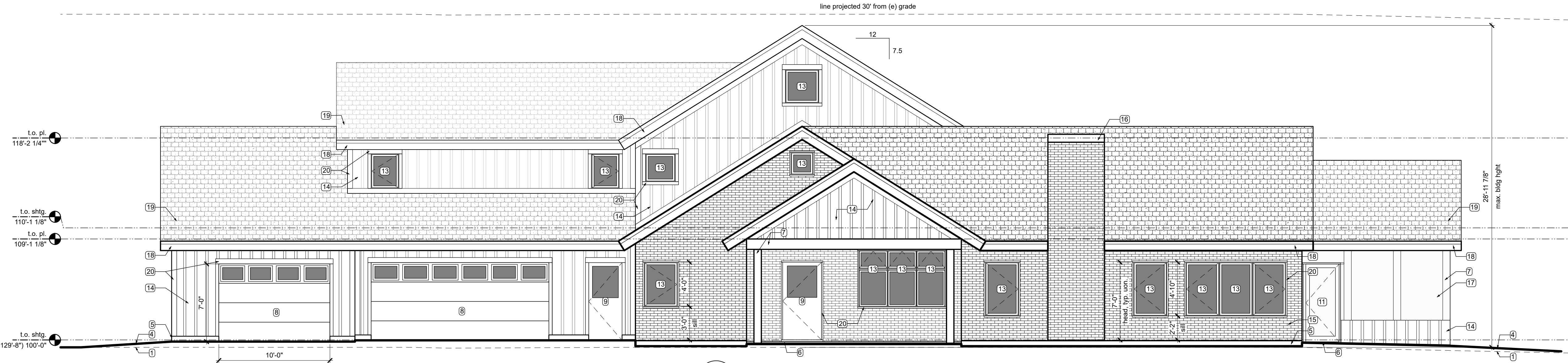
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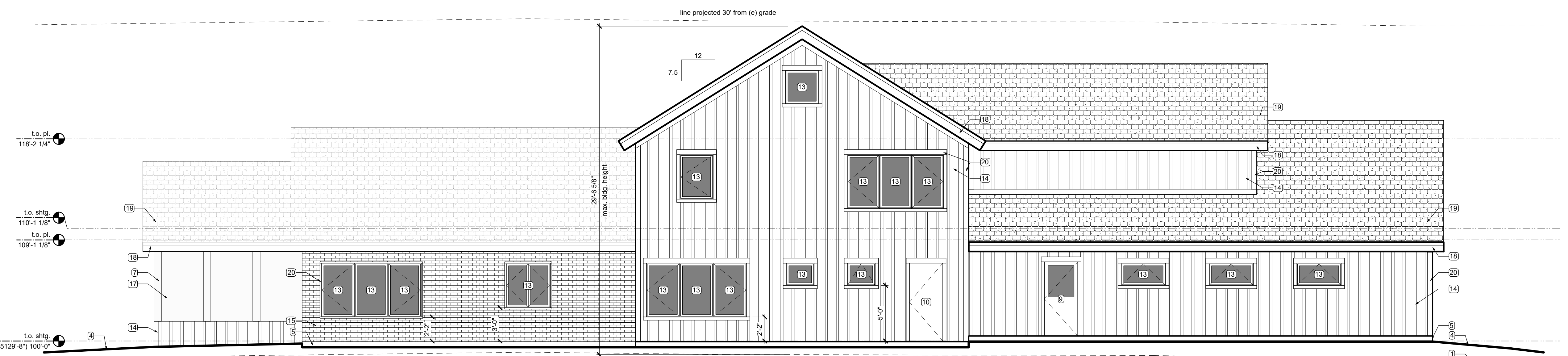
LU
Date: 18 November, 2024
Revisions:

Elevation Notes

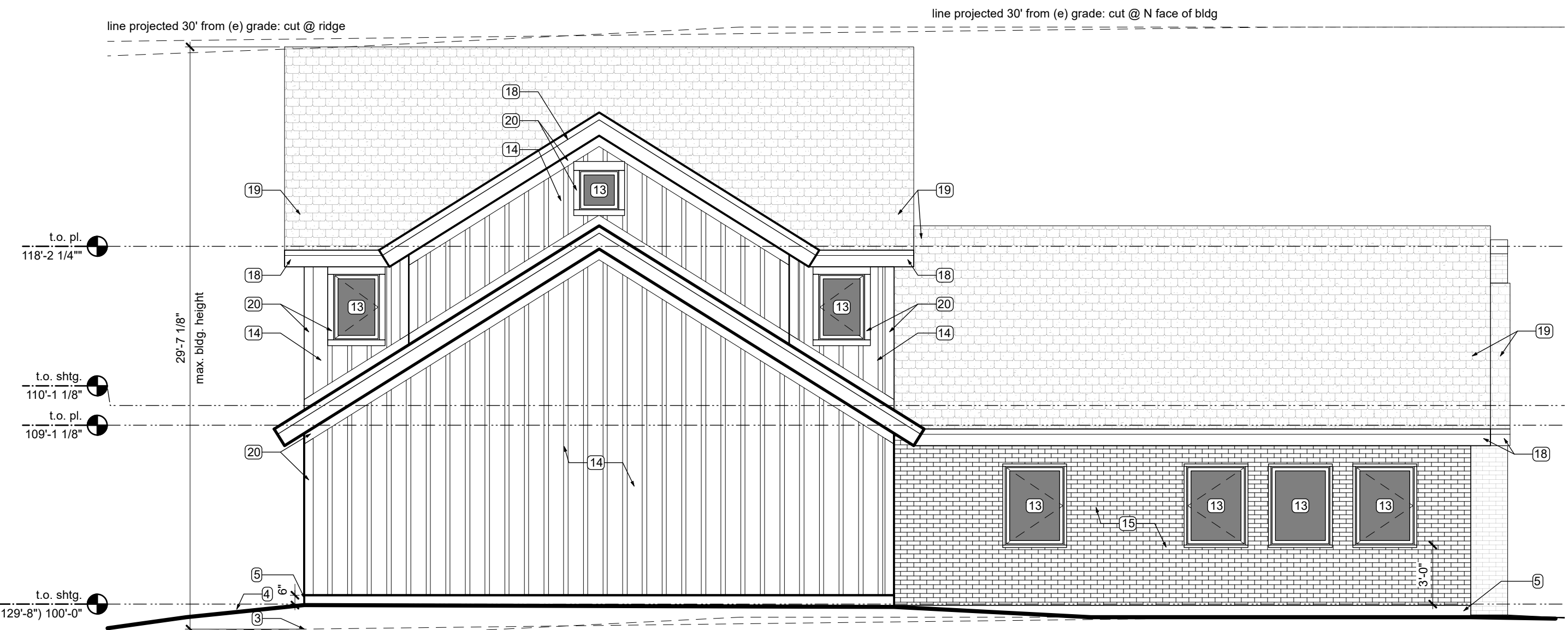
- 1 (e) grade
- 2 (e) grade: cut at North face of bldg.
- 3 (e) grade: cut at ridge
- 4 proposed grade: provide positive surface drainage, min. 6" over 10'
- 5 fdn: provide 6" min. from wood to grade
- 6 concrete slab: 2" below t.o. shtg., slope 1/4" over 12"
- 7 col/beam: exterior grade, rough sawn wood w/ clear sealant
- 8 door: overhead; vinyl/fiberglass, white exterior
- 9 door: pedestrian; vinyl/fiberglass, half lite, white exterior
- 10 door: pedestrian; vinyl/fiberglass, white exterior
- 11 door: pedestrian, screened
- 12 door: vinyl/fiberglass sliding door, white exterior
- 13 window: vinyl/fiberglass exterior, white
- 14 siding A: hardie board or eq., board and batten, white
- 15 siding B: brick, red
- 16 chimney: red brick w/ white stone chimney cap
- 17 screen enclosure: paint screen black
- 18 fascia & trim: hardie board or eq., white & pre-finished brake trim, white
- 19 roofing: Class A asphalt shingles, gray
- 20 exterior trim: window/corner; hardie board or eq., white



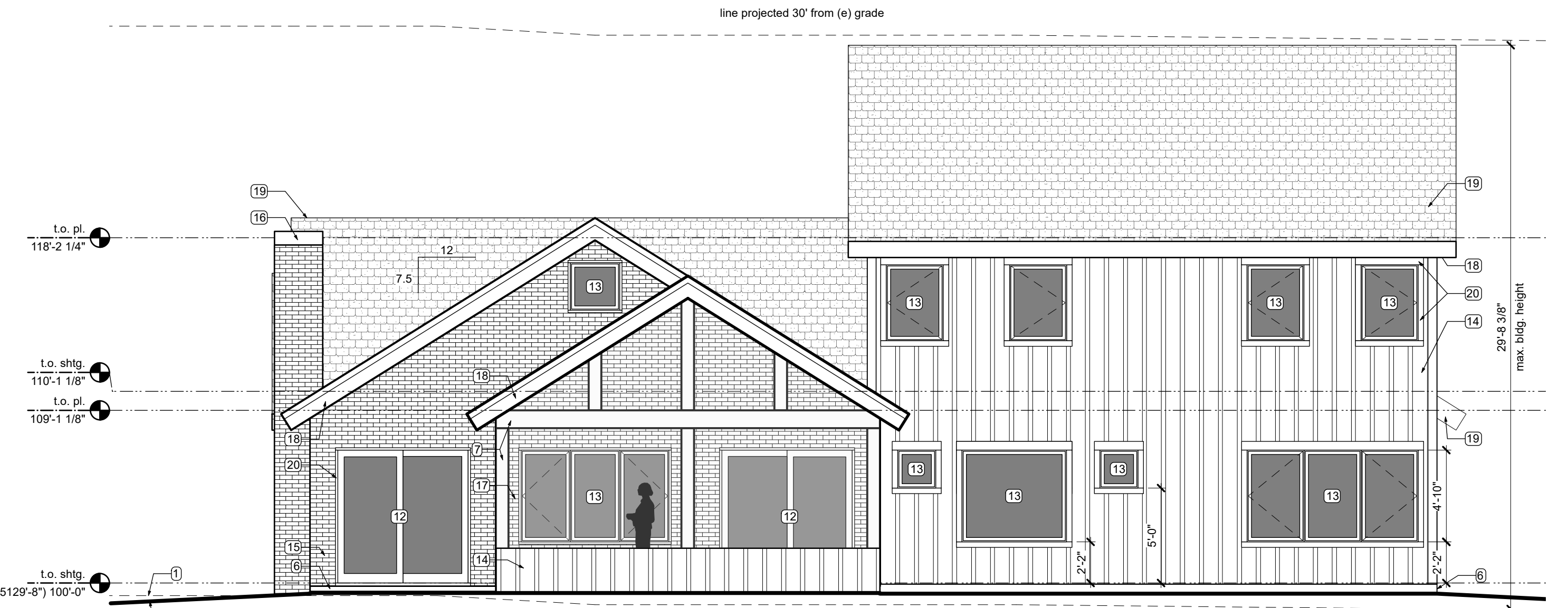
4 West Exterior Elevation
Scale: 3/16" = 1'-0"



3 East Exterior Elevation
Scale: 3/16" = 1'-0"



2 North Exterior Elevation
Scale: 3/16" = 1'-0"



1 South Exterior Elevation
Scale: 3/16" = 1'-0"

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Longmont, CO 80503

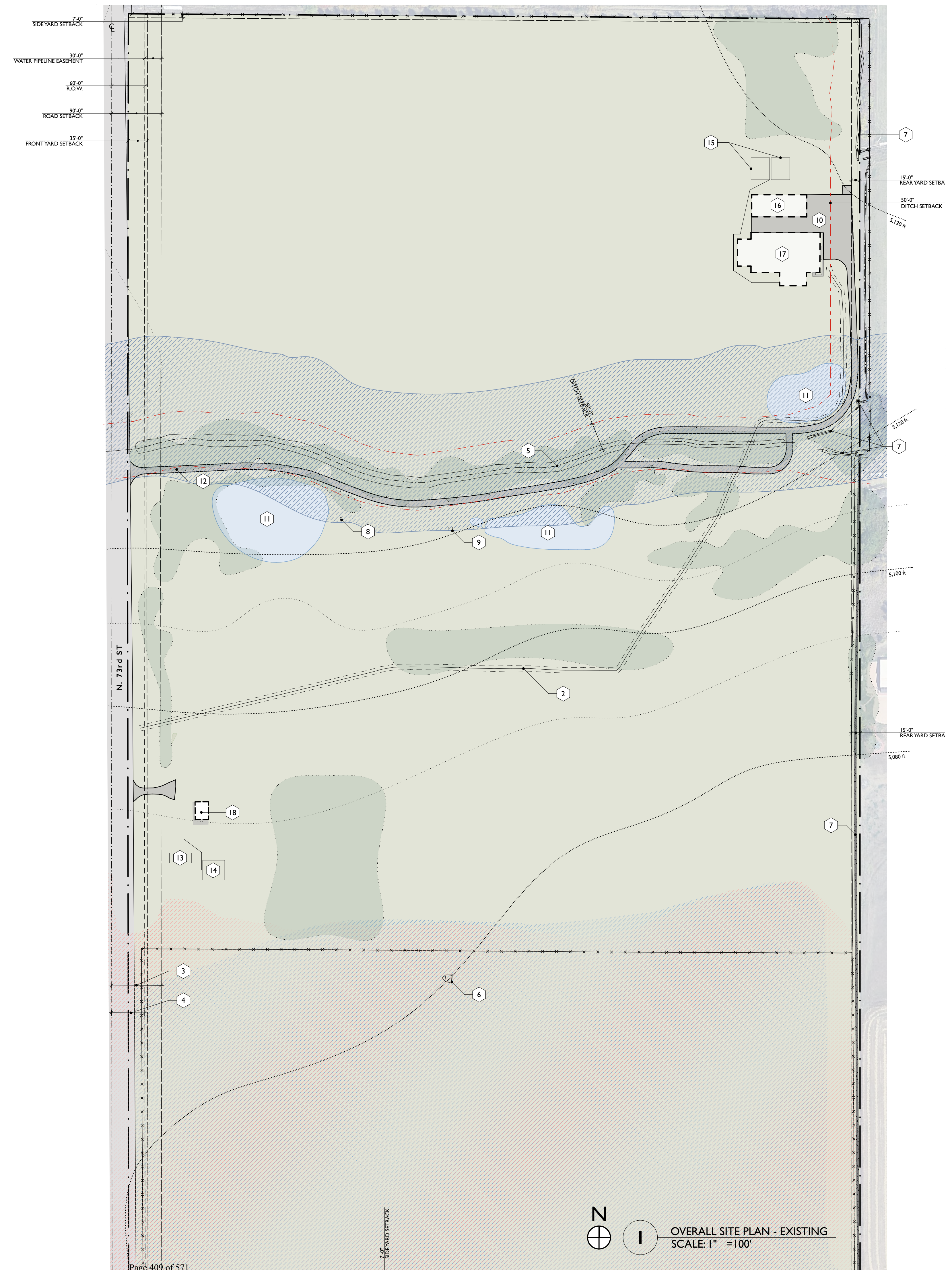
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Residence Elevations

Sheet Number:

A4.0



- SITE PLAN LEGEND**
- Property Extents
 - Pond
 - Tree Line
 - Riparian Area
 - Flood Zone AE (100 yr floodplain)
 - Flood Zone X (500 yr floodplain)

- SITE PLAN NOTES**
1. 30' water pipeline easement
 2. 10' wide PVREA electric easement
 3. 90' road setback
 4. N 73rd st. 60' r.o.w.
 5. Holland Ditch
 6. (e) center pivot irrigation on concrete pad
 7. (e) concrete ditch
 8. (e) bronze statue
 9. (e) concrete pump structure
 10. (e) asphalt
 11. (e) pond
 12. (e) dirt/gravel drive
 13. (e) abandoned absorption bed: approximate location (no record)
 14. (e) septic tank and leech field (3 bed): approximate location
 15. (e) septic tank and leech field (7 bed): approximate location
 16. (e) 1-story metal frame bldg, 4,000 s.f.
 17. (e) 2-story residence w/ garage, 11,385 s.f.
 18. (e) 1-story wood frame bldg, 768 s.f.

BLACKBURN
 WASHINGTON, DC www.blackburnarch.com
 1820 N STREET NW
 WASHINGTON, DC 20036
 (202) 337-1755 PHONE
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73rd. St. Farm
 8130 N. 73rd St.
 Longmont, CO 80503

PROJECT No : 224010.01
 DATE : November 12, 2024
 DRAWN BY : FZ
 CHECKED BY :

**SCHEMATIC DESIGN:
 PROGRESS SET**

DESIGNER'S STAMP

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 Starlings CO LLC
 73rd. St. Farm
 8130 N. 73rd St.
 Longmont, CO 80503

DESIGNER
 JOHN A. BLACKBURN ARCHITECT
 1820 N STREET NW
 WASHINGTON, DC 20036
 Tel: 202-337-1755
 Fax: 202-337-5271

CONSULTANTS

Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 EXISTING SITE PLAN**

SHEET NUMBER
AS1-1

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73rd. St. Farm

8130 N. 73rd St.
 Longmont, CO 80503

PROJECT No : 224010.01
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 8130 N. 73rd St.
 Longmont, CO 80503

DESIGNER

JOHN A. BLACKBURN ARCHITECT
 1820 N STREET NW
 WASHINGTON, DC 20036
 Tel: 202-337-1755
 Fax: 202-337-5271

CONSULTANTS

Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 PROPOSED SITE PLAN**

SHEET NUMBER

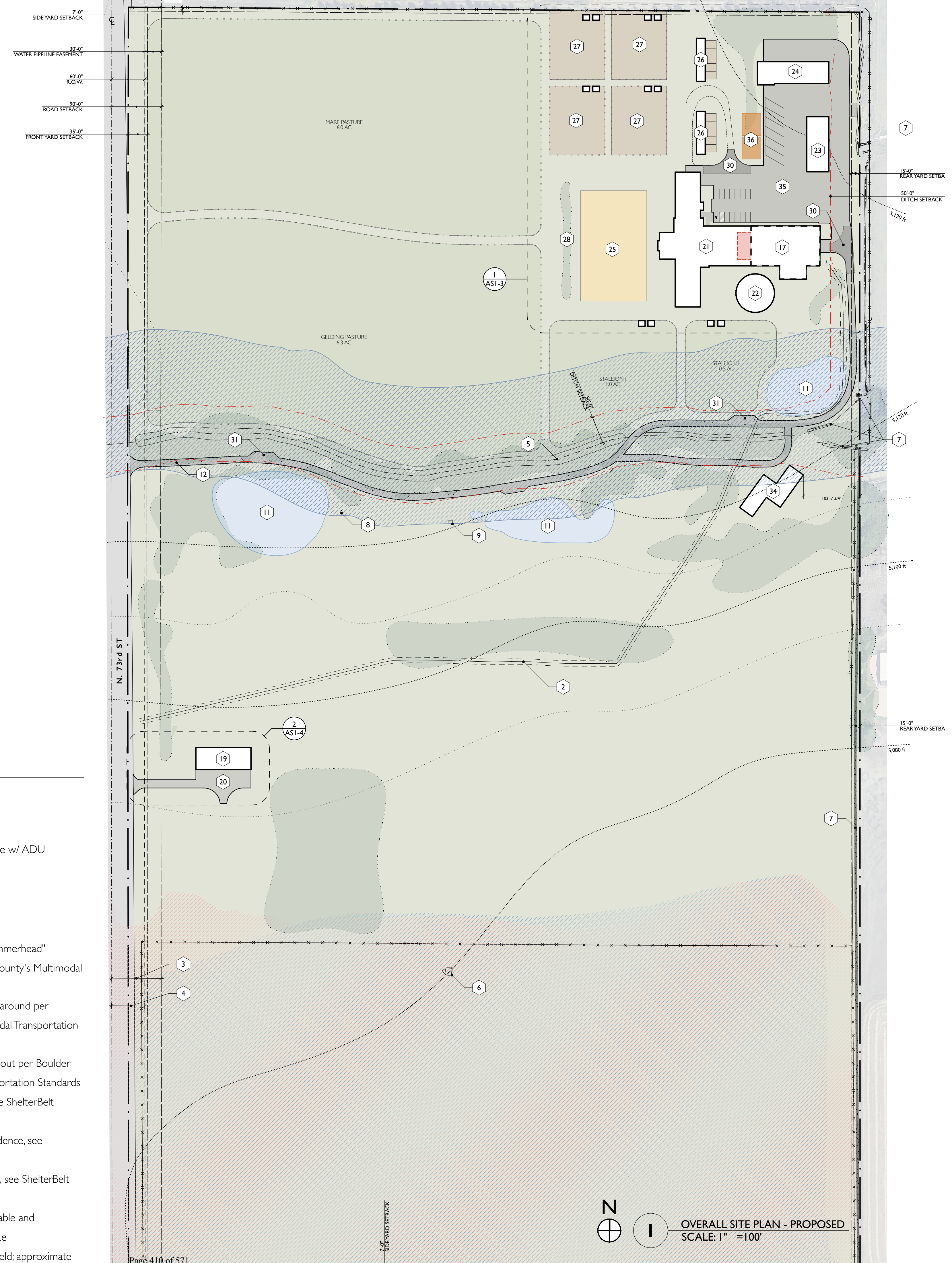
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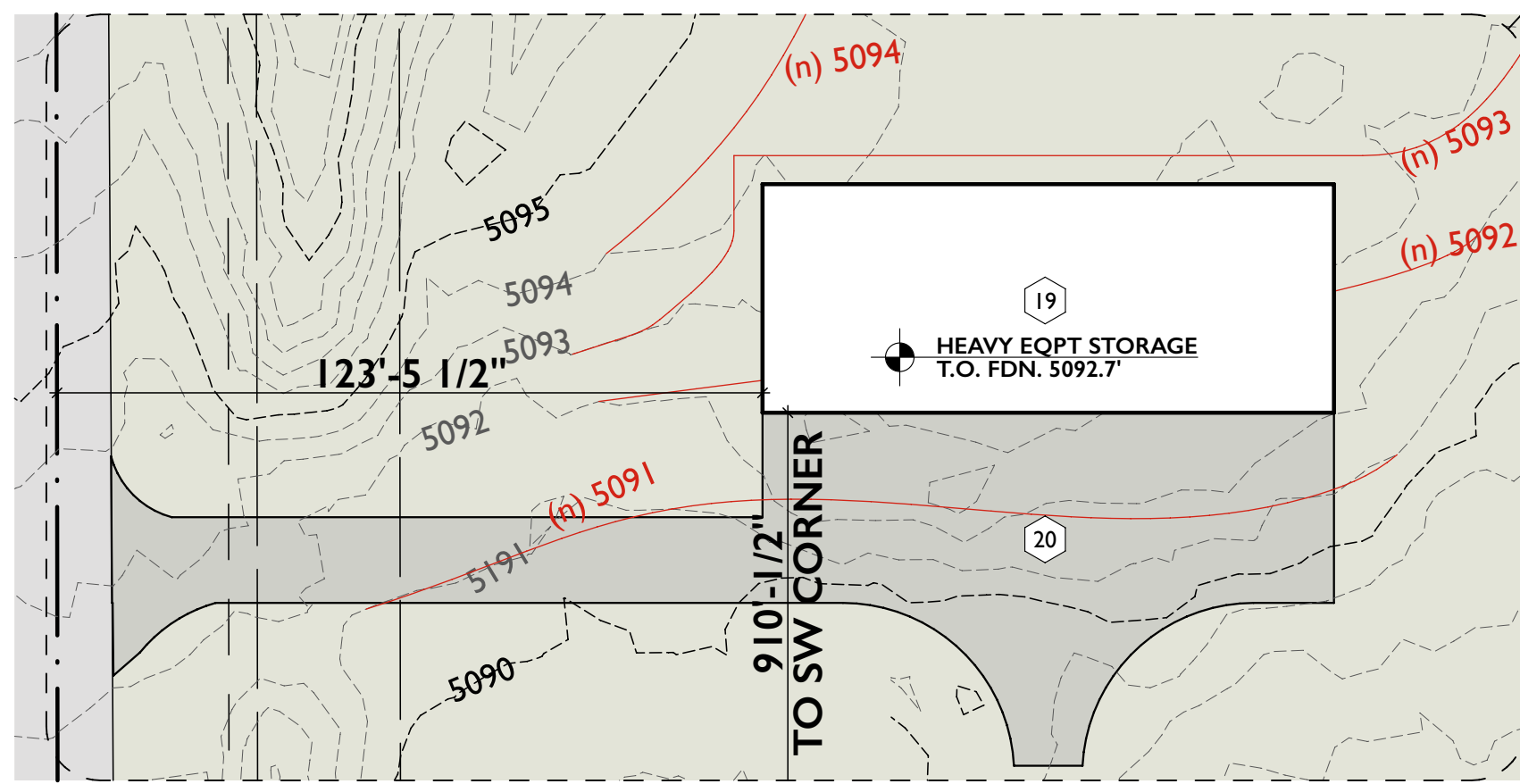
SITE PLAN LEGEND

	Property Extents
	Pond
	Tree Line
	Riparian Area
	Flood Zone AE (100 yr floodplain)
	Flood Zone X (500 yr floodplain)
	Existing Structure to be demolished

SITE PLAN NOTES

1. 30' water pipeline easement	21. (n) 15 stall barn
2. 10' wide PVREA electric easement	22. (n) 70' round pen
3. 90' road setback	23. (n) hay/bedding storage
4. N 73rd st. 60' r.o.w.	24. (n) farm equipment storage w/ ADU
5. Holland Ditch	25. (n) 120' x 200' arena
6. (e) center pivot irrigation on concrete pad	26. (n) 32' x 14' horse runs
7. (e) concrete ditch	27. (n) 100' x 125' dry lots
8. (e) bronze statue	28. (n) berm w/ plantings
9. (e) concrete pump structure	29. (n) emergency access "hammerhead" turnaround per Boulder County's Multimodal Transportation Standards
10. (e) asphalt	30. (n) emergency access turnaround per Boulder County's Multimodal Transportation Standards
11. (e) pond	31. (n) emergency access pull-out per Boulder County Multimodal Transportation Standards
12. (e) dirt/gravel drive	32. (n) driveway: residence, see ShelterBelt Design
13. (e) abandoned absorption bed: approximate location (no record)	33. (e) tree: demo for (n) residence, see ShelterBelt Design
14. (e) septic tank and leech field (3 bed): approximate location	34. (n) 4,115 s.f. (conditioned), see ShelterBelt Design
15. (e) septic tank and leech field (7 bed): approximate location	35. (n) combination of permeable and impermeable driving surface
16. (e) 1-story metal frame bldg, 4,000 s.f.	36. (n) septic tank and leach field; approximate
17. (e) 2-story residence w/ garage, 11,388 s.f.	
18. (e) 1-story wood frame bldg, 768 s.f.	
19. (e) building: relocated, for heavy equipment storage	
20. (n) drive	





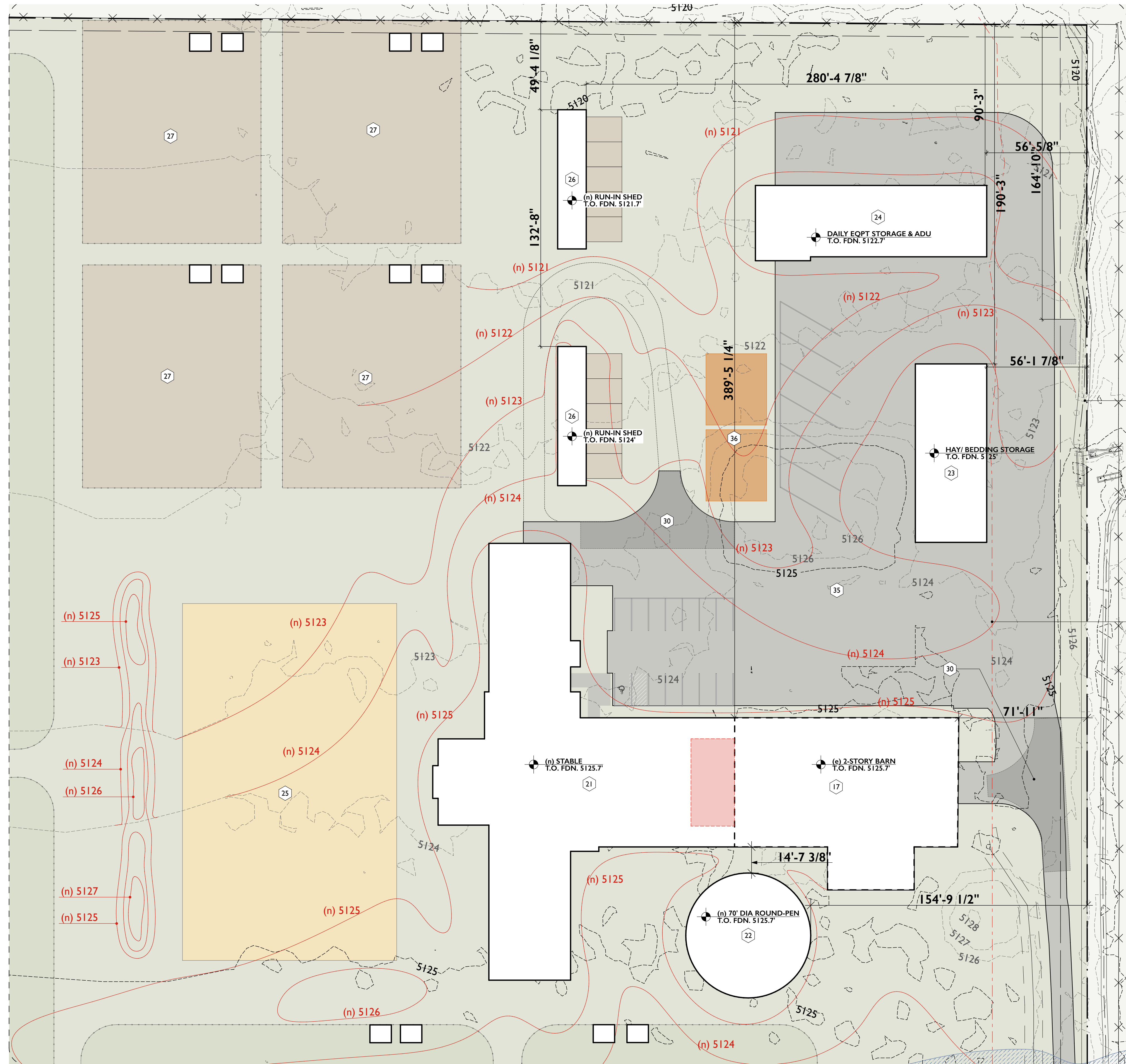
2 ENLARGED PROPOSED SITE PLAN | HEAVY EQUIP. CORE
SCALE: 1" = 30'

SITE PLAN LEGEND

- Property Extents
- Pond
- Tree Line
- Riparian Area
- Flood Zone AE (100 yr floodplain)
- Flood Zone X (500 yr floodplain)
- Existing structure to be demolished

SITE PLAN NOTES

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. 30' water pipeline easement 2. 10' wide PVREA electric easement 3. 90' road setback 4. N 73rd st. 60' r.o.w. 5. Holland Ditch 6. (e) center pivot irrigation on concrete pad 7. (e) concrete ditch 8. (e) bronze statue 9. (e) concrete pump structure 10. (e) asphalt 11. (e) pond 12. (e) dirt/gravel drive 13. (e) abandoned absorption bed: approximate location (no record) 14. (e) septic tank and leech field (3 bed): approximate location 15. (e) septic tank and leech field (7 bed): approximate location 16. (e) 1-story metal frame bldg, 4,000 s.f. 17. (e) 2-story residence w/ garage, 11,385 s.f. 18. (e) 1-story wood frame bldg, 768 s.f. 19. (e) building: relocated, for equipment storage | <ol style="list-style-type: none"> 20. (n) drive 21. (n) 15 stall barn 22. (n) 70' round pen 23. (n) hay/bedding storage 24. (n) farm equipment storage w/ ADU 25. (n) 120' x 200' arena 26. (n) 32' x 14' horse runs 27. (n) 100' x 125' dry lots 28. (n) barn w/ plantings 29. (n) emergency access "hammerhead" turnaround per Boulder County's Multimodal Transportation Standards 30. (n) emergency access turnaround per Boulder County's Multimodal Transportation Standards 31. (n) emergency access pull-out per Boulder County Multimodal Transportation Standards 32. (n) driveway: residence, see ShelterBelt Design 33. (e) tree: demo for (n) residence, see ShelterBelt Design 34. (n) 4,115 s.f. (conditioned), see ShelterBelt Design 35. (n) combination of permeable and impermeable driving surface |
|--|---|



1 ENLARGED PROPOSED SITE PLAN | EQUINE CORE
SCALE: 1" = 30'

73rd. St. Farm

8130 N. 73rd St.
Longmont, CO 80503

PROJECT No: 224010.01
DATE: November 12, 2024
DRAWN BY: FZ
CHECKED BY:

**SCHEMATIC DESIGN:
PROGRESS SET**

DESIGNER'S STAMP

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CONSTRUCTION**

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73rd. St. Farm
8130 N. 73rd St.
Longmont, CO 80503

DESIGNER

JOHN A. BLACKBURN ARCHITECT
1820 N STREET NW
WASHINGTON, DC 20036
Tel: 202-337-1755
Fax: 202-337-5271

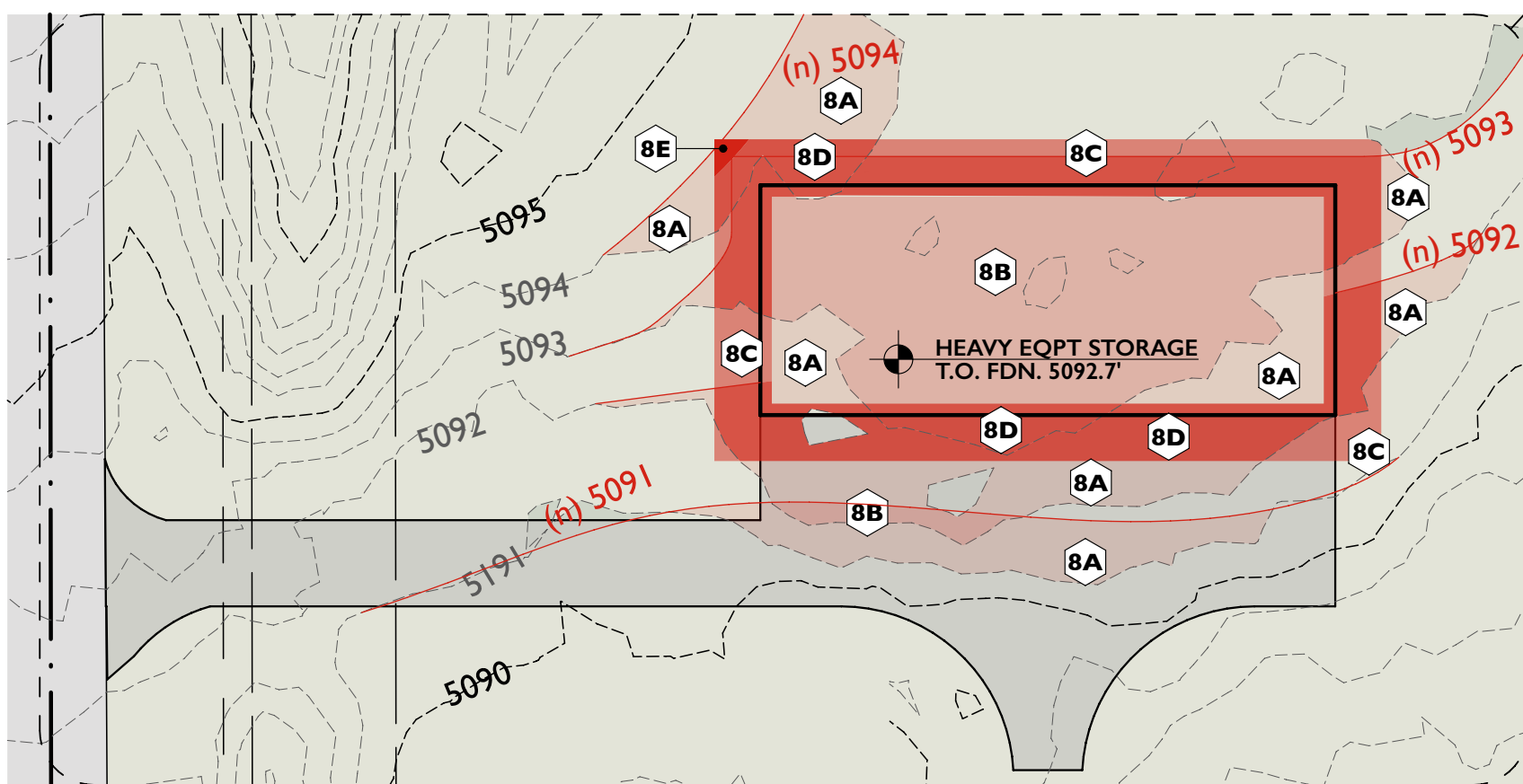
CONSULTANTS

Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
PROPOSED SITE PLAN
- ENLARGED**

SHEET NUMBER

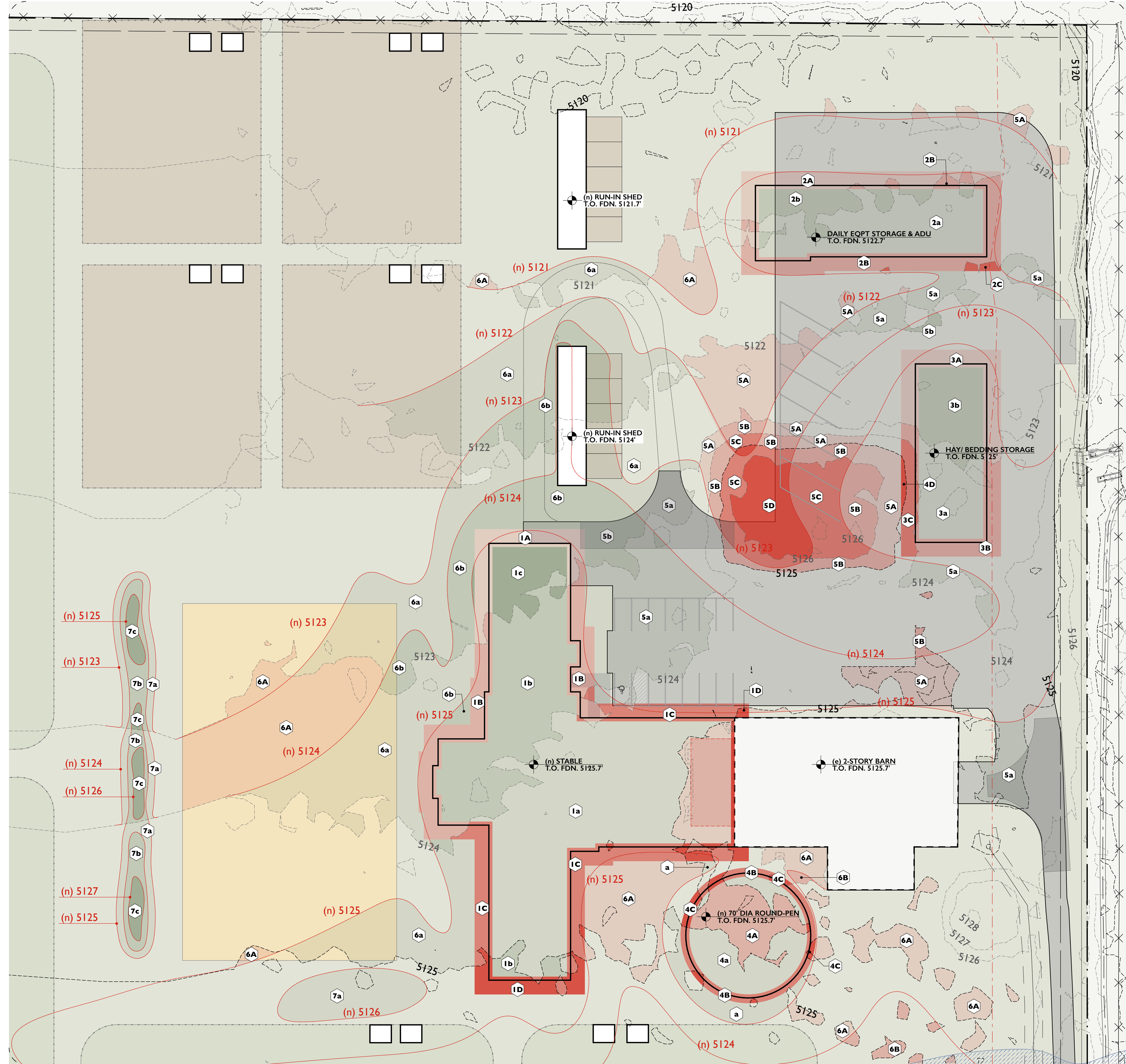
AS1-3



2 TOPO CALCS | HEAVY EQUIP. CORE
SCALE: 1" = 30'

CUT & FILL CALCULATIONS

Stable & Indoor Arena - CUT					Stable & Indoor Arena - FILL				
zone	area (sq ft)	depth (ft)	volume	top 12'72"	zone	area (sq ft)	depth (ft)	volume	top 12'72"
1A	1,885	1	1,885	2,827.5	1a	9,348	1	9,348	14,022
1B	1,437	2	2,874	718.5	1b	5,501	2	11,002	2,750.5
1C	3,019	3	9,057	1,309.5	1c	1,285	3	3,855	642.5
1D	1,152	4	4,608	576.0					
			22,130.5	cubic feet				32,372	cubic feet
			37	comment				37	comment
			821.13	cubic yards				1,195.26	cubic yards
Cubic yards Total: 2,016.39									
Daily Equipment Storage & ADU - CUT					Daily Equipment Storage & ADU - FILL				
2A	1,437	1	1,437	2,155.5	2a	3,353	1	3,353	5,029.5
2B	2,338	2	4,676	1,119.0	2b	1,224	2	2,448	613.0
2C	90	3	270	45.2					
			8,364.9	cubic feet				8,094.5	cubic feet
			37	comment				37	comment
			396.37	cubic yards				399.80	cubic yards
Cubic yards Total: 596.56									
Hay / Bedding Storage - CUT					Hay / Bedding Storage - FILL				
3A	1,411	1	1,411	2,116.5	3a	3,353	1	3,353	5,029.5
3B	1,069	2	2,138	545.5	3b	1,224	2	2,448	613.0
3C	490	3	1,470	265.0					
3D	68	4	272	34.0					
			4,810	cubic feet				8,094.5	cubic feet
			37	comment				37	comment
			352.32	cubic yards				399.80	cubic yards
Cubic yards Total: 552.02									
70' Round Pen - CUT					70' Round Pen - FILL				
4A	1,571	2	3,142	785.5	4a	1,848	1	1,848	924.0
4B	843	3	2,529	421.5					
4C	227	4	908	113.5					
			7,899.5	cubic feet				2,372	cubic feet
			37	comment				37	comment
			392.17	cubic yards				102.47	cubic yards
Cubic yards Total: 395.24									
Driveway - CUT					Driveway - FILL				
5A	25,440	1	25,440	12,720.0	5a	12,143	1	12,143	6,071.5
5B	2,447	2	4,894	1,223.5	5b	1,039	2	2,078	519.5
5C	2,565	3	7,695	1,983.5					
5D	1,492	4	5,968	866.0					
			32,709	cubic feet				2,597.5	cubic feet
			37	comment				37	comment
			841.07	cubic yards				96.30	cubic yards
Cubic yards Total: 937.28									
Other Grading - CUT					Other Grading - FILL				
6A	12,276	1	12,276	6,138.0	6a	72,590	1	72,590	36,295.0
6B	2,447	2	4,894	1,223.5	6b	5,011	2	10,022	2,505.5
			6,117.5	cubic feet				12,527.5	cubic feet
			37	comment				37	comment
			326.17	cubic yards				463.98	cubic yards
Cubic yards Total: 690.56									
Berm - CUT					Berm - FILL				
7a	1,772	1	1,772	886.0	7a	1,772	1	1,772	886.0
7b	1,384	2	2,768	692.0	7b	1,384	2	2,768	692.0
7c	817	3	2,451	408.5	7c	817	3	2,451	408.5
			0	cubic feet				22,659.5	cubic feet
			37	comment				37	comment
			0.00	cubic yards				839.24	cubic yards
Cubic yards Total: 839.24									
Heavy Equipment Storage - CUT					Heavy Equipment Storage - FILL				
8A	2,696	1	2,696	1,348.0	8a	287	1	287	143.5
8B	135	2	270	67.5					
8C	3,014	3	9,042	1,307.0					
8D	2,349	4	9,396	1,174.5					
8E	21	5	105	11.5					
			35,614.5	cubic feet				410.5	cubic feet
			37	comment				37	comment
			948.76	cubic yards				15.94	cubic yards
Cubic yards Total: 964.70									
Cubic yards Total (equine): 6,992.99									



1 TOPO CALCS DIAG | EQUINE CORE
SCALE: 1" = 30'

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73rd. St. Farm

8130 N. 73rd St.
Longmont, CO 80503

PROJECT No : 224010.01
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Longmont, CO 80503

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Tel: 202-337-1755
Fax: 202-337-5271

CONSULTANTS

Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
EQUESTRIAN CENTER -
PROPOSED SITE PLAN
- CUT & FILL CALCS

SHEET NUMBER

AS1-4

73rd. St. Farm

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82'-7 1/2"

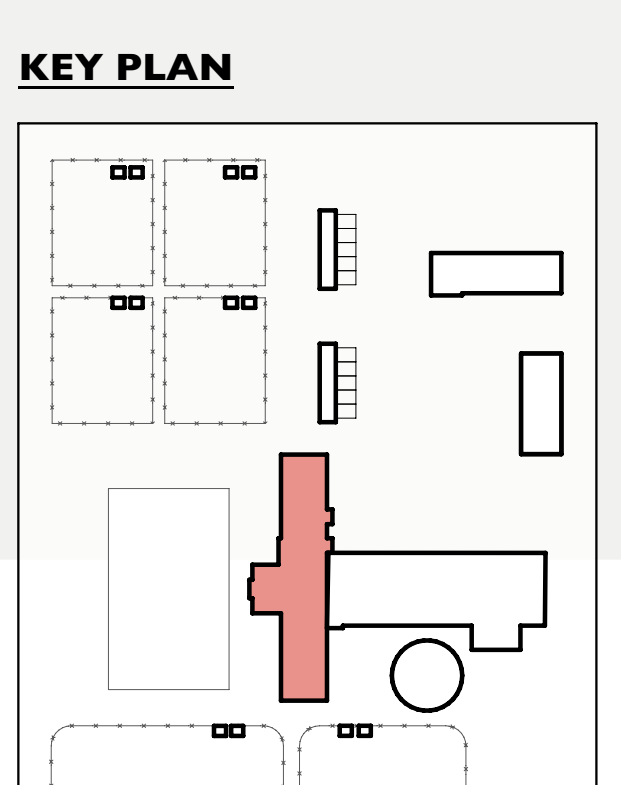
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FLOOR PLAN - BARN
 SCALE: 1/8" = 1'-0"

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	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 FLOOR PLAN - BARN**

SHEET NUMBER
A1-1



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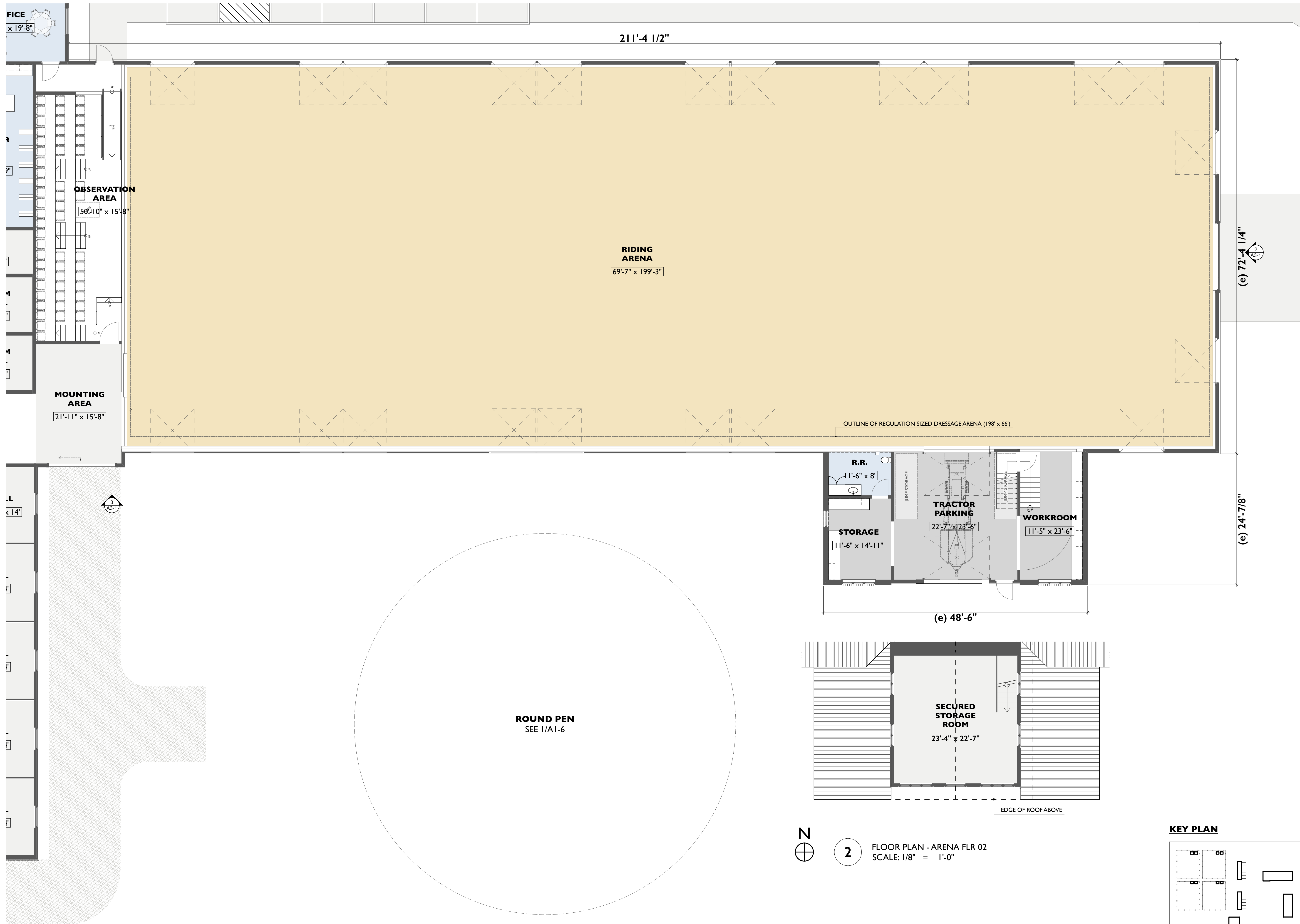
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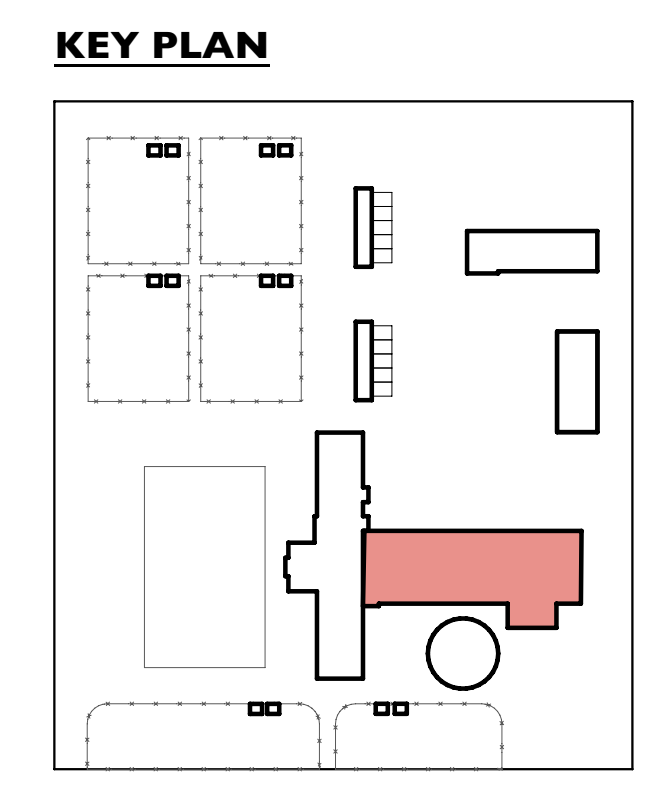
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1 FLOOR PLAN - ARENA FLR 01
 SCALE: 1/8" = 1'-0"

2 FLOOR PLAN - ARENA FLR 02
 SCALE: 1/8" = 1'-0"



Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 FLOOR PLAN - ARENA**

SHEET NUMBER
A1-2

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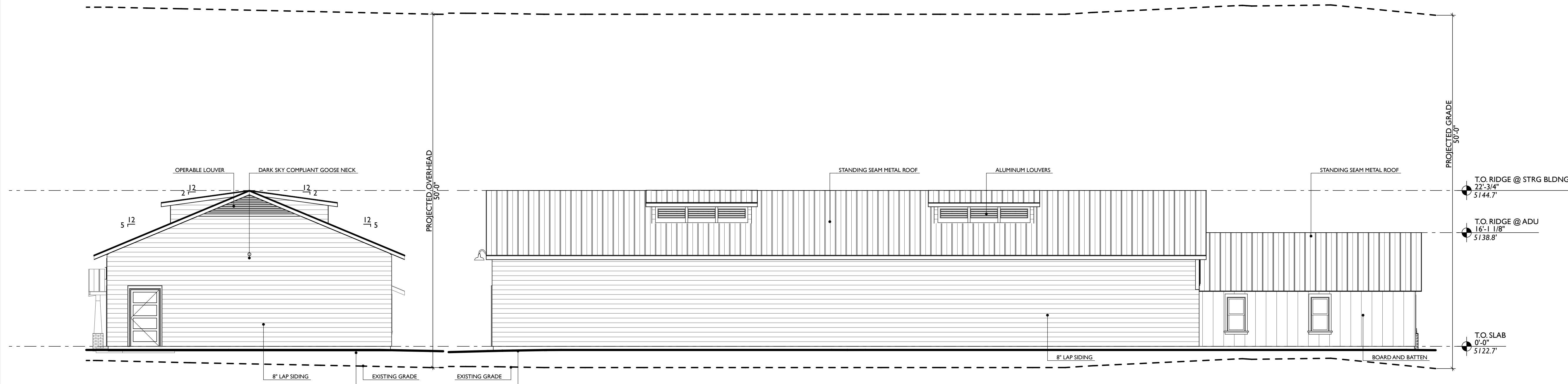
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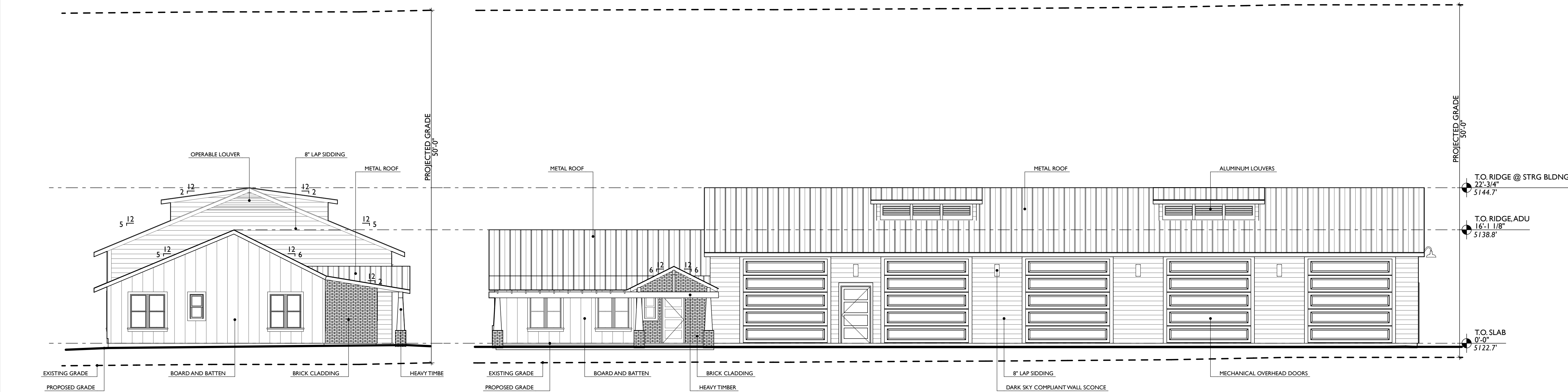
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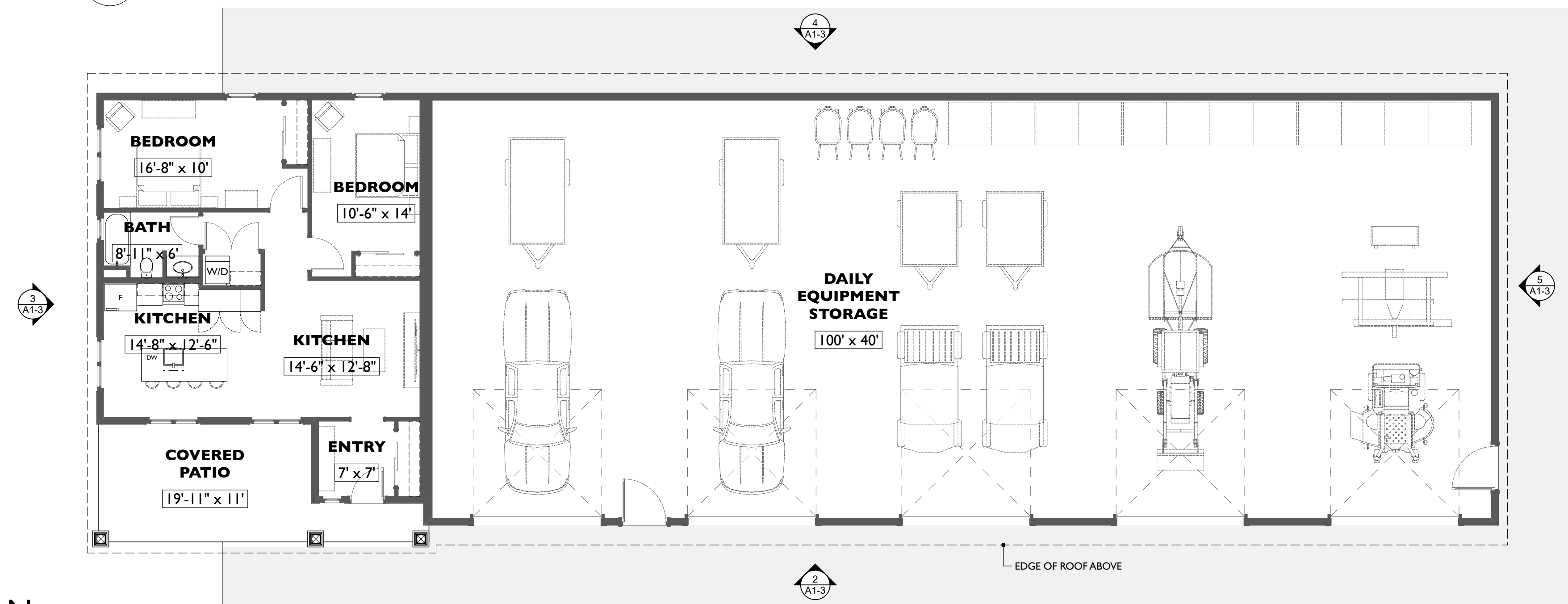
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 SCALE: 1/8" = 1'-0"

4 ELEVATION - DAILY EQUIP STRG & ADU - NORTH
 SCALE: 1/8" = 1'-0"



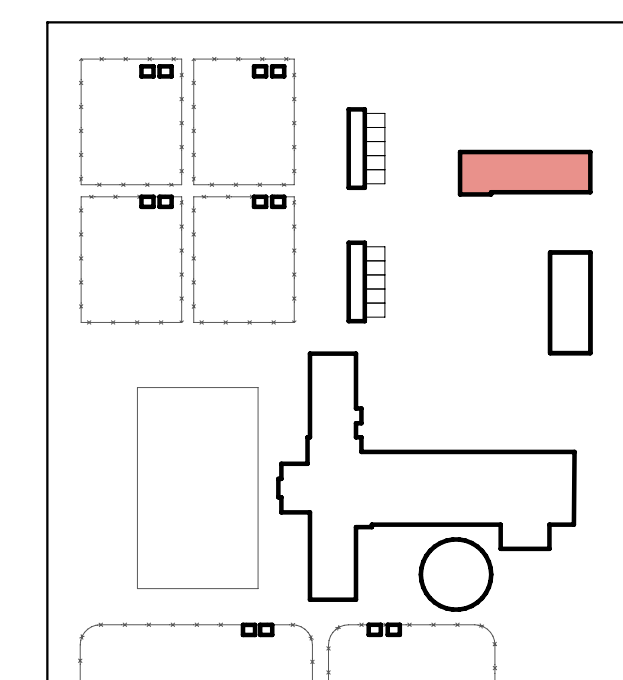
3 ELEVATION - DAILY EQUIP STRG & ADU - WEST
 SCALE: 1/8" = 1'-0"

2 ELEVATION - DAILY EQUIP STRG & ADU - SOUTH
 SCALE: 1/8" = 1'-0"



1 FLOOR PLAN - DAILY EQUIP STRG & ADU
 SCALE: 1/8" = 1'-0"

KEY PLAN



Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 DAILY FARM EQPT
 STORAGE & ADU**

SHEET NUMBER

A1-3

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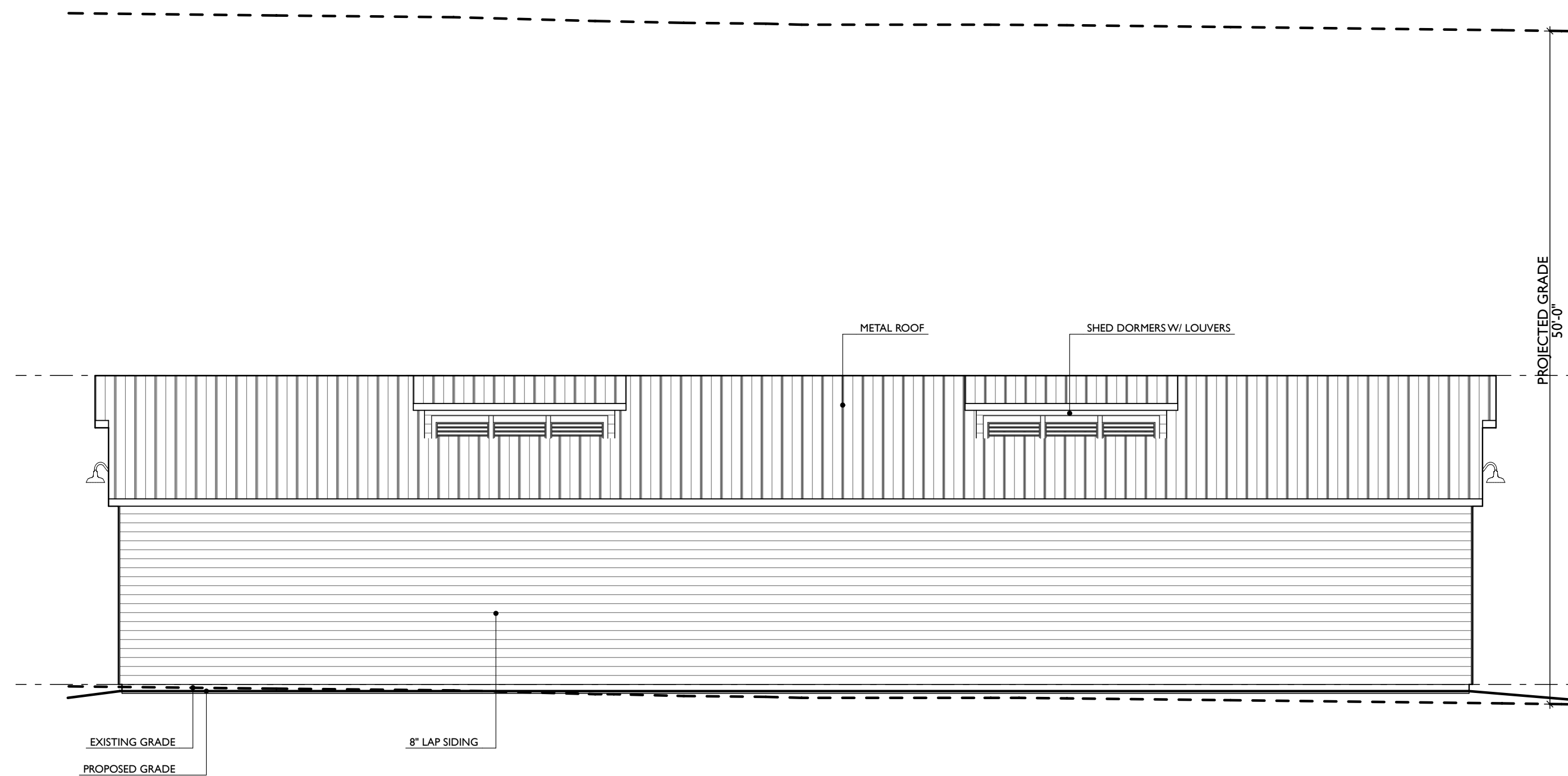
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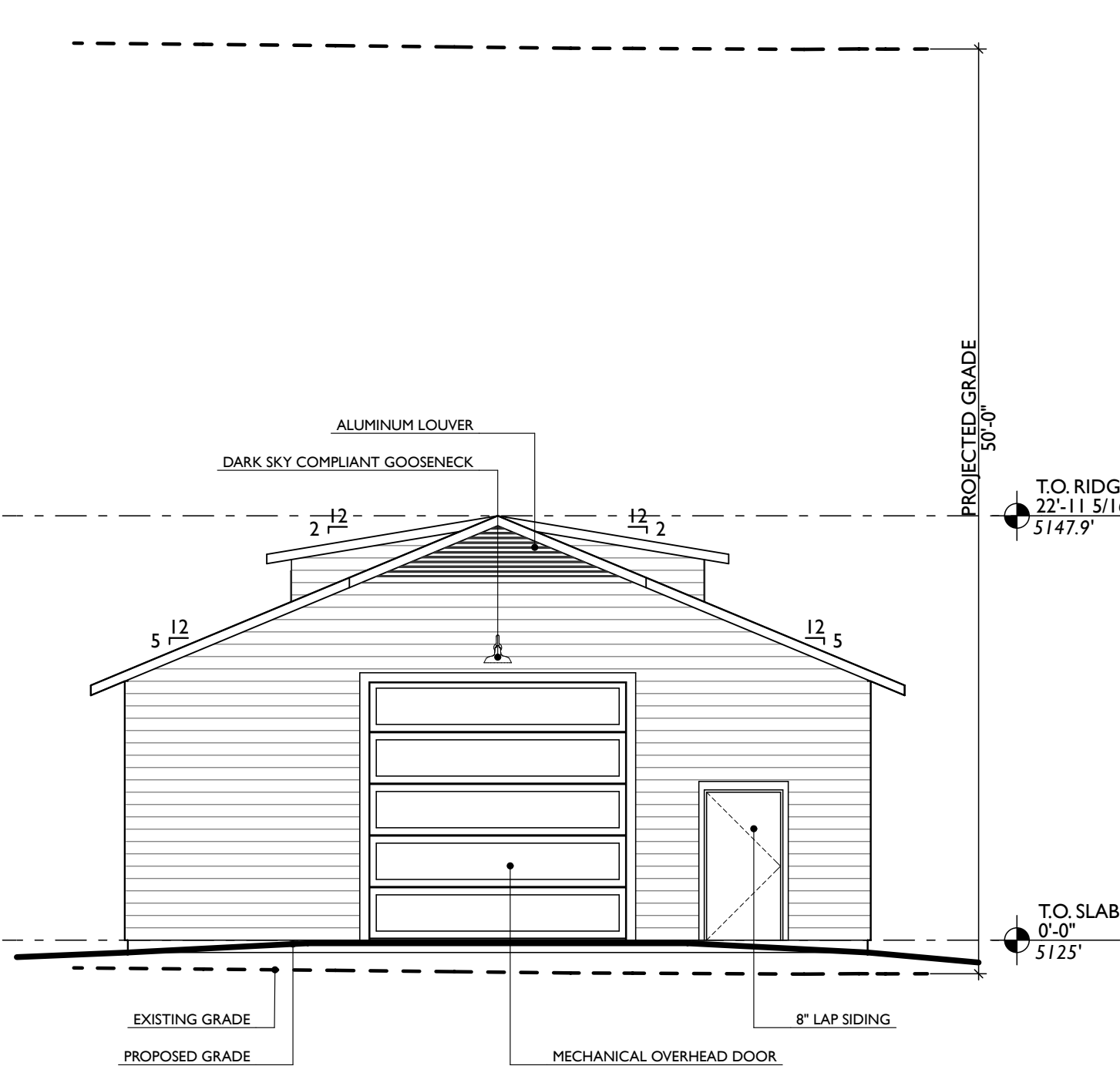
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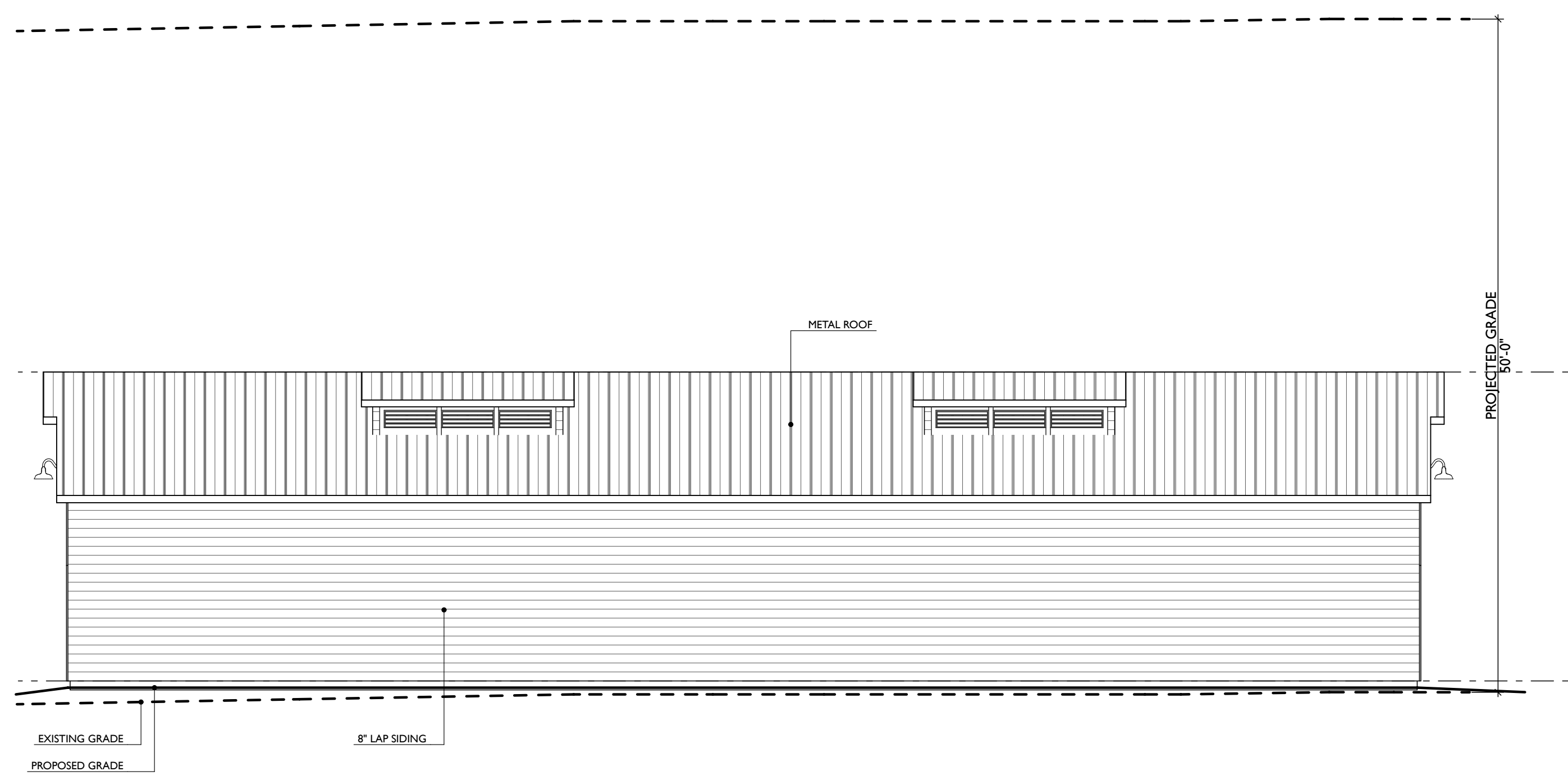
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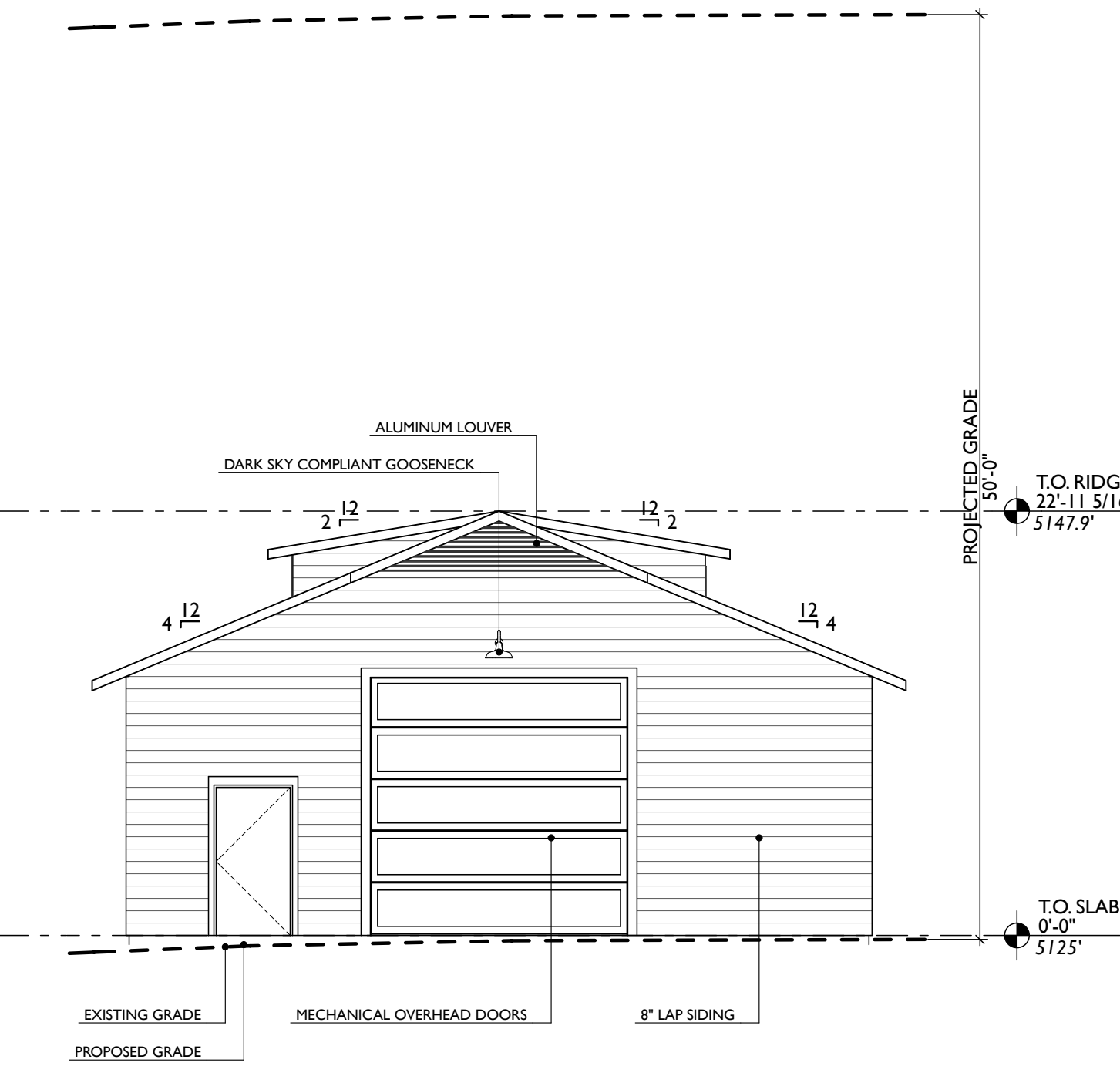
5 ELEVATION - HAY/ BEDDING STRG BUILDING - EAST
 SCALE: 1/8" = 1'-0"



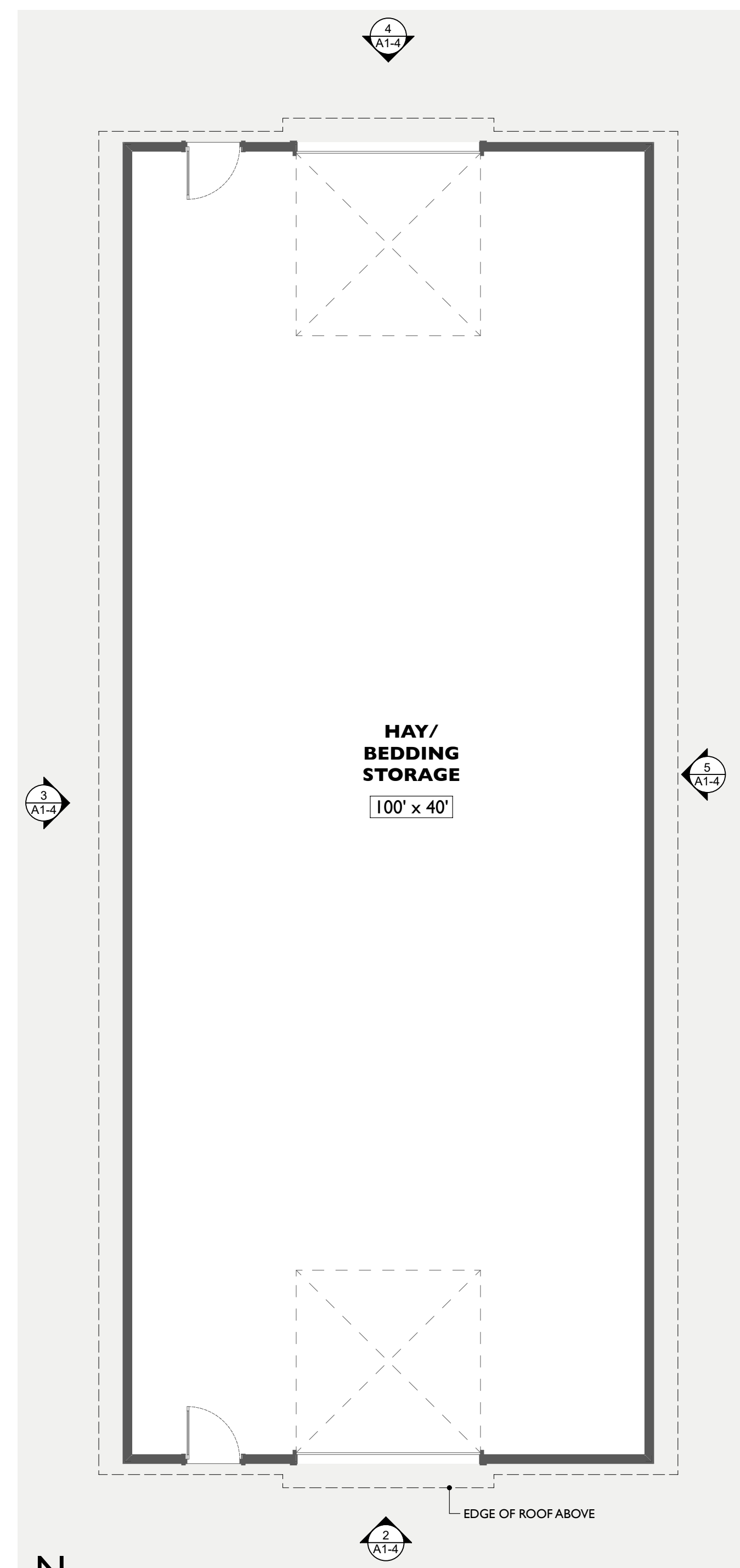
4 ELEVATION - HAY/ BEDDING STRG BUILDING - NORTH
 SCALE: 1/8" = 1'-0"



3 ELEVATION - HAY/ BEDDING STRG BUILDING - WEST
 SCALE: 1/8" = 1'-0"

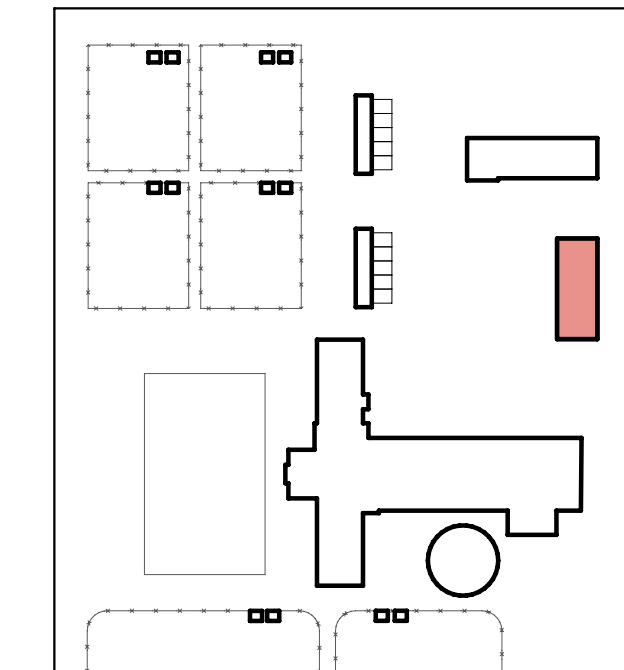


2 ELEVATION - HAY/BEDDING STRG & ADU - SOUTH
 SCALE: 1/8" = 1'-0"



1 FLOOR PLAN - HAY/ BEDDING STRG BUILDING
 SCALE: 1/8" = 1'-0"

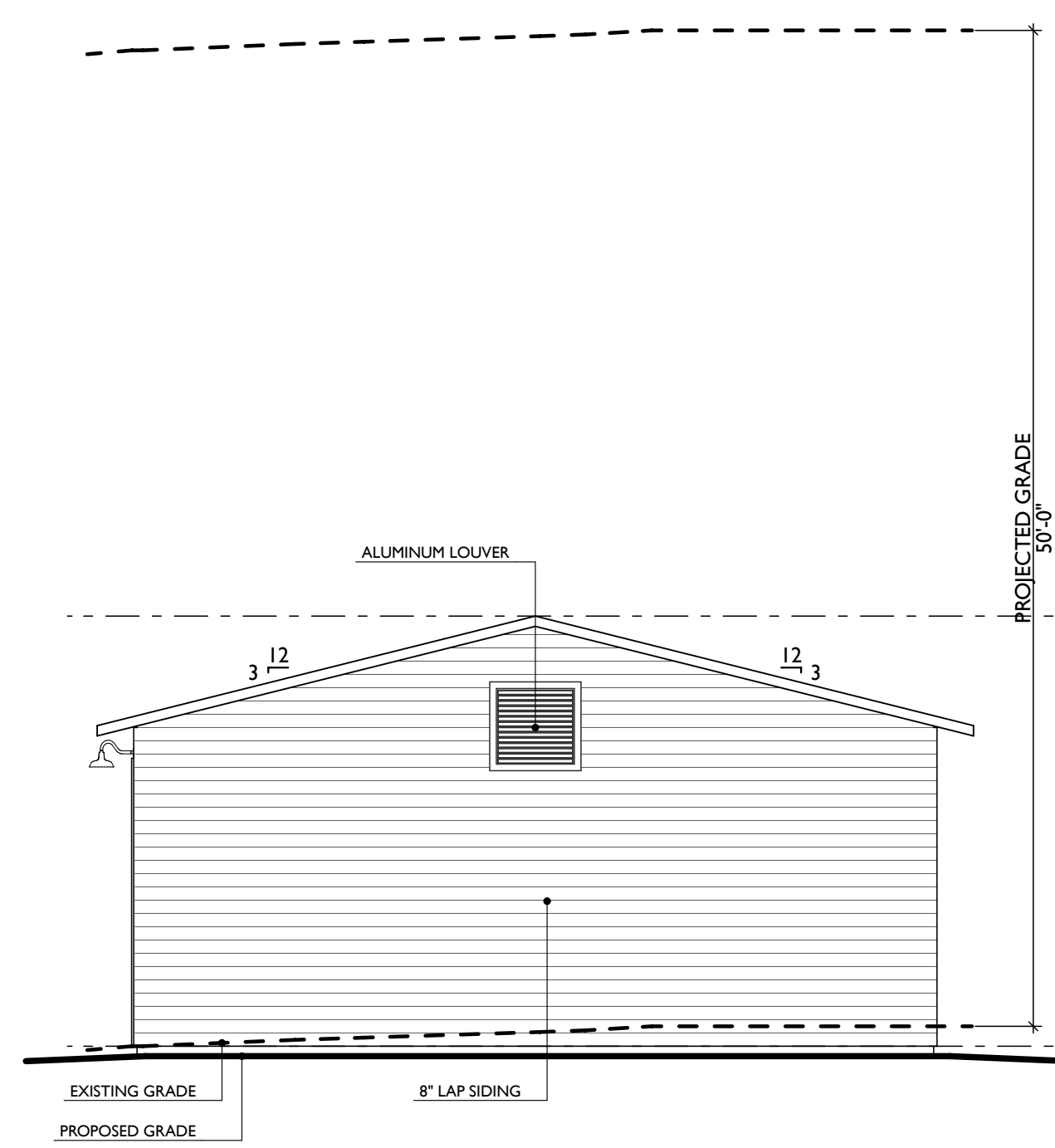
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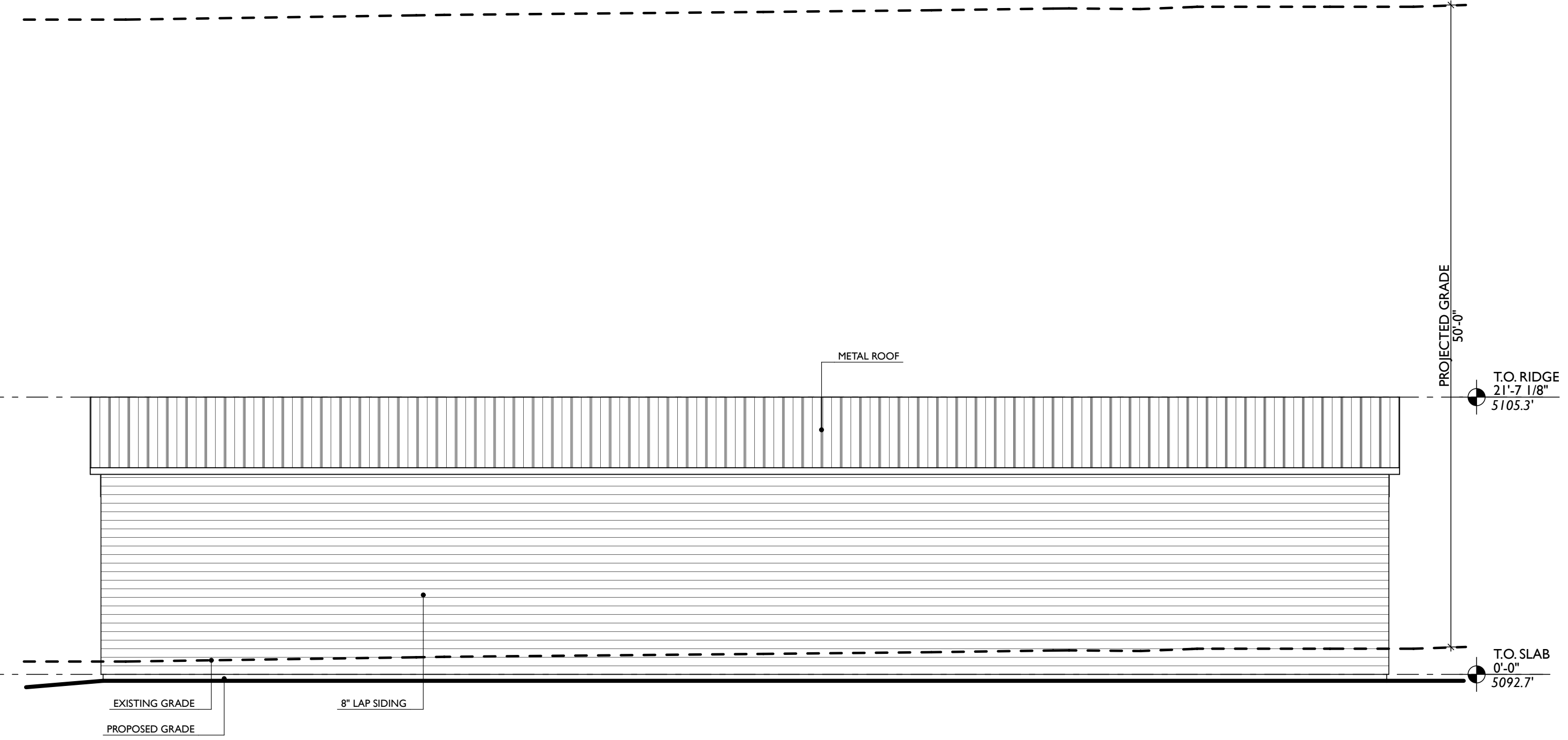
Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 HAY/ BEDDING
 STORAGE**

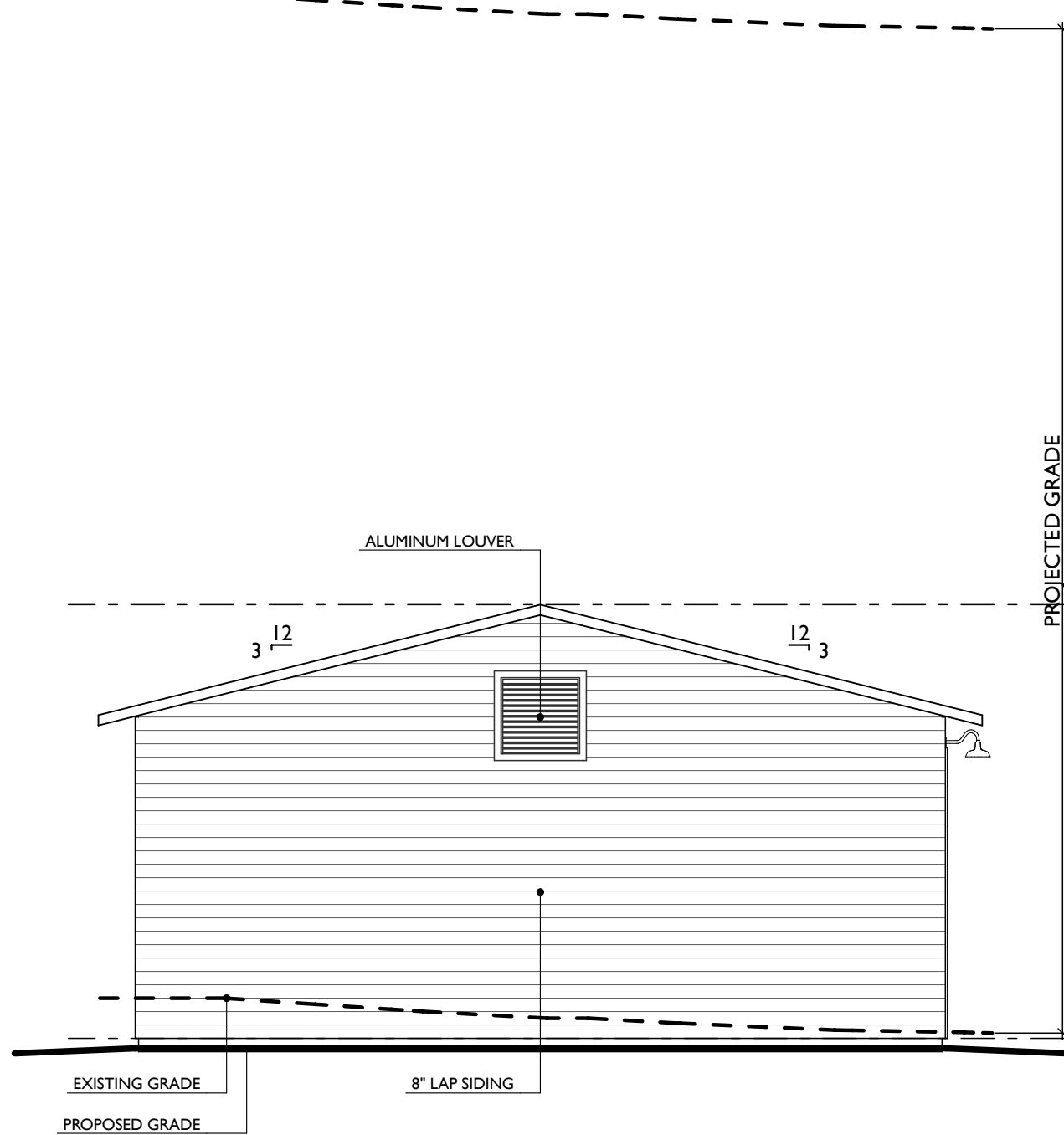
SHEET NUMBER
A1-4



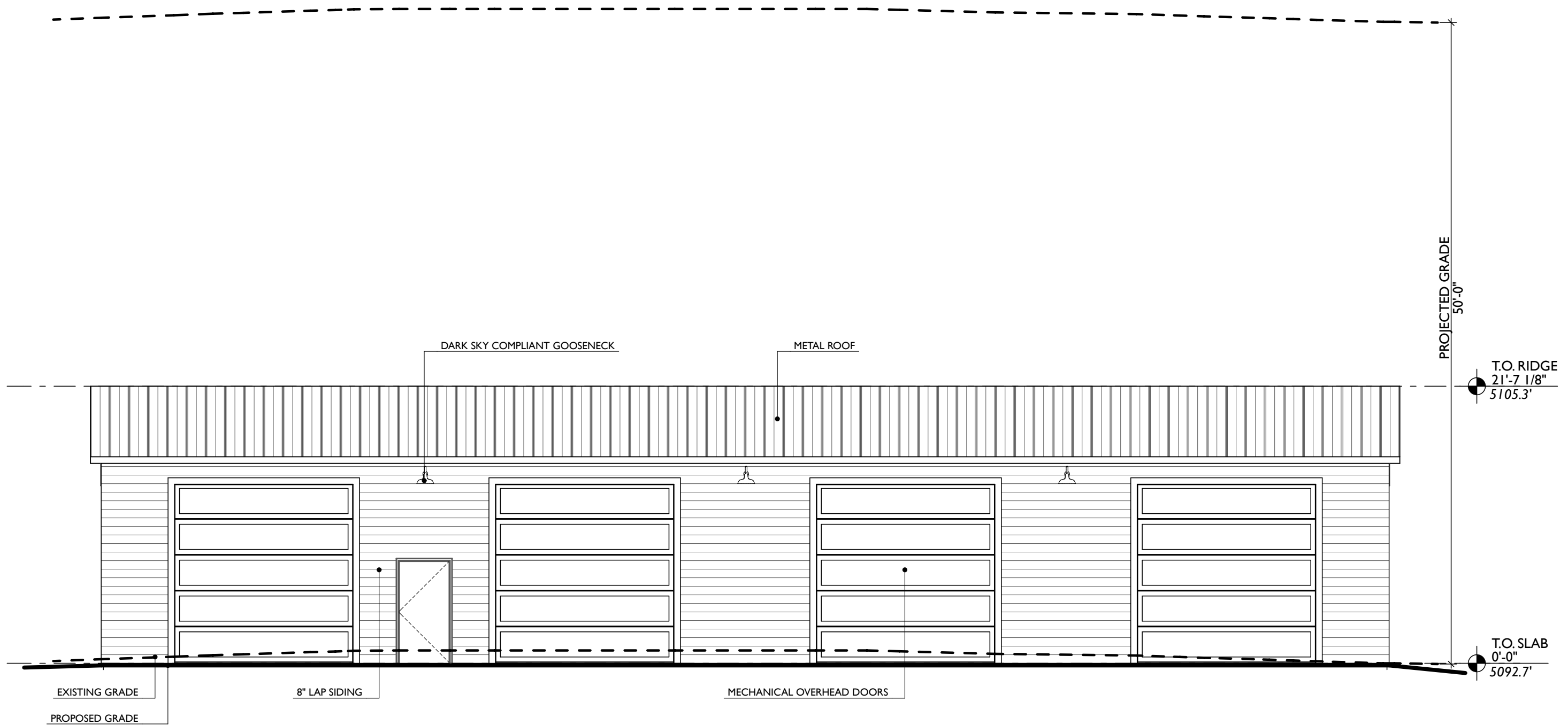
5 ELEVATION - HEAVY EQPT STORAGE BUILDING - EAST
SCALE: 1/8" = 1'-0"



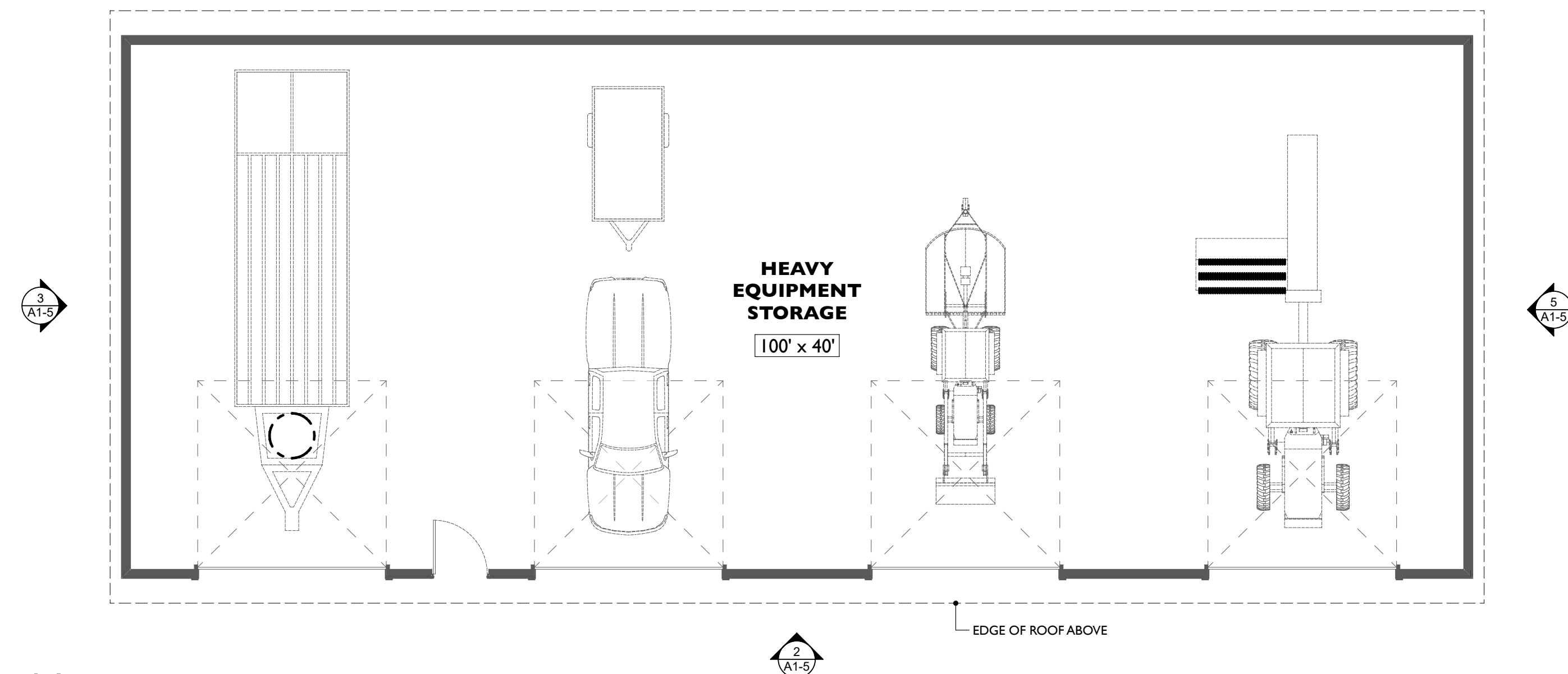
4 ELEVATION - HEAVY EQPT STORAGE BUILDING - NORTH
SCALE: 1/8" = 1'-0"



3 ELEVATION - HEAVY EQPT STORAGE BUILDING - WEST
SCALE: 1/8" = 1'-0"



2 ELEVATION - HEAVY EQPT STORAGE BUILDING - SOUTH
SCALE: 1/8" = 1'-0"



FLOOR PLAN - HEAVY EQPT STORAGE BUILDING
SCALE: 1/8" = 1'-0"

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73rd. St. Farm

8130 N. 73rd St.
Longmont, CO 80503

PROJECT No : 224010.01
DATE : November 12, 2024
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8130 N. 73rd St.
Longmont, CO 80503

DESIGNER

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WASHINGTON, DC 20036
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**TITLE
EQUESTRIAN CENTER -
HEAVY EQPT STORAGE**

SHEET NUMBER

A1-5

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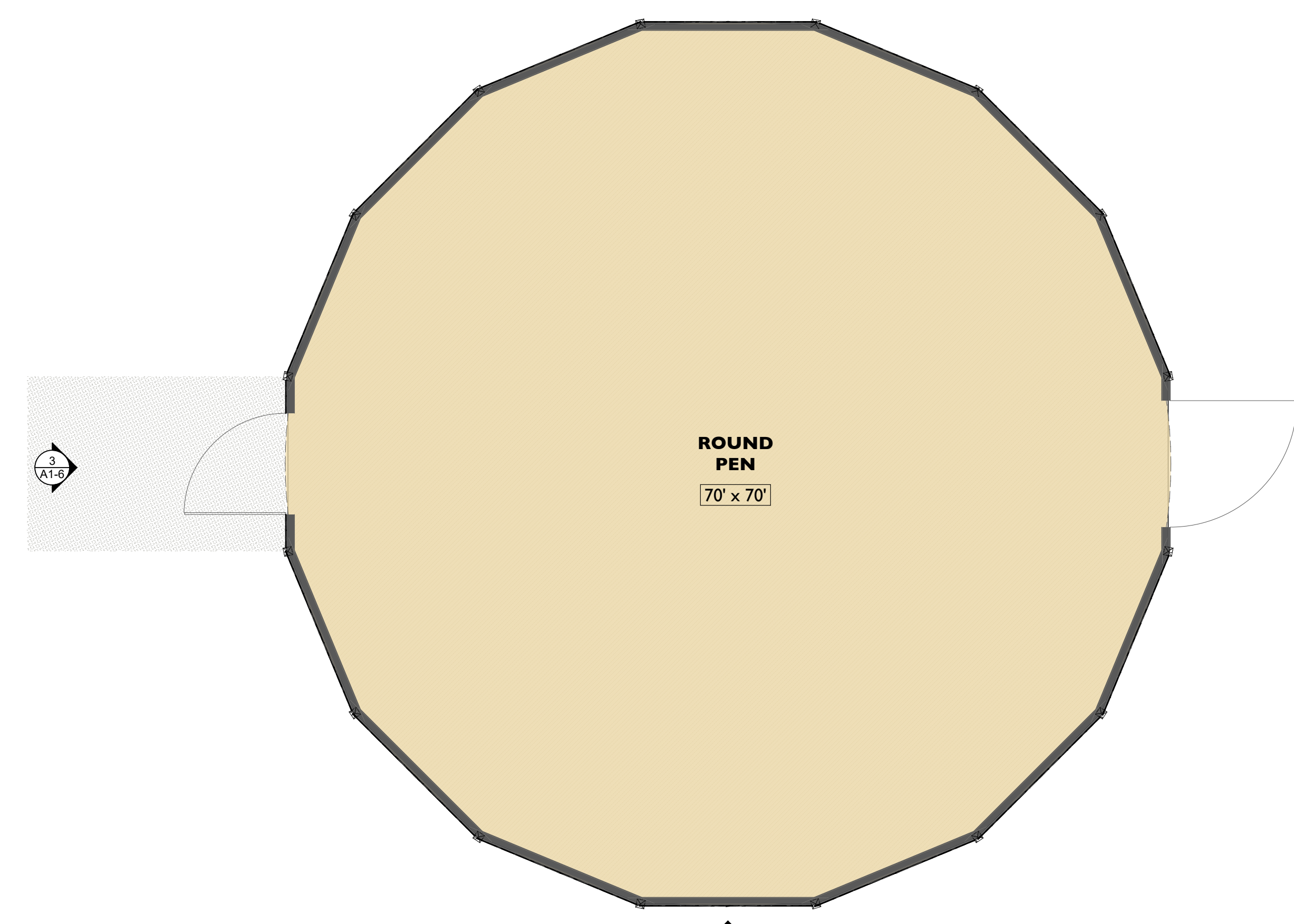
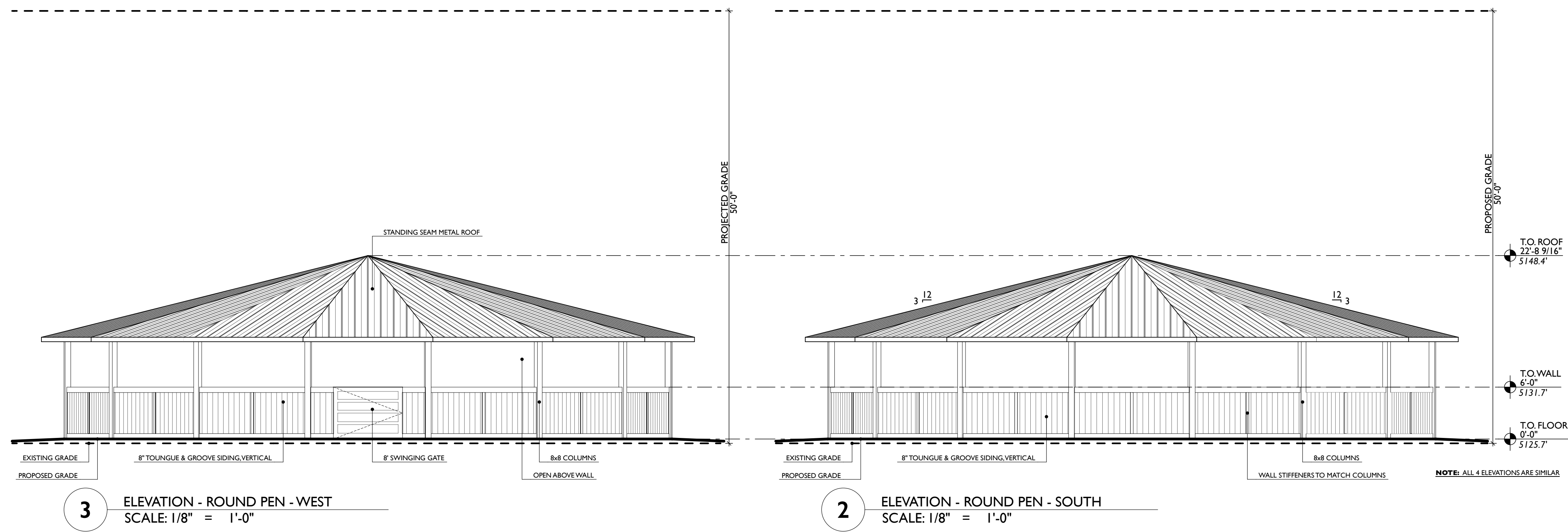
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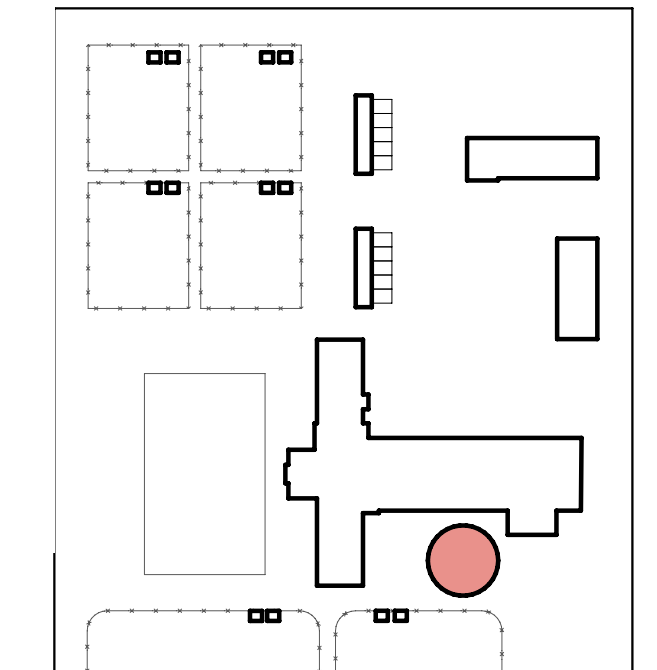
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1 FLOOR PLAN - ROUND PEN
 SCALE: 1/8" = 1'-0"

KEY PLAN



Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 ROUND PEN**

SHEET NUMBER

A1-6

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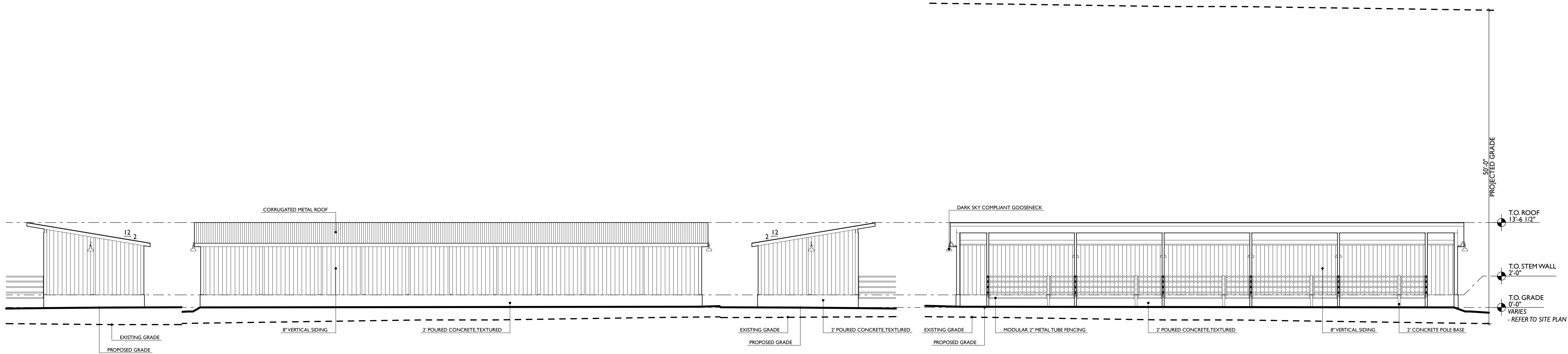
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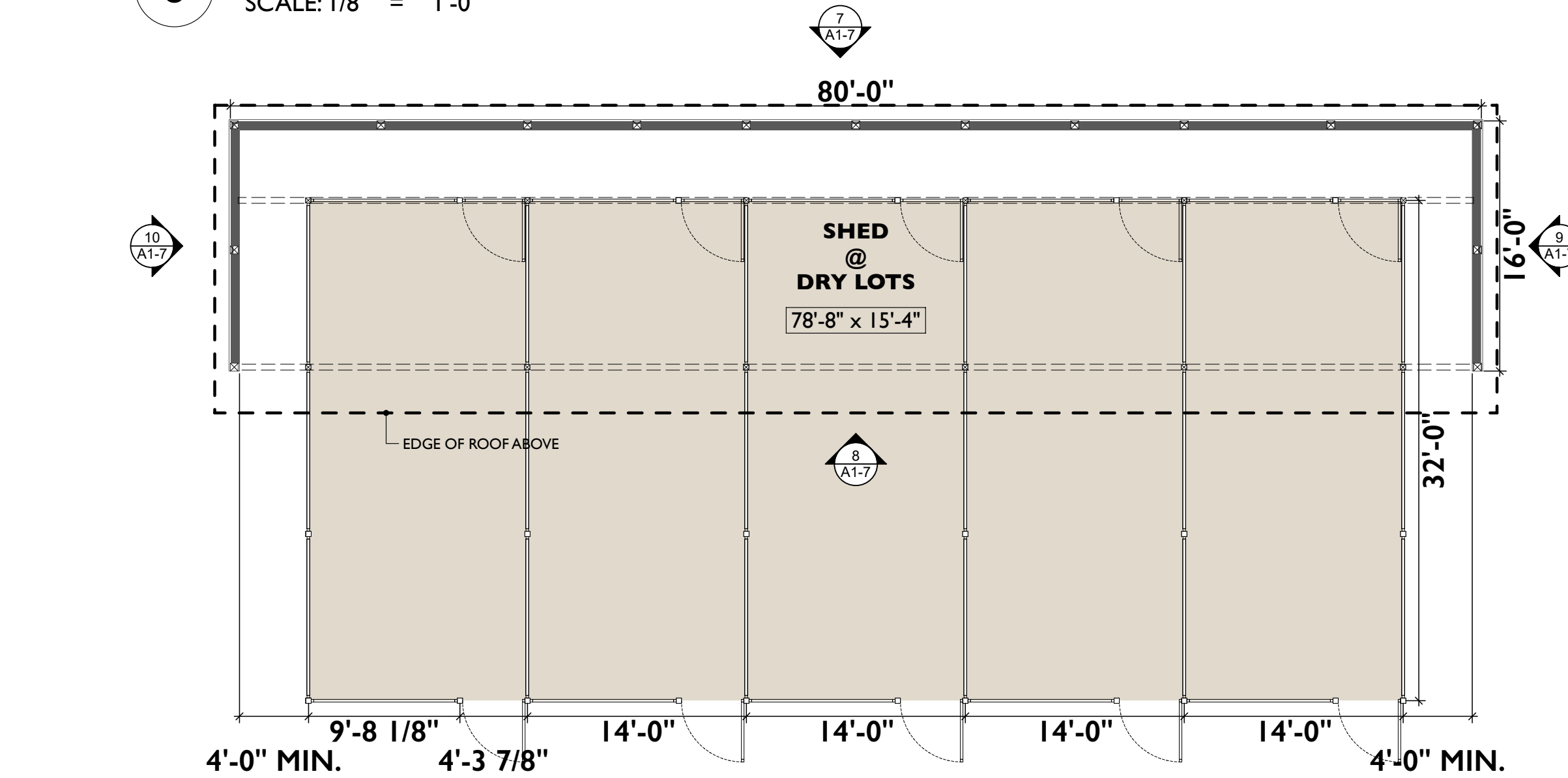


9 ELEVATION - NORTH
 SCALE: 1/8" = 1'-0"

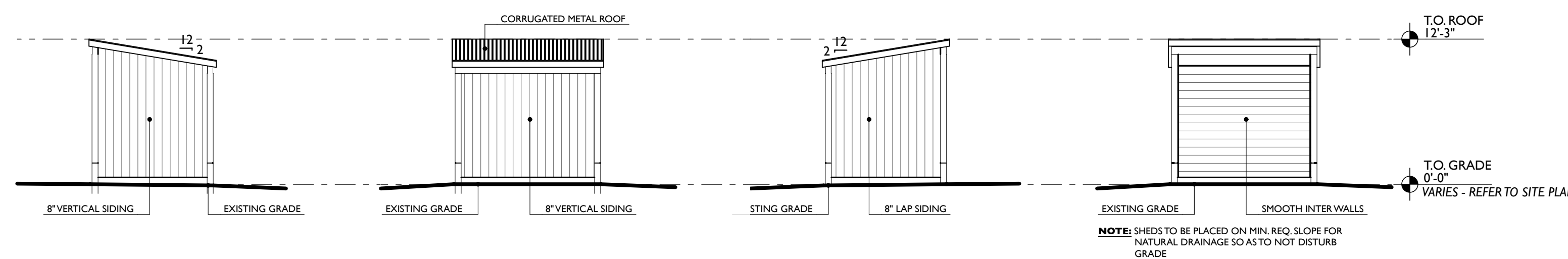
7 ELEVATION - WEST
 SCALE: 1/8" = 1'-0"

10 ELEVATION - SOUTH
 SCALE: 1/8" = 1'-0"

8 ELEVATION - SHED @ HORSE RUNS - EAST
 SCALE: 1/8" = 1'-0"



6 FLOOR PLAN - SHED @ RUN INS (x2)
 SCALE: 1/8" = 1'-0"

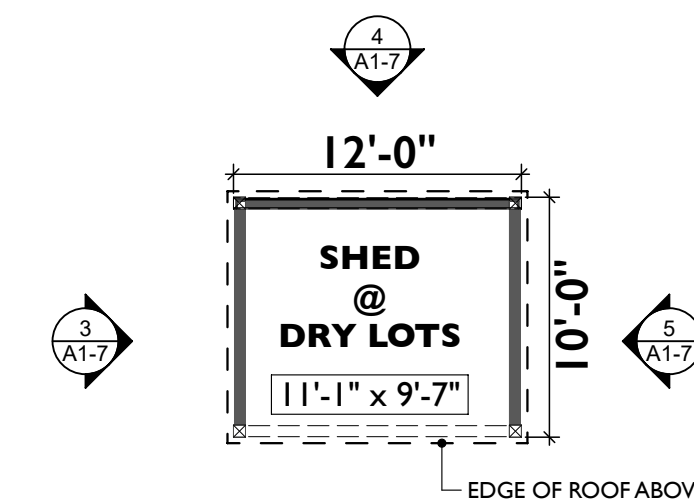


5 ELEVATION - EAST
 SCALE: 1/8" = 1'-0"

4 ELEVATION - NORTH
 SCALE: 1/8" = 1'-0"

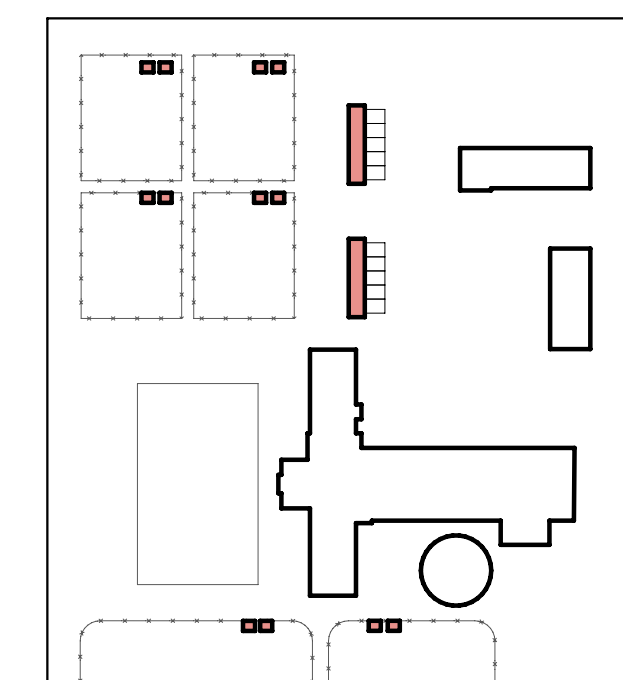
3 ELEVATION - WEST
 SCALE: 1/8" = 1'-0"

2 ELEVATION - SHED @ DRY LOTS - SOUTH
 SCALE: 1/8" = 1'-0"



1 FLOOR PLAN - SHED @ DRY LOTS (x12)
 SCALE: 1/8" = 1'-0"

KEY PLAN



Rev	Date	Description
	11/12/24	PROGRESS SET

TITLE
**EQUESTRIAN CENTER -
 HORSE SHEDS**

SHEET NUMBER

A1-7

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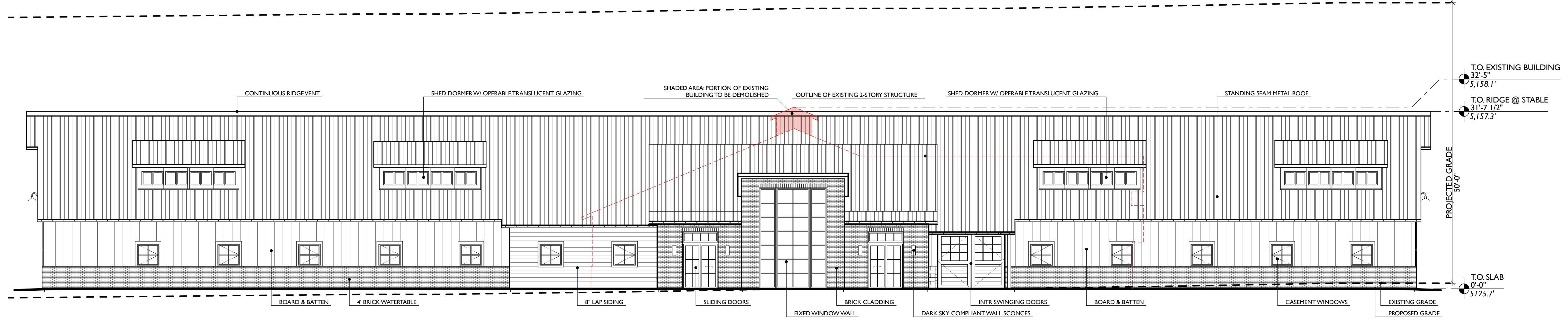
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Rev	Date	Description
	11/12/24	PROGRESS SET

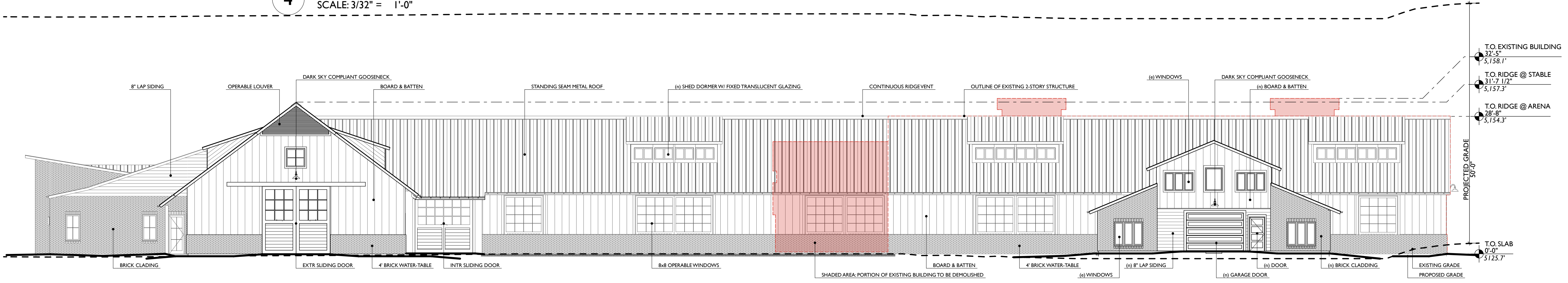
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 EXTERIOR
 ELEVATIONS - STABLE
 & ARENA**

SHEET NUMBER

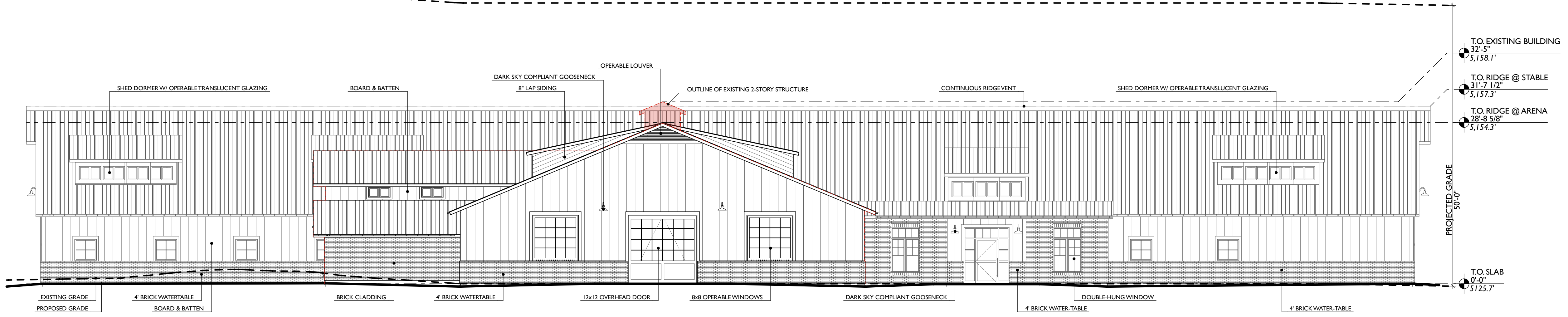
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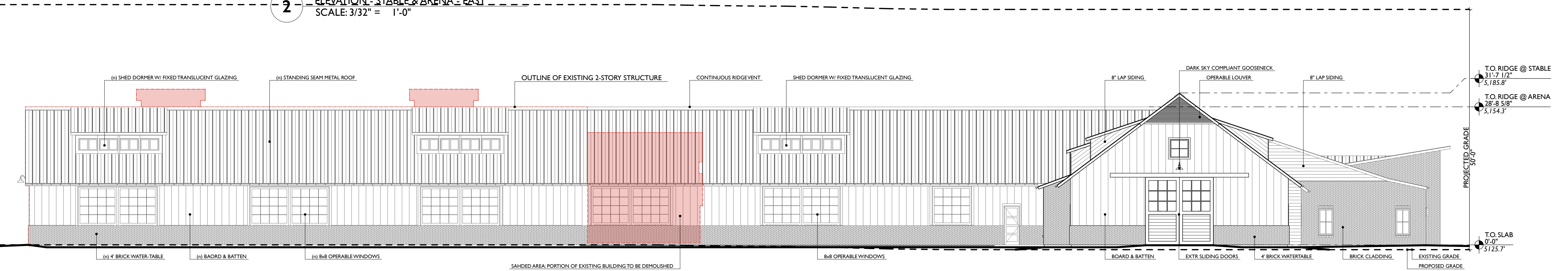
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 SCALE: 3/32" = 1'-0"



3 ELEVATION - SOUTH
 SCALE: 3/32" = 1'-0"

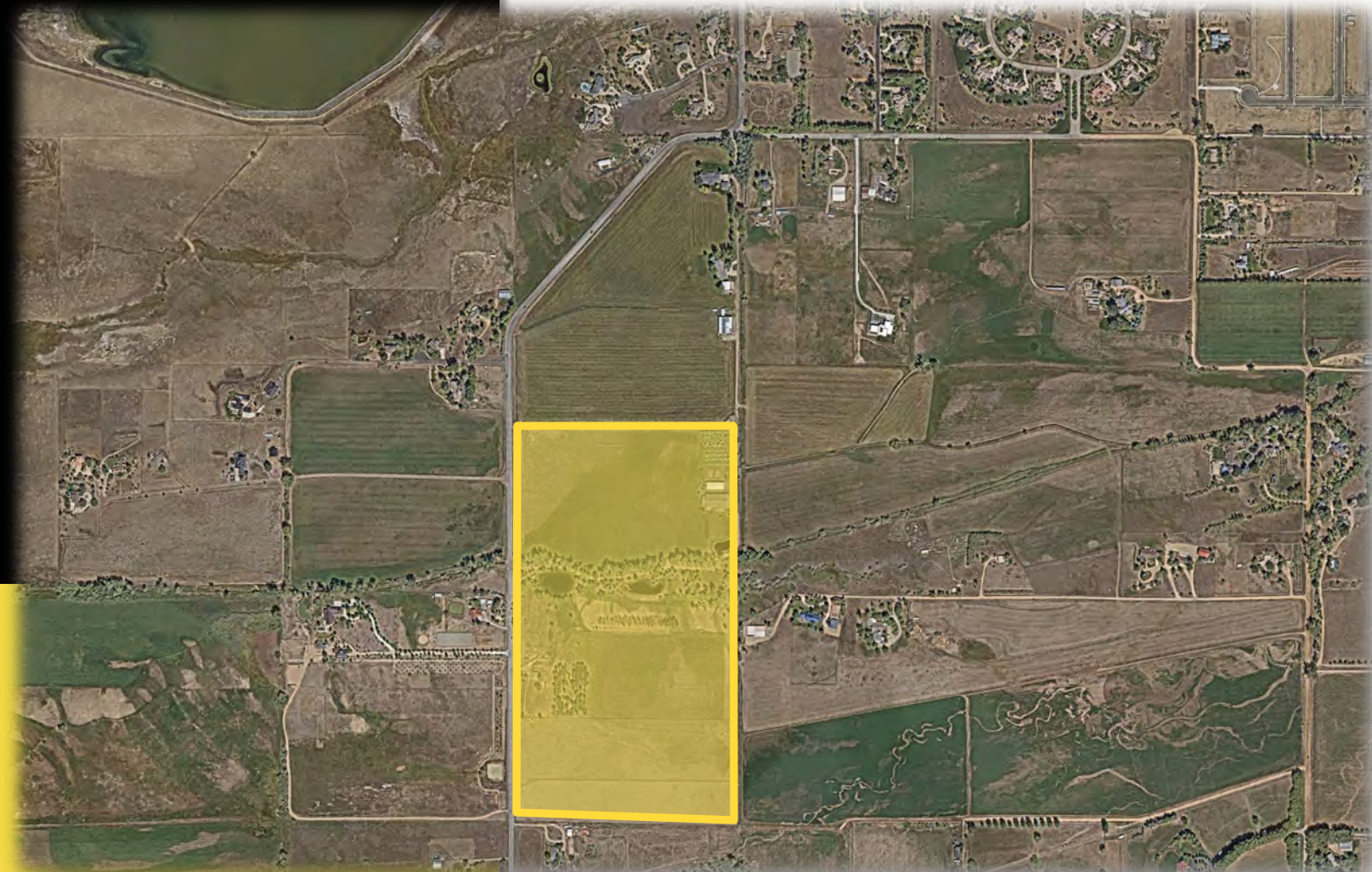


2 ELEVATION - STABLE & ARENA - EAST
 SCALE: 3/32" = 1'-0"



1 ELEVATION - NORTH
 SCALE: 3/32" = 1'-0"

CH Equine Transportation System Impact Analysis at the Review Level



Submittal Date: November 5, 2024

Submitted To:
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- Level of Service Definitions
- Existing Traffic Data
- Intersection Capacity Worksheets

CH EQUINE

TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL

1.0 Introduction

The Fox Tuttle Transportation Group has prepared this Transportation System Impact Analysis at the Review Level (TSIR) for the development of the CH Equine project. The property is located in Boulder County east of 73rd Street, approximately 1.3 miles north of Niwot Road. It is understood that the project will develop an equestrian training and breeding center. Access to the site is planned to be located on 73rd Street at one (1) location. Adjacent land uses are comprised of agricultural and rural residential areas, with the Town of Niwot to the southeast and the City of Longmont to the northeast. **Figure 1** provides a vicinity map for the proposed project.

The purpose of this study is to assist in identifying potential traffic impacts within the study area as a result of this project. The traffic study addresses existing and short-term peak hour intersection conditions in the study area with and without the project-generated traffic. The information contained in this study is anticipated to be used by Boulder County staff in identifying any intersection or roadway deficiencies and potential improvements for the build-out condition. This study focused on the weekday AM, weekday mid-day, and Saturday peak hours which represent the periods of highest trip generation for the proposed use and adjacent street traffic. The study is consistent with the requirements of the *Boulder County Multimodal Transportation Standards (July 1, 2012)*.

2.0 Project Description

The CH Equine project plans to develop the site with an equestrian training and breeding center including agricultural uses, a horse barn, a riding arena, horse runs, and residential uses typical for projects of this type. The project proposes to construct one (1) access on 73rd Street. The access is proposed to be full-movement and side-street stop-controlled. For the purpose of this traffic study, it was assumed that the project will be built out and operational by Year 2025. **Figure 1** shows the project location.

3.0 Study Considerations

3.1 Data Collection

Intersection turning movement volumes were collected in October 2024 at two (2) existing intersections during the weekday AM, weekday mid-day, and Saturday peak hours, including pedestrians and bicyclists. Daily traffic volumes were also collected on 75th Street south of Nelson Road, on 73rd Street north of the project site, and on Niwot Road east of 73rd Street.

The existing traffic volumes, including pedestrian and bicycle volumes, are illustrated on **Figure 2**. The existing intersection geometry and traffic control are also shown on this figure. Count data sheets are provided in the **Appendix**.

3.2 Evaluation Methodology

The traffic operations analysis addressed the signalized and unsignalized intersection operations using the procedures and methodologies set forth by the *Highway Capacity Manual (HCM)*¹. Existing peak hour factors (PHF) by approach and peak hour were applied to the study intersections for all scenarios. Study intersections were evaluated using Synchro software (v12).

3.3 Level of Service Capacity Analysis

A Level of Service analysis was conducted to determine the existing and future performance of the study area intersections and accesses to determine the most appropriate intersection traffic controls and auxiliary lanes for future conditions.

To measure and describe the operational status of the study intersections, transportation engineers and planners commonly use a system referred to as “Level of Service” (LOS) that is defined by the *HCM*. LOS characterizes the operational conditions of an intersection’s traffic flow, ranging from LOS A (indicating free flow operations) and LOS F (indicating congested and sometimes oversaturated conditions). These grades represent the perspective of drivers and are an indication of the comfort and convenience

¹ *Highway Capacity Manual*, Highway Research Board Special Report 209, Transportation Research Board, National Research Council, 7th Edition (2022).

associated with traveling through the intersections. The intersection LOS is based on delay in seconds per vehicle for the intersection as a whole and for each movement.

Typically, LOS D overall during peak hours is acceptable. Individual movements may be allowed to fall to LOS E or F at signalized intersections. Minor movements at unsignalized intersections, such as left turns onto a major arterial, may be allowed to fall below LOS D. Criteria contained in the *HCM* was applied for these analyses in order to determine peak hour LOS for each scenario. A more detailed discussion of LOS methodology is contained in the **Appendix** for reference.

4.0 Existing Conditions

4.1 Roadways

The study area boundaries are based on the amount of traffic to be generated by the project and potential impact to the existing roadway network. The primary public roadways that serve the project site are discussed in the following text and illustrated on **Figure 1**.

73rd Street is a two-lane, north-south, collector roadway that provides access to rural residential and agricultural sites near the project location. The roadway extends from the 71st Street/Niwot Road intersection (south) to an easterly bend where the roadway becomes 75th Street (north). 73rd Street has a posted speed limit of 50 miles per hour (mph) and serves approximately 5,050 vehicles per day (vpd) near the project site (Year 2024).

75th Street is a two-lane, north-south, collector roadway that provides access to local residential neighborhoods and agricultural sites. The roadway extends from 73rd Street (south) to Woodland Road (north). 75th Street has a posted speed limit of 45 mph within the study area and serves approximately 3920 vpd south of Nelson Road (Year 2024).

Niwot Road is a two-lane, east-west, collector roadway that provides access to local residential neighborhoods, agricultural sites, and the Town of Niwot. The roadway extends from 45th Street (west) to 107th Street (east). At 73rd Street, the west approach of Niwot Road is north of Dodd Lake, while the east approach of Niwot Road is south of Dodd Lake and in line with 71st Street at the T-intersection. Niwot Road has a posted speed limit of 35 mph within the study area and serves approximately 4,730 vpd east of 73rd Street (Year 2024).

71st Street is a two-lane local roadway that provides access to local residential and agricultural sites. The roadway extends from the T-intersection with 73rd Street and Niwot Road (north) to State Highway 119 (south). 71st Street has a posted speed limit of 35 mph and serves approximately 720 vpd (Boulder County, Year 2022).

Nelson Road is an east-west roadway. West of 75th Street, Nelson Road is a two-lane minor arterial roadway. East of 75th Street, Nelson Road is a City of Longmont three-lane municipal primary roadway. The roadway provides access to residential neighborhoods, agricultural areas, and the City of Longmont. Nelson Road extends from Foothills Highway (west) to Ken Pratt Boulevard (east). The posted speed is 35 mph west of the 75th Street intersection and 45 mph east of the intersection, within the study area. Nelson Road serves approximately 4,100 vpd west of 75th Street (Boulder County, Year 2022).

4.2 Intersections

The study area includes two (2) existing intersections that are listed below with the current traffic control and were analyzed for existing and future background year traffic operations:

1. Nelson Road at 75th Street [signalized]
2. 73rd Street at Niwot Road / 71st Street [all-way stop-controlled]

The existing lane configuration at each of the study locations is illustrated on **Figure 2**.

4.3 Pedestrian and Bicycle

Currently, there are no sidewalks on any of the study roadways, with the exception of Nelson Road. East of 75th Street, Nelson Road has sidewalks on the south side of the roadway with no sidewalks on the north side of the roadway. West of 75th Street, Nelson Road does not have sidewalks.

There are no on-street bike lanes within the project study area with the exception of Nelson Road east of 75th Street which has a bike lane on the south side only. However, 73rd Street and 75th Street both have wide paved shoulders which bicyclists use frequently. Bicycle counts were taken at the study intersections during peak hours, and range from 0 to 10 for any given direction and peak hour. Daily bicycle volumes were obtained from the Boulder County Geographic Information Systems (GIS) website and are shown on **Figure 2**. 73rd Street serves approximately 165 bicycles per day (bpd) (Boulder County, Year 2020), while 75th Street serves approximately 275 bpd (Boulder County, Year 2020).

4.4 Transit

Boulder County is serviced by multiple municipal and regional transit services from Boulder, Longmont, Boulder County, and RTD. However, there are no transit routes or facilities near the project or within the study area.

4.5 Year 2024 Existing Intersection Capacity Analysis

The existing volumes, lane configuration, and traffic control are illustrated on **Figure 2**. The details of LOS for each movement are provided in **Table 1** and the 95th percentile queues are provided in **Table 2** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**. **Currently, the study intersections overall and all individual movements operate at LOS B or better in the weekday AM, weekday mid-day, and Saturday peak hours. All 95th percentile queues were estimated to be contained within existing storage.**

5.0 Future Conditions with the Development

The CH Equine project will develop an equestrian training and breeding center to include agricultural uses, a horse barn, a riding arena, horse runs, and residential uses typical for projects of this type. For the purpose of this study it was assumed that the entire project will be built out and operational in Year 2025. Due to the short timeframe before the project is operational and relatively low existing traffic volumes, a background growth rate was not applied to existing traffic volumes for the project buildout year.

5.1 Trip Generation

A trip generation estimate was performed to determine the traffic characteristics of the proposed development. Because the Institute of Transportation Engineers (ITE) *Trip Generation Handbook and Manual*² does not contain any land uses similar to the project, the project team used data from a similar site to estimate the project-generated traffic for the equestrian center.

The CH Equine project was estimated to generate approximately 32 weekday daily trips, 10 trips in the weekday AM peak hour, 15 trips in the weekday PM peak hour, and 23 trips in the Saturday peak hour.

² *Trip Generation Handbook and Manual, 11th Edition*, Institute of Transportation Engineers, 2021.

It should be noted that these trip volumes are not expected to occur most days and instead represent the highest daily and peak hour volumes the site can be expected to generate. Additionally, it is likely that the peak hour trips for each individual period will not occur on the same day. Trip generation is described on **Table 3**.

5.2 Trip Distribution and Assignment

The estimated trip volumes were distributed onto the study area street network based on existing traffic characteristics, land uses, and traffic patterns in the area. A desktop analysis was performed to determine where vehicles are coming from and going to within the study area, plus the route to get to major highways and anticipated destinations.

The following distributions were assumed for this project and are shown on **Figure 3**:

- North via 75th Street: 20%
- West via Nelson Road: 20%
- East via Nelson Road: 10%
- South via 71st Street: 30%
- East via Niwot Road: 20%

The above distribution assumes that all project trips will start and end outside the study area, and pass through one of the study intersections to both enter and exit the project site. This approach results in conservatively high trip assignments at the study intersections, as it is likely that some project trips will start and end before they reach the study intersections.

Using the distribution assumptions, the projected site traffic was assigned to the study area roadway network for the weekday AM, weekday PM, and Saturday peak hour periods. Project-generated trips are shown on **Figure 4**.

5.3 Year 2025 Background + Project Intersection Capacity Analysis

This section discusses impacts associated with the addition of the project trips in the project buildout scenario. The site-generated volumes were added to the Year 2025 background volumes and are illustrated on **Figure 5**. This figure also illustrates the necessary traffic control and lane configurations for the proposed access. Note that for the purposes of this study, Year 2025 background volumes are equal

to Year 2024 existing volumes as a growth rate was not applied given the short timeframe. See **Section 5.0** for further discussion.

The study intersections are anticipated to operate similarly to the existing conditions with the addition of project trips since all of the intersection and movement levels of service remain the same letter grade. The proposed access is anticipated to operate at LOS A in the weekday AM, weekday PM, and Saturday peak hours with all movements operating at LOS B or better. The details of LOS for each movement are provided in **Table 1** and the 95th percentile queues are provided in **Table 2** (refer to **Appendix**). The intersection Level of Service worksheets are attached in the **Appendix**.

6.0 Queuing Analysis

A queuing analysis was performed to determine if the 95th percentile queues would be accommodated by the existing storage length, to determine the storage lengths for future auxiliary lanes, and if any of the queues would impact an upstream intersection/access. **Table 2** provides the existing storage lengths, as well as the 95th percentile queues for each scenario as calculated by Synchro (assuming each vehicle utilizes 25 feet of space). It should be noted that the 95th percentile queue length is a theoretical queue that is 1.65 standard deviations above the average queue length. In theory, the 95th percentile queue would be exceeded 5% of the time based on the average queue length, but it is also possible that a queue this long may not occur.

As shown in **Table 2**, all of the queues are shorter than the provided storage length in all scenarios. The project trips have minimal impact on queues at the existing study intersections.

7.0 Safety Analysis

A safety analysis was performed to determine if there is a documented crash history within the study area and, if so, if there are any correctable patterns with the crashes. Crash data was gathered from the Colorado Department of Transportation (CDOT) (Years 2021-2023) as well as Boulder County GIS (Years 2021-2022). CDOT crash data was used to confirm Boulder County GIS data as well as supplement the data for Year 2023.

The following is a summary of the crash history analyzed for this study:

- **73rd Street at Niwot Road (north intersection):** four (4) total crashes including three (3) property damage only and one (1) with possible injury:
 - At two (2) of the crashes, the vehicles ran off the road at the T-intersection.
 - At one (1) of the crashes, a vehicle rear ended another vehicle.
 - At one (1) of the crashes, a vehicle made an eastbound right turn, failed to yield right-of-way to a southbound vehicle, and was struck. This crash resulted in a possible injury.
- **73rd Street south of Nimbus Road:** a motorcycle was involved in a single-vehicle rollover crash resulting in possible injury.
- **73rd Street north of Alpenglow Court:** two (2) total crashes including one (1) with evident injury:
 - At one (1) of the crashes, a suspected alcohol-impaired driver ran off the side of the road resulting in evident, non-incapacitating injury.
 - At one (1) of the crashes, a non-impaired driver ran off the side of the road.
- **75th Street at 73rd Street:** a vehicle was involved in a single-vehicle rollover crash.
- **75th Street north of 73rd Street:** a vehicle was involved in a crash where it ran off the road attempting to pass another vehicle, resulting in evident, non-incapacitating injury.
- **75th Street at Nelson Road:** five (5) total crashes including four (4) property damage only and one (1) with possible injuries:
 - At two (2) of the crashes, the vehicle ran off the side of the road.
 - At one (1) of the crashes, a vehicle sideswiped another vehicle while changing lanes.
 - One (1) of the crashes was an approach turn crash.

-
- One (1) of the crashes was a broadside, or T-bone, crash which resulted in possible injuries.

In the provided data, there were no crashes involving bicycles or pedestrians. It should be noted that near misses, or unsafe situations which nearly resulted in a crash, are frequently unreported and therefore are not available for analysis. Safety concerns which can result in near misses but do not have a discernable crash history can sometimes be addressed through systemic safety improvements.

From the available data, **it does not appear that the crashes follow a discernable pattern**. There were no crash trends which would suggest changes in traffic control or traffic operations. The relatively low amount of additional trips generated by the project should not create or exacerbate a safety issue. Boulder County should consider systemic improvements to identify and address safety concerns with horizontal roadway alignments, or curves in the roadway, especially given the high bicycle volumes on 73rd Street and 75th Street.

8.0 Conclusions

The CH Equine project plans to develop the site with an equestrian training and breeding center including agricultural uses, a horse barn, a riding arena, horse runs, and residential uses typical for projects of this type. The project proposes to construct one (1) access on 73rd Street. The access is proposed to full-movement and side-street stop-controlled. For the purpose of this traffic study, it was assumed that the project will be built out and operational by Year 2025.

The project is estimated to generate approximately 32 weekday daily trips, 10 trips in the weekday AM peak hour, 15 trips in the weekday PM peak hour, and 23 trips in the Saturday peak hour. **It was determined that the proposed roadway system can adequately accommodate the projected traffic volumes**. The relatively low increase in traffic volumes from the project should not create or exacerbate any safety issues. There are no existing, background, or project-related recommendations for roadway improvements

Tables and Figures:

Table 1 – Peak Hour Intersection Level of Service Summary

Table 2 – Peak Hour Estimated Queues

Table 3 – Trip Generation Summary

Figure 1 – Vicinity Map

Figure 2 – Year 2024 Existing Traffic Volumes

Figure 3 – Site Trip Distribution

Figure 4 – Site-Generated Trips

Figure 5 – Year 2025 Total Traffic Volumes

CH Equine Transportation System Impact Analysis at the Review Level

Table 1 - Peak Hour Intersection Level of Service Summary

Intersections and Lane Groups	Year 2024 Existing						Year 2025 with Project					
	AM Peak		Mid-Day		Saturday Peak		AM Peak		Mid-Day		Saturday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SIGNAL CONTROL												
1. 75th Street at Nelson Road	13	B	12	B	10	B	13	B	12	B	10	B
Eastbound Left	11	B	11	B	7	A	11	B	11	B	7	A
Eastbound Through + Right	8	A	9	A	7	A	8	A	9	A	7	A
Westbound Left	9	A	11	B	7	A	9	A	11	B	7	A
Westbound Through	10	A	7	A	7	A	10	A	7	A	7	A
Westbound Right	7	A	7	A	7	A	7	A	7	A	7	A
Northbound Left	17	B	15	B	14	B	17	B	15	B	14	B
Northbound Through	14	B	16	B	13	B	14	B	16	B	13	B
Northbound Right	14	B	14	B	13	B	14	B	14	B	13	B
Southbound Left	17	B	19	B	14	B	17	B	19	B	14	B
Southbound Through	17	B	15	B	14	B	17	B	15	B	14	B
Southbound Right	19	B	13	B	13	B	19	B	13	B	13	B
STOP SIGN CONTROL												
2. 71st Street at Niwot Road / 73rd Street	10	A	10	B	8	A	10	A	10	B	8	A
Eastbound Left + Through	9	A	10	A	8	A	9	A	10	A	8	A
Westbound Through + Right	9	A	9	A	7	A	9	A	9	A	7	A
Southbound Left + Right	10	B	12	B	8	A	10	B	12	B	8	A
101. 73rd Street at Access							0	A	0	A	0	A
Westbound Left + Right			<i>Project Access</i>				0	A	13	B	0	A
Northbound Through + Right							0	A	0	A	0	A
Southbound Left + Through							9	A	9	A	8	A

CH Equine Transportation System Impact Analysis at the Review Level

Table 2 - Peak Hour Estimated Queues

Intersections and Lane Groups	2024 Existing			2025 with Project			Max. Queue	Existing Storage
	95th% Queue			95th% Queue				
	AM	Mid-Day	Saturday	AM	Mid-Day	Saturday		
1. 75th Street at Nelson Road	<i>Signal</i>			<i>Signal</i>				
Eastbound Left	8'	71'	6'	8'	71'	6'	71'	210'
Eastbound Through + Right	40'	100'	24'	40'	101'	24'	101'	-
Westbound Left	26'	18'	9'	27'	18'	10'	27'	240'
Westbound Through	100'	41'	27'	100'	41'	27'	100'	-
Westbound Right	12'	15'	4'	12'	15'	4'	15'	240'
Northbound Left	14'	12'	9'	14'	13'	9'	14'	300'
Northbound Through	43'	81'	24'	43'	81'	24'	81'	-
Northbound Right	16'	15'	0'	16'	16'	0'	16'	300'
Southbound Left	48'	39'	15'	48'	39'	15'	48'	190'
Southbound Through	77'	50'	25'	77'	50'	27'	77'	-
Southbound Right	19'	5'	2'	19'	5'	2'	19'	190'
2. 71st Street at Niwot Road / 73rd Street	<i>Stop-Controlled</i>			<i>Stop-Controlled</i>				
Eastbound Left + Through	3'	20'	0'	3'	20'	3'	20'	-
Westbound Through + Right	23'	20'	13'	23'	20'	13'	23'	-
Southbound Left + Right	48'	55'	10'	48'	58'	10'	58'	-
101. 73rd Street at Access	<i>Project Access</i>			<i>Stop-Controlled</i>				
Westbound Left + Right				0'	3'	0'	3'	-
Northbound Through + Right				0'	0'	0'	0'	-
Southbound Left + Through				0'	0'	0'	0'	-



Table 3 - Trip Generation

Land Use	Size	Unit	Highest Daily			Weekday AM Peak Hour			Mid-Day			Saturday Event Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Visitors with Trailers			10	5	5	8	8	0	8	5	3	8	8	0
Visitors No Trailers			10	5	5	0	0	0	3	2	1	15	15	0
Employees			12	6	6	2	2	0	4	1	3	0	0	0
Total			32	16	16	10	10	0	15	8	7	23	23	0

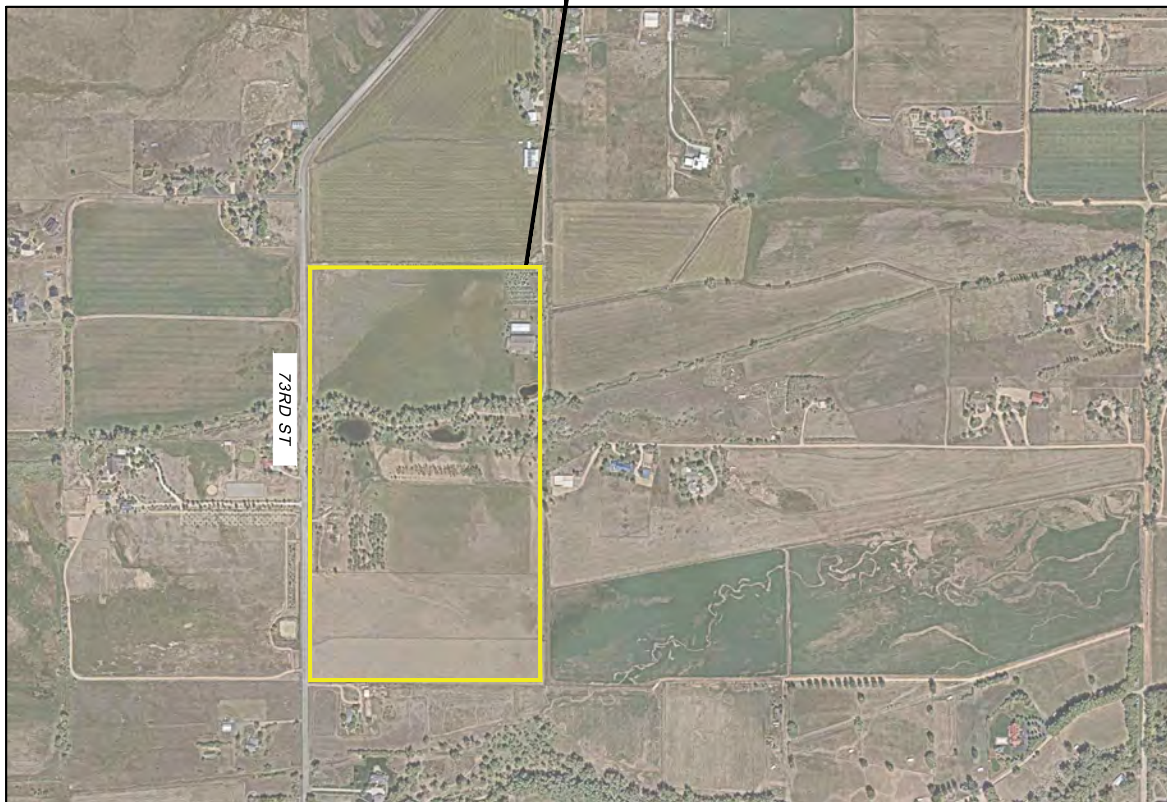
Sources : Project team.

Area Map



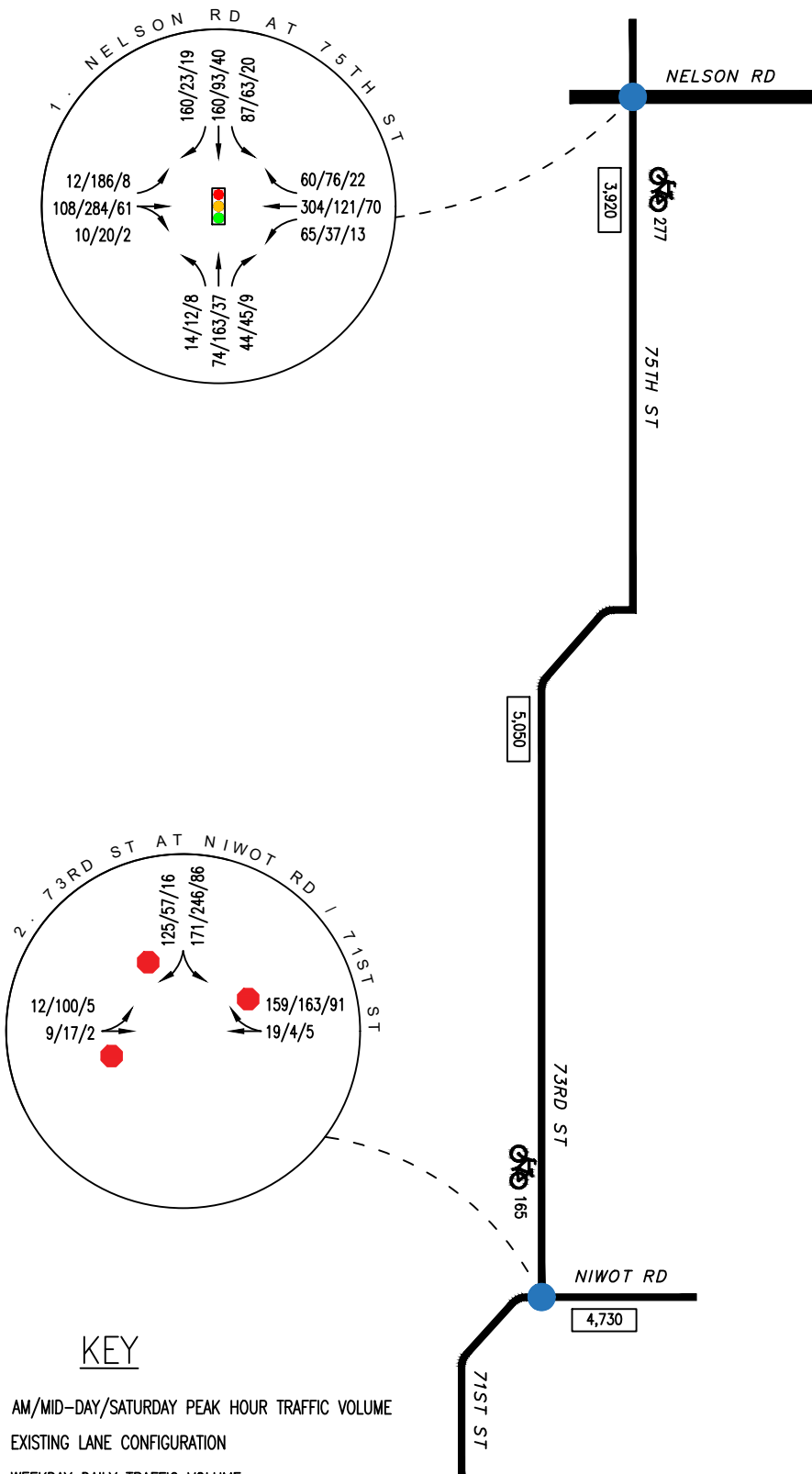
Location within Boulder County

PROJECT SITE



CH EQUINE TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL
VICINITY MAP

Project #	24077	Original Scale	NTS	Date	Page 49/70 of 57	Drawn by	CAF	Figure #	1
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CH EQUINE TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL
 YEAR 2024 EXISTING TRAFFIC VOLUMES

Project #	24077	Original Scale	NTS	Date	4/8/2024	Drawn by	CAF	Figure #	2
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20%

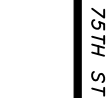
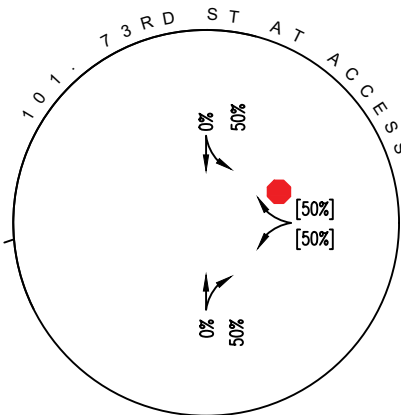
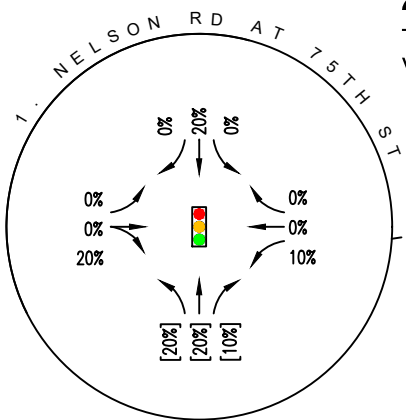
To/From West
Via Nelson Rd

20%

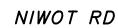
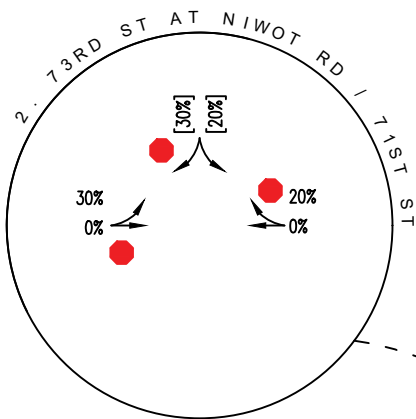
To/From North
Via 75th St

10%

To/From East
Via Nelson Rd



ACCESS



20%

To/From East
Via Niwot Rd

30%

To/From South
Via 71st St

KEY

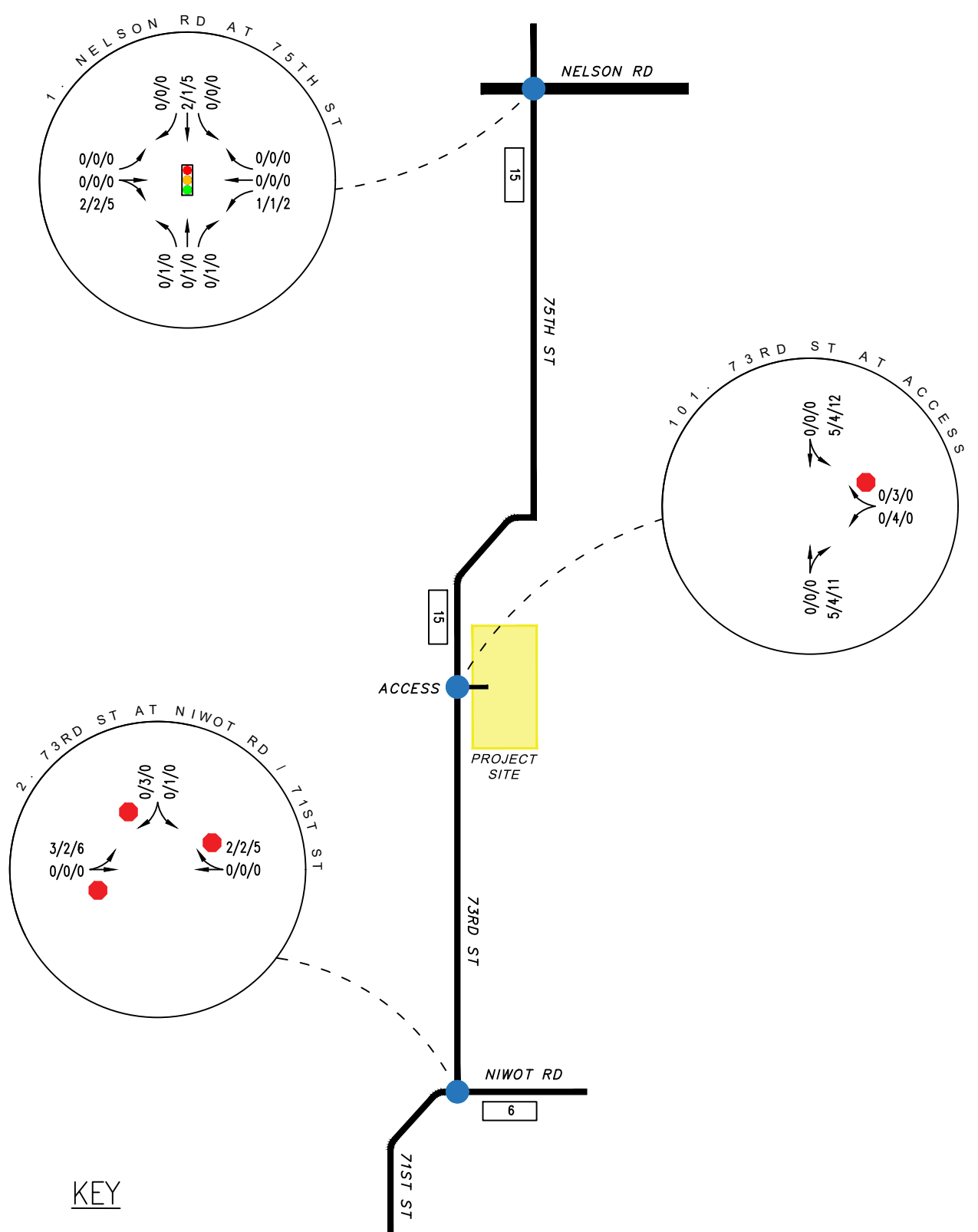
XX% [XX%] IN [OUT] SITE TRIP DISTRIBUTION

→ LANE CONFIGURATION



CH EQUINE TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL
SITE TRIP DISTRIBUTION





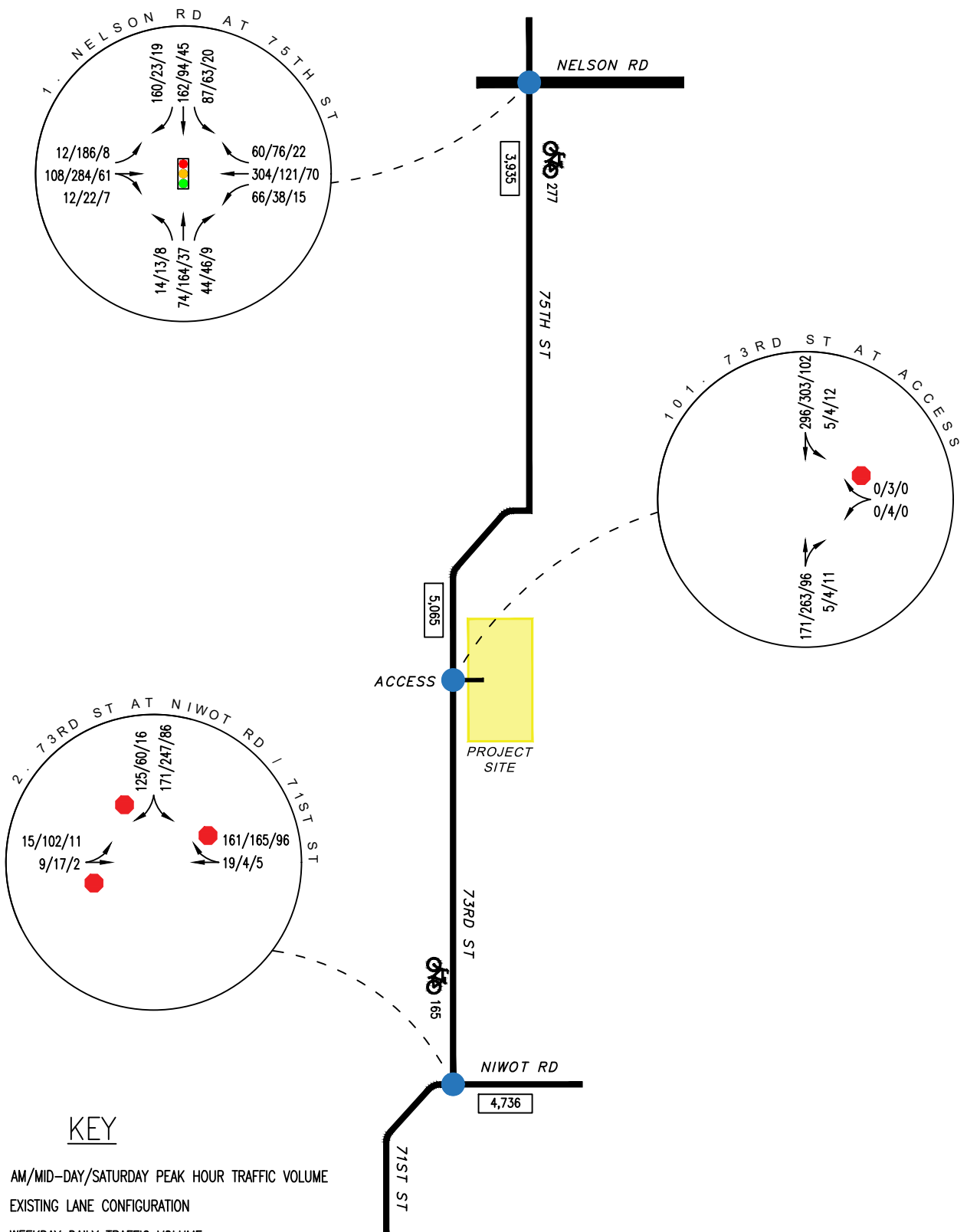
KEY

- XX/XX/XX AM/MID-DAY/SATURDAY SITE-GENERATED TRIPS
- LANE CONFIGURATION
- X,XXX WEEKDAY DAILY TRAFFIC VOLUME



CH EQUINE TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL
SITE-GENERATED TRIPS





KEY

- XX/XX/XX AM/MID-DAY/SATURDAY PEAK HOUR TRAFFIC VOLUME
- EXISTING LANE CONFIGURATION
- X,XXX WEEKDAY DAILY TRAFFIC VOLUME
- 🚲 XX DAILY BIKE VOLUME (BOULDER COUNTY)



CH EQUINE TRANSPORTATION SYSTEM IMPACT ANALYSIS AT THE REVIEW LEVEL
YEAR 2025 TOTAL TRAFFIC VOLUMES

Appendix:

Level of Service Definitions

Existing Traffic Data

Intersection Capacity Worksheets



Level of Service Definitions

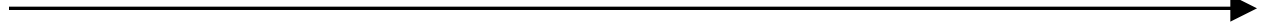


LEVEL OF SERVICE DEFINITIONS

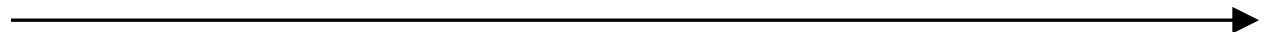
In rating roadway and intersection operating conditions with existing or future traffic volumes, “Levels of Service” (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. Levels of service at signalized and unsignalized intersections are closely associated with vehicle delays experienced in seconds per vehicle. More complete level of service definitions and delay data for signal and stop sign controlled intersections are contained in the following table for reference.

Level of Service Rating	Delay in seconds per vehicle (a)		Definition
	Signalized	Unsignalized	
A	0.0 to 10.0	0.0 to 10.0	Low vehicular traffic volumes; primarily free flow operations. Density is low and vehicles can freely maneuver within the traffic stream. Drivers are able to maintain their desired speeds with little or no delay.
B	10.1 to 20.0	10.1 to 15.0	Stable vehicular traffic volume flow with potential for some restriction of operating speeds due to traffic conditions. Vehicle maneuvering is only slightly restricted. The stopped delays are not bothersome and drivers are not subject to appreciable tension.
C	20.1 to 35.0	15.1 to 25.0	Stable traffic operations, however the ability for vehicles to maneuver is more restricted by the increase in traffic volumes. Relatively satisfactory operating speeds prevail, but adverse signal coordination or longer vehicle queues cause delays along the corridor.
D	35.1 to 55.0	25.1 to 35.0	Approaching unstable vehicular traffic flow where small increases in volume could cause substantial delays. Most drivers are restricted in ability to maneuver and selection of travel speeds due to congestion. Driver comfort and convenience are low, but tolerable.
E	55.1 to 80.0	35.1 to 50.0	Traffic operations characterized by significant approach delays and average travel speeds of one-half to one-third the free flow speed. Vehicular flow is unstable and there is potential for stoppages of brief duration. High signal density, extensive vehicle queuing, or corridor signal progression/timing are the typical causes of vehicle delays at signalized corridors.
F	> 80.0	> 50.0	Forced vehicular traffic flow and operations with high approach delays at critical intersections. Vehicle speeds are reduced substantially, and stoppages may occur for short or long periods of time because of downstream congestion.

(a) Delay ranges based on Highway Capacity Manual (6th Edition, 2016) criteria.



Existing Traffic Data



Vehicle Classification Report Summary

Location: 75th St S/O Nelson Rd
Count Direction: Northbound / Southbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 01

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Northbound	235	3,400	942	32	217	4	0	0	4	0	0	0	3	4,837
	4.9%	70.3%	19.5%	0.7%	4.5%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	
Southbound	109	3,822	965	24	185	4	0	1	5	0	0	0	0	5,115
	2.1%	74.7%	18.9%	0.5%	3.6%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	
Total	344	7,222	1,907	56	402	8	0	1	9	0	0	0	3	9,952
	3.5%	72.6%	19.2%	0.6%	4.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

Thursday, October 10, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	20	8	0	3	0	0	0	0	0	0	0	0	31
7:00 AM	1	77	19	1	9	0	0	0	1	0	0	0	0	108
8:00 AM	2	89	18	3	9	0	0	0	0	0	0	0	0	121
9:00 AM	3	86	22	3	9	0	0	0	0	0	0	0	0	123
10:00 AM	18	62	14	2	5	0	0	0	0	0	0	0	0	101
11:00 AM	5	78	26	2	3	0	0	0	0	0	0	0	0	114
12:00 PM	5	70	19	2	7	0	0	0	0	0	0	0	0	103
1:00 PM	8	77	30	0	4	0	0	0	2	0	0	0	0	121
2:00 PM	6	107	26	1	4	2	0	0	0	0	0	0	0	146
3:00 PM	2	146	45	3	9	0	0	0	0	0	0	0	0	205
4:00 PM	5	156	44	0	14	0	0	0	0	0	0	0	0	219
5:00 PM	3	113	37	1	9	0	0	0	0	0	0	0	1	164
6:00 PM	3	85	18	0	2	0	0	0	0	0	0	0	0	108
7:00 PM	0	53	18	0	4	0	0	0	0	0	0	0	0	75
8:00 PM	0	55	8	0	3	0	0	0	0	0	0	0	0	66
9:00 PM	0	44	11	0	1	0	0	0	0	0	0	0	0	56
10:00 PM	0	21	3	0	0	0	0	0	0	0	0	0	0	24
11:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
Total	61	1,364	371	18	95	2	0	0	3	0	0	0	1	1,915
	3.2%	71.2%	19.4%	0.9%	5.0%	0.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

Thursday, October 10, 2024
 Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	1	27	10	0	4	0	0	0	0	0	0	0	0	42
6:00 AM	1	54	27	2	4	0	0	0	0	0	0	0	0	88
7:00 AM	2	167	39	1	10	0	0	0	0	0	0	0	0	219
8:00 AM	2	179	53	5	11	0	0	0	2	0	0	0	0	252
9:00 AM	1	80	33	0	8	0	0	0	0	0	0	0	0	122
10:00 AM	1	69	22	2	5	0	0	0	0	0	0	0	0	99
11:00 AM	2	81	11	1	1	1	0	0	0	0	0	0	0	97
12:00 PM	4	58	21	0	5	0	0	0	1	0	0	0	0	89
1:00 PM	4	78	18	0	6	1	0	0	0	0	0	0	0	107
2:00 PM	5	91	29	2	3	0	0	0	0	0	0	0	0	130
3:00 PM	3	114	24	3	2	0	0	0	0	0	0	0	0	146
4:00 PM	3	121	27	0	1	0	0	0	0	0	0	0	0	152
5:00 PM	2	84	23	0	5	0	0	0	0	0	0	0	0	114
6:00 PM	2	75	19	0	0	0	0	0	0	0	0	0	0	96
7:00 PM	0	49	10	0	2	0	0	0	0	0	0	0	0	61
8:00 PM	0	43	6	0	1	0	0	0	0	0	0	0	0	50
9:00 PM	0	56	7	0	1	0	0	0	0	0	0	0	0	64
10:00 PM	0	35	3	0	0	0	0	0	0	0	0	0	0	38
11:00 PM	0	22	2	0	0	0	0	0	0	0	0	0	0	24
Total	33	1,493	386	16	70	2	0	0	3	0	0	0	0	2,003
	1.6%	74.5%	19.3%	0.8%	3.5%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

Friday, October 11, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	6
1:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	3
5:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	7
6:00 AM	0	19	7	0	3	0	0	0	1	0	0	0	0	30
7:00 AM	1	44	17	0	5	0	0	0	0	0	0	0	0	67
8:00 AM	4	48	20	0	6	0	0	0	0	0	0	0	0	78
9:00 AM	6	68	19	1	2	0	0	0	0	0	0	0	0	96
10:00 AM	10	67	20	3	9	0	0	0	0	0	0	0	0	109
11:00 AM	4	70	17	1	1	1	0	0	0	0	0	0	0	94
12:00 PM	6	67	18	2	4	0	0	0	0	0	0	0	0	97
1:00 PM	4	93	23	0	7	0	0	0	0	0	0	0	0	127
2:00 PM	5	100	35	2	0	0	0	0	0	0	0	0	0	142
3:00 PM	4	113	29	0	9	0	0	0	0	0	0	0	0	155
4:00 PM	9	115	35	0	6	0	0	0	0	0	0	0	0	165
5:00 PM	7	94	30	0	6	0	0	0	0	0	0	0	0	137
6:00 PM	2	54	28	0	2	0	0	0	0	0	0	0	0	86
7:00 PM	0	32	21	0	4	0	0	0	0	0	0	0	0	57
8:00 PM	0	19	4	0	2	0	0	0	0	0	0	0	0	25
9:00 PM	0	26	6	0	0	0	0	0	0	0	0	0	0	32
10:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	14
11:00 PM	0	7	3	0	0	0	0	0	0	0	0	0	0	10
Total	62	1,060	342	9	68	1	0	0	1	0	0	0	0	1,543
	4.0%	68.7%	22.2%	0.6%	4.4%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: 75th St S/O Nelson Rd
Date Range: 10/10/2024 to 10/12/2024
Site Code: 01

Friday, October 11, 2024
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	10
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	17	6	0	6	0	0	0	0	0	0	0	0	29
6:00 AM	0	51	16	0	1	0	0	0	0	0	0	0	0	68
7:00 AM	0	98	47	1	14	0	0	0	1	0	0	0	0	161
8:00 AM	2	92	43	3	7	0	0	0	0	0	0	0	0	147
9:00 AM	1	91	26	1	4	0	0	0	0	0	0	0	0	123
10:00 AM	0	83	24	1	6	0	0	0	0	0	0	0	0	114
11:00 AM	5	77	23	0	1	0	0	0	0	0	0	0	0	106
12:00 PM	7	79	21	0	2	1	0	0	0	0	0	0	0	110
1:00 PM	1	79	14	0	5	0	0	0	0	0	0	0	0	99
2:00 PM	1	86	18	0	7	0	0	0	0	0	0	0	0	112
3:00 PM	3	98	26	0	4	0	0	0	0	0	0	0	0	131
4:00 PM	6	98	24	0	7	0	0	0	0	0	0	0	0	135
5:00 PM	2	98	15	0	2	0	0	0	0	0	0	0	0	117
6:00 PM	2	72	16	0	4	0	0	0	0	0	0	0	0	94
7:00 PM	0	36	7	0	0	0	0	0	0	0	0	0	0	43
8:00 PM	0	29	6	0	0	0	0	0	0	0	0	0	0	35
9:00 PM	0	19	3	0	0	0	0	0	0	0	0	0	0	22
10:00 PM	0	17	4	0	1	0	0	0	0	0	0	0	0	22
11:00 PM	0	4	1	0	0	0	0	0	1	0	0	0	0	6
Total	30	1,239	347	6	72	1	0	0	2	0	0	0	0	1,697
	1.8%	73.0%	20.4%	0.4%	4.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

Saturday, October 12, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	3	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
7:00 AM	1	20	7	0	1	0	0	0	0	0	0	0	0	29
8:00 AM	6	45	11	0	3	0	0	0	0	0	0	0	0	65
9:00 AM	26	61	13	1	3	0	0	0	0	0	0	0	2	106
10:00 AM	15	78	17	2	5	0	0	0	0	0	0	0	0	117
11:00 AM	12	95	23	0	2	0	0	0	0	0	0	0	0	132
12:00 PM	11	120	19	0	6	1	0	0	0	0	0	0	0	157
1:00 PM	14	97	30	0	8	0	0	0	0	0	0	0	0	149
2:00 PM	11	78	16	1	6	0	0	0	0	0	0	0	0	112
3:00 PM	7	84	14	0	6	0	0	0	0	0	0	0	0	111
4:00 PM	6	81	21	0	5	0	0	0	0	0	0	0	0	113
5:00 PM	1	59	15	1	1	0	0	0	0	0	0	0	0	77
6:00 PM	0	54	9	0	3	0	0	0	0	0	0	0	0	66
7:00 PM	0	29	11	0	0	0	0	0	0	0	0	0	0	40
8:00 PM	0	18	4	0	2	0	0	0	0	0	0	0	0	24
9:00 PM	2	13	3	0	2	0	0	0	0	0	0	0	0	20
10:00 PM	0	14	3	0	1	0	0	0	0	0	0	0	0	18
11:00 PM	0	7	4	0	0	0	0	0	0	0	0	0	0	11
Total	112	976	229	5	54	1	0	0	0	0	0	0	2	1,379
	8.1%	70.8%	16.6%	0.4%	3.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

Saturday, October 12, 2024
 Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	8	2	0	1	0	0	0	0	0	0	0	0	11
6:00 AM	0	8	6	0	4	0	0	0	0	0	0	0	0	18
7:00 AM	0	16	8	0	2	0	0	0	0	0	0	0	0	26
8:00 AM	1	37	14	0	1	1	0	0	0	0	0	0	0	54
9:00 AM	2	59	15	1	1	0	0	0	0	0	0	0	0	78
10:00 AM	2	74	10	0	2	0	0	0	0	0	0	0	0	88
11:00 AM	5	104	13	0	1	0	0	0	0	0	0	0	0	123
12:00 PM	11	73	21	0	3	0	0	0	0	0	0	0	0	108
1:00 PM	10	105	18	0	6	0	0	0	0	0	0	0	0	139
2:00 PM	5	102	14	0	4	0	0	0	0	0	0	0	0	125
3:00 PM	3	120	20	0	5	0	0	0	0	0	0	0	0	148
4:00 PM	5	93	26	0	3	0	0	0	0	0	0	0	0	127
5:00 PM	1	92	22	1	5	0	0	0	0	0	0	0	0	121
6:00 PM	1	57	14	0	3	0	0	0	0	0	0	0	0	75
7:00 PM	0	40	8	0	1	0	0	0	0	0	0	0	0	49
8:00 PM	0	30	4	0	0	0	0	1	0	0	0	0	0	35
9:00 PM	0	26	6	0	1	0	0	0	0	0	0	0	0	33
10:00 PM	0	25	7	0	0	0	0	0	0	0	0	0	0	32
11:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
Total	46	1,090	232	2	43	1	0	1	0	0	0	0	0	1,415
	3.3%	77.0%	16.4%	0.1%	3.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

**Total Study Average
 Northbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	16	6	0	2	0	0	0	0	0	0	0	0	24
7:00 AM	1	47	14	0	5	0	0	0	0	0	0	0	0	67
8:00 AM	4	61	16	1	6	0	0	0	0	0	0	0	0	88
9:00 AM	12	72	18	2	5	0	0	0	0	0	0	0	1	110
10:00 AM	14	69	17	2	6	0	0	0	0	0	0	0	0	108
11:00 AM	7	81	22	1	2	0	0	0	0	0	0	0	0	113
12:00 PM	7	86	19	1	6	0	0	0	0	0	0	0	0	119
1:00 PM	9	89	28	0	6	0	0	0	1	0	0	0	0	133
2:00 PM	7	95	26	1	3	1	0	0	0	0	0	0	0	133
3:00 PM	4	114	29	1	8	0	0	0	0	0	0	0	0	156
4:00 PM	7	117	33	0	8	0	0	0	0	0	0	0	0	165
5:00 PM	4	89	27	1	5	0	0	0	0	0	0	0	0	126
6:00 PM	2	64	18	0	2	0	0	0	0	0	0	0	0	86
7:00 PM	0	38	17	0	3	0	0	0	0	0	0	0	0	58
8:00 PM	0	31	5	0	2	0	0	0	0	0	0	0	0	38
9:00 PM	1	28	7	0	1	0	0	0	0	0	0	0	0	37
10:00 PM	0	16	3	0	0	0	0	0	0	0	0	0	0	19
11:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	11
Total	79	1,133	314	10	70	1	0	0	1	0	0	0	1	1,609
	4.9%	70.4%	19.5%	0.6%	4.4%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	

Note: Average only considered on days with 24-hours of data.

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01

**Total Study Average
 Southbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	2	1	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	17	6	0	4	0	0	0	0	0	0	0	0	27
6:00 AM	0	38	16	1	3	0	0	0	0	0	0	0	0	58
7:00 AM	1	94	31	1	9	0	0	0	0	0	0	0	0	136
8:00 AM	2	103	37	3	6	0	0	0	1	0	0	0	0	152
9:00 AM	1	77	25	1	4	0	0	0	0	0	0	0	0	108
10:00 AM	1	75	19	1	4	0	0	0	0	0	0	0	0	100
11:00 AM	4	87	16	0	1	0	0	0	0	0	0	0	0	108
12:00 PM	7	70	21	0	3	0	0	0	0	0	0	0	0	101
1:00 PM	5	87	17	0	6	0	0	0	0	0	0	0	0	115
2:00 PM	4	93	20	1	5	0	0	0	0	0	0	0	0	123
3:00 PM	3	111	23	1	4	0	0	0	0	0	0	0	0	142
4:00 PM	5	104	26	0	4	0	0	0	0	0	0	0	0	139
5:00 PM	2	91	20	0	4	0	0	0	0	0	0	0	0	117
6:00 PM	2	68	16	0	2	0	0	0	0	0	0	0	0	88
7:00 PM	0	42	8	0	1	0	0	0	0	0	0	0	0	51
8:00 PM	0	34	5	0	0	0	0	0	0	0	0	0	0	39
9:00 PM	0	34	5	0	1	0	0	0	0	0	0	0	0	40
10:00 PM	0	26	5	0	0	0	0	0	0	0	0	0	0	31
11:00 PM	0	12	2	0	0	0	0	0	0	0	0	0	0	14
Total	37	1,274	322	9	62	0	0	0	1	0	0	0	0	1,705
	2.2%	74.7%	18.9%	0.5%	3.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Vehicle Speed Report Summary

Location: 75th St S/O Nelson Rd
Direction: Northbound / Southbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 01

Direction	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Northbound	28	129	51	51	97	330	1,261	1,685	912	244	38	11	0	0	0	0	0	4,837
	0.6%	2.7%	1.1%	1.1%	2.0%	6.8%	26.1%	34.8%	18.9%	5.0%	0.8%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Southbound	3	3	36	38	35	266	1,336	1,994	1,007	312	69	16	0	0	0	0	0	5,115
	0.1%	0.1%	0.7%	0.7%	0.7%	5.2%	26.1%	39.0%	19.7%	6.1%	1.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	31	132	87	89	132	596	2,597	3,679	1,919	556	107	27	0	0	0	0	0	9,952
	0.3%	1.3%	0.9%	0.9%	1.3%	6.0%	26.1%	37.0%	19.3%	5.6%	1.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			Northbound		
50th Percentile (Median)	41.3	mph	Mean (Average) Speed	40.3	mph
85th Percentile	47.1	mph	10 mph Pace	36.5 - 46.5	mph
95th Percentile	50.4	mph	Percent in Pace	62.6	%
Southbound			Southbound		
50th Percentile (Median)	41.9	mph	Mean (Average) Speed	42.1	mph
85th Percentile	47.5	mph	10 mph Pace	37.1 - 47.1	mph
95th Percentile	51.2	mph	Percent in Pace	69.3	%

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Thursday, October 10, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3
5:00 AM	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	0	0	4	9	8	6	3	1	0	0	0	0	0	0	31
7:00 AM	0	1	0	4	1	5	29	40	19	8	1	0	0	0	0	0	0	108
8:00 AM	0	2	0	0	0	4	36	56	21	2	0	0	0	0	0	0	0	121
9:00 AM	0	1	1	2	3	6	35	45	22	8	0	0	0	0	0	0	0	123
10:00 AM	2	10	3	2	1	8	30	28	13	3	0	1	0	0	0	0	0	101
11:00 AM	0	1	1	1	4	7	31	42	20	7	0	0	0	0	0	0	0	114
12:00 PM	4	2	1	1	1	5	15	44	20	7	3	0	0	0	0	0	0	103
1:00 PM	0	6	2	2	2	4	19	44	28	11	3	0	0	0	0	0	0	121
2:00 PM	0	1	1	2	2	5	36	49	30	16	3	1	0	0	0	0	0	146
3:00 PM	0	1	0	0	2	21	65	60	40	12	2	2	0	0	0	0	0	205
4:00 PM	0	0	1	2	3	13	59	91	44	5	1	0	0	0	0	0	0	219
5:00 PM	1	0	3	0	3	6	48	60	33	9	1	0	0	0	0	0	0	164
6:00 PM	0	0	1	0	2	6	39	32	21	6	0	1	0	0	0	0	0	108
7:00 PM	0	0	0	0	3	15	20	29	8	0	0	0	0	0	0	0	0	75
8:00 PM	0	0	0	1	0	14	26	18	5	2	0	0	0	0	0	0	0	66
9:00 PM	0	0	0	1	5	8	15	17	10	0	0	0	0	0	0	0	0	56
10:00 PM	0	0	0	0	0	4	13	4	3	0	0	0	0	0	0	0	0	24
11:00 PM	0	0	0	0	0	0	2	6	4	0	0	0	0	0	0	0	0	12
Total	7	25	14	18	33	137	533	679	349	99	16	5	0	0	0	0	0	1,915
	0.4%	1.3%	0.7%	0.9%	1.7%	7.2%	27.8%	35.5%	18.2%	5.2%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	41.2 mph	Mean (Average) Speed	40.8 mph
85th Percentile	47.2 mph	10 mph Pace	36.5 - 46.5 mph
95th Percentile	50.5 mph	Percent in Pace	64.9 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Thursday, October 10, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	1	1	0	2	3	0	0	0	0	0	0	0	7
5:00 AM	0	0	0	0	0	0	9	11	12	6	4	0	0	0	0	0	0	42
6:00 AM	0	0	0	0	0	2	15	36	19	12	4	0	0	0	0	0	0	88
7:00 AM	0	0	0	0	1	6	51	80	53	26	1	1	0	0	0	0	0	219
8:00 AM	0	0	0	0	0	4	60	118	49	18	2	1	0	0	0	0	0	252
9:00 AM	0	1	0	0	0	3	34	41	32	10	1	0	0	0	0	0	0	122
10:00 AM	0	0	0	1	2	8	37	32	15	3	0	1	0	0	0	0	0	99
11:00 AM	0	0	1	0	1	1	29	50	11	3	1	0	0	0	0	0	0	97
12:00 PM	0	0	0	0	1	4	25	42	13	2	1	1	0	0	0	0	0	89
1:00 PM	0	0	1	1	0	8	27	43	21	5	0	1	0	0	0	0	0	107
2:00 PM	0	0	2	0	3	8	30	51	26	9	1	0	0	0	0	0	0	130
3:00 PM	0	0	0	0	2	6	41	70	23	3	1	0	0	0	0	0	0	146
4:00 PM	0	0	1	2	1	2	50	64	27	4	1	0	0	0	0	0	0	152
5:00 PM	0	0	0	1	0	12	31	34	32	3	1	0	0	0	0	0	0	114
6:00 PM	0	0	0	0	1	4	24	43	14	8	2	0	0	0	0	0	0	96
7:00 PM	0	0	0	0	0	6	18	24	9	3	1	0	0	0	0	0	0	61
8:00 PM	0	0	0	0	1	5	12	22	10	0	0	0	0	0	0	0	0	50
9:00 PM	0	0	0	1	1	7	25	16	11	3	0	0	0	0	0	0	0	64
10:00 PM	0	0	0	0	1	3	11	14	6	2	1	0	0	0	0	0	0	38
11:00 PM	0	0	0	0	0	6	8	6	4	0	0	0	0	0	0	0	0	24
Total	0	1	5	6	15	97	538	799	392	123	22	5	0	0	0	0	0	2,003
	0.0%	0.0%	0.2%	0.3%	0.7%	4.8%	26.9%	39.9%	19.6%	6.1%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	41.9 mph	Mean (Average) Speed	42.3 mph
85th Percentile	47.4 mph	10 mph Pace	37.1 - 47.1 mph
95th Percentile	51.0 mph	Percent in Pace	71.49 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Friday, October 11, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	0	0	0	0	2	3	2	0	0	0	0	0	0	0	0	7
6:00 AM	0	0	0	0	0	1	10	6	9	4	0	0	0	0	0	0	0	30
7:00 AM	0	0	0	0	2	3	16	21	19	6	0	0	0	0	0	0	0	67
8:00 AM	1	3	0	2	2	5	22	25	15	1	1	1	0	0	0	0	0	78
9:00 AM	0	5	1	3	3	4	23	33	18	5	0	1	0	0	0	0	0	96
10:00 AM	4	3	0	1	2	11	39	28	17	4	0	0	0	0	0	0	0	109
11:00 AM	3	1	0	1	1	8	27	36	15	2	0	0	0	0	0	0	0	94
12:00 PM	0	2	0	3	1	11	15	35	22	6	2	0	0	0	0	0	0	97
1:00 PM	1	3	0	2	2	4	38	52	13	9	3	0	0	0	0	0	0	127
2:00 PM	1	3	1	1	4	14	28	52	28	10	0	0	0	0	0	0	0	142
3:00 PM	1	2	0	1	6	6	35	61	32	9	2	0	0	0	0	0	0	155
4:00 PM	0	5	0	1	5	12	36	63	31	9	2	1	0	0	0	0	0	165
5:00 PM	0	4	3	1	0	2	22	64	36	4	1	0	0	0	0	0	0	137
6:00 PM	0	1	1	1	0	8	14	32	24	4	0	1	0	0	0	0	0	86
7:00 PM	0	0	0	0	2	8	18	21	6	2	0	0	0	0	0	0	0	57
8:00 PM	0	0	0	1	0	3	8	5	5	3	0	0	0	0	0	0	0	25
9:00 PM	0	0	0	0	2	8	4	8	8	1	0	1	0	0	0	0	0	32
10:00 PM	0	0	0	0	0	3	5	3	3	0	0	0	0	0	0	0	0	14
11:00 PM	0	0	0	0	0	1	3	5	1	0	0	0	0	0	0	0	0	10
Total	11	32	6	18	32	115	371	556	306	80	11	5	0	0	0	0	0	1,543
	0.7%	2.1%	0.4%	1.2%	2.1%	7.5%	24.0%	36.0%	19.8%	5.2%	0.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	41.7 mph	Mean (Average) Speed	40.7 mph
85th Percentile	47.0 mph	10 mph Pace	37.5 - 47.5 mph
95th Percentile	50.6 mph	Percent in Pace	63.8 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Friday, October 11, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	3	3	2	1	0	0	0	0	0	0	0	10
1:00 AM	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	0	0	0	3	12	9	3	2	0	0	0	0	0	0	29
6:00 AM	0	0	0	0	0	2	6	23	19	15	3	0	0	0	0	0	0	68
7:00 AM	0	0	0	0	0	4	27	65	43	19	3	0	0	0	0	0	0	161
8:00 AM	0	0	0	0	0	6	33	55	32	16	5	0	0	0	0	0	0	147
9:00 AM	0	0	0	0	0	4	32	52	22	10	3	0	0	0	0	0	0	123
10:00 AM	0	0	0	0	1	9	33	47	21	2	0	1	0	0	0	0	0	114
11:00 AM	0	0	1	2	0	7	28	37	24	4	3	0	0	0	0	0	0	106
12:00 PM	0	0	1	3	2	2	36	34	22	7	3	0	0	0	0	0	0	110
1:00 PM	0	0	0	0	1	13	23	34	21	6	1	0	0	0	0	0	0	99
2:00 PM	0	0	0	0	0	11	34	44	15	5	0	3	0	0	0	0	0	112
3:00 PM	1	0	1	1	2	6	40	55	24	1	0	0	0	0	0	0	0	131
4:00 PM	0	0	2	0	0	7	44	57	21	4	0	0	0	0	0	0	0	135
5:00 PM	1	0	1	0	0	1	40	49	19	4	2	0	0	0	0	0	0	117
6:00 PM	0	0	0	0	1	4	29	31	24	4	1	0	0	0	0	0	0	94
7:00 PM	0	0	0	1	1	4	11	8	12	3	1	2	0	0	0	0	0	43
8:00 PM	0	0	0	0	0	6	10	12	6	0	1	0	0	0	0	0	0	35
9:00 PM	0	0	0	0	0	3	5	7	4	3	0	0	0	0	0	0	0	22
10:00 PM	0	0	0	0	0	1	4	11	5	1	0	0	0	0	0	0	0	22
11:00 PM	0	0	0	0	0	1	3	2	0	0	0	0	0	0	0	0	0	6
Total	2	0	6	7	8	92	446	644	347	110	29	6	0	0	0	0	0	1,697
	0.1%	0.0%	0.4%	0.4%	0.5%	5.4%	26.3%	37.9%	20.4%	6.5%	1.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	42.1 mph	Mean (Average) Speed	42.4 mph
85th Percentile	47.9 mph	10 mph Pace	37.2 - 47.2 mph
95th Percentile	51.9 mph	Percent in Pace	68.36 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Saturday, October 12, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	0	0	1	4	3	2	1	1	0	0	0	0	0	0	12
7:00 AM	1	0	1	2	0	3	5	9	4	3	0	1	0	0	0	0	0	29
8:00 AM	0	5	1	1	1	3	19	16	15	2	2	0	0	0	0	0	0	65
9:00 AM	4	18	5	2	0	2	17	32	24	2	0	0	0	0	0	0	0	106
10:00 AM	0	9	7	3	4	6	28	35	20	4	1	0	0	0	0	0	0	117
11:00 AM	2	8	6	0	2	7	35	46	22	3	1	0	0	0	0	0	0	132
12:00 PM	0	9	1	2	2	9	33	58	34	8	1	0	0	0	0	0	0	157
1:00 PM	0	6	3	0	1	13	37	54	28	7	0	0	0	0	0	0	0	149
2:00 PM	0	7	3	1	3	6	33	37	18	4	0	0	0	0	0	0	0	112
3:00 PM	2	6	0	2	4	6	27	37	22	5	0	0	0	0	0	0	0	111
4:00 PM	1	3	1	0	2	1	28	44	24	8	1	0	0	0	0	0	0	113
5:00 PM	0	1	0	2	1	2	23	27	14	7	0	0	0	0	0	0	0	77
6:00 PM	0	0	2	0	3	5	23	15	14	3	1	0	0	0	0	0	0	66
7:00 PM	0	0	1	0	5	5	15	8	6	0	0	0	0	0	0	0	0	40
8:00 PM	0	0	0	0	1	5	6	7	4	1	0	0	0	0	0	0	0	24
9:00 PM	0	0	0	0	1	1	8	4	2	2	2	0	0	0	0	0	0	20
10:00 PM	0	0	0	0	0	2	7	8	1	0	0	0	0	0	0	0	0	18
11:00 PM	0	0	0	0	0	0	3	4	1	2	1	0	0	0	0	0	0	11
Total	10	72	31	15	32	78	357	450	257	65	11	1	0	0	0	0	0	1,379
	0.7%	5.2%	2.2%	1.1%	2.3%	5.7%	25.9%	32.6%	18.6%	4.7%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	41.0 mph	Mean (Average) Speed	39.2 mph
85th Percentile	47.1 mph	10 mph Pace	36.0 - 46.0 mph
95th Percentile	50.3 mph	Percent in Pace	59.4 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



Saturday, October 12, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
1:00 AM	0	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	0	1	2	4	1	2	1	0	0	0	0	0	0	11
6:00 AM	0	0	0	0	0	1	3	7	6	0	0	1	0	0	0	0	0	18
7:00 AM	0	0	0	0	0	0	4	13	6	3	0	0	0	0	0	0	0	26
8:00 AM	0	0	0	0	0	2	9	20	13	5	5	0	0	0	0	0	0	54
9:00 AM	0	0	0	1	1	1	17	28	21	8	0	1	0	0	0	0	0	78
10:00 AM	0	1	3	1	0	3	23	34	20	3	0	0	0	0	0	0	0	88
11:00 AM	0	0	9	8	3	5	26	48	21	3	0	0	0	0	0	0	0	123
12:00 PM	0	1	4	4	0	3	19	56	13	5	3	0	0	0	0	0	0	108
1:00 PM	0	0	6	5	0	4	42	53	22	5	2	0	0	0	0	0	0	139
2:00 PM	0	0	0	2	1	9	27	52	25	7	1	1	0	0	0	0	0	125
3:00 PM	1	0	0	3	0	13	41	65	18	7	0	0	0	0	0	0	0	148
4:00 PM	0	0	3	1	3	3	32	50	22	10	2	1	0	0	0	0	0	127
5:00 PM	0	0	0	0	0	14	33	40	26	8	0	0	0	0	0	0	0	121
6:00 PM	0	0	0	0	0	9	21	22	17	5	1	0	0	0	0	0	0	75
7:00 PM	0	0	0	0	1	3	14	18	10	2	1	0	0	0	0	0	0	49
8:00 PM	0	0	0	0	1	2	9	10	10	1	2	0	0	0	0	0	0	35
9:00 PM	0	0	0	0	2	1	12	12	5	1	0	0	0	0	0	0	0	33
10:00 PM	0	0	0	0	0	0	11	10	9	1	0	1	0	0	0	0	0	32
11:00 PM	0	0	0	0	0	1	6	4	0	1	0	0	0	0	0	0	0	12
Total	1	2	25	25	12	77	352	551	268	79	18	5	0	0	0	0	0	1,415
	0.1%	0.1%	1.8%	1.8%	0.8%	5.4%	24.9%	38.9%	18.9%	5.6%	1.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	41.8	mph	Mean (Average) Speed	41.5	mph
85th Percentile	47.2	mph	10 mph Pace	36.2 - 46.2	mph
95th Percentile	51.0	mph	Percent in Pace	67.63	%

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



**Total Study Average
Northbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	0	0	2	8	6	6	3	1	0	0	0	0	0	0	26
7:00 AM	0	0	0	2	1	4	17	23	14	6	0	0	0	0	0	0	0	67
8:00 AM	0	3	0	1	1	4	26	32	17	2	1	0	0	0	0	0	0	87
9:00 AM	1	8	2	2	2	4	25	37	21	5	0	0	0	0	0	0	0	107
10:00 AM	2	7	3	2	2	8	32	30	17	4	0	0	0	0	0	0	0	107
11:00 AM	2	3	2	1	2	7	31	41	19	4	0	0	0	0	0	0	0	112
12:00 PM	1	4	1	2	1	8	21	46	25	7	2	0	0	0	0	0	0	118
1:00 PM	0	5	2	1	2	7	31	50	23	9	2	0	0	0	0	0	0	132
2:00 PM	0	4	2	1	3	8	32	46	25	10	1	0	0	0	0	0	0	132
3:00 PM	1	3	0	1	4	11	42	53	31	9	1	1	0	0	0	0	0	157
4:00 PM	0	3	1	1	3	9	41	66	33	7	1	0	0	0	0	0	0	165
5:00 PM	0	2	2	1	1	3	31	50	28	7	1	0	0	0	0	0	0	126
6:00 PM	0	0	1	0	2	6	25	26	20	4	0	1	0	0	0	0	0	85
7:00 PM	0	0	0	0	3	9	18	19	7	1	0	0	0	0	0	0	0	57
8:00 PM	0	0	0	1	0	7	13	10	5	2	0	0	0	0	0	0	0	38
9:00 PM	0	0	0	0	3	6	9	10	7	1	1	0	0	0	0	0	0	37
10:00 PM	0	0	0	0	0	3	8	5	2	0	0	0	0	0	0	0	0	18
11:00 PM	0	0	0	0	0	0	3	5	2	1	0	0	0	0	0	0	0	11
Total	7	42	16	16	31	108	420	561	304	82	11	2	0	0	0	0	0	1,600
	0.4%	2.6%	1.0%	1.0%	1.9%	6.8%	26.3%	35.1%	19.0%	5.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	41.3 mph	Mean (Average) Speed	40.3 mph
85th Percentile	47.1 mph	10 mph Pace	36.5 - 46.5 mph
95th Percentile	50.4 mph	Percent in Pace	62.6 %

Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 01



**Total Study Average
 Southbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	0	0	0	5	9	7	4	2	0	0	0	0	0	0	27
6:00 AM	0	0	0	0	0	2	8	22	15	9	2	0	0	0	0	0	0	58
7:00 AM	0	0	0	0	0	3	27	53	34	16	1	0	0	0	0	0	0	134
8:00 AM	0	0	0	0	0	4	34	64	31	13	4	0	0	0	0	0	0	150
9:00 AM	0	0	0	0	0	3	28	40	25	9	1	0	0	0	0	0	0	106
10:00 AM	0	0	1	1	1	7	31	38	19	3	0	1	0	0	0	0	0	102
11:00 AM	0	0	4	3	1	4	28	45	19	3	1	0	0	0	0	0	0	108
12:00 PM	0	0	2	2	1	3	27	44	16	5	2	0	0	0	0	0	0	102
1:00 PM	0	0	2	2	0	8	31	43	21	5	1	0	0	0	0	0	0	113
2:00 PM	0	0	1	1	1	9	30	49	22	7	1	1	0	0	0	0	0	122
3:00 PM	1	0	0	1	1	8	41	63	22	4	0	0	0	0	0	0	0	141
4:00 PM	0	0	2	1	1	4	42	57	23	6	1	0	0	0	0	0	0	137
5:00 PM	0	0	0	0	0	9	35	41	26	5	1	0	0	0	0	0	0	117
6:00 PM	0	0	0	0	1	6	25	32	18	6	1	0	0	0	0	0	0	89
7:00 PM	0	0	0	0	1	4	14	17	10	3	1	1	0	0	0	0	0	51
8:00 PM	0	0	0	0	1	4	10	15	9	0	1	0	0	0	0	0	0	40
9:00 PM	0	0	0	0	1	4	14	12	7	2	0	0	0	0	0	0	0	40
10:00 PM	0	0	0	0	0	1	9	12	7	1	0	0	0	0	0	0	0	30
11:00 PM	0	0	0	0	0	3	6	4	1	0	0	0	0	0	0	0	0	14
Total	1	0	12	11	10	87	446	666	336	103	20	3	0	0	0	0	0	1,695
	0.1%	0.0%	0.7%	0.6%	0.6%	5.1%	26.3%	39.3%	19.8%	6.1%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	41.9 mph	Mean (Average) Speed	42.1 mph
85th Percentile	47.5 mph	10 mph Pace	37.1 - 47.1 mph
95th Percentile	51.2 mph	Percent in Pace	69.3 %



Location: 75th St S/O Nelson Rd
 Date Range: 10/10/2024 - 10/16/2024
 Site Code: 01

Time	Thursday 10/10/2024			Friday 10/11/2024			Saturday 10/12/2024			Sunday 10/13/2024			Monday 10/14/2024			Tuesday 10/15/2024			Wednesday 10/16/2024			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	3	2	5	6	10	16	5	3	8	-	-	-	-	-	-	-	-	-	-	-	3	2	5	
1:00 AM	4	1	5	2	4	6	2	4	6	-	-	-	-	-	-	-	-	-	-	-	4	1	5	
2:00 AM	2	0	2	2	1	3	2	1	3	-	-	-	-	-	-	-	-	-	-	-	2	0	2	
3:00 AM	0	3	3	2	4	6	1	3	4	-	-	-	-	-	-	-	-	-	-	-	0	3	3	
4:00 AM	3	7	10	3	4	7	4	2	6	-	-	-	-	-	-	-	-	-	-	-	3	7	10	
5:00 AM	6	42	48	7	29	36	6	11	17	-	-	-	-	-	-	-	-	-	-	-	6	42	48	
6:00 AM	31	88	119	30	68	98	12	18	30	-	-	-	-	-	-	-	-	-	-	-	31	88	119	
7:00 AM	108	219	327	67	161	228	29	26	55	-	-	-	-	-	-	-	-	-	-	-	108	219	327	
8:00 AM	121	252	373	78	147	225	65	54	119	-	-	-	-	-	-	-	-	-	-	-	121	252	373	
9:00 AM	123	122	245	96	123	219	106	78	184	-	-	-	-	-	-	-	-	-	-	-	123	122	245	
10:00 AM	101	99	200	109	114	223	117	88	205	-	-	-	-	-	-	-	-	-	-	-	101	99	200	
11:00 AM	114	97	211	94	106	200	132	123	255	-	-	-	-	-	-	-	-	-	-	-	114	97	211	
12:00 PM	103	89	192	97	110	207	157	108	265	-	-	-	-	-	-	-	-	-	-	-	103	89	192	
1:00 PM	121	107	228	127	99	226	149	139	288	-	-	-	-	-	-	-	-	-	-	-	121	107	228	
2:00 PM	146	130	276	142	112	254	112	125	237	-	-	-	-	-	-	-	-	-	-	-	146	130	276	
3:00 PM	205	146	351	155	131	286	111	148	259	-	-	-	-	-	-	-	-	-	-	-	205	146	351	
4:00 PM	219	152	371	165	135	300	113	127	240	-	-	-	-	-	-	-	-	-	-	-	219	152	371	
5:00 PM	164	114	278	137	117	254	77	121	198	-	-	-	-	-	-	-	-	-	-	-	164	114	278	
6:00 PM	108	96	204	86	94	180	66	75	141	-	-	-	-	-	-	-	-	-	-	-	108	96	204	
7:00 PM	75	61	136	57	43	100	40	49	89	-	-	-	-	-	-	-	-	-	-	-	75	61	136	
8:00 PM	66	50	116	25	35	60	24	35	59	-	-	-	-	-	-	-	-	-	-	-	66	50	116	
9:00 PM	56	64	120	32	22	54	20	33	53	-	-	-	-	-	-	-	-	-	-	-	56	64	120	
10:00 PM	24	38	62	14	22	36	18	32	50	-	-	-	-	-	-	-	-	-	-	-	24	38	62	
11:00 PM	12	24	36	10	6	16	11	12	23	-	-	-	-	-	-	-	-	-	-	-	12	24	36	
Total	1,915	2,003	3,918	1,543	1,697	3,240	1,379	1,415	2,794	-	-	-	-	-	-	-	-	-	-	-	1,915	2,003	3,918	
Percent	49%	51%		48%	52%		49%	51%		-	-	-	-	-	-	-	-	-	-	-	49%	51%		
AM Peak	09:00	08:00	08:00	10:00	07:00	07:00	11:00	11:00	11:00	-	-	-	-	-	-	-	-	-	-	-	09:00	08:00	08:00	
Vol.	123	252	373	109	161	228	132	123	255	-	-	-	-	-	-	-	-	-	-	-	123	252	373	
PM Peak	16:00	16:00	16:00	16:00	16:00	16:00	12:00	15:00	13:00	-	-	-	-	-	-	-	-	-	-	-	16:00	16:00	16:00	
Vol.	219	152	371	165	135	300	157	148	288	-	-	-	-	-	-	-	-	-	-	-	219	152	371	

1. Mid-week average includes data between Tuesday and Thursday.

Vehicle Classification Report Summary

Location: 73rd St S/O Goose Point Ct
Count Direction: Northbound / Southbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 02

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Northbound	10	3,842	948	16	168	24	0	3	11	1	0	0	0	5,023
	0.2%	76.5%	18.9%	0.3%	3.3%	0.5%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	
Southbound	391	5,386	1,107	33	351	269	0	4	7	0	0	0	1	7,549
	5.2%	71.3%	14.7%	0.4%	4.6%	3.6%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
Total	401	9,228	2,055	49	519	293	0	7	18	1	0	0	1	12,572
	3.2%	73.4%	16.3%	0.4%	4.1%	2.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	



Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

Thursday, October 10, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	17	8	0	2	0	0	0	0	0	0	0	0	27
7:00 AM	0	63	12	0	5	1	0	0	2	0	0	0	0	83
8:00 AM	0	78	20	1	8	0	0	0	0	0	0	0	0	107
9:00 AM	0	67	20	0	6	2	0	0	0	0	0	0	0	95
10:00 AM	1	62	16	2	5	0	0	0	0	0	0	0	0	86
11:00 AM	1	89	25	0	5	0	0	0	1	0	0	0	0	121
12:00 PM	1	91	18	1	7	1	0	0	0	0	0	0	0	119
1:00 PM	1	102	29	1	3	0	0	0	3	0	0	0	0	139
2:00 PM	4	128	31	1	3	2	0	0	0	0	0	0	0	169
3:00 PM	0	196	46	3	13	0	0	0	1	0	0	0	0	259
4:00 PM	2	228	43	0	8	1	0	0	0	0	0	0	0	282
5:00 PM	0	216	43	0	10	0	0	0	0	0	0	0	0	269
6:00 PM	0	130	23	0	2	0	0	0	0	0	0	0	0	155
7:00 PM	0	97	16	0	3	0	0	0	0	0	0	0	0	116
8:00 PM	0	41	8	0	2	0	0	0	0	0	0	0	0	51
9:00 PM	0	54	12	0	0	0	0	0	0	0	0	0	0	66
10:00 PM	0	36	6	0	0	0	0	0	0	0	0	0	0	42
11:00 PM	0	14	3	0	0	0	0	0	0	0	0	0	0	17
Total	10	1,725	384	9	82	7	0	0	7	0	0	0	0	2,224
	0.4%	77.6%	17.3%	0.4%	3.7%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	



Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

Thursday, October 10, 2024
 Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	9	2	0	0	0	0	0	0	0	0	0	0	11
5:00 AM	2	37	12	0	3	4	0	0	0	0	0	0	0	58
6:00 AM	1	144	24	2	8	6	0	0	0	0	0	0	0	185
7:00 AM	5	316	47	0	11	11	0	0	0	0	0	0	0	390
8:00 AM	4	315	57	3	24	16	0	0	2	0	0	0	0	421
9:00 AM	10	147	33	0	13	3	0	0	0	0	0	0	0	206
10:00 AM	7	86	37	2	14	5	0	0	0	0	0	0	0	151
11:00 AM	14	79	28	0	6	1	0	0	0	0	0	0	0	128
12:00 PM	10	62	14	1	9	7	0	0	1	0	0	0	0	104
1:00 PM	14	77	21	0	11	4	0	0	0	0	0	0	0	127
2:00 PM	4	99	39	3	5	3	0	1	0	0	0	0	0	154
3:00 PM	6	135	47	2	14	2	0	0	0	0	0	0	0	206
4:00 PM	3	149	45	0	13	8	0	0	0	0	0	0	0	218
5:00 PM	5	96	27	0	6	3	0	1	0	0	0	0	0	138
6:00 PM	4	86	24	0	4	2	0	0	0	0	0	0	0	120
7:00 PM	0	39	14	0	4	1	0	0	0	0	0	0	0	58
8:00 PM	0	30	6	0	3	1	0	0	0	0	0	0	0	40
9:00 PM	0	40	1	0	0	3	0	0	0	0	0	0	0	44
10:00 PM	0	26	4	0	0	4	0	0	0	0	0	0	0	34
11:00 PM	0	20	2	0	1	2	0	0	0	0	0	0	0	25
Total	89	1,998	484	13	149	86	0	2	3	0	0	0	0	2,824
	3.2%	70.8%	17.1%	0.5%	5.3%	3.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

Friday, October 11, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	9	3	0	1	0	0	0	0	0	0	0	0	13
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 AM	0	3	3	0	0	2	0	0	0	0	0	0	0	8
6:00 AM	0	15	3	0	1	0	0	0	1	0	0	0	0	20
7:00 AM	0	10	6	2	4	1	0	0	0	0	0	0	0	23
8:00 AM	0	30	15	0	1	0	0	0	0	0	0	0	0	46
9:00 AM	0	47	15	0	3	1	0	0	0	0	0	0	0	66
10:00 AM	0	62	23	1	5	3	0	1	0	0	0	0	0	95
11:00 AM	0	81	22	1	2	0	0	0	0	0	0	0	0	106
12:00 PM	0	79	20	1	3	0	0	0	0	0	0	0	0	103
1:00 PM	0	111	27	0	7	0	0	0	1	0	0	0	0	146
2:00 PM	0	138	37	1	5	1	0	0	1	0	0	0	0	183
3:00 PM	0	146	38	0	6	0	0	1	1	0	0	0	0	192
4:00 PM	0	163	44	0	4	1	0	0	0	0	0	0	0	212
5:00 PM	0	136	33	0	5	0	0	0	0	0	0	0	0	174
6:00 PM	0	73	27	0	3	0	0	0	0	1	0	0	0	104
7:00 PM	0	47	15	0	2	0	0	0	0	0	0	0	0	64
8:00 PM	0	28	4	0	1	0	0	0	0	0	0	0	0	33
9:00 PM	0	11	4	0	0	1	0	0	0	0	0	0	0	16
10:00 PM	0	10	1	0	0	0	0	0	0	0	0	0	0	11
11:00 PM	0	9	3	0	0	0	0	0	0	0	0	0	0	12
Total	0	1,215	347	6	54	10	0	2	4	1	0	0	0	1,639
	0.0%	74.1%	21.2%	0.4%	3.3%	0.6%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	



Location: 73rd St S/O Goose Point Ct
Date Range: 10/10/2024 to 10/12/2024
Site Code: 02

Friday, October 11, 2024
Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	1	40	6	3	3	0	0	0	0	0	0	0	0	53
6:00 AM	0	124	12	0	4	9	0	0	0	0	0	0	0	149
7:00 AM	1	286	26	0	15	7	0	0	2	0	0	0	0	337
8:00 AM	7	216	26	3	14	8	0	0	0	0	0	0	0	274
9:00 AM	3	160	25	1	10	9	0	0	0	0	0	0	0	208
10:00 AM	10	136	35	0	9	1	0	0	0	0	0	0	0	191
11:00 AM	18	125	15	2	7	5	0	0	0	0	0	0	0	172
12:00 PM	13	100	32	0	6	6	0	1	0	0	0	0	0	158
1:00 PM	8	80	33	3	11	5	0	0	0	0	0	0	0	140
2:00 PM	12	105	31	2	11	1	0	1	0	0	0	0	0	163
3:00 PM	11	119	27	0	10	5	0	0	0	0	0	0	0	172
4:00 PM	13	117	26	0	16	7	0	0	0	0	0	0	0	179
5:00 PM	3	114	29	0	6	6	0	0	0	0	0	0	0	158
6:00 PM	4	109	15	0	4	8	0	0	0	0	0	0	0	140
7:00 PM	0	61	6	0	0	4	0	0	0	0	0	0	0	71
8:00 PM	1	29	5	0	0	0	0	0	0	0	0	0	0	35
9:00 PM	0	30	2	0	0	1	0	0	0	0	0	0	0	33
10:00 PM	0	23	1	0	0	1	0	0	0	0	0	0	0	25
11:00 PM	0	7	0	0	1	1	0	0	1	0	0	0	0	10
Total	105	1,995	358	14	128	84	0	2	3	0	0	0	0	2,689
	3.9%	74.2%	13.3%	0.5%	4.8%	3.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

Saturday, October 12, 2024
 Northbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	3
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
7:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	3
8:00 AM	0	14	7	0	0	0	0	0	0	0	0	0	0	21
9:00 AM	0	23	12	0	0	0	0	0	0	0	0	0	0	35
10:00 AM	0	70	11	0	1	2	0	1	0	0	0	0	0	85
11:00 AM	0	84	20	0	2	0	0	0	0	0	0	0	0	106
12:00 PM	0	121	28	0	4	0	0	0	0	0	0	0	0	153
1:00 PM	0	122	34	0	4	0	0	0	0	0	0	0	0	160
2:00 PM	0	90	24	1	3	1	0	0	0	0	0	0	0	119
3:00 PM	0	91	17	0	5	2	0	0	0	0	0	0	0	115
4:00 PM	0	82	16	0	7	0	0	0	0	0	0	0	0	105
5:00 PM	0	59	12	0	1	0	0	0	0	0	0	0	0	72
6:00 PM	0	41	8	0	4	0	0	0	0	0	0	0	0	53
7:00 PM	0	33	8	0	0	0	0	0	0	0	0	0	0	41
8:00 PM	0	22	3	0	1	0	0	0	0	0	0	0	0	26
9:00 PM	0	14	6	0	0	0	0	0	0	0	0	0	0	20
10:00 PM	0	8	3	0	0	0	0	0	0	0	0	0	0	11
11:00 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
Total	0	902	217	1	32	7	0	1	0	0	0	0	0	1,160
	0.0%	77.8%	18.7%	0.1%	2.8%	0.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

Saturday, October 12, 2024
 Southbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	6
1:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	17	0	0	1	0	0	0	0	0	0	0	0	18
6:00 AM	0	26	3	0	1	1	0	0	0	0	0	0	0	31
7:00 AM	3	85	8	0	3	0	0	0	0	0	0	0	0	99
8:00 AM	10	92	6	0	5	4	0	0	0	0	0	0	0	117
9:00 AM	8	95	19	1	5	7	0	0	0	0	0	0	0	135
10:00 AM	19	94	25	1	8	2	0	0	0	0	0	0	0	149
11:00 AM	29	85	14	1	3	6	0	0	0	0	0	0	0	138
12:00 PM	37	99	32	0	8	3	0	0	0	0	0	0	1	180
1:00 PM	29	109	34	1	6	7	0	0	0	0	0	0	0	186
2:00 PM	19	104	24	0	4	7	0	0	0	0	0	0	0	158
3:00 PM	19	125	21	0	12	7	0	0	0	0	0	0	0	184
4:00 PM	8	104	20	1	7	12	0	0	0	0	0	0	0	152
5:00 PM	14	124	29	0	4	17	0	0	0	0	0	0	0	188
6:00 PM	2	85	7	0	3	10	0	0	1	0	0	0	0	108
7:00 PM	0	53	6	1	0	3	0	0	0	0	0	0	0	63
8:00 PM	0	29	6	0	1	7	0	0	0	0	0	0	0	43
9:00 PM	0	22	3	0	0	4	0	0	0	0	0	0	0	29
10:00 PM	0	24	3	0	2	1	0	0	0	0	0	0	0	30
11:00 PM	0	11	1	0	1	1	0	0	0	0	0	0	0	14
Total	197	1,393	265	6	74	99	0	0	1	0	0	0	1	2,036
	9.7%	68.4%	13.0%	0.3%	3.6%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	



Location: 73rd St S/O Goose Point Ct
Date Range: 10/10/2024 to 10/12/2024
Site Code: 02

**Total Study Average
Northbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00 AM	0	2	2	0	0	1	0	0	0	0	0	0	0	5
6:00 AM	0	12	4	0	1	0	0	0	0	0	0	0	0	17
7:00 AM	0	25	6	1	3	1	0	0	1	0	0	0	0	37
8:00 AM	0	41	14	0	3	0	0	0	0	0	0	0	0	58
9:00 AM	0	46	16	0	3	1	0	0	0	0	0	0	0	66
10:00 AM	0	65	17	1	4	2	0	1	0	0	0	0	0	90
11:00 AM	0	85	22	0	3	0	0	0	0	0	0	0	0	110
12:00 PM	0	97	22	1	5	0	0	0	0	0	0	0	0	125
1:00 PM	0	112	30	0	5	0	0	0	1	0	0	0	0	148
2:00 PM	1	119	31	1	4	1	0	0	0	0	0	0	0	157
3:00 PM	0	144	34	1	8	1	0	0	1	0	0	0	0	189
4:00 PM	1	158	34	0	6	1	0	0	0	0	0	0	0	200
5:00 PM	0	137	29	0	5	0	0	0	0	0	0	0	0	171
6:00 PM	0	81	19	0	3	0	0	0	0	0	0	0	0	103
7:00 PM	0	59	13	0	2	0	0	0	0	0	0	0	0	74
8:00 PM	0	30	5	0	1	0	0	0	0	0	0	0	0	36
9:00 PM	0	26	7	0	0	0	0	0	0	0	0	0	0	33
10:00 PM	0	18	3	0	0	0	0	0	0	0	0	0	0	21
11:00 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	12
Total	2	1,281	315	5	56	8	0	1	3	0	0	0	0	1,671
	0.1%	76.7%	18.9%	0.3%	3.4%	0.5%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02

**Total Study Average
 Southbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	1	31	6	1	2	1	0	0	0	0	0	0	0	42
6:00 AM	0	98	13	1	4	5	0	0	0	0	0	0	0	121
7:00 AM	3	229	27	0	10	6	0	0	1	0	0	0	0	276
8:00 AM	7	208	30	2	14	9	0	0	1	0	0	0	0	271
9:00 AM	7	134	26	1	9	6	0	0	0	0	0	0	0	183
10:00 AM	12	105	32	1	10	3	0	0	0	0	0	0	0	163
11:00 AM	20	96	19	1	5	4	0	0	0	0	0	0	0	145
12:00 PM	20	87	26	0	8	5	0	0	0	0	0	0	0	146
1:00 PM	17	89	29	1	9	5	0	0	0	0	0	0	0	150
2:00 PM	12	103	31	2	7	4	0	1	0	0	0	0	0	160
3:00 PM	12	126	32	1	12	5	0	0	0	0	0	0	0	188
4:00 PM	8	123	30	0	12	9	0	0	0	0	0	0	0	182
5:00 PM	7	111	28	0	5	9	0	0	0	0	0	0	0	160
6:00 PM	3	93	15	0	4	7	0	0	0	0	0	0	0	122
7:00 PM	0	51	9	0	1	3	0	0	0	0	0	0	0	64
8:00 PM	0	29	6	0	1	3	0	0	0	0	0	0	0	39
9:00 PM	0	31	2	0	0	3	0	0	0	0	0	0	0	36
10:00 PM	0	24	3	0	1	2	0	0	0	0	0	0	0	30
11:00 PM	0	13	1	0	1	1	0	0	0	0	0	0	0	16
Total	129	1,794	368	11	115	90	0	1	2	0	0	0	0	2,510
	5.1%	71.5%	14.7%	0.4%	4.6%	3.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Vehicle Speed Report Summary

Location: 73rd St S/O Goose Point Ct
Direction: Northbound / Southbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 02

Direction	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Northbound	0	0	1	1	5	81	651	1,535	1,639	812	244	54	0	0	0	0	0	5,023
	0.0%	0.0%	0.0%	0.0%	0.1%	1.6%	13.0%	30.6%	32.6%	16.2%	4.9%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Southbound	13	68	205	95	59	101	298	1,097	2,503	2,246	700	164	0	0	0	0	0	7,549
	0.2%	0.9%	2.7%	1.3%	0.8%	1.3%	3.9%	14.5%	33.2%	29.8%	9.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	13	68	206	96	64	182	949	2,632	4,142	3,058	944	218	0	0	0	0	0	12,572
	0.1%	0.5%	1.6%	0.8%	0.5%	1.4%	7.5%	20.9%	32.9%	24.3%	7.5%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Northbound			Northbound		
50th Percentile (Median)	45.6	mph	Mean (Average) Speed	45.9	mph
85th Percentile	51.6	mph	10 mph Pace	39.8 - 49.8	mph
95th Percentile	55.7	mph	Percent in Pace	63.0	%
Southbound			Southbound		
50th Percentile (Median)	48.9	mph	Mean (Average) Speed	47.3	mph
85th Percentile	54.0	mph	10 mph Pace	44.1 - 54.1	mph
95th Percentile	57.4	mph	Percent in Pace	63.6	%

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Thursday, October 10, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	3	0	3	0	0	0	0	0	0	0	0	7
1:00 AM	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 AM	0	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0	6
6:00 AM	0	0	0	0	0	0	2	9	12	3	1	0	0	0	0	0	0	27
7:00 AM	0	0	0	0	0	0	14	21	26	17	4	1	0	0	0	0	0	83
8:00 AM	0	0	0	0	0	1	13	38	34	17	3	1	0	0	0	0	0	107
9:00 AM	0	0	0	0	1	1	20	27	30	11	5	0	0	0	0	0	0	95
10:00 AM	0	0	0	0	0	1	15	33	26	9	2	0	0	0	0	0	0	86
11:00 AM	0	0	0	0	1	2	32	26	35	19	6	0	0	0	0	0	0	121
12:00 PM	0	0	0	1	0	1	14	42	35	20	5	1	0	0	0	0	0	119
1:00 PM	0	0	0	0	0	4	16	38	45	29	6	1	0	0	0	0	0	139
2:00 PM	0	0	0	0	0	1	20	49	68	22	7	2	0	0	0	0	0	169
3:00 PM	0	0	0	0	0	0	44	75	90	40	10	0	0	0	0	0	0	259
4:00 PM	0	0	0	0	0	2	40	78	109	43	8	2	0	0	0	0	0	282
5:00 PM	0	0	0	0	0	2	27	76	97	46	19	2	0	0	0	0	0	269
6:00 PM	0	0	0	0	0	2	26	62	45	15	2	3	0	0	0	0	0	155
7:00 PM	0	0	0	0	0	4	21	30	47	10	1	3	0	0	0	0	0	116
8:00 PM	0	0	0	0	1	1	6	20	11	8	3	1	0	0	0	0	0	51
9:00 PM	0	0	1	0	0	3	14	23	12	9	3	1	0	0	0	0	0	66
10:00 PM	0	0	0	0	0	0	8	18	10	3	2	1	0	0	0	0	0	42
11:00 PM	0	0	0	0	0	0	0	4	10	2	1	0	0	0	0	0	0	17
Total	0	0	1	1	3	26	338	675	746	327	88	19	0	0	0	0	0	2,224
	0.0%	0.0%	0.0%	0.0%	0.1%	1.2%	15.2%	30.4%	33.5%	14.7%	4.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	45.4 mph	Mean (Average) Speed	45.6 mph
85th Percentile	51.0 mph	10 mph Pace	39.5 - 49.5 mph
95th Percentile	54.8 mph	Percent in Pace	64.2 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Thursday, October 10, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	0	0	0	2	1	4	4	0	0	0	0	0	11
5:00 AM	0	0	1	0	0	0	0	8	17	15	16	1	0	0	0	0	0	58
6:00 AM	0	0	0	0	0	0	5	18	67	82	10	3	0	0	0	0	0	185
7:00 AM	0	1	1	0	0	3	10	58	154	140	19	4	0	0	0	0	0	390
8:00 AM	0	0	2	0	0	2	13	59	150	143	45	7	0	0	0	0	0	421
9:00 AM	0	0	8	2	0	0	4	18	46	89	32	7	0	0	0	0	0	206
10:00 AM	1	1	4	0	2	7	6	26	49	37	13	5	0	0	0	0	0	151
11:00 AM	0	3	10	1	1	0	6	24	46	22	12	3	0	0	0	0	0	128
12:00 PM	1	2	3	5	0	3	2	15	32	21	16	4	0	0	0	0	0	104
1:00 PM	0	4	7	1	0	1	9	20	34	37	9	5	0	0	0	0	0	127
2:00 PM	0	2	0	0	0	4	9	35	44	51	6	3	0	0	0	0	0	154
3:00 PM	0	0	3	0	0	7	12	33	62	57	28	4	0	0	0	0	0	206
4:00 PM	0	0	2	1	0	1	3	24	73	82	28	4	0	0	0	0	0	218
5:00 PM	0	0	2	2	1	0	9	11	43	49	19	2	0	0	0	0	0	138
6:00 PM	0	1	0	1	1	0	5	20	54	27	7	4	0	0	0	0	0	120
7:00 PM	0	0	0	0	0	0	3	12	15	24	3	1	0	0	0	0	0	58
8:00 PM	0	0	0	0	0	0	1	4	24	9	2	0	0	0	0	0	0	40
9:00 PM	0	0	0	0	1	0	5	10	21	5	1	1	0	0	0	0	0	44
10:00 PM	0	0	0	0	0	0	4	15	12	3	0	0	0	0	0	0	0	34
11:00 PM	0	0	0	0	0	0	3	3	4	13	1	1	0	0	0	0	0	25
Total	2	14	43	13	6	28	109	414	951	909	272	63	0	0	0	0	0	2,824
	0.1%	0.5%	1.5%	0.5%	0.2%	1.0%	3.9%	14.7%	33.7%	32.2%	9.6%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	49.3 mph	Mean (Average) Speed	48.3 mph
85th Percentile	54.1 mph	10 mph Pace	43.7 - 53.7 mph
95th Percentile	57.6 mph	Percent in Pace	66.54 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Friday, October 11, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	4	4	2	2	0	1	0	0	0	0	0	13
1:00 AM	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	0	0	0	0	2	3	3	0	0	0	0	0	0	8
6:00 AM	0	0	0	0	0	0	2	6	7	3	2	0	0	0	0	0	0	20
7:00 AM	0	0	0	0	0	1	2	6	10	4	0	0	0	0	0	0	0	23
8:00 AM	0	0	0	0	0	2	3	20	13	4	4	0	0	0	0	0	0	46
9:00 AM	0	0	0	0	0	2	6	18	25	8	6	1	0	0	0	0	0	66
10:00 AM	0	0	0	0	0	3	12	34	28	16	2	0	0	0	0	0	0	95
11:00 AM	0	0	0	0	1	0	13	35	32	19	5	1	0	0	0	0	0	106
12:00 PM	0	0	0	0	0	2	11	34	29	19	6	2	0	0	0	0	0	103
1:00 PM	0	0	0	0	0	2	15	51	44	23	10	1	0	0	0	0	0	146
2:00 PM	0	0	0	0	0	4	21	62	52	37	7	0	0	0	0	0	0	183
3:00 PM	0	0	0	0	0	1	21	55	62	35	15	3	0	0	0	0	0	192
4:00 PM	0	0	0	0	0	5	19	54	67	44	19	4	0	0	0	0	0	212
5:00 PM	0	0	0	0	0	2	18	44	75	25	8	2	0	0	0	0	0	174
6:00 PM	0	0	0	0	1	3	10	31	33	17	7	2	0	0	0	0	0	104
7:00 PM	0	0	0	0	0	0	7	22	18	13	2	2	0	0	0	0	0	64
8:00 PM	0	0	0	0	0	0	4	8	13	6	2	0	0	0	0	0	0	33
9:00 PM	0	0	0	0	0	0	1	4	7	1	2	1	0	0	0	0	0	16
10:00 PM	0	0	0	0	0	0	3	2	2	2	1	1	0	0	0	0	0	11
11:00 PM	0	0	0	0	0	0	2	4	4	1	0	1	0	0	0	0	0	12
Total	0	0	0	0	2	27	176	498	528	284	102	22	0	0	0	0	0	1,639
	0.0%	0.0%	0.0%	0.0%	0.1%	1.6%	10.7%	30.4%	32.2%	17.3%	6.2%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	46.1 mph	Mean (Average) Speed	46.3 mph
85th Percentile	51.8 mph	10 mph Pace	41.0 - 51.0 mph
95th Percentile	56.5 mph	Percent in Pace	63.0 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Friday, October 11, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
2:00 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
3:00 AM	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	0	0	0	0	6	0	1	0	0	0	0	0	7
5:00 AM	0	0	0	0	1	1	0	6	12	15	13	5	0	0	0	0	0	53
6:00 AM	0	0	0	0	0	0	2	11	48	54	30	4	0	0	0	0	0	149
7:00 AM	1	0	0	0	0	1	13	36	131	136	14	5	0	0	0	0	0	337
8:00 AM	0	1	2	2	2	8	6	21	115	79	34	4	0	0	0	0	0	274
9:00 AM	0	0	1	1	0	4	3	33	76	56	30	4	0	0	0	0	0	208
10:00 AM	0	0	7	2	6	0	11	26	70	53	12	4	0	0	0	0	0	191
11:00 AM	0	6	11	6	1	3	8	47	47	34	8	1	0	0	0	0	0	172
12:00 PM	2	4	4	1	5	7	9	27	56	26	13	4	0	0	0	0	0	158
1:00 PM	0	3	3	1	2	3	6	18	47	41	13	3	0	0	0	0	0	140
2:00 PM	0	3	4	5	3	7	11	27	42	41	18	2	0	0	0	0	0	163
3:00 PM	0	2	5	2	1	3	6	21	55	59	16	2	0	0	0	0	0	172
4:00 PM	2	2	4	0	1	0	3	27	66	54	14	6	0	0	0	0	0	179
5:00 PM	0	1	2	0	0	0	3	19	49	59	21	4	0	0	0	0	0	158
6:00 PM	0	0	3	0	2	0	12	36	53	25	8	1	0	0	0	0	0	140
7:00 PM	0	0	0	0	0	0	3	9	21	32	3	3	0	0	0	0	0	71
8:00 PM	1	0	0	8	0	0	2	6	8	10	0	0	0	0	0	0	0	35
9:00 PM	0	0	0	0	0	0	0	1	11	20	1	0	0	0	0	0	0	33
10:00 PM	0	0	0	0	0	0	0	0	1	12	11	1	0	0	0	0	0	25
11:00 PM	0	0	0	0	0	0	1	3	2	0	4	0	0	0	0	0	0	10
Total	6	22	46	28	24	37	99	374	920	815	263	55	0	0	0	0	0	2,689
	0.2%	0.8%	1.7%	1.0%	0.9%	1.4%	3.7%	13.9%	34.2%	30.3%	9.8%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	49.1 mph	Mean (Average) Speed	47.8 mph
85th Percentile	54.2 mph	10 mph Pace	44.1 - 54.1 mph
95th Percentile	57.8 mph	Percent in Pace	65.34 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Saturday, October 12, 2024
 Northbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	0	4	0	1	1	2	0	0	0	0	0	9
1:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3
5:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6:00 AM	0	0	0	0	0	0	1	1	2	0	1	0	0	0	0	0	0	5
7:00 AM	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	4	4	7	6	0	0	0	0	0	0	0	21
9:00 AM	0	0	0	0	0	0	1	14	13	7	0	0	0	0	0	0	0	35
10:00 AM	0	0	0	0	0	0	10	31	19	18	5	2	0	0	0	0	0	85
11:00 AM	0	0	0	0	0	3	12	33	37	18	3	0	0	0	0	0	0	106
12:00 PM	0	0	0	0	0	3	16	49	58	24	3	0	0	0	0	0	0	153
1:00 PM	0	0	0	0	0	3	26	52	46	29	4	0	0	0	0	0	0	160
2:00 PM	0	0	0	0	0	4	15	38	32	20	9	1	0	0	0	0	0	119
3:00 PM	0	0	0	0	0	5	13	39	42	11	5	0	0	0	0	0	0	115
4:00 PM	0	0	0	0	0	4	8	28	33	22	8	2	0	0	0	0	0	105
5:00 PM	0	0	0	0	0	1	5	23	25	12	6	0	0	0	0	0	0	72
6:00 PM	0	0	0	0	0	3	8	14	14	11	2	1	0	0	0	0	0	53
7:00 PM	0	0	0	0	0	0	12	15	9	4	0	1	0	0	0	0	0	41
8:00 PM	0	0	0	0	0	0	1	7	12	4	0	2	0	0	0	0	0	26
9:00 PM	0	0	0	0	0	0	3	4	4	5	2	2	0	0	0	0	0	20
10:00 PM	0	0	0	0	0	1	1	1	5	1	2	0	0	0	0	0	0	11
11:00 PM	0	0	0	0	0	0	0	2	4	3	0	0	0	0	0	0	0	9
Total	0	0	0	0	0	28	137	362	365	201	54	13	0	0	0	0	0	1,160
	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	11.8%	31.2%	31.5%	17.3%	4.7%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	45.6 mph	Mean (Average) Speed	45.9 mph
85th Percentile	51.9 mph	10 mph Pace	39.7 - 49.7 mph
95th Percentile	55.8 mph	Percent in Pace	63.4 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



Saturday, October 12, 2024
 Southbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	1	1	0	4	0	0	0	0	0	6
1:00 AM	0	0	0	0	0	0	0	1	0	2	0	2	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	0	0	0	0	1	1	12	4	0	0	0	0	0	18
6:00 AM	0	0	0	0	0	0	0	2	2	18	8	1	0	0	0	0	0	31
7:00 AM	0	0	2	0	0	0	0	18	33	41	3	2	0	0	0	0	0	99
8:00 AM	1	0	6	2	0	8	2	10	29	50	9	0	0	0	0	0	0	117
9:00 AM	2	1	4	1	3	6	4	18	42	35	17	2	0	0	0	0	0	135
10:00 AM	0	2	12	7	5	0	8	23	47	37	7	1	0	0	0	0	0	149
11:00 AM	0	6	17	11	1	5	5	15	43	28	4	3	0	0	0	0	0	138
12:00 PM	0	6	28	11	2	3	10	27	42	37	11	3	0	0	0	0	0	180
1:00 PM	1	3	22	4	7	4	5	42	51	31	13	3	0	0	0	0	0	186
2:00 PM	0	4	8	5	8	2	11	37	44	28	10	1	0	0	0	0	0	158
3:00 PM	0	4	9	9	2	4	9	26	65	40	12	4	0	0	0	0	0	184
4:00 PM	0	1	1	3	1	1	6	18	44	57	17	3	0	0	0	0	0	152
5:00 PM	1	5	6	1	0	3	16	22	71	41	20	2	0	0	0	0	0	188
6:00 PM	0	0	1	0	0	0	6	18	56	21	6	0	0	0	0	0	0	108
7:00 PM	0	0	0	0	0	0	4	6	19	28	5	1	0	0	0	0	0	63
8:00 PM	0	0	0	0	0	0	1	10	18	2	6	6	0	0	0	0	0	43
9:00 PM	0	0	0	0	0	0	2	7	9	8	1	2	0	0	0	0	0	29
10:00 PM	0	0	0	0	0	0	0	6	9	12	2	1	0	0	0	0	0	30
11:00 PM	0	0	0	0	0	0	1	3	5	3	2	0	0	0	0	0	0	14
Total	5	32	116	54	29	36	90	309	632	522	165	46	0	0	0	0	0	2,036
	0.2%	1.6%	5.7%	2.7%	1.4%	1.8%	4.4%	15.2%	31.0%	25.6%	8.1%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	47.8 mph	Mean (Average) Speed	45.1 mph
85th Percentile	53.6 mph	10 mph Pace	44.0 - 54.0 mph
95th Percentile	56.9 mph	Percent in Pace	57.56 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



**Total Study Average
Northbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	2	3	2	1	0	1	0	0	0	0	0	10
1:00 AM	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	5
6:00 AM	0	0	0	0	0	0	2	5	7	2	1	0	0	0	0	0	0	17
7:00 AM	0	0	0	0	0	0	5	9	12	8	1	0	0	0	0	0	0	35
8:00 AM	0	0	0	0	0	1	7	21	18	9	2	0	0	0	0	0	0	58
9:00 AM	0	0	0	0	0	1	9	20	23	9	4	0	0	0	0	0	0	66
10:00 AM	0	0	0	0	0	1	12	33	24	14	3	1	0	0	0	0	0	88
11:00 AM	0	0	0	0	1	2	19	31	35	19	5	0	0	0	0	0	0	112
12:00 PM	0	0	0	0	0	2	14	42	41	21	5	1	0	0	0	0	0	126
1:00 PM	0	0	0	0	0	3	19	47	45	27	7	1	0	0	0	0	0	149
2:00 PM	0	0	0	0	0	3	19	50	51	26	8	1	0	0	0	0	0	158
3:00 PM	0	0	0	0	0	2	26	56	65	29	10	1	0	0	0	0	0	189
4:00 PM	0	0	0	0	0	4	22	53	70	36	12	3	0	0	0	0	0	200
5:00 PM	0	0	0	0	0	2	17	48	66	28	11	1	0	0	0	0	0	173
6:00 PM	0	0	0	0	0	3	15	36	31	14	4	2	0	0	0	0	0	105
7:00 PM	0	0	0	0	0	1	13	22	25	9	1	2	0	0	0	0	0	73
8:00 PM	0	0	0	0	0	0	4	12	12	6	2	1	0	0	0	0	0	37
9:00 PM	0	0	0	0	0	1	6	10	8	5	2	1	0	0	0	0	0	33
10:00 PM	0	0	0	0	0	0	4	7	6	2	2	1	0	0	0	0	0	22
11:00 PM	0	0	0	0	0	0	1	3	6	2	0	0	0	0	0	0	0	12
Total	0	0	0	0	1	27	219	511	549	272	82	17	0	0	0	0	0	1,678
	0.0%	0.0%	0.0%	0.0%	0.1%	1.6%	13.1%	30.5%	32.7%	16.2%	4.9%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	45.6 mph	Mean (Average) Speed	45.9 mph
85th Percentile	51.6 mph	10 mph Pace	39.8 - 49.8 mph
95th Percentile	55.7 mph	Percent in Pace	63.0 %

Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 02



**Total Study Average
Southbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	0	0	4
1:00 AM	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	0	0	1	3	1	2	0	0	0	0	0	7
5:00 AM	0	0	0	0	0	0	0	5	10	10	14	3	0	0	0	0	0	42
6:00 AM	0	0	0	0	0	0	2	10	39	51	16	3	0	0	0	0	0	121
7:00 AM	0	0	1	0	0	1	8	37	106	106	12	4	0	0	0	0	0	275
8:00 AM	0	0	3	1	1	6	7	30	98	91	29	4	0	0	0	0	0	270
9:00 AM	1	0	4	1	1	3	4	23	55	60	26	4	0	0	0	0	0	182
10:00 AM	0	1	8	3	4	2	8	25	55	42	11	3	0	0	0	0	0	162
11:00 AM	0	5	13	6	1	3	6	29	45	28	8	2	0	0	0	0	0	146
12:00 PM	1	4	12	6	2	4	7	23	43	28	13	4	0	0	0	0	0	147
1:00 PM	0	3	11	2	3	3	7	27	44	36	12	4	0	0	0	0	0	152
2:00 PM	0	3	4	3	4	4	10	33	43	40	11	2	0	0	0	0	0	157
3:00 PM	0	2	6	4	1	5	9	27	61	52	19	3	0	0	0	0	0	189
4:00 PM	1	1	2	1	1	1	4	23	61	64	20	4	0	0	0	0	0	183
5:00 PM	0	2	3	1	0	1	9	17	54	50	20	3	0	0	0	0	0	160
6:00 PM	0	0	1	0	1	0	8	25	54	24	7	2	0	0	0	0	0	122
7:00 PM	0	0	0	0	0	0	3	9	18	28	4	2	0	0	0	0	0	64
8:00 PM	0	0	0	3	0	0	1	7	17	7	3	2	0	0	0	0	0	40
9:00 PM	0	0	0	0	0	0	2	6	14	11	1	1	0	0	0	0	0	35
10:00 PM	0	0	0	0	0	0	1	7	7	9	4	1	0	0	0	0	0	29
11:00 PM	0	0	0	0	0	0	2	3	4	5	2	0	0	0	0	0	0	16
Total	3	21	68	31	19	33	98	366	834	748	233	55	0	0	0	0	0	2,509
	0.1%	0.8%	2.7%	1.2%	0.8%	1.3%	3.9%	14.6%	33.2%	29.8%	9.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	48.9 mph	Mean (Average) Speed	47.3 mph
85th Percentile	54.0 mph	10 mph Pace	44.1 - 54.1 mph
95th Percentile	57.4 mph	Percent in Pace	63.6 %



Location: 73rd St S/O Goose Point Ct
 Date Range: 10/10/2024 - 10/16/2024
 Site Code: 02

Time	Thursday 10/10/2024			Friday 10/11/2024			Saturday 10/12/2024			Sunday 10/13/2024			Monday 10/14/2024			Tuesday 10/15/2024			Wednesday 10/16/2024			Mid-Week Average		
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	7	2	9	13	6	19	9	6	15	-	-	-	-	-	-	-	-	-	7	2	9			
1:00 AM	4	0	4	4	2	6	3	5	8	-	-	-	-	-	-	-	-	-	4	0	4			
2:00 AM	2	0	2	3	2	5	3	1	4	-	-	-	-	-	-	-	-	-	2	0	2			
3:00 AM	1	4	5	3	4	7	2	0	2	-	-	-	-	-	-	-	-	-	1	4	5			
4:00 AM	1	11	12	2	7	9	3	2	5	-	-	-	-	-	-	-	-	-	1	11	12			
5:00 AM	6	58	64	8	53	61	1	18	19	-	-	-	-	-	-	-	-	-	6	58	64			
6:00 AM	27	185	212	20	149	169	5	31	36	-	-	-	-	-	-	-	-	-	27	185	212			
7:00 AM	83	390	473	23	337	360	3	99	102	-	-	-	-	-	-	-	-	-	83	390	473			
8:00 AM	107	421	528	46	274	320	21	117	138	-	-	-	-	-	-	-	-	-	107	421	528			
9:00 AM	95	206	301	66	208	274	35	135	170	-	-	-	-	-	-	-	-	-	95	206	301			
10:00 AM	86	151	237	95	191	286	85	149	234	-	-	-	-	-	-	-	-	-	86	151	237			
11:00 AM	121	128	249	106	172	278	106	138	244	-	-	-	-	-	-	-	-	-	121	128	249			
12:00 PM	119	104	223	103	158	261	153	180	333	-	-	-	-	-	-	-	-	-	119	104	223			
1:00 PM	139	127	266	146	140	286	160	186	346	-	-	-	-	-	-	-	-	-	139	127	266			
2:00 PM	169	154	323	183	163	346	119	158	277	-	-	-	-	-	-	-	-	-	169	154	323			
3:00 PM	259	206	465	192	172	364	115	184	299	-	-	-	-	-	-	-	-	-	259	206	465			
4:00 PM	282	218	500	212	179	391	105	152	257	-	-	-	-	-	-	-	-	-	282	218	500			
5:00 PM	269	138	407	174	158	332	72	188	260	-	-	-	-	-	-	-	-	-	269	138	407			
6:00 PM	155	120	275	104	140	244	53	108	161	-	-	-	-	-	-	-	-	-	155	120	275			
7:00 PM	116	58	174	64	71	135	41	63	104	-	-	-	-	-	-	-	-	-	116	58	174			
8:00 PM	51	40	91	33	35	68	26	43	69	-	-	-	-	-	-	-	-	-	51	40	91			
9:00 PM	66	44	110	16	33	49	20	29	49	-	-	-	-	-	-	-	-	-	66	44	110			
10:00 PM	42	34	76	11	25	36	11	30	41	-	-	-	-	-	-	-	-	-	42	34	76			
11:00 PM	17	25	42	12	10	22	9	14	23	-	-	-	-	-	-	-	-	-	17	25	42			
Total	2,224	2,824	5,048	1,639	2,689	4,328	1,160	2,036	3,196	-	-	-	-	-	-	-	-	-	2,224	2,824	5,048			
Percent	44%	56%		38%	62%		36%	64%		-	-	-	-	-	-	-	-	-	44%	56%				
AM Peak	11:00	08:00	08:00	11:00	07:00	07:00	11:00	10:00	11:00	-	-	-	-	-	-	-	-	-	11:00	08:00	08:00			
Vol.	121	421	528	106	337	360	106	149	244	-	-	-	-	-	-	-	-	-	121	421	528			
PM Peak	16:00	16:00	16:00	16:00	16:00	16:00	13:00	17:00	13:00	-	-	-	-	-	-	-	-	-	16:00	16:00	16:00			
Vol.	282	218	500	212	179	391	160	188	346	-	-	-	-	-	-	-	-	-	282	218	500			

1. Mid-week average includes data between Tuesday and Thursday.

Vehicle Classification Report Summary

Location: Niwot Rd E/O 73rd St
Count Direction: Eastbound / Westbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

Direction	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Eastbound	168	5,419	742	11	171	147	0	0	25	2	0	0	2	6,687
	2.5%	81.0%	11.1%	0.2%	2.6%	2.2%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	
Westbound	45	4,562	839	16	155	108	0	2	10	1	0	0	1	5,739
	0.8%	79.5%	14.6%	0.3%	2.7%	1.9%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	
Total	213	9,981	1,581	27	326	255	0	2	35	3	0	0	3	12,426
	1.7%	80.3%	12.7%	0.2%	2.6%	2.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	

FHWA Vehicle Classification	
Class 1 - Motorcycles	Class 8 - Four or Fewer Axle Single-Trailer Trucks
Class 2 - Passenger Cars	Class 9 - Five-Axle Single-Trailer Trucks
Class 3 - Other Two-Axle, Four-Tire Single Unit Vehicles	Class 10 - Six or More Axle Single-Trailer Trucks
Class 4 - Buses	Class 11 - Five or fewer Axle Multi-Trailer Trucks
Class 5 - Two-Axle, Six-Tire, Single-Unit Trucks	Class 12 - Six-Axle Multi-Trailer Trucks
Class 6 - Three-Axle Single-Unit Trucks	Class 13 - Seven or More Axle Multi-Trailer Trucks
Class 7 - Four or More Axle Single-Unit Trucks	



Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

Thursday, October 10, 2024
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
4:00 AM	0	10	6	0	0	0	0	0	0	0	0	0	0	16
5:00 AM	0	20	10	0	3	0	0	0	0	0	0	0	0	33
6:00 AM	0	71	7	1	4	0	0	0	0	0	0	0	0	83
7:00 AM	2	163	24	0	8	0	0	0	0	0	0	0	0	197
8:00 AM	2	159	33	3	8	2	0	0	1	0	0	0	0	208
9:00 AM	4	135	20	1	8	4	0	0	1	0	0	0	0	173
10:00 AM	5	119	29	0	6	3	0	0	2	0	0	0	0	164
11:00 AM	6	135	24	0	5	1	0	0	2	0	0	0	0	173
12:00 PM	9	107	21	0	5	3	0	0	2	0	0	0	1	148
1:00 PM	4	134	20	0	3	3	0	0	3	0	0	0	0	167
2:00 PM	3	143	24	0	2	3	0	0	4	1	0	0	0	180
3:00 PM	4	170	27	1	8	6	0	0	0	0	0	0	0	216
4:00 PM	2	213	32	2	7	5	0	0	2	0	0	0	0	263
5:00 PM	2	163	22	0	2	3	0	0	1	0	0	0	0	193
6:00 PM	4	116	10	0	2	3	0	0	0	0	0	0	0	135
7:00 PM	0	53	7	0	1	1	0	0	0	0	0	0	0	62
8:00 PM	0	30	4	0	2	1	0	0	0	0	0	0	0	37
9:00 PM	0	45	5	0	0	2	0	0	0	0	0	0	0	52
10:00 PM	0	40	3	0	0	0	0	0	0	0	0	0	0	43
11:00 PM	0	27	3	0	0	0	0	0	0	0	0	0	0	30
Total	47	2,057	331	8	75	40	0	0	18	1	0	0	1	2,578
	1.8%	79.8%	12.8%	0.3%	2.9%	1.6%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	



Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03

Thursday, October 10, 2024
 Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	8	2	0	1	0	0	0	0	0	0	0	0	11
6:00 AM	0	32	13	0	3	1	0	0	0	0	0	0	0	49
7:00 AM	0	83	28	4	8	2	0	0	1	0	0	0	0	126
8:00 AM	0	139	22	1	10	1	0	0	0	0	0	0	1	174
9:00 AM	1	94	30	0	4	1	0	0	0	0	0	0	0	130
10:00 AM	4	88	18	1	6	1	0	0	0	0	0	0	0	118
11:00 AM	1	102	32	1	8	2	0	0	0	0	0	0	0	146
12:00 PM	1	89	31	0	9	1	0	0	0	0	0	0	0	131
1:00 PM	3	103	36	1	7	1	0	0	1	0	0	0	0	152
2:00 PM	3	126	30	1	3	5	0	0	0	0	0	0	0	168
3:00 PM	0	134	30	1	5	2	0	0	2	0	0	0	0	174
4:00 PM	1	135	26	1	6	2	0	0	0	0	0	0	0	171
5:00 PM	1	130	17	0	3	2	0	0	2	0	0	0	0	155
6:00 PM	1	99	13	0	5	1	0	0	0	0	0	0	0	119
7:00 PM	0	101	13	0	2	3	0	0	0	0	0	0	0	119
8:00 PM	0	63	7	0	0	1	0	0	0	0	0	0	0	71
9:00 PM	0	58	10	0	0	0	0	0	0	0	0	0	0	68
10:00 PM	0	39	4	0	0	0	0	0	0	0	0	0	0	43
11:00 PM	0	14	3	0	0	0	0	0	0	0	0	0	0	17
Total	16	1,643	367	11	80	26	0	0	6	0	0	0	1	2,150
	0.7%	76.4%	17.1%	0.5%	3.7%	1.2%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	



Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03

Friday, October 11, 2024
 Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	8
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	4	0	0	1	0	0	0	0	0	0	0	0	5
4:00 AM	0	6	4	0	0	0	0	0	0	0	0	0	0	10
5:00 AM	0	23	3	0	4	2	0	0	0	0	0	0	0	32
6:00 AM	0	64	6	0	5	0	0	0	0	0	0	0	0	75
7:00 AM	1	95	16	0	5	0	0	0	1	0	0	0	0	118
8:00 AM	2	146	17	0	8	3	0	0	0	0	0	0	0	176
9:00 AM	2	131	18	1	4	5	0	0	1	0	0	0	0	162
10:00 AM	0	127	20	1	5	5	0	0	0	0	0	0	0	158
11:00 AM	8	132	14	0	3	7	0	0	0	0	0	0	0	164
12:00 PM	6	145	17	0	4	5	0	0	1	0	0	0	0	178
1:00 PM	4	135	20	0	2	5	0	0	0	0	0	0	0	166
2:00 PM	2	132	13	0	5	10	0	0	1	0	0	0	0	163
3:00 PM	4	160	19	0	7	3	0	0	0	0	0	0	0	193
4:00 PM	4	184	22	0	6	2	0	0	0	1	0	0	0	219
5:00 PM	3	167	18	0	5	0	0	0	1	0	0	0	0	194
6:00 PM	1	113	17	0	4	3	0	0	0	0	0	0	0	138
7:00 PM	0	56	7	0	0	1	0	0	0	0	0	0	0	64
8:00 PM	0	49	4	0	0	3	0	0	0	0	0	0	0	56
9:00 PM	0	20	1	0	0	1	0	0	0	0	0	0	0	22
10:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	18
11:00 PM	0	10	0	0	1	0	0	0	0	0	0	0	0	11
Total	37	1,925	240	2	69	55	0	0	5	1	0	0	0	2,334
	1.6%	82.5%	10.3%	0.1%	3.0%	2.4%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03

Friday, October 11, 2024

Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	3	0	0	1	0	0	1	0	0	0	0	13
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	9	1	0	0	1	0	0	0	0	0	0	0	11
6:00 AM	0	27	8	0	1	1	0	0	0	0	0	0	0	37
7:00 AM	1	63	19	1	5	3	0	0	0	0	0	0	0	92
8:00 AM	0	88	17	0	9	2	0	0	1	0	0	0	0	117
9:00 AM	2	86	18	0	3	1	0	0	0	1	0	0	0	111
10:00 AM	3	97	15	1	5	3	0	0	0	0	0	0	0	124
11:00 AM	0	93	16	1	3	4	0	0	0	0	0	0	0	117
12:00 PM	2	99	16	0	2	5	0	0	0	0	0	0	0	124
1:00 PM	1	110	34	0	4	1	0	0	0	0	0	0	0	150
2:00 PM	0	120	24	0	3	4	0	1	1	0	0	0	0	153
3:00 PM	1	110	25	0	1	5	0	0	0	0	0	0	0	142
4:00 PM	0	133	21	0	2	4	0	0	0	0	0	0	0	160
5:00 PM	1	142	15	1	0	5	0	0	0	0	0	0	0	164
6:00 PM	1	104	24	0	4	1	0	0	0	0	0	0	0	134
7:00 PM	0	75	7	0	1	3	0	0	0	0	0	0	0	86
8:00 PM	0	49	8	0	4	1	0	0	0	0	0	0	0	62
9:00 PM	0	40	4	0	0	2	0	0	0	0	0	0	0	46
10:00 PM	0	20	3	0	0	0	0	0	0	0	0	0	0	23
11:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	18
Total	12	1,499	284	4	47	47	0	1	3	1	0	0	0	1,898
	0.6%	79.0%	15.0%	0.2%	2.5%	2.5%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	



Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

Saturday, October 12, 2024
Eastbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	5
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2
5:00 AM	0	9	1	0	1	0	0	0	0	0	0	0	0	11
6:00 AM	0	10	1	0	4	0	0	0	0	0	0	0	0	15
7:00 AM	0	47	6	0	0	1	0	0	0	0	0	0	0	54
8:00 AM	2	81	11	0	0	5	0	0	1	0	0	0	0	100
9:00 AM	5	111	17	0	3	4	0	0	0	0	0	0	0	140
10:00 AM	6	116	15	0	1	3	0	0	0	0	0	0	0	141
11:00 AM	12	109	12	0	2	4	0	0	0	0	0	0	0	139
12:00 PM	19	112	14	0	2	2	0	0	0	0	0	0	1	150
1:00 PM	15	125	16	0	1	3	0	0	1	0	0	0	0	161
2:00 PM	9	115	12	0	5	6	0	0	0	0	0	0	0	147
3:00 PM	6	117	14	0	4	4	0	0	0	0	0	0	0	145
4:00 PM	3	127	13	0	1	1	0	0	0	0	0	0	0	145
5:00 PM	5	139	11	0	2	6	0	0	0	0	0	0	0	163
6:00 PM	2	81	10	0	0	6	0	0	0	0	0	0	0	99
7:00 PM	0	45	4	1	1	1	0	0	0	0	0	0	0	52
8:00 PM	0	28	5	0	0	2	0	0	0	0	0	0	0	35
9:00 PM	0	32	3	0	0	0	0	0	0	0	0	0	0	35
10:00 PM	0	17	3	0	0	2	0	0	0	0	0	0	0	22
11:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	8
Total	84	1,437	171	1	27	52	0	0	2	0	0	0	1	1,775
	4.7%	81.0%	9.6%	0.1%	1.5%	2.9%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	



Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03

Saturday, October 12, 2024
 Westbound

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	13
1:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	2	1	0	0	1	0	0	0	0	0	0	0	4
3:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
4:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	7
5:00 AM	0	5	1	0	0	1	0	0	0	0	0	0	0	7
6:00 AM	0	12	3	0	0	0	0	0	0	0	0	0	0	15
7:00 AM	0	29	7	0	1	1	0	0	0	0	0	0	0	38
8:00 AM	0	89	14	0	4	3	0	0	0	0	0	0	0	110
9:00 AM	2	69	9	1	0	1	0	0	0	0	0	0	0	82
10:00 AM	1	100	10	0	3	1	0	0	0	0	0	0	0	115
11:00 AM	3	104	20	0	1	5	0	0	0	0	0	0	0	133
12:00 PM	3	138	21	0	4	3	0	1	0	0	0	0	0	170
1:00 PM	2	133	29	0	2	5	0	0	0	0	0	0	0	171
2:00 PM	3	117	13	0	2	2	0	0	0	0	0	0	0	137
3:00 PM	1	129	7	0	5	1	0	0	1	0	0	0	0	144
4:00 PM	2	110	13	0	3	2	0	0	0	0	0	0	0	130
5:00 PM	0	114	9	0	0	0	0	0	0	0	0	0	0	123
6:00 PM	0	76	8	0	1	4	0	0	0	0	0	0	0	89
7:00 PM	0	58	3	0	0	2	0	0	0	0	0	0	0	63
8:00 PM	0	41	5	0	2	1	0	0	0	0	0	0	0	49
9:00 PM	0	31	6	0	0	1	0	0	0	0	0	0	0	38
10:00 PM	0	23	2	0	0	1	0	0	0	0	0	0	0	26
11:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	18
Total	17	1,420	188	1	28	35	0	1	1	0	0	0	0	1,691
	1.0%	84.0%	11.1%	0.1%	1.7%	2.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	



Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

**Total Study Average
Eastbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	3
4:00 AM	0	5	4	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	17	5	0	3	1	0	0	0	0	0	0	0	26
6:00 AM	0	48	5	0	4	0	0	0	0	0	0	0	0	57
7:00 AM	1	102	15	0	4	0	0	0	0	0	0	0	0	122
8:00 AM	2	129	20	1	5	3	0	0	1	0	0	0	0	161
9:00 AM	4	126	18	1	5	4	0	0	1	0	0	0	0	159
10:00 AM	4	121	21	0	4	4	0	0	1	0	0	0	0	155
11:00 AM	9	125	17	0	3	4	0	0	1	0	0	0	0	159
12:00 PM	11	121	17	0	4	3	0	0	1	0	0	0	1	158
1:00 PM	8	131	19	0	2	4	0	0	1	0	0	0	0	165
2:00 PM	5	130	16	0	4	6	0	0	2	0	0	0	0	163
3:00 PM	5	149	20	0	6	4	0	0	0	0	0	0	0	184
4:00 PM	3	175	22	1	5	3	0	0	1	0	0	0	0	210
5:00 PM	3	156	17	0	3	3	0	0	1	0	0	0	0	183
6:00 PM	2	103	12	0	2	4	0	0	0	0	0	0	0	123
7:00 PM	0	51	6	0	1	1	0	0	0	0	0	0	0	59
8:00 PM	0	36	4	0	1	2	0	0	0	0	0	0	0	43
9:00 PM	0	32	3	0	0	1	0	0	0	0	0	0	0	36
10:00 PM	0	24	3	0	0	1	0	0	0	0	0	0	0	28
11:00 PM	0	15	1	0	0	0	0	0	0	0	0	0	0	16
Total	57	1,805	246	3	57	48	0	0	10	0	0	0	1	2,227
	2.6%	81.1%	11.0%	0.1%	2.6%	2.2%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.



Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

**Total Study Average
Westbound**

Time	FHWA Vehicle Classification													Total Volume
	1	2	3	4	5	6	7	8	9	10	11	12	13	
12:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	9
1:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00 AM	0	7	1	0	0	1	0	0	0	0	0	0	0	9
6:00 AM	0	24	8	0	1	1	0	0	0	0	0	0	0	34
7:00 AM	0	58	18	2	5	2	0	0	0	0	0	0	0	85
8:00 AM	0	105	18	0	8	2	0	0	0	0	0	0	0	133
9:00 AM	2	83	19	0	2	1	0	0	0	0	0	0	0	107
10:00 AM	3	95	14	1	5	2	0	0	0	0	0	0	0	120
11:00 AM	1	100	23	1	4	4	0	0	0	0	0	0	0	133
12:00 PM	2	109	23	0	5	3	0	0	0	0	0	0	0	142
1:00 PM	2	115	33	0	4	2	0	0	0	0	0	0	0	156
2:00 PM	2	121	22	0	3	4	0	0	0	0	0	0	0	152
3:00 PM	1	124	21	0	4	3	0	0	1	0	0	0	0	154
4:00 PM	1	126	20	0	4	3	0	0	0	0	0	0	0	154
5:00 PM	1	129	14	0	1	2	0	0	1	0	0	0	0	148
6:00 PM	1	93	15	0	3	2	0	0	0	0	0	0	0	114
7:00 PM	0	78	8	0	1	3	0	0	0	0	0	0	0	90
8:00 PM	0	51	7	0	2	1	0	0	0	0	0	0	0	61
9:00 PM	0	43	7	0	0	1	0	0	0	0	0	0	0	51
10:00 PM	0	27	3	0	0	0	0	0	0	0	0	0	0	30
11:00 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	18
Total	16	1,521	281	4	52	37	0	0	2	0	0	0	0	1,913
	0.8%	79.5%	14.7%	0.2%	2.7%	1.9%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.



Vehicle Speed Report Summary

Location: Niwot Rd E/O 73rd St
Direction: Eastbound / Westbound
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03

Direction	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
Eastbound	0	23	108	78	113	702	2,677	2,253	601	103	21	8	0	0	0	0	0	6,687
	0.0%	0.3%	1.6%	1.2%	1.7%	10.5%	40.0%	33.7%	9.0%	1.5%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Westbound	1	1	3	20	95	685	2,192	1,822	748	134	26	12	0	0	0	0	0	5,739
	0.0%	0.0%	0.1%	0.3%	1.7%	11.9%	38.2%	31.7%	13.0%	2.3%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	1	24	111	98	208	1,387	4,869	4,075	1,349	237	47	20	0	0	0	0	0	12,426
	0.0%	0.2%	0.9%	0.8%	1.7%	11.2%	39.2%	32.8%	10.9%	1.9%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Total Study Percentile Speed Summary			Total Study Speed Statistics		
Eastbound			Eastbound		
50th Percentile (Median)	39.5	mph	Mean (Average) Speed	39.2	mph
85th Percentile	44.1	mph	10 mph Pace	35.1 - 45.1	mph
95th Percentile	47.3	mph	Percent in Pace	73.5	%
Westbound			Westbound		
50th Percentile (Median)	39.8	mph	Mean (Average) Speed	40.1	mph
85th Percentile	45.2	mph	10 mph Pace	34.8 - 44.8	mph
95th Percentile	48.5	mph	Percent in Pace	70.0	%

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



Thursday, October 10, 2024
 Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	1	7	4	3	0	1	0	0	0	0	0	0	16
5:00 AM	0	0	0	0	0	2	14	8	7	1	0	1	0	0	0	0	0	33
6:00 AM	0	0	0	1	3	9	24	33	8	4	1	0	0	0	0	0	0	83
7:00 AM	0	0	0	2	5	15	80	71	21	2	1	0	0	0	0	0	0	197
8:00 AM	0	0	0	4	5	41	69	62	23	3	1	0	0	0	0	0	0	208
9:00 AM	0	1	4	3	1	20	67	57	17	3	0	0	0	0	0	0	0	173
10:00 AM	0	3	5	5	2	22	74	43	9	1	0	0	0	0	0	0	0	164
11:00 AM	0	0	8	3	7	19	73	43	13	6	0	1	0	0	0	0	0	173
12:00 PM	0	2	6	3	6	20	52	52	4	3	0	0	0	0	0	0	0	148
1:00 PM	0	0	7	3	6	30	69	40	8	2	2	0	0	0	0	0	0	167
2:00 PM	0	1	3	17	4	29	63	49	9	5	0	0	0	0	0	0	0	180
3:00 PM	0	0	3	1	3	17	80	93	17	1	0	1	0	0	0	0	0	216
4:00 PM	0	0	2	0	1	24	126	84	21	4	1	0	0	0	0	0	0	263
5:00 PM	0	0	2	3	0	13	88	61	20	3	2	1	0	0	0	0	0	193
6:00 PM	0	0	2	4	2	13	57	47	8	2	0	0	0	0	0	0	0	135
7:00 PM	0	0	0	0	0	4	30	25	3	0	0	0	0	0	0	0	0	62
8:00 PM	0	0	0	0	0	3	19	12	3	0	0	0	0	0	0	0	0	37
9:00 PM	0	0	0	0	1	4	28	17	2	0	0	0	0	0	0	0	0	52
10:00 PM	0	0	0	0	0	7	24	8	4	0	0	0	0	0	0	0	0	43
11:00 PM	0	0	0	0	1	0	21	8	0	0	0	0	0	0	0	0	0	30
Total	0	7	43	49	47	293	1,068	818	200	40	9	4	0	0	0	0	0	2,578
	0.0%	0.3%	1.7%	1.9%	1.8%	11.4%	41.4%	31.7%	7.8%	1.6%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	39.3 mph	Mean (Average) Speed	38.8 mph
85th Percentile	43.7 mph	10 mph Pace	34.0 - 44.0 mph
95th Percentile	47.1 mph	Percent in Pace	73.6 %

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



Thursday, October 10, 2024
 Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	2	7	1	1	0	0	0	0	0	0	0	11
6:00 AM	0	0	0	0	0	6	24	14	4	0	1	0	0	0	0	0	0	49
7:00 AM	0	0	0	0	6	15	54	38	9	3	0	1	0	0	0	0	0	126
8:00 AM	0	0	0	1	12	30	63	48	15	4	1	0	0	0	0	0	0	174
9:00 AM	0	0	0	0	1	15	38	39	30	6	1	0	0	0	0	0	0	130
10:00 AM	0	0	0	0	0	8	52	36	16	6	0	0	0	0	0	0	0	118
11:00 AM	0	0	0	0	1	17	50	56	18	4	0	0	0	0	0	0	0	146
12:00 PM	0	0	0	2	2	17	41	41	24	4	0	0	0	0	0	0	0	131
1:00 PM	0	0	0	0	2	17	47	62	21	3	0	0	0	0	0	0	0	152
2:00 PM	0	0	0	8	7	24	44	54	26	5	0	0	0	0	0	0	0	168
3:00 PM	0	0	0	0	16	43	65	34	16	0	0	0	0	0	0	0	0	174
4:00 PM	0	0	0	0	1	26	80	46	16	1	1	0	0	0	0	0	0	171
5:00 PM	0	0	0	0	1	23	60	48	19	4	0	0	0	0	0	0	0	155
6:00 PM	0	0	0	0	0	13	58	39	8	1	0	0	0	0	0	0	0	119
7:00 PM	0	0	0	0	0	21	54	34	9	1	0	0	0	0	0	0	0	119
8:00 PM	0	0	0	0	2	10	28	20	8	1	0	2	0	0	0	0	0	71
9:00 PM	0	0	0	0	1	9	32	20	4	1	0	1	0	0	0	0	0	68
10:00 PM	0	0	0	0	2	7	17	12	4	1	0	0	0	0	0	0	0	43
11:00 PM	0	0	0	0	0	3	2	2	6	4	0	0	0	0	0	0	0	17
Total	0	0	1	11	55	306	813	651	255	50	4	4	0	0	0	0	0	2,150
	0.0%	0.0%	0.0%	0.5%	2.6%	14.2%	37.8%	30.3%	11.9%	2.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	39.4 mph	Mean (Average) Speed	39.6 mph
85th Percentile	44.9 mph	10 mph Pace	34.1 - 44.1 mph
95th Percentile	48.2 mph	Percent in Pace	68.88 %

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



Friday, October 11, 2024
 Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0	0	0	8
1:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
2:00 AM	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	0	0	0	0	0	3	5	1	0	1	0	0	0	0	0	0	10
5:00 AM	0	0	0	0	0	5	8	13	4	1	0	1	0	0	0	0	0	32
6:00 AM	0	0	0	0	0	3	28	28	15	1	0	0	0	0	0	0	0	75
7:00 AM	0	0	0	0	0	6	48	41	20	3	0	0	0	0	0	0	0	118
8:00 AM	0	1	0	1	0	16	58	71	24	4	0	1	0	0	0	0	0	176
9:00 AM	0	0	0	1	1	14	72	55	15	2	1	1	0	0	0	0	0	162
10:00 AM	0	0	0	1	1	14	63	60	17	0	2	0	0	0	0	0	0	158
11:00 AM	0	2	3	0	4	25	76	37	14	3	0	0	0	0	0	0	0	164
12:00 PM	0	1	5	1	4	17	75	55	16	4	0	0	0	0	0	0	0	178
1:00 PM	0	0	3	1	5	14	70	58	14	1	0	0	0	0	0	0	0	166
2:00 PM	0	0	2	0	2	17	72	50	17	3	0	0	0	0	0	0	0	163
3:00 PM	0	0	3	1	0	17	79	73	18	1	1	0	0	0	0	0	0	193
4:00 PM	0	0	0	2	3	26	77	84	22	5	0	0	0	0	0	0	0	219
5:00 PM	0	1	1	0	3	9	64	83	27	4	1	1	0	0	0	0	0	194
6:00 PM	0	0	2	0	1	20	68	41	6	0	0	0	0	0	0	0	0	138
7:00 PM	0	0	0	0	0	8	28	19	8	0	1	0	0	0	0	0	0	64
8:00 PM	0	0	0	1	1	14	24	15	1	0	0	0	0	0	0	0	0	56
9:00 PM	0	0	0	0	1	2	13	5	1	0	0	0	0	0	0	0	0	22
10:00 PM	0	0	0	0	0	5	5	7	1	0	0	0	0	0	0	0	0	18
11:00 PM	0	0	0	0	0	3	7	1	0	0	0	0	0	0	0	0	0	11
Total	0	5	19	9	27	237	945	808	241	32	7	4	0	0	0	0	0	2,334
	0.0%	0.2%	0.8%	0.4%	1.2%	10.2%	40.5%	34.6%	10.3%	1.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	39.7	mph	Mean (Average) Speed	39.7	mph
85th Percentile	44.5	mph	10 mph Pace	35.1 - 45.1	mph
95th Percentile	47.4	mph	Percent in Pace	74.7	%

Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03



Friday, October 11, 2024
Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	1	0	3	3	4	2	0	0	0	0	0	0	0	0	13
1:00 AM	0	0	0	0	1	0	2	0	0	0	1	0	0	0	0	0	0	4
2:00 AM	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	3
4:00 AM	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	4
5:00 AM	0	0	0	0	0	0	3	3	4	1	0	0	0	0	0	0	0	11
6:00 AM	0	0	0	0	0	7	17	11	2	0	0	0	0	0	0	0	0	37
7:00 AM	0	0	0	0	1	4	33	25	22	2	4	1	0	0	0	0	0	92
8:00 AM	1	0	0	0	1	10	45	47	13	0	0	0	0	0	0	0	0	117
9:00 AM	0	0	0	0	0	6	45	41	17	2	0	0	0	0	0	0	0	111
10:00 AM	0	0	0	0	1	15	48	49	9	2	0	0	0	0	0	0	0	124
11:00 AM	0	0	0	0	7	16	43	41	9	1	0	0	0	0	0	0	0	117
12:00 PM	0	0	0	0	2	15	54	38	10	4	1	0	0	0	0	0	0	124
1:00 PM	0	0	0	2	1	21	64	43	16	3	0	0	0	0	0	0	0	150
2:00 PM	0	0	0	0	0	19	62	45	22	4	1	0	0	0	0	0	0	153
3:00 PM	0	0	0	0	3	15	75	31	16	1	1	0	0	0	0	0	0	142
4:00 PM	0	0	0	0	0	9	67	57	18	7	1	1	0	0	0	0	0	160
5:00 PM	0	0	0	0	2	19	60	51	30	2	0	0	0	0	0	0	0	164
6:00 PM	0	0	0	0	0	19	52	50	11	2	0	0	0	0	0	0	0	134
7:00 PM	0	0	0	0	1	9	43	24	7	2	0	0	0	0	0	0	0	86
8:00 PM	0	0	0	0	0	10	30	16	4	1	1	0	0	0	0	0	0	62
9:00 PM	0	0	0	0	2	5	14	15	7	3	0	0	0	0	0	0	0	46
10:00 PM	0	0	0	0	0	3	7	1	6	1	3	2	0	0	0	0	0	23
11:00 PM	0	0	0	0	0	2	3	6	6	1	0	0	0	0	0	0	0	18
Total	1	0	0	4	22	210	771	600	233	39	14	4	0	0	0	0	0	1,898
	0.1%	0.0%	0.0%	0.2%	1.2%	11.1%	40.6%	31.6%	12.3%	2.1%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary			Speed Statistics		
50th Percentile (Median)	39.7	mph	Mean (Average) Speed	40.1	mph
85th Percentile	45.1	mph	10 mph Pace	34.3 - 44.3	mph
95th Percentile	48.2	mph	Percent in Pace	72.92	%

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



Saturday, October 12, 2024
 Eastbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	1	0	0	3	1	0	0	0	0	0	0	0	0	5
1:00 AM	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 AM	0	0	0	0	0	1	2	4	3	1	0	0	0	0	0	0	0	11
6:00 AM	0	0	0	0	0	1	7	6	1	0	0	0	0	0	0	0	0	15
7:00 AM	0	0	0	0	2	4	16	22	8	2	0	0	0	0	0	0	0	54
8:00 AM	0	1	2	0	0	3	34	35	21	3	1	0	0	0	0	0	0	100
9:00 AM	0	0	2	2	3	14	47	55	15	2	0	0	0	0	0	0	0	140
10:00 AM	0	1	4	1	7	5	54	45	19	5	0	0	0	0	0	0	0	141
11:00 AM	0	0	8	5	6	16	39	56	8	1	0	0	0	0	0	0	0	139
12:00 PM	0	4	13	5	4	17	52	45	10	0	0	0	0	0	0	0	0	150
1:00 PM	0	1	9	4	5	17	53	59	13	0	0	0	0	0	0	0	0	161
2:00 PM	0	0	2	2	1	14	64	50	11	2	1	0	0	0	0	0	0	147
3:00 PM	0	3	2	1	6	20	46	52	10	2	3	0	0	0	0	0	0	145
4:00 PM	0	1	1	0	1	11	71	43	12	5	0	0	0	0	0	0	0	145
5:00 PM	0	0	2	0	1	19	56	68	13	4	0	0	0	0	0	0	0	163
6:00 PM	0	0	1	0	0	11	48	32	5	2	0	0	0	0	0	0	0	99
7:00 PM	0	0	0	0	1	8	20	17	6	0	0	0	0	0	0	0	0	52
8:00 PM	0	0	0	0	1	0	20	14	0	0	0	0	0	0	0	0	0	35
9:00 PM	0	0	0	0	0	7	12	12	2	2	0	0	0	0	0	0	0	35
10:00 PM	0	0	0	0	0	4	11	6	1	0	0	0	0	0	0	0	0	22
11:00 PM	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0	0	0	8
Total	0	11	46	20	39	172	664	627	160	31	5	0	0	0	0	0	0	1,775
	0.0%	0.6%	2.6%	1.1%	2.2%	9.7%	37.4%	35.3%	9.0%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	39.7 mph	Mean (Average) Speed	38.9 mph
85th Percentile	44.1 mph	10 mph Pace	34.9 - 44.9 mph
95th Percentile	47.2 mph	Percent in Pace	72.6 %

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



Saturday, October 12, 2024
 Westbound

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	1	4	4	4	0	0	0	0	0	0	0	0	13
1:00 AM	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	5
2:00 AM	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	4
4:00 AM	0	0	0	0	0	1	0	4	1	0	0	1	0	0	0	0	0	7
5:00 AM	0	0	0	0	1	0	0	5	1	0	0	0	0	0	0	0	0	7
6:00 AM	0	0	0	0	0	1	5	7	1	1	0	0	0	0	0	0	0	15
7:00 AM	0	0	0	0	0	4	15	11	6	2	0	0	0	0	0	0	0	38
8:00 AM	0	0	1	2	0	13	35	42	17	0	0	0	0	0	0	0	0	110
9:00 AM	0	1	0	0	1	7	24	36	11	2	0	0	0	0	0	0	0	82
10:00 AM	0	0	1	0	2	8	39	37	21	4	2	1	0	0	0	0	0	115
11:00 AM	0	0	0	2	5	21	45	42	15	3	0	0	0	0	0	0	0	133
12:00 PM	0	0	0	1	1	13	60	61	26	5	2	1	0	0	0	0	0	170
1:00 PM	0	0	0	0	1	26	55	53	33	3	0	0	0	0	0	0	0	171
2:00 PM	0	0	0	0	4	18	45	41	24	4	1	0	0	0	0	0	0	137
3:00 PM	0	0	0	0	0	5	62	57	17	3	0	0	0	0	0	0	0	144
4:00 PM	0	0	0	0	0	10	45	47	23	4	1	0	0	0	0	0	0	130
5:00 PM	0	0	0	0	0	10	55	37	15	5	1	0	0	0	0	0	0	123
6:00 PM	0	0	0	0	3	8	35	26	17	0	0	0	0	0	0	0	0	89
7:00 PM	0	0	0	0	0	13	36	10	1	2	0	1	0	0	0	0	0	63
8:00 PM	0	0	0	0	0	6	18	21	3	0	1	0	0	0	0	0	0	49
9:00 PM	0	0	0	0	0	2	19	11	5	1	0	0	0	0	0	0	0	38
10:00 PM	0	0	0	0	0	0	4	5	11	6	0	0	0	0	0	0	0	26
11:00 PM	0	0	0	0	0	0	3	11	4	0	0	0	0	0	0	0	0	18
Total	0	1	2	5	18	169	608	571	260	45	8	4	0	0	0	0	0	1,691
	0.0%	0.1%	0.1%	0.3%	1.1%	10.0%	36.0%	33.8%	15.4%	2.7%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily Percentile Speed Summary		Speed Statistics	
50th Percentile (Median)	40.3 mph	Mean (Average) Speed	40.6 mph
85th Percentile	45.7 mph	10 mph Pace	35.0 - 45.0 mph
95th Percentile	48.9 mph	Percent in Pace	69.43 %

Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 to 10/12/2024
 Site Code: 03



**Total Study Average
Eastbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	4
1:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
4:00 AM	0	0	0	0	0	0	4	3	2	0	1	0	0	0	0	0	0	10
5:00 AM	0	0	0	0	0	3	8	8	5	1	0	1	0	0	0	0	0	26
6:00 AM	0	0	0	0	1	4	20	22	8	2	0	0	0	0	0	0	0	57
7:00 AM	0	0	0	1	2	8	48	45	16	2	0	0	0	0	0	0	0	122
8:00 AM	0	1	1	2	2	20	54	56	23	3	1	0	0	0	0	0	0	163
9:00 AM	0	0	2	2	2	16	62	56	16	2	0	0	0	0	0	0	0	158
10:00 AM	0	1	3	2	3	14	64	49	15	2	1	0	0	0	0	0	0	154
11:00 AM	0	1	6	3	6	20	63	45	12	3	0	0	0	0	0	0	0	159
12:00 PM	0	2	8	3	5	18	60	51	10	2	0	0	0	0	0	0	0	159
1:00 PM	0	0	6	3	5	20	64	52	12	1	1	0	0	0	0	0	0	164
2:00 PM	0	0	2	6	2	20	66	50	12	3	0	0	0	0	0	0	0	161
3:00 PM	0	1	3	1	3	18	68	73	15	1	1	0	0	0	0	0	0	184
4:00 PM	0	0	1	1	2	20	91	70	18	5	0	0	0	0	0	0	0	208
5:00 PM	0	0	2	1	1	14	69	71	20	4	1	1	0	0	0	0	0	184
6:00 PM	0	0	2	1	1	15	58	40	6	1	0	0	0	0	0	0	0	124
7:00 PM	0	0	0	0	0	7	26	20	6	0	0	0	0	0	0	0	0	59
8:00 PM	0	0	0	0	1	6	21	14	1	0	0	0	0	0	0	0	0	43
9:00 PM	0	0	0	0	1	4	18	11	2	1	0	0	0	0	0	0	0	37
10:00 PM	0	0	0	0	0	5	13	7	2	0	0	0	0	0	0	0	0	27
11:00 PM	0	0	0	0	0	1	11	4	0	0	0	0	0	0	0	0	0	16
Total	0	6	36	26	37	233	893	751	201	33	6	2	0	0	0	0	0	2,224
	0.0%	0.3%	1.6%	1.2%	1.7%	10.5%	40.2%	33.8%	9.0%	1.5%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	39.5 mph	Mean (Average) Speed	39.2 mph
85th Percentile	44.1 mph	10 mph Pace	35.1 - 45.1 mph
95th Percentile	47.3 mph	Percent in Pace	73.5 %

Location: Niwot Rd E/O 73rd St
Date Range: 10/10/2024 to 10/12/2024
Site Code: 03



**Total Study Average
Westbound**

Time	Speed Range (mph)																	Total Volume
	0 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 +	
12:00 AM	0	0	0	0	0	2	2	3	2	0	0	0	0	0	0	0	0	9
1:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	3
2:00 AM	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 AM	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	3
5:00 AM	0	0	0	0	0	0	2	5	2	1	0	0	0	0	0	0	0	10
6:00 AM	0	0	0	0	0	5	15	11	2	0	0	0	0	0	0	0	0	33
7:00 AM	0	0	0	0	2	8	34	25	12	2	1	1	0	0	0	0	0	85
8:00 AM	0	0	0	1	4	18	48	46	15	1	0	0	0	0	0	0	0	133
9:00 AM	0	0	0	0	1	9	36	39	19	3	0	0	0	0	0	0	0	107
10:00 AM	0	0	0	0	1	10	46	41	15	4	1	0	0	0	0	0	0	118
11:00 AM	0	0	0	1	4	18	46	46	14	3	0	0	0	0	0	0	0	132
12:00 PM	0	0	0	1	2	15	52	47	20	4	1	0	0	0	0	0	0	142
1:00 PM	0	0	0	1	1	21	55	53	23	3	0	0	0	0	0	0	0	157
2:00 PM	0	0	0	3	4	20	50	47	24	4	1	0	0	0	0	0	0	153
3:00 PM	0	0	0	0	6	21	67	41	16	1	0	0	0	0	0	0	0	152
4:00 PM	0	0	0	0	0	15	64	50	19	4	1	0	0	0	0	0	0	153
5:00 PM	0	0	0	0	1	17	58	45	21	4	0	0	0	0	0	0	0	146
6:00 PM	0	0	0	0	1	13	48	38	12	1	0	0	0	0	0	0	0	113
7:00 PM	0	0	0	0	0	14	44	23	6	2	0	0	0	0	0	0	0	89
8:00 PM	0	0	0	0	1	9	25	19	5	1	1	1	0	0	0	0	0	62
9:00 PM	0	0	0	0	1	5	22	15	5	2	0	0	0	0	0	0	0	50
10:00 PM	0	0	0	0	1	3	9	6	7	3	1	1	0	0	0	0	0	31
11:00 PM	0	0	0	0	0	2	3	6	5	2	0	0	0	0	0	0	0	18
Total	0	0	0	7	30	227	729	609	246	45	7	3	0	0	0	0	0	1,903
	0.0%	0.0%	0.0%	0.4%	1.6%	11.9%	38.3%	32.0%	12.9%	2.4%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Note: Average only considered on days with 24-hours of data.

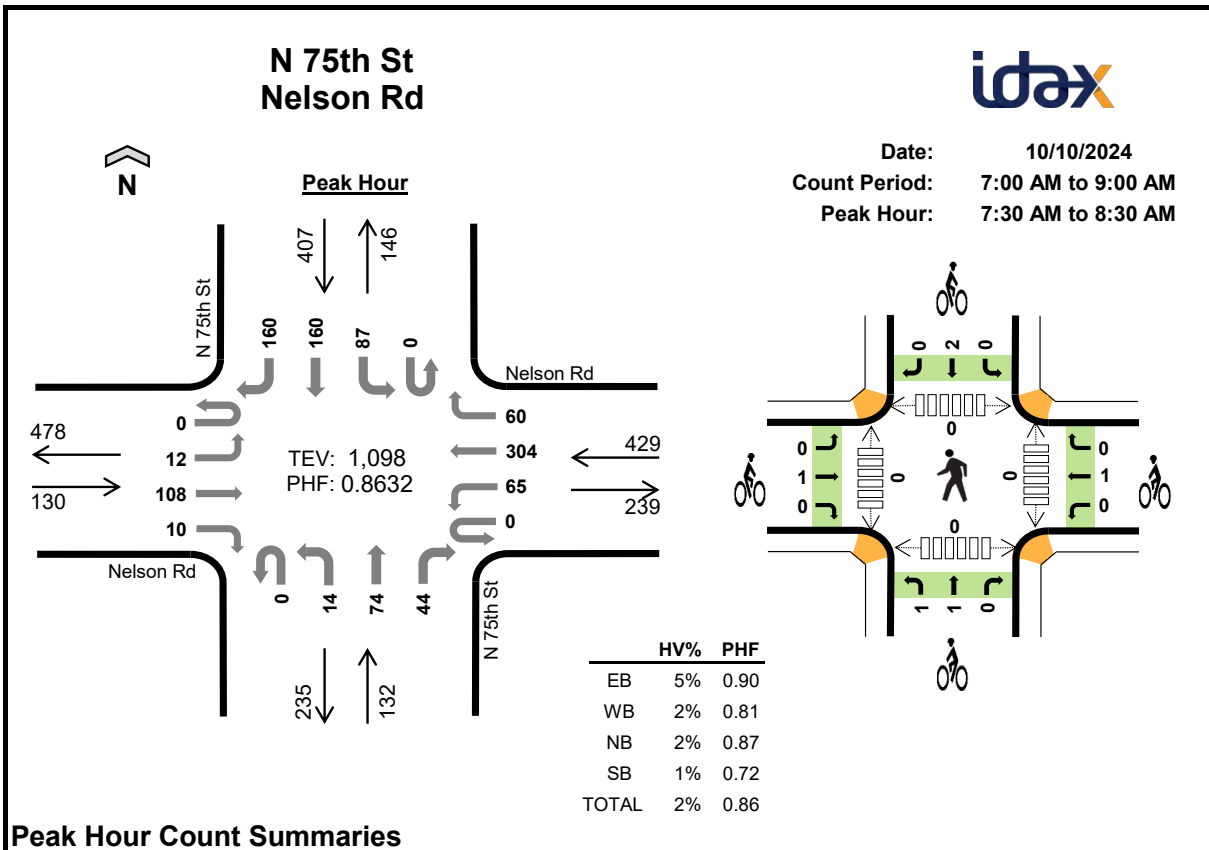
Total Study Percentile Speed Summary		Total Study Speed Statistics	
50th Percentile (Median)	39.8 mph	Mean (Average) Speed	40.1 mph
85th Percentile	45.2 mph	10 mph Pace	34.8 - 44.8 mph
95th Percentile	48.5 mph	Percent in Pace	70.0 %



Location: Niwot Rd E/O 73rd St
 Date Range: 10/10/2024 - 10/16/2024
 Site Code: 03

Time	Thursday 10/10/2024			Friday 10/11/2024			Saturday 10/12/2024			Sunday 10/13/2024			Monday 10/14/2024			Tuesday 10/15/2024			Wednesday 10/16/2024			Mid-Week Average		
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	2	4	6	8	13	21	5	13	18	-	-	-	-	-	-	-	-	-	2	4	6			
1:00 AM	1	3	4	1	4	5	5	5	10	-	-	-	-	-	-	-	-	-	1	3	4			
2:00 AM	0	1	1	3	3	6	1	4	5	-	-	-	-	-	-	-	-	-	0	1	1			
3:00 AM	2	0	2	5	3	8	0	4	4	-	-	-	-	-	-	-	-	-	2	0	2			
4:00 AM	16	0	16	10	4	14	2	7	9	-	-	-	-	-	-	-	-	-	16	0	16			
5:00 AM	33	11	44	32	11	43	11	7	18	-	-	-	-	-	-	-	-	-	33	11	44			
6:00 AM	83	49	132	75	37	112	15	15	30	-	-	-	-	-	-	-	-	-	83	49	132			
7:00 AM	197	126	323	118	92	210	54	38	92	-	-	-	-	-	-	-	-	-	197	126	323			
8:00 AM	208	174	382	176	117	293	100	110	210	-	-	-	-	-	-	-	-	-	208	174	382			
9:00 AM	173	130	303	162	111	273	140	82	222	-	-	-	-	-	-	-	-	-	173	130	303			
10:00 AM	164	118	282	158	124	282	141	115	256	-	-	-	-	-	-	-	-	-	164	118	282			
11:00 AM	173	146	319	164	117	281	139	133	272	-	-	-	-	-	-	-	-	-	173	146	319			
12:00 PM	148	131	279	178	124	302	150	170	320	-	-	-	-	-	-	-	-	-	148	131	279			
1:00 PM	167	152	319	166	150	316	161	171	332	-	-	-	-	-	-	-	-	-	167	152	319			
2:00 PM	180	168	348	163	153	316	147	137	284	-	-	-	-	-	-	-	-	-	180	168	348			
3:00 PM	216	174	390	193	142	335	145	144	289	-	-	-	-	-	-	-	-	-	216	174	390			
4:00 PM	263	171	434	219	160	379	145	130	275	-	-	-	-	-	-	-	-	-	263	171	434			
5:00 PM	193	155	348	194	164	358	163	123	286	-	-	-	-	-	-	-	-	-	193	155	348			
6:00 PM	135	119	254	138	134	272	99	89	188	-	-	-	-	-	-	-	-	-	135	119	254			
7:00 PM	62	119	181	64	86	150	52	63	115	-	-	-	-	-	-	-	-	-	62	119	181			
8:00 PM	37	71	108	56	62	118	35	49	84	-	-	-	-	-	-	-	-	-	37	71	108			
9:00 PM	52	68	120	22	46	68	35	38	73	-	-	-	-	-	-	-	-	-	52	68	120			
10:00 PM	43	43	86	18	23	41	22	26	48	-	-	-	-	-	-	-	-	-	43	43	86			
11:00 PM	30	17	47	11	18	29	8	18	26	-	-	-	-	-	-	-	-	-	30	17	47			
Total	2,578	2,150	4,728	2,334	1,898	4,232	1,775	1,691	3,466	-	-	-	-	-	-	-	-	-	2,578	2,150	4,728			
Percent	55%	45%		55%	45%		51%	49%		-	-	-	-	-	-	-	-	-	55%	45%				
AM Peak	08:00	08:00	08:00	08:00	10:00	08:00	10:00	11:00	11:00	-	-	-	-	-	-	-	-	-	08:00	08:00	08:00			
Vol.	208	174	382	176	124	293	141	133	272	-	-	-	-	-	-	-	-	-	208	174	382			
PM Peak	16:00	15:00	16:00	16:00	17:00	16:00	17:00	13:00	13:00	-	-	-	-	-	-	-	-	-	16:00	15:00	16:00			
Vol.	263	174	434	219	164	379	163	171	332	-	-	-	-	-	-	-	-	-	263	174	434			

1. Mid-week average includes data between Tuesday and Thursday.



Peak Hour Count Summaries

Peak Hour Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound		Westbound		Westbound		Northbound		Southbound		Southbound								
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:30 AM	0	2	28	2	0	15	85	12	0	1	17	14	0	42	41	59	318	0	
7:45 AM	0	4	31	1	0	22	96	14	0	4	24	10	0	15	33	34	288	0	
8:00 AM	0	3	27	5	0	10	60	17	0	4	17	11	0	14	52	36	256	0	
8:15 AM	0	3	22	2	0	18	63	17	0	5	16	9	0	16	34	31	236	1,098	
Pk Hr	All	0	12	108	10	0	65	304	60	0	14	74	44	0	87	160	160	1,098	
	HV	0	0	6	0	0	2	3	2	0	1	0	2	0	1	2	1	20	
	HV%	-	0%	6%	0%	-	3%	1%	3%	-	7%	0%	5%	-	1%	1%	1%	2%	

Note: For complete count summary (all intervals), see following pages.

** Heavy Vehicle Classifications include FHWA Classes 4-13.

** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

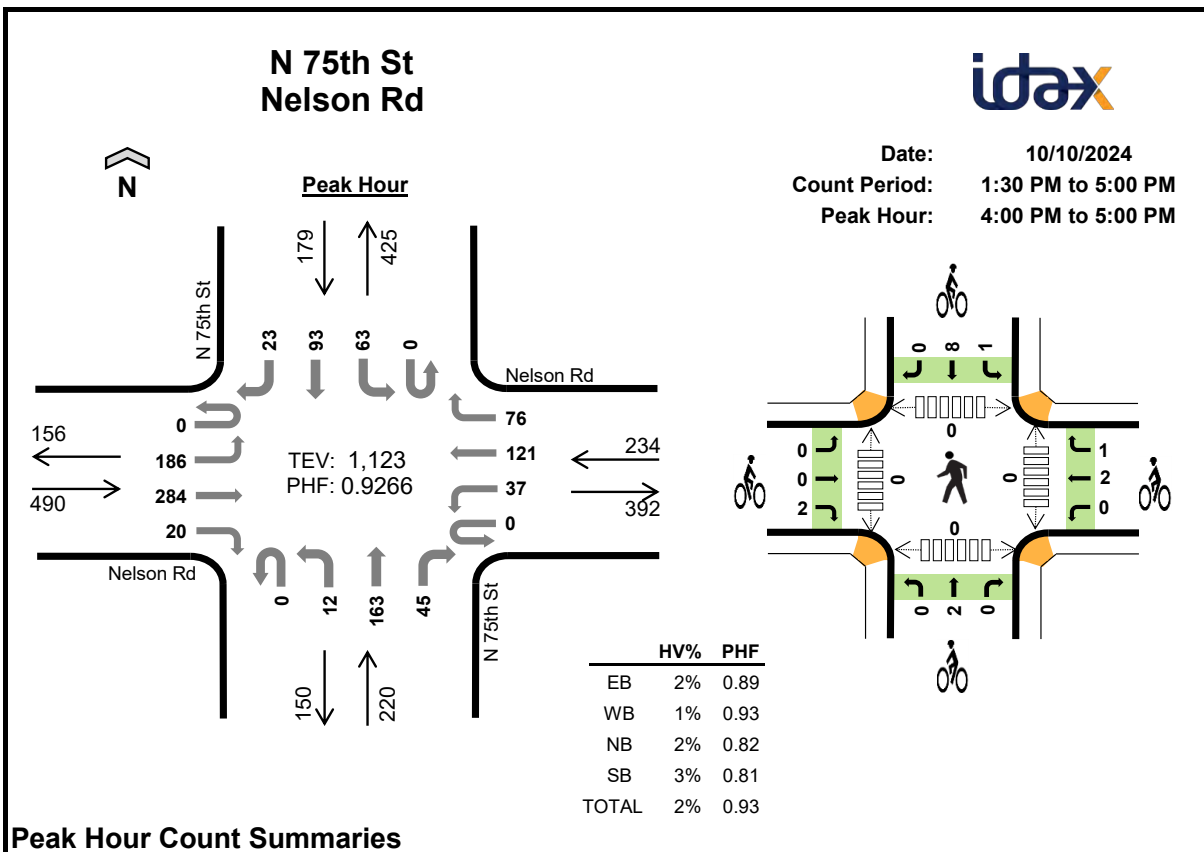
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:30 AM	2	4	2	2	10	0	0	1	0	1	0	0	0	0	0
7:45 AM	1	1	1	1	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	1	0	1	4	0	0	1	2	3	0	0	0	0	0
8:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
Peak Hour	6	7	3	4	20	1	1	2	2	6	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	2	11	2	0	10	38	6	0	0	13	4	0	6	29	24	145	0	
7:15 AM	0	5	14	3	0	13	68	5	0	3	8	9	0	11	44	34	217	0	
7:30 AM	0	2	28	2	0	15	85	12	0	1	17	14	0	42	41	59	318	0	
7:45 AM	0	4	31	1	0	22	96	14	0	4	24	10	0	15	33	34	288	968	
8:00 AM	0	3	27	5	0	10	60	17	0	4	17	11	0	14	52	36	256	1,079	
8:15 AM	0	3	22	2	0	18	63	17	0	5	16	9	0	16	34	31	236	1,098	
8:30 AM	0	2	26	4	0	11	59	13	0	3	12	6	0	15	53	31	235	1,015	
8:45 AM	0	2	30	4	0	12	49	7	0	5	18	16	0	16	43	19	221	948	
Count Total	0	23	189	23	0	111	518	91	0	25	125	79	0	135	329	268	1,916		
Pk Hr	All	0	12	108	10	0	65	304	60	0	14	74	44	0	87	160	160	1,098	
	HV	0	0	6	0	0	2	3	2	0	1	0	2	0	1	2	1	20	
	HV%	-	0%	6%	0%	-	3%	1%	3%	-	7%	0%	5%	-	1%	1%	1%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	1	1	1	5	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	4	2	2	10	0	0	1	0	1	0	0	0	0	0
7:45 AM	1	1	1	1	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	1	0	1	4	0	0	1	2	3	0	0	0	0	0
8:15 AM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
8:30 AM	1	1	1	2	5	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	4	2	2	8	0	0	2	0	2	0	0	0	0	0
Count Total	9	14	7	9	39	1	1	4	2	8	0	0	0	0	0
Peak Hour	6	7	3	4	20	1	1	2	2	6	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	5	0
7:30 AM	0	0	2	0	0	0	3	1	0	0	0	2	0	1	0	1	10	0
7:45 AM	0	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	4	20
8:00 AM	0	0	2	0	0	1	0	0	0	0	0	0	0	0	1	0	4	23
8:15 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	20
8:30 AM	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	1	5	15
8:45 AM	0	0	0	0	0	2	2	0	0	0	1	1	0	0	1	1	8	19
Count Total	0	0	9	0	0	4	7	3	0	1	3	3	0	1	5	3	39	
Pk Hr Heavy	0	0	6	0	0	2	3	2	0	1	0	2	0	1	2	1	20	

Count Summaries - Bikes																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	4
8:15 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	7
Count Total	0	0	1	0	0	0	1	0	0	1	3	0	0	0	2	0	8	
Pk Hr Bike	0	0	1	0	0	0	1	0	0	1	1	0	0	0	2	0	6	



Peak Hour Count Summaries

Peak Hour Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	44	57	7	0	11	29	15	0	4	43	10	0	19	28	8	275	0	
4:15 PM	0	48	62	4	0	7	32	24	0	4	27	8	0	10	22	8	256	0	
4:30 PM	0	45	82	3	0	8	31	16	0	2	49	16	0	10	22	5	289	0	
4:45 PM	0	49	83	6	0	11	29	21	0	2	44	11	0	24	21	2	303	1,123	
Pk Hr	All	0	186	284	20	0	37	121	76	0	12	163	45	0	63	93	23	1,123	
	HV	0	7	5	0	0	0	3	0	0	1	3	1	0	4	0	1	25	
	HV%	-	4%	2%	0%	-	0%	2%	0%	-	8%	2%	2%	-	6%	0%	4%	2%	

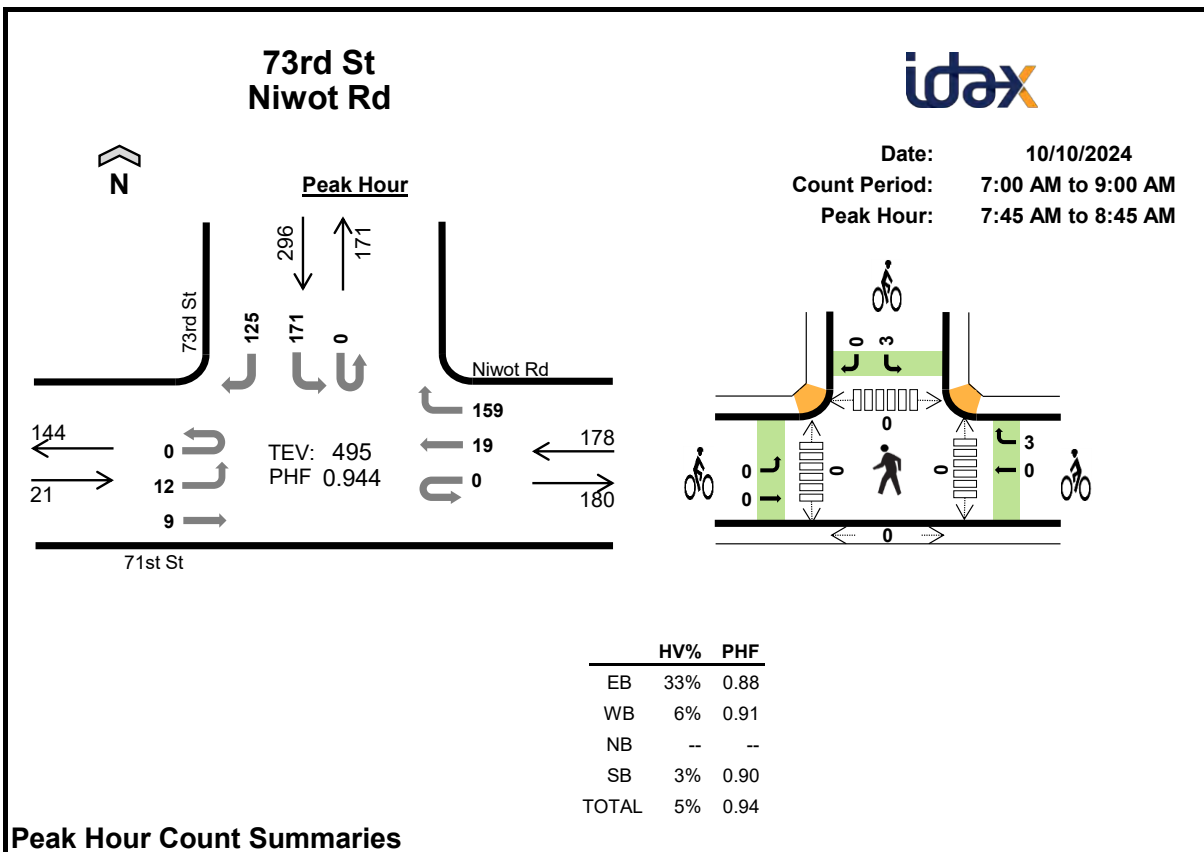
Note: For complete count summary (all intervals), see following pages.
 ** Heavy Vehicle Classifications include FHWA Classes 4-13.
 ** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	2	1	1	1	5	1	0	1	2	4	0	0	0	0	0
4:15 PM	2	2	1	1	6	0	3	0	0	3	0	0	0	0	0
4:30 PM	5	0	1	2	8	0	0	0	2	2	0	0	0	0	0
4:45 PM	3	0	2	1	6	1	0	1	5	7	0	0	0	0	0
Peak Hour	12	3	5	5	25	2	3	2	9	16	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	10	27	1	0	5	20	16	0	3	17	11	0	12	16	5	143	0	
1:45 PM	0	10	34	2	0	4	34	19	0	1	20	10	0	6	17	4	161	0	
2:00 PM	0	9	27	2	0	11	22	9	0	1	19	14	0	6	11	7	138	0	
2:15 PM	0	14	35	2	0	9	24	13	0	2	28	8	0	12	18	5	170	612	
2:30 PM	0	20	34	4	0	7	20	14	0	1	22	10	0	20	30	6	188	657	
2:45 PM	0	19	51	4	0	10	37	23	0	1	28	8	0	19	19	4	223	719	
3:00 PM	0	22	47	3	0	13	35	33	0	4	30	6	0	13	16	5	227	808	
3:15 PM	0	37	57	2	0	6	29	24	0	3	29	10	0	14	26	4	241	879	
3:30 PM	0	37	65	5	0	10	29	24	0	6	33	20	0	13	25	7	274	965	
3:45 PM	0	35	71	5	0	10	29	26	0	6	36	20	0	16	27	3	284	1,026	
4:00 PM	0	44	57	7	0	11	29	15	0	4	43	10	0	19	28	8	275	1,074	
4:15 PM	0	48	62	4	0	7	32	24	0	4	27	8	0	10	22	8	256	1,089	
4:30 PM	0	45	82	3	0	8	31	16	0	2	49	16	0	10	22	5	289	1,104	
4:45 PM	0	49	83	6	0	11	29	21	0	2	44	11	0	24	21	2	303	1,123	
Count Total	0	399	732	50	0	122	400	277	0	40	425	162	0	194	298	73	3,172		
Pk Hr	All	0	186	284	20	0	37	121	76	0	12	163	45	0	63	93	23	1,123	
	HV	0	7	5	0	0	0	3	0	0	1	3	1	0	4	0	1	25	
	HV%	-	4%	2%	0%	-	0%	2%	0%	-	8%	2%	2%	-	6%	0%	4%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
1:30 PM	1	1	1	0	3	2	2	2	1	7	0	0	0	0	0
1:45 PM	2	1	2	2	7	3	2	1	4	10	0	0	0	0	0
2:00 PM	1	0	1	0	2	3	0	2	2	7	0	0	0	0	0
2:15 PM	1	0	1	4	6	1	0	0	1	2	0	0	0	0	0
2:30 PM	2	1	1	1	5	5	0	1	1	7	0	0	0	0	0
2:45 PM	3	3	1	2	9	2	0	0	2	4	0	0	0	0	0
3:00 PM	2	4	2	0	8	2	0	1	1	4	0	0	0	0	0
3:15 PM	2	3	2	2	9	1	0	0	0	1	0	0	0	0	0
3:30 PM	6	4	2	1	13	0	0	0	1	1	0	0	0	0	0
3:45 PM	3	1	4	0	8	0	0	0	3	3	0	0	0	0	0
4:00 PM	2	1	1	1	5	1	0	1	2	4	0	0	0	0	0
4:15 PM	2	2	1	1	6	0	3	0	0	3	0	0	0	0	0
4:30 PM	5	0	1	2	8	0	0	0	2	2	0	0	0	0	0
4:45 PM	3	0	2	1	6	1	0	1	5	7	0	0	0	0	0
Count Total	35	21	22	17	95	21	7	9	25	62	0	0	0	0	0
Peak Hour	12	3	5	5	25	2	3	2	9	16	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
1:45 PM	0	1	1	0	0	0	1	0	0	0	2	0	0	1	1	0	7	0
2:00 PM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
2:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	2	2	0	6	18
2:30 PM	0	1	0	1	0	0	0	1	0	0	1	0	0	0	1	0	5	20
2:45 PM	0	0	3	0	0	0	3	0	0	0	1	0	0	2	0	0	9	22
3:00 PM	0	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0	8	28
3:15 PM	0	0	2	0	0	0	3	0	0	0	1	1	0	1	1	0	9	31
3:30 PM	0	1	5	0	0	2	0	2	0	0	2	0	0	1	0	0	13	39
3:45 PM	0	0	3	0	0	0	0	1	0	1	2	1	0	0	0	0	8	38
4:00 PM	0	1	1	0	0	0	1	0	0	0	1	0	0	1	0	0	5	35
4:15 PM	0	2	0	0	0	0	2	0	0	1	0	0	0	0	0	1	6	32
4:30 PM	0	4	1	0	0	0	0	0	0	0	0	1	0	2	0	0	8	27
4:45 PM	0	0	3	0	0	0	0	0	0	0	2	0	0	1	0	0	6	25
Count Total	0	12	21	2	0	4	11	6	0	2	17	3	0	11	5	1	95	
Pk Hr Heavy	0	7	5	0	0	0	3	0	0	1	3	1	0	4	0	1	25	
Count Summaries - Bikes																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	1	1	0	0	1	1	0	1	1	0	0	0	0	1	7	0
1:45 PM	0	0	2	1	0	0	2	0	0	0	1	0	0	0	4	0	10	0
2:00 PM	0	0	1	2	0	0	0	0	0	1	1	0	0	0	2	0	7	0
2:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	26
2:30 PM	0	1	2	2	0	0	0	0	0	0	1	0	0	0	1	0	7	26
2:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	4	20
3:00 PM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	4	17
3:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	10
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	9
4:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	4	9
4:15 PM	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	3	11
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	12
4:45 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	5	0	7	16
Count Total	0	2	11	8	0	0	5	2	0	2	7	0	0	7	17	1	62	
Pk Hr Bike	0	0	0	2	0	0	2	1	0	0	2	0	0	1	8	0	16	



Peak Hour Count Summaries

Peak Hour Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:45 AM	0	4	2	0	0	0	3	46	0	0	0	0	0	34	0	37	126	0	
8:00 AM	0	2	2	0	0	0	4	40	0	0	0	0	0	37	0	29	114	0	
8:15 AM	0	5	1	0	0	0	8	35	0	0	0	0	0	51	0	31	131	0	
8:30 AM	0	1	4	0	0	0	4	38	0	0	0	0	0	49	0	28	124	495	
Pk Hr	All	0	12	9	0	0	0	19	159	0	0	0	0	0	171	0	125	495	
	HV	0	3	4	0	0	0	0	11	0	0	0	0	0	6	0	2	26	
	HV%	-	25%	44%	-	-	-	0%	7%	-	-	-	-	-	4%	-	2%	5%	

Note: For complete count summary (all intervals), see following pages.
 ** Heavy Vehicle Classifications include FHWA Classes 4-13.
 ** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

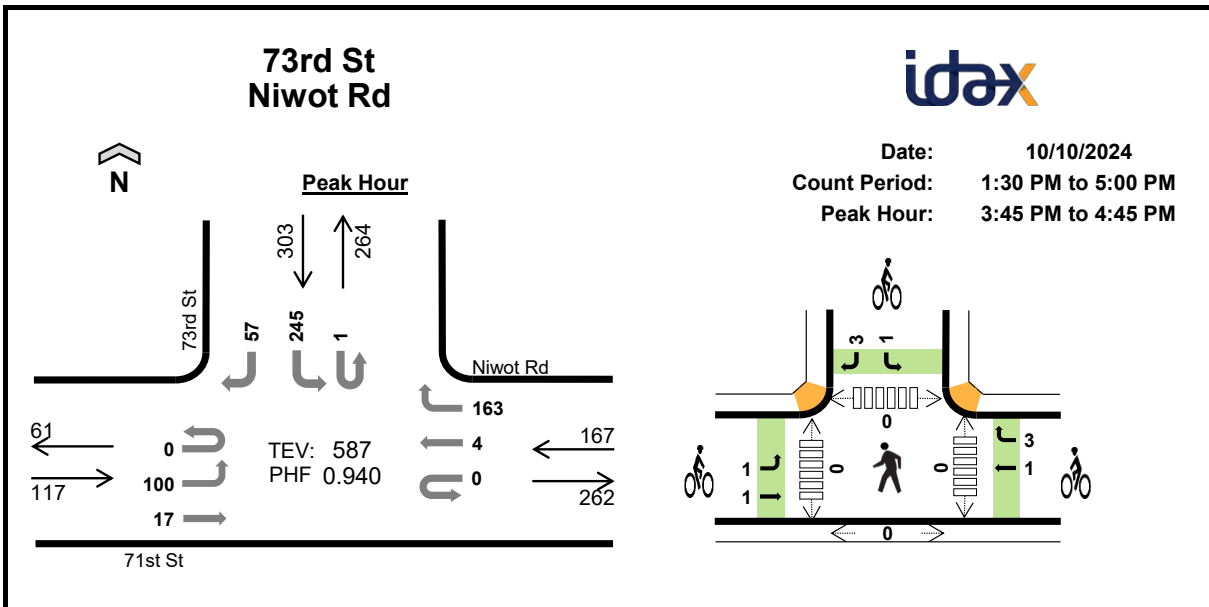
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0
8:00 AM	1	3	0	3	7	0	1	0	0	1	0	0	0	0	0
8:15 AM	2	1	0	2	5	0	0	0	0	0	0	0	0	0	0
8:30 AM	4	3	0	3	10	0	0	0	3	3	0	0	0	0	0
Peak Hour	7	11	0	8	26	0	3	0	3	6	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	2	2	0	0	0	3	11	0	0	0	0	0	40	0	13	71	0	
7:15 AM	0	1	1	0	0	0	2	26	0	0	0	0	0	59	0	21	110	0	
7:30 AM	0	1	1	0	0	0	4	30	0	0	0	0	0	58	0	22	116	0	
7:45 AM	0	4	2	0	0	0	3	46	0	0	0	0	0	34	0	37	126	423	
8:00 AM	0	2	2	0	0	0	4	40	0	0	0	0	0	37	0	29	114	466	
8:15 AM	0	5	1	0	0	0	8	35	0	0	0	0	0	51	0	31	131	487	
8:30 AM	0	1	4	0	0	0	4	38	0	0	0	0	0	49	0	28	124	495	
8:45 AM	0	3	4	0	0	0	2	33	0	0	0	0	0	53	0	19	114	483	
Count Total	0	19	17	0	0	0	30	259	0	0	0	0	0	381	0	200	906		
Pk Hr	All	0	12	9	0	0	0	19	159	0	0	0	0	0	171	0	125	495	
	HV	0	3	4	0	0	0	0	11	0	0	0	0	0	6	0	2	26	
	HV%	-	25%	44%	-	-	-	0%	7%	-	-	-	-	-	4%	-	2%	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0
7:15 AM	0	5	0	3	8	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	2	0	0	2	0	2	0	1	3	0	0	0	0	0
7:45 AM	0	4	0	0	4	0	2	0	0	2	0	0	0	0	0
8:00 AM	1	3	0	3	7	0	1	0	0	1	0	0	0	0	0
8:15 AM	2	1	0	2	5	0	0	0	0	0	0	0	0	0	0
8:30 AM	4	3	0	3	10	0	0	0	3	3	0	0	0	0	0
8:45 AM	3	0	0	3	6	1	1	0	1	3	0	0	0	0	0
Count Total	11	20	0	14	45	1	7	0	5	13	0	0	0	0	0
Peak Hour	7	11	0	8	26	0	3	0	3	6	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0
7:15 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	2	0	1	8	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	17
8:00 AM	0	1	0	0	0	0	0	3	0	0	0	0	0	2	0	1	7	21
8:15 AM	0	1	1	0	0	0	0	1	0	0	0	0	0	2	0	0	5	18
8:30 AM	0	1	3	0	0	0	0	3	0	0	0	0	0	2	0	1	10	26
8:45 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	6	28
Count Total	0	3	8	0	0	0	0	20	0	0	0	0	0	11	0	3	45	
Pk Hr Heavy	0	3	4	0	0	0	0	11	0	0	0	0	0	6	0	2	26	

Count Summaries - Bikes																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	0
7:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	6
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	6
8:45 AM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3	7
Count Total	0	1	0	0	0	0	2	5	0	0	0	0	0	3	0	2	13	
Pk Hr Bike	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	0	6	



Date: 10/10/2024
 Count Period: 1:30 PM to 5:00 PM
 Peak Hour: 3:45 PM to 4:45 PM

	HV%	PHF
EB	1%	0.81
WB	3%	0.93
NB	--	--
SB	2%	0.91
TOTAL	2%	0.94

Peak Hour Count Summaries

Peak Hour Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:45 PM	0	22	3	0	0	0	2	43	0	0	0	0	0	67	0	16	153	0
4:00 PM	0	19	5	0	0	0	0	35	0	0	0	0	0	71	0	11	141	0
4:15 PM	0	28	4	0	0	0	1	41	0	0	0	0	1	49	0	13	137	0
4:30 PM	0	31	5	0	0	0	1	44	0	0	0	0	0	58	0	17	156	587
Pk Hr	All	0	100	17	0	0	0	163	0	0	0	0	1	245	0	57	587	
	HV	0	0	1	0	0	0	5	0	0	0	0	0	6	0	0	12	
	HV%	-	0%	6%	-	-	-	0%	3%	-	-	-	-	0%	2%	-	0%	2%

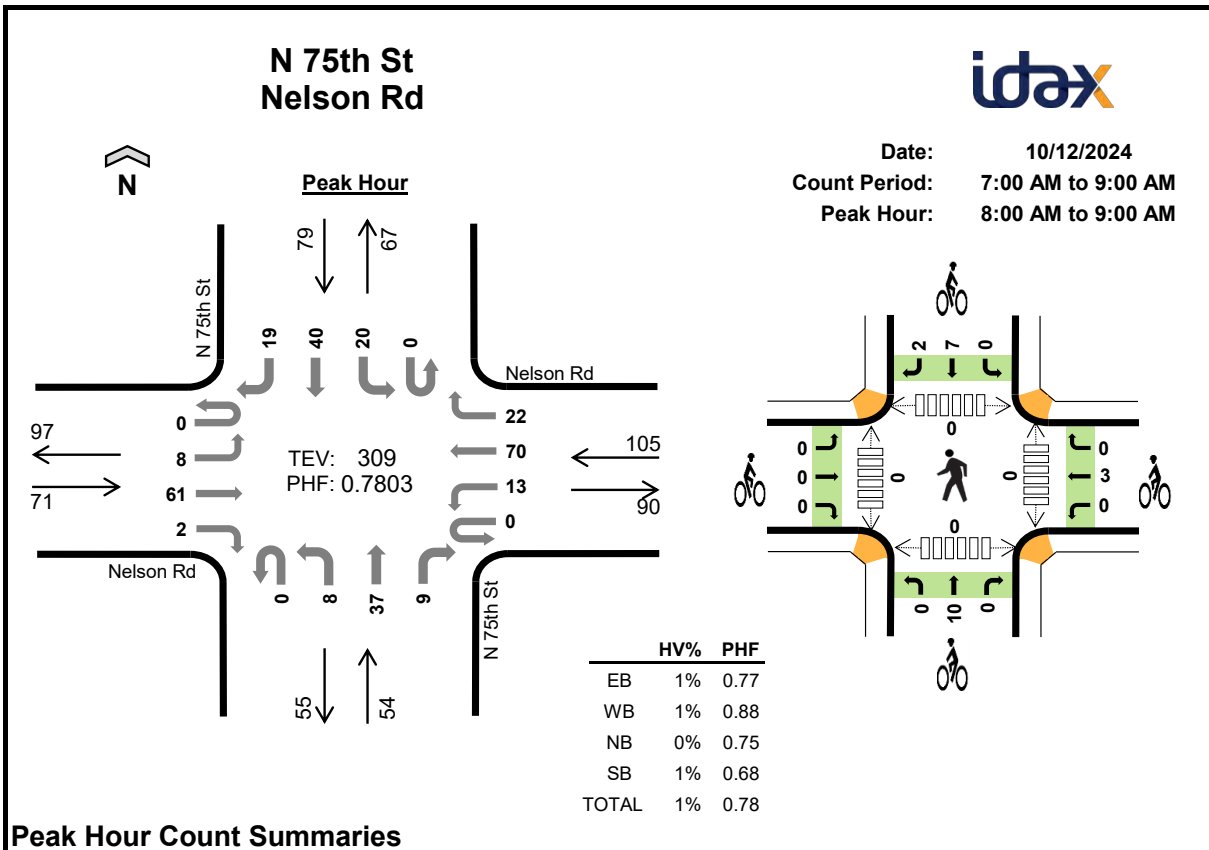
Note: For complete count summary (all intervals), see following pages.
 ** Heavy Vehicle Classifications include FHWA Classes 4-13.
 ** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
3:45 PM	1	2	0	0	3	0	1	0	1	2	0	0	0	0	0
4:00 PM	0	1	0	2	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	3	5	1	2	0	3	6	0	0	0	0	0
4:30 PM	0	0	0	1	1	1	1	0	0	2	0	0	0	0	0
Peak Hour	1	5	0	6	12	2	4	0	4	10	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
1:30 PM	0	9	3	0	0	0	2	30	0	0	0	0	0	40	0	4	88	0	
1:45 PM	0	5	2	0	0	0	1	32	0	0	0	0	0	23	0	6	69	0	
2:00 PM	0	12	5	0	0	0	2	33	0	0	0	0	0	35	0	5	92	0	
2:15 PM	0	9	3	0	0	0	4	36	0	0	0	0	0	33	0	12	97	346	
2:30 PM	0	8	6	0	0	0	2	37	0	0	0	0	0	32	0	11	96	354	
2:45 PM	0	9	4	0	0	0	1	51	0	0	0	0	0	36	0	11	112	397	
3:00 PM	0	17	5	0	0	0	0	42	0	0	0	0	0	28	0	8	100	405	
3:15 PM	0	14	6	0	0	0	2	42	0	0	0	0	0	40	0	8	112	420	
3:30 PM	0	17	8	0	0	0	1	36	0	0	0	0	0	38	0	9	109	433	
3:45 PM	0	22	3	0	0	0	2	43	0	0	0	0	0	67	0	16	153	474	
4:00 PM	0	19	5	0	0	0	0	35	0	0	0	0	0	71	0	11	141	515	
4:15 PM	0	28	4	0	0	0	1	41	0	0	0	0	1	49	0	13	137	540	
4:30 PM	0	31	5	0	0	0	1	44	0	0	0	0	0	58	0	17	156	587	
4:45 PM	0	20	0	0	0	0	1	42	0	0	0	0	0	48	0	9	120	554	
Count Total	0	220	59	0	0	0	20	544	0	0	0	0	1	598	0	140	1,582		
Pk Hr	All	0	100	17	0	0	0	4	163	0	0	0	0	1	245	0	57	587	
	HV	0	0	1	0	0	0	0	5	0	0	0	0	0	6	0	0	12	
	HV%	-	0%	6%	-	-	-	0%	3%	-	-	-	-	0%	2%	-	0%	2%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
1:30 PM	3	1	0	2	6	1	0	0	2	3	0	0	0	0	0
1:45 PM	2	2	0	3	7	3	1	0	2	6	0	0	0	0	0
2:00 PM	2	2	0	1	5	0	0	0	4	4	0	0	0	0	0
2:15 PM	2	1	0	5	8	0	1	0	2	3	0	0	0	0	0
2:30 PM	3	1	0	1	5	1	0	0	0	1	0	0	0	0	0
2:45 PM	3	0	0	0	3	0	0	0	2	2	0	0	0	0	0
3:00 PM	3	2	0	1	6	0	2	0	0	2	0	0	0	0	0
3:15 PM	0	1	0	1	2	0	1	0	5	6	0	0	0	0	0
3:30 PM	1	1	0	1	3	0	1	0	1	2	0	0	0	0	0
3:45 PM	1	2	0	0	3	0	1	0	1	2	0	0	0	0	0
4:00 PM	0	1	0	2	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	3	5	1	2	0	3	6	0	0	0	0	0
4:30 PM	0	0	0	1	1	1	1	0	0	2	0	0	0	0	0
4:45 PM	0	1	0	3	4	2	2	0	2	6	0	0	0	0	0
Count Total	20	17	0	24	61	9	12	0	24	45	0	0	0	0	0
Peak Hour	1	5	0	6	12	2	4	0	4	10	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	0	3	0	0	0	0	1	0	0	0	0	0	2	0	0	6	0
1:45 PM	0	1	1	0	0	0	0	2	0	0	0	0	0	3	0	7	0	
2:00 PM	0	0	2	0	0	0	1	1	0	0	0	0	0	1	0	5	0	
2:15 PM	0	0	2	0	0	0	0	1	0	0	0	0	0	4	0	8	26	
2:30 PM	0	0	3	0	0	0	0	1	0	0	0	0	0	1	0	5	25	
2:45 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	3	21	
3:00 PM	0	0	3	0	0	0	0	2	0	0	0	0	0	1	0	6	22	
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	16	
3:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	3	14	
3:45 PM	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	3	14	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	11	
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	5	14	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	12	
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	4	13	
Count Total	0	3	17	0	0	0	1	16	0	0	0	0	0	23	0	61		
Pk Hr Heavy	0	0	1	0	0	0	0	5	0	0	0	0	0	6	0	12		
Count Summaries - Bikes																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0
1:45 PM	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	2	6	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	
2:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3	16	
2:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	14	
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	10	
3:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	8	
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	6	11	
3:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2	12	
3:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	12	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
4:15 PM	0	0	1	0	0	0	0	2	0	0	0	0	0	1	0	6	10	
4:30 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	10	
4:45 PM	0	2	0	0	0	0	1	1	0	0	0	0	0	0	0	6	14	
Count Total	0	8	1	0	0	0	3	9	0	0	0	0	0	8	0	45		
Pk Hr Bike	0	1	1	0	0	0	1	3	0	0	0	0	0	1	0	10		



Peak Hour Count Summaries

Peak Hour Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	4	10	0	0	0	14	4	0	0	8	1	0	0	11	4	56	0	
8:15 AM	0	0	12	1	0	3	20	7	0	5	11	1	0	6	9	5	80	0	
8:30 AM	0	0	21	0	0	5	17	6	0	0	7	3	0	4	8	3	74	0	
8:45 AM	0	4	18	1	0	5	19	5	0	3	11	4	0	10	12	7	99	309	
Pk Hr	All	0	8	61	2	0	13	70	22	0	8	37	9	0	20	40	19	309	
	HV	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	3	
	HV%	-	0%	0%	50%	-	0%	0%	5%	-	0%	0%	0%	-	5%	0%	0%	1%	

Note: For complete count summary (all intervals), see following pages.
 ** Heavy Vehicle Classifications include FHWA Classes 4-13.
 ** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

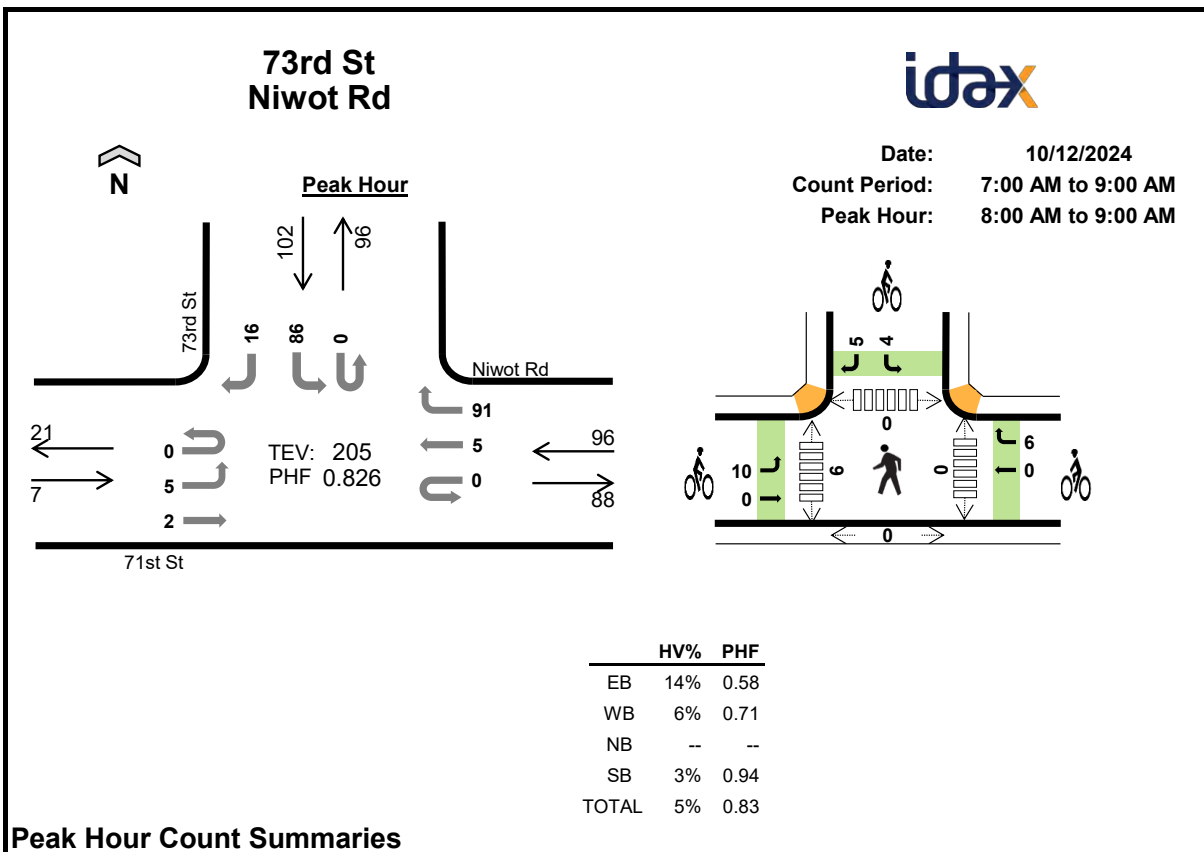
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0
8:15 AM	1	0	0	0	1	0	1	2	4	7	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	1	3	4	0	0	0	0	0
8:45 AM	0	0	0	1	1	0	1	7	1	9	0	0	0	0	0
Peak Hour	1	1	0	1	3	0	3	10	9	22	0	0	0	0	0

Count Summaries - All Vehicles																			
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	4	2	0	0	0	7	3	0	0	5	1	0	2	4	3	31	0	
7:15 AM	0	0	6	1	0	1	11	6	0	0	5	1	0	6	4	7	48	0	
7:30 AM	0	2	8	0	0	2	9	3	0	0	3	2	0	3	5	1	38	0	
7:45 AM	0	6	9	1	0	1	23	6	0	0	10	1	0	1	7	8	73	190	
8:00 AM	0	4	10	0	0	0	14	4	0	0	8	1	0	0	11	4	56	215	
8:15 AM	0	0	12	1	0	3	20	7	0	5	11	1	0	6	9	5	80	247	
8:30 AM	0	0	21	0	0	5	17	6	0	0	7	3	0	4	8	3	74	283	
8:45 AM	0	4	18	1	0	5	19	5	0	3	11	4	0	10	12	7	99	309	
Count Total	0	20	86	4	0	17	120	40	0	8	60	14	0	32	60	38	499		
Pk Hr	All	0	8	61	2	0	13	70	22	0	8	37	9	0	20	40	19	309	
	HV	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	3	
	HV%	-	0%	0%	50%	-	0%	0%	5%	-	0%	0%	0%	-	5%	0%	0%	1%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	2	1	4	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0
8:15 AM	1	0	0	0	1	0	1	2	4	7	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	1	3	4	0	0	0	0	0
8:45 AM	0	0	0	1	1	0	1	7	1	9	0	0	0	0	0
Count Total	3	3	0	1	7	0	4	13	10	27	0	0	0	0	0
Peak Hour	1	1	0	1	3	0	3	10	9	22	0	0	0	0	0

Count Summaries - Heavy Vehicles																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	3
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Count Total	0	2	0	1	0	0	0	3	0	0	0	0	0	1	0	0	7	
Pk Hr Heavy	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	3	

Count Summaries - Bikes																		
Interval Start	Nelson Rd				Nelson Rd				N 75th St				N 75th St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	0	4	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	7
8:15 AM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3	1	7	10
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	14
8:45 AM	0	0	0	0	0	0	1	0	0	0	7	0	0	0	0	1	9	22
Count Total	0	0	0	0	0	0	4	0	0	1	12	0	0	0	8	2	27	
Pk Hr Bike	0	0	0	0	0	0	3	0	0	0	10	0	0	0	7	2	22	



Peak Hour Count Summaries

Peak Hour Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
8:00 AM	0	2	0	0	0	0	0	21	0	0	0	0	0	21	0	3	47	0	
8:15 AM	0	2	1	0	0	0	1	21	0	0	0	0	0	23	0	3	51	0	
8:30 AM	0	1	0	0	0	0	2	17	0	0	0	0	0	19	0	6	45	0	
8:45 AM	0	0	1	0	0	0	2	32	0	0	0	0	0	23	0	4	62	205	
Pk Hr	All	0	5	2	0	0	0	5	91	0	0	0	0	0	86	0	16	205	
	HV	0	0	1	0	0	0	0	6	0	0	0	0	0	2	0	1	10	
	HV%	-	0%	50%	-	-	-	0%	7%	-	-	-	-	-	2%	-	6%	5%	

Note: For complete count summary (all intervals), see following pages.
 ** Heavy Vehicle Classifications include FHWA Classes 4-13.
 ** Count Summaries include heavy vehicles, but exclude bicycles in overall count.

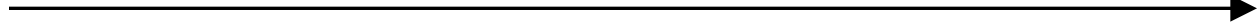
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
8:00 AM	0	0	0	1	1	0	2	0	0	2	0	0	0	0	0
8:15 AM	1	1	0	1	3	0	0	0	2	2	0	0	0	0	0
8:30 AM	0	0	0	1	1	0	3	0	2	5	0	6	0	0	6
8:45 AM	0	5	0	0	5	10	1	0	5	16	0	0	0	0	0
Peak Hour	1	6	0	3	10	10	6	0	9	25	0	6	0	0	6

Count Summaries - All Vehicles																			
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	1	9	0	0	0	0	0	7	0	5	22	0	
7:15 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	13	0	3	21	0	
7:30 AM	0	1	0	0	0	0	0	7	0	0	0	0	0	12	0	1	21	0	
7:45 AM	0	1	0	0	0	0	2	13	0	0	0	0	0	20	0	3	39	103	
8:00 AM	0	2	0	0	0	0	0	21	0	0	0	0	0	21	0	3	47	128	
8:15 AM	0	2	1	0	0	0	1	21	0	0	0	0	0	23	0	3	51	158	
8:30 AM	0	1	0	0	0	0	2	17	0	0	0	0	0	19	0	6	45	182	
8:45 AM	0	0	1	0	0	0	2	32	0	0	0	0	0	23	0	4	62	205	
Count Total	0	7	2	0	0	0	8	125	0	0	0	0	0	138	0	28	308		
Pk Hr	All	0	5	2	0	0	0	5	91	0	0	0	0	0	86	0	16	205	
	HV	0	0	1	0	0	0	0	6	0	0	0	0	0	2	0	1	10	
	HV%	-	0%	50%	-	-	-	0%	7%	-	-	-	-	-	2%	-	6%	5%	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	2	0	1	3	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
7:30 AM	0	1	0	0	1	1	0	0	1	2	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	1	1	0	2	0	0	2	0	0	0	0	0
8:15 AM	1	1	0	1	3	0	0	0	2	2	0	0	0	0	0
8:30 AM	0	0	0	1	1	0	3	0	2	5	0	6	0	0	6
8:45 AM	0	5	0	0	5	10	1	0	5	16	0	0	0	0	0
Count Total	1	9	0	4	14	11	7	0	11	29	0	6	0	0	6
Peak Hour	1	6	0	3	10	10	6	0	9	25	0	6	0	0	6

Count Summaries - Heavy Vehicles																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	3	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
8:45 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	10
Count Total	0	0	1	0	0	0	0	9	0	0	0	0	0	3	0	1	14	
Pk Hr Heavy	0	0	1	0	0	0	0	6	0	0	0	0	0	2	0	1	10	

Count Summaries - Bikes																		
Interval Start	71st St				Niwot Rd				n/a				73rd St				15-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	7
8:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	5	10
8:45 AM	0	10	0	0	0	0	0	1	0	0	0	0	0	4	0	1	16	25
Count Total	0	11	0	0	0	0	0	7	0	0	0	0	0	5	0	6	29	
Pk Hr Bike	0	10	0	0	0	0	0	6	0	0	0	0	0	4	0	5	25	



***Intersection Capacity Worksheets:
2024 Existing***



Timings
10/29/2024

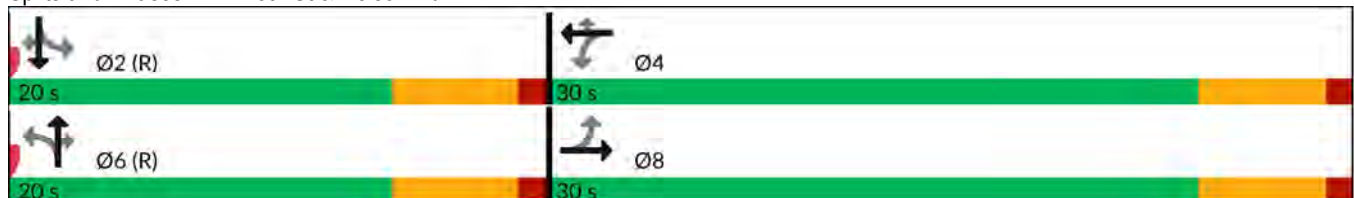
1: 75th St & Nelson Rd
Year 2024 Existing - AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	12	108	65	304	60	14	74	44	87	160	160
Future Volume (vph)	12	108	65	304	60	14	74	44	87	160	160
Lane Group Flow (vph)	13	131	80	375	74	16	85	51	121	222	222
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.03	0.15	0.13	0.41	0.09	0.05	0.16	0.10	0.32	0.41	0.36
Control Delay (s/veh)	7.0	7.2	7.8	10.0	2.6	13.5	14.4	4.8	17.0	17.3	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	7.2	7.8	10.0	2.6	13.5	14.4	4.8	17.0	17.3	4.5
Queue Length 50th (ft)	2	18	12	64	0	3	18	0	27	52	0
Queue Length 95th (ft)	8	40	26	100	12	14	43	16	48	77	19
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	452	873	609	905	807	330	532	494	377	537	615
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.15	0.13	0.41	0.09	0.05	0.16	0.10	0.32	0.41	0.36

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2024 Existing - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	108	10	65	304	60	14	74	44	87	160	160
Future Volume (veh/h)	12	108	10	65	304	60	14	74	44	87	160	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	13	120	11	80	375	74	16	85	51	121	222	222
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.87	0.87	0.87	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	472	801	73	705	909	770	324	535	453	462	539	457
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	919	1648	151	1259	1870	1585	946	1870	1585	1263	1885	1598
Grp Volume(v), veh/h	13	0	131	80	375	74	16	85	51	121	222	222
Grp Sat Flow(s),veh/h/ln	919	0	1799	1259	1870	1585	946	1870	1585	1263	1885	1598
Q Serve(g_s), s	0.5	0.0	2.0	1.9	6.4	1.3	0.7	1.7	1.2	4.0	4.8	5.8
Cycle Q Clear(g_c), s	6.9	0.0	2.0	3.9	6.4	1.3	5.5	1.7	1.2	5.7	4.8	5.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	0	874	705	909	770	324	535	453	462	539	457
V/C Ratio(X)	0.03	0.00	0.15	0.11	0.41	0.10	0.05	0.16	0.11	0.26	0.41	0.49
Avail Cap(c_a), veh/h	472	0	874	705	909	770	324	535	453	462	539	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	0.0	7.1	8.2	8.3	6.9	16.7	13.4	13.2	15.5	14.4	14.8
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.3	1.4	0.2	0.3	0.6	0.5	1.4	2.3	3.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.5	2.2	0.4	0.2	0.7	0.4	1.1	1.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.6	0.0	7.5	8.5	9.6	7.2	16.9	14.0	13.7	16.8	16.8	18.5
LnGrp LOS	B		A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h		144			529			152			565	
Approach Delay, s/veh		7.8			9.1			14.2			17.4	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		30.0		20.0		30.0				
Change Period (Y+Rc), s		5.7		5.7		5.7		5.7				
Max Green Setting (Gmax), s		14.3		24.3		14.3		24.3				
Max Q Clear Time (g_c+I1), s		7.8		8.4		7.5		8.9				
Green Ext Time (p_c), s		1.2		2.2		0.3		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.9								
HCM 7th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2024 Existing - AM Peak Hour

Intersection

Intersection Delay, s/veh 9.5

Intersection LOS A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	12	9	19	159	171	125
Future Vol, veh/h	12	9	19	159	171	125
Peak Hour Factor	0.88	0.88	0.91	0.91	0.90	0.90
Heavy Vehicles, %	33	33	6	6	3	3
Mvmt Flow	14	10	21	175	190	139
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	8.8	8.6	10.1
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	57%	0%	58%
Vol Thru, %	43%	11%	0%
Vol Right, %	0%	89%	42%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	21	178	296
LT Vol	12	0	171
Through Vol	9	19	0
RT Vol	0	159	125
Lane Flow Rate	24	196	329
Geometry Grp	1	1	1
Degree of Util (X)	0.037	0.231	0.394
Departure Headway (Hd)	5.557	4.253	4.308
Convergence, Y/N	Yes	Yes	Yes
Cap	644	845	835
Service Time	3.59	2.277	2.33
HCM Lane V/C Ratio	0.037	0.232	0.394
HCM Control Delay, s/veh	8.8	8.6	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.1	0.9	1.9

Timings
10/29/2024

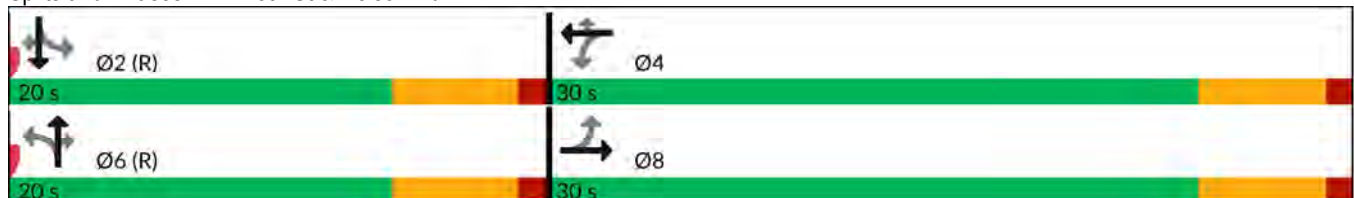
1: 75th St & Nelson Rd
Year 2024 Existing - Mid-Day Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	186	284	37	121	76	12	163	45	63	93	23
Future Volume (vph)	186	284	37	121	76	12	163	45	63	93	23
Lane Group Flow (vph)	209	341	40	130	82	15	199	55	78	115	28
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.34	0.38	0.08	0.14	0.10	0.04	0.37	0.11	0.23	0.22	0.06
Control Delay (s/veh)	10.0	9.4	7.5	7.7	2.5	13.4	16.8	5.1	15.9	15.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.0	9.4	7.5	7.7	2.5	13.4	16.8	5.1	15.9	15.0	2.3
Queue Length 50th (ft)	34	55	6	19	0	3	46	0	17	25	0
Queue Length 95th (ft)	71	100	18	41	15	12	81	15	39	50	5
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	609	901	502	914	819	363	532	494	334	527	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.38	0.08	0.14	0.10	0.04	0.37	0.11	0.23	0.22	0.06

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2024 Existing - Mid-Day Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	284	20	37	121	76	12	163	45	63	93	23
Future Volume (veh/h)	186	284	20	37	121	76	12	163	45	63	93	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	209	319	22	40	130	82	15	199	55	78	115	28
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.82	0.82	0.82	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	3	3	3
Cap, veh/h	668	841	58	531	916	776	441	535	453	368	531	450
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1170	1730	119	1048	1885	1598	1245	1870	1585	1117	1856	1572
Grp Volume(v), veh/h	209	0	341	40	130	82	15	199	55	78	115	28
Grp Sat Flow(s),veh/h/ln	1170	0	1849	1048	1885	1598	1245	1870	1585	1117	1856	1572
Q Serve(g_s), s	6.0	0.0	5.8	1.3	1.9	1.4	0.5	4.3	1.3	3.0	2.4	0.6
Cycle Q Clear(g_c), s	7.9	0.0	5.8	7.1	1.9	1.4	2.8	4.3	1.3	7.3	2.4	0.6
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	668	0	899	531	916	776	441	535	453	368	531	450
V/C Ratio(X)	0.31	0.00	0.38	0.08	0.14	0.11	0.03	0.37	0.12	0.21	0.22	0.06
Avail Cap(c_a), veh/h	668	0	899	531	916	776	441	535	453	368	531	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	8.1	10.3	7.1	7.0	14.7	14.3	13.2	17.2	13.6	13.0
Incr Delay (d2), s/veh	1.2	0.0	1.2	0.3	0.3	0.3	0.1	2.0	0.5	1.3	0.9	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.8	0.3	0.6	0.4	0.1	1.7	0.4	0.8	0.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.5	0.0	9.3	10.6	7.4	7.2	14.8	16.2	13.8	18.5	14.5	13.2
LnGrp LOS	B		A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		550			252			269			221	
Approach Delay, s/veh		9.8			7.9			15.7			15.8	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		30.0		20.0		30.0				
Change Period (Y+Rc), s		5.7		5.7		5.7		5.7				
Max Green Setting (Gmax), s		14.3		24.3		14.3		24.3				
Max Q Clear Time (g_c+I1), s		9.3		9.1		6.3		9.9				
Green Ext Time (p_c), s		0.3		0.8		0.7		2.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.6								
HCM 7th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2024 Existing - Mid-Day Peak Hour

Intersection

Intersection Delay, s/veh 10.3

Intersection LOS B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	100	17	4	163	246	57
Future Vol, veh/h	100	17	4	163	246	57
Peak Hour Factor	0.81	0.81	0.93	0.93	0.91	0.91
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	123	21	4	175	270	63
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left SB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh 9.5		8.7	11.5
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	0%	81%
Vol Thru, %	15%	2%	0%
Vol Right, %	0%	98%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	117	167	303
LT Vol	100	0	246
Through Vol	17	4	0
RT Vol	0	163	57
Lane Flow Rate	144	180	333
Geometry Grp	1	1	1
Degree of Util (X)	0.206	0.219	0.438
Departure Headway (Hd)	5.122	4.383	4.732
Convergence, Y/N	Yes	Yes	Yes
Cap	698	815	759
Service Time	3.177	2.434	2.783
HCM Lane V/C Ratio	0.206	0.221	0.439
HCM Control Delay, s/veh	9.5	8.7	11.5
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.8	0.8	2.2

Timings
10/29/2024

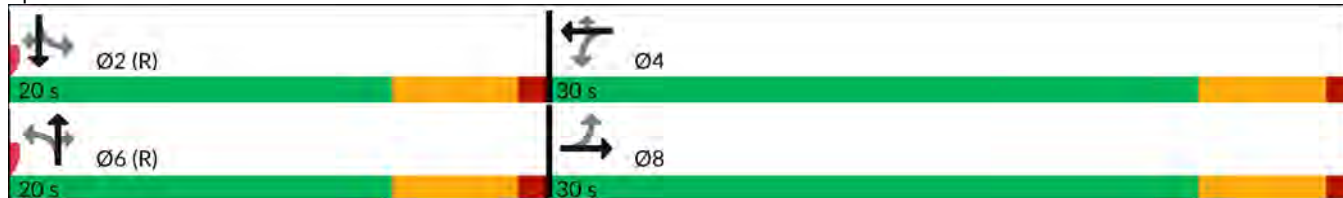
1: 75th St & Nelson Rd
Year 2024 Existing - Saturday Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	8	61	13	70	22	8	37	9	20	40	19
Future Volume (vph)	8	61	13	70	22	8	37	9	20	40	19
Lane Group Flow (vph)	10	82	15	80	25	11	49	12	29	59	28
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.02	0.09	0.02	0.09	0.03	0.03	0.09	0.02	0.07	0.11	0.06
Control Delay (s/veh)	6.8	7.1	6.8	7.3	1.0	13.3	13.7	0.1	13.8	13.9	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.8	7.1	6.8	7.3	1.0	13.3	13.7	0.1	13.8	13.9	2.3
Queue Length 50th (ft)	1	11	2	11	0	2	10	0	6	13	0
Queue Length 95th (ft)	6	24	9	27	4	9	24	0	15	25	2
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	644	911	643	914	807	386	537	499	390	537	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.09	0.02	0.09	0.03	0.03	0.09	0.02	0.07	0.11	0.06

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2024 Existing - Saturday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	61	2	13	70	22	8	37	9	20	40	19
Future Volume (veh/h)	8	61	2	13	70	22	8	37	9	20	40	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	10	79	3	15	80	25	11	49	12	29	59	28
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.75	0.75	0.75	0.68	0.68	0.68
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	746	877	33	758	916	776	491	539	457	505	539	457
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1299	1804	69	1327	1885	1598	1321	1885	1598	1352	1885	1598
Grp Volume(v), veh/h	10	0	82	15	80	25	11	49	12	29	59	28
Grp Sat Flow(s),veh/h/ln	1299	0	1873	1327	1885	1598	1321	1885	1598	1352	1885	1598
Q Serve(g_s), s	0.2	0.0	1.2	0.3	1.1	0.4	0.3	1.0	0.3	0.8	1.2	0.6
Cycle Q Clear(g_c), s	1.3	0.0	1.2	1.5	1.1	0.4	1.5	1.0	0.3	1.8	1.2	0.6
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	746	0	910	758	916	776	491	539	457	505	539	457
V/C Ratio(X)	0.01	0.00	0.09	0.02	0.09	0.03	0.02	0.09	0.03	0.06	0.11	0.06
Avail Cap(c_a), veh/h	746	0	910	758	916	776	491	539	457	505	539	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	6.9	7.3	6.9	6.7	13.7	13.1	12.8	13.7	13.2	13.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.3	0.1	0.2	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	0.4	0.1	0.1	0.4	0.1	0.2	0.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.3	0.0	7.1	7.4	7.1	6.8	13.8	13.4	12.9	13.9	13.6	13.2
LnGrp LOS	A		A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h	92		120				72		116			
Approach Delay, s/veh	7.1		7.1				13.4		13.6			
Approach LOS	A		A				B		B			
Timer - Assigned Phs	2		4				6		8			
Phs Duration (G+Y+Rc), s	20.0		30.0				20.0		30.0			
Change Period (Y+Rc), s	5.7		5.7				5.7		5.7			
Max Green Setting (Gmax), s	14.3		24.3				14.3		24.3			
Max Q Clear Time (g_c+I1), s	3.8		3.5				3.5		3.3			
Green Ext Time (p_c), s	0.2		0.4				0.1		0.3			
Intersection Summary												
HCM 7th Control Delay, s/veh			10.1									
HCM 7th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2024 Existing - Saturday Peak Hour

Intersection

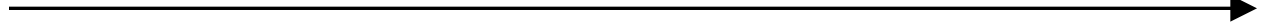
Intersection Delay, s/veh 7.6

Intersection LOS A

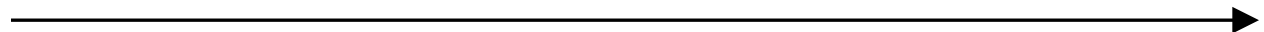
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	5	2	5	91	86	16
Future Vol, veh/h	5	2	5	91	86	16
Peak Hour Factor	0.58	0.58	0.71	0.71	0.94	0.94
Heavy Vehicles, %	14	14	6	6	3	3
Mvmt Flow	9	3	7	128	91	17
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	7.7	7.3	8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	0%	84%
Vol Thru, %	29%	5%	0%
Vol Right, %	0%	95%	16%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	7	96	102
LT Vol	5	0	86
Through Vol	2	5	0
RT Vol	0	91	16
Lane Flow Rate	12	135	109
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.136	0.129
Departure Headway (Hd)	4.576	3.631	4.281
Convergence, Y/N	Yes	Yes	Yes
Cap	773	975	836
Service Time	2.657	1.7	2.319
HCM Lane V/C Ratio	0.016	0.138	0.13
HCM Control Delay, s/veh	7.7	7.3	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.5	0.4



***Intersection Capacity Worksheets:
2025 Total***



Timings
10/29/2024

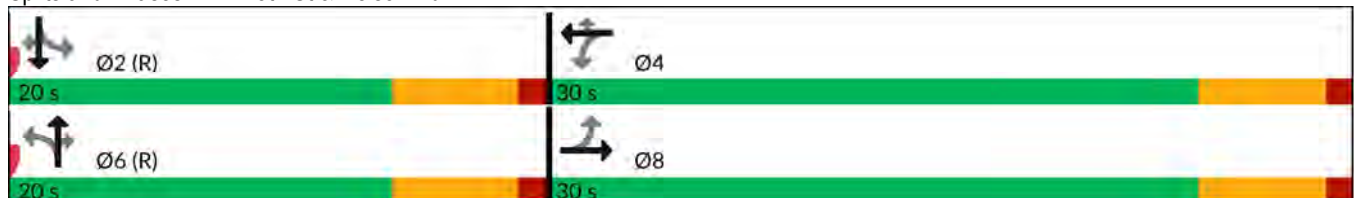
1: 75th St & Nelson Rd
Year 2025 w/ Project - AM Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	12	108	66	304	60	14	74	44	87	162	160
Future Volume (vph)	12	108	66	304	60	14	74	44	87	162	160
Lane Group Flow (vph)	13	133	81	375	74	16	85	51	121	225	222
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.03	0.15	0.13	0.41	0.09	0.05	0.16	0.10	0.32	0.42	0.36
Control Delay (s/veh)	7.0	7.1	7.8	10.0	2.6	13.5	14.4	4.8	17.0	17.4	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.0	7.1	7.8	10.0	2.6	13.5	14.4	4.8	17.0	17.4	4.5
Queue Length 50th (ft)	2	18	12	64	0	3	18	0	27	53	0
Queue Length 95th (ft)	8	40	27	100	12	14	43	16	48	77	19
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	452	872	608	905	807	329	532	494	377	537	615
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.15	0.13	0.41	0.09	0.05	0.16	0.10	0.32	0.42	0.36

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2025 w/ Project - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	108	12	66	304	60	14	74	44	87	162	160
Future Volume (veh/h)	12	108	12	66	304	60	14	74	44	87	162	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	13	120	13	81	375	74	16	85	51	121	225	222
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.87	0.87	0.87	0.72	0.72	0.72
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	472	787	85	703	909	770	322	535	453	462	539	457
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	919	1619	175	1257	1870	1585	943	1870	1585	1263	1885	1598
Grp Volume(v), veh/h	13	0	133	81	375	74	16	85	51	121	225	222
Grp Sat Flow(s),veh/h/ln	919	0	1794	1257	1870	1585	943	1870	1585	1263	1885	1598
Q Serve(g_s), s	0.5	0.0	2.1	1.9	6.4	1.3	0.7	1.7	1.2	4.0	4.8	5.8
Cycle Q Clear(g_c), s	6.9	0.0	2.1	4.0	6.4	1.3	5.5	1.7	1.2	5.7	4.8	5.8
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	0	872	703	909	770	322	535	453	462	539	457
V/C Ratio(X)	0.03	0.00	0.15	0.12	0.41	0.10	0.05	0.16	0.11	0.26	0.42	0.49
Avail Cap(c_a), veh/h	472	0	872	703	909	770	322	535	453	462	539	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.5	0.0	7.1	8.2	8.3	6.9	16.7	13.4	13.2	15.5	14.5	14.8
Incr Delay (d2), s/veh	0.1	0.0	0.4	0.3	1.4	0.2	0.3	0.6	0.5	1.4	2.4	3.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.6	0.5	2.2	0.4	0.2	0.7	0.4	1.1	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.6	0.0	7.5	8.6	9.6	7.2	17.0	14.0	13.7	16.8	16.8	18.5
LnGrp LOS	B		A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h		146			530			152			568	
Approach Delay, s/veh		7.8			9.1			14.2			17.5	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		30.0		20.0		30.0				
Change Period (Y+Rc), s		5.7		5.7		5.7		5.7				
Max Green Setting (Gmax), s		14.3		24.3		14.3		24.3				
Max Q Clear Time (g_c+I1), s		7.8		8.4		7.5		8.9				
Green Ext Time (p_c), s		1.2		2.2		0.3		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.9									
HCM 7th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2025 w/ Project - AM Peak Hour

Intersection

Intersection Delay, s/veh 9.6

Intersection LOS A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	15	9	19	161	171	125
Future Vol, veh/h	15	9	19	161	171	125
Peak Hour Factor	0.88	0.88	0.91	0.91	0.90	0.90
Heavy Vehicles, %	33	33	6	6	3	3
Mvmt Flow	17	10	21	177	190	139
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	8.9	8.6	10.2
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	63%	0%	58%
Vol Thru, %	38%	11%	0%
Vol Right, %	0%	89%	42%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	24	180	296
LT Vol	15	0	171
Through Vol	9	19	0
RT Vol	0	161	125
Lane Flow Rate	27	198	329
Geometry Grp	1	1	1
Degree of Util (X)	0.042	0.234	0.395
Departure Headway (Hd)	5.572	4.259	4.32
Convergence, Y/N	Yes	Yes	Yes
Cap	643	843	832
Service Time	3.606	2.283	2.345
HCM Lane V/C Ratio	0.042	0.235	0.395
HCM Control Delay, s/veh	8.9	8.6	10.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.1	0.9	1.9

HCM 7th TWSC
10/29/2024

101: 73rd St & Access
Year 2025 w/ Project - AM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	171	5	5	296
Future Vol, veh/h	0	0	171	5	5	296
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	90	90
Heavy Vehicles, %	3	3	3	80	80	3
Mvmt Flow	0	0	190	6	6	329

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	533	193	0	0	196
Stage 1	193	-	-	-	-
Stage 2	340	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.9
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.92
Pot Cap-1 Maneuver	506	846	-	-	1022
Stage 1	837	-	-	-	-
Stage 2	719	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	503	846	-	-	1022
Mov Cap-2 Maneuver	503	-	-	-	-
Stage 1	837	-	-	-	-
Stage 2	714	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0.14
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	30
HCM Lane V/C Ratio	-	-	-	0.005
HCM Control Delay (s/veh)	-	-	0	8.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Timings
10/29/2024

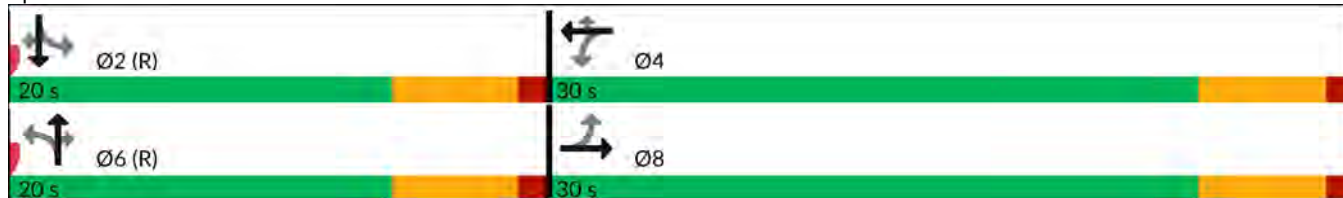
1: 75th St & Nelson Rd
Year 2025 w/ Project - Mid-Day Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	186	284	38	121	76	13	164	46	63	94	23
Future Volume (vph)	186	284	38	121	76	13	164	46	63	94	23
Lane Group Flow (vph)	209	344	41	130	82	16	200	56	78	116	28
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.34	0.38	0.08	0.14	0.10	0.04	0.38	0.11	0.23	0.22	0.06
Control Delay (s/veh)	10.0	9.4	7.5	7.7	2.5	13.4	16.8	5.2	16.0	15.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.0	9.4	7.5	7.7	2.5	13.4	16.8	5.2	16.0	15.0	2.3
Queue Length 50th (ft)	34	56	6	19	0	3	46	0	17	26	0
Queue Length 95th (ft)	71	101	18	41	15	13	81	16	39	50	5
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	609	900	499	914	819	363	532	494	333	527	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.38	0.08	0.14	0.10	0.04	0.38	0.11	0.23	0.22	0.06

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2025 w/ Project - Mid-Day Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	284	22	38	121	76	13	164	46	63	94	23
Future Volume (veh/h)	186	284	22	38	121	76	13	164	46	63	94	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	209	319	25	41	130	82	16	200	56	78	116	28
Peak Hour Factor	0.89	0.89	0.89	0.93	0.93	0.93	0.82	0.82	0.82	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	3	3	3
Cap, veh/h	668	832	65	529	916	776	441	535	453	367	531	450
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1170	1712	134	1045	1885	1598	1244	1870	1585	1115	1856	1572
Grp Volume(v), veh/h	209	0	344	41	130	82	16	200	56	78	116	28
Grp Sat Flow(s),veh/h/ln	1170	0	1846	1045	1885	1598	1244	1870	1585	1115	1856	1572
Q Serve(g_s), s	6.0	0.0	5.9	1.3	1.9	1.4	0.5	4.3	1.3	3.0	2.4	0.6
Cycle Q Clear(g_c), s	7.9	0.0	5.9	7.2	1.9	1.4	2.9	4.3	1.3	7.3	2.4	0.6
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	668	0	897	529	916	776	441	535	453	367	531	450
V/C Ratio(X)	0.31	0.00	0.38	0.08	0.14	0.11	0.04	0.37	0.12	0.21	0.22	0.06
Avail Cap(c_a), veh/h	668	0	897	529	916	776	441	535	453	367	531	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.3	0.0	8.1	10.4	7.1	7.0	14.7	14.3	13.2	17.2	13.6	13.0
Incr Delay (d2), s/veh	1.2	0.0	1.2	0.3	0.3	0.3	0.2	2.0	0.6	1.3	0.9	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.8	0.3	0.6	0.4	0.1	1.7	0.4	0.8	0.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.5	0.0	9.4	10.7	7.4	7.2	14.8	16.3	13.8	18.5	14.5	13.2
LnGrp LOS	B		A	B	A	A	B	B	B	B	B	B
Approach Vol, veh/h		553			253			272			222	
Approach Delay, s/veh		9.8			7.9			15.7			15.8	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		30.0		20.0		30.0				
Change Period (Y+Rc), s		5.7		5.7		5.7		5.7				
Max Green Setting (Gmax), s		14.3		24.3		14.3		24.3				
Max Q Clear Time (g_c+I1), s		9.3		9.2		6.3		9.9				
Green Ext Time (p_c), s		0.3		0.9		0.7		2.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				11.7								
HCM 7th LOS				B								
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2025 w/ Project - Mid-Day Peak Hour

Intersection

Intersection Delay, s/veh 10.4

Intersection LOS B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	102	17	4	165	247	60
Future Vol, veh/h	102	17	4	165	247	60
Peak Hour Factor	0.81	0.81	0.93	0.93	0.91	0.91
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	126	21	4	177	271	66
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left SB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh 9.6		8.7	11.6
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	86%	0%	80%
Vol Thru, %	14%	2%	0%
Vol Right, %	0%	98%	20%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	119	169	307
LT Vol	102	0	247
Through Vol	17	4	0
RT Vol	0	165	60
Lane Flow Rate	147	182	337
Geometry Grp	1	1	1
Degree of Util (X)	0.21	0.222	0.444
Departure Headway (Hd)	5.137	4.398	4.738
Convergence, Y/N	Yes	Yes	Yes
Cap	695	812	756
Service Time	3.193	2.45	2.79
HCM Lane V/C Ratio	0.212	0.224	0.446
HCM Control Delay, s/veh	9.6	8.7	11.6
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.8	0.8	2.3

HCM 7th TWSC
10/29/2024

101: 73rd St & Access
Year 2025 w/ Project - Mid-Day Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	3	263	4	4	303
Future Vol, veh/h	4	3	263	4	4	303
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	90	90
Heavy Vehicles, %	43	43	3	63	63	3
Mvmt Flow	4	3	292	4	4	337

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	640	294	0	0	297
Stage 1	294	-	-	-	-
Stage 2	346	-	-	-	-
Critical Hdwy	6.83	6.63	-	-	4.73
Critical Hdwy Stg 1	5.83	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-
Follow-up Hdwy	3.887	3.687	-	-	2.767
Pot Cap-1 Maneuver	381	658	-	-	985
Stage 1	671	-	-	-	-
Stage 2	634	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	379	658	-	-	985
Mov Cap-2 Maneuver	379	-	-	-	-
Stage 1	671	-	-	-	-
Stage 2	631	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.91	0	0.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	463	23
HCM Lane V/C Ratio	-	-	0.016	0.005
HCM Control Delay (s/veh)	-	-	12.9	8.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Timings
10/29/2024

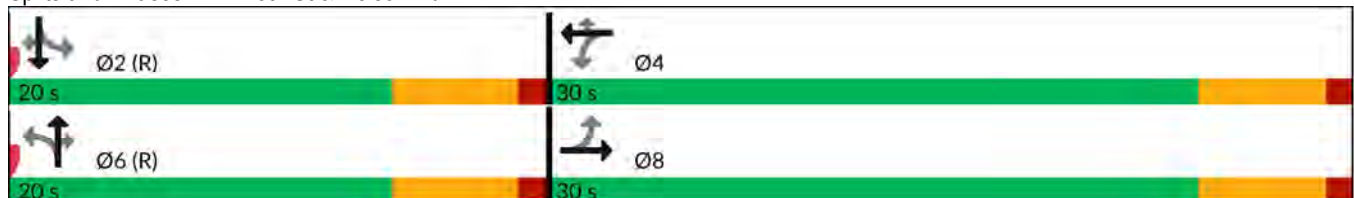
1: 75th St & Nelson Rd
Year 2025 w/ Project - Saturday Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	8	61	15	70	22	8	37	9	20	45	19
Future Volume (vph)	8	61	15	70	22	8	37	9	20	45	19
Lane Group Flow (vph)	10	88	17	80	25	11	49	12	29	66	28
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8		4			6			2	
Permitted Phases	8		4		4	6		6	2		2
Detector Phase	8	8	4	4	4	6	6	6	2	2	2
Switch Phase											
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	25.7	25.7	23.7	23.7	23.7	19.7	19.7	19.7	19.0	19.0	19.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag											
Lead-Lag Optimize?											
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
v/c Ratio	0.02	0.10	0.03	0.09	0.03	0.03	0.09	0.02	0.07	0.12	0.06
Control Delay (s/veh)	6.8	6.8	6.9	7.3	1.0	13.3	13.7	0.1	13.8	14.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.8	6.8	6.9	7.3	1.0	13.3	13.7	0.1	13.8	14.0	2.3
Queue Length 50th (ft)	1	11	2	11	0	2	10	0	6	14	0
Queue Length 95th (ft)	6	24	10	27	4	9	24	0	15	27	2
Internal Link Dist (ft)		358		581			641			434	
Turn Bay Length (ft)	210		240		240	300		300	190		190
Base Capacity (vph)	644	905	640	914	807	384	537	499	390	537	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.10	0.03	0.09	0.03	0.03	0.09	0.02	0.07	0.12	0.06

Intersection Summary

Cycle Length: 50
 Actuated Cycle Length: 50
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: 75th St & Nelson Rd



HCM 7th Signalized Intersection Summary
10/29/2024

1: 75th St & Nelson Rd
Year 2025 w/ Project - Saturday Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	61	7	15	70	22	8	37	9	20	45	19
Future Volume (veh/h)	8	61	7	15	70	22	8	37	9	20	45	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	10	79	9	17	80	25	11	49	12	29	66	28
Peak Hour Factor	0.77	0.77	0.77	0.88	0.88	0.88	0.75	0.75	0.75	0.68	0.68	0.68
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	746	808	92	751	916	776	485	539	457	505	539	457
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1299	1662	189	1319	1885	1598	1312	1885	1598	1352	1885	1598
Grp Volume(v), veh/h	10	0	88	17	80	25	11	49	12	29	66	28
Grp Sat Flow(s),veh/h/ln	1299	0	1851	1319	1885	1598	1312	1885	1598	1352	1885	1598
Q Serve(g_s), s	0.2	0.0	1.3	0.4	1.1	0.4	0.3	1.0	0.3	0.8	1.3	0.6
Cycle Q Clear(g_c), s	1.3	0.0	1.3	1.6	1.1	0.4	1.6	1.0	0.3	1.8	1.3	0.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	746	0	900	751	916	776	485	539	457	505	539	457
V/C Ratio(X)	0.01	0.00	0.10	0.02	0.09	0.03	0.02	0.09	0.03	0.06	0.12	0.06
Avail Cap(c_a), veh/h	746	0	900	751	916	776	485	539	457	505	539	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	0.0	6.9	7.4	6.9	6.7	13.8	13.1	12.8	13.7	13.2	13.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.3	0.1	0.2	0.5	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	0.4	0.1	0.1	0.4	0.1	0.2	0.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.3	0.0	7.2	7.4	7.1	6.8	13.9	13.4	12.9	13.9	13.7	13.2
LnGrp LOS	A		A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h		98			122			72			123	
Approach Delay, s/veh		7.2			7.1			13.4			13.6	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		30.0		20.0		30.0				
Change Period (Y+Rc), s		5.7		5.7		5.7		5.7				
Max Green Setting (Gmax), s		14.3		24.3		14.3		24.3				
Max Q Clear Time (g_c+I1), s		3.8		3.6		3.6		3.3				
Green Ext Time (p_c), s		0.2		0.4		0.1		0.3				
Intersection Summary												
HCM 7th Control Delay, s/veh			10.1									
HCM 7th LOS			B									
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th AWSC
10/29/2024

2: 71st St/Niwot Rd & 73rd St
Year 2025 w/ Project - Saturday Peak Hour

Intersection

Intersection Delay, s/veh 7.6

Intersection LOS A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	11	2	5	96	86	16
Future Vol, veh/h	11	2	5	96	86	16
Peak Hour Factor	0.58	0.58	0.71	0.71	0.94	0.94
Heavy Vehicles, %	14	14	6	6	3	3
Mvmt Flow	19	3	7	135	91	17
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay, s/veh	7.8	7.3	8
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	85%	0%	84%
Vol Thru, %	15%	5%	0%
Vol Right, %	0%	95%	16%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	101	102
LT Vol	11	0	86
Through Vol	2	5	0
RT Vol	0	96	16
Lane Flow Rate	22	142	109
Geometry Grp	1	1	1
Degree of Util (X)	0.029	0.144	0.13
Departure Headway (Hd)	4.608	3.638	4.309
Convergence, Y/N	Yes	Yes	Yes
Cap	767	972	827
Service Time	2.693	1.713	2.361
HCM Lane V/C Ratio	0.029	0.146	0.132
HCM Control Delay, s/veh	7.8	7.3	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.5	0.4

HCM 7th TWSC
10/29/2024

101: 73rd St & Access
Year 2025 w/ Project - Saturday Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	96	11	12	102
Future Vol, veh/h	0	0	96	11	12	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	90	90
Heavy Vehicles, %	2	2	3	35	35	3
Mvmt Flow	0	0	107	12	13	113

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	253	113	0	0	119	0
Stage 1	113	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.45	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.515	-
Pot Cap-1 Maneuver	736	940	-	-	1288	-
Stage 1	912	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	728	940	-	-	1288	-
Mov Cap-2 Maneuver	728	-	-	-	-	-
Stage 1	912	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0.82
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	189
HCM Lane V/C Ratio	-	-	-	0.01
HCM Control Delay (s/veh)	-	-	0	7.8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930

Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.gov

Building Safety & Inspection Services Team

MEMO

TO: Pete L'Orange, Senior Planner
FROM: Michelle Huebner, Plans Examiner Supervisor
DATE: December 23, 2024

RE: Referral Response, LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU: Limited Impact Special Review for an Equestrian Center with more than 25,000 square feet of floor area, an Agricultural Worker Accessory Dwelling Unit, and non-foundational earthwork exceeding 500 cubic yards, and Site Plan Review for a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet.

Location: 8130 N. 73rd Street

Thank you for the referral. We have the following comments for the applicants:

1. **Building Permit.** A building permit, plan review, inspection approvals, and a Certificate of Occupancy ("C.O.") are required for the proposed residence. A separate building permit is required to deconstruct the existing buildings. Separate building permit are required for each structure: Arena with stable, Hay / bedding storage, Heavy equipment storage, ADU (Single family dwelling) with equipment storage, covered round pen, horse runs with sheds and any other building. The grading must be included with one of building permits.

Geologic hazards – the required **soils report** for the residence will address the soil and bedrock swell potential on the parcel.

ADU with equipment storage. Is a mixed-use building, a code analysis from a Colorado licensed design professional, an architect, is required. The building occupancy must be classified by each space. The ADU (single family dwelling) portion of the building needs to meet all the same requirements as new single-family dwelling.

(Residential) Stairs are not permitted or approvable in crawlspaces. The crawlspace must be less than 6'-8" or will count as basement area. The [2015 Building Code Adoption & Amendments](#) definitions:

Claire Levy County Commissioner Marta Loachamin County Commissioner Ashley Stolzmann County Commissioner

(Residential) CRAWL SPACE. An under floor space below the first story floor of the building that does not meet the definition of story above grade plane, that has a ceiling height measured from the crawlspace grade or floor to the bottom of the floor joists above of less than six feet 8 inches, and that does not contain interior stairs, windows, wall, and ceiling finish materials, trim or finished flooring

(Residential) Floor area is measure to the outside of outside walls and includes the stairs on each level. The [2015 Building Code Adoption & Amendments](#) definitions: **AREA, FLOOR.** The area of the building, existing or new, under consideration including basements and attached garages calculated without deduction for corridors, stairways, closets, the thickness of interior walls, columns, or other features as measured from the exterior face of the exterior walls.

[2015 Building Code Adoption & Amendments](#)

The Commercial Plan Submittal Checklist: [B70 Commercial Plan Checklist \(bouldercounty.gov\)](#)

We are in the process of **updating the building code**. Please review the draft amendments - [Board of Review - 2021 BCBC Amendments Draft](#)

2. **(Residential) Automatic Fire Sprinkler System.** Under the 2015 International Residential Code (“IRC”) as adopted by Boulder County, all new one- and two-family dwellings and townhouses are required to be equipped with an automatic fire sprinkler system that is designed and installed in accordance with NFPA 13D or IRC Section P2904.
3. **(Residential) BuildSmart.** Please refer to the county’s adoption and amendments to Chapter 11 of the IRC, the county’s “BuildSmart” program, for the applicable requirements for energy conservation and sustainability for residential additions and new residential buildings. Please be aware that there are energy related requirements of this code that may require the use of renewable energy systems (such as rooftop solar systems) that will also need to be approved by your electric utility provider. In some cases, there may be limitations on the size of on-site systems allowed by your utility provider that could constrain the project design. We strongly encourage discussions between the design team and the utility company as early in the process as possible in order to identify these constraints.
4. **(Residential) Electric vehicle charging outlet.** Boulder County Building Code requires:
 - a. R329.1 Electric vehicle charging pre-wire option. In addition to the one 125-volt receptacle outlet required for each car space by NEC Section 210.52(G)(1.), every new garage or carport that is accessory to a one- or two-family dwelling or townhouse shall include at least one of the following, installed in accordance with the requirements of Article 625 of the Electrical Code:

- i. A Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - ii. Upgraded wiring to accommodate the future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet, or
 - iii. Electrical conduit to allow ease of future installation of a Level 2 (240-volt) electric vehicle charging receptacle outlet.
5. **(Commercial) Business.** The business use buildings and parking will be reviewed through the International Building Code (IBC) as commercial.
6. **(Commercial) Narrative use.** For each building permit provide a narrative of use for the building.
7. **(Commercial - mixed-use building)** will be reviewed through the International Building Code (IBC) as commercial buildings. A code analysis from a Colorado licensed design professional, an architect, is required. The building occupancy must be classified by each space. These buildings are not all agricultural use under the International Building Code (IBC), but rather a mixed-use building see chapter 3 of the IBC. Electrical, mechanical and plumbing design is required to be prepared by a Colorado licensed design professional, an engineer.
8. **(Commercial) Minimum Plumbing Fixtures.** The plumbing fixtures count needs to meet or exceed the requirements of IBC Chapter 29, including the need for accessible restrooms and fixtures.
9. **(Commercial) Accessibility.** Chapter 11 of the IBC and referenced standard ICC A117.1-09 provide for accessibility for persons with disabilities. Any building permit submittals are to include any applicable accessibility requirements, including accessible parking, signage, accessible routes and accessible fixtures and features.
10. **(Commercial) Energy Code.** If structures, or a portion of them are to be conditioned (heated or cooled), please demonstrate compliance to 2015 International Energy Conservation Code IECC – Commercial provisions.
11. **(Grading) Grading Permit.** The grading permit must be submitted with one of the building permits. The inspections approvals are required for the proposed non-foundational grading. Please refer to the county's adopted 2015 editions of the International Codes and code amendments, including IBC Appendix Chapter J for grading.
12. **(Grading) Observation Reports.** The design professional responsible for the design or a similarly qualified Colorado-licensed design professional is to observe the grading and submit a stamped report to Building Safety & Inspection Services for review and approval. The final report is to state that the work has been completed in substantial conformance with the approved engineered plans.

13. **(General) Design Wind and Snow Loads.** The design wind and ground snow loads for the property are 155 mph (Vult) and 40 psf, respectively.
14. **(General) 2015 International Green Construction Code (“IGCC”).** Boulder County’s adoptions of the 2015 editions of the International Codes include the IGCC as applying to buildings or complexes of buildings on the same property with 25,000 sq. ft. or more of floor area. Thus, the provisions of the IGCC will apply to all new construction involved in the proposal.
15. **(General) Ignition-Resistant Construction and Defensible Space.** Please refer to Section R327 of the Boulder County Building Code for wildfire hazard mitigation requirements, including ignition-resistant construction and defensible space.
16. **(General) Fire Department.** It appears that the site is served by MOUNTAIN VIEW FIRE RESCUE DISTRICT. A separate referral response from the fire department should also be forthcoming. The fire department may have additional requirements in accordance with their International Fire Code (“IFC”) adoption. Also, the Fire Protection District must provide written documentation to Boulder County Building Safety and Inspection Services approving the building permit plans and specifications of projects before the building permit can be issued.
17. **(General) Plan Review.** The items listed above are a general summary of some of the county’s building code requirements. A much more detailed plan review will be performed at the time of building permit application, when full details are available for review, to assure that all applicable minimum building codes requirements are to be met. Our [Building Safety publications](#).

If the applicants should have questions or need additional information, we’d be happy to work with them toward solutions that meet minimum building code requirements. Please call (720) 564-2640.



Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
 303-441-3930 • www.BoulderCounty.gov

January 2, 2025

TO: Pete L'Orange, Senior Planner; Community Planning & Permitting, Development Review Team - Zoning

FROM: Tim Oliver, Planner II; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU at 8130 N. 73rd Street

The Development Review Team – Access & Engineering staff have reviewed the above referenced docket and have the following comments:

1. The subject property is accessed via N 73rd Street, an asphalt Boulder County owned and maintained right-of-way (ROW) with a Functional Classification of Collector. Legal access has been demonstrated via adjacency to this public ROW.
2. The driveway design must comply with the Multimodal Transportation Standards (the Standards) for residential development, including without limitation:
 - a. Table 5.5.1 – Parcel Access Design Standards (1-Lane Plains Access)
 - b. Standard Drawing 11 – Private Access
 - c. Standard Drawing 14 – Access with Roadside Ditch
 - d. Standard Drawing 15 – Access Profiles Detail
 - e. Standard Drawing 16 – Access Grade & Clearance
 - f. Standard Drawing 17 – Access Pull-Outs
 - g. Standard Drawing 18 – Access Turnaround
 - h. Standard Drawing 19 – Typical Turnaround & Pullout Locations

The proposed emergency pullouts are more than 400 feet apart. Emergency pullouts have to be within 400 feet of each other per Standard Drawing 17 – Access Pull-Outs of the Standards.

The proposed emergency turnarounds are within 50 feet of the front of the house barn and the proposed residence. The emergency turnarounds must be no closer than 50 feet to the front of the structures per Standard Drawing 18 – Access Turnaround of the Standards.

At building permit, submit revised plans that show the proposed emergency pullouts within 400 feet of each other and the emergency turnarounds further than 50 feet from the front of structures.

At final inspection, the Community Planning & Permitting Department must verify that the access and driveway has been constructed to comply with the Standards.

3. The proposed grading on sheets AS1-3 and AS1-4 is cut off at the south side of the sheets before the proposed contours tie back into the existing contours.

At building permit, submit revised grading plans that show the complete proposed grading, including all proposed contours tying back into existing.

4. On sheet number A1.0, the Overall Site Plan – Existing, the site plan notes end at 18, but there are labels on the plan that are higher than 18.

At building permit, submit a revised Overall Site Plan – Existing sheet that includes all of the notes in the Site Plan Notes legend.

5. During construction, all vehicles, machinery, dumpsters, and other items shall be staged on the subject property.
6. As a part of Boulder County’s water quality protection and Municipal Separate Storm Sewer System (MS4) Construction Program, a Stormwater Quality Permit (SWQP) is required for this project because the disturbance illustrated in the submitted materials is over an acre.

At building permit, provide a complete SWQP submittal to stormwater@bouldercounty.gov.

7. The transportation system impact analysis (TSIR), dated November 5, 2025, was reviewed and staff agrees with its conclusions. It does not include data for the residential component of the proposal, but this exclusion does not alter the conclusions of the analysis.
8. The plans show 11 parking spaces, one of which must be ADA van accessible, and 6 spaces for vehicles with trailers. The parking is sufficient.
9. The minimum ROW width requirement for a Collector is 70 feet. However, N. 73rd Street is 60 feet at the subject property. Staff is uncertain whether ROW can be dedicated with a Limited Impact Special Use Review but recommends that a 5-foot half-width ROW be dedicated to the County at the subject property, if possible.
10. Staff observed stockpiles at the southern access point during the site visit. If stockpiles are going to remain for more than 30 days, they need to be vegetated.
11. There are no records of access permits issued for the northern and southern most agricultural accesses. They must be removed, revegetated, and restored.
12. A drainage letter is required for this development in order to determine if any detention or water quality treatment is required. A PDF is attached that lists the requirements in detail for this drainage letter.

At building permit, provide the required drainage letter as laid out in the attached PDF.

This concludes our comments at this time.



Public Works

2525 13th Street • Boulder, Colorado 80304 • Tel: 303-441-3900

MEMORANDUM

November 9, 2021

Subject: Allowance of the use of Drainage Letters on Private Development and Public Capital Projects

At the discretion of the County Engineer, proposed projects may be allowed to utilize a drainage letter to satisfy the requirements of Section 204 of the Boulder County Storm Drainage Criteria Manual (SDCM), adopted November 2016. All other requirements that are not otherwise addressed by the Drainage Letter are still in force. The elements of the letter shall include, at a minimum, the following:

- Description of property location with size of property; alternately, include a vicinity map, with North arrow and nearby waterway features.
- Description of the proposed project
- Site plan showing entire property, with North arrow, scale, property size, disturbance area, and distance to waterways shown.
- Identify and address effects on adjacent or nearby major drainage features or waterways
- Existing (dashed) and proposed (solid) contours with tie-ins shown (2-foot or better resolution), and contour intervals and major contours clearly identified
- Proposed flow directions for current and proposed conditions
- Peak discharge calculations for the minor and major storm events as identified in the SDCM
- Peak flow rates to determine the sizing of drainage infrastructure, including, but not limited to, swales, inlets, storm drains, culverts, and any other infrastructure affected by the site development
- Infrastructure sizing calculations and supporting documentation
- Demonstration that detention is not required by applying one or more of the exemptions listed in SDCM section 1203.1
- Identification of potential impacts to adjacent down-gradient properties, proposed mitigation features, and certification that the project will not adversely affect downstream structures or infrastructure
- For projects that disturb an acre or more and are located within the County's MS4 permitted area, an explanation of stormwater management facilities (SWMFs) is required. The explanation may include calculations for proposed SWMF or documentation that such measures are not required.
- Lots that are within a subdivision that have an approved drainage report may reference and supply the approved drainage report as well as a statement that the lot conforms to the original drainage report criteria.

Matt Jones County Commissioner **Claire Levy** County Commissioner **Marta Loachamin** County Commissioner

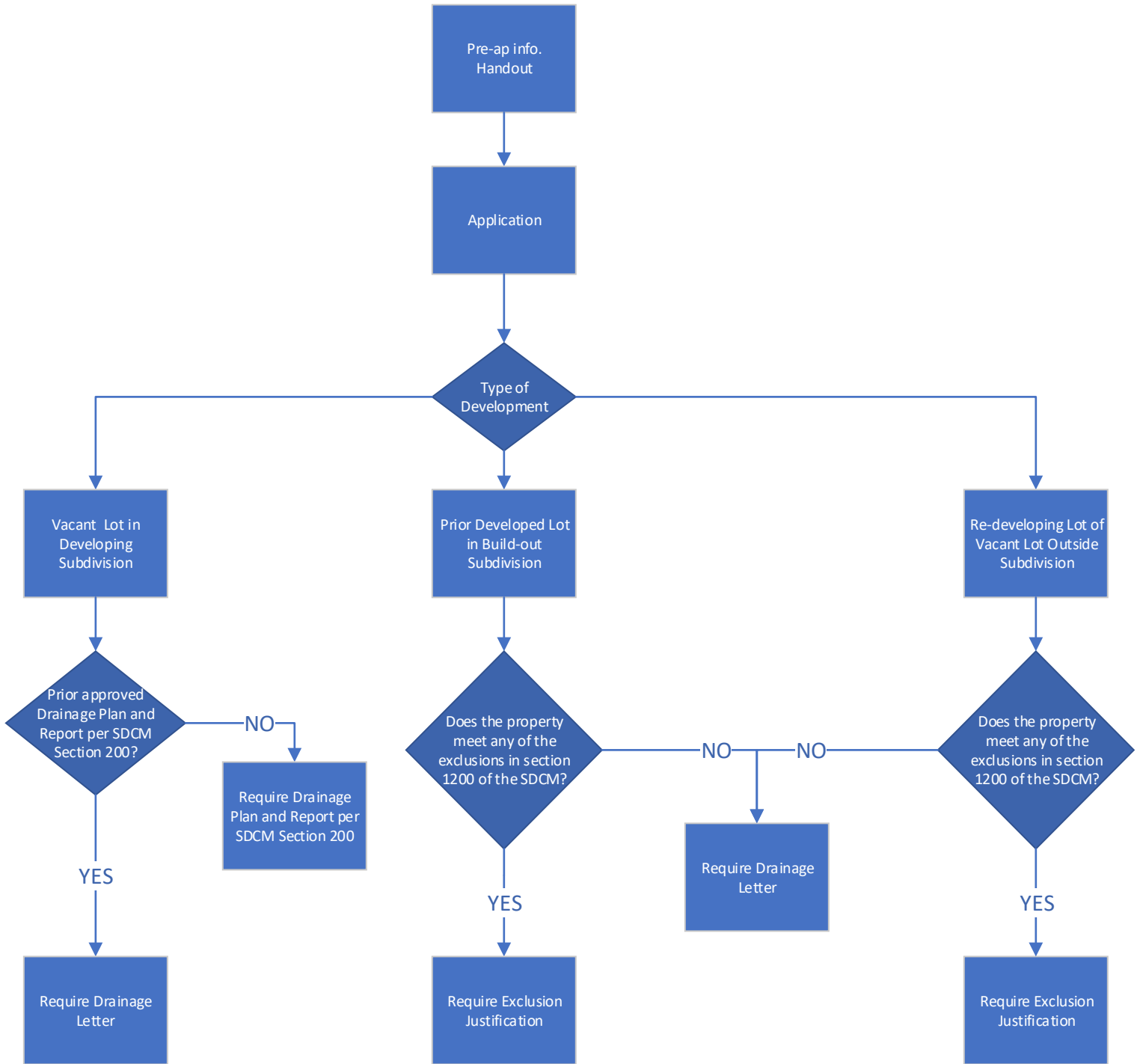
- Letter must be stamped and signed by a Colorado registered Professional Engineer in a related field
- Any other information that is necessary to satisfy drainage analysis and design for the site based on the judgement of the County Engineer.

After review of the initial letter submittal, the County Engineer may require additional information deemed necessary for adequate and appropriate drainage analysis on the site.



By: _____
Michael A. Thomas, P.E.
County Engineer, Boulder County Public Works

Effective Date: November 17, 2021





Community Planning & Permitting

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
303-441-3930 • www.BoulderCounty.gov

January 2, 2025

TO: Pete L'Orange, Senior Planner; Community Planning & Permitting, Development Review Team - Zoning

FROM: Tim Oliver, Planner II; Community Planning & Permitting, Development Review Team – Access & Engineering

SUBJECT: Docket # LU-24-0017/SPR-24-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU at 8130 N. 73rd Street Addendum

The Access & Engineering staff requests additional information to support the Transportation System Impact Analysis (TSIR) conclusions. Specifically, the applicant should provide information regarding how many employees will be on staff, what their hours of employment will be, and how many will live onsite.

It is not clear to staff if the proposal is primarily for a breeding facility or a riding facility. Please provide a detailed description of the business model to be employed at the facility. Describe the expected schedule for trainers and students. How many trainers and students are expected on site on any given day? What days and times of day will they be on site? Similarly, describe the expected schedule for breeding activities. Also, describe any special events that will occur at the facility, when they will be held, and how many people will attend.

This concludes our comments at this time.



Community Planning & Permitting

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 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306
 303-441-3930 • www.BoulderCounty.gov

December 18, 2024

To: Pete L'Orange, Senior Planner
 From: Kelly Watson, Principal Floodplain Planner

Subject: Docket LU-24-0017/SPR-42-0081: Starlings CO LLC Equestrian Center and Ag Worker ADU

Request: Limited Impact Special Review for an Equestrian Center with more than 25,000 square feet of floor area, an Agricultural Worker Accessory Dwelling Unit, and non-foundational earthwork exceeding 500 cubic yards, and Site Plan Review for a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet.

Location: 8130 N. 73rd Street, a 68-acre parcel located approximately .75-mile north of the intersection of N. 73rd Street and Nimbus Road, in Section 24, Township 2N, Range 70W.

The Community Planning & Permitting Department – Floodplain Management Program has reviewed the above referenced docket and has the following comments.

1. The subject parcel is located outside the Floodplain Overlay (FO) District. No Floodplain Development Permit (FDP) will be required for the proposed development. Note that FEMA and county floodplain maps changed on October 24, 2024. Previously, portions of the property were located within the 100-year floodplain. Currently, portions of the property are located within the 500-year floodplain, which is not part of the regulated FO District.

Additional / advisory notes:

- A portion of the property, specifically the southern 1/3 of the parcel, is within a known fluvial hazard zone, which is the area a stream has occupied in recent history, could occupy, or could physically influence as it stores and transports water, sediment, and debris. Parts of the property that are outside the regulatory FO District are still within the fluvial hazard zone and may be subject to excessive erosion, sedimentation, and/or wholesale changes in the location of the stream channel.
- The Floodplain Management Program recommends that all homeowners maintain flood insurance, regardless of whether a structure is in a mapped floodplain. In 2021, the National Flood Insurance Program (NFIP) changed how flood insurance premiums are rated. As a result, homeowners may see flood insurance savings by implementing flood mitigation measures, even for structures outside the mapped floodplain. These measures may include: building farther away from flooding sources; building on higher ground; elevating the first floor above adjacent grade; filling in crawlspaces and basements or adding flood vents to such enclosed spaces; and elevating mechanical and electrical equipment above the first floor.

Claire Levy County Commissioner

Marta Loachamin County Commissioner

Ashley Stolzmann County Commissioner

We recommend that you contact your insurance agent to discuss the impact of the proposed development on your flood insurance rate. Boulder County residents receive discounts on NFIP premiums because of the county's participation in the program, but there are also private options available.

Please contact Kelly Watson, Principal Floodplain Planner, at kwatson@bouldercounty.gov to discuss this referral.

This concludes our comments at this time.



Public Health

Environmental Health Division

December 27, 2024

TO: Staff Planner, Community Planning and Permitting

FROM: Carl Job, Environmental Health Specialist

SUBJECT: LU-24-0017: Starlings CO LLC Equestrian Center and Ag Worker ADU (SPR-24-0081)

OWNER: STARLINGS CO LLC

PROPERTY ADDRESS: 8130 N 73RD STREET

SEC-TOWN-RANGE: 24 -2N -70

The Boulder County Public Health (BCPH) – Environmental Health division has reviewed the submittals for the above referenced docket and has the following comments.

OWTS:

1. Boulder County Public Health issued a new permit for the installation of an absorption bed system on 03/15/1999. The permit was issued for an onsite wastewater treatment system (OWTS) adequate for a 3-bedroom house. Boulder County Public Health approved the installation of the OWTS on 05/18/2000.
2. Boulder County Public Health issued a new permit for the installation of an absorption bed system on 10/29/2003. The permit was issued for an onsite wastewater treatment system (OWTS) adequate for a 7-bedroom house. Boulder County Public Health approved the installation of the OWTS on 11/14/2005.
3. The narrative included in the Land Use Review application states that the existing 7-bedroom OWTS will be replaced and relocated to be sized in support of the proposed stable. Similarly, a new OWTS will be designed and installed to service the proposed residence.
4. The owner or their agent (e.g., contractor) must apply for the OWTS permit, and the OWTS permit must be issued prior to installation and before a building permit can be obtained. The OWTS components must be installed, inspected, and approved before a Certificate of Occupancy or Final Building Inspection approval will be issued by Community Planning and Permitting (CP&P).
5. Be sure to apply for the correct permit (Major Repair Permit Associated with Property Improvements). The permit fees can be found at: <https://bouldercounty.gov/environment/water/septicmart/permit-and-fee-schedule/#owts-permit-services-and-fees>
6. Boulder County Public Health must conduct an onsite investigation and review percolation rates, soil conditions and any design plans and specifications prior to OWTS permit issuance. The OWTS absorption field must be located a minimum distance of 100' from all wells, 25' from waterlines, 50' from waterways and 10' from property lines.

7. Setbacks between all buildings and the OWTS serving this property and OWTS serving neighboring properties, must be in accordance with the Boulder County OWTS Regulations, Table 7-1. <https://assets.bouldercounty.gov/wp-content/uploads/2017/05/boulder-county-ows-regulations.pdf>
8. The existing septic tanks must be properly abandoned if they are not to be incorporated into the new OWTS. Pumping the tank and then either crushing it or filling it is required.

Avoid Damage to OWTS:

1. Heavy equipment should be restricted from the surface of the absorption field during construction to avoid soil compaction, which could cause premature absorption field malfunction. Caution should be used in conducting trenching and excavation activities so that sewer lines and other OWTS components are not damaged.

This concludes comments from the Public Health – Environmental Health division at this time. For additional information on OWTS, refer to the following website: www.SepticSmart.org. If you have additional questions about OWTS, please do not hesitate to contact HealthOWS@bouldercounty.org.
Cc: OWTS file, owner, Community Planning and Permitting



December 26, 2024

Pete L'Orange, Senior Planner

Boulder County Community Planning & Permitting

Transmission via email: plorange@bouldercounty.gov

Re: LU-24-0017/SPR-24-0081, Starlings CO LLC Equestrian Center & Ag Worker ADU

8130 N 73rd Street, Longmont

NE¼ of the SW¼ & Pt. SE¼ of the NW¼ , Sec. 24, T2N, R70W, 6th P.M.

Water Division 1, Water District 5

Dear Mr. L'Orange:

We have reviewed the above-referenced Site Plan Review for a new 5,352-square-foot residence where the presumed compatible size is 5,934 square feet and Limited Impact Special Use Review for an Equestrian Center with more than 25,000 square feet of floor area, an Agricultural Worker Accessory Dwelling Unit (“ADU”), and non-foundational earthwork exceeding 500 cubic yards, all on an approximately 68-acre parcel (ID 131724000011). The submitted material does not appear to qualify as a “subdivision” as defined in section 30-28-101(10)(a), C.R.S. Therefore, pursuant to the State Engineer’s March 4, 2005 and March 11, 2011 memorandums to county planning directors, this office will only perform a cursory review of the referral information and provide comments. The comments will not address the adequacy of the water supply plan for this property or the ability of the water supply plan to satisfy any County regulations or requirements.

The referral proposal is in support of equestrian training and breeding center CH Equine. Based on Boulder County property records, this property currently contains one 4,000 sq foot equipment shed and one 12,144 square foot barn. Current septic availability consists of two two systems on the property serving the existing barn and a previously-demolished residence, respectively. The current water supply is stated as being provided from an existing tap through the Left Hand Water District (“LHWD”) and an existing well: Permit no. 5664--A, which was issued for the replacement of a well first put to use prior to May 8 of 1972.



The use of water from well no. 5664--A is limited to the historical uses of watering livestock on a farm or ranch. Uses that are an expansion of the historical use of the well are not permitted, meaning that water from well no. 5664--A cannot be used for either the proposed residential dwelling nor the ADU. In regards to the proposed equestrian center, information from the [CH Equine website](#) indicates that the organization's focus is on the instruction of horses brought in from external owners. Subsequent correspondence with the applicant clarified that the majority of the horses on-site will be owned by the applicant. Although the facility is intended to be for training purposes, not boarding, trainee horses will be stabled on site. It was communicated that stabling periods will vary, from a weekend up to a year. When considering historical livestock uses, well no. 5664--A may only be used if the subject animals are owned by the well owner. Water from well no. no. 5664--A cannot be used for stabled trainee horses.

Permit no. 5664-A was issued on the condition that the existing well under permit no. 5664 be plugged and abandoned. A Well Abandonment Report was not received for well no. 5664, therefore it is unknown if the well was plugged. To confirm well no. 5664 was plugged and abandoned, the well owner should submit a Well Abandonment Report (Form GWS-09) available at: <https://dwr.colorado.gov/services/well-construction-inspection>.

The applicant indicated through correspondence that the well water is currently not potable for livestock, and use of the well (rather than the LHWD tap) will be contingent on the installation feasibility of a filtration system. If well permit no. 5664-A is no longer required for the uses stated in the permit, it should be plugged and abandoned with a Well Abandonment Report submitted to this office to verify that the work has been completed. The Well Abandonment Report (GWS-09) may be found on the eForms page of the Division of Water Resources website at <https://dwr.state.co.us/eforms>.

Application materials also state that Holland Ditch (WDID 0500574) crosses the subject property, with the headgate located several miles from the proposed area. Should construction activities impact the ability of the Left Hand Ditch Company to deliver water to users under the Holland Ditch, the applicant will need to coordinate with the ditch company to mitigate any such impacts.

Three existing ponds are visible on satellite imagery, and confirmed by the proposed site plan. Construction information on these ponds were not provided, so it is not clear whether these ponds were constructed in accordance with Colorado Law. Ponds resulting from exposed groundwater excavations or collection and impoundment of flowing waters on the surface (or combination of both), must have a legal means of exposing groundwater and storing flowing waters on the surface (for periods of greater than 120 hours following a

precipitation event). The Applicant must coordinate with the Water Commissioner (Shera Sumerford, Shera.Sumerford@state.co.us) to ensure the ponds are in compliance, which may require obtaining a water right and augmentation plan, or eliminating the pond if the pond cannot be brought into compliance. See the [Beginners Guide to Ponds](#) for more information.

This office has no concerns with the proposed Site Plan Review nor Limited Impact Special Use Review so long as the well with permit no. 5664--A is used in accordance with its permitted terms and conditions.

Should you or the applicants have any questions regarding this matter, please contact Keian Freshwater at 303-866-3581 ext. 8237 or keian.freshwater@state.co.us for assistance.

Sincerely,



Kate Fuller, P.E.

Water Resources Engineer

Ec: Referral file no. 32602

Well permit file no. 5664--A

Shera Sumerford, Water Commissioner (Shera.Sumerford@state.co.us)



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303.571.3284
donna.l.george@xcelenergy.com

December 30, 2024

Boulder County Community Planning and Permitting
PO Box 471
Boulder, CO 80306

Attn: Pete L'Orange

**Re: Starlings CO LLC Equestrian Center and Ag Worker ADU
Case #s LU-24-0017 and SPR-24-0081**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the limited impact special review and site plan for **Starlings CO LLC Equestrian Center and Ag Worker ADU**. Please be aware PSCo owns and operates existing natural gas service facilities within the subject property. The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

As a safety precaution, PSCo would like to remind the developer to contact Colorado 811 for utility locates prior to construction.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

From: [Seth Levine](#)
To: [L"Orange, Pete](#)
Subject: [EXTERNAL] Fwd: Additional Information re: Site Plan Review LU-24-0017-SPR-24-0081
Date: Thursday, January 9, 2025 3:05:15 PM

Hi Pete. I believe you are the planner who has been assigned to this. I haven't heard back from my email below and thought it was best to reach out directly. I'm not necessarily opposed to the planned commercial use of this property across the street from us, but we absolutely need to do something to slow the traffic down over the hill on 73rd St (variable speed sign for sure, but potentially other measures like a rumble strip, etc). It's already not safe to pull in/out of the driveways just over the proposed use will make it even more so. With the approved construction at Nelson and 75th, too many people are using 73rd St. We need to encourage them to use Airport Road instead.

Thanks for your time.

Seth Levine

Buy my book: <https://thenewbuilders.com/#buy>



----- Forwarded message -----

From: Seth Levine <seth@sethlevine.com>
Date: Friday, January 3 2025 at 10:15 AM MST
Subject: Additional Information re: Site Plan Review LU-24-0017-SPR-24-0081
To: planner@bouldercounty.gov

We received a notice about the proposed structures to be built on the property located at 8130 N 73rd St. This lot is directly across from 73rd St from our property. While we generally believe that people should be able to build reasonable structures on their properties, in this case the materials suggest that the applicants anticipate operating some kind of equestrian business at this location (and will be building structures and infrastructure to support this commercial effort). As you may be aware, many neighbors have complained to Boulder County about controlling vehical speeds on this stretch of road and have been lobbying for better signage (for example a variable speed sign at the top of the hill on 73rd St to slow traffic over the hill). It was unclear from the materials submitted where the applicants

are intending on placing the driveway/access to their new commercial property. We are concerned that without either reducing speed limits or adding in additional measures to slow traffic that the addition of additional traffic turning onto and off of 73rd St will exacerbate what is already a dangerous traffic situation. We'd encourage Boulder County to work with the applicants and the neighborhood to take active measures to control traffic and reduce traffic speeds. We would be happy to provide additional information and ideas once we have a sense for the plans for access to the property as well as a better understanding of the amount of traffic the applicants anticipate their new commercial business to generate.

You can reach me at 303-378-9397 to discuss this in person or via email here.

Thank you.

Seth Levine
8165 N 73rd St

Buy my book: <https://thenewbuilders.com/#buy>



From: [John Reber](#)
To: [LU Land Use Planner](#)
Subject: [EXTERNAL] Fw: LU-27-0017?SPR-24-0087 COMMENTS
Date: Wednesday, January 29, 2025 1:13:54 PM

----- Forwarded Message -----

From: John Reber
To: petelorange@bouldercounty.com
Cc: Debbie Lane ; rjr@raicer.com ; Leslie Ewy ; Kim Kelleghan ; Valdez Ron
Sent: Wednesday, January 29, 2025 at 01:08:59 PM MST
Subject: LU-27-0017?SPR-24-0087 COMMENTS

LU-27-0017 / SPR-24-0087

January 29, 2025

Comments and questions regarding the subject proposal

My family and I live at 8558 N 79th St., Longmont, CO 80503 – Boulder County

My property does not abut the subject property, and my visual and sound connection to the property are limited. I do enjoy a dark night sky, one which continues to be negatively impacted in this area. I also drive on N 73rd Street along the western border of the subject property daily and have direct knowledge//experience about the subject property for more than 30 years.

I have several comments about the proposal:

Traffic Study and direct concerns:

The Traffic Study (Study) considered the area on n 73rd at Niwot Rd. According to the Study: “ The Study73rd Street has a posted speed limit of 50 miles per hour (mph) and serves approximately 5,050 vehicles per day (vpd) near the project site (Year 2024). “ The speed limit is in fact 50 mph on only a portion of the North 73rd and St and south of the subject property. The current speed limit along the subject property ranges from 45 mph and then most importantly **35mph in the area of the property’s driveway and blind hill**. For good reason, the speed limit was lowered years ago for safety reasons of so blind hill and at least 3 residential driveways are **NOT** visible to drivers along an extended portion of N 73rd.

Rural properties such as the ones regional to the subject properties regularly have slow moving vehicles (tractors/farm equipment, residential driveway entry/exit, and where horses or livestock are present: frequent vehicles pulling horse or stock trailers. Additionally, a substantial volume of biking and jogging occurs throughout that 35 mph zone and present challenges to drivers, joggers and bikers. This requires addressing for this proposal and must design some way to **NOT** make that safety concern worse. And, the traffic study considered biking volume in the subject

property area in October. Depending upon the weather and day of the week, the bike volumes could have varied from better weather and day of the week timing during the Summer.

Outdoor Lighting:

Reviewing the proposed project application, it was difficult to ascertain what outdoor lighting is planned for the structures and both the driveways and outdoor animal and personal use areas. One mention is made of an area that was not to be lighted and one of the structure elevation plans showed one apparent downlighting fixture.

The region has numerous residences and agricultural use areas that employ many different forms of outdoor lighting. Some are on only for portions of dark hours, and some run all night for reasons ranging from security, regular night time use or even just occasional use.

The proposal at this stage or future stages must be clear about the specific areas that are lit and that the method for that lighting meets County regulations, even considering neighbor desires for a darker night sky if possible. There is substantial (though not all, regrettably) use of down lighting in out door lighting in our neighborhood, regionally and nationally. Please consider the best available outdoor lighting practices available and apply them appropriately.

Finally, and an item likely not considered as part of the current subject property application, is the access requirement onto the property for particular Holland Ditch water rights owners. During the irrigation season, one of the head gates on the Holland Ditch must be accessible for me to turn on/turn off my water ordered and occasionally check on settings and function at the head gate. The current access to the head gate is via the existing property drive located at the brow of the hill on North 79th St. Several other water rights holders must also have such access.

I have attached an image showing the subject property in relation to my residence. The pink circle encloses my residence.

I am available by phone 303 589-6134 or email jhreber@aol.com . Please contact me if you need additional information or have questions.

John Reber



L'Orange, Pete

From: Debbie Lane <solstice56@comcast.net>
Sent: Thursday, January 30, 2025 2:41 PM
To: LU Land Use Planner; L'Orange, Pete
Subject: [EXTERNAL] 8130 N. 73rd Docket LU-24-0017/SPR-24-0081

Dear Boulder County Commissioners and Planning Dept.

I am a neighbor of 8130 N. 73rd Street.

I have looked at the site review plan and would like to make some comments. I am inexperienced at looking at site review plans and want to thank Pete L'Orange for his answers to my many questions.

I'd like to welcome my new neighbor.

I can tell from all many hours of work that have gone into preparing this site plan that she has a passion for what she is doing.

This is a slice of paradise on Earth in this area. I can fall asleep to sounds of coyotes or owls. Recently we had a big herd of elk that visited us for a couple of days. This morning as I was leaving home, I saw a coyote bound across our field. What a joy to live in harmony with nature's creatures. I feel privileged to live here in this open space. I hope you will too. I look forward to seeing more horses in the fields. They will add to the beauty of living in the country.

When my husband Steve Szabo and I first purchased our property it was 5 acres surrounded by a 45 acre conversation easement. Through the kindness and generosity of Boulder County we were able to purchase the 45 acres and tie it to the original 5 acres.

We have lived at our home for 22 years, and for all those years as I look out my kitchen window to the west, there are just a sprinkling of lights glowing. I saw that the outdoor arena would not have lights, or amplified sound. I appreciate this consideration of the neighbors. I'm unclear about other lights that might be used for safety of the horse owners. Will the parking lot have lights? Overhead lights? I wonder if there will be lights if they can be turned off at a reasonable hour.

I'm please that BC is allowing an ADU on the project, this will support the project in a positive way. It shows BC's commitment to keeping lands agricultural. Having a on site farmer will help reduce the carbon footprint of this property.

I know that Boulder County is a leader in protecting the environment during the building process. I understand that buildings that are torn down will be recycled to the greatest extent possible. I know that BC has high standards for reducing energy produced from fossil fuel. I understand there will be roof top solar on the home. I wonder what will power the equestrian facility?

In 2020 Gamma Grass began leasing a piece of property out here. I began learning about carbon capture regenerative farming. This year we began a project on our farm to plant an orchard and herbs for Wishgarden Herbs in a carbon capture regenerative way. The Earthwork is complete and next Spring the orchard will be planted and cows will be grazing the fields. I'm happy that this area can remain agricultural and help prove the concept of carbon capture regenerative farming. I hope the new owners of 8130 N. 73rd will make the hay organic, as the people farming this land are working towards a certification in regenerative farming.

I have the following requests for the commissioners to consider.

1. Limits on the hours that outdoor work can occur.
2. Move the driveway from it's current location. Currently the one lane driveway is at the crest of a hill. It is a blind spot. It concerns me that big vehicles pulling horse trailers will be using it. This is a narrow area where vehicles, bikes and runner all must share the same space. As you can see from attached photos it is difficult to see traffic exiting this driveway. The driveway is located where the mailbox is. On the north side is a row of evergreen trees and along N. 73rd is a long row of deciduous trees. I hope that you will consider requiring the driveway to the facility be moved to area with better visibility for all users. Being aware that the neighbors will need access to the head-gates to turn on water during the irrigation season.

Namaste,
Debbie Lane
8449 N. 79th Street
Longmont, CO 80503
303 678-0690





I acknowledge that I walk, dance and live upon traditional land stewarded by the Arapahoe, Ute, Sioux and Cheyenne People who still consider this their homeland.